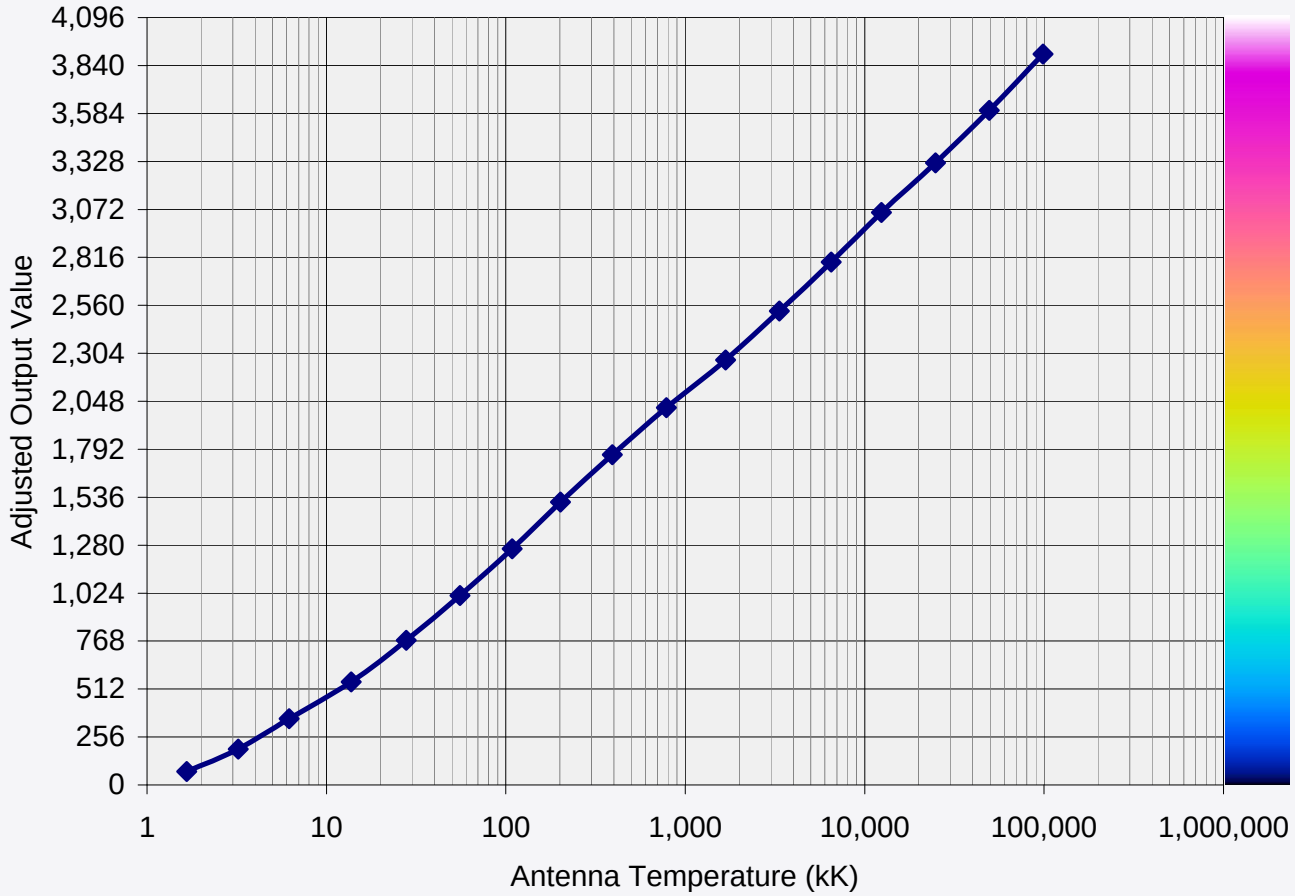
Heliotown FSX-4 (12-bit) Spectrograph Step Calibration – 02-Oct-2013

Adjusted Output Value & Color vs Antenna Temperature for 1.3 dB Feed Loss

Color Bar Corresponds to RSS Color Offset = 1600, Color Gain = 1.80

Adjusted Output Value = (Raw ADC Output Value - Color Offset) * Color Gain



Heliotown FSX-4 (12-bit) Spectrograph Step Calibration

02-Oct-2013 12:51 UTC

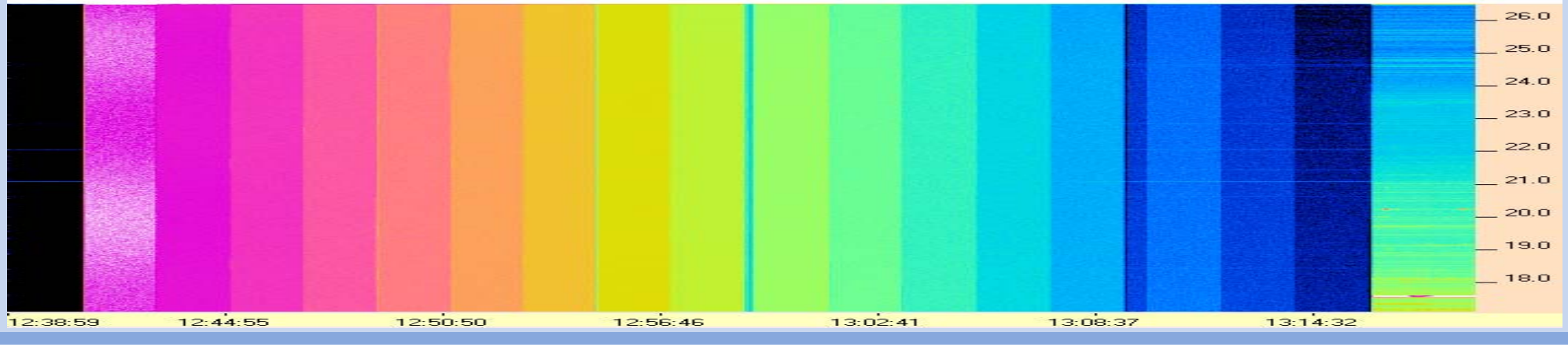
HP461A noise source + Kay 431D step attenuator

Calibration Plane: Spectrograph Input

T0 (K)	290
Noise source temperature (MK)	74.8
Feed loss, cal plane to antenna (dB)	1.3
Receiver noise figure (dB)	6.0

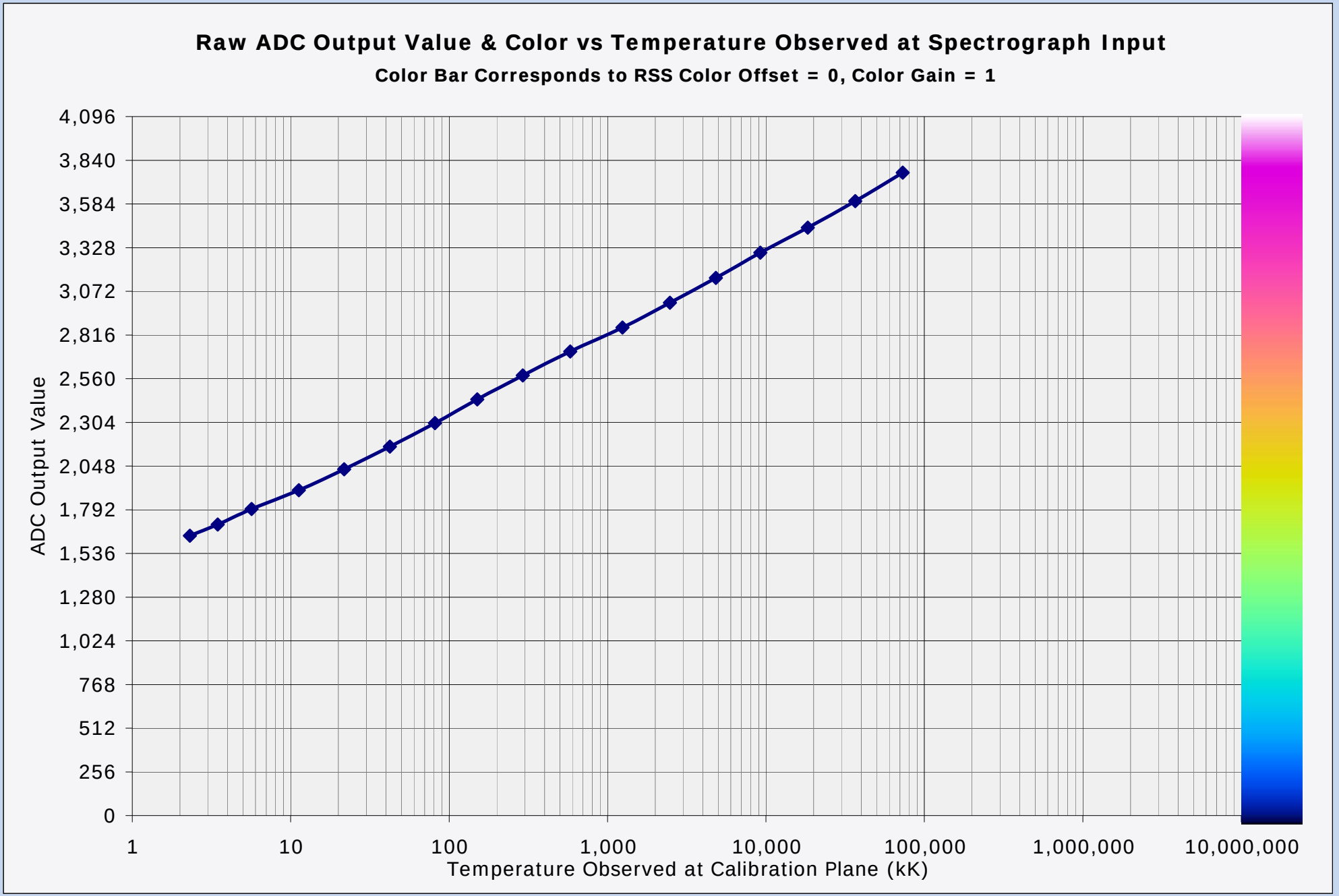
Att. dB	Source Temp (kK)	Equiv. Ant. Temp. (kK)	50 s Avg. @ Average MHz
0.1	73,098	**98,606**	**3767**
3.1	36,636	**49,420**	**3600**
6.1	18,362	**24,769**	**3445**
9.1	9,204	**12,414**	**3298**
11.9	4,831	**6,515**	**3151**
14.8	2,478	**3,341**	**3005**
17.8	1,243	**1,675**	**2860**
21.1	582	**783**	**2719**
24.1	292	**393**	**2579**
27.0	150	**201**	**2439**
29.7	81	**108**	**2300**
32.6	42	**56**	**2162**
35.6	22	**28**	**2029**
38.7	11	**14**	**1906**
42.2	6	**6**	**1796**
45.1	3	**3**	**1706**
48.1	2	**2**	**1640**

RSS Color Offset:	**1600**	**1600**	**0.00**	**0.00**
RSS Color Gain:	**1.80**	**1.80**	**1.00**	**1.00**
	Solar ↓	**Jupiter** ↓	**Custom 1** ↓	**Custom 2** ↓
	Adjusted Value	**Adjusted Value**	**Adjusted Value**	**Adjusted Value**
	3901	3901	3767	3767
	3600	3600	3600	3600
	3321	3321	3445	3445
	3056	3056	3298	3298
	2792	2792	3151	3151
	2529	2529	3005	3005
	2268	2268	2860	2860
	2014	2014	2719	2719
	1762	1762	2579	2579
	1510	1510	2439	2439
	1260	1260	2300	2300
	1012	1012	2162	2162
	772	772	2029	2029
	551	551	1906	1906
	353	353	1796	1796
Image Below	191	191	1706	1706
Offset: 1600	72	72	1640	1640
Gain: 1.80				



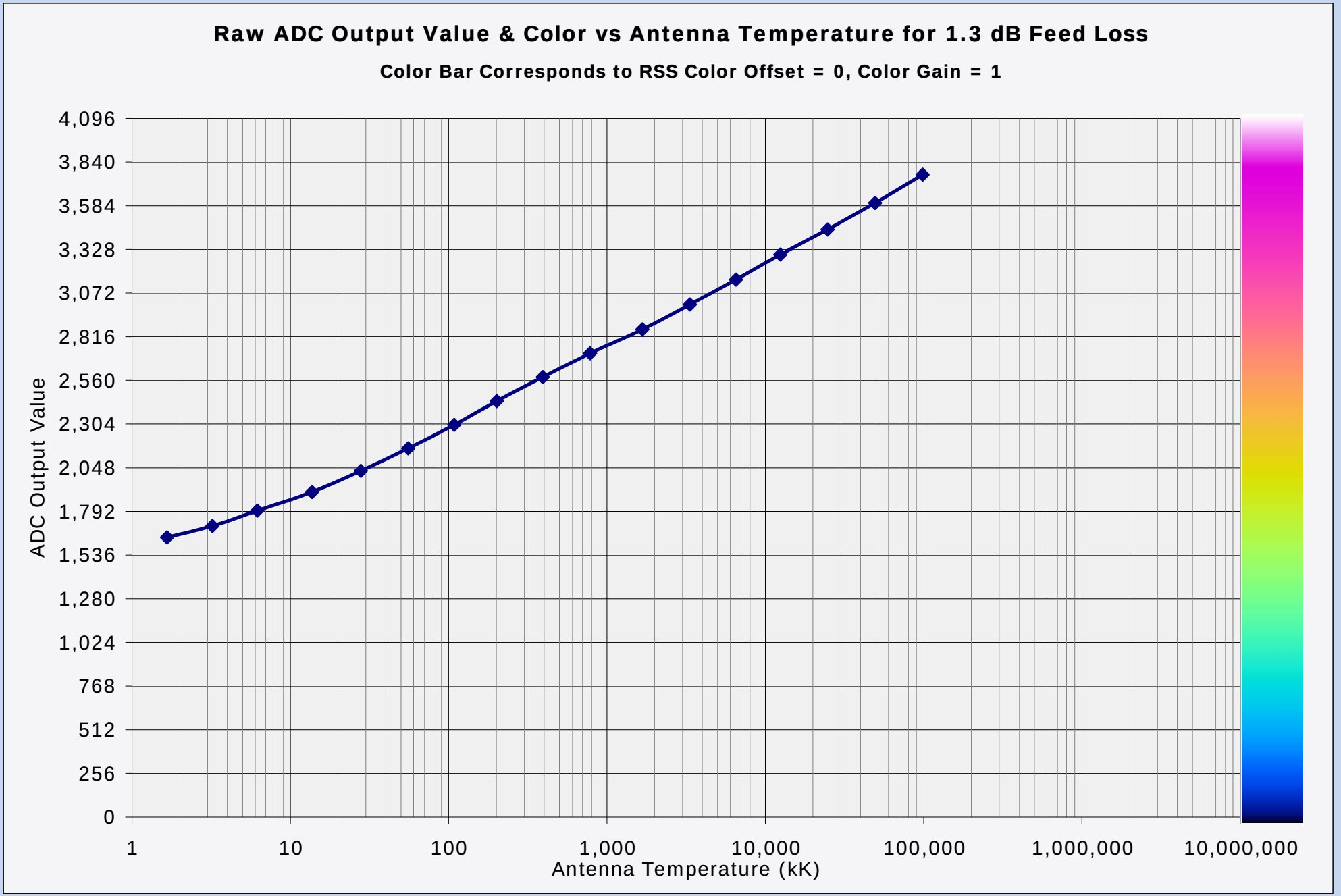
Heliotown FSX-4 (12-bit) Spectrograph Step Calibration

02-Oct-2013 12:51 UTC



Heliotown FSX-4 (12-bit) Spectrograph Step Calibration

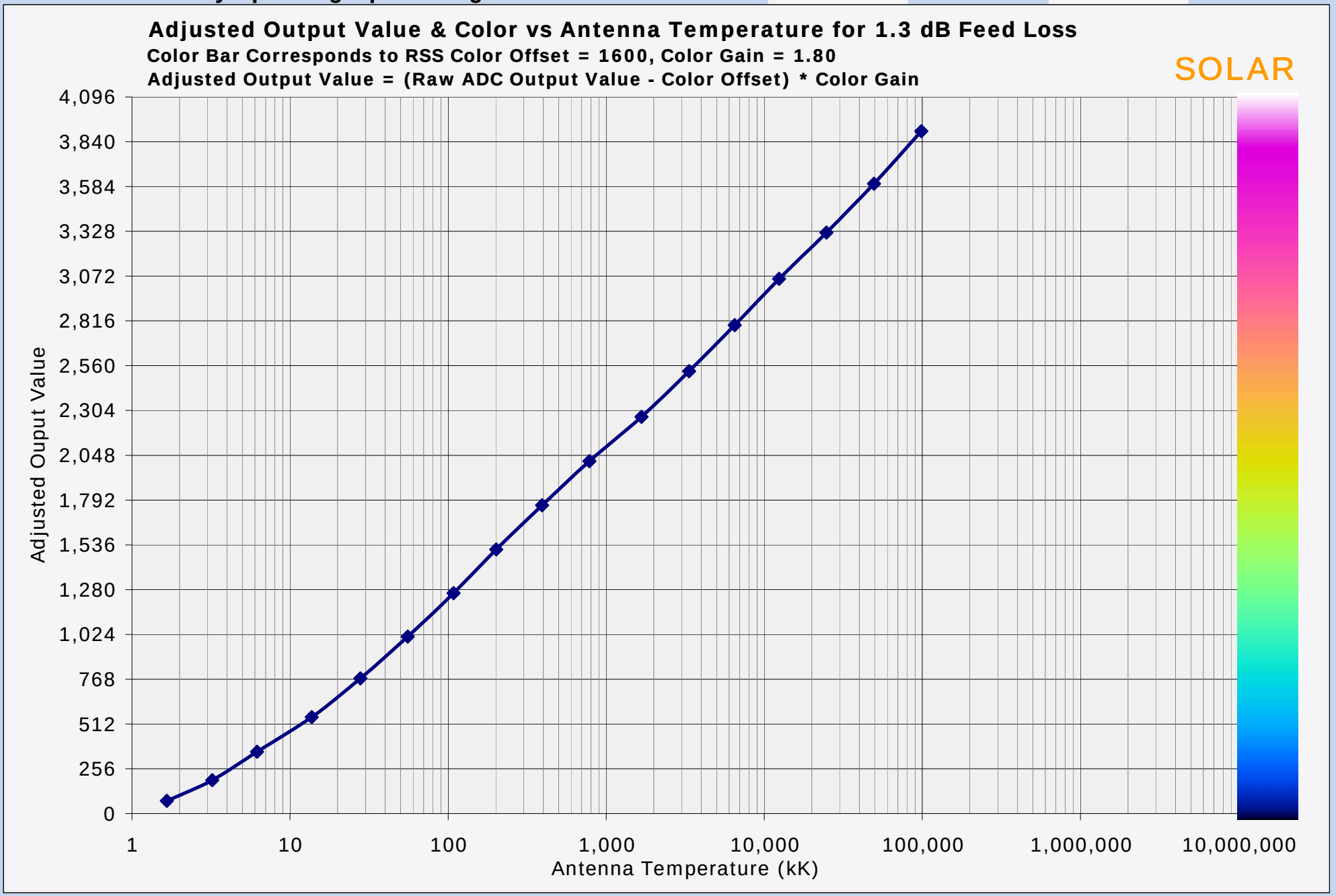
02-Oct-2013 12:51 UTC



Heliotown FSX-4 (12-bit) Spectrograph Step Calibration

02-Oct-2013 12:51 UTC

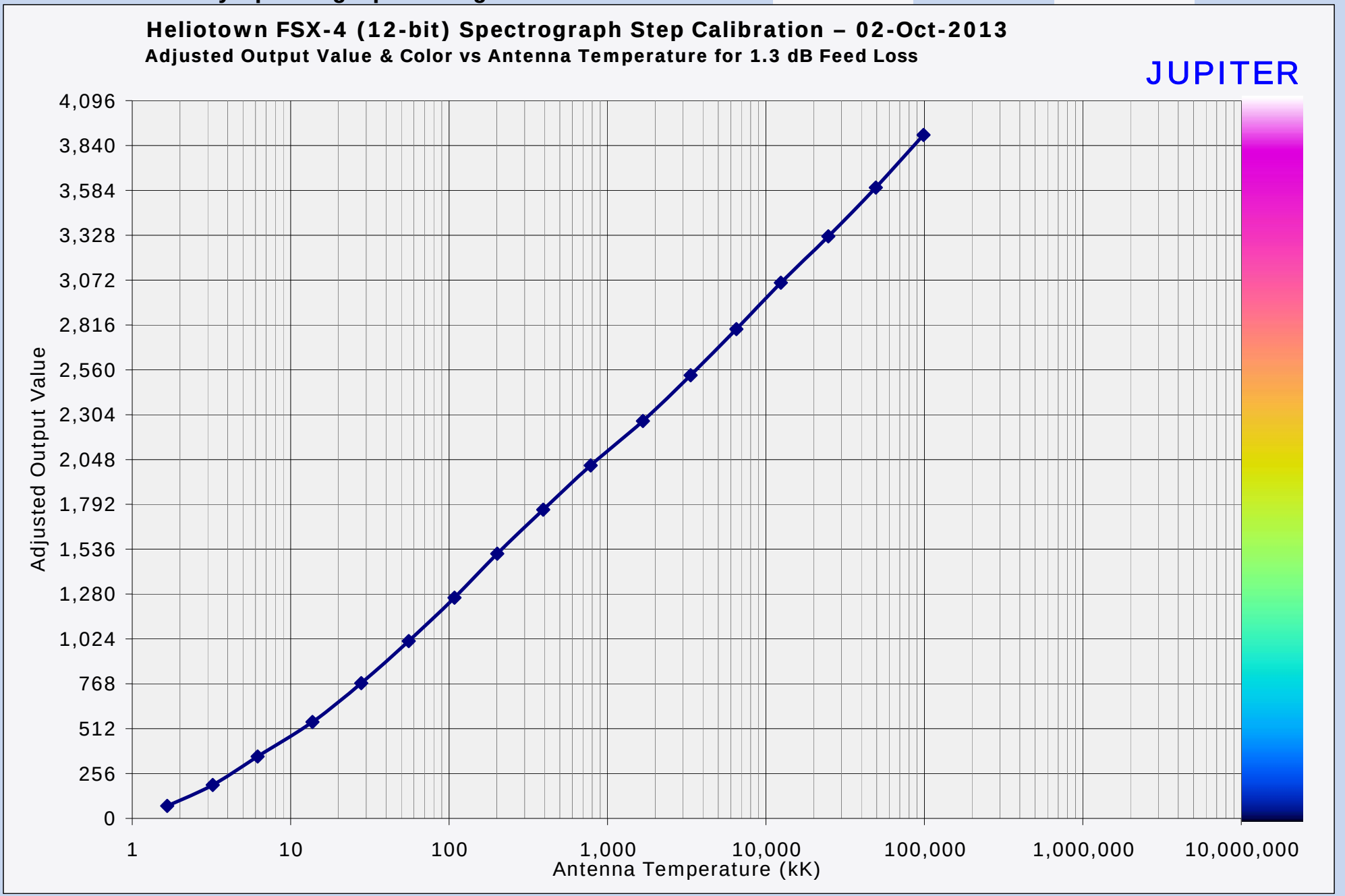
Radio-Sky Spectrograph Configuration: **Offset:** 1600 **Gain:** 1.80



Heliotown FSX-4 (12-bit) Spectrograph Step Calibration

02-Oct-2013 12:51 UTC

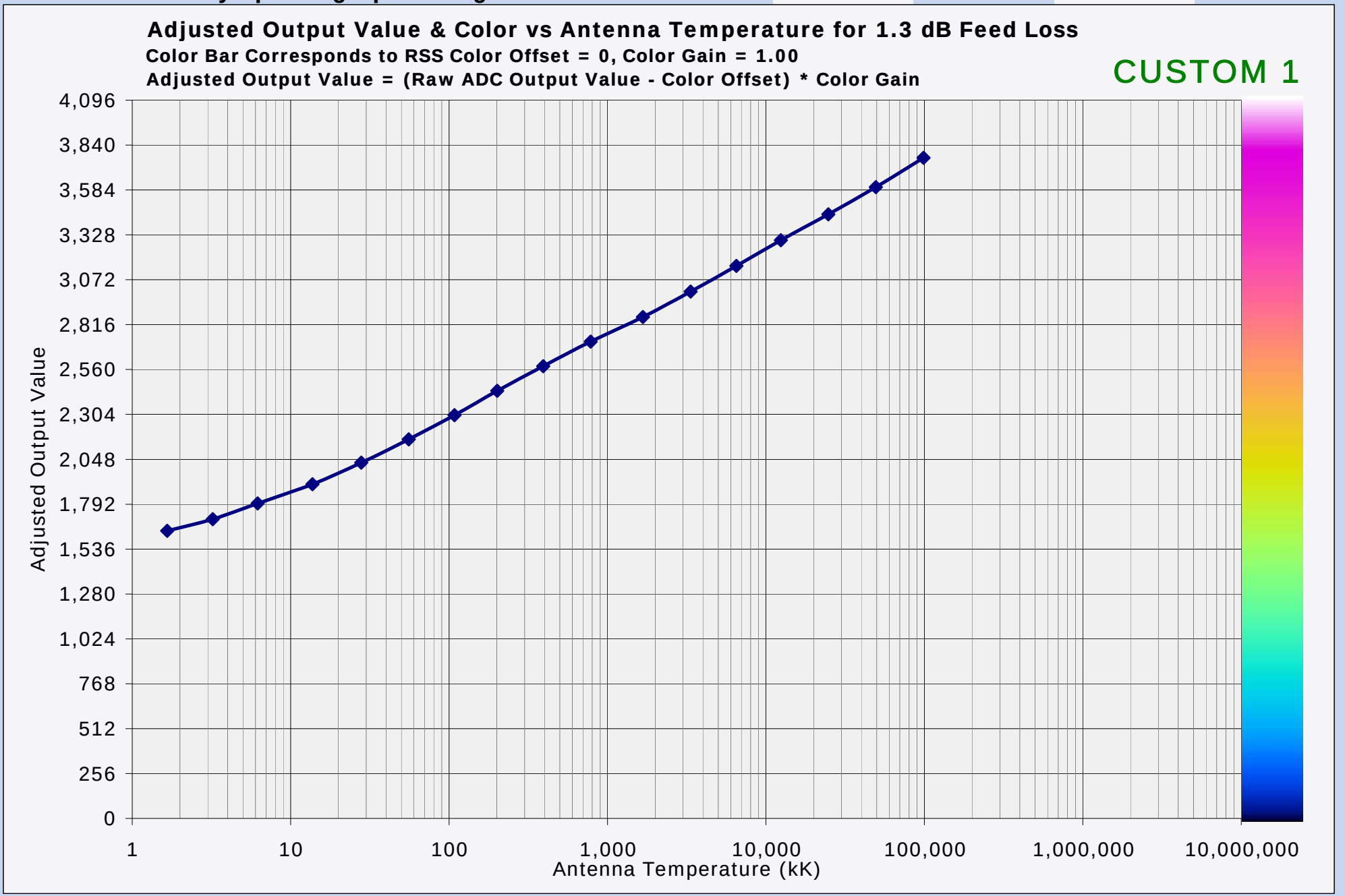
Radio-Sky Spectrograph Configuration: **Offset:** 1600 **Gain:** 1.80



Heliotown FSX-4 (12-bit) Spectrograph Step Calibration

02-Oct-2013 12:51 UTC

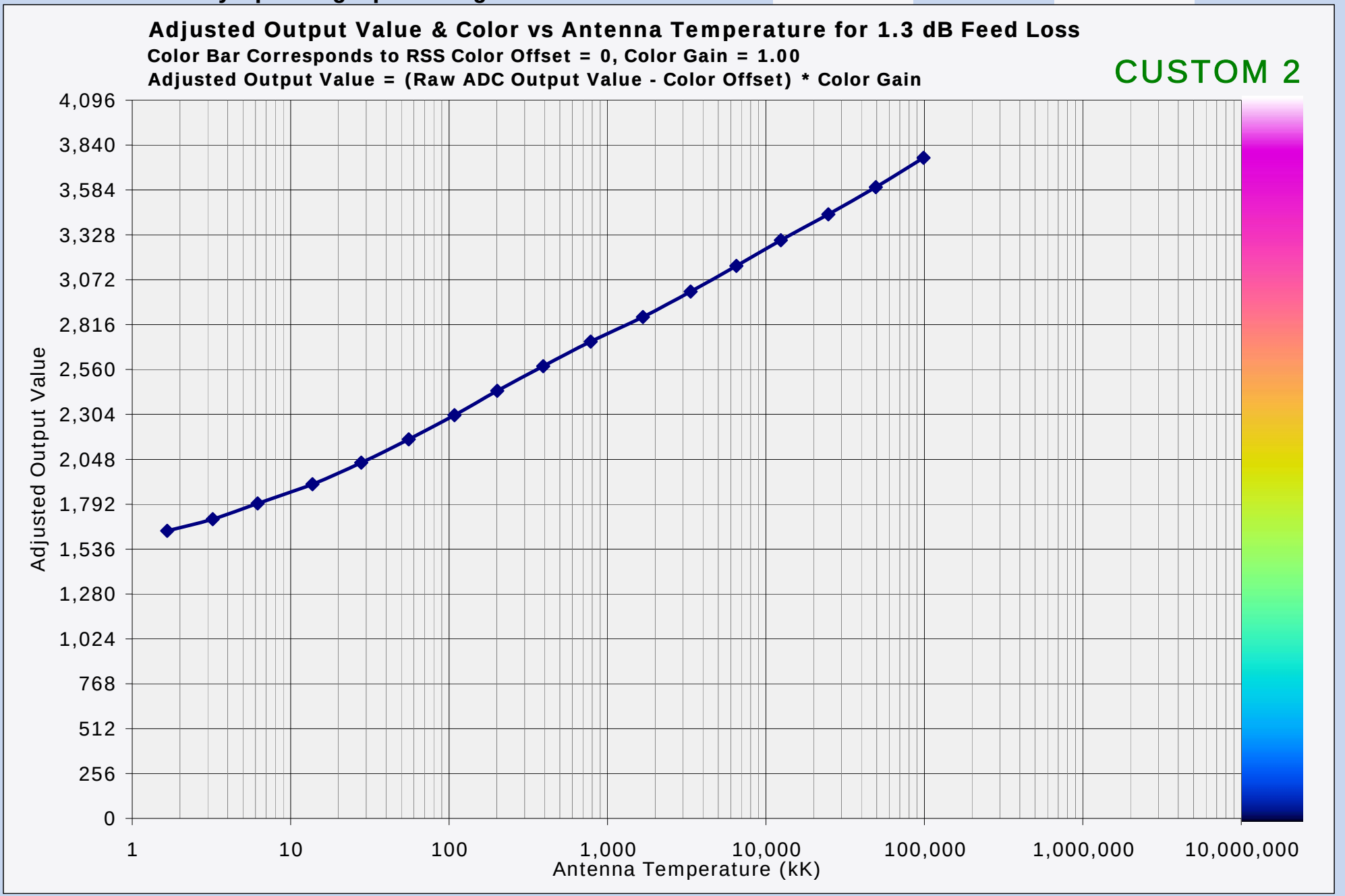
Radio-Sky Spectrograph Configuration: **Offset:** 0 **Gain:** 1.00



Heliotown FSX-4 (12-bit) Spectrograph Step Calibration

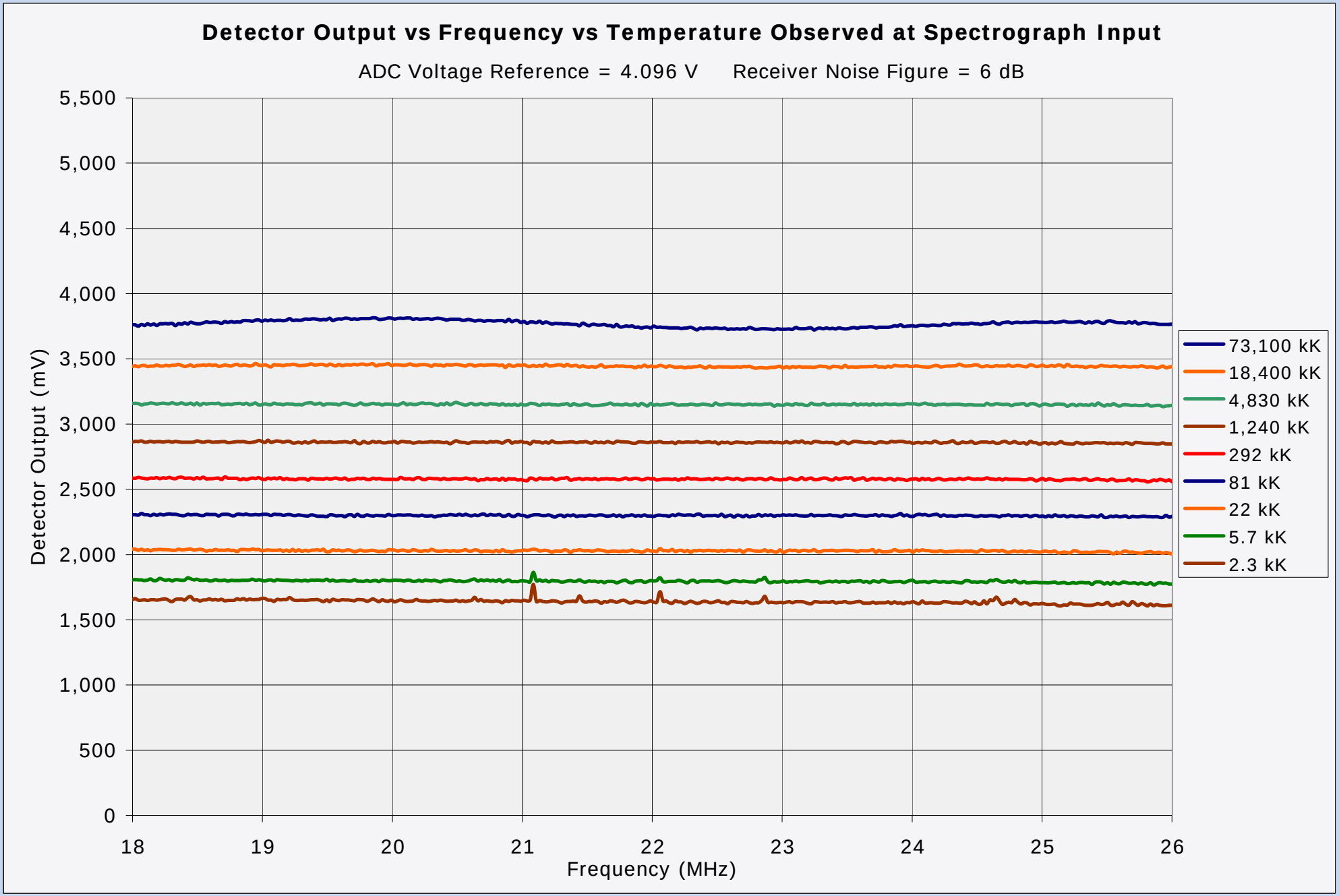
02-Oct-2013 12:51 UTC

Radio-Sky Spectrograph Configuration: **Offset:** 0 **Gain:** 1.00



Heliotown FSX-4 (12-bit) Spectrograph Step Calibration

02-Oct-2013 12:51 UTC



Heliotown FSX-4 (12-bit) Spectrograph Step Calibration

02-Oct-2013 12:51 UTC

