



Contribution ID: 113

Type: **Poster**

## Primordial Black Holes from Confinement

*Tuesday 7 December 2021 08:20 (30 minutes)*

A mechanism for the formation of primordial black holes is proposed. Here, heavy quarks of a confining gauge theory produced by de Sitter fluctuations are pushed apart by inflation and get confined after horizon re-entry. The large amount of energy stored in the colour flux tubes connecting the quark pair leads to black-hole formation. These are much lighter and can be of higher spin than those produced by standard collapse of horizon-size inflationary overdensities. Other difficulties exhibited by such mechanisms are also avoided. Phenomenological features of the new mechanism are discussed as well as accounting for both the entirety of the dark matter and the supermassive black holes in the galactic centres. Under proper conditions, the mechanism can be realised in a generic confinement theory, including ordinary QCD. Moreover, for particular values of the confinement scale, the produced gravity waves are within the range of recent NANOGrav events. Simple generalisations of the mechanism allow for the existence of a significant scalar component of gravity waves with distinct observational signatures.

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**Session Classification:** Break and Poster Session