

Annealing 11th

- January 12th: Heaters switch on
- January 13th: GeD are at 106 C
 - 106 C during 195 h
- January 21th: Heaters switch off
- January 24th: Cryo-coolers switch on
- January 28th: Camera switch on at 100K

198 keV, 82K, Resolution=f(HV)

High Voltage HV = 1.5 kV HV = 2 kV HV = 2.5 kV HV = 3 kV HV = 3.5 kV HV = 4 kV

Detector	Energy resolution in keV					
0	2,1	1,95	1,99	1,99	1,91	2
1	1,91	1,81	1,82	1,87	1,82	1,89
2						
3	2,1	1,89	1,9	1,94	1,97	1,97
4	2,26	2,22	2,2	2,22	2,25	2,2
5	1,95	1,94	1,88	1,84	1,9	1,86
6	1,93	1,97	1,93	1,91	2,06	1,97
7	2,18	1,96	1,81	1,87	1,87	1,91
8	2,05	1,86	1,93	1,91	1,9	1,92
9	1,96	1,86	1,8	1,89	1,9	1,87
10	2,17	1,85	1,93	1,87	1,88	1,9
11	2,07	1,96	1,88	1,88	1,93	1,92
12	2,06	1,95	2,04	2,05	2,05	2,16
13	1,97	1,86	1,85	1,86	1,91	1,94
14	2,52	2,11	2	2,05	2,05	2,04
15	1,93	1,93	1,93	1,87	1,92	1,92
16	2,12	1,93	1,87	1,93	1,94	1,91
17						
18	1,98	1,86	1,83	1,84	1,91	1,9



80 K Rev 647 HV=4KV,GED12=3.5KV

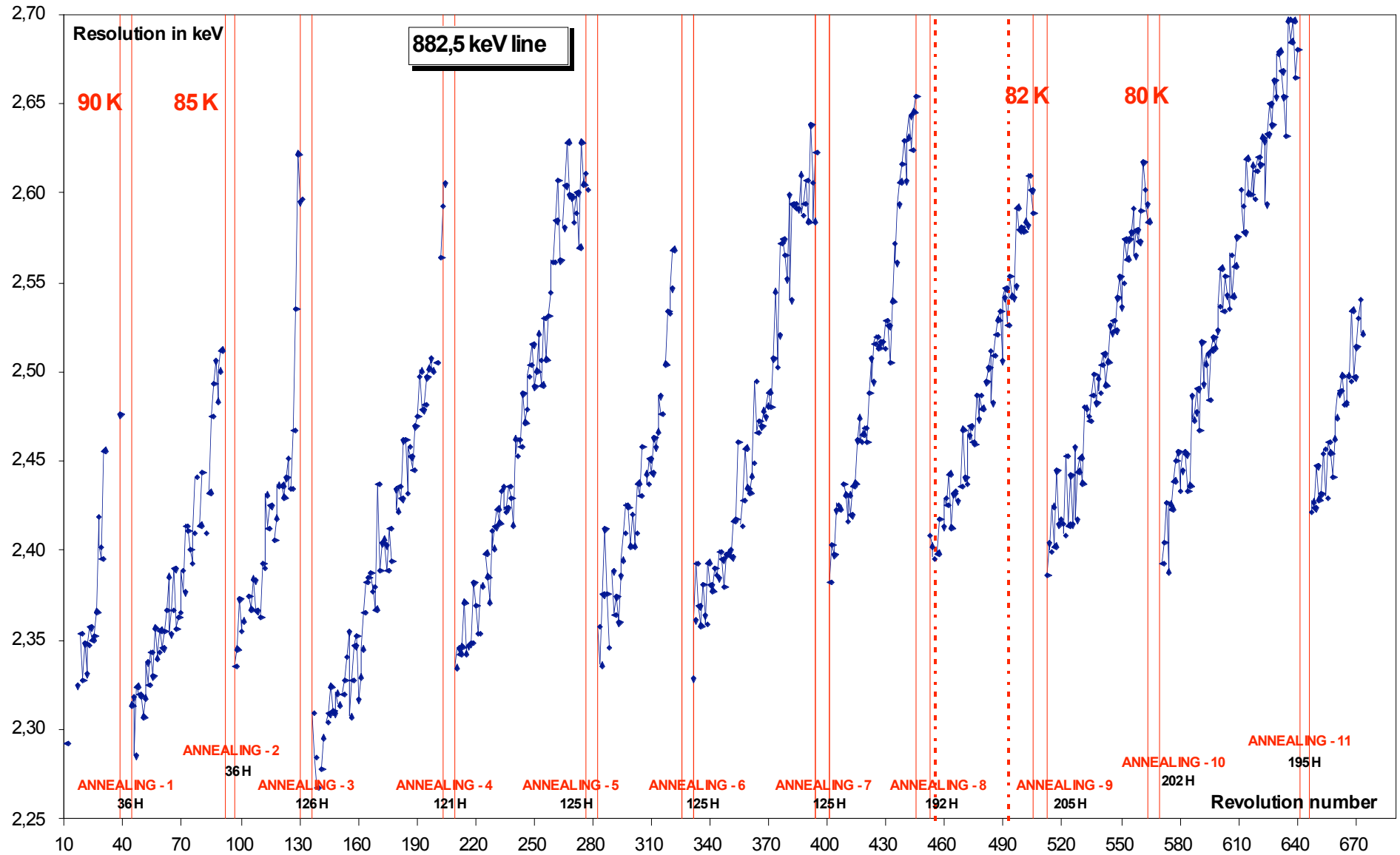
Detector	198.3 keV line	882.5 keV line	1107 keV line	1764 keV line	1778 keV line	2754 keV line
0	1,99	2,45	2,71	3	2,99	3,99
1	1,9	2,38	2,55	2,89	2,96	4,06
2						
3	1,97	2,4	2,66	2,99	3,05	3,85
4	2,2	2,56	2,93	3,11	3,28	4,31
5	1,87	2,34	2,67	2,96	3,03	4,05
6	1,98	2,44	2,7	3,08	3,03	4,13
7	1,91	2,34	2,66	2,96	3,11	4,01
8	1,92	2,38	2,67	2,92	3,22	3,91
9	1,86	2,36	2,74	2,58	3,12	3,72
10	1,9	2,34	2,67	2,89	3,07	3,79
11	1,93	2,31	2,72	2,83	3,09	4,1
12	2,03	2,55	2,77	3,04	3,21	3,74
13	1,94	2,39	2,67	2,81	3,08	3,78
14	2,03	2,52	2,86	2,93	3,16	3,81
15	1,92	2,32	2,72	2,88	3,2	3,97
16	1,9	2,4	2,64	2,89	2,91	3,92
17						
18	1,95	2,34	2,81	2,93	3,14	3,89

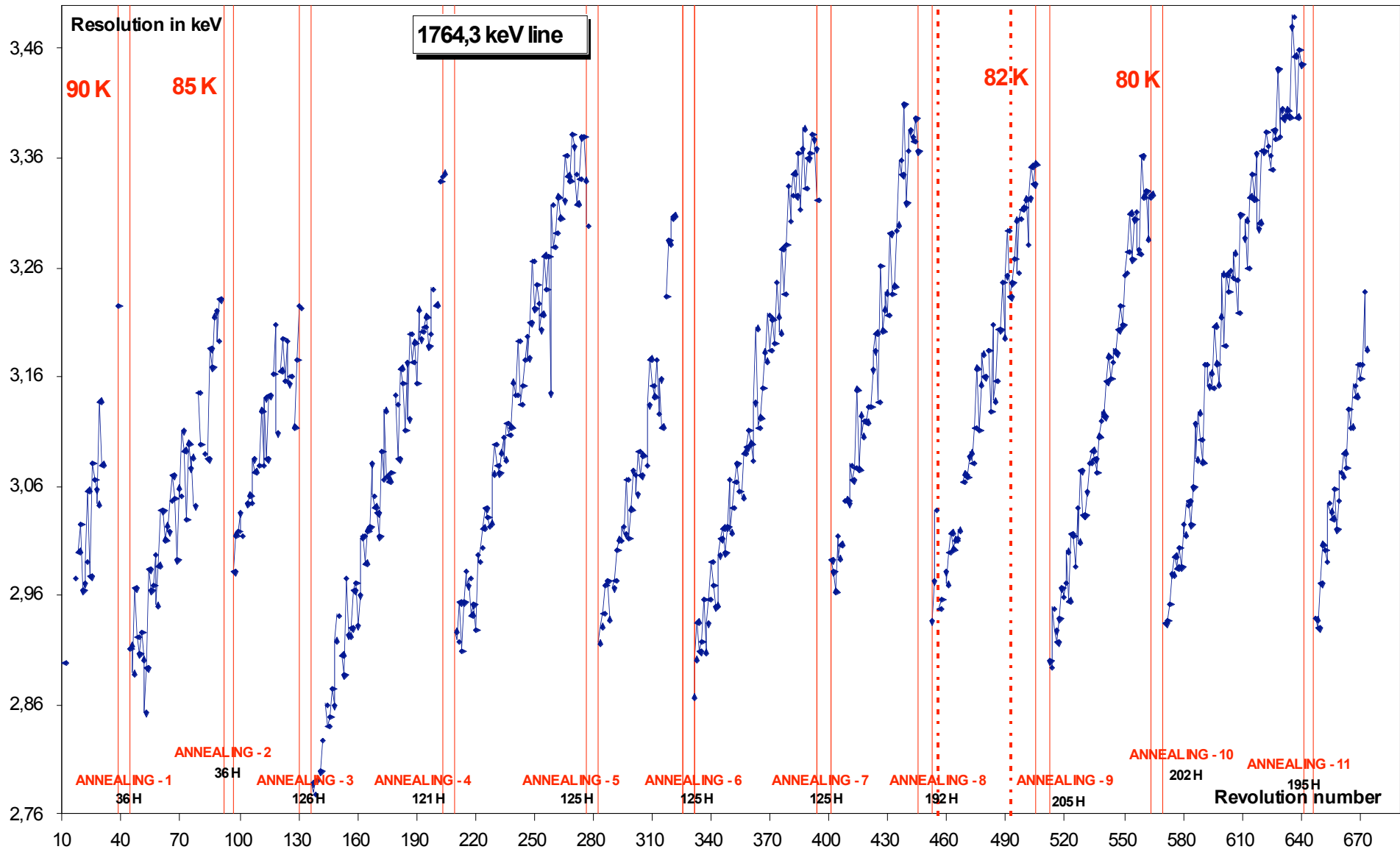
GeD12 anomaly

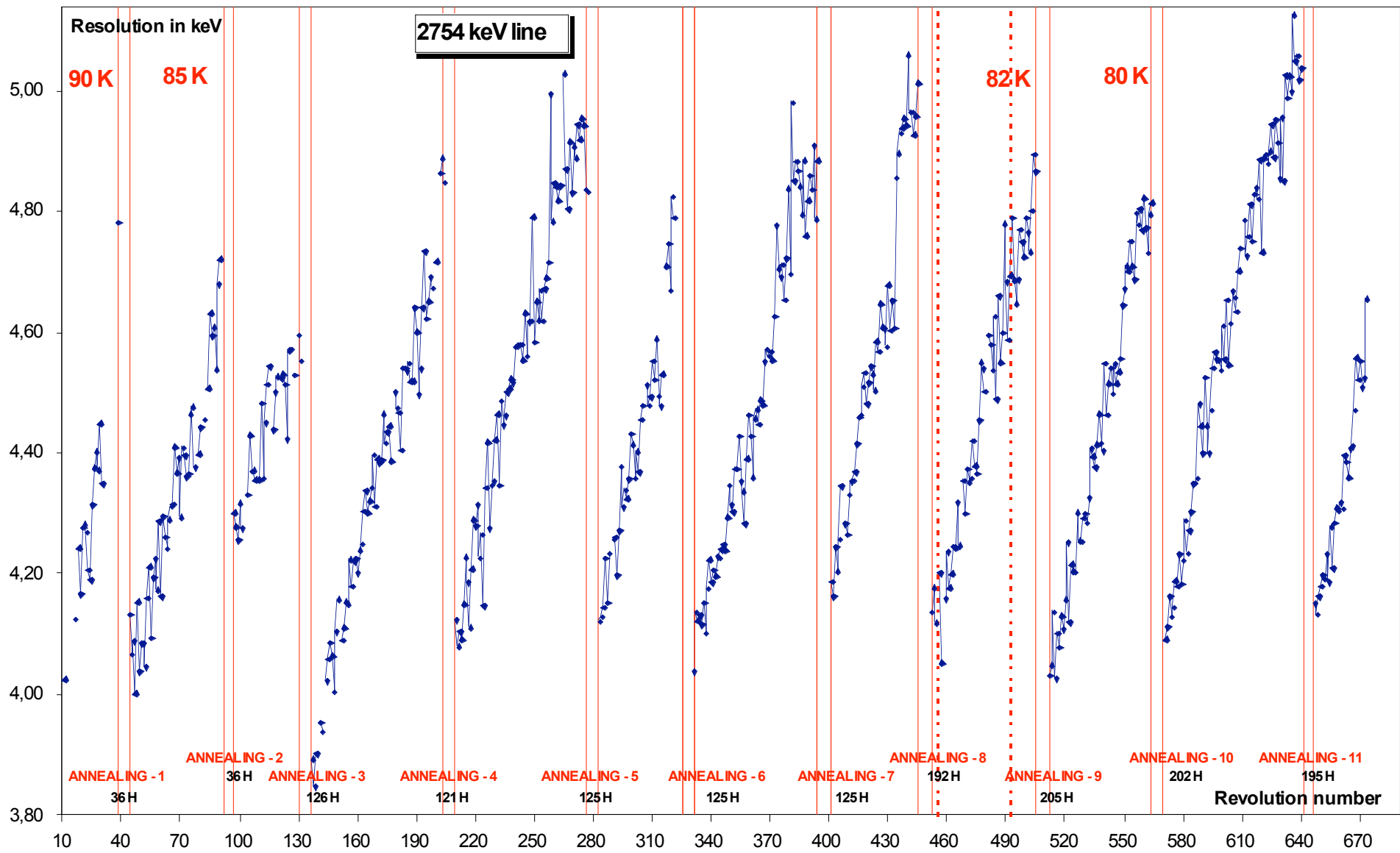
GeD#12 HV		2,5 kV	3 kV	3,5 kV	4 kV
198 keV line, resolution in keV	after annealing 11, 82 K (rev 646)	2,04	2,05	2,05	2,16
	after annealing 10, 82 K (rev 570)		2,22	2,25	2,4
	after annealing 10, 80 K (rev 571)			2,19	
	after annealing 9, 80 K (rev 514)	2,02	2,1	2,16	2,4

GeD 12 behaviour improved: still pollution problems?.....

GeD12 HV is set at 3.5 KV



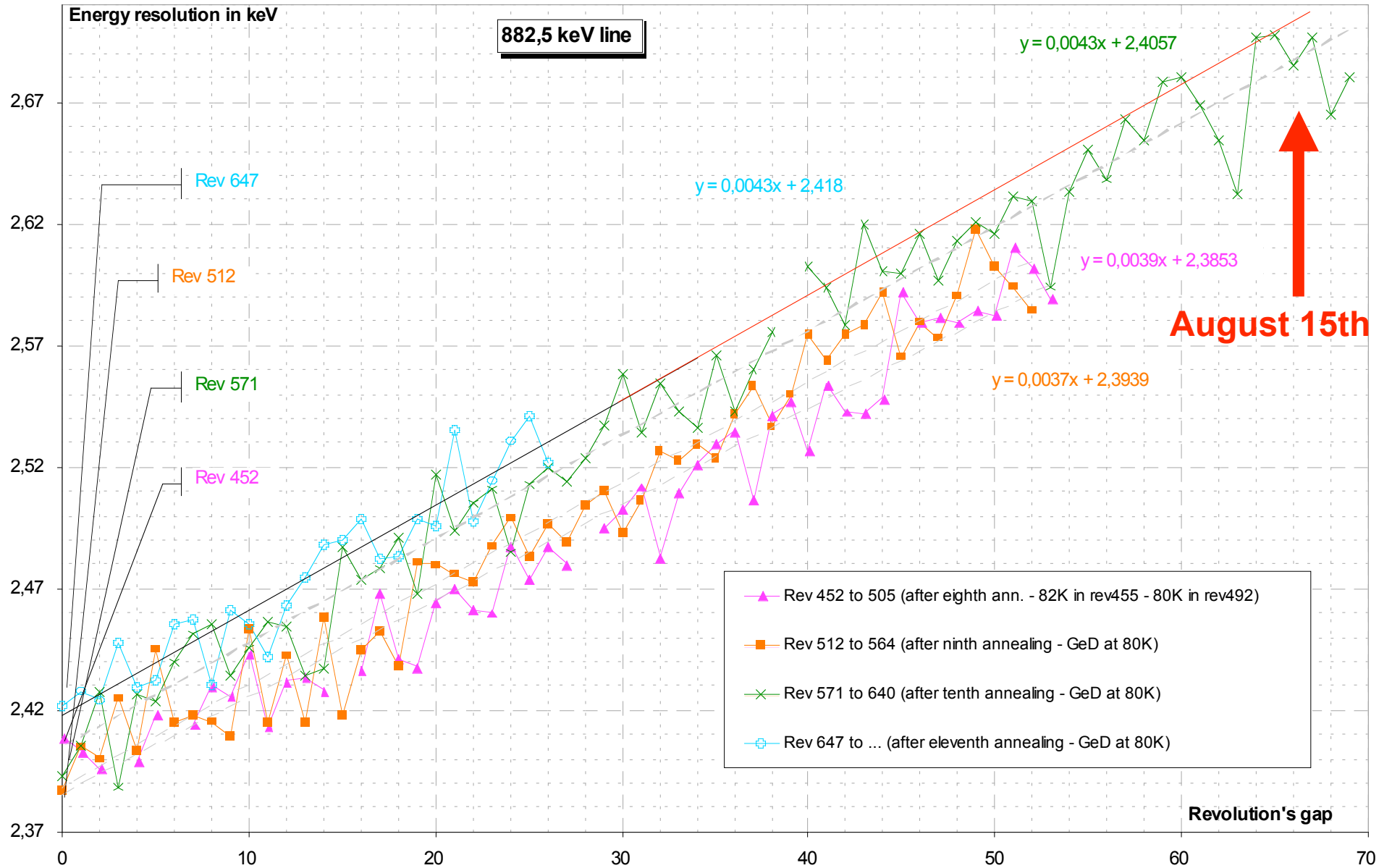


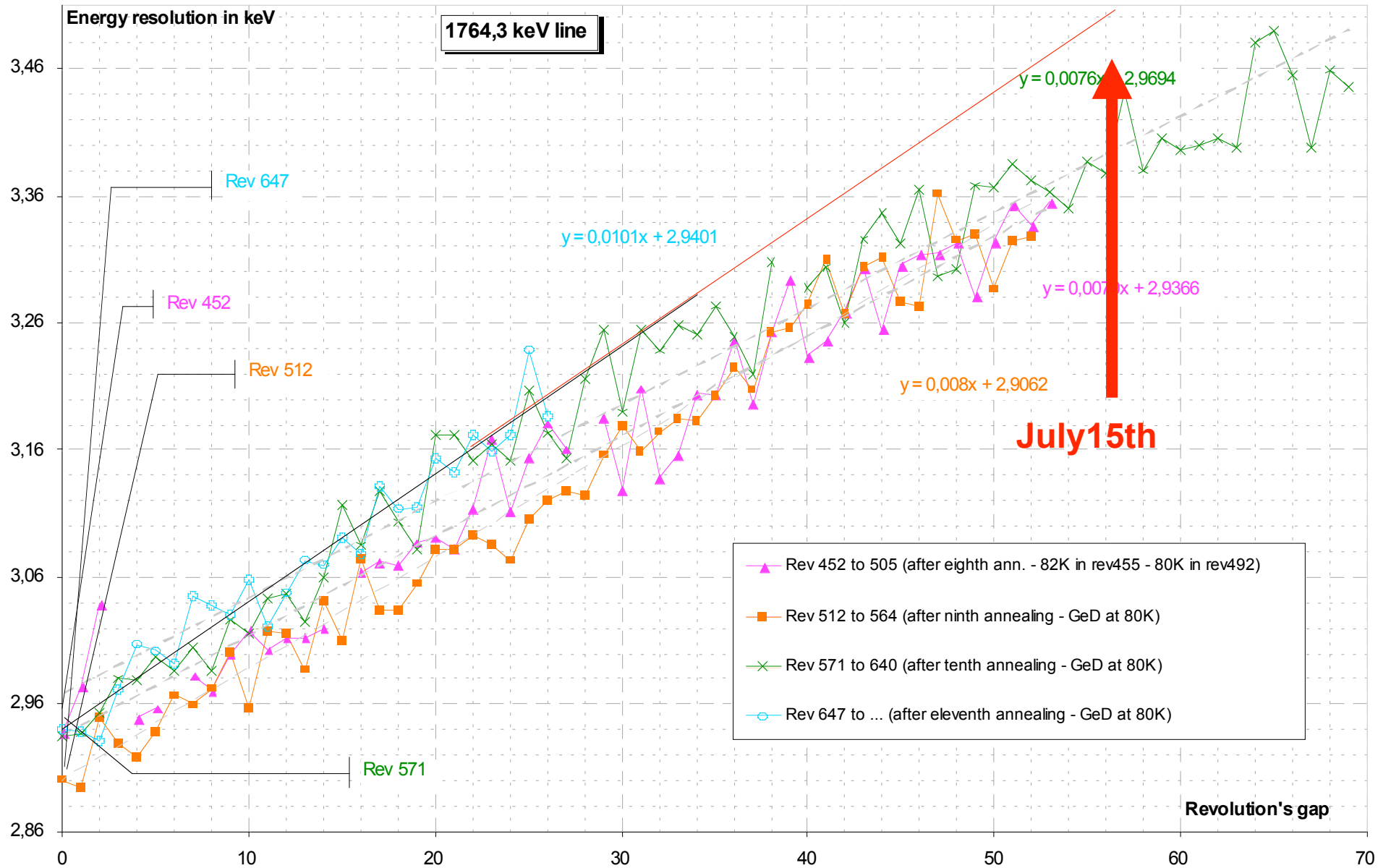


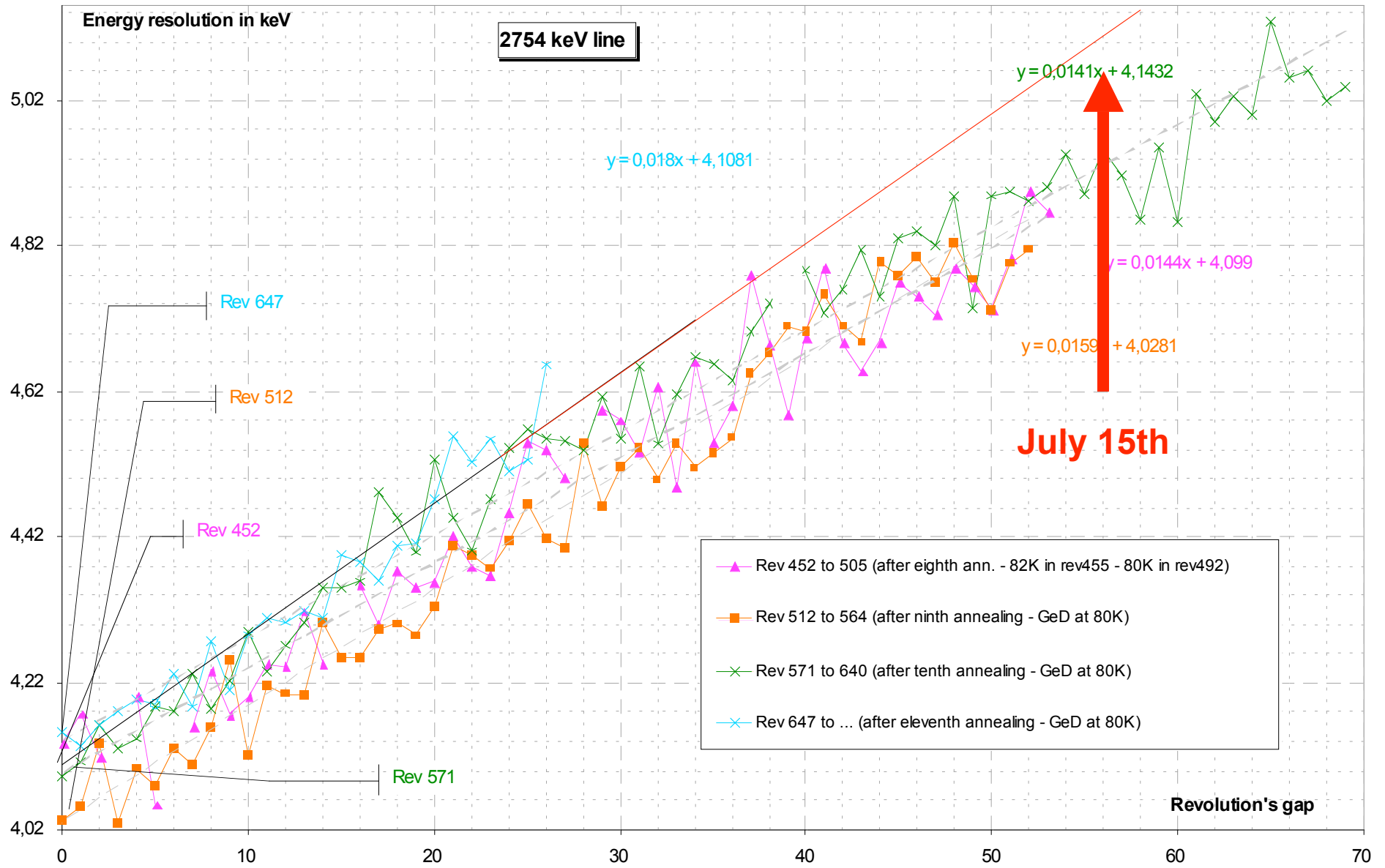
Annealing 11

- Recovery is good if we consider the high level of radiation (the highest observed) and the long duration of the period.
- SPI energy resolution still under control

Annealing 12th





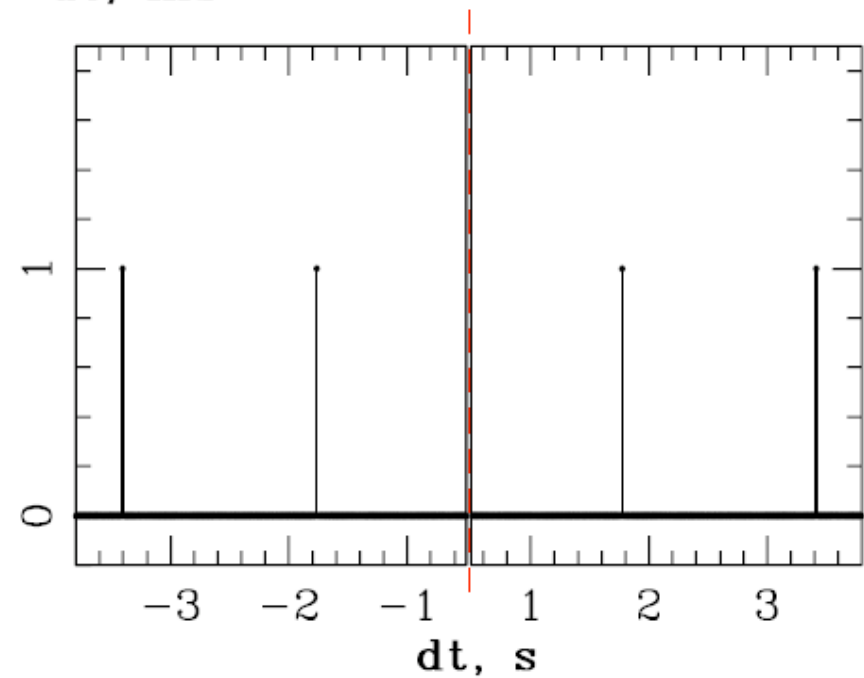
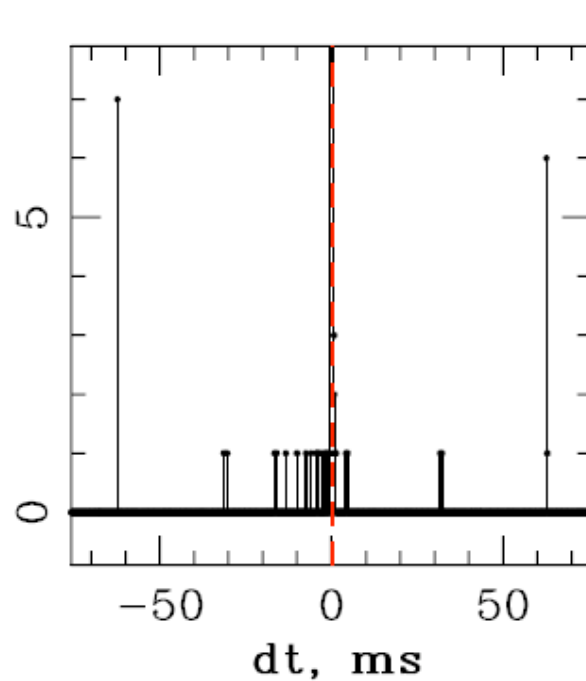
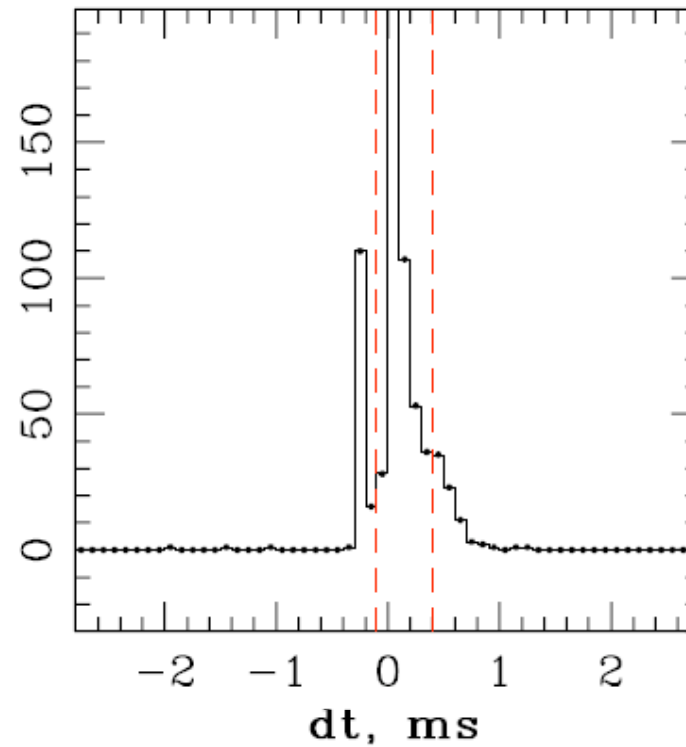


Next annealing

- Long term plan constraint lead to two options:
 - Early July or around August 15th
- Extrapolation is not easy
- August 15th is a late and will result in a « bad » recovery but is my preferred option
- I suggest to keep the two options until end of may

STILL TIMING PROBLEMS !

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```
*dt= (IJD2-IJD1)(s) - (OBT2-OBT1)(s
```

```
##### SCANNING PROCEDURE  
#####
```

```
# OSA7.0
```

```
step=0.0125; /* equal to 108 seconds */
```

```
for (ijd_day=1300.0; ijd_day<3000.0; ijd_day+=step)
```

```
    obt=converttime IJD ijd_day OBT
```

```
};
```

"converttime" is equivalent to calling procedures from DAL3AUX library.

#####THE TABLE OF THE JUMPS |dt|>1 ms #####

IJD1	IJD2	OBT1	OBT	dt(s)*
1321.570000	1321.571250	27314966561251	27315079806208	0.00119305
1477.105000	1477.106250	41405958070952	41406071251243	0.06286335
1477.107500	1477.108750	41406184497391	41406297809078	-0.06244564
1631.316250	1631.317500	55377021693830	55377138524062	-3.41799166
1631.470000	1631.471250	55390954554045	55391064216124	3.41809178
1662.091250	1662.092500	58165141704404	58165256814935	-1.77795696
1662.536250	1662.537500	58205459191442	58205570573577	1.77771855
1698.283750	1698.285000	61444070466726	61444183647333	0.06256199
1698.293750	1698.295000	61444976370364	61445089682045	-0.06243992
1881.611250	1881.612500	78052976348242	78053089528854	0.06255720
1881.621250	1881.622500	78053882251868	78053995563550	-0.06244089
1881.625000	1881.626250	78054222055839	78054335236449	0.06255913
1881.631250	1881.632500	78054788221031	78054901532727	-0.06245424
2060.375000	2060.376250	94248420160769	94248533405618	0.00129603
2123.443750	2123.445000	99962254250873	99962367431478	0.06256388
2123.670000	2123.671250	99982751737199	99982865048878	-0.06243889
2155.793750	2155.795000	102893064381499	102893177659754	-0.03056238
2155.810000	2155.811250	102894536614515	102894649827490	0.03169344
2164.785000	2164.786250	103707643887197	103707757166424	-0.03148939
2164.836250	2164.837500	103712287012740	103712400225129	0.03225229
2354.307500	2354.308750	120877796882185	120877910062796	0.06255820
2355.272500	2355.273750	120965222840105	120965336151798	-0.06245138
2360.220000	2360.221250	121413451135976	121413564316585	0.06256010
2361.240000	2361.241250	121505859924062	121505973235763	-0.06245897
2390.465000	2390.466250	124153554814676	124153668065063	-0.00398538
2390.512500	2390.513750	124157858172347	124157971414246	0.00410937
2468.438750	2468.440000	131217735574842	131217848825849	-0.00457666
2468.512500	2468.513750	131224417102178	131224530343460	0.00469782
2469.888750	2469.890000	131349101100492	131349214347854	-0.00110056
2472.877500	2472.878750	131619872602382	131619985850205	-0.00154016
2475.865000	2475.866250	131890530845826	131890644094148	-0.00201605
2478.856250	2478.857500	132161528861949	132161642111255	-0.00295450