



# ML Computing Resources @ DESY

Yves Kemp  
Hamburg, 27.05.2019

# A very brief overview on DESY computing resources

- Maxwell: The HPC infrastructure at DESY
  - (mostly) for photon science and accelerator. Little HEP (mostly for ML)
  - ~30k CPU cores with high RAM, ~100 GPUs
  - „bring-in“ model: Different groups contribute to a common system with own resources. IT also provides some general resources
  - <https://maxwel.desy.de/>
- NAF / BIRD + Grid: The High Troughput Compute infrastructure at DESY
  - (mostly) for HEP
  - ~30k CPU cores, ~10 GPUs
  - IT organizes purchases, fair-share to user groups based on political contributions. Some “bring-in“ by DESY groups and UHH.
  - <https://naf.desy.de/> <https://grid.desy.de>

# Maxwell GPU systems

6 cfel 2xTesla (K20 and/or K40)  
10 cms 1xP100  
3 cssb 2xP100  
3 display 4xQuadro M6000  
18 exfl 1xGP100GL  
4 exfl 1xTesla (K20 and/or K40)  
1 exfl 2xGP100GL  
1 exfl 2xTesla (K20 and/or K40)  
1 hzg 2xTesla (K20 and/or K40)  
2 nova 2xQuadro M6000  
27 p3a 1xP100  
1 p3a 1xTesla (K20 and/or K40)  
1 p3a 4xP100  
4 IT 1xP100  
10 IT 1xV100  
1 IT 1xTesla(K20 and/or K40)  
2 IT 2xP100  
2 IT 2xTesla (K20 and/or K40)

## Summary:

- Many different models, versions
- Mostly one or two GPU/server, some rare with >2
- Different owner groups (sharing possible)

# NAF

- 4x Server with 1xP100
- 9x Batch Server with 1xGeForce 1080TI

# My proposal

- Interested people should get access to Maxwell
  - ... Do people already have a Maxwell account?
  - If not, need to finally check best way of getting account
    - ((Federations????))
- Using Maxwell on best effort

# Nvidia? Only Nvidia?

- Mostly people use and want Nvidia
- We have one AMD machine: 1xAMD Radeon Instinct MI25 Vega64
  - Anyone interested?