



# Q1: Scope Opportunity



Priority	System	Description	Early Decision	Latest Decision	Cost k\$
1	6.04 LAr	Design and produce Layer Sum Boards (LSB) to be installed on FEB2 boards to implement HL-LHC Level 0 trigger	Jan-22	???	700
2	6.05 Tile	Produce additional 50% of LV bricks	Apr-21	Jul-22	540
3	6.05 Tile	Produce additional 50% of LV boxes	Jul-21	Oct-22	325
4	6.08 Trigger	Participate in L1Track	Jan-24	---	2,000
5	6.06 Muon	Purchase remaining L0MDT ATCA crate	May-24	---	34
6	6.04 LAr	Expand US responsibility for firmware for BE electronics (LASP + sRTM)	Jan-22	???	1,000
7	6.08 Trigger	Additional Global Algorithm	Jan-24	---	600
8	6.08 Trigger	New Algorithm for L0Calo gFEX	Jan-24	---	600
9	6.06 Muon	Firmware for NSW Trigger Processor	Oct-21	Oct-23	500
<b>TOTAL SCOPE OPPORTUNITY</b>					<b>6,299</b>

Latest Decision dates would require mod's to current ATLAS schedule, but should be possible



# Q1,2: Scope Contingency



- Scope contingency dates provided already represent the latest possible dates by which the scope contingency option would need to be exercised

Priority	System	Description	Decision	Cost Savings (k\$)
1	6.08 Trigger	Reduce HTT capacity 1: make 70% of planned TP, 31% of planned RTM boards, and 83% of planned TFM boards	Jul-23	1,708
2	6.08 Trigger	Reduce HTT capacity 2: further reduce production to 40% of planned TP, 0 RTM boards, and 67% of planned TFM boards	Jul-23	1,619
3	6.06 Muon	Reduce number of sMDT chambers. Do not make chamber sets	Dec-21	580
4	6.06 Muon	Reduce number of sMDT chambers. Do not make chamber sets	May-22	583
5	6.06 Muon	Do not build LOMDT Command Module in US	Jun-23	594
6	6.06 Muon	Reduce number of sMDT chambers. Do not make chamber sets	Sep-22	592
7	6.06 Muon	Reduce number of sMDT chambers. Do not make chamber sets	Jan-23	590
8	6.06 Muon	Do not build LOMDT. MDT data to be read out by Felix via another hardware board	Mar-23	810
9	6.04 LAR	Read only 1 gain from FE to BE instead of both HI/LO gain - as a result, build only 50% of sRTM BE boards	Sep-23	1,297
<b>TOTAL SCOPE CONTINGENCY</b>				<b>8,373</b>