The two figures presented in this report are schematic layouts of the spectral formats for the two Echelle configurations of the HRS. As the carrousel is rotated, the scan angle of the Echelle varies. At a given scan angle, the product of m*\lambda is constant for all orders. Knowing the wavelength visible in any order, the wavelengths in all other orders can be calculated. These plots show graphically which wavelengths lie in adjacent orders.

If a scientific program requires that wavelengths be observed in many orders, an efficient way to scan the spectrum is to position the carrousel for the appropriate scan angle, then observe all orders of interest by adjusting the Y deflections between observations. This eliminates the overhead time associated with each movement of the carrousel (approximately 30 seconds), and can result in a considerable savings of time if the stellar exposure times are short. Additionally, a set of dispersion constants derived from the Pt-Ne spectral lamps will apply to all orders at a fixed carrousel position, so an additional efficiency is gained by not having to calibrate the wavelength scale for each observation separately. At the top of each figure is a bar indicating the approximate length of a single observation with the 500 science diodes. This should help choose a carrousel position which will allow lines of interest to be visible simultaneously. To specify a carrousel position, the observer need only specify one wavelength in one order.
TITLE: HRS Echelle Formats

AUTHOR: D. Ebbets

DATE: 12/13/87

ABSTRACT

DISTRIBUTION: Major File, Library
            ISE: Macchetto, Bohlin, Erickson
            CSC: Bolzano, Lupie, Miller, Parsons, Shiffer, Holm
            CDBS - SDAS
            G0SB S06S Wallborn
            IDT All members, Lindler