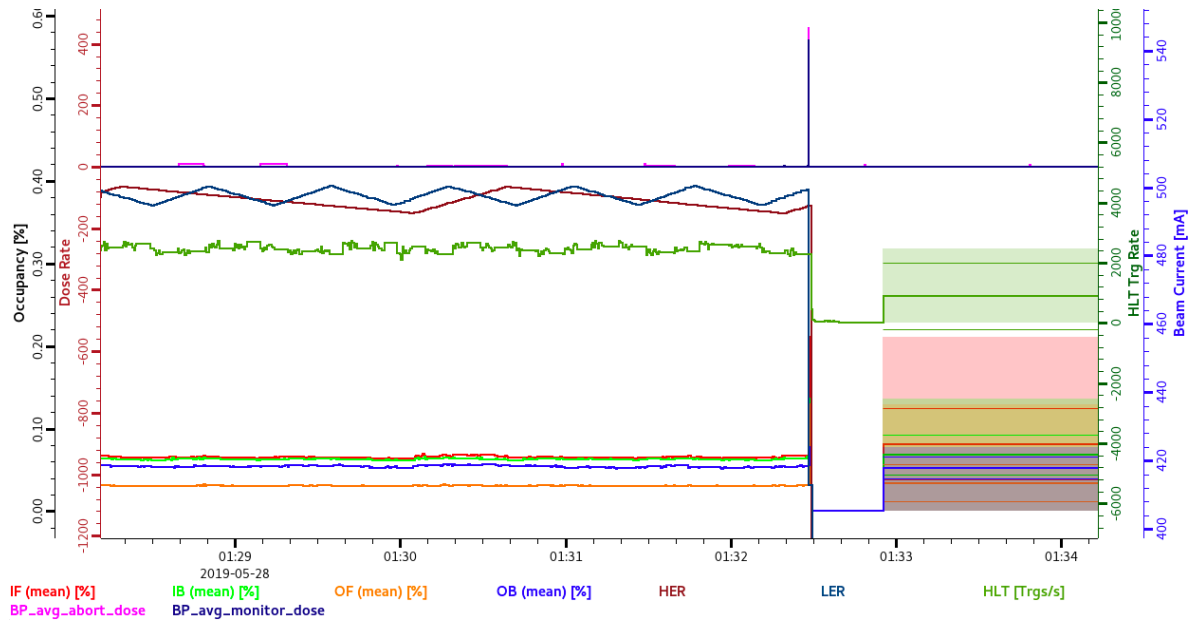


Note 2019.05.28

Owl shift,

1:32am beam aborted, PXD emergency shutdown



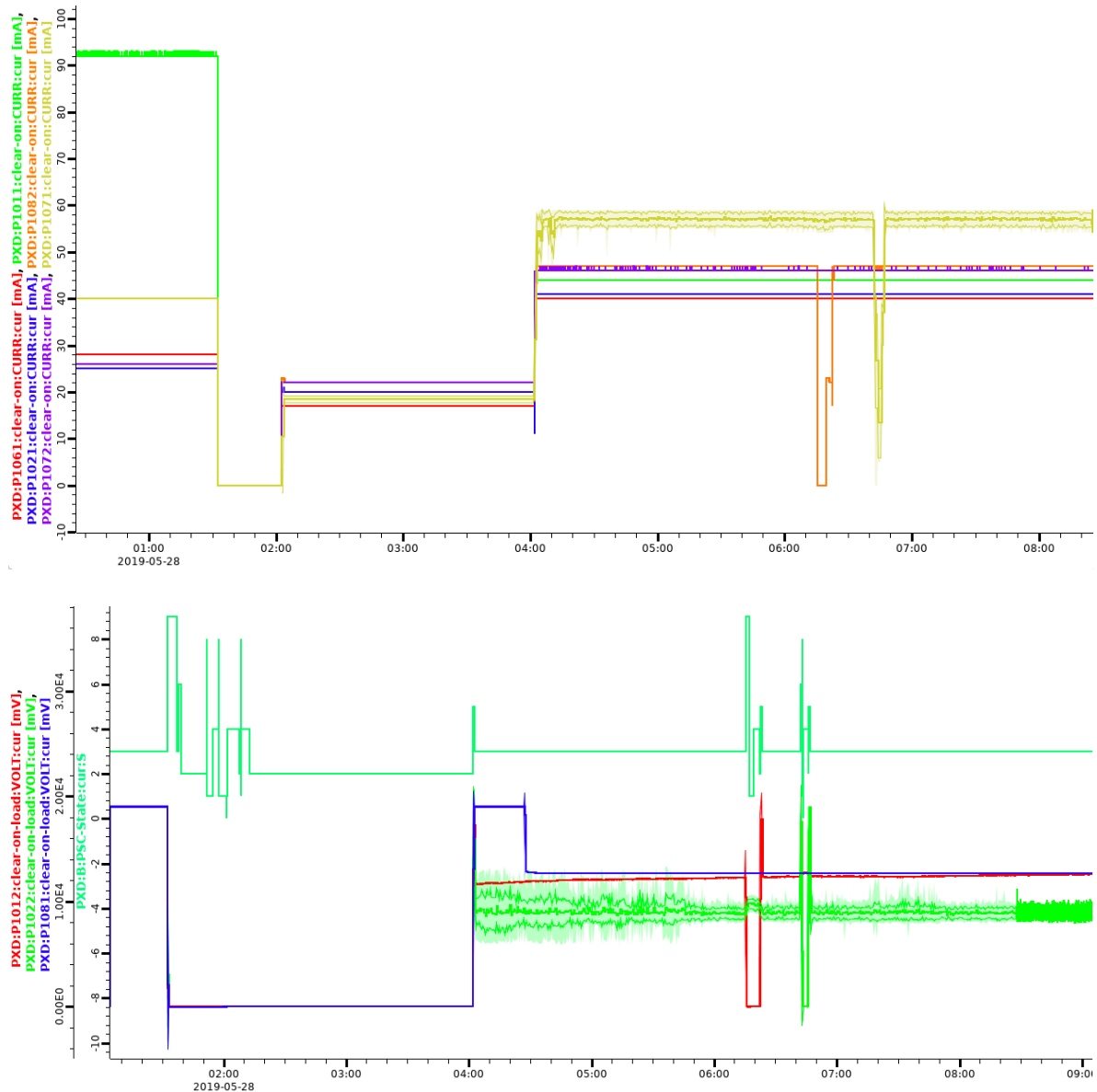
DHH Status										
	H1011	H1021	H1031	H1041	H1051	H1061	H1071	H1081	H2041	H2051
ChannelUp										
DHP Alive										
DHP Voltage ON										
DHC data rate [f]	0	0	0	0	0	0	0	0	0	0
Trigger										
GM										
DHP Mask	0xf	0xf	0xf	0xf	0xf	0xf	0xf	0xf	0xf	0xf
	ERROR	ERROR	PEAK	PEAK	PEAK	ERROR	ERROR	ERROR	PEAK	PEAK
DHE OM										
	H1012	H1022	H1032	H1042	H1052	H1062	H1072	H1082	H2042	H2052
ChannelUp										
DHP Alive										
DHP Voltage ON										
DHC data rate [f]	0	0	0	0	0	0	0	0	0	0
Trigger										
GM										
DHP Mask	0xf	0xf	0xf	0xf	0xf	0xf	0xf	0xf	0xf	0xf

3:50am BCG announced QCS power supply trouble need vendor's investigation, so no beam until today's evening at fastest.

Then H1012,1022,1081 high clear-on current, voltage does not reach the requested.

H1071 clear-on current at limit.

H1071,1022 were masked in data taking.



Abnormal clear-on currents on:

H1082,1072,1022,1012,1081,1071, 1061,1021,1011

At 10:00

Reading Switcher IDCODE:

fine: 1011, 1081, 1031, 1021, 2042, 1071, 1051, 1061, 1041, 2052. (Sw -> ASIC4)
not fine, reading fill pattern back (AAAAAAA or 5555555): 2041, 1012, 1082, 1022, 1032, 2051, 1062, 1072, 1042, 1052 (Sw -> ASIC1). After enable dcd stag en in ASIC1, all sw IDCODE are correct.

The sw-seq in DHP memory are correct.

Adjust the clear-on/off current limits for several modules:

P1022

Set limits: clear-on 90, clear-off to 80mA, current reaches 83mA, -59mA, source 94mA.

P1012

Limit: clear-on 80mA, currents reach 70mA, -49mA, source 69mA.

P1081

Limit: clear-on 100mA, currents reach 95mA, -26mA, source 83mA.

P1071

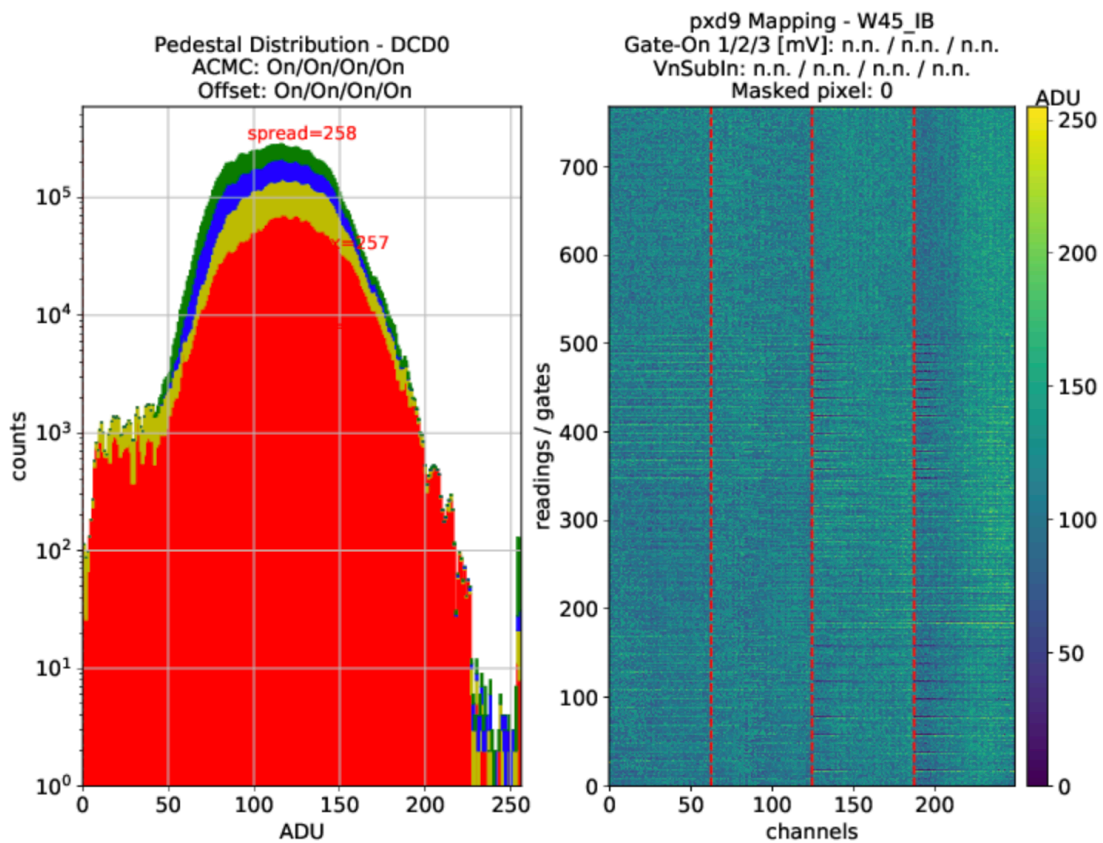
Limit: clear-on 70mA, currents reach 60mA, -35mA, source 94mA.

Taking pedestals, all works except H1071.

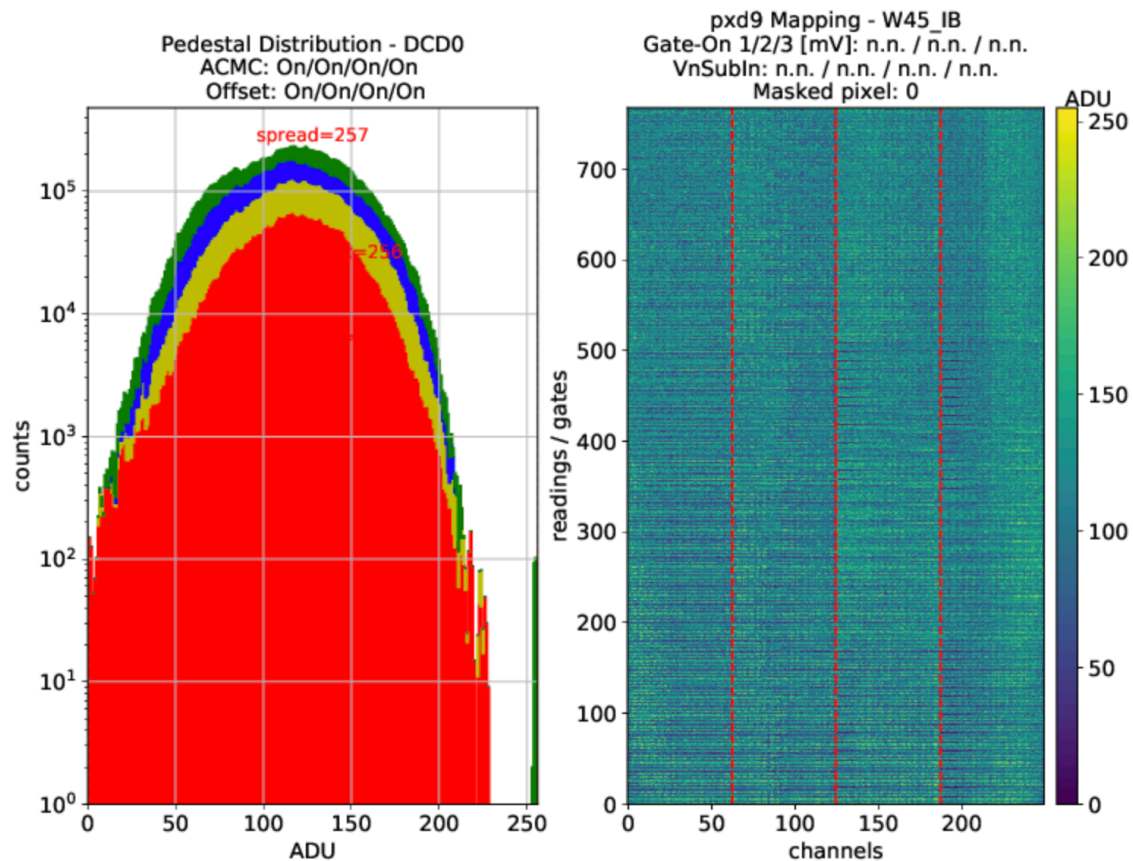
<https://elog.belle2.org/elog/PXD-Commissioning-KEK/4654> - 4672

Pedestal changes, e.g. H1022:

Before



After



H1071

PXD

PS

PS Channel Overview

P1071 - Sensor 07 IF

P1072

P1081

P2071

P1061

ENABLE

CONNECTED

OVP

THERMAL

UPS

ENABLE

DISABLE

software reset

EMERGENCY

Current State:

PEAK

Unit ID: 34

Temp: 27 degC

DHI power 1071

	min.	Set Current	max.	min.	Set Voltage	max.	Reg.	Voltage at Regulator	Voltage at Load	Current	
sw-sub	0 mA	50 mA	50 mA	-7100 mV	-7000 mV	0 mV	<div></div>	-7099 mV	-7009 mV	-22 mA	sw-sub
sw-dvdd	0 mA	30 mA	40 mA	0 mV	1800 mV	2000 mV	<div></div>	3046 mV	1801 mV	22 mA	sw-dvdd
sw-refin	0 mA	30 mA	30 mA	-7100 mV	-5200 mV	0 mV	<div></div>	-5237 mV	-5202 mV	0 mA	sw-refin
lcd-amplow	0 mA	1300 mA	1400 mA	0 mV	300 mV	500 mV	<div></div>	1007 mV	299 mV	-696 mA	lcd-amplow
dcd-avdd	0 mA	3000 mA	3000 mA	0 mV	1800 mV	2000 mV	<div></div>	5139 mV	1800 mV	2613 mA	dcd-avdd
dcd-dvdd	0 mA	940 mA	1000 mA	0 mV	1800 mV	2000 mV	<div></div>	3776 mV	1802 mV	846 mA	dcd-dvdd
dcd-refin	0 mA	1000 mA	1000 mA	0 mV	700 mV	1300 mV	<div></div>	2616 mV	701 mV	260 mA	dcd-refin
dhp-core	0 mA	730 mA	800 mA	0 mV	1200 mV	1640 mV	<div></div>	3255 mV	1198 mV	694 mA	dhp-core
dhp-io	0 mA	550 mA	550 mA	0 mV	1800 mV	2000 mV	<div></div>	3595 mV	1802 mV	334 mA	dhp-io
buk	0 mA	10 mA	10 mA	0 mV	10000 mV	10000 mV	<div></div>	10005 mV	10004 mV	0 mA	buk
clear-on	0 mA	70 mA	100 mA	0 mV	19000 mV	22000 mV	<div></div>	19177 mV	19022 mV	60 mA	clear-on
clear-off	0 mA	60 mA	100 mA	0 mV	4000 mV	20000 mV	<div></div>	3828 mV	3990 mV	-38 mA	clear-off
gate-on1	0 mA	15 mA	30 mA	-4000 mV	-3090 mV	5000 mV	<div></div>	-3165 mV	-3090 mV	-7 mA	gate-on1
gate-on2	0 mA	15 mA	30 mA	-4000 mV	-3090 mV	5000 mV	<div></div>	-3160 mV	-3093 mV	-6 mA	gate-on2
gate-on3	0 mA	15 mA	30 mA	-4000 mV	-3090 mV	5000 mV	<div></div>	-3169 mV	-3087 mV	-7 mA	gate-on3
gate-off	0 mA	40 mA	40 mA	0 mV	5000 mV	6000 mV	<div></div>	5107 mV	5006 mV	26 mA	gate-off
source	0 mA	120 mA	150 mA	0 mV	6000 mV	7000 mV	<div></div>	7478 mV	6003 mV	93 mA	source
csg1	0 mA	10 mA	10 mA	-5000 mV	0 mV	0 mV	<div></div>	-3 mV	-8 mV	0 mA	csg1
csg2	0 mA	10 mA	10 mA	-5000 mV	0 mV	0 mV	<div></div>	3 mV	3 mV	0 mA	csg2
csg3	0 mA	10 mA	10 mA	-5000 mV	0 mV	0 mV	<div></div>	-3 mV	2 mV	0 mA	csg3
hv	0 uA	600 uA	10000 uA	-80000 mV	-66000 mV	0 mV	<div></div>	-65955 mV	-65970 mV	-114 uA	hv
drift	0 mA	10 mA	10 mA	-6000 mV	-4000 mV	0 mV	<div></div>	-3996 mV	-4005 mV	0 mA	drift
guard	0 mA	10 mA	30 mA	-6000 mV	-5000 mV	0 mV	<div></div>	-5003 mV	-5001 mV	0 mA	guard

The clear-on/off current is not stable, jumping from 54 to 60mA / -38 to -34mA

Pedestals: <https://elog.belle2.org/elog/PXD-Commissioning-KEK/4653>.

Pedestal Calibration always failed using calibrationIOC,

After manually upload the pedestals, high occupancy observed.

