

CHI

- a) W1 – planare – cremat 2ch
- b) W6 – grooved – cremat 1ch
- c) W8 – grooved – caen 1ch
- d) W6 – grooved 6mm – cremat 2ch

COSA

- THR SCAN @ different gains

COME

Misurando allo scaler i conteggi in 10s:

- 1 canale discriminato e formato a 20us
- 1 canale discriminato e formato a 20us (attivo solonel caso del cremat a 2 ch)
- 1 OR dei due canali, ri-formato a 35us

CAUBRAZIONE 2 CRETAT x 1 CAMERA

$$V_{IN} = 70 \text{ mV} \quad V_{OUT} = 80 \text{ mV} \text{ INSIDE}$$
$$V_{OUT} = 100 \text{ mV} \text{ NO INSIDE}$$

$$Q_{IN} = V_{IN} \times C = 70 \text{ mV} \cdot 1,87 \text{ pF} = 130 \text{ fC}$$

$$\frac{V_{OUT \text{ INSIDE}}}{Q_{IN}} = \frac{80 \text{ mV}}{130 \text{ fC}} = 0,62 \text{ mV/fC}$$

$$\frac{V_{OUT \text{ NO INSIDE}}}{Q_{IN}} = \frac{100 \text{ mV}}{130 \text{ fC}} = 0,77 \text{ mV/fC}$$

1 CRETAT X TUTTA LA CAMERA

$$V_{IN} = 70 \text{ mV} \quad V_{OUT} = 140 \text{ mV} \quad C = 1,87 \text{ pF}$$

$$Q = 70 \times 1,87 = 130 \text{ fC}$$

$$\frac{V_{OUT}}{Q} = \frac{140 \text{ mV}}{130 \text{ fC}} = 1,08 \text{ mV/fC}$$

W6 con DRIFT 6mm + 3mm 2 CRETAT

$$V_{IN} = 70 \text{ mV} \quad V_{OUT \text{ INSIDE}} = 70 \text{ mV}$$
$$V_{OUT \text{ NO INSIDE}} = 90 \text{ mV}$$

$$\frac{V_{OUT \text{ INSIDE}}}{Q_{IN} (130 \text{ fC})} = 0,54 \text{ mV/fC}$$

$$\frac{V_{OUT \text{ NO INSIDE}}}{Q_{IN}} = 0,70 \text{ mV/fC}$$

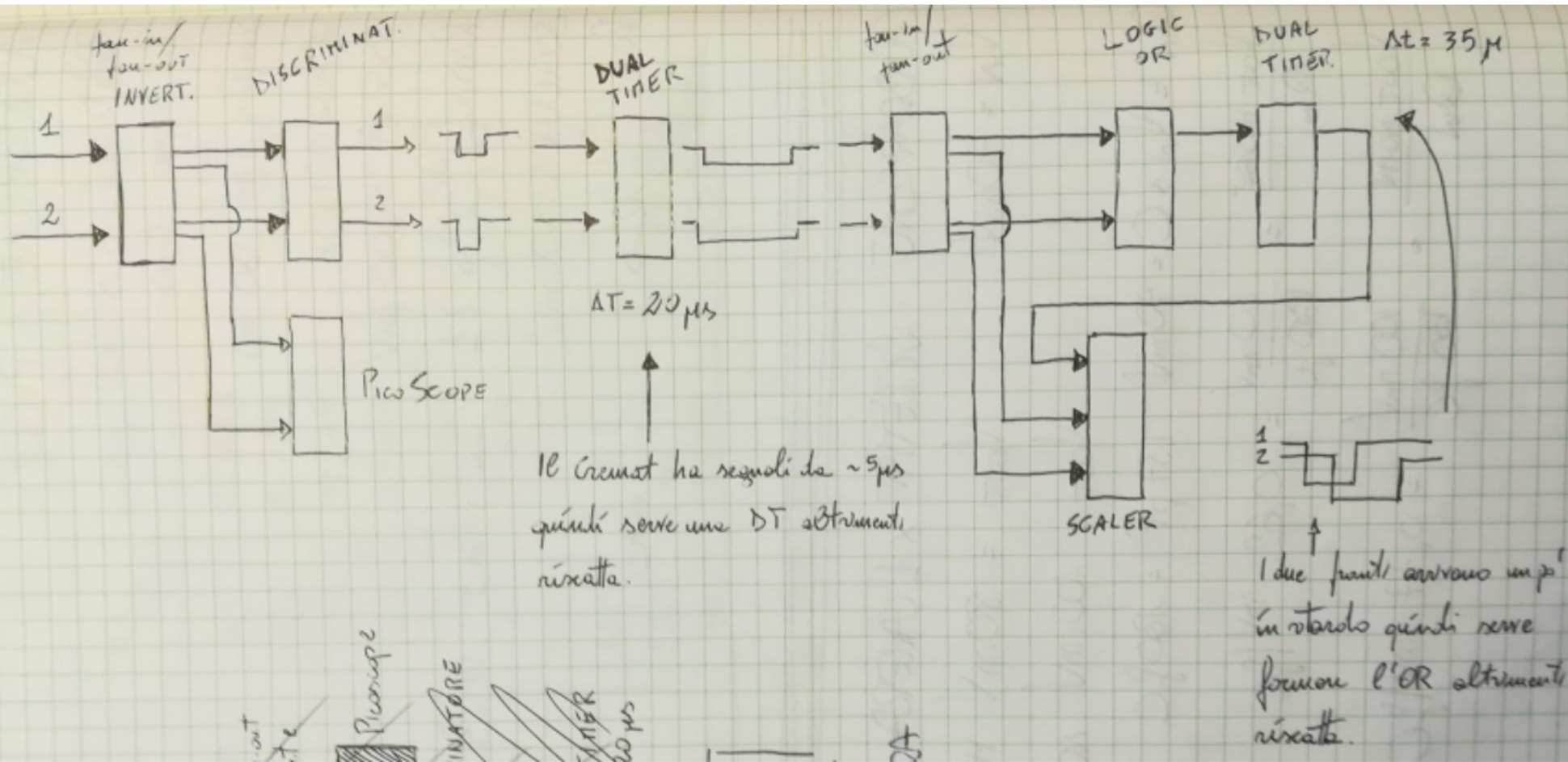
Conversione CAEN

impulsi a 70 mV (capacità 1,87 pF)

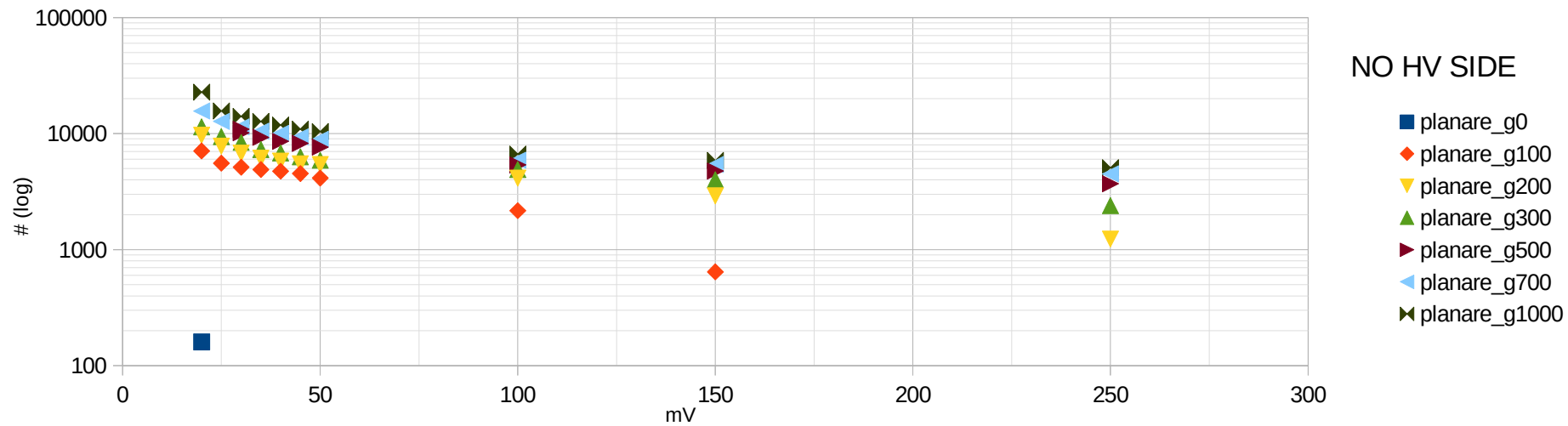
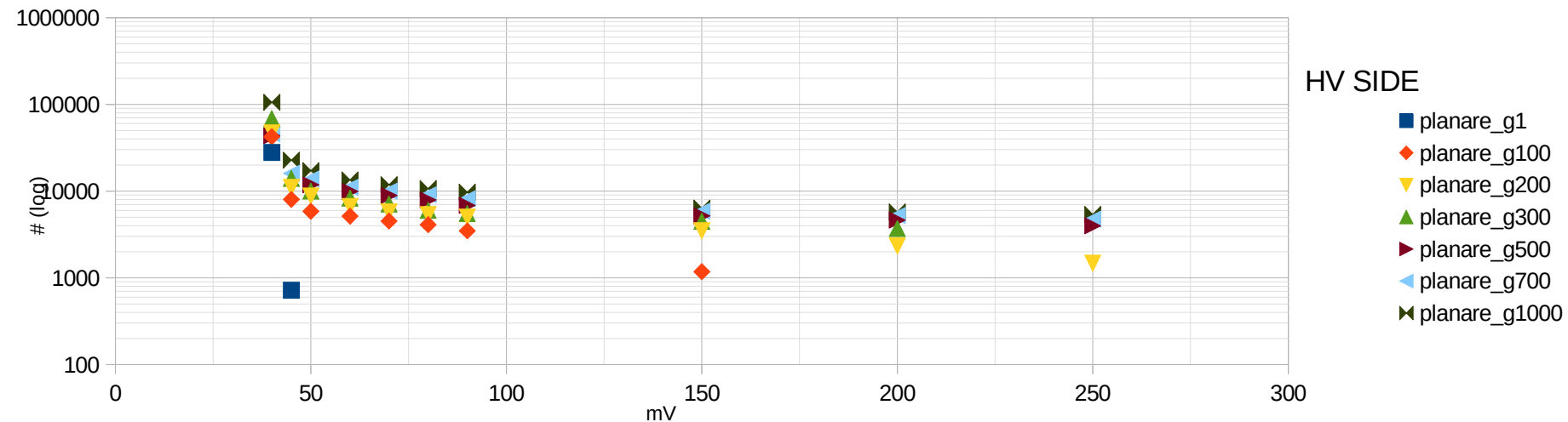
$$\text{CARICA INIETTATA} = V_{IN} \times C = Q$$
$$70 \text{ mV} \times 1,87 \text{ pF} = 130 \text{ fC}$$

$$V_{OUT} = 35 \text{ mV}$$

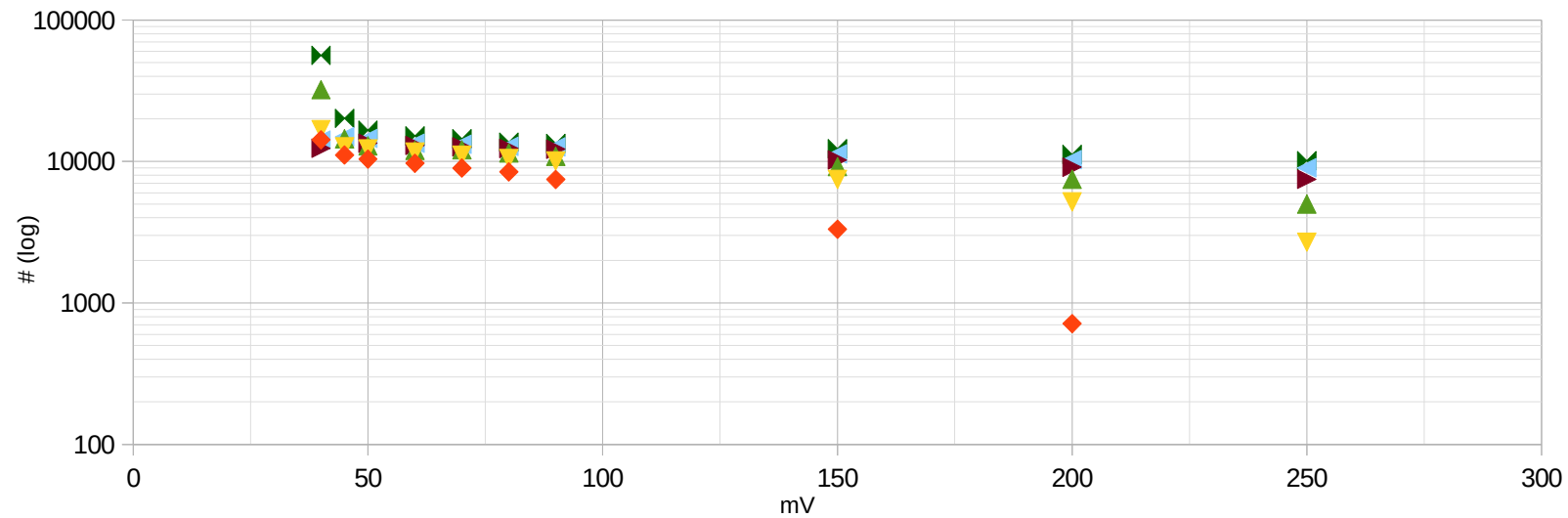
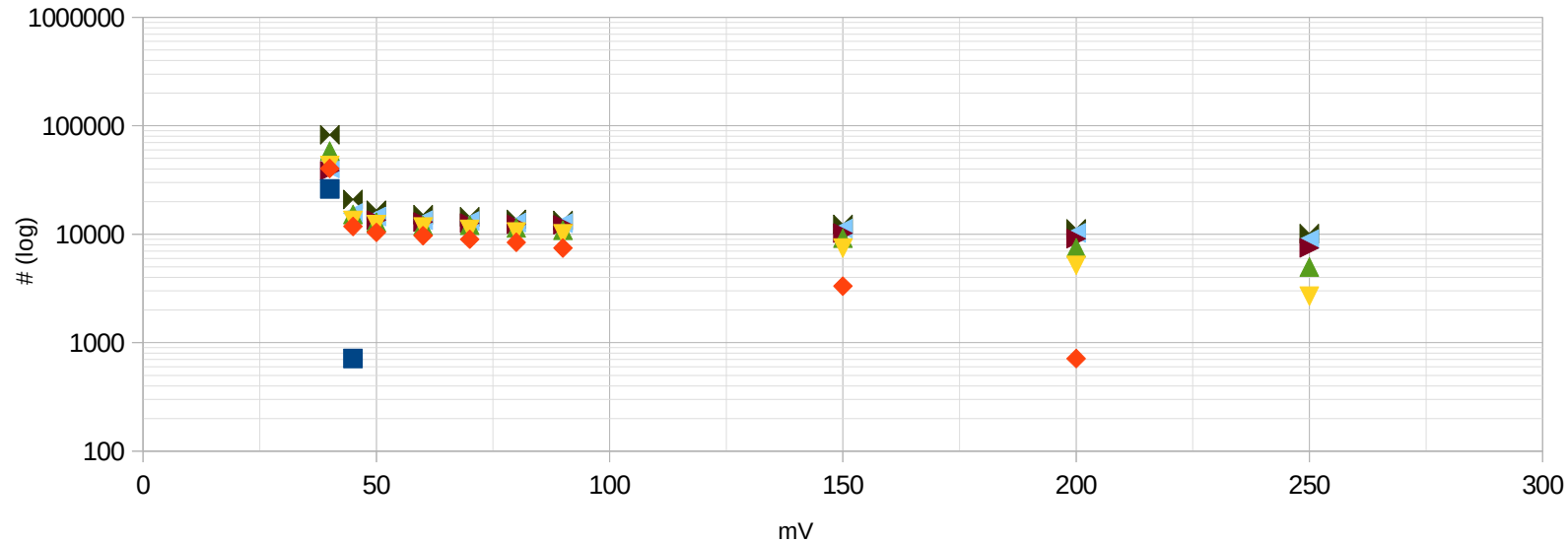
$$\frac{V_{OUT}}{Q (130 \text{ fC})} = \frac{35 \text{ mV}}{130 \text{ fC}} = 0,25 \text{ mV/fC}$$



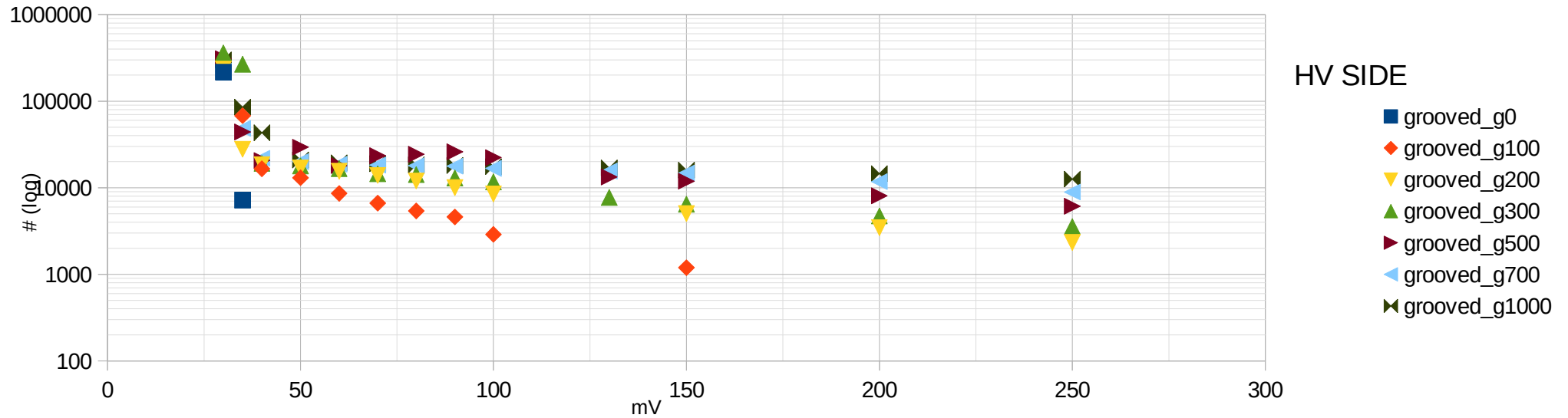
PLANARE 2 CREMAT



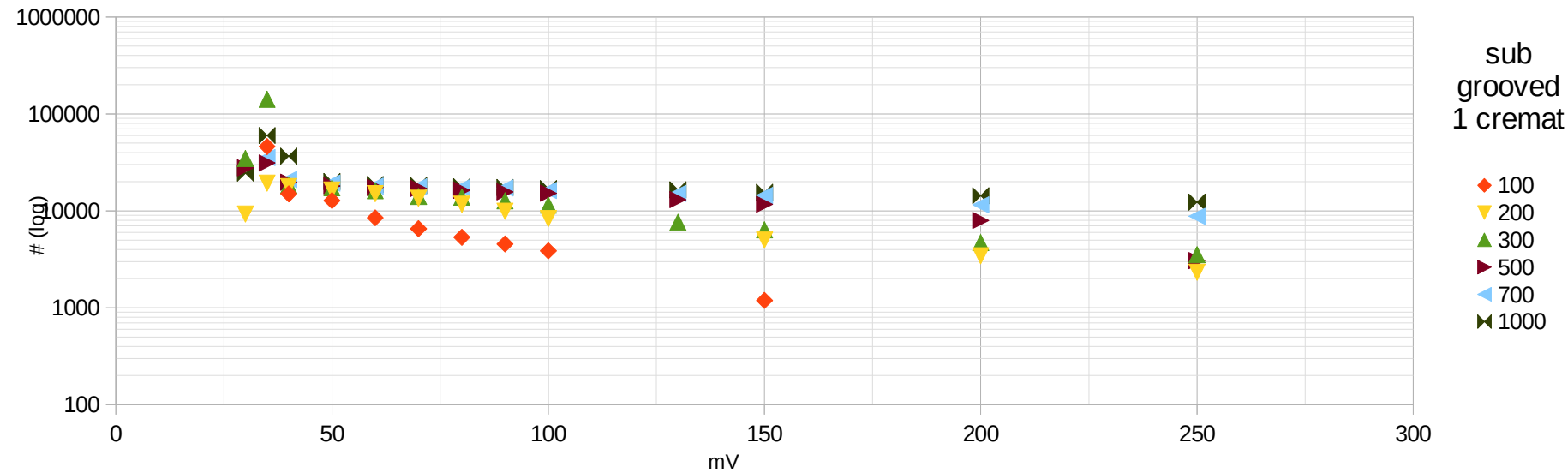
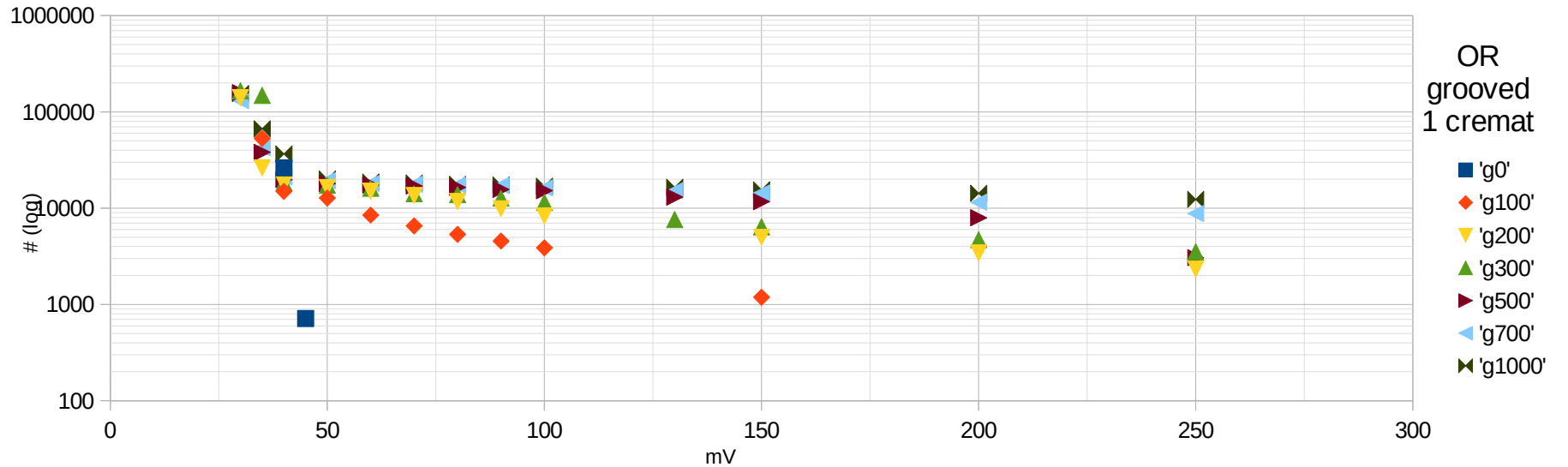
PLANARE 2 CREMAT



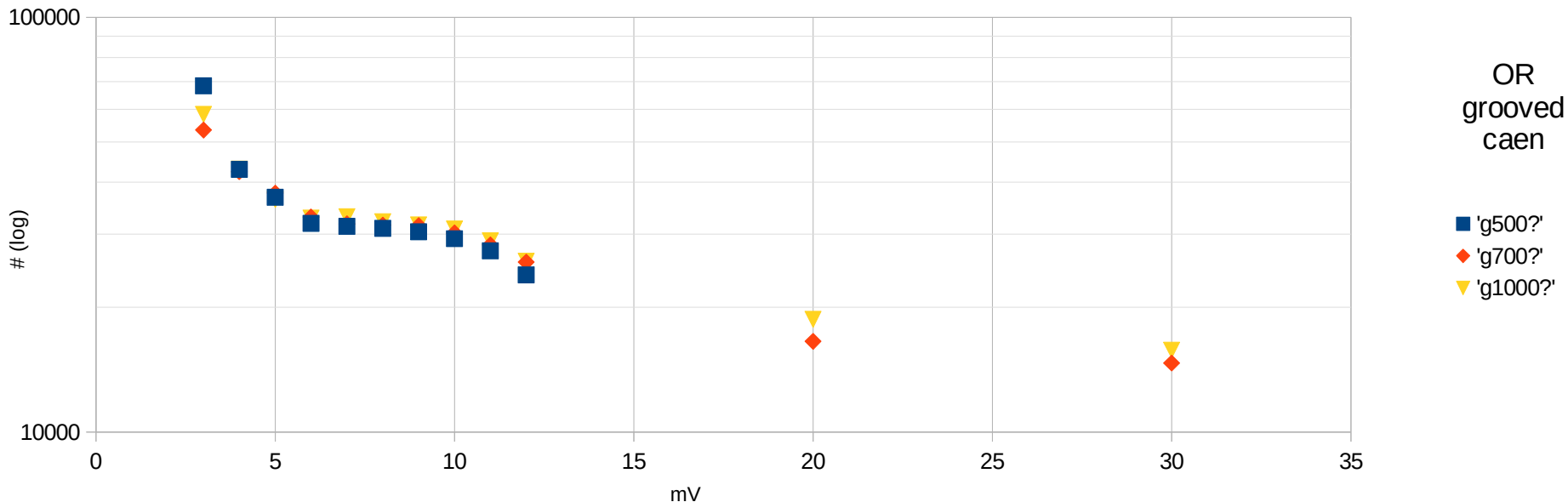
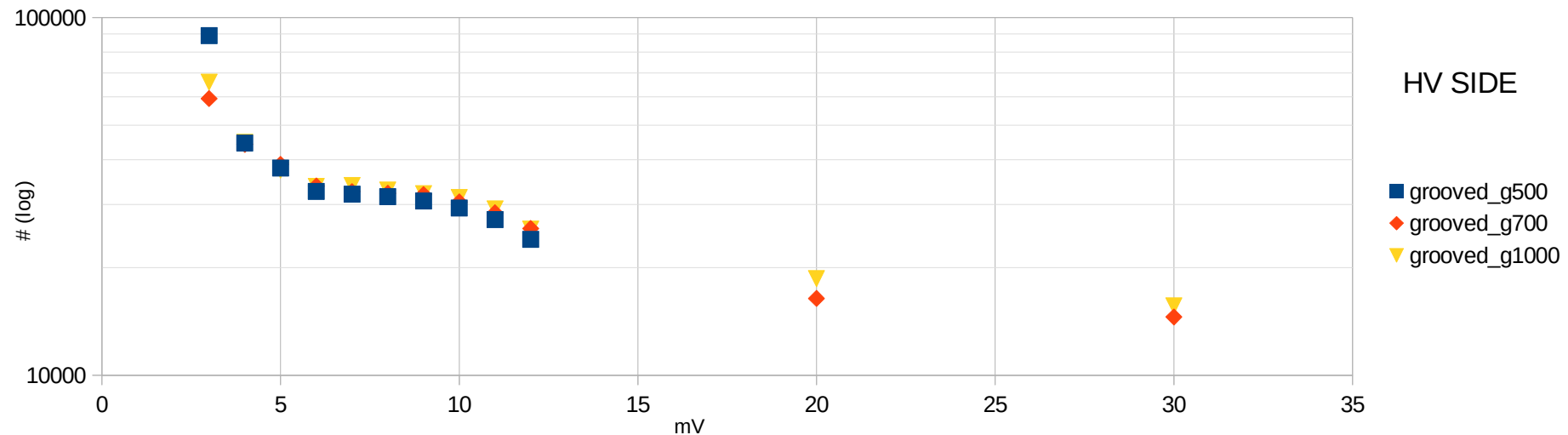
GROOVED 1 CREMAT



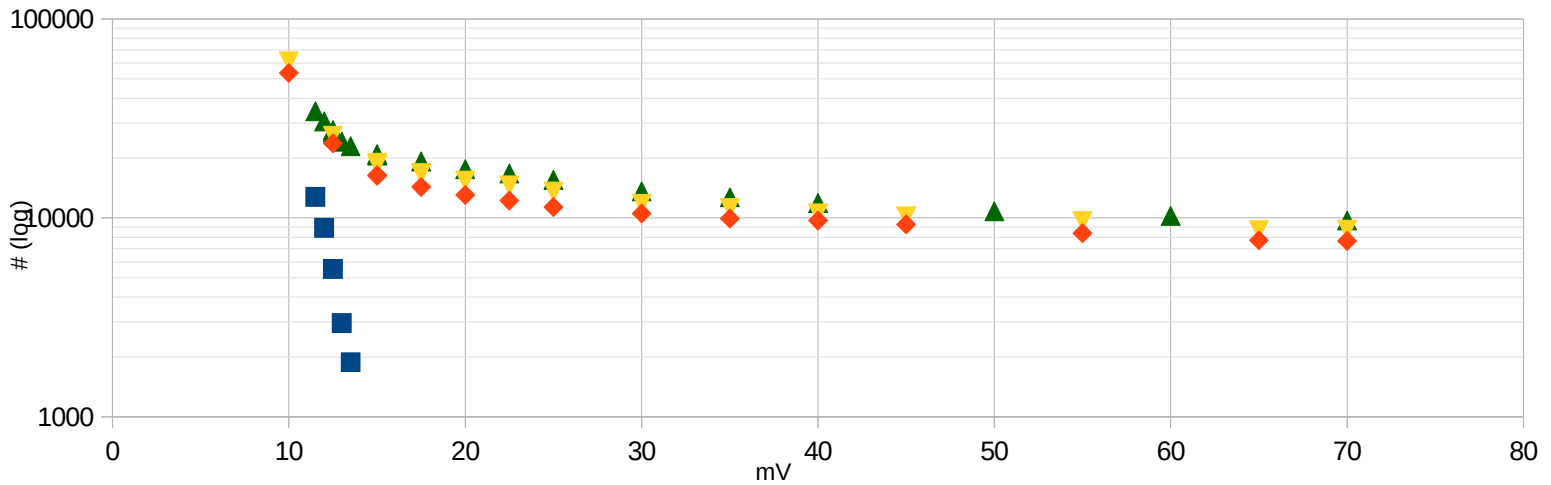
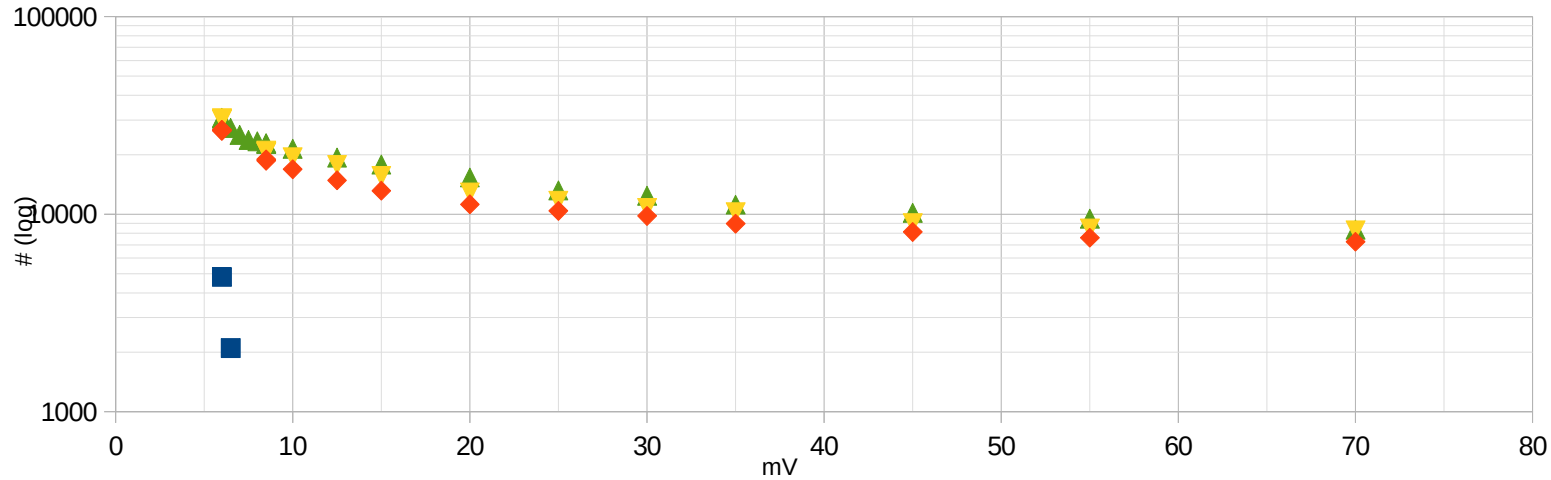
GROOVED 1 CREMAT



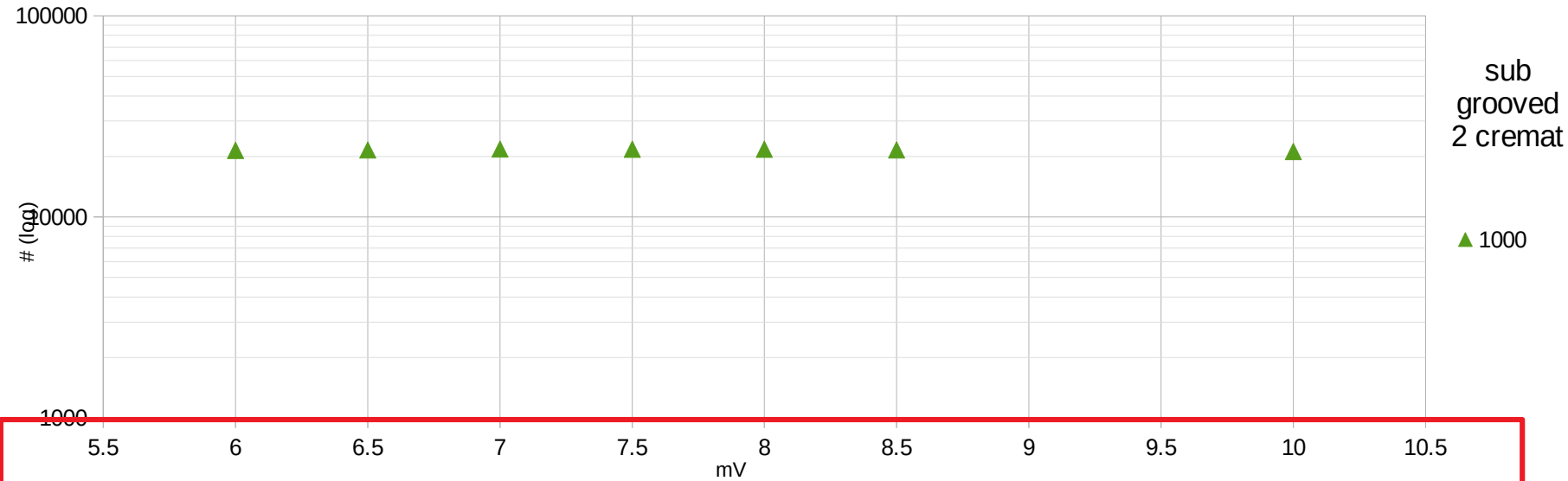
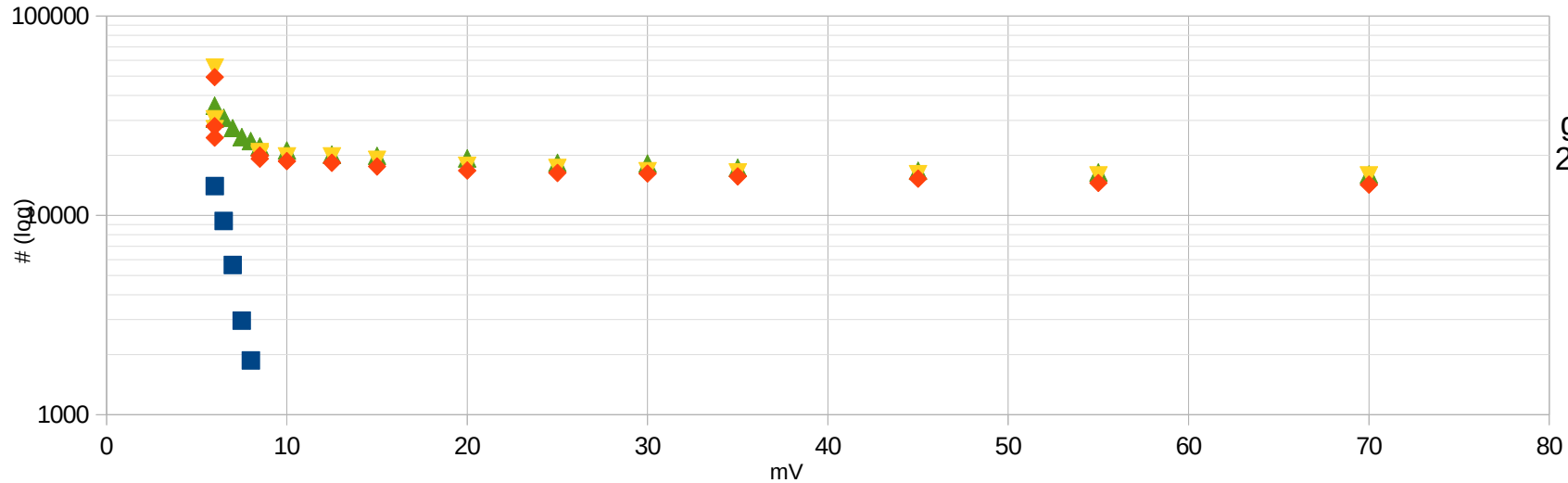
GROOVED 1 CAEN cameretta non calibrata in HV



GROOVED 2 CREMAT 6 + 3 mm

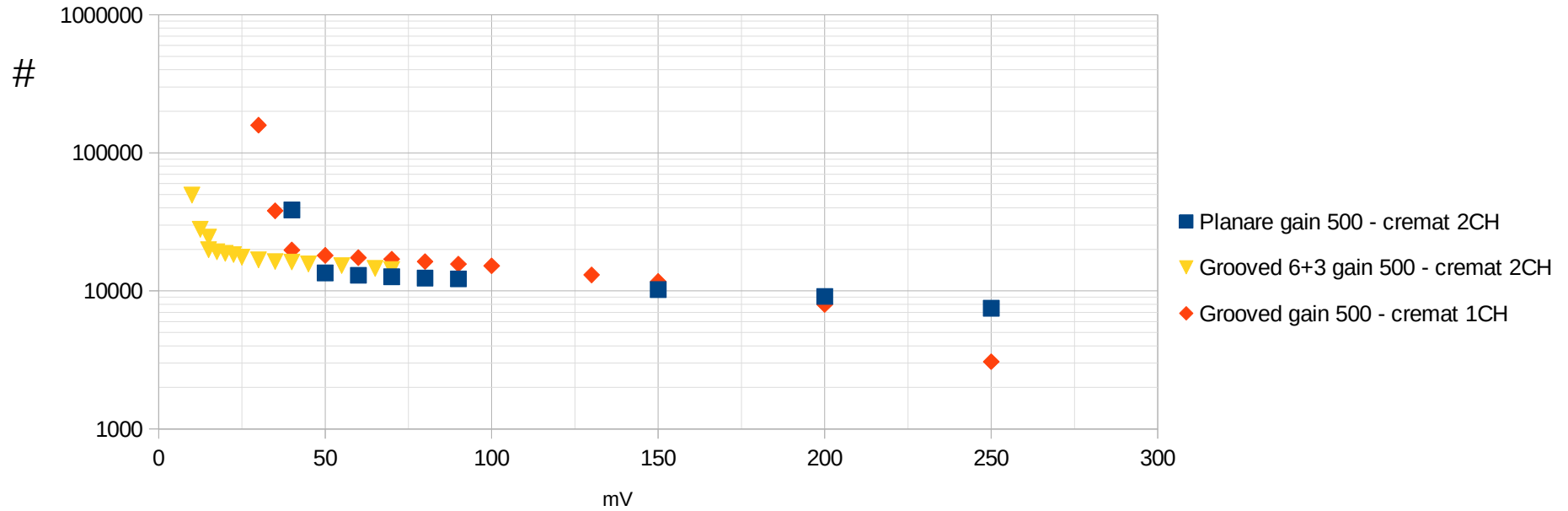


GROOVED 2 CREMAT 6 + 3 mm



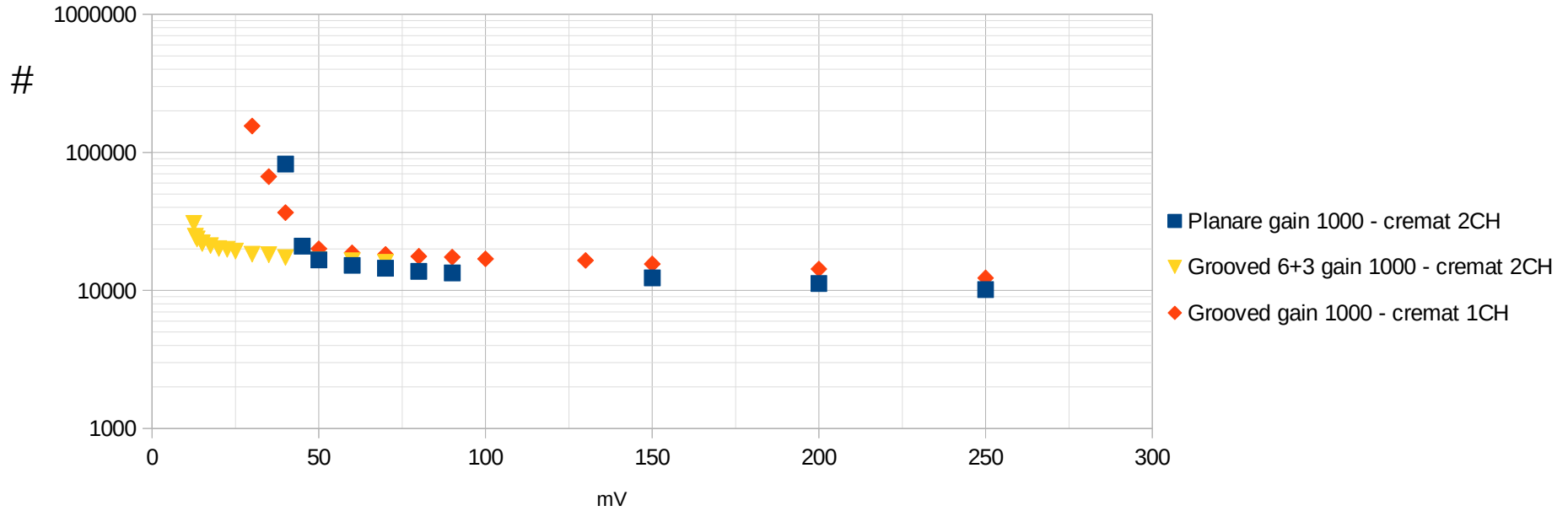
CONFRONTO GAIN 500

PLANARE 2CREMAT / GROOVED 1CREMAT / GROOVED 2CREMAT6+3



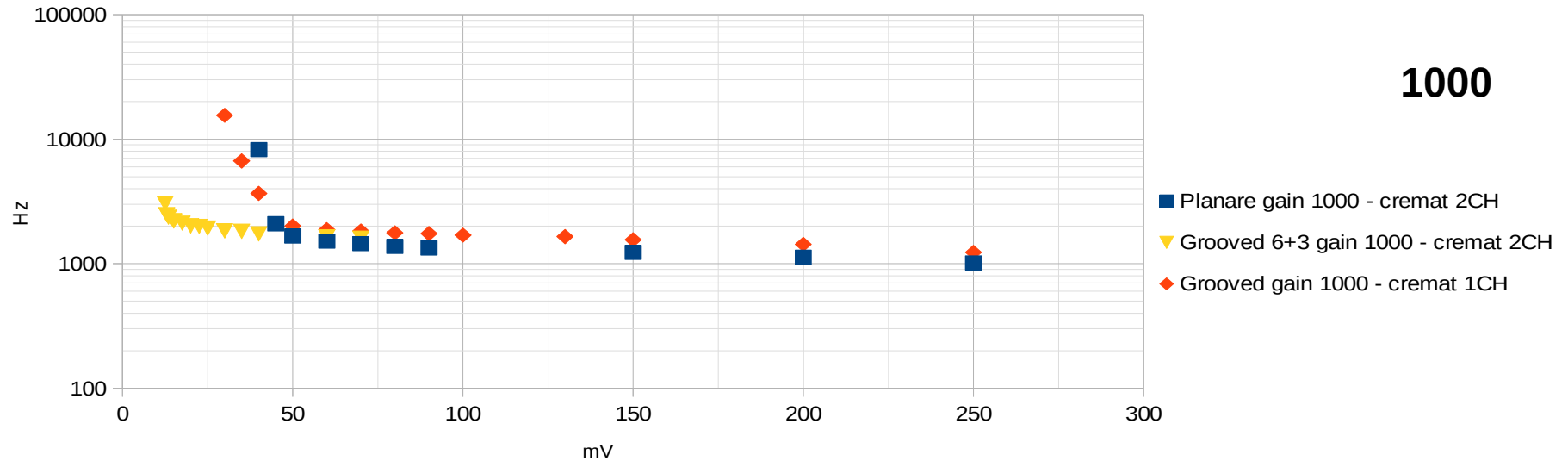
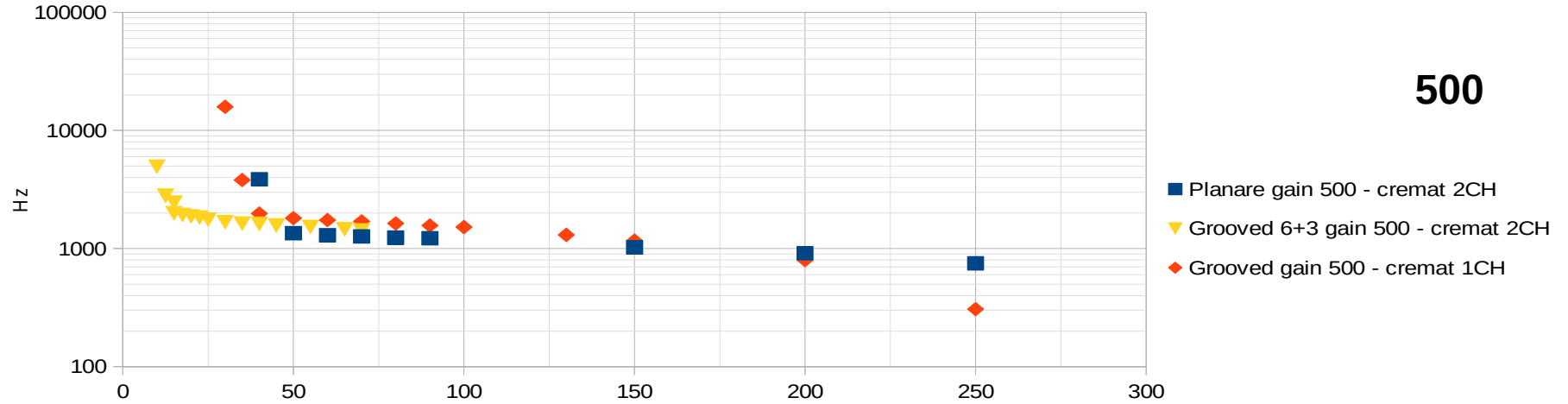
CONFRONTO GAIN 1000

PLANARE 2CREMAT / GROOVED 1CREMAT / GROOVED 2CREMAT6+3



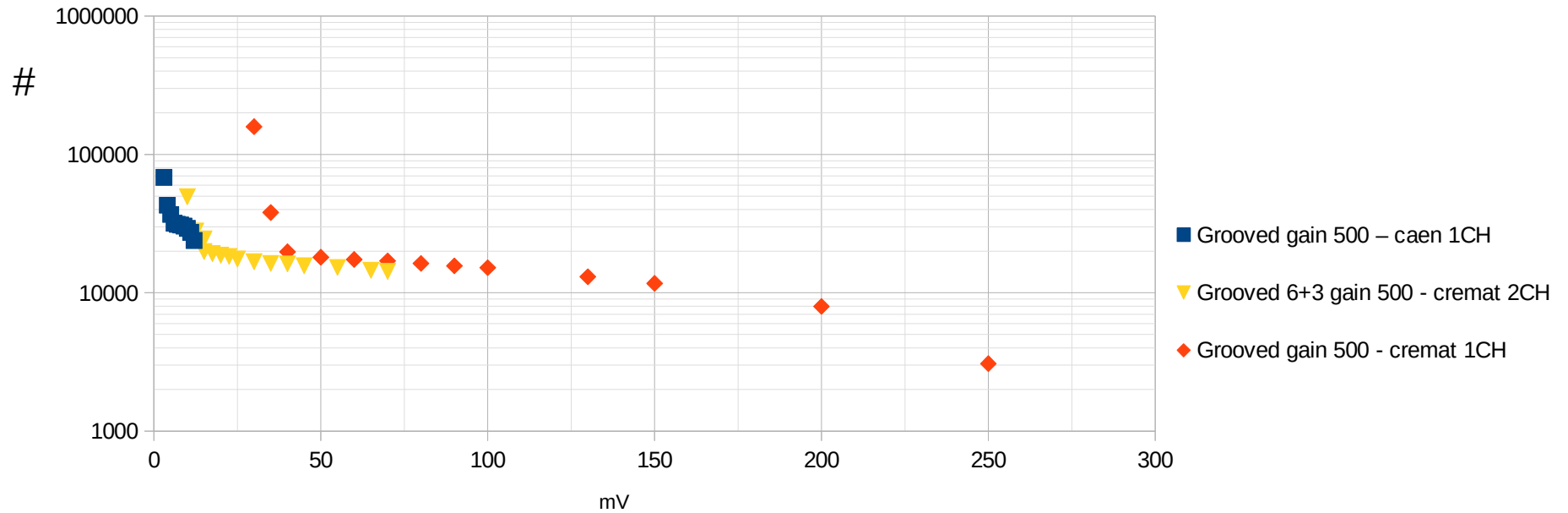
RATE - CONFRONTO

PLANARE 2CREMAT / GROOVED 1CREMAT / GROOVED 2CREMAT6+3



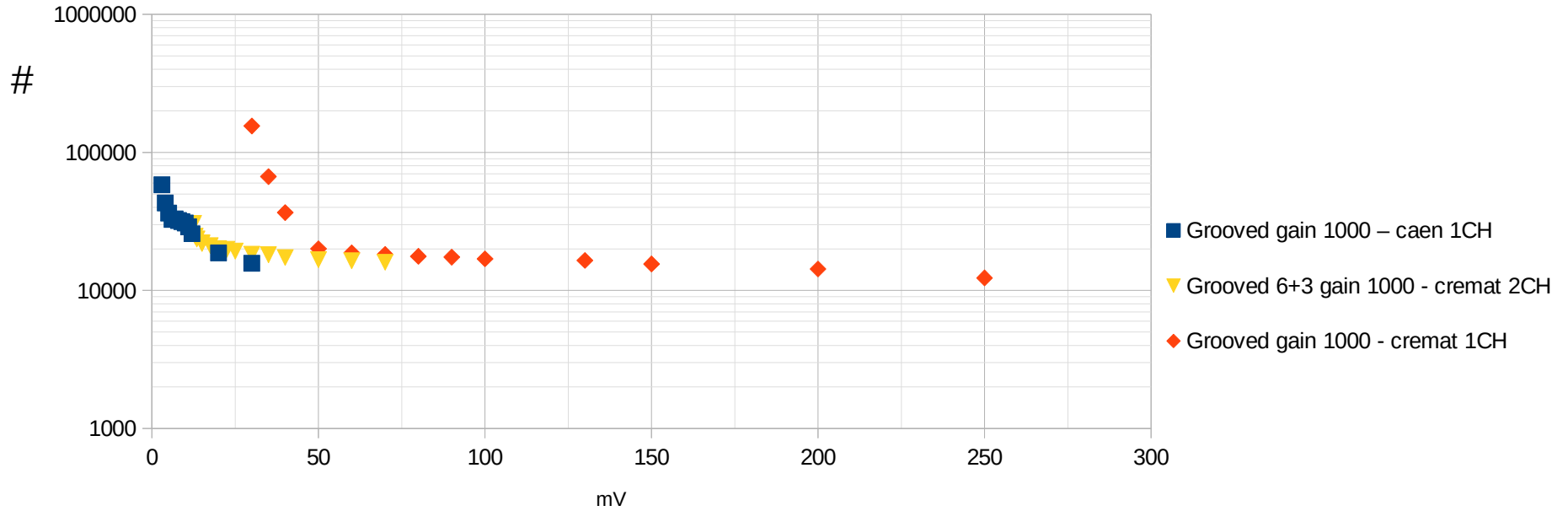
CONFRONTO GAIN 500

GROOVED 1CAEN / GROOVED 1CREMAT / GROOVED 2CREMAT6+3



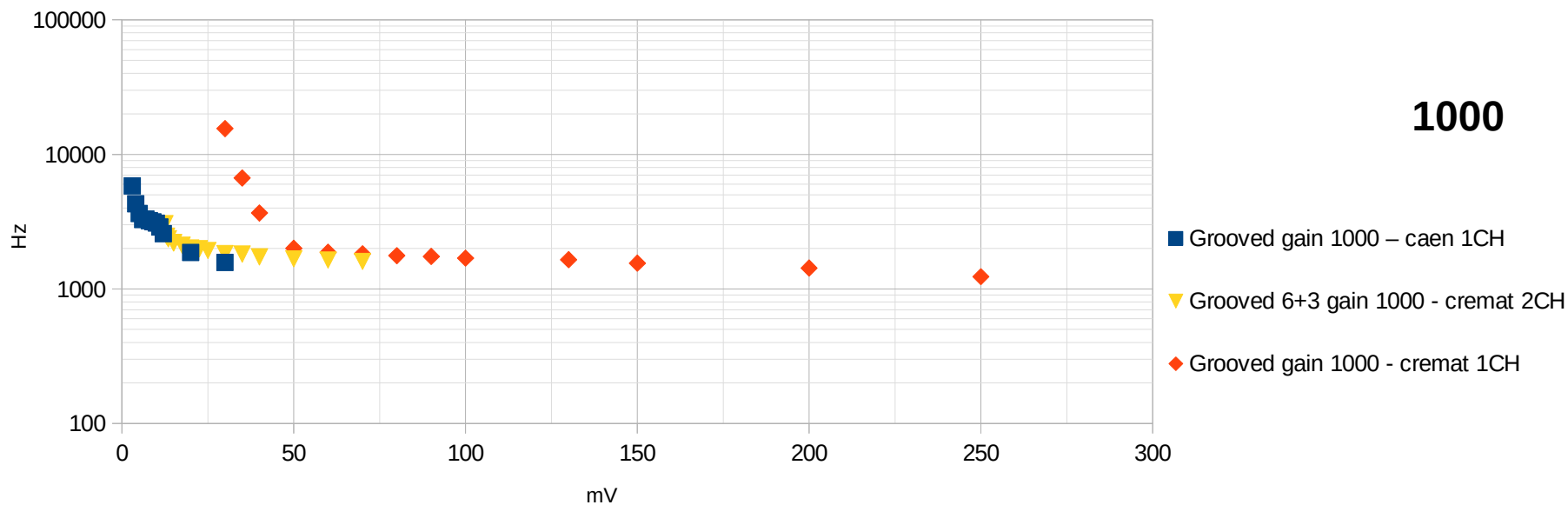
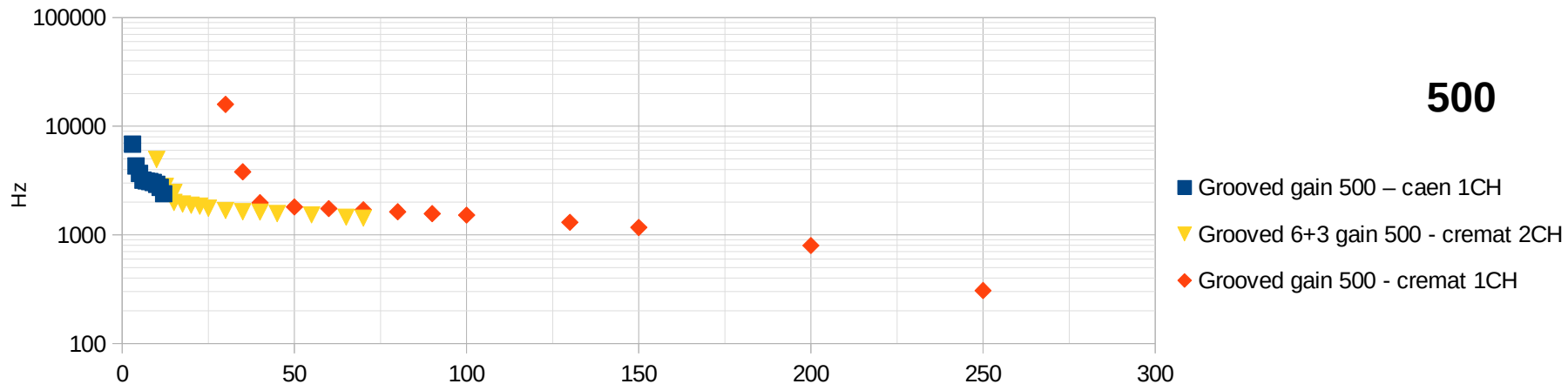
CONFRONTO GAIN 1000

GROOVED 1CAEN / GROOVED 1CREMAT / GROOVED 2CREMAT6+3

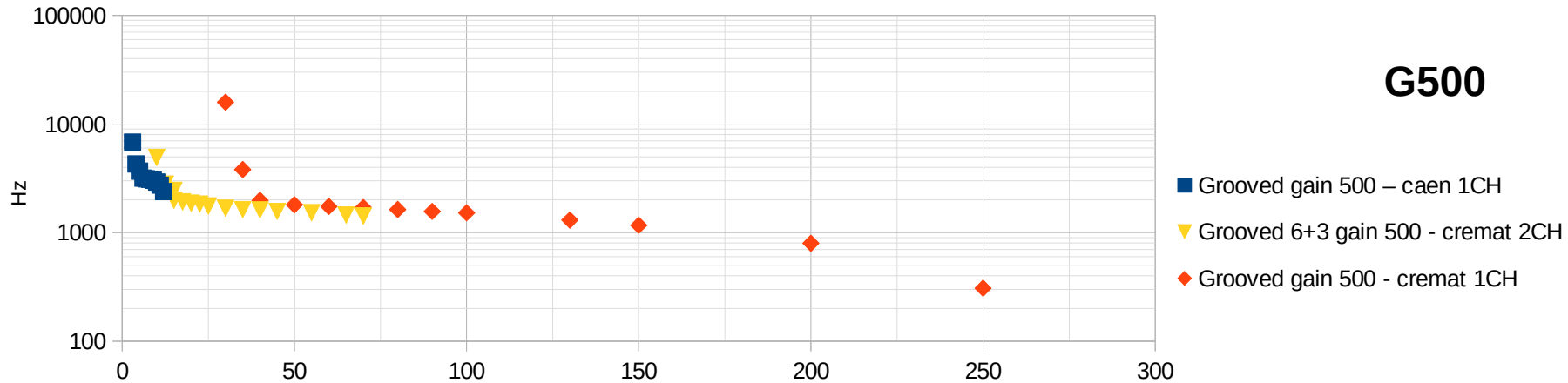


RATE - CONFRONTO

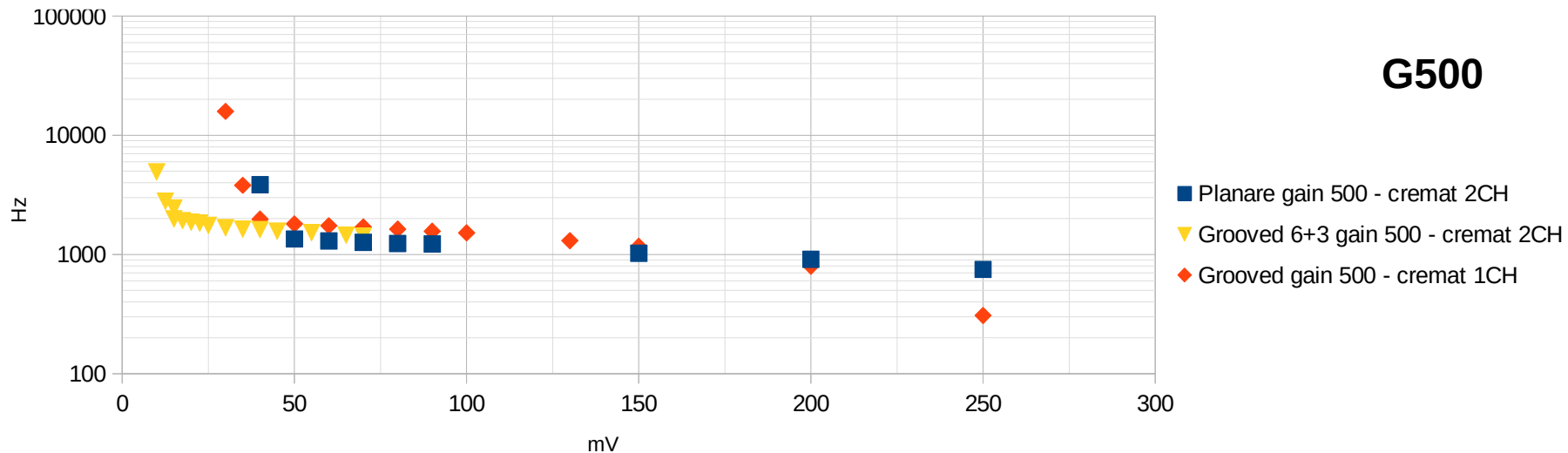
GROOVED 1CAEN / GROOVED 1CREMAT / GROOVED 2CREMAT6+3



GROOVED 1CAEN / GROOVED 1CREMAT / GROOVED 2CREMAT6+3



PLANARE 2CREMAT / GROOVED 1CREMAT / GROOVED 2CREMAT6+3



Planare conteggia circa $\frac{1}{4}$ in meno; Grooved 1CAEN non era ben calibrata in HV;
1 o 2 cremat non sembrano cambiare significativamente; Conteggi al plateau per grooved (no caen) ~ 2000

RATE ATTESO

- Planare conteggia circa $\frac{1}{4}$ in meno;
- Grooved 1CAEN non era ben calibrata in HV;
- 1 o 2 cremat non sembrano cambiare significativamente;
- Conteggi al plateau per grooved (no caen) ~ 2000

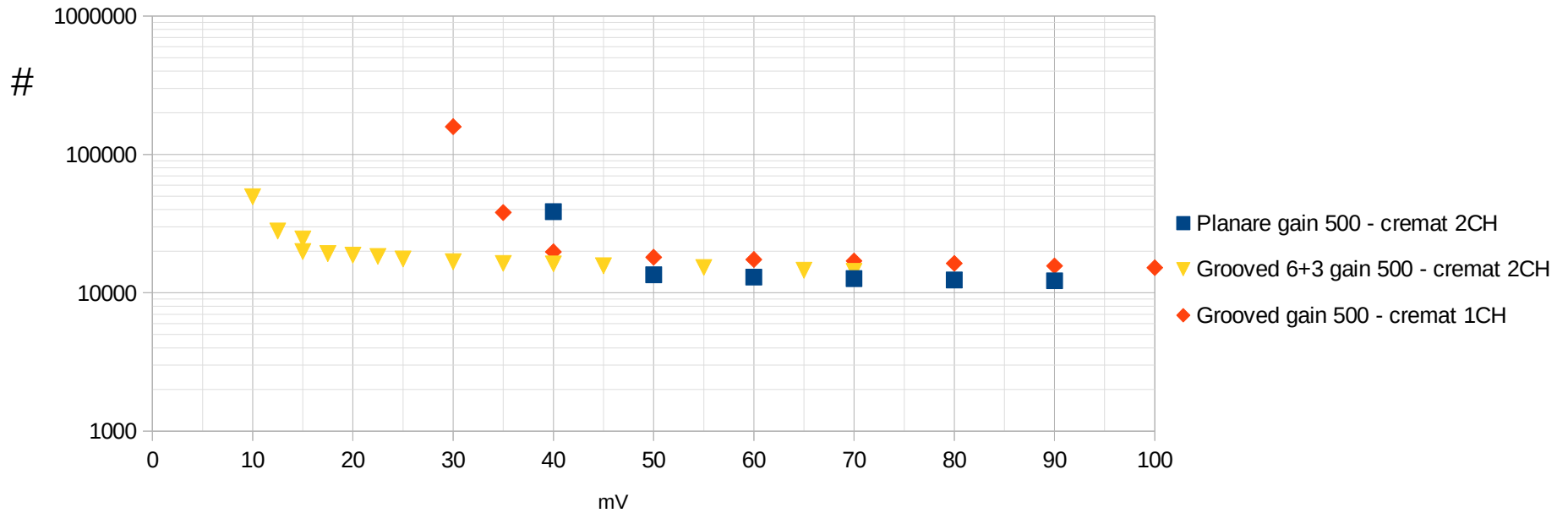
Sorgente 750 Hz/cm^2
Area Attiva 100 cm^2 } 75000 Hz \longrightarrow $1\% \text{ di efficienza} = 750 \text{ Hz}$

Nostri Conteggi GROOVED $\sim 2000 \text{ Hz}$ \longrightarrow Efficienza $\sim 3\%$

Nostri Conteggi PLANARE $\sim 1500 \text{ Hz}$ \longrightarrow Efficienza $\sim 2\%$

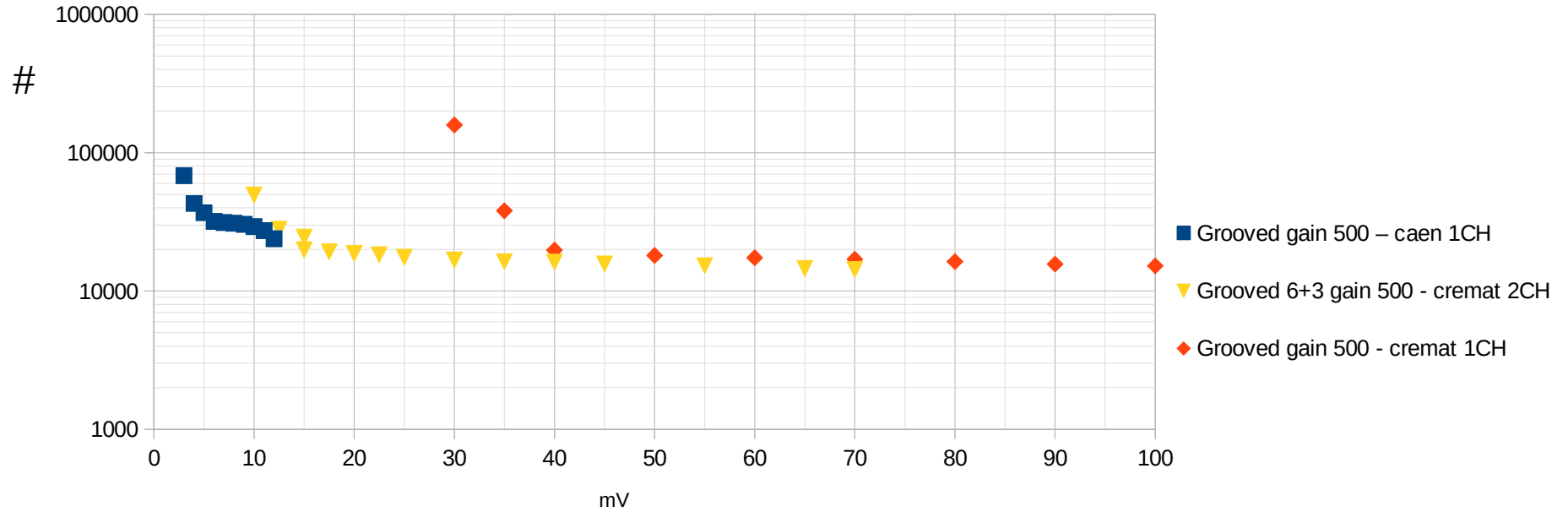
CONFRONTO GAIN 500

PLANARE 2CREMAT / GROOVED 1CREMAT / GROOVED 2CREMAT6+3



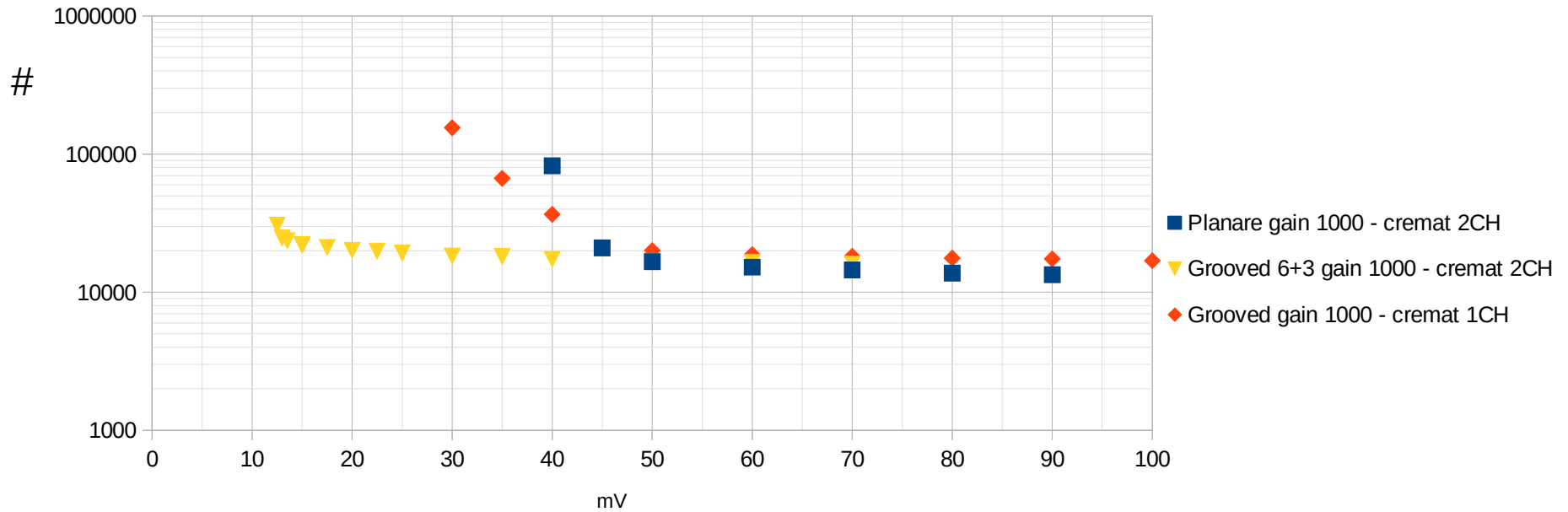
CONFRONTO GAIN 500

GROOVED 1CAEN / GROOVED 1CREMAT / GROOVED 2CREMAT6+3



CONFRONTO GAIN 1000

PLANARE 2CREMAT / GROOVED 1CREMAT / GROOVED 2CREMAT6+3



CONFRONTO GAIN 1000

GROOVED 1CAEN / GROOVED 1CREMAT / GROOVED 2CREMAT6+3

