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Dear Sir Ajdari,

I am currently in my first post-doc at SYRTE (SYstème Référence Temps-Espace) hosted by the Observatoire de Paris. My research program takes place at the laboratory of Strontium optical lattice clocks, part of the Métrologie de Fréquence Optiques research group. I have been actively contributing to the development of high precision measurements of systematic effects on the frequency standard of the optical clock due to light shift and background gas collision shift. In addition, I am also implementing novel quantum techniques of atomic spin squeezing to improve the clock stability.

During my PhD at CERN, I researched on antimatter physics, having antihydrogen as the object of study. We determined the absolute optical frequency of the 1S–2S transition in antihydrogen for the first time with a precision of 2 parts in 10^{12} . My major task was on the optical frequency metrology that ensured our knowledge of the absolute laser frequency with which we probed the atoms of antihydrogen. Our results are directly connected to one of the major opened problems in physics today: the baryon asymmetry.

Having now 5 years of experience on research in metrology and high precision measurements, I feel the desire of contributing with the technological industry. In particular, Saint Gobain offers a professional and technological environment where the scientific research is taken at a serious level, which will allow me, as a researcher, to develop at the human and technical aspect. Hence, I am applying for the position of research engineer in physical measurements at the Research and Development department.

Yours faithfully,

Bruno Ximenez Rodrigues Alves

Attached: curriculum vitæ