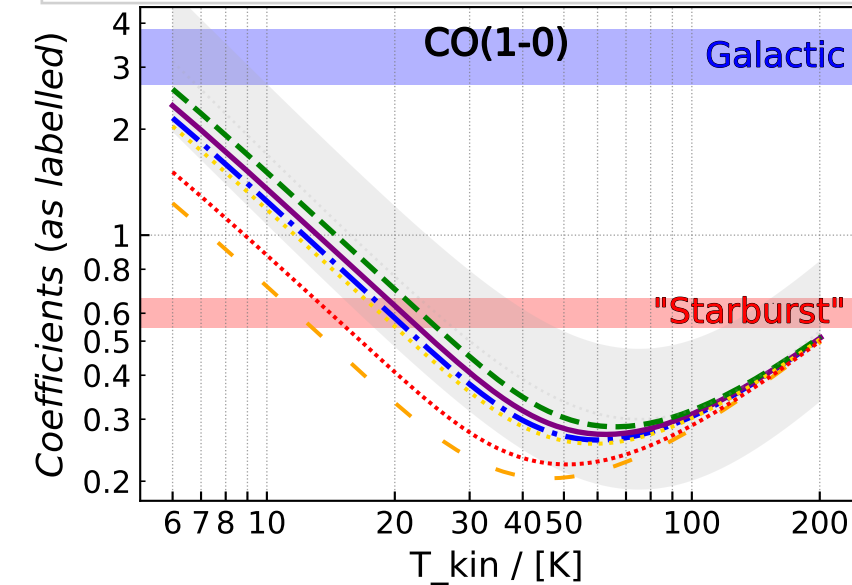
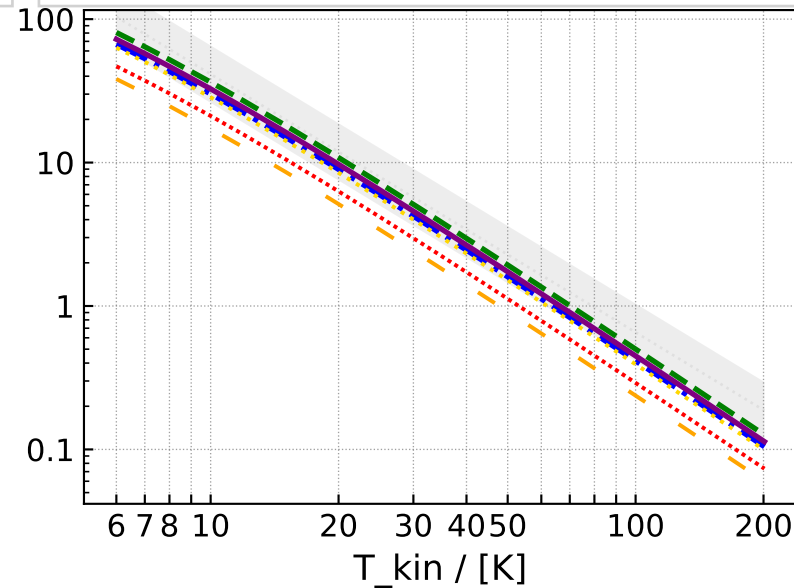


$$\alpha_{\text{CO}(1-0)}^{\text{no Helium}} = 0.64 \times [(2 T_{\text{kin}} / 5.53 + 2.87) / 100] \times [(\tau_{\text{CO}(1-0)} / (1 - e^{-\tau_{\text{CO}(1-0)})})]$$

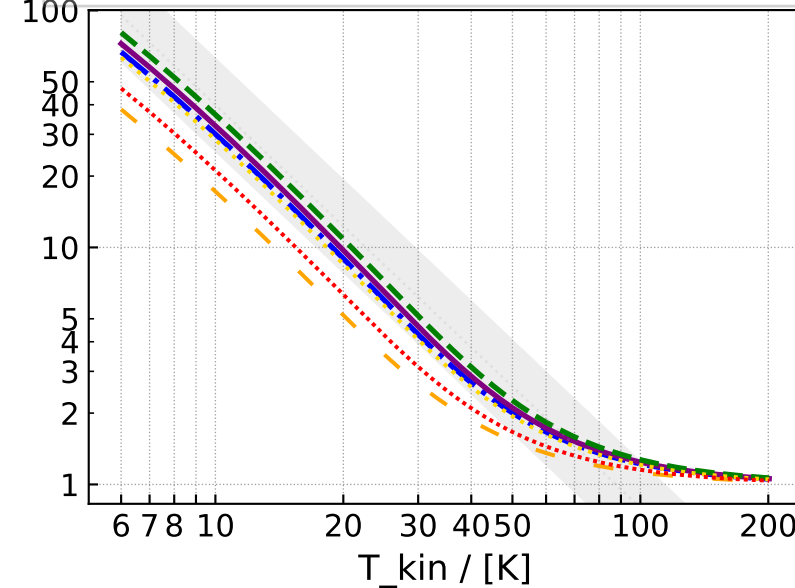
Approx. = $0.15 [1 + (T_{\text{kin}} / 75)^{2.4}] (T_{\text{kin}} / 75)^{-1.2} \times (3 \times 10^{-4}) / ([\text{CO}/\text{H}_2])$



Coeff.: $\tau_{\text{CO}(1-0)}$
 Approx.: $y = 1.1 (T_{\text{kin}} / 75)^{-1.8} [\pm 0.2 \text{ dex}]$



Coeff.: $\tau_{\text{CO}(1-0)} / (1 - e^{-\tau_{\text{CO}(1-0)}})$
 Approx.: $y = 1.3 (T_{\text{kin}} / 75)^{-1.7} [\pm 0.2 \text{ dex}]$



- $N_{\text{CO}} = 7.9\text{e}17, \Sigma_{\text{H}_2} = 42, \Delta v = 4$
 $N_{\text{CO}} / \Delta v = 2.0\text{e}17$
- $N_{\text{CO}} = 2.1\text{e}18, \Sigma_{\text{H}_2} = 115, \Delta v = 10$
 $N_{\text{CO}} / \Delta v = 2.1\text{e}17$
- - - $N_{\text{CO}} = 4.8\text{e}18, \Sigma_{\text{H}_2} = 255, \Delta v = 20$
 $N_{\text{CO}} / \Delta v = 2.4\text{e}17$
- ... $N_{\text{CO}} = 1.1\text{e}19, \Sigma_{\text{H}_2} = 600, \Delta v = 60$
 $N_{\text{CO}} / \Delta v = 1.9\text{e}17$
- . - $N_{\text{CO}} = 5.7\text{e}18, \Sigma_{\text{H}_2} = 303, \Delta v = 50$
 $N_{\text{CO}} / \Delta v = 1.1\text{e}17$
- ... $N_{\text{CO}} = 1.3\text{e}19, \Sigma_{\text{H}_2} = 668, \Delta v = 90$
 $N_{\text{CO}} / \Delta v = 1.4\text{e}17$