

# Astro @ njstargazer.org

This program provides you with an easy way to find what objects will be visible at your location at what time of the day. You can specify the time period you are interested in along with many other search criteria.

The site will allow you to view images that I took over the years, find out what DSO is visible at your location, Get info on planet location, and get view what variable stars are available at you site.

The screenshot displays the website's interface for Northwest New Jersey. At the top, a navigation menu includes links for Home, Pictures, What's UP, Planets, About, Contact, Upload Pix, and Variable Stars. A banner features a telescope and the text "New Jersey Stargazer" with coordinates "74° 54' W, 40° 50' N" and "Oxford, NJ USA". A hit counter shows 00062 hits, last accessed on 3/5/2022. Below the banner, a "Northwest New Jersey Seeing" bar is visible. The "Your Local Data" section for 3/5/2022 at 11:51:31 AM shows a waxing crescent moon. Key data points include: Latitude 40° 50' 28.9" N (40.84135555555556), Longitude 74° 54' 52.7" W (-74.91465277777778), Moon Rise at 08:07:32, AM Twilight at 6:0, Sun Rise at 6:28, Sun Set at 17:54, and Moon Set at 21:15:57, PM Twilight at 18:21. Two visualizations are provided: a 3D view of the ISS over Earth from Heavens-Above.com and a current sun image from Space Weather.com showing solar features at 2960 and 2952961.

In order for me to calculate object availability I need to know some specifics about your observatory location.. This data will be stored in a cookie on your computer so it is available the next time you visit this site. If you have entered the information it will be displayed on the main page, as you see above.

To enter your observatory data go to the WHAT'S UP tab. Enter your Latitude, longitude Time zone offset, and if you are on Daylight savings time (summer time).

**What's Up in Your Sky**  
*DSO's visible from your location*

**Observatory Location**

Observatory LATITUDE:  (dd:mm:ss or -dd:mm:ss)  
(Negative for SOUTH)

Observatory LONGITUDE:  (dd:mm:ss or -dd:mm:ss)  
(Negative Deg for West)

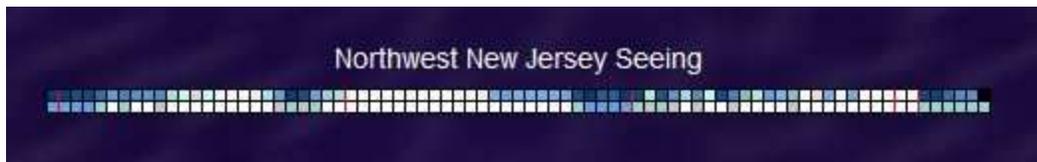
Time zone offset:  (negative WEST of GMT)

Please Check if appropriate:  **Apply Daylight savings time**

These values will be stored in a cookie for your next visit.

Click on the save above data button to write it to your cookie.

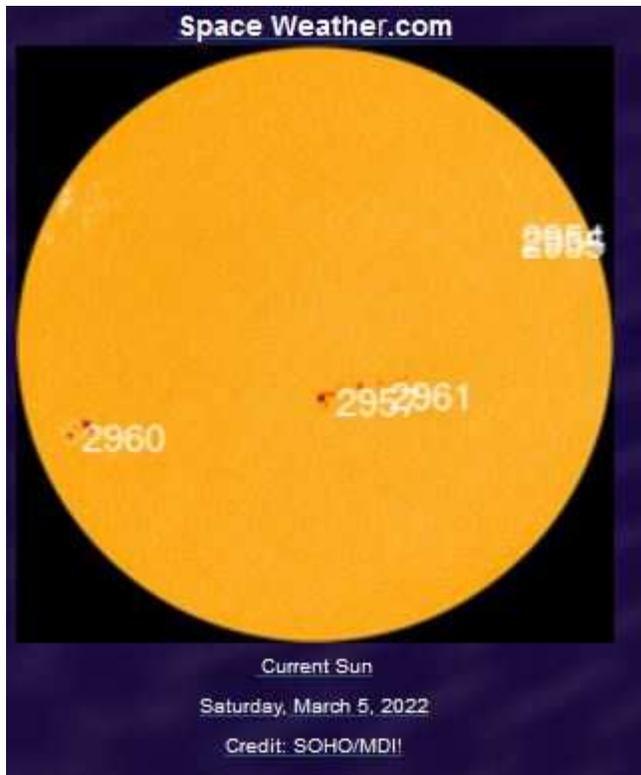
There are some active links on the home page:



This display shows the seeing conditions here in northern NJ  
You can click on the display above to go to the CLEAR SKY CHART site for more detailed information and possibly find a chart for your location.



Clicking on the image of the earth will bring you to the HEAVENS-ABOVE web site that contains all kinds of good information as well as ISS location at any given time.



This image shows you what the sun looks like at the current time. The link associated with this image will take you to space weather.com. More interesting information about solar flares and solar winds etc.

## IMAGES:

Clicking on the PICTURE link get you to my image galleria.

Hit Counter 0 0 0 2 9  
Last Accessed: 3/5/2022

Show latest  of the selected category

OR

Enter part of the subject name (i.e. m101)

OR

Selects a category

786 Images available.

Click on the picture to view larger image.

			
sun Image Taken: 3/4/2022 Last accessed: 3/5/2022 8:05:00 AM Hits: 2	Sun Image Taken: 2/27/2022 Last accessed: 3/3/2022 11:29:00 PM Hits: 16	Sun Image Taken: 2/15/2022 Last accessed: 3/3/2022 11:29:00 PM Hits: 39	SUN Image Taken: 2/9/2022 Last accessed: 3/3/2022 11:29:00 PM Hits: 52

When you first enter this page you will get the last 10 images that I posted to the site. You can change the number of images you want to see. You can also enter part of a name of an object (i.e.: M1 will get you all object I've imaged that start with the letters M1). You can also select a specific category i.e.: SUN, Moon , Planets, etc.

## What's up:

**Query Section**

Specific object to search: (i.e.: NGC2392)  OR

Show me what will transit between  and   
(YYYY-MM-DD hh:mm) or any valid date/time format [Reset to Default](#)

or choose a type of object  
 ALL  
 Messier  
 NGC  
 Caldwell  
 IC  
 Sharpless

If you are interested in a specific object type select it here:

Include objects with magnitude  or brighter.  
 Include objects with transit elevation (above the horizon) greater than  degrees.  Show only those above this elevation

Show me groups of  records [Next bunch](#)

[Lookup](#) [Download CSV](#)

The What's up page gives you information about what DSO is transiting your location and when.

You can specify:

- A specific object name i.e.: M104 or NGC7027
- You can change the transit time range
- You can choose a specific type of object i.e.: Messier, IC, Sharpless, Caldwell . or All
- You can select a specific object class i.e.: Sun, Galaxy, Star clusters, etc.
- You can set the minimum magnitude of the objects.
- You can limit the list to those objects that will transit above a certain elevation.
- You can view only items that transit above that elevation or you can see all. If you uncheck the box Items below the specified elevation will have a red background in the table.
- Finally, you can indicate how many items to show . Clicking the NEXT BUNCH button will get you the next set of results. The display will tell you how many objects are available.

Click the LOOKUP button to get the result. YOU can download this data as a CSV file by clicking the DOWN LOAD CSV button.

Local Sidreal Time: 23:33:46 Local Time: 3/5/2022 12:39:37 PM 10 Records displayed, 10 Records below min. Elev. out of 705 records available.

Click on Record ID for SDSS Image

Record ID	NGC	Object	Rise Tm	Rise AZ	Transit TM	Transit Elev.	Set TM.	Set AZ	Name	Class	RA	DEC	Mag	Const
2298	2207	<<<<<	14:39:41	118° 35' 12.1"	19:23:11	27° 46' 29.1" [Looking S]	00:06	241° 26' 11.5"	Galaxy in CMa	Galaxy	06:16:24	-21:22:24	11	CMa
2302	2211	<<<<<	14:30:10	114° 39' 48.6"	19:25:13	30° 36' 34.7" [Looking S]	00:20	245° 22' 10.9"	Galaxy in CMa	Galaxy	06:18:24	-18:32:14	12.8	CMa
2303	2212	<<<<<	14:30:12	114° 38' 23.2"	19:25:19	30° 37' 38.5" [Looking S]	00:20	245° 23' 36.7"	Galaxy in CMa	Galaxy	06:18:30	-18:31:10	13.6	CMa
2238	2146	<<<<<	Circumpolar		19:28:03	52° 29' 26.3" [Looking N]	Circumpolar		Galaxy in Cam	Galaxy	06:18:42	+78:21:28	10.3	Cam
2306	2215	<<<<<	13:51:13	99° 31' 22.2"	19:27:55	41° 51' 39.4" [Looking S]	01:04	260° 32' 43.8"	Open star cluster in Mon	Open star cluster	06:21:00	-07:17:02	8.4	Mon
2307	2216	<<<<<	14:47:54	119° 35' 33.8"	19:28:23	27° 03' 28.1" [Looking S]	00:08	240° 25' 56.7"	Galaxy in CMa	Galaxy	06:21:36	-22:05:15	13	CMa
2308	2217	<<<<<	15:11:07	126° 57' 14.3"	19:28:26	21° 54' 39.7" [Looking S]	23:45	233° 41' 42.3"	Galaxy in CMa	Galaxy	06:21:42	-27:14:04	10.4	CMa
2299	2208	<<<<<	Circumpolar		19:30:06	78° 55' 59.8" [Looking N]	Circumpolar		Galaxy in Aur	Galaxy	06:22:30	+51:54:33	12.9	Aur
2314	2223	<<<<<	14:54:07	120° 39' 12.9"	19:31:23	26° 18' 16.4" [Looking S]	00:08	239° 22' 17.4"	Galaxy in CMa	Galaxy	06:24:36	-22:50:21	11.8	CMa
2318	2227	<<<<<	14:51:52	119° 29' 00.1"	19:32:41	27° 08' 15.8" [Looking S]	00:13	240° 32' 44.3"	Galaxy in CMa	Galaxy	06:25:54	-22:00:19	12.9	CMa

This is what the NGC selection looks like for my location.

Click on Record ID for SDSS Image

Record ID	NGC Object	Rise Tm	Rise AZ	Transit TM	Transit Elev.	Set TM.	Set AZ	Name	Class	RA	DEC	Mag	Const
2298	2207 <<<<<	14:39:41	118° 35' 12.1"	19:23:11	27° 46' 29.1" [Looking S]	00:06	241° 26' 01.7"	Galaxy in CMa	Galaxy	06:16:24	-21:22:24	11	CMa
2302	2211 <<<<<	14:30:09	114° 39' 38.8"	19:25:12	30° 36' 34.8" [Looking S]	00:20	245° 22' 01.1"	Galaxy in CMa	Galaxy	06:18:24	-18:32:14	12.8	CMa
2303	2212 <<<<<	14:30:11	114° 38' 13.4"	19:25:18	30° 37' 38.6" [Looking S]	00:20	245° 23' 36.7"	Galaxy in CMa	Galaxy	06:18:30	-18:31:10	13.6	CMa
2238	2146 <<<<<	Circumpolar		19:28:02	52° 29' 26.4" [Looking N]	Circumpolar		Galaxy in Cam	Galaxy	06:18:42	+78:21:28	10.3	Cam
2312	2221 <<<<<	Below Hoiz.		19:26:24	08° 25' 54.4" [Looking S]	Below Hoiz.		Galaxy in Pic	Galaxy	06:20:12	-57:34:45	13.1	Pic
2313	2222 <<<<<	Below Hoiz.		19:26:30	08° 23' 11.6" [Looking S]	Below Hoiz.		Galaxy in Pic	Galaxy	06:20:18	-57:32:02	13.5	Pic
2322	2231 <<<<<	Below Hoiz.		19:26:12	18° 22' 15.8" [Looking S]	Below Hoiz.		Open star cluster in Dor	Open star cluster	06:20:24	-67:31:07	13.2	Dor
2306	2215 <<<<<	13:51:12	99° 31' 12.4"	19:27:55	41° 51' 39.4" [Looking S]	01:04	260° 32' 43.8"	Open star cluster in Mon	Open star cluster	06:21:00	-07:17:02	8.4	Mon
2315	2228 <<<<<	Below Hoiz.		19:27:09	15° 18' 44.6" [Looking S]	Below Hoiz.		Galaxy in Dor	Galaxy	06:21:12	-64:27:34	13.7	Dor
2320	2229 <<<<<	Below Hoiz.		19:27:14	15° 48' 36.8" [Looking S]	Below Hoiz.		Galaxy in Dor	Galaxy	06:21:18	-64:57:26	13.6	Dor
2321	2230 <<<<<	Below Hoiz.		19:27:20	15° 50' 45.9" [Looking S]	Below Hoiz.		Galaxy in Dor	Galaxy	06:21:24	-64:59:35	13.2	Dor
					27° 03' 28.2"								

Un-checking the " Show only ... " box will produce a display as seen above. Those items below the 20 degree limit I had set will be marked in red.

You can click on the ID number in the table to be taken to the SKY-MAP.org site to see a picture from SDSS of that specific object.

## Planets:

Data For Date 3/5/2022 12:46:48 PM

**Planet Location**

Data For Date 3/5/2022 12:46:48 PM

Planet	Right Ascension	Declination	Transit Time	Transit Elev	Rise Time	Current Az.	Current El.	Hour Angle
Mercury	21h45m01s	-15° 27' 41.6"	10h52m03s	33° 47' 54.8"	05h44m39s	+178° 43' 53.7"	+33° 41' 16.5"	01h55m57s
Venus	20h03m20s	-16° 39' 27.2"	09h10m25s	32° 33' 49.2"	04h07m44s	+206° 36' 33.7"	+28° 13' 37.7"	03h37m38s
Mars	20h07m41s	-21° 07' 00.9"	09h14m48s	28° 06' 22.6"	04h29m56s	+203° 50' 08.1"	+24° 23' 04.5"	03h33m17s
Jupiter	23h06m17s	-06° 48' 39.3"	12h13m16s	42° 27' 58.5"	06h34m27s	+152° 25' 42.6"	+38° 26' 46.1"	00h34m41s
Saturn	21h28m11s	-15° 52' 09.2"	10h35m14s	33° 23' 08.4"	05h29m24s	+183° 34' 59.3"	+33° 12' 56.6"	02h12m47s
Uranus	26h37m37s	+14° 59' 31.6"	15h44m40s	64° 14' 33.8"	08h48m42s	+88° 30' 48.4"	+21° 34' 16.0"	21h03m21s
Neptune	23h34m33s	-03° 58' 10.6"	12h41m31s	45° 18' 36.1"	06h52m47s	+142° 46' 06.9"	+38° 10' 52.3"	00h06m25s

The planet page gives you information about the location of the planets at any given time. You can click the RECALCULATE button and see how the Azimuth, Elevation and Hour angle changes.

## Variable Stars:

The variable star page is similar to the What's up page with the exception of different search criteria that pertain to the stars.

**Query Section**

Specific object to search: (i.e.: R And) Show me what will transit between Constellation: -- Select Const --

and  Mag. Range:  (max)  (min)

( YYYY-MM-DD hh:mm ) or any valid date/time format Spectral Class:

Type: -- Select Type --

Include objects with transit elevation (above the horizon) greater than  degrees.  Show only those above this elevation

Show me groups of  records

TIME Best Time Label

[Click on Name for AAVSO Star Finder chart](#)

You can control the search by:

- Specifying a specific variable star name i.e.: CZ Ori
- As with the what's up app you can specify the transit time range, and minimum elevation
- You can select a constellation group.
- You can select the minimum and maximum magnitude range.
- Spectral Class
- And or Variable type

Local Sidereal Time: 23:48:31 Local Time: 3/5/2022 12:54:20 PM 17 Records displayed, 3 Records below min. Elev, out of 5430 records available.

[Click on Name for AAVSO Star Finder chart](#)

Name	Rise Tm	Rise AZ	Transit TM	Transit Elev.	Set TM	Set AZ	RA	DEC	Type	Max Mag.	Min. Mag.	Period	Spectrum	Const
V1392 Ori	12:49:47	77° 54' 38.5"	19:23:19	58° 10' 25.2" [Looking S]	01:56	282° 11' 13.1"	06:16:17.89	+09:01:39.8	EB	7.73	7.92	0		Orion (Orion)
V1026 Ori	12:46:43	76° 44' 44.5"	19:23:23	59° 02' 39.6" [Looking S]	02:00	283° 21' 11.3"	06:16:21.69	+09:53:54.7	LB:	13.5	16.5	0	C	Orion (Orion)
V0395 Aur	11:27:16	50° 08' 46.2"	19:23:35	77° 59' 28.7" [Looking S]	03:19	310° 00' 57.4"	06:16:22.20	+28:51:07.1	ELL	7.34	7.43	23.1755	F5III+B8V	Auriga (Charioteer)
QT Aur	10:14:37	31° 32' 31.6"	19:23:49	88° 55' 07.8" [Looking S]	04:33	328° 39' 54.2"	06:16:27.60	+39:53:24.0	EA	13.3	15	1.0895041		Auriga (Charioteer)
V0395 Gem	11:44:57	55° 25' 35.9"	19:23:44	74° 26' 11.3" [Looking S]	03:02	304° 43' 23.1"	06:16:33.97	+25:17:41.4	SR:	11.8	12	104		Gemini (Twins)
V2791 Ori	13:17:21	88° 13' 20.1"	19:23:40	50° 24' 05.3" [Looking S]	01:29	271° 51' 12.5"	06:16:42.46	+01:15:17.7	RS	11.6	11.7	3.362		Orion (Orion)
CZ Ori	12:26:39	69° 18' 48.7"	19:23:48	64° 32' 52.4" [Looking S]	02:20	290° 48' 06.8"	06:16:43.23	+15:24:11.6	UGSS	11.2	15.6	0	pec(UG)	Orion (Orion)
PX Gem	11:52:29	57° 40' 29.3"	19:24:08	72° 52' 59.0" [Looking S]	02:55	302° 28' 06.6"	06:16:58.70	+23:44:27.3	ACYG	6.33	6.38	0		Gemini (Twins)

The output will look something like this.

The number of items displayed, number below the minimum elevation and total number of object that match your query is shown in the upper right.

You can click on the NAME of the star and get a finder chart generated by AAVSO if the star is in their database.

This data can be downloaded as a CSV file or CDC observation list by clicking the appropriate buttons.