

WBS 3	Beam Cerenkov part	start date	end date	M&S or Labor	M & S & E Cost	External Skilled Paid Labor	Employee / Student	BOE	Funding Source	Cost to Sponsor	Contingency	Reason for Contingency	F&A	Total Equipment only	Contingency equipment only
3.1	Design frame for 1st Cerenkov	1-Apr-2014	1-Sep-2015	Labor	\$0			existing manpower	NSF/DOE	\$0				\$0	
3.2	beam test of Photek, Photonis	15-Jun-2014	30-Jun-2014	travel - \$6,000 asked separately				recent experience for 1 1-week + 1 2-week trips	NSF/DOE	\$0	\$300	recent experience for trip costs variations		\$0	
3.2	Order first 4 Photek MCP-PMT 240's	1-Aug-2014	1-Dec-2014	Equipment	\$87,600			Photek quote, 1/24/2014	NSF / DOE	\$87,600	\$8,760	10% based on currency fluctuations		\$87,600	\$8,760
3.3	Order sapphire bars	1-Aug-2014	1-Nov-2014	Equipment	\$5,050			DeiMar Photonics quote, 2/6/14	NSF / DOE	\$5,050	\$505	10% based on currency fluctuations	\$1,414	\$6,464	\$505
3.4	Order 5 mounting fixtures	1-Sep-2014	1-Oct-2014	Equipment	\$125			purchase of 3d printed mounting fixture in October 2013	NSF/DOE	\$125	\$2,500	contingency is for machined mounting fixtures		\$125	\$2,500
3.5	Supplies	1-Sep-2014	1-Oct-2014	Labor	\$0			all existing, do not expect to need	NSF/DOE	\$0	\$100	In case electrical tape or optical grease or ... needed...		\$0	\$100
3.6	Construct frame for 1st prototype	1-Sep-2014	30-Nov-2014	parts & labor	\$1,000	\$2,000		Estimate based on crude design, to produce in Rutgers machine shop	NSF/DOE	\$3,000	\$1,000	Only crude design exists, not costed by machine shop	\$840	\$1,840	\$1,000
3.7	Test of available equipment at PSI	1-Dec-2014	20-Dec-2014	\$3,500 asked separately				recent experience for 2-week trips to Switzerland	NSF/DOE	\$0	\$300	recent experience for trip costs variations		\$0	\$0
3.8	Order first 5 more Photek MCP-PMT 240's	1-Aug-2015	1-Dec-2015	Equipment	\$107,500			Photek quote, 1/24/2014	NSF/DOE	\$107,500	\$10,750			\$107,500	\$10,750
3.9	Order 5 mounting fixtures	1-Sep-2015	1-Oct-2015	parts	\$125			purchase of 3d printed mounting fixture in October 2013	NSF/DOE	\$125	\$2,500	contingency is for machined mounting fixtures		\$125	\$2,500
3.10	Dress rehearsal run at PSI	Nov 1, 2015	Dec 20, 2015	\$7,000 asked separately				recent experience for 2 2-week trips to Switzerland	NSF/DOE	\$0	\$600	recent experience for trip costs variations		\$0	\$0
3.11	Data analysis	Nov 1, 2015	Feb 1, 2016		\$0			existing manpower						\$0	\$0
3.12	Design frame for 2nd Cerenkov	1-Feb-2016	1-Apr-2016	Labor	\$0				NSF/DOE	\$0				\$0	\$0
3.13	Construct frame for 2nd prototype	1-Apr-2016	1-May-2016	parts & labor	\$1,000	\$2,000		Estimate based on crude design, to produce in Rutgers machine shop	NSF/DOE	\$3,000	\$1,000		\$840.00	\$1,840	\$1,000
3.14	install Cerenkov at PSI and commission	1-May-2016	1-Jun-2016	\$7,000 asked separately				recent experience for 2 2-week trips to Switzerland	NSF/DOE	\$0	\$600	recent experience for trip costs variations		\$0	
													\$3,094	\$205,494	\$27,115