

HIGH METALLICITY IN CATAclySMIC VARIABLES AND THE RISE OF SUPERNOVAE

Peter Garnavich
University Of Notre Dame
GO20046

We propose to study two of the three known cataclysmic variables (CV) in the old, metal-rich open cluster NGC 6791. Both appear to be dwarf novae, although, ground observations have been sparse. The instability of the accretion disk producing the dwarf nova outbursts may depend on the metal abundance of the accreting gas. Photometric properties, such as cycle time and outburst amplitude, maybe enhanced in the unique NGC 6791 environment. We also propose to monitor 93 bright galaxies at $z < 0.05$ in the Kepler field to obtain the early light curve of a supernova. SDSS-II studies of type Ia light curves show that the rise-times are shorter than previously thought and the shape of the early rise provides insight into the explosion mechanism.