

# Simulation of the Sun shadow in the 10 TeV cosmic-ray flux and comparison with the Tibet air-shower experiment

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A simulation of intensity deficit of cosmic rays with 10 TeV region, arriving from the direction around the Sun, so called Sun shadow, was done. The simulation is based on data of the solar and interplanetary magnetic fields observed from space and the Earth and the geomagnetic field. On the other hand, the Tibet ASgamma experiment showed quite deep and clear Sun shadows in the quiet solar activity phase in 1996-97 and it became gradually shallow and almost disappeared in most active phase in 2000-02, then got back after 2003. We present the result of comparison between the simulation and observation of the Sun shadow in the period through 1996-2004.