

# Jean-Philippe Combe, PhD

## Curriculum Vitae

### Professional Experience

March 2021 – Present: Senior Scientist at the Planetary Science Institute

June 2006 – March 2021: Research Scientist at the Bear Fight Institute (BFI) in Winthrop, WA

September 2001 – June 2006: Graduate Assistant at University of Nantes, France

September 2001 – October 2005: Ph.D. student at University of Nantes, France

### Research activities:

Surface composition and photometric properties of telluric objects of the solar system:

- Development of spectral unmixing algorithms, absorption band identification, photometric corrections and thermal emission correction of reflectance data.
- Member (2009-2014) and Co-Investigator (2014-2018) of the Dawn mission for studying the surface properties of Vesta and Ceres.
- Composition and temporal variations of comet 67P/Churyumov-Gerasimenko with the Visible and Infrared Thermal imaging Spectrometer on the Rosetta mission.
- Surface composition of Saturn's satellites and atmospheric spectrophotometric properties of Titan with the Cassini VIMS imaging spectrometer.
- Mineralogy, photometry, and thermal emission of the Moon with Chandrayaan-1 Moon Mineralogy Mapper hyperspectral images, the Diviner Lunar Radiometer Experiment, and Clementine UVVIS + NIR multispectral images.
- Mapping of mineralogical surface composition and geology of Mars with Mars Express OMEGA and HRSC, and Mars Reconnaissance Orbiter CRISM spectral data.
- Identification of hydrated salts on Europa with the Galileo NIMS imaging spectrometer.
- NASA proposal review panelist

### Education and academic degrees

October 2005 Graduated from the University of Nantes, France, with a Ph.D. in Planetary Sciences & Remote Sensing; thesis advisor Pr. Christophe Sotin

Thesis title: Studies of Planetary Surfaces by Hyperspectral Visible-Infrared Remote Sensing

June 2001 Graduated (B.Sc.) from the University of Toulouse, France, with a Master in Earth and Environmental Sciences; speciality: Dynamics of the Earth and Telluric Planets

### Computer skills

Processing software and languages: IDL, Python, ENVI, SPICE, ISIS, Excel

### Honors, Awards and Work Recognition

- Hayabusa-2 Science Team award, for reviewing the PDS archive, December 2021
- ESA Group Achievement Award to the VIRTIS/Rosetta Science Team, July 2017
- Asteroid 9152 Combe (1980 VZ2), July 12, 2014 for helping interpret the widespread presence of OH on the surface of asteroid (4) Vesta with the Dawn mission
- NASA Group Achievement Award to the Dawn Science Team, July 18, 2013
- ESA Group Achievement Award to Mars Express Science Team, September, 2013