

Colloquium SFB 956

Conditions and Impact of Star Formation

28.10.2013 Monday 4:00 pm Physikalische Institute Köln Lecture Hall III Zülpicher Straße 77 | 50937 Köln

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From stellar surfaces to mass loss with high angular resolution optical-IR instruments

The details of how mass is lost in evolved stars are still partly elusive. The global picture of how molecules are produced and how gas is pushed away to the interstellar medium by a dust-driven wind is well understood. However, the scenario of how this works close to the star surface still has to be completed and is very much dependent on the star characteristics. In Mira-type stars, large amplitude pulsations are thought to be the major source of mechanical energy to lift molecules up to an altitude where dust can condensate. Such a scenario is not applicable to red supergiants and another source of energy is required. One candidate is convection and its connection with magnetic fields. A lot of progress has been made with photometric, spectroscopic studies and simulations. Another useful tool is imaging at high angular resolution. I will present some recent results in this field based on interferometric and adaptive optics imaging obtained by the group at Observatoire de Paris/LESIA. I will also present some prospects with long baseline interferometers and the FIRST instrument, a fibered pupil masking instrument installed at Subaru.



