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## **BSD-COBI: New search pipeline to target inspiring light dark compact objects.**

*Tuesday 22 August 2023 09:30 (20 minutes)*

Dark compact objects, like primordial black holes, can span a large range of masses depending on their time and mechanism of formation. In particular, they can have subsolar masses and form binary systems with an inspiral phase that can last for long periods of time. Additionally, these signals have a slow increase of frequency, and, therefore, are well suited to be searched with continuous gravitational waves methods. We present a new pipeline called COmpact Binary Inspiral (COBI), based on the Band Sampled Data (BSD) framework, which specifically targets these signals. We describe the method and propose a possible setup for a search on O4 LIGO-Virgo data. We characterize the pipeline performances in terms of sensitivity and computing cost of the search corroborating the results with software injections on O3 data.

### **Collaboration / Activity**

Virgo, ET

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