

Magnetic reconnection in small scale solar eruption events

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In this paper, we present a detailed study of small-scale solar activity event: filament expanding two times with surge-like activity erupting two times, in which the successive brightening of the chromosphere was due to the successive magnetic reconnection along the magnetic neutral line. For the first time we give the measured method for such magnetic reconnection rate ψ_{rec} . The rate of magnetic flux change φ_{rec} involved in the magnetic reconnection in the low corona was also obtained. Two profiles of two rates as a function of time were relatively consistent.