

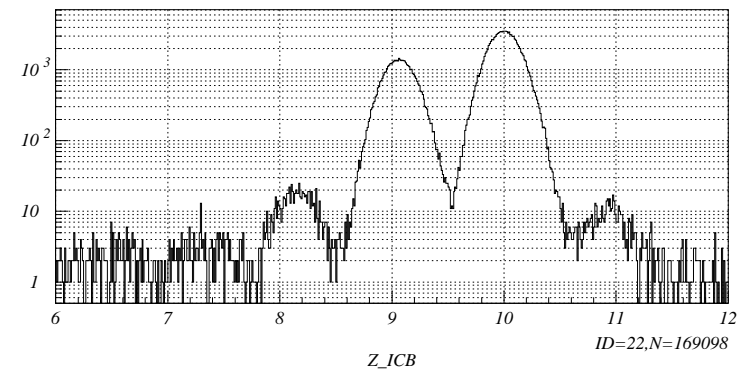
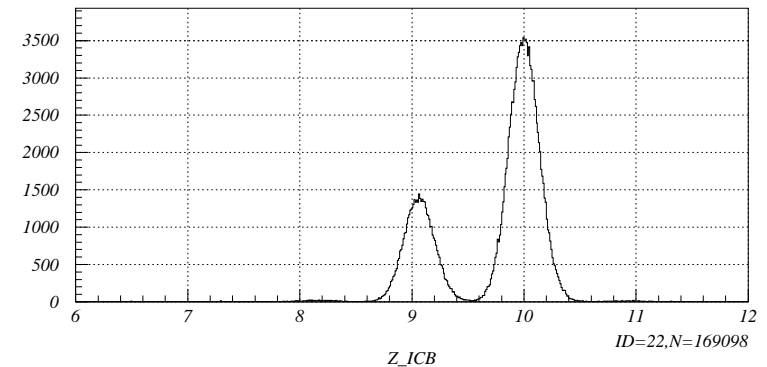
## Memo (S27)

---

- BDC1,2, FDC1, FDC2, ICB, (SBT)
  - $^{30}\text{Ne}$  from Run237
    - Efficiency & Resolution
    - Position resolution is comparable or slightly better than C/N runs

# Z identification Z= 10

- Data from run237 :  $^{30}\text{Ne}$
- SBT
  - $\sigma(\text{SF13a-SF13b}) \sim 100$  psec
    - $\rightarrow$  time resolution of one detector :  $\sigma_T \sim 71$  psec
    - $\rightarrow$  resolution of TOF start time :  $\sigma(T_0) \sim 51$  psec
- ICB
  - $\sigma_Z \sim 0.14$  @Z=10



- Efficiency/Multiplicity for Z=10 from Run237
  - HV: 700 V (BDC), 725 V (FDC1), 2425 V (FDC2) (?)

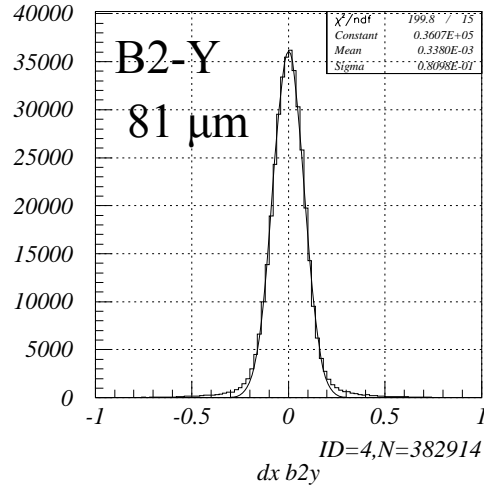
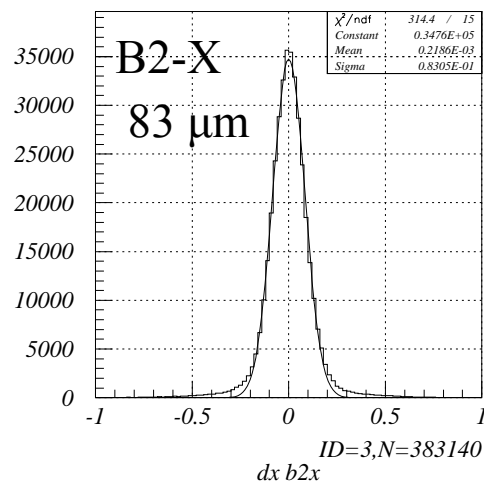
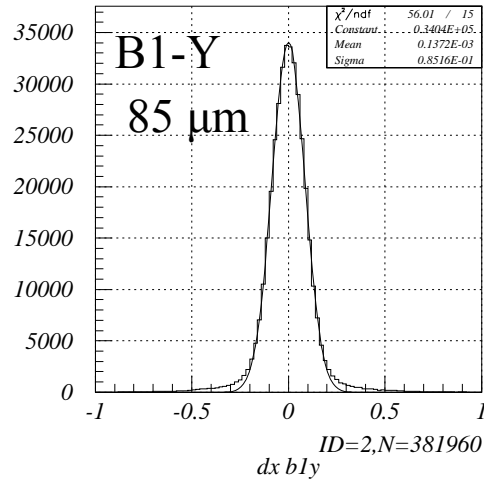
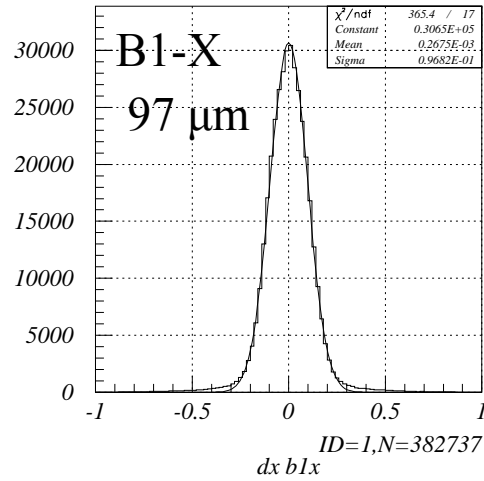
	e(tot)	e(m1)	e(m2)
B1X1	100.0	84.4	14.2
B1X1P	100.0	83.7	14.8
B1X2	100.0	88.6	10.6
B1X2P	100.0	88.7	10.5
B1Y1	99.8	83.0	15.2
B1Y1P	99.8	84.0	14.3
B1Y2	99.9	87.6	11.3
B1Y2P	99.9	82.9	15.3

B2X1	100.0	83.7	14.8
B2X1P	100.0	84.2	14.4
B2X2	100.0	83.2	15.1
B2X2P	100.0	89.3	10.0
B2Y1	100.0	84.2	14.2
B2Y1P	100.0	87.5	11.6
B2Y2	100.0	87.0	12.1
B2Y2P	100.0	82.8	15.4

	e(tot)	e(m1)	e(m2)
F1X1	100.0	76.1	20.3
F1X1P	100.0	79.7	17.7
F1U1	100.0	77.9	19.0
F1U1P	100.0	78.8	18.5
F1V1	100.0	79.4	17.9
F1V1P	100.0	79.2	18.1
F1X2	100.0	78.0	19.0
F1X2P	100.0	79.6	17.8
F1U2	100.0	79.4	17.9
F1U2P	100.0	76.8	19.9
F1V2	100.0	79.8	17.5
F1V2P	100.0	80.4	17.1
F1X3	100.0	78.6	18.6
F1X3P	100.0	81.6	16.0

F2X1	99.8	80.8	16.8
F2X1P	99.8	73.9	21.6
F2U1	99.9	73.5	21.9
F2U1P	99.9	73.6	21.8
F2V1	99.7	72.4	22.3
F2V1P	99.7	74.4	21.0
F2X2	99.8	70.0	23.8
F2X2P	99.8	72.7	22.1
F2U2	99.6	68.2	25.3
F2U2P	97.0	70.8	21.4
F2V2	94.0	55.6	28.9
F2V2P	90.4	58.9	24.5
F2X3	100.0	67.1	25.4
F2X3P	100.0	75.4	17.9

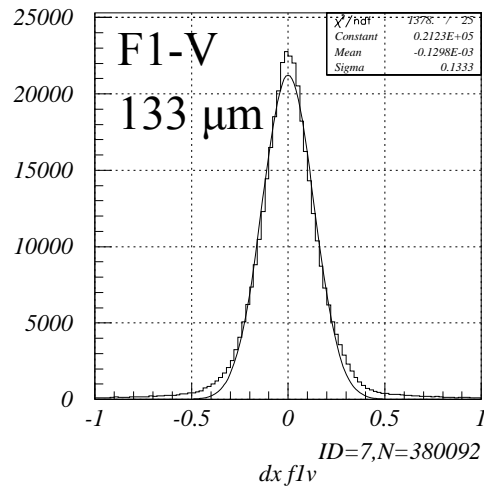
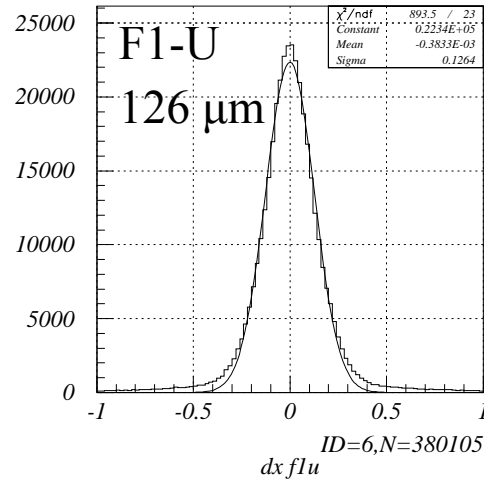
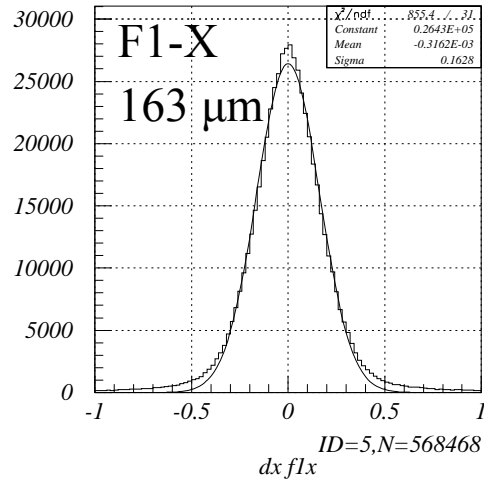
- **BDC1, 2** for  $^{30}\text{Ne}$ 
  - HV ( $V_k = V_p$ ) = 700 V(?)



- $\sigma_{\text{residue}} \sim 87 \mu\text{m}$ 
  - $\rightarrow \sigma_{\text{resolution}} \sim 125 \mu\text{m}$  for  $Z=10$

$\sigma_{\text{residue}}$  [mm]

- **FDC1** for  $^{30}\text{Ne}$ 
  - HV ( $V_k = V_p$ ) = 725 V (?)

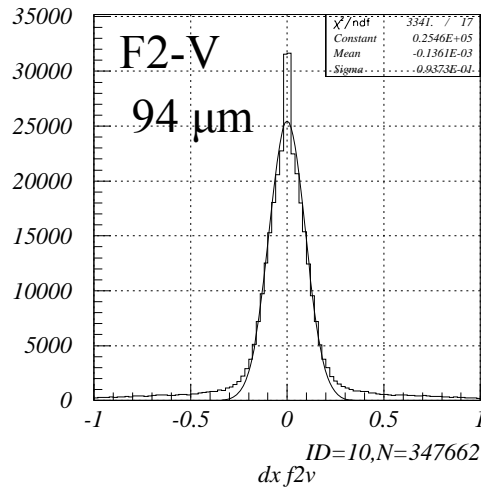
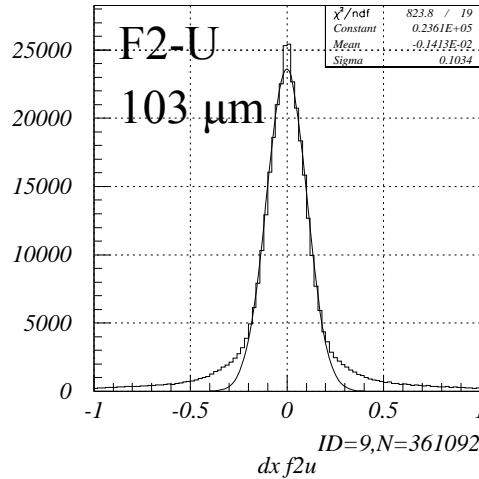
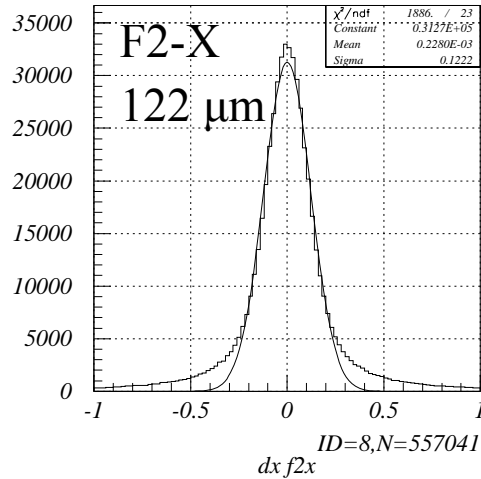


- $\sigma_{\text{resolution}}(\text{FDC1}) \sim 190 \mu\text{m}$  for  $Z=10$

plane	$\sigma_{\text{residue}}$ [ $\mu\text{m}$ ]	$\sigma_{\text{resolution}}$ [ $\mu\text{m}$ ]
F1-X	163	200
F1-U	126	179
F1-V	133	189

$\sigma_{\text{residue}}$  [mm]

- **FDC2** for  $^{30}\text{Ne}$ 
  - HV = 2425 V (?)



$\sigma_{\text{residue}}$  [mm]

- $\sigma_{\text{resolution}}(\text{FDC2}) \sim 145 \mu\text{m}$  for  $Z=10$

plane	$\sigma_{\text{residue}}$ [ $\mu\text{m}$ ]	$\sigma_{\text{resolution}}$ [ $\mu\text{m}$ ]
F2-X	122	150
F2-U	103	146
F2-V	94	133

- By looking at the shape of the drift time distribution, slightly lower HV for FDC2 may be better ?  
HV=2425 V was determined from the data of  $^{22}\text{Ne}$  at 320 MeV/u.