

**PROGRESS REPORT – FUNDING APPLICATION 012**  
**Collaborative visits: University of Wales and HP Labs**

[Please note, this work is also part of QUICOV]

Title:

Weak force detection with superposed coherent states

Description:

We have investigated the utility of non-classical states of simple harmonic oscillators, to be used for sensitive force detection. We have found that a superposition of coherent states offers the same advantage as squeezed states and that, like squeezed states, entangling these states offers no significant advantage.

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