
Trajectory visualization tools for artificial satellites and asteroids: exercises.

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Résumé

This session will be dedicated to orbit visualization tools that are publicly available or provided through the Web. It will be a session focused on both artificial and natural celestial bodies, and the exercises will be dedicated to trajectories around the Earth or within the Solar system.

The exercises will take advantage on the theoretical lectures, and will be based on the following tools :

- Scilab, the Celestlab module provided by CNES (<https://atoms.scilab.org/toolboxes/celestlab>),
- the IXION software, provided by LMD (<http://climserv.ipsl.polytechnique.fr/ixion/index.php>),
- Stellarium (<http://www.stellarium.org>),
- the "Virtual Observatory" IMCCE package tools (<http://vo.imcce.fr>).

Attendees will have the opportunity to learn how to use these tools to plot the orbits and extract the relevant informations, as seen from space, or in the terrestrial rotating frame. Part of the session will also illustrate the theoretical part of the lectures dealing with the geometrical configuration of the orbits, where the positions of the observer to the ground, and the directions of the Moon and the Sun are also involved. This practical session will be led on computers in a suitable meeting room in Meudon, with one computer for two participants.

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