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X-ray measurements at J-PARC –a general overview

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The antikaon-nucleon interaction close to threshold provides crucial information on the interplay between spontaneous and explicit chiral symmetry breaking in low-energy QCD. In this context, the importance of kaonic atom X-ray spectroscopy has been well recognized and were performed at KEK and J-PARC (Japan) and DAFNE (Italy) during the last 3 decades.
At J-PARC there are now two experiments ongoing to study strong interaction physics using X-rays: E57 –"Measurement of the strong interaction induced shift and width of the 1st state of kaonic deuterium at J-PARC"and E62 –"Precision Spectroscopy of Kaonic Helium 3 and 4 to study 3d->2p X-ray transitions". Both experiments are involving two different X-ray detection systems Silicon Drift Detectors and Transition Edge Sensors. In this talk, I will concentrate on the newly developed large area Silicon Drift Detector system for E57.

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