

FIDO ANALYST'S NOTEBOOK: AN APPROACH TO INTEGRATING SCIENCE DATA FOR ROVER MISSION PLAYBACK. T. C. Stein¹ and R. E. Arvidson², ¹Washington University, CB 1169, St. Louis, MO 63304, E-mail: stein@wunder.wustl.edu, ²E-mail: arvidson@wunder.wustl.edu.

The FIDO Analyst's Notebook (AN) is a set of static web pages serves as the archive for the Jet Propulsion Laboratory FIDO Rover field trials held between October 1999 and August 2002. Rover missions are nondeterministic, thus scientists need context to understand observations. This is the role of the AN, which integrates engineering and science data and documentation in a single tool (see Figure 1). The FIDO AN is not an operational but rather a reference tool made available to participating scientists and to the Planetary Data System (PDS) science community.

During the field trial, FIDO Rover Experiment Data Records (EDRs) were transferred from JPL to Washington University via ftp. Standard products were automatically processed for the Panorama (Pan-cam) and Navigation (Navcam) Cameras, Infrared Point Spectrometer (IPS), Color Microscopic Imager (CMI), and Front and Rear Hazard (Hazcam) Cameras (see Figure 2). Standard products for the Mini-Thermal Emission and Mössbauer Spectrometers were submitted by the respective instrument teams.

Data products are summarized in time- and instrument-ordered listings, and in a graphical timeline (see Figure 3). Users may access detailed information by "drilling down" through data screens. For example,

summary listings provide high-level information such as time, location, and instrument for each product. Selecting a product from the summary listing returns a page showing a browse version of the image or spectral plot, along with rover heading and solar azimuth and elevation. From this page, the user may access a full-resolution data or detailed rover status such as mast angles, wheel angles, and rover motor temperatures.

During the August 2002 field trial, data updates for each sol were processed, verified, and "released" to the FIDO team within 30 minutes of data download.

Documentation products include daily reports from the Mission Manager, Documentarian, and science theme groups. These products are accessible from the Mission Summary Table within the AN, as well as from the documentation section of the main AN page. During the field trial, documentation products were transferred via ftp and e-mail. These products were posted within 30 minutes of receipt.

During the August 2002 trial, more than 11,000

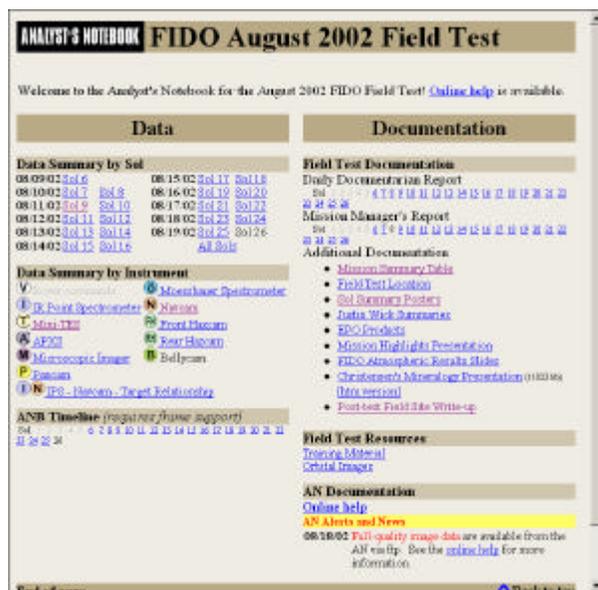


Figure 1. FIDO Analyst's Notebook main web page. Data products are accessible from the left side of the page. A variety of documentation products are listed on the right side.

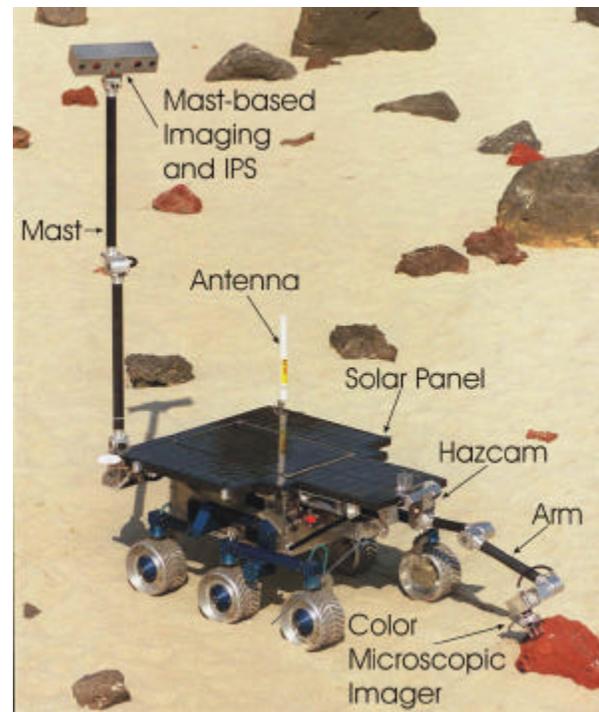


Figure 2. FIDO rover used during field trials. Pan-cam, Navcam, and IPS instruments are mounted atop the mast.

