

4. Eruptions in the solar atmosphere

Rare Solar Radio Burst and Falling EUV Blob

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At the beginning of the M3.7 flare that occurred on November, 4th, 2015, we observed a rare burst drifting with the frequency drift of $115 \text{ MHz}\cdot\text{s}^{-1}$ from 1300 to 2000 MHz. We analyzed the multi-spectral imaging data of the flare from H_α , EUV (IRIS, SDO/AIA) and soft X-rays (Hinode/XRT) and found that this slowly positively drifting burst was associated with a falling blob of plasma observed in EUV and soft X-rays. The blob moved with velocity of about $280 \text{ km}\cdot\text{s}^{-1}$ along a dark loop visible also in H_α . The H_α profile taken from the same position in the dark loop showed a change from absorption to a weak emission profile. Considering different possibilities, we propose that this slowly positively drifting burst was generated by the thermal conduction front formed in front of the falling hot EUV blob.