

W21a XRISM time-resolved spectroscopy of the transient eclipsing low-mass X-ray binary AX J1745.6-2901

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XRISM caught X-rays from the transient low mass X-ray binary AX J1745.6-2901 in 2024 Spring, only 1.5 arcmin off from the supermassive blackhole in our Galaxy Sgr A*. The exposure time is about 100 ksec, covering about 10 cycle of the binary orbit of AX J1745.6-2901. AX J1745.6-2901 is pointed just out of the corner of the Resolve array, so most of the photons accumulated by the Resolve XMA are lost. However, spill-over X-rays due to the XMA's PSF tail are falling into the Resolve array, providing a high resolution spectra for the first time. AX J1745.6-2901 is pointed at around the center of Xtend. The Resolve spectra clearly show absorption lines from highly ionized irons, which are likely to originate from the accretion disc coronae (ADC). Since this source is an eclipsing binary, AX J1745.6-2901 gives an opportunity of high inclination case study for the ADC.