

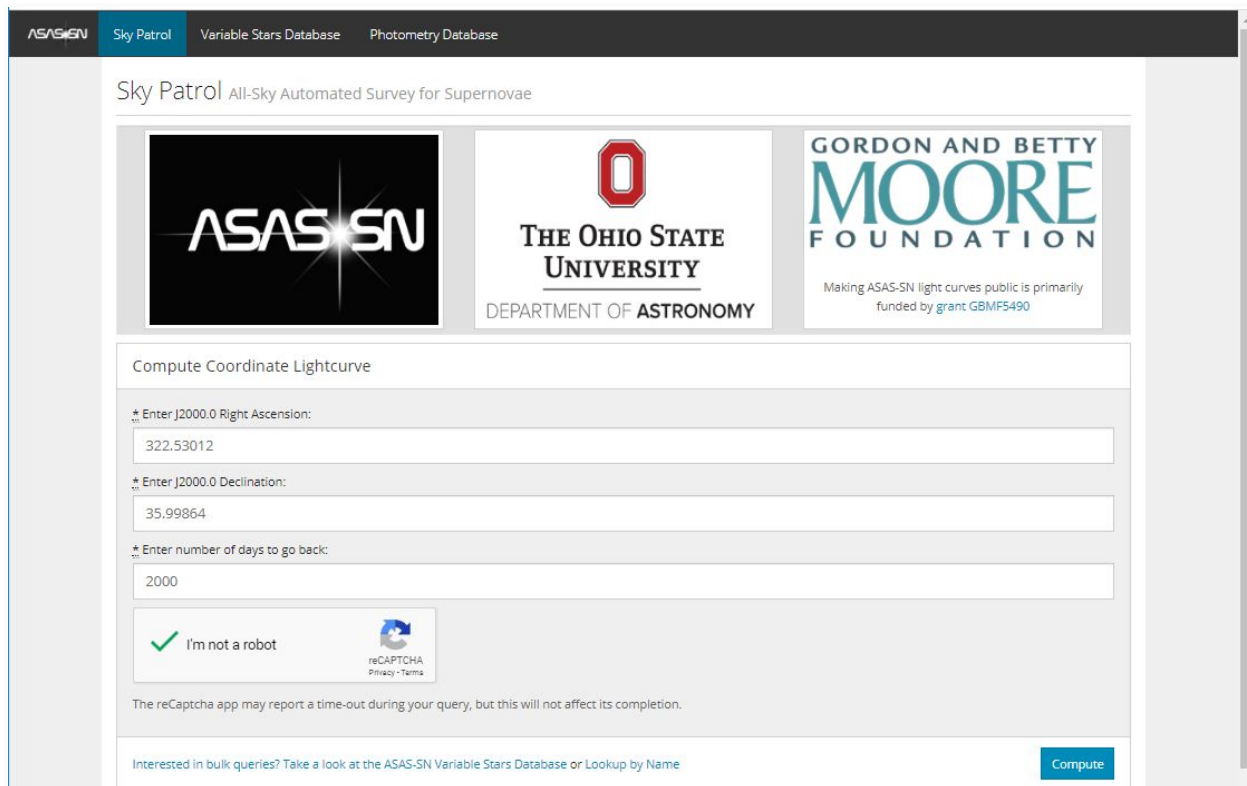
ASAS-SN Plugin for VStar

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 coordinates of a target and number of days to go back, then press [Compute]



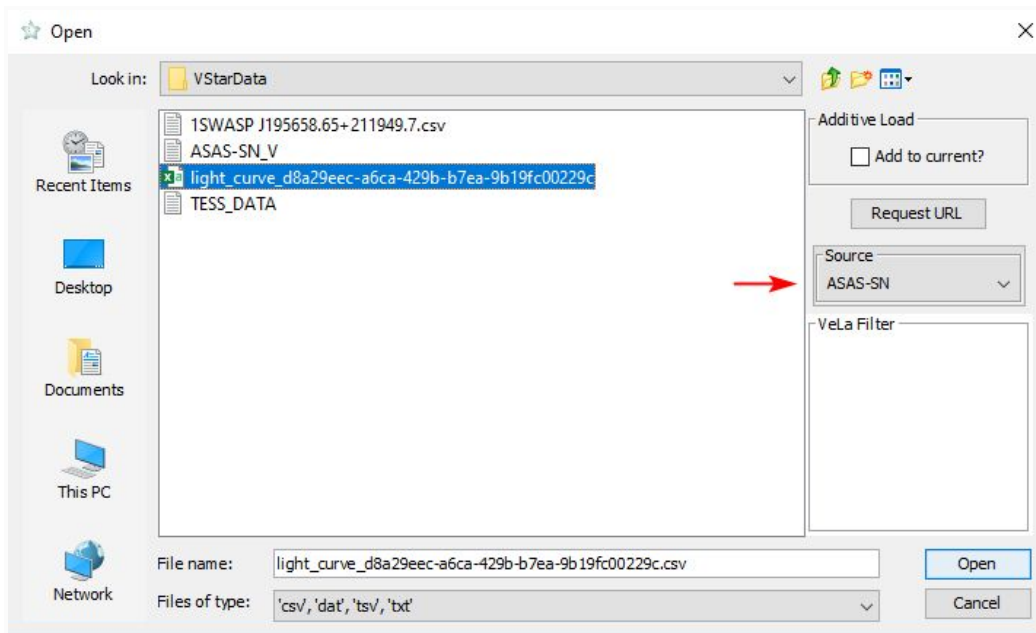
The screenshot shows the ASAS-SN Sky Patrol website. At the top, there is a navigation bar with links: ASAS-SN, Sky Patrol (selected), Variable Stars Database, and Photometry Database. Below the navigation bar, the page title is "Sky Patrol All-Sky Automated Survey for Supernovae". The main content area features three logos: ASAS-SN, The Ohio State University Department of Astronomy, and the Gordon and Betty Moore Foundation. Below the logos, there is a section titled "Compute Coordinate Lightcurve". This section contains three input fields: "Enter J2000.0 Right Ascension:" with the value "322.53012", "Enter J2000.0 Declination:" with the value "35.99864", and "Enter number of days to go back:" with the value "2000". Below these fields is a reCAPTCHA widget with the text "I'm not a robot" and a "reCAPTCHA Privacy - Terms" link. At the bottom of the form, there is a link: "Interested in bulk queries? Take a look at the ASAS-SN Variable Stars Database or Lookup by Name". A blue "Compute" button is located at the bottom right of the form.

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

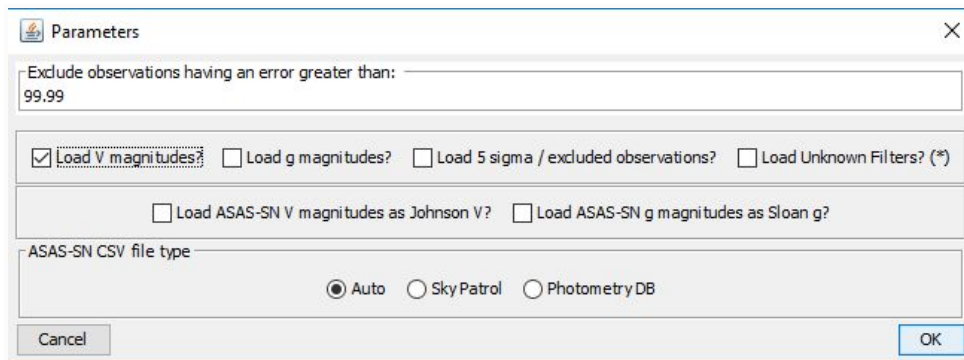


Press [CSV] button under “Export Data” and save CSV-file to disk. The file contains data for V and g bands, as it is seen from the preview plot.

From VStar (version 2.21+), 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.

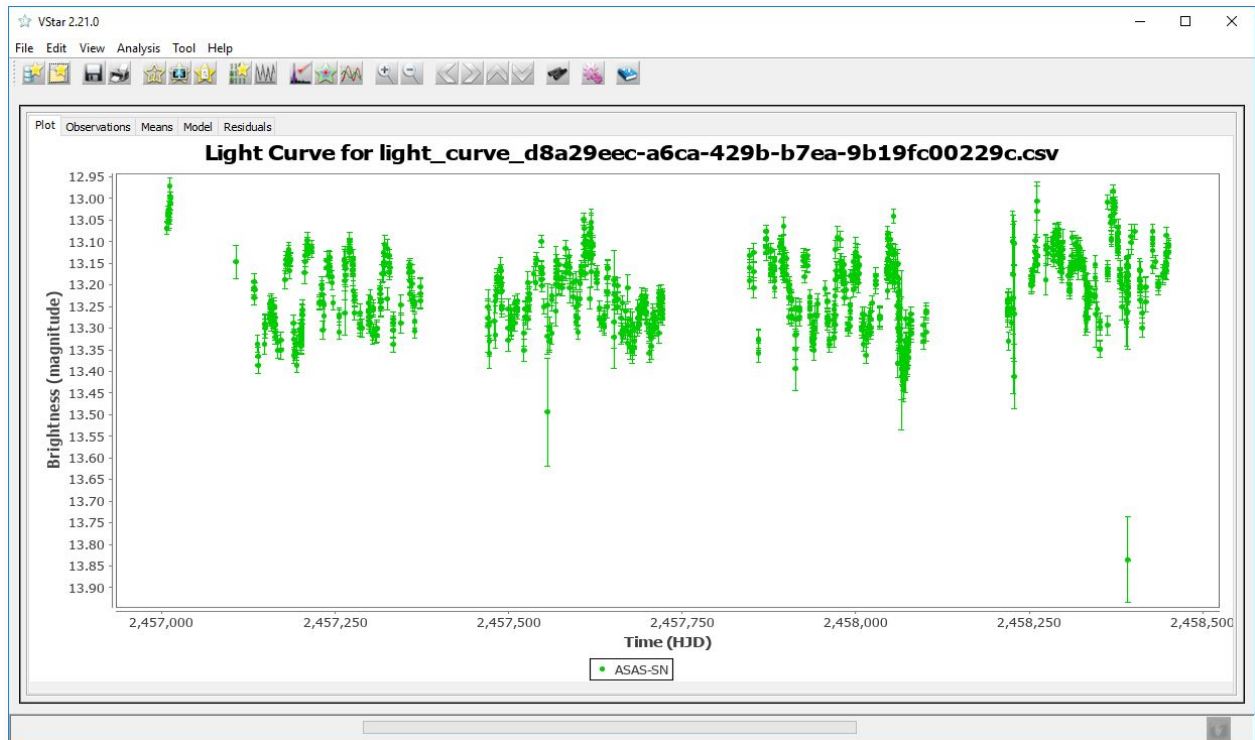


The following dialog will appear:



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). “ASAS-SN CSV file type” option should be set to “Auto” in most cases.

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:



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 coordinates and 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

Photometry Database

ASAS-SN Photometry Database







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: 09/30/2019

Search Sources

Right Ascension

322.5301

Declination

35.99863

Radius (arcmin)

0.5

Mean VMag

Min

Max

Epochs

Min

Max

RMS

Min

Max

Sort By

Right Ascension

Descending

Ascending

Total Sources Found: 2

Reset

Search

Export Data

Download CSV Dataset (Max 1000 Sources)

ID	Right Ascension	Declination	Distance (arcsec)	Epochs	Mean VMag	RMS	Blend?	Source
AP11986958	322.5301	35.99863	0.00	89	13.2	0.069	false	DR9
AP11986945	322.52737	35.99242	23.73	89	15.14	0.089	false	DR9

Displaying 2 Sources

Prev

1

Next

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 the same way as described above.

AP11986958 (322.5301, 35.99863)

Right Ascension

322.5301

Declination

35.99863

Epochs

89

Mean VMag

13.2

RMS

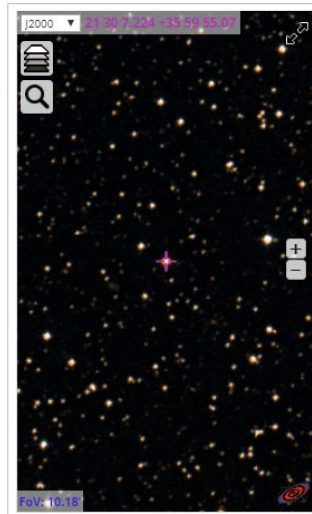
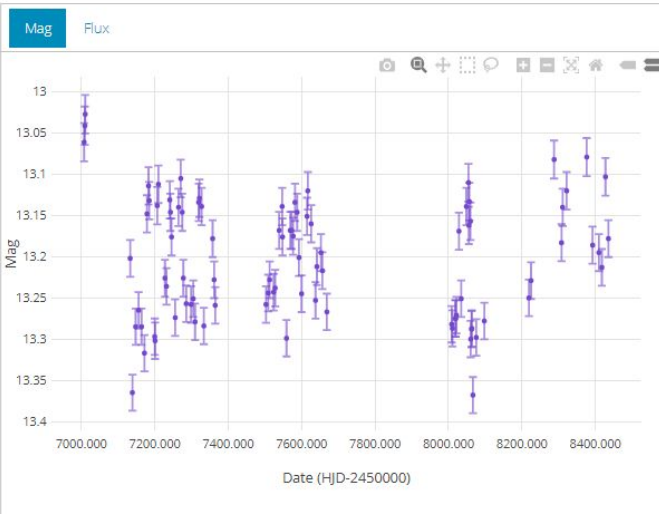
0.069

Blend?

False

Source

DR9



Export Data

CSV

Excel

JSON

HJD	UT Date	Camera	Filter	Mag	Mag Error	Flux	Flux Error
2457007.70092	2014-12-15T16:49:19+00:00	bb	V	13.061	0.023	22.873	0.487
2457009.69538	2014-12-17T16:41:20+00:00	bb	V	13.041	0.023	23.307	0.499
2457010.69282	2014-12-18T16:37:39+00:00	bb	V	13.027	0.023	23.605	0.508
2457133.11671	2015-04-20T02:48:03+00:00	bb	V	13.202	0.022	20.095	0.414

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Rev B

2020-04-26

Revision History

Rev	Date	Description
B	2020-04-26	Open Dialog image added
A	2020-04-17	Initial Release