

## Thruster Report

**Magnetic Field:** 133 mT  
**Anode Power:** 456 W  
**Anode Current:** 8.0 A  
**Propellant:** Argon 2.000 mg/s

**Thruster Details:** Nagoya magnet, LaB6 cathode, 1 mm orifice, copper anode, 80 mm internal diameter.

Thrust	Thrust Eff.	ISP	Total DOF	Coverage Factor	Exp. Uncertainty	Std. Uncertainty
6.9 mN	2.6 %	350.7 sec	10	2.13	3.1 mN	1.5 mN

### Thrust-Stand Uncertainty Components

	Scale	Hysteresis	Repeatability	Noise	Offset	Drift
Value	1.3 mN	0.5 mN	0.5 mN	0.2 mN	0.1 mN	0.0 mN
DOF	6	6	6	31	4	4

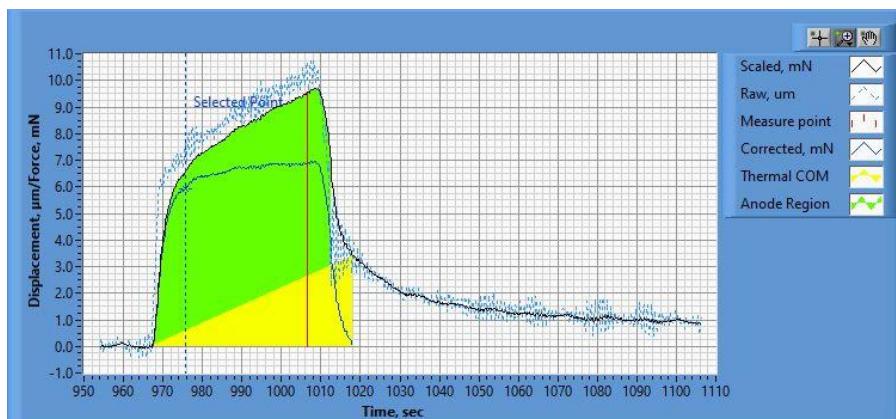


Figure 1. Thrust Plot

File Name: Philtech Data 2024.09.19\_17.32.56.csv

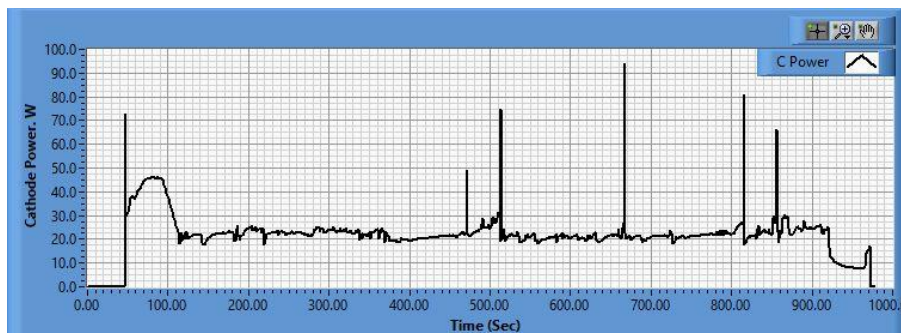
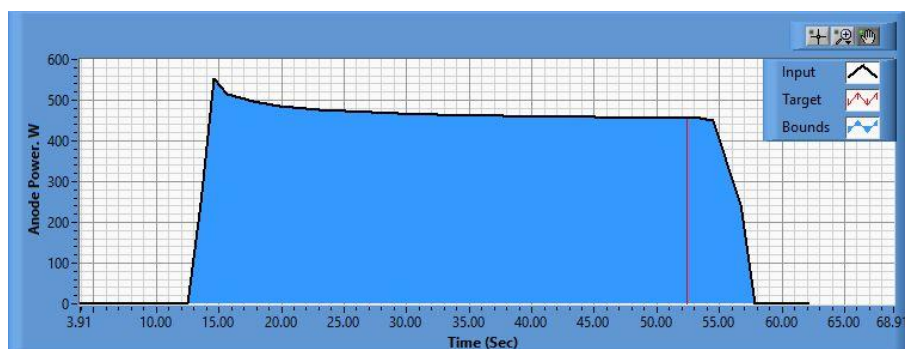


Figure 2. Cathode Power Plot

File Name: PSU C Data 2024.09.19\_17.33.42.csv

**Figure 3. Anode Power Plot**

File Name: PSU A Data 2024.09.19\_17.48.50.csv

**Pre-Cal. Information**

File Name: BaseLine\_Magnet\_Philtech Data 2024.09.19\_15.41.13.csv

Start/Stop times (24 h): 15:41:17 15:45:02

Sensitivity: 1.27  $\mu\text{m}/\text{mN}$ 

Offset	Drift	Scale Factor	Scale Std.Dev
0.005 mN	0.002 mN/s	0.789	1.555 mN

Plateau values:

Weight 0	Weight 1	Weight 2	Weight 3	Weight 4	Weight 5	Weight 4	Weight 3	Weight 2	Weight 1	Weight 0
-0.3 mN	12.9 mN	29.6 mN	40.7 mN	52.0 mN	68.0 mN	51.3 mN	40.0 mN	28.4 mN	11.9 mN	-0.1 mN

**Post-Cal. Information**

File Name: Philtech Data 2024.09.19\_17.32.56.csv

Start/Stop times (24 h): 17:53:08 17:56:53

Sensitivity: 1.27  $\mu\text{m}/\text{mN}$ 

Offset	Drift	Scale Factor	Scale Std.Dev
-5.476 mN	0.003 mN/s	0.788	1.255 mN

Plateau values:

Weight 0	Weight 1	Weight 2	Weight 3	Weight 4	Weight 5	Weight 4	Weight 3	Weight 2	Weight 1	Weight 0
-0.3 mN	12.9 mN	27.8 mN	40.6 mN	51.6 mN	68.1 mN	51.0 mN	39.8 mN	26.4 mN	11.7 mN	-0.2 mN

