

High rotational lines from the Orion BN/KL star forming region

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We present observations of the closest region of high mass star formation, Orion BN/KL, performed in Fabry-Perot mode with the Long Wavelength Spectrometer (LWS) on board the Infrared Space Observatory (ISO). We detected the CO rotational transitions from $J_{up} = 15$ to $J_{up} = 49$. A LVG analysis of the line fluxes allows to distinguish three main physical components with different temperatures, densities and column densities: the photodissociation region (PDR), the low velocity outflow (plateau), and a hot and dense gas component. The latter exhibits broadened lines for the levels $J_{up} > 32$ and is thought to be due to shocked gas in a high velocity outflow. The Far Infrared Space Telescope (FIRST) instruments, particularly the spectrometers, will permit the spectral and spatial separations of the PDR and the plateau components, unresolved with ISO, and characterise more precisely the Orion BN/KL star forming region.