

# Loading FITS generated by Lightkurve Python package into VStar

Plugin version 0.2

The plugin recognizes FITS having the following structure:

1. Primary HDU contains keywords only, no data
2. Secondary HDU contains a table:

	TIME	FLUX	FLUX_ERR	CADENCENO	MOM_CENTR1	MOM_CENTR2	QUALITY
Select	D	E	E	J	D	D	J
<input checked="" type="checkbox"/> All	btjd	counts	counts				
<input type="checkbox"/> Invert	Modify	Modify	Modify	Modify	Modify	Modify	Modify
1	1.711366526815E+003	2.501616E+004	1.843704E+001	348415	2.833373132605E+002	1.715791694166E+003	0
2	1.711367915704E+003	2.495189E+004	1.840580E+001	348416	2.833373398730E+002	1.715787558466E+003	0
3	1.711369304593E+003	2.487754E+004	1.838439E+001	348417	2.833381300229E+002	1.715787908602E+003	0
4	1.711370693482E+003	2.483237E+004	1.837181E+001	348418	2.833419269376E+002	1.715789734477E+003	0
5	1.711372082371E+003	2.478018E+004	1.835002E+001	348419	2.833381494221E+002	1.715787028351E+003	0
6	1.711373471260E+003	2.470755E+004	1.835068E+001	348420	2.833420001989E+002	1.715791386880E+003	0
7	1.711374860149E+003	2.468565E+004	1.832056E+001	348421	2.833352101829E+002	1.715789114674E+003	0
8	1.711376249038E+003	2.461228E+004	1.829686E+001	348422	2.833383437532E+002	1.715787029500E+003	0

- Column 0: TIME = barycentric time (Julian Days with some initial point)
- Column1: FLUX = flux in counts
- Column2: FLUX\_ERR = flux error in counts

Other columns are ignored for now.

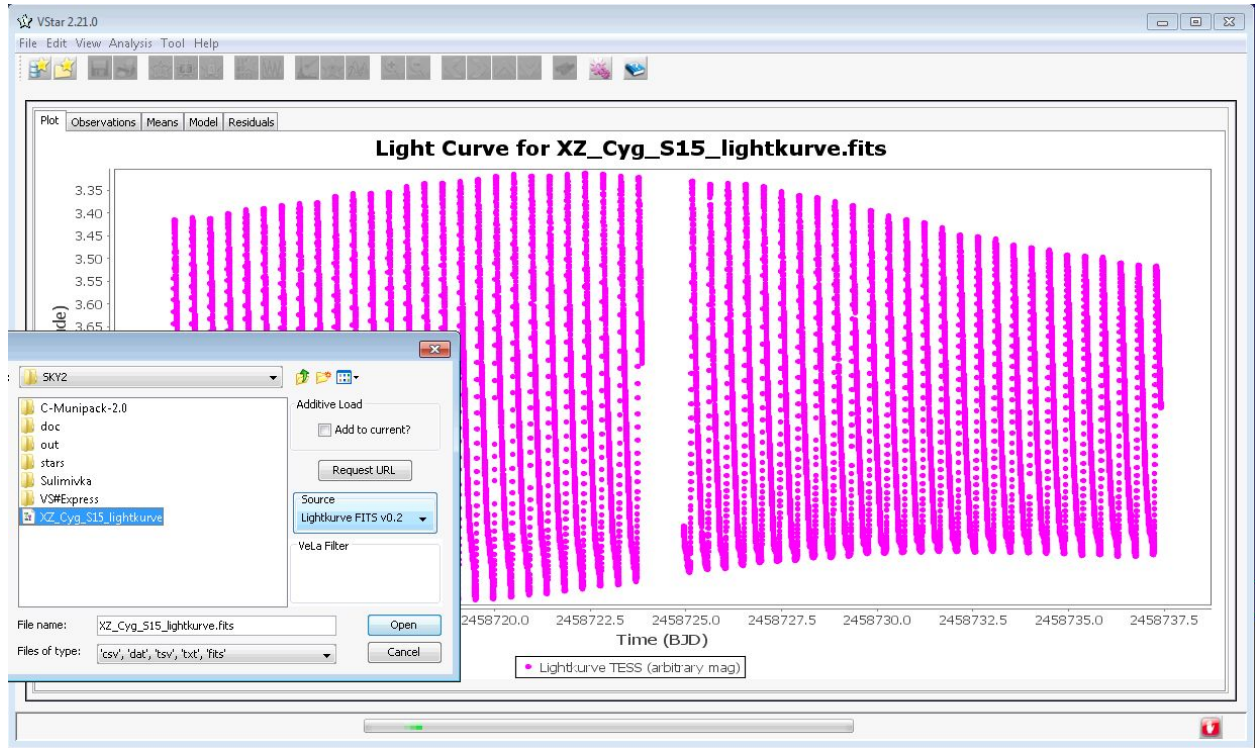
3. Other HDUs are ignored

The plugin uses an arbitrary zero level (magShift constant = 15) to convert counts to magnitude:

```
double magShift = 15.0;
double mag = magShift - 2.5 * Math.log10(rawObs.intensity);
```

Time correction (pseudocode):

```
If TELESCOP= 'TESS' then bjd := time + 2457000.0;
If TELESCOP= 'Kepler' then bjd := time + 2454833.0;
```



Rev. B

## Revision History

Rev	Date	Description	Author
B	2020-04-24	Time correction based on TELESCOP keyword	Maksym Pyatnytskyy, PMAK
A	2020-04-24	Initial Release	Maksym Pyatnytskyy, PMAK