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Wide parameter searches for continuous waves with Advanced LIGO VLADIMIR DERGACHEV, Albert Einstein Institute/Golm, LIGO AND VIRGO SCIENTIFIC COLLABORATION COLLABORATION — Continuous waves from non-axisymmetric neutron stars are orders of magnitude weaker than transient events from black hole and neutron star collisions. As continuous waves from galactic sources are expected to persist across an observing run the searches are carried out by integrating months of collected data. This greatly increases sensitivity, with a corresponding increase in analysis complexity. All-sky and spotlight searches are designed to cover large parameter spaces, trading off potential sensitivity of a single-target search for greater chance of detection. We will present latest analysis results and discuss algorithms that make large-scale analysis practical and efficient.

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