

RFP for Monochromator & Source

As a part of Integration and test & calibration of Echelle spectrograph, it is necessary to test the optical fibers for its spectral transmission efficiency before routing the fibers in the telescope. Monochromator is the testing equipment required for a) measuring spectral transmission efficiency of optical fibers b) Fiber Focal Ratio Degradation (FRD) c) Quantum efficiency of the detector with NIST. Source needed for the Monochromator should have the spectral band of 300nm to 1000nm and its mounting interface compatible to the proposed Monochromator.

Specifications:

a) Monochromator :-

Configuration : In-plane Czerny-Turner configuration

Monochromator optics: *Torroidal mirrors* for offaxis aberration correction; Each part of the input slit is one to one reimaged on to out put slit

Collimator/Focusing Mirrors: Toroidal

Input/output: F/# is 3 to 4

Focal length: 200 to 300mm

Ports: 1 input, 2 output

Micrometer Driven Variable Slit Assembly

Continuously variable from 4 micron to 3.0 mm

Repeatability ± 10 micron

Accuracy ± 10 micron

Usable Wavelength Range 300 nm < to >1 μ m

Reciprocal Dispersion ~ 3 to 4 nm/mm

Wavelength Resolution 0.1 nm typical, <0.15 nm max.

Wavelength Accuracy ± 0.1 nm typical, <0.15 nm max.

Wavelength Repeatability ± 0.03 nm typical, <0.06 nm max.

Wavelength Step Size 0.03 nm

Grating- Plane ruled/holographic

Grating Turret: to accommodate three gratings

Grating Rotation Optical center @ grating face

b) Monochromator Source unit :

Apex Monochromator Illuminators with Xenon Arc , 75 W , Ozone Free

c) Accessories

Computer interface: USB Communication

Monochromator Mounting Kit

Control Software (Window based)

Replacement lamp- 1 no