BACHELOR THESIS

CENTRE FOR ADVANCED LASER APPLICATIONS / HIGH FIELDS (Garching)

To strengthen our experimental team at the Centre for Advanced Laser Applications (CALA) at the Forschungszentrum Garching near Munich we are currently looking for a talented and motivated

Bachelor Student

In the framework of your thesis, you will be responsible for:

- Setting up a transmission screen, to characterize the coupling efficiency of laser light into the target
- Imaging of the screen by one to two cameras with the correct filter settings
- Quantification of the amount of the transmitted light during beamtimes

Furthermore, you will be given the chance to participate in beamtimes, getting hands-on experience in operating the experimental device controls and diagnostics.

Vivid interest in laser particle acceleration, optics and laser physics is beneficial. Knowledge in programming with Python is desirable. Enjoyment of experimental work is major prerequisite.

If we caught your attention, we would be happy to receive your application including a short cover letter, your transcript of records and your CV to the email address listed below. You are always very welcome to visit us in Garching for a lab tour. We are excited to meet you!

Contact Data:

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Laser-driven Heavy Ion Acceleration

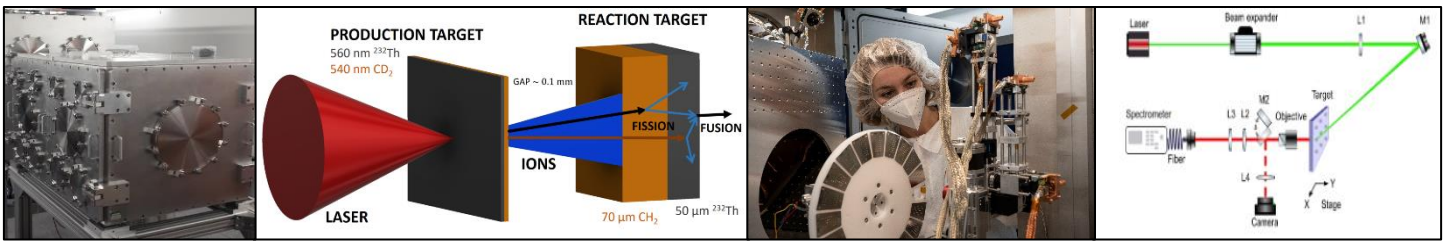
Laser-driven ion acceleration has been an emerging research field since its first realization about two decades ago. The ion bunches, accelerated by the interaction of ultra-intense laser pulses with plasmas, exhibit unique features, promising applications in various fields of physics.

Our group aims at the development of laser-driven bunches of *heavy* ions (gold, lead, thorium) as preparation for a novel reaction mechanism ('fission-fusion') in order to generate extremely neutron-rich isotopes relevant for nuclear astrophysics.

One parameter to monitor the coupling efficiency of the laser to energetic ions is the laser light transmitted through the target. Furthermore, it was shown, that the highest ion cut-off energies correspond to a specific amount of transmitted light, therefore requiring good assessment of this parameter.

CALA

The Centre for Advanced Laser Applications is home to one of the world's most powerful laser systems, the ATLAS-3000 laser, with a maximum power of up to 3 PW, delivered in ultra short pulses of 25 fs.



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