Jason Kras

PSL Work : 7/03/18

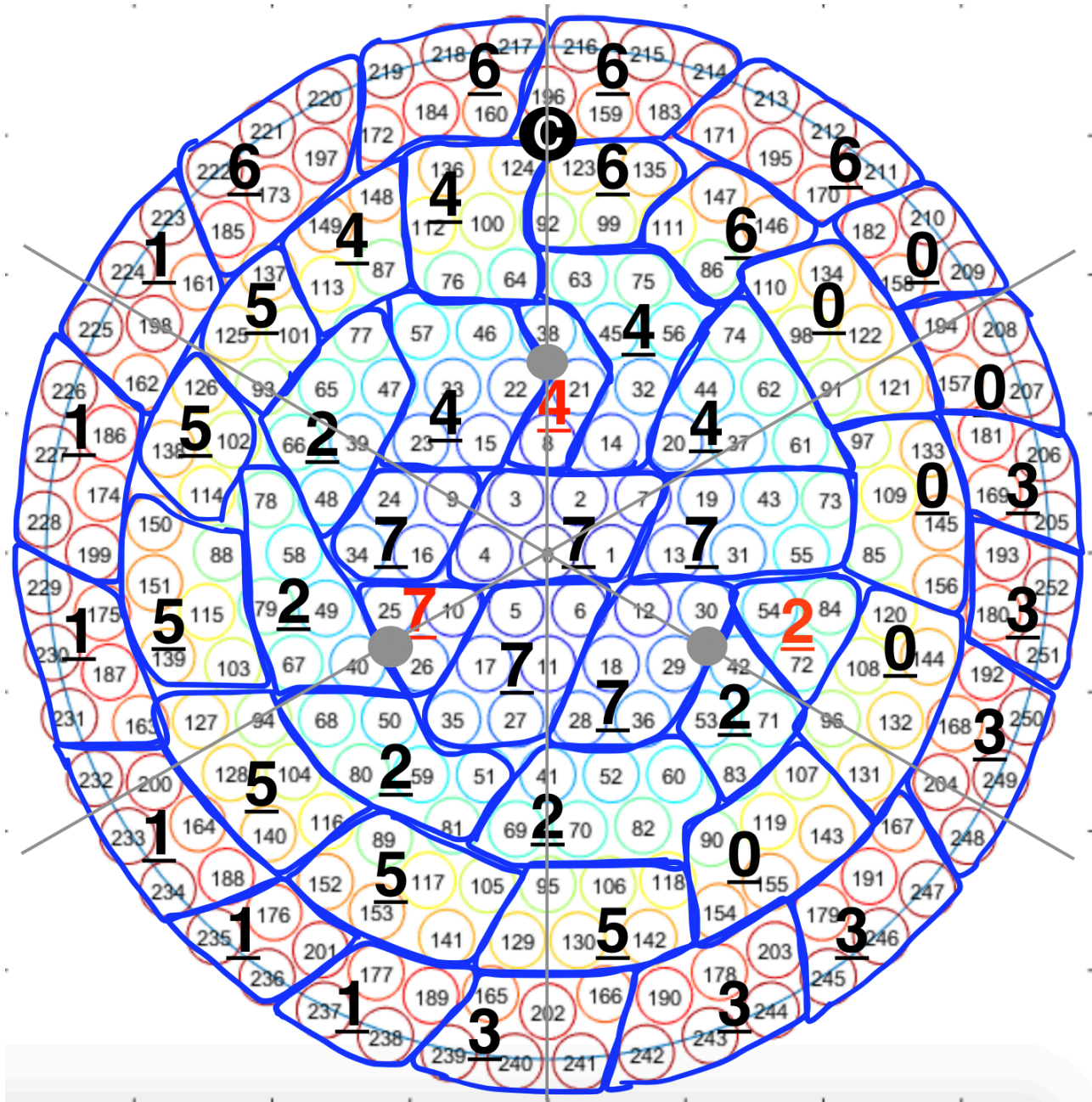
Cable Mapping

- Idea is to have PMTs furthest from the conduit go to the closest flange
- Want to group in such a way to not have any cables be 1-2 wires

	8 wrie cable	6 wire cable	5 wire cable	4 wire cable
Top Signal	32	0	0	0
Bot Signal	28	2	1	0
Top HV	0	32	0	16
Bot HV	0	32	0	13
Top Skin Signal	11	0	1	0
Bot Dome Skin Signal	1	0	2	0
Bot Side Skin Signal	3	0	0	0
Top Skin HV	0	12	1	0
Bot Dome Skin HV	0	3	0	0
Bot Side Skin HV	0	4	0	0
Total	75	85	5	29

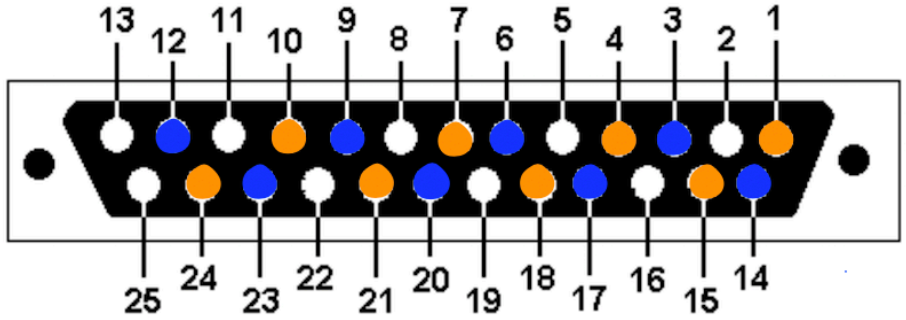
Example: Top HV Map

- Trusses are grey lines, Conduit feedthrough in black circle with “C”, dummy bases are grey circles
- Red numbers are bundles with 3 PMT wires and 1 dummy wire



Wire Labeling and DB-25 Pin Connections

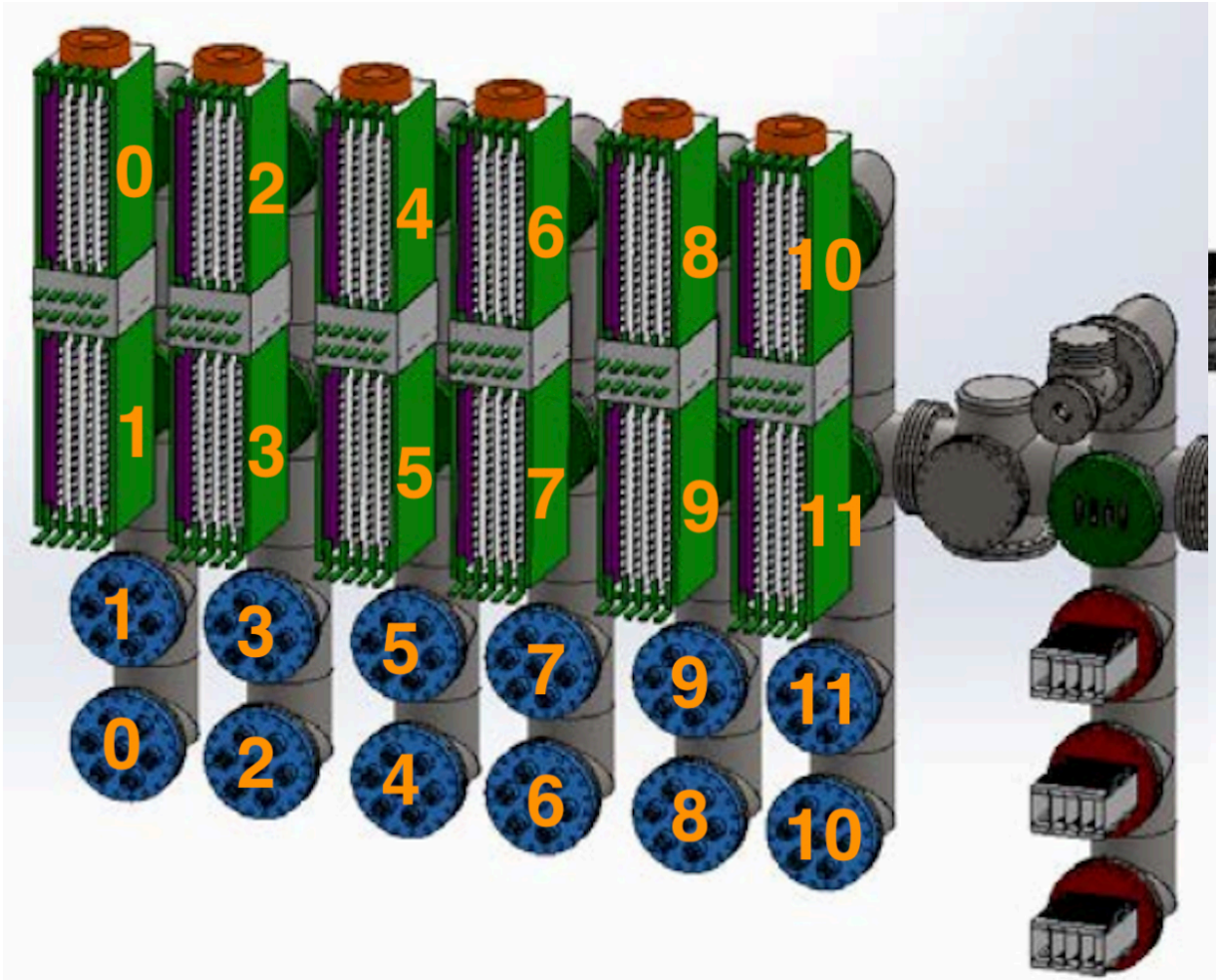
- Label each cable in binary from 0-7 for signals and 0-5 for high voltage in heat shrink
- The lowest PMT number in a bundle is labeled with 0 in binary, next highest PMT labeled with 1
- Increasing cable label is routed from left to right in DB-25



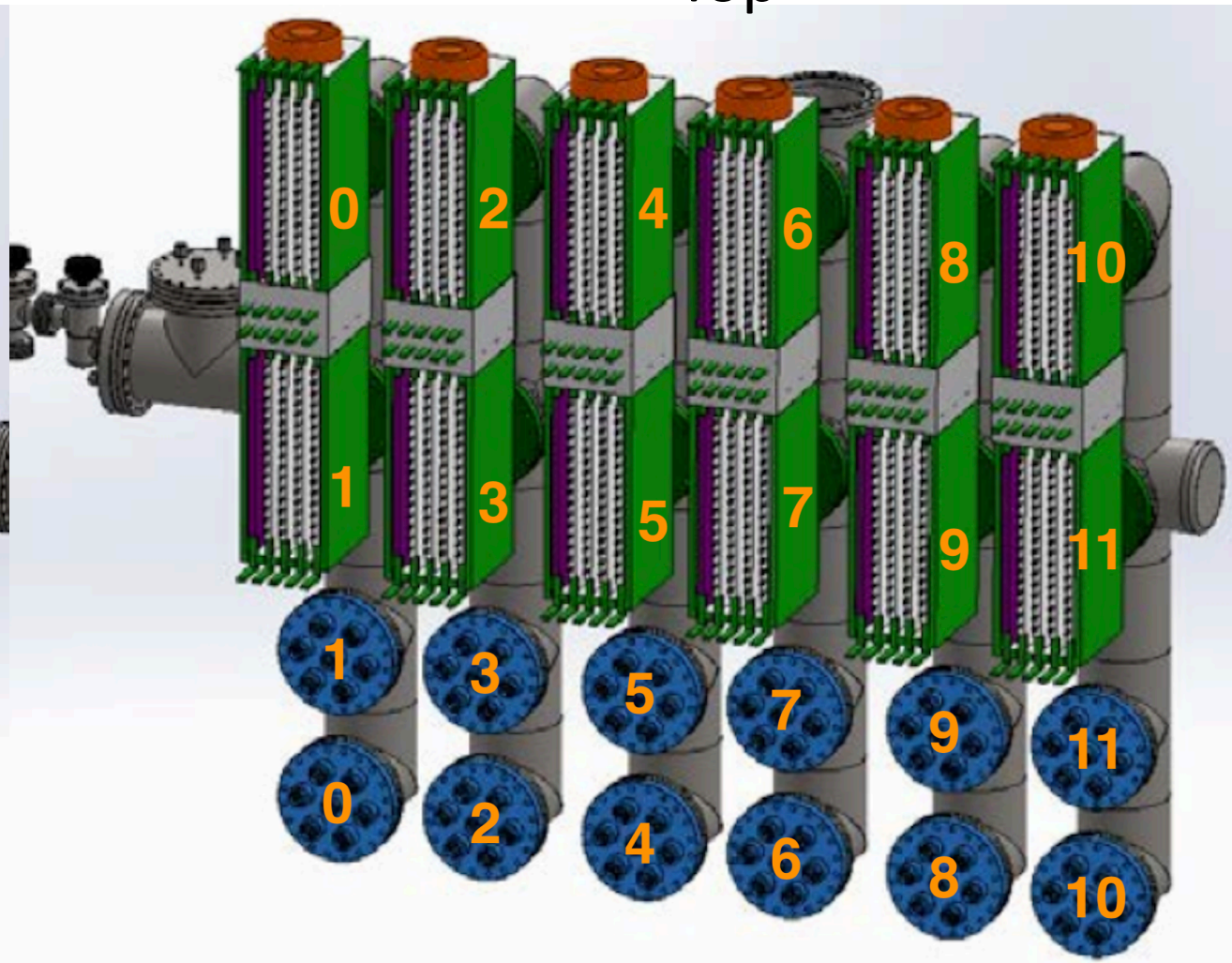
Wire Label	Internal DB-25 Pin	Internal Return Pin	External DB-25 Pin	External Return Pin	Amplifier Slot
0	12	24	2	24,25	A
1	23	10	16	10,11	B
2	9	21	5	21,22	C
3	20	7	19	7,8	D
4	6	18	8	18,19	E
5	17	4	22	4,5	F
6	3	15	11	15,16	G
7	14	1	25	1,2	H

Flange Numbering

Bottom

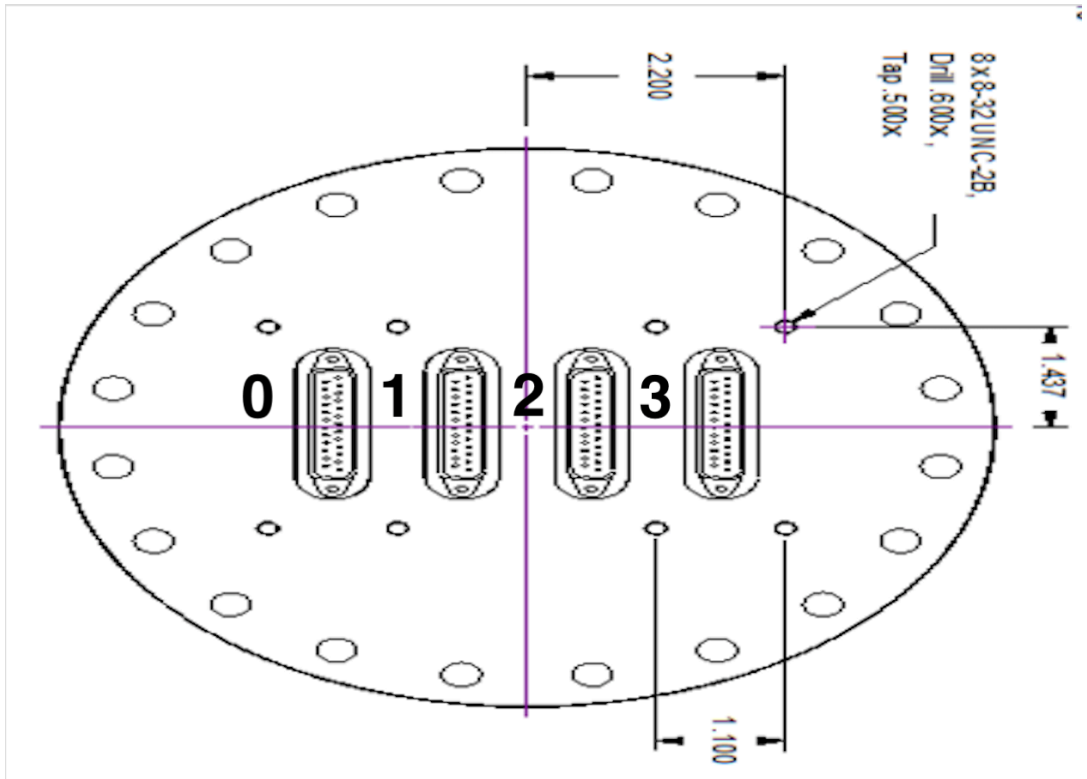


Top



Flange Numbering

Signal Flange: Facing from amplifier side



HV Flange: Facing from amplifier side