
VA 1: Space propulsion by ion thrusters

Time: Monday 10:00–10:40

Location: H40

Invited Talk

VA 1.1 Mon 10:00 H40

Ions and radio frequency technology for space propulsion - Basics, concepts and missions — •HANS LEITER — Astrium GmbH Space Transportation, Moeckmuehl, Germany

Space flight has become part of our daily life. Data links via satellites are a major element in global communication, satellites are monitoring our environment and satellites are providing services for navigation and logistics. Instruments like telescopes in the visual spectrum as well as instruments in the IR, UV or X-ray spectra flying onboard space-

crafts are a key to the outermost regions of the universe and its earliest moments. Interplanetary probes are exploring the solar systems.

In common, most of these spacecrafts need propulsion systems either for orbital control or for cruising. Chemical thrusters are still standard in space propulsion, but a silent revolution has been taking place. Electric thrusters are replacing the conventional engines.

The presentation introduces in radio frequency ion thrusters and their applications. The overview contains classic commercial applications as well as the new challenging formation flying missions.