

NERC

NORTH AMERICAN ELECTRIC
RELIABILITY CORPORATION

Geomagnetic Disturbance Data System

Event Data Search & Download

User Guide

May 2022

RELIABILITY | RESILIENCE | SECURITY



3353 Peachtree Road NE
Suite 600, North Tower
Atlanta, GA 30326
404-446-2560 | www.nerc.com

Table of Contents

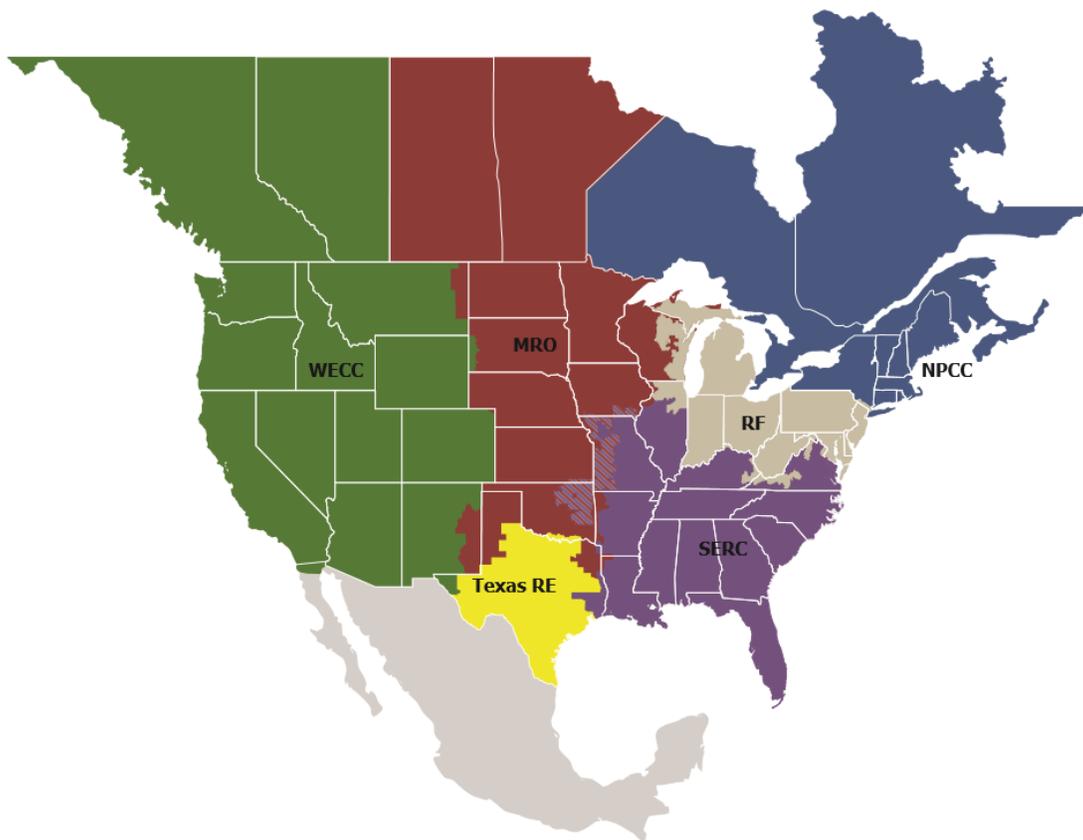
Preface	iii
Overview	iv
Chapter 1 : User Setup	5
Creating an ERO Portal Account	5
Chapter 2 : Access the GMD System	12
Chapter 3 : Device Lists	13
Chapter 4 : Data Search & Download	14

Preface

Electricity is a key component of the fabric of modern society and the Electric Reliability Organization (ERO) Enterprise serves to strengthen that fabric. The vision for the ERO Enterprise, which is comprised of the North American Electric Reliability Corporation (NERC) and the six Regional Entities, is a highly reliable and secure North American bulk power system (BPS). Our mission is to assure the effective and efficient reduction of risks to the reliability and security of the grid.

Reliability | Resilience | Security
Because nearly 400 million citizens in North America are counting on us

The North American BPS is made up of six Regional Entity boundaries as shown in the map and corresponding table below. The multicolored area denotes overlap as some load-serving entities participate in one Regional Entity while associated Transmission Owners/Operators participate in another.

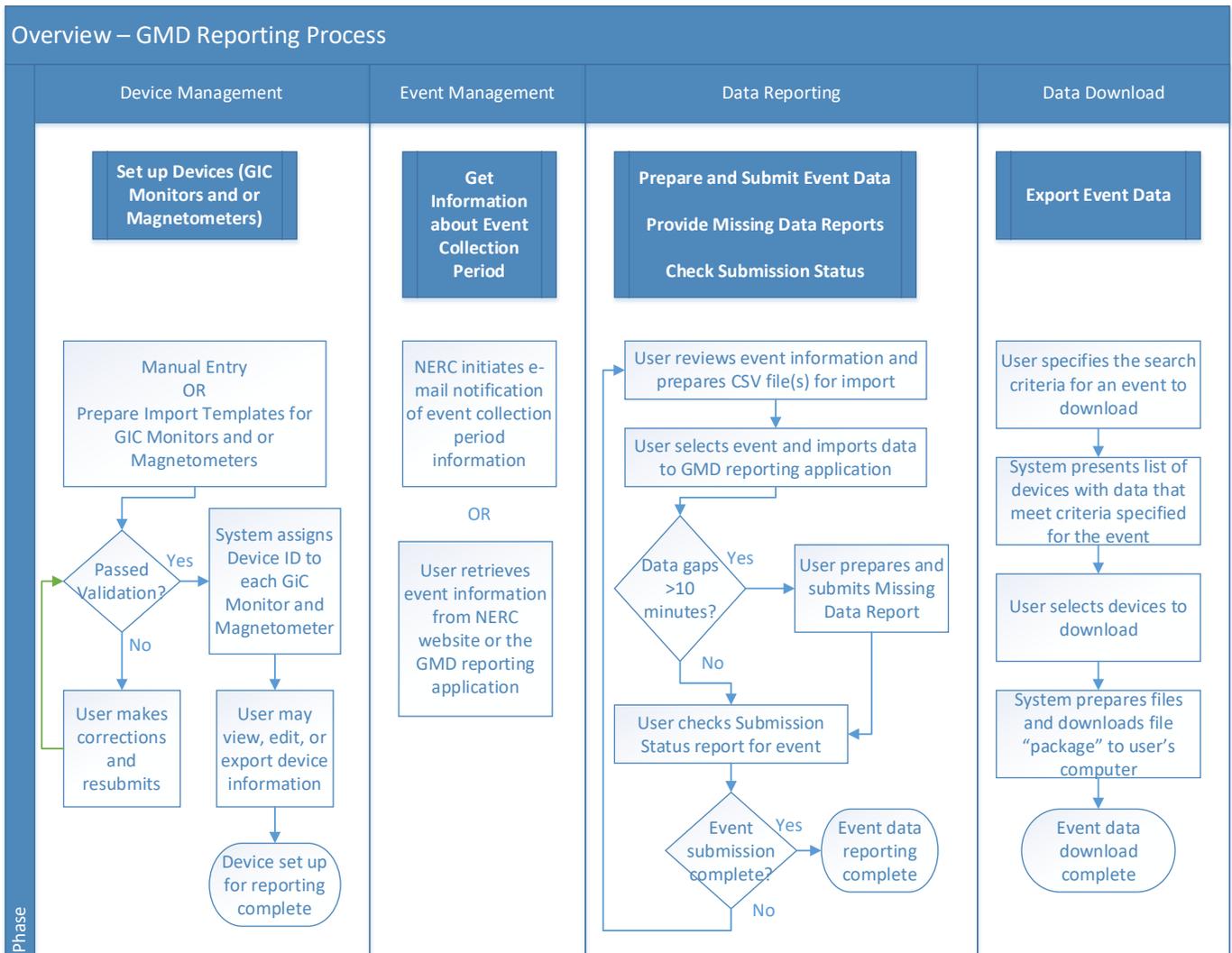


MRO	Midwest Reliability Organization
NPCC	Northeast Power Coordinating Council
RF	ReliabilityFirst
SERC	SERC Reliability Corporation
Texas RE	Texas Reliability Entity
WECC	WECC

Overview

This GMD Portal guide provides extensive instructions on the data download functionality that is available to third-party entities through the GMD Portal. This document does not instruct users how to gather nor document information relating to Geomagnetic Disturbance events. For additional information on NERC’s GMD reporting requirements, refer to the [GMD Data Reporting Instructions](#) available on nerc.com

Please email GMD@nerc.net with any questions you may have after reviewing this document, or if you believe information within this document requires updating.



Please note: All information relating to any given entity or company shown within this document exists only within the testing environment of the GMD Portal, and is included here for demonstration purposes only. It does not reflect actual information, which has been or will be, submitted by the entity or company.

Chapter 1: User Setup

Creating an ERO Portal Account

An ERO Portal account is required for access to the GMD reporting application.

1. Navigate to [NERC.com](http://www.nerc.com)



2. In the upper right, click "Account Log-In/Register"



3. Under "Application Link", Click "ERO Portal" (or go directly to <https://eroportal.nerc.net>)



4. In the upper right, click "Register"



5. Complete the required fields and click “Register”

Register for a new account

* First Name

* Last Name

* Email

* Confirm Email

* Username

* Password

- Minimum of 10 characters long.
- Must Contain at least 1 number, 1 lowercase letter, 1 uppercase letter, and 1 special character (!,@,#,\$,%^,&,*)

* Confirm Password



* Captcha

6. Look for the email that will come from NERC to confirm the account.

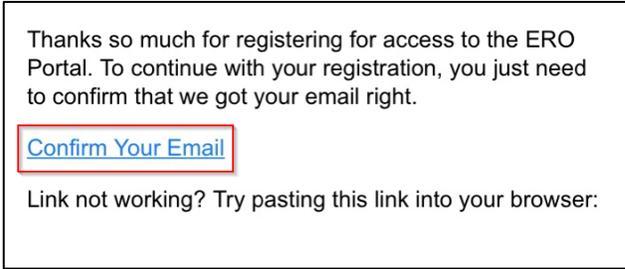
Confirm Registration

You will receive an email shortly with instructions on how to complete the registration process.

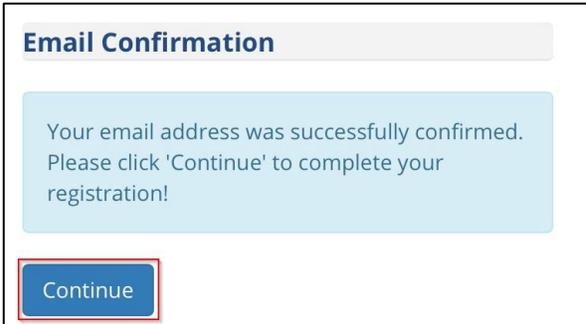
If you do not receive an email, please click [here](#) to resend.

If the problem continues, please contact the NERC Helpdesk by opening a ticket at: [NERC Helpdesk](#).

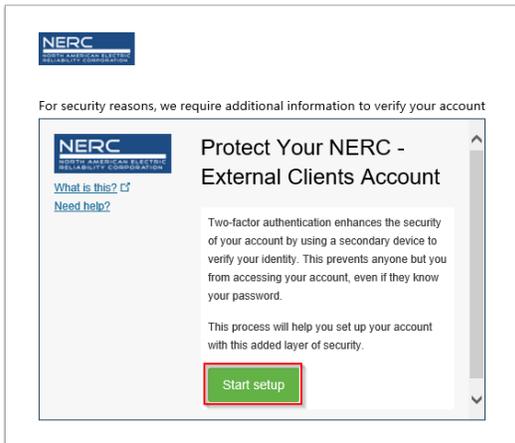
7. Click “Confirm Your Email” to verify the account.



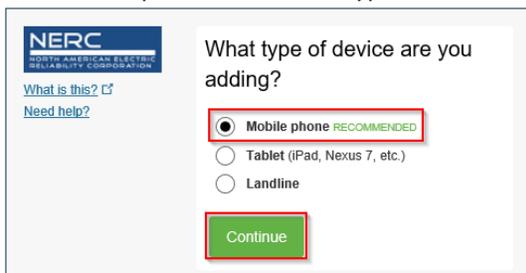
8. Click “Continue” once the window is open on the screen.



9. Click “Start setup” to setup the two-factor authentication.



10. Choose the preferred device type and click “Continue”.



11. Enter the preferred phone number, confirm the phone number and click “Continue”. Choose the phone type.

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What is this? [Need help?](#)

Enter your phone number

United States

+1 ✓

Example: (201) 234-5678

You entered is this the correct number?

Back Continue

12. Install DUO Mobile, and then click “I have Duo Mobile”.

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What is this? [Need help?](#)

Install Duo Mobile for iOS

1. Launch the App Store app and search for "Duo Mobile".
2. Tap "Get" and then "Install" to download the app.

Back I have Duo Mobile

13. Open the app and tap the “+” button and scan the barcode, then click “Continue”.

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What is this? [Need help?](#)

Activate Duo Mobile for iOS

1. Open Duo Mobile.
2. Tap the "+" button.
3. Scan this barcode.

[Email me an activation link instead.](#)

Back Continue

14. Click “Continue to Login”.

Saved Continue to Login

15. Click “Send Me a Push” and follow the instructions that are sent to the phone to continue.

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What is this? [Add a new device](#) [My Settings & Devices](#) [Need help?](#)

Choose an authentication method

Send Me a Push

Call Me

Enter a Passcode

Remember me for 10 hours

Enrollment successful! This is the Duo login prompt that you'll normally see when logging in. ✕

- 16. At a minimum, complete the required fields (First Name, Last Name, and Business Phone) for personal information.
- 17. Click "Next".

Personal

Salutation <input type="text"/>	First Name * <input type="text" value="MIDAS"/>
Job Title <input type="text"/>	Middle Name <input type="text"/>
Business Phone * <input type="text" value="770-777-7777"/>	Last Name * <input type="text" value="Example User"/>
Fax <input type="text"/>	Mobile Phone <input type="text"/>



- 18. Complete at least the required fields (Street 1, City, State/Province, ZIP/Postal Code, Country) for work address information
- 19. Click "Next".

My Work Address

Street 1 * <input type="text" value="3353 Peachtree Road"/>	City * <input type="text" value="Atlanta"/>
Street 2 <input type="text"/>	State/Province * <input type="text" value="Georgia"/>
	ZIP/Postal Code * <input type="text" value="30326"/>
	Country * <input type="text" value="USA"/>



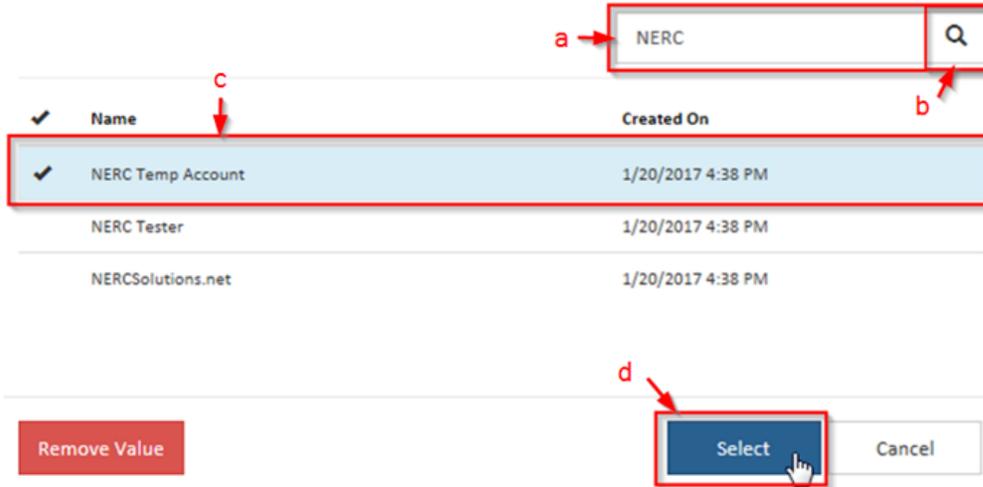
- 20. Click the magnifying icon.

Company

Company

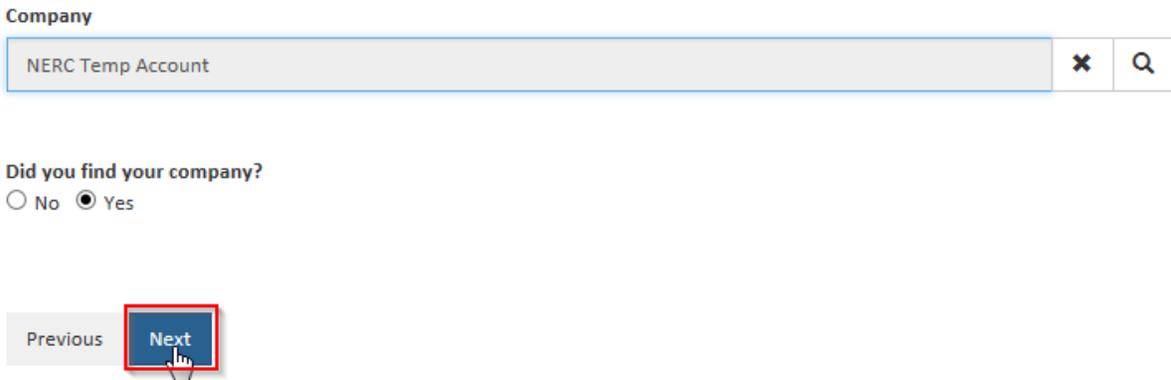
A magnifying glass icon located at the end of the company name input field, used for searching or filtering.

21. Choose the company:
 - a. Type the company's name¹ in the search bar
 - b. Click the magnifying glass or enter
 - c. Click the company²,
 - d. Click "Select".



22. Click "Next"

Company



¹ If reporting for multiple companies, select the primary company. An account may be associated with additional companies later in the process.

² If the company is not found, click "Cancel" and select "No" under "Did you find your company?" Complete the form on the screen that appears, and click "Next".

23. Create two security questions then click “Save”

Security

Security Question 1 *

Security Answer 1 *

Security Question 2 *

Security Answer 2 *

[Previous](#) [Save](#)

Chapter 2: Access the GMD System

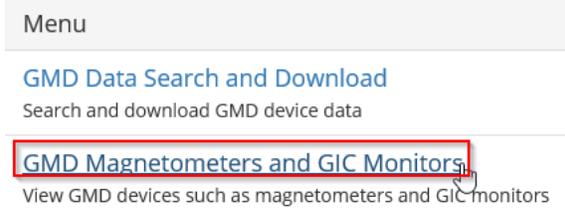
1. Navigate to the NERC ERO Portal (<https://eroportal.nerc.net/>) and login.
2. In the navigation bar, click “Research”, then click “Geomagnetic Disturbance Data”.



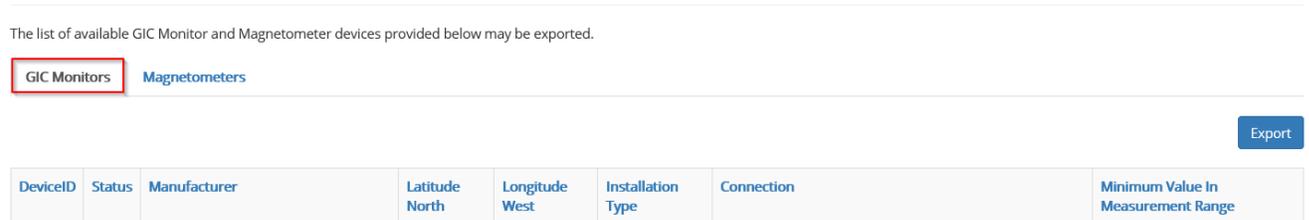
Chapter 3: Device Lists

The device lists contain characteristics about the devices in the system. A device list may be viewed or exported.

1. From the “Menu”, click “GMD Magnetometers and GIC Monitors”.



2. The user has the ability to toggle back and forth between GIC Monitors and Magnetometers using the tabs at the top of the page.
GMD Magnetometers and GIC Monitors



GMD Magnetometers and GIC Monitors



3. The user has the ability to export the full GIC Monitor and Magnetometer lists by clicking “Export” on each of the views.

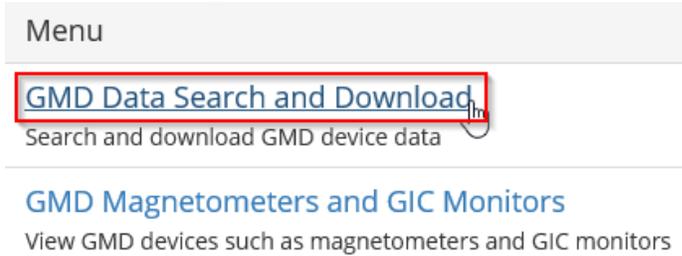


Chapter 4: Data Search & Download

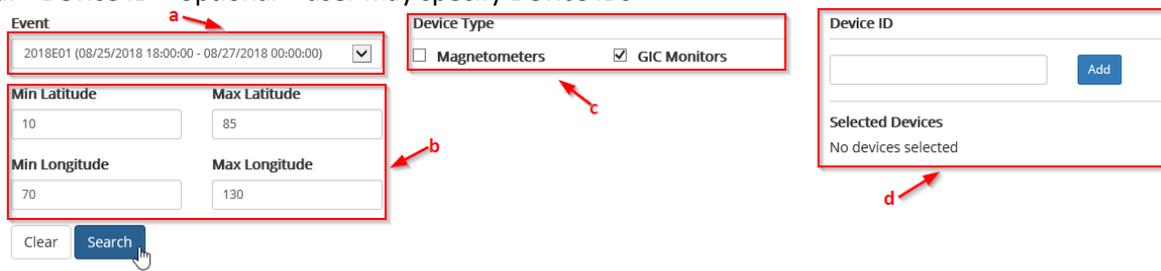
To obtain GMD event data, the user may enter or select criteria to filter the results of the event data to export. The data search is event-specific. The search results are presented to the user in summarized form. The user may download all results or further refine the search results.

The selected search results of the Data Search and Download are compiled into a data package that includes compressed data files, lists of devices with installation and location characteristics, and, if applicable, missing data reports.

1. From the “Menu”, click “GMD Data Search and Download”.



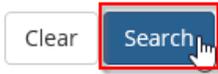
2. The user has the ability to use any of the following filters:
 - a. Event ID – required – user must select from the list of events in the dropdown
 - b. Location – optional – user may specify latitude and longitude ranges
 - i. A user may select a minimum and/or maximum value for latitude or longitude. Any entries for location will limit the devices and data provided.
 - c. Device Type – optional – user may specify Magnetometers or GIC Monitors
 - i. When left unchecked, both device types will display in results
 - d. Device ID – optional – user may specify Device IDs



3. If the user specifies a Device ID(s), all other filters are disabled.



- Once the user has specified all desired criteria, click “Search”.



- Data Package Search Results

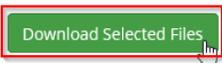
The search results are provided in tabular form as shown below. Based on the information provided, the user may further refine the data that will be included in the download package by checking the box in the first column of each row. To select all rows, click the box in the first column of the first row.

- Number of Records – Total number of rows that exist for the device for the selected event
- Start/End Dates/Times – The first and last date/time of the first and last interval of data available for the device for the selected event
- Missing Data Report – If “Yes”, then the device has one or more Missing Data Reports for the event
- Modified On – If filled in, then the event data has been modified since creation

<input type="checkbox"/>	Event Name	Device Type	Device ID	Number of Data Records	Latitude	Longitude	Data Sample Start Date and Time	Data Sample End Date and Time	Missing Data Report	Created On	Modified On
<input type="checkbox"/>	2015E03	Magnetometer	50067	5401	44.00	100.00	09/11/2015 03:00:00	09/11/2015 18:00:00	No	10/07/2020 16:35:05	
<input type="checkbox"/>	2015E03	Magnetometer	50068	5401	55.00	65.00	09/11/2015 03:00:00	09/11/2015 18:00:00	No	10/07/2020 16:35:06	
<input type="checkbox"/>	2015E03	Magnetometer	50070	5401	65.00	120.00	09/11/2015 03:00:00	09/11/2015 18:00:00	No	10/14/2020 09:20:08	
<input type="checkbox"/>	2015E03	Magnetometer	50073	5401	11.00	111.00	09/11/2015 03:00:00	09/11/2015 18:00:00	No	10/23/2020 11:30:06	
<input type="checkbox"/>	2015E03	Magnetometer	50075	5401	10.00	101.00	09/11/2015 03:00:00	09/11/2015 18:00:00	No	10/26/2020 12:10:03	
<input type="checkbox"/>	2015E03	GIC Monitor	10054	5401	75.00	121.00	09/11/2015 03:00:00	09/11/2015 18:00:00	No	10/07/2020 16:30:04	
<input type="checkbox"/>	2015E03	GIC Monitor	10055	5401	33.00	133.00	09/11/2015 03:00:00	09/11/2015 18:00:00	No	10/07/2020 16:30:05	
<input type="checkbox"/>	2015E03	GIC Monitor	10058	50	20.00	120.00	09/11/2015 03:00:00	09/11/2015 03:08:10	No	10/23/2020 11:30:04	10/23/2020 12:40:02
<input type="checkbox"/>	2015E03	GIC Monitor	10060	50	60.00	121.00	09/11/2015 03:00:00	09/11/2015 03:08:10	Yes	10/23/2020 11:30:05	10/23/2020 12:40:02
<input type="checkbox"/>	2015E03	GIC Monitor	10061	50	55.00	125.00	09/11/2015 03:00:00	09/11/2015 03:08:10	No	10/23/2020 11:30:05	10/23/2020 12:40:03

- Check desired data packages and click “Download Selected Files”.

<input checked="" type="checkbox"/>	2015E03	Magnetometer	50075	5401	10.00	101.00	09/11/2015 03:00:00	09/11/2015 18:00:00	No	10/26/2020 12:10:03	
<input type="checkbox"/>	2015E03	GIC Monitor	10054	5401	75.00	121.00	09/11/2015 03:00:00	09/11/2015 18:00:00	No	10/07/2020 16:30:04	
<input checked="" type="checkbox"/>	2015E03	GIC Monitor	10055	5401	33.00	133.00	09/11/2015 03:00:00	09/11/2015 18:00:00	No	10/07/2020 16:30:05	
<input type="checkbox"/>	2015E03	GIC Monitor	10058	50	20.00	120.00	09/11/2015 03:00:00	09/11/2015 03:08:10	No	10/23/2020 11:30:04	10/23/2020 12:40:02
<input type="checkbox"/>	2015E03	GIC Monitor	10060	50	60.00	121.00	09/11/2015 03:00:00	09/11/2015 03:08:10	Yes	10/23/2020 11:30:05	10/23/2020 12:40:02
<input checked="" type="checkbox"/>	2015E03	GIC Monitor	10061	50	55.00	125.00	09/11/2015 03:00:00	09/11/2015 03:08:10	No	10/23/2020 11:30:05	10/23/2020 12:40:03



- Data Download Details

- Event Data – a data package for each device will be in a separate compressed file
- GIC Monitor and Magnetometer lists –all selected devices included in the requested download
- Missing Data Reports – any existing Missing Data Reports associated with selected devices in the requested download

