P108a Weighting all the protostars in Ophiuchus

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Mass is arguably the most fundamental quantity of a star, determining its structure, evolution, and ultimate fate. Tracing the growth of stellar mass through its earliest stages is key for (1) revealing the link between the mass distribution in molecular clouds and the resulting Initial Mass Function (IMF) of a given population of stars, (2) characterizing the mass accretion rate and its evolution, and (3) understanding what determines the fraction of molecular cloud material that is eventually incorporated into stars - the star formation efficiency. It is clear that the embedded (Class 0/I) protostellar stages play a key role in this context: these are the stages in which stars acquire more than 90% of their final mass while still associated with their parent molecular clouds. Quantifying the mass evolution of embedded protostellar stages is difficult, however, because the stars are obscured by their large-scale envelopes. The dynamical mass from the Keplerian disk motion is the only reliable method for stellar mass determination in the embedded protostar phase. We have launched a new ALMA project as a spin-off of the ALMA eDisk program to systematically determine the dynamical masses for a homogeneous sample of 25 protostars in the Ophiuchus star-forming region, whose proximity and relatively large number of protostars make it well suited to address the fundamental question of how protostars assemble their masses. One of the main goals is to investigate the relationship between protostellar mass, mass accretion rate, and disk mass based on a uniform sample of protostars in a single star-forming region. In my talk I will discuss the motivation for the program, the sample selection, and the latest status of the observations.