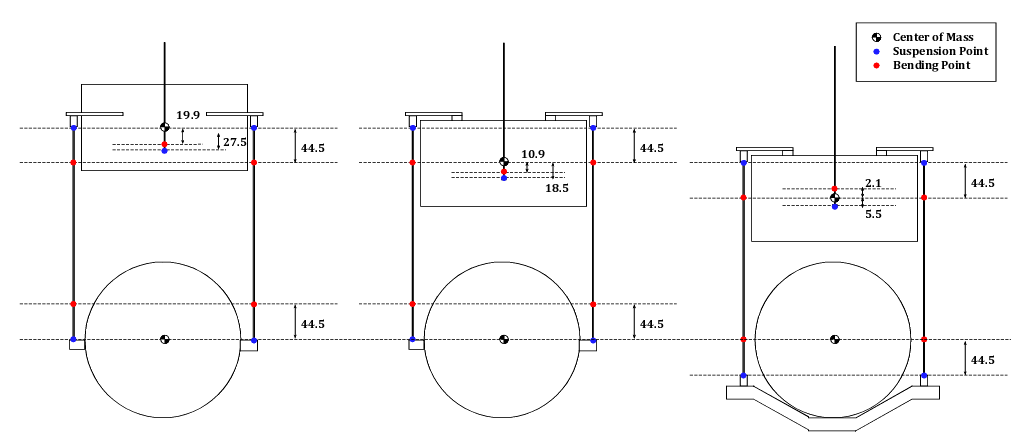
***JGW-T1402160-v1 Jan. 23, 2014***

**Actuator Response of Cryogenic Payload**

**with Different Suspension Points of Sapphire Fibers**

**Takanori Sekiguchi**

**1. Model**



**Left**: Suspension points are at CoM of IM and TM

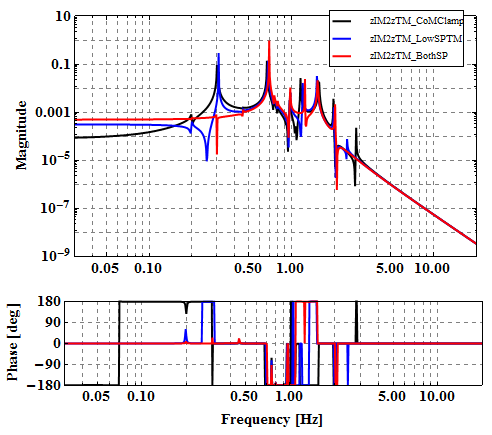
**Middle**: Upper bending points are at CoM of IM, lower suspension points are at CoM of TM

**Right**: Bending points are at CoM of IM and TM

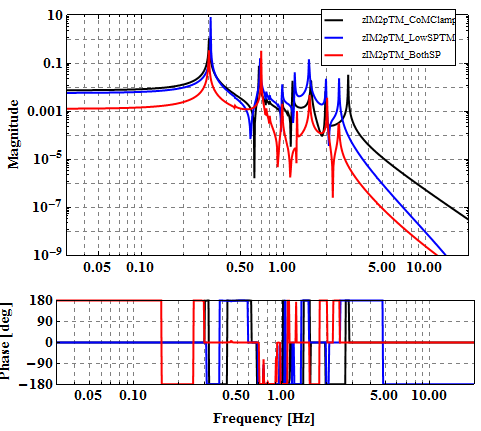
The pitch mode of IM is tuned at 0.3 Hz.

**2. Calculated TFs**

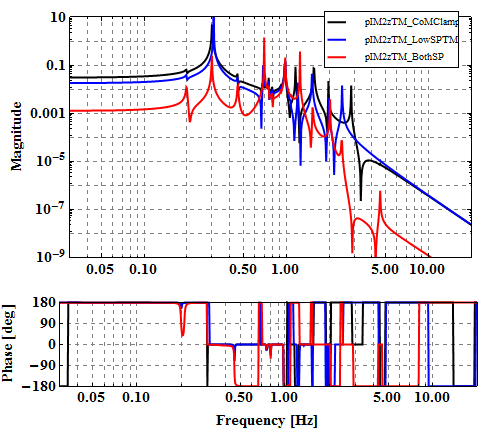
**2.1. FzIM to zTM [m/N]**



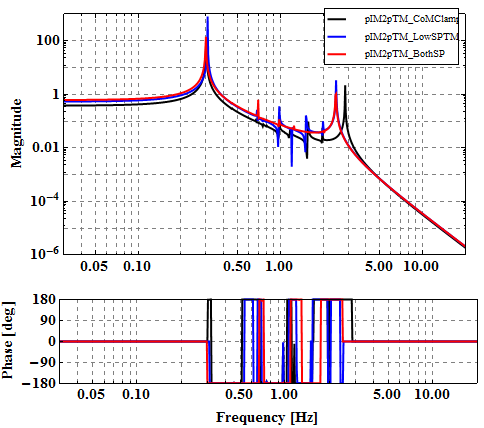
**2.2. FzIM to pitchTM [rad/N]**



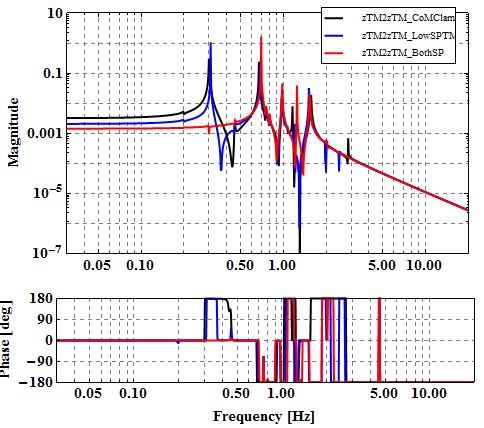
**2.3. TxIM to zTM [m/Nm]**



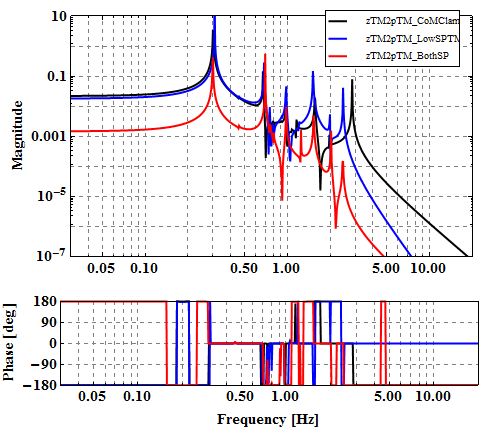
**2.4. TxIM to pitchTM [rad/Nm]**



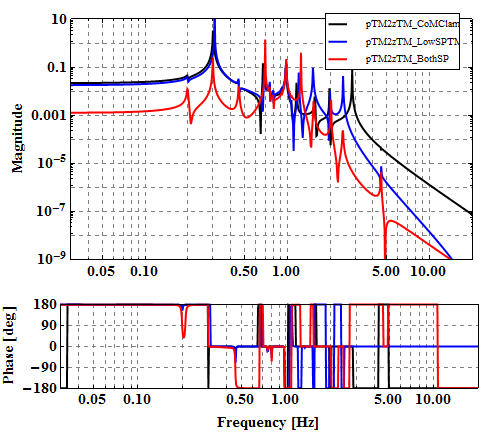
**2.5. FzTM to zTM [m/N]**



**2.6. FzTM to pitchTM [rad/N]**



**2.7. TxTM to zTM [m/Nm]**



**2.8. TxTM to pitchTM [rad/Nm]**

