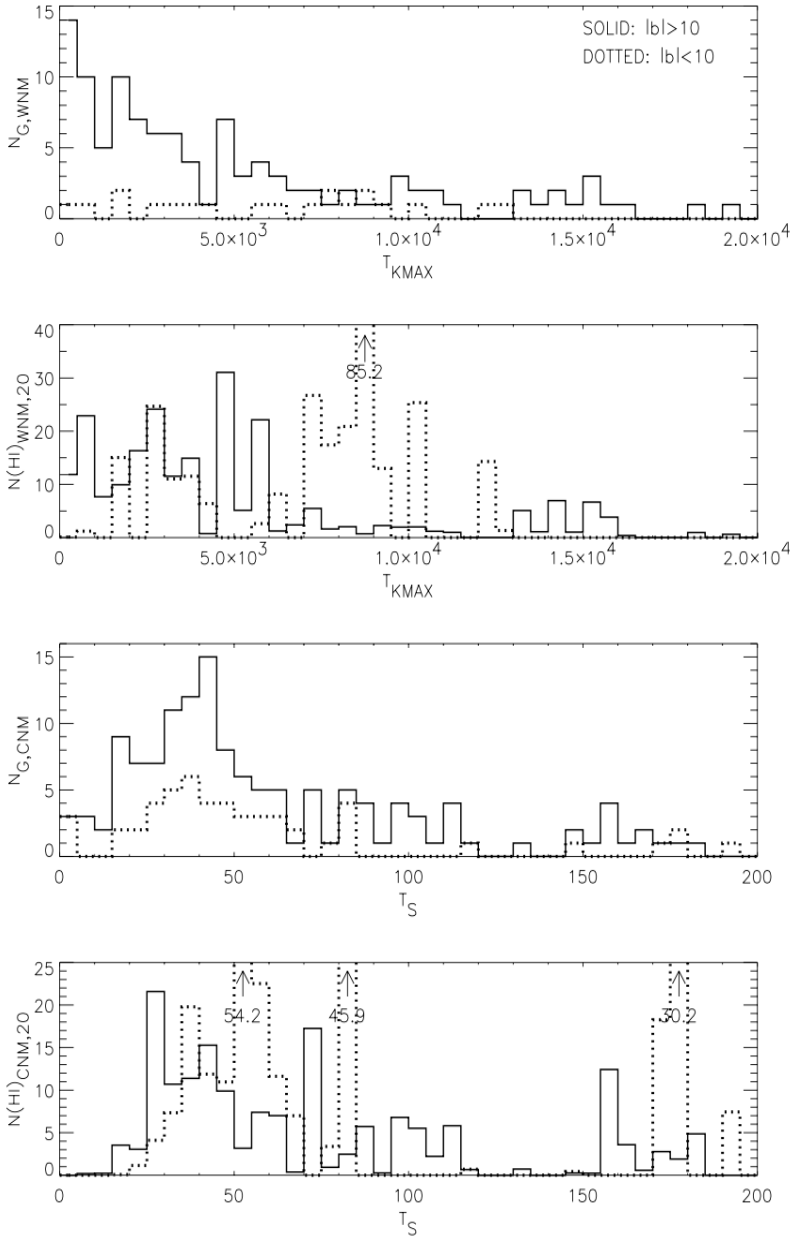
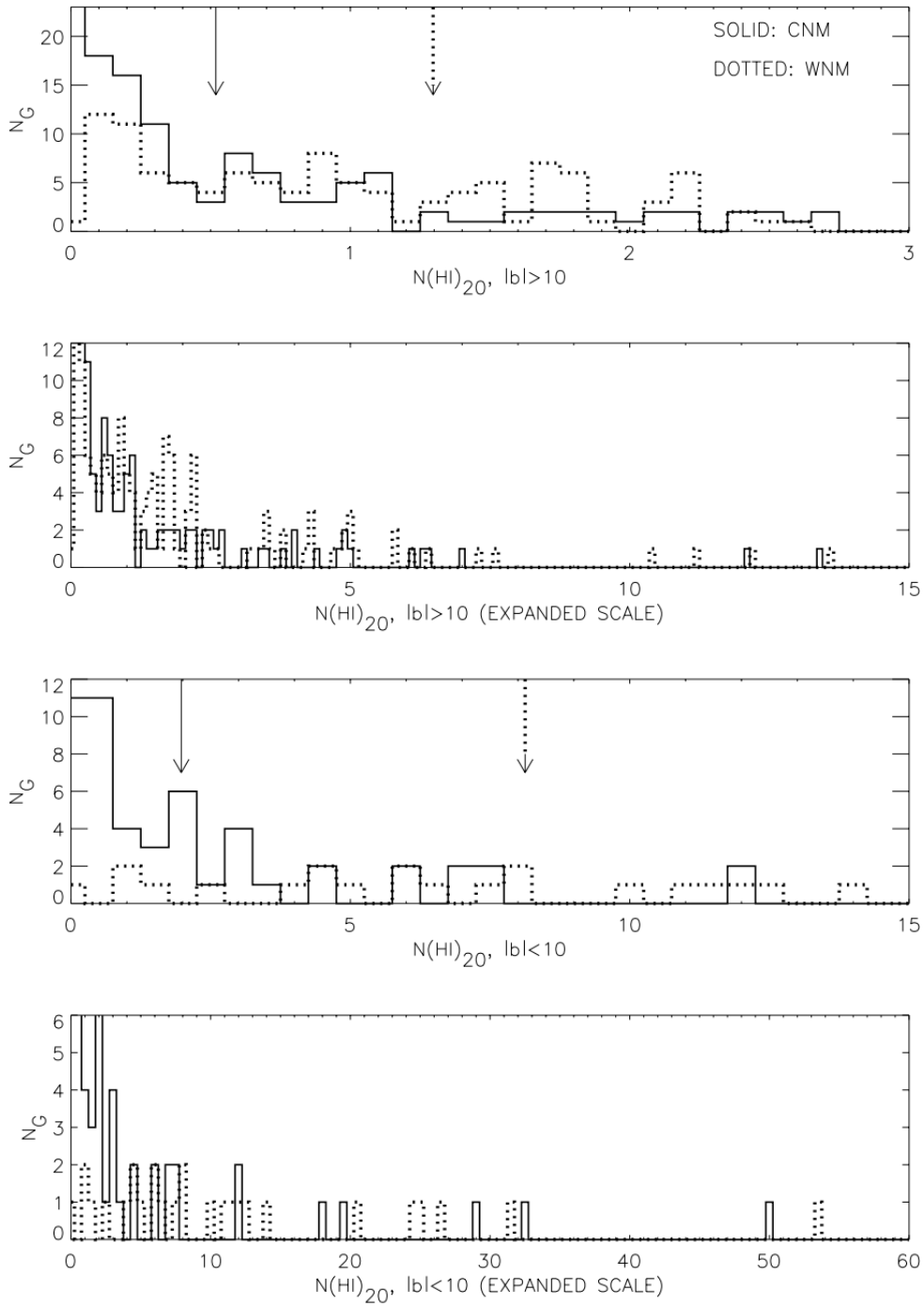
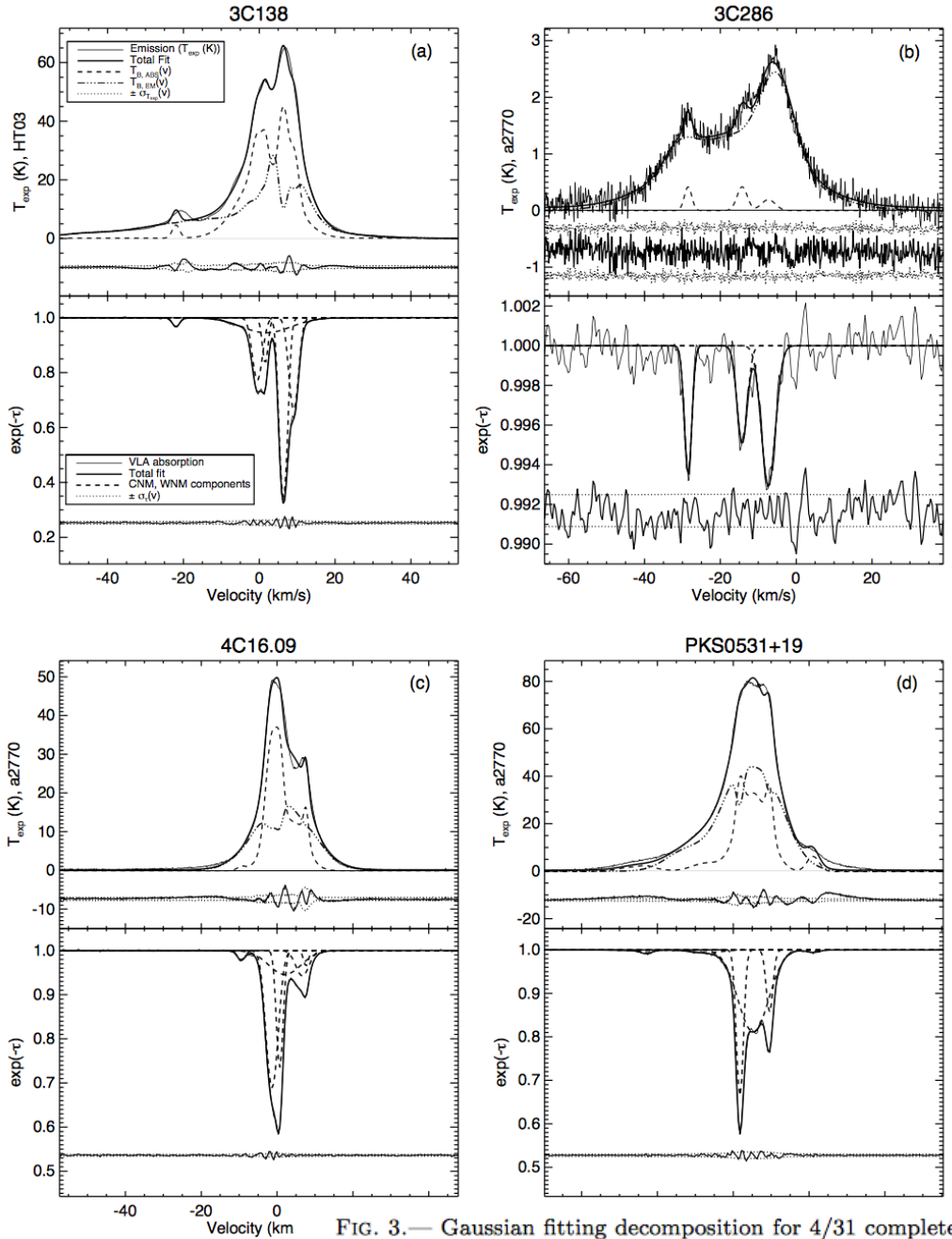
Neutral Atomic Gas



Heiles & Troland (2003) Millenium Survey

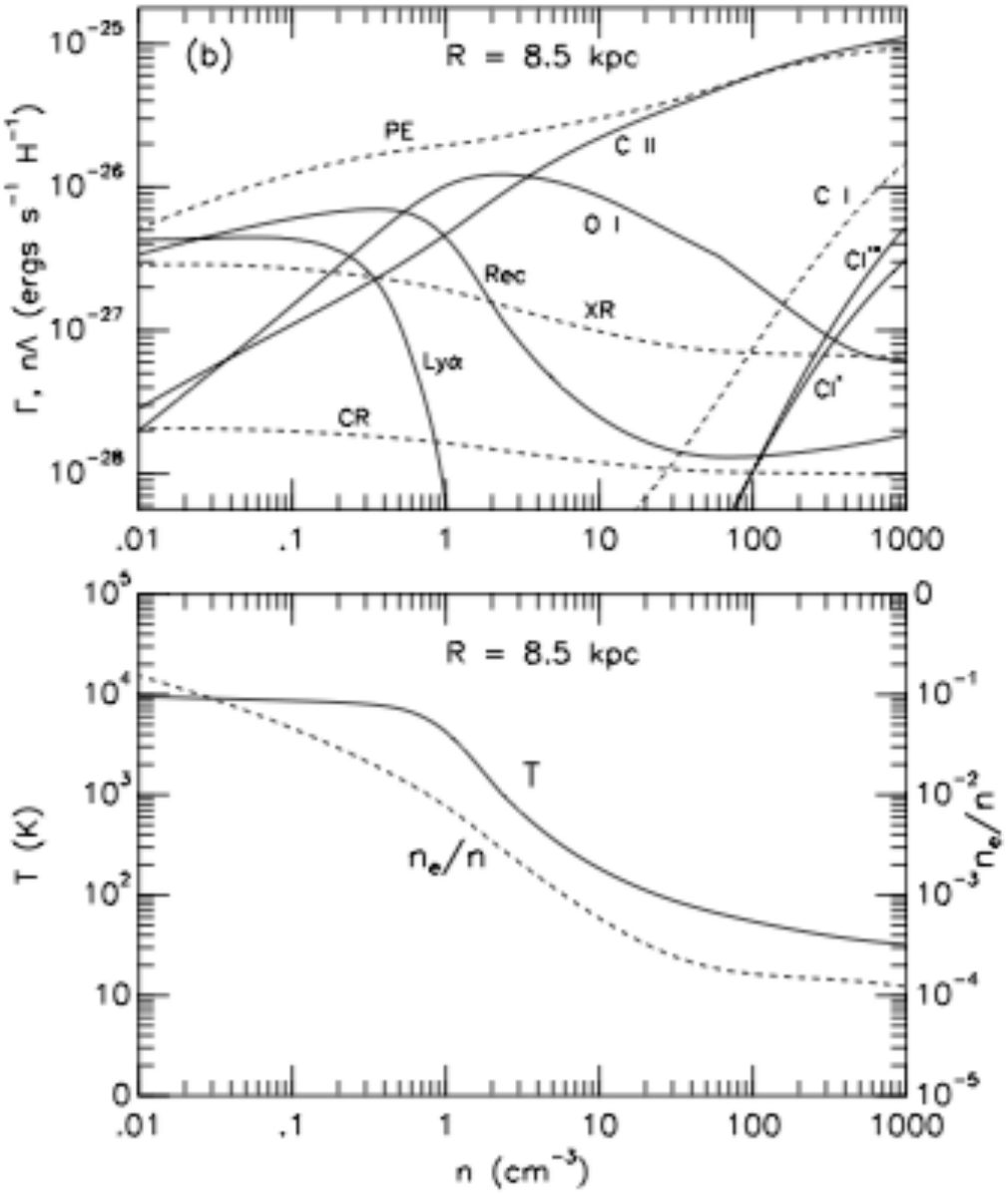
FIG. 2.—Histograms of $T_{k,\max}$ for the WNM (*top two panels*) and of T_s for the CNM (*bottom two panels*). The solid lines are for $|b| > 10°$ and the dotted ones for $|b| < 10°$. N_G is the number of Gaussian components; $N(\mathrm{H\,I})_{20}$ is column density in units of 10^{20} cm^{-2}.


SOLID: CNM
DOTTED: WNM
N_G
$N(HI)_{20}$, |b|>10
$N(HI)_{20}$, |b|>10 (EXPANDED SCALE)
$N(HI)_{20}$, |b|<10
$N(HI)_{20}$, |b|<10 (EXPANDED SCALE)



Stanimirovic et al. (2015) 21-SPONGE first results

FIG. 3.— Gaussian fitting decomposition for 4/31 completed sources. The sources are displayed in two-panel plots, where the top panel displays the emission profile (from HT03, a2770, or the LAB survey) and the bottom panel displays the VLA absorption profile. The fits are overlaid in several forms, including total CNM and WNM contribution and individual components, according to the inset legend in panel (a). Residuals in the fits are offset at the bottom of each panel, with $\pm\sigma_{T_{\rm exp}}(v)$ (top, see Section 2.4) and $\pm\sigma_\tau(v)$ (bottom, see Section 3.2) to illustrate the goodness of fit.



Wolfire et al. (1995, 2003)

FIG. 10.—*Top panels:* Heating and cooling curves vs. hydrogen nucleus density n at various Galactic distances, R. Heating rates (*dashed curve*): photoelectric heating from small grains and PAHs ("PE"); EUV and X-ray ("XR"); cosmic ray ("CR"); photoionization of C ("C I"). Cooling rates (*solid curve*): C II 158 μm fine-structure ("C II"); O I 63 μm fine-structure ("O I"); recombination onto small grains and PAHs ("Rec"); Lyα plus metastable transitions ("Lyα"); C I fine-structure 609 μm ("C I*"); C I fine-structure 370 μm ("C I**"). *Bottom panels:* Gas temperature T (*solid curve*) and electron fraction n_e/n (*dashed curve*) vs. hydrogen nucleus density n. (*a*) $R = 5$ kpc. (*b*) $R = 8.5$ kpc. (*c*) $R = 11$ kpc. (*d*) $R = 17$ kpc.