

## Astronomy & Astrophysics Division Seminar

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**Title : Recent Developments in Electronic Subsystems of PARAS**

**Speaker : Mr. J. S. S. V. Prasad (PRL, Ahmedabad)**

**Date : 07.09.2017 (Thursday)**

**Time : 16:00 Hrs**

**Venue : Seminar Room # 113/114 (Thaltej Campus)**

### **Abstract:**

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PRL Advanced Radial Velocity Abu Sky Search (PARAS) is a high-resolution Spectrograph which uses radial velocity technique for detection of exoplanets. In order to reach an accuracy of Doppler shift measurements of a few meters-per-second, effective temperature regulations of the stellar spectrograph is very important. A change of  $1^{\circ}\text{C}$  in the spectrograph temperature can produce instrument shift of 100m/s due to change in refractive index in Lenses and other optical components. Hence temperature variation during the observation should be within  $0.01^{\circ}\text{C}$  to  $0.005^{\circ}\text{C}$  to get a system stability of 1m/s or better. In this talk, I will discuss about the Temperature controller of PARAS along with some recent developments in other electronics sub systems.

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