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SPACE-TIME EXPLORER AND QUANTUM EQUIVALENCE PRINCIPLE SPACE TEST  
(STE-QUEST)**Abstract**

The atom interferometry test of the Weak Equivalence Principle is based on a differential measurement performed by two atom interferometers simultaneously probing the acceleration experienced by two clouds of two different atomic species.

STE-QUEST will make pair wise comparisons between the two isotopes of rubidium while it orbits around the Earth. Testing the universality of free fall at a level of one part in  $10^{15}$  implies a measurement of the differential acceleration between the two atomic species at the same level of precision.