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| **Summer Placement Project Proposal** |
| Supervisor(s): Prof Dr Armin Reichold  Nominees in case of absence: Dr Laura Corner, Dr Andrew Lancaster  Duration of Placement: 2 to 3 months are reasonable  Date restrictions: preferably inside 4th July to 23rd September |
| **Section 1: Project description:**  Project title: Frequency referencing for FSI interferometry with gas absorption cells characterised by frequency combs.  Include project aims here  In 2015 Prof Reichold visited the German national institute of metrology (PTB) and compared their state of the art frequency combs to the absorption spectra of a variety of gas absorption cells that form the metrological core of each FSI system. These measurements should provide a much improved knowledge of the absorption frequencies and line width. The project will seek to analyse the data taken in 2015, characterise the gas cell and use this knowledge in the analysis of a set of length comparison measurements also performed at PTB with the same gas cells. |
| **Section 2: Special requirements (skills and experience required):**  Required skills: Very good command of spoken and written English, good knowledge of Java, Fourier transform mathematics, data analysis techniques in general, knowledge of basic optics principles and interferometry,  Desired skills: familiarity with general programming languages and matlab, some concepts of parallel computing, basic concepts of CUDA programming |