

## Z111a Probing the Flared Disk of IRAS04368+2557 with Sulfur-bearing Molecules (FAUST)

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IRAS04368+2557 in L1527 is a Class 0/I protostar with a clear disk-envelope system which is revealed by previous ALMA observations. In this presentation, we discuss the flared structure of this source with observed sulfur-bearing molecules included in the FAUST program. The analyses of molecular distributions and kinematics have shown that CS, SO, and OCS trace different regions of the disk-envelope system, such as the infalling-rotating envelope and the centrifugal barrier. To evaluate the temperature across the disk, we derive rotation temperature with the two observed SO lines. The temperature profile shows a flared “butterfly” structure with high temperature being  $\sim 50$  K and low temperature “hollow” coinciding with the continuum peak, indicating heating from accretion rather than radiation. Other physical properties, including column densities, are also estimated and further used to demonstrate the vertical structure of L1527.