

Vainu Bappu Telescope (VBT)

High Resolution Fibre-fed Echelle Spectrograph at Prime Focus :

CCD Details	:	UKATC 4K x 4K CCD (4096 x 4096 pixels)
		One pixel size = 12 x 12 micron
		Gain = 0.85 e ⁻ /ADU
		Readnoise = 4.4 e ⁻
Plate scale at Prime Focus	:	27 arc sec /mm
Aperture of the Optical fibre core	:	100 micron ~ 2.7 arc sec
Spectral Resolution R	:	27000 (Slit width = 100 micron)
Limiting magnitude V	:	~ 11 (Three 40 mins exposures are required to get ~ S/N=60 in clear sky) It depends on the spectral type of the target also.
Spectral Resolution R	:	72000 (Slit width = 60 micron)
Limiting magnitude V	:	~ 9 (Two 40 mins exposures are required to get ~ S/N=60 in clear sky)

Low Resolution Spectrograph at Cassegrain focus (OMR) :

CCD Details	:	Tek 1K x 1K CCD (1024 x 1024 pixels)
		One pixel size = 24 x 24 micron
		Gain = 4.33 e ⁻ /ADU
		Readnoise = 13.5 e ⁻
Plate scale at Prime Focus	:	6.7 arc sec /mm
Grating Details	:	
(1) 150 grooves/mm grating	:	Dispersion ~ 10 Å/pixel ; R ~ 250
(2) 300 grooves/mm grating	:	Dispersion ~ 5 Å/pixel ; R ~ 500
(3) 600 grooves/mm grating	:	Dispersion ~ 2.6 Å/pixel ; R ~ 1000
(4) 1200 grooves/mm grating	:	Dispersion ~ 1.3 Å/pixel ; R ~ 2000
Slit jaws	:	Minimum slit width = 50 micron , Maximum slit width = 950 micron
Camera Focal Length	:	150 mm
Collimator Focal Length	:	1000 mm
Reduction Factor	:	6.7
Slit width	:	300 micron ~ 2 arc sec of the sky (~ for two pixel resolutions)
Full Slit Height	:	25 mm (Slit height can be adjusted by moving the decker)

1 metre Telescope

Low Resolution Spectrograph at Cassegrain focus (UAGS) :

CCD Details	:	Pixis CCD (1340 x 400 pixels)
		One pixel size = 20 x 20 micron
		Gain = 1.22 e ⁻ /ADU
		Readnoise = 4.8 e ⁻
Plate scale at Prime Focus	:	15.9 arc sec /mm
Slit width	:	130 micron ~ 2 arc sec of the sky (for two pixel resolutions)
Grating Details	:	
(1) 300 grooves/mm grating	:	Dispersion ~ 3 Å/pixel
(2) 651 grooves/mm grating	:	Dispersion ~ 1.5 Å/pixel
(3) 1800 grooves/mm grating	:	Dispersion ~ 0.5 Å/pixel

Photo Polarimeter at Cassegrain focus:

Please contact Prof S. Muneer (muneers@iiap.res.in).