

Primordial Black Hole Paper Comments/Suggestions

- Pg. 2, Line 12: “By evolving an ingoing solution past a gravitationally collapsing objects, Hawking showed that a black hole will thermally emit[**comma**] with a temperature inversely proportional to the black hole mass[**comma**] all available species of fundamental particles.”
 - Adding the commas clarifies the meaning of the sentence, or instead switching the two underlined clauses would clarify this sentence as well
- Pg. 5, Lines 130-132: “As the evaporation proceeds to higher temperatures, the greater **the number of degrees of freedom of emitted fundamental particles will be** and the faster and more powerful **the final burst will be**, with...”

OR

“As the evaporation proceeds to higher temperatures, the greater will **the number of degrees of freedom of emitted fundamental particles be** and the faster and more powerful will **the final burst be**, with...”
 - The words “will be” do not sound correct in their current location (in my opinion), but I would not say it is currently necessarily incorrect
 - “degrees of freedom” should be before “ emitted fundamental particles” because it is the number of degrees of freedom and not emitted particles that will be greater as evaporation proceeds to higher temperatures (at least that's how I understood it based on this sentence, but if that is incorrect then perhaps this sentence conveys the wrong message?)
- Page 7, Lines 165-166: “To search for the emission from a PBH burst[**comma**] one needs to for an excess [**of...?**] that can...”
 - It is unclear to me what the excess must be an excess of? An excess of cosmic-ray flux, of gamma-ray flux, or something else?
- Page 7, Line 182: “Here[**comma**] p_0 ...”
- Page 9, Line 228: “First[**comma**] we created skymaps...”

- Page 9, Table 2: “Milagro effective area parametrization parameters for various...”
 - Is it supposed to say “parametrization parameters” or just either “parametrization” or “parameters”?

- Page 14, Lines 346-347: “The final upper limits on the PBH burst rate density if[**comma**] at the 99% confidence level[**comma**] zero PBH bursts are observed...”
 - Adding these commas will make this sentence more clear and more grammatically correct.

- Page 17, Line 388: “However[**comma**] the anti-proton derived limit depends...”