**Thruster Report**

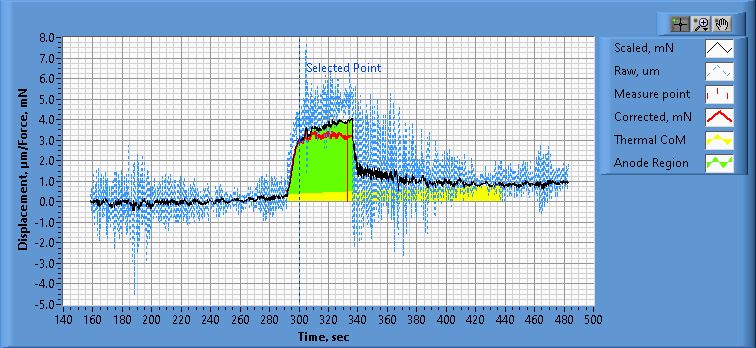
|  |  |
| --- | --- |
| **Thruster Ratio:** | **1.200** |
| **Magnetic Field:** | **265 mT** |
| **Anode Power:** | **166 W** |
| **Anode Current:** | **2.0 A** |
| **Anode Energy:** | **6999.9 J** |
| **Propellant:** | **Argon 0.500 mg/s** |

**Thruster Details: Nagoya magnet, LaB6 cathode, 1 mm orifice, copper anode, 80 mm internal diameter. CoM correction method: Anode Energy, Pre-offset 0.0 s, Post-offset 100.0 s, Cold-Gas thrust 0.1 mN**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Thrust | Thrust Eff. | ISP | Total DOF | Coverage Factor | Exp. Uncertainty | Std. Uncertainty |
| 3.2 mN | 6.0 % | 642.5 sec | 14 | 2.11 | 2.5 mN | 1.2 mN |

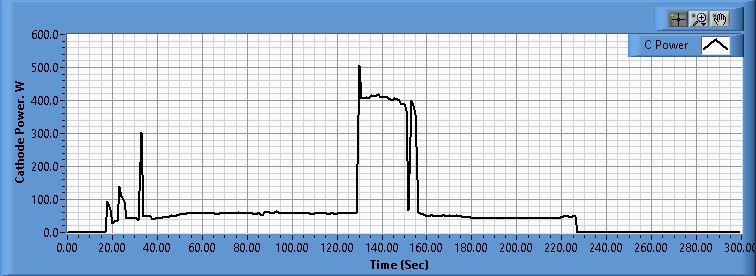
**Thrust-Stand Uncertainty Components**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Weights | Scale | Hysteresis | Repeatability | Noise | Offset | Drift |
| Value | 0.0 mN | 1.0 mN | 0.3 mN | 0.3 mN | 0.4 mN | 0.4 mN | 0.2 mN |
| DOF | 30 | 6 | 6 | 6 | 31 | 4 | 4 |

****

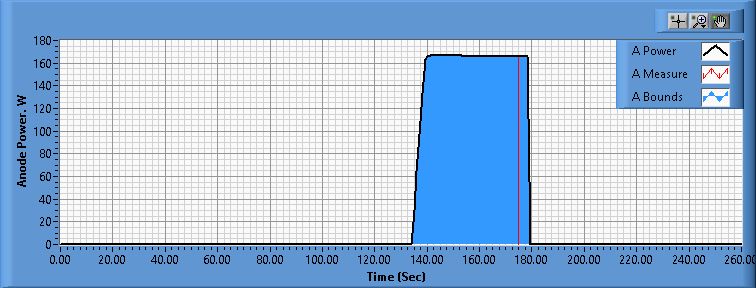
**Figure 1. Thrust Plot**

File Name: Philtech Data 2025.04.09\_16.42.40.csv



**Figure 2. Cathode Power Plot**

File Name: PSU C Data 2025.04.09\_16.44.38.csv



**Figure 3. Anode Power Plot**

File Name: PSU A Data 2025.04.09\_16.45.18.csv

**Pre-Cal. Information**

File Name: Magnet\_On\_Flow\_05\_Philtech Data 2025.04.09\_12.22.27.csv

Start/Stop times (24 h): 12:22:33 12:26:19

Sensitivity: 1.49 um/mN

|  |  |  |  |
| --- | --- | --- | --- |
| Offset | Drift | Scale Factor | Scale Std.Dev |
| 0.951 mN | -0.021 mN/s | 0.672 | 1.225 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 | 22.6 mN | 39.3 mN | 59.5 mN | 79.6 mN | 101.0 mN | 79.8 mN | 59.5 mN | 39.2 mN | 21.8 mN | -0.3 mN |

**Post-Cal. Information**

File Name: Philtech Data 2025.04.09\_16.42.40.csv

Start/Stop times (24 h): 16:51:50 16:55:32

Sensitivity: 1.47 um/mN

|  |  |  |  |
| --- | --- | --- | --- |
| Offset | Drift | Scale Factor | Scale Std.Dev |
| -2.296 mN | -0.027 mN/s | 0.678 | 1.094 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 | 21.4 mN | 38.8 mN | 58.8 mN | 79.9 mN | 100.8 mN | 79.8 mN | 58.7 mN | 38.0 mN | 20.7 mN | -1.1 mN |