Report on EPlanet trip to UNLP, La Plata (Argentina)

Lorenzo Moneta, Gerardo Ganis

SFT group Meeting
January 20, 2014

ATLAS UNLP group

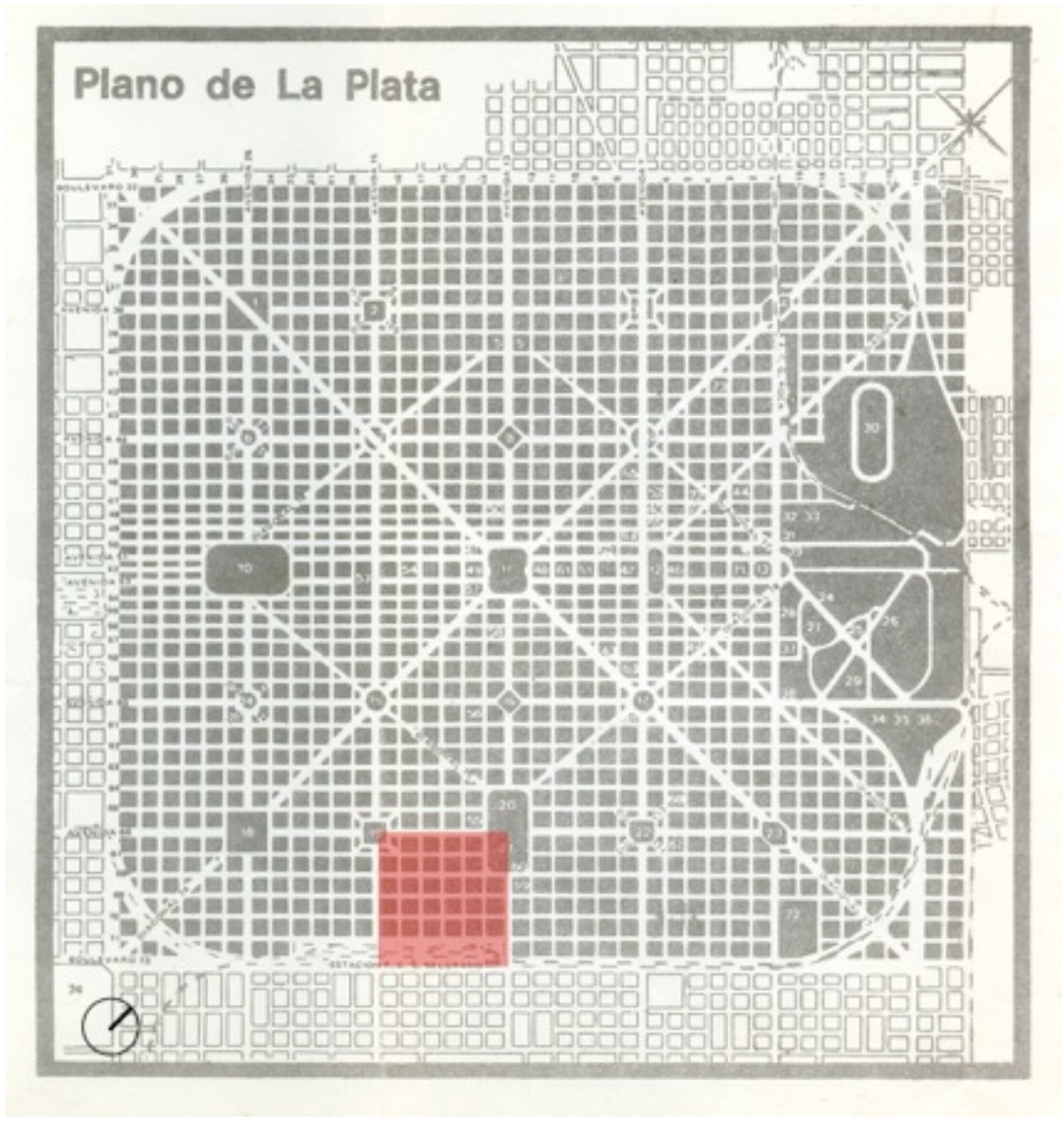
- Maria Teresa DOVA, group leader
- 6 exp. researchers, 1 theoretical researcher
- 2 PhD students

- Activities
  - ATLAS:
    - Trigger
    - Data analysis: Higgs, Supersymmetry searches
  - Pierre Auger observatory (Malargue, Argentina)

La Plata

La Plata: a squared planned city

- Designed by Pedro Benoit, around 1882
- Strict grid of numbered streets, avenues, diagonals



ROOT Training

- ROOT training inspired on what has been done in Belgium at IRMM in early 2013
  - one week training on ROOT starting from zero
    - assuming no prior knowledge of ROOT
- Program:
  - Start Using ROOT
  - Introduction to C++
  - Working with Histograms
  - ROOT I/O and Trees
  - Interactive Data Analysis with PROOF
  - Fitting in ROOT
  - Fitting Using RooFit
- Lecture slides together with simple exercises
- Length: ~ about 20 hours

ROOT Training

- Training well advertised at UNLP
- Slides and exercises provided by a TWIKI page
  - https://twiki.cern.ch/twiki/bin/view/Main/ROOTLaPlataTutorial
  - A link exists in ROOT Drupal page
    - in Documentation/ Tutorials and Courses

ROOT Training

- Attendance
  - about 10 graduate and doctoral physics students from UNLP (not only HEP)
    - basically no real prior knowledge of ROOT

HW for the course

- Room at IT department with 20 dual core PCs running Windows
- Running SLC6 image inside VirtualBox
- All the required software from CernVM-FS
  - Using local squid server setup beforehand

- Worked basically fine, except the last day, when the network all of a sudden went down. It was a Saturday …

Feedback from the course

- Students could follow well the course
  - level was adequate
  - we added also an introduction to C++ after consulting with them
  - useful to break with exercises
- Some part (like ROOT I/O, Trees) were maybe more difficult to follow
  - we could not complete there all the foreseen exercises
    - e.g. creating and analyzingTree's made with user objects
    - using PROOF to generate events with Pythia
- Always useful to do a training
  - see how people use and think of ROOT

Dedicated Tutorials on Fitting

- Helped post-doc of UNLP with RooFit/RooStats
  - provided a dedicated RooStats tutorial
  - working in Higgs and SUSY searches in ATLAS
- Had also various discussions with other ULP members
  - Helped a physicist using ROOT for some dedicated fitting problems

Enabling PROOF on the small cluster

- Create a simplified version of their analysis running with PROOF
  - Full version later on
- Run PROOF-Lite in the submitted job
- Next: Run PROOF w/ PoD

Conclusions

- Very interesting visit
  - ROOT training was a success
    - goals of the course has been achieved
  - received useful feedback from users of ROOT
  - Having our presence useful for establishing contacts with users
- EPlanet support is crucial for institutes in Latin America
- Always nice to spend some time in a warm climate during winter