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# Primordial Black Hole Hot Spots and Nucleosynthesis

Upon their evaporation via Hawking radiation, primordial black holes (PBHs) may deposit energy in the ambient plasma on scales smaller than the typical distance between two black holes, leading to the formation of hot spots around them. My talk will be based on arXiv:2501.05531, where we investigate how the corresponding rise of the local temperature during the evaporation may act as a shield against the release of low-energy photons, affecting PBH's capacity to dissociate light nuclei after Big-Bang Nucleosynthesis through photodissociation. We study the different ways PBH hot spots affect the flux of low-energy photons expected from PBH evaporation, and we find that such effects can be particularly relevant to the physics of photo-dissociation during Big-Bang Nucleosynthesis for PBHs with masses between $10^{11}$ g and $3\times10^{12}$g. We emphasize that the magnitude of this effect is highly dependent on the specific shape of the temperature profile around PBHs and its time evolution. This underscores the necessity for a comprehensive study of PBH hot spots and their dynamics in the future.

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