



Omni-directional particle detector (ODPD) on Tiangong-2 spacecraft

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Tiangong-2 spacecraft is the second space laboratory independently developed by china after Tiangong-1. The Omni-directional particle detector (ODPD), on board Tiangong-2 spacecraft, which launched in September 2016. Its main scientific objectives are to explore the high energy particle radiation environment on manned space flight orbit and study for space weather prediction. The ODPD consists of one electrons spectrum telescopes, one proton spectrum telescopes and sixteen directional flux telescopes. The ODPD is optimized to measure the protons spectrum from 2.5 to 150MeV, electrons spectrum from 0.2-1.5MeV, the flux of electrons energy >200keV and protons energy>1.5MeV on 2π space, also the LET spectrum of particle in silicon. The detector is described, and the preliminary detecting result also shows on this paper.