

Second MODE Workshop on Differentiable Programming for Experiment Design



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Optimization of small scale experiments, MILLIQAN and SUBMET as examples

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Several new experiments that look for millicharged particles have been proposed recently. Milliquan is an international collaboration that is now installed and under upgrade at point 5 @ CMS at CERN for a second run. SUBMET is a new proposal that is expected to be installed at JPARC. The common denominator of the two proposals is the simplicity of the construction. Muons are the main background that should be well characterized, this is done through additional side and top panels. Looking for detector optimization constitutes a simple benchmark for detector optimization tools like Tomopt.

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