



Contribution ID: 57

Type: **not specified**

## Making PBHs in a Early Matter Dominated Era

*Monday 19 May 2025 15:40 (20 minutes)*

I present a novel mechanism for creating primordial black holes. A heavy dissipative dark sector can come to dominate the universe, creating an early matter dominated era prior to Big Bang Nucleosynthesis (BBN). At this time the dark matter can form halos which persist after the phase transition back to radiation domination, and slowly collapse at late times. This leads to the late time formation of subsolar mass primordial black holes. This also leads to the formation of late forming low mass black holes which may Hawking radiate violently at late times.

**Author:** DIAMOND, Melissa

**Presenter:** DIAMOND, Melissa

**Session Classification:** PBHs from inflation & other formation scenarios