

PHOTOMULTIPLIERS BEHAVIOR IN STRONG MAGNETIC FIELD, FOR THE TOF SYSTEM OF THE AMS-02 SPACE EXPERIMENT

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Some Hamamatsu R5946 photomultiplier tubes have been tested in magnetic field, in view of their use in the TOF system of AMS-02 experiment, a cosmic ray spectrometer to be operated in space after 2003. The PMTs are shown to be rather insensitive to the magnetic field up to about 4kG at angles between the field direction and tube axis up to about 30 degrees. The experimental results, together with the simulation made, restricted the TOF mechanical design.