

Z203a Outflow from supercritical accretion flow in the low-mass X-ray binary GX 13+1

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The XRISM satellite observed the neutron star low-mass X-ray binary GX 13+1 in the PV phase, and high-resolution X-ray spectroscopic data by micro calorimeters show numerous blue-shifted absorption lines from He- and H-like ions and an absorption edge structure from He-like iron. The absorber can be described by a high column, high-ionisation, high-velocity (~ 900 km/s) component and an even higher column, lower-ionisation, lower-velocity (~ 300 km/s) component. This analysis suggests that the column is optically thick, and the intrinsic luminosity of the central source is above the Eddington luminosity. Despite this, the outflow is slow, showing that the gas is launched only from large radii of the disk. This result presents a challenge to our understanding of winds from supercritical accretion flows.