



ELI, the Extreme Light Infrastructure

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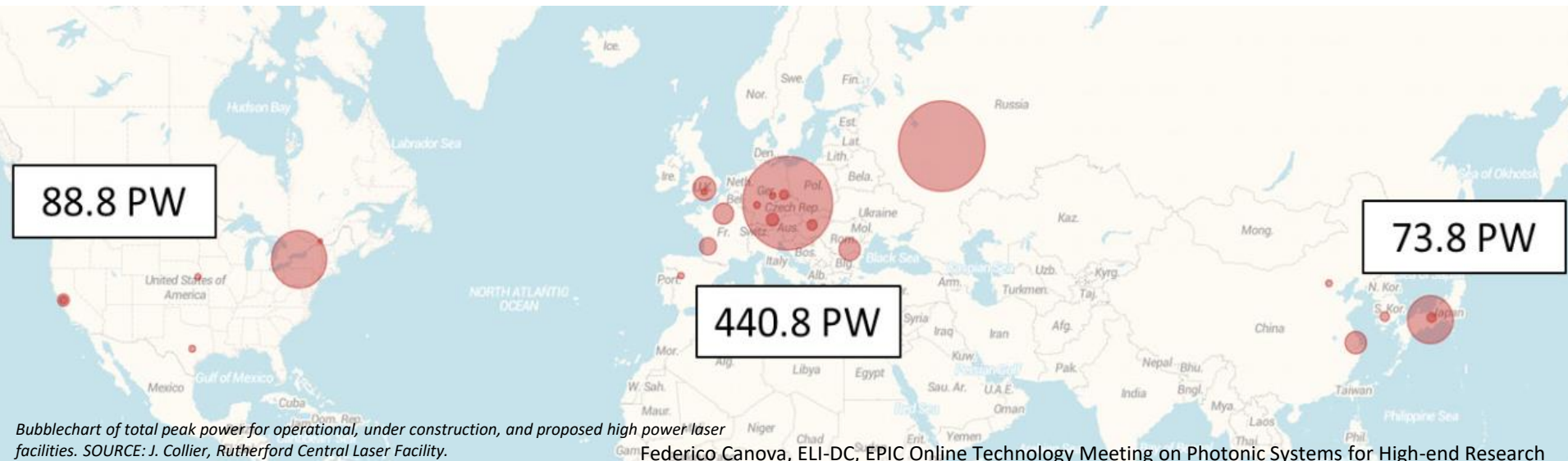
EPIC Online Technology Meeting on Photonic
Systems for High-end Research

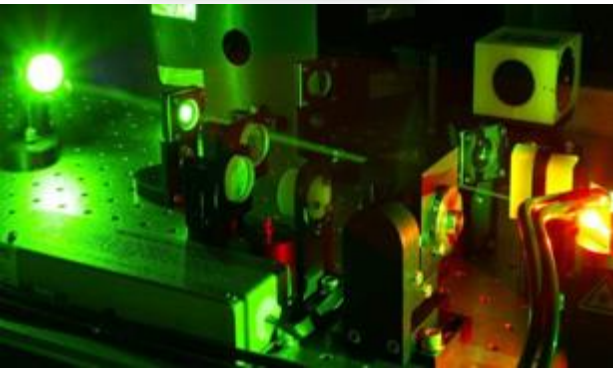
Nov. 2, 2020



ELI is on the European Roadmap since 2006

- ***Investment*** is driving **leadership** in laser and photonics, especially for state-of-the-art systems
- Projected total peak power for high power laser systems operational and under construction is by far world-leading
- ELI Facilities are introducing **5 PW-class lasers, 3 lasers at 10PW**





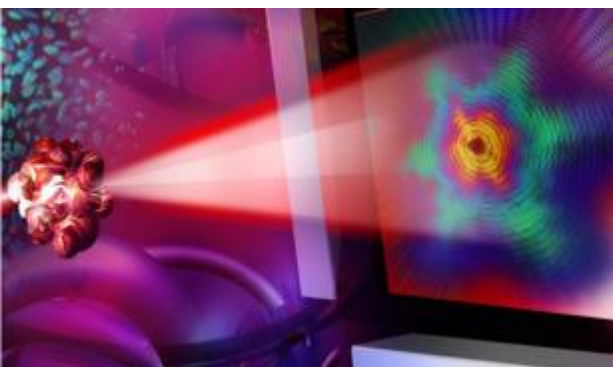
Laser Development



Radiation Physics and Electron Acceleration
Soft to hard x-rays, GeV electrons



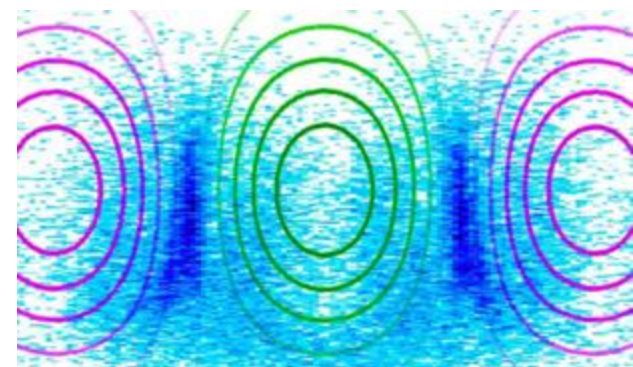
Particle Acceleration
250 MeV Ions Acceleration by lasers



Applications in Material Science and Biology



Plasma Physics and High Energy Density, Astrophysics, Nuclear Photonics



Ultra High Intensity Interactions
High-field physics and theory

Why ELI is a key partner for innovation



- Over the construction period **ELI Facilities (CZ, HU and RO)** report more than **€455 million in contracts**, with companies from **19 European countries**
- **ELI is already success story of industrial partnerships.** All R&D equipment delivered in time and at specification.
- **ELI is a showcase for your R&D** (company designed a multi-M€ laser for ELI, almost immediately sold 3 to other customers)
- ELI is a driver for the new technological developments for the laser community (3 lasers at 10PW !!!).

To operate successfully a ELI needs excellence (quality), risk management and sustainability of operations on the long term (cost control)

ELI is searching for partners to

- **Develop and characterize** high performances **optics**, crystals, diodes...
- **Implement** efficiently **control command**, automatization, vacuum
- **Manage** large amount of **data** (transfer, manipulation, visualization)
- **Train** operators and users for excellence in **user experience**



ELI ERIC collaborates with industry as part of its core mission



Thank you