

What is the duration of the solar cycle?

A 1 yr

0 ✕

B 7 yr

0 ✕

C 11 yr

0 ✓

D 42 yr

0 ✕

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What are the effects of a geomagnetic storm?

A Auroras

0 ✓

B Decreased density of the upper atmosphere

0 ✗

C Higher drag up to ~1000 km

0 ✓

D Risks of surface charging

0 ✓

What is the typical altitude range for Low Earth Orbits?

A 35 000 to 36 500 km

0 ✕

B 15 000 to 20 000 km

0 ✕

C < 2000 km

0 ✓

D > 37 000 km

0 ✕

What are geostationary orbits?

A alt ~ 36 000 km

0 ✓

B inc ~ 0°, e~0

0 ✓

C inc ~10°, e~0

0 ✗

D T = 1 sidereal day

0 ✓

What does HEO mean?

A Highly energised orbit

0 ✕

B Highly elliptical orbit

0 ✓

C $e = 0$

0 ✕

D Perigee < 2000 km

0 ✕

What is the ballistic coefficient?

A $BC = \frac{m}{C_D A_N}$ in kg/m²

0 ✓

B a shape coefficient that also depends on the coating

0 ✗

C Is high for high drag

0 ✗

D a coefficient that depend on the velocity and the cross-section

0 ✗

What is the effect of the Earth's buldge?

A The drag

0 ✕

B A rotation of the line of apsides

0 ✓

C A central force on the objects

0 ✕

D Increases the apogee

0 ✕

What is the condition for a Sun-synchronous orbit?

A A nodal regression of $2^\circ/\text{d}$

0 ✕

B Alt $\sim 36\,000$ km

0 ✕

C A nodal progression of $0.986^\circ/\text{d}$

0 ✓

D An inclination of $< 90^\circ$

0 ✕

If the crossing of the descending node is at 8am, what is the time of the ascending node?

A 8am

0 ✕

B 12pm

0 ✕

C 6am

0 ✕

D 8pm

0 ✓

Which accelerations must be taken into account to find the Lagrange points in the Sun-Earth system?

A The gravitational acceleration of the Earth

0 ✓

B The gravitational acceleration of Jupiter

0 ✗

C The gravitational acceleration of the Sun

0 ✓

D Acceleration due to the Solar pressure

0 ✗

E The inertial angular velocity of the reference frame

0 ✓

What are the parameters of this orbit? (image A)

A alt ~ 36 000 km

0 ✕

B LEO

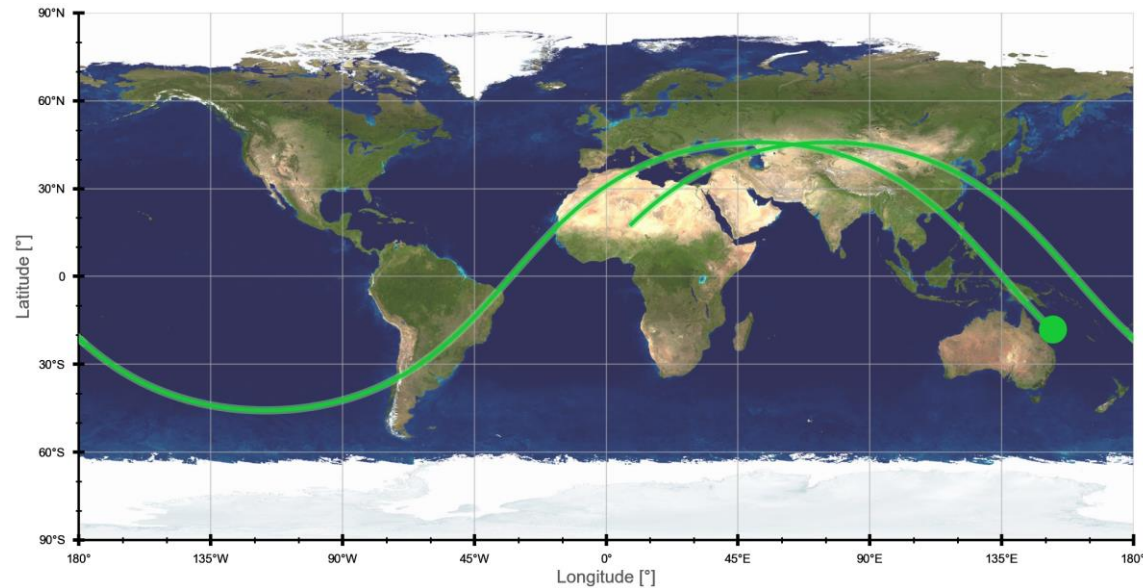
0 ✓

C $i \sim 97^\circ$

0 ✕

D $i \sim 45^\circ$

0 ✓



What is the class of this orbit? (image B)

A GTO

0 ✕

B HEO

0 ✕

C GEO

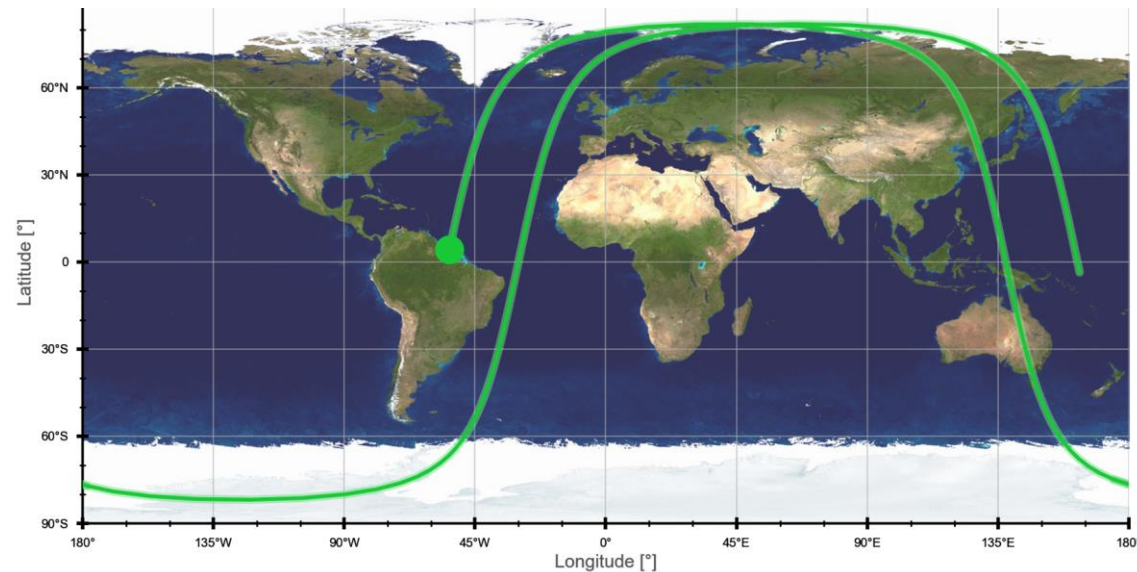
0 ✕

D SSO ($i \sim 97^\circ$)

0 ✓

E Graveyard orbit

0 ✕



What is the class of this orbit? (image C)

A GTO

0 ✕

B LEO, $i \sim 0^\circ$

0 ✕

C GEO

0 ✓

D SSO

0 ✕

E Molynia orbits

0 ✕

