D	Task Name	Тур	Duration	Start Constraint Out	tine Predece	Resource Names	Lab Cost C min m	ost CQ TR p	Orig. Exch. currency rate	09101112	2009 01.02 03 0	4.05 06 07 08	8 09 10 11 12	2010	4 05 06 07	18/09/10 11	2011	30405.060	7.0809101	2012	030405.0	107 08 09 1	01112	2013 1102/03/04/0	510 <u>5107</u> 10	109/10/11 1	2014	4105106107 0	809/10/11	2015	4.05060708
	Time frame AdV project start	-		05/01/09 Earlier Than 01/07/09 Earlier Than	1	WD							IV project st																		
3	AdV installation shutdown		0 wks	01/07/11 Earlier Than	1					1								01/07 🔶	AdV instal	lation shu	tdown										
5																															
6		\vdash	\vdash		_		-+-	++-																							
8 9	ISC		248 wks	05/01/09 As Possible	1																							ISC			
10	Start of VSR2 run PAY: payload siesta model available	D	0 mors	26/06/09 Earlier Than 05/01/09 As Possible	2					05/04	pay-	Sta	art of VSR2 i	run																	
12	Project start	D	0 mons	01/07/09 Earlier Than	2					use01		01/17	hala todo	1																	
13 14	OSD: CITF lengths defined OSD: finesse and reflectivities definition		0 mons	05/01/09 As Possible 05/01/09 As Possible	2					05/01	05D: 0	CITE lengths incluse and re	effectivities	definition																	
15 16	OSD: interferometer asymmetries estimat OSD: contrast defect estimation	tio D D		05/01/09 As Possible 05/01/09 As Possible	2					05/01	oso u oso u	nto longento 100 cast colo	er asymmetri act estimatio	ior ostima																	
17	OSD: consist direct issumation OSD: finesse definition SAT, PAY: expected mirror motion spects	D	0 mons	05/01/09 As Possible 05/01/09 As Possible	2					05/01	OSD:1	ine se defini	ition																		
19	DET commissioned		0 mors	31/12/10 Earlier Than	2		-+-			05/01			mirror mo	uan speci	a density	31/12	. DET		ned												
20 21	INJ commissioned PAY: LC commissioned	D		31/12/10 Earlier Than 31/12/10 Earlier Than	2					1						31/12 31/12	PALO	ommitte store	ed scioned												
22	ITF commissioning start	D	0 mors	01/07/13 Earlier Than	2	PIEON.'				·														01/0	7 • T	commissi	oning start				
23 24	ISC management Alignment conceptual design		31 wks	05/01/09 Earlier Than 01/04/09 As Possible	2	P[50%]	Pisa			P[50%]	•	-		Alignment	conceptua	design.				ISC m	anagement										
25 26	Software identification for alignment Evaluation of Anderson vs. Ward tec			01/04/09 Earlier Than 01/07/09 Earlier Than	3 3 10	P					° (e in the second s			ignment vs. Ward t	chnique															
27	MSRC: feasibility of noise evaluation Steady state sensing configuration (n	n c _	2 wks	15/07/09 As Possible 15/07/09 As Possible	3 26	P P[150%]						P	WSR C: feasi	Anderson billey of no	ise evalual	on due to I	high order	modes	Ebu y-M												
28 29	Steady state sensing configuration (n Steady state control configuration (ra		1 mon	02/09/09 As Possible	3 25;26;31	P[150%] P[150%]						(150%) P[150%]	ŧΠ	•	tol config	ration (rad	lation pres	sure mitiga	ility with qu ition,)		q resp., e	ror signal	0								
30 31	Noise performance (coupling to DF, radiation pressure mitigation: definition			28/10/09 As Possible 15/07/09 As Possible	3 28;29 3 26	P P				1		P	<u>Î</u>	oise perfe	mance (or	upling to D Sefinition of	IF, electron f Sidles-Si	nic noise, . gg modes f) lor cavity w	ith n>=3 n	nirrors										
32 33	deliverable: alignment specs for PAY			28/10/09 As Possible	3 28;29	P	Pisa								alignment	specs for F an specific	AY														
34	Alignment design specifications Beam/quadrant ports definition (noise		1 mon	25/11/09 As Possible 25/11/09 As Possible	3 28;29	P[150%]	risa					Р	2(150%)	Beam'c	undrant pe	rts definitio	in (noise p	erf., DC po	wers,)												
35 36	Angular accuracy specification (RMS Alignment simulations - pre-commission			25/11/09 As Possible 03/02/10 As Possible	3 28;29 2 33	P[150%]	Pisa			1		P	P[150%]	Angu	lar accura	y specifica	tion (RMS	beam jitte	r, LC specs	.)											
37	Tuning of software	-	3 mors	03/02/10 As Possible 28/04/10 As Possible	3 25	P								1	Tuning	of software															
38 39	Simulation of radiation pressure in ce Simulation of OLTF's, stability of all I		4 mors	28/04/10 As Possible	3 37;31;28 3 37;31;28									P	Partie of	Simula	enulation of OL	or radiation TP's, stabi	pressure li ity of all loc	n central li ops	menterormet	er: multipl	e mirror s	uspensions							
40 41	Alignment acquisition procedure Modulation frequencies	-		03/02/10 As Possible 05/01/09 As Possible	3		Nice				Ц			: ====	Align	nent acquir	sition proc	edure													
42	Nominal frequency and multiple locking		4 mors	01/07/09 As Possible	3 12	P						P 🖸	No	minal freq	uency and	multiple loc	iking point	5?													
43 44	Sidebands on sidebands: possible or Definition of modulation frequencies	-	2 mors	05/01/09 As Possible 02/03/09 As Possible	3 43;13	P				P		wounds on s	of modulati	on freque	r not? ncles																
45 46	Compatibility with EM environmental Steady state locking: conceptual design			27/04/09 As Possible 01/07/09 As Possible	3 44 2	¢E	Nice				еE	Current	aibilly with I	El enviro	nmental no ty state loc	ise ling: conce	ptual desi	gn													
47	Shot noise correlations and feed-fore DC locking of dark fringe: hierarchica	N2 _	6 mors	01/07/09 As Possible 01/07/09 As Possible	3 12	P								Shot r	ioise correl	ations and	eptual desi feed-forwa ical gain, N	ard techniq	ues (check)											
49	Digital SSFS feasibility		3 mors	01/07/09 As Possible	3 12	P						P 1	Digita	I SSFS fe	asibility	werarchi	ical gain, N														
50 51	Need for 21, 31 signals? Steady state locking: design specificatio	- or _		01/07/09 As Possible 20/01/10 As Possible	3 12 2 46		Nice					f	No	ed for 21,	3f signals?		Ste	ady state I	ocking: des	sign specil	ications										
52 53	Radiation pressure mitigation with dig		4 mors	20/01/10 As Possible 12/05/10 As Possible	3 12 3 45;52	P								-	Radiat	on pressur	e mitigatio	n with digi	tal spring: p	parameter	accuracy										
54	Feed-forward filters: specs at low fre		4 mors	20/01/10 As Possible	3 14	P								•	Feed-6	w ard filte		nition at low frequ													
55 56	Feed-forward technique filter design Specifications on mirror control noise			12/05/10 As Possible 04/08/10 As Possible	3 54 3 53;55	P P									P COLO	Feed form	ecilication	ique filter d s on mirror	esign control no	ise											
57	Specifications on mirror control signa Specifications on RF oscillator phase	al _	2 mors	04/08/10 As Possible 04/08/10 As Possible	3 53;55	P									р 0	Sp	Security 1	ations on i	control sig	r obaro a	sion	le noise									
59	Specifications on IMC locking accura	ac _	4 mors	04/08/10 As Possible	3 53;55	P									а, 2		Specific Specific	ations on I	RF oscillato MC locking	accuracy	_ emplitud										
60 61	Specifications on IMC length noise p Specifications on laser frequency noi			04/08/10 As Possible 04/08/10 As Possible	3 53;55 3 53;55;15	P									ę ę	Sp Sp	ecrication	s on IMC le s on laser	ingth noise	power sp noise	ectral dens	ity									
62 63	Beams & photodiodes definition Specifications on DC powers	-	1 mon	04/08/10 As Possible 04/08/10 As Possible	3 53;55	P									ę. ę	Beam Snort	is & photo	diodes def	1111												
63 64	Specifications on sampling frequenci	-	1 mon	04/08/10 As Possible	3 53;55	P									P	Speci	fications o	in sampling	frequenci	es and del	ays										
65 66	Specifications on beam quality Definition of detuning	-	2 mons	04/08/10 As Possible 04/08/10 As Possible	3 53;55 3 53;55;16	P P									P P	De	· • •	ions on bea detuning	im quality												
67	Specification for noise on sidebands Specification on RFAM	b _	5 mors	04/08/10 As Possible 04/08/10 As Possible	3 53;55	P									р. р		Spe	cification f	or noise on M	sideband	s brought t	y IMC									
69	Steady state locking: simulations - pre-		24 wks	26/01/11 As Possible	2 51		Nice										÷ ۲		Gleady at	tate lockin	-	pre-	ommissie	aning							
70	Simulation of radiation pressure (tim Simulation of OLTF's, stability of all I		6 mors	26/01/11 As Possible 26/01/11 As Possible	3 53;55 3 53;55	р Р	$-+\mp$												simulation Simulation	of radiati	on pressur s, stability	e (time-de of all loops	main) (frequer	icy domain)							
72	Lock acquisition conceptual design Evaluation of different lock acquisitio	-	12 wks 3 more	05/01/09 As Possible 05/01/09 As Possible	2 3 17	p	LAL			P	÷	Losk acquis	sition conce	ptual desi	gn ition techn	ques															
74	Lock acquisition: construction	-		30/03/09 As Possible	2 72 3 73		LAL					-	olfion		lane-4					1.	ick acquisi	tion: const	ruction								
75 76	Specifications on auxiliary laser frequ Auxiliary laser bench design	-	3 mons	30/03/09 As Possible 22/06/09 As Possible	3 75	P	LAL					F	tt Auxile	ry lacor b	anch der ig		1														
77 78	Purchase of lasers Puchase of optical components	-	3 mons	05/01/11 Earlier Than 01/07/10 Earlier Than	3 76 3 76	Budget[100 k€];P[Budget[100 k€];P[110 3 2 150 0 1					Budget(100 k€];P	Budget[100	kE];P[10%) Terrer	Purchas	e of lasers												
79 80	Lab tests	-	6 mors	30/03/11 As Possible 05/10/11 As Possible	3 77;78	oE[50%];oT[50%]	LAL									oE[50%]	oT[50%]	E[50%/~~~	150%I	ib tesis	tallation										
81	Whole interferometer lock acquisition	1 1	2 mors	05/10/09 As Possible	3 75;76;73	P								Whole inte	ferometer	ock acquis	alion proce	duros	444												
82 83	Specifications on correction signal ex specification on mirror velocity nomin	na _	2 mons	05/10/09 As Possible 05/10/09 As Possible	3 75;76;18 3 75;76;18		$-+\mp$						2 100 S	• • • •	in on mirror																
84 85	Lock acquisition: simulations - pre-com Lock acquisition of long arms simulat			11/01/12 As Possible 11/01/12 As Possible	2 74 3 75	P	LAL														Lock	cquisition	nLock a ol lono :	cquisition: s Irms simula	simulation	is - pre-cor -domain)	nmissionin	9			
86	Lock acquisition of interferometer ce Lock acquisition of interferometer ce	nt _	3 mores	11/01/12 As Possible 11/01/12 As Possible	3 81	P															Lock	cquisition	al interle	arometer ce	intral part						
87 88	deliverable: Lock acquisition procedu		3 mores	27/06/12 As Possible	3 76 3 85;86;87		LAL														•	сыскас	delivera	ble: Lock a	cquisition	cavity: CA	v A demo	arabon			
89 90	Parametric instability mitigation Parametric instability mitigation cono			01/07/09 As Possible 01/07/09 As Possible	2 3 12		LKB					7	Parametric	instability ability mit	mitigation gation con	eptual des	ign														
91 92	Parametric instability mitigation desig Parametric instability mitigation desig	9n -	0,2 wks	02/07/09 As Possible 03/07/09 As Possible	3 90		LKB					Par	rametric inst	ability mit	gation desi	gn specific	ations	mis-1-													
93	sensing and control: integration	-	4 wks	10/10/12 As Possible	2		LKB					C3 P	arametric in	subliky		mulations	- pre-com	sioning					sen:	sing and cor	ntrol: inte	gration					
94 95	test of global control for longitudinal litest of global control for angular locki			10/10/12 As Possible 10/10/12 As Possible	3 36;41;69 3 36;41;69																		tost o	af global cor af global cor	ntrol for b	ngitudinal ngular lock	locking ing				
96	software support	-	1 mon	10/10/12 As Possible	3 9455		EGO																softw	rare suppor	t I				mine fo		
98	commissioning for 1-hour long lock Lock of one arm with auxiliary laser	+ -	1 mon	01/07/13 As Possible 01/07/13 As Possible	2 3 94;95;22		LAL																		, <mark>E</mark> ,			commissio uxiliary lase		our long loi	
99 100	1 arm lock, transfer to 1.06 laser at re Lock of DARM, CARM and MICH	es _		29/07/13 As Possible 02/09/13 As Possible	3 98 3 99		LAL																		ľ	1 arm loc	ik, transfer If DARM, C	to 1.06 lase ARM and N	ir at resona	1Ce	
101	alignment of DARM, CARM and MIC		1 mon	30/09/13 As Possible 28/10/13 As Possible	3 100																					alig alig	nment of D	ARM, CARI	M and MICH		
103	alignement of PRC; mitigation of opt		1 mon	25/11/13 As Possible	3 102	[++																			aligneme	nt of PRC;	AICH and P nitigation o	optical spr	ing
104 105	lock of SRC alignement of SRC		1 mon	06/01/14 As Possible 03/03/14 As Possible	3 103 3 104																							k of SRC	of SRC		
106	software support	<u> </u>		010713 As Possible	3 pess	iE[20%]	EGO	<u> </u>		1							:						:					re support			
Project: Date: 14	MSProj11 External 1 105/09 Ext.Depe		Ecologia T	Task Split	600000	Progres	ne 🔶		ummary roject Summary	-	_	External External		*		Split External		8 000000		ndenc	y Duration	•									
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