Geophysical Research Abstracts
Vol. 12, EGU2010-13414, 2010
EGU General Assembly 2010

Venus' lower atmospheric winds from the south pole to 60°N

Eliot Young (1), Mark Bullock (1), Kevin McGouldrick (2), and Constantine Tsang (1)

(1) Southwest Research Institute, Boulder, CO, USA (efy@boulder.swri.edu/303-546-9687), (2) Denver Museum of Nature & Science, Denver, CO, USA (kmcgouldrick@dmns.org)

In September 2007 nearly simultaneous observations of Venus were obtained from NASA's IRTF telescope and the VIRTIS-M spectrometer on the Venus Express spacecraft. The spacecraft observations are concentrated over Venus' southern hemisphere while the ground-based observations are of the entire disk, centered at Venus' equator. Both data sets include observations in carbon dioxide windows at 1.74 and 2.25 - 2.45 microns in which Venus' lower and middle cloud decks are visible as silhouettes against thermal emission from lower in the atmosphere. The combined data sets allow us to track cloud fields from Venus' south pole to about 60 N, a larger span of latitudes than would be available to either set by itself. We compare the latitudinal distribution of inferred winds to Venus Express observations taken during the spacecraft's April 2006 orbit insertion (Sanchez-Lavega et al. 2008, GRL 35, L13204), the one previous Venus Express data set that sampled both hemispheres.