

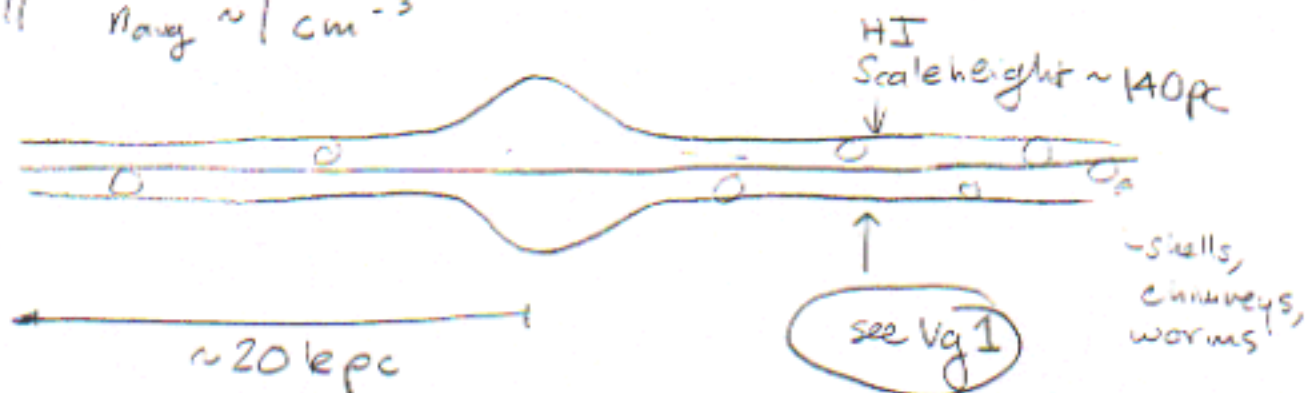
9/21/00

AY208 - Meeting #2

§1.2 Continued

Last time. Milky Way quick tour for an example

Recall $n_{\text{avg}} \sim 1 \text{ cm}^{-3}$



Neutral Material is mostly HI

$\text{H I} \rightarrow \text{H}_2$ in presence of dust in dense, cold regions
 $n \gtrsim 10$ to 50 cm^{-3} T 10's to 100's of K

see Table 1

gas & dust correlated & $\rho_{\text{gas}} / \rho_{\text{dust}} \sim 0.1$ $\frac{\rho_{\text{gas}}}{\rho_{\text{H I}}} \sim 0.2$

note " ρ_{dust} " means of dust per unit ISM volume, not per dust grain volume

~ Discuss Table 1 ~

~ 1st 4 lines

Draw Figure on Next Page

→ Viewgraphs ←

Temperature & Ionization

A = Very dense gas, possible site of \star - formation
 possible outflows from young stars (shocks, heating)

ISRF (energy budget strength depends on n)

D $< 10^{15} \text{ general } M_{\odot}$



B = group of O & B stars
 creating H II region
 → ionizing photons + shocks

C = Supernova remnant
 → strong shock
 → photons + cosmic rays