
NIRSPEC

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NIRSPEC Cryomechanics Design Note 12.00 Cross-disperser mechanism

Introduction

The cross-disperser mechanism has to tilt the grating about a vertical axis. This mechanism will be very demanding in terms of accuracy.

What next?

We don't yet have a concept of this mechanism on paper, although there are a number of ideas floating around. My own concept (go ahead, shoot it down if you have a better one) is of a turntable with the grating mount standing up from it. In other words the bearing(s) will be below the grating only. This scheme should ease clearance problems fitting the cross-disperser in next to the TMA.

Like everything else this mechanism needs to be aligned; in particular the axis needs to be at exactly the correct angle to the plane of the optical bench, and the azimuth of the whole thing needs to be referred properly to the echelle and the TMA.