

Mass production and characterization of 3-inch PMTs for the JUNO experiment

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26000 3-inch PMTs have been produced for Jiangmen Underground Neutrino Observatory (JUNO) by Hainan Zhanchuang Photonics Technology Co., Ltd (HZC) company in China and passed all acceptance tests with only 15 tubes rejected. The mass production began in 2018 and elapsed for about 2 years at a rate of ~1,000 PMTs per month. The characterization of the PMTs was performed in the factory concurrently with production as a joint effort between HZC and JUNO. Fifteen performance parameters were tracked at different sampling ratios, and novel working strategies were implemented to improve quality assurance. This constitutes the largest sample of 3-inch PMTs ever produced and studied in detail to date. This talk will provide an overview of the mass production and characterization of the 3-inch PMTs of JUNO.

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