cta-lstchain@CNAF: Environment

- Support: Elena Corni e Federico Fornari (user-support@lists.cnaf.infn.it), Daniele Cesini (storage)
- CNAF account → Access Authorization Form (https://www.cnaf.infn.it/utenti-faq/)
- Software abilitation with . /cvmfs/sft.cern.ch/lcg/views/setupViews.sh
- General tool: vi, display
- Required by ctapipe and lstchain: git, python 3.6.5, pip, anaconda
- OS on the user interface ui-tier1: CentOS Linux 7
- batch system at Tier-1 is LSF9
- CTA storage:

  - software dir : /opt/exp_software/cta/ writable only by software manager (sgm)

  - filesystems on ui and worker nodes:
  ++ /storage/gpfs_data/ctadisk only tool grid (srm+gridftp, cert. x509)
  ++/storage/gpfs_data/ctalocal via POSIX
  ++ area cvmfs /cvmfs/cta.in2p3.fr/

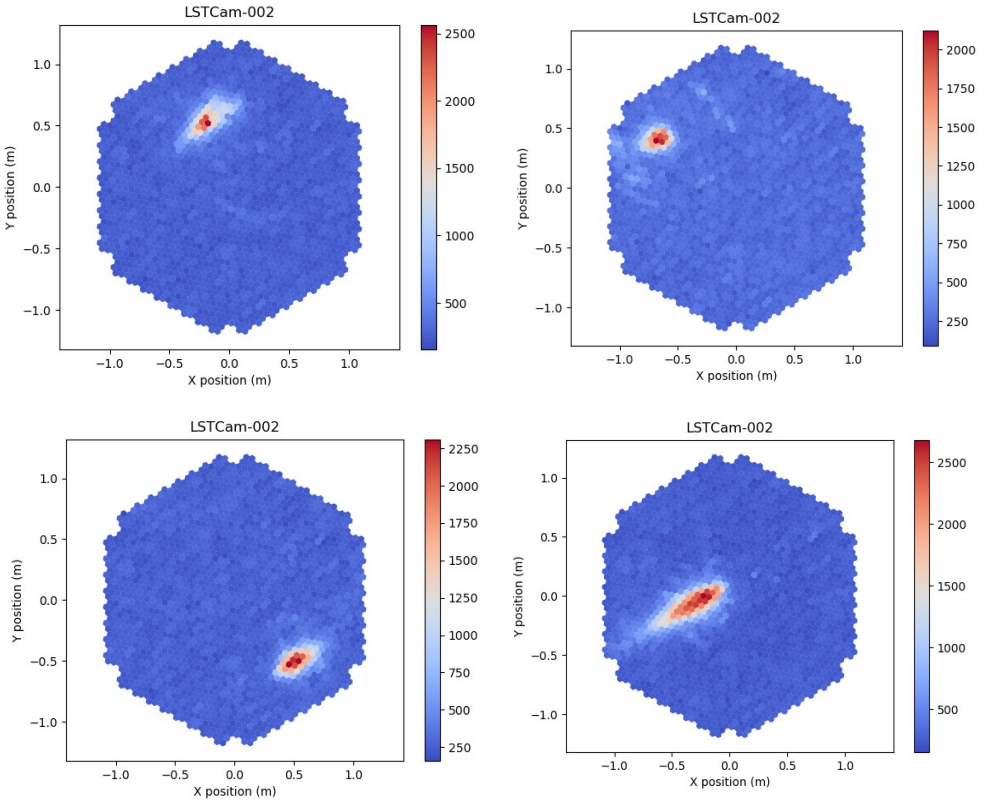
cta-lstchain@CNAF: installation

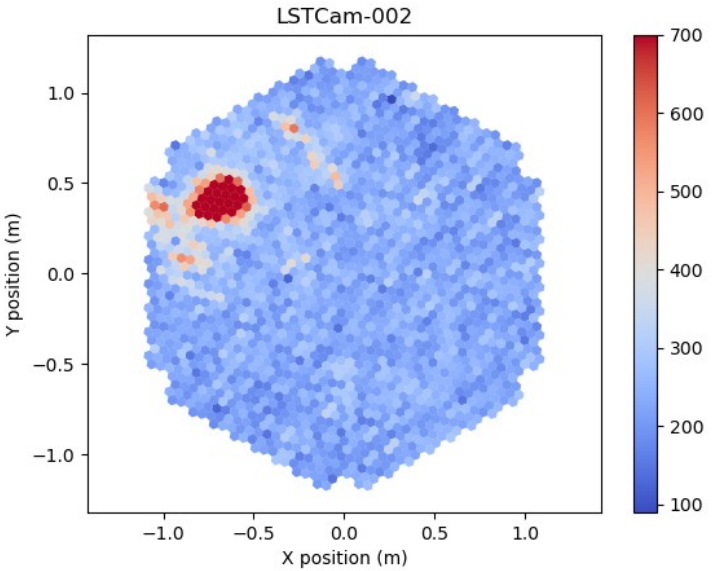
- Performed local installation of ctapipe and cta-lstchain
- For ctapipe followed procedure at https://cta-observatory.github.io/ctapipe/getting_started/index.html
- conda virtual environment cta-dev ok! (no problem in getting the required libs on ui)
- pytest ends almost ok
- For lstchain followed procedure at https://github.com/cta-observatory/cta-lstchain
- conda virtual environment cta ok! (no problem in getting the required libs on ui)

cta-lstchain@CNAF: data and tests

- For testing purpose few experimental data runs downloaded from PIC
- wget worked smoothly
- Individual quota around 20Gb ! Currently in use 13Gb for 7 files, we need to use the common data storage area (ctalocal?)
- To perform a minimal test of lstchain:
  – search for shower image in r0 data;
  – test of calibration tools (r0 → dl1)

Tests: selected showers



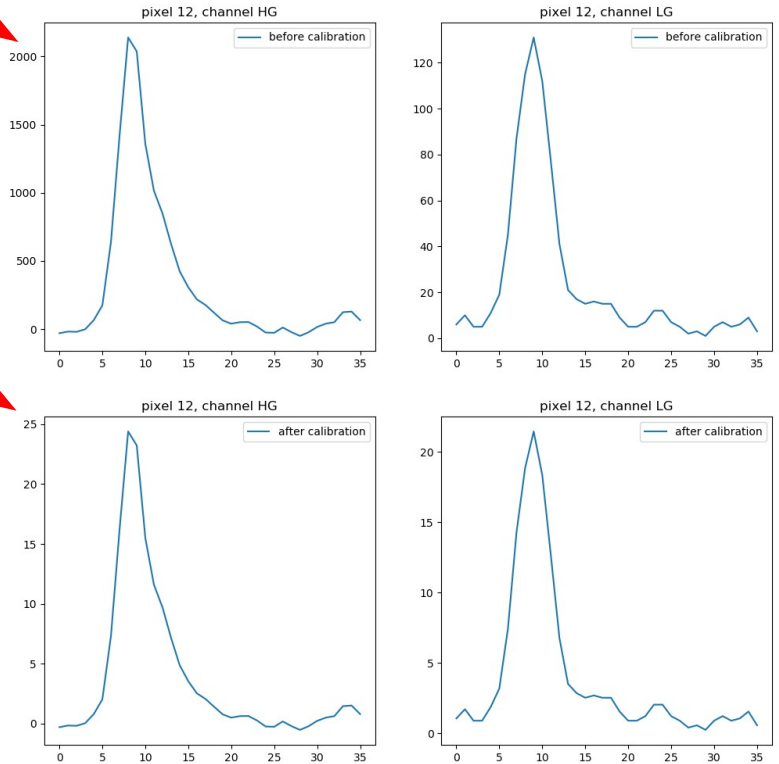


Event 748,
Saturated at 700 adc
Shower + muon ??

Run 1355
r0, Integrated waveform (2 to 38), low gain
Selection: max_pixel > 5 * aver_pixels):

Tests: apply_calibration

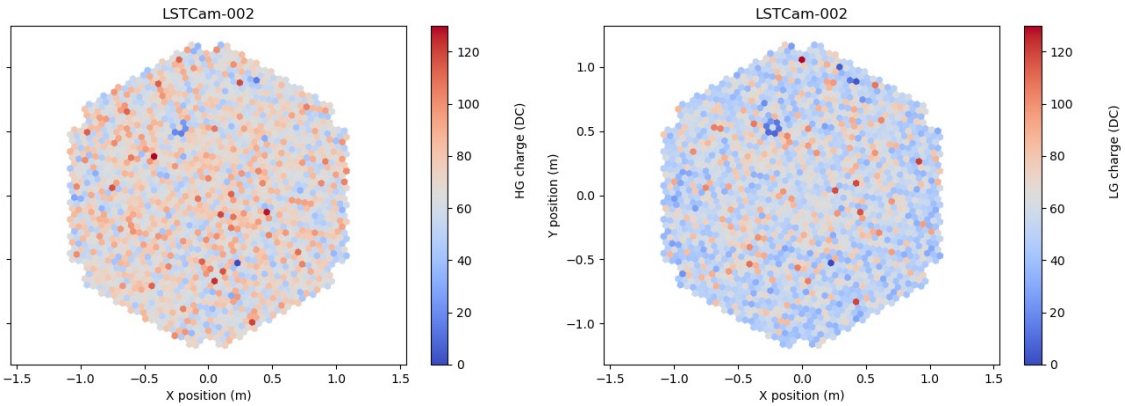
Bright pixel example



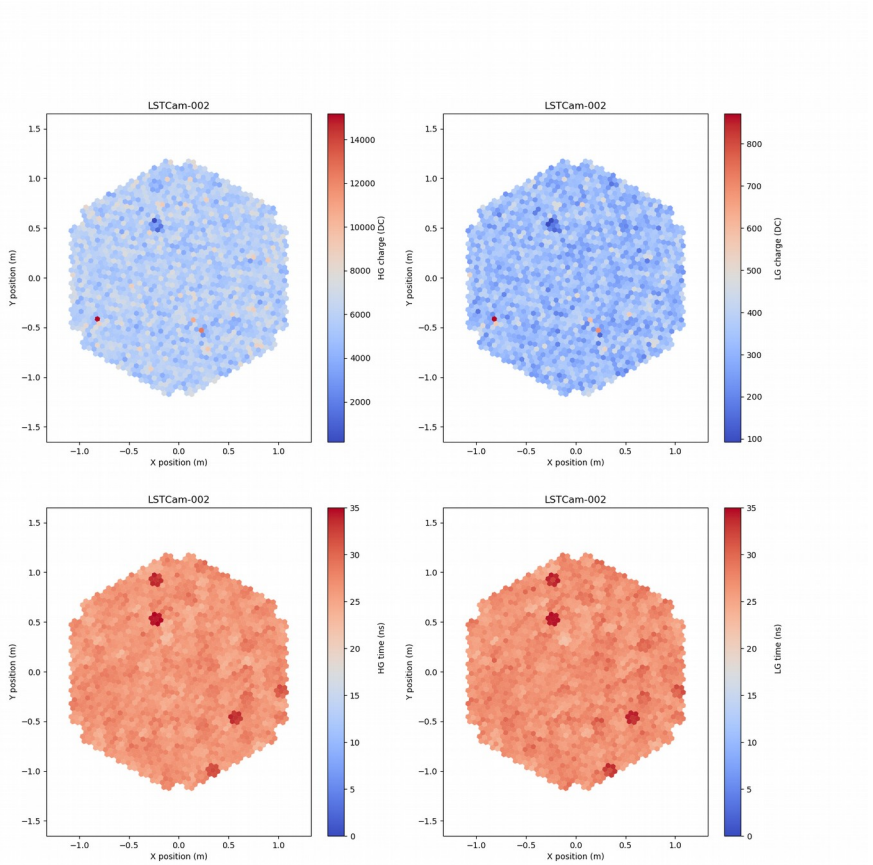
- Production of pedestal file with lstchain_data_create_pedestal_file.py
- Production of calibration file, by porting Franca's calculate_calibration_coefficients.ipynb notebook to a script
- Application of calibration, by porting Pawel apply_calibration.ipynb notebook to a script

from r0 to dl1
Ped run 446
Cal run 472
Data run 503

DL1 image (high,low gain)



calculate_calibration_coefficients



Run 1548
Charge and
time containers

Summary

- local installation of ctapipe and lstchain performed without any big problem
- Individual quota is around 20Gb ! we need to use the common data storage area (ctalocal?) also for testing purposes
- Tests on low level calibration and the further data analysis steps ongoing..