of a prominence (or disappearance of a filament), 2. The formation of new loops of emission resembling the classic 'post-flare' loops as the hot plasma cools following the flare, and 3. The formation of new loops at the outer corona, and 3. The formation of new loops of emission resembling the classic 'post-flare' loops as the hot plasma cools following the flare. Both of these loops are often observed in the SOLRAD-9 X-ray images. However, spatially-resolved X-ray observations from ATM suggest that some of these events may have X-ray emission that is below the sensitivity of the SOLRAD-9 instrument.

18.04.09 Intense Soft X-Ray Flux From Her X-1, R.C. Catura and L.W. Acton, Lockheed Palo Alto Research Laboratory. - An intense flux of soft X-rays reaching up to 1 keV has been observed in the spectrum of Her X-1 on 3 February 1975. The observation was made at a binary phase of 0.18, approximately two days after x-ray "turn on" relative to the 35 day cycle. If the observed flux is corrected for interstellar X-ray absorption this luminosity in the 0.10-0.28 keV band is comparable to that of 2-10 keV. This confirms the results of Shulman et al. (Preprint submitted to Ap. J. Letters, Feb. 1975) and extends the detection of this flux to lower energy, a different binary phase and to a time period later in the 35 day cycle. The present results and those of Shulman et al. suggest that this intense soft X-ray flux may be a stable feature of the spectrum of Her X-1 during its X-ray "on" state. It appears to be difficult to reconcile the high luminosity of the soft X-ray emission with the current simple models of the X-ray source. This work has been supported by NASA contract NAS-2672 and the Lockhead Independent Research Program.

18.06.03 Coronal X-Ray Transient Events Associated with Hα Emission Disappearances, D. Wilth, S. Krieger, D. Roats, GSFC & S. Valiana, CTA. - The soft X-ray images returned by the S-654 X-ray telescope experiment have revealed the existence of a class of transient X-ray brightenings in the quiet corona which are associated with the coronal cavities surrounding Hα filaments. Of 47 observed X-ray events of this type, 31 were associated with the disappearance of an Hα filament. The remainder were associated with filament channels (i.e., aligned fibril structures without accompanying absorbing material). A comparison of the X-ray images with a compilation of observed Hα filament disappearances suggests that most (if not all) such events are accompanied by a coronal manifestation. Where X-ray observations are available near the peak of the event, the shape and size of the X-ray emitting region resemble those of the disappearing Hα filament. Peak X-ray brightnesses for these events are comparable with active regions in the 2-32, 44-54 Å waveband. The durations of the observed X-ray events range from 20 to 30 hours. The cause of the long-lived changes in the surrounding coronal structures, primarily a filling-in of the pre-existing coronal cavity. Occasionally loop structures are observed in association with these events. An event on 21 August 1975 will be discussed in detail. Estimates of electron temperatures, emission measures and particle densities will be given. This work was supported by NASA contract NAS-27758 and NAS-31017.