
NIRSPEC

UCLA Astrophysics Program

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NIRSPEC Cryomechanics Design Note 08.00 Filter wheel

Introduction

The filter wheel will be a direct descendant of the wheels used in Gemini and the Navy camera. In other words, it will be edge driven via a worm gear from a stepper motor. The motor will be cryogenically prepared with a dry lubricant in the bearings.

What next?

The main work going on at the moment is in research into anti-backlash schemes. This is more applicable to the other mechanisms than to the filter wheel, but may be applied to this mechanism also. The filter wheel size has been fixed so that it is the same as the slit wheel, giving a filter wheel with 12 positions. The wheel enclosure and its mount to the optical plate also have to be defined.

The majority of the work remaining on this subassembly will be mechanical drawings.