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Physics results with the ultimate AGATA-MUGAST-VAMOS setup and ISOL beams at GANIL

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The AGATA-MUGAST-VAMOS set-up, which was recently available at GANIL, combined the state-of-the-art gamma-ray tracking array AGATA with the highly-segmented silicon array MUGAST and the large-acceptance magnetic spectrometer VAMOS. The mechanical and electronics integration provided a maximum efficiency for each device. The superb sensitivity of the complete set-up offered a unique opportunity to perform exclusive measurements of direct reactions with radioactive beams delivered by the SPIRAL1 facility.

An experimental campaign using radioactive ISOL beams was performed during 2019-2021 using the cutting-edge combined setup, covering physics cases ranging from oxygen-14 to argon-46, and topics from nuclear structure and dynamics to astrophysics.

In this contribution I'll review the performance of the setup and focus on the physics results of the experimental campaign.

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