

Frequency and Timing

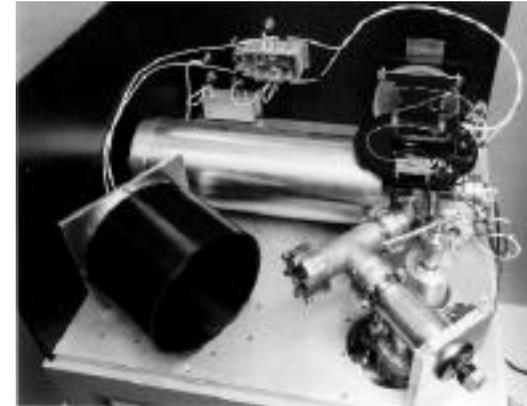


• Overall Objective

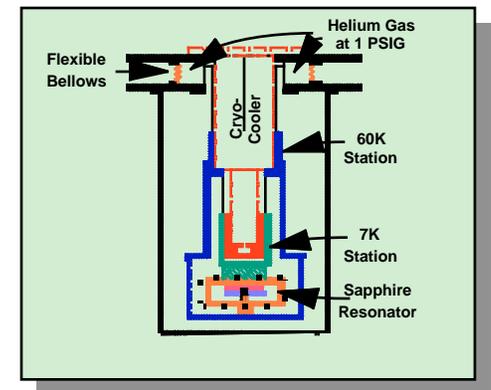
- Improve reliability and performance of DSN frequency references with state-of-the-art technology to reduce cosgts, enhance oeprability, and enable new missions

• Goals and Products

- Demonstrate world's best long- term (hours to weeks) stability with Linear Ion Trap standard (LITS)
 - Second generation Extended Linear Ion Trap (LITE) offers reduced size and cost, improved stability, commercial utility
- 10K Compensated Sapphire Oscillator (CSO) is firsx to provide ultra-high stability with uninterrupted operation
 - Provides phase noise and short term stability required by Cassini Radio Science Experiment
- Optoelectronic Oscillator (OEO) under development for high stability in small package
 - Promises flight LO capability with 10x stability of current USO's



Extended Linear Ion Trap (LITE)



10K Sapphire Oscillator

