
SFT News

SFT Group Meeting, 30 November 2020

EP Retreat

- ❖ Last week we had the EP retreat (EP management + Group leaders)
- ❖ Mainly devoted to present the department to the new Research and Computing Director (Joachim Mnich)
 - ❖ EP overview (M. Krammer)
 - ❖ EP budget (C. Decosse)
 - ❖ EP personnel (C. Joram)
 - ❖ EP R&D (C. Joram)
 - ❖ HL-LHC Computing Challenge (M. Cattaneo)
 - ❖ Neutrino (M. Nessi), FCCee (P. Janot), CHIPS initiative (F. Vasey)

HL-LHC Computing Challenge

Executive Summary

In order to obtain data processing and analysis software, as well as computing tools and services, allowing for the full **exploitation of the HL-LHC physics programme**, the priorities are:

- Exploitation of modern **multicore and heterogeneous platforms as well as novel storage and networking techniques**, instrumental also for adapting to modern computing centre designs, including HPCs and clouds
- Preserve and develop the portfolio of **software and computing tools** provided by the EP (and IT) departments which span a wide range:
 - reconstruction and simulation, data analysis, data persistification, data/workload management, storage technologies, file transfer systems, software frameworks, ...
- **Acquire and retain expertise in the area of event reconstruction, simulation, data analysis and computing** in order to achieve the full exploitation of detector and accelerator upgrades starting from Run 3 and in the years to come
 - Invest in training and outreach to attract outstanding computing engineers into CERN research
 - Software skills should be valued on equal grounds to detector expertise when hiring research physicists. CERN can and should take the lead in this.

Marco Cattaneo

Building 140 – The EP Building

Large new building to be constructed in the centre of CERN Meyrin

Building to host EP personnel, infrastructure, users



Artistic view from a previous study. Building will likely look different.

Building 140 – The EP Building

- Re-structuring of BNP Paribas Fortis loan through new credit facility with UBS
~30 Mio/year liberated in **2021-2025**
- Refinancing approved by Council under the condition that a large fraction of these 30 Mio to improve/consolidate infrastructure at CERN
- Seen as a chance for EP. Together with SMB we proposed Building 140
Digging out a proposal from the past, proposed Buildings 140 + 146 (not realized)
- MTP 2020 contains **50 Mio CHF for Building 140**
- MTP approved in September Council

Unique chance for EP: New building for ~700 people

Opportunity to optimise EP space usage, restructure some historically grown, but no longer efficiently used space, demolish old buildings and barracks (some aged 30-65 years)

First consideration for Bat 140, hosting of

EP management + EP services (e.g. EP secretariat)

DT cluster, DT offices, possibly “light” laboratories

Healthy mixture of EP Staff/Fellows and Users

Advent of Code 2020

- ▶ Advent calendar of programming puzzles
 - ▶ Unlocked at midnight EST (UTC-5); 6am Geneva time
 - ▶ Two puzzles per day until December 25th, increasing difficulty
- ▶ Solve in any programming language you want!
 - ▶ Input available after login (with GitHub, Google, ...)
 - ▶ Always a solution that completes in “in at most 15 seconds”
 - ▶ Answer is usually a number or short string
- ▶ Compare time to solution
 - ▶ Global leaderboard: Top 100 in the world
 - ▶ Private leaderboard with colleagues (will share link by mail)
- ▶ More information:
 - ▶ <https://adventofcode.com/2020/about>
 - ▶ Old puzzles: <https://adventofcode.com/2020/events>

Proposed by
Jonas Hanhfeld

<https://adventofcode.com/>

Events

- ❖ Nobel Prize Lecture: Our Galactic Center: A Unique Laboratory for the Physics & Astrophysics of Black Holes, Thu 3 Dec @ 18:00
- ❖ Lecture: A practical introduction to quantum computing (every Friday)

AoB

- ❖ Please enter 'Occasional Teleworking' with EDH (with "Exceptional Measures" in the comment box)
 - ❖ 3 weeks until X-mas break
- ❖ Daily 'Virtual Coffee' at 8:30
- ❖ Would you like to share in this group meeting your ongoing work?