A fully funded PhD position

is available in experimental AMO physics within the research program:

**Physics beyond the Standard Model with cold molecules:**

- Measuring the electric dipole moment of the electron in BaF -

Together with PIs from University of Groningen and Nikhef, we have started an exciting new project to measure the electric dipole moment (EDM) of the electron in a slow beam of BaF molecules. The eEDM, which is predicted by the Standard Model of particle physics to be extremely small, is a powerful tool to explore physics beyond this Standard Model. All extensions to the Standard Model naturally predict an electron EDM that is just below the current experimental limits. We aim to improve on the best current measurement by at least an order of magnitude.

**Project: Building a cryogenic source and guide for an eEDM experiment on BaF molecules**

Your task will be to design, construct and test a high-intensity cryogenic source of BaF molecules. Furthermore, you will develop a lens system that guides the BaF molecules from the exit of the cryogenic source to the entrance of the Stark decelerator and perform test studies for a lens system for a BaF fountain.

Admission as a PhD student (4-year position) is possible with a MSc Physics (or comparable) degree. Experience in experimental physics, preferentially atomic or molecular physics, is useful. You can send your application or questions by email to Rick Bethlem (H.L.Bethlem@vu.nl). Please include a letter of motivation, a CV and two persons (email addresses) we can contact for a reference.

For more information, see

[www.few.vu.nl/~rick](http://www.few.vu.nl/~rick)
[www.rug.nl/research/vsi](http://www.rug.nl/research/vsi)

or contact Rick Bethlem (H.L.Bethlem@vu.nl).