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Investigation of hadronic interaction models from *10TeV to 1 PeV with the Tibet AS-core

M. Amenomori[1], X. J. Bi[2], D. Chen[3], T. L. Chen[4], W. Y. Chen[2], S. W. Cui[5], Danzengluobu[4], L. K. Ding[2], C. F. Feng[6], Zhaoyang Feng[2], Z. Y. Feng[7], Q. B. Gou[2], Y. Q. Guo[2], H. H. He[2], Z. T. He[5], K. Hibino[8], N. Hotta[9], Haibing Hu[4], H. B. Hu[2], J. Huang[2], H. Y. Jia[7], L. Jiang[2], F. Kajino[10], K. Kasahara[11], Y. Katayose[12], C. Kato[13], K. Kawata[14], M. Kozai[13], Labaciren[4], G. M. Le[15], A. F. Li[16,6,2], H. J. Li[4], W. J. Li[2,7], C. Liu[2], J. S. Liu[2], M. Y. Liu[4], H. Lu[2], X. R. Meng[4], T. Miyazaki[13], K. Mizutani[11,17], K. Munakata[13], T. Nakajima[13], Y. Nakamura[13], H. Nanjo[1], M. Nishizawa[18], T. Niwa[13], M. Ohnishi[14], I. Ohta[19], S. Ozawa[11], X. L. Qian[6,2], X. B. Qu[2], T. Saito[20], T. Y. Saito[21], M. Sakata[10], T. K. Sako[14], J. Shao[2,6], M. Shibata[12], A. Shiomi[22], T. Shirai[8], H. Sugimoto[23], M. Takita[14], Y. H. Tan[2], N. Tateyama[8], S. Torii[11], H. Tsuchiya[24], S. Udo[8], H. Wang[2], H. R. Wu[2], L. Xue[6], Y. Yamamoto[10], K. Yamauchi[12], Z. Yang[2], S. Yasue[25], A. F. Yuan[4], T. Yuda[14], L. M. Zhai[2], H. M. Zhang[2], J. L. Zhang[2], X. Y. Zhang[6], Y. Zhang[2], Yi Zhang[2], Ying Zhang[2], Zhaxisangzhu[4], X. X. Zhou[7]

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(The Tibet ASγ Collaboration)

[1]*Department of Physics, Hirosaki University, Hirosaki 036-8561, Japan*
[2]*Key Laboratory of Particle Astrophysics, Institute of High Energy Physics, Chinese Academy of Sciences, Beijing 100049, China*
[3]*National Astronomical Observatories, Chinese Academy of Sciences, Beijing 100012, China*
[4]*Department of Mathematics and Physics, Tibet University, Lhasa 850000, China*
[5]*Department of Physics, Hebei Normal University, Shijiazhuang 050016, China*
[6]*Department of Physics, Shandong University, Jinan 250100, China*
[7]*Institute of Modern Physics, SouthWest Jiaotong University, Chengdu 610031, China*
[8]*Faculty of Engineering, Kanagawa University, Yokohama 221-8686, Japan*
[9]*Faculty of Education, Utsunomiya University, Utsunomiya 321-8505, Japan*
[10]*Department of Physics, Konan University, Kobe 658-8501, Japan*
[11]*Research Institute for Science and Engineering, Waseda University, Tokyo 169-8555, Japan*
[12]*Faculty of Engineering, Yokohama National University, Yokohama 240-8501, Japan*
[13]*Department of Physics, Shinshu University, Matsumoto 390-8621, Japan*
[14]*Institute for Cosmic Ray Research, University of Tokyo, Kashiwa 277-8582, Japan*
[15]*National Center for Space Weather, China Meteorological Administration, Beijing 100081, China*
[16]*School of Information Science and Engineering, Shandong Agriculture University, Taian 271018, China*
[17]*Saitama University, Saitama 338-8570, Japan*
[18]*National Institute of Informatics, Tokyo 101-8430, Japan*
[19]*Sakushin Gakuin University, Utsunomiya 321-3295, Japan*
[20]*Tokyo Metropolitan College of Industrial Technology, Tokyo 116-8523, Japan*
[21]*Max-Planck-Institut für Physik, München D-80805, Deutschland*
[22]*College of Industrial Technology, Nihon University, Narashino 275-8576, Japan*
[23]*Shonan Institute of Technology, Fujisawa 251-8511, Japan*
[24]*Japan Atomic Energy Agency, Tokai-mura 319-1195, Japan*
[25]*School of General Education, Shinshu University, Matsumoto 390-8621, Japan*

A hybrid experiment has been started by the Tibet ASγ collaboration in Tibet, China, since May 2009. It consists of a burst-detector-grid (YAC : Yangbajing Air-shower Core-array) and the Tibet-III AS array. The Tibet-III array is used to measure the total energy and the arrival direction of air-showers, and YAC-I can observe high-energy shower particles in air-shower cores. By comparing the MC data with our experimental data, we examine hadronic interaction models currently used for AS simulation code CORSIKA(ver.7.3500) and the detector simulation code Geant4 (version 9.5). In this paper, the results on the check of interaction models from *10 TeV to 1 PeV energy region will be reported based on the data taken by YAC-I and Tibet-III during the period from May 2009 through February 2010.

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