

KINEMATICS OF EJECTA
SURROUNDING η CARINAE

R.J. Dufour

Rice University and
Instituto de Astronomía, UNAM

Recent *HST* imagery of η Carinae (Hester et al. 1991, AJ, 102, 654; Ebbets et al. 1993, 34th Hertsmenceux Conf., p. 95) show remarkable structures in this system arising from the major shell ejection episode during the mid-19th century from a (once!) LBV star. This high resolution structure is compared with numerous velocity features evident on longslit echelle spectra of several locations across the η Car system taken with the CTIO 4-m telescope. Radial, tangential, and space velocities for the various parts of the complex system are presented. The highest velocity structures are consistent with being ejected in the mid-19th century, although numerous slower moving (previously ejected) components in the system are evident as well. Overall, the kinematics of the different parts of the system are consistent with the basic shell model of Hester et al., except that the "South Ridge" is now interpreted to be a previously ejected shell (~ 300 yrs old; $v_{exp} \approx 800$ km s $^{-1}$)—rather than just limb-brightened "cap" of emitting material. Finally, the *HST* imagery of the Ridge show numerous small knots embedded in the more diffuse ridge material, which apparently are the high velocity knots ($v \sim 10^3$ km s $^{-1}$) previously noted by Dufour (1989, RevMexAA, 18, 87).

THE CARINA REGION IN *UBVR*
BASED ON SURFACE PHOTOMETRIES

C. Tappert, B. Hoffmann¹,
W. Schlosser, and Th. Schmidt-Kaler¹

Astron. Institut der Ruhr-Universität Bochum,
Germany

Several photographic plates were exposed in *UBVR* with the Bochum super wide angle camera at the site of the European Southern Observatory (ESO) at La Silla, Chile. For calibration, this work was accompanied by photoelectric measurements (Schmidt-Kaler et al. 1983). By reducing these plates of extinction, airglow and zodiacal light and combining and averaging them, four maps and their corresponding colour maps of the Southern Milky Way resulted with a resolution of $0^{\circ}.25 \times 0^{\circ}.25$ (Hoffmann 1992; Hoffmann et al. 1993; Kimeswenger et al. 1993; Tappert et al. 1993). For this presentation, the region $315^{\circ} \leq \ell \leq 265^{\circ}$, $20^{\circ} \leq b \leq 20^{\circ}$ has been cut out of the maps. Positions of local dark clouds and OB associations are examined. A rough estimation of the FWHM of the central galactic dust lane cutting through the η Car region gives a value of about $2^{\circ}.4$ ($\pm 0^{\circ}.7$). Features of the Carina region will be discussed based on the colour maps.

¹Wissenschaftlich-Technisches Optik-Zentrum NRW,
Bochum, Germany.

LIST OF ABSTRACTS

CARINA ARM STUDIES: A POLARIMETRIC
APPROACH

A.M. Orsatti, E.I. Vega, & H.G. Marraco 123
THE NATURE OF THE LUMINOUS BLUE VARIABLE AG CARINAE *C. Rossi, M. Barylak, A. Cassatella, A. Damineli Neto, V.F. Polcaro, M. Villada, & R. Viotti* 123

LARGE SCALE PROPERTIES OF MOLECULAR
GAS IN THE CARINA ARM *L. Bronfman* 123

KINEMATICS OF EJECTA SURROUNDING
 η CARINAE *R.J. Dufour* 124
THE CARINA REGION IN *UBVR* BASED ON
SURFACE PHOTOMETRIES
C. Tappert, B. Hoffmann, W. Schlosser, & Th. Schmidt-Kaler 124