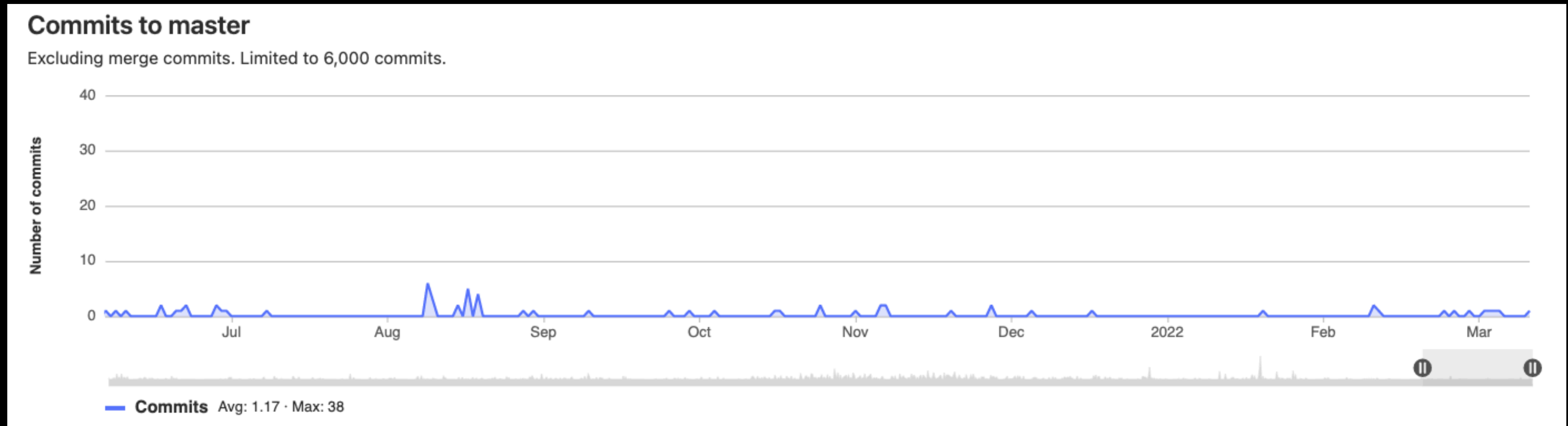


Virtual OPAL Developer Meeting April 2022



Andreas Adelmann (Paul Scherrer Institut)

Content

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

Updates

* 94 97 member in the active mailing list (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

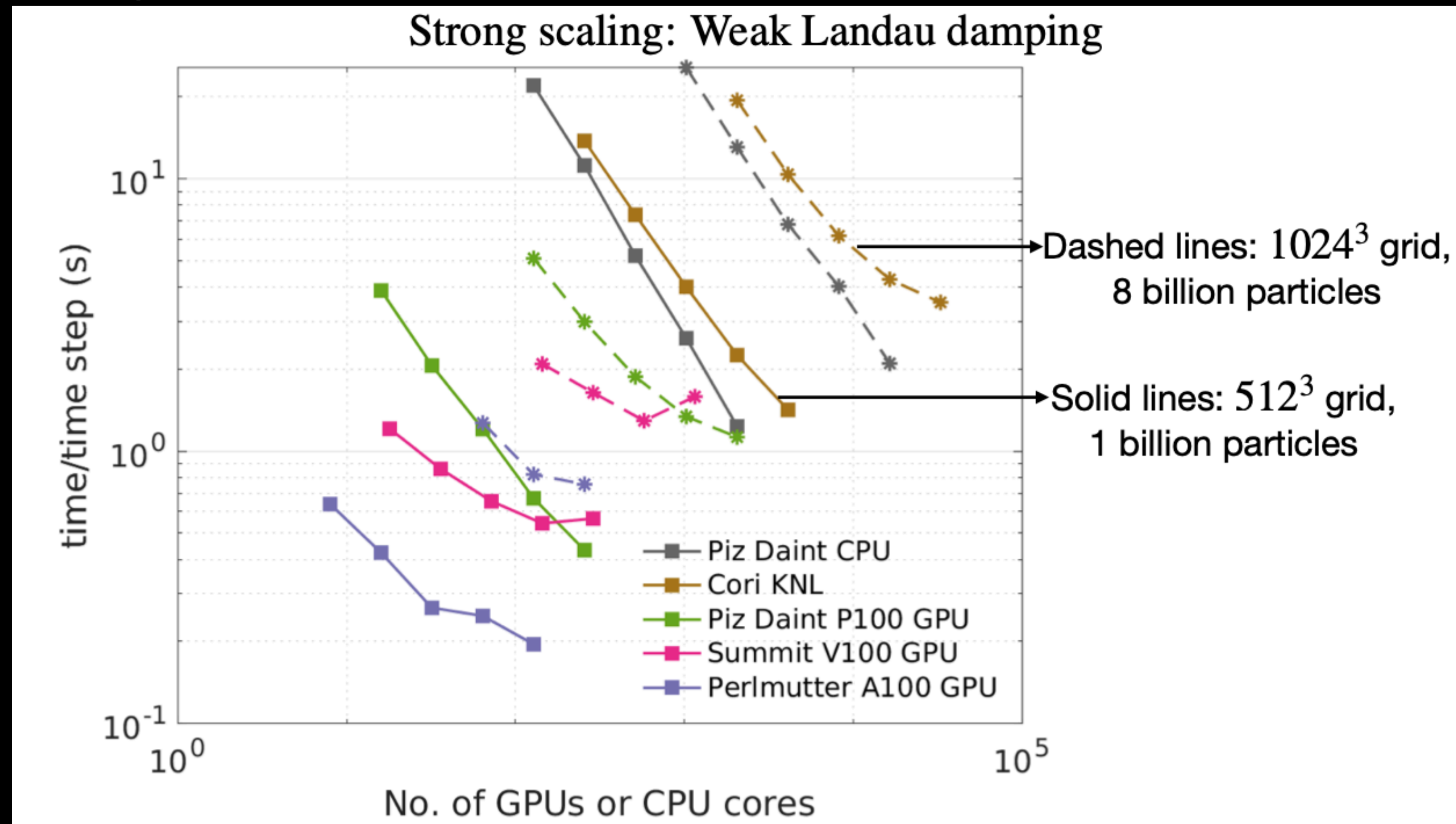
- Ch Rogers

- 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**



This is the documentation for an old version of boost. Click here for the latest Boost documentation.

“...one of the most highly regarded and expertly designed
— Herb Sutter and Andrei Al

QVM: Quaternions, Vectors, Matrices

Quaternions, Vectors, Matrices

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