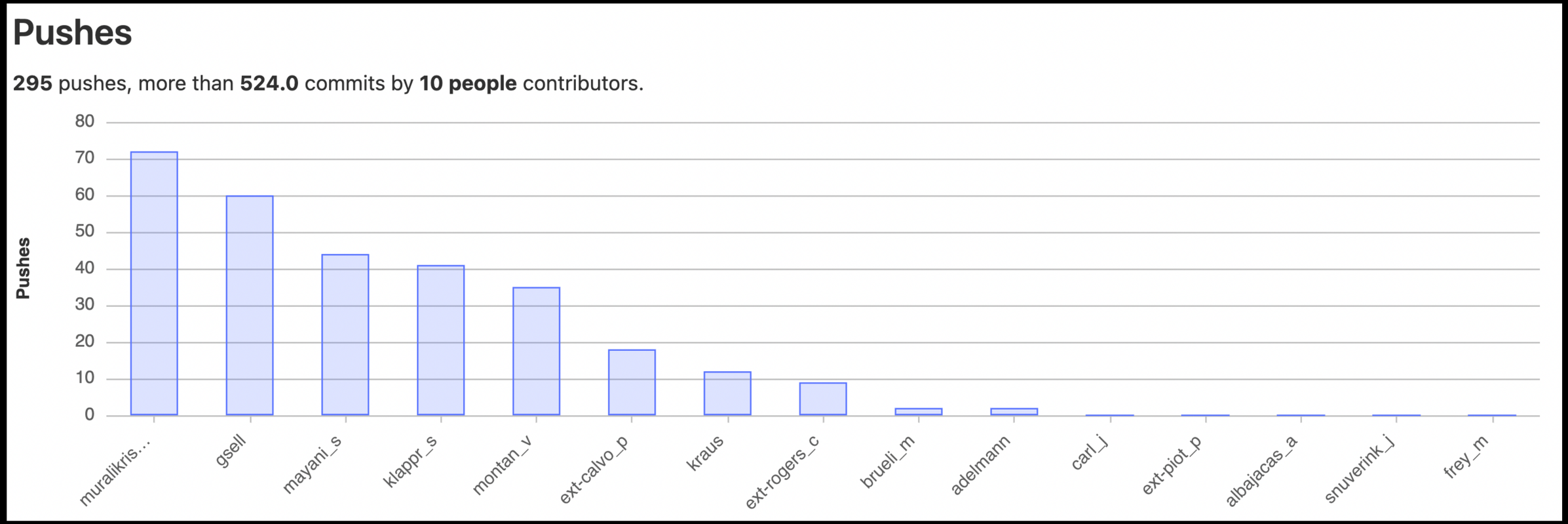
Virtual OPAL Developer Meeting 2022 December - Introduction

https://gitlab.psi.ch/groups/OPAL/-/contribution_analytics?start_date=2022-09-15



Andreas Adelmann (Paul Scherrer Institut)

Content

1. Updates OPAL (A Adelmann)
2. Updates on IPPL V 2.x (S Muralikrishnan)
3. pyOPAL (N. Neveu & Ch Rogers)
4. Next releases (A Gsell)
5. Pressing open issues (all)

Updates

- WELCOME Philippe Piot

Updates

- ~~100~~ 101 member in the active mailing list (opal@lists.psi.ch)
- presenting at SpaceCharge 2022
- we had 3 oral presentation related to OPAL

Space charge effects in wiggler with OPAL-FEL	*Andreas Adelmann*	
Holston Room, Embassy Suites	09:00 - 09:15	
ALPINE: space charge calculations for exascale computing	*Andreas Adelmann*	
Holston Room, Embassy Suites	09:50 - 10:05	
Space charge in high intensity cyclotron design	*Sonali Mayani Mayani*	
Holston Room, Embassy Suites	16:25 - 16:40	

At present the focus in large is on:

- continue consolidation & code cleanup

  ✳ remove sampler / optimiser ?

- working on bugfixes / feature requests

  - 11 ~~11~~ bugs 20 ~~19~~ feature requests

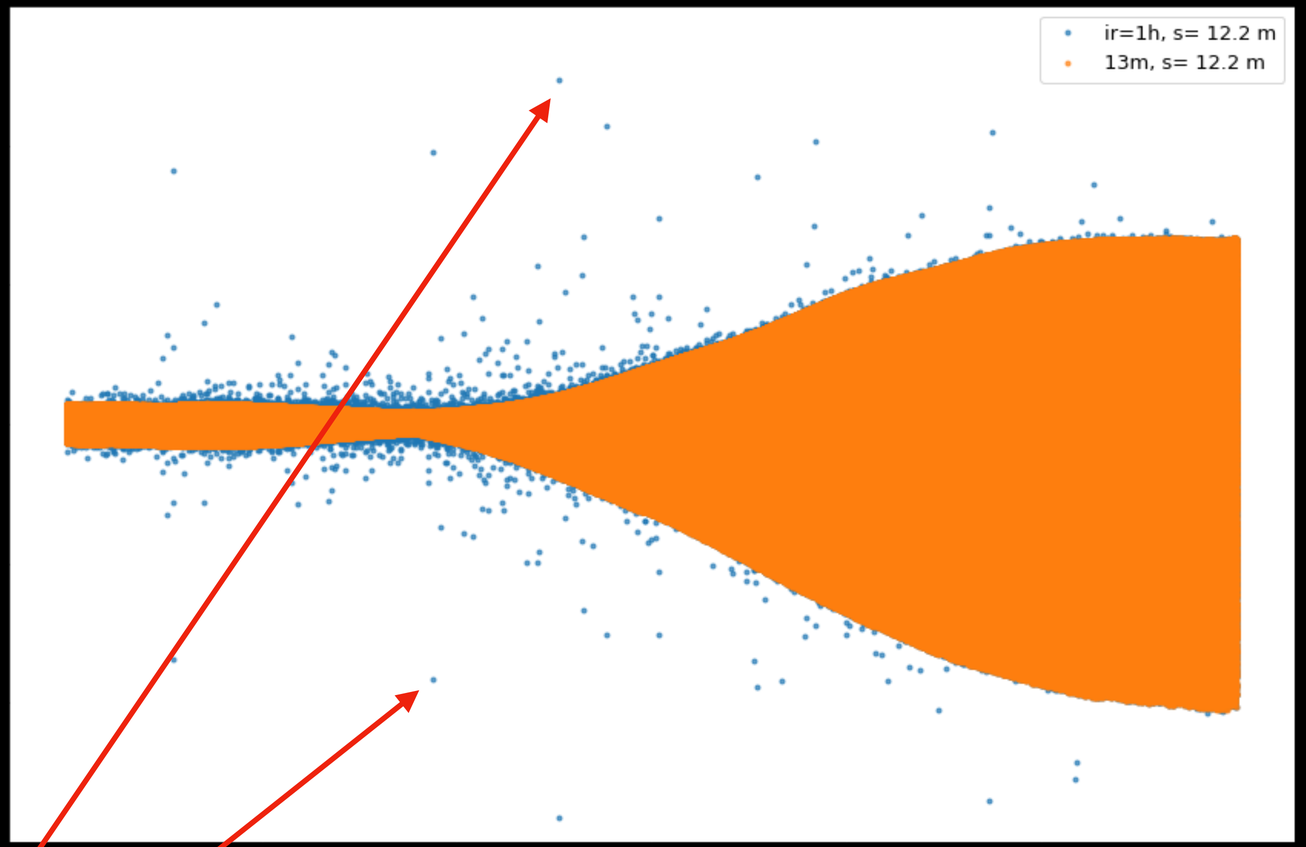
- Hiring Post Doc
  https://www.psi.ch/en/pa/job-opportunities/54968-postdoctoral-fellow

✱ delayed OPAL paper

Current projects - 1

- IPPL 2.x (Sri & Matthias)

  ✓ paper submitted CPC (https://arxiv.org/abs/2205.11052)



- Ch Rogers / N Neveu
  - FFA modeling (Ring element)
  - pyOPAL
- Sri, Sonali & AA + MSc student
  - SwissFEL modeling there are hints that collisions play a role (from P3M model)
  - 3 new students for spring semester 2023 (dim-indep. IPPL, mixed-prec, Langevin coll.)

Current projects - 2

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