Cable Map Status

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US/CN Offline 12/03/22

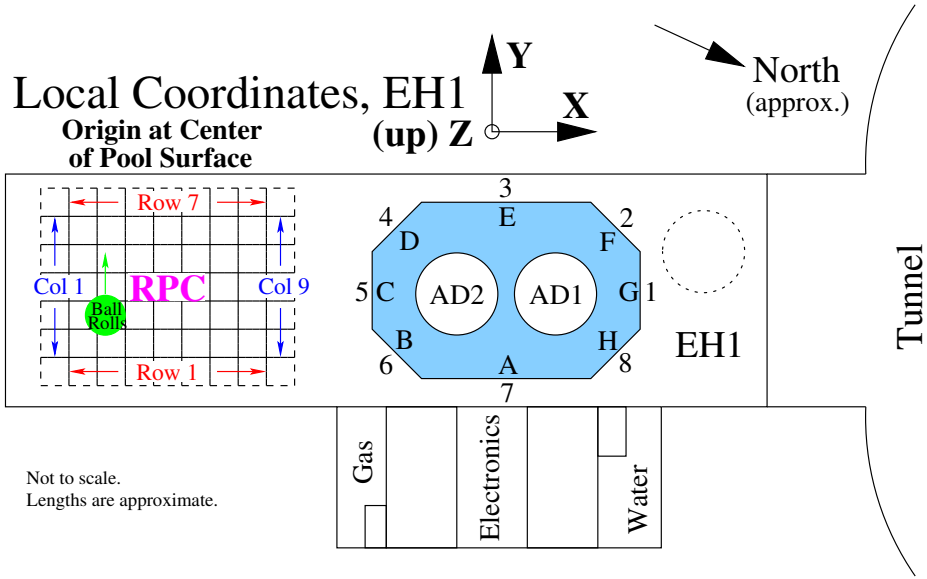
Outline

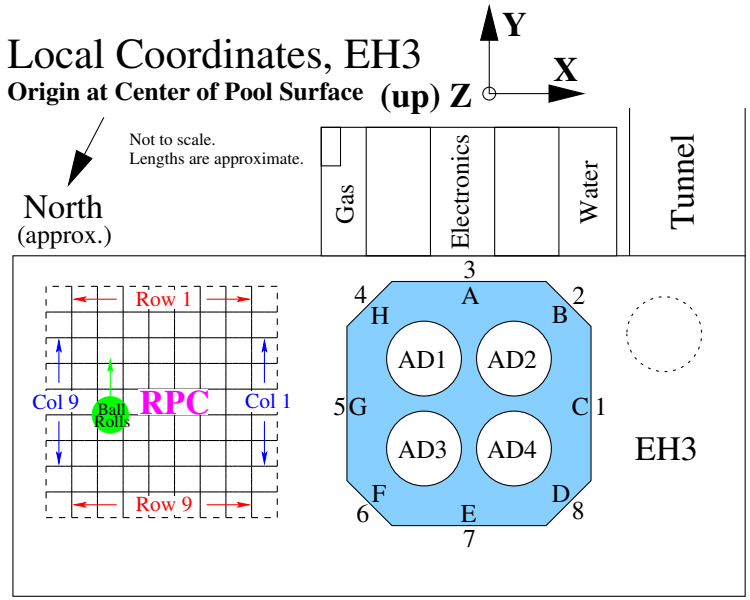
Reminders
- Offline Coordinate System Convention
- Cable Map vs. Geometry

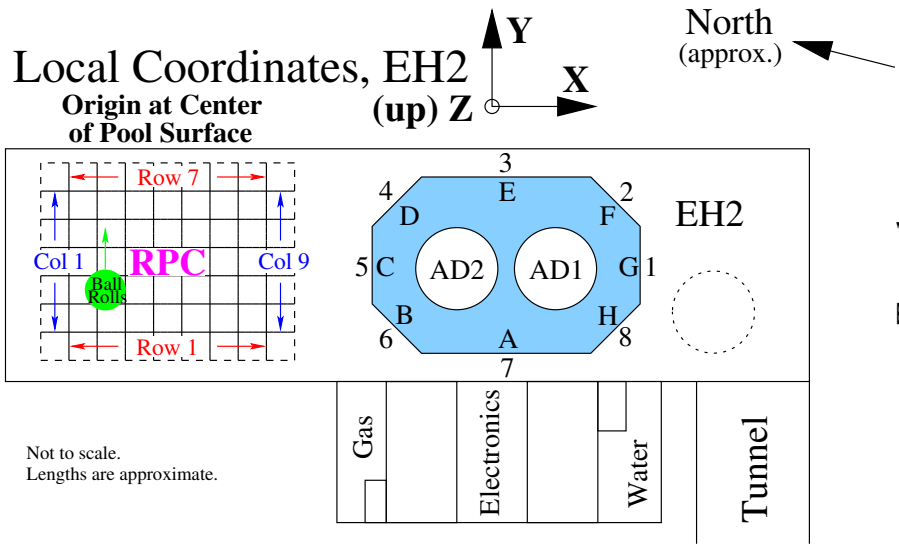
AD Problems

Pool Problems

Status and To Do

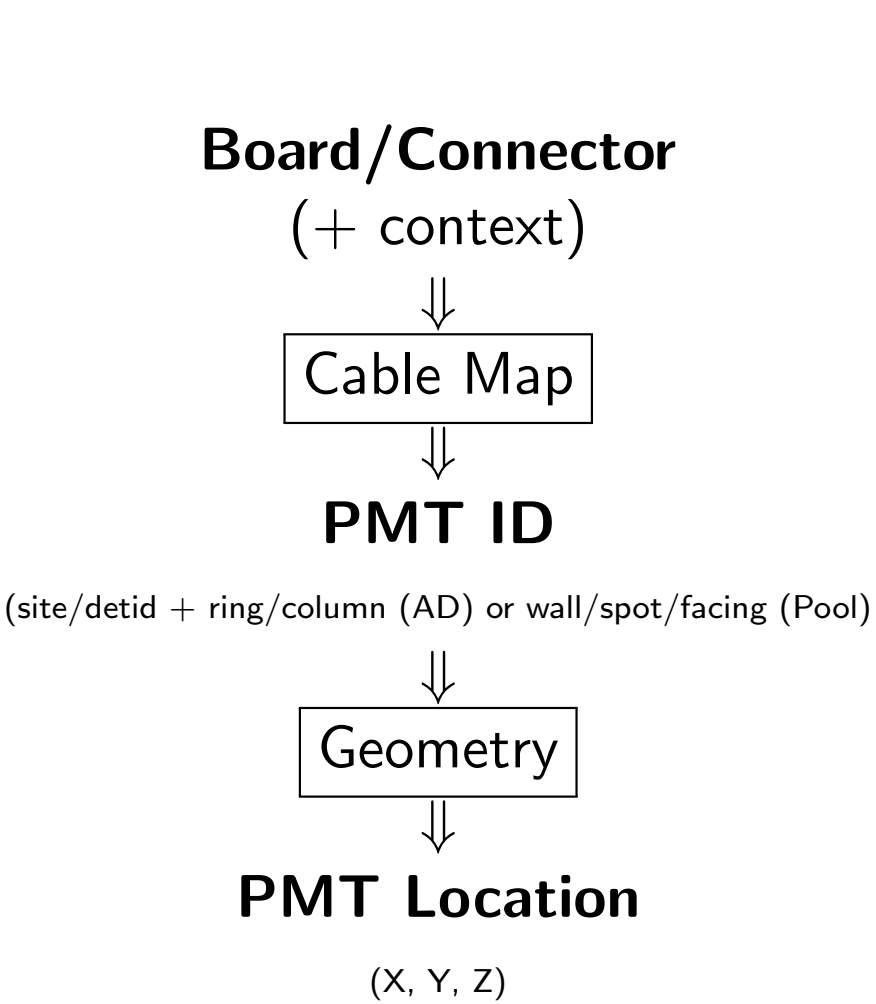






- Site, Pool, AD and RPC X-axis points perpendicular to tunnel, away from RPC "garage".
- Global Y-axis points North, X-axis points East
- Figures from docdb:7566

Cable Map vs. Geometry (reminder)



Cable Map

- in offline database DBI tables
- **PMT ID** specifies a nominal placement in a detector
- conventions differ from installation!
- sometimes difficult to get needed input from experts
- several iterations, still some bugs

Geometry

- in SVN as XML and Python files
- **PMT ID** $\Rightarrow$ **Location** fixed, definitive offline convention

AD Cable Map Workshop Discussion

From docdb:7598-v1

2012/02/14, present: DavidJ, Brett, BobH, Haoqi, Jilei, Miao, DavidJ, Craig, Weidong, Zhimin, Shih-Kai, Jiaheng, Xiaonan, others?

- Convention illustrated in docdb:7566
- Coordinate system conventions between offline and installation differ. 180° rotation mismatch.
- Problems identified:
  - 180° rotation top/bottom halves of EH (Trac #1184, xujl)
    - EH1/EH2 geometry divergence
  - 180° in AD placements (Trac #1187, bv)

Implementing fixes delayed until after PRL excitement calms.
$\longrightarrow$ that time is now

P12B saga mid-Feb

- Wrong but "complete" mapping used via roll-back, `nHit` cuts okay
- Last minute "fix" botched due to incomplete info and convention confusions
- Fixed now (dybaux r5189 and r5192) (Trac #1179)

Pool LED reference signals

Board/connector of LED reference signals (from Yue)

B/C	EH1	EH2	EH3
IWS	6/1	6/1	None
OWS	16/16	16/16	15/16*

- No Pool reference signals recorded in cable map
- `PoolPmtSensor` needs an "`isRefSig()`" method
- *EH3 OWS ref. sig. uses a dead PMT's channel, not reflected in current cable map.
- Trac #911

Current EH1 Pool Cable Map

Last update did not properly take into account DBI VERSIONDATE so wrong SEQNO is returned to users. EH2 and EH3 updates accidently okay.

EH1:

[seqno]	valid from	valid to	count	[insert date]
[495]	2010-11-29 08:56:22	2038-01-19 03:14:07	121	[2012-01-27 05:21:43]
[503]	2010-11-29 08:56:22	2038-01-19 03:14:07	121	[2012-02-16 13:37:09]
[453]	2010-12-07 19:14:20	2038-01-19 03:14:07	116	[2011-06-28 02:26:02]
[467]	2011-06-01 00:00:00	2038-01-19 03:14:07	121	[2011-08-09 06:35:22]

EH2:

[seqno]	valid from	valid to	count	[insert date]
[458]	2010-12-07 19:14:20	2038-01-19 03:14:07	116	[2011-06-28 02:26:02]
[472]	2011-06-01 00:00:00	2038-01-19 03:14:07	121	[2011-08-09 06:35:22]
[497]	2011-08-13 02:28:24	2038-01-19 03:14:07	121	[2012-01-27 05:21:43]
[505]	2011-08-13 02:28:24	2038-01-19 03:14:07	121	[2012-02-16 13:37:09]

VERSIONDATE defaults to validity start and determines precedence.
Previous EH1 (EH2) update 467 (472) starts after (before) recent update 503 (505) so takes (doesn't take) precedence.
$\longrightarrow$ need to reload SEQNO 503 with forced VERSIONDATE (Trac #1195)

Status and To Do

AD:

- Reference signals are mapped (Trac #911)
- Global rotation fix still needed (Trac #1187)
  - → Rotate AD, keeping MO and PMT cylinder fixed, rotate cable maps
  - Will break current mapping between offline column # and installation ladder #.
  - Retains internal, offline conventions
    - AD/Pool/Site axes remain parallel
    - Offline mapping between PMT IDs and locations are retained.
  - Other solutions exist but cause more breakage.

Pool:

- Cable map itself is mostly okay
- DBI machinery EH1 problem with last update just discovered. I'm working on fixing this now (Trac #1195)
- I will add the LED reference signals at same time (Trac #911)