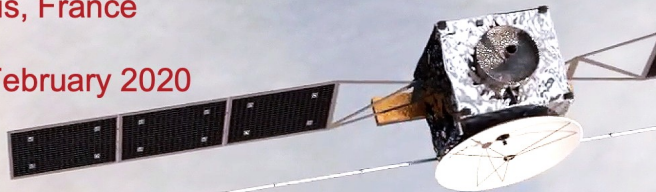


EnVision Conference

CNES Headquarters
Paris, France

12-14 February 2020



DAY 1 - Wednesday 12 February 2020

08:00-08:45 Registration

08:45 Welcoming/opening words

Session 1: Mission Overview - Wed. 9:00-15:00

1.1 - Wed 12 Feb - 09:00-10:45 - Conveners: Titov, Ocampo

09:00 1.01 **Ghail** - EnVision: understanding why our closest neighbour is so different
09:15 1.02 **Hensley** - VenSAR: A New Generation S-Band Radar for Venus Exploration
09:35 1.03 **Kiefer** - High Resolution Topography as a Constraint on Venus Tectonic Processes
09:50 1.04 **Le Gall** - Microwave Radiometry at Venus with EnVision
10:05 1.05 **Bruzzo** - SRS: A nadir sub-surface radar sounder
10:25 1.06 **Dumoulin** - EnVision Radio Science Experiment

10:45-11:15 - Break 1.1

1.2 - Wed 12 Feb - 11:15-12:30 - Conveners: Titov, Ocampo

11:15 1.07 **Helbert** - The VenSpec suite on the ESA EnVision mission to Venus
11:35 1.08 **Marcq** - Science Objectives of VenSpec-U (VeSUV) on board EnVision
11:50 1.09 **Vandaele** - VenSpec-H, an Infrared High Resolution Spectrometer to Observe the Atmosphere of Venus
12:05 1.10 **Voirin** - Mission & phase A status

12:30-14:00 - Catered lunch - Salle de l'Espace"

1.3 - Wed 12 Feb - 14:00-15:30 - Conveners: Ghail, Wilson

14:00 1.11 **Romstedt/Wielders** - EnVision Payload Complement Overview
14:20 1.12 **Rugina** - Sci. op. reference scenario (SORS) / I-EnVision mission, system & telemetry
14:40 1.13 **Lefort** - Sci. op. reference scenario (SORS) / II-EnVision science instrument operations
15:00 1.14 **Grieger** - EnVision Science Operations Analysis with EnVisionary

15:15-15:30 *Discussion 1: Phase A/SORS*

15:30-15:45 - Break 1.2

Session 2: Surface - Wed 15:45-Thu 10:15

2.1 - Wed 12 Feb - 15:45-18:00 - Conveners: Komatsu, Ghail

15:45 0.L01 **Kiefer** (Invited) - Magellan legacy
16:10 2.01 **Ivanov** (Invited, remote presentation) - Possible Nature of Tessera Terrain on Venus
16:30 2.02 **Romeo** - Controversial Tectonic Structures On Tessera Terrain, Venus
16:45 2.03 **Brossier** - Compositional Properties on Venus Highlands: From Magellan Radar to EnVision VenSpec Suite
17:00 2.04 **Herrick** (Invited, remote presentation) - Unusual Mid-Sized Volcanoes on Venus and the Need for EnVision's Higher Resolution Imaging and Topography
17:20 2.05 **Gregg** - The Importance of Plains

17:35-18:00 - *Discussion 2.1: Regions of Interest - Surface (I)*

End day 1

Day 1 - Wed 12 Feb 19:00-20:45 - Louvre visit, Venus Art Theme

DAY 2 - Thursday 13 February 2020

2.2 - Thu 13 Feb - 08:30-10:00 - Conveners: Komatsu, Ghail

08:30 2.10 **Carter** (invited) - Using Radar Polarimetry to Understand Surface Deposits on Venus
08:50 2.11 **Chakraborty** (remote presentation) - Characterization of Venesian Geological Features: Opportunities Using EnVision Polarimetric SAR Data
09:05 2.12 **Komatsu** - Channels On Venus: What We Know Before Revisiting With EnVision
09:20 2.13 **Carpy** - Sand Transport Regime on Venus: Analytical Approach

09:35-10:00 - *Discussion 2.2: Regions of Interest - Surface (II)*

2.3P - Thu 13 Feb - 10:00-10:30 - Surface Poster Session

2.06P **Hoad** - Is Lada Terra the site of a Overturn Upwelling Zone?
2.07P **Shalygin** - Global Map of the Relative Surface Emissivity at 1 Micron for the Venus Northern Hemisphere and Equatorial Region
2.08P **Shalygina** 1 - Are the Steep-Sided Domes Produced of Non-Basaltic Lava?
2.09P **Berger** - Surface-Atmosphere Interaction: How It May Influence Remote Sensing Of Venus Surface

10:00-10:30 Break 2.1 / Poster Session 2.3P

Session 3: Activity Detection - Thu 10:30-12:30

3 - Thu 13 Feb - 10:30-12:30 - Conveners: Helbert, Hensley

10:30 3.01 **Lorenz** (invited) - Detecting Volcanic Surface Change on Venus: A Critical Assessment of Different Techniques
10:50 3.02 **Ghail** - How Active is Venus today?
11:05 3.03 **Wilson** - On the Probability of Detecting Plumes of Volcanogenic Gases in the Troposphere
11:20 3.04 **Robert** - Scientific Requirements Of VenSpec-H, An Infrared Spectrometer To Study Venus' Activity
11:35 3.05 **Davaille** (invited) - Plume-Induced Subduction and Accretion in the Expanding Artemis Coranae

11:55-12:30 - *Discussion 3*: Regions of Interest - Activity Detection

12:30-14:00 Lunch

Session 4: Interior Structure and Evolution - Thu 14:00-18:00

4.1 - Thu 13 Feb - 14:00-15:45 - Conveners: Breuer, Gillmann

14:00 4.01 **Rosenblatt** - Assessment of the EnVision Gravity Experiment

14:20 4.02 **James** (invited) - Even Modest Improvements In Venus's Gravity Field Will Improve Our Understanding Of The Crust And Mantle

14:40 4.03 **Rambaux** - Rotational Motion of Venus and its Observational Strategy through EnVision Mission

14:55 4.04 **Kervazo** - Effect of a basal magma ocean on the tidal deformation of Venus

15:10 4.05 **O'Rourke** (invited, remote presentation) - A Thick Basal Magma Ocean May Exist Today

15:30-15:45 - *Discussion 4.1*: Venus Internal Structure & Rotation

4.2P - Thu 13 Feb - 15:45-16:15 - Int. Structure and Evolution Poster Session

4.06P **Salvador** - Early evolution of Venus: from magma ocean to temperate surface conditions?

15:45-16:15 Break / Poster Session **4.2P**

4.3 - Thu 13 Feb - 16:15-18:00 - Conveners: Dumoulin, Kiefer

16:15 4.07 **Gillmann** (invited) - Modelling the Evolution of Venus: Insights and Questions

16:35 4.08 **Plesa** (invited) - Thermal Evolution of Venus' Interior

16:55 4.09 **Breuer** - Interior Structure and Present-Day Thermal State of Venus

17:10 4.10 **Weller** (invited, remote presentation) - Evolution in the Style of Mantle Convection on Venus: The Role of Coupling Between the Mantle, Lithosphere, and Atmosphere

17:30-18:00 - *Discussion 4.2*: Venus Evolution

End Day 2

DAY 3 - Friday 14 February 2020

Session 5: Atmosphere - Fri 08:45-12:45

5.1 - Fri 14 Feb - 08:45-10:35 - Conveners: Lebonnois, Satoh

08:45 0.L02 **Nakamura** (invited) - Akatsuki: Four Earth Years In Venus Orbit

09:10 0.L03 **Wilson** (Invited) - The Scientific Legacy of Venus Express

09:35 5.01 **Mahieux** - Mesospheric Water Vapour at the Venus Terminator from SOIR/VEX

09:50 5.02 **Encrenaz** - H₂O and SO₂ Thermal Mapping on Venus: Evidence for a Long-Term Anti-Correlation (presenter: Widemann)

10:05 5.03 **Machado** - Venus' Meridional and Zonal winds from: Akatsuki/UVI, Venus Express/VIRTIS, TNG/HARPS-N and CFHT/ESPaDOs

10:20-10:35 Discussion 5: An Active Atmosphere

5.2P - Fri 14 Feb - 10:35-11:00 - Atmosphere Poster Session

5.04P **Satoh** - Venus Night-Side Photometry and Aerosol Properties as Inferred from Restored Akatsuki/IR2 Data

5.05P **Shalygina 2** - Glory As An Effective Tool For Retrieving The Properties Of The Venus Upper Clouds

5.06P **Slowik** - Usefulness of the Bioaccumulatory Hypothesis in the Evaluation of the Venus Electrochemical Habitat

10:35-11:00 Break 3.1 / Poster Session **5.2P**

5.3 - Fri 14 Feb - 11:00-12:45 - Conveners: Wilson, Satoh

11:00 5.07 **Lebonnois** - Exploring the Variability of the Venusian Atmosphere Above the Clouds With the IPSL Venus GCM

11:15 5.08 **Millour** - The Venus Climate Database Project

11:30 5.09 **Lefèvre** - Turbulent Vertical Mixing of H₂O and SO₂ in Venus Cloud Layer

11:45 5.10 **Garate-Lopez** - The Venus' Polar Vortices Observed by EnVision

12:00 5.11 **Peralta** - A Discontinuity at the Lower Clouds of Venus to be considered by EnVision

12:15 5.12 **Jessup** - EnVision Enabled Studies of Venus' Climate and Sulfur Chemistry

12:30 5.13 **Tellmann** - Radio Sounding of the Venusian Atmosphere and Ionosphere with the Radio Occultation Experiment on EnVision

12:45-14:00 - Lunch

Session 6: Venus Exploration 2025-2040 - Fri 14:00-14:50

6 - Fri 14 Feb - 14:00-14:50 - Conveners: Widemann, Rocard

14:00 6.01 **Helbert** - Why We Need An International Venus Program

14:15 6.02 **Smrekar** (invited, remote presentation) - VERITAS, EnVision and a Venus Program

14:35-14:50 *Discussion 6*: EnVision and International Venus Exploration

14:50-15:15 Break 3.2

Session 7: EnVision Assessment Study Report (Yellow Book) - Fri 15:15-17:15

7 - Fri 14 Feb - 15:15-17:15 - Conveners: Widemann, Titov

15:15-15:45 Round table 1- Goals prioritisation for the EnVision phase A

15:45-17:00 Round table 2 - Yellow Book discussion

17:00 Address by **Dr. Lori Glaze**, NASA Planetary Science Division

End Day 3

Conference Abstracts

<http://bit.ly/envision-s1> - Session 1: Mission Overview

<http://bit.ly/envision-s2> - Session 2: Surface

<http://bit.ly/envision-s3> - Session 3: Activity Detection

<http://bit.ly/envision-s4> - Session 4: Int.Structure and Evolution

<http://bit.ly/envision-s5> - Session 5: Atmosphere

<http://bit.ly/envision-s6> - Session 6: Venus Exploration 2025-2040