

Study horizontal air showers with LHAASO-KM2A

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LHAASO-KM2A is a sub-array of the Large High Altitude Air Shower Observatory (LHAASO) with an area of 1.3 km². It consists of 5195 electromagnetic detectors (EDs, 1 m² each) and 1171 muon detectors (MDs, 36 m² each). Horizontal Air Showers (HAS) are a fundamental tool to detect penetrating particles like neutrinos and to study hadronic interactions. HAS detected at ground are mainly constituted by secondary muons. In this contribution first observations of HAS with EDs of LHAASO-KM2A are reported. We discuss the zenith angle distribution of EAS and the transition from electromagnetic-dominated showers to muon-dominated ones above a zenith angle of 60 degree. Muon contents together with hadronic interaction models will also be discussed.

Keywords

horizontal air showers; muon contents; hadronic interaction models

Collaboration

Lhaaso

other Collaboration

Subcategory

Experimental Results

Primary authors: Dr GOU, Quanbu (Key Laboratory of Particle Astrophysics, Institute of High Energy Physics, Chinese Academy of Sciences, P.O. Box 918, 100049 Beijing, China); Dr LI, Zhuo (Department of Astronomy, School of Physics, Peking University, 100871 Beijing, China); Dr DI SCIASCIO, Giuseppe (INFN - Sezione Roma Tor Vergata, I-00133 Roma, Italy); Dr HOU, Chao (Key Laboratory of Particle Astrophysics, Institute of High Energy Physics, Chinese Academy of Sciences, P.O. Box 918, 100049 Beijing, China); Dr LIU, Jiangtao (Key Laboratory of Particle Astrophysics, Institute of High Energy Physics, Chinese Academy of Sciences, P.O. Box 918, 100049 Beijing, China); Dr CHANG, Xiaochuan (Key Laboratory of Particle Astrophysics, Institute of High Energy Physics, Chinese Academy of Sciences, P.O. Box 918, 100049 Beijing, China); Dr LV, Hongkui (Key Laboratory of Particle Astrophysics, Institute of High Energy Physics, Chinese Academy of Sciences, P.O. Box 918, 100049 Beijing, China); Dr YANG, Lili (School of Physics and Astronomy, Sun Yat-sen University, 519000 Zhuhai, Guangdong, China); Dr LIN, Sujie (School of Physics and Astronomy, Sun Yat-sen University, 519000 Zhuhai, Guangdong, China); Dr ADDAZI, Andrea (College of Physics, Sichuan University, 610065 Chengdu, Sichuan, China); Dr LIU, Xuewen (College of Physics, Sichuan University, 610065 Chengdu, Sichuan, China); Dr KANG, Mingming (College of Physics, Sichuan University, 610065 Chengdu, Sichuan, China); Dr MARCIANO, Antonino (Department of Physics, Fudan University, 200438 Shanghai, China); Dr GOU, Jinsheng (College of Materials Science and Technology, Beijing Forestry University, 100083 Beijing, China); Dr YIN, Shiyu (School of Mechanical and Material Engineering, North China University of Technology, 100144 Beijing, China); Ms WANG, Yaping (Key Laboratory of Particle Astrophysics, Institute of High Energy Physics, Chinese Academy of Sciences, P.O. Box 918, 100049 Beijing, China); Mr YANG, Zihan (Key Laboratory of Particle Astrophysics, Institute of High Energy Physics, Chinese Academy of Sciences, P.O. Box 918, 100049 Beijing, China); Mr TIAN, Xishui (Department of Astronomy, School of Physics, Peking University, 100871 Beijing, China); Mr ZHANG, Qinyuan (Department of Astronomy, School of Physics, Peking University, 100871 Beijing, China); Mr SHAO, Chengyu (School of Physics and Astronomy, Sun

Yat-sen University, 519000 Zhuhai, Guangdong, China); Mr YU, Zhibo (Department of Physics, Fudan University, 200438 Shanghai, China); Mr LI, Jiaming (Department of Physics, Fudan University, 200438 Shanghai, China); Mr JIANG, Qunfeng (Department of Physics, Fudan University, 200438 Shanghai, China); Mr LIU, Lin (School of Mechanical and Material Engineering, North China University of Technology, 100144 Beijing, China); Mr DOU, Jie (College of Physics, Sichuan University, 610065 Chengdu, Sichuan, China); Mr OU, Xuwei (College of Physics, Sichuan University, 610065 Chengdu, Sichuan, China); Mr XUE, Yukun (College of Physics, Sichuan University, 610065 Chengdu, Sichuan, China); Mr FU, lingyi (College of Physics, Sichuan University, 610065 Chengdu, Sichuan, China); Mr ZUO, Qianxun (College of Physics, Sichuan University, 610065 Chengdu, Sichuan, China); Mr WANG, Zhiheng (College of Physics, Sichuan University, 610065 Chengdu, Sichuan, China); Mr WANG, Yuanqing (College of Physics, Sichuan University, 610065 Chengdu, Sichuan, China); Mr GONG, Chenyang (College of Physics, Sichuan University, 610065 Chengdu, Sichuan, China)

Presenter: Dr GOU, Quanbu (Key Laboratory of Particle Astrophysics, Institute of High Energy Physics, Chinese Academy of Sciences, P.O. Box 918, 100049 Beijing, China)

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