



# International Living With a Star

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## Austrian ILWS activities

H.O.Rucker  
Space Research Institute  
Austrian Academy of Sciences

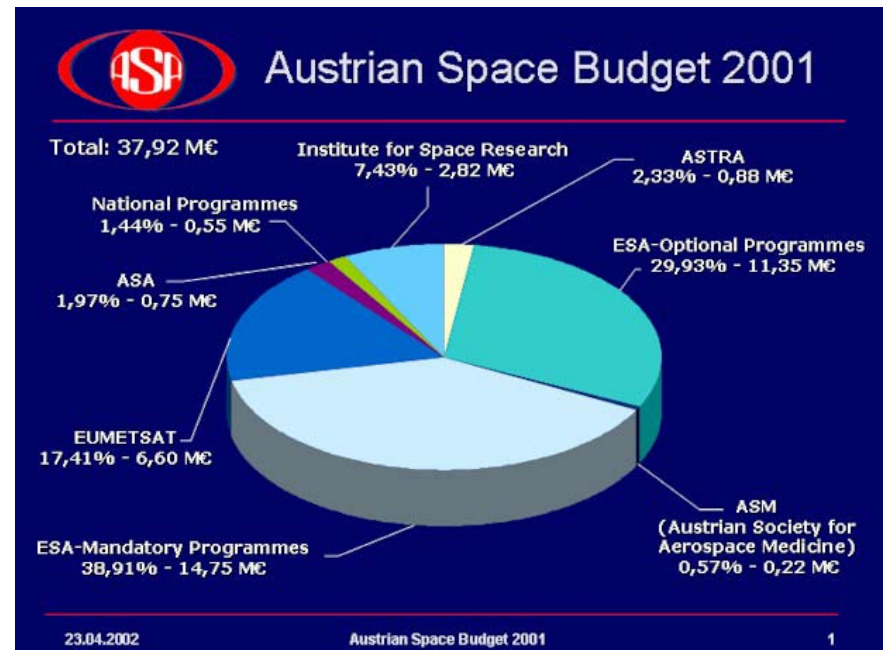


# Austrian Funding for Space Activities



- The funding of the space activities is distributed through the Austrian Space Agency (ASA), Austrian Academy of Sciences (OEAW), and the Austrian Science Foundation (FWF).
- Other projects are carried out under ESA or EU contracts.

- A national space program (ASAP) was implemented in 2002 in the amount of 7 million Euro.





# Austrian ILWS related Institutions



- **IWF/OEAW**

Space Research Institute of the Austrian Academy of Sciences  
*space mission, theory-modeling, ground-based observation*

- **IGAM/KFU**

Institute for Geophysics, Astrophysics, and Meteorology of  
the Karl-Franzens University of Graz  
*Ground based observation, theory*

- **TUG**

Graz University of Technology  
*Rocket experiment, modeling*



# Austrian ILWS contributions (1) *in space*



## ESA missions

- Cluster: magnetosphere/solar wind interaction by IWF (ASPOC, FGM, EDI, PEACE)
- Double Star: magnetosphere /solar wind interaction by IWF (ASPOC, FGM, PEACE)
- Venus Express : a sentinel at 0.72 AU by IWF (MAG)
- Mars Express (IWF contribution to MARSIS experiment)

## NASA mission

- THEMIS: magnetospheric substorm by IWF (magnetometer)

## Other program

- Rocket experiment: electron density profile, by TUG and IWF



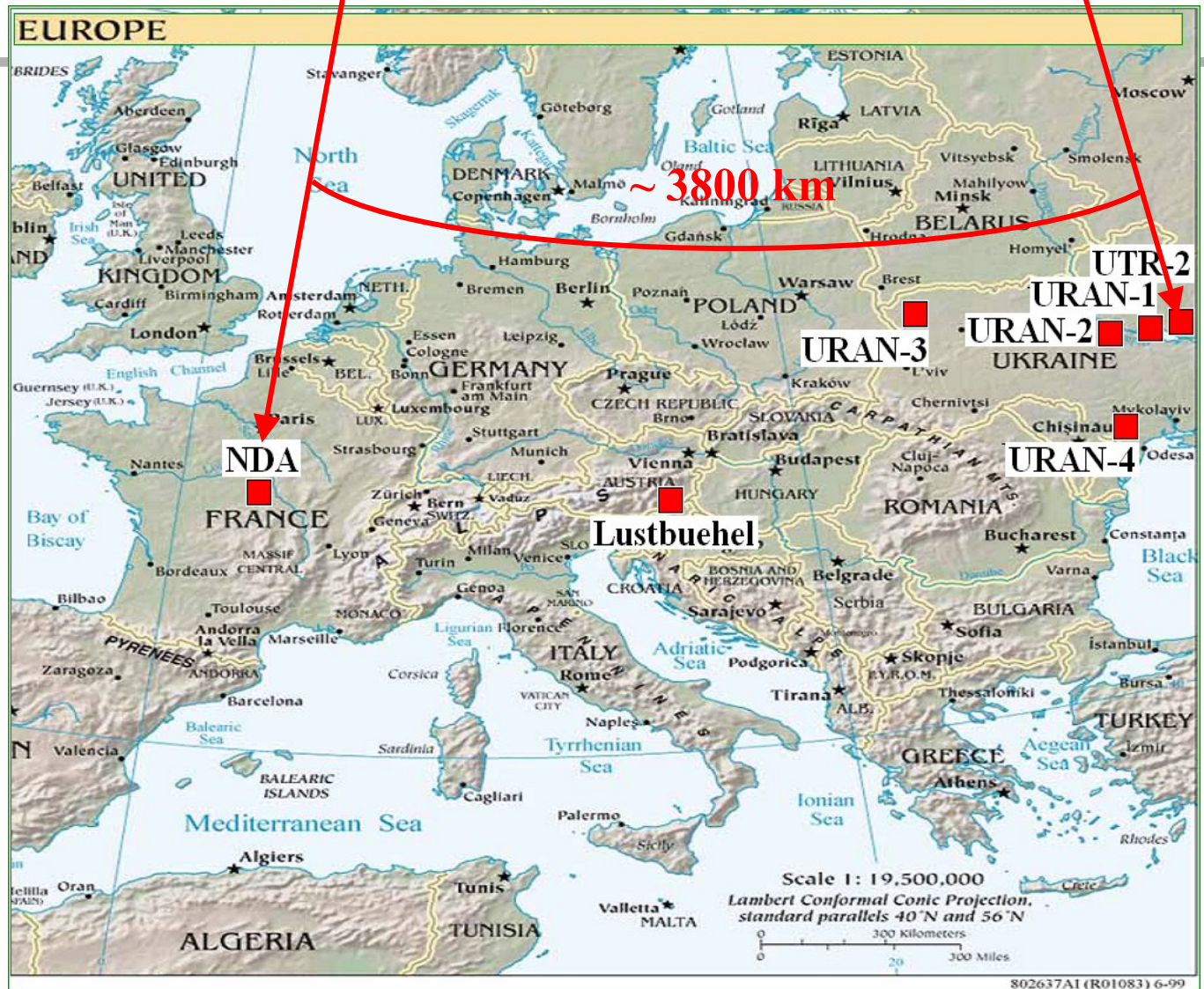
# Austrian ILWS contributions *(2) ground based*



- CHIMAG (IWF):  
magnetometer array in China  
together with Chinese Academy of Sciences, UCLA,  
Universita dell'Aquila, Hungarian Academy of Sciences
- Kanzelhöhe Solar Observatory (KFU):  
Solar activity monitoring,  
part of the Global H $\alpha$  Observing Network
- Lustbühel Observatory (KFU, IWF):  
Total electron content (TEC) using satellite beacons,  
Solar radio emission observation  
(European radio station network Nancay, Graz, Kharkov)



European  
Decameter  
Radio Telescope  
Network

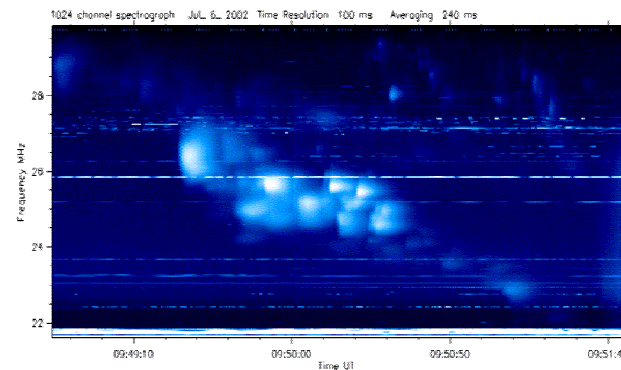
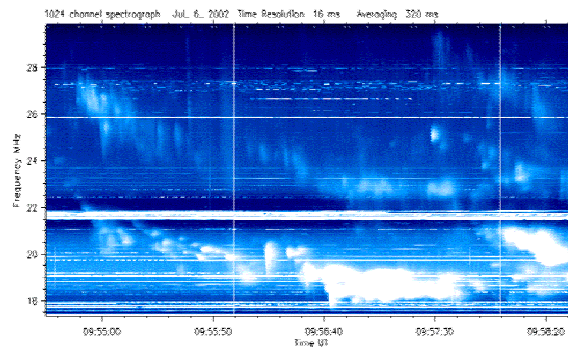
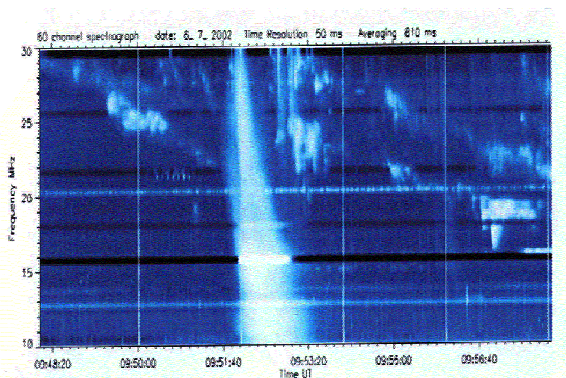




# Austrian ILWS contributions (2) ground based



Joint radio telescope operations Nancay – Graz – Kharkov:  
Type II studies in connection with CMEs, shock propagation





# Austrian ILWS contributions

## *(3) modeling, theory*



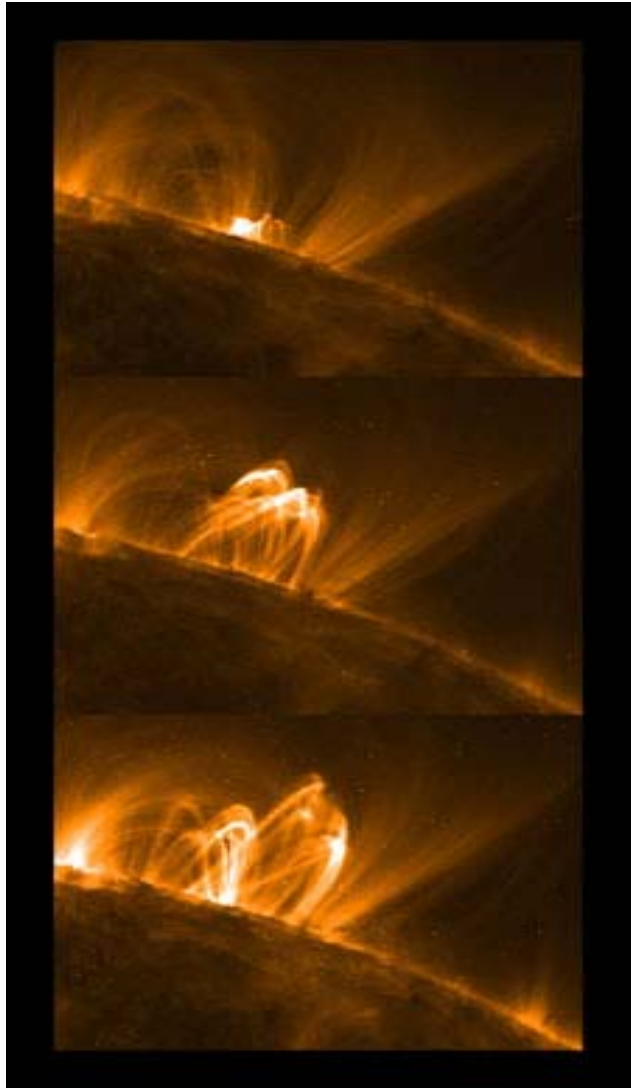
- Magnetosphere (IWF):  
bowshock, magnetosheath, magnetopause,  
magnetotail, substorm physics
- Ionosphere, Upper atmosphere (TUG, IWF, KFU):  
modeling of the electron density profile
- Solar flares, CMEs (KFU, IWF)





# Austrian ILWS contributions

## *(3) modeling, theory*



Preparational work for

- STEREO/ SWAVES
- Solar Orbiter/ RPW