

**M19a Source Structures of A Microwave Burst with Slow Frequency Drift
on November 28, 1998**

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An X3.3 flare occurred in NOAA 8395 together with a partial halo CME reported by SOHO/LASCO on Nov. 28, 1998, between 05:25 and 07:50 UT with peak time at 05:40 UT. The associated radio burst was also recorded by Nobeyama Radioheliograph at 17 and 34 GHz and the radiospectrometer of Beijing Observatory at 2.6-3.8 GHz.

The burst source was composed of three parts in the diagram of the heliograph. The main part (source A) was located at a bright region in SXT images with strong magnetic field, closely to a footpoint of one soft X-ray loop. The second part (source B) was associated with the other bright soft X-ray loop with weaker magnetic field. The third part (source C) coincided with another soft x-ray loop with weaker magnetic field. Moreover, each loop in sources B and C seems to be triggered by being prolonged from the loop in source A. It was observed by the radiospectrometer that in the decay phase there was a hump at 05:41-05:43 UT accompanied by very slow drift from high to low frequencies corresponding to a speed of several tens km/s. The source C at 17 GHz seems to correspond to the slow frequency drift component as follows. (1) The source C was a newborn source in both the heliograph and SXT/HXT images which started around 05:41 UT. (2) The source C moved towards the limb, and its speed was comparable with the estimated velocity from the spectrometer.

We discuss the possible relationship between the slow drift component and coronal shock (CME).