

## Large-scale magnetic reorganization by flares from Active Region NOAA 10484 on 22 October 2003

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Solar Observations are routinely carried out at ARIES, Nainital to study the solar activity phenomena. These observations are valuable to understand the various features/ processes of the energetic Sun (e.g., flares, filaments, CMEs, etc.), which form one of the goals of IHY. On October 22, 2003, around 1:30-6:30 UT several flares occurred in the NOAA 10484 active region. These events have been observed in H $\alpha$  using 15 cm f/15 coudé refractor and CCD camera at ARIES. Some of the selected images of the flare event are shown in Figure 1. In this paper we present the evolution of the flares in H $\alpha$  and compare the results with the available multi-wavelength data and CME measurements. The interesting part of these observations is that the eruption takes place at a complex magnetic field region ( $\beta\gamma\delta$ ). Soon after the eruption a dark surge developed on the disk at the south-east of the active region, which grew in size enormously within a short time. The data have been analyzed to understand the triggering of the event and associated CME and we discuss the possible explanation in terms of tether-cutting model and break-out scenario.

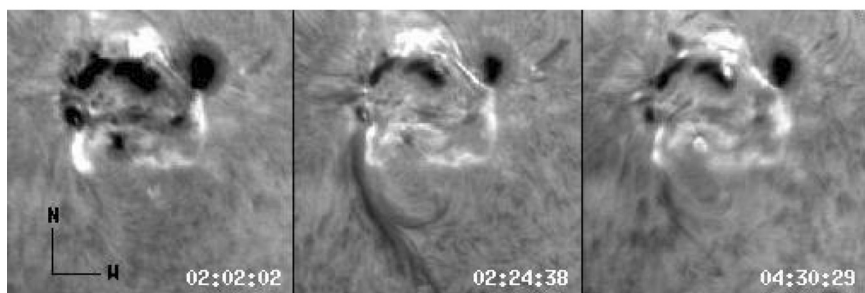


Figure 1. Selected H $\alpha$  filtergrams (270 $\times$ 270 arc sec) of NOAA 10484.