

APIS : a value-added database of HST UV planetary auroral observations acquired since 1997

L. Lamy (1), F. Henry (1), R. Prangé (1) and P. Le Sidaner (2)

(1) LESIA, Observatoire de Paris-CNRS, Meudon, France (laurent.lamy@obspm.fr), (2) Observatoire de Paris, Paris, France.

Abstract

The APIS service <http://lesia.obspm.fr/apis/> (Auroral Planetary Imaging and Spectroscopy), aimed at facilitating the use of planetary auroral observations, was presented at EPSC last year, following its opening to the community in July 2013.

This facility consists of :

- a high level database derived from public Far-UV observations of Jupiter, Io, Ganymede, Saturn, Titan and Uranus acquired by the Hubble Space Telescope since 1997 (36 observational campaigns so far) ;
- a specific search interface (Figure 1), aimed at browsing the database freely, quickly and efficiently through relevant search criteria (as planetary longitudes, moon or spacecraft ephemeris etc.).
- Virtual-Observatory tools which enable the user to interactively work with images and spectra online.

We will present the updated capabilities of APIS and illustrate them with several examples. Several tutorials are also directly available online.

The screenshot shows the APIS search interface. At the top, there is a banner with the APIS logo and a small image of a Hubble Space Telescope. Below the banner, there are tabs for Home, What is APIS ?, Data levels, Search for data, Data use policy, Resources, and Login. The 'Search for data' tab is active. The search form includes fields for Target (set to Io), Telescope (set to HST), Instrument (set to STIS), Observation type (set to FUV), Date interval (set to 1997-09-26 13:34:14 to 2007-02-27 15:55:50), and a dropdown for Observing campaign. The dropdown shows a list of campaigns: 'C1997-09-26 to 1997-12-14 Oct', 'Io - 1998 21-27 Aug', 'Io - 1998 26 Sep-25 Feb', 'Io - 2001 13-29 Dec', and 'Io - 2007 03 Mar-02 Jan'. Below the dropdown, there are buttons for Search, Reset, Clear, and Clear date. To the right, there is a section for 'Advanced research' with a dropdown for Dataset name and a button for 100 items per page. The main area shows a table with 136 results, with the first few rows visible. The table has columns for Target, Original data, and D spectrum. The first row shows an image of Io with auroral features and a corresponding spectrum. At the bottom, there are links for Detailed information, Aladin / SpecView, FITS [FITS | JPG], and FITS [FITS | JPG] Display with Aladin / SpecView.

Fig. 1 : The APIS various data levels can be browsed quickly with a dedicated search interface.