

Curriculum Vitae -- Gabriele Cremonese

July 1988 to October 2000: graduated technician, INAF- Astronomical Observatory of Padova

November 2000 –present: researcher astronomer

Scientific Activity

The scientific activity can be summarized in the following key points:

- Participation to the project of the wide field camera for the Large Binocular Telescope
- Observations and modelling of dust comae and dust tails in the comets
- Observations and analysis of the sodium cloud around Io
- Discovery and analysis of sodium tails and sodium release in comets
- Modelling and simulations of observations of Solar System minor bodies in the sub-millimetre spectral range with the ESA mission PLANCK
- High resolution spectroscopy and cataloguing of emission lines, in the visible spectral range, of comets
- Observations and modelling of the sodium exosphere of the Moon and Mercury
- Modelling of meteoroid flux and impacts on the surface of Mercury and the Moon
- Geology of Mercury, the Moon and Mars
- Age determination of planetary surfaces
- Impact crater simulations with hydrocode
- Design and project of visible imagers for space missions
- Stereo reconstruction techniques

Activities related to space missions

- 1995 Co-I of the imaging system OSIRIS in the ESA mission ROSETTA
- 2000 associate of the LFI instrument of the ESA mission PLANCK
- 2000-2004 coordinator of the team in charge for the study of the Solar System with the PLANCK mission
- 2001-2004 coordinator of the working group 2.8 "moving objects extraction and separation" for PLANCK mission
- 2001-2004 coordinator of the working group 7.7 "Solar System Science" for the PLANCK mission
- 2001 CoPI of the proposal "Solar System studies with Planck" accepted in the Baseline Core Program of PLANCK
- 2001-2004 member of the ESA Science Advisory Group for the BepiColombo mission

- **2004-2015 CoPI di SIMBIOSYS** (Spectrometers and Imagers for Mpo BepiColombo Integrated Observatory SYStem) on board the MPO module of the BepiColombo mission, with the overall responsibility of the stereo camera
- 2004 CoI of the UV spectrometer PHEBUS on board MPO in the BepiColombo mission
- 2004 CoI of MSASI (Mercury Sodium Imager) on board the MMO module of the BepiColombo mission
- 2004 team member of SERENA on board MPO in the BepiColombo mission
- **2008-2009 CoPI of the study of the visible cameras for the ESA Cosmic Vision M-class mission Marco Polo**
- **2009-2010 PI of the study of the Wide Angle and Medium Resolution Cameras for the ESA Cosmic Vision L-class mission Europa Jupiter System Mission – Jupiter Ganymede Orbiter, now called JUICE**
- 2010-2011 CoI in the NASA instrument High resolution Stereo Color Imager (HiSCI) for the ExoMars Trace Gas Orbiter (EMTGO)
- **2012 – present CoPI of the camera CaSSIS on board ExoMars Trace Gas Orbiter 2016.**
- **2012-2013 PI of the study of the Narrow Angle and Wide Angle Cameras for the ESA Cosmic Vision M3 class mission Marco Polo-R**
- 2013 – present CoI in the NASA instrument High Resolution Imaging Science Experiment (HiRISE) on board the Mars Reconnaissance Orbiter
- **2013 – present deputy PI and instrument scientist of Janus, the camera on board the ESA mission JUICE**
- 2015 - present scientific consultant in BIOSIGN, it is an astrobiology experiment that will be on board the ISS
- **2016 – present PI of SIMBIO-SYS, suite of 3 instruments on board the ESA-JAXA mission BepiColombo**
- **2017 – 2019 member of the Solar System Exploration Working Group of ESA**

Scientific memberships

- 1989-96 CoI in the NASA project International Jupiter Watch
- 1995-97 CoI in the european team for the ground-based observations, of the first target of the ROSETTA mission, with the ESO telescopes
- 1996-97 CoI of the european team obtaining the 5% of all the telescopes in the Canary islands to observe comet Hale-Bopp
- 1997 member of the LOC of the conference "The Three Galileos" in Padova, Italy
- 1998 member of the SOC of the conference "First International Conference on Hale-Bopp", in Tenerife, Canary islands
- 1999 member of the LOC of DPS 99 dell'American Astronomical Society, in Padova, Italy
- 1999 CoI in the NASA project to study the sodium in the comets

- 1999-2002 Leader for the italian participation to the INTAS-ESA project on the study of the Mercury regolith
- 2000-03 secretary of the IAU Commission n.15
- 2002 member of the SOC for the conference "1st Planck Galactic and Solar System science meeting", Toulouse, France
- 2004-06 CoI in the italian project of exploration and study of sub-glacial lakes in Antarctica
- 2006, Convener at the European Geosciences Union assembly of the session *Relation between Exosphere-Magnetosphere-Surface on Mercury and the Moon*.
- 2010, Main Scientific Organizer at the COSPAR of the event *The new exploration of Mercury*.
- 2014 - present, member of the Science Organizing Committee of the European Planetary Science Congress

Publications

Refereed journals: 180

Proceedings: 278

SPIE: 25

Other publications: 19