

## **Dust Formation of Evolved Massive Main Sequence Stars**

*Chien-De Lee (Institute of Astronomy, National Central University, Chung-Li 32054, Taiwan), Chakali Eswaraiah (Aryabhata Research Institute of Observational Sciences, Manora Peak, Nainital 263129, India), Anil Pandey (Aryabhata Research Institute of Observational Sciences, Manora Peak, Nainital 263129, India) and Wen-Ping Chen (Institute of Astronomy, National Central University, Chung-Li 32054, Taiwan)*

Classical Be stars are the fast rotating massive main sequence stars with emission line. Most of them show infrared emission in excess of photospheric radiation, attributed to free-free emission from ionized gas in a circumstellar envelope. However, a few classical Be stars show extremely large near-infrared excess which must be accounted for by the thermal dust emission. In this poster, we use the polarimetric tool to study the circumstellar dust properties of these peculiar classical Be stars. Especially, HD 45677 and HD 50138, which show relatively large near-infrared excess with both J-H and H-K<sub>S</sub> > 0.7 mag, exhibit more polarization at shorter wavelengths than that at longer wavelengths thereby indicating the presence of small dust grains in their circumstellar envelope. We suggest that these classical Be stars are evolved stars on the verge of turning-off the MS condense dust in their expanding cooling envelopes.