

TOTEM RRB APRIL 2011 :

M&O BOOK-CLOSING 2010

M&O STATUS 2011

REPORT ON CONSTRUCTION

M&O 2012 - PRELIMINARY

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RRB M&O 2010 : Cat.A and Cat.B contributions by funding agencies [book-closing 31 Dec 2010]

TOTEM Cat.A M&O 2010			CERN	INFN	Finland	Estonia	Prague	US NSF	KFKI
Budget T299572									
Balance Contrib. Cat.A = + 10 k									
	Expected'10		94	202	49	18	27	40	18
	TotToBeAllocated		94	202	49	18 + 6	27	0 + 53	18
	Paid'10		94 + 53	202	49	24	27	0	9

TOTEM Cat.B M&O 2010			CERN	INFN	Finland	Estonia	Prague	US NSF	KFKI
Budget T299570 + Institutes									
Balance Contrib. Cat.B = + 0 k									
	Expected'10		81	120	18	2	5	18	3
	TotToBeAllocated		81	120	18	2	5	18	3
	Paid'10		81	120	18	2	5	18	3

* US NSF: Outstanding 53k from 2008-2009 paid by CERN as reported at RRB October 2010
 US CWRU: in charge to pay M&O from 2011 onwards as anticipated at RRB October 2010

M&O 2010: Cat.A expenditures summary (operation & consumables).**Expenditures and Balance book-closed at 31 Dec 2010.**

	B	C	D	E	F	G
2	TOTEM Category A M&O 2010					
3	Budget T299572 :			RRB	Out	Balance
	B	C	D	E	F	G
137	GRAND TOTAL			448	-420	28
138	Operation sub-items			350	-337	13
139	Consumables sub-items			98	-83	15
140						
141						
142	Carry-over from previous years					6
143						
144	Balance contributions '10 Cat.A					10
145						
146	Credits - Debits					-36
147						
148	TOTAL BALANCE CAT. A					8

M&O 2010: Cat.B expenditures summary (operation & consumables).**Expenditures and Balance book-closed at 31 Dec 2010.**

TOTEM Category B M&O 2010						
Budget T299570 + Institutes :			RRB	Out	Balance	
GRAND TOTAL						
			247	-247	0	
	Operation sub-items		83	-83	0	
	Consumables sub-items		164	-164	0	
	Carry-over from previous years				60	
	Balance contributions '10 Cat.B				0	
	Expenses from RP add. contribution				-58	
TOTAL BALANCE CAT. B						
2						

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M&O STATUS 2011**BOOK-CLOSING 28 Feb [FI Dpt.]**

- **TOTEM figures are consistent with the data presented by FI Dpt. within 1kCHF precision.**
- **CERN paid the 2011 contribution and US paid a fraction already.**
- **Finland and Prague paid the 2011 contribution after 28 Feb.**
- **Invoices have been sent to all the collaborating institutes.**

Notes:

The carry over from 2010 shown in the FI Dpt. figures coincides with TOTEM 2010 book-closing after taking into account the open commitments and the credits-debits from last year.

M&O Cat.A Status Contributions 2011 [9th Apr 2011]

TOTEM Cat.A M&O 2011								
Budget T299572								
<i>Balance Contrib. Cat.A</i>		CERN	INFN	Finland	Estonia	Prague	US CWRU	KFKI
Expected'11	106	198	48	18	26	26	18	
TotToBeAllocated	106	198	48	18	26	26	9 + 18	
Paid'11	106	0	48	0	26	4	0	

* **Estonia and CWRU are currently preparing the transactions to transfer their contributions.**

* **INFN has confirmed the transfer of their contribution by mid-2011.**

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Report on construction budget

- The construction budget expenditures have progressed according to the projections and figures presented to the RRB in October 2010.
- The T1 telescope has been fully installed. CERN is managing the costs reimbursement for both CMS and TOTEM (TOTEM = 90k).
- **The TOTEM experiment construction has been completed.**
- The next slide shows the Dec 2010 book-closing of the final Construction Financial Matrix approved by the TOTEM Collaboration Board.
- The residual gap between Projections and Paid-expenditures represents the foreseen cost for linking to CMS DAQ, which will have to be duly managed and funded.

TOTEM - 31/12/2010 - Financial Matrix

TOTEM	TOTAL			CERN			INFN			Finland			Brunel			Estonia			Prague			NSF			Hungary			C.Projects			
	MoU	Proj	Paid	MoU	Proj	Paid	MoU	Proj	Paid	MoU	Proj	Paid	MoU	Proj	Paid	MoU	Proj	Paid	MoU	Proj	Paid	MoU	Proj	Paid	MoU	Proj	Paid	MoU	In	Out	
1. ROMAN POTS	2476	3457	3457	1702	2494	2557																									
1.1 Roman Pot mechanics	651	865	865	456	618	618													195	247	247										
1.2 Movement	204	243	243	204	243	243													2	2	2										
1.3 Beam position monitor	171	122	122	169	120	120																									
1.4 Detector mechanics	133	210	210	133	210	210																									
1.5 Silicon sensors*	228	299	299	110	236	299							55	0	0						63	63	0								
1.6 Cooling	209	319	319	209	319	319																									
1.7 Electronics	554	830	830	175	260	260									40	42	42		0	187	187	324	244	244	0	80	80	15	17	17	
1.8 Power supplies and cables**	287	459	459	206	378	378	48	48	48	13	13	13			2	2	2		5	5	5	13	13	13							
1.9 Miscellaneous	40	110	110	40	110	110																									
2. T1-CSC	1820	1895	1896	441	486	486																									
2.1 70 CSC Detectors	627	640	640				627	640	640																						
2.2 Electronics	666	595	595	73	66	66	509	416	416												70	98	98						15	15	15
2.3 Power supplies and cables	159	201	201	119	81	81	40	120	120																				70	70	71
2.4 Supports and services***	369	459	460	249	339	339	50	50	50																						
3. T2-GEM	1303	1521	1521																												
3.1 50 GEM Detectors	434	515	515							434	515	515																			
3.2 Electronics	533	570	569				518	555	555																				15	15	14
3.3 Power supplies and cables	138	172	172				138	172	172																						
3.4 Supports and services	199	264	265							90	155	155																109	109	110	
4. TEST SETUP	150	150	150																												
4.1 Cables, power supplies & infrastr.	40	40	40																										40	40	40
4.2 Electronics DAQ and computing	70	70	70																										70	70	70
4.3 Pool rental & Consumables	40	40	40																									40	40	40	
5. DAQ EVENT BUILDER	720	723	222																												
5.1 Readout column	170	137	137				170	137	137																						
5.2 Link into CMS DAQ*	500	500	0																												
5.3 Online PC & storage	50	86	85				33	69	69																				17	17	16
TOTAL TOTEM	6470	7746	7246	2142	2980	3043	2133	2207	2207	537	683	683	55	0	0	42	44	44	202	441	441	470	418	355	0	80	80	390	393	393	

* Item 1.5 US contribution compensated by CERN. ** Item 1.8 includes the redistributed Polish funds. *** Item 2.4 includes extra costs of T1 installation.
 * Item 5.2 is foreseen for linking to CMS DAQ. It is not included in current CERN MoU and Projection columns, but it is included in the TOTAL MoU and Projection columns.

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TOTEM M&O BUDGET REQUEST 2012 - Preliminary

A total M&O budget envelope equal to 2011 is requested for the year 2012, according to the table of projections done with the SG for the years of LHC runs.

The table of projections will be updated with the SG to reflect the CERN strategy of LHC running in 2012 and of possible LHC long shutdowns in 2013 and 2014.

	Official 2011	Request 2012
A: TOT DETECTORS RELATED COSTS	142K	142K
A: TOT SECRETARIAT	44K	44K
A: TOT COMMUNICATIONS	3K	3K
A: TOT CORE COMPUTING	92K	92K
A: TOT ONLINE COMPUTING	96K	96K
A: TOT TESTBEAMS, CALIBRATION	20K	20K
A: TOT LABORATORY OPERATIONS	13K	13K
A: TOT GENERAL SERVICES	30K	30K
<u>A: TOTAL =</u>	<u>440K</u>	<u>440K</u>

It is proposed to maintain const Cat.B contributions, as foreseen in the projections.

B: TOTAL = 247K

CONCLUSIONS

- TOTEM is grateful to CERN for the financial support on the installation of the T1 detector and to CMS for the collaboration on the related technical challenges.

- TOTEM has completed the experiment construction and it is going to be operational on 2011 data taking and runs at LHC to pursue its physics objectives.

- TOTEM is looking forward to iterating with the Scrutiny Group on the required reviews in order to finalize the 2012 M&O budget request.