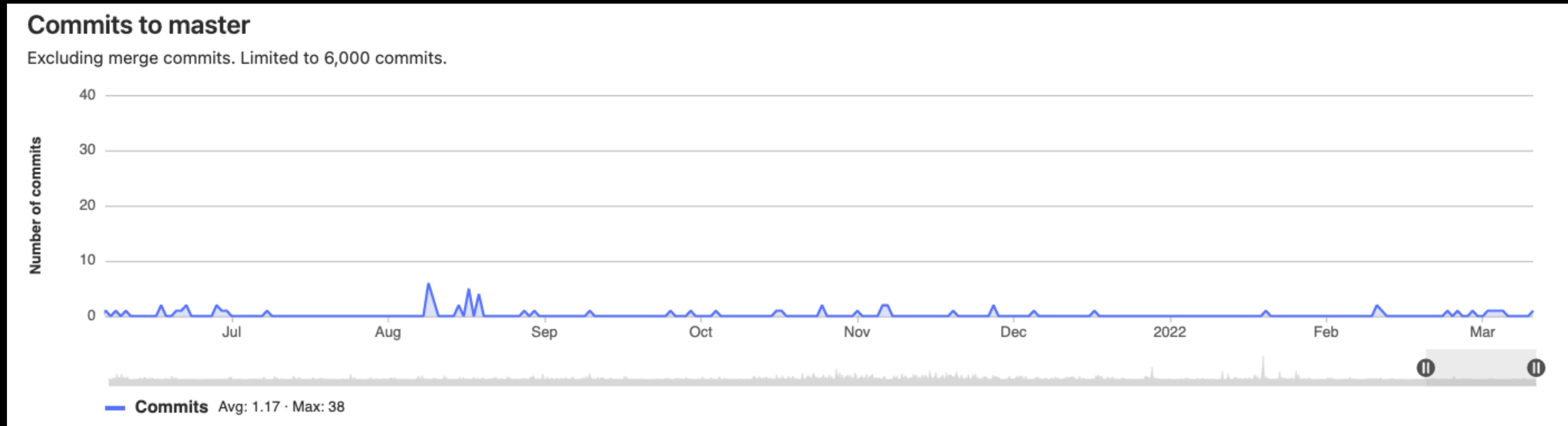


# Virtual OPAL Developer Meeting April 2022



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# Content

1. Updates OPAL (A Adelmann)
2. Conferences (A Adelmann)
3. AOB (all)

# Updates

- \* 94 97 member in the active mailing list ([opal@lists.psi.ch](mailto:opal@lists.psi.ch))

# At present the focus in large is on:

- continue consolidation & code cleanup
- working on bugfixes / feature requests
  - 11 15 bugs 19 19 feature requests

\* delayed OPAL paper



# Current projects - 1

- P3M in OPAL (IPPL 1.0) (Sri & AA)

- IPPL 2.x (Sri & Matthias)

✓ is performance portable

- Ch Rogers

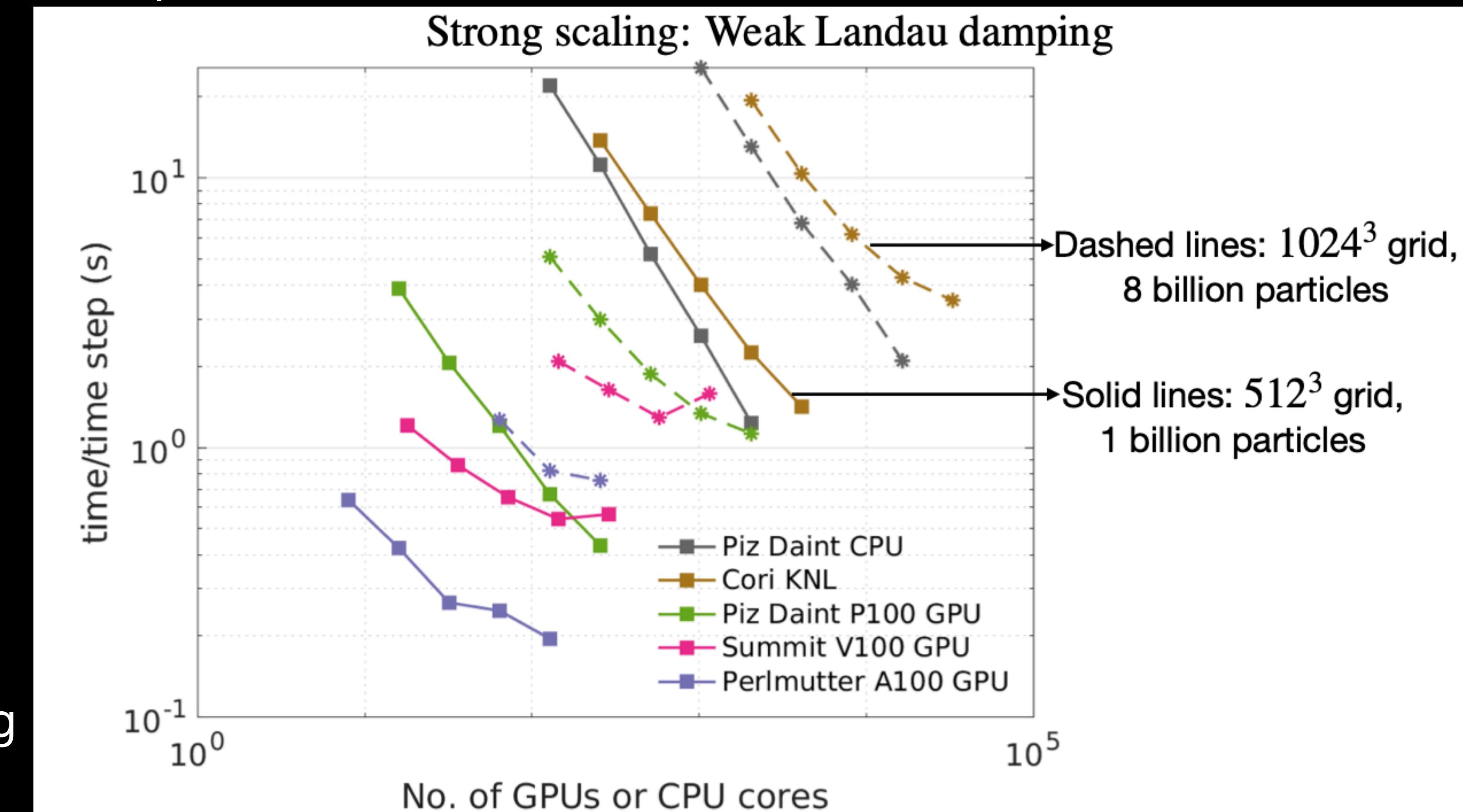
- FFA modeling (Ring element)

- pyOPAL

- Sri & AA + MSc student

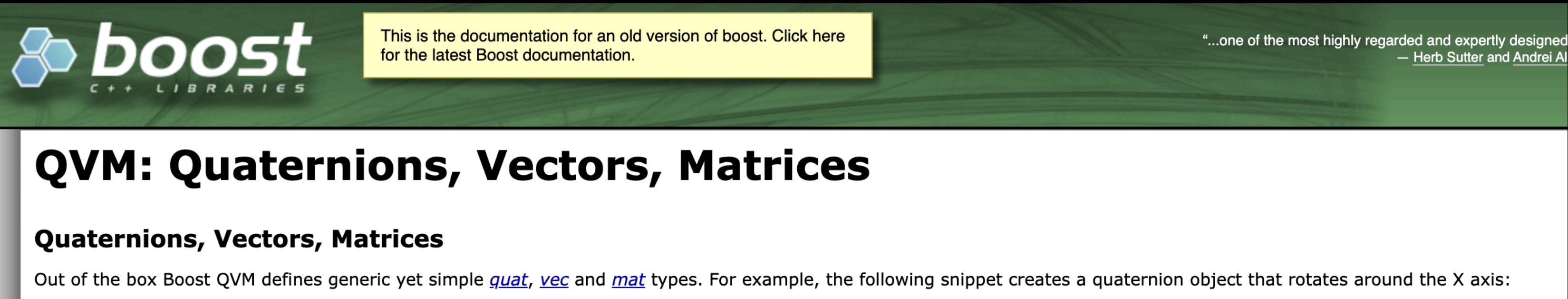
- SwissFEL modeling progressing somewhat slow

- PhD project advertised: on Performance Portable Particle In Cell Exascale Maxwell Solver



# Current projects - 2

- Prepare OPAL for IPPL 2.x (AA)
  - ✓ adapt cmake such that IPPL is an external library
  - ✓ header file adaption
- Volontier for replacing **Tensor** and/in **Quaternion** class



The screenshot shows the Boost QVM documentation page. At the top, there is a green header bar with the Boost logo and a note: "This is the documentation for an old version of boost. Click here for the latest Boost documentation." To the right, a quote reads: "...one of the most highly regarded and expertly designed — Herb Sutter and Andrei Alexandrescu". The main content area has a white background and features the title "QVM: Quaternions, Vectors, Matrices" in large, bold, black font. Below the title, there is a section titled "Quaternions, Vectors, Matrices" in bold black font. A snippet of code is shown: "Out of the box Boost QVM defines generic yet simple `quat`, `vec` and `mat` types. For example, the following snippet creates a quaternion object that rotates around the X axis:

## 2. Conferences

- NAPAC
- ✓ Opal for Self-Consistent Start-to-End Simulation of Undulator-Based Facilities  
(AA et al)
- ✓ Beam Shaping ... (N Neveu)
- ✓ OPAL Poster wo 3 page paper
- ✓ OPAL and FFA Modeling

## 3. AOB

Pedro: interest in RFQ features

Achim: OPAL on M1 working

Sri: will continue on P3M

Arnau: make a feature request for the replacement of the Tenzor class

Nicole: interest in back-tracking at SLAC

Chris: pyOPAL single particle done, lots of local commits w.r.t. FFA modeling