LHC physics

Here ATLAS/CMS images like Ingrid, or possibly possibly common FH?

Physics with ATLAS and CMS

Helmholtz Program: Matter and the Universe (MU)

PoF III Research Theme:

DESY Research Unit: “Experimental Particle Physics”

Elisabetta Gallo
Center Evaluation DESY, 5 – 9 February 2018

HELMHOLTZ
RESEARCH FOR GRAND CHALLENGES

DESY

Some general introduction

Here some general introduction

- If there will be some image/sketch for everybody, show where we are, add picture
- Stress that since DESY has joined ATLAS and CMS in 2006, they have **acquired leading roles** in detector operation and calibration, object reconstruction, physics analyses and upgrades (refer to Ingrid's talk). Covering several management and leading roles
- Stress the **unique environment and close vicinity of ATLAS, CMS groups and theory**. LHC discussion days each month on a particular topics
- Stress the role as **national hub**, numerous workshops, schools and meetings of the ATLAS and CMS communities here at DESY. Several international guest scientists attracted to work with us
- Unique role of **DESY facilities** (NAF, TIER-2) for data analysis (refer to Tier-2). Close vicinity to detectors from people performing analysis
- etc.

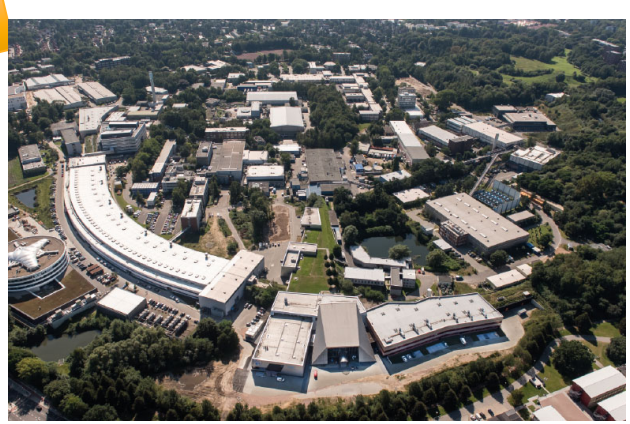
Then starts with physics results

Slides will be of this type, 1 plot ATLAS 1 plot CMS typically (plan to show also all 3 plots in POF)

Concentrate on physics:

- Slide 3: recall Run1, legacy Higgs plot, Run 2 luminosity
- Slide 4: Higgs physics
- Slide 5: SM ATLAS (Wmass, LbyL)
- Slide 6: Top and pdf at CMS
- Slide 7/8: Susy, searches and DM
-

✓ milestone



Slide 9: Future

- Continue to address the most important topics in particle physics today along the 3 themes:
- Higgs/SM precision physics
- Searches for new physics
- Dark Matter searches

reference

Conclusion

Style of slide will adapt to content

Slide 10: Conclusions

- Here a short conclusion on the physics results
- Shall I add some numbers here (like number of PhD theses, YIGs, ERCs, common appointments, etc.?, most important management positions in the experiments?)