

ID	WBS	Task Name	Duration	Start	Finish
1	1.0	Real Photon Collaboration	1072 days?	Tue 5/15/01	Wed 6/22/05
2	1.AIP	Photon Beamline	325 days	Mon 7/9/01	Fri 10/4/02
3	1.AIP	Photon Beamline Accelerator	295 days	Mon 7/9/01	Fri 8/23/02
4	1.AIP	<i>Critical Design Review for Photon Beamline Accel. (Internal)</i>	2 days	Mon 7/9/01	Tue 7/10/01
5	1.AIP	Photon Beamline Accel. Component Fabrication	180 days	Thu 7/19/01	Wed 3/27/02
6	1.AIP	Photon Beamline Accel. Installation	60 days	Mon 6/3/02	Fri 8/23/02
7	53.0.0.0	Photon Beamline ESA	295 days	Mon 7/9/01	Fri 8/23/02
8	53.0.0.0	<i>Critical Design Review for Photon Beamline ESA (Internal)</i>	2 days	Mon 7/9/01	Tue 7/10/01
9	53.1.0.0	Photon Beam Line Components	287 days	Thu 7/19/01	Fri 8/23/02
10	53.1.1.0	Engineering and Design	100 days	Thu 7/19/01	Wed 12/5/01
11	53.1.0.9	Installation	60 days	Mon 6/3/02	Fri 8/23/02
12	53.0.0.0	Goniometer	100 days	Thu 7/19/01	Wed 12/5/01
13	53.0.0.0	Wire Array	100 days	Thu 7/19/01	Wed 12/5/01
14	53.4.0.0	Magnets	100 days	Thu 7/19/01	Wed 12/5/01
15	53.5.0.0	Photon Collimator	100 days	Thu 7/19/01	Wed 12/5/01
16	53.6.0.0	Photon Beam Detectors	100 days	Thu 7/19/01	Wed 12/5/01
17	53.6.1.0	Ion Chamber	100 days	Thu 7/19/01	Wed 12/5/01
18	53.6.2.0	Cerenkov	100 days	Thu 7/19/01	Wed 12/5/01
19	53.6.3.0	SEQ	100 days	Thu 7/19/01	Wed 12/5/01
20	53.9.0.0	Photon Beamline Radiation Shielding	100 days	Thu 7/19/01	Wed 12/5/01
21	53.0.0.0	Commission Photon Beam	30 days	Mon 8/26/02	Fri 10/4/02
22	54.0.0.0	E160	471 days	Thu 6/28/01	Thu 4/17/03
23	54.0.0.0	<i>Critical Design Review for E160 Spectrometer (Internal)</i>	2 days	Thu 6/28/01	Fri 6/29/01
24	54.0.0.0	<i>Critical Design Review for E160 Detectors (Internal)</i>	2 days	Mon 7/2/01	Tue 7/3/01
25	54.0.0.0	<i>Critical Design Review for E160 DAQ (Internal)</i>	2 days	Wed 7/4/01	Thu 7/5/01
26	54.0.0.0	Critical Design Review for E160 Full (External)	3 days	Mon 7/16/01	Wed 7/18/01
27	54.0.0.0	Construction Approval for E160	0 days	Wed 7/18/01	Wed 7/18/01
28	54.0.0.0	ESA Available End of E158	0 days	Mon 6/3/02	Mon 6/3/02
29	54.0.0.0	ESA Radiation Cool-Down	2.67 mons	Mon 6/3/02	Fri 9/20/02
30	54.0.0.0	Commission E160	0 days	Wed 12/11/02	Wed 12/11/02
31	54.0.0.0	Operational Approval for E160	0 days	Thu 12/12/02	Thu 12/12/02
32	54.3.0.0	Referbish Spectrometer Magnets	180 days	Thu 7/19/01	Wed 3/27/02
33	54.4.0.0	Spectrometer Installation (non-contaminated areas)	60 days	Tue 6/4/02	Mon 8/26/02
34	54.4.0.0	Spectrometer Installation (High Radiation Areas)	30 days	Mon 9/23/02	Fri 11/1/02
35	54.5.0.0	Detector Fabrication for E160	180 days	Thu 7/19/01	Wed 3/27/02
36	54.5.0.0	Detector Installation	60 days	Tue 6/4/02	Mon 8/26/02
37	54.6.0.0	Develop E160 DAQ	365 days	Thu 7/19/01	Wed 12/11/02
38	54.0.0.0	Run E160	90 days	Fri 12/13/02	Thu 4/17/03
39	55.0.0.0	E161	890 days?	Tue 5/15/01	Mon 10/11/04
40	55.0.0.0	<i>CDR E161 Spectrometer (Internal)</i>	2 days	Wed 8/1/01	Thu 8/2/01
41	55.0.0.0	<i>CDR E161 Detectors (Internal)</i>	2 days	Wed 8/15/01	Thu 8/16/01
42	55.0.0.0	CDR E161 Full (External)	3 days	Mon 1/7/02	Wed 1/9/02
43	55.0.0.0	Construction Approval for E161	0 days	Wed 1/9/02	Wed 1/9/02
44	55.0.0.0	ESA Available End of E160	1 day	Fri 5/30/03	Fri 5/30/03
45	55.1.0.0	Re-Configure for E161	180 days	Mon 6/2/03	Fri 2/6/04
46	55.2.0.0	E161/E159 Target Subsystem	799 days?	Tue 5/15/01	Fri 6/4/04
47	55.2.0.0	<i>CDR/ConceptDR for E159/E161 Target SubSystem (Internal)</i>	2 days	Tue 5/15/01	Wed 5/16/01
48	55.2.0.0	E161/E159 Target: Prepare Order for Long Lead Time Items	30 days	Thu 5/17/01	Wed 6/27/01
49	55.2.0.0	E161/E159 Target: Acquire Long Lead Time Components	452 days	Thu 6/28/01	Fri 3/21/03

ID	WBS	Task Name	Duration	Start	Finish
50	55.2.0.0	Fabricate Microwave Source	300 days	Mon 1/28/02	Fri 3/21/03
51	55.2.0.0	Fabricate Magnet at Oxford	369 days	Thu 6/28/01	Tue 11/26/02
52	55.2.0.0	Magnet Acceptance Test at Oxford	5 days	Wed 11/27/02	Tue 12/3/02
53	55.2.0.0	Ship Magnet to UVa.	14 days	Wed 12/4/02	Mon 12/23/02
54	55.2.0.0	E161/E159 Target Construction and Commissioning at UVa.	500 days	Fri 6/1/01	Thu 5/1/03
55	55.2.0.0	Dilution Refrigerator	408 days	Fri 6/1/01	Tue 12/24/02
56	55.2.0.0	Engineering, Design, Modification, Fabrication	169 days	Fri 6/1/01	Wed 1/23/02
57	55.2.0.0	SLAC Visit to UVa.	5 days	Mon 10/8/01	Fri 10/12/01
58	55.2.0.0	Assemble and Test	239 days	Thu 1/24/02	Tue 12/24/02
59	55.2.0.0	SLAC Visit to UVa.	5 days	Mon 2/11/02	Fri 2/15/02
60	55.2.0.0	SLAC Visit to UVa.	5 days	Mon 5/6/02	Fri 5/10/02
61	55.2.0.0	SLAC Visit to UVa.	5 days	Mon 8/5/02	Fri 8/9/02
62	55.2.0.0	Commission Magnet at UVa.	22 days	Tue 12/24/02	Wed 1/22/03
63	55.2.0.0	Commission Complete System	44 days	Thu 1/23/03	Tue 3/25/03
64	55.2.0.0	SLAC Visit to UVa.	5 days	Wed 3/26/03	Tue 4/1/03
65	55.2.0.0	Ship to SLAC	22 days	Wed 4/2/03	Thu 5/1/03
66	55.2.0.0	Target Control System Spec & Design	156 days?	Thu 5/17/01	Thu 12/20/01
67	55.2.0.0	Target Cart System Spec. & Design	151 days	Mon 7/16/01	Mon 2/11/02
68	55.2.0.0	Preliminary SLAC Safety Committee Meetings	5 days	Mon 6/4/01	Fri 6/8/01
69	55.2.0.0	Cryogenics Support System Spec & Design	151 days	Mon 6/4/01	Mon 12/31/01
70	55.2.0.0	Order Sealed Roots Pumps	30 days	Mon 10/1/01	Fri 11/9/01
71	55.2.0.0	Acquire Sealed Roots Pumps	90 days	Mon 11/12/01	Fri 3/15/02
72	55.2.0.0	Intermediate SLAC Safety Committee Reviews	5 days	Mon 1/14/02	Fri 1/18/02
73	55.2.0.0	Cart System Construction	258 days	Tue 2/12/02	Thu 2/6/03
74	55.2.0.0	Cryogenics Support Construction	304 days	Tue 1/1/02	Fri 2/28/03
75	55.2.0.0	E161/E159 Target Commissioning at SLAC	155 days	Fri 5/2/03	Thu 12/4/03
76	55.2.0.0	Assemble system on Cart	23 days	Fri 5/2/03	Tue 6/3/03
77	55.2.0.0	UVa. Visit to SLAC	5 days	Thu 5/29/03	Wed 6/4/03
78	55.2.0.0	Offline Commission and Test	131 days	Thu 6/5/03	Thu 12/4/03
79	55.2.0.0	UVa. Visit to SLAC	5 days	Mon 6/9/03	Fri 6/13/03
80	55.2.0.0	UVa. Visit to SLAC	5 days	Mon 8/4/03	Fri 8/8/03
81	55.2.0.0	UVa. Visit to SLAC	5 days	Mon 11/3/03	Fri 11/7/03
82	55.2.0.0	Final SLAC Safety Committee Reviews	5 days	Mon 5/3/04	Fri 5/7/04
83	55.2.0.0	E161/E159 Target Installation into ESA beam line	131 days	Fri 12/5/03	Fri 6/4/04
84	55.2.0.0	UVa. Visit to SLAC	5 days	Fri 12/5/03	Thu 12/11/03
85	55.2.0.0	Leak Check on Beamline	7 days	Thu 5/27/04	Fri 6/4/04
86	55.0.0.0	Commission E161	0 days	Fri 6/4/04	Fri 6/4/04
87	55.0.0.0	Operational Approval for E161	0 days	Mon 6/7/04	Mon 6/7/04
88	56.0.0.0	Run E161	90 days	Tue 6/8/04	Mon 10/11/04
89	56.0.0.0	E159	883 days	Mon 2/4/02	Wed 6/22/05
90	56.0.0.0	<i>CDR E159 Detector (Internal)</i>	2 days	Mon 2/4/02	Tue 2/5/02
91	56.0.0.0	CDR E159 Full (External)	3 days	Mon 3/4/02	Wed 3/6/02
92	56.0.0.0	Construction Approval for E159	0 days	Wed 3/6/02	Wed 3/6/02
93	56.0.0.0	ESA Available End of E161	1 day	Tue 11/23/04	Tue 11/23/04
94	56.0.0.0	Re-Configure for E159	60 days	Wed 11/24/04	Tue 2/15/05
95	56.0.0.0	Commission E159	0 days	Tue 2/15/05	Tue 2/15/05
96	56.0.0.0	Operational Approval for E159	0 days	Wed 2/16/05	Wed 2/16/05
97	56.0.0.0	Run E159	90 days	Thu 2/17/05	Wed 6/22/05