Table of Contents

Table of Contents

Table of Contents

Mein deutsches Wortschatz

ablehnen	rinunciare
aufpumpen	gonfiare
sich ablenken	distrarsi
bestehen auf	insistere
einladen	invitare, offrire
neigen	tendere
sperren	chiudere, sbarrare
vermeiden	evitare
vermuten	sospettare

Bedingung	condizione
Entscheidung	decisione
-s Geheimnis	mistero
Genehmigung	autorizzazione
-r Hintergrund	sfondo, backgound
-r Reifen	pneumatico
-r Schlauch	camera d'aria
Verzeihung	scuse
-r Zettel	foglio

knapp	appena
solange	finché

Ich entschuldige mich für die Störung

Ich rede mal mit ihm

Ich schaffe es (nicht)

Das wäre es von meiner Seite

Firefox

Einstellungen -> Datenschutz & Sicherheit -> Cookies -> Datei Verwalten

login.cern.ch

(cern.ch)

Ausgewählte...

VPN

Packages:

```
sudo apt install network-manager-openconnect network-manager-openconnect-gnome

Gateway: vpn.uni-giessen.de
CA Certificate: attached
Proxy: (kein)
(CSD Wrapper Script?)
(User Ceritifcate?)
(Prvate key?)...

ssh -X <username>@alfa3.physik.uni-giessen.de
```

Linux

Nohup

```
nohup <command> > list.out 2 > list.err &
```

Find the code of a process

You can add filters to `top` while it is running: press the `o` key and then type in a filter expression. For example, to monitor all java processes use the filter expression `COMMAND=java`. Multiple filters by pressing the key again, filter by user with the `u` key, clear all filters with the `=` key.

Converting images

```
convert <image.jpg> <image.png>
```

```
convert <image*.png> <filename.pdf>
```

Merging images

Vertically:

```
convert image1.png imag2.png [-append] result.png
```

Horizontally:

```
convert image1.png imag2.png +append result.png
```

Merge pdf files

```
pdfunite file1.pdf file2.pdf merged_output.pdf
```

Extract pages from a pdf file

```
pdftk full-pdf.pdf cat 12-15 output outfile_p12-15.pdf
```

Printers

Web CUPS

```
http://localhost:631/printers/Dell_C3765dnf_Color_MFP
```

Audio

```
arecord -f cdr /tmp/test
```

```
arecord  /tmp/test
```

```
aplay  /tmp/test
```

```
speaker-test
```

```
speaker-test -twav
```

```
pgrep -a speaker
```

Hostname

```
nslookup <ip-address>
```

View last lines of a file updating "live"

```
tail -f <filename>
```

Search for text in files

```
grep -rli 'some_text' .
```

r = recursive, i = case insensitive, l = list file names

Bash scripts

Read the content of a file

```
#!/bin/bash

filename='filename.txt'

while read -r item1 item2 item3; do
  echo "$item1 $item2"
done < $filename
```

Avoid big vertical space before the last item of a list:

```
\item some text\par
```

Remove bullet from a list of items:

```
\item[]
```

Custom font size:

```
\usepackage{anyfontsize}
...
{\fontsize{50}{60}\selectfont Foo}{\fontsize{5}{6}\selectfont bar!}
```

Installing biblatex and biber packages:

```
sudo apt-get install texlive-bibtex-extra
sudo apt-get install texlive-bibtex-extra biber
```

ATHENA

ATLAS data scheme

- https://indico.cern.ch/event/831761/contributions/3484227/attachments/1929826/3195970/inductionday_SWC

Tutorial

Release setup

Setup

```
setupATLAS
asetup Athena,master,latest

bash
mkdir workArea
setupATLAS
export ATLAS_LOCAL_ROOT_BASE=/cvmfs/atlas.cern.ch/repo/ATLASLocalRootBase
alias setupATLAS='source ${ATLAS_LOCAL_ROOT_BASE}/user/atlasLocalSetup.sh'
mkdir source
mkdir build
mkdir run
cd source
```

Checking xAOD files

```
checkxAOD.py <filename>
```

COOL

```
setupATLAS
asetup 21.0.39,Athena
(asetup 21.2.93,AthAnalysis)
```

GIT

General

Git global setup

```
git config --global user.name "Name Surname"
git config --global user.email "mail@somewhere.de"
git config --list
```

To avoid entering credentials anytime

```
git config credential.helper store
```

Manage remote origins

```
git remote remove origin
git remote add origin https://gitlab.cern.ch/<project-name>
```

Create a new repository

```
git clone https://:@gitlab.cern.ch:8443/<user>/<project-name>.git
cd <project-name>
touch README.md
git add README.md
git commit -m "add README"
git push -u origin master
```

Push an existing folder

```
cd existing_folder
git init
git remote add origin https://gitlab.cern.ch/<user>/<project-name>.git
git add .
git commit -m "Initial commit"
git push -u origin master
```

Push an existing Git repository

```
cd existing_repo
git remote rename origin old-origin
git remote add origin https://gitlab.cern.ch/<user>/<project-name>.git
git push -u origin --all
git push -u origin --tags
```

View the branches in a Git repository

```
git branch [-a]
```

Delete a local branch

```
git branch -d <the_local_branch>
```

Checkout the latest version on the remote repository

(

```
git fetch origin
```

)

```
git checkout -b <branch_name> origin/master
```

GIT commit

```
git commit -[a]m "My message"
```

(use the -a option in your commit command to stage and add the changes to your repository).

Push a new local branch to a remote git repository link

1. create a new branch:

   ```
   git checkout -b feature_branch_name
   ```
2. edit, add and commit your files
3. push your branch to the remote repository:

   ```
   git push -u origin feature_branch_name
   ```

Data quality

Luminosity etc.

https://acode-browser.usatlas.bnl.gov/lxr/source/athena/Control/AthenaMonitoring/AthenaMonitoring/ManagedMonito

Talks

https://indico.cern.ch/event/831761/contributions/3484227/ ->
https://indico.cern.ch/event/831761/contributions/3484227/attachments/1929826/3195970/inductionday_SWC.pdf

DQ algorithms

https://gitlab.cern.ch/atlas/athena/-/tree/master/DataQuality/dqm_algorithms

Release 22 - MT

A collection of the basic DQ algorithms that have been already implemented and where they reside:
https://twiki.cern.ch/twiki/bin/view/Atlas/Run3DQCodeInGit.

AFP repository on GIT:
https://gitlab.cern.ch/atlas/athena/tree/master/ForwardDetectors/AFP/AFP_Monitoring

AFP DQ code:

```
mkdir testAFP
cd testAFP/
setupATLAS
lsetup git
git atlas init-config --apply
git atlas init-workdir https://:@gitlab.cern.ch:8443/atlas/athena.git [:@gitlab.cern.ch:8443] -b
cd athena/
git checkout -b 21.0-AFP-DQM upstream/21.0 --no-track
git atlas addpkg AFP_Monitoring
ls ForwardDetectors/AFP/AFP_Monitoring/
cd ..
mkdir Build
cd Build/
asetup Athena,21.0,latest,slc6
cmake ../athena/Projects/WorkDir/
make
source ./x86_64-centos7-gcc62-opt/setup.sh
```

AFP DQ strategy (as of 13.08.2019):

1. Get some first code running. Song-Ming pointed you to https://twiki.cern.ch/twiki/bin/view/Atlas/DataQuality where this is also roughly described (right hand side): Suggested workflow:
    1. read through the instructions in the example job option
    2. write an algorithm (subclass AthMonitorAlgorithm) that follows the form of the ExampleMonitorAlgorithm to retrieve a quantity (just port over a calculation from your subsystem s Run II monitoring code) related to your subsystem from a data file (AOD/ESD/etc)
    3. write a configuration file that defines a histogram for this quantity and writes it to the output histogram file

4. run athena with the JobOption you have created and check the out put file for your histogram
5. test your ability to change the python configuration. (e.g. try changing the output `TDirectory` structure)
6. test your ability to calculate other quantities and use filters in the algorithm
7. record what percentage of your histograms is migrated

2. for how to get this template code running, the best is to look at: https://twiki.cern.ch/twiki/bin/view/Atlas/DQRun3FrameworkTutorial (which I understand, you have already looked at - though I understand you tried to indeed understand all references, which is very admirable, but not possibly very difficult without having too much practical experience of the ATLAS computing framework).

Inside the section: https://twiki.cern.ch/twiki/bin/view/Atlas/DQRun3FrameworkTutorial#New_Monitoring_Framework (which roughly explains some of the algorithms) you find a reference to https://gitlab.cern.ch/atlas/athena/tree/master/Control/AthenaMonitoring where you find in the folders: `src / AthenaMonitoring / python` the following files:

- ExampleMonitorAlgorithm.cxx
- ExampleMonitorAlgorithm.h
- ExampleMonitorAlgorithm.py

which you would want to rename to AFP DQMonitoring and include it in a relevant package in your project folder: https://gitlab.cern.ch/atlas/athena/tree/master/ForwardDetectors/AFP (Betty's old code there?).

Instructions to run: https://twiki.cern.ch/twiki/bin/view/Atlas/DQRun3FrameworkTutorial#Getting_started_with_the_new_mon.

JIRA tickets: https://its.cern.ch/jira/browse/ATLASDQ-662.

Release 20.7

Run the ATLAS test web display

Get the DQM tools:

```
mkdir dq_devel
cd dq_devel
setupATLAS
lsetup git
git atlas init-workdir https://:@gitlab.cern.ch:8443/atlas/athena.git
cd athena
git atlas addpkg DataQualityConfigurations
git fetch upstream
git checkout -b 21.0-my-dq-development upstream/21.0  no-track
```

TWiki

- https://twiki.cern.ch/twiki/bin/view/Atlas/DQOperationalRecipes

AFP

M. Trzebinski (12.06.2019): list of defects and descriptions created, to be uploaded in the DQDefects DB, a specific GRL (AFP special runs) will be created

Open Call for Tasks in the Data Quality area

https://twiki.cern.ch/twiki/bin/view/Atlas/DQOpenCalls#Finalization_of_the_AFP_DQ_histo

https://its.cern.ch/jira/browse/ATLASDQ-674

Talks

2020

- https://indico.cern.ch/event/902942/contributions/3800430/attachments/2009779/3357598/Data_quality.pdf

26/03/2020 AFP soft & sim + DQ Weekly Meeting

- https://indico.cern.ch/event/897295/contributions/3784408/attachments/2002902/3344158/DQM_-_ARP_TM_

12/03/2020 ARP Technical Meeting

- https://indico.cern.ch/event/889902/contributions/3752878/attachments/1991298/3320616/DQ_TM_20.02.202

20/02/2020 ARP Technical Meeting

- https://indico.cern.ch/event/886473/contributions/3737294/attachments/1983109/3303418/AFP_DQ_2020020

06/02/2020 ARP Technical Meeting

- https://indico.cern.ch/event/868833/contributions/3715669/attachments/1974405/3285578/AFP_DQM_in_Ath

23/01/2020 ARP General Meeting

- https://indico.cern.ch/event/868833/contributions/3715658/attachments/1974406/3285582/AFP_DQM_genera

23/01/2020 ARP General Meeting

2017

- https://indico.cern.ch/event/675482/contributions/2767773/attachments/1547295/2428923/calpas_atlas_dqm_2

25/10/2017 Data Quality weekly

- https://indico.cern.ch/event/675745/contributions/2765936/attachments/1546490/2427513/calpas_afp_dqm_24

24/10/2017 technical AFP meeting (AFP detector, test AFP in ATLAS web display, which histograms to use and how)

- https://indico.cern.ch/event/671946/contributions/2748538/attachments/1538276/2411072/calpas_afp_dqm_10

10/10/2017 technical AFP meeting (grouping and convention name in COOL, BPM, AFP in ATLAS test web display)

- https://indico.cern.ch/event/670247/contributions/2741588/attachments/1534352/2403011/calpas_afp_dqm_03

03/10/2017 technical AFP meeting (AFP in general DQ meeting, AFP into ATLAS test web display, COOL update)

- https://indico.cern.ch/event/668338/contributions/2732712/attachments/1530324/2395002/calpas_afp_dqm_26

09/26/2017 technical AFP meeting (Monitoring status, COOL parameters, AFP runs list, analysis of runs)

- https://indico.cern.ch/event/668310/contributions/2732588/attachments/1529439/2393167/calpas_afp_dqm_co

09/25/2017 AFP Condition Database meeting (A : variabls for COOL, B: data structure)

- https://indico.cern.ch/event/644125/contributions/2713532/attachments/1522344/2378850/calpas_afp_dqm_Be

09/13/2017 ATLAS ALFA/AFP meeting (A: Online and Offline tools, defects, histo and ref histo, remaining steps. B: TPX-3)

- https://indico.cern.ch/event/662347/contributions/2704608/attachments/1515238/2364441/calpas_afp_dqm_29

08/29/2017 technical AFP meeting (Analysis of run 332303, SiT hit versus luminosity block)

- https://indico.cern.ch/event/661072/contributions/2697715/attachments/1511130/2356620/calpas_afp_dqm_22

08/22/2017 technical AFP meeting (Online and offline monitoring histograms, analysis of run 332303)

- https://indico.cern.ch/event/659927/contributions/2691865/attachments/1508525/2351914/calpas_afp_dqm_15

08/15/2017 technical AFP meeting (Online and offline monitoring histograms and analysis status)

- https://indico.cern.ch/event/658583/contributions/2685037/attachments/1505547/2346132/calpas_afp_dqm_08

08/08/2017 technical AFP meeting (ATLAS monitoring system, Online Histogram Presenter)

- https://indico.cern.ch/event/657202/contributions/2677953/attachments/1501737/2345579/calpas_afp_dqm_01

08/01/2017 technical AFP meeting (Data Quality Monitoring importance, strategy, new email list)

Test setup

- create a root file with AFP reconstructed objects (G. Gach)
  - ♦ setup the framework

```
setupATLAS
mkdir ../build && cd ../build
asetup 21.0.39,Athena
mkdir ../source && mv CMakeLists.txt ../source/
cmake ../source
make -j
source x*/setup.sh
mkdir ../run && cd ../run
```

- ♦ create the root file

```
Reco_tf.py --inputBSFile 'raw_AFP_file' --outputAODFile 'output.root' --outputHISTFile 'output_HI
--autoConfiguration 'everything' --preExec
'all:rec.doTrigger.set_Value_and_Lock(True);rec.doAlfa.set_Value_and_Lock(False);rec.doForwardDet
ue);rec.doAFP.set_Value_and_Lock(True);DQMonFlags.doAFPMon=True;from InDetRecExample.InDetJobProp
InDetFlags;InDetFlags.checkDeadElementsOnTrack.set_Value_and_Lock(True);' 'r2a:from
InDetRecExample.InDetJobProperties import InDetFlags;
InDetFlags.useDynamicAlignFolders.set_Value_and_Lock(True);from InDetPrepRawDataToxAOD.SCTxAODJob
import SCTxAODFlags;SCTxAODFlags.Prescale.set_Value_and_Lock(50);from TrigHLTMonitoring.HLTMonFla
HLTMonFlags;HLTMonFlags.doGeneral=False;TriggerFlags.AODEDMSet="AODFULL";' --maxEvents 5000 --con
```

```
'CONDBR2-BLKPA-2017-11' --geometryVersion 'all:ATLAS-R2-2016-01-00-01' --steering 'doRAWtoALL'
```

- run the ATLAS test web display (R. Narayan, P. Onyisi)
  - ♦ get the DQM tools

```
mkdir dq_devel ; cd dq_devel
SetupATLAS ; lsetup git
git atlas init-workdir https://:@gitlab.cern.ch:8443/atlas/athena.git
cd athena
git atlas addpkg DataQualityConfigurations
git fetch upstream
git checkout -b 21.0-my-dq-development upstream/21.0  no-track
```

  - ♦ setup a release

```
mkdir ../build ; cd ../build
asetup 21.0.38
```

  - ♦ get the AFP configuration file

```
cd ../athena/DataQuality/DataQualityConfigurations/config/ ; mkdir AFP
cp /afs/cern.ch/user/c/calpas/www/collisions_run.config AFP
```

  - ♦ get the AFP reconstructed root file

```
cp /PATH/TO/YOUR/NEW/output.HIST.root
```

  - ♦ compile

```
cd ../../../../build
cmake ../athena/Projects/WorkDir ; make -j ; source x*/setup.sh
```

  - ♦ run the DQM

```
DQWebDisplay.py ../athena/DataQuality/DataQualityConfigurations/config/output.HIST.root TestDispl
```

DCSCalculator2

https://twiki.cern.ch/twiki/bin/view/Atlas/DcsCalculator2

TDAQ

General

https://atlasop.cern.ch/twiki/bin/view/Main/Run2Preparation

Setup environment

```
source /sw/tdaq/setup/setup_tdaq-07-01-00.sh
```

DQMD display

```
dqm_display -p ATLAS
```

To-do list

- events in the xAOD files not chronologically ordere (LB number can go backwards from one event to the next)
- efficiency plots: currently `ex=px` (`px` = hits in the plane x), should be `ex=px/(p0+p1+p2+p3)`
- correlation between AFP and central ATLAS: (horizontal) track multiplicity in AFP vs. total energy or total multiplicity

Luminosity with AFP

https://indico.cern.ch/event/954049/contributions/4008725/attachments/2099700/3529788/AFPlum.pdf

ROOT

ROOT tutorial https://root.cern.ch/root/htmldoc/guides/primer/ROOTPrimer.html#root-macros

Sources

The source code from the ROOT download webpages does not contain the `CMakeLists.txt` file. The GIT repository works fine instead:https://root.cern/releases/release-62200/#git

Installation

https://root.cern.ch/building-root

http://tylern4.github.io/InstallRoot/

Seems to work on Lubuntu 16.04 i686 and 18.04 amd64:

Download the source from GIT:

```
git clone https://github.com/root-project/root.git
cd root
git checkout v6-10-00-patches
```

or the most recent release:

```
git clone https://github.com/root-project/root.git
cd root
git checkout -b v6-22-00 v6-22-00
```

Seems to work on Lubuntu 18.04 amd64:

Required packages:

```
sudo apt-get install git dpkg-dev cmake g++ gcc binutils libx11-dev libxpm-dev \
libxft-dev libxext-dev
```

Optional packages:

```
sudo apt-get install gfortran libssl-dev libpcre3-dev \
xlibmesa-glu-dev libglew1.5-dev libftgl-dev \
libmysqlclient-dev libfftw3-dev libcfitsio-dev \
graphviz-dev libavahi-compat-libdnssd-dev \
libldap2-dev python-dev libxml2-dev libkrb5-dev \
libgsl0-dev libqt4-dev
```

```
mkdir build
cd build
cmake path/to/source
cmake --build . -- -jN
```

where N is the number of available cores.

Setup the environment to run:

```
$ source /path/to/install-or-build/dir/bin/thisroot.sh
```

Start ROOT interactive application:

```
$ root
```

Python3

(Lubuntu 18.04 64)

```
sudo apt-get install python3-dev
```

ROOT setup on lxplus

```
setupATLAS

localSetupROOT [options] [version]

localSetupROOT --help
```

Input/output

ROOT input/output

```
root -l <file_name>
tree_name->MakeClass("<class_name>")
```

Peaks in histograms

TSpectrum: search by setting the sigma and the amplitude threshold of the peaks:

```
Int_t Search(const TH1* hist, Double_t sigma = 2, Option_t* option = "", Double_t threshold = 0.0
```

Example

```
#include "TSpectrum.h"

TSpectrum *s = new TSpectrum();
Int_t peak;
...
peak = s->Search(hist, 2.2, "nobackground", 0.12);
cout << "peak: " << peak << "\n";
```

TChain

```
        TChain *chain = new TChain("ntuple");

        chain->Add("//data/scratch/atlas_root_v3/mpx04_20120305_Background_2012_LT_100s_1000.root

        chain->Add("/data/scratch/atlas_root_v3/mpx04_20120327_Background_2012_LT_50s_1000.root")

        chain->Add("/data/scratch/atlas_root_v3/mpx04_20120412_VdM_scan_LT_8s_1000.root");
```

Seems to work on Lubuntu 18.04 amd64:

dir

```
TDirectory* topDir

m_outputFile = TFile::Open("out_file.root", "RECREATE");
topDir = m_outputFile->mkdir("test");
topDir->cd("test");

...Save_Hists...

 m_outputFile->Write();
 m_outputFile->Close();
```

Root dir

Draw

In an online session:

```
tree->Draw("variable_name");
```

Vectors

```
std::vector<double> *myvector = new std::vector<double>;
```

Loop over vectors

```
vector<int> vi;
...
for ( int i : vi ) cout << "i = " << i << endl;
```

External variables

In header `global.h`:

```
  // Global variables
  #ifndef GLOBAL_H
  #define GLOBAL_H
  extern Bool_t ext_var;
  #endif
```

In `.C` macro or `.cpp` source file;

```
#include "global.h"

Bool_t ext_var;

void macro()
{
...
   cout << ext_var << "\n";
...
}
```

Animated GIF

```
c1->SaveAs("MSet.gif+NN");
Each frame is delayed by NN*10ms.
```

Reading histograms from a ROOT file

```
// adjust path to input analysis rootfile
sprintf(sdata, "file.root");
cout << "Input file = " << sdata << "\n";
TFile *f = new TFile(sdata);

TH1 *h;
f->GetObject("dir1/dir2/histo_name;1",h);
h->Draw();
```

SSH and SCP stuff

`ssh` and `scp` with port specification:

- `ssh name@server -p`
- `scp -P <port> name@server:<path/to/file>`

  `P` capital!

Vydio stuff

```
sudo dpkg -i ./VidyoDesktopInstaller-ubuntu64-TAG_VD_3_6_3_017.deb
sudo apt install libqt4-designer libqt4-opengl libqt4-svg libqtgui4 libqtwebkit4
mkdir ../prg
gvim ../prg/videbcontrol
chmod 755 ../prg/videbcontrol
../prg/videbcontrol VidyoDesktopInstaller-ubuntu64-TAG_VD_3_6_3_017.deb
sudo dpkg -i ./VidyoDesktopInstaller-ubuntu64-TAG_VD_3_6_3_017.modfied.deb
../prg/videbcontrol VidyoDesktopInstaller-ubuntu64-TAG_VD_3_6_3_017.deb
rm VidyoDesktopInstaller-ubuntu64-TAG_VD_3_6_3_017.modfied.deb
../prg/videbcontrol VidyoDesktopInstaller-ubuntu64-TAG_VD_3_6_3_017.deb
sudo apt install libqt4-designer libqt4-opengl libqt4-svg libqtgui4 libqtwebkit4
sudo apt install libqtgui4 libqtwebkit4
rm VidyoDesktopInstaller-ubuntu64-TAG_VD_3_6_3_017.modfied.deb
../prg/videbcontrol VidyoDesktopInstaller-ubuntu64-TAG_VD_3_6_3_017.deb
sudo apt install libqt4-opengl
sudo apt install libqt4-svg
sudo apt install libqt4gui
sudo apt install libqtgui4
sudo apt install libqtwebkit4
sudo apt install libqt4-network
sudo dpkg -i ./VidyoDesktopInstaller-ubuntu64-TAG_VD_3_6_3_017.modfied.deb
```

LUMI stuff

Good runs

- 2015: 251103-286474, 286475-287983
- 2016: 289496-314199
- 2017: 324320-341649, 341692-342182
- 2018: 348197-367384

Vdm scans - Run-2

- 2015: 277025,277089,280231,280500,280520,286282,287224,287594
- 2016: 299390,300287,301915,301918,309311,309375,310781,312796,313067,313285,313878,313935
- 2017: 324832,324839,325020,329484,330875,335302,336506,339197,340453,340634,340644
- 2018: 354494,365218,365763,365768

LUMI DQ defects

- 2017
    - 338377 LUMI_ONL_DET_ERROR_SEVERE 1−528; LUMI_ONL_OLC2HLT_SEVERE 1−575

ALFA

Documents

- https://cds.cern.ch/record/1602297/files/ATL-COM-PHYS-2013-1357.pdf
- https://cds.cern.ch/record/2067608/files/ATL-COM-PHYS-2015-1371.pdf
- ATL-COM-PHYS-2017-1286
- https://gitlab.cern.ch/atlas-physics/sm/soft-qcd/elastic/analysis_13tev_2p5km/-/blob/master/SupportNote/Elast

DCS server at P1

pcatlrpolcs (pcatlfwd01)

```
source /det/dcs/linuxScripts/set_env.sh
```

Radmons

```
/det/dcs/Production/ATLAS_DCS_RPO/scripts/libs/RadMonLib.ctl
```

https://indico.cern.ch/event/472136/contributions/2165711/attachments/1276882/1894886/Radiation_status_2016.pdf

https://indico.cern.ch/event/484369/contributions/1993893/attachments/1226159/1795122/ALFA_radmons_20160211.

https://indico.cern.ch/event/574904/contributions/2335039/attachments/1353890/2045310/Radiation_Oct_2016.pdf

https://indico.cern.ch/event/612336/contributions/2497687/attachments/1423742/2183127/Radiation_Feb_2017.pdf

https://indico.cern.ch/event/574904/contributions/2335039/attachments/1353890/2045310/Radiation_Oct_2016.pdf

https://indico.cern.ch/event/645856/contributions/2644078/attachments/1487452/2310647/Radiation_Radmons_2017.p

https://indico.cern.ch/event/645856/contributions/2644079/attachments/1488568/2313303/new_RadMons.pdf

https://indico.cern.ch/event/644125/contributions/2713542/attachments/1522330/2378815/Radiation_Sept_2017.pdf

https://indico.cern.ch/event/710304/contributions/3007162/attachments/1653516/2645869/Radiation_Jan_2018.pptx

https://atlasop.cern.ch/elisa/display/334932

https://atlasop.cern.ch/elisa/display/348971

HGTD

Open questions

- water cooling (from LAr?) only for DC-DC converters?
- LV: any (hardware) protection against overvoltage?

HV

- HEC-LV :3Specifications Document for HL-LHC (LAr)

LV

- NSW generator tender

Temperature

- ITk temperature

Pressure

Humidity

Presentations about FOS-LPG:

- https://indico.cern.ch/event/781529/contributions/3291145/attachments/1788171/2913700/Discuss_Spec_Revi
- https://indico.cern.ch/event/590227/contributions/2612892/attachments/1486530/2308743/ForumOntrackerDe
- https://indico.cern.ch/event/824593/contributions/3729928/attachments/1981899/3300827/Humidity_Simulatio
- https://indico.cern.ch/event/842010/attachments/1909192/3158784/EnvHum-Specs-V1.3.6.pdf
- https://indico.cern.ch/event/842010/contributions/3568573/attachments/1912831/3164182/Humidity_Monitori

Demonstrator

Interlock

- ITk

Modules

Pad size: 1.3 x 1.3 mm2

Module size: 40 x 20 mm2

450 pads/ module

ELMB

Documents:

- https://twiki.cern.ch/twiki/bin/viewauth/Atlas/PixelDCSElmb
- https://indico.cern.ch/event/803808/contributions/3343197/attachments/1807273/2950217/ITk-EnvTemp_SK_

ELMB2

ELMB2 radiation tests

ELMB++

- Pros:
  - optical fibres, no CANbus, no electrical ground
  - (possibly) more radiation hard
- Cons:
  - not available at the moment
- ELMB++ monthly meeting

EMCI

- general
- scheme
- [[https://indico.cern.ch/event/881028/contributions/3715679/attachments/1973490/3283698/EMCI.pdf[detailed scheme]]
- example of use
- preliminary specs
- preliminary specs, more detailed
- detailed scheme
- EDMS specs
- DCS control of PEBs with EMCI
- EMCI specifications
- EMCI specifications
- Alternatives to EMCI

Racks

- Rack space requirements

TDR

Comments (DCS-related)

- Markus Elsing: L 358 FLEX cables: number of connected modules limited by FLEX bandwidth?
- Maurice Garcia-Sciveres: calibrations
- Philippe Farthouat:
  - sec. 6.4.2 time needed to upload the 1024 configuration registers of an ASIC
  - MUX: who is developing; time scale
  - ELMB++: availability
- Michel Raymond: L 4832 one PT100 per heater or per cover/vessel?

- Richard Teuscher:
  - chap 8, humidity sensors: type, location, read-out software
  - sec. 8.3 ELMB2 as backup if ELMB++ not available
- Kevin Einsweiler:
  - sec. 6.6: voltage monitoring: automated action in case of high currents or voltage drops or relying only on Interlock triggered by large temperature variations?
  - MUX: who is developing; time scale

My remarks:

- HV ramp up/down according to SB condition
- L 2882 total monitoring range is of 90°C
- L 2889 proposed->provided
- L 2915 mux->MUX's or multiplexers

DCS

Role administration

AMRM

Server replacement

DCS Server Replacement Procedure

Project administration

```
source /det/dcs/linuxScripts/set_env.sh
startPA
startConsole
WCCOAui -proj ATLZDC01 -m gedi &
```

ASCII manager

From the gedi panel, click on `SysMgm`, then `Database` > `ASCII Manager`.

Virtual Machine

```
xfreerdp -g 800x600
```

Documents

- ATLAS DCS Integration Guidelines
- DCS Software Organization Users Guide

-- DavideCaforio - 2019-04-10

This topic: Sandbox > DavideCaforioSandbox
Topic revision: r81 - 2020-11-10 - DavideCaforio