

MOLLER Tasks List

Subsystem	Task	Description	Comments	"Owner" (if more than one, please designate a primary contact)
Detectors	Radiation hardness of detector components	Investigate which detector components need radiation testing and carry out 50 MRad test	Michael and Dustin devise a plan. Status: Initial list being established.	Dustin
Detectors	Main detector stand mechanical assembly	Engineering design of lightweight support structure to hold main integrating detectors	Enquire with SU if engineer Lou Buda is available? Not yet started.	KK
Detectors	QC plan for main detector quartz	Devise plan to evaluate robustness of main detector quartz (Redundant with # 1 above)	Michael and Dustin to devise a plan? Not yet started.	Dustin
Detectors	LG assembly event signals.	Investigate the background from particles moving through the light guide assembly. This combines simulations and beam tests of primarily scintillation and Cherenkov generation in the LG.	SBU group: Nearly completed.	KK
Detectors	Quartz, PMT and LG assembly soft photon background signals.	This combines simulations and beam tests of soft photon background in the quartz detector assembly. This is the dominant detector background.	U. of Manitoba group working on this. Should have first results soon.	Michael
Detectors	Thin detector module geometric design and mechanical assembly design	Design of the thin quartz detector geometry and mechanical assembly, incorporating quartz, LG, and PMT	Advanced state of progress. We have a well tested suitable geometry (multiple prototypes have been tested with beam), but still need to decide on materials and structure of the mechanical assembly.	KK

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Detectors	Shower-Max module mechanical assembly design	This task incorporates the physical design and prototyping of the shower max detector, as well as the associated mechanical mounting structure.	Advanced state of first prototype design, including mechanical assembly.	Dustin
Detectors	PMT base electronics	Develop PMT base design through multiple prototype cycles	Started to revise initial Mainz prototype.	Michael
Detectors	Preamplifier design	Develop preamp design through multiple prototype cycles	Started to develop new preamp design, based on QWeak design.	Michael
Detectors	Integrating ADC design	Develop the integrating ADCs for all integrating mode detectors in the experiment.	Operational design criteria have been established. Candidate ADC and FPGA chip/architecture have been identified. Initial discussion regarding readout architecture and protocol completed.	Michael

Please fill out the table above (following the example) for any task where you are the “primary” owner.