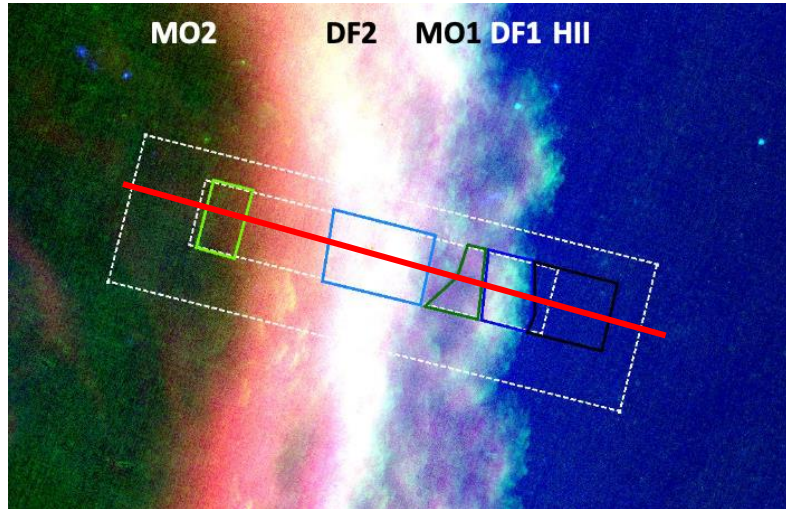
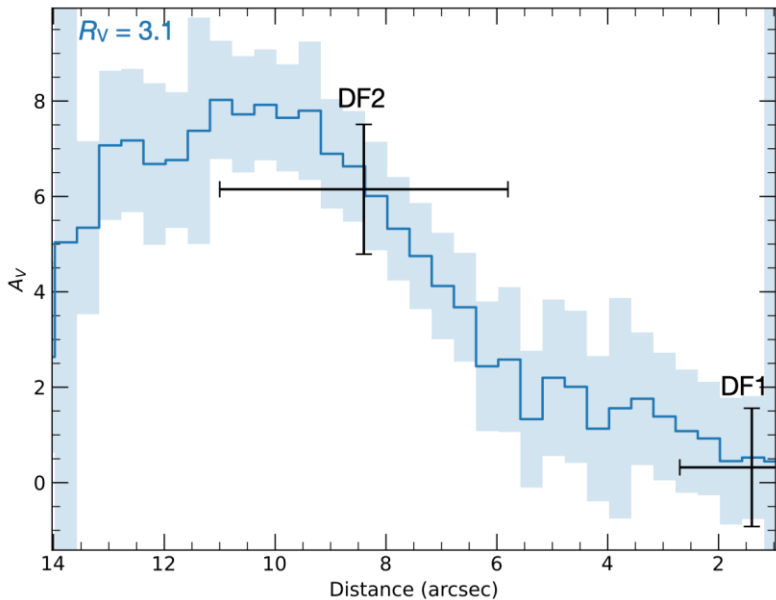


H₂ emission in the Horsehead Nebula

M. Zannese, P. Guillard, A. Abergel et al.



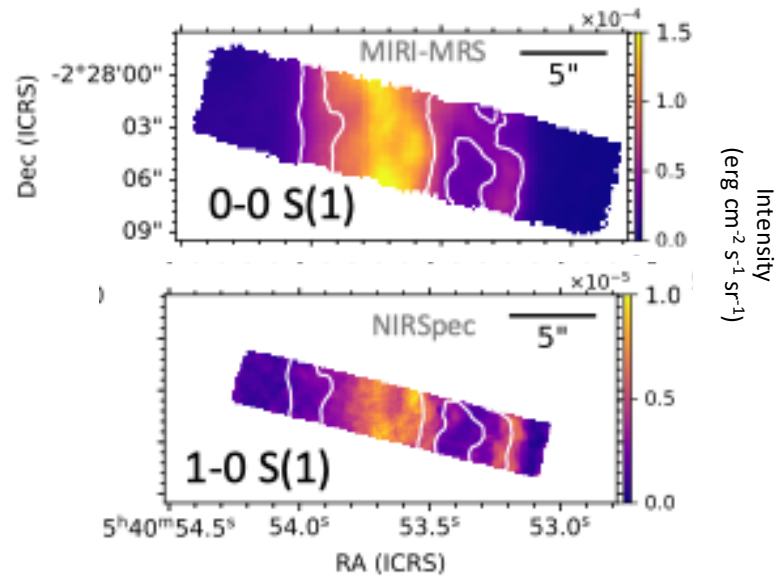
Evolution of extinction through the PDR (red line)



➡ DF1 : $A_V \sim 0$

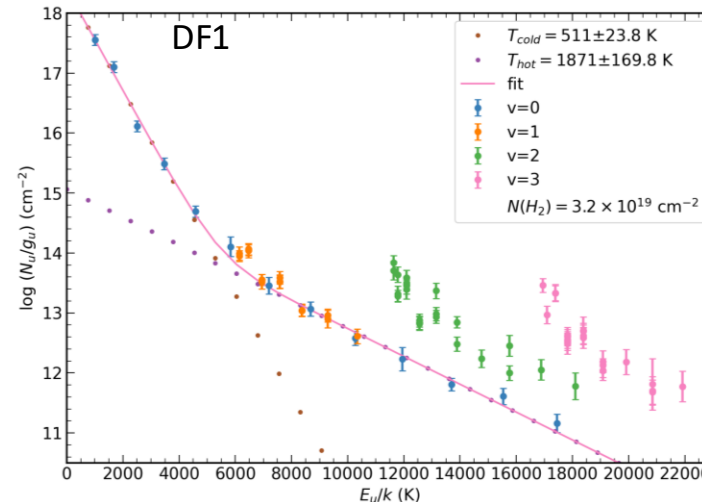
➡ DF2 : $A_V = 6.1 \pm 1.4$

H₂ maps with MIRI-MRS and NIRSpect

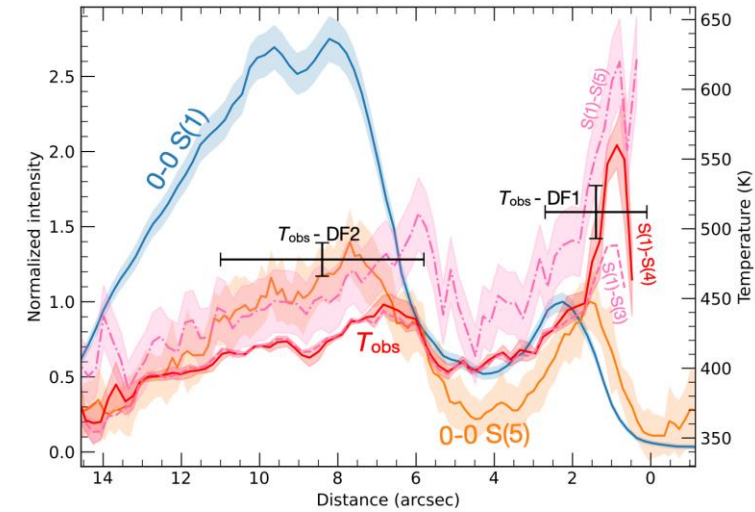


➡ FUV-pumped H₂ lines peak closer to the edge of the PDR than thermalized lines.

H₂ excitation diagram

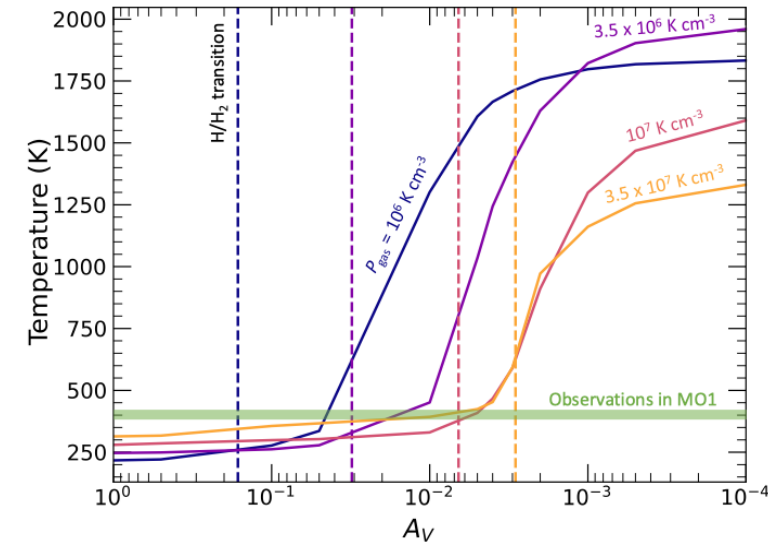


Variation of temperature throughout the PDR



➡ Few variation of temperature : $T > 380$ K

H₂ temperature in static PDR models



➡ Static models fail to reproduce the high temperature ! Importance of dynamics?