
Presentation of the TLE NORAD catalog, and on-line related tools, such as the IXION s/w

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Résumé

This lecture will be dedicated to orbit visualization tools that are publicly available or provided through the Web. The following tools will be presented, by linking theory to applications:

- 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>). In particular, the way an orbit is catalogued through dedicated orbital elements, such as the famous "Two-Line Element" designed by NORAD (North American Aerospace Defense Command), will be presented. The way those catalogued elements enable to build time series of orbital elements of the trajectories will be discussed, as well as the accuracy with the real ones, adjusted to observations.

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