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DISCOVERY OF THE NEW CHANGING LOOK EVENTS IN NGC1566

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We present a study of optical, UV and X-ray light curves of the nearby changing look active galactic nucleus in the galaxy NGC 1566 obtained with the Neil Gehrels Swift Observatory and the MASTER Global Robotic Network over the period 2007 - 2019. We also report on our optical spectroscopy at the South African Astronomical Observatory with the 1.9-m telescope on the 5 nights: 2018 Aug. 2, Dec. 18, 2019 Jan. 9 and 15, Mar. 27 . A substantial increase in X-ray flux by 1.5 orders of magnitude was observed following the brightening in the UV and optical bands during the last year. After a maximum was reached at the beginning of 2018 July the fluxes in all bands decreased with some fluctuations. The remarkable re-brightening in of the light curve following the decline from the bright phase was observed at MJD range 58440-58490. The amplitude of the flux variability is strongest in the X-ray band and decreases with increasing wavelength. Low-resolution spectra (2018 Aug.) reveal a dramatic strengthening of the broad emission as well as high-ionization [FeX]6374 lines. These lines were not detected so strongly in the past published spectra. The change in the type of the optical spectrum was accompanied by a significant change in the X-ray spectrum. At the last 4 spectra (2018 Dec.-2019 Mar.) we see dramatic changes comparative to the first one (2018 Aug.) with fading of broad emission lines during Dec.-Mar. So we were observed 2 changing look (CL) cases with the object: changing to Sy1.2 type and then returning to the low state as Sy 1.8-Sy1,9 type. All these facts confirm NGC~1566 to be a CL Seyfert galaxy. Some possible explanations of the observed dramatic changes are discussed.