

**WIREBONDS STATUS**

dE				E-front				E-back				Last checked	
strip n.:	1st	2nd	3rd	strip n.:	1st	2nd	3rd	strip n.:	1st	2nd	3rd	date	detector
1				1				1				9/23/07	dE, Eb, Ef
2				2				2					
3				3				3					
4				4				4					
5				5				5					
6				6				6					
7				7				7					
8				8				8					
9				9				9					
10				10				10					
11		X		11				11					
12				12				12					
13				13				13					
14				14				14					
15				15				15					
16				16				16					
17				17				17					
18			X	18				18					
19				19				19					
20				20				20					
21	X			21				21					
22			X	22				22					
23				23				23					
24	X		X	24				24					
25		X		25				25					
26		X		26				26					
27		X	X	27				27					
28		X		28				28					
29				29				29					
30				30				30					
31				31				31					
32				32	GR	GR	X	32					

**Legend:**

X = bond missing      / = bond broken      ~ = bond damaged

Table 14

AE = 2266-9  
E = 2403-2

(M)

# Paragon Profile

## BB7-1500

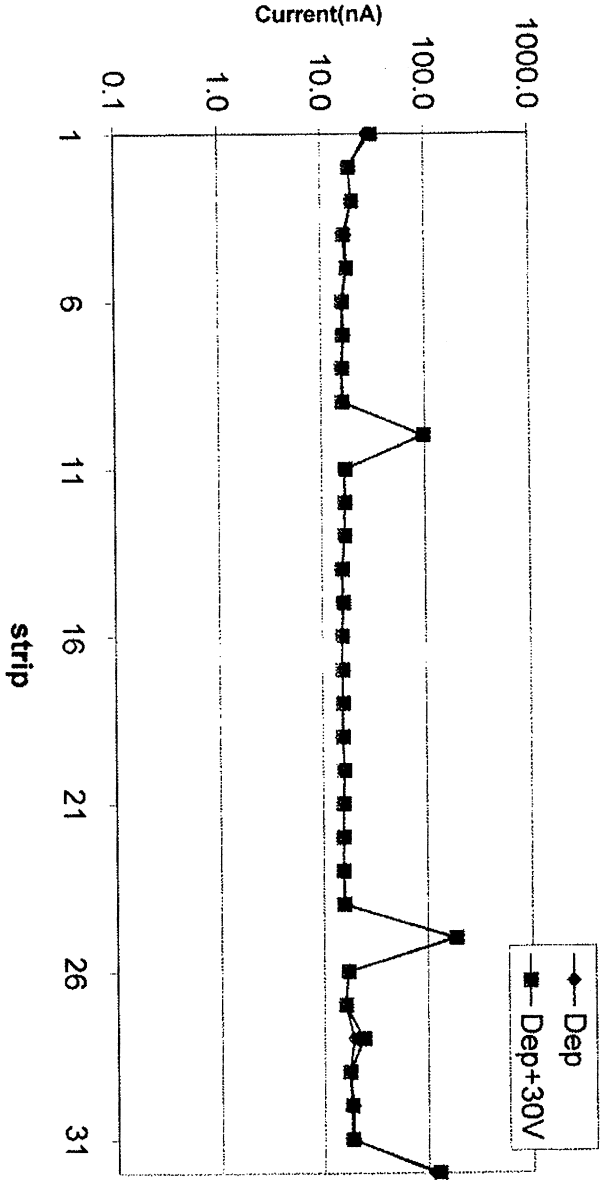
Water No: **2403-2** Thickness: **1533**  $\mu\text{m}$  Depletion: **280** Volts

Back Side Data

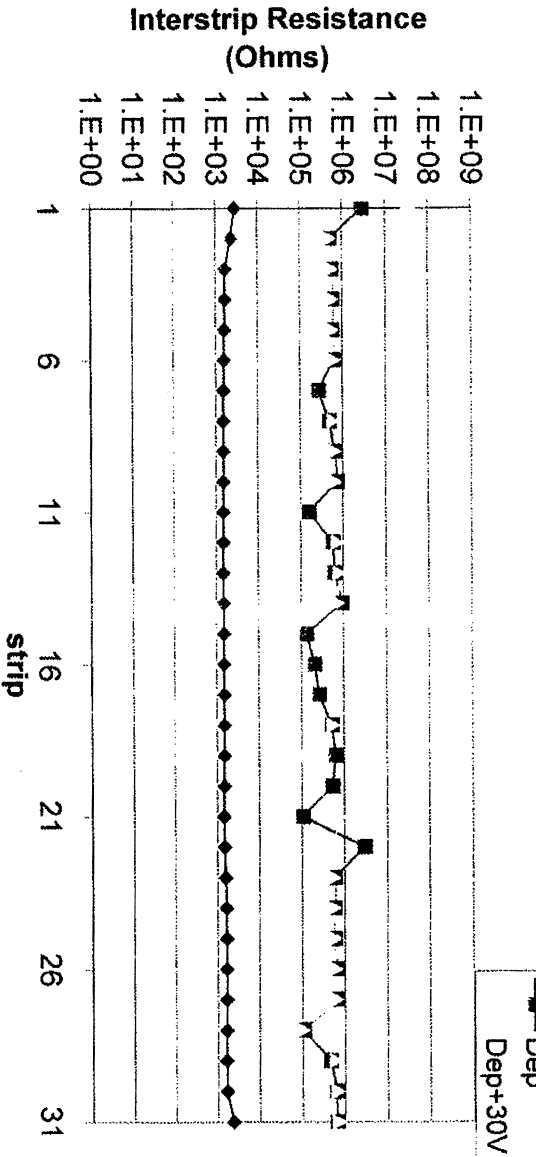
### Front Side Data

Strip	Current (nA)	Dep	Dep+30V
1	27.50	30.20	
2	18.50	18.50	
3	19.80	19.70	
4	16.90	16.40	
5	17.60	17.40	
6	15.90	15.80	
7	15.40	16.00	
8	15.70	15.70	
9	16.00	15.70	
10	92.30	95.70	
11	16.50	16.60	
12	16.50	16.50	
13	16.40	16.40	
14	15.30	15.40	
15	15.70	15.70	
16	15.20	15.20	
17	15.30	15.30	
18	15.40	15.40	
19	15.20	15.30	
20	15.80	15.70	
21	15.50	15.40	
22	15.30	15.30	
23	15.30	15.30	
24	15.70	15.30	
25	180.10	189.10	
26	16.60	16.70	
27	15.70	15.70	
28	18.90	23.40	
29	17.10	17.10	
30	18.50	17.80	
31	18.60	17.80	
32	114.20	127.70	
Total	877.53	905.28	

Front Side Strip Leakage Current



Back Side Inter-strip Resistance



# Resolution Test

## HIRA BB7

Wafer No.: **2403-2**

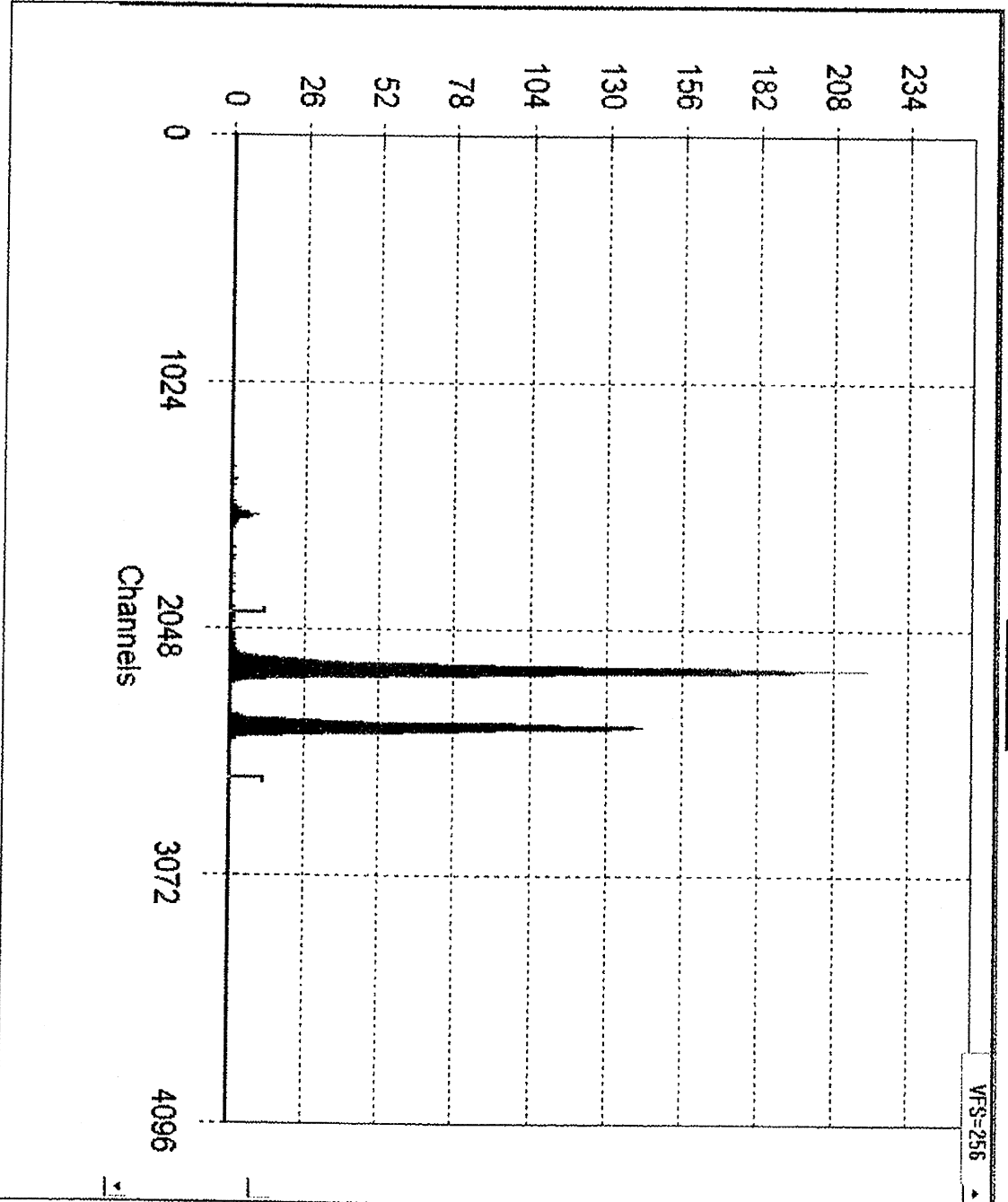
Thickness: **1533** um

### JUNCTION

DET LINE: **76.1** KeV  
SYSTEM: **63.6** KeV  
CAL: **41.8** KeV

### OHMIC

DET LINE: **78** KeV  
SYSTEM: **63.5** KeV  
CALC: **42.3** KeV



BIAS VOLTS=  V

Leakage  nA

Source

Rise Time

Flat Top

# Patecor Profile

**BB7-1500**

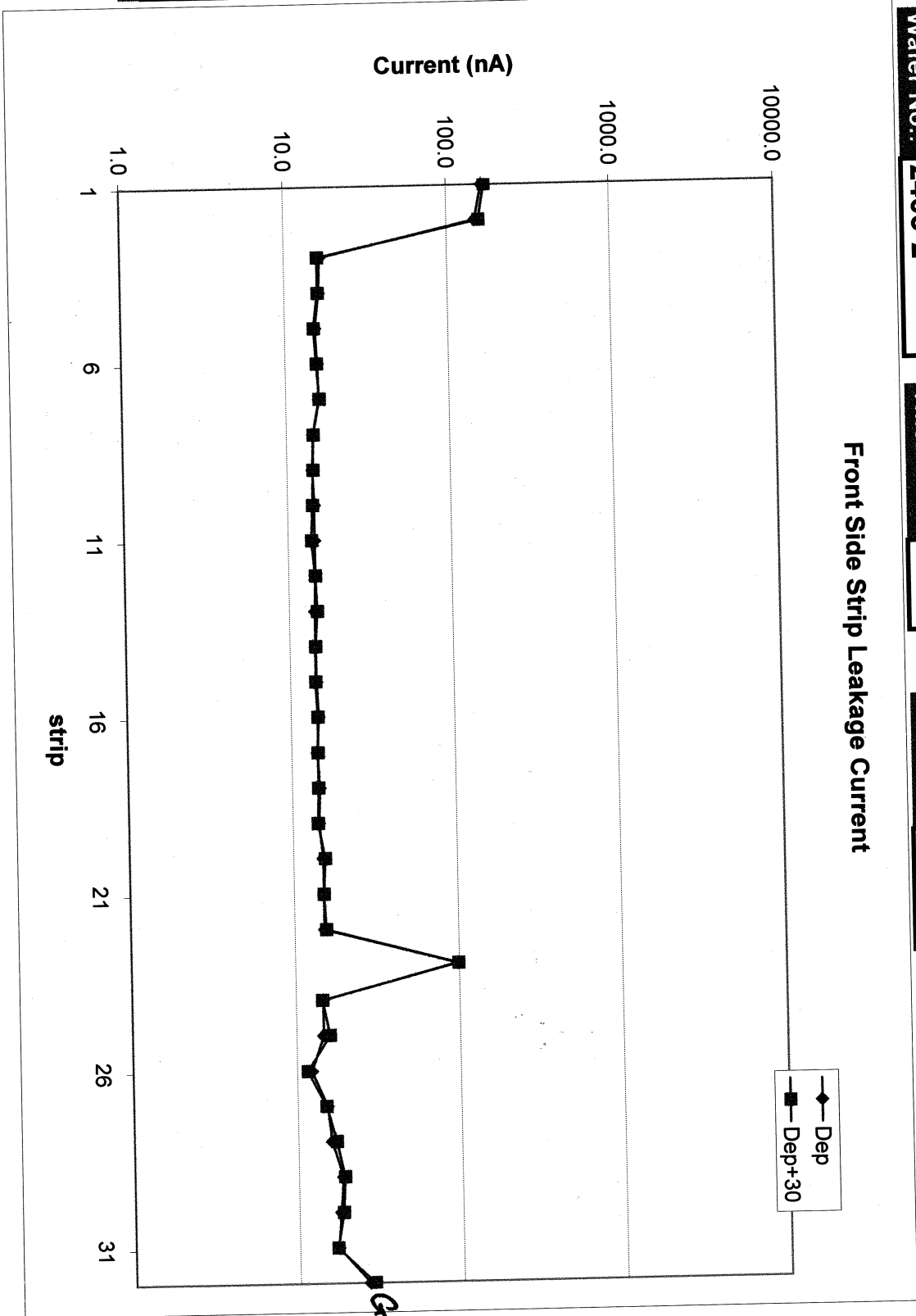
Wafer No.: **2403-2**

Thickness: **1500**  $\mu\text{m}$  Vop.

**320** Volts

## Front Side Data

Strip	Current(nA)	Dep	Dep+30
1	165	171.1	
2	149.1	157.5	
3	16.5	16	
4	16.2	16	
5	15.3	15	
6	15.7	15.5	
7	15.9	16	
8	14.6	14.6	
9	14.3	14.4	
10	14.6	14.2	
11	14.5	13.9	
12	14.5	14.5	
13	14.3	14.8	
14	14.3	14.3	
15	14.4	14.2	
16	14.7	14.5	
17	14.3	14.4	
18	14.7	14.4	
19	14.4	14.2	
20	15.1	15.5	
21	15.2	15.1	
22	15.2	15.5	
23	97.4	98.6	
24	14.6	14.4	
25	14.6	15.9	
26	12.3	11.6	
27	15.1	14.9	
28	16	17.1	
29	18.6	19	
30	17.9	18.5	
31	17.2	17	
32	26.7	28.4	
Total	863.1	881	



# Resolution Plot

HIRA BB7-1500

Wafer No.: **2403-2**

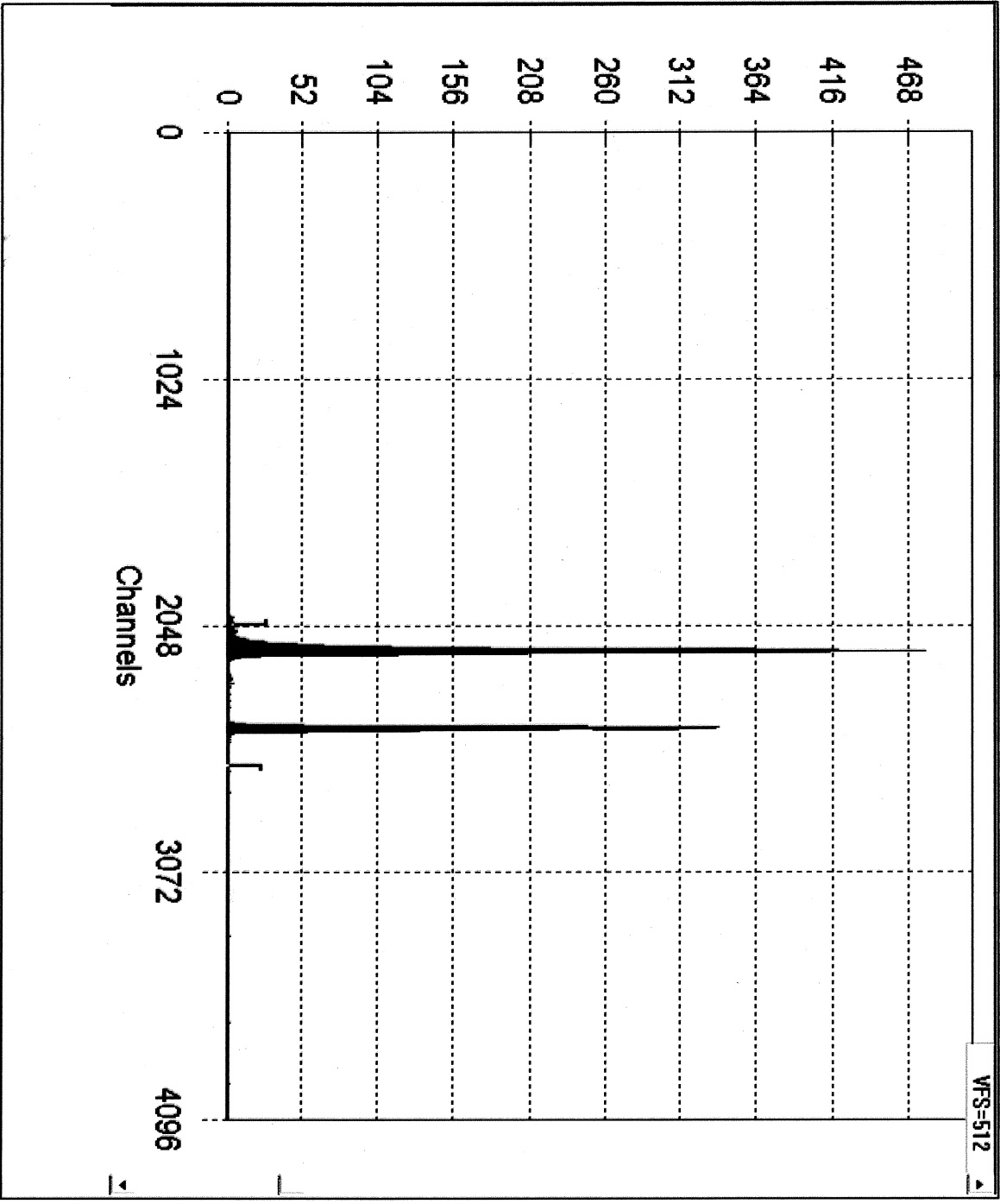
Thickness: **1500**  $\mu\text{m}$

VFS-512

UNCTION  
T LINE:  Kev  
STEM:  Kev  
L:  Kev

MIC

T LINE:  81.9 Kev  
STEM:  61 Kev  
LC:  54.6 Kev



Source  
Am 241

Rise Time  
1

Flat Top  
0

BIAS VOLTS=  400 V Leakage  1100 nA

# Si-detector Inspection Record

**Date:** 9/23/07      **Time:** ~21:00  
**Tel n.:** 14      **Inspected detector(s):** dE+E  
**1st inspector:** Vlad HENZL  
**2nd inspector:** Davidka HENZLOVA

## WIREBONDS STATUS

dE				E-front				E-back			
strip n.:	1st	2nd	3rd	strip n.:	1st	2nd	3rd	strip n.:	1st	2nd	3rd
1				1				1			
2				2				2			
3				3				3			
4				4				4			
5				5				5			
6				6				6			
7				7				7			
8				8				8			
9				9				9			
10				10				10			
11		X		11				11			
12				12				12			
13				13				13			
14				14				14			
15				15				15			
16				16				16			
17				17				17			
18			X	18				18			
19				19				19			
20				20				20			
21	X			21				21			
22			X	22				22			
23				23				23			
24	X		X	24				24			
25		X		25				25			
26		X		26				26			
27		X	X	27				27			
28		X		28				28			
29				29				29			
30				30				30			
31				31				31			
32				32	↑	GR	GR	X			

GR = guard ring      Legend: ↓ strips interconnected  
 X = bond missing      / = bond broken      ~ = bond damaged

**Overall detector status:**  
 (e.g. dusty surface, scratches, dirty frame and/or cable, status of telescope can ...)  
 Cable pad elevated above the detector surface @ strips 2-10 and 20-21; wirebonds O.K.  
 EB wirebonds look good

Noise tests of detector n.: 2403-2 in telescope n.: 15

		Date																			
		9-13-07	10-31-07																		
E back		electronics																			
		CLASSIC	CH.P																		
E back	Chip 0 or shaper 0	chn 0	~4.3	~37																	
		1	4.3	~33																	
		2	4.3	~64mV																	
		3	4.3	~33																	
		4	4.3	33																	
		5	4.3	33																	
		6	4.3	33																	
		7	4.3	33																	
		8	~5.0mV	33																	
		9	~5.0mV	~37																	
		10	4.3	38																	
		11	4.3	34																	
		12	5.3	34																	
		13	16mV	34																	
		14	4.3	34																	
	15	4.3	34																		
	E front	Chip 1 or shaper 1	chn 0	~5.0mV	~26mV																
			1	5	~35																
			2	5	35																
			3	5	35																
			4	5	35																
			5	5	~88mV																
			6	5	~34																
			7	5	34																
			8	5	34																
			9	5	~47mV																
			10	5mV	34																
			11	5	34																
			12	5	34																
			13	5	34																
14			5	34																	
15		5	34																		
E front		Chip 0 or shaper 2	chn 0	~20mV	~40mV																
			1	11	~41mV																
			2	15	~40																
			3	15	40																
			4	15	40																
			5	15	40																
			6	15	40																
			7	11	40																
			8	11	40																
			9	11	40																
			10	11	40																
			11	9	40																
			12	11	40																
			13	11	40																
	14		15	40																	
	15	~28mV	40																		
	E front	Chip 1 or shaper 3	chn 0	15	~65mV																
			1	15	~75mV																
			2	15	40																
			3	13	40																
			4	15	40																
			5	20	40																
			6	15	40																
			7	15	40																
			8	13	40																
			9	13	40																
			10	10	~60mV																
			11	10	40																
			12	10	40																
			13	10	40																
14			10	40																	
15		20mV	40																		

↓  
after 1st part  
of 05.13.3 exp

Date: 12-2-07 Time: ~4:30 AM Tel n.: 14

Inspected detector(s): dE + EF

Detector number(s): 22669 (dE) + 2403 + 2 (E)

What occasion: dE removal

1st inspector: Vlad HENZL

2nd inspector: Denise HENZLOVA

WIREBONDS STATUS												
dE				E-front				E-back				
strip n.:	1st	2nd	3rd	strip n.:	1st	2nd	3rd	strip n.:	1st	2nd	3rd	
1				1				1				
2				2				2				
3				3				3				
4				4				4				
5				5				5				
6				6				6				
7				7				7				
8				8				8				
9				9				9				
10				10				10				
11		X		11				11				
12				12				12				
13				13				13				
14				14				14				
15				15				15				
16				16				16				
17				17				17				
18			X	18				18				
19				19				19				
20				20				20				
21	X			21				21				
22			X	22				22				
23				23				23				
24	X		X	24				24				
25	<del>USA</del>	X	<del>USA</del>	25				25				
26		X		26				26				
27		X	X	27				27				
28		X	<del>USA</del>	28				28				
29		<del>USA</del>		29				29				
30				30				30				
31				31				31				
32				32	<del>USA</del> G2			32				

**Legend:**

X = bond missing

/ = bond broken

~ = bond damaged

**Overall detector status:**

(e.g. dusty surface, scratches, dirty frame and/or cable, status of telescope can ...)

dE - detector warped in frame

EF - cable seems to be elevated above det. surface between 2-11 and 26-21 strips

- strips 32 and 31 both bonded together, pos 32 G2



# Si-detector Inspection Record

**Date:** 10/6/2007    **Time:** 4:20pm    **Tel n.:** 14  
**Inspected detector(s):** dE(2266-9) + E<sub>F</sub>(2403-2)  
**What occasion :** dE put back in case  
**1st inspector:** Daniela HENZLOVA  
**2nd inspector:** Hecha KILBURN

## WIREBONDS STATUS

dE				E-front				E-back			
strip n.:	1st	2nd	3rd	strip n.:	1st	2nd	3rd	strip n.:	1st	2nd	3rd
1				1				1			
2				2				2			
3				3				3			
4				4				4			
5				5				5			
6				6				6			
7				7				7			
8				8				8			
9				9				9			
10				10				10			
11	X			11				11			
12				12				12			
13				13				13			
14				14				14			
15				15				15			
16				16				16			
17				17				17			
18	X			18				18			
19				19				19			
20				20				20			
21	X			21				21			
22	X			22				22			
23				23				23			
24	X	~	X	24				24			
25		X		25				25			
26		X		26				26			
27	X	X		27				27			
28		X		28				28			
29				29				29			
30				30				30			
31				31				31			
32				32	↑	GD	X X	32			

**Legend:**    ↑ strips are interconnected

X = bond missing      / = bond broken      ~ = bond damaged

### Overall detector status:

(e.g. dusty surface, scratches, dirty frame and/or cable, status of telescope can ...)

E wirebonds look good  
 dE surface inspect even outside case  
 dE + E<sub>F</sub> surface blow with dry N<sub>2</sub>

note: numbering of wirebonds reversed wrt standard convention