



Publication Year	2015
Acceptance in OA	2020-05-14T13:42:44Z
Title	ATel 7267: The TeV HBL blazar 1ES 1011+496 in Gamma-, X-, Optical flaring activity
Authors	PACCIANI, LUIGI, STAMERRA, Antonio
Handle	http://hdl.handle.net/20.500.12386/24817
Journal	The Astronomer's Telegram
Volume	7267

Outside

GCN
IAUCs

Other

ATel on [Twitter](#) and [Facebook](#)
ATELstream
[ATel Community Site](#)

The Astronomer's Telegram

[Post](#) | [Search](#) | [Policies](#)
[Credential](#) | [Feeds](#) | [Email](#)

29 Apr 2020; 14:45 UT

This space for free for your conference.

[[Previous](#) | [Next](#) | [ADS](#)]

The TeV HBL blazar 1ES 1011+496 in Gamma-, X-, Optical flaring activity

ATel #7267; **Luigi Pacciani (IAPS-INAF Italy), Antonio Stamerra (INAF-Italy & SNS Pisa Italy)**

on **21 Mar 2015; 16:10 UT**

Credential Certification: [Luigi Pacciani \(luigi.pacciani@iaps.inaf.it\)](mailto:luigi.pacciani@iaps.inaf.it)

Subjects: Optical, Ultra-Violet, X-ray, Gamma Ray, >GeV, AGN, Blazar

Tweet

We detected a gamma-ray flare from the TeV HBL blazar 1ES 1011+496 ($z=0.212$), triggering on FERMI-LAT data at $E > 10$ GeV with $TS \sim 50$, from 2015-03-12 to 2015-03-16, following the prescription of Pacciani et al. 2014, ApJ, 790, 45. The gamma-ray flux was $(3.0 \pm 0.9) \times 10^{-8}$ ph $\text{cm}^{-2} \text{s}^{-1}$, photon index 1.32 ± 0.25 , $TS \sim 94$ ($E > 1$ GeV), to be compared with the catalog flux of $(0.73 \pm 0.02) \times 10^{-8}$ ph $\text{cm}^{-2} \text{s}^{-1}$ reported in the 3rd Fermi-LAT point-source catalog. The Swift Follow-up revealed the source in high state in optical and X-ray. The preliminary Swift-UVOT photometry on 2015-03-17 is: $V = 15.69 \pm 0.05$ $B = 16.01 \pm 0.03$ $U = 15.02 \pm 0.03$ $UVW1 = 14.89 \pm 0.03$ $UVM2 = 14.69 \pm 0.02$ $UVW2 = 14.79 \pm 0.02$ which is 5-15% brighter than the peak flux on 2014. Magnitudes are in the UVOT photometric system (Poole et al. 2008, MNRAS, 383, 627) and have not been corrected for Galactic extinction. The simultaneous Swift-XRT observation gives a counting rate of 4.2 cps (to be compared with 5.1 cps of the brightest state on 2014-02-25, Swift obsid 00035012033 <http://www.swift.psu.edu/monitoring/source.php?source=1ES1011+496> , and ATel 5866 <http://www.astronomerstelegam.org/?read=5866>) and a flux of $(1.02 \pm 0.07) \times 10^{-10}$ erg $\text{cm}^{-2} \text{s}^{-1}$ (0.3-10 keV). We fit an absorbed log-parabola model to the data, obtaining $\alpha = 1.65 \pm 0.15$, $\beta = 0.49 \pm 0.12$, $E_{\text{pivot}} = 0.3 \text{ keV}$, $E_{\text{peak}} \sim 0.7 \text{ keV}$, n_{H} fixed at the galactic value of $8.4 \times 10^{19} \text{ cm}^{-2}$, $\chi^2/\text{ndof} = 0.97$). We encourage further multi-wavelength observations, particularly TeV observations. We thank the Swift team and Swift Observatory Duty Scientist for rapidly scheduling our observations.