

GT Mus

Observation plan

The main purpose of the XRISM observations is to detect non-thermal signatures during stellar flares in a magnetically active star. GT Mus was chosen as a good candidate, although any other magnetically active star satisfying the triggering conditions may be observed instead.

To trigger the XRISM observation, we require that MAX will alert us of a giant flare in GT Mus or any other magnetically active star, and confirm the stellar nature of the source by NICER, onboard the International Space Station (OHMAN). These observations will also allow us to determine rapidly the flux level and confirm the long duration of the flare. ISAS has the capacity to trigger NICER observations based on MAXI results. Based on the MAXI and NICER information, the XRISM observation will be triggered.

XRISM will then make one single pointed observation of 90 ksec. The OPEN filter will be used with Resolve and the FULL window for Xtend.

Immediate objectives

- [1] Measure Doppler shifts of multiple lines
- [2] Detect deviations from collisional ionization equilibrium (CIE)
- [3] Constrain flag geometry from neutral Fe I K α