

Venus 2016 conference schedule

Final version - 29 March 2016

Monday 4 April

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08:30		Registration desk open
09:20	C. Wilson	Introduction / Welcome / Logistics
		Volcanism & minerals
09:30	Wilson, L.	Ascent and eruption of magma on Venus: changes of style with geologic time
09:45	Airey, M.	The distribution of volcanism on Venus and global tectonic implications
10:00	Markiewicz, W.J.	Past and present volcanism of Venus
10:15	Mueller, N.	Detecting Active Lava Flows from Venus Orbit
10:30	Port, S.T.	Stability of Pyrite under Venusian Surface Conditions.
10:45		Discussion
11:00		Coffee
		Tectonics, Impacts, rotation
11:30	Davaille, A.	Geodynamical modeling of Venus in the laboratory: plume-induced coronae, subduction and microplates.
11:45	Byrne, P.K.	Similarities in large-scale tectonic deformation on Venus and Earth
12:00	Smrekar, S.E.	A statistical model of relative surface age on Venus
12:15	Gillmann, C.	Large impacts on Venus: Effects on long term evolution
12:30	Karatekin, O.	Rotation of Venus: predictions & observations
12:45		Discussion
13:00		Lunch
		Interior & Evolution
14:00	Ivanov, M.A.	Geological evolution of Venus
14:15	Head, J.W.	Geodynamic evolution of Venus: testing models with global stratigraphic and chronological observations
14:30	Weller, M.B.	Venus and Earth: Is the Divergence a (Natural) Consequence of Planetary Evolution?
14:45	Grimm, R.E.	Heat loss and geology of a Young Venus
15:00	Ghail, R.C.	Farewell fantastic Venus: a new understanding of our closest sibling
15:15	Hansen, V.L.	The evolution of Venus, a global perspective - from exogenic to endogenic over time
15:30	Mikhail, S.	A dynamic and testable hypothesis to describe the evolution of the Venusian surface environment
15:45		Discussion
16:00		Coffee
		Geology: future investigations
16:30	Kremic, T.	Simulating the surface of Venus on Earth
16:45	Radoman-Shaw	Reaction of Basaltic Materials under High-Fidelity Venus Surface Conditions using the Glenn Extreme Environment Rig: First Results
17:00	Wang, A.	Definitive mineralogy for a Venus landing mission
17:15	Cutts, J.A.	Venus: Exploring its interior with seismic and infrasonic techniques
17:30	Garcia, R.F.	Infrasound from Venus quakes: Numerical modeling and balloon observation project
17:45		Discussion
18:00		Close

Future: orbital missions

- 09:00 Ghail, R.C. [Envision M5 Venus Orbiter Proposal: Opportunities And Challenges](#)
- 09:15 Smrekar, S.E. [VERITAS \(Venus Emissivity, Radio science, Insar, Topography And Spectroscopy\): A proposed Discovery mission](#)
- 09:30 Hensley, S. [VERITAS: A proposed NASA Discovery mission to Venus with an X-band interferometric mapping radar](#)
- 09:45 Herrick, R.R. [Initial Stereo matching tests with Magellan opposite look data](#)
- 10:00 Helbert, J. [The Venus Emissivity Mapper \(VEM\) Concept](#)
- 10:15 Bruzzone, L. [A radar sounder instrument for the analysis of the Venus sub-surface](#)
- 10:30 Izenberg, N.R. [Empire Strikes Back: Venus exploration in the new human spaceflight age](#)
- 10:45 Discussion
- 11:00 Coffee

Future: entry probe missions

- 11:30 Glaze, L.S. [DAVINCI: Deep Atmosphere Venus Investigation of Noble gases, Chemistry and Imaging](#)
- 11:45 Webster, C.R. [High precision gas isotope ratios: leveraging Curiosity's success on Mars to Venus exploration](#)
- 12:00 Trainer, M.G. [The heavy noble gases of Venus](#)
- 12:15 Amato, M.J. [The DAVINCI Venus probe descent module and engineering development unit](#)
- 12:30 Baines, K.H. [Global aerial exploration of our sister world via the Venus Atmospheric Maneuverable Platform \(VAMP\): Science objectives and potential instrumentation](#)
- 12:45 Discussion
- 13:00 Lunch

Clouds : observations

- 14:00 Titov, D.V. [Clouds and aerosols on Venus: an overview](#)
- 14:15 Carlson, R.W. [Venus's ultraviolet absorber: Cyclo-octal \(S8\) and polymeric sulfur \(Sx\) and their latitudinal behavior](#)
- 14:30 Rossi, L. [Latitudinal and temporal variability of Venus clouds and hazes observed by polarimetry with SPICAV-IR](#)
- 14:45 Oschlisniok, J. [Sulfuric acid vapor in the atmosphere of Venus as observed by the Venus Express radio science experiment VERA](#)
- 15:00 Russell, C.T. [Lightning observations at Venus: a review of the measurements over the last half century](#)
- 15:15 Discussion
- 15:30 Coffee

Chemistry: observations

- 16:00 Vandaele, A.-C. [Neutral composition of the Venus atmosphere measured by SPICAV/SOIR on board Venus Express: a compendium](#)
- 16:15 Encrenaz, T. [Variability of SO2 and HDO and thermal structure in the lower mesosphere of Venus from infrared spectroscopy](#)
- 16:30 Jessup, K.L. [Venus: Observe it while it's hot!](#)
- 16:45 Belyaev, D. [Distribution of SO2 content at the night side of Venus' upper mesosphere](#)
- 17:00 Tsang, C.C.C. [Variations of Carbon Monoxide in the Venus Troposphere from Venus Express/VIRTIS in 2006 and 2007](#)
- 17:15 Discussion

17:30 POSTER SESSION 1

- 19:30 Close

Chemistry & clouds: modelling

09:15	LeFèvre, F.	Three-dimensional modelling of Venus photochemistry
09:30	Määttänen, A.	The LATMOS Venus cloud model VENLA: status report
09:45	Parkinson, C.D.	Photochemical control of the distribution of Venusian water & sulphuric acid aerosols in the clouds and upper haze layer of Venus, plus new insights regarding SO₂
10:00	Mills, F.P.	Simulations of time-of-day variability of SO and SO₂ on Venus
10:15		Discussion
10:30		Coffee

Akatsuki: First results

11:00	Nakamura, M.	Akatsuki returns to Venus
11:15	Yamazaki, A.	Instrumentation and Initial Results of Ultraviolet Imager on AKATSUKI
11:30	Taguchi, M.	Initial results of the Venusian cloud-top temperature observations by Akatsuki/LIR
11:45	Iwagami, N.	Akatsuki 1μm camera awakens
12:00	Satoh, T.	Initial scientific results with IR2 onboard Akatsuki
12:15	Takahashi, Y.	Exploration for lightning in Venus with LAC onboard Akatsuki
12:30	Imamura, T.	Renewed observation plan of Akatsuki
12:45		Discussion
13:00		Lunch

Venus Express Legacy session

14:00	Piccioni, G.	VIRTIS-M
14:25	Drossart, P.	VIRTIS-H
14:50	Marcq, E.	SPICAV
15:15	Vandaele, A.-C.	SOIR
15:40		Coffee
16:05	Markiewicz, W.	VMC
16:30	Häusler	VeRa
16:55	Futaana, Y.	ASPERA
17:20	Delva, M.	MAG
17:45	Svedhem, H.	Discussion
18:00		Close

18:30 **EVENING RECEPTION, Oxford University Museum of Natural History**

21:30 Close

Atmosphere dynamics: observations

- 09:00 Limaye, S.S. [Trouble with Venus II – Old and New Questions](#)
- 09:15 Schubert, G. [Dynamics and Circulation of the Venus Atmosphere: Expected Contributions of Akatsuki Observations](#)
- 09:30 Hueso, R. [Reviewing VIRTIS-M measurements of Venus winds at different altitudes: global circulation and South Polar vortex](#)
- 09:45 Tellmann, S. [Zonal winds in the Venus atmosphere deduced from VERA radio occultation measurements](#)
- 10:00 Sanchez-Lavega, A. [Venus cloud morphology and motions from long-term ground-based observations](#)
- 10:15 Bertaux, J.L. [Influence of venus topography on the zonal wind and albedo at cloud top level: the role of stationary gravity waves](#)
- 10:30 Discussion
- 10:45 Coffee

Atmosphere dynamics: modelling

- 11:15 Mendonca, J.M. [Exploring Venus with a comprehensive atmospheric model](#)
- 11:30 Takagi, M. [Thermal tide in the Venus atmosphere](#)
- 11:45 Ando, H. [On Venusian polar vortex: numerical experiments and radio occultation measurements](#)
- 12:00 Lebonnois, S. [Wave analysis in the atmosphere of Venus below 100 km altitude, using the LMD Venus GCM](#)
- 12:15 Lee, Y.-J. [Sensitivity of net thermal flux to abundance of trace gases in the Venus atmosphere below the clouds](#)
- 12:30 Bougher, S.W. [Upper atmosphere temperature and CO VMR structure at the Venusian terminators: a comparison of recent SOIR models and VTGCM simulations](#)
- 12:45 Discussion
- 13:00 Lunch

Atmospheric structure

- 14:00 Pätzold, M. [Comparison between VeRa and VIRA profiles from the Venus atmosphere and ionosphere](#)
- 14:15 Herrmann, M. [Analysis of deep inversions at the Tropopause of Venus: new insights from the Radio Science Experiment \(VeRa\) onboard Venus Express](#)
- 14:30 Tanga, P. [Venus mesosphere at the terminator, studied during the solar transits](#)
- 14:45 Mueller-Wodarg, I. [The vertical structure of Venus' polar upper atmosphere from in-situ density measurements with Venus Express](#)
- 15:00 Wilson, C.F. [Venus thermospheric densities as revealed by Venus Express torque measurements](#)
- 15:15 Discussion
- 15:30 Coffee

Aeronomy

- 16:00 Slanger, T.G. [Excited nitric oxide emission in the atmospheres of terrestrial-like planets](#)
- 16:15 Gérard, J.-C. [Structures in the O₂ and NO Venus night airglow: observations and two-dimensional simulations](#)
- 16:30 Soret, L. [The O₂\(a¹Δ\) Venus nightglow intensity: internal versus solar activity control](#)
- 16:45 Gray, C. [Effects of solar storms on the Venusian ionosphere](#)
- 17:00 Luhmann, J.G. [Lessons for the Venus aurora from the MAVEN mission?](#)
- 17:15 Discussion

17:30 POSTER SESSION 2

- 19:30 Close

Plasma & solar wind interaction

- 09:00 Chaufray, J-Y. [Local time variations of the hydrogen corona observed by SPICAV-UV/VEX](#)
- 09:15 Futaana, Y. [Review of ASPERA-4 results on Venus–solar wind interaction: After 8 years operation at Venus](#)
- 09:30 Barabash, S. [Ion escape from Venus: Induced magnetospheres against magnetospheres proper](#)
- 09:45 Persson, M. [Mass composition analysis of plasma in the Venesian upper ionosphere measured by ASPERA-4](#)
- 10:00 Collinson, G. [The Electric Wind of Venus](#)
- 10:15 Dubinin, E. [Distribution and dynamic of plasma in the magnetospheres of Mars and Venus](#)
- 10:30 Nordheim, T.A. [Cosmic ray ionization in the Venesian atmosphere](#)
- 10:45 Discussion
- 11:00 Coffee

Magnetosphere

- 11:30 Luhmann, J.G. [Our neighboring ‘induced magnetospheres’: Big picture similarities and differences between Venus and Mars](#)
- 11:45 Russell, C.T. [The subionospheric magnetic field observed by Venus Express: Implications for sounding](#)
- 12:00 Rong, Z.J. [Is IMF Bx component really able to impact the magnetic field structure of Venesian magnetotail?](#)
- 12:15 Stenberg Wieser, C. [Solar wind precipitation - a comparison between Mars and Venus](#)
- 12:30 Discussion

12:45 CLOSE

DISPLAY TIME: Monday 08:30 - Wednesday 13:30

Presentation time: Tuesday Evening 17:30 - 19:30

<u>Lead Author</u>	<u>Title</u>
1 Basilevskiy, A.T.	Synthesis of Venera Lander Results and Future Problems
2 Kreslavsky, M.	The resurfacing history of Venus: constraints from crater retention ages of geomorphological units
3 López, I.	Geology of the Venusian lowland plains: Insight from Niobe Planitia
4 Tomlinson, S.M.	Modeling plume initiated subduction at coronae on Venus
5 Cochrane, C.G.	Highland targets for an orbital INSAR mission to Venus
6 Port, S.T.	Bismuth tellurides and sulfides mixtures and their relation to metal frost on Venus
7 Miura, Y.	Local and global systems on Venus and Earth: Less activity on air-planet Venus for change of volatiles
8 Dumoulin, C.	Tidal constraints on the Interior of Venus
9 Breuer, D.	On the problem of a dry Venusian crust
10 Gilmore, M.	The search for unadulterated Venus Tessera terrain
11 Tovar, D.	Detailed structural and geological map of a high fractured zone on Western Aphrodite Terra and its implications for heat transfer
12 Cathala, A.	Preliminary experimental results on atmosphere-surface interaction under Venus conditions
13 Bocanegra-Bahamòn, T.M.	Radio occultation experiments with Venus Express using the Planetary Radio Interferometry and Doppler Experiment (PRIDE) technique
14 Mangano, V.	Bepi-Colombo flybys at Venus
15 Mueller, N.	Venus atmosphere variability as error source for surface emissivity
16 Widemann, T.W.	International ground-based support to Venus Express and Akatsuki missions, 2007-2017
17 Stefani, S.	Experimental setup for the optical characterisation of gases at typical planetary atmospheric conditions
18 Head, J.W.	VERITAS Venus Discovery Mission High-Resolution Targets
19 Webster, C.R.	High precision gas isotope ratios: leveraging Curiosity's success on Mars to Venus exploration
20 Wilquet, V.	Aerosols properties in the Venus upper haze from SPICAV/SOIR measurement in solar occultation
21 Luginin, M.	Venus' upper haze aerosol properties from SPICAV IR data
22 Takagi, S.	A plan to study the Venus' upper haze based on SOIR/Venus Express and AKATSUKI
23 Guilbon, S.	Comparison of sectional and modal cloud microphysics representations for Venus: VenLA vs. MAD-VenLA
24 Carlson, R.W.	Sulfuric acid optical constants in Venus's Infrared windows region
25 Piccialli, A.	Mapping the thermal structure and minor species of Venus mesosphere with ALMA
26 Vandaale, A.-C.	Sulfur Dioxide variability in the Venus atmosphere
27 Sato, T.	Mid-infrared spectroscopy of Venus obtained by Subaru/COMICS
28 Airey, M.	Volcanic lightning on Venus and early Earth
29 Hart, R.A.	Whistler-mode wave observations from Venus Express: The smoking gun for lightning on Venus
30 Svedhem, H.S.	Timeline and events of the Venus Express mission

DISPLAY TIME: Wednesday 13:30 - Friday 13:00

Presentation time: Thursday Evening 17:30 - 19:30

<u>Lead Author</u>	<u>Title</u>
1 Politi, R.	The VIRTIS-VEX data in NetCDF format
2 Grotheer, E.	New user interface for accessing archived European Space Agency planetary science data
3 Carlson, R.W.	Venus Express VIRTIS-M visible-channel: diffracted and scattered light corrections
4 Lorenz, R.D.	VEGA Balloon Dataset: PDS4 Archive Preparation
5 Chiavassa, A.	A new view on exoplanet transits: Transit of Venus described using three-dimensional solar atmosphere Stagger-grid simulations
6 Marcq, E.	A 1D radiative-convective model of H₂O-CO₂ atmospheres around young telluric planets: an update
7 Gorinov, D.	Oxygen nightside airglow on Venus in relation to atmospheric dynamics based on VIRTIS-M observations
8 Collinson, G.	The Ionospheric Fossil Fields of Venus: Simultaneous multipoint observations by Venus Express and MESSENGER
9 Stenberg Wieser, G.	Ion heating from wave particle interaction on Venus
10 Chai, L.	An Induced Global Magnetic Field Looping Around the Magnetotail of Venus
11 Lee, Y.-J.	Venus cloud level convection in the equatorial region
12 LeFèvre, M.	Three-dimensional mesoscale modeling of the Venusian cloud layer and associated gravity waves
13 MCGouldrick, K.	A 145 day period in the Venus condensational clouds
14 Iwagami, N.	Detection of waves at 60 and 70km in the Venus atmosphere by ground-based IR spectroscopy
15 Imai, M.	Ground-based observations of the periodical rotation and temporal variability of the global scale UV-feature
16 Peralta, J.	The winds of Venus during Messenger's flyby
17 Machado, P.	Ground and space based cloud-top wind velocities using CFHT/ESPaDOnS (Doppler velocimetry) and VEx/VIRTIS (cloud tracking) coordinated measurements
18 Machado, P.	Cloud tracked winds at the lower cloud level using Venus' nightside observations at 2.28 μm with TNG/NICS
19 Khatuntsev, I.V.	Winds in the middle cloud deck from VMC near-IR imaging on Venus Express
20 Muto, K.	Morphology and temporal variation of the polar oval of Venus revealed by Venus
21 Kouyama, T.	Vertical propagation of planetary scale waves in variable background zonal winds
22 Gilli, G.	Impact of a non-orographic gravity wave parameterization in the Venus upper atmosphere by the LMD-VGCM
23 Parisi, M.	Understanding the role of rotation and temperature distribution on Venus' general circulation
24 Tabataba-Vakili, F.	Slow rotating planets with diurnal cycle: a parameter study of the atmospheric dynamics using a simple GCM
25 Limaye, S.S.	The structure of the Venus atmosphere: intercomparison of Venus Express and ground based observations of vertical temperature and density profiles
26 Mahieux, A.	Comparison of the thermal structure measured by SOIR on board Venus Express with a 1-D non-LTE radiative transfer model
27 Krause, P.	Temperature Measurements in Venus Upper Atmosphere between 2007 and 2015 from ground-based Infrared Heterodyne Spectroscopy
28 Wilson, C.F.	Correlations between temperature structure and UV contrasts in the clouds of Venus
29 Migliorini, A.	Rotational temperature estimation at airglow altitudes using nightside VIRTIS/Venus Express measurements
30 Camino, O.	Venus scientific and platform data correlation