

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

Date/Time/Location 10 Mar 2016, 6:00 PM ADM1

AGENDA ITEMS CARRIED FORWARD

Meeting schedule changes – Mark, Kevin, Art

Kevin suggested using DoodlePoll, a free ap that allows our active volunteers to register their preferences for a new meeting night. This change was necessitated because our favored venues, Studio 102 and Studio 106, have become increasingly unavailable because of higher-priority meetings are booked in them. (Thursday is the most popular meeting night.) The poll will allow volunteers to rate alternate meeting nights (Monday, Tuesday, Wednesday) as well as the existing Thursday meeting night.

Centering images demos - Ashley, Michael Logan, Yvonne

These analysts will discuss their own image centering techniques using Photoshop and GIMP.

Akatsuki Updates - Kevin

There has been very little additional information about the *Akatsuki* mission, other than that the spacecraft instruments, power, and propulsion systems all remain in excellent condition. Data and images continue to be received by the ground stations, but the data reduction pipeline is not yet producing processed images. So we have not seen any more images than the handful that were released in early December. Kevin will update us on the *Akatsuki* mission if there is anything new to report.

NEW AGENDA ITEMS SINCE LAST MEETING

Navigating the new file system – Mark

Mark will demonstrate how to find and download raw data, metadata, and results posted to the data server.

Using Python to view raw data – Mark

Mark will talk about using the Python programming language on Windows, Macs, and Linux to view and compare the Venus FITS images (raw data). For those interested in applying Python to perform some of the processing steps, we'll go over the primer, *Using Python for Interactive Data Analysis*. This was written by two astronomers at the Space Telescope Science Institute. You can obtain a copy of it from Mark's Dropbox:

<https://dl.dropboxusercontent.com/u/52682795/greenfield07a.pdf>

Probability and error analysis of wind velocities derived from cloud tracking – Mark

Mark will begin a discussion on probability theory, leading to how we will calculate the velocity errors introduced in each step. In the future we will talk about how these errors are compounded to obtain the total estimated errors in the velocity calculations.