

Three Dimensional HI Gas Distribution in the Milky Way Galaxy

Hiroyuki Nakanishi, Yoshiaki Sofue

*Institute of Astronomy, University of Tokyo, 2-21-1 Osawa, Mitaka,
 Tokyo 181-0015, Japan*

Abstract. We derive a new three dimensional map of H I gas in the Milky Way Galaxy using the latest H I survey data (Hartmann & Burton 1997) and a new rotation curve (Honma & Sofue 1997). The H I disk extends to $R \simeq 23$ kpc and is strongly warped. The 17 kpc ring is most remarkable, and contains $\sim 2/3$ of the total H I mass, $5.5 \times 10^9 M_{\odot}$. The 13 kpc ring corresponds to the so-called Outer arm, and the 8 kpc ring to the Sagittarius and Perseus arms. Our map shows an H I deficient ring at $R = 10$ kpc. It coincides with a corotation, if the pattern speed is about $20 \text{ km s}^{-1} \text{ kpc}^{-1}$.

1. HI map of the Milky Way Galaxy

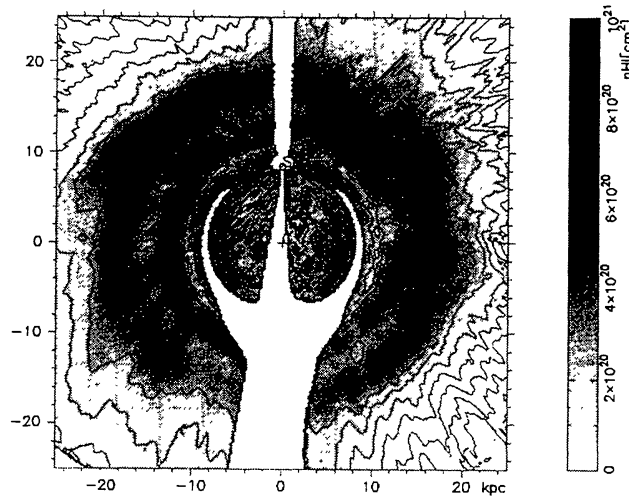
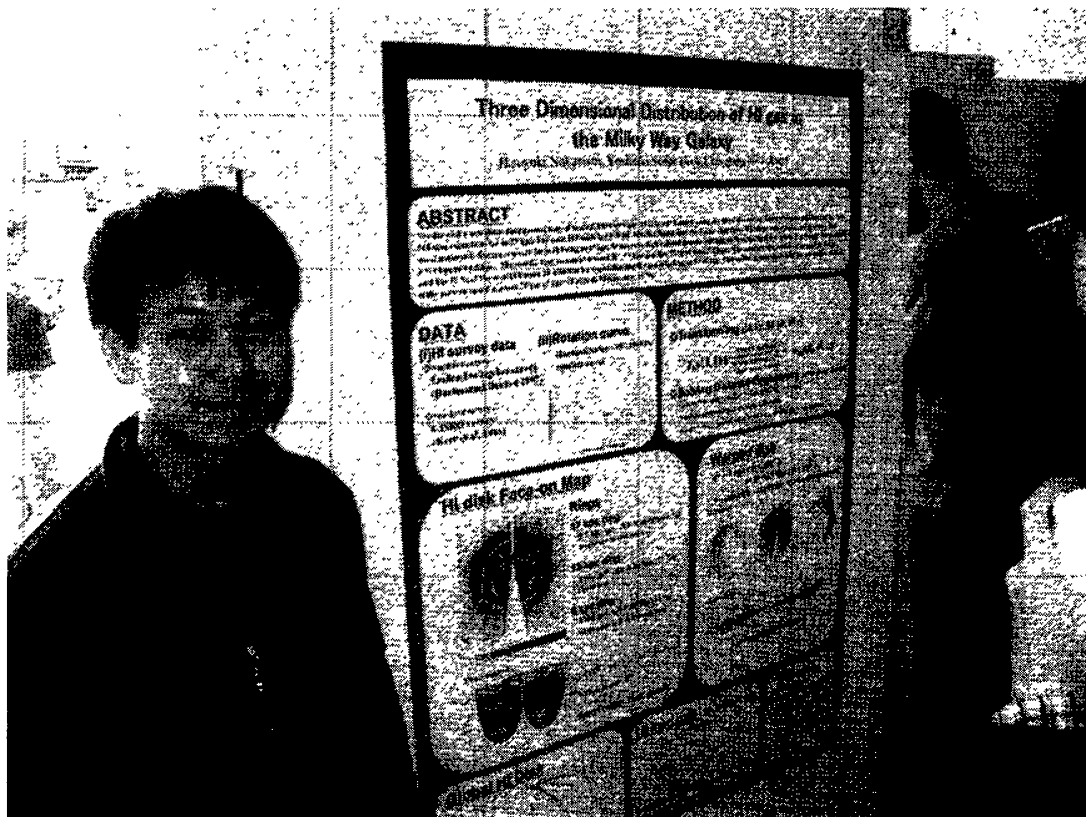


Figure 1. HI column density map integrated along z axis.

References

- Hartmann, D., & Burton, W. B. 1997, *Atlas of Galactic Neutral Hydrogen*, Cambridge University Press, Cambridge
 Honma, M., & Sofue, Y. 1997, *PASJ*, 49, 453



Hiroyuki Nakanishi presenting his poster

Part 3

Bars



Lia Athanassoula asking a question