activities in CMa OB1 and Mon R2 complexes are discussed by comparing the distributions of H II regions, reflection nebula, outflow sources, maser emissions and IRAS YSO candidated.

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INTERACTION OF SUPERNOVA REMNANTS WITH STELLAR-WIND BUBBLES

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We have carried out 1-dimensional numerical simulations of the interaction of supernova remnants with stellar wind bubbles. We have used an Eulerian, FCT code with an improved accuracy for the simulations of ideal, adiabatic hydrodynamics flows. We assume that the density profile of the supernova ejecta follows the Cheavlier model(1982) and the SN ejecta contains a kinetic energy of 10^{51} ergs. The structure of wind bubble has been calculated with the stellar mass loss rate $M=5\times10^{-6}M_\odot/yr$ and the wind velocity $\upsilon=2\times10^{3}km/s$. In the first two models we computed the evolution of SNRs with n=7 and n=14 in the uniform medium. The numerical results agree with the Chevalier's similarity solution at early time. The radius of the shock varies as $R_s \propto t_\eta$ where $\eta=0.61$ for n=7. When all of the power-law portion of the ejecta is swept up by the reverse shock, the evolution slowly converges to the Sedov-Taylor stage($\eta=0.4$).

There is not much difference between the two cases with different n's. In the five models, the SN ejecta explodes in the center of wind bubbles. In model III, the ejecta generate a variety of reflected and transmitted shocks, complex velocity field by the interaction of stellar shocks and the with the contact discontinuities. In the model III, the time scale for the SN shock to cross the wind shell τ_{cross} is similar to the time scale for the reverse shock to sweep the power-law density profile τ_{bend}. Hence the SN shock crosses the wind shell. At late times SN shock produces another shell in the ambient medium so that we have a SNR with double shell structure. In the numerical results of the remaining four models, we have found that when $\tau_{cross}/\tau_{bend} \leq 2$, or equivalently when $\alpha \leq 50$, the SNRs produced inside wind bubbles have double shell structure. Otherwise, either the SN shock does not cross the wind shell or, even if it crosses, the reverse shock reflected at the accelerates the wind shell to merge into the SN shock. Our results confirm the conclusion of Tenorio-Tagle et al(1990).