

L0 module prototyping

- What we built so far:

- No.3 First prototype with SVX4 (L1 hybrid)
- No.4 with irradiated sensor
- No.5 Installed on the support structure
- No.6 has 10 chip hybrid with two sensor – very good for systematic comparison in the cable and spacer studies.

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- No.7 First prototype with L0 hybrid (with cut sensor)
 - No.8 in progress (L0 hybrid with new chip and un-cut sensor)
 - No.9 in progress (ditto)

4 or 10
chip hybrid

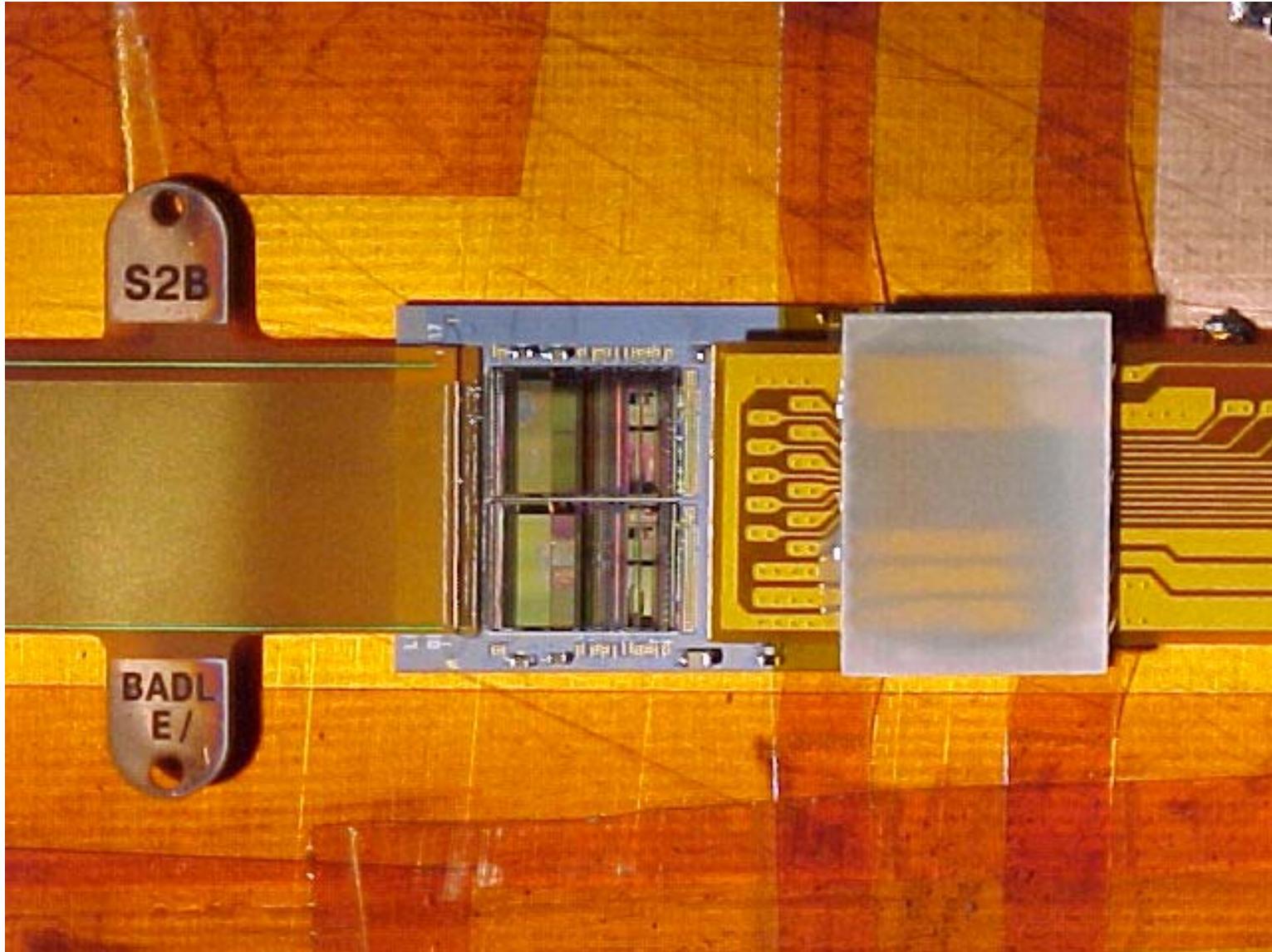


L0 hybrid



- Characterization of single module is in good shape.

No.7 module with L0 hybrid



Goal

- Simultaneous read out of multiple modules on the support structure.
 - No. 8 and 9 will go to the structure → B-sector because of the wider sensor.
 - Two for A-sector, two for B-sector would be the ideal
← should we build two more for A-sector? But the cut sensor is not happy so far.
 - Is it impossible to use the un-cut sensor for A-sector???
 - Question: can we use the prototype hybrid support by UW???

Goal – continued

- Finalizing the analog cable design.
 - $>500\ \mu\text{m}$ space under the bottom cable.
 - ← Is there such thick Kapton?
 - We still don't understand the reason why we don't see the non dependence of noise on the spacer
 - I propose to have $\sim 140\ \mu\text{m}$ thick spacer between each cable.
(The original plan was $200\ \mu\text{m}$ thickness, but the effective dielectric constant can be lowered.)
 - Electrically pre-laminated cable seems to be OK.
 - Quote for price (Dyconex and Compunteics) – if we pick Compunetics, lamination should be done in Fermilab.
 - If we pick Dyconex, mechanical issues must be addressed by Dyconex– spacer alignment, glue control, rad-hard glue etc.

Spacer prototype

