

P145a **Rotation in the NGC 1333 IRAS 4C Outflow**

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We report ALMA molecular line observations of the outflow from the NGC 1333 IRAS 4C Class 0 protostar in the Perseus Molecular Cloud. The CCH and CS emission reveal an outflow cavity structure with clear signatures of rotation with respect to the outflow axis. The rotation is detected from about 120 au up to about 1400 au above the envelope/disk mid-plane. As the distance to the central source increases, the rotation velocity of the outflow decreases while the outflow radius increases, which gives a flat specific angular momentum distribution along the outflow. The mean specific angular momentum of the outflow is about 100 au km s^{-1} . Based on reasonable assumptions on the outward velocity of the outflow and the protostar mass, we estimate the range of outflow launching radii to be 5 – 15 au. Such a launching radius rules out that this outflow is launched as an X-wind, but rather, it is more consistent to be a slow disk wind launched from relatively large radii on the disk. The radius of the centrifugal barrier is roughly estimated, and the role of the centrifugal barrier in the outflow launching is discussed.