

Inferring magnetic reconnection behavior in solar atmosphere from observations

Haisheng Ji

Purple Mountain Observatory, Chinese Academy of Sciences

In this talk, we give a short review of our knowledge about reconnection behaviors for solar flares. It is shown that the two-dimensional classical "CSHKP" magnetic reconnection model of two-ribbon flares can not account for new observational results. Recent observations from hard X-ray and optical wavelength have revealed a new kind of motion patterns. For example, observations of hard X-rays made by RHESSI have shown that in most cases the loop-top sources have a downward motion in the early part of flares before the apparent outward motion is observed. Meanwhile, the flare ribbons or hard X-ray footpoints have a converging motion. Using two well-observed events, we show that this kind of motion is a signature of relaxation of highly-sheared magnetic fields.