Algorithmic quantum sensing beyond T1 limit of frequency resolution | 8AGS	**Start date:**
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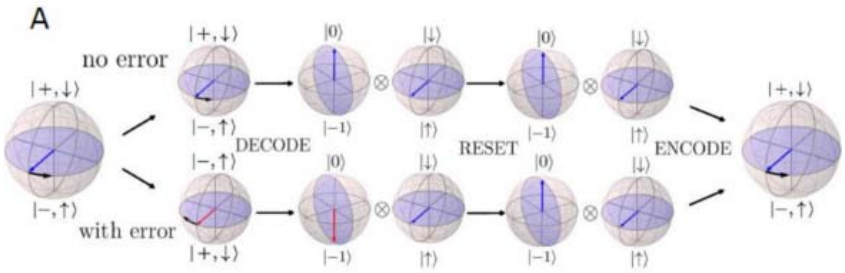
Abstract: Quantum metrology enhanced by repetitive quantum error correction.

- Nitrogen Vacancy center based magnetometer has shown unprecedented sensitivity and spatial resolution owing to its long coherence time and atomic size.
- The NV center's electron spin is a sensitive probe to external magnetic field but the sensitivity is intrinsically limited by its phase memory time T2*.
- Here we experimentally demonstrate, the approach presented in [2] of combining sensing protocol with Quantum error correction, which promises to tackle noise of high frequency where dynamical decoupling fails.
- This is a promising addition to state of the art techniques for quantum sensing in noisy environments.



Recent results:	**Publications:** Unden, T et al. Phys Rev Lett **116**,(2016).

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