

Status of the CDAS based merging/production and processes and works in progress

O<P meeting

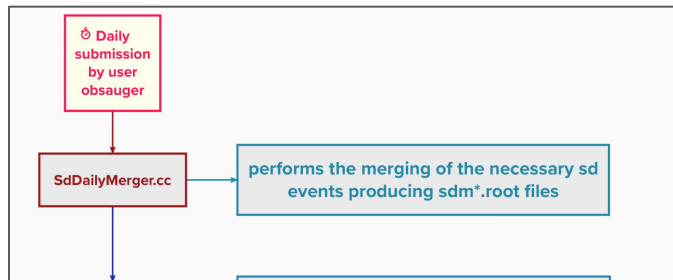
2023/10/xx

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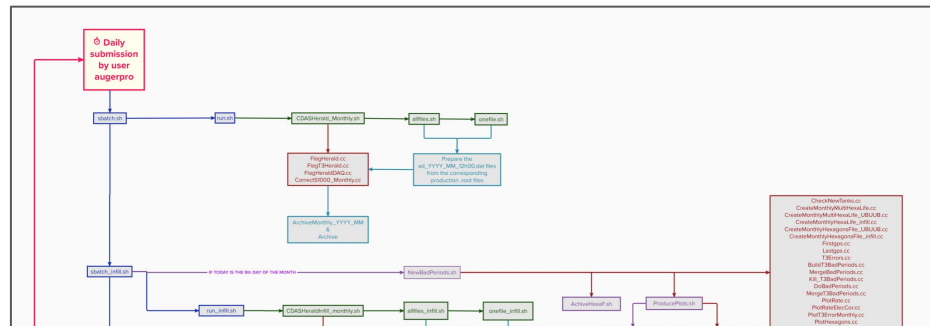
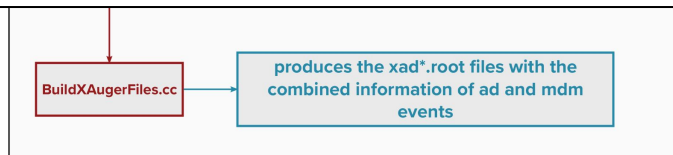
<https://www.auger.unam.mx/AugerWiki/CdasBasedProduction>



**Prod v2r0 outputs in
/sps/pauger/Prod/v2r0/**

CDAS version:

</sps/pauser/Softwares/Prod/CDAS/ape/current/>



**CDAS processes scripts (for daily checks and SD shifts) in
/sps/pauger/ForAnalysis/CDASProcess
/Scripts/**

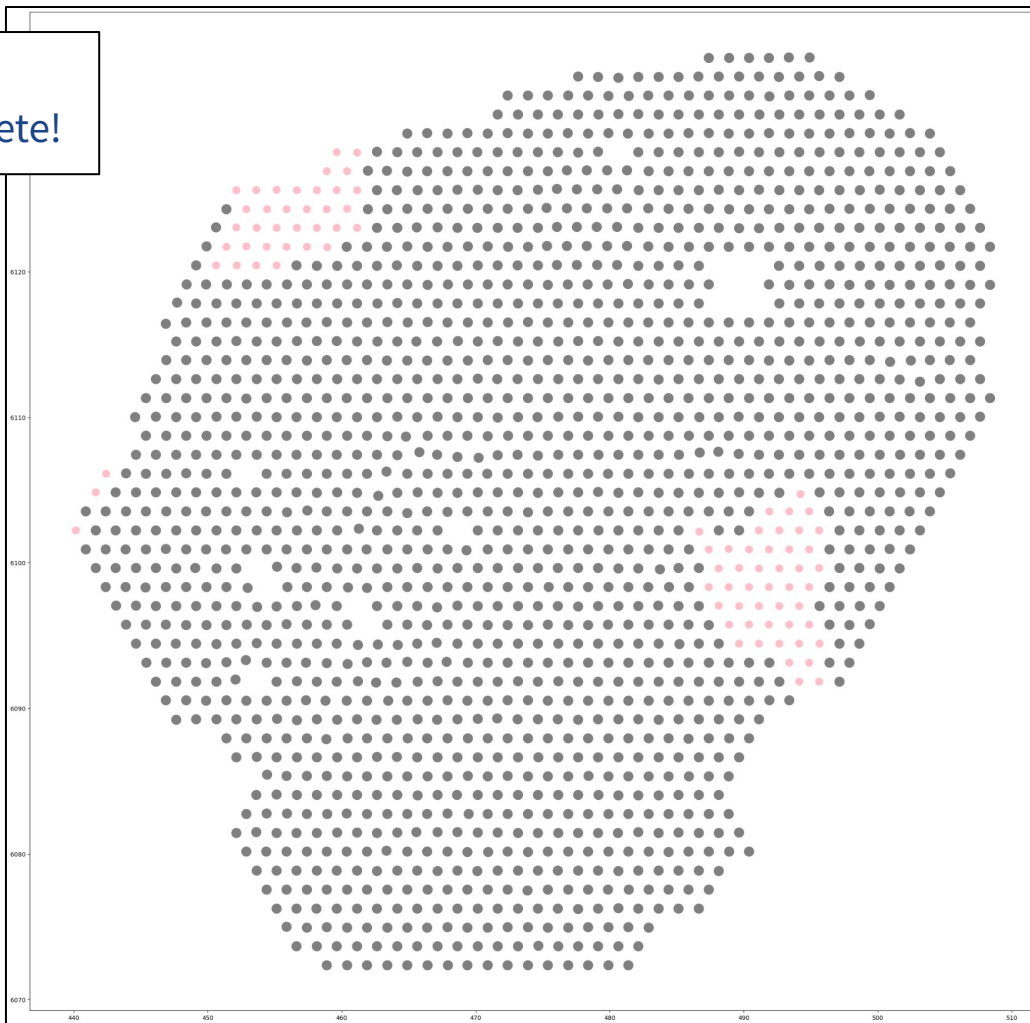
CDAS version :

[/sps/pauser/Softwares/Prod/CDAS/CDAS-v6r2p2](#)

Merging/production v2r0

- The process chain is runned daily without unforeseen interruptions
- For the problems that have been found over the past few months, we have implemented some control scripts that allow us to solve and not lose any production days
- Problems were encountered on few days (4) in April, (5) in June, (4) in August regarding copying/compressing some t2 files
 - all solved **EXCEPT FOR april 6-7-8-9** -> no possibility of recovering

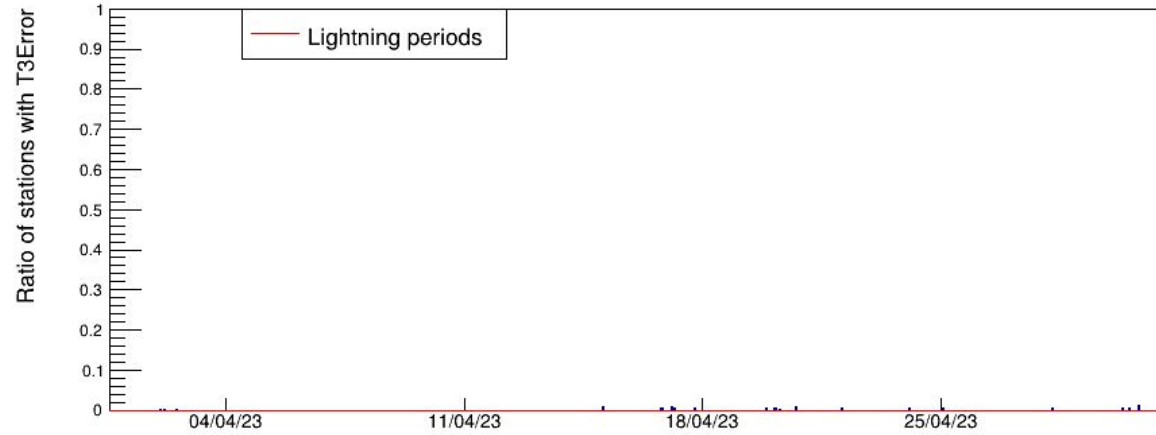
SSD, UUB and sPMT
deployment is complete!



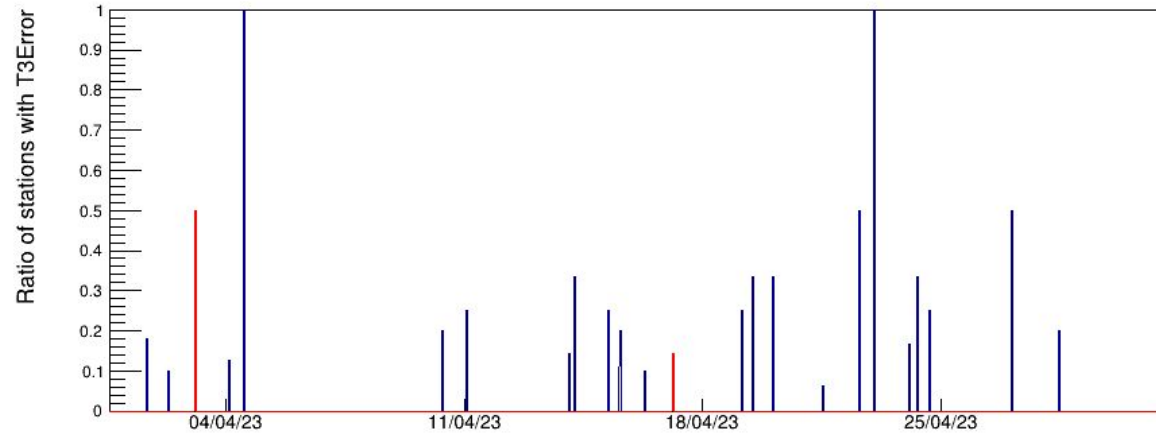
Monthly CDAS processes (SD shifts)

- Monthly processes often break or crash and must be resubmitted -> No problem
 - recover scripts to be submitted by hand are available in the scripts directory, easy to use and ready for immediate recovery
- With the completion of deployment, the plots of interest for SD shifts are those of hexagons and T3Errors
- For the past few months, T3Errors have been available considering array configuration (including SD433) and electronic

1500m UB array : 0 hours above 0.1 with Error 1+2+7



1500m UUB array : 22 hours above 0.1 with Error 1+2+7



Summary #1

- Production/merging processes are running without any particular unresolved problems
- CDAS processed for SD shifts often requires some adjustments or fixes
 - thanks to the work of the always careful shifters
- The new features implemented are now stable in the process chain
 - hexagons differentiated based on electronic and array configuration (main array, infill, SD433)
 - T3Errors available considering array configuration (including SD433) and electronic



NEW

v2r4

- Last December with Gialex we installed a new CDAS version
 - /sps/pauger/Softwares/Prod/CDAS-v6r4p0/
 - includes modules for sPMT
 - checks performed showed complete compatibility with the version used for the official production (all the same, with only the addition of information about sPMT)
- We are running parallel merging/production v2r4 (/sps/pauger/Prod/v2r4/)
 - We implemented some checks routines in order to avoid certain problems that have occurred in the past



NEW

v2r4

- With the new CDAS installation, we created a folder for running the parallel daily and monthly CDAS processes
 - the idea is to have a clean installation for both production and other control processes
 - some useful scripts for CDAS processes are not integrated into the downloadable CDAS, I have added them directly on this version installed
 - monthly processes are still in testing but the scripts are the same as the official one currently in use

Soon v2r4 will be announced as new official version
for merging/production and cdas processes

What's next: AugerPrime event reconstruction and BadPeriods

CDAS Herald reconstruction is done using UB stations only

- it is necessary to have a reconstruction with UUB stations -> Offline
 - we tested an event list with Offline reconstruction and using it to calculate BadPeriods and found same results to those using the CDAS event list
 - we are working for an Offline installation in Lyon
- As of Prime report, full-efficiency data taking with the upgraded array (Phase II) is expected to start in 2024
 - we need to check the stability of Phase II event rate
 - check BadPeriods procedure as used for Phase I is suitable for Phase II

BadPeriods in UB - UUB transition period

GAP2006_101

GAP2006_042

As done at the beginning of Phase1, we are studying the stability of the event rate as a function of the type of electronics and the extension of the array configuration (UB & UUB)

- this way for each time period we can tune and choose the correct parameters with which to identify whether it is a bed period or not
- by doing some tests and seeing the development of the deployment, it is possible that proposals of different length periods could be made
- at the moment checks are possible only for the UB part of the array (only event list available)

This can be extended to calculate the BadPeriods of the infill array and SD433