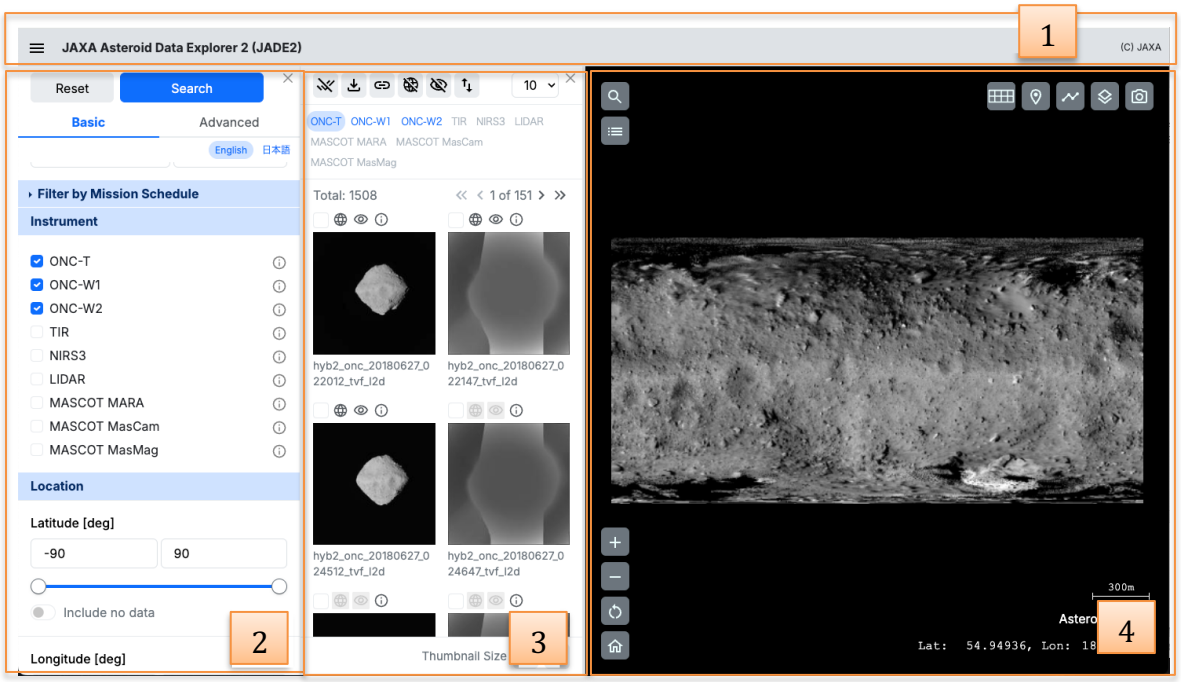
JADE2（JAXA Asteroid Data Explorer 2）

User Manual

1. Windows of JADE2



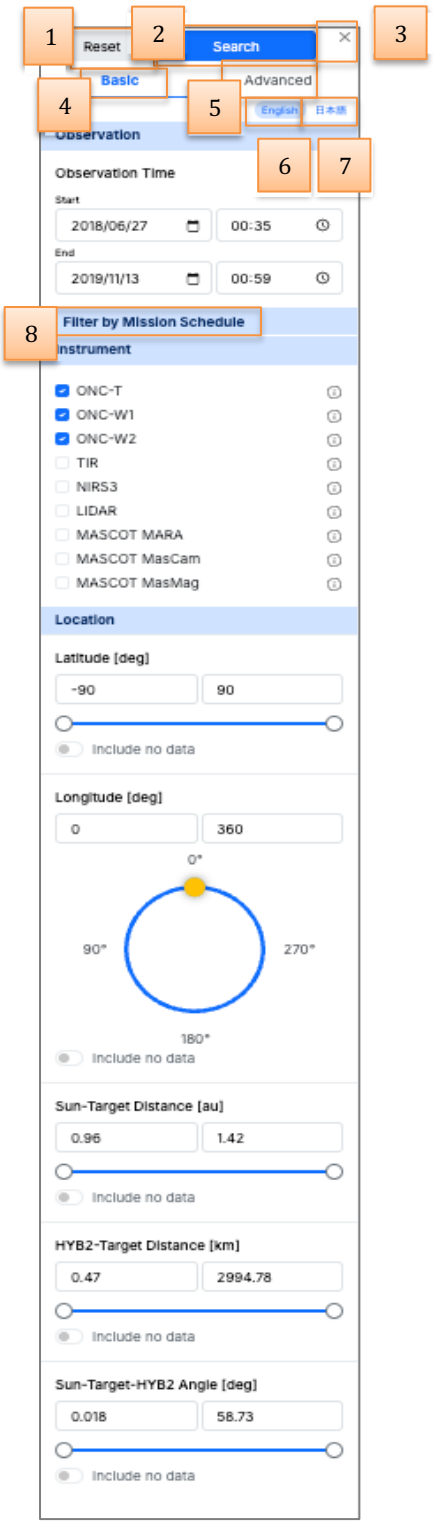
1. Header
   - Term of use of JADE2 and link to Hayabusa2 project and data archive websites are shown from the Menu button (left side of the header).

2. Search criteria widow
   - Search criteria can be set in this window.

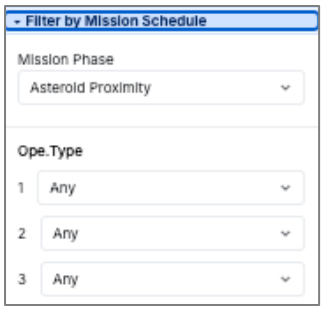
3. Search result window
   - Found data by input search criteria are shown.

4. Basemap window
   - Selected data can be displayed on the Ryugu basemap. Data can be also searched from the area of the map using polygons or longitude/latitude.

2. About search window

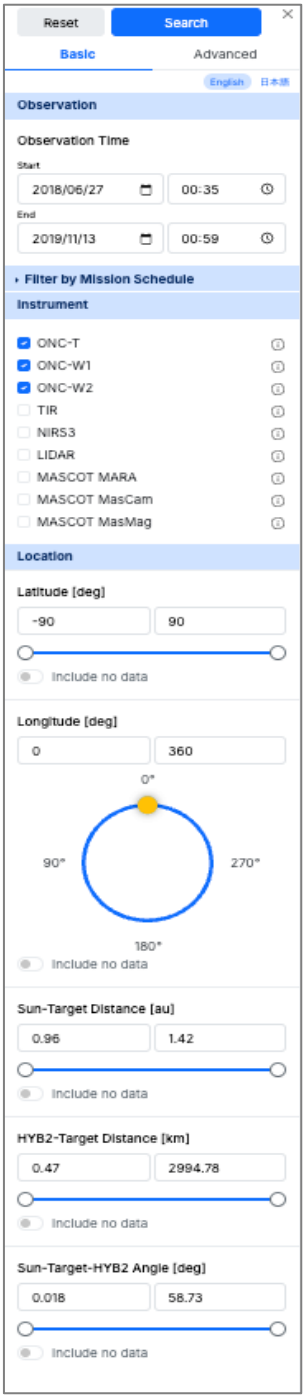


1. Reset
   - Return to the default setting.
2. Search
   - Search for data by clicking.
3. X(Close)
   - Hide the search window.
4. Basic
   - Search for data by basic criteria.
5. Advanced
   - Search for data by detailed criteria.
6. English
   Change the display to English.
7. 日本語(Japanese)
   - Change the display to Japanese.
8. Filter by Mission Schedule
   - Constrain data by mission schedule as follows.

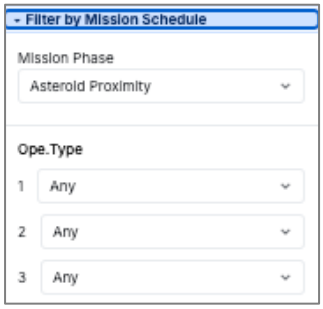


(a) Basic mode

Basic mode searches for data using common criteria through all instruments. To set criteria for each instrument, please use “Advance mode”.



No	Criteria	Format	Default setting (min/max)
1	Observation Time	Input Date and Time	2014/12/03 00:00 | 2019/11/19 23:59
2	Mission Phase	Selection	Any Commissioning EDVEGA Earth Swingby Transfer Approach Asteroid Proximity Return
3	Ope. Type1	Selection	Operation list based on the selected Mission Phase Example：Rovers
4	Ope. Type2	Selection	Operation list based on the selected Ope. Type 1 Example：MASCOT（>51m）
5	Ope. Type3	Selection	Operation list based on the selected Ope. Type 2 Example：Descent
6	Latitude	Slide	-90.00 | 90.00
7	Longitude	Circular slide	0.00 | 360.00
8	Instrument	Selection (multiple selection)	ONC-W1 ONC-W2 ONC-T TIR NIRS3 LIDAR MASCOT MARA MASCOT MASCam MASCOT MasMag
9	Sun-Target Distance [au]	Slide	0.96 | 1.42
10	HYB2-Target Distance [km]	Slide	0.47 | 2994.78
11	Sun-Target-HYB2 Angle [deg]	Slide	0.018 | 58.73

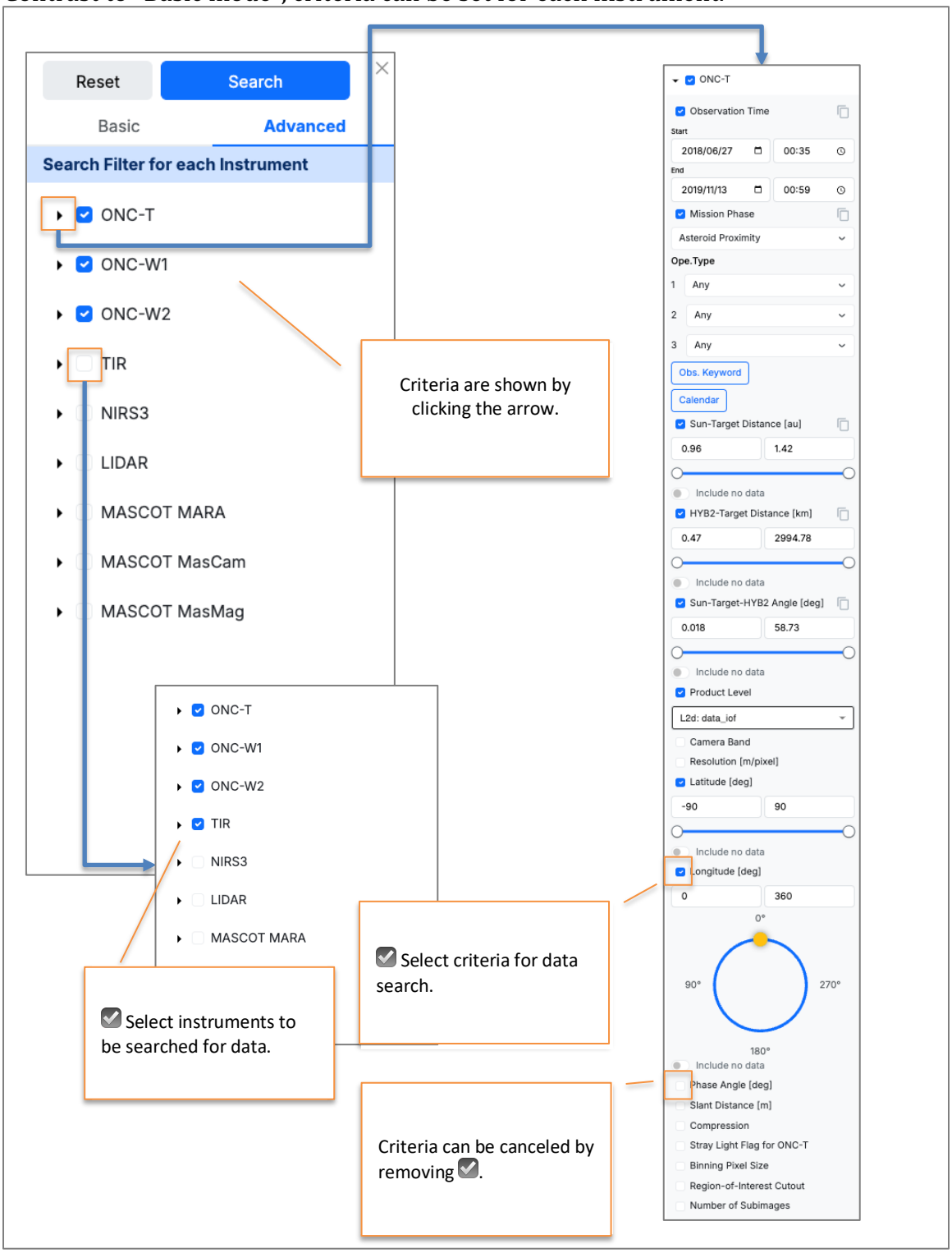


Product level searched in the basic mode is as follows. To search for different product levels, please use “Advanced mode”.

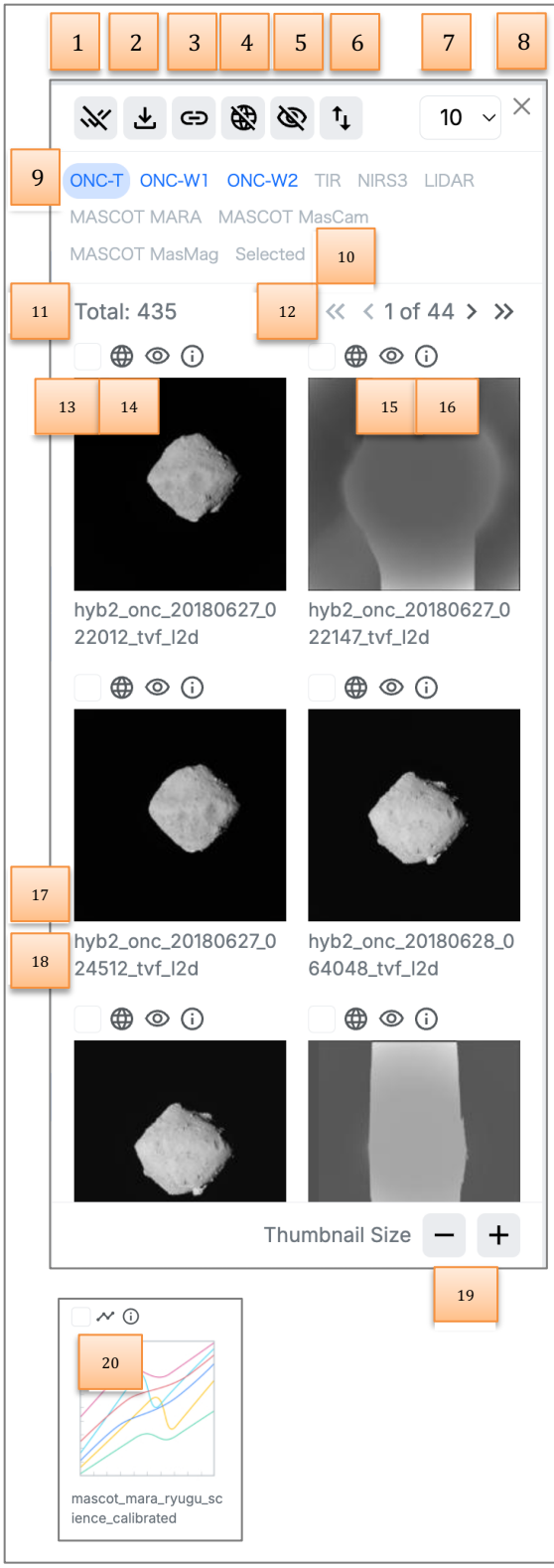
Instrument	Default product level for “Basic mode”
ONC-T	L2d: data_iof
ONC-W1	L2d: data_iof
ONC-W2	L2d: data_iof
TIR	L2: Calibrated Brightness Temperature
NIRS3	L2C: data_calibrated
LIDAR	L2: data_derived
MASCOT MARA	L2B: data_calibrated
MASCOT Mas Cam	Data_calibrated
MASCOT MasMag	Data_sci_calibrated

(b) About Advanced mode

Advanced mode can search for data using detailed criteria of each instrument.
Contrast to “Basic mode”, criteria can be set for each instrument.

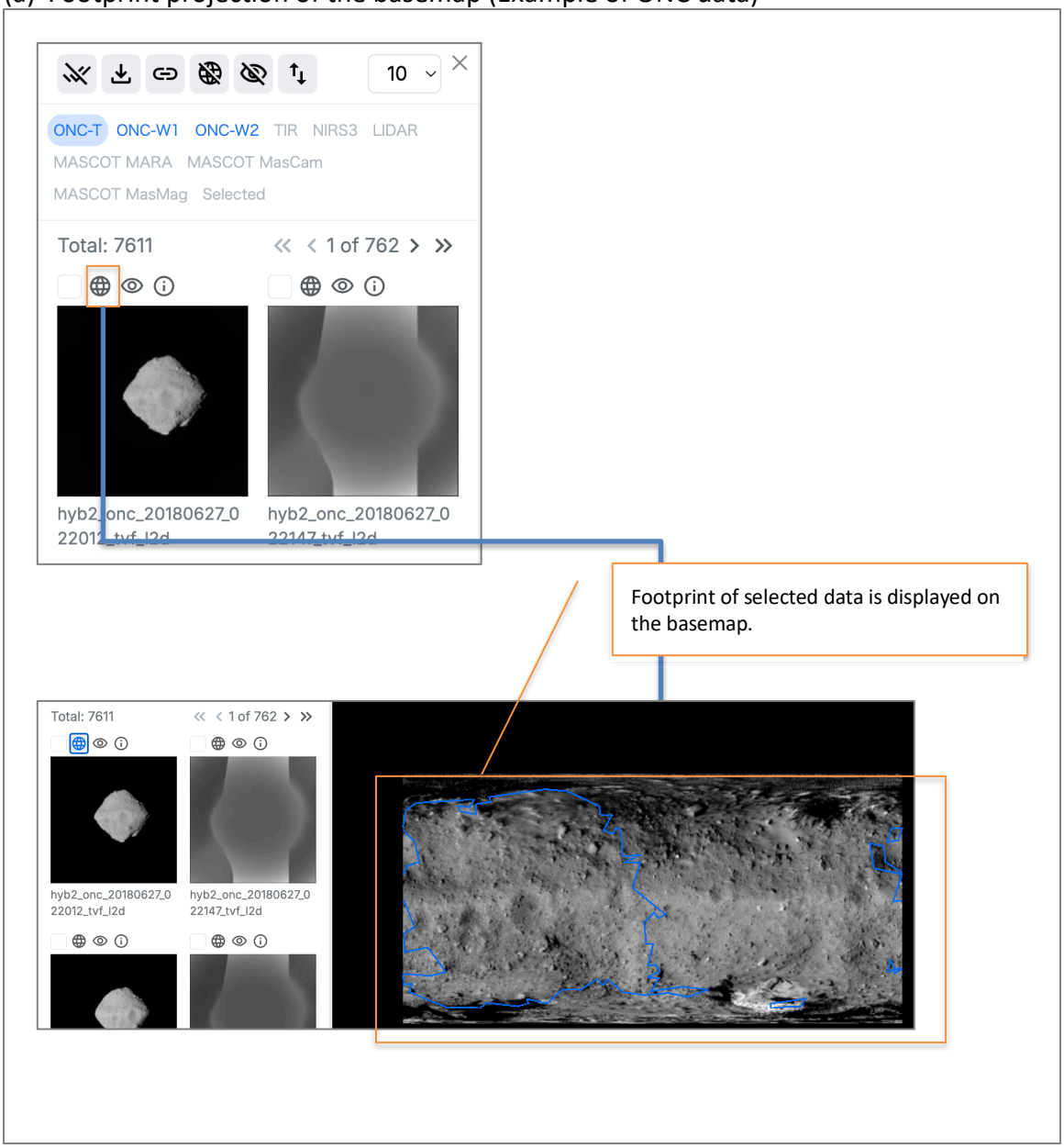


3. Search result window

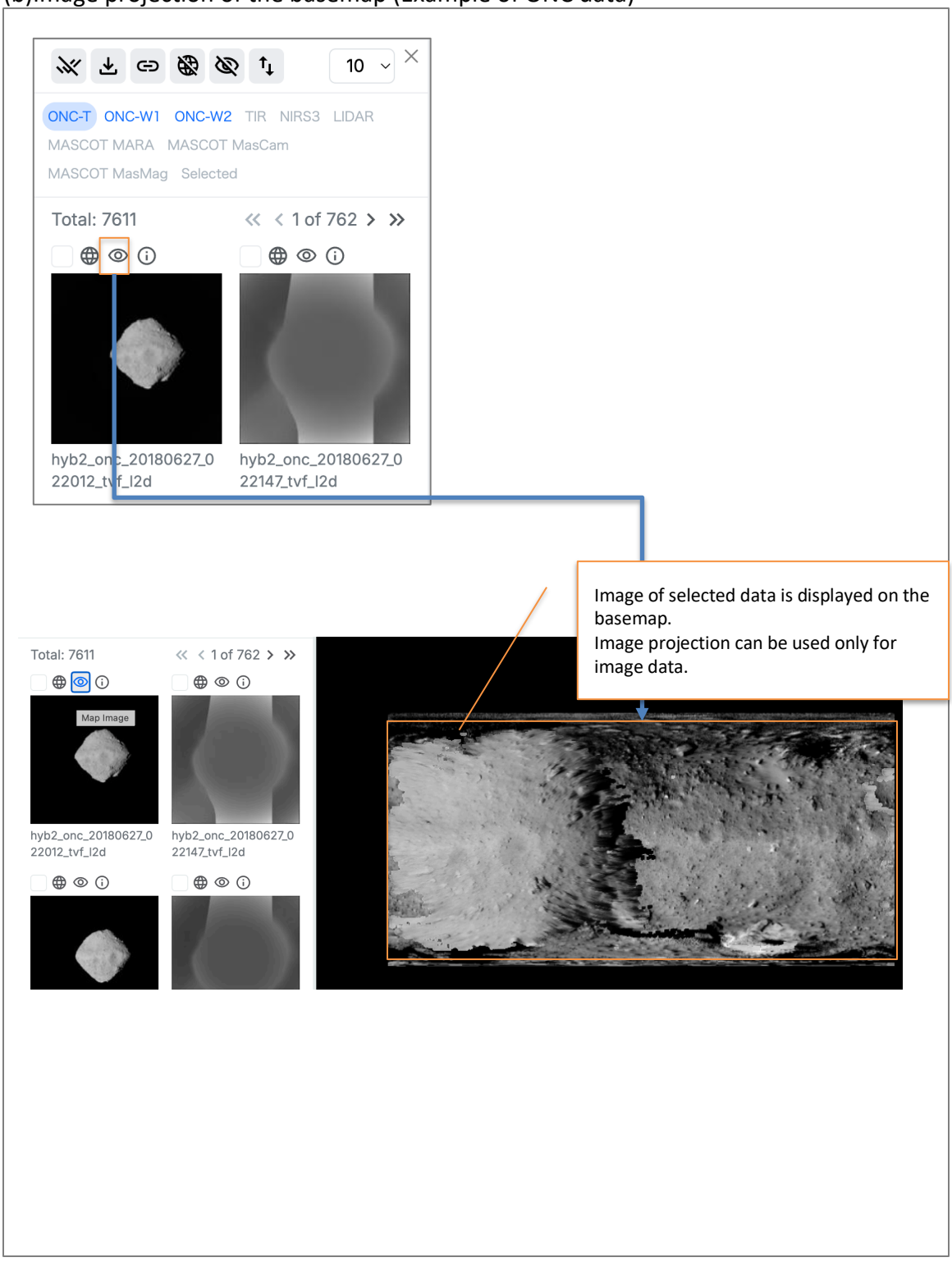


1. Clear selected
   - Clear all checks of selected data.
2. Download
   - Download checked data.
3. Get permanent link
   - Generate URL link to reproduce current search results.
4. Clear footprint
   - Clear all footprints drawn on the basemap.
5. Clear all projected images
   - Clear all images projected on the basemap.
6. Change result order
   - Change order of search results.
7. Change number of displays
   - Change the number of displays of search results.
8. Close
   - Close the window of search result.
9. Instrument tubs
   - Shows search results of selected instrument.
   - Not selected for not-used instrument in data search.
10. Selected tub
    - Show all selected data by “check box” (button 13).
11. Total number
    - The number of searched data.
12. Page number
    - Current page of search result.
13. Check box
    - When checked, each data can be downloaded.
    - When checked, the data is shown in “selected tub”.
14. Show footprint
    - Show footprint on the basemap.
    - If there is no data to represent position, this button cannot be checked.
15. Show image
    - When checked, the image is projected on the basemap (ONC, TIR).
    - For non-image data, this button cannot be checked.
    - If there is no data to represent position, this button cannot be checked.
16. Information
    - Show information.
17. Thumbnail
    - Show thumbnail.
18. File name
    - File name of data at database.
19. Thumbnail size
    - Change the seize of each thumbnail.
20. Show graph
    - Show plot of the searched data (for non-image data).
    - For non-signal data, this button cannot be checked.

(a) Footprint projection of the basemap (Example of ONC data)

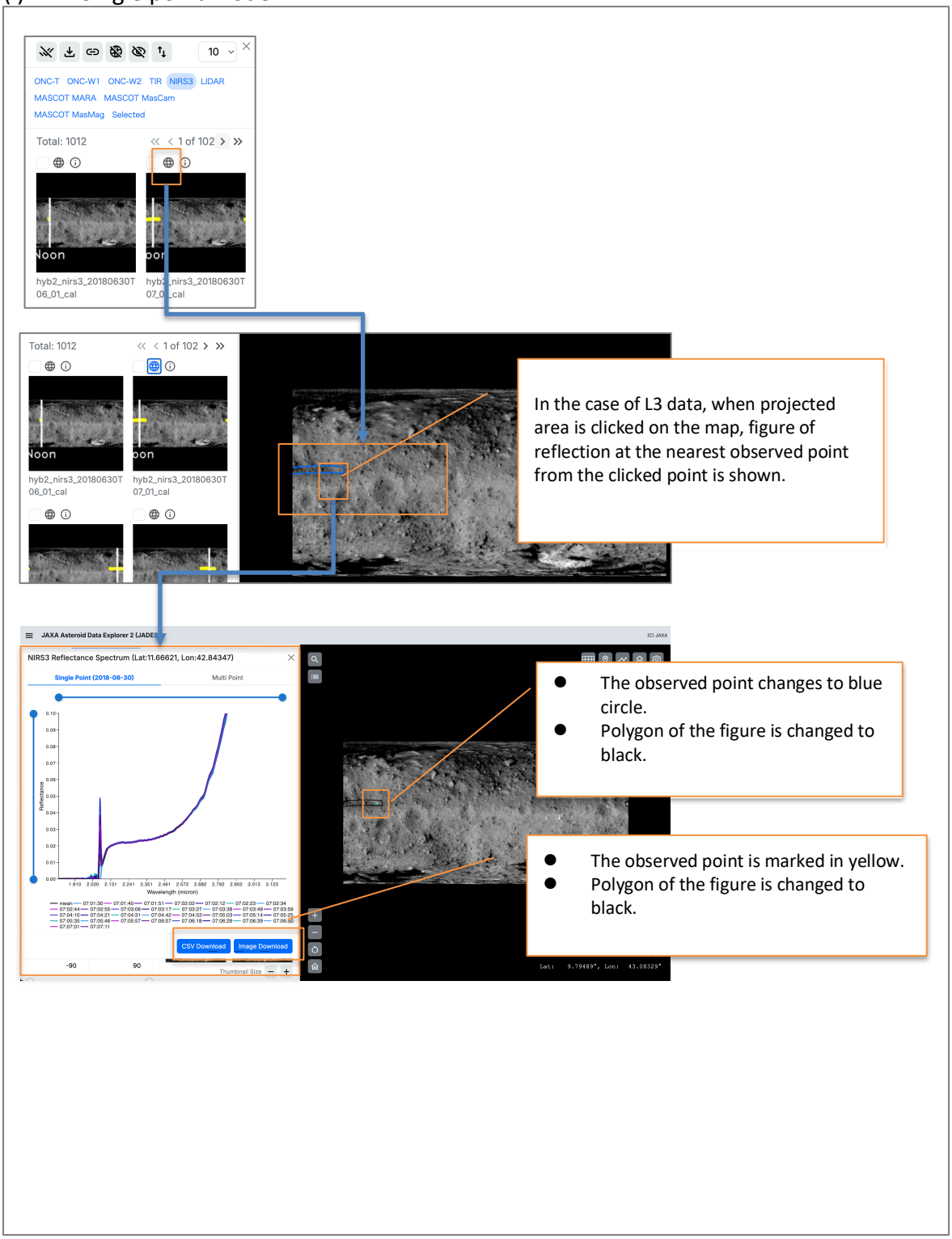


(b)Image projection of the basemap (Example of ONC data)

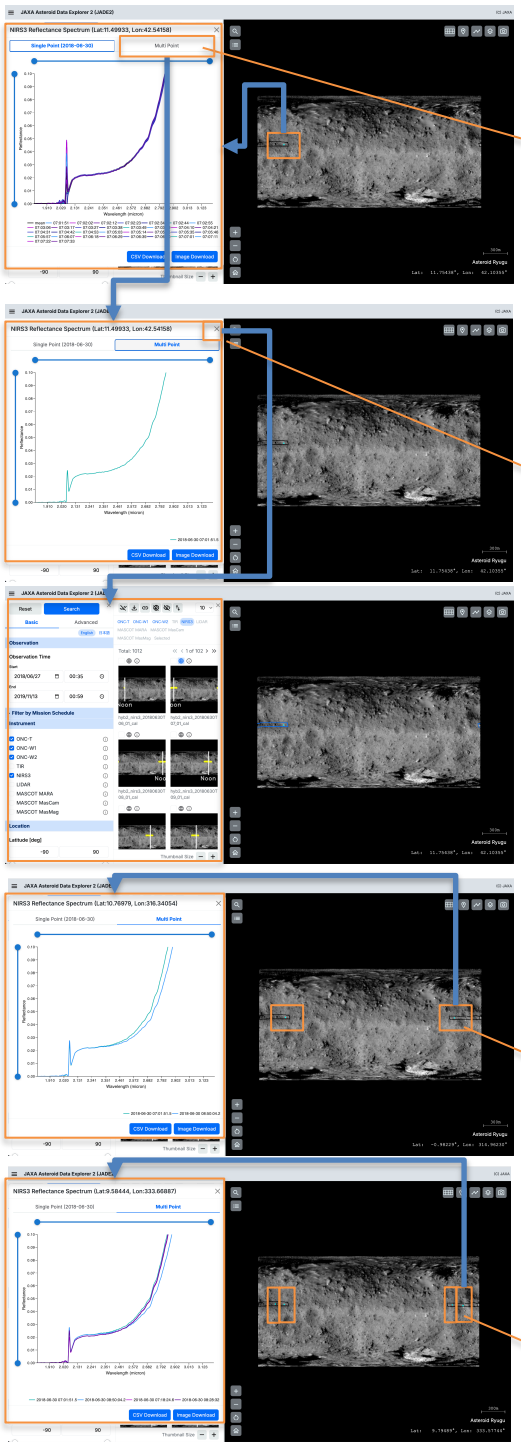


(c) Graph plot (Example of NIRS3 data)

(i) Single point mode



(ii) Multi point mode



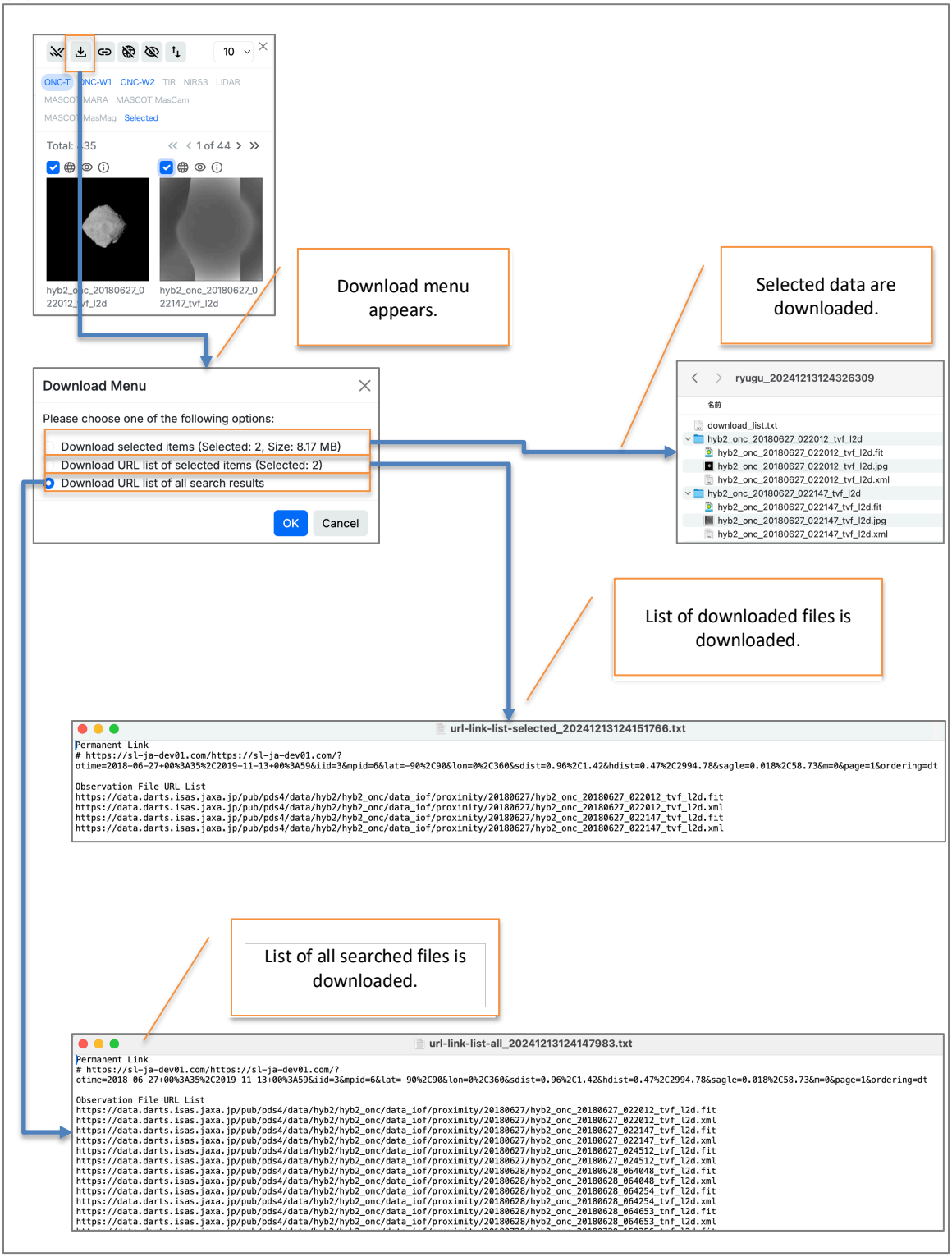
At “Multi point” mode, figure of mean reflections at each position is shown. Mean reflection is the averaged reflection of overlapped observation data.

To plot data of multiple points, please close the figure once.

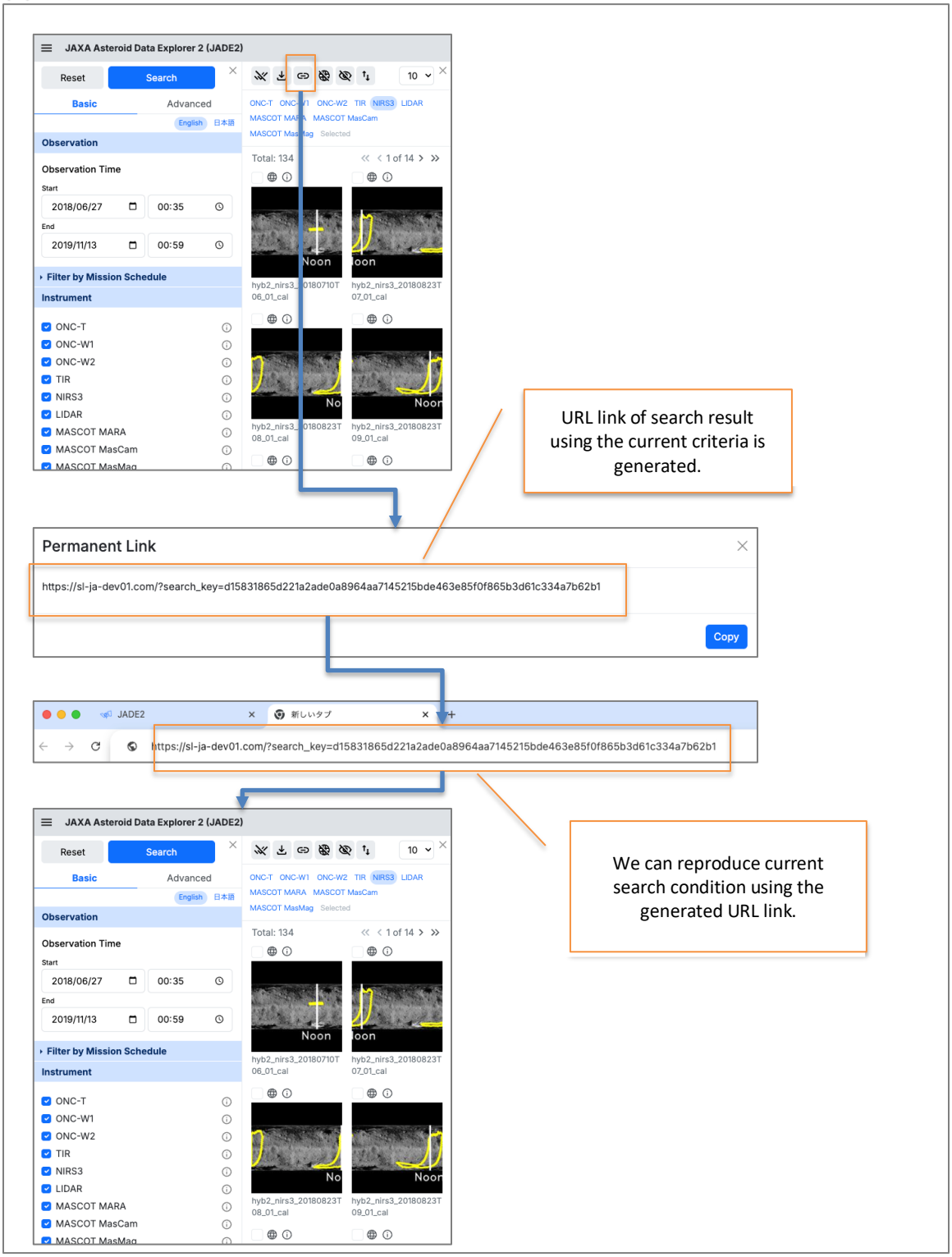
Then, click another point on the map.

In “Multi Point” mode, multiple plots from the same observation data are also possible.

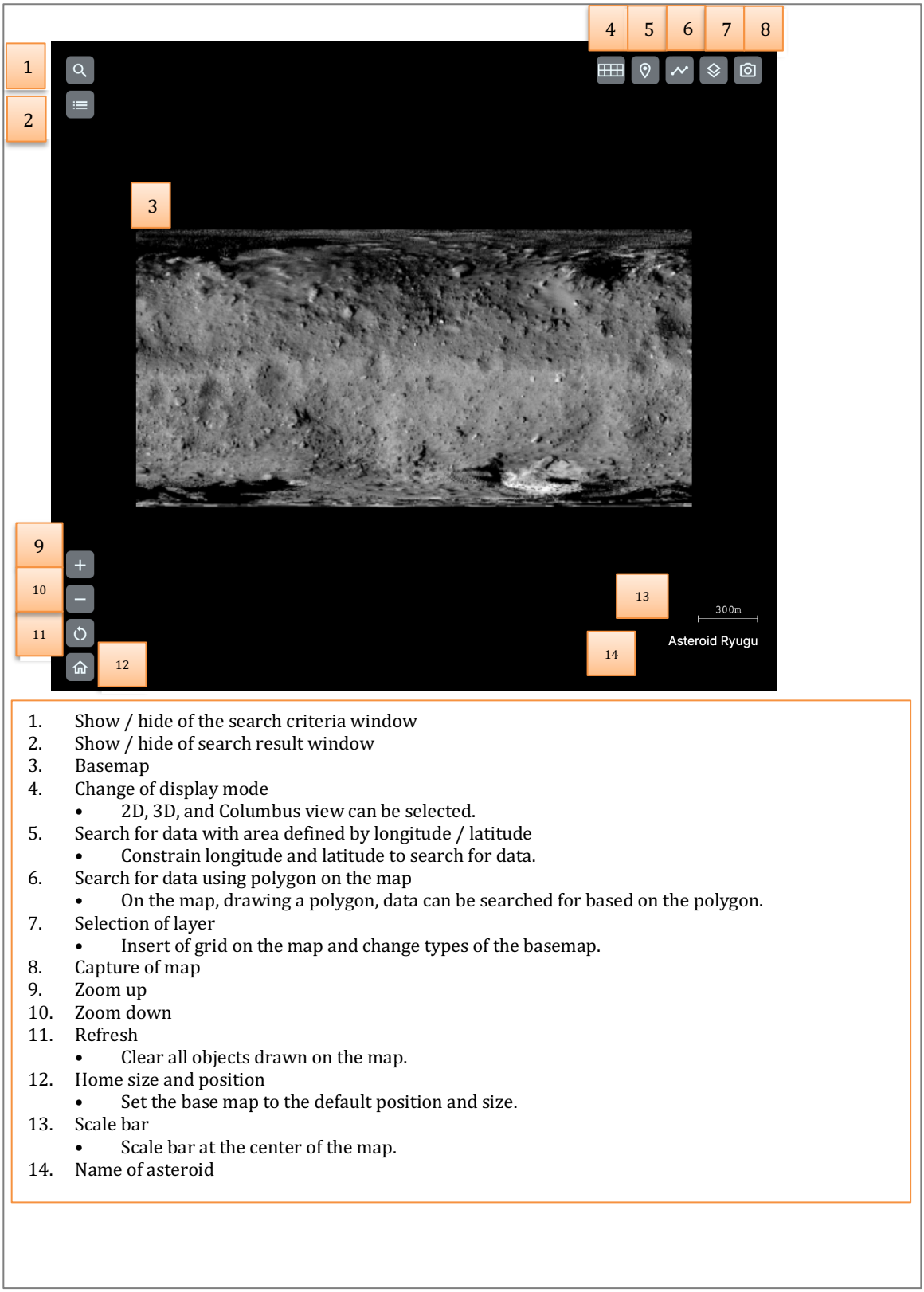
(d) Download of data



(e) Permanent link function

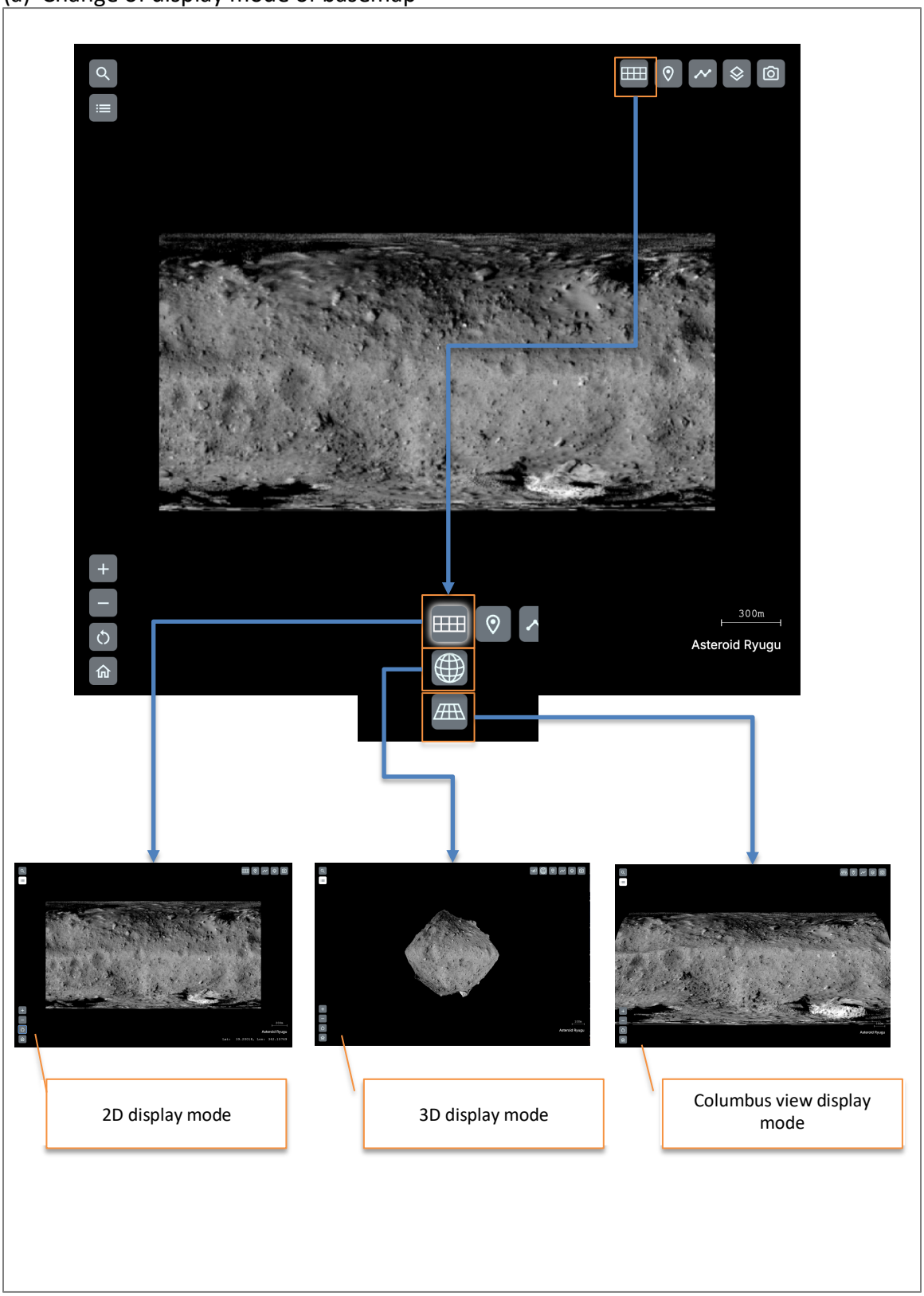


4. About base map window



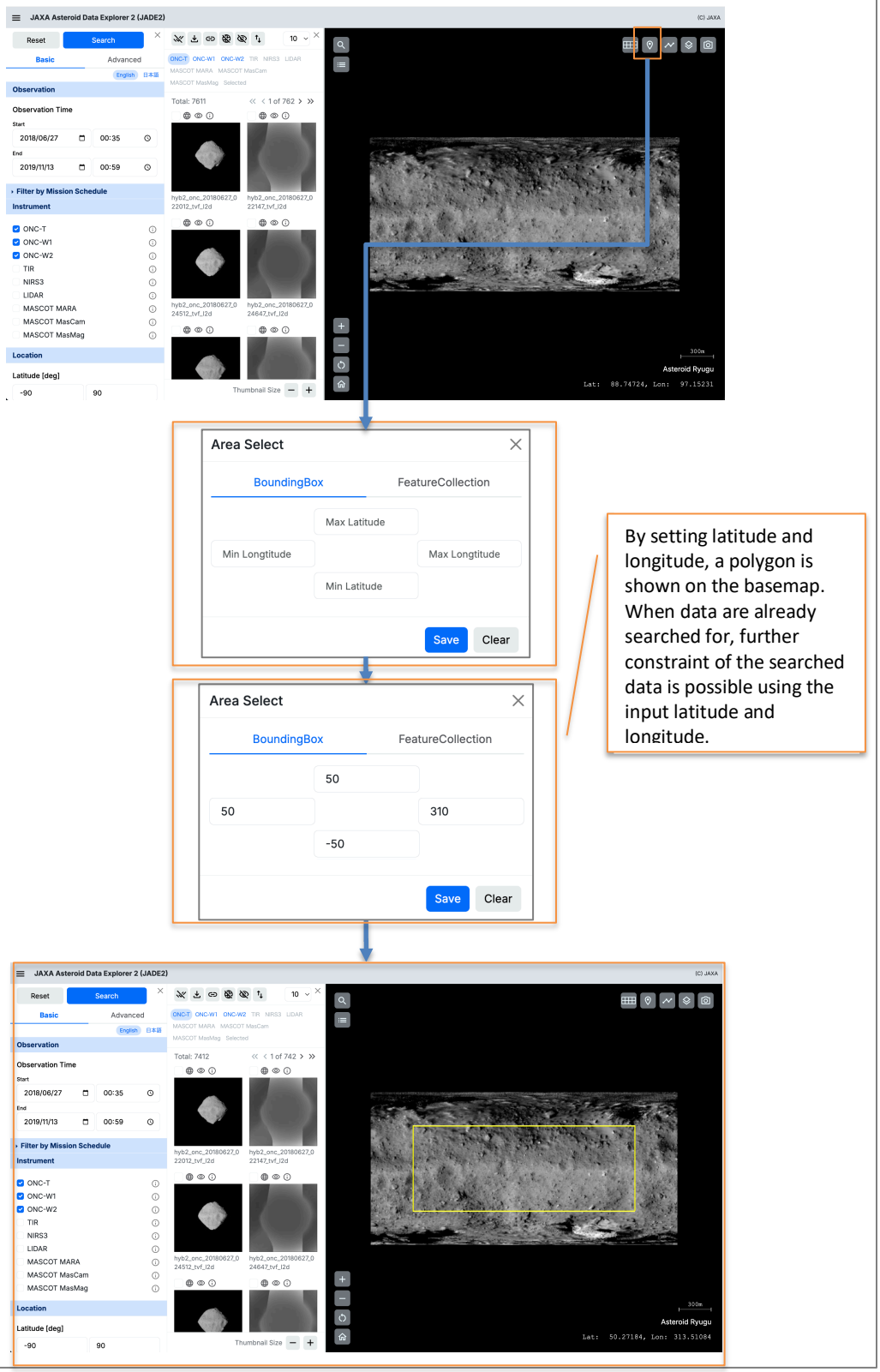
1. Show / hide of the search criteria window
2. Show / hide of search result window
3. Basemap
4. Change of display mode
   - 2D, 3D, and Columbus view can be selected.
5. Search for data with area defined by longitude / latitude
   - Constrain longitude and latitude to search for data.
6. Search for data using polygon on the map
   - On the map, drawing a polygon, data can be searched for based on the polygon.
7. Selection of layer
   - Insert of grid on the map and change types of the basemap.
8. Capture of map
9. Zoom up
10. Zoom down
11. Refresh
    - Clear all objects drawn on the map.
12. Home size and position
    - Set the base map to the default position and size.
13. Scale bar
    - Scale bar at the center of the map.
14. Name of asteroid

(a) Change of display mode of basemap



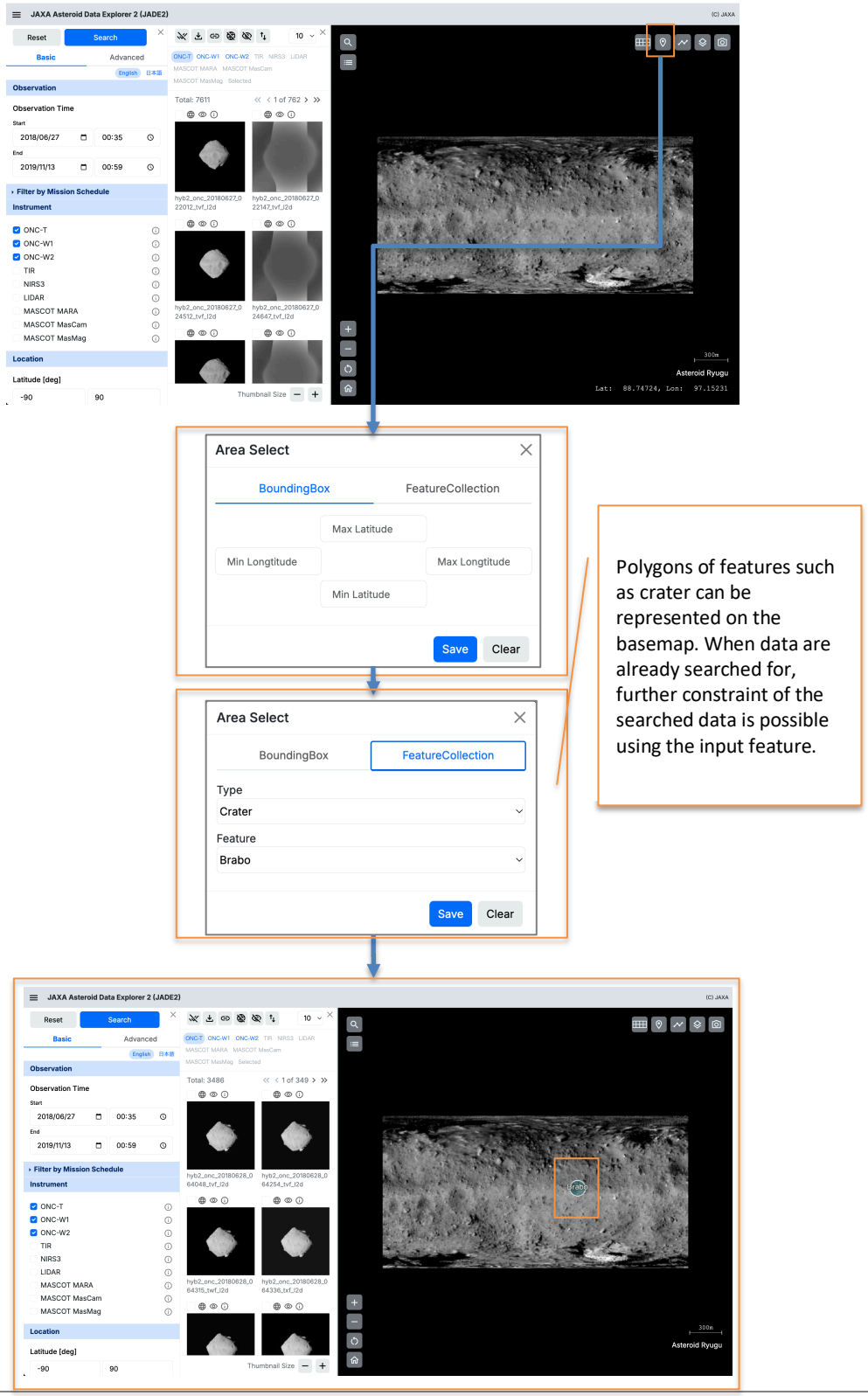
(b) Searching with a polygon on the basemap

(c) Constraint of area by bounding box

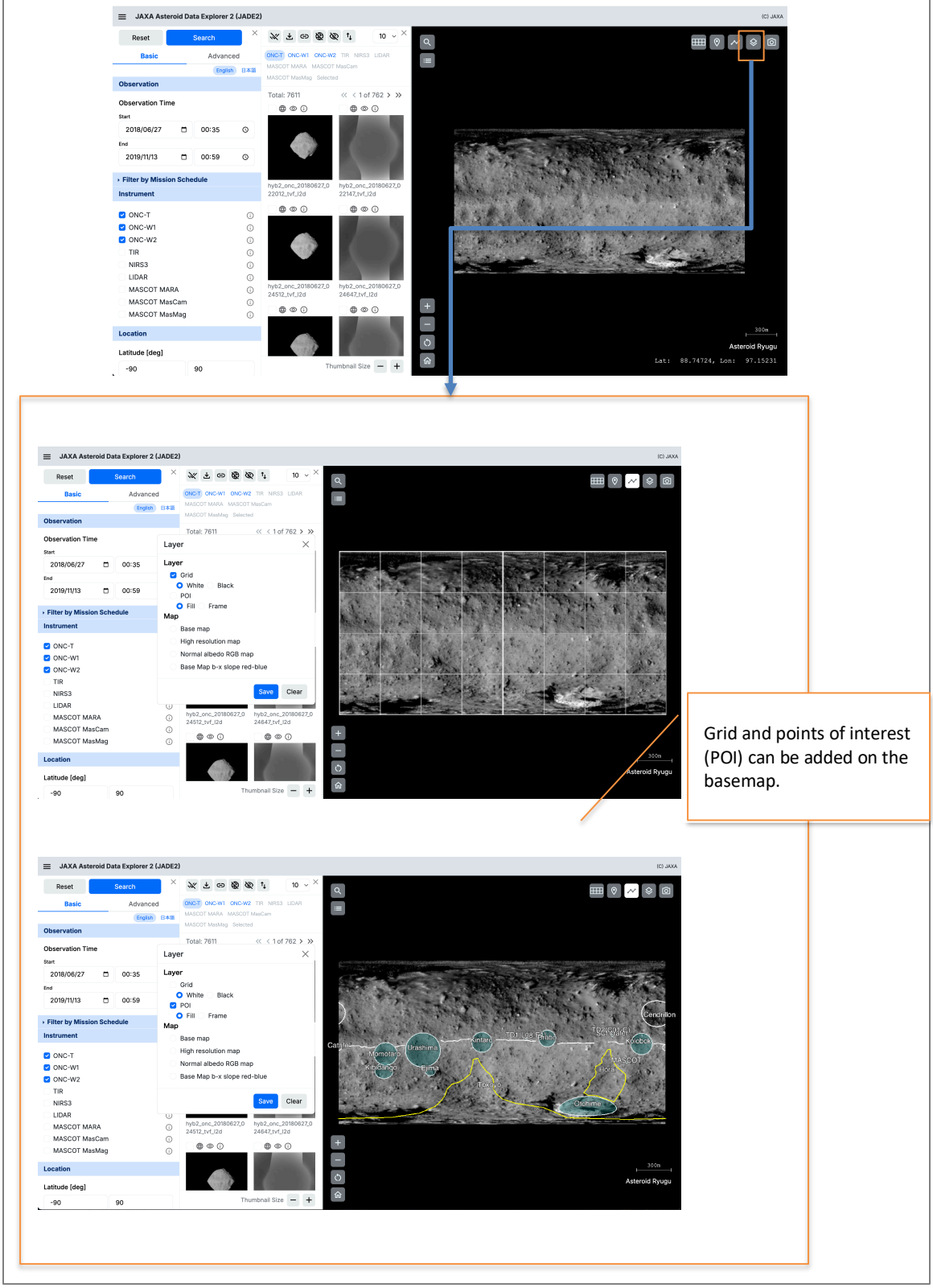


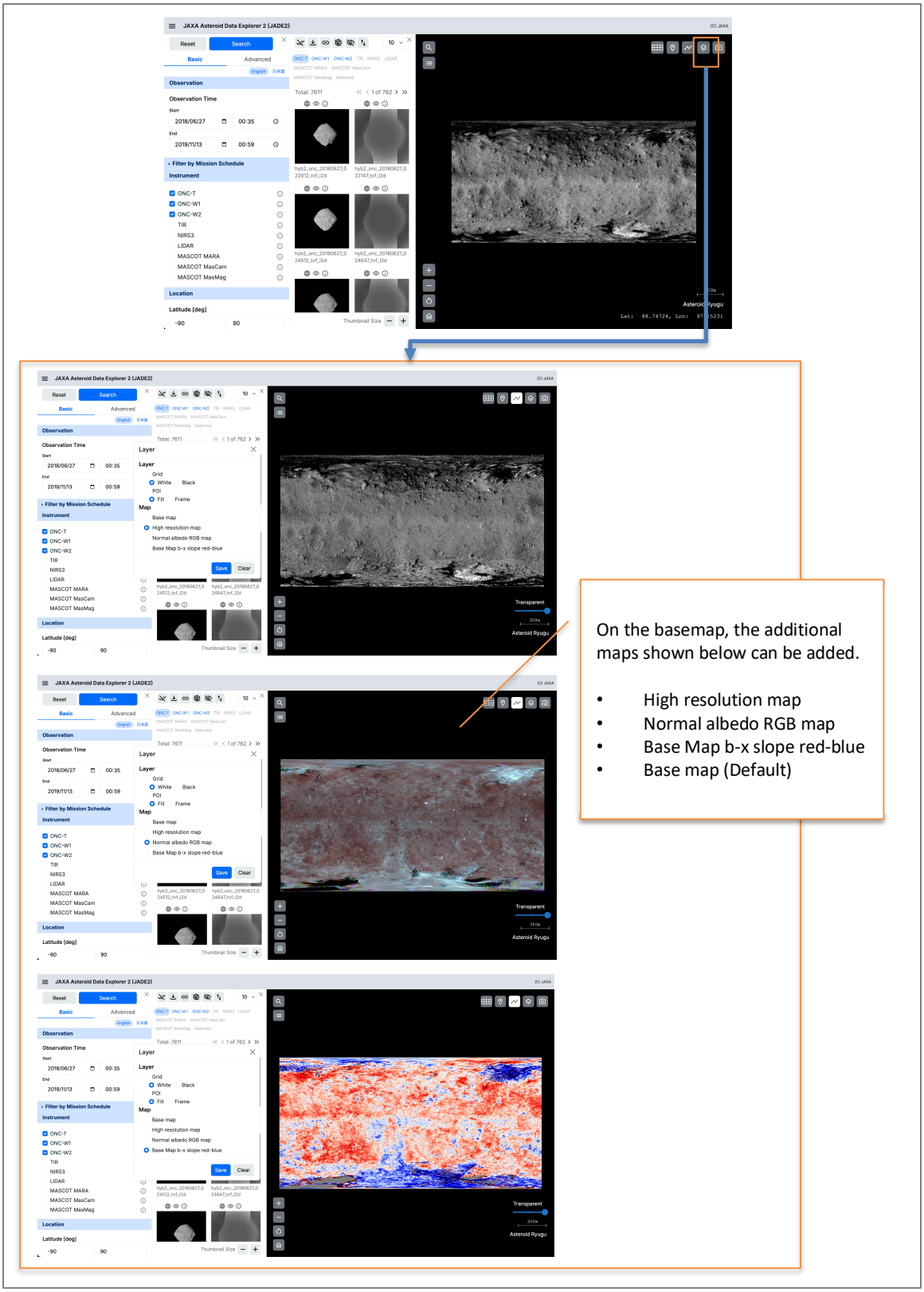
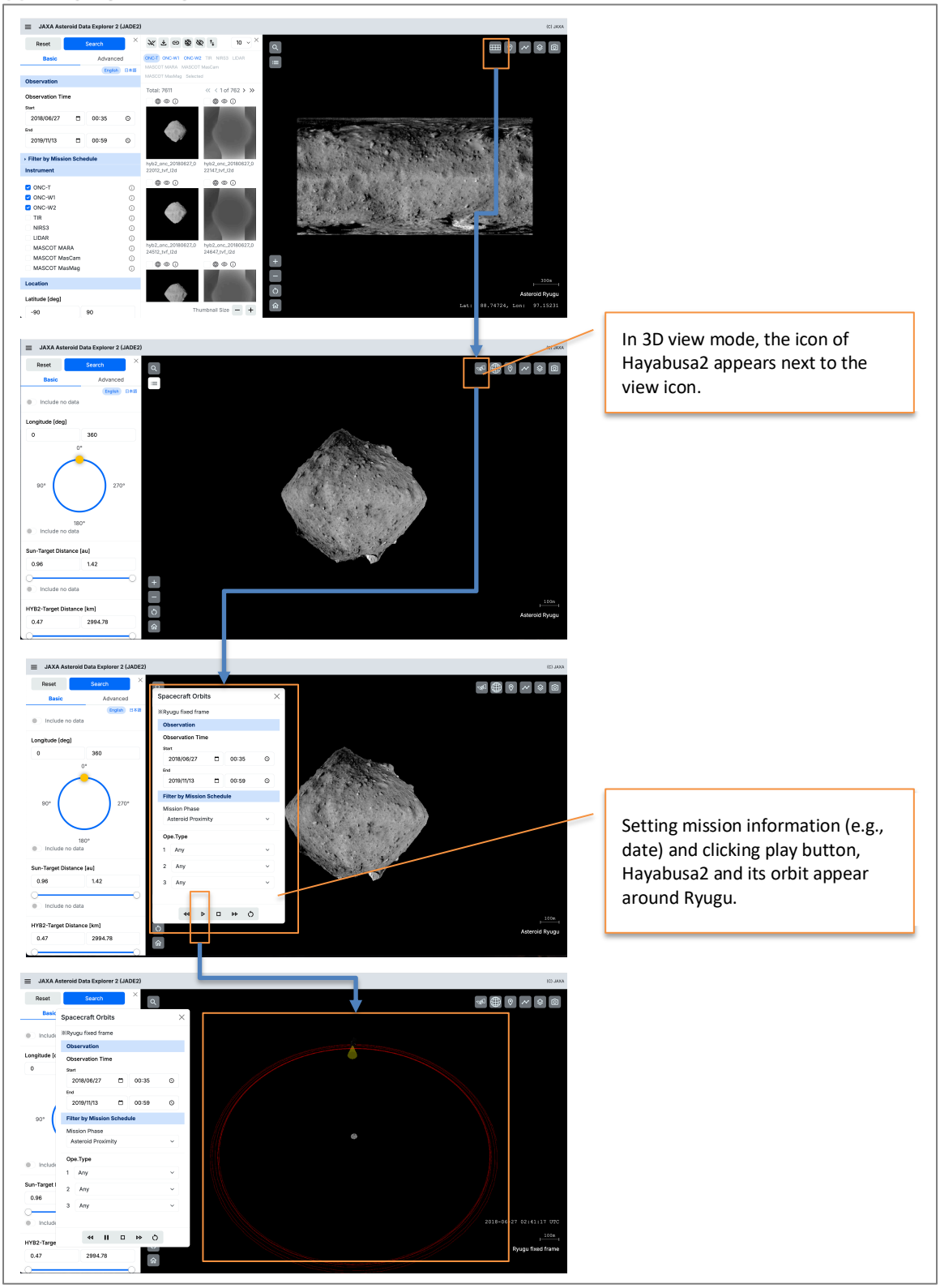
By setting latitude and longitude, a polygon is shown on the basemap. When data are already searched for, further constraint of the searched data is possible using the input latitude and longitude.

(d) Searching from feature collection



(e) Display of additional layers




JAXA Asteroid Data Explorer 2 (JADE2)
Reset
Search
Basic
Advanced
Observation
Observation Time
Start
2018/06/27
00:35
End
2019/11/13
00:59
Filter by Mission Schedule
Instrument
ONC-T
ONC-W1
ONC-W2
TIR
NIRS3
LIDAR
MASCOT MARA
MASCOT MasCam
MASCOT MasMag
Location
Latitude [deg]
-90
90
Total: 7611
1 of 762
Thumbnail Size
Layer
Grid
White
Black
POI
Fill
Frame
Map
Base map
High resolution map
Normal albedo RGB map
Base Map b-x slope red-blue
Save
Clear
Transparent
Asteroid Ryugu
On the basemap, the additional maps shown below can be added.
High resolution map
Normal albedo RGB map
Base Map b-x slope red-blue
Base map (Default)

(f) Display of Hayabusa2 orbit