

# Development of ML algorithm for reaction layer determination in LISA array

*Dienstag, 29. Oktober 2024 11:30 (15 Minuten)*

LISA project aims to develop an array of five  $5 \times 5$  grids of thin single-crystal diamond detectors, to measure otherwise inaccessible lifetimes in exotic nuclei. Determining reaction positions in the target is a pivotal component of the project and we are developing ML algorithms for characterization. We used ANN and Random Forest Algorithm on the simulated data. RF algorithm has shown the most promising results so far in detecting reaction layers for simulated data and next step will be to apply this to experimental data. In future, to improve the accuracy we plan to use DNN with better feature selections.

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**Sitzung Einordnung:** Session