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A previously decommissioned frequency standard fountain, repurposed for atom interferometry at the National Physical Laboratory with the University of Liverpool, has been relocated to Liverpool and is currently in operation with an upgraded laser system. The device will serve as a prototype detector to test for fundamental physics concepts beyond the standard model and can act as a test stand for quantum technology and inertial sensing applications. The set-up is capable of trapping and cooling ˜109 rubidium-85 atoms in a 3D MOT from a low-velocity intense source, followed by launching using a moving molasses configuration, and an interferometry sequence in a ˜1 m magnetically shielded region. A significant upgrade to laser power and frequency control for the cooling, repumper and Raman systems is underway. The interferometer is in a fountain configuration, so the upgrade also includes the ability to launch atoms, improved state selection, incorporation of an active vibration control system and a new detection system. Progress on the fountain, upgrading the laser system, and the planned new vacuum chamber will be reported.

Session Classification: Poster Session & Wine & Coffee