2015 8/27 モセネイング実験準備 澤宮、スロタ

14:00~

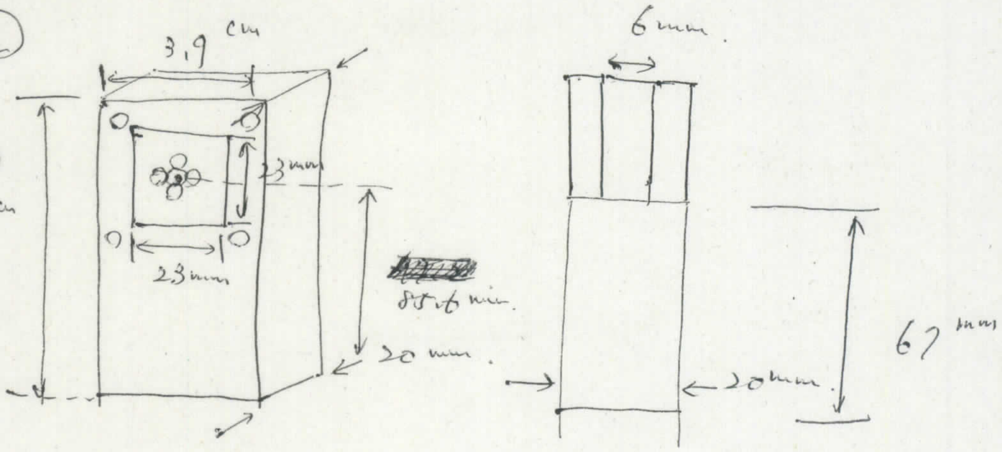
標的寸法取り

標的①

4layers

(4L標的)

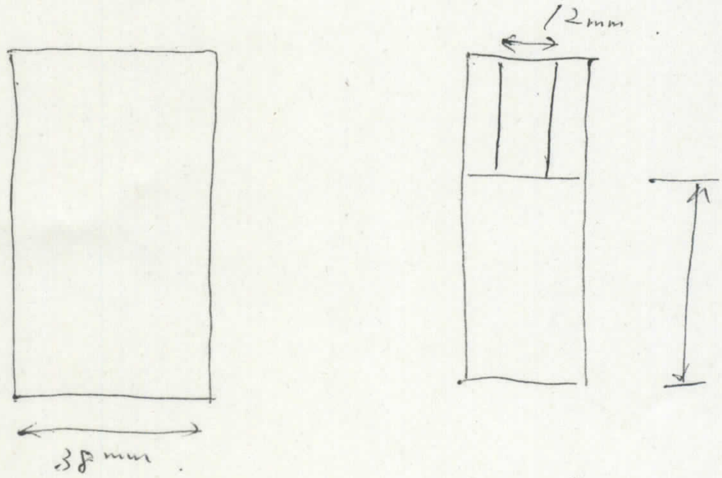
10.5 cm



標的②

8lay

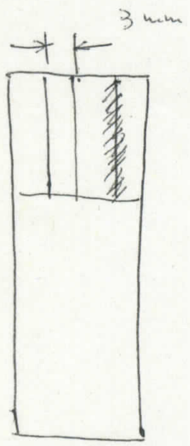
(8L標的)



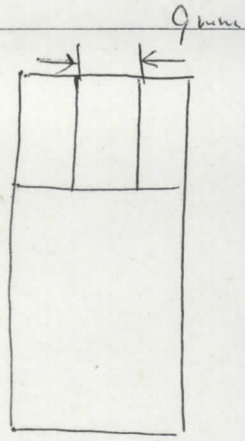
標的③

2layers

(2L標的).

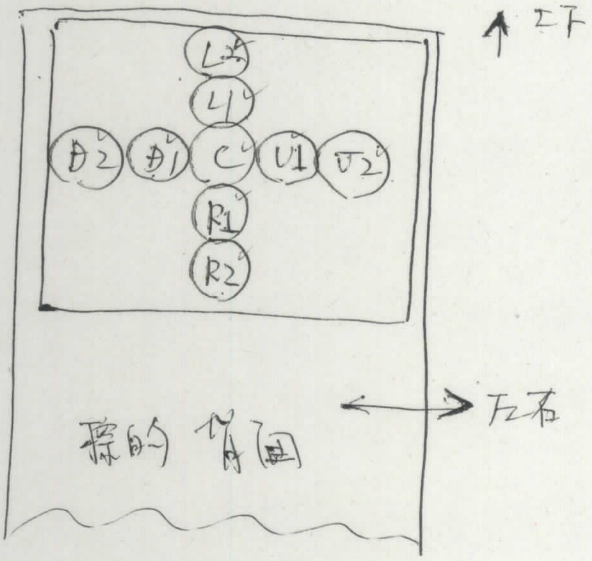


標的 (4)
6 layers
(6L 標的)

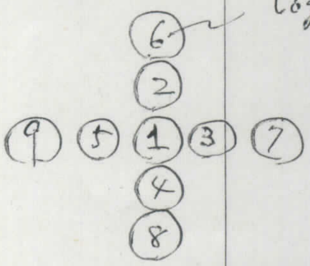


測定前 配線確認

○ 4L 標的 チェック
← 測定前 側 背面 から見て

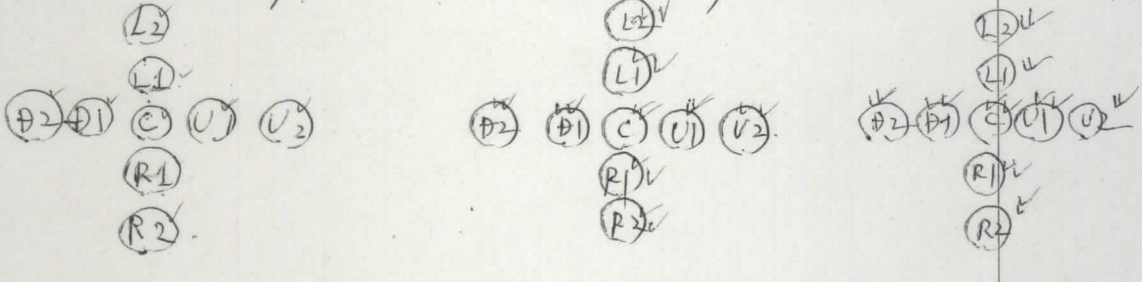


logger 入力 への serial 番号の対応



標的 背面 から見て、
中心を①として時計回りに
番号を入れてゆく。

○ 8L 標的 チェック ok. ○ 6L 標的 チェック ok. ○ 2L 標的 チェック ok.



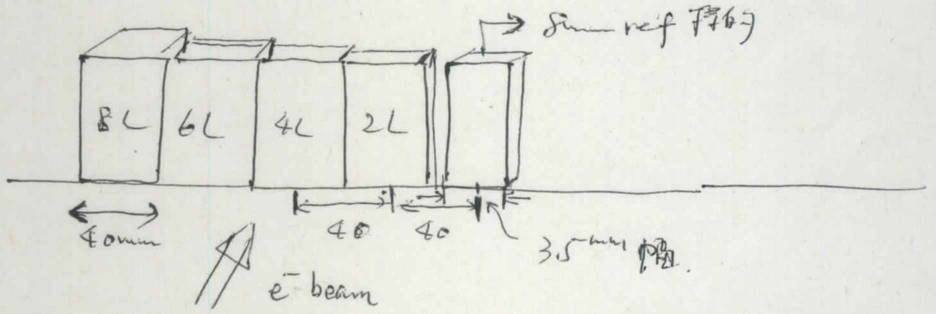
○ 番号 対応表

1 — C
2 — L1
3 — U1
4 — R1
5 — D1
6 — L2
7 — U2
8 — R2
9 — D2

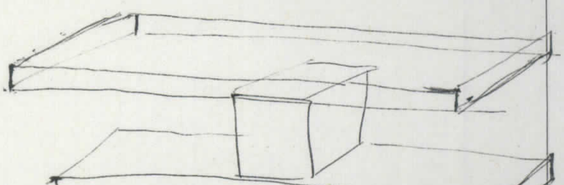
補償電磁石 全台までで行なテスト.

- 標的3 (2L標的) 9本 OK
- 預備 0〜1〜3 OK.
- 交換器 — 比ガー間 ケーブル 12本 OK.
  1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
- 交換器 12台 OK.
  1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
- 標的1 (4L標的) 9本 OK です
- 標的2 (8L標的) 9本 ケーブル OK.

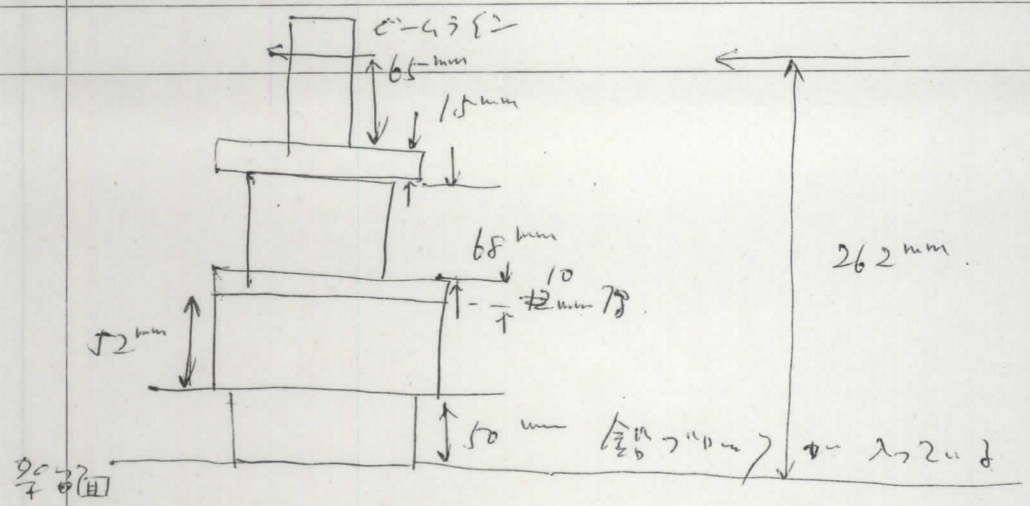
40mm ピッチで標的を配置する.



5 × 40 = 200 mm

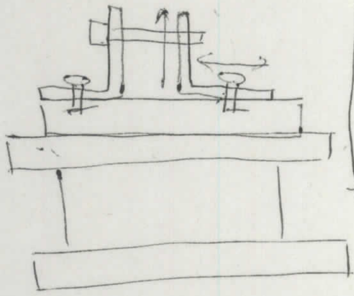


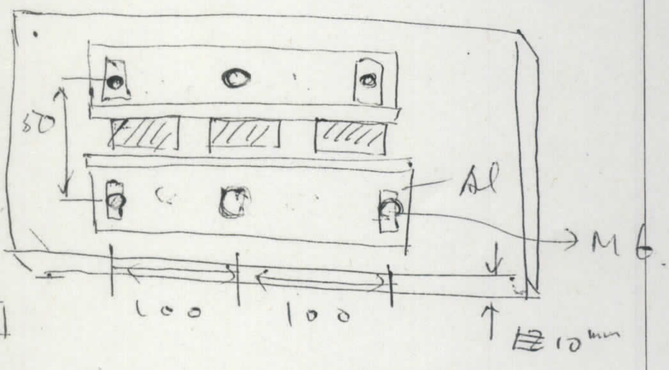
型名	ストローク	高さ
ZA10A-W201	±7.0mm	80±7mm
-W2C01	±2.5mm	50±2.5mm.



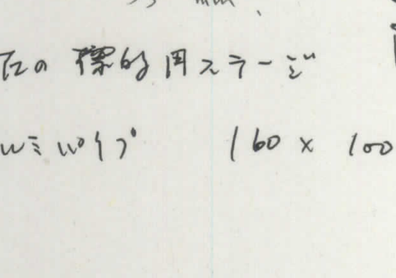
Xステージ高さ
12+52 = 64 mm

262 − 64 = 198 mm 残り
198 − 85.6 = 112.4 mm
112.4 − 10 mm = 102.4 mm
Zステージ 102.4 − 80 = 22.4 mm ← これをスペーサーで埋める





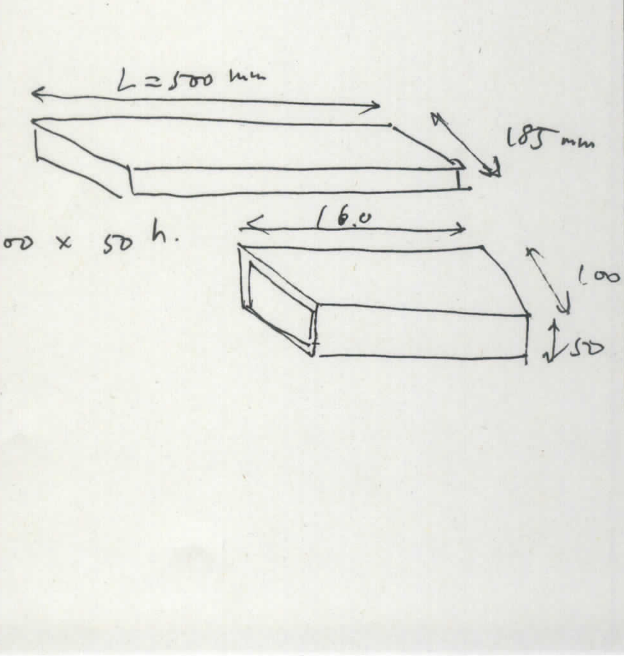
Ref 標的



スルガ精機 Ref標的取付ポスト
{ A31-25 標的用ポスト 高さ 25 mm
{ B53-60

現在の標的用ステージ

角アルミパイプ 160 × 100 × 50h.



直流電源

9/11(金) Sweeper 電磁石用 (マグネット) ✓ 電源 Temp, スロープ 新旧

9:30 ・BM-61-2/5 を使用する. (新電源, ホイッスリー最近に設置する)

・容量 105V, 430A. 工藤電機製, 直流定電流電源

・この電源のインターロック入力は Normal open である.

・EX-New-58-1-6番 BM 61-2/5 (分電盤, 北東新)

・Mag Temp, Mag. Water インターロックが Sweeper 磁石から出ているので, これを差し込む.

EXT INT(erlock) DSub で入力する.

ANL G 2/0 } 現存のものを使う.
DIG 2/01.

・電源用冷却水, 系統 (北東壁にバルブ有)

BM-61-2/5 (往) どちらも開にする.

BM-61-2/5 (還) 流量 17 (l/min? 単位はよくわからない) 目安 最大 20

この系統は Kly-61 から分岐に使っているようで.

・南側には 大沢氏の Gun テスト スタンドになっている

・9/9 吉和電気に Sweeper Magnet の配線接続の変更をやってもらった. (増幅用を取除す電源)
(圧着端子の交換を行った)

9:56 ・MG. Water Normal open
MG Temp Normal Close. Current モード

・ガウスメーター値 +2.25 KG / 100A (このとき ↓ 磁力線の向き)

↓ 磁力線向き

+10.83 KG 1400A まで 問題なし.

+ KG

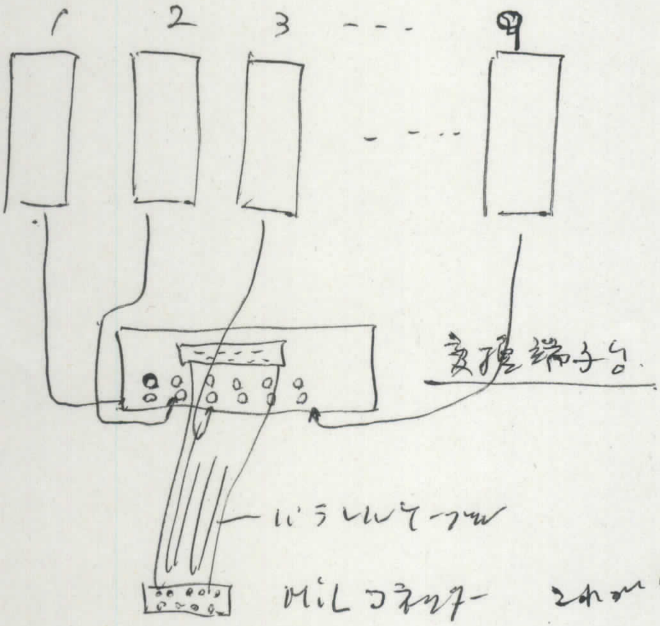
10:02 output off
NFB off
分電盤 off.

16:00 温度測定 変換器 （工事 配線接続 事前確認）

熱電対用 TC INPUT unit
MS3701-A-KB31K.

入力 9,10 (⊕ ⊖)
出力（電流） out 1 4,5 (⊕ ⊖) 0~20mA
電源 AC 100V 1,2 (⊕ ⊖)

熱電対用 そのまま 電圧でロガーで読み込む
入力 同じ
出力（電圧） out 2 0~1V 7,8 (⊕ ⊖)
電源 AC 100V 1,2



MILコネクター これが●ロガーに入力する.

電流出力では 6ch で 1 MILコネクター 必要となるので
3セット用意してもらうことにした。

9月18日

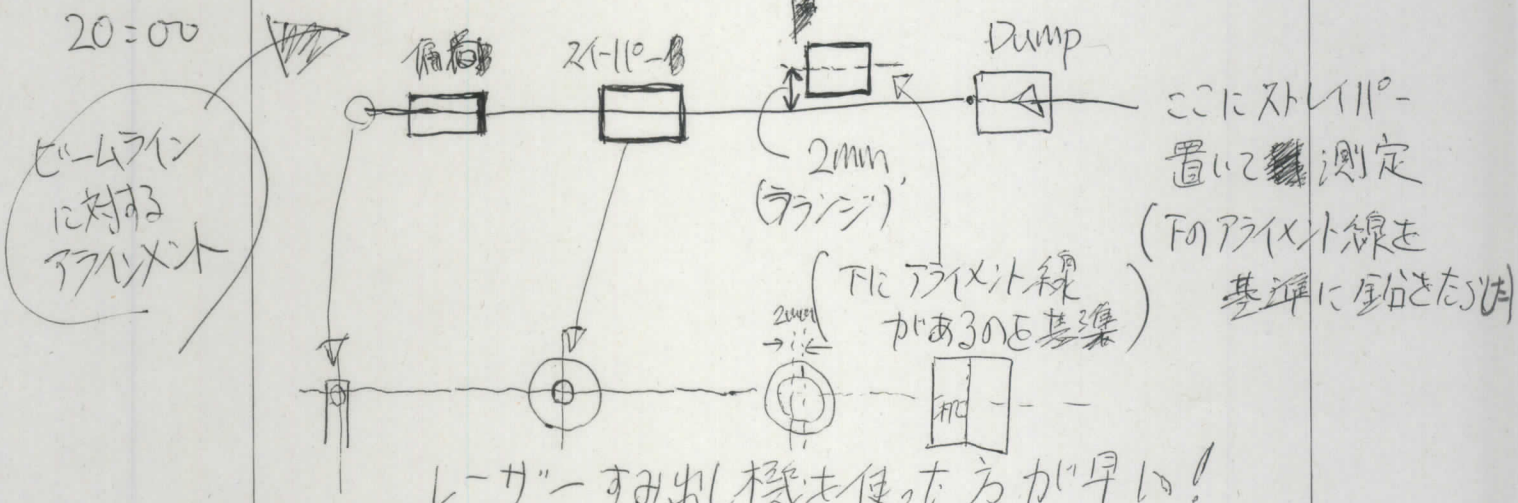
10:00
~12:00

高さアライメント

- スイーパー磁石上流とゴニオの軸高さが一致してること確認，ゴニオとスイーパー磁石の高さも一致
- スイーパー磁石とターゲットの散乱対称性とが一致していること，その下流のフランジ中心（鉛ブロックの間を見じるしに）と一致していることを確認

（この間，Xステージが~4mmにあることかんちがいし，3mmのスペーサーを抜いてしまったが，後から間違いに気づき，もとに戻

20:00

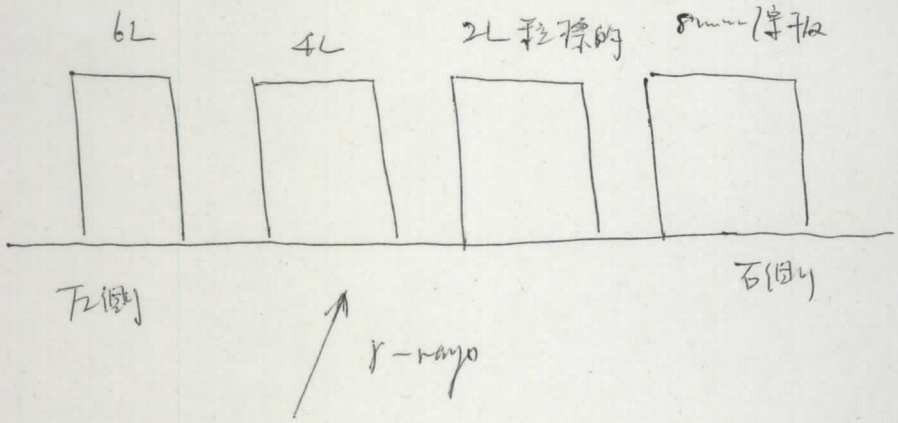


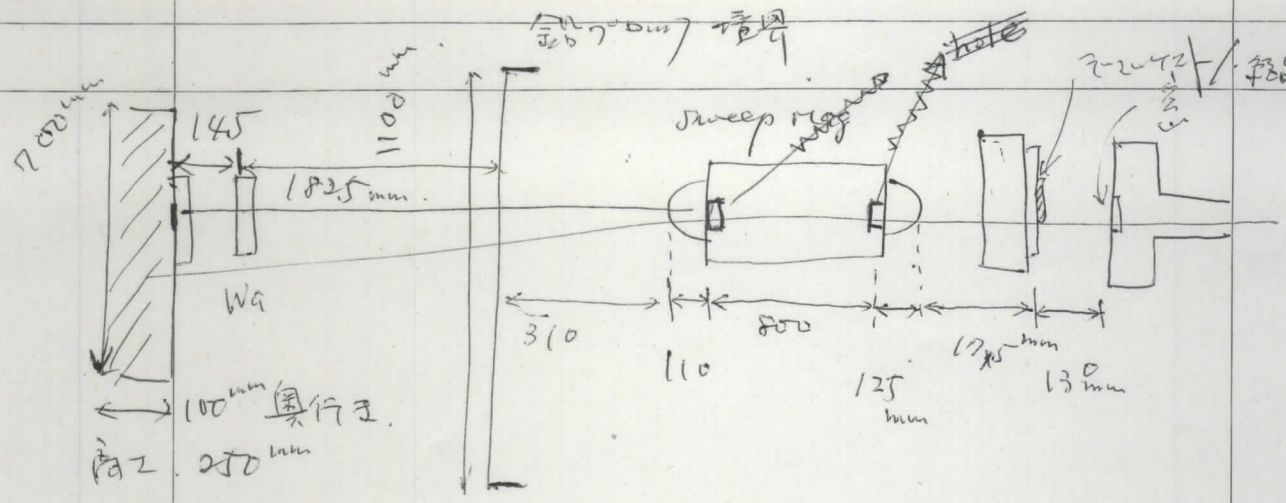
レーザーすみ出し機を使った方が早い！
次から使用すべき。

標的前の偏向磁石を基本にしています。
偏向磁石の横の高さを基準とします。
その高さに従って、横方向にセオドライトを動かして、
窓のフランジ中心を確認する。
決勝標的用ゴニオの中心を確認する。
その次に、スイーパー磁石の横高さを確認、
次に標的高さの確認、
その後ろの陽電子路の真空窓の中心を確認します。
これらが一致すればOKです。
さらに、上から見ての直線性は、セオドライトを偏向磁石の上に置いて、
今度は同じように、陽電子路まで上から見た直線ができているかどうかを確認します。

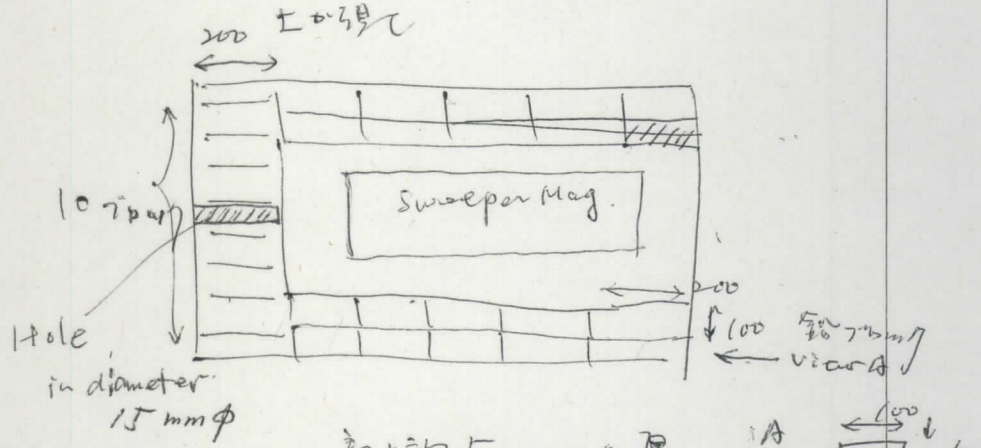
これらの工程は、大地震後に行うのは初めてですが、問題なければアライメントはそう大きくはずれていないはずです。

9/23(水) 11:07 清宮、スワヅ





12:00



高土詰5ブロックの厚

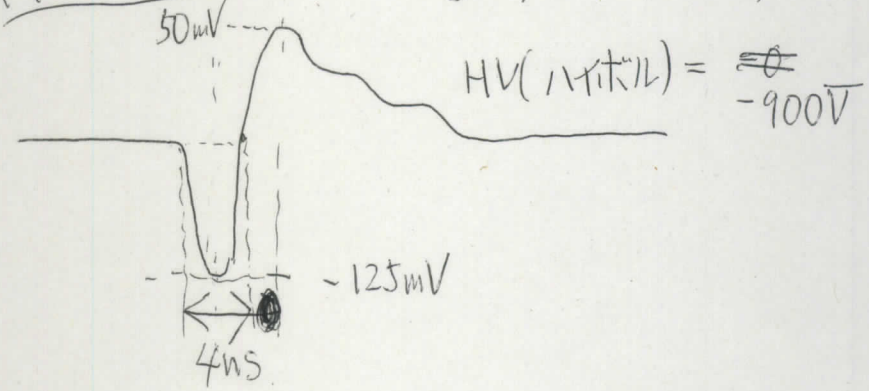
12:41

十 回路系テスト

Ch1 Lucite Cherenkov Detector を check

HV → -830V を印加したところで Cosmic Rays のようなものを見つけることを確認した。

宇宙線信号!



12:52. CH1 ~~Lucite~~ Lucite Cherenkov Detector が生きていることを確認した.

Calibration results for Temp. measurements

●調整手順
別紙校正手順資料のように標準器と接続し、補償導線は1-1～1-9、0-1～0-4を校正対象に接続
入力信号0.5%(1.5℃相当起電圧入力)時、変換器のゼロ調整ボリュームを操作し、
入力信号100%(300℃相当起電圧入力)時にスパン調整ボリュームを操作し、調整した

●校正手順
調整後、電圧発生器より起電圧を校正対象に入力し、校正対象からの出力信号(出力電流)を確認した。
出力電流を温度に換算し、結果を校正対象の精度範囲を基準として判定した。
2-1～2-9、3-1～3-9、4-1～4-9に関しては、校正のみ行った

●校正対象
信号変換器(MS3701-A-KD3/K:エムティーティー社製) ＋ 補償導線(EXD 0.3/7X2 40M 片側 CMP02-K　片側処理なし(予備半田無し)) ＋ 信号線(VAMVVS-0.3-2-2)
MTT signal Transformer + 40m cable, without thermocouple

●校正結果

target name 4L

CH	Serial No.	校正結果 (mA) (校正点上段:Input 下段:OUT1) 0℃	100℃	200℃	300℃	校正結果温度換算値(℃) 0℃	100℃	200℃	300℃	判定基準	使用標準器登録番号
		0.000mA	6.666mA	13.332mA	20.000mA						
1-1	214K03243	0.046	6.664	13.324	19.999	0.7	0.0	−0.1	0.0	±1.1℃	H2081:電圧発生器 H2075:マルチメータ H2074:ゼロコン H2125-08: 校正用熱電対
1-2	214K03246	0.065	6.665	13.326	19.999	1.0	0.0	−0.1	0.0		
1-3	214K03242	0.043	6.663	13.325	19.999	0.6	−0.1	−0.1	0.0		
1-4	214K03245	0.002	6.660	13.326	20.000	0.0	−0.1	−0.1	0.0		
1-5	214K03244	0.050	6.664	13.326	19.999	0.8	0.0	−0.1	0.0		
1-6	415K02428	0.034	6.665	13.327	20.000	0.5	0.0	−0.1	0.0		
1-7	415K02429	0.010	6.663	13.327	19.999	0.2	−0.1	−0.1	0.0		
1-8	415K02430	0.040	6.664	13.323	20.000	0.6	0.0	−0.2	0.0		
1-9	415K02431	0.012	6.662	13.326	19.999	0.2	−0.1	−0.1	0.0		

±[スパンの0.1% +0.5℃(感温素子精度) + リニアライズ精度]

8L

CH	Serial No.	校正結果 (mA) (上段:Input 下段:OUT1) 0℃	100℃	200℃	300℃	校正結果温度換算値(℃) 0℃	100℃	200℃	300℃	判定基準	使用標準器登録番号
		0.000mA	6.666mA	13.332mA	20.000mA						
2-1	214K03243	0.047	6.656	13.320	19.998	0.7	−0.2	−0.2	0.0	±1.1℃	H2081:電圧発生器 H2075:マルチメータ H2074:ゼロコン H2125-08: 校正用熱電対
2-2	214K03246	0.063	6.677	13.339	20.018	0.9	0.2	0.1	0.3		
2-3	214K03242	0.035	6.663	13.328	20.003	0.5	−0.1	−0.1	0.0		
2-4	214K03245	0.005	6.667	13.332	20.008	0.1	0.0	0.0	0.1		
2-5	214K03244	0.049	6.678	13.344	20.015	0.7	0.2	0.2	0.2		
2-6	415K02428	0.032	6.663	13.325	20.000	0.5	−0.1	−0.1	0.0		
2-7	415K02429	0.010	6.663	13.329	20.000	0.2	−0.1	−0.1	0.0		
2-8	415K02430	0.042	6.660	13.320	19.997	0.6	−0.1	−0.2	0.0		
2-9	415K02431	0.018	6.652	13.318	19.990	0.3	−0.2	−0.2	−0.2		

±[スパンの0.1% +0.5℃(感温素子精度) + リニアライズ精度]

2L

CH	Serial No.	校正結果 (mA) (上段:Input 下段:OUT1) 0℃	100℃	200℃	300℃	校正結果温度換算値(℃) 0℃	100℃	200℃	300℃	判定基準	使用標準器登録番号
		0.000mA	6.666mA	13.332mA	20.000mA						
3-1	214K03243	0.043	6.665	13.328	20.006	0.6	0.0	−0.1	0.1	±1.1℃	H2081:電圧発生器 H2075:マルチメータ H2074:ゼロコン H2125-08: 校正用熱電対
3-2	214K03246	0.064	6.676	13.340	20.015	1.0	0.1	0.1	0.2		
3-3	214K03242	0.037	6.660	13.322	19.998	0.6	−0.1	−0.2	0.0		
3-4	214K03245	0.001	6.66	13.329	20.005	0.0	−0.1	−0.1	0.1		
3-5	214K03244	0.05	6.670	13.336	20.010	0.7	0.0	0.0	0.2		
3-6	415K02428	0.033	6.660	13.326	20.003	0.5	−0.1	−0.1	0.0		
3-7	415K02429	0.01	6.666	13.332	20.005	0.2	0.0	0.0	0.1		
3-8	415K02430	0.05	6.672	13.332	20.009	0.7	0.1	0.0	0.1		
3-9	415K02431	0.013	6.665	13.331	20.004	0.2	0.0	0.0	0.1		

±[スパンの0.1% +0.5℃(感温素子精度) + リニアライズ精度]

6L

CH	Serial No.	校正結果 (mA) (上段:Input 下段:OUT1) 0℃	100℃	200℃	300℃	校正結果温度換算値(℃) 0℃	100℃	200℃	300℃	判定基準	使用標準器登録番号
		0.000mA	6.666mA	13.332mA	20.000mA						
4-1	214K03243	0.045	6.660	13.324	20.000	0.7	−0.1	−0.1	0.0	±1.1℃	H2081:電圧発生器 H2075:マルチメータ H2074:ゼロコン H2125-08: 校正用熱電対
4-2	214K03246	0.063	6.671	13.335	20.009	0.9	0.1	0.0	0.1		
4-3	214K03242	0.038	6.659	13.325	20.001	0.6	−0.1	−0.1	0.0		
4-4	214K03245	0.014	6.67	13.340	20.015	0.2	0.1	0.1	0.2		
4-5	214K03244	0.05	6.666	13.335	20.011	0.8	0.0	0.0	0.2		
4-6	415K02428	0.033	6.650	13.323	19.999	0.5	−0.3	−0.2	0.0		
4-7	415K02429	0.01	6.662	13.330	20.003	0.2	−0.1	−0.1	0.0		
4-8	415K02430	0.04	6.650	13.313	19.990	0.6	−0.3	−0.3	−0.2		
4-9	415K02431	0.012	6.650	13.319	19.994	0.2	−0.3	−0.2	−0.1		

±[スパンの0.1% +0.5℃(感温素子精度) + リニアライズ精度]

CH	Serial No.	校正結果 (mA) (上段:Input 下段:OUT1) 0℃	100℃	200℃	300℃	校正結果温度換算値(℃) 0℃	100℃	200℃	300℃	判定基準	使用標準器登録番号
		0.000mA	6.666mA	13.332mA	20.000mA						
0-1	715K03066	0.034	6.668	13.333	20.006	0.5	0.0	0.0	0.1	±1.1℃	H2081:電圧発生器 H2075:マルチメータ H2074:ゼロコン H2125-08: 校正用熱電対
0-2	715K03067	0.009	6.669	13.336	20.009	0.1	0.0	0.0	0.1		
0-3	715K03068	0.018	6.665	13.330	20.002	0.3	0.0	−0.1	0.0		

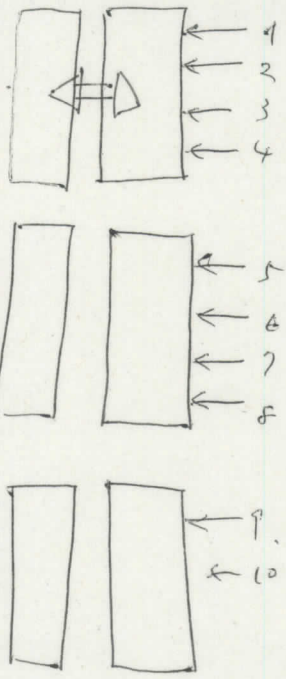
allowable limit in Temperature

~25℃

6
2
9 5 1 3 7
4
8
after the signal transformer

for Temp. Rise Measurement with the current mode
by using data Logger

Data Logger



from signal transformer

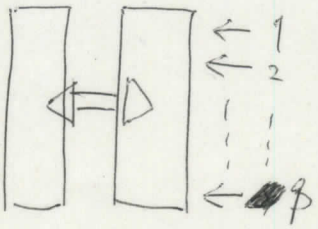
4chs / 1 connector.

(environmental Temp. Measurement)

Data Logger KEYENCE NR-HA08 for modules,
" " NR-600 for Control unit

for Temp. Rise Meas. with the voltage mode.
for the ref. 8mm target

data logger side



from signal transformer side.

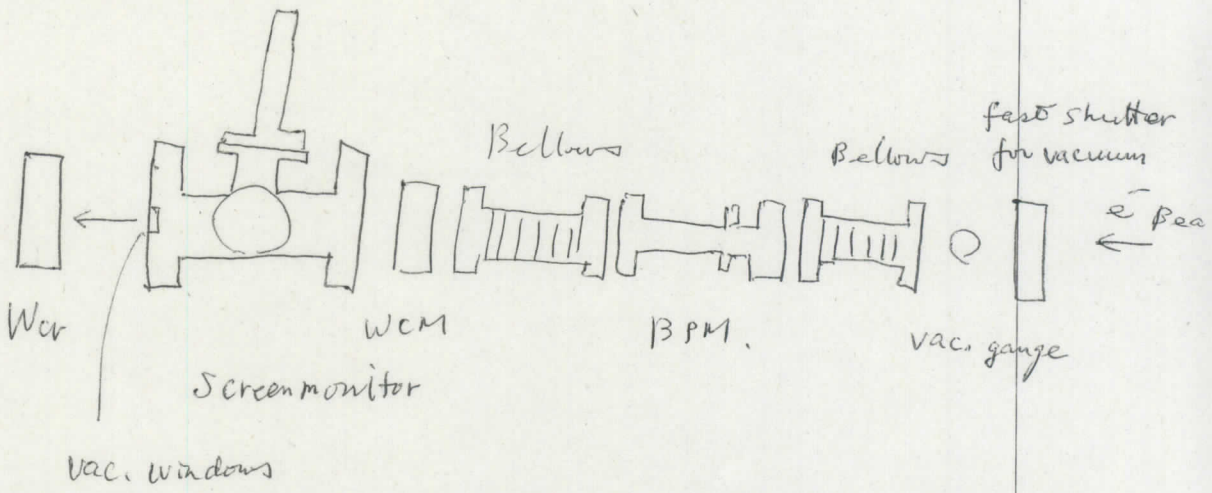
under voltage mode

Oct 07 Iryna, Hayg, ~~Kamitani~~, Satoh, Miyahara, Saimiya and Suwada Ushimoto

Preparation for Channeling Experiment

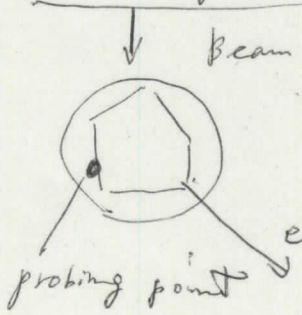
9:50 Water flow on for Analyzing Magnet 2l/min ok,

Vacuum pump ON for e^+ detector (working well).



17:55 Summary of Today's preparation.

1) Analyzing Magnet Check

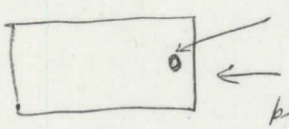


~~Cooling H2O~~ Cooling water flow ok

10A applied → 1.9 KG (Gauss meter)

2) Sweeper Magnet check

Cooling Water flow ok,



entrance of the pole gap

300A applied → 9.0 KG (Gauss meter)

(3) Screen Monitors

1 is for Crystal target

and is for Amorphous target.

The setting and tuning, and calibration were finished.

(4) Data Logger Checking for Temp. Measurements.

for the reference target all the 8 chs (but 1 ch for a signal transformer is (ach) are active (available), because 1 signal transformer is missing during the experiment we will exchange

+7 channels are available

for the granular target, 9 chs were checked and 1 ch was checked for environmental temp. meas.

(

[Voltage mode was set for the ref. target

Current mode was set for the granular target.

Temp. Rises were checked by heating the back surfaces of the targets.

(5) Trigger Signal (25 Hz) is available

(6) Detector signal is also active. This signal was checked by cosmic rays.

First of all, the cable connections ~~from~~ for the outputs from the signal transformers were wrong, and thus, we did not find any signal variations; after repairing the cable connections we could find the in the data logger. data variation in the logger.

仏国 DESMARQUEST社 (France)
アルミナ蛍光板 AF995R 特性表

Screen Material AF995R

Characteristics	Units		
MainConstituents	% by weight		99.5% Al_2O_3 chromium oxide
Melting Point	℃		2000
Maximum working temperature	℃		1850
Absolute density			3.98
Apparent density			3.85-3.92
Open porosity	%		0
Hardness	MOHS Scale VICKERS/3N		9 ＞1100
Compressive Strength	daN/cm^2		22000
Bending strength	daN/cm^2		2400
Modulus of elasticity	daN/cm^2		3×10^6
Coeffisient of thermal expansion 20-1000℃			8.6×10^{-6}
Specific heat 20<T<1000℃	J/g℃		1.09
Thermal conductivity	J/cm.s.℃	at 20℃ at800℃	25×10^{-2} 63×10^{-3}
Dielectrical conductivity	kV/mm		30-35
Electrical resistivity	ohm/cm	at 20℃ at 200℃ at 600℃	＞10^{14} 10^{13} 10^{9}
Temp.corresp.to transv.resistance1MΩ/cm TKI	℃		1100
Relative permittivity (dielectric constant)		at 1 MHz at 1000 MHz at 10000 MHz	9.7 9.6 9.4
Dielectric loss factor : tg δ		at 1 MHz at 1000 MHz at 10000 MHz	10^{-4} 10^{-4} 10^{-4}

仁木工芸株式会社
〒108-0073 東京都港区三田3丁目9-7
TEL : 03-3456-4700 FAX:03-3456-3423

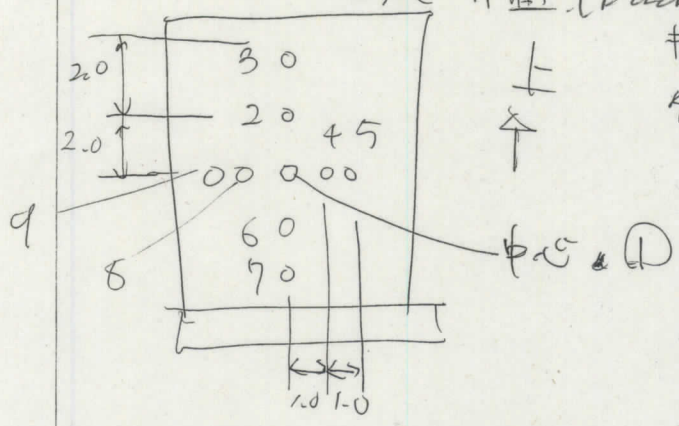
Memos

- Sweeping Magnet Current { ON 400 A (Max) / OFF 0 A.
  Required Water flow 4.8 l/min
- Thermocouples for the reference target
  ~~Ta~~ Cable numbering (See P.18)

1/14

熱電対 — target 間 4ch 全て導通確認.

viewed from target 背面 (Back surface)



横は 1mm 間隔
タテは 2mm.

No. 7, 9. not detectable.

- Step resolutions for the linear stage of ~~Ta~~ Wa targets (See p. 19)
  X (Hor) 5 μm / step
  Z (Ver) : 0.1 μm / step

- Calibration for the e^- analyzing magnet.

P[MeV/c]	B[kG]	I(A)
5	0.887	3.0
10	1.77	6.1
15	2.66	9.2
20	3.55	12.6 (26.5 V)

Required Water flow 2.5 l/min

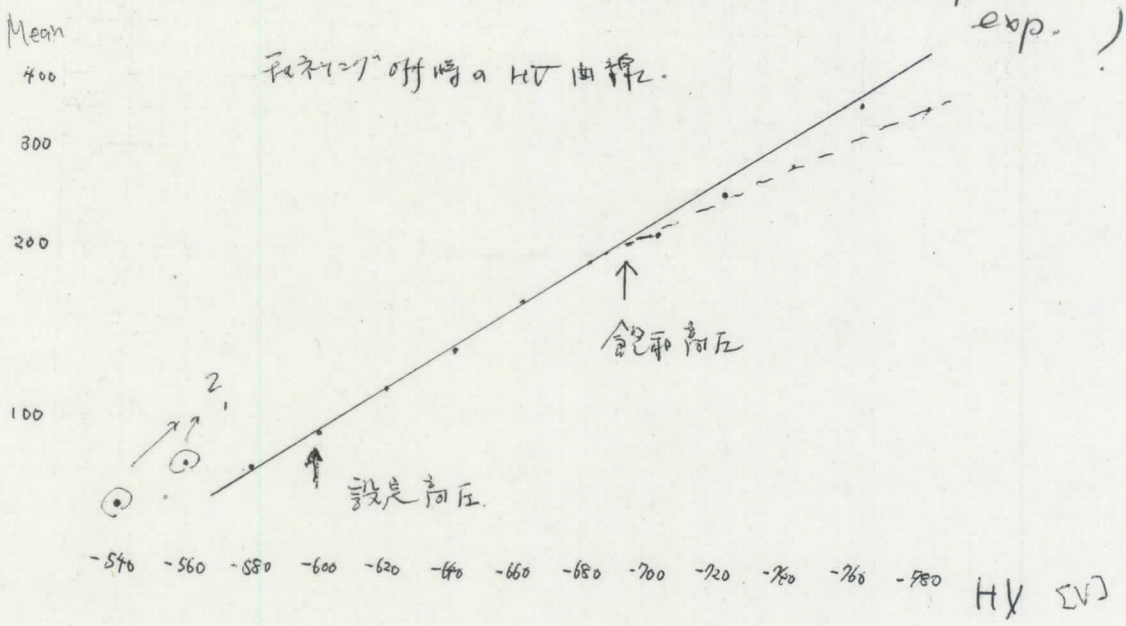
55

9

9/22

34

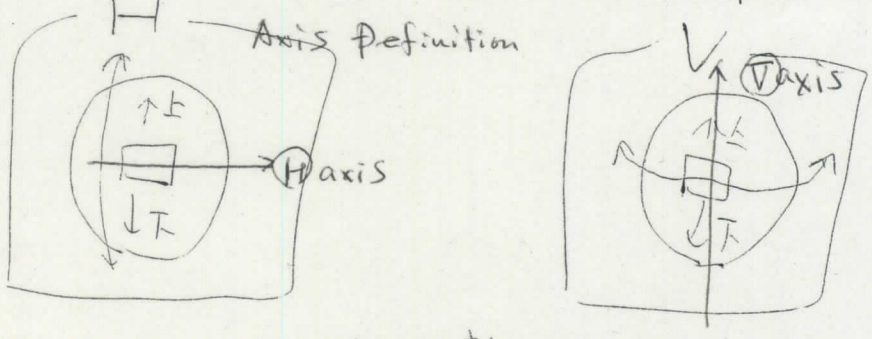
HV curve. (previous exp.)



Calibration for Goniometer

2000年 9/30 のテスト.

- V: 100 mrad → −2865 step (V) ~~286~~ steps /10mrad (~300)
- H: 100 mrad → −9549 step (H) ~955 step/10mrad (~1000)
- X: 10 mm → −10000 step

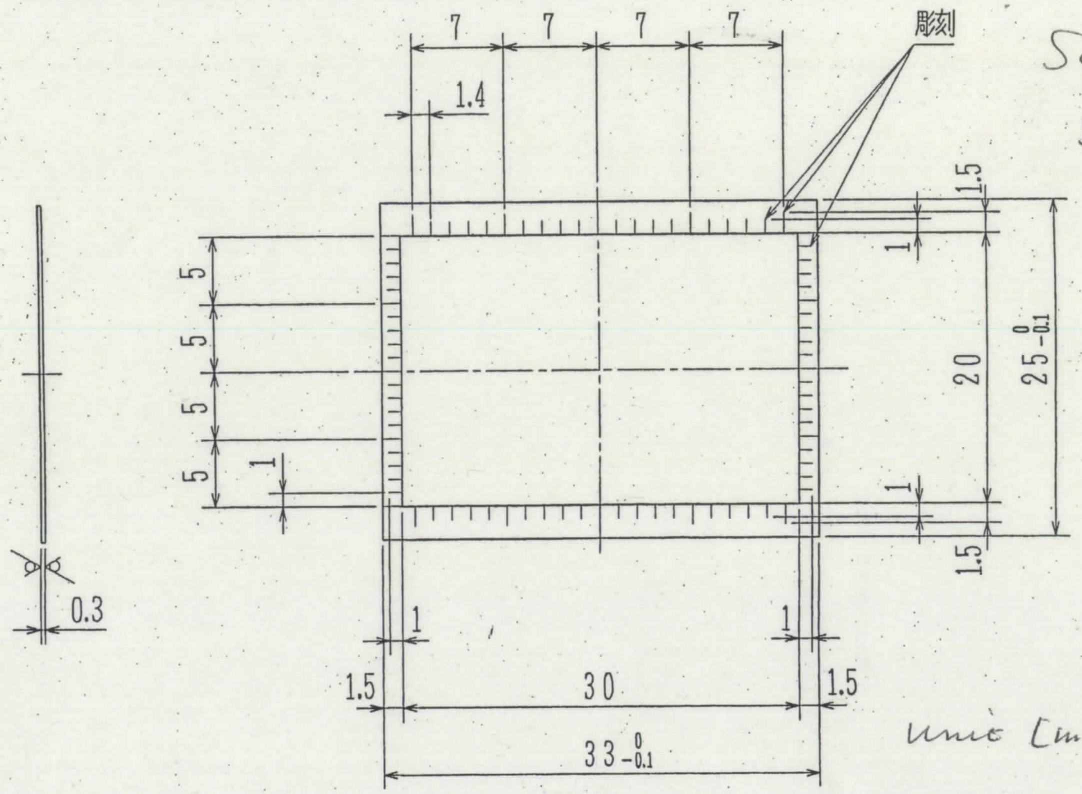


※ V, H: ゴニオの V軸, H軸 (vertical, horizontal)

図中の ⇧, ⟷ は回転する方向を表す。

表面粗サ (JIS・ISO)	指示ナキ表面粗サは、本表ニヨル。			
Ra	▽	25 ▽	6.3 ▽	1.6 ▽ / 0.2 ▽

<検図> | 形 | 寸 | 粋 | 能 | 粗 |



Screen monitor scale calibration

unit [mm]

K	J	I	H	G	F	E	D	C	B	A	品番	図番	品名	材質	素材寸法	処理	備考

一般ノ機械加工ノ公差 / 指示ナキ寸法公差ハ本表ニヨル		記号
0.5≦ 6	± 0.1	④
6< 30	± 0.2	③
30< 120	± 0.3	②
120< 315	± 0.5	①
315<1000	± 0.8	記号

変更記事 | 年月日 | 氏名

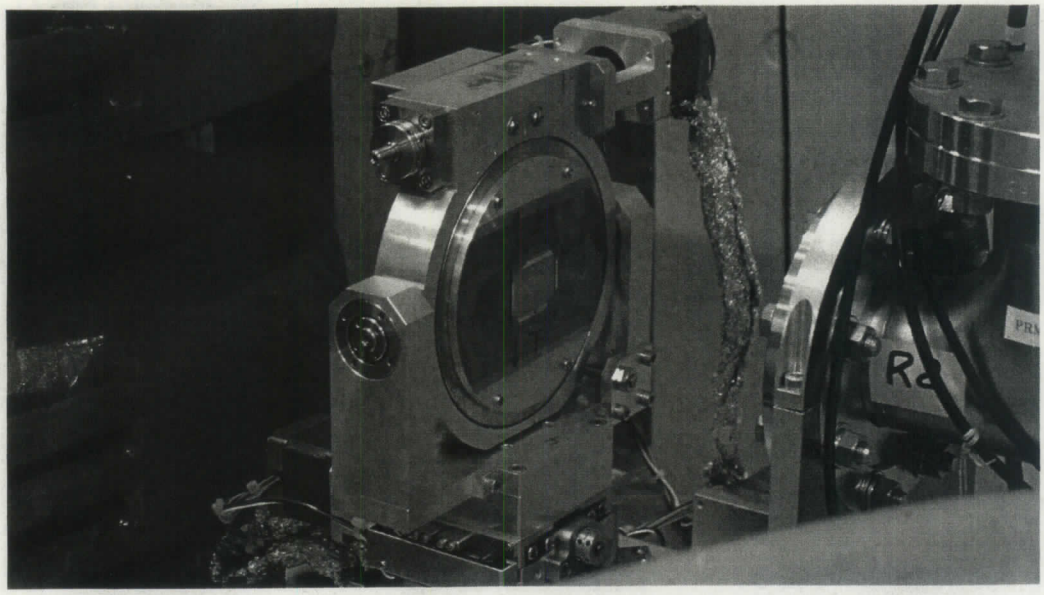
第三角法	検図	設計	製図	出図	品名
					目盛り板

TOYAMA CO., LTD.

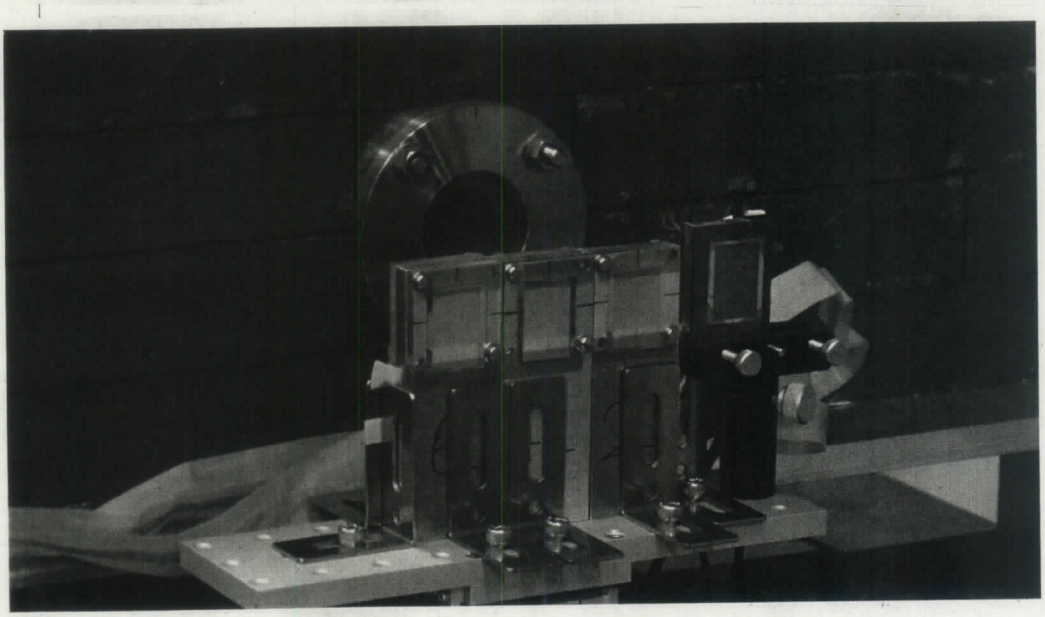
尺度	図番	
2 : 1	4JB-02938 ⓪	PCS

2010. 4/20

2



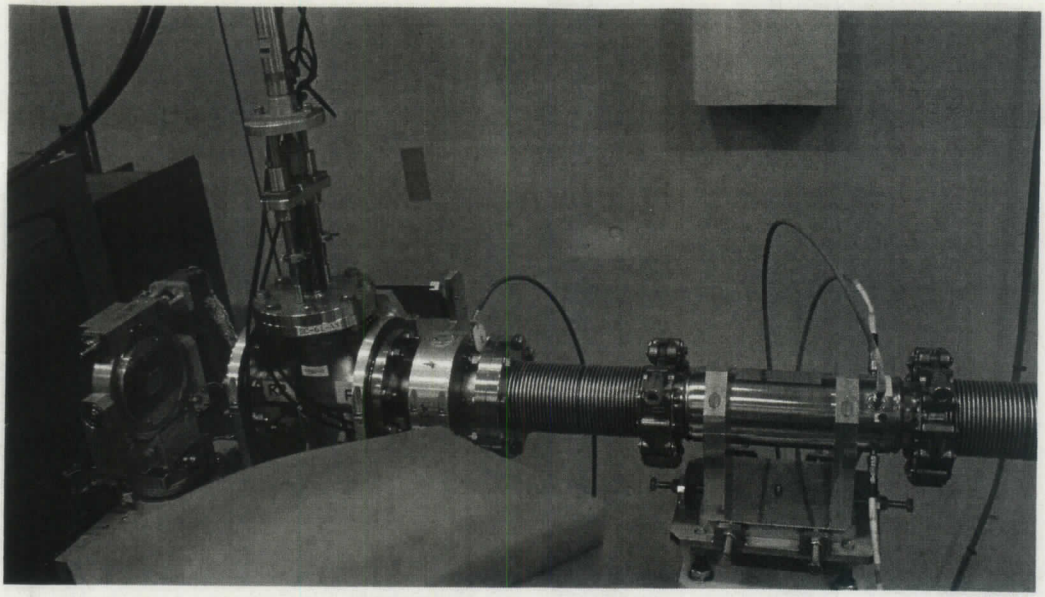
Waxystal on a Goniometer



Wavelengths from the left

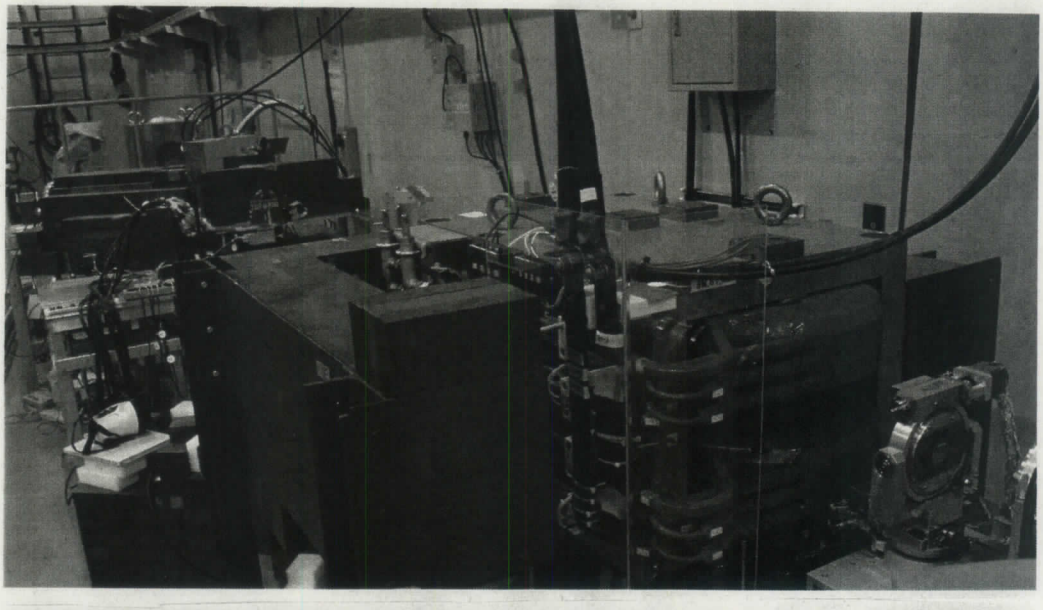
6L, 4L, 2L and reflections with targets

from the sideview

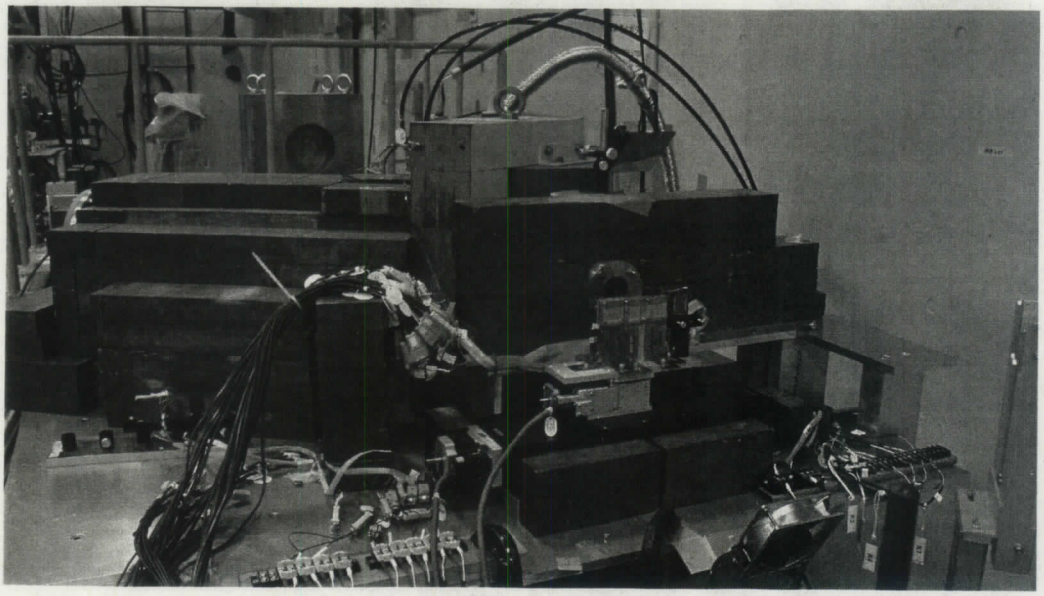


Beamline before the Wien filter

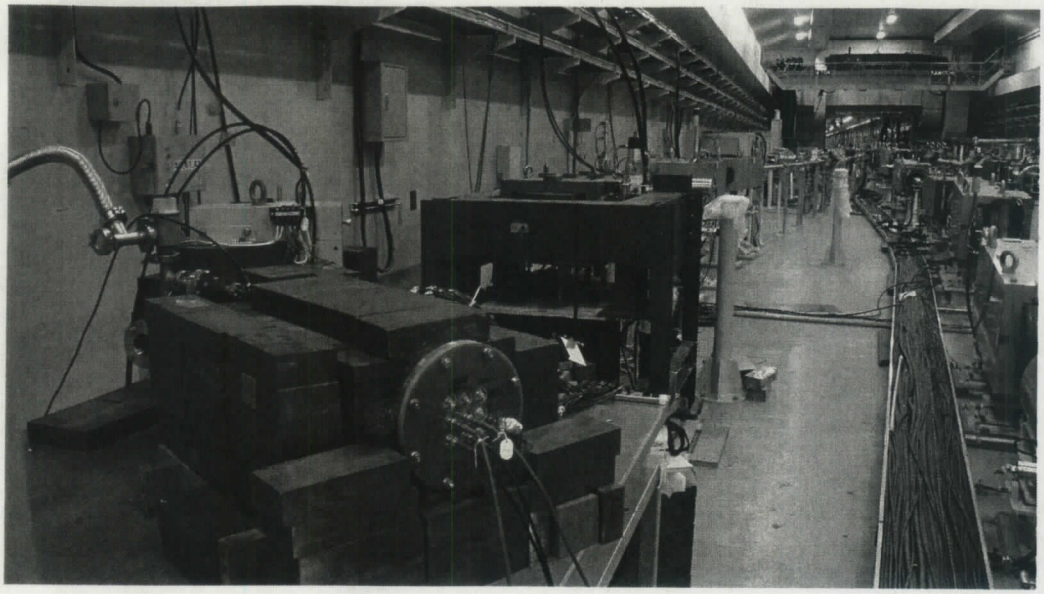
Screen →
WCM →
BPM



From the front view

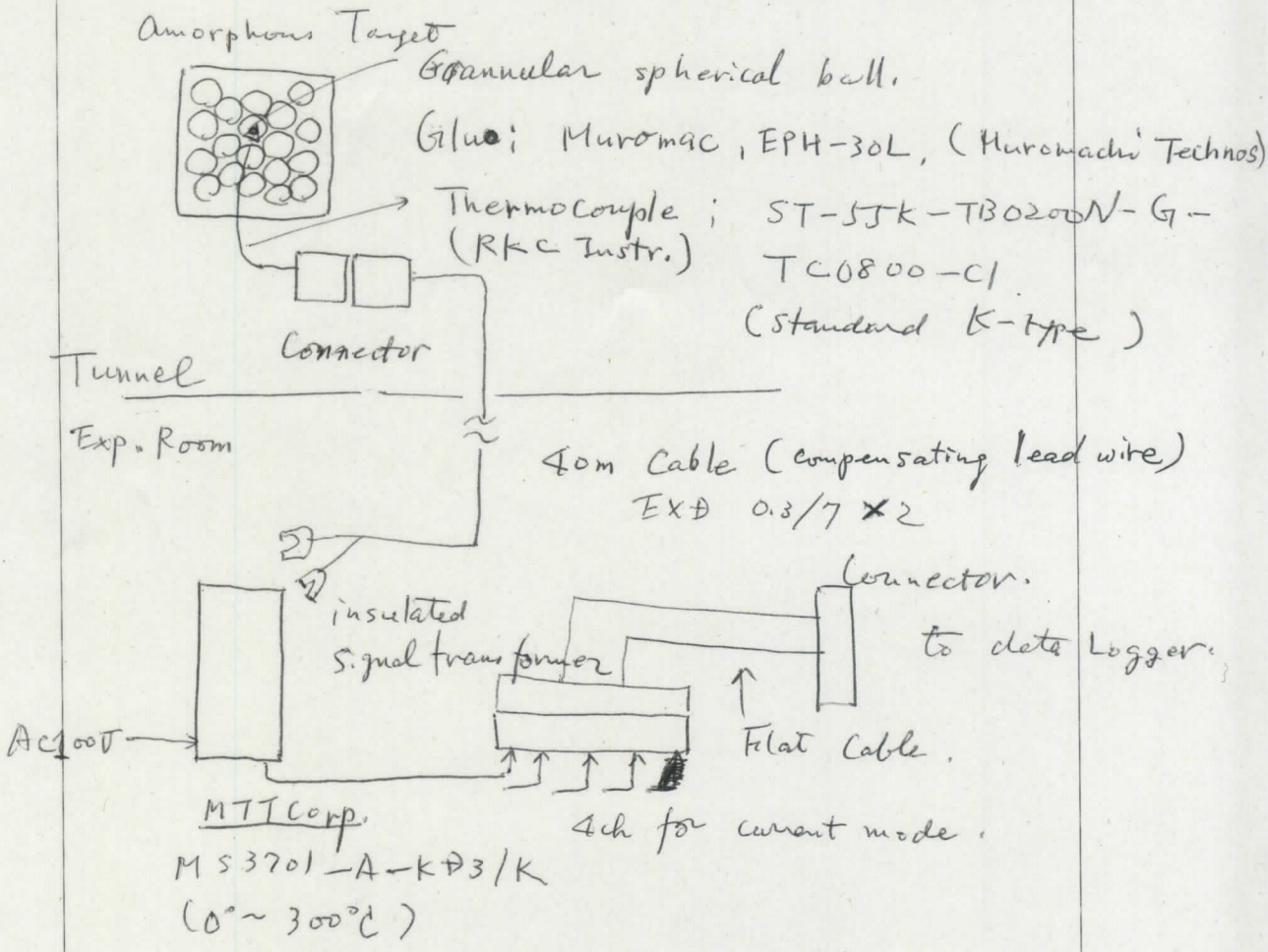


Wien filter and e⁻ detector with an analyzing magnet.



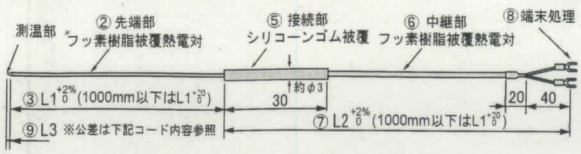
Viewed from the back sic
with $e^{\top}$ ~~de~~ detector

- Connection of Thermocouples



微小表面測定用熱電対：ＳＴ－５５ Thermocouple Specification

フッ素樹脂被覆タイプ：ST-55K-T□

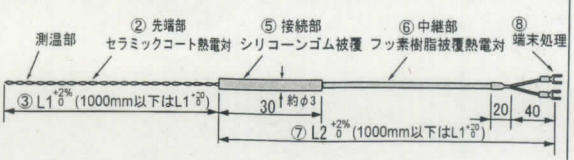


ＳＴ－５５Ｋ－□□ L1 □－Ｇ－□□ L2－□－L3
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

① 熱電対の種類
② 先端部熱電対形態
③ 先端部熱電対素線長
④ 先端部粘着テープ
⑤ 接続部仕様
⑥ 中継部熱電対形態
⑦ 中継部熱電対素線長
⑧ 端末処理
⑨ 先端むき出し長

型式例：ST-55K-TA0500P-G-TD1000-Y-05

セラミックコートタイプ：ST-55K-C□



ＳＴ－５５Ｋ－□□ L1 Ｎ－Ｇ－□□ L2－□
① ② ③ ④ ⑤ ⑥ ⑦ ⑧

① 熱電対の種類
② 先端部熱電対形態
③ 先端部熱電対素線長
④ 先端部粘着テープ
⑤ 接続部仕様
⑥ 中継部熱電対形態
⑦ 中継部熱電対素線長
⑧ 端末処理

型式例：ST-55K-CA0500N-G-TD1000-Y

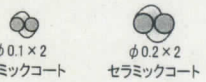
① 熱電対の種類

K：Type K（クロメル－アルメル）

② 先端部熱電対形態（素線径および被覆の種類）

コード	内　容
TA	φ0.076mmフッ素樹脂被覆（単線タイプ）
TB	φ0.076mmフッ素樹脂被覆（一対合体タイプ）
TC	φ0.127mmフッ素樹脂被覆（一対合体タイプ）

コード	内　容
CA	φ0.10mmセラミックコート（単線タイプ）
CB	φ0.20mmセラミックコート（単線タイプ）



③ 先端部熱電対素線長

ご希望の長さを50mm単位で指定ください。※ 先端部・中継部合計の素線抵抗値が100Ω以内で製作可

④ 先端部粘着テープ

コード	内　容
P	ポリイミド製
G	ガラス不織布製
N	なし

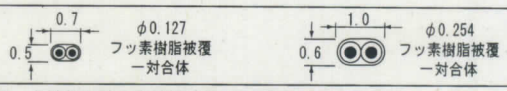
N：なし

⑤ 接続部仕様

G：シリコンゴム被覆（耐熱温度：170℃）

⑥ 中継部熱電対形態（素線径および被覆の種類）

コード	内　容
TC	φ0.127mmフッ素樹脂被覆（一対合体タイプ）
TD	φ0.254mmフッ素樹脂被覆（一対合体タイプ）



⑦ 中継部熱電対素線長

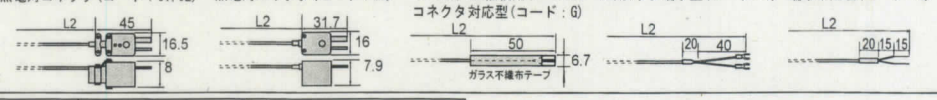
ご希望の長さを200mm単位で指定ください。※ 先端部・中継部合計の素線抵抗値が100Ω以内で製作可

⑧ 端末処理

コード	内　容
C1	熱電対コネクタ　CMP01-K(RKC型名) 材質：ポリアミド
C2	熱電対コネクタ　CMR01-K(RKC型名) 材質：ライトン、　耐熱温度：220℃
C3	熱電対コネクタ　1260-K(マリン社製) 材質：ガラス充填熱硬化樹脂、耐熱温度：205℃
Y	M3用Ｙラグ端子　＊
G	DP-350/700用接続ケーブルコネクタ対応型
N	未処理

＊ 中継部に0.127mm仕様（コード：TC）を選択した場合は、端末処理にＹラグ端子は指定できません。

熱電対コネクタ（コード：C1, C2）　熱電対コネクタ（コード：C3）　DP-350/700接続用ケーブルコネクタ対応型（コード：G）　M3用Yラグ端子型（コード：Y）　端末未処理（コード：N）



⑨ 先端むき出し長（ST-55K-T□のみ指定可能）

コード	内　容
記号なし	むき出し長　2mm（標準）
03～30	むき出し長　3～30mm（1mm単位で指定してください）

※L3寸法の公差は、2±0.5mm・3～10±1.0mm
11～20±2.0mm・21～30±3.0mmとなります。

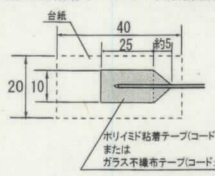
仕様

等　級：クラス２相当（フッ素樹脂被覆タイプのみ）
精　度：±０．５%±1℃
＊ 100℃の金属表面温度計測（銅製）による精度（出荷時）
応答時間：1）素線径φ0.0076mmフッ素樹脂被覆
０．２秒（63.2%応答）、０．８秒（95.0%応答）
2）素線径φ0.1mmセラミックコート
０．２秒（63.2%応答）、０．５秒（95.0%応答）
＊金属表面温度計測による

最高使用温度：1）測温部
フッ素樹脂被覆：３００℃（被覆部：２６０℃）
セラミックコート：５００℃
2）粘着テープ：３００℃
3）接続部：１７０℃
4）中継部：２６０℃
100mmあたりの各径の抵抗値
φ0.076mm:18Ω, φ0.127mm:8Ω, φ0.254mm:2Ω,
φ0.10mm:12Ω, φ0.20mm:3Ω

備考

＊ 貼付用粘着テープ（フッ素樹脂被覆タイプ専用）



粘着剤は熱硬化型シリコーン系粘着剤を使用し、一部の難接着物体を除きほとんどの物体表面に粘着可能です。
〈粘着耐久性〉
・150℃まで：接着・剥離繰り返し使用可能。
・200℃まで：150℃以下に下げない条件で接着・剥離繰り返し使用可能。
・250℃まで：200℃以下に下げない条件で接着・剥離繰り返し使用可能。
・250℃以上：粘着剤が焼き固まる状態となり再接着不能。
※接着回数は、使用環境（接着面の洗浄度等）により異なります。
○使用時には、接着する面の油汚れ・ゴミ等はきれいに清掃してから、密接するように接着してください。
接着が弱いと誤計測の原因になります。
○セラミックコート仕様のセンサの場合は、使用環境に応じた接着剤にて測温部を接着固定してください。
（推奨品：エポキシ接着剤　鎌通株式会社製　Duralco4703（耐熱型・最高使用温度 370℃, Duralco4525（速硬化型・最高使用温度 260℃）

RKC Instrument Inc. 2015/10/08 15:56

RKC Welcome RKC INSTRUMENT INC.

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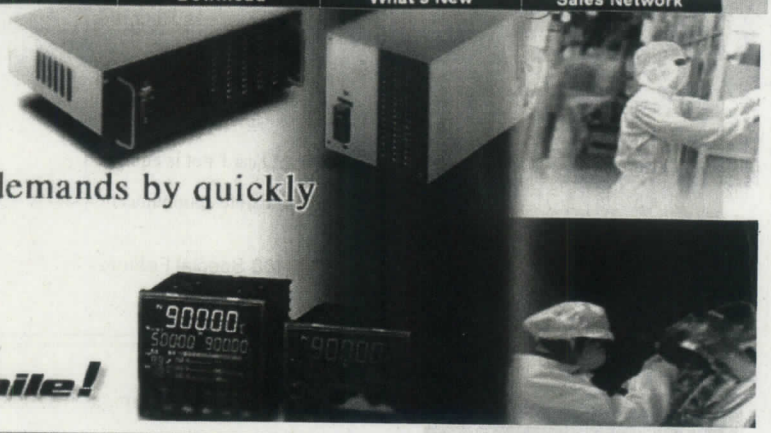
Speed



RKC responds to consumer demands by quickly developing new products.

Speed! Simple! Smile!

MTT Web Site 2015/10/08 16:10

MTT Corporation

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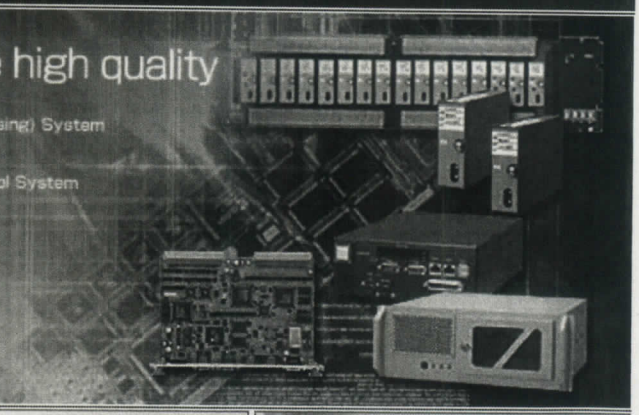
MTT - to produce high quality

- DSP (Digital Signal Processing) System
- Measurement & Control System
- Industrial Computer System



Solution

Description of Business

Measurement & Control System

- Isolated Signal Conditioner
- Power Transducer
- Lightning Arrester
- Isolation Module
- Network I/O
- Other

DSP (Digital Signal Processing) System

- PC Based DSP System
- VME Based DSP System(VME bus)
- DSK Based DSP System
- DSP module for embedded system

Industrial Computer System

- WinGuard
- WinGuard Mini
- Supplementary Products

Muromac® Muromac Bond EPH-30L

1. Feature

Muromac Bond EPH-30L is an epoxy thermal conductive paste whchi enable to use under high temperat

2. Specification (Actual measurement value data)

Physical property	Silver Paster
Viscosity (25℃)	37±3 Ps
Specific gravity (20℃)	3.5±0.1
Cure condition	150℃-30min.
Resistivity value	$5.0\times10^{-4}\Omega$-cm
Transile Shear Strength (Cu×Cu with standard cure condition)	169.4 kg/cm^2
Thermal conductivity	23 W/k·m

※ These material characteristics are typical properties that are based on a limited number of samples/batches. Some properties may vary.

3. Instruction

(1) Seal up and store under 10℃
(2) Open the cap after the product turned room temperature.
(3) Stir the paste before use it.
(4) Suitable for screen printing and using dispenser.
(5) Pot life is 1month at 20℃, 6month at 0 - 10℃.
(6) In case of skin contact, immediately wash with plenty of water and remove contaminated clothing.

ムロマチテクノス株式会社 (販売元)

東京 〒101-0062 東京都千代田区神田駿河台3-4
TEL 03-3525-4793 FAX 03-3526-4807

大阪 〒532-0003 大阪府大阪市淀川区宮原5-1-28
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http://www.muro-chem.co.jp

2015/10/9 (morning + afternoon)

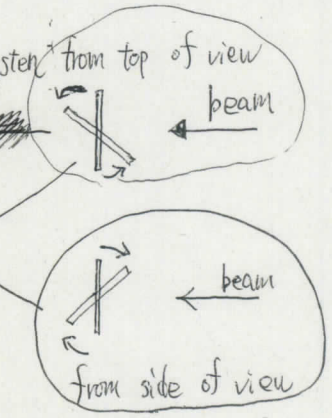
■ stage controller check.

- KOHZU SC-200 for granular tungsten

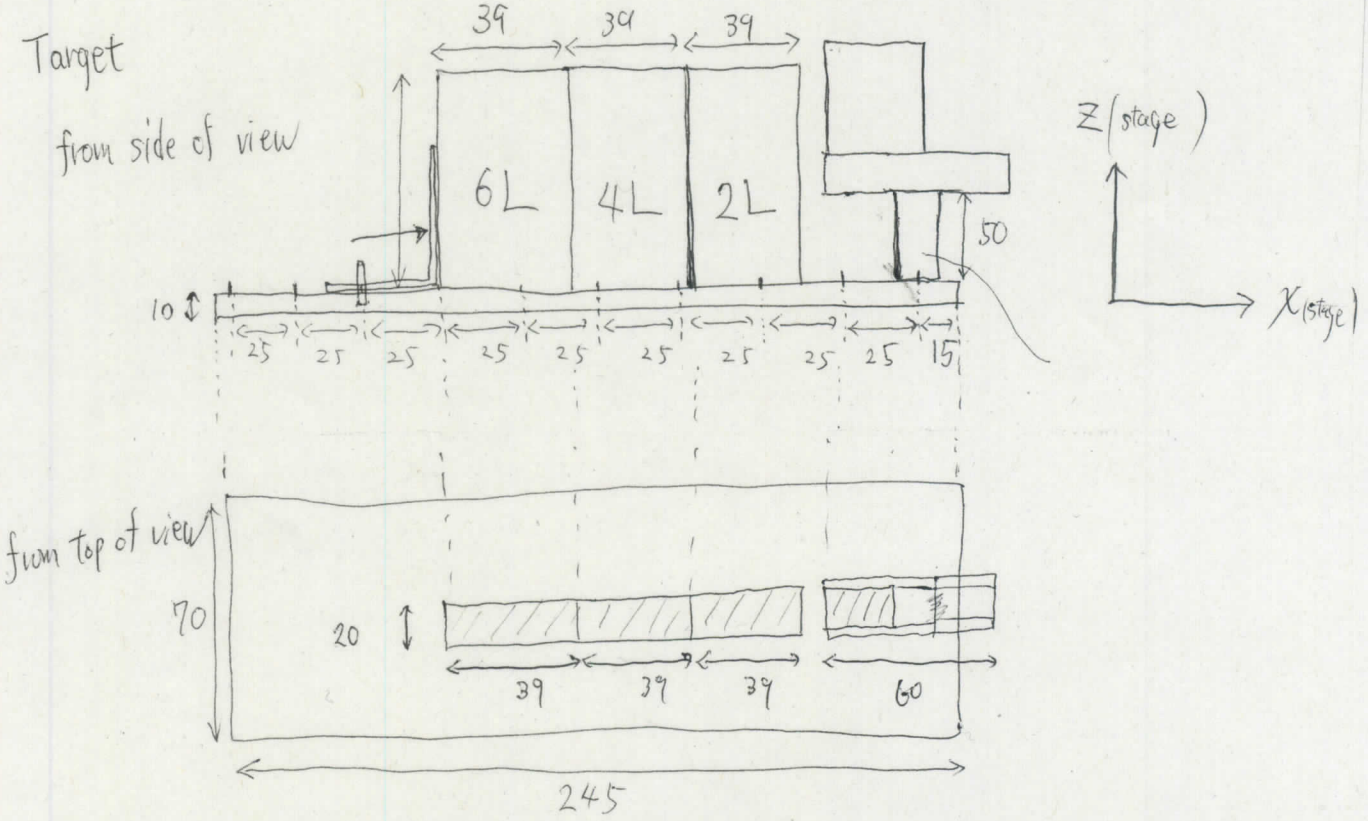
  P1 x stage
  P2 z stage.

- PMC-4GR-H0 for crystaline tungsten

  CH1 Goniometer V
  CH2 n/a
  CH3 Goniometer H
  CH4 x stage (horizontal)



Target



10:40 ◦ Cooling water flow checked ok.

4.5 ℓ/min for the sweeper magnet

2 ℓ/min for the Analyzing magnet

◦ Vacuum rotary pump sw ON

for the e^+ detector.

◦ However the vacuum level does'nt reduce, and so, it is not in vacuum in this experiment

10/10 9:00 Beam Tuning start.

Q at sp 61-A1 1.56nC

Q at sp-61-A3 0.7 nC

Energy 7.2776 GeV, BM 61-1, 386 (A)

Q at sp-AT-ϕ 3.2 nC/bunch

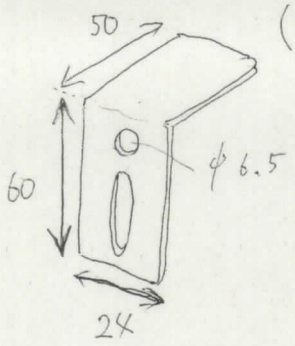
14:00~ Experiment Tuning start

X stage (P1) −10034 → −9034 (+ = stage go right)

Z stage (P2) −34222 → −33222 (+ = stage go up)

2L
- Center of the galvanizer target (2L)
- X stage −10434
- Z stage (P2) −22222

ジョイント金具24型Lステンレス
(TRUSCO, TK24-L2S)



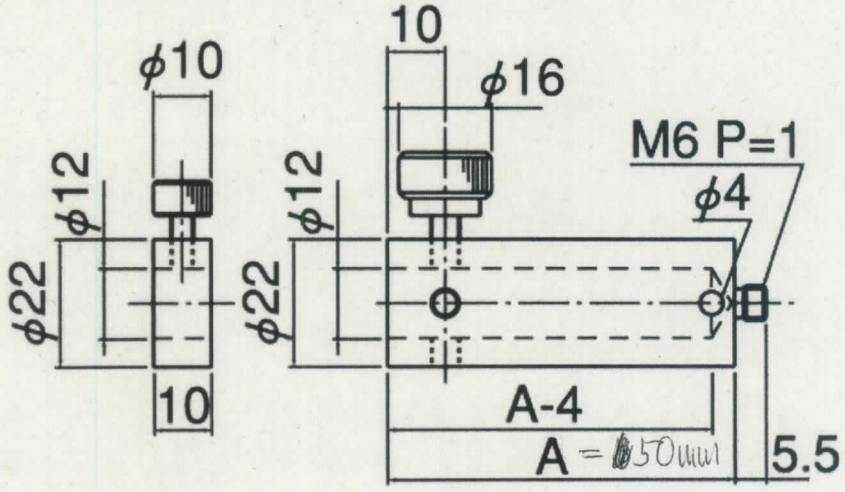
ロックスタンド(A31-50), 駿河精機
(Lock stand)

A31_cad.jpg 506×340 ピクセル

2015/10/08 16:06

A31 (φ12M6タイプ)

A = 50 mm



10/10
14:59

Center of ~~crystal tungsten~~ reference target

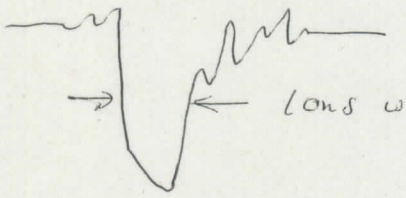
{ X P1 −19634
Z P2 −28222

Control for crystaline tungsten
x stage (CH4)

e^- signal, and WCM signal Oscilloscope LeCroy 104MiA, 1GHz BW 10GS/s

Typical 1.319 ±0.014 V signal
1.9087 ±0.0172 V WCM
} at HV = −506.0 V

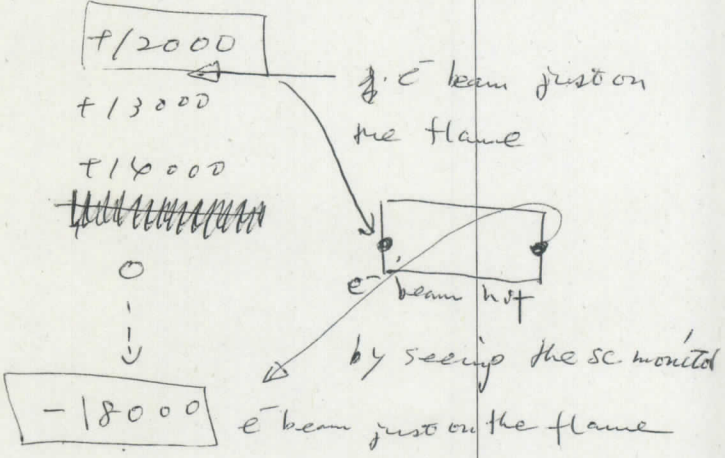
e^- signal



15:35 W crystal shadow scan. Yet ⑨ HV = −506 V
Set Pet = 20MeV

X=0	−1.33 V
+1000	〃
+2000	〃
+3000	〃
+4000	〃 −1.310 V
+5000	〃
+6000	〃
+7000	〃
+8000	〃
+9000	〃
+10000	〃
+11000	〃

within fluctuation



15:50 X = −3000 ← center position of Wc
Set

Trigger / Stage controller

- Trigger signal
  - From #5 sub control room to exp. room
  - EVR UNIV10 => Cable (CASW003) => IDF 7-B11 => Cable (A6) @ exp. Room
- Stage controller
  - KOHZU SC-200 for granular target
    - P1: x stage (horizontal)
    - P2: z stage (vertical)
  - PMC-4GR-H0 for crystalline tungsten
    - CH1: Goniometer V
    - CH2: n/a
    - CH3: Goniometer H
    - CH4: x stage (horizontal)

X = -3000 Set for the Wcrystal.

15:52. HV Scan

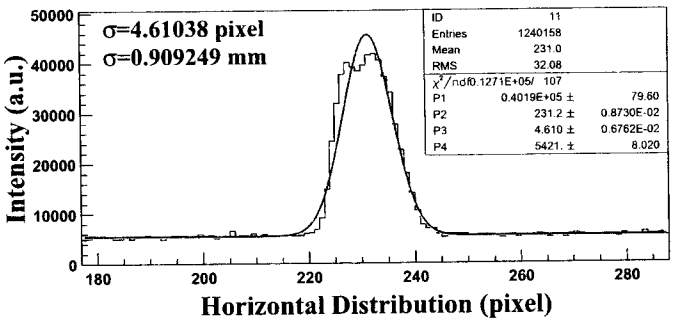
Wcrystal ON, reference ON

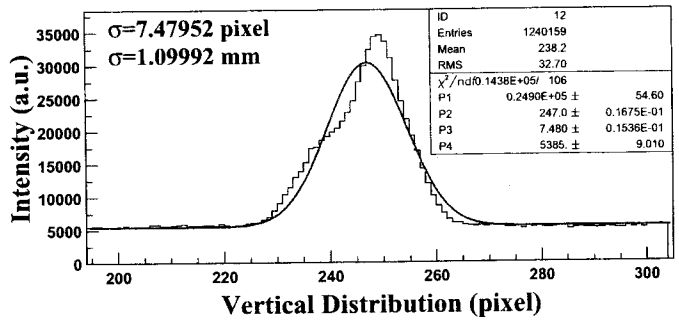
Magsweep off Mag Analyzer Pet = 20 Hert/c

HV	V signal
-340V	-391 mV
-360	-518
-380	-795
-400	-928
-420	-1043 mV
-440	1115
-460	1181
-480	1231
-340	372
-320	215
-300	120
-280	77.0 ← lower limit for detection

crystalline

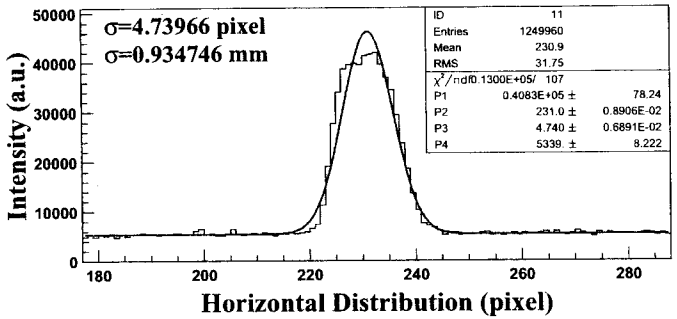
Screen at the [redacted] target

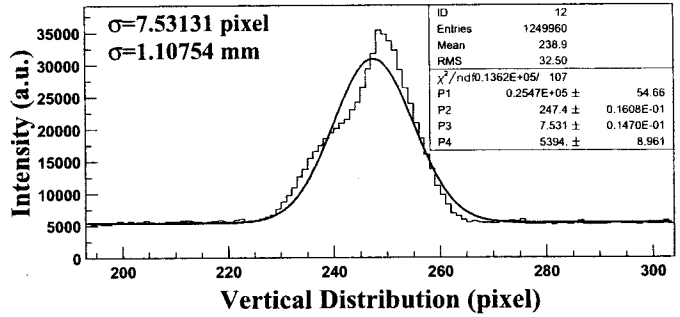




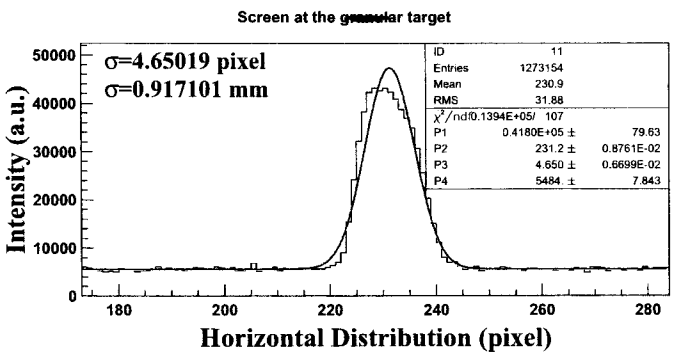
crystalline

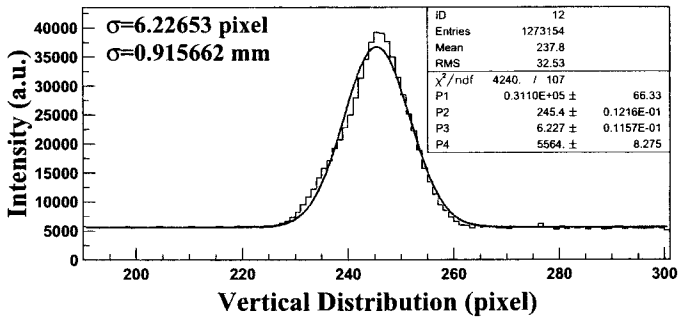
Screen at the [redacted] target



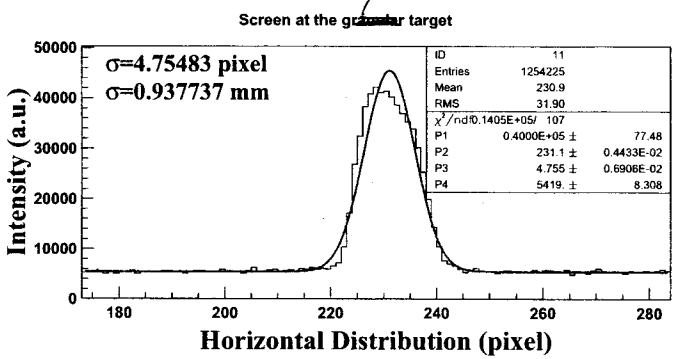


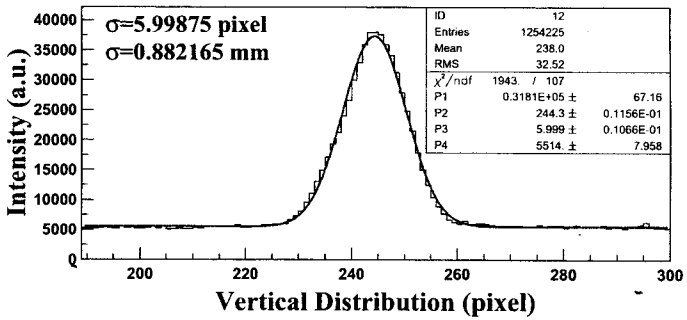
crystaline



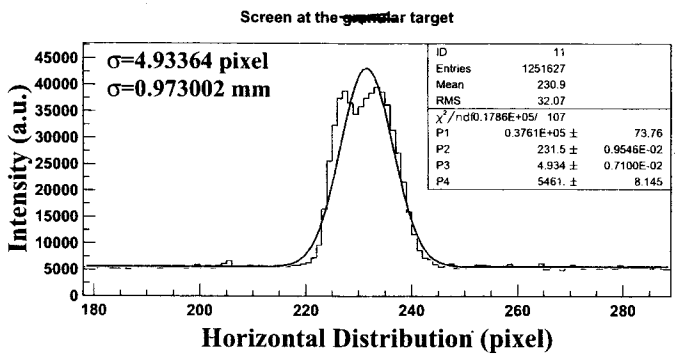


crystaline

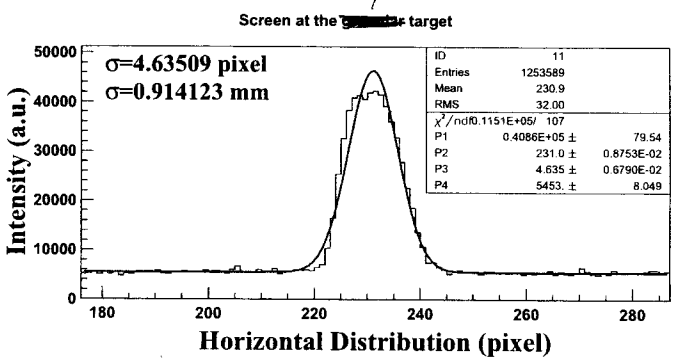


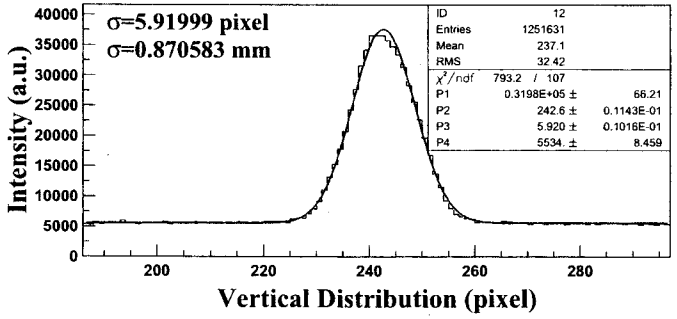


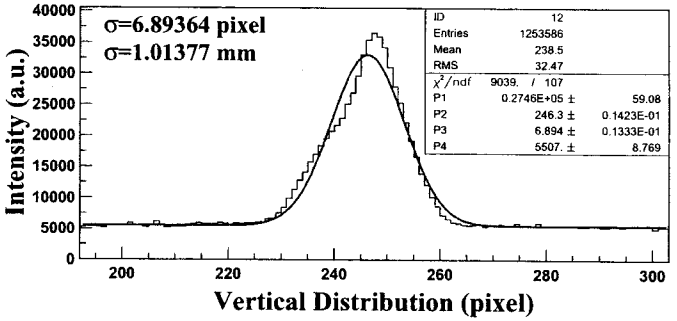
crystaline



crystaline

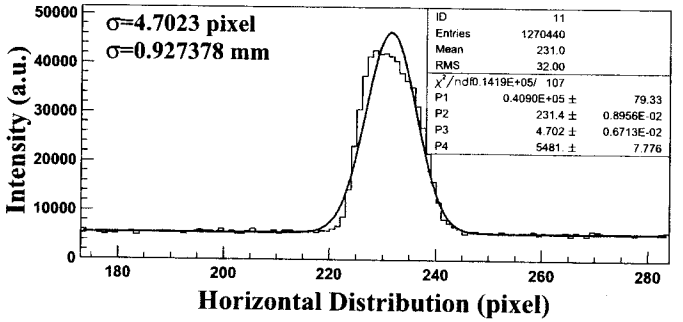


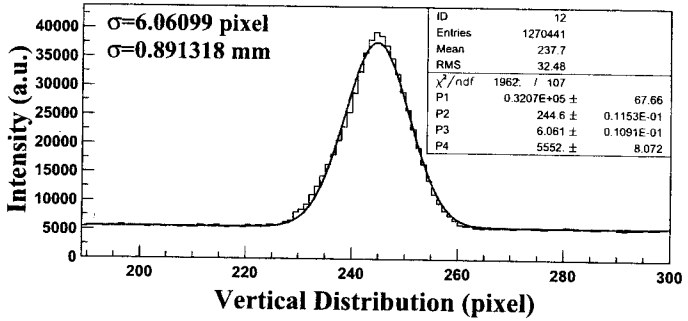




crystaline

Screen at the granular target





$4 = 13$

$H = 400$	Cerenkov	WMC
$V = -1500$	540	2096
$V = -1200$		

2015/10/11 (Sun) 4950 = operator (ON axis crystale) H=400, V=110
(Reference Target)

8:10 ~~Momentum Scan~~

~~8:15~~ 8:39 sweeping MG ON 25[illegible] e^+ P = 20 MeV, 12.6A
8:54 〃 OFF 〃
8:57 〃 ON e^+ P = 15 MeV, 9.2A
9:02 〃 OFF 〃
9:17 〃 ON e^+ P = 10 MeV, 6.1A
9:10 〃 OFF 〃
9:36 〃 ON e^+ P = 5 MeV 3.0A
9:46 〃 OFF 〃

(KL_15, 16, 17 ~~[illegible]~~
※ are not used in acceleration.

9:51 Background sweeper MG OFF P = 0, 0A
9:58 〃 ON 〃

10:05 Reference Target { ON axis (crystal) = H=400, V=110 (sweeping MG ON)
10:09 P = 20MeV { OFF axis ... H = -4600 V = 110
10:13 ~~P~~ = 15 MeV ~~[illegible]~~ { OFF axis 〃
10:18 { ON axis H = 400, V = 110
10:22 P = 10 MeV { ~~OFF~~ ON axis 〃
10:26 { ~~ON~~ OFF axis H = -4600, V = 110
10:27 P = 5 MeV { OFF axis 〃
10:30 { ON axis H = 400, V = 110
~~10:32~~ 10:36 background { ON axis 〃
10:37 { OFF axis H = -4600, V = 110

2015/10/11 (Sun)

4L Target (25Hz) (crystale ON axis) H=400, V=110

sweeping MG { ON / OFF } e^+ P=20 MeV, 12.6A

10:56 ~~10:57~~ 11:02

{ ~~ON~~ OFF / ~~OFF~~ ON } e^+ P=15 MeV, 9.2A

11:04

11:08

{ ON / OFF } e^+ P=10 MeV, 6.1A

11:11

11:14

{ OFF / ON } e^+ P=5 MeV, 3.0A

11:16

11:19

11:22 Background sweeper MG { ON / OFF } e^+ P=0, 0A

11:25

4L Target (sweeping MG ON) (V=110)

11:29 P=20 MeV { ON axis H=400, ~~H=400~~ / OFF axis H=-4600, ~~H=-4600~~ }

11:33

11:36 P=15 MeV { OFF axis ~~H=-4600~~ 〃 / ON axis H=400 }

11:38

11:41 P=10 MeV { ON axis 〃 / OFF axis H=-4600 }

11:44

11:47 P=5 MeV { OFF axis 〃 / ON axis H=400 }

11:49

11:52 Background { ON axis 〃 / OFF axis H=-4600 }

11:54

11:56 Finished

11:57 25Hz → 1Hz

(0:47) Wa Stage Controller

Present position P1 = -2334 P2 = -28222

~~[illegible] P2 [illegible] → Reset [illegible]~~

10:50 Mag sweep off 開始 for 4L target movement

The z stage for the amorphous target Wa doesn't work, although Reset the controller.

Anyway without the z position movement, the 4L target moves only in the horizontal direction.

11:55 Magsweep ON, Rep 1 → 25 Hz

2015.10.11

Temperature Measurement

- 1shot / Saturation modes.
- target position shift
- Yet comparison amorphous / granular
- e^- direct injection to granular
- different thickness targets

12:13 | Lunch Break

14:06 |

14:02 ① Crystal axis ON (V=110. H=400)

Momentum= 20 MeV. Sweeper MG ON (400A)

granular target 4L

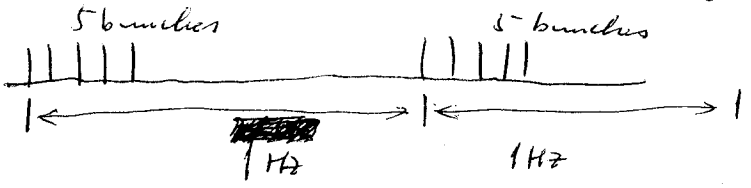
1Hz. → Exercise on Temperature measurement

14:15 Sweeper MG ΦA

15:07 1Hz → 5Hz 1.7 mA ← 1.5mA increased Temperature.

15:40 Beam Pattern (special pattern)

25Hz ← (5 successive bunches)



1.7 ~ 1.8mA at the center position.

(1.683mA − 1.670mA) = 0.013 mA

High

~~0 = 20mA / 300°C~~

~~ΔT = 1.8 mA × 300°C / 20mA = 27°C~~

→ Mag Sweeper ON

0.013 mA $dT = 0.013 \times \frac{300°C}{20mA}$

$= 0.195°C \sim 0.2°C$

We Target Positions

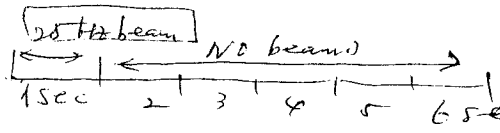
4L Target position P1 = −2334 P2 = −28222

Reference XP1 = −19634 ZP2 = −28222

2L XP1 = −10434 ZP2 = −22222

6L XP1 = +5366 ZP2 = −22222

16:10



Next beam pattern

16:40 XP1 = −2334 → −3334 → −2334 → −1334

16:45 −1334 → −1834 → −3834 → −3334 → −2834

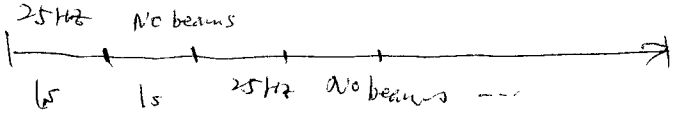
→ −2334 → −1834 → −1334 → −834 → −334

500 cnts step × 0.5μm = 1mm 1.5mm

1000 cnts step × 0.025μm = 5mm

17:05 17:01:12 → 17:00:31 Poly_B1 tripped off.

17:06



next pattern

2nd pattern

XP1 → −2334

17:30 after changing the beam pattern and starting the beam injection, we could not find any e.t signals. The reason is unclear.

Trouble No e+s' !!

17:40 25 → 5 Hz.

17:42 081 −2334 → −19834 (Reference target)

	Ye+ (mV)	WCM
H = +400	325 mV	1.~~2455~~ 55 (V)
−600	236	1.57
−1600	237	1.58
+1400	240	1.6
+2400	248	1.68
H = +600	280	1.64
H = +200	305	1.63.

H = +400 fixed

17:55 Mag Sweep ON

V = 110	Ye+ (mV)	WCM.
	260	1.55
160	200	1.56
210	160	1.56
260	144	1.57
+60	158	1.6
+10	164	1.57

18:02 H = +400 V = +110 fixed

The channeling positions doesn't change,

But the e+ intensity ~~~~ become lower

18:12 Xp1 −1983Y → −2334

18:15 set beam pattern ~~to~~ 15t pattern. (25Hz 1sec beam + 5S w/o beam

18:20 18:15:08 → 18:15:19 key 8-6 down

18:30 Mag sweep on' verified, 4L target, δT, Meas.

18:35 Xp1 = −2334 → −1834 → −1334 → −1834 → −2334

→ −2834 → −3334 → −3834 →

(Center position 18:38)

18:40 H = 400 → −4600 off Axis set (V = 110 fixed)

and δT Meas for 4L.

Xp1 = −3834 →

18:32 Xp1 = −3834 → −1963Y (Reference target)

Beam pattern (25Hz 1sec beam + 5Hz w/o beam)

l/c on axis, Mag sweep on, Pet = 21 Mev/c

Xp2 = −28222

19:40 H = 400 → −4600 (off Axis)

(on Axis)

No increase for δT, why?

19:42 H on Axis set to be +400

① Beam Pattern 1sec (25Hz) + 5sec (No beam)

- Target Position → ~~center~~ fine scan. { Xtal coils ON/OFF
  Sw Mag ON/OFF

19:46 Base temp ~110 mT (water blue)

25Hz beam No increase for δT

19:47 XP1 = −1963.4 → −2634

4L target again check.

Response is ok for 4L target!!

20:33 Goniometer ch 3 ↔ ch 4

H X

this channel is dead.

X ⟷ H

H ⟵ X

20:40 Goniometer H move 600 → 26400

Mag sweep off

We found "new electron spot!!" just on the amorphous target.

Beam pattern #1

Satoh, Suwada, Fukutana, Kamitani

2015/10/11(Sun) - Check cable connection in the linac tunnel.

~~25~~ 22

#1 ~ #9 are connected to the target (18mm thick W/q) which is not used ~~for~~ in this experiment.

- k2, k3, k4 are connected to the Reference target mounted on the stage.

23:30

- change cable connection

k2 → #1
k3 → #2
k4 → #3

Satoh, Kamitani, Seimiya, Miyahara, Suwada

10/12 (Mon) 10:00 After checking the cable connection trouble, we found that the thermocouples of the ref. 8mm-thick W/q were damaged.

We decided to ship the ~~ref~~ data taking of temp rise for the reference 8mm thick W/q.

- Xp1 = -19634 ⇒ -3334

We : Horizontal ~~beam~~ position off

Per = 20 MeV/c ,

- Miyahara. beam size measurements in a case of the direct hit to the W/q of the electron beam

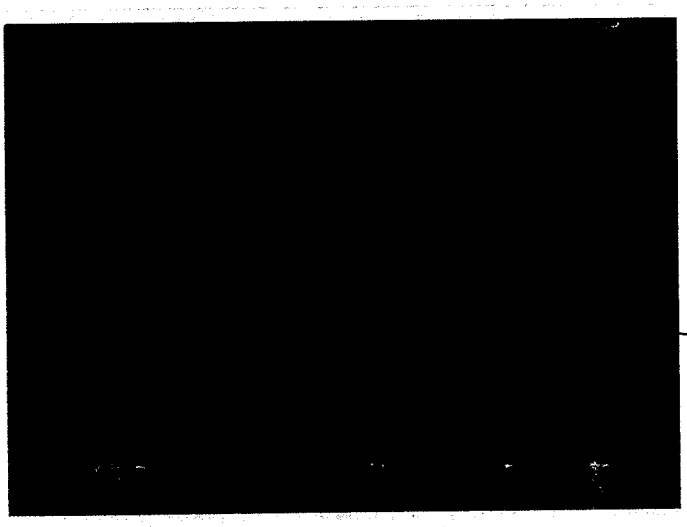
10/11 in Midnight Miyahara replace the CCD camera for the Wa target to a new one.

2015/10/11:21 Miyahara, Suwada, Satoh, Kamitani, Furukawa,Iryna, Hayg

We confirmed that beam can hit the refernce/granular target without beamloss.

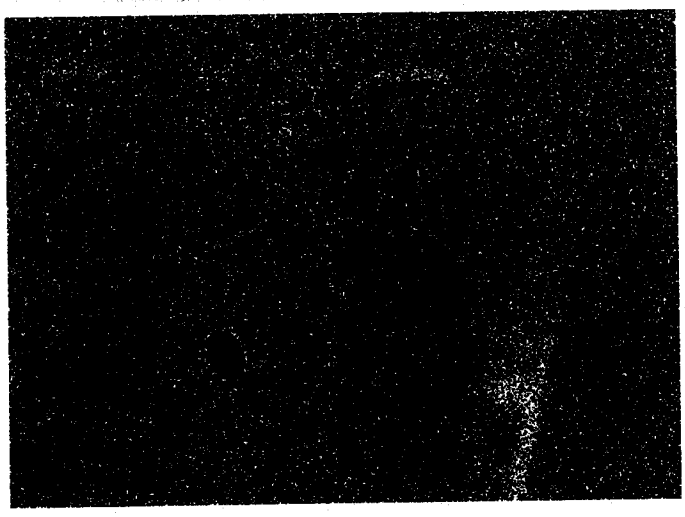
Crystal is set on off beam line. The beam go through right sideof the crystal.
(We checked that because there was no temperature rising in reference target.)

Condition: Sweeping magnet off
25 Hz with 5 sec interval operation.



The primary electron beam go through without loss.

Crystal (Upstream)



Beam hit the reference target directly.

There was also no temprerateure rising in this case.

Reference target (Tangusten) with Al2O3:Cr2O3
CCD camera has damaged pixel due to the radiation.
(after ~2 days operation)

Scale calibration of the screen in front of the crystal.

F. Miyahara 2015/10/10

Reconstructed beam size can be represented by (approximation)

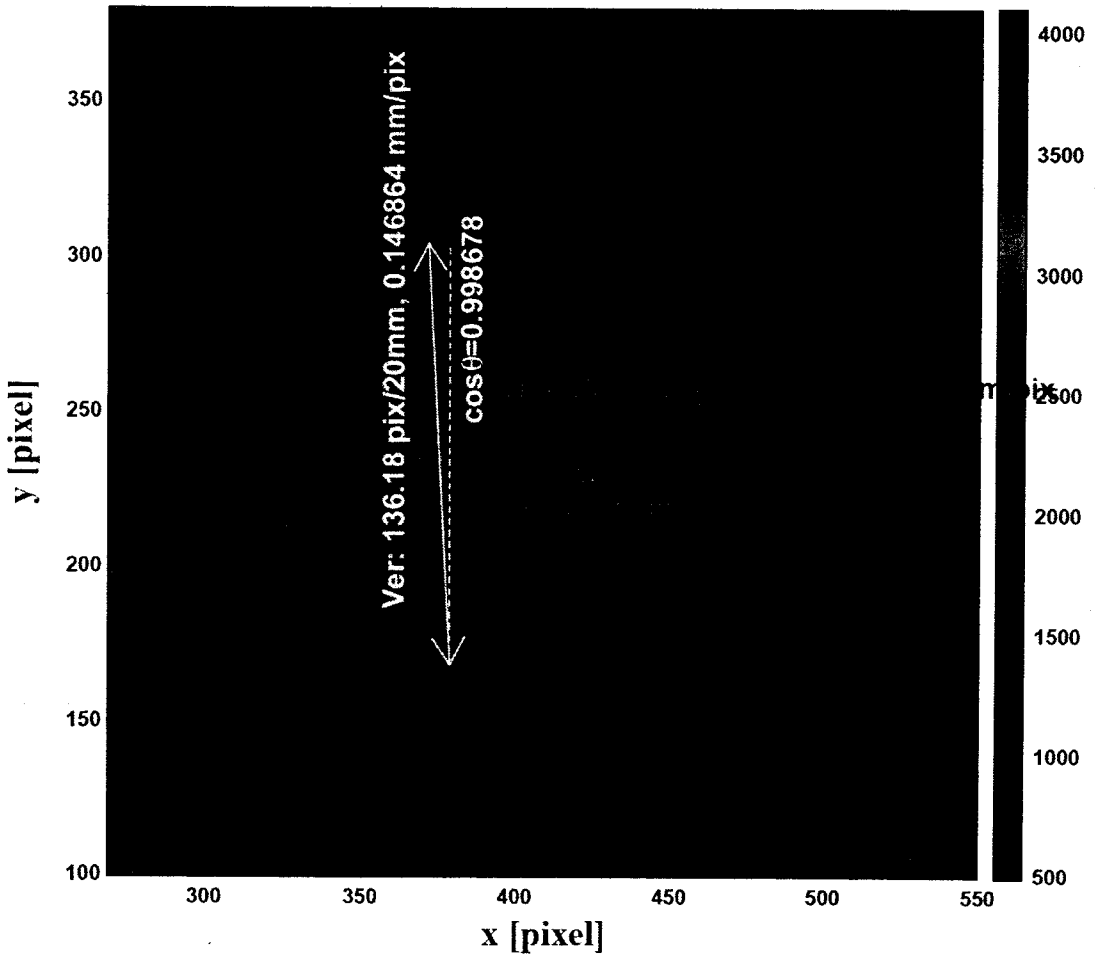
$$\sigma_{rec} = k_{pix2mm}\sigma_{mes,pix} / \cos\theta$$

s_{rec}: beam size [mm]

$s_{mes,pix}$: Measured beam size in pixel. It can be estimated by using hor./vert. projected distribution.

k_{pix2mm}: factor to convert pixel to mm.

cosq: correction for rotation.

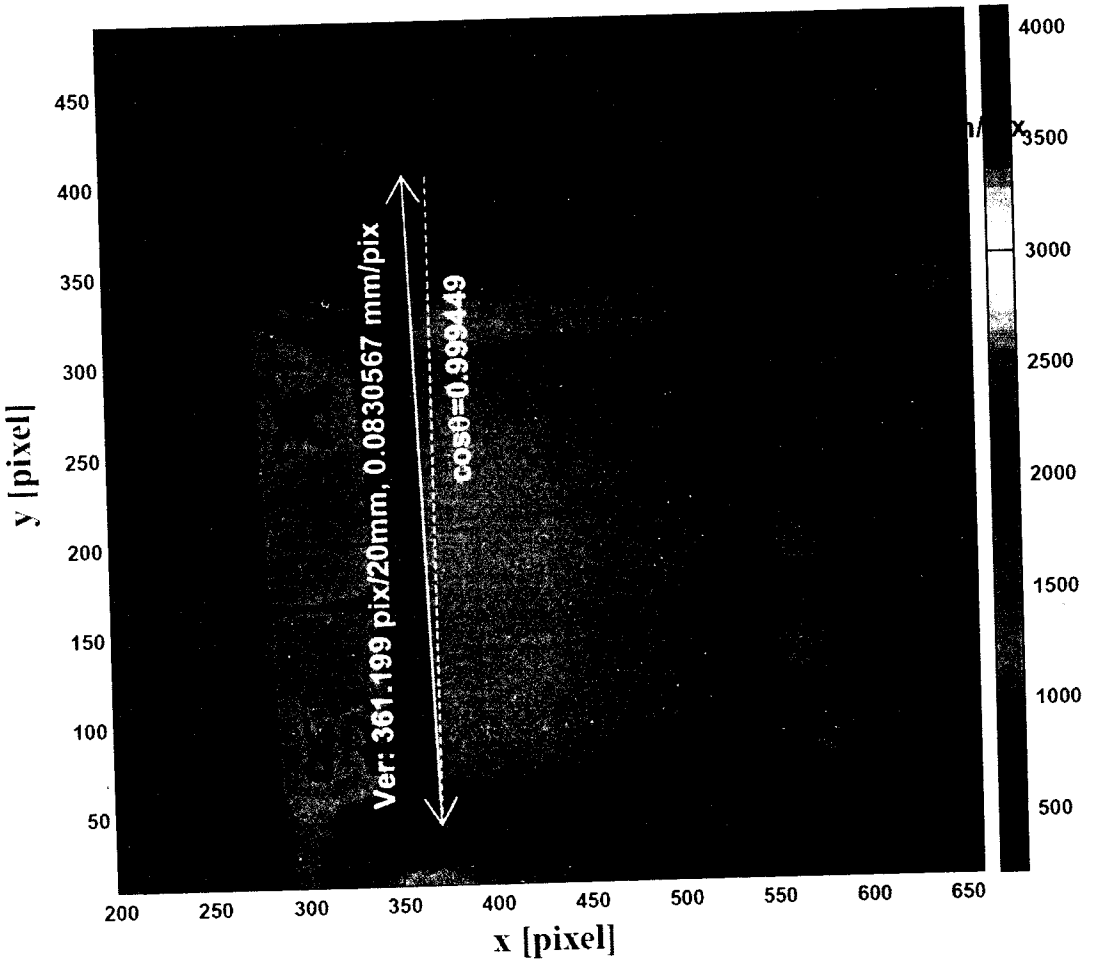


	Horizontal	Vertical
k_{pix2mm}	0.19665	0.146864
cosq	0.99636	0.99868

Scale calibration of the screen in front of the granular target.

In this screen, it is difficult to calibrate the scale due to blurry image.

$$\sigma_{rec} = k_{pix2mm}\sigma_{mes,pix} / \cos\theta$$



	Horizontal	Vertical
k_{pix2mm}	0.1290	0.08306
cosq	0.99981	0.99945

10:22 X stage 2L -1063K (z: -28222)
X stage 4L -313K (")

10:22~ 4L Wa Yet (yield) data taking
25 Hz, Beam charge sp 61 A1 1.6 nC
" A3 0.65 nC.

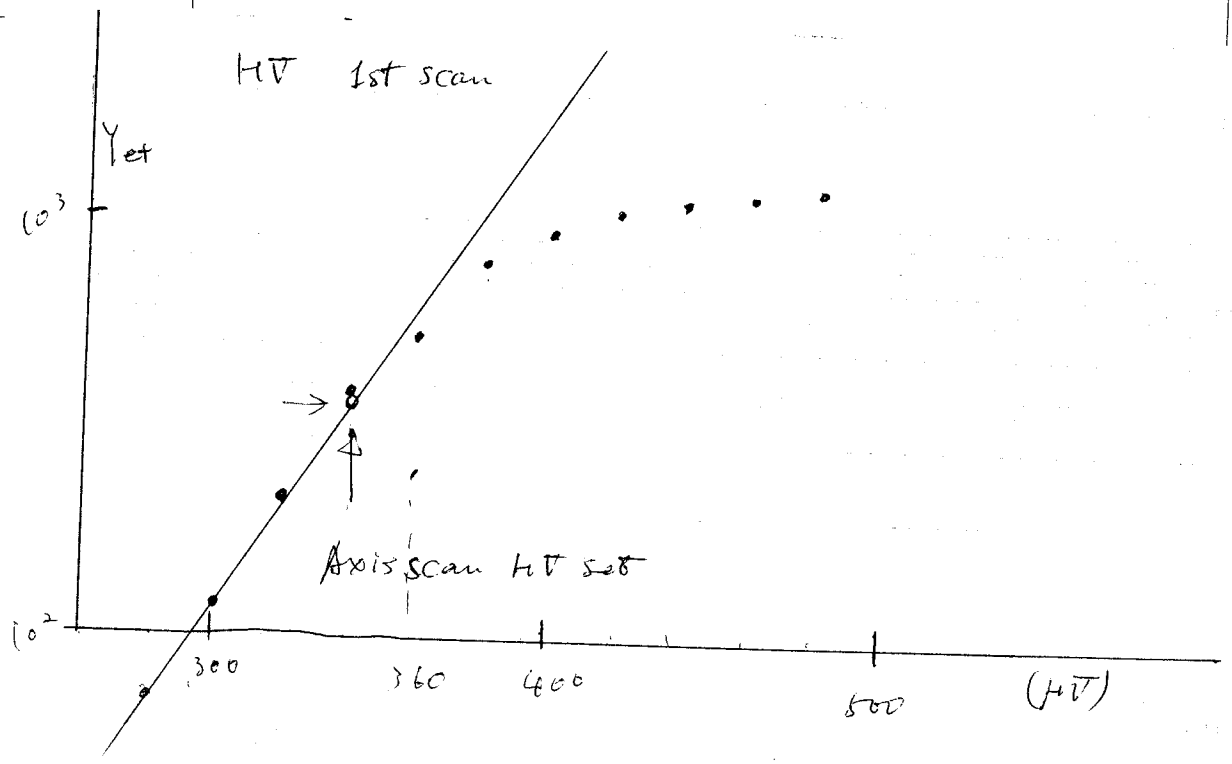
10:38 BG Measurement Analyzing Mag Power 0A. (Mag anal = 0A)
X position Wcr away 26400 @ ch 4
(Wcr on 400 @ ch 4)

10:44 the data taking finished.

~10:35 Miyahara : he start to recalibrate the beam size measurement because the CCD camera for Wa has been changed.

10:52. Beam Mode (15 sec + 5 sec w/o Beam) 1st beam pattern.
X Stage 4L -313K → -325.34 → -413.2 → -333K
200 cnts/mm center X
• et Mag anal 0 → 20 Mev/c

11:25 Wcrystal 26400 → 400 Wcy ON.
Gonio ch 3 ↔ ch 4.
Mag sweep off → ON (400A)



16:30 Axis scan for N crystal.
HV = 340V
25Hz rep.
100 events / 1 points

ΔV = 300 digit ΔH = 1000 digit scan step.

Oscilloscope 5ms/div
100mV/div 500mV/div for WCM

16:36 H = 0 V = 0

H = 0 ~~-99~~ 352 mV

17:10 25 → 5Hz rep restart of scan

H scan H = V = 0 348 mV

+1000 320

+2000 334

+3000 320

Analyzer Magnet Current

Per = 20 Hz 12.6 A (= 12.65 / mV DC)

@ based on a precise shunt resistance 1mΩ

16:58 Goniometer

H axis trouble, don't work

after reset for the controller don't work

after pushing the ORG button 0 → −8975

but we can't recover this movement,

17:05 Controller Ch 3

Ch 1 V axis

ch 2 None

ch 3 H axis → change → X axis → don't work.

ch 4 X axis → change → H axis

17:07 Recover +8975 for H axis ofc.

17:08 Reset the Controller. Restart Controller.

H scan (V = 0)

+4000
+5000
+6000
+7000
+8000
+9000
+10000
0
−1000
−2000
−3000
−4000
−5000
⋮

→

−7000
−8000
−9000
−10000

	V = +300	H Scan	● +10000 → −10000	nothing	
	~~V = +600~~				
	V = +600	〃	0 → 10000 → −10000	nothing 〃	Step length ΔH = +1000
17:23	V = +900	〃	0 → 10000 → −10000	〃 〃	
17:27	V = +1200	〃	0 → 10000 → −10000	〃 〃	
	V = +1500	〃	0 → 10000 → −10000		
	V = +1800	〃	0 → 10000 → −10000		
	V = +2100	〃	0 → 10000 → −10000		
17:38	V = +2400	〃	0 → 10000 → −10000		
	V = +2700	〃	0 → 10000 → −10000		
	V = +3000	〃	0 → 10000 → −10000		
	V = −300	〃	0 → 10000 → −10000		
17:45	V = −600	〃	0 → 10000 → −10000		
17:48	V = −900		0 → 10000 → −10000		
	V = −1200		0 → 10000 → −10000		
17:50	V = −1500		0 → 10000		

17:52 V = -1800 H = 0 → 10000 → -10000

V = -2100 H → 10000 → -10000 Ave Signal Intensity ~ 296 mV

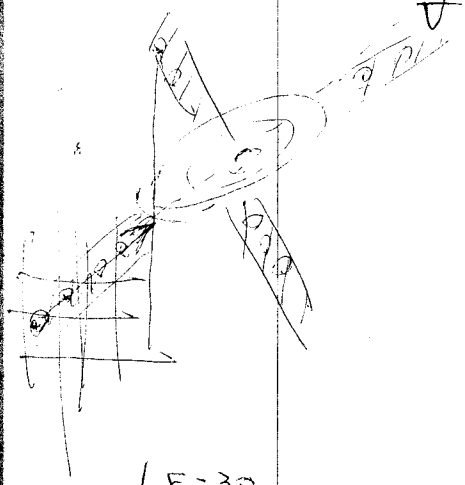
17:56 V = -2400 H = 0 → 10000 → -10000

18:00 V = -2700 H = 0 → 10000 → -10000 Ave ~290 mV

V = -3000 H = 0 → 10000 → -10000 Ave ~289 mV

V = -600 H =

	(V) Signal	WCM V
18:10 H = 10000, V 3000, scan	267 mV	1.873 (V)
2700	265	1.865 V
2400	269,	1.9780.
2100	267.	1.882
1800	272.	1.980
1500	265	1.942
1200	284,	2.000
900	264	1.914
600	240	1.901
300	239 mV	1.89
0	235	1.890
-300	237	1.890
-600	282	1.905
-900	225	1.84



		Tot(V)	WCM(V)
	V = -1200	243	1.890
	= -1500	260	1.865
	= -1800	230	1.860
	= -2100	245	1.850
	= -2400	230	1.854
	= -2700	222	1.793
δ = 30	= -3000	~~231~~ 223	1.834
H = 10^6,	V = -600	255	1.836.

← plane channeli peak ?

		Signal(mV)	WCM
δ = 35	~~H = ∅~~		
	V = 3000	243	1.865
	= 2700	260	1.879
	= 2400	260	1.912.
	= 2100	262	1.892
	= 1800	226 ~230	1.865
	= 1500,	238,	1.890
	= 1200,	227,	1.865
	= 900	233	1.870
	= 600	261	1.827
	= 300	290	1.870
	= 0	287	1.880
	= -300	280	1.870

= −600	273,	1.905
= −900,	264,	1.904
= −1200,	270	1.902
= −1500,	260	1.920
= −1800,	261	1.888
= −2100	252	1.883
= −2400	265	1.910
= −2700	260	1.911
= −3000	260	1.943

V = 300 fixed | H scan

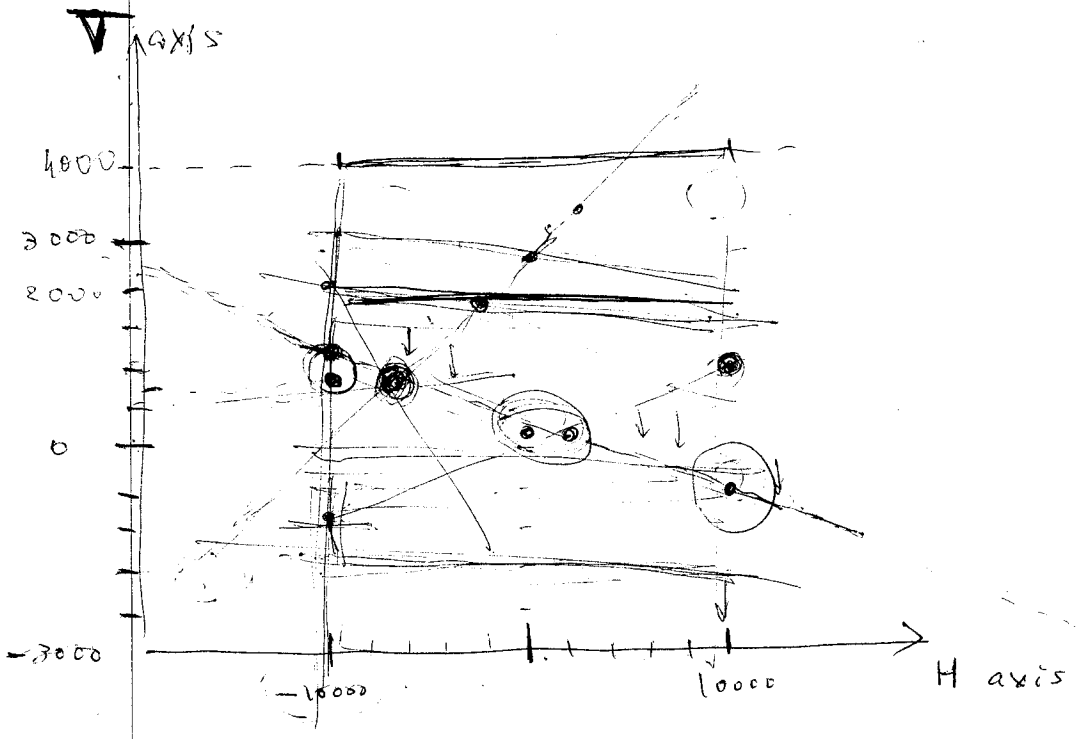
	Sig mtv	w/cm
8:17 H = 10000	272	1.920 V
9000	280	1.970
8000	298	2.00
7000	303	2.039
6000	305	2.022
5000	295	2.063
4000	300	2.093
3000	318	2.085
2000	310	2.060
1000	346	2.023 ←
0	340	2.005
−1000	325	2.015
−2000	325	2.032
−3000	312	2.006

		mT	WCM (T)
	−4000	302	2.033
19:10	−5000	298	2.053
	−6000	302	2.100
	−7000	310	2.057
	−8000	290	2.050
	−9000	290	2.045
19:06	−10000	292	2.027

H=1000, V-scan Signal mT WCM.

V=	3000	280	2.051
	2700	297	2.032
	2400	300	2.060
	2100	286	2.011
	1800	286	2.000
	1500	290	2.010
	1200	278	2.032
	900	305	2.025
	600	293	2.003
19:11	300	330	2.0050
	0	310	1.9570
	−300	307	2.000
	−600	310	2.005
	−900	293	2.025

-1200,	295,	2.022
-1500	290	2.083
-1800	280	2.0065
-2100	287	2.022
-2400	295	2.020
-2700	283,	2.0094
-3000	295	2.0091



19:33 H = -10000 fixed

Vscan
V = -3000 : +3000

V = -3000 Cherenkov 260 mV WCM 1.937 V

	Oscilloscope	WCM
V = -2700	247 mV	1.924 V
V = -2400	246 mV	1.894 V
V = -2100	240 mV	1.937 V
V = -1800	240 mV	1.924 V
V = -1500	255 mV	1.917 V
V = -1200	252 mV	1,942 V
V = -900	250 mV	1.963 V
V = -600	260 mV	1.988 V
V = -300	240 mV	1.965 V
V = 0	235 mV	1,930 V
V = 300	230 mV	1.950 V
V = 600	250 mV	1.939 V
→ V = 900	280 mV	1.941 V
V = 1200	250 mV	1.965 V
V = 1500	260 mV	2.023 V
V = 1800	270 mV	2.083 V
V = 2100	272 mV	2.049 V
V = 2400	265 mV	2.013 V

	Chevenlor	WCM
V = 2700	245	2.012 V
V = 3000	260	1.922 V
	***	
V = 4000 Fixed		10 mrd = 1000
H = -10.000 - 10000		
H = -10.000	220 mV	1.888 V
H = -9000	237 mV	1.883 V
H = -8000	235 mV	1.908 V
H = -7000	238 mV	1.908 V
H = -6000	242 mV	1.1915 V
H = -5000	230 mV	1.889 V
H = -4000	235 mV	1.878 V
H = -3000	220 mV	1.852 V
H = -2000	210 mV	1.8751 V
H = -1000	220 mV	1.867 V
H = 0	230 mV	1.920 V
H = 1000	255 mV	1.978 V
H = 2000	250 mV	1.992 V
H = 3000	247 mV	1.967 V
H = 4000	260 mV	1.943 V
H = 5000	253 mV	1.988 V
H = 6000	265 mV	1.998 V

	Chevenkov	WCM
M = 7000	268 mV	2.048 V
M = 8000	265 mV	1.992 V
M = 5000	250 mV	1.962 V
M = 10000	235 mV	1.942 V

* * *

V = 2000 Fixed

M = -10k - 10k

M = 10000	250 mV	1.950 V
M = 9000	253 mV	1.993 V
M = 8000	247 mV	1.977 V
M = 7000	270 mV	1.995 V
M = 6000	266 mV	2.032 V
M = 5000	275 mV	2.004 V
⇒ M = 4000	280 mV	2.030 V
M = 3000	270 mV	2.073 V
⇒ M = 2000	280 mV	2.046 V
M = 1000	275 mV	2.030 V
M = 0	260 mV	1.987 V
M = -1000	257 mV	2.03 V
M = -2000	265 mV	2.022 V
M = -3000	278 mV	2.045 V

	Cherenkov	WCM
H = -4000	274 mV	2.648 V
H = -5000	265 mV	2.027 V
H = -6000	260 mV	1.993 V
⇒ H = -7000	280 mV	2.065 V
H = -8000	260 mV	2.023 V
H = -9000	265 mV	1.587 V
H = -10000	270 mV	2,056 V

* * *

V = -1500 fixed

H: -10k - 10k

H = -10000	250 mV	2.020 V
H = -9000	255 mV	2.032 V
H = -8000	245 mV	2.023 V
H = -7000	250 mV	2.043 V
H = -6000	247 mV	2.021 V
H = -5000	250 mV	2.000 V
H = -4000	225 mV	1.987 V
H = -3000	252 mV	1.998 V
H = -2000	237 mV	1.954 V
H = -1000	235 mV	1.974 V
H = 0	258 mV	2.012 V
H = 1000	243 mV	2.023 V

	Cherenkov (CH1)	WCM (CH2)
H = 2000	264 mV	2.019 V
H = 3000	242 mV	2.032 V
H = 4000	250 mV	2.0101 V
H = 5000	210 mV	1.945 V
H = 6000	240 mV	1.982 V
H = 7000	230 mV	1.963 V
H = 8000	216 mV	1.940 V
H = 9000	227 mV	1.974 V
H = 10000	238 mV	2.008 V

* * *

20:55

H = 6000 fixed V = -4k ~ +4k

V = -4000	253.39 mV	2.028 V
~~V = -3900~~		
V = -3700	242.38 mV	2.015 V
V = -3400	250.37 mV	2.034 V
V = -3100	245.09 mV	1.970 V
V = -2800	253.97 mV	2.011 V
V = -2500	253.97 mV	2.042 V
V = -2200	257.04 mV	2.062 V
V = -1900	264.37 mV	2.054 V
V = -1600	260.02 mV	2.035 V

	Cherenkov	WCM
V = -1300	256.27 mV	1.9942 V
V = -1000	267.52 mV	2.0416 V
V = -700	266.82 mV	2.0534 V
V = -400	262.54 mV	1.9982 V
V = -100	250.07 mV	1.978 V
V = 200	245.37 mV	1.986 V
V = 500	237.93 mV	1.985 V
V = 800	263.97 mV	2.0457 V
V = 1100	239.69 mV	2.000 V
V = 1400	237.26 mV	1.984 V
V = 1700	221.54 mV	1.9623 V
V = 2000	241.49 mV	1.992 V
V = 2300	232.75 mV	1.9375 V
V = 2600	240.15 mV	1.9835 V
V = 2900	267.15 mV	2.0423 V
V = 3100	246.01 mV	1.9502 V
V = 3400	263.44 mV	1.9974 V
V = 3800	255.63 mV	1.9762 V
V = 4100	253.16 mV	2.0252 V

• Sweeper Magnet ON. 400A.

H = 1000 fixed

	Cherenkov	WCM
V = ~~2000~~ 1800	99.35mV	~~2.007~~ V
V = 1500	102.32mV	1.976 V
V = 1200	106.27mV	2.004 V
V = 900	123.86mV	1.9815V
V = 600	117.65mV	1.9964V
⇒ V = 300	160.21mV	1.9688V
V = ~~1200~~ 0	157.34mV	1.9154V
V = -300	120.92mV	1.9122V
V = -600	117.49mV	1.839V
V = -900	83.97mV	1.8135V
V = -1200	84.39mV	1.7812V
V = -1500	80.24mV	1.7672V
V = -1800	83.25mV	1.7794V

21:45 (Analyzer Magnet off (0 A)
Sweeper Magnet ON (400 A)

	Cherenkov	WCM
V = -1800, H = 1000	39,38 mV	1,756 V

* * *

21h52

H_+ = 1000 fixed

Analyzer Magnet ON I = 12.6 A

step = 100

V = -1500	83 mV	1.8030 V
V = -1400	83 mV	1,845 V
V = -1300	80 mV	1.8072 V
V = -1200	77 mV	1.782 V
V = -1100	84 mV	1.8093 V
V = -1000	84 mV	1.8265 V
V = -900	95 mV	1.8672 V
V = -800	93 mV	1.8700 V
V = -700	104 mV	1.9234 V

step = 50

V = -650	104 mV	1.8624 V
V = -600	120 mV	1,8670 V
V = -550	127 mV	1.8600 V
V = -500	128 mV	1,8595 V
V = -450	118 mV	1,8469

	Oberfläche	WCM
V = -400	113 mV	1.9033 V
V = -350	117 mV	1.9657 V
V = -300	110 mV	1.8954 V
V = -250	109 mV	1.8685 V
V = -200	120 mV	1.8765 V
V = -150	123 mV	1.8700 V
V = -100	128 mV	1.8449 V
V = -50	145 mV	1.9324 V
V = 0	149 mV	1.9405 V
V = 50	153 mV	1.9093 V
V = 100	151 mV	1.9112 V
V = 150	153 mV	1.9677 V
V = 200	148 mV	1.9659 V
V = 250	144 mV	1.9452 V
V = 300	150 mV	1.9374
V = 350	127 mV	1.9612
V = 400	128 mV	1.9610
V = 450	127 mV	1.9147

	Cherenkov	WCM
V = 500	112 mV	1.9456
V = 550	116 mV	1.9343
V = 600	118 mV	2,002
after 100 V = 700	103 mV	1.9257 V
V = 800	105 mV	1.9267 V
V = 900	119 mV	1.9735
V = 1000	111 mV	1.9352 V
V = 1100	103 mV	1.9558 V
V = 1200	94 mV	1.9553 V
V = 1300	97 mV	1.9700 V
V = 1400	98 mV	1.9642 V
V = 1500	95 mV	1.9743 V

22h25 Analyzer Magnet is OFF

Cherenkov signal = 39 mV

22h30 We put H = +1000 and perform

(2nd) HV Scan V = +50 HV (PMT) scan

HV = -340 V

Cherenkov signal I = 180 mV

WCM = 2,051 V

	Cherenkov	Wcm
HV = 360 V	258 mV	1.9927 V
HV = 380 V	343 mV	1.9714 V
HV = 400 V	~~384 mV~~	1.9707 V
	450 mV	1.9501 V
→ HV = 420 V	650 mV	1.9856 V
HV = 440 V	735 mV	2,0213 V
HV = 460 V	785 mV	2.0213 V
HV = 480 V	790 mV	1.9534 V

22h50 We try to Put I = 3 A Analyser Right
P = 5 MeV/c

HV = 480 V
$I_{Cherenkov}$ = 200 mV
I_{wcm} = 2,0112 V

HV = 400 V
I_{ch} = difficult
I_{wcm} =

⇒ HV = 420 V
$I_{Cherenkov}$ = 91 mV
I_{wcm} = 2,06 V

Switch OFF analyzer Magnet

HV = 420 V

$I_{channeltron}$ = 80 mV

I_{wien} = 2.05 V

*** Coming back to angular scan to find channeling

HV = 400 V

Sweeping Magnet ON

Analyzing Magnet P = 20 MeV/c

V = 50

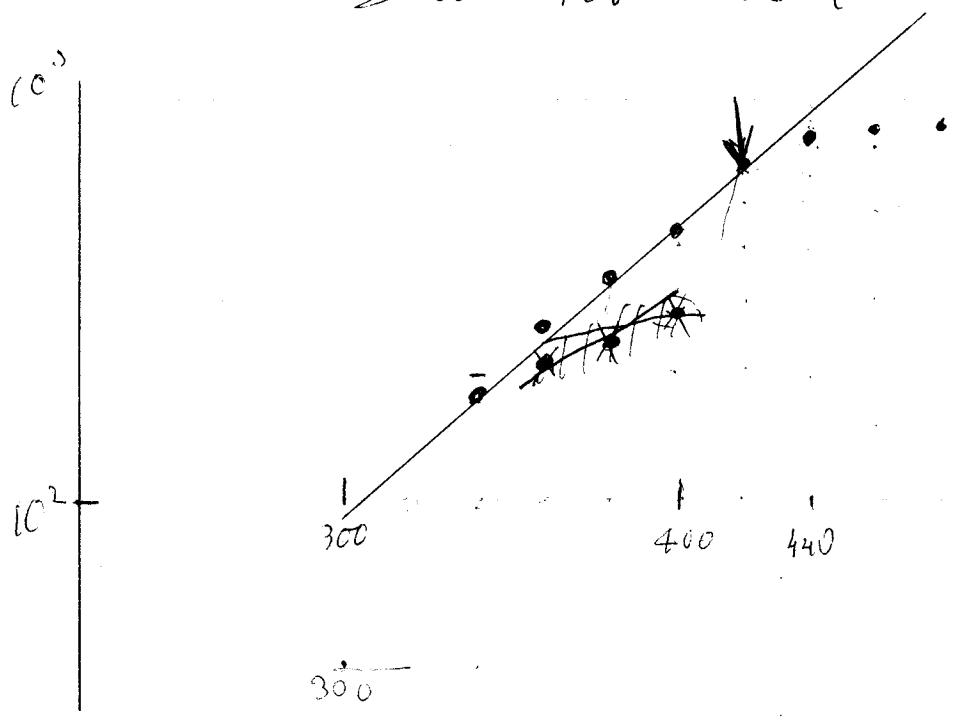
horizontal Scan } first peak position was around H 1000

H = +5000	coeunter (mV) 289	wien (V) 1.9830
H = +4000	300	2.0190
H = +3000	305	1.9822
H = +2000	346	1,9717
H = +1800	353	2.0050
H = +1600	394	2.0428
H = +1400	432	2.0260
H 1200	481	2.0580
H = 1000	519	2.0470

	Cevelkov	woze
H = 800	523	2.0428
H = 600	640	2.04
H = 400	549	2.0710
H = 200	602	2.0270
H = 0	608	2.0814
H = -200	567	2.1071
H = -400	502	2.0305
H = -600	435	2.0810
H = -800	398	2.0223
H = -1000	422	2.0971
H = -2000	315	1.9670
H = -3000	300	1.9965
H = -4000	296	2.0477
H = -5000	285	2.0275

(A) → Background Reading

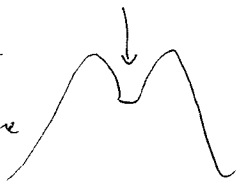
2nd HT Scan



23:30 Background Measurment at (A)

↳ 58 mV

Rescale the peak place just to understand if it's close to saturation -



} HV = 360 V

	resonator	WMC
→ H = 800	280	2.027
H = 600	305	2.0080

	Ceramic	WLC
H=400	254	1.9756
H=200	278	1.9675
H=0	272	1.9615
H=-200	264	2.0445
H=-400	233	1.9970

↳ same shape

Hole seen --- beam has such distribution ?

HV → 380 Not too high, not too low –

V=0 → same scan than for 50 –

	Ceramic	WLC
H=-5000	177	1.9557
H=-4000	185	1.9607
H=-3000	196	1.9001
H=-2000	198	1.9390
H=-1000	209	1.9324
H=-800	247	1.9605
H=-600	273	1.9930
H=-400	278	1.9230
H=-200	296	1.9590
H=0	324	1.9660
H=200	338	2.0134
H=400	370	2.0705
H=600	370	2.0450
H=800	297	1.9930

	Coincidence	WMC
H = 1000	289	1.9812
2000	238	1.9617
3000	187	1.9407
4000	188	1.9997
5000	183	2.0037

Background Scan 49 mV

V = -50

	Coincidence	WMC
H = +5000	166	1.965
H = +4000	~~163~~ 166	~~1.962~~ 1.909
H = 3000	173	1.944
H = 2000	233	1.973
H = 1000	257	1.930
H = 800	283	1.972
H = 600	282	2.000
H = 400	298	1.991
H = 200	318	1.962
H = 0	301	1.983
H = -200	272	1.967
H = -400	263	1.982
H = -600	250	1.994
H = -800	236	1.965

	Cerenkov	WMC
H = -1000	225	1.968
H = -2000	205	1.995
H = -3000	~~20~~ 197	1.967
H = -4000	190	~~1.96~~ 1.966
H = -5000	213	2.007

Background Scan 45.5 mV

H = 400.

	Cerenkov	WMC
~~-1500~~ V = ~~-1500~~	208	2.031
V = -1200	212	2.018
V = -900	223	2.061
V = -600	244	2.085
V = -300	274	2.091
V = -150	317	2.086
V = 0	337 ~~338~~ ~~423~~	~~2.07~~ 2.037
V = 150	584	2.020
V = 300	340	2.033
V = 600	262	2.044
V = 900	229	2.006
V = 1200	207	1.992
V = 1500	214	2.048

H = 400	Ceramco V	WMC
V = 0	400	2,017
V = 50	411	2,063
V = 100	655	2,032
V = 150	594	2,005
V = 200	450	2,023
V = 250	386	2,001
V = 300	339	1,996
~~#~~		
V = 125	650	1,978
V = 110	688	1,996

background scan 67,5 mV

V=110

	Сечение	WMC
H=-5000	232	2.102
H=-4000	228	2.041
H=-3000	238	2.052
H=-2000	250	2.118
H=-1000	273	2.043
H=-800	264	2.022
H=-600	283	2.003
H=-400	284	1.933
H=-200	313	1.996
H=0	340	1.987
H=200	535	1.992
H=400	672	2.011
H=600	472	1.980
H=800	384	2.010
H=1000	332	2.008
H=2000	249.	2.010
H=3000	227	2.012
H=4000	232	2.048
H=5000	210	1.994

10/11
1=25

I = 25

V = 110	Cerenkov	WMC
H = 200	494	1.993
H = 300	624	2.021
H = 400	672	2.003
H = 500	538	1.977
H = 600	445	1.945
H = ~~500~~	270	1.998
H = 350	654	1.990
H = 450	588	1.955
~~H =~~		
~~H =~~		

Background 67.5 mV

I = 39

(Cerenkov) (WMC)

V = 110, H = 400, 603 mV, 1.908 V

H = 400	Conical	WMC
V = -1500	.177	1.897
V = -1200		

TEMPLATURE of Ref TARGET ~~40010~~

1:55

2:05 Temp Rise Meas. for the reference target

Sweep Mag ON , Beam Rep 25 Hz.

Analyzing Mag 20 Kev/c

Conic angle V = -1500, H = 400

Temp. measured ~~11~~ 0,2 mV

2:40

X P1 -19634 → ~~-19334~~ -23334

Z P2 -28222 → -22222

} 4L position

reference Target → 4L Target

Temperature

3=10 4L ~~temperature~~ 25Hz ~~1.5~~ 2.5mA [integral mode]

(1Hz: 1.5mA)

3=15 25Hz → 1Hz

3=16 4L → 6L (X stage move)

X(P1) −233K → 5366 } 6L position

Z(P2) −22222

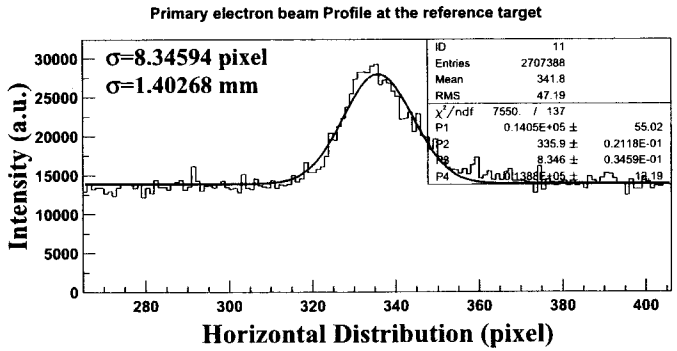
3=48 6L 25Hz 3.5mA (temperature reach)

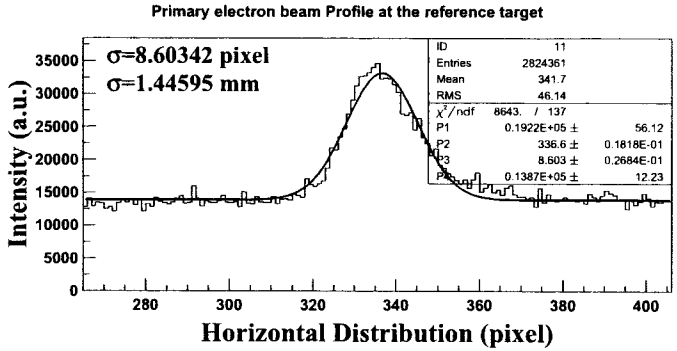
4=58 470mV, 1.900V, V=90, H=400

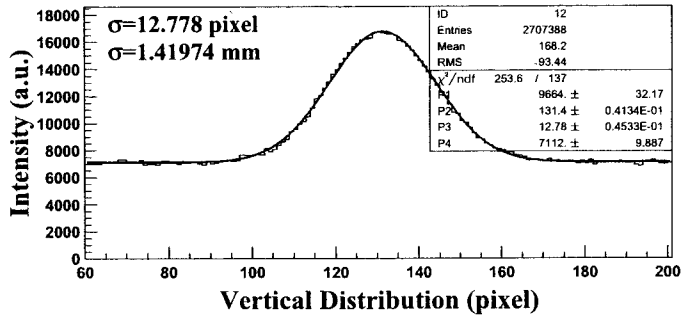
5=46 6L → reference target

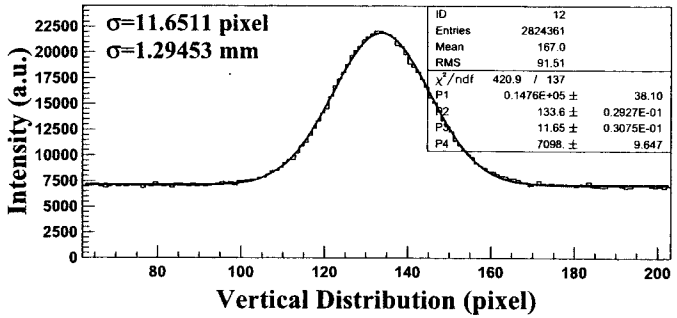
X ~~−233K~~ 5366 → −1963K

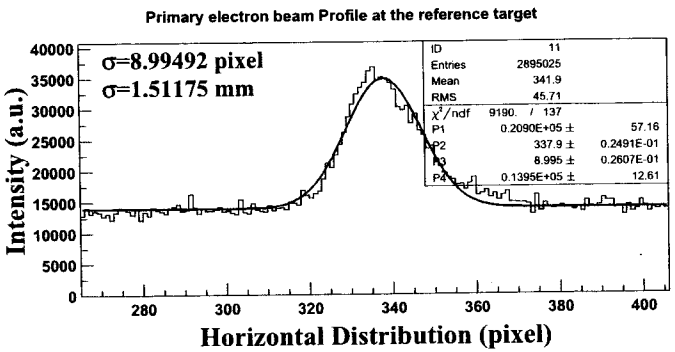
Z −22222 → −28222

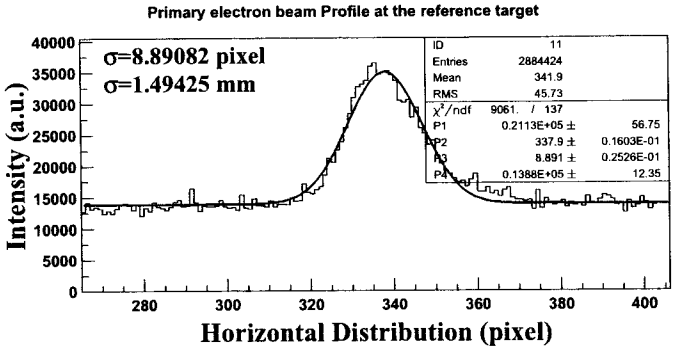

Primary electron beam Profile at the reference target
σ=8.34594 pixel
σ=1.40268 mm
ID 11
Entries 2707388
Mean 341.8
RMS 47.19
χ²/ndf 7550. / 137
P1 0.1405E+05 ± 55.02
P2 335.9 ± 0.2118E-01
P3 8.346 ± 0.3459E-01
P4 0.1388E+05 ± 18.19
Intensity (a.u.)
Horizontal Distribution (pixel)

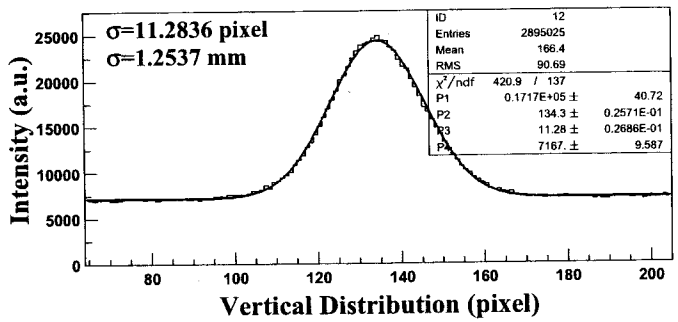

Primary electron beam Profile at the reference target
σ=8.60342 pixel
σ=1.44595 mm
ID 11
Entries 2824361
Mean 341.7
RMS 46.14
χ²/ndf 8643. / 137
P1 0.1922E+05 ± 56.12
P2 336.6 ± 0.1818E-01
P3 8.603 ± 0.2684E-01
P4 0.1387E+05 ± 12.23
Intensity (a.u.)
Horizontal Distribution (pixel)

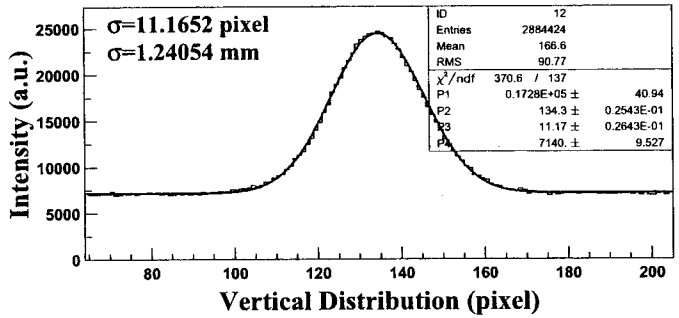

σ=12.778 pixel
σ=1.41974 mm
ID 12
Entries 2707388
Mean 168.2
RMS 93.44
χ²/ndf 253.6 / 137
P1 9664. ± 32.17
P2 131.4 ± 0.4134E-01
P3 12.78 ± 0.4533E-01
P4 7112. ± 9.887
Intensity (a.u.)
Vertical Distribution (pixel)

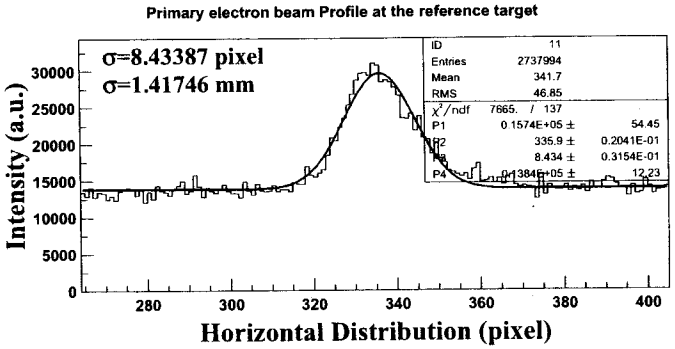

σ=11.6511 pixel
σ=1.29453 mm
ID 12
Entries 2824361
Mean 167.0
RMS 91.51
χ²/ndf 420.9 / 137
P1 0.1476E+05 ± 38.10
P2 133.6 ± 0.2927E-01
P3 11.65 ± 0.3075E-01
P4 7098. ± 9.647
Intensity (a.u.)
Vertical Distribution (pixel)

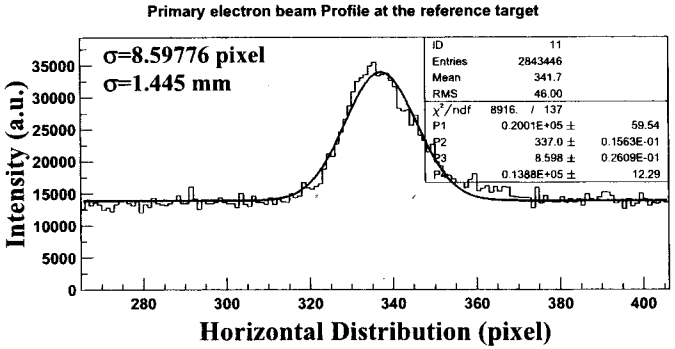

Primary electron beam Profile at the reference target
σ=8.99492 pixel
σ=1.51175 mm
ID 11
Entries 2895025
Mean 341.9
RMS 45.71
χ²/ndf 9190. / 137
P1 0.2090E+05 ± 57.16
P2 337.9 ± 0.2491E-01
P3 8.995 ± 0.2607E-01
P4 0.1395E+05 ± 12.61
Intensity (a.u.)
Horizontal Distribution (pixel)

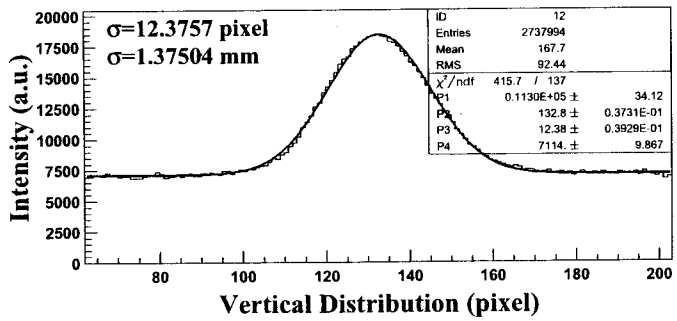

Primary electron beam Profile at the reference target
σ=8.89082 pixel
σ=1.49425 mm
ID 11
Entries 2884424
Mean 341.9
RMS 45.73
χ²/ndf 9061. / 137
P1 0.2113E+05 ± 56.75
P2 337.9 ± 0.1603E-01
P3 8.891 ± 0.2526E-01
P4 0.1388E+05 ± 12.35
Intensity (a.u.)
Horizontal Distribution (pixel)

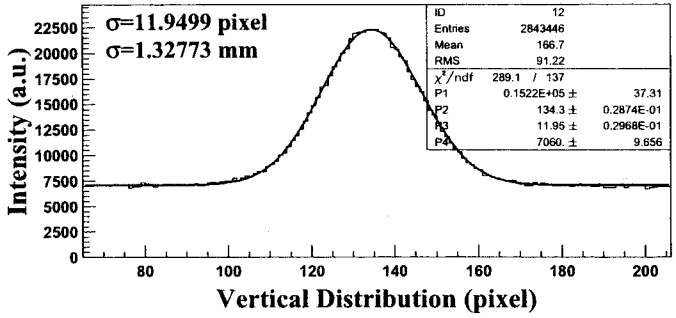

σ=11.2836 pixel
σ=1.2537 mm
ID 12
Entries 2895025
Mean 166.4
RMS 90.69
χ²/ndf 420.9 / 137
P1 0.1717E+05 ± 40.72
P2 134.3 ± 0.2571E-01
P3 11.28 ± 0.2686E-01
P4 7167. ± 9.587
Intensity (a.u.)
Vertical Distribution (pixel)

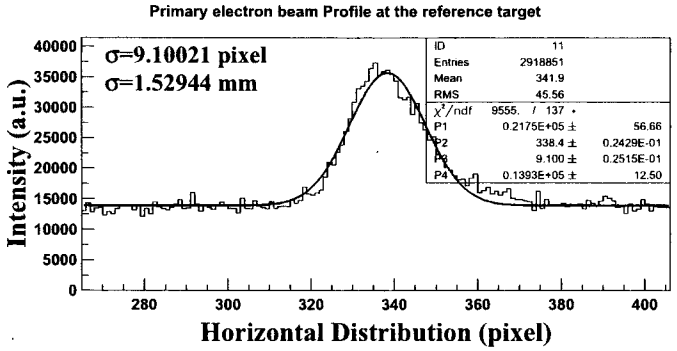

σ=11.1652 pixel
σ=1.24054 mm
ID 12
Entries 2884424
Mean 166.6
RMS 90.77
χ²/ndf 370.6 / 137
P1 0.1728E+05 ± 40.94
P2 134.3 ± 0.2543E-01
P3 11.17 ± 0.2643E-01
P4 7140. ± 9.527
Intensity (a.u.)
Vertical Distribution (pixel)

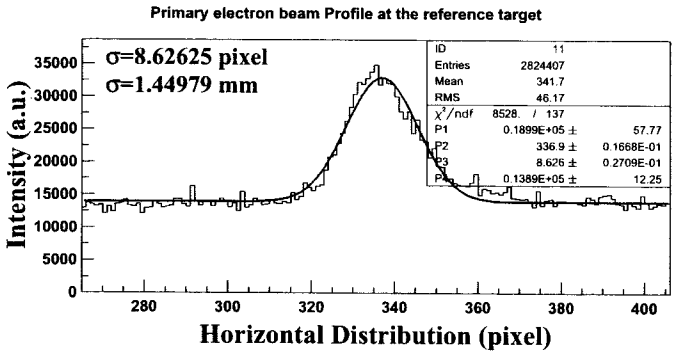

Primary electron beam Profile at the reference target
σ=8.43387 pixel
σ=1.41746 mm
ID 11
Entries 2737994
Mean 341.7
RMS 46.85
χ²/ndf 7665. / 137
P1 0.1574E+05 ± 54.45
P2 335.9 ± 0.2041E-01
P3 8.434 ± 0.3154E-01
P4 0.1384E+05 ± 12.23
Intensity (a.u.)
Horizontal Distribution (pixel)

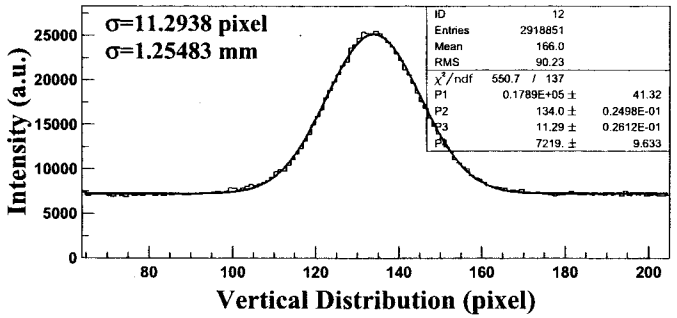

Primary electron beam Profile at the reference target
σ=8.59776 pixel
σ=1.445 mm
ID 11
Entries 2843446
Mean 341.7
RMS 46.00
χ²/ndf 8916. / 137
P1 0.2001E+05 ± 59.54
P2 337.0 ± 0.1563E-01
P3 8.598 ± 0.2609E-01
P4 0.1388E+05 ± 12.29
Intensity (a.u.)
Horizontal Distribution (pixel)

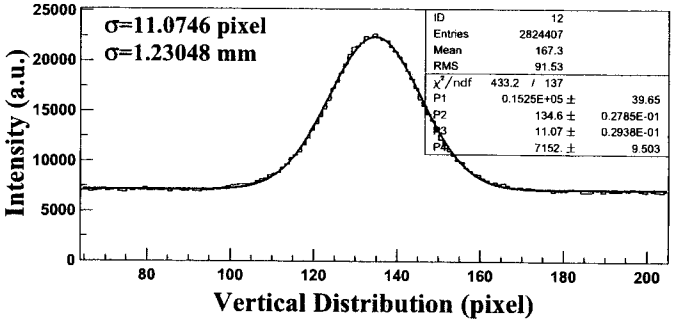

σ=12.3757 pixel
σ=1.37504 mm
ID 12
Entries 2737994
Mean 167.7
RMS 92.44
χ²/ndf 415.7 / 137
P1 0.1130E+05 ± 34.12
P2 132.8 ± 0.3731E-01
P3 12.38 ± 0.3929E-01
P4 7114. ± 9.867
Intensity (a.u.)
Vertical Distribution (pixel)

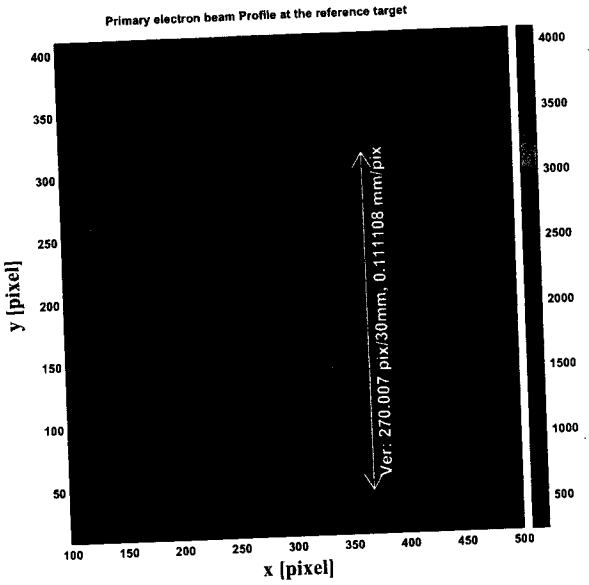

σ=11.9499 pixel
σ=1.32773 mm
ID 12
Entries 2843446
Mean 166.7
RMS 91.22
χ²/ndf 289.1 / 137
P1 0.1522E+05 ± 37.31
P2 134.3 ± 0.2874E-01
P3 11.95 ± 0.2968E-01
P4 7060. ± 9.656
Intensity (a.u.)
Vertical Distribution (pixel)


Primary electron beam Profile at the reference target
σ=9.10021 pixel
σ=1.52944 mm
ID 11
Entries 2918851
Mean 341.9
RMS 45.56
χ²/ndf 9555. / 137
P1 0.2175E+05 ± 56.66
P2 338.4 ± 0.2429E-01
P3 9.100 ± 0.2515E-01
P4 0.1393E+05 ± 12.50
Intensity (a.u.)
Horizontal Distribution (pixel)


Primary electron beam Profile at the reference target
σ=8.62625 pixel
σ=1.44979 mm
ID 11
Entries 2824407
Mean 341.7
RMS 46.17
χ²/ndf 8528. / 137
P1 0.1899E+05 ± 57.77
P2 336.9 ± 0.1668E-01
P3 8.626 ± 0.2709E-01
P4 0.1389E+05 ± 12.25
Intensity (a.u.)
Horizontal Distribution (pixel)


σ=11.2938 pixel
σ=1.25483 mm
ID 12
Entries 2918851
Mean 166.0
RMS 90.23
χ²/ndf 550.7 / 137
P1 0.1789E+05 ± 41.32
P2 134.0 ± 0.2498E-01
P3 11.29 ± 0.2612E-01
P4 7219. ± 9.633
Intensity (a.u.)
Vertical Distribution (pixel)


σ=11.0746 pixel
σ=1.23048 mm
ID 12
Entries 2824407
Mean 167.3
RMS 91.53
χ²/ndf 433.2 / 137
P1 0.1525E+05 ± 39.65
P2 134.6 ± 0.2785E-01
P3 11.07 ± 0.2938E-01
P4 7152. ± 9.503
Intensity (a.u.)
Vertical Distribution (pixel)



11:30

Axis check. Horizontal Scan. $P_{et.}$ = 20 kev/c

V = 110	Y_{et} (mm)	w cm (mm)
H = 400	290	1.86
600	175	1.83
800	135	1.78
1000	120	1.78
~~1200~~	100	1.84
400	177 / 157	1.78
200	148	1.8
0	135	1.8
400	150	1.76

61
sp A1— 1.67 mc
sp 61—A3 1.65 mc

V Scan H = 400 fixed

11:40

V =		
60	140	1.82
10	135	1.84
-40	125	1.89

11:50

T =	160	140	1.78
	240	133	1.77
	260	133	1.79
	110	162	1.81

V = 110

14L

	Cerenkov	WMC
Hscan -5000	100	1.676
-4000	98.1	1.635
-3000	102	1.67K
-2000	105	1.665
-1000	111	1.616
-800	112	1.595
-600	116	1.595
-400	117	1.572
-200	128	1.598
0	136	1.571
200	141	1.615
400	140	1.613
600		
800		
1000		
2000		
3000		
4000		
5000		

Reference Target

400	178	1.530
600	122	1.492
~~800~~		

V=110 Reference Target

Hscan	Cerenkov	WMC
-5000	123	~~7.05~~ 1.508
-4000	122	1.458
-3000	~~7~~ 76.2	
-2000		
-1000		
-800		
-600		
-400		

100/1.9

/2.25

102×1.2

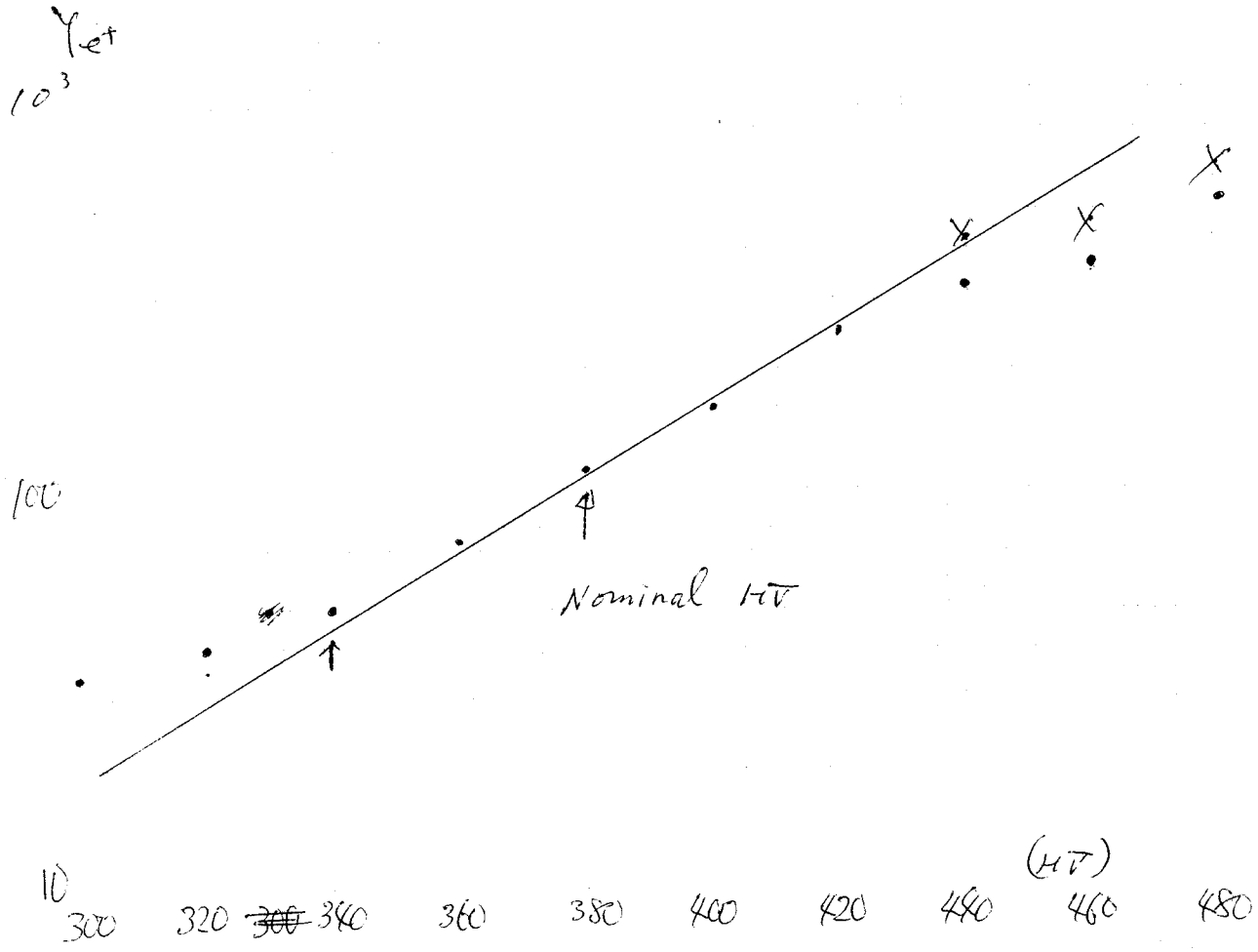
120/166

Cerenkov singinal decrease to ~50 mV.

12=K2.

HV linerity check (P=20MeV, Sweeper-ON, crystal H=-500, V=110, reference Target, 5Hz

	Cherenkov (mV)	WMC (V)
300 V	33.7	1.985
320 V	40.1	1.998
340 V	49.7	1.987
360 V	73.5	2.000
380 V	115	2.015
400 V	158	2.001
420 V	246	2.005
440 V	318	1.990
460 V	365	1.979
480 V	553	1.988



Beam orbit tuning by kamitani

13=40 ⑤ sp-~~61~~-A1 Beam position x = −4mm → to 0mm key beam positions

Bend 61 A1, A2, A3 strength tuning

We can find the intensity increase for the ET yield, much more due to the recovery of the beam injection angle to the W crystal.

13:58 Again Hor Scan V=110 Quick scan

	Intensity mV	WCM. (V)	
H=400	720 (mV)	1.877	
200	~~720~~ 736	1.912	
0	640	1.916	
-200	578	1.914	
+600	655	1.871	
+800	600	1.858	
+300	772	1.892	ON axis
~~+100~~ +200	735	1.908	
+100	680	1.905	

14:05 H=300

~~V=110~~			
V=110	768	1.909	
V=60	631	1.882	
V=10	615	1.903	
V=160	740	1.891	
V=210	661	1.905	
V=130	760	1.907	
V=90	752	1.930	
V=110	770	1.906	ON axis

14:14 ~~X stage~~

Reference Target → 4L target.

(xstage -19634) ~~→~~ (x: -3134)

14:19 Beam mode 5Hz → special pattern

(1s 25Hz 4 1s without beam)

Temp. Rise Hex. Restart

- Mag sweep 400 A on
- Mag analy P = 20 Hex
- special patten for beam injection
- Wcrystal on.

HT = -379 (V) fixed

14:52 Hor. 300 → -5000 Off-Axis Run

15:00 Kly 3-6 Ts down 14:56:24 — 15:16:32

(from Linac operator)

15:13 Hor -5000 → +300

Mag sweep ON → off

~15:20 Ter decreased by a half !!

We can not find any situation change for the beam.

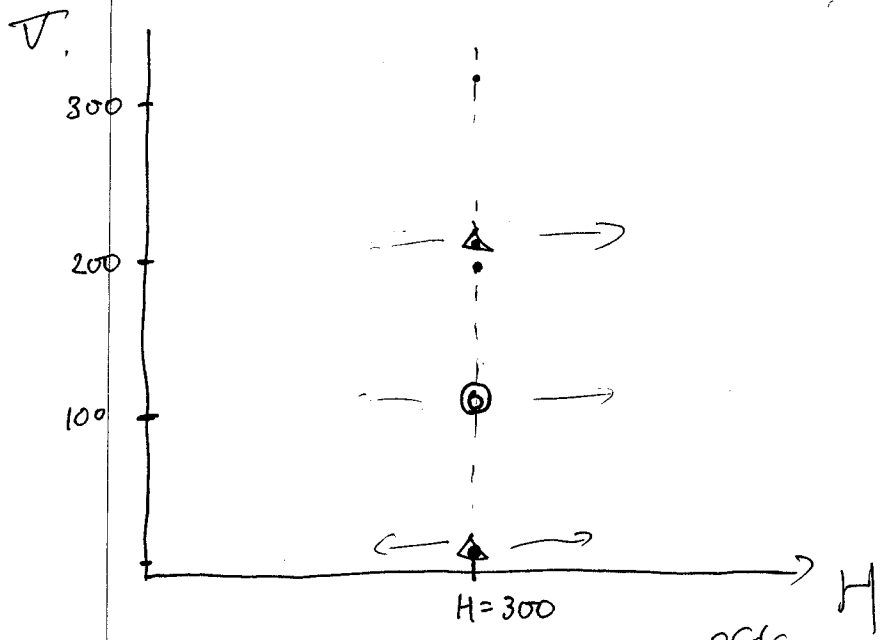
It seems the vertical orbit changed just after the 3rd sector. But, why the vertical axis changed, we can't understand.

15:40 Kamitani will try to readjust the vertical orbit, and he will check the beam orbit during the at final analyzing section.

16 = 35

sweeper MG ON

	Cerenkov	WMC
V = 210		
H = 300	222	2.210
H = 500	216	2.154
H = 700	186	2.190
H = 900	167	2.189
H = 100	209	2.191
H = -100	180	2.205
H = -300	156	2.207
V = 110		
H = -300	160	2.145
H = -100	197	2.245
H = 100	232	2.150
H = 300	320	2.160
H = 500	266	2.074
H = 700	215	2.226
H = 900	179	2.223
V = 10		
H = 900	167	2.179
H = 700	184	2.192
H = 500	192	2.223
H = 300	197	2.263
H = 100	189	2.243
H = -100	182	2.248



28K

H=300

17:00

V=60	197	2.186
V=160	~~260 284~~	2.179
V=110	244	2.290
V=160	266	1.825
V=110	336	2.232

17:48

H = 1300

	Cerenkov	WMC
V = 110	181	1.925
V = 210	185	1.969
V = 310	172	1.941
V = 410	195	1.947
V = 510	161	1.986
V = 10	193	1.973
V = -90		

step 50

V = -1540

V = 1510

There are two peaks.

H = -700

V = 110

V = 1510

V = -1540

~~H = -1700~~

H = -200

V = 110 → V = +1510 → V = -1540

H = +800

V = 110 → V = +1510 → V = -1540

18:14 H=1800

V=110 → V=1510 → −1540.

H=−1200

V=110 → V=1510 → V=−1540.

Checking gain of PM?

18:23 5Hz → 25Hz/s + 5sec
(1 sec) (No beam)

20:50 Wc ~~stage~~ Gonio stage Controller ch ch3 ↔ ch4 changed.

As Gonio X stage 0 Displacement 300 → ~~26400~~ 26300, Move
→ Wc horizontally off Axis
← Beam ON 25Hz.

21:00 Mag sweep 600 → 0 A.

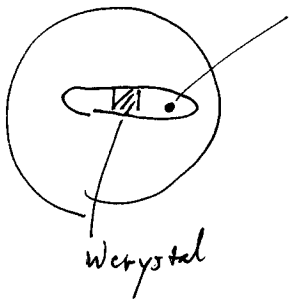
21:00 25Hz Beam off

21:05 25Hz Beam ON.

21:23 Experiment finished!! Beam off.

This position is H peak position.

Gonio ch4 26300 fixed. (← 300)
H=.



Ch3 ↔ ch4
Connection order changed

ch1 V axis = 110 fixed

Power supply off.

Gonio controller ch2. ch3 were dead!!
only ch1 and ch4 are active

REL x stage (P1) = -334
     ≅ stage (P2) = -28222