Dust and Molecular Features in the SWS spectra of C-rich AGB Stars: Models and Observations

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Abstract

We discuss the importance of proper synthetic spectra for interpreting the molecular and dust emission observed in ISO-SWS data. First we compare synthetic molecular spectra with observed SWS spectra for C-rich AGB stars, corrected for the dust contribution by means of blackbody fits. Then first results for synthetic spectra containing the molecular *and* the dust component are presented. These are obtained from a combination of improved model spectra for the molecular component with radiative transfer calculations for the circumstellar dust envelope. Both types of synthetic spectra are based on the same dynamical model atmospheres. The application to O-rich stars is briefly discussed.

We also present results on the internal agreement between SWS spectra taken at similar pulsational phases and the external agreement with (quasi)simultaneous ground based photometry

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