The steepest growth of the power spectrum and primordial black holes

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Primordial black holes have had a recent surge in popularity due to the LIGO/VIRGO detections and the possibility that they could make up all or part of the dark matter. However, even if you only want to produce one primordial black hole, there are tough requirements for the inflationary potential which can be translated into constraints on the primordial power spectrum. I will show that there is a limit to how fast the power spectrum can grow, and how observational constraints are getting closer and closer to ruling out primordial black holes on certain mass ranges.

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