

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/>), click the “Launch the DAR Tool” link located towards the bottom of the page.

The screenshot shows the ASTER DAR Tool home page. The main content area is titled "ASTER DAR Tool" and contains the following text:

***** NOTICE OF SCHEDULED DOWN TIME *****

The ASTER DAR TOOL will be unavailable during the following times due to scheduled maintenance.

- Every Wednesday: 08:00 - 12:00 CDT (1300 - 1700 GMT)

***** Welcome to the DAR Tool! *****

Update: The 2.0 version of the DAR Tool has just been released. New features in 2.0 include:

- Designed using web standards (no longer a flash-based application).
- HTML based – Uses javascript, jquery, and Google Maps API
- All functionality is the same except synchronized searching was eliminated due to long search times. Search results will be emailed via Japan.
- Tool-tip icon information
- Save query results to spreadsheet
- New query results viewer

The DAR Tool uses NASA's Earth Observing System Data and Information System (EOSDIS) User Registration System (URS) logins.

You may manage your URS account (reset password, retrieve/change account information) at this link: [URS Registration](#)

ASTER data access for acquired scenes:

https://lpdaac.usgs.gov/products/aster_policies

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Select the following to proceed.

[Launch the DAR Tool](#)

Please read the [Release Notes](#) and [User Guide](#) documentation, if you have not used the DAR Tool.

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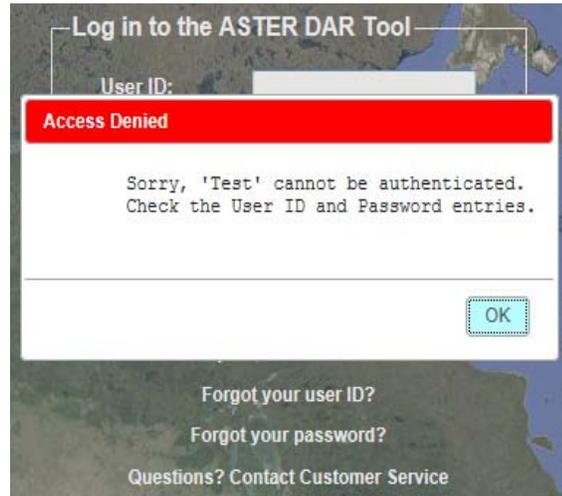
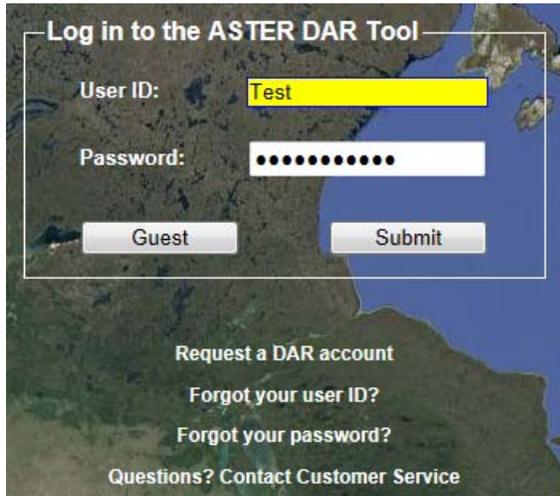
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Page Contact Information: lpdaac@usgs.gov
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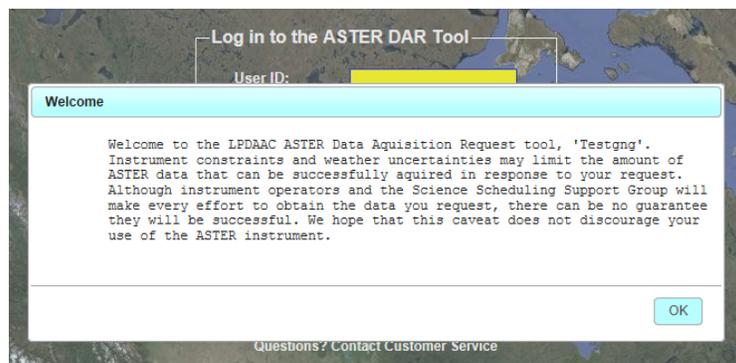
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Log on to the ASTER DAR Tool:

1. Enter your authorized User ID and Password in the designated fields. Successful registered users will continue to the next step. If an “Access Denied” error dialog window displays, the DAR Tool cannot authenticate the User ID and Password entered. Note: Entering as a Guest is possible for searching and viewing previously acquired DARs.

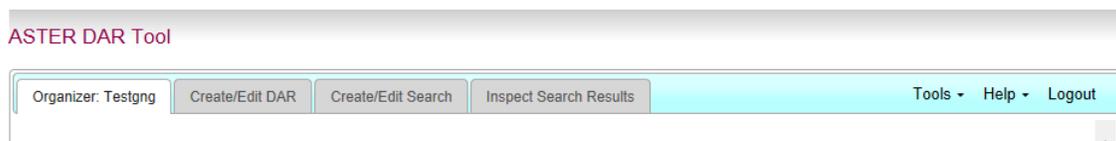


2. Once logged in, a dialog window will display welcoming you to the DAR tool, and to advise that, there is no guarantee ASTER can acquire the requested data.



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. The form includes the following fields and controls:

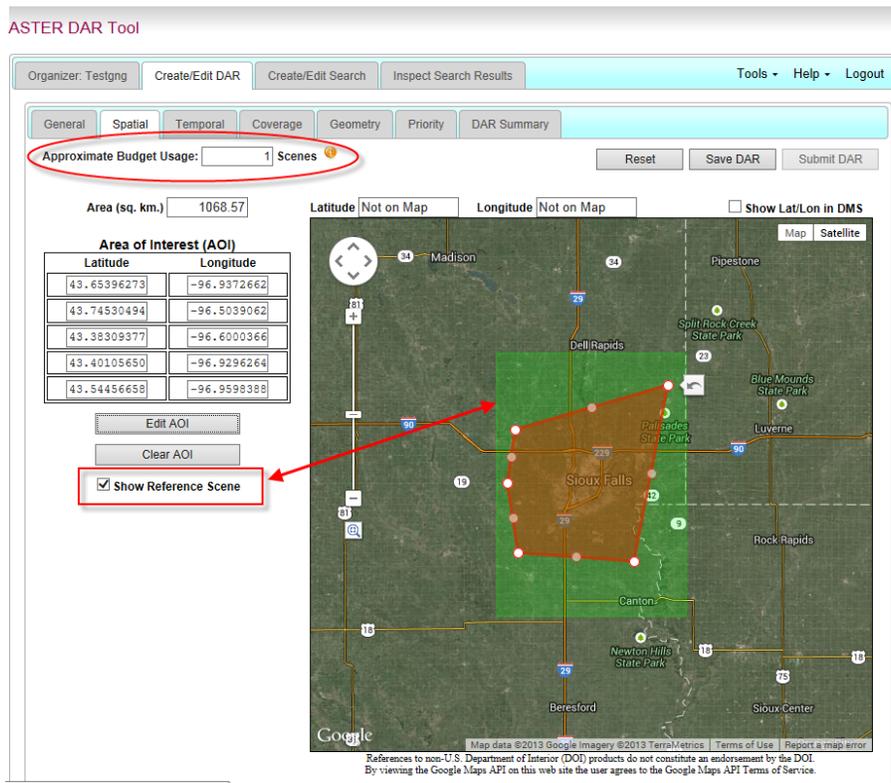
- Approximate Budget Usage: [0] Scenes
- Buttons: Reset, Save DAR, Submit DAR
- DAR ID: []
- * DAR Title: [User Guide] (22 characters remaining)
- User ID: [Testng]
- Science Classification: [Other]
- * Science Objective: [Testing] (25 characters remaining)
- Avoid Clouds Flag: [Yes]
- Maximum Cloud Coverage (%): [20] (Users may only increase this value after DAR submission)
- Day/Night Settings: [Day]
- Telescope Settings: [Full Mode]
- Show Gain Settings: [] (with a red box around the checkbox and an arrow pointing to a note)

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:

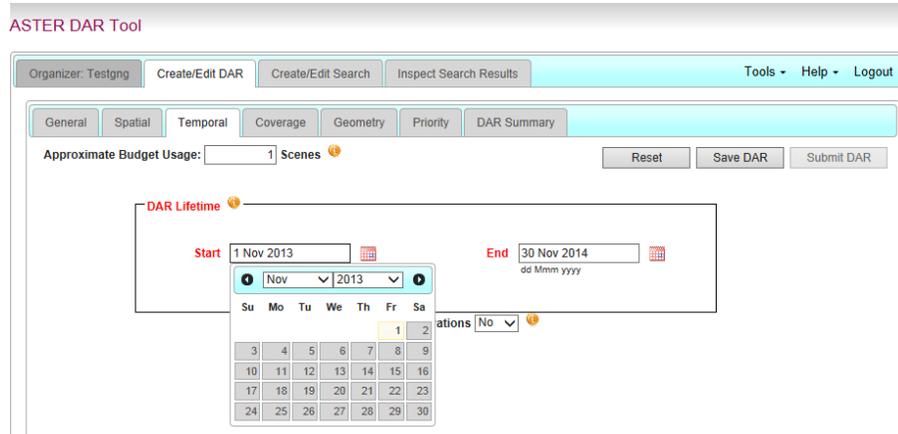
1. The (AOI) points on the map use a clockwise manner to set the limits of the area. GDS Japan will not accept areas with points in a counter clockwise order. There are Two available options to enter your AOI points:
 - a. Using the draw icon, the bounding area is set by double clicking the last point 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
"L" is satellite Left
"R" 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.

The screenshot shows the 'Priority' tab in the ASTER DAR Tool. At the top, there are navigation tabs: 'Organizer: Testgng', 'Create/Edit DAR', 'Create/Edit Search', and 'Inspect Search Results'. On the right, there are links for 'Tools', 'Help', and 'Logout'. Below these are sub-tabs: 'General', 'Spatial', 'Temporal', 'Coverage', 'Geometry', 'Priority', and 'DAR Summary'. The 'Priority' sub-tab is active. It features a text input for 'Approximate Budget Usage' with the value '3' and a 'Scenes' icon. To the right are 'Reset', 'Save DAR', and 'Submit DAR' buttons. Below this is the 'Acquisition Urgency' section with radio buttons for 'Normal' and 'Urgent', where 'Urgent' is selected. A red warning message states: 'Warning: An 'Urgent' acquisition uses three (3) times more budget than a 'Normal' acquisition'. Below that is a 'Requester Comments' text area with a '255 characters remaining' indicator. At the bottom, there is a 'Request for Expedited Data' section with radio buttons for 'Yes' and 'No', where 'No' is selected. A note at the bottom right reads: 'Only pre-authorized users can request Expedited data. Expedited buttons are not viewable to all users.'

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.

The screenshot shows the 'DAR Summary' tab in the ASTER DAR Tool. The 'Save DAR' button is circled in red, and a red arrow points from it to an 'OK' button in a small dialog box. The dialog box contains the text: 'INFO Dar parameters successfully saved'. The background shows the 'DAR Summary' section expanded, displaying a tree view of parameters under 'General' and 'Gain Settings'.

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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:

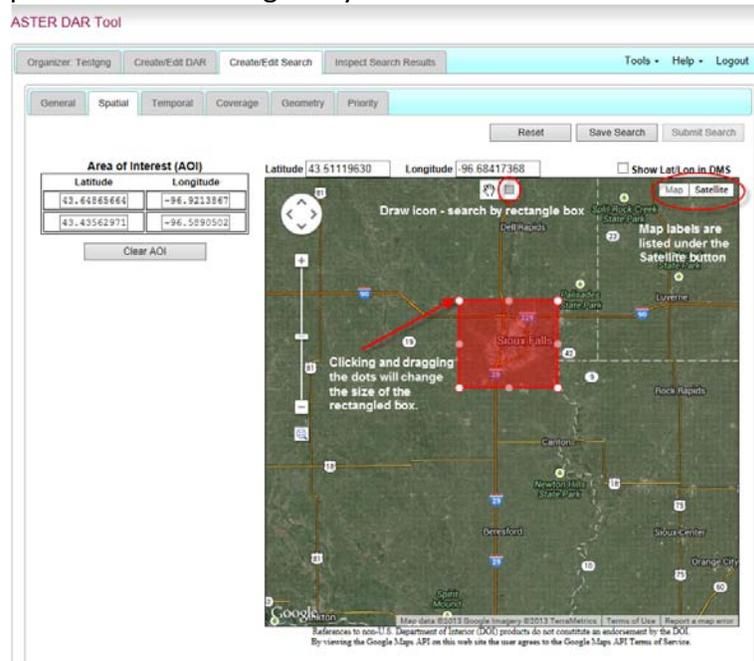
2. Fill out the General tab when you know the specifics of DARs associated with their area(s) of interest. If you know the DAR ID, enter the ID in the “Search by DAR ID Field” (e.g. 121425). If multiple IDs need to be searched, enter the IDs you want to search by separated with commas.

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

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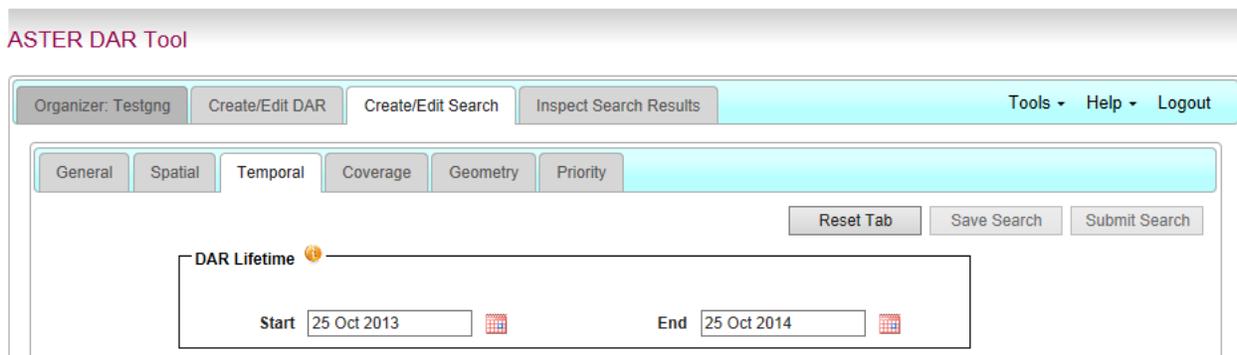
Spatial tab:

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.



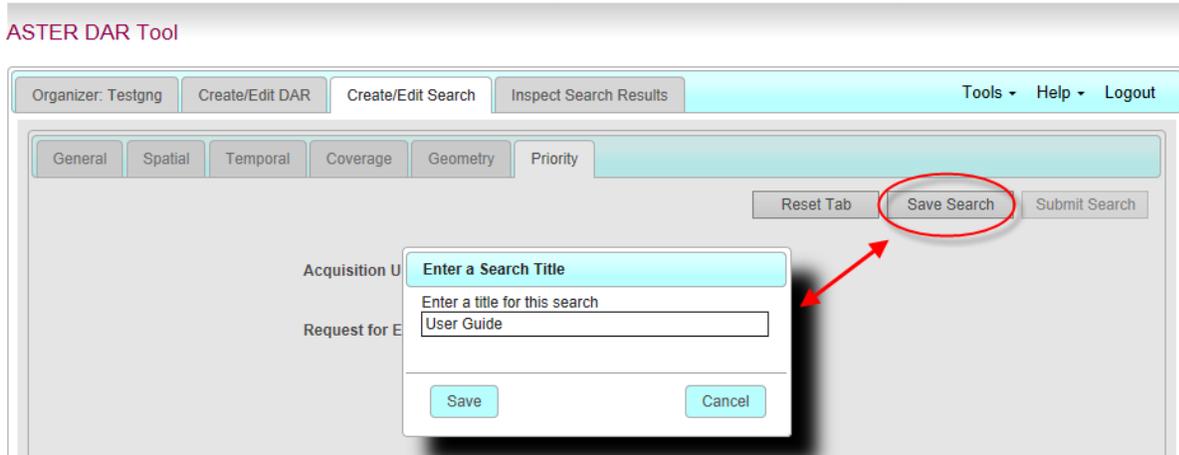
Coverage, Geometry, and Priority tabs:

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.

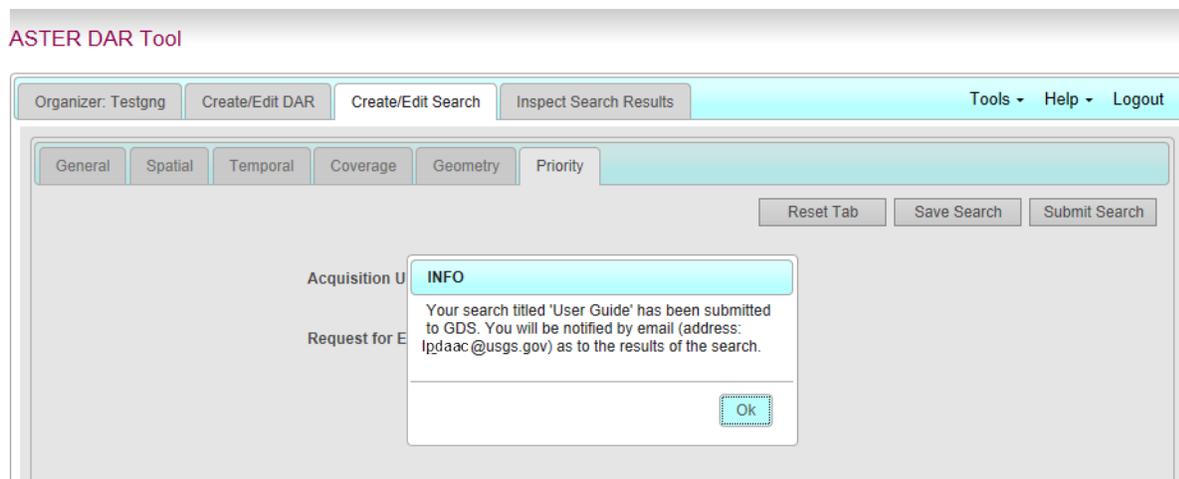
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Save and Submit Search:

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.



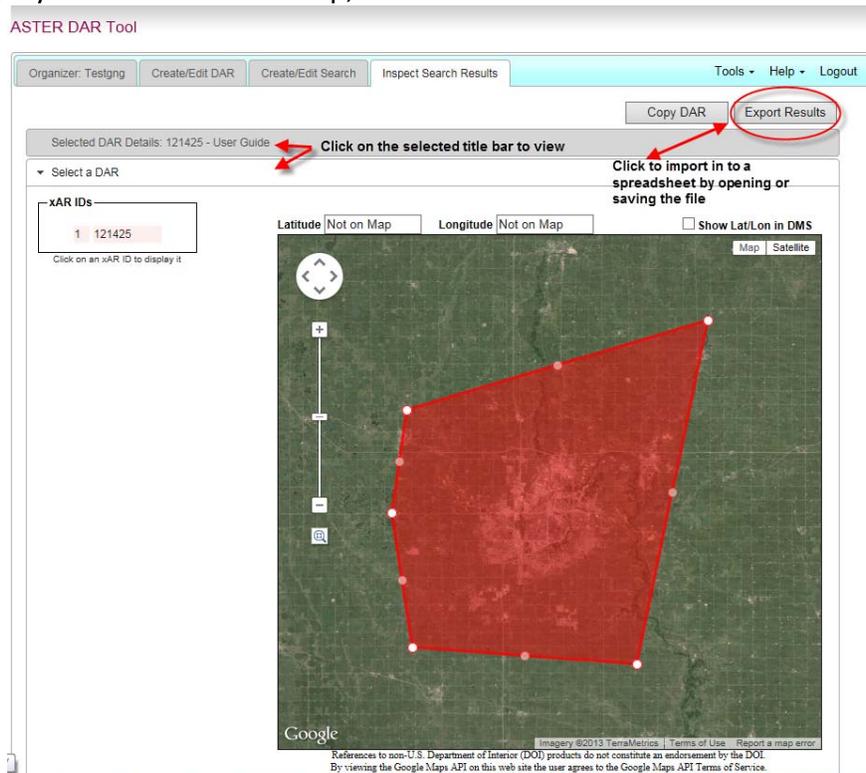
Inspect Search Results

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