

## EP 17: Astrophysik II

Time: Thursday 14:00–15:45

Location: V55.02

**Invited Talk** EP 17.1 Thu 14:00 V55.02  
**SOFIA The Stratospheric Observatory for Infrared Astronomy** — •ALFRED KRABBE — Deutsches SOFIA Institut, Universität Stuttgart, Stuttgart, Germany

The Stratospheric Observatory SOFIA is a 2.7m-telescope for optical and infrared radiation operating at altitudes of 35000 - 45000 feet. Jointly developed by USA and Germany for the next 20 years it opens a new window into the warm and cold universe for astronomical research. Early science demonstration flights were completed during 2011. Regular operations will begin in summer 2012. Four out of seven first generation instruments have already been commissioned and will be available. This presentation will give an overview over this very special observatory and the first science results.

**Invited Talk** EP 17.2 Thu 14:30 V55.02  
**Astronomy with ultraviolet space telescopes** — •KLAUS WERNER — Eberhard Karls Universität Tübingen

After a short "historical" introduction we highlight a few scientific results obtained with observations of space telescopes that are operating in the ultraviolet spectral range.

**Invited Talk** EP 17.3 Thu 15:00 V55.02  
**The pipeline starts in space: On-board data handling of space observatories** — •ROLAND OTTENSAMER — Department of Astronomy, University of Vienna

The rapid development of detector technologies for space missions with more pixels and higher efficiency leads to scientifically more valuable data, but also to much higher data rates and on-board processing needs. Especially spacecrafts at far distances, such as the Lagrangian point L2 or solar system probes and missions with a limited lifetime cannot afford lengthy downlink periods and must therefore reduce the data to a smaller amount in real-time. An example for this is the Herschel Space Observatory, which is in its third year of highly successful operations.

Depending on a mission's profile, the data may have to be intensely processed with special techniques to fit into the available downlink. An overview of on-board data handling is given together with a perspective of currently planned missions and the implications on the data products are outlined.

EP 17.4 Thu 15:30 V55.02  
**The morphology of young supernova remnants** — •SONJA BOYER, DOMINIK ELSÄSSER, and KARL MANNHEIM — Institut für Theoretische Physik und Astrophysik, Universität Würzburg

Core-collapse supernovae are among the candidate sites suggested for heavy element nucleosynthesis. Metallicity evolution of the Galaxy however seems to mandate that explosive nucleosynthesis of iron-group and above elements cannot take place in all core-collapses. We survey archival X-ray data with the aim to probe correlations between asymmetries of supernova remnants - potentially due to highly asymmetric explosions - and heavy element production.