with those obtained from models assuming hydrostatic equilibrium and discuss the implications for deriving self-consistent transition zone models from EUV observations. The importance of the detailed shapes of optically thin lines as diagnostics for studying the dynamics of the solar transition zone is discussed in the light of our results. This work was supported by NASA Grant NAG 7756.


29.04.03 Comparison of slowly and rapidly evolving magnetic structures in active regions seen in Hx and EUV. E.J. Schmahl, ASTR FROM, U. MD., Z. Mouradian, M.-J. Martres and I. Soru-Escart, OBS. MEUDON - We have examined several active regions of the sun observed in EUV (HGO spectroheliograms) and in Kx and Hx (Meudon spectroheliograms and filtergrams) in order to determine spatial and temporal associations between the coronal and chromospheric structures. We summarize the most common associations: 1) In quasi-stationary (non-flaring) active regions, most of the emission from coronal ions such as Mg X and from ions of lower formation temperature, such as O IV and O VI overlies the Hx faculae and Kx plage. 2) There is a high spatial correlation between plage-grains in the chromosphere and corresponding corridors in EUV lines. 3) Around chromospheric plage in well-developed active regions, the commonly observed organization of Hx fibrils ("vortex systems") is highly correlated with fine structure in coronal loops of intermediate to high temperature (10^5 ≤ T ≤ 10^8K). 4) Both stable and unstable Hx filaments appear in the Kx and EUV corridors. The stable Hx absorption features do not usually have overlying Mg X or Si XII emission. 5) On the other hand, unstable filaments, such as those which show Hx doppler shifts or variable absorption, tend to have coronal arcs the channel 

29.06.01 Imm Continuum Observations. T. I. Roellig and J. R. Houck, Cornell University A 3He cooled bolometer system has been developed for making continuum observations at wavelengths near 1mm. The system has been used on the Palomar 5 meter telescope. A 1 s noise equivalent flux density of 1.5 Jy is achieved in 20 seconds of integration time. Observations of Titan indicate a brightness temperature of 86 ± 12K for an assumed radius of 2700 km. The system has also been used to measure the flux from several normal spiral galaxies. These data will also be presented. This work was supported by NASA grant NAG-7324.

29.07.06 Coordinated X-Ray, Optical, and Radio Observations of Flares from the DMS Star YZ Canis Minoris. S.M. Kahlert, ASAR, L. Golub, P.B. Handlen, F.D. Semark, and G.S. Vailana, CPA - The flare star YZ Canis Minoris was observed in 0.2-4.0 keV X-rays on three consecutive nights in October 1979 with the Imaging Proportional Counter (IPC) of the Einstein Observatory. Simultaneous observations were made at radio and optical observatories in Europe and the Western Hemisphere by collaborators too numerous to list here. In total of 215 minutes of X-ray observations for the three nights, one distinct flare event was seen with a peak at about 1045 UT on 25 October. The entire time profile of the X-ray event, which lasted about 10 minutes, was observed. The temperature and emission measure have been determined at several times during the event. The onset of the X-ray event coincided with a peak in the rest of the event in about 20 seconds of the onset of a b-band burst with three distinct peaks each separated by about 23 seconds. The first of which reached a level of 1.9 mag above background. The event was also observed spectroscopically and at several wavelengths in the meter and centimeter range. The characteristics of this event will be compared to those of solar flare events.

A second optical event with a 1.0 mag peak.