

8 Week 11

8.1 Key concepts

N/A

8.2 Important concepts

- ADCS description
- Thruster-based attitude control
- Reaction Wheel
- Minimum orbit inclination and launch site latitude

8.3 Relevant concepts

- Coordinate systems for ADCS
- Euler sequence
- Spacecraft attitude control methods including the different methods
- Attitude control loop
- Three axis stabilisation
- Control Moment Gyroscopes
- Electrical power system (solar panels, batteries, fuel cells, RTG)
- Ascent to space (Δv losses, case for orbit insertion)
- Earth's rotation speed
- Launch site restriction and launch azimuths
- Vehicle staging
- Effect of launch on payloads
- Re-entry corridor

8.4 Advanced concepts

- Main events during re-entry
- Re-entry predictions and statistics
- Consequences on the atmosphere
- Re-entry examples