

Title: Multiwavelength Evidence for a Changing-look Event Triggered by a Tidal Disruption Event in NGC 3822

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The Seyfert galaxy NGC 3822 underwent a changing-look (CL) transition in 2022, coincident with a nuclear outburst. We investigate whether a tidal disruption event (TDE) triggered this transition, using X-ray, UV and optical spectroscopic observations spanning 2008–2025. In early 2022, the source brightened simultaneously from the optical to X-ray bands. Optical spectra obtained during the outburst reveal broad Balmer lines, with FWHM of $\sim 5100\text{--}5300\text{ km s}^{-1}$ for H α and $\sim 3500\text{--}4600\text{ km s}^{-1}$ for H β . These lines were absent in 2018 and mark a transition from type 1.9 to type 1. After the outburst, the UV flux declined as $t^{-(0.41\pm 0.03)}$, consistent with the $t^{-(5/12)}$ decay expected from a cooling TDE accretion disc. The X-ray flux dropped by a factor of ~ 16 during 2023–2024. Optical spectra from 2024–2025 show that the broad lines disappeared and the source returned to a type 1.9/2 state. The Eddington ratio tracks the optical spectral type. Broad lines are present at $\lambda_{\text{Edd}} \approx 3.8 \times 10^{-3}$ and absent at $\lambda_{\text{Edd}} \lesssim 0.9 \times 10^{-3}$. X-ray spectroscopy reveals a partially covering absorber ($N_{\text{H}} \sim 1\text{--}2 \times 10^{22}\text{ cm}^{-2}$) in 2016 and 2022, but its presence is independent of the optical state. This disfavors variable obscuration as the origin of the CL event. Broadband NuSTAR spectra show that the coronal temperature increased from $kT_{\text{e}} \sim 50\text{ keV}$ in 2016 to 88 keV during the outburst. The anticorrelation between α_{ox} and λ_{Edd} indicates a relatively weaker corona at higher accretion rates. These results indicate that the TDE raised the accretion rate above the threshold required to sustain the broad-line region, and the broad lines faded as the fallback accretion declined.