Within the ERC-Advanced grant project of Wim Ubachs on “Physics Beyond the Standard Model from Molecules” there are openings for PhD students. The aim is to perform ultra-precision frequency measurements on vibrational modes in the hydrogen molecule, to search for new physics. The project entails producing a high-density, high-repetition rate molecular beam, and the production of excited H₂ quantum states via photolysis. The latter includes also the photo-stop technique to produce slow H₂ molecules in the laboratory frame.

Key words for the research are: Pulsed narrowband lasers, molecular beam techniques, vacuum,

Students of all nationalities, with MSc. Degree in physics, chemistry, or engineering are eligible. Knowledge about lasers and spectroscopy is a considered an advantage. The work is mainly experimental and will be carried out at LaserLaB Amsterdam, which is part of Laserlab-Europe.

Previous publications about the project:

The PhD positions are funded with full salary for 4 years and the candidate will have an employee status. Salary, up to 2,636 euro gross (taxable) per month in the 4th year is supplemented with a holiday allowance of 8% and an end-of-year bonus of 8,33%.

Send application with letter of motivation, CV, and reference letters to:
Prof. Wim Ubachs (w.m.g.ubachs@vu.nl).