



Max Planck Society and its Institutes

Standorte

- Institut / Forschungsstelle
- Teilinstitut / Außenstelle
- Sonstige Forschungseinrichtungen

- Niederlande
■ Nijmegen
- Italien
■ Rom
■ Florenz
- USA
■ Florida
- BRASILIEN
■ Manaus



MAX-PLANCK-GESELLSCHAFT

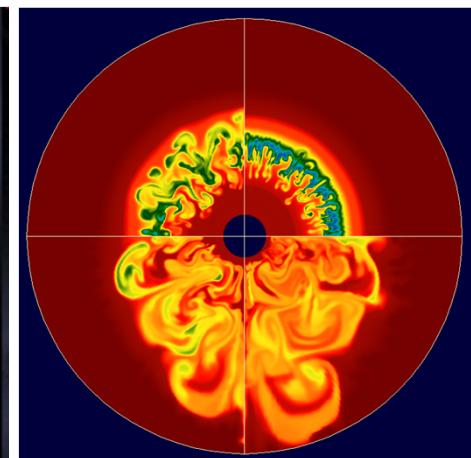
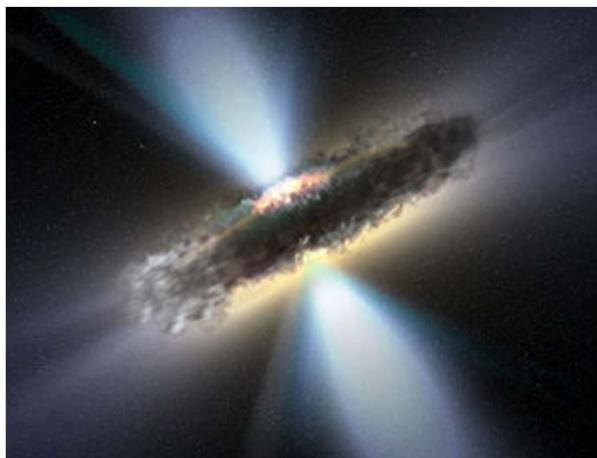
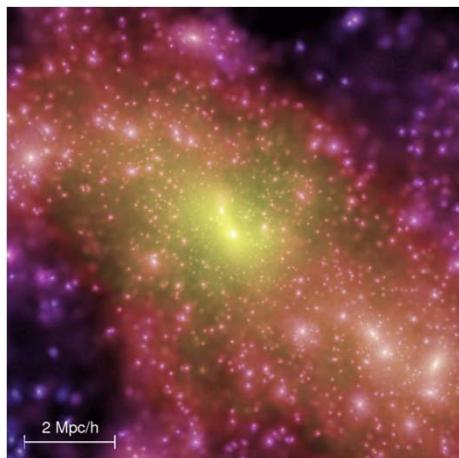


MPA + MPE
= two out of
more than 80
Max Planck Institutes



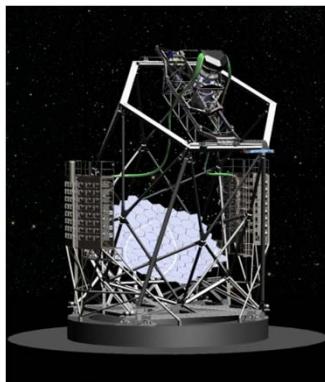
Max Planck Institute for Astrophysics

- Theoretical astrophysics
 - Stellar astrophysics
 - High energy astrophysics
 - Cosmology
- Staff
 - 15 scientists, ~50 guest scientists
 - ~30 postdocs, ~40 students



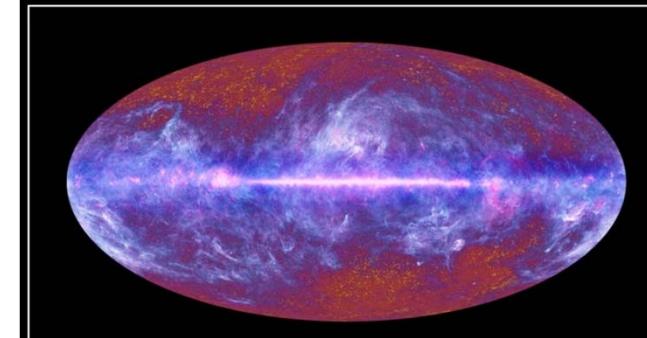
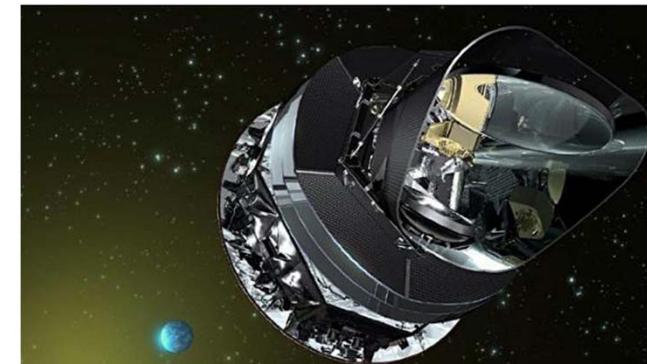
Max Planck Institute for Extraterrestrial Physics

- Experimental astrophysics
 - Infrared and Submm astronomy
 - Optical and interpretative astronomy
 - High energy astrophysics
 - Theory and complex plasma
- Staff (>400 in total)
 - ~150 scientists
 - 50 postdocs, ~50 Students
 - Engineers, IT experts, administration



Cosmology at MPA

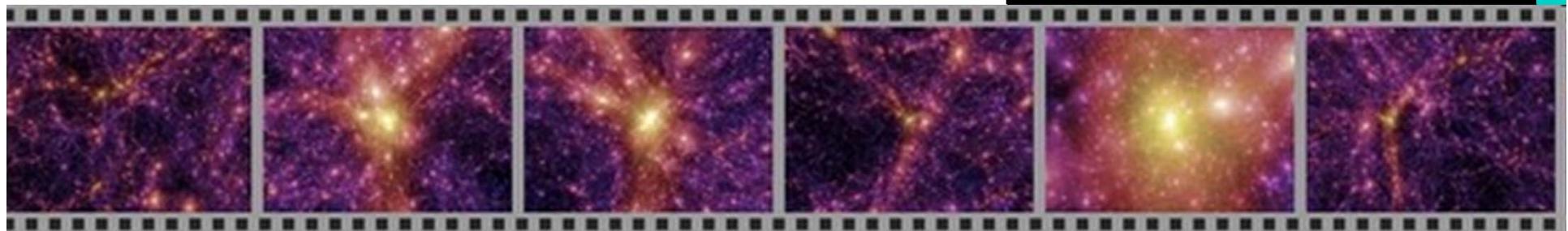
- Planck satellite
 - Launch: May 2009
 - Goal: detailed map of the Cosmic Microwave Background
- Structure formation:
Millennium simulation
 - 10 billion particles
 - Computing time on RZG Supercomputer:
 > 1 month



The Planck one-year all-sky survey

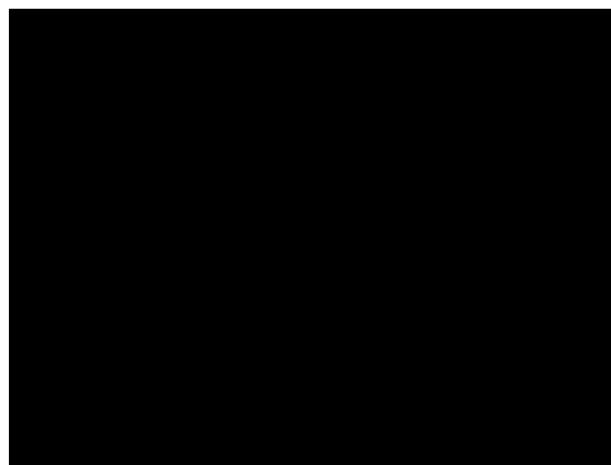
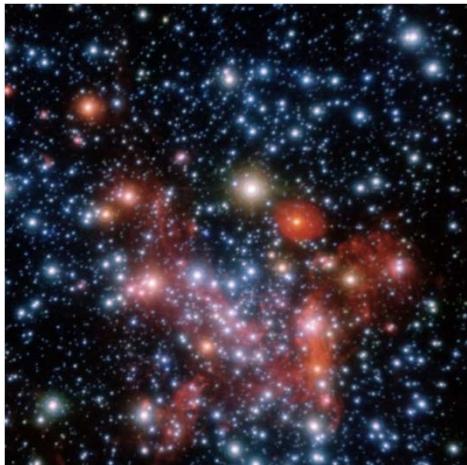


(c) ESA, HFI and LFI consortia, July 2010



The heart of the Milky Way

- Observations of the galactic centre
 - Since 1992
 - VLT telescope (ESO)
 - Instrument: SINFONI (MPE)
- Mass of the central Black Hole :
>>4 million solar masses



Star formation with Herschel

- Herschel space observatory
 - Launch: May 2009
 - PACS-Instrument built at MPE for infrared observations

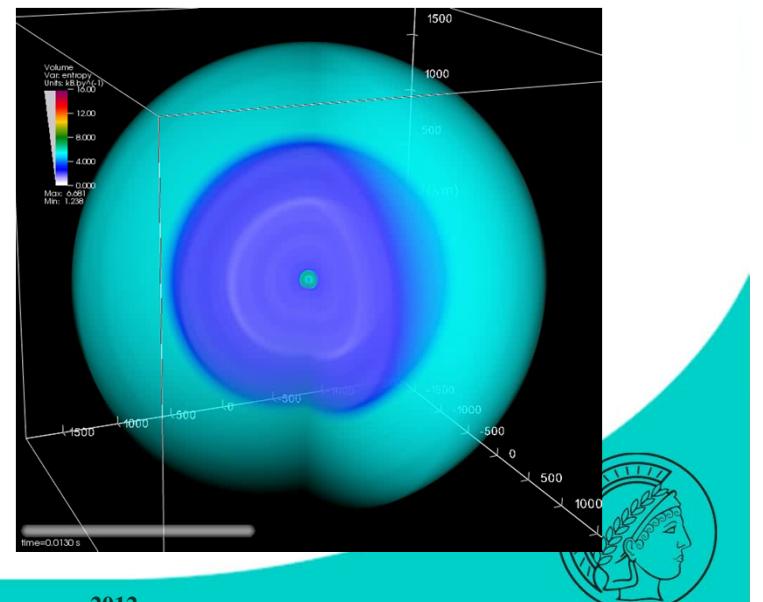
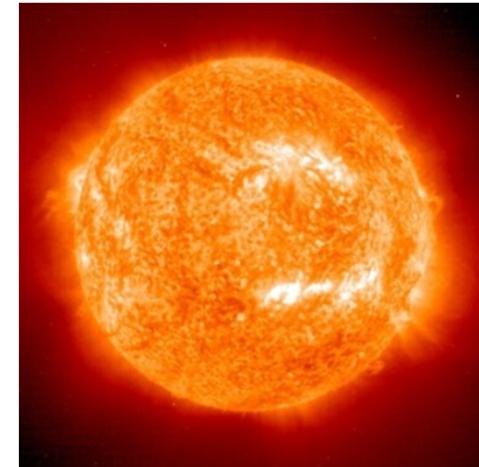
- Star forming regions
 - Gas clouds with neutral hydrogen and other molecules
 - Young stars irradiate their environment
 - Influence of magnetic fields and turbulence



Stellar astrophysics at MPA

- Formation of the elements in stars
 - Nuclear burning
 - Explosions

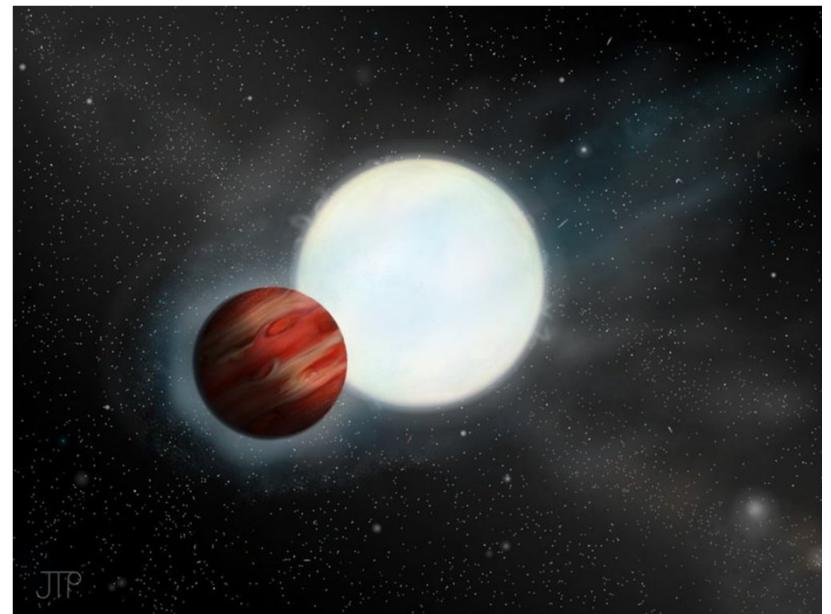
- Supernovae
 - Death of massive stars:
Core Collapse
 - Merging stars



Planets around other stars

- Initial Training Network RoPACS
(Rocky Planets Around Cool Stars)
 - To study extra-solar planets and cool stars
 - Funded by FP7

- The WFCAM Transit Survey
 - Operating since 2007
 - First „hot Jupiter“ found



Exhibition at the Deutsches Museum

- Evolution of the Universe
- Partners:
MPA, MPE, ESO, MPP,
Exzellenzcluster Universe
- Inauguration:
8. November 2009

