Results from DEIMOS Commissioning Observations

THROUGHPUTS

We are in the process of determining the throughput of DEIMOS in spectroscopic mode for all the gratings and grating tilts of relevance. What you will find in the links below are downloadable plots and tables with the results of observations of the star BD+28 4211, taken under photometric conditions during the months of June through September/2002.

Our throughputs are defined as follows:

Throughput = Nd/Nt

where:

Nd = Number of photons detected
Nt = Number of photons hitting the telescope's primary mirror

The latter is given by:

Nt = Nst * 10 ** (-0.4*airmass*ext(lambda))

where Nst is the star's photon flux, in photon/sq.cm/s, taken from the HST/CALSPEC database of standard star fluxes, and ext(lambda) is the mean monochromatic extinction coefficient for Mauna Kea.

THE DATA

Throughput data taken with various combinations of grating tilts and order-blocking filters for the aluminum 600 and 900 l/mm gratings, and a more limited, preliminary set of data for the gold 830 and 1200 l/mm gratings are available. A more comprehensive data set for the latter two gratings and for the aluminum 1200 l/mm grating are in the process of being collected and reduced, and will be made available soon. By following the links below, you'll be able to view plots, or download postscript files and ascII tables with the measured throughputs.

We note that these throughputs are higher by a factor of 1.056 than the values from an earlier release, due to a correction in the value adopted for the collective area of the Keck telescope.

Aluminum 600 l/mm

Aluminum 900 l/mm

Gold 1200 l/mm

Gold 830 l/mm: **download ps** view plot