

TDE Meeting Notes 20210519

Welcome Anna Franckowiak to join our working group!

Round of introduction.

Anna is interested in neutrino follow up. Gamma-ray & optical light curves.

Resources: mainly ESO follow ups. Maybe NOT.

SRK: should submit proposals for follow up.

Scanning Jean

Assigned 2 more sources to future runs

Matthew report on changing-look AGNs

Graham+2000 reported 111 changing look AGNs

In the last 6 month we got 18 new sources from ZTF

Model: The accretion disk ionizing front makes the inner disk puff up. This occurs on the thermal timescale.

There are a few sources which are not changing-look AGN but extrem variable AGN.

Developed methods to track the color using 2D Gaussian process.

The end goal is to have a statistical sample where we can look for the correlation between the timescale and spec/color terms to identify a good physical model to explain this phenomenon.

Report from the May 12 LRIS run

(1) ig11: <https://fritz.science/source/ZTF21aapvvtb>

For this peculiar nuclear transient, we have a crazy spectrum.

- * He II in broad emission (very TDE-like)
- * C II in broad emission
- * No H features in broad emission
- * H-alpha narrow emission but all the other H lines in narrow *absorption*
- * NII in narrow emission (AGN-like ratio versus H-alpha), but no OIII
- * Very strong Mg II and Na I in absorption (host ISM)
- * Two very strong broad UV features

Swift show bright UV but no X-rays. The monitoring is ongoing

(2) Boba Fett: <https://fritz.science/source/ZTF21aaroozv> (z=0.408, -22 mag):

This is a luminous nuclear transient with a featureless spectrum. I will trigger Swift

A close analog in the ZTF-II sample is Grogue: <https://fritz.science/source/ZTF20acwytxn> (z=0.34, -23 mag)

Another analog in the ZTF-I BTS sample is <https://fritz.science/source/ZTF19aaniqrr> (z=0.519, -23.5 mag)

And maybe also ZTF18acnbpmd...

Any other similar examples that we know of?

iPTF14aon and ASASSN-15lh??

We may discuss if our group want to lead a sample paper of these sources

(3) Pershing: ZTF21aauybyx -- confirmed to be TDE-H

(4) <https://fritz.science/source/ZTF21aaowefe>:

spectrum obtained at 12 deg twilight so not good SNR

I guess $z=0.485$ based on an absorption feature at 3623 Å, but does anyone have a cross-correlation code to better determine the redshift?

Or should we get another LRIS spectrum on June 6?