



SPACECRAFT THERMAL CONTROL

This is a set of lectures on the fundamentals of Spacecraft Thermal Control (STC) at large, i.e. including thermal management during ascent and descent flights, shuttles and space stations, space suits, and not just restricted to the thermal control devices but to thermal engineering in general. It is organised in the following topics:

- [STC systems, missions and needs](#). An introduction to spacecraft design and the importance of the thermal control subsystem.
- [Space environment](#). A description of the thermal characteristics of the space environment, including planetary atmospheres. (Presentation on [Space thermal environment](#))
 - [Planet and moon properties](#)
- [Heat transfer and thermal radiation modelling](#). A review of Heat Transfer as applicable to spacecraft thermal control, i.e. with emphasis on thermal radiation exchanges. (Presentation on [Thermal Engineering introduction to Space Technology course](#))
 - [Table of thermo-optical properties](#).
 - [Table of view factors](#)
- [Spacecraft thermal modelling and testing](#) An analysis of spacecraft thermal design, covering design procedures, environmental thermal loads, the different aspects of load averaging, the thermal discretization process, some details on practical thermal simulation, and the physical tests that can be used to validate the predictions..
- STS Technologies and testing. A presentation of the state of the art in spacecraft thermal control practice, including some future prospects.

References

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Some front covers of above mentioned books:

