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SPECTRUM: Computing Strategy for Data-intensive Science Infrastructures in Europe in the High Energy Physics and Radio Astronomy Domains

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The amount of data gathered, shared, and processed in frontier research is set to increase steeply in the coming decade, leading to unprecedented data processing, simulation, and analysis needs. In particular, high-energy physics and radio astronomy are gearing up for groundbreaking instruments, necessitating infrastructures many times larger than current capabilities. In this context, the SPECTRUM project (https://spectrumproject.eu/) has brought together leading European science organisations and e-infrastructure providers to formulate a Strategic Research, Innovation, and Deployment Agenda (SRIDA) along with a Technical Blueprint for a European computer and data continuum.

With a consortium composed of leading European science organisations in High Energy Physics and Radio Astronomy, and leading e-Infrastructure providers covering HTC, HPC, Cloud and Quantum technologies, the project has set up a Community of Practice (https://www.spectrumproject.eu/spectrumcop) composed of external experts in several working groups. This collaborative effort will facilitate the creation of an exabyte-scale research data federation and compute continuum, fostering data-intensive scientific collaborations across Europe.

This presentation aims to introduce SPECTRUM project to IBERGRID community, including the early results already obtained including survey and scientific use cases, and encourage IBERGRID community to engage in the effort that will define the roadmap at the end of the project.

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