

## Primordial Black Hole Paper Comments/Suggestions

- Pg. 2, Line 12-15: “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 will be **the number of degrees of freedom of emitted fundamental particles** and the faster and more powerful will be **the final burst**, with...”
  - “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 8, Lines 167-168: “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 9, Line 178: “... $5\sigma$  excess[**comma**] after a given number of trials, based on the...”
 

\*\*\*OR\*\*\* “... $5\sigma$  excess after a given number of trials[**no comma**] based on the...”

  - I realize that Krista suggested the removal of one of the commas in this sentence (the one I am suggesting to put back in), but if you remove that comma you must also remove the one following it, otherwise the sentence is grammatically incorrect. So either have both commas or remove both, both of those options are correct.
  
- Page 9, Line 183: “Here[**comma**] p\_0 ...”

- Page 10, Line 229: “First[**comma**] we created skymaps...”
  
- Page 11, Table 2: “Milagro effective area parametrization parameters for various...”
  - Is it supposed to say “parametrization parameters” or just either “parametrization” or “parameters”?
  
- Page 16, Lines 347-348: “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 19, Line 389: “However[**comma**] the anti-proton derived limit depends...”