An Example of NAF Usage in CMS

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for

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Overview

1. How and Why do we use it?
2. Some feedback

How do we use it?

Group

- physics topics
- a user friendly tool (based on TTree)
- needed tests and files for: GRID and NAF
- runs analysis
- feedback

"Super" User/ "Active" User

NAF/GRID:

- scripts setup
- submit jobs
- copy & clean output files

NAF

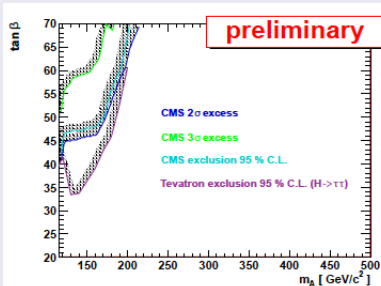- place to run jobs (*the magic box if one knows how to use it*)

in our case:

- one super user is the one that:
  - knows how make and use NAF scripts (e.g. array tasks: #$ -t 1-100)
  - checks & transfers files
  - complains to NAF people if things do not work on NAF (he should also compliment them more when problems are fixed)

most important: knows the right people to ask for solutions (thanks[2] to B.S. & A.L.)
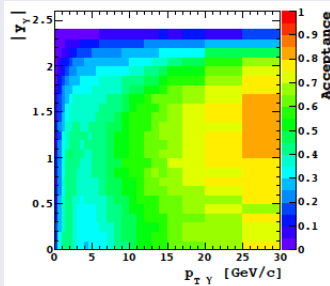
Why do we use it? Just two examples:

$\Phi^0 \to \mu^+ \mu^-$: the only in CMS

- results obtained by H. Weber
- only place to cover all analysis phase space: $\tan\beta$ and m_A

$\Upsilon \to \mu^+ \mu^-$: go to higher p_T

- results obtained by S. Beranek
- best place to try to understand polarization

in our case:

- in 6 month from now, the reasons why we will use NAF will be different
- important is to know how to use it and **to use it**

Some feedback:

if numbers, they are for "a" super user:

- we do not only need CPU we need also space:
  - would be nice to have some more *afs*-space to store our scripts ($\mathcal{O}(2GB)$)
  - would be very nice to increase the disk space quota ($\mathcal{O}(5TB)$))
- we do not only need CPU we need also (wo)men-power:
  - (my opinion)
    there are too few experts/people on site that can jump to solve problems
    – especially over week-end when the CPUs are not overloaded
- GRID access is working only one way (for me at least)
  - I can copy files on, but I cannot copy from
- soon there will be GB internet lines in our homes
  - we need to increase the transfer speed between NAF and institutes
    (is by far faster to transfer a file from a disk in Aachen to my external USB2
    hard driver when I am at CERN)
- ideas:
  - to avoid "accidents" in submitting jobs: user $\leftrightarrow$ super user $\leftrightarrow$ NAF
  - a *super users* meeting: use part of the workshop to keep people up to date
  - more reminders about down times