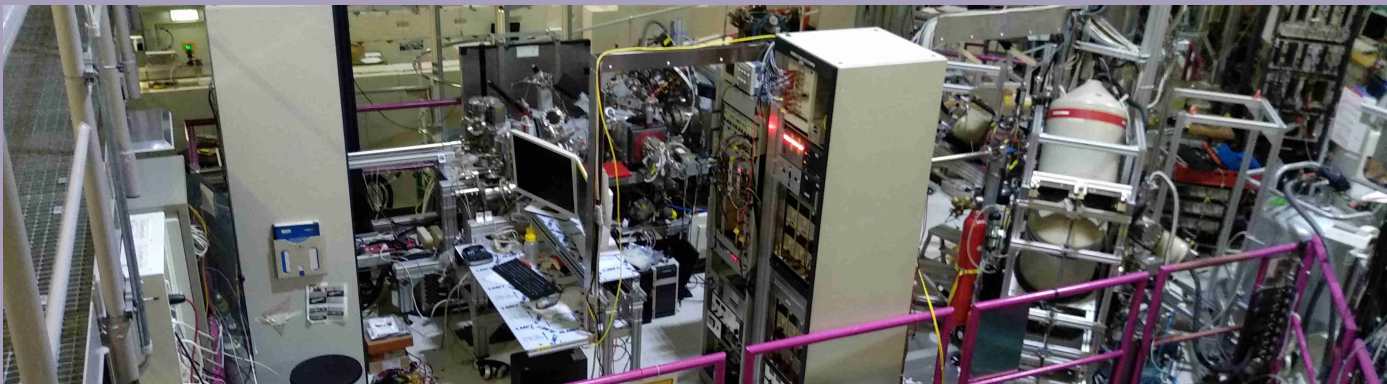


The NEutron-induced POsitrone source MUniCh (NEPOMUC) at FRM II at the TU München provides the worlds most intense anti-matter beam. In addition the positron physics research group operates further experiments sourced by  $\beta^+$ -emitters in its laboratories at the physics department. These cover a wide range of topics ranging from basic to material science.

## Bachelor Thesis

### Efficient Production of Positron Emitters using a Proton Beam

Small, weak positron sources are in enormous demand worldwide for positron experiments on a laboratory scale. In order to enable the simple production of such compact positron emitters, a new concept is being pursued in this pilot project, in which complex processing such as wet-chemical processes is completely eliminated. In this work, the depth-dependent activity ( $^{22}\text{Na}$ ) generated by proton irradiation in aluminum is to be determined and compared with the calculated depth distribution. The irradiation will be performed in cooperation with the HZB Berlin. The project is carried out within the TUM research group Physics with Positrons.



Working in our group you will have the chance to experience, applied physics research at first hand while collaborating with both engineers and scientist. Also you will gain insight into the way a large science facility is operated.

Please send applications to Prof. Christoph Hugenschmidt. If you apply online, please send the documents collected in one PDF file.