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Primordial Black Holes and Structure Formation ADAM DRAKE,

University of Houston-Downtown — Primordial Black Holes (PBHs) were first proposed by Zel'dovich & Novikov (1967) and Hawking (1971) as a consequence of the extremely high densities that occur in the Big Bang model. They differ from other black holes in our universe in that they do not have stellar progenitors and have a wide range of possible masses $M_{\rm PBH} \sim 10^{-5} g$ and $M_{\rm PBH} \geq 10^{15} g$. It is well-established that supermassive black holes (SMBHs) with masses in the range of $10^6-10^{9.5}M_{\odot}$ reside in most galactic centers. These SMBHs have grown largely through accretion but it is still unclear how they formed. We examine the possibility that PBHs are the seeds from which SMBHs grow and attempt to determine the viability of PBHs as a dark matter candidate.

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