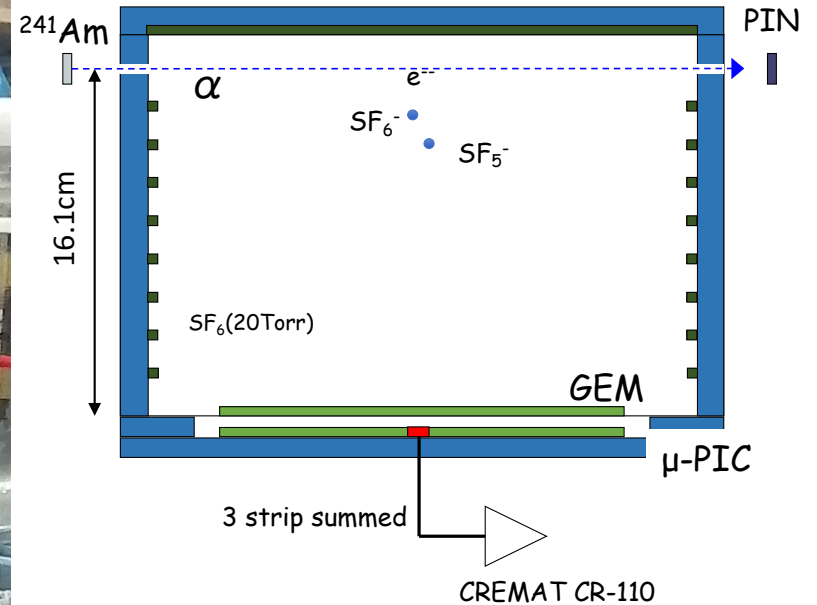
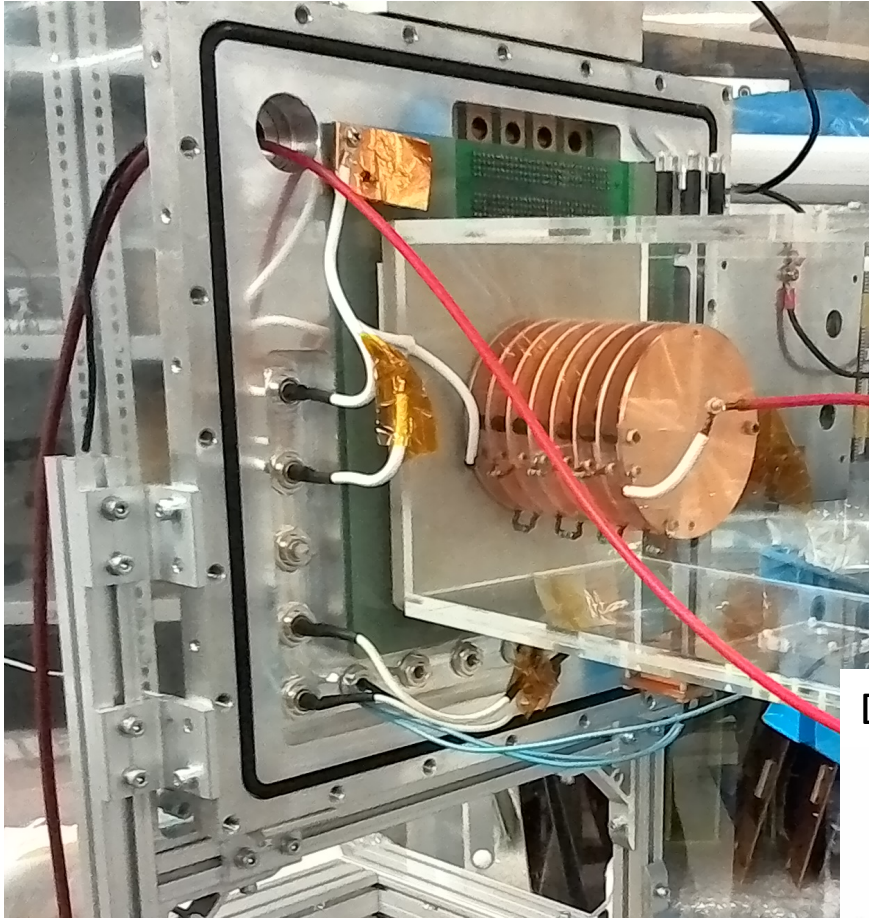


# SF<sub>6</sub> Study @ Kobe Univ.

T. Ikeda

Aug. 2017

# Detector



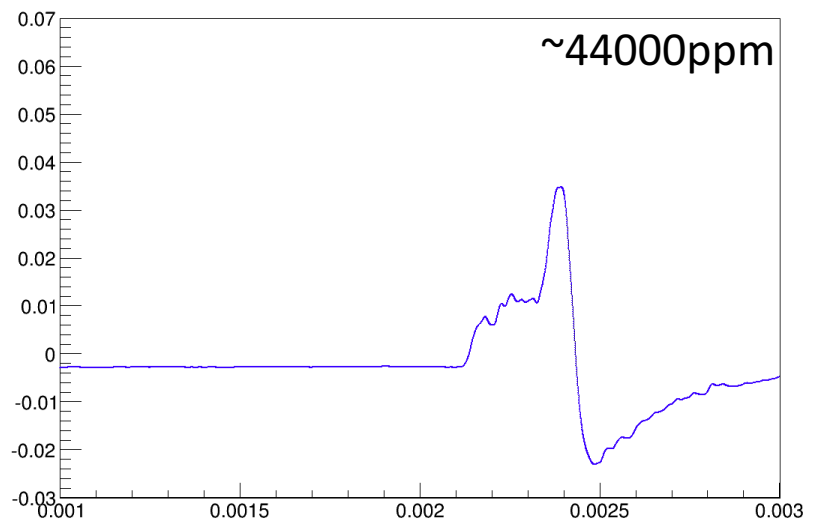
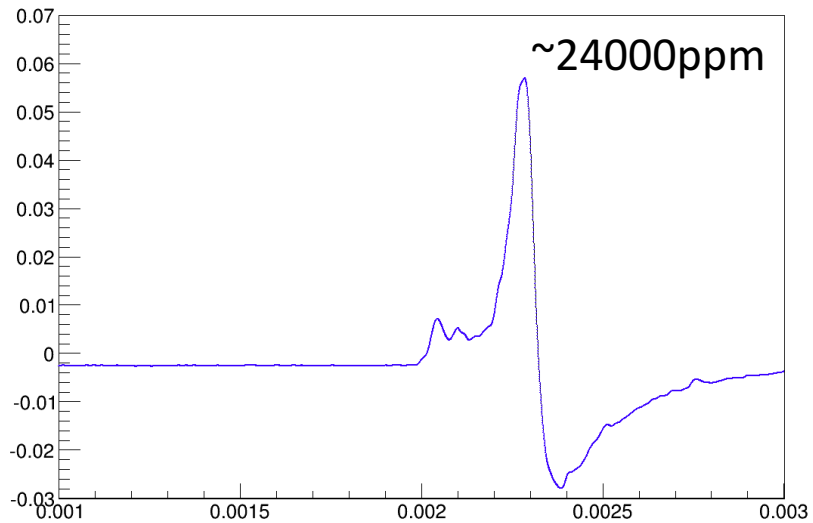
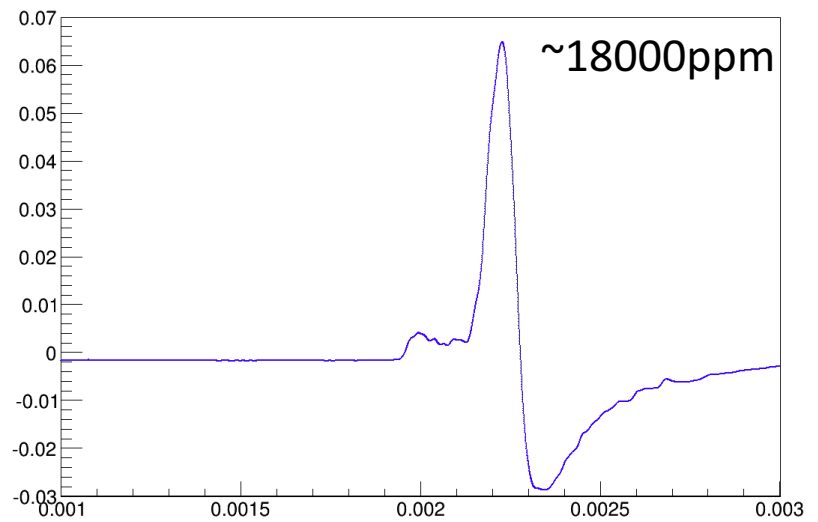
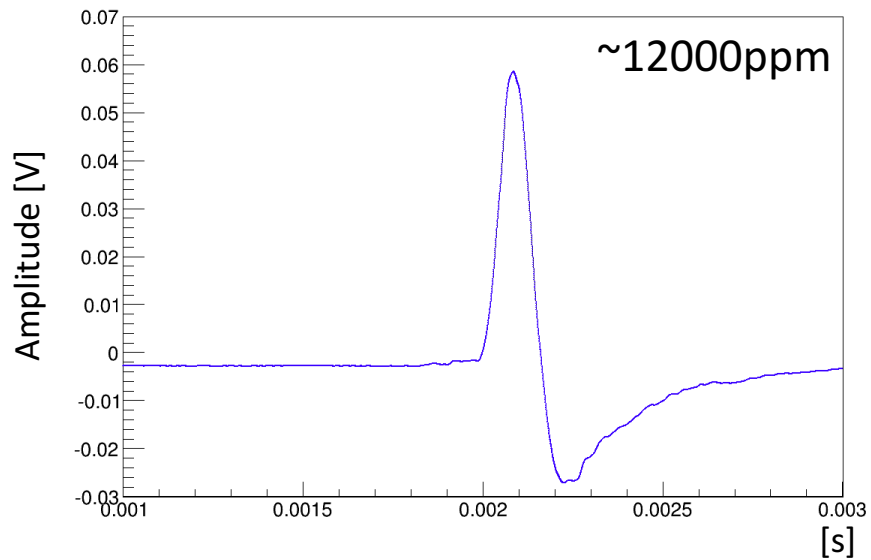
Dewpoint meter (Vaisala DMT152)



- drift length : 16.1 cm
- Source :  $^{241}\text{Am}$
- Trigger : PIN photodiode
- Signal :  $\mu\text{-PIC}$  anode 3 strip

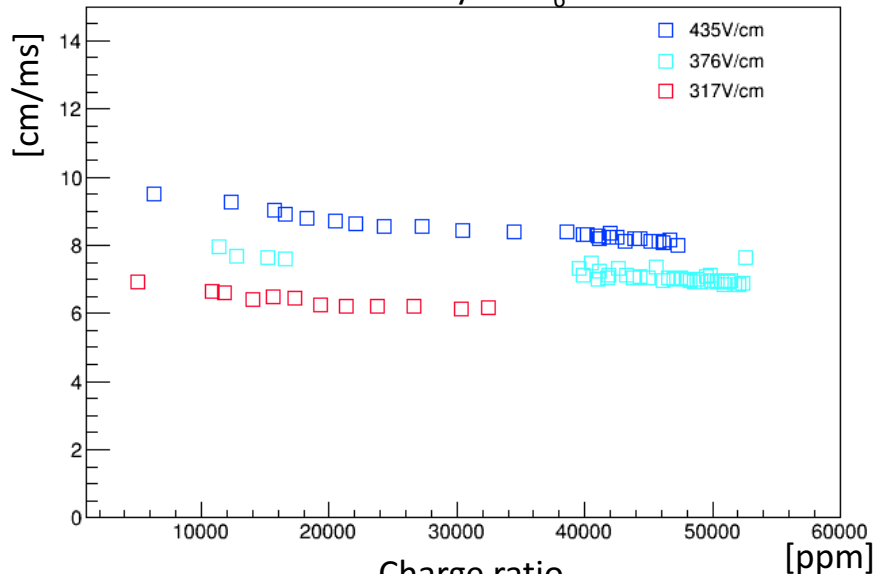
# Waveform (E=435V/cm)

~50 events average

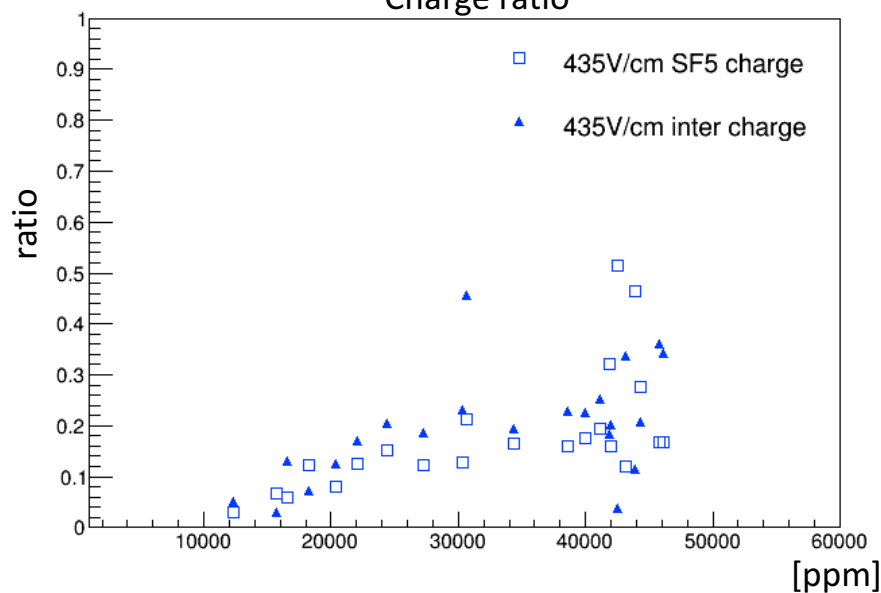
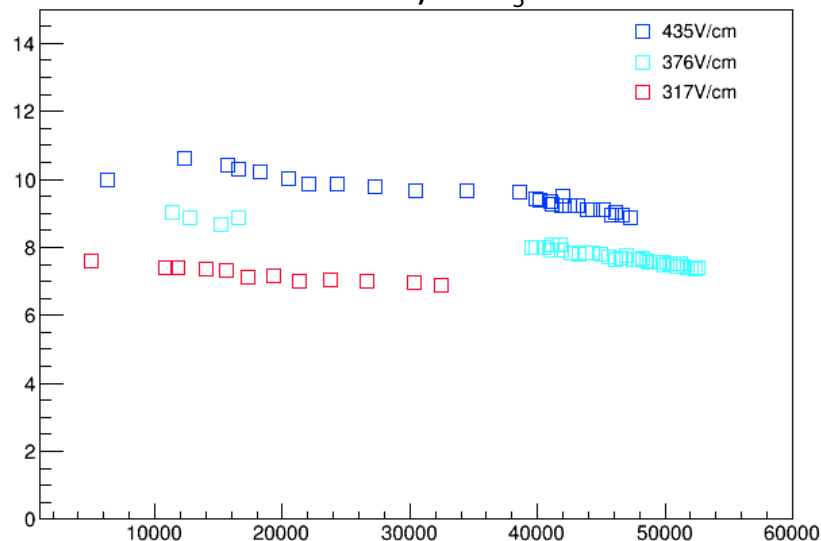


# Dependent of Contamination

Velocity of SF<sub>6</sub>



Velocity of SF<sub>5</sub>



- Both SF<sub>6</sub> and SF<sub>5</sub> were slower at high contamination.
- SF<sub>5</sub> peak charge increased, but also inter peak charge increased.

# Summary

- $\text{SF}_5$  is very sensitive to contamination.
- Mainly  $\text{H}_2\text{O}$  of outgas will contribute.
- How much  $\text{H}_2\text{O}$  does it maximize  $\text{SF}_5$  detection efficiency?