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Type: **Invited Oral Presentation**

## **Elettra 2.0 –Italy’s lightsource for science and outreach**

*Monday, 8 May 2023 10:10 (30 minutes)*

An overview of the project status of the future Italian 2.4 GeV 4th generation light source Elettra 2.0 that will replace the existing 3rd generation light source Elettra is presented, including challenges and perspectives in the design and construction of such light sources. Elettra 2.0 will be the ultra-low emittance light source that will provide ultra-high brilliance and coherence and at the same time also aims to provide very short pulses for time resolved experiments. The discussion includes the technical challenges requiring specific R&D studies, for example on injection schemes, high performance magnets, vacuum, diagnostics for stability, feed-backs, harmonic cavities, etc. The upgrade also addresses on the request from the established user community to minimize the duration of beam-time interruption, imposing the need of a careful organization and planning of all the phases of the project, from the removal of the old machine to the installation and successful commissioning of the new one.

### **Funding Agency**

### **Footnotes**

### **I have read and accept the Privacy Policy Statement**

Yes

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**Session Classification:** Monday Plenary before coffee