How to Request Data

-The Data Request feature is new to EMERALD, and it allows users to request data sets directly from IRIS DMC. This is a short "how-to" guide to walk new users through the Data Request Process

-To start, you should make sure that you are in a new and unfilled datasets. If you do not have any empty datasets, the first step should be to create a new dataset.

-Next, click on the Menu and highlight the Request Data submenu. Select New Data Request when it appears.

-You will now be linked to the Create a new Data Request page. This page allows the user to edit the various options and settings:

Create a new Data Request

Request Name:	Sample Request
Starting Date:	2012-01-01 00:00:00 **(format YYYY-MM-DD 00:00:00)**
Ending Date:	2012-06-01 00:00:00 **(format YYYY-MM-DD 00:00:00)**
Return traces from:	10 seconds before/after P **(negative numbers = before phase arrival)**
to:	20 seconds before/after P **(negative numbers = before phase arrival)**
Velocity Model:	iasp91 **(used to calculate phase arrivals)**
Data Center:	IRIS DMC
Data Quality:	B **(to restrict data to a single quality code)**
Minimum Trace Length:	0 **(seconds, zero to allow any length)**
Longest Trace Only:	☑ **(check to only return longest if multiple traces)**

Cancel   Save

- When you are satisfied with the settings of your data request, click on the "Save" button at the bottom of the page. If you wish to change your settings after leaving this page, go to the Menu, then the Request Data submenu, and then select the Data Request you wish to edit (for the example pictured above, you would select "Sample Request").

-Note the green "**Request Summary**" box to the left of the page. At the bottom of the box, under "This request contains:" you will see three options: **Components, Events,** and **Stations**. These three options, along with "**Process Data Request**" beneath it, will all become blue hyperlinks once the "Save" button has been pressed on your Data Request:

Request Summary

Name: Sample Request
Status: new, unprocessed

Date Range: 2012-01-01 to 2012-06-01

Return: from 10 seconds after P to 20 seconds after P

Velocity Model: iasp91

Data Center: IRIS DMC

Data Quality: B

Minimum Length: 0 s

Return Longest Trace Only: yes

This request contains:
0 Components
0 Events
0 Stations

Process Data Request

Request Name:	Sam
Starting Date:	201
Ending Date:	201
Return traces from:	10
to:	20
Velocity Model:	ias
Data Center:	IRI
Data Quality:	B
Minimum Trace Length:	0
Longest Trace Only:	☑

-It is important that you do **NOT** click on "**Process Data Request**" before you have selected the components, events, and stations you want your Data Request to contain. Doing so will result in an empty Data Request. If you accidently do click "Process Data Request" prematurely, you must select "Cancel this Request," and then "Reset Request Status to New." This will allow you to proceed with your request without having to completely restart.

-To select the components you wish your request to contain, select the "**Components**" button. This will link you to a new page with a long list of possible components. Click the box next to the components you want to be included in your request (for example, my sample request will have 3 common components: BHE, BHN, and BHZ), and then scroll down to the very bottom of the page and click on the "Save" button.

-At this point you should see the number of Components you have selected appear next to the "Component" link in the Request Summary box.

-Next, click on "**Events**" to set the event parameters for the request. The Event Parameters page allows you to set the starting and ending dates (which should automatically load to the dates you set in the initial Create Data Request page), the magnitude range, and the range of depth. It also will give you five options for the method by which EMERALD will gather your event request:

     -The **Request Continuous Data by Day** choice creates a virtual event at midnight for each station and each day in the time span chosen, and downloads 24-

hours of continuous data for each station and each day. Warning: use this option with care, as it can generate very large sets of data and take a long time to download. ~~allows you to receive up to   date data daily from the accepted stations through EMERALD~~.

>-The **<u>Select from global list of events</u>** choice will load a list of worldwide events that meet the specifications you have selected. You can select what events you wish to be included in your data request by checking the box next to the event. Clicking the blue "all" button at the top of the list will select all of the events, will clicking "none" will deselect all the events. Click "Save" to accept the events you have selected.

>-The **<u>Specify events around a point</u>** selection allows you to manually enter the latitude and longitude of a center point. You then enter minimum and maximum distances from the center point, giving EMERALD a circular range about the center point to search for events.

>-The **<u>Specify Events by Distance from each Station</u>** selection is similar to method just mentioned, except in this case each station EMERALD accepts will in effect become a center point. All you must do is enter the maximum and minimum distances to create a range

>-The **<u>Specify Events by Lat/Long Boundaries</u>** allows you to create a range of both latitudes and longitudes for EMERALD to search for events.

-Click "Save" once you have chosen your method, and click "Save" again once you have the parameters within that method set up to your satisfaction.

-If you wish to **change your parameters or method at any point**, scroll to the bottom of the page and click on "**Change Event Specification Method**." This will take you back to the initial "Event Parameters" page.

-Now both the "**Components**" and "**Events**" links in the Request Summary box should have **non-zero values** next to them.

-The last link is the "**Stations**" link. Clicking this link will again load a page that allows you to set starting and ending date parameters (which should read the same dates you set on the Create Data Set Request page) as well as five methods for choosing stations. Note that only stations recording the chosen components are available to choose, so components must be chosen prior to selecting stations:

>-The **<u>Choose from a complete list a stations</u>** selection will load a list of every station EMERALD has access to. From this list, you can pick and choose which stations you wish to receive data from. Be warned, though, this list is extremely large. It is more useful if you already know the network

and station codes of the stations you wish to use ahead of time if you use this option.

-The **Choose from list of networks** option will load a list of the networks that EMERALD has access to. This option allows you to pick and choose entire networks of stations rather than individual stations.

-The **Specify stations around a point** option is very similar to the specify events about a point option. It again allows you to input a center point with a latitude and longitude, and then searches within the range of degrees from the minimum and maximum distance points you assign.

-The **Specify stations by distance from event(s)** option will create turn each event's location into a center point, and then search a within a range based on the minimum and maximum distances you assign.

-The **Specify stations in a rectangular region** option will allow you to set boundaries for the latitudes and longitudes. EMERALD will search for all viable stations within those boundaries.

-**NOTE:** **If you use any of the last four options listed above, you can still handpick the stations you want EMERALD to request data from. To do so, click on "View a List of Stations" at the bottom of the page AFTER you have saved you parameters/selected a network.**

-When you have chosen your preferred method and completed your station search, click "Save". Now the "**Stations**" link in the **Request Summary** should read a non-zero value like the **"Components**" and "**Events**" links:

Request Summary

Name: Sample Request
Status: new, unprocessed

Date Range: 2012-01-01 to 2012-06-01

Return: from 10 seconds after P to 20 seconds after P

Velocity Model: iasp91

Data Center: IRIS DMC

Data Quality: B

Minimum Length: 0 s

Return Longest Trace Only: yes

This request contains:
3 Components
83 Events
17 Stations

Process Data Request

-Review your request summary to be sure everything is how you want it. Note that the one above is just an example (and a relatively small request at that), and that the data requests you make might be very different. However, the **Components, Events, and Stations have non-zero values next to them. If they do not, your request will come back with nothing**. Also, be careful not to make any one request too large, or else you will have to wait a very long time before it finishes.

-If you are satisfied with the **Request Summary**, click on "**Process Data Request.**" This will load a new page that will show you the status of the request. You can also **cancel and reset, or clear, the request** from this page, as well as pause the request. You can monitor the data requests progress by the number of **Requests Sent** and refreshing the page.

Current Status of Data Request: Sample Request

Status: preprocessing

Requests Sent: 153 of 153 (100%)

Data Saved: 21 traces

View the Log for this Request (opens in new tab or window)

Clear this Request and all Data from this DataSet (can take a very long time)

Reset Request Status to New (can result in duplicate data)

Pause this Request

Resume this Request

Cancel this Request

Reload page to see updated status...

-When your request has finished, click on the **DataSet name** in the top left of the page (or under "Menu>DataSet" if you prefer). This will link you to the homepage of the dataset. Scroll down and you will see the requested data, ready to be reviewed.