

# NELIOTA

## ONLINE HELP MANUAL

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# CHANGE LOG

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Added Section 3.1.4.1 “Event Statistics”, p.7	02	00	13/1/2017
Updated User Profile Section to reflect User profile Changes. Section 3.1.7, p. 9	02	00	13/1/2017
Updated Complete Order message, sec. 3.1.8 “Download Cart” p. 10	02	00	13/1/2017
Updated whole document to match current website look, feel and functionality	03	00	15/7/2017

# CHANGE RECORD

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## **1 INTRODUCTION**

### **1.1 Scope**

This document offers guidance for the NELIOTA Information System. It provides a description of the different website areas and their functionality/features.

### **1.2 Abbreviated Terms**

DE	Detected Event
NEO	Near Earth Object

## 2 NELIOTA Information System overview

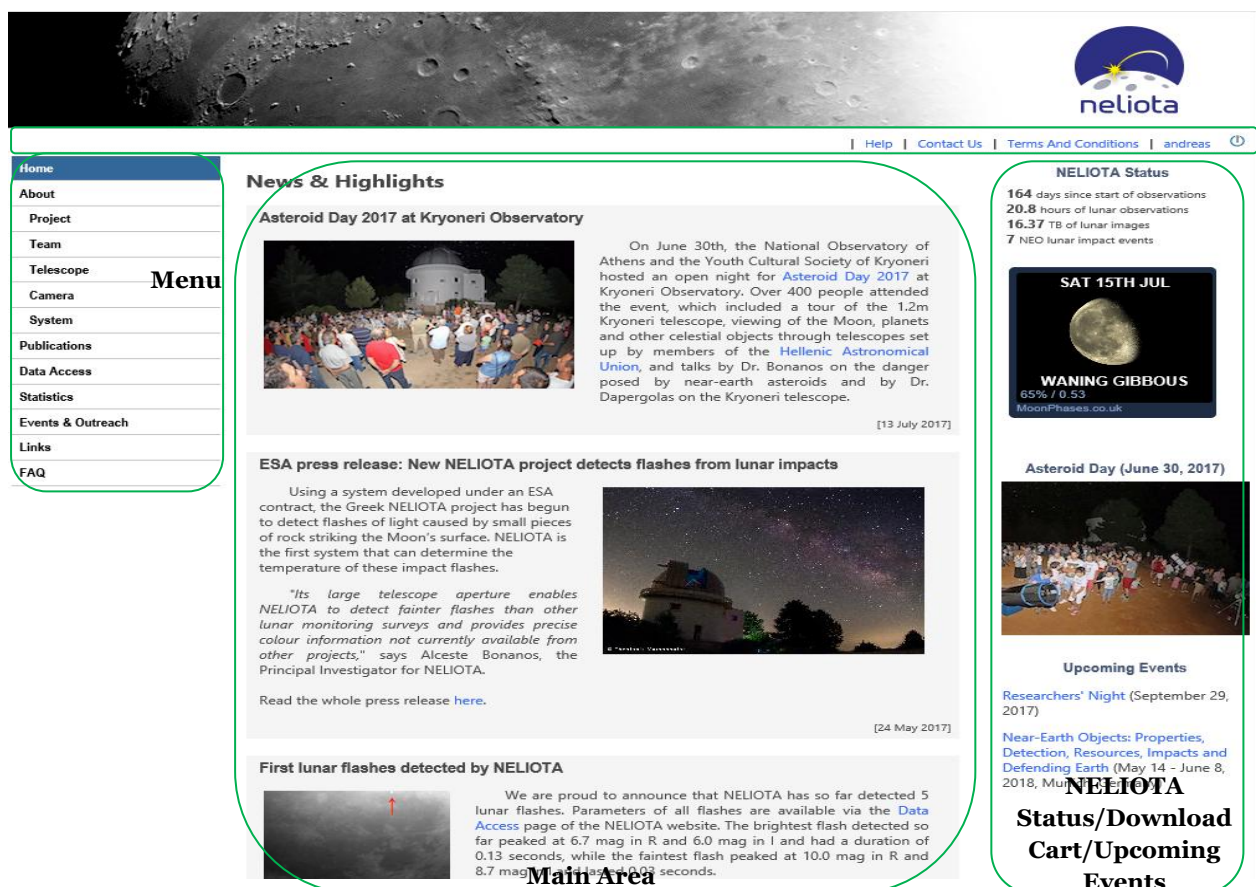
The NELIOTA information system attempts to publicize information about NEO impact events, detected on the Moon. It also offers other related information as well as the ability to download data (images in different bands, etc.) about these Detected Events. It does so by the means of a website found at <http://neliota.astro.noa.gr>. This document describes the main website areas and all information to be found at these areas in Section 3. Moreover, Section 4 contains detailed descriptions of all User operations.

## 3 WEBSITE AREAS

The website is divided in different sections, thus grouping content and making it easier for users to find. There are 8 main areas: Home, About, Publications, Data Access, Statistics, Events and Outreach, Links, and FAQs, which can be accessed using the website's main menu on the left.

Furthermore, there are other areas offering relevant supportive information such as the Terms and Conditions page, the Contact Us page and finally the User Profile page. The first two can be accessed by the website's top bar links on the far right, whilst the latter can be accessed after successful logon by clicking on someone's user name appearing at the far left side of the website's top bar.

Finally there is the website's right column hosting the NELIOTA Status widget as well as the User's Download Cart, which only appears once items have been added to it, and other related information such as Upcoming Events. Here's what the website looks like:



The screenshot shows the NELIOTA website interface. At the top right is the NELIOTA logo. Below it is a navigation bar with links: Help, Contact Us, Terms And Conditions, and andreas. On the left is a vertical menu with items: Home, About, Project, Team, Telescope, Camera, System, Publications, Data Access, Statistics, Events & Outreach, Links, and FAQ. The main content area is titled 'News & Highlights' and contains three articles:

- Asteroid Day 2017 at Kryoneri Observatory**: A photograph of a crowd at an observatory. Text: "On June 30th, the National Observatory of Athens and the Youth Cultural Society of Kryoneri hosted an open night for Asteroid Day 2017 at Kryoneri Observatory. Over 400 people attended the event, which included a tour of the 1.2m Kryoneri telescope, viewing of the Moon, planets and other celestial objects through telescopes set up by members of the Hellenic Astronomical Union, and talks by Dr. Bonanos on the danger posed by near-earth asteroids and by Dr. Dapergolos on the Kryoneri telescope." [13 July 2017]
- ESA press release: New NELIOTA project detects flashes from lunar impacts**: Text: "Using a system developed under an ESA contract, the Greek NELIOTA project has begun to detect flashes of light caused by small pieces of rock striking the Moon's surface. NELIOTA is the first system that can determine the temperature of these impact flashes." [24 May 2017]
- First lunar flashes detected by NELIOTA**: Text: "We are proud to announce that NELIOTA has so far detected 5 lunar flashes. Parameters of all flashes are available via the Data Access page of the NELIOTA website. The brightest flash detected so far peaked at 6.7 mag in R and 6.0 mag in I and had a duration of 0.13 seconds, while the faintest flash peaked at 10.0 mag in R and 8.7 mag in I, with a duration of 0.03 seconds." [24 May 2017]

On the right side, there is a 'NELIOTA Status' widget showing: 164 days since start of observations, 20.8 hours of lunar observations, 16.37 TB of lunar images, and 7 NEO lunar impact events. Below it is a 'SAT 15TH JUL' widget showing a moon phase: WANING GIBBOUS (65% / 0.53). At the bottom right, there is an 'Upcoming Events' section listing 'Researchers' Night (September 29, 2017)' and 'Near-Earth Objects: Properties, Detection, Resources, Impacts and Defending Earth (May 14 - June 8, 2018, Munich)'. A 'Main Area' label is placed at the bottom of the green circle.

### 3.1.1 Home Page

The Homepage contains articles about News & Highlights related to the NELIOTA activity.

Note that not all Articles will be listed on the Homepage. At the bottom of this area users can find a link that takes them to the News Archive, which contains all News articles grouped by the year of publication.

### 3.1.2 About

Information about the NELIOTA project, Project Team, the Telescope, Camera, etc. can be found by accessing the “About” page. In order to access this information please use the associated links on the website’s main menu located on the left.

### 3.1.3 Publications

#### 3.1.4 Data Access

The Archive Area is the place where all *Detected* (i.e. validated events) or *Suspected* (i.e. non-validated) Events will be published. The NELIOTA Lunar Impact Events are presented in a table, ordered by the detection date (newest first). For each *Event* a few details are displayed on this list. If the user wishes to see more details about an *Event* they can do so by clicking on the “See Details” link.

**Validated/Suspected NEO Lunar Impact Events**

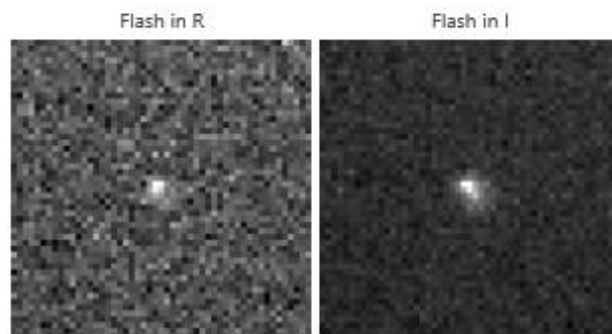
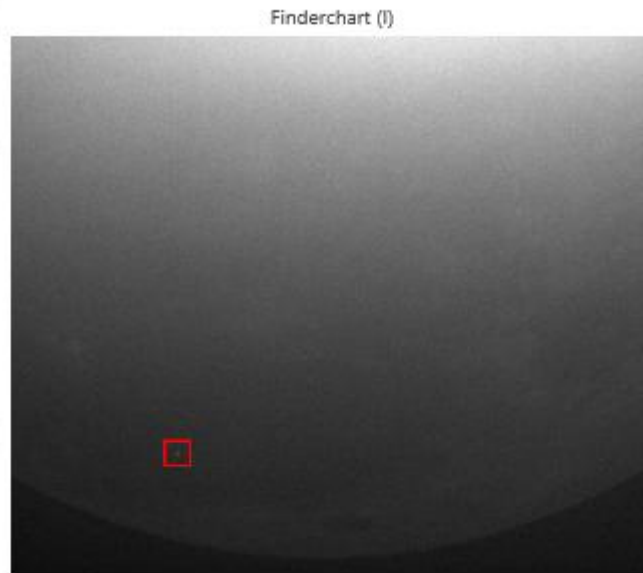
UT Date (DD/MM/YYYY)	UT Time	Duration (sec)	R (mag)	I (mag)	Validated	Size (MB)	Details	Download
28/06/2017	18:45:27.803	0.033	10.0 ± 0.0	9.4 ± 0.0	<input type="checkbox"/>	93	<a href="#">See &gt;&gt;</a>	<a href="#">+ Add to Cart</a>
27/06/2017	18:58:27.680	0.066	10.3 ± 0.0	9.2 ± 0.0	<input checked="" type="checkbox"/>	87	<a href="#">See &gt;&gt;</a>	<a href="#">+ Add to Cart</a>
19/06/2017	02:39:14.590	0.033	-	10.1 ± 0.1	<input type="checkbox"/>	97	<a href="#">See &gt;&gt;</a>	<a href="#">+ Add to Cart</a>
19/06/2017	01:51:09.663	0.033	-	10.2 ± 0.1	<input type="checkbox"/>	98	<a href="#">See &gt;&gt;</a>	<a href="#">+ Add to Cart</a>
19/06/2017	01:50:35.560	0.066	9.9 ± 0.1	9.3 ± 0.1	<input type="checkbox"/>	98	<a href="#">See &gt;&gt;</a>	<a href="#">+ Add to Cart</a>
29/05/2017	19:00:05.083	0.033	-	9.6 ± 0.0	<input type="checkbox"/>	89	<a href="#">See &gt;&gt;</a>	<a href="#">+ Add to Cart</a>
20/05/2017	01:58:57.980	0.033	-	9.8 ± 0.0	<input type="checkbox"/>	99	<a href="#">See &gt;&gt;</a>	<a href="#">+ Add to Cart</a>

The Event’s Details link ([See>>](#)) will provide users with more information about the *Event*, including data associated with the Moon position at the time of the Event, such as Airmass, Altitude (deg), Azimuth (deg). Event data information also include the R & I Magnitude, Lunar Latitude and Longitude as well as the Event duration. Note that the maximum information will be included in the *.fits* header file once users download an Event. The Event Details screen is illustrated below. Notice how Data has been put into categories to assist users finding the information they need.

## Detected NEO Lunar Impact Event

**ID: 20170401\_194551**

Moon Position (Topocentric)	
Airmass:	2.44
Altitude (deg):	24.1
Azimuth (deg):	273.6
Event Data	
UT Date (DD/MM/YYYY):	01/04/2017
UT Time:	19:45:51.653
R (mag):	10.0 ± 0.1
I (mag):	8.7 ± 0.1
Lunar Long (deg):	-58.8
Lunar Lat (deg):	11.6
Duration (sec):	0.033
Additional Information	
Number of Cameras:	2



Media Size: 92 MB

**Important Note:** Only authorized users can see non-validated (i.e. Suspected) events.

For more information about the process of downloading NEO Lunar Impact Events please see [paragraph 4.3](#).

### 3.1.5 Statistics

Users can also find statistical information about the NELIOTA Lunar Impact Events. Statistical information comprises of 3 histograms and a Lunar Impact Events map (indicating the location of the validated impact flashes), but note that as the NELIOTA lunar monitoring campaign progresses these might change and more histograms (or other diagrams as necessary) may appear on the Statistics page.

For the time being the first histogram provides information about the Events occurrence over time, while the second and third provide information about the Events Magnitude over R and I respectively.

### **3.1.6 Events and Outreach**

The Events and Outreach page offers information about relevant Upcoming Events, but also may provide links to NELIOTA related resources.

### **3.1.7 Links**

The Links page provides NELIOTA related links.

### **3.1.8 FAQ**

The FAQ page does what it says on the tin. Users might get a better insight of the system, its usefulness, usage, purpose, etc.

### **3.1.9 Terms and Conditions**

In order to be informed about the rules governing access to, and use of, the website please visit the “Terms and Conditions” page. The page can be accessed by clicking on the Terms and Conditions link found on the far right of the website’s top bar menu.

### **3.1.10 Contact Us**

If you wish to contact us for any reason you can access the “Contact Us” page by clicking on the respective link found on the top bar menu of the NELIOTA website.




The Contact Us page provides all the necessary information so the NELIOTA team can be contacted either by e-mail or by post.



### 3.1.11 User Profile

Users can access their profile by clicking on their *username*, which will appear on the rightmost side of the website's top bar menu.

| [Help](#) | [Contact Us](#) | [Terms And Conditions](#) | [andreas](#) 

---

#### User Profile

Hi Andreas Noutsopoulos!

**Profile Information**

Title:

First Name:

Last Name:

Gender:

Institution:

**Contact Information**

Street & Number:

Address Extra Info:

Post Code:

City:

County/State:

Country:

Save Changes


**NELIOTA Status**

164 days since start of observations


20.8 hours of lunar observations

16.37 TB of lunar images

7 NEO lunar impact events



**Asteroid Day (June 30, 2017)**



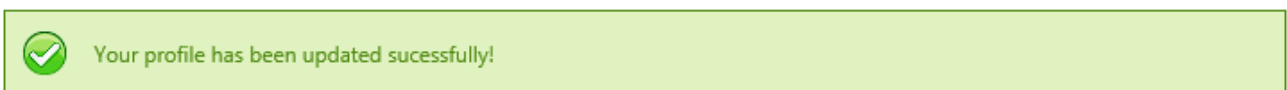
**Upcoming Events**

[Researchers' Night](#) (September 29, 2017)

[Near-Earth Objects: Properties, Detection, Resources, Impacts and Defending Earth](#) (May 14 - June 8, 2018, Munich, Germany)

The user's profile information can be changed by altering their values and then clicking on the "Save Changes" button.

After successfully saving the user profile a confirmation message will appear.






### 3.1.12 Download Cart

The *Download Cart* contains information about the NEO Lunar Impact Events added to the user's Cart. The main view of the Download Cart is illustrated below:

#### NEO Lunar Impact Events - Download Cart

Notice that the Total cart size cannot exceed 350 MB.  
You have 74 MB left.

NEO Lunar Impact Event ID	Description	Size	
20170627_185827	NEO Flash	87 MB	
20170301_170848	The brightest flash.	98 MB	
20170201_171357	The first NELIOTA NEO impact detected.	91 MB	
			<b>Total Size: 276 MB</b>

[Back to where I was](#)

[Check out now](#)

Users can modify the contents of their *Download Cart* by deleting a *NEO Lunar Impact Event*. Deleting an Event from the Download Cart is as simple as clicking the waste bin icon on the right side of each item row.

Every time a user adds an *Event* into their Cart, they are taken to the Cart and the full Cart view is displayed. Users can click to the “Back” button in order to continue browsing through the list of the Events.

Once they are finished adding Events into their Download Cart, users can complete their Order by clicking on the “Check Out” button. This will take them to the Check Out page which contains information about what happens next.

#### Check Out

Please click on 'Complete Order' button to confirm your NEO Lunar Impact Events Download Order.

##### What happens next?

We will prepare a compressed file containing all the data you have ordered and we will inform you by e-mail when the file will be available for download. **Note that** until then we will not accept any new order from you. This is done mainly for maintaining the website performance at high standards, since placing an order on NELIOTA website it means adding workload on our servers to prepare your data (i.e. compressing even Gigabytes).

Please note that we **do not** deliver any actual physical items, but rather a download link in your e-mailbox.

Thank you for your interest!

[Complete order](#)

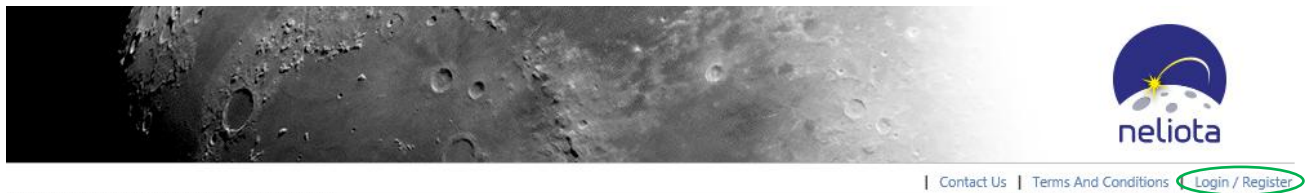
This page also contains the “Complete Order” button. Once clicked the Download Order is stored into our Database. The NELIOTA Information system working together with the Archive System will then take over, preparing the final compressed file containing all data for the ordered Events.

Once the final compressed file is ready, users will be informed by e-mail. For more information about the actual download process please see the related paragraph [here](#).

## 4 MAIN USER OPERATIONS

### 4.1 User Registration

In order to take full advantage of the NELIOTA website and be able to download NEO Lunar Impact Events, users have to register. Registration is a simple process. Users need to click on the Login/Register button found at the right most of the top menu bar.



This will take users to the Login and Registration screen. In order to start the registration process users must click on the “Register by clicking here” link illustrated bellow:

#### Login and Registration

Please Login to access Restricted Area.

**Login**

UserName

Password

[Forgot my Password!](#)


**Why Register?**

Registering to the NELIOTA website will allow you to view and download all data available for each detected or suspected event.

[Register by clicking here!](#)

Clicking the “Register” link takes users to the User Registration Form where users will have to fill in their information, prove they are real and not a robot by solving a typical “Gotcha riddle” and click the Register button located at the bottom of the Form. Note that Country and Institution fields are compulsory.

## New User Registration

**User Information**  
FirstName  LastName   
Country   
Institution   
UserName  
  
Password  
  
ConfirmPassword  
  
E-mail  
  
Secret Question  
  
Secret Answer  
  
**Verification**  
Please enter the letters displayed below.  
  
Verification Letters:

Please note the importance of the “Secret Question” and “Secret Answer” fields. These fields will be used if users forget or for any other reason wish to reset their passwords. For more information about password resetting please see paragraph [4.2.1 Password Reset](#).

After clicking on the “Register” button the system will check that all information provided is valid (i.e. username has not already been used, e-mail format validity and uniqueness within the NELIOTA system, verification letters are correct, etc.) and if this is the case, the users will be registered into the NELIOTA website database.

### Success!



Your account has been created. Please follow the instructions sent to your e-mail account in order to activate your NELIOTA Account!

Their registration however will be in an inactive state. The system will generate an e-mail which will be sent to the user with directions about how to activate their account. The process involved is as simple as clicking on the link provided within the e-mail.

Upon successful activation users will see a “success message” and will now be able to login into the NELIOTA website.

## Registration Activation

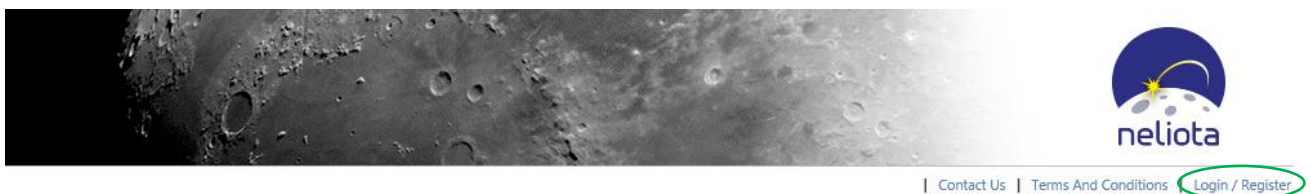


Your Account has been successfully activated, you can now login into NELIOTA website!

For more information about how to Login please see the next paragraph [4.2 Login/Logout](#).

## 4.2 Login/Logout

Logging into the NELIOTA website can be done by clicking on the Login/Register link located at the right most side of the top menu bar.



**Login**

UserName

Password

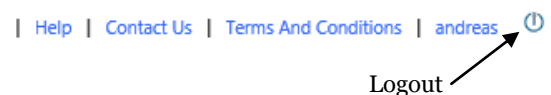
[Forgot my Password!](#)

By clicking on the “Login/Register” link, the user will be taken to the Login page where they will be able to Login by submitting their username and password and clicking on the “Login” button found within the login form illustrated on the left.

After successful login, users will be taken back to the page they came from.

Note that the system will automatically redirect users to the Login page if they try to access a page or functionality which requires them to be authenticated and authorized first.

Once users have successfully logged in, their username will be displayed on the left most side of the top bar menu as illustrated bellow:



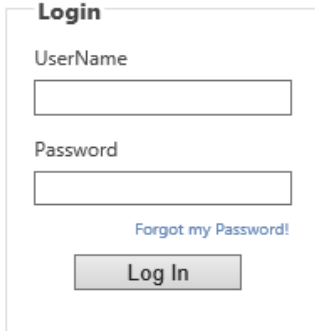
### Logout

In order to log out, the user can simply click on the “off” switch next to their username on the website’s top bar menu as illustrated above.

### 4.2.1 Password Reset

The NELIOTA website offers the ability to users to reset their password in case they have lost it. Note that passwords are hashed and cannot be recovered, so they have to be reset.

In order to reset their password users have to go to the Login and Registration page by clicking on the “Login/Register” link located at the right-most side of the top bar menu (as illustrated [here previously](#)).



Once in the Login and Registration page, users have to click on the “Forgot my Password” link found within the Login Form.

Clicking on this link will direct users to the Forgot my Password page where users will be asked to supply their username and click on the “Submit” button.

**Forgot Password** **1**

In order to reset your password please [enter your username](#) and follow the steps.

Username  
demo-user| x

**Submit**

If the username provided is found in the NELIOTA Database the users will be asked their secret question. (Note that the secret question is also hashed in our database and it cannot be recovered so please do not forget it!)

**Forgot Password**

Please answer the question you have set during registration:

Are you a demo user?  
yes| x

**Submit**

**2**

After successfully answering their secret question users can supply a new password and the process is completed.

**3 Change Password**

Upon successful completion a success message will be displayed to the users.

New Password  
|

Confirm New Password  
|

**Submit**



**4.3 Downloading NEO Lunar Impact Events**

Telescope
Camera
System
Publications
<b>Data Access</b>
Statistics

In order to download NEO Lunar Impact Events users must visit the “Data Access” page. Use the main menu on the left column to do so.

Please note that only authorized Users<sup>1</sup> will be eligible to add NEO Lunar Impact Events to their Download Cart. So it is advised to first login into the system. For more information about how to login please see [paragraph 4.2](#) above.

<sup>1</sup> All registered users who are currently logged in are authorized to download validated NEO Lunar Impact Events.

Once logged in, users can add *Events* to their *Download Cart* by clicking the respective button “Add to Download Cart”. This button will only appear to users who are eligible for downloading.

**Validated/Suspected NEO Lunar Impact Events**

UT Date (DD/MM/YYYY)	UT Time	Duration (sec)	R (mag)	I (mag)	Validated	Size (MB)	Details	Download
28/06/2017	18:45:27.803	0.033	10.0 ± 0.0	9.4 ± 0.0	<input type="checkbox"/>	93	<a href="#">See &gt;&gt;</a>	+ Add to Cart
27/06/2017	18:58:27.680	0.066	10.3 ± 0.0	9.2 ± 0.0	<input checked="" type="checkbox"/>	87	<a href="#">See &gt;&gt;</a>	+ Add to Cart
19/06/2017	02:39:14.590	0.033	-	10.1 ± 0.1	<input type="checkbox"/>	97	<a href="#">See &gt;&gt;</a>	+ Add to Cart
19/06/2017	01:51:09.663	0.033	-	10.2 ± 0.1	<input type="checkbox"/>	98	<a href="#">See &gt;&gt;</a>	+ Add to Cart
19/06/2017	01:50:35.560	0.066	9.9 ± 0.1	9.3 ± 0.1	<input type="checkbox"/>	98	<a href="#">See &gt;&gt;</a>	+ Add to Cart
29/05/2017	19:00:05.083	0.033	-	9.6 ± 0.0	<input type="checkbox"/>	89	<a href="#">See &gt;&gt;</a>	+ Add to Cart
20/05/2017	01:58:57.980	0.033	-	9.8 ± 0.0	<input type="checkbox"/>	99	<a href="#">See &gt;&gt;</a>	+ Add to Cart

Users can download more than one *Events*. There is a limit for each download currently set to 3 *Events* per download and this is done in order to achieve good performance on delivering downloads<sup>2</sup>.

Users can complete their *Download Order* in two steps, by clicking the “Checkout” button found in their download cart and then “Complete Order” button, which will appear in the final Check Out screen.

For more information about the Check Out process please see [paragraph 3.1.12](#) which describes the *Download Cart* view and functionality.

### 4.3.1 The Actual Download Process

Once a download *Order* has been completed the system will prepare a compressed file containing all available information for each *Event* that has been added to the *Download Cart*.

Preparing the final compressed file will take some time depending on the size of the *Download Order*. The time it will take varies depending also on the system workload. Approximately 10-15 minutes are needed for a single event download. This is the total time needed until the system will issue an e-mail to the user containing a download link which they will have to access in order to download a compressed file containing all the *Data* about each *Event* included in their *Download Order*.

Note that more than one *NEO Lunar Impact Events* can be downloaded within a single *Download Order*.

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<sup>2</sup> At the moment of writing this document the website is still under development so this value may change as fine tuning of the website is an on-going process.