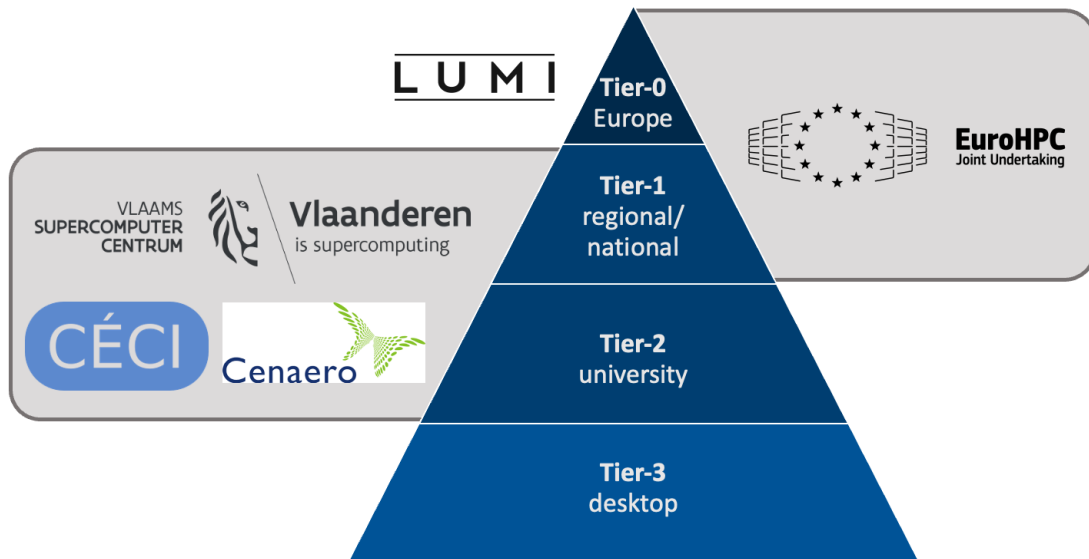# LUMI

Short update on getting access to EuroHPC infrastructure and support

Stefan Becuwe
University of Antwerp
VSC

December 2025

Getting Access to Infrastructure

- Make sure you have gained experience on the regional Tier-1 systems first.

- Two "tracks" are possible:
  - the LUMI-BE track,
  - the EuroHPC track.

Getting access

Getting compute time on LUMI

50% of the compute time on LUMI will be distributed via EuroHPC calls. The other 50% is distributed among the participating countries according to their contributions to the consortium. Belgium as the second largest participant will get 7.4% of the total compute time on LUMI for its own allocation programs.

Both the EuroHPC and Belgian national track to get access to LUMI will have different access modes, including tracks for academic research, open industrial research, commercial access or preparatory access to prepare a larger proposal or develop exascale software.

Dates for the next cut-off for the Belgian track: 2nd of March, 1st of June and 5th of October 2026 at 23.59 h CET.

We have separate application forms for the preparatory/development projects and regular projects. Make sure you use the most recent version available on this website. Detailed instructions can be found in a separate document. Please submit your application to lumi-be-support@enccb.be.

- Download the application form for preparatory/development projects
- Download the application form for regular projects
- Download the detailed instructions for application

Preparatory/development projects can be submitted continuously and will be reviewed once a month.

The calls in the EuroHPC program for compute time on LUMI (and other machines) are announced on https://eurohpc-ju.europa.eu/access-our-supercomputers_en.

Want to know more about LUMI and how it can boost your research?
Researchers Tim Lebailly's quest to revolutionise AI training methods led him to embrace the power of the LUMI supercomputer.
Read all about it in this EuroCC user story: https://www.enccb.be/uslumitlebailly

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Supercomputers Access Calls

Announcement

We are in the process of transitioning to a new platform. In the meantime, proposals can still be submitted via the existing platform at **https://access.eurohpc-ju.europa.eu/**. Stay tuned for updates!

Regular Access
Extreme Scale Access
AI for Science and Collaborative EU Projects
AI and Data-Intensive Applications

Filter by

Keywords

Status

1 | Upcoming and open

Opening date

Select

Deadline date

Select

Search | Clear filters

Supercomputers Access Calls (2)

RSS

Showing results 1 to 2

STATUS | Upcoming and open

CALL STATUS: OPEN

EuroHPC JU Call for Proposals for Development Access

The Call for Proposal for EuroHPC JU Development Access Mode is a continuously open call, with a maximum time-to-resources-access (start-date) of two weeks after the date of submission.

CALL STATUS: OPEN

EuroHPC JU Call for Proposals for Benchmark Access

The Call for Proposals for EuroHPC JU Benchmark Access Mode is a continuously open call, with a maximum time-to-resources-access (start-date) of two weeks after the date of submission.

The European High Performance Computing Joint Undertaking (EuroHPC JU)

Home | About ⌄ | AI Factories ⌄ | Supercomputers ⌄ | Quantum Computers ⌄ | Research & Innovation ⌄ | Media & Events ⌄

Home > AI Factories > AI Factories Access Calls

AI Factories Access Calls

Announcement

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Filter by

Keywords

Status

1 Upcoming and open ⌄

Opening date

Select ⌄

Deadline date

Select ⌄

Search   Clear filters

AI Factories Access Calls (3)

🔊 RSS

Showing results 1 to 3

STATUS Upcoming and open

CALL STATUS: OPEN

Playground Access to AI factories

Playground mode is intended for SMEs, startups and entry level users. It offers rapid, FIFO access to test technologies, including access within 2 working days and onboarding services for new users.

CALL STATUS: OPEN

Fast Lane Access to AI factories

Fast Lane access is intended for SMEs and startups performing AI activities that require medium size allocations.

CALL STATUS: OPEN

Large Scale Access to AI factories

Large Scale access mode is for AI models and applications requiring more than 50,000 GPU hours for a maximum of one year.

Getting Access to Support

L U M I

- When your EuroHPC proposal is accepted, you may get support to
  - increase scalability of your code,
  - optimize your code,
  - restructure or rewrite your code,
  - …

  just by selecting it in the application form!
- Suggestion: submit a development access proposal and request it.

- Interested VSC users can show their interest in the last question of the (updated) Tier-1 application form.

EPICURE

Unlocking European-level HPC Support

Co-funded by
the European Union

EuroHPC
Joint Undertaking

Support services

Meet our Support Services

Code enablement and scaling
Support for enabling and increase the scalability of user codes to EuroHPC supercomputers

Performance Analysis
Performance analysis for HPC codes

Benchmarking
Our service focuses on developing a benchmarking suite to evaluate the performance of EuroHPC machines.

Code refactoring
This service involves restructuring or rewriting parts of an application code to improve it maintainability but without changing its function.

Code optimization
Our service aims at improving the efficiency and performance of the software such that it consumes fewer resources

Support levels

2nd Level Support | Code Porting, Enabling and Scaling

Work limited to 1-2 months with focus in compilation improvements, vectorization and scalability analysis
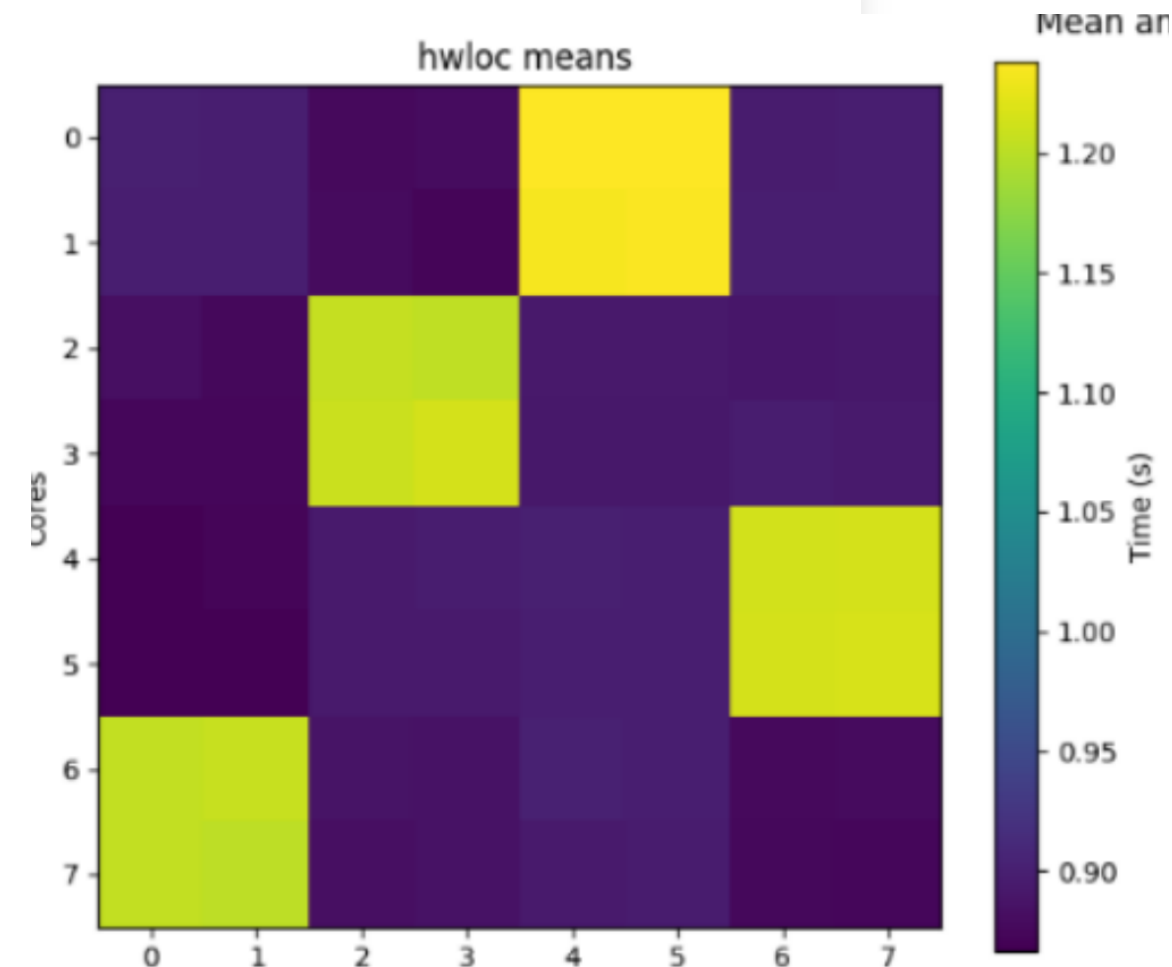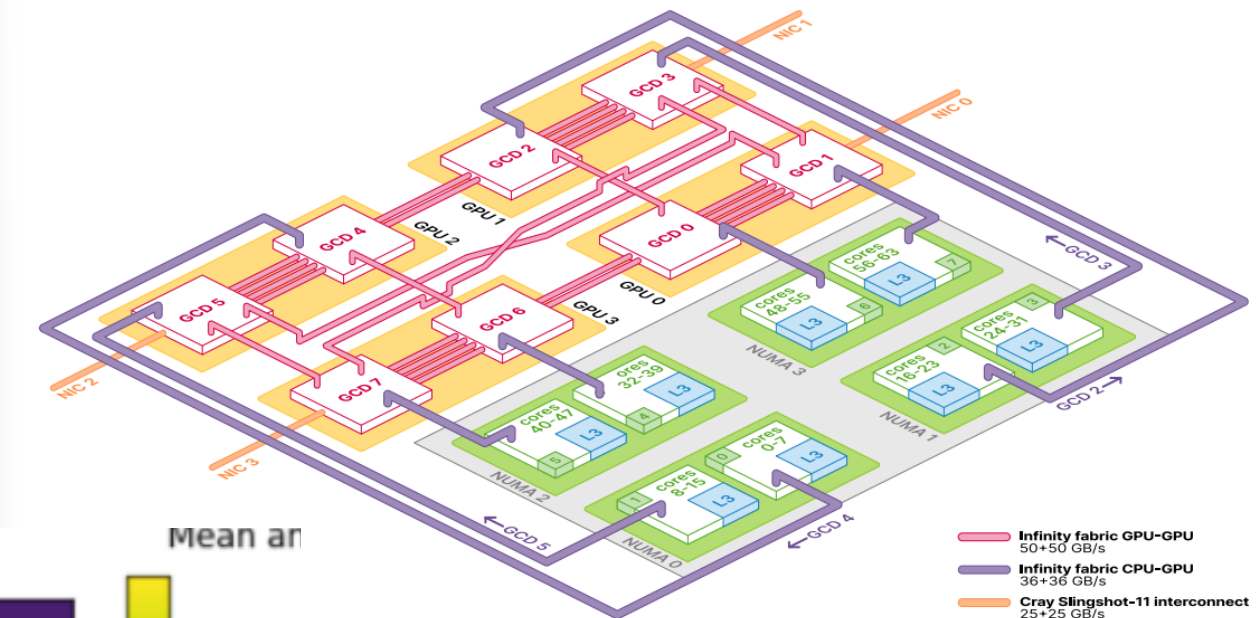
3rd Level Support | Code Optimization

Handling large-scale workloads with durations of 2 to 6 months, focused on performance improvements that require code modifications, such as inter-node optimizations, GPU porting and scalability improvements

Project 51-EHPC-DEV-2024D07-079 119-EHPC-DEV-2025D03-120 118-EHPC-DEV-2025D05-093 153 – EHPC-DEV-2025D10-090 LUMI

Bert

Extreme scalability in EPSILOD

A framework for generic iterative loop stencil applications

Arturo Gonzalez-Escribano – Departamento de Informatica – Universidad de Valladolid

Objectives:

– Code porting & scaling issues

Support Given (WP2):

– Compilation Celerity/Controllers

– Optimizations
  - hipHostMalloc
  - async faults

Achievements:

– running on LUMI

Lessons Learned:

– hipcc/cray runtime difference

– Ask detailed questions at start

HIDALGO 2 Wildfires deployment 2024

Specific MicroHH configuraton

Bert

Objectives:

Run on LUMI

Support Given (WP2/WP3):

– EasyBuild WRF-SFIRE / µHH

Achievements:

–Added µHH EasyBuild

Lessons Learned:

– dependencies for program

– need example scripts

LUMI **LUMI Software Library**

Search

a b c d e f g h i j k l m n o p q r s t u v w x y z Issues New

[package list]

WRF-SFIRE

user-installable

License information

The license for WRF-SFIRE can be viewed on the OpenWFM GitHub.

Table of contents

License information

User-installable modules (and EasyConfigs)

Technical documentation

EasyBuild

Version W4.4-SO.1

[package list]

MicroHH

user-installable

License information

MicroHH is released under the GNU General Public License (v3).

Table of contents

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EasyBuild

Version 2.0.1 for cpeGNU

CANONICS

ChArge aNd current ON cosmIC Strings

Carlos Martins – Instituto de Astrofísica e Ciências do Espaço – Universidade Do Porto

Bert

Objectives:

– FFT on Leonardo (HeFFTe)

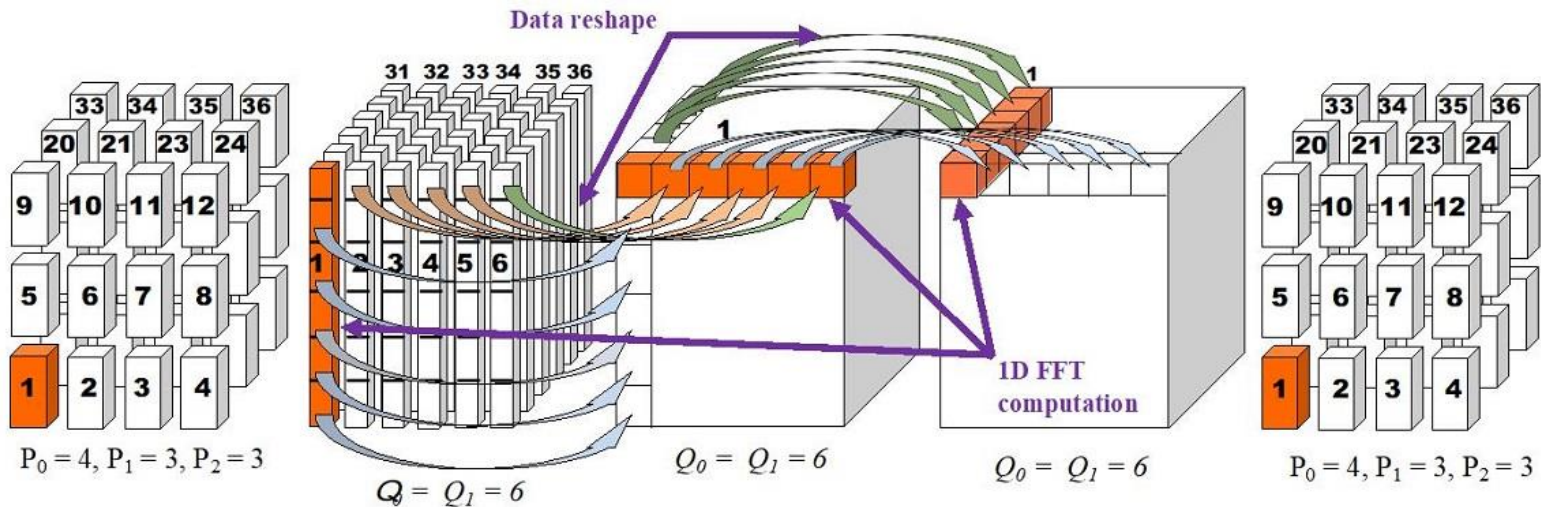**Support Given (WP2/WP3):**

– HeFFTe installation

– Tips on development

Achievements:

– Running on Leonardo

Lessons Learned:

– PI should provide code

– Ask for a working example


```
A100:
| Data Type | Time (ms) | Data Read (MB/Iter) | Bandwidth (GB/s) |
|-----------|-----------|---------------------|------------------|
| float3    |     1.184 |             1200.00 |          1319.28 |
| float4    |     1.462 |             1600.00 |          1335.91 |

P4000
| Data Type | Time (ms) | Data Read (MB/Iter) | Bandwidth (GB/s) |
|-----------|-----------|---------------------|------------------|
| float3    |     8.423 |             1200.00 |           185.50 |
| float4    |    10.179 |             1600.00 |           191.87 |

MI250X
| Data Type | Time (ms) | Data Read (MB/Iter) | Bandwidth (GB/s) |
|-----------|-----------|---------------------|------------------|
| float3    |     1.347 |             1200.00 |          1160.00 |
| float4    |     1.687 |             1600.00 |          1157.97 |
```

Large scale fission properties with energy density functionals

Wouter Ryssens – Institute of Astronomy and Astrophysics – Université Libre de Bruxelles

😇*Bert*

Objectives:

1. Benchmarking: ScaLAPACK for solving large eigenvalue problems
2. Investigate possible benefit of replacing ScaLAPACK vs ELPA
3. Reflect on code refactoring for
   - Improved maintainability
   - Flatten the learning curve for new users and developers
   - Executable → Python module (scriptable, extensible from the outside, restrict own code to solving the physics while outsourcing the number crunching to high quality HPC libraries, integrate third party libraries Machine Learning libraries, leverage existing f90 code with f2py)

Support Given (WP2):

- explore PyScalapack
- Pyev: wrapper code for solving large eigenvalue problems with Python code independent of the selected the backend (ScaLAPACK/ELPA)
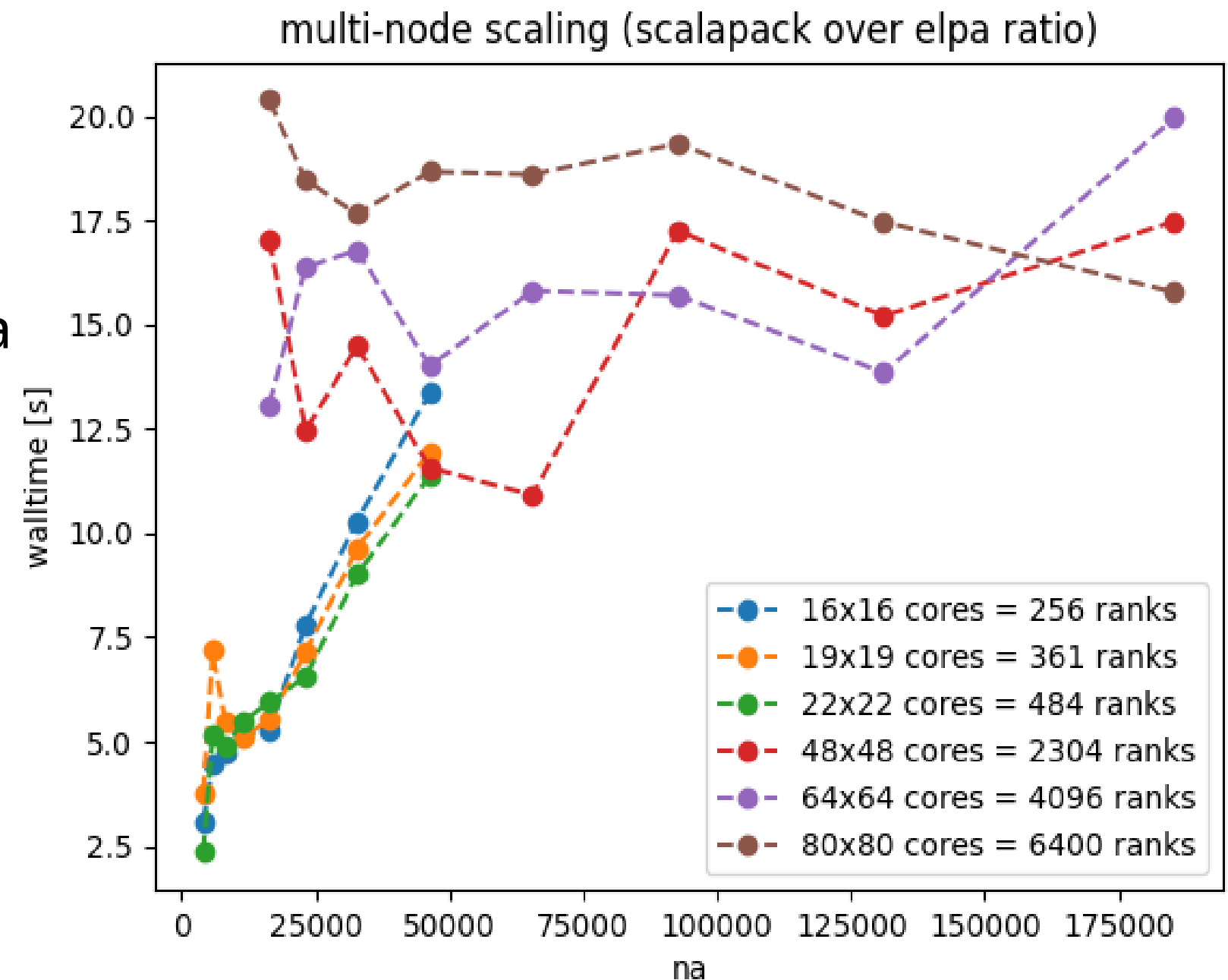- Extensive benchmarking

😇 *Bert*

Large scale fission properties with energy density functionals

Wouter Ryssens – Institute of Astronomy and Astrophysics – Université Libre de Bruxelles

Achievements:

- Performance:
  - **ELPA** 2-5x faster for small systems wrt ScaLAPACK
  - 10-20x faster for large systems
- Ability to write code **agnostic to backend** via Python wrappers
- Convince team to refactor Modern Fortran code into **Python modules** for
  - Improved user experience
  - Intuitive Domain-specific language
  - Outsourcing tasks to dedicated HPC Python packages
  - Allowing interfacing with e.g., ML packages
  - Improved maintainability
  - Improved developer experience

multi-node scaling (scalapack over elpa ratio)

Legend:
- 16x16 cores = 256 ranks
- 19x19 cores = 361 ranks
- 22x22 cores = 484 ranks
- 48x48 cores = 2304 ranks
- 64x64 cores = 4096 ranks
- 80x80 cores = 6400 ranks

x-axis: na, y-axis: walltime [s]

EPICURE

Unlocking European-level HPC Support

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Thank you!

✉ **pmo-epicure@postit.csc.fi**