**DSC HCal Questions – 11/15/2024**

1. Services
	1. Cables
		1. Low Voltage - How many cables come from the HCal?
		2. High Voltage - How many cables come from the HCal?
		3. Readout / Data - How many cables come from the HCal?
		4. Cooling estimate - More questions below, quick estimate on needs?
		5. Gas lines (dry air/nitrogen or something else)?
		6. FEBs / electronics – Do we still fit in the envelope?
		7. Cable Reference



* 1. Cooling
		1. Heat Dissipation – Total heat dissipated by the detector.
			1. Sensors
			2. FEBs
			3. RDOs
		2. Heat Stability – Changes in heat dissipation over time.
			1. Activity
			2. Radiation damage
			3. Temperature
		3. Pressure Drop – Drop in pressure across the detector
		4. Temperature – Desired operating temperature.
		5. Tolerance – Allowable deviation from the desired temperature.
		6. Gradient – Allowable difference in temperature across the detector.
		7. Stability – Allowable deviation from the desired temperature over time.
		8. Segmentation – The number of detector components there are that require cooling, we can determine the number of parallel or series lines, manifolding, etc.
		9. Leak mitigation – Air, negative pressure water, non-conductive fluid, etc.
		10. Cooling Reference

None

1. Support
	1. Serviceability
	2. Cut out for magnet chimney
2. Detector
	1. Envelope
		1. 1822.5 mm Inner radius, 2682.5 mm Outer radius, 0 mm pos Z (Hadron side), 6392.5 mm total length
		2. Reference

