



## Event Index

Problems or Questions ? - Ask [service manager](#) !  
[Detailed Help](#)

Available runs

ELIS

00263962	00263964	00263965	00264034	00265532	00265545	00265573	00266211
00266503	00266534	00266604	00266919	00267079	00267148	00267152	00267162
00267167	00267358	00267359	00267369	00267367	00267385	00267599	00267638
00267639	00270441	00270448	00270588	00270806	00270816	00270949	00270953
00271048	00271298	00271370	00271388	00271421	00271516	00271595	00271649

EH17\_100330079:  live  Help

Cluster by AMI Tag  Cluster by group size  Expand all clusters

overlap thresholds:  0%  50%

tag level: 99 target: null filter: null

PNG histogram		PNG histogram	
data17_13TeV.00330079.physics_CosmicCalo.merge.AOD.R843_m1824 cvf=199452.0	144315 (72.36%)	data17_13TeV.00330079.physics_CosmicCalo.merge.AOD.R843_m1824 cvf=199452.0	144315 (72.36%)
L1_EM3_EMPTY	34159 (17.13%)	HLT_larcLib_L1EM3_EMPTY	144610 (70.50%)
L1_EM7_EMPTY	34068 (17.08%)	HLT_nnalq_cosmiccalo_L1EM7_EMPTY	22109 (11.08%)
L1_J12_EMPTY	23673 (11.87%)	HLT_larcLib_L1EM7_EMPTY	15205 (6.76%)
L1_RD1_EMPTY	12652 (6.34%)	HLT_larps_L1EM7_EMPTY	13070 (6.55%)
L1_J30_EMPTY	5940 (2.98%)	HLT_larcLib_L1J12_EMPTY	13050 (6.54%)
L1_TAU30_EMPTY	5292 (2.65%)	HLT_nnalq_cosmiccalo_L1RD1_EMPTY	12652 (6.34%)
L1_J12_ABORTGAPNOTCALIB	2284 (1.15%)	HLT_larcLib_L1TAU8_EMPTY	11751 (5.89%)
L1_J12_UNPAIRED_ISO	1228 (0.62%)	HLT_nnalq_cosmiccalo_L1J12_EMPTY	9480 (4.75%)
L1_J50_ABORTGAPNOTCALIB	1052 (0.52%)	HLT_larps_L1TAU8_EMPTY	7542 (3.78%)
L1_J12_BGRP12	448 (0.22%)	HLT_larps_L1J12_EMPTY	7429 (3.72%)
L1_J50_UNPAIRED_ISO	243 (0.12%)	HLT_larps_L1EM3_EMPTY	6828 (3.42%)

data17\_13TeV.00330079.physics\_Bphysics.merge.AOD.R843\_m1824

\* Catalog - Dataset Overlays - Trigger Statistics - Trigger Overlays() - TagFile.Sample - TagFile.Infor() - Journal(run|tag\*) - AMI

\* Generic: Catalog - Event Index

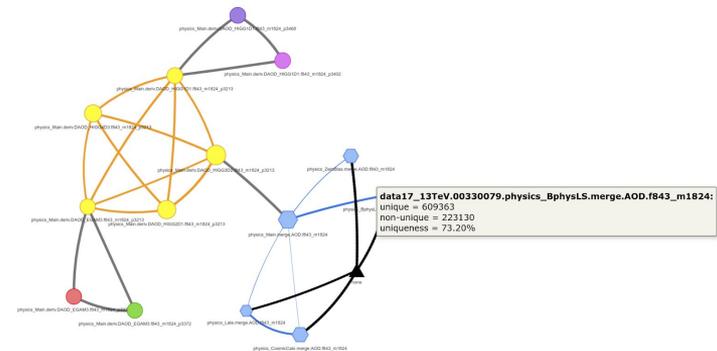
\* For experts: EI - EL - TI - Inspect - Journal - Full Service-oriented Portal

(\*) ... may be slow

# Atlas Event Index

## (with new Web Portal)

- What is Event Index
- How it works
- How to use it
  - New Graphical Web Service
- Plans



<https://atlas-event-index.cern.ch/EIHadoop>

*Julius Hrivnac  
Ruiun Yuan  
Grigoriy Rybkin  
17 Sep 2018, LAL*



# *What is Event Index*

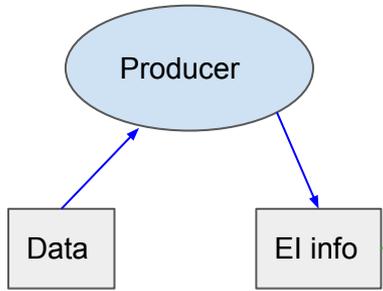
- Event Index (EI) = Complete catalog of ATLAS events, real and simulated
- Using **Hadoop-HBase Map/Reduce** framework
- Uniquely identified by run and event number
- All AODs indexed, DAODs and EVNTs indexed if needed (on request)
- RAWs, RDOs, ESDs referenced (by GUID)
- For each event, EI contains:
  - Run and event number
  - Trigger stream, LB, BCID
  - Trigger masks for each trigger level, decoded trigger chains (passed triggers)
  - References to events on Grid for each processing stages
- Typical usage:
  - Event picking (run number + event number -> GUIDs) [[Grigoriy Rybkin,...](#)]
  - Consistency checks (duplicated events, overlaps between datasets,...)
  - Trigger checks, counts, selection, statistics and overlaps
- User interface:
  - Command line on Linux @CERN or @CVMFS (used by Panda,...)
  - Interactive Web Service (several Portals)

*Most of the Core System has been written (and is maintained) by LAL*



# EI Architecture

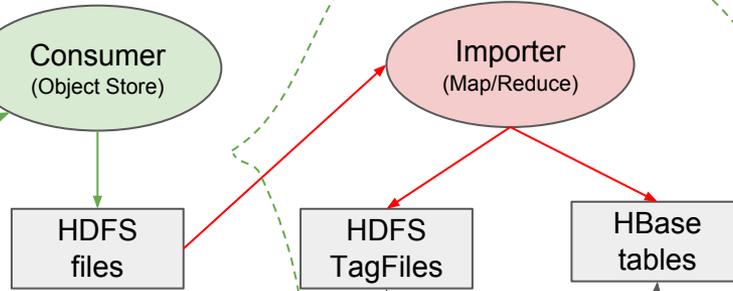
## Data Production



## Data Collection



## Data Import



Command Line  
(@ Linux, AFS or CVMFS)



Web Service

*maintained  
by IAF,  
runs  
on CERN  
Hadoop Cluster*

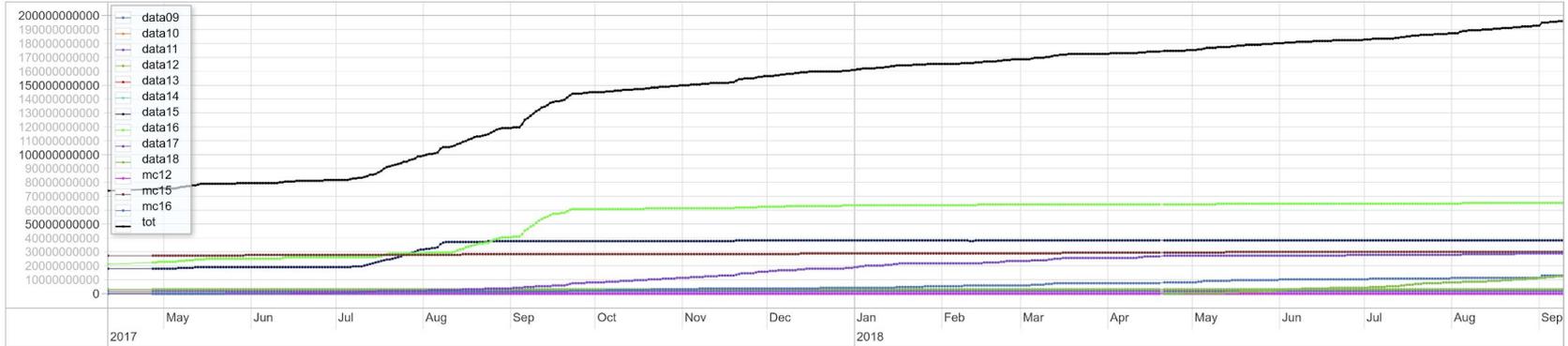


# E1 Size

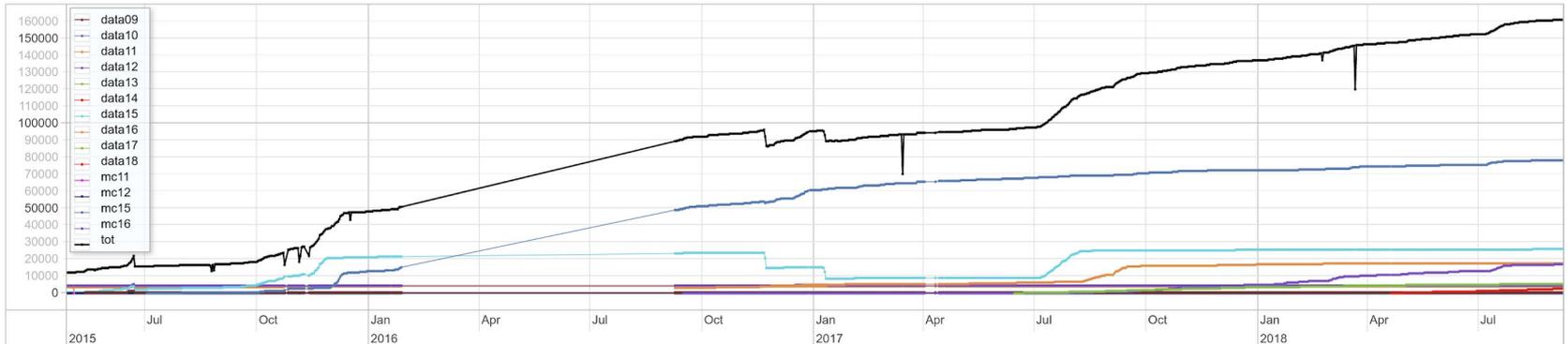
*almost 200 000 000 000 events covered*

## Import statistics

Events (196405464272 @ 2018-09-10)



Datasets (161193 @ 2018-09-10)



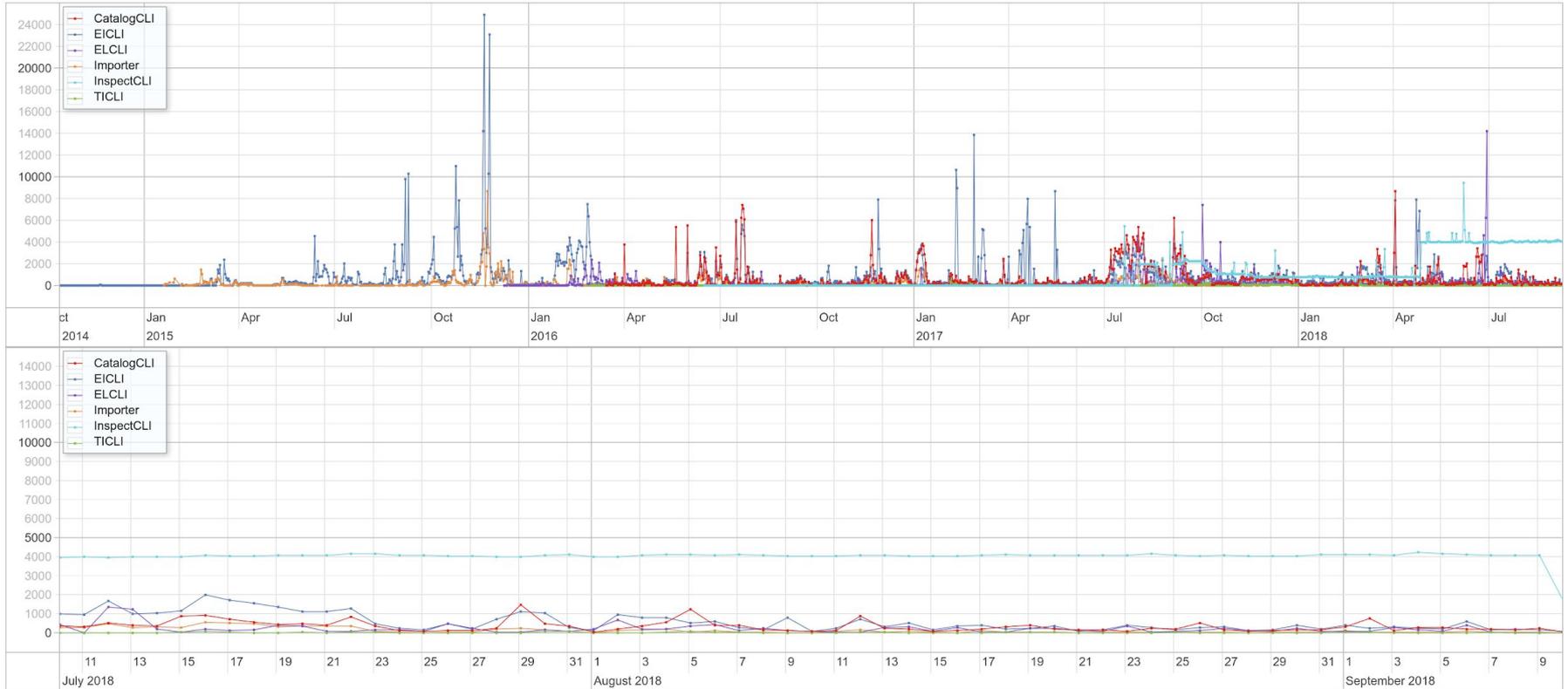
<https://atlas-event-index.cern.ch/EIHadoop/Imported.jsp>



# EI Usage

Event Lookup requests answered in ms

Daily Access statistics (3132442 @ 2018-09-10)



<https://atlas-event-index.cern.ch/EIHadoop/Accessed.jsp>



# Command Line

```
# to select events where one trigger chain passed
ei -query dataset:data17_13TeV.00339396.physics_ZeroBias.merge.AOD.f887_m1892
    -mr 'chainFired("HLT_noalg_zb_L1ZB")'
    -filter RunNumber_EventNumber
```

```
# to check a statistical distribution of LumiBlockN of a dataset
ei -query 'dataset:data16_13TeV.00307454.physics_L1Topo.merge.AOD.x464_m1667'
    -mr 'true'
    -aux 'net.hep.atlas.Database.EIHadoop.Accessor.Aux.VarStat;-v LumiBlockN'
```

```
# this request can be combined with a search, for example on a fired trigger
ei -query 'dataset:data15_13TeV.00279515.physics_Main.merge.AOD.r7562_p2521'
    -mr 'trigFired("HLT_tau35_medium1_tracktwo_tau25_medium1_tracktwo_L1TAU20IM_2TAU12IM") &&
        !trigFired("HLT_tau35_tight1_tracktwo_tau25_tight1_tracktwo_L1TAU20IM_2TAU12IM")'
    -aux 'net.hep.atlas.Database.EIHadoop.Accessor.Aux.VarStat;-v BunchId'
```

```
# to get GUIDs for a set of runNumber-eventNumbers specified as an argument
e1 -e '00278880 558085589, 00278880 255538473'
# the same request, give more informations about found events
e1 -e '00278880 558085589, 00278880 255538473' -details 'type event dataset'
# the same request, search all amiTags (not just the most recent one)
e1 -e '00278880 558085589, 00278880 255538473' -p all
```

*Just examples*

See more in <https://atlas-event-index.cern.ch/doc/faq>



# Service - oriented Portal (old, classical, legacy)

*select a service - then apply it to data*



## Event Index

- [Global Help](#)
- [FAQ, Use Cases, Home, Import Statistics, Access Statistics](#)
- [Old Data-Centric View, New Data-Centric View, Interactive Portal \(demo\)](#)
- [Catalog](#)
- [Event Index \(Expert Mode\)](#)
- [Event Lookup](#)
- [Trigger Info](#)
- [TagFile Inspector](#)
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- [External Services](#)
  - [AMI](#)

Problems or Questions ?  
Ask [service manager](#) !

## Event Lookup

List of 'runnumber evtnumber' (-e)

AMI tag (-p) (substring match)

Stream name (-s)

Data type (-d)

GUID type (-t)

AOD  ESD  RAW  all

simple  rich  indexer  mc (indexer)

event  type  id  dataset  rich output

-email  (implies asynchronous execution)

*Formulate a request*

*Choose a service here*

```
Event Lookup via Event Index
=====
general call: el
local call: hadoop jar EIHadoop.jar net.hep.atlas.Database.EIHadoop.Apps.ELCLI <arguments>
remote call: java -jar EIHadoopEL.exe.iar <arguments>
```

*command help*

```
-e 00278880 558085589, 00278880 210318172
-d details typenullnullnull
-a api indexer
```

```
6 guids found for 1 runs with 2 events, 0 guids missing, 0s spend
148C774B-B5BB-BF41-9346-F82F213EC4A6 StreamDAOD_HIGG1D1
6C2A1CB8-8F8F-4B42-9FAF-AC55B0957CFD StreamAOD
886C7D3A-3E56-E511-9D00-44A8420A5E7 StreamRAW
99ACB5FB-11FB-464F-B60F-E496213CABF1 StreamDAOD_HIGG1D1
EBC919C0-BAE8-9F42-BA63-21D782C0FAB7 StreamAOD
FC28C1E6-1D56-E511-AEDE-44A8420A8576 StreamRAW
```

*command line options to get the same result*



# Data - oriented Portal (table-based prototype)

Select a dataset with AMI tag - then apply an action to it

[Ruiun Yuan,...]

Search Criterion

Year :  Project :  Stream Name :  Prod Step :  evgen  merge  recon

Catalog Query Search Results (Get this result via command line : \$ catalog -query 'id:E116.1 project:data16\_13TeV streamName:physics\_Main prodStep:merge' -filter 'dataType runNumber version')

runNumber	AOD	DAOD_BPHY1	DAOD_BPHY4	DAOD_BPHY5	DAOD_BPHY7	DAOD_EGAM1	DAOD_EGAM2	DAOD_EGAM3	DAOD_EGAM4	DAOD_EGAM5	DAOD_EGAM6	DAOD_EGAM7
00311321	AMI Tag : <input type="text" value="r9264_p3083"/> <input type="text" value="f758_m1710"/> Dataset Overlaps General Action ▾	AMI Tag : <input type="text" value="f758_m1710_p2"/> <input type="text" value="f758_m1710_p2"/> General Action ▾	AMI Tag : <input type="text" value="f758_m1710_p2"/> <input type="text" value="f758_m1710_p2"/> General Action ▾	AMI Tag : <input type="text" value="f758_m1710_p2"/> <input type="text" value="f758_m1710_p2"/> General Action ▾	AMI Tag : <input type="text" value="f758_m1710_p2"/> <input type="text" value="f758_m1710_p3"/> General Action ▾	AMI Tag : <input type="text" value="f758_m1710_p3"/> <input type="text" value="f758_m1710_p2"/> General Action ▾	AMI Tag : <input type="text" value="f758_m1710_p2"/> <input type="text" value="f758_m1710_p2"/> General Action ▾	AMI Tag : <input type="text" value="f758_m1710_p2"/> <input type="text" value="f758_m1710_p2"/> General Action ▾	AMI Tag : <input type="text" value="f758_m1710_p2"/> <input type="text" value="f758_m1710_p2"/> General Action ▾	AMI Tag : <input type="text" value="f758_m1710_p2"/> <input type="text" value="f758_m1710_p2"/> General Action ▾	AMI Tag : <input type="text" value="f758_m1710_p2"/> <input type="text" value="f758_m1710_p2"/> General Action ▾	AMI Tag : <input type="text" value="f758_m1710_p2"/> <input type="text" value="f758_m1710_p2"/> General Action ▾
00311365	AMI Tag : <input type="text" value="r9264_p3083"/> <input type="text" value="f758_m1710"/> Dataset Overlaps General Action ▾	Full Catalog Info AMI Info Number of Events Event Range Variable-Statistic Trigger Statistic Available-Trigger						AMI Tag : <input type="text" value="r9264_p3083_p3"/> <input type="text" value="f758_m1710_p2"/> <input type="text" value="f758_m1710_p2"/> General Action ▾				
00311402	AMI Tag :							AMI Tag :				

Action Run Number Result (Get this result via command line : \$ inspect -query 'id:E116.1.data16\_13TeV.physics\_Main.merge.DAOD\_BPHY1.f758\_m1710\_p2950.00311321')

-query id:E116.1.data16\_13TeV.physics\_Main.merge.DAOD\_BPHY1.f758\_m1710\_p2950.00311321 status:good  
-filter

```
0s spend
1 : TagFile(id: E116.1.data16_13TeV.physics_Main.merge.DAOD_BPHY1.f758_m1710_p2950.00311321)
description: name: E116.1.data16_13TeV.physics_Main.merge.DAOD_BPHY1.f758_m1710_p2950.00311321
path: /user/atlevind/E116.1/data16_13TeV.00311321.physics_Main.merge.DAOD_BPHY1.f758_m1710_p2950
type: tags
format: map
info: Copy of E116.2.data16_13TeV.physics_Main.merge.DAOD_BPHY1.f758_m1710_p2950.00311321.guid_transid_consumerid_pandataaskid_pandauserid
key: RunNumber_EventNumber=String
schema: LumiBlockN=Int BunchId=Int EventTime=Int EventTimeNanoSec=Int EventWeight=Float McChannelNumber=Int Lvl1ID=String IsSimulation=Int IsCalibration=Int IsTestBeam=Int L1trigMask=String L2trigMask=String EFTrigMask=String SMK=Int
```



# Data - oriented Portal (*new, graphical, interactive*)

*select a run - then apply an action to it*

<a href="#">EI16.1</a>
<a href="#">EI17.1</a>
<a href="#">EI18.1</a>
<a href="#">00348354</a> <a href="#">00348403</a> <a href="#">00348440</a> <a href="#">00348534</a> <a href="#">00348583</a> <a href="#">00348609</a> <a href="#">00348610</a> <a href="#">00348836</a> <a href="#">00348885</a> <a href="#">00348894</a> <a href="#">00348895</a> <a href="#">00349011</a> <a href="#">00349051</a> <a href="#">00349101</a> <a href="#">00349109</a> <a href="#">00349111</a> <a href="#">00349114</a> <a href="#">00349159</a> <a href="#">00349169</a> <a href="#">00349263</a> <a href="#">00349268</a> <a href="#">00349309</a> <a href="#">00349326</a> <a href="#">00349327</a> <a href="#">00349334</a> <a href="#">00349335</a> <a href="#">00349451</a> <a href="#">00349481</a> <a href="#">00349498</a> <a href="#">00349526</a> <a href="#">00349533</a> <a href="#">00349534</a> <a href="#">00349582</a> <a href="#">00349583</a> <a href="#">00349604</a> <a href="#">00349626</a> <a href="#">00349637</a> <a href="#">00349645</a> <a href="#">00349646</a> <a href="#">00349670</a> <a href="#">00349682</a>

**Choose a run number here**

## Global Help

A prototype of interactive data-centric view.

2.0.0+ [05/Jul/2018 at 11:39:23 CEST by hrivnac]  
(atlas-event-index.cern.ch)

Catalog: atlas.atlevind.filesets.2  
COMA: atlas.atlevind.coma  
Journal: atlas.atlevind.log  
Root: /user/atlevind  
WS: atlevind  
Manager: atlevind@cern.ch

1. Choose a **run** on the left frame.
2. The bottom frame will show a graph of all relevant datasets with overlaps. That graph is configurable.
3. the right frame will show the dataset overlap table.
4. A double-click on a dataset note will create a context-sensitive manu at the right top cornert of the bottom frame.
5. Result of the context-sensitive actions will go into the right frame.

[Detailed Help](#)

[Atlas Event Index in Hadoop](#)

## News

- [Use Case list](#) and [Frequently Asked Questions list](#) assembled (16/1/2017).
- New [Graphical Data-Centric View](#) (13/3/2018).
- Venn diagrams for overlaps.
- Trigger Overlap tables per LumiBlock ranges (1/7/2018).

[Atlas Event Index in Hadoop](#)

<https://atlas-event-index.cern.ch/EIHadoop>



to create a sub-table

# Run Number View

to create a PNG or TXT view of the table  
or a new overlap graph

**datasets overlap table**  
(command results go here too)

tables shows  
overlap & union,  
Hover over cell  
to see subtractions

**context-sensitive menu**  
(actions on datasets)

**datasets overlap graph**

**click!**

Each cell shows overlap, union and both subtractions (on cursor hover). - Replace

<a href="#">EI18.1/00348894</a> Show Selection	AOD express_express merge f921_m1955	AOD physics_CosmicCato merge f921_m1947	AOD physics_Late merge f921_m1947	DAOD_EGAM3 physics_Main deriv f926_m1955_p3544	DAOD_EGAM3 physics_Main deriv f937_m1972_p3553	DAG physi deriv f926_m...
AOD express_express merge f921_m1955	20957 (20957)	1 (130976)	1 (22456)	146 (22448)	151 (22479)	164 (976)
AOD physics_CosmicCato merge f921_m1947	1 (130976)	110020 (110020)	639 (110881)	0 (111657)	0 (111693)	0 (188383)
AOD physics_Late merge f921_m1947	1 (22456)	639 (110881)	1500 (1500)	0 (3137)	0 (3173)	0 (79863)
DAOD_EGAM3 physics_Main deriv	146	0	0	1637	1496	1388

0.58%, 42.60%

live   
    
 overlap thresholds:   
 tag level:  target:   unique

[data18\\_13TeV.00348894.physics\\_ZeroBias.merge.AOD.f921\\_m1947](#)  
[\\* Catalog - Dataset Overlaps - Trigger Statistics - Trigger Overlaps - TaoF](#)  
[\\* Generic: Catalog - Event Index](#)  
[\\* For experts: EI - EL - TI - Inspect - Journal - Full Service](#)  
 (\*) ... may be slow, (+) ... external service

**graph drawing options**



express\_express.merge.AOD.f921\_m1955



# Run Number View

Each cell shows overlap, union and both subtractions (on cursor hover). - Replace with [OEI Overlap T](#)

**EI18.1/00348894**

	AOD_express_merge f921_m1955	AOD_physics_CosmicCalo_merge f921_m1947	AOD_physics_Late_merge f921_m1947	DAOD_EGAM3_physics_Main_deriv f926_m1955_p3544	DAOD_EGAM3_physics_Main_deriv f937_m1972_p3553	DAOD_EXOT4_physics_Main_deriv f926_m1955_p3544	DAOD_EXC_physics_Main_deriv f937_m1972
AOD_express_merge f921_m1955	20957 (20957)	1 (130976)	1 (22456)	146 (22448)	151 (22479)	1642 (97678)	1647 (9768)
AOD_physics_CosmicCalo_merge f921_m1947	1 (130976)	110020 (110020)	639 (110881)	0 (111657)	0 (111693)	0 (188383)	0 (18839)
AOD_physics_Late_merge f921_m1947	1 (22456)	639 (110881)	1500 (1500)	0 (3137)	0 (3173)	0 (79863)	0 (7987)
DAOD_EGAM3_physics_Main_deriv	146	0	0	1637	1496	1388	1341

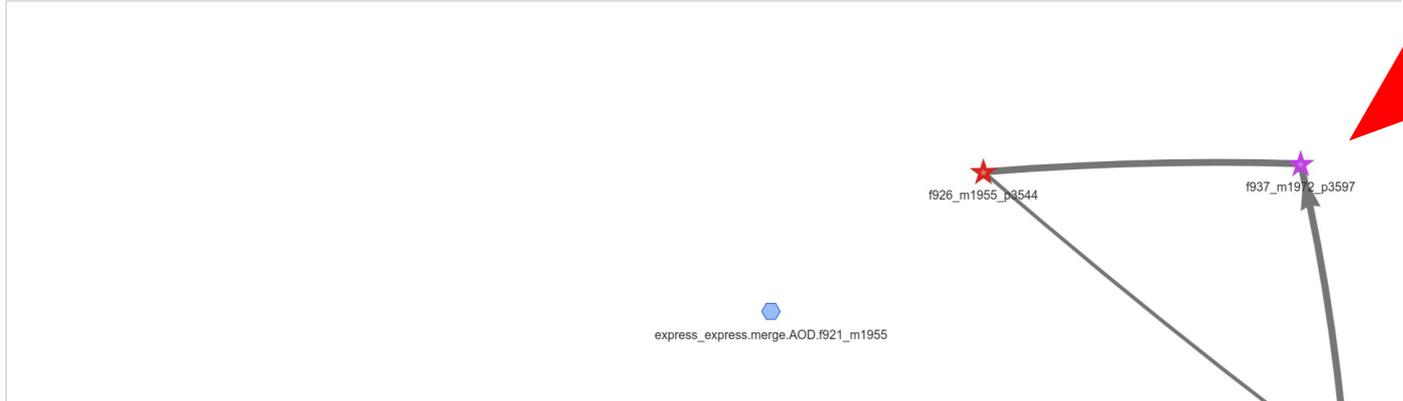
0.58%, 42.60%

live

overlap thresholds:    
 tag level:  target:  filter:   unique

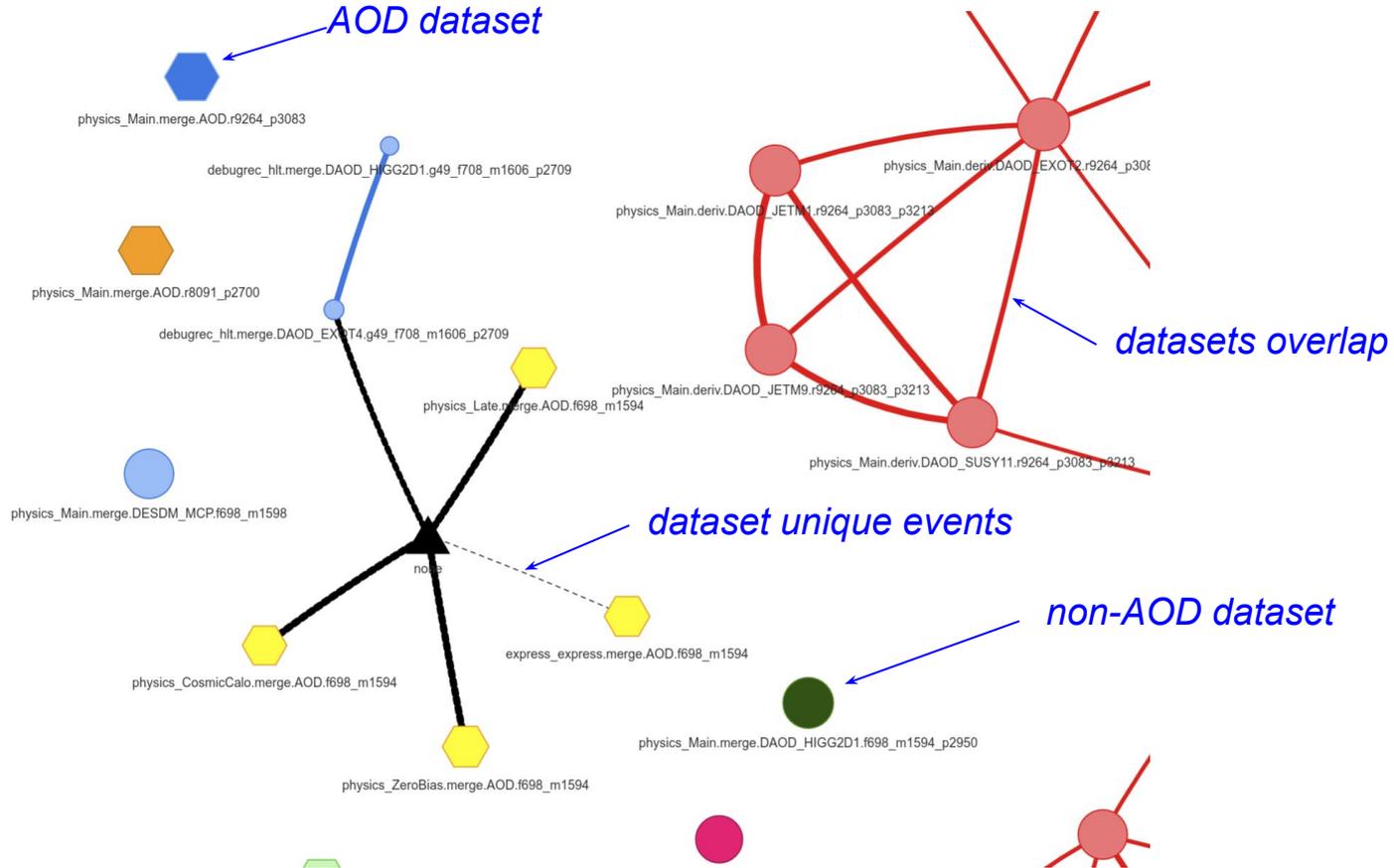
**data18\_13TeV.00348894.physics\_ZeroBias.merge.AOD.f921\_m1947**  
[\\* Catalog - Dataset Overlaps - Trigger Statistics - Trigger Overlaps - TagFile Sample - TagFile](#)  
[\\* Generic: Catalog - Event Index](#)  
[\\* For experts: EI - EL - TI - Inspect - Journal - Full Service-oriented Portal](#)  
 (\*) ... may be slow, (+) ... external service

*Datasets  
Graphical View*



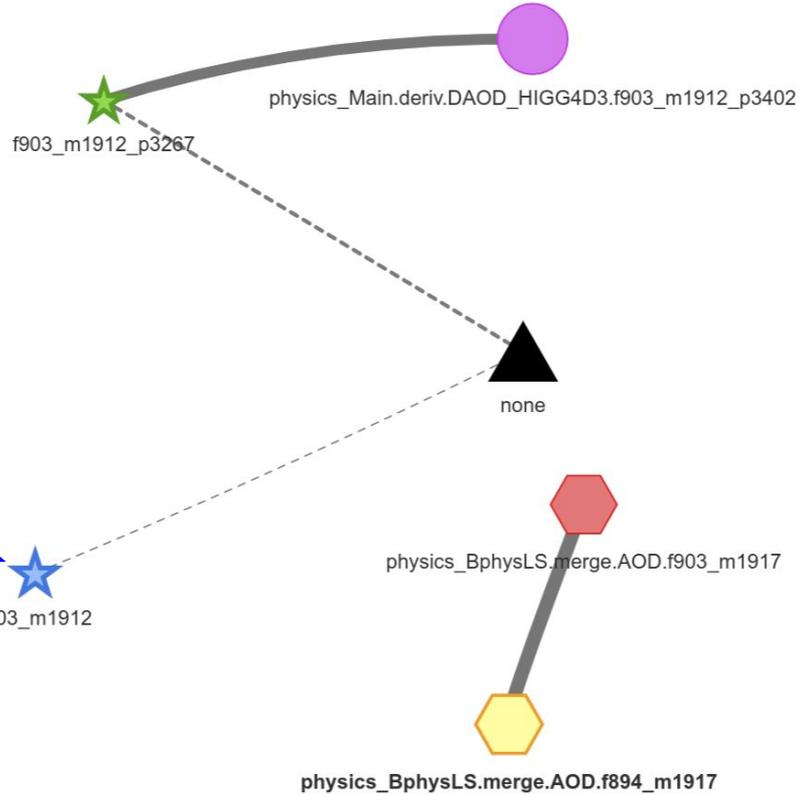


# Datasets Graphical View





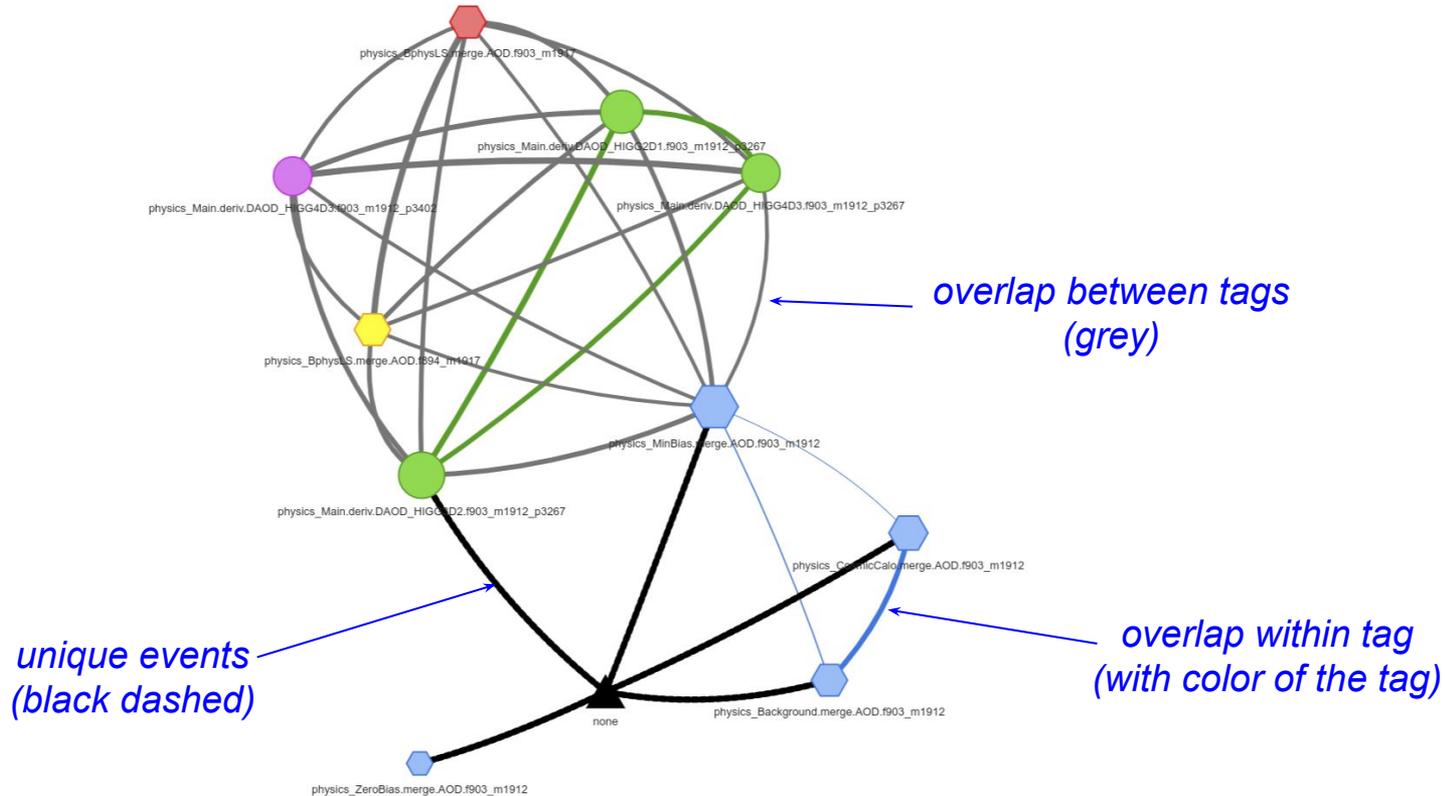
# Datasets Graphical View



*cluster of datasets  
with the same AMI tag*



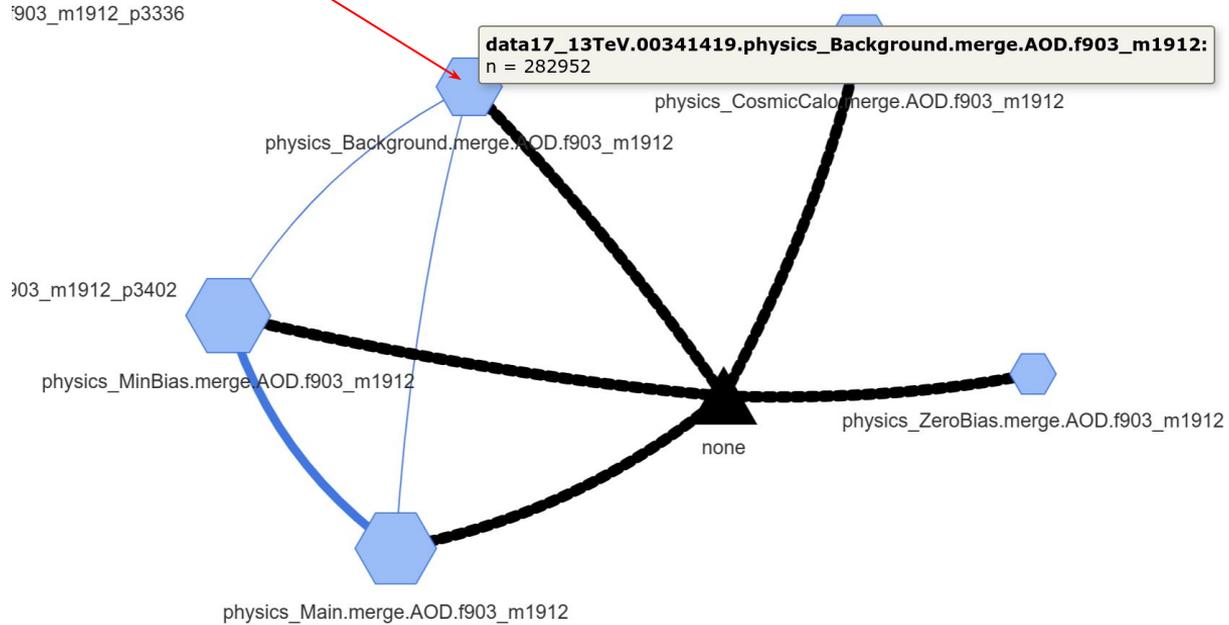
# Overlaps between Tags, Unique Events





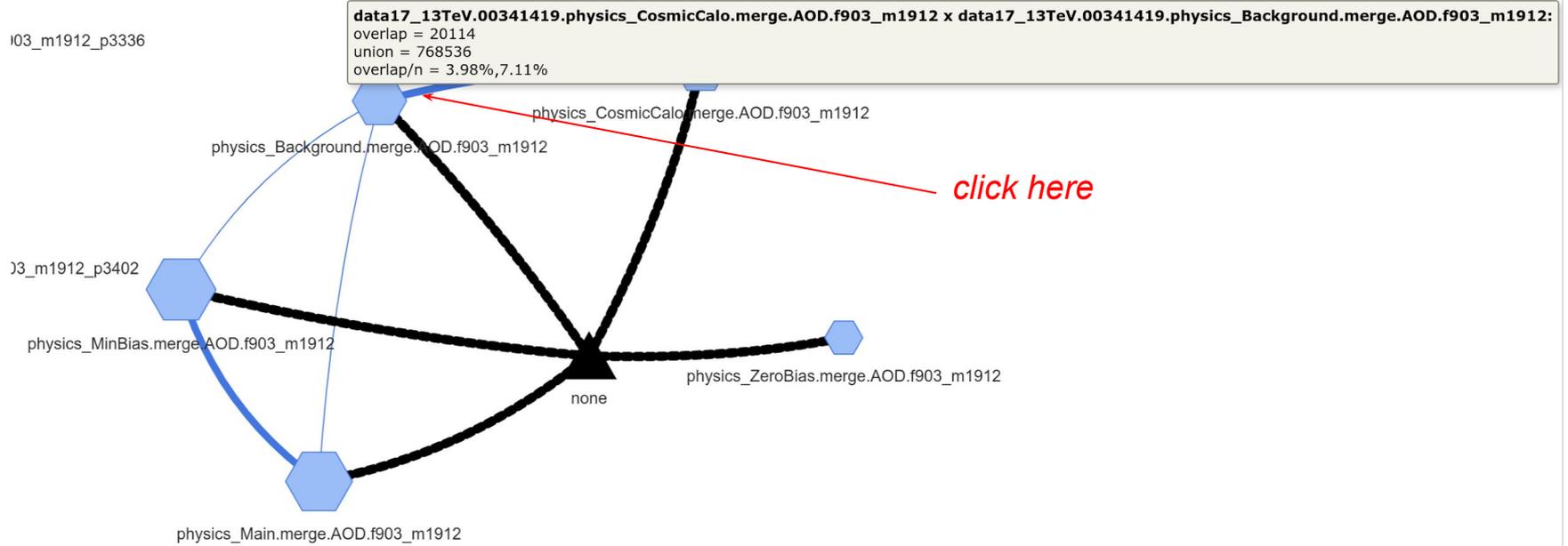
# Dataset Details

*click here*



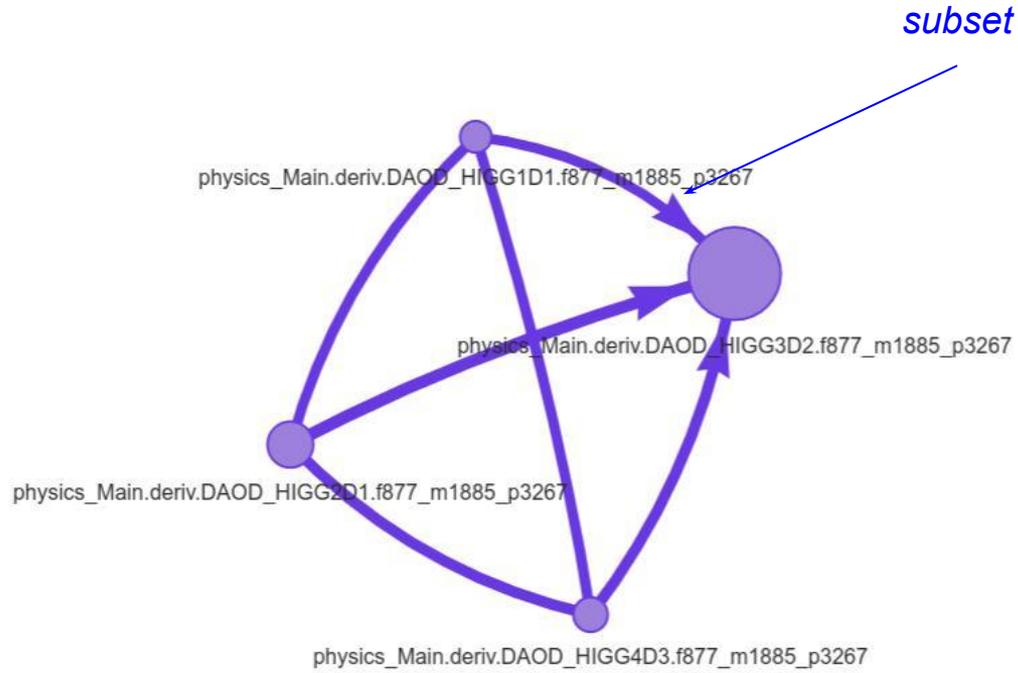


# Overlap Details

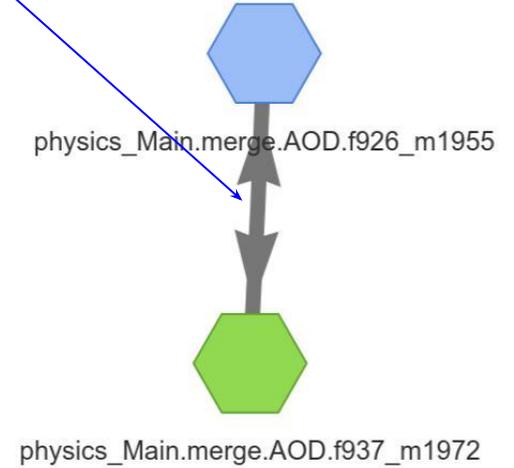




# Subsets



*identity  
(mutual subset)*





# Unique Events Details

[click here](#)

03\_m1912\_p3336

physics\_Background.merge.AOD.f903\_m1912

physics\_CosmicCalo.merge.AOD.f903\_m1912

**data17\_13TeV.00341419.physics\_Background.merge.AOD.f903\_m1912:**  
unique = 262834  
non-unique = 20118  
uniqueness = 92.89%

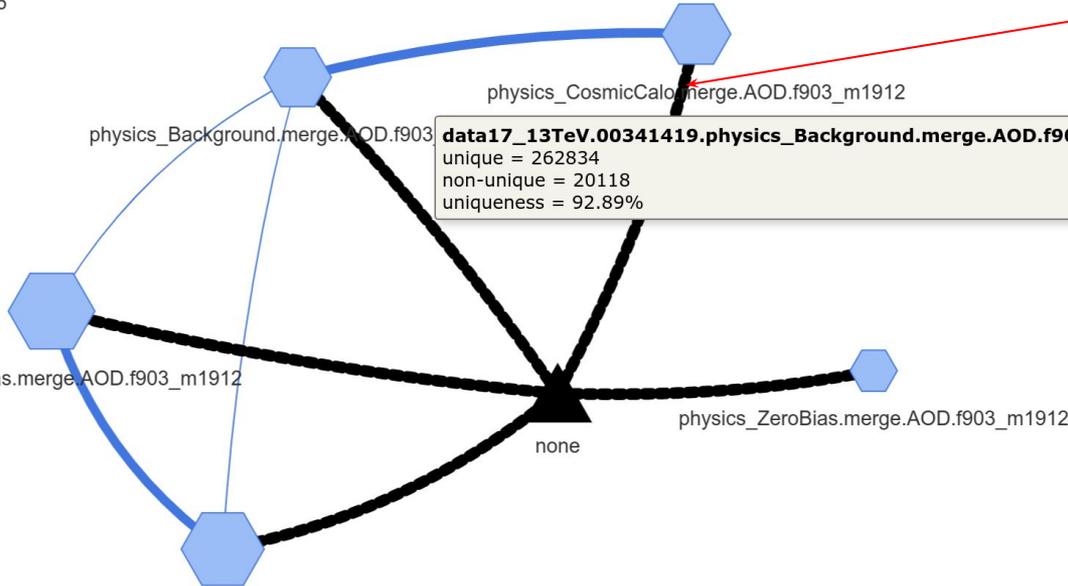
13\_m1912\_p3402

physics\_MinBias.merge.AOD.f903\_m1912

physics\_ZeroBias.merge.AOD.f903\_m1912

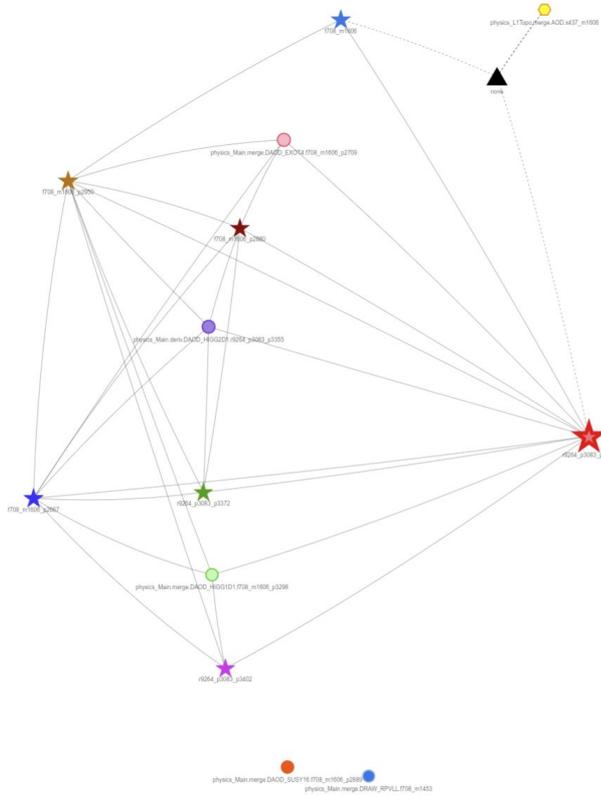
none

physics\_Main.merge.AOD.f903\_m1912





# Clusters



*click to expand cluster  
(or use menu to expand them all)*



# Expanded Clusters

*de-select to stop animation*

E116.1/00298690:  live Help

Cluster by AMI Tag Cluster by group size Expand all clusters

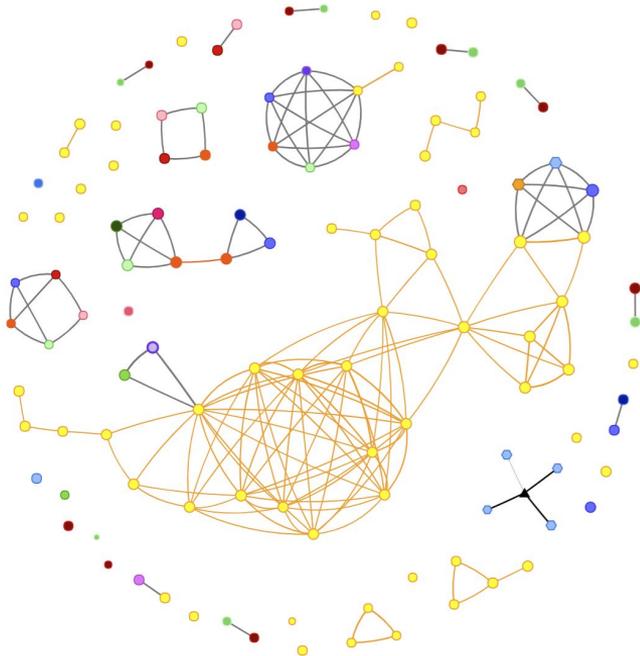
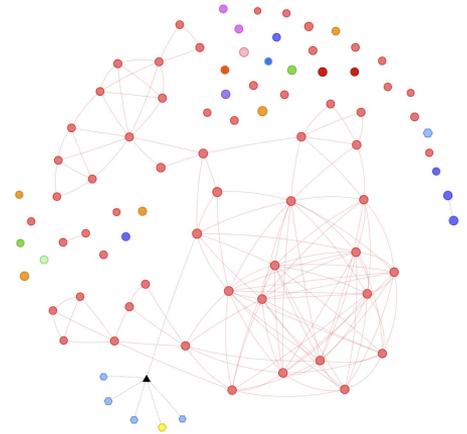
overlap thresholds: 20% 80%

tag level: 99 target: null filter: null

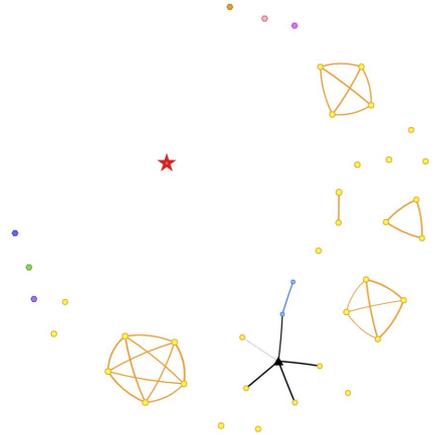
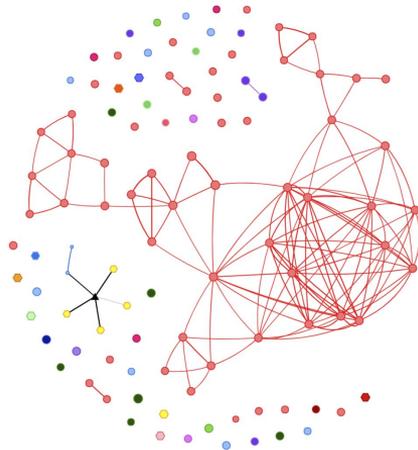
Recreate

Context-sensi

*re-create after options change*



- zoom to get names & info
- move symbols around to re-arrange graph





# Uniqueness

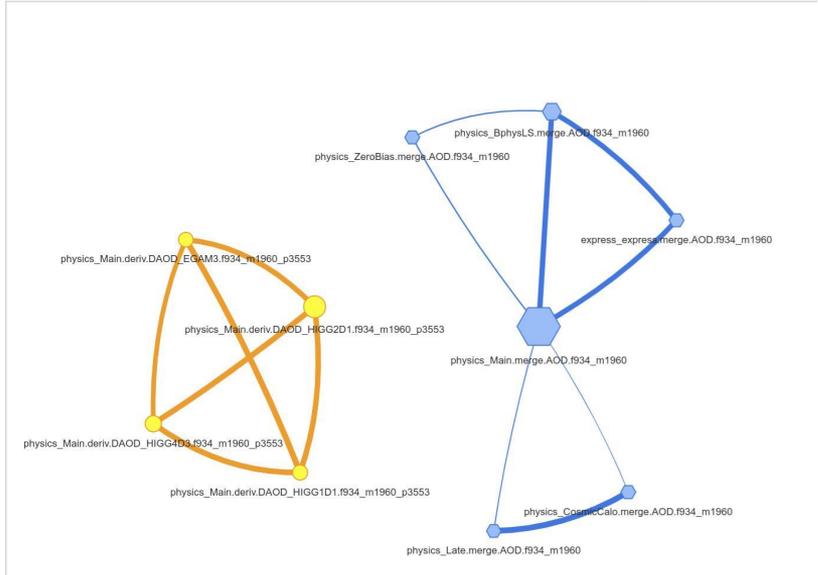
show uniqueness triangle

E118.1/00350184:  live  Help

overlap thresholds:

tag level: 99 target: null filter: null  unique

Context-sensitive menu

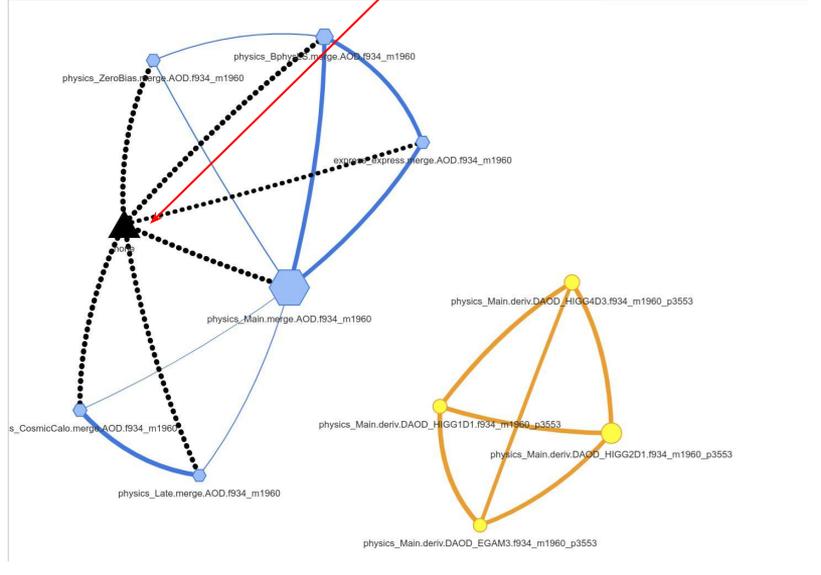


E118.1/00350184:  live  Help

overlap thresholds:

tag level: 99 target: null filter: null  unique

Context-sensitive menu will be





# Filter

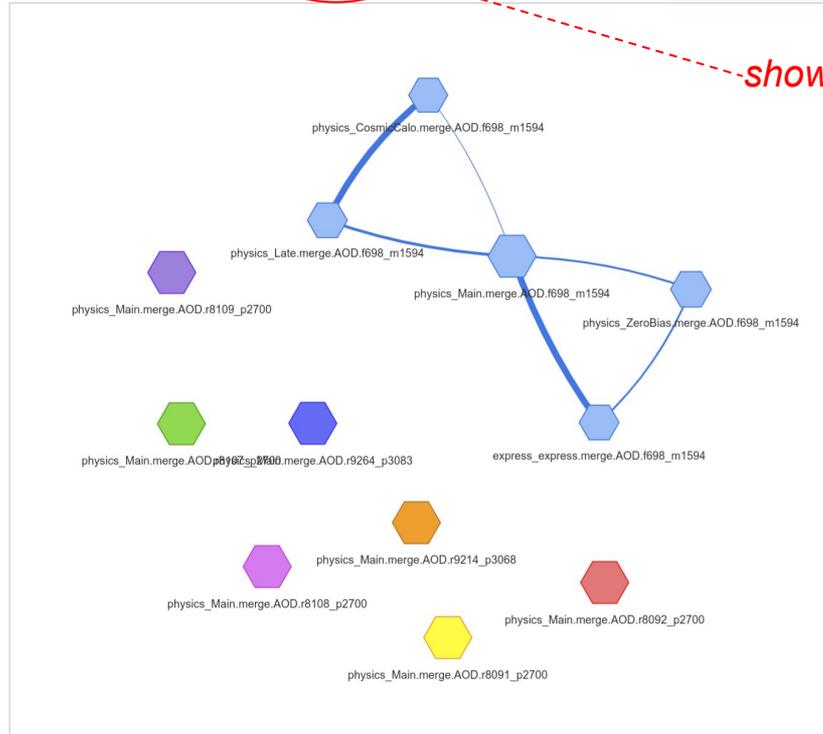
E116.1/00299184:  live

overlap thresholds:

tag level: 1 target:

Context-sensitive menu

*show only AODs*





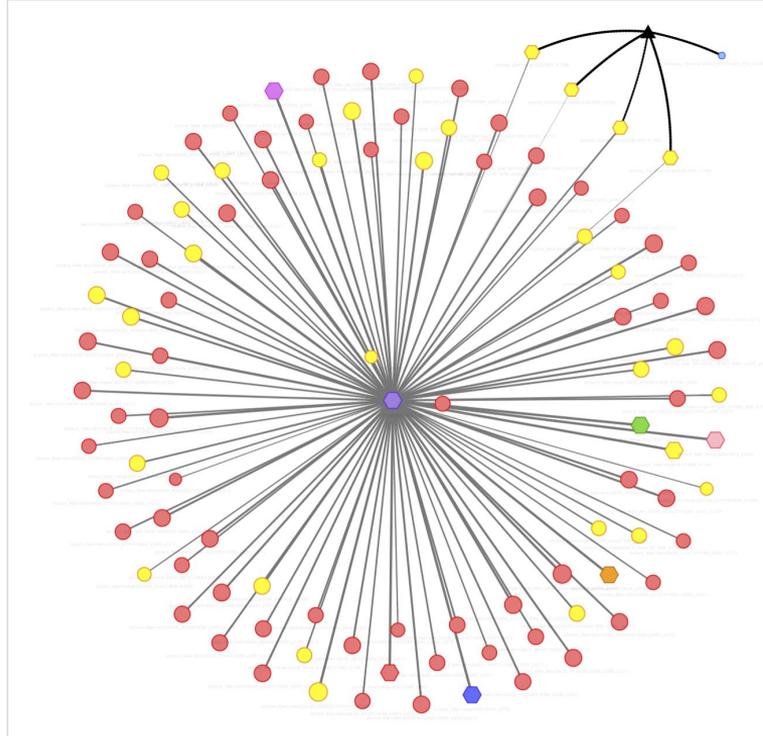
# Target

*show all overlaps to AOD & r8107*

EI16.1/00299184:  live

overlap thresholds:

tag level: 1





# All Overlaps (different tag levels)

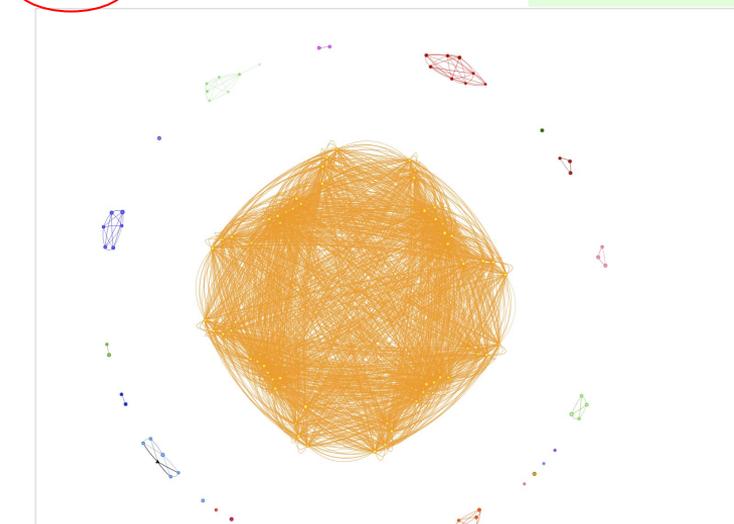
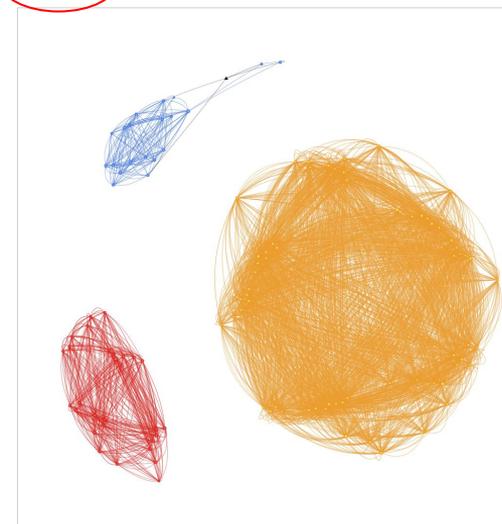
*tag levels to be considered as equivalent*

E116.1/00298690:  live   
    
overlap thresholds:    
tag level: 1 | target: null | filter: null

E116.1/00298690:  live   
    
overlap thresholds:    
tag level: 2 | target: null | filter: null

E116.1/00298690:  live   
    
overlap thresholds:    
tag level: 99 | target: null | filter: null

Context-sensitive menu will be here.





# All Overlaps of AODs

show all overlaps within a tag

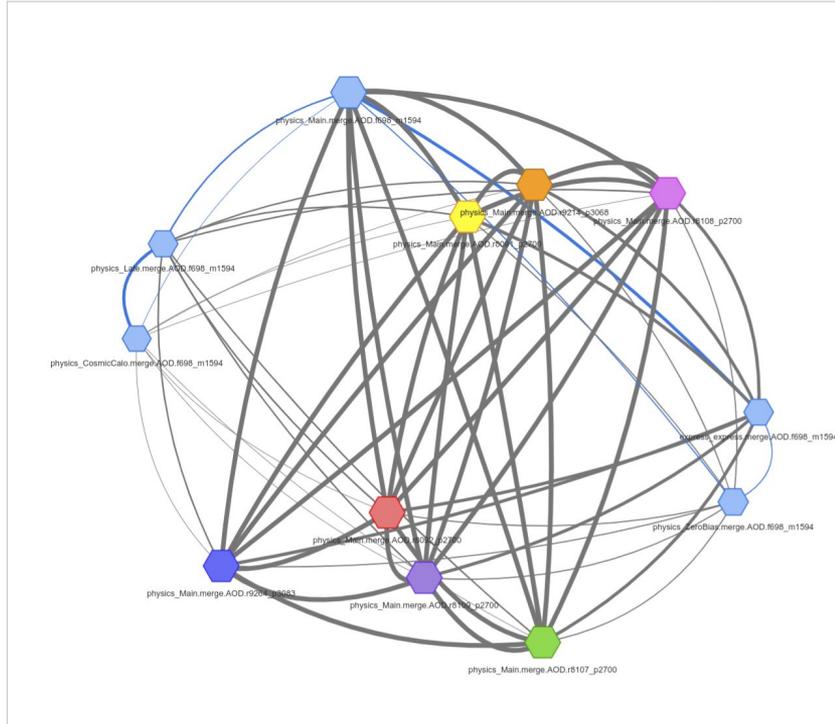
show all overlaps between tags

E116.1/00299184:  live

overlap thresholds:

tag level:  target:  filter: .AOD.

Context-sensitive menu will be here.





# Run Number View

Each cell shows overlap, union and both subtractions (on cursor hover). - Replace with [OEI Overlap T](#)

**EI18.1/00348894**

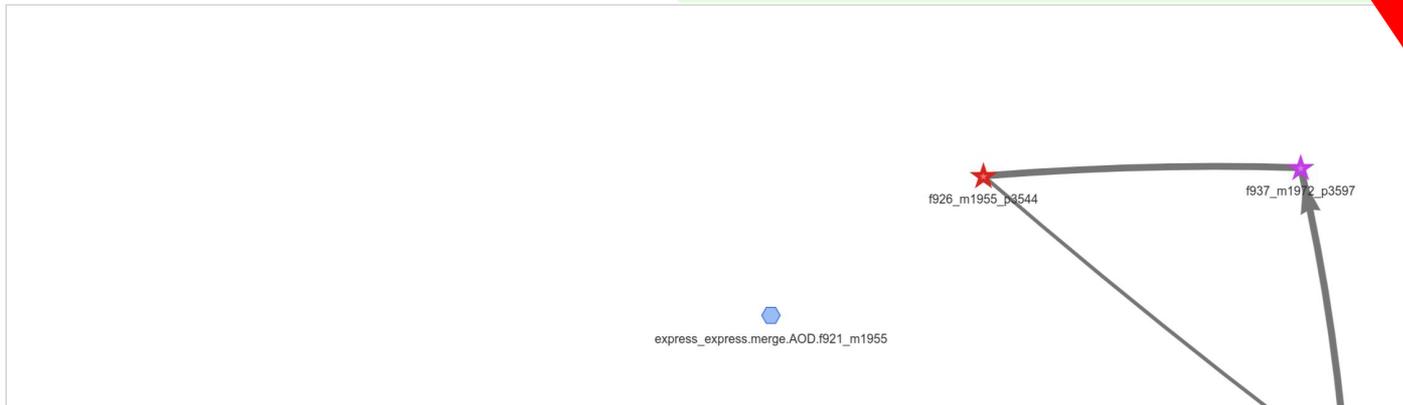
	AOD_express_merge f921_m1955	AOD_physics_CosmicCalo_merge f921_m1947	AOD_physics_Late_merge f921_m1947	DAOD_EGAM3_physics_Main_deriv f926_m1955_p3544	DAOD_EGAM3_physics_Main_deriv f937_m1972_p3553	DAOD_EXOT4_physics_Main_deriv f926_m1955_p3544	DAOD_EXC_physics_Main_deriv f937_m1972
AOD_express_merge f921_m1955	20957 (20957)	1 (130976)	1 (22456)	146 (22448)	151 (22479)	1642 (97678)	1647 (9768)
AOD_physics_CosmicCalo_merge f921_m1947	1 (130976)	110020 (110020)	639 (110881)	0 (111657)	0 (111693)	0 (188383)	0 (18839)
AOD_physics_Late_merge f921_m1947	1 (22456)	639 (110881)	1500 (1500)	0 (3137)	0 (3173)	0 (79863)	0 (7987)
DAOD_EGAM3_physics_Main_deriv	146	0	0	1637	1496	1388	1341

0.58%, 42.60%

**EI18.1/00348894:**  live

overlap thresholds:  20%  50%  
 tag level:  target:  filter:   unique

[data18\\_13TeV.00348894.physics\\_ZeroBias.merge.AOD.f921\\_m1947](#)  
[\\* Catalog - Dataset Overlaps - Trigger Statistics - Trigger Overlaps - TagFile Sample - TagFile](#)  
[\\* Generic: Catalog - Event Index](#)  
[\\* For experts: EI - EL - TI - Inspect - Journal - Full Service-oriented Portal](#)  
 (\*) ... may be slow, (+) ... external service



**Context-sensitive  
 Actions  
 (depends on  
 object  
 selected in  
 Dataset View)**





# Menu: TagFile Info

[7705](#)  
[8220](#)  
[8480](#)  
[8767](#)  
[8967](#)  
[9205](#)  
[9435](#)  
[9590](#)  
[0030](#)  
[0308](#)  
[0634](#)  
[0814](#)  
[0917](#)  
[0972](#)  
[1203](#)  
[1419](#)

```
-limit 10  
-climit 1  
-query dataset:data17_13TeV.00341534.physics_BphysLS.merge.AOD.f894_m1917  
-action info  
-view txt
```

4s spend

```
>>> EI17.1.data17_13TeV.physics_BphysLS.merge.AOD.f894_m1917.00341534  
nol = 232622  
first key: 00341534-00035512374  
last key: 00341534-07228114807  
  
modified: 13:31:36.825 07/Dec/2017
```

Get this result via [command line](#):

```
$ inspect -query dataset:data17_13TeV.00341534.physics_BphysLS.merge.AOD.f894_m1917 -action info -limit 10 -climit 1
```

**information about HDFS TagFile**  
(extracted from the file, not from the Catalog)

pand all clusters

50%

null

**[data17\\_13TeV.00341534.physics\\_BphysLS.merge.AOD.f894\\_m1917](#)**

\* [Catalog](#) - [Dataset Overlaps](#) - [Trigger Statistics](#) - [Trigger Overlaps\(\\*\)](#) - [TagFile Sample](#) - [TagFile Info\(\\*\)](#) - [Journal\(run\)\(tag\)\(\\*\)](#) - AMI

\* Generic: [Catalog](#) - [Event Index](#)

\* For experts: [EI](#) - [EL](#) - [TI](#) - [Inspect](#) - [Journal](#) - [Full Service-oriented Portal](#)

(\*) ... may be slow

physics\_Main.deriv.DAOD\_HIGG4D3.f903\_m1912\_p3402



# Menu: Journal

*imported, added to Catalog, then inspected*

actor ▲▼	rc ▲▼	time ▲▼	timestamp ▲▼	action ▲▼	result ▲▼
Importer	0	57	13:31:42.909 07/Dec/2017	/afs/cern.ch/user/a/atlevind/work/DatasetsConfOS.m... more	
CatalogCLI	0	3	13:33:06.745 07/Dec/2017	{-query=id:E117.1.data17_13TeV.physics_BphysLS.mer... more	Info: 3-
InspectCLI	0	0	16:57:38.021 11/Jan/2018	{-runs=00341534, -view=DOverlap, -limit=0, -climit... more	.../00341... more
InspectCLI	0	0	16:57:43.442 11/Jan/2018	{-triggers=AOD physics_Background m... more	... >>> DOverlap/E117.1/00341... more
InspectCLI	0	0	10:55:15.165 12/Jan/2018	{-runs=00341534	Info: 0s spend Result: >>> DOverlap/E117.1/00341... more
InspectCLI	0	0	14:48:32.509 22/Jan/2018	{-runs=00341534	Info: 0s spend Result: >>> DOverlap/E117.1/00341... more
InspectCLI	0	0	14:50:28.760 22/Jan/2018	{-runs=00341534	Info: 0s spend Result: >>> DOverlap/E117.1/00341... more
InspectCLI	0	3	14:53:34.905 22/Jan/2018	{-runs=00341534	Info: 3s spend Result: >>> DOverlap/E117.1/00341... more
InspectCLI	0	0	14:55:18.365 22/Jan/2018	{-runs=00341534	Info: 0s spend Result: >>> DOverlap/E117.1/00341... more

**all Journal entries concerning the dataset (or run or tag)**  
**(each entry contains full information, incl. complete result)**

and all clusters

50%

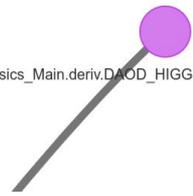
||

**data17\_13TeV.00341534.physics\_BphysLS.merge.AOD.f894\_m1917**

- \* [Catalog](#) - [Dataset Overlaps](#) - [Trigger Statistics](#) - [Trigger Overlaps\(\\*\)](#) - [TagFile Sample](#) - [TagFile Info\(\\*\)](#) - [Journal\(run\)\(tag\)\(\\*\)](#) - [AMI](#)
- \* Generic: [Catalog](#) - [Event Index](#)
- \* For experts: [EI](#) - [EL](#) - [TI](#) - [Inspect](#) - [Journal](#) - [Full Service-oriented Portal](#)

(\*) ... may be slow

physics\_Main.deriv.DAOD\_HIGG4D3.f903\_m1912\_p3402





thanks to AMI team for releasing pure Java client

# Menu: AMI

<a href="#">705</a>	<b>Element_Info</b>
<a href="#">220</a>	logicalDatasetName = data17_13TeV.00341534.physics_BphysLS.merge.AOD.f894_m1917
<a href="#">480</a>	nFiles = 174
<a href="#">767</a>	totalEvents = 232622
<a href="#">967</a>	totalSize = 29848367568
<a href="#">205</a>	runNumber = 341534
<a href="#">435</a>	period = N4
<a href="#">590</a>	prodsysStatus = Tier 0
<a href="#">030</a>	dataType = AOD
<a href="#">308</a>	ecmEnergy = 13000000
<a href="#">634</a>	beamType = collisions
<a href="#">814</a>	AtlasRelease = Athena_21.0.42
<a href="#">917</a>	conditionsTag = CONDBR2-BLKPA-2017-13
<a href="#">972</a>	geometryVersion = ATLAS-R2-2016-01-00-01
<a href="#">203</a>	streamName = physics_BphysLS
<a href="#">419</a>	

**full AMI information about dataset**  
(via direct call to AMI)

and all clusters

50%  
 All

## data17\_13TeV.00341534.physics\_BphysLS.merge.AOD.f894\_m1917

- \* [Catalog](#) - [Dataset Overlaps](#) - [Trigger Statistics](#) - [Trigger Overlaps\(\\*\)](#) - [TagFile Sample](#) - [TagFile Info\(\\*\)](#) - [Journal\(run\)\(tag\)\(\\*\)](#) - [AMI](#)
- \* Generic: [Catalog](#) - [Event Index](#)
- \* For experts: [EI](#) - [EL](#) - [TI](#) - [Inspect](#) - [Journal](#) - [Full Service-oriented Portal](#)
- (\*) ... may be slow

physics\_Main.deriv.DAOD\_HIGG4D3.f903\_m1912\_p3402



# Menu: Rucio

[03352131](#) [03352170](#)  
[0335287](#) [0335290](#)  
[0336567](#) [0336629](#)  
[0336852](#) [0336915](#)  
[0337052](#) [0337098](#)  
[0337335](#) [0337371](#)  
[0337832](#) [0337833](#)  
[0338377](#) [0338480](#)  
[0338846](#) [0338897](#)  
[0339205](#) [0339345](#)  
[0339562](#) [0339589](#)  
[0340072](#) [0340186](#)  
[0340453](#) [0340634](#)  
[0340849](#) [0340850](#)  
[0340972](#) [0340973](#)  
[0341312](#) [0341367](#)

[0348403](#) [0348440](#)

ATLAS Rucio UI   Monitoring ▾   Data Transfers (R2D2) ▾   Reports ▾      Search   Using ac

You are here: Data Identifier [data18\_13TeV:data18\_13TeV.00348251.physics\_Main.merge.AOD.f920\_m1947]   Ruc

### DID Metadata

account	
availability	AVAILABLE
campaign	data18_13TeV:tzero
closed_at	Fri, 20 Apr 2018 15:14:33 UTC
created_at	Fri, 20 Apr 2018 09:19:58 UTC
datatype	AOD
did_type	DATASET
events	7005668
filesize	794.39 GB

**full Rucio information about dataset  
(via remote call to Rucio)**

**data18\_13TeV.00348251.physics\_Main.merge.AOD.f920\_m1947**

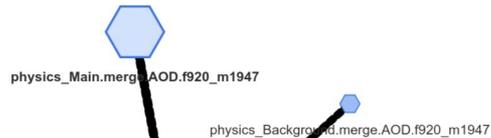
\* [Catalog](#) - [Dataset Overlaps](#) - [Trigger Statistics](#) - [Trigger Overlaps](#) - [TagFile Sample](#) - [TagFile Info\(\\*\)](#) - [Journal\(run\)\(tag\)\(\\*\)](#) - [AMI\(+\)](#) - [Rucio\(+\)](#)

\* Generic: [Catalog](#) - [Event Index](#)

\* For experts: [EI](#) - [EL](#) - [TI](#) - [Inspect](#) - [Journal](#) - [Full Service-oriented Portal](#)

(\*) ... may be slow, (+) ... external service

50%







# Menu: Generic Event Index

[37102](#)  
[38220](#)  
[38480](#)  
[38767](#)  
[38967](#)  
[39205](#)  
[39435](#)  
[39590](#)  
[40030](#)  
[40308](#)  
[40634](#)  
[40814](#)  
[40917](#)  
[40972](#)  
[41203](#)  
[41419](#)

## Event Index (Expert Mode)

**-query** dataset:data17\_13TeV.00341534.physics\_BphysLS.merge.AOD.f894\_m1917 (implicit status:good)  
**-key**   
**-scan**   
**-mr** true  
**-filter**   
**-index**   
**-limit**   
**-show**   
**-count**   
**-output**

**any EI command can be called here  
(for the selected dataset)**

Expand all clusters

50%

null

**data17\_13TeV.00341534.physics\_BphysLS.merge.AOD.f894\_m1917**

\* [Catalog](#) - [Dataset Overlaps](#) - [Trigger Statistics](#) - [Trigger Overlaps\(\\*\)](#) - [TagFile Sample](#) - [TagFile Info\(\\*\)](#) - [Journal\(run\)\(tag\)\(\\*\)](#) - [AMI](#)

\* Generic: [Catalog](#) - [Event Index](#)

\* For experts: [EI](#) - [EL](#) - [TI](#) - [Inspect](#) - [Journal](#) - [Full Service-oriented Portal](#)

(\*) ... may be slow

physics\_BphysLS.merge.AOD.f894\_m1917

physics\_Main.deriv.DAOD\_HIGG4D3.f903\_m1912\_p3402



# Single Dataset View

00334204 00334230 00334231 00334232 00334264 00334317 00334350 00334384  
00334413 00334443 00334455 00334455 00334487 00334527 00334545 00334549  
00334564 00334580 00334588 00334637 00334678 00334710 00334737 00334776  
00334777 00334778 00334779 00334842 00334849 00334878 00334890 00334907  
00334955 00334956 00334960 00334993 00335016 00335022 00335055 00335056  
00335080 00335081 00335082 00335082 00335083 00335123 00335131 00335170  
00335177 00335184 00335187 00335216 00335222 00335282 00335287 00335290  
00335302 00336497 00336503 00336505 00336506 00336548 00336567 00336629  
00336630 00336678 00336718 00336719 00336782 00336832 00336852 00336915  
00336927 00336944 00336998 00337005 00337017 00337030 00337052 00337098  
00337100 00337107 00337156 00337176 00337215 00337263 00337335 00337371  
00337404 00337451 00337491 00337542 00337662 00337705 00337832 00337833  
00338037 00338183 00338220 00338259 00338263 00338349 00338377 00338480  
00338498 00338608 00338675 00338712 00338767 00338834 00338846 00338897  
00338933 00338967 00338987 00339037 00339070 00339197 00339205 00339345  
00339346 00339387 00339396 00339435 00339500 00339535 00339562 00339589  
00339590 00339758 00339848 00339849 00339957 00340030 00340072 00340186  
00340286 00340290 00340308 00340364 00340367 00340368 00340453 00340634  
00340644 00340683 00340697 00340718 00340814 00340844 00340849 00340850  
00340910 00340917 00340918 00340925 00340962 00340966 00340972 00340973  
00341027 00341123 00341184 00341203 00341257 00341294 00341312 00341367  
00341419 00341534 00341615 00341649

```
-query dataset:mc16_13TeV.345900.Sherpa_222_NNPDF30NNLO_mumugamma_M_3000_E_CMS.merge.AOD.e6585_e5984_a875_r10201_r10210 status:good
-filter

0s spend
1 : TagFile(id: MC16.1.mc16_13TeV.Sherpa_222_NNPDF30NNLO_mumugamma_M_3000_E_CMS.merge.AOD.e6585_e5984_a875_r10201_r10210.345900)
description: name: MC16.1.mc16_13TeV.Sherpa_222_NNPDF30NNLO_mumugamma_M_3000_E_CMS.merge.AOD.e6585_e5984_a875_r10201_r10210.345900
path: /user/atlevind/MC16.1/mc16_13TeV.345900.Sherpa_222_NNPDF30NNLO_mumugamma_M_3000_E_CMS.merge.AOD.e6585_e5984_a875_r10201_r10210.345900
type: tags
format: map
info: 1522998066
key: RunNumber=String EventNumber=String
schema: LumiBlockN=int BunchId=int EventTime=int FileNumber=int LvlIID=String IsSimulation=boolean
relations: before: null
after: null
master: null
slaves: null
indexes: null
attributes: {imported: 2018.04.06.09.55.1523001348, version=e6585_e5984_a875_r10201_r10210}
inserted/updated: 09:57
```

any single dataset can be explored (even MC)

Select any dataset

dataset: mc16\_13TeV.345900.Sherpa\_222\_NNPDF30NNLO\_mumugamma\_M\_3000\_E\_CMS.merge.AOD.e6585\_e5984\_a875\_r10201\_r10210

mc16\_13TeV.345900.Sherpa\_222\_NNPDF30NNLO\_mumugamma\_M\_3000\_E\_CMS.merge.AOD.e6585\_e5984\_a875\_r10201\_r10210  
\* Catalog - [TagFile Sample](#) - [TagFile Info\(\\*\)](#) - [Journal\(run\)\(tag\)\(\\*\)](#) - [AMI](#)  
\* Generic: [Catalog](#) - [Event Index](#)  
\* For experts: [EJ](#) - [EL](#) - [TI](#) - [Inspect](#) - [Journal](#) - [Full Service-oriented Portal](#)  
(\* ... may be slow



most views show  
command line options  
to get the same result

# Menu: Catalog

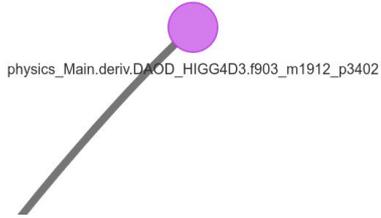
```
15 -query dataset:data17_13TeV.00341534.physics_BphysLS.merge.AOD.f894_m1917 status:good
16
17 -filter
18
19
20
21
22
23
24
25 0s spend
26 1 : TagFile(id: EI17.1.data17_13TeV.physics_BphysLS.merge.AOD.f894_m1917.00341534)
27 description: name: EI17.1.data17_13TeV.physics_BphysLS.merge.AOD.f894_m1917.00341534
28 path: /user/atlevind/EI17.1/data17_13TeV.00341534.physics_BphysLS.merge.AOD.f894_m1917.00341534
29 type: tags
30 format: map
31 info: 1512642952
32 key: RunNumber EventNumber=String
33 schema: LumiBlockN=int BunchId=int EventTime=int EventTimeNanoSec=int McChannelNumber=int Lvl1ID=String IsSimulation=int
34 relations: before: null
35 after: null
36 master: null
37 slaves: null
38 indexes: null
39 attributes: {import.keyformat=%08d-%011d, status=good, consumer=os, imported=2017.12.07.13.31.1512649903, version=f894_m1917, streamName=physi
40 inserted/updated: 13:33:06.512 07/Dec/2017
```

full dataset information from the Catalog

all clusters

50%

**data17\_13TeV.00341534.physics\_BphysLS.merge.AOD.f894\_m1917**  
\* [Catalog](#) - [Dataset Overlaps](#) - [Trigger Statistics](#) - [Trigger Overlaps\(\\*\)](#) - [TagFile Sample](#) - [TagFile Info\(\\*\)](#) - [Journal\(run\)\(tag\)\(\\*\)](#) - [AMI](#)  
\* Generic: [Catalog](#) - [Event Index](#)  
\* For experts: [EI](#) - [EL](#) - [TI](#) - [Inspect](#) - [Journal](#) - [Full Service-oriented Portal](#)  
(\* ) ... may be slow





# Menu: Trigger Statistics

to create a PNG view of the table or a trigger occupation histogram

[1337705](#)  
[1338220](#)  
[1338480](#)  
[1338767](#)  
[1338967](#)  
[1339205](#)  
[1339435](#)  
[1339590](#)  
[1340030](#)  
[1340308](#)  
[1340634](#)  
[1340814](#)  
[1340917](#)  
[1340972](#)  
[1341203](#)  
[1341419](#)

PNG [histogram](#)

PNG [histogram](#)

data17_13TeV.00341534.physics_BphysLS.merge.AOD.f894_m1917 evt=232622.0		data17_13TeV.00341534.physics_BphysLS.merge.AOD.f894_m1917 evt=232622.0	
L1_2MU4	215437 (92.61%)	HLT_2mu4	213168 (91.64%)
L1_2MU6	14327 (92.14%)	HLT_2mu6_bJpsimumu	212913 (91.53%)
L1_MU10	9869 (85.92%)	HLT_2mu6	211655 (90.99%)
L1_MU11	5133 (75.29%)	HLT_mu14	60475 (26.00%)
L1_2MU10	91628 (39.39%)	HLT_mu15_L1MU10	50424 (21.68%)
L1_MU4_TE40	90049 (38.71%)	HLT_mu15	48611 (20.90%)
L1_MU20	63835 (27.44%)	HLT_mu10_bJpsi_TrkPEB	42242 (18.16%)
L1_MU21	61531 (26.45%)	HLT_mu16	40251 (17.30%)
L1_MU4_TE30	30786 (13.23%)	HLT_mu4_mu4_idperf_bJpsimumu_noid	
L1_EM12	29696 (12.77%)	HLT_mu18_L1MU10	
L1_MU6	18889 (8.12%)	HLT_mu18	
L1_MU4_TE20	16472 (7.08%)	HLT_mu10_bJpsi_TrkPEBmon	
L1_EM15VH	10655 (4.58%)	HLT_mu20	

trigger statistics table

Expand all clusters

50%

nr: null

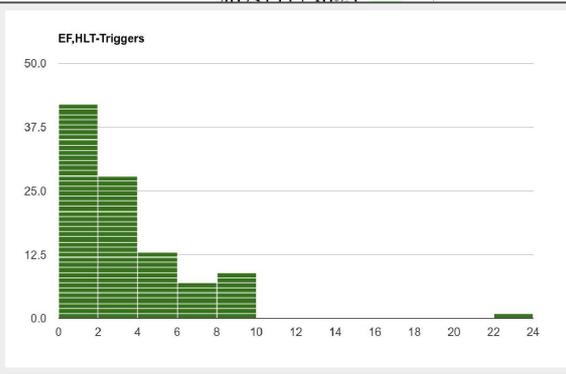
data17\_13TeV.00341534.physics\_BphysLS.merge.AOD.f894\_m1917

\* [Catalog](#) - [Dataset Overlaps](#) - [Trigger Statistics](#) - [Trigger Overlaps\(\\*\)](#) - [TagFile Sample](#) - [TagFile Info\(\\*\)](#) - [Journal](#)

\* Generic: [Catalog](#) - [Event Index](#)

\* For experts: [EI](#) - [EL](#) - [TI](#) - [Inspect](#) - [Journal](#) - [Full Service-oriented Portal](#)

(\*) ... may be slow



physics\_Main.deriv.DAOD\_HIGG4D3.f903\_m1912\_p3402



# Menu: Trigger Overlaps - phase 1

290  
629  
915  
098  
371  
833  
480  
897  
345  
589  
186  
634  
850  
973  
367

PNG

data17\_13TeV.00341294.physics\_MinBias.merge.AOD.f903\_m1912  
evt=12338461,t3=1.2350338E7

Show Selection  inclusive

HLT_e14_lhtight_nod0	851322 (6.90%)	<input checked="" type="checkbox"/>
HLT_e5_lhtight_nod0	5515086 (44.70%)	<input checked="" type="checkbox"/>
HLT_e9_lhtight_nod0	1986418 (16.10%)	<input type="checkbox"/>
HLT_larnoiseburst_rerun	12350338 (100.10%)	<input checked="" type="checkbox"/>
HLT_mu20_idperf	135718 (1.10%)	<input type="checkbox"/>
HLT_mu4_nomucomb	349165	<input type="checkbox"/>
HLT_mu6_idperf		<input type="checkbox"/>
HLT_mu6_nomucomb		<input type="checkbox"/>
HLT_tau25_idperf_tracktwo		<input type="checkbox"/>
L1_2EM10VH		<input type="checkbox"/>
L1_2EM12	148056 (1.20%)	<input type="checkbox"/>
L1_2EM15	74028 (0.60%)	<input type="checkbox"/>
L1_2EM15VH	12338 (0.10%)	<input type="checkbox"/>

Select triggers for trigger overlaps table  
(the full table would be too big to show)

data17\_13TeV.00341294.physics\_MinBias.merge.AOD.f903\_m1912

\* [Catalog](#) - [Dataset Overlaps](#) - [Trigger Statistics](#) - [Trigger Overlaps](#) - [TagFile Sample](#) - [TagFile Info\(\\*\)](#) - [Journal\(run\)\(tag\)\(\\*\)](#) - [AMI](#)

\* Generic: [Catalog](#) - [Event Index](#)

\* For experts: [EI](#) - [EL](#) - [TI](#) - [Inspect](#) - [Journal](#) - [Full Service-oriented Portal](#)

(\*) ... may be slow





# Menu: Trigger Overlaps - phase 2

to create a PNG view of the table  
or a relational graph

```
00335177 00335184 00335187 00335216 00335222 00335282 00335287 00335290
00335302 00336497 00336503 00336505 00336506 00336548 00336567 00336629
00336630 00336678 00336718 00336719 00336782 00336832 00336852 00336915
00336927 00336944 00336998 00337005 00337017 00337030 00337052 00337098
00337100 00337107 00337156 00337176 00337215 00337263 00337335 00337371
00337404 00337451 00337491 00337542 00337662 00337705 00337832 00337833
00338037 00338183 00338220 00338259 00338263 00338349 00338377 00338480
00338498 00338608 00338675 00338712 00338767 00338834 00338846 00338897
00338933 00338967 00338987 00339037 00339070 00339197 00339205 00339345
00339346 00339387 00339396 00339435 00339500 00339535 00339562 00339589
00339590 00339758 00339848 00339849 00339957 00340030 00340072 00340186
00340786 00340290 00340308 00340364 00340367 00340368 00340453 00340634
00340644 00340683 00340697 00340718 00340814 00340844 00340849 00340850
00340910 00340917 00340918 00340925 00340962 00340966 00340972 00340973
00341027 00341123 00341184 00341203 00341257 00341294 00341312 00341367
00341419 00341534 00341615 00341649
```

PNG  
Relational Graph

data17_13TeV.00341294.physics_MinBias.merge.AOD.f903_m1912_HLT_e14_lhtight_nod0_HLT_e5_lhtight_nod0H	851322 (6.90%)	5515086 (44.70%)	1:
evt=12338461,t3=1.2350338E7			
<b>HLT_e14_lhtight_nod0</b>	<b>851322 (6.90%)</b>	<b>851322 (6.90%)</b>	<b>8:</b>
851322 (6.90%)	(851322)	(5515086)	(1)
	100.00%,100.00%	100.00%,15.44%	1:
<b>HLT_e5_lhtight_nod0</b>	<b>851322 (6.90%)</b>	<b>5515086 (44.70%)</b>	<b>5:</b>
5515086 (44.70%)	(5515086)	(5515086)	(1)
	15.44%,100.00%	100.00%,100.00%	1:
<b>HLT_larnoiseburst_rerun</b>	<b>851322 (6.90%)</b>	<b>5515086 (44.70%)</b>	<b>1:</b>
12350338 (100.10%)	(12350338)	(12350338)	(1)
	6.89%,100.00%	44.66%,100.00%	1:
<b>HLT_mu20_idperf</b>	<b>49352 (0.40%)</b>	<b>74028 (0.60%)</b>	<b>1:</b>
135718 (1.10%)	(937688)	(5576776)	(1)
	36.36%,5.80%	54.55%,1.34%	1:

Select any dataset

data17\_13TeV.00341294.physics\_MinBias.merge.AOD.f903\_m1912:  live  Help

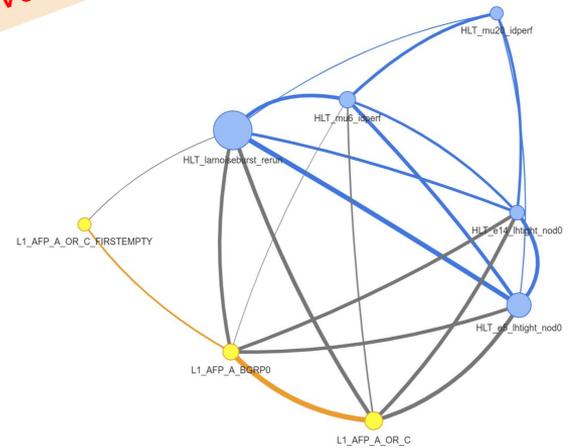
Cluster by L1/HLT  Cluster by group size  Expand all clusters

overlap thresholds:

tag level: 99 target: null filter: null

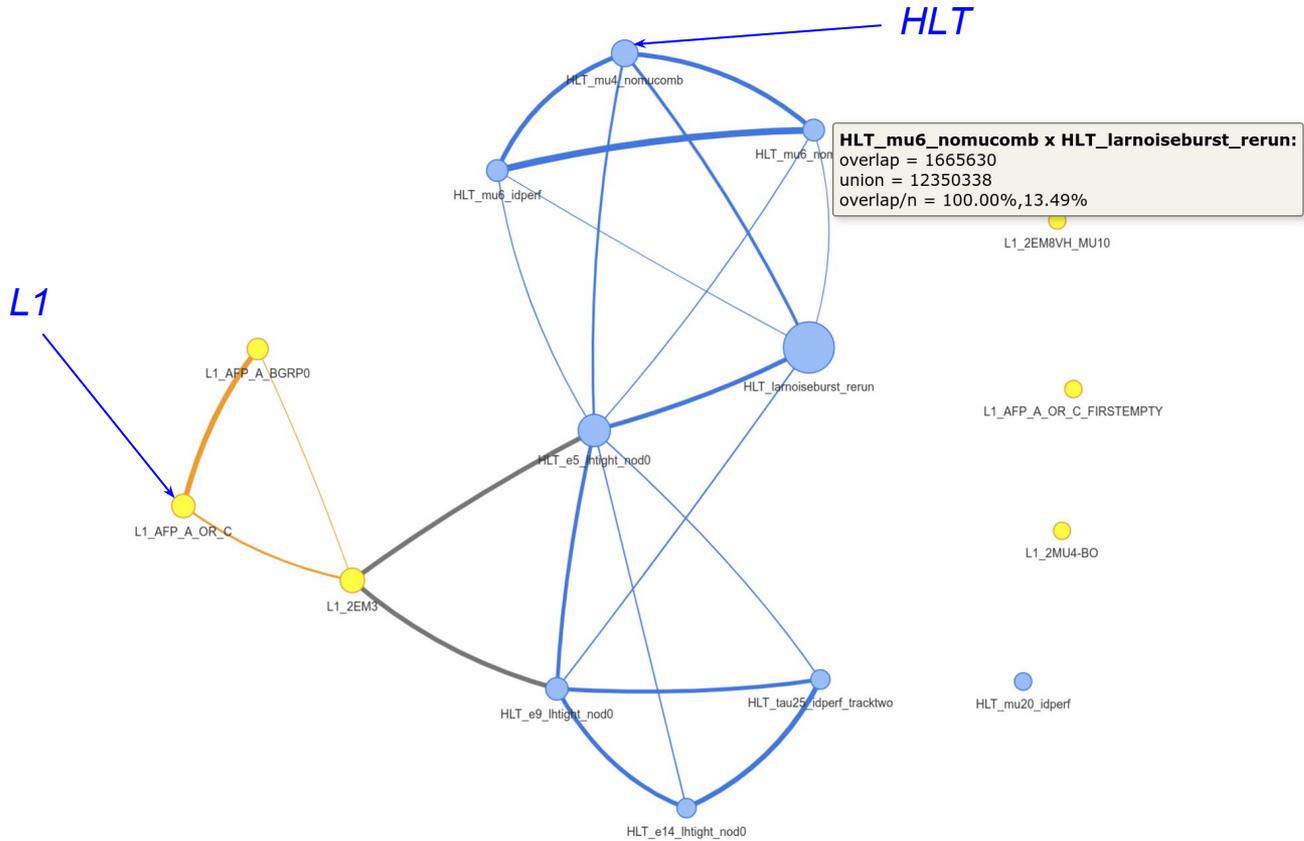
menu will be here.

**trigger overlaps table & graph**  
(based on subset of events)





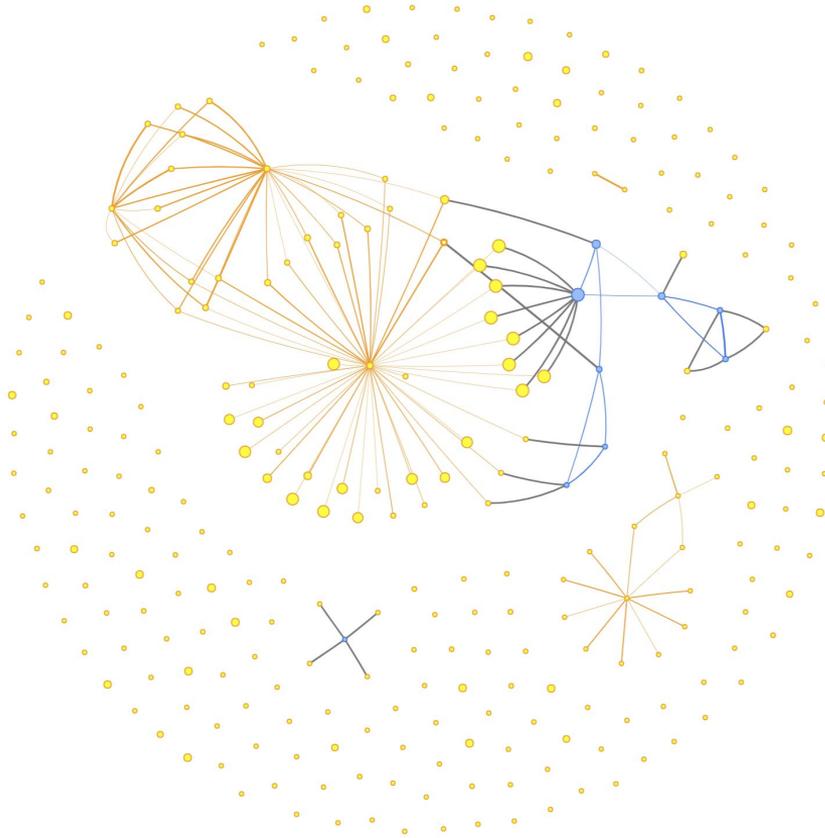
# Trigger Overlaps





# Trigger Overlaps (inclusive)

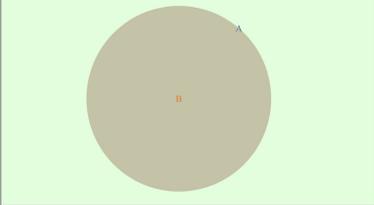
*shows all triggers,  
but only overlaps to selected ones*



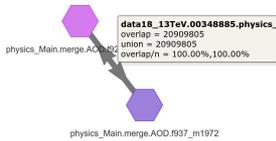
	Show Selection	<input checked="" type="checkbox"/> inclusive
851322 (6.90%)	<input checked="" type="checkbox"/>	
5515086 (44.70%)	<input checked="" type="checkbox"/>	
1986418 (16.10%)	<input checked="" type="checkbox"/>	
12350338 (100.10%)	<input checked="" type="checkbox"/>	
135718 (1.10%)	<input checked="" type="checkbox"/>	
3491654 (28.30%)	<input checked="" type="checkbox"/>	
1665630 (13.50%)	<input checked="" type="checkbox"/>	



A: data18\_13TeV.00348885.physics\_Main.merge.AOD.f937\_m1972\_n = 20909805  
 B: data18\_13TeV.00348885.physics\_Main.merge.AOD.f926\_m1955\_n = 20909805  
 overlap = 20909805, union = 20909805



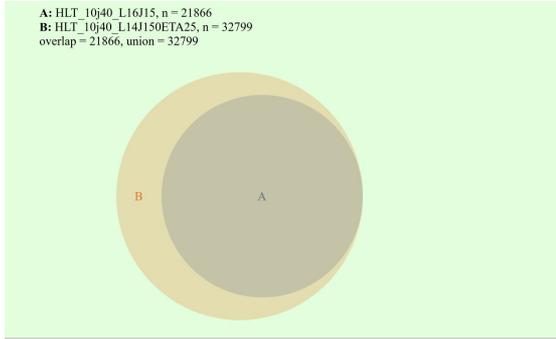
data18\_13TeV.00348885.physics\_Main.merge.AOD.f937\_m1972 x data18\_13TeV.00348885.physics\_Main.merge.AOD.f926\_m1955  
 Venn Diagram



# Venn Diagrams

works both for dataset and trigger overlaps

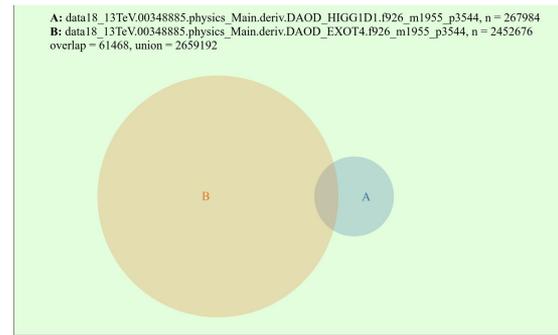
A: HLT\_10j40\_L16J15, n = 21866  
 B: HLT\_10j40\_L14J150ETA25, n = 32799  
 overlap = 21866, union = 32799



HLT\_10j40\_L16J15 x HLT\_10j40\_L14J150ETA25  
 Venn Diagram

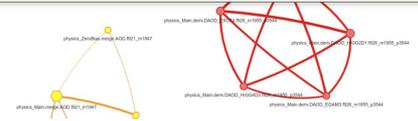


A: data18\_13TeV.00348885.physics\_Main.deriv.DAOD\_HIGG1D1.f926\_m1955\_p3544\_n = 267984  
 B: data18\_13TeV.00348885.physics\_Main.deriv.DAOD\_EXOT4.f926\_m1955\_p3544\_n = 2452676  
 overlap = 61468, union = 2659192

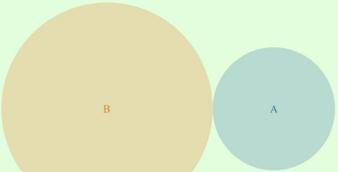


data18\_13TeV.00348885.physics\_Main.deriv.DAOD\_HIGG1D1.f926\_m1955\_p3544 x data18\_13TeV.00348885.physics\_Main.deriv.DAOD\_EXOT4.f926\_m1955\_p3544  
 Venn Diagram

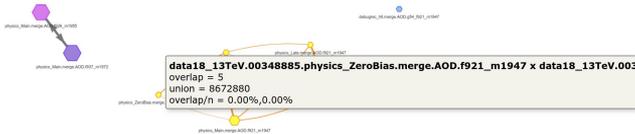
data18\_13TeV.00348885.physics\_Main.deriv.DAOD\_HIGG1D1.f926\_m1955\_p3544 x data18\_13TeV.00348885.physics\_Main.deriv.DAOD\_EXOT4.f926\_m1955\_p3544  
 overlap = 61468, union = 2659192, overlap/n = 22.94%, 2.51%



A: data18\_13TeV.00348885.physics\_ZeroBias.merge.AOD.f921\_m1947\_n = 186395  
 B: data18\_13TeV.00348885.express\_express.merge.AOD.f921\_m1947\_n = 556987  
 overlap = 1, union = 743381



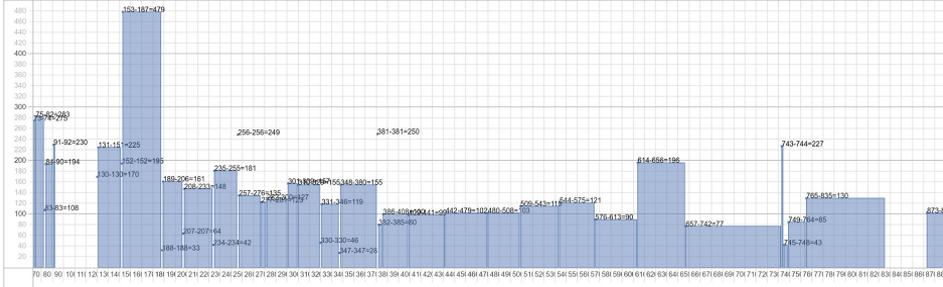
data18\_13TeV.00348885.physics\_ZeroBias.merge.AOD.f921\_m1947 x data18\_13TeV.00348885.express\_express.merge.AOD.f921\_m1947  
 Venn Diagram



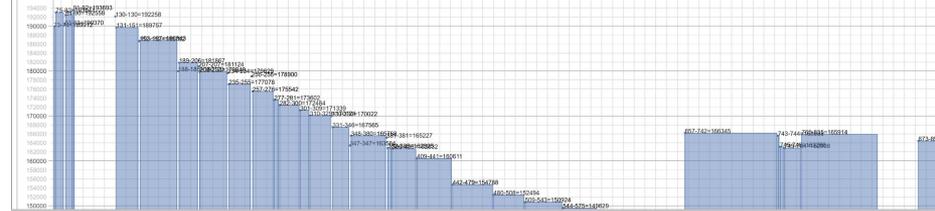


# Trigger Overlaps for LB Ranges

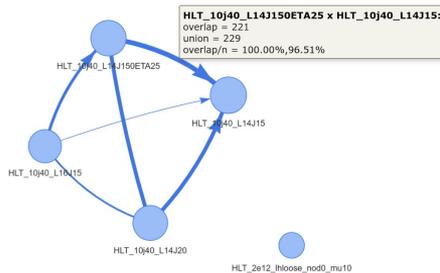
HLT\_1040\_L16J15 x HLT\_1040\_L14J150ETA25 overlap for data19\_1376V.0931384.physics\_Main.merge.AOD.P937\_m1972 (per LB ranges, normalised to revents)



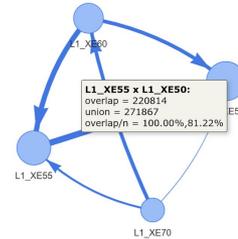
L1\_XE55 x L1\_XE50 overlap for data19\_1376V.0931384.physics\_Main.merge.AOD.P937\_m1972 (per LB ranges, normalised to revents)



HLT\_1040\_L16J15 x HLT\_1040\_L14J150ETA25  
Venn Diagram - LB Graph



L1\_XE55 x L1\_XE50  
Venn Diagram - LB Graph(\*)



Problem: there is no Atlas service to deliver LB Ranges



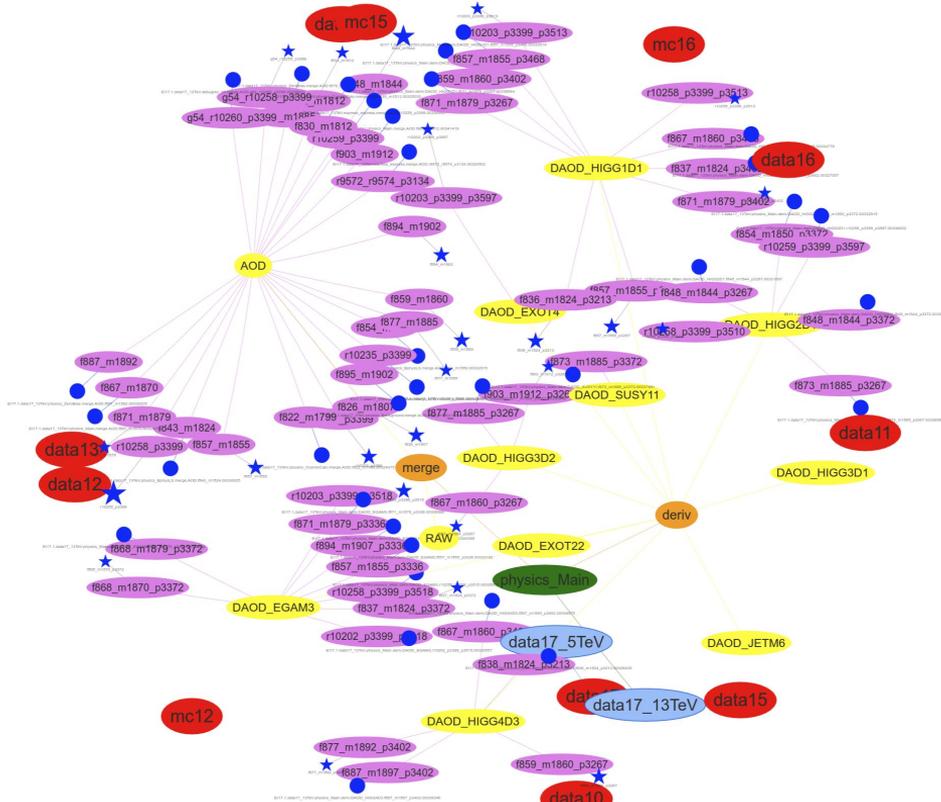
# *More*

- Subset of data (only real data, without trigger) also available via **Oracle**
- R&D for using **Kudu** storage
- R&D for using **Graph Database** (database based on vertices and edges)
- R&D for generating **multi-overlaps** of datasets/triggers (mathematical problem !)



# Preview of a future Fully interactive & graphical Web Portal

*Global View  
of all ATLAS data*



*under active development*

*using  
Graph Database*



# *Info*

**Service:** <https://atlas-event-index.cern.ch> (protected by CERN SSO outside CERN)

**New Web Service:** <https://atlas-event-index.cern.ch/EIHadoop>

**Documentation:** <https://atlas-event-index.cern.ch/doc>

**FAQ:** <https://atlas-event-index.cern.ch/doc/faq>