DTU Nutech, DK-4000 Roskilde, Denmark

Cobalt irradiation report for file: exp104416

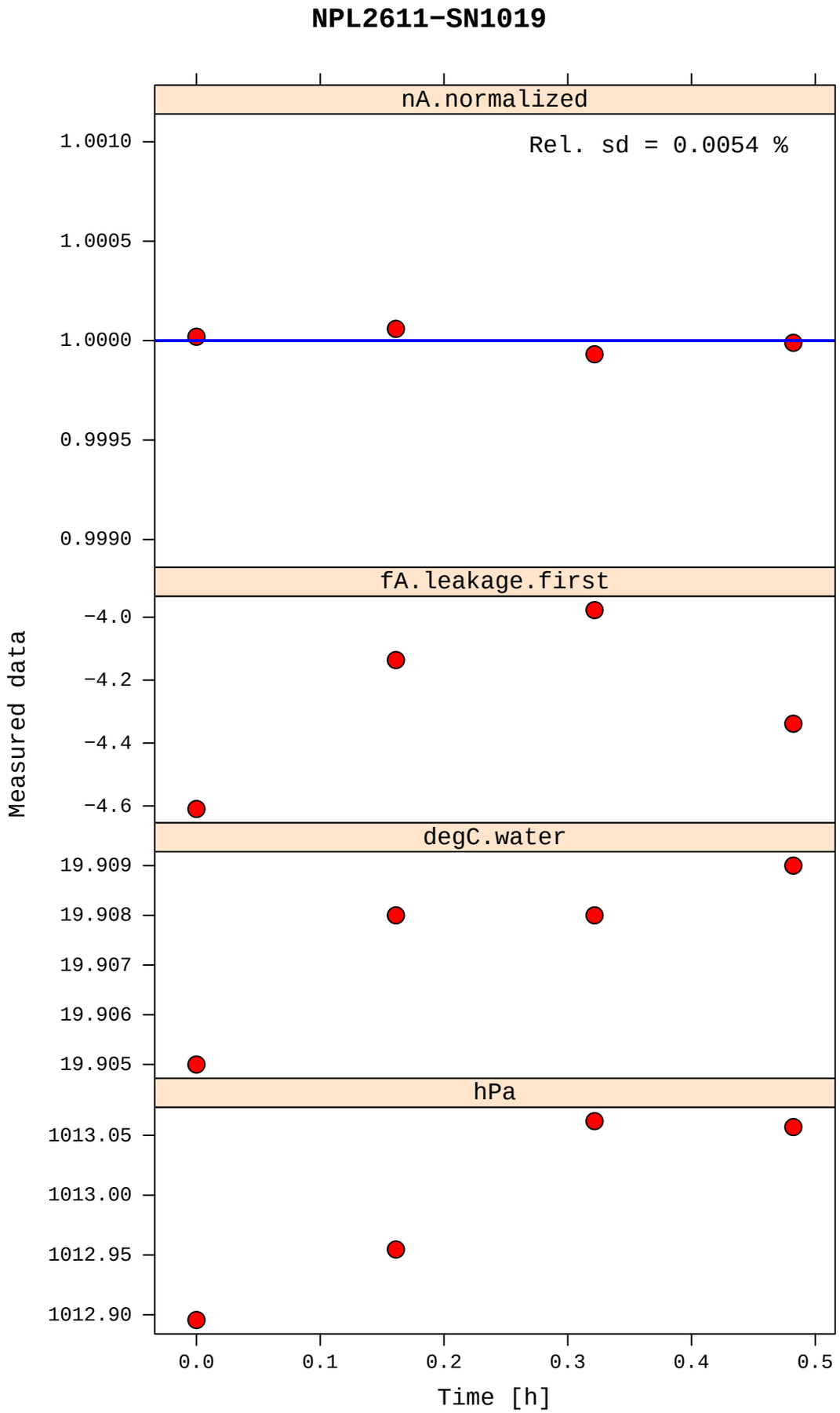
CRC32 file validation = TRUE (ok.lines=59, not.ok.lines=0)

Consistency between index and number of lines in data file = TRUE

> Notes made during the analysis:

Session 1 (May 19-21, 2016)

> End of notes.



File = exp104416
Detector = NPL2611−SN1019
Measurement period = 20−05−2016 − 20:57:00 to 20−05−2016 − 22:04:59
Cobalt collimators (X1,X2,Y1,Y2) = 9.78 cm 9.78 cm 9.78 cm 9.78 cm
Sensors: Pressure = hPa.Pace1 hPa.Pace2
Sensors: Water temp. = degC.Almemo1.M02 degC.Almemo1.M03
Senrors: Room temp. = degC.Almemo1.M00 degC.Almemo1.M01
Sensors: Room RH = pctRH.V1.Control
Cable = DTU10574
Electrometer = KEITHLEY INSTRUMENTS INC.,MODEL 6517B,1341729,A12/700x
Electrometer note =
High voltage (V.center.electrode − V.outer.cap) = 200 V
k.elec (electrom.)= 1.000558 nA/nA From: No link
System leakage (elecm. & cable)= −3 fA From: No link
Reference date = May 19, 2016, 12:00
Mean current (corrected for decay, k.elec, leakage, temp. & press. =
(−0.19481 +/− 0.00001) nA

No. data points / source irradiations pr. data point: 4 / 1
Total no. of integrations / irradiations: 58 / 4
Variance component, integrations (%): sd = 0.0070 CI95 = [0.0050;0.0099]
Variance component, source openings (%): sd = 0.0044 CI95 = [0.0013;0.0149]
note1 = Sleeve
note2 = IC @ 1000 mm (427.45)
note3 = Rias/Risø tank window at 5 g/cm2 (MP7)
note4 = Nominal FS 9.78 x 9.78 cm2 (10x10cm2 actual) −
Recorded pre−irradiation: Duration = 23.2 min Current = −0.195 nA

which	mean	sd	range
nA.batch.mean	−0.194814	1e−05	2.5e−05
nA.normalized	1	5.4e−05	0.00013
fA.leakage.first	−4.26533	0.27	0.63
fA.chamber.leak	−4.02189	0.26	0.63
degC.room	22.0425	0.034	0.08
%RH.room	50.5535	0.029	0.066
degC.water	19.9075	0.0017	0.004
hPa	1012.99	0.081	0.17
k.T	0.999684	5.9e−06	1.4e−05
k.P	1.00025	8e−05	0.00016
k.decay	1.00051	3.1e−06	7.2e−06

NPL2611-SN1019 File = exp104416 (beam off)

DTU

1
Mean = −0.006 pA
Sd = 0.011 pA
N = 3
Range = 0.020 pA

3
Mean = −0.005 pA
Sd = 0.000 pA
N = 3
Range = 0.001 pA
Chamber leakage (CIRCLES)
Mean = −4.4 fA N = 1

5
Mean = −0.004 pA
Sd = 0.000 pA
N = 3
Range = 0.001 pA
Chamber leakage (CIRCLES)
Mean = −3.9 fA N = 1

7
Mean = −0.004 pA
Sd = 0.000 pA
N = 3
Range = 0.000 pA
Chamber leakage (CIRCLES)
Mean = −3.8 fA N = 1

9
Mean = −0.004 pA
Sd = 0.000 pA
N = 3
Range = 0.000 pA
Chamber leakage (CIRCLES)
Mean = −3.8 fA N = 1

11
Mean = −0.004 pA
Sd = 0.000 pA
N = 3
Range = 0.000 pA
Chamber leakage (CIRCLES)
Mean = −4.1 fA N = 1

Raw current after system leakage correction [pA]

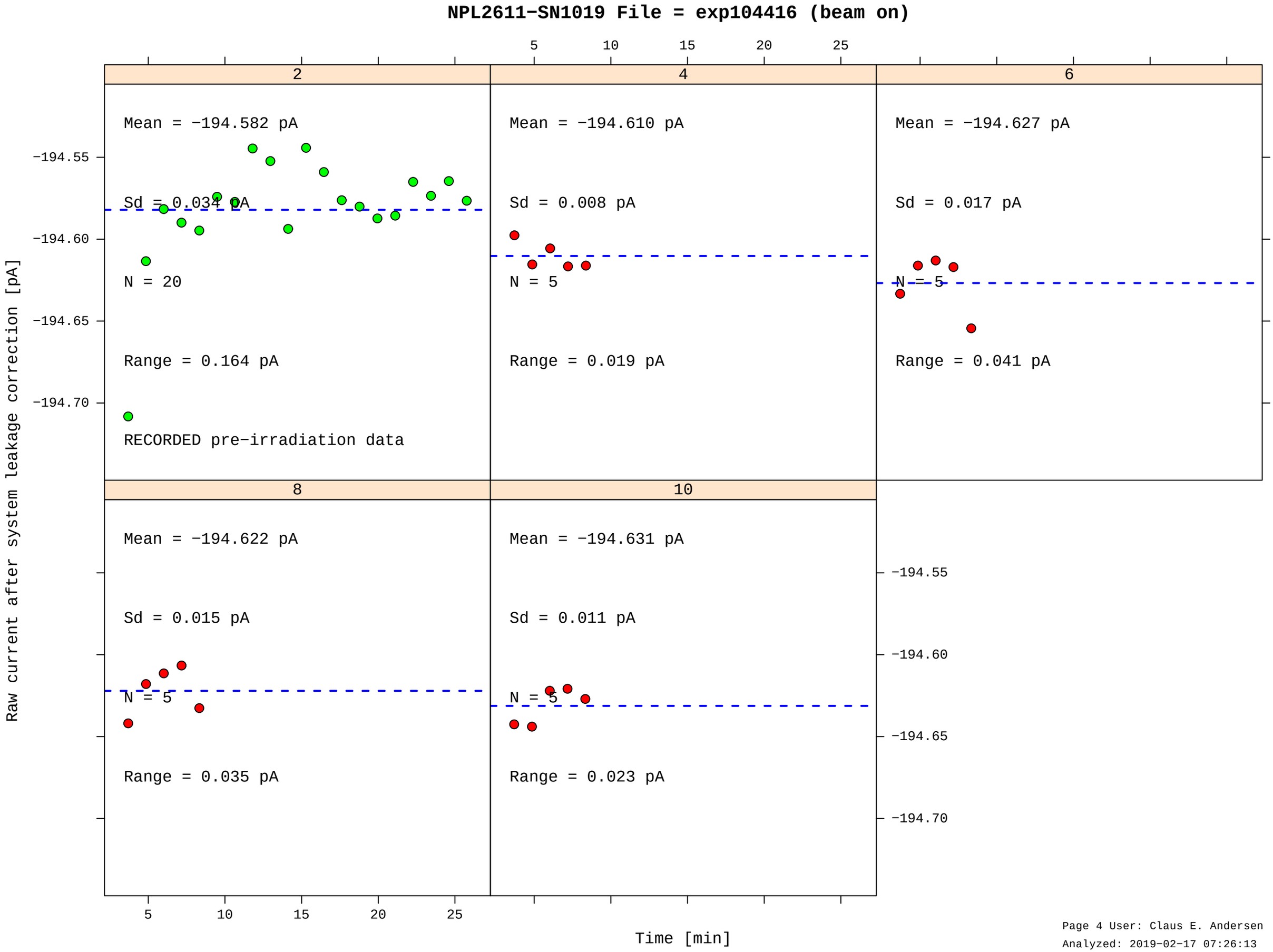
0.000
−0.005
−0.010
−0.015
−0.020

1.0 1.5 2.0 2.5 3.0

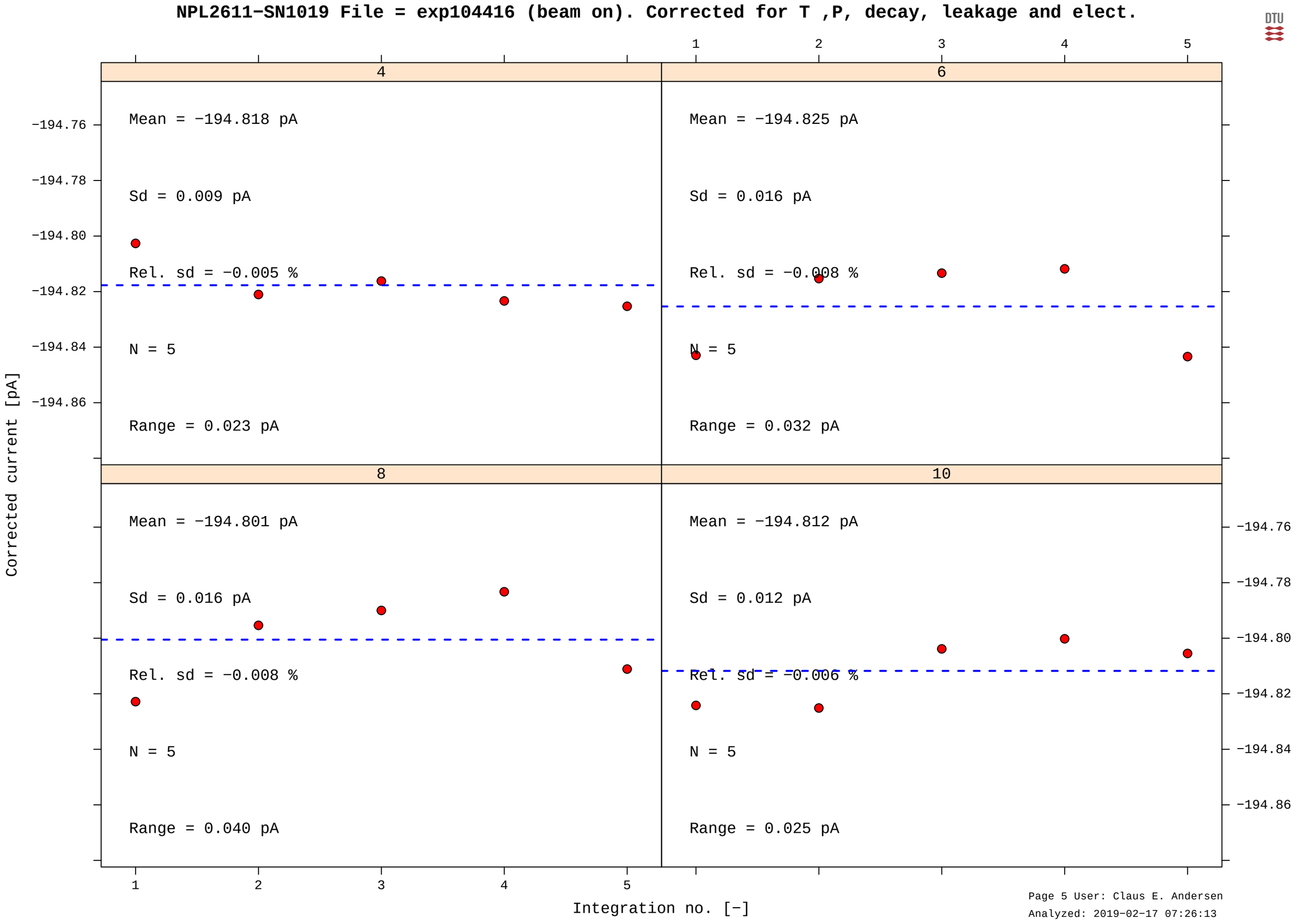
Integration no. [−]

Page 3 User: Claus E. Andersen
Analyzed: 2019-02-17 07:26:13

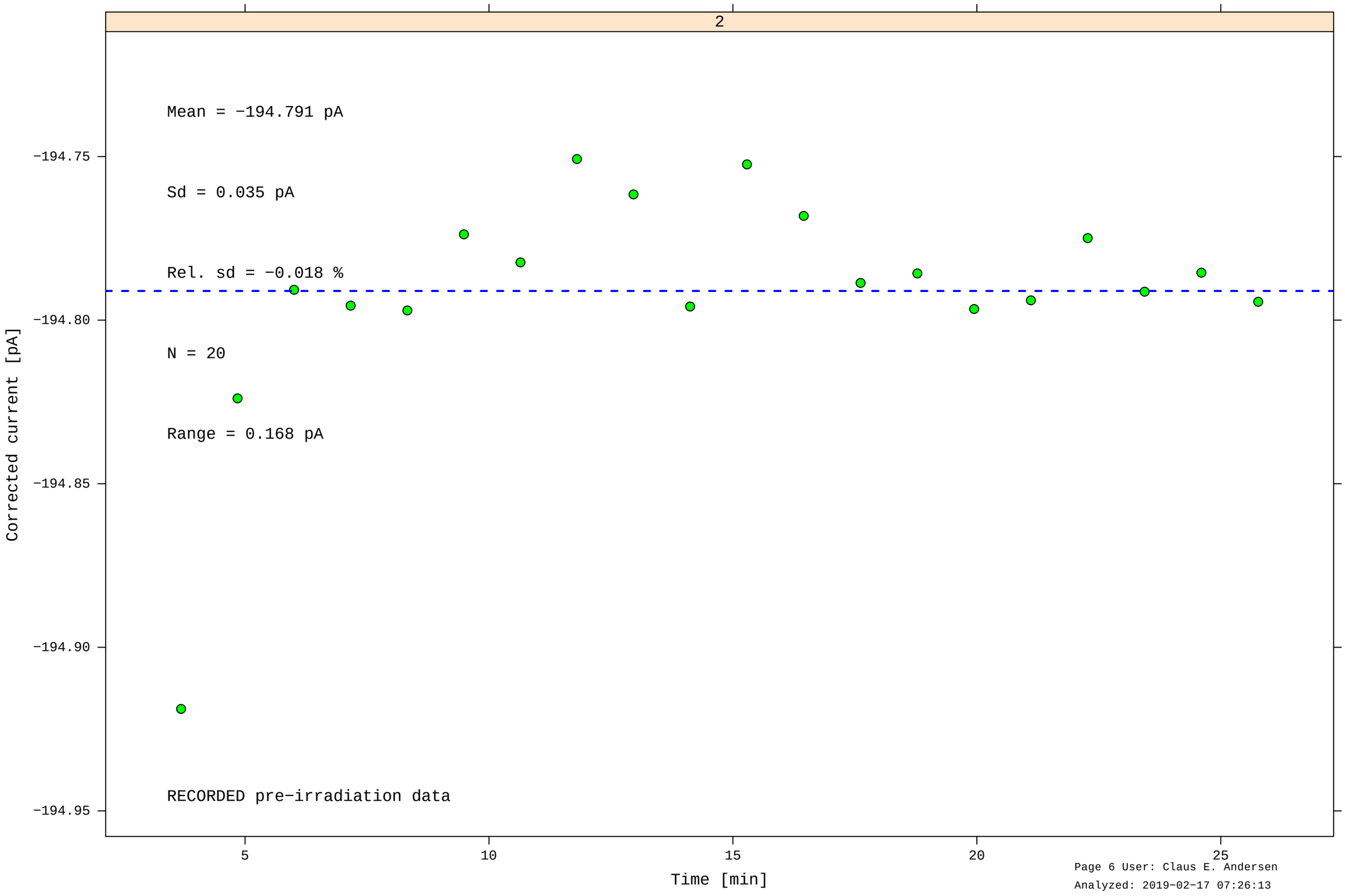
NPL2611-SN1019 File = exp104416 (beam on)



NPL2611-SN1019 File = exp104416 (beam on). Corrected for T ,P, decay, leakage and elect.



NPL2611-SN1019 File = exp104416 (beam on). Corrected PRE-IRRADIATION data
Corrected for T ,P, decay, leakage and electrometer



Summary of all variables in exp104416 (alphabetic order)

id	first	last	mean	min	max	NAs
Almemo1.M00.ID	..... SENS100014−ZA9030−FS1	. SENS100014−ZA9030−FS1	no number	no number	no number	0
Almemo1.M01.ID	..... SENS100015−ZA9030−FS1	. SENS100015−ZA9030−FS1	no number	no number	no number	0
Almemo1.M02.ID	..... SENS100012−ZA9040−FS	.. SENS100012−ZA9040−FS	no number	no number	no number	0
Almemo1.M03.ID	..... SENS100013−ZA9040−FS	.. SENS100013−ZA9040−FS	no number	no number	no number	0
Almemo1.M04.ID	..... SENS100013−ZA9040−FS	.. SENS100013−ZA9040−FS	no number	no number	no number	0
Almemo1.M05.ID	..... void	..... void	no number	no number	no number	0
Almemo1.model	..... A2690−8A	..... A2690−8A	no number	no number	no number	0
Almemo1.SN	..... H13020005	..... H13020005	no number	no number	no number	0
Almemo2.M00.ID	.... ZA9040−FS−NTC−thin (air)	ZA9040−FS−NTC−thin (ai	no number	no number	no number	0
Almemo2.M01.ID	..... FNA611−SN9070057 (air)	FNA611−SN9070057 (air)	no number	no number	no number	0
Almemo2.M02.ID	FNA611−SN12070199 (water/pla	FNA611−SN12070199 (wat	no number	no number	no number	0
Almemo2.M03.ID	..... void	..... void	no number	no number	no number	0
Almemo2.M04.ID	..... void	..... void	no number	no number	no number	0
Almemo2.model	..... A2690−8A	..... A2690−8A	no number	no number	no number	0
Almemo2.SN	..... H12060093	..... H12060093	no number	no number	no number	0
axis.coll.rtn	 0	 0	0	0	0	0
axis.couch.lat	 0	 0	0	0	0	0
axis.couch.lng	 0	 0	0	0	0	0
axis.couch.rnt	 0	 0	0	0	0	0
axis.couch.vrt	 0	 0	0	0	0	0
axis.gantry	 0	 0	0	0	0	0
beam.on	 0	 0	0.68966	0	1	0
C.PTW1	 0	 0	0	0	0	0
C.PTW1.status	 0	 0	0	0	0	0
C.PTW2	 0	 0	0	0	0	0
C.PTW2.status	 0	 0	0	0	0	0
C.PTW3	 0	 0	0	0	0	0
C.PTW3.status	 0	 0	0	0	0	0
col.cm.wanted	 0	 0	0	0	0	0
date	..... 20−05−2016 − 20:57:00	. 20−05−2016 − 22:04:59	no number	no number	no number	0
dayfraction	..... 0.872911	..... 0.920126	0.89641	0.87291	0.92013	0
dayno	..... 870.872911	..... 870.920126	870.9	870.87	870.92	0
degC.Almemo1.M00	..... 21.4	..... 21.4	21.355	21.3	21.4	0
degC.Almemo1.M01	..... 22.7	..... 22.6	22.71	22.6	22.9	0
degC.Almemo1.M02	..... 19.91	..... 19.91	19.907	19.89	19.91	0

Summary of all variables in exp104416 (alphabetic order) page 2

id	first	last	mean	min	max	NAs
degC.Almemo1.M03	19.91	19.91	19.908	19.9	19.91	0
degC.Almemo2.M00	21.35	21.36	21.372	21.33	21.43	0
degC.Almemo2.M01	21.61	21.59	21.602	21.59	21.62	0
degC.V1.Control	22.02	22.04	22.029	22	22.05	0
degC.V2.Cobalt	NA	NA	21.138	21.13	21.16	53
degC.V3.Lin.Right	21.61	21.58	21.588	21.57	21.61	0
degC.V4.Lin.Left	22.07	22.06	22.049	22.03	22.07	0
degC.V5.Modulator	22.59	22.45	22.549	22.39	22.83	0
expid	Full cal. of multiple ICs	Full cal. of multiple	no number	no number	no number	0
hour	20.949864	22.083029	21.514	20.95	22.083	0
hPa.Pace1	1012.7771758	1013.0608524	1012.9	1012.8	1013.1	0
hPa.Pace2	1012.8624092	1013.1449928	1013	1012.9	1013.1	0
index	0	57	28.5	0	57	0
K6517.Cable	DTU10574	DTU10574	no number	no number	no number	0
K6517.DET	NPL2611-SN1019	NPL2611-SN1019	no number	no number	no number	0
K6517.HV	200	200	200	200	200	0
K6517.ID	KEITHLEY INSTRUMENTS INC.,MO	KEITHLEY INSTRUMENTS I	no number	no number	no number	0
K6517.SN	NA	NA	no number	no number	no number	58
linac.beam	0	0	0	0	0	0
linac.FS.cm2	0	0	0	0	0	0
linac.MU	0	0	0	0	0	0
linac.MU.min	0	0	0	0	0	0
linac.note1	0	0	0	0	0	0
min.integration	0	2.32128000003286	7.5111	0	25.767	0
nA.K6517	-2.213191e-05	-7.088123e-06	-0.13421	-0.19471	-2.4822e-06	0
nC.K6517	-0.00061	-0.00019	-3.6237	-5.2572	-7e-05	0
no.HV	1	1	1	1	1	0
no.HV.irradiation	1-1	1-6	no number	no number	no number	0
no.integration	1	3	5.2759	1	20	0
no.irradiation	1	6	2.6379	1	6	0
note1	Sleeve	Sleeve	no number	no number	no number	0
note2	IC @ 1000 mm (427.45)	IC @ 1000 mm (427.45)	no number	no number	no number	0
note3	Rias/Risø tank window at 5 g	Rias/Risø tank window	no number	no number	no number	0
note4	Nominal FS 9.78 x 9.78 cm2 (	Nominal FS 9.78 x 9.78	no number	no number	no number	0
note5	-	-	no number	no number	no number	0

id	first	last	mean	min	max	NAs
Pa.delta	NA	NA	no number	no number	no number	58
Pace1.SN	3895266	3895266	3895300	3895300	3895300	0
Pace2.SN	3895267	3895267	3895300	3895300	3895300	0
pctRF.V4.Lin.Left	50.02	50.53	50.422	50.02	50.6	0
pctRH.V1.Control	50.06	50.57	50.426	50.06	50.61	0
pctRH.V2.Cobalt	NA	NA	53.88	53.81	53.91	53
pctRH.V3.Lin.Right	51.28	51.81	51.668	51.28	51.85	0
pctRH.V5.Modulator	47.55	48.86	48.252	47.55	48.86	0
PTB200.hPa	1012.82	1013.12	1012.9	1012.8	1013.1	0
PTW1.Cable	NA	NA	no number	no number	no number	58
PTW1.DET	NA	NA	no number	no number	no number	58
PTW1.SN	NA	NA	no number	no number	no number	58
PTW2.Cable	NA	NA	no number	no number	no number	58
PTW2.DET	NA	NA	no number	no number	no number	58
PTW2.SN	NA	NA	no number	no number	no number	58
PTW3.Cable	NA	NA	no number	no number	no number	58
PTW3.DET	NA	NA	no number	no number	no number	58
PTW3.SN	NA	NA	no number	no number	no number	58
R2.K6517	0.9736778	0.9958746	0.99745	0.96007	1	0
Reserved.6	0	0	0	0	0	0
Reserved.9	0	0	0	0	0	0
rot.deg	NA	NA	no number	no number	no number	58
sec.int	10	10	10	10	10	0
sec.irr	0	0	0	0	0	0
sec.shut	NA	NA	no number	no number	no number	58
Terabalt.note1	void	void	no number	no number	no number	0
Terabalt.note2	void	void	no number	no number	no number	0
Terabalt.note3	void	void	no number	no number	no number	0
Terabalt.note4	void	void	no number	no number	no number	0
Terabalt.note5	void	void	no number	no number	no number	0
Terabalt.note6	void	void	no number	no number	no number	0
terabalt.status.DIATU	NA	269.98	269.98	269.98	269.99	11
terabalt.status.SYMETRY	1	1	1	1	1	0
terabalt.status.X1	9.78	9.78	9.78	9.78	9.78	0
terabalt.status.X2	9.78	9.78	9.78	9.78	9.78	0

id	first	last	mean	min	max	NAs
terabalt.status.Y1	9.78	9.78	9.78	9.78	9.78	0
terabalt.status.Y2	9.78	9.78	9.78	9.78	9.78	0
u.nA.K6517	7.136507e-07	8.946917e-08	1.6587e-06	7.5079e-08	4.9287e-06	0
V.PTW1	0	0	0	0	0	0
V.PTW2	0	0	0	0	0	0
V.PTW3	0	0	0	0	0	0
Vaisala1.SN	HMT330-SNJ1730108	HMT330-SNJ1730108	no number	no number	no number	0
Vaisala2.SN	HMT330-SNJ1730111	HMT330-SNJ1730111	no number	no number	no number	0
Vaisala3.SN	HMT330-SNJ1730110	HMT330-SNJ1730110	no number	no number	no number	0
Vaisala4.SN	HMT330-SNJ1730107	HMT330-SNJ1730107	no number	no number	no number	0
Vaisala5.SN	HMT330-SNJ1730109	HMT330-SNJ1730109	no number	no number	no number	0
vent.freshair	3	3	3	3	3	0
vent.recirculation	3	3	3	3	3	0
vent.RH.setpoint	40	40	40	40	40	0
vent.T.setpoint	22	22	22	22	22	0
vent.TI01.MAX	22	22	22	22	22	0
vent.TI01.MIN	22	22	22	22	22	0
vent.TI02.setpoint	18	18	18	18	18	0
Version	MELab-v129	MELab-v129	no number	no number	no number	0
void.Almemo1.M04	0	0	0	0	0	0
void.Almemo1.M05	0	0	0	0	0	0
void.Almemo2.M02	0	0	0	0	0	0
void.Almemo2.M03	0	0	0	0	0	0
void.Almemo2.M04	0	0	0	0	0	0
water.cm	0	0	0	0	0	0
x.col.cm	NA	NA	no number	no number	no number	58
X3314131463	1892194150	556576090	2069800000	8272600	4290900000	0
y.col.cm	NA	NA	no number	no number	no number	58

This is the final page of the Cobalt irradiation report for file: exp104416