

Fig. 3: Spectrum grid of $C^{18}O$ (2-1) (black histogram) and DCO^+ (3-2) (red histogram) for 40 random positions around the core. Shown are the two-Gaussian fits (blue curves) and one-Gaussian fits (green curves) to the $C^{18}O$ (2-1) line. The vertical line is $V_{lsr}=5.2 \text{ km s}^{-1}$. The blue star shows the spectrum for the position of the central protostar.