

ILD Software workplan (June 2011)

detector	sw type	ID	task	comment	due date	persons	status	
VXD	simulation	1.1	increase material	current support material is to optimistic	July	Y.Sugimoto M.Winter	open	AM
		1.2	add/check services	possibly need to be added to beamline or FTD	July	Y.Sugimoto M.Winter	open	AM
	digitization	1.3	implement in Mokka		Aug	G.Musat	open	FG
		1.4	finalize FPCCD digitizer	code is in MarlinReco	Aug	D.Kamai	ongoing	AM
		1.5	decide which digitizer to use in DBD production	in Grenada ?		ILD	open	
	tracking	2.1	pattern recognition	first step: re-write SilconTracking using IMarlinTrack (5.6)	Aug	S.Aplin	open	
		2.2		develop new algorithm ?		?		
		2.3		pick-up hits from clupatra TPC tracks	July	F.Gaede	open	
2.4		KalTest: implement bounded planes	need algorithm for sorting wrt. overlaps → first version exists in KalTest example	June	S.Aplin F.Gaede K.Fujii D.Kamai	done		
SIT, SET	simulation	3.1	check new drivers (overlaps geometry, material)			A.Charpy	open	FG
		3.2	cabling and services		Aug	A.Charpy G.Musat (C.Clerk)	open	FG
		3.3	check if there is a support frame	is there a mechanical design?	July	G.Musat H.Videau	open	FG
			write proper GEAR parameters	see 3.6	July	A.Charpy S.Aplin F.Gaede	open	FG
	digitization	3.3	develop strip digitizer	a digitizer exists for Belle2 by Z.Drasal → can this be used ?	Aug	K. Androsov	ongonig	FG
		3.35	define strip orientation	do we have 90deg or shallow angle stereo layers ? or just parallel to z ?	July	A.Savoy-Navarro	open	FG
	tracking	3.4	pattern recognition	first step: re-write SilconTracking using IMarlinTrack (5.6)	Aug	S.Aplin	open	
		3.5	KalTest: implement bounded planes from ILD gear description	same as 2.3	July	S.Aplin F.Gaede K.Fujii D.Kamai	ongoing	
	core	3.6	need GEAR parameters	copy code from VXDParameters	June	S.Aplin F.Gaede	done	
ETD	3.7	remove from ILD_01 for now	there is currently no one working on the code for tracking of uvw-planes	July	G.Musat	open	SA	
	3.8	consider new u,v (x,y) design for ETD	needs discussion in ILD - need mechanical design - and implementation is sw	Sep	H.Videau G.Musat	open		
FTD	simulation	4.1	check new drivers (overlaps geometry, material)	after 4.3	July	I.Alvarez	open	SA
		4.15	first two layers pixels ?	different mechanical design - cryostate, etc	July	I.Alvarez		SA
	4.2	cabling and services	check with Integration WG	Aug	I.Alvarez G.Musat	open	SA	
	4.3	decide if we need to rewrite geometry using non-tilted planes ?	in principle KalTest can deal with tilted planes - pat rec might be simplified with non-tilted planes	July	I.Alvarez S.Aplin	open	SA	
	core	4.4	need GEAR parameters	develop new GEAR parameters for Si-disks	July	I.Alvarez S.Aplin F.Gaede	open	
		4.4	develop strip digitizer	a digitizer exists for Belle2 by Z.Drasal → can this be used ? need to know the strip orientation	Aug	I.Alvarez	open	SA

	tracking	4.5	pattern recognition	-> same as 2.1 and 3.4	July	S.Aplin	open	
		4.6	pattern recognition	develop new standalone algorithm	Nov	W.Mittarof R.Glattaauer	open	
TPC	simulation	5.1	check cabling and services	cooling material vs. endplate material	June	S.Aplin	done	
	digitization	5.2	improve parameterization field inhomogeneities, double hit resolution,...	parameterization needs to come from LCTPC	Aug	S.Aplin	open	
	tracking	5.3	finalize new pat rec (Clupatra)	use IMarlinTrack (5.6)	Aug	F.Gaede	open	
		5.6	develop IMarlinTrack interface	needed for all trackers	July	S.Aplin F.Gaede	partly done	
ECal	simulation	6.1	check drivers → mixing of Si-and Sci layers ?	probably not for large DBD production		G.Musat K.Kotera	open	
	reconstruction	6.2	finalize Sci-strip clustering		Nov	K.Kotera	ongoing	
		6.3	adopt Pandora PFA to work with both strip and digital	calibration !?	Nov	M.Thomson J.Marshall	ongoing	
AHCal	simulation	7.1	check latest driver	sci-thickness consistent with mechanical design ?	July	S.Lu	ongoing	FG
		7.15	desirable to have an AHCal with Videau geometry		Sep	???		
	reconstruction	7.2	verify Pandora PFA (calibration)	sci-thickness has been decreased	Aug	M.Thomson J.Marshall	open	
(S)DHCal	simulation	8.1	finalize Mokka (Tesla) driver: - endcap missing - include in Mokka release	Note: endcap design is the same in Videau&Tesla	July	G.Grenier G.Musat	partly done	FG
	digitization	8.2	realistic digitization with crosstalk	some code exists - needs MCParticle ::getStepPosition(i) → LCIO v1.6 (see 12.1) alternative is to use 1x1mm ² cells	Aug	G.Grenier et al	ongoing	FG
	reconstruction	8.3	adopt Pandora PFA to work with (S)DHCal	calibration	Sep	M.Thomson J.Marshall	open	
Muon	simulation	9.1	cleanup current Mokka driver	hardcoded numbers etc.	July	V.Saveliev N.D'Ascenzo	open	FG
		9.2	verify layer layout (coil layers?)	check with integration group !	July	V.Saveliev N.D'Ascenzo	open	FG
	digitization	9.3	verify current MuonDigi		Aug	V.Saveliev N.D'Ascenzo	open	FG
	reconstruction	9.4	adopt Pandora PFA to work with final layer layout		Sep	M.Thomson J.Marshall	open	
FCAL	simulation	9.5	verify existing drivers		Aug	A.Sailer B.Pawlik	open	FG
	reconstruction	9.6	check PandoraPFA works with BeamCal (standalone clusters)	should beamCal clusters be integrated in PFO collection ?	Sep	M.Berggren M.Thomson J.Marshall	open	
ILD	simulation	10.1	integrate all new drivers in three models - AHCal:SiEcal - SDHCal:SiEcal - AHCal:SciEcal	prepare pre-models: ILD_01_pre02 ILD_01_SDH_pre00 ILD_01_SciW_pre00	July	G.Musat	open	SA
		10.2	services in overall detector	pipes, cables, supports that are not attached to subdetector driver - as defined by integration Wg	Aug	G.Musat (C.Clerk)	ongoing	
	tracking	11.1	integrate all new tracking code into one consistent package		Nov	S.Aplin F.Gaede	ongoing	
		11.2	have pre-liminary tracking with IMarlinTrack/KalTest and TrackCheater	need before Grenada	Aug	S.Aplin F.Gaede	ongoing	
	LCIO	12.1	release v01-06	provides StepPosition needed by 8.2	June	J.Engels	done	

	12.2	release v02-00 provide new Track (multiple TrackStates), TrackerHitPlane, TrackerHitZCylinder	need for new tracking code: strip digitizers VXD track fitting	Aug	S.Aplin F.Gaede J.Engels	ongoing	
LCFIVertex	13.1	release new standalone LCFIVertex flavor tag	new package in marlinreco or new release of LCFIV. ?	July	T.Tanabe	ongoing	AM
	13.2	provide version that runs on DST	depends on 17.1 (DST format)	Sep	T.Tanabe	open	AM
reconstruction	14.1	integrate all new code into a standard reconstruction	check calibration and performance	Nov	"all"	open	
generator	15.1	provide first generated samples	some test sample for WW and nunuH exists (tH soon)	July	A.Miyamoto M.Berggren T.Barklow	ongoing	
MC production	16.1	produce first 1TeV test samples	need 15.1 can use ILD_00 now or wait for ILD_01_pre02 (and preliminary new tracking)	July	J.Engels	open	
	16.2	define event samples needed for DBD production	ILD physics WGs → talk/discussion in ILD Physics Meeting	Oct	ILD	open	
	16.3	define/verify new DST format	drop the Jet collections new MCTruth link other → collect input from ILD → talk/discussion in Physics and Analysis Meeting	Sep	M.Berggren	open	FG
Background	18.1	strategy for dealing w/ bg	see discussion at Orsay ILD meeting	Oct	M.Thomson + ILD bg WG	ongoing	
	18.2	pair bg standalone hit densities tracking performance		Oct	???	open	
	18.3	incl. gamma gamma in physics samples		Nov	???	open	
iLCSoft	20.1	need (developers) release with - IMarlinTrk - LCIOv2 - ILD_01_pre02 -..		Aug	F.Gaede S.Aplin J.Engels	open	