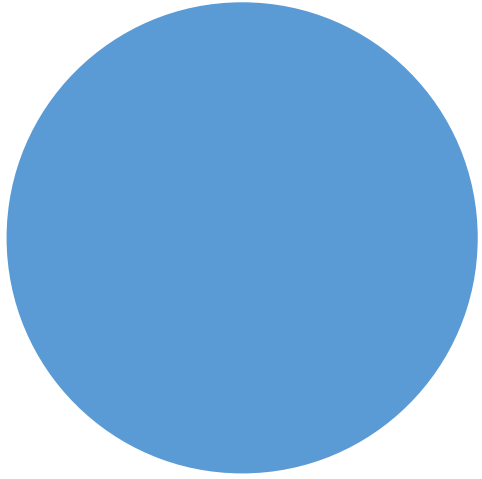


STAR and PHENIX Production

Amol Jaikar

Index

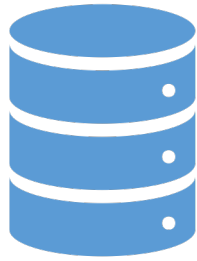
STAR

- Production
- BirdView
(Monitoring framework)

PHENIX

- Production
- OSG Exploration

STAR



Production

RAW dataset(DAQ) to MuDst conversion

MuDst to PicoDst conversion



BirdView

Monitoring system

Notification system

Workflow management

Production



RAW dataset to MuDst conversion



MuDst to PicoDst conversion



Nightly jobs

RAW TO MUDST

- Current Framework

- Consist of 4 steps
 - Database insertion
 - Extract runnumber information
 - File creation
 - Submission

- New Framework

- Consist of 2 steps
 - Files creation
 - Submission

Log extraction framework		
Parameter	Old	New
Execution Time	12 ~ 19 min	2.37 ~ 3.5 min
Parse files	8 ~ 32	148 ~ 162
Code length	2140	721
Language	Perl	Python

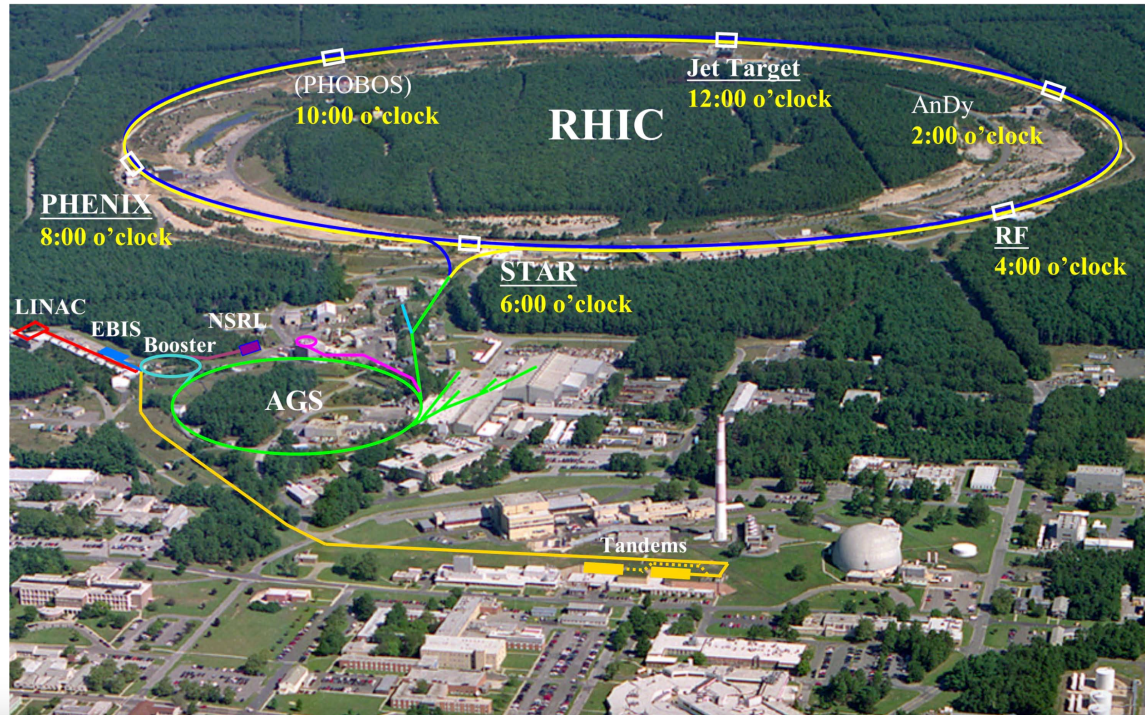
BirdView



BirdView

Workflow Management and Monitoring System

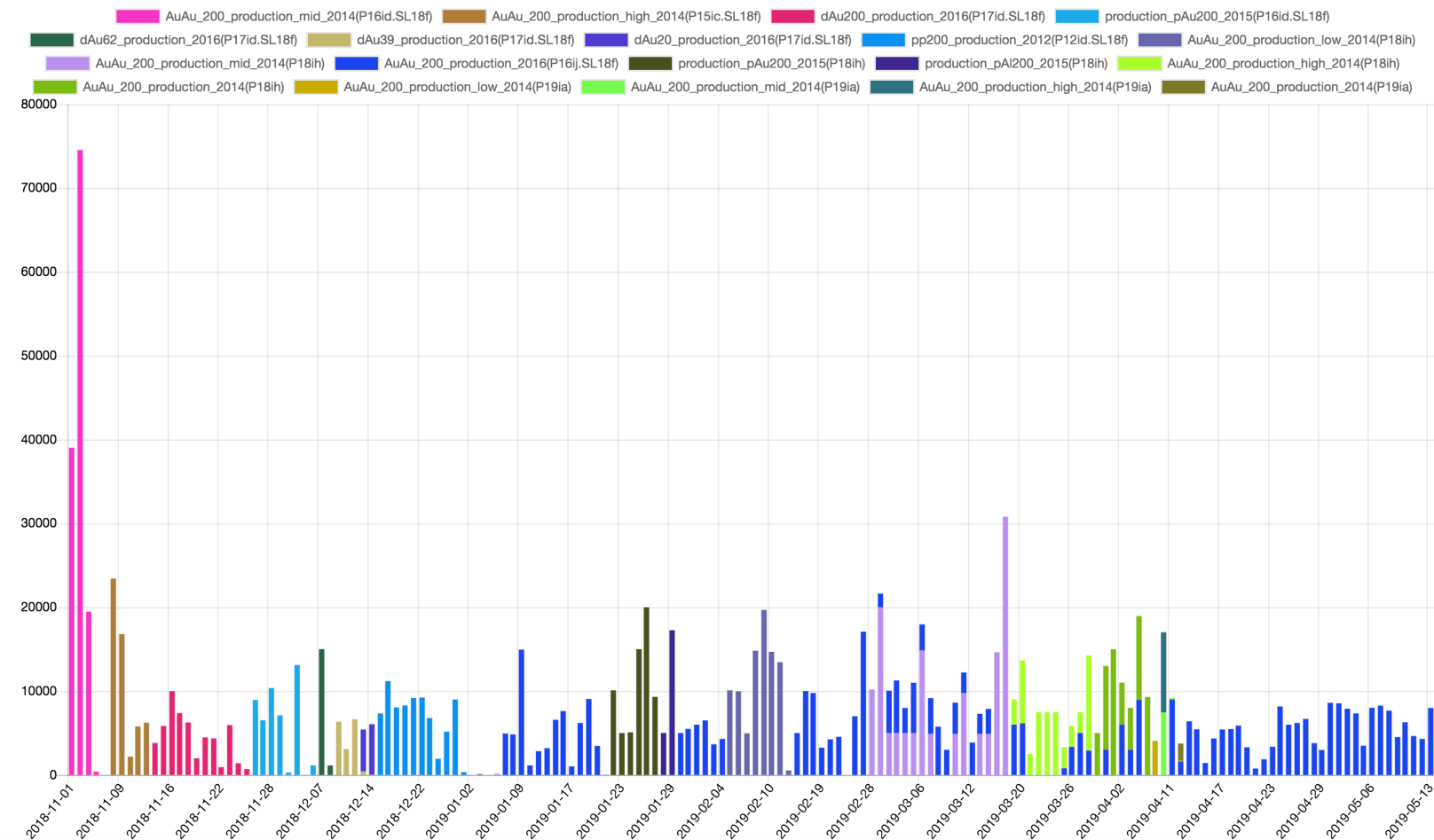
BirdView Nightly Test Production Notification



- Monitoring System
 - Production job's monitoring system
 - Nightly job's performance monitoring
 - Fault identification system
- Notification System
 - Notification of an event
- Workload management
 - Add or remove Nightly jobs
 - Launch test and production jobs

MuDst to PicoDst Conversion

Graph



Current Production



BirdView

Workflow Management and Monitoring System

BirdView [Nightly Test](#) [Production](#) [Notification](#)

Current Production

[PicoDst Conversion](#)

[Disk status](#)

[Chain Details](#)

Current Production Status

Trigger set name	Production tag	Status	Number of Jobs
27GeV_production_2018	P19ib_calib	DONE	2
production_14p5GeV_2019	dev	DONE	3
production_19GeV_2019	dev	DONE	46
27GeV_production_2018	P19ib_calib	RUNNING	382
production_14p5GeV_2019	dev	RUNNING	5
production_19GeV_2019	dev	RUNNING	127
production_19GeV_2019	dev	STAGING	19
production_19GeV_2019	dev	SUBMITTED	3

Nightly Job Monitoring

BirdView

Nightly Test

Production

Notification

Nightly Tests

Add New Test

Precision

Precision Modification

Week Status

Dataset Change Identification

Dataset Compare

Dataset w.r.t. Library

Past Week Details

DatasetID

Start Time

End Time

Select Parameter

Choose the Parameter

Graph

DatasetID

Dataset

Chain

Year

DatasetID	Date 1	Date 2	NoEventDone (1.0%)	memUsageF (5.0%)	memUsageL (5.0%)	CPU_per_evt_sec (50.0%)	RealTime_per_evt (50.0%)	percent_of_usable_evt (1.0%)	avg_no_tracks (1.0%)
12	2019-5-18	2019-5-19	0.0	0.04	0.07	54.06	53.57	0.0	0.0
13	2019-5-18	2019-5-19	0.0	0.06	0.04	87.59	82.8	0.0	0.0
34	2019-5-18	2019-5-19	0.0	0.55	0.08	22.66	22.62	0.0	1.06
34	2019-5-19	2019-5-20	0.0	0.32	0.23	42.68	42.85	0.0	1.08

Nightly Job monitoring

[Nightly Tests](#)

[Add New Test](#)

[Precision](#)

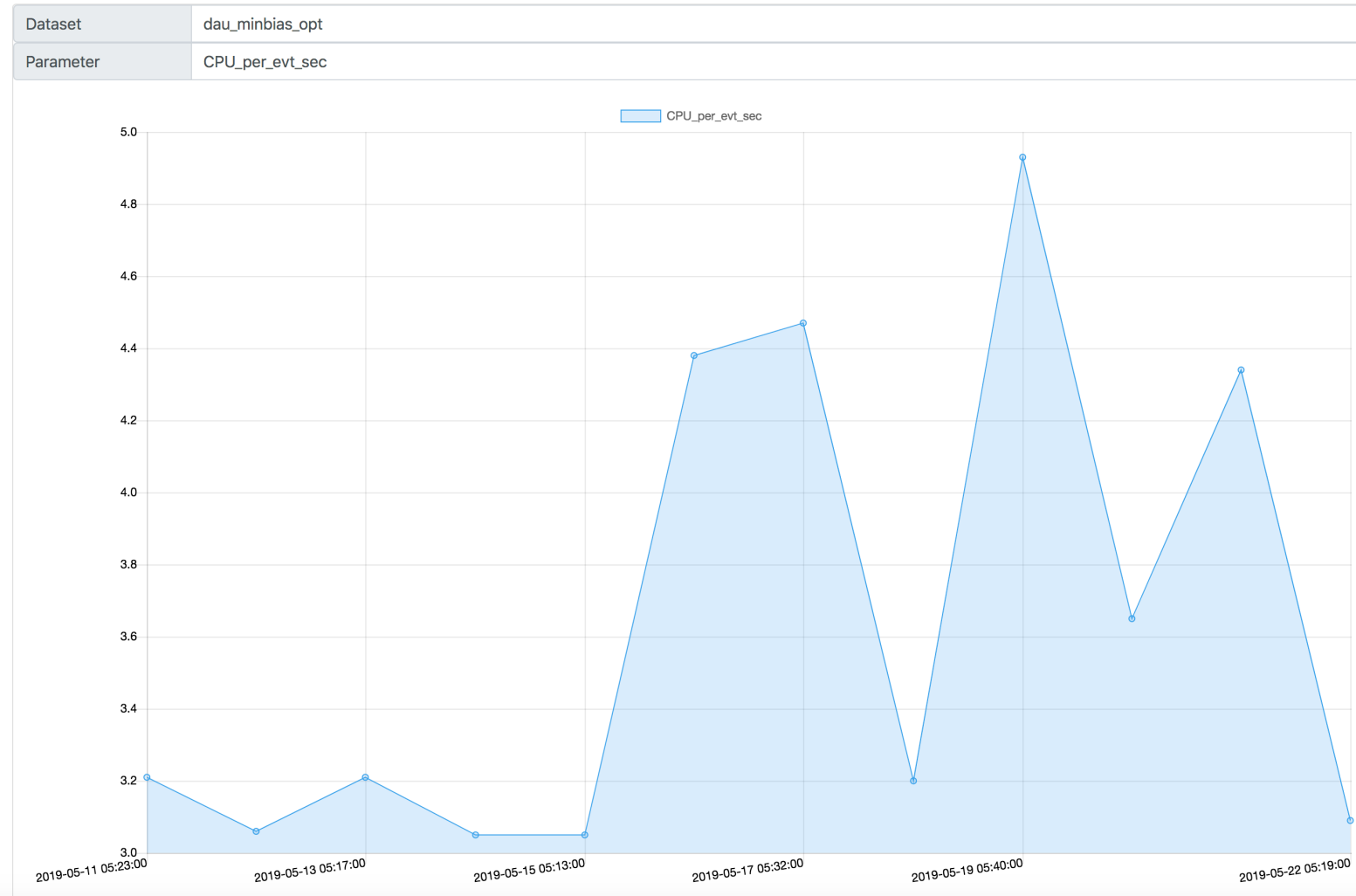
[Precision Modification](#)

[Week Status](#)

[Dataset Change Identification](#)

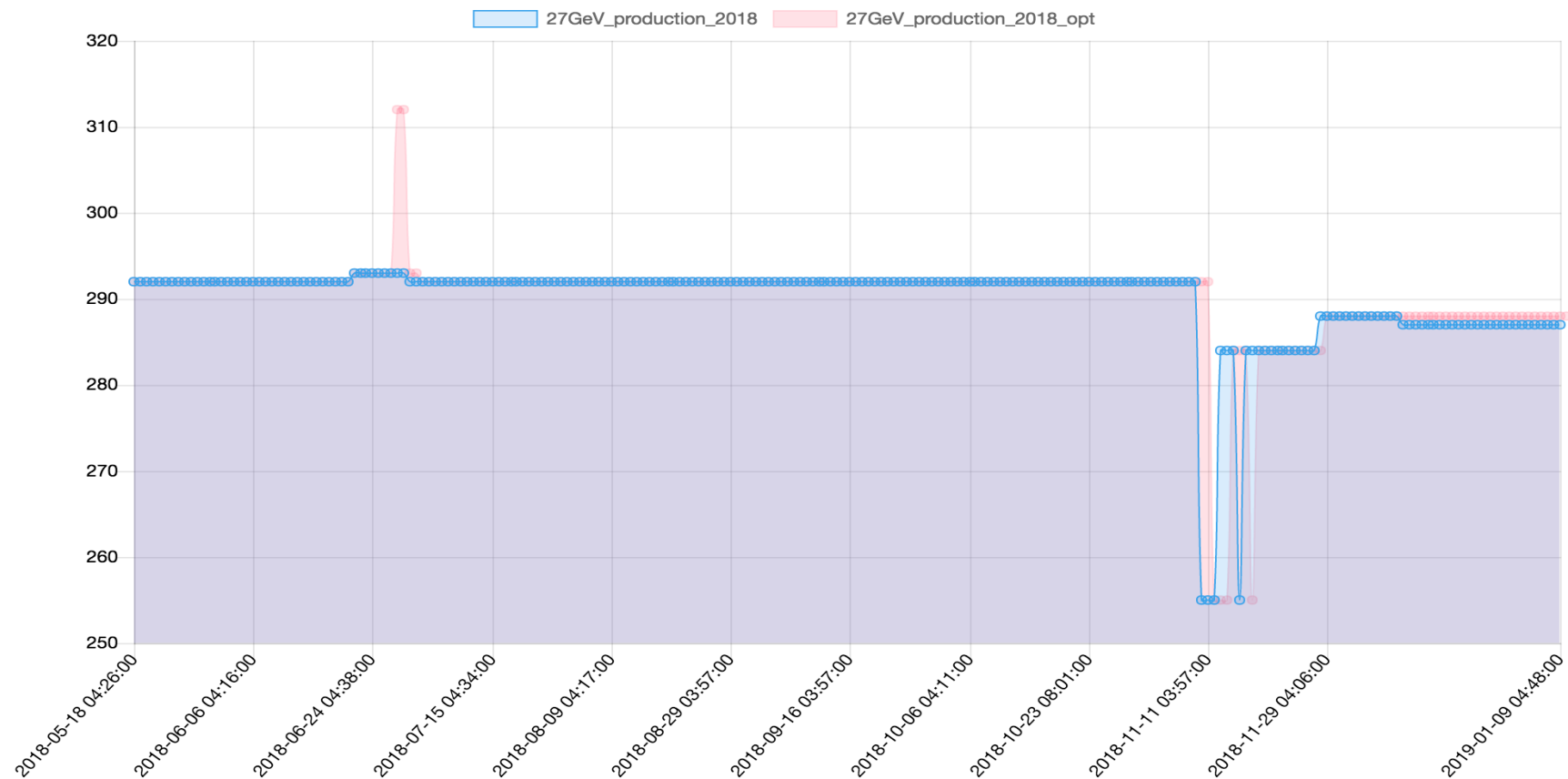
[Dataset Compare](#)

[Dataset w.r.t. Library](#)

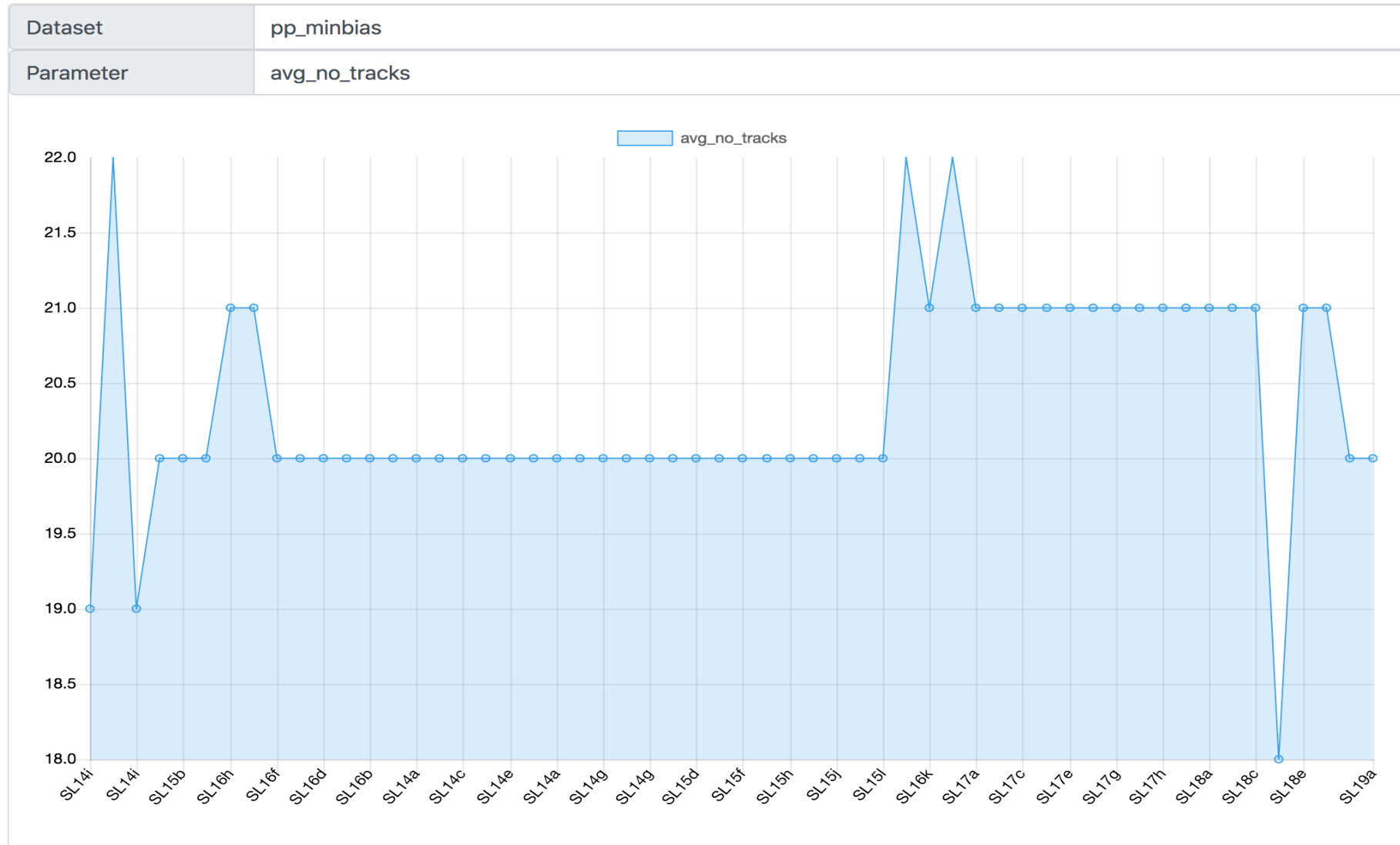


Dataset comparison

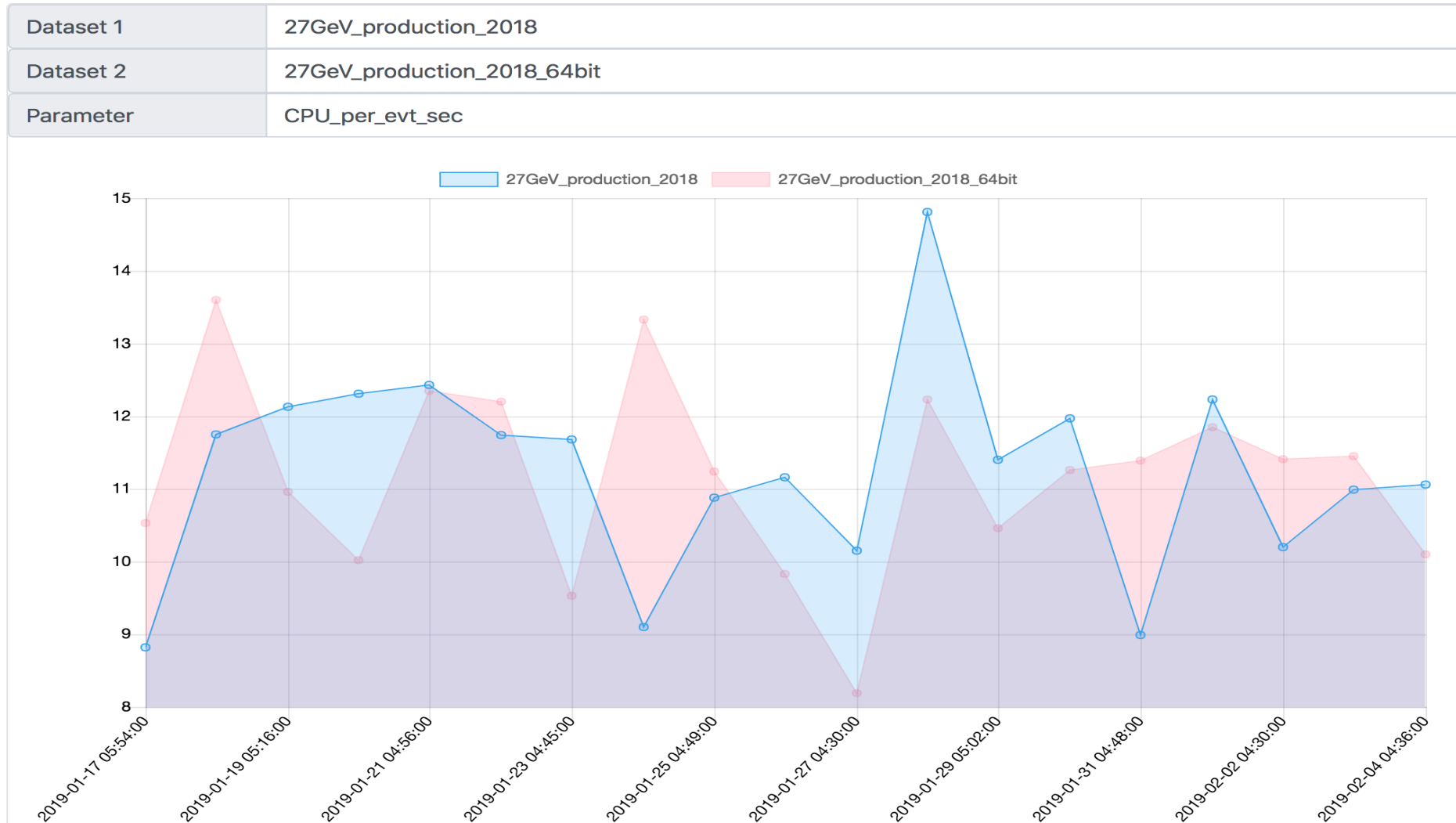
Dataset 1	27GeV_production_2018
Dataset 2	27GeV_production_2018_opt
Parameter	avg_no_tracks



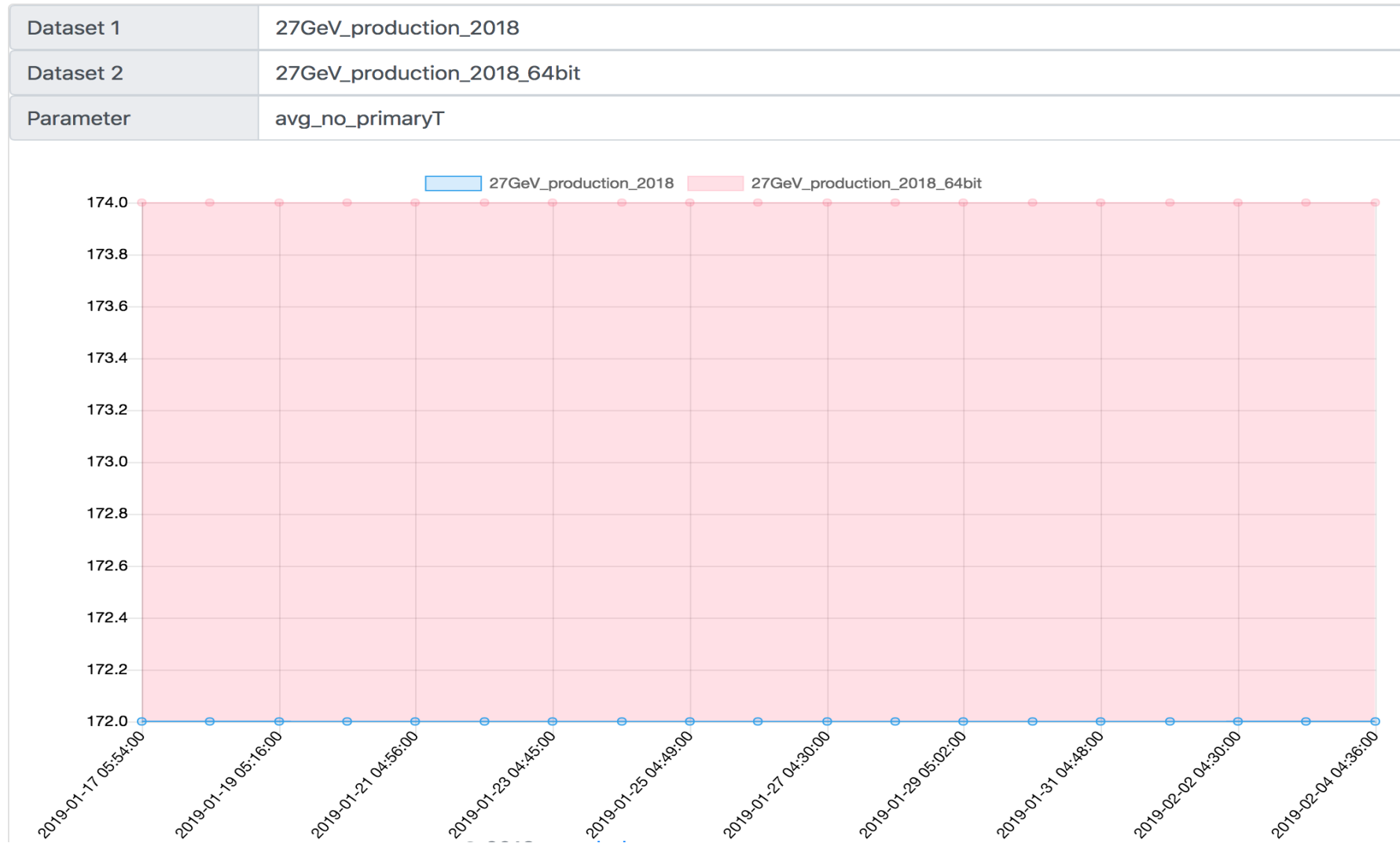
Dataset w.r.t. Library



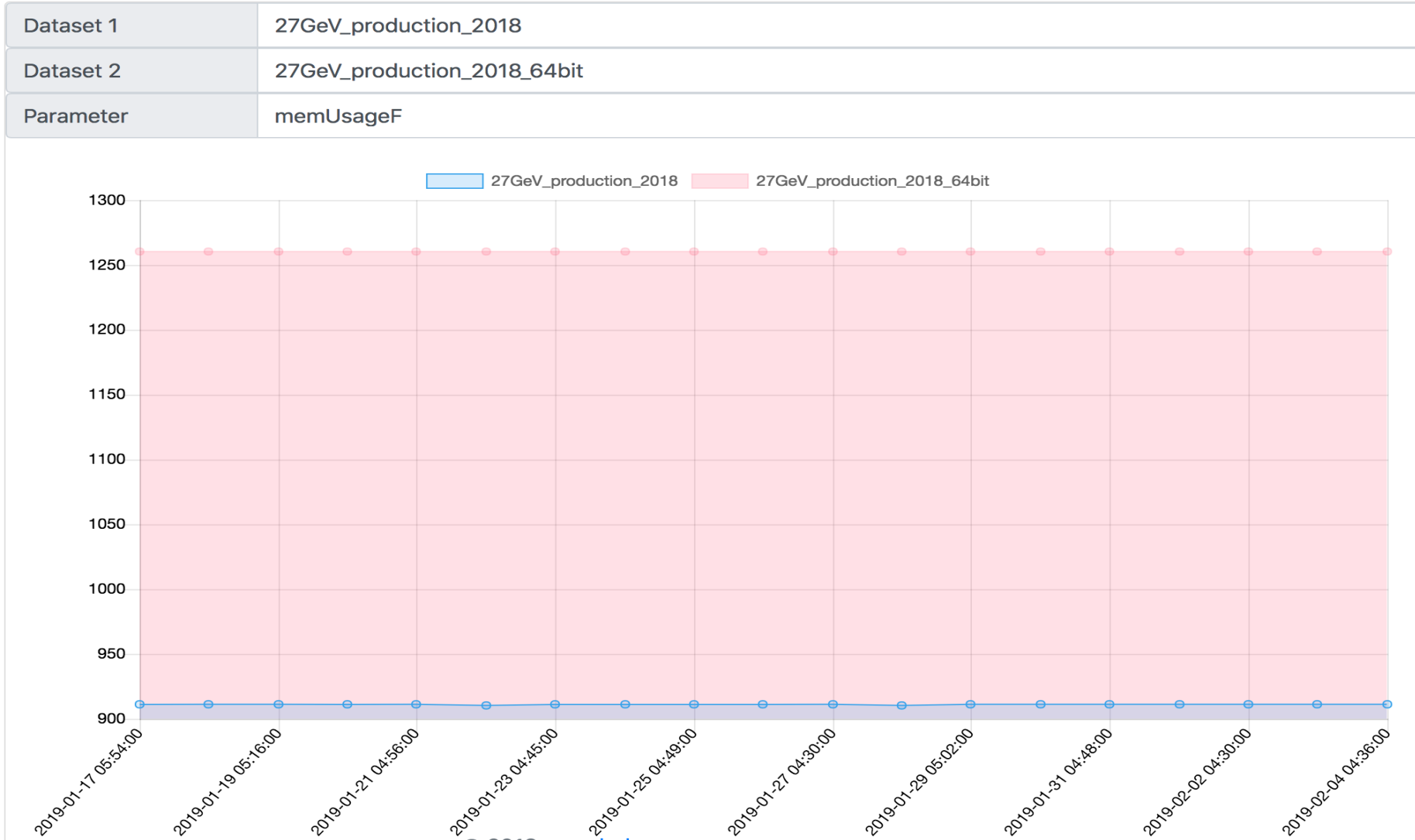
32 bit to 64 bit conversion



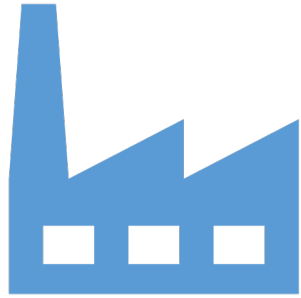
32 bit to 64 bit conversion



32 bit to 64 bit conversion



PHENIX



Production



OSG exploration

Production

- Current framework
 - Insert → Insertion of information into the database
 - Create → Creation of job submission files
 - **Submission** → Submission to CRS framework
- Current Dataset
 - 2016 AuAu 200 GeV

Number of jobs	Current status
215832	Processing succeeded
144	Processing failed
19	MD5 mismatch

OSG Exploration

- Creation of account
 - Creation of sPHENIX project under OSG - Done
 - Creation of account to access the resources - Done
- Execution of sample jobs
 - With specific requirement (e.g. 4 GB memory) - Done
 - With singularity image - in progress
 - To a specific site - in progress
- Library integration with OSG CVMFS
 - Requested to RCF regarding this - in process

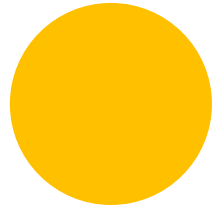
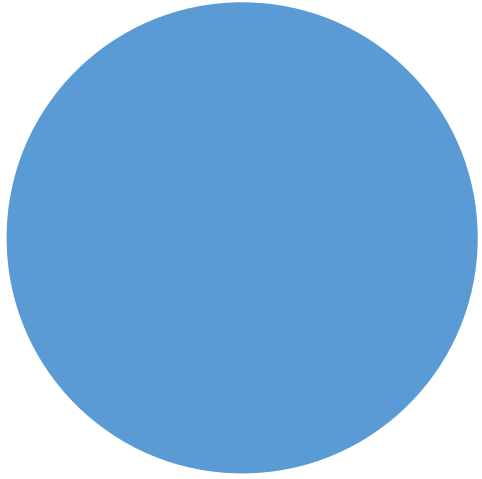
Future work

STAR

- BirdView deployment
- Database optimization
- Framework optimization
- Continue production

PHENIX

- OSG exploration
- Continue production



Thank you

Amol Jaikar