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Graz

In Graz Astronomy is part of the new physics curriculum. The acceptance among the students is high and also of big advantage over the previous curriculum since the perspectives to get a job are much higher with a degree in physics than in astronomy. Solar physics is the main part of the astrophysics section.

New cooperations started with Glasgow on the field of flare dynamics and origination. In that context we were also involved in analyzing RHESSI, and SOHO/MDI data. A cooperation with the Observatoire Pic du Midi on the problem of the variation of solar granulation over the activity cycle was initiated and first results will appear. From an FWF project that was accepted we will buy 2 CCD cameras for the new FPI that will be installed with the new GREGOR at the Observatorio del Teide (cooperation with Göttingen).

Spatially highly resolved photospheric data were analyzed (with Göttingen, Kiepenheuer Institut and Tatranska Lomnica).

With the IAC a collaboration began on the topic of solar UV radiation and its implication and influence on different bodies in the solar system.

Solar like stars were observed with the NOT telescope at the Observatorio Roque de los Muchachos.

International cooperations:

1. Zagreb, Univ. Glasgow, Goddart Space flight Center (solar flares)
2. Instituto de Astrofisica de Canarias (UV radiation, faint young Sun)

3. Institut für Weltraumforschung, Graz

4. Tatranska Lomnica, Kiepenheuer Institut f. Sonnenphysik, Göttingen (high resolution photospheric data).

Kanzelhöhe

The cooperation with the H-α Global Network was continued, the coverage achieved by the Kanzelhöhe Observatory reached more than 11% (about 1000 hours per year). The observatory also observed as one of the ground based stations in the Max Millenium Program providing high cadence full disk H-α images. In cooperation with the Astrophysikalisches Institut Potsdam (AIP) an automatic filter shifting of the H-α telescope was installed, during flares images are also taken in the red and blue wings of H-α. The H-α system was updated with newer hardware which made a faster image acquisition possible, now about 21 images per minute can be stored. The image selection software was renewed and selects now the best image every minute and stores all images during flare events. The H-α observations reached a volume of 200000 images during 1387 observation hours in 2003. In order to handle such a large amount of data (up to 10000 images per day) a new archive system was worked out based on SQL. This archive called KEAS (Kanzelhöhe Electronic Archive System) provides also information on other data as observation logs, image information, sunspot numbers, sunspot drawings and weather data. This archive system meets the specifications of the European Grid of Solar Observations (EGSO) or the Soho Long Term Archive (SOLAR).

International Cooperations

Global H-α network with BBSO H-α line wings observations (AIP) Solar Flares (Zagreb) Large scale solar motions (Ondrejov), Space Weather (Trieste, Zagreb)

Conferences

- From Aug. 25. to Sep. 5. the **Third International Summerschool** was held on Kanzelhöhe. The general topic was **"'Solar Magnetic Phenomena'"**. About 40 participants from 12 countries listened to the 6 general lectures and presented their own contributions. The proceedings will be published in Kluwer ASSL series.

- From Oct 23. to 25. the **'First central European Solar Physics Meeting'** was held in Bairisch Kölldorf, 60 km southeast of Graz. 25 Scientists from 10 different central European countries met and discussed several topics. The proceedings will be published in special edition of the Hvar Obs. Bulletin.