



FY12 Cooling Channel Study Plans

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FY12 Current Guidelines (FTEs)



	BNL	FNAL	UCLA	UCR	Muons, Inc.	Other (~MAP)
Guggenheim	0.7					0.1
HCC Design/Simulation		0.3				
HCC Engineering		0.2				0.5
FOFO Snake		0.1				
Final Cooling – Li Lens		0.3	0.3(?)			
Final Cooling – High-field						0.2
Space Charge (6D & Final)	0.15					0.3
Other Components						
Mgmt. / G4BL Support					0.2	
PIC / EPIC						2
Inverse Cyclotron						2
(Unknown / TBD / New Hire)	0.85			0.75*		~0.2



Current Focus



- A major focus is on the 2012 milestone for the down selection of 6-D cooling technique.
 - The primary contenders are the Guggenheim and the HCC.
 - The FOFO Snake is valuable to reduce emittance before charge separation.
 - The result is that the block diagram is not yet finalized.
 - A fully informed down selection will require a complete simulation of each configuration; we simply do not have enough people working on this to finish during 2012.
 - **This milestone is in grave jeopardy.**
- We also need a solution for Final Cooling; exploration of technologies is still in progress.



Alternate Funding Scenarios



- 10-20% Increase
 - Increase the end-to-end simulations of HCC and Guggenheim.
- 10-20% Decrease
 - Reduce everything roughly equally.



Final Remarks



- Muon cooling is arguably the make-or-break technology for a muon collider; this design and simulation effort is significantly under-funded.
- The 2012 milestone for down-selecting 6-D cooling technique is in grave jeopardy.
- Three SBIR/STTR projects account for half of the total effort on cooling.