ARICH slow control

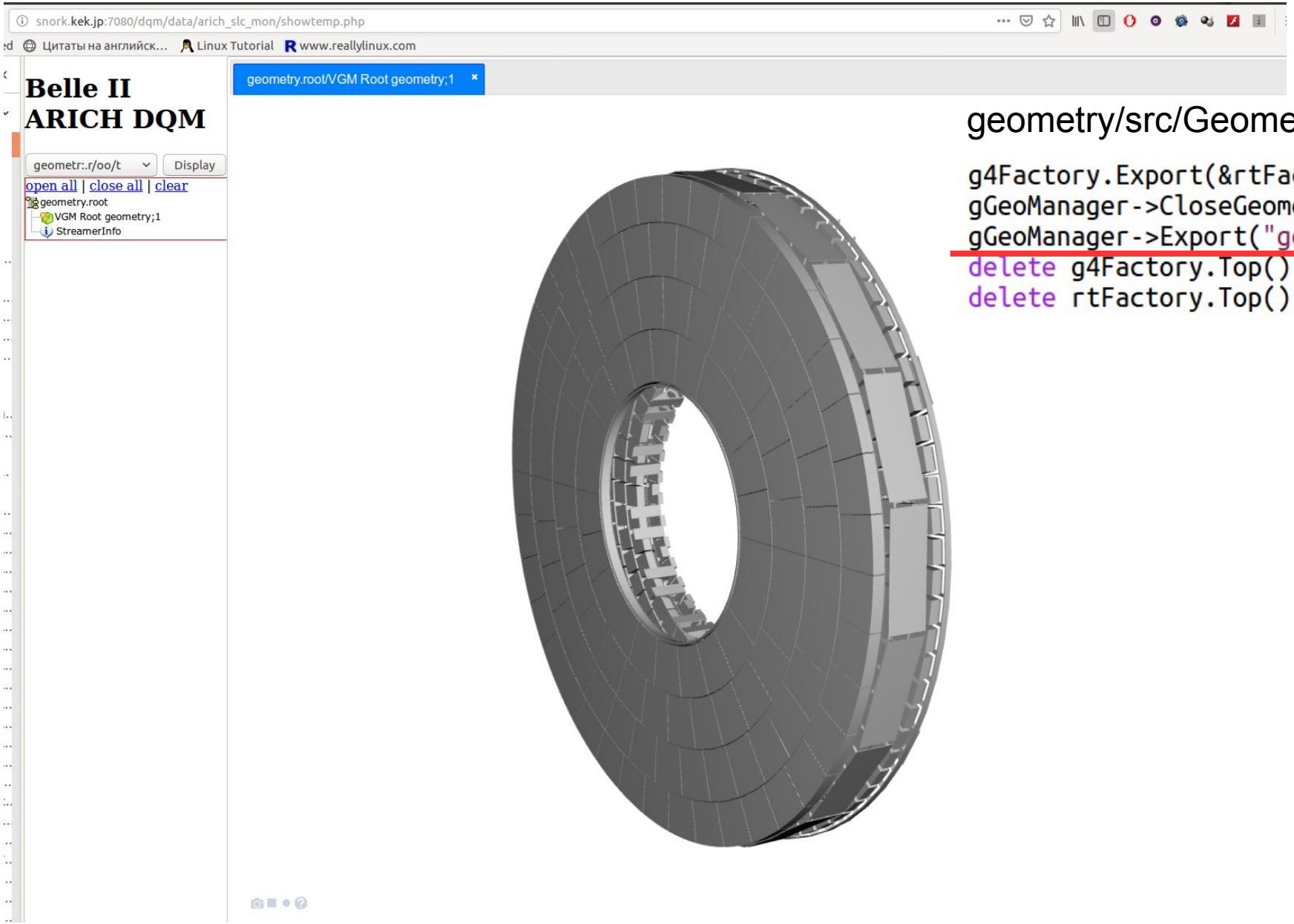
Leonid Burmistrov [1]

[1] *LAL, Univ Paris-Sud, CNRS/IN2P3, Orsay, France*

- JSROOT visualization
- Temperature sensors inside the ARICH mother volume.
- Temperature sensors on the cooling system – for extracted power monitoring.
- Voltage monitoring on the back – end of front end electronics.
- PC condition state
  - → main ARICH terminal PC (ariterm1)
  - → HV control pc (arichsc)
  - → slow monitor PC (arichmon)
  - → ARICH front end electronics PC (arich01, arich02, arich03, arich04, arich05, arich06)

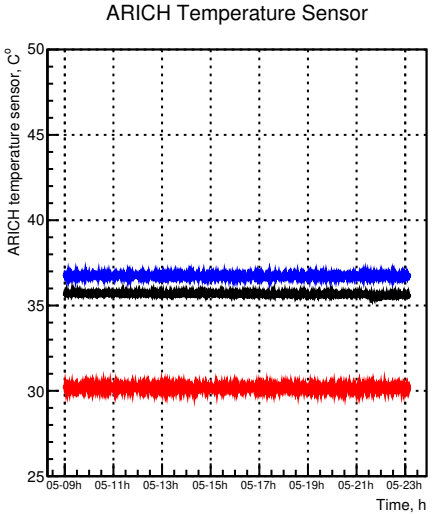
JSROOT visualization

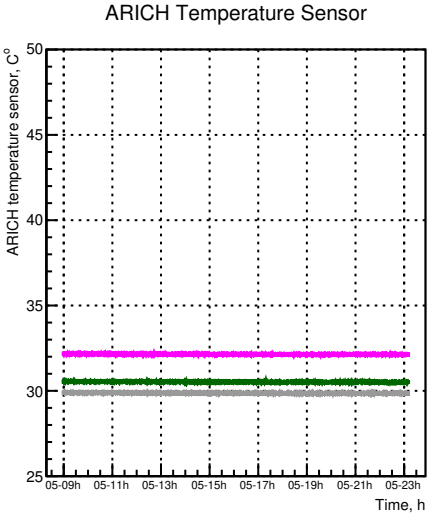
→ http://snork.kek.jp:7080/dqm/data/arich_slc_mon/showtemp.php

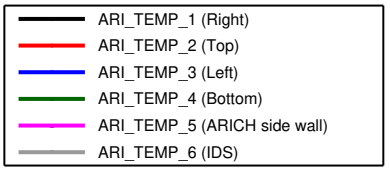


geometry/src/GeometryManager.cc

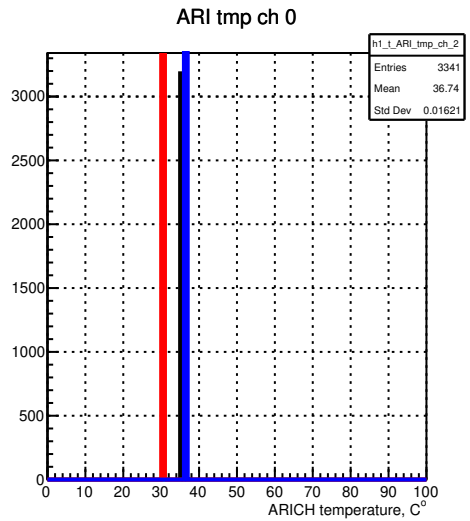
```
g4Factory.Export(&rtFactory);
gGeoManager->CloseGeometry();
gGeoManager->Export("geometry.root");
delete g4Factory.Top();
delete rtFactory.Top();
```

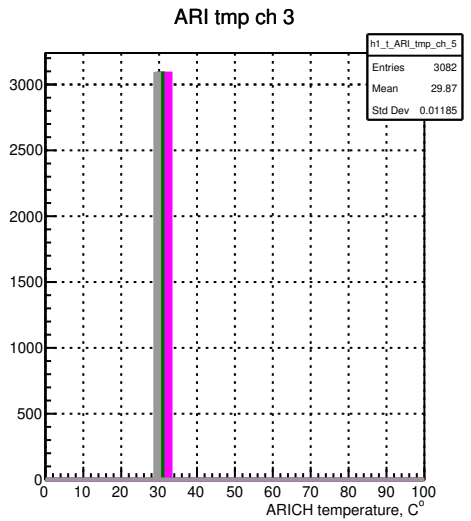


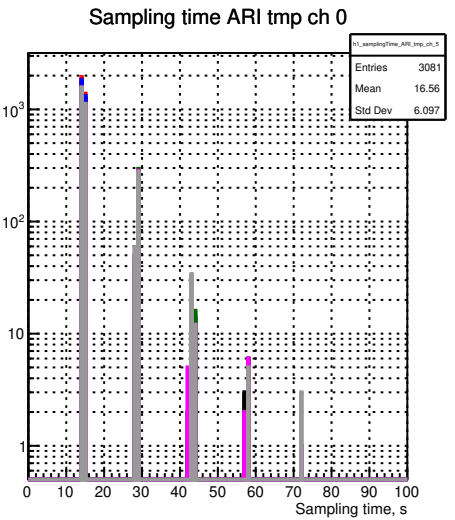


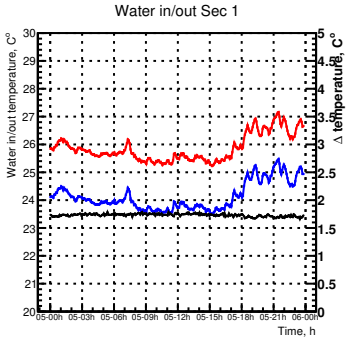


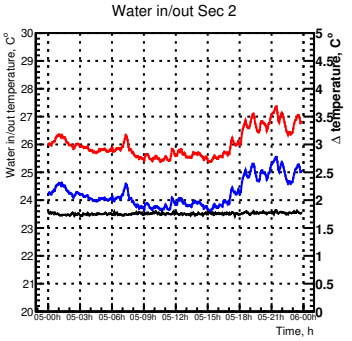
Time start : Mon May 6 09:00:02 2019
Time stop : Mon May 6 23:09:54 2019

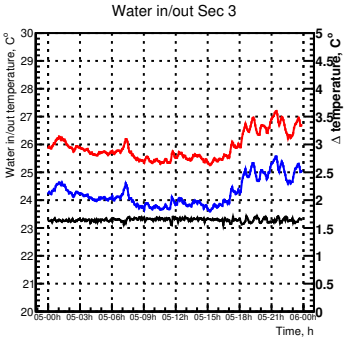


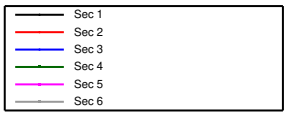






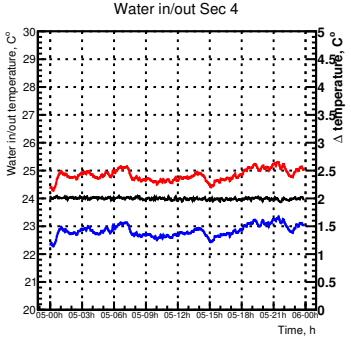


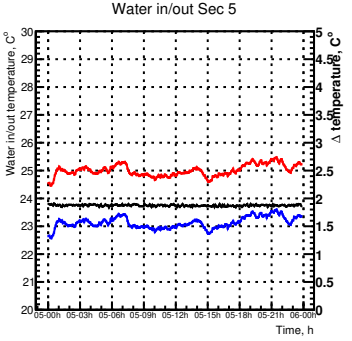


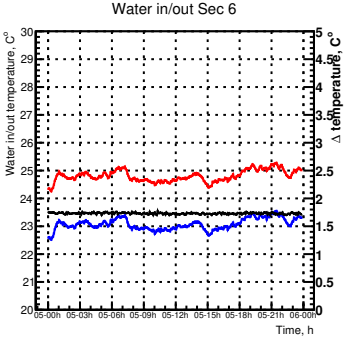


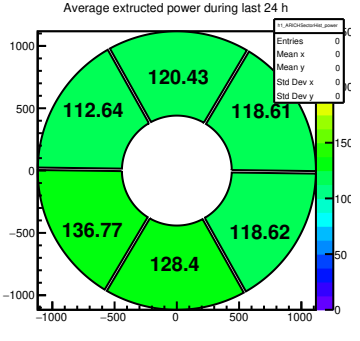
Time start : Mon May 6 00:07:02 2019
Time stop : Mon May 6 23:48:02 2019

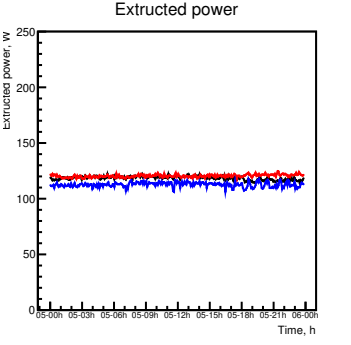
Last update for water t and flux :
Mon-Apr-15-12:15:44-JST-2019
Water temperature : 22.0 C^{o}
Water flux per sector : 1 L/min

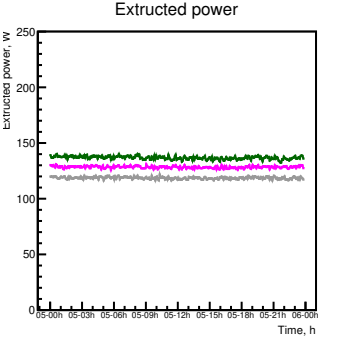


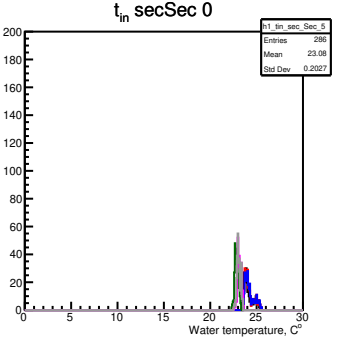


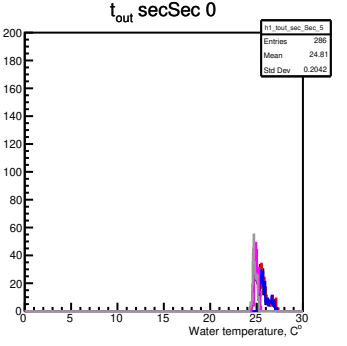




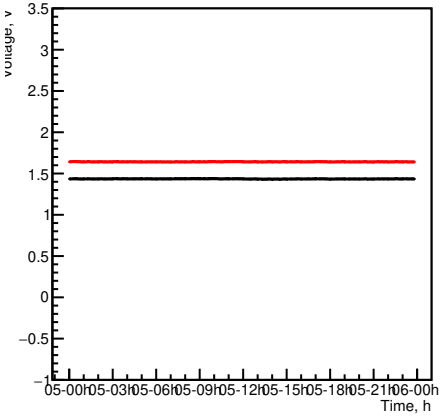




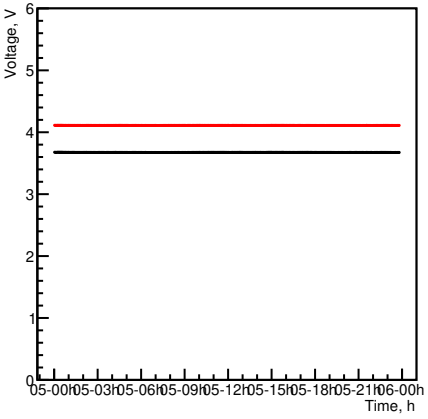


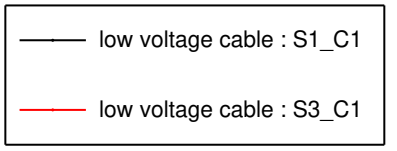


+1.5 MERGER



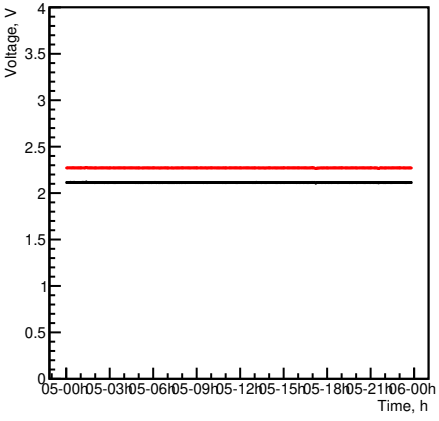
+3.8 MER + FEB



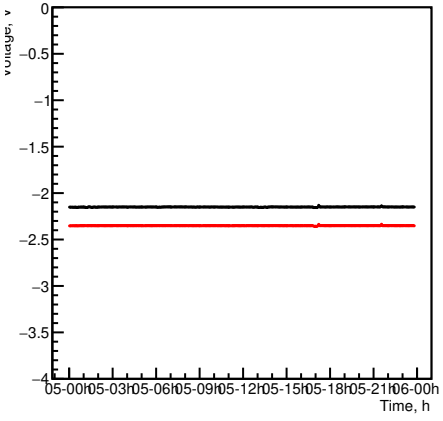


Time start : Mon May 6 00:07:02 2019
Time stop : Mon May 6 23:48:02 2019

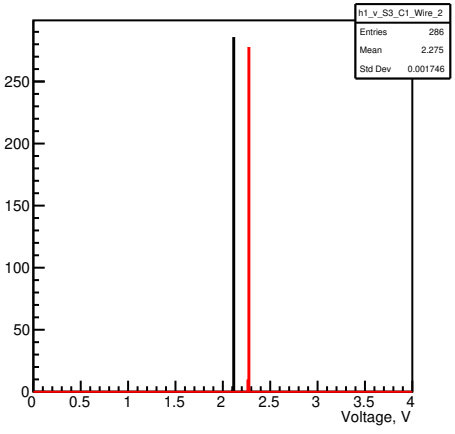
+2.0 FEB



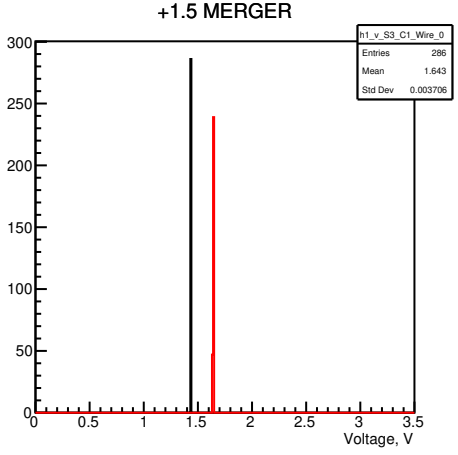
-2.0 FEB



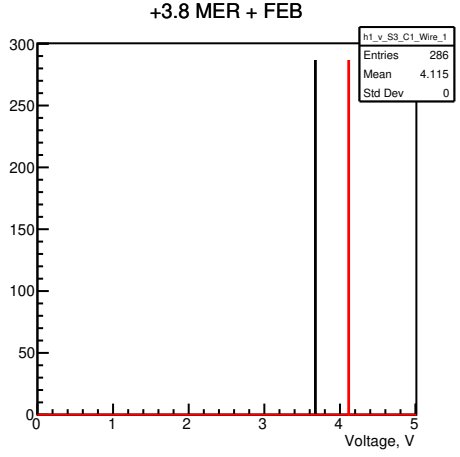
+2.0 FEB



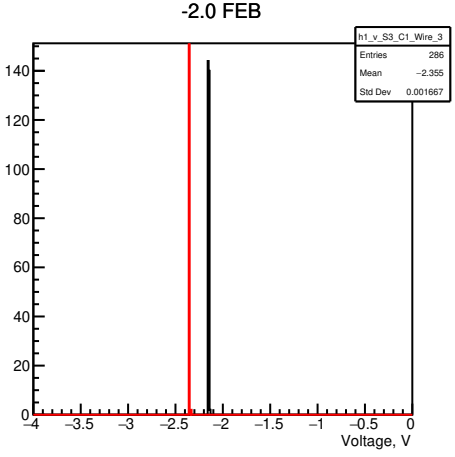
+1.5 MERGER



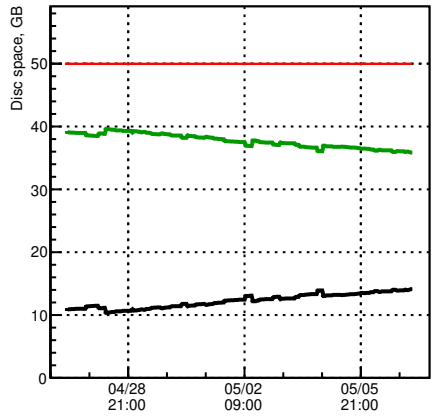
+3.8 MER + FEB



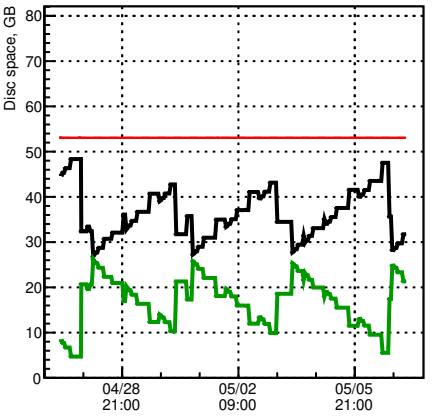
-2.0 FEB



Disc space : /, GB



Disc space : /home/hvala, GB

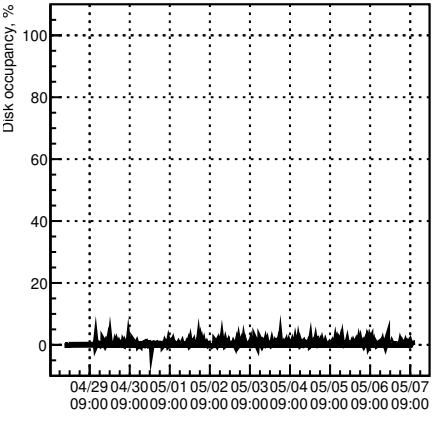


Used disc space

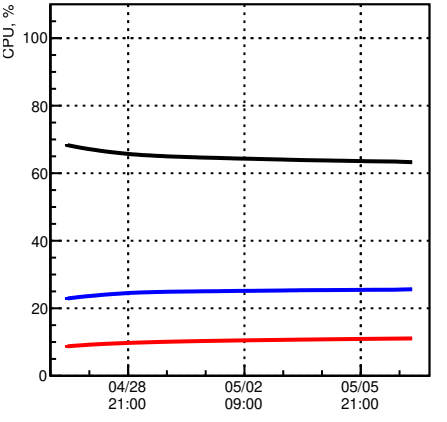
Free disc space

Time start : Sat Apr 27 01:19:04 2019
Time stop : Tue May 7 10:07:02 2019
Host : ariterm1
Time synchro mon start : Tue May 7 10:08:11 2019
Time synchro mon stop : Tue May 7 10:25:19 2019

Disk occupancy, %



CPU usage : average, system, IDLE, %

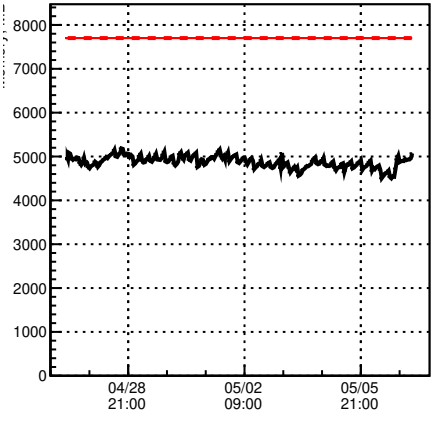


Average usage, %

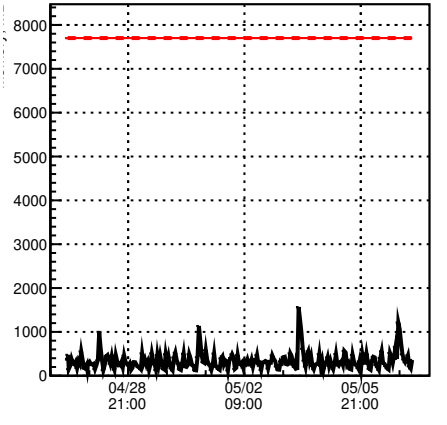
System CPU usage, %

IDLE, %

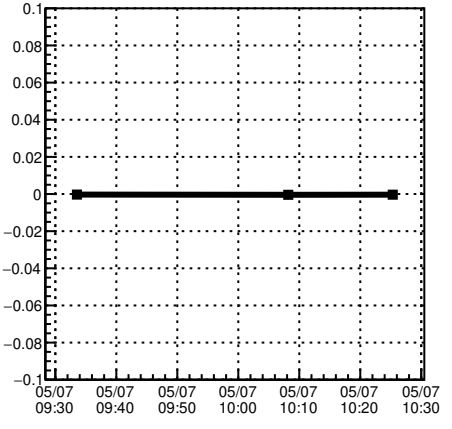
Used memory, MB



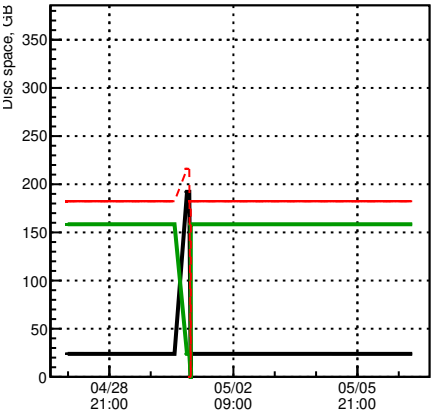
Free memory, MB



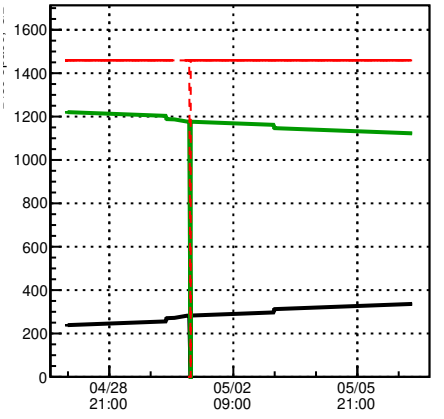
PC time synchronisation, s



Disc space : /, GB



Disc space : /home/usr/hvala, GB



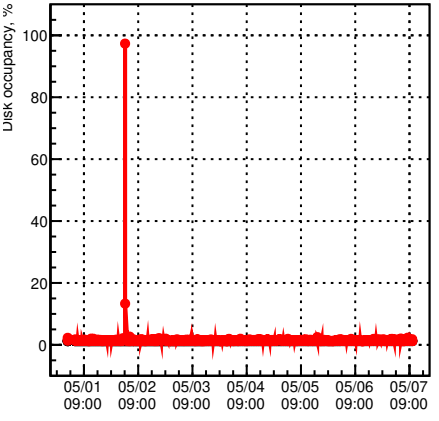
Used disc space

Free disc space

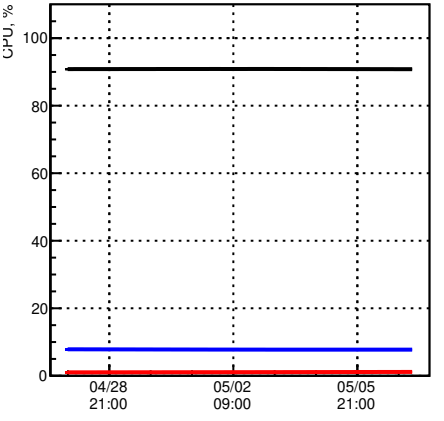
Time start : Sat Apr 27 16:48:25 2019
Time stop : Tue May 7 10:07:01 2019
Host : arichsc

Time synchro mon start : Tue May 7 09:48:09 2019
Time synchro mon stop : Tue May 7 10:05:53 2019
Time disk occ. start : Wed May 1 01:50:06 2019
Time disk occ. stop : Tue May 7 10:12:32 2019

Disk occupancy, %



CPU usage : average, system, IDLE, %



Average usage, %

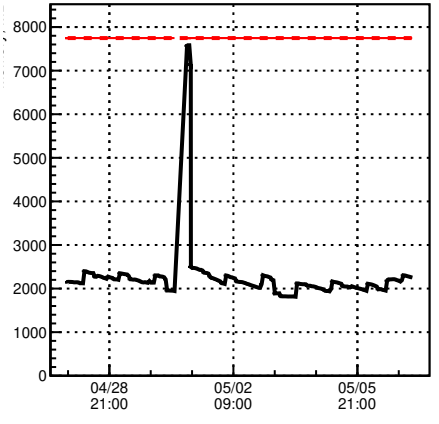
System CPU usage, %

IDLE, %

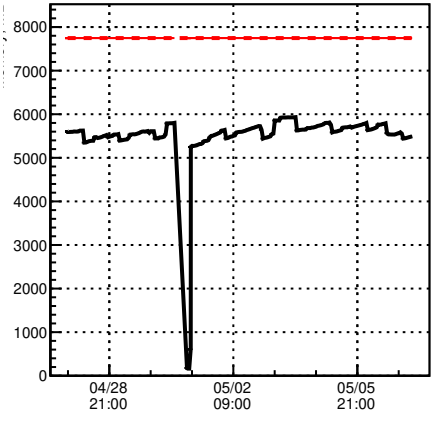
disck occ. : sda_average

disck occ. : sda

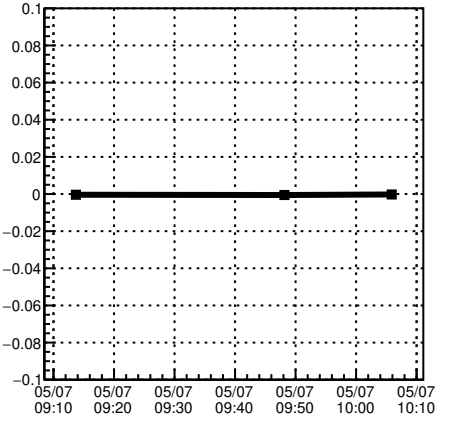
Used memory, MB



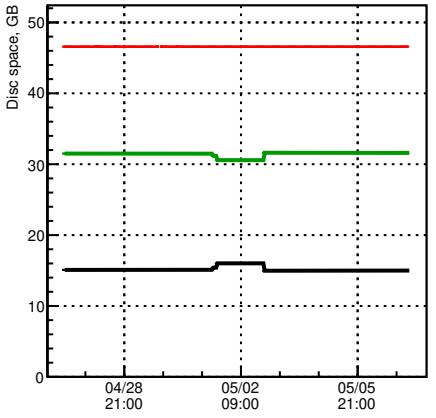
Free memory, MB



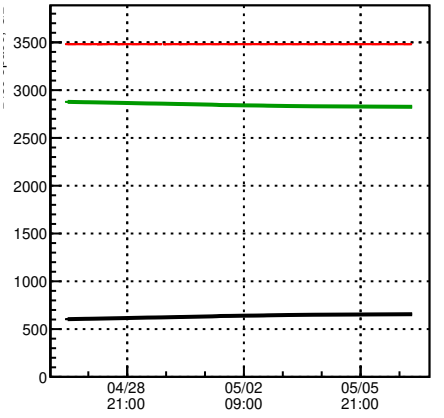
PC time synchronisation, s

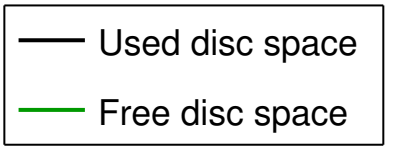


Disc space : /, GB



Disc space : /home/usr/hvala, GB

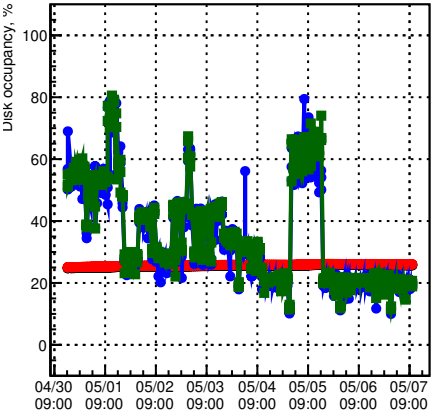




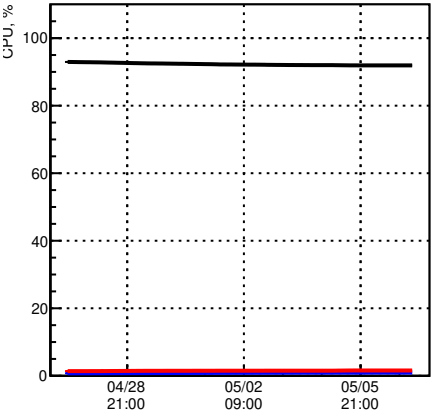
Time start : Sat Apr 27 03:07:01 2019
Time stop : Tue May 7 10:07:01 2019
Host : arichmon

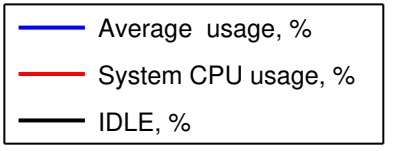
Time synchro mon start : Tue May 7 09:48:53 2019
Time synchro mon stop : Tue May 7 10:24:30 2019
Time disk occ. start : Tue Apr 30 15:19:51 2019
Time disk occ. stop : Tue May 7 10:15:33 2019

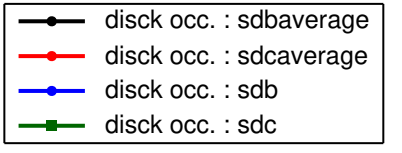
Disk occupancy, %



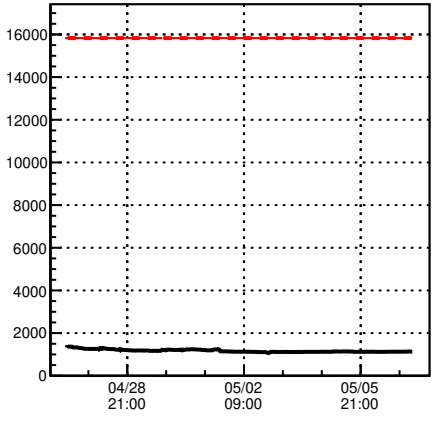
CPU usage : average, system, IDLE, %



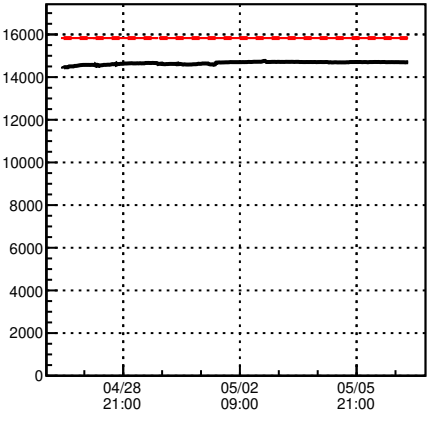




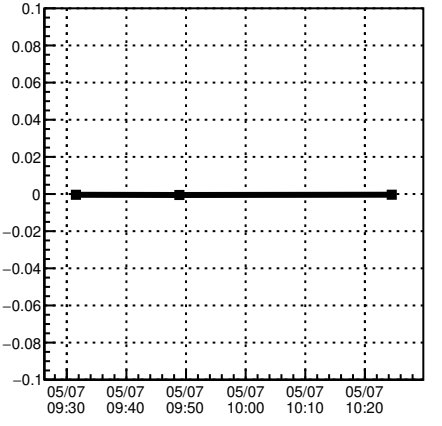
Used memory, MB



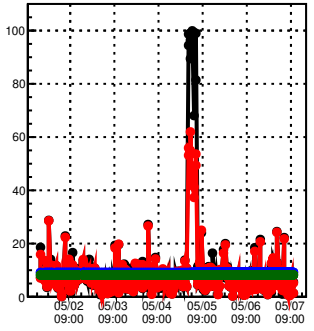
Free memory, MB



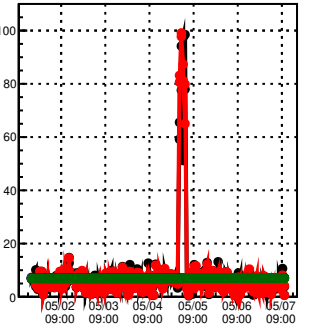
PC time synchronisation, s



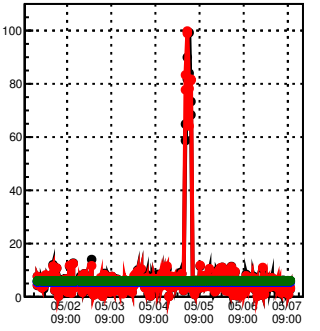
Disk occupancy arich01 ,%

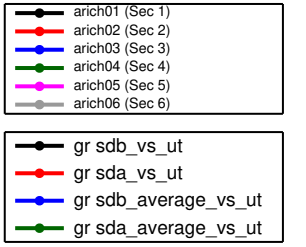


Disk occupancy arich02 ,%

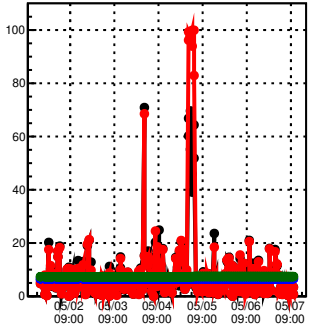


Disk occupancy arich03 ,%

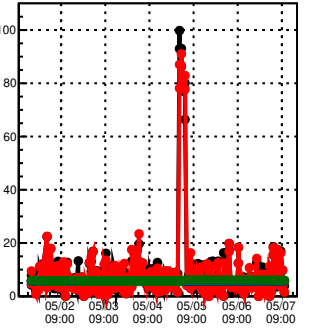




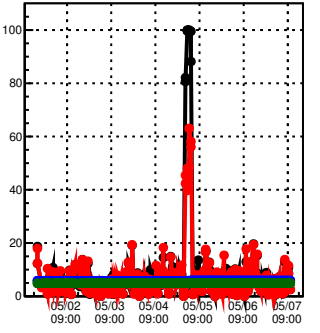
Disk occupancy arich04 ,%



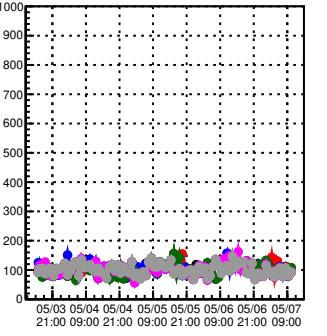
Disk occupancy arich05 ,%



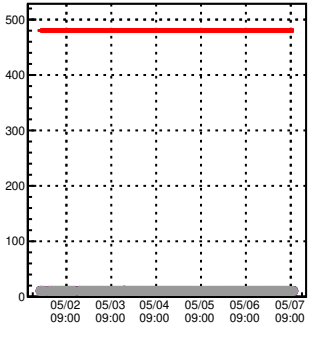
Disk occupancy arich06 ,%



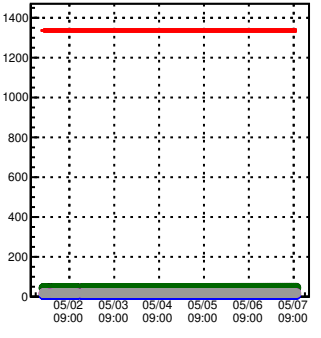
Time synchronisation, ms



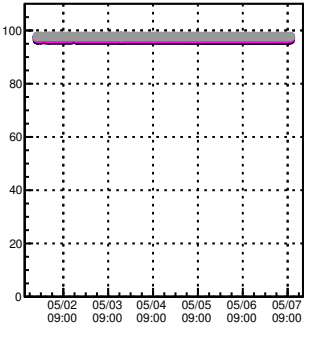
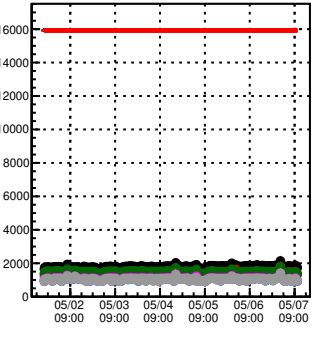
Disk used : /, MB



Disk used : /home/group/b2ari/, MB



CPU idle, %



Momory used, MB