

Modules — Risks

- RD-06-02-04-005: Loss of key personnel
 - Prob. = 36%. \$80–250K. 2–4 mo.
 - Is this a fair assessment of our exposure?
- RD-06-02-04-006: Delay of site qualification
 - Prob. = 18%. \$140–630K. 2–3 mo. Exp. 2/1/21
 - The actual probability is (probably) higher, but due partly to COVID
 - Some of the preparation work are running ~6 months late
 - I worry about the hybrid burn-in systems, which is outside our control
- Other risks unchanged — Technical/logistical, specific to production
 - Lower throughput in wirebonding. Worse electrical performance of modules in production. Damage to modules during shipping to BNL. Delay of sensors from Japan. Delay of hybrids from UK. Wirebond quality issues on hybrids. UV glue problems

Modules — Tools

- Latest from LBNL:
 - Tooling 90% done (labor) in Status Sheet. Under review for pins. PB with pin+bushing drawings under review too.
 - We sent demonstrator pieces to SCIPP first as I had promised Vitaliy first. SCIPP will send to UK
 - Meeting Oct 7 on pins. But it's kind of weird to have 15 people to discuss pin length - Engineers would have preferred to talk one on one like in fact happened with Tynan (Toronto).
 - Tooling still under tendering because other companies declined to send quotes and we need 2 in addition to E&S
 - The PB alignment tools will be done at E&S too as it costs much less there (instead of in house)

Modules — Site Status

- SCIPP

- Summarized the waffle bonding test results, circulated the information.
- Finished pull tests on the 6 hybrids mounted on a panel.
- Un-bent the hybrids.
- Wirebonded the hybrids.
- Started testing the hybrids (in progress, no issues yet).
- Ran a few tests with the sensor stability setup.
- Wrote site qualification document for the sensor tests, submitted it to the qualification committee.
- Checking on the backup parts for dry cabinets and another temperature control system for the glue dispenser.
- Working on thermal insulation of the coldbox chiller's pipes to continue commissioning it.
- Interacting with DAQ expert regarding the test results with updated firmware and software.
- Added ESD monitors to more setups.

- LBNL

- 5th module of 2020 done (Batch 3 of PP2). Metrology ok, one chip to be debugged.