



Monitoring Space Disturbances using KACST MWC detector

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Forbush decreases are short term variations in cosmic ray observations due to the solar transient events such as solar flares and coronal mass ejections which affect the interplanetary field and heliospheric structure. They are defined as a sharp reduction of cosmic ray intensity followed by a gradual recovery over a period of a few days. We have constructed and operated a three layer small MultiWire Proportional Chamber (MWPC) for cosmic ray muon monitoring. The detector is located at KACST radiation detector laboratory (769 m; $R_c=14.4$ GV), Riyadh, Saudi Arabia. In this paper, data from this newly developed detector were used to study FD observed during 5–30 December 2015. Interplanetary data were used to characterize the solar and interplanetary conditions causing the observed FD. The obtained results were comparable with those obtained by the existed 1 m² scintillator detector and with data obtained from different neutron monitors around the world.