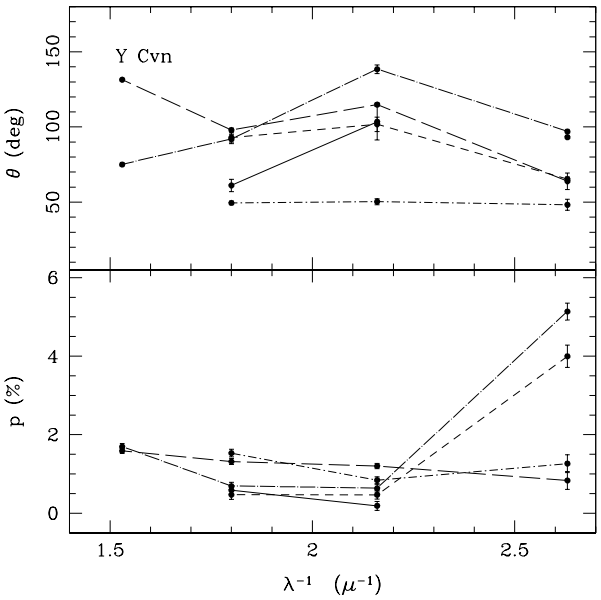

Fig. 4. Same as Figure 1, but for Y Cvn on JD=4856.02 (solid line), 4891.95 (dotted line), 4913.83 (short-dashed line), 4952.74 (long-dashed line), and 5001.72 (dot short-dashed line).

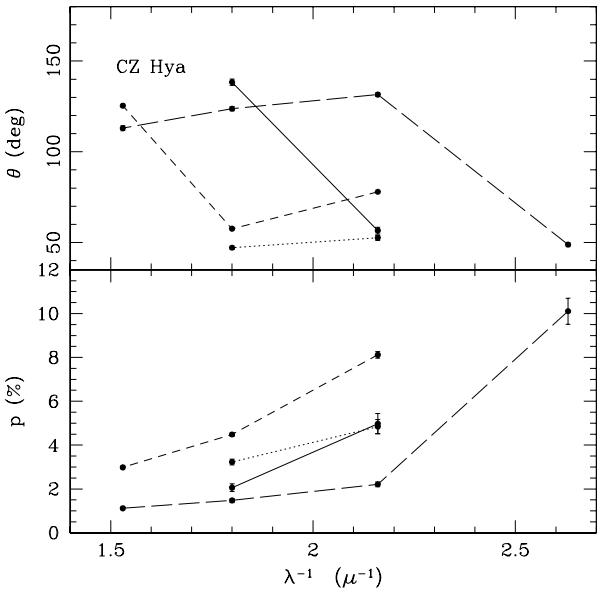

Fig. 5. Same as Figure 1, but for CZ Hya on JD=2454860.97 (solid line), 2454891.89 (dotted line), 2454913.74 (short-dashed line), and 2454952.73 (long-dashed line).

Raveendran (2002) presents polarimetry for R Lep in the *BVR* bands during 1991–2002 when the star went through an episode of fading brightness at light maximum after an interval of 3 yr. The percentage of linear polarization increased as the fading progressed and attained a maximum of 3% in the *V* band, close to the minimum; it remained more or less at the same level during and well after the star returned to normal brightness. Raveendran suggests that the physical mechanism that causes the rather large polarization is perhaps selective extinction by aligned foreground grains produced by the passage of shock waves through the circumstellar envelope.

3.4. *Y Cvn*

Raveendran (1991) carried out polarimetric observations of Y Cvn close to a light maximum and obtained values close to zero in the *BVRI* bands on JD=2446117.48. Serkowski (1971) reported a value of ∼0.25% for Y Cvn in the blue region. We have found a polarization of about ∼1.0% in the *BVR* bands and a relatively high and variable polarization in the *U* band for this star. Y Cvn is a high galactic latitude object ($b^{\rm II} = 72°$). The low polarization listed in Table 2 for the *BVR* bands indicates that the interstellar component of the polarization is almost zero.

3.5. *Other objects*

As far as we know, our polarization measurements are the first for the remaining objects: CZ Hya, T Dra, RV Aqr, and RT Cap.

4. DISCUSSION

4.1. *Wavelength dependence of polarization*

Even though the emission from evolved carbon stars is relatively dim at short wavelengths, we were able to measure linear polarization in the *B* and *U* bands. When both were measured for each object, the highest value was always found for the *U* band.

Among the eight observed carbon stars with significant linear polarization, only CZ Hya presents a polarization that increases systematically towards the ultraviolet. In general, T Dra also shows a systematical increase to the ultraviolet, but during one observing run (JD=2455000.77) it showed a drop in the ultraviolet polarization.

V Hya, R For, Y Cvn, R Lep, and RT Cap show a dip in their degree of polarization in the *V* or *B* bands. This dip has been observed previously by Raveendran (1991) for UU Aur and for SS Vir by Kruszewski et al. (1968). In all these cases, the polarization is larger in the *R* band than in the *V* or *B* bands. At low levels of polarization, distortion of the intrinsic polarization by the interstellar component could be significant. For our stars, interstellar