

CSS to Phoebus migration in TRG

49th B2GM TRG parallel session

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YongHeon Ahn

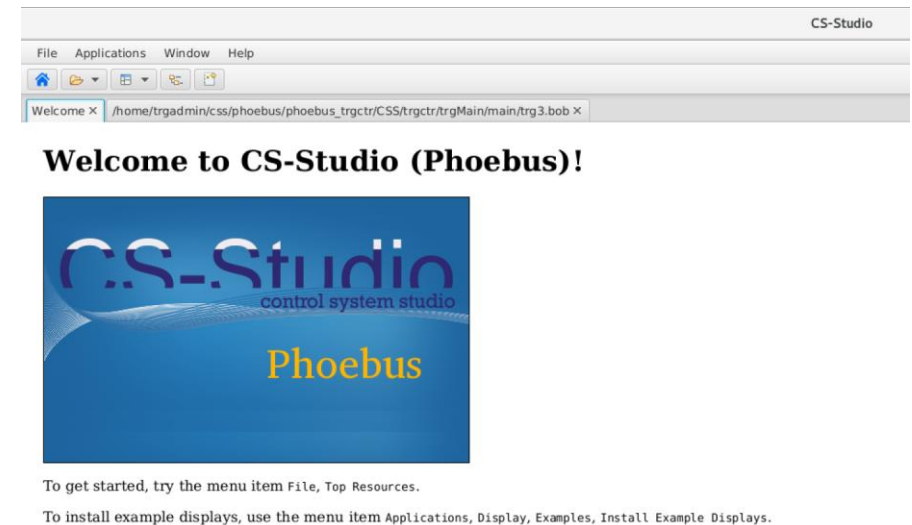
Korea University

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Phoebus Introduction

- Phoebus is an update of the Control System Studio(CSS) toolset that removes dependencies on Eclipse RCP(Rich Client Platform) and SWT(Standard Widget Toolkit).
- Use Java FX as the graphics library to overcome limitations of SWT.
- New development mostly takes place in the Phoebus branch.
- References
 - [Phoebus web page](#)
 - [Belle II migration confluence page](#)
 - [Michael Ritzert's slide](#)



Phoebus Installation

- Installation:
Phoebus can be installed from the official Phoebus web site. But Belle II group provide the phoebus-belle2 repository which include NSM(Network Shared Memory) in the core folder.
- Download link: <https://gitlab.desy.de/belle2/detector/pxd/gui/phoebus-belle2/-/tree/release>
- Requirement:
 - maven 3.x or ant: Phoebus is built with maven. **Maven™**
 - JDK17 or later, suggested is OpenJDK.
btrgterm0 server's ".bashrc" export jdk17 when you bash it as

```
export JAVA_HOME=/usr/lib/jvm/jdk-17.0.10
export PATH=$JAVA_HOME/bin:$PATH
```

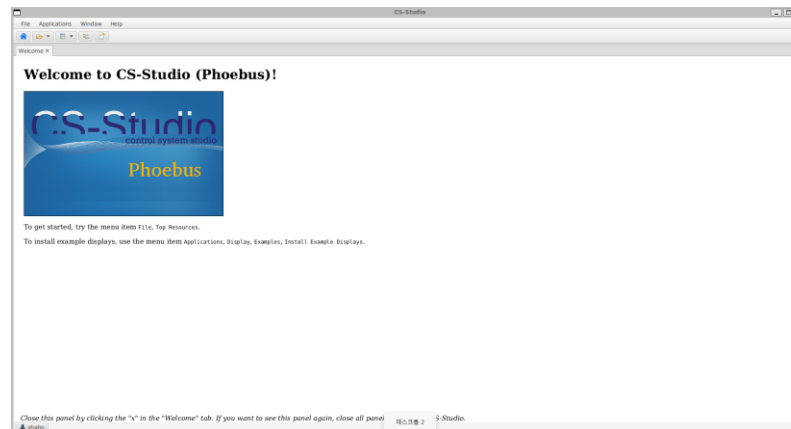
Running the Phoebus

- At the btrgterm0 server:
Phoebus is installed in /home/trgadmin/css/phoebus on the btrgterm0 server.
You can run the phoebus by executing “phoebus.sh”
in /home/trgadmin/css/phoebus/phoebus-belle2/phoebus-product/
“phoebus” commend is added to ~/.bashrc for your(my) convenience.

```
function phoebus {  
  echo "Executing phoebus..."  
  /home/trgadmin/css/phoebus/phoebus-belle2/phoebus-product/phoebus.sh -setting  
  gs /home/trgadmin/css/phoebus/phoebus-belle2/phoebus-product/settings.ini  
}
```

This commend exploits a setting configuration file.

- If you run the phoebus at first time, you can see the below screen.



Phoebus examples

- You may open the example display to learn the phoebus

Action Button Widgets

Action Buttons with one assigned action trigger when pressed

Actions that open a display will by default replace the existing display. Users can then navigate 'back' to the original display as well as 'forward' again.

By holding the 'Control' key, the display will open in a new tab. By holding the 'Shift' key, the display will open in a new workspace window. By holding both 'Control' and 'Shift' key, the display will open in a standalone window. (On Mac OS X, use 'Command' instead of 'Control')

Action Buttons with more than one action provide a dropdown to choose an action

This button includes actions that will default to using a tab, workbook window or standalone window. Ideally, that decision is however left to the user via the 'Control' ('Command' on Mac) and 'Shift' modifiers.

Actions can also be invoked from the context menu of the button.

Actions can in fact be assigned to any widget, and the context menu then allows users to invoke them.

The preferred way to offer actions, however, is via action buttons that the user can simply "click", while actions assigned to other widgets for invocation via the context menu are more suitable for "hidden" actions.

Press buttons to see sub-displays.

Note you can also navigate between buttons via <Tab> key or <Shift> and cursor keys, then press <SPACE> to activate button.

ex) Action Button

open the example display

“open in Editor” generates a bob file which can be open with phoebus editor

```

<?xml version="1.0" encoding="UTF-8"?>
<display version="2.0.0">
  <name>Action Button Example</name>
  <widget type="label" version="2.0.0">
    <name>Label</name>
    <text>Action Button Widgets</text>
    <width>301</width>
    <height>31</height>
    <font name="Header 1" family="Liberation Sans" style="BOLD" size="22.0">
    </font>
  </widget>
  <widget type="label" version="2.0.0">
    <name>Label_1</name>
    <text>Action Buttons with one assigned action trigger when pressed</text>
    <y>31</y>
    <width>641</width>
    <height>30</height>
    <font name="Header 2" family="Liberation Sans" style="BOLD" size="18.0">
    </font>
  </widget>
</display>

```

It also can be open as a code

CSS to Phoebus migration

- CSS use .opi files while Phoebus use .bob files. We need convert below .opi files that we use in TRG control.

Group	File name
Files for GDL under trggdl:	gdl0014_firm.opi
	gdl0014_ftd.opi
	gdl0014_inj.opi
	gdl0014_itd.opi
	gdl0014_psn.opi
	gdl0014_tmdl.opi
	gdl0015_status.opi
	injection_bg.opi
Files for GRL/CDCTRG :	trgcdc/trgcdc.opi
Files for TRG expert shift is	trgMain/main/trg3.opi
Files for ecltrg	ecltrg_menu.opi
	ecltrg_main.opi
	a part of trg2.opi

- We have two methods for conversion.
 - 1) Open the opi file in the Phoebus directly one by one
: Phoebus convert the opi files to bob file itself.
 - 2) Use Phoebus convert script
: Phoebus has a convert class. It convert the opi files. It is written in /home/trgadmin/css/phoebus/convert.sh file.

```
#!/bin/bash
```

```
sh /home/trgadmin/css/phoebus/phoebus-belle2/phoebus-product/phoebus.sh -main org.csstudio.display.builder.model.Converter $1
```

CSS to Phoebus migration workflow – GDL related

Group	File name	status	opi → bob conversion	test_20240703	ecltrg test_20240717	test_20240731	test_20240812	test_20240826
Files for GDL under trggdl:	gdl0014_firm.opi	DONE	done	save, load conffile are working well. adjust size of Save and Load button				
	gdl0014_ftd.opi	DONE	done	not working at all				
	gdl0014_inj.opi	DONE	done	parameter change is not reflected.		After input values, if we type enter, value is saved.	Refresh LER, HER histo nsm are not connected.	Working well.
	gdl0014_itd.opi	DONE	done	working well. responce of parameter change is not reflected sometimes.		After input values, if we type enter, value is saved.		
	gdl0014_psn.opi	DONE	done	the numbering are not shown. prescale value should be shown by integer without decimal point.				
	gdl0014_tmdl.opi	DONE	done	working well.		The NSM was not connected, so it can't be tested.	top2gdll1, ecl2gdll1, cdc2gdll1 nsm are not connected	
	gdl0015_status.opi	DONE	done	loading pv error				
	injection_bg.opi	DONE	done	working well				

Files for GDL under trggdl

- For the GDL files, to bring the bit name and their information, the BOY script which get the data from nsm should be modified. The widget in the BOY file does not works in the Phoebus.
- The new script is based on the Phoebus widget grammar

```
import re
from org.csstudio.opibuilder.scriptUtil import PVUtil
from org.csstudio.opibuilder.scriptUtil import ColorFontUtil

table = widget.getTable()

#find index of the trigger PV
i=0
while triggerPV != pvs[i]:
    i+=1

table.setCellText(i, 0, str(i))
table.setCellBackground(i, 0, ColorFontUtil.LIGHT_BLUE)
```

gdl_table_num.py
(CSS)



```
import os, sys
from org.csstudio.display.builder.runtime.script import PVUtil, ScriptUtil, ConsoleUtil

# Create matrix (2D array) of strings

table1 = ScriptUtil.findWidgetByName(widget, "Table_inum1")
i=0
data1 = []
for pv in pvs:
    row = [ str(i)]
    data1.append(row)
    i+=1
table1.setValue(data1)

table2 = ScriptUtil.findWidgetByName(widget, "Table_inum2")
i=0
data2 = []
for pv in pvs:
    row = [ str(i+36)]
    data2.append(row)
    i+=1
table2.setValue(data2)

table3 = ScriptUtil.findWidgetByName(widget, "Table_inum3")
i=0
data3 = []
for pv in pvs:
    row = [ str(i+72)]
    data3.append(row)
    i+=1
table3.setValue(data3)

table4 = ScriptUtil.findWidgetByName(widget, "Table_inum4")
i=0
data4 = []
for pv in pvs:
    row = [ str(i+108)]
    data4.append(row)
    i+=1
table4.setValue(data4)
```

table_number.py
(Phoebus)



		51.000	16.000		
113	d5	51.000	16.000	92	4
114	cdc_veto	0.000	0.000	0	0
115	p3	31.000	16.000	0	0
116	p5	51.000	16.000	0	0
117	ecl_veto	0.000	0.000	0	0
118	typ6	10.000	31.000	0	0
119	cdcecl_0	51.000	16.000	0	0
120	cdcecl_1	51.000	16.000	0	0
121	cdcecl_2	51.000	16.000	0	0
122	cdcecl_3	51.000	16.000	0	0
123	c2gev_0	51.000	16.000	0	0
124	c2gev_1	51.000	16.000	0	0
125	c2gev_2	31.000	16.000	0	0
126	c2gev_3	31.000	16.000	0	0
127	cdctop_0	0.000	16.000	0	0
128	cdctop_1	0.000	16.000	0	0
129	cdctop_2	0.000	16.000	0	0
130	cdctop_3	0.000	16.000	0	0
131	cdcklm_0	0.000	16.000	0	0
132	cdcklm_1	0.000	16.000	0	0
133	sekim_0	11.000	31.000	0	0
134	sekim_1	11.000	31.000	0	0
135	eclckim	2.000	16.000	110	5
136	iekim	2.000	31.000	0	0
137	fwdsb	0.000	0.000	0	0
138	bwdsb	0.000	0.000	0	0
139	fwdnb	0.000	0.000	0	0
140	bwdnb	0.000	0.000	0	0
141	brifb1	0.000	0.000	0	0
142	brifb2	0.000	0.000	0	0
143	brlnb1	0.000	0.000	0	0
Click...	Click to add row			Click to add row	Click

gdl0014_itd.bob

gd10014_itd

Introduction for TRG Phoebus × inj_bg × gd10014_tmdl × gd10014_psn × **gd10014_itd** × gd10014_inj × gd10014_firm × ecl_bkg × trgcdc × ecltrg × trig4 × RC TRG × Console × gd10015_status ×

Inout bits

input name	DELAY	WIDTH	raw rate	count	input bit name	DELAY	WIDTH	raw rate	count	input bit name	DELAY	WIDTH	raw rate	count	input bit name	DELAY	WIDTH	raw rate	count											
0	t3_0	83	31	0	0	36	s2s3	60	31	0	0	0	72	ecl_lmi_5	47	16	0	0	108	iecl_0	50	63	0	0	144	brinb2	28	16	0	0
1	t3_1	83	31	0	0	37	s2s5	80	31	0	0	0	73	ecl_lmi_6	47	16	5	38	109	iecl_1	50	63	0	0	145	trkbha1	0	80	0	0
2	t3_2	83	31	0	0	38	s2s0	80	31	0	0	0	74	ecl_lmi_7	47	16	1	7	110	samhem	43	16	65	540	146	trkbha2	0	80	0	0
3	t3_3	83	31	0	0	39	s2f3	60	31	0	0	0	75	ecl_lmi_8	47	16	1	11	111	opohem	43	16	0	0	147	grigg1	28	16	0	0
4	ty_0	19	31	0	0	40	s2f5	80	31	0	0	0	76	ecl_lmi_9	47	16	9	75	112	d3	31	16	0	0	148	grigg2	28	16	0	0
5	ty_1	19	31	0	0	41	s2f0	80	31	0	0	0	77	ecl_lmi_10	47	16	21	172	113	d5	51	16	98	816	149	nimin0	0	0	0	0
6	ty_2	19	31	0	0	42	fwid_s	80	31	0	0	0	78	ecl_lmi_12	47	16	28	234	114	cdc_veto	0	0	0	0	150	nimin1	0	0	1694	14144
7	ty_3	19	31	0	0	43	bwid_s	80	31	0	0	0	79	ecl_lmi_13	47	16	12	104	115	p3	31	16	0	0	151	ecl_taub2b	47	16	158	1317
8	t2_0	91	31	0	0	44	track	72	63	0	0	0	80	ecl_mumu	47	16	15	125	116	p5	51	16	0	0	152	ehigh1	47	16	45	372
9	t2_1	91	31	0	0	45	trkft	0	63	0	0	0	81	ecl_bhapur	47	16	0	0	117	ecl_veto	0	0	0	0	153	ehigh2	47	16	40	336
10	t2_2	91	31	0	0	46	ehigh	47	16	45	374	82	ecl_bst	47	16	0	1	118	typ6	10	31	0	0	154	ehigh3	47	16	42	355	
11	t2_3	91	31	0	0	47	elow	47	16	227	1893	83	top_0	0	0	0	0	119	cdcecl_0	51	16	0	0	155	ecl_taub2b2	47	16	49	410	
12	ts_0	79	31	0	0	48	elum	47	16	2	15	84	top_1	0	0	0	0	120	cdcecl_1	51	16	0	0	156	ecl_taub2b3	47	16	92	767	
13	ts_1	79	31	0	0	49	prein	47	16	1694	14144	85	top_2	0	0	0	0	121	cdcecl_2	51	16	0	0	157	tx_3	0	0	0	0	
14	ts_2	79	31	0	0	50	ecl_3dbha	55	16	0	0	86	top_bb	0	0	0	0	122	cdcecl_3	51	16	0	0	158	blocked1	0	0	0	0	
15	ts_3	79	31	0	0	51	bha_veto	34	100	0	0	87	top_active	22	0	0	0	123	c2gev_0	51	16	0	0	159	blocked2	0	0	45	374	
16	ta_0	95	31	0	0	52	ehigh4	47	16	45	373	88	klm_hit	16	16	1648	13761	124	c2gev_1	51	16	0	0	160	Click to add row	<nsm;/><nsm;/>	Click to add row	Click to add row		
17	ta_1	95	31	0	0	53	cdcecl_veto	0	0	0	0	89	klm_0	16	16	1501	12532	125	c2gev_2	31	16	0	0	161	<nsm;/><nsm;/>	<nsm;/><nsm;/>	<nsm;/><nsm;/>			
18	ta_2	95	31	0	0	54	bha_intrk	55	16	0	0	90	klm_1	16	16	155	1293	126	c2gev_3	31	16	0	0	162	<nsm;/><nsm;/>	<nsm;/><nsm;/>	<nsm;/><nsm;/>			
19	ta_3	95	31	0	0	55	bha_theta_0	47	16	0	0	91	klm_2	16	16	0	3	127	cdctop_0	120	16	0	0	163	<nsm;/><nsm;/>	<nsm;/><nsm;/>	<nsm;/><nsm;/>			
20	typ	10	31	0	0	56	bha_theta_1	47	16	0	0	92	klmb2b	16	16	0	0	128	cdctop_1	120	16	0	0	164	<nsm;/><nsm;/>	<nsm;/><nsm;/>	<nsm;/><nsm;/>			
21	typ4	10	31	0	0	57	clst_0	47	16	468	3904	93	ekim_hit	16	16	1874	15649	129	cdctop_2	120	16	0	0	165	<nsm;/><nsm;/>	<nsm;/><nsm;/>	<nsm;/><nsm;/>			
22	typ5	10	31	0	0	58	clst_1	47	16	551	4601	94	ekim_0	16	16	1784	14895	130	cdctop_3	120	16	0	0	166	<nsm;/><nsm;/>	<nsm;/><nsm;/>	<nsm;/><nsm;/>			
23	cdc_open90	91	31	0	0	59	clst_2	47	16	22	183	95	ekim_1	16	16	90	754	131	cdckim_0	0	16	0	0	167	<nsm;/><nsm;/>	<nsm;/><nsm;/>	<nsm;/><nsm;/>			
24	cdc_active	0	31	0	0	60	clst_3	47	16	0	0	96	ekim_2	16	16	0	0	132	cdckim_1	0	16	0	0	168	<nsm;/><nsm;/>	<nsm;/><nsm;/>	<nsm;/><nsm;/>			
25	cdc_b2b3	71	31	0	0	61	ecl_active	47	16	1694	14144	97	ekimb2b	16	16	35	291	133	sekim_0	0	31	0	0	169	<nsm;/><nsm;/>	<nsm;/><nsm;/>	<nsm;/><nsm;/>			
26	cdc_b2b5	91	31	0	0	62	ecl_timing_fwd	47	16	119	997	98	revo	0	0	1	8	134	sekim_1	0	31	0	0	170	<nsm;/><nsm;/>	<nsm;/><nsm;/>	<nsm;/><nsm;/>			
27	cdc_b2b7	71	31	0	0	63	ecl_timing_bri	47	16	793	6623	99	her_kick	0	0	0	0	135	eclckim	2	16	99	827	171	<nsm;/><nsm;/>	<nsm;/><nsm;/>	<nsm;/><nsm;/>			
28	passive_veto	0	0	0	0	64	ecl_timing_bwd	47	16	781	6524	100	ler_kick	0	0	0	0	136	iekim	2	31	0	0	172	<nsm;/><nsm;/>	<nsm;/><nsm;/>	<nsm;/><nsm;/>			
29	itsfb2b	152	31	0	0	65	prnrsup	0	0	0	0	101	bha_delay	0	0	0	0	137	bkimalf	16	16	0	0	173	<nsm;/><nsm;/>	<nsm;/><nsm;/>	<nsm;/><nsm;/>			
30	ti	152	31	0	0	66	ecl_oflo	47	16	0	4	102	pseud_rand	0	0	1	7	138	ekimalf	16	16	0	0	174	<nsm;/><nsm;/>	<nsm;/><nsm;/>	<nsm;/><nsm;/>			
31	i2io	152	31	0	0	67	ecl_lmi_0	47	16	96	806	103	plsin	0	0	1	8	139	fwdrb	28	16	0	0	175	<nsm;/><nsm;/>	<nsm;/><nsm;/>	<nsm;/><nsm;/>			
32	i2fo	152	31	0	0	68	ecl_lmi_1	47	16	2	15	104	poissonr	0	0	2	18	140	bwdrb	28	16	0	0	176	<nsm;/><nsm;/>	<nsm;/><nsm;/>	<nsm;/><nsm;/>			
33	r2f30	80	31	0	0	69	ecl_lmi_2	47	16	1	6	105	veto	0	0	0	0	141	brfb1	28	16	0	0	177	<nsm;/><nsm;/>	<nsm;/><nsm;/>	<nsm;/><nsm;/>			
34	s2f30	91	31	0	0	70	ecl_lmi_3	47	16	0	0	106	inlv	0	0	0	0	142	brfb2	28	16	0	0	178	<nsm;/><nsm;/>	<nsm;/><nsm;/>	<nsm;/><nsm;/>			
35	s2s30	80	31	0	0	71	ecl_lmi_4	47	16	0	4	107	secl	50	31	0	0	143	brinb1	28	16	0	0	179	<nsm;/><nsm;/>	<nsm;/><nsm;/>	<nsm;/><nsm;/>			
Click...	Click to add row			Click to add row	Click to add row	Click...	Click to add row			Click to add row	Click to add row	Click...	Click to add row			Click to add row	Click to add row	Click...	Click to add row			Click to add row	Click to add row	Click...	Click to add row			Click to add row	Click to add row	

gdl0014_psn

Introduction for TRG Phoebus × inj_bg × gdl0014_tmdl × gdl0014_psn × gdl0014_itd × gdl0014_inj × gdl0014_firm × ecl_bkg × trgcdc × ecltrg × trg4 × RC TRG × Console × gdl0015_s

psn bit name	Prescale	raw rate	psn bit name	Prescale	raw rate	psn bit name	Prescale	raw rate	psn bit name	Prescale	raw rate
0	fff	0	36	aaa	0	72	beklm	1	108	ycdckim1	0
1	fffo	0	37	aaao	0	73	toptiming	0	109	ycdckim2	0
2	ffs	0	38	aao	0	74	ectiming	0	110	yp	10
3	ecitaub2b2	0	39	aab	0	75	cdctiming	0	111	aay	0
4	sss	0	40	aa	0	76	revolution	1	112	shem	0
5	ffz	0	41	hie	1	77	random	1	113	ohem	0
6	fzz	0	42	lowe	0	78	bg	1	114	cdcecl1	0
7	zzz	0	43	lume	100	79	pls	0	115	cdcecl2	0
8	ffy	1	44	hade	0	80	poisson	0	116	cdcecl3	1
9	fyy	0	45	c2	0	81	poissonv	1	117	cdcecl4	1
10	yyy	0	46	c3	500	82	vetout	0	118	c2gev1	1
11	ff	0	47	c4	1	83	lmi0	100	119	c2gev2	1
12	fs	0	48	c5	0	84	lmi1	2	120	c2gev3	0
13	ss	0	49	bha3d	100	85	lmi2	1	121	c2gev4	0
14	fz	0	50	preout	0	86	lmi3	100	122	c1hie	0
15	zz	0	51	bhapur	10	87	lmi4	10	123	lmi14	0
16	fy	0	52	bha_id0	0	88	lmi5	100	124	lmi15	0
17	yy	0	53	bha_id1	0	89	lmi6	1	125	lmi16	1
18	ffo	0	54	bha_id2	0	90	lmi7	1	126	hie1	0
19	ffoc	0	55	bha_id3	0	91	lmi8	1	127	stt4	0
20	fso	0	56	ecimumu	1	92	lmi9	1	128	stt5	0
21	sso	0	57	eclofo	0	93	lmi10	1	129	stt6	0
22	fzo	0	58	ecibst	0	94	lmi12	1	130	c2hie	1
23	fyo	1	59	emusif	0	95	lmi13	10	131	cdctop1	0
24	ffb	0	60	ggsel	1	96	stt	1	132	cdctop2	0
25	fsb	0	61	bmusif	0	97	sttecl	1	133	cdctop3	0
26	ssb	10	62	fpre	10	98	yec1	0	134	cdctop4	0
27	fzb	0	63	hie4	0	99	sec1	0	135	cdckim1	1
28	fyb	1	64	mu_pair	0	100	iecl1	0	136	cdckim2	1
29	syo	1	65	mu_b2b	1	101	fioiecl1	0	137	seklm1	1
30	syb	1	66	klmhit	0	102	itsf_b2b	0	138	seklm2	1
31	ff30	0	67	mu_epair	0	103	ioiecl1	0	139	iekim1	0
32	fs30	0	68	mu_eb2b	1	104	ioiecl2	0	140	fwd_seklm	1
33	ss30	0	69	eklmhit	100	105	eed	10	141	bwd_seklm	1
34	fy30	1	70	klm2	0	106	fed	10	142	eclekim1	1
									144		0
									145		0
									146	y	500
									147	w	0
									148	bf	0
									149	bs	0
									150	bz	0
									151	by	0
									152	hie2	0
									153	bffo	0
									154	bhie	50
									155	syoecl	0
									156	sybec1	0
									157	ffv	80000
									158	zsv	0
									159	yyv	0
									160	Click to add row	1
									161		1
									162		80000
									163		0
									164		0
									165		50
									166		0
									167		0
									168		0
									169		0
									170		0
									171		1
									172		0
									173		0
									174		0
									175		0
									176		0
									177		0
									178		0

gdl0014_ftd

Introduction for TRG Phoebus × ecl_bkg × ecltrg × trg4 × RC TRG × Console × gdl0015_status × gdl0014_tmdl × gdl0014_psn × gdl0014_itd × gdl0014_inj × gdl0014_ftd × gdl0014_firm × trgcdc ×

68 % [Navigation icons]

ftdl bit name	raw rate	random flag
0 fff	0	0
1 ffo	0	0
2 ffs	0	0
3 ecftaub2b2	45	0
4 sss	0	0
5 ffz	0	0
6 fzz	0	0
7 zzz	0	0
8 ffy	0	0
9 fyy	0	0
10 yyy	0	0
11 ff	0	0
12 fs	0	0
13 ss	0	0
14 fz	0	0
15 zz	0	0
16 fy	0	0
17 yy	0	0
18 ffo	0	0
19 ffoc	0	0
20 fso	0	0
21 sso	0	0
22 fzo	0	0
23 fyo	0	0
24 ffb	0	0
25 ffb	0	0
26 sssb	0	0
27 fzb	0	0
28 fyb	0	0
29 syo	0	0
30 syb	0	0
31 ff30	0	0
32 fs30	0	0
33 ss30	0	0
34 fy30	0	0

ftdl bit name	raw rate	random flag
36 aaa	0	0
37 aaaa	0	0
38 aao	0	0
39 aab	0	0
40 aa	0	0
41 hie	40	0
42 lowe	222	0
43 lume	2	0
44 hade	2	0
45 c2	566	0
46 c3	92	0
47 c4	20	0
48 c5	6	0
49 bha3d	0	0
50 preout	0	0
51 bhapur	0	0
52 bha_id0	0	0
53 bha_id1	0	0
54 bha_id2	0	0
55 bha_id3	0	0
56 eclmumu	15	0
57 ecloffo	1	0
58 eclbst	0	0
59 emuslf	0	0
60 ggsef	0	0
61 bmuslf	0	0
62 fpre	0	0
63 hie4	40	0
64 mu_pair	0	0
65 mu_b2b	0	0
66 kimhit	0	0
67 mu_epair	0	0
68 muEb2b	0	0
69 ekimhit	0	0
70 kim2	0	0

ftdl bit name	raw rate	random flag
72 bekim	0	0
73 toptiming	0	0
74 ec timing	1095	0
75 cdctiming	0	0
76 revolution	1	1
77 random	1	1
78 bg	0	1
79 pls	1	0
80 poisson	1	0
81 poissonv	1	1
82 vetout	0	0
83 lmi0	97	0
84 lmi1	2	0
85 lmi2	0	0
86 lmi3	0	0
87 lmi4	0	0
88 lmi5	0	0
89 lmi6	4	0
90 lmi7	2	0
91 lmi8	1	0
92 lmi9	10	0
93 lmi10	20	0
94 lmi12	29	0
95 lmi13	11	0
96 stt	0	0
97 sttecl	0	0
98 yecl	0	0
99 sec1	0	0
100 iec1	0	0
101 fioiec1	0	0
102 itsf_b2b	0	0
103 ioiec1	0	0
104 ioiec2	0	0
105 eed	0	0
106 fed	0	0

ftdl bit name	raw rate	random flag
108 ydcckim1	0	0
109 ydcckim2	0	0
110 yp	0	0
111 aay	0	0
112 shem	61	0
113 ohem	0	0
114 cdcecl1	0	0
115 cdcecl2	0	0
116 cdcecl3	0	0
117 cdcecl4	0	0
118 c2gev1	0	0
119 c2gev2	0	0
120 c2gev3	0	0
121 c2gev4	0	0
122 c1hie	6	0
123 lmi14	4	0
124 lmi15	2	0
125 lmi16	11	0
126 hie1	40	0
127 stt4	0	0
128 stt5	0	0
129 stt6	0	0
130 c2hie	35	0
131 cdctop1	0	0
132 cdctop2	0	0
133 cdctop3	0	0
134 cdctop4	0	0
135 cdckim1	0	0
136 cdckim2	0	0
137 sekim1	0	0
138 sekim2	0	0
139 iekim1	0	0
140 fwd_sekim	0	0
141 bwd_sekim	0	0
142 eciekim1	0	0

ftdl bit name	raw rate	random flag
144 s	0	0
145 z	0	0
146 y	0	0
147 w	0	0
148 bf	0	0
149 bs	0	0
150 bz	0	0
151 by	0	0
152 hie2	37	0
153 bffo	0	0
154 bhie	40	0
155 syoeci	0	0
156 sybecf	0	0
157 fffv	0	0
158 zzv	0	0
159 yyy	0	0
160	Click to add row	Click to add r...
161		
162		
163		
164		
165		
166		
167		
168		
169		
170		
171		
172		
173		
174		
175		
176		
177		
178		

gdl0014_tmdl

Introduction for TRG Phoebus × inj_bg × gdl0014_tmdl × gdl0014_psn × gdl0014_itd × gdl0014_inj × gdl0014_firm × ecl_bkg × trgcdc × ecl

TMDL setting

Accepting Timing source

- RANDOM
- PSNM
- TOP
- ECL
- CDC

GDL timing parameters

top-rvcos	577	top-rvc	0
ecl-rvcos	352	ecl-rvc	5
cdc-rvcos	572	cdc-rvc	0
top-gdll1	<nsm://set:TRGGDL:top2gdll1>	top-inj	0
ecl-gdll1	<nsm://set:TRGGDL:ecl2gdll1>	ecl-inj	3
cdc-gdll1	<nsm://set:TRGGDL:cdc2gdll1>	cdc-inj	0
top-inpdly	0		
ecl-inpdly	44		
cdc-inpdly	65		

gdl0015_status

Last update Tue Oct 1 16:49:23 JST Please restart CSS at first

GDL Trigger rate

Total Trigger rate

	Rate(Hz)	Scaler
commonL1	0.0	0.0
gdlL1	0.0	0.0

Fraction of timing source

top_timing	0.0	0.0
ecl_timing	0.0	0.0
cdc_timing	0.0	0.0
psn_timing	0.0	0.000
rnd_timing	0.0	0.000

Main output bits rate

fff	0.0	0.000
ffo	0.0	0.000
hie	41.7	348.000
c4	21.2	177.000
lm10	94.8	792.000
ecloflo	0.2	2.000

poisson Hz

duration(sec)

GDL status link error

GDL Ready Signal Components

Timing	Component	Status	Rate	Range
	top-rcv		0.000	
	ecl-rcv	OK	5.000	2-20
	cdc-rcv	OK	0.000	2-20
	top-inj		0.000	
	ecl-inj	OK	3.000	1-5
	cdc-inj	OK	0.000	1-40

Input rate

Component	Status	Rate	Threshold	Component	Status	Rate	Threshold
ecltiming	OK	1678.900	>10Hz	ffy	OK	0.000	> 0.000
t2_0	OK	0.000	>10Hz	ffz	OK	0.000	> 0.000
toptiming	OK	0.000	>10Hz	yso	OK	0.000	> 0.000
k1m_hit	OK	1643.700	>10Hz	yioecl1	OK	0.000	> 0.000
d5	OK	99.200	>10Hz				
cdctop_0	OFF	0.000	>10Hz				
cdck1m_0	OK	0.000	>10Hz				
ek1m_hit	OK	1865.700	>10Hz				

bha3d based threshold

Link

ECL	OK
GRL	BAD
TOP	OFF
KLM	OK
ETF	BAD

Clock correction (physics running only) OK

GDL VME parameter loading OK

beam confile OK

gdl0014_firm

- Introduction for TRG Phoebus ×
- inj_bg ×
- gdl0014_tmdb ×
- gdl0014_psn ×
- gdl0014_itd ×
- gdl0014_inj ×
- gdl0014_firm ×
- ecl_bkg ×
- trgcdc ×
- ecltrg ×
- trg4 ×
- RC TRG ×
- Console ×
- gdl0015_status ×

Firmware version

firmware

configuration

save as / load

Save

Load

READY to save

Current trigger type

BEAM

- 20240719_col
- GDL0083a_non

Beam

Cosmic

Random

conf1

conf2

conf3

conf4

conf5

conf6

conf7

gdl0014_inj

Introduction for TRG Phoebus × inj_bg × gdl0014_tmdl × gdl0014_psn × gdl0014_itd × gdl0014_inj × gdl0014_firm × ecl_bkg × trgcdc × ecltrg × trg4 × RC TRG × Console × gdl0015_status ×

Injection veto

Automatic veto adjustment

Refresh LER histo

Refresh HER histo

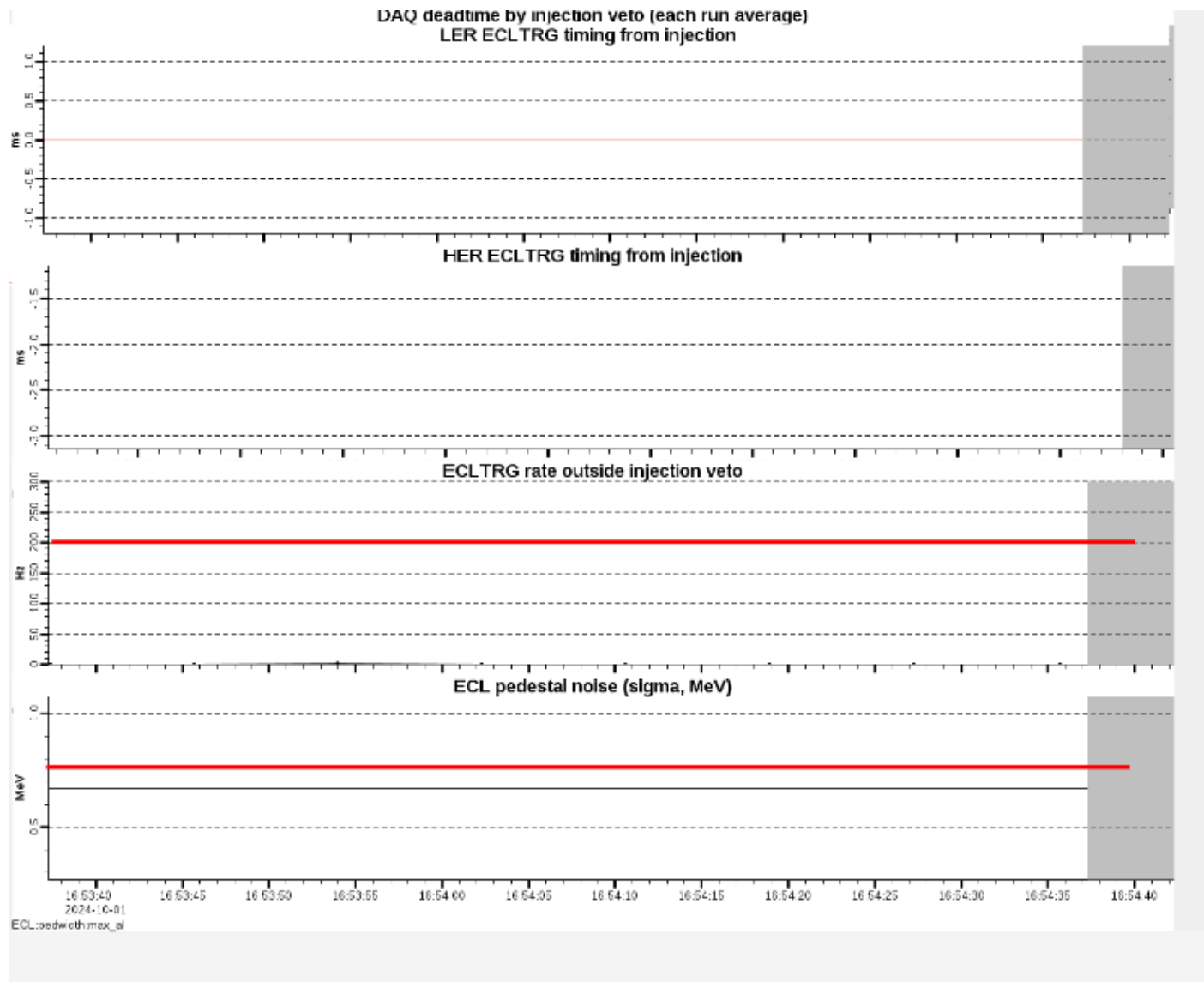
LER parameters

fullveto	<input type="text" value="100"/>	x10micro sec
gateveto	<input type="text" value="400"/>	x10micro sec
	<input type="text" value="400"/>	x8nsec
gateveto2	<input type="text" value="1700"/>	x10micro sec
	<input type="text" value="200"/>	x8nsec
voffsetLer	<input type="text" value="9"/>	x10micro sec
vpreLer	<input type="text" value="1235"/>	x8nsec

HER parameters

fullveto	<input type="text" value="50"/>	x10micro sec
gateveto	<input type="text" value="400"/>	x10micro sec
	<input type="text" value="400"/>	x8nsec
gateveto2	<input type="text" value="1300"/>	x10micro sec
	<input type="text" value="200"/>	x8nsec
voffsetHer	<input type="text" value="9"/>	x10micro sec
vpreHer	<input type="text" value="1100"/>	x8nsec

injection_bg



CSS to Phoebus migration workflow – trgcdc

Group	File name	status	opi → bob conversion	test_20240703	ecltrg test_20240717	test_20240731	test_20240812	test_20240826
Files for GRL/CDCTRG :	trgcdc/trgcdc.opi	DONE	done	Not working at all	Not working at all	Not working at all	Table doesn't show nsm, color problem	

Introduction for TRG Phoebus × inj_bg × gdl0014_tmdl × gdl0014_psn × gdl0014_itd × gdl0014_inj × gdl0014_firm × ecl_bkg × **trgcdc ×** ecltrg × trg4 × RC TRG × Console × gdl0015_status ×

90 %

ne	CDCFE	Value	Status	#down	#down
U2	70,71	1	OK	0	0
U1	72,73	1	OK	0	0
U2	74,75	1	OK	0	0
U1	76,77	1	OK	0	0
U2	78,79	1	OK	0	0
U1	80,81	1	OK	0	0
U2	82,83	1	OK	0	0
U1	84,85	1	OK	0	0
U2	86,87	1	OK	0	0
U1	88,89	1	OK	0	0
U2	90,91	1	OK	0	0
U1	92,93	1	OK	0	0
U2	94,95	1	OK	0	0
U1	96,97	1	OK	0	0
U2	98,99	1	OK	0	0
U1	100,101	1	OK	0	0
U2	102,103	1	OK	0	0
U1	104,105	1	OK	0	0
U2	106,107	1	OK	0	0
U1	108,109	1	OK	0	0
U2	110,111	1	OK	0	0
U1	112,113	1	OK	0	0
U2	114,115	1	OK	0	0
U1	116,117	1	OK	0	0
U2	118,119	1	OK	0	0

PV Name	CDCFE	Value	Status	#down	#down
MGR5-0-U1	132,133	1	OK	0	0
MGR5-0-U2	134,135	1	OK	0	0
MGR5-1-U1	136,137	1	OK	0	0
MGR5-1-U2	138,139	1	OK	0	0
MGR5-2-U1	140,141	1	OK	0	0
MGR5-2-U2	142,143	1	OK	0	0
MGR5-3-U1	144,145	1	OK	0	0
MGR5-3-U2	146,147	1	OK	0	0
MGR5-4-U1	148,149	1	OK	0	0
MGR5-4-U2	150,151	1	OK	0	0
MGR5-5-U1	152,153	1	OK	0	0
MGR5-5-U2	154,155	1	OK	0	0
MGR5-6-U1	156,157	1	OK	0	0
MGR5-6-U2	158,159	1	OK	0	0
MGR5-7-U1	160,161	1	OK	0	0
MGR5-7-U2	162,163	1	OK	0	0
MGR5-8-U1	164,165	1	OK	0	0
MGR5-8-U2	166,167	1	OK	0	0
MGR6-0-U1	168,169	1	OK	0	0
MGR6-0-U2	170,171	1	OK	0	0
MGR6-1-U1	172,173	1	OK	0	0
MGR6-1-U2	174,175	1	OK	0	0
MGR6-2-U1	176,177	1	OK	0	0
MGR6-2-U2	178,179	1	OK	0	0
MGR6-3-U1	180,181	1	OK	0	0

PV Name	CDCFE	Value	Status	#down	#down
MGR6-6-U2	194,195	1	OK	0	0
MGR6-7-U1	196,197	1	OK	0	0
MGR6-7-U2	198,199	1	OK	0	0
MGR6-8-U1	200,201	1	OK	0	0
MGR6-8-U2	202,203	1	OK	0	0
MGR6-9-U1	204,205	1	OK	0	0
MGR6-9-U2	206,207	1	OK	0	0
MGR7-0-U1	208,209	1	OK	0	0
MGR7-0-U2	210,211	1	OK	0	0
MGR7-1-U1	212,213	1	OK	0	0
MGR7-1-U2	214,215	1	OK	0	0
MGR7-2-U1	216,217	1	OK	0	0
MGR7-2-U2	218,219	1	OK	0	0
MGR7-3-U1	220,221	1	OK	0	0
MGR7-3-U2	222,223	1	OK	0	0
MGR7-4-U1	224,225	1	OK	0	0
MGR7-4-U2	226,227	1	OK	0	0
MGR7-5-U1	228,229	1	OK	0	0
MGR7-5-U2	230,231	1	OK	0	0
MGR7-6-U1	232,233	1	OK	0	0
MGR7-6-U2	234,235	1	OK	0	0
MGR7-7-U1	236,237	1	OK	0	0
MGR7-7-U2	238,239	1	OK	0	0
MGR7-8-U1	240,241	1	OK	0	0
MGR7-8-U2	242,243	1	OK	0	0

PV Name	CDCFE	Value	Status	#down	#down
MGR8-1-U1	256,257	0	BAD	0	0
MGR8-1-U2	258,259	0	BAD	0	0
MGR8-2-U1	260,261	1	OK	0	0
MGR8-2-U2	262,263	1	OK	0	0
MGR8-3-U1	264,265	1	OK	0	0
MGR8-3-U2	266,267	1	OK	0	0
MGR8-4-U1	268,269	1	OK	0	0
MGR8-4-U2	270,271	1	OK	0	0
MGR8-5-U1	272,273	1	OK	0	0
MGR8-5-U2	274,275	1	OK	0	0
MGR8-6-U1	276,277	1	OK	0	0
MGR8-6-U2	278,279	1	OK	0	0
MGR8-7-U1	280,281	1	OK	0	0
MGR8-7-U2	282,283	1	OK	0	0
MGR8-8-U1	284,285	1	OK	0	0
MGR8-8-U2	286,287	1	OK	0	0
MGR8-9-U1	288,289	1	OK	0	0
MGR8-9-U2	290,291	1	OK	0	0
MGR8-10-...	292,293	0	BAD	0	0
MGR8-10-...	294,295	0	BAD	0	0
MGR8-11-...	296,297	0	BAD	0	0
MGR8-11-...	298,299	0	BAD	0	0

PV Name	Value	Status
ready_TSF0	1	OK
ready_TSF1	1	OK
ready_TSF2	1	OK
ready_TSF3	1	OK
ready_TSF4	1	OK
ready_TSF5	1	OK
ready_TSF6	1	OK
ready_TSF7	1	OK
ready_TSF8	0	BAD

PV Name	Value	Status
ready_TNN0	0	BAD
ready_TNN1	0	BAD
ready_TNN2	0	BAD
ready_TNN3	0	BAD
ready_T3D0	0	BAD
ready_T3D1	0	BAD
ready_T3D2	0	BAD
ready_T3D3	0	BAD
ready_TNN0_cc	0	BAD
ready_TNN1_cc	0	BAD
ready_TNN2_cc	0	BAD
ready_TNN3_cc	0	BAD

PV Name	Value	Status
ready_T2D0	0	BAD
ready_T2D1	0	BAD
ready_T2D2	0	BAD
ready_T2D3	0	BAD
ready ETF2	0	BAD
ready_T2D0_cc	0	BAD
ready_T2D1_cc	0	BAD
ready_T2D2_cc	0	BAD

PV Name	Value	Status
GRL:KLM	1	OK
GRL:ECL	1	OK
GRL:2D	0	BAD
GRL:3D	0	BAD
GRL:NN	0	BAD
GRL:TOP	1	OK
GRL:GDL	0	BAD
GRL:TSF_LO...	0	BAD

CSS to Phoebus migration workflow – trg4

Group	File name	status	opi → bob convers ion	test_20240703	ecltrg test_20240717	test_20240731	test_20240812	test_20240826
Files for TRG expert shift is	trgMain/main/trg4.opi	DONE	done		- non of command(recover, reboot, freboot) worked	Working Well		

Introduction for TRG Phoebus ×
inj_bg ×
gdI0014_tmdl ×
gdI0014_psn ×
gdI0014_itd ×
gdI0014_inj ×
gdI0014_firm ×
ecl_bkg ×
trgcdc ×
ecltrg ×
trg4 ×

The Trigger Status Panel for Expert Shifter Tue Oct 1 16:50:13 JST 2024

1. Please check subtrigger readiness==OK (ignore during null run/local work)
 2. If BAD, please execute recovery command. If Rocket chat message appear, please follow.
 3. If you can not fix the problem within 5 minute, please call core expert immediately.
 (If it is not clear who should be called, please call T.Koga 0-080-5207-1310)

TRG in Local Work. You can ignore both L1 Signal and TRG DAQ States

GDL L1rate(Hz)	0.0	Global Runtype	null	Global Runno	658	TRG SYSTEM is in	LOCAL
GDL config	BEAM	Global TRGtype	pelisson	Global Expro	34	ECL SYSTEM is in	LOCAL

L1 Signal BAD

TRG DAQ UNKNOWN

GLOBAL DAQ READY

Now run type is null. please ignore this panel.

L1 signal status	Recovery command	Core expert
SLC <input checked="" type="checkbox"/> OK		[SLC] T.Koga 0-080-5207-1310
ECLSLC <input checked="" type="checkbox"/> OK		[ECLSLC, ECL] Y.Unno tel: 0-090-3579-1525 Skype: live:..cid.a3bc05bc322f6923
ECL <input checked="" type="checkbox"/> BAD Detail	1.recover 2.reboot 3.freboot	
TOP <input type="checkbox"/> Label text Detail	1. reboot: b2trg@btrgsrv2:~\$trgexp/scr/toptrg.sh	[TOP] S.Vladimir Skype: vladimir-savinov
KLM <input type="checkbox"/> OFF Detail		[KLM] R.Peschke Whatsapp: +1808 4762512 Tel: +1 972 994 6974
GRL/CDC <input checked="" type="checkbox"/> BAD Detail	1. If Rocket chat message suggest to reprogram FE, please ask CR to do so. 2.recover	[GRL/CDC] T.Koga 0-080-5207-1310 H.Bae 0-090-8844-7997
GDL <input checked="" type="checkbox"/> EXCLUDED Detail		[GDL]H.Nakazawa 0-090-4223-0134 T.Koga 0-080-5207-1310

Execute recovery command of BAD component, from top to bottom.
 (ex. if GRL/CDC and GDL are BAD at the same time, please try GRL/CDC at first.)

DAQ/monitor error If TRG is in GLOBAL, please handle below errors always even when run type is null

TRGDAQ	ttlost, ttdown, busy, b2ldown, b2llost, ttd etc. error notified by CR	Try SALS and Call core expert	H.Nakazawa 0-090-4223-0134 T.Koga 0-080-5207-1310
BG duration monitor on BCG	BG duration monitor error notified by BCG	1.recover	H.Bae 0-090-8844-7997 T.Koga 0-080-5207-1310

CSS to Phoebus migration workflow - ecltrg

Group	File name	status	opi -> bob conversion	test_20240703	ecltrg test_20240717	test_20240731	test_20240812	test_20240826
Files for ecltrg	ecltrg_menu.opi		will not be used					
	ecltrg_main.opi	DONE	done	the trg2 panel doesn't work	<ul style="list-style-type: none"> - response of the color for upper 4 indicator boxes and run numbers in bottom are OK, but labels in the boxes of 1st and 2nd from left are strange. - the response of indicator boxes for FAM, TMM, ETM look OK. (but the label names are different from opi) - FAM,TMM,ETM worked 			
	a part of trg2.opi	DONE	merged to ecltrg_main		<ul style="list-style-type: none"> - TRGECL SLC process panel does not work at all. Unno san will fix by himself. 			
	ecltrg_bkgmon.opi	DONE	done			Need nsm test. NSM was not connected.	Working Well	

CSS to Phoebus migration workflow

Group	File name	status	opi -> bob conversion	test_20240703	ecltrg test_20240717	test_20240731	test_20240812	test_20240826
etc.	phoebus/main/RCControlMain.bob	DONE						nsm problem

CTRL: ON

TRG PCIe40 Run Control Nodes

Reload

Hostname	TTD	DMA	DMA [kBytes]	Size [Bytes]	Rate [MB/s]	Program PCIe40
<input checked="" type="checkbox"/> rtra1	NOTREADY	NOTREADY	0	0	0.00	INIT
Belle2link-channel						
0-3	<input type="checkbox"/>	<input type="checkbox"/>	0	<input type="checkbox"/>	0	2D0, 2D1, 2D2, 2D3
4-7	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0	<input checked="" type="checkbox"/>	0	3D0, 3D1, 3D2, 3D3
8-11	<input type="checkbox"/>	<input type="checkbox"/>	0	<input type="checkbox"/>	0	NN0, NN1, NN2, NN3
12-15	<input type="checkbox"/>	<input type="checkbox"/>	0	<input type="checkbox"/>	0	TSF0, TSF1, TSF2, TSF3
16-19	<input type="checkbox"/>	<input type="checkbox"/>	0	<input type="checkbox"/>	0	TSF4, TSF5, TSF6, TSF8
20-23	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	<input type="checkbox"/>	0	ETF2, GDL, GRL, TOP1
24-27	<input type="checkbox"/>	<input type="checkbox"/>	0	<input type="checkbox"/>	0	TOP2
28-31	<input type="checkbox"/>	<input type="checkbox"/>	0	<input type="checkbox"/>	0	

RC_TRG

Run #: 628 TRG@RC:cosmic:201

RC_STORE_LOCAL NOTREADY

RC_HLT_RTRG NOTREADY

TRG NOTREADY

TTD_TRG NOTREADY

LOAD

ABORT

TRG

Run #: 657

RTRG1 NOTREADY

RCBTRGSRV NOTREADY

LOAD

ABORT

FTSW # 185

ERROR

resetft statft

Trigger type: poisson

Trigger limit: -1

Dummy rate: 100 [Hz]

Max time: 499 [us]

Max trig: 1

Run start at: 2024-10-01 16:36:23

Run time: 819 [sec]

Trigger in: 105.6 [Hz]

Trigger out: 0.0 [Hz]

Input count: 82826

Output count: 0

RC_HLT_RTRG

Run #: 628

HLTIN_RTRG NOTREADY

HLTOUT_RTRG NOTREADY

EB1_RTRG NOTREADY

HLTWK13_RTRG NOTREADY

HLTWK14_RTRG NOTREADY

DQM_RTRG NOTREADY

LOAD

ABORT

RC_STORE_LOCAL

NOTREADY

EB2RX_LOCAL NOTREADY

DISTRIBUTOR_LOCAL NOTREADY

WORKER_LOCAL NOTREADY

events: 000000

Rate: 000000

Flow: 000000

RCBTRGSRV

Run #: 657

LOAD

ABORT

TRGGD1 OFF	TRGT2D3 NOTREADY	TRGTNN0 NOTREADY	TRGTSF1 NOTREADY	TRGMGR1 NOTREADY
TRGGRE NOTREADY	TRGT3D0 NOTREADY	TRGTNN1 NOTREADY	TRGTF2 NOTREADY	TRGMGR2 NOTREADY
TRGT2D0 NOTREADY	TRGT3D1 NOTREADY	TRGTNN2 NOTREADY	KLMTRE NOTREADY	TRGMGR3 NOTREADY
TRGT2D1 NOTREADY	TRGT3D2 NOTREADY	TRGTNN3 NOTREADY	TRG_READ1 NOTREADY	TRGMGR4 NOTREADY
TRGT2D2 NOTREADY	TRGT3D3 NOTREADY	TRGTSF0 NOTREADY		

Load & Apply Mask

Save & Apply Mask

● suppress.sh

● NoLimit.sh

Some tips (Updated on Feb. 18, 2022)

- * How to program PCIe40 firmware
- Push "Program PCIe40" and wait until the progress-bar reaches "SUCCESS".
- Mask was set as before program PCIe40, refresh bob to confirm.

* Mask/unmask channels

- Update channel checkboxes and push "Save & apply Mask".

* Load and apply the last saved mask setting

- Push "Load & Apply Mask" and then checkboxes should be updated.
- Refresh OPI to confirm the update.

CSS to Phoebus migration workflow - ecltrg

Introduction for TRG Phoebus × inj_bg × gdI0014_tmdl × gdI0014_psn × gdI0014_itd × gdI0014_inj × gdI0014_firm × ecl_bkg × trgcdc × ecltrg × trg4 × RC TRG × Console × gdI0015_status ×

TRG/ECLTRG-Detail/Home

ECLTRG **NOTREADY** **Label text** **NOTREADY** **LOCAL**

Global run # 658 Local run # 648

Trg rate(out) **Trg rate(in)**

Trg rate(out) max **Trg rate(in) max**

Luminosity(2D) **Luminosity(3D)**

Bhabha rate(2D) **Bhabha rate(3D)**

FAM **OFF**

FAM Versions

Firmware b2tt MCU

FAM Ready Signal Components 0 is OK.

clock NClkDwn

TMM **Label text**

TMM Versions

Firmware b2tt MCU

TMM Ready Signal Components 0 is OK.

clock clk NDwn

ETM **OFF** If it has a problem, Please try clicking ABORT / LOAD button.

ETM Versions

Firmware b2tt b2L

ETM Ready Signal Components 0 is OK.

clock

ETM-GDL Link Status

[Description]

[+] 1: Link is Down(not OK), 0: Link is UP(OK),
 [+] ETM-GDL Link is automatically disconnected when ECLTRG shows NOTREADY if RC_ECL is in Global (This one deactivated from 2019 autumn run.)
 [+] This is recovered when CR-shifts click ABORT or LOAD button.

TRGECL (BTRGCTR) SLC processes

ECL10 Run # :

LOAD ABORT BOOT

- The purple box is due to the connection when the screenshot is created.
- TRGECL SLC panel (trg2) in the ecltrg_main will be fixed by Unno san.

CSS to Phoebus migration workflow – opening Phoebus

Group	File name	status	opi -> bob conversion	test_20240703	ecltrg test_20240717	test_20240731	test_20240812	test_20240826
etc.	open_phoebus	DONE	done					

- The “open_phoebus” icon has been created on the desktop in btrgterm0.
- the bobfiles for trigger control are in the ~/Phoebus in the btrgterm0. You may see the READMEforTRGCTR. Or you can also see the introduction for TRG Phoebus in the phoebus tab as

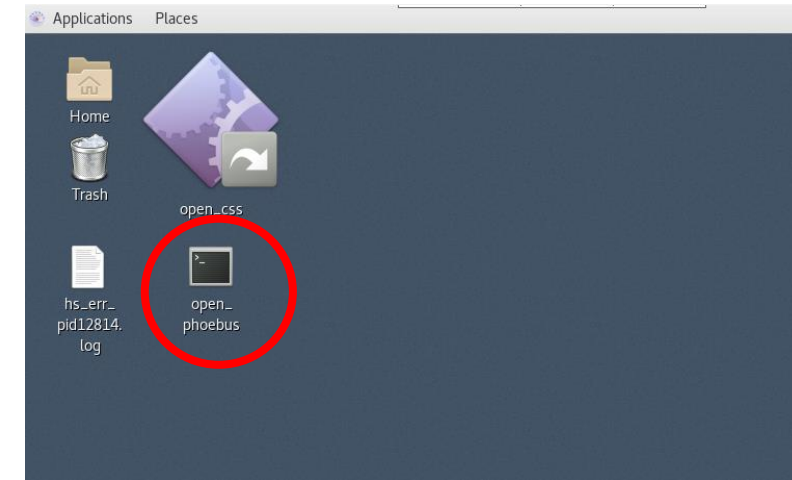
```
Introduction for TRG Phoebus x | ecl_bkg x | ecltrg x | trg4 x | RC
```

Introduction

This is the address of bob files for trigger control.

RCTR: ~/Phoebus/main/rcmain_trg_pcie40.bob
gdl related: ~/Phoebus/trg/trggdl/
trg4 controller: ~/Phoebus/trg/trgMain/main/trg4.bob
cdc : ~/Phoebus/trg/trgcdc/trgcdc.bob
ecl : ~/Phoebus/trg/ecltrg/ecltrg_main.bob

"~/Phoebus" is a symbolic link.
The original address is "/home/trgadmin/css/phoebus/UseThis"



CSS to Phoebus migration workflow

Group	File name	status	opi -> bob conversion	test_20240703	ecltrg test_20240717	test_20240731	test_20240812	test_20240826
etc.	gitlab upload	Merging						

- This migration work is requested for merging to daq_rc_gui in gitlab
https://gitlab.desy.de/belle2/daq/daq_rc_gui/-/merge_requests/270
- If you have any changes, copy the changed file into the daq_rc_gui git folder below:
 /home/trgadmin/Phoebus/daq_rc_gui/DAQ/phoebus/trg/
 In case of the RCcontrol, /home/trgadmin/Phoebus/daq_rc_gui/DAQ/phoebus/main

and in that folder,

```
git add changed files
git commit -m "what is changed"
git push
```

- You can see this instruction in the TRG introduction tab:

Introduction

This is the address of bob files for trigger control.
 RCTRG: ~/Phoebus/main/rcmain_trg_pcie40.bob
 gdl related: ~/Phoebus/trg/trggdl/
 trg4 controller: ~/Phoebus/trg/trgMain/main/trg4.bob
 cdc : ~/Phoebus/trg/trgcdc/trgcdc.bob
 ecl : ~/Phoebus/trg/ecltrg/ecltrg_main.bob

"~/Phoebus" is a symbolic link.
 The original address is "/home/trgadmin/css/phoebus/UseThis"

If you have any changes, copy the changed file into the daq_rc_gui git folder below:
 /home/trgadmin/Phoebus/daq_rc_gui/DAQ/phoebus/trg/

In case of the RCcontrol, /home/trgadmin/Phoebus/daq_rc_gui/DAQ/phoebus/main

and in that folder update the git following

```
git add changed files
git commit -m "what is changed"
git push
```