

EUROPEAN  
PLASMA RESEARCH  
ACCELERATOR WITH  
EXCELLENCE IN  
APPLICATIONS



# Presentation of 2nd site selection procedure

for the EuPRAXIA management:

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for the candidate sites:

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- **collegiate selection process -> include candidate site representatives**
- clarification of the **role of non-host partners** : codeveloper-user v/s extra-disciplinary end-user
- **internal panel = representatives of the candidate sites + EuPRAXIA management**  
to be nominated officially soon (June 24)  
will elaborate a procedure proposal for approval to the Sept. 2024 CB Elba.
- Schematically, the procedure should identify a **“tool” for 2nd site assessment:**
  - general criteria for hosting an international research infrastructure
  - more precise criteria for the LPA specific technical characteristics
- **Aims:**
  - completion of the process by a special CB Meeting in February-March 2025.
  - viable proposal before the end of the preparatory phase
  - avoid unnecessary multiplication of work on the related TDR.
- **Accessible funding to be identified**

- Ralph Assmann (GSI): former EuPRAXIA-PP project leader
- Pierluigi Campana (INFN): EuPRAXIA-PP project leader
- Massimo Ferrario (INFN): head of Sparclab (1st site)
- Antonio FALONE (INFN): WP2 co-coordinator
- Andrea Ghigo (INFN): WP3 co-coordinator
- Arnd Specka (CNRS): WP3 co-coordinator
- Giancarlo Gatti (CLPU, Salamanca)
- Leo Gizzi (CNR, Pisa)
- Alexander Molodozhentsev (ELI BL, Prague)
- Rajeev Pattathil (EPAC, Rutherford Lab, Didcot)

The “bid-book” format should help in:

- **uniformization of format** for collegiate assessment of hosting capabilities
- **identification of synergies** with the beam driven site
- evaluation of needs for **in-kind contributions from EuPRAXIA partners**
- **refine costing**
- tool for **consultation** for green (=no red) light with host countries **funding agencies**
- **speed-up TDR** work in the collaboration
- Most of the work already done in Milestone report M16.1 (Jan 2024) (contains freeform detailed description of candidates sites)
- **bid-book = COMPACT DOCUMENT:**
  - **Layout description of the EuPRAXIA laser-driven facility**
  - **(min. 10 p., max. 20 p excluding references but including figures)**

The requested document should contain TABULAR information on the hosting infrastructure such as:

- the number and expertise of the staff,
- financial capacity to support the operation,
- budget to implement the EuPRAXIA RI
- available space to implement the infrastructure.

as well as technical information on existing or proposed equipment such as:

- Laser parameters and characteristics,
- electron beam parameters
- Undulator and FEL photons specifications
- Photon beam lines and end stations description

- Geographic location, transportation, accommodation
- Local collaboration and expertise: partnerships, universities, industry
- Environmental impact and risk assessment
- Funding opportunities
- Compliance with legal and regulatory requirements
- Connection to defense and National Security (restrictions, separation)
- Recognition in national roadmap of RI's
- Future expansion potential

- distributed: version 2, comments by 09/20-2024
- to be voted: version 3 (slightly amended) distributed today
- change-log: (**modifications in red**) 4 paragraphs in the text part
- A complete Technical Design Report for the realization of the infrastructure will be requested after the site choice, to follow EuPRAXIA-PP EU grant requirements. **The timeline for the delivery of the TDR will be defined soon after the site choice.**
- ~~• If already available, the expected contribution from the other EuPRAXIA laboratories, in terms of expertise or in-kind contribution can be set out.~~
- **The bidder should point – if necessary for each phase – for which part of the construction project they require contributions from academic and/or industry partners from inside the EuPRAXIA collaboration, and whenever available, discussions with partners are already ongoing. It should be pointed out if the expected contributions are expertise, in-kind or financial.**
- Other specific information useful for evaluating the readiness and the competence of the candidates can be reported. **The bidder should outline how they plan to fill the technology gaps between existing and targeted performance of components.**
- It is possible to foresee a staged realization of the EuPRAXIA laser-plasma FEL with, e.g. an initial 1 GeV (phase 1) and a later 5 GeV (phase 2) implementation, also with a staging in repetition rate, e.g. 10-20Hz (phase 1) and later 100Hz (phase 2). In this case the tables in this bid book should be provided for both cases with incremental costs, **and with envisaged dates (month-year) for the start of commissioning and the start of user operation. The overall plan must to should be compatible with the expected ESFRI implementation schedule of phase 1. While the layout description should cover the full plan. The layout description should cover both phases.**



## **SCHEDULE**

**Schedule Considerations:** The ESFRI guidelines and commitments require us to reach user operation within a certain timeline. Schedule is therefore an important criterion for our success. The overall plan should be compatible with the expected ESFRI implementation schedule of phase 1. Please use (month-year) for indicating schedule goals.

Envisaged completion dates for the site 2 TDR – for different phases, if applicable

Envisaged start of laser/beam commissioning – phase 1

Envisaged start of FEL user operation – phase 1

Envisaged start of laser/beam commissioning – phase 2, if applicable

Envisaged start of FEL user operation – phase 2, if applicable

- 27 Aug 2024: bid-book template discussion -> PANEL
- 10 Sep 2024: bid-book template finalization -> PANEL
- 25 Sep 2024: bid-book approval by CB
- 20 Dec 2024: bid-book submission (internal political/funding evaluation by bidders)
- Jan-Feb 2025: collegiate evaluation of bid-books-> PANEL  
requests of further clarification to the bidders
- Feb 2025: Information meetings with STAB and the Sponsor's Board to evaluate if there are any objections to procedure or direction taken – as light as possible  
**Bid-book material communicated to CB.**
- Mar 2025: decision by dedicated CB on 2nd site proposal
- Apr 2025: submission of EU deliverable report: 2<sup>nd</sup> choice completed
- Apr 2025: Presentation to relevant bodies (ECFA, ICFA, ESFRI, TIARA, LEAPS, ...).  
Collection of support letters 2<sup>nd</sup> site.