

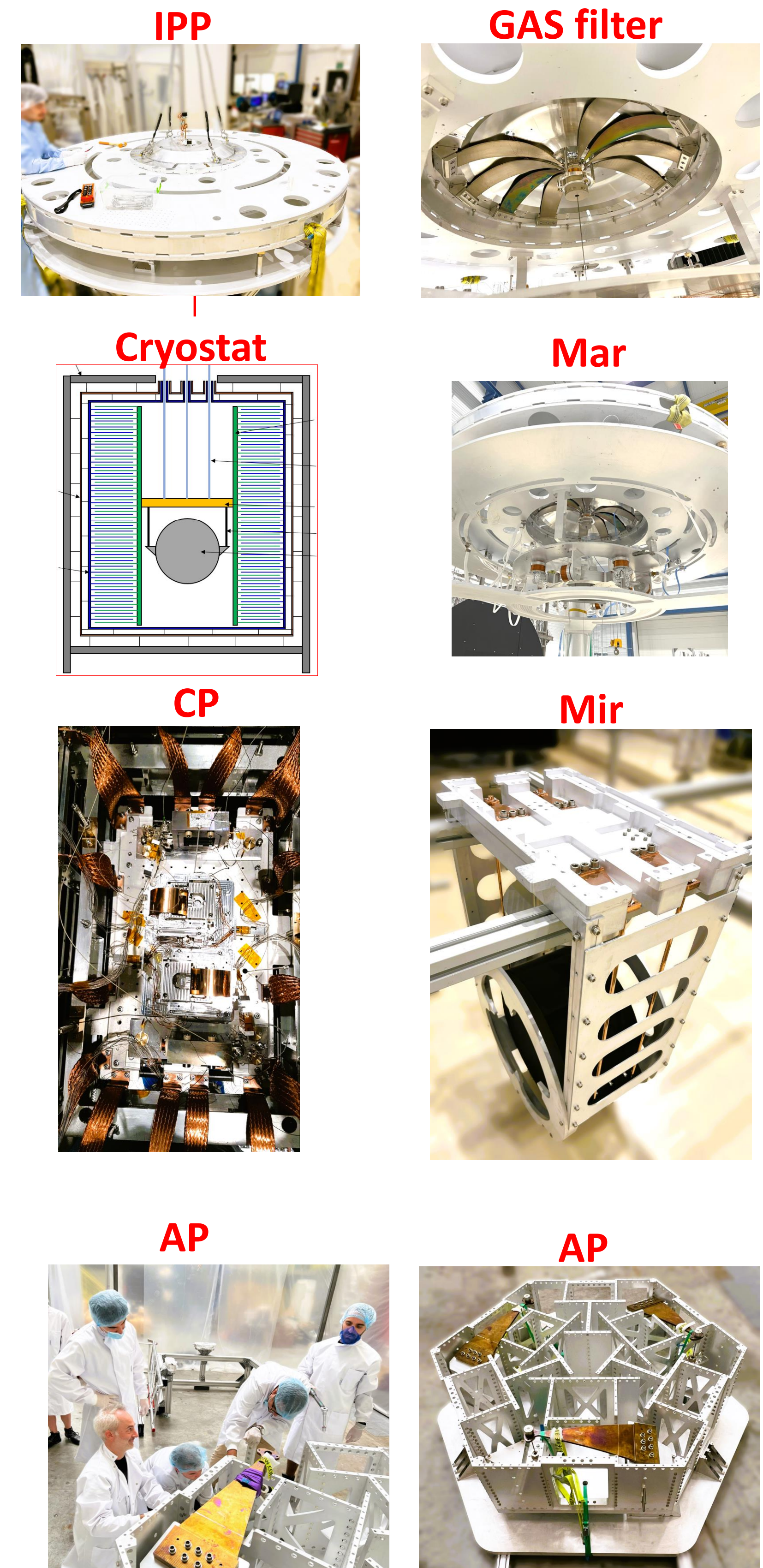
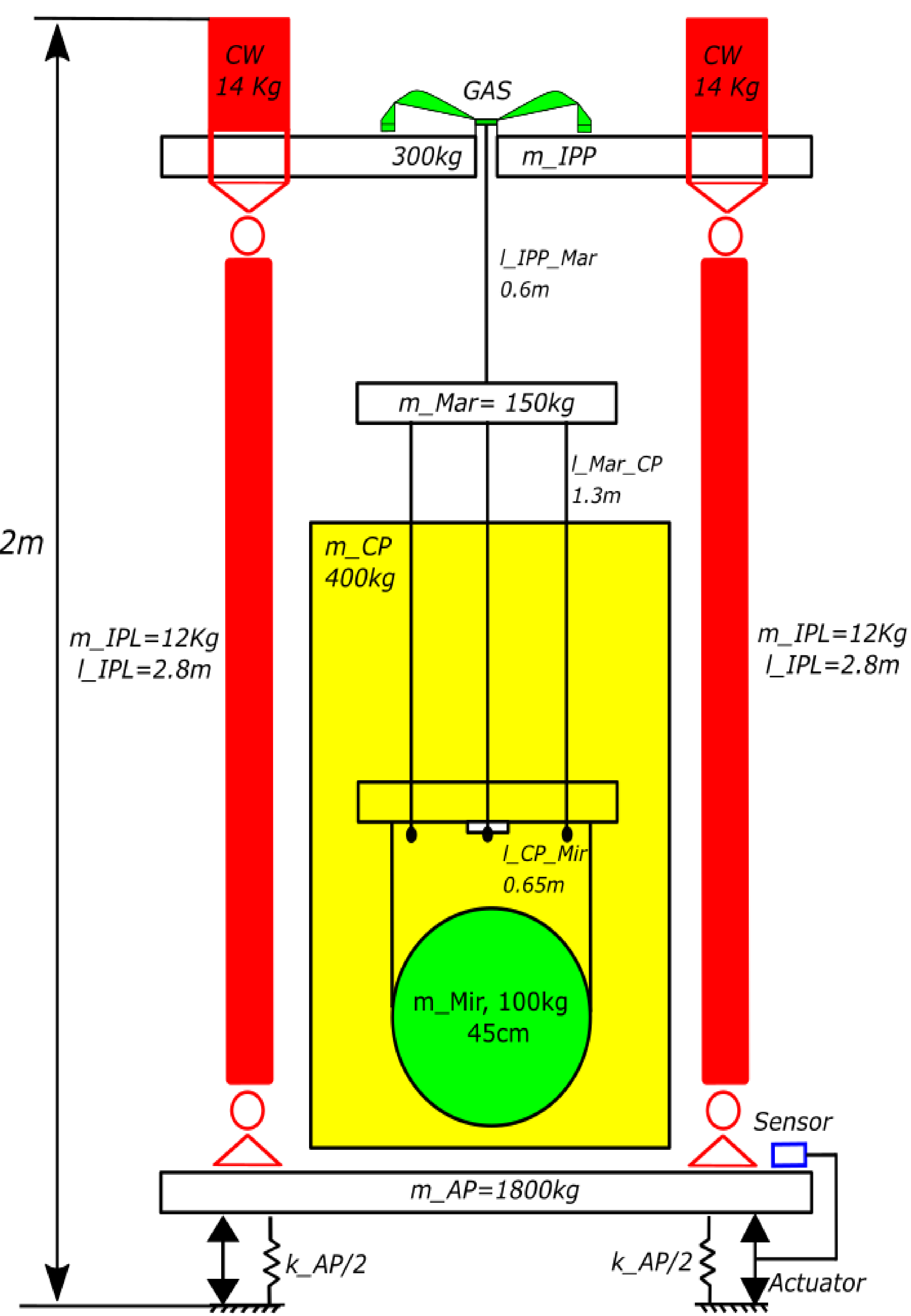
# E-TEST Isolator: a proof of concepts for the future Einstein Telescope

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## Summary

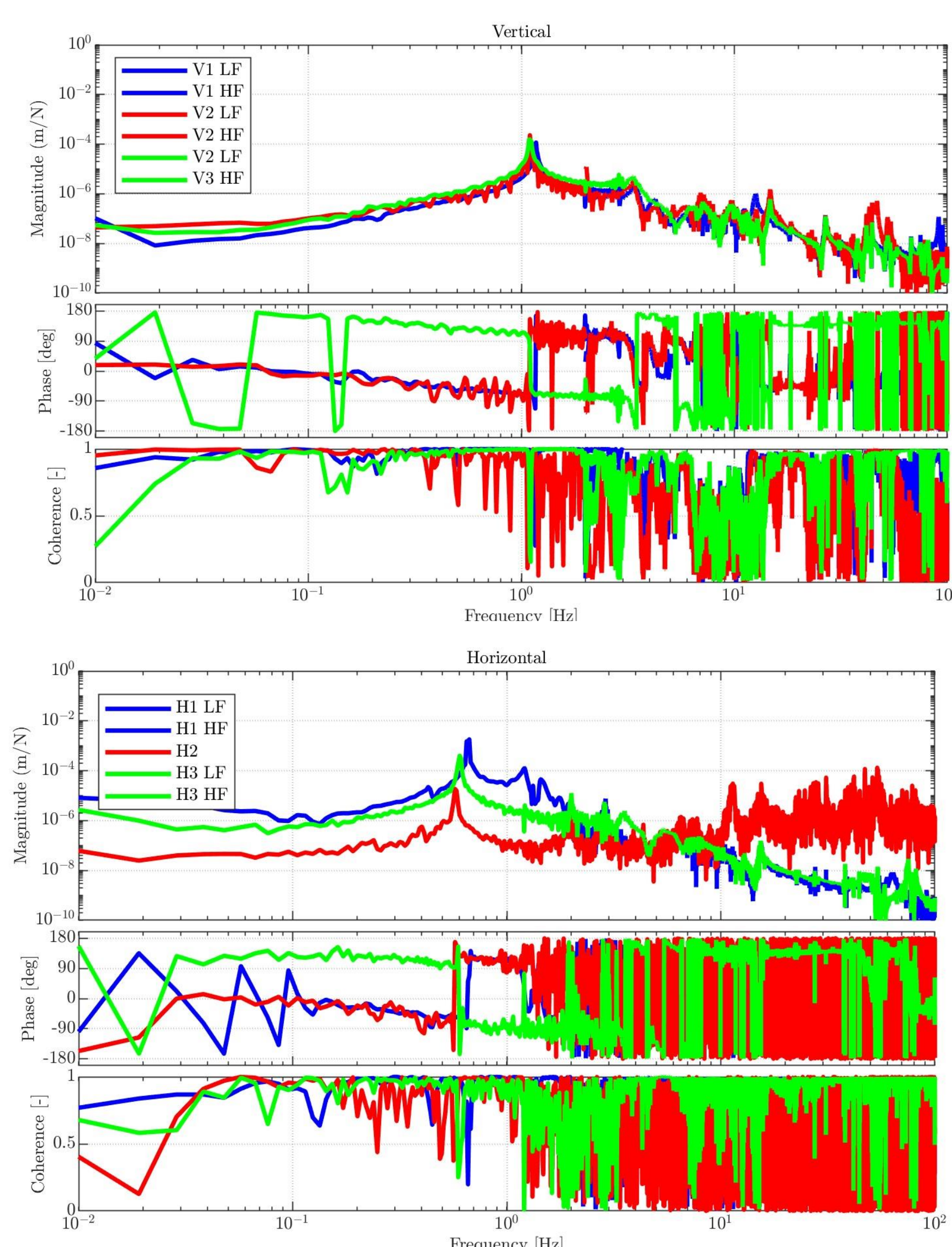
E-TEST project includes designing a low-frequency compact isolator system for a large silicon mirror (100 kg), implementing radiative cooling of the mirror at cryogenic temperatures (22 K), developing cryogenic sensors and electronics, and developing optical components and lasers operating in the range above 1500 nm. The launch of this project is early 2020 and the first run inside the vacuum chamber is late 2023.



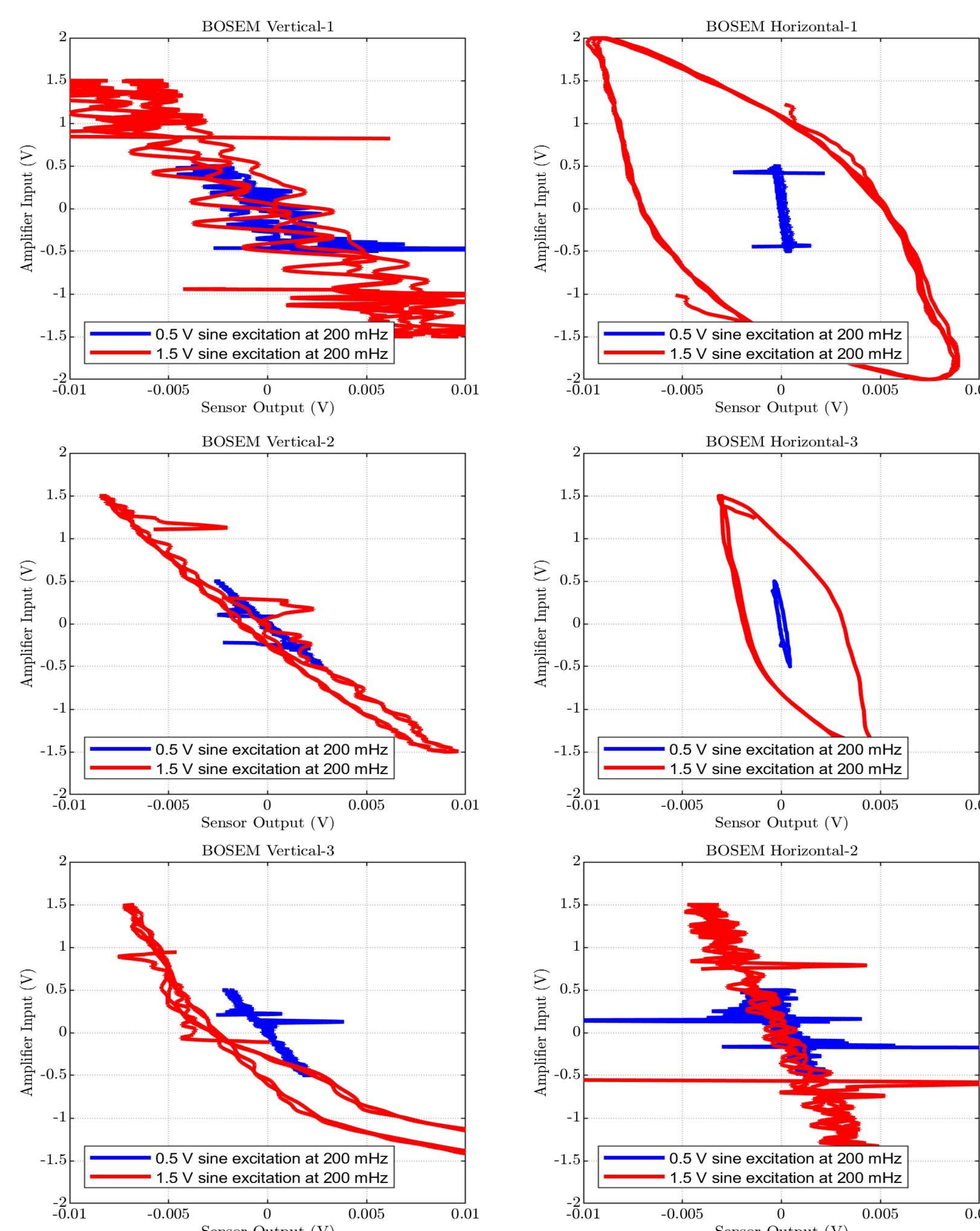
Abbreviation: AP: Active Inertial Platform, GAS: Geometric Anti-Spring, IPL: Inverted Pendulum Leg, IPP: Inverted Pendulum Platform, Mar: Marionette, CP: Cryostat+Cold Platform, Mir: Mirror, k: Stiffness, m: Mass, CW: Counter Weight

## Experimental Result – First Run November 2023

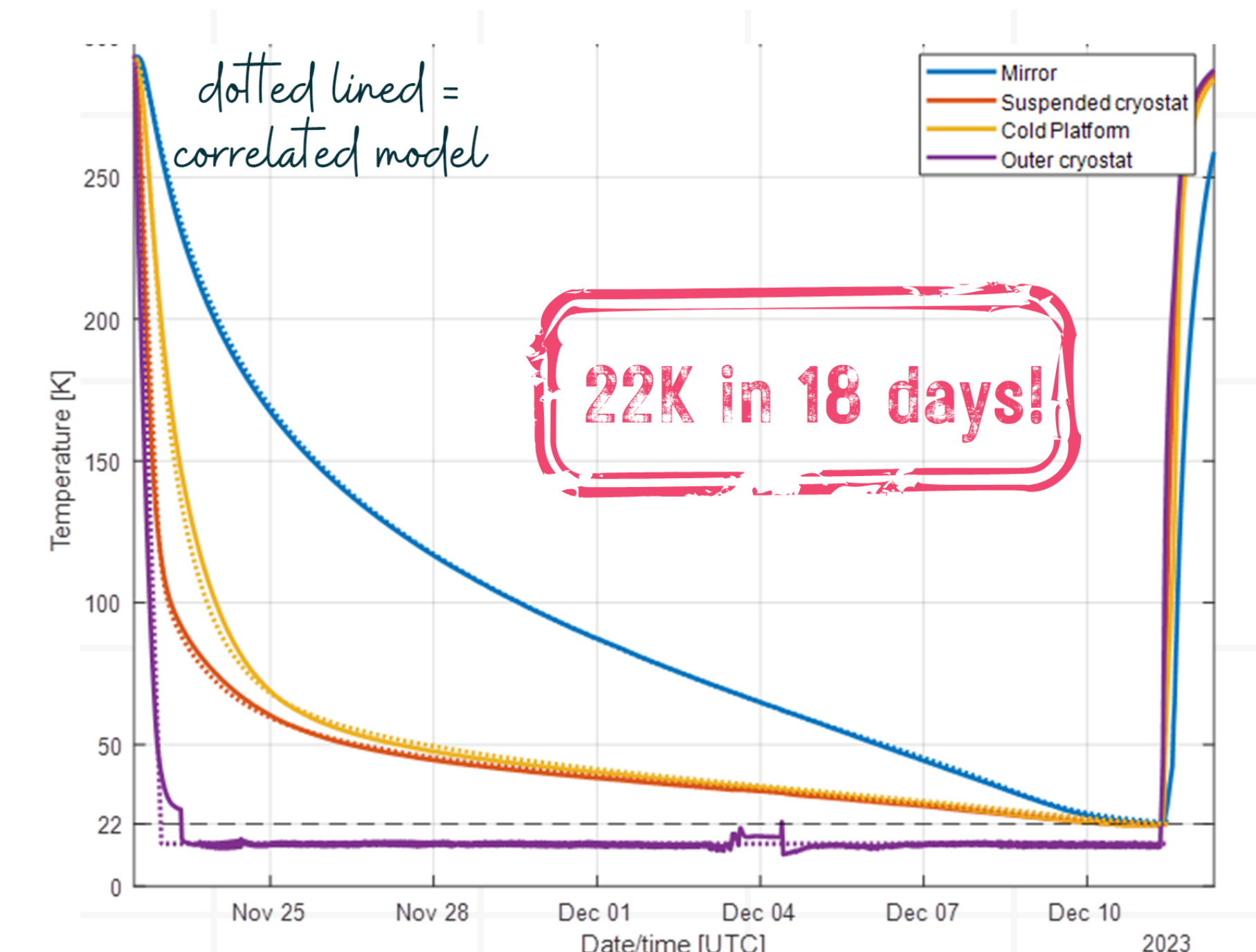
### Isolation System based inertial sensors Transfer Function (Sensor/Actuator)



### Sensor Friction



### Cooling System



## Acknowledgement

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