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# **NBS monthly report - 2024 May**

**MET Norway - NBS team**

**Oct 17, 2024**



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## The NBS project

The European Space Agency (ESA) is in charge for the distribution of data from the Sentinel satellite constellation. In order to maintain a reliable and sustainable data hub, the creation and operation of multiples data hubs is necessary. With the purpose of keeping and maintaining a reliable and online source of data from the ESA Sentinel constellation for an Area Of Interest (AOI) covering Norway, the Norwegian Space Agency (NOSA) funded the National Bakke Segment (NBS) project. The map below is indicating the AOI in red.



Therefore, MET Norway was contracted for the operation of the NBS data. The NBS is implemented as a part of the operational infrastructure at MET Norway. As so it follows the normal procedures for planning, implementation and testing, and operations. User access to the NBS is configured according to NOSA requirements. This includes the use of ESA's DHuS software for synchronization between ESA and user accessibility.

The present report is part of MET Norway duties to inform about its performance as operator of the NBS. Monthly reports will be created monthly to regularly communicate the status of MET Norway's NBS.

## The Sentinel products

The NBS project includes the management of the data received from Sentinel-1 (S1), Sentinel-2, Sentinel-3 (S3) and Sentinel-5p (S5p) satellites for the specified AOI. Each of the Sentinels has different operational modes for achieving images with different characteristics. Those images can have different processing levels. The products included in the DHR are Level-1 images for all the Sentinels except for Sentinel-2. For which Level-1 (S2L1C) and Level-2 (S2L2A) are both included in the NBS.

## BackEnds and FrontEnds

As operator of NBS, the source of Sentinel data is ESA; and ESA spreads the Sentinel data through the Copernicus Data Space Ecosystem (CDSE - [dataspace.copernicus.eu](https://dataspace.copernicus.eu)). CDSE is ESA's FrontEnd (FE) for Sentinel data accessibility. MET Norway uses the DHS software for synchronization and creation of other FrontEnds. During the synchronization

process a BackEnd (BE) is created. MET Norway is also running two FEs, [colhub.met.no](https://colhub.met.no) and [colhub-archive.met.no](https://colhub-archive.met.no). The colhub FE includes or will include all the products mentioned for Sentinel global products plus S3 marine products from Copernicus, S1 products from the Kongsberg Satellite Services (KSAT), and S2 Digital Elevation Model (DEM). The colhub-archive FE includes data from S1, S2L1C, S2L2A, S2DEM, S3, S5p products for the AOI. An important distinction between both FEs is that colhub-archive will always maintain available online all the products for the AOI.

In order to maintain an accountability on products synchronized from ESA's CDSE and available for users at the different FEs, it is necessary to understand the architecture of MET Norway's DHR.

## ACRONYMS

Here follows a formatted list of acronyms.

**BE** BackEnd

**DEM** Digital Elevation Model

**DHuS** Data Hub Software

**ESA** European Space Agency

**FE** FrontEnd

**KSAT** Kongsberg Satellite Services

**MET Norway** Meteorological Institute of Norway

**CDSE** Copernicus Data Space Ecosystem

**S1** Sentinel-1

**S2** Sentinel-2

**S2L1C** Sentinel-2 Level-1 C

**S2L2A** Sentinel-2 Level-2 A

**S3** Sentinel-3

**S5p** Sentinel-5p





## QUICK SUMMARY

The table below shows a short overview of the NBS performance operation during the last 30 days. The number of products are compared against CDSE. All columns represents the number of products in each portal except the last 3 columns. Those 3 columns represents the data flow from MET Norway to users through the portals where Volumes are measured in Tb.

Portals	S1	S2L1C	S2L2A	S3	S5p	Nb of users	Nb of products	Volume
<a href="http://colhub.met.no">colhub.met.no</a>	6900	32811	29643	27727	14333	20	60207	18.702
<a href="http://colhub-archive.met.no">colhub-archive.met.no</a>	6914	32320	14170	24525	14239	7	1120	0.612
<a href="http://dataspace.copernicus.eu">dataspace.copernicus.eu</a>	8956	40999	40999	32477	0			

Finally, the total amount of disk space dedicated to the NBS project, including either products in SAFE and NetCDF formats, represents 5572 Tb.

Due to tracking the data ingested and produced for the NBS project in the last year it is possible to forecast the upcoming need for disk space. As long as data flows follows the same pattern than last year, in 6 months the total disk space will grow until 5854 Tb; while in 12 months it is forecast to become 6877 Tb.



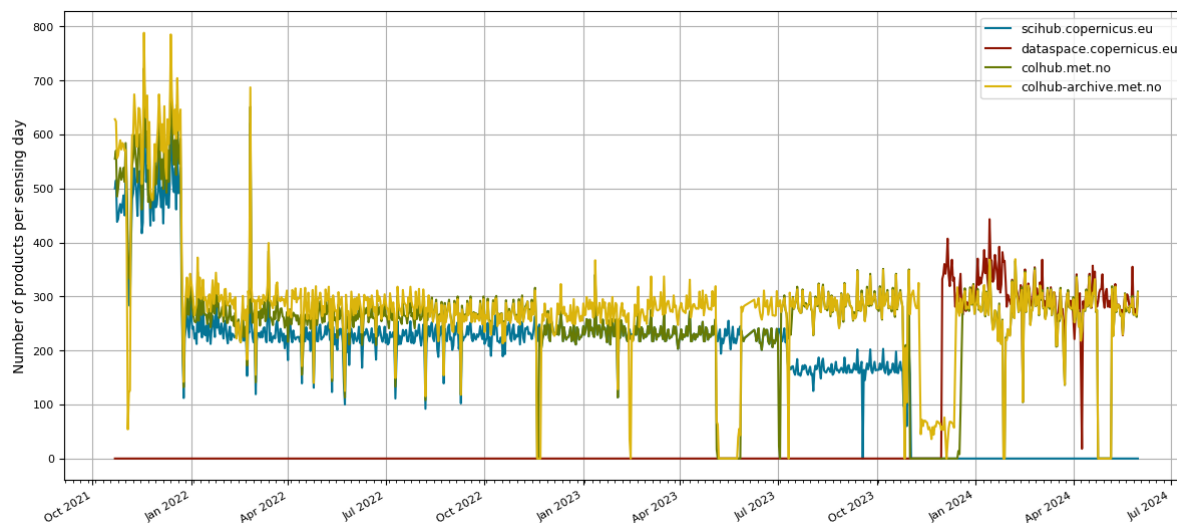
## SENTINEL-1 PRODUCTS

This section shows the performance of MET Norway for Sentinel-1 products. Both, an overall status and last month status are shown below.

Note that scihub is no longer in operation but is included for historical comparisons.

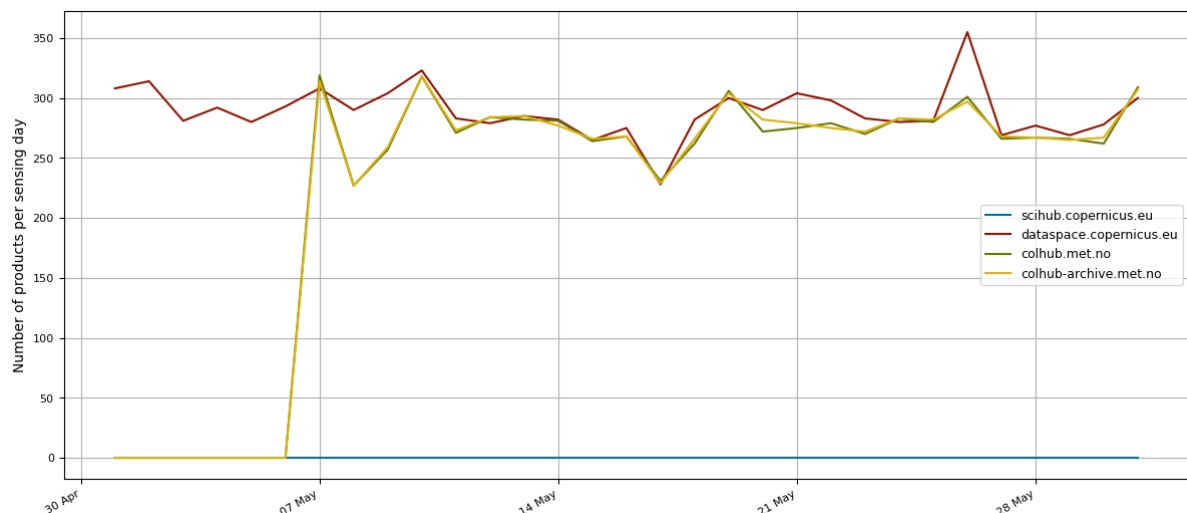
### 3.1 Products on portals

The following section contains an update on the Sentinel-1 products included in the different FEs and BEs.



The figure above represents the overall number of products present in the different BackEnds and FrontEnds per day for Sentinel-1.

While the figure below shows a zoom on the last month.



A table is also included for more detailed information.

	colhub.met.no	dataspace.copernicus.eu	colhub-archive.met.no
sensing_date			
2024-05-01	0.0	308.0	0.0
2024-05-02	0.0	314.0	0.0
2024-05-03	0.0	281.0	0.0
2024-05-04	0.0	292.0	0.0
2024-05-05	0.0	280.0	0.0
2024-05-06	0.0	293.0	0.0
2024-05-07	319.0	308.0	314.0
2024-05-08	227.0	290.0	227.0
2024-05-09	257.0	304.0	259.0
2024-05-10	318.0	323.0	318.0
2024-05-11	271.0	283.0	273.0
2024-05-12	284.0	279.0	284.0
2024-05-13	282.0	285.0	285.0
2024-05-14	281.0	282.0	277.0
2024-05-15	264.0	265.0	266.0
2024-05-16	268.0	275.0	268.0
2024-05-17	231.0	228.0	229.0
2024-05-18	262.0	282.0	266.0
2024-05-19	306.0	300.0	304.0
2024-05-20	272.0	290.0	282.0
2024-05-21	275.0	304.0	279.0
2024-05-22	279.0	298.0	275.0
2024-05-23	270.0	283.0	272.0
2024-05-24	283.0	280.0	283.0
2024-05-25	280.0	281.0	282.0
2024-05-26	301.0	355.0	297.0
2024-05-27	266.0	269.0	268.0
2024-05-28	267.0	277.0	267.0
2024-05-29	266.0	269.0	265.0
2024-05-30	262.0	278.0	267.0
2024-05-31	309.0	300.0	307.0

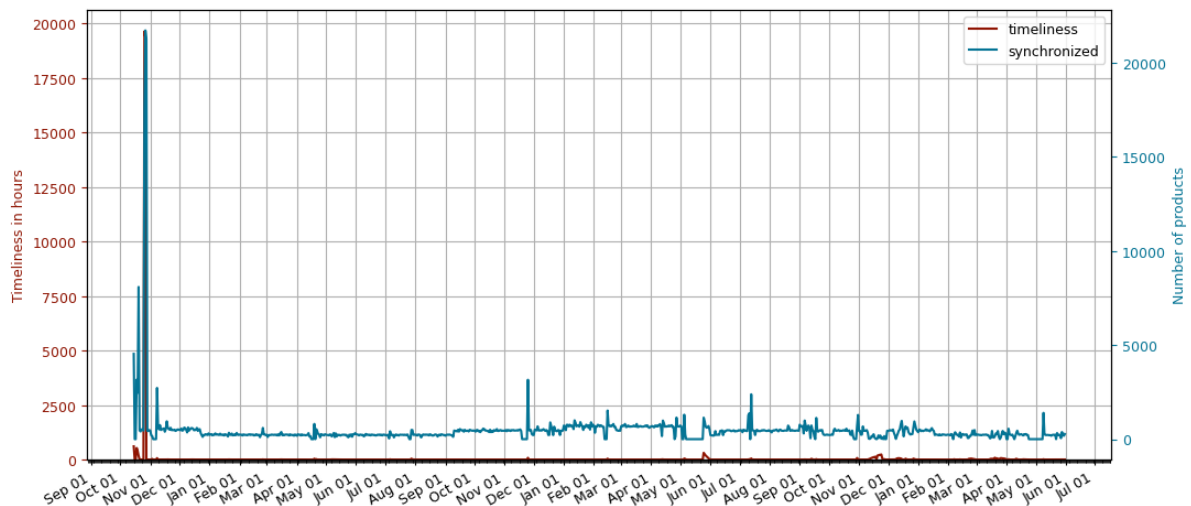
## 3.2 Missing products

The overall total number of Sentinel-1 products is 3708637. The number of overall Sentinel-1 missing products consists of 1011095 images. This represents that a 700% of the total was included in MET Norway DHR, while a -600% was not included.

The total number of Sentinel-1 products in May is 673843. The number of Sentinel-1 missing products during May consists of 581675 images. This represents that a 0% of the total was included in MET Norway DHR, while a 100% was not included.

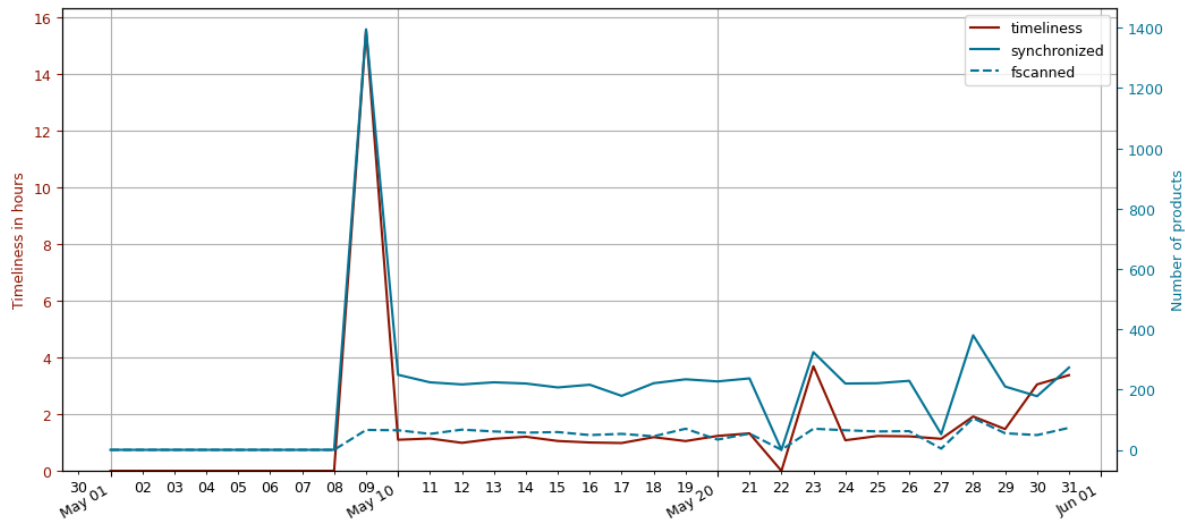
## 3.3 Data ingestion

In this section the time difference between sensing time and ingestion time at MET Norway is assessed. The ingestion time is the time at which a Sentinel product was downloaded to MET Norway BE and so, it is automatically available in at least one of the MET Norway FEs.



The figure above shows an overall status of the Sentinel-1 synchronization between ESA datahub and MET Norway BE. The number of products synchronized and deleted are represented by the dark and light blue lines respectively. The red line represents the timeliness.

Following previous sections, the graph below shows a zoom in the last month for the synchronization between ESA datahub and MET Norway BE.



A more detailed information is given in the table below where the last month is assessed for products synchronized from ESA.

day	size	number	timeliness
2024-05-01	0.000000	0	0.000000
2024-05-02	0.000000	0	0.000000
2024-05-03	0.000000	0	0.000000
2024-05-04	0.000000	0	0.000000
2024-05-05	0.000000	0	0.000000
2024-05-06	0.000000	0	0.000000
2024-05-07	0.000000	0	0.000000
2024-05-08	0.000000	0	0.000000
2024-05-09	3500.951387	1395	15.531466
2024-05-10	652.103247	249	1.096451
2024-05-11	496.573499	224	1.140952
2024-05-12	546.373336	217	0.988107
2024-05-13	541.457363	224	1.130226
2024-05-14	580.302068	220	1.203308
2024-05-15	518.745105	207	1.053663
2024-05-16	484.255747	216	1.000339
2024-05-17	495.702207	179	0.981831
2024-05-18	516.270146	221	1.187671
2024-05-19	580.352423	234	1.050602
2024-05-20	565.698634	227	1.232293
2024-05-21	600.157300	237	1.322313
2024-05-22	0.000000	0	0.000000
2024-05-23	778.001286	324	3.688883
2024-05-24	546.526858	220	1.079115
2024-05-25	540.992063	221	1.228614
2024-05-26	548.348868	229	1.218137
2024-05-27	155.758059	52	1.130238
2024-05-28	887.242524	380	1.916779
2024-05-29	544.581056	210	1.473106
2024-05-30	404.739242	178	3.047810
2024-05-31	685.331381	273	3.374730

It is also given extra information in the table below where the data are assessed for products synchronized from KSAT.

day	size	number	timeliness
2024-05-01	0.000000	0	0.000000
2024-05-02	0.000000	0	0.000000
2024-05-03	0.000000	0	0.000000
2024-05-04	0.000000	0	0.000000
2024-05-05	0.000000	0	0.000000
2024-05-06	0.000000	0	0.000000
2024-05-07	0.000000	0	0.000000
2024-05-08	0.000000	0	0.000000
2024-05-09	78.494789	66	0.825955
2024-05-10	77.846904	65	0.748602
2024-05-11	51.108983	53	0.610272
2024-05-12	80.337093	67	0.693469
2024-05-13	73.019697	61	0.769025
2024-05-14	55.259419	57	0.561582
2024-05-15	71.527338	59	0.673442
2024-05-16	47.414912	49	0.617147
2024-05-17	72.917371	53	0.704686
2024-05-18	47.180239	45	0.656783
2024-05-19	68.925765	70	0.643667
2024-05-20	12.933718	34	0.697522
2024-05-21	84.218287	54	1.711908
2024-05-22	0.000000	0	0.000000
2024-05-23	73.301493	70	1.478285
2024-05-24	73.559512	65	0.631281
2024-05-25	76.415447	61	0.793323
2024-05-26	67.803150	62	0.644534
2024-05-27	1.835082	4	0.756120
2024-05-28	114.606592	105	8.705088
2024-05-29	72.107785	55	0.679020
2024-05-30	54.251497	49	0.667018
2024-05-31	73.708420	73	0.676475





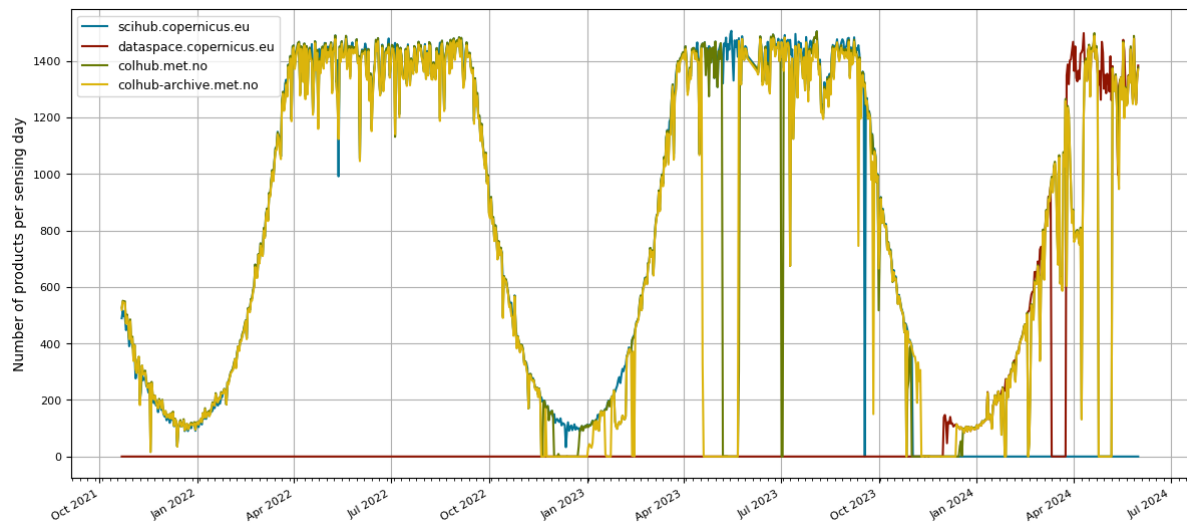
## SENTINEL-2 LEVEL-1C PRODUCTS

This section shows the performance of MET Norway for Sentinel-2 Level-1C products. Both, an overall status and last month status are shown below.

Note that scihub is no longer in operation but is included for historical comparisons.

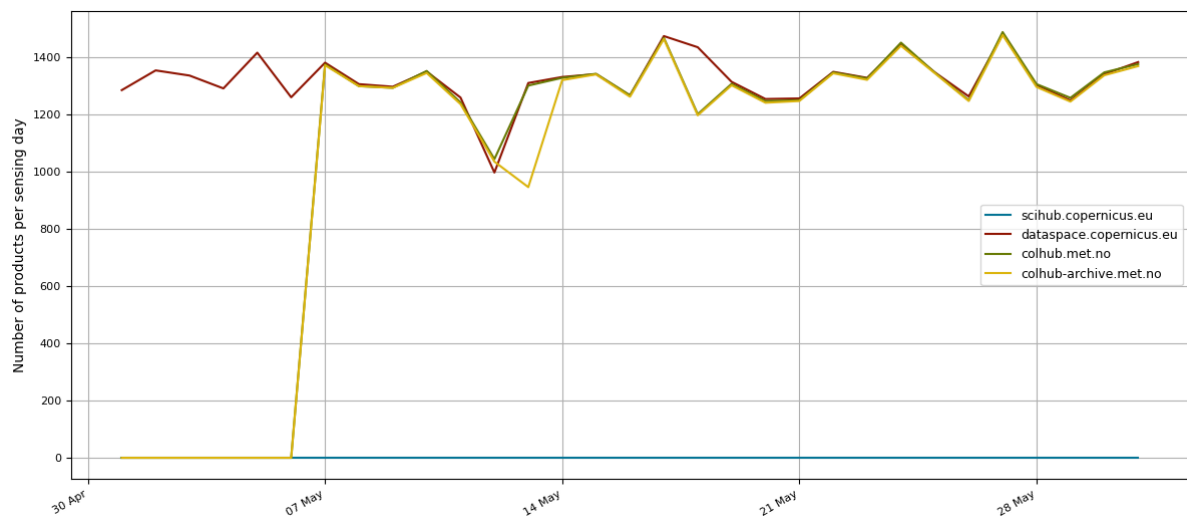
### 4.1 Products on portals

The following section contains an update on the Sentinel-2 Level-1C products included in the different FEs and BEs.



The figure above represents the overall number of products present in the different BackEnds and FrontEnds per day for Sentinel-2 Level-1C.

While the figure below shows a zoom on the last month.



A table is also included for more detailed information.

	colhub.met.no	dataspace.copernicus.eu	colhub-archive.met.no
sensing_date			
2024-05-01	0.0	1285.0	0.0
2024-05-02	0.0	1354.0	0.0
2024-05-03	0.0	1336.0	0.0
2024-05-04	0.0	1291.0	0.0
2024-05-05	0.0	1416.0	0.0
2024-05-06	0.0	1260.0	0.0
2024-05-07	1375.0	1381.0	1372.0
2024-05-08	1299.0	1306.0	1299.0
2024-05-09	1293.0	1297.0	1293.0
2024-05-10	1352.0	1350.0	1345.0
2024-05-11	1242.0	1259.0	1236.0
2024-05-12	1044.0	997.0	1035.0
2024-05-13	1301.0	1310.0	946.0
2024-05-14	1328.0	1331.0	1320.0
2024-05-15	1342.0	1341.0	1340.0
2024-05-16	1267.0	1266.0	1262.0
2024-05-17	1468.0	1474.0	1464.0
2024-05-18	1201.0	1435.0	1197.0
2024-05-19	1307.0	1314.0	1302.0
2024-05-20	1247.0	1254.0	1241.0
2024-05-21	1250.0	1256.0	1247.0
2024-05-22	1347.0	1349.0	1344.0
2024-05-23	1326.0	1328.0	1321.0
2024-05-24	1451.0	1443.0	1440.0
2024-05-25	1346.0	1347.0	1344.0
2024-05-26	1250.0	1263.0	1247.0
2024-05-27	1488.0	1480.0	1478.0
2024-05-28	1306.0	1303.0	1296.0
2024-05-29	1258.0	1249.0	1245.0
2024-05-30	1347.0	1341.0	1337.0
2024-05-31	1376.0	1383.0	1369.0

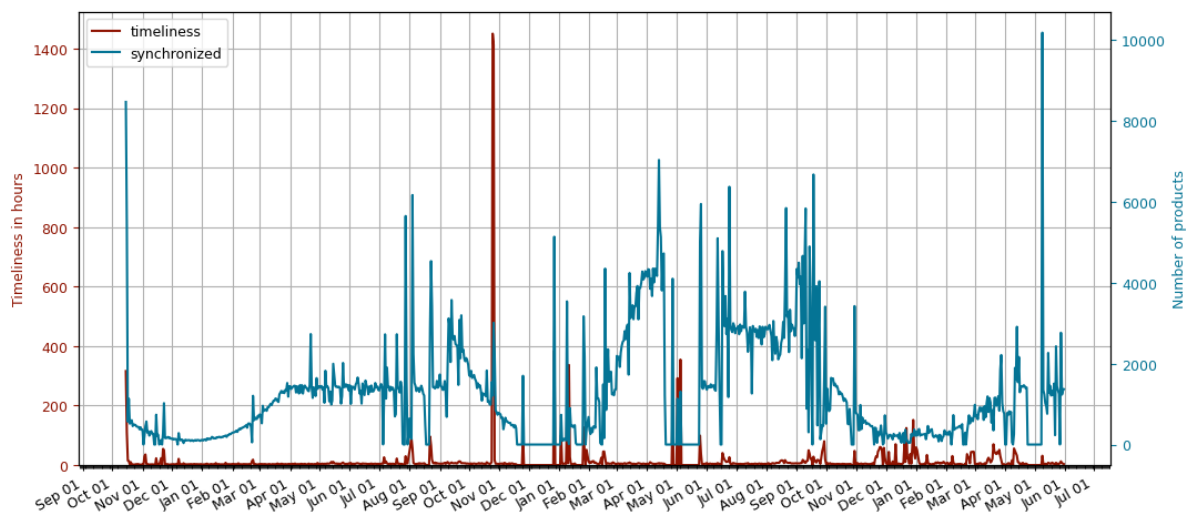
## 4.2 Missing products

The overall total number of Sentinel-2 Level-1C products is 3708637. The number of overall Sentinel-2 Level-1C missing products consists of 1011095 images. This represents that a 700% of the total was included in MET Norway DHR, while a -600% was not included.

The total number of Sentinel-2 Level-1C products in May is 673843. The number of Sentinel-2 Level-1C missing products during May consists of 581675 images. This represents that a 0% of the total was included in MET Norway DHR, while a 100% was not included.

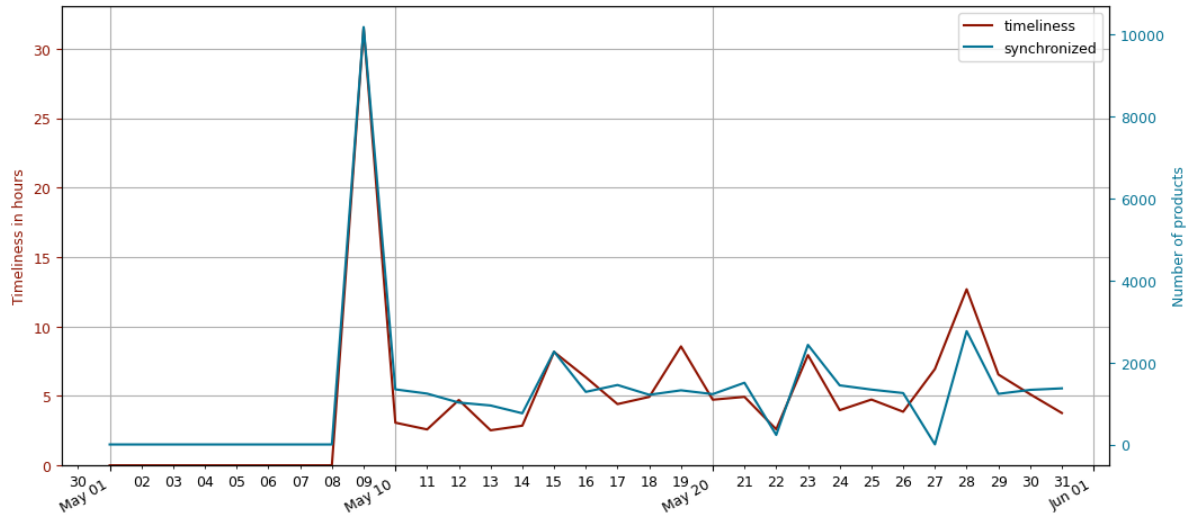
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2024-05-02	0.000000	0	0.000000
2024-05-03	0.000000	0	0.000000
2024-05-04	0.000000	0	0.000000
2024-05-05	0.000000	0	0.000000
2024-05-06	0.000000	0	0.000000
2024-05-07	0.000000	0	0.000000
2024-05-08	0.000000	0	0.000000
2024-05-09	4474.387499	10185	31.481481
2024-05-10	555.427518	1344	3.070019
2024-05-11	532.957424	1241	2.584895
2024-05-12	428.158478	1022	4.703918
2024-05-13	404.141954	951	2.523469
2024-05-14	335.665528	761	2.854188
2024-05-15	955.163178	2266	8.161782
2024-05-16	546.239836	1283	6.340109
2024-05-17	637.747697	1451	4.408668
2024-05-18	538.407863	1212	4.927852
2024-05-19	549.637975	1321	8.561771
2024-05-20	510.169077	1228	4.726286
2024-05-21	650.288276	1506	4.928473
2024-05-22	105.456096	232	2.594194
2024-05-23	1024.502230	2430	7.936422
2024-05-24	614.010121	1442	3.971466
2024-05-25	563.912774	1339	4.736013
2024-05-26	545.193248	1254	3.859118
2024-05-27	0.468605	2	6.931064
2024-05-28	1222.979728	2765	12.677534
2024-05-29	528.331102	1235	6.539423
2024-05-30	556.923037	1332	5.119615
2024-05-31	592.450176	1369	3.767972

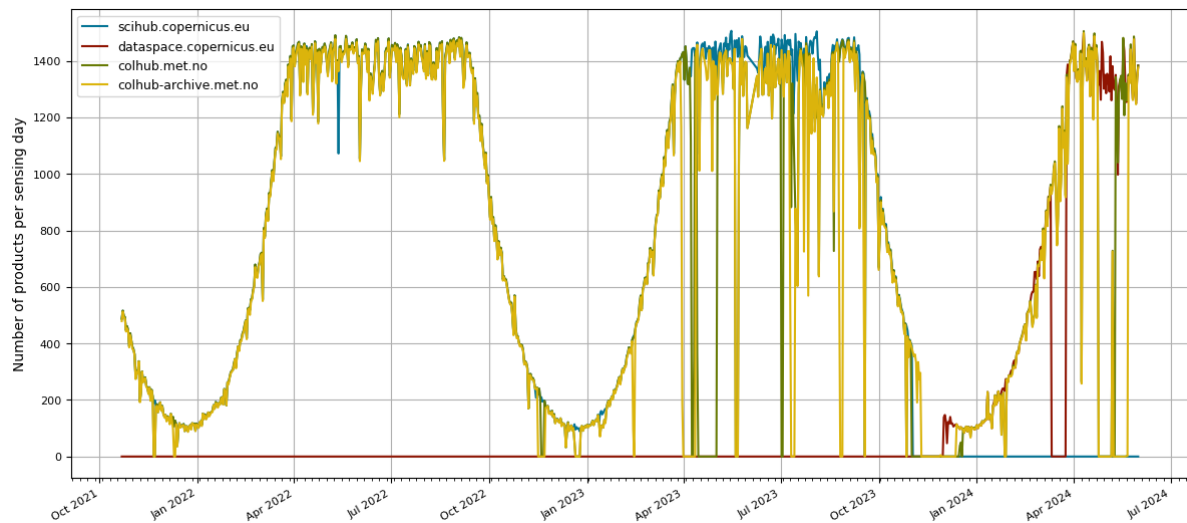
## SENTINEL-2 LEVEL-2A PRODUCTS

This section shows the performance of MET Norway for Sentinel-2 Level-2A products. Both, an overall status and last month status are shown below.

Note that scihub is no longer in operation but is included for historical comparisons.

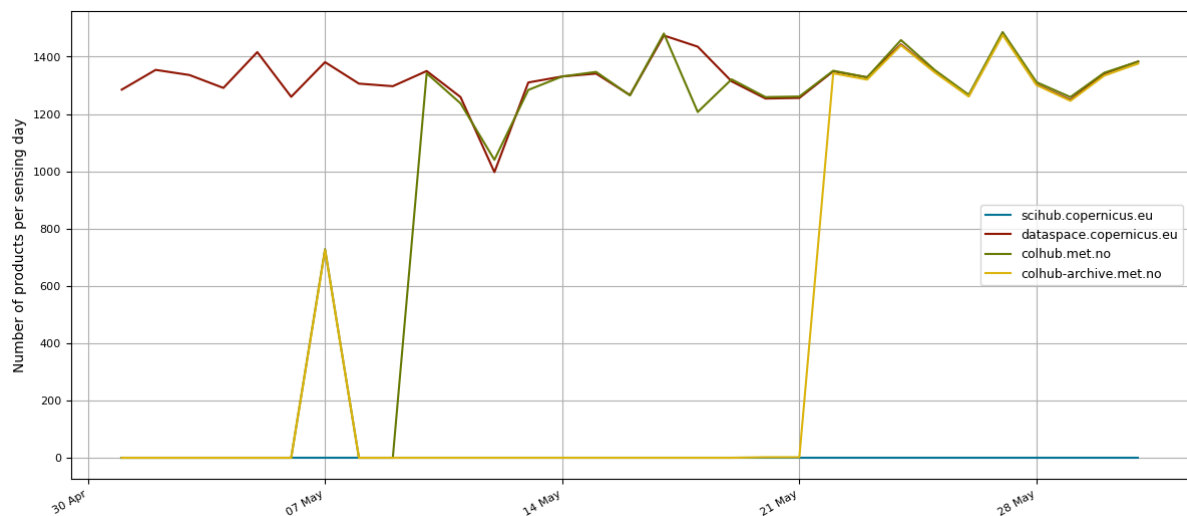
### 5.1 Products on portals

The following section contains an update on the Sentinel-2 Level-2A products included in the different FEs and BEs.



The figure above represents the overall number of products present in the different BackEnds and FrontEnds per day for Sentinel-2 Level-2A.

While the figure below shows a zoom on the last month.



A table is also included for more detailed information.

	colhub.met.no	dataspace.copernicus.eu	colhub-archive.met.no
sensing_date			
2024-05-01	0.0	1285.0	0.0
2024-05-02	0.0	1354.0	0.0
2024-05-03	0.0	1336.0	0.0
2024-05-04	0.0	1291.0	0.0
2024-05-05	0.0	1416.0	0.0
2024-05-06	0.0	1260.0	0.0
2024-05-07	728.0	1381.0	725.0
2024-05-08	0.0	1306.0	0.0
2024-05-09	0.0	1297.0	0.0
2024-05-10	1342.0	1350.0	0.0
2024-05-11	1237.0	1259.0	0.0
2024-05-12	1040.0	997.0	0.0
2024-05-13	1284.0	1310.0	0.0
2024-05-14	1331.0	1331.0	0.0
2024-05-15	1347.0	1341.0	0.0
2024-05-16	1265.0	1266.0	0.0
2024-05-17	1481.0	1474.0	0.0
2024-05-18	1207.0	1435.0	0.0
2024-05-19	1321.0	1314.0	0.0
2024-05-20	1259.0	1254.0	2.0
2024-05-21	1261.0	1256.0	2.0
2024-05-22	1351.0	1349.0	1342.0
2024-05-23	1328.0	1328.0	1320.0
2024-05-24	1458.0	1443.0	1440.0
2024-05-25	1353.0	1347.0	1345.0
2024-05-26	1267.0	1263.0	1261.0
2024-05-27	1486.0	1480.0	1476.0
2024-05-28	1311.0	1303.0	1301.0
2024-05-29	1259.0	1249.0	1246.0
2024-05-30	1344.0	1341.0	1334.0
2024-05-31	1383.0	1383.0	1376.0

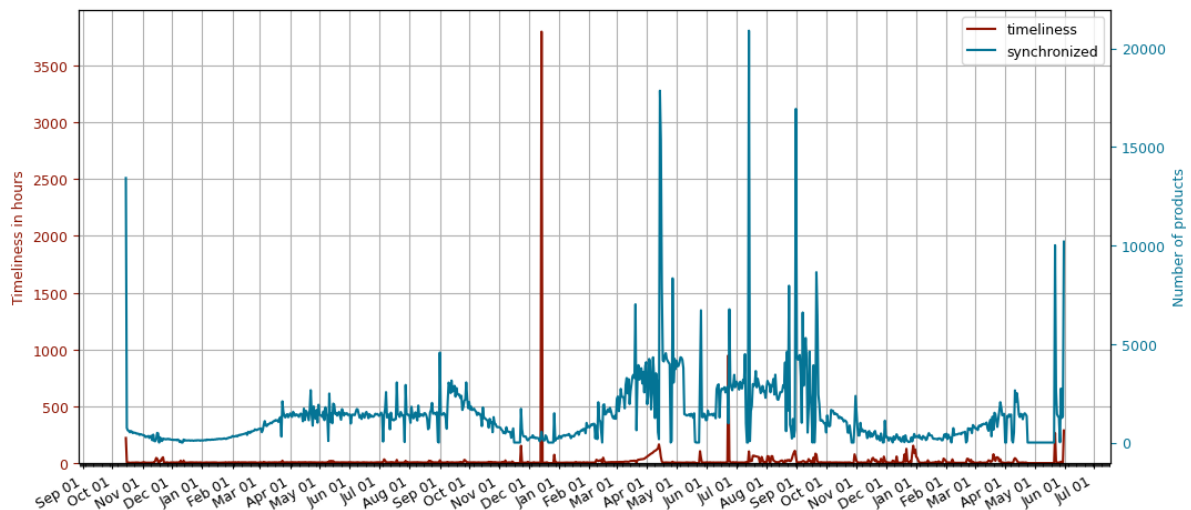
## 5.2 Missing products

The overall total number of Sentinel-2 Level-2A products is 3708637. The number of overall Sentinel-2 Level-2A missing products consists of 1011095 images. This represents that a 700% of the total was included in MET Norway DHR, while a -600% was not included.

The total number of Sentinel-2 level-2A products in May is 673843. The number of Sentinel-2 level-2A missing products during May consists of 581675 images. This represents that a 0% of the total was included in MET Norway DHR, while a 100% was not included.

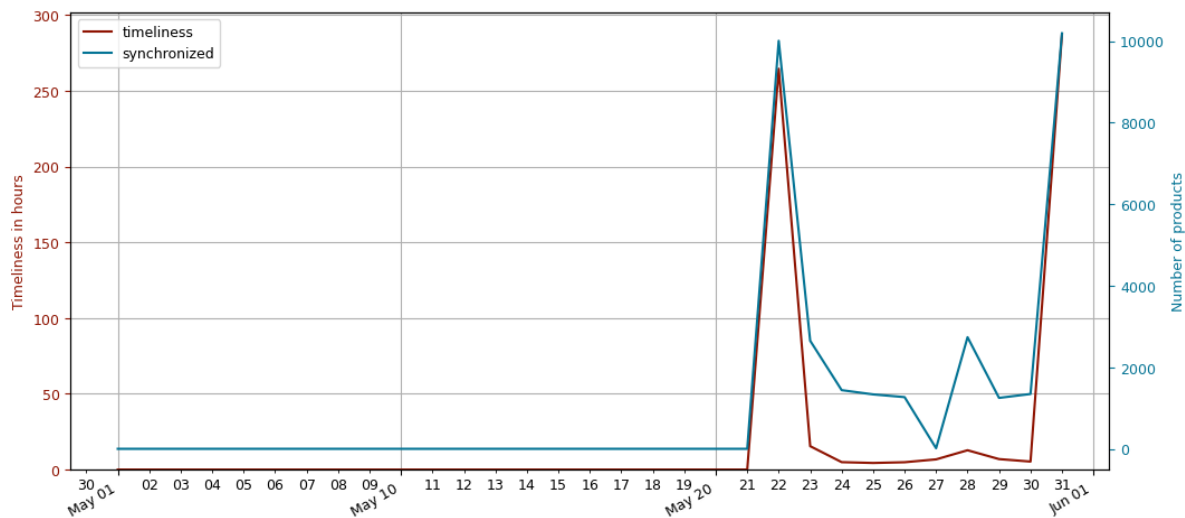
## 5.3 Data ingestion

In this section the time difference between sensing time and ingestion time at MET Norway is assessed. The ingestion time is the time at which a Sentinel product was downloaded to MET Norway BE and so, it is automatically available in at least one of the MET Norway FEs.



The figure above shows an overall status of the Sentinel-2 Level-2A synchronization between ESA datahub and MET Norway BE. The number of products synchronized and deleted are represented by the dark and light blue lines respectively. The red line represents the timeliness.

Following previous sections, the graph below shows a zoom in the last month for the synchronization between ESA datahub and MET Norway BE.



A more detailed information is given in the table below where the last month is assessed for products synchronized from ESA.

day	size	number	timeliness
2024-05-01	0.000000	0	0.000000
2024-05-02	0.000000	0	0.000000
2024-05-03	0.000000	0	0.000000
2024-05-04	0.000000	0	0.000000
2024-05-05	0.000000	0	0.000000
2024-05-06	0.000000	0	0.000000
2024-05-07	0.000000	0	0.000000
2024-05-08	0.000000	0	0.000000
2024-05-09	0.000000	0	0.000000
2024-05-10	0.000000	0	0.000000
2024-05-11	0.000000	0	0.000000
2024-05-12	0.000000	0	0.000000
2024-05-13	0.000000	0	0.000000
2024-05-14	0.000000	0	0.000000
2024-05-15	0.000000	0	0.000000
2024-05-16	0.000000	0	0.000000
2024-05-17	0.000000	0	0.000000
2024-05-18	0.000000	0	0.000000
2024-05-19	0.000000	0	0.000000
2024-05-20	0.000000	0	0.000000
2024-05-21	0.000000	0	0.000000
2024-05-22	5459.100352	10008	264.507141
2024-05-23	1448.298459	2651	15.459292
2024-05-24	781.429404	1439	4.914669
2024-05-25	722.228150	1335	4.367525
2024-05-26	701.531334	1268	4.859275
2024-05-27	9.210496	14	6.745651
2024-05-28	1556.529090	2738	12.765402
2024-05-29	681.788405	1249	6.931178
2024-05-30	726.037170	1345	5.297182
2024-05-31	5645.263564	10192	287.228989



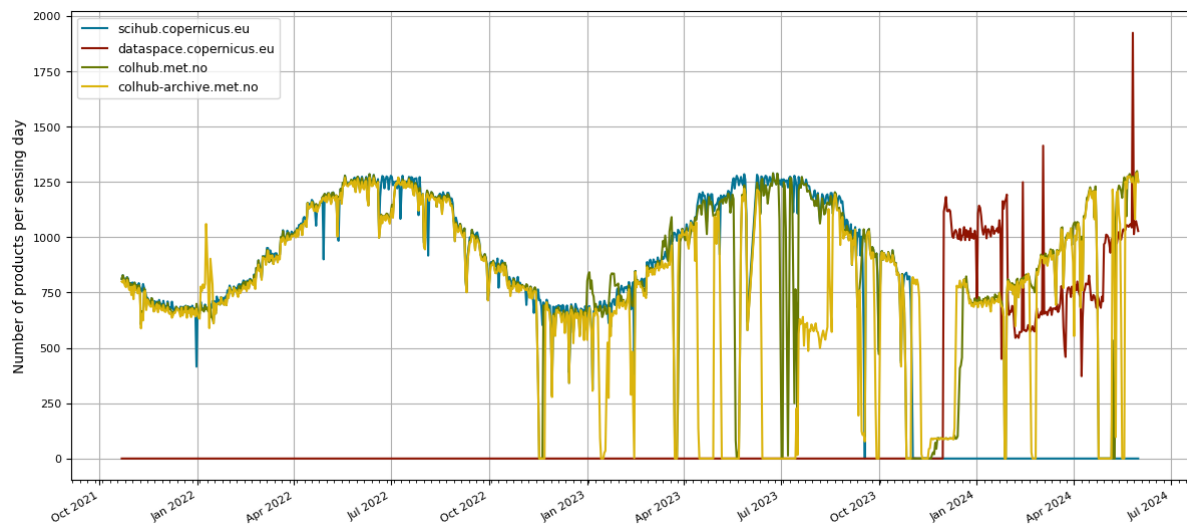
## SENTINEL-3 PRODUCTS

This section shows the performance of MET Norway for Sentinel-3 products. Both, an overall status and last month status are shown below.

Note that scihub is no longer in operation but is included for historical comparisons.

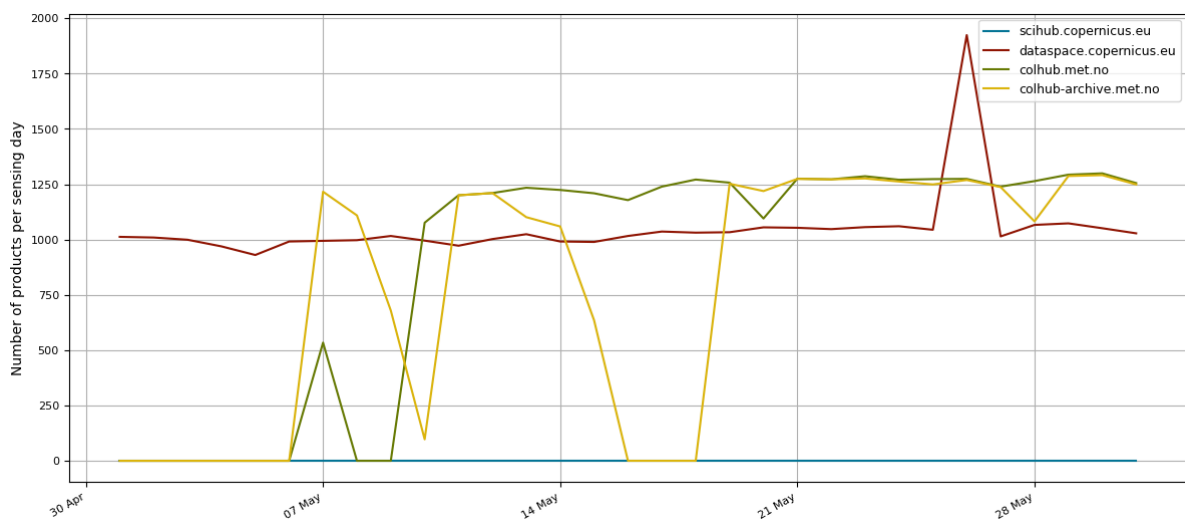
### 6.1 Products on portals

The following section contains an update on the Sentinel-3 products included in the different FEs and BEs.



The figure above represents the overall number of products present in the different BackEnds and FrontEnds per day for Sentinel-3.

While the figure below shows a zoom on the last month.



A table is also included for more detailed information.

	colhub.met.no	dataspace.copernicus.eu	colhub-archive.met.no
sensing_date			
2024-05-01	0.0	1012.0	0.0
2024-05-02	0.0	1009.0	0.0
2024-05-03	0.0	999.0	0.0
2024-05-04	0.0	969.0	0.0
2024-05-05	0.0	930.0	0.0
2024-05-06	0.0	991.0	0.0
2024-05-07	534.0	994.0	1216.0
2024-05-08	0.0	997.0	1109.0
2024-05-09	0.0	1016.0	679.0
2024-05-10	1076.0	995.0	97.0
2024-05-11	1200.0	972.0	1200.0
2024-05-12	1210.0	1002.0	1210.0
2024-05-13	1234.0	1024.0	1101.0
2024-05-14	1224.0	991.0	1059.0
2024-05-15	1209.0	989.0	635.0
2024-05-16	1178.0	1016.0	0.0
2024-05-17	1239.0	1036.0	0.0
2024-05-18	1271.0	1031.0	0.0
2024-05-19	1257.0	1033.0	1252.0
2024-05-20	1095.0	1055.0	1219.0
2024-05-21	1275.0	1053.0	1274.0
2024-05-22	1272.0	1047.0	1272.0
2024-05-23	1286.0	1056.0	1276.0
2024-05-24	1270.0	1060.0	1262.0
2024-05-25	1273.0	1044.0	1249.0
2024-05-26	1274.0	1924.0	1269.0
2024-05-27	1239.0	1014.0	1237.0
2024-05-28	1264.0	1066.0	1082.0
2024-05-29	1293.0	1073.0	1287.0
2024-05-30	1299.0	1051.0	1291.0
2024-05-31	1255.0	1028.0	1249.0

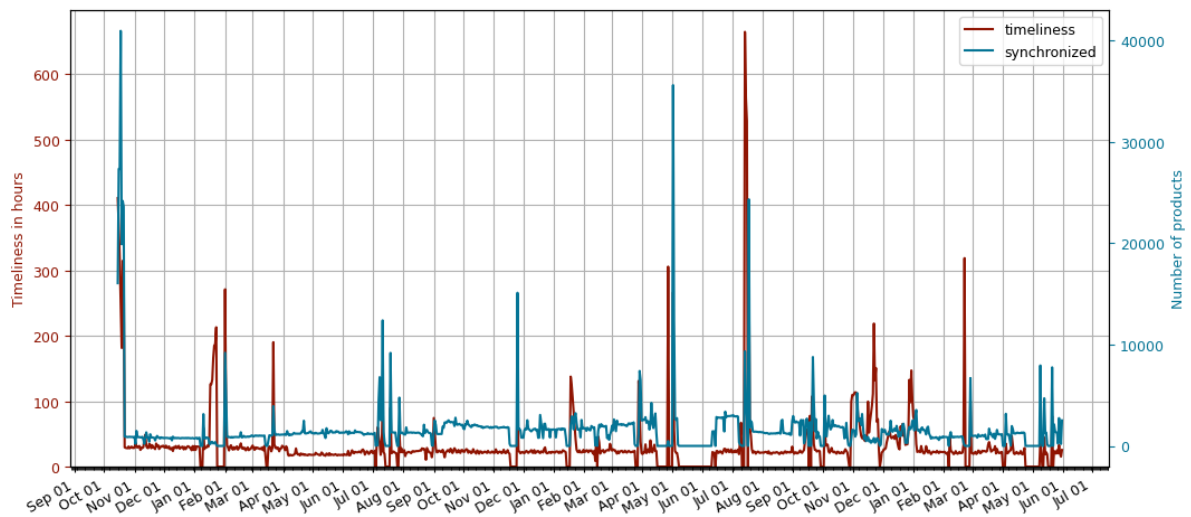
## 6.2 Missing products

The overall total number of Sentinel-3 products is 3708637. The number of overall Sentinel-3 missing products consists of 1011095 images. This represents that a 700% of the total was included in MET Norway DHR, while a -600% was not included.

The total number of Sentinel-3 products in May is 673843. The number of Sentinel-3 missing products during May consists of 581675 images. This represents that a 0% of the total was included in MET Norway DHR, while a 100% was not included.

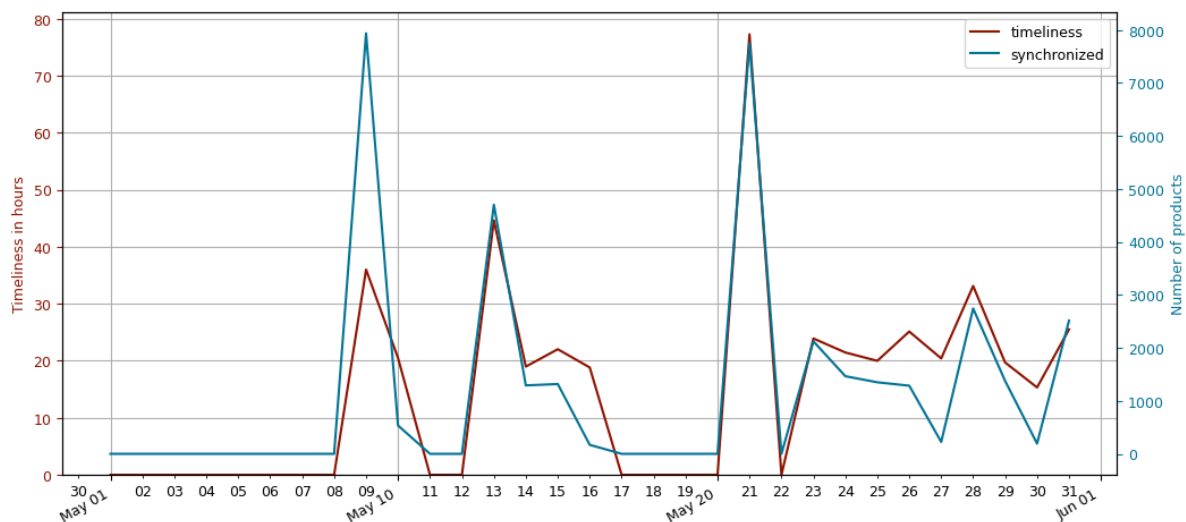
## 6.3 Data ingestion

In this section the time difference between sensing time and ingestion time at MET Norway is assessed. The ingestion time is the time at which a Sentinel product was downloaded to MET Norway BE and so, it is automatically available in at least one of the MET Norway FEs.



The figure above shows an overall status of the Sentinel-3 synchronization between ESA datahub and MET Norway BE. The number of products synchronized and deleted are represented by the dark and light blue lines respectively. The red line represents the timeliness.

Following previous sections, the graph below shows a zoom in the last month for the synchronization between ESA datahub and MET Norway BE.



A more detailed information is given in the table below where the last month is assessed for products synchronized from ESA.

day	size	number	timeliness
2024-05-01	0.000000	0	0.000000
2024-05-02	0.000000	0	0.000000
2024-05-03	0.000000	0	0.000000
2024-05-04	0.000000	0	0.000000
2024-05-05	0.000000	0	0.000000
2024-05-06	0.000000	0	0.000000
2024-05-07	0.000000	0	0.000000
2024-05-08	0.000000	0	0.000000
2024-05-09	2625.519546	7935	35.996406
2024-05-10	184.900259	535	20.498913
2024-05-11	0.000000	0	0.000000
2024-05-12	0.000000	0	0.000000
2024-05-13	1571.784903	4700	44.613683
2024-05-14	433.046979	1292	18.985444
2024-05-15	442.068777	1317	22.029685
2024-05-16	56.695609	170	18.830086
2024-05-17	0.000000	0	0.000000
2024-05-18	0.000000	0	0.000000
2024-05-19	0.000000	0	0.000000
2024-05-20	0.000000	0	0.000000
2024-05-21	2578.689197	7749	77.241681
2024-05-22	0.000000	0	0.000000
2024-05-23	692.938204	2123	23.913827
2024-05-24	479.449497	1465	21.459538
2024-05-25	451.729549	1350	19.993502
2024-05-26	426.058501	1286	25.130934
2024-05-27	82.147380	225	20.416738
2024-05-28	885.867263	2742	33.117468
2024-05-29	453.896469	1376	19.705939
2024-05-30	65.698878	194	15.325379
2024-05-31	842.967696	2514	25.511036

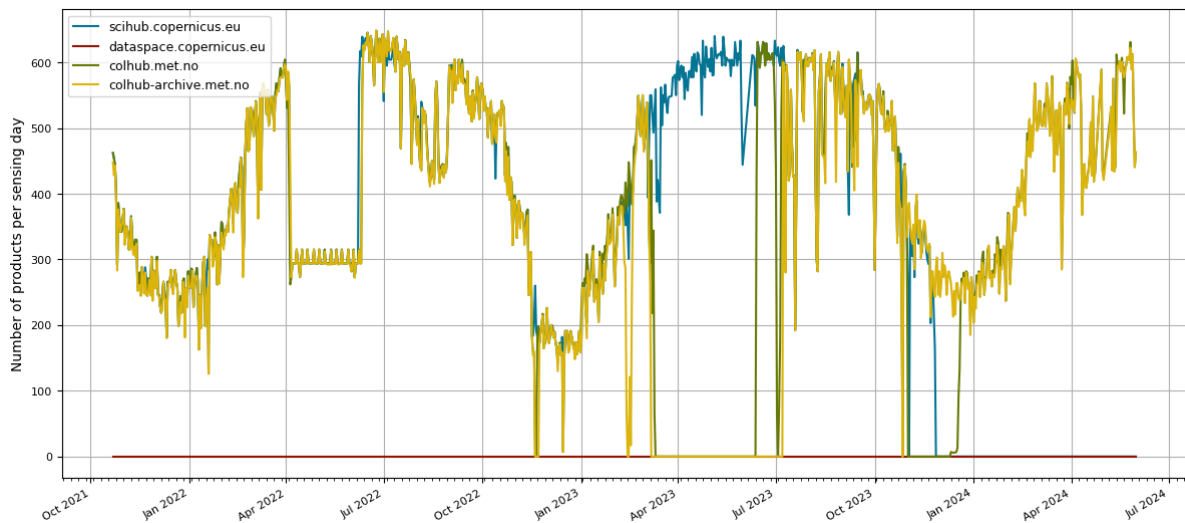
## SENTINEL-5P PRODUCTS

This section shows the performance of MET Norway for Sentinel-5p products. Both, an overall status and last month status are shown below.

Note that scihub is no longer in operation but is included for historical comparisons.

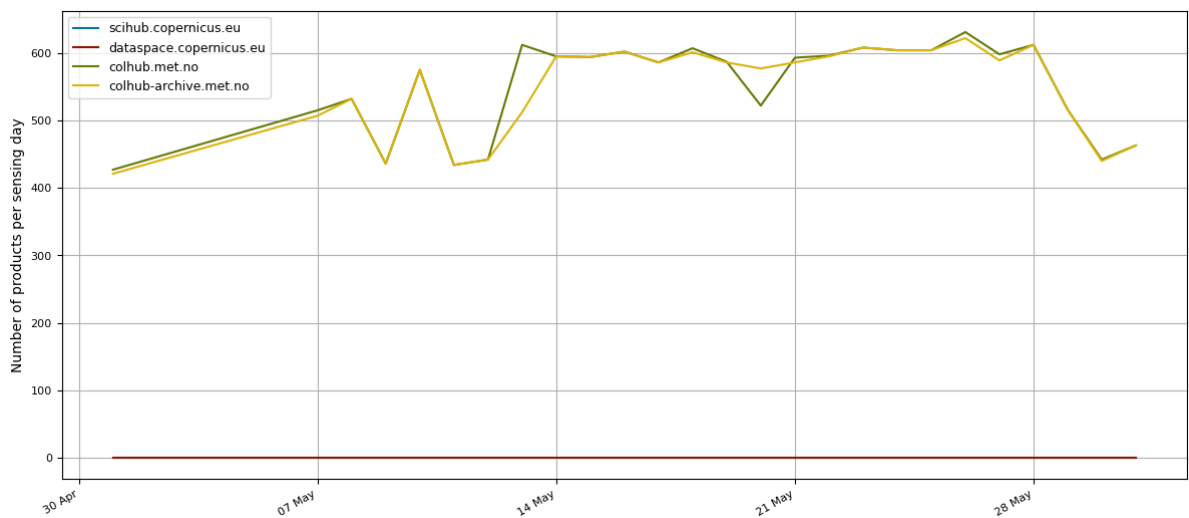
### 7.1 Products on portals

The following section contains an update on the Sentinel-5p products included in the different FEs and BEs.



The figure above represents the overall number of products present in the different BackEnds and FrontEnds per day for Sentinel-5p.

While the figure below shows a zoom on the last month.



A table is also included for more detailed information.

	colhub.met.no	dataspace.copernicus.eu	colhub-archive.met.no
sensing_date			
2024-05-01	427.0	0.0	421.0
2024-05-07	515.0	0.0	507.0
2024-05-08	532.0	0.0	532.0
2024-05-09	436.0	0.0	436.0
2024-05-10	575.0	0.0	575.0
2024-05-11	434.0	0.0	434.0
2024-05-12	442.0	0.0	442.0
2024-05-13	612.0	0.0	512.0
2024-05-14	595.0	0.0	595.0
2024-05-15	594.0	0.0	594.0
2024-05-16	602.0	0.0	602.0
2024-05-17	586.0	0.0	586.0
2024-05-18	607.0	0.0	601.0
2024-05-19	587.0	0.0	586.0
2024-05-20	522.0	0.0	577.0
2024-05-21	593.0	0.0	586.0
2024-05-22	596.0	0.0	595.0
2024-05-23	608.0	0.0	608.0
2024-05-24	604.0	0.0	604.0
2024-05-25	604.0	0.0	604.0
2024-05-26	631.0	0.0	622.0
2024-05-27	598.0	0.0	589.0
2024-05-28	612.0	0.0	612.0
2024-05-29	516.0	0.0	516.0
2024-05-30	442.0	0.0	440.0
2024-05-31	463.0	0.0	463.0

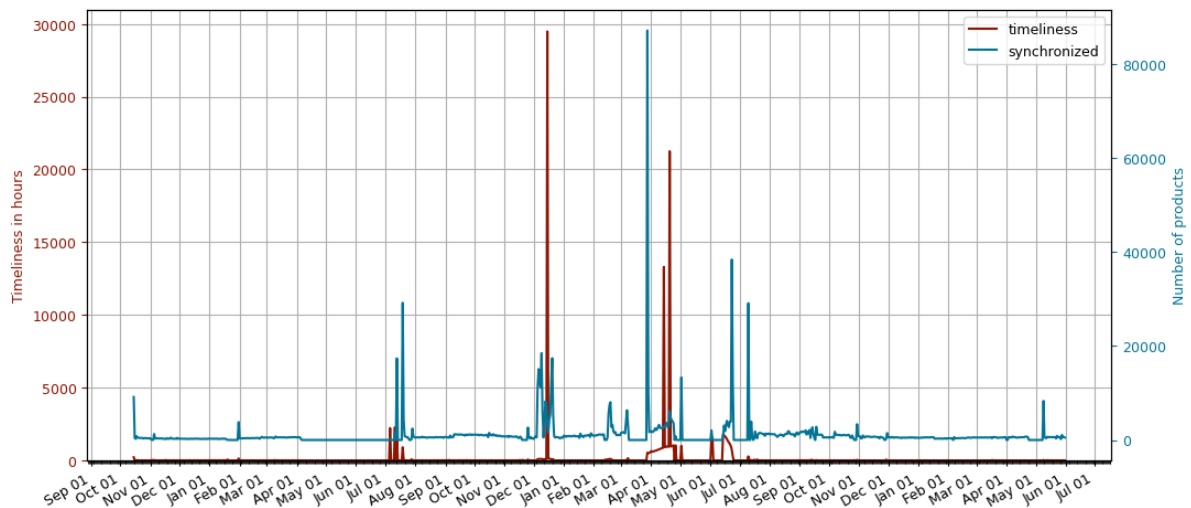
## 7.2 Missing products

The overall total number of Sentinel-5p products is 3708637. The number of overall Sentinel-5p missing products consists of 1011095 images. This represents that a 700% of the total was included in MET Norway DHR, while a -600% was not included.

The total number of Sentinel-5p products in May is 673843. The number of Sentinel-5p missing products during May consists of 581675 images. This represents that a 0% of the total was included in MET Norway DHR, while a 100% was not included.

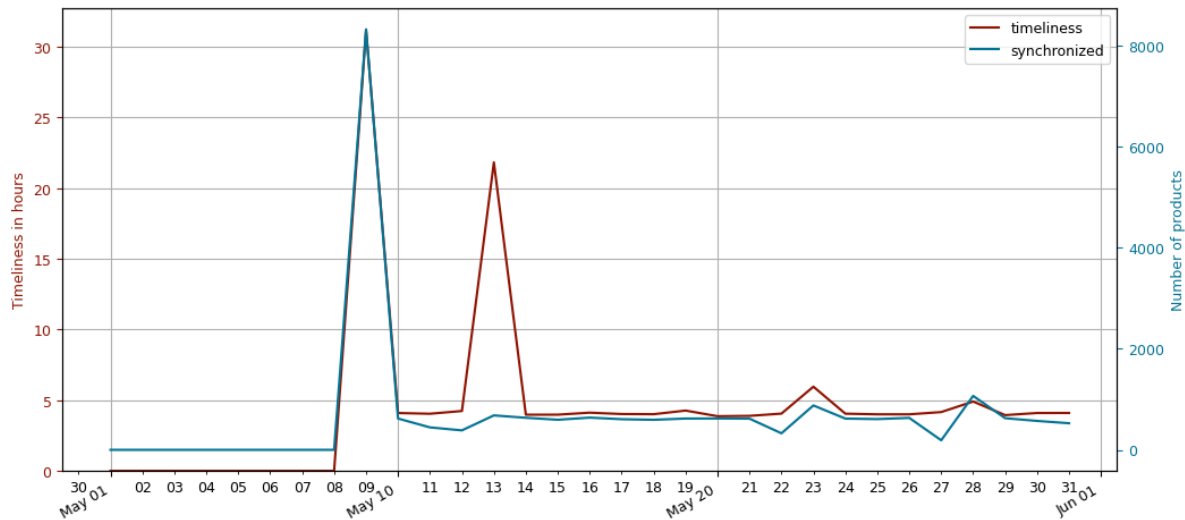
## 7.3 Data ingestion

In this section the time difference between sensing time and ingestion time at MET Norway is assessed. The ingestion time is the time at which a Sentinel product was downloaded to MET Norway BE and so, it is automatically available in at least one of the MET Norway FEs.



The figure above shows an overall status of the Sentinel-5p synchronization between ESA datahub and MET Norway BE. The number of products synchronized and deleted are represented by the dark and light blue lines respectively. The red line represents the timeliness.

Following previous sections, the graph below shows a zoom in the last month for the synchronization between ESA datahub and MET Norway BE.



A more detailed information is given in the table below where the last month are assessed for products synchronized from ESA.

day	size	number	timeliness
2024-05-01	0.000000	0	0.000000
2024-05-02	0.000000	0	0.000000
2024-05-03	0.000000	0	0.000000
2024-05-04	0.000000	0	0.000000
2024-05-05	0.000000	0	0.000000
2024-05-06	0.000000	0	0.000000
2024-05-07	0.000000	0	0.000000
2024-05-08	0.000000	0	0.000000
2024-05-09	6777.468614	8316	31.163792
2024-05-10	390.988879	619	4.092086
2024-05-11	215.435057	444	4.041229
2024-05-12	204.147886	385	4.235082
2024-05-13	594.580188	681	21.825427
2024-05-14	409.772300	634	3.973467
2024-05-15	380.017845	595	3.975941
2024-05-16	385.787978	637	4.117308
2024-05-17	381.861835	606	4.021078
2024-05-18	359.693168	594	4.008779
2024-05-19	407.235724	619	4.265154
2024-05-20	383.919990	620	3.866911
2024-05-21	408.554661	617	3.891187
2024-05-22	185.026183	327	4.049809
2024-05-23	602.274775	878	5.955917
2024-05-24	384.241050	618	4.045258
2024-05-25	384.309875	608	4.000534
2024-05-26	386.458318	632	4.000173
2024-05-27	108.285520	189	4.159466
2024-05-28	659.754415	1067	4.904533
2024-05-29	405.385267	626	3.943546
2024-05-30	367.429075	572	4.093575
2024-05-31	354.570345	526	4.096257

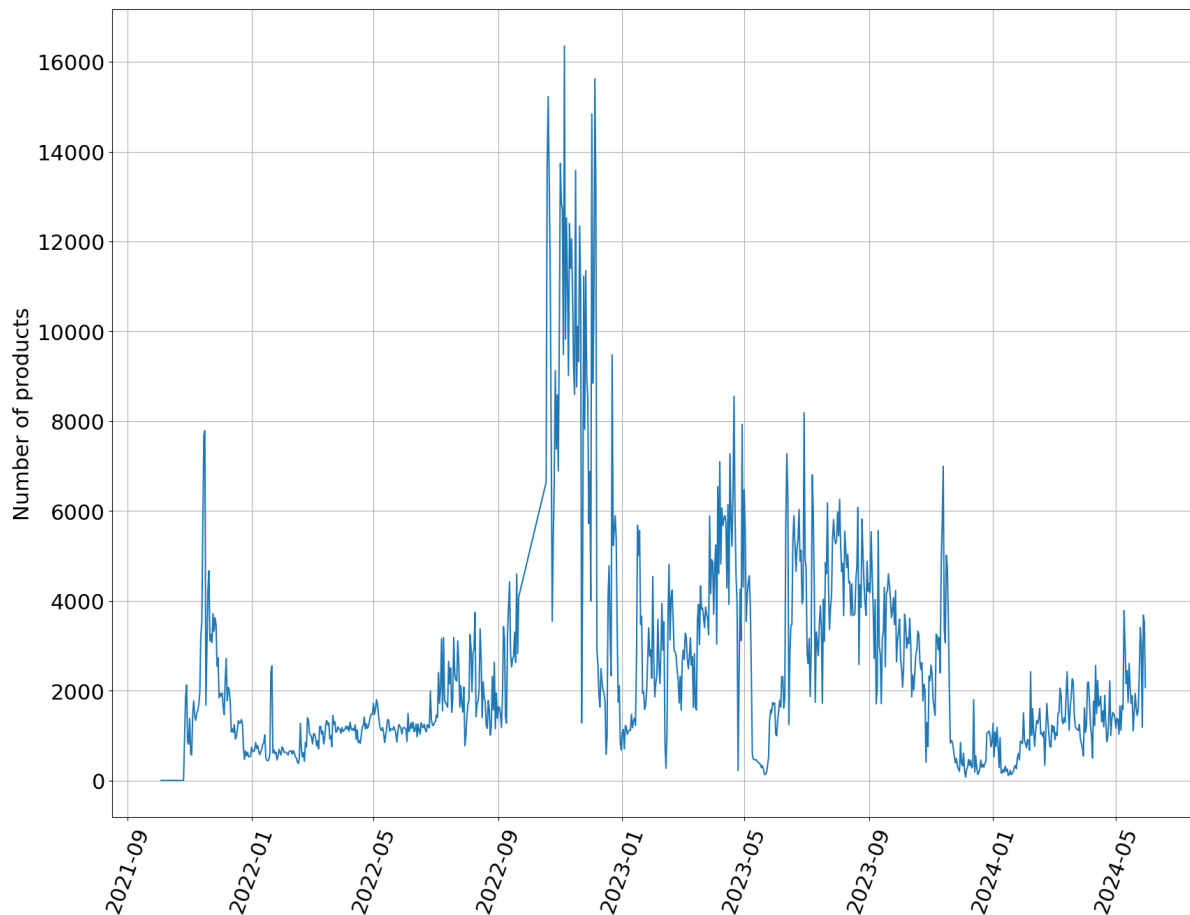


## MONITORING DATA DOWNLOADS FROM COLHUB PORTALS

In this section the performance of the FrontEnds is analyzed, for both [colhub.met.no](#) and [colhub-archive.met.no](#). The FEs performance is translated as user accessibility to the data which is one of the main goals for the project.

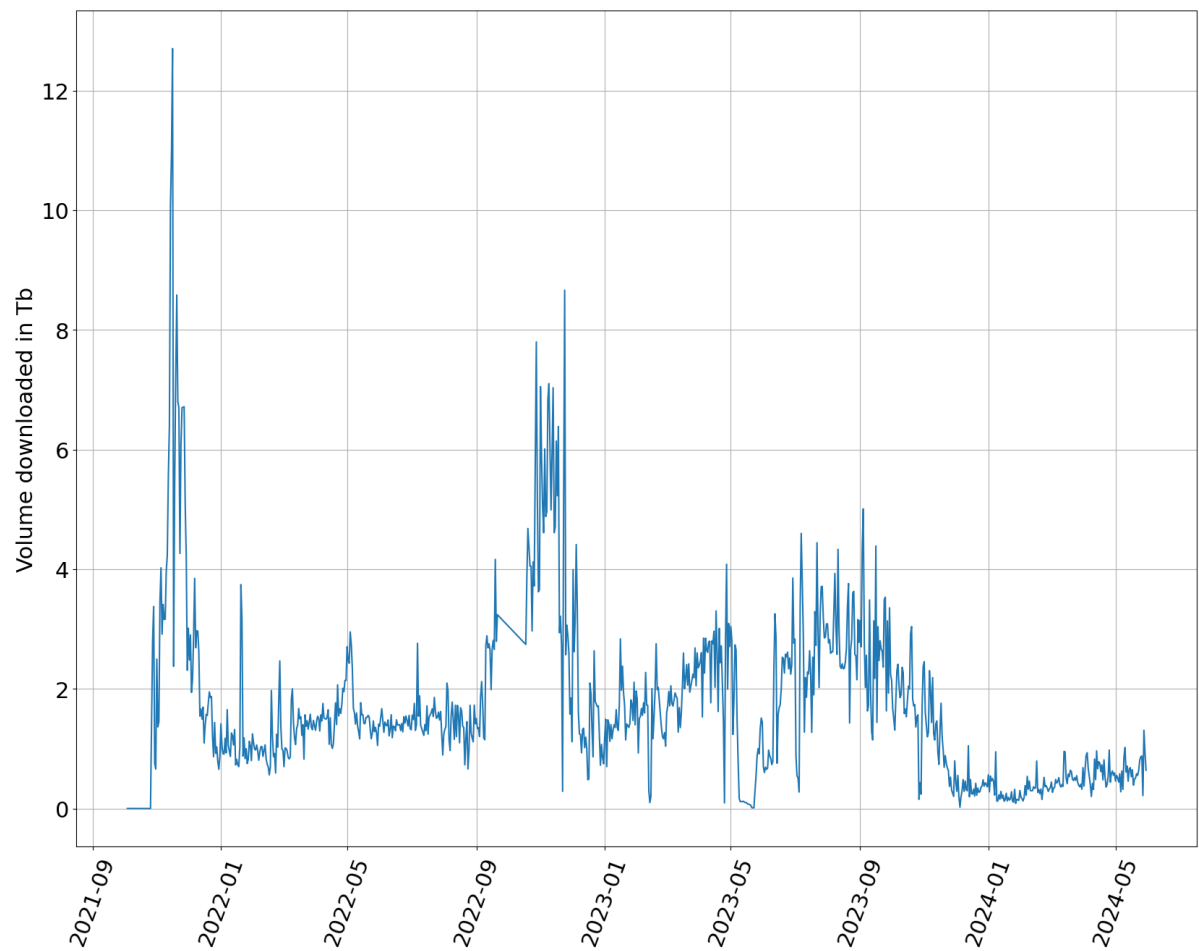
### 8.1 Portal: [colhub.met.no](#)

The first portal to analyze is [colhub.met.no](#). The target of the analysis is to check the amount of data downloaded by users, but also the number of users accessing the datahub. Below the historical amount of data per day is represented.



The same data is also represented below, with a difference. This time the data is not accounted by number, but by volume. Although both graphs show similar trends, they are not exactly equal due to the variability in the ratio volume per product.

For instance, the seasonality of optical products could have an impact in the total volume of products.



The table below is also interesting. It shows the amount of products downloaded for each the different Sentinel products. As expected, S1 and S2 are the most used Sentinels. S3 is slightly used, while S5p is not used.

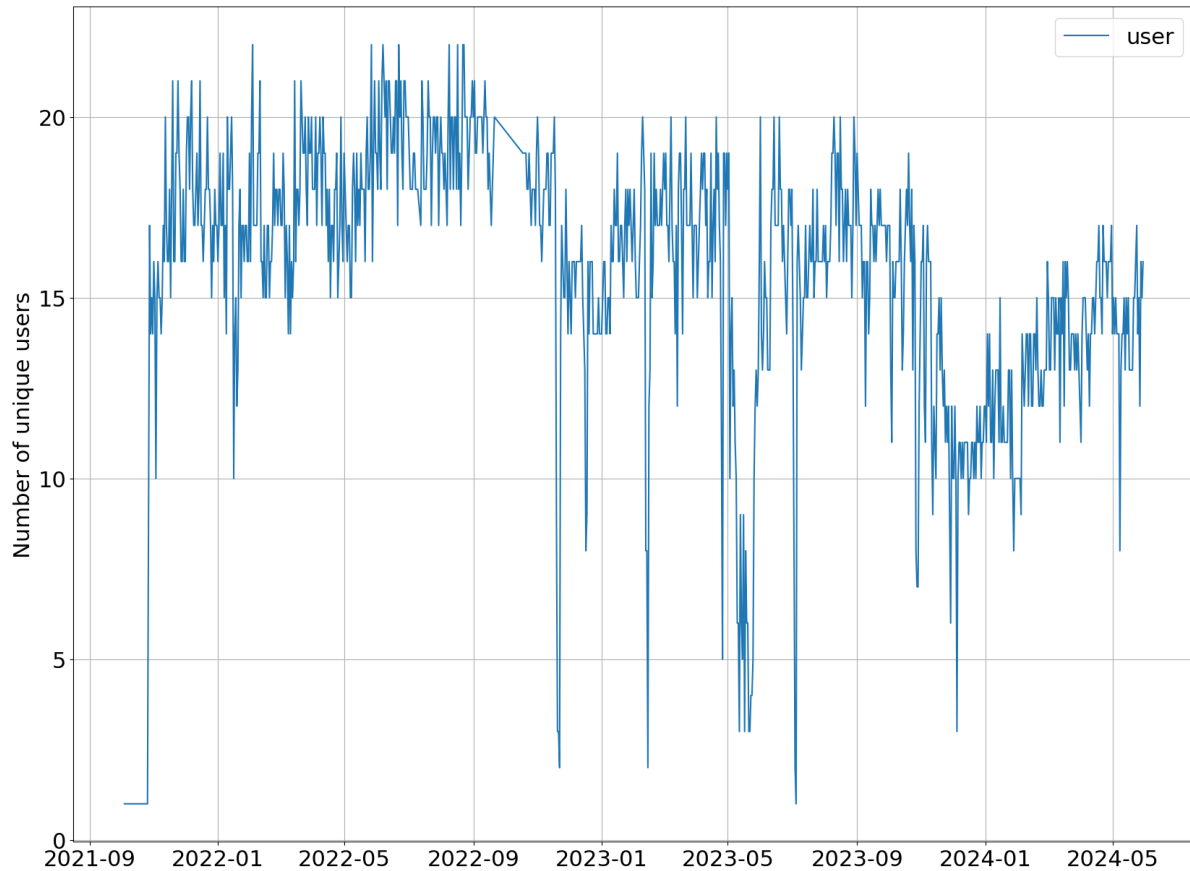
satellite	product_type	
S1	GRDH	243540
	GRDM	109588
	OCN	94095
	RAW	196353
	SLC	62815
S2	MSIL1C	519086
	MSIL1C_DTERRENG	3100
	MSIL2A	1117310
S3	OLCI_L1	7998
	OLCI_L2	490
	SLSTR_L1	10167
	SLSTR_L2	12
	SRAL_L1	23
	SRAL_L2	84
	SYN_L2	40
S5	NRTI_L2	8207
	OFFL_L1B	3
	OFFL_L2	6
dtype: int64		

The following table shows the total downloaded volume of data in Tb per month. Here the seasonality of some Sentinel products can affect the final numbers.

download_time	download_time	
2021	10	7.588303
	11	158.654049
	12	57.675128
2022	1	36.406545
	2	29.798405
	3	39.869718
	4	46.768604
	5	51.219186
	6	42.277098
	7	44.565096
	8	42.852304
	9	47.447532
	10	60.491409
	11	141.031091
	12	50.957670
2023	1	48.169138
	2	41.604374
	3	61.866205
	4	74.137962
	5	25.676479
	6	54.858885
	7	78.211367
	8	88.075235
	9	80.195622
	10	54.828457
	11	33.878596
	12	10.909848
2024	1	8.061366
	2	9.525797
	3	15.088652
	4	18.111391
	5	18.753042

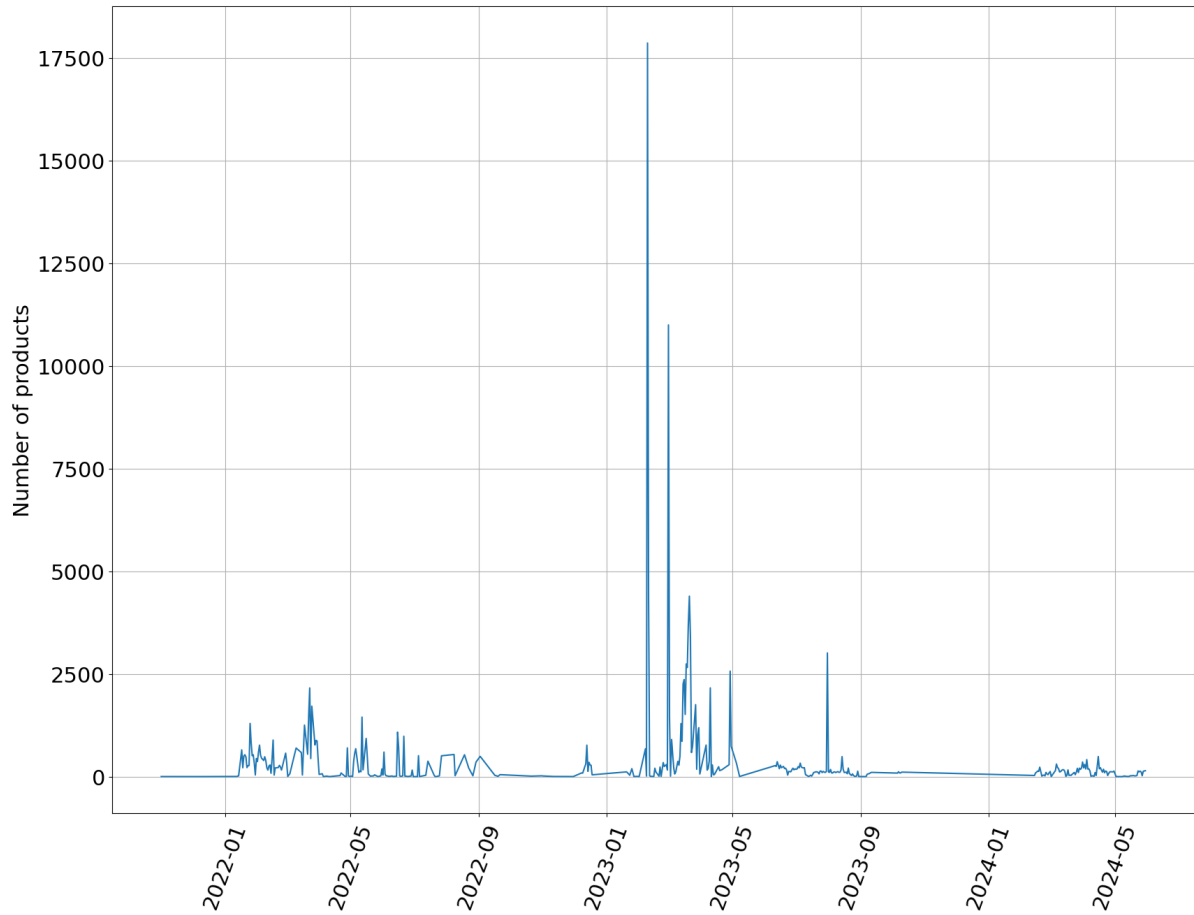
Name: size, dtype: float64

The number of users accessing and using the datahub is also important to be known. The plot below show the number of users per day. Some variability is represented in its numbers. Nevertheless, [colhub.met.no](https://colhub.met.no) is used by 15 to 20 users per day.



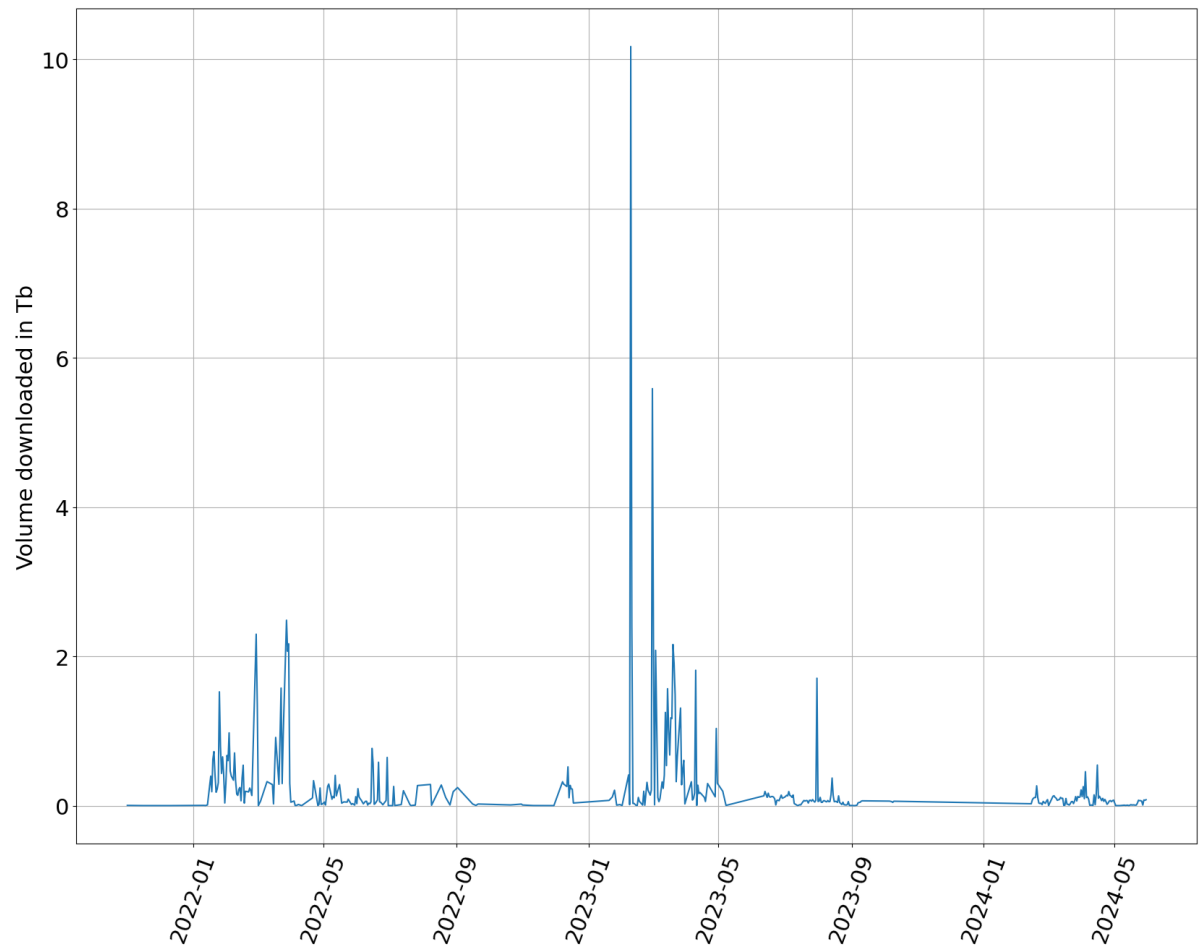
## 8.2 Portal: colhub-archive.met.no

Similar to [colhub.met.no](#), here it is presented the performance of [colhub-archive.met.no](#). First the number of products downloaded per day. As shown in the plot below, some days the number of products downloaded is null. This is a correct value which is not reflecting the performance of the FE. The archive is not as frequently accessed as [colhub.met.no](#). Only those users looking for historical data will use this portal.



As explained and shown in the previous section, the total volume downloaded is also shown in the graphic below.

```
Index(['size', 'download_duration'], dtype='object')
```



It is still interesting to see the number of products downloaded per product type. As shown in the previous section, S1 and S2 still are the most popular Sentinels.

satellite	product_type	
S1	GRDH	31582
	GRDM	8862
	OCN	1
	RAW	875
	SLC	3221
S2	MSIL1C	34588
	MSIL1C_DTERRENG	16832
	MSIL2A	50830
S3	OLCI_L1	2
	SLSTR_L1	705
	SRAL_L1	6
	SRAL_L2	160
S5	OFFL_L2	2
dtype: int64		

The table below shows the monthly retrieved volume of data in Tb.

download_time	download_time	
2021	December	0.000696
	November	0.005186

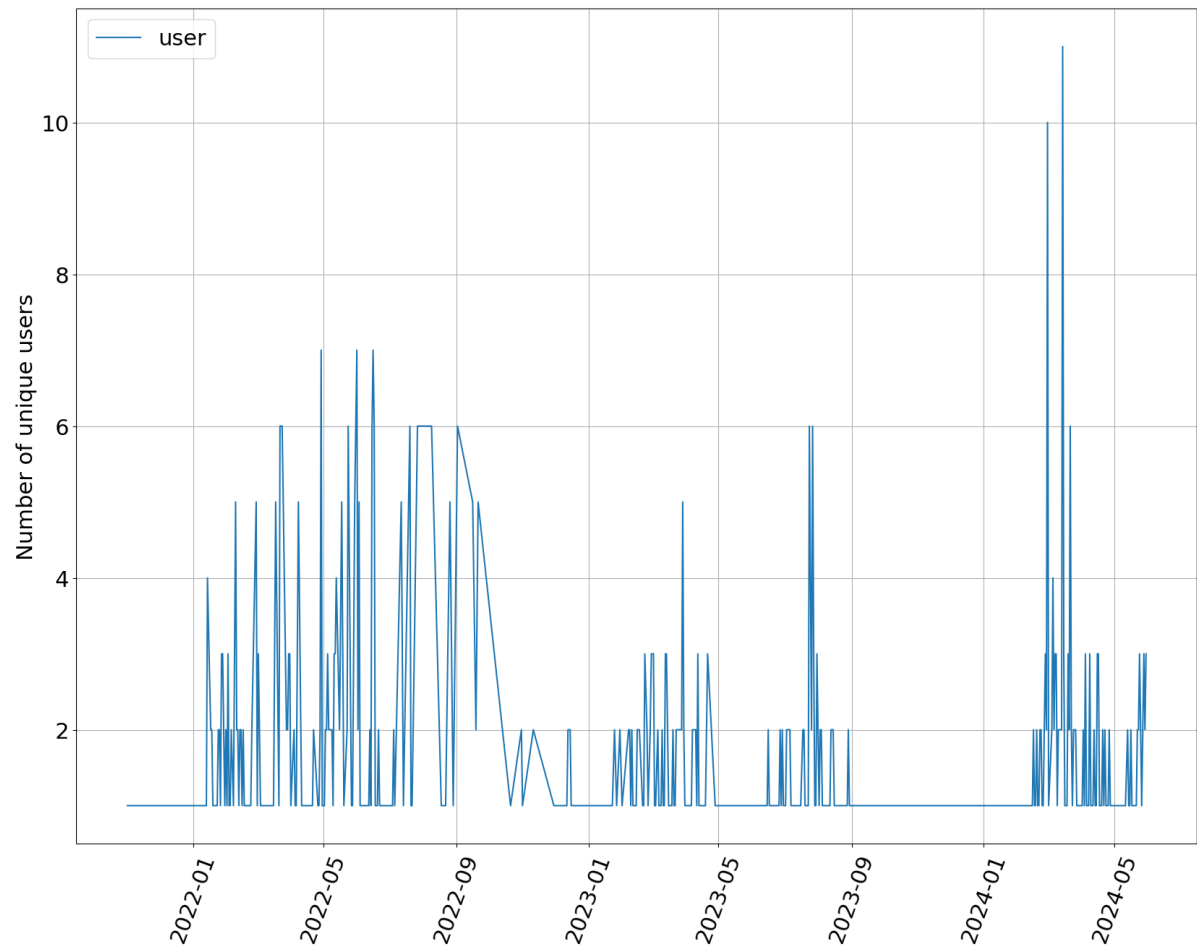
(continues on next page)

(continued from previous page)

2022	April	0.858194
	August	0.874257
	December	2.247264
	February	9.514969
	January	7.210722
	July	0.771705
	June	3.787335
	March	13.999207
	May	2.258999
	November	0.011412
	October	0.030705
	September	0.289683
2023	April	5.010196
	August	1.931697
	February	14.316868
	January	0.417223
	July	3.804772
	June	2.082679
	March	27.805556
	May	0.196331
	October	0.276372
	September	0.220003
2024	April	3.181320
	February	1.177107
	March	2.230899
	May	0.611591

Name: size, dtype: float64

The last graphic show the number of users accessing and downloading data from the portal. Again, the discontinuity in numbers of users it is not a sign of the portal performance.





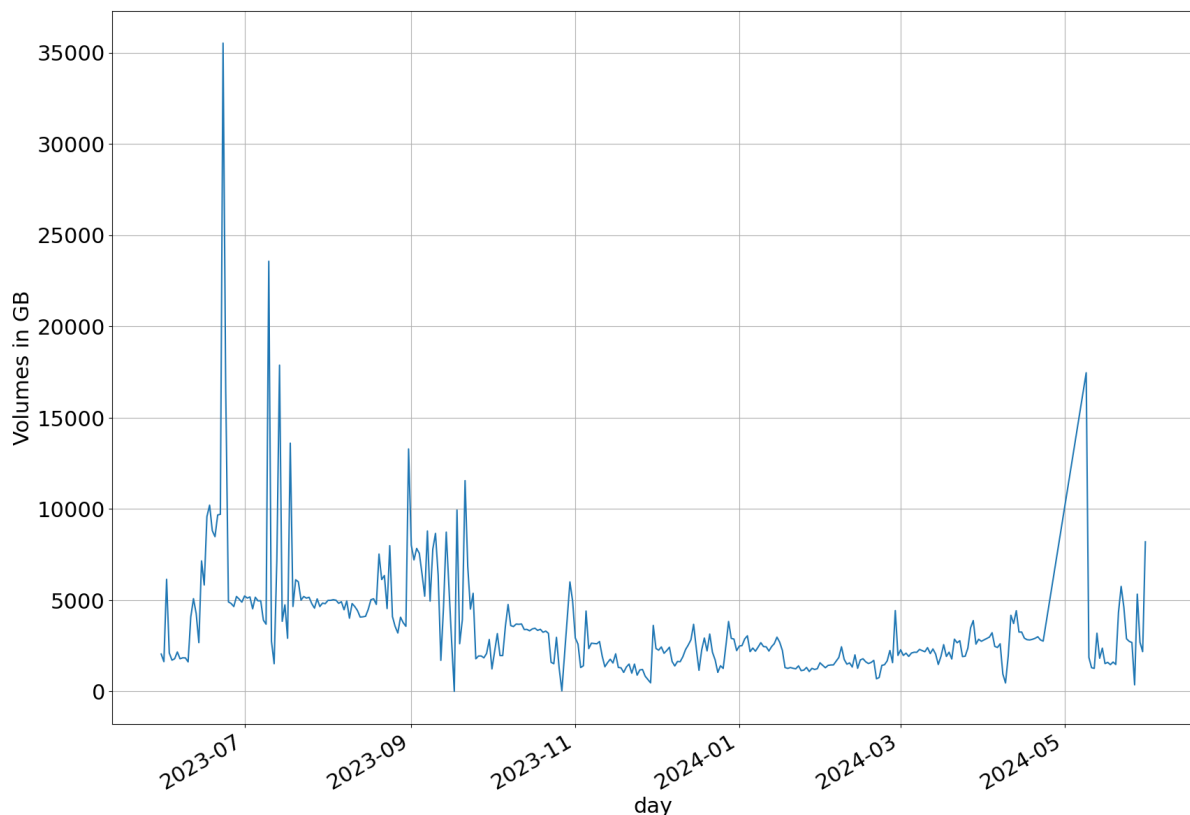
## DATA VOLUMES FOR NBS

Satellite data storage requires an important amount of disk space, especially high resolution products such as the ones produced by the Sentinel constellation. This also represents an economical cost. Hence, it is very important to keep track of the total volume of data stored at MET Norway premises. In this section those numbers are shown.

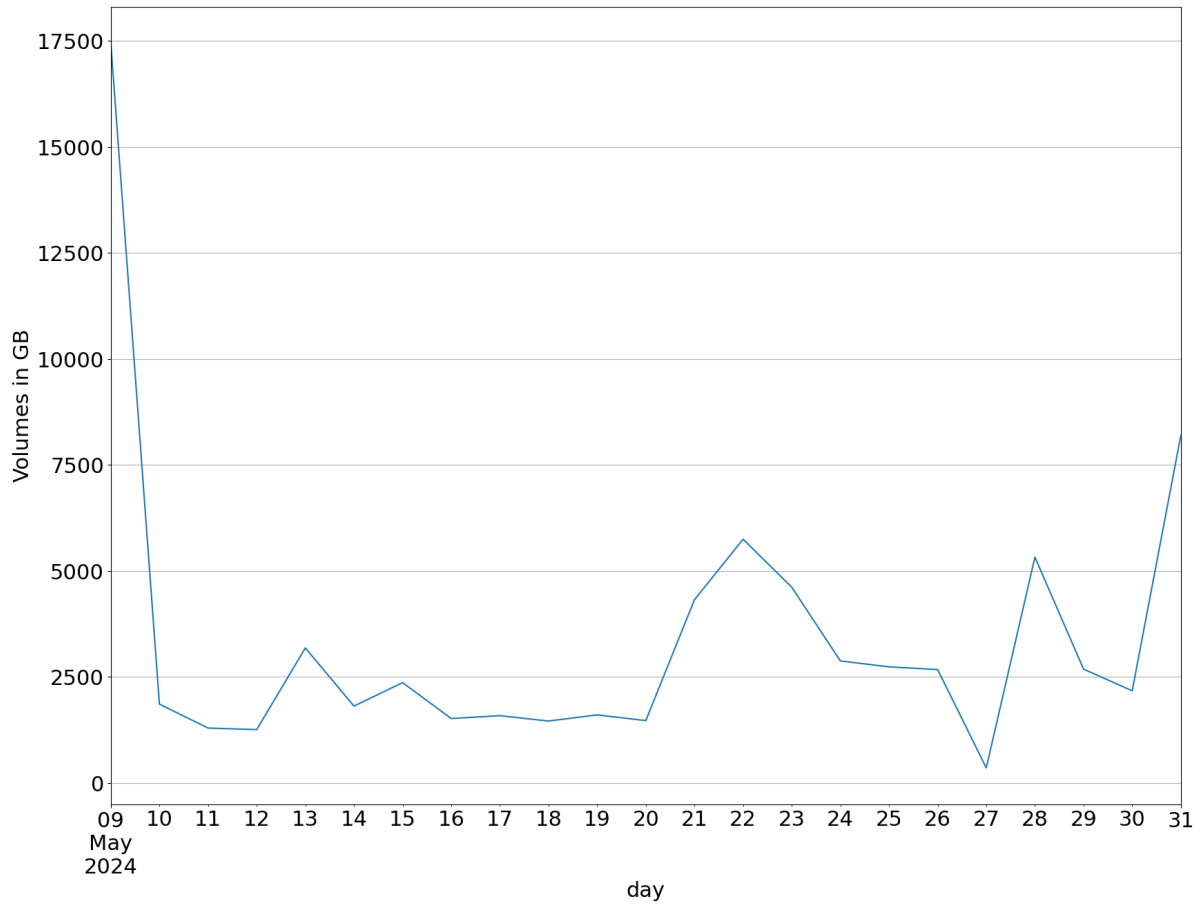
### 9.1 Volumes for AOI backends

Two type of products can be differentiated, products acquired from ESA datahub which keep the original format and Sentinel products transformed into NetCDF-CF. Those directly acquired from ESA are store at MET Norway BE for the AOI. Later on, they are made available to users through colhub-archive and colhub FEs.

The total amount of Sentinel products for the AOI, located in the AOI BE, represents 4695 TB



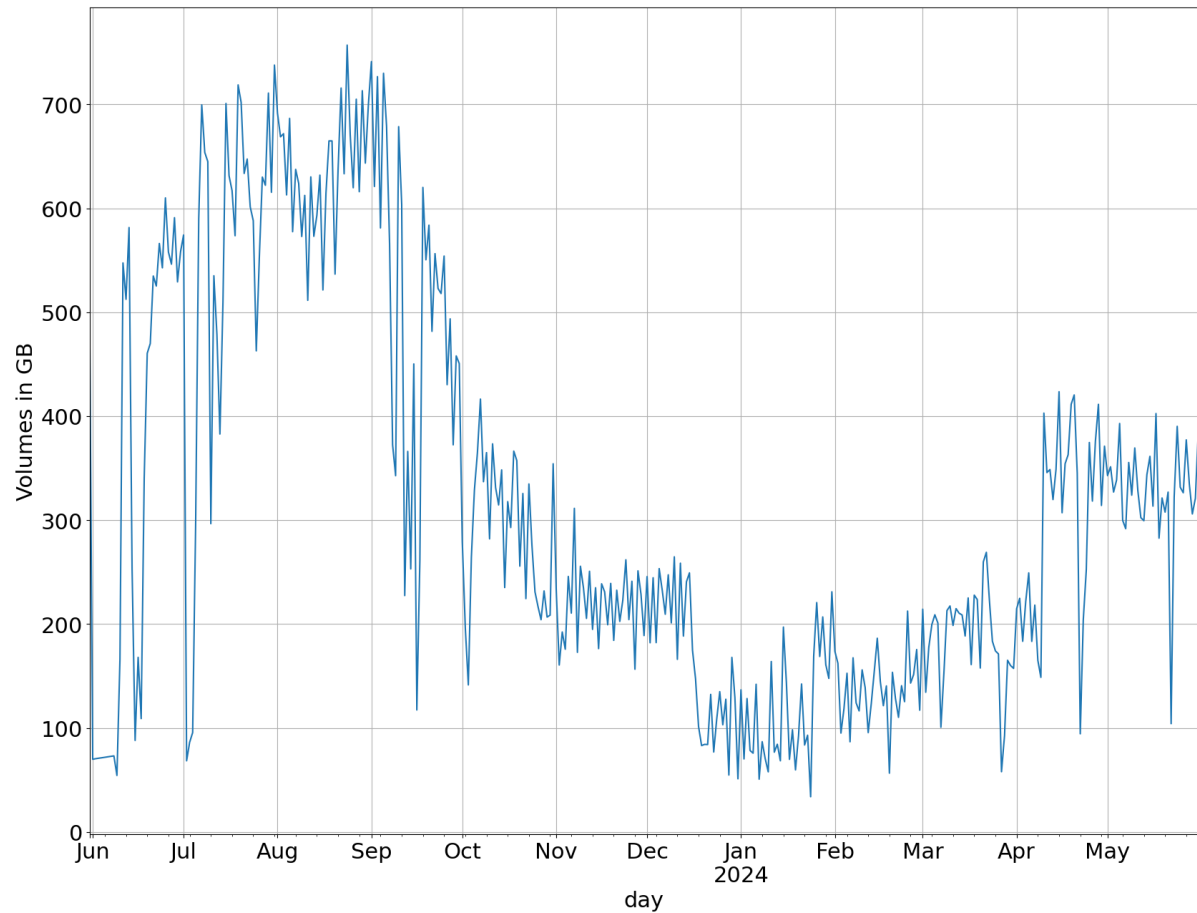
In the graphic above the volume of data per day in GB is shown for the last year. Here we can observed seasonality due to optical sensor products. The table below shows the same information for the last month.



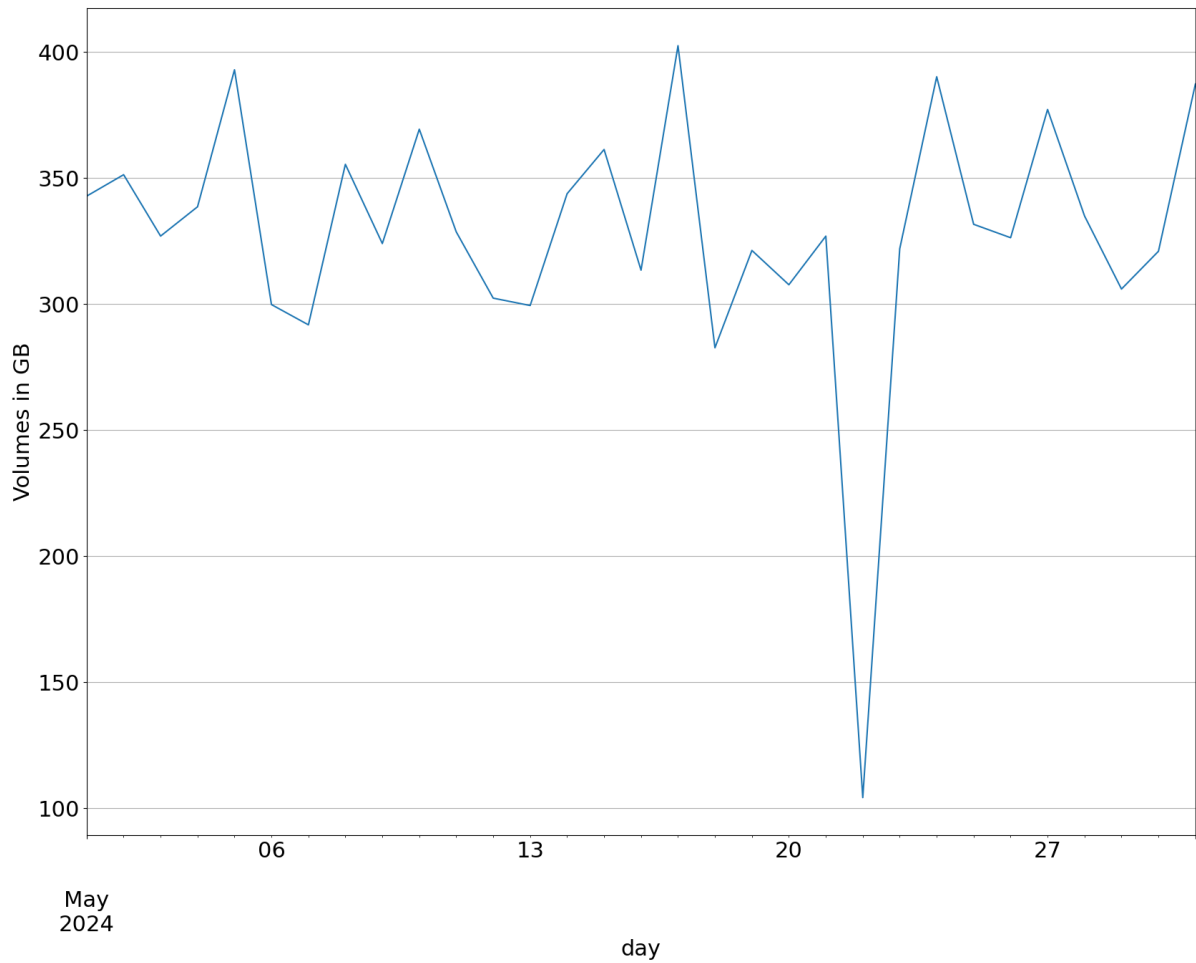
## 9.2 Volume for netcdf products

The products converted to NetCDF-CF are S1 and S2 products. These Sentinel datasets are served as SAFE format by ESA. This is not always convenient for users. Therefore as part of the NBS project, one of the MET Norway tasks as operator is to translate those products into NetCDF-CF.

The total amount of Sentinel-1 and Sentinel-2 products for the AOI transformed to NetCDF represents 917 TB

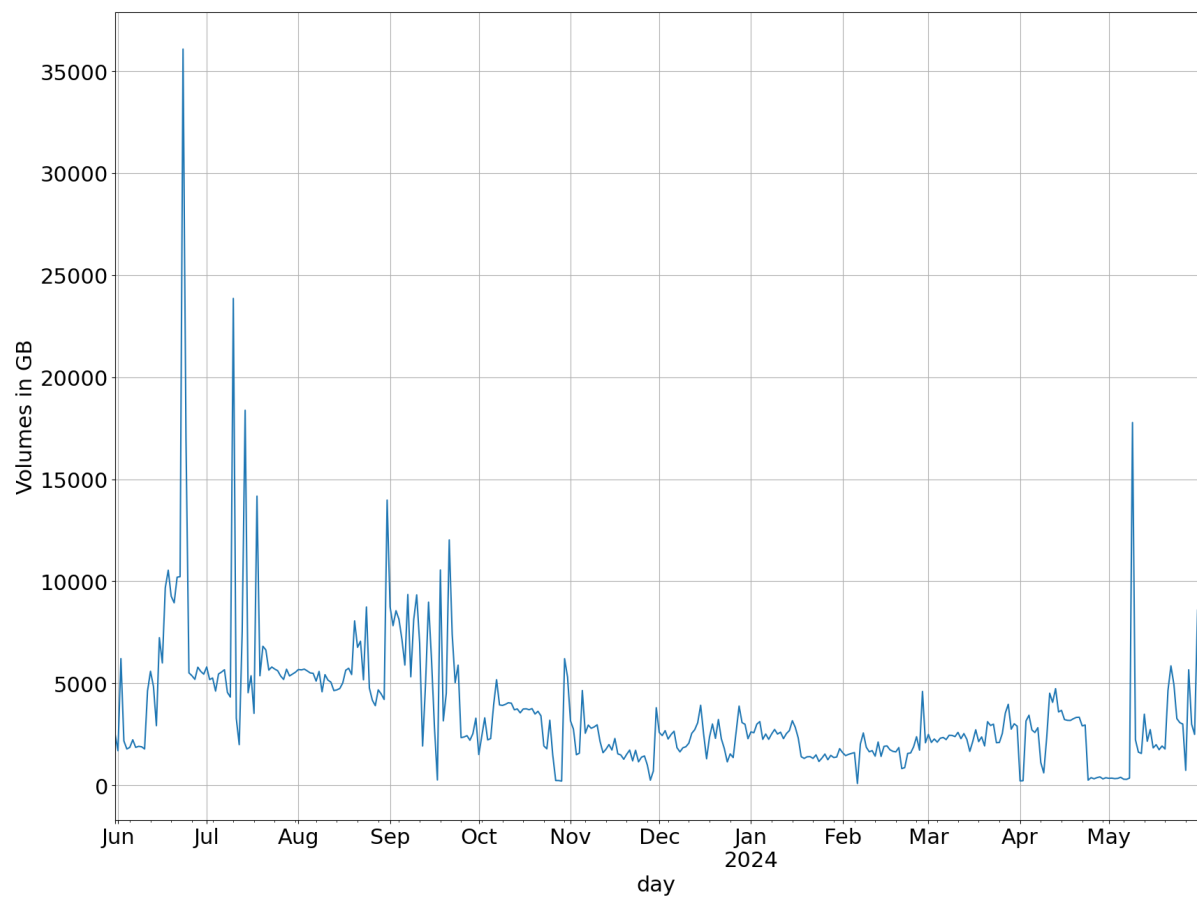


In the graphic above the volume of NetCDF-CF data per day in GB is shown for the last year. Here we can observed seasonality due to optical sensor products. The table below shows the same information for the last 30 days.



## 9.3 Totals

Finally, the total amount of disk space dedicated to the NBS project, including either products in SAFE and NetCDF formats, represents 5613 TB



In the graphic above the total volume of data per day in GB is shown for the last year. Here we can observed seasonality due to optical sensor products again. The table below shows the same information for the last month.

day	product_type	action	volume	number	timeliness
2024-05-09	GRDH	fscanner	24.641234	8.0	0.843855
2024-05-09	GRDH	synchronized	170.844378	104.0	12.413834
2024-05-09	GRDM	fscanner	1.523696	14.0	0.808054
2024-05-09	GRDM	synchronized	10.528741	27.0	15.580690
2024-05-09	OCN	synchronized	1.866027	96.0	22.243699
2024-05-09	RAW	synchronized	183.669876	131.0	15.531466
2024-05-09	SLC	synchronized	800.074773	107.0	12.527998
2024-05-09	GRDH	fscanner	24.641234	8.0	0.843855
2024-05-09	GRDH	synchronized	170.844378	104.0	12.413834
2024-05-09	GRDM	fscanner	1.523696	14.0	0.808054
2024-05-09	GRDM	synchronized	10.528741	27.0	15.580690
2024-05-09	OCN	synchronized	1.866027	96.0	22.243699
2024-05-09	RAW	synchronized	183.669876	131.0	15.531466
2024-05-09	SLC	synchronized	800.074773	107.0	12.527998
2024-05-09	GRDH	fscanner	24.641234	8.0	0.843855
2024-05-09	GRDH	synchronized	170.844378	104.0	12.413834
2024-05-09	GRDM	fscanner	1.523696	14.0	0.808054
2024-05-09	GRDM	synchronized	10.528741	27.0	15.580690
2024-05-09	OCN	synchronized	1.866027	96.0	22.243699
2024-05-09	RAW	synchronized	183.669876	131.0	15.531466
2024-05-09	SLC	synchronized	800.074773	107.0	12.527998

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2024-05-10	GRDH	fscanner	73.294334	23.0	0.765722
2024-05-10	GRDH	synchronized	99.761234	61.0	1.084366
2024-05-10	GRDM	fscanner	4.552571	42.0	0.731481
2024-05-10	GRDM	synchronized	3.237045	9.0	1.248691
2024-05-10	OCN	synchronized	0.810931	49.0	1.096451
2024-05-10	RAW	synchronized	99.760769	70.0	0.918527
2024-05-10	SLC	synchronized	448.533267	60.0	1.499775
2024-05-11	GRDH	fscanner	44.371115	18.0	0.606289
2024-05-11	GRDH	synchronized	65.271629	39.0	1.148818
2024-05-11	GRDM	fscanner	6.737868	35.0	0.614254
2024-05-11	GRDM	synchronized	9.449994	24.0	0.704740
2024-05-11	OCN	synchronized	1.217919	54.0	1.140952
2024-05-11	RAW	synchronized	83.495670	63.0	0.848059
2024-05-11	SLC	synchronized	337.138286	44.0	1.490898
2024-05-12	GRDH	fscanner	74.395125	27.0	0.691095
2024-05-12	GRDH	synchronized	78.030154	47.0	0.988107
2024-05-12	GRDM	fscanner	5.941968	40.0	0.695843
2024-05-12	GRDM	synchronized	5.586674	15.0	0.586664
2024-05-12	OCN	synchronized	0.876436	43.0	1.198949
2024-05-12	RAW	synchronized	86.024542	62.0	0.800111
2024-05-12	SLC	synchronized	375.855529	50.0	1.331499
2024-05-13	GRDH	fscanner	66.351803	23.0	0.754198
2024-05-13	GRDH	synchronized	78.233562	47.0	1.130226
2024-05-13	GRDM	fscanner	6.667895	38.0	0.783851
2024-05-13	GRDM	synchronized	4.786731	14.0	0.655949
2024-05-13	OCN	synchronized	0.993170	52.0	1.155246
2024-05-13	RAW	synchronized	83.681087	62.0	0.888696
2024-05-13	SLC	synchronized	373.762812	49.0	1.563278
2024-05-14	GRDH	fscanner	49.764481	17.0	0.531549
2024-05-14	GRDH	synchronized	85.473787	51.0	1.203308
2024-05-14	GRDM	fscanner	5.494938	40.0	0.591614
2024-05-14	GRDM	synchronized	3.612795	11.0	0.559741
2024-05-14	OCN	synchronized	0.744325	42.0	1.272580
2024-05-14	RAW	synchronized	89.271862	63.0	0.869050
2024-05-14	SLC	synchronized	401.199298	53.0	1.547957
2024-05-15	GRDH	fscanner	65.138021	21.0	0.689639
2024-05-15	GRDH	synchronized	73.499964	45.0	1.173325
2024-05-15	GRDM	fscanner	6.389317	38.0	0.657244
2024-05-15	GRDM	synchronized	4.873847	13.0	0.594860
2024-05-15	OCN	synchronized	0.816594	43.0	1.053663
2024-05-15	RAW	synchronized	80.130234	58.0	0.838145
2024-05-15	SLC	synchronized	359.424465	48.0	1.512168
2024-05-16	GRDH	fscanner	41.139634	15.0	0.623712
2024-05-16	GRDH	synchronized	65.596760	39.0	1.019364
2024-05-16	GRDM	fscanner	6.275278	34.0	0.610582
2024-05-16	GRDM	synchronized	8.166565	22.0	0.589374
2024-05-16	OCN	synchronized	1.120035	51.0	1.000339
2024-05-16	RAW	synchronized	80.806980	61.0	0.821302
2024-05-16	SLC	synchronized	328.565407	43.0	1.606631
2024-05-17	GRDH	fscanner	69.314977	20.0	0.606422
2024-05-17	GRDH	synchronized	73.252055	43.0	0.981831
2024-05-17	GRDM	fscanner	3.602394	33.0	0.802951
2024-05-17	GRDM	synchronized	2.309090	6.0	0.758225
2024-05-17	OCN	synchronized	0.514385	31.0	1.027863
2024-05-17	RAW	synchronized	74.554921	53.0	0.835511
2024-05-17	SLC	synchronized	345.071757	46.0	1.357054

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2024-05-18	GRDH	fscanner	42.986716	15.0	0.653980
2024-05-18	GRDH	synchronized	73.767626	45.0	1.187671
2024-05-18	GRDM	fscanner	4.193523	30.0	0.659585
2024-05-18	GRDM	synchronized	6.248453	16.0	1.138616
2024-05-18	OCN	synchronized	1.055392	53.0	1.376207
2024-05-18	RAW	synchronized	82.560863	60.0	0.870519
2024-05-18	SLC	synchronized	352.637811	47.0	1.600902
2024-05-19	GRDH	fscanner	61.943428	23.0	0.612456
2024-05-19	GRDH	synchronized	82.692007	50.0	1.050602
2024-05-19	GRDM	fscanner	6.982336	47.0	0.674877
2024-05-19	GRDM	synchronized	6.087810	16.0	0.779888
2024-05-19	OCN	synchronized	0.977996	48.0	1.061604
2024-05-19	RAW	synchronized	93.271548	67.0	0.891596
2024-05-19	SLC	synchronized	397.323062	53.0	1.498281
2024-05-20	GRDH	fscanner	9.462561	2.0	0.780100
2024-05-20	GRDH	synchronized	82.892600	50.0	1.163138
2024-05-20	GRDM	fscanner	3.471158	32.0	0.614944
2024-05-20	GRDM	synchronized	5.110547	13.0	1.808169
2024-05-20	OCN	synchronized	0.943450	49.0	1.232293
2024-05-20	RAW	synchronized	90.101911	64.0	0.930422
2024-05-20	SLC	synchronized	386.650126	51.0	1.426323
2024-05-21	GRDH	fscanner	81.493639	29.0	2.709083
2024-05-21	GRDH	synchronized	86.296726	53.0	1.203291
2024-05-21	GRDM	fscanner	2.724648	25.0	0.714733
2024-05-21	GRDM	synchronized	5.417767	14.0	1.810870
2024-05-21	OCN	synchronized	0.925009	47.0	1.322313
2024-05-21	RAW	synchronized	94.066158	67.0	1.029356
2024-05-21	SLC	synchronized	413.451639	56.0	1.493993
2024-05-23	GRDH	fscanner	65.503570	25.0	2.270284
2024-05-23	GRDH	synchronized	111.096428	67.0	3.729598
2024-05-23	GRDM	fscanner	7.797923	45.0	0.686287
2024-05-23	GRDM	synchronized	9.645178	25.0	2.172465
2024-05-23	OCN	synchronized	1.430795	70.0	3.671334
2024-05-23	RAW	synchronized	126.814049	92.0	3.688883
2024-05-23	SLC	synchronized	529.014836	70.0	3.774994
2024-05-23	Unknown	deleted	0.000000	114.0	0.000000
2024-05-24	GRDH	fscanner	67.606524	25.0	0.653306
2024-05-24	GRDH	synchronized	77.866265	47.0	1.079115
2024-05-24	GRDM	fscanner	5.952988	40.0	0.609256
2024-05-24	GRDM	synchronized	5.586883	15.0	1.015536
2024-05-24	OCN	synchronized	0.961304	46.0	1.107323
2024-05-24	RAW	synchronized	86.962157	62.0	0.866975
2024-05-24	SLC	synchronized	375.150248	50.0	1.377001
2024-05-25	GRDH	fscanner	70.726363	26.0	0.791195
2024-05-25	GRDH	synchronized	78.414066	47.0	1.228614
2024-05-25	GRDM	fscanner	5.689084	35.0	0.795451
2024-05-25	GRDM	synchronized	4.520182	13.0	0.590456
2024-05-25	OCN	synchronized	0.931480	52.0	1.251594
2024-05-25	RAW	synchronized	82.532380	60.0	0.937447
2024-05-25	SLC	synchronized	374.593956	49.0	1.620780
2024-05-26	GRDH	fscanner	62.335523	23.0	0.686994
2024-05-26	GRDH	synchronized	83.716151	50.0	1.239474
2024-05-26	GRDM	fscanner	5.467627	39.0	0.602074
2024-05-26	GRDM	synchronized	5.349690	16.0	0.905794
2024-05-26	OCN	synchronized	0.901419	47.0	1.218137
2024-05-26	RAW	synchronized	94.224158	68.0	0.983100

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2024-05-26	SLC	synchronized	364.157450	48.0	2.167676
2024-05-27	GRDH	fscanner	1.506304	1.0	1.033092
2024-05-27	GRDH	synchronized	21.794332	13.0	1.130238
2024-05-27	GRDM	fscanner	0.328778	3.0	0.479148
2024-05-27	GRDM	synchronized	1.050762	3.0	0.950629
2024-05-27	OCN	synchronized	0.147871	7.0	1.239226
2024-05-27	RAW	synchronized	18.972910	14.0	0.960814
2024-05-27	SLC	synchronized	113.792184	15.0	1.801766
2024-05-27	Unknown	deleted	0.000000	2.0	0.000000
2024-05-28	GRDH	fscanner	102.271917	36.0	9.552657
2024-05-28	GRDH	synchronized	118.863208	72.0	1.885186
2024-05-28	GRDM	fscanner	12.334676	69.0	7.857519
2024-05-28	GRDM	synchronized	12.442738	33.0	1.365862
2024-05-28	OCN	synchronized	1.826600	88.0	1.916779
2024-05-28	RAW	synchronized	143.642399	106.0	2.362440
2024-05-28	SLC	synchronized	610.467579	81.0	3.130010
2024-05-28	Unknown	deleted	0.000000	1.0	0.000000
2024-05-29	GRDH	fscanner	68.527900	22.0	0.710777
2024-05-29	GRDH	synchronized	78.327520	48.0	1.554438
2024-05-29	GRDM	fscanner	3.579885	33.0	0.647264
2024-05-29	GRDM	synchronized	4.240227	11.0	1.211684
2024-05-29	OCN	synchronized	0.758317	41.0	1.473106
2024-05-29	RAW	synchronized	83.621099	59.0	1.227355
2024-05-29	SLC	synchronized	377.633892	51.0	1.976082
2024-05-30	GRDH	fscanner	50.036610	19.0	0.674484
2024-05-30	GRDH	synchronized	54.976959	33.0	2.245351
2024-05-30	GRDM	fscanner	4.214887	30.0	0.659553
2024-05-30	GRDM	synchronized	5.845203	15.0	3.047810
2024-05-30	OCN	synchronized	0.884610	42.0	3.191823
2024-05-30	RAW	synchronized	72.898611	53.0	3.002701
2024-05-30	SLC	synchronized	270.133859	35.0	4.576180
2024-05-31	GRDH	fscanner	66.724523	26.0	0.678353
2024-05-31	GRDH	synchronized	101.836602	62.0	3.374730
2024-05-31	GRDM	fscanner	6.983897	47.0	0.674596
2024-05-31	GRDM	synchronized	6.087917	16.0	2.818348
2024-05-31	OCN	synchronized	1.112443	58.0	3.479593
2024-05-31	RAW	synchronized	102.314857	73.0	2.514788
2024-05-31	SLC	synchronized	473.979562	64.0	3.707116
2024-05-09	MSIL1C	synchronized	1491.462500	3395.0	31.481481
2024-05-09	MSIL1C	synchronized	1491.462500	3395.0	31.481481
2024-05-09	MSIL1C	synchronized	1491.462500	3395.0	31.481481
2024-05-10	MSIL1C	synchronized	555.427518	1344.0	3.070019
2024-05-11	MSIL1C	synchronized	532.957424	1241.0	2.584895
2024-05-12	MSIL1C	synchronized	428.158478	1022.0	4.703918
2024-05-13	MSIL1C	synchronized	404.141954	951.0	2.523469
2024-05-14	MSIL1C	synchronized	335.665528	761.0	2.854188
2024-05-15	MSIL1C	synchronized	955.163178	2266.0	8.161782
2024-05-16	MSIL1C	synchronized	546.239836	1283.0	6.340109
2024-05-17	MSIL1C	synchronized	637.747697	1451.0	4.408668
2024-05-18	MSIL1C	synchronized	538.407863	1212.0	4.927852
2024-05-19	MSIL1C	synchronized	549.637975	1321.0	8.561771
2024-05-20	MSIL1C	synchronized	510.169077	1228.0	4.726286
2024-05-21	MSIL1C	synchronized	650.288276	1506.0	4.928473
2024-05-22	MSIL1C	synchronized	105.456096	232.0	2.594194
2024-05-22	Unknown	deleted	0.000000	320.0	0.000000
2024-05-23	MSIL1C	synchronized	1024.502230	2430.0	7.936422

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2024-05-23	Unknown	deleted	0.000000	14.0	0.000000
2024-05-24	MSIL1C	synchronized	614.010121	1442.0	3.971466
2024-05-25	MSIL1C	synchronized	563.912774	1339.0	4.736013
2024-05-26	MSIL1C	synchronized	545.193248	1254.0	3.859118
2024-05-27	MSIL1C	synchronized	0.468605	2.0	6.931064
2024-05-28	MSIL1C	synchronized	1222.979728	2765.0	12.677534
2024-05-28	Unknown	deleted	0.000000	24.0	0.000000
2024-05-29	MSIL1C	synchronized	528.331102	1235.0	6.539423
2024-05-30	MSIL1C	synchronized	556.923037	1332.0	5.119615
2024-05-31	MSIL1C	synchronized	592.450176	1369.0	3.767972
2024-05-22	MSIL2A	synchronized	5459.100352	10008.0	264.507141
2024-05-22	Unknown	deleted	0.000000	373.0	0.000000
2024-05-23	MSIL2A	synchronized	1448.298459	2651.0	15.459292
2024-05-23	Unknown	deleted	0.000000	22.0	0.000000
2024-05-24	MSIL2A	synchronized	781.429404	1439.0	4.914669
2024-05-25	MSIL2A	synchronized	722.228150	1335.0	4.367525
2024-05-26	MSIL2A	synchronized	701.531334	1268.0	4.859275
2024-05-27	MSIL2A	synchronized	9.210496	14.0	6.745651
2024-05-28	MSIL2A	synchronized	1556.529090	2738.0	12.765402
2024-05-28	Unknown	deleted	0.000000	28.0	0.000000
2024-05-29	MSIL2A	synchronized	681.788405	1249.0	6.931178
2024-05-29	Unknown	deleted	0.000000	2.0	0.000000
2024-05-30	MSIL2A	synchronized	726.037170	1345.0	5.297182
2024-05-31	MSIL2A	synchronized	5645.263564	10192.0	287.228989
2024-05-09	OLCI_L1	synchronized	285.701782	362.0	30.426438
2024-05-09	OLCI_L2	synchronized	40.367732	365.0	30.180559
2024-05-09	SLSTR_L1	synchronized	148.174282	360.0	33.912525
2024-05-09	SLSTR_L2	synchronized	33.330783	542.0	35.996406
2024-05-09	SRAL_L1	synchronized	276.156162	173.0	56.609820
2024-05-09	SRAL_L2	synchronized	10.548500	409.0	56.100178
2024-05-09	SYN_L2	synchronized	80.893941	434.0	45.747469
2024-05-09	OLCI_L1	synchronized	285.701782	362.0	30.426438
2024-05-09	OLCI_L2	synchronized	40.367732	365.0	30.180559
2024-05-09	SLSTR_L1	synchronized	148.174282	360.0	33.912525
2024-05-09	SLSTR_L2	synchronized	33.330783	542.0	35.996406
2024-05-09	SRAL_L1	synchronized	276.156162	173.0	56.609820
2024-05-09	SRAL_L2	synchronized	10.548500	409.0	56.100178
2024-05-09	SYN_L2	synchronized	80.893941	434.0	45.747469
2024-05-09	OLCI_L1	synchronized	285.701782	362.0	30.426438
2024-05-09	OLCI_L2	synchronized	40.367732	365.0	30.180559
2024-05-09	SLSTR_L1	synchronized	148.174282	360.0	33.912525
2024-05-09	SLSTR_L2	synchronized	33.330783	542.0	35.996406
2024-05-09	SRAL_L1	synchronized	276.156162	173.0	56.609820
2024-05-09	SRAL_L2	synchronized	10.548500	409.0	56.100178
2024-05-09	SYN_L2	synchronized	80.893941	434.0	45.747469
2024-05-10	OLCI_L1	synchronized	54.399914	68.0	12.300483
2024-05-10	OLCI_L2	synchronized	7.473788	66.0	12.824681
2024-05-10	SLSTR_L1	synchronized	35.549994	87.0	18.531844
2024-05-10	SLSTR_L2	synchronized	7.944567	128.0	20.498913
2024-05-10	SRAL_L1	synchronized	60.432745	30.0	39.220268
2024-05-10	SRAL_L2	synchronized	2.218591	75.0	40.292296
2024-05-10	SYN_L2	synchronized	16.880660	81.0	26.614228
2024-05-13	OLCI_L1	synchronized	523.004981	653.0	39.520381
2024-05-13	OLCI_L2	synchronized	72.648461	655.0	39.267277
2024-05-13	SLSTR_L1	synchronized	259.791147	630.0	41.664363
2024-05-13	SLSTR_L2	synchronized	57.110710	930.0	44.613683

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2024-05-13	SRAL_L1	synchronized	488.541516	310.0	67.718821
2024-05-13	SRAL_L2	synchronized	18.619192	724.0	69.168125
2024-05-13	SYN_L2	synchronized	152.068896	798.0	51.580442
2024-05-13	Unknown	deleted	0.000000	19.0	0.000000
2024-05-14	OLCI_L1	synchronized	143.735775	178.0	5.988902
2024-05-14	OLCI_L2	synchronized	19.401793	173.0	2.992644
2024-05-14	SLSTR_L1	synchronized	69.189028	168.0	4.738410
2024-05-14	SLSTR_L2	synchronized	15.593629	254.0	18.985444
2024-05-14	SRAL_L1	synchronized	135.665576	82.0	39.765516
2024-05-14	SRAL_L2	synchronized	5.777673	219.0	40.366728
2024-05-14	SYN_L2	synchronized	43.683504	218.0	22.591137
2024-05-15	OLCI_L1	synchronized	146.876649	182.0	10.382903
2024-05-15	OLCI_L2	synchronized	21.037941	186.0	10.506937
2024-05-15	SLSTR_L1	synchronized	69.481328	169.0	15.799451
2024-05-15	SLSTR_L2	synchronized	15.426776	251.0	22.029685
2024-05-15	SRAL_L1	synchronized	141.371811	87.0	38.616930
2024-05-15	SRAL_L2	synchronized	6.336480	232.0	41.356932
2024-05-15	SYN_L2	synchronized	41.537792	210.0	22.552216
2024-05-16	OLCI_L1	synchronized	10.235905	13.0	3.083416
2024-05-16	OLCI_L2	synchronized	1.434566	12.0	2.932684
2024-05-16	SLSTR_L1	synchronized	8.924427	22.0	3.225890
2024-05-16	SLSTR_L2	synchronized	2.390071	39.0	34.464589
2024-05-16	SRAL_L1	synchronized	27.043144	16.0	38.290667
2024-05-16	SRAL_L2	synchronized	0.900199	34.0	39.534844
2024-05-16	SYN_L2	synchronized	5.767296	34.0	18.830086
2024-05-21	OLCI_L1	synchronized	873.300338	1156.0	72.812927
2024-05-21	OLCI_L2	synchronized	122.242638	1146.0	71.652684
2024-05-21	SLSTR_L1	synchronized	408.853363	989.0	74.827631
2024-05-21	SLSTR_L2	synchronized	91.162020	1479.0	77.241681
2024-05-21	SRAL_L1	synchronized	794.563104	496.0	113.664717
2024-05-21	SRAL_L2	synchronized	30.232263	1164.0	113.945101
2024-05-21	SYN_L2	synchronized	258.335471	1319.0	81.726886
2024-05-21	Unknown	deleted	0.000000	21.0	0.000000
2024-05-23	OLCI_L1	synchronized	233.365504	314.0	16.467196
2024-05-23	OLCI_L2	synchronized	32.294572	319.0	16.477976
2024-05-23	SLSTR_L1	synchronized	107.273970	259.0	19.639886
2024-05-23	SLSTR_L2	synchronized	24.171312	394.0	23.913827
2024-05-23	SRAL_L1	synchronized	214.176117	137.0	42.925843
2024-05-23	SRAL_L2	synchronized	8.388640	333.0	42.390477
2024-05-23	SYN_L2	synchronized	73.268090	367.0	26.942309
2024-05-24	OLCI_L1	synchronized	168.749429	224.0	10.001669
2024-05-24	OLCI_L2	synchronized	25.220212	238.0	12.440405
2024-05-24	SLSTR_L1	synchronized	73.637086	178.0	16.207033
2024-05-24	SLSTR_L2	synchronized	17.803191	290.0	23.482405
2024-05-24	SRAL_L1	synchronized	139.590438	87.0	38.561571
2024-05-24	SRAL_L2	synchronized	5.330267	204.0	39.738792
2024-05-24	SYN_L2	synchronized	49.118873	244.0	21.459538
2024-05-25	OLCI_L1	synchronized	147.481436	196.0	6.564405
2024-05-25	OLCI_L2	synchronized	20.195641	193.0	5.996091
2024-05-25	SLSTR_L1	synchronized	74.160681	179.0	6.313092
2024-05-25	SLSTR_L2	synchronized	16.181627	264.0	19.993502
2024-05-25	SRAL_L1	synchronized	140.931189	86.0	39.223915
2024-05-25	SRAL_L2	synchronized	5.232195	201.0	40.265755
2024-05-25	SYN_L2	synchronized	47.546779	231.0	20.376194
2024-05-26	OLCI_L1	synchronized	138.564225	184.0	5.912346
2024-05-26	OLCI_L2	synchronized	19.805955	187.0	5.435183

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2024-05-26	SLSTR_L1	synchronized	68.276834	164.0	6.157739
2024-05-26	SLSTR_L2	synchronized	14.252125	232.0	26.264043
2024-05-26	SRAL_L1	synchronized	134.118696	84.0	38.592276
2024-05-26	SRAL_L2	synchronized	5.395299	205.0	40.155959
2024-05-26	SYN_L2	synchronized	45.645367	230.0	25.130934
2024-05-27	OLCI_L1	synchronized	9.882691	17.0	3.094639
2024-05-27	OLCI_L2	synchronized	1.470703	15.0	2.846224
2024-05-27	SLSTR_L1	synchronized	12.287861	30.0	20.416738
2024-05-27	SLSTR_L2	synchronized	2.255479	37.0	34.515703
2024-05-27	SRAL_L1	synchronized	43.513393	23.0	38.503752
2024-05-27	SRAL_L2	synchronized	1.408451	47.0	40.444848
2024-05-27	SYN_L2	synchronized	11.328802	56.0	8.894094
2024-05-27	Unknown	deleted	0.000000	2.0	0.000000
2024-05-28	OLCI_L1	synchronized	325.609980	416.0	17.653535
2024-05-28	OLCI_L2	synchronized	44.712811	416.0	18.296091
2024-05-28	SLSTR_L1	synchronized	138.542340	333.0	20.936575
2024-05-28	SLSTR_L2	synchronized	32.851803	533.0	33.117468
2024-05-28	SRAL_L1	synchronized	246.041883	175.0	52.014796
2024-05-28	SRAL_L2	synchronized	9.996553	423.0	54.688236
2024-05-28	SYN_L2	synchronized	88.111894	446.0	33.897654
2024-05-28	Unknown	deleted	0.000000	11.0	0.000000
2024-05-29	OLCI_L1	synchronized	148.811205	196.0	6.586483
2024-05-29	OLCI_L2	synchronized	22.418895	214.0	10.182301
2024-05-29	SLSTR_L1	synchronized	76.701365	184.0	15.807032
2024-05-29	SLSTR_L2	synchronized	16.523719	267.0	19.705939
2024-05-29	SRAL_L1	synchronized	135.682906	82.0	39.563860
2024-05-29	SRAL_L2	synchronized	5.191766	195.0	40.637986
2024-05-29	SYN_L2	synchronized	48.566613	238.0	21.561065
2024-05-30	OLCI_L1	synchronized	12.333189	19.0	5.678954
2024-05-30	OLCI_L2	synchronized	1.289952	13.0	2.855290
2024-05-30	SLSTR_L1	synchronized	11.199656	27.0	15.325379
2024-05-30	SLSTR_L2	synchronized	1.913649	31.0	17.474363
2024-05-30	SRAL_L1	synchronized	29.430816	17.0	38.512609
2024-05-30	SRAL_L2	synchronized	0.954231	37.0	39.291785
2024-05-30	SYN_L2	synchronized	8.577385	50.0	9.552685
2024-05-31	OLCI_L1	synchronized	294.143544	381.0	18.859111
2024-05-31	OLCI_L2	synchronized	41.450832	385.0	18.329089
2024-05-31	SLSTR_L1	synchronized	133.108153	319.0	22.562223
2024-05-31	SLSTR_L2	synchronized	30.047097	485.0	25.511036
2024-05-31	SRAL_L1	synchronized	250.366211	157.0	42.903175
2024-05-31	SRAL_L2	synchronized	9.609803	369.0	42.792111
2024-05-31	SYN_L2	synchronized	84.242056	418.0	26.909134
2024-05-31	Unknown	deleted	0.000000	2.0	0.000000
2024-05-09	NRTI_L2	synchronized	36.607079	920.0	31.163792
2024-05-09	OFFL_L1B	synchronized	1682.508102	695.0	30.874364
2024-05-09	OFFL_L2	synchronized	540.041024	1157.0	93.368592
2024-05-09	Unknown	deleted	0.000000	28.0	0.000000
2024-05-09	NRTI_L2	synchronized	36.607079	920.0	31.163792
2024-05-09	OFFL_L1B	synchronized	1682.508102	695.0	30.874364
2024-05-09	OFFL_L2	synchronized	540.041024	1157.0	93.368592
2024-05-09	Unknown	deleted	0.000000	28.0	0.000000
2024-05-09	NRTI_L2	synchronized	36.607079	920.0	31.163792
2024-05-09	OFFL_L1B	synchronized	1682.508102	695.0	30.874364
2024-05-09	OFFL_L2	synchronized	540.041024	1157.0	93.368592
2024-05-09	Unknown	deleted	0.000000	28.0	0.000000
2024-05-10	NRTI_L2	synchronized	11.142222	306.0	1.882325

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2024-05-10	OFFL_L1B	synchronized	305.325901	112.0	4.092086
2024-05-10	OFFL_L2	synchronized	74.520756	201.0	40.155805
2024-05-10	Unknown	deleted	0.000000	2.0	0.000000
2024-05-11	NRTI_L2	synchronized	7.090780	198.0	1.918424
2024-05-11	OFFL_L1B	synchronized	139.951788	56.0	4.041229
2024-05-11	OFFL_L2	synchronized	68.392489	190.0	39.291138
2024-05-12	NRTI_L2	synchronized	5.801186	162.0	1.894925
2024-05-12	OFFL_L1B	synchronized	139.689704	56.0	4.235082
2024-05-12	OFFL_L2	synchronized	58.656996	167.0	39.556281
2024-05-13	NRTI_L2	synchronized	13.275007	332.0	1.944907
2024-05-13	OFFL_L1B	synchronized	530.997155	200.0	21.825427
2024-05-13	OFFL_L2	synchronized	50.308025	149.0	45.306500
2024-05-14	NRTI_L2	synchronized	11.906283	315.0	1.911451
2024-05-14	OFFL_L1B	synchronized	327.337042	120.0	3.973467
2024-05-14	OFFL_L2	synchronized	70.528976	199.0	40.130489
2024-05-15	NRTI_L2	synchronized	11.147056	296.0	1.969267
2024-05-15	OFFL_L1B	synchronized	301.946749	112.0	3.975941
2024-05-15	OFFL_L2	synchronized	66.924040	187.0	39.597769
2024-05-16	NRTI_L2	synchronized	13.405603	341.0	1.919269
2024-05-16	OFFL_L1B	synchronized	305.389510	112.0	4.117308
2024-05-16	OFFL_L2	synchronized	66.992866	184.0	39.597729
2024-05-17	NRTI_L2	synchronized	12.206963	310.0	1.869367
2024-05-17	OFFL_L1B	synchronized	302.991068	112.0	4.021078
2024-05-17	OFFL_L2	synchronized	66.663804	184.0	39.559693
2024-05-18	NRTI_L2	synchronized	11.606314	317.0	1.919221
2024-05-18	OFFL_L1B	synchronized	286.569174	105.0	4.008779
2024-05-18	OFFL_L2	synchronized	61.517680	172.0	39.430448
2024-05-19	NRTI_L2	synchronized	11.953858	309.0	2.152677
2024-05-19	OFFL_L1B	synchronized	325.835348	118.0	4.265154
2024-05-19	OFFL_L2	synchronized	69.446518	192.0	43.196181
2024-05-20	NRTI_L2	synchronized	12.878849	323.0	1.935877
2024-05-20	OFFL_L1B	synchronized	305.519472	112.0	3.866911
2024-05-20	OFFL_L2	synchronized	65.521669	185.0	39.321491
2024-05-21	NRTI_L2	synchronized	12.244608	309.0	1.902720
2024-05-21	OFFL_L1B	synchronized	328.430325	121.0	3.891187
2024-05-21	OFFL_L2	synchronized	67.879728	187.0	39.429892
2024-05-22	NRTI_L2	synchronized	6.795145	188.0	1.885932
2024-05-22	OFFL_L1B	synchronized	149.703066	57.0	4.049809
2024-05-22	OFFL_L2	synchronized	28.527972	82.0	39.083856
2024-05-22	Unknown	deleted	0.000000	465.0	0.000000
2024-05-23	NRTI_L2	synchronized	17.052701	417.0	3.136311
2024-05-23	OFFL_L1B	synchronized	480.839263	175.0	5.955917
2024-05-23	OFFL_L2	synchronized	104.382811	286.0	47.554801
2024-05-23	Unknown	deleted	0.000000	135.0	0.000000
2024-05-24	NRTI_L2	synchronized	12.972615	324.0	1.919285
2024-05-24	OFFL_L1B	synchronized	305.569213	112.0	4.045258
2024-05-24	OFFL_L2	synchronized	65.699223	182.0	39.534251
2024-05-25	NRTI_L2	synchronized	12.638884	315.0	1.936087
2024-05-25	OFFL_L1B	synchronized	305.580646	112.0	4.000534
2024-05-25	OFFL_L2	synchronized	66.090344	181.0	39.605068
2024-05-26	NRTI_L2	synchronized	12.408855	330.0	1.944299
2024-05-26	OFFL_L1B	synchronized	305.640774	112.0	4.000173
2024-05-26	OFFL_L2	synchronized	68.408689	190.0	39.450897
2024-05-27	NRTI_L2	synchronized	3.081098	109.0	1.869270
2024-05-27	OFFL_L1B	synchronized	88.153522	32.0	4.159466
2024-05-27	OFFL_L2	synchronized	17.050901	48.0	39.205351

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2024-05-27	Unknown	deleted	0.000000	4.0	0.000000
2024-05-28	NRTI_L2	synchronized	22.448170	554.0	2.119400
2024-05-28	OFFL_L1B	synchronized	520.796662	192.0	4.904533
2024-05-28	OFFL_L2	synchronized	116.509582	321.0	45.465875
2024-05-28	Unknown	deleted	0.000000	5.0	0.000000
2024-05-29	NRTI_L2	synchronized	13.331246	322.0	1.952628
2024-05-29	OFFL_L1B	synchronized	325.170610	120.0	3.943546
2024-05-29	OFFL_L2	synchronized	66.883411	184.0	39.426389
2024-05-30	NRTI_L2	synchronized	12.348092	324.0	1.919335
2024-05-30	OFFL_L1B	synchronized	305.649475	112.0	4.093575
2024-05-30	OFFL_L2	synchronized	49.431508	136.0	42.159366
2024-05-31	NRTI_L2	synchronized	12.872153	331.0	1.919272
2024-05-31	OFFL_L1B	synchronized	305.705330	112.0	4.096257
2024-05-31	OFFL_L2	synchronized	35.992863	83.0	51.764010
2024-05-01	s1_iw	NaN	18.029076	12.0	NaN
2024-05-01	s1_ew	NaN	21.126408	12.0	NaN
2024-05-01	s2_l1c	NaN	296.760612	468.0	NaN
2024-05-01	s2_l2a	NaN	6.900066	8.0	NaN
2024-05-02	s2_l2a	NaN	1.697460	4.0	NaN
2024-05-02	s2_l1c	NaN	289.654953	484.0	NaN
2024-05-02	s1_iw	NaN	49.167068	39.0	NaN
2024-05-02	s1_ew	NaN	10.796474	6.0	NaN
2024-05-03	s1_iw	NaN	37.817272	29.0	NaN
2024-05-03	s1_ew	NaN	12.851284	6.0	NaN
2024-05-03	s2_l1c	NaN	274.619164	470.0	NaN
2024-05-03	s2_l2a	NaN	1.666260	3.0	NaN
2024-05-04	s1_iw	NaN	20.895695	17.0	NaN
2024-05-04	s1_ew	NaN	21.576775	10.0	NaN
2024-05-04	s2_l1c	NaN	289.715519	471.0	NaN
2024-05-04	s2_l2a	NaN	6.404747	8.0	NaN
2024-05-05	s2_l2a	NaN	23.836205	0.0	NaN
2024-05-05	s2_l1c	NaN	300.861210	507.0	NaN
2024-05-05	s1_iw	NaN	53.892040	35.0	NaN
2024-05-05	s1_ew	NaN	14.358131	5.0	NaN
2024-05-06	s1_iw	NaN	9.456387	13.0	NaN
2024-05-06	s1_ew	NaN	20.856453	9.0	NaN
2024-05-06	s2_l1c	NaN	263.618664	446.0	NaN
2024-05-06	s2_l2a	NaN	5.847404	8.0	NaN
2024-05-07	s2_l2a	NaN	1.099010	2.0	NaN
2024-05-07	s1_iw	NaN	50.011391	38.0	NaN
2024-05-07	s1_ew	NaN	20.029045	9.0	NaN
2024-05-07	s2_l1c	NaN	220.595200	370.0	NaN
2024-05-08	s2_l2a	NaN	23.136055	0.0	NaN
2024-05-08	s2_l1c	NaN	286.026379	473.0	NaN
2024-05-08	s1_iw	NaN	23.136055	0.0	NaN
2024-05-08	s1_ew	NaN	23.136055	0.0	NaN
2024-05-09	s2_l1c	NaN	257.573536	445.0	NaN
2024-05-09	s1_iw	NaN	20.145473	13.0	NaN
2024-05-09	s1_ew	NaN	23.136120	0.0	NaN
2024-05-09	s2_l2a	NaN	23.136120	0.0	NaN
2024-05-10	s2_l2a	NaN	23.136185	0.0	NaN
2024-05-10	s2_l1c	NaN	275.763908	491.0	NaN
2024-05-10	s1_iw	NaN	63.946144	40.0	NaN
2024-05-10	s1_ew	NaN	6.517883	2.0	NaN
2024-05-11	s1_iw	NaN	15.702393	15.0	NaN
2024-05-11	s1_ew	NaN	26.595726	13.0	NaN

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2024-05-11	s2_l1c	NaN	279.821636	471.0	NaN
2024-05-11	s2_l2a	NaN	6.510593	8.0	NaN
2024-05-12	s1_iw	NaN	54.042717	37.0	NaN
2024-05-12	s1_ew	NaN	19.595158	9.0	NaN
2024-05-12	s2_l1c	NaN	226.979641	408.0	NaN
2024-05-12	s2_l2a	NaN	1.714310	4.0	NaN
2024-05-13	s2_l2a	NaN	1.772919	3.0	NaN
2024-05-13	s2_l1c	NaN	272.245262	462.0	NaN
2024-05-13	s1_iw	NaN	10.991890	11.0	NaN
2024-05-13	s1_ew	NaN	14.392326	9.0	NaN
2024-05-14	s1_iw	NaN	45.741871	38.0	NaN
2024-05-14	s1_ew	NaN	5.508419	4.0	NaN
2024-05-14	s2_l1c	NaN	286.879368	483.0	NaN
2024-05-14	s2_l2a	NaN	5.648582	9.0	NaN
2024-05-15	s2_l2a	NaN	23.138000	0.0	NaN
2024-05-15	s2_l1c	NaN	282.323643	482.0	NaN
2024-05-15	s1_ew	NaN	6.704803	4.0	NaN
2024-05-15	s1_iw	NaN	49.155468	32.0	NaN
2024-05-16	s1_iw	NaN	28.394276	19.0	NaN
2024-05-16	s1_ew	NaN	12.867275	8.0	NaN
2024-05-16	s2_l1c	NaN	265.448380	449.0	NaN
2024-05-16	s2_l2a	NaN	6.722069	8.0	NaN
2024-05-17	s2_l1c	NaN	324.300964	529.0	NaN
2024-05-17	s2_l2a	NaN	1.717915	4.0	NaN
2024-05-17	s1_iw	NaN	53.349442	34.0	NaN
2024-05-17	s1_ew	NaN	23.138283	0.0	NaN
2024-05-18	s1_iw	NaN	16.972580	15.0	NaN
2024-05-18	s1_ew	NaN	7.757759	4.0	NaN
2024-05-18	s2_l1c	NaN	256.186115	426.0	NaN
2024-05-18	s2_l2a	NaN	1.714108	3.0	NaN
2024-05-19	s2_l1c	NaN	253.886806	452.0	NaN
2024-05-19	s1_iw	NaN	50.383778	38.0	NaN
2024-05-19	s1_ew	NaN	11.003925	6.0	NaN
2024-05-19	s2_l2a	NaN	5.985363	8.0	NaN
2024-05-20	s2_l2a	NaN	23.138439	0.0	NaN
2024-05-20	s2_l1c	NaN	248.155445	445.0	NaN
2024-05-20	s1_ew	NaN	9.790165	4.0	NaN
2024-05-20	s1_iw	NaN	26.561150	21.0	NaN
2024-05-21	s1_iw	NaN	32.273075	9.0	NaN
2024-05-21	s1_ew	NaN	8.638950	3.0	NaN
2024-05-21	s2_l1c	NaN	279.428345	473.0	NaN
2024-05-21	s2_l2a	NaN	6.598923	8.0	NaN
2024-05-22	s1_iw	NaN	52.824051	20.0	NaN
2024-05-22	s1_ew	NaN	5.039192	2.0	NaN
2024-05-22	s2_l1c	NaN	23.137203	0.0	NaN
2024-05-22	s2_l2a	NaN	23.137203	0.0	NaN
2024-05-23	s2_l2a	NaN	1.798546	3.0	NaN
2024-05-23	s2_l1c	NaN	272.728046	467.0	NaN
2024-05-23	s1_iw	NaN	19.410324	15.0	NaN
2024-05-23	s1_ew	NaN	28.004734	13.0	NaN
2024-05-24	s1_iw	NaN	47.362812	35.0	NaN
2024-05-24	s1_ew	NaN	19.608688	9.0	NaN
2024-05-24	s2_l1c	NaN	317.691650	515.0	NaN
2024-05-24	s2_l2a	NaN	5.527485	8.0	NaN
2024-05-25	s2_l2a	NaN	22.702438	0.0	NaN
2024-05-25	s2_l1c	NaN	280.420757	484.0	NaN

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2024-05-25	s1_ew	NaN	13.593220	8.0	NaN
2024-05-25	s1_iw	NaN	14.917450	12.0	NaN
2024-05-26	s1_iw	NaN	47.771988	36.0	NaN
2024-05-26	s1_ew	NaN	7.100994	6.0	NaN
2024-05-26	s2_l1c	NaN	264.578342	450.0	NaN
2024-05-26	s2_l2a	NaN	6.857613	8.0	NaN
2024-05-27	s2_l1c	NaN	329.227543	533.0	NaN
2024-05-27	s2_l2a	NaN	1.465336	5.0	NaN
2024-05-27	s1_iw	NaN	34.514801	27.0	NaN
2024-05-27	s1_ew	NaN	11.983906	6.0	NaN
2024-05-28	s1_iw	NaN	21.453094	17.0	NaN
2024-05-28	s1_ew	NaN	20.150208	11.0	NaN
2024-05-28	s2_l1c	NaN	291.477036	479.0	NaN
2024-05-28	s2_l2a	NaN	1.864731	3.0	NaN
2024-05-29	s2_l2a	NaN	5.815052	8.0	NaN
2024-05-29	s1_iw	NaN	48.245869	33.0	NaN
2024-05-29	s1_ew	NaN	12.719818	5.0	NaN
2024-05-29	s2_l1c	NaN	239.161049	410.0	NaN
2024-05-30	s2_l1c	NaN	268.376987	477.0	NaN
2024-05-30	s2_l2a	NaN	22.704155	0.0	NaN
2024-05-30	s1_iw	NaN	17.336708	15.0	NaN
2024-05-30	s1_ew	NaN	12.511471	6.0	NaN
2024-05-31	s1_iw	NaN	42.132450	36.0	NaN
2024-05-31	s1_ew	NaN	17.923168	9.0	NaN
2024-05-31	s2_l1c	NaN	320.591362	524.0	NaN
2024-05-31	s2_l2a	NaN	6.650570	8.0	NaN





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