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## **First Decay Spectroscopy Measurements of $^{219,220}\text{Po}$ from IS456 using IDS and PI-LIST**

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The neutron rich isotopes near the  $Z = 82$  and  $N = 126$  are an area of active research as they display a range of exotic nuclear properties including octupole deformation.

Previously the long lived (>10 minutes) neutron rich isotopes  $^{219,220}\text{Po}$  have not been properly investigated as their expected half-lives are too long for fragmentation facilities and until the development of the PI-LIST the presence of isobaric Fr contamination it was not possible to study them at ISOLDE.

In 2022 with the use of the double-repeller PI-LIST it was possible to perform both decay spectroscopy and In-source laser spectroscopy. This contribution will discuss the analysis of the decay spectroscopy data and present preliminary results.

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