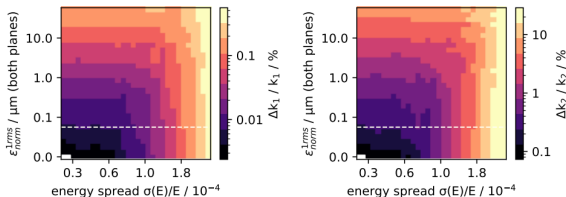


A detailed wireframe model of a particle accelerator complex, likely the FAIR facility. The model shows a large, elongated oval ring structure in the foreground, with various smaller components, including circular and rectangular sections, extending from it. The entire structure is rendered in a transparent, grid-like wireframe style, showing the internal layout and connections of the accelerator.

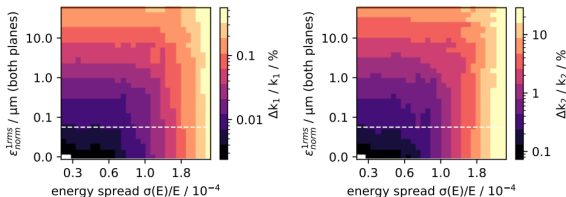
## **ACCLAIM, GSI: Progress in ML Projects**

Sabrina Appel, Conrad Caliri, *Adrian Oeftiger*

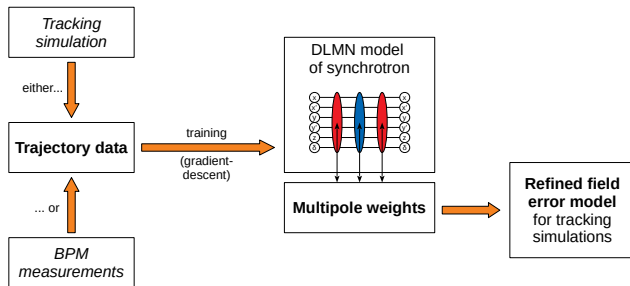
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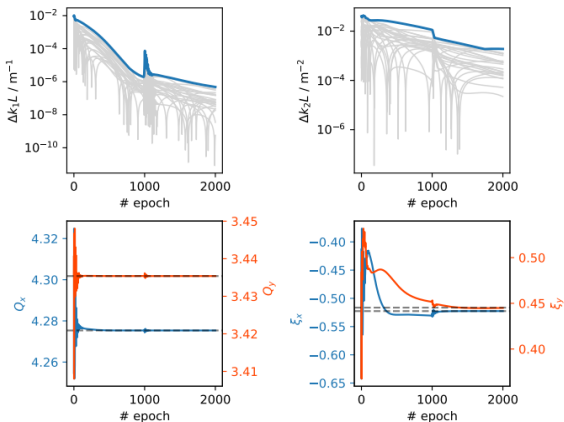


- established a first python interface to machine control via LSA using adapted CERN package `pjl1sa`, working on `pyjapc` to subscribe to published instrumentation / diagnostics data
- new EU-funded postdoc position with Sabrina Appel to start from 01.03. on machine learning algorithms for beam control



**Figure:** sketched work flow of training process with Deep Lie Map Network (DLMN)

All magnets have random quadrupole and sextupole errors:



**Figure:** top: difference between learned and “real” quadrupole and sextupole components during training; bottom: convergence of tune and chromaticity