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The PyCBC search for compact binary mergers in the second run of Advanced LIGO TITO DAL CANTON, USRA - NASA/GSFC, PYCBC TEAM — The PyCBC software implements a matched-filter search for gravitational-wave signals associated with mergers of compact binaries. During the first observing run of Advanced LIGO, it played a fundamental role in the discovery of the binary-black-hole merger signals GW150914, GW151226 and LVT151012. In preparation for Advanced LIGO's second run, PyCBC has been modified with the goal of increasing the sensitivity of the search, reducing its computational cost and expanding the explored parameter space. The ability to report signals with a latency of tens of seconds and to perform inference on the parameters of the detected signals has also been introduced. I will give an overview of PyCBC and present the new features and their impact.

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