

Vertex Reconstruction in JUNO

Thursday, 30 May 2019 10:00 (20 minutes)

The Jiangmen Underground Neutrino Observatory (JUNO), currently under construction in the south of China, will be the largest Liquid Scintillator (LS) detector in the world. JUNO is a multipurpose neutrino experiment designed to determine neutrino mass hierarchy, precisely measure oscillation parameters, and study solar neutrinos, supernova neutrinos, geo-neutrinos and atmosphere neutrinos. The central detector of JUNO contains 20,000 tons of LS and 18,000 20-inch as well as 25,600 3-inch Photomultiplier Tubes (PMTs). The energy resolution is expected to be 3% at 1MeV. To meet the requirements of the experiment, a vertex reconstruction algorithm which utilizes the time and charge information of PMTs with good understanding of the complicated optical processes in the LS has been developed.

Summary

In this talk, I will present the vertex reconstruction algorithm in JUNO.

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Session Classification: 物理软件 (I)

Track Classification: 物理软件