

Highlight

THE HOT INTERSTELLAR MEDIUM

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The interstellar medium is heated and ionized by radiation, by stellar winds, and finally, by supernova explosions of massive stars. These processes are often correlated in space and time, generating superbubbles filled with hot thin plasma with sizes of typically 100 – 1000 pc. Supernova remnants and superbubbles can be studied best in soft X-ray line and continuum emission, since the plasma in their interiors is very hot ($10^6 - 10^7$ K), while there are also a few cases in which the emission from non-thermal particles dominates that of the thermal gas. I will present recent results of our studies of the hot interstellar medium in the Milky Way and nearby galaxies. I will discuss the physics of the hot plasma, the evolution and energetics of supernova remnants and superbubbles, and their impact on star formation.