

Announcement of the ESO Workshop

## Multiwavelength Views of the ISM in High-redshift Galaxies

27–30 June 2011, ESO Vitacura, Santiago, Chile



The study of the interstellar matter (ISM) is no longer limited to the nearby Universe. Major progress in observational capabilities from the optical to the radio have allowed the first studies out to the highest redshift galaxies known, while theoretical modelling has proved essential to interpret the different environments in the early Universe. The imminent availability of the Atacama Large Millimeter/submillimeter Array (ALMA) will revolutionise this field, thanks to its exquisite sensitivity and spatial resolution. At the same time, the Herschel Space

Observatory is observing nearby galaxies in atomic and molecular lines, which will be redshifted down to ALMA frequencies at high redshift. This workshop aims to provide an overview of this field at this crucial moment, and foster collaboration between scientists working at low and high redshifts and in different wavelength regimes.

Topics to be covered include:

- Theoretical predictions of the physical properties of gas in high-*z* galaxies;
- Outflows and inflows at high redshifts;
- Effects of star formation and active galactic nuclei activity;
- Census of molecular gas masses and excitation at high-*z*;
- Interplay between mass, metallicity and star formation rate in galaxies;
- ALMA and far-infrared line emission in high-*z* studies;
- Synergy between ALMA, the Expanded Very Large Array (EVLA) and the future Extremely Large Telescopes (ELTs).

The meeting will be held at the ESO and Joint ALMA Office (JAO) campus

in Santiago, and will be limited to 100 participants. At the end of the workshop, interested participants will be given the opportunity to fly to San Pedro de Atacama and enjoy a guided tour of the ALMA and APEX Chajnantor site.

The Scientific Organising Committee consists of: Andrew Baker (Rutgers University), Chris Carilli (NRAO), Carlos De Breuck (ESO, co-chair), Leopoldo Infante (PUC), Rob Ivison (UK ATC and IfA, Edinburgh), Roberto Maiolino (INAF, Roma), Alison Peck (JAO), Dominik Riechers (Caltech), Linda Tacconi (MPE), Jeff Wagg (ESO, co-chair), Fabian Walter (MPIA), Tommy Wiklind (JAO) and Min Yun (University of Massachusetts).

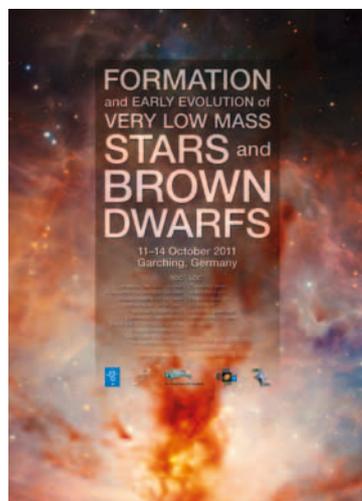
The deadline for registration is 8 April 2011.

Further information can be found at <http://www.eso.org/sci/meetings/2011/gas2011.html>.

Announcement of the ESO/MPE/MPA/Excellence Cluster/USM Joint Astronomy Workshop

## Formation and Early Evolution of Very Low Mass Stars and Brown Dwarfs

11–14 October 2011, Garching, Germany



The wide-area surveys in nearby molecular clouds that are currently being conducted with Herschel in the far-infrared and APEX in the submillimetre will soon be complemented and extended with observations by SCUBA2 at the James Clerk Maxwell Telescope. Together they will add to the enormous amount of data that will be collected by ground-based wide-area surveys with telescopes like VISTA and the VST, and those already available, most notably those carried out with the Spitzer Space Telescope. These surveys will offer complete samples of objects in nearby star-forming regions, from cores to protostars and young stars, with unprecedented sensitivity. The surveys will probe the physical conditions at

the sites where the lowest mass isolated objects form.

Together, these facilities will provide a multiwavelength view of the origin of the full stellar and sub-stellar mass function. In parallel, detailed studies of individual objects and small samples are already underway with new and existing VLT/I instruments and with current millimetre interferometers, and will shortly begin with ALMA. At the same time, increasingly realistic computations of the collapse and fragmentation processes, the early evolution of the resulting objects, their inner structure, and the dynamics and chemistry of their atmospheres and surrounding medium are