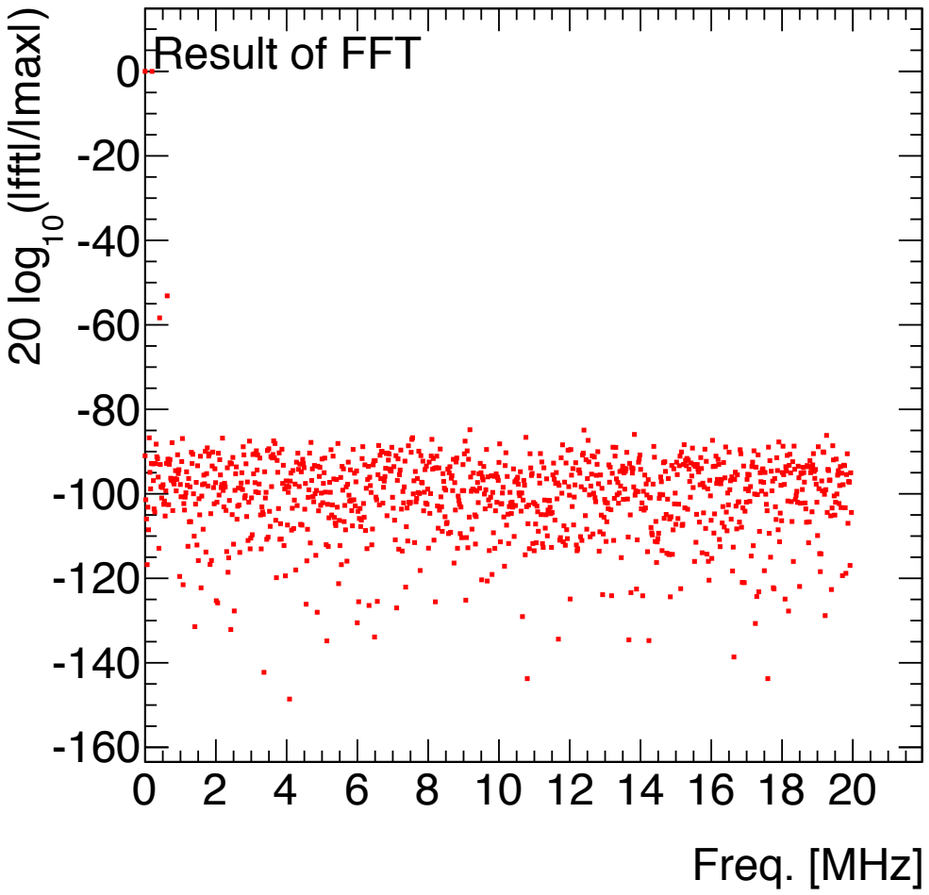
ADC June 2nd

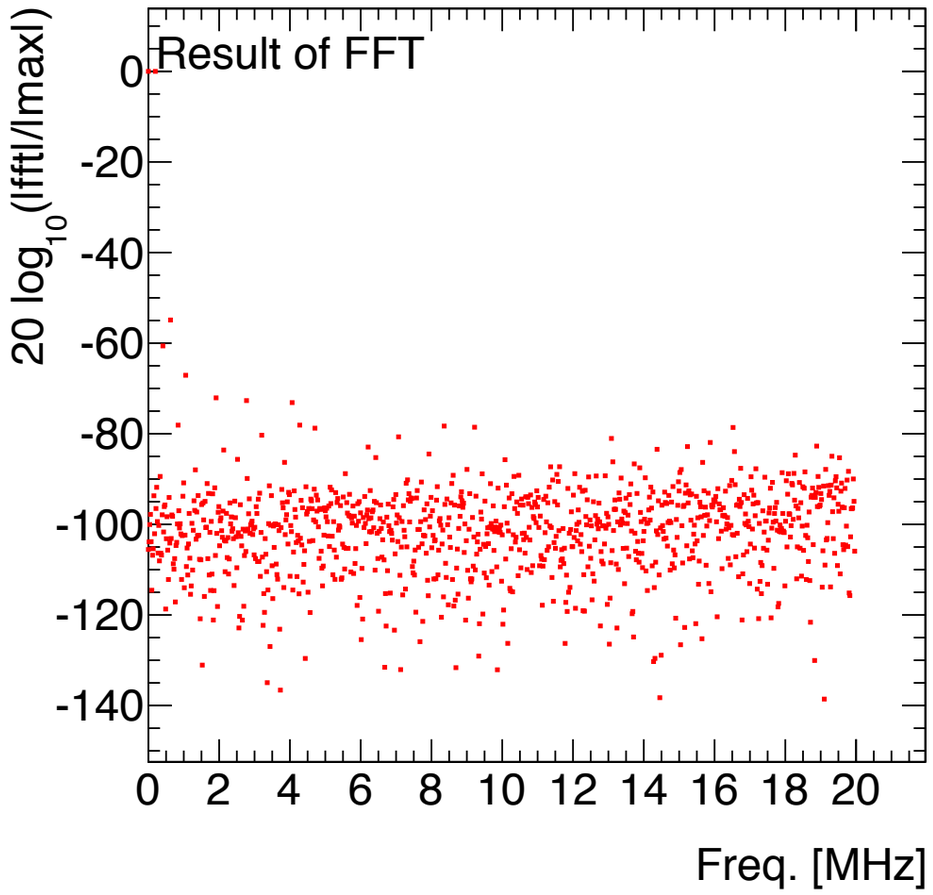
- Each number is the average of 5 runs. Calibration is redone for each change of frequency for mg and hg.

freq [Mhz]	gain (med/high)	volts [V]	com./nevis	ENOB	SINAB	NoiseFloor	SFDR
18	mg	0.5	Nevis10	8.34274	80.5027	100.88	52.9787
18	mg	0.5	comm.	9.23387	85.8673	91.6819	70.6424
18	hg	1	Nevis10	10.0872	91.0044	101.847	68.9976
18	hg	1	comm.	10.853	95.6146	102.906	76.5271
10	mg	0.5	Nevis10	8.84351	83.5173	95.7589	58.7525
10	mg	0.5	comm.	10.1068	91.1224	96.8693	74.4163
10	hg	1	Nevis10	10.1629	91.4601	103.286	68.2069
10	hg	1	comm.	11.158	97.4508	104.047	79.3689
0.2	mg	0.5	Nevis10	8.3536	80.5681	97.9763	51.491
0.2	mg	0.5	comm.	8.24586	79.9194	94.9974	50.4867
0.2	hg	1	Nevis10	6.30216	68.2184	84.4196	40.0367
0.2	hg	1	comm.	7.5372	75.6533	93.14	46.6063

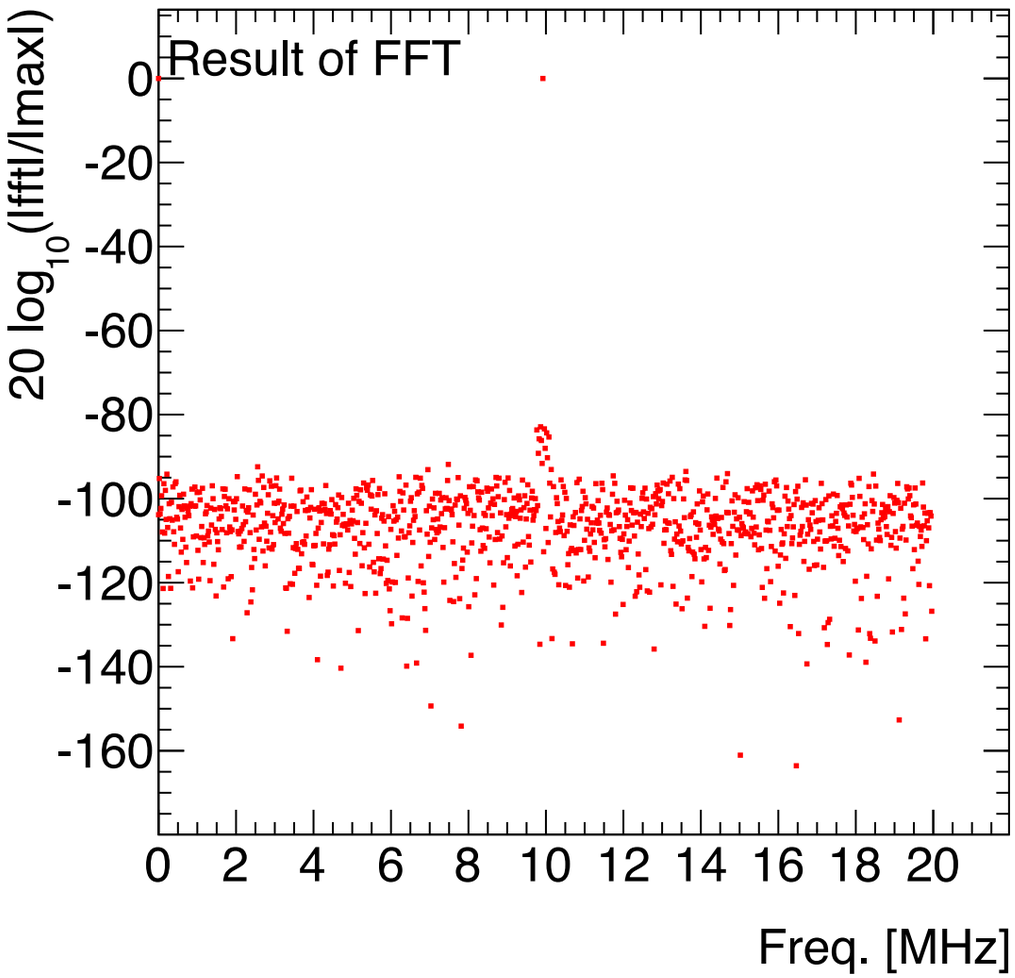
- the next slides have 1 example fft for each point. in == commercial adc, out== nevis10

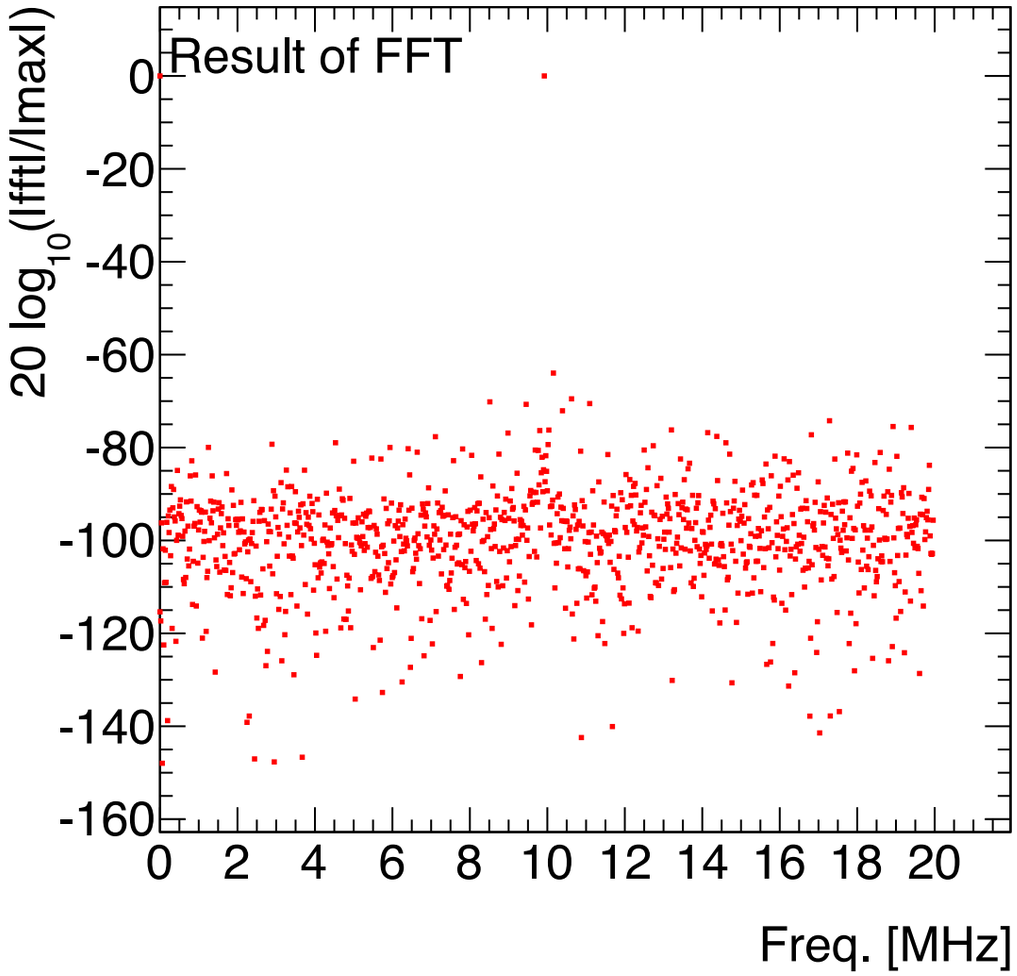
- hg 0.2 Mhz in out



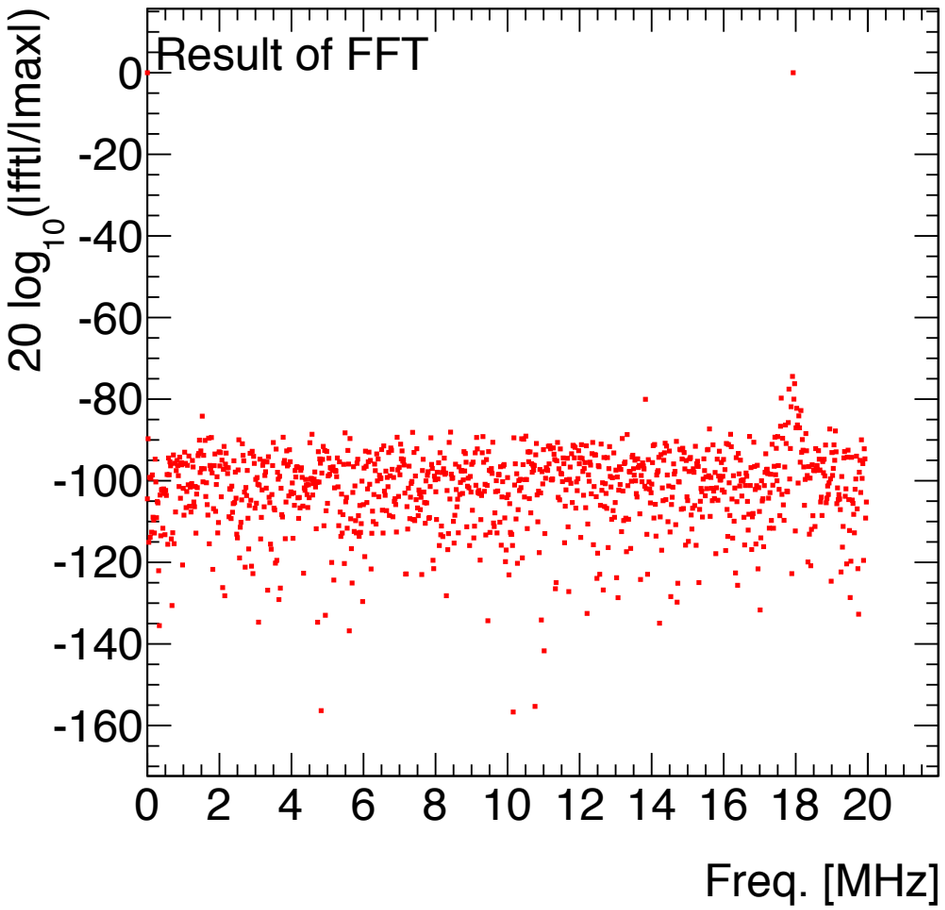


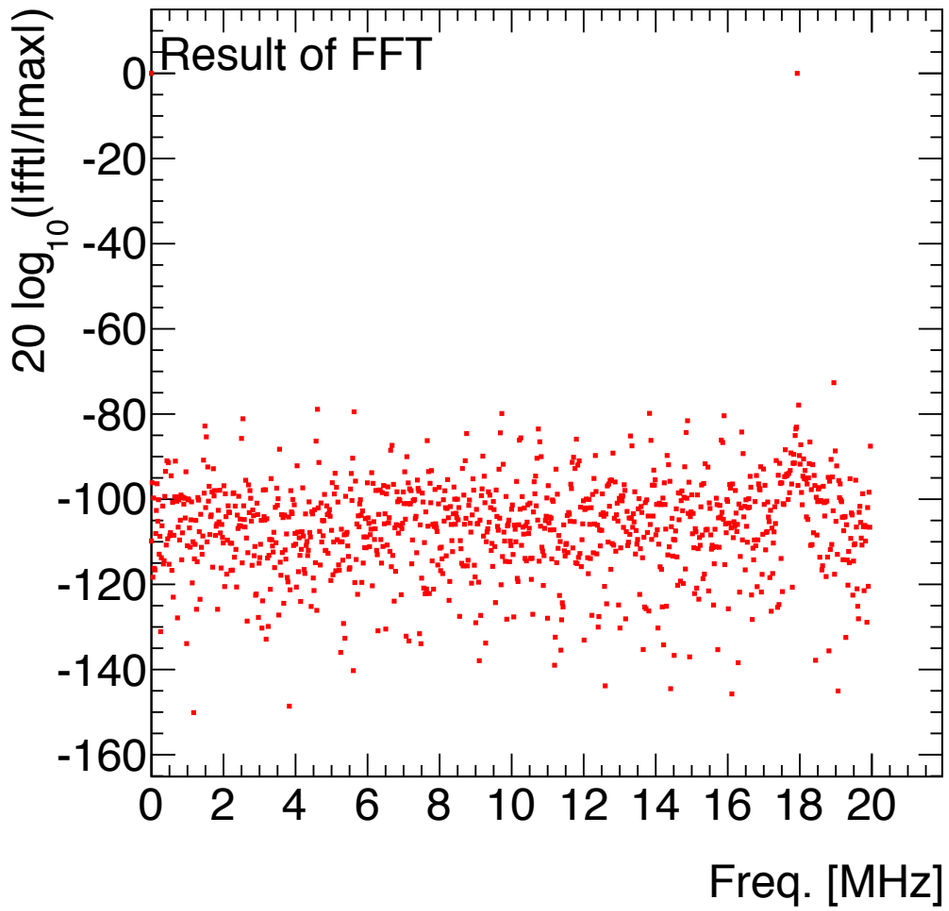
- hg 10 Mhz in out



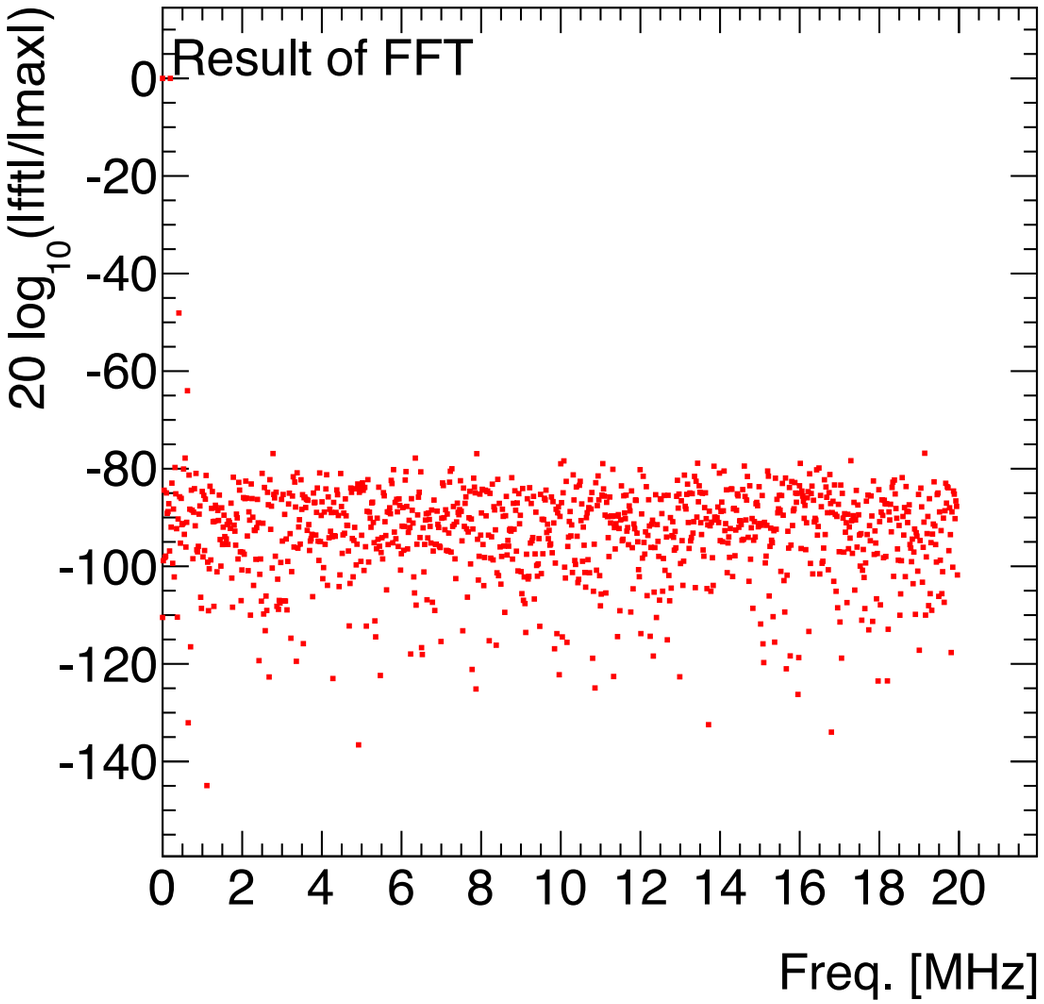


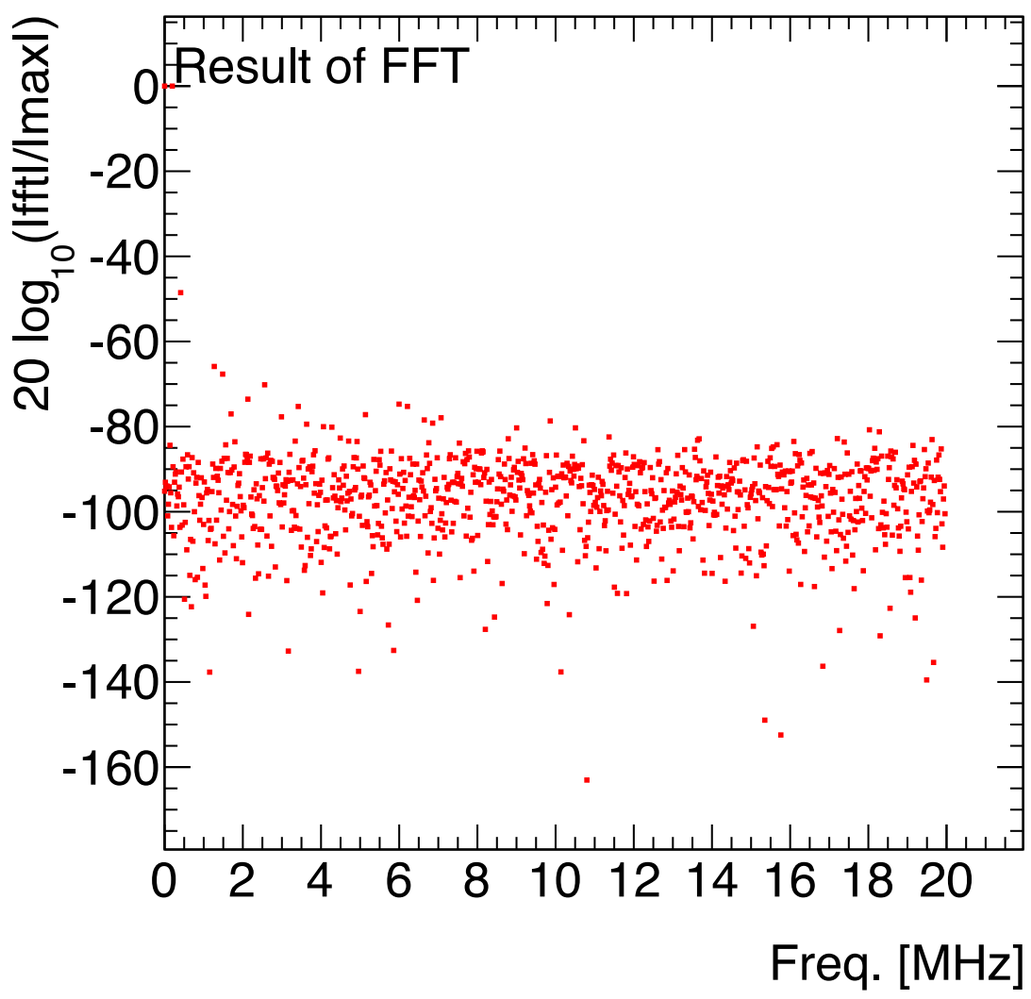
- hg 18 Mhz in out



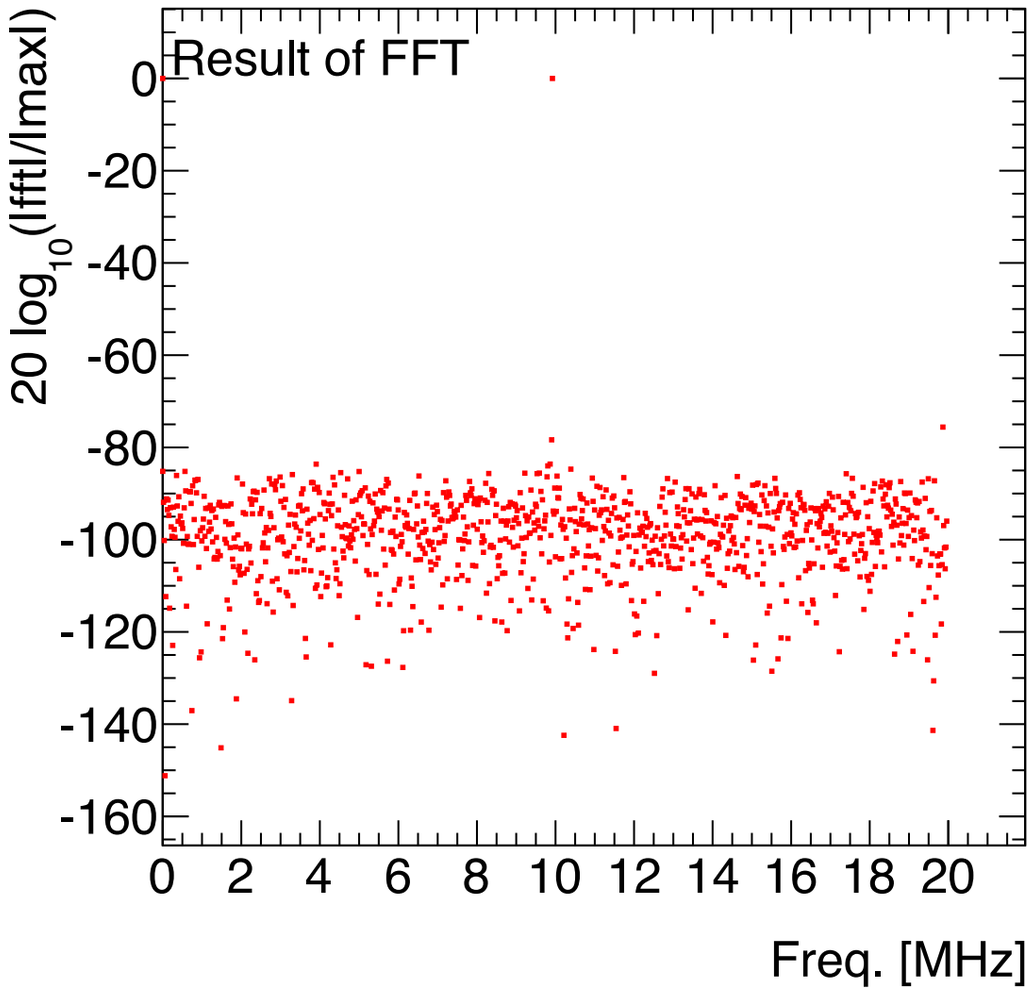


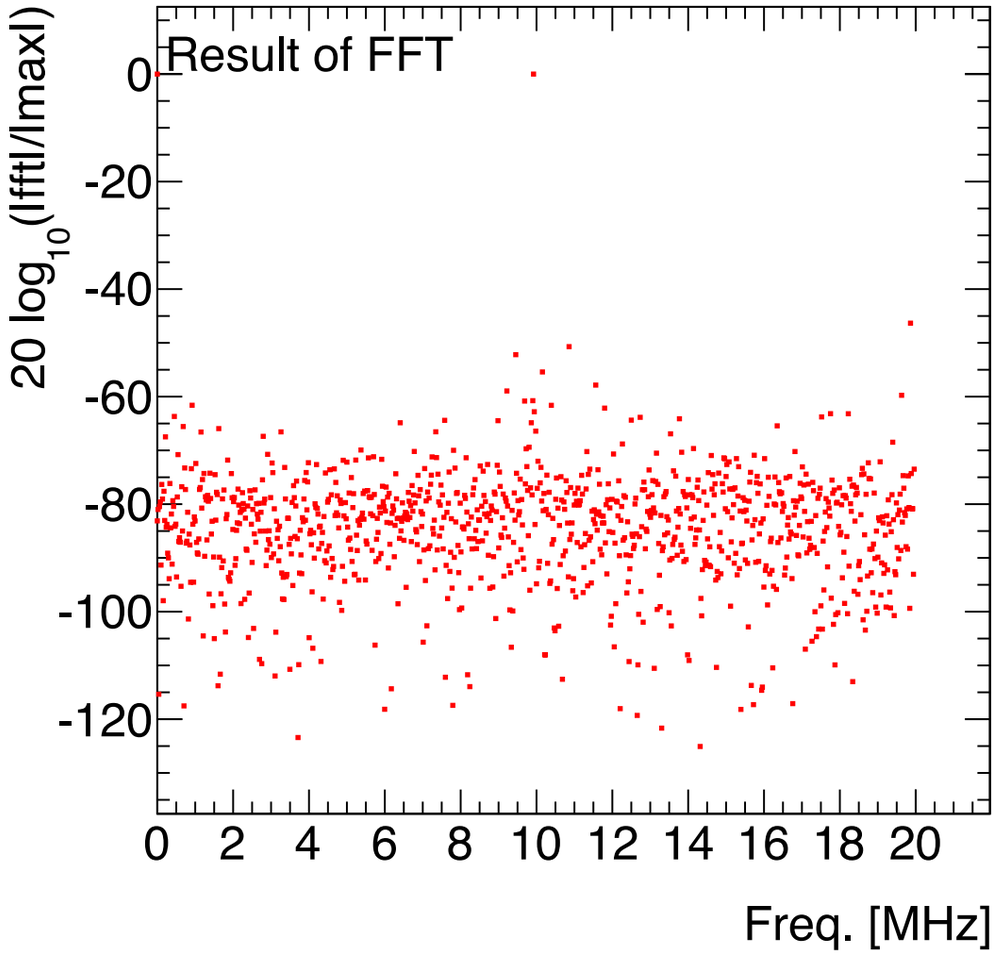
- mg 0.2 Mhz in out



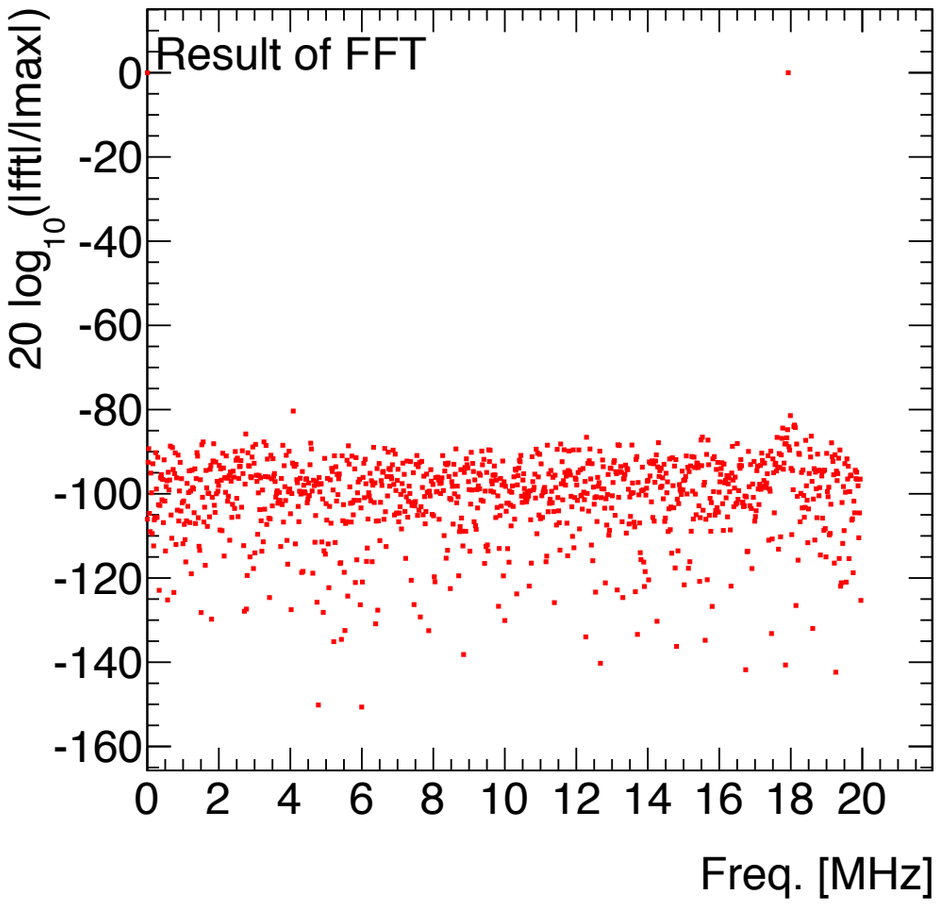


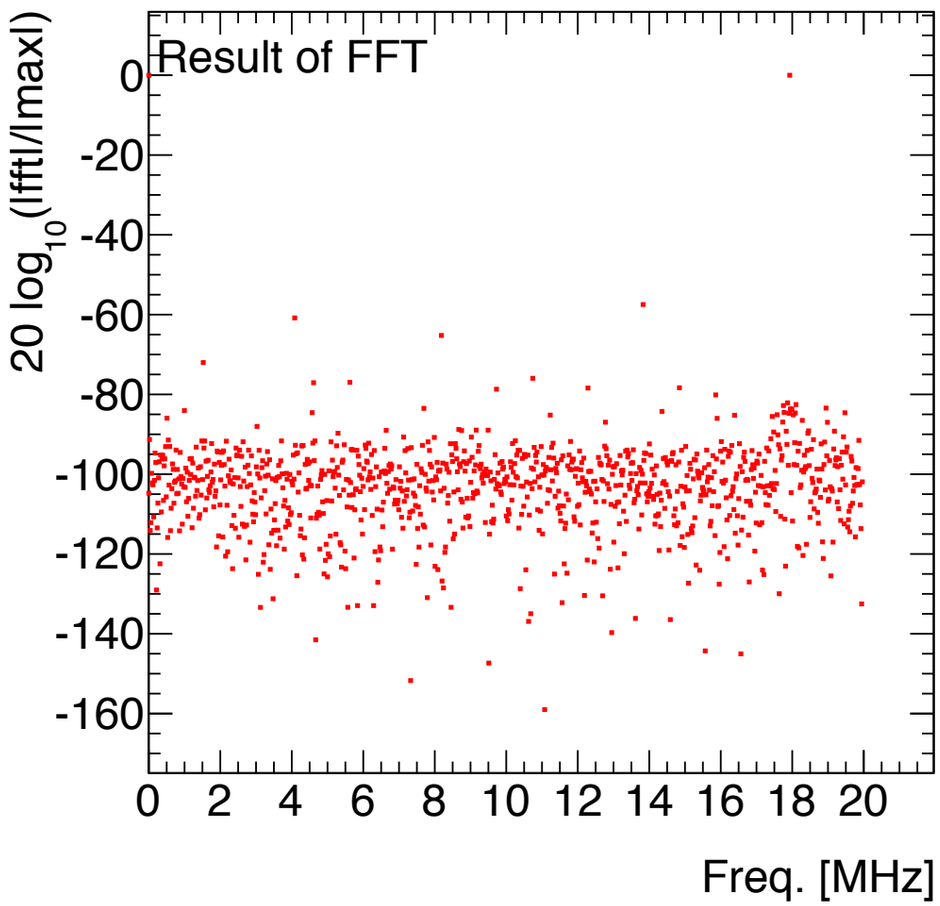
- mg 10 Mhz in out



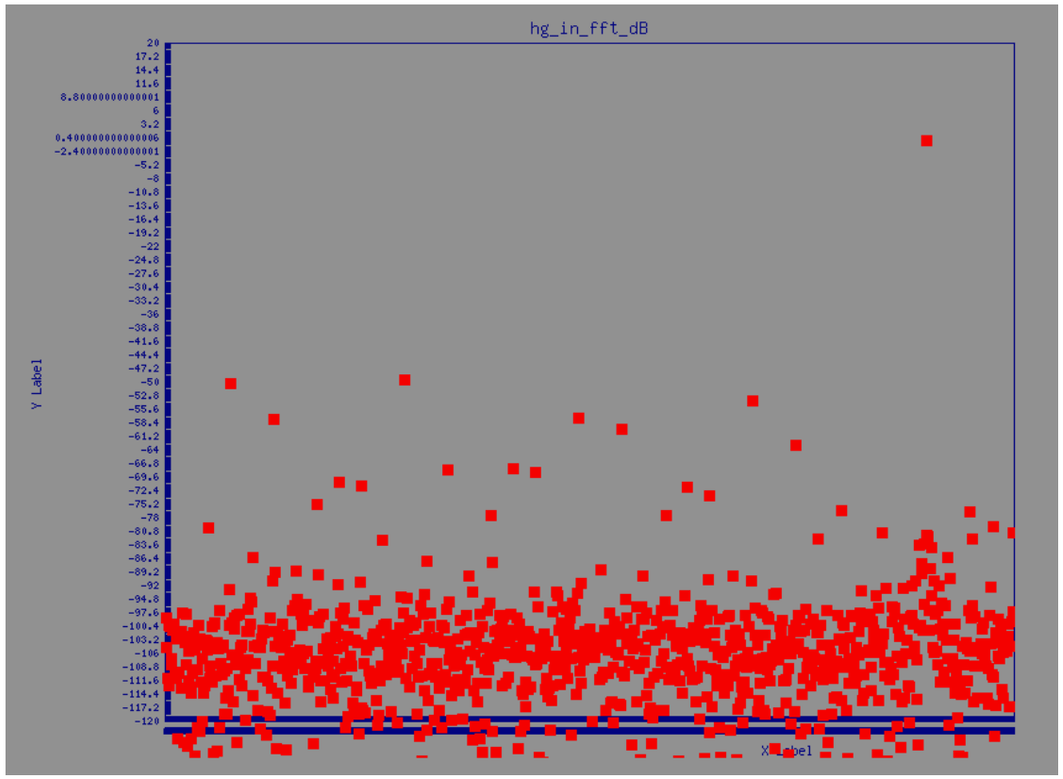


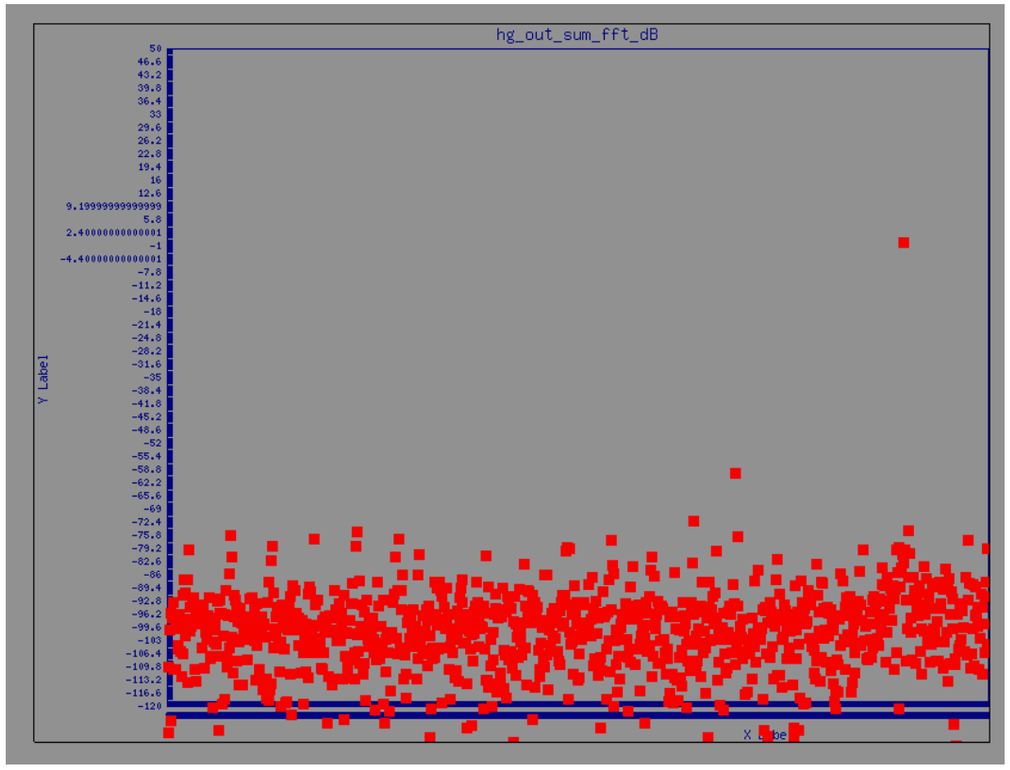
- mg 18 Mhz in out





- For fun Lei and I also looked at what Jaro mentioned: that there is no way for the commercial adc to handle a residual from the nevis10 of >1V. We put a 1.2V signal in and saw the following fft:





- You can see the problem in the data right away (left is commercial adc, right is nevis 10). Fortunately I don't think this kills us: as long as the input signal is <1V I think we don't see this.