Title:	AstroSat/UVIT observations of IC 4329A: constraining the accretion disc inner radius
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Abstract:	We present a study of far- and near ultraviolet (UV) emission from the accretion disc in a powerful Seyfert 1 galaxy IC 4329A using observations performed with the Ultraviolet Imaging Telescope (UVIT) onboard AstroSat. These data provide the highest spatial resolution and deepest images of IC 4329A in the far- and near UV bands acquired to date. The excellent spatial resolution of the UVIT data has allowed us to accurately separate the extended emission from the host galaxy and the AGN emission in the far- and near UV bands. We derive the intrinsic AGN flux after correcting for the Galactic and internal reddening, as well as for the contribution of emission lines from the broad and narrow-line regions. The intrinsic UV continuum emission shows a marked deficit compared to that expected from the 'standard' models of the accretion disc around an estimated black hole mass of 1−2×108M⊙ when the disc extends to the innermost stable circular orbit. We find that the intrinsic UV continuum is fully consistent with the standard disc models, but only if the disc emits from distances larger than ∼80–150 gravitational radii.
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