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NIRSPEC Cryomechanics Design Note 14.00
Detector head

Introduction

The detector head must hold the detector in its socket, provide electrical connections to the socket, and enclose the detector to shield it from stray radiation. It also has to keep the detector electrically and thermally isolated, since it can't make contact with the dewar ground and it has to be colder (~30K) than the rest of the instrument.

What next?

This design has to be moved ahead quite a bit in the next few weeks. If we don't have overall size and the interface to the TMA properly defined, we are asking for trouble when the optics vendors start designing the mechanical support structure of the TMA. Frank is making progress with the PCB layout, but that needs to be completed and attentions turned to the mount and how we will achieve the electrical and thermal isolation. We can probably achieve both using G10, but how to do that and maintain exact focus position is a harder proposition. It may take a large number of iterations before we can get the focus right.