

Abstract Submitted
for the 4CF12 Meeting of
The American Physical Society

Dynamics of Primordial Black Hole Clusters JAMES CHISHOLM,
Southern Utah University — Primordial black holes (PBHs) that form from the collapse of density perturbations are more clustered than the underlying density field. In this talk we examine the formation of bound systems of PBHs in the early universe. These would hypothetically be the earliest gravitationally collapsed structures, forming when the universe is still radiation dominated. Depending upon the size and occupation of the clusters, PBH merging and core collapse occurs before they would have otherwise evaporated due to Hawking evaporation, leaving behind larger PBHs. This talk summarizes the results of PRD 84, 124031 (2011).

James Chisholm
Southern Utah University

Date submitted: 29 Aug 2012

Electronic form version 1.4