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## **Development and efficiency assessment of a reference Helium refrigeration cycles**

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Development of a Helium Turbo-Brayton cryogenic refrigerator for the FCC-hh -  
EASITrain project status overview

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The scope of the EASITrain project includes the development of the cryogenic system for the 40-60 K beam screen cooling as a part of the FCC-hh design. The study includes such topics as comparison of cryogenic cycle arrangements, matching of turbo-compressor and cycle designs, Helium composition improvement, assessment of component efficiencies and operational mode performance. The current state of the project and main results of ESR11 will be presented.

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