

B10a **ALMA Cycle 0 Observation of a Protostellar Binary L1551 NE**

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In this presentation, we will show ALMA Cycle 0 results of L1551 NE in the 0.9-mm dust continuum emission and C<sup>18</sup>O ( $J=3-2$ ) emission. L1551 NE is a Class I protostellar binary ( $T_{bol} = 91$  K;  $L_{bol} = 4.2 L_{\odot}$ ) located in Taurus at a distance of 140 pc. This protostellar binary has been identified as two 3.6-cm radio continuum sources with a projected separation of  $\sim 70$  AU at a position angle of  $120^{\circ}$ . Our previous SMA observations of L1551 NE in the 0.9-mm continuum and C<sup>18</sup>O ( $J=3-2$ ) line emission at a spatial resolution of  $\sim 0.9''$  have found a ring-like,  $r \sim 300$  AU circumbinary disk in Keplerian rotation. Our higher-sensitivity ALMA observation of the circumbinary disk has revealed finer-scale morphology and gas motions. We will report our progress of our discussion on the ALMA data, and show the latest results, in the context of binary star formation.