region/PDR (Photodissociation Region) has formed in the underlying neutral/molecular cloud, which is photoionized/dissociated by the diffuse photons produced in the volume of collisional ionization.

Using the same elemental abundances and N_e, photoionization models similar to those of Erickson et al (1988) are also found to fit the FIR and radio data equally well and to be narrowly confined to a radiation field characterized by a Kurucz atmosphere $T_{eff} \lesssim 35000K$, $\log g = 4$ sequence.

THE CHAMAELEON DARK CLOUDS COMPLEX: PRELIMINARY ANALYSIS OF THE COLOUR EXCESSES E(b-y) TOWARDS THE SELECTED AREA 203

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The Chamaeleon dark clouds form a large complex of interstellar obscuring material situated at $\approx$ 15° below the galactic plane. Although it is accepted as being one of the closest low-mass star formation region to the Sun, its distance has been debated issues. The proposed distance is in general dependent on the value assumed for the ratio of total-to-selective extinction, which in the Chamaeleon clouds has proved controversial, leading to distances estimates ranging from 115 to 215 pc.

Selected Area 203 ($l = 300\overset{\circ}{.}0, b = 13\overset{\circ}{.}1$) lies approximately in the geometric center of the Chamaeleon cloud complex, in a relatively less obscured area, when compared with the surrounding dark region. As part of an investigation of the interstellar dust distribution towards the Chamaeleon dark clouds complex, all stars earlier than G0 and brighter than $m_{pg} \approx 10\overset{m}{.}4$ in the Potsdam Spektral Durchmusterung of SA 203 were selected for observation. About 200 selected stars were observed in four-colour uvby and H_β photometry.

A preliminary analysis of the distribution of the colour excesses, E(b-y), as a function of the distance is presented. The obtained E(b-y) versus distance diagram clearly suggests the presence of a sheet-like structure at a distance of $\approx$137 pc, indicating that at least part of the Chamaeleon complex is located nearer than 140 pc.

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