DFG Priority Program SPP 1573: Physics of the Interstellar Medium

The physics of the interstellar medium (ISM) plays a crucial role in many areas of astronomy, like galaxy formation and evolution, the formation of stars, cosmic nucleosynthesis, the origin of large complex, prebiotic molecules and the abundance, structure and growth of dust grains which constitute the fundamental building blocks of planets. New observations with powerful telescopes have revealed that the ISM is a turbulent, multiphase gas, filled with structures on all resolvable spatial scales.

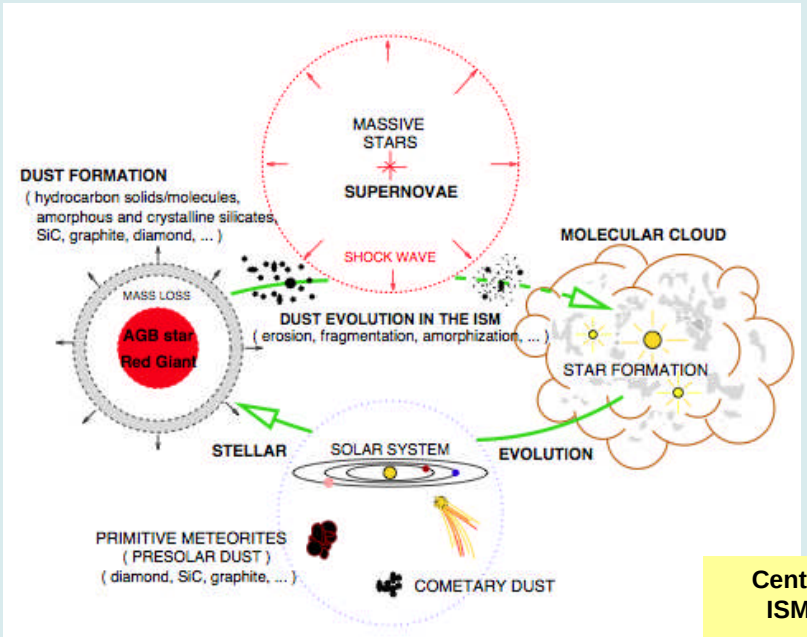
The goal of **DFG Priority Program SPP 1573: Physics of the Interstellar Medium** is to develop a comprehensive physical understanding of the multi-phase ISM that provides a solid basis for other fields of astrophysics by

A) combining the expertise of researchers in Germany who work on different aspects of ISM physics
B) investigating observationally and theoretically how various physical processes interact with one another and shape the ISM
C) constructing a new model of the dynamical, non-linear, multi-phase ISM

To reach this ambitious goals, the SPP 1573 relies on three complementary pillars:

- **Laboratory studies** will provide the necessary data of molecular and ionic reactions as well as transition frequencies and data on dust physics, which is required for the physical and chemical description of the ISM.
- **Observations** are the key to constrain theoretical models and give insight into the structure of the ISM and its dependence on galactic environment.
- **Theory and numerical simulations** will shed light on physical processes and the importance of their combined effect on structuring the ISM and the driving of turbulence.

ISM in the star forming region NGC 602 Credit: NASA, ESA, and the Hubble Heritage Team (STScI / AURA) - ESA/Hubble Collaboration



Complex matter cycle in the interstellar medium

Central entry point: ISM-SPP website

www.ism-spp.de

Time line of DFG priority program SPP 1573: Physics of the Interstellar Medium

- November 15, 2009: proposal was submitted
- May 2010: established by DFG (altogether 13 out of 64 proposals are funded)
- September (AG Annual Meeting): general discussion of ISM SPP
- November 2010: call for proposals for period I (2011-2014)
- January / February 2011: deadline for proposal submission
- April / May 2011: kick-off meeting and proposal evaluation
- June / July 2011: funding starts for period I (2011-2014)

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