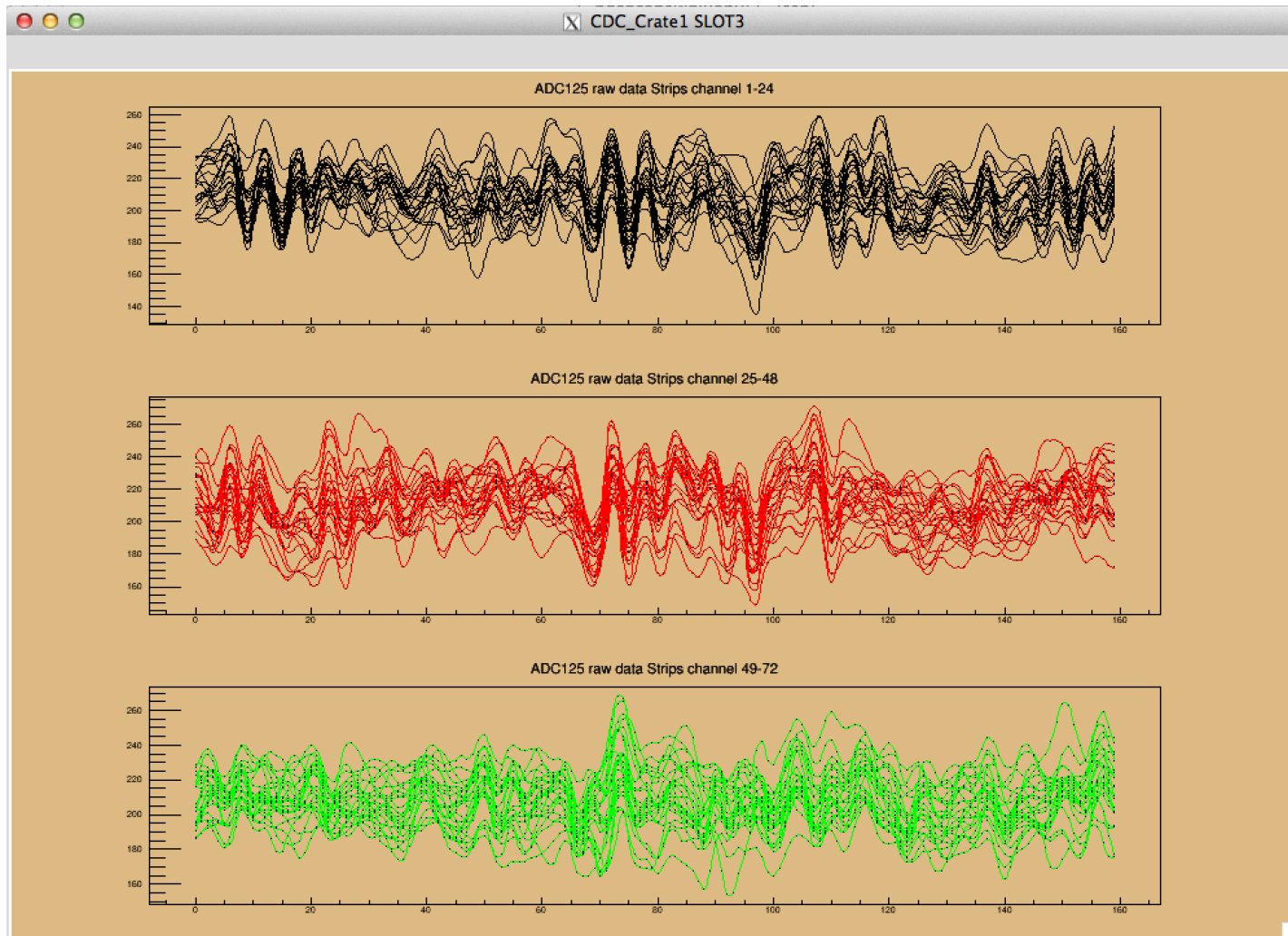


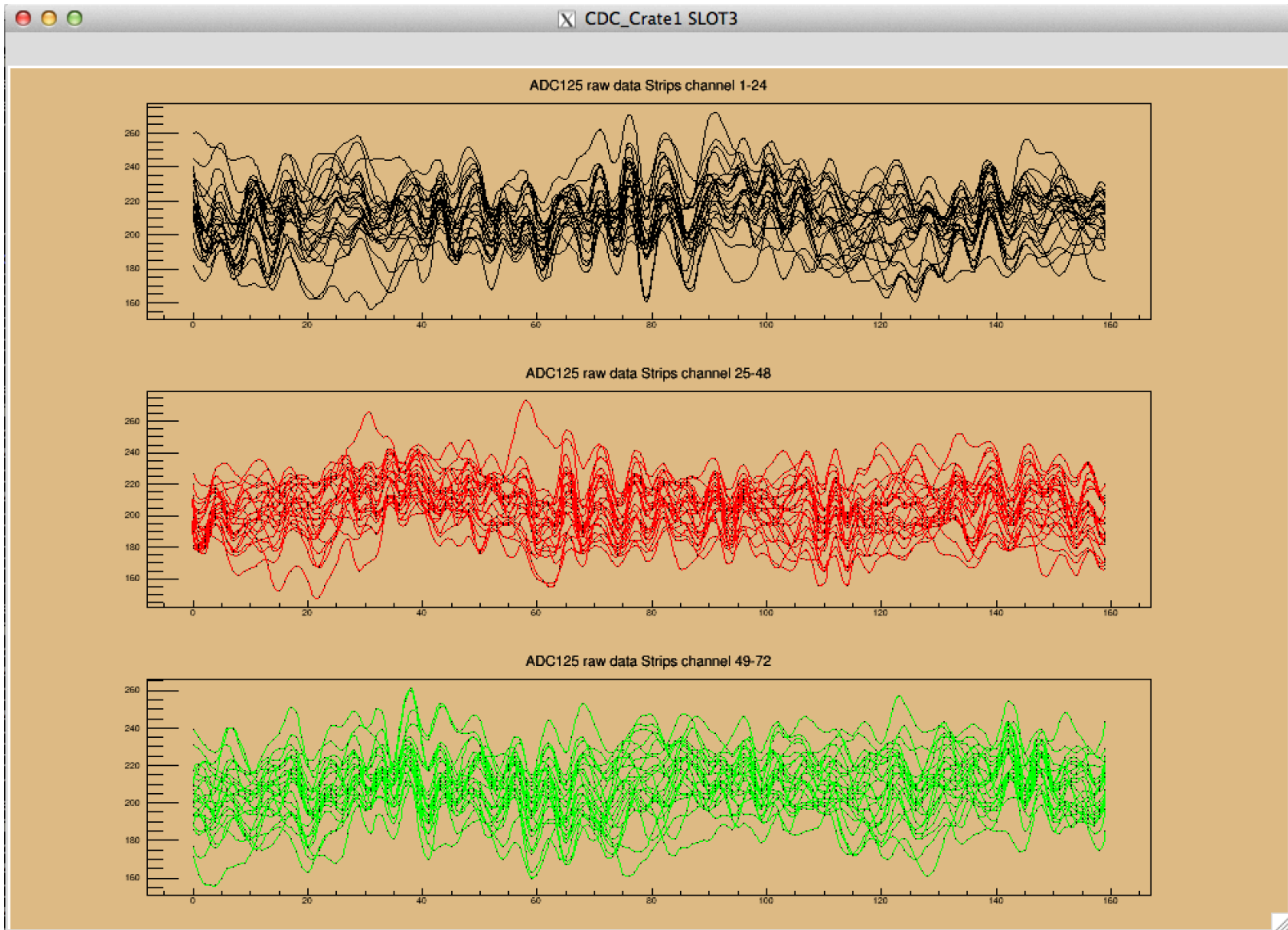
CDC Noise

Run 178 - All HV on

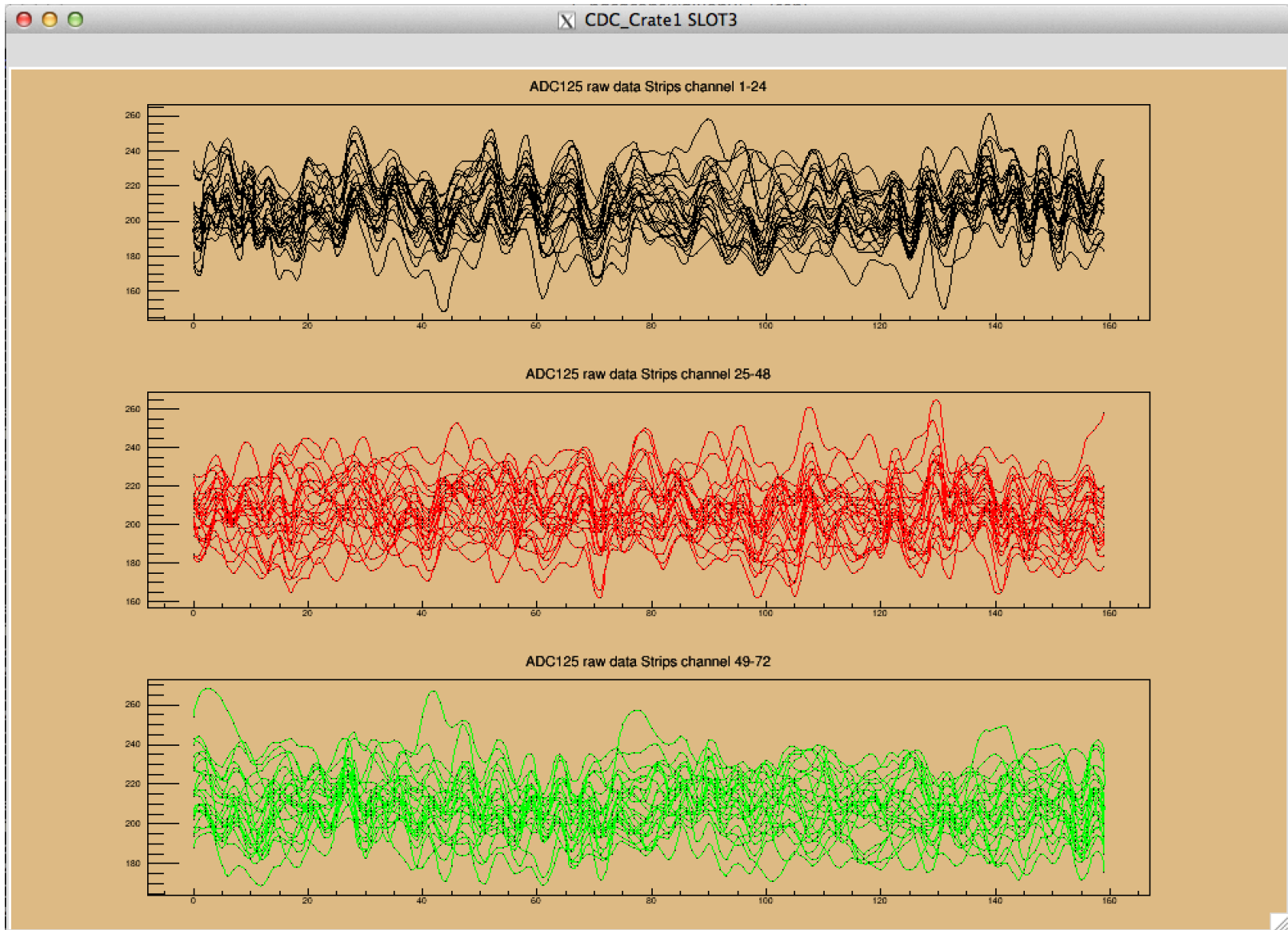


The frequency of this noise is **~ 25 MHz**, not the 200 kHz noise from the scope

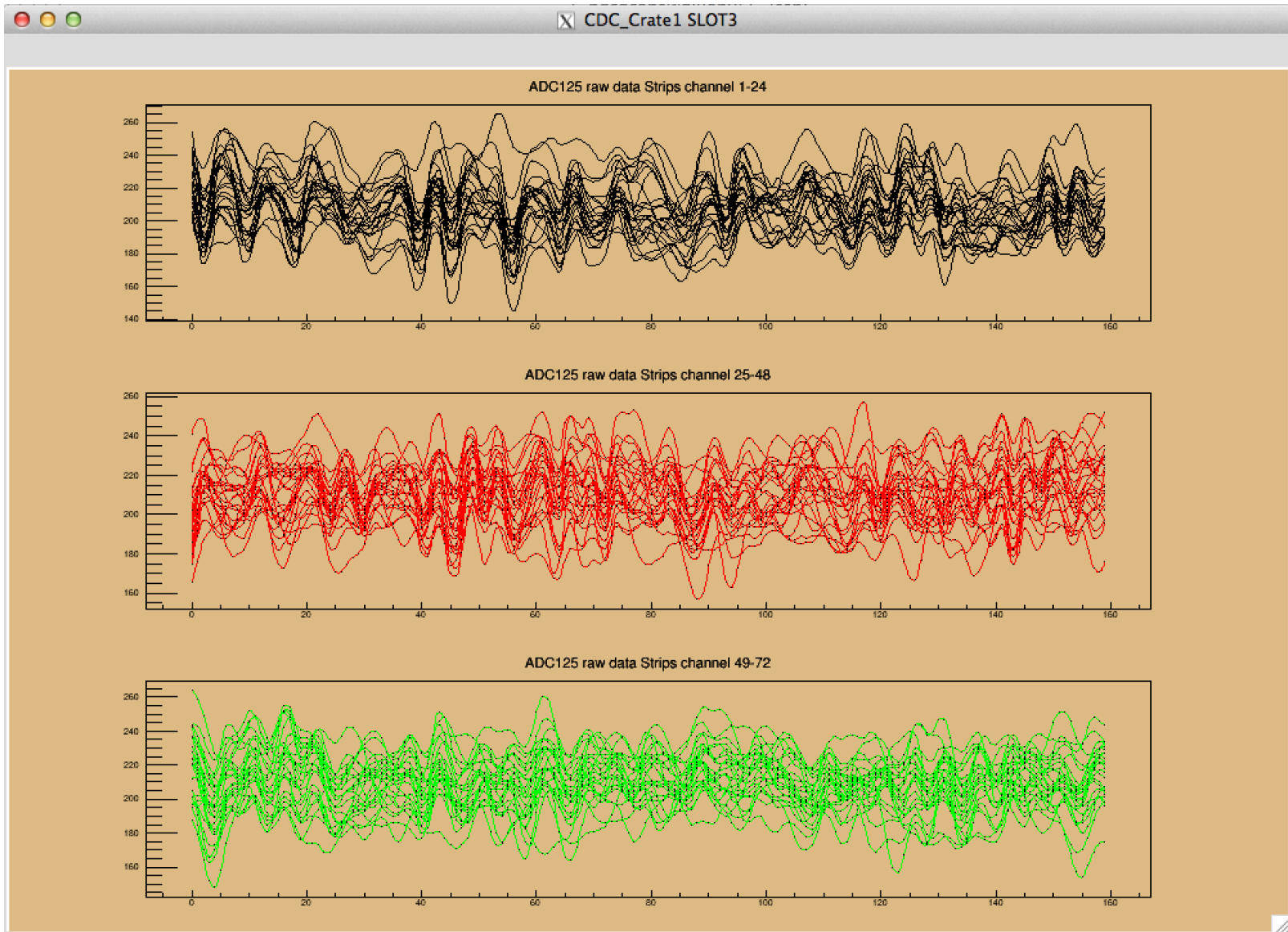
Run 180 – Sector 1 ON



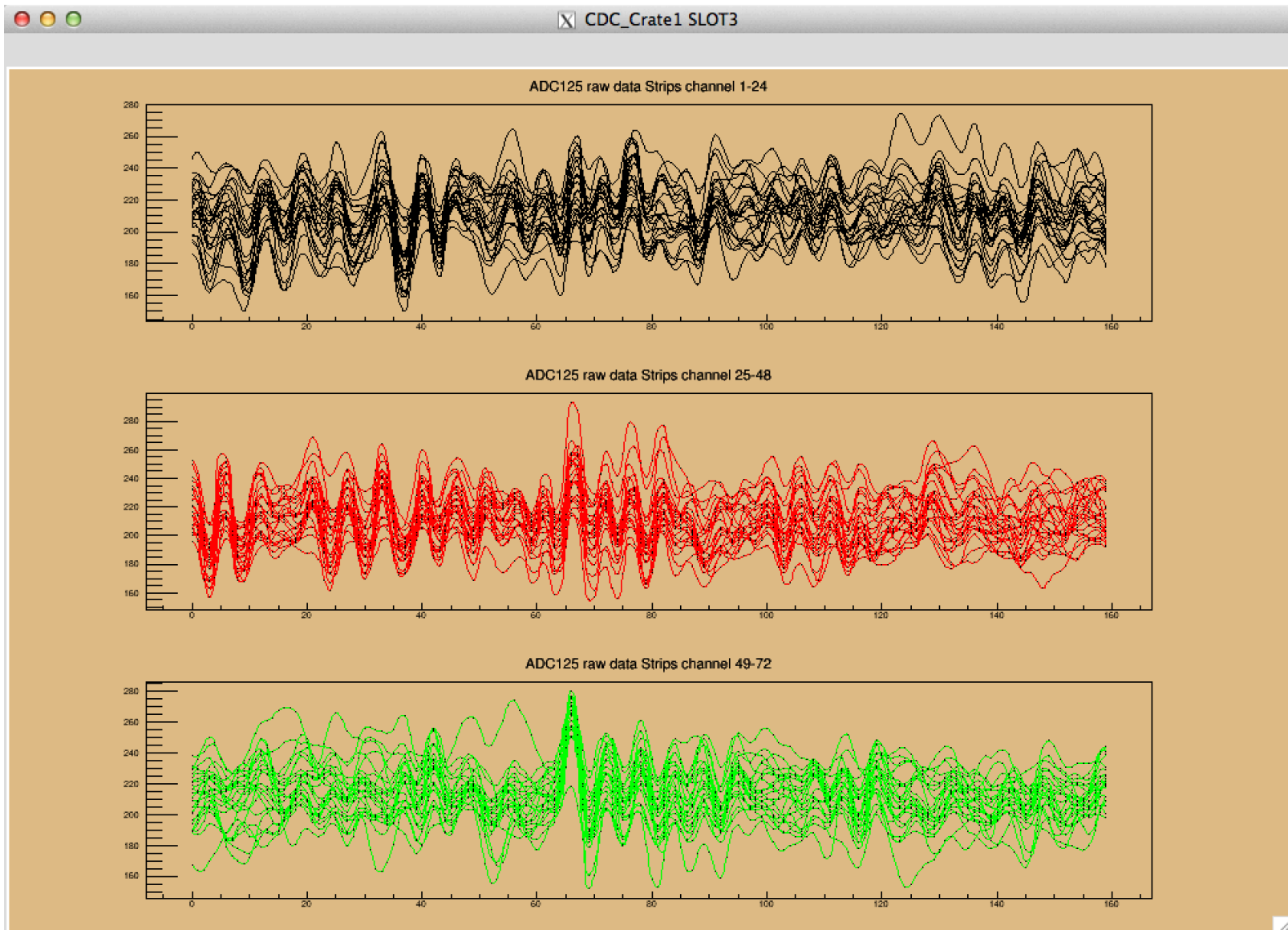
Run 182 – Sector 2 ON



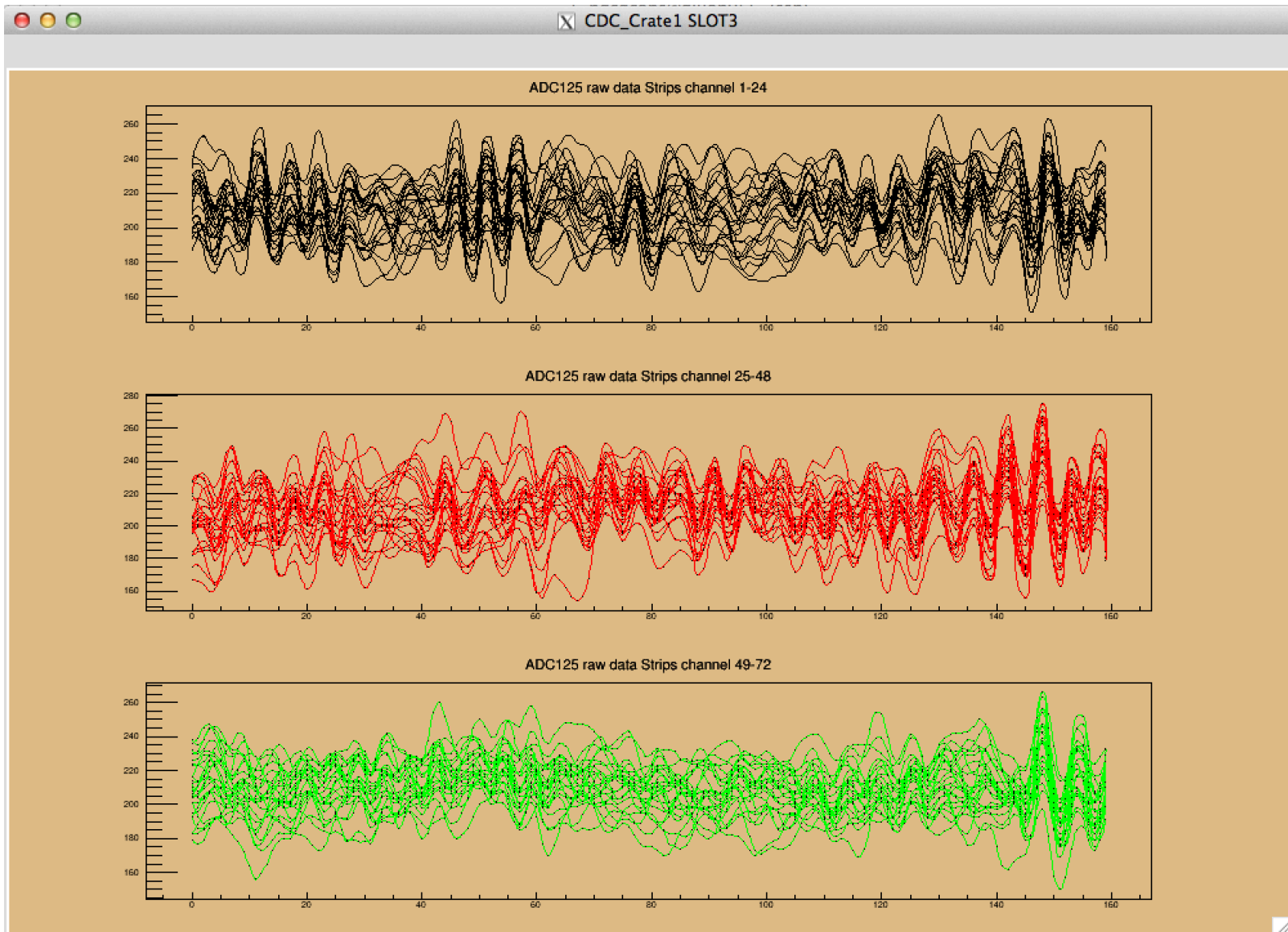
Run 184 – Sector 3 ON



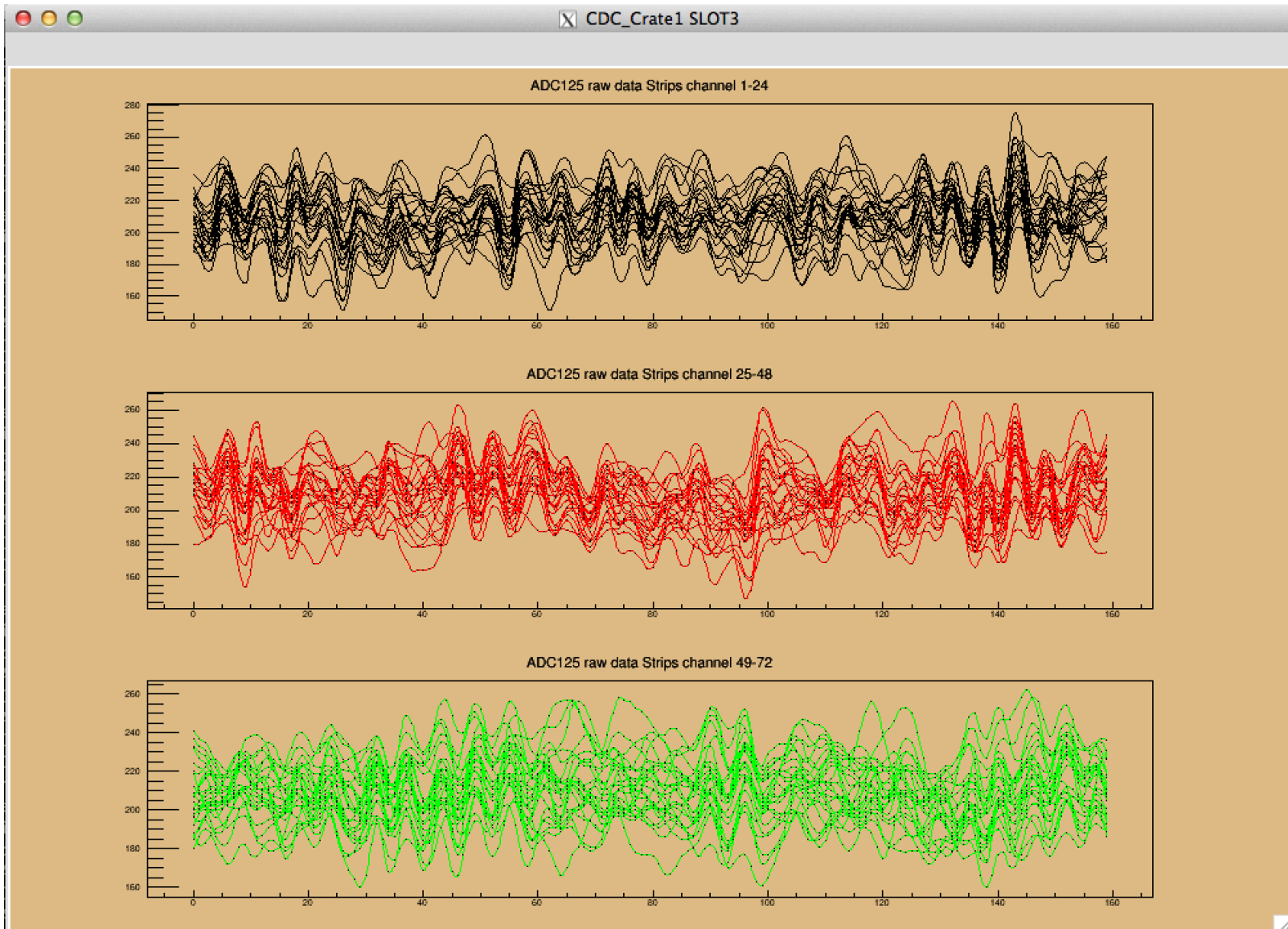
Run 187 – Sector 4 ON



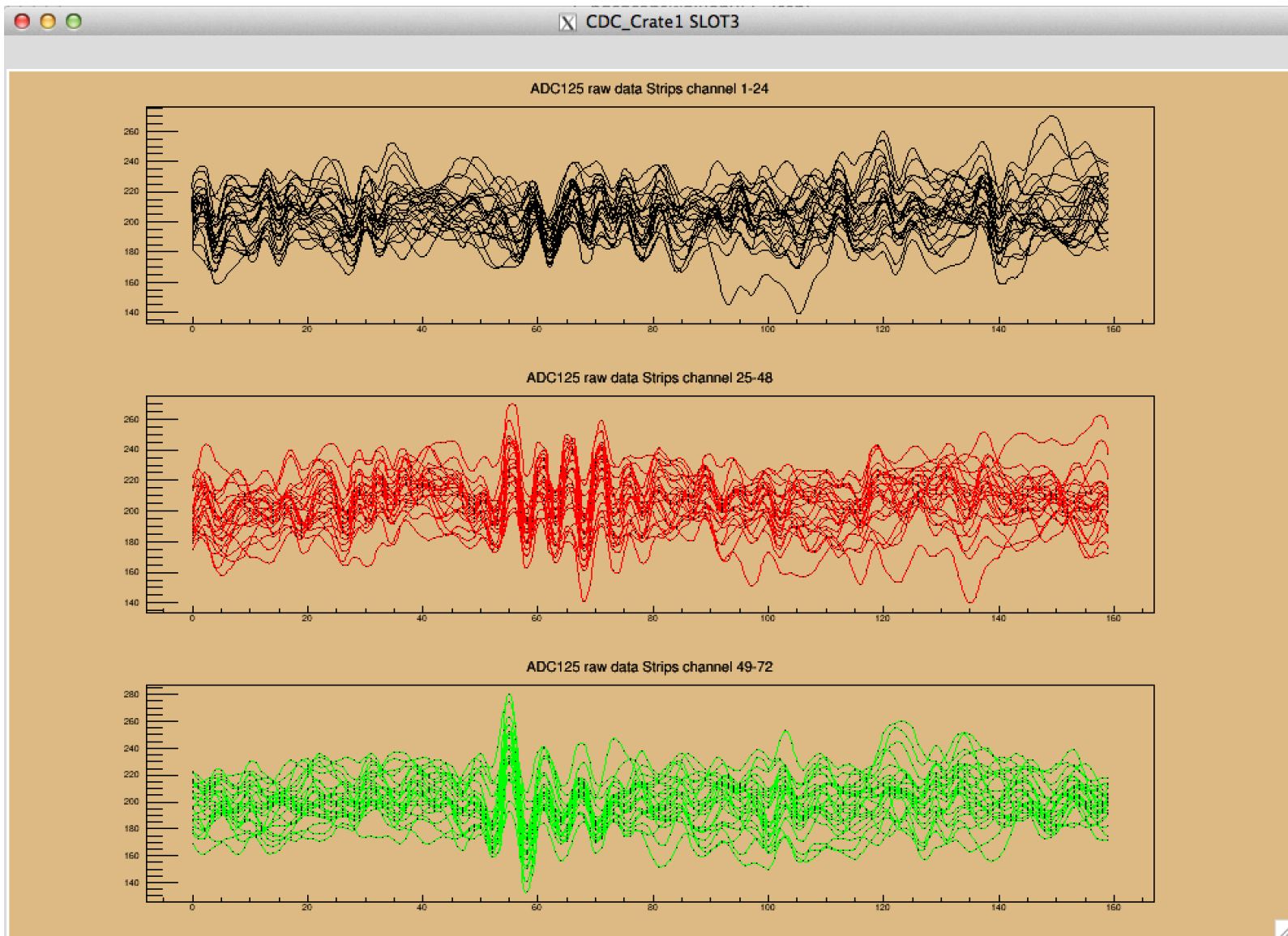
Run 188 – Sector 5 ON



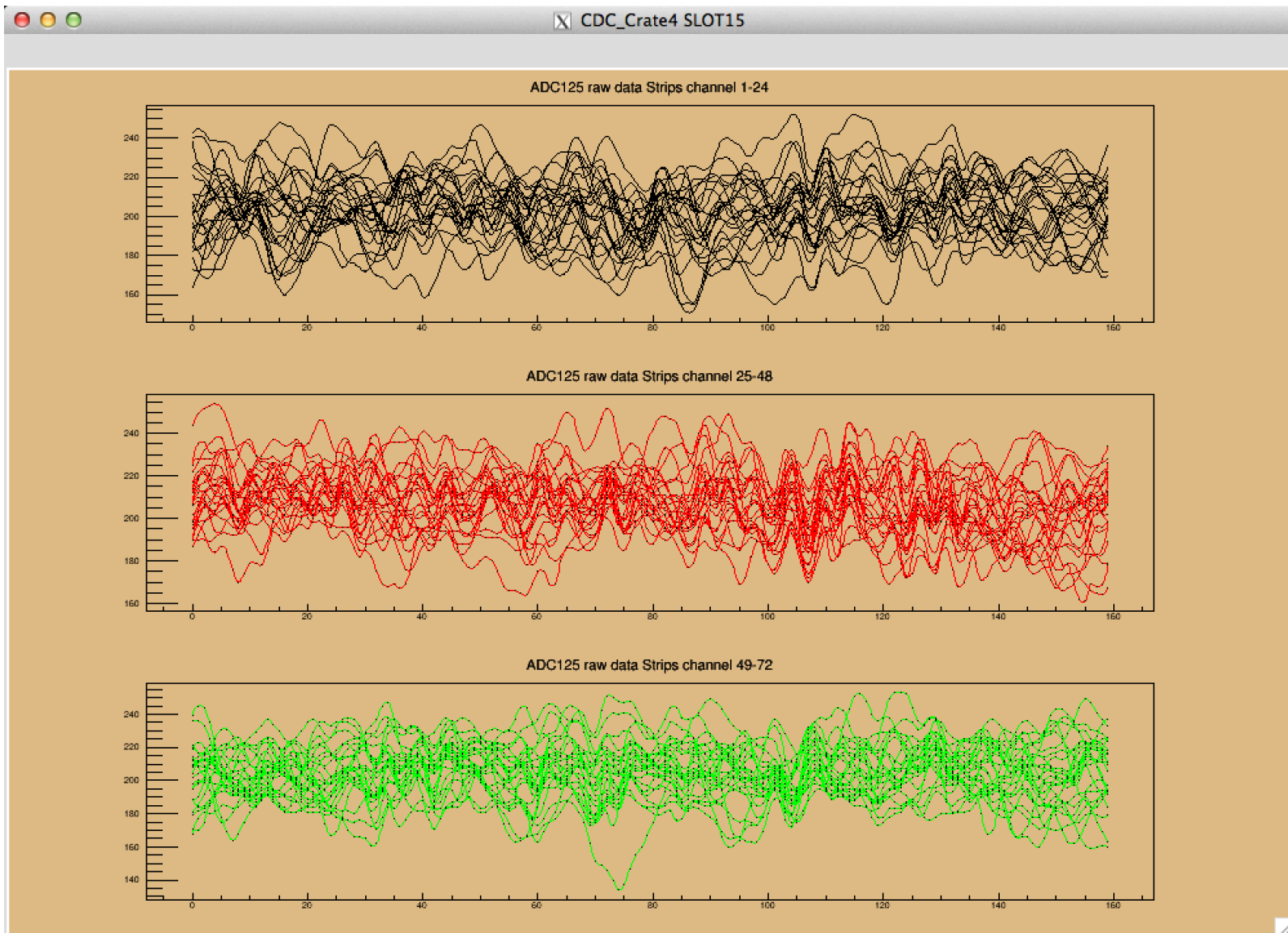
Run 189 – Sector 6 ON



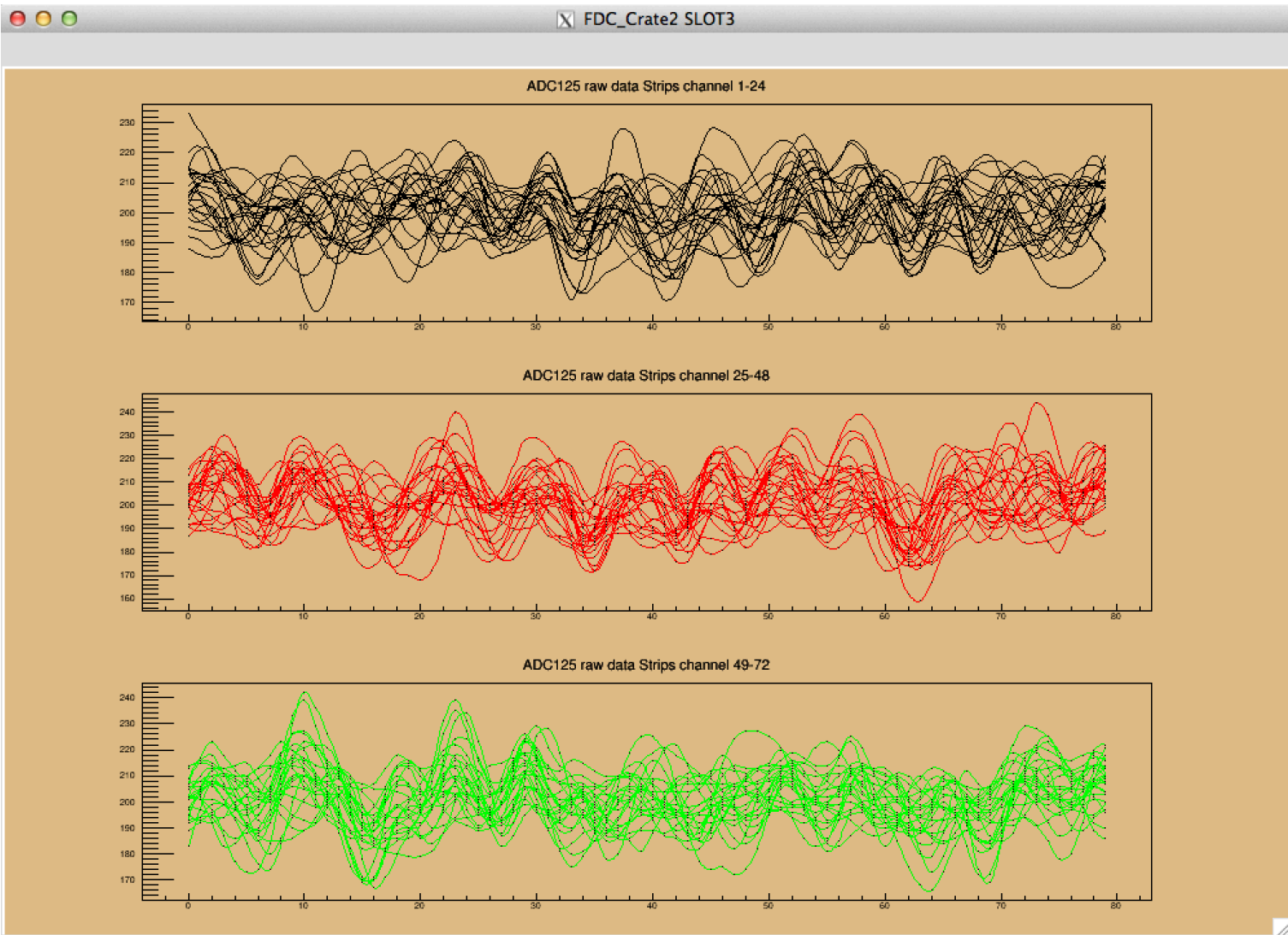
Run 191 – All CDC HV off



They aren't all that bad – Or at least the noise is different.



Noise in the FDC (HV on)



X scales are different (160 CDC samples vs 80 FDC samples)

Maybe clock noise?

Crystal oscillator frequencies

From Wikipedia, the free encyclopedia

| Frequency (MHz) ↕ | comm ↕ | UART ↕ | AV ↕ | RTC ↕ | Primary uses ↕ |
|-------------------|----------|--------|-------|-------|---|
| 23.104 | GPS | | | | Reference clock for some GPS systems. Available as TCXO. ^[13] |
| 23.9616 | | 115200 | | | UART clock; allows integer division to common baud rates . (208×115200 baud or 208×96×1,200 baud) |
| 24 | USB | | | | full-speed USB (24 MHz * 20 = 480Mbit/s); LCD monitor some MCU |
| 24.5535 | GPS | | | | Reference clock for some GPS systems. Available as TCXO. ^[13] Almost 24 times the 1.023 MHz C/A code chipping rate. |
| 24.576 | Firewire | | audio | | Digital audio systems - DAT , MiniDisc , AC'97 , sound cards ; 512×48 kHz (2 ⁹ ×48 kHz); also used as bus reference clock in Firewire systems (with accuracy of 100 ppm). 49.1520 MHz (2x 24.576) also used. |
| 24.704 | DS1 | | | | 16x 1.544, the bit clock for DS1 systems (+-32 ppm, ANSI T1.102). Available as TCXO and OCXO. |
| 25.000 | Ethernet | | | | Fast Ethernet MII clock (100 Mbit/s/4-bit nibble) (with accuracy of 100 ppm); also multiplied by 5 to 125 MHz Gigabit Ethernet GMII GTXCLK clock, FDDI clock; used as input for 100 MHz PCI Express clock generators ^[14] |
| 25.175 | | | VGA | | Common Video Graphics Array pixel clock (i.e., 640x350@70 Hz, 640x400@70 Hz, 640x480@60 Hz) ^[15] |
| 25.8048 | | 115200 | | | UART clock; allows integer division to common baud rates . (224×115200 baud or 224×96×1,200 baud) |
| 26.000 | GSM/UMTS | | DVB | | Commonly used as a reference clock for GSM and UMTS/3G handsets. (26 MHz is exactly 96 times the GSM bit rate). Commonly available as TCXO and OCXO. ^[11] Also used in some DVB receiver chipsets. Reference clock of some consumer GPS receivers. ^[10] |