

## Protostellar flares driven by accretion in protoplanetary disks

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X-ray observations reveal that protostars produce huge explosions frequently. There is discussions that protostellar flares may play roles in forming chondrules that are important building blocks of planets. Protostellar flares are similar to solar flares, and are considered as explosions driven by magnetic energy release. However, protostellar flares are much more energetic than solar flares. The huge energy suggests that flare size should be larger than the stellar radius, which implies that a different energy build up process is required. We investigate the mechanism of protostellar flares using 3D MHD simulations. Our simulations revealed that the energy build up is done by the accumulation of magnetic flux by accretion from the protoplanetary disk. In this paper we will discuss the physics on the basis of our simulaitions.

Keywords: protoplanetary disks, flare