

# “Stars and the secondary calibrators” splinter

chairs: Joris Blommaert and Martin Groenewegen

## Objectives & points to be discussed:

- To learn about the status of the available models for “normal” stars. Special attention should be given to
  - Accuracies (compared to instrument requirements)
  - the dependencies on different parameters like  $T_{\text{eff}}$ , metallicity, gravity, ...
  - uncertainties in the model assumptions
- What could to be done to improve the models?
- Need for calibrator stars of different spectral types?
- Presentation of the network of calibration stars. How many stars are sufficiently bright enough to be used for calibration for PACS and SPIRE?
- The presence of far-IR excess due to chromospheres or debris disks. What is known from observations?
- Available observations to constrain the models (ISO-PHT program on candidate debris disk stars, (sub-)mm programs, Spitzer). Are further observations needed and how to obtain these?
- What is the role of the secondary calibrators (taking into account the possible variability of dust-enshrouded AGB stars, possibly extended)?
- How well are (emission, absorption) lines known in the spectra of AGB stars, Post-AGB, PNs and HII regions and how useful can these be as wavelength calibrators / line profile determination ? Spatial extent will be an issue. To investigate the distortion effects in PACS we need sources extended on a  $1'$  scale. Ideally we need a range of source sizes from  $< 2''$  to  $\sim 1'$ .
- Need for further modelling and observations
- Spatial distribution of the secondary calibrators