



Space Weather and confined CME events

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The unusually large NOAA active region (AR) 2192, observed in October and November 2014, was outstanding in its productivity of major flares (GOES class M5 and larger). During the time when the AR faced Earth, major Space Weather events would have been expected. However, none of the X-flares was associated to a coronal mass ejection. Observational evidence for the confinement of the flare are large initial separation of the flare ribbons, together with an almost absent growth in ribbon separation. The low dynamic of the ribbons also suggests a reconnection site high up in the corona. From NLFF modeling we show that the arcade overlying the AR had a predominantly north-south oriented magnetic system, which served as a strong, also lateral, confinement for the flares at the core of the active region. From the magnetic field modeling we derived the decay of the constraining background, and it was found that the overlying field was only slowly decaying with height. We conclude that observational data of the solar surface, especially of flare ribbon dynamics as well as magnetic field models support Space Weather predictions.