From the postulate ("statistical bootstrap") that highly excited lumps of hadronic matter are not essentially different from the hadronic resonances observed at lower excitation, a mathematical self-consistency condition on the hadron mass spectrum is derived. This forces the spectrum to grow exponentially with the further consequence that there exists a 'highest temperature': $T_0 = 1.2 \times 10^{12} \text{ OK}$ for hadronic matter. (The SCI indicates that this paper has been cited in over 460 publications since 1965.)

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