

International Venus Workshop

10 – 14 June 2013
Museo Diocesano, Catania, Sicily



Monday, 10th June

Schedule	Author	Title
9:00 - 13:00		SWT
9:00 - 13:00		Science Working Team meeting (only for the Venus Express team members)
14:30	Session	Surface/Interior
14:30 - 15:00	Stofan	Venus: Earth's (Neglected) Twin (Invited)
15:00 - 15:15	Mueller	Search for active lava flows with VIRTIS on Venus Express
15:15 - 15:30	Shalygin	Venus surface geology from near infrared night side Venus Monitoring Camera images
15:30 - 16:00	Smrekar	Diverse Geologic Settings of Recent Volcanism on Venus and Implications for the Interior (Invited)
16:00 - 16:30		<i>Coffee</i>
16:30	Session	Surface/Interior
16:30 - 17:00	Sotin	Are terrestrial exoplanets Earth-like, Venus-like, or different? (Invited)
17:00 - 17:15	Ghail	The influence of rheology and volatiles on the geology of Venus
17:15 - 17:45	Russell	Venus and Planetary Magnetism (Invited)
17:45 - 18:00	Luhmann	Large-scale magnetic flux ropes in low-altitude ionosphere of Venus: planetary origin or solar wind origin
18:00 - 18:15		Discussion of Surface/Interior/Magnetism
18:15 - 19:45	Poster session 1	

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Tuesday, 11th June

Schedule	Author	Title
9:00	Session	Plasma & Induced Magnetosphere
9:00 - 9:30	Zhang	Physics of Induced Magnetosphere (Invited)
9:30 - 10:00	Luhmann	Comparative Plasma Interactions and their Effects at Venus, Mars and Titan (Invited)
10:00 - 10:15	Barabash	How the near-Venus space affects the planet
10:15 - 10:30	Stenberg	Ion escape from Venus
10:30 - 10:45	Masunaga	Dependence of O ⁺ escape rate from the Venusian upper atmosphere on IMF directions: ASPERA-4 observations
10:45 - 11:00	McEnulty	Comparisons of Venus Express measurements with an MHD model of O ⁺ ion flows: Implications for atmosphere escape measurements
11:00 - 11:30	<i>Coffee</i>	
11:30	Session	Plasma & Induced Magnetosphere
11:30 - 11:45	Lundin	Solar Wind energy and momentum transfer - Effects on the Venus polar thermosphere
11:45 - 12:00	Fedorov	The plasma vortex in the Venusian plasma tail. Steady-state reconnection or fluid motion?
12:00 - 12:15	Nordheim	Cosmic ray ionization in the Venusian atmosphere from Monte Carlo modelling
12:15 - 12:30	Dubinin	Ionospheric magnetic fields and currents at Mars and Venus
12:30 - 12:45	Vasko	Fine structure of the Venus current sheet
12:45 - 13:00	Coates	Ionospheric photoelectron observations at Venus
13:00 - 13:15	Gray	A survey of Hot Flow Anomalies at Venus
13:15 - 13:30	Russell	The Implications of the Observed Evolution of the Co-Orbiting Material in 2201 Oljato's Orbit Observed by PVO and VEX
13:30	<i>Lunch</i>	
15:30	Etna excursion	

Wednesday, 12th June

Schedule	Author	Title
9:00	Session	Dynamics & Structure
9:00 - 9:25	Lebonnois	Venus GCM modelling: current status and perspectives in the light of Venus Express datasets (Invited)
9:25 - 9:50	Rodin	Non-hydrostatic general circulation model of the Venus atmosphere (Invited)
9:50 - 10:05	Takagi	Structures and generation mechanisms of the Venus atmospheric superrotation
10:05 - 10:20	Sugimoto	Baroclinic modes in the Venus atmosphere simulated by AFES (Atmospheric GCM For the Earth Simulator)
10:20 - 10:35	Limaye	Global Vortex Circulation on Venus - an assessment from Venus Express Observations
10:35 - 10:50	Hueso	Measurements of Venus winds from ultraviolet, visible and near infrared images with VIRTIS on Venus Express
10:50 - 11:05	Bertaux	Atmospheric Oscillation in the atmosphere of Venus: the Cupido effect
11:05 - 11:30		<i>Coffee</i>
11:30	Session	Dynamics & Structure
11:30 - 11:45	Lee	Variations of the radiative forcing induced by the cloud top structure changes of the Venus mesosphere
11:45 - 12:00	Grassi	Thermal Structure of Venus Mesosphere as Observed by VIRTIS - Venus Express
12:00 - 12:15	Zasova	Thermal structure of the Venus mesosphere from remote sensing in the infrared spectral range (VIRA II improvement)
12:15 - 12:30	Tellmann	The VeRa Radio Occultation Data Base: Atmosphere and Ionosphere (Invited)
12:30 - 12:45	Tellmann	Waves in the Venus Atmosphere detected by the Venus Express Radio Science Experiment VeRa (Invited)
12:45 - 13:00	Migliorini	Gravity waves in the Venus upper atmosphere, modelled on VIRTIS/Venus Express data
13:00 - 14:30		<i>Lunch</i>
14:30	Session	Upper Mesosphere/Lower Thermosphere
14:30 - 14:45	Piccialli	Thermal structure of the upper atmosphere of Venus with SPICAV/VEx data
14:45 - 15:00	Mahieux	CO ₂ rotational temperatures compared to hydrostatic temperatures obtained with the SOIR instrument on board VEx
15:00 - 15:15	Zalucha	Incorporation of a gravity wave momentum deposition parameterization into the Venus thermosphere general circulation Model (VTGCM)
15:15 - 15:30	Lopez-Valverde	Retrieval of temperature and carbon monoxide from the 4.7um limb non-LTE emission of the upper atmosphere measured by VIRTIS/Venus Express
15:30 - 15:45	Sornig	Earth based Doppler-wind and temperature measurements in Venus upper atmosphere using the infrared heterodyne spectrometer THIS
15:45 - 16:00	Clancy	Doppler Winds Mapped around the Lower Thermospheric Terminator of Venus: JCMT Observations of the 2012 Solar Transit
16:00 - 16:30		<i>Coffee</i>
16:30	Session	Upper Mesosphere/Lower Thermosphere
16:30 - 16:45	Bertaux	Venus night side measurements of winds at 115 km altitude from NO bright patches tracking
16:45 - 17:00	Stiepen	Venus nitric oxide nightglow distribution: a clue to thermospheric dynamics
17:00 - 17:15	Zasova	The O ₂ nightglow from VIRTIS-M VEX measurements
17:15 - 17:30	Gérard	Latitudinal variations of the altitude of the Venus O ₂ airglow observed with VIRTIS-M: a signature of dynamical processes in the upper atmosphere
17:30 - 17:45	Jain	Modelling of ultraviolet and visible dayglow emissions on Venus
17:45 - 18:00	Clarke	Coordinated Sounding Rocket, HST, and SPICAV Observations of Venus in Nov. 2013
18:00 - 18:15		Discussion of airglow and dynamics
18:15 - 19:45		Poster session 2

Thursday, 13th June

Schedule	Author	Title
9:00	Session	Chemistry & Composition
9:00 - 9:15	Encrenaz	Ground-based observations of minor species on Venus using infrared spectroscopy (Invited)
9:15 - 9:30	Encrenaz	Sulfur and water mapping in the mesosphere of Venus
9:30 - 9:45	Marcq	Measurements of minor species at cloud top level
9:45 - 10:00	Fedorova	Water vapor and the cloud top variations in the Venus' mesosphere from SPICAV observations
10:00 - 10:15	McGouldrick	Re-analysis of Pioneer Venus SO ₂ measurements
10:15 - 10:30	Grinspoon	Assessing An Impact Hypothesis for Upper Atmosphere Abundance Variations on Venus
10:30 - 11:00		<i>Coffee</i>
11:00	Session	Chemistry & Composition
11:00 - 11:15	Sandor	Positive Correlation of SO, SO ₂ in the Dayside Venus Mesosphere: Identification of Diurnal SO _x Partitioning from JCMT Submm Spectroscopy
11:15 - 11:30	Sandor	Temporal, Spatial Variation of HCl in the Venus Mesosphere, based upon Submm Spectroscopic Observations with JCMT
11:30 - 11:45	Vandaele	Trace gases in the mesosphere and lower thermosphere of Venus from SOIR/VEX (Invited)
11:45 - 12:00	Vandaele	Contribution of the SOIR/VEX instrument to VIRA II (Invited)
12:00	Session	Clouds & Hazes
12:00 - 12:30	Wilquet	SPICAV-SOIR mesospheric aerosols observations and modeling (Invited)
12:30 - 12:45	Titov/Markiewicz	Venus cloud morphology: monitoring by the VMC/ Venus Express camera continued
12:45 - 13:00	Petrova	Physical properties of particles in the upper clouds of Venus from the IR and UV images taken by VMC/VEx at small phase angles
13:00 - 14:30		<i>Lunch</i>
14:30	Session	Clouds & Hazes
14:30 - 15:00	Hashimoto	Temporal variation of UV reflectivity of Venus: VEX/VMC data analysis (Invited)
15:00 - 15:15	Esposito	Causes of the bright and dark features at the Venus cloud tops
15:15 - 15:30	Satoh	On the origin of the 1-micron contrast features in Venus clouds
15:30 - 15:45	Maattanen	Modeling the clouds on Venus: model development and improvement of a nucleation parameterization
15:45 - 16:00	Imamura	Latitudinal and local time dependence of Venus's cloud-level convection
16:00 - 16:15	Ignatiev	Cloud top variations from Venus Express measurements (Invited)
16:15 - 16:30	Ignatiev	Venus Clouds: Input to VIRA II model from Venus Express and Venera 15 measurements (Invited)
16:30 - 16:45		Discussion of chemistry and clouds
16:45 - 17:15		<i>Coffee</i>
17:15	Session	Lab-based
17:15 - 17:40	Helbert	High temperature spectroscopy at the Planetary Emissivity Laboratory in support of present and future Venus missions" (Invited)
17:40 - 18:05	Slanger	Long-lived Emitters in the Atmospheres of the Terrestrial Planets (Invited)
18:05 - 18:30	Hartmann	Experimental and theoretical studies of CO ₂ infrared absorption continua (Invited)
18:30 - 18:45	Kohler	Experimental Stability of Tellurium: Implications for the Venusian Radar Anomalies
18:45 - 19:00	Stefani	Experimental set-up to study optical properties of gases at typically planetary conditions
19:00 - 19:15	Snels	Carbon dioxide collision induced absorption in the 1.18 micron atmospheric window of Venus
20:00	Team dinner	

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**Friday, 14th June**

Schedule	Author	Title
9:00	Session	Evolution
9:00 - 9:25	Moresi	The influence of surface conditions on global mantle evolution (Invited)
9:25 - 9:40	Gillmann	Long term evolution of Venus through Mantle/Atmosphere coupling
9:40 - 9:55	Lebrun	Thermal evolution of an early magma ocean in interaction with the atmosphere: conditions for the condensation of a water ocean
9:55 - 10:10	Marcq	Early evolution of telluric atmospheres in the magma ocean stage
10:10 - 10:25	Taylor	Volcanism and Climate on Venus: An Updated Model
10:25 - 10:50	Goldblatt	New calculations of the runaway greenhouse limit: bad news for early Venus and future Earth (Invited)
10:50 - 11:05	Baines	The origin and early evolution of Venus, Earth and Mars: Clues from bulk properties and the abundances and isotopic ratios of noble and light gases
11:05 - 11:30		<i>Coffee</i>
11:30		Future
11:30 - 11:45	Nakamura	Japan/Akatsuki report
11:45 - 12:00	Zasova	Russia/Venera-D report
12:00 - 12:15	Limaye/Baines	U.S./VEXAG report
12:15 - 12:30	Drossart	Future Venus IR observation plans
12:30 - 12:45	All	ISSI/EuroVenus/other reports
12:45 - 13:00	Taylor	Venus III book discussions
13:00 - 13:15	Zasova	VIRA II discussion
13:15 - 13:30	Wilson	Future VEx science plan
13:30 - 14:00	All	Discussion
14:00		End



GROUP 1 POSTER – MON-WED

Author	Title
Cochrane	Errors and Artifacts in the Magellan Imagery of the Surface of Venus
Nunes	Stereo-Derived Topography To Aid Emissivity Estimates at Tesserae on Venus
Peter	A global comparison between VeRa radio science observations of the Venus dayside ionosphere and the IonA model
Russell	ULF and ELF Electromagnetic Waves in the Venus Ionosphere: Separating Atmospheric and Magnetosheath Sources
Stenberg	Solar wind precipitation on Venus
Molaverdikhani	A new dawn-dusk asymmetry in the photoelectron flux of Venus's Ionosphere
Ogohara	Limb fitting and cloud tracking for the study of the Venus atmosphere
Widemann	Mesospheric Temperature at Terminator using SDO/HMI Aureole Photometry, DST/FIRS CO ₂ absorption spectroscopy and comparison with Venus Express
Ando	Vertical structure of the Venus vortex
Fukuhara	Temperature variation of the cloud top of Venus obtained by photometry observation by LIR onboard Akatsuki
Piccilli	Gravity waves in Venus mesosphere observed by the Venus Monitoring Camera on board Venus Express
Marinangeli	Polar Vortex: a common element of the Earth and Venus
Peralta	Towards a general classification of atmospheric waves on Venus
Yamamoto	Simulation of Venus' polar vortex in the presence of diurnal thermal tide
Machado	Venus cloud tops winds with ground-based Doppler velocimetry and comparison with cloud tracking method
Soret	The time evolution of O ₂ (a ¹ Δ) individual observations acquired by VIRTIS-M on board Venus Express
Svedhem	The variable upper atmosphere of Venus - data from drag and torque measurements by Venus Express
López-Valverde	Mapping the lower thermosphere of Venus using VIRTIS/VEx Nadir non-LTE observations at 4.3 μm
Migliorini	Visible and Infrared nightglow investigation in the Venus atmosphere by means of VIRTIS on Venus Express
García-Muñoz	Global imaging of the Venus O ₂ visible nightglow with the Venus Monitoring Camera
Gray	The Effect of Coronal Mass Ejections and Solar Flares on the Venusian Nightglow
Anderson	Mt. Etna and the Eistla volcanoes: Comparative studies to constrain venusian volcano evolution and flow emplacement
Bougher / Parkinson	Temperatures in Venus' Lower Thermosphere: Comparison of VTGCM and SOIR Profiles at the Terminator



GROUP 2 POSTER – WED-FRI

Author	Title
Fedorova	Observations of the near-IR nightside windows of Venus during Maxwell Montes transits by SPICAV IR onboard Venus Express
Iwagami	Ground-based IR observation of oxygen isotope ratios in the Venus atmosphere
Oschlisniok	Abundance of sulfuric acid vapor in the Venus atmosphere derived from the Venus Express Radio Science Experiment VeRa
Cottini	Water vapor near the cloud tops of Venus from VIRTIS Venus Express day side data
Lorenz	On the Possibility of Gamma Ray Flashes from Venusian Lightning
Mills	Modeling and observations of mesospheric sulfur chemistry
Robert	Spectral inventory of the SOIR spectra onboard Venus Express
Stolzenbach	Three-dimensional modelling of Venus photochemistry
Jessup	Variations in Venus' cloud top SO ₂ and SO gas density with latitude and time of day
Politi	VIRTIS-VEX data analysis for the study of the Venus
Carlson	Progress in a refined calibration of the Venus Express VIRTIS-M instrument with application to Venus's ultraviolet absorber
Enomoto	Venusian upper hazes observed by Imaging-Polarimetry system HOPS
Kuroda	Latitudinal cloud structure in the Venusian northern hemisphere evaluated from Venus Express/VIRTIS observations
Rossi	Study of Venus cloud layers by polarimetry using SPICAV/VEx
Takagi	High-altitude source for the Venus' upper haze found by SOIR/Venus Express
Takeshi	Simulation of the formation, evaporation and transport of sulfuric acid clouds on Venus using a general circulation model
Cimo	Planetary Radio Interferometry and Doppler Experiments for current and future Venusian missions
Molera Calves	Interplanetary scintillations study retrieved from Venus Express communications signal
Pluchino	Using Venus Express to perform sounding experiments on lunar ionosphere
Rafkin	A compact, Low Power Tunable Laser Spectrometer for Trace Gas Measurement in the Venus Atmosphere
Rodin	A compact, lightweight infrared heterodyne spectrometer for studies of Venus atmosphere
Perez-Hoyos	Analysis of MESSENGER/MASCS data during second Venus flyby