

## **Astrophysics of the ultra high energy cosmic rays detected by the Pierre Auger Observatory**

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### **Resumo**

This seminar will focus on the physics and astrophysics of ultra high energy cosmic rays ( $E > 1$  EeV), with emphasis on the results reported by the Pierre Auger Collaboration and the interpretation of the experimental data. We will discuss the intriguing and apparent contradiction between the correlation of arrival directions of cosmic rays with astrophysical objects and observables related to the chemical composition of the primary particles. Neutrinos and photons of ultra high energy will also be discussed.