be made available to the astronomical community in the near future.

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13.06.01 Haystack Observatory - A Resource for Astronomy. B. G. LESLIE, NRAO, Haystack Observatory - Haystack Observatory, conveniently located one hour by car from Boston's Logan Airport, provides a precision 120-ft radio telescope operating at many wavelengths from 18cm to 7mm. Particularly well-instrumented frequencies include 7.5-11.2 GHz and 20-26 GHz. Less sensitive but useful systems cover 1.6, 15.5, 29- and 43-GHz regions of interest, and improvements in coverage and sensitivity are in progress, particularly around 5, 29 and 43 GHz. New angle encoders, just installed, are expected to improve pointing accuracy twofold, approaching 3 arcsec rms deviation. A new computer system for pointing, data acquisition and on- and off-line processing has made the telescope a convenient, powerful instrument even for new, unfamiliar users. Receiver back-end equipment includes a 1024-channel correlation spectrometer and accommodates wide-band continuum work as well. Haystack is in the forefront of VLBI operation and instrumentation development. Both MkII and MkIII terminals are available, supported by a hydrogen maser frequency standard. Haystack is leading the development of MkIII, which, due to its wideband capability, affords a fivefold increase in VLBI sensitivity. Operating time is available to all qualified researchers.

14.06.03 Comparison of Satellite and Rocket Coronal Observations around April 13, 1979. R. A. HANABU, R. J. MICHAELS, M. J. MORGEN and N. R. SHERBEE, Jr., NRL, and J. L. KOHL, CFA, R. H. MUIR, HAO, and H. WEISER, CFA - The USAF polar orbiting satellite P78-1 carries an NRL coronagraph that records the white-light corona between 2.8 and 10 R \(_{\odot}\) with a spatial resolution of approximately 1.3 arc min. Observations are made more or less routinely at a rate ranging from one to five images per 90-minute orbit. The coronagraph was operating at the time of the joint CFA/HAO by \(\alpha\)-white light coronagraph rocket flight on April 13, 1979 (see papers by Kohl, et al., this meeting). Our objective is to use the sequence of satellite images together with the rocket white-light coronal images as an aid in interpreting the \(\alpha\) coronal profiles.

**ABSTRACTS**

**AFTERNOON SESSIONS**

Special Session 7: 1400–1500 (Alumnae Hall)

Invited

08.07.09 Recent Advances in X-Ray Astronomy. R. GIACCONI, CFA, Cambridge, Ma.

Session 7: 1500–1700 (Room 377)

HEAD MEETING

01.07.09 "Nondispersive Spectroscopy of Celestial X-Ray Sources." R. H. BECKER, Lab. for High Energy Astrophysics, NASA/GSFC.


03.07.09 "Observations of Clusters of Galaxies with the Einstein Observatory." P. GORENSTEIN, CFA, HCO/SAO.


Session 8: 1500–1700 (Room 277)

Solar Magnetic Fields

08.08.03 Observational Tests of Magnetic Field-Related Coronal Heating Theories. GOLD, L., C. MAXSON, R. ROSNER, S. SERNO and G.S. VAIANA, Harvard-Smithsonian CFA -- General considerations concerning the scaling properties of magnetic field-related coronal heating mechanisms are used to build a two-parameter model for the heating of closed coronal regions. The model predicts the way in which coronal temperature and electron density are related to photospheric magnetic field strength and the size of the region, using the additional constraint provided by the scaling law of Rosner, Tucker and Vaiana (1976). The model successfully replicates the observed scaling of total thermal