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Deformations of Reinforced Concrete Members at Yielding and Ultimate

by Telemachos B. Panagiotakos and Michael N. Fardis

A database of more than 1000 tests (mainly cyclic) on specimens representative of various types of reinforced concrete (RC) members (beams, columns, and walls) is used to develop expressions for the deformations of RC members at yielding or failure (at ultimate), in terms of member geometric and mechanical characteristics. Expressions for the yield and the ultimate curvature based on the plane-section assumption provide good average agreement with test results, but with large scatter. The same applies to models for the ultimate drift or chord-rotation capacity based on curvatures and the concept of plastic hinge length. Semi-empirical models for the drift or chord-rotation at member yielding provide good average agreement with test results, but with considerable scatter. Their predictions and the associated test results point to effective secant stiffness at yielding around 20% of that of the uncracked gross section. An empirical expression is also developed for the ultimate drift or chord rotation in terms of: steel ductility; bar pull-out from the anchorage zone; load cycling; ratios of tension; compression; confinement or diagonal reinforcement; axial load ratio; $n = N/A_g f_c'$; shear-span ratio; and concrete strength. This expression is characterized by less scatter than alternatives with a more fundamental basis, and applies over a very wide range of parameter values for all types of RC members used in earthquake-resistant structures, including beams or columns with conventional or diagonal reinforcement and shear walls.

Keywords: deformation; ductility; stiffness; tests.

INTRODUCTION

The inelastic deformation capacity of reinforced concrete (RC) members is important for the resistance of RC structures to imposed deformations, such as those due to settling of supports, temperature or shrinkage, and for moment redistribution under gravity loads. It is even more important for seismic loads because earthquake-resistant design relies on ductility, that is, on the ability of RC members to develop (cyclic) deformations well beyond elastic limits without significant loss of load-carrying capacity. Values of the force-reduction factor *R* of conventional force-based earthquake-resistant design depend on the deformation capacity of RC members, while detailing rules are specified for RC members so that they provide the required deformation capacity.

Due to the emergence of displacement-based concepts for seismic design of new structures and seismic evaluation of old ones, quantification of deformation capacity in terms of geometric and mechanical characteristics of members and of their reinforcement have attracted increased interest in recent years. The 1997 NEHRP Guidelines for the Seismic Rehabilitation of Buildings[1-3] base member evaluation on a capacity-demand comparison in terms of (member) deformations. These guidelines, known as FEMA 273/274[1,2] and more recently FEMA 356,[3] as well as other current procedures for the analysis of the seismic response of RC structures, require realistic values of the effective cracked stiffness of RC members up to yielding for reliable estimation of the seismic force and deformation demands. If the elastic member stiffnesses used for the analysis effectively reproduce secant member stiffness to yielding, even a linear-elastic analysis with 5% damping can satisfactorily approximate inelastic seismic displacement and deformation demands.[1-4] To this end, tools are needed for the calculation of the secant stiffness to yielding for known geometric and mechanical characteristics of RC members.

The secant stiffness to yielding and the ultimate deformation of RC members are commonly determined (assuming purely flexural behavior) from section moment-curvature relations and integration thereof along the member length. Such a calculation does not commonly account for the effects of shear and inclined cracking, bond-slip phenomena, bar buckling, or even load cycling. More advanced models that incorporate the effects of inclined cracking, bond-slip, and tension stiffening, and account for the detailed σ-ε behavior of the reinforcement have also been proposed for the plastic rotation capacity of beams under monotonic loading.[5,6] The primary motivation of those models was the quantification of the capacity for moment redistribution in connection with the bond and fracture properties of steel, especially in relation with some brittle cold-worked steels currently used in nonseismic or low seismicity regions of Europe. Despite their sophistication, these models have thus far not been very successful in effectively reproducing the experimental behavior up to ultimate.

Test results constitute the ultimate recourse for validation, calibration, or even development of models. This is particularly true for complex phenomena, such as the deformational behavior of concrete members up to failure in monotonic or cyclic loading. With this in mind, a large bank of experimental data was assembled and used herein for the development of simple models for the deformations of RC members at yielding and at failure. The primary deformation measure considered herein is the drift or chord rotation θ of a member over the shear span L_s. This measure captures the macroscopic behavior of the member as a whole, relates readily to more global measures of seismic response—such as story drifts—while at the same time suffices for signaling failure at the local level. Curvatures ϕ at yielding and ultimate are also considered, as potential intermediate steps for the determination of the corresponding values of θ for the entire member.

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Two approaches are pursued in this study: a statistical (or empirical) approach, as in References 7 and 8; and a more fundamental approach developed from basic principles and the mechanics of reinforced concrete.[9-11]

RESEARCH SIGNIFICANCE

This study develops expressions for the ultimate deformation capacity and for the deformation at yielding of RC members, in terms of their geometric and mechanical characteristics. Such expressions are essential for the application of displacement-based procedures for earthquake-resistant design of new RC structures and for seismic evaluation of old ones. They are also essential for a realistic estimation of the effective elastic stiffness of cracked RC members and structures, which is important for the calculation of seismic force and deformation demands.

EXPERIMENTAL DATABASE

The database used in this study is comprised of 1012 tests of RC members in uniaxial bending, with or without axial force. The full characterization of test specimens and the experimental results, as well as the associated list of references, is given in the Appendix.* Out of these specimens, 266 can be considered as representative of beams because they have unsymmetric reinforcement and were tested under zero axial load (all specimens have rectangular cross section, with the exception of two, which have a T-section); 682 can be considered as column specimens with a symmetrically reinforced square or rectangular section, tested with or without axial force; 61 specimens are walls with a rectangular, barbelled, or T-section; and 23 of the column specimens have diagonal reinforcement, combined or not with conventional longitudinal bars.

Most specimens were of the simple or double cantilever type. In these specimens, some slippage of the longitudinal reinforcement from its anchorage beyond the section of maximum moment is possible in principle, contributing a fixed-end rotation to the overall drift of the specimen and increasing the average curvature measured next to the end. Many specimens were of the simply supported beam type, loaded with a force at midspan. Due to symmetry in these specimens, there was no slippage of the longitudinal reinforcement from an anchorage block at the section of maximum moment, except when the load was applied through a bulky stub at midspan, with enough dimension along the specimen axis for reinforcement slippage to develop on both sides of the midspan section.

In 296 tests, the relative rotation between the section of maximum moment and a nearby section within the plastic hinge region was measured and translated into an average curvature ϕ. In 124 of these tests, some slippage of the reinforcement from its anchorage beyond the section of maximum moment is, in principle, possible. In these instances, curvatures include the effect of the associated fixed-end rotation.

In 963 specimens, deflections were measured in addition to or instead of curvatures, to be translated herein into drift θ, that is, deflection divided by distance from the section of maximum moment. If the deflection is measured at the point of zero moment, θ is equal to the chord rotation of the section of maximum moment. In 786 of these specimens, slip of reinforcement from its anchorage beyond the section of maximum moment was, in principle, possible.

With the exception of 35 of the tests where curvatures ϕ were measured and 88 of those where drifts θ are reported, testing continued up to failure. Failure in this study is identified with a clear change in the measured lateral force-deformation response: in monotonic loading, a noticeable drop of lateral force after the peak (at least 15% of maximum force) is interpreted as failure; and in cycling loading, failure is identified with distinct reduction of the reloading slope, and the area of the hysteresis loops and the peak force, in comparison with those of the preceding cycle(s). Such developments are typically associated with physical phenomena, such as extensive crushing or disintegration of the concrete, bar buckling, or even rupture. Typically they coincide with a drop in peak force exceeding 15% of the ultimate force.

The geometry of the test specimens in the database, the amount and layout of their reinforcement, the concrete strength, the type of steel, and the axial load cover a very broad range. For the 296 beam or column tests in which curvatures are reported, the concrete (cylindrical) strength f_c' ranges from 15 to 105 MPa, and the axial load ratio $\nu = N/A_g f_c'$ ranges from 0 to 0.95. For the 902 beam or column specimens for which deflections are reported, f_c' ranges from 15 to 120 MPa, and the axial load ratio $\nu = N/A_g f_c'$ ranges from 0 to 0.85. For the 61 wall specimens, f_c' ranges from 15 to 60 MPa, and the axial load ratio $\nu = N/A_g f_c'$ ranges from 0 to 0.9. The shear-span ratio $M/Vh = L_s/h$ ranges from 1.0 to 6.5 for prismatic specimens, and 1.75 to 5.75 for wall specimens. The ratio of diagonal reinforcement ρ_d in each diagonal direction for the 23 diagonally reinforced column specimens ranges from 0 to 1.125. The steel used in the 1012 tests can be classified in three grades: 824 tests utilized hot-rolled ductile steel with hardening ratio f_t/f_y of approximately 1.5 and strain at peak stress ε_{su} around 15%; 129 tests had heat-treated steel, such as the tempcore steel currently used in Europe, with f_t/f_y around 1.2 and ε_{su} of approximately 8%; and 59 specimens used brittle cold-worked steel with f_t/f_y of approximately 1.1 and ε_{su} around 4%.

DEFORMATIONS OF REINFORCED CONCRETE (RC) MEMBERS AT YIELDING

Deformations of RC members at yielding are important for the determination of their effective cracked stiffness. In earthquake-resistant design, they are also important as normalizing factors of member peak deformation demands or supplies because of their expression as ductility factors.

Curvature ϕ is convenient as a deformation measure in that it can be easily quantified in terms of section parameters and material properties on the basis of the plane-section hypothesis. If yielding of the section is signaled by yielding of the tension steel, the yield curvature is

$$\phi_y = \frac{f_y}{E_s(1-k_y)d} \tag{1}$$

*The Appendix is available in xerographic or similar form from ACI headquarters, where it will be kept permanently on file, at a charge equal to the cost of reproduction plus handling at time of request.

whereas if it is due to significant nonlinearity of the concrete in compression beyond a level $\varepsilon_c \approx 1.8f_c'/E_c$ of the extreme compression fiber strain, then

$$\phi_y = \frac{\varepsilon_c}{k_y d} \approx \frac{1.8f_c'}{E_c k_y d} \tag{2}$$

The compression zone depth at yield k_y (normalized to d) is

$$k_y = (n^2A^2 + 2nB)^{1/2} - nA \tag{3}$$

where $n = E_s/E_c$, and A and B are given by Eq. (4) or (5), if section yielding is controlled by the tension steel or by the compression zone, respectively

$$A = \rho + \rho' + \rho_v + \frac{N}{bdf_y}, \tag{4}$$

$$B = \rho + \rho'\delta' + 0.5\rho_v(1 + \delta') + \frac{N}{bdf_y}$$

$$A = \rho + \rho' + \rho_v - \frac{N}{\varepsilon_c E_s bd} \approx \rho + \rho' + \rho_v - \frac{N}{1.8nbdf_c'}, \tag{5}$$

$$B = \rho + \rho'\delta' + 0.5\rho_v(1 + \delta')$$

In Eq. (4) and (5), ρ, ρ', and ρ_v are the reinforcement ratios of the tension, compression, and web reinforcement (all normalized to bd) respectively; $\delta' = d'/d$, where d' is the distance of the center of the compression reinforcement from the extreme compression fibers; b is the width of the compression zone; and N is the axial load (compression: positive). In this analysis, the area of diagonal bars times the cosine of their angle with respect to the member axis is added to the reinforcement area considered in calculating ρ and ρ'.

The lower of the two values of Eq. (1) or (2) is the yield curvature. Then, the yield moment can be computed as

$$\frac{M_y}{bd^3} = \phi_y\left\{E_c\frac{k_y^2}{2}\left(0.5(1 + \delta') - \frac{k_y}{3}\right) + \right. \tag{6}$$

$$\left.\frac{E_s}{2}\left[(1 - k_y)\rho + (k_y - \delta')\rho' + \frac{\rho_v}{6}(1 - \delta')\right](1 - \delta')\right\}$$

The results of Eq. (1) through (5) can be compared with the experimental values of the yield curvature in 296 tests included in the database. The experimental value of curvature was obtained as the relative rotation between the section of maximum moment and a nearby section, divided by the distance of the two sections. In 124 cases, measured relative rotations include the effect of reinforcement pullout from its anchorage zone beyond the section of maximum moment, and hence, may normally lead to overestimation of the curvature. On the other hand, the effect of tension stiffening, due to concrete tensile stresses developing between discrete cracks through bond, reduces the average curvature below the value estimated from Eq. (1) or (2), neglecting tension in the concrete. Finally, curvatures determined from relative rotation of two sections depend on the distance of the two sections, as this affects the number of discrete cracks and the curvature variation along this distance. Despite these inherent problems of experimental curvatures, the overall agreement of Eq. (1) through (5) with the data is fairly good and the dispersion, as expressed by the coefficient of variation of the ratio of experimental-to-predicted values, is relatively low (first row in Table 1; Fig. 1(a)). Figure 1(a) does not show any systematic increase of measured curvatures due to possible slip.

It is noteworthy that the simpler semi-empirical expressions proposed in Reference 12 ($\phi_y = 1.7f_y/E_sh$ for beams; $\phi_y = 2.12f_y/E_sh$ for rectangular columns) provide overall an equally good average fit to the same data as the fundamental Eq. (1) through (5), with only slightly higher scatter (Table 1, Rows 2 and 3).

Table 1 (fourth row) and Fig. 1(b) summarize the results of the comparison between the predictions of Eq. (1) through (6) and values of M_y measured in 1008 tests (after correction for any P-Δ effects).

Often the ratio M_y/ϕ_y is taken as the effective flexural rigidity EI of the cracked section. This ratio, however, does not reflect many important effects, such as those of inclined cracking and shear deformations along the member. Such effects refer to the member (or rather, to the shear span L_s) as a whole. They are reflected in the magnitude of the drift θ of the shear span, which, in simple or double cantilever members, is equal to the chord rotation at the member end where yielding takes place. The part of the drift or chord rotation at yield θ_y that is due to flexural deformations equals $\phi_yL_s/3$. Shear deformations and inclined cracking, as well as any fixed-end rotation due to bar pullout from the anchorage zone, add to this. Test results in the database show that, when pullout of longitudinal bars from the anchorage zone is not possible, the difference between the experimental value of θ_y and the computed value of $\phi_yL_s/3$ (attributed to inclined cracking and shear) does not have a statistically significant dependence on any of the test or specimen parameters and

Table 1—Mean, median, and coefficient of variation of ratio of experimental-to-predicted quantities at yielding

Quantity	No. of data	Mean*	Median*	Coefficient of variation, %
$\phi_{y,exp}/\phi_{y,pred.eq.(1)\text{-}(5)}$	296	1.22	1.16	32
$\phi_{y,exp}/\phi_{y,pred.Ref.12}$—columns	121	0.84	0.83	35
$\phi_{y,exp}/\phi_{y,pred.Ref.12}$—beams	175	1.30	1.30	25
$M_{y,exp}/M_{y,pred.eq.(6)}$	1008	1.06	1.02	20
$\theta_{y,exp}/\theta_{y,pred.eq.(7)}$	963	1.06	1.00	36
$\theta_{y,exp}/\theta_{y,pred.Ref.7}$	963	0.84	0.79	40
$\theta_{y,exp}/\theta_{y,pred.Ref.12}$	963	1.60	1.24	72
$(M_{y,exp}L_s/3\theta_{y,exp})/(M_{y,pred}L_s/3\theta_{y,pred})$	963	1.13	1.03	44
$(M_{y,exp}L_s/3\theta_{y,exp})/EI_{ACI}$	963	0.67	0.59	64
$(M_{y,exp}L_s/3\theta_{y,exp})/EI_{Ref.13}$	484 ($N \neq 0$)	1.26	1.00	82

*When coefficient of variation is high, median is more representative measure of average trend than mean, as median value of ratio of predicted-to-experimental value is always inverse of ratio of experimental-to-predicted, while mean value of both ratios is higher than median.

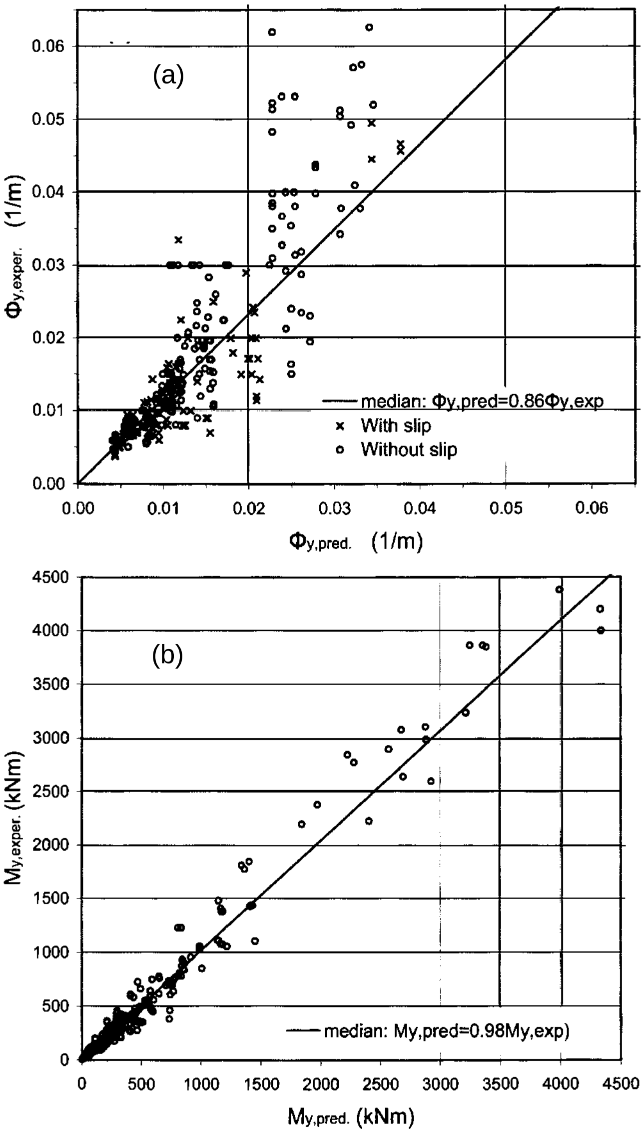

Fig. 1—Comparison of experimental and predicted values of yield: (a) curvature f_y; and (b) moment M_y.

may be considered as constant. The fixed-end rotation due to bar pullout is equal to the slip from the anchorage zone at yielding of the tension steel, divided by the distance between tension and compression reinforcement d-d'. Slip should be proportional to the bond stress demand at yielding of the tension steel, that is, to the ratio of the bar yield force $A_s f_y$ to its perimeter πd_b (that is, to $d_b f_y$), and inversely proportional to bond strength, that is, to $\sqrt{f_c'}$. Based on this reasoning, the following relation was statistically fitted to the results of 963 tests for θ_y

$$\theta_y = \phi_y \frac{L_s}{3} + 0.0025 + a_{sl} \frac{0.25 \varepsilon_y d_b f_y}{(d - d')\sqrt{f_c'}} \qquad (7)$$

The second term on the right-hand-side of Eq. (7) can be considered as the (average) shear distortion of the shear span at flexural yielding. The third term is the fixed-end rotation due to slippage: coefficient a_{sl} equals 1 if slippage of longitudinal steel from its anchorage zone beyond the end section is possible, or 0 if it is not; $\varepsilon_y = f_y/E_s$ is the yield strain of

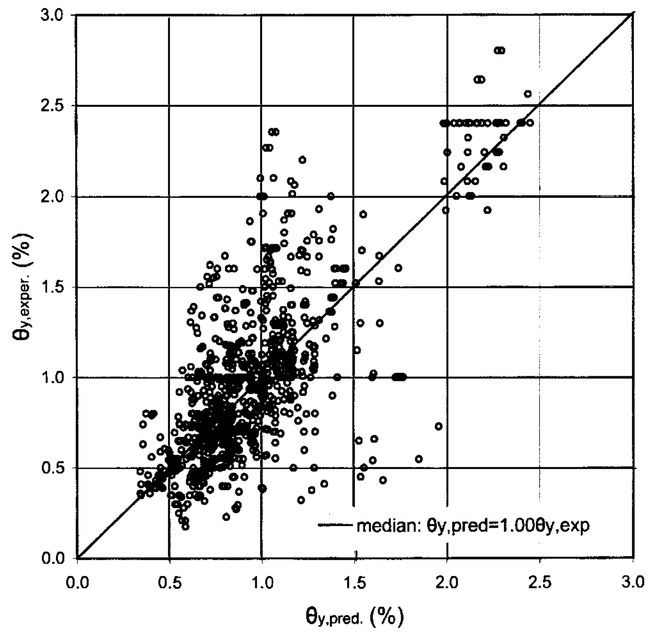

Fig. 2—Comparison of experimental and predicted values of chord rotation (or drift) at yield (963 tests).

steel; and the yield strength f_y and the concrete strength f_c' are in MPa.

Figure 2 compares the predictions of Eq. (7) with the data from which it was derived. Statistics of the ratio of the experimental to the predicted value are given at the fifth row of Table 1. On the average, Eq. (7) predicts the data well, but the dispersion is large. Overall, it does better than other models reported in the literature[7,12] as far as agreement in the mean and the magnitude of the dispersion are concerned (Rows 5 to 7 in Table 1).

The effective rigidity of the cracked RC member to yielding EI_{ef} can be taken as $EI = M_y L_s / 3\theta_y$, with M_y and θ_y equal to the experimental values, or to those determined from Eq. (6) and (7) with the aid of Eq. (1) to (4). Experimental and calculated values of this effective rigidity are compared in the eighth row of Table 1. The effective rigidity of the cracked member to yielding is, on average, approximately 20% of that of the uncracked gross section $E_c I_g$. It is generally significantly lower than the effective rigidity given in 10.11.1 of ACI 318R-95 ($EI = 0.35 E_c I_g$ for beams or walls, $EI = 0.7 E_c I_g$ for columns) for the calculation of magnified moments in compression members and frames, or that given in 10.12.3 of ACI 318R-95 ($EI = 0.2 E_c I_g + E_s I_{se}$) for the calculation of the moment magnification in nonsway frames. This is evident from Row 9 of Table 1, which gives statistics of the ratio of the experimental effective rigidity at yielding to the value in 10.12.3 of ACI 318R-95. The proposal in Reference 13 to replace coefficient 0.2 in the ACI 318 expression with $0.27 + 0.006 L_s/h - 0.3 M/Nh$, to reproduce better moment magnification in heavily compressed slender members, is also compared in Row 10 of Table 1 with the experimental value for axially compressed specimens. Although developed in a completely different context, the Reference 13 proposal is in good average agreement with the present data and with the expression for $EI = M_{y,pred} L_s / 3\theta_{y,pred}$ fitted to them herein, albeit with considerably larger scatter than this latter expression (Rows 8 and 10 of Table 1).

Table 2—Statistics of ratio of experimental ultimate plastic (chord) rotation q_{pl} to values suggested by FEMA 273[1] and FEMA 356[3]*

		$\theta_{pl,exp.}/\theta_{pl,FEMA}$		$\theta_{u,exp.}/\theta_{u,FEMA}$			$\theta_{pl,exp.}/\theta_{pl,FEMA}$		$\theta_{u,exp.}/\theta_{u,FEMA}$			$\theta_{pl,exp.}/\theta_{pl,FEMA}$		$\theta_{u,exp.}/\theta_{u,FEMA}$	
$V/bd\sqrt{f_c'}$, units: lb. in.		< 1.00					1.00 to 2.00					>2.00			
$(\rho - \rho')/\rho_{bal}$	n	m	σ	m	σ	n	m	σ	m	σ	n	m	σ	m	σ
	Beams with closely spaced stirrups†														
≤ 0	0	—	—	—	—	0	—	—	—	—	0	—	—	—	—
0 to 0.25	42	1.18	0.36	1.28	0.35	11	1.13	046	1.32	0.5	0	—	—	—	—
≥ 0.25	0	—	—	—	—	0	—	—	—	—	0	—	—	—	—
	Beams without closely spaced stirrups†														
	0	—	—	—	—	0	—	—	—	—	0	—	—	—	—
$\nu = N/A_g f_c'$	Columns with closely spaced stirrups†														
≤ 0.1	76	1.43	0.78	1.48	0.70	18	1.07	0.63	1.19	0.55	5	0.78	0.17	1.03	0.13
0.1 to 0.25	172	1.36	0.57	1.55	0.60	16	0.89	0.47	1.05	0.50	0	—	—	—	—
0.25 to 0.4	58	1.2	0.85	1.32	0.78	5	1.12	0.52	1.24	0.43	2	0.09	0.13	0.42	0.05
≥ 0.4	28	1.1	0.85	1.18	0.77	0	—	—	—	—	0	—	—	—	—
	Columns with no closely spaced stirrups†														
≤ 0.1	44	2.75	1.33	2.59	1.14	8	2.79	1.72	2.58	1.41	5	2.01	0.54	2.18	0.40
0.1 to 0.25	26	2.13	1.15	2.17	0.98	4	0.93	0.39	1.02	0.39	2	1.92	1.38	1.95	0.99
0.25 to 0.4	21	1.54	1.09	1.77	0.92	1	2.57	—	2.25	—	1	2.56	—	2.25	—
≥ 0.4	12	2.74	1.57	2.38	1.08	0	—	—	—	—	0	—	—	—	—
$(\rho - \rho')f_y/f_c' + \nu$	Walls with confined boundaries‡														
≤ 0.1	42	0.93	0.49	1.01	0.44	1	0.53	—	0.74	—	0	—	—	—	—
0.1 to 0.175	8	0.65	0.26	0.69	0.19	0	—	—	—	—	0	—	—	—	—
0.175 to 0.25	1	0.58	—	0.50	—	0	—	—	—	—	0	—	—	—	—
≥ 0.25	0	—	—	—	—	0	—	—	—	—	0	—	—	—	—
	Walls without confined boundaries‡														
≤ 0.1	1	1.28	—	1.33	—	0	—	—	—	—	0	—	—	—	—
> 0.1	0	—	—	—	—	0	—	—	—	—	0	—	—	—	—
	Diagonally reinforced beams														
	23	0.6	0.28	0.67	0.28	0	—	—	—	—	0	—	—	—	—

*m = mean; σ = standard deviation; and n = number of tests.
†Stirrups spaced at less than d/3 and providing shear strength greater than 0.75V.
‡Confined boundaries according to ACI 318-95.

ASSESSMENT OF FEMA 273/274 and FEMA 356 ULTIMATE DRIFTS OR CHORD ROTATIONS

Recent years have seen an increased interest in the estimation of the available deformation capacity of RC members from their geometry, reinforcement, and axial and shear force levels. This interest has developed especially in relation to displacement-based seismic design and to seismic evaluation and retrofitting of existing RC structures. The "NEHRP Guidelines for the Seismic Rehabilitation of Buildings"[1-3] give values of the ultimate plastic hinge rotation of RC members as acceptable limiting values for primary or secondary components of the structural system under the collapse prevention earthquake, as a function of the type, reinforcement, axial and shear force levels, and detailing of RC members. These guidelines imply values of the yield rotation approximately equal to 0.005rad for RC beams and columns, or to 0.003rad for walls, to be added to plastic hinge rotations for conversion into total rotations, which are approximately equal to the chord rotation θ or drift of the shear span. Acceptable chord rotations or drifts for primary components under the collapse prevention earthquake are approximately 1.5 times lower; under the life safety earthquake, acceptable chord rotations or drifts for the primary and secondary components are approximately 1.5 or 2 times, respectively, lower than the ultimate (chord) rotations or drifts.

The present database can be used to assess the values given for the ultimate value of the plastic rotation in the NEHRP guidelines.[1,3] To this end, 633 flexure-controlled cyclic tests to failure were identified from the database. In these tests, the ratio of yield moment M_y to shear span L_s is less than the calculated shear strength of the specimen, even after subsequent reduction of shear strength due to cyclic inelastic flexural deformations (expressed through the displacement ductility ratio $\mu_\delta = \theta_u/\theta_y$). FEMA reports[1,3] give values of the ultimate plastic rotation θ_{pl} (which is approximately equal to the total minus the implied yield rotation of 0.005rad in beams or columns, or of 0.003rad in walls). Thus, for the 633 cyclic tests to failure Table 2 presents separately: a) the ratio of the plastic part θ_{pl} of the experimental ultimate chord rotation (total rotation θ_u minus the experimental value of θ_y) to the ultimate plastic hinge rotation in FEMA 356[3]; and b) the ratio of the experimental ultimate chord rotation θ_u to the sum of the FEMA 356[3] plastic rotation plus an implied yield rotation of 0.005rad for beams and columns, or of

0.003rad for walls. For beams or columns with well-detailed and closely spaced transverse reinforcement, agreement between experimental and FEMA values is good on average, albeit with significant scatter. For beams or columns with poorly detailed or widely spaced transverse reinforcement, the FEMA values are on the average well below the experimental ones. If, however, the values given in the FEMA reports[1,3] are meant to be mean *m* minus one standard deviation σ bounds, then they are, on average, satisfactory for poorly detailed beams and columns, but lie on the unsafe side for well-detailed members. For walls and diagonally reinforced members for which test results are available only for well-detailed specimens, the FEMA values are on the high side, not only at the *m*-σ level, but also at that of the mean. (The difference for diagonally reinforced members is partly due to the axial load on some of the test specimens, while the FEMA values[1,3] are quoted for diagonally reinforced coupling beams.)

When the FEMA values[1,3] and the experimental ones are compared on the basis of plastic rotations θ_{pl}, the ratio of experimental-to-FEMA values is smaller, on average, but its dispersion is higher than when the comparison is made on the basis of total ultimate rotations θ_u. As a result, if the FEMA values represent a *m*-σ bound, the use of total rotations θ_u instead of plastic ones makes the FEMA values more consistent with the available data. If, on the contrary, they are meant to be average values, the use of θ_{pl} for beams and columns (but not for walls or diagonally reinforced elements) offers an advantage.

EMPIRICAL EXPRESSIONS FOR ULTIMATE CHORD ROTATION OF RC MEMBERS

The database of 875 monotonic or cyclic tests, in which θ_u values are reported and failure was controlled by flexure, is used to develop more detailed rules for the prediction of the ultimate chord rotation or drift of RC members in terms of their geometric characteristics, material properties and reinforcement, and axial and shear load levels. Two approaches are applied to this end: a) a purely empirical approach based on statistical analysis and described in this section; and b) a more fundamental approach based on curvatures and on the concept of plastic hinge length, as described in the following section.

The statistical analysis utilized data from 242 monotonic and 633 cyclic tests, all carried to flexure-controlled failure. Sixty-one tests refer to walls and the rest to beams or columns, 23 of which were diagonally reinforced. Slip of longitudinal bars from the anchorage zones beyond the section of maximum moment was possible in 703 tests, most of them cyclic.

The analysis was linear regression of the log of θ_u on the control variables or their logs without coupling between the control variables, assuming that the variance of the scatter of $\log\theta_u$ about the regression is independent of θ_u. This implies that for a given predicted value of θ_u, the coefficient of variation of the real (experimental) value is constant. In all regression analyses performed, all the parameters were initially considered as control variables, but only those that turned out to be statistically significant for the prediction of θ_u were retained. Moreover, the resulting values of the regression coefficients were rounded off.

A separate regression for 234 monotonic tests on beam and column specimens (the eight monotonic cases of walls were not enough for inclusion) gives the following expression for the ultimate chord rotation or drift θ_u in monotonic loading

$$\theta_{u,\,mon}(\%) = \alpha_{st,\,mon}\left(1+\frac{a_{sl}}{8}\right)(0.15^{\nu}) \qquad (8)$$

$$\left(\frac{max\left(0.01,\,\dfrac{\rho' f_y'}{f_c'}\right)}{max\left(0.01,\,\dfrac{\rho f_y}{f_c'}\right)}\frac{L_s}{h}f_c'\right)^{0.425}$$

where

$L_s/h = M/Vh$ = shear-span ratio at the section of maximum moment;

ρ, ρ' = steel ratios of the tension and compression longitudinal reinforcement (not including diagonal bars); for elements with distributed reinforcement between the two flanges, the entire vertical web reinforcement is included in the tension steel;

f_y, f_y' = yield stress of tension and compression steel (for bars of different grade the sums $\Sigma\rho f_y$ or $\Sigma\rho' f_y'$ are used);

f_c' = uniaxial (cylindrical) concrete strength, MPa;

$\nu = N/A_g f_c'$ = axial load ratio, positive for compression;

$\alpha_{st,mon}$ = coefficient for the type of steel, equal to 1.25 for hot-rolled ductile steel, to 1.0 for heat-treated (tempcore) steel, and to 0.5 for cold-worked steel. (The 234 tests include 168 with hot-rolled steel, 32 with tempcore steel, and 34 with cold-worked steel); and

a_{sl} = coefficient for slip equal to 1 if there is slippage of the longitudinal bars from their anchorage beyond the section of maximum moment, or to 0 if there is not (Eq. (7)).

A separate regression was performed on the 633 cyclic test data, including the 53 wall cases. The resulting expression for the ultimate chord rotation θ_u in cyclic loading is

$$\theta_{u,\,cyc}(\%) = \alpha_{st,\,cyc}\left(1+\frac{a_{sl}}{2}\right)(1-0.4a_{wall})(0.2^{\nu}) \qquad (9)$$

$$(f_c')^{0.175}\left(\frac{L_s}{h}\right)^{0.4}1.1^{\left(100\alpha\rho_{sx}\frac{f_{yh}}{f_c'}\right)}(1.3^{100\rho_d})$$

where

$\alpha_{st,cyc}$ = coefficient for the type of steel equal to 1.125 for hot-rolled ductile steel, 1.0 for heat-treated (tempcore) steel, and 0.8 for cold-worked steel. (The 633 tests include 542 with hot-rolled steel, 68 with tempcore steel, and 23 with cold-worked steel);

α = confinement effectiveness factor according to Reference 14, adopted also in the CEB/FIP Model Code 90[10] and given by

$$\alpha = \left(1-\frac{s_h}{2b_c}\right)\left(1-\frac{s_h}{2h_c}\right)\left(1-\frac{\Sigma b_i^2}{6b_ch_c}\right) \qquad (10)$$

Table 3—Mean, median, and coefficient of variation of ratio of experimental-to-predicted quantities at ultimate deformation

Quantity	No. of data	Mean*	Median*	Coefficient of variation, %
$\theta_{u,exp}/\theta_{u,pred.eq.(8)}$	234	1.17	1.01	57
$\theta_{u,exp}/\theta_{u,pred.eq.(9)}$	633	1.05	1.01	41
$\theta_{u,exp}/\theta_{u,pred.eq.(11)}$	875	1.06	1.00	47
$\theta_{u,exp}/\theta_{u,pred.eq.(12)}$	875	1.08	0.99	51
$\phi_{u,exp}/\phi_{u,predMC90}$	261	2.77	2.15	82
$\phi_{u,exp}/\phi_{u,pred.eq.(21)}$	261	0.94	0.64	91
$\phi_{u,exp}/\phi_{u,pred.eq.(22),(23)}$	261	1.26	1.00	70
$\theta_{u,exp}/\theta_{u,pred.eq.(13)-(20),(22)-(24)}$	633	1.23	0.99	83
$\theta_{u,exp}/\theta_{u,pred.eq.(13)-(20),(22),(23),(25)}$	242	1.37	1.01	94
$\theta_{u,exp}/\theta_{u,pred.eq.(13)-(20),(22),(23),Ref.11}$	875	1.53	1.20	87

*When coefficient of variation is high, median is more representative measure of average trend than mean, as median value of ratio of predicted-to-experimental value is always inverse of ratio of experimental-to-predicted, while mean value of both ratios is higher than median.

with b_c, h_c denoting the width and depth of the confined core, respectively, and b_i the distances of successive longitudinal bars laterally restrained at stirrup corners or by 135 degree hooks;

ρ_{sx} = $A_{sx}/(b_w s_h)$ = ratio of transverse steel parallel to the direction x of loading;

f_{yh} = yield stress of transverse steel;

ρ_d = steel ratio of diagonal reinforcement in each diagonal direction; and

a_{wall}= coefficient equal to 1.0 for shear walls and 0 for beams or columns.

The amounts of tension or compression longitudinal steel do not appear in Eq. (9), although they were found to be quite important for the ultimate deformation in monotonic loading (Eq. (8)). The reason is that very few of the 633 cyclic tests have unsymmetric reinforcement (even when any web steel is counted as tension reinforcement). Therefore, the (equal and opposite) effects of tension and compression reinforcement on θ_u cancel out, and their composite effect turns out as statistically insignificant.

The predictions of Eq. (8) and (9) are compared in Fig. 3(a) and (b), respectively, with the experimental data to which they were fitted. These figures show also the lines below which only 5% of the data fall. Statistics of the ratio of the experimental-to-predicted values of θ_u are given in the first two rows of Table 3. The cyclic Eq. (9) better fits the corresponding data than the monotonic Eq. (8).

The monotonic and cyclic groups of data are complementary: in the monotonic group members with unsymmetric reinforcement and the less ductile types of steel are well represented, whereas shear walls and diagonally reinforced elements are not. The situation is reversed in the group of cyclic tests. To profit from this complementary relationship and to fill any gaps of data in each one of these two groups, a regression is performed on all 875 flexure-controlled tests to failure—monotonic or cyclic—giving the following

$$\theta_u(\%) = \alpha_{st}\alpha_{cyc}\left(1 + \frac{a_{sl}}{2.3}\right)\left(1 - \frac{a_{wall}}{3}\right)(0.2^{\nu}) \qquad (11)$$

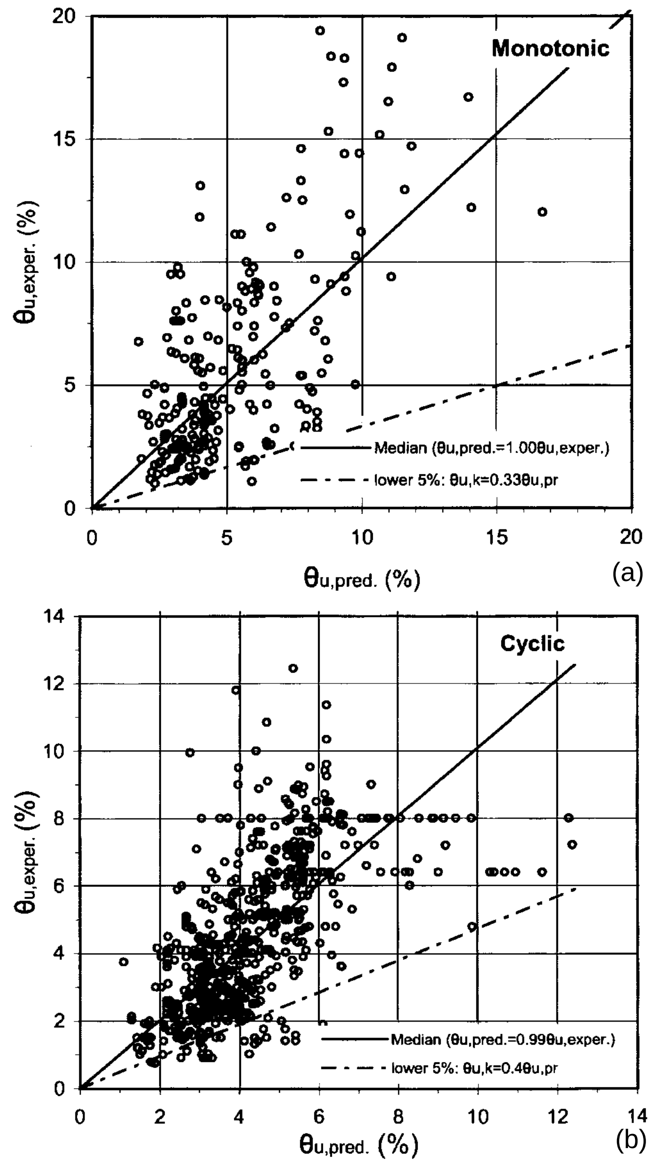

Fig. 3—Comparison of experimental ultimate chord rotations (drifts) with predictions of: (a) Eq. (8) for 234 monotonic tests on beams or columns; and (b) Eq. (9) for 633 cyclic tests.

$$\left[\frac{max\left(0.01, \frac{\rho' f_y'}{f_c'}\right)}{max\left(0.01, \frac{\rho f_y}{f_c'}\right)} f_c'\right]^{0.275} \left(\frac{L_s}{h}\right)^{0.45} 1.1^{\left(100\alpha\rho_{sx}\frac{f_{yh}}{f_c'}\right)}(1.3^{100\rho_d})$$

where

α_{st} = coefficient for the type of steel: equal to 1.5 for hot-rolled ductile steel; 1.25 for heat-treated (tempcore) steel; and 0.8 for cold-worked steel. (The three types of steel are represented in 718, 100, and 57, respectively, of the 875 cases); and

α_{cyc} = coefficient equal to 1.0 for monotonic loading and to 0.6 for cyclic loading typical of load-histories applied in laboratory tests (in the 633 cyclic tests, the equivalent number of inelastic half-cycles at peak displace-

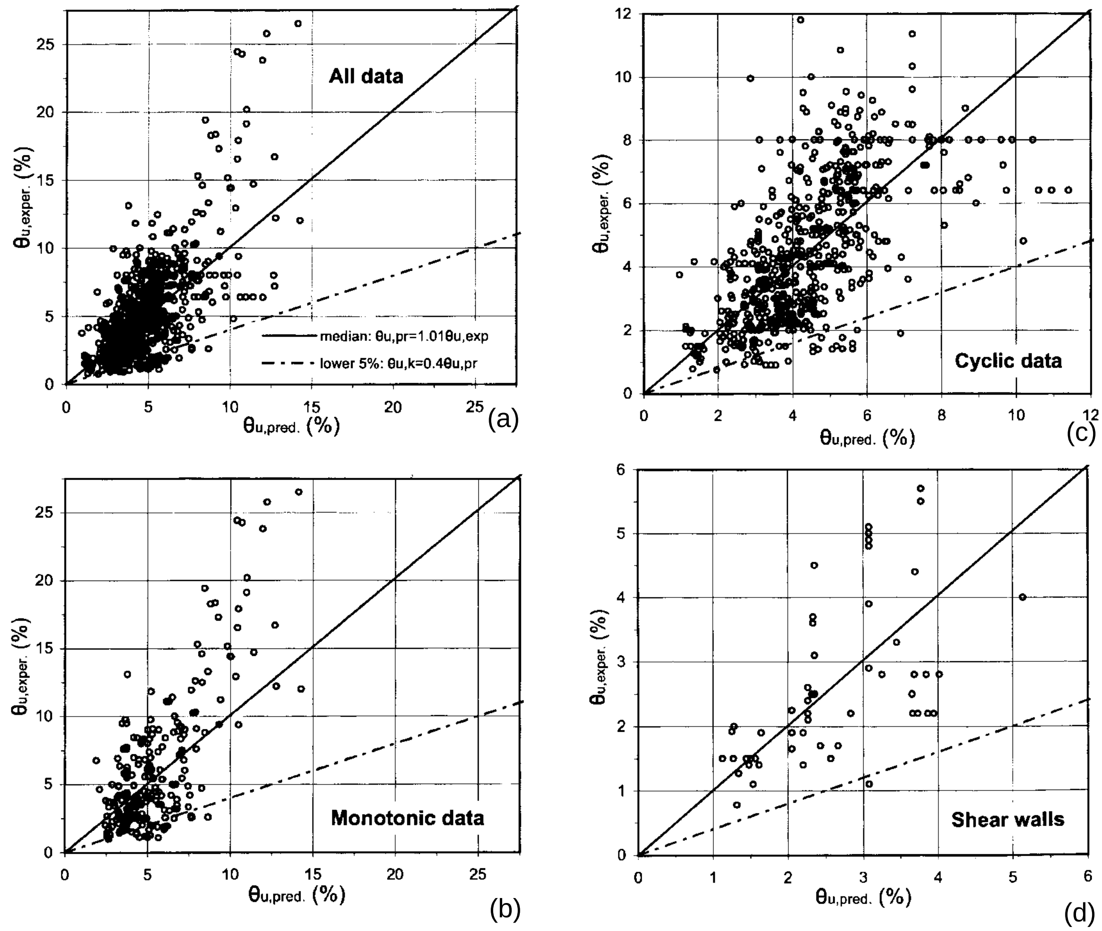

Fig. 4—Comparison of experimental ultimate chord rotations with predictions of Eq. (11) for: (a) all 875 tests; (b) 234 montotonic tests of beams or columns; (c) 633 cyclic tests; and (d) 61 shear walls.

ment, $n_{eq} = \Sigma|\theta_i|/\theta_u$, ranges from 2 to over 50, with a mean value of 13).

To account explicitly for the effect of cycling, the equivalent number of inelastic half-cycles in each test $n_{eq} = \Sigma|\theta_i|/\theta_u$ was included in the regression as a control variable. This gives the following

$$\theta_{u,\,neq}(\%) = \alpha_{st,\,neq}\left(1 + \frac{a_{sl}}{3}\right)(1 - 0.35a_{wall})\frac{0.2^{\nu}}{n_{eq}^{\,0.1}} \qquad (12)$$

$$\left(\frac{max\left(0.01,\, \dfrac{\rho' f_y{}'}{f_c{}'}\right)}{max\left(0.01,\, \dfrac{\rho f_y}{f_c{}'}\right)} f_c{}'\right)^{0.2} \left(\frac{L_s}{h}\right)^{0.475} 1.1^{\left(100\alpha\rho_{sx}\frac{f_{yh}}{f_c{}'}\right)} (1.2^{100\rho_d})$$

In Eq. (12), the steel coefficient $\alpha_{st,neq}$ takes the values 1.55, 1.35, and 0.9 for the three types of steel.

Statistics on the ratio of the experimental value of θ_u to the predictions of Eq. (11) and (12) are given in the third and fourth row, respectively, of Table 3. As suggested by the larger coefficient of variation resulting from Eq. (12), contrary to expectations, the fit to the data is slightly worse if the number of cycles is explicitly accounted for as in Eq. (12). It seems therefore that what matters for θ_u is whether or not one or more full cycles with peak displacement amplitude occur, and not the exact number of (equivalent) cycles before that. This is better expressed by the zero-one type of variable α_{cyc} in Eq. (11) than by the equivalent number of (half) cycles in Eq. (12). Thus, Eq. (11) is selected as the best regression for the prediction of θ_u among all alternatives previously considered.

For comparison with Eq. (11), the mean and coefficient of variation of the ratio of the experimental-to-predicted value of θ_u for other well-known empirical models of θ_u of beams or columns in monotonic loading are 0.74 and 62% for the model in Reference 7, and 0.52 and 81% for Reference 8. These statistics refer to the 242 monotonic tests in the present database. For the 633 cyclic tests, they are equal to 0.71 and 223% for the model in Reference 6, and 0.58 and 62% for Reference 7. Therefore, Eq. (11) represents an advance over earlier empirical models.

From the statistical point of view, the smaller uncertainty associated with the estimation of the coefficients and exponents in the right-hand side of Eq. (11) (and expressed through their coefficients of variation) is strong evidence of its superiority over Eq. (8), (9), or (12). The values of the coefficients of variation of most of the coefficients and exponents in Eq. (11) are between 7 and 11%, except: a) those of coefficient a_{sl} for the two less ductile types of steel, which are approximately 16%; b) those of the bases in the powers of ν and $100\rho_d$, which are approximately 20%; and c) that of the base of $100\alpha\rho_{sx}f_{yh}/f_c{}'$, which is much higher. All corresponding coefficients of variation in Eq. (8), (9), and (12) are higher, and sometimes significantly so.

Figure 4 compares the experimental values of θ_u with the predictions of Eq. (11). In Fig. 4(a), the comparison refers to all 875 data; in Fig. 4(b) and (c), the comparison refers to the 242 monotonic tests and 633 cyclic tests separately; and in Fig. 4(d), the comparison refers to the 61 monotonic or cyclic data on walls. These figures also show the median line: $\theta_{u,eq11} = \theta_{u,exp}$ of all the data and the lower characteristic line: $\theta_{u,k0.05} = 0.4\theta_{u,eq11}$, below which only 5% of the data fall. This line can be considered as a practical lower bound, for possible use in design or evaluation of RC members on the basis of displacements.

Figure 5 compares the predictions of Eq. (11) with the maximum chord rotation attained in 60 of the database cyclic tests that did not lead to failure of the specimen. All data lie below the 45 degree line, further confirming Eq. (11).

The comparisons in Fig. 4(a) to (d) suggest that there is no systematic bias of any of the groups of data (monotonic, cyclic, or walls) with respect to Eq. (11). Moreover, analyses of the scatter of the data about Eq. (11) have not revealed a lack of fit with respect to any of the independent variables (with one exception: for $L_s/h > 6$ Eq. (11) overpredicts θ_u, as the lack of inclined cracking for such values of the shear span ratio reduces overall deformations[5]). In other words, Eq. (11) scatter is uniform throughout the full range of the independent variables, including f_c' (that is, according to this analysis, θ_u increases with f_c' for values of f_c' up to 120 MPa). Nevertheless, for high values of θ_u, the predictions of Eq. (11) seem to be systematically on the low side, especially for the monotonic data. Moreover, the dispersion of the data with respect to the line expressed by Eq. (11) is large. Both these features seem to be intrinsic in the problem of prediction of deformation capacity of RC members: predictions of the monotonic plastic rotation θ_{pl} between points of inflection along the member using very sophisticated models exhibit the same features.[5,6] In these latter models, plastic rotation was calculated by summing up contributions from discrete flexural or shear cracks, taking into account tension stiffening between them and employing very detailed models for bond-slip, for the steel postyield σ-ε behavior and for the concrete, confined or not. Nevertheless, in general they do not do better than Eq. (8) or (11) for scatter and bias in underpredicting high deformation capacities.

Certain aspects of the scatter about Eq. (8), (9), (11), and (12) are due to the intrinsic variability of the deformation capacity of RC members, especially under cyclic loading. To quantify this variability, 40 subgroups of practically identical cases were identified within the 875 specimens used for the development of Eq. (11). Each subgroup is comprised of two to nine specimens with practically the same parameters (even f_c' differs by less than 5%). The coefficient of variation of the value of θ_u within each subgroup ranges from 0 to 39%, with a mean value of 12.5%. This is an estimate of the contribution of natural variability to the overall coefficient of variation of 47% about the predictions of Eq. (11).

Three further points are worth mentioning regarding the variables at the right-hand side of Eq. (8), (9), (11), and (12): 1) an effort was made to include as a variable the depth h of the section separately from the shear-span ratio L_s/h instead of treating the walls separately. Despite the fact that a size-effect on the behavior of RC members is often quoted, this alternative provided much poorer predictions than Eq. (9), (11), or (12) and it was abandoned; 2) the ratio of longitudinal bar diameter d_b to stirrup spacing s_h appears as another important variable. Nevertheless, on statistical grounds, inclusion of d_b/s_h as a separate independent variable is not allowed, because it is strongly positively correlated with the transverse steel ratio ρ_{sx} through s_h and with the compression reinforcement ratio ρ' through d_b (cf. the strong positive correlation of ρ and ρ' in the group of cyclic tests dominated by columns). Indeed, given that ρ' is included as an independent variable, inclusion of both d_b/s_h and $\rho_{sx} f_{yh}/f_c'$ as separate, independent variables leads to the conclusion that each one of them separately has a very small influence on θ_u. Therefore it was decided to keep only the ratio of transverse steel ρ_{sx} as an independent variable, because it is more important statistically than d_b/s_h for the magnitude of θ_u. As a matter of fact, what signals the occurrence of failure in cyclic loading is not bar buckling by itself, which is delayed when the value of d_b/s_h is high, but bar fracture—possibly initiated by the curvature imposed on the bar at buckling. This curvature increases with decreasing s_h. This effect partly counterbalances the positive effect of high d_b/s_h on buckling and reduces the beneficial effect of closely spaced stirrups on θ_u; 3) the ratio $\nu_o = N/(f_c'A_g + f_y A_{s,tot})$ was considered as a variable in Eq. (11) instead of $\nu = N/f_c'A_g$, as suggested in Reference 15. The resulting expression is almost identical to Eq. (11), except that it has $0.125^{\nu o}$ instead of 0.2^{ν} and that the base of the power of $100\rho_d$ increases from 1.3 to 1.4. It is slightly better than Eq. (11), as far as the scatter and the coefficients of variation of the estimated coefficients and parameters are concerned, except for the coefficients of variation of the parameters referring to ν_o (the 0.125) and to ρ and ρ' (exponent 0.275), which increase due to the statistical correlation introduced by the presence of ρ and ρ' in both variables. Because this alternative expression suffers from correlation between two of its independent variables (a serious flaw from the statistical point of view), it is not emphasized herein, despite the slight advantage it offers.

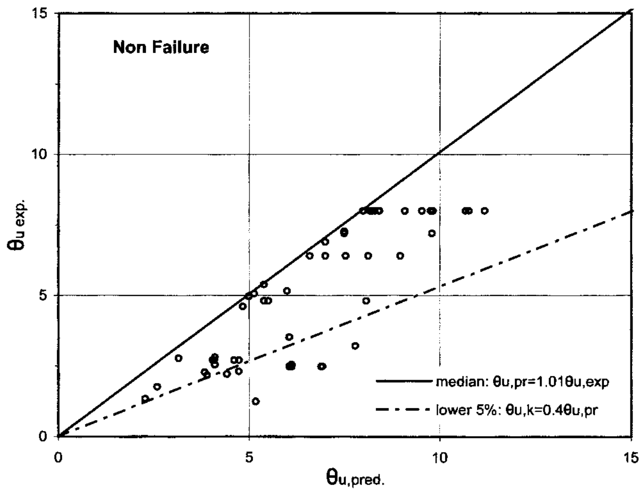

Fig. 5—Comparison of maximum chord rotation attained in 60 tests that did not reach failure, with prediction of Eq. (11) for ultimate chord rotation.

Equation (8), (9), and especially (11) show quantitatively how member deformation capacity is affected by the characteristics of the member and its reinforcement. More specifically, the following conclusions may be drawn:

1. Replacement of the very ductile hot-rolled steels traditionally used in seismic regions all over the world by the less ductile heat-treated tempcore steels currently dominant in Europe reduces member deformability by 15 to 20%. The

use of brittle cold-worked steel reduces member deformation capacity by half;

2. Pullout of longitudinal reinforcement from its anchorage zone beyond the member end increases member deformability, on average, by 40%. This effect is more evident in cyclic loading (Eq. (8), (9), and (11));

3. Deformation capacity is reduced by a 40% average due to full cycling at the maximum deformation. The number and magnitude of deformation cycles before ultimate seem to be unimportant;

4. Shear-span ratio seems to be the most important parameter for member deformation capacity: θ_u increases with almost the square root of L_s/h. In almost 95% of the data, the shear-span ratio is less than the threshold value of $L_s/h = 6.0$, beyond which inclined cracking does not occur, and deformation capacity may decrease with L_s/h for that reason;[5]

5. Deformability increases with approximately the fourth-root of the ratio of compression-to-tension reinforcement (the latter including the vertical reinforcement of the web of shear walls). This finding comes mainly from monotonic tests, as specimens subjected to cyclic loading typically had symmetric reinforcement;

6. The increase in deformability with confining reinforcement was found to be less than was expected, especially in monotonic loading. This was possibly due to the significant deformation capacity found in members with effectively no confinement;

7. Within the range of axial load ratio $\nu = N/A_g f_c'$ common in earthquake-resistant design, deformation capacity decreases approximately linearly with ν, dropping by almost 50% when ν increases from zero to the balance load;

8. Despite the presence of many elements with high-strength concrete in the database, the influence of concrete strength f_c' on deformation capacity was found to be as positive as that of the compression-to-tension steel ratio for values of f_c' up to 120 MPa;

9. Diagonal reinforcement has a very beneficial effect on deformation capacity: a steel ratio of 1 or 2% along each diagonal increases θ_u by 30 or 70%, respectively; and

10. All other geometric or mechanical parameters being equal, the deformation capacity of a shear wall is lower than that of a beam or column by 1/3. Statistically, this difference cannot be attributed to size effects (that is, to the larger cross-sectional depth h of walls). Physically, the difference can only partly be explained by the effects of shear, as in the walls of the database failure was either purely flexural or due to the combined effects of shear and flexure; in none of these walls was failure due to diagonal compression in the web.

ULTIMATE CURVATURE AND PLASTIC HINGE LENGTH

Ultimate drifts or chord rotations are typically expressed quantitatively on the basis of purely flexural behavior through the concepts of plastic hinge and plastic hinge length L_{pl} in which the entire inelasticity of the shear span is considered to be lumped and uniformly distributed

$$\theta_u = \phi_y \frac{L_s}{3} + (\phi_u - \phi_y) L_{pl}\left(1 - \frac{0.5L_{pl}}{L_s}\right) \tag{13}$$

The advantages of this formulation are that: a) it represents a mechanical and physical model (that of lumped inelasticity); and b) ϕ_y, ϕ_u can be determined in terms of cross-sectional characteristics on the basis of the plane-section hypothesis. The effects of shear, bond slip, and tension stiffening should be dealt with through L_{pl}, which is more a conventional quantity satisfying Eq. (9), rather than a physical quantity.

Under deformation-control conditions, the plastic hinge will fail either by rupture of the tension reinforcement or when the compression zone fails and sheds its load. Depending on the confinement of the compression zone by transverse reinforcement and on other parameters, these failure modes may take place either at the full section level, or at the level of the confined core after spalling of the unconfined concrete cover. For failure of the full section prior to spalling, the corresponding ultimate curvatures are:

For failure due to steel rupture at elongation equal to ε_{su}

$$\phi_{su} = \frac{\varepsilon_{su}}{(1 - k_{su})d} \tag{14}$$

At failure of the compression zone

$$\phi_{cu} = \frac{\varepsilon_{cu}}{k_{cu}d} \tag{15}$$

k_{su} and k_{cu} in Eq. (14) and (15) are, respectively, the compression zone depth at steel rupture or failure of the compression zone, both normalized to d; and ε_{cu} in Eq. (15) is the extreme compression fiber strain when the compression zone fails and sheds its load. For unconfined concrete, ε_{cu} is approximately equal to 0.004. Assuming a stress-strain law for unconfined concrete that rises parabolically up to a strain equal to ε_{co} (≈ 0.002) and stays constant up to a strain of ε_{cu} (as is typically assumed in Europe for the calculation of the resistance of cross sections[10]), the plane-section assumption and equilibrium give for k_{su}

$$k_{su} = \tag{16}$$

$$\frac{(1-\delta')\left(\frac{N}{bdf_c'} + \frac{\rho f_t}{f_c'} - \frac{\rho' f_y'}{f_c'} + \frac{\varepsilon_{co}}{3\varepsilon_{su}}\right) + \left(\frac{1+\delta'}{2}\right)\frac{\rho_v(f_y + f_t)}{f_c'}}{(1-\delta')\left(1 + \frac{\varepsilon_{co}}{3\varepsilon_{su}}\right) + \frac{\rho_v(f_y + f_t)}{f_c'}}$$

Steel rupture at elongation ε_{su} takes place prior to compression zone failure and controls the ultimate curvature if k_{su} from Eq. (12) is less than $\varepsilon_{su}/(\varepsilon_{cu} + \varepsilon_{su})$, which is translated into the following condition for the axial load ratio

$$\frac{N}{bdf_c'} < \frac{\varepsilon_{cu} - \frac{\varepsilon_{co}}{3}}{\varepsilon_{cu} + \varepsilon_{su}} + \frac{\rho' f_y'}{f_c'} - \frac{\rho f_t}{f_c'} - \tag{17}$$

$$\frac{\rho_v(f_y + f_t)}{f_c'} \frac{\varepsilon_{su}(1+\delta') - \varepsilon_{cu}(1-\delta')}{(1-\delta')(\varepsilon_{su} + \varepsilon_{cu})}$$

For values of N/bdf_c' greater than the right-hand-side of Eq. (17), spalling of the concrete cover will occur and the moment of the section will drop (at least temporarily). This will take place with yielding of the tension steel if $k < \varepsilon_{cu}/(\varepsilon_{cu} + \varepsilon_y)$, which is translated into

$$\frac{N}{bdf_c'} \le \frac{\rho' f_y'}{f_c'} - \frac{\rho f_y}{f_c'} - \frac{\delta'}{1-\delta'}\frac{\rho_v f_y}{f_c'} + \tag{18}$$

$$\frac{\left(\varepsilon_{cu} - \frac{\varepsilon_{co}}{3}\right) + (\varepsilon_{cu} - \varepsilon_y)\frac{\rho_v f_y}{(1-\delta')f_c'}}{\varepsilon_{cu} + \varepsilon_y}$$

If Eq. (18) is satisfied, k_{cu} for use in Eq. (15) is

$$k_{cu} = \frac{(1-\delta')\left(\frac{N}{bdf_c'} + \frac{\rho f_y}{f_c'} - \frac{\rho' f_y'}{f_c'}\right) + (1+\delta')\frac{\rho_v f_y}{f_c'}}{(1-\delta')\left(1 - \frac{\varepsilon_{co}}{3\varepsilon_{cu}}\right) + 2\frac{\rho_v f_y}{f_c'}} \tag{19}$$

(if the numerator in Eq. (19) is close to zero, ρ may be multiplied by f_t instead of f_y). Otherwise, k_{cu} is the positive root of the following equation

$$\left[1 - \frac{\varepsilon_{co}}{3\varepsilon_{cu}} - \frac{\rho_v f_y}{2(1-\delta')f_c'}\frac{(\varepsilon_{cu} - \varepsilon_y)^2}{\varepsilon_{cu}\varepsilon_y}\right]k^2 + \tag{20}$$

$$\left[\frac{\rho' f_y'}{f_c'} + \frac{\rho f_y}{f_c'}\frac{\varepsilon_{cu}}{\varepsilon_y} - \frac{N}{bdf_c'} + \frac{\rho_v f_y}{(1-\delta')f_c'}\left(\frac{\varepsilon_{cu}}{\varepsilon_y} - \delta'\right)\right]k -$$

$$\left[\frac{\rho f_y}{f_c'} + \frac{\rho_v f_y}{2(1-\delta')f_c'}\right]\frac{\varepsilon_{cu}}{\varepsilon_y} = 0$$

If Eq. (17) is satisfied, section failure will occur at $\phi_u = \phi_{su}$ according to Eq. (14) and (16). If it is not, attainment of ϕ_{cu} according to Eq. (15) and (18) to (20) does not necessarily signal failure. If the moment capacity of the confined section, determined on the basis of the strength f_{cc}' and ultimate strain ε_{cc} of confined concrete, and the dimensions b_c, d_c, d_c' of the confined core (d_c and d_c' result by subtracting from d or d' the sum of the cover and half the diameter of transverse reinforcement; b_c is obtained by subtracting double this sum) is not less than a fraction in the order of 80% of the capacity of the full but unconfined section, most of the load will be sustained by the confined core and failure will ultimately occur at the lower of the two curvature values given by Eq. (14) or (15), applied this time for the confined core (that is, dimensions b, d and d' are replaced by b_c, d_c, d_c'; N, ρ, ρ', and ρ_v are normalized to $b_c d_c$ instead of bd; and f_{cc}', ε_{cc} are used instead of f_c', ε_{cu}).

To summarize, if Eq. (17) is satisfied, ϕ_u is determined from Eq. (14) and (15). Otherwise the moment capacities of the full but unconfined section and of the confined core after spalling of the cover are computed and compared. If the capacity of the confined core is less than 80% of that of the unconfined section, ϕ_u is the lower of: a) the value determined from Eq. (14) and (16); or b) the value determined from Eq. (15) and (18) to (20) for the confined core of the section.

This calculation of ϕ_u was applied to the 261 tests of the database for which measured values of ϕ_u are available. Three alternative confinement models were applied for this purpose: a) that of the CEB/FIP model code 1990 (MC 90),[10] adopted also in Eurocode 8; b) the Mander model,[9] as simplified in Reference 11 regarding calculation of the ultimate strain ε_{cc} of confined concrete

$$\varepsilon_{cc} = 0.004 (= \varepsilon_{cu}) + 1.4\varepsilon_{su}\frac{\rho_s f_{yh}}{f_{cc}'} \tag{21}$$

in which ρ_s is the volumetric ratio of confining steel; and c) a model that adopts the following expression for the strength of confined concrete

$$f_{cc}' = f_c'\left(1 + 3.7\left(\frac{0.5\alpha\rho_s f_{yh}}{f_c'}\right)^{0.87}\right) \tag{22}$$

and for ε_{cc}, the following modification of the Mander model

$$\varepsilon_{cc} = 0.004 + 0.6\varepsilon_{su}\frac{\rho_s f_{yh}}{f_{cc}'} \tag{23}$$

Coefficient α in Eq. (22) is the confinement efficiency factor, taken herein according to Eq. (10) after References 10 and 14.

Experimental values of ϕ_u are compared with the predictions of the three alternatives: a) in Table 3, through the statistics of the ratio of experimental-to-predicted values; and b) in Fig. 6, in graphic form. On the average, the MC90 confinement model underpredicts the ultimate curvature, the Mander model with the addition of Eq. (21) overpredicts it, and the model of Eq. (22) and (23) provides an unbiased fit to the data with less scatter than the others. The scatter is partly attributed to the effects of load cycling and of the fixed-end rotation due to bar pullout from the anchorage, which are not considered explicitly in the model for curvature.

Considering that the results of the comparison: a) of the predictions of Eq. (1) to (5) with the results of the tests for ϕ_y; and b) of those of Eq. (14) to (20) and (22) and (23) with the test data for ϕ_u, constitute a verification on the average, these sets of equations are adopted for use in Eq. (13), and an appropriate expression is sought for L_{pl}. The aim is to provide a fit to the data on θ_u from the 875 tests to which Eq. (11) or (12) were fitted.

Research over all relevant element variables revealed that for Eq. (13) to apply, L_{pl} should be a function of the two variables proposed for this purpose in Reference 11: L_s and the product $d_b f_y$. If L_{pl} is taken as a linear function of these two variables, the following expressions provide the best fit to the 875 tests for which values of θ_u are available:

For cyclic loading

$$L_{pl,cy} = 0.12L_s + 0.014a_{sl}d_b f_y \tag{24}$$

For monotonic loading

$$L_{pl,mon} = 1.5L_{pl,cy} = 0.18L_s + 0.021a_{sl}d_b f_y \tag{25}$$

where f_y is in MPa, and a_{sl} is the zero-one variable used in Eq. (7) to (9), (11), and (12) for absence or presence of bar pullout from the anchorage zone beyond the section of maximum moment.

The statistics of the ratio of experimental-to-predicted value of θ_u resulting from these optimal fits are listed in Table

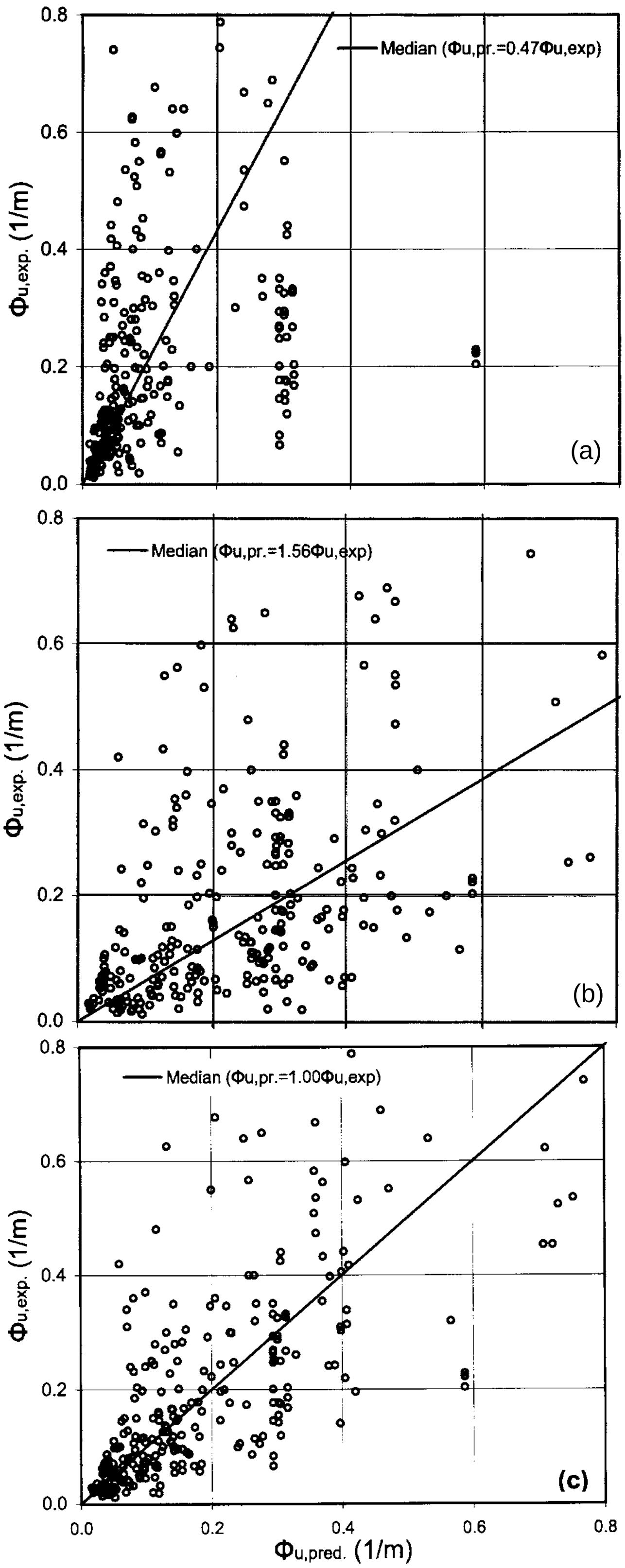

Fig. 6—Comparison of experimental ultimate curvatures with predictions from Eq. (14) to (20), for confinement models according to: (a) MC90;[10] (b) Mander, Priestley, and Park[9] and Eq. (21); and (c) Eq. (10), (22), and (23).

3, Rows 8 and 9. Figure 7 compares the predictions of Eq. (13) to (20) and (22) to (25) with the data to which they were fitted. They also show the 5% fractile lines for the data.

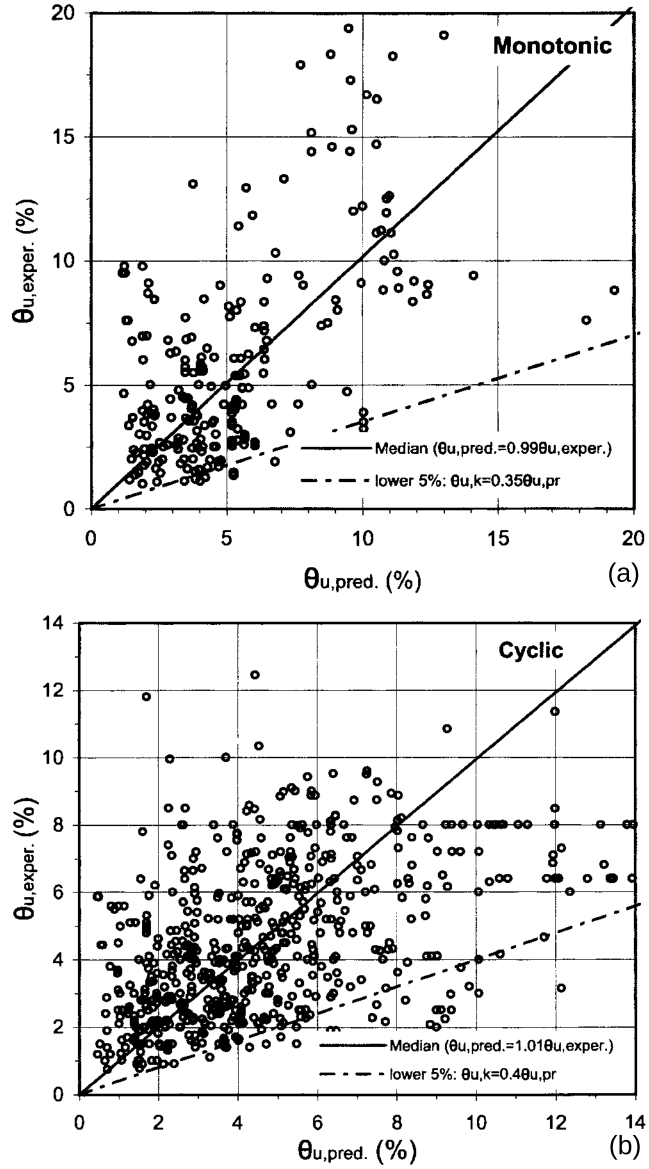

Fig. 7—Comparison of experimental ultimate chord rotations (drifts) with predictions of: (a) Eq. (13) to (20), (22), (23), and (25) for montotonic loading; and (b) Eq. (13) to (20) and (22) to (24) for cyclic loading.

Compared with Fig. 3 and 4(a) to (c), the scatter in Fig. 7 is larger. The scatter is attributed to failure of the model Eq. (13) to account properly for the effects of: a) shear and inclined cracking; and b) the type of element (wall, conventional, or diagonally reinforced beam or column). There is also considerable lack-of-fit of Eq. (13) to (20) and (22) to (25) with some of the variables, for which Eq. (11) is unbiased. It overpredicts θ_u for cold-worked brittle steels, and underpredicts it for hot-rolled ductile ones; it underpredicts θ_u for diagonally reinforced members; it overestimates the effect of confinement; and it overpredicts the value of θ_u in members with $L_s/h > 6$ more so than Eq. (11).

The comparison of the predictions of Eq. (13) to (20) and (22) to (24) with the maximum values of θ_u attained in 60 cyclic tests that did not reach failure, is as satisfactory as the comparison in Fig. 5.

For comparison with Eq. (13) to (20) and (22) to (24), Table 3 lists in the last row statistics of the ratio of experimental values to those predicted using the L_{pl} model in Reference 11, that is, one in which coefficients 0.12 and 0.014 in Eq. (24) are replaced with 0.08 and 0.022, respectively. These statistics are not much worse than those of Eq. (22) to (25), suggesting little sensitivity of the predictions of Eq. (13) to the details of the model for L_{pl}.

CONCLUSIONS

A large database comprised of over 1000 tests of flexure-controlled RC members in uniaxial bending with or without axial force, was assembled and used to develop simple models for the deformations of RC members at yielding and failure (ultimate). Approximately 1/4 of these tests include measurements of curvatures, which may be affected by any fixed-end rotation at the member end due to reinforcement pullout from its anchorage. Despite this and the disability of section models to capture the effects of shear or bar buckling, simple models for curvature based on first principles can reproduce on the average well the experimental curvature at yielding and ultimate. The scatter of the prediction of curvature at yielding is acceptable, but that associated with ultimate curvatures is very large.

A simple model is proposed for the chord rotation of the shear span at yielding, which comprises the familiar flexural term, a constant deformation due to shear and the contribution of any fixed-end rotation, proportional to the product of the bond stress demand and the steel yield strain. The scatter of the data about this semi-empirical model is of the same order as that of the curvature data about the model based on first principles. Its application gives effective flexural rigidities of RC members at yielding in the order of 20% of that of the uncracked gross section and in agreement with previous proposals[13] for the flexural rigidity of heavily compressed slender columns, but with much less scatter with respect to the data.

The models proposed for yield and ultimate curvature are used to fit empirical expressions for the plastic hinge length at member ultimate deformations (Eqs. (24) and (25)). Good average fit is obtained with a plastic hinge length that is 50% greater in monotonic loading than in cyclic loading. Nevertheless, the scatter with respect to the data cannot be less than that of the model for ultimate curvature and is very high. Moreover, for certain ranges of values of the control variables, there is systematic bias of the predictions. For these reasons, alternative purely empirical models are proposed for the ultimate chord rotation. For their development, it was found necessary to combine data for monotonic and cyclic loading and for various types of elements (beams, columns, walls, and diagonally reinforced elements) into a single database, as the individual groups of elements do not include enough data to support independent fitting of empirical equations. The main outcome of this effort, Eq. (11), gives less scatter with respect to the data and is more unbiased to all the parameters than the alternatives based on rational mechanics (Eq. (13) to (20) and (22) to (25)). In this respect, it may be considered more useful for practical applications. Moreover, it shows more clearly the dependence of member deformability on the characteristics of the member and of its reinforcement. More specifically, according to Eq. (11):

1. Steel ductility is quite important for member deformability. The use of brittle cold-worked steel reduces member deformation capacity almost by 1/2, while the replacement of ductile steels traditionally used in seismic regions with modern European tempcore steels reduces deformation capacity by 15 to 20% on the average;
2. Pullout of reinforcement from its anchorage zone beyond the member end increases deformability by approximately 40% on the average, especially under cyclic loading; in this respect it may be considered as beneficial;
3. Full cycling at the peak deformation demand reduces deformation capacity by 40% on the average, almost regardless of the previous load history;
4. Among the geometric and mechanical characteristics of the member and of its reinforcement, the shear-span ratio seems to be the most important ratio in increasing member deformation capacity. The ratio of compression-to-tension reinforcement and concrete strength f_c' rank second. The amount of confining reinforcement is less important;
5. Deformation capacity decreases almost linearly with axial load, to approximately 50% of its zero-load value at balance load; and
6. All other parameters being equal, walls have, on average, 1/3 less deformation capacity than prismatic elements.

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NOTATION

A	=	variable defined in Eq. (4) and (5) and used in Eq. (3)
A_g	=	gross cross-sectional area of concrete member
A_{sx}	=	area of transverse reinforcement parallel to direction of loading
a_{sl}	=	zero-one variable in Eq. (7), (9), (11), and (12), expressing effect of pullout of longitudinal bars from anchorage zone beyond section of maximum moment
a_{wall}	=	zero-one variable in Eq. (9), (11), and (12) for shear walls
B	=	variable defined in Eq. (4) and (5) and used in Eq. (3)
b	=	width of compression zone
b_c	=	width of confined core of section after spalling of concrete cover
b_i	=	distance along cross section perimeter of successive longitudinal bars laterally restrained by stirrup corner or 135 degree hook
b_w	=	width of web
d	=	effective depth of cross section
d'	=	distance of center of compression reinforcement from extreme compression fiber
d_b	=	diameter of compression longitudinal reinforcement
d_c	=	effective depth of confined core of section after spalling of concrete cover
d_c'	=	distance of center of compression reinforcement from center of stirrup (boundary of confined core)
E_c	=	elastic modulus of concrete
E_s	=	elastic modulus of steel
f_c'	=	compressive strength of unconfined concrete based on standard cylinder test
f_{cc}'	=	compressive strength of confined concrete
f_t	=	tensile strength of steel
f_y	=	yield strength of tension reinforcement
f_y'	=	yield strength of compression reinforcement.
f_{yh}	=	yield strength of transverse reinforcement
h	=	depth of member cross section
h_c	=	depth of confined core of section after spalling of cover
k_{cu}	=	normalized (to d) compression zone depth at failure of compression zone
k_{su}	=	normalized (to d) compression zone depth at rupture of tension steel
k_u	=	normalized (to d) compression zone depth at section ultimate deformation
k_y	=	normalized (to d) compression zone depth at section yielding
L_{pl}	=	plastic hinge length
$L_{pl,cy}$	=	value of L_{pl} under cyclic loading, Eq. (24)

$L_{pl,mon}$ = value of L_{pl} under monotonic loading, Eq. (25)
L_s = shear span of member (= M/V)
M_y = yield moment of cross section
N = axial force positive for compression
n = E_s/E_c = ratio of moduli
n_{eq} = equivalent number of inelastic half-cycles of loading at deflections equal to maximum deflection during test
s_h = spacing of transverse reinforcement
V = shear force
α = confinement effectiveness factor, given by Eq. (10)
α_{cyc} = coefficient in Eq. (8) expressing effect of cycling of loading on θ_u
α_{st} = coefficient in Eq. (11) expressing effect of steel type on θ_u
$\alpha_{st,cyc}$ = coefficient in Eq. (9) expressing effect of steel type on θ_u in cyclic loading
$\alpha_{st,mon}$ = coefficient in Eq. (8) expressing effect of steel type on θ_u in monotonic loading
$\alpha_{st,neq}$ = coefficient in Eq. (12) expressing effect of steel type on θ_u accounting for member of cycles
δ' = d'/d
ε_c = strain at extreme compression fiber beyond which yielding of cross section due to concrete nonlinearity can be identified
ε_{cc} = strain where confined concrete is considered to fail in compression
ε_{co} = strain at peak of concrete stress-strain diagram (~0.002)
ε_{cu} = strain where unconfined concrete is considered to fail in compression
ε_{su} = ultimate elongation of steel
ε_y = steel yield strain = f_y/E_s
ϕ = section curvature
ϕ_{cu} = section curvature at ultimate failure of compression zone
ϕ_{su} = section curvature at fracture of tension reinforcement
ϕ_u = ultimate section curvature (at failure)
ϕ_y = section curvature at yielding
ν = $N/A_g f_c'$ = normalized axial load ratio
θ = drift ratio or chord rotation of shear span
θ_{pl} = plastic rotation
θ_u = value of θ at member failure (ultimate value)
θ_y = value of θ at member yielding
ρ = tension reinforcement ratio determined as ratio of tension reinforcement area to bd
ρ' = compression reinforcement ratio determined as ratio of compression reinforcement area to bd
ρ_d = diagonal reinforcement ratio in diagonally reinforced members, determined as ratio of area of reinforcement arranged along one diagonal to bd
ρ_{sx} = confinement reinforcement ratio in direction of loading determined as ratio of area A_{sx} of transverse reinforcement in compression zone parallel to direction of loading to bs_h
ρ_v = web vertical reinforcement ratio of shear wall determined as ratio of total web area of longitudinal reinforcement between tension and compression steel to bd

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APPENDIX 1

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NOTATION FOR COLUMNS (3) TO (32) OF DATABASE TABLE

L_s= shear span of member (=M/V), mm.
b= width of compression zone, mm.
h= depth of member cross-section, mm.
d= effective depth of cross-section, mm.
ρ= tension reinforcement ratio (%), determined as ratio of tension reinforcement area to bd.
ρ'= compression reinforcement ratio (%), determined as ratio of compression reinforcement area to bd.
ρ_v= web vertical reinforcement ratio (%) of column or shear wall, determined as ratio of total area of longitudinal reinforcement between the tension and compression steel, to bd.
f_y= yield strength of tension reinforcement, MPa.
f_y'= yield strength of compression reinforcement, MPa.
f_{yv}'= yield strength of web vertical reinforcement, MPa.
Φ_L= diameter of tension longitudinal reinforcement, mm.
Φ_L'= diameter of compression longitudinal reinforcement, mm.
Φ_v= diameter of web vertical reinforcement, mm.
f_c= compressive strength of unconfined concrete based on standard cylinder test, MPa.
Φ_h= diameter of transverse reinforcement, mm.
s_h= spacing of transverse reinforcement, mm.
f_{yh}= yield strength of transverse reinforcement, MPa.
ρ_{sx}= confinement reinforcement ratio (%) in direction of loading, determined as ratio of the area A_{sh} of transverse reinforcement in compression zone parallel to direction of loading, to bs_h.
ν= $N/A_g f_c'$ = normalised axial load ratio.
θ_y= chord rotation at member yielding (%).
θ_u= chord rotation at member failure (ultimate value), %.
M_y= yield moment, kNm.
M_u= ultimate moment of cross section, kNm.
ϕ_y= curvature at yielding, 1/m.
ϕ_u= ultimate curvature (at failure), 1/m.
ST = Steel type [1: hot-rolled steel, 2: heat-treated (tempcore) steel, 3: brittle cold-worked steel]
SL = [1: with bar slip from anchorage zone, 2: without slip]
TP = Type of element [0: Beam/Column, 1: Shear wall]
CM = Type of loading [0: Monotonic, 1: Cyclic]
ρ_d= diagonal reinforcement ratio (%) in diagonally reinforced members, determined as the ratio of the area of reinforcement arranged along one diagonal to bd.

	REFERENCE	TEST	L_s mm	b mm	h mm	d mm	ρ %	ρ' %	ρ_v %	f_y MPa	f_y' MPa	f_{yv}' MPa	Φ_L mm	Φ_L' mm	Φ_V mm
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1	Abrams (1987)	C1	1600.0	230.0	310.0	261.0	0.795	0.810	0.000	423.0	423.0	0.0	19	19	0
2	Alca et al. (1997)	LH1	2060.0	335.0	678.0	515.0	3.526	0.000	0.000	406.0	0.0	0.0	35.7	0	0
3	Alca et al. (1997)	LH2	2060.0	335.0	678.0	515.0	3.526	0.000	0.000	412.0	0.0	0.0	35.7	35.7	0
4	Alca et al. (1997)	LL1	2060.0	335.0	630.0	515.0	1.897	0.000	0.000	409.0	0.0	0.0	35.7	35.7	0
5	Alca et al. (1997)	LL2	2060.0	335.0	630.0	515.0	1.897	0.000	0.000	409.0	0.0	0.0	35.7	35.7	0
6	Alca et al. (1997)	MH1	1440.0	235.0	475.0	360.0	3.575	0.000	0.000	402.0	0.0	0.0	25.2	25.2	0
7	Alca et al. (1997)	MH2	1440.0	235.0	475.0	360.0	3.575	0.000	0.000	402.0	0.0	0.0	25.2	25.2	0
8	Alca et al. (1997)	ML1	1440.0	235.0	443.0	360.0	1.916	0.000	0.000	409.0	0.0	0.0	25.2	25.2	0
9	Alca et al. (1997)	ML2	1440.0	235.0	443.0	360.0	1.916	0.000	0.000	404.0	0.0	0.0	25.2	25.2	0
10	Alca et al. (1997)	SH1	920.0	150.0	302.0	230.0	3.551	0.000	0.000	410.0	0.0	0.0	16	16	0
11	Alca et al. (1997)	SH2	920.0	150.0	302.0	230.0	3.551	0.000	0.000	410.0	0.0	0.0	16	16	0
12	Alca et al. (1997)	SL1	920.0	150.0	282.0	230.0	1.901	0.000	0.000	410.0	0.0	0.0	16	16	0
13	Alca et al. (1997)	SL2	920.0	150.0	282.0	230.0	1.901	0.000	0.000	410.0	0.0	0.0	16	16	0
14	Ali and Wight (1991)		3600.0	128.0	1220.0	1156.0	0.825	0.649	0.140	540.0	540.0	0.0	13	13	0
15	Ang Priestley and Park (1981)	NO. 3	1600.0	400.0	400.0	365.5	0.503	0.503	0.503	427.0	427.0	427.0	16	16	16
16	Ang Priestley and Park (1981)	NO. 4	1600.0	400.0	400.0	365.5	0.503	0.503	0.503	427.0	427.0	427.0	16	16	16
17	Ang, Priestley and Paulay (1989)	UNIT-13	800.0	400.0	371.0	364.0	1.625	1.625	0.000	436.0	436.0	0.0	16	16	0
18	Ang, Priestley and Paulay (1989)	UNIT-14	800.0	400.0	367.0	364.0	1.995	1.995	0.000	424.0	424.0	0.0	16	16	0
19	Ang, Priestley and Paulay (1989)	UNIT-15	800.0	400.0	371.0	364.0	1.256	1.256	0.000	436.0	436.0	0.0	16	16	0
20	Ang, Priestley and Paulay (1989)	UNIT-17	1000.0	400.0	367.0	364.0	1.810	1.810	0.000	436.0	436.0	0.0	16	16	0
21	Ang, Priestley and Paulay (1989)	UNIT-20	700.0	400.0	367.0	364.0	1.932	1.932	0.000	482.0	482.0	0.0	16	16	0
22	Ang, Priestley and Paulay (1989)	UNIT-6	600.0	400.0	367.0	364.0	2.350	2.350	0.000	436.0	436.0	0.0	16	16	0
23	Ang, Priestley and Paulay (1989)	UNIT-8	800.0	400.0	371.0	364.0	2.729	2.729	0.000	448.0	448.0	0.0	16	16	0
24	Atalay and Penzien (1975)	A11	1828.8	304.8	304.8	254.0	0.835	0.835	0.000	380.6	380.6	0.0	22.225	22.225	0
25	Atalay and Penzien (1975)	A12	1828.8	304.8	304.8	254.0	0.835	0.835	0.000	380.6	380.6	0.0	22.225	22.225	0
26	Atalay and Penzien (1975)	A4	1828.8	304.8	304.8	254.0	0.835	0.835	0.000	380.6	380.6	0.0	22.225	22.225	0
27	Atalay and Penzien (1975)	A7	1828.8	304.8	304.8	254.0	0.835	0.835	0.000	380.6	380.6	0.0	22.225	22.225	0
28	Atalay and Penzien (1975)	A8	1828.8	304.8	304.8	254.0	0.835	0.835	0.000	380.6	380.6	0.0	22.225	22.225	0
29	Atalay and Penzien (1975)	NO. 10	1828.8	304.8	304.8	254.0	0.835	0.835	0.000	363.0	363.0	0.0	22.225	22.225	0
30	Atalay and Penzien (1975)	NO. 11	1828.8	304.8	304.8	254.0	0.835	0.835	0.000	380.6	380.6	0.0	22.225	22.225	0
31	Atalay and Penzien (1975)	NO. 12	1828.8	304.8	304.8	254.0	0.835	0.835	0.000	363.0	363.0	0.0	22.225	22.225	0
32	Atalay and Penzien (1975)	NO. 1S1	1828.8	304.8	304.8	254.0	0.835	0.835	0.000	367.0	367.0	0.0	22.225	22.225	0
33	Atalay and Penzien (1975)	NO. 2S1	1828.8	304.8	304.8	254.0	0.835	0.835	0.000	367.0	367.0	0.0	22.225	22.225	0
34	Atalay and Penzien (1975)	NO. 3S1	1828.8	304.8	304.8	254.0	0.835	0.835	0.000	367.0	367.0	0.0	22.225	22.225	0
35	Atalay and Penzien (1975)	NO. 4S1	1828.8	304.8	304.8	254.0	0.835	0.835	0.000	429.0	429.0	0.0	22.225	22.225	0

36	Atalay and Penzien (1975)	NO. 5S1	1828.8	304.8	304.8	254.0	0.835	0.835	0.000	429.0	429.0	0.0	22.225	22.225	0
37	Atalay and Penzien (1975)	NO. 6S1	1828.8	304.8	304.8	254.0	0.835	0.835	0.000	429.0	429.0	0.0	22.225	22.225	0
38	Atalay and Penzien (1975)	NO. 9	1828.8	304.8	304.8	254.0	0.835	0.835	0.000	363.0	363.0	0.0	22.225	22.225	0
39	Aycardi et al. (1994)	SPEC 2	533.4	101.6	101.6	71.9	0.496	0.991	0.000	469.0	469.0	0.0	5.73	5.73	0
40	Aycardi et al. (1994)	SPEC 4	533.4	101.6	101.6	71.9	0.496	0.991	0.000	469.0	469.0	0.0	5.73	5.73	0
41	Azizinamini et al. (1994)	NC 2	1372.0	460.0	460.0	395.0	0.730	0.730	0.000	414.0	414.0	0.0	25.5	25.5	0
42	Azizinamini et al. (1994)	NC 4	1372.0	460.0	460.0	395.0	0.730	0.730	0.000	414.0	414.0	0.0	25.5	25.5	0
43	Azizinamini et al. (1994)	UNIT_1	1117.6	305.0	305.0	282.7	0.914	0.914	0.610	473.0	473.0	473.0	19	19	19
44	Azizinamini et al. (1994)	UNIT_2	1117.6	305.0	305.0	278.3	0.914	0.914	0.610	473.0	473.0	473.0	19	19	19
45	Azizinamini et al. (1994)	UNIT_3	1117.6	305.0	305.0	282.7	0.914	0.914	0.610	473.0	473.0	473.0	19	19	19
46	Azizinamini et al. (1994)	UNIT_4	1117.6	305.0	305.0	278.3	0.914	0.914	0.610	473.0	473.0	473.0	19	19	19
47	Azizinamini et al. (1994)	UNIT_5	1117.6	305.0	305.0	278.3	0.914	0.914	0.610	473.0	473.0	473.0	19	19	19
48	Azizinamini et al. (1994)	UNIT_6	1117.6	305.0	305.0	278.3	0.914	0.914	0.610	473.0	473.0	473.0	19	19	19
49	Azizinamini et al. (1994)	UNIT_7	1117.6	305.0	305.0	278.3	0.914	0.914	0.610	473.0	473.0	473.0	19	19	19
50	Azizinamini et al. (1994)	UNIT_8	1117.6	305.0	305.0	278.3	0.914	0.914	0.610	473.0	473.0	473.0	19	19	19
51	Azizinamini et al. (1994)	UNIT_9	1117.6	305.0	305.0	278.3	0.914	0.914	0.610	473.0	473.0	473.0	19	19	19
52	Azizinamini et al. (1988)	NC-2	1372.0	457.0	457.0	406.2	0.728	0.728	0.485	439.0	439.0	439.0	25.4	25.4	25.4
53	Azizinamini et al. (1988)	NC-4	1372.0	457.0	457.0	406.2	0.728	0.728	0.485	439.0	439.0	439.0	25.4	25.4	25.4
54	Bayrak and Sheikh (1998)	AS 2HT	1841.0	305.0	305.0	270.0	0.963	0.963	0.642	454.0	454.0	454.0	19.5	19.5	19.5
55	Bayrak and Sheikh (1998)	AS 3HT	1841.0	305.0	305.0	270.0	0.963	0.963	0.642	454.0	454.0	454.0	19.5	19.5	19.5
56	Bayrak and Sheikh (1998)	AS 4HT	1841.0	305.0	305.0	270.0	0.963	0.963	0.642	454.0	454.0	454.0	19.5	19.5	19.5
57	Bayrak and Sheikh (1998)	AS 5HT	1841.0	305.0	305.0	270.0	0.963	0.963	0.642	454.0	454.0	454.0	19.5	19.5	19.5
58	Bayrak and Sheikh (1998)	AS 6HT	1841.0	305.0	305.0	270.0	0.963	0.963	0.642	454.0	454.0	454.0	19.5	19.5	19.5
59	Bayrak and Sheikh (1998)	AS 7HT	1841.0	305.0	305.0	270.0	0.963	0.963	0.642	454.0	454.0	454.0	19.5	19.5	19.5
60	Bayrak and Sheikh (1998)	ES 1HT	1841.0	305.0	305.0	270.0	0.963	0.963	0.642	454.0	454.0	454.0	19.5	19.5	19.5
61	Bayrak and Sheikh (1998)	ES 8HT	1841.0	305.0	305.0	270.0	0.963	0.963	0.642	454.0	454.0	454.0	19.5	19.5	19.5
62	Bigaj and Walraven (1993)	B024	1000.0	100.0	210.0	180.0	0.279	0.000	0.000	562.0	0.0	0.0	8	0	0
63	Bigaj and Walraven (1993)	B124	1000.0	100.0	210.0	180.0	1.117	0.000	0.000	573.0	0.0	0.0	16	0	0
64	Bossco and Debernardi (1993)	T10A1	3000.0	300.0	600.0	565.0	0.566	0.126	0.000	587.3	587.3	0.0	12	12	0
65	Bossco and Debernardi (1993)	T10B1	3000.0	300.0	600.0	565.0	0.566	0.126	0.000	595.6	595.6	0.0	12	12	0
66	Bossco and Debernardi (1993)	T11A1	3000.0	300.0	600.0	565.0	1.131	0.126	0.000	587.3	587.3	0.0	12	12	0
67	Bossco and Debernardi (1993)	T1A1	1000.0	100.0	200.0	175.0	0.565	0.251	0.000	587.3	587.3	0.0	12	8	0
68	Bossco and Debernardi (1993)	T1B1	1000.0	100.0	200.0	175.0	0.565	0.251	0.000	595.6	595.6	0.0	12	8	0
69	Bossco and Debernardi (1993)	T2A1	1000.0	100.0	200.0	175.0	1.131	0.503	0.000	587.3	587.3	0.0	12	8	0
70	Bossco and Debernardi (1993)	T2B1	1000.0	100.0	200.0	175.0	1.131	0.503	0.000	595.6	595.6	0.0	12	8	0
71	Bossco and Debernardi (1993)	T3A1	1000.0	100.0	200.0	175.0	1.696	0.503	0.000	587.3	587.3	0.0	12	8	0
72	Bossco and Debernardi (1993)	T3B1	1000.0	100.0	200.0	175.0	1.696	0.503	0.000	595.6	595.6	0.0	12	8	0
73	Bossco and Debernardi (1993)	T4A1	2000.0	200.0	400.0	365.0	0.283	0.196	0.000	587.3	587.3	0.0	12	10	0

74	Bossco and Debernardi (1993)	T4B1	2000.0	200.0	400.0	365.0	0.283	0.196	0.000	595.6	595.6	0.0	12	10	0
75	Bossco and Debernardi (1993)	T5A1	2000.0	200.0	400.0	365.0	0.565	0.196	0.000	587.3	587.3	0.0	12	10	0
76	Bossco and Debernardi (1993)	T5B1	2000.0	200.0	400.0	365.0	0.565	0.196	0.000	595.6	595.6	0.0	12	10	0
77	Bossco and Debernardi (1993)	T6A1	2000.0	200.0	400.0	365.0	1.131	0.196	0.000	587.3	587.3	0.0	12	10	0
78	Bossco and Debernardi (1993)	T6B1	2000.0	200.0	400.0	365.0	1.131	0.196	0.000	595.6	595.6	0.0	12	10	0
79	Bossco and Debernardi (1993)	T7A1	2000.0	200.0	400.0	365.0	1.696	0.283	0.000	587.3	587.3	0.0	12	12	0
80	Bossco and Debernardi (1993)	T7B1	2000.0	200.0	400.0	365.0	1.696	0.283	0.000	595.6	595.6	0.0	12	12	0
81	Bossco and Debernardi (1993)	T8A1	3000.0	300.0	600.0	565.0	0.126	0.126	0.000	587.3	587.3	0.0	12	12	0
82	Bossco and Debernardi (1993)	T8B1	3000.0	300.0	600.0	565.0	0.126	0.126	0.000	595.6	595.6	0.0	12	12	0
83	Bossco and Debernardi (1993)	T9A1	3000.0	300.0	600.0	565.0	0.251	0.126	0.000	587.3	587.3	0.0	12	12	0
84	Bossco and Debernardi (1993)	T9B1	3000.0	300.0	600.0	565.0	0.251	0.126	0.000	595.6	595.6	0.0	12	12	0
85	Bousias et al (1992)	S0	1500.0	250.0	250.0	210.0	0.965	0.965	0.643	440.0	440.0	440.0	16	16	16
86	BRI (1978)	LE2-3	500.0	250.0	250.0	210.0	0.377	0.377	0.000	397.3	397.3	397.3	10	10	0
87	BRI (1978)	LE-2SL	500.0	250.0	250.0	210.0	0.377	0.377	0.000	397.3	397.3	397.3	10	10	0
88	BRI (1978)	LE-8SL	500.0	250.0	250.0	210.0	0.965	0.965	0.000	379.6	379.6	379.6	16	16	0
89	BRI (1978)	CAAA2	375.0	250.0	250.0	215.0	1.216	1.216	0.000	402.3	402.3	402.3	22	22	0
90	BRI (1978)	CAAB1	375.0	250.0	250.0	215.0	1.216	1.216	0.000	402.3	402.3	402.3	22	22	0
91	BRI (1978)	CAAB2	375.0	250.0	250.0	215.0	1.216	1.216	0.000	402.3	402.3	402.3	22	22	0
92	BRI (1978)	CABA1	750.0	250.0	250.0	215.0	1.216	1.216	0.000	402.3	402.3	402.3	22	22	0
93	BRI (1978)	CABA2	750.0	250.0	250.0	215.0	1.216	1.216	0.000	402.3	402.3	402.3	22	22	0
94	BRI (1978)	CABB1	750.0	250.0	250.0	215.0	1.216	1.216	0.000	402.3	402.3	402.3	22	22	0
95	BRI (1978)	CABB2	750.0	250.0	250.0	215.0	1.216	1.216	0.000	402.3	402.3	402.3	22	22	0
96	BRI (1978)	CBBA1	750.0	250.0	250.0	215.0	0.425	0.425	0.000	370.8	370.8	370.8	13	13	0
97	BRI (1978)	CBBA2	750.0	250.0	250.0	215.0	0.425	0.425	0.000	370.8	370.8	370.8	13	13	0
98	BRI (1978)	CBBB1	750.0	250.0	250.0	215.0	0.425	0.425	0.000	370.8	370.8	370.8	13	13	0
99	BRI (1978)	CBBB2	750.0	250.0	250.0	215.0	0.425	0.425	0.000	370.8	370.8	370.8	13	13	0
100	BRI (1978)	LM1-1B	250.0	250.0	250.0	215.0	0.377	0.377	0.000	368.9	368.9	368.9	10	10	0
101	BRI (1978)	LM1-2A	500.0	250.0	250.0	215.0	0.377	0.377	0.000	368.9	368.9	368.9	10	10	0
102	BRI (1978)	LM1-2B	500.0	250.0	250.0	215.0	0.377	0.377	0.000	368.9	368.9	368.9	10	10	0
103	BRI (1978)	LM1-3A	250.0	250.0	250.0	215.0	0.377	0.377	0.000	368.9	368.9	368.9	10	10	0
104	BRI (1978)	LM1-3B	250.0	250.0	250.0	215.0	0.377	0.377	0.000	368.9	368.9	368.9	10	10	0
105	BRI (1978)	LM1-5A	250.0	250.0	250.0	215.0	0.637	0.637	0.000	379.6	379.6	379.6	13	13	0
106	BRI (1978)	LM1-5B	250.0	250.0	250.0	215.0	0.637	0.637	0.000	379.6	379.6	379.6	13	13	0
107	BRI (1978)	LM1-6A	500.0	250.0	250.0	215.0	0.637	0.637	0.000	379.6	379.6	379.6	13	13	0
108	BRI (1978)	LM1-6B	500.0	250.0	250.0	215.0	0.637	0.637	0.000	379.6	379.6	379.6	13	13	0
109	BRI (1978)	LM1-7A	500.0	250.0	250.0	215.0	0.965	0.965	0.000	364.0	364.0	364.0	16	16	0
110	BRI (1978)	LM1-7B	500.0	250.0	250.0	215.0	0.965	0.965	0.000	364.0	364.0	364.0	16	16	0
111	BRI (1978)	LM1-8A	500.0	250.0	250.0	215.0	0.965	0.965	0.000	364.0	364.0	364.0	16	16	0

112	BRI (1978)	LM1-8B	500.0	250.0	250.0	215.0	0.965	0.965	0.000	364.0	364.0	364.0	16	16	0
113	BRI (1978)	S2BAB1	375.0	250.0	250.0	215.0	0.425	0.425	0.000	370.8	370.8	370.8	13	13	0
114	BRI (1978)	S2BAB2	375.0	250.0	250.0	215.0	0.425	0.425	0.000	370.8	370.8	370.8	13	13	0
115	BRI (1978)	SAAA1	375.0	250.0	250.0	215.0	1.216	1.216	0.000	393.4	393.4	393.4	22	22	0
116	BRI (1978)	SAAA2	375.0	250.0	250.0	215.0	1.216	1.216	0.000	393.4	393.4	393.4	22	22	0
117	BRI (1978)	SAAB1	375.0	250.0	250.0	215.0	1.216	1.216	0.000	393.4	393.4	393.4	22	22	0
118	BRI (1978)	SAAB2	375.0	250.0	250.0	215.0	1.216	1.216	0.000	393.4	393.4	393.4	22	22	0
119	BRI (1978)	SABA1	750.0	250.0	250.0	215.0	1.216	1.216	0.000	393.4	393.4	393.4	22	22	0
120	BRI (1978)	SABA2	750.0	250.0	250.0	215.0	1.216	1.216	0.000	393.4	393.4	393.4	22	22	0
121	BRI (1978)	SABB1	750.0	250.0	250.0	215.0	1.216	1.216	0.000	393.4	393.4	393.4	22	22	0
122	BRI (1978)	SABB2	750.0	250.0	250.0	215.0	1.216	1.216	0.000	393.4	393.4	393.4	22	22	0
123	BRI (1978)	SBBA1	750.0	250.0	250.0	215.0	0.425	0.425	0.000	370.8	370.8	370.8	13	13	0
124	BRI (1978)	SBBA2	750.0	250.0	250.0	215.0	0.425	0.425	0.000	370.8	370.8	370.8	13	13	0
125	BRI (1978)	SBBB1	750.0	250.0	250.0	215.0	0.425	0.425	0.000	370.8	370.8	370.8	13	13	0
126	BRI (1978)	SBBB2	750.0	250.0	250.0	215.0	0.425	0.425	0.000	370.8	370.8	370.8	13	13	0
127	BRI (1978)	SDBAA2	375.0	250.0	250.0	215.0	0.503	0.503	0.000	399.3	399.3	399.3	10	10	0
128	BRI (1978)	SE-2A	1000.0	500.0	500.0	430.0	0.340	0.340	0.000	353.8	353.8	353.8	19	19	0
129	BRI (1978)	SE-2B	1000.0	500.0	500.0	430.0	0.340	0.340	0.000	353.8	353.8	353.8	19	19	0
130	BRI (1978)	SE-3A	500.0	500.0	500.0	430.0	0.340	0.340	0.000	353.8	353.8	353.8	19	19	0
131	BRI (1978)	SE-3B	500.0	500.0	500.0	430.0	0.340	0.340	0.000	353.8	353.8	353.8	19	19	0
132	BRI (1978)	SE-4B	1000.0	500.0	500.0	430.0	0.340	0.340	0.000	353.8	353.8	353.8	19	19	0
133	BRI (1978)	SE-5B	500.0	500.0	500.0	430.0	0.589	0.589	0.000	356.3	356.3	356.3	25	25	0
134	BRI (1978)	SE-6A	1000.0	500.0	500.0	430.0	0.589	0.589	0.000	356.3	356.3	356.3	25	25	0
135	BRI (1978)	SE-6A1	1000.0	500.0	500.0	430.0	0.589	0.589	0.000	356.3	356.3	356.3	25	25	0
136	BRI (1978)	SE-6A2	1000.0	500.0	500.0	430.0	0.589	0.589	0.000	356.3	356.3	356.3	25	25	0
137	BRI (1978)	SE-6B	1000.0	500.0	500.0	430.0	0.589	0.589	0.000	356.3	356.3	356.3	25	25	0
138	BRI (1978)	SE-7B	1000.0	500.0	500.0	430.0	0.965	0.965	0.000	351.7	351.7	351.7	32	32	0
139	BRI (1978)	SE-8A	1000.0	500.0	500.0	430.0	0.965	0.965	0.000	351.7	351.7	351.7	32	32	0
140	BRI (1978)	SE-8B	1000.0	500.0	500.0	430.0	0.965	0.965	0.000	351.7	351.7	351.7	32	32	0
141	BRI (1978)	SPBAA1	375.0	250.0	250.0	215.0	0.251	0.251	0.503	399.3	399.3	399.3	10	10	10
142	BRI (1978)	SPBAA2	375.0	250.0	250.0	215.0	0.251	0.251	0.503	399.3	399.3	399.3	10	10	10
143	BRI (1978)	AF2-1	500.0	250.0	250.0	215.0	0.377	0.377	0.000	437.3	437.3	437.3	10	10	0
144	BRI (1978)	AF21OA	250.0	250.0	250.0	215.0	0.637	0.637	0.000	370.8	370.8	370.8	13	13	0
145	BRI (1978)	AF2-2	500.0	250.0	250.0	215.0	0.377	0.377	0.000	437.3	437.3	437.3	10	10	0
146	BRI (1978)	AF22CD	500.0	250.0	250.0	215.0	0.637	0.637	0.000	370.8	370.8	370.8	13	13	0
147	BRI (1978)	AF2-3	500.0	250.0	250.0	215.0	0.377	0.377	0.000	437.3	437.3	437.3	10	10	0
148	BRI (1978)	AF2-4	500.0	250.0	250.0	215.0	0.637	0.637	0.000	432.7	432.7	432.7	13	13	0
149	BRI (1978)	AF2-5	500.0	250.0	250.0	215.0	0.637	0.637	0.000	433.0	433.0	433.0	13	13	0

150	BRI (1978)	AF2-6	500.0	250.0	250.0	215.0	0.637	0.637	0.000	433.0	433.0	433.0	13	13	0
151	BRI (1978)	AF2-7	500.0	250.0	250.0	215.0	0.637	0.637	0.000	433.0	433.0	433.0	13	13	0
152	BRI (1978)	AF31OA	250.0	250.0	250.0	215.0	0.965	0.965	0.000	353.2	353.2	353.2	16	16	0
153	BRI (1978)	AF31OB	250.0	250.0	250.0	215.0	0.965	0.965	0.000	353.2	353.2	353.2	16	16	0
154	BRI (1978)	AF31TA	250.0	250.0	250.0	215.0	0.965	0.965	0.000	353.2	353.2	353.2	16	16	0
155	BRI (1978)	AF32CA	500.0	250.0	250.0	215.0	0.965	0.965	0.000	353.2	353.2	353.2	16	16	0
156	BRI (1978)	AF32CB	500.0	250.0	250.0	215.0	0.965	0.965	0.000	353.2	353.2	353.2	16	16	0
157	BRI (1978)	AF32OA	500.0	250.0	250.0	215.0	0.965	0.965	0.000	353.2	353.2	353.2	16	16	0
158	BRI (1978)	AF41OB	250.0	250.0	250.0	215.0	1.361	1.361	0.000	347.6	347.6	347.6	19	19	0
159	BRI (1978)	AF41TA	250.0	250.0	250.0	215.0	1.361	1.361	0.000	347.6	347.6	347.6	19	19	0
160	BRI (1978)	AF41TB	250.0	250.0	250.0	215.0	1.361	1.361	0.000	347.6	347.6	347.6	19	19	0
161	BRI (1978)	AF42CB	500.0	250.0	250.0	215.0	1.361	1.361	0.000	347.6	347.6	347.6	19	19	0
162	BRI (1978)	AF42OA	500.0	250.0	250.0	215.0	1.361	1.361	0.000	347.6	347.6	347.6	19	19	0
163	BRI (1978)	AF42OB	500.0	250.0	250.0	215.0	1.361	1.361	0.000	347.6	347.6	347.6	19	19	0
164	BRI (1978)	AF42TA	250.0	250.0	250.0	215.0	1.361	1.361	0.000	347.6	347.6	347.6	19	19	0
165	BRI (1978)	AR15A2T	375.0	250.0	250.0	215.0	0.643	0.643	0.000	349.5	349.5	349.5	16	16	0
166	BRI (1978)	AR15A5H	375.0	250.0	250.0	215.0	0.628	0.628	0.251	389.2	389.2	389.2	10	10	10
167	BRI (1978)	AR15A5T	375.0	250.0	250.0	215.0	0.628	0.628	0.251	389.2	389.2	389.2	10	10	10
168	BRI (1978)	AR15B2T	375.0	250.0	250.0	215.0	0.907	0.907	0.000	357.6	357.6	357.6	19	19	0
169	BRI (1978)	AR15B5H	375.0	250.0	250.0	215.0	1.062	1.062	0.425	382.4	382.4	382.4	13	13	13
170	BRI (1978)	AR15B5T	375.0	250.0	250.0	215.0	1.062	1.062	0.425	382.4	382.4	382.4	13	13	13
171	BRI (1978)	AR20A2H	500.0	250.0	250.0	215.0	0.643	0.643	0.000	349.5	349.5	349.5	16	16	0
172	BRI (1978)	AR20A2T	500.0	250.0	250.0	215.0	0.643	0.643	0.000	349.5	349.5	349.5	16	16	0
173	BRI (1978)	AR20A5H	500.0	250.0	250.0	215.0	0.628	0.628	0.251	389.2	389.2	389.2	10	10	10
174	BRI (1978)	AR20B2H	500.0	250.0	250.0	215.0	0.907	0.907	0.000	357.6	357.6	357.6	19	19	0
175	BRI (1978)	AR20B2T	500.0	250.0	250.0	215.0	0.907	0.907	0.000	357.6	357.6	357.6	19	19	0
176	BRI (1978)	AR20B5H	500.0	250.0	250.0	215.0	1.062	1.062	0.425	382.4	382.4	382.4	13	13	13
177	BRI (1978)	AR20B5T	500.0	250.0	250.0	215.0	1.062	1.062	0.425	382.4	382.4	382.4	13	13	13
178	BRI (1978)	AR2-2AH(1/4)	500.0	250.0	250.0	215.0	0.643	0.643	0.000	381.0	381.0	381.0	16	16	0
179	BRI (1978)	AR2-2AH(1/8)	500.0	250.0	250.0	215.0	0.643	0.643	0.000	381.0	381.0	381.0	16	16	0
180	BRI (1978)	AR2-2AT(1/4)	500.0	250.0	250.0	215.0	0.643	0.643	0.000	381.0	381.0	381.0	16	16	0
181	BRI (1978)	AR2-2AT(1/8)	500.0	250.0	250.0	215.0	0.643	0.643	0.000	381.0	381.0	381.0	16	16	0
182	BRI (1978)	AR2-2BH(1/4)	500.0	250.0	250.0	215.0	0.907	0.907	0.000	368.8	368.8	368.8	19	19	0
183	BRI (1978)	AR2-2BH(1/8)	500.0	250.0	250.0	215.0	0.907	0.907	0.000	368.8	368.8	368.8	19	19	0
184	BRI (1978)	AR2-2BT(1/4)	500.0	250.0	250.0	215.0	0.907	0.907	0.000	368.8	368.8	368.8	19	19	0
185	BRI (1978)	AR2-2BT(1/8)	500.0	250.0	250.0	215.0	0.907	0.907	0.000	368.8	368.8	368.8	19	19	0
186	BRI (1978)	AR2-5AH(1/4)	500.0	250.0	250.0	215.0	0.628	0.628	0.000	376.1	376.1	376.1	10	10	0
187	BRI (1978)	AR2-5AH(1/8)	500.0	250.0	250.0	215.0	0.628	0.628	0.000	376.1	376.1	376.1	10	10	0

188	BRI (1978)	AR2-5AT(1/4)	500.0	250.0	250.0	215.0	0.628	0.628	0.000	376.1	376.1	376.1	10	10	0
189	BRI (1978)	AR2-5AT(1/8)	500.0	250.0	250.0	215.0	0.628	0.628	0.000	376.1	376.1	376.1	10	10	0
190	BRI (1978)	AR2-5BH(1/4)	500.0	250.0	250.0	215.0	1.062	1.062	0.000	395.0	395.0	395.0	13	13	0
191	BRI (1978)	AR2-5BH(1/8)	500.0	250.0	250.0	215.0	1.062	1.062	0.000	395.0	395.0	395.0	13	13	0
192	BRI (1978)	AR2-5BT(1/4)	500.0	250.0	250.0	215.0	1.062	1.062	0.000	395.0	395.0	395.0	13	13	0
193	BRI (1978)	AR2-5BT(1/8)	500.0	250.0	250.0	215.0	1.062	1.062	0.000	395.0	395.0	395.0	13	13	0
194	BRI (1978)	CHT1	600.0	400.0	400.0	347.0	0.606	0.606	0.000	358.2	358.2	358.2	19	19	0
195	BRI (1978)	CHT2	800.0	400.0	400.0	347.0	0.606	0.606	0.000	358.2	358.2	358.2	19	19	0
196	BRI (1978)	CHT3	800.0	400.0	400.0	347.0	0.968	0.968	0.000	350.8	350.8	350.8	25	25	0
197	BRI (1978)	CHT4	800.0	400.0	400.0	347.0	0.968	0.968	0.000	350.8	350.8	350.8	25	25	0
198	BRI (1978)	CHT5	800.0	400.0	400.0	347.0	0.968	0.968	0.000	350.8	350.8	350.8	25	25	0
199	BRI (1978)	DWC1	500.0	250.0	250.0	215.0	0.637	0.637	0.000	415.0	415.0	415.0	13	13	0
200	BRI (1978)	DWC10	750.0	250.0	250.0	215.0	0.965	0.965	0.000	398.3	398.3	398.3	16	16	0
201	BRI (1978)	DWC11	750.0	250.0	250.0	215.0	0.637	0.637	0.000	415.0	415.0	415.0	13	13	0
202	BRI (1978)	DWC12	750.0	250.0	250.0	215.0	0.637	0.637	0.000	415.0	415.0	415.0	13	13	0
203	BRI (1978)	DWC2	500.0	250.0	250.0	215.0	0.637	0.637	0.000	415.0	415.0	415.0	13	13	0
204	BRI (1978)	DWC2-13	625.0	250.0	250.0	215.0	0.637	0.637	0.000	410.1	410.1	410.1	13	13	0
205	BRI (1978)	DWC2-14	625.0	250.0	250.0	215.0	0.637	0.637	0.000	394.4	394.4	394.4	13	13	0
206	BRI (1978)	DWC2-15	750.0	250.0	250.0	215.0	0.637	0.637	0.000	410.1	410.1	410.1	13	13	0
207	BRI (1978)	DWC2-16	750.0	250.0	250.0	215.0	0.637	0.637	0.000	394.4	394.4	394.4	13	13	0
208	BRI (1978)	DWC2-17	750.0	250.0	250.0	215.0	0.637	0.637	0.000	397.3	397.3	397.3	13	13	0
209	BRI (1978)	DWC2-18	750.0	250.0	250.0	215.0	0.965	0.965	0.000	397.3	397.3	397.3	16	16	0
210	BRI (1978)	DWC3	625.0	250.0	250.0	215.0	0.637	0.637	0.000	415.0	415.0	415.0	13	13	0
211	BRI (1978)	DWC4	625.0	250.0	250.0	215.0	0.637	0.637	0.000	415.0	415.0	415.0	13	13	0
212	BRI (1978)	DWC5	625.0	250.0	250.0	215.0	0.637	0.637	0.000	415.0	415.0	415.0	13	13	0
213	BRI (1978)	DWC6	625.0	250.0	250.0	215.0	0.637	0.637	0.000	415.0	415.0	415.0	13	13	0
214	BRI (1978)	DWC7	750.0	250.0	250.0	215.0	0.637	0.637	0.000	415.0	415.0	415.0	13	13	0
215	BRI (1978)	DWC8	750.0	250.0	250.0	215.0	0.637	0.637	0.000	415.0	415.0	415.0	13	13	0
216	BRI (1978)	DWC9	750.0	250.0	250.0	215.0	0.965	0.965	0.000	398.3	398.3	398.3	16	16	0
217	BRI (1978)	LE2-1(3A-CL)	250.0	250.0	250.0	215.0	0.377	0.377	0.000	379.9	379.9	379.9	10	10	0
218	BRI (1978)	LE2-2(3A-CL10)	250.0	250.0	250.0	215.0	0.377	0.377	0.000	379.9	379.9	379.9	10	10	0
219	BRI (1978)	LE2-4(3B-AL)	250.0	250.0	250.0	215.0	0.377	0.377	0.000	379.9	379.9	379.9	10	10	0
220	BRI (1978)	LE2-5(3B-CL)	250.0	250.0	250.0	215.0	0.377	0.377	0.000	379.9	379.9	379.9	10	10	0
221	BRI (1978)	LE2-6(3B-CL10)	250.0	250.0	250.0	215.0	0.377	0.377	0.000	379.9	379.9	379.9	10	10	0
222	BRI (1978)	LE2BAL	500.0	250.0	250.0	215.0	0.377	0.377	0.000	405.3	405.3	405.3	10	10	0
223	BRI (1978)	LE2BCL	500.0	250.0	250.0	215.0	0.377	0.377	0.000	405.3	405.3	405.3	10	10	0
224	BRI (1978)	LE6ACL	500.0	250.0	250.0	215.0	0.637	0.637	0.000	414.6	414.6	414.6	13	13	0
225	BRI (1978)	LE6BCL	500.0	250.0	250.0	215.0	0.637	0.637	0.000	414.6	414.6	414.6	13	13	0

226	BRI (1978)	LE7BCL	500.0	250.0	250.0	215.0	0.965	0.965	0.000	387.5	387.5	387.5	16	16	0
227	BRI (1978)	LE8ACL	500.0	250.0	250.0	215.0	0.965	0.965	0.000	387.5	387.5	387.5	16	16	0
228	BRI (1978)	LE8BAL	500.0	250.0	250.0	215.0	0.965	0.965	0.000	387.5	387.5	387.5	16	16	0
229	BRI (1978)	LE8BCL	500.0	250.0	250.0	215.0	0.965	0.965	0.000	387.5	387.5	387.5	16	16	0
230	BRI (1978)	LS0BB	375.0	250.0	250.0	215.0	0.965	0.965	0.000	349.5	349.5	349.5	16	16	0
231	BRI (1978)	LS1AB	375.0	250.0	250.0	215.0	0.637	0.637	0.000	356.6	356.6	356.6	13	13	0
232	BRI (1978)	LS1BB	375.0	250.0	250.0	215.0	0.637	0.637	0.000	356.6	356.6	356.6	13	13	0
233	BRI (1978)	LS2AB	375.0	250.0	250.0	215.0	0.571	0.571	0.000	374.4	374.4	374.4	10	10	0
234	BRI (1978)	LS2BA	375.0	250.0	250.0	215.0	0.571	0.571	0.000	374.4	374.4	374.4	10	10	0
235	BRI (1978)	LS2BB	375.0	250.0	250.0	215.0	0.571	0.571	0.000	374.4	374.4	374.4	10	10	0
236	BRI (1978)	LS3AA	750.0	250.0	250.0	215.0	1.462	1.462	0.000	349.5	349.5	349.5	16	16	0
237	BRI (1978)	LS3AB	750.0	250.0	250.0	215.0	1.462	1.462	0.000	349.5	349.5	349.5	16	16	0
238	BRI (1978)	LS3BA	750.0	250.0	250.0	215.0	1.462	1.462	0.000	349.5	349.5	349.5	16	16	0
239	BRI (1978)	LS3BB	750.0	250.0	250.0	215.0	1.462	1.462	0.000	349.5	349.5	349.5	16	16	0
240	BRI (1978)	LS4AA	750.0	250.0	250.0	215.0	0.965	0.965	0.000	356.6	356.6	356.6	13	13	0
241	BRI (1978)	LS4AB	750.0	250.0	250.0	215.0	0.965	0.965	0.000	356.6	356.6	356.6	13	13	0
242	BRI (1978)	LS4BA	750.0	250.0	250.0	215.0	0.965	0.965	0.000	356.6	356.6	356.6	13	13	0
243	BRI (1978)	NS1-3AP	250.0	250.0	250.0	215.0	0.305	0.305	0.000	392.4	392.4	392.4	9	9	0
244	BRI (1978)	NS1-4AP	500.0	250.0	250.0	215.0	0.305	0.305	0.000	392.4	392.4	392.4	9	9	0
245	BRI (1978)	NS1-5BP	250.0	250.0	250.0	215.0	0.637	0.637	0.000	353.2	353.2	353.2	13	13	0
246	BRI (1978)	NS1-6BP	500.0	250.0	250.0	215.0	0.637	0.637	0.000	353.2	353.2	353.2	13	13	0
247	BRI (1978)	NS1-7BP	500.0	250.0	250.0	215.0	0.965	0.965	0.000	333.5	333.5	333.5	16	16	0
248	BRI (1978)	NS1-8BP	500.0	250.0	250.0	215.0	0.965	0.965	0.000	333.5	333.5	333.5	16	16	0
249	BRI (1978)	NS2-1509	250.0	250.0	250.0	215.0	0.305	0.305	0.000	326.9	326.9	326.9	9	9	0
250	BRI (1978)	NS2-1513	500.0	250.0	250.0	215.0	0.637	0.637	0.000	329.6	329.6	329.6	13	13	0
251	BRI (1978)	NS2-1516	500.0	250.0	250.0	215.0	0.965	0.965	0.000	398.5	398.5	398.5	16	16	0
252	BRI (1978)	NS2-2009	500.0	250.0	250.0	215.0	0.305	0.305	0.000	326.9	326.9	326.9	9	9	0
253	BRI (1978)	NS2-2013	500.0	250.0	250.0	215.0	0.637	0.637	0.000	329.6	329.6	329.6	13	13	0
254	BRI (1978)	NS2-2016	500.0	250.0	250.0	215.0	0.965	0.965	0.000	398.5	398.5	398.5	16	16	0
255	BRI (1978)	WS21BH	250.0	250.0	250.0	215.0	0.377	0.377	0.251	374.7	374.7	374.7	10	10	10
256	BRI (1978)	WS21BS	250.0	250.0	250.0	215.0	0.251	0.251	5.027	374.7	374.7	374.7	10	10	10
257	BRI (1978)	WS21BT	250.0	250.0	250.0	215.0	0.377	0.377	0.251	374.7	374.7	374.7	10	10	10
258	BRI (1978)	WS25BH	250.0	250.0	250.0	215.0	0.637	0.637	0.425	381.6	381.6	381.6	13	13	13
259	BRI (1978)	WS25BS	250.0	250.0	250.0	215.0	0.425	0.425	0.849	381.6	381.6	381.6	13	13	13
260	BRI (1978)	WS25BT	250.0	250.0	250.0	215.0	0.637	0.637	0.425	381.6	381.6	381.6	13	13	13
261	BRI (1978)	WS26BH	500.0	250.0	250.0	215.0	0.637	0.637	0.425	381.6	381.6	381.6	13	13	13
262	BRI (1978)	WS26BT	500.0	250.0	250.0	215.0	0.637	0.637	0.425	381.6	381.6	381.6	13	13	13
263	BRI (1978)	WS27BH	500.0	250.0	250.0	215.0	0.965	0.965	0.643	345.3	345.3	345.3	16	16	16

264	BRI (1978)	WS27BT	500.0	250.0	250.0	215.0	0.965	0.965	0.643	315.9	315.9	315.9	16	16	16
265	Brown and Jirsa (1971)	RV106635	1524.0	152.0	305.0	254.0	1.220	1.220	0.000	317.0	317.0	0.0	19	19	0
266	Brown and Jirsa (1971)	RV108832	1524.0	152.0	305.0	254.0	2.180	2.180	0.000	317.0	317.0	0.0	25.4	25.4	0
267	Brown and Jirsa (1971)	RV108834	762.0	152.0	305.0	254.0	2.180	2.180	0.000	317.0	317.0	0.0	25.4	25.4	0
268	Brown and Jirsa (1971)	RV108835	1524.0	152.0	305.0	254.0	2.180	2.180	0.000	317.0	317.0	0.0	25.4	25.4	0
269	Brown and Jirsa (1971)	RV58834	762.0	152.0	305.0	254.0	2.180	2.180	0.000	317.0	317.0	0.0	25.4	25.4	0
270	Brown and Jirsa (1971)	RV58835	1524.0	152.0	305.0	254.0	2.180	2.180	0.000	317.0	317.0	0.0	25.4	25.4	0
271	Burns and Siess (1966)	J-1	1676.0	203.0	305.0	254.0	1.649	0.000	0.000	328.0	0.0	0.0	25.4	0	0
272	Burns and Siess (1966)	J-10	1676.0	203.0	406.0	355.6	1.235	0.000	0.000	310.7	0.0	0.0	25.4	0	0
273	Burns and Siess (1966)	J-11	1676.0	203.0	305.0	254.0	1.649	0.000	0.000	323.1	0.0	0.0	25.4	0	0
274	Burns and Siess (1966)	J-13	1676.0	203.0	406.0	355.6	1.235	1.235	0.000	314.2	316.9	0.0	25.4	25.4	0
275	Burns and Siess (1966)	J-14	1676.0	203.0	406.0	355.6	1.235	0.692	0.000	324.5	344.5	0.0	25.4	19.05	0
276	Burns and Siess (1966)	J-17	1676.0	203.0	305.0	254.0	1.649	1.649	0.000	323.1	322.5	0.0	25.4	25.4	0
277	Burns and Siess (1966)	J-18	1676.0	152.0	305.0	254.0	2.199	2.199	0.000	312.8	324.5	0.0	25.4	25.4	0
278	Burns and Siess (1966)	J-19	1676.0	203.0	406.0	355.6	1.235	0.000	0.000	315.6	0.0	0.0	25.4	0	0
279	Burns and Siess (1966)	J-2	1676.0	203.0	305.0	254.0	1.649	0.916	0.000	330.7	334.9	0.0	25.4	19.05	0
280	Burns and Siess (1966)	J-20	1676.0	203.0	406.0	355.6	1.235	1.235	0.000	315.6	320.4	0.0	25.4	25.4	0
281	Burns and Siess (1966)	J-21	1676.0	203.0	508.0	457.2	0.990	0.000	0.000	328.0	0.0	0.0	25.4	0	0
282	Burns and Siess (1966)	J-22	1676.0	203.0	508.0	457.2	0.990	0.990	0.000	318.3	319.7	0.0	25.4	25.4	0
283	Burns and Siess (1966)	J-4	1676.0	203.0	508.0	457.2	0.990	0.000	0.000	309.4	0.0	0.0	25.4	0	0
284	Burns and Siess (1966)	J-5	1676.0	203.0	508.0	457.2	0.990	0.549	0.000	310.7	336.9	0.0	25.4	19.05	0
285	Burns and Siess (1966)	J-6	1676.0	203.0	508.0	457.2	0.990	0.990	0.000	318.3	319.7	0.0	25.4	25.4	0
286	Burns and Siess (1966)	J-8	1676.0	203.0	305.0	254.0	1.649	1.649	0.000	312.8	313.5	0.0	25.4	25.4	0
287	Burns and Siess (1966)	J-9	1676.0	203.0	508.0	457.2	0.990	0.000	0.000	323.8	0.0	0.0	25.4	0	0
288	Calvi et al (1993)	S01-1	1000.0	440.0	160.0	140.0	0.557	0.121	0.000	591.8	591.8	0.0	10	6	0
289	Calvi et al (1993)	S01-2	1000.0	440.0	160.0	140.0	0.557	0.121	0.000	591.8	591.8	0.0	10	6	0
290	Calvi et al (1993)	S01-3	1000.0	440.0	160.0	140.0	0.557	0.121	0.000	591.8	591.8	0.0	10	6	0
291	Calvi et al (1993)	S02-1	1000.0	440.0	160.0	140.0	0.557	0.121	0.000	578.0	578.0	0.0	10	6	0
292	Calvi et al (1993)	S02-2	1000.0	440.0	160.0	140.0	0.557	0.121	0.000	578.0	578.0	0.0	10	6	0
293	Calvi et al (1993)	S02-3	1000.0	440.0	160.0	140.0	0.557	0.121	0.000	578.0	578.0	0.0	10	6	0
294	Calvi et al (1993)	S03-1	1000.0	440.0	160.0	140.0	0.557	0.121	0.000	540.9	540.9	0.0	10	6	0
295	Calvi et al (1993)	S03-2	1000.0	440.0	160.0	140.0	0.557	0.121	0.000	540.9	540.9	0.0	10	6	0
296	Calvi et al (1993)	S03-3	1000.0	440.0	160.0	140.0	0.557	0.121	0.000	540.9	540.9	0.0	10	6	0
297	Calvi et al (1993)	S04-1	1000.0	440.0	160.0	140.0	0.200	0.121	0.000	591.8	591.8	0.0	6	6	0
298	Calvi et al (1993)	S04-2	1000.0	440.0	160.0	140.0	0.200	0.121	0.000	591.8	591.8	0.0	6	6	0
299	Calvi et al (1993)	S04-3	1000.0	440.0	160.0	140.0	0.200	0.121	0.000	591.8	591.8	0.0	6	6	0
300	Calvi et al (1993)	S05-1	1000.0	440.0	160.0	140.0	0.200	0.121	0.000	578.0	578.0	0.0	6	6	0
301	Calvi et al (1993)	S05-2	1000.0	440.0	160.0	140.0	0.200	0.121	0.000	578.0	578.0	0.0	6	6	0

302	Calvi et al (1993)	S05-3	1000.0	440.0	160.0	140.0	0.200	0.121	0.000	578.0	578.0	0.0	6	6	0
303	Calvi et al (1993)	S06-1	1000.0	440.0	160.0	140.0	0.200	0.121	0.000	540.9	540.9	0.0	6	6	0
304	Calvi et al (1993)	S06-2	1000.0	440.0	160.0	140.0	0.200	0.121	0.000	540.9	540.9	0.0	6	6	0
305	Calvi et al (1993)	S06-3	1000.0	440.0	160.0	140.0	0.200	0.121	0.000	540.9	540.9	0.0	6	6	0
306	Calvi et al (1993)	S07-1	1000.0	440.0	160.0	140.0	0.335	0.121	0.000	591.8	591.8	0.0	10	6	0
307	Calvi et al (1993)	S07-2	1000.0	440.0	160.0	140.0	0.335	0.121	0.000	591.8	591.8	0.0	10	6	0
308	Calvi et al (1993)	S07-3	1000.0	440.0	160.0	140.0	0.335	0.121	0.000	591.8	591.8	0.0	10	6	0
309	Calvi et al (1993)	S08-1	1000.0	440.0	160.0	140.0	0.335	0.121	0.000	540.9	540.9	0.0	10	6	0
310	Calvi et al (1993)	S08-2	1000.0	440.0	160.0	140.0	0.335	0.121	0.000	540.9	540.9	0.0	10	6	0
311	Calvi et al (1993)	S08-3	1000.0	440.0	160.0	140.0	0.335	0.121	0.000	540.9	540.9	0.0	10	6	0
312	Calvi et al (1993)	S11-1	1000.0	440.0	160.0	140.0	0.200	0.121	0.000	540.9	540.9	0.0	6	6	0
313	Calvi et al (1993)	S11-2	1000.0	440.0	160.0	140.0	0.200	0.121	0.000	540.9	540.9	0.0	6	6	0
314	Calvi et al (1993)	S11-3	1000.0	440.0	160.0	140.0	0.200	0.121	0.000	540.9	540.9	0.0	6	6	0
315	Calvi et al (1993)	S12-1	1000.0	440.0	160.0	140.0	0.200	0.121	0.000	540.9	540.9	0.0	6	6	0
316	Calvi et al (1993)	S12-2	1000.0	440.0	160.0	140.0	0.200	0.121	0.000	540.9	540.9	0.0	6	6	0
317	Calvi et al (1993)	S12-3	1000.0	440.0	160.0	140.0	0.200	0.121	0.000	540.9	540.9	0.0	6	6	0
318	Carvalho and Pipa (1993)	S1-V1	1500.0	200.0	300.0	270.0	0.565	1.131	0.000	548.0	548.0	0.0	12	12	0
319	Carvalho and Pipa (1993)	S1-V2	1500.0	1000.0	300.0	270.0	0.226	0.113	0.000	536.0	536.0	0.0	12	12	0
320	Carvalho and Pipa (1993)	S2-V1	1500.0	200.0	300.0	270.0	0.377	1.131	0.000	548.0	548.0	0.0	12	12	0
321	Carvalho and Pipa (1993)	S2-V2	1500.0	1000.0	300.0	270.0	0.226	0.095	0.000	548.0	548.0	0.0	12	12	0
322	Carvalho and Pipa (1993)	S1-V3	1500.0	200.0	300.0	268.0	1.010	0.505	0.000	548.0	548.0	0.0	12	12	0
323	Carvalho and Pipa (1993)	S1-V4	1500.0	200.0	300.0	268.0	1.010	0.505	0.000	548.0	548.0	0.0	12	12	0
324	Carvalho and Pipa (1993)	S1-V5	1500.0	200.0	300.0	268.0	1.010	0.505	0.000	548.0	548.0	0.0	12	12	0
325	Carvalho and Pipa (1993)	S1-V6	1500.0	200.0	300.0	268.0	1.010	0.505	0.000	548.0	548.0	0.0	12	12	0
326	Carvalho and Pipa (1993)	S2-V3	1500.0	200.0	300.0	268.0	1.010	0.337	0.000	548.0	548.0	0.0	12	12	0
327	Carvalho and Pipa (1993)	S2-V4	1500.0	200.0	300.0	268.0	1.010	0.337	0.000	548.0	548.0	0.0	12	12	0
328	Carvalho and Pipa (1993)	S2-V5	1500.0	200.0	300.0	268.0	1.010	0.337	0.000	548.0	548.0	0.0	12	12	0
329	Carvalho and Pipa (1993)	S2-V6	1500.0	200.0	300.0	268.0	1.010	0.337	0.000	548.0	548.0	0.0	12	12	0
330	Celebi and Penzien (1973)	BEAM1	1828.8	228.6	381.0	330.2	0.889	0.889	0.000	361.6	361.6	0.0	22.225	22.225	0
331	Celebi and Penzien (1973)	BEAM10	1371.6	228.6	381.0	330.2	0.889	0.889	0.000	357.4	357.4	0.0	22.225	22.225	0
332	Celebi and Penzien (1973)	BEAM11	914.4	228.6	381.0	330.2	0.889	0.889	0.000	345.7	345.7	0.0	22.225	22.225	0
333	Celebi and Penzien (1973)	BEAM12	914.4	228.6	381.0	330.2	0.889	0.889	0.000	345.7	345.7	0.0	22.225	22.225	0
334	Celebi and Penzien (1973)	BEAM2	1828.8	228.6	381.0	330.2	0.889	0.889	0.000	361.6	361.6	0.0	22.225	22.225	0
335	Celebi and Penzien (1973)	BEAM4	1828.8	228.6	304.8	254.0	1.108	1.108	0.000	361.6	361.6	0.0	22.225	22.225	0
336	Celebi and Penzien (1973)	BEAM5	1828.8	228.6	381.0	330.2	0.889	0.889	0.000	357.4	357.4	0.0	22.225	22.225	0
337	Celebi and Penzien (1973)	BEAM6	1828.8	228.6	381.0	330.2	0.889	0.889	0.000	357.4	357.4	0.0	22.225	22.225	0
338	Celebi and Penzien (1973)	BEAM7	1371.6	228.6	381.0	330.2	0.889	0.889	0.000	357.4	357.4	0.0	22.225	22.225	0
339	Celebi and Penzien (1973)	BEAM8	1371.6	228.6	381.0	330.2	0.889	0.889	0.000	357.4	357.4	0.0	22.225	22.225	0

340	Celebi and Penzien (1973)	BEAM9	1371.6	228.6	381.0	330.2	0.889	0.889	0.000	357.4	357.4	0.0	22.225	22.225	0
341	Corley (1966)	J1	440.0	75.0	150.0	125.0	1.704	1.228	0.000	482.3	547.8	0.0	16	10	0
342	Corley (1966)	J11	445.0	75.0	150.0	125.0	1.704	1.228	0.000	482.3	547.8	0.0	16	10	0
343	Corley (1966)	J2	895.0	75.0	150.0	125.0	1.704	1.228	0.000	477.5	545.0	0.0	16	10	0
344	Corley (1966)	J21	895.0	75.0	150.0	125.0	1.704	1.228	0.000	477.5	545.0	0.0	16	10	0
345	Corley (1966)	J3	440.0	75.0	150.0	125.0	2.182	1.228	0.000	552.6	541.6	0.0	13	10	0
346	Corley (1966)	J4	895.0	75.0	150.0	125.0	2.182	1.228	0.000	554.7	538.8	0.0	13	10	0
347	Corley (1966)	J41	895.0	75.0	150.0	125.0	2.182	1.228	0.000	552.6	538.8	0.0	13	10	0
348	Corley (1966)	J42	895.0	75.0	150.0	125.0	2.182	1.228	0.000	554.7	526.4	0.0	13	10	0
349	Corley (1966)	J5	440.0	75.0	150.0	125.0	2.454	1.228	0.000	470.6	541.6	0.0	19	10	0
350	Corley (1966)	J6	895.0	75.0	150.0	125.0	2.454	1.228	0.000	478.9	532.6	0.0	19	10	0
351	Corley (1966)	J61	900.0	75.0	150.0	125.0	2.454	1.228	0.000	474.7	532.6	0.0	19	10	0
352	Corley (1966)	K1	875.0	75.0	280.0	255.0	1.862	0.670	0.000	471.3	492.6	0.0	16	10	0
353	Corley (1966)	K10	1790.0	305.0	280.0	255.0	1.164	0.168	0.000	476.8	485.8	0.0	16	10	0
354	Corley (1966)	K11	875.0	305.0	280.0	255.0	1.677	0.168	0.000	476.8	492.6	0.0	16	10	0
355	Corley (1966)	K12	1790.0	305.0	280.0	255.0	1.677	0.168	0.000	478.9	492.6	0.0	16	10	0
356	Corley (1966)	K2	1790.0	75.0	280.0	255.0	1.862	0.670	0.000	460.2	480.2	0.0	16	10	0
357	Corley (1966)	K3	875.0	75.0	280.0	255.0	2.682	0.670	0.000	478.9	481.6	0.0	16	10	0
358	Corley (1966)	K4	1790.0	75.0	280.0	255.0	2.682	0.670	0.000	464.4	492.0	0.0	16	10	0
359	Corley (1966)	K5	875.0	230.0	280.0	255.0	1.242	0.223	0.000	458.2	482.3	0.0	16	10	0
360	Corley (1966)	K51	875.0	230.0	280.0	255.0	1.242	0.223	0.000	471.3	526.4	0.0	16	10	0
361	Corley (1966)	K6	1790.0	230.0	280.0	255.0	1.242	0.223	0.000	466.5	485.8	0.0	16	10	0
362	Corley (1966)	K7	875.0	230.0	280.0	255.0	1.788	0.223	0.000	466.5	482.3	0.0	19	10	0
363	Corley (1966)	K8	1790.0	230.0	280.0	255.0	1.788	0.223	0.000	459.6	478.9	0.0	19	10	0
364	Corley (1966)	K9	875.0	305.0	280.0	255.0	1.164	0.168	0.000	479.5	477.5	0.0	16	10	0
365	Corley (1966)	M1	1790.0	230.0	650.0	610.0	1.151	0.096	0.000	447.8	485.8	0.0	19	10	0
366	Corley (1966)	M2	3010.0	230.0	650.0	610.0	1.151	0.096	0.000	443.7	485.8	0.0	19	10	0
367	Corley (1966)	M3	1790.0	230.0	650.0	610.0	1.567	0.096	0.000	437.7	483.7	0.0	22	10	0
368	Corley (1966)	M4	3010.0	230.0	650.0	610.0	1.567	0.096	0.000	436.8	483.7	0.0	22	10	0
369	Corley (1966)	M5	1790.0	305.0	650.0	610.0	1.151	0.072	0.000	447.2	488.5	0.0	19	10	0
370	Corley (1966)	M6	3010.0	305.0	650.0	610.0	1.151	0.072	0.000	441.7	488.5	0.0	19	10	0
371	Corley (1966)	M7	1790.0	305.0	650.0	610.0	1.763	0.072	0.000	436.4	486.4	0.0	22	10	0
372	Corley (1966)	M8	3010.0	305.0	650.0	610.0	1.763	0.072	0.000	440.3	486.4	0.0	22	10	0
373	Corley (1966)	N1	2045.0	230.0	800.0	760.0	1.481	0.078	0.000	428.3	482.3	0.0	22	10	0
374	Corley (1966)	N2	4155.0	230.0	800.0	760.0	1.481	0.078	0.000	423.1	480.2	0.0	22	10	0
375	Corley (1966)	N3	2045.0	230.0	800.0	760.0	1.658	0.078	0.000	423.1	482.3	0.0	19	10	0
376	Corley (1966)	N4	4155.0	230.0	800.0	760.0	1.658	0.078	0.000	420.3	492.6	0.0	19	10	0
377	Corley (1966)	N5	2045.0	305.0	800.0	760.0	1.036	0.058	0.000	424.4	477.5	0.0	19	10	0

378	Corley (1966)	N6	4155.0	305.0	800.0	760.0	1.036	0.058	0.000	429.3	472.0	0.0	19	10	0
379	Corley (1966)	N7	2045.0	305.0	800.0	760.0	1.658	0.058	0.000	423.1	482.3	0.0	19	10	0
380	Corley (1966)	N8	4155.0	305.0	800.0	760.0	1.658	0.058	0.000	426.5	480.2	0.0	19	10	0
381	Dazio, Wenk and Bachmann (1999)	WSH1	4560.0	150.0	2000.0	1900.0	0.146	0.146	0.226	547.1	547.1	615.8	10	10	6
382	Dazio, Wenk and Bachmann (1999)	WSH2	4560.0	150.0	2000.0	1900.0	0.146	0.146	0.226	574.6	574.6	485.7	10	10	6
383	Dazio, Wenk and Bachmann (1999)	WSH3	4560.0	150.0	2000.0	1870.0	0.202	0.202	0.369	580.3	580.3	527.9	12	12	8
384	Dazio, Wenk and Bachmann (1999)	WSH4	4560.0	150.0	2000.0	1870.0	0.202	0.202	0.369	531.0	531.0	543.9	12	12	8
385	Dazio, Wenk and Bachmann (1999)	WSH5	4560.0	150.0	2000.0	1870.0	0.088	0.088	0.189	543.9	543.9	488.6	8	8	6
386	Dazio, Wenk and Bachmann (1999)	WSH6	4520.0	150.0	2000.0	1866.8	0.231	0.231	0.302	531.0	531.0	543.9	12	12	8
387	De Stefano and Sabia (1989)	T1	950.0	250.0	250.0	230.0	0.644	0.644	0.000	480.0	480.0	0.0	16	16	0
388	De Stefano and Sabia (1989)	T2	950.0	250.0	250.0	230.0	0.644	0.644	0.000	480.0	480.0	0.0	16	16	0
389	De Stefano and Sabia (1989)	T3	950.0	250.0	250.0	230.0	0.644	0.644	0.000	480.0	480.0	0.0	16	16	0
390	De Stefano and Sabia (1989)	T4	950.0	250.0	250.0	230.0	0.644	0.644	0.000	480.0	480.0	0.0	16	16	0
391	De Stefano and Sabia (1989)	T5	950.0	250.0	250.0	230.0	0.644	0.644	0.000	480.0	480.0	0.0	16	16	0
392	De Stefano and Sabia (1989)	T6	950.0	250.0	250.0	230.0	0.644	0.644	0.000	480.0	480.0	0.0	16	16	0
393	De Stefano and Sabia (1989)	T7	950.0	250.0	250.0	230.0	0.644	0.644	0.000	480.0	480.0	0.0	16	16	0
394	De Stefano and Sabia (1989)	T8	950.0	250.0	250.0	230.0	0.644	0.644	0.000	480.0	480.0	0.0	16	16	0
395	Ernst (1956)	G1-12F	1219.2	152.4	304.8	254.0	4.142	0.307	0.000	305.2	313.5	0.0	28.575	9.525	0
396	Ernst (1956)	G1-12S	1219.2	152.4	304.8	254.0	4.142	0.307	0.000	305.2	313.5	0.0	28.575	9.525	0
397	Ernst (1956)	G1-18F	1143.0	152.4	304.8	254.0	4.142	0.307	0.000	305.2	313.5	0.0	28.575	9.525	0
398	Ernst (1956)	G1-18S	1143.0	152.4	304.8	254.0	4.142	0.307	0.000	305.2	313.5	0.0	28.575	9.525	0
399	Ernst (1956)	G1-24F	1066.8	152.4	304.8	254.0	4.142	0.307	0.000	305.2	313.5	0.0	28.575	9.525	0
400	Ernst (1956)	G1-24S	1066.8	152.4	304.8	254.0	4.142	0.307	0.000	305.2	313.5	0.0	28.575	9.525	0
401	Ernst (1956)	G1-36F	914.4	152.4	304.8	254.0	4.142	0.307	0.000	310.1	313.5	0.0	28.575	9.525	0
402	Ernst (1956)	G1-36S	914.4	152.4	304.8	254.0	4.142	0.307	0.000	305.2	313.5	0.0	28.575	9.525	0
403	Ernst (1956)	G1-6F	1295.4	152.4	304.8	254.0	4.142	0.307	0.000	305.2	313.5	0.0	28.575	9.525	0
404	Ernst (1956)	G1-6S	1295.4	152.4	304.8	254.0	4.142	0.307	0.000	305.2	313.5	0.0	28.575	9.525	0
405	Ernst (1956)	G2-12F	1219.2	152.4	304.8	254.0	2.505	0.307	0.000	310.1	313.5	0.0	22.225	9.525	0
406	Ernst (1956)	G2-12S	1219.2	152.4	304.8	254.0	2.505	0.307	0.000	310.1	313.5	0.0	22.225	9.525	0
407	Ernst (1956)	G2-18F	1143.0	152.4	304.8	254.0	2.505	0.307	0.000	310.1	313.5	0.0	22.225	9.525	0
408	Ernst (1956)	G2-18S	1143.0	152.4	304.8	254.0	2.505	0.307	0.000	310.1	313.5	0.0	22.225	9.525	0
409	Ernst (1956)	G2-24F	1066.8	152.4	304.8	254.0	2.505	0.307	0.000	310.1	313.5	0.0	22.225	9.525	0
410	Ernst (1956)	G2-24S	1066.8	152.4	304.8	254.0	2.505	0.307	0.000	310.1	313.5	0.0	22.225	9.525	0
411	Ernst (1956)	G2-36F	914.4	152.4	304.8	254.0	2.505	0.307	0.000	327.3	313.5	0.0	22.225	9.525	0
412	Ernst (1956)	G2-36S	914.4	152.4	304.8	254.0	2.505	0.307	0.000	310.1	313.5	0.0	22.225	9.525	0
413	Ernst (1956)	G2-6F	1295.4	152.4	304.8	254.0	2.505	0.307	0.000	310.1	313.5	0.0	22.225	9.525	0
414	Ernst (1956)	G2-6S	1295.4	152.4	304.8	254.0	2.505	0.307	0.000	310.1	313.5	0.0	22.225	9.525	0
415	Ernst (1956)	G3-12F	1219.2	152.4	304.8	254.0	0.852	0.307	0.000	327.3	313.5	0.0	15.875	9.525	0

416	Ernst (1956)	G3-12S	1219.2	152.4	304.8	254.0	0.852	0.307	0.000	327.3	313.5	0.0	15.875	9.525	0
417	Ernst (1956)	G3-18F	1143.0	152.4	304.8	254.0	0.852	0.307	0.000	327.3	313.5	0.0	15.875	9.525	0
418	Ernst (1956)	G3-18S	1143.0	152.4	304.8	254.0	0.852	0.307	0.000	327.3	313.5	0.0	15.875	9.525	0
419	Ernst (1956)	G3-24F	1066.8	152.4	304.8	254.0	0.852	0.307	0.000	327.3	313.5	0.0	15.875	9.525	0
420	Ernst (1956)	G3-24S	1066.8	152.4	304.8	254.0	0.852	0.307	0.000	327.3	313.5	0.0	15.875	9.525	0
421	Ernst (1956)	G3-36F	914.4	152.4	304.8	254.0	0.852	0.307	0.000	327.3	313.5	0.0	15.875	9.525	0
422	Ernst (1956)	G3-36S	914.4	152.4	304.8	254.0	0.852	0.307	0.000	305.2	313.5	0.0	15.875	9.525	0
423	Ernst (1956)	G3-6F	1295.4	152.4	304.8	254.0	0.852	0.307	0.000	327.3	313.5	0.0	15.875	9.525	0
424	Ernst (1956)	G3-6S	1295.4	152.4	304.8	254.0	0.852	0.307	0.000	327.3	313.5	0.0	15.875	9.525	0
425	Fang et al (1994)	LB 1-1	1150.0	200.0	400.0	337.0	0.990	0.495	0.000	540.0	540.0	0.0	15.9	15.9	0
426	Fang et al (1994)	LB 1-10	1150.0	200.0	400.0	337.0	0.990	0.495	0.000	540.0	540.0	0.0	15.9	15.9	0
427	Fang et al (1994)	LB 1-2	1150.0	200.0	400.0	337.0	0.990	0.495	0.000	540.0	540.0	0.0	15.9	15.9	0
428	Fang et al (1994)	LB 1-3	1150.0	200.0	400.0	337.0	0.990	0.495	0.000	540.0	540.0	0.0	15.9	15.9	0
429	Fang et al (1994)	LB 1-4	1150.0	200.0	400.0	337.0	0.990	0.990	0.000	540.0	540.0	0.0	15.9	15.9	0
430	Fang et al (1994)	LB 1-5	1150.0	200.0	400.0	337.0	0.990	0.990	0.000	540.0	540.0	0.0	15.9	15.9	0
431	Fang et al (1994)	LB 1-6	1150.0	200.0	400.0	337.0	0.990	0.495	0.000	540.0	540.0	0.0	15.9	15.9	0
432	Fang et al (1994)	LB 1-7	1150.0	200.0	400.0	337.0	0.990	0.495	0.000	540.0	540.0	0.0	15.9	15.9	0
433	Fang et al (1994)	LB 2-1	850.0	200.0	400.0	337.0	0.990	0.495	0.000	540.0	540.0	0.0	15.9	15.9	0
434	Fang et al (1994)	LB 2-2	850.0	200.0	400.0	337.0	0.990	0.495	0.000	540.0	540.0	0.0	15.9	15.9	0
435	Fang et al (1994)	LB 2-3	850.0	200.0	400.0	337.0	0.990	0.495	0.000	540.0	540.0	0.0	15.9	15.9	0
436	Fang et al (1994)	LB 2-4	850.0	200.0	400.0	337.0	0.990	0.990	0.000	540.0	540.0	0.0	15.9	15.9	0
437	Fang et al (1994)	LB 2-5	850.0	200.0	400.0	337.0	0.990	0.990	0.000	540.0	540.0	0.0	15.9	15.9	0
438	Fang et al (1994)	LB 2-6	850.0	200.0	400.0	337.0	0.990	0.495	0.000	540.0	540.0	0.0	15.9	15.9	0
439	Fang et al (1994)	LB 2-8	850.0	200.0	400.0	337.0	0.990	0.495	0.000	540.0	540.0	0.0	15.9	15.9	0
440	Galeota et al. (1996)	AA1	1140.0	250.0	250.0	220.0	0.500	0.500	0.500	430.0	430.0	430.0	10	10	10
441	Galeota et al. (1996)	AA2	1140.0	250.0	250.0	220.0	0.500	0.500	0.500	430.0	430.0	430.0	10	10	10
442	Galeota et al. (1996)	AA3	1140.0	250.0	250.0	220.0	0.500	0.500	0.500	430.0	430.0	430.0	10	10	10
443	Galeota et al. (1996)	AA4	1140.0	250.0	250.0	220.0	0.500	0.500	0.500	430.0	430.0	430.0	10	10	10
444	Galeota et al. (1996)	AB1	1140.0	250.0	250.0	220.0	2.000	2.000	2.000	430.0	430.0	430.0	20	20	20
445	Galeota et al. (1996)	AB2	1140.0	250.0	250.0	220.0	2.000	2.000	2.000	430.0	430.0	430.0	20	20	20
446	Galeota et al. (1996)	AB3	1140.0	250.0	250.0	220.0	2.000	2.000	2.000	430.0	430.0	430.0	20	20	20
447	Galeota et al. (1996)	AB4	1140.0	250.0	250.0	220.0	2.000	2.000	2.000	430.0	430.0	430.0	20	20	20
448	Galeota et al. (1996)	BA1	1140.0	250.0	250.0	220.0	0.500	0.500	0.500	430.0	430.0	430.0	10	10	10
449	Galeota et al. (1996)	BA2	1140.0	250.0	250.0	220.0	0.500	0.500	0.500	430.0	430.0	430.0	10	10	10
450	Galeota et al. (1996)	BA3	1140.0	250.0	250.0	220.0	0.500	0.500	0.500	430.0	430.0	430.0	10	10	10
451	Galeota et al. (1996)	BA4	1140.0	250.0	250.0	220.0	0.500	0.500	0.500	430.0	430.0	430.0	10	10	10
452	Galeota et al. (1996)	BB1	1140.0	250.0	250.0	220.0	2.000	2.000	2.000	430.0	430.0	430.0	20	20	20
453	Galeota et al. (1996)	BB4	1140.0	250.0	250.0	220.0	2.000	2.000	2.000	430.0	430.0	430.0	20	20	20

454	Galeota et al. (1996)	BB4B	1140.0	250.0	250.0	220.0	2.000	2.000	2.000	430.0	430.0	430.0	20	20	20
455	Galeota et al. (1996)	CA1	1140.0	250.0	250.0	220.0	0.500	0.500	0.500	430.0	430.0	430.0	10	10	10
456	Galeota et al. (1996)	CA2	1140.0	250.0	250.0	220.0	0.500	0.500	0.500	430.0	430.0	430.0	10	10	10
457	Galeota et al. (1996)	CA3	1140.0	250.0	250.0	220.0	0.500	0.500	0.500	430.0	430.0	430.0	10	10	10
458	Galeota et al. (1996)	CA4	1140.0	250.0	250.0	220.0	0.500	0.500	0.500	430.0	430.0	430.0	10	10	10
459	Galeota et al. (1996)	CB1	1140.0	250.0	250.0	220.0	2.000	2.000	2.000	430.0	430.0	430.0	20	20	20
460	Galeota et al. (1996)	CB2	1140.0	250.0	250.0	220.0	2.000	2.000	2.000	430.0	430.0	430.0	20	20	20
461	Galeota et al. (1996)	CB3	1140.0	250.0	250.0	220.0	2.000	2.000	2.000	430.0	430.0	430.0	20	20	20
462	Galeota et al. (1996)	CB4	1140.0	250.0	250.0	220.0	2.000	2.000	2.000	430.0	430.0	430.0	20	20	20
463	Galeota et al. (1996)	BB2	1140.0	250.0	250.0	220.0	2.000	2.000	2.000	430.0	430.0	430.0	20	20	20
464	Garstka et al (1993)	SBV1	500.0	300.0	300.0	270.0	0.754	0.754	0.000	566.0	566.0	0.0	12	12	0
465	Garstka et al (1993)	SBV2	600.0	300.0	300.0	270.0	0.754	0.754	0.000	566.0	566.0	0.0	12	12	0
466	Garstka et al (1993)	SBV3	700.0	300.0	300.0	270.0	0.754	0.754	0.000	566.0	566.0	0.0	12	12	0
467	Gill et al. (1979)	NO. 1	1200.0	550.0	550.0	500.0	0.598	0.598	0.598	375.0	375.0	375.0	24	24	24
468	Gill et al. (1979)	NO. 2	1200.0	550.0	550.0	500.0	0.598	0.598	0.598	375.0	375.0	375.0	24	24	24
469	Gill et al. (1979)	NO. 3	1200.0	550.0	550.0	500.0	0.598	0.598	0.598	375.0	375.0	375.0	24	24	24
470	Gill et al. (1979)	NO. 4	1200.0	550.0	550.0	500.0	0.598	0.598	0.598	375.0	375.0	375.0	24	24	24
471	Goodfellow and Elnashai (2000)	1	1250.0	250.0	250.0	225.0	0.965	0.965	0.643	540.0	540.0	540.0	16	16	16
472	Goodfellow and Elnashai (2000)	2	1250.0	250.0	250.0	225.0	0.965	0.965	0.643	540.0	540.0	540.0	16	16	16
473	Goodfellow and Elnashai (2000)	3	1250.0	250.0	250.0	225.0	0.965	0.965	0.643	540.0	540.0	540.0	16	16	16
474	Goodfellow and Elnashai (2000)	4	1250.0	250.0	250.0	225.0	0.965	0.965	0.643	540.0	540.0	540.0	16	16	16
475	Goodfellow and Elnashai (2000)	5	1250.0	250.0	250.0	225.0	0.965	0.965	0.643	540.0	540.0	540.0	16	16	16
476	Goodfellow and Elnashai (2000)	6	1250.0	250.0	250.0	225.0	0.965	0.965	0.643	540.0	540.0	540.0	16	16	16
477	Goodfellow and Elnashai (2000)	7	1250.0	250.0	250.0	225.0	1.361	1.361	0.907	729.0	729.0	729.0	19	19	19
478	Goodfellow and Elnashai (2000)	8	1250.0	250.0	250.0	225.0	1.361	1.361	0.907	729.0	729.0	729.0	19	19	19
479	Goodfellow and Elnashai (2000)	9	1250.0	250.0	250.0	225.0	1.361	1.361	0.907	729.0	729.0	729.0	19	19	19
480	Goodfellow and Elnashai (2000)	10	1250.0	250.0	250.0	225.0	1.361	1.361	0.907	729.0	729.0	729.0	19	19	19
481	Goodfellow and Elnashai (2000)	11	1250.0	250.0	250.0	225.0	1.361	1.361	0.907	729.0	729.0	729.0	19	19	19
482	Goodfellow and Elnashai (2000)	12	1250.0	250.0	250.0	225.0	1.361	1.361	0.907	729.0	729.0	729.0	19	19	19
483	Goodfellow and Elnashai (2000)	13	1250.0	250.0	250.0	225.0	0.965	0.965	0.643	815.0	815.0	815.0	16	16	16
484	Goodfellow and Elnashai (2000)	14	1250.0	250.0	250.0	225.0	0.965	0.965	0.643	815.0	815.0	815.0	16	16	16
485	Goodfellow and Elnashai (2000)	15	1250.0	250.0	250.0	225.0	0.965	0.965	0.643	815.0	815.0	815.0	16	16	16
486	Goodfellow and Elnashai (2000)	16	1250.0	250.0	250.0	225.0	0.965	0.965	0.643	815.0	815.0	815.0	16	16	16
487	Goodfellow and Elnashai (2000)	17	1250.0	250.0	250.0	225.0	0.965	0.965	0.643	815.0	815.0	815.0	16	16	16
488	Goodfellow and Elnashai (2000)	18	1250.0	250.0	250.0	225.0	0.965	0.965	0.643	815.0	815.0	815.0	16	16	16
489	Goodfellow and Elnashai (2000)	19	1250.0	250.0	250.0	225.0	0.965	0.965	0.643	851.0	851.0	851.0	16	16	16
490	Goodfellow and Elnashai (2000)	20	1250.0	250.0	250.0	225.0	0.965	0.965	0.643	851.0	851.0	851.0	16	16	16
491	Goodfellow and Elnashai (2000)	21	1250.0	250.0	250.0	225.0	0.965	0.965	0.643	851.0	851.0	851.0	16	16	16

492	Goodfellow and Elnashai (2000)	22	1250.0	250.0	250.0	225.0	0.965	0.965	0.643	851.0	851.0	851.0	16	16	16
493	Goodfellow and Elnashai (2000)	23	1250.0	250.0	250.0	225.0	0.965	0.965	0.643	851.0	851.0	851.0	16	16	16
494	Goodfellow and Elnashai (2000)	24	1250.0	250.0	250.0	225.0	0.965	0.965	0.643	851.0	851.0	851.0	16	16	16
495	Goodfellow and Elnashai (2000)	25	1250.0	250.0	250.0	225.0	0.647	0.647	0.431	1204.0	1204.0	1204.0	13.1	13.1	13.1
496	Goodfellow and Elnashai (2000)	26	1250.0	250.0	250.0	225.0	0.647	0.647	0.431	1204.0	1204.0	1204.0	13.1	13.1	13.1
497	Goodfellow and Elnashai (2000)	27	1250.0	250.0	250.0	225.0	0.647	0.647	0.431	1204.0	1204.0	1204.0	13.1	13.1	13.1
498	Goodfellow and Elnashai (2000)	29	1250.0	250.0	250.0	225.0	0.647	0.647	0.431	1204.0	1204.0	1204.0	13.1	13.1	13.1
499	Goodfellow and Elnashai (2000)	30	1250.0	250.0	250.0	225.0	0.647	0.647	0.431	1204.0	1204.0	1204.0	13.1	13.1	13.1
500	Goodfellow and Elnashai (2000)	31	1250.0	250.0	250.0	225.0	0.965	0.965	0.643	540.0	540.0	540.0	16	16	16
501	Goodfellow and Elnashai (2000)	32	1250.0	250.0	250.0	225.0	0.965	0.965	0.643	540.0	540.0	540.0	16	16	16
502	Goodfellow and Elnashai (2000)	33	1250.0	250.0	250.0	225.0	0.965	0.965	0.643	540.0	540.0	540.0	16	16	16
503	Goodfellow and Elnashai (2000)	34	1250.0	250.0	250.0	225.0	0.965	0.965	0.643	540.0	540.0	540.0	16	16	16
504	Goodfellow and Elnashai (2000)	35	1250.0	250.0	250.0	225.0	0.965	0.965	0.643	540.0	540.0	540.0	16	16	16
505	Goodfellow and Elnashai (2000)	36	1250.0	250.0	250.0	225.0	0.965	0.965	0.643	540.0	540.0	540.0	16	16	16
506	Goodfellow and Elnashai (2000)	37	1250.0	250.0	250.0	225.0	1.361	1.361	0.907	729.0	729.0	729.0	19	19	19
507	Goodfellow and Elnashai (2000)	38	1250.0	250.0	250.0	225.0	1.361	1.361	0.907	729.0	729.0	729.0	19	19	19
508	Goodfellow and Elnashai (2000)	39	1250.0	250.0	250.0	225.0	1.361	1.361	0.907	729.0	729.0	729.0	19	19	19
509	Goodfellow and Elnashai (2000)	40	1250.0	250.0	250.0	225.0	1.361	1.361	0.907	729.0	729.0	729.0	19	19	19
510	Goodfellow and Elnashai (2000)	41	1250.0	250.0	250.0	225.0	1.361	1.361	0.907	729.0	729.0	729.0	19	19	19
511	Goodfellow and Elnashai (2000)	42	1250.0	250.0	250.0	225.0	1.361	1.361	0.907	729.0	729.0	729.0	19	19	19
512	Goodfellow and Elnashai (2000)	43	1250.0	250.0	250.0	225.0	0.965	0.965	0.643	815.0	815.0	815.0	16	16	16
513	Goodfellow and Elnashai (2000)	44	1250.0	250.0	250.0	225.0	0.965	0.965	0.643	815.0	815.0	815.0	16	16	16
514	Goodfellow and Elnashai (2000)	45	1250.0	250.0	250.0	225.0	0.965	0.965	0.643	815.0	815.0	815.0	16	16	16
515	Goodfellow and Elnashai (2000)	46	1250.0	250.0	250.0	225.0	0.965	0.965	0.643	815.0	815.0	815.0	16	16	16
516	Goodfellow and Elnashai (2000)	47	1250.0	250.0	250.0	225.0	0.965	0.965	0.643	815.0	815.0	815.0	16	16	16
517	Goodfellow and Elnashai (2000)	48	1250.0	250.0	250.0	225.0	0.965	0.965	0.643	815.0	815.0	815.0	16	16	16
518	Goodfellow and Elnashai (2000)	49	1250.0	250.0	250.0	225.0	0.965	0.965	0.643	851.0	851.0	851.0	16	16	16
519	Goodfellow and Elnashai (2000)	50	1250.0	250.0	250.0	225.0	0.965	0.965	0.643	851.0	851.0	851.0	16	16	16
520	Goodfellow and Elnashai (2000)	51	1250.0	250.0	250.0	225.0	0.965	0.965	0.643	851.0	851.0	851.0	16	16	16
521	Goodfellow and Elnashai (2000)	52	1250.0	250.0	250.0	225.0	0.965	0.965	0.643	851.0	851.0	851.0	16	16	16
522	Goodfellow and Elnashai (2000)	53	1250.0	250.0	250.0	225.0	0.965	0.965	0.643	851.0	851.0	851.0	16	16	16
523	Goodfellow and Elnashai (2000)	54	1250.0	250.0	250.0	225.0	0.965	0.965	0.643	851.0	851.0	851.0	16	16	16
524	Goodfellow and Elnashai (2000)	55	1250.0	250.0	250.0	225.0	0.647	0.647	0.431	1204.0	1204.0	1204.0	13.1	13.1	13.1
525	Goodfellow and Elnashai (2000)	56	1250.0	250.0	250.0	225.0	0.647	0.647	0.431	1204.0	1204.0	1204.0	13.1	13.1	13.1
526	Goodfellow and Elnashai (2000)	57	1250.0	250.0	250.0	225.0	0.647	0.647	0.431	1204.0	1204.0	1204.0	13.1	13.1	13.1
527	Goodfellow and Elnashai (2000)	59	1250.0	250.0	250.0	225.0	0.647	0.647	0.431	1204.0	1204.0	1204.0	13.1	13.1	13.1
528	Goodfellow and Elnashai (2000)	60	1250.0	250.0	250.0	225.0	0.647	0.647	0.431	1204.0	1204.0	1204.0	13.1	13.1	13.1
529	Goodfellow and Elnashai (2000)	61	1250.0	250.0	250.0	225.0	0.965	0.965	0.643	540.0	540.0	540.0	16	16	16

530	Goodfellow and Elnashai (2000)	62	1250.0	250.0	250.0	225.0	0.965	0.965	0.643	540.0	540.0	540.0	16	16	16
531	Goodfellow and Elnashai (2000)	63	1250.0	250.0	250.0	225.0	0.965	0.965	0.643	540.0	540.0	540.0	16	16	16
532	Goodfellow and Elnashai (2000)	64	1250.0	250.0	250.0	225.0	0.965	0.965	0.643	540.0	540.0	540.0	16	16	16
533	Goodfellow and Elnashai (2000)	65	1250.0	250.0	250.0	225.0	0.965	0.965	0.643	540.0	540.0	540.0	16	16	16
534	Goodfellow and Elnashai (2000)	66	1250.0	250.0	250.0	225.0	0.965	0.965	0.643	540.0	540.0	540.0	16	16	16
535	Goodfellow and Elnashai (2000)	67	1250.0	250.0	250.0	225.0	1.361	1.361	0.907	729.0	729.0	729.0	19	19	19
536	Goodfellow and Elnashai (2000)	68	1250.0	250.0	250.0	225.0	1.361	1.361	0.907	729.0	729.0	729.0	19	19	19
537	Goodfellow and Elnashai (2000)	69	1250.0	250.0	250.0	225.0	1.361	1.361	0.907	729.0	729.0	729.0	19	19	19
538	Goodfellow and Elnashai (2000)	70	1250.0	250.0	250.0	225.0	1.361	1.361	0.907	729.0	729.0	729.0	19	19	19
539	Goodfellow and Elnashai (2000)	71	1250.0	250.0	250.0	225.0	1.361	1.361	0.907	729.0	729.0	729.0	19	19	19
540	Goodfellow and Elnashai (2000)	72	1250.0	250.0	250.0	225.0	1.361	1.361	0.907	729.0	729.0	729.0	19	19	19
541	Goodfellow and Elnashai (2000)	73	1250.0	250.0	250.0	225.0	0.965	0.965	0.643	815.0	815.0	815.0	16	16	16
542	Goodfellow and Elnashai (2000)	74	1250.0	250.0	250.0	225.0	0.965	0.965	0.643	815.0	815.0	815.0	16	16	16
543	Goodfellow and Elnashai (2000)	75	1250.0	250.0	250.0	225.0	0.965	0.965	0.643	815.0	815.0	815.0	16	16	16
544	Goodfellow and Elnashai (2000)	76	1250.0	250.0	250.0	225.0	0.965	0.965	0.643	815.0	815.0	815.0	16	16	16
545	Goodfellow and Elnashai (2000)	77	1250.0	250.0	250.0	225.0	0.965	0.965	0.643	815.0	815.0	815.0	16	16	16
546	Goodfellow and Elnashai (2000)	78	1250.0	250.0	250.0	225.0	0.965	0.965	0.643	815.0	815.0	815.0	16	16	16
547	Goodfellow and Elnashai (2000)	79	1250.0	250.0	250.0	225.0	0.965	0.965	0.643	851.0	851.0	851.0	16	16	16
548	Goodfellow and Elnashai (2000)	80	1250.0	250.0	250.0	225.0	0.965	0.965	0.643	851.0	851.0	851.0	16	16	16
549	Goodfellow and Elnashai (2000)	81	1250.0	250.0	250.0	225.0	0.965	0.965	0.643	851.0	851.0	851.0	16	16	16
550	Goodfellow and Elnashai (2000)	82	1250.0	250.0	250.0	225.0	0.965	0.965	0.643	851.0	851.0	851.0	16	16	16
551	Goodfellow and Elnashai (2000)	83	1250.0	250.0	250.0	225.0	0.965	0.965	0.643	851.0	851.0	851.0	16	16	16
552	Goodfellow and Elnashai (2000)	84	1250.0	250.0	250.0	225.0	0.965	0.965	0.643	851.0	851.0	851.0	16	16	16
553	Goodfellow and Elnashai (2000)	85	1250.0	250.0	250.0	225.0	0.647	0.647	0.431	1204.0	1204.0	1204.0	13.1	13.1	13.1
554	Goodfellow and Elnashai (2000)	86	1250.0	250.0	250.0	225.0	0.647	0.647	0.431	1204.0	1204.0	1204.0	13.1	13.1	13.1
555	Goodfellow and Elnashai (2000)	87	1250.0	250.0	250.0	225.0	0.647	0.647	0.431	1204.0	1204.0	1204.0	13.1	13.1	13.1
556	Goodfellow and Elnashai (2000)	89	1250.0	250.0	250.0	225.0	0.647	0.647	0.431	1204.0	1204.0	1204.0	13.1	13.1	13.1
557	Goodfellow and Elnashai (2000)	90	1250.0	250.0	250.0	225.0	0.647	0.647	0.431	1204.0	1204.0	1204.0	13.1	13.1	13.1
558	Goodfellow and Elnashai (2000)	91	1250.0	250.0	250.0	225.0	0.965	0.965	0.643	540.0	540.0	540.0	16	16	16
559	Goodfellow and Elnashai (2000)	92	1250.0	250.0	250.0	225.0	0.965	0.965	0.643	540.0	540.0	540.0	16	16	16
560	Goodfellow and Elnashai (2000)	93	1250.0	250.0	250.0	225.0	0.965	0.965	0.643	540.0	540.0	540.0	16	16	16
561	Hiraishi et al (1984)	W1	5800.0	250.0	2750.0	2625.0	0.083	0.083	0.103	388.0	388.0	369.8	11.59	11.59	6
562	Hiraishi et al (1984)	W2	5820.0	250.0	2750.0	2625.0	0.186	0.147	0.170	380.0	380.0	369.8	13	13	6
563	Hwang Scribner (1986)	S3-1	635.0	203.0	305.0	246.0	1.879	1.380	0.000	408.5	438.9	0.0	22.225	19.05	0
564	Hwang Scribner (1986)	S3-2	635.0	203.0	305.0	249.0	1.879	1.380	0.000	408.5	438.9	0.0	22.225	19.05	0
565	Hwang Scribner (1986)	S3-3	635.0	203.0	305.0	244.0	1.879	1.380	0.000	408.5	438.9	0.0	22.225	19.05	0
566	Hwang Scribner (1986)	S3-4	635.0	203.0	305.0	246.0	1.879	1.380	0.000	408.5	438.9	0.0	22.225	19.05	0
567	Ilya and Bertero (1980)	SW7	6622.0	254.0	2388.0	2261.0	0.374	0.374	0.136	510.0	510.0	586.2	19	19	6.35

568	Ilya and Bertero (1980)	SW7	6622.0	254.0	2388.0	2261.0	0.374	0.374	0.136	510.0	510.0	586.2	19	19	6.35
569	Ilya and Bertero (1980)	SW8	6622.0	254.0	2388.0	2261.0	0.374	0.374	0.136	510.0	510.0	586.2	19	19	6.35
570	Ilya and Bertero (1980)	SW8	6622.0	254.0	2388.0	2261.0	0.374	0.374	0.136	510.0	510.0	586.2	19	19	6.35
571	Ilya and Bertero (1980)	SW8	6622.0	254.0	2388.0	2261.0	0.374	0.374	0.136	510.0	510.0	586.2	19	19	6.35
572	Ilya and Bertero (1980)	SW7	6622.0	254.0	2388.0	2261.0	0.374	0.374	0.136	510.0	510.0	586.2	19	19	6.35
573	Imai and Yamamoto (1986)	NO. 1	825.0	400.0	500.0	450.0	0.950	0.950	0.760	318.0	318.0	318.0	22	22	22
574	Kanda et al. (1987)	85PDC-1	750.0	300.0	250.0	215.0	0.531	0.531	0.531	374.0	374.0	374.0	13	13	13
575	Kanda et al. (1987)	85PDC-2	750.0	300.0	250.0	215.0	0.531	0.531	0.531	374.0	374.0	374.0	13	13	13
576	Kanda et al. (1987)	85PDC-3	750.0	300.0	250.0	215.0	0.531	0.531	0.531	374.0	374.0	374.0	13	13	13
577	Kanda et al. (1987)	85STC-1	750.0	300.0	250.0	215.0	0.531	0.531	0.531	374.0	374.0	374.0	13	13	13
578	Kanda et al. (1987)	85STC-2	750.0	300.0	250.0	215.0	0.531	0.531	0.531	374.0	374.0	374.0	13	13	13
579	Kanda et al. (1987)	85STC-3	750.0	300.0	250.0	215.0	0.531	0.531	0.531	374.0	374.0	374.0	13	13	13
580	Kinugasa and Nomura	A1	500.0	200.0	200.0	170.0	0.528	0.528	0.000	420.0	420.0	0.0	13	13	0
581	Kinugasa and Nomura	A2	500.0	200.0	200.0	170.0	0.528	0.528	0.000	420.0	420.0	0.0	13	13	0
582	Kinugasa and Nomura	A3	500.0	200.0	200.0	170.0	0.528	0.528	0.000	420.0	420.0	0.0	13	13	0
583	Kinugasa and Nomura	A4	500.0	200.0	200.0	170.0	0.528	0.528	0.000	420.0	420.0	0.0	13	13	0
584	Kinugasa and Nomura	A5	500.0	200.0	200.0	170.0	0.528	0.528	0.000	420.0	420.0	0.0	13	13	0
585	Kinugasa and Nomura	B1	500.0	200.0	200.0	170.0	1.500	1.500	0.000	410.0	410.0	0.0	16	16	0
586	Kraetzig et al (1989)	S1.1	1500.0	300.0	300.0	260.0	1.270	1.270	0.847	514.0	514.0	514.0	22	22	22
587	Kraetzig et al (1989)	S1.2	1500.0	300.0	300.0	260.0	1.270	1.270	0.847	514.0	514.0	514.0	22	22	22
588	Kraetzig et al (1989)	S1.3	1500.0	300.0	300.0	260.0	1.270	1.270	0.847	514.0	514.0	514.0	22	22	22
589	Kraetzig et al (1989)	S1.4	1500.0	300.0	300.0	260.0	1.270	1.270	0.847	514.0	514.0	514.0	22	22	22
590	Kraetzig et al (1989)	S1.6	1500.0	300.0	300.0	260.0	1.270	1.270	0.847	514.0	514.0	514.0	22	22	22
591	Kraetzig et al (1989)	S1-0	1500.0	300.0	300.0	260.0	1.267	1.267	0.845	514.0	514.0	514.0	22	22	22
592	Kraetzig et al (1989)	S2-0	1500.0	300.0	300.0	260.0	1.267	1.267	0.845	514.0	514.0	514.0	22	22	22
593	Low Moehle (1980)	NO 1	546.0	165.0	127.0	110.0	0.982	0.982	0.302	458.0	458.0	444.4	9.52	9.52	6.35
594	Lynn et al. (1998)	2CLH18	1473.2	457.2	457.2	419.1	0.727	0.727	0.727	331.0	331.0	331.0	25.4	25.4	25.4
595	Lynn et al. (1998)	2CMH18	1473.2	457.2	457.2	419.1	0.727	0.727	0.727	331.0	331.0	331.0	25.4	25.4	25.4
596	Lynn et al. (1998)	3CLH18	1473.2	457.2	457.2	419.1	1.136	1.136	1.136	331.0	331.0	331.0	31.75	31.75	31.75
597	Lynn et al. (1998)	3CMD12	1473.2	457.2	457.2	419.1	1.136	1.136	1.136	331.0	331.0	331.0	31.75	31.75	31.75
598	Lynn et al. (1998)	3CMH18	1473.2	457.2	457.2	419.1	1.136	1.136	1.136	331.0	331.0	331.0	31.75	31.75	31.75
599	Ma, Bertero and Popov (1976)	R1	1587.5	228.6	406.4	355.6	1.221	0.640	0.000	451.3	458.2	0.0	19.05	15.875	0
600	Ma, Bertero and Popov (1976)	R2	1587.5	228.6	406.4	355.6	1.221	0.640	0.000	451.3	458.2	0.0	19.05	15.875	0
601	Ma, Bertero and Popov (1976)	R3	1587.5	228.6	406.4	355.6	1.221	0.640	0.000	451.3	458.2	0.0	19.05	15.875	0
602	Ma, Bertero and Popov (1976)	R4	1587.5	228.6	406.4	355.6	1.221	0.640	0.000	451.3	458.2	0.0	19.05	15.875	0
603	Ma, Bertero and Popov (1976)	R5	977.9	228.6	406.4	355.6	1.221	1.221	0.000	451.3	451.3	0.0	19.05	19.05	0
604	Ma, Bertero and Popov (1976)	R6	1587.5	228.6	406.4	355.6	1.221	1.221	0.000	451.3	451.3	0.0	19.05	19.05	0
605	Ma, Bertero and Popov (1976)	T1	1587.5	228.6	406.4	355.6	1.636	0.640	0.000	451.3	458.2	0.0	19.05	15.875	0

606	Ma, Bertero and Popov (1976)	T2	1587.5	228.6	406.4	355.6	1.636	0.640	0.000	451.3	458.2	0.0	19.05	15.875	0
607	Ma, Bertero and Popov (1976)	T3	1587.5	228.6	406.4	355.6	1.636	1.227	0.000	451.3	451.3	0.0	19.05	19.05	0
608	Machi et al. (1996)	SP16/10-1	1500.0	200.0	300.0	275.0	0.700	0.700	0.000	590.0	590.0	600.0	16	16	0
609	Machi et al. (1996)	SP16/2-3	1500.0	200.0	300.0	275.0	0.700	0.700	0.000	600.0	600.0	600.0	16	16	0
610	Machi et al. (1996)	SP16/7-2	1500.0	200.0	300.0	275.0	0.700	0.700	0.000	600.0	600.0	600.0	16	16	0
611	Machi et al. (1996)	SP22/3-3	1500.0	200.0	300.0	275.0	1.400	1.400	0.000	600.0	600.0	600.0	22	22	0
612	Machi et al. (1996)	SP22/8-2	1500.0	200.0	300.0	275.0	1.400	1.400	0.000	600.0	600.0	600.0	22	22	0
613	Machi et al. (1996)	SP28/1-1	2000.0	300.0	400.0	375.0	1.270	1.270	0.000	600.0	600.0	600.0	28	28	0
614	Maruyama et al. (1984)	O-U4	455.0	305.0	305.0	265.0	0.914	0.914	0.610	373.4	373.4	373.4	19	19	19
615	Maruyama et al. (1984)	OS	455.0	305.0	305.0	265.0	0.914	0.914	0.610	373.4	373.4	373.4	19	19	19
616	Mattock (1964)	A1	625.0	150.0	280.0	255.0	1.341	0.335	0.000	314.9	339.7	0.0	19	10	0
617	Mattock (1964)	A2	1320.0	150.0	280.0	255.0	1.341	0.335	0.000	317.6	339.7	0.0	19	10	0
618	Mattock (1964)	A3	2720.0	150.0	280.0	255.0	1.341	0.335	0.000	336.2	339.7	0.0	19	10	0
619	Mattock (1964)	A4	625.0	150.0	280.0	255.0	2.682	0.335	0.000	314.9	343.1	0.0	19	10	0
620	Mattock (1964)	A5	1320.0	150.0	280.0	255.0	2.682	0.335	0.000	314.2	332.1	0.0	19	10	0
621	Mattock (1964)	A6	2720.0	150.0	280.0	255.0	2.682	0.335	0.000	327.9	332.1	0.0	19	10	0
622	Mattock (1964)	B1	1325.0	150.0	535.0	510.0	1.404	0.175	0.000	328.7	339.7	0.0	19	10	0
623	Mattock (1964)	B2	2720.0	150.0	535.0	510.0	1.404	0.175	0.000	321.8	336.2	0.0	19	10	0
624	Mattock (1964)	B3	1320.0	150.0	550.0	510.0	2.731	0.171	0.000	321.1	354.8	0.0	19	10	0
625	Mattock (1964)	B4	2720.0	150.0	550.0	510.0	2.731	0.171	0.000	322.5	336.9	0.0	19	10	0
626	Mattock (1964)	C1	625.0	150.0	280.0	255.0	1.341	0.335	0.000	328.7	341.1	0.0	19	10	0
627	Mattock (1964)	C2	1320.0	150.0	280.0	255.0	1.341	0.335	0.000	328.7	341.1	0.0	19	10	0
628	Mattock (1964)	C3	2720.0	150.0	280.0	255.0	1.341	0.335	0.000	329.6	341.1	0.0	19	10	0
629	Mattock (1964)	C4	625.0	150.0	280.0	255.0	2.682	0.335	0.000	325.2	341.1	0.0	13	10	0
630	Mattock (1964)	C5	1320.0	150.0	280.0	255.0	2.682	0.335	0.000	327.9	334.2	0.0	13	10	0
631	Mattock (1964)	C6	1375.0	150.0	280.0	255.0	2.682	0.335	0.000	319.0	334.2	0.0	13	10	0
632	Mattock (1964)	D1	1325.0	150.0	535.0	510.0	1.404	0.175	0.000	319.0	344.5	0.0	13	10	0
633	Mattock (1964)	D2	2720.0	150.0	535.0	510.0	1.404	0.175	0.000	316.3	334.2	0.0	13	10	0
634	Mattock (1964)	D3	1320.0	150.0	550.0	510.0	2.731	0.171	0.000	319.7	340.4	0.0	19	10	0
635	Mattock (1964)	D4	2720.0	150.0	550.0	510.0	2.731	0.171	0.000	321.8	319.0	0.0	19	10	0
636	Mattock (1964)	E1	625.0	150.0	280.0	255.0	1.341	0.335	0.000	403.8	504.4	0.0	19	10	0
637	Mattock (1964)	E2	1320.0	150.0	280.0	255.0	1.341	0.335	0.000	413.4	500.9	0.0	19	10	0
638	Mattock (1964)	E3	2720.0	150.0	280.0	255.0	1.341	0.335	0.000	412.0	500.9	0.0	19	10	0
639	Mattock (1964)	F1	625.0	150.0	280.0	255.0	1.341	0.335	0.000	403.8	504.4	0.0	19	10	0
640	Mattock (1964)	F2	1320.0	150.0	280.0	255.0	1.341	0.335	0.000	414.8	469.9	0.0	19	10	0
641	Mattock (1964)	F3	2720.0	150.0	280.0	255.0	1.341	0.335	0.000	414.8	463.7	0.0	19	10	0
642	Mattock (1964)	G1	1325.0	150.0	535.0	510.0	1.052	0.175	0.000	414.1	507.1	0.0	19	10	0
643	Mattock (1964)	G2	5190.0	150.0	535.0	510.0	1.052	0.175	0.000	413.4	482.3	0.0	19	10	0

644	Mattock (1964)	G3	1325.0	150.0	535.0	510.0	1.404	0.175	0.000	414.8	469.9	0.0	19	10	0
645	Mattock (1964)	G4	5190.0	150.0	535.0	510.0	1.404	0.175	0.000	414.8	504.4	0.0	19	10	0
646	Mattock (1964)	G5	5190.0	150.0	535.0	510.0	0.702	0.175	0.000	416.9	507.1	0.0	19	10	0
647	McCollister (1954)	S-12	1219.0	152.4	305.0	274.1	0.306	0.000	0.000	300.4	0.0	0.0	9.525	0	0
648	McCollister (1954)	S-6	1219.0	152.4	305.0	272.3	0.830	0.000	0.000	308.7	0.0	0.0	12.7	0	0
649	McCollister (1954)	S-7	1219.0	152.4	305.0	272.3	0.554	0.000	0.000	310.1	0.0	0.0	12.7	0	0
650	McCollister (1954)	S-8	1219.0	152.4	305.0	272.3	0.554	0.000	0.000	310.1	0.0	0.0	12.7	0	0
651	McCollister (1954)	T-1	1219.0	152.4	305.0	268.7	1.225	0.555	0.000	288.0	330.0	0.0	12.7	12.7	0
652	McCollister (1954)	T-10	1219.0	152.4	305.0	268.7	1.225	0.308	0.000	293.5	319.0	0.0	19.05	9.525	0
653	McCollister (1954)	T-11	1219.0	152.4	305.0	268.7	1.225	3.524	0.000	292.8	317.6	0.0	19.05	31.75	0
654	McCollister (1954)	T-12	1219.0	152.4	305.0	261.1	3.519	2.774	0.000	316.9	315.6	0.0	31.75	28.575	0
655	McCollister (1954)	T-13	1219.0	152.4	305.0	263.4	2.772	3.523	0.000	323.1	316.9	0.0	28.575	31.75	0
656	McCollister (1954)	T-14	1219.0	152.4	305.0	268.7	1.225	1.225	0.000	285.2	281.8	0.0	19.05	19.05	0
657	McCollister (1954)	T-15	1219.0	152.4	305.0	268.7	1.225	1.225	0.000	323.8	279.0	0.0	19.05	19.05	0
658	McCollister (1954)	T-2	1219.0	152.4	305.0	263.4	2.772	1.667	0.000	312.8	344.5	0.0	28.575	22.225	0
659	McCollister (1954)	T-3	1219.0	152.4	305.0	259.1	4.332	2.192	0.000	308.0	317.6	0.0	34.925	25.4	0
660	McCollister (1954)	T-4	1219.0	152.4	305.0	270.5	0.860	0.559	0.000	324.5	314.9	0.0	15.875	12.7	0
661	McCollister (1954)	T-5	1219.0	152.4	305.0	267.0	1.663	0.858	0.000	333.5	321.1	0.0	22.225	15.875	0
662	McCollister (1954)	T-6	1219.0	152.4	305.0	263.4	2.772	1.667	0.000	389.3	342.4	0.0	28.575	22.225	0
663	McCollister (1954)	T-7	1219.0	152.4	305.0	268.7	1.225	1.225	0.000	281.8	292.8	0.0	19.05	19.05	0
664	McCollister (1954)	T-8	1219.0	152.4	305.0	268.7	1.225	1.665	0.000	310.1	339.0	0.0	19.05	22.225	0
665	McCollister (1954)	T-9	1219.0	152.4	305.0	272.3	0.554	1.223	0.000	361.7	285.9	0.0	12.7	19.05	0
666	Minami and Wakabayashi (1980)	PA	225.0	150.0	150.0	125.0	1.180	1.180	0.000	371.0	371.0	0.0	13	13	0
667	Minami and Wakabayashi (1980)	X20	150.0	150.0	150.0	125.0	0.000	0.000	0.000	371.0	371.0	0.0	13	13	0
668	Minami and Wakabayashi (1980)	X22	150.0	150.0	150.0	125.0	0.000	0.000	0.000	371.0	371.0	0.0	13	13	0
669	Minami and Wakabayashi (1980)	X24	150.0	150.0	150.0	125.0	0.000	0.000	0.000	371.0	371.0	0.0	13	13	0
670	Minami and Wakabayashi (1980)	XA	225.0	150.0	150.0	125.0	0.000	0.000	0.000	371.0	371.0	0.0	13	13	0
671	Minami and Wakabayashi (1980)	FULL SCALE	710.0	350.0	350.0	310.0	0.655	0.655	0.328	371.0	371.0	371.0	16	16	16
672	Minami and Wakabayashi (1980)	L02	450.0	300.0	300.0	260.0	1.110	1.110	0.000	371.0	371.0	0.0	16	16	0
673	Minami and Wakabayashi (1980)	L04	450.0	300.0	300.0	260.0	1.110	1.110	0.000	371.0	371.0	0.0	16	16	0
674	Minami and Wakabayashi (1980)	L22	450.0	300.0	300.0	260.0	0.890	0.890	0.000	371.0	371.0	0.0	16	16	0
675	Minami and Wakabayashi (1980)	L24	450.0	300.0	300.0	260.0	0.890	0.890	0.000	371.0	371.0	0.0	16	16	0
676	Minami and Wakabayashi (1980)	L42	450.0	300.0	300.0	260.0	0.670	0.670	0.000	371.0	371.0	0.0	16	16	0
677	Minami and Wakabayashi (1980)	L44	450.0	300.0	300.0	260.0	0.670	0.670	0.000	371.0	371.0	0.0	16	16	0
678	Minami and Wakabayashi (1980)	L62	450.0	300.0	300.0	260.0	0.450	0.450	0.000	371.0	371.0	0.0	16	16	0
679	Minami and Wakabayashi (1980)	L64	450.0	300.0	300.0	260.0	0.450	0.450	0.000	371.0	371.0	0.0	16	16	0
680	Mo and Wang (2000)	C1-1	1650.0	400.0	400.0	375.0	0.713	0.713	0.713	497.0	497.0	497.0	19.05	19.05	19.05
681	Mo and Wang (2000)	C1-2	1650.0	400.0	400.0	375.0	0.713	0.713	0.713	497.0	497.0	497.0	19.05	19.05	19.05

682	Mo and Wang (2000)	C1-3	1650.0	400.0	400.0	375.0	0.713	0.713	0.713	497.0	497.0	497.0	19.05	19.05	19.05
683	Mo and Wang (2000)	C2-1	1650.0	400.0	400.0	375.0	0.713	0.713	0.713	497.0	497.0	497.0	19.05	19.05	19.05
684	Mo and Wang (2000)	C2-2	1650.0	400.0	400.0	375.0	0.713	0.713	0.713	497.0	497.0	497.0	19.05	19.05	19.05
685	Mo and Wang (2000)	C2-3	1650.0	400.0	400.0	375.0	0.713	0.713	0.713	497.0	497.0	497.0	19.05	19.05	19.05
686	Mo and Wang (2000)	C3-1	1650.0	400.0	400.0	375.0	0.713	0.713	0.713	497.0	497.0	497.0	19.05	19.05	19.05
687	Mo and Wang (2000)	C3-2	1650.0	400.0	400.0	375.0	0.713	0.713	0.713	497.0	497.0	497.0	19.05	19.05	19.05
688	Mo and Wang (2000)	C3-3	1650.0	400.0	400.0	375.0	0.713	0.713	0.713	497.0	497.0	497.0	19.05	19.05	19.05
689	Moretti (1997)	NO 0	250.0	250.0	250.0	210.0	1.000	1.000	0.493	650.0	650.0	650.0	14	14	14
690	Moretti (1997)	NO 1	250.0	250.0	250.0	210.0	1.000	1.000	0.493	480.0	480.0	480.0	14	14	14
691	Moretti (1997)	NO 3	250.0	250.0	250.0	210.0	2.000	2.000	1.005	415.0	415.0	415.0	20	20	20
692	Moretti (1997)	NO 4	250.0	250.0	250.0	210.0	2.000	2.000	1.005	415.0	415.0	415.0	20	20	20
693	Moretti (1997)	NO 5	250.0	250.0	250.0	210.0	0.540	0.540	0.362	390.0	390.0	390.0	12	12	12
694	Moretti (1997)	NO 6	250.0	250.0	250.0	210.0	1.170	1.170	0.493	480.0	480.0	480.0	14	14	14
695	Moretti (1997)	NO 7	500.0	250.0	250.0	210.0	1.000	1.000	0.493	480.0	480.0	480.0	14	14	14
696	Moretti (1997)	NO 8	750.0	250.0	250.0	210.0	0.739	0.739	0.493	480.0	480.0	480.0	14	14	14
697	Morgan et al (1984)		4382.0	142.0	1572.0	1501.0	0.113	0.113	0.138	448.0	448.0	510.6	6.35	6.35	5.08
698	Muguruma et al. (1989)	AH-1	500.0	200.0	200.0	191.0	1.327	1.327	1.327	399.6	399.6	399.6	13	13	13
699	Muguruma et al. (1989)	AL-1	500.0	200.0	200.0	191.0	1.327	1.327	1.327	399.6	399.6	399.6	13	13	13
700	Muguruma et al. (1989)	AL-2	500.0	200.0	200.0	191.0	1.327	1.327	1.327	399.6	399.6	399.6	13	13	13
701	Muguruma et al. (1989)	BH-1	500.0	200.0	200.0	191.0	1.327	1.327	1.327	399.6	399.6	399.6	13	13	13
702	Muguruma et al. (1989)	BH-2	500.0	200.0	200.0	191.0	1.327	1.327	1.327	399.6	399.6	399.6	13	13	13
703	Muguruma et al. (1989)	BL-1	500.0	200.0	200.0	191.0	1.327	1.327	1.327	399.6	399.6	399.6	13	13	13
704	Muguruma et al. (1989)	BL-2	500.0	200.0	200.0	191.0	1.327	1.327	1.327	399.6	399.6	399.6	13	13	13
705	Muguruma et al. (1989)	AH-1	500.0	200.0	200.0	191.0	1.327	1.327	1.327	399.6	399.6	399.6	13	13	13
706	Nagasaka (1982)	HPRC10-63	300.0	200.0	200.0	175.0	0.664	0.664	0.664	371.0	371.0	371.0	13	13	13
707	Nagasaka (1982)	HPRC19-32	300.0	200.0	200.0	175.0	0.664	0.664	0.664	371.0	371.0	371.0	13	13	13
708	Nmai and Darwin (1986)	F-1	1524.0	190.0	457.0	387.4	0.865	0.424	0.000	509.0	509.0	0.0	12.7	12.7	0
709	Nmai and Darwin (1986)	F-2	1524.0	190.0	457.0	390.7	0.880	0.427	0.000	509.0	509.0	0.0	12.7	12.7	0
710	Nmai and Darwin (1986)	F-3	1524.0	190.0	457.0	390.7	0.590	0.299	0.000	509.0	509.0	0.0	12.7	12.7	0
711	Nmai and Darwin (1986)	F-4	1524.0	190.0	457.0	387.4	0.585	0.297	0.000	509.0	509.0	0.0	12.7	12.7	0
712	Nmai and Darwin (1986)	F-5	1524.0	190.0	457.0	393.7	0.594	0.302	0.000	509.0	509.0	0.0	12.7	12.7	0
713	Nmai and Darwin (1986)	F-6	1524.0	190.0	457.0	390.7	0.590	0.427	0.000	509.0	509.0	0.0	12.7	12.7	0
714	Nmai and Darwin (1986)	F-7	1524.0	190.0	457.0	390.7	0.590	0.299	0.000	509.0	509.0	0.0	12.7	12.7	0
715	Oesterle et al. (1979)	B1	4572.0	305.0	1905.0	1752.5	0.250	0.174	0.097	450.0	450.0	0.0	13	13	0
716	Oesterle et al. (1979)	B10	4572.0	305.0	1905.0	1752.5	0.384	0.315	0.097	443.0	443.0	0.0	13	13	0
717	Oesterle et al. (1979)	B11	4572.0	305.0	1905.0	1752.5	0.506	0.428	0.097	436.0	436.0	0.0	19	19	0
718	Oesterle et al. (1979)	B12*	4572.0	305.0	1905.0	1752.5	0.652	0.586	0.097	452.0	452.0	0.0	19	19	0
719	Oesterle et al. (1979)	B2	4572.0	305.0	1905.0	1752.5	0.672	0.586	0.097	410.0	410.0	0.0	19	19	0

720	Oesterle et al. (1979)	B3	4572.0	305.0	1905.0	1752.5	0.246	0.174	0.097	438.0	438.0	0.0	13	13	0
721	Oesterle et al. (1979)	B5	4572.0	305.0	1905.0	1752.5	0.661	0.586	0.097	444.0	444.0	0.0	19	19	0
722	Oesterle et al. (1979)	B6	4572.0	305.0	1905.0	1752.5	0.663	0.586	0.097	441.0	441.0	0.0	19	19	0
723	Oesterle et al. (1979)	B7	4572.0	305.0	1905.0	1752.5	0.658	0.586	0.097	450.0	450.0	0.0	19	19	0
724	Oesterle et al. (1979)	B8	4572.0	305.0	1905.0	1752.5	0.653	0.586	0.097	448.0	448.0	0.0	19	19	0
725	Oesterle et al. (1979)	B9	4572.0	305.0	1905.0	1752.5	0.657	0.586	0.097	430.0	430.0	0.0	19	19	0
726	Oesterle et al. (1979)	R1	4572.0	102.0	1905.0	1810.0	0.351	0.147	0.250	512.0	512.0	0.0	9.5	9.5	0
727	Oesterle et al. (1979)	R2	4572.0	102.0	1905.0	1810.0	0.600	0.398	0.250	450.0	450.0	0.0	13	13	0
728	Oesterle et al. (1979)	R3	4572.0	102.0	1905.0	1715.0	1.311	1.184	0.220	540.0	540.0	0.0	19	19	0
729	Oesterle et al. (1979)	R4	4572.0	102.0	1905.0	1765.0	0.728	0.520	0.280	491.0	491.0	0.0	13	13	0
730	Oesterle et al. (1979)	B4	4572.0	305.0	1905.0	1752.5	0.660	0.586	0.097	451.0	451.0	0.0	19	19	0
731	Oetes (1993)	S1-V2	1500.0	200.0	300.0	270.0	0.565	0.754	0.000	536.0	536.0	0.0	12	12	0
732	Oetes (1993)	S2-V1	1500.0	200.0	300.0	270.0	0.752	0.377	0.000	536.0	536.0	0.0	12	12	0
733	Oetes (1993)	S2-V2	1500.0	200.0	300.0	270.0	0.377	0.754	0.000	536.0	536.0	0.0	12	12	0
734	Oetes (1993)	S1-V3	1500.0	200.0	300.0	268.0	0.754	0.565	0.000	536.0	536.0	0.0	12	12	0
735	Oetes (1993)	S1-V4	1500.0	200.0	300.0	268.0	0.754	0.565	0.000	536.0	536.0	0.0	12	12	0
736	Oetes (1993)	S1-V5	1500.0	200.0	300.0	268.0	0.754	0.565	0.000	536.0	536.0	0.0	12	12	0
737	Oetes (1993)	S1-V6	1500.0	200.0	300.0	268.0	0.754	0.565	0.000	536.0	536.0	0.0	12	12	0
738	Oetes (1993)	S2-V3	1500.0	200.0	300.0	268.0	0.754	0.377	0.000	536.0	536.0	0.0	12	12	0
739	Oetes (1993)	S2-V4	1500.0	200.0	300.0	268.0	0.754	0.377	0.000	536.0	536.0	0.0	12	12	0
740	Oetes (1993)	S2-V5	1500.0	200.0	300.0	268.0	0.754	0.377	0.000	536.0	536.0	0.0	12	12	0
741	Oetes (1993)	S2-V6	1500.0	200.0	300.0	268.0	0.754	0.377	0.000	536.0	536.0	0.0	12	12	0
742	Ohno and Nishioka (1984)	L1	1600.0	400.0	400.0	400.0	0.709	0.709	0.354	362.0	362.0	362.0	19	19	19
743	Ohno and Nishioka (1984)	L2	1600.0	400.0	400.0	400.0	0.709	0.709	0.354	362.0	362.0	362.0	19	19	19
744	Ohno and Nishioka (1984)	L3	1600.0	400.0	400.0	400.0	0.709	0.709	0.354	362.0	362.0	362.0	19	19	19
745	Ono et al. (1989)	CA025C	300.0	200.0	200.0	170.0	0.785	0.785	0.785	361.0	361.0	361.0	10	10	10
746	Ono et al. (1989)	CA060C	300.0	200.0	200.0	170.0	0.785	0.785	0.785	361.0	361.0	361.0	10	10	10
747	Papanikolaou et al (1991)	P1	450.0	200.0	300.0	285.0	0.670	0.670	0.000	482.0	482.0	0.0	16	16	0
748	Papanikolaou et al (1991)	P2	450.0	200.0	300.0	285.0	0.670	0.670	0.000	482.0	482.0	0.0	16	16	0
749	Papanikolaou et al (1991)	P3	450.0	200.0	300.0	285.0	0.670	0.670	0.000	482.0	482.0	0.0	16	16	0
750	Papanikolaou et al (1991)	P4	450.0	200.0	300.0	285.0	0.670	0.670	0.000	482.0	482.0	0.0	16	16	0
751	Papanikolaou et al (1991)	P5	450.0	200.0	300.0	285.0	0.670	0.670	0.000	482.0	482.0	0.0	16	16	0
752	Papanikolaou et al (1991)	P6	450.0	200.0	300.0	285.0	0.670	0.670	0.000	482.0	482.0	0.0	16	16	0
753	Papanikolaou et al (1991)	X1	450.0	200.0	300.0	285.0	0.380	0.380	0.000	482.0	482.0	0.0	12	12	0
754	Papanikolaou et al (1991)	X2	450.0	200.0	300.0	285.0	0.380	0.380	0.000	482.0	482.0	0.0	12	12	0
755	Papanikolaou et al (1991)	X3	450.0	200.0	300.0	285.0	0.380	0.380	0.000	482.0	482.0	0.0	12	12	0
756	Papanikolaou et al (1991)	X4	450.0	200.0	300.0	285.0	0.380	0.380	0.000	482.0	482.0	0.0	12	12	0
757	Papanikolaou et al (1991)	X5	450.0	200.0	300.0	285.0	0.380	0.380	0.000	482.0	482.0	0.0	12	12	0

758	Papanikolaou et al (1991)	X6	450.0	200.0	300.0	285.0	0.380	0.380	0.000	482.0	482.0	0.0	12	12	0
759	Pipa and Carvalho (1990)	ID2	866.0	150.0	300.0	280.0	0.538	0.538	1.200	490.0	490.0	490.0	12	12	12
760	Pipa and Carvalho (1990)	ID2	866.0	150.0	300.0	280.0	0.538	0.538	1.200	490.0	490.0	490.0	12	12	12
761	Pipa and Carvalho (1990)	ID4	866.0	150.0	300.0	280.0	0.538	0.538	1.200	490.0	490.0	490.0	12	12	12
762	Pipa and Carvalho (1990)	ID4	866.0	150.0	300.0	280.0	0.538	0.538	1.200	490.0	490.0	490.0	12	12	12
763	Pipa and Carvalho (1990)	ND1	866.0	150.0	300.0	280.0	0.800	0.800	1.200	490.0	490.0	490.0	12	12	12
764	Pipa and Carvalho (1990)	ND1	866.0	150.0	300.0	280.0	0.800	0.800	1.200	490.0	490.0	490.0	12	12	12
765	Pipa and Carvalho (1990)	ND3	866.0	150.0	300.0	280.0	0.800	0.800	1.200	490.0	490.0	490.0	12	12	12
766	Pipa and Carvalho (1990)	ND3	866.0	150.0	300.0	280.0	0.800	0.800	1.200	490.0	490.0	490.0	12	12	12
767	Plainis and Tassios (1986)		2120.0	100.0	1300.0	1250.0	0.441	0.309	0.090	420.0	420.0	0.0	10	10	0
768	Popov, Bertero and Krawinkler (1972)	B35	1980.0	380.0	735.0	685.0	1.371	1.371	0.000	415.0	415.0	0.0	29	29	0
769	Popov, Bertero and Krawinkler (1972)	B43	1980.0	380.0	735.0	685.0	1.371	1.371	0.000	415.0	415.0	0.0	29	29	0
770	Popov, Bertero and Krawinkler (1972)	B46	1980.0	380.0	735.0	685.0	1.371	1.371	0.000	415.0	415.0	0.0	29	29	0
771	Rabbat et al (1986)	LC1	1194.0	381.0	381.0	322.0	0.730	0.730	0.391	461.5	461.5	461.5	22.2	22.2	19
772	Rabbat et al (1986)	LC10	1194.0	381.0	381.0	322.0	0.730	0.730	0.391	461.5	461.5	461.5	22.2	22.2	19
773	Rabbat et al (1986)	LC11	1305.0	381.0	381.0	322.0	0.589	0.589	0.391	461.5	461.5	461.5	19	22.2	19
774	Rabbat et al (1986)	LC3	1194.0	381.0	381.0	322.0	0.730	0.730	0.391	461.5	461.5	461.5	22.2	22.2	19
775	Rabbat et al (1986)	LC4	1194.0	381.0	381.0	322.0	0.730	0.730	0.391	461.5	461.5	461.5	22.2	22.2	19
776	Rabbat et al (1986)	LC7	1194.0	381.0	381.0	322.0	0.589	0.589	0.391	461.5	461.5	461.5	19	22.2	19
777	Rabbat et al (1986)	LC8	1194.0	381.0	381.0	322.0	0.589	0.589	0.391	461.5	461.5	461.5	19	22.2	19
778	Rabbat et al (1986)	NC1	1194.0	381.0	381.0	319.0	0.730	0.730	0.391	461.5	461.5	461.5	22.2	22.2	19
779	Rabbat et al (1986)	NC2	1194.0	381.0	381.0	322.0	0.589	0.589	0.391	461.5	461.5	461.5	19	22.2	19
780	Rabbat et al (1986)	NC3	1370.0	381.0	381.0	322.0	0.730	0.730	0.391	461.5	461.5	461.5	22.2	22.2	19
781	Ruiz and Winter (1969)	A-1	965.0	205.0	280.0	230.0	1.605	0.477	0.000	429.9	441.0	0.0	20	19	0
782	Ruiz and Winter (1969)	A-2	965.0	205.0	280.0	230.0	1.605	0.477	0.000	429.9	441.0	0.0	20	19	0
783	Ruiz and Winter (1969)	A-3	965.0	205.0	280.0	230.0	1.605	0.477	0.000	429.9	441.0	0.0	20	19	0
784	Ruiz and Winter (1969)	A-4	965.0	205.0	280.0	230.0	1.605	0.477	0.000	429.9	441.0	0.0	20	19	0
785	Ruiz and Winter (1969)	B-3	965.0	205.0	280.0	240.0	1.495	0.498	0.000	441.0	441.0	0.0	19	19	0
786	Ruiz and Winter (1969)	B-4	965.0	205.0	280.0	240.0	1.495	0.498	0.000	441.0	441.0	0.0	19	19	0
787	Ruiz and Winter (1969)	C-1	1450.0	205.0	280.0	230.0	1.491	0.000	0.000	441.0	441.0	0.0	19	19	0
788	Ruiz and Winter (1969)	C-2	1450.0	205.0	280.0	230.0	1.491	0.000	0.000	441.0	441.0	0.0	19	19	0
789	Ruiz and Winter (1969)	C-3	1450.0	205.0	280.0	230.0	1.491	0.000	0.000	441.0	441.0	0.0	19	19	0
790	Ruiz and Winter (1969)	C-4	1450.0	205.0	280.0	230.0	1.491	0.000	0.000	441.0	441.0	0.0	19	19	0
791	Ruiz and Winter (1969)	D-1	1450.0	205.0	280.0	230.0	2.029	0.000	0.000	413.4	441.0	0.0	22	19	0
792	Ruiz and Winter (1969)	D-2	1450.0	205.0	280.0	230.0	2.029	0.000	0.000	413.4	441.0	0.0	22	19	0
793	Ruiz and Winter (1969)	D-3	1450.0	205.0	280.0	230.0	2.029	0.000	0.000	413.4	441.0	0.0	22	19	0
794	Ruiz and Winter (1969)	D-4	1450.0	205.0	280.0	230.0	2.029	0.000	0.000	413.4	441.0	0.0	22	19	0
795	Saatcioglou and Ozcebe (1989)	D1	1000.0	350.0	350.0	305.0	1.202	1.202	0.801	453.0	453.0	453.0	25	25	25

796	Saatcioglou and Ozcebe (1989)	D2	1000.0	350.0	350.0	305.0	1.202	1.202	0.801	453.0	453.0	453.0	25	25	25
797	Saatcioglou and Ozcebe (1989)	D3	1000.0	350.0	350.0	305.0	1.202	1.202	0.801	430.0	430.0	430.0	25	25	25
798	Saatcioglou and Ozcebe (1989)	D4	1000.0	350.0	350.0	305.0	1.202	1.202	0.801	430.0	430.0	430.0	25	25	25
799	Saatcioglou and Ozcebe (1989)	D5	1000.0	350.0	350.0	305.0	1.202	1.202	0.801	430.0	430.0	430.0	25	25	25
800	Saatcioglou and Ozcebe (1989)	U1	1000.0	350.0	350.0	305.0	1.202	1.202	0.801	430.0	430.0	430.0	25	25	25
801	Saatcioglou and Ozcebe (1989)	U2	1000.0	350.0	350.0	305.0	1.202	1.202	0.801	453.0	453.0	453.0	25	25	25
802	Saatcioglou and Ozcebe (1989)	U3	1000.0	350.0	350.0	305.0	1.202	1.202	0.801	430.0	430.0	430.0	25	25	25
803	Saatcioglou and Ozcebe (1989)	U4	1000.0	350.0	350.0	305.0	1.202	1.202	0.801	438.0	438.0	438.0	25	25	25
804	Saatcioglou and Ozcebe (1989)	U5	1000.0	350.0	350.0	305.0	1.202	1.202	0.801	430.0	430.0	430.0	25	25	25
805	Saatcioglou and Ozcebe (1989)	U6	1000.0	350.0	350.0	305.0	1.202	1.202	0.801	437.0	437.0	437.0	25	25	25
806	Saatcioglou and Ozcebe (1989)	U7	1000.0	350.0	350.0	305.0	1.202	1.202	0.801	437.0	437.0	437.0	25	25	25
807	Saatcioglu, Salamat and Razvi (1995)	C10-2	820.0	210.0	210.0	185.6	0.682	0.682	0.455	517.0	517.0	517.0	11.3	11.3	11.3
808	Saatcioglu, Salamat and Razvi (1995)	C11-2	820.0	210.0	210.0	185.6	0.682	0.682	0.455	517.0	517.0	517.0	11.3	11.3	11.3
809	Saatcioglu, Salamat and Razvi (1995)	C12-2	820.0	210.0	210.0	185.6	0.910	0.910	0.910	517.0	517.0	517.0	11.3	11.3	11.3
810	Saatcioglu, Salamat and Razvi (1995)	C3-1	820.0	210.0	210.0	185.6	0.910	0.910	0.910	517.0	517.0	517.0	11.3	11.3	11.3
811	Saatcioglu, Salamat and Razvi (1995)	C4-2	820.0	210.0	210.0	185.6	0.682	0.682	0.455	517.0	517.0	517.0	11.3	11.3	11.3
812	Saatcioglu, Salamat and Razvi (1995)	C5-2	820.0	210.0	210.0	185.6	0.682	0.682	0.455	517.0	517.0	517.0	11.3	11.3	11.3
813	Saatcioglu, Salamat and Razvi (1995)	C6-2	820.0	210.0	210.0	185.6	0.910	0.910	0.910	517.0	517.0	517.0	11.3	11.3	11.3
814	Saatcioglu, Salamat and Razvi (1995)	C8-1	820.0	210.0	210.0	185.6	0.682	0.682	0.455	517.0	517.0	517.0	11.3	11.3	11.3
815	Saatcioglu, Salamat and Razvi (1995)	C9-1	820.0	210.0	210.0	185.6	0.910	0.910	0.910	517.0	517.0	517.0	11.3	11.3	11.3
816	Saclay (1999)	WALL0	4150.0	300.0	750.0	625.0	0.287	0.255	0.192	643.0	643.0	604.0	8	8	6
817	Saclay (1999)	WALL1	4150.0	300.0	750.0	625.0	0.287	0.255	0.192	643.0	643.0	604.0	8	8	6
818	Saclay (1999)	WALL2	4150.0	300.0	750.0	625.0	0.287	0.255	0.192	643.0	643.0	604.0	8	8	6
819	Saclay (1999)	WALL3	4150.0	300.0	750.0	625.0	0.287	0.255	0.192	643.0	643.0	604.0	8	8	6
820	Sakai et al. 1990	B1	500.0	250.0	250.0	226.5	0.849	0.849	0.849	379.0	379.0	379.0	13	13	13
821	Sakai et al. 1990	B2	500.0	250.0	250.0	226.5	0.849	0.849	0.849	379.0	379.0	379.0	13	13	13
822	Sakai et al. 1990	B3	500.0	250.0	250.0	226.5	0.849	0.849	0.849	379.0	379.0	379.0	13	13	13
823	Sakai et al. 1990	B4	500.0	250.0	250.0	226.5	0.849	0.849	0.849	379.0	379.0	379.0	13	13	13
824	Sakai et al. 1990	B5	500.0	250.0	250.0	226.5	0.849	0.849	0.849	379.0	379.0	379.0	13	13	13
825	Sakai et al. 1990	B6	500.0	250.0	250.0	226.5	0.849	0.849	0.849	379.0	379.0	379.0	13	13	13
826	Sakai et al. 1990	B7	500.0	250.0	250.0	219.5	0.907	0.907	0.907	339.0	339.0	339.0	19	19	19
827	Salonikios et al. (1999)	MSW1	1920.0	240.0	1200.0	1150.0	0.372	0.140	0.560	586.0	586.0	0.0	8	8	0
828	Salonikios et al. (1999)	MSW2	1920.0	240.0	1200.0	1150.0	0.255	0.140	0.280	586.0	586.0	0.0	8	8	0
829	Salonikios et al. (1999)	MSW3	1920.0	240.0	1200.0	1150.0	0.255	0.140	0.280	586.0	586.0	0.0	8	8	0
830	Salonikios et al. (1999)	MSW4	1920.0	240.0	1200.0	1150.0	0.382	0.140	0.580	586.0	586.0	0.0	8	8	0
831	Salonikios et al. (1999)	MSW5	1920.0	240.0	1200.0	1150.0	0.255	0.140	0.280	586.0	586.0	0.0	8	8	0
832	Salonikios et al. (1999)	MSW6	1920.0	240.0	1200.0	1150.0	0.372	0.140	0.560	586.0	586.0	0.0	8	8	0
833	Satyarno et al (1993)	NO 1	1600.0	400.0	400.0	350.0	1.500	1.500	0.475	774.0	774.0	1080.0	20	20	22

834	Satyarno et al (1993)	NO 3	1600.0	400.0	400.0	350.0	1.375	1.375	0.393	497.0	497.0	497.0	20	20	20
835	Scribner and Wight (1978)	S10	1524.0	254.0	355.6	307.3	2.244	1.718	0.560	414.8	339.7	392.7	25.4	22.2	12.7
836	Scribner and Wight (1978)	S11	1219.2	254.0	355.6	307.3	2.244	1.718	0.000	414.8	339.7	0.0	25.4	22.2	0
837	Scribner and Wight (1978)	S12	1219.2	254.0	355.6	307.3	2.244	1.718	0.560	414.8	339.7	392.7	25.4	22.2	12.7
838	Scribner and Wight (1978)	S3	1054.1	203.2	304.8	256.5	1.380	0.960	0.000	336.9	356.2	0.0	19.05	15.88	0
839	Scribner and Wight (1978)	S4	1054.1	203.2	304.8	256.5	1.380	0.960	0.460	336.9	356.2	381.7	19.05	15.88	9.52
840	Scribner and Wight (1978)	S5	787.4	203.2	254.0	218.4	1.104	0.767	0.000	363.1	363.1	0.0	19.05	15.88	0
841	Scribner and Wight (1978)	S6	787.4	203.2	254.0	218.4	1.104	0.767	0.246	363.1	363.1	332.1	19.05	15.88	6.35
842	Scribner and Wight (1978)	S7	1054.1	203.2	304.8	256.5	1.380	0.958	0.000	363.1	363.1	0.0	19.05	15.88	0
843	Scribner and Wight (1978)	S8	1054.1	203.2	304.8	256.5	1.380	0.958	0.460	363.1	363.1	381.7	19.05	15.88	9.52
844	Scribner and Wight (1978)	S9	1524.0	254.0	355.6	307.3	2.244	1.718	0.000	414.8	339.7	0.0	25.4	22.2	0
845	Sheikh and Khoury (1993)	AS 17	1841.0	305.0	305.0	270.0	0.914	0.914	0.610	508.0	508.0	508.0	19	19	19
846	Sheikh and Khoury (1993)	AS 18	1841.0	305.0	305.0	270.0	0.914	0.914	0.610	508.0	508.0	508.0	19	19	19
847	Sheikh and Khoury (1993)	AS 19	1841.0	305.0	305.0	270.0	0.914	0.914	0.610	508.0	508.0	508.0	19	19	19
848	Sheikh and Khoury (1993)	AS 3	1841.0	305.0	305.0	270.0	0.914	0.914	0.610	508.0	508.0	508.0	19	19	19
849	Sheikh and Khoury (1993)	ES 13	1841.0	305.0	305.0	270.0	0.914	0.914	0.610	508.0	508.0	508.0	19	19	19
850	Sheikh and Khoury (1993)	FS 9	1841.0	305.0	305.0	270.0	0.914	0.914	0.610	508.0	508.0	508.0	19	19	19
851	Sheikh and Yeh (1990)	A-11	915.0	304.8	304.8	273.4	0.914	0.914	0.610	516.1	516.1	516.1	19	19	19
852	Sheikh and Yeh (1990)	A-16	915.0	304.8	304.8	273.4	0.914	0.914	0.610	516.1	516.1	516.1	19	19	19
853	Sheikh and Yeh (1990)	A-3	915.0	304.8	304.8	271.4	0.914	0.914	0.610	516.1	516.1	516.1	19	19	19
854	Sheikh and Yeh (1990)	D-14	915.0	304.8	304.8	274.9	0.865	0.865	0.865	436.1	436.1	436.1	16	16	16
855	Sheikh and Yeh (1990)	D-15	915.0	304.8	304.8	272.9	0.865	0.865	0.865	436.1	436.1	436.1	16	16	16
856	Sheikh and Yeh (1990)	D-5	915.0	304.8	304.8	272.9	0.865	0.865	0.865	436.1	436.1	436.1	16	16	16
857	Sheikh and Yeh (1990)	D-7	915.0	304.8	304.8	274.9	0.865	0.865	0.865	436.1	436.1	436.1	16	16	16
858	Sheikh and Yeh (1990)	E-10	915.0	304.8	304.8	271.4	0.914	0.914	0.610	516.1	516.1	516.1	19	19	19
859	Sheikh and Yeh (1990)	E-13	915.0	304.8	304.8	269.9	0.914	0.914	0.610	516.1	516.1	516.1	19	19	19
860	Sheikh and Yeh (1990)	E-2	915.0	304.8	304.8	269.9	0.914	0.914	0.610	516.1	516.1	516.1	19	19	19
861	Sheikh and Yeh (1990)	E-8	915.0	304.8	304.8	271.4	0.914	0.914	0.610	516.1	516.1	516.1	19	19	19
862	Sheikh and Yeh (1990)	F-12	915.0	304.8	304.8	273.4	0.914	0.914	0.610	516.1	516.1	516.1	19	19	19
863	Sheikh and Yeh (1990)	F-4	915.0	304.8	304.8	271.4	0.914	0.914	0.610	516.1	516.1	516.1	19	19	19
864	Sheikh and Yeh (1990)	F-6	915.0	304.8	304.8	269.9	0.914	0.914	0.610	516.1	516.1	516.1	19	19	19
865	Sheikh and Yeh (1990)	F-9	915.0	304.8	304.8	271.4	0.914	0.914	0.610	516.1	516.1	516.1	19	19	19
866	Sheikh, Shah and Khoury (1994)	AS 18H	1841.0	305.0	305.0	270.0	0.914	0.914	0.610	508.0	508.0	508.0	19	19	19
867	Sheikh, Shah and Khoury (1994)	AS 20H	1841.0	305.0	305.0	270.0	0.914	0.914	0.610	508.0	508.0	508.0	19	19	19
868	Sheikh, Shah and Khoury (1994)	AS 34H	1841.0	305.0	305.0	270.0	0.914	0.914	0.610	508.0	508.0	508.0	19	19	19
869	Soesianawati et al. (1986)	NO. 1	1600.0	400.0	400.0	387.0	0.503	0.503	0.503	446.0	446.0	446.0	16	16	16
870	Soesianawati et al. (1986)	NO. 2	1600.0	400.0	400.0	387.0	0.503	0.503	0.503	446.0	446.0	446.0	16	16	16
871	Soesianawati et al. (1986)	NO. 3	1600.0	400.0	400.0	387.0	0.503	0.503	0.503	446.0	446.0	446.0	16	16	16

872	Soesianawati et al. (1986)	NO. 4	1600.0	400.0	400.0	387.0	0.503	0.503	0.503	446.0	446.0	446.0	16	16	16
873	Steidle and Schaefer (1986)	STSC	1375.0	300.0	300.0	260.0	1.368	1.368	0.000	465.0	465.0	0.0	28	28	0
874	Steidle and Schaefer (1986)	UC10H	450.0	225.0	225.0	225.0	0.621	0.621	0.621	393.0	393.0	393.0	10	10	10
875	Steidle and Schaefer (1986)	UC15H	450.0	225.0	225.0	225.0	0.621	0.621	0.621	393.0	393.0	393.0	10	10	10
876	Steidle and Schaefer (1986)	UC15L	450.0	225.0	225.0	225.0	0.621	0.621	0.621	393.0	393.0	393.0	10	10	10
877	Steidle and Schaefer (1986)	UC20H	450.0	225.0	225.0	225.0	0.621	0.621	0.621	393.0	393.0	393.0	10	10	10
878	Steidle and Schaefer (1986)	UC20L	450.0	225.0	225.0	225.0	0.621	0.621	0.621	393.0	393.0	393.0	10	10	10
879	Takizawa and Aoyama (1976)	NO 1	600.0	200.0	200.0	165.0	0.664	0.664	0.000	386.5	386.5	0.0	13	13	0
880	Tanaka and Park (1990)	NO. 1	1600.0	400.0	400.0	360.0	0.589	0.589	0.589	474.0	474.0	474.0	20	20	20
881	Tanaka and Park (1990)	NO. 2	1600.0	400.0	400.0	360.0	0.589	0.589	0.589	474.0	474.0	474.0	20	20	20
882	Tanaka and Park (1990)	NO. 3	1600.0	400.0	400.0	360.0	0.589	0.589	0.589	474.0	474.0	474.0	20	20	20
883	Tanaka and Park (1990)	NO. 4	1600.0	400.0	400.0	360.0	0.589	0.589	0.589	474.0	474.0	474.0	20	20	20
884	Tanaka and Park (1990)	NO. 5	1650.0	550.0	550.0	510.0	0.415	0.415	0.415	511.0	511.0	511.0	20	20	20
885	Tanaka and Park (1990)	NO. 6	1650.0	550.0	550.0	510.0	0.415	0.415	0.415	511.0	511.0	511.0	20	20	20
886	Tanaka and Park (1990)	NO. 7	1650.0	550.0	550.0	510.0	0.415	0.415	0.415	511.0	511.0	511.0	20	20	20
887	Tanaka and Park (1990)	NO. 8	1650.0	550.0	550.0	510.0	0.415	0.415	0.415	511.0	511.0	511.0	20	20	20
888	Tegos (1984)	S10	300.0	200.0	200.0	170.0	0.393	0.393	0.000	455.0	455.0	0.0	10	10	0
889	Tegos (1984)	S11	300.0	200.0	200.0	170.0	0.774	0.774	0.000	485.0	485.0	0.0	14	14	0
890	Tegos (1984)	S12	300.0	200.0	200.0	170.0	0.774	0.774	0.000	485.0	485.0	0.0	14	14	0
891	Tegos (1984)	S13	300.0	200.0	200.0	170.0	1.571	1.571	0.000	475.0	475.0	0.0	20	20	0
892	Tegos (1984)	S14	300.0	200.0	200.0	170.0	1.571	1.571	0.000	475.0	475.0	0.0	20	20	0
893	Tegos (1984)	S9	300.0	200.0	200.0	170.0	0.393	0.393	0.000	455.0	455.0	0.0	10	10	0
894	Tegos (1984)	SS1	200.0	200.0	200.0	175.0	0.770	0.770	0.000	325.0	325.0	0.0	14	14	0
895	Tegos (1984)	SS2	200.0	200.0	200.0	175.0	0.770	0.770	0.000	325.0	325.0	0.0	14	14	0
896	Tegos (1984)	SS3	300.0	200.0	200.0	175.0	0.770	0.770	0.000	325.0	325.0	0.0	14	14	0
897	Tegos (1984)	SS4	400.0	200.0	200.0	175.0	0.770	0.770	0.000	325.0	325.0	0.0	14	14	0
898	Tegos (1984)	SS5	500.0	200.0	200.0	175.0	0.770	0.770	0.000	325.0	325.0	0.0	14	14	0
899	Tegos (1984)	SS6	200.0	200.0	200.0	175.0	0.393	0.393	0.000	455.0	455.0	0.0	10	10	0
900	Tegos (1984)	SS7	200.0	200.0	200.0	175.0	0.393	0.393	0.000	370.0	370.0	0.0	10	10	0
901	Tegos (1984)	SS8	300.0	200.0	200.0	175.0	0.393	0.393	0.000	370.0	370.0	0.0	10	10	0
902	Tegos (1984)	X1	200.0	200.0	200.0	175.0	0.000	0.000	0.000	325.0	325.0	0.0	14	14	0
903	Tegos (1984)	X2	300.0	200.0	200.0	175.0	0.000	0.000	0.000	325.0	325.0	0.0	14	14	0
904	Tegos (1984)	X3	400.0	200.0	200.0	175.0	0.000	0.000	0.000	325.0	325.0	0.0	14	14	0
905	Tegos (1984)	X4	500.0	200.0	200.0	175.0	0.000	0.000	0.000	325.0	325.0	0.0	14	14	0
906	Thomsen and Wallace (1994)	B 3	482.6	152.4	152.4	133.4	0.924	0.924	0.616	448.2	448.2	448.2	9.525	9.525	9.525
907	Thomsen and Wallace (1994)	B 2	482.6	152.4	152.4	133.4	0.924	0.924	0.616	448.2	448.2	448.2	9.525	9.525	9.525
908	Tsonos et al. (1996)	L1	700.0	200.0	200.0	180.0	0.770	0.770	0.000	485.0	485.0	0.0	14	14	0
909	Tsonos et al. (1996)	L'1	700.0	200.0	200.0	180.0	0.770	0.770	0.000	485.0	485.0	0.0	14	14	0

910	Tsonos et al. (1996)	L2	700.0	200.0	200.0	180.0	0.770	0.770	0.000	485.0	485.0	0.0	14	14	0
911	Tsonos et al. (1996)	L2	700.0	200.0	200.0	180.0	0.770	0.770	0.000	485.0	485.0	0.0	14	14	0
912	Tsonos et al. (1996)	L'2	700.0	200.0	200.0	180.0	0.770	0.770	0.000	485.0	485.0	0.0	14	14	0
913	Tsonos et al. (1996)	L'2	700.0	200.0	200.0	180.0	0.770	0.770	0.000	485.0	485.0	0.0	14	14	0
914	Tsonos et al. (1996)	L3	700.0	200.0	200.0	180.0	0.770	0.770	0.000	485.0	485.0	0.0	14	14	0
915	Tsonos et al. (1996)	L3	700.0	200.0	200.0	180.0	0.770	0.770	0.000	485.0	485.0	0.0	14	14	0
916	Tsonos et al. (1996)	L'3	700.0	200.0	200.0	180.0	0.770	0.770	0.000	485.0	485.0	0.0	14	14	0
917	Tsonos et al. (1996)	L'3	700.0	200.0	200.0	180.0	0.770	0.770	0.000	485.0	485.0	0.0	14	14	0
918	Tsonos et al. (1996)	S1	550.0	200.0	200.0	180.0	0.770	0.770	0.000	485.0	485.0	0.0	14	14	0
919	Tsonos et al. (1996)	S2	550.0	200.0	200.0	180.0	0.770	0.770	0.000	485.0	485.0	0.0	14	14	0
920	Tsonos et al. (1996)	S2	550.0	200.0	200.0	180.0	0.770	0.770	0.000	485.0	485.0	0.0	14	14	0
921	Tsonos et al. (1996)	S'2	550.0	200.0	200.0	180.0	0.770	0.770	0.000	485.0	485.0	0.0	14	14	0
922	Umehara and Jirsa (1984)	CMS	510.0	230.0	405.0	365.0	1.231	1.231	0.610	441.0	441.0	441.0	19	19	19
923	Umehara and Jirsa (1984)	O-DM	455.0	305.0	305.0	265.0	0.923	0.923	0.610	365.2	365.2	365.2	19	19	19
924	Vallenas et al (1979)	SW4-1	4383.0	254.0	2388.0	2261.0	0.376	0.376	0.260	444.0	444.0	507.0	19	19	6.35
925	Vallenas et al (1979)	SW4-2	4383.0	254.0	2388.0	2261.0	0.376	0.376	0.260	444.0	444.0	507.0	19	19	6.35
926	Vallenas et al (1979)	SW4-3	4383.0	254.0	2388.0	2261.0	0.376	0.376	0.260	444.0	444.0	507.0	19	19	6.35
927	Vallenas et al (1979)	SW6-1	3849.0	114.0	2412.0	2272.5	0.658	0.658	0.440	482.0	482.0	507.0	16	16	6.35
928	Vallenas et al (1979)	SW6-2	3849.0	114.0	2412.0	2272.5	0.658	0.658	0.440	482.0	482.0	507.0	16	16	6.35
929	Vallenas et al (1979)	SW6-3	3849.0	114.0	2412.0	2272.5	0.658	0.658	0.440	482.0	482.0	507.0	16	16	6.35
930	Vallenas et al (1979)	SW3-1	4383.0	254.0	2388.0	2261.0	0.376	0.376	0.260	444.0	444.0	507.0	19	19	6.35
931	Vallenas et al (1979)	SW3-2	4383.0	254.0	2388.0	2261.0	0.376	0.376	0.260	444.0	444.0	507.0	19	19	6.35
932	Vallenas et al (1979)	SW3-3	4383.0	254.0	2388.0	2261.0	0.376	0.376	0.260	444.0	444.0	507.0	19	19	6.35
933	Vallenas et al (1979)	SW5-2	3849.0	114.0	2412.0	2272.5	0.658	0.658	0.440	482.0	482.0	507.0	16	16	6.35
934	Vallenas et al (1979)	SW5-3	3849.0	114.0	2412.0	2272.5	0.658	0.658	0.440	482.0	482.0	507.0	16	16	6.35
935	Vallenas et al (1979)	SW5-3	3849.0	114.0	2412.0	2272.5	0.658	0.658	0.440	482.0	482.0	507.0	16	16	6.35
936	Verzelletti et al (1991)	H01	1530.0	300.0	300.0	270.0	1.050	1.050	0.000	460.0	460.0	0.0	20	20	0
937	Verzelletti et al (1991)	H03	1530.0	300.0	300.0	270.0	1.050	1.050	0.000	460.0	460.0	0.0	20	20	0
938	Vintzeleou et al. (1995)	EMPSP1	1050.0	250.0	250.0	243.0	0.739	0.739	0.493	475.0	475.0	475.0	14	14	14
939	Vintzeleou et al. (1995)	EMPSP10	1050.0	250.0	250.0	234.0	0.739	0.739	0.493	475.0	475.0	475.0	14	14	14
940	Vintzeleou et al. (1995)	EMPSP12	1050.0	250.0	250.0	245.0	0.739	0.739	0.493	475.0	475.0	475.0	14	14	14
941	Vintzeleou et al. (1995)	EMPSP13	1050.0	250.0	250.0	236.0	0.739	0.739	0.493	475.0	475.0	475.0	14	14	14
942	Vintzeleou et al. (1995)	EMPSP15	1050.0	250.0	250.0	232.5	0.739	0.739	0.493	475.0	475.0	475.0	14	14	14
943	Vintzeleou et al. (1995)	EMPSP16	1050.0	250.0	250.0	243.0	0.739	0.739	0.493	475.0	475.0	475.0	14	14	14
944	Vintzeleou et al. (1995)	EMPSP18	1050.0	250.0	250.0	245.0	0.739	0.739	0.493	475.0	475.0	475.0	14	14	14
945	Vintzeleou et al. (1995)	EMPSP19	1050.0	250.0	250.0	247.0	0.739	0.739	0.493	475.0	475.0	475.0	14	14	14
946	Vintzeleou et al. (1995)	EMPSP2	1050.0	250.0	250.0	247.0	0.739	0.739	0.493	475.0	475.0	475.0	14	14	14
947	Vintzeleou et al. (1995)	EMPSP22	1050.0	250.0	250.0	230.5	0.739	0.739	0.493	475.0	475.0	475.0	14	14	14

948	Vintzeleou et al. (1995)	EMPSP3	1050.0	250.0	250.0	235.5	0.739	0.739	0.493	475.0	475.0	475.0	14	14	14
949	Vintzeleou et al. (1995)	EMPSP30	1050.0	250.0	250.0	229.5	0.739	0.739	0.493	475.0	475.0	475.0	14	14	14
950	Vintzeleou et al. (1995)	EMPSP32	1050.0	250.0	250.0	244.0	0.724	0.724	0.724	475.0	475.0	475.0	12	12	12
951	Vintzeleou et al. (1995)	EMPSP33	1050.0	250.0	250.0	234.5	0.724	0.724	0.724	475.0	475.0	475.0	12	12	12
952	Vintzeleou et al. (1995)	EMPSP36	1050.0	250.0	250.0	229.5	0.724	0.724	0.724	475.0	475.0	475.0	12	12	12
953	Vintzeleou et al. (1995)	EMPSP38	1050.0	250.0	250.0	236.0	0.724	0.724	0.724	475.0	475.0	475.0	12	12	12
954	Vintzeleou et al. (1995)	EMPSP6	1050.0	250.0	250.0	227.5	0.739	0.739	0.493	475.0	475.0	475.0	14	14	14
955	Vintzeleou et al. (1995)	EMPSP8	1050.0	250.0	250.0	237.5	0.739	0.739	0.493	475.0	475.0	475.0	14	14	14
956	Wang et al. (1975)	SW1	4386.0	254.0	2388.0	2261.0	0.376	0.376	0.260	501.0	501.0	507.0	19	19	6.35
957	Wang et al. (1975)	SW1	4386.0	254.0	2388.0	2261.0	0.376	0.376	0.260	501.0	501.0	507.0	19	19	6.35
958	Wang et al. (1975)	SW1	4386.0	254.0	2388.0	2261.0	0.376	0.376	0.260	501.0	501.0	507.0	19	19	6.35
959	Wang et al. (1975)	SW2	4408.0	254.0	2388.0	2261.0	0.376	0.376	0.260	501.0	501.0	507.0	19	19	6.35
960	Wang et al. (1975)	SW2	4408.0	254.0	2388.0	2261.0	0.376	0.376	0.260	501.0	501.0	507.0	19	19	6.35
961	Wang et al. (1975)	SW2	4408.0	254.0	2388.0	2261.0	0.376	0.376	0.260	501.0	501.0	507.0	19	19	6.35
962	Watson and Park (1994)	UNIT 1	1600.0	400.0	400.0	387.0	0.503	0.503	0.503	446.0	446.0	446.0	16	16	16
963	Watson and Park (1994)	UNIT 2	1600.0	400.0	400.0	371.0	0.503	0.503	0.503	446.0	446.0	446.0	16	16	16
964	Watson and Park (1994)	UNIT 3	1600.0	400.0	400.0	387.0	0.503	0.503	0.503	446.0	446.0	446.0	16	16	16
965	Watson and Park (1994)	UNIT 4	1600.0	400.0	400.0	387.0	0.503	0.503	0.503	446.0	446.0	446.0	16	16	16
966	Watson and Park (1994)	UNIT 5	1600.0	400.0	400.0	387.0	0.503	0.503	0.503	474.0	474.0	446.0	16	16	16
967	Watson and Park (1994)	UNIT 6	1600.0	400.0	400.0	387.0	0.503	0.503	0.503	474.0	474.0	446.0	16	16	16
968	Watson and Park (1994)	UNIT 7	1600.0	400.0	400.0	387.0	0.503	0.503	0.503	474.0	474.0	446.0	16	16	16
969	Watson and Park (1994)	UNIT 8	1600.0	400.0	400.0	387.0	0.503	0.503	0.503	474.0	474.0	446.0	16	16	16
970	Watson and Park (1994)	UNIT 9	1600.0	400.0	400.0	387.0	0.503	0.503	0.503	474.0	474.0	446.0	16	16	16
971	Wehbe et al. (1996)	A1	2335.0	380.0	610.0	582.0	0.734	0.734	0.734	448.0	448.0	448.0	19	19	19
972	Wehbe et al. (1996)	A2	2335.0	380.0	610.0	582.0	0.734	0.734	0.734	448.0	448.0	448.0	19	19	19
973	Wehbe et al. (1996)	B1	2335.0	380.0	610.0	582.0	0.734	0.734	0.734	448.0	448.0	448.0	19	19	19
974	Wehbe et al. (1996)	B2	2335.0	380.0	610.0	582.0	0.734	0.734	0.734	448.0	448.0	448.0	19	19	19
975	Woodword and Jirsa (1984)	C-86	455.0	305.0	305.0	265.0	0.914	0.914	0.610	373.4	373.4	373.4	19	19	19
976	Woodword and Jirsa (1984)	O-86	455.0	305.0	305.0	265.0	0.914	0.914	0.610	373.4	373.4	373.4	19	19	19
977	Xiao and Martirossyan (1998)	HC4-8L16-T10-0.1P	508.0	254.0	254.0	241.0	0.923	0.923	0.923	510.0	510.0	510.0	15.9	15.9	15.9
978	Xiao and Martirossyan (1998)	HC4-8L16-T10-0.2P	508.0	254.0	254.0	241.0	0.923	0.923	0.923	510.0	510.0	510.0	15.9	15.9	15.9
979	Xiao and Martirossyan (1998)	HC4-8L16-T6-0.1P	508.0	254.0	254.0	241.0	0.923	0.923	0.923	510.0	510.0	510.0	15.9	15.9	15.9
980	Xiao and Martirossyan (1998)	HC4-8L16-T6-0.2P	508.0	254.0	254.0	241.0	0.923	0.923	0.923	510.0	510.0	510.0	15.9	15.9	15.9
981	Xiao and Martirossyan (1998)	HC4-8L19-T10-0.1P	508.0	254.0	254.0	241.0	1.332	1.332	1.332	510.0	510.0	510.0	19.1	19.1	19.1
982	Xiao and Martirossyan (1998)	HC4-8L19-T10-0.2P	508.0	254.0	254.0	241.0	1.332	1.332	1.332	510.0	510.0	510.0	19.1	19.1	19.1
983	Xiao et al. (1999)	HB4-10L	609.0	203.0	406.0	381.0	1.850	1.850	0.000	510.0	510.0	510.0	19.1	19.1	0
984	Xiao et al. (1999)	HB4-10L	812.0	203.0	406.0	381.0	1.850	1.850	0.000	510.0	510.0	510.0	19.1	19.1	0
985	Xiao et al. (1999)	HB4-6L	812.0	203.0	406.0	381.0	1.110	1.110	0.000	510.0	510.0	510.0	19.1	19.1	0

986	Yamashiro and Siess (1962)	J-15	1675.0	205.0	305.0	255.0	0.666	0.666	0.000	323.1	325.9	0.0	25.4	25.4	0
987	Yamashiro and Siess (1962)	J-16	1675.0	205.0	305.0	255.0	0.666	0.666	0.000	316.3	308.0	0.0	25.4	25.4	0
988	Yamashiro and Siess (1962)	J-24	1675.0	152.4	305.0	255.0	0.666	0.666	0.000	334.2	329.3	0.0	12.7	12.7	0
989	Yamashiro and Siess (1962)	J-25	1675.0	152.4	305.0	255.0	0.666	0.666	0.000	339.0	339.0	0.0	12.7	12.7	0
990	Yamashiro and Siess (1962)	J-26	1675.0	152.4	305.0	255.0	0.666	0.666	0.000	343.8	337.6	0.0	12.7	12.7	0
991	Yamashiro and Siess (1962)	J-27	1675.0	152.4	305.0	255.0	0.666	0.666	0.000	344.5	345.2	0.0	12.7	12.7	0
992	Yamashiro and Siess (1962)	J-28	1675.0	152.4	305.0	255.0	0.666	0.666	0.000	323.1	321.8	0.0	28.6	28.6	0
993	Yamashiro and Siess (1962)	J-29	1675.0	152.4	305.0	255.0	0.666	0.666	0.000	336.2	334.9	0.0	28.6	28.6	0
994	Yamashiro and Siess (1962)	J-30	1675.0	152.4	305.0	255.0	0.666	0.666	0.000	323.8	325.2	0.0	28.6	28.6	0
995	Yamashiro and Siess (1962)	J-31	1675.0	152.4	305.0	255.0	0.666	0.666	0.000	332.8	330.0	0.0	28.6	28.6	0
996	Yamashiro and Siess (1962)	J-34	1675.0	152.4	305.0	255.0	0.666	0.666	0.000	336.2	346.6	0.0	12.7	12.7	0
997	Zahn, Park and Priestley (1986)	UNIT-3A	1600.0	400.0	400.0	369.0	0.503	0.503	0.503	423.0	423.0	423.0	16	16	16
998	Zahn, Park and Priestley (1986)	UNIT-4A	1600.0	400.0	400.0	369.0	0.503	0.503	0.503	423.0	423.0	423.0	16	16	16
999	Zhang (1996)	C2H1	1300.0	300.0	300.0	275.0	0.669	0.669	0.446	401.0	401.0	0.0	16	16	0
1000	Zhang (1996)	C2L1	1300.0	300.0	300.0	275.0	0.669	0.669	0.446	401.0	401.0	0.0	16	16	0
1001	Zhang (1996)	C3H2	825.0	200.0	200.0	185.0	0.848	0.848	0.446	462.0	462.0	0.0	12	12	0
1002	Zhang (1996)	C3L2	825.0	200.0	200.0	185.0	0.848	0.848	0.446	462.0	462.0	0.0	12	12	0
1003	Zhang (1996)	C5H1	450.0	110.0	110.0	102.0	0.701	0.701	0.467	479.0	479.0	0.0	6	6	0
1004	Zhang (1996)	C5H2	450.0	110.0	110.0	102.0	0.701	0.701	0.467	479.0	479.0	0.0	6	6	0
1005	Zhang (1996)	C5L1	450.0	110.0	110.0	102.0	0.701	0.701	0.467	479.0	479.0	0.0	6	6	0
1006	Zhang (1996)	C5L2	450.0	110.0	110.0	102.0	0.701	0.701	0.467	479.0	479.0	0.0	6	6	0
1007	Zhou et al. (1987)	NO. 204-08	320.0	160.0	160.0	147.5	0.920	0.920	0.920	341.0	341.0	341.0	10	10	10
1008	Zhou et al. (1987)	NO. 214-08	320.0	160.0	160.0	147.5	0.920	0.920	0.920	341.0	341.0	341.0	10	10	10
1009	Zhou et al. (1987)	NO. 223-09	320.0	160.0	160.0	147.5	0.920	0.920	0.920	341.0	341.0	341.0	10	10	10
1010	Zhou et al. (1987)	NO. 302-07	480.0	160.0	160.0	147.5	0.920	0.920	0.614	341.0	341.0	341.0	10	10	10
1011	Zhou et al. (1987)	NO. 312-07	480.0	160.0	160.0	147.5	0.920	0.920	0.614	341.0	341.0	341.0	10	10	10
1012	Zhou et al. (1987)	NO. 322-07	480.0	160.0	160.0	147.5	0.920	0.920	0.614	341.0	341.0	341.0	10	10	10

	REFERENCE (1)	TEST (2)	f_c MPa (16)	Φ_h mm (17)	s_h mm (18)	f_{yh} MPa (19)	ρ_{sx} % (20)	v - (21)	θ_y % (22)	θ_u % (23)	M_y kNm (24)	M_u kNm (25)	φ_y 1/m (26)	φ_u 1/m (27)	ST - (28)	SL - (29)	TP - (30)	CM - (31)	ρ_d % (32)
1	Abrams (1987)	C1	42.3	9.5	64.0	423.0	0.967	0.100	1.330	0.000	115.0	120.0	0.000	0.000	1	1	0	1	0
2	Alca et al. (1997)	LH1	90.3	4.8	115.0	0.0	0.092	0.000	0.000	0.000	1432.0	1546.0	0.010	0.027	1	0	0	0	0
3	Alca et al. (1997)	LH2	87.7	4.8	115.0	0.0	0.092	0.000	0.000	0.000	1440.0	1566.0	0.010	0.028	1	0	0	0	0
4	Alca et al. (1997)	LL1	54.2	4.8	230.0	0.0	0.046	0.000	0.000	0.000	722.0	774.0	0.008	0.027	1	0	0	0	0
5	Alca et al. (1997)	LL2	43.8	4.8	230.0	0.0	0.046	0.000	0.000	0.000	720.2	747.6	0.009	0.020	1	0	0	0	0
6	Alca et al. (1997)	MH1	90.3	4.8	160.0	0.0	0.095	0.000	0.000	0.000	493.8	521.8	0.013	0.036	1	0	0	0	0
7	Alca et al. (1997)	MH2	73.4	4.8	160.0	0.0	0.095	0.000	0.000	0.000	475.5	476.1	0.015	0.022	1	0	0	0	0
8	Alca et al. (1997)	ML1	52.7	3.2	160.0	0.0	0.042	0.000	0.000	0.000	248.2	256.2	0.012	0.033	1	0	0	0	0
9	Alca et al. (1997)	ML2	54.1	3.2	160.0	0.0	0.042	0.000	0.000	0.000	250.6	275.1	0.012	0.053	1	0	0	0	0
10	Alca et al. (1997)	SH1	90.1	3.2	115.0	0.0	0.092	0.000	0.000	0.000	128.2	136.5	0.022	0.061	1	0	0	0	0
11	Alca et al. (1997)	SH2	85.6	3.2	115.0	0.0	0.092	0.000	0.000	0.000	128.8	134.2	0.022	0.055	1	0	0	0	0
12	Alca et al. (1997)	SL1	51.1	3.2	115.0	0.0	0.092	0.000	0.000	0.000	65.3	68.8	0.019	0.053	1	0	0	0	0
13	Alca et al. (1997)	SL2	51.1	3.2	115.0	0.0	0.092	0.000	0.000	0.000	64.9	69.4	0.019	0.071	1	0	0	0	0
14	Ali and Wight (1991)		34.5	4.8	64.0	550.0	0.884	0.074	0.000	2.900	0.0	0.0	0.000	0.000	1	1	1	1	0
15	Ang Priestley and Park (1981)	NO. 3	23.6	12.0	100.0	320.0	2.832	0.380	0.625	0.000	256.0	0.0	0.000	0.000	1	1	0	1	0
16	Ang Priestley and Park (1981)	NO. 4	25.0	10.0	90.0	280.0	2.218	0.210	0.813	0.000	256.0	0.0	0.000	0.000	1	1	0	1	0
17	Ang, Priestley and Paulay (1989)	UNIT-13	36.2	6.0	30.0	326.0	0.471	0.100	1.343	6.641	360.3	332.4	0.000	0.000	1	1	0	1	0
18	Ang, Priestley and Paulay (1989)	UNIT-14	33.7	6.0	60.0	326.0	0.236	0.000	1.275	4.319	295.8	170.8	0.000	0.000	1	1	0	1	0
19	Ang, Priestley and Paulay (1989)	UNIT-15	34.8	6.0	60.0	326.0	0.236	0.000	0.980	5.121	176.5	206.3	0.000	0.000	1	1	0	1	0
20	Ang, Priestley and Paulay (1989)	UNIT-17	34.3	6.0	60.0	326.0	0.236	0.100	1.331	4.622	275.7	152.9	0.000	0.000	1	1	0	1	0
21	Ang, Priestley and Paulay (1989)	UNIT-20	36.7	6.0	80.0	326.0	0.177	0.175	1.517	2.307	451.9	152.9	0.000	0.000	1	1	0	1	0
22	Ang, Priestley and Paulay (1989)	UNIT-6	30.1	6.0	60.0	328.0	0.236	0.000	1.368	2.721	352.4	271.4	0.000	0.000	1	1	0	1	0
23	Ang, Priestley and Paulay (1989)	UNIT-8	28.7	6.0	30.0	372.0	0.471	0.200	1.549	5.314	383.6	364.0	0.000	0.000	1	1	0	1	0
24	Atalay and Penzien (1975)	A11	28.0	9.5	76.2	380.6	0.614	0.308	1.229	3.419	142.0	150.0	0.000	0.000	1	0	0	1	0
25	Atalay and Penzien (1975)	A12	28.0	9.5	127.0	380.6	0.368	0.308	1.003	2.732	143.0	150.0	0.000	0.000	1	0	0	1	0
26	Atalay and Penzien (1975)	A4	28.0	9.5	127.0	380.6	0.368	0.103	1.080	4.497	91.5	95.0	0.000	0.000	1	0	0	1	0
27	Atalay and Penzien (1975)	A7	28.0	9.5	76.2	380.6	0.614	0.205	1.051	4.287	122.0	125.0	0.000	0.000	1	0	0	1	0
28	Atalay and Penzien (1975)	A8	28.0	9.5	127.0	380.6	0.368	0.205	1.078	3.412	123.0	125.0	0.000	0.000	1	0	0	1	0
29	Atalay and Penzien (1975)	NO. 10	32.4	9.5	127.0	392.0	0.930	0.266	1.094	2.187	142.6	0.0	0.000	0.000	1	0	0	1	0
30	Atalay and Penzien (1975)	NO. 11	28.0	9.5	76.0	373.0	1.540	0.278	0.984	1.914	142.6	0.0	0.000	0.000	1	0	0	1	0
31	Atalay and Penzien (1975)	NO. 12	31.8	9.5	127.0	373.0	0.930	0.271	0.984	2.297	142.6	0.0	0.000	0.000	1	0	0	1	0
32	Atalay and Penzien (1975)	NO. 1S1	29.1	9.5	76.0	363.0	1.540	0.099	0.984	0.000	106.1	0.0	0.000	0.000	1	0	0	1	0
33	Atalay and Penzien (1975)	NO. 2S1	30.7	9.5	127.0	363.0	0.930	0.093	0.984	0.000	100.6	0.0	0.000	0.000	1	0	0	1	0
34	Atalay and Penzien (1975)	NO. 3S1	29.2	9.5	76.0	363.0	1.540	0.098	0.930	0.000	106.1	0.0	0.000	0.000	1	0	0	1	0

35	Atalay and Penzien (1975)	NO. 4S1	27.6	9.5	127.0	363.0	0.930	0.104	0.984	0.000	128.0	0.0	0.000	0.000	1	0	0	1	0
36	Atalay and Penzien (1975)	NO. 5S1	29.4	9.5	76.0	392.0	1.540	0.195	1.094	0.000	137.2	0.0	0.000	0.000	1	0	0	1	0
37	Atalay and Penzien (1975)	NO. 6S1	31.8	9.5	127.0	392.0	0.930	0.181	1.094	0.000	128.0	0.0	0.000	0.000	1	0	0	1	0
38	Atalay and Penzien (1975)	NO. 9	33.3	9.5	76.0	392.0	1.540	0.259	1.094	2.625	137.2	0.0	0.000	0.000	1	0	0	1	0
39	Aycardi et al. (1994)	SPEC 2	31.0	3.0	50.8	362.3	0.276	0.292	0.727	5.000	4.5	4.8	0.000	0.000	1	1	0	1	0
40	Aycardi et al. (1994)	SPEC 4	31.0	3.0	50.8	362.3	0.276	0.138	0.546	0.000	3.3	0.0	0.000	0.000	1	1	0	1	0
41	Azizinamini et al. (1994)	NC 2	41.4	12.5	101.0	414.0	0.901	0.195	0.850	5.100	725.0	825.0	0.000	0.000	1	1	0	1	0
42	Azizinamini et al. (1994)	NC 4	41.4	9.5	101.0	414.0	0.520	0.298	0.700	2.900	750.0	800.0	0.000	0.000	1	1	0	1	0
43	Azizinamini et al. (1994)	UNIT_1	53.7	12.7	66.7	453.7	1.246	0.190	0.555	3.886	210.0	248.0	0.012	0.000	1	0	0	1	0
44	Azizinamini et al. (1994)	UNIT_2	50.8	9.5	41.3	495.4	1.696	0.194	0.638	5.108	195.3	237.7	0.000	0.000	1	0	0	1	0
45	Azizinamini et al. (1994)	UNIT_3	100.8	12.7	66.7	453.7	1.246	0.186	0.722	2.887	229.0	271.4	0.013	0.000	1	0	0	1	0
46	Azizinamini et al. (1994)	UNIT_4	100.3	9.5	41.3	495.4	1.696	0.190	0.666	3.997	258.2	295.1	0.014	0.000	1	0	0	1	0
47	Azizinamini et al. (1994)	UNIT_5	101.6	9.5	66.7	752.8	1.050	0.190	0.694	2.776	321.6	379.8	0.015	0.000	1	0	0	1	0
48	Azizinamini et al. (1994)	UNIT_6	101.7	9.5	41.3	752.8	1.696	0.190	0.777	3.886	243.9	288.1	0.011	0.000	1	0	0	1	0
49	Azizinamini et al. (1994)	UNIT_7	26.3	9.5	66.7	495.4	1.050	0.200	0.638	3.192	146.6	173.2	0.014	0.000	1	0	0	1	0
50	Azizinamini et al. (1994)	UNIT_8	27.0	9.5	66.7	495.4	1.050	0.200	0.555	2.221	142.4	168.2	0.009	0.000	1	0	0	1	0
51	Azizinamini et al. (1994)	UNIT_9	103.8	9.5	41.3	495.4	1.696	0.190	0.666	3.331	257.4	304.0	0.011	0.000	1	0	0	1	0
52	Azizinamini et al. (1988)	NC-2	39.3	12.7	102.0	454.0	2.190	0.206	1.093	4.956	548.8	0.0	0.000	0.000	1	1	0	1	0
53	Azizinamini et al. (1988)	NC-4	39.8	9.5	102.0	616.0	1.260	0.310	0.948	0.000	617.4	0.0	0.000	0.000	1	1	0	1	0
54	Bayrak and Sheikh (1998)	AS 2HT	71.7	11.3	90.0	542.0	1.246	0.360	1.000	5.000	260.0	290.0	0.020	0.167	1	1	0	1	0
55	Bayrak and Sheikh (1998)	AS 3HT	71.8	11.3	90.0	542.0	1.246	0.500	1.000	3.100	270.0	285.0	0.017	0.146	1	1	0	1	0
56	Bayrak and Sheikh (1998)	AS 4HT	71.9	16.0	100.0	463.0	2.248	0.500	1.000	4.100	275.0	305.0	0.017	0.177	1	1	0	1	0
57	Bayrak and Sheikh (1998)	AS 5HT	101.8	16.0	90.0	463.0	2.498	0.450	1.000	2.000	350.0	380.0	0.011	0.070	1	1	0	1	0
58	Bayrak and Sheikh (1998)	AS 6HT	101.9	16.0	76.0	463.0	2.958	0.460	1.000	3.800	360.0	390.0	0.017	0.134	1	1	0	1	0
59	Bayrak and Sheikh (1998)	AS 7HT	102.0	11.3	94.0	542.0	1.193	0.450	1.000	1.400	350.0	355.0	0.012	0.045	1	1	0	1	0
60	Bayrak and Sheikh (1998)	ES 1HT	72.1	16.0	95.0	463.0	1.388	0.510	1.000	2.500	265.0	280.0	0.017	0.073	1	1	0	1	0
61	Bayrak and Sheikh (1998)	ES 8HT	102.2	16.0	70.0	463.0	1.883	0.470	1.000	1.400	345.0	360.0	0.014	0.064	1	1	0	1	0
62	Bigaj and Walraven (1993)	B024	27.5	0.0	1000.0	0.0	0.000	0.000	0.750	3.350	5.2	5.7	0.000	0.000	2	0	0	0	0
63	Bigaj and Walraven (1993)	B124	28.2	0.0	1000.0	0.0	0.000	0.000	0.850	3.350	17.1	17.8	0.000	0.000	2	0	0	0	0
64	Bossco and Debernardi (1993)	T10A1	25.7	6.0	150.0	587.3	0.126	0.000	0.870	4.930	299.0	320.3	0.007	0.095	2	0	0	0	0
65	Bossco and Debernardi (1993)	T10B1	25.7	6.0	150.0	595.6	0.126	0.000	0.970	3.730	285.0	314.4	0.007	0.080	3	0	0	0	0
66	Bossco and Debernardi (1993)	T11A1	25.7	6.0	150.0	587.3	0.126	0.000	1.370	3.830	561.0	566.1	0.010	0.065	2	0	0	0	0
67	Bossco and Debernardi (1993)	T1A1	25.7	6.0	150.0	587.3	0.377	0.000	0.900	8.000	11.4	12.7	0.030	0.640	2	0	0	0	0
68	Bossco and Debernardi (1993)	T1B1	25.7	6.0	150.0	595.6	0.377	0.000	1.000	3.000	11.8	12.8	0.035	0.400	3	0	0	0	0
69	Bossco and Debernardi (1993)	T2A1	25.7	6.0	150.0	587.3	0.377	0.000	1.300	9.000	23.3	25.3	0.024	0.400	2	0	0	0	0
70	Bossco and Debernardi (1993)	T2B1	25.7	6.0	150.0	595.6	0.377	0.000	1.300	6.900	22.3	24.5	0.040	0.550	3	0	0	0	0
71	Bossco and Debernardi (1993)	T3A1	25.7	6.0	150.0	587.3	0.377	0.000	1.450	6.800	34.5	34.6	0.040	0.250	2	0	0	0	0
72	Bossco and Debernardi (1993)	T3B1	25.7	6.0	150.0	595.6	0.377	0.000	1.500	5.000	33.8	35.7	0.040	0.250	3	0	0	0	0

73	Bossco and Debernardi (1993)	T4A1	25.7	6.0	200.0	587.3	0.141	0.000	0.450	9.000	42.0	58.1	0.008	0.300	2	0	0	0	0
74	Bossco and Debernardi (1993)	T4B1	25.7	6.0	200.0	595.6	0.141	0.000	0.680	2.300	48.5	53.8	0.015	0.085	3	0	0	0	0
75	Bossco and Debernardi (1993)	T5A1	25.7	6.0	200.0	587.3	0.141	0.000	0.850	8.150	92.5	108.2	0.015	0.280	2	0	0	0	0
76	Bossco and Debernardi (1993)	T5B1	25.7	6.0	200.0	595.6	0.141	0.000	0.950	3.450	97.5	107.7	0.010	0.100	3	0	0	0	0
77	Bossco and Debernardi (1993)	T6A1	25.7	6.0	200.0	587.3	0.141	0.000	1.180	3.800	196.1	201.6	0.017	0.100	2	0	0	0	0
78	Bossco and Debernardi (1993)	T6B1	25.7	6.0	200.0	595.6	0.141	0.000	1.300	3.800	178.7	199.8	0.014	0.110	3	0	0	0	0
79	Bossco and Debernardi (1993)	T7A1	25.7	6.0	200.0	587.3	0.141	0.000	1.650	2.250	220.0	223.3	0.020	0.030	2	0	0	0	0
80	Bossco and Debernardi (1993)	T7B1	25.7	6.0	200.0	595.6	0.141	0.000	1.450	2.000	225.0	239.7	0.020	0.030	3	0	0	0	0
81	Bossco and Debernardi (1993)	T8A1	25.7	6.0	150.0	587.3	0.126	0.000	0.450	3.070	63.5	76.1	0.005	0.055	2	0	0	0	0
82	Bossco and Debernardi (1993)	T8B1	25.7	6.0	150.0	595.6	0.126	0.000	0.450	1.500	63.0	69.8	0.008	0.040	3	0	0	0	0
83	Bossco and Debernardi (1993)	T9A1	25.7	6.0	150.0	587.3	0.126	0.000	0.650	4.200	140.6	163.0	0.000	0.000	2	0	0	0	0
84	Bossco and Debernardi (1993)	T9B1	25.7	6.0	150.0	595.6	0.126	0.000	0.730	1.570	144.8	153.0	0.007	0.031	3	0	0	0	0
85	Bousias et al (1992)	S0	30.8	8.0	70.0	440.0	0.574	0.160	1.700	7.000	82.5	0.0	0.000	0.000	1	1	0	1	0
86	BRI (1978)	LE2-3	14.3	6.0	50.0	437.5	0.452	0.155	1.030	1.880	29.4	36.0	0.000	0.000	1	1	0	0	0
87	BRI (1978)	LE-2SL	20.6	6.0	63.0	437.5	0.359	0.215	0.700	2.000	52.7	52.7	0.000	0.000	1	1	0	0	0
88	BRI (1978)	LE-8SL	20.6	6.0	37.0	437.5	0.611	0.108	1.100	5.000	60.0	61.3	0.000	0.000	1	1	0	0	0
89	BRI (1978)	CAAA2	26.5	13.0	50.0	343.4	2.124	0.096	0.800	2.510	90.0	0.0	0.000	0.000	1	1	0	1	0
90	BRI (1978)	CAAB1	26.5	13.0	75.0	343.4	1.416	0.096	0.800	2.510	89.5	0.0	0.000	0.000	1	1	0	1	0
91	BRI (1978)	CAAB2	26.5	13.0	75.0	343.4	1.416	0.096	0.730	2.510	84.5	0.0	0.000	0.000	1	1	0	1	0
92	BRI (1978)	CABA1	26.5	9.0	50.0	355.1	1.018	0.096	1.040	4.000	72.6	0.0	0.000	0.000	1	1	0	1	0
93	BRI (1978)	CABA2	26.5	9.0	50.0	355.1	1.018	0.096	1.040	6.000	70.0	0.0	0.000	0.000	1	1	0	1	0
94	BRI (1978)	CABB1	26.5	9.0	100.0	355.1	0.509	0.096	1.210	3.000	70.9	0.0	0.000	0.000	1	1	0	1	0
95	BRI (1978)	CABB2	26.5	9.0	100.0	355.1	0.509	0.096	0.690	3.000	77.9	0.0	0.000	0.000	1	1	0	1	0
96	BRI (1978)	CBBA1	26.5	6.0	120.0	369.8	0.188	0.096	0.640	2.670	43.8	0.0	0.000	0.000	1	1	0	1	0
97	BRI (1978)	CBBA2	26.5	6.0	120.0	369.8	0.188	0.096	0.520	4.000	41.1	0.0	0.000	0.000	1	1	0	1	0
98	BRI (1978)	CBBB1	26.5	6.0	250.0	369.8	0.090	0.096	0.230	2.000	37.6	0.0	0.000	0.000	1	1	0	1	0
99	BRI (1978)	CBBB2	26.5	6.0	250.0	369.8	0.090	0.096	0.520	2.670	40.3	0.0	0.000	0.000	1	1	0	1	0
100	BRI (1978)	LM1-1B	16.0	9.0	33.3	344.2	1.528	0.277	0.670	2.290	62.3	0.0	0.000	0.000	1	1	0	1	0
101	BRI (1978)	LM1-2A	16.0	9.0	71.5	344.2	0.712	0.277	0.620	2.400	50.0	0.0	0.000	0.000	1	1	0	1	0
102	BRI (1978)	LM1-2B	16.0	6.0	62.5	347.3	0.362	0.277	0.380	1.440	58.8	0.0	0.000	0.000	1	1	0	1	0
103	BRI (1978)	LM1-3A	16.0	9.0	55.5	344.2	0.917	0.138	0.550	2.130	31.9	0.0	0.000	0.000	1	1	0	1	0
104	BRI (1978)	LM1-3B	16.0	6.0	50.0	344.3	0.452	0.138	0.640	1.600	48.4	0.0	0.000	0.000	1	1	0	1	0
105	BRI (1978)	LM1-5A	16.0	13.0	45.5	312.0	2.334	0.138	0.510	2.400	63.0	0.0	0.000	0.000	1	1	0	1	0
106	BRI (1978)	LM1-5B	16.0	9.0	45.5	344.2	1.119	0.138	0.530	1.330	61.5	0.0	0.000	0.000	1	1	0	1	0
107	BRI (1978)	LM1-6A	16.0	6.0	43.5	351.0	0.520	0.138	0.750	1.920	60.0	0.0	0.000	0.000	1	1	0	1	0
108	BRI (1978)	LM1-6B	16.0	4.0	37.0	343.4	0.272	0.138	0.700	2.400	61.9	0.0	0.000	0.000	1	1	0	1	0
109	BRI (1978)	LM1-7A	16.0	13.0	43.5	312.0	2.441	0.277	0.820	3.200	84.4	0.0	0.000	0.000	1	1	0	1	0
110	BRI (1978)	LM1-7B	16.0	9.0	41.7	344.2	1.220	0.277	0.760	2.270	85.0	0.0	0.000	0.000	1	1	0	1	0

111	BRI (1978)	LM1-8A	16.0	9.0	40.0	344.2	1.272	0.138	0.600	2.240	70.6	0.0	0.000	0.000	1	1	0	1	0
112	BRI (1978)	LM1-8B	16.0	6.0	37.0	337.8	0.611	0.138	0.640	3.000	70.6	0.0	0.000	0.000	1	1	0	1	0
113	BRI (1978)	S2BAB1	23.5	6.0	250.0	369.8	0.090	0.108	0.467	2.800	45.0	0.0	0.000	0.000	1	1	0	1	0
114	BRI (1978)	S2BAB2	23.5	6.0	250.0	369.8	0.090	0.108	0.600	2.400	32.5	0.0	0.000	0.000	1	1	0	1	0
115	BRI (1978)	SAAA1	23.5	13.0	50.0	343.4	2.124	0.108	0.733	2.507	80.5	0.0	0.000	0.000	1	1	0	1	0
116	BRI (1978)	SAAA2	23.5	13.0	50.0	343.4	2.124	0.108	0.800	2.507	84.0	0.0	0.000	0.000	1	1	0	1	0
117	BRI (1978)	SAAB1	23.5	13.0	75.0	343.4	1.416	0.108	0.800	2.507	81.5	0.0	0.000	0.000	1	1	0	1	0
118	BRI (1978)	SAAB2	23.5	13.0	75.0	343.4	1.416	0.108	0.800	2.000	79.0	0.0	0.000	0.000	1	1	0	1	0
119	BRI (1978)	SABA1	26.5	9.0	50.0	355.1	1.018	0.096	0.553	4.000	70.0	0.0	0.000	0.000	1	1	0	1	0
120	BRI (1978)	SABA2	26.5	9.0	50.0	355.1	1.018	0.096	0.700	3.000	70.9	0.0	0.000	0.000	1	1	0	1	0
121	BRI (1978)	SABB1	26.5	9.0	100.0	355.1	0.509	0.096	0.640	4.000	70.9	0.0	0.000	0.000	1	1	0	1	0
122	BRI (1978)	SABB2	26.5	9.0	100.0	355.1	0.509	0.096	0.750	3.000	68.3	0.0	0.000	0.000	1	1	0	1	0
123	BRI (1978)	SBBA1	26.5	6.0	125.0	369.8	0.181	0.096	0.670	2.667	40.3	0.0	0.000	0.000	1	1	0	1	0
124	BRI (1978)	SBBA2	26.5	6.0	125.0	369.8	0.181	0.096	0.660	2.667	37.6	0.0	0.000	0.000	1	1	0	1	0
125	BRI (1978)	SBBB1	26.5	6.0	250.0	369.8	0.090	0.096	0.660	2.667	39.4	0.0	0.000	0.000	1	1	0	1	0
126	BRI (1978)	SBBB2	26.5	6.0	250.0	369.8	0.090	0.096	0.700	2.667	39.4	0.0	0.000	0.000	1	1	0	1	0
127	BRI (1978)	SDBAA2	26.5	6.0	50.0	369.8	0.452	0.096	0.480	2.400	60.5	0.0	0.000	0.000	1	1	0	1	0
128	BRI (1978)	SE-2A	26.0	19.0	133.0	287.7	0.853	0.170	0.432	2.592	457.9	0.0	0.000	0.000	1	1	0	1	0
129	BRI (1978)	SE-2B	26.0	13.0	125.0	299.4	0.425	0.170	0.400	2.088	459.0	0.0	0.000	0.000	1	1	0	1	0
130	BRI (1978)	SE-3A	26.0	19.0	111.0	287.7	1.022	0.085	0.507	2.027	354.4	0.0	0.000	0.000	1	1	0	1	0
131	BRI (1978)	SE-3B	26.0	13.0	111.0	299.4	0.478	0.085	0.520	1.560	364.4	0.0	0.000	0.000	1	1	0	1	0
132	BRI (1978)	SE-4B	26.0	9.0	250.0	340.7	0.102	0.085	0.424	1.500	283.5	0.0	0.000	0.000	1	1	0	1	0
133	BRI (1978)	SE-5B	26.0	19.0	83.0	287.7	1.366	0.085	0.513	1.620	435.0	0.0	0.000	0.000	1	1	0	1	0
134	BRI (1978)	SE-6A	26.0	13.0	87.0	299.4	0.610	0.085	0.756	2.252	374.6	0.0	0.000	0.000	1	1	0	1	0
135	BRI (1978)	SE-6A1	26.0	13.0	105.0	299.4	0.506	0.085	0.760	2.276	402.8	0.0	0.000	0.000	1	1	0	1	0
136	BRI (1978)	SE-6A2	26.0	13.0	125.0	299.4	0.425	0.085	0.756	2.300	394.9	0.0	0.000	0.000	1	1	0	1	0
137	BRI (1978)	SE-6B	26.0	9.0	95.0	340.7	0.268	0.085	0.712	2.136	400.5	0.0	0.000	0.000	1	1	0	1	0
138	BRI (1978)	SE-7B	26.0	19.0	80.0	287.7	1.418	0.170	0.784	2.364	663.8	0.0	0.000	0.000	1	1	0	1	0
139	BRI (1978)	SE-8A	26.0	19.0	77.0	287.7	1.473	0.085	0.608	2.500	598.5	0.0	0.000	0.000	1	1	0	1	0
140	BRI (1978)	SE-8B	26.0	13.0	71.0	299.4	0.748	0.085	0.656	2.500	610.9	0.0	0.000	0.000	1	1	0	1	0
141	BRI (1978)	SPBAA1	26.5	9.0	50.0	355.1	1.018	0.096	0.480	2.400	55.0	0.0	0.000	0.000	1	1	0	1	0
142	BRI (1978)	SPBAA2	26.5	9.0	50.0	355.1	1.018	0.096	0.480	2.400	53.5	0.0	0.000	0.000	1	1	0	1	0
143	BRI (1978)	AF2-1	23.6	6.0	30.0	373.2	0.754	0.250	0.875	2.580	75.3	0.0	0.000	0.000	1	1	0	1	0
144	BRI (1978)	AF21OA	18.6	4.0	47.0	392.4	0.214	0.000	0.880	2.640	45.2	0.0	0.000	0.000	1	1	0	1	0
145	BRI (1978)	AF2-2	23.6	6.0	30.0	373.2	0.754	0.375	0.505	0.910	81.3	0.0	0.000	0.000	1	1	0	1	0
146	BRI (1978)	AF22CD	18.6	9.0	81.0	328.4	0.628	0.287	0.800	3.600	68.1	0.0	0.000	0.000	1	1	0	1	0
147	BRI (1978)	AF2-3	23.6	6.0	30.0	373.2	0.754	0.500	0.500	1.000	71.6	0.0	0.000	0.000	1	1	0	1	0
148	BRI (1978)	AF2-4	23.6	9.0	30.0	328.3	1.696	0.375	0.707	2.140	94.7	0.0	0.000	0.000	1	1	0	1	0

149	BRI (1978)	AF2-5	23.6	6.0	30.0	373.2	0.754	0.375	0.712	2.000	95.3	0.0	0.000	0.000	1	1	0	1	0
150	BRI (1978)	AF2-6	23.6	9.0	30.0	328.3	1.696	0.500	0.800	1.500	93.4	0.0	0.000	0.000	1	1	0	1	0
151	BRI (1978)	AF2-7	23.6	6.0	30.0	373.2	0.754	0.500	0.800	1.000	96.9	0.0	0.000	0.000	1	1	0	1	0
152	BRI (1978)	AF31OA	18.6	9.0	50.0	328.4	1.018	0.000	0.780	3.120	59.4	0.0	0.000	0.000	1	1	0	1	0
153	BRI (1978)	AF31OB	18.6	6.0	44.0	360.6	0.514	0.000	1.500	3.000	62.6	0.0	0.000	0.000	1	1	0	1	0
154	BRI (1978)	AF31TA	18.6	4.0	48.0	392.4	0.209	-0.009	1.160	3.480	47.8	0.0	0.000	0.000	1	1	0	1	0
155	BRI (1978)	AF32CA	18.6	13.0	65.0	309.3	1.634	0.287	1.180	3.540	80.3	0.0	0.000	0.000	1	1	0	1	0
156	BRI (1978)	AF32CB	18.6	9.0	62.0	328.4	0.821	0.287	1.080	3.240	77.5	0.0	0.000	0.000	1	1	0	1	0
157	BRI (1978)	AF32OA	18.6	6.0	49.0	360.6	0.462	0.000	0.990	2.970	54.4	0.0	0.000	0.000	1	1	0	1	0
158	BRI (1978)	AF41OB	18.6	13.0	50.0	309.3	2.124	0.000	1.620	3.240	83.3	0.0	0.000	0.000	1	1	0	1	0
159	BRI (1978)	AF41TA	18.6	9.0	64.0	328.4	0.795	-0.009	0.780	2.340	54.2	0.0	0.000	0.000	1	1	0	1	0
160	BRI (1978)	AF41TB	18.6	6.0	55.0	360.6	0.411	-0.009	1.040	3.600	54.2	0.0	0.000	0.000	1	1	0	1	0
161	BRI (1978)	AF42CB	18.6	13.0	44.0	309.3	2.413	0.287	1.300	5.200	95.0	0.0	0.000	0.000	1	1	0	1	0
162	BRI (1978)	AF42OA	18.6	9.0	53.0	328.4	0.960	0.000	0.840	3.360	65.0	0.0	0.000	0.000	1	1	0	1	0
163	BRI (1978)	AF42OB	18.6	6.0	46.0	360.6	0.492	0.000	1.080	2.160	70.6	0.0	0.000	0.000	1	1	0	1	0
164	BRI (1978)	AF42TA	18.6	4.0	63.0	392.4	0.160	-0.009	1.600	4.400	39.2	0.0	0.000	0.000	1	1	0	1	0
165	BRI (1978)	AR15A2T	12.2	13.9	75.0	347.2	0.813	0.182	0.667	2.880	41.0	0.0	0.000	0.000	1	1	0	1	0
166	BRI (1978)	AR15A5H	12.2	9.0	62.5	342.7	0.814	0.182	1.067	3.093	41.5	0.0	0.000	0.000	1	1	0	1	0
167	BRI (1978)	AR15A5T	15.0	13.9	75.0	347.2	0.813	0.148	1.000	3.147	51.0	0.0	0.000	0.000	1	1	0	1	0
168	BRI (1978)	AR15B2T	15.0	13.9	34.1	347.2	1.787	0.148	1.600	5.600	59.0	0.0	0.000	0.000	1	1	0	1	0
169	BRI (1978)	AR15B5H	15.0	9.0	28.9	342.7	1.761	0.148	1.440	6.080	65.0	0.0	0.000	0.000	1	1	0	1	0
170	BRI (1978)	AR15B5T	12.2	13.9	34.1	347.2	1.787	0.182	1.440	5.867	65.0	0.0	0.000	0.000	1	1	0	1	0
171	BRI (1978)	AR20A2H	12.2	6.0	50.0	362.6	0.452	0.182	0.930	3.300	42.5	0.0	0.000	0.000	1	1	0	1	0
172	BRI (1978)	AR20A2T	15.0	10.2	71.5	363.6	0.457	0.148	1.100	3.920	42.5	0.0	0.000	0.000	1	1	0	1	0
173	BRI (1978)	AR20A5H	15.0	6.0	50.0	362.6	0.452	0.148	1.000	2.550	50.0	0.0	0.000	0.000	1	1	0	1	0
174	BRI (1978)	AR20B2H	15.0	9.0	47.6	342.7	1.069	0.148	1.400	5.800	56.3	0.0	0.000	0.000	1	1	0	1	0
175	BRI (1978)	AR20B2T	12.2	13.9	55.5	347.2	1.098	0.182	1.190	3.800	53.8	0.0	0.000	0.000	1	1	0	1	0
176	BRI (1978)	AR20B5H	12.2	13.9	47.6	342.7	1.280	0.182	1.430	3.150	50.0	0.0	0.000	0.000	1	1	0	1	0
177	BRI (1978)	AR20B5T	15.0	13.9	55.5	347.2	1.098	0.148	1.000	4.160	65.0	0.0	0.000	0.000	1	1	0	1	0
178	BRI (1978)	AR2-2AH(1/4)	25.6	6.0	32.3	364.5	0.700	0.173	0.760	4.260	79.4	0.0	0.000	0.000	1	1	0	1	0
179	BRI (1978)	AR2-2AH(1/8)	25.6	6.0	32.3	364.5	0.700	0.086	0.660	9.500	65.6	0.0	0.000	0.000	1	1	0	1	0
180	BRI (1978)	AR2-2AT(1/4)	25.6	10.2	45.5	337.8	0.718	0.173	0.710	4.260	81.3	0.0	0.000	0.000	1	1	0	1	0
181	BRI (1978)	AR2-2AT(1/8)	25.6	10.2	45.5	337.8	0.718	0.086	0.630	11.800	61.9	0.0	0.000	0.000	1	1	0	1	0
182	BRI (1978)	AR2-2BH(1/4)	25.6	9.0	50.0	308.0	1.018	0.173	0.960	3.760	92.5	0.0	0.000	0.000	1	1	0	1	0
183	BRI (1978)	AR2-2BH(1/8)	25.6	9.0	50.0	308.0	1.018	0.086	0.700	5.840	72.5	0.0	0.000	0.000	1	1	0	1	0
184	BRI (1978)	AR2-2BT(1/4)	25.6	13.9	58.8	308.0	1.036	0.173	0.840	3.760	90.6	0.0	0.000	0.000	1	1	0	1	0
185	BRI (1978)	AR2-2BT(1/8)	25.6	13.9	58.8	308.0	1.036	0.086	0.740	7.800	74.4	0.0	0.000	0.000	1	1	0	1	0
186	BRI (1978)	AR2-5AH(1/4)	25.6	6.0	32.3	364.5	0.700	0.173	0.780	3.120	80.6	0.0	0.000	0.000	1	1	0	1	0

187	BRI (1978)	AR2-5AH(1/8)	25.6	6.0	32.3	364.5	0.700	0.086	0.570	9.000	63.8	0.0	0.000	0.000	1	1	0	1	0
188	BRI (1978)	AR2-5AT(1/4)	25.6	10.2	45.5	337.8	0.718	0.173	0.730	5.680	80.6	0.0	0.000	0.000	1	1	0	1	0
189	BRI (1978)	AR2-5AT(1/8)	25.6	10.2	45.5	337.8	0.718	0.086	0.630	5.100	65.0	0.0	0.000	0.000	1	1	0	1	0
190	BRI (1978)	AR2-5BH(1/4)	25.6	9.0	50.0	308.0	0.509	0.173	0.990	3.000	96.9	0.0	0.000	0.000	1	1	0	1	0
191	BRI (1978)	AR2-5BH(1/8)	25.6	9.0	50.0	308.0	0.509	0.086	0.880	3.480	98.1	0.0	0.000	0.000	1	1	0	1	0
192	BRI (1978)	AR2-5BT(1/4)	25.6	13.9	58.8	308.0	1.036	0.173	0.950	4.000	106.3	0.0	0.000	0.000	1	1	0	1	0
193	BRI (1978)	AR2-5BT(1/8)	25.6	13.9	58.8	308.0	1.036	0.086	0.840	5.100	88.8	0.0	0.000	0.000	1	1	0	1	0
194	BRI (1978)	CHT1	27.2	13.0	75.0	328.3	1.770	0.219	0.643	9.092	311.8	0.0	0.000	0.000	1	1	0	1	0
195	BRI (1978)	CHT2	27.2	9.0	67.0	300.2	0.950	0.329	0.810	4.863	350.1	0.0	0.000	0.000	1	1	0	1	0
196	BRI (1978)	CHT3	27.2	9.0	57.0	300.2	1.116	0.438	0.886	7.088	370.0	0.0	0.000	0.000	1	1	0	1	0
197	BRI (1978)	CHT4	23.5	13.0	52.0	328.3	2.553	0.380	0.901	3.606	402.4	0.0	0.000	0.000	1	1	0	1	0
198	BRI (1978)	CHT5	23.5	13.0	64.0	328.3	2.074	0.380	0.858	5.150	407.5	0.0	0.000	0.000	1	1	0	1	0
199	BRI (1978)	DWC1	21.5	5.5	31.1	283.5	0.611	0.103	0.538	3.005	57.4	0.0	0.000	0.000	1	1	0	1	0
200	BRI (1978)	DWC10	21.8	5.5	30.7	283.5	0.619	0.102	0.840	2.497	71.3	0.0	0.000	0.000	1	1	0	1	0
201	BRI (1978)	DWC11	21.1	5.5	72.0	283.5	0.264	0.105	0.677	2.038	52.5	0.0	0.000	0.000	1	1	0	1	0
202	BRI (1978)	DWC12	21.6	5.5	72.0	283.5	0.264	0.103	0.673	2.687	52.1	0.0	0.000	0.000	1	1	0	1	0
203	BRI (1978)	DWC2	21.9	5.5	31.1	283.5	0.611	0.101	0.587	3.532	56.8	0.0	0.000	0.000	1	1	0	1	0
204	BRI (1978)	DWC2-13	21.1	6.0	32.0	283.5	0.707	0.105	0.369	2.906	69.0	0.0	0.000	0.000	1	1	0	1	0
205	BRI (1978)	DWC2-14	20.1	6.0	50.0	283.5	0.452	0.110	0.557	4.517	55.3	0.0	0.000	0.000	1	1	0	1	0
206	BRI (1978)	DWC2-15	20.3	6.0	35.5	283.5	0.956	0.218	0.720	2.916	80.5	0.0	0.000	0.000	1	1	0	1	0
207	BRI (1978)	DWC2-16	21.3	6.0	72.0	283.5	0.314	0.104	0.549	4.320	52.9	0.0	0.000	0.000	1	1	0	1	0
208	BRI (1978)	DWC2-17	18.1	6.0	34.0	283.5	0.665	0.244	0.688	2.804	67.4	0.0	0.000	0.000	1	1	0	1	0
209	BRI (1978)	DWC2-18	18.5	6.0	30.0	283.5	0.754	0.119	0.715	2.891	69.1	0.0	0.000	0.000	1	1	0	1	0
210	BRI (1978)	DWC3	22.3	5.5	49.5	283.5	0.384	0.099	0.734	2.186	55.9	0.0	0.000	0.000	1	1	0	1	0
211	BRI (1978)	DWC4	19.4	5.5	49.5	283.5	0.384	0.114	0.726	2.905	55.3	0.0	0.000	0.000	1	1	0	1	0
212	BRI (1978)	DWC5	21.5	5.5	31.0	283.5	0.613	0.206	0.812	2.336	70.5	0.0	0.000	0.000	1	1	0	1	0
213	BRI (1978)	DWC6	22.4	5.5	31.0	283.5	0.613	0.198	0.866	2.542	71.0	0.0	0.000	0.000	1	1	0	1	0
214	BRI (1978)	DWC7	22.0	5.5	45.0	283.5	0.422	0.202	0.812	2.287	71.6	0.0	0.000	0.000	1	1	0	1	0
215	BRI (1978)	DWC8	20.7	5.5	45.0	283.5	0.422	0.214	0.757	3.057	70.0	0.0	0.000	0.000	1	1	0	1	0
216	BRI (1978)	DWC9	23.9	5.5	30.7	283.5	0.619	0.093	0.807	2.520	69.8	0.0	0.000	0.000	1	1	0	1	0
217	BRI (1978)	LE2-1(3A-CL)	14.3	9.0	55.5	335.2	0.917	0.155	0.860	2.720	47.6	0.0	0.000	0.000	1	1	0	1	0
218	BRI (1978)	LE2-2(3A-CL10)	14.3	9.0	55.5	335.2	0.917	0.155	0.880	2.820	48.0	0.0	0.000	0.000	1	1	0	1	0
219	BRI (1978)	LE2-4(3B-AL)	14.3	6.0	50.0	391.2	0.452	0.155	0.740	2.240	46.5	0.0	0.000	0.000	1	1	0	1	0
220	BRI (1978)	LE2-5(3B-CL)	14.3	6.0	50.0	391.2	0.452	0.155	0.740	1.520	46.9	0.0	0.000	0.000	1	1	0	1	0
221	BRI (1978)	LE2-6(3B-CL10)	14.3	6.0	50.0	391.2	0.452	0.155	0.740	1.880	46.9	0.0	0.000	0.000	1	1	0	1	0
222	BRI (1978)	LE2BAL	23.5	6.0	62.5	446.0	0.362	0.188	0.680	5.440	64.1	0.0	0.000	0.000	1	1	0	1	0
223	BRI (1978)	LE2BCL	23.5	6.0	62.5	446.0	0.362	0.188	0.740	4.450	64.7	0.0	0.000	0.000	1	1	0	1	0
224	BRI (1978)	LE6ACL	23.5	6.0	43.5	446.0	0.520	0.094	0.900	5.420	59.7	0.0	0.000	0.000	1	1	0	1	0

225	BRI (1978)	LE6BCL	23.5	4.0	37.0	371.7	0.272	0.094	0.850	3.420	60.6	0.0	0.000	0.000	1	1	0	1	0
226	BRI (1978)	LE7BCL	23.5	9.0	41.7	336.6	1.220	0.188	1.070	4.300	88.1	0.0	0.000	0.000	1	1	0	1	0
227	BRI (1978)	LE8ACL	23.5	9.0	40.0	336.6	1.272	0.094	1.000	8.000	75.3	0.0	0.000	0.000	1	1	0	1	0
228	BRI (1978)	LE8BAL	23.5	6.0	37.0	446.0	0.611	0.094	1.000	4.000	76.6	0.0	0.000	0.000	1	1	0	1	0
229	BRI (1978)	LE8BCL	23.5	6.0	37.0	446.0	0.611	0.094	1.000	3.000	76.6	0.0	0.000	0.000	1	1	0	1	0
230	BRI (1978)	LS0BB	18.9	9.0	46.9	352.1	1.085	0.117	1.133	3.400	70.6	0.0	0.000	0.000	1	1	0	1	0
231	BRI (1978)	LS1AB	18.9	9.0	46.9	352.1	1.085	0.272	0.800	4.800	61.8	0.0	0.000	0.000	1	1	0	1	0
232	BRI (1978)	LS1BB	18.9	6.0	50.0	377.4	0.452	0.117	0.667	2.667	52.0	0.0	0.000	0.000	1	1	0	1	0
233	BRI (1978)	LS2AB	18.9	6.0	37.5	377.4	0.603	0.272	1.000	6.000	52.2	0.0	0.000	0.000	1	1	0	1	0
234	BRI (1978)	LS2BA	18.9	4.0	34.1	381.3	0.295	0.117	0.667	4.000	38.8	0.0	0.000	0.000	1	1	0	1	0
235	BRI (1978)	LS2BB	18.9	4.0	68.2	381.3	0.147	0.117	0.667	2.000	39.4	0.0	0.000	0.000	1	1	0	1	0
236	BRI (1978)	LS3AA	18.9	9.0	51.7	352.1	0.984	0.272	1.067	4.267	68.4	0.0	0.000	0.000	1	1	0	1	0
237	BRI (1978)	LS3AB	18.9	6.0	45.5	377.4	0.497	0.272	1.067	4.267	69.2	0.0	0.000	0.000	1	1	0	1	0
238	BRI (1978)	LS3BA	18.9	6.0	44.1	377.4	0.513	0.117	1.000	4.000	61.7	0.0	0.000	0.000	1	1	0	1	0
239	BRI (1978)	LS3BB	18.9	4.0	39.5	381.3	0.255	0.117	1.000	4.000	60.9	0.0	0.000	0.000	1	1	0	1	0
240	BRI (1978)	LS4AA	18.9	6.0	42.9	380.0	0.527	0.272	0.600	3.600	47.1	0.0	0.000	0.000	1	1	0	1	0
241	BRI (1978)	LS4AB	18.9	4.0	38.5	381.3	0.261	0.272	0.800	3.600	53.1	0.0	0.000	0.000	1	1	0	1	0
242	BRI (1978)	LS4BA	18.9	4.0	51.0	381.3	0.197	0.117	0.800	4.800	45.4	0.0	0.000	0.000	1	1	0	1	0
243	BRI (1978)	NS1-3AP	17.7	4.0	50.0	392.4	0.201	0.125	0.740	5.900	36.6	0.0	0.000	0.000	1	1	0	1	0
244	BRI (1978)	NS1-4AP	13.4	4.0	50.0	392.4	0.201	0.165	0.550	3.300	34.4	0.0	0.000	0.000	1	1	0	1	0
245	BRI (1978)	NS1-5BP	13.4	4.0	48.0	353.2	0.209	0.165	1.020	4.000	43.5	0.0	0.000	0.000	1	1	0	1	0
246	BRI (1978)	NS1-6BP	13.4	9.0	54.0	392.4	0.942	0.165	0.700	2.800	42.2	0.0	0.000	0.000	1	1	0	1	0
247	BRI (1978)	NS1-7BP	17.7	6.0	37.0	510.1	0.611	0.251	0.850	3.500	68.8	0.0	0.000	0.000	1	1	0	1	0
248	BRI (1978)	NS1-8BP	17.7	6.0	47.0	510.1	0.481	0.125	0.770	2.300	52.5	0.0	0.000	0.000	1	1	0	1	0
249	BRI (1978)	NS2-1509	25.7	6.0	51.0	235.4	0.444	0.086	0.606	9.952	32.8	0.0	0.000	0.000	1	1	0	1	0
250	BRI (1978)	NS2-1513	25.7	9.0	54.0	326.9	0.942	0.086	0.663	2.664	58.9	0.0	0.000	0.000	1	1	0	1	0
251	BRI (1978)	NS2-1516	25.7	9.0	52.0	326.9	0.979	0.086	0.761	2.279	73.6	0.0	0.000	0.000	1	1	0	1	0
252	BRI (1978)	NS2-2009	25.7	4.0	50.0	433.6	0.201	0.086	0.340	6.710	37.5	0.0	0.000	0.000	1	1	0	1	0
253	BRI (1978)	NS2-2013	25.7	6.0	41.0	235.4	0.552	0.086	0.760	8.010	60.0	0.0	0.000	0.000	1	1	0	1	0
254	BRI (1978)	NS2-2016	25.7	9.0	57.0	326.9	0.893	0.086	1.120	3.195	78.8	0.0	0.000	0.000	1	1	0	1	0
255	BRI (1978)	WS21BH	26.5	9.0	33.3	334.5	1.528	0.167	0.920	2.740	63.6	0.0	0.000	0.000	1	1	0	1	0
256	BRI (1978)	WS21BS	26.5	9.0	33.3	334.5	1.528	0.167	1.040	4.160	65.8	0.0	0.000	0.000	1	1	0	1	0
257	BRI (1978)	WS21BT	26.5	14.1	41.7	339.4	1.491	0.167	0.740	4.440	65.8	0.0	0.000	0.000	1	1	0	1	0
258	BRI (1978)	WS25BH	26.5	9.0	45.5	334.5	1.119	0.084	1.060	2.120	63.0	0.0	0.000	0.000	1	1	0	1	0
259	BRI (1978)	WS25BS	26.5	9.0	45.5	334.5	1.119	0.084	0.920	3.660	60.4	0.0	0.000	0.000	1	1	0	1	0
260	BRI (1978)	WS25BT	26.5	9.4	55.6	340.2	0.994	0.084	1.060	2.120	63.9	0.0	0.000	0.000	1	1	0	1	0
261	BRI (1978)	WS26BH	31.6	4.0	37.0	386.5	0.272	0.070	0.670	2.660	57.2	0.0	0.000	0.000	1	1	0	1	0
262	BRI (1978)	WS26BT	31.6	4.0	55.6	386.5	0.271	0.070	0.610	2.450	56.6	0.0	0.000	0.000	1	1	0	1	0

263	BRI (1978)	WS27BH	31.6	9.0	41.7	334.5	1.220	0.140	0.990	3.960	90.6	0.0	0.000	0.000	1	1	0	1	0
264	BRI (1978)	WS27BT	31.6	14.1	50.0	345.3	2.488	0.140	1.030	6.180	96.3	0.0	0.000	0.000	1	1	0	1	0
265	Brown and Jirsa (1971)	RV106635	37.9	9.5	127.0	317.0	0.737	0.000	1.410	9.601	40.7	54.3	0.000	0.000	1	1	0	1	0
266	Brown and Jirsa (1971)	RV108832	37.9	9.5	50.8	317.0	1.844	0.000	1.000	10.338	70.0	88.0	0.000	0.000	1	1	0	1	0
267	Brown and Jirsa (1971)	RV108834	37.9	9.5	101.6	317.0	0.922	0.000	1.600	10.842	67.0	84.0	0.000	0.000	1	1	0	1	0
268	Brown and Jirsa (1971)	RV108835	37.9	9.5	127.0	317.0	0.737	0.000	1.500	11.353	68.0	88.0	0.000	0.000	1	1	0	1	0
269	Brown and Jirsa (1971)	RV58834	37.9	9.5	101.6	317.0	0.922	0.000	1.000	6.157	67.8	84.8	0.000	0.000	1	1	0	1	0
270	Brown and Jirsa (1971)	RV58835	37.9	9.5	127.0	317.0	0.737	0.000	1.500	8.485	65.0	81.3	0.000	0.000	1	1	0	1	0
271	Burns and Siess (1966)	J-1	34.0	9.5	152.4	308.7	0.461	0.000	0.909	6.060	72.2	0.0	0.011	0.134	1	1	0	0	0
272	Burns and Siess (1966)	J-10	24.7	9.5	152.4	308.7	0.461	0.000	0.600	8.000	100.8	0.0	0.007	0.126	1	1	0	0	0
273	Burns and Siess (1966)	J-11	28.3	9.5	152.4	308.7	0.461	0.000	0.924	6.060	73.2	0.0	0.011	0.126	1	1	0	0	0
274	Burns and Siess (1966)	J-13	33.1	9.5	152.4	308.7	0.461	0.000	0.576	24.248	106.2	0.0	0.007	0.531	1	1	0	0	0
275	Burns and Siess (1966)	J-14	31.0	9.5	152.4	308.7	0.461	0.000	0.606	18.338	108.1	0.0	0.007	0.244	1	1	0	0	0
276	Burns and Siess (1966)	J-17	26.9	9.5	152.4	308.7	0.461	0.000	0.811	27.582	71.8	0.0	0.010	0.563	1	1	0	0	0
277	Burns and Siess (1966)	J-18	30.4	9.5	152.4	308.7	0.615	0.000	0.871	23.794	70.0	0.0	0.011	0.508	1	1	0	0	0
278	Burns and Siess (1966)	J-19	26.9	6.4	152.4	308.7	0.205	0.000	0.576	4.500	102.9	0.0	0.007	0.106	1	1	0	0	0
279	Burns and Siess (1966)	J-2	28.1	9.5	152.4	308.7	0.461	0.000	0.894	14.397	77.4	0.0	0.011	0.291	1	1	0	0	0
280	Burns and Siess (1966)	J-20	30.2	6.4	152.4	308.7	0.205	0.000	0.561	16.519	106.2	0.0	0.007	0.567	1	1	0	0	0
281	Burns and Siess (1966)	J-21	30.0	6.4	152.4	308.7	0.205	0.000	0.455	6.820	137.8	0.0	0.005	0.118	1	1	0	0	0
282	Burns and Siess (1966)	J-22	30.5	6.4	152.4	308.7	0.205	0.000	0.439	11.215	136.1	0.0	0.005	0.087	1	1	0	0	0
283	Burns and Siess (1966)	J-4	33.2	9.5	152.4	308.7	0.461	0.000	0.447	11.821	135.0	0.0	0.005	0.146	1	1	0	0	0
284	Burns and Siess (1966)	J-5	34.5	9.5	152.4	308.7	0.461	0.000	0.455	19.399	133.8	0.0	0.005	0.248	1	1	0	0	0
285	Burns and Siess (1966)	J-6	35.6	9.5	152.4	308.7	0.461	0.000	0.439	15.155	135.0	0.0	0.005	0.346	1	1	0	0	0
286	Burns and Siess (1966)	J-8	32.2	9.5	152.4	308.7	0.461	0.000	0.803	25.764	71.1	101.0	0.010	0.598	1	1	0	0	0
287	Burns and Siess (1966)	J-9	28.9	9.5	152.4	308.7	0.461	0.000	0.470	8.330	137.2	155.0	0.005	0.126	1	1	0	0	0
288	Calvi et al (1993)	S01-1	39.2	6.0	150.0	591.8	0.086	0.000	1.200	2.900	29.0	32.6	0.040	0.168	3	0	0	0	0
289	Calvi et al (1993)	S01-2	39.2	6.0	150.0	591.8	0.086	0.000	1.150	2.800	29.5	33.3	0.044	0.186	3	0	0	0	0
290	Calvi et al (1993)	S01-3	39.2	6.0	150.0	591.8	0.086	0.000	1.150	2.980	29.7	33.4	0.043	0.204	3	0	0	0	0
291	Calvi et al (1993)	S02-1	39.2	6.0	150.0	578.0	0.086	0.000	1.100	8.320	27.0	31.6	0.000	0.668	2	0	0	0	0
292	Calvi et al (1993)	S02-2	39.2	6.0	150.0	578.0	0.086	0.000	1.100	6.420	29.0	30.3	0.019	0.473	2	0	0	0	0
293	Calvi et al (1993)	S02-3	39.2	6.0	150.0	578.0	0.086	0.000	1.100	7.370	28.1	31.2	0.023	0.535	2	0	0	0	0
294	Calvi et al (1993)	S03-1	39.2	6.0	150.0	540.9	0.086	0.000	1.200	4.890	30.2	32.6	0.053	0.332	3	0	0	0	0
295	Calvi et al (1993)	S03-2	39.2	6.0	150.0	540.9	0.086	0.000	1.300	4.190	27.0	30.6	0.038	0.268	3	0	0	0	0
296	Calvi et al (1993)	S03-3	39.2	6.0	150.0	540.9	0.086	0.000	1.200	4.850	28.0	31.6	0.031	0.327	3	0	0	0	0
297	Calvi et al (1993)	S04-1	39.2	6.0	150.0	591.8	0.086	0.000	1.100	1.460	11.0	12.3	0.035	0.084	3	0	0	0	0
298	Calvi et al (1993)	S04-2	39.2	6.0	150.0	591.8	0.086	0.000	1.030	1.330	10.3	11.6	0.016	0.067	3	0	0	0	0
299	Calvi et al (1993)	S04-3	39.2	6.0	150.0	591.8	0.086	0.000	1.080	1.400	10.8	12.2	0.015	0.066	3	0	0	0	0
300	Calvi et al (1993)	S05-1	39.2	6.0	150.0	578.0	0.086	0.000	1.090	3.200	10.9	13.5	0.029	0.204	2	0	0	0	0

301	Calvi et al (1993)	S05-2	39.2	6.0	150.0	578.0	0.086	0.000	1.200	3.480	12.0	14.9	0.029	0.222	2	0	0	0	0
302	Calvi et al (1993)	S05-3	39.2	6.0	150.0	578.0	0.086	0.000	1.210	3.880	12.1	14.4	0.021	0.228	2	0	0	0	0
303	Calvi et al (1993)	S06-1	39.2	6.0	150.0	540.9	0.086	0.000	0.890	3.450	8.9	11.2	0.040	0.265	3	0	0	0	0
304	Calvi et al (1993)	S06-2	39.2	6.0	150.0	540.9	0.086	0.000	0.990	2.650	9.9	11.2	0.038	0.201	3	0	0	0	0
305	Calvi et al (1993)	S06-3	39.2	6.0	150.0	540.9	0.086	0.000	1.070	2.520	10.7	31.6	0.038	0.146	3	0	0	0	0
306	Calvi et al (1993)	S07-1	39.2	6.0	150.0	591.8	0.086	0.000	1.740	3.200	17.4	19.6	0.029	0.177	3	0	0	0	0
307	Calvi et al (1993)	S07-2	39.2	6.0	150.0	591.8	0.086	0.000	1.800	2.770	18.0	20.3	0.023	0.155	3	0	0	0	0
308	Calvi et al (1993)	S07-3	39.2	6.0	150.0	591.8	0.086	0.000	1.870	2.750	18.7	21.1	0.032	0.142	3	0	0	0	0
309	Calvi et al (1993)	S08-1	39.2	6.0	150.0	578.9	0.086	0.000	1.700	4.350	17.0	19.2	0.053	0.288	3	0	0	0	0
310	Calvi et al (1993)	S08-2	39.2	6.0	150.0	578.9	0.086	0.000	1.630	4.380	16.3	18.4	0.037	0.325	3	0	0	0	0
311	Calvi et al (1993)	S08-3	39.2	6.0	150.0	578.9	0.086	0.000	1.640	4.210	16.4	18.5	0.033	0.294	3	0	0	0	0
312	Calvi et al (1993)	S11-1	39.2	6.0	150.0	540.9	0.086	0.000	1.030	3.350	10.3	10.5	0.031	0.248	3	0	0	0	0
313	Calvi et al (1993)	S11-2	39.2	6.0	150.0	540.9	0.086	0.000	0.960	3.490	9.6	10.3	0.038	0.269	3	0	0	0	0
314	Calvi et al (1993)	S11-3	39.2	6.0	150.0	540.9	0.086	0.000	0.960	4.130	9.6	10.3	0.052	0.350	3	0	0	0	0
315	Calvi et al (1993)	S12-1	39.2	6.0	150.0	540.9	0.086	0.000	0.930	4.010	9.3	9.8	0.062	0.332	3	0	0	0	0
316	Calvi et al (1993)	S12-2	39.2	6.0	150.0	540.9	0.086	0.000	0.980	3.850	9.8	10.5	0.051	0.293	3	0	0	0	0
317	Calvi et al (1993)	S12-3	39.2	6.0	150.0	540.9	0.086	0.000	1.270	2.740	12.7	10.1	0.048	0.177	3	0	0	0	0
318	Carvalho and Pipa (1993)	S1-V1	38.2	6.0	70.0	554.0	0.404	0.000	0.760	12.200	54.0	64.5	0.020	0.650	2	1	0	0	0
319	Carvalho and Pipa (1993)	S1-V2	38.2	6.0	70.0	536.0	0.081	0.000	1.100	12.500	90.0	96.0	0.034	0.425	2	1	0	0	0
320	Carvalho and Pipa (1993)	S2-V1	38.2	6.0	70.0	554.0	0.404	0.000	0.500	12.000	35.0	46.5	0.010	0.350	2	1	0	0	0
321	Carvalho and Pipa (1993)	S2-V2	38.2	6.0	70.0	554.0	0.081	0.000	1.200	12.600	100.0	101.0	0.023	0.440	2	1	0	0	0
322	Carvalho and Pipa (1993)	S1-V3	38.2	8.0	70.0	554.0	0.718	0.000	1.090	7.712	91.5	94.5	0.000	0.000	2	1	0	1	0
323	Carvalho and Pipa (1993)	S1-V4	38.2	8.0	70.0	554.0	0.718	0.000	1.040	7.753	91.5	94.5	0.000	0.000	2	1	0	1	0
324	Carvalho and Pipa (1993)	S1-V5	38.2	8.0	70.0	554.0	0.718	0.000	1.173	7.715	91.5	94.5	0.000	0.000	2	1	0	1	0
325	Carvalho and Pipa (1993)	S1-V6	38.2	8.0	70.0	554.0	0.718	0.000	1.065	7.538	93.0	94.5	0.000	0.000	2	1	0	1	0
326	Carvalho and Pipa (1993)	S2-V3	38.2	6.4	70.0	554.0	0.452	0.000	1.285	8.255	91.5	94.5	0.000	0.000	2	1	0	1	0
327	Carvalho and Pipa (1993)	S2-V4	38.2	6.4	70.0	554.0	0.452	0.000	1.065	4.092	91.5	94.5	0.000	0.000	2	1	0	1	0
328	Carvalho and Pipa (1993)	S2-V5	38.2	6.4	70.0	554.0	0.452	0.000	1.169	8.269	91.5	94.5	0.000	0.000	2	1	0	1	0
329	Carvalho and Pipa (1993)	S2-V6	38.2	6.4	70.0	554.0	0.452	0.000	1.130	8.267	91.5	94.5	0.000	0.000	2	1	0	1	0
330	Celebi and Penzien (1973)	BEAM1	32.8	9.5	152.4	345.0	0.409	0.000	0.640	4.300	98.0	0.0	0.000	0.000	1	1	0	1	0
331	Celebi and Penzien (1973)	BEAM10	29.3	9.5	82.6	362.3	0.754	0.000	0.648	0.000	92.5	0.0	0.000	0.000	1	1	0	1	0
332	Celebi and Penzien (1973)	BEAM11	31.7	9.5	82.6	344.0	0.754	0.000	0.639	1.500	120.9	0.0	0.000	0.000	1	1	0	1	0
333	Celebi and Penzien (1973)	BEAM12	31.7	9.5	82.6	344.0	0.754	0.000	0.639	0.000	117.0	0.0	0.000	0.000	1	1	0	1	0
334	Celebi and Penzien (1973)	BEAM2	32.8	9.5	152.4	345.0	0.409	0.000	0.667	0.000	94.8	0.0	0.000	0.000	1	1	0	1	0
335	Celebi and Penzien (1973)	BEAM4	32.8	9.5	127.0	345.0	0.490	0.000	0.833	0.000	73.2	0.0	0.000	0.000	1	1	0	1	0
336	Celebi and Penzien (1973)	BEAM5	28.0	9.5	82.6	362.3	0.754	0.000	0.764	0.000	102.5	0.0	0.000	0.000	1	1	0	1	0
337	Celebi and Penzien (1973)	BEAM6	28.0	9.5	82.6	362.3	0.754	0.000	0.694	1.900	84.6	0.0	0.000	0.000	1	1	0	1	0
338	Celebi and Penzien (1973)	BEAM7	32.1	9.5	152.4	362.3	0.409	0.000	0.648	0.000	116.9	0.0	0.000	0.000	1	1	0	1	0

339	Celebi and Penzien (1973)	BEAM8	32.1	9.5	152.4	362.3	0.409	0.000	0.556	0.000	91.6	0.0	0.000	0.000	1	1	0	1	0
340	Celebi and Penzien (1973)	BEAM9	29.3	9.5	82.6	362.3	0.754	0.000	0.648	0.000	113.8	0.0	0.000	0.000	1	1	0	1	0
341	Corley (1966)	J1	30.4	6.0	63.5	334.2	1.187	0.000	0.866	5.369	10.2	13.1	0.050	0.453	1	0	0	0	0
342	Corley (1966)	J11	30.6	6.0	63.5	341.7	1.187	0.000	0.970	5.365	10.3	13.2	0.051	0.453	1	0	0	0	0
343	Corley (1966)	J2	24.6	6.0	63.5	343.1	1.187	0.000	1.220	11.920	10.4	14.8	0.038	0.622	1	0	0	0	0
344	Corley (1966)	J21	25.8	6.0	63.5	351.4	1.187	0.000	1.164	10.245	11.0	15.0	0.034	0.524	1	0	0	0	0
345	Corley (1966)	J3	28.3	6.0	31.8	354.2	2.375	0.000	1.212	6.235	15.7	20.3	0.063	0.740	1	0	0	0	0
346	Corley (1966)	J4	26.3	6.0	63.5	358.3	1.187	0.000	1.703	9.280	14.9	18.9	0.057	0.417	1	0	0	0	0
347	Corley (1966)	J41	26.0	6.0	63.5	350.0	1.187	0.000	1.674	7.180	15.2	17.9	0.049	0.441	1	0	0	0	0
348	Corley (1966)	J42	28.8	6.0	63.5	341.1	1.187	0.000	1.788	5.449	16.0	17.7	0.052	0.309	1	0	0	0	0
349	Corley (1966)	J5	28.0	6.0	31.8	343.1	2.375	0.000	0.981	5.426	13.7	18.2	0.041	0.535	1	0	0	0	0
350	Corley (1966)	J6	28.7	6.0	63.5	353.5	1.187	0.000	1.419	6.783	14.6	18.3	0.038	0.339	1	0	0	0	0
351	Corley (1966)	J61	29.0	6.0	63.5	341.7	1.187	0.000	1.298	6.011	13.8	17.6	0.057	0.406	1	0	0	0	0
352	Corley (1966)	K1	27.2	6.0	127.0	327.3	0.594	0.000	0.929	2.438	42.0	46.9	0.021	0.118	1	0	0	0	0
353	Corley (1966)	K10	26.2	6.0	127.0	334.9	0.146	0.000	1.135	4.413	110.0	129.0	0.020	0.150	1	0	0	0	0
354	Corley (1966)	K11	26.7	10.0	64.0	361.0	0.805	0.000	0.900	6.270	148.0	189.0	0.023	0.233	1	0	0	0	0
355	Corley (1966)	K12	25.4	6.0	127.0	327.3	0.146	0.000	1.249	4.186	150.0	167.0	0.020	0.098	1	0	0	0	0
356	Corley (1966)	K2	28.4	6.0	127.0	314.2	0.594	0.000	1.249	2.497	41.7	48.2	0.020	0.101	1	0	0	0	0
357	Corley (1966)	K3	27.6	6.0	64.0	345.2	1.178	0.000	1.074	2.671	60.9	64.8	0.028	0.090	1	0	0	0	0
358	Corley (1966)	K4	30.0	6.0	127.0	314.2	0.594	0.000	1.589	2.554	57.5	59.6	0.026	0.045	1	0	0	0	0
359	Corley (1966)	K5	25.6	6.0	127.0	330.7	0.194	0.000	0.784	2.380	79.9	95.3	0.019	0.071	1	0	0	0	0
360	Corley (1966)	K51	29.6	6.0	127.0	529.8	0.194	0.000	0.784	6.967	84.3	116.0	0.025	0.269	1	0	0	0	0
361	Corley (1966)	K6	27.1	6.0	127.0	325.2	0.194	0.000	1.107	4.768	86.0	105.0	0.022	0.116	1	0	0	0	0
362	Corley (1966)	K7	21.2	10.0	127.0	356.2	0.538	0.000	0.900	2.409	118.0	130.0	0.024	0.092	1	0	0	0	0
363	Corley (1966)	K8	26.4	6.0	127.0	331.4	0.194	0.000	1.235	3.746	120.0	138.0	0.016	0.067	1	0	0	0	0
364	Corley (1966)	K9	29.3	6.0	64.0	332.8	0.290	0.000	0.726	2.961	109.0	133.0	0.019	0.137	1	0	0	0	0
365	Corley (1966)	M1	31.2	10.0	305.0	485.1	0.224	0.000	1.447	2.412	399.0	465.0	0.007	0.041	1	0	0	0	0
366	Corley (1966)	M2	28.3	10.0	305.0	482.3	0.224	0.000	0.819	2.397	411.0	470.0	0.007	0.043	1	0	0	0	0
367	Corley (1966)	M3	30.7	10.0	152.0	476.1	0.449	0.000	0.738	2.270	521.0	597.0	0.008	0.041	1	0	0	0	0
368	Corley (1966)	M4	29.6	10.0	305.0	487.8	0.224	0.000	0.945	1.873	544.0	584.0	0.009	0.029	1	0	0	0	0
369	Corley (1966)	M5	29.0	10.0	203.0	480.9	0.254	0.000	0.724	1.887	553.0	614.0	0.008	0.038	1	0	0	0	0
370	Corley (1966)	M6	30.0	10.0	305.0	480.9	0.169	0.000	0.785	2.582	546.0	609.0	0.007	0.037	1	0	0	0	0
371	Corley (1966)	M7	28.9	10.0	203.0	478.9	0.254	0.000	0.937	1.164	787.0	790.0	0.009	0.016	1	0	0	0	0
372	Corley (1966)	M8	30.5	10.0	305.0	483.0	0.169	0.000	1.046	2.135	810.0	830.0	0.009	0.033	1	0	0	0	0
373	Corley (1966)	N1	31.8	10.0	254.0	467.1	0.269	0.000	0.782	1.366	763.0	777.0	0.007	0.019	1	0	0	0	0
374	Corley (1966)	N2	31.1	10.0	381.0	452.7	0.179	0.000	0.905	1.981	744.0	796.0	0.006	0.030	1	0	0	0	0
375	Corley (1966)	N3	32.2	13.0	254.0	436.8	0.454	0.000	0.745	1.751	838.0	883.0	0.007	0.026	1	0	0	0	0
376	Corley (1966)	N4	29.6	10.0	381.0	469.9	0.179	0.000	0.941	1.614	845.0	928.0	0.006	0.019	1	0	0	0	0

377	Corley (1966)	N5	27.2	13.0	381.0	438.9	0.228	0.000	0.696	0.994	734.0	752.0	0.006	0.011	1	0	0	0	0
378	Corley (1966)	N6	25.6	13.0	381.0	436.8	0.228	0.000	0.782	2.439	699.0	819.0	0.005	0.029	1	0	0	0	0
379	Corley (1966)	N7	32.7	13.0	229.0	432.0	0.380	0.000	0.745	1.453	1117.0	1209.0	0.006	0.019	1	0	0	0	0
380	Corley (1966)	N8	29.4	13.0	381.0	435.5	0.228	0.000	0.948	1.437	1111.0	1198.0	0.005	0.013	1	0	0	0	0
381	Dazio, Wenk and Bachmann (1999)	WSH1	45.0	6.0	75.0	615.8	1.181	0.051	0.210	0.780	1410.2	1533.8	0.000	0.000	3	1	1	1	0
382	Dazio, Wenk and Bachmann (1999)	WSH2	40.5	6.0	75.0	485.7	1.215	0.051	0.210	1.270	1482.0	1653.0	0.000	0.000	3	1	1	1	0
383	Dazio, Wenk and Bachmann (1999)	WSH3	39.2	6.0	75.0	489.0	1.129	0.051	0.350	2.000	1847.4	2100.0	0.000	0.000	3	1	1	1	0
384	Dazio, Wenk and Bachmann (1999)	WSH4	40.9	6.0	150.0	488.6	0.436	0.051	0.280	1.500	1812.3	1987.7	0.000	0.000	3	1	1	1	0
385	Dazio, Wenk and Bachmann (1999)	WSH5	38.3	4.2	50.0	562.2	1.322	0.110	0.175	1.500	1777.2	1983.6	0.000	0.000	3	1	1	1	0
386	Dazio, Wenk and Bachmann (1999)	WSH6	45.6	6.0	50.0	488.6	1.719	0.110	0.300	1.920	2380.5	2666.8	0.000	0.000	3	1	1	1	0
387	De Stefano and Sabia (1989)	T1	59.0	8.0	200.0	480.0	0.201	0.100	1.667	12.917	80.0	0.0	0.000	0.000	1	1	0	0	0
388	De Stefano and Sabia (1989)	T2	59.0	8.0	200.0	480.0	0.201	0.100	0.833	5.000	78.0	0.0	0.025	0.360	1	1	0	1	0
389	De Stefano and Sabia (1989)	T3	59.0	8.0	120.0	480.0	0.335	0.100	0.833	6.250	78.0	0.0	0.025	0.320	1	1	0	1	0
390	De Stefano and Sabia (1989)	T4	59.0	8.0	40.0	480.0	1.005	0.100	1.667	0.000	80.0	0.0	0.025	0.320	1	1	0	1	0
391	De Stefano and Sabia (1989)	T5	59.0	8.0	200.0	480.0	0.201	0.300	2.083	3.333	139.0	0.0	0.000	0.000	1	1	0	0	0
392	De Stefano and Sabia (1989)	T6	59.0	8.0	200.0	480.0	0.201	0.300	1.667	3.333	133.0	0.0	0.029	0.070	1	1	0	1	0
393	De Stefano and Sabia (1989)	T7	59.0	8.0	120.0	480.0	0.335	0.300	1.667	2.917	143.0	0.0	0.029	0.080	1	1	0	1	0
394	De Stefano and Sabia (1989)	T8	59.0	8.0	50.0	480.0	0.804	0.300	1.667	5.833	135.0	0.0	0.029	0.070	1	1	0	1	0
395	Ernst (1956)	G1-12F	33.2	9.5	76.2	313.5	1.227	0.000	2.354	1.250	105.8	0.0	0.000	0.000	1	1	0	0	0
396	Ernst (1956)	G1-12S	28.8	9.5	76.2	313.5	1.227	0.000	2.354	2.500	105.8	0.0	0.000	0.000	1	1	0	0	0
397	Ernst (1956)	G1-18F	33.2	9.5	76.2	313.5	1.227	0.000	2.267	1.111	106.8	0.0	0.000	0.000	1	1	0	0	0
398	Ernst (1956)	G1-18S	28.8	9.5	76.2	313.5	1.227	0.000	2.267	2.444	106.8	0.0	0.000	0.000	1	1	0	0	0
399	Ernst (1956)	G1-24F	33.2	9.5	76.2	313.5	1.227	0.000	2.000	1.190	104.4	0.0	0.000	0.000	1	1	0	0	0
400	Ernst (1956)	G1-24S	28.8	9.5	76.2	313.5	1.227	0.000	2.000	2.000	104.4	0.0	0.000	0.000	1	1	0	0	0
401	Ernst (1956)	G1-36F	33.2	9.5	76.2	313.5	1.227	0.000	1.750	1.111	101.7	0.0	0.000	0.000	1	1	0	0	0
402	Ernst (1956)	G1-36S	28.8	9.5	76.2	313.5	1.227	0.000	1.750	2.778	101.7	0.0	0.000	0.000	1	1	0	0	0
403	Ernst (1956)	G1-6F	33.2	9.5	76.2	313.5	1.227	0.000	1.529	1.961	99.5	0.0	0.000	0.000	1	1	0	0	0
404	Ernst (1956)	G1-6S	28.8	9.5	76.2	313.5	1.227	0.000	1.529	1.667	99.5	0.0	0.000	0.000	1	1	0	0	0
405	Ernst (1956)	G2-12F	32.5	9.5	152.4	313.5	0.614	0.000	0.938	4.167	80.8	0.0	0.000	0.000	1	1	0	0	0
406	Ernst (1956)	G2-12S	28.7	9.5	152.4	313.5	0.614	0.000	0.938	3.542	80.8	0.0	0.000	0.000	1	1	0	0	0
407	Ernst (1956)	G2-18F	32.5	9.5	152.4	313.5	0.614	0.000	1.000	4.444	79.1	0.0	0.000	0.000	1	1	0	0	0
408	Ernst (1956)	G2-18S	28.7	9.5	152.4	313.5	0.614	0.000	1.000	4.444	79.1	0.0	0.000	0.000	1	1	0	0	0
409	Ernst (1956)	G2-24F	32.5	9.5	127.0	313.5	0.736	0.000	1.190	3.810	78.6	0.0	0.000	0.000	1	1	0	0	0
410	Ernst (1956)	G2-24S	28.7	9.5	127.0	313.5	0.736	0.000	1.190	5.476	78.6	0.0	0.000	0.000	1	1	0	0	0
411	Ernst (1956)	G2-36F	32.5	9.5	101.6	313.5	0.920	0.000	1.167	5.556	80.1	0.0	0.000	0.000	1	1	0	0	0
412	Ernst (1956)	G2-36S	28.7	9.5	101.6	313.5	0.920	0.000	1.167	6.111	80.1	0.0	0.000	0.000	1	1	0	0	0
413	Ernst (1956)	G2-6F	32.5	9.5	152.4	313.5	0.614	0.000	1.039	3.137	81.4	0.0	0.000	0.000	1	1	0	0	0
414	Ernst (1956)	G2-6S	28.7	9.5	152.4	313.5	0.614	0.000	1.039	3.529	81.4	0.0	0.000	0.000	1	1	0	0	0

415	Ernst (1956)	G3-12F	22.3	9.5	127.0	313.5	0.736	0.000	1.167	8.333	31.0	0.0	0.000	0.000	1	1	0	0	0
416	Ernst (1956)	G3-12S	22.7	9.5	127.0	313.5	0.736	0.000	1.167	9.167	31.0	0.0	0.000	0.000	1	1	0	0	0
417	Ernst (1956)	G3-18F	22.3	9.5	127.0	313.5	0.736	0.000	1.133	9.556	30.5	0.0	0.000	0.000	1	1	0	0	0
418	Ernst (1956)	G3-18S	22.7	9.5	127.0	313.5	0.736	0.000	1.133	8.889	30.5	0.0	0.000	0.000	1	1	0	0	0
419	Ernst (1956)	G3-24F	22.3	9.5	127.0	313.5	0.736	0.000	1.381	8.810	30.9	0.0	0.000	0.000	1	1	0	0	0
420	Ernst (1956)	G3-24S	22.7	9.5	127.0	313.5	0.736	0.000	1.381	10.000	30.9	0.0	0.000	0.000	1	1	0	0	0
421	Ernst (1956)	G3-36F	22.3	9.5	114.8	313.5	0.815	0.000	1.556	11.111	31.3	0.0	0.000	0.000	1	1	0	0	0
422	Ernst (1956)	G3-36S	22.7	9.5	114.8	313.5	0.815	0.000	1.556	11.111	31.3	0.0	0.000	0.000	1	1	0	0	0
423	Ernst (1956)	G3-6F	22.3	9.5	127.0	313.5	0.736	0.000	1.137	8.627	31.0	0.0	0.000	0.000	1	1	0	0	0
424	Ernst (1956)	G3-6S	22.7	9.5	127.0	313.5	0.736	0.000	1.137	9.020	31.0	0.0	0.000	0.000	1	1	0	0	0
425	Fang et al (1994)	LB 1-1	60.2	9.5	80.0	420.0	0.886	0.000	1.478	18.261	126.5	144.9	0.000	0.000	1	1	0	0	0
426	Fang et al (1994)	LB 1-10	30.2	9.5	80.0	420.0	0.886	0.000	1.130	6.783	111.6	148.4	0.000	0.000	1	1	0	1	0
427	Fang et al (1994)	LB 1-2	60.2	9.5	80.0	420.0	0.886	0.000	1.478	8.870	115.0	138.0	0.000	0.000	1	1	0	1	0
428	Fang et al (1994)	LB 1-3	60.2	9.5	80.0	420.0	0.886	0.000	1.217	7.304	120.8	143.8	0.000	0.000	1	1	0	1	0
429	Fang et al (1994)	LB 1-4	60.2	9.5	80.0	420.0	0.886	0.000	1.478	8.870	126.5	144.9	0.000	0.000	1	1	0	1	0
430	Fang et al (1994)	LB 1-5	60.2	9.5	80.0	420.0	0.886	0.000	1.217	7.304	120.8	148.4	0.000	0.000	1	1	0	1	0
431	Fang et al (1994)	LB 1-6	68.2	9.5	80.0	420.0	0.886	0.000	1.043	6.261	109.3	146.1	0.000	0.000	1	1	0	1	0
432	Fang et al (1994)	LB 1-7	70.1	9.5	80.0	420.0	0.886	0.000	1.130	6.783	115.0	136.9	0.000	0.000	1	1	0	1	0
433	Fang et al (1994)	LB 2-1	70.1	9.5	80.0	420.0	0.886	0.000	1.294	15.294	114.8	152.2	0.000	0.000	1	1	0	0	0
434	Fang et al (1994)	LB 2-2	70.1	9.5	80.0	420.0	0.886	0.000	1.059	6.353	117.3	139.4	0.000	0.000	1	1	0	1	0
435	Fang et al (1994)	LB 2-3	70.1	9.5	80.0	420.0	0.886	0.000	1.176	7.059	119.0	144.5	0.000	0.000	1	1	0	1	0
436	Fang et al (1994)	LB 2-4	70.1	9.5	80.0	420.0	0.886	0.000	1.294	7.765	122.4	142.8	0.000	0.000	1	1	0	1	0
437	Fang et al (1994)	LB 2-5	70.1	9.5	80.0	420.0	0.886	0.000	1.294	7.765	125.0	145.4	0.000	0.000	1	1	0	1	0
438	Fang et al (1994)	LB 2-6	63.8	9.5	80.0	420.0	0.886	0.000	1.176	5.882	114.8	133.5	0.000	0.000	1	1	0	1	0
439	Fang et al (1994)	LB 2-8	32.0	9.5	80.0	420.0	0.886	0.000	1.294	5.176	121.6	132.6	0.000	0.000	1	1	0	1	0
440	Galeota et al. (1996)	AA1	80.0	8.0	150.0	430.0	1.220	0.300	0.877	1.316	136.8	0.0	0.000	0.000	1	1	0	1	0
441	Galeota et al. (1996)	AA2	80.0	8.0	150.0	430.0	1.220	0.300	0.877	1.491	125.4	0.0	0.000	0.000	1	1	0	1	0
442	Galeota et al. (1996)	AA3	80.0	8.0	150.0	430.0	1.220	0.200	0.789	1.754	91.2	0.0	0.018	0.100	1	1	0	1	0
443	Galeota et al. (1996)	AA4	80.0	8.0	150.0	430.0	1.220	0.200	0.789	1.404	125.4	0.0	0.000	0.000	1	1	0	1	0
444	Galeota et al. (1996)	AB1	80.0	8.0	150.0	430.0	1.220	0.200	1.754	4.386	193.8	0.0	0.015	0.150	1	1	0	1	0
445	Galeota et al. (1996)	AB2	80.0	8.0	150.0	430.0	1.220	0.300	1.316	2.807	182.4	0.0	0.000	0.000	1	1	0	1	0
446	Galeota et al. (1996)	AB3	80.0	8.0	150.0	430.0	1.220	0.300	1.316	3.684	182.4	0.0	0.000	0.000	1	1	0	1	0
447	Galeota et al. (1996)	AB4	80.0	8.0	150.0	430.0	1.220	0.200	1.579	4.035	228.0	0.0	0.000	0.000	1	1	0	1	0
448	Galeota et al. (1996)	BA1	80.0	8.0	100.0	430.0	1.830	0.300	1.053	1.754	159.6	0.0	0.000	0.000	1	1	0	1	0
449	Galeota et al. (1996)	BA2	80.0	8.0	100.0	430.0	1.830	0.200	1.053	1.579	134.5	0.0	0.000	0.000	1	1	0	1	0
450	Galeota et al. (1996)	BA3	80.0	8.0	100.0	430.0	1.830	0.200	1.140	1.404	142.5	0.0	0.000	0.000	1	1	0	1	0
451	Galeota et al. (1996)	BA4	80.0	8.0	100.0	430.0	1.830	0.300	1.140	1.754	119.7	0.0	0.015	0.300	1	1	0	1	0
452	Galeota et al. (1996)	BB1	80.0	8.0	100.0	430.0	1.830	0.200	1.667	5.965	171.0	0.0	0.015	0.350	1	1	0	1	0

453	Galeota et al. (1996)	BB4	80.0	8.0	100.0	430.0	1.830	0.300	1.754	6.140	199.5	0.0	0.000	0.000	1	1	0	1	0
454	Galeota et al. (1996)	BB4B	80.0	8.0	100.0	430.0	1.830	0.300	1.754	5.965	199.5	0.0	0.000	0.000	1	1	0	1	0
455	Galeota et al. (1996)	CA1	80.0	8.0	50.0	430.0	3.660	0.200	1.316	3.947	114.0	0.0	0.000	0.000	1	1	0	1	0
456	Galeota et al. (1996)	CA2	80.0	8.0	50.0	430.0	3.660	0.200	1.140	3.947	136.8	0.0	0.000	0.000	1	1	0	1	0
457	Galeota et al. (1996)	CA3	80.0	8.0	50.0	430.0	3.660	0.300	1.491	3.333	142.5	0.0	0.000	0.000	1	1	0	1	0
458	Galeota et al. (1996)	CA4	80.0	8.0	50.0	430.0	3.660	0.300	1.491	3.509	142.5	0.0	0.020	0.200	1	1	0	1	0
459	Galeota et al. (1996)	CB1	80.0	8.0	50.0	430.0	3.660	0.200	1.754	7.895	176.7	0.0	0.000	0.000	1	1	0	1	0
460	Galeota et al. (1996)	CB2	80.0	8.0	50.0	430.0	3.660	0.200	1.754	6.140	182.4	0.0	0.000	0.000	1	1	0	1	0
461	Galeota et al. (1996)	CB3	80.0	8.0	50.0	430.0	3.660	0.300	1.930	8.158	182.4	0.0	0.020	0.200	1	1	0	1	0
462	Galeota et al. (1996)	CB4	80.0	8.0	50.0	430.0	3.660	0.300	1.667	6.842	176.7	0.0	0.000	0.000	1	1	0	1	0
463	Galeota et al. (1996)	BB2	80.0	8.0	100.0	430.0	1.830	0.300	1.754	5.088	216.6	0.0	0.000	0.000	1	1	0	1	0
464	Garstka et al (1993)	SBV1	39.4	6.0	60.0	514.0	0.314	0.000	0.930	11.400	83.0	83.0	0.014	0.250	2	1	0	0	0
465	Garstka et al (1993)	SBV2	39.4	6.0	60.0	514.0	0.314	0.000	0.980	7.300	110.0	110.0	0.014	0.175	2	1	0	0	0
466	Garstka et al (1993)	SBV3	39.4	6.0	60.0	514.0	0.314	0.000	1.070	4.200	108.0	108.0	0.014	0.120	2	1	0	0	0
467	Gill et al. (1979)	NO. 1	23.1	10.0	80.0	297.0	1.500	0.260	0.667	0.000	696.0	0.0	0.000	0.000	1	1	0	1	0
468	Gill et al. (1979)	NO. 2	41.4	12.0	75.0	316.0	2.300	0.214	0.667	0.000	900.0	0.0	0.000	0.000	1	1	0	1	0
469	Gill et al. (1979)	NO. 3	21.4	10.0	75.0	297.0	2.000	0.420	0.417	0.000	696.0	0.0	0.000	0.000	1	1	0	1	0
470	Gill et al. (1979)	NO. 4	23.5	12.0	72.0	294.0	3.500	0.600	0.417	0.000	780.0	0.0	0.000	0.000	1	1	0	1	0
471	Goodfellow and Elnashai (2000)	1	57.3	6.0	35.0	540.0	1.104	0.124	1.520	4.800	97.5	114.3	0.000	0.000	2	1	0	1	0
472	Goodfellow and Elnashai (2000)	2	63.4	6.0	50.0	540.0	0.772	0.124	1.520	8.000	112.5	118.2	0.000	0.000	2	1	0	1	0
473	Goodfellow and Elnashai (2000)	3	57.3	10.0	50.0	815.0	2.146	0.124	1.600	0.000	118.8	114.3	0.000	0.000	2	1	0	1	0
474	Goodfellow and Elnashai (2000)	4	58.0	10.0	70.0	815.0	1.533	0.127	1.600	8.000	118.8	115.5	0.000	0.000	2	1	0	1	0
475	Goodfellow and Elnashai (2000)	5	60.5	9.0	50.0	1204.0	1.738	0.124	1.520	8.000	118.8	116.4	0.000	0.000	2	1	0	1	0
476	Goodfellow and Elnashai (2000)	6	59.5	9.0	70.0	1204.0	1.241	0.124	1.520	8.000	112.5	115.8	0.000	0.000	2	1	0	1	0
477	Goodfellow and Elnashai (2000)	7	59.8	6.0	35.0	540.0	1.104	0.141	2.400	8.000	156.3	189.0	0.000	0.000	2	1	0	1	0
478	Goodfellow and Elnashai (2000)	8	61.4	6.0	50.0	540.0	0.772	0.141	2.080	7.200	156.3	190.1	0.000	0.000	2	1	0	1	0
479	Goodfellow and Elnashai (2000)	9	60.4	10.0	50.0	815.0	2.146	0.141	2.400	6.400	156.3	189.4	0.000	0.000	2	1	0	1	0
480	Goodfellow and Elnashai (2000)	10	66.4	10.0	70.0	815.0	1.533	0.141	2.400	6.400	162.5	193.8	0.000	0.000	2	1	0	1	0
481	Goodfellow and Elnashai (2000)	11	69.0	9.0	50.0	1204.0	1.738	0.141	2.240	6.400	162.5	195.7	0.000	0.000	2	1	0	1	0
482	Goodfellow and Elnashai (2000)	12	68.5	9.0	70.0	1204.0	1.241	0.141	2.320	6.400	156.3	195.3	0.000	0.000	2	1	0	1	0
483	Goodfellow and Elnashai (2000)	13	60.4	6.0	35.0	540.0	1.104	0.146	2.400	4.800	187.5	163.3	0.000	0.000	2	1	0	1	0
484	Goodfellow and Elnashai (2000)	14	64.3	6.0	50.0	540.0	0.772	0.146	2.400	6.400	156.3	166.2	0.000	0.000	2	1	0	1	0
485	Goodfellow and Elnashai (2000)	15	63.8	10.0	50.0	815.0	2.146	0.146	2.240	4.800	156.3	165.9	0.000	0.000	2	1	0	1	0
486	Goodfellow and Elnashai (2000)	16	55.9	10.0	70.0	815.0	1.533	0.146	2.400	6.400	150.0	159.8	0.000	0.000	2	1	0	1	0
487	Goodfellow and Elnashai (2000)	17	57.5	9.0	50.0	1204.0	1.738	0.146	2.320	7.200	150.0	161.0	0.000	0.000	2	1	0	1	0
488	Goodfellow and Elnashai (2000)	18	60.2	9.0	70.0	1204.0	1.241	0.146	2.400	8.000	162.5	163.1	0.000	0.000	2	1	0	1	0
489	Goodfellow and Elnashai (2000)	19	63.0	6.0	35.0	540.0	1.104	0.149	2.400	0.000	156.3	171.7	0.000	0.000	2	1	0	1	0
490	Goodfellow and Elnashai (2000)	20	55.2	6.0	50.0	540.0	0.772	0.127	2.560	4.800	125.0	159.5	0.000	0.000	2	1	0	1	0

491	Goodfellow and Elnashai (2000)	21	59.2	10.0	50.0	815.0	2.146	0.124	2.400	6.400	125.0	161.6	0.000	0.000	2	1	0	1	0
492	Goodfellow and Elnashai (2000)	22	53.8	10.0	70.0	815.0	1.533	0.127	2.400	6.400	137.5	158.6	0.000	0.000	2	1	0	1	0
493	Goodfellow and Elnashai (2000)	23	62.6	9.0	50.0	1204.0	1.738	0.143	2.400	6.400	137.5	169.5	0.000	0.000	2	1	0	1	0
494	Goodfellow and Elnashai (2000)	24	61.2	9.0	70.0	1204.0	1.241	0.143	2.400	6.800	137.5	168.5	0.000	0.000	2	1	0	1	0
495	Goodfellow and Elnashai (2000)	25	56.5	6.0	35.0	540.0	1.104	0.168	1.760	4.800	131.3	162.2	0.000	0.000	3	1	0	1	0
496	Goodfellow and Elnashai (2000)	26	64.2	6.0	50.0	540.0	0.772	0.146	1.600	7.600	100.0	169.2	0.000	0.000	3	1	0	1	0
497	Goodfellow and Elnashai (2000)	27	52.9	10.0	50.0	815.0	2.146	0.146	1.600	8.000	112.5	153.1	0.000	0.000	3	1	0	1	0
498	Goodfellow and Elnashai (2000)	29	63.2	9.0	50.0	1204.0	1.738	0.146	1.600	7.200	112.5	168.4	0.000	0.000	3	1	0	1	0
499	Goodfellow and Elnashai (2000)	30	63.1	9.0	70.0	1204.0	1.241	0.146	1.600	7.200	112.5	168.3	0.000	0.000	3	1	0	1	0
500	Goodfellow and Elnashai (2000)	31	79.7	6.0	35.0	540.0	1.104	0.122	1.600	0.000	137.5	127.5	0.000	0.000	2	1	0	1	0
501	Goodfellow and Elnashai (2000)	32	78.6	6.0	50.0	540.0	0.772	0.122	1.520	0.000	143.8	126.9	0.000	0.000	2	1	0	1	0
502	Goodfellow and Elnashai (2000)	33	74.8	10.0	50.0	815.0	2.146	0.122	1.600	8.000	150.0	124.5	0.000	0.000	2	1	0	1	0
503	Goodfellow and Elnashai (2000)	34	81.9	10.0	70.0	815.0	1.533	0.122	1.600	8.000	137.5	128.9	0.000	0.000	2	1	0	1	0
504	Goodfellow and Elnashai (2000)	35	83.8	9.0	50.0	1204.0	1.738	0.122	1.440	0.000	137.5	130.1	0.000	0.000	2	1	0	1	0
505	Goodfellow and Elnashai (2000)	36	80.6	9.0	70.0	1204.0	1.241	0.122	1.280	0.000	150.0	128.1	0.000	0.000	2	1	0	1	0
506	Goodfellow and Elnashai (2000)	37	77.8	6.0	35.0	540.0	1.104	0.133	2.400	8.000	168.8	199.0	0.000	0.000	2	1	0	1	0
507	Goodfellow and Elnashai (2000)	38	75.5	6.0	50.0	540.0	0.772	0.133	2.160	7.200	168.8	197.4	0.000	0.000	2	1	0	1	0
508	Goodfellow and Elnashai (2000)	39	76.9	10.0	50.0	815.0	2.146	0.133	2.400	7.200	162.5	198.4	0.000	0.000	2	1	0	1	0
509	Goodfellow and Elnashai (2000)	40	81.8	10.0	70.0	815.0	1.533	0.133	2.000	8.000	162.5	201.7	0.000	0.000	2	1	0	1	0
510	Goodfellow and Elnashai (2000)	41	76.5	9.0	50.0	1204.0	1.738	0.133	2.400	6.400	162.5	198.1	0.000	0.000	2	1	0	1	0
511	Goodfellow and Elnashai (2000)	42	85.1	9.0	70.0	1204.0	1.241	0.133	2.400	8.000	162.5	204.0	0.000	0.000	2	1	0	1	0
512	Goodfellow and Elnashai (2000)	43	84.3	6.0	35.0	540.0	1.104	0.135	2.400	6.400	175.0	177.1	0.000	0.000	2	1	0	1	0
513	Goodfellow and Elnashai (2000)	44	78.9	6.0	50.0	540.0	0.772	0.135	2.400	8.000	175.0	173.3	0.000	0.000	2	1	0	1	0
514	Goodfellow and Elnashai (2000)	45	78.7	10.0	50.0	815.0	2.146	0.135	2.400	0.000	193.8	173.2	0.000	0.000	2	1	0	1	0
515	Goodfellow and Elnashai (2000)	46	77.9	10.0	70.0	815.0	1.533	0.135	2.400	0.000	175.0	172.6	0.000	0.000	2	1	0	1	0
516	Goodfellow and Elnashai (2000)	47	78.5	9.0	50.0	1204.0	1.738	0.135	2.640	0.000	193.8	173.0	0.000	0.000	2	1	0	1	0
517	Goodfellow and Elnashai (2000)	48	84.4	9.0	70.0	1204.0	1.241	0.135	2.640	0.000	193.8	177.1	0.000	0.000	2	1	0	1	0
518	Goodfellow and Elnashai (2000)	49	83.4	6.0	35.0	540.0	1.104	0.133	2.400	4.800	150.0	180.7	0.000	0.000	2	1	0	1	0
519	Goodfellow and Elnashai (2000)	50	84.2	6.0	50.0	540.0	0.772	0.133	2.800	0.000	150.0	181.3	0.000	0.000	2	1	0	1	0
520	Goodfellow and Elnashai (2000)	51	77.3	10.0	50.0	815.0	2.146	0.133	2.160	8.000	156.3	176.8	0.000	0.000	2	1	0	1	0
521	Goodfellow and Elnashai (2000)	52	79.6	10.0	70.0	815.0	1.533	0.133	2.800	8.000	162.5	178.5	0.000	0.000	2	1	0	1	0
522	Goodfellow and Elnashai (2000)	53	84.5	9.0	50.0	1204.0	1.738	0.133	2.400	8.000	162.5	181.5	0.000	0.000	2	1	0	1	0
523	Goodfellow and Elnashai (2000)	54	82.4	9.0	70.0	1204.0	1.241	0.133	2.240	0.000	150.0	180.1	0.000	0.000	2	1	0	1	0
524	Goodfellow and Elnashai (2000)	55	78.6	6.0	35.0	540.0	1.104	0.135	2.400	7.040	137.5	176.4	0.000	0.000	3	1	0	1	0
525	Goodfellow and Elnashai (2000)	56	83.1	6.0	50.0	540.0	0.772	0.135	2.400	0.000	137.5	179.7	0.000	0.000	3	1	0	1	0
526	Goodfellow and Elnashai (2000)	57	77.5	10.0	50.0	815.0	2.146	0.135	2.400	8.000	150.0	175.6	0.000	0.000	3	1	0	1	0
527	Goodfellow and Elnashai (2000)	59	85.4	9.0	50.0	1204.0	1.738	0.135	2.000	8.000	150.0	181.4	0.000	0.000	3	1	0	1	0
528	Goodfellow and Elnashai (2000)	60	82.3	9.0	70.0	1204.0	1.241	0.135	2.080	0.000	143.8	179.1	0.000	0.000	3	1	0	1	0

529	Goodfellow and Elnashai (2000)	61	100.8	6.0	35.0	540.0	1.104	0.124	1.440	0.000	156.3	141.7	0.000	0.000	2	1	0	1	0
530	Goodfellow and Elnashai (2000)	62	107.0	6.0	50.0	540.0	0.772	0.124	2.000	6.400	156.3	145.5	0.000	0.000	2	1	0	1	0
531	Goodfellow and Elnashai (2000)	63	99.7	10.0	50.0	815.0	2.146	0.124	1.440	0.000	150.0	141.0	0.000	0.000	2	1	0	1	0
532	Goodfellow and Elnashai (2000)	64	102.9	10.0	70.0	815.0	1.533	0.124	1.760	8.000	162.5	142.9	0.000	0.000	2	1	0	1	0
533	Goodfellow and Elnashai (2000)	65	105.9	9.0	50.0	1204.0	1.738	0.124	1.440	0.000	156.3	144.8	0.000	0.000	2	1	0	1	0
534	Goodfellow and Elnashai (2000)	66	101.0	9.0	70.0	1204.0	1.241	0.124	1.360	0.000	156.3	141.8	0.000	0.000	2	1	0	1	0
535	Goodfellow and Elnashai (2000)	67	98.6	6.0	35.0	540.0	1.104	0.132	2.400	0.000	162.5	212.9	0.000	0.000	2	1	0	1	0
536	Goodfellow and Elnashai (2000)	68	97.5	6.0	50.0	540.0	0.772	0.132	2.240	6.400	150.0	212.2	0.000	0.000	2	1	0	1	0
537	Goodfellow and Elnashai (2000)	69	101.2	10.0	50.0	815.0	2.146	0.132	1.920	0.000	156.3	214.6	0.000	0.000	2	1	0	1	0
538	Goodfellow and Elnashai (2000)	70	99.9	10.0	70.0	815.0	1.533	0.132	2.400	0.000	162.5	213.8	0.000	0.000	2	1	0	1	0
539	Goodfellow and Elnashai (2000)	71	104.1	9.0	50.0	1204.0	1.738	0.132	2.080	0.000	168.8	216.6	0.000	0.000	2	1	0	1	0
540	Goodfellow and Elnashai (2000)	72	105.7	9.0	70.0	1204.0	1.241	0.132	2.400	8.000	168.8	217.7	0.000	0.000	2	1	0	1	0
541	Goodfellow and Elnashai (2000)	73	106.9	6.0	35.0	540.0	1.104	0.135	2.400	8.000	193.8	192.8	0.000	0.000	2	1	0	1	0
542	Goodfellow and Elnashai (2000)	74	94.8	6.0	50.0	540.0	0.772	0.134	2.000	0.000	175.0	184.0	0.000	0.000	2	1	0	1	0
543	Goodfellow and Elnashai (2000)	75	98.7	10.0	50.0	815.0	2.146	0.134	2.000	0.000	187.5	186.7	0.000	0.000	2	1	0	1	0
544	Goodfellow and Elnashai (2000)	76	99.4	10.0	70.0	815.0	1.533	0.134	2.400	0.000	187.5	187.2	0.000	0.000	2	1	0	1	0
545	Goodfellow and Elnashai (2000)	77	102.5	9.0	50.0	1204.0	1.738	0.134	2.080	6.400	193.8	189.4	0.000	0.000	2	1	0	1	0
546	Goodfellow and Elnashai (2000)	78	102.5	9.0	70.0	1204.0	1.241	0.134	2.080	0.000	181.3	189.4	0.000	0.000	2	1	0	1	0
547	Goodfellow and Elnashai (2000)	79	107.2	6.0	35.0	540.0	1.104	0.133	2.240	0.000	175.0	197.3	0.000	0.000	2	1	0	1	0
548	Goodfellow and Elnashai (2000)	80	105.5	6.0	50.0	540.0	0.772	0.134	2.160	7.200	187.5	196.5	0.000	0.000	2	1	0	1	0
549	Goodfellow and Elnashai (2000)	81	100.8	10.0	50.0	815.0	2.146	0.134	2.400	6.000	187.5	193.2	0.000	0.000	2	1	0	1	0
550	Goodfellow and Elnashai (2000)	82	102.0	10.0	70.0	815.0	1.533	0.134	1.920	7.200	181.3	194.1	0.000	0.000	2	1	0	1	0
551	Goodfellow and Elnashai (2000)	83	101.3	9.0	50.0	1204.0	1.738	0.134	1.920	0.000	200.0	193.6	0.000	0.000	2	1	0	1	0
552	Goodfellow and Elnashai (2000)	84	99.6	9.0	70.0	1204.0	1.241	0.134	2.160	8.000	175.0	192.5	0.000	0.000	2	1	0	1	0
553	Goodfellow and Elnashai (2000)	85	102.4	6.0	35.0	540.0	1.104	0.135	2.000	4.800	137.5	193.7	0.000	0.000	3	1	0	1	0
554	Goodfellow and Elnashai (2000)	86	104.1	6.0	50.0	540.0	0.772	0.135	2.000	7.200	162.5	194.9	0.000	0.000	3	1	0	1	0
555	Goodfellow and Elnashai (2000)	87	103.8	10.0	50.0	815.0	2.146	0.135	2.000	8.000	150.0	194.7	0.000	0.000	3	1	0	1	0
556	Goodfellow and Elnashai (2000)	89	95.2	9.0	50.0	1204.0	1.738	0.135	2.000	7.200	156.3	188.4	0.000	0.000	3	1	0	1	0
557	Goodfellow and Elnashai (2000)	90	89.5	9.0	70.0	1204.0	1.241	0.135	1.600	6.400	137.5	184.3	0.000	0.000	3	1	0	1	0
558	Goodfellow and Elnashai (2000)	91	70.9	6.0	35.0	540.0	1.104	0.244	1.520	0.000	156.3	162.0	0.000	0.000	2	1	0	1	0
559	Goodfellow and Elnashai (2000)	92	77.1	6.0	50.0	540.0	0.772	0.183	1.600	0.000	156.3	147.9	0.000	0.000	2	1	0	1	0
560	Goodfellow and Elnashai (2000)	93	76.6	10.0	50.0	815.0	2.146	0.244	1.520	0.000	156.3	168.6	0.000	0.000	2	1	0	1	0
561	Hiraishi et al (1984)	W1	31.0	6.4	90.0	370.0	0.282	0.046	0.000	2.500	2200.0	2250.0	0.000	0.000	1	1	1	1	0
562	Hiraishi et al (1984)	W2	31.0	6.4	60.0	370.0	0.422	0.046	0.000	2.100	2900.0	3010.0	0.000	0.000	1	1	1	1	0
563	Hwang Scribner (1986)	S3-1	33.8	9.5	63.5	520.2	1.100	0.000	0.810	2.087	99.0	110.0	0.000	0.000	1	1	0	1	0
564	Hwang Scribner (1986)	S3-2	34.2	9.5	63.5	520.2	1.100	0.000	0.978	4.109	97.0	109.0	0.000	0.000	1	1	0	1	0
565	Hwang Scribner (1986)	S3-3	34.3	9.5	63.5	520.2	1.100	0.000	0.931	4.099	98.0	108.0	0.000	0.000	1	1	0	1	0
566	Hwang Scribner (1986)	S3-4	34.9	9.5	63.5	520.2	1.100	0.000	0.860	4.107	97.0	110.0	0.000	0.000	1	1	0	1	0

567	Ilya and Bertero (1980)	SW7	40.8	5.3	21.2	483.0	1.639	0.066	0.500	3.900	5360.0	5500.0	0.000	0.000	1	1	1	1	0
568	Ilya and Bertero (1980)	SW7	40.8	5.3	21.2	483.0	1.639	0.066	0.400	4.800	5360.0	5500.0	0.000	0.000	1	1	1	1	0
569	Ilya and Bertero (1980)	SW8	40.8	5.3	21.2	483.0	1.639	0.066	0.450	4.900	5830.0	5900.0	0.000	0.000	1	1	1	1	0
570	Ilya and Bertero (1980)	SW8	40.8	5.3	21.2	483.0	1.639	0.066	0.450	5.000	5830.0	5900.0	0.000	0.000	1	1	1	1	0
571	Ilya and Bertero (1980)	SW8	40.8	5.3	21.2	483.0	1.639	0.066	0.450	5.100	5830.0	5900.0	0.000	0.000	1	1	1	1	0
572	Ilya and Bertero (1980)	SW7	40.8	5.3	21.2	483.0	1.639	0.066	0.500	4.000	5360.0	5500.0	0.000	0.000	1	1	1	0	0
573	Imai and Yamamoto (1986)	NO. 1	27.1	9.0	100.0	336.0	0.360	0.072	0.485	2.182	371.3	0.0	0.000	0.000	1	1	0	1	0
574	Kanda et al. (1987)	85PDC-1	24.8	6.0	50.0	352.0	0.380	0.099	0.800	0.000	60.0	0.0	0.000	0.000	1	1	0	1	0
575	Kanda et al. (1987)	85PDC-2	27.9	6.0	50.0	506.0	0.380	0.088	0.800	0.000	52.5	0.0	0.000	0.000	1	1	0	1	0
576	Kanda et al. (1987)	85PDC-3	27.9	6.0	50.0	506.0	0.380	0.088	0.800	0.000	52.5	0.0	0.000	0.000	1	1	0	1	0
577	Kanda et al. (1987)	85STC-1	27.9	6.0	50.0	506.0	0.380	0.088	0.800	5.600	56.3	0.0	0.000	0.000	1	1	0	1	0
578	Kanda et al. (1987)	85STC-2	27.9	6.0	50.0	506.0	0.380	0.088	0.800	4.667	56.3	0.0	0.000	0.000	1	1	0	1	0
579	Kanda et al. (1987)	85STC-3	27.9	6.0	50.0	506.0	0.380	0.088	0.800	5.600	60.0	0.0	0.000	0.000	1	1	0	1	0
580	Kinugasa and Nomura	A1	30.0	6.0	37.5	440.0	0.750	0.000	0.700	6.000	20.0	0.0	0.000	0.000	1	1	0	1	0
581	Kinugasa and Nomura	A2	27.0	6.0	37.5	440.0	0.750	0.000	0.700	6.000	20.0	0.0	0.000	0.000	1	1	0	1	0
582	Kinugasa and Nomura	A3	30.0	6.0	37.5	440.0	0.750	0.000	0.700	5.000	20.0	0.0	0.000	0.000	1	1	0	1	0
583	Kinugasa and Nomura	A4	26.0	6.0	37.5	440.0	0.750	0.000	0.700	0.000	20.0	0.0	0.000	0.000	1	1	0	0	0
584	Kinugasa and Nomura	A5	28.0	6.0	37.5	440.0	0.750	0.000	0.700	0.000	20.0	0.0	0.000	0.000	1	1	0	1	0
585	Kinugasa and Nomura	B1	34.0	6.0	150.0	440.0	0.188	0.000	0.700	0.000	31.0	0.0	0.000	0.000	1	1	0	1	0
586	Kraetzig et al (1989)	S1.1	35.6	8.0	80.0	514.0	0.419	0.095	1.020	0.000	135.0	0.0	0.000	0.000	1	1	0	1	0
587	Kraetzig et al (1989)	S1.2	35.6	8.0	80.0	514.0	0.419	0.095	1.020	0.000	126.0	0.0	0.000	0.000	1	1	0	1	0
588	Kraetzig et al (1989)	S1.3	35.0	8.0	80.0	514.0	0.419	0.095	0.660	0.000	135.0	0.0	0.000	0.000	1	1	0	1	0
589	Kraetzig et al (1989)	S1.4	36.2	8.0	80.0	514.0	0.419	0.090	0.540	0.000	120.0	0.0	0.000	0.000	1	1	0	1	0
590	Kraetzig et al (1989)	S1.6	30.5	8.0	80.0	514.0	0.419	0.110	0.430	0.000	142.5	0.0	0.000	0.000	1	1	0	1	0
591	Kraetzig et al (1989)	S1-0	32.1	8.0	80.0	514.0	0.419	0.100	1.670	2.670	125.0	131.0	0.000	0.000	2	1	0	0	0
592	Kraetzig et al (1989)	S2-0	32.3	8.0	80.0	514.0	0.419	0.100	1.530	2.530	120.0	128.0	0.000	0.000	2	1	0	0	0
593	Low Moehle (1980)	NO 1	37.2	3.2	25.4	420.0	0.379	0.060	1.000	5.200	13.1	0.0	0.000	0.000	1	1	0	1	0
594	Lynn et al. (1998)	2CLH18	33.1	9.5	457.2	399.9	0.000	0.073	0.747	2.579	324.1	0.0	0.000	0.000	1	1	0	1	0
595	Lynn et al. (1998)	2CMH18	25.5	9.5	457.2	399.9	0.000	0.284	0.747	1.222	442.0	0.0	0.000	0.000	1	1	0	1	0
596	Lynn et al. (1998)	3CLH18	26.9	9.5	457.2	399.9	0.000	0.089	0.747	1.018	383.0	0.0	0.000	0.000	1	1	0	1	0
597	Lynn et al. (1998)	3CMD12	27.6	9.5	304.8	399.9	0.000	0.262	0.747	1.697	486.2	0.0	0.000	0.000	1	1	0	1	0
598	Lynn et al. (1998)	3CMH18	27.6	9.5	457.2	399.9	0.000	0.262	0.747	1.018	471.4	0.0	0.000	0.000	1	1	0	1	0
599	Ma, Bertero and Popov (1976)	R1	34.9	6.4	88.9	413.7	0.312	0.000	0.912	3.904	155.2	183.5	0.010	0.096	1	1	0	1	0
600	Ma, Bertero and Popov (1976)	R2	28.9	6.4	88.9	413.7	0.312	0.000	0.896	4.352	158.8	169.4	0.010	0.107	1	1	0	1	0
601	Ma, Bertero and Popov (1976)	R3	31.6	6.4	88.9	413.7	0.312	0.000	1.024	5.056	170.8	188.4	0.010	0.093	1	1	0	1	0
602	Ma, Bertero and Popov (1976)	R4	30.2	6.4	88.9	413.7	0.312	0.000	0.960	6.880	160.9	199.0	0.010	0.166	1	1	0	1	0
603	Ma, Bertero and Popov (1976)	R5	31.6	6.4	88.9	413.7	0.312	0.000	0.935	4.104	170.8	191.3	0.010	0.118	1	1	0	1	0
604	Ma, Bertero and Popov (1976)	R6	29.9	6.4	88.9	413.7	0.312	0.000	0.992	4.320	169.4	208.2	0.010	0.105	1	1	0	1	0

605	Ma, Bertero and Popov (1976)	T1	33.0	6.4	88.9	413.7	0.312	0.000	1.152	4.672	225.8	236.4	0.011	0.084	1	1	0	1	0
606	Ma, Bertero and Popov (1976)	T2	31.8	6.4	88.9	413.7	0.312	0.000	1.200	6.640	225.8	264.6	0.011	0.198	1	1	0	1	0
607	Ma, Bertero and Popov (1976)	T3	30.8	6.4	88.9	413.7	0.312	0.000	1.200	4.992	220.2	248.4	0.011	0.109	1	1	0	1	0
608	Machi et al. (1996)	SP16/10-1	42.0	8.0	75.0	600.0	0.670	0.000	0.900	7.600	64.5	70.0	0.000	0.000	1	1	0	1	0
609	Machi et al. (1996)	SP16/2-3	42.0	8.0	75.0	600.0	0.670	0.160	1.300	6.500	111.0	120.0	0.000	0.000	1	1	0	1	0
610	Machi et al. (1996)	SP16/7-2	42.0	8.0	75.0	600.0	0.670	0.000	1.000	5.300	66.0	70.0	0.000	0.000	1	1	0	1	0
611	Machi et al. (1996)	SP22/3-3	42.0	10.0	75.0	600.0	1.047	0.160	1.600	7.300	165.0	172.0	0.000	0.000	1	1	0	1	0
612	Machi et al. (1996)	SP22/8-2	42.0	10.0	75.0	600.0	1.047	0.000	1.300	6.600	132.0	142.0	0.000	0.000	1	1	0	1	0
613	Machi et al. (1996)	SP28/1-1	42.0	10.0	60.0	600.0	0.873	0.000	1.900	9.000	300.0	310.0	0.000	0.000	1	1	0	1	0
614	Maruyama et al. (1984)	O-U4	34.5	6.0	63.5	465.1	0.292	0.000	1.940	1.940	122.0	122.0	0.000	0.000	1	1	0	0	0
615	Maruyama et al. (1984)	OS	30.3	6.0	63.5	465.1	0.292	0.000	1.890	1.890	116.0	116.0	0.000	0.000	1	1	0	0	0
616	Mattock (1964)	A1	38.2	10.0	127.0	339.7	0.825	0.000	0.398	8.453	42.3	67.1	0.012	0.303	1	0	0	0	0
617	Mattock (1964)	A2	42.3	6.0	127.0	379.0	0.297	0.000	0.720	7.755	44.3	61.8	0.011	0.177	1	0	0	0	0
618	Mattock (1964)	A3	40.9	6.0	127.0	383.0	0.297	0.000	1.027	9.086	44.3	61.8	0.011	0.147	1	0	0	0	0
619	Mattock (1964)	A4	42.9	10.0	63.5	343.1	1.649	0.000	0.484	7.722	76.5	11.1	0.014	0.261	1	0	0	0	0
620	Mattock (1964)	A5	39.6	10.0	127.0	332.1	0.825	0.000	0.618	5.561	76.4	96.3	0.013	0.178	1	0	0	0	0
621	Mattock (1964)	A6	41.1	6.0	127.0	385.8	0.297	0.000	1.166	4.968	78.3	87.9	0.013	0.073	1	0	0	0	0
622	Mattock (1964)	B1	42.9	10.0	127.0	339.7	0.825	0.000	0.441	5.808	178.0	246.0	0.006	0.117	1	0	0	0	0
623	Mattock (1964)	B2	41.8	10.0	254.0	336.2	0.412	0.000	0.488	3.997	171.0	212.0	0.006	0.067	1	0	0	0	0
624	Mattock (1964)	B3	42.9	10.0	63.5	354.8	1.649	0.000	0.470	3.656	299.0	390.0	0.007	0.096	1	0	0	0	0
625	Mattock (1964)	B4	42.8	10.0	127.0	336.9	0.825	0.000	0.710	2.801	297.0	323.0	0.006	0.063	1	0	0	0	0
626	Mattock (1964)	C1	27.4	10.0	127.0	341.1	0.825	0.000	0.455	13.086	41.8	63.3	0.011	0.583	1	0	0	0	0
627	Mattock (1964)	C2	26.0	6.0	127.0	438.9	0.297	0.000	0.629	6.100	42.2	57.2	0.013	0.223	1	0	0	0	0
628	Mattock (1964)	C3	25.6	6.0	127.0	395.5	0.297	0.000	1.043	7.499	40.4	54.1	0.011	0.162	1	0	0	0	0
629	Mattock (1964)	C4	25.9	10.0	63.5	341.1	1.649	0.000	0.597	6.340	78.3	103.0	0.014	0.254	1	0	0	0	0
630	Mattock (1964)	C5	23.4	10.0	127.0	334.2	0.825	0.000	0.862	3.541	80.6	85.1	0.016	0.120	1	0	0	0	0
631	Mattock (1964)	C6	27.4	6.0	127.0	427.2	0.297	0.000	0.835	8.424	72.9	77.4	0.014	0.114	1	0	0	0	0
632	Mattock (1964)	D1	26.7	10.0	127.0	334.5	0.825	0.000	0.389	4.045	162.0	206.0	0.006	0.087	1	0	0	0	0
633	Mattock (1964)	D2	25.6	10.0	254.0	334.2	0.412	0.000	0.593	3.549	164.0	198.0	0.006	0.064	1	0	0	0	0
634	Mattock (1964)	D3	25.9	10.0	63.5	340.4	1.649	0.000	0.535	2.675	303.0	333.0	0.007	0.068	1	0	0	0	0
635	Mattock (1964)	D4	26.9	10.0	127.0	319.0	0.825	0.000	0.732	1.606	305.0	316.0	0.008	0.039	1	0	0	0	0
636	Mattock (1964)	E1	27.9	10.0	127.0	478.9	0.825	0.000	0.581	5.690	51.0	71.7	0.017	0.243	1	0	0	0	0
637	Mattock (1964)	E2	28.3	10.0	127.0	477.5	0.825	0.000	0.791	7.389	52.8	71.4	0.015	0.242	1	0	0	0	0
638	Mattock (1964)	E3	29.8	10.0	127.0	496.8	0.825	0.000	1.363	7.592	51.5	65.1	0.014	0.141	1	0	0	0	0
639	Mattock (1964)	F1	41.2	10.0	127.0	469.9	0.825	0.000	0.545	6.462	53.3	80.4	0.017	0.314	1	0	0	0	0
640	Mattock (1964)	F2	41.3	10.0	127.0	480.9	0.825	0.000	0.693	8.409	53.8	75.5	0.013	0.220	1	0	0	0	0
641	Mattock (1964)	F3	42.8	10.0	127.0	499.5	0.825	0.000	1.214	8.787	55.6	75.5	0.011	0.196	1	0	0	0	0
642	Mattock (1964)	G1	27.4	10.0	127.0	478.9	0.825	0.000	0.460	4.294	166.0	223.0	0.007	0.099	1	0	0	0	0

643	Mattock (1964)	G2	28.3	10.0	127.0	482.3	0.825	0.000	0.377	3.220	163.0	228.0	0.007	0.106	1	0	0	0	0
644	Mattock (1964)	G3	27.2	10.0	127.0	477.5	0.825	0.000	0.518	2.645	209.0	250.0	0.008	0.067	1	0	0	0	0
645	Mattock (1964)	G4	27.2	10.0	127.0	504.4	0.825	0.000	0.411	1.933	218.0	248.0	0.007	0.057	1	0	0	0	0
646	Mattock (1964)	G5	27.4	10.0	127.0	504.4	0.825	0.000	0.323	4.860	114.0	180.0	0.006	0.145	1	0	0	0	0
647	McCollister (1954)	S-12	17.1	0.0	0.0	308.7	0.000	0.000	0.354	0.000	12.5	0.0	0.007	0.000	1	1	0	0	0
648	McCollister (1954)	S-6	28.6	0.0	0.0	308.7	0.000	0.000	0.521	0.000	31.6	0.0	0.008	0.000	1	1	0	0	0
649	McCollister (1954)	S-7	28.1	0.0	0.0	308.7	0.000	0.000	0.427	0.000	21.7	0.0	0.008	0.000	1	1	0	0	0
650	McCollister (1954)	S-8	18.2	0.0	0.0	308.7	0.000	0.000	0.469	0.000	21.4	0.0	0.008	0.000	1	1	0	0	0
651	McCollister (1954)	T-1	26.9	9.5	152.4	308.7	0.614	0.000	0.542	14.600	38.8	57.0	0.008	0.000	1	1	0	0	0
652	McCollister (1954)	T-10	29.8	9.5	152.4	308.7	0.614	0.000	0.542	0.000	42.5	0.0	0.009	0.000	1	1	0	0	0
653	McCollister (1954)	T-11	30.8	9.5	152.4	308.7	0.614	0.000	0.521	26.500	40.1	64.4	0.008	0.000	1	1	0	0	0
654	McCollister (1954)	T-12	30.1	9.5	101.6	308.7	0.920	0.000	0.979	0.000	120.9	0.0	0.011	0.000	1	1	0	0	0
655	McCollister (1954)	T-13	33.4	9.5	101.6	308.7	0.920	0.000	1.104	0.000	121.3	0.0	0.012	0.000	1	1	0	0	0
656	McCollister (1954)	T-14	27.8	9.5	152.4	308.7	0.614	0.000	0.511	0.000	41.5	0.0	0.008	0.000	1	1	0	0	0
657	McCollister (1954)	T-15	25.5	9.5	152.4	308.7	0.614	0.000	0.604	0.000	45.9	0.0	0.009	0.000	1	1	0	0	0
658	McCollister (1954)	T-2	26.6	9.5	101.6	308.7	0.920	0.000	0.833	0.000	91.0	0.0	0.011	0.000	1	1	0	0	0
659	McCollister (1954)	T-3	29.4	9.5	76.2	308.7	1.227	0.000	1.042	0.000	137.6	0.0	0.012	0.000	1	1	0	0	0
660	McCollister (1954)	T-4	15.4	9.5	152.4	308.7	0.614	0.000	0.511	0.000	30.9	0.0	0.009	0.000	1	1	0	0	0
661	McCollister (1954)	T-5	13.9	9.5	152.4	308.7	0.614	0.000	0.813	0.000	60.7	0.0	0.011	0.000	1	1	0	0	0
662	McCollister (1954)	T-6	13.1	9.5	101.6	308.7	0.920	0.000	1.313	0.000	111.3	0.0	0.014	0.000	1	1	0	0	0
663	McCollister (1954)	T-7	31.3	9.5	152.4	308.7	0.614	0.000	0.511	17.900	40.2	55.6	0.008	0.000	1	1	0	0	0
664	McCollister (1954)	T-8	16.8	9.5	152.4	308.7	0.614	0.000	0.542	0.000	39.1	0.0	0.009	0.000	1	1	0	0	0
665	McCollister (1954)	T-9	18.6	9.5	152.4	308.7	0.614	0.000	0.552	9.380	24.3	34.6	0.009	0.000	1	1	0	0	0
666	Minami and Wakabayashi (1980)	PA	27.0	4.5	50.0	248.0	0.424	0.200	0.550	2.000	11.0	12.0	0.000	0.000	1	1	0	1	0
667	Minami and Wakabayashi (1980)	X20	27.0	4.5	50.0	248.0	0.424	0.000	0.400	5.000	9.6	10.0	0.000	0.000	1	1	0	1	1.18
668	Minami and Wakabayashi (1980)	X22	27.0	4.5	50.0	248.0	0.424	0.270	0.400	3.000	12.3	13.8	0.000	0.000	1	1	0	1	1.18
669	Minami and Wakabayashi (1980)	X24	27.0	4.5	50.0	248.0	0.424	0.520	0.400	0.750	14.2	14.3	0.000	0.000	1	1	0	1	1.18
670	Minami and Wakabayashi (1980)	XA	27.0	4.5	50.0	248.0	0.424	0.200	0.700	3.500	14.5	17.0	0.000	0.000	1	1	0	1	1.18
671	Minami and Wakabayashi (1980)	FULL SCALE	26.7	6.0	50.0	248.0	0.323	0.030	0.600	3.500	235.0	265.0	0.000	0.000	1	1	0	1	0.655
672	Minami and Wakabayashi (1980)	L02	25.8	6.0	90.0	248.0	0.209	0.103	0.350	0.900	89.0	91.0	0.000	0.000	1	1	0	1	0
673	Minami and Wakabayashi (1980)	L04	27.1	6.0	45.0	248.0	0.419	0.103	0.350	0.900	89.0	96.0	0.000	0.000	1	1	0	1	0
674	Minami and Wakabayashi (1980)	L22	27.5	6.0	90.0	248.0	0.209	0.101	0.400	0.900	93.0	94.5	0.000	0.000	1	1	0	1	0.22
675	Minami and Wakabayashi (1980)	L24	27.1	6.0	45.0	248.0	0.419	0.101	0.400	1.500	96.0	103.0	0.000	0.000	1	1	0	1	0.22
676	Minami and Wakabayashi (1980)	L42	25.8	6.0	90.0	248.0	0.209	0.103	0.400	2.500	93.0	94.5	0.000	0.000	1	1	0	1	0.45
677	Minami and Wakabayashi (1980)	L44	27.1	6.0	45.0	248.0	0.419	0.103	0.450	3.000	103.0	106.0	0.000	0.000	1	1	0	1	0.45
678	Minami and Wakabayashi (1980)	L62	25.8	6.0	90.0	248.0	0.209	0.103	0.400	2.900	97.0	104.0	0.000	0.000	1	1	0	1	0.67
679	Minami and Wakabayashi (1980)	L64	27.1	6.0	45.0	248.0	0.419	0.103	0.450	3.500	109.0	116.0	0.000	0.000	1	1	0	1	0.67
680	Mo and Wang (2000)	C1-1	24.9	6.4	50.0	459.5	0.633	0.113	0.970	5.455	353.1	0.0	0.000	0.000	1	1	0	1	0

681	Mo and Wang (2000)	C1-2	26.7	6.4	52.0	459.5	0.609	0.105	1.067	5.758	399.3	0.0	0.000	0.000	1	1	0	1	0
682	Mo and Wang (2000)	C1-3	26.1	6.4	54.0	459.5	0.586	0.108	1.073	6.303	404.3	0.0	0.000	0.000	1	1	0	1	0
683	Mo and Wang (2000)	C2-1	25.3	6.4	50.0	459.5	0.633	0.167	1.061	6.242	333.3	0.0	0.000	0.000	1	1	0	1	0
684	Mo and Wang (2000)	C2-2	27.1	6.4	52.0	459.5	0.609	0.156	1.067	6.061	412.5	0.0	0.000	0.000	1	1	0	1	0
685	Mo and Wang (2000)	C2-3	26.8	6.4	54.0	459.5	0.586	0.158	1.079	5.879	424.1	0.0	0.000	0.000	1	1	0	1	0
686	Mo and Wang (2000)	C3-1	26.4	6.4	50.0	459.5	0.633	0.213	1.030	6.061	331.7	0.0	0.000	0.000	1	1	0	1	0
687	Mo and Wang (2000)	C3-2	27.5	6.4	52.0	459.5	0.609	0.205	1.091	6.485	397.7	0.0	0.000	0.000	1	1	0	1	0
688	Mo and Wang (2000)	C3-3	26.9	6.4	54.0	459.5	0.586	0.209	1.079	6.242	412.5	0.0	0.000	0.000	1	1	0	1	0
689	Moretti (1997)	NO 0	21.3	8.0	50.0	430.0	0.804	0.300	0.800	1.200	70.0	0.0	0.000	0.000	1	0	0	1	0
690	Moretti (1997)	NO 1	36.0	8.0	50.0	300.0	0.804	0.300	1.000	1.500	82.5	0.0	0.000	0.000	1	0	0	1	0
691	Moretti (1997)	NO 3	39.0	8.0	50.0	300.0	0.804	0.300	0.800	1.200	90.0	0.0	0.000	0.000	1	0	0	1	0
692	Moretti (1997)	NO 4	35.0	10.0	50.0	305.0	1.257	0.300	1.000	1.000	90.0	0.0	0.000	0.000	1	0	0	1	0
693	Moretti (1997)	NO 5	35.0	8.0	50.0	300.0	0.804	0.300	0.800	2.600	82.5	175.0	0.000	0.000	1	1	0	1	0.18
694	Moretti (1997)	NO 6	39.0	8.0	50.0	300.0	0.804	0.300	0.800	2.400	100.0	205.0	0.000	0.000	1	1	0	1	0.49
695	Moretti (1997)	NO 7	38.0	8.0	50.0	300.0	0.804	0.300	1.000	3.000	100.0	0.0	0.000	0.000	1	0	0	1	0
696	Moretti (1997)	NO 8	38.0	8.0	50.0	300.0	0.804	0.300	1.200	0.000	105.0	0.0	0.000	0.000	1	0	0	1	0
697	Morgan et al (1984)		31.7	3.2	38.0	510.0	0.298	0.049	0.000	1.500	584.0	800.0	0.000	0.000	1	1	1	1	0
698	Muguruma et al. (1989)	AH-1	85.7	6.0	35.0	792.3	1.610	0.400	1.000	10.000	115.0	0.0	0.000	0.000	1	1	0	1	0
699	Muguruma et al. (1989)	AL-1	85.7	6.0	35.0	328.4	1.610	0.400	0.900	6.200	115.0	0.0	0.000	0.000	1	1	0	1	0
700	Muguruma et al. (1989)	AL-2	85.7	6.0	35.0	328.4	1.610	0.629	1.000	2.200	110.0	0.0	0.000	0.000	1	1	0	1	0
701	Muguruma et al. (1989)	BH-1	115.8	6.0	35.0	792.3	1.610	0.254	0.800	8.400	120.0	0.0	0.000	0.000	1	1	0	1	0
702	Muguruma et al. (1989)	BH-2	115.8	6.0	35.0	792.3	1.610	0.423	0.800	7.000	135.0	0.0	0.000	0.000	1	1	0	1	0
703	Muguruma et al. (1989)	BL-1	115.8	6.0	35.0	328.4	1.610	0.254	0.800	7.400	117.5	0.0	0.000	0.000	1	1	0	1	0
704	Muguruma et al. (1989)	BL-2	115.8	6.0	35.0	328.4	1.610	0.423	0.800	6.400	130.0	0.0	0.000	0.000	1	1	0	1	0
705	Muguruma et al. (1989)	AH-1	85.7	6.0	35.0	792.3	1.610	0.629	1.200	8.000	122.5	0.0	0.000	0.000	1	1	0	1	0
706	Nagasaka (1982)	HPRC10-63	21.6	6.0	35.0	344.0	0.810	0.170	0.667	1.500	24.6	0.0	0.000	0.000	1	1	0	1	0
707	Nagasaka (1982)	HPRC19-32	21.0	6.0	20.0	344.0	1.390	0.350	0.667	1.600	30.0	0.0	0.000	0.000	1	1	0	1	0
708	Nmai and Darwin (1986)	F-1	29.4	7.6	96.5	224.3	0.495	0.000	1.093	4.233	123.4	152.6	0.000	0.000	1	0	0	1	0
709	Nmai and Darwin (1986)	F-2	29.1	7.6	96.5	224.3	0.495	0.000	0.888	4.550	133.6	168.2	0.000	0.000	1	0	0	1	0
710	Nmai and Darwin (1986)	F-3	29.4	7.6	96.5	224.3	0.495	0.000	0.778	3.400	91.6	113.3	0.000	0.000	1	0	0	1	0
711	Nmai and Darwin (1986)	F-4	29.9	4.5	40.6	263.6	0.419	0.000	0.667	3.400	88.2	109.2	0.000	0.000	1	0	0	1	0
712	Nmai and Darwin (1986)	F-5	30.2	4.5	53.3	263.6	0.319	0.000	0.745	3.400	88.2	110.5	0.000	0.000	1	0	0	1	0
713	Nmai and Darwin (1986)	F-6	29.8	7.6	96.5	224.3	0.495	0.000	0.638	3.400	90.2	113.3	0.000	0.000	1	0	0	1	0
714	Nmai and Darwin (1986)	F-7	29.1	4.5	96.5	263.6	0.353	0.000	0.667	3.400	90.2	112.6	0.000	0.000	1	0	0	1	0
715	Oesterle et al. (1979)	B1	53.0	3.0	203.0	521.0	0.046	0.000	0.350	3.300	1057.5	1240.5	0.000	0.000	1	1	1	1	0
716	Oesterle et al. (1979)	B10	45.7	6.0	34.0	464.0	1.091	0.029	0.550	2.200	2775.5	3233.5	0.000	0.000	1	1	1	1	0
717	Oesterle et al. (1979)	B11	53.8	6.0	34.0	518.0	1.091	0.001	0.500	2.800	2850.6	3320.9	0.000	0.000	1	1	1	1	0
718	Oesterle et al. (1979)	B12	41.7	6.0	34.0	450.0	1.091	0.000	0.500	2.200	3107.2	3619.9	0.000	0.000	1	1	1	1	0

719	Oesterle et al. (1979)	B2	53.6	3.0	203.0	533.0	0.046	0.000	0.500	2.800	2643.7	3107.4	0.000	0.000	1	1	1	1	0
720	Oesterle et al. (1979)	B3	47.3	6.0	36.0	479.0	1.030	0.000	0.350	4.400	1082.3	1260.8	0.000	0.000	1	1	1	1	0
721	Oesterle et al. (1979)	B5	45.3	6.0	34.0	502.0	1.091	0.001	0.550	2.200	2990.2	3483.6	0.000	0.000	1	1	1	1	0
722	Oesterle et al. (1979)	B6	21.8	6.0	56.0	512.0	0.662	0.045	0.650	1.100	3238.1	3772.4	0.000	0.000	1	1	1	1	0
723	Oesterle et al. (1979)	B7	49.3	6.0	34.0	490.0	1.091	0.025	0.650	2.800	3847.3	4482.1	0.000	0.000	1	1	1	1	0
724	Oesterle et al. (1979)	B8	42.0	6.0	34.0	454.0	1.091	0.030	0.600	2.800	3863.9	4469.9	0.000	0.000	1	1	1	1	0
725	Oesterle et al. (1979)	B9	44.1	6.0	34.0	462.0	1.091	0.028	0.650	2.200	3863.9	4465.8	0.000	0.000	1	1	1	1	0
726	Oesterle et al. (1979)	R1	44.8	3.0	203.0	522.0	0.068	0.004	0.250	2.200	464.3	540.9	0.000	0.000	1	1	1	1	0
727	Oesterle et al. (1979)	R2	46.5	6.0	64.0	535.0	0.866	0.004	0.400	2.800	854.1	992.4	0.000	0.000	1	1	1	1	0
728	Oesterle et al. (1979)	R3	24.4	6.0	76.0	518.0	0.729	0.070	0.650	1.700	2229.1	2596.9	0.000	0.000	1	1	1	1	0
729	Oesterle et al. (1979)	R4	22.7	6.0	64.0	518.0	0.866	0.075	0.450	1.700	1106.7	1289.3	0.000	0.000	1	1	1	1	0
730	Oesterle et al. (1979)	B4	45.1	6.0	36.0	505.0	1.030	0.001	0.350	5.000	2600.0	3000.0	0.000	0.000	1	1	1	0	0
731	Oetes (1993)	S1-V2	38.3	6.0	70.0	536.0	0.404	0.000	0.900	14.700	52.5	56.0	0.000	0.000	2	1	0	0	0
732	Oetes (1993)	S2-V1	37.4	6.0	70.0	536.0	0.404	0.000	1.030	13.300	65.0	70.0	0.000	0.000	2	1	0	0	0
733	Oetes (1993)	S2-V2	37.5	6.0	70.0	536.0	0.404	0.000	0.800	16.700	34.5	36.0	0.000	0.000	2	1	0	0	0
734	Oetes (1993)	S1-V3	37.5	6.0	70.0	536.0	0.404	0.000	1.007	8.933	63.0	64.0	0.000	0.000	2	1	0	1	0
735	Oetes (1993)	S1-V4	35.0	6.0	70.0	536.0	0.404	0.000	1.108	6.809	61.5	63.0	0.000	0.000	2	1	0	1	0
736	Oetes (1993)	S1-V5	35.7	6.0	70.0	536.0	0.404	0.000	0.953	8.733	63.0	64.0	0.000	0.000	2	1	0	1	0
737	Oetes (1993)	S1-V6	33.7	6.0	70.0	536.0	0.404	0.000	0.798	6.657	63.0	64.0	0.000	0.000	2	1	0	1	0
738	Oetes (1993)	S2-V3	45.5	6.0	70.0	536.0	0.404	0.000	1.027	7.086	63.0	64.0	0.000	0.000	2	1	0	1	0
739	Oetes (1993)	S2-V4	37.5	6.0	70.0	536.0	0.404	0.000	1.090	5.300	64.5	66.0	0.000	0.000	2	1	0	1	0
740	Oetes (1993)	S2-V5	38.3	6.0	70.0	536.0	0.404	0.000	0.919	7.034	58.5	60.0	0.000	0.000	2	1	0	1	0
741	Oetes (1993)	S2-V6	35.8	6.0	70.0	536.0	0.404	0.000	1.126	4.340	67.5	68.0	0.000	0.000	2	1	0	1	0
742	Ohno and Nishioka (1984)	L1	24.8	9.0	100.0	325.0	0.320	0.040	0.625	0.000	168.0	0.0	0.000	0.000	1	1	0	1	0
743	Ohno and Nishioka (1984)	L2	24.8	9.0	100.0	325.0	0.320	0.040	0.625	0.000	168.0	0.0	0.000	0.000	1	1	0	1	0
744	Ohno and Nishioka (1984)	L3	24.8	9.0	100.0	325.0	0.320	0.040	0.625	4.500	152.0	0.0	0.000	0.000	1	1	0	1	0
745	Ono et al. (1989)	CA025C	25.8	6.0	70.0	426.0	0.910	0.257	0.667	2.500	36.0	0.0	0.000	0.000	1	1	0	1	0
746	Ono et al. (1989)	CA060C	25.8	6.0	70.0	426.0	0.910	0.616	0.500	1.500	37.5	0.0	0.000	0.000	1	1	0	1	0
747	Papanikolaou et al (1991)	P1	14.8	8.0	100.0	502.0	0.503	0.000	0.700	3.500	38.0	47.0	0.000	0.000	1	1	0	1	0
748	Papanikolaou et al (1991)	P2	18.0	8.0	100.0	502.0	0.503	0.090	0.800	3.300	45.0	53.0	0.000	0.000	1	1	0	1	0
749	Papanikolaou et al (1991)	P3	12.7	8.0	100.0	502.0	0.503	0.260	0.800	3.800	50.0	58.0	0.000	0.000	1	1	0	1	0
750	Papanikolaou et al (1991)	P4	16.0	8.0	50.0	502.0	1.005	0.000	1.000	4.400	43.0	48.0	0.000	0.000	1	1	0	1	0
751	Papanikolaou et al (1991)	P5	17.0	8.0	50.0	502.0	1.005	0.100	1.000	5.000	50.0	60.0	0.000	0.000	1	1	0	1	0
752	Papanikolaou et al (1991)	P6	12.7	8.0	50.0	502.0	1.005	0.260	1.000	4.500	57.0	72.0	0.000	0.000	1	1	0	1	0
753	Papanikolaou et al (1991)	X1	18.0	8.0	100.0	502.0	0.503	0.000	1.000	4.500	45.0	53.5	0.000	0.000	1	1	0	1	0.38
754	Papanikolaou et al (1991)	X2	16.5	8.0	100.0	502.0	0.503	0.100	1.000	5.600	55.0	66.0	0.000	0.000	1	1	0	1	0.38
755	Papanikolaou et al (1991)	X3	17.5	8.0	100.0	502.0	0.503	0.190	1.100	5.500	65.0	80.0	0.000	0.000	1	1	0	1	0.38
756	Papanikolaou et al (1991)	X4	21.6	8.0	50.0	502.0	1.005	0.000	1.000	6.700	46.0	54.0	0.000	0.000	1	1	0	1	0.38

757	Papanikolaou et al (1991)	X5	14.4	8.0	50.0	502.0	1.005	0.116	1.000	5.600	56.0	66.0	0.000	0.000	1	1	0	1	0.38
758	Papanikolaou et al (1991)	X6	21.2	8.0	50.0	502.0	1.005	0.157	1.100	5.500	65.0	79.0	0.000	0.000	1	1	0	1	0.38
759	Pipa and Carvalho (1990)	ID2	31.0	4.0	50.0	480.0	0.335	0.000	0.000	0.000	68.0	0.0	0.008	0.000	1	1	0	1	0
760	Pipa and Carvalho (1990)	ID2	31.0	4.0	50.0	480.0	0.335	0.000	0.000	0.000	68.0	0.0	0.008	0.000	1	1	0	1	0
761	Pipa and Carvalho (1990)	ID4	29.0	4.0	50.0	480.0	0.335	0.000	0.000	0.000	67.0	0.0	0.008	0.000	1	1	0	1	0
762	Pipa and Carvalho (1990)	ID4	29.0	4.0	50.0	480.0	0.335	0.000	0.000	0.000	67.0	0.0	0.008	0.000	1	1	0	1	0
763	Pipa and Carvalho (1990)	ND1	40.0	4.0	75.0	480.0	0.220	0.000	0.000	0.000	76.0	0.0	0.008	0.000	1	1	0	1	0
764	Pipa and Carvalho (1990)	ND1	40.0	4.0	75.0	480.0	0.220	0.000	0.000	0.000	76.0	0.0	0.008	0.000	1	1	0	1	0
765	Pipa and Carvalho (1990)	ND3	32.0	4.0	75.0	480.0	0.220	0.000	0.000	0.000	73.0	0.0	0.008	0.000	1	1	0	1	0
766	Pipa and Carvalho (1990)	ND3	32.0	4.0	75.0	480.0	0.220	0.000	0.000	0.000	73.0	0.0	0.008	0.000	1	1	0	1	0
767	Plainis and Tassios (1986)	0.0	11.0	5.0	75.0	450.0	0.524	0.125	0.000	1.100	380.0	0.0	0.000	0.000	1	1	1	1	0
768	Popov, Bertero and Krawinkler (1972)	B35	28.0	9.5	114.3	415.0	0.326	0.000	0.760	0.000	1031.0	0.0	0.004	0.000	1	1	0	1	0
769	Popov, Bertero and Krawinkler (1972)	B43	28.0	12.7	76.2	415.0	0.875	0.000	0.690	4.860	1057.0	0.0	0.004	0.420	1	1	0	1	0
770	Popov, Bertero and Krawinkler (1972)	B46	28.0	12.7	152.4	415.0	0.437	0.000	0.680	0.000	1031.0	0.0	0.004	0.000	1	1	0	1	0
771	Rabbat et al (1986)	LC1	37.8	9.5	51.0	455.0	0.730	0.100	1.126	5.200	237.0	240.0	0.000	0.000	1	1	0	1	0
772	Rabbat et al (1986)	LC10	37.8	9.5	121.0	455.0	0.308	0.100	1.126	5.200	237.0	240.0	0.000	0.000	1	1	0	1	0
773	Rabbat et al (1986)	LC11	37.8	9.5	102.0	455.0	0.365	0.100	1.126	5.200	237.0	240.0	0.000	0.000	1	1	0	1	0
774	Rabbat et al (1986)	LC3	37.8	9.5	121.0	455.0	0.308	0.100	1.237	7.599	237.0	240.0	0.000	0.000	1	1	0	1	0
775	Rabbat et al (1986)	LC4	37.8	9.5	102.0	455.0	0.365	0.100	1.126	5.200	237.0	240.0	0.000	0.000	1	1	0	1	0
776	Rabbat et al (1986)	LC7	37.8	9.5	102.0	455.0	0.365	0.100	1.126	5.200	237.0	240.0	0.000	0.000	1	1	0	1	0
777	Rabbat et al (1986)	LC8	37.8	9.5	102.0	455.0	0.365	0.100	1.126	5.200	237.0	240.0	0.000	0.000	1	1	0	1	0
778	Rabbat et al (1986)	NC1	37.8	12.7	102.0	455.0	0.652	0.150	1.019	5.531	237.0	240.0	0.000	0.000	1	1	0	1	0
779	Rabbat et al (1986)	NC2	37.8	9.5	102.0	455.0	0.365	0.100	1.126	5.200	237.0	240.0	0.000	0.000	1	1	0	1	0
780	Rabbat et al (1986)	NC3	37.8	9.5	102.0	455.0	0.365	0.100	1.126	5.200	237.0	240.0	0.000	0.000	1	1	0	1	0
781	Ruiz and Winter (1969)	A-1	38.1	6.0	102.0	303.2	0.270	0.000	1.110	3.950	103.0	109.0	0.000	0.000	1	0	0	0	0
782	Ruiz and Winter (1969)	A-2	38.6	6.0	102.0	303.2	0.270	0.000	0.950	6.000	103.0	109.0	0.000	0.000	1	0	0	0	0
783	Ruiz and Winter (1969)	A-3	38.2	6.0	102.0	303.2	0.270	0.000	0.840	6.960	103.0	109.0	0.000	0.000	1	0	0	0	0
784	Ruiz and Winter (1969)	A-4	38.2	6.0	102.0	303.2	0.270	0.000	0.850	9.770	105.7	109.0	0.000	0.000	1	0	0	0	0
785	Ruiz and Winter (1969)	B-3	37.9	6.0	102.0	303.2	0.270	0.000	0.534	9.090	99.0	14.8	0.015	0.157	1	0	0	0	0
786	Ruiz and Winter (1969)	B-4	37.2	6.0	102.0	303.2	0.270	0.000	0.584	8.680	106.0	16.7	0.017	0.161	1	0	0	0	0
787	Ruiz and Winter (1969)	C-1	32.4	0.0	0.0	303.2	#DIV/0!	0.000	0.980	7.600	90.2	16.7	0.020	0.063	1	0	0	0	0
788	Ruiz and Winter (1969)	C-2	33.2	0.0	0.0	303.2	#DIV/0!	0.000	1.020	7.600	91.6	16.7	0.000	0.075	1	0	0	0	0
789	Ruiz and Winter (1969)	C-3	33.8	0.0	0.0	303.2	#DIV/0!	0.000	0.940	7.600	96.6	15.4	0.015	0.087	1	0	0	0	0
790	Ruiz and Winter (1969)	C-4	35.2	0.0	0.0	303.2	#DIV/0!	0.000	1.420	7.600	93.6	18.1	0.000	0.079	1	0	0	0	0
791	Ruiz and Winter (1969)	D-1	34.9	0.0	0.0	303.2	#DIV/0!	0.000	0.880	9.490	113.0	15.4	0.017	0.063	1	0	0	0	0
792	Ruiz and Winter (1969)	D-2	38.6	0.0	0.0	303.2	#DIV/0!	0.000	1.070	9.770	113.0	16.9	0.017	0.071	1	0	0	0	0
793	Ruiz and Winter (1969)	D-3	38.6	0.0	0.0	303.2	#DIV/0!	0.000	0.840	9.770	114.0	16.9	0.017	0.059	1	0	0	0	0
794	Ruiz and Winter (1969)	D-4	39.8	0.0	0.0	303.2	#DIV/0!	0.000	1.330	9.490	106.0	15.4	0.017	0.047	1	0	0	0	0

795	Saatcioglou and Ozcebe (1989)	D1	40.3	10.0	150.0	470.0	0.299	0.000	1.315	8.571	216.2	285.0	0.000	0.000	1	1	0	1	0
796	Saatcioglou and Ozcebe (1989)	D2	30.2	10.0	150.0	470.0	0.299	0.162	1.373	4.556	244.4	270.0	0.000	0.000	1	1	0	1	0
797	Saatcioglou and Ozcebe (1989)	D3	34.8	10.0	75.0	470.0	0.598	0.140	1.407	4.389	207.0	275.0	0.000	0.000	1	1	0	1	0
798	Saatcioglou and Ozcebe (1989)	D4	43.6	10.0	50.0	470.0	0.898	0.110	1.597	6.713	252.1	300.0	0.000	0.000	1	1	0	1	0
799	Saatcioglou and Ozcebe (1989)	D5	49.3	10.0	150.0	470.0	0.299	0.083	1.133	5.411	230.0	254.0	0.000	0.000	1	1	0	1	0
800	Saatcioglou and Ozcebe (1989)	U1	43.6	10.0	150.0	470.0	0.299	0.000	1.863	8.467	217.5	275.0	0.000	0.000	1	1	0	1	0
801	Saatcioglou and Ozcebe (1989)	U2	30.2	10.0	150.0	470.0	0.299	0.160	1.339	5.714	240.0	270.0	0.000	0.000	1	1	0	1	0
802	Saatcioglou and Ozcebe (1989)	U3	34.8	10.0	75.0	470.0	0.598	0.140	1.544	7.131	220.0	268.0	0.000	0.000	1	1	0	1	0
803	Saatcioglou and Ozcebe (1989)	U4	32.0	10.0	50.0	470.0	0.898	0.150	1.573	8.880	282.8	326.0	0.000	0.000	1	1	0	1	0
804	Saatcioglou and Ozcebe (1989)	U5	49.3	10.0	150.0	470.0	0.299	0.083	0.999	5.759	220.0	255.0	0.000	0.000	1	1	0	1	0
805	Saatcioglou and Ozcebe (1989)	U6	37.3	6.4	65.0	425.0	0.848	0.130	1.719	8.978	288.4	343.0	0.000	0.000	1	1	0	1	0
806	Saatcioglou and Ozcebe (1989)	U7	39.0	6.4	65.0	425.0	0.848	0.130	1.598	8.846	292.9	342.0	0.000	0.000	1	1	0	1	0
807	Saatcioglu, Salamat and Razvi (1995)	C10-2	27.4	6.3	100.0	410.0	0.750	0.670	1.304	4.638	53.3	60.7	0.030	0.240	1	0	0	0	0
808	Saatcioglu, Salamat and Razvi (1995)	C11-2	26.4	6.3	100.0	410.0	0.927	0.639	0.000	0.000	45.0	55.8	0.030	0.360	1	0	0	0	0
809	Saatcioglu, Salamat and Razvi (1995)	C12-2	26.0	6.3	100.0	410.0	0.980	0.785	0.000	0.000	61.7	67.5	0.030	0.340	1	0	0	0	0
810	Saatcioglu, Salamat and Razvi (1995)	C3-1	34.0	6.3	50.0	410.0	1.959	0.889	0.000	0.000	64.6	80.0	0.019	0.204	1	0	0	0	0
811	Saatcioglu, Salamat and Razvi (1995)	C4-2	35.0	6.3	50.0	410.0	1.499	0.576	0.000	0.000	60.0	66.7	0.030	0.110	1	0	0	0	0
812	Saatcioglu, Salamat and Razvi (1995)	C5-2	35.0	6.3	50.0	410.0	1.853	0.591	0.000	0.000	60.0	68.5	0.030	0.480	1	0	0	0	0
813	Saatcioglu, Salamat and Razvi (1995)	C6-2	34.4	6.3	50.0	410.0	1.959	0.770	0.609	6.748	80.0	87.6	0.030	0.370	1	0	0	0	0
814	Saatcioglu, Salamat and Razvi (1995)	C8-1	25.3	6.3	100.0	410.0	0.927	0.784	0.000	0.000	44.2	52.5	0.030	0.310	1	0	0	0	0
815	Saatcioglu, Salamat and Razvi (1995)	C9-1	26.1	6.3	100.0	410.0	0.980	0.869	0.000	0.000	52.5	60.0	0.030	0.150	1	0	0	0	0
816	Saclay (1999)	WALL0	30.0	8.0	40.0	604.0	0.838	0.025	1.000	2.250	280.0	445.0	0.000	0.000	3	1	1	1	0
817	Saclay (1999)	WALL1	30.0	8.0	90.0	604.0	0.372	0.025	1.000	1.900	280.0	445.0	0.000	0.000	3	1	1	1	0
818	Saclay (1999)	WALL2	30.0	8.0	40.0	604.0	0.838	0.025	1.000	1.650	280.0	450.0	0.000	0.000	3	1	1	1	0
819	Saclay (1999)	WALL3	30.0	8.0	40.0	604.0	0.838	0.025	1.000	2.250	280.0	450.0	0.000	0.000	3	1	1	1	0
820	Sakai et al. 1990	B1	99.5	5.0	60.0	774.0	0.500	0.350	0.800	2.100	200.0	0.0	0.000	0.000	1	1	0	1	0
821	Sakai et al. 1990	B2	99.5	5.0	40.0	774.0	0.750	0.350	0.700	2.100	200.0	0.0	0.000	0.000	1	1	0	1	0
822	Sakai et al. 1990	B3	99.5	5.5	60.0	344.0	0.610	0.350	1.000	2.100	200.0	0.0	0.000	0.000	1	1	0	1	0
823	Sakai et al. 1990	B4	99.5	5.0	60.0	1126.0	0.500	0.350	0.700	4.100	197.5	0.0	0.000	0.000	1	1	0	1	0
824	Sakai et al. 1990	B5	99.5	5.0	30.0	774.0	0.500	0.350	0.800	1.600	197.5	0.0	0.000	0.000	1	1	0	1	0
825	Sakai et al. 1990	B6	99.5	7.0	60.0	857.0	0.500	0.350	0.800	2.000	200.0	0.0	0.000	0.000	1	1	0	1	0
826	Sakai et al. 1990	B7	99.5	5.0	30.0	774.0	0.500	0.350	0.700	1.000	190.0	0.0	0.000	0.000	1	1	0	1	0
827	Salonikios et al. (1999)	MSW1	26.1	4.2	40.0	586.0	0.289	0.070	0.300	1.400	1382.4	0.0	0.000	0.000	2	1	1	1	0
828	Salonikios et al. (1999)	MSW2	26.2	4.2	40.0	586.0	0.289	0.070	0.300	1.900	921.6	0.0	0.000	0.000	2	1	1	1	0
829	Salonikios et al. (1999)	MSW3	24.6	4.2	24.0	586.0	0.481	0.070	0.300	1.400	1228.8	0.0	0.000	0.000	2	1	1	1	0
830	Salonikios et al. (1999)	MSW4	24.6	4.2	24.0	586.0	0.481	0.070	0.300	1.500	1075.2	0.0	0.000	0.000	2	1	1	1	0
831	Salonikios et al. (1999)	MSW5	22.0	4.2	24.0	586.0	0.481	0.070	0.300	1.500	1228.8	0.0	0.000	0.000	2	1	1	1	0
832	Salonikios et al. (1999)	MSW6	27.5	4.2	24.0	586.0	0.481	0.070	0.500	1.500	1382.4	0.0	0.000	0.000	2	1	1	1	0

833	Satyarno et al (1993)	NO 1	50.0	7.4	80.0	1250.0	0.458	0.600	0.800	3.900	640.0	790.0	0.000	0.000	1	0	0	1	0
834	Satyarno et al (1993)	NO 3	50.0	7.4	80.0	1250.0	0.458	0.600	0.600	3.000	610.0	660.0	0.000	0.000	1	0	0	1	0
835	Scribner and Wight (1978)	S10	34.0	9.5	76.2	372.1	0.736	0.000	2.062	9.416	231.4	222.6	0.000	0.000	1	1	0	1	0
836	Scribner and Wight (1978)	S11	34.0	9.5	76.2	372.1	0.736	0.000	1.596	6.417	201.6	260.5	0.000	0.000	1	1	0	1	0
837	Scribner and Wight (1978)	S12	34.0	9.5	76.2	372.1	0.736	0.000	2.100	6.347	218.4	278.1	0.000	0.000	1	1	0	1	0
838	Scribner and Wight (1978)	S3	34.2	6.4	63.5	293.5	0.491	0.000	1.276	7.065	66.7	68.0	0.000	0.000	1	1	0	1	0
839	Scribner and Wight (1978)	S4	34.2	6.4	63.5	293.5	0.491	0.000	1.936	7.166	74.8	74.3	0.000	0.000	1	1	0	1	0
840	Scribner and Wight (1978)	S5	27.4	6.4	50.8	293.5	0.614	0.000	1.487	7.918	56.2	39.0	0.000	0.000	1	1	0	1	0
841	Scribner and Wight (1978)	S6	27.4	6.4	50.8	293.5	0.614	0.000	1.057	7.122	41.0	33.4	0.000	0.000	1	1	0	1	0
842	Scribner and Wight (1978)	S7	27.4	9.5	63.5	381.7	1.104	0.000	1.411	6.859	65.4	45.0	0.000	0.000	1	1	0	1	0
843	Scribner and Wight (1978)	S8	27.4	6.4	63.5	381.7	0.491	0.000	2.251	7.108	76.9	77.9	0.000	0.000	1	1	0	1	0
844	Scribner and Wight (1978)	S9	34.0	9.5	76.2	372.1	0.736	0.000	2.013	8.724	230.1	226.7	0.000	0.000	1	1	0	1	0
845	Sheikh and Khoury (1993)	AS 17	31.3	9.5	108.0	508.0	0.734	0.770	1.050	4.300	165.0	185.0	0.008	0.108	1	1	0	1	0
846	Sheikh and Khoury (1993)	AS 18	32.8	12.7	108.0	464.0	1.311	0.770	0.500	4.700	160.0	215.0	0.007	0.153	1	1	0	1	0
847	Sheikh and Khoury (1993)	AS 19	32.3	9.5	108.0	508.0	0.734	0.470	1.150	6.200	180.0	220.0	0.010	0.166	1	1	0	1	0
848	Sheikh and Khoury (1993)	AS 3	33.2	9.5	108.0	508.0	0.734	0.600	1.000	5.900	160.0	205.0	0.016	0.280	1	1	0	1	0
849	Sheikh and Khoury (1993)	ES 13	32.6	12.7	114.0	464.0	0.729	0.760	0.700	1.800	150.0	173.0	0.006	0.050	1	1	0	1	0
850	Sheikh and Khoury (1993)	FS 9	32.4	9.5	95.0	508.0	0.734	0.760	0.800	2.500	150.0	157.0	0.006	0.060	1	1	0	1	0
851	Sheikh and Yeh (1990)	A-11	27.9	6.0	108.0	420.3	0.702	0.740	0.000	0.000	185.2	222.2	0.007	0.059	1	0	0	0	0
852	Sheikh and Yeh (1990)	A-16	33.9	6.0	108.0	420.3	0.702	0.600	0.000	0.000	185.2	213.7	0.011	0.018	1	0	0	0	0
853	Sheikh and Yeh (1990)	A-3	31.8	10.0	108.0	489.9	2.010	0.610	0.000	0.000	215.5	222.7	0.010	0.232	1	0	0	0	0
854	Sheikh and Yeh (1990)	D-14	26.9	6.0	108.0	420.3	0.742	0.750	0.000	0.000	146.5	160.8	0.008	0.024	1	0	0	0	0
855	Sheikh and Yeh (1990)	D-15	26.2	10.0	114.3	489.9	2.008	0.750	0.000	0.000	158.7	179.1	0.007	0.032	1	0	0	0	0
856	Sheikh and Yeh (1990)	D-5	31.3	10.0	114.3	489.9	2.003	0.460	0.000	0.000	255.2	261.0	0.021	0.240	1	0	0	0	0
857	Sheikh and Yeh (1990)	D-7	26.2	6.0	54.0	420.3	1.483	0.780	0.000	0.000	144.1	166.2	0.005	0.060	1	0	0	0	0
858	Sheikh and Yeh (1990)	E-10	26.3	10.0	63.5	489.9	2.528	0.770	0.000	0.000	135.7	150.9	0.006	0.032	1	0	0	0	0
859	Sheikh and Yeh (1990)	E-13	27.3	13.0	114.3	483.0	1.925	0.740	0.000	0.000	138.4	167.7	0.007	0.047	1	0	0	0	0
860	Sheikh and Yeh (1990)	E-2	31.4	13.0	114.3	483.0	1.925	0.610	0.000	0.000	203.5	209.6	0.013	0.068	1	0	0	0	0
861	Sheikh and Yeh (1990)	E-8	25.9	10.0	127.0	483.0	1.264	0.780	0.000	0.000	159.4	167.9	0.006	0.020	1	0	0	0	0
862	Sheikh and Yeh (1990)	F-12	33.5	6.0	88.9	420.3	0.749	0.600	0.000	0.000	175.7	186.7	0.008	0.050	1	0	0	0	0
863	Sheikh and Yeh (1990)	F-4	32.2	10.0	95.3	489.9	2.001	0.600	0.000	0.000	232.2	232.6	0.014	0.196	1	0	0	0	0
864	Sheikh and Yeh (1990)	F-6	27.3	13.0	173.0	483.0	1.907	0.750	0.000	0.000	186.7	195.1	0.008	0.020	1	0	0	0	0
865	Sheikh and Yeh (1990)	F-9	26.5	10.0	95.3	489.9	2.002	0.770	0.000	0.000	183.1	201.5	0.007	0.018	1	0	0	0	0
866	Sheikh, Shah and Khoury (1994)	AS 18H	54.7	12.7	108.0	464.0	1.311	0.640	0.450	3.750	210.0	265.0	0.009	0.113	1	1	0	1	0
867	Sheikh, Shah and Khoury (1994)	AS 20H	53.7	12.7	76.0	464.0	1.864	0.640	0.650	6.100	220.0	290.0	0.009	0.149	1	1	0	1	0
868	Sheikh, Shah and Khoury (1994)	AS 34H	54.1	9.5	108.0	508.0	0.734	0.620	0.500	3.900	210.0	250.0	0.007	0.082	1	1	0	1	0
869	Soesianawati et al. (1986)	NO. 1	46.5	7.0	85.0	364.0	0.860	0.100	0.938	6.250	320.0	0.0	0.000	0.000	1	1	0	1	0
870	Soesianawati et al. (1986)	NO. 2	44.0	8.0	78.0	360.0	1.220	0.300	0.938	4.375	448.0	0.0	0.000	0.000	1	1	0	1	0

871	Soesianawati et al. (1986)	NO. 3	44.0	7.0	91.0	364.0	0.800	0.300	0.938	2.813	448.0	0.0	0.000	0.000	1	1	0	1	0
872	Soesianawati et al. (1986)	NO. 4	40.0	6.0	94.0	255.0	0.570	0.300	0.938	2.625	416.0	0.0	0.000	0.000	1	1	0	1	0
873	Steidle and Schaefer (1986)	STSC	22.8	8.0	50.0	465.0	0.670	0.620	1.820	1.820	174.0	174.0	0.000	0.000	2	1	0	0	0
874	Steidle and Schaefer (1986)	UC10H	118.0	5.1	45.0	1415.0	0.770	0.620	0.800	1.867	252.0	0.0	0.000	0.000	1	1	0	1	0
875	Steidle and Schaefer (1986)	UC15H	118.0	6.4	45.0	1424.0	1.190	0.620	0.800	3.556	288.0	0.0	0.000	0.000	1	1	0	1	0
876	Steidle and Schaefer (1986)	UC15L	118.0	6.4	45.0	1424.0	1.190	0.360	0.800	8.000	171.0	0.0	0.000	0.000	1	1	0	1	0
877	Steidle and Schaefer (1986)	UC20H	118.0	6.4	35.0	1424.0	1.520	0.620	1.333	8.000	315.0	0.0	0.000	0.000	1	1	0	1	0
878	Steidle and Schaefer (1986)	UC20L	118.0	6.4	35.0	1424.0	1.520	0.360	1.244	12.444	180.0	0.0	0.000	0.000	1	1	0	1	0
879	Takizawa and Aoyama (1976)	NO 1	22.2	6.0	50.0	257.0	0.565	0.177	0.570	2.000	27.0	0.0	0.000	0.000	1	1	0	1	0
880	Tanaka and Park (1990)	NO. 1	25.6	12.0	80.0	333.0	2.550	0.200	1.250	8.125	256.0	0.0	0.000	0.000	1	1	0	1	0
881	Tanaka and Park (1990)	NO. 2	25.6	12.0	80.0	333.0	2.550	0.200	1.250	7.813	256.0	0.0	0.000	0.000	1	1	0	1	0
882	Tanaka and Park (1990)	NO. 3	25.6	12.0	80.0	333.0	2.550	0.200	1.125	3.625	256.0	0.0	0.000	0.000	1	1	0	1	0
883	Tanaka and Park (1990)	NO. 4	25.6	12.0	80.0	333.0	2.550	0.200	1.125	6.250	256.0	0.0	0.000	0.000	1	1	0	1	0
884	Tanaka and Park (1990)	NO. 5	32.0	12.0	110.0	325.0	1.700	0.100	1.091	0.000	594.0	0.0	0.000	0.000	1	1	0	1	0
885	Tanaka and Park (1990)	NO. 6	32.0	12.0	110.0	325.0	1.700	0.100	1.091	0.000	643.5	0.0	0.000	0.000	1	1	0	1	0
886	Tanaka and Park (1990)	NO. 7	32.1	12.0	90.0	325.0	2.080	0.300	1.091	0.000	957.0	0.0	0.000	0.000	1	1	0	1	0
887	Tanaka and Park (1990)	NO. 8	32.1	12.0	90.0	325.0	2.080	0.300	1.091	0.000	957.0	0.0	0.000	0.000	1	1	0	1	0
888	Tegos (1984)	S10	31.4	8.0	150.0	495.0	0.335	0.250	1.670	2.330	30.0	32.0	0.000	0.000	1	1	0	0	0
889	Tegos (1984)	S11	37.8	8.0	75.0	495.0	0.670	0.360	2.100	2.500	47.5	48.5	0.000	0.000	1	1	0	0	0
890	Tegos (1984)	S12	35.9	8.0	150.0	495.0	0.335	0.320	2.000	3.000	44.0	47.0	0.000	0.000	1	1	0	0	0
891	Tegos (1984)	S13	37.0	8.0	75.0	495.0	0.670	0.320	2.830	3.670	46.5	48.5	0.000	0.000	1	1	0	0	0
892	Tegos (1984)	S14	24.9	8.0	150.0	495.0	0.335	0.480	3.170	3.670	46.5	48.0	0.000	0.000	1	1	0	0	0
893	Tegos (1984)	S9	34.2	8.0	75.0	495.0	0.670	0.290	2.400	2.830	38.1	38.7	0.000	0.000	1	1	0	0	0
894	Tegos (1984)	SS1	21.0	8.0	50.0	315.0	1.005	0.290	0.600	4.091	28.0	29.0	0.000	0.000	1	1	0	1	0
895	Tegos (1984)	SS2	22.5	8.0	50.0	315.0	1.005	0.267	0.735	4.151	30.0	32.0	0.000	0.000	1	1	0	1	0
896	Tegos (1984)	SS3	27.5	8.0	50.0	315.0	1.005	0.218	0.637	3.911	31.5	33.0	0.000	0.000	1	1	0	1	0
897	Tegos (1984)	SS4	21.0	8.0	50.0	315.0	1.005	0.286	0.552	4.006	30.0	32.0	0.000	0.000	1	1	0	1	0
898	Tegos (1984)	SS5	19.8	8.0	50.0	315.0	1.005	0.303	0.789	4.048	30.0	30.0	0.000	0.000	1	1	0	1	0
899	Tegos (1984)	SS6	14.0	8.0	100.0	315.0	0.503	0.267	0.736	4.157	18.0	20.0	0.000	0.000	1	1	0	1	0
900	Tegos (1984)	SS7	19.0	8.0	50.0	315.0	1.005	0.197	0.726	4.096	20.0	20.0	0.000	0.000	1	1	0	1	0
901	Tegos (1984)	SS8	19.1	8.0	50.0	315.0	1.005	0.196	0.788	4.042	21.0	21.0	0.000	0.000	1	1	0	1	0
902	Tegos (1984)	X1	20.6	8.0	50.0	315.0	1.005	0.290	0.800	4.100	30.0	33.5	0.000	0.000	1	1	0	1	0.77
903	Tegos (1984)	X2	17.1	8.0	50.0	315.0	1.005	0.350	0.700	4.100	27.0	33.5	0.000	0.000	1	1	0	1	0.77
904	Tegos (1984)	X3	22.5	8.0	50.0	315.0	1.005	0.270	0.600	4.100	28.0	36.5	0.000	0.000	1	1	0	1	0.77
905	Tegos (1984)	X4	24.0	8.0	50.0	315.0	1.005	0.250	0.500	4.100	28.0	38.0	0.000	0.000	1	1	0	1	0.77
906	Thomsen and Wallace (1994)	B 3	72.6	3.2	25.4	792.9	0.818	0.200	0.790	3.470	25.8	21.6	0.000	0.000	1	1	0	1	0
907	Thomsen and Wallace (1994)	B 2	77.4	3.2	25.4	792.9	0.818	0.100	0.790	0.000	25.8	21.6	0.000	0.000	1	1	0	1	0
908	Tsonos et al. (1996)	L1	34.0	8.0	65.0	495.0	0.773	0.110	1.300	6.400	47.0	49.0	0.000	0.000	1	1	0	1	0

909	Tsonos et al. (1996)	L'1	33.8	8.0	32.5	495.0	1.547	0.110	1.400	8.500	46.0	49.0	0.000	0.000	1	1	0	1	0
910	Tsonos et al. (1996)	L2	32.4	8.0	65.0	495.0	0.773	0.230	1.700	5.000	60.0	60.0	0.000	0.000	1	1	0	1	0
911	Tsonos et al. (1996)	L2	32.4	8.0	65.0	495.0	0.773	0.080	1.000	6.400	43.0	46.0	0.000	0.000	1	1	0	1	0
912	Tsonos et al. (1996)	L'2	32.3	8.0	32.5	495.0	1.547	0.230	2.200	7.100	57.0	57.0	0.000	0.000	1	1	0	1	0
913	Tsonos et al. (1996)	L'2	32.3	8.0	32.5	495.0	1.547	0.080	1.000	8.500	43.0	46.0	0.000	0.000	1	1	0	1	0
914	Tsonos et al. (1996)	L3	32.8	8.0	65.0	495.0	0.773	0.380	1.400	4.300	55.0	55.0	0.000	0.000	1	1	0	1	0
915	Tsonos et al. (1996)	L3	32.8	8.0	65.0	495.0	0.773	0.080	1.400	6.400	45.0	47.0	0.000	0.000	1	1	0	1	0
916	Tsonos et al. (1996)	L'3	32.0	8.0	32.5	495.0	1.547	0.390	1.400	4.300	57.0	57.0	0.000	0.000	1	1	0	1	0
917	Tsonos et al. (1996)	L'3	32.0	8.0	32.5	495.0	1.547	0.080	1.300	6.400	49.0	49.0	0.000	0.000	1	1	0	1	0
918	Tsonos et al. (1996)	S1	32.6	8.0	65.0	495.0	0.773	0.115	1.100	7.200	52.5	55.5	0.000	0.000	1	1	0	1	0
919	Tsonos et al. (1996)	S2	32.3	8.0	65.0	495.0	0.773	0.232	1.300	5.500	58.5	60.0	0.000	0.000	1	1	0	1	0
920	Tsonos et al. (1996)	S2	32.3	8.0	65.0	495.0	0.773	0.077	0.700	6.400	45.0	55.0	0.000	0.000	1	1	0	1	0
921	Tsonos et al. (1996)	S'2	31.8	8.0	32.5	495.0	1.547	0.236	1.300	6.300	62.0	65.0	0.000	0.000	1	1	0	1	0
922	Umehara and Jirsa (1984)	CMS	42.0	6.0	89.0	413.4	0.276	0.040	1.000	1.080	175.0	175.0	0.000	0.000	1	1	0	0	0
923	Umehara and Jirsa (1984)	O-DM	30.0	6.0	64.0	468.5	0.290	0.000	1.690	1.690	122.0	122.0	0.000	0.000	1	1	0	0	0
924	Vallenas et al (1979)	SW4-1	35.1	4.6	34.0	440.0	0.770	0.077	0.360	2.600	4383.0	4777.0	0.000	0.000	1	1	1	1	0
925	Vallenas et al (1979)	SW4-2	35.1	4.6	34.0	440.0	0.770	0.077	0.430	2.200	4383.0	4777.0	0.000	0.000	1	1	1	1	0
926	Vallenas et al (1979)	SW4-3	35.1	4.6	34.0	440.0	0.770	0.077	0.410	2.400	4383.0	4777.0	0.000	0.000	1	1	1	1	0
927	Vallenas et al (1979)	SW6-1	34.7	4.6	34.0	440.0	1.715	0.062	0.360	1.400	3080.0	3525.0	0.000	0.000	1	1	1	1	0
928	Vallenas et al (1979)	SW6-2	34.7	4.6	34.0	440.0	1.715	0.062	0.410	1.900	3080.0	3525.0	0.000	0.000	1	1	1	1	0
929	Vallenas et al (1979)	SW6-3	34.7	4.6	34.0	440.0	1.715	0.062	0.460	1.400	3080.0	3525.0	0.000	0.000	1	1	1	1	0
930	Vallenas et al (1979)	SW3-1	35.2	4.6	34.0	440.0	0.385	0.077	0.390	5.500	4383.0	4777.0	0.000	0.000	1	1	1	0	0
931	Vallenas et al (1979)	SW3-2	35.2	4.6	34.0	440.0	0.385	0.077	0.460	5.700	4383.0	4777.0	0.000	0.000	1	1	1	0	0
932	Vallenas et al (1979)	SW3-3	35.2	4.6	34.0	440.0	0.385	0.077	0.480	6.000	4383.0	4777.0	0.000	0.000	1	1	1	0	0
933	Vallenas et al (1979)	SW5-2	34.5	4.6	34.0	440.0	0.858	0.063	0.400	2.500	3080.0	3525.0	0.000	0.000	1	1	1	0	0
934	Vallenas et al (1979)	SW5-3	34.5	4.6	34.0	440.0	0.858	0.063	0.460	2.500	3080.0	3525.0	0.000	0.000	1	1	1	0	0
935	Vallenas et al (1979)	SW5-3	34.5	4.6	34.0	440.0	0.858	0.063	0.350	2.500	3080.0	3525.0	0.000	0.000	1	1	1	0	0
936	Verzelletti et al (1991)	H01	35.0	8.0	70.0	440.0	0.479	0.000	0.600	8.100	84.0	105.0	0.000	0.000	1	1	0	1	0
937	Verzelletti et al (1991)	H03	35.0	8.0	70.0	440.0	0.479	0.000	0.700	7.800	89.0	107.0	0.000	0.000	1	1	0	1	0
938	Vintzeleou et al. (1995)	EMPSP1	30.0	6.0	100.0	350.0	0.226	0.027	1.429	5.714	65.0	105.0	0.000	0.000	1	1	0	1	0
939	Vintzeleou et al. (1995)	EMPSP10	30.0	8.0	100.0	450.0	0.402	0.048	1.286	5.143	39.0	45.0	0.000	0.000	1	1	0	1	0
940	Vintzeleou et al. (1995)	EMPSP12	30.0	8.0	125.0	350.0	0.322	0.016	1.714	7.619	100.0	110.0	0.000	0.000	1	1	0	1	0
941	Vintzeleou et al. (1995)	EMPSP13	30.0	8.0	125.0	350.0	0.322	0.014	1.714	6.667	95.0	105.0	0.000	0.000	1	1	0	1	0
942	Vintzeleou et al. (1995)	EMPSP15	30.0	8.0	125.0	350.0	0.322	0.013	1.714	6.190	95.0	105.0	0.000	0.000	1	1	0	1	0
943	Vintzeleou et al. (1995)	EMPSP16	30.0	6.0	100.0	350.0	0.386	0.051	1.524	6.095	85.0	125.0	0.000	0.000	1	1	0	1	0
944	Vintzeleou et al. (1995)	EMPSP18	30.0	10.0	50.0	350.0	2.146	0.345	3.333	8.190	200.0	250.0	0.000	0.000	1	1	0	1	0
945	Vintzeleou et al. (1995)	EMPSP19	30.0	6.0	100.0	350.0	0.386	0.043	1.190	4.762	40.0	48.0	0.000	0.000	1	1	0	1	0
946	Vintzeleou et al. (1995)	EMPSP2	30.0	14.1	50.0	350.0	2.513	0.230	1.167	4.667	100.0	175.0	0.000	0.000	1	1	0	1	0

947	Vintzeleou et al. (1995)	EMPSP22	30.0	6.0	100.0	350.0	0.386	0.040	1.143	5.714	40.0	50.0	0.000	0.000	1	1	0	1	0
948	Vintzeleou et al. (1995)	EMPSP3	30.0	6.0	100.0	350.0	0.226	0.027	1.286	5.238	59.0	95.0	0.000	0.000	1	1	0	1	0
949	Vintzeleou et al. (1995)	EMPSP30	30.0	8.0	100.0	450.0	0.687	0.146	1.905	7.619	110.0	125.0	0.000	0.000	1	1	0	1	0
950	Vintzeleou et al. (1995)	EMPSP32	30.0	10.0	50.0	350.0	2.513	0.478	1.905	7.619	194.0	60.0	0.000	0.000	1	1	0	1	0
951	Vintzeleou et al. (1995)	EMPSP33	30.0	6.0	100.0	350.0	0.452	0.070	1.714	5.714	55.0	60.0	0.000	0.000	1	1	0	1	0
952	Vintzeleou et al. (1995)	EMPSP36	30.0	6.0	100.0	350.0	0.452	0.065	0.952	6.667	75.0	110.0	0.000	0.000	1	1	0	1	0
953	Vintzeleou et al. (1995)	EMPSP38	30.0	8.0	50.0	350.0	1.608	0.310	1.905	9.524	150.0	160.0	0.000	0.000	1	1	0	1	0
954	Vintzeleou et al. (1995)	EMPSP6	30.0	6.0	100.0	350.0	0.226	0.027	1.286	5.714	60.0	92.0	0.000	0.000	1	1	0	1	0
955	Vintzeleou et al. (1995)	EMPSP8	30.0	8.0	50.0	350.0	0.804	0.055	1.714	7.619	80.0	120.0	0.000	0.000	1	1	0	1	0
956	Wang et al. (1975)	SW1	36.5	5.3	21.2	571.0	1.639	0.074	0.670	3.600	4200.0	4700.0	0.000	0.000	1	1	1	1	0
957	Wang et al. (1975)	SW1	36.5	5.3	21.2	571.0	1.639	0.074	0.790	3.600	4200.0	4700.0	0.000	0.000	1	1	1	1	0
958	Wang et al. (1975)	SW1	36.5	5.3	21.2	571.0	1.639	0.074	0.740	3.700	4200.0	4700.0	0.000	0.000	1	1	1	1	0
959	Wang et al. (1975)	SW2	37.1	5.3	21.2	571.0	1.639	0.073	0.590	2.500	4000.0	4500.0	0.000	0.000	1	1	1	1	0
960	Wang et al. (1975)	SW2	37.1	5.3	21.2	571.0	1.639	0.073	0.560	3.100	4000.0	4500.0	0.000	0.000	1	1	1	1	0
961	Wang et al. (1975)	SW2	37.1	5.3	21.2	571.0	1.639	0.073	0.630	4.500	4000.0	4500.0	0.000	0.000	1	1	1	1	0
962	Watson and Park (1994)	UNIT 1	47.0	7.0	85.0	364.0	0.453	0.100	0.611	0.000	302.0	335.2	0.010	0.201	1	1	0	1	0
963	Watson and Park (1994)	UNIT 2	44.0	8.0	78.0	360.0	0.644	0.300	0.567	3.714	405.0	486.0	0.011	0.198	1	1	0	1	0
964	Watson and Park (1994)	UNIT 3	44.0	7.0	91.0	364.0	0.423	0.300	0.560	2.734	480.0	479.1	0.008	0.128	1	1	0	1	0
965	Watson and Park (1994)	UNIT 4	40.0	6.0	94.0	255.0	0.301	0.300	0.588	2.813	430.0	448.1	0.009	0.098	1	1	0	1	0
966	Watson and Park (1994)	UNIT 5	41.0	8.0	81.0	372.0	0.621	0.500	0.384	0.000	520.0	525.8	0.016	0.079	1	1	0	1	0
967	Watson and Park (1994)	UNIT 6	40.0	6.0	96.0	388.0	0.295	0.500	0.391	1.688	520.0	526.4	0.016	0.068	1	1	0	1	0
968	Watson and Park (1994)	UNIT 7	42.0	12.0	96.0	308.0	1.178	0.700	0.297	1.813	510.0	516.8	0.011	0.053	1	1	0	1	0
969	Watson and Park (1994)	UNIT 8	39.0	8.0	77.0	372.0	0.653	0.700	0.281	0.000	510.0	524.5	0.011	0.057	1	1	0	1	0
970	Watson and Park (1994)	UNIT 9	40.0	12.0	52.0	308.0	2.175	0.700	0.272	2.813	555.0	599.0	0.010	0.244	1	1	0	1	0
971	Wehbe et al. (1996)	A1	31.7	6.0	110.0	451.1	0.648	0.084	1.265	5.225	777.6	852.3	0.008	0.185	1	1	0	1	0
972	Wehbe et al. (1996)	A2	27.2	6.0	83.0	451.1	1.717	0.251	1.071	4.411	875.6	934.0	0.008	0.123	1	1	0	1	0
973	Wehbe et al. (1996)	B1	29.7	10.0	110.0	428.0	0.097	0.092	1.370	6.895	758.9	887.3	0.009	0.305	1	1	0	1	0
974	Wehbe et al. (1996)	B2	28.1	10.0	83.0	428.0	1.803	0.246	1.285	6.467	934.0	1004.1	0.009	0.228	1	1	0	1	0
975	Woodword and Jirsa (1984)	C-86	36.2	6.0	65.0	465.1	0.285	0.190	1.170	3.500	138.0	138.0	0.000	0.000	1	1	0	0	0
976	Woodword and Jirsa (1984)	O-86	41.0	6.0	65.0	465.1	0.285	0.000	1.390	4.200	112.0	112.0	0.000	0.000	1	1	0	0	0
977	Xiao and Martirossyan (1998)	HC4-8L16-T10-0.1P	86.0	9.3	51.0	510.0	3.670	0.096	0.984	0.000	142.2	0.0	0.000	0.000	1	1	0	1	0
978	Xiao and Martirossyan (1998)	HC4-8L16-T10-0.2P	86.0	9.3	51.0	510.0	3.670	0.192	0.984	6.890	147.3	0.0	0.000	0.000	1	1	0	1	0
979	Xiao and Martirossyan (1998)	HC4-8L16-T6-0.1P	86.0	6.4	51.0	449.0	1.630	0.096	0.984	6.299	132.1	0.0	0.000	0.000	1	1	0	1	0
980	Xiao and Martirossyan (1998)	HC4-8L16-T6-0.2P	86.0	6.4	51.0	449.0	1.630	0.192	0.984	4.331	152.4	0.0	0.000	0.000	1	1	0	1	0
981	Xiao and Martirossyan (1998)	HC4-8L19-T10-0.1P	76.0	9.3	51.0	510.0	3.670	0.100	0.984	9.252	154.9	0.0	0.000	0.000	1	1	0	1	0
982	Xiao and Martirossyan (1998)	HC4-8L19-T10-0.2P	76.0	9.3	51.0	510.0	3.670	0.200	0.984	7.972	182.9	0.0	0.000	0.000	1	1	0	1	0
983	Xiao et al. (1999)	HB4-10L	69.5	9.5	50.0	510.0	1.404	0.000	0.900	3.200	208.0	215.0	0.000	0.000	1	1	0	1	0
984	Xiao et al. (1999)	HB4-10L	69.5	9.5	65.0	510.0	1.080	0.000	0.920	3.600	208.0	220.0	0.000	0.000	1	1	0	1	0

985	Xiao et al. (1999)	HB4-6L	69.5	9.5	100.0	510.0	0.702	0.000	0.740	4.600	134.0	140.0	0.000	0.000	1	1	0	1	0
986	Yamashiro and Siess (1962)	J-15	30.3	9.5	152.4	329.3	0.456	0.117	0.925	14.406	47.0	0.0	0.011	0.299	1	1	0	0	0
987	Yamashiro and Siess (1962)	J-16	31.3	9.5	152.4	329.3	0.456	0.057	0.849	20.168	40.0	0.0	0.012	0.398	1	1	0	0	0
988	Yamashiro and Siess (1962)	J-24	34.9	9.5	152.4	329.3	0.613	0.000	0.516	38.062	20.5	0.0	0.009	0.689	1	1	0	0	0
989	Yamashiro and Siess (1962)	J-25	34.8	9.5	152.4	329.3	0.613	0.069	0.622	19.107	32.1	0.0	0.010	0.354	1	1	0	0	0
990	Yamashiro and Siess (1962)	J-26	31.7	9.5	152.4	329.3	0.613	0.151	0.713	9.402	42.8	0.0	0.012	0.197	1	1	0	0	0
991	Yamashiro and Siess (1962)	J-27	33.9	9.5	152.4	329.3	0.613	0.212	0.819	2.578	53.6	0.0	0.013	0.059	1	1	0	0	0
992	Yamashiro and Siess (1962)	J-28	34.6	9.5	152.4	329.3	0.613	0.000	0.955	33.513	31.0	0.0	0.011	0.551	1	1	0	0	0
993	Yamashiro and Siess (1962)	J-29	30.4	9.5	152.4	329.3	0.613	0.079	1.046	24.414	51.0	0.0	0.012	0.433	1	1	0	0	0
994	Yamashiro and Siess (1962)	J-30	31.0	9.5	152.4	329.3	0.613	0.154	1.092	17.287	54.0	0.0	0.013	0.346	1	1	0	0	0
995	Yamashiro and Siess (1962)	J-31	29.5	9.5	152.4	329.3	0.613	0.243	1.183	10.312	61.0	0.0	0.014	0.283	1	1	0	0	0
996	Yamashiro and Siess (1962)	J-34	31.1	9.5	76.2	329.3	1.226	0.231	0.880	4.701	53.1	0.0	0.014	0.114	1	1	0	0	0
997	Zahn, Park and Priestley (1986)	UNIT-3A	23.6	10.0	100.0	318.0	0.393	0.380	0.599	3.187	295.9	276.9	0.000	0.000	1	1	0	1	0
998	Zahn, Park and Priestley (1986)	UNIT-4A	25.0	10.0	90.0	318.0	0.436	0.210	0.644	3.636	263.2	301.5	0.000	0.000	1	1	0	1	0
999	Zhang (1996)	C2H1	29.3	8.0	47.0	220.0	0.713	0.070	1.041	4.454	112.0	149.0	0.013	0.174	1	1	0	1	0
1000	Zhang (1996)	C2L1	33.4	8.0	100.0	220.0	0.335	0.070	1.357	7.207	104.0	130.5	0.014	0.000	1	1	0	1	0
1001	Zhang (1996)	C3H2	33.4	5.0	27.0	220.0	0.727	0.200	1.331	5.855	45.4	60.0	0.024	0.677	1	1	0	1	0
1002	Zhang (1996)	C3L2	29.3	5.0	60.0	220.0	0.327	0.200	1.120	4.436	46.8	56.6	0.024	0.626	1	1	0	1	0
1003	Zhang (1996)	C5H1	26.4	3.0	18.0	220.0	0.714	0.070	1.017	5.300	7.0	8.0	0.049	1.222	1	1	0	1	0
1004	Zhang (1996)	C5H2	26.4	3.0	18.0	220.0	0.714	0.200	1.018	4.347	8.2	9.8	0.047	0.788	1	1	0	1	0
1005	Zhang (1996)	C5L1	26.4	3.0	40.0	220.0	0.321	0.070	0.879	3.922	6.1	7.3	0.045	0.744	1	1	0	1	0
1006	Zhang (1996)	C5L2	26.4	3.0	40.0	220.0	0.321	0.200	1.107	3.820	6.4	7.8	0.046	0.640	1	1	0	1	0
1007	Zhou et al. (1987)	NO. 204-08	21.1	5.0	40.0	559.0	0.730	0.800	0.469	2.125	20.8	0.0	0.000	0.000	1	1	0	1	0
1008	Zhou et al. (1987)	NO. 214-08	21.1	5.0	40.0	559.0	0.730	0.800	0.563	2.031	20.8	0.0	0.000	0.000	1	1	0	1	0
1009	Zhou et al. (1987)	NO. 223-09	21.1	5.0	40.0	559.0	1.750	0.900	0.563	3.750	20.8	0.0	0.000	0.000	1	1	0	1	0
1010	Zhou et al. (1987)	NO. 302-07	28.8	5.0	40.0	559.0	0.730	0.701	0.521	1.458	21.6	0.0	0.000	0.000	1	1	0	1	0
1011	Zhou et al. (1987)	NO. 312-07	28.8	5.0	40.0	559.0	0.730	0.701	0.521	1.667	21.6	0.0	0.000	0.000	1	1	0	1	0
1012	Zhou et al. (1987)	NO. 322-07	28.8	5.0	40.0	559.0	1.750	0.701	0.521	2.917	24.0	0.0	0.000	0.000	1	1	0	1	0