

User Guide for ASTER Data Acquisition Requests (DAR) Tool

The Advanced Spaceborne Thermal Emissions and Reflection Radiometer (ASTER) DAR Tool is a web resource used to make tasking requests of the ASTER sensor for gathering data from areas specified by an authorized user. Additional details are available from the [ASTER JPL Web site](#).

The ASTER SWIR detector is no longer functioning due to anomalously high SWIR detector temperatures. Refer to [ASTER SWIR User Advisory Document](#) for more details.

The following user guide is intended to aid users in effectively making their tasking requests.

Launch the ASTER DAR Tool:

1. Go to the ASTER DAR Tool home page (https://lpdaac.usgs.gov/tools/aster_dar_tool) click the “Launch the DAR Tool” link located towards the bottom of the page.

The screenshot shows the LP DAAC website interface. At the top, there are logos for LP DAAC, NASA, and USGS. Below the logos is a navigation menu with links for Home, About, Dataset Discovery, Citing Our Data, Tools, User Resources, and User Services. A search bar and a 'Login with URS' button are also visible. The main content area is titled 'ASTER DAR Tool' and contains a 'NOTICE OF SCHEDULED DOWN TIME' section, a 'Welcome to the DAR Tool!' section, and an 'Update' section. At the bottom of the page, there is a link labeled 'Launch the DAR Tool' which is highlighted with a red box and a red arrow pointing to it.

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Welcome: Log on to the ASTER DAR Tool:

1. Once the DAR Tool is launched it will open as a “Guest” user. Please note that, while you have access to most of the tool, you will not be able to submit Data Acquisition Requests (DARs). Note: Entering as a Guest is possible for searching and viewing previously acquired DARs.
2. An authorized user must click the “Login with URS” located in the upper right corner. Enter your Earthdata URS User ID and Password in the designated fields. Successful registered users will continue to the next step.

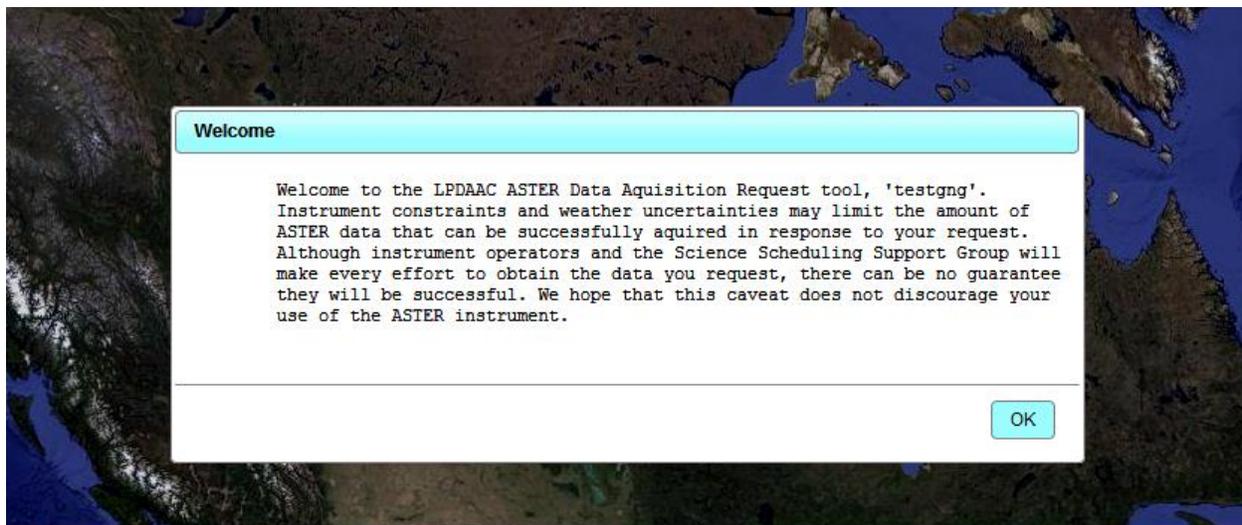


If an “Invalid username or password” displays on the login page, the DAR Tool cannot authenticate the User ID and Password entered.

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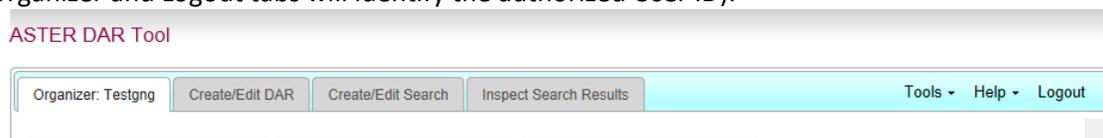


3. Once logged in, a dialog window will display welcoming you to the DAR tool, and to advise that, there is no guarantee ASTER can acquire the requested data.



DAR Tool Tabs:

The corresponding tabs will allow a user to switch to other sections displaying available options (the Organizer and Logout tabs will identify the authorized User ID).



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Organizer

By default, the Organizer tab will load after you log in, enabling retrieval of previously saved DARs, searches, and search results.

Copy DAR:

Create a DAR using previously submitted criteria.

1. Locate the DAR from the “Organizer” tab that has a DAR ID associated with it.
2. Double-click on that DAR. The DAR Tool will load the selected DAR information.
3. Use the (General, Spatial, Temporal, Coverage, Geometry, Priority, and DAR Summary) tabs to update and make any changes to your DAR parameters.
4. When you have updated all the relevant fields, click the “Save DAR” button. A dialog box will advise the DAR parameters successfully saved. Click “OK” to close window.
5. If you are satisfied with the changes, click the “Submit DAR” button. Your submitted DAR will be sent to GDS Japan for scheduling of your DAR. A DAR ID will identify your DAR located under the “Organizer” tab. (If an error occurs, a dialog window with an error code will be provided. Contact [LP DAAC User Services](#) for information about the error code).

Create/Edit DAR

General Tab:

1. Click on the “Create/Edit DAR” tab. Creating a DAR requires moving through the tabs associated with the Create/Edit DAR tab. Begin with the General tab and work your way to the right
2. Complete the appropriate fields. Entries in red text (marked with an asterisk) are required. The “Reset” button can reset all values or just the tab currently displayed.

The screenshot shows the ASTER DAR Tool interface. At the top, there are tabs for "Organizer: Testng", "Create/Edit DAR", "Create/Edit Search", and "Inspect Search Results". Below these are sub-tabs for "General", "Spatial", "Temporal", "Coverage", "Geometry", "Priority", and "DAR Summary". The "General" tab is active, showing the following fields and controls:

- Approximate Budget Usage: [0] Scenes
- DAR ID: []
- * DAR Title: [User Guide] (22 characters remaining)
- User ID: [Testng]
- Science Classification: [Other]
- * Science Objective: [Testing] (25 characters remaining)
- Avoid Clouds Flag: [Yes]
- Maximum Cloud Coverage (%): [20] (Users may only increase this value after DAR submission)
- Day/Night Settings: [Day]
- Telescope Settings: [Full Mode]
- [] Show Gain Settings

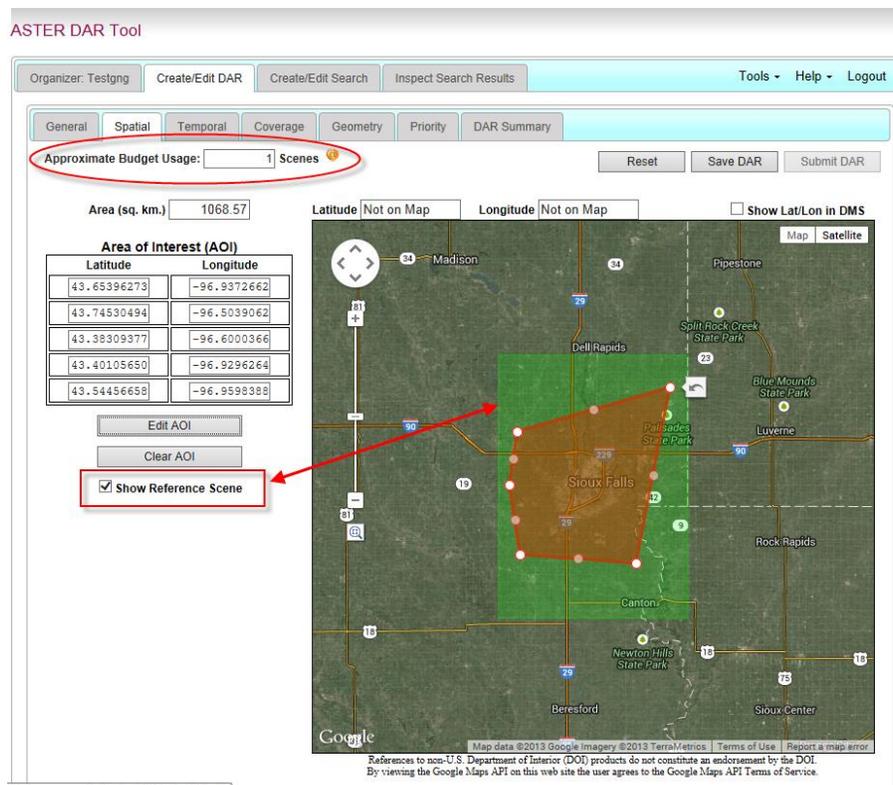
Buttons: Reset, Save DAR, Submit DAR

Note: Show Gain Settings - this field is recommended for expert users only as invalid entries can result in failed data acquisition requests.

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Spatial tab:

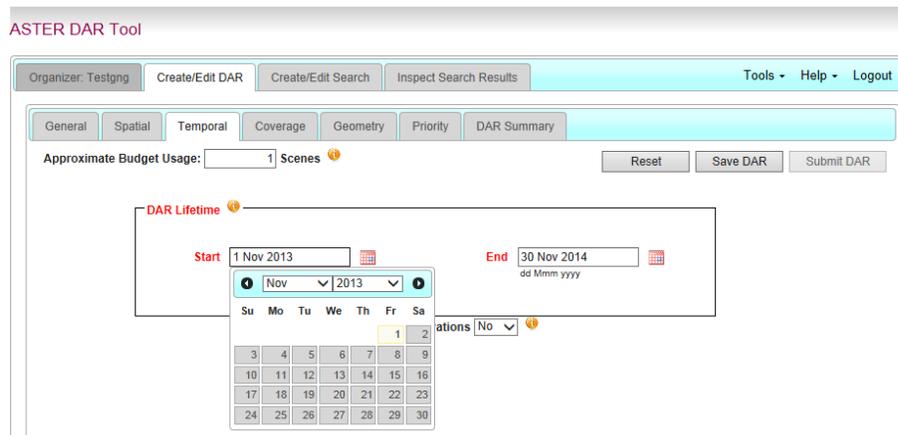
1. The (AOI) points on the map use a clockwise manner to set the limits of the area. GDS Japan will not accept areas with points in a counter clockwise order. There are Two available options to enter your AOI points:
 - a. Using the draw icon, the bounding area is set by double clicking the last point entered. To adjust these points, place the mouse over the dot, click and hold to move the point. To reset the last dot you moved, click the arrow icon.
 - b. Create AOI: Enter Latitude/Longitude pairs separated by a comma with each pair on a separate line
2. The “Approximate Budget Usage” tool provides the number of scenes used in the currently displayed DAR request.
3. The green reference box is equivalent to one scene (60 km x 60 km); this can be toggled on and off using the checkbox to the left of the map labeled “Show Reference Scene”. The area shaded in red, within the polygon points represents the selected area of your DAR request.



Temporal tab:

1. In the DAR Lifetime, set the dates for your acquisition request, using the calendar tool.
2. Click on the “OverPass predictor”, located under the “Tools” tab, to obtain an estimate of the next opportunity for ASTER to acquire data. You will have the option to choose “With or Without Current Values”.

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Multi-Temporal Observations:

1. The default settings for “Multi-Temporal Observations is “No”.
2. If you want to have multiple Acquisition Windows over the Dar lifetime, set this flag to “Yes”.
3. Click on the “OverPass Predictor”, located under the “Tools” tab, to obtain an estimate of the next opportunity for ASTER to acquire data.
4. Set the “Repeat Interval” (minimum effective value = 16 days) and the “Acquisition window” (This is the length of time you desire each subsequent request to last). Note: If you have the show timeline checkbox checked, you will see a pictorial representation of your acquisition windows and repeat intervals. Hold the mouse over the different sections within the bar will show the dates of that acquisition window.

Coverage tab:

1. This tab allows:
 - a. Cross-Track Fragmentation – The default value of “Yes” allows fragmentation in the cross-track direction and provides a higher probability for the AOI being observed. Changing the value to “No” requires that the AOI be observed with a single observation. Note: The Allow Cross-Track Fragmentation feature applies to AOIs of less than 60 kilometers wide (i.e., the width of one ASTER scene).
 - b. Along-Track Fragmentation – The default value of “No” allows the observation to include the entire length of the AOI in the Along-Track direction; thus, minimizing any fragmentation during data acquisition.
 - c. Coverage Method – The default value of “Normal” allows for 100% observation of the AOI. Use of the Normal setting is strongly recommended. Changing the value to Sample requires the user to provide additional information to control the sampling pattern.

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ASTER DAR Tool

Organizer: Testgng Create/Edit DAR Create/Edit Search Inspect Search Results Tools Help Logout

General Spatial Temporal Coverage Geometry Priority DAR Summary

Approximate Budget Usage: Scenes

Reset Save DAR Submit DAR

Allow Cross-Track Fragmentation: Yes No

Allow Along-Track Fragmentation: Yes No

Coverage Method: Normal Sampled

GDS Japan will only accept expert calculated values in these fields.

Geometry tab:

1. Default values are set for the Telescope Look Angle and Acceptable Sun Angle settings. Using the Advanced settings is NOT recommended for users without a thorough understanding of the ASTER instrument.

Overriding the default values in the Geometry tab:

2. To override the default values, check the “Advanced” checkbox. Respond to the fields for each radio button accordingly.

ASTER DAR Tool

Organizer: Testgng Create/Edit DAR Create/Edit Search Inspect Search Results Tools Help Logout

General Spatial Temporal Coverage Geometry Priority DAR Summary

Approximate Budget Usage: Scenes

Reset Save DAR Submit DAR

Telescope Look Angle

Any Angle

Advanced

Advanced option is recommended for expert use only. Click on the icon for additional information.

Range is -8.55 to +8.55
"*" is satellite Left
"." is satellite Right

Acceptable Sun Angle

Any Angle

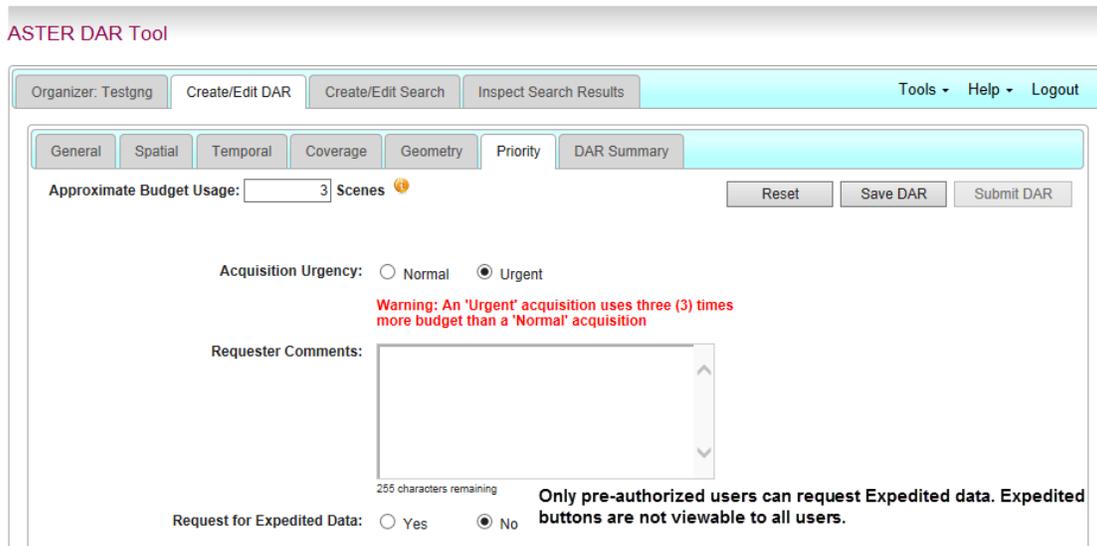
Advanced

Range is 0 to 90
Zenith = 90 degrees

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Priority tab:

1. The default is set to “Normal”. When the acquisition of your data is critical (e.g. emergency response to natural hazard/human disaster) users may assign the Acquisition Urgency as urgent. The budget tool will indicate how many scenes will attempt to be acquired.



2. Authorized users are allowed to request expedited data. This puts an increase priority on delivery of the acquired scene(s).

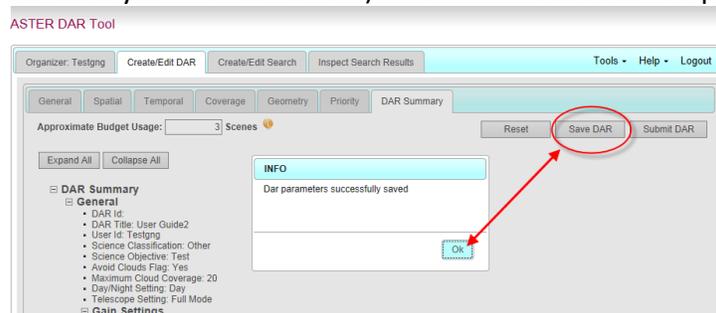
DAR Summary tab:

The DAR Summary tab is used to review the settings you have entered for your DAR.

1. Click the “Expand All” to view the various folders to review the data related to your DAR.
2. The Reset button will allow the user to reset to the defaults, the currently selected tab or the entire DAR criteria.
3. When you are satisfied the information is correct, continue to the “Save and Submitting DAR” button.

Saving and Submitting DAR:

1. Click the “Save DAR” button. This will save your DAR parameters.
2. To close the window, click the OK button. (Your saved DAR will now appear under the Organizer tab should you wish to review). The DAR must be saved prior to submitting.



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3. Click the “Submit DAR” button. A dialog window will indicate the DAR had been sent to GDS Japan for scheduling of your DAR. You will receive a DAR ID to identify your DAR. If there is an error you will be given the error code. Contact [LP DAAC User Services](#) for information about the error code.

Modify Create/Edit DAR:

Only Two parameters are allowed to be modified once you submit a DAR.

1. The maximum cloud coverage field can only be made less restrictive (i.e. increase from 10% to a larger value).
2. Suspend/Activate DAR – Allows users to suspend or activate a submitted DAR once they have submitted it. If an acquisition has failed or partially failed, that budget for those failed acquisitions will be credited in approximately 41 days **after** the DAR lifetime has expired.

Searching for Acquired DARs

Create/Edit Search

The Create/Edit search does not require that all fields from all tabs be filled out (e.g. DAR ID and xAR Title) related to specific DARs. This functionality is available for users signed in as a GUEST. Acquired ASTER data searches may be located by completing the Spatial and Temporal tabs.

1. Click on the Create/Edit Search tab.

General tab:

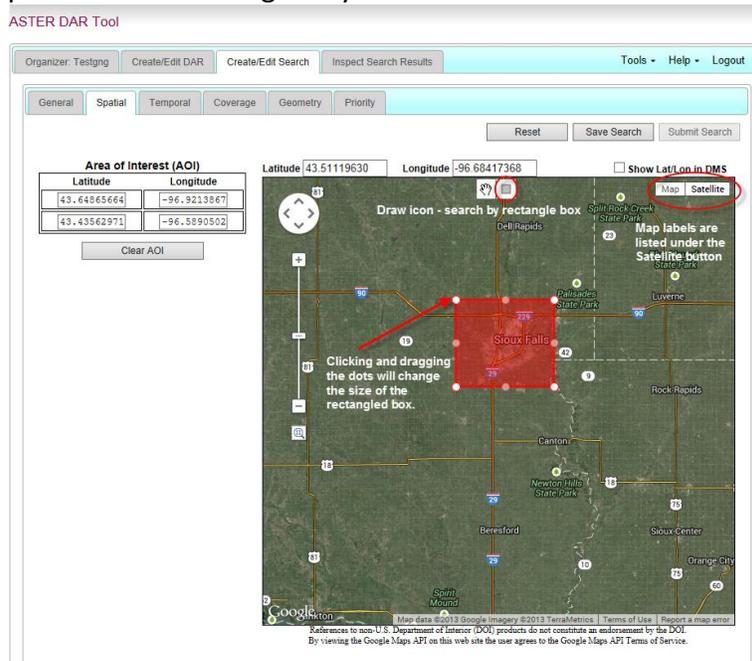
2. Fill out the General tab when you know the specifics of DARs associated with their area(s) of interest. If you know the DAR ID, enter the ID in the “Search by DAR ID Field” (e.g. 121425). If multiple IDs need to be searched, enter the IDs you want to search by separated with commas.

The screenshot displays the 'ASTER DAR Tool' interface. At the top, there are navigation tabs: 'Organizer: Testng', 'Create/Edit DAR', 'Create/Edit Search', and 'Inspect Search Results'. On the right, there are links for 'Tools', 'Help', and 'Logout'. Below these, there are sub-tabs for 'General', 'Spatial', 'Temporal', 'Coverage', 'Geometry', and 'Priority'. The 'General' tab is active, showing a search form. At the top of the form, there is a 'Search by DAR ID' field with a magnifying glass icon and a red circle around it. Below this field, instructions state: 'Enter DAR ID and click icon to begin search. Search multiple IDs, separated by a comma'. To the right of the form, there is a message: 'If no specifics (DAR ID) are associated in the General tab, continue entering your search criteria.' The form includes several fields: 'xAR Status' (dropdown menu set to 'Any'), 'xAR Type' (dropdown menu set to 'Any'), 'xAR Title' (text input field with a note '(Exact match required if entered)'), 'xAR User ID' (text input field), 'Science Classification' (dropdown menu set to 'Any'), 'Maximum Cloud Coverage (%)' (range selector with '>= 5' and '<= 100'), 'Day/Night Settings' (dropdown menu set to 'Any'), and 'Telescope Settings' (dropdown menu set to 'Any'). At the top right of the form, there are buttons for 'Reset', 'Save Search', and 'Submit Search'.

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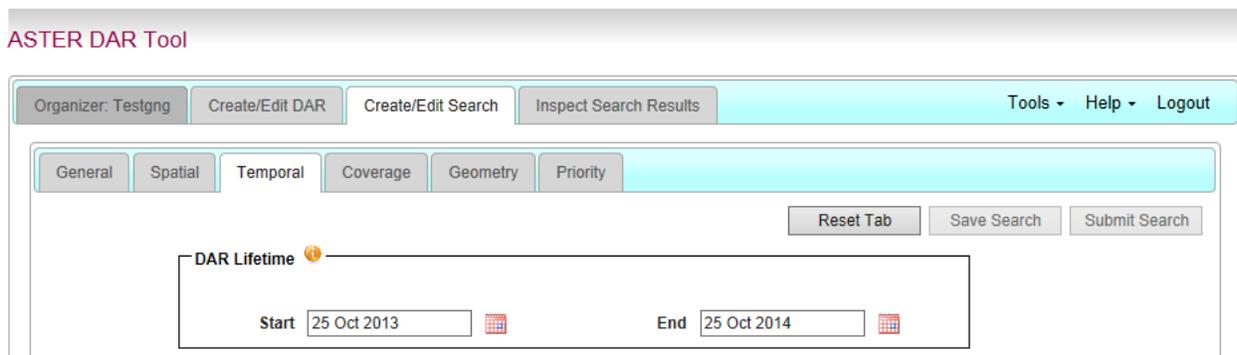
Spatial tab:

1. Locate your AOI by first clicking the globe to reposition it over your area. Another source would be to use the navigation tools located in the upper middle of the viewable map.
2. Use the Zoom in – Zoom out scale along the left side of the map or click on the pan arrows to maneuver to your AOI.
3. Click on the “Draw a rectangle” box in the middle of the map. By placing the mouse over the dots, you can move the corners to manipulate your search box. Your AOI will populate in the latitude and longitude boxes on the left hand side of the screen. If you do not like the area selected, use the Clear AOI button to clear the map and enter another location. If you know the approximate Latitude and Longitude for your AOI, use the Latitude and Longitude boxes at the top of the window to guide your selection.



Temporal tab:

1. Enter the time window for your dates of interest.



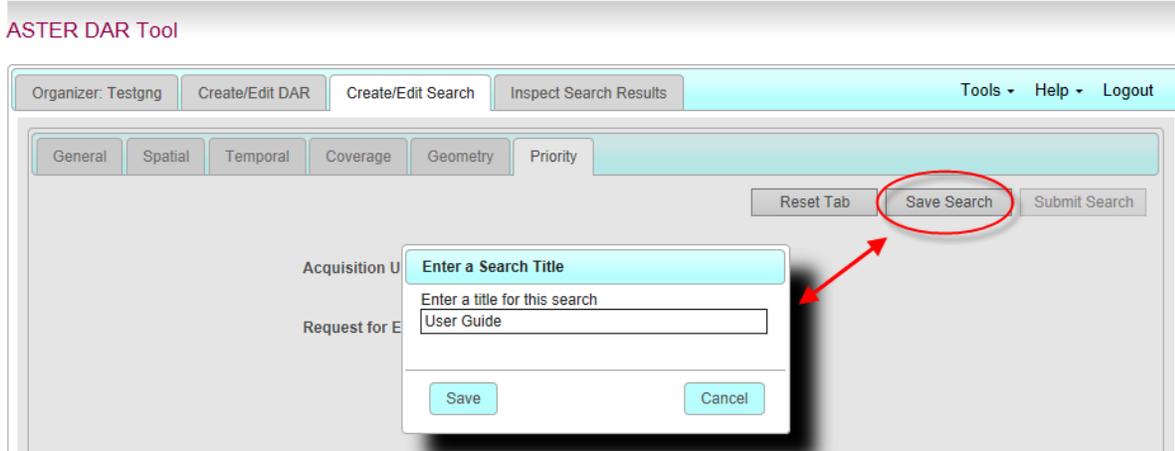
Coverage, Geometry, and Priority tabs:

1. Users are advised to use the default settings on these pages. Contact [LP DAAC User Services](#) for further details should you desire to use this function.

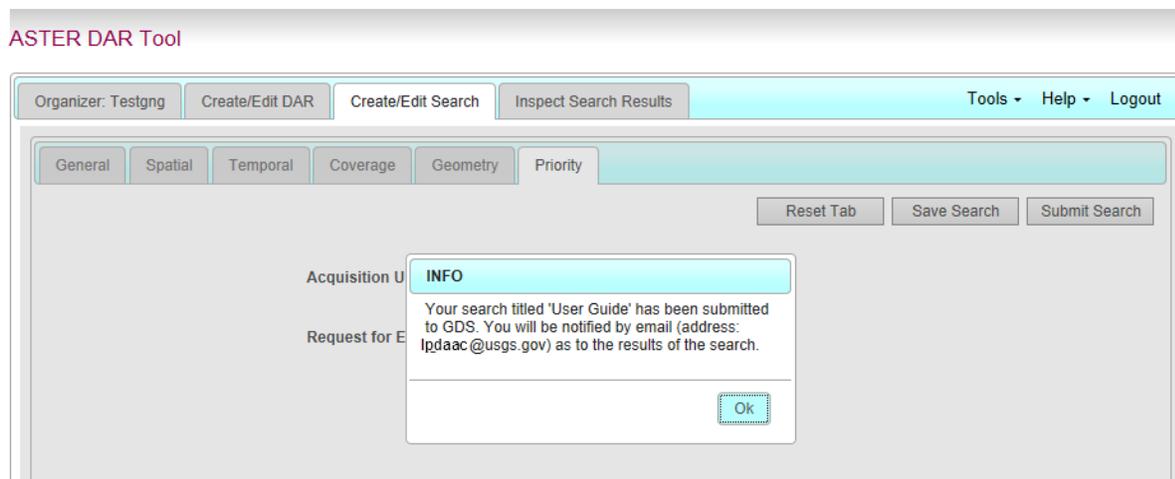
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Save and Submit Search:

1. Click the “Save Search” button. A dialog window will request you to enter a title for your search and click “Save”. If logged in as a “GUEST”, please enter an email address to be notified when the search results are available (An e-mail notification from LP DAAC will reference the search title that you are to enter in the “Inspect Search Results” tab).



2. Click on the “Submit Search” button. Non-Guest users do not need to enter an e-mail address and will be sent an e-mail with the notification of the results of your search. Click “OK” to close window.



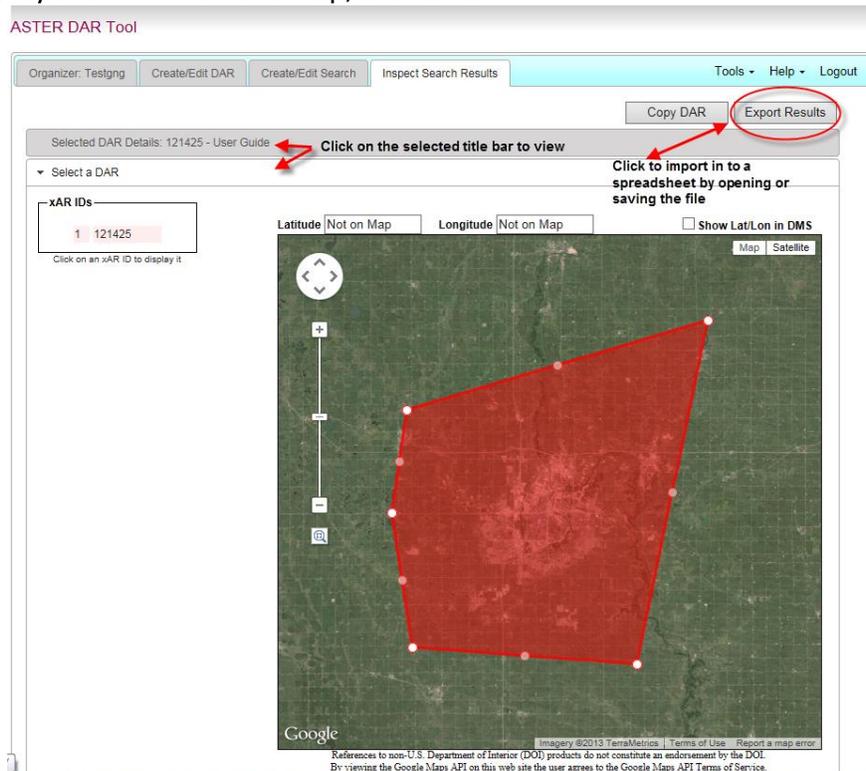
Inspect Search Results

Review returned results of acquired data.

1. If your search was submitted as a registered user, log in to the DAR Tool, and locate the search title under the “Organizer” tab. (If the search was submitted as a “GUEST”, follow the instruction that was emailed with subject titled: LPDAAC: DAR Tool Search Results. The search results will be available as long as the user remembers how to access them).

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2. Click on the radio button next to the titled search you entered and click the “Load Selected Session” button.
3. Results will be returned in the “Inspect Search Results” tab. These results are for information only; it is not editable. To display the results on to a spreadsheet, click the “Export Results” button.
4. Click on the selected title bar to view the DAR summary or the xAR ID on the map.
5. To display the xAR ID on the map, click on a xAR ID.



References

ASTER JPL Web site

<http://asterweb.jpl.nasa.gov/NewReq.asp>

ASTER SWIR User Advisory Document

https://lpdaac.usgs.gov/sites/default/files/public/aster/docs/ASTER_SWIR_User_Advisory_July%2018_08.pdf

ASTER Overpass Predictor

https://lpdaacaster.cr.usgs.gov/estimator/reference_info.php

LP DAAC User Services

https://lpdaac.usgs.gov/user_services/contact_us