**Thruster Report**

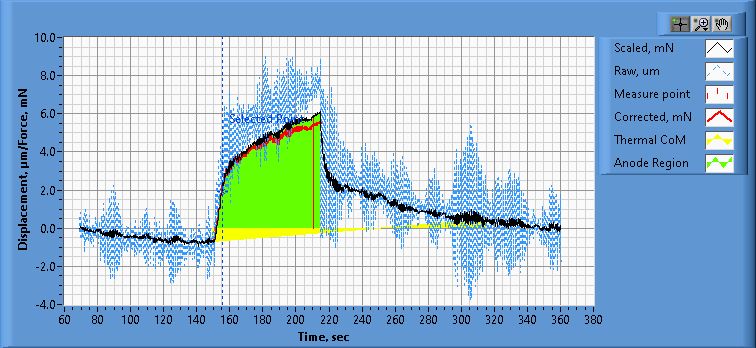
|  |  |
| --- | --- |
| **Thruster Ratio:** | **1.200** |
| **Magnetic Field:** | **500 mT** |
| **Anode Power:** | **333 W** |
| **Anode Current:** | **2.0 A** |
| **Anode Energy:** | **21247.0 J** |
| **Propellant:** | **Argon 0.499 mg/s** |

**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 |
| 5.4 mN | 8.7 % | 1097.7 sec | 21 | 2.08 | 4.9 mN | 2.4 mN |

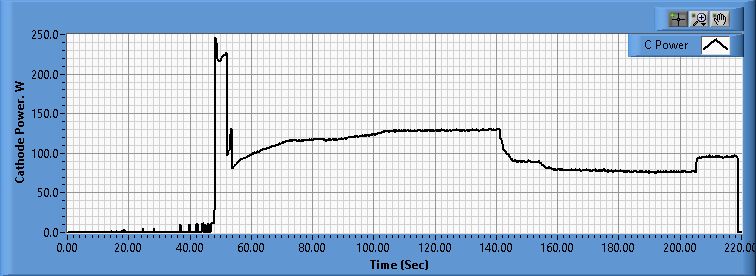
**Thrust-Stand Uncertainty Components**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Weights | Scale | Hysteresis | Repeatability | Noise | Offset | Drift |
| Value | 0.0 mN | 1.1 mN | 0.6 mN | 0.2 mN | 1.3 mN | 0.5 mN | 1.5 mN |
| DOF | 30 | 6 | 6 | 6 | 31 | 4 | 4 |

****

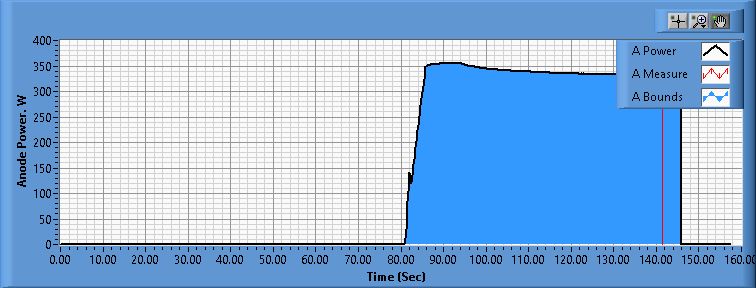
**Figure 1. Thrust Plot**

File Name: Philtech Data 2025.04.16\_23.03.52.csv



**Figure 2. Cathode Power Plot**

File Name: PSU C Data 2025.04.16\_23.04.02.csv



**Figure 3. Anode Power Plot**

File Name: PSU A Data 2025.04.16\_23.05.01.csv

**Pre-Cal. Information**

File Name: Philtech Data 2025.04.10\_11.46.21.csv

Start/Stop times (24 h): 11:46:28 11:50:13

Sensitivity: 1.53 um/mN

|  |  |  |  |
| --- | --- | --- | --- |
| Offset | Drift | Scale Factor | Scale Std.Dev |
| -0.151 mN | -0.033 mN/s | 0.656 | 1.436 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 |
| -0.7 mN | 21.4 mN | 37.8 mN | 57.5 mN | 78.6 mN | 100.8 mN | 78.9 mN | 57.6 mN | 37.9 mN | 20.4 mN | -1.7 mN |

**Post-Cal. Information**

File Name: Philtech Data 2025.04.16\_23.03.52.csv

Start/Stop times (24 h): 23:10:38 23:14:31

Sensitivity: 1.47 um/mN

|  |  |  |  |
| --- | --- | --- | --- |
| Offset | Drift | Scale Factor | Scale Std.Dev |
| 0.014 mN | -0.001 mN/s | 0.679 | 1.495 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 |
| -0.6 mN | 20.8 mN | 37.7 mN | 58.4 mN | 78.4 mN | 100.7 mN | 77.6 mN | 57.9 mN | 37.2 mN | 20.8 mN | -0.6 mN |