



# Venus Express Interoperability Project

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# Project Objectives

- Provide access through the PDS Atmospheres Node to the Venus Express data, which will be archived in ESA's Planetary Science Archive (PSA)
- Develop standard interoperability protocol that can be applied to other mission data sets

# Project Team Members

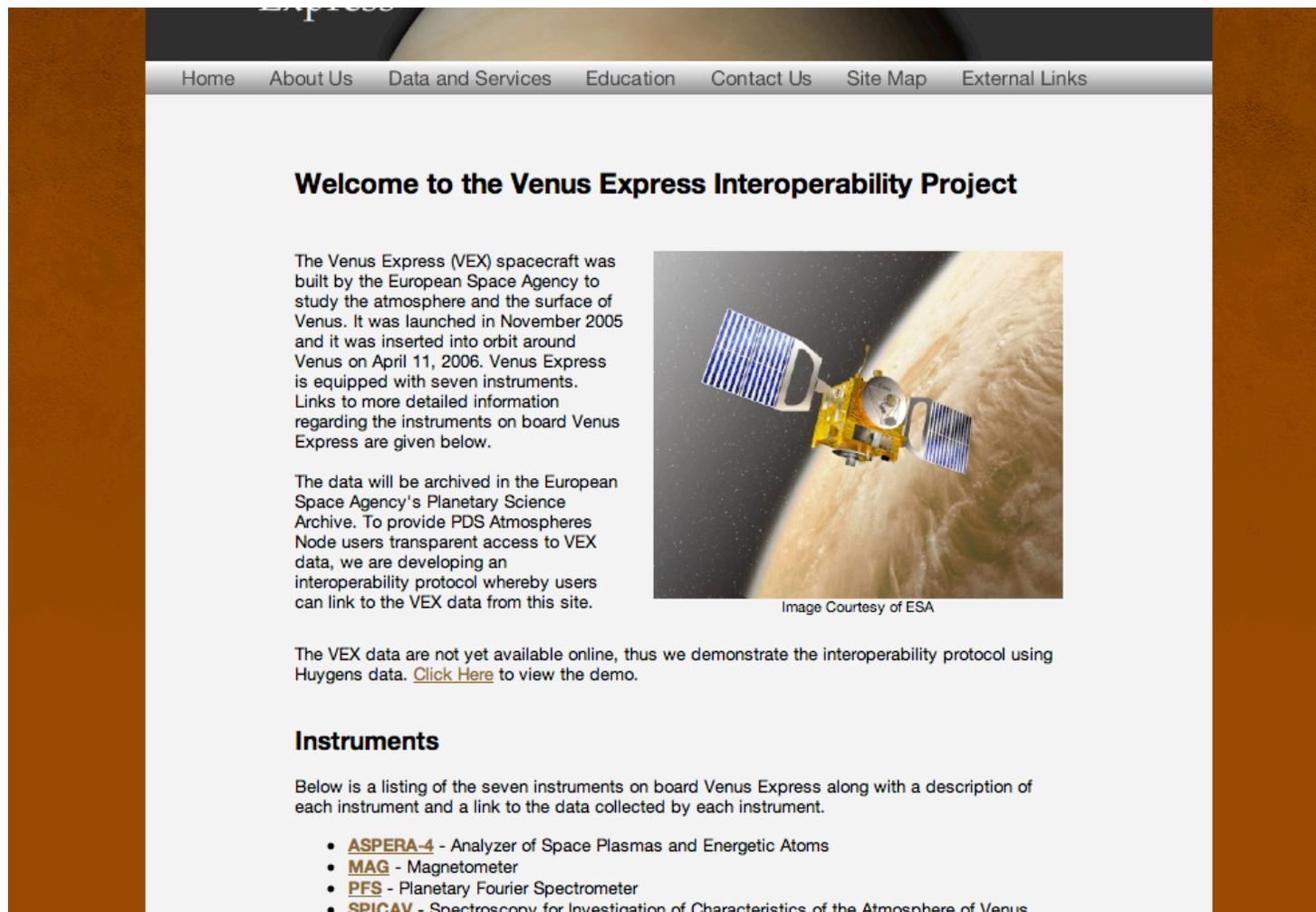
- Nancy Chanover, PDS Atmospheres Node (Team Leader)
- David Heather, PSA
- Jesus Salgado, PSA
- Pedro Osuna, PSA
- Ed Guinness, PDS Geosciences Node
- Lyle Huber, PDS Atmospheres Node
- Irma Trejo, PDS Atmospheres Node

# Results to Date

- VEX data still undergoing peer review (lien resolution), so data are not yet publicly available online through the PSA interface
- Demonstration of interoperability protocol with Huygens data, which is available online both through the PSA and through the PDS Atmospheres Node
- Two efforts being pursued in parallel:
  - PDS/ATM: retrieve VOTable files from PSA and provide direct links to data products
  - PSA: develop interoperability interface (see J. Salgado's presentation)

# PDS/ATM Interoperability Demonstration

<http://atmos.nmsu.edu/ve/> Entry into VEX Interoperability page



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## Welcome to the Venus Express Interoperability Project

The Venus Express (VEX) spacecraft was built by the European Space Agency to study the atmosphere and the surface of Venus. It was launched in November 2005 and it was inserted into orbit around Venus on April 11, 2006. Venus Express is equipped with seven instruments. Links to more detailed information regarding the instruments on board Venus Express are given below.

The data will be archived in the European Space Agency's Planetary Science Archive. To provide PDS Atmospheres Node users transparent access to VEX data, we are developing an interoperability protocol whereby users can link to the VEX data from this site.



Image Courtesy of ESA

The VEX data are not yet available online, thus we demonstrate the interoperability protocol using Huygens data. [Click Here](#) to view the demo.

## Instruments

Below is a listing of the seven instruments on board Venus Express along with a description of each instrument and a link to the data collected by each instrument.

- **ASPERA-4** - Analyzer of Space Plasmas and Energetic Atoms
- **MAG** - Magnetometer
- **PFS** - Planetary Fourier Spectrometer
- **SPICAV** - Spectroscopy for Investigation of Characteristics of the Atmosphere of Venus

# PDS/ATM Interoperability Demonstration

Huygens Interoperability demo

<http://atmos.nmsu.edu/ve/demo.html>

Links are generated by parsing VOTables

**Venus Express**

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## CASSINI HUYGENS RESULTS

- [ACP](#)
- [DISR](#)
- [DTWG](#)
- [DWE](#)
- [GCMS](#)
- [HASI](#)
- [HK](#)
- [SSP](#)

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▢ [HP-SSA-DWE-2-3-DESCENT-V1.0/](#)

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- [CARRFREQ\\_PARKES.TAB](#)
- [ZONALWIND.LBL](#)
- [ZONALWIND.TAB](#)

# Future Work and Schedule

- Integrate PDS and PSA efforts: **through Aug. 2008**
- Test resultant protocol with VEX data once online: **Aug.-Sep. 2008**
- Invite users to test VEX Interoperability site: **Sep.-Oct. 2008**
- Refine interface to optimize ease of data selection/transfer: **Nov. 2008**
- Complete project: **Dec. 2008**