

Beam Test and System Testing Priorities ESB Perspective

June 17, 2026

Zisis Papandreou, Norbert Novitzky, Aram Teymurazyan

ESB Mechanical Session (June 16, 2026)

1. 5mm inner plate: move detector outwards, eliminate 1st AstroPix layer, reduced Astropix layers from 5 to 6.
2. SiPM pedestal MIPs: validate simulations with new irradiated SiPM at JLab
3. Justify 7 C temperature at SiPMs.
4. U-shaped cooling tube options. Copper vs Al.
5. How to implement thermal pads; new uni-boards. How to stabilize SiPMs?
6. Update power numbers including DC/DC. Need ETC numbers.
7. Cooling fittings outside ESB.
8. Area outside ESB radially reserved for BIC.

ESB -CALOROC Session (June 16, 2026)

1. Aram's board interface to H2GCROC.
2. Diode option for cross talk. Use spring probe on scope.
3. Why CALOROC and not discrete electronics? Justify based on power.
4. 2 or 3 channels on CALOROC?
5. gRDO decisions? bits/sec, power.
6. How many different LV lines needed?
7. Justify timing resolution requirement for bulk PbSciFi.
8. Timelines: some delays due to money, but mostly chip availability.

August Beam test tasks

1. Arrive early for setup; access to equipment in Hall D?
2. Communications with Andrew/Yulia.
3. Beam test team.
4. Test LG cage and boards for mounting on Baby BCAL.
5. Uni-board in July; proof of principle in beam tests with existing mini-boards.
6. Baby BCAL through HGCROC. Air cooling.