

Abstract Submitted
for the PSF13 Meeting of
The American Physical Society

Using Spatially-Resolved Spectroscopy to Study Stardust LACEY DANIELS, SPECK ANGELA, NELSON DESOUZA, SUKLIMA GUHA NIYOGI, Univ of Missouri - Columbia, STARDUST COLLABORATION — We present a study of spatial distribution of different dusty spectral features in the Oxygen-rich Asymptotic Giant Branch star SW-Vir. We have spectral data for 8-14 μ m from Michelle at Gemini North, covering a 10x10 grid centered on the star to yield a set of 100 spectra cover (4 x 4 arcseconds of sky). We analyzed each spectrum by eliminating the continuum and the measuring the parameters (full width at half maximum, peak position, and strength) of the remaining spectral features. To assess the precision of the measurements, we chose to eliminate the continuum in two different ways – dividing and subtracting a fitted power law. We compared the resulting measurements to each other in order to find correlations. We sought correlations between the parameters of the spectral feature as well as between different spectral features and with apparent radial distance from the central star. We did not find any correlation between the equivalent properties when comparing subtracted and divided spectra or between any parameters, even when the parameters of a single continuum-elimination technique were compared. Our results suggest that the standard model for dust formation and/or our attributions of specific compounds to specific spectra features are far too simple.

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Date submitted: 09 Oct 2013

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