

RCW 114: ANOTHER CASE OF HI BUBBLE RELATED TO A
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ABSTRACT. The neutral hydrogen distribution in the area $336^\circ \leq \ell \leq 351^\circ$, $-10^\circ \leq b \leq 0^\circ$ shows an expanding shell of enhanced emission coincident with the H α emission region RCW 114 (Figure 1). Although the observed morphology, both in the 21-cm and H α lines, resembles those associated with SNR's, the absence of non-thermal radiosources in the interior of the shell, dismisses this hypothesis. Instead, the shell has been most probably blown by the strong stellar wind of the WR star HD 156385, located inside RCW 114, and at a distance coincident with the kinematical distance of the HI shell. The parameters of the HI bubble are: linear radius 53 pc (at a distance of 1.8 kpc); missing mass $6300 M_\odot$; initial ambient density 0.25 cm^{-3} ; expanding velocity 12 km s^{-1} . Through models of interaction of stellar winds with the surrounding interstellar gas, a dynamical age of $2.4 \times 10^6 \text{ yr}$ is derived. Within the surveyed region, a second cavity is present in the $(+9.5, +18.5) \text{ km s}^{-1}$ velocity interval. This feature is not associated with the previously mentioned void.

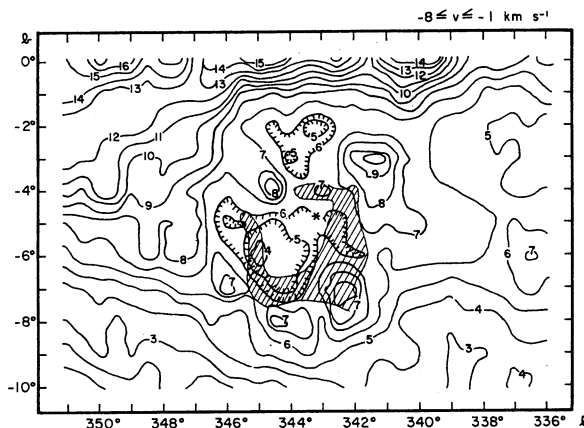


Fig.1. HI column density distribution in the $(-4.5, +2.5) \text{ km s}^{-1}$ velocity interval. The contours are in units of 10^{20} cm^{-2} . The shaded part indicates the H emission region RCW 114 and the asterisk, the position of the Wolf Rayet star HD 156385.

Key words: INTERSTELLAR-BUBBLES - RADIO LINES-21-cm - STARS-WOLF-RAYET

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