The orbital periods of old novae

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A nova explosion is a thermonuclear runaway on the surface of the white dwarf in a cataclysmic variable (CV). A few decades after the nova eruption, the features of the host CV become dominant. Population studies of post-novae would therefore provide observational information on the importance of certain properties (magnetic field, mass-transfer rate, etc.) for the CV to undergo a nova eruption, as well as the impact of the eruption on those parameters. The orbital period distribution is an important diagnostic for the theory of evolution of CVs, and comparison between the periods of novae to those of the whole CV population shows significant differences. However, the nova sample is still very small and its period distribution suffers from undersampling in several period ranges. In order to enlarge the current sample, we started a project to recover the post-novae, classify them through their spectral characteristics and whenever possible, obtain the orbital period of those systems. In this talk, we present preliminary results on the latest objects studied.

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