

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

Date/Time/Location 9 Jul 2015, 6:00 PM Exploration Studio 106

AGENDA ITEMS CARRIED FORWARD

Your experience with DS9 and Gimp All

SAOImage DS9 is an analysis tool that is widely used by the astronomical community to extract the maximum usable information from astronomical images. An essential function for **DS9** analysis of Venus images would be to locate the maximum pixel values of cloud/gap features much more precisely than an analyst could pick them. At the last meeting, the merit of **DS9** was its ability to precisely determine coordinates of features. Analysts who have used **DS9** in the last two weeks are encouraged to discuss their experience with the software.

Several of our analysts have experimented with **Gimp** already; they will discuss their experience with **Gimp**. This will lead to a discussion of the comparative merits of **Gimp** and **DS9**. Analysts who have used both software should be prepared to discuss differences and similarities.

Tracking features present on July 12 and July 13, 2004 images Mark

Earlier, Mark distributed one image each from July 12 and July 13, 2004 to be examined for cloud features that could be found on both days. Analysts were asked to limit tracking features to the equatorial band (20°N to 20°S), using the formula $[(X2 - X1) \times 5,959]/86,940$ where **X1** is the *x*-coordinate from the July 12 image and **X2** is the *x*-coordinate from the July 13 image. Analysts can use either DS9 or GIMP for this exercise (which are free), or Adobe Photoshop if they have it. Mark and Art experimented with the images gave unusual and conflicting results, which will be discussed at this meeting. Others who have completed the exercise should be prepared to show their results.

Wind Velocities to Date Mark

At a later date, Mark will summarize the results from all analysts who have completed velocity spreadsheets for July 12, 2004. The purpose is to show the strengths and weaknesses of the methods used so far, and to point to ways that might provide more consistent results. As a result, Christy will not do a statistical analysis of the results to date.

NEW AGENDA ITEMS SINCE LAST MEETING

Tracking features present on July 12 and July 13, 2004 images All

Comparing analysts' results from this exercise is key to understanding how much individual technique affects wind velocity determinations. So it is desirable to have results from as many analysts as possible. If there are not enough results by July 9 to do a statistical analysis, we will track some points as a group during this meeting, and calculate 'consensus' wind velocities.

Tracking high latitude features on July 12 and July 13, 2004 images Mark

Mark will discuss the trigonometric correction for calculating velocities at high latitudes.

This will allow analysts to add tracking points and calculate velocities for points at latitudes greater than 20° .