Sequential chromospheric brightenings as signature of chromospheric evaporation

A. **A. Pevtsov** (1) and K. S. Balasubramaniam (1)

(1) National Solar Observatory, U.S.A. (apevtsov@nso.edu/(+1-505-434-7029)

Sequential Chromospheric Brightennings (SCBs, Balasubramaniam et al, 2005) are observed in conjunction with some strong solar flares, prominence eruptions, and coronal mass ejections (CMEs). SCBs are seen as wave-like trains of increased brightenning of chromospheric network elements propagating away from the site of eruption (flare/CME). Although network magnetic field usually has mixed polarity, only areas of one polarity (prevailing or unbalanced) field are seen as SCBs; there are no brightenings in neighboring network elements of opposite (minor) polarity. This polarity rule, relative timing of SCBs in respect to beginning of flare/CME, and their location in respect to overall topology of each event suggest that SCBs may be caused by high energy particles precipitating from the reconnection site at the tail of CME. In this work we use TRACE, SOHO/MDI, and H-alpha ISOON data to demonstrate that indeed SCB locations exhibit several properties of chromospheric evaporation.