The Das2 System: Efficient Navigation of Large Time-Series Data Sets

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Das2 describes a collection of cooperating programs originally created to support daily review and analysis activities of the Cassini RPWS investigation. The system proved to be useful and is now relied upon for rapid access to working data sets from many missions including Galileo, Polar, Cluster, Voyager, Mars Express and Juno as well as ground based radio astronomy results from the Nançay Decameter Array and Long Wave Array.

The key points of das2 as envisioned 18 years ago are automatic server-side data reduction and automatic generation of data requests during GUI interaction, features not unfamiliar to anyone who has used Google Maps[™]. The most widely used das2 client program is Autoplot. Since Autoplot is already the focus of a separate presentation, this overview will focus on other aspects of the das2 system. In short I will:

- Give a brief development history and major component synopsis;
- Navigate gigabytes of Planetary Data System files over a home DSL link;
- Touch on standardizing an in-house protocol;
- and cover more recent developments such as the stream validator and SPEDAS client.

I will also point out where more work is needed to make das2 servers immediately usable without local software development.

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Abstract

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