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## **(U\*) Diagnostic technique to identify collision site in an ion trap**

*Wednesday 8 June 2022 14:00 (15 minutes)*

Atomic clocks made of trapped ions are subject to collisions with gases in the chamber. These collisions change the transition frequency of the trapped ions, affecting their use in the clock. When a collision occurs, the trap is removed, and all the ions are replaced since the affected ion (or ions) is unknown. I will present the theory to diagnose the collision site and how it can be mitigated.

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