

**DENVER MUSEUM OF NATURE AND SCIENCE**  
**VENUS WINDS PROJECT**  
**MINUTES OF MEETING**

Date/Time/Location: 8 October 2015 6:00 PM Admin 1 (Basement)

**ATTENDING**

<b>Art</b>	Ashley	Christian	Cristy	Dave	Drew	Dylan
Elizabeth	<b>Emilie</b>	John	<b>Kevin</b>	<b>Mark</b>	<b>Marta</b>	Michael D.
<b>Michael L.</b>	Rachel	Terran	<b>Yvonne</b>			

Guests: **Connor Logan**

The meeting opened at 6:00 PM in Admin 1. Those **attending** are listed above.

**OLD BUSINESS**

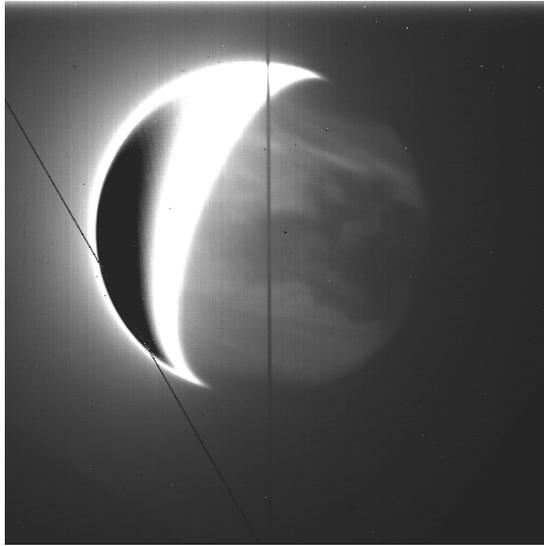
**Wind velocities for analysis of July 4-13, 2004 data** Mark

Mark discussed some numerical experiments that he did to test the cylindrical transform algorithm. He discussed the sources of errors that seen in the transform, and how to check if your images have been properly converted to cylindrical format. Those who have not yet sent their 10 centered images to Mark should do so before the next meeting.

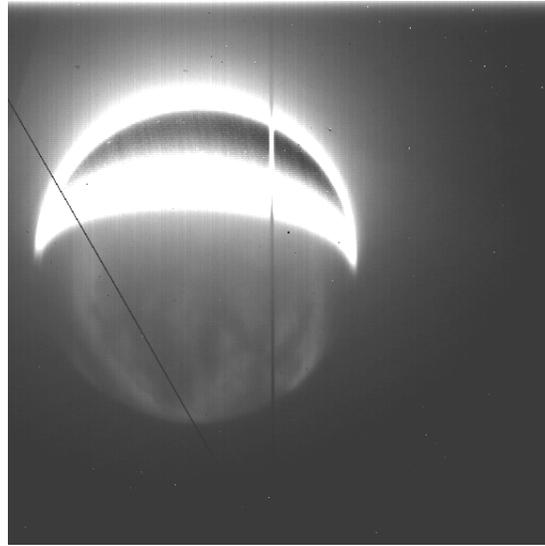
**NEW BUSINESS**

**New Venus Images from Sept. 25-29, 2015** Mark

Mark was granted five mornings on NASA's Infrared Telescope Facility to observe Venus. He used the same telescope used to acquire past images, with an upgraded camera and spectrometer. He showed the new data from Sep 25-29, 2015. The seeing was good on Sept. 25 but rained out on Sept. 26. The seeing on the remaining three nights was barely adequate. On these nights the images were rotated 90°. It will be interesting to compare the quality and cloud features seen in these new images with those that we've already studied.



September 25, 2015



September 29, 2015

### **New Venus Mission Design Selections** Kevin

Kevin discussed NASA's recent selection of five planetary mission concepts for further study. Two are missions to Venus and three are missions to different asteroids. These are NASA's Discovery class missions, the smallest Principal Investigator-led planetary missions that are solicited every 3 or 4 years by NASA. Larger, more expensive PI-led missions are called New Frontiers; calls for mission proposals for this class of planetary missions occur every seven years or so. The next round will be next year, and a Venus lander is among them.

The five planetary mission teams will flesh out their mission and payload designs in the next 12 months, and ultimately one or two of these will be selected for flight in the early 2020s. The two Venus mission proposals are DAVINCI, from NASA's Goddard Space Flight Center, and VERITAS, from the Jet Propulsion Laboratory. DAVINCI is an atmospheric probe that would descend through the atmosphere of Venus, making measurements of gas and isotope compositions to understand the origin and evolution of Venus' atmosphere. The entire active phase of this mission is only 63 minutes. VERITAS is an orbiter that would obtain radar images of Venus' surface at much higher resolution than Magellan did in the 1990s. It also includes a spectrometer that will acquire images of the surface and clouds at infrared wavelengths. Some of these will be similar to the telescopic images that we use, but from a much nearer vantage point and with much greater resolution and detail.

### **Update on Physiography of Pluto and new Charon results** Art

New images have been published by the New Horizons Mission team of dwarf planet Charon's surface. Art previewed an expanded version of a previous PowerPoint presentation, *Physiography of Pluto*. This new PowerPoint presentation, *Physiography of Pluto and Charon*, will be accessible early next week on the Venus Winds website.

The next meeting on October 20, 2015 will be in Exploration Studio 102 at 6 PM.

Submitted by Arthur C. Tarr, Venus Winds Project Coordinator

