

DO Upgrade Schedule
Intercryostat Detector

ID	Task Name	Duration	Start	Finish	Predecessors	Constraint	WBS	Resource Names
1244	ICD FABRICATION	267 w	6/1/95	10/10/00		As Soon As		
1245	Design	132.8 w	10/2/95	6/1/98		As Soon As		
1246	Module Design	32 w	10/2/95	5/16/96		Start No Ear	1.2.2.2.1	PhysU122[0.1],MEU122[0.2],k\$(0.05)
1247	Drawers, Crate Design	40 w	1/2/96	10/10/96		Start No Ear	1.2.2.4.1,1.2.2.5.1	PhysU122[0.1],MEU122[0.2],k\$(0.09),k\$(0.01)
1248	Fiber System Design	24 w	9/3/96	3/3/97		Start No Ear	1.2.2.3.1	PhysU122[0.1],MEU122[0.2],k\$(0.08),k\$(0.01)
1249	Electronics Design	58 w	4/1/97	6/1/98		Start No Ear	1.2.2.4.4	PhysU122[0.2],EEU122[0.2],k\$(0.07),k\$(0.01)
1250	LED Calibration Design	41 w	6/1/97	4/1/98		Start No Ear	1.2.2.7.1	PhysU122[0.1],MEU122[0.05],k\$(0.06),k\$(0.01)
1251	Technical Design Report	32.4 w	11/1/96	7/1/97		Finish No Ea		PhysU122[0.4]
1252	M3-ICD TDR Submitted	0 w	6/30/97	6/30/97	1251	Start No Ear		
1253	Magnetic Field Testing	76 w	6/1/95	11/22/96		Start No Ear		PhysU122[0.1],MTU122[0.1]
1254	Prepare Tools	76 w	6/3/96	12/9/97		Start No Ear	1.2.2.2.4,1.2.2.2.5,1.2.2.3.2.4	PhysU122[0.1],MEU122[0.2],MTU122[0.3],k\$(0.2),k\$(0.02)
1255	Setup Teststands	40 w	9/3/96	6/24/97		Start No Ear	1.2.2.2.9.1	PhysU122[0.2],MTU122[0.2],MTF122[0.1],k\$(0.05),k\$(0.01)
1256	First Prototypes	87.8 w	5/17/96	3/1/98		As Soon As		
1257	Tile Prototype	87.8 w	5/17/96	2/27/98	1246	Finish No Ea		PhysU122[0.2]
1258	First Prototype tested	0 w	3/1/98	3/1/98	1257	As Soon As		
1259	Second Prototypes	116 w	10/11/96	2/24/99		As Soon As		
1260	Final Module Prototype	15 w	6/25/97	10/9/97	1246,1255	As Soon As f	1.2.2.1.1,(25)	PhysU122[0.2],MTF122[0.1],MTU122[0.1],k\$(0.01)
1261	Fiber System Prototype	22 w	5/27/97	10/29/97	1248	As Soon As f	1.2.2.1.1,(25)	PhysU122[0.1],MTU122[0.2],k\$(0.01)
1262	Calibration Prototype	44 w	4/2/98	2/24/99	1250	As Soon As f		
1263	Drawer Prototype	24 w	10/11/96	4/10/97	1247	As Soon As f	1.2.2.1.1,(25)	PhysU122[0.1],MTU122[0.2],k\$(0.01)
1264	Electronics Prototype	52.4 w	4/11/97	5/1/98	1263	As Soon As f		PhysU122[0.2],MTU122[0.2]
1265	Full Prototype Test	56 w	8/26/97	10/12/98	1260SS+50 %,1264SS+50 %	As Soon As f	1.2.2.1.1,(25)	PhysU122[0.2],MTU122[0.5],k\$(0.01)
1266	M3-ICD Full Prototype Tested	0 w	10/12/98	10/12/98	1265	As Soon As		
1267	PMT Testing	134.2 w	11/2/97	7/27/00		As Soon As		
1268	Test Run I Boxes	14.8 w	11/2/97	2/27/98		Start No Ear		PhysU122[0.3],MTU122
1269	Build PMT Teststand	18 w	3/2/98	7/7/98	1268	As Soon As f	1.2.2.6.3.1	PhysU122[0.2],MTU122[0.4],k\$(0.05),k\$(0.01)
1270	Test PMTs	36 w	11/1/99	7/27/00	1268,1269	Start No Ear		PhysU122[0.1],Song[0.1]
1271	Tile Module Fabrication	126.8 w	9/18/97	4/19/00		As Soon As		
1272	FY97 MOU-UTA	4 w	9/18/97	10/15/97		Start No Ear	1.2.2.2.2,1.2.2.2.3,1.2.2.2.6	k\$(0.2),k\$(0.06)
1273	FY98 MOU-UTA	0.2 w	3/30/98	3/30/98		Start No Ear	1.2.2.2.7,(15),1.2.2.2.8,1.2.2.2.9	k\$(0.61),k\$(0.08)
1274	Procure Materials (Tile Modules)	13 w	9/15/98	12/16/98	1266FS-4 w	As Soon As f		
1275	Start Tile Module Fabrication	0 w	4/30/99	4/30/99	1254SS+50 %,1274SS+8 w	Start No Ear		
1276	Assemble Tiles/Fibers	21.4 w	4/30/99	9/30/99	1275	As Soon As f		MTF122[0.3],PhysU122[0.2]
1277	Test 20% Tiles, Fibers	22.8 w	5/21/99	11/1/99	1276SS+3 w	As Soon As f		MTF122[0.2],PhysU122[0.1]
1278	Build Aluminum Boxes	25.8 w	4/1/99	10/1/99		Start No Ear		
1279	Assemble Tile Modules	8 w	10/4/99	11/30/99	1277SS+3 w,1278	As Soon As f	1.2.2.2.7,(85)	PhysU122[0.1],MTU122[0.3],k\$(0.06),k\$(0.01)
1280	Tile Modules Assembled	0 w	11/30/99	11/30/99	1279	As Soon As		
1281	Cosmic Ray Test	15 w	11/18/99	3/17/00	1279SS+2 w	As Soon As f		PhysU122[0.1],Sosebee[0.1]
1282	M3-20% ICD Tile Modules Tested	0 w	11/29/99	11/29/99	1281SS+25 %	As Soon As		
1283	Insert tile modules in boxes	6.6 w	3/6/00	4/19/00	1281FS-2 w	As Soon As f		
1284	M3-ICD Tile Modules/Boxes Ready	0 w	4/19/00	4/19/00	1283	As Soon As		
1285	Ship ICD North Modules to FNAL	3 d	4/20/00	4/24/00	1284	Start No Ear	1.2.2.9,(3)	k\$(0.02)
1286	Ship ICD South Modules to FNAL	3 d	4/20/00	4/24/00	1284	As Soon As f		
1287	M2-ICD Modules Arrive at Fermilab	0 w	4/24/00	4/24/00	1286	As Soon As		
1288	Fiber Cables/Connectors	83.8 w	11/10/98	7/27/00		As Soon As		
1289	Procure Connectors	8 w	11/10/98	1/20/99	1266FS+4 w	As Soon As f		
1290	Procure Fibers	13 w	11/8/99	2/22/00		Start No Ear		
1291	Assemble and Test Prototype Fiber Cable	6 w	2/23/00	4/4/00	1290	As Soon As f		
1292	Assemble Fiber Cables	6 w	6/1/00	7/13/00	1289SS+4 w,1291FS+1 w	Start No Ear		PhysU122[0.1],MTU122[0.3]
1293	Test Cables	6 w	6/15/00	7/27/00	1292SS+2 w	As Soon As f		PhysU122[0.1],MTU122[0.3],Sosebee[0.1],Xiao[0.3]
1294	25% Cables Tested	0 w	6/26/00	6/26/00	1293SS+25 %	As Soon As		
1295	Fiber Cables Completed	0 w	7/27/00	7/27/00	1293	As Soon As		
1296	Fiber Backplanes/Crates Fabrication	99.2 w	9/15/98	9/19/00		As Soon As		
1297	Procure Materials (Crates/Backplanes)	8 w	9/15/98	11/9/98	1250,1266FS-4 w	As Soon As f	1.2.2.3.3.1,1.2.2.3.3.3,1.2.2.5.3,	k\$(0.23),k\$(0.03)
1298	Assemble Backplanes/Crates	12 w	11/10/98	2/17/99	1297	As Soon As f		PhysU122[0.1],MTU122[0.3]
1299	Procure Clear Fiber	6 w	11/8/99	1/4/00		Start No Ear		
1300	Cut Fibers	2 w	1/5/00	1/18/00	1299	As Soon As f		MTU122[0.3],Xiao[0.3]
1301	Polish fibers at FNAL	8.6 w	1/19/00	3/17/00	1300	As Soon As f		MTF122[0.2]
1302	Fabricate Backplane Pigtailed	9 w	4/24/00	6/26/00	1301	As Soon As f		MTU122[0.5],Xiao[0.5]
1303	Install and Test Pigtailed	4 w	6/12/00	7/10/00	1302SS+4 w	Start No Ear		MTU122[0.2],Xiao[0.2],PhysU122[0.2],WhiteA[0.2]
1304	Test Fiber Backplanes/Crates	8 w	7/11/00	9/5/00	1298,1303SS+4 w	As Soon As f		PhysU122[0.1],MTU122[0.3],WhiteA[0.1],Xiao[0.3]
1305	Fiber Backplanes/Crates Ready	0 w	9/5/00	9/5/00	1304,1331	As Soon As		
1306	Ship Backplanes/Crates to FNAL	2 w	9/6/00	9/19/00	1305	As Soon As f	1.2.2.9,(4)	k\$(0.02)
1307	Install Supports for Backplanes/Crates	1 w	9/13/00	9/19/00	1306FS-1 w	As Soon As f		MTF122[0.25],Platform[0.3]
1308	Install Backplanes/Crates	1 w	9/20/00	9/26/00	1306,1307	As Soon As f		MTF122[0.3],UnknownMTF122[0.3],Platform[0.3]
1309	PMT Drawer Fabrication	193.4 w	10/1/96	8/31/00		As Soon As		
1310	FY97 MOU-LT	0.2 w	10/1/96	10/1/96		Start No Ear	1.2.2.3.2.3,1.2.2.4.5,1.2.2.4.6	k\$(0.15),k\$(0.02)
1311	FY98 MOU-LT	0.2 w	10/1/97	10/1/97		Start No Ear	1.2.2.3.2.1,1.2.2.3.2.2,1.2.2.4.7,	k\$(0.37),k\$(0.05)
1312	Procure Materials (PMT Drawers)	8 w	8/17/98	10/12/98	1249,1266FS-8 w	As Soon As f	1.2.2.4.2,(25),1.2.2.4.3,1.2.2.4.9	k\$(0.12),k\$(0.02)
1313	Start Drawer Fabrication	0 w	9/4/98	9/4/98	1312SS+3 w	As Soon As		
1314	Build Drawers	39.8 w	9/8/98	6/30/99	1313	As Soon As f	1.2.2.4.2,(75)	MTU122[0.2],k\$(0.23),k\$(0.05)
1315	Fabricate HV Bases	84 w	10/13/98	6/29/00	1312	As Soon As f		PhysU122[0.1],Shur[0.1]

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1316	Test HV Bases	80 w	11/10/98	6/29/00	1315SS+4 w	As Soon As f		PhysU122[0.25],Shur[0.25]
1317	Fabricate Electronic Boards	77 w	10/13/98	5/10/00	1312	As Soon As f		ETU122[0.1],HiID[0.1]
1318	Test Electronic Boards	77 w	11/10/98	6/8/00	1317SS+4 w	As Soon As f		PhysU122[0.1],Sawyer[0.1],ETU122[0.2],HiID[0.2]
1319	Begin Testing Boards	0 w	11/10/98	11/10/98	1318SS	As Soon As		
1320	Preamps Available	0 w	1/14/00	1/14/00		Start No Ear		
1321	Assemble Readout	4 w	7/14/00	8/10/00	1270FF+2 w,1314SS+25 %,131	As Soon As f		PhysU122[0.1],Sawyer[0.1],ETU122[0.3],HiID[0.3]
1322	Test Readout	4 w	7/21/00	8/17/00	1321SS+1 w	As Soon As f		PhysU122[0.1],Sawyer[0.1],ETU122[0.3],HiID[0.3]
1323	20% Readout Tested	0 w	7/27/00	7/27/00	1322SS+25 %	As Soon As		
1324	Drawers Ready	0 w	8/17/00	8/17/00	1322	As Soon As		
1325	Ship Drawers to FNAL	2 w	8/18/00	8/31/00	1324	As Soon As f	1.2.2.9.(3)	k\$[0.02]
1326	Install Drawers	2 w	9/27/00	10/10/00	1308,1325	As Soon As f	1.2.2.10.2.(5)	k\$[0.02],PhysU122[0.5],StoneA[0.5],CF_Wikway_E[0.5],CF_Wik
1327	LED Calib Fab	37.4 w	12/1/99	9/5/00		As Soon As		
1328	LMBs Available	0 w	12/1/99	12/1/99		Start No Ear		
1329	Assemble LED/Fiber for Calibration	10 w	12/1/99	2/22/00	1328	As Soon As f		PhysU122[0.1],MTU122[0.3],UnknownPhysU122[0.1],Xiao[0.3]
1330	Install LMBs in Backplanes	4 w	6/12/00	7/10/00	1303SS,1329	As Soon As f		MTU122[0.2],Li[0.2]
1331	Test LED Calibration	8 w	7/11/00	9/5/00	1330	As Soon As f	1.2.2.7.2.(5)	PhysU122[0.1],MTU122[0.3],k\$[0.05],k\$c[0.01],WhiteA[0.1],Xiao
1332	Platform/Cable Routing	82.8 w	10/13/98	6/21/00		As Soon As		
1333	Platform Electronics Design	22 w	10/13/98	3/31/99	1249,1266	As Soon As f		EEF122[0.1],PhysU122[0.1]
1334	Build/Assemble Platform Electronics	47 w	7/1/99	6/14/00		As Soon As	1.2.2.8	PhysU122[0.1],k\$[0.16],k\$c[0.03],ETU122[0.3],HiID[0.3],Ston
1335	Build Pulser	8 w	9/1/99	10/27/99		Start No Earl		
1336	Assemble Modified Maryland Boxes	47 w	7/1/99	6/14/00		Start No Earl		MTF122[0.05],Fogelsong[0.05]
1337	Build LV Power Supplies	34 w	10/1/99	6/13/00		Start No Earl		ETU122[0.25],Maxy[0.25]
1338	Install Platform Electronics	1 w	6/15/00	6/21/00	1334	As Soon As f		ETF122[0.5],UnknownETF122[0.5],Platform[0.3]
1339	Install ICD North	1 d	5/4/00	5/4/00	1285,1404	Start No Earl		MTF122[3],PhysU122[3],MTU122,Welder_Day,Crane_Day[0.1],W
1340	Install ICD South	1 d	5/5/00	5/5/00	1287,1402,1339	Start No Earl	1.2.2.10.2.(5)	MTF122[3],PhysU122[3],MTU122,k\$[0.02],Welder_Day,Crane_C
1341	M3-InterCryostat Detectors Installed	0 w	5/5/00	5/5/00	1339,1340	As Soon As		
1342	Hookup ICD-North	2 w	9/27/00	10/10/00	1339,1293,1308	As Soon As f		MTF122[3],PhysU122[3],MTU122,ICR_North[0.5],CF_Wikway_E
1343	Hookup ICD-South	1 w	10/11/00	10/17/00	1342,1293,2135,1017	As Soon As f		MTF122[3],PhysU122[3],MTU122,ICR_South[0.5],CF_Wikway_E
1344	Commission ICD	15 w	10/11/00	1/31/01	1342	As Soon As f	1.2.2.11	PhysU122[2],k\$[0.05],ICR_North[0.1],ICR_South[0.1],CF_Wikw