

Test run hybrid production

Hybrid #	Received	Passive components loaded / cleaned	Sent to UCSC	APV25s loaded	Wirebonded	Tested	Results	Sent to SLAC	Glued to carbon fiber	Part of half-module	Notes
Hybrid 0	10/10/11(RH)	?	?	?	?	test 1	?	?	?	Half-module 0	COMPLETE
Hybrid 1	10/10/11(RH)	?	2/1/12 (PH,VF)	2/1/12(FM)	2/3/12(FM)	2/14/12 OM test 1	OK	2/22/12 (OM)	2/23/12 (TKN)	Half-module 1	COMPLETE
Hybrid 0t	2/21/12(RH)	2/22/12(RH)	2/23/12 (AG)	2/24/12(FM)	2/27/12(FM)	2/29/12 OM test 1	OK	2/29/12 (OM)	3/1/12 (TKN)	Half-module 2	COMPLETE
Hybrid 1t	2/21/12(RH)	3/5/12(RH/PH)	3/5/12 (PH)	3/6/12(FM)	3/7/12(FM)	3/7/12 (OM) test 1	OK	3/7/12 (JN)	3/10/12 (TKN)	Half-module 3	COMPLETE
Hybrid 2t	2/21/12(RH)	3/5/12(RH/PH)	3/5/12 (PH)	3/6/12(FM)	3/7/12(FM)	3/7/12 (OM) test 1	OK	3/7/12 (JN)	3/10/12 (TKN)	Half-module 4	COMPLETE
Hybrid 3t	2/21/12(RH)	3/5/12(RH/PH)	3/5/12 (PH)	3/6/12(FM)	3/7/12(FM)	3/7/12 (OM) test 1	OK	3/7/12 (JN)	3/10/12 (TKN)	Half-module 5	COMPLETE
Hybrid 4t	2/21/12(RH)	3/14/12(RH/PH)	3/14/12 (PH)	3/14/12(FM)	3/15/12(FM)	3/15/12 (VF, OM) test 1 3/15/12 test 2 3/15/12 test 3 3/16/12 test 4 3/16/12 test 5	Bad channel 466, else OK.	3/16/12 (PH)	3/20/12 (TKN)	Half-module 9	COMPLETE
Hybrid 5t	2/21/12(RH)	3/14/12(RH/PH)	3/14/12 (PH)	3/14/12(FM)	3/15/12(FM)	3/15/12 (VF)	V125, AVDD, GND shorts => no readout test	3/16/12 (PH)	-	-	-
5t continued	-	-	-	-	-	3/23/12 (PH) test 1 3/23/12 (PH) test 2 3/23/12 (PH) test 3 3/23/12 (PH) test 4 3/23/12 (PH) test 5 3/23/12 (PH) test 6	After connector pinout fixed: channel 417 dead, else OK	-	3/27/12 (TKN)	Half-module 21	COMPLETE
Hybrid 6t	2/21/12(RH)	3/14/12(RH/PH)	3/14/12 (PH)	Not loaded, loose connector wire (FM, VF)	back to SLAC	-	-	3/16/12 (PH)	-	-	continued on next line...
6t continued	-	-	3/19/12 (TKN/VF)	3/19/12(FM)	3/20/12 (FM)	3/20/12 (OM) test 1	Bad channel 345, else OK.	3/20/12 (VF)	3/22/12 (TKN)	Half-module 12	COMPLETE
Hybrid 7t	2/21/12(RH)	3/15/12(RH/PH /TKN)	3/16/12 (PH)	3/16/12 (FM)	3/17/12 (FM)	3/17/12 (TC,VF) test 1	OK	3/18/12 (VF)	3/18/12 (TKN)	Half-module 6	COMPLETE
Hybrid 8t	2/21/12(RH)	3/15/12(RH/PH /TKN)	3/16/12 (PH)	3/16/12 (FM)	3/17/12 (FM)	3/17/12 (TC,VF) test 1 3/18/12 test 2 3/18/12 test 3	APV0 defective? Could not set defaults => No test results.	?	?	Half-module ?	Needs further testing
Hybrid 9t	2/21/12(RH)	3/15/12(RH/PH /TKN)	3/16/12 (PH)	3/16/12 (FM)	3/17/12 (FM)	3/17/12 (TC,VF) test 1	Problems testing with DAQ	3/18/12 (VF)	?	Half-module ?	Needs further testing
Hybrid 10t	2/21/12(RH)	3/15/12(RH/PH /TKN)	3/16/12 (PH)	3/16/12 (FM)	3/17/12 (FM)	3/17/12 (TC,VF) test 1	OK	3/18/12 (VF)	3/18/12 (TKN)	Half-module 7	COMPLETE
Hybrid 11t	2/21/12(RH)	3/15/12(RH/PH /TKN)	3/16/12 (PH)	3/16/12 (FM)	3/17/12 (FM)	3/17/12 (TC,VF) test 1	OK	3/18/12 (VF)	3/18/12 (TKN)	Half-module 8	COMPLETE
Hybrid 12t	2/21/12(RH)	3/15/12(RH/PH /TKN)	3/16/12 (PH)	Not loaded, b/c of gauge mark on ASIC pad.	N/A	N/A	N/A	3/18/12 (VF)	?	Half-module ?	Salvage connector?

Hybrid 13t	2/21/12(RH)	3/15/12(RH/PH /TKN)	3/16/12 (PH)	3/19/12 (FM)	3/20/12 (FM)	3/20/12 (OM) test 1	OK	3/20/12 (VF)	3/20/12 (TKN)	Half-module 10	COMPLETE
Hybrid 14t	2/21/12(RH)	3/15/12(RH/PH /TKN)	3/16/12 (PH)	3/19/12 (FM)	3/20/12 (FM)	3/20/12 (OM) test 1	OK	3/20/12 (VF)	3/20/12 (TKN)	Half-module 11	COMPLETE
Hybrid 15t	2/21/12(RH)	3/15/12(RH/PH /TKN)	3/16/12 (PH)	3/19/12 (FM)	3/20/12 (FM)	3/19/12 (OM) test 1 3/19/12 test 2	OK	3/20/12 (VF)	3/22/12 (TKN)	Half-module 13	COMPLETE
Hybrid 16t	2/21/12(RH)	3/15/12(RH/PH /TKN)	3/16/12 (PH)	3/19/12 (FM)	3/20/12 (FM)	3/20/12 (OM) test 1	OK	3/20/12 (VF)	3/22/12 (TKN)	Half-module 14	COMPLETE
Hybrid 17t	2/21/12(RH)	3/16/12(PH)	3/19/12 (TKN/VF)	3/19/12 (FM)	3/20/12 (FM)	3/20/12 (OM) test 1	OK	3/20/12 (VF)	3/23/12 (TKN)	Half-module 15	COMPLETE
Hybrid 18t	2/21/12(RH)	3/16/12(PH)	3/19/12 (TKN/VF)	3/19/12 (FM)	3/20/12 (FM)	3/20/12 (OM) test 1	OK	3/20/12 (VF)	3/23/12 (TKN)	Half-module 16	COMPLETE
Hybrid 19t	2/21/12(RH)	3/16/12(PH)	3/19/12 (TKN/VF)	3/19/12 (FM)	3/20/12 (FM)	3/20/12 (OM) test 1	Bad channel 254, else OK	3/20/12 (VF)	3/23/12 (TKN)	Half-module 17	COMPLETE
Hybrid 20t	3/21/12(RH)	3/22/12(PH)	3/23/12 (PH)	3/23/12(FM)	3/24/12(FM)	3/24/12 (OM,VF) test 1 test 2	OK	3/26/12 (VF,PH)	3/26/12 (TKN)	Half-module 18	COMPLETE
Hybrid 21t	3/21/12(RH)	3/22/12(PH)	3/23/12 (PH)	3/23/12(FM)	3/24/12(FM)	3/24/12 (OM,VF)test 1 test 2	OK	3/26/12 (VF,PH)	3/26/12 (TKN)	Half-module 19	COMPLETE
Hybrid 22t	3/21/12(RH)	3/22/12(PH)	3/23/12 (PH)	3/23/12(FM)	3/24/12(FM)	3/24/12 (OM,VF)test 1	OK	3/26/12 (VF,PH)	3/27/12 (TKN)	Half-module 22	COMPLETE
Hybrid 23t	3/21/12(RH)	3/22/12(PH)	3/23/12 (PH)	3/23/12(FM)	3/24/12(FM)	3/24/12 (OM,VF)test 1 test 2	OK	3/26/12 (VF,PH)	3/27/12 (TKN)	Half-module 23	COMPLETE
Hybrid 24t	3/21/12(RH)	3/22/12(PH)	3/23/12 (PH)	3/23/12(FM)	3/24/12(FM)	3/24/12 (OM,VF) test 1 test 2	OK	3/26/12 (VF,PH)	3/26/12 (TKN)	Half-module 20	COMPLETE
Hybrid 25t	3/21/12(RH)	3/29/12(PH)	3/29/12 (PH)	3/29/12(FM)	3/30/12(FM)	3/30/12 (OM) test 1 3/30/12test 2	OK	3/30/12 (AG,VF)	3/30/12 (TKN)	Half-module 24	COMPLETE
Hybrid 26t	3/21/12(RH)	3/29/12(PH)	3/29/12 (PH)	3/29/12(FM)	3/29/12(FM)	3/30/12 (OM) test 1	OK	3/30/12 (AG,VF)	3/30/12 (TKN)	Half-module 25	COMPLETE
Hybrid 27t	3/21/12(RH)	3/29/12(PH)	3/29/12 (PH)	3/29/12(FM)	3/29/12(FM)	3/30/12 (OM) test 1	OK	3/30/12 (AG,VF)	3/30/12 (TKN)	Half-module 26	COMPLETE
Hybrid 28t	3/21/12(RH)	3/30/12(PH)	3/30/12 (AG,VF)	3/30/12(FM)	4/01/12(FM)	4/01/12 (VF) test 1	OK	4/1/12 (PH)	4/1/12 (TKN)	Half-module 28	COMPLETE
Hybrid 29t	3/21/12(RH)	3/30/12(PH)	3/30/12 (AG,VF)	3/30/12(FM)	4/01/12(FM)	4/01/12 (VF) test 1	OK	4/1/12 (PH)	4/1/12 (TKN)	Half-module 29	COMPLETE
Hybrid 30t	3/21/12(RH)	3/30/12(PH)	3/30/12 (AG,VF)	3/30/12(FM)	4/01/12(FM)	4/01/12 (VF) test 1	Chans 203, 300-302 have pronounced baseline tails, others are OK.	4/1/12 (PH)	4/1/12 (TKN)	Half-module 27	COMPLETE

Adding a hybrid to the production database

To add a hybrid, copy the line below into the table and fill in the ?s.

```
|[Hybrid ?] | ? | ? | ? | ? | ? | ? | ? [test 1|Hybrid ?, test 1]| ? | ? | ? | ? |[Half-module ?]| |
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The below link creates the hybrid page. Enter the hybrid ID once for each page that follows, and save the resulting page.

- [Add hybrid page ↗](#)

Adding a set of QA tests

On the hybrid page, click the link to add a test page. Enter the hybrid ID, test number and any notes in the template when prompted. You can also edit the page to record the APV25 settings and other test conditions in the table.

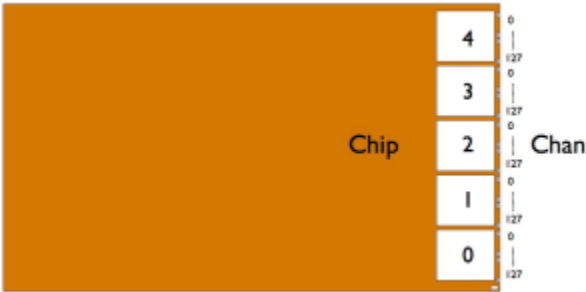
The hybrid page gets created with an excerpt box for the first test; copy the wiki markup for further tests.
The production table starts with an entry for one test; add a newline inside the table to add further tests.

Hybrid Documentation (schematics, layout, etc.)

[HPS Hybrid Confluence Page](#)

Hybrid Channel Numbering

DAQ readout ordering translates to channels on the hybrids as follows:



Sensor channel 0 is at the top of the drawing, so sensor channel = (4 - APV)*128 + channel