

Ion beam production and manipulation at IGISOL

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IGISOL-facility in the Accelerator Laboratory relies on the ion guide technique developed early 80's in the University of Jyväskylä. Since then the ion guide technique has constantly been developed and improved. Our recent studies have concentrated on the laser ionization both in the gas cell but also in the gas jet evacuating the gas volume.

The extracted ion beam can be manipulated in a various way. Recently we have developed optical pumping in the cooler, which will be discussed.

In the ion trap technology, we have developed totally new purification technique called Ramsey-cleaning and also multi-injection method, which greatly increases efficiency of trap-assisted spectroscopy. Those methods will be introduced.

Author: JOKINEN, Ari (Department of Physics-University of Jyvaskyla)

Presenter: JOKINEN, Ari (Department of Physics-University of Jyvaskyla)

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