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**Title:** On the critical metrics of the total scalar curvature functional

**Author(s):** Abdênago Barros and Israel Evangelista

The aim of this paper is to study the critical metrics of the total scalar curvature functional on compact manifolds with constant scalar curvature and unit volume, for simplicity, critical point equation (CPE) metrics. It has been conjectured that every CPE metric must be Einstein. We prove that the conjecture is true for CPE metrics under a suitable integral condition, and we also prove that it suffices the metric to be conformal to an Einstein metric.

**Address:**

Abdênago Barros  
Universidade Federal do Ceará  
Departamento de Matemática  
60455-760-Fortaleza/CE  
Brazil

**Address:**

Israel Evangelista  
Universidade Federal do Piauí  
Departamento de Matemática  
64202-020-Parnaíba/PI  
Brazil