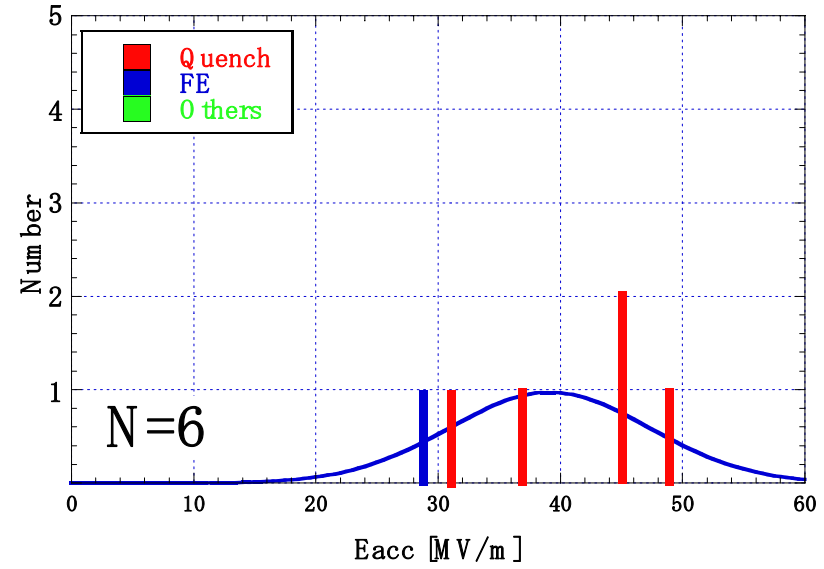
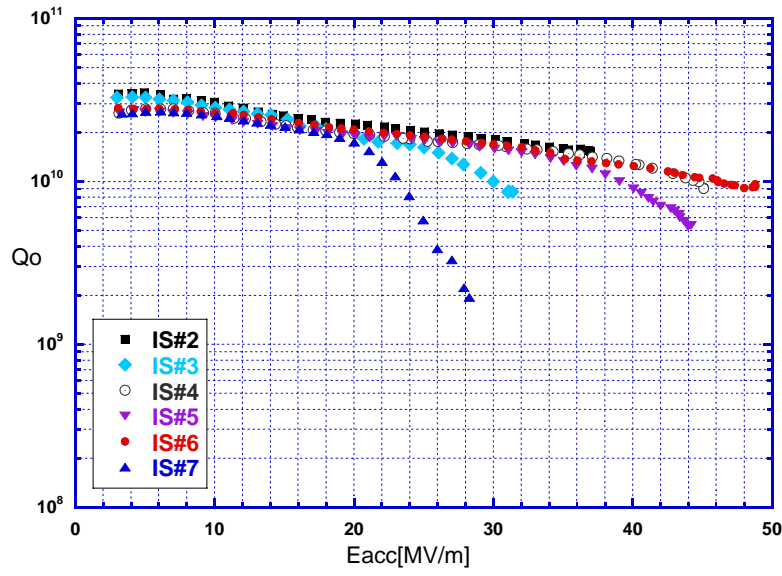


S0 single cell study @ KEK

F.Furuta, ILC-WG5-Asia KEK

10th TTC Asia-EU-US video meeting 07/Mar./14

(A) CBP+CP+Anneal+EP(80μm) +HPR+Baking(120C*48hrs)

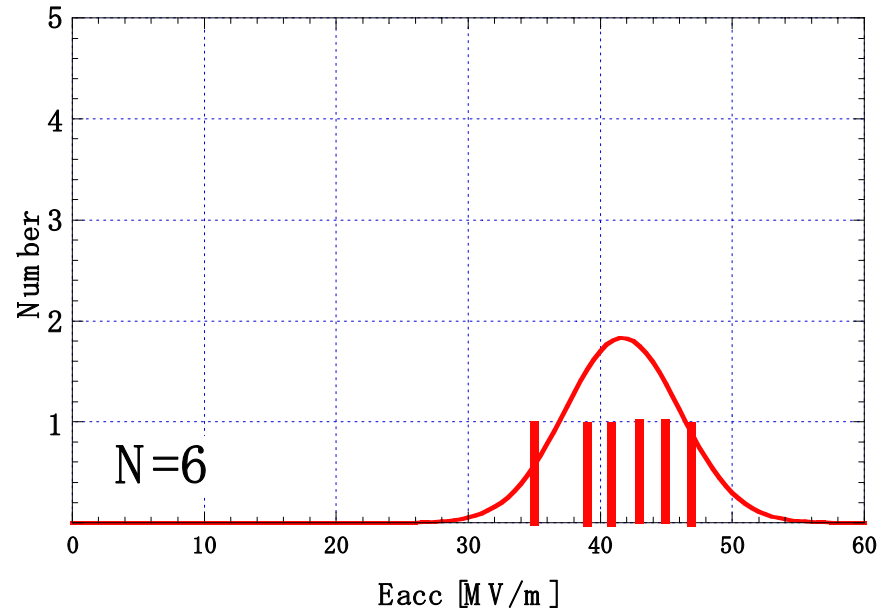
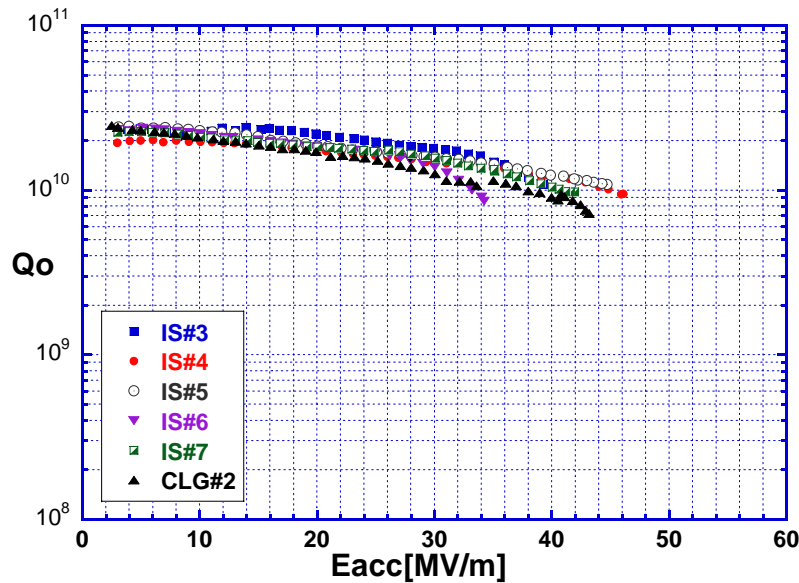


Ave. Eacc=39.1±8.2MV/m
Scattering:20%, Acceptability@40MV/m(ACD):50%

		IS#2	IS#3	IS#4	IS#5	IS#6	IS#7
EP(80)	Eacc	36.90	31.40	45.10	44.20	48.80	28.30
	Qo	1.53e10	8.66e9	9.07e9	5.38e9	9.64e9	1.94e9

**(B) CBP+CP+Anneal+EP(80 μ m)+EP(3 μ m, fresh, closed)+HF
+HPR+Baking (120C*48hrs)**

4

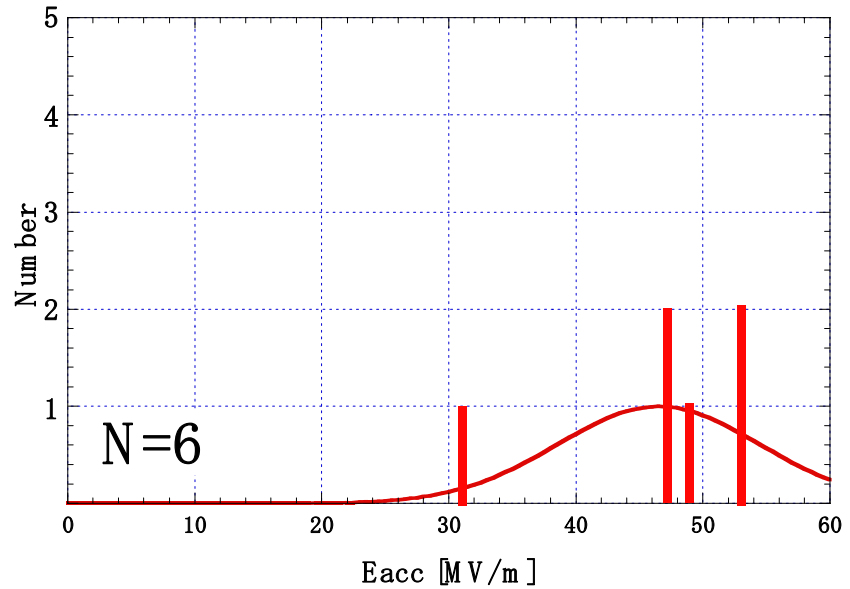
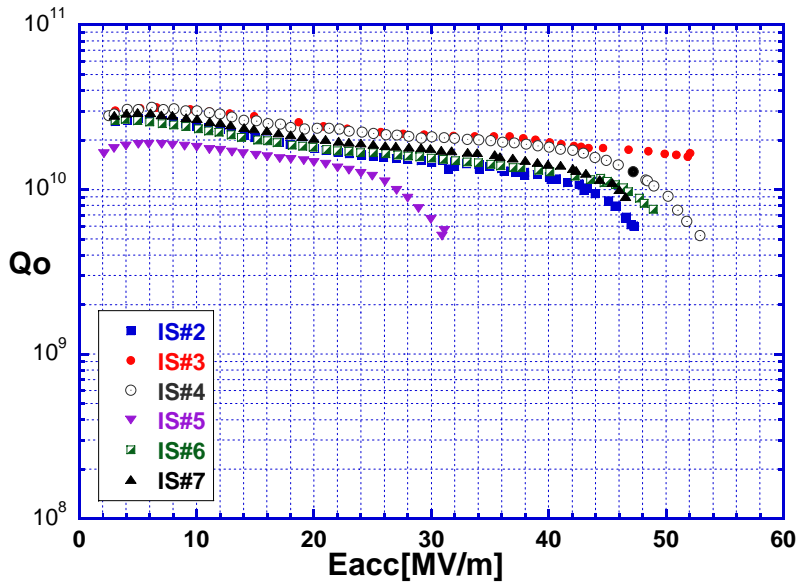


Ave. Eacc=41.7 \pm 4.4MV/m,

Scattering:10%, Acceptability@40MV/m(ACD):67%

		IS#3	IS#4	IS#5	IS#6	IS#7	CLG#2
EP(80+3) +HF	Eacc	42.00	46.10	44.70	34.25	39.30	43.80
	Qo	9.72e9	9.47e9	1.08e10	8.56e9	1.03e10	3.46e9

(C) +EP(20 μ m)+HPR+Baking (120C*48hrs)

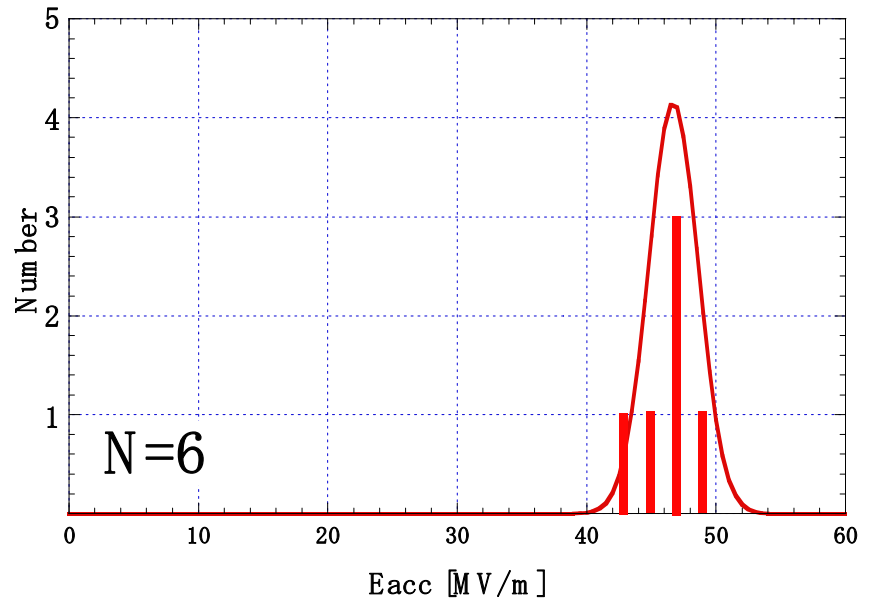
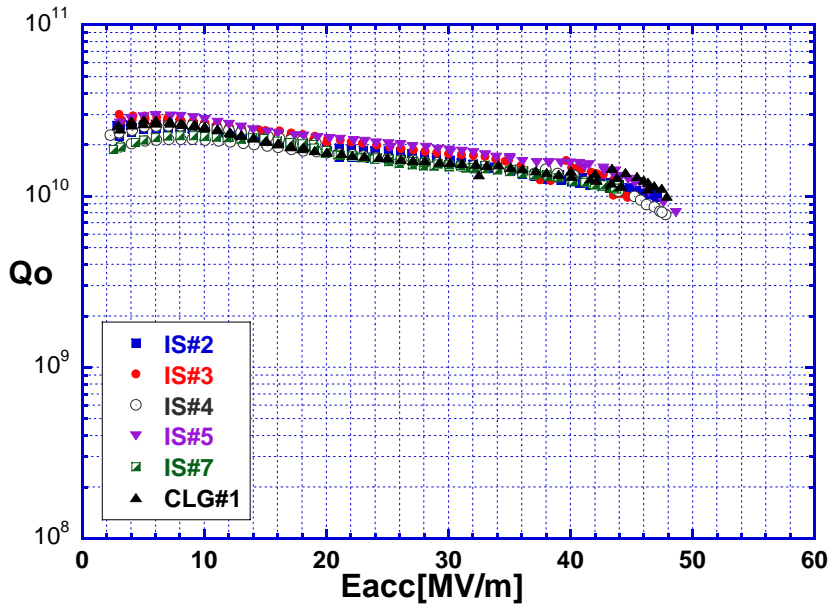


Ave. Eacc=46.5 \pm 8.0MV/m

Scattering:17%, Acceptability@40MV/m(ACD):83%

		IS#2	IS#3	IS#4	IS#5	IS#6	IS#7
+EP(20+3)	Eacc	47.24	52.44	52.91	31.10	48.92	46.53
+HF*	Qo	5.98e9	1.51e10	5.23e9	5.21e9	7.56e9	9.03e9

**(D) +EP(20 μ m)+EP(3 μ m, fresh, closed) +HF*
+HPR+Baking (120C*48hrs)**

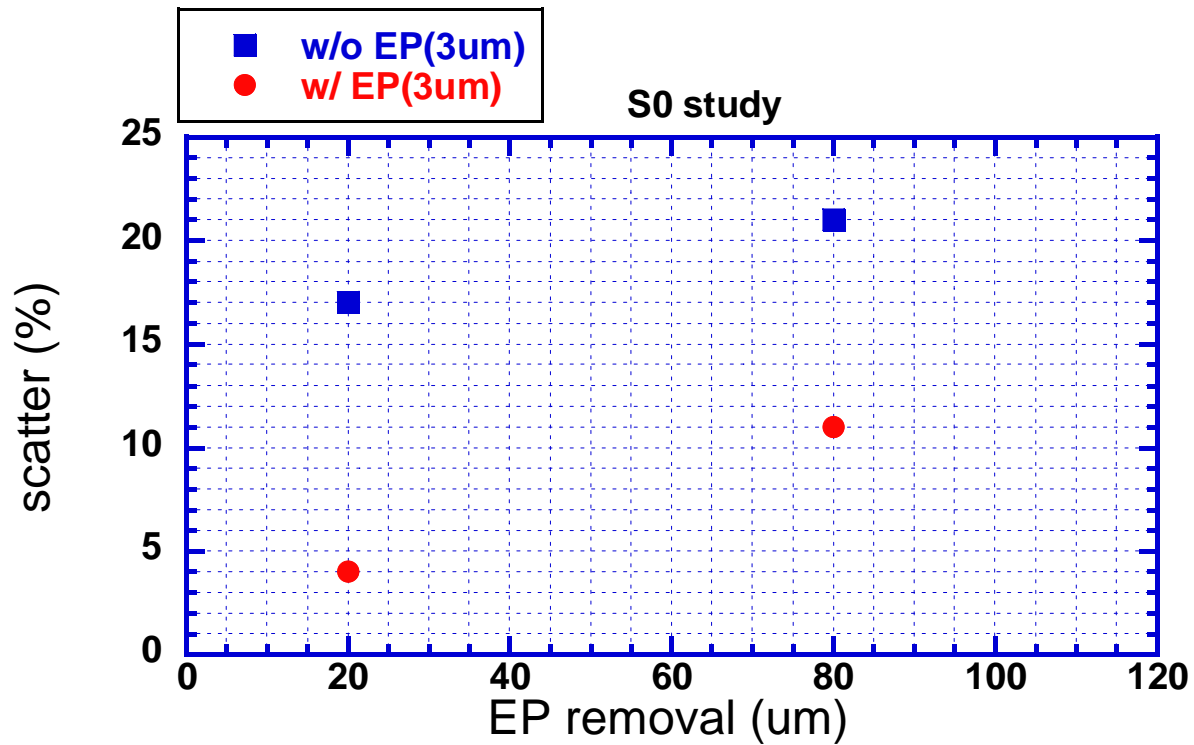


Ave. Eacc=46.7 \pm 1.9MV/m

Scattering:4%, Acceptability@40MV/m(ACD):100%

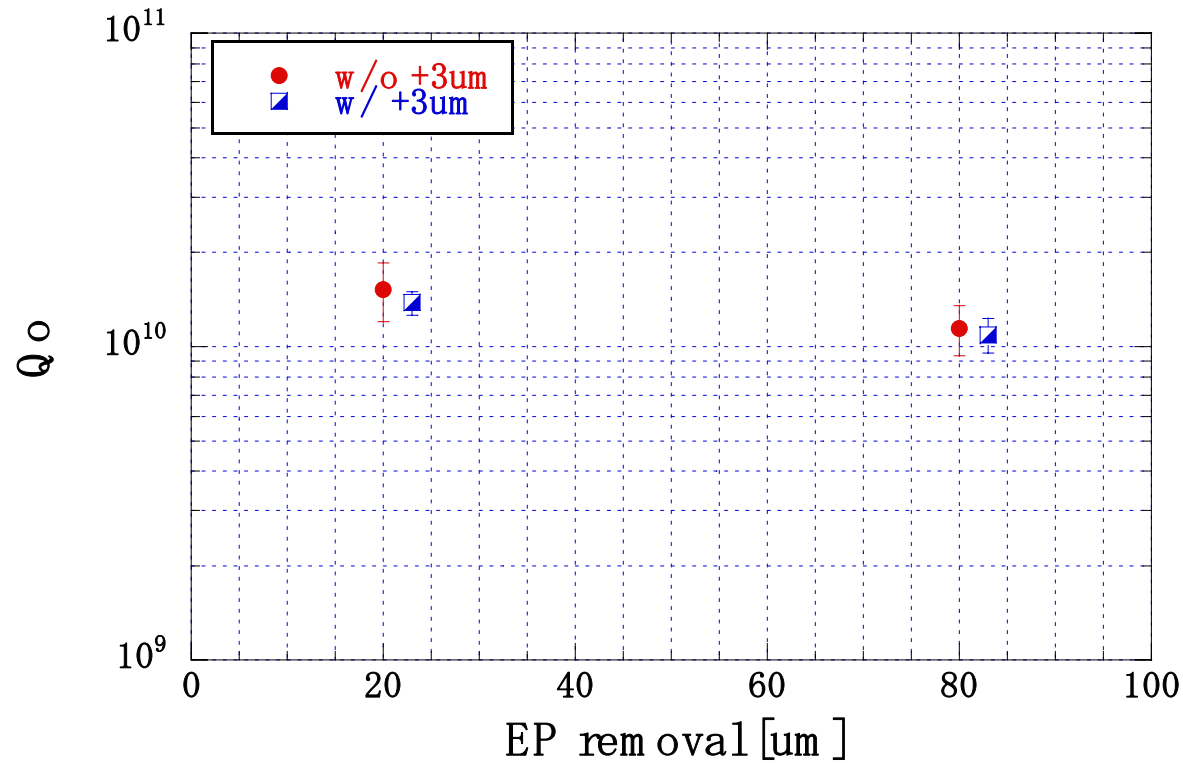
		IS#2	IS#3	IS#4	IS#6	IS#7	CLG#1
+EP(20+3)	Eacc	47.07	44.67*	47.82	48.60*	43.93*	47.90*
+HF*	Qo	1.06e10	0.98e10	0.78e10	0.80e10	1.17e10	1.0e10

scattering

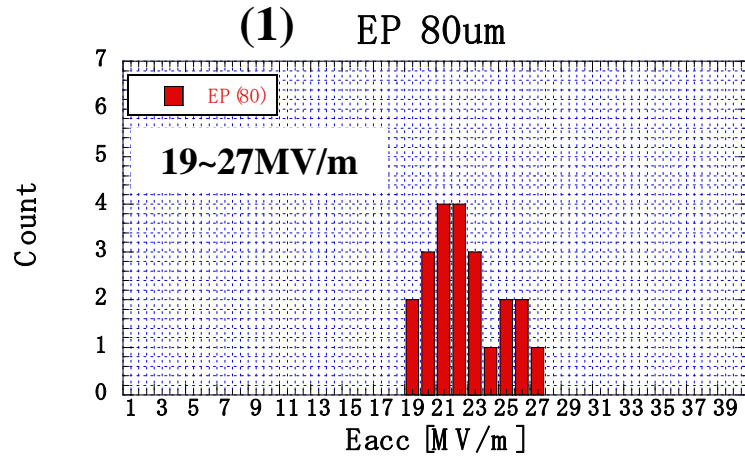


	EP(80)	EP(80+3)	EP(20)	EP(20+3)
Eacc ave	39.1±8.2	41.7±4.4	46.5±8.0	46.7 ±1.9
Scatter(%)	21	11	17	4

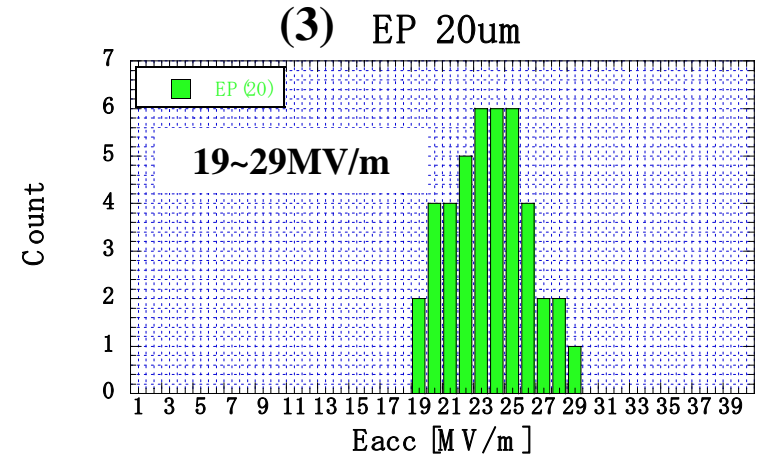
Qo @ 40MV/m



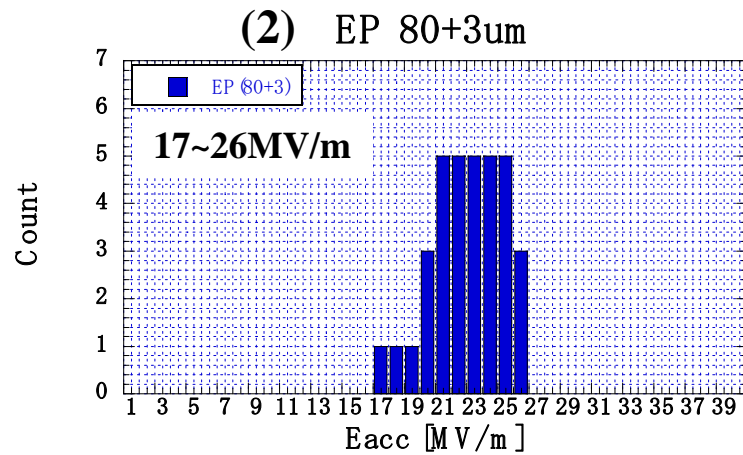
	EP(80)	EP(80+3)	EP(20)	EP(20+3)
Qo(*1e10)	1.14±0.21	1.09 ±0.14	1.52 ±0.32	1.38 ±0.12
Scatter(%)	18	13	21	9



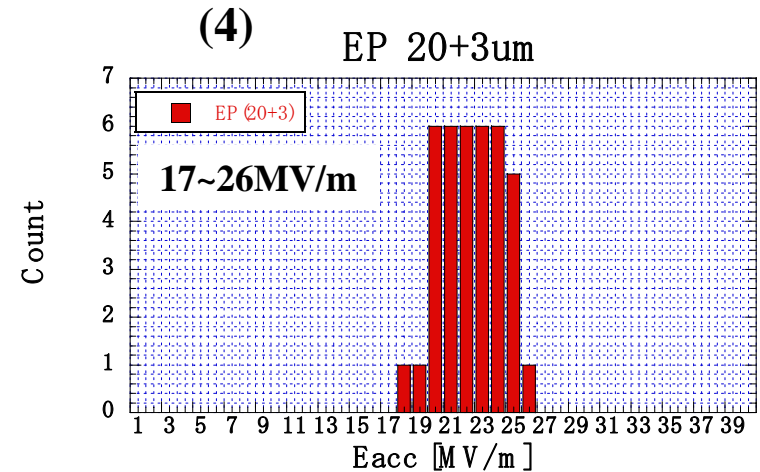
N=6



N=6



N=6



N=6

SUMMARY

- KEK S0-single study is now on going. We finished the series test for 4 recipe.
- Additional 3 μ m EP with fresh acid after heavy EP is effective to reduce the scattering. It became half compared with the recipe without additional 3 μ m EP.
- MP phenomena was observed in all tested recipe. How to eliminate the MP is also important issue.
- We start another recipe with H₂O₂ rinse to look the effect on MP phenomena.
- Degreasing is also prepared, this recipe will be tested after H₂O₂ rinse.