T CrB

Observation plan

- A single, 150 ks, TOO observation, to be triggered when the hard X-ray flux has recovered to the historical level.
- Trigger to be based on X-ray all sky monitors (Swift/BAT, MAXI) supplemented by pointed Swift/XRT observations. The estimated trigger probability is low (~0.2), based on its historical behavior.
- Once it returns to the X-ray bright state, T CrB is likely to stay bright for months or years; rapid reaction is not necessary.

Immediate objectives

To measure the gravitational redshift of the 6.4 keV line from the white dwarf surface, and hence to measure the white dwarf mass. The gravitational redshift is a steep function of mass near the Chandrasekhar limit, so the accuracy to which mass can be determined is excellent in the most interesting case of a near-Chandrasekhar mass white dwarf. On the other hand, we cannot specify the accuracy to which we will measure the mass without knowing what the mass is.