

## **P33b**            **H $\alpha$ Spectroscopic study of Herbig Ae star AB Aurigae**

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AB Aur is classified as Herbig Ae star that is the pre-main sequence objects of intermediate mass. Like most Herbig Ae stars, it is surrounded by circumstellar matter of gas and dust. High-resolution spectropolarimetry can provide important information both on the scattering geometry and materials and on kinematics around the star.

We present the spectropolarimetric observation, especially across H $\alpha$  line, of AB Aur with LIPS mounted on the UH88 telescope. The result clearly implies the presence of geometrical asymmetry in the distribution of scattering materials in circumstellar regions. However, our result shows difference in polarization value and disappearance of polarization across H $\alpha$  emission line in comparison to the other literatures. This may indicate the time and/or spatial variation of circumstellar matter, whether it may be due to the motion of inhomogeneous blobs in gas disk and envelope or due to stellar activity.