Swiss Institute of Particle Physics

an Association according to Swiss law

CHIPP Long-Term Financial Table: *edition 2011*

December 2011/JPR

Introduction

Since several years, CHIPP establishes a Long-Term Financial Table containing a realistic view of the future need for running and planned project participation. Initially restricted to CERN related activities (FORCE funds) the table has been expanded two years ago to contain also other projects for international research installations (FLARE, formerly FOLIS). The table is handed over for planning purposes to the State Secretariat for Education and Research SER and the Swiss National Science Foundation SNF.

The table contains investments to equipments and consumables as well as the so-called 'technical manpower' for FORCE and FLARE. The data is collected from the responsible project leaders. Large deviations from the previous year's table are clarified with the data provider. The more realistic the planning is the better are the chances that it is taken seriously by the two funding agencies.

The attached Long-Term Financial Table (edition 2011) covers the years 2012-2016 (with 2010 and 2011 for reference).

Present situation

During many years, intensive discussions had taken place in the CHIPP Board meetings, trying to match the needs for the years to come with the available funding. This process, which was sometimes rather painful, has established a good confidence in the tables from the side of the two funding agencies and has led the proposers and projects leaders to carefully weigh their input. This self-control has diminished the need for discussions in the Board for the past years.

Today, however, the total sums in the table collected in 2011 (attached) have reached for the period 2012- 2016 between 7.5 and 12.1 MCHF per year for FORCE (available funds: 4.8 MCHF/year) and between 4.2 and 10.1 MCHF for FLARE (available funds: not yet known exactly, but probably at a level of 1-2 MCHF/year).

This massive overbooking has led the Lenkungsausschuss FORCE to request CHIPP to re-introduce the discussions in the Board, aiming at moderating the ambitions of the intended participations of CHIPP research groups in large projects for the period 2014-2017. This discussion will take place in the June Board meeting on the basis of this table, complemented by presentations by the leaders for the largest projects (upgrade of the LHC detectors, LAGUNA, DARWIN, and CTA).

The Board (applying Article 27, litt. b) is requested

- to take note of the present table
- to prepare itself for a detailed discussion of the intended participations of CHIPP research groups in large projects for the period 2014-2017 at the Board Meeting 2012-02 (13 June 2012).

CHIPP Particle Physics Programm (Investments for equipment & consumables PLUS MANPOWER FOR FORCE & FLARE resp.)

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Research Field	Experiment	CERN	Item	Manpower	2010	2011	2012	2013	2014	2015	2016	Total 2010-2011	Total 2012	Total 2013-2016	Total
LHC	ATLAS	Y	M&O		242	258	269	269	269	269	269	500	269	1'076	1'845
			Computing and local items		235	168	195	180	180	180	180	403	195	720	1'318
			FORCE technical manpower	1 BE, 1 GE		232	244	256	265	140	145	232	244	806	1'282
			Consolid. & upgrade (R&D+C)		281	337	660	885	635	485	2'585	618	660	4'590	5'868
	CMS	Y	M&O		590	525	495	495	495	495	495	1'115	495	1'980	3'590
			Computing and local items		128	100	100	100	100	100	100	228	100	400	728
			FORCE technical manpower	1 pixel, 1 ECAL, 1 T3-CMS		225	392	400	400	400	400	225	392	1'600	2'217
			Consolid. & upgrade (R&D+C)		225	565	935	1'050	1'250	1'250	850	790	935	4'400	6'125
	LHCb	Y	CtC		350							350	0	0	350
			M&O		238	259	256	256	256	256	256	497	256	1'024	1'777
			Computing and local items		0	98	100	100	100	100	100	98	100	400	598
			FORCE technical manpower	1 ZH, 1 EPFL	204	185	200	200	200	200	200	389	200	800	1'389
			Consolid. & upgrade (R&D+C)		0	600	600	600	800	1'000	1'400	600	600	3'800	5'000
	TIER2	Y	Operation and Expansion		650	561	821	700	700	700	700	1'211	821	2'800	4'832
			FORCE technical manpower	1 CSCS		146	134	150	150	150	150	146	134	600	880
	Machine upgrade	Y	R&D		0	0	0	120	120	120	120		0	480	
Other CERN experiments	NA61	Y	Construction & Development		0	0	30	30	30	30	30	0	30	120	150
			CF & Operation		110	114	100	100	100	100	100	224	100	400	724
	CLOUD	Y	Construction		158	32	160	160	120	120	120	190	160	520	870
			CF & Operation		0	60	60	60	60	60	60	60	60	240	360
			FORCE technical manpower	1 PSI		18	17	20	20	20	20	18	17	80	115
	DIRAC	Y			50	50	50	0	0	0	0	100	50	0	150
Neutrinos	OPERA	Y	M&O		250	250	220	100	250	250	0	500	220	600	1'320
			Computing and local items		240	110	130	80	50	50	0	350	130	180	660
			FORCE technical manpower	1 BE		190	116	120	125	130	0	190	116	375	681
	T2K*	REC	Construction		161	50	30	30	30	30	0	211	30	90	331
			CF & Operation		0	0	150	150	150	150	0	0	150	450	600
	EXO-200	N	Commissioning & Operations		0	0	80	40	40	0	0	0	80	80	160
	EXO-full	N	R&D		0	0	100	150	80	50	0	0	100	280	380
			Commissioning & Operations			0	0	0	200	100	100	0	0	400	400
	GERDA	N	R&D		85	120						205			
			Construction & Hardware		0	30	250	150	150	0	0	30	250	300	580
			CF & Operation Phase I+II		9	9	130	130	130	130	130	18	130	520	668

AstroParticle	**AMS**	REC			101	92	64	64	64	64	64	193	64	256	513
	MAGIC (I+II)	REC	M&O		0	0	0	70	70	70	70	0	0	280	280
	ArDM	REC			200	200	75	75	75	75	75	400	75	300	775
	XENON 1ton	N	Construction & Hardware		115	240	640	340	120	0	0	355	640	460	1'455
			CF & Operation		0	0	150	150	150	150	150	0	150	600	750
			Computing		0	21	30	25	25	10	10	21	30	70	121
	DARWIN*	N	R&D		48	150	250	250	250	0	0	198	250	500	948
			FLARE technical manpower	1 ZH	0	0	0	150	150	150	150		0	600	
			Construction				0	0	0	3'000	4'500	0	0	7'500	7'500
			CF & Operation				0	0	0	150	150	0	0	300	300
	LAGUNA LBNO*	Y	R&D LAGUNA LBNO (GE)			170	130	130	130	170	170	170	130	600	900
			R&D LAGUNA LBNO (ETHZ/BE)		150	300	500	0	0	0	0	450	500	0	
			Construction (phase 1)			0	0	0	4'000	3'000	3'000	0	0	10'000	10'000
	CTA	N	R&D		200	200	200	200	200	200	200	400	200	800	1'400
			Construction & Hardware			0	0	2'000	3'000	4'000	4'000	0	0	13'000	13'000
			FLARE technical manpower	1 GE	0	0	158	200	200	200	200	0	158	800	958
	ICECUBE	REC	R&D		0	0	30	30	30	30	30	0	30	120	150
			M&O		0	0	170	170	170	170	170	0	170	680	850
	POLAR*	N			174	0	0	0	0	0	0	174	0	0	174
	PEBS	N	R&D		200	100	0	0	0	50	100	300	0	150	450
		N	M&O		0	0	0	50	50	100	100	0	0	300	300
		N	Construction Phase I		0	0	50	150	200	150	50	0	50	550	600
Future Projects and R&D	**Neutrino Detector***	Y	R&D		251	58	89	87	87	150	150	309	89	474	872
	(= part of AIDA)		FORCE technical manpower	1 GE (2013ff)			0	86	86	86	86	0	0	344	344
	Neutrino Factory (MICE)	REC			200	136	150	150	200	200	200	336	150	750	1'236
	Linear Collider	Y	R&D		217	108	120	120	120	120	120	325	120	480	925
	EUDET (FP6)	N			22	0	0	0	0	0	0	22	0	0	22
	AIDA (FP7)*	Y			0	170	524	364	364	0	0	170	524	728	1'422
OUTREACH	**Agora**				0	0	86	61	61	65	65	0	86	252	338
TOTAL					**6'084**	**7'237**	**10'440**	**12'003**	**17'257**	**19'425**	**22'320**				**92'531**
Sum of possible FORCE					**5'081**	**5'897**	**7'966**	**7'537**	**11'831**	**10'500**	**12'145**	**11'598**	**7'966**	**42'013**	**60'147**
Sum of possible FORCE 2010-2011						**10'978**									
Sum of possible FORCE 2012							**7'966**								
Sum of possible FORCE											**42'013**				
Sum of possible FLARE 2012			(NOT AVAILABLE; FLARE NOT YET INTRODUCED)				**2'238**								
Sum of possible FLARE								**4'255**	**5'215**	**8'710**	**10'110**	**1'527**	**2'238**	**28'290**	**31'250**
Sum of possible FLARE 2013-2016											**28'290**				

*** = other funding sources**			**2010**	**2011**	**2012**	**2013**	**2014**
T2K	SINERGIA		150	150			
DARWIN	ASPERA	manpower	101	104	108		
LAGUNA LBNO	FP7				40	40	40
CTA	SINERGIA	manpower	820	898			
POLAR	Polish-Swiss Research Progr.; Sino-Swiss Science & Technology Cooperation			251	1'006	1'078	817
Neutrino Detect	FP7			92	61	63	63
AIDA	FP7			31	21	21	21
OUTREACH	SER				50	0	0
	CHIPP				17	17	17