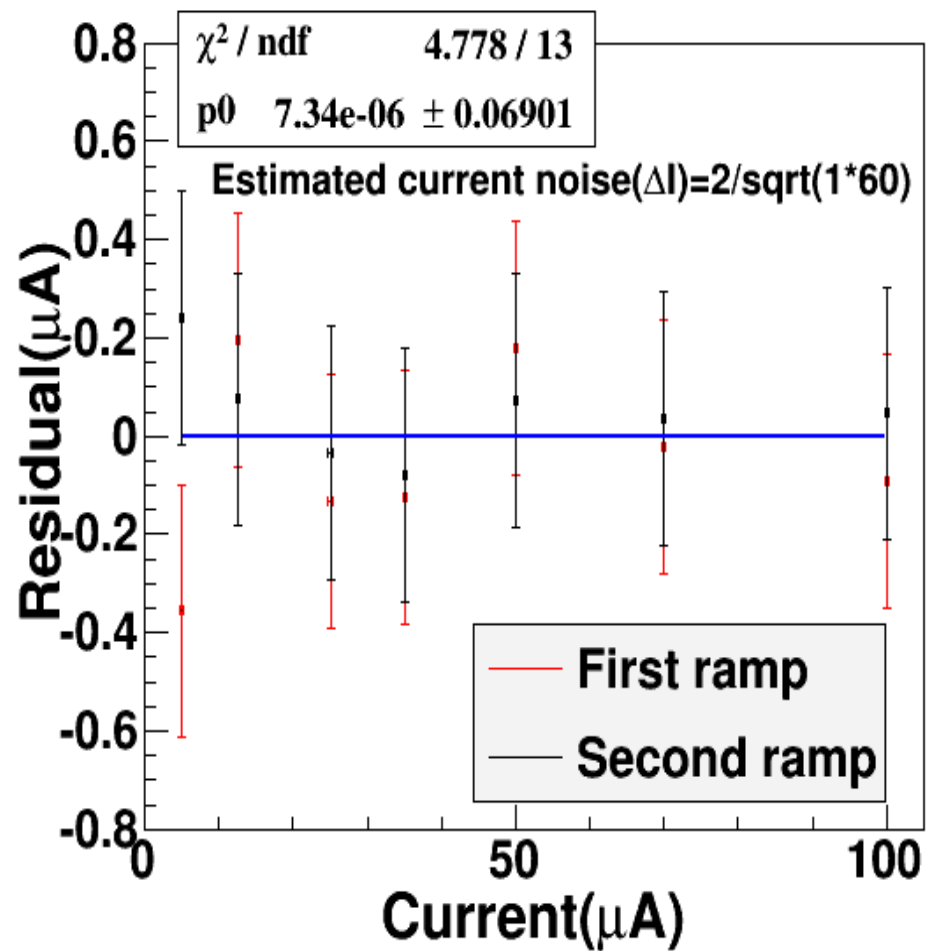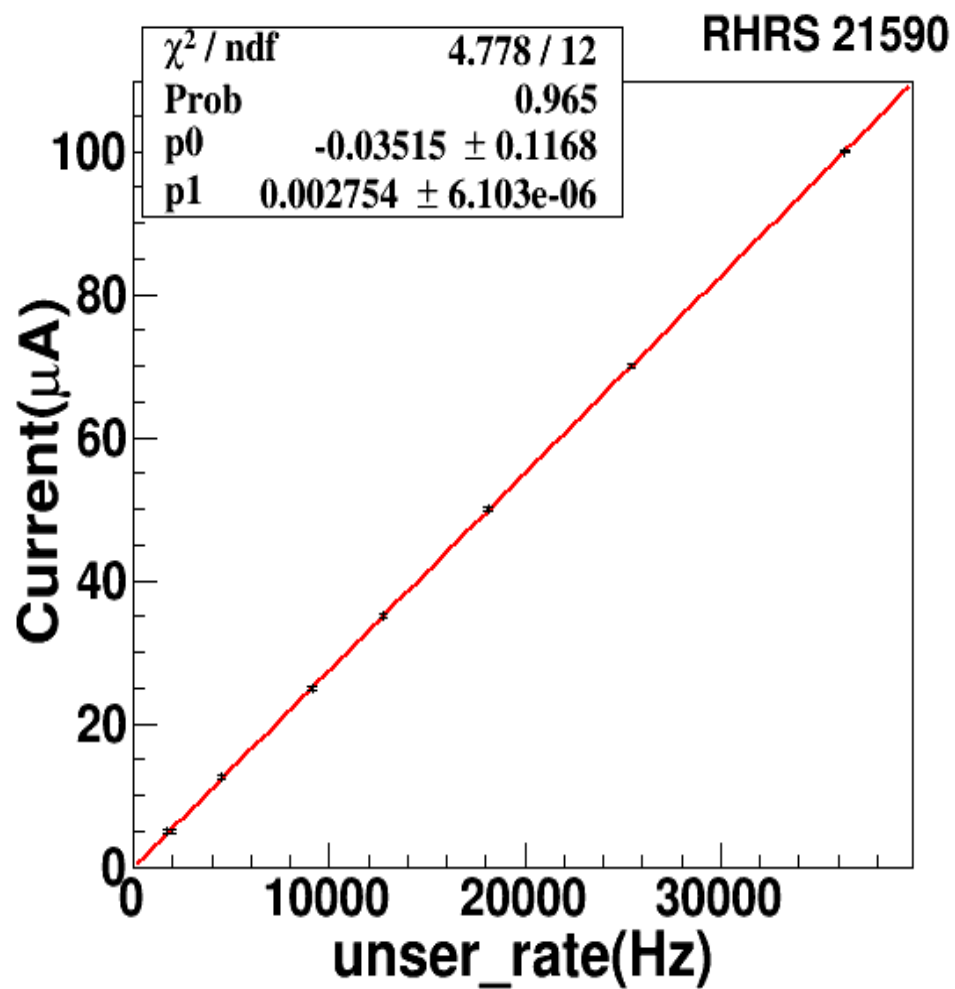# Unser:

- Unser package is regulating properly at 110F after some power cycle.

- Unser offset is positive now, about 68mV.

- Rates are now in xscalar screen about 6000Hz for both HRS.

- Calibrated unser with a Hall A current source.

  Gain(Spring_2015) = 0.002759muA/Hz.

  Gain_now = 0.002754muA/Hz

RHRS 21590

Left panel:

χ^2 / ndf	4.778 / 12
Prob	0.965
p0	-0.03515 ± 0.1168
p1	$0.002754 \pm 6.103\text{e-}06$

Current(μA) vs unser_rate(Hz)

Right panel:

χ^2 / ndf	4.778 / 13
p0	$7.34\text{e-}06 \pm 0.06901$

Estimated current noise(ΔI)=2/sqrt(1*60)

Residual(μA) vs Current(μA)

First ramp
Second ramp

BPM Saturation check:

- Checked all BPM antenna and raster pedestal signals with 1V battery.

- The idea here is to introduce this battery in each BPM and raster and try to see whether there is saturation.

- If there is saturation the ADC spike will go to maximum channel number. But I have not seen these condition,there is only a little shift in spike position.

- The raster actually on during this test so the spike there represents the external signal and rest is a spread in the raster current.

- Log-entry: https://logbooks.jlab.org/entry/3373890

BPMA Antenna 1

bpmaraw1	
Entries	27207
Mean	4217
RMS	15.87

External signal
RHRS 21535
Polarity 1

BPMA Antenna 2

bpmaraw2	
Entries	27207
Mean	3715
RMS	65.44

BPMA Antenna 3

bpmaraw3	
Entries	27207
Mean	3749
RMS	41.86

BPMA Antenna 4

bpmaraw4	
Entries	27207
Mean	3829
RMS	57.22

BPMB Antenna 1

bpmbraw1	
Entries	27207
Mean	3912
RMS	49.72

BPMB Antenna 2

bpmbraw2	
Entries	27207
Mean	3793
RMS	46.81

BPMB Antenna 3

bpmbraw3	
Entries	27207
Mean	3676
RMS	49.83

BPMB Antenna 4

bpmbraw4	
Entries	27207
Mean	3972
RMS	49.48

Fast Raster 1 X vs.Y

haxis	
Entries	
Mean x	
Mean y	
RMS x	
RMS y	

Upstream Raster X

URastX	
Entries	11750
Mean	3572
RMS	410.7

Upstream Raster Y

URastY	
Entries	11750
Mean	4369
RMS	15.41

External signal
RHRS 21553
Polarity