grams in the photosphere and chromosphere. The available daily light period was from about 7:30 to 15:00 UT. In spite of some bad weather, observations were obtained for at least part of each day except May 6. Most are in the form of long movies with interlaced magnetogram, H α, and continuum images at a rate of about one image per 3 to 4 seconds. More detailed context observations including scans through the Fe I 6002Å line for all Stokes parameters were obtained several times a day. The field of view ranged from 70 to 210°. Active regions covered included AR 7150, 7152, 7154, 7160, 7162, and 7163. A summary of the coverage and some sample results will be presented. All 1992 data has been flatfield corrected and recorded to video disk for convenient browsing. The digital data is stored on 8mm Exabyte tapes.

This work was supported by NASA contracts NAS8-39395 and NASW-4612, Lockheed Independent Research Funds, and the Swedish Royal Academy of Sciences.

23.12
OVRO Microwave Observations During the Max'91/CoMoSOTOC'92 Campaign
D. E. Gary, G. J. Hurford (Caltech), T. Bastian (NRAO)

The CoMoSOTOC'92 observing campaign was fully supported by the OVRO Solar Array throughout the months of April and May 1992. A total of 18 days of active region and flare observations were obtained jointly with VLA observers. We present an overview of the kind of results obtainable from OVRO data, using the first CoMoSOTOC day of 3 April as an example. We compare preliminary results from the VLA with OVRO maps at the same frequencies, then show how the many additional OVRO frequencies allow the frequency-dependent source structure to be fully characterized. Examples of quantitative results for the electron temperature, column emission measure, and magnetic field strength are also given. We encourage interested researchers with other kinds of data to participate with us in analyzing this large dataset.

23.13
Solar Coronal Plasma and Magnetic Field Diagnostics Using SERTS and Coordinated VLA Observations

We obtained simultaneous images of solar active regions and plage on 1991 May 7 with NASA/Goddard Space Flight Center's Solar EUV Rocket Telescope and Spectrograph (SERTS), the Very Large Array (VLA), and the NASA/National Solar Observatory spectromagnetograph at the NSO/Kitt Peak Vacuum Telescope. We also obtained simultaneous active region spectra using SERTS. The coronal temperature is derived using intensity ratios of emission lines originating in different stages of ionization of iron (Fe X+12 through Fe X+12). Maps of the plage electron temperature and column emission measure are generated using EUV spectroheliograms. We use the Meyer (1993) revised coronal iron abundance to calculate the emission measure. The temperature and emission measure maps are used to calculate a map of the 20 cm wavelength thermal bremsstrahlung emission emitted by the hot plasma observed by SERTS. Because this calculated emission agrees well with the observed 20 cm emission, we find no evidence either for cool absorbing plasma or for contributions from thermal gyroemission in the plage. Using the observed microwave polarization and the SERTS plasma parameters, we calculate a map of the coronal longitudinal magnetic field. The resulting field strengths, ~ 30 - 60 Gauss, are comparable to extrapolated values of the potential field at heights of 5,000 and 10,000 km. Analysis of the active regions remains to be completed.

23.14
VLA Stereoscopy of Solar Active Region 7123
M. J. Aschwanden (UMd, NASA/GSFC), T. S. Bastian (NRAO), N. Nitta (Lockheed)

Daily solar radio observations with the VLA have been performed from April 3 through April 10, 1992, together with soft X-ray observations by YOHKOH, during a coordinated MAX'91 observing campaign. We present multi-frequency VLA observations of the Active Region NOAA/USAF 7123, measured at 90 cm, 20 cm, 6 cm, and 3.6 cm wavelength, and compare the VLA radio maps with simultaneously recorded soft X-ray maps from YOHKOH. This dataset is unique regarding the spatial, temporal, and spectral coverage in radio and soft X-rays.

We analyze the 3-dimensional spatial structure of the coronal plasma of the active region by employing a stereoscopic reconstruction method. We cross-correlate the radio maps from different days at each frequency to infer the altitude, relative motion, and center-to-limb opacity effects of individual features in the brightness distribution of the radio emission. Because of the relatively stable global structure of the active region, and because of the aspect-angle variation over a quarter of a solar rotation, we are able to deduce the basic 3-dimensional structure of the active region, allowing a detailed modeling of the radio emission in terms of free-free emission and gyroresonance emission. Future analysis is planned to include the emission measure and temperature of the soft X-ray data in the active region modeling, in order to test whether the same temperature structures are seen in radio and soft X-rays, or not.

Session 24: Late Posters
Chair: Taek Bai
Law School 281

24.01
Structure of the White Light Corona During the Epoch of the SPARTAN 201 Observations
D. G. Sime (High Altitude Observatory)

Observations of the white light solar corona made almost daily in the interval 1993 April 5 to May 17 (day of year 95-137) are interpreted to describe the large scale density structure of the corona which prevailed during the time of the Spartan 201 Mission (day of year 101-103). These data, gathered routinely with the Mk III K-coronometer at the Mauna Loa Solar Observatory, indicate the locations of streamers and coronal holes and were used to derive