

Abstract Submitted
for the APR08 Meeting of
The American Physical Society

Harmonic correlation for eccentric binaries in gravitational wave observations SHANE L. LARSON, Weber State University, RONALD W. HELLINGS, Montana State University — Binary systems will be among the most numerous sources detected by interferometric gravitational wave detectors. In many instances, the binaries will have non-zero orbital eccentricities, producing power in the Fourier spectrum at the fundamental orbital frequency and its higher harmonics. This talk describes a binary search technique called *harmonic correlation* which exploits the harmonic structure of the signal to identify binaries in gravitational wave data streams, even at low signal-to-noise ratios.

Shane Larson
Weber State University

Date submitted: 10 Jan 2008

Electronic form version 1.4