P14b SUBARU ADAPTIVE OPTICS SPECTROSCOPY OF THE [Fe II] OUTFLOWS FROM HL TAURI AND RW AURIGAE

○ Tae-Soo Pyo、林　正彦 (国立天文台), 小林尚人 (天文センター、東大), Alan T. Tokunaga(IfA, UH), 寺田　宏, 高見英樹, 高遠徳尚 (国立天文台), Christoper J. Davis(UKIRT, JAC), 高見道弘, 林　左絵子 (国立天文台), Wolfgang Gässler(MPIA, Germany), 大屋　真, 早野　裕, 鎌田有紀子、美濃和　陽典, 家　正則, 臼田知史 (国立天文台),　西川貴行 (総研大), 根建　航 (東大)

We present new results of [Fe II] λ1.644 μm spectroscopy toward the jets from HL Tau and RW Aur carried out with the Subaru Telescope combined with the adaptive optics system. We observed the regions within $2''$–$3''$ from the stars with the sub-arcsecond resolutions of $0.''5$ and $0.''2$ for HL Tau and RW Aur, respectively. In addition to the strong, high velocity component (HVC) extended along each jet, we detected a blueshifted low velocity component (LVC) feature seen as a wing or shoulder of the high velocity emission at each stellar position. The PVDs of HL Tau and RW Aur show a characteristic similar to those of the cold disk wind and X-wind models in that the [Fe II] line width is broad in the vicinity of the stellar position and is narrower at the extended jet. A closer comparison, however, suggests that the narrow velocity width with symmetric line profiles of the observed HVC supports an X-wind type model where the launching region is localized in a small radial range, while the LVC located away from the star favors the presence of a disk wind. The [Fe II] emission from the HL Tau and RW Aur jets show a gap of $0.''8$ and a marked drop of $0.''2$ between the redshifted jets and the stars, indicating the presence of optically thick disks of $\sim$160 AU and $\sim$40 AU in radius, respectively.