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## The ISOLDE Solenoidal Spectrometer - recent highlights and future developments

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The first two physics experiments using the ISOLDE Solenoidal Spectrometer (ISS) have both been a success. This talk will present the final results from the two measurements made before LS2. The  $^{28}\text{Mg}(\text{d},\text{p})^{29}\text{Mg}$  reaction, carried out at 9.5 MeV/u, probed single-particle structure near the island of inversion. This measurement revealed the structure of the low-lying negative-parity intruder states, enhancing our understanding of how they evolve in this region of the nuclear chart.

At the other end of the nuclear chart, the second measurement with ISS was the  $^{206}\text{Hg}(\text{d},\text{p})^{207}\text{Hg}$  reaction, carried out at 7.4 MeV/u. Single-particle excitations in this unexplored region of the nuclear chart were identified for the first time. The spectroscopy of  $^{207}\text{Hg}$  is the first step in extending our knowledge of nuclear structure towards r-process nuclei in this region. These measurements demonstrate the versatility of ISS as a charged-particle spectrometer capable of exploiting beams of all masses from ISOLDE.

Progress and plans for the new detector systems for ISS, which are due to be commissioned during LS2, will also be presented. These include the new silicon array that has been constructed by the University of Liverpool, a fast-counting recoil detector for identifying reaction products and an array of fission-fragment detectors for probing transfer-induced fission - both under construction at The University of Manchester.

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