For this work we will use the point spread function (PSF) fit-based optical light curves available in the ZTF public data release 6 (ZTF DR6; documentation: <https://www.ztf.caltech.edu/page/dr6>). I used the ZTF Application Programming Interface (ZTF API) to obtain light curves for all the sources in our sample of QSOs, AGNs, and Blazars. I retrieved the light curves of each source, centered in the coordinates of the catalog available in the Google Drive folder, and using a radius of 1.5 arcseconds, which is the standard cross-matching radius used by ZTF. When doing this for a particular object, the ZTF API can return more than one light curve in each filter. This happens because ZTF treats independently the light curves observed in a particular field, filter, and CCD-quadrant, and thus, if a source appears in more than one combination of these three, ZTF will provide more than one light curve. The ZTF quadrants are calibrated independently, and thus combining light curves from different fields and CCD-quadrants (but same filter), can produce spurious variability (see van Roestel+2021).

ZTF DR6 provides light curves in the g, r and i ZTF bands, however for this work we will only used light curves observed in the g and r bands.

You can clean the ZTF DR6 light curves using the catflags quality score, keeping only the epochs with catflags=0, as advised by the ZTF documentation. You can also remove all the epochs with a photometric error higher than 1 magnitude.

The ZTF PSF-fit-based light curves are provided for point-like and extended sources, however PSF-fit photometry measurements are proper for point-sources only. Therefore, I used the catalog presented in Tachibana+2018, which provides a morphological classification score (ps\_score) using PanSTARRS1 photometry, to filter-out extended sources from our analysis, keeping only sources with ps\_score>0.5 (i.e., point sources according to Tachibana+2018.

Relevant columns available in data files:

**oid\_alerce**: Unique Object Identifier. This is the ***oid*** that is returned by queries on the Objects Database Table. This ID can be used to retrieve additional metadata for an Object or lightcurve.

**name**: name of the target in the original catalog.

**mjd*:*** Modified Julian Date [days] corresponding to "JD - 2400000.5" (JD: Julian Date).

**mag:** Calibrated magnitude for a source with color *g* - *r* = 0 in the *AB* photometric system. See Cautionary Note #12 in Section 10.

**magerr*:*** Corresponding 1-σ uncertainty in *mag* estimate; excludes the (usually small) uncertainty associated with the calibration zeropoint and possible systematics relative to external photometry catalogs (for example PS1).

**catflags*:*** Photometric/image quality flags encoded as bits (Section 9b). In particular, you will always want to exclude observation epochs affected by clouds and/or the moon. These epochs have catflags = 32768 (decimal bit 15).

Classes available in the catalog (column “type”):

QSO\_AGN\_Blazar\_sample\_milliquas\_roma\_ps\_score\_pointsources.csv

QSOs: Q, QR, QX, QRX, QR2, Q2, Q2X

AGNs: A, AX, ARX, AR2, A2X, A2, Seyfert\_1

Blazar: B, BR, BX, BRX, BL Lac, BL Lac-galaxy dominated, Blazar Uncertain type, QSO RLoud flat radio sp.

Features are defined here: <https://ui.adsabs.harvard.edu/abs/2021AJ....161..141S/abstract>

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