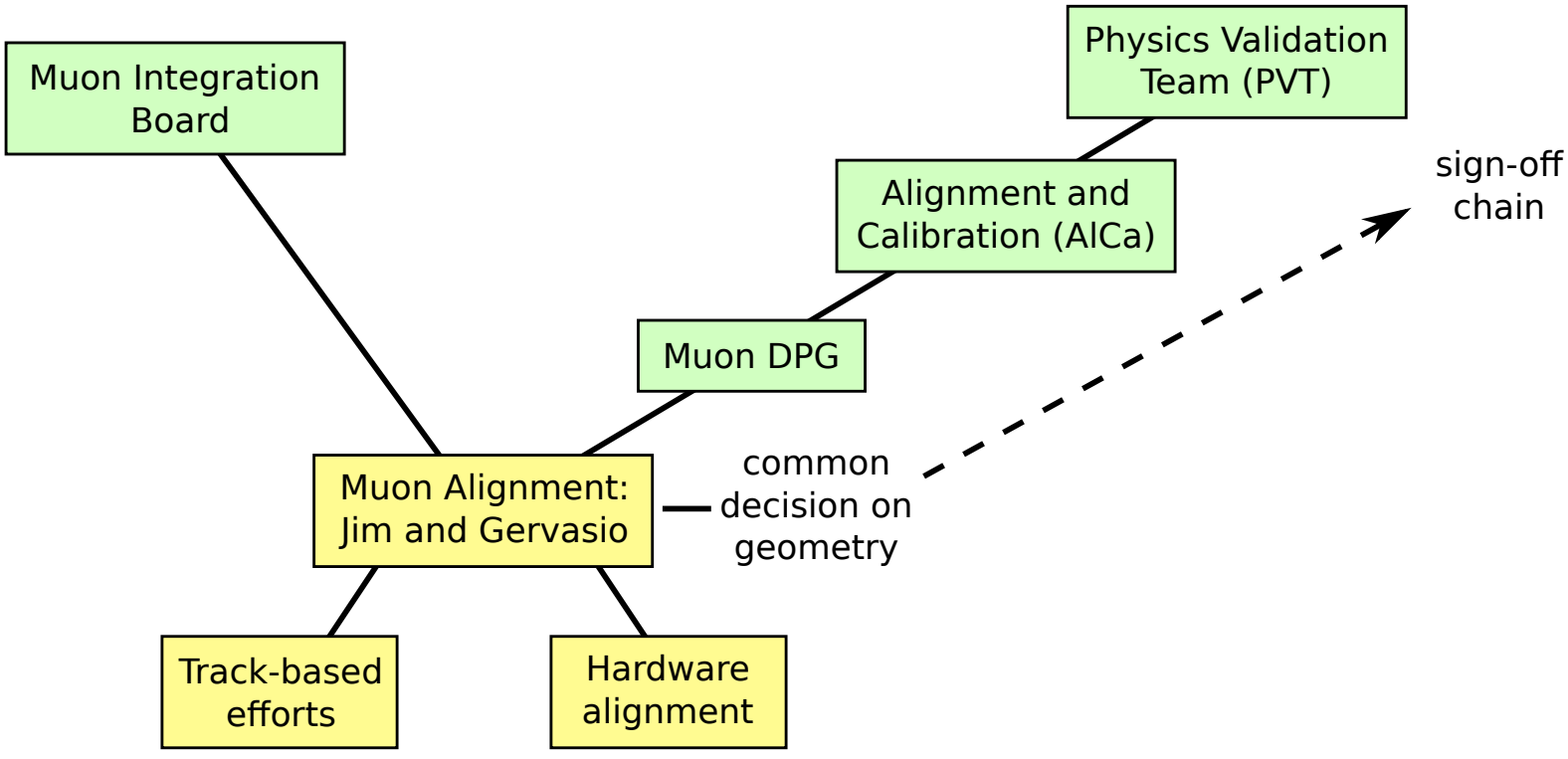
Muon Alignment News

Jim Pivarski Gervasio Gomez

2 July, 2010

Organization

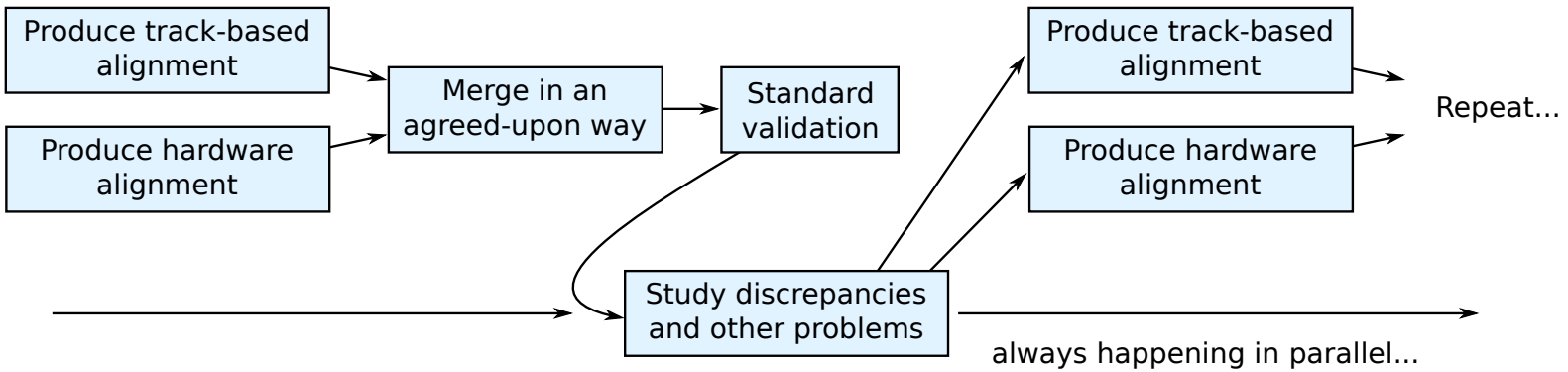
- Gervasio and I have been nominated as co-conveners of the Muon Alignment Group



- The sign-off chain is formalized, but long: we'll need to have a common decision on a muon geometry within the group a few weeks in advance of the CMS-wide sign-off

Quasi-static alignment

- Even when a requested sign-off date is announced in advance, slippage can make the actual date uncertain
- To avoid being caught without an agreed-upon geometry, we should always have a "state-of-the-art" on hand



- The discrepancies/problems that we're working on are usually motivated by the results of validation anyway: having a validated working point formalizes that (and can help assess priorities)

Today's agenda

- Major topic: relative track-based/hardware "barrel twist"
  - largest/most systematic track-based-vs-hardware difference
  - goal: to express what was actually measured very clearly, to figure out where to look to resolve the apparent contradiction

Muon Alignment

chaired by Gervasio Gomez (Instituto de Física de Cantabria) , Jim Pivarski (Texas A&M University)

Friday 02 July 2010 from **15:00** to **18:40** (Europe/Zurich)
at EVO

Material | Previous Meeting

Friday 02 July 2010

15:00 - 15:05 The usual wait for people to connect...

15:05 - 15:15 News *10'*
Speaker: Jim Pivarski (Texas A&M University)

15:15 - 16:00 Barrel "Twist": HW vs tracks

15:15 **Constrains from global tracks** *15'*
Speaker: Aysen Tatarinov (Texas A & M University)

15:30 **Constrains from stand-alone tracks** *15'*
Speaker: Luca Scodellaro

15:45 **Constrains from Link HW** *15'*
Speaker: Gomez Gervasio (IFCA)

16:00 - 16:15 Endcap HW constants *15'*
Speaker: Himali Kalakhety (Florida Tech)

16:15 - 16:25 Common HW data-taking *10'*
- Synchronized 3,8T data taking period for new HW geometry
Material: Slides

16:25 - 16:40 Schedule proposal for new constants *15'*
Speakers: Gervasio Gomez (Instituto de Física de Cantabria) , Jim Pivarski (Texas A&M University)

16:40 - 16:45 The following discussions are more technical

16:45 - 17:05 Automation/Unification of hardware system workflows *20'*

Meeting schedule in general

Common sessions: specific details of interest to both groups; in particular, comparison/merging of results, what the final results mean (uncertainties, correlations, well/poorly determined parameters), standardized validation

Beginning of the Friday meeting probably best for everyone

Should be kept relatively brief (1–2 hours)

Hardware details: operations (e.g. problems with specific sensors), automated workflow, merging endcap/barrel/link results

Track-based details: book-keeping and other computer issues, framework development, in-progress residuals mysteries, etc.

"Details" can directly follow the common session, but should we

- alternate by week? (less frequent "details" sessions)
- split into parallel sessions on Fridays? (people can't do both)
- do track-based details on a different day? (need to schedule)

Concluding remarks

- I'm looking forward to working with Gervasio on a common alignment solution
- I'm sure that we can start fresh and come to a good understanding of the muon alignment geometry