



Contribution ID : 1301

Type : **Poster**

Description and preliminary test results of a detector prototype for the TUS space fluorescence observatory

Friday, 6 July 2007 14:45 (0:00)

Abstract content

We discuss a general scheme of the optics and electronics read out as well as preliminary test results of a detector prototype for the space fluorescence telescope TUS (FD-TUS). The mirror of this prototype is coupled to an 8 by 8 pixel camera. Each of the 64 pixels is read by one PMT of 13 mm diameter (Hamamatsu model R1463) . The optics design is a multi-hexagonal segmented telescope with focal distance of 1.5m and 2 square meter area. The optics design is optimized to have a light collection efficiency greater than 50% for all the pixel positions. The fluorescence detector is being tested at the high mountain site Sierra La Negra near Puebla City in Mexico (600g/cm²). The FD-TUS will observe EAS tracks at energies of about 1 EeV at distances 25-50km, and zenith angles greater than 45 degree with direction tracks perpendicular to the FD axis.

If this papers is presented for a collaboration, please specify the collaboration

Summary

Reference

Proceedings of the 30th International Cosmic Ray Conference; Rogelio Caballero, Juan Carlos D'Olivo, Gustavo Medina-Tanco, Lukas Nellen, Federico A. Sánchez, José F. Valdés-Galicia (eds.); Universidad Nacional Autónoma de México, Mexico City, Mexico, 2008; Vol. 5 (HE part 2), pages 1183-1186

Primary author(s) : Dr. SALAZAR, Humberto (Fac. Cs. FIS-MAT, BUAP)

Co-author(s) : Prof. COREDERO, Alberto (Fac. Cs. FIS-MAT, BUAP); Mrs. ROBLEDO, Carlos (Fac. Cs. FIS-MAT, BUAP); Dr. MARTINEZ, Oscar (Fac. Cs. FIS-MAT, BUAP); Mr. RODRIGUEZ, L (Fac. Cs. FIS-MAT, BUAP); Mr. MURRIETA, Tirso (Fac. Cs. FIS-MAT, BUAP); Dr. VILLASEÑOR, Luis (IFM-UMSNH, Morelia, Mexico); Prof. KHRENOV, Boris (NIP-MSU, Moscow, Russian Federation); Dr. GARIPOV, Garik (NIP-MSU, Moscow, Russian Federation)

Presenter(s) : Dr. SALAZAR, Humberto (Fac. Cs. FIS-MAT, BUAP)

Session Classification : Posters 2 + Coffee

Track Classification : HE.1.5