

# ASAS-SN Plugin for VStar

*Description:* This plugin allows you to open text files in the formats of the [All-Sky Automated Survey for Supernovae \(ASAS-SN\)](#).

Data files can be generated using the [ASAS-SN Sky Patrol](#) website or downloaded from the [ASAS-SN Photometry Database](#) or [ASAS-SN Variable Stars Database](#). The format of precomputed data files, loaded from *ASAS-SN Photometry* and *ASAS-SN Variable Stars* databases, differs from one generated by the *Sky Patrol*. The plugin loads files of both formats.

## ASAS-SN Sky Patrol data

ASAS-SN Sky Patrol data are computed in real-time using aperture photometry for a point on the celestial sphere for which ASAS-SN images exist. Go to [Sky Patrol website](#), enter the coordinates of a target and the number of days to go back, then press [Compute]

ASAS-SN

Sky Patrol

Variable Stars Database

Variable Stars Atlas


Photometry Database


Citizen ASAS-SN


Binary Stars Database

Sky Patrol


All-Sky Automated Survey for Supernovae








Making ASAS-SN light curves public is primarily funded by grants GBMF5490 and GBMF10501



ASAS-SN is funded in part by the Alfred P. Sloan Foundation under grant G202114192



Find Right Ascension and Declination by Star Name

Resolve Name

Compute Coordinate Lightcurve


\* J2000.0 Right Ascension


\* J2000.0 Declination

\* Number of days to go back

\* Photometry Method: (see update below for details)

Aperture Photometry

 I'm not a robot

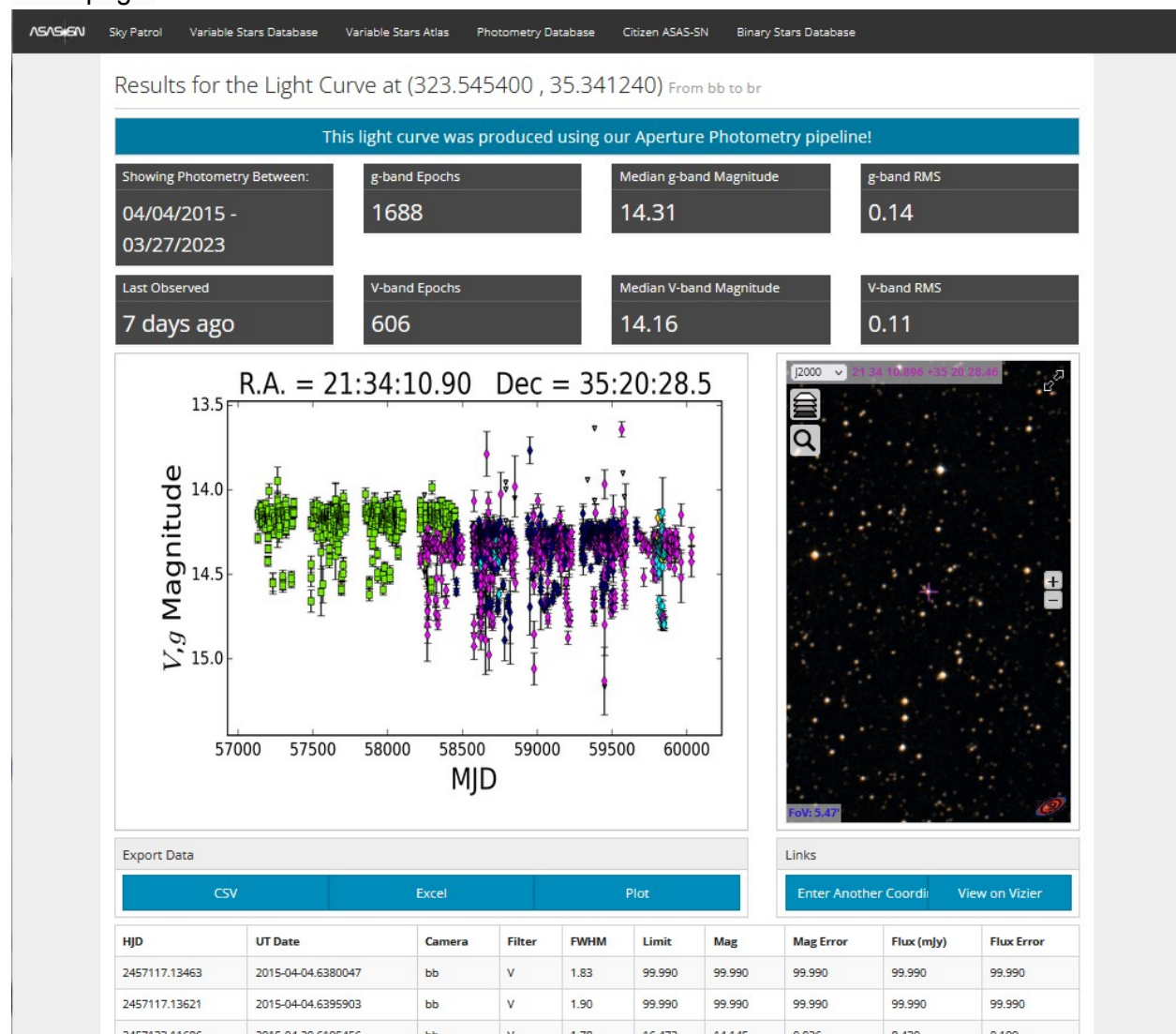
  
reCAPTCHA  
Privacy - Terms

The reCaptcha app may report a time-out during your query, but this will not affect its completion.

Interested in bulk queries? Take a look at the [ASAS-SN Variable Stars Database](#) or [Lookup by Name](#)

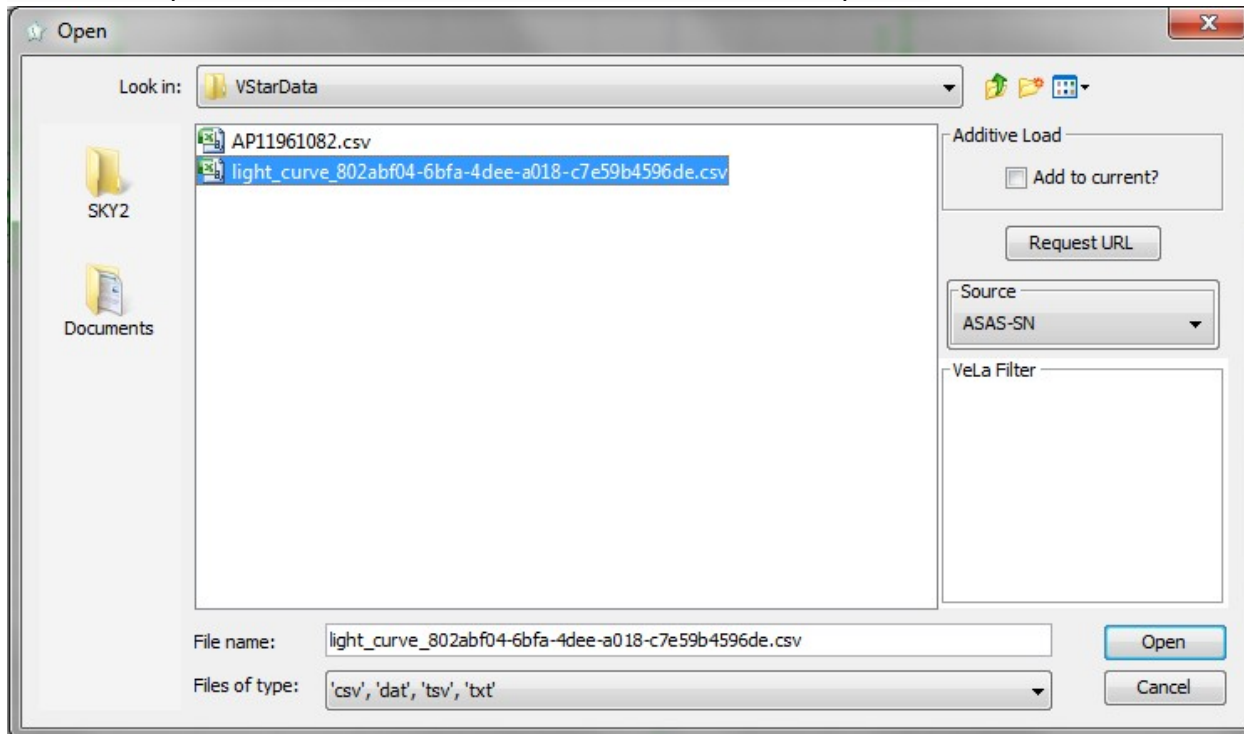
Compute

The calculations may take a while. When calculations succeed, you will be redirected to the result page.

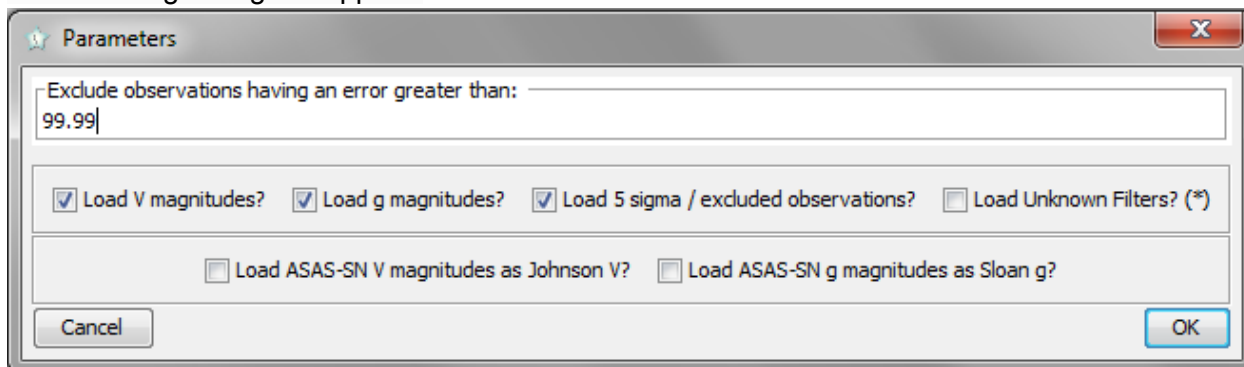


Press the [CSV] button under “Export Data” and save the CSV file to disk. The file contains V and g bands data, as seen from the preview plot.

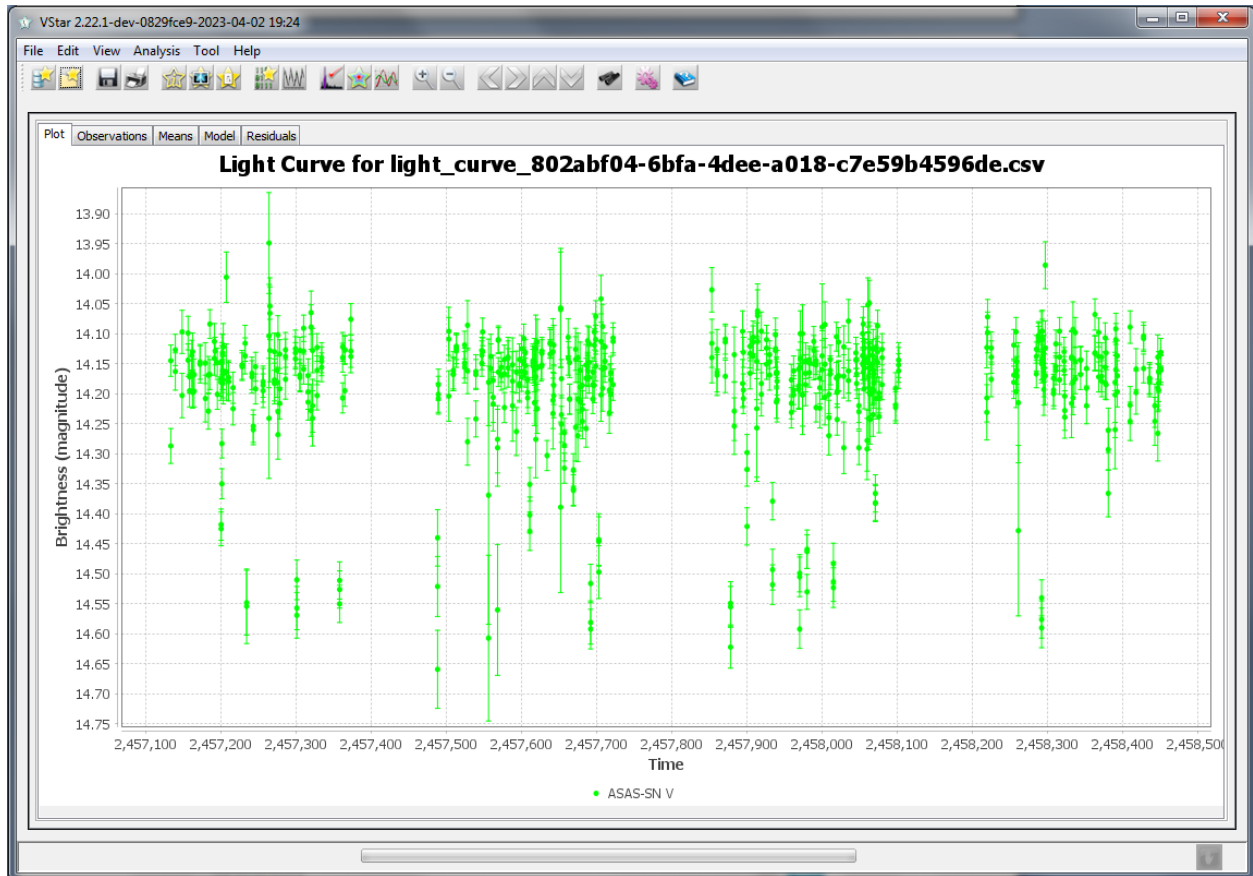
From VStar, select [New Star from File...] from the [File] menu and then select “ASAS-SN” in the “Source” dropdown list. Go to the location of the saved file and open it.



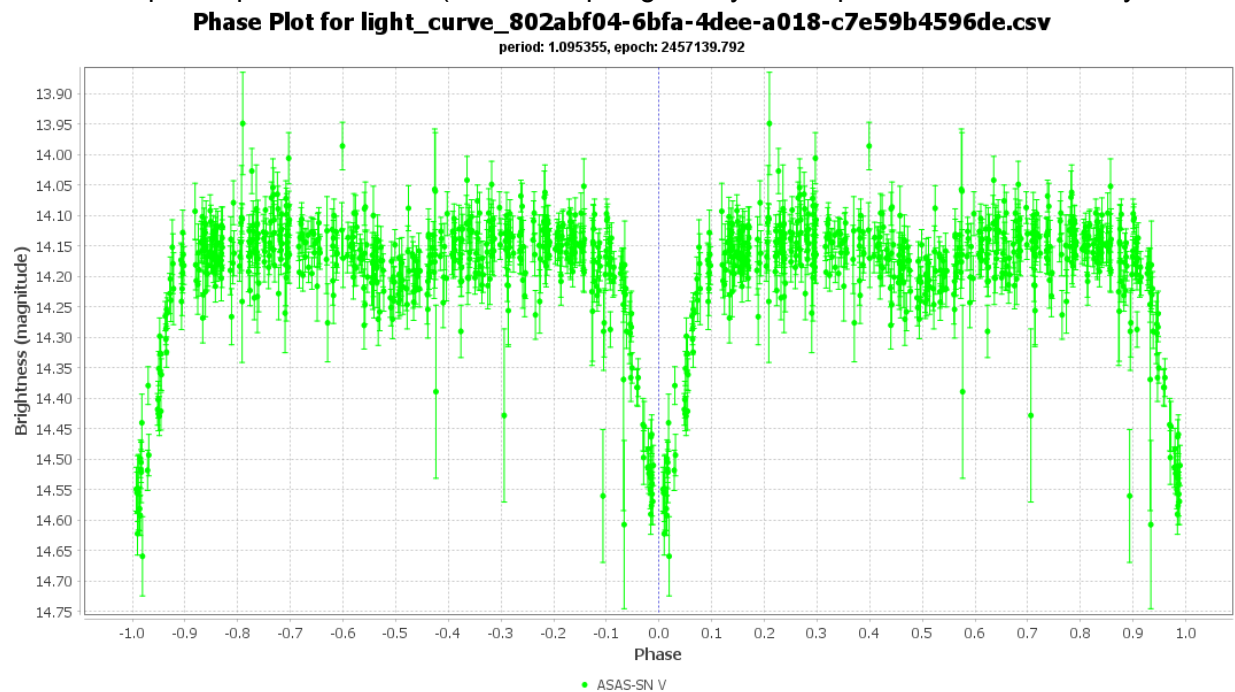
The following dialog will appear:



Currently, ASAS-SN light curves can contain data for V and g bands. Some observations in a file can be marked as unreliable (“5 sigma/excluded observations”); they can be excluded by unchecking the corresponding checkbox. A user can limit the maximum allowed uncertainty (“Exclude observations having an error greater than” field). Select the data you need (let’s assume you have selected data for V band only) and press OK. VStar will show you a light curve:



Here is the phase plot for the star (it is an eclipsing binary with a period of 1.095355 days:



# Precomputed ASAS-SN Light Curves

Other sources for ASAS-SN light curves are [ASAS-SN Photometry Database](#) and [ASAS-SN Variable Stars Database](#). Those databases contain ready-to-use light curves in a format that differs from one produced by Sky Patrol. The plugin loads files of both formats.

To download a light curve, go to one of the databases and enter the coordinates and the search radius (for both databases) or ASAS-SN variable name (for the Variable Star Database). If precomputed curves exist, they will be listed. Do *not* load the data via [Download CSV Dataset] button (the format is currently not supported by the plugin). Instead, click on one of the curves' IDs.

ASAS-SN

Sky Patrol

Variable Stars Database


Variable Stars Atlas


Photometry Database


Citizen ASAS-SN

Binary Stars Database


ASAS-SN Photometry Database








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Using in Publications

When using ASAS-SN light curves in publications cite: [Shappee et al. \(2014\)](#) and [The ASAS-SN Catalog of Variable Stars III: Jayasinghe et al. \(2019b\)](#)

Database Updated: 07/02/2021

Find Right Ascension and Declination by Star Name

Resolve Name

Search Sources

Right Ascension

323.545400

Declination

35.341240

Radius (arcmin)

0.5

Mean VMag

Min

Max

Epochs

Min

Max

RMS

Min

Max

Sort By

Right Ascension

☐ Descending ☐ Ascending

Sources Found: 2

Reset

Search

Export Data

View JSON

ID	Right Ascension	Declination	Distance (arcsec)	Epochs	Mean VMag	RMS	Blend?	Source
<a href="#">AP11961082</a>	323.5455	35.3412	0.33	89	14.13	0.042	false	DR9
<a href="#">AP11961048</a>	323.54821	35.33299	30.83	89	14.74	0.031	false	DR9

You will see a new window with a preview plot. Click on the [CSV] button under “Export Data” to download a file. This file can be opened by the plugin in the same way as described above.

AP11961082 (323.5455, 35.3412)



The HJD values reported here are calculated for the field centers. If you need accurate timings (better than ~200 seconds), please recalculate the light curve using the Aperture Photometry pipeline on our Sky Patrol page.



Right Ascension

323.5455

Declination

35.3412

Epochs

89

Mean VMag

14.13

RMS

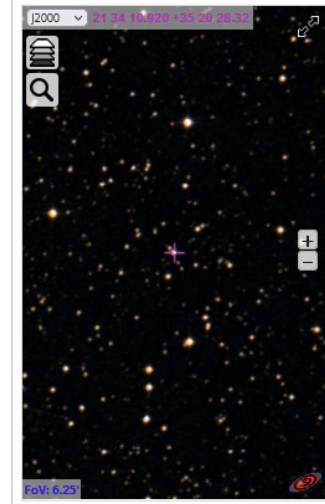
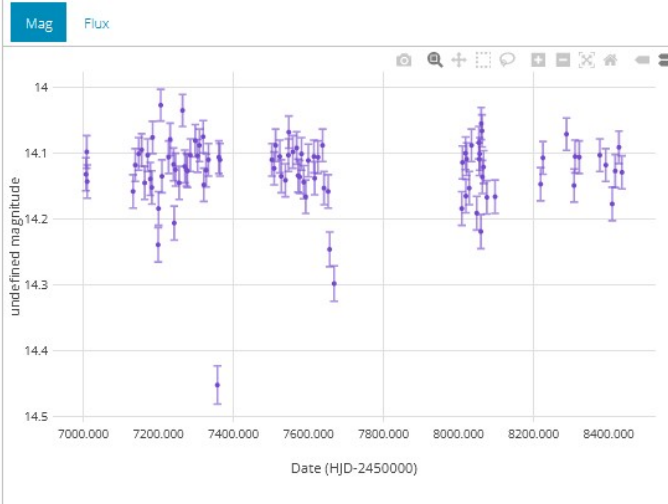
0.042

Blend?

False

Source

DR9



Export Data

CSV

Excel

JSON

Recompute Light

Variability

HJD	Camera	Filter	Mag	Mag Error	Flux	Flux Error
2457007.70092	bb	V	14.132	0.025	8.53	0.197
2457009.69538	bb	V	14.098	0.025	8.808	0.2
2457010.69282	bb	V	14.143	0.025	8.449	0.196
2457133.11671	bb	V	14.158	0.025	8.328	0.194
2457139.12052	bb	V	14.118	0.025	8.644	0.198
2457148.11242	bb	V	14.101	0.025	8.777	0.2

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Rev C

2023-04-02

**Revision History**

Rev	Date	Description
C	2023-04-02	Updated according to the last plugin's revision
B	2020-04-26	Open Dialog image added
A	2020-04-17	Initial Release