NIRSPEC

UCLA Astrophysics Program

U.C. Berkeley

W.M. Keck Observatory

March 27, 1996

Don Figer

NIRSPEC Optics Design Note 14.00 Low-res Flat RFQ

1. Introduction

The low-res flat request for quote is reproduced in its entirety below. It was sent to the following vendors. The responses are summarized at the end of this document.

Recipients:

J. L. Wood Aero APS Commercial Optical Cosmo Harold Johnson Janos MRC OCA OFC SORL Speedring Surface Finishes

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NIRSPEC

Don Figer

Phone: 310-825-1666 Fax: 310-206-7254

January 22, 1996

To:

LRFLAT RFQ

Message:

This is a request for quote to fabricate a flat mirror to be used in the NIRSPEC instrument, a high-resolution, near-infrared, spectrometer for the Keck II telescope. The mirror must be made of thermally destressed aluminum as it will be used at 77 K. We require a surface figure of **8**5 PV at 632.8 nm and a surface roughness of < 100 Å RMS; we expect that the surface might need to be nickel-plated and polished to achieve this roughness. The surface should be gold coated. The qualified area and clear aperture is 128X128 mm, and it is centered within a substrate which has dimensions 330X142 mm. The surface outside the clear aperture should not be of optical quality and will probably be coated with IR black paint. We require that the center of the qualified area be placed within 0.5 mm of the center of the substrate. The substrate thickness should be 25 mm. The relative parallelism between the front and back surface should be no more than 1 arcmin.

Vendor Responses

The vendor responses are summarized below. Actual responses are included as attachments in the cases where bids were given.

Aero:	no bid
no bid	MRC:
APS:	no bid
no bid	OCA:
Commercial Optical:	no bid
no bid	OFC:
Cosmo:	no bid
They bid about \$5200, but wanted to	SORL:
use Zerodur instead of Al.	no bid
Harold Johnson:	Speedring:
They bid \$8,694, but wanted to use	Included in their package quote to
Zerodur. They quoted an additional	build the front-end. We chose
\$2000 for 77 K testing.	Speedring to produce this part. See
Janos:	Speedring documentation for details
Quoted \$6,675, although it appears	about the quote.
as if they would not cryo-verify.	Surface Finishes:
J. L. Wood:	no bid