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**Broadband searches for continuous gravitational waves** VLADIMIR DERGACHEV, Max Planck Inst for Gravitational Physics , LIGO/VIRGO COLLABORATION COLLABORATION — Isolated rotating neutron stars are expected to emit gravitational radiation of nearly constant frequency and amplitude. Searches for such radiation from unknown stars are computationally limited, with all-sky searches of initial LIGO and Virgo data achieving sensitivity to strains smaller than  $10^{-24}$ . Because CW amplitudes are thought to be extremely weak, long time integrations must be carried out to detect a signal. Integration is complicated by the motion of the Earth (daily rotation and orbital motion) which induces substantial modulations of detected frequency and amplitude that are highly dependent on source location. Large volumes of acquired data make this search computationally difficult. We will present recently published results and discuss algorithms used to analyze large volumes of data.

Vladimir Dergachev  
Max Planck Inst for Gravitational Physics

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