

Advanced ways to find and retrieve data in the LTA

There are some useful ways to find and retrieve your data in the LTA that might not be immediately obvious. This page explains some of the more advanced options you have.

Queries

- You can use wildcards in your query. This will for example give all observations and pipelines that have a SAS/Observation ID in the 146xxx range:

Target Name	3:19*
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- You can put a list of SAS/Observation IDs in the query:

Observation Id	146112,147775,151778
Observing Date	From 0000-00-00 00:00:00 To 0000-00-00 00:00:00

Viewing data

When you are looking at the results of a query you might see something like this:

Number Of Correlated DataProducts
0 / 488

This means that the observation is known in the LTA, it knows what data was produced, the produced data was not archived, but further processing happened on the raw data and the results of some of those pipelines were archived. If you click on the zero, you will see something like this:

#	<input type="checkbox"/>	DataProduct Identifier	SubArray Pointing Identifier	Subband	Stations	Observations	Pipeline	Derived DataProducts
1	<input type="checkbox"/>	7260485	293855	479	show	1		AveragingPipeline
2	<input type="checkbox"/>	7260483	293855	477	show	1		AveragingPipeline
3	<input type="checkbox"/>	7260488	293855	482	show	1	back to observation	AveragingPipeline
4	<input type="checkbox"/>	7260489	293855	483	show	1		AveragingPipeline
5	<input type="checkbox"/>	7260492	293855	486	show	1		AveragingPipeline
6	<input type="checkbox"/>	7260490	293855	484	show	1		AveragingPipeline
7	Can not be downloaded	7260493	293855	487	show	1		AveragingPipeline
8		7260486	293855	480	show	1		AveragingPipeline
9	<input type="checkbox"/>	7260487	293855	481	show	1	To pipeline	AveragingPipeline
10	<input type="checkbox"/>	7260482	293855	476	show	1		AveragingPipeline
11	<input type="checkbox"/>	7260491	293855	485	show	1		AveragingPipeline
12	<input type="checkbox"/>	7260484	293855	478	show	1		AveragingPipeline
13	<input type="checkbox"/>	7260436	293854	430	show	1		AveragingPipeline

This allows you to navigate from a pipeline back to the original observation, or from the observation to any pipelines that have run on the raw data.

Retrieving data

- You can retrieve data on the Observation and Pipeline level, you don't have to select all files individually.

#	<input type="checkbox"/>	Observation Id	Observing Mode	Antenna Set	Instrun Filt
1	<input checked="" type="checkbox"/>	146448	Interferometer	HBA Dual Inner	110-190
2	<input type="checkbox"/>	146447	Interferometer	HBA Dual Inner	110-190
3	<input checked="" type="checkbox"/>	146446	Interferometer	HBA Dual Inner	110-190
4	<input type="checkbox"/>	146445	Interferometer	HBA Dual Inner	110-190
5	<input checked="" type="checkbox"/>	146444	Interferometer	HBA Dual Inner	110-190
6	<input checked="" type="checkbox"/>	146443	Interferometer	HBA Dual Inner	110-190
7	<input type="checkbox"/>	146442	Interferometer	HBA Dual Inner	110-190
8	<input checked="" type="checkbox"/>	146441	Interferometer	HBA Dual Inner	110-190
9	<input checked="" type="checkbox"/>	146456	Interferometer	HBA Dual Inner	110-190
10	<input checked="" type="checkbox"/>	146455	Interferometer	HBA Dual Inner	110-190
11	<input type="checkbox"/>	146454	Interferometer	HBA Dual Inner	110-190
12	<input type="checkbox"/>	146453	Interferometer	HBA Dual Inner	110-190
13	<input type="checkbox"/>	146452	Interferometer	HBA Dual Inner	110-190

- If you have a query with more than 1000 results, you can open the multiple pages each in a separate tab/window.

Observation 1001 to 1100 (showing 100 of total 1156) ▾

[edit columns](#) | [stage selected](#)

[first](#) | [previous](#) | ... | [2](#) | [3](#) | [4](#) | [5](#) | [6](#) | [7](#) | [8](#) | [9](#) | [10](#) | [11](#) | [12](#) | [next](#) | [last](#)

Of SubArray	Start Time	Duration	Nr Stations	Nr Stations
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- With the small triangle next to a list, you can fold or unfold the list to get a better overview.

Folded entries

Observation 1 to 100 (showing 100 of total 1156) ▲

Averaging Pipeline 1 to 100 (showing 100 of total 4060) ▲

Calibration Pipeline (total 30) ▲

Imaging Pipeline (total 0) ▲

UnspecifiedProcess 1 to 100 (showing 100 of total 125) ▲

Unfolded entries

Calibration Pipeline (total 30) -

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#	Process Name	Process Version	Process Identifier	Observation ID	Start Time	Duration (s)	End Time	Strategy Name	Strategy Description	Progressive Integration Step	Time Integration Step	Flag Auto Correlation	Stakeholder Database	Receiving	Number Of Instruments	Number Of Correlated DataProducts	Source DataProduct
1	PRG_AveragingPipeline	1.0.0	407000	123456	2010-01-01 00:00:00	0.0	2010-01-01 00:00:00	Programme Pipeline (no device)	Programme Pipeline (no device)	10	0	0	0	0	0	0	data
2	PRG_AveragingPipeline	1.0.0	407001	123457	2010-01-01 00:00:00	0.0	2010-01-01 00:00:00	Programme Pipeline (no device)	Programme Pipeline (no device)	10	0	0	0	0	0	0	data
3	PRG_AveragingPipeline	1.0.0	407002	123458	2010-01-01 00:00:00	0.0	2010-01-01 00:00:00	Programme Pipeline (no device)	Programme Pipeline (no device)	10	0	0	0	0	0	0	data
4	PRG_AveragingPipeline	1.0.0	407003	123459	2010-01-01 00:00:00	0.0	2010-01-01 00:00:00	Programme Pipeline (no device)	Programme Pipeline (no device)	10	0	0	0	0	0	0	data
5	PRG_AveragingPipeline	1.0.0	407004	123460	2010-01-01 00:00:00	0.0	2010-01-01 00:00:00	Programme Pipeline (no device)	Programme Pipeline (no device)	10	0	0	0	0	0	0	data
6	PRG_AveragingPipeline	1.0.0	407005	123461	2010-01-01 00:00:00	0.0	2010-01-01 00:00:00	Programme Pipeline (no device)	Programme Pipeline (no device)	10	0	0	0	0	0	0	data
7	PRG_AveragingPipeline	1.0.0	407006	123462	2010-01-01 00:00:00	0.0	2010-01-01 00:00:00	Programme Pipeline (no device)	Programme Pipeline (no device)	10	0	0	0	0	0	0	data
8	PRG_AveragingPipeline	1.0.0	407007	123463	2010-01-01 00:00:00	0.0	2010-01-01 00:00:00	Programme Pipeline (no device)	Programme Pipeline (no device)	10	0	0	0	0	0	0	data
9	PRG_AveragingPipeline	1.0.0	407008	123464	2010-01-01 00:00:00	0.0	2010-01-01 00:00:00	Programme Pipeline (no device)	Programme Pipeline (no device)	10	0	0	0	0	0	0	data
10	PRG_AveragingPipeline	1.0.0	407009	123465	2010-01-01 00:00:00	0.0	2010-01-01 00:00:00	Programme Pipeline (no device)	Programme Pipeline (no device)	10	0	0	0	0	0	0	data
11	PRG_AveragingPipeline	1.0.0	407010	123466	2010-01-01 00:00:00	0.0	2010-01-01 00:00:00	Programme Pipeline (no device)	Programme Pipeline (no device)	10	0	0	0	0	0	0	data
12	PRG_AveragingPipeline	1.0.0	407011	123467	2010-01-01 00:00:00	0.0	2010-01-01 00:00:00	Programme Pipeline (no device)	Programme Pipeline (no device)	10	0	0	0	0	0	0	data
13	PRG_AveragingPipeline	1.0.0	407012	123468	2010-01-01 00:00:00	0.0	2010-01-01 00:00:00	Programme Pipeline (no device)	Programme Pipeline (no device)	10	0	0	0	0	0	0	data
14	PRG_AveragingPipeline	1.0.0	407013	123469	2010-01-01 00:00:00	0.0	2010-01-01 00:00:00	Programme Pipeline (no device)	Programme Pipeline (no device)	10	0	0	0	0	0	0	data
15	PRG_AveragingPipeline	1.0.0	407014	123470	2010-01-01 00:00:00	0.0	2010-01-01 00:00:00	Programme Pipeline (no device)	Programme Pipeline (no device)	10	0	0	0	0	0	0	data
16	PRG_AveragingPipeline	1.0.0	407015	123471	2010-01-01 00:00:00	0.0	2010-01-01 00:00:00	Programme Pipeline (no device)	Programme Pipeline (no device)	10	0	0	0	0	0	0	data
17	PRG_AveragingPipeline	1.0.0	407016	123472	2010-01-01 00:00:00	0.0	2010-01-01 00:00:00	Programme Pipeline (no device)	Programme Pipeline (no device)	10	0	0	0	0	0	0	data
18	PRG_AveragingPipeline	1.0.0	407017	123473	2010-01-01 00:00:00	0.0	2010-01-01 00:00:00	Programme Pipeline (no device)	Programme Pipeline (no device)	10	0	0	0	0	0	0	data
19	PRG_AveragingPipeline	1.0.0	407018	123474	2010-01-01 00:00:00	0.0	2010-01-01 00:00:00	Programme Pipeline (no device)	Programme Pipeline (no device)	10	0	0	0	0	0	0	data
20	PRG_AveragingPipeline	1.0.0	407019	123475	2010-01-01 00:00:00	0.0	2010-01-01 00:00:00	Programme Pipeline (no device)	Programme Pipeline (no device)	10	0	0	0	0	0	0	data
21	PRG_AveragingPipeline	1.0.0	407020	123476	2010-01-01 00:00:00	0.0	2010-01-01 00:00:00	Programme Pipeline (no device)	Programme Pipeline (no device)	10	0	0	0	0	0	0	data
22	PRG_AveragingPipeline	1.0.0	407021	123477	2010-01-01 00:00:00	0.0	2010-01-01 00:00:00	Programme Pipeline (no device)	Programme Pipeline (no device)	10	0	0	0	0	0	0	data
23	PRG_AveragingPipeline	1.0.0	407022	123478	2010-01-01 00:00:00	0.0	2010-01-01 00:00:00	Programme Pipeline (no device)	Programme Pipeline (no device)	10	0	0	0	0	0	0	data
24	PRG_AveragingPipeline	1.0.0	407023	123479	2010-01-01 00:00:00	0.0	2010-01-01 00:00:00	Programme Pipeline (no device)	Programme Pipeline (no device)	10	0	0	0	0	0	0	data
25	PRG_AveragingPipeline	1.0.0	407024	123480	2010-01-01 00:00:00	0.0	2010-01-01 00:00:00	Programme Pipeline (no device)	Programme Pipeline (no device)	10	0	0	0	0	0	0	data
26	PRG_AveragingPipeline	1.0.0	407025	123481	2010-01-01 00:00:00	0.0	2010-01-01 00:00:00	Programme Pipeline (no device)	Programme Pipeline (no device)	10	0	0	0	0	0	0	data
27	PRG_AveragingPipeline	1.0.0	407026	123482	2010-01-01 00:00:00	0.0	2010-01-01 00:00:00	Programme Pipeline (no device)	Programme Pipeline (no device)	10	0	0	0	0	0	0	data
28	PRG_AveragingPipeline	1.0.0	407027	123483	2010-01-01 00:00:00	0.0	2010-01-01 00:00:00	Programme Pipeline (no device)	Programme Pipeline (no device)	10	0	0	0	0	0	0	data
29	PRG_AveragingPipeline	1.0.0	407028	123484	2010-01-01 00:00:00	0.0	2010-01-01 00:00:00	Programme Pipeline (no device)	Programme Pipeline (no device)	10	0	0	0	0	0	0	data
30	PRG_AveragingPipeline	1.0.0	407029	123485	2010-01-01 00:00:00	0.0	2010-01-01 00:00:00	Programme Pipeline (no device)	Programme Pipeline (no device)	10	0	0	0	0	0	0	data

Imaging Pipeline (total 0) -

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UnspecifiedProcess 1 to 100 (showing 100 of total 125) -

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#	Process Name	Process Version	Process Identifier	Observation ID	Start Time	Duration (s)	End Time	Strategy Name	Strategy Description	Progressive Integration Step	Time Integration Step	Flag Auto Correlation	Stakeholder Database	Receiving	Number Of Instruments	Number Of Correlated DataProducts	Source DataProduct
1	UnspecifiedProcess	1.0.0	123456	123456	2010-01-01 00:00:00	0.0	2010-01-01 00:00:00	UnspecifiedProcess	UnspecifiedProcess	10	0	0	0	0	0	0	data
2	UnspecifiedProcess	1.0.0	123457	123457	2010-01-01 00:00:00	0.0	2010-01-01 00:00:00	UnspecifiedProcess	UnspecifiedProcess	10	0	0	0	0	0	0	data
3	UnspecifiedProcess	1.0.0	123458	123458	2010-01-01 00:00:00	0.0	2010-01-01 00:00:00	UnspecifiedProcess	UnspecifiedProcess	10	0	0	0	0	0	0	data
4	UnspecifiedProcess	1.0.0	123459	123459	2010-01-01 00:00:00	0.0	2010-01-01 00:00:00	UnspecifiedProcess	UnspecifiedProcess	10	0	0	0	0	0	0	data
5	UnspecifiedProcess	1.0.0	123460	123460	2010-01-01 00:00:00	0.0	2010-01-01 00:00:00	UnspecifiedProcess	UnspecifiedProcess	10	0	0	0	0	0	0	data
6	UnspecifiedProcess	1.0.0	123461	123461	2010-01-01 00:00:00	0.0	2010-01-01 00:00:00	UnspecifiedProcess	UnspecifiedProcess	10	0	0	0	0	0	0	data
7	UnspecifiedProcess	1.0.0	123462	123462	2010-01-01 00:00:00	0.0	2010-01-01 00:00:00	UnspecifiedProcess	UnspecifiedProcess	10	0	0	0	0	0	0	data
8	UnspecifiedProcess	1.0.0	123463	123463	2010-01-01 00:00:00	0.0	2010-01-01 00:00:00	UnspecifiedProcess	UnspecifiedProcess	10	0	0	0	0	0	0	data
9	UnspecifiedProcess	1.0.0	123464	123464	2010-01-01 00:00:00	0.0	2010-01-01 00:00:00	UnspecifiedProcess	UnspecifiedProcess	10	0	0	0	0	0	0	data
10	UnspecifiedProcess	1.0.0	123465	123465	2010-01-01 00:00:00	0.0	2010-01-01 00:00:00	UnspecifiedProcess	UnspecifiedProcess	10	0	0	0	0	0	0	data
11	UnspecifiedProcess	1.0.0	123466	123466	2010-01-01 00:00:00	0.0	2010-01-01 00:00:00	UnspecifiedProcess	UnspecifiedProcess	10	0	0	0	0	0	0	data
12	UnspecifiedProcess	1.0.0	123467	123467	2010-01-01 00:00:00	0.0	2010-01-01 00:00:00	UnspecifiedProcess	UnspecifiedProcess	10	0	0	0	0	0	0	data
13	UnspecifiedProcess	1.0.0	123468	123468	2010-01-01 00:00:00	0.0	2010-01-01 00:00:00	UnspecifiedProcess	UnspecifiedProcess	10	0	0	0	0	0	0	data
14	UnspecifiedProcess	1.0.0	123469	123469	2010-01-01 00:00:00	0.0	2010-01-01 00:00:00	UnspecifiedProcess	UnspecifiedProcess	10	0	0	0	0	0	0	data
15	UnspecifiedProcess	1.0.0	123470	123470	2010-01-01 00:00:00	0.0	2010-01-01 00:00:00	UnspecifiedProcess	UnspecifiedProcess	10	0	0	0	0	0	0	data
16	UnspecifiedProcess	1.0.0	123471	123471	2010-01-01 00:00:00	0.0	2010-01-01 00:00:00	UnspecifiedProcess	UnspecifiedProcess	10	0	0	0	0	0	0	data
17	UnspecifiedProcess	1.0.0	123472	123472	2010-01-01 00:00:00	0.0	2010-01-01 00:00:00	UnspecifiedProcess	UnspecifiedProcess	10	0	0	0	0	0	0	data
18	UnspecifiedProcess	1.0.0	123473	123473	2010-01-01 00:00:00	0.0	2010-01-01 00:00:00	UnspecifiedProcess	UnspecifiedProcess	10	0	0	0	0	0	0	data
19	UnspecifiedProcess	1.0.0	123474	123474	2010-01-01 00:00:00	0.0	2010-01-01 00:00:00	UnspecifiedProcess	UnspecifiedProcess	10	0	0	0	0	0	0	data
20	UnspecifiedProcess	1.0.0	123475	123475	2010-01-01 00:00:00	0.0	2010-01-01 00:00:00	UnspecifiedProcess	UnspecifiedProcess	10	0	0	0	0	0	0	data
21	UnspecifiedProcess	1.0.0	123476	123476	2010-01-01 00:00:00	0.0	2010-01-01 00:00:00	UnspecifiedProcess	UnspecifiedProcess	10	0	0	0	0	0	0	data
22	UnspecifiedProcess	1.0.0	123477	123477	2010-01-01 00:00:00	0.0	2010-01-01 00:00:00	UnspecifiedProcess	UnspecifiedProcess	10	0	0	0	0	0	0	data
23	UnspecifiedProcess	1.0.0	123478	123478	2010-01-01 00:00:00	0.0	2010-01-01 00:00:00	UnspecifiedProcess	UnspecifiedProcess	10	0	0	0	0	0	0	data
24	UnspecifiedProcess	1.0.0	123479	123479	2010-01-01 00:00:00	0.0	2010-01-01 00:00:00	UnspecifiedProcess	UnspecifiedProcess	10	0	0	0	0	0	0	data
25	UnspecifiedProcess	1.0.0	123480	123480	2010-01-01 00:00:00	0.0	2010-01-01 00:00:00	UnspecifiedProcess	UnspecifiedProcess	10	0	0	0	0	0	0	data
26	UnspecifiedProcess	1.0.0	123481	123481	2010-01-01 00:00:00	0.0	2010-01-01 00:00:00	UnspecifiedProcess	UnspecifiedProcess	10	0	0	0	0	0	0	data
27	UnspecifiedProcess	1.0.0	123482	123482	2010-01-01 00:00:00	0.0	2010-01-01 00:00:00	UnspecifiedProcess	UnspecifiedProcess	10	0	0	0	0	0	0	data
28	UnspecifiedProcess	1.0.0	123483	123483	2010-01-01 00:00:00	0.0	2010-01-01 00:00:00	UnspecifiedProcess	UnspecifiedProcess	10	0	0	0	0	0	0	data
29	UnspecifiedProcess	1.0.0	123484	123484	2010-01-01 00:00:00	0.0	2010-01-01 00:00:00	UnspecifiedProcess	UnspecifiedProcess	10	0	0	0	0	0	0	data
30	UnspecifiedProcess	1.0.0	123485	123485	2010-01-01 00:00:00	0.0	2010-01-01 00:00:00	UnspecifiedProcess	UnspecifiedProcess	10	0	0	0	0	0	0	data

DBView

There is a server that gives the option to run your own queries on the database

<http://lofar-dbview.target.rug.nl/>

A useful query might be this one, that gives you all files for a certain Obs Id (SAS VIC tree ID).

```
SELECT fo.URI, dp."dataProductType", dp."dataProductIdentifier",
       dp."processIdentifier"
FROM AWOPER."DataProduct+" dp,
       AWOPER.FileObject fo,
       AWOPER."Process+" pr
WHERE dp."processIdentifier" = pr."processIdentifier"
      AND pr."observationId" = '123456'
      AND fo.data_object = dp."object_id"
```

```
AND dp."isValid" > 0
```

In this '123456' should be replaced with the Obs Id of an Observation/Pipeline you're looking for.

AstroWise Python Interface

There is also a python interface to the LTA. With this you can also script some advanced queries. This for example gives all observations on a certain patch of the sky:

```
# python code
from pprint import pprint
from common.database.Context import context
from lofar.main.Pointing import Pointing
result = {}
for project in sorted(context.get_projects()) :
    print "Project %(project)s" % vars()
    ok = context.set_project(project)
    # do your query
    obs_ids = set()
    query = (Pointing.rightAscension > 15 * 8) & \
            (Pointing.declination < 15 * 17) & \
            (Pointing.declination > 0) & \
            (Pointing.declination < 60)
    for pointing in query :
        query_subarr = SubArrayPointing.pointing == pointing
        for subarr in query_subarr:
            query_obs = Observation.subArrayPointings.contains(subarr)
            for obs in query_obs :
                obs_ids.add(obs.observationId)
    result[project] = sorted(list(obs_ids))
    print result[project]

pprint(result)
```

Get SRM-URIs for one Observation

Using the python interface I wrote a short script to get all the SRM-URIs for one observation into a file:

From:

<https://www.astron.nl/lofarwiki/> - **LOFAR Wiki**

Permanent link:

https://www.astron.nl/lofarwiki/doku.php?id=public:lta_tricks&rev=1404237580

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