

DO Upgrade Schedule
Forward Preshower Detector

ID	Task Name	Duration	Start	Finish	Predecessors	Constraint	WBS	Resource Names
1346	FORWARD PRESHOWER FABRICATION	218.6 w	4/4/96	9/1/00		As Soon As		
1347	Conceptual Design	21 w	4/4/96	8/30/96		Start No Earl		PhysU114,PhysF114
1348	M3-Forward Preshower TDR Submitted	0 w	2/2/98	2/2/98		Start No Ear		
1349	Engineering Design	69 w	9/3/96	1/30/98	1347	As Soon As f		MEU114[0.1],DesU114[0.7]
1350	Design Complete	0 w	1/30/98	1/30/98	1349	As Soon As		
1351	Detector R&D	28 w	10/29/96	5/27/97	1349SS+8 w	As Soon As f		MTU114,PhysU114[1.5]
1352	Prototype Beam Test	13 w	6/2/97	9/2/97	1351	As Soon As f		MTF114,PhysU114[3]
1353	PREPARE FIBERS/CONNECTORS	157.4 w	6/26/97	9/1/00		As Soon As		
1354	Procure Fibers	22 w	6/26/97	12/2/97		Start No Earl	1.1.4.4.1,1.1.4.6.1	k\$[2.18],k\$c[0.2]
1355	Cut/Sort/Polish WLS Fibers	7.4 w	6/23/98	8/13/98	1376SS	As Soon As f	1.1.4.4.7(0.3)	MTF114[0.5],k\$c[0.02]
1356	Aluminize WLS Fiber Ends	6.4 w	7/8/98	8/20/98	1355SS+2 w	As Soon As f	1.1.4.4.3	MTF114[0.5],k\$c[0.03]
1357	Test Prepared WLS Fibers	4 w	7/24/98	8/20/98	1356FS-4 w	As Soon As f		MTF114[0.5]
1358	Procure Connectors - (both detector ends) (UIC MOU)	0.2 w	9/16/97	9/16/97		Start No Earl	1.1.4.4.4,1.1.4.6.2	k\$[0.28],k\$c[0.06]
1359	Manufacture Connectors (both detector ends)	45 w	3/2/98	1/29/99		Start No Earl	1.1.4.4.6(0.5)	PhysU114[0.5],ETU114[0.5],k\$c[0.05],k\$c[0.01]
1360	Assemble/Polish Connectors (Wavelength shifter side)	52 w	2/15/99	3/3/00	1357FS-2 w,1359FS+2 w	As Soon As f	1.1.4.4.7(0.2)	MTF114[0.5],k\$c[0.01]
1361	Begin Connector Assembly - WLS Side	0 w	2/15/99	2/15/99	1360SS	As Soon As		
1362	Connector Assemblies Complete - WLS Side	0 w	3/3/00	3/3/00	1360	As Soon As		
1363	Manufacture Connectors (VLPC end)	4 w	1/7/00	2/4/00	122FS-4 w	As Soon As f	1.1.4.6.3,1.1.4.4.6(0.5),1.1.4.6.6	ETU114[0.5],k\$c[0.13],k\$c[0.03]
1364	Fabricate Clear Fiber Bundles	9 w	6/30/00	9/1/00		Start No Earl	1.1.4.6.4,1.1.4.6.5,1.1.4.6.6(0.8)	MTU114,MTF114,k\$c[0.53],k\$c[0.11]
1365	Clear Fiber Bundles Complete	0 w	9/1/00	9/1/00	1364	As Soon As		
1366	PREPARE SCINTILLATOR	89.6 w	8/6/97	6/2/99		As Soon As		
1367	Procure Extrusions FY97	4 w	8/6/97	9/3/97		Start No Earl	1.1.4.2.2,1.1.4.2.5(0.3)	k\$[0.15]
1368	Procure Extrusions FY98	24.4 w	3/2/98	8/20/98		Start No Earl	1.1.4.2.1,1.1.4.2.3,1.1.4.2.4,1.1.	MTF114[0.3],k\$c[0.31]
1369	Scintillator Procurement Complete	0 w	8/20/98	8/20/98	1368	As Soon As		
1370	Inspect/Test Scintillator	2 w	8/21/98	9/3/98	1369	As Soon As f		MTF114
1371	Wrap Scintillator	38 w	8/21/98	6/2/99	1369	As Soon As f	1.1.4.3	MTF114[0.25],k\$c[0.04],k\$c[0.01]
1372	MODULE ASSEMBLY	84.6 w	7/10/98	4/1/00		As Soon As		
1373	Procure Materials	6 w	7/10/98	8/20/98	1368FS-6 w	Start No Earl	1.1.4.5.3-1.1.4.5.5	k\$[0.13],k\$c[0.03]
1374	Fab Assembly/Align Fixt	8 w	7/24/98	9/18/98	1368FS-4 w	As Soon As f	1.1.4.5.1,1.1.4.5.6	MTU114[0.5],k\$c[0.3],k\$c[0.06]
1375	Fab Storage Containers	8 w	8/21/98	10/16/98	1373	As Soon As f		MTU114[0.3]
1376	Prepare Components	9 w	8/21/98	10/23/98	1373	As Soon As f		MTU114[0.5]
1377	Fabricate Modules	49.4 w	10/26/98	10/26/99	1376	As Soon As f	1.1.4.5.7	MTU114[1.5],k\$c[0.07],k\$c[0.01]
1378	M2-Forward Preshower Module Fabrication Begun	0 w	11/4/98	11/4/98	1371SS+20 %,1377SS	As Soon As		
1379	1st Module Complete	0 w	11/24/98	11/24/98	1378SS+3 w	As Soon As		
1380	Cable Modules	52 w	3/1/99	3/17/00	1361SS+2 w,1379	As Soon As f		MTU114[0.5]
1381	Install Calibration System	52 w	3/8/99	3/24/00	1380SS,1387SS+1 w	As Soon As f		MTU114[0.3]
1382	Inspect/Test Modules	52 w	3/15/99	4/1/00	1381SS+1 w	As Soon As f		MTU114[0.3]
1383	M3-Forward Preshower Modules 50% Complete	0 w	9/20/99	9/20/99	1382SS+70 %	As Soon As		
1384	Module Fabrication and Testing Complete	0 w	4/1/00	4/1/00	1382	As Soon As		
1385	Calibration System	81 w	5/4/98	12/17/99		As Soon As		
1386	R&D	40 w	5/4/98	2/26/99	1349	Start No Earl	1.1.4.8(0.3)	MTU114[0.5],k\$c[0.13],k\$c[0.01]
1387	Fabricate Production Parts	41 w	3/1/99	12/17/99	1386	As Soon As f	1.1.4.8(0.7)	MTU114[0.5],k\$c[0.29],k\$c[0.03]
1388	Calibration System Ready	0 w	12/17/99	12/17/99	1387	As Soon As		
1389	DETECTOR ASSEMBLY	94.2 w	5/18/98	4/17/00		As Soon As		
1390	Fabricate Support Components	20 w	5/18/98	10/7/98		Start No Earl	1.1.4.9.1,1.1.4.9.2,1.1.4.9.6-1.1.	k\$[0.7],k\$c[0.11]
1391	Prepare Components	4 w	5/18/98	6/15/98	1390SS	As Soon As f		MTU114[0.5]
1392	Fabricate Lead Absorber	24 w	9/13/99	3/14/00		Start No Earl		MTU114[0.25]
1393	Assemble Support Structures	33 w	7/19/99	3/22/00	1391SS+14 w	As Soon As f		MTU114[0.5]
1394	Insert Modules in Supports-South	1 w	2/18/00	2/24/00	1382SS+85 %,1392SS+85 %,13	As Soon As f		MTU114[0.2]
1395	Inspect/Align Modules/Detectors-South	1 w	2/18/00	2/24/00	1394SS	As Soon As f		MTU114[0.3],PhysU114[0.3]
1396	M3-1st Forward Preshower Detector Complete	0 w	2/24/00	2/24/00	1395	As Soon As		
1397	Ship First Detector to FNAL	1 w	4/11/00	4/17/00	1396,1401SS	As Soon As f	1.1.4.9.3-1.1.4.9.5	MTU114[0.5],k\$c[0.18],k\$c[0.03]
1398	Insert Modules in Supports-North	0.2 w	4/3/00	4/3/00	1382,1392,1393	As Soon As f		
1399	Inspect/Align Modules/Detectors-North	0.2 w	4/3/00	4/3/00	1398SS	As Soon As f		
1400	M3-2nd Forward Preshower Detector Complete	0 w	4/3/00	4/3/00	1399	As Soon As		
1401	Ship Second Detector to FNAL	1 w	4/11/00	4/17/00	1400FS+1 w	As Soon As f		MTU114[0.5]
1402	Install FPS-South	1.4 w	4/18/00	4/26/00	1397	As Soon As f		MTF114[2],PhysU114[2],Welder_Day,Crane_Day[0.1],ICR_Sout
1403	M3-Forward Preshower-South Installed	0 w	4/26/00	4/26/00	1402	As Soon As		
1404	Install FPS-North	0.4 w	4/27/00	4/28/00	1401,1402	As Soon As f		MTF114[2],PhysU114[2],Welder_Day,Crane_Day[0.1],ICR_Nort
1405	Hookup FPS-North	3 w	8/28/00	9/18/00	1364SS+50 %,1404,2150	As Soon As f		MTF114[2],PhysU114[2],ICR_North,Platform[0.5]
1406	Hookup FPS-South	3 w	10/5/00	10/25/00	1405,1364,2135,1017	As Soon As f		MTF114[2],PhysU114[2],ICR_South,Platform[0.5]
1407	Commission FPS	18 w	9/19/00	1/30/01	1405	As Soon As f		PhysU114[2],ICR_North[0.1],ICR_South[0.1],Platform[0.1]