



## **Understand solar eruptions with the Advanced Space-based Solar Observatory (ASO-S) mission**

Li Feng, Weiqun Gan, and the ASO-S team

ASO-S is a mission proposed for the 25th solar activity maximum by the Chinese solar community. It will be China's first solar space mission, if successful and has been officially approved at the end of 2017. Currently, ASO-S is in Phase-C and expected to be launched around 2022. ASO-S has a solar-synchronous orbit at an altitude of 720 km, with an inclination angle of around 98.2°. The scientific objectives of ASO-S are to study the relationships among solar magnetic field, solar flares, and coronal mass ejections (CMEs). The energies of solar flares and CMEs are now believed to come from the solar magnetic field. The simultaneous observations of the solar magnetic field, solar flares, and CMEs, and the researches on the relationship among them, are therefore of particular importance. To fulfill the scientific objectives, ASO-S consists of three payloads: Full-disk vector MagnetoGraph (FMG), Lymanalpha Solar Telescope (LST), and Hard X-ray Imager (HXI), to measure solar magnetic fields, to observe CMEs and solar flares, respectively. This talk shows the current status of ASO-S and our science preparations for understanding solar eruptions with ASO-S.

### References

The references related to your talks will be used to write summary paper in RMPP (Rev. Mod. Plasma Phys.). So do not miss important papers related to your talk.

Figure xx

Note: Abstract should be in 1 page.