## [SO05] Simultaneous observations of X-ray plasma ejection, type II burst, and CME

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We report on the first simultaneous observation of X-ray plasma ejection(XPE), type II solar radio burst, and CME on 1999 October 26. First, an XPE was observed from 21:12 UT to 21:23 UT in the Yohkoh/SXT field of view (1.1 to 1.4 solar radii). The XPE initially had a strong acceleration of 2500 m/s2 for 2 minutes and then constantly propagated with a speed of about 350 km/s. Second, a type II solar radio burst was observed at 21:30 UT by the Culgoora solar radio spectrograph. The burst started at the height of 1.5 solar radii which is estimated from its starting frequency assuming the one-fold Newkirk coronal density model. From the frequency drift rate of the burst, the propagation speed is estimated to be about 400 km/s. Third, the associated CME was observed by the Mauna Loa Mk 4 coronameter (1.2 to 2.8 solar radii). The CME first appeared at 21:20 UT and then accelerated up to 1.6 solar radii. Its speed is 500 km/s (around 2 solar radii) at the type II starting time. By comparing these three phenomena, we find that (1) there is a remarkable difference (0.4 solar radius) between the CME front and the XPE front at 21:23 UT, (2) the type II formation height is not consistent with the CME front but the trajectory extrapolated from the XPE front, (3) three speeds are comparable with one another. Regarding the type II origin, our results suggest two possibilities : the XPE front or the CME flank.

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## [SO06] Observations of magnetic reconnections in erupting kinked loops

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We report on multi-wavelength observations of magnetic reconnections that occurred in erupting kinked loops. We found EUV cusp-like brightenings as evidence for magnetic reconnection in the loops. The EUV cusp-like structure was located at the intersecting X-type position of the loops seen in EIT running difference images, Nobeyama radioheliograms, and H-alpha images. Especially, the radioheliograms show that there was a counter-clock wise rotation at the angular speed of 18 degree/min. The kinked loops were associated with the eruption of a very large quiescent filament and a coronal mass ejection (CME). Additional signatures supporting for magnetic reconnection are as follows; (1) it was located just on the extended line of a large scale current sheet in the helmet streamer overlying the filament, (2) there was a weak GOES X-ray enhancement with a very short duration of about 1 minute, which is exactly coincident with the time of the EUV cusp-like brightenings, and (3) the temperature of flaring plasma estimated from the flux ratio of shorter and longer wavelength flux of GOES is about 10 MK. In addition, we found that there were continuous EUV brightenings at the bottom of one footpoint of the kinked loops for a few hours after the eruption, which seems to be evidence for coronal mass drainage.