**Star == 0**

This criterion cuts out all point sources, ensuring we exclude all stars that were measured alongside the galaxies/clusters of interest in GOGREEN’s observations.

**K\_flag == 0**

This criterion excludes galaxies that were flagged by SExtractor, the tool used to photometrically calibrate stars (Balogh et al. 2020) in galaxies. I do not know precisely what this flag means but documentation at <https://sextractor.readthedocs.io/en/latest/Flagging.html> suggests at least that flags represent a flaw in data.

**totmask == 0**

This criterion checks whether a galaxy is located at a position in which an aggressive mask was used (Balogh et al. 2020) and excludes it if so. This is done because a mask indicates the imaging for this position is incomplete (not achieved in all filters).

**re > 0**

Galaxies without a valid effective radius measurement are not useful to us for the purpose of this project. This criterion specifies that there must be effective radius data and it must be valid (nonzero, nonnegative)

**Fit\_flag > 1**

I do not know what this criterion is, but based on the name I suspect it indicates a necessary fitting process has taken place.

**n < 6**

This criterion ensures no galaxies with Sérsic indices beyond that which we measure for (n > 6) are included. I do not why this exact value is chosen for the upper limit, however if we did not include this criterion data would be excluded when we plot by Sérsic index.

**HSTFOV\_flag == 1**

I do not know what this criterion is, however based on the name I suspect it indicates there is HST imaging for the galaxy. Given that we are already checking for re > 0 and without HST imaging it is not possible to obtain re data, I’m not sure how necessary this flag actually is.

**(1 < zphot < 1.5) or (1 < zspec < 1.5)**

This criterion ensures we only include galaxies that have at least one redshift that falls within the range of the survey. This is not so important for member galaxies since membership is determined by closeness of redshift to the cluster redshift (all of which fallen within the range). However, this criterion is vital for plotting field galaxies since the GOGREEN dataset includes all galaxies in the portion of the sky it covered, regardless of redshift.