



Gamma Ray Spectroscopy for JT-60SA Plans for 2026 and status

M. Nocente^{1,2} and F. Scioscioli² for the implementation team
V. Kiptily³

¹Department of Physics, University of Milano-Bicocca, Milan, Italy

²Institute for Plasma Science and Technology, National Research Council, Milan, Italy

³UKAEA, Culham Campus, Abingdon, UK



Task title

2026 Design and procurement of gamma-ray detector for JT-60SA

Task description

- Design of a gamma-ray spectroscopy system for exploitation in fast ion and runaway electron physics experiments at the JT-60SA tokamak.
- Updated evaluation of the detector expected performance in at least one scenario of relevance for physics studies based on the latest diagnostics design.
 - Identification of plasma scenarios of special relevance - and their related operational conditions - for application of the JT-60SA gamma-ray spectroscopy system to physics studies in the area of energetic particle physics (V. Kiptily)

Status of the system and plans

- Monthly progress meetings with F4E and QST ongoing since December 2025
- Full draft of annex B written and reviewed by F4E and QST
 - Preliminary design of detector and collimator made (collaboration between us, F4E and QST)
- Detector design frozen by end of April; collimator design to be frozen afterwards.
- Purchase of components expected to start by end of 2026
 - Installation planned for ME/2 (\approx summer 2027)

