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## **【312】 Kaonic Deuterium X-Ray Measurements with the SIDDHARTA-2 Apparatus at DAFNE**

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The SIDDHARTA-2 experiment aims to observe the energy shift and width of the kaonic deuterium ground state induced by the strong interaction via X-ray spectroscopy.

This measurement requires an improvement of the signal-to-noise ratio of at least a factor of ten compared to SIDDHARTA due to the very low kaonic deuterium X-ray yield. Therefore, three updates to the apparatus are implemented: a lightweight, cryogenic target cell, a large-area X-ray detection system consisting of Silicon Drift Detectors, and a dedicated veto system to suppress signal-correlated background. The characterisation of these updates will be discussed.

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