Simulated FE output noise when injecting wide-band noise at power supply:

-900mV BL, DC coupling (blue)

-200mV BL, DC coupling (purple)

-200mV BL, AC coupling (yellow)

Simulated FE output noise when injecting wide-band noise at power supply of each FE block: VDD

VDDA CA

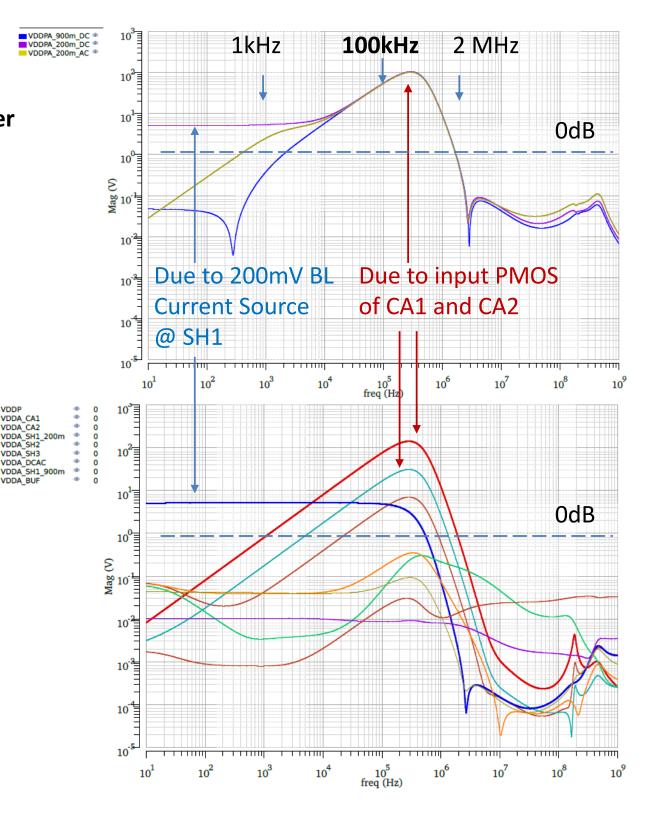
VDDA

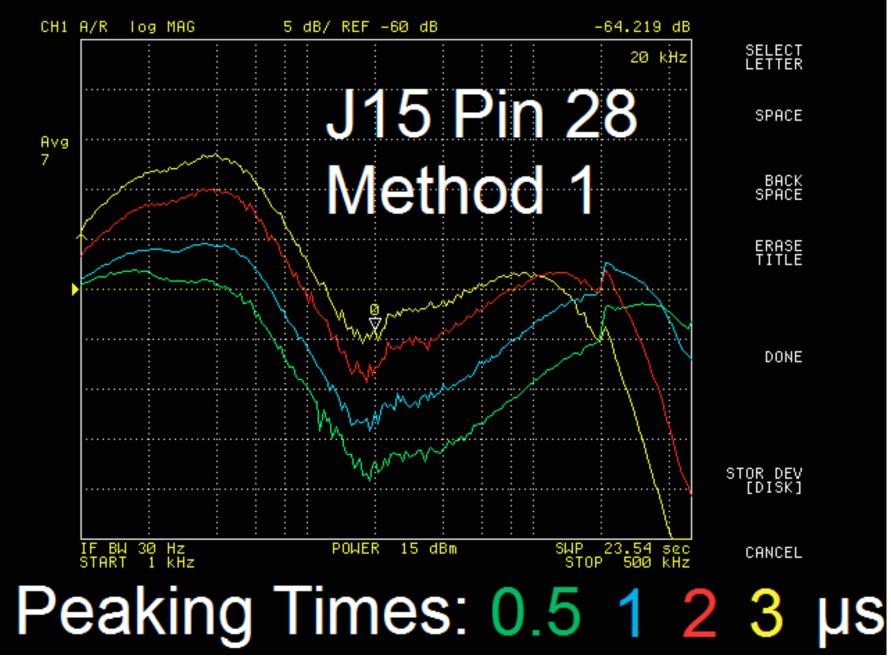
-VDDP (CA1 input PMOS only, red) -VDDA of CA1 (w/o CA1 input PMOS, brown) -VDDA of CA2 (w/ CA2 input PMOS, turquoise) -VDDA of SH1 at 200 mV BL (blue) -VDDA of SH1 at 900 mV BL (yellow) -VDDA of SH2 (orange)

-VDDA of SH3 (green)

-VDDA of dc/ac coupling (purple)

--VDDA of buffer (brown #2)





PSRR Measurement of MicroBooNE Cold Mother Board with Voltage Regulator, better than -45dB

## **FE ASIC Configuration**

- FE ASIC configuration is coming through COLDATA with SPI interface
- As presented in Dave's COLDATA talk yesterday
  - Every SPI sequence for a LArASIC is issued twice & the pattern read back (the second time) is compared to the pattern sent
  - An error bit is set in one of the status registers if the two differ
- The configuration of FE ASIC doesn't go through ColdADC, which uses I2C interface