

## Physics opportunities with the SPIRAL upgrade



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## Precision measurements in mirror beta decays

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In this contribution, we propose to measure the beta-neutrino angular correlation parameters in mirror beta decays using an upgraded LPCTrap setup at LIRAT. The main interest lies in the determination of  $V_{ud}$  which can be deduced from this set of transitions if the GT/F mixing ratios are precisely known. This is precisely the purpose of the proposed measurements. The setup also provides the charge state distributions of the recoiling ions, enabling to study the atomic processes involved in these ions when the electron cloud is disturbed. The most interesting nuclei will be highlighted, among the new beams produced at SPIRAL1.

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