

SA-O9

Here, we found three vortex flows on the photosphere during an M flare. One of the vortex rotated clockwise and located on the footpoint of the erupting flux rope. The other two ones marking the two flare ribbons rotated contour-clockwise. The result implies that the clockwise vortex is responding for the expanding flux rope and the counter-clockwise vortex is due to the shrinkage of the flare loop.