

Abstract Submitted
for the APR21 Meeting of
The American Physical Society

The Method for Targeted Search for Long-duration Transients From Glitching Pulsars LIUDMILA FESIK, MARIA ALESSANDRA PAPA, Max-Planck-Institut für Gravitationsphysik — We propose a method for identifying continuous waves (CWs) from spinning neutron stars. We focus on glitching pulsars with abrupt spin-ups and long term spin-down, which imprint in CWs as long-duration transients from weeks to months. The main principle of the method is the combination of a coherent detection statistics over time intervals of different duration. We characterize the method by determining the false alarm and false dismissal probabilities for different signal strengths, and appropriate choices of the relative detection thresholds. We compare the sensitivity of this method with the standard match-filtering.

Liudmila Fesik
Max-Planck-Institut für Gravitationsphysik

Date submitted: 11 Jan 2021

Electronic form version 1.4