present so different morphological types is not well understood yet. A well accepted suggestion is that the binary central stars could be partially responsible for the bipolar shapes. Considering that there is only one 3D modeling of a bipolar PN (NGC 6302; Wright et al. 2011, MNRAS, 418, 370) and also because NGC 2346 has a binary system as central star, this PN seems to be an excellent candidate for a 3D detailed modeling. The code used for the modeling process was MOCASSIN (Ercolano, B. et al. 2003, MNRAS, 340, 1136). The density distribution we assumed for NGC 2346 has two components: torus and lobes. We considered the density constant in the torus (n_T) and three different cases in the lobes (n_L): (i) n_L = constant; (ii) $n_L \propto r^{-1}$; and (iii) $n_L \propto r^{-2}$. In our models we have observed that density stratification is essential in order to reproduce the higher ionization stages observed in this nebula. So far, the $n_L \propto r^{-1}$ distribution has given the best agreement between the observed and modeled spectrum.

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G 126.1–0.8–14: A MOLECULAR SHELL RELATED TO SH2-187

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We present a multi-wavelength study of a region where a well defined molecular shell, named G 126.1–0.8–14, is observed. The distance of G 126.1–0.8–14 is about 1 kpc. Based on HI and CO data we analyze the atomic and molecular gas related to the structure and estimate its main physical properties. From the radio continuum and infrared data we analyze whether the emission associated with G 126.1–0.8–14 has a thermal origin. To disentangle the possible origin of the shell, and given the lack of catalogued O-type stars in the area, we observed with GEMINI the spectra of four OB stars located in projection inside the shell, to get their accurate spectral types and distances. The young HII region Sh2-187 is located onto the densest part of this molecular shell. A search for young stellar object candidates (cYSOs) was made using infrared point source catalogs. Several cYSOs are found spread out onto the shell. Based on all the available data, we discuss the possible origin of G 126.1–0.8–14 as well as its role in the formation of a new generation of stars.

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THE BUBBLE N10

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We studied the environment surrounding the infrared bubble N10 in molecular and infrared emission. There is an HII region at the center of this bubble. We investigated J=1-0 transitions of molecules ^{12}CO, ^{13}CO and $C^{18}O$ towards N10. This object was detected by GLIMPSE, a survey carried out between 3.6 and 8.0 μm. We also analyzed the emission at 24 μm, corresponding to the emission of hot dust, with a contribution of small grains heated by nearby O stars. Besides, the contribution at 8 μm is dominated by PAHs (polycyclic aromatic hydrocarbons) excited by radiation from the PDRs of bubbles. In the case of N10, it is proposed that the excess at 4.5 μm IRAC band indicate an outflow, a signature of early stages of massive star formation. This object was the target of observations at the PMO 13.7 m radio telescope. The bubble N10 presents clumps, from which we can derive physical features through the observed parameters. We also intended to discuss the evolutionary stage of the clumps and their distribution. It can lead us to understand the triggered star formation scenario in this region.

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KINEMATIC PROFILES OF NGC 3918 AND NGC 6302 FORM HIGH DISPERSION SPECTRA

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Planetary nebulae have typical expansion velocities between 20 and 40 km/s. Using high dispersion, long slit spectroscopy obtained with the 1.60m telescope and the Coudé spectrograph at Pico dos Dias Observatory (MCT/LNA) in Brazil, we derived the kinematic profiles from forbidden lines for different