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1. Kanzelhöhe Solar Observatory, Treffen

The routine observations in white light and Hα were performed every day, weather permitting. The Hα data are available on the Internet and are included in the SOHO data base.

The LAN of Kanzelhöhe Solar Observatory is now connected to the Aconet via a 64 kbps data line.

The development of the software for the digital Hα patrol system is in progress. Several test runs with high cadence have already been performed.

The working group for modelling solar irradiance variations has met several times to progress with the investigation of several periods in 1996 during which only one single active region was existing on the solar hemisphere. The software for image restoration and data analysis was considerably improved.

The construction of the dome for the new photometric full–disk telescope was granted by the Bundesgebäudeverwaltung (BGV). This dome was built outside of the observatory and its construction is nearly finished.

The installed magneto–optical filter (MOF) was used to supply full–disk magnetograms for two SOHO/UVCS observing campaigns.

2. Institute of Astronomy, Graz

The construction of the small photometric full–disk telescope was nearly finished. All the optical and mechanical components have been assembled. The development of the software for the data acquisition is progressing rapidly and in the near future the first test observations should be performed.

In collaboration with the Instituto de Astrofisica de Canarias the following common projects have been continued:

- Analysis of time series of white light images obtained at the Swedish Vacuum Solar Telescope (SVST) in La Palma.
- Investigation of special events like exploding granules or small dark points.
- Evolution in magnetically non active and active regions.
- Simultaneous observations of solar granulation in the IR, G–Band, Ca and white light using the SAIS system at the VTT at the Observatorio del Teide.
- Adaption of an inversion code for 3-D simulation of various photospheric line profile parameters.

Using a time series from the SVST (La Palma) observed in June 1993 the properties and the dynamics of the solar mesogranulation are analyzed. This is a collaboration with the Kiepenheuer–Institut für Sonnenphysik in Freiburg.

Jointly with the Main Astronomical Observatory Kiev the scaling behaviour of solar granulation and its time evolution was analyzed using fully compressible 2-D HD models. Special properties of solar IR lines were calculated for comparison with observed spectral lines in collaboration with the Institute of Astronomy at the ETH Zurich.

The co–operation with the Astronomical Observatory Trieste was continued. In the study of the application of cellular automata for simulating stellar convection also magnetic fields were considered. The non linear analysis of solar radio bursts was finished.

The collaboration with the Burgenländische Landesregierung, Abt. XIII/3, on possible influences of solar variations on precipitation was finished.

In a co–operation with Tatranska Lomnica solar spectral lines in the mid photosphere are studied.

More information about the institute and the solar observatory is available on the World Wide Web. The URLs are *http://www.kfunigraz.ac.at/astwww/* and *http://www.solobskh.ac.at/*.

A. Antalová, H. Balthasar and A. Kučera (eds.): JOSO Annual Report '98, 14 – 14