

THE INTERNATIONAL SOLAR POLAR MISSION: ZODIACAL LIGHT/BACKGROUND
STARLIGHT EXPERIMENT (ISPM-ZLE)

G. H. Schwehm for the ZLE-Team⁺)

The International Solar Polar 1983 Mission will for the first time provide the opportunity to perform measurements out of the ecliptic and above the solar poles. The Zodiacal Light/Background Starlight Experiment of the Ruhr-University Bochum, FRG, (in collaboration with the State University of New York at Albany) which was selected for the NASA-S/C is a scanning photometer which is based on the HELIOS 1, 2 - Zodiacal Light Experiment.

The scientific objectives of the experiment are to investigate the intensity, polarization, and color of the diffuse sky brightness and determine the spatial distribution and physical properties of the interplanetary dust, including a possible interstellar component, as a function of spacecraft position in and out of the ecliptic.

The instrument consists of a sensor unit with an associated baffle system necessary for stray light rejection.

To optimize the performance of the instrument in the different spectral ranges two photomultipliers and two filter wheels will be used for the 'visible' and UV wavelength range. Measurements will be performed at 2200, 2400, 3500, 4400, 6400 and 8400 Å including the state of polarization.

The basic design of the instrument and the unique observation geometry will be presented and discussed.

⁺) The members of the ZLE team are:

Bochum group:

R.H. Giese (PI)	Bereich Extraterrestrische Physik, Ruhr-Universität Bochum
G.H. Schwehm	"
R.H. Zerull	"
M.S. Hanner	Jet Propulsion Lab., Pasadena, California, USA

