ZTF calibration simulation using SDSS BOSS spectra templates

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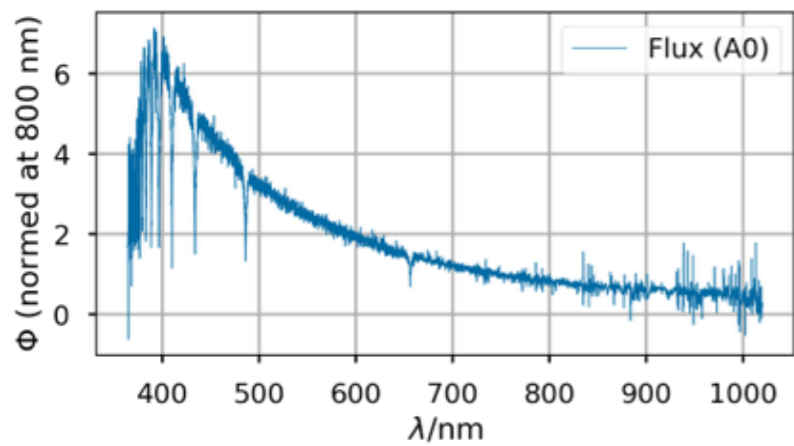
UNIVERSITÉ
Clermont
Auvergne

- 324 templates star spectra from SDSS BOSS
- wide range of spectra classes, luminosity classes and metallicities (O5 -> L3)
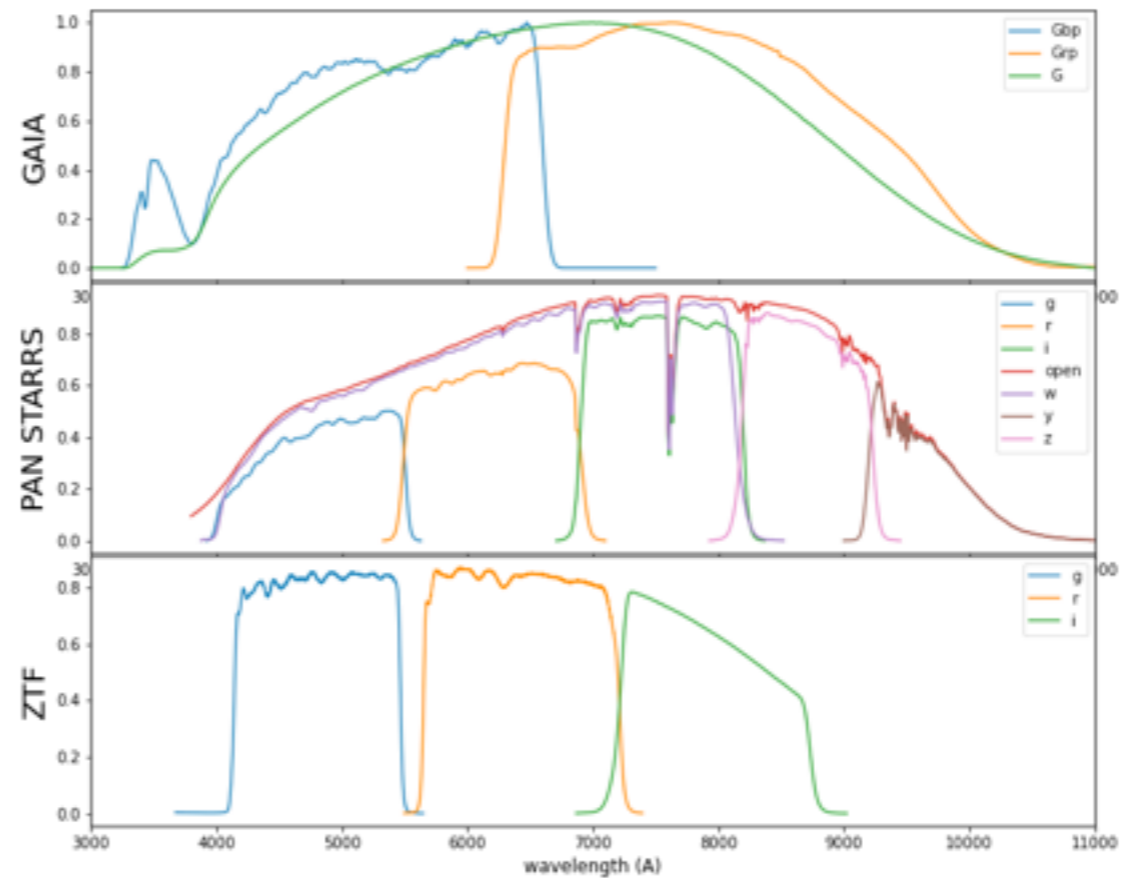- https://zenodo.org/record/321394

/!\ One spectrum of each class => may not be representative of stars classes in a real field of view.
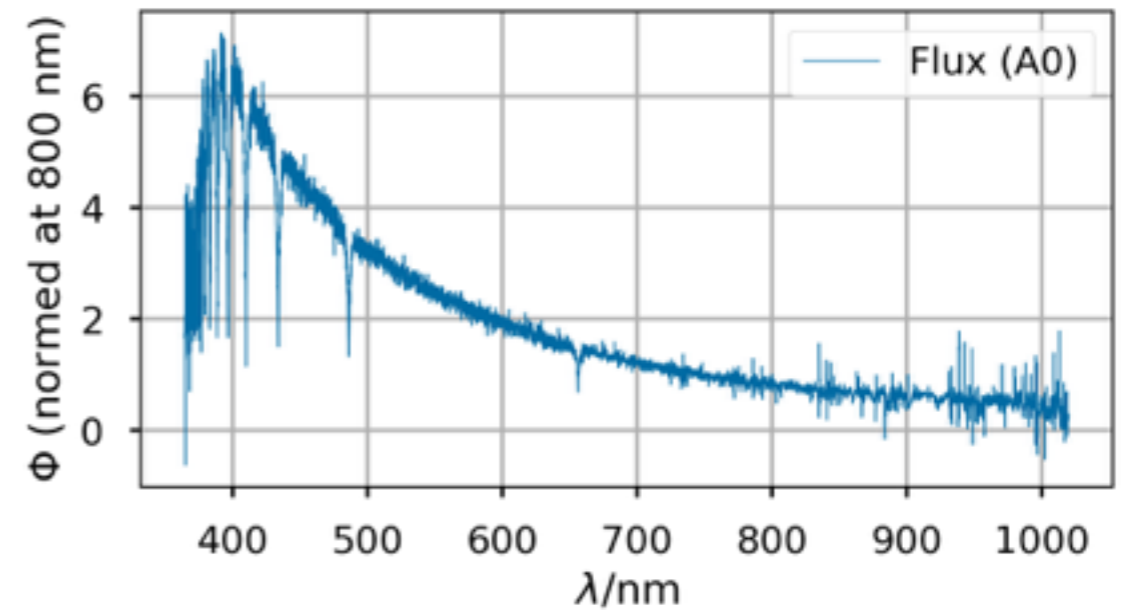
Flux integration over filters

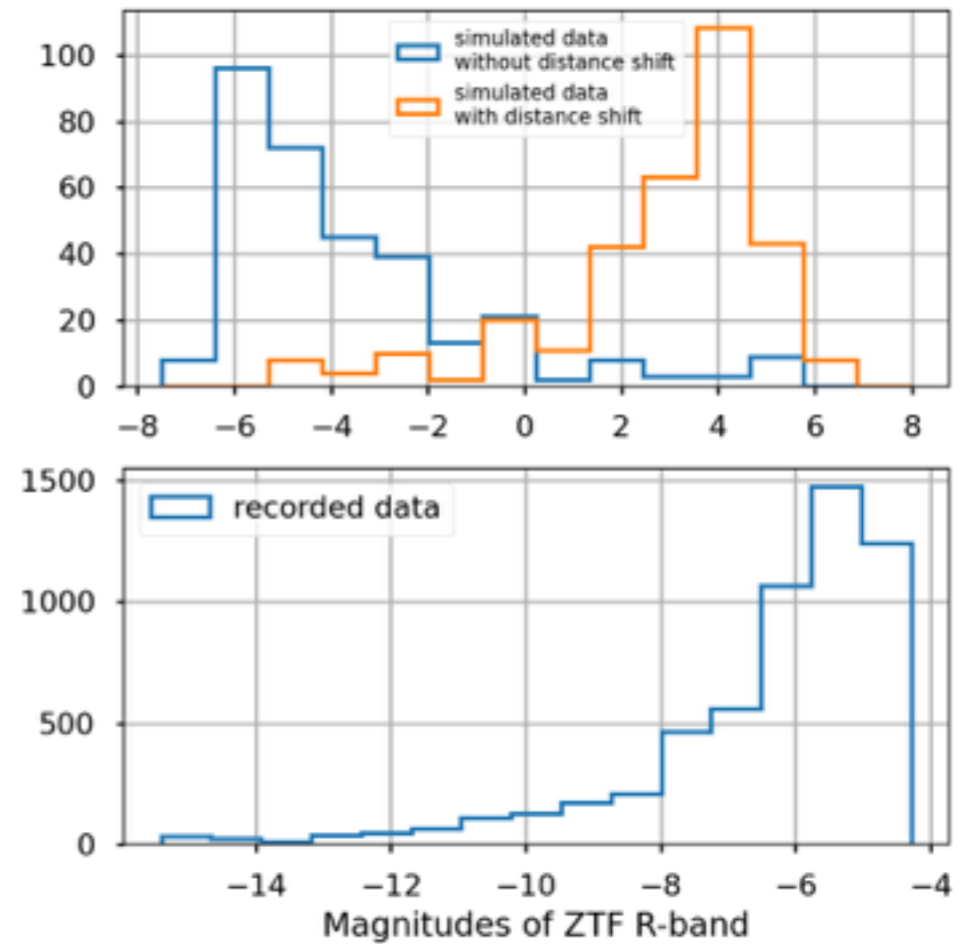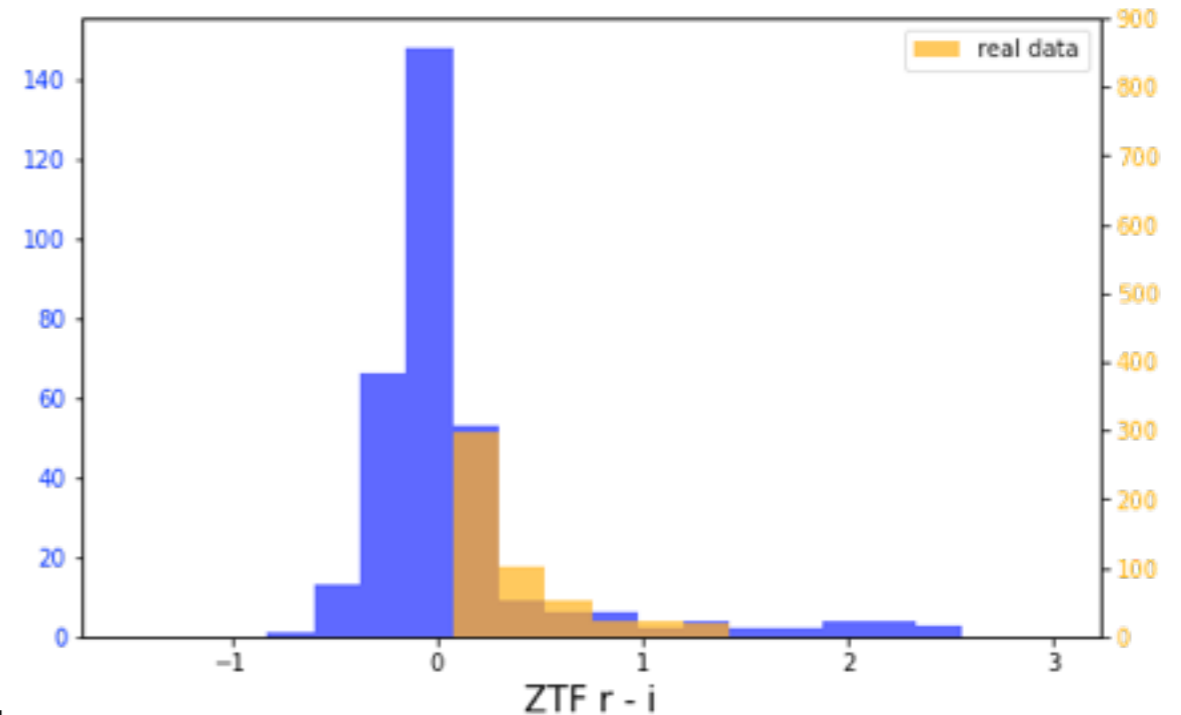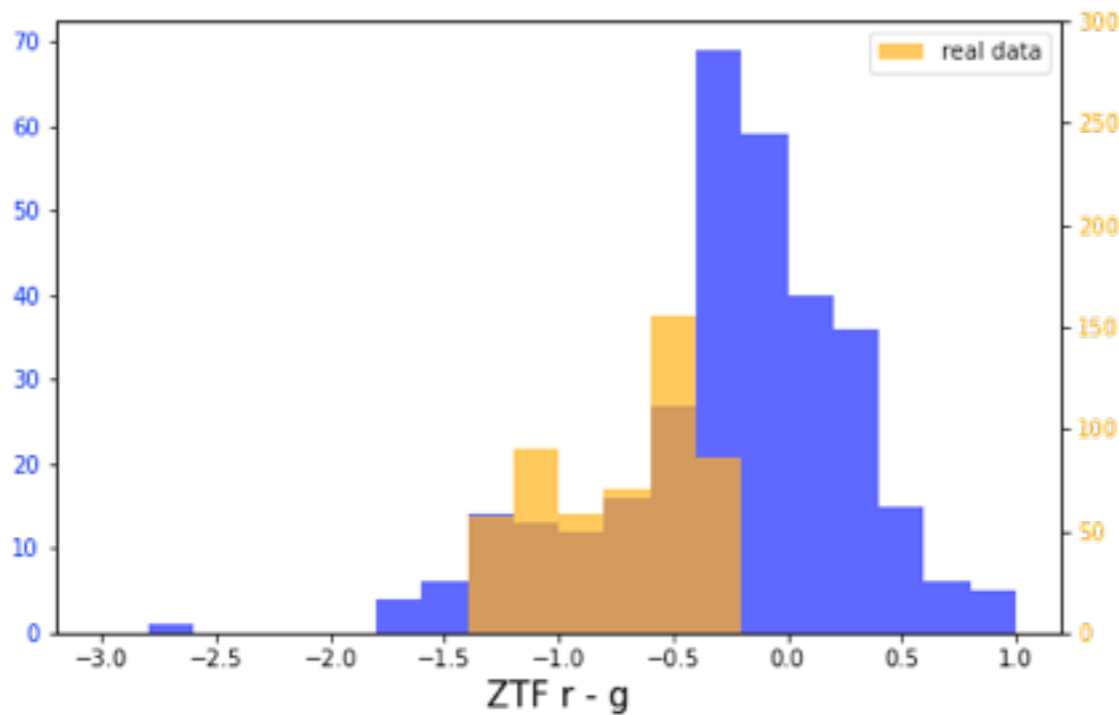324 spectra

324 mag
x 3 filters

324 mag
x 7 filters

324 mag
x 3 filters

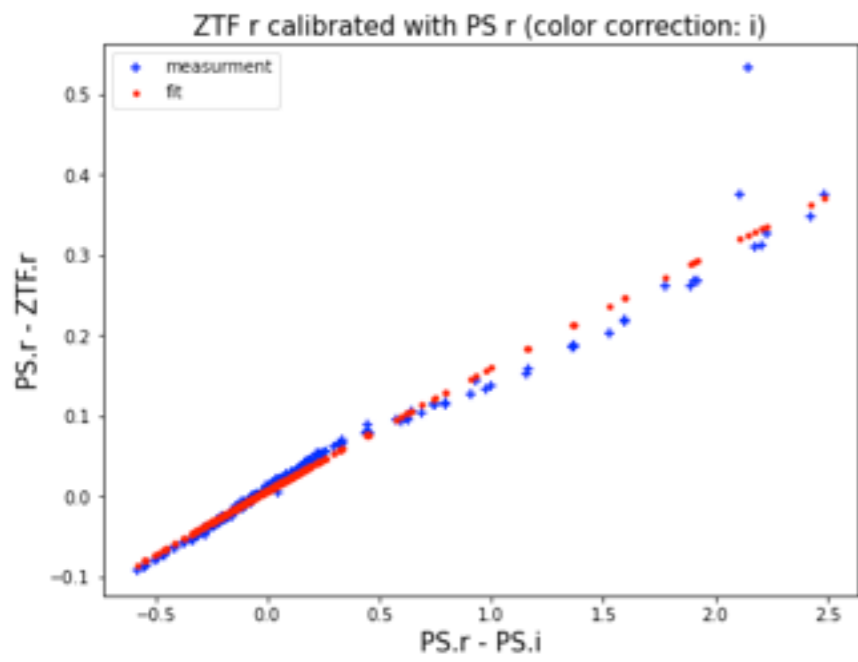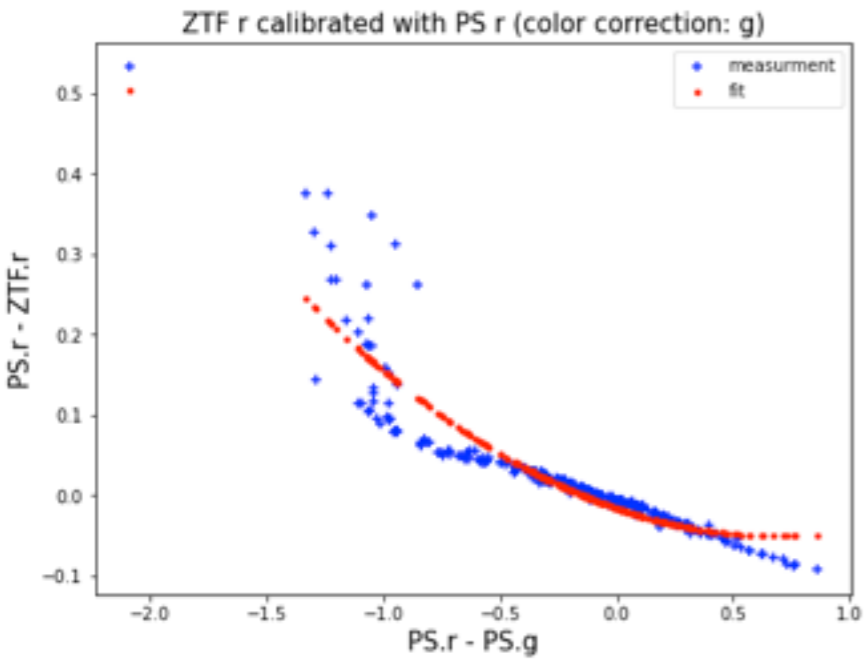Average spectrum used as reference star

- magnitude distribution not similar to real data
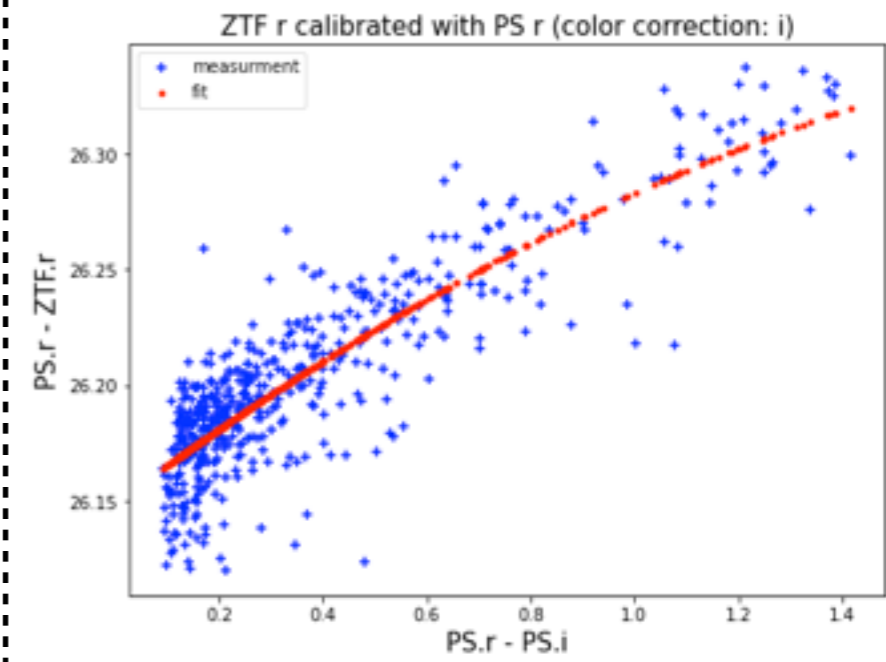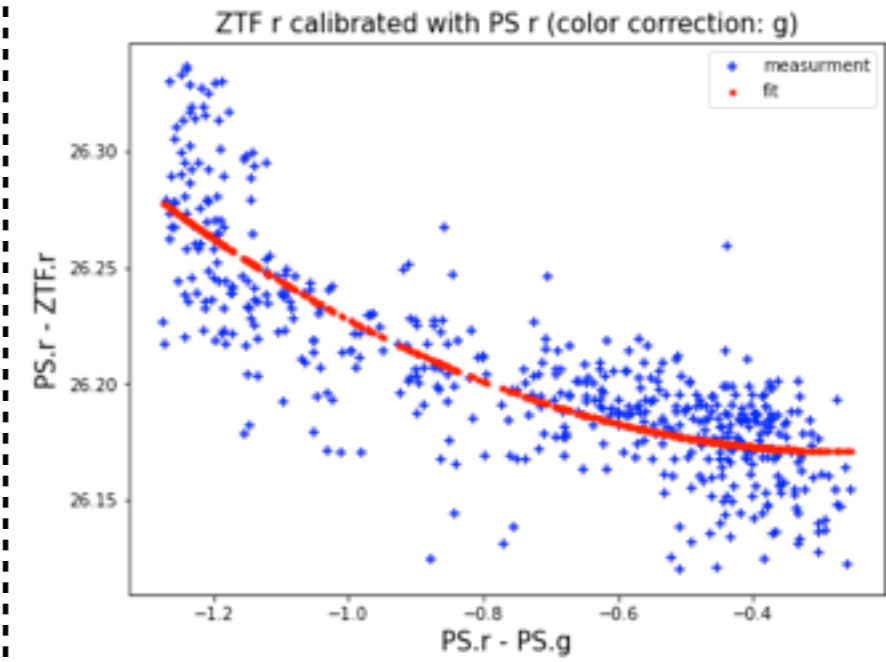- >> flat random distance distribution added
  Flux F becomes F/d^2
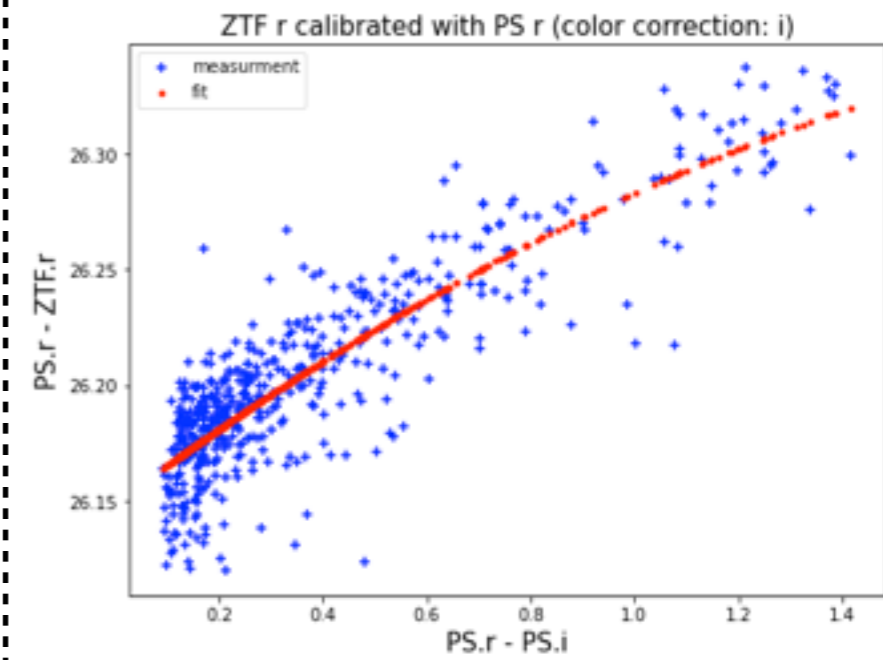
- color distribution similar to real data

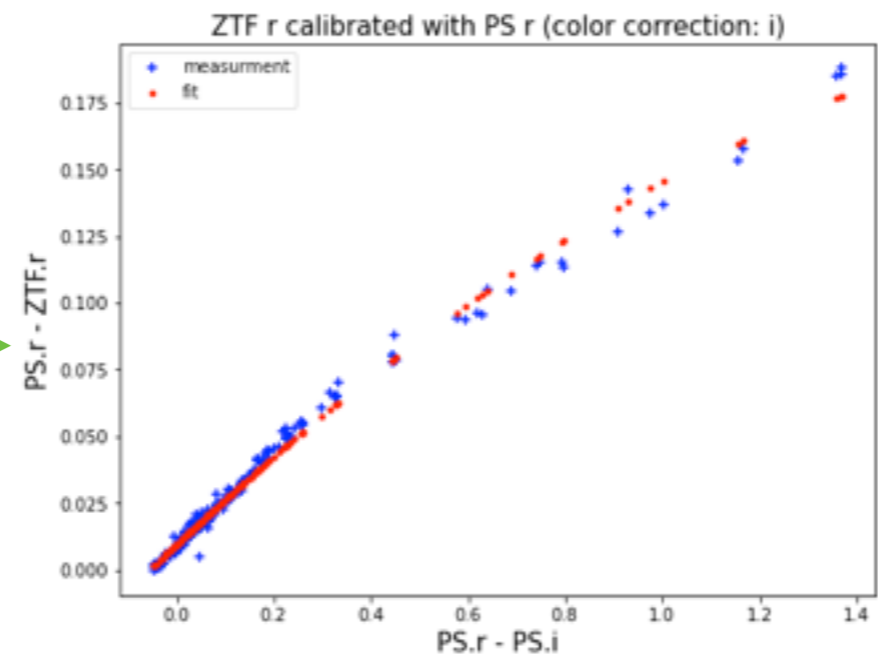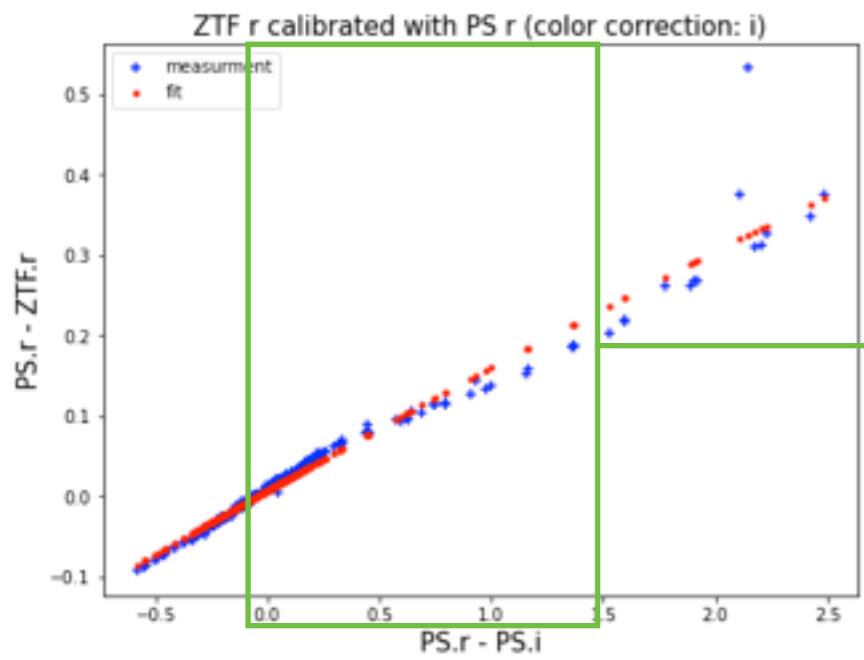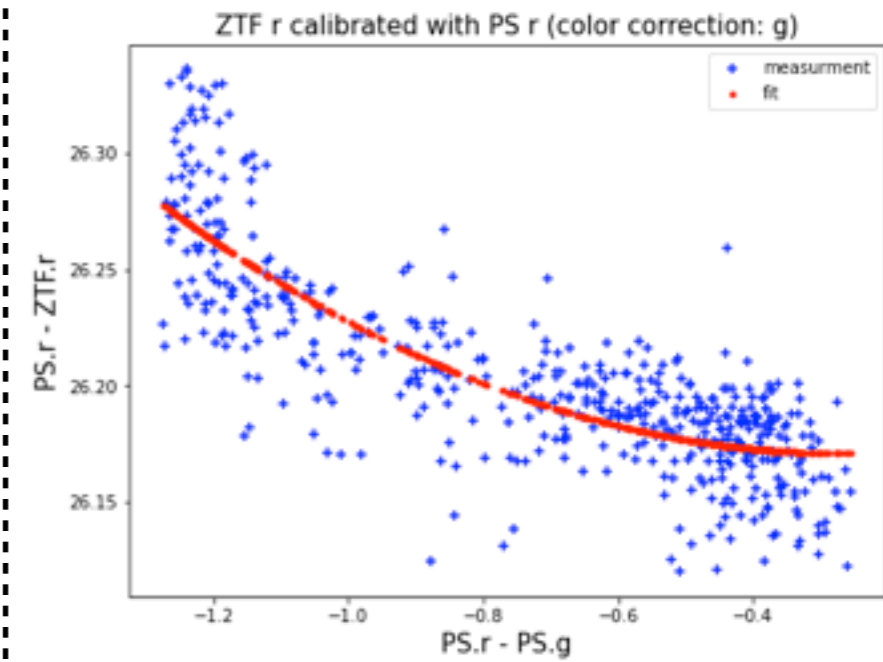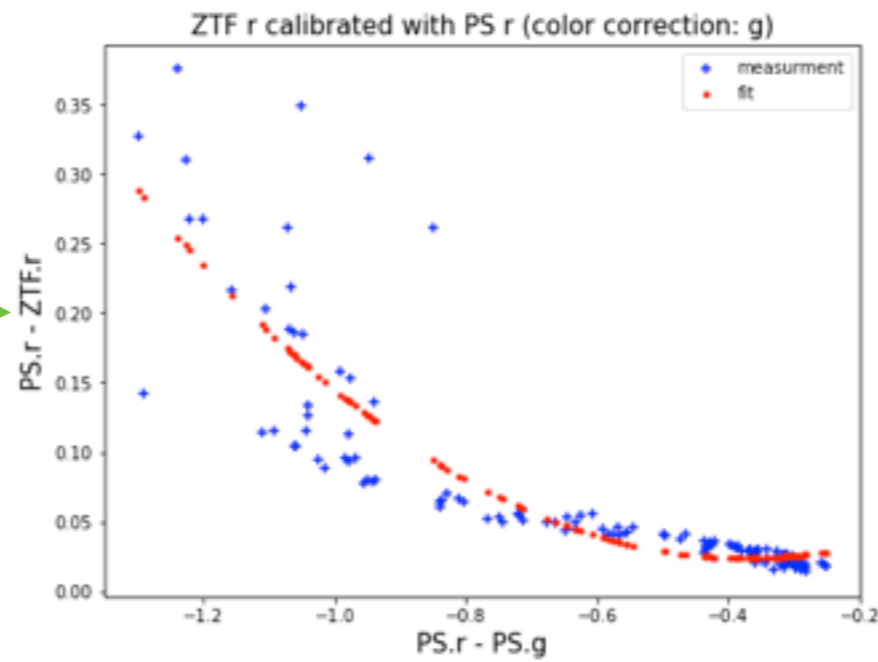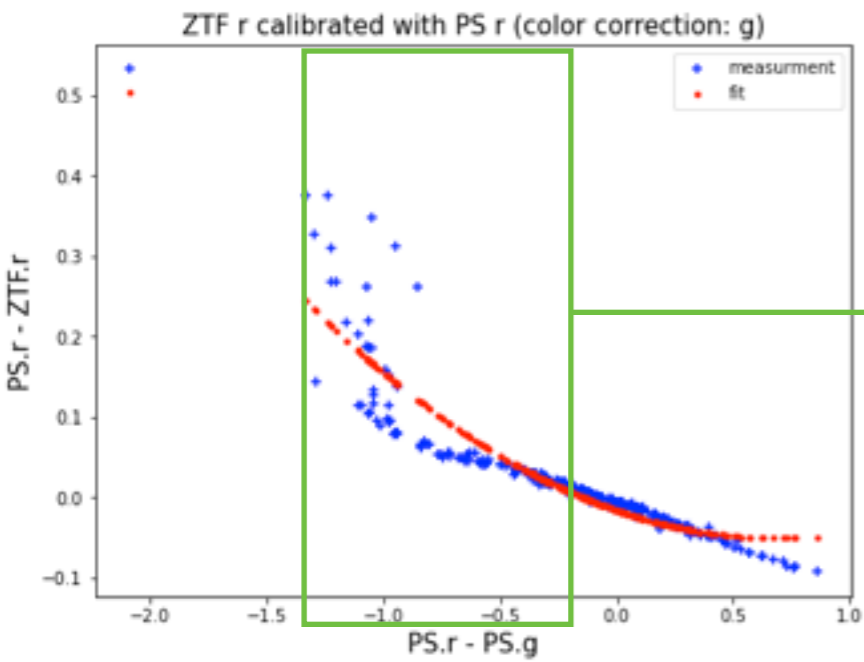Magnitudes of ZTF R-band

ZTF r - g

ZTF r - i

4

PAN STARRS

Simulated data   vs.   Real data

Simulated data   vs.   Real data

Simulated data   vs.   Real data
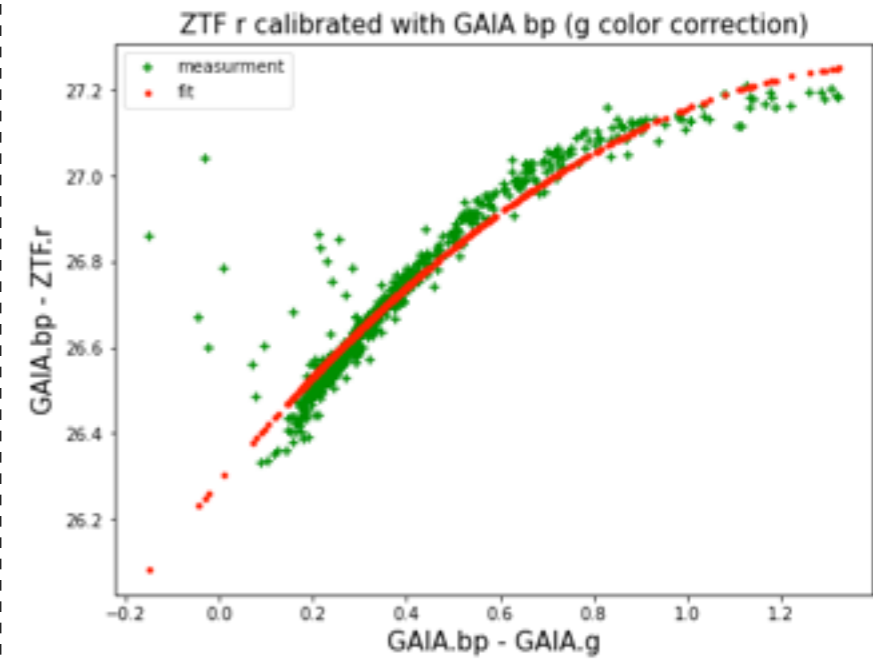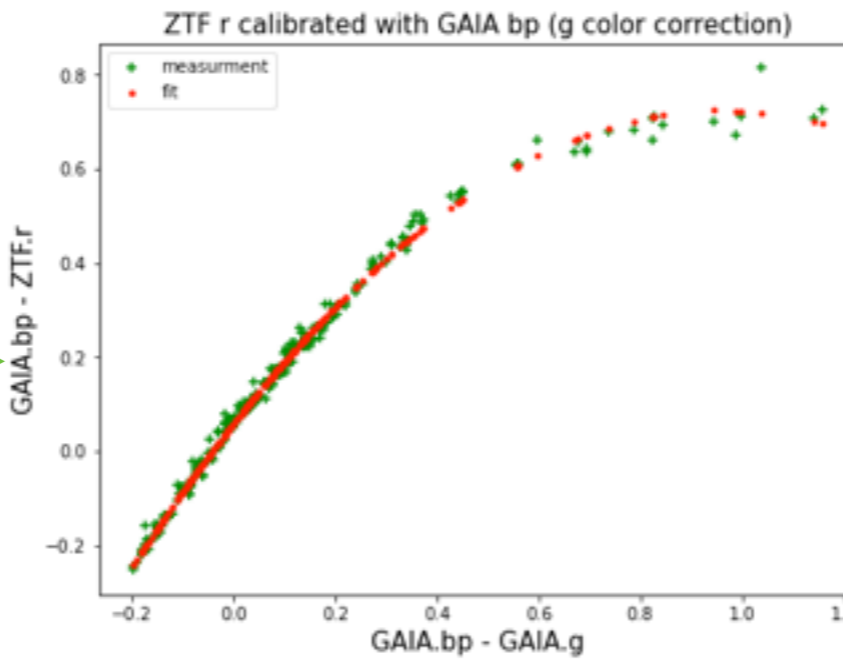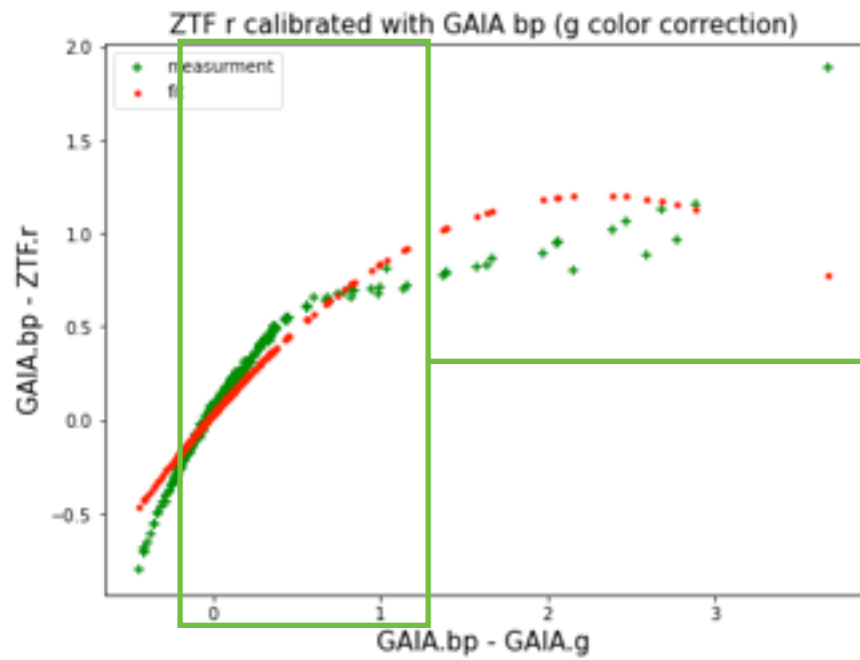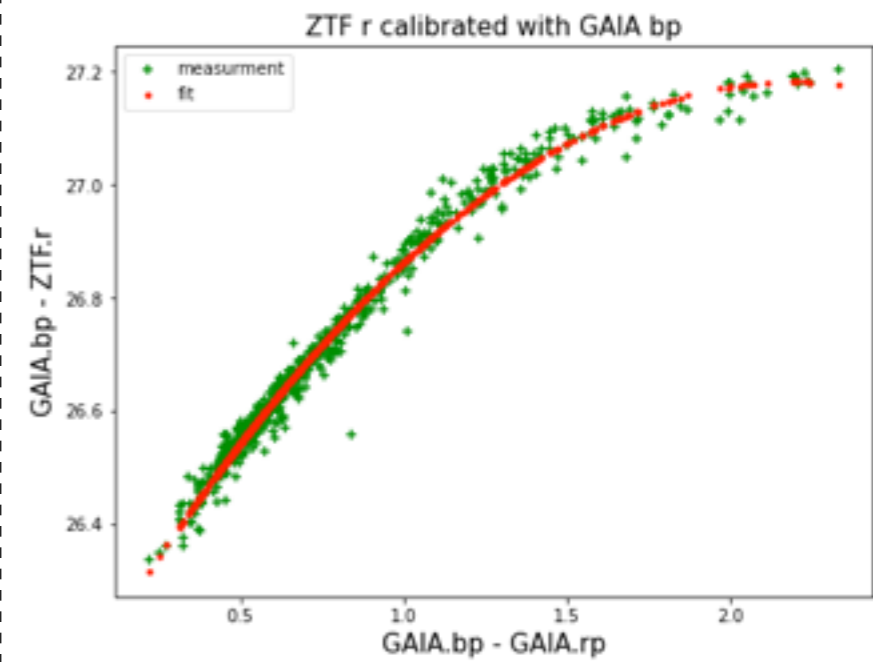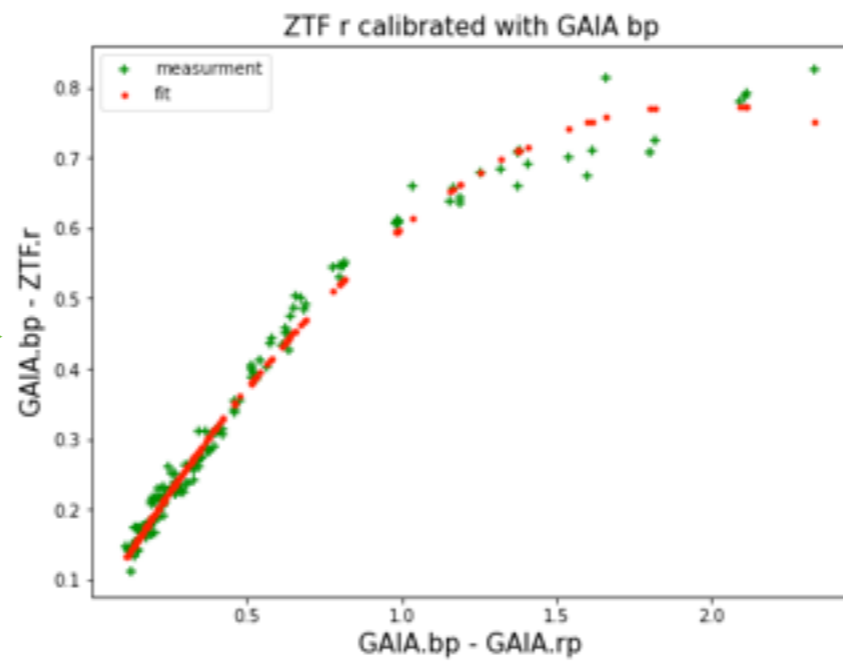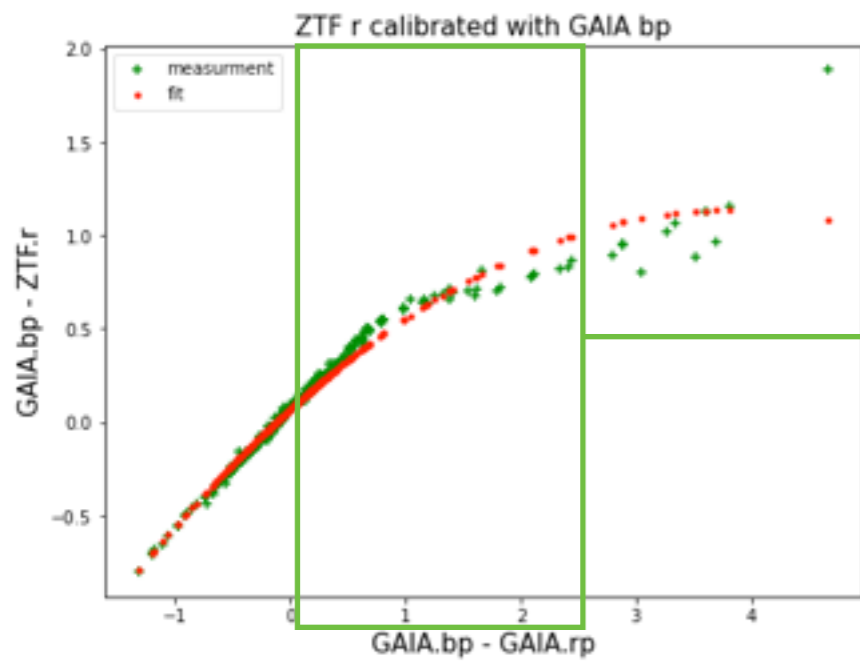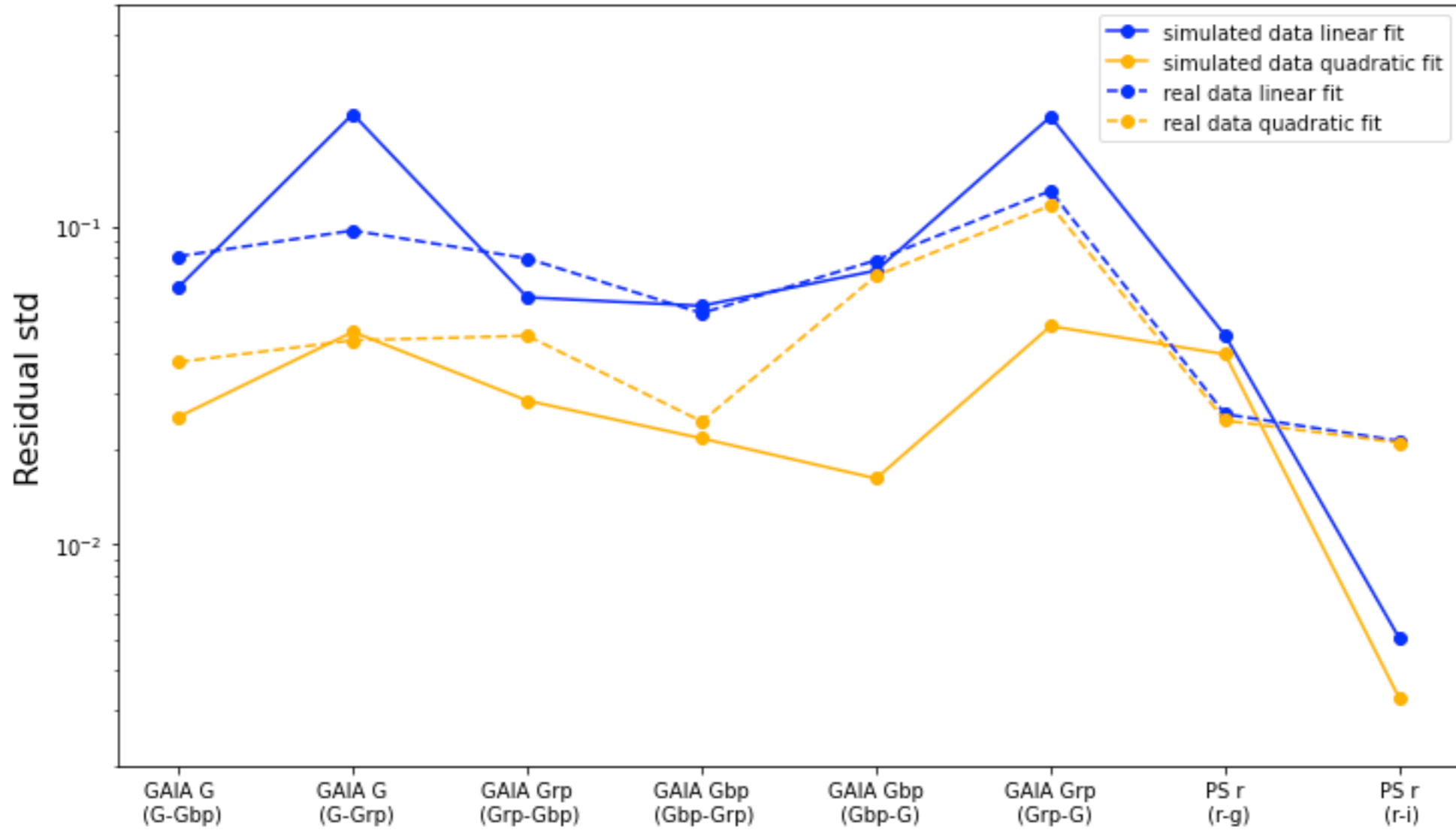
real data use for comparison
- r filter
- field of view 759
- 1st CCD
- 1st quadrant
- obs 505938 from 2020/02/01

ZTF r band

Thank you

ZTF r band