Status of the $\overline{\text{P}}$ANDA Models and of the Website Redesign — Outreach Plans

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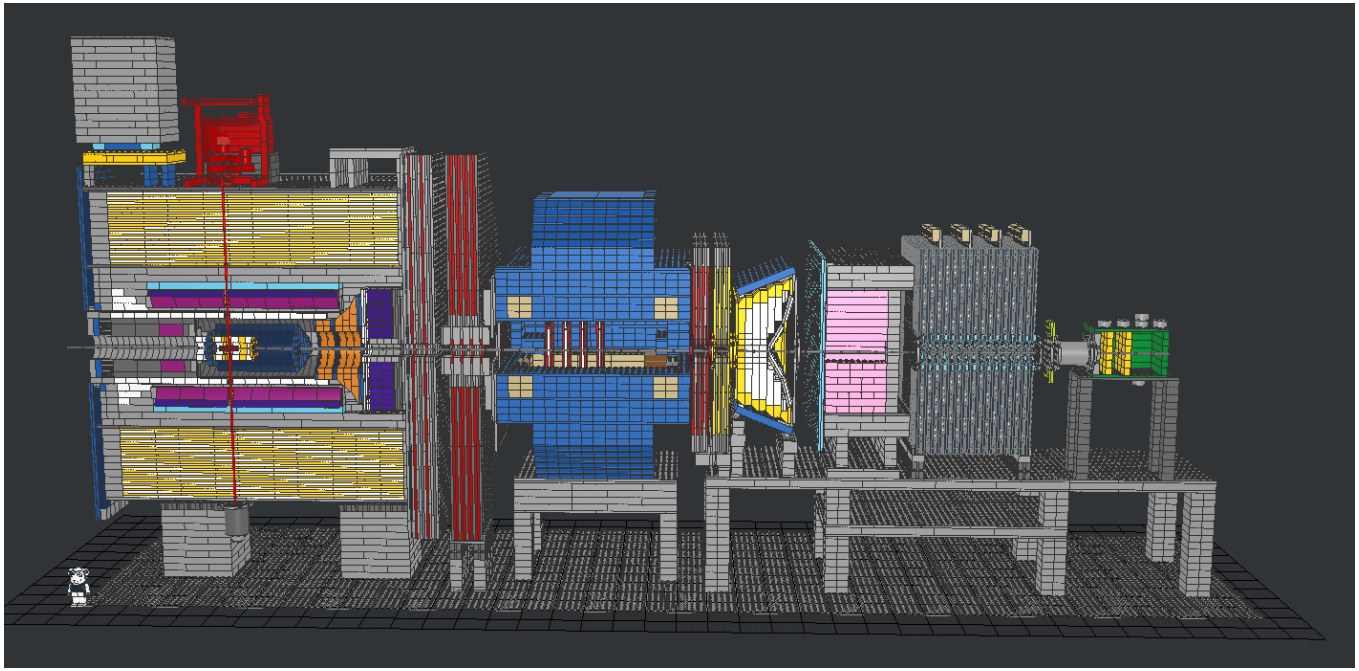
16.05.2022

The $\overline{\text{P}}$ANDA Models

- One model 3D printed and one model made out of nippled/clamping building blocks
- 3D model waiting for input from theorists to identify particle reactions that are distinctive for $\overline{\text{P}}$ANDA but can be explained to laypersons easily.
- After that, cut-out angles for the inner parts can be defined and some remaining parts can be printed.
- LEDs will be added to show particle tracks inside the detector.
- Controlled via microcontroller

Status of the Brick Model



- Major redesign necessary
- Original constructions used bricks that were never produced in that color
- Replacement one by one ongoing...

Buying Bricks

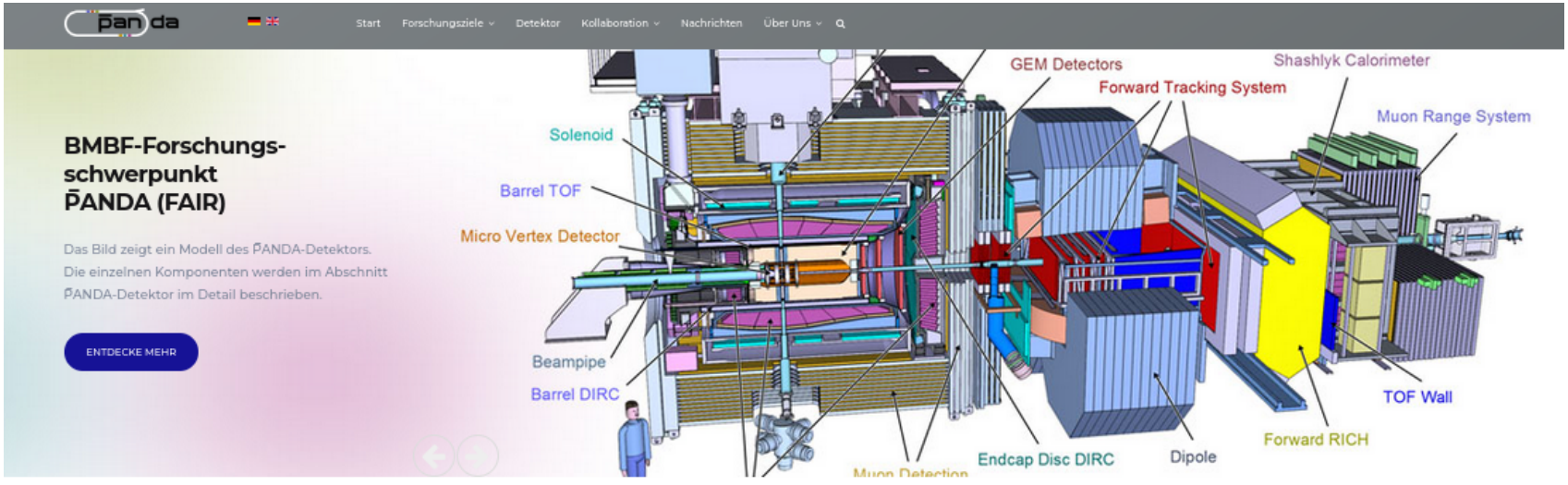
- Manufacturers only produce bricks for their current catalogue
- We have to buy second hand
- Rebrickable to match our part list with offers from dealers all over the country
- Currently we would by from $>$ 50 dealers for about 5000 €
- Funds for model come from GSI (K. Peters)
- I suggested discussing with GSI accouting department how this purchase can be handled...

URL redacted
9077 × 16 384 px, ≈ 3 MiB

Redesign of panda-physik.de

- Website to inform the general public (in Germany) about $\overline{\text{P}}$ANDA and its aims
- Funded by BmBF for $\overline{\text{P}}$ANDA Forschungsverbund
- Primary language is German, but I enabled translation functions of the CMS, stub of English version available
- No competition for `panda.gsi.de`
- Basic design is almost finished
- Now adding content, but explaining $\overline{\text{P}}$ANDA for the general public is hard...
- If you want to have a look:
  - URL: *redacted*
  - Username: *redacted*
  - Password: *redacted*
  - 2FA Code: *redacted*

Current Status of Website



Feedback and contributions welcome!

Questions?

Any questions or comments regarding the models or the website?

Plans for Maus-Türöffner-Tag 2022

- Concerns only $\overline{\text{P}}$ANDA members in Germany
- `https://www.wdrmaus.de/extras/tueren_auf.php5`
- Monday, 3rd October 2022
- Many universities, research institutes, charities, and companies open their doors for children aged $\approx$ 6 to 15.
- I would like to encourage all $\overline{\text{P}}$ANDA institutes in Germany to participate!
- In Bochum, we will participate together with other institutes of the Physics faculty
- On 8th May, I got the first e-mail from a parent...
- What you can show: See my presentation on CM 19/3

$\Rightarrow$ Be creative!

Ideas not only for Maus-Türöffner-Tag

- Since some time I've been thinking about creating interactive media ("games") for $\overline{\text{P}}$ANDA Outreach
- Purpose: Demonstration of basic principles of hadron physics on a science exhibition or event like Maus-Türöffner-Tag
- Idea (mainly from today):
  - "Quark Detective" or "Quark Puzzle"
  - Game shows "wanted poster" with characteristics like charge, isospin, strangeness, charmness, etc.
  - Player can add quarks and anti-quarks with color
  - Final particle has to obey confinement and have the wanted characteristics
  - Not to complicated, so no angular momentum, excitation, constituent gluons, spin coupling, etc.
- Localizable, so usable by all $\overline{\text{P}}$ANDA groups

$\overline{\text{P}}$ANDA Master Class

- Aimed at pupils in their final years
- Example from ATLAS:
  - “Signature particle”: Higgs
  - Go through some events by hand (pupils won’t know C++ and ROOT)
  - Look at missing momentum perpendicular to beam axis
  - Large value $\Rightarrow$ Higgs candidate
- Idea to create something similar for $\overline{\text{P}}$ANDA
- Input from theory: What are our “signature reactions”?
- Simulate some events where they appear
- Create a software that pupils can understand and use

Questions?

Any questions or comments regarding the Maus-Tag or these ideas?