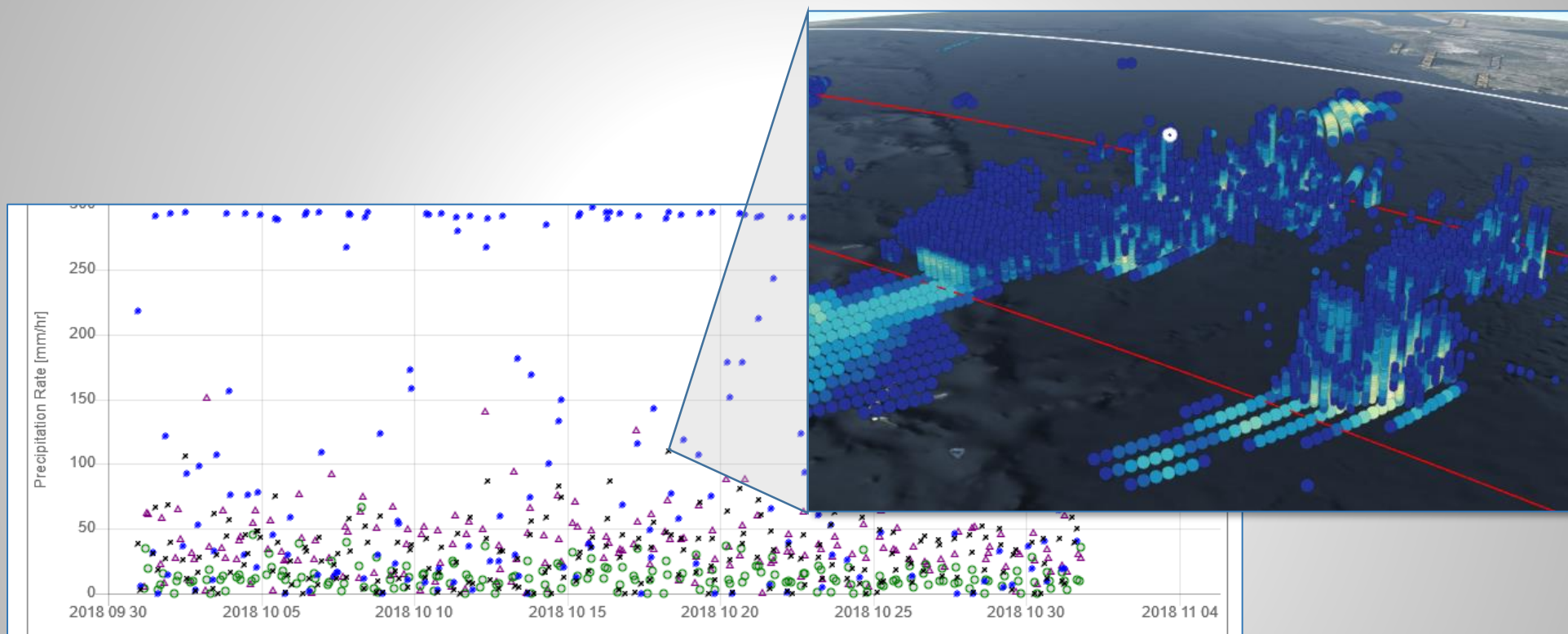


More Efficient Precipitation Rate Data Acquisition with the STORM Swath-Based Analysis Tool

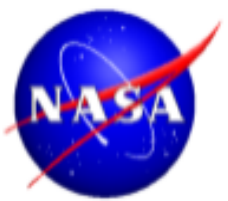


December 14, 2018

Matt Lammers (matthew.r.lammers@nasa.gov)

Senior Science Data Visualization Analyst / Software Engineer

NASA Goddard Space Flight Center / SGT, Inc.



STORM

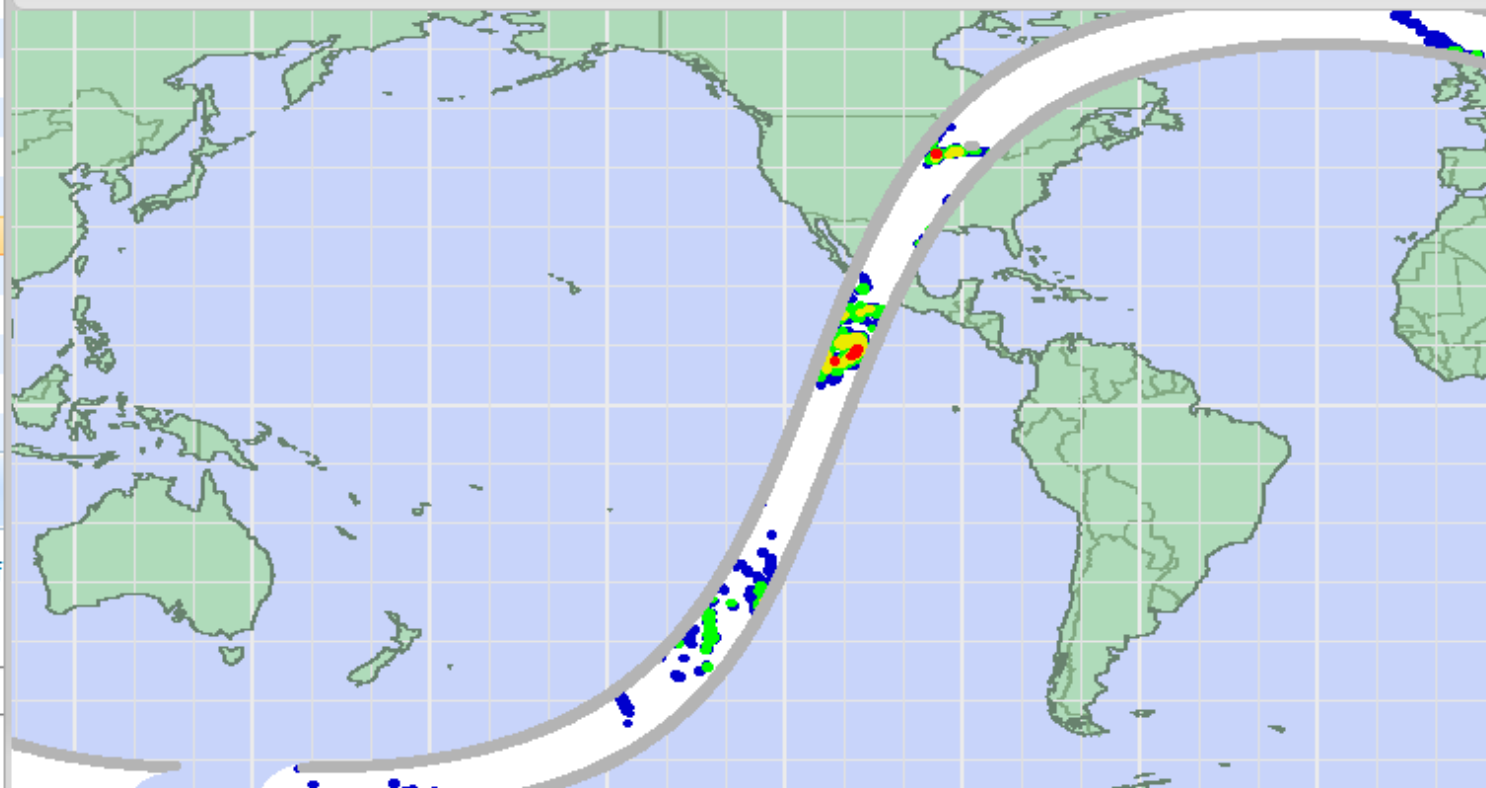
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Left click on the header to sort columns. Right click to view additional info (file name, satellite, instrument, format and version).

Select	Data Type ^	Algorithm	Download / View ?	Start Time	Stop Time	Orbit #	Format
☐	v	v					v
☐	2A	2AGPROFG		2018-09-30 22:49:26	2018-10-01 00:22:00	26078	hdf5
☐	2A	2AGPROFG		2018-10-01 00:22:01	2018-10-01 01:54:35	26079	hdf5
☐	2A	2AGPROFG		2018-10-01 01:54:36	2018-10-01 03:27:10	26080	hdf5

View Browse File for granule 2A.GPM.GMI.GPROF2017v1.20181001-S141517-E154751.026...

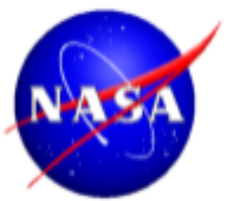


Total Granules selected: 3

1 2 — Records from 1 to 16 of

Script Type ?

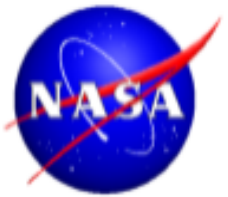
Select a script type to help access data



Why Swath-Based Analysis Tool?



- Users wanted to explore Level 2 swath products
 - Goddard Profiling Algorithm (GPROF)
 - TMI, GMI, AMSR2, ATMS, MHS, AMSRE, AMSUB, SSMI/S
 - Precipitation Radars
 - TRMM PR, GPM DPR
 - Combined Algorithm
 - TRMM Combined, GPM Combined
- Initially envisioned as a chart tool displaying statistics gathered from geographic regions of swaths
- Evolved to include connections to THOROnline and STORM Virtual Globe, as well as ordering capabilities



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GPM-GMI	GPM-DPR	GPM-Ka MS	GPM-Ku
GPM-CMB	TRMM-TMI	TRMM-PR	NPP-ATMS
GCOMW1-AMSR2	NOAA15-AMSUB	NOAA16-AMSUB	NOAA17-AMSUB
NOAA18-MHS	NOAA19-MHS	NOAA20-ATMS	METOP-A-MHS
METOP-B-MHS	F11-SSMI	F13-SSMI	F14-SSMI
F15-SSMI	F17-SSMIS	F18-SSMIS	F19-SSMIS
AQUA-AMSRE			

Date Range:

Valid Range is between 19971201 and 20181027 (Loading the chart takes approximately 5-10 minutes for one year and one instrument)

YYYYMMDD [HH:MM]

Start DateTime

Stop DateTime

Geographic Domain:

Use the buttons on the top-left to select a geographic area, or type the box into the inputs below.

Lat Lng:



Leaflet | Sources: Esri, HERE, DeLorme, INCREMENT P, NPIS, NRCAN, Ordnance Survey, AID, OpenStreetMap contributors, USGS, NGA, NASA, CIGAR, N. Robinson, NCEAS, NLS, OS, NMA, Geodatasystreisen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community.

Northern Latitude

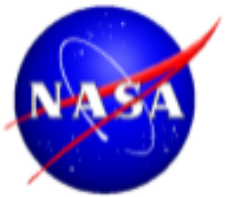
Southern Latitude

Eastern Longitude

Western Longitude

Draw

Clear



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☐ GPM-CMB	☐ TRMM-TMI	☐ TRMM-PR	☐ NPP-ATMS
☐ GCOMW1-AMSR2	☐ NOAA15-AMSUB	☐ NOAA16-AMSUB	☐ NOAA17-AMSUB
☐ NOAA18-MHS	☐ NOAA19-MHS	☐ NOAA20-ATMS	☐ METOP-A-MHS
☐ METOP-B-MHS	☐ F11-SSM/I	☐ F13-SSM/I	☐ F14-SSM/I
☐ F15-SSM/I	☐ F17-SSMIS	☐ F18-SSMIS	☐ F19-SSMIS
☐ AQUA-AMSRE			

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Stop Date/Time

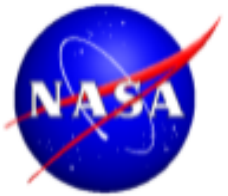
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Lat/Lng:

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Northern Latitude Southern Latitude
Eastern Longitude Western Longitude

[PyDev] [pprops@...] [Terminal] ~/PyDev/... [willa.split...]



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AQUA-AMSRE			

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YYYYMMDD [HH:MM]
Start Date/Time
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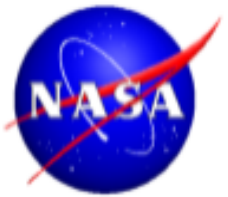
Lat Lng:

Leaflet | Sources: Esri, HERE, DeLorme, INCREMENT P, NPIS, NRCAN, Ordnance Survey, A&O, OpenStreetMap contributors, USGS, NASA, CGIAR, N. Robinson, NCEAS, NLS, OS, NMA, Geodatasystreien, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community.

Northern Latitude Southern Latitude
Eastern Longitude Western Longitude

[PyDev] [pprops@...] [Terminal] ~/PyDev/... [willa.split...]

Date/Time Range Select



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Storm Swath-Based Analysis Tool

This tool enables comparisons between domain-aggregated values from different GPM and Partner Instruments. Select one or more instruments, a date range, and a geographic domain. The tool will display statistical values on an interactive graph, with the ability to change what statistics, what instruments, and what colors are displayed. All values are aggregated from swath pixels within the geographic domain selected.

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AQUA-AMSRE			

Date Range:

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YYYYMMDD [HH:MM]

Start Date/Time

Stop Date/Time

Geographic Domain:

Use the buttons on the top-left to select a geographic area, or type the box into the inputs below.

Lat Lng:

Map showing continents and oceans with selection tools.

Northern Latitude

Southern Latitude

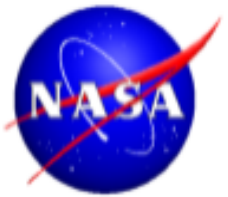
Eastern Longitude

Western Longitude

Draw Clear

Date/Time
Range Select

Geographic
Select



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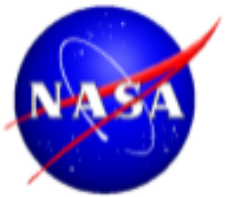
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Northern Latitude **Southern Latitude**

Eastern Longitude **Western Longitude**

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Click the
button to
“Get Granules
For Chart”

and JAXA. The caveat document for these products can be found here.

04/18/2018 - TRMM TMI L2-L3 reprocessing is expected to begin on April 19. Please note that these Version 05A files will be in HDF5 format. Most previous TRMM products had been in HDF4 format, so please update your software if necessary. Files will appear in STORM as they are processed.

02/20/2018 - The STORM Swath-Based Analysis Tool has expanded to include all Level 2 products reprocessed back through the TRMM era. Users can now generate graphs of statistics (and geo-subset orders) based on GPROF precipitation rates for SSMI, AMSUB, and AMSRE, as well as all previously-available instruments.

02/13/2018 - We are beginning to roll out Level 2A PRPS files for the SAPHIR instrument. It is possible to request PRPS files in BUFR format and it is Geographically Subsettable. We are also reprocessing Level 2A GPROF for the TRMM era for AMSRE, SSMI, and AMSUB. This will continue until all datasets are complete.

01/29/2018 - The new STORM User Guide (Version 2.4) is now available. It contains a full guide to using the Swath-Based Analysis Tool to gather statistics about Level 2 products and generate orders based on statistical thresholds!

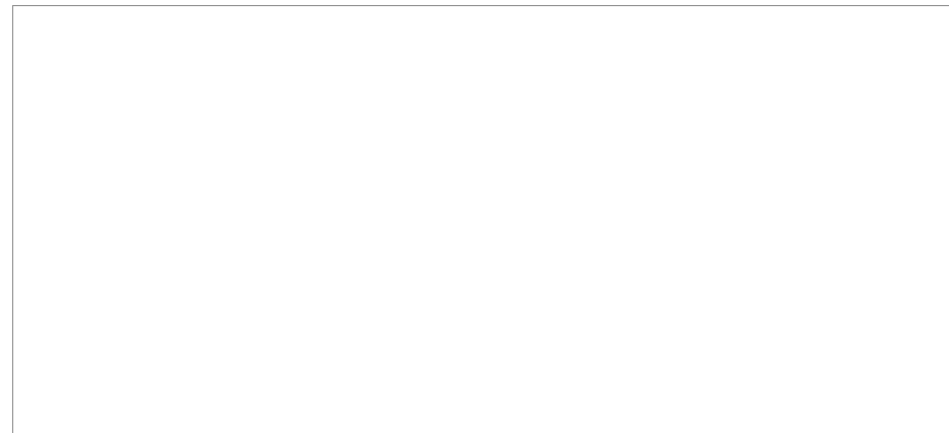
01/12/2018 - Check out the updated Tools page, now with new CosinusIS

Get Granules for Chart

Chart

Points Loaded: 0 of 93

Estimated Time Remaining: minutes, seconds [Pause Data Load](#)



All Statistics are for Surface Precipitation Rate

[Export All Data to CSV](#)

[Export Chart Data to CSV](#)

[Export Chart to PNG](#)

[Click Points for Prompt to View Granule in STORM Virtual Globe](#)

Chart Variables:

[Mean](#)

[Conditional Mean](#)

[Median](#)

[Maximum](#)

[Standard Deviation](#)

[Percent of Pixels with Precipitation](#)

[Total Swath Pixels in Domain](#)

Chart Instruments:

[NOAA20.ATMS](#)

[NPP.ATMS](#)

[GCOMW1.AMSR2](#)

[GPM.GMI](#)

Chart Color and Point Style:

[Red - +](#)

[Black - x](#)

[Blue - *](#)

[Green - o](#)

[Purple - Δ](#)

[Grey - □](#)

Submit Order Based on Criteria:

Registered Email:

[Don't have a PPS Registered Email? Register Here!](#)

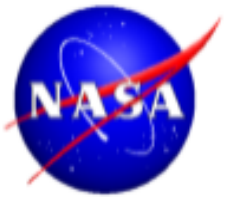
Order All Granules With:

[Mean](#)

[Greater Than](#)

[Submit Order](#)

*All granules will be geographically subset to the scans within the specified domain



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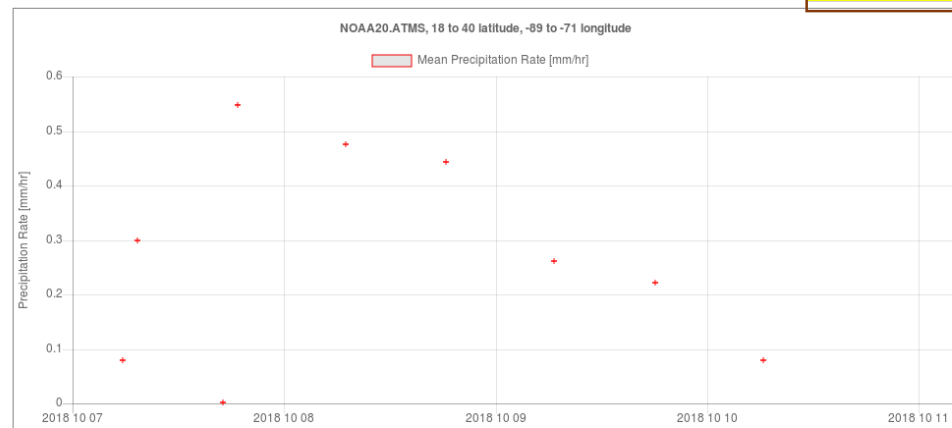
Get Granules for Chart

Chart

Points Loaded: 50 of 93

Estimated Time Remaining: 0 minutes, 32 seconds

Resume Data Load



All Statistics are for Surface Precipitation Rate

Export All Data to CSV

Export Chart Data to CSV

Export Chart to PNG

Click Points for Prompt to View Granule in STORM Virtual Globe

Chart Variables:

Mean

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Median

Maximum

Standard Deviation

Percent of Pixels with Precipitation

Total Swath Pixels in Domain

Chart Instruments:

NOAA20.ATMS

NPP.ATMS

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GPM.GMI

Chart Color and Point Style:

Red - +

Black - x

Blue - *

Green - o

Purple - Δ

Grey - □

Submit Order Based on Criteria:

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Order All Granules With:

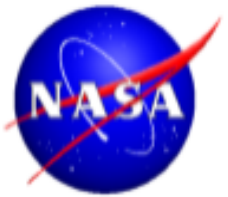
Mean

Greater Than

Submit Order

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Click to
pause Data
Load



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Time
remaining
updates

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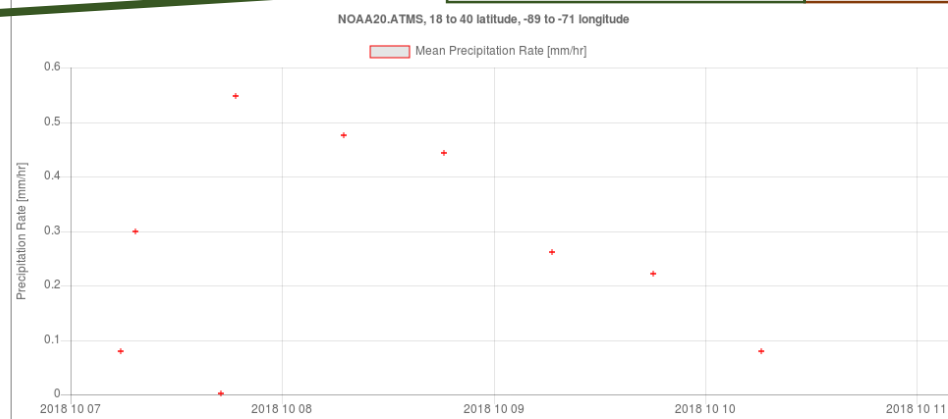
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Percent of Pixels with Precipitation

Total Swath Pixels in Domain

Chart Instruments:

NOAA20.ATMS

NPP.ATMS

GCOMW1.AMSR2

GPM.GMI

Chart Color and Point Style:

Red - +

Black - x

Blue - *

Green - o

Purple - Δ

Grey - □

Submit Order Based on Criteria:

Registered Email:

Don't have a PPS Registered Email? [Register Here!](#)

Order All Granules With:

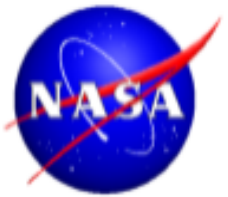
Mean

Greater Than

Submit Order

*All granules will be geographically subset to the scans within the specified domain

Click to
pause Data
Load



[storm.pps.eosdis.nasa.gov/ storm/Analysis.jsp](http://storm.pps.eosdis.nasa.gov/storm/Analysis.jsp)



Time
remaining
updates

document for these products can be found here.

04/18/2018 - TRMM TMI L2-L3
reprocessing is expected to begin on April 19. Please note that these Version 05A files will be in HDF5 format. Most previous TRMM products had been in HDF4 format, so please update your software if necessary. Files will appear in STORM as they are processed.

02/20/2018 - The STORM Swath-Based Analysis Tool has expanded to include all Level 2 products reprocessed back through the TRMM era. Users can now generate graphs of statistics (and geo-subset orders) based on GPROF precipitation rates for SSM/I, AMSUB, and AMSRE, as well as all previously-available instruments.

02/13/2018 - We are beginning to roll out Level 2A PRPS files for the SAPHIR instrument. It is possible to request PRPS files in BUFR format and it is Geographically Subsettable. We are also reprocessing Level 2A GPROF for the TRMM era for AMSRE, SSM/I, and AMSUB. This will continue until all datasets are complete.

01/29/2018 - The new STORM User Guide (Version 2.4) is now available. It contains a full guide to using the Swath-Based Analysis Tool to gather statistics about Level 2 products and generate orders based on statistical thresholds!

01/12/2018 - Check out the updated Tools page, now with new Custom JS

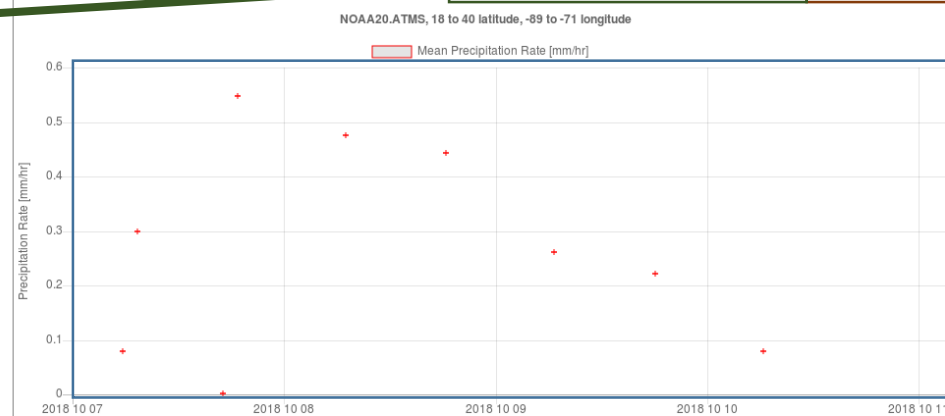
Get Granules for Chart

Chart

Points Loaded: 50 of 93

Estimated Time Remaining: 0 minutes, 32 seconds

Resume Data Load



All Statistics are for Surface Precipitation Rate

Export All Data to CSV

Export Chart Data to CSV

Export Chart to PNG

Click Points for Prompt to View Granule in STORM Virtual Globe

Chart Variables:

Mean

Conditional Mean

Median

Maximum

Standard Deviation

Percent of Pixels with Precipitation

Total Swath Pixels in Domain

Chart Instruments:

NOAA20.ATMS

NPP.ATMS

GCOMW1.AMSR2

GPM.GMI

Chart Color and Point Style:

Red ->

Black - x

Blue - *

Green - o

Purple - Δ

Grey - □

Submit Order Based on Criteria:

Registered Email:

Don't have a PPS Registered Email? [Register Here!](#)

Order All Granules With:

Mean

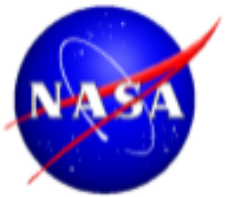
Greater Than

Submit Order

*All granules will be geographically subset to the scans within the specified domain

Click to
Pause Data
Load

First Data
Points have
Loaded for
Single
Instrument

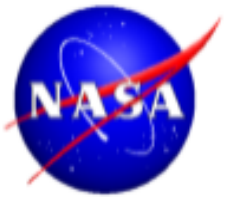


[storm.pps.eosdis.nasa.gov/ storm/Analysis.jsp](http://storm.pps.eosdis.nasa.gov/storm/Analysis.jsp)



Add more
Instruments to
the chart



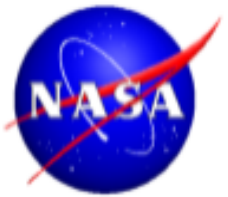


[storm.pps.eosdis.nasa.gov/ storm/Analysis.jsp](http://storm.pps.eosdis.nasa.gov/storm/Analysis.jsp)



Choose between
variables, which
automatically
updates the chart

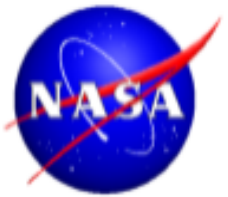




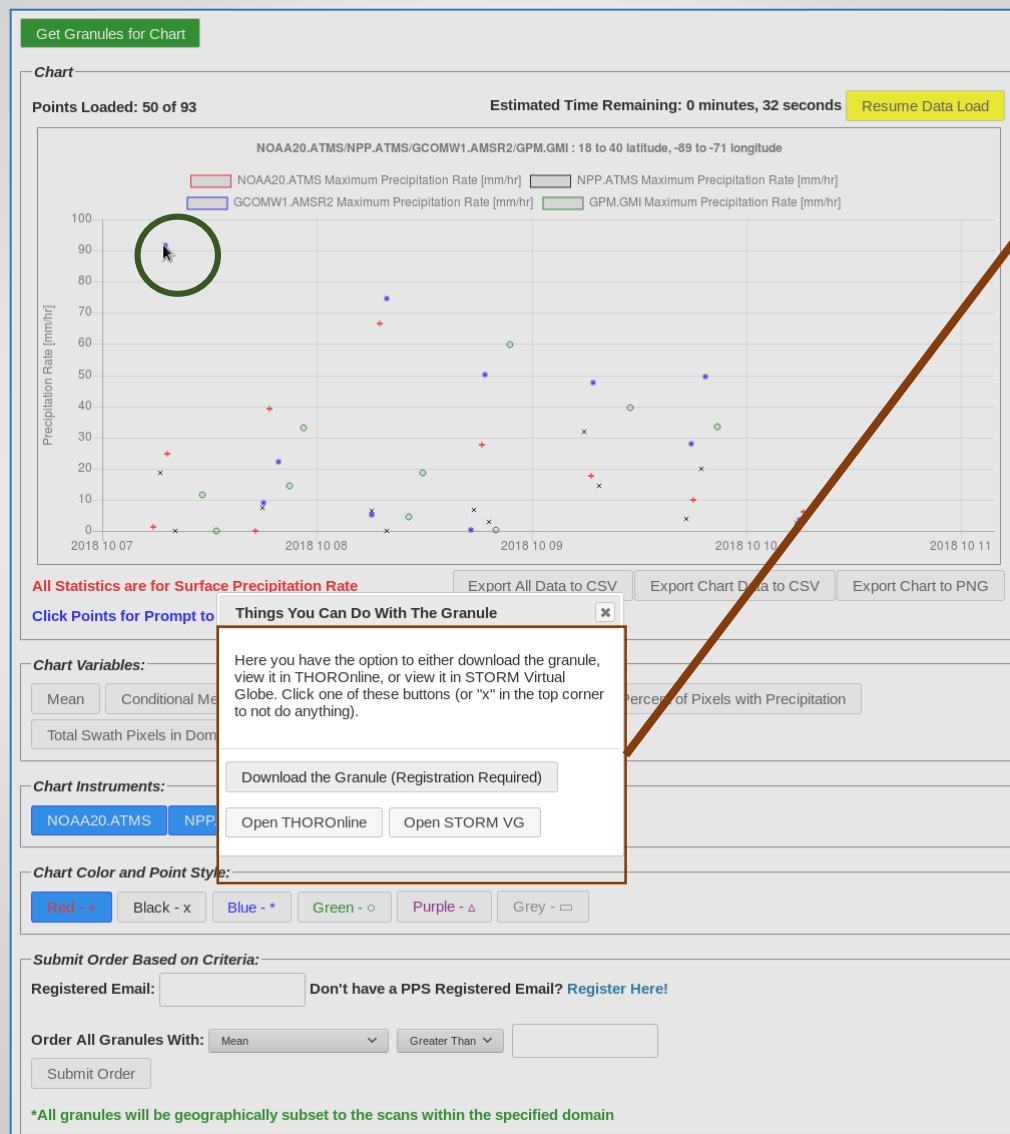
[storm.pps.eosdis.nasa.gov/ storm/Analysis.jsp](http://storm.pps.eosdis.nasa.gov/storm/Analysis.jsp)



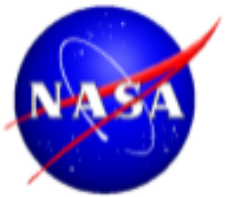
You can mouse over the points in the chart to see the raw values.



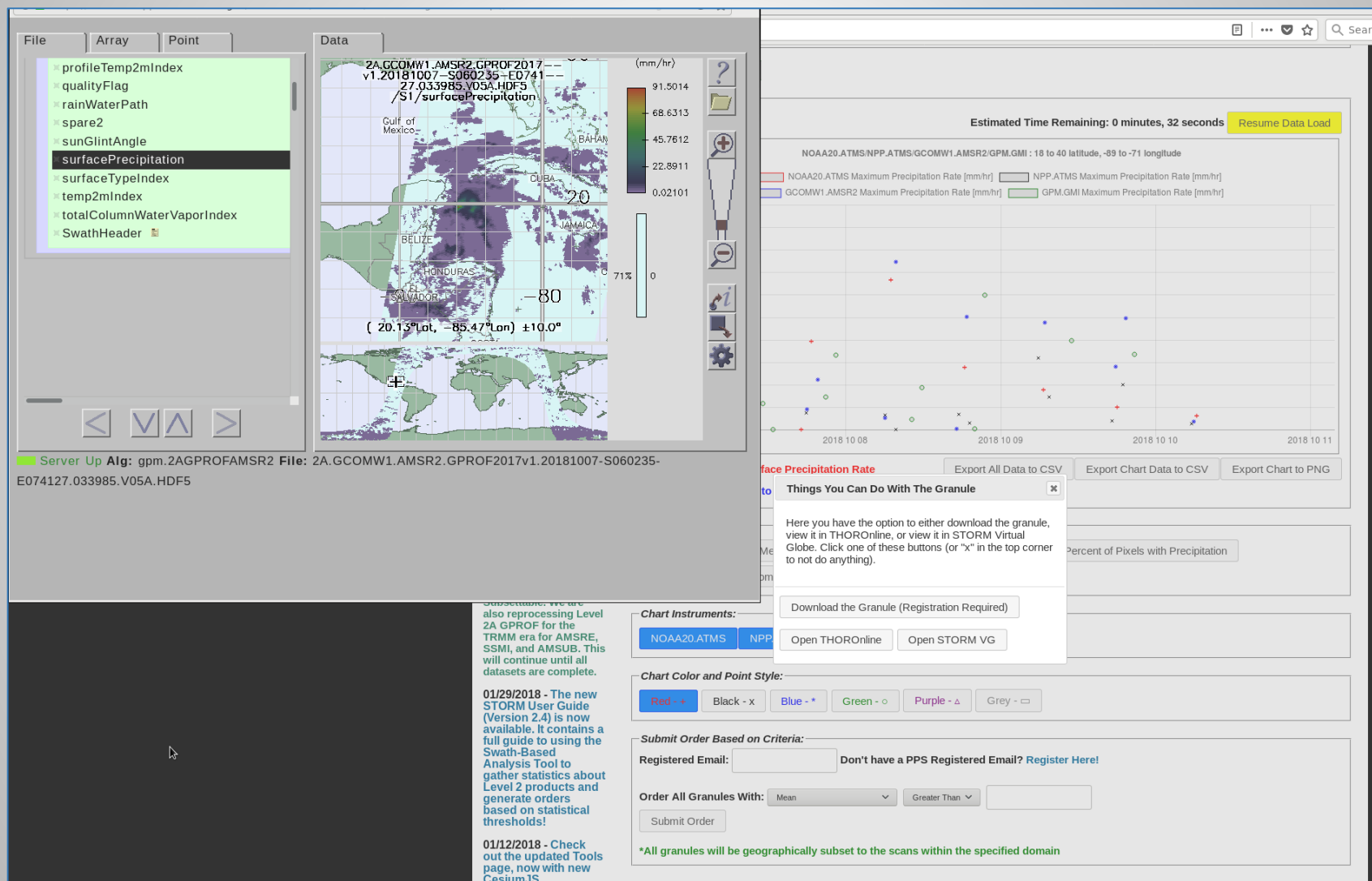
[storm.pps.eosdis.nasa.gov/ storm/Analysis.jsp](http://storm.pps.eosdis.nasa.gov/storm/Analysis.jsp)

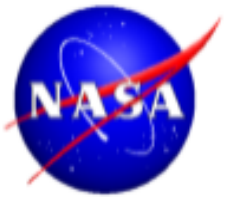


If you click on a point, a window pops up providing options for that overflight

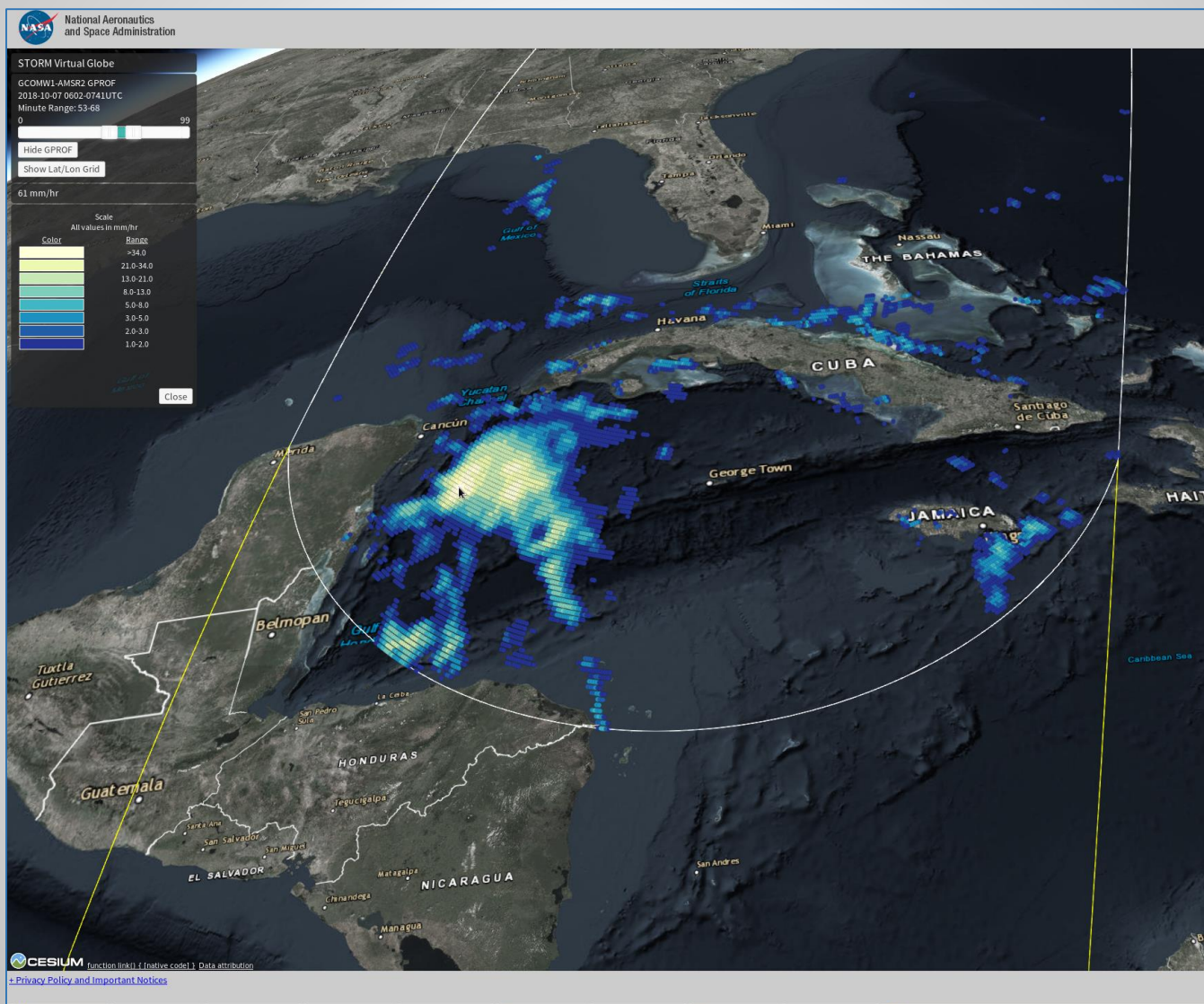


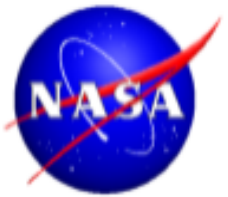
[storm.pps.eosdis.nasa.gov/ storm/Analysis.jsp](http://storm.pps.eosdis.nasa.gov/storm/Analysis.jsp)





[storm.pps.eosdis.nasa.gov/
storm/Analysis.jsp](http://storm.pps.eosdis.nasa.gov/storm/Analysis.jsp)



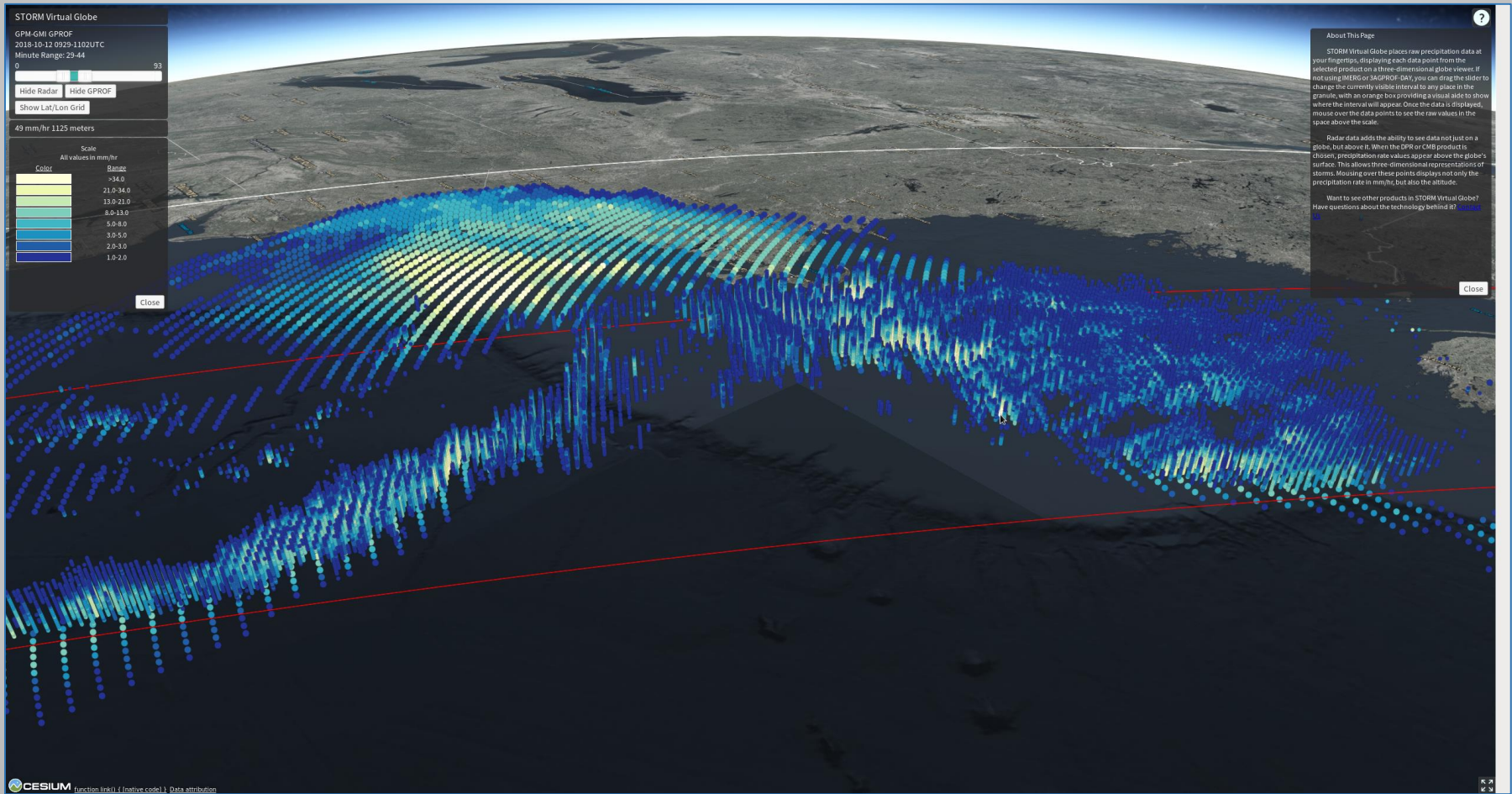


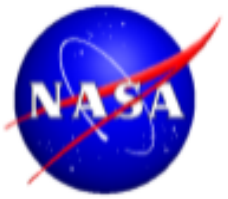
[storm.pps.eosdis.nasa.gov/ storm/Analysis.jsp](http://storm.pps.eosdis.nasa.gov/storm/Analysis.jsp)





[storm.pps.eosdis.nasa.gov/ storm/Analysis.jsp](http://storm.pps.eosdis.nasa.gov/storm/Analysis.jsp)





[storm.pps.eosdis.nasa.gov/ storm/Analysis.jsp](http://storm.pps.eosdis.nasa.gov/storm/Analysis.jsp)



Submit Order Based on Criteria:

Registered Email: Don't have a PPS Registered Email? [Register Here!](#)

Order All Granules With:

**All granules will be geographically subset to the scans within the specified domain*



At the bottom of the page, users can create a geographically-subset order for all files meeting a statistical threshold. Here we only want granules with maximum precipitation rate greater than 50 (mm/hr).

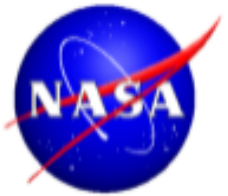
Request Submitted! Order Number: 008



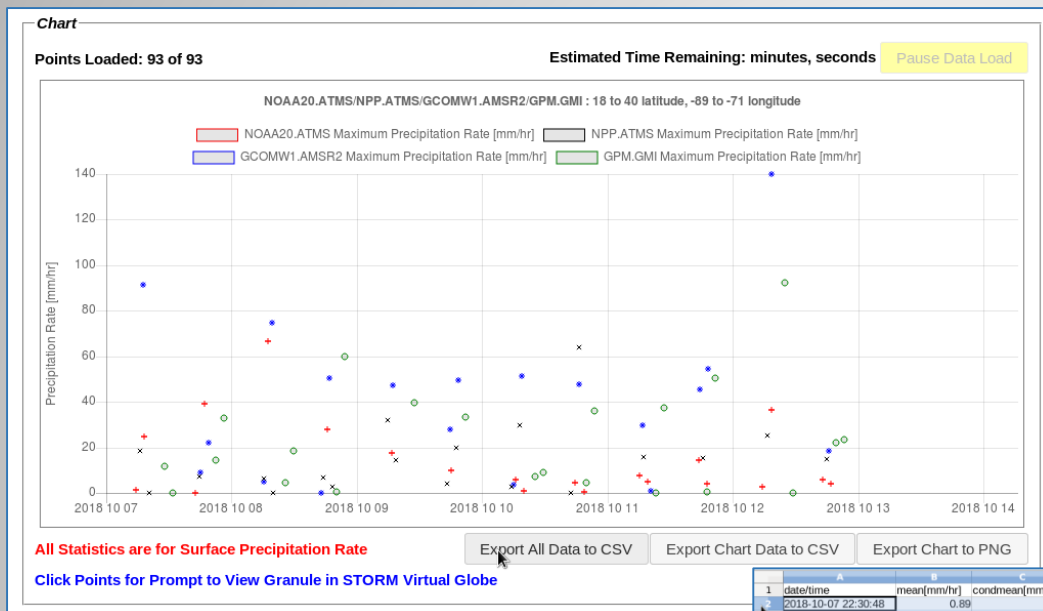
Index of <ftp://matthew.r.lammers@nasa.gov@arthurhou.pps.eosdis.nasa.gov/gpmuser/matthew.r.lammers@nasa.gov/pgs/>

[Up to higher level directory](#)

Name	Size	Last Modified
File: 2A-CS-89W40N71W18N.GCOMW1.AMSR2.GPROF2017v1.20181007-...	4591 KB	10/29/18 5:21:00 PM EDT
File: 2A-CS-89W40N71W18N.GCOMW1.AMSR2.GPROF2017v1.20181008-...	4334 KB	10/29/18 5:21:00 PM EDT
File: 2A-CS-89W40N71W18N.GCOMW1.AMSR2.GPROF2017v1.20181008-...	4434 KB	10/29/18 5:21:00 PM EDT
File: 2A-CS-89W40N71W18N.GCOMW1.AMSR2.GPROF2017v1.20181010-...	4666 KB	10/29/18 5:21:00 PM EDT
File: 2A-CS-89W40N71W18N.GCOMW1.AMSR2.GPROF2017v1.20181011-...	3983 KB	10/29/18 5:21:00 PM EDT
File: 2A-CS-89W40N71W18N.GCOMW1.AMSR2.GPROF2017v1.20181012-...	4452 KB	10/29/18 5:21:00 PM EDT
File: 2A-CS-89W40N71W18N.GPM.GMI.GPROF2017v1.20181008-S21361-...	1566 KB	10/29/18 5:21:00 PM EDT
File: 2A-CS-89W40N71W18N.GPM.GMI.GPROF2017v1.20181011-S20350-...	1375 KB	10/29/18 5:21:00 PM EDT
File: 2A-CS-89W40N71W18N.GPM.GMI.GPROF2017v1.20181012-S09572-...	1839 KB	10/29/18 5:21:00 PM EDT
File: 2A-CS-89W40N71W18N.NOAA20.ATMS.GPROF2017v2.20181008-S0-...	702 KB	10/29/18 5:21:00 PM EDT
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If you just want to work with the statistical data, you can do that too! Export all the data (or just the currently plotted data) to CSV and put it in your favorite spreadsheet...or your programming language

1	date/time	mean(mm/hr)	condmean(mm/hr)	median(mm/hr)	max(mm/hr)	std(mm/hr)	var(mm/hr)	perc[%]	count[number]	granule
1	2018-10-07 22:30:48	0.89	1.903	0.07	33.08	2.875	8.265	46.38	54642A.GPM.GMI.GPROF2017v1.20181007-S212837-E230111.026186.V05A.HDF5	
2	2018-10-08 21:36:22	0.888	2.47	0	59.82	2.902	8.42	35.78	275942A.GPM.GMI.GPROF2017v1.20181008-S203722-E220956.026201.V05A.HDF5	
3	2018-10-07 19:41:54	0.685	1.425	0.068	22.21	1.422	2.022	47.77	30962A.GCOMW1.AMSR2.GPROF2017v1.20181007-S191339-E205231.033993.V05A.HDF5	
4	2018-10-09 19:29:01	0.67	2.111	0	49.62	2.977	8.86	31.47	254952A.GCOMW1.AMSR2.GPROF2017v1.20181009-S190117-E204009.034022.V05A.HDF5	
5	2018-10-08 07:46:47	0.647	3.088	0	74.65	3.853	14.842	20.81	545722A.GCOMW1.AMSR2.GPROF2017v1.20181008-S064559-E062442.034000.V05A.HDF5	
6	2018-10-10 18:38:26	0.578	1.999	0	63.91	2.116	4.477	28.62	76312A.NPP.ATMS.GPROF2017v2.20181010-S181010-S181546-E195715.036027.V05D.HDF5	
7	2018-10-07 18:43:57	0.548	2.095	0	39.2	1.847	3.412	25.96	64162A.NOAA20.ATMS.GPROF2017v2.20181007-S182117-E200246.004589.V05A.HDF5	
8	2018-10-09 06:51:12	0.538	2.146	0	47.45	2.556	6.535	24.7	902042A.GCOMW1.AMSR2.GPROF2017v1.20181009-S055013-E27905.034014.V05A.HDF5	
9	2018-10-09 10:59:00	0.534	1.937	0	39.48	2.098	4.4	27.18	334962A.GPM.GMI.GPROF2017v1.20181009-S103037-E120312.026210.V05A.HDF5	
10	2018-10-10 07:34:27	0.5	1.889	0	51.25	1.917	3.674	26.08	707822A.GCOMW1.AMSR2.GPROF2017v1.20181010-S063328-E081220.034029.V05A.HDF5	
11	2018-10-11 10:49:55	0.482	1.853	0	37.56	1.608	2.587	25.7	294922A.GPM.GMI.GPROF2017v1.20181011-S102042-E115316.026241.V05A.HDF5	
12	2018-10-08 06:59:56	0.476	2.452	0	66.41	2.362	5.581	19.32	91932A.NOAA20.ATMS.GPROF2017v2.20181008-S061146-E075315.004596.V05A.HDF5	
13	2018-10-09 18:57:30	0.475	1.467	0	19.79	1.366	1.866	32.02	39952A.NPP.ATMS.GPROF2017v2.20181009-S183448-E201617.036013.V05D.HDF5	
14	2018-10-08 18:45:40	0.453	2.203	0	50.25	1.976	3.906	20.37	874102A.GCOMW1.AMSR2.GPROF2017v1.20181008-S181801-E195653.034007.V05A.HDF5	
15	2018-10-08 18:24:55	0.443	2.053	0	27.72	1.591	2.531	21.39	94562A.NOAA20.ATMS.GPROF2017v2.20181008-S180215-E194344.004603.V05A.HDF5	
16	2018-10-10 07:13:25	0.443	1.745	0	29.63	1.455	2.118	25.03	70552A.NPP.ATMS.GPROF2017v2.20181010-S062517-E080646.036020.V05D.HDF5	
17	2018-10-10 18:33:18	0.384	1.78	0	47.92	1.481	2.193	21.21	1061272A.GCOMW1.AMSR2.GPROF2017v1.20181010-S180539-E194431.034036.V05A.HDF5	
18	2018-10-12 21:22:10	0.369	2.734	0	23.28	1.772	3.14	13.5	3262A.GPM.GMI.GPROF2017v1.20181012-S201731-E215005.026263.V05A.HDF5	
19	2018-10-11 17:38:51	0.348	1.599	0	45.28	1.383	1.913	21.4	37872A.GCOMW1.AMSR2.GPROF2017v1.20181011-S171001-E184853.034050.V05A.HDF5	
20	2018-10-11 17:28:14	0.343	1.624	0	14.5	1.303	1.699	20.24	35872A.NOAA20.ATMS.GPROF2017v2.20181011-S170510-E184638.004645.V05A.HDF5	
21	2018-10-09 05:51:31	0.334	1.631	0	31.86	1.513	2.29	19.95	98942A.NPP.ATMS.GPROF2017v2.20181009-S050249-E084418.036005.V05D.HDF5	
22	2018-10-12 09:57:48	0.324	1.435	0	92.29	1.865	3.478	22.26	304682A.GPM.GMI.GPROF2017v1.20181012-S092927-E110201.026256.V05A.HDF5	
23	2018-10-09 20:44:06	0.317	1.533	0	33.39	1.304	1.701	20.37	324522A.GPM.GMI.GPROF2017v1.20181009-S194608-E211842.026216.V05A.HDF5	
24	2018-10-11 07:44:18	0.301	1.984	0	4.78	0.832	0.692	15.07	14132A.NOAA20.ATMS.GPROF2017v2.20181011-S065610-E083739.004639.V05A.HDF5	
25	2018-10-07 07:18:56	0.299	2.545	0	24.61	1.472	2.167	11.65	57612A.NOAA20.ATMS.GPROF2017v2.20181007-S063048-E081221.004582.V05A.HDF5	
26	2018-10-07 07:03:34	0.284	2.091	0	91.5	2.068	4.277	13.4	1069622A.GCOMW1.AMSR2.GPROF2017v1.20181007-S060235-E074127.033985.V05A.HDF5	
27	2018-10-12 07:22:05	0.281	1.836	0	139.78	1.822	3.318	15.08	881812A.GCOMW1.AMSR2.GPROF2017v1.20181012-S062106-E075958.034058.V05A.HDF5	
28	2018-10-11 06:54:29	0.279	1.446	0	15.75	1.013	1.026	18.66	98942A.NPP.ATMS.GPROF2017v2.20181011-S060615-E074744.036015.V05D.HDF5	
29	2018-10-11 18:19:24	0.263	1.935	0	15.44	1.114	1.242	13.39	100772A.NPP.ATMS.GPROF2017v2.20181011-S175644-E193813.036041.V05D.HDF5	
30	2018-10-09 06:41:06	0.261	1.249	0	17.54	1.071	1.148	20.35	101452A.NOAA20.ATMS.GPROF2017v2.20181009-S055244-E073413.004610.V05A.HDF5	
31	2018-10-09 07:32:27	0.244	1.155	0	14.52	0.994	0.989	20.8	33852A.NPP.ATMS.GPROF2017v2.20181009-S064419-E082548.036006.V05D.HDF5	
32	2018-10-12 06:35:39	0.231	1.421	0	25.33	1.157	1.34	15.86	95832A.NPP.ATMS.GPROF2017v2.20181012-S064713-E072842.036048.V05D.HDF5	
33	2018-10-09 18:05:59	0.221	1.028	0	10.11	0.735	0.54	20.88	100702A.NOAA20.ATMS.GPROF2017v2.20181009-S174313-E192442.004617.V05A.HDF5	
34	2018-10-07 06:29:23	0.212	1.505	0	18.51	1.169	1.366	13.92	87652A.NPP.ATMS.GPROF2017v2.20181007-S054053-E072222.035977.V05D.HDF5	
35	2018-10-12 17:10:50	0.21	1.815	0	5.69	0.847	0.718	11.25	8892A.NOAA20.ATMS.GPROF2017v2.20181012-S164608-E182737.004659.V05A.HDF5	
36	2018-10-09 17:50:27	0.206	1.111	0	27.82	0.831	0.691	18.14	547172A.GCOMW1.AMSR2.GPROF2017v1.20181009-S172224-E190116.034021.V05A.HDF5	
37	2018-10-10 11:44:19	0.195	0.861	0	8.88	0.593	0.351	22.45	73842A.GPM.GMI.GPROF2017v1.20181010-S11158-E124432.026226.V05A.HDF5	
38	2018-10-10 05:36:27	0.174	0.453	0	2.65	0.461	0.213	37.84	372A.NPP.ATMS.GPROF2017v2.20181010-S044347-E062516.036019.V05D.HDF5	
39	2018-10-10 17:47:05	0.17	0.788	0	4.28	0.486	0.236	21.29	72612A.NOAA20.ATMS.GPROF2017v2.20181010-S172411-E190540.004631.V05A.HDF5	
40	2018-10-10 08:03:20	0.166	0.387	0	0.96	0.238	0.057	42.54	1342A.NOAA20.ATMS.GPROF2017v2.20181010-S071512-E085641.004625.V05A.HDF5	
41	2018-10-11 06:38:53	0.137	0.616	0	29.85	0.569	0.324	21.01	701202A.GCOMW1.AMSR2.GPROF2017v1.20181011-S053750-E071642.034043.V05A.HDF5	
42	2018-10-10 10:07:44	0.134	0.649	0	7.37	0.463	0.214	19.01	152432A.GPM.GMI.GPROF2017v1.20181010-S093923-E11157.026225.V05A.HDF5	



Wrap Up



Why STORM Swath-Based Analysis Tool?

Do you use Level 2 precipitation data?
Are you interested in a specific region?
Do you want to compare instruments?

This tool can handle all of those and more!

matthew.r.lammers@nasa.gov

storm.pps.eosdis.nasa.gov/storm/Analysis.jsp