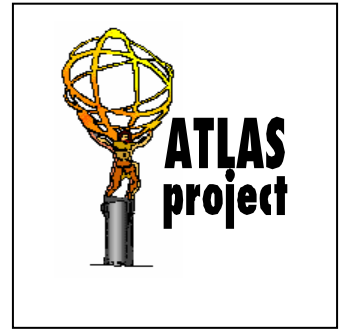


CERN-RRB-2006-071

ATLAS Resources Review Board, October 23, 2006



2006 – 2007 ATLAS Baseline and Cost to Completion Budgets



CERN-RRB-2006-071

ATLAS Resources Review Board, October 23, 2006

For RRB to take note

Part 1

Status of the 2006 ATLAS Baseline and Cost to Completion Budgets

Introduction

The ATLAS management, supported by the ATLAS Executive and Collaboration Boards, kindly invites the RRB to take note of the status of the baseline and cost to completion budgets for 2006.

The RRB approved in October 2005 the 2006 ATLAS budget for construction activities (CERN-RRB-2005-100). The baseline commitments and payments were planned at 14.9 MCHF and 28.5 MCHF, respectively, including also CC (Construction Completion) Category-A costs. The RRB also accepted the proposed budget levels for cost to completion, composed of C&I (Commissioning and Integration) and CC Category-B at 3.5 MCHF and 3.3 MCHF, respectively. An update of the budgets was presented in April 2006 (CERN-RRB-2006-018, Part 2). The present document provides a further budget status report. All cost to completion payments remain in line with the Completion Plan (CERN-RRB-2002-114 rev.).

BASELINE BUDGET

REPORT ELEMENTS


 Summary Update




 Table References

1. Baseline Budget & CC-A Status for 2006

The updated 2006 baseline commitments, including CC-A items, are estimated at 21.5 MCHF and payments at 41.0 MCHF, respectively. This represents a slight decrease in expected payments w.r.t. the April 2006 update (CERN-RRB-2006-018), due to shift in payments in the Common Fund (End Cap Toroid installation) and in the LAr (power supplies) to 2007.

The status of the planned commitments and payments by system/sub-detector and Funding Agencies are presented in **Tables 1 to 3**. For some Funding Agencies, Table 1 and Table 2 show contributions exceeding the original CORE values. These will be aligned with the CORE values in April 2007 for 2006 and a record will be kept separately for any remaining difference.




The column “m.s. contrib.” in Table 3 shows membership fees to be paid by the end of 2006, including both due membership contributions in the baseline budget as defined in the construction MoU (RRB-D 98-44 rev.) as well as the last year of the extended membership fees as part of the CC-A.

C & I B U D G E T	
R E P O R T E L E M E N T S	
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	Table References

2. C&I (A and B) Status for 2006

The 2006 Commissioning and Integration (C&I) budget level was accepted at 3.5 MCHF for payments in October 2005 (CERN-RRB-2005-100), in line with the so-called Category-1 funding in the Completion Plan (CERN-RRB-2002-114 rev/Annex). An update was provided in April 2006 (CERN-RRB-2006-018, Part 2).

Table 4 shows the status of expected contributions for 2006 from each Funding Agency and system (Categories A and B, both based on CORE sharing) as well as updated payments by each system. Updated total payments are planned at 2.6 MCHF in 2006 due to shift in payments to 2007 in the Inner Detector, LAr and the Muons commissioning. The expected contributions will exceed the projected payments by 1.2 MCHF which will help the budget position elsewhere. The table also gives for reference the calculated amount of the 2006 share of the full planned C&I payments of 21 MCHF as part of the 68.2 MCHF, as projected in 2002, to which not yet all Funding Agencies have committed.

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3. Construction Completion (CC-B) Status for 2006

The RRB accepted in October 2005 the proposed Construction Completion Category- B (i.e. system-specific) budget of 3.3 MCHF for payments (CERN-RRB-2005-100). The updated CC-B budget estimate for 2006 is 3.0 MCHF. This decrease is mainly due to shift in payments related to electronics in all the systems, within the approved total cost envelope. The shortfall of the updated CC-B budget between income and payments (1.3 MCHF) will be covered by the positive budget balance in C&I as well as by carry-over from 2005.

Table 5 shows the expected contributions for 2006 for each Funding Agency and system (Category-B). Table 5 also shows for reference the calculated amount of the 2006 share of the full CC-B costs of 12 MCHF as part of the 68 MCHF to which not yet all Funding Agencies have committed.

It should be noted that, until now, the deferrals scheme has not been sufficient to avoid the projected budget deficit. This scheme was accepted by the RRB in 2002 as part of the Completion Plan (CERN-RRB-2004-114 rev.) to financially bridge the gap between the planned Cost to Completion payments (68 MCHF) and pledged contributions (initially, 47 MCHF). This is achieved by staging certain baseline detector components, mostly TDAQ processors, thus redirecting originally pledged baseline CORE funds towards completing the initial detector. The staged items will

then be restored centrally by the ATLAS management once the received contributions reach 68 MCHF. Observed delays in making the deferral funds available not only deteriorate the cash flow situation but also postpones reaching the full physics discovery potential of ATLAS.

The status of received deferral funds is presented in **Table 6**. These contributions are not included in the baseline contribution tables presented earlier.

A summary of the pledged C&I and CC contributions (Category-1) per year and Funding Agency is provided in the **Annex 1** of this document (Part 2).

.

**Planned CORE and CC-A Contributions to ATLAS Detector Construction
during 2006 by Funding Agency
(Commitments, in kCHF)**

Funding Agency	Inner Det.	LAr Cal.	Tile Cal.	Muon cham.	Trigger /DAQ	Common Projects	total
Argentina						0.0	0
Armenia						38.0	38
Australia						25.0	25
Austria					140	13.0	153
Azerbaijan						18.0	18
Belarus						75.0	75
Brazil						38.0	38
Canada						839.0	839
China NSFC+MSTC						353.0	353
Czech Republic					2	38.0	40
Denmark						13.0	13
Finland						0.0	0
France IN2P3						62.5	63
France CEA						13.0	13
Georgia						38.0	38
Germany BMBF		450			200	460.0	1110
Germany DESY						0.0	0
Germany MPI		125				57.5	183
Greece						113.0	113
Israel					3	38.0	41
Italy				3865	1935	150.0	5950
Japan					470	749.5	1220
Morocco						26.0	26
Netherlands					25	25.0	50
Norway						41.0	41
Poland					10	67.0	77
Portugal					115	45.0	160
Romania						13.0	13
Russia				200		868.0	1068
JINR					95	25.0	120
Serbia						13.0	13
Slovak Republic						13.0	13
Slovenia	95					35.0	130
Spain						38.0	38
Sweden					195	128.0	323
Switzerland		150			845	25.0	1020
Taipei						13.0	13
Turkey						25.0	25
United Kingdom					745	322.0	1067
US DOE+NSF		440			250	4160.0	4850
CERN					2150	12.5	2163
total sub-detector	95	1,165	-	4,065	7,180	9,026	21,531

Table 1 (Page 4)

**Planned CORE and CC-A Contributions to ATLAS Detector
Construction during 2006 by Funding Agency
(Payments, in kCHF)**

Funding Agency	Inner Det.	LAr Cal.	Tile Cal.	Muon cham.	Trigger /DAQ	Common Projects	total
Argentina						0.0	0
Armenia						38.0	38
Australia						380.0	380
Austria					140	13.0	153
Azerbaijan						18.0	18
Belarus						83.0	83
Brazil						63.0	63
Canada						2869.0	2869
China NSFC+MSTC						353.0	353
Czech Republic	5				2	38.0	45
Denmark	235				175	13.0	423
Finland						0.0	0
France IN2P3	10					62.5	73
France CEA						13.0	13
Georgia						85.0	85
Germany BMBF	35	450			640	460.0	1585
Germany DESY						0.0	0
Germany MPI		125				57.5	183
Greece						378.0	378
Israel					3	538.0	541
Italy	25			3865	2210	150.0	6250
Japan					470	1349.5	1820
Morocco						138.0	138
Netherlands	225				25	25.0	275
Norway						191.0	191
Poland					10	46.0	56
Portugal					115	34.0	149
Romania						13.0	13
Russia				200		3095.0	3295
JINR					95	425.0	520
Serbia						13.0	13
Slovak Republic						13.0	13
Slovenia	95					35.0	130
Spain						38.0	38
Sweden					195	128.0	323
Switzerland		150			845	25.0	1020
Taipei						128.0	128
Turkey						25.0	25
United Kingdom	150				1265	1657.0	3072
US DOE+NSF	250	440			250	4836.0	5776
CERN	805				2150	12.5	2968

from past Common Fund contributions

0.0

missing contributions to meet planned project payments

7,471

total sub-detector

1,835	1,165	-	4,065	8,590	25,310	40,965
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Planned CORE Common Project Contributions
during 2006 by Funding Agency
 (Baseline+CC-A, in kCHF)

Funding Agency	payments				new commitments needed		
	in-kind contrib.	cash contrib.	m.s. contrib.	total contrib.	in-kind contrib.	Common Fund	total contrib.
Argentina	0	0	0	0	0	0	0
Armenia	0	0	38	38	0	38	38
Australia	0	355	25	380	0	25	25
Austria	0	0	13	13	0	13	13
Azerbaijan	0	0	18	18	0	18	18
Belarus	0	0	83	83	0	75	75
Brazil	0	0	63	63	0	38	38
Canada	0	2781	88	2869	0	839	839
China NSFC+MSTC	0	340	13	353	0	353	353
Czech Republic	0	0	38	38	0	38	38
Denmark	0	0	13	13	0	13	13
Finland	0	0	0	0	0	0	0
France IN2P3	0	0	63	63	0	63	63
France CEA	0	0	13	13	0	13	13
Georgia	0	0	85	85	0	38	38
Germany BMBF	0	348	113	460	0	460	460
Germany DESY	0	0	0	0	0	0	0
Germany MPI	0	45	13	58	0	58	58
Greece	0	190	188	378	0	113	113
Israel	0	500	38	538	0	38	38
Italy	0	0	150	150	0	150	150
Japan	0	1162	188	1350	0	750	750
Morocco	0	50	88	138	0	26	26
Netherlands	0	0	25	25	0	25	25
Norway	0	166	25	191	0	41	41
Poland	21	0	25	46	21	46	67
Portugal	11	0	23	34	11	34	45
Romania	0	0	13	13	0	13	13
Russia	375	2545	175	3095	0	868	868
JINR	0	400	25	425	0	25	25
Serbia	0	0	13	13	0	13	13
Slovak Republic	0	0	13	13	0	13	13
Slovenia	0	23	13	35	0	35	35
Spain	0	0	38	38	0	38	38
Sweden	0	78	50	128	0	128	128
Switzerland	0	0	25	25	0	25	25
Taipei	0	115	13	128	0	13	13
Turkey	0	0	25	25	0	25	25
United Kingdom	0	1495	163	1657	0	322	322
US DOE+NSF	0	4423	413	4836	1500	2660	4160
CERN	0	0	13	13	0	13	13
Common Fund	0	0	0	0			
missing contributions to meet planned project payments				7471			
total	407	15,015	2,418	25,310	1,532	7,494	9,026

**Planned C+I Contributions (cash and in-kind)
for ATLAS in 2006 by Funding Agency (Categories A and B, in kCHF)**

9/28/2006

Funding Agency	Cat. A items	Category B item contributions						Total Cat. B	Total A+B	Total Calc.+
		Pixel	SCT	TRT	IDGen	LAr	TileC			
Argentina							0	0		
Armenia							0	0	2	
Australia							0	0	9	
Austria							0	0	1	
Azerbaijan							0	0		
Belarus							0	0	1	
Brazil							0	0	2	
Canada					155		155	155	20	
China NSFC+MSTC							0	0	1	
Czech Republic	5		2				2	7	10	
Denmark			1				1	1	8	
France IN2P3	740		27	239	106		372	1112	85	
France CEA	245						0	245	39	
Georgia							0	0		
Germany BMBF	192		65	2			67	259	108	
Germany DESY							0	0		
Germany MPI				12			12	12	24	
Greece							0	0	12	
Israel	106						0	106	33	
Italy	205		31		72	159	262	467	190	
Japan							0	0	114	
Morocco							0	0	1	
Netherlands							0	0	62	
Norway							0	0	15	
Poland	20		2				2	22	2	
Portugal	6				72		72	78	14	
Romania							0	0	3	
Russia				65	26		91	91	73	
JINR							0	0	39	
Serbia							0	0		
Slovak Republic							0	0		
Slovenia	36		35				35	71	6	
Spain							0	0	43	
Sweden			35	73	24	73	205	205	34	
Switzerland	433		210	25			235	668	48	
Taipei							0	0	7	
Turkey							0	0	1	
United Kingdom	232						0	232	106	
US DOE + NSF							0	0	288	
CERN							0	0	214	
total contributions	2,220	0	0	38	443	522	349	1,511	3,731	1,615
other income*							0	0		
total payments	153		52	1175	128	455	589	2,399	2,552	
balance									1,179	

Notes:

*Funds available either in baseline or by using deferral funds or contribution advancements

+Calculated annual share of C&I total of 21 MCHF (not yet committed to by all FAs)

Cost sharing based on CORE contributions

**Planned CC-B Contributions (cash and in-kind)
for ATLAS in 2006 by Funding Agency
(in kCHF)**

9/28/2006

Funding Agency	Category B item contributions							Total	Total Calc.+
	Pixel	SCT	TRT	IDGen	LAr	TileC	Muon	Cat. B	
Argentina								0	
Armenia								0	
Australia								0	
Austria								0	
Azerbaijan								0	
Belarus								0	
Brazil								0	
Canada					180			180	
China NSFC+MSTC				1			1	2	
Czech Republic								0	
Denmark								0	
France IN2P3	60		20	65				145	
France CEA								0	
Georgia								0	
Germany BMBF	59		6	38			42	145	
Germany DESY								0	
Germany MPI				22				22	
Greece								0	
Israel								0	
Italy	80		5	28			140	253	
Japan								0	
Morocco				4				4	
Netherlands							13	13	
Norway								0	
Poland								0	
Portugal						37		37	
Romania								0	
Russia					51			51	
JINR			6	13				19	
Serbia								0	
Slovak Republic					3			3	
Slovenia	19							19	
Spain					1			1	
Sweden	12	38	14	34		37		135	
Switzerland	38		70	36				144	
Taipei					4			4	
Turkey								0	
United Kingdom								0	
US DOE + NSF	43	4	23	10	253		149	482	
CERN					24			24	
total contributions	242	73	67	125	757	74	345	1,683	0
other income*								0	
total payments	445	374		159	1087	687	275	3,027	
balance								(1,344)	

Notes:

*Funds available either in baseline or by using deferral funds or contribution advancements
+Calculated annual share of CC Category B of total 12 MCHF (not yet committed to by all FAs);
cost sharing based on CORE contributions.

**Status of Deferral Contributions (cash and in-kind)
for ATLAS by Funding Agency (in kCHF)
(August 31, 2006)**

10/3/2006

Funding Agency	Contribution		Deferral contribution allocated to						Total alloc.	
	Pixel	TDAQ	Magnets	LArCC	Infrastr.	ID	LAr	TileC		Muon
Argentina										0
Armenia										0
Australia										0
Austria										0
Azerbaijan										0
Belarus										0
Brazil										0
Canada										0
China NSFC+MSTC										0
Czech Republic										0
Denmark		500	500							500
France IN2P3	380		380							380
France CEA										0
Georgia										0
Germany BMBF		105	105							105
Germany DESY										0
Germany MPI										0
Greece										0
Israel										0
Italy										0
Japan		565	565							565
Morocco										0
Netherlands		325	325							325
Norway										0
Poland										0
Portugal		50	50							50
Romania										0
Russia										0
JINR										0
Serbia										0
Slovak Republic										0
Slovenia										0
Spain										0
Sweden										0
Switzerland		2000		77	1089	834				2000
Taipei										0
Turkey										0
United Kingdom		1110	1110							1110
US DOE + NSF										0
CERN										0
total contributions	380	4,655	3,035	0	77	1,089	834	0	0	5,035

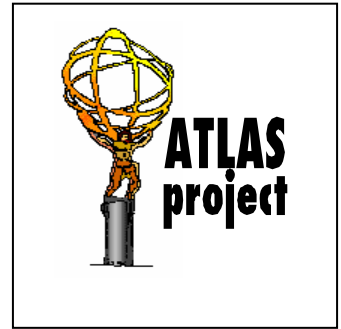
Notes:

Deferral scheme as part of the Cost to Completion Plan (CERN-RRB-2002-114 rev.)

Deferral funds refer to resources allocated to original CORE obligations now staged

Total of approved deferral funding is 13 MCHF for TDAQ and 2 MCHF for Pixels

The deferral contributions will be included in the final CORE baseline payments report



CERN-RRB-2006-071

ATLAS Resources Review Board, October 23, 2006

For RRB approval

Part 2

Request for 2007 ATLAS Baseline and Cost to Completion Budgets

Introduction

The ATLAS management, supported by the ATLAS Executive and Collaboration Boards, kindly invites the RRB to approve the 2007 baseline and cost to completion budgets.

The budget request for the ATLAS detector construction baseline expenses in 2007, including the construction completion Category-A costs (CC-A) of common items, amounts to 12.9 MCHF in new commitments and 13.2 MCHF in payments. The Commissioning and Integration (C&I, Categories A and B) and construction completion Category-B (CC-B) costs in 2007 amount to 0.7 MCHF and 1.6 MCHF, respectively.

The above budget payments represent a net increase of 4.4 MCHF w.r.t the preliminary budget estimates presented in April, 2006 (CERN-RRB-2006-2006-018, Part 3). As reported elsewhere (CERN-RRB-2006-069), new additional costs worth 4.4 MCHF have been identified in the CC-A, over and above the approved completion plan of 68 MCHF (CERN-RRB-20020114 rev.).

The temporary cumulative budget deficit up to 3 MCHF reached by the end of 2006 would be fully recovered in 2007 if all expected contributions were received. Large Common Fund contributions are still expected from Canada, Russia and the United States. More details on remaining contributions from each Funding Agency are provided in **Annex 2**. Negotiations continue with the Funding Agencies to obtain these contributions as soon as possible.

BASELINE BUDGET REPORT ELEMENTS

 Budget summary

 Activity Description

 Table References

1. Baseline and CC-A Budgets for 2007

In 2007 the installation work will be completed in Point 1 in time for the planned low-energy collisions before the end of the year. Most of the detector systems will be ready for data taking in the cavern. In the Common Projects, the integration work of the End Cap Toroids will be completed.

The 2007 baseline commitments and payments for the detector systems, including CC-A, are budgeted at 12.9 MCHF and 13.2 MCHF, respectively. The key cost drivers are as follows:

- Production of the trigger processors for the High Level Trigger system;

- Completion of the installation of the electronics systems in the Liquid Argon.

Detector (sub) system construction:

The completion and installation of the LAr electronics (mostly power supplies) is planned at a level of 500 kCHF both in commitments and payments.

The construction of the detector Read Out System, as part of the High Level Trigger, continues as planned. The Detector Control System (DCS) construction proceeds also according to plans. Commitments for the TDAQ system reach 4.6 MCHF and payments 4.9 MCHF, respectively.

Common projects:

Concerning CC-A, new additional over costs exceeding the accepted 68.2 MCHF CtC budget have been identified. These new additional costs amount to 4.4 MCHF, comprising 1.8 MCHF for the magnet system, 2.4 MCHF for additional manpower and the completion of the Big Wheels construction as well as 0.2 MCHF for completing the LAr cryostat and cryogenics system. The commitments and payments in 2007 as shown in Tables 8 – 10 thus exceed the pledged (Category-1) CC-A contributions by 4.4 MCHF.

The missing income of 4.4 MCHF is planned to be covered as follows. Should all Funding Agencies pledge their full calculated share of the 68 MCHF, the income will amount to 73 MCHF due to the generous extra contribution from CERN. This would be adequate to absorb the new, additional cost. The ATLAS Management and the CERN Management are negotiating with all Funding Agencies to achieve this goal before the April RRB in 2007.

In case this goal is not obtained by April 2007, ATLAS Management proposes, in line with the extension of the construction MoU up to 2010, also to extend the current annual member fees until the missing funds are obtained. Currently, this implies two additional years, 2007 and 2008. The contributions shown in Table 10 include the proposed extended member fees amounting to 2.1 MCHF. The decision to collect the proposed extended member fees for 2007 will therefore be taken only in April, 2007. The extension of member fees to 2007 is therefore only presented here as an option, and not as part of the approval requested for the present document.

The RRB is thus asked now to approve commitments of 8.5 MCHF and payments of 13.2 MCHF, in the understanding that 4.4 MCHF of the present budget envelope (construction and CtC) will remain uncommitted until May 1st, 2007.

Table 7 shows an update of the global budget balance w.r.t the situation in April, 2006 (CERN-RRB-2006-018). Table 7 includes in Payments the additional CtC costs of 4.4 MCHF but not in the income as the mechanism to fund it is not yet settled. The temporary, cumulative budget deficit of ca. 3 MCHF projected by the end of 2006

would return to zero if all currently pledged contributions were received now, including the deferral funds. At present, the following baseline Common Fund contributions are due: Russia (2.5 MCHF), US (1.0 MCHF), Canada (1.5 MCHF), JINR (0.5 MCHF), China (0.3 MCHF) and Morocco (0.1 MCHF). There are encouraging signs that some of the above contributions will become available soon.

It should be stressed that unless the required contributions are secured soon, ATLAS is left with no other choice than to further stage parts of the initial detector, in particular TDAQ processors.

The ATLAS management urges Funding Agencies to make their remaining baseline and cost to completion contributions as soon as possible. In parallel, the ATLAS management seeks ways to shift payments as much as it can. If no other solution is found, new commitments will not be made until funding is available. This would certainly result in delaying the completion of ATLAS.

Table 7. Updated evolution of the ATLAS Budget Balance (MCHF)

PAYMENTS	95-01	2002	2003	2004	2005	2006	2007	2008	2009	2010	Total
Baseline + CC(A)	231	71	56	52	43	41	13	2			509
<i>of which deferrals</i>					-3	-2	-4	-2			-11
C&I (A+B)	0	1	3	4	9	3	1				21
CC (B)		1	1	1	4	3	1				12
TOTAL	231	73	61	57	54	45	11	0	0	0	531

INCOME	95-01	2002	2003	2004	2005	2006	2007	2008	2009	2010	Total
Baseline + CC(A)	252	65	55	54	33	28	9				495
C&I (A+B)		1	9	3	4	4	0				21
CC (B)		2	4	2	1	1	0				11
TOTAL	252	68	68	59	38	33	10	0	0	0	526

BUDGET BALANCE	21	-5	7	2	-15	-13	-1	0	0	0	-4
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CUMULATIVE	21	15	23	25	9	-3	-4	-4	-4	-4	
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Details of the budget estimates for 2007 by system/sub-detector and Funding Agencies are presented in **Tables 8 to 10**. It should be noted that for some Funding Agencies, the contributions exceed the original CORE values. The final contributions will be aligned with the CORE values in 2008 for 2007 and any differences will be recorded separately. The option of extended annual member fees for 2007, as part of the CC-A, are included in Table 10.

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2. Commissioning and Integration C&I (A and B)

Most of the planned C&I activities will be completed in 2006 but there are some remaining activities related to the Inner Detector (notably the Pixels), LAr and the Muon system. In all cases, detector modules and related electronics continue being installed and commissioned during the year. The remaining effort is related to commissioning the systems and operating the technical crews in charge of these activities.

Table 11 shows the status of expected contributions for 2007 from each Funding Agency and system (Categories A and B, both based on CORE sharing) as well as planned payments by each system. Total remaining payments are projected at 0.7 MCHF in 2007, as part of the cost envelope of 68 MCHF. The contributions will therefore fall short the projected payments by some 0.7 MCHF. The global budget balance and cash flow position is shown in Table 7.

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Table References	

3. Construction Completion (CC-B)

In a similar fashion to the C&I, some construction completion items remain to be paid in 2007. These include contributions to the completion of the big wheels construction work as well as electronics components for the LAr and Tiles (namely power supplies). The remaining CC-B budget for 2006 is 1.6 MCHF as part of the accepted total cost envelope of 68 MCHF. The expected income is planned at 0.2 MCHF, resulting in a budget deficit of 1.4 MCHF. The global budget balance and cash flow position is shown in Table 7.

Table 12 shows the expected contributions for 2007 for each Funding Agency and system (Category-B).

Concerning the status of contribution to the present Cost to Completion scheme of 68 MCHF, the global view of the pledged, Category-1 contributions per Funding Agency to the ATLAS cost to completion is shown in the **Annex 1**. It also shows the share of the 68 MCHF which is needed to complete the initial ATLAS detector.

Annex 2 shows the updated baseline (CORE) and CtC contributions as well as the due contributions for each Funding Agency, excluding the additional CtC costs of 4.4 MCHF.

**Planned CORE and CC-A Contributions to ATLAS Detector Construction during
2007 by Funding Agency
(Commitments, in kCHF)**

Funding Agency	Inner Det.	LAr Cal.	Tile Cal.	Muon cham.	Trigger /DAQ	Common Projects	total
Argentina						25.0	25
Armenia						38.0	38
Australia						25.0	25
Austria					160	13.0	173
Azerbaijan						18.0	18
Belarus						75.0	75
Brazil						38.0	38
Canada						88.0	88
China NSFC+MSTC						13.0	13
Czech Republic					40	38.0	78
Denmark						13.0	13
Finland						0.0	0
France IN2P3						785.0	785
France CEA						13.0	13
Georgia						38.0	38
Germany BMBF					45	112.5	158
Germany DESY						12.5	13
Germany MPI						12.5	13
Greece						113.0	113
Israel					55	288.0	343
Italy					365	2438.0	2803
Japan					465	187.5	653
Morocco						26.0	26
Netherlands					15	25.0	40
Norway						65.0	65
Poland					150	25.0	175
Portugal					10	23.0	33
Romania						13.0	13
Russia					5	88.0	93
JINR						25.0	25
Serbia						13.0	13
Slovak Republic						13.0	13
Slovenia						73.5	74
Spain						38.0	38
Sweden						50.0	50
Switzerland					1055	25.0	1080
Taipei						13.0	13
Turkey						25.0	25
United Kingdom					295	162.5	458
US DOE+NSF		500			675	413.0	1588
CERN					1225	12.5	1238

missing contributions to meet planned project payments 2,300

total sub-detector

-	500	-	-	4,560	7,813	12,873
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Planned CORE and CC-A Contributions to ATLAS Detector
Construction during 2007 by Funding Agency
(Payments, in kCHF)

Funding Agency	Inner Det.	LAr Cal.	Tile Cal.	Muon cham.	Trigger /DAQ	Common Projects	total
Argentina						25.0	25
Armenia						38.0	38
Australia						25.0	25
Austria					160	13.0	173
Azerbaijan						18.0	18
Belarus						75.0	75
Brazil						38.0	38
Canada						88.0	88
China NSFC+MSTC						13.0	13
Czech Republic					40	38.0	78
Denmark					325	13.0	338
Finland						0.0	0
France IN2P3						785.0	785
France CEA						13.0	13
Georgia						38.0	38
Germany BMBF					45	112.5	158
Germany DESY						12.5	13
Germany MPI						12.5	13
Greece						113.0	113
Israel					55	288.0	343
Italy					365	2438.0	2803
Japan					465	187.5	653
Morocco						26.0	26
Netherlands					15	25.0	40
Norway						65.0	65
Poland					150	25.0	175
Portugal					10	23.0	33
Romania						13.0	13
Russia					5	88.0	93
JINR						25.0	25
Serbia						13.0	13
Slovak Republic						13.0	13
Slovenia						73.5	74
Spain						38.0	38
Sweden						50.0	50
Switzerland					1055	25.0	1080
Taipei						13.0	13
Turkey						25.0	25
United Kingdom					295	162.5	458
US DOE+NSF		500			675	413.0	1588
CERN					1225	12.5	1238

from past Common Fund contributions

0.0

missing contributions to meet planned project payments

2,300

total sub-detector

-	500	-	-	4,885	7,813	13,198
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**Planned CORE Common Project Contributions
during 2007 by Funding Agency
(Baseline+CC-A, in kCHF)**

Funding Agency	payments				new commitments needed		
	in-kind contrib.	cash contrib.	m.s. contrib.	total contrib.	in-kind contrib.	Common Fund	total contrib.
Argentina	0	0	25	25	0	25	25
Armenia	0	0	38	38	0	38	38
Australia	0	0	25	25	0	25	25
Austria	0	0	13	13	0	13	13
Azerbaijan	0	0	18	18	0	18	18
Belarus	0	0	75	75	0	75	75
Brazil	0	0	38	38	0	38	38
Canada	0	0	88	88	0	88	88
China NSFC+MSTC	0	0	13	13	0	13	13
Czech Republic	0	0	38	38	0	38	38
Denmark	0	0	13	13	0	13	13
Finland	0	0	0	0	0	0	0
France IN2P3	0	698	87	785	0	785	785
France CEA	0	0	13	13	0	13	13
Georgia	0	0	38	38	0	38	38
Germany BMBF	0	0	113	113	0	113	113
Germany DESY	0	0	13	13	0	13	13
Germany MPI	0	0	13	13	0	13	13
Greece	0	0	113	113	0	113	113
Israel	0	250	38	288	0	288	288
Italy	0	2288	150	2438	0	2438	2438
Japan	0	0	188	188	0	188	188
Morocco	0	0	26	26	0	26	26
Netherlands	0	0	25	25	0	25	25
Norway	0	40	25	65	0	65	65
Poland	0	0	25	25	0	25	25
Portugal	0	0	23	23	0	23	23
Romania	0	0	13	13	0	13	13
Russia	0	0	88	88	0	88	88
JINR	0	0	25	25	0	25	25
Serbia	0	0	13	13	0	13	13
Slovak Republic	0	0	13	13	0	13	13
Slovenia	0	61	13	74	0	74	74
Spain	0	0	38	38	0	38	38
Sweden	0	0	50	50	0	50	50
Switzerland	0	0	25	25	0	25	25
Taipei	0	0	13	13	0	13	13
Turkey	0	0	25	25	0	25	25
United Kingdom	0	0	163	163	0	163	163
US DOE+NSF	0	0	413	413	0	413	413
CERN	0	0	13	13	0	13	13
Common Fund	0	0	0	0			
missing contributions to meet planned project payments				2,300			
total	-	3,337	2,176	5,513	-	5,513	5,488

**Planned C+I Contributions (cash and in-kind)
for ATLAS in 2007 by Funding Agency (Categories A and B, in kCHF)**

9/30/2006

Funding Agency	Cat. A items	Category B item contributions						Total Cat. B	Total A+B	Total Calc.+
		Pixel	SCT	TRT	IDGen	LAr	TileC			
Argentina							0	0		
Armenia							0	0		
Australia							0	0		
Austria							0	0		
Azerbaijan							0	0		
Belarus							0	0		
Brazil							0	0		
Canada							0	0		
China NSFC+MSTC							0	0		
Czech Republic							0	0		
Denmark							0	0		
France IN2P3							0	0		
France CEA							0	0		
Georgia							0	0		
Germany BMBF							0	0		
Germany DESY							0	0		
Germany MPI							0	0		
Greece							0	0		
Israel							0	0		
Italy							0	0		
Japan							0	0		
Morocco							0	0		
Netherlands							0	0		
Norway							0	0		
Poland							0	0		
Portugal							0	0		
Romania							0	0		
Russia							0	0		
JINR							0	0		
Serbia							0	0		
Slovak Republic							0	0		
Slovenia							0	0		
Spain							0	0		
Sweden							0	0		
Switzerland							0	0		
Taipei							0	0		
Turkey							0	0		
United Kingdom							0	0		
US DOE + NSF							0	0		
CERN							0	0		
total contributions	0	0	0	0	0	0	0	0	0	
other income*							0	0		
total payments				200	250		200	650	650	
balance									(650)	

Notes:

*Funds available either in baseline or by using deferral funds or contribution advancements

+Calculated annual share of C&I total of 21 MCHF (not yet committed to by all FAs)

Cost sharing based on CORE contributions

**Planned CC-B Contributions (cash and in-kind)
for ATLAS in 2007 by Funding Agency
(in kCHF)**

9/28/2006

Funding Agency	Category B item contributions						Total	Total Calc.+	
	Pixel	SCT	TRT	IDGen	LAr	TileC	Muon		Cat. B
Argentina								0	
Armenia								0	
Australia								0	
Austria								0	
Azerbaijan								0	
Belarus								0	
Brazil								0	
Canada								0	
China NSFC+MSTC								0	
Czech Republic								0	
Denmark								0	
France IN2P3	64			11	80			155	
France CEA								0	
Georgia								0	
Germany BMBF								0	
Germany DESY								0	
Germany MPI								0	
Greece								0	
Israel								0	
Italy								0	
Japan								0	
Morocco								0	
Netherlands								0	
Norway								0	
Poland								0	
Portugal								0	
Romania								0	
Russia								0	
JINR								0	
Serbia								0	
Slovak Republic								0	
Slovenia				12				12	
Spain								0	
Sweden								0	
Switzerland								0	
Taipei								0	
Turkey								0	
United Kingdom								0	
US DOE + NSF								0	
CERN								0	
total contributions	64	0	0	23	80	0	0	167	0
other income*								0	
total payments		238		40	700	100	500	1,578	
balance								(1,411)	

Notes:

*Funds available either in baseline or by using deferral funds or contribution advancements
 +Calculated annual share of CC Category B of total 12 MCHF (not yet committed to by all FAs);
 cost sharing based on CORE contributions.

ACTUAL & PLANNED INCOME FOR ATLAS C&I (kCHF)

Annex 1

Funding Agency	C&I (A)							Calc. Total	C&I (B)							Calc. Total	Invoic Total	Calc. G.Total	
	2002	2003	2004	2005	2006	2007	Total		2002	2003	2004	2005	2006	2007	Total				
Argentina	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Armenia	0	0	0	0	0	0	0	0	5	3	4	0	0	0	0	7	13	7	18
Australia	0	0	0	0	0	0	0	56	13	17	0	0	0	0	30	59	30	115	
Austria	0	5	6	4	0	0	15	15	0	0	0	0	0	0	0	0	15	15	
Azerbaijan	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	4	
Belarus	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	10	
Brazil	0	0	0	0	0	0	0	4	1	0	0	0	0	0	1	11	1	15	
Canada	0	0	0	336	0	0	336	336	0	71	0	155	0	0	226	226	562	562	
China NSFC+MSTC	0	7	8	5	0	0	20	20	0	10	9	3	0	0	22	22	42	42	
Czech Republic	2	9	20	0	0	0	31	31	14	33	22.7	19.3	0	0	89	89	120	120	
Denmark	0	0	0	0	0	0	0	71	10	0	0	0	0	0	10	60	10	131	
France IN2P3	0	0	0	11	740	0	751	865	54	40	146	238	372	0	850	850	1601	1715	
France CEA	0	0	0	0	245	0	245	295	0	0	0	0	0	0	0	265	245	560	
Georgia	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	4	
Germany BMBF	252	0	18	454	0	0	724	724	253	0	183	16	105	0	557	557	1281	1281	
Germany DESY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Germany MPI	0	44	69	54	0	0	167	167	36	34	45	44	1	0	160	165	327	332	
Greece	0	0	0	0	0	0	0	36	0	0	0	0	0	0	0	52	0	88	
Israel	0	0	0	0	106	0	106	107	14	72	50	0	0	0	136	135	242	242	
Italy	0	350	206	205	205	0	966	1007	0	418	93	190	262	0	963	980	1929	1987	
Japan	0	0	247	436	0	0	683	683	0	0	290	360	0	0	650	650	1333	1333	
Morocco	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	6	0	10	
Netherlands	0	118	141	82	0	0	341	341	34	65	83	43	0	0	225	225	566	566	
Norway	0	32	38	22	0	0	92	92	23	29	26	20	0	0	98	98	190	190	
Poland	0	0	0	0	20	0	20	20	2	0	0	0	2	0	4	22	24	42	
Portugal	0	0	0	38	6	0	44	46	3	0	0	60	72	0	135	135	179	181	
Romania	0	0	0	15	0	0	15	15	0	0	29	11	0	0	40	40	55	55	
Russia	150	320	220	398	0	0	1088	408	28	122	0	65	91	0	306	588	1394	996	
JINR	0	0	0	0	0	0	0	117	48	78	144	62	0	0	332	289	332	406	
Serbia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Slovak Republic	0	0	0	0	0	0	0	11	10	36	0	0	0	0	46	8	46	19	
Slovenia	0	0	0	0	36	0	36	36	0	0	0	0	35	0	35	35	71	71	
Spain	0	0	163	53	0	0	216	220	22	55	211	83	10	0	381	381	597	601	
Sweden	0	83	99	57	0	0	239	239	45	90	0	0	195	0	330	330	569	569	
Switzerland	0	0	0	0	433	0	433	433	3	0	0	0	235	0	238	238	671	671	
Taipei	0	22	27	16	0	0	65	65	8	26	12	15	0	0	61	61	126	126	
Turkey	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	10	
United Kingdom	0	0	250	250	232	0	732	764	0	269	174	116	0	0	559	559	1291	1323	
US DOE + NSF	0	0	0	0	0	0	0	1807	51	25	0	0	0	0	76	2001	76	3808	
CERN	111	5485	0	0	0	0	5596	1428	199	1081	0	0	0	0	1280	1260	6876	2688	

All in-kind
All in-kind

total	515	6475	1512	2436	2023	0	12961	10496	874	2575	1518	1500	1380	0	7847	10410	20808	20906
calculated total	865	2775	4341	2515	0	0	10496	0	1405	2770	3375	2825	35		10410			
							%	123							%	75		
Actual payments	332	1425	1474	6696			9927		376	1710	1978	2366			6430			
Income-actual payment	183	5050	38	-4260			1011		498	865	-460	-866			37			

balance cumulative

1011

37

ACTUAL & PLANNED INCOME FOR ATLAS CONSTRUCTION COMPLETION (kCHF) Annex 1

Funding Agency	CC (A)							Calc. Total	CC (B)							Calc. Total	Invoice Total	Calc. G.Total	
	2002	2003	2004	2005	2006	2007	Total		2002	2003	2004	2005	2006	2007	Total				
Argentina	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Armenia	0	0	0	0	38	0	38	38	0	0	0	0	0	0	0	0	10	38	48
Australia	0	0	0	50	25	0	75	190	10	14	11	0	0	0	35	52	110	242	
Austria	0	12	14	13	13	0	52	52	0	0	0	0	0	0	0	0	52	52	
Azerbaijan	0	0	20	0	18	0	38	38	0	0	0	0	0	0	0	0	38	38	
Belarus	0	0	0	0	75	0	75	75	0	0	0	0	0	0	0	0	75	75	
Brazil	0	0	0	0	38	0	38	38	2	0	0	0	0	0	2	9	40	47	
Canada	0	0	87.5	212	839	0	1139	1139	32	177	0	180	0	0	389	389	1527.5	1528	
China NSFC+MSTC	0	25	18	13	13	0	69	69	0	9	13	6	2	0	30	30	99	99	
Czech Republic	22	98	0	0	0	0	120	113	16	33	26	1	0	0	76	83	196	196	
Denmark	0	0	38	0	0	0	38	242	0	0	10	0	0	0	10	49	48	291	
France IN2P3	0	730	520	912.5	62.5	710	2935	2935	569	0	116	370	145	155	1355	1241	4290	4176	
France CEA	0	300	712	13	13	0	1038	1001	21	30	0	0	0	0	51	379	1089	1380	
Georgia	0	0	0	0	38	0	38	38	0	0	0	0	0	0	0	0	38	38	
Germany BMBF	1992	0	0	0	460	0	2452	2452	430	368	0	0	0	0	798	798	3250	3250	
Germany DESY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Germany MPI	122	290	0	100	58	0	570	570	61	51	82	2	0	0	196	191	766	761	
Greece	0	0	0	0	113	0	113	121	0	0	0	0	0	0	0	52	113	173	
Israel	0	0	37	38	38	250	363	363	6	128	0	0	0	0	134	134	497	497	
Italy	80	350	80	160	151	2288	3109	3418	14	393	323	267	253	0	1250	1233	4359	4651	
Japan	0	0	1438	229	750	0	2417	2417	0	0	212	400	0	0	612	612	3029	3029	
Morocco	0	0	12	13	13	0	38	38	0	0	0	1	3	0	4	9	42	47	
Netherlands	0	0	25	1107	25	0	1157	1157	22	34	101	41	13	0	211	211	1368	1368	
Norway	0	187	18	25	41	40	311	311	22	33	21	4	0	0	80	80	391	391	
Poland	0	0	25	25	46	0	96	75	3	0	0	0	0	0	3	19	99	94	
Portugal	0	0	15	12	23	0	50	155	0	0	0	73	37	0	110	110	160	265	
Romania	0	15	0	37	0	0	52	52	0	0	17	16	0	0	33	33	85	85	
Russia	0	0	0	0	263	0	263	1381	36	12	3	0	51	0	102	614	365	1995	
IJNR	0	0	12	0	25	0	37	397	3	76	58	0	15	0	152	263	189	660	
Serbia	0	163	0	137	0	0	300	0	0	0	0	0	0	0	0	0	300	0	
Slovak Republic	0	0	15	15	1	0	31	39	5	0	0	0	0	0	5	14	36	53	
Slovenia	0	0	12	13	35	61	121	121	0	0	0	0	19	12	31	31	152	152	
Spain	0	0	446	258	38	0	742	738	58	54	242	13	0	0	367	367	1109	1105	
Sweden	0	441	213	157	0	0	811	811	45	131	0	0	135	0	311	311	1122	1122	
Switzerland	0	1213	225	12	25	0	1475	1475	21	61	0	0	144	0	226	226	1701	1701	
Taipei	0	134	59	18	13	0	224	224	10	42	27	12	4	0	95	95	319	319	
Turkey	0	0	25	25	25	0	75	75	0	0	0	0	0	0	0	0	75	75	
United Kingdom	0	0	613	433	322	0	1368	2590	137	195	121	21	0	0	474	474	1842	3064	
US DOE + NSF	0	1830	232	723	1056	0	3841	6129	156	914	778	0	435	0	2283	2308	6124	8437	
CERN	978	4523	0	0	0	0	5501	4527	294	949	0	0	0	0	1243	1243	6744	5770	

Profile as calculated
As calculated total, 100k/year 2003-2006

Profile (A) changed as in letter RCN 24.9.03

All In-kind

total	3194	10311	4912	4751	4694	3349	31210	35604	1973	3704	2161	1407	1256	167	10668	11670	41878	47274
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calculated total	9550	11900	9350	4700	100	0	35600	4	2510	2945	4035	1645	535	0	11670	0		
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% 88 % 91

Actual payments	8415	4490	3690	5940			22535		1126	1007	1044	4207			7384			
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Income-actual payment	-5221	5821	1222	-1190			632		847	2697	1117	-2800			1861			
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balance cumul. 632 1861

Status of Contributions to ATLAS from Funding Agencies (August 31, 2006), kCHF

Annex 2

Funding Agency	Construction MoU obligations (kCHF)					CC and C&I accepted (kCHF)			Grand total committed (CORE-CC-C&I)	Part not yet pledged	
	total paid	detectors		CF	total CMoU	total paid	remaining contrib.	total committed		CC	C&I
		remaining deliverables	remaining deferrals	remaining contrib.							
Argentina											
Armenia	195				195	12	33	45	240	10	11
Australia	2140	5		350	2495	140		140	2635	132	85
Austria	400	150	50		600	67	1	67	667		
Azerbaijan	100				100	20	18	38	138		4
Belarus	192			8	200		75	75	275		10
Brazil	160			25	185	3	38	41	226	7	14
Canada	13215			1860	15075	1662	428	2090	17165		
China NSFC+MSTC	1235			340	1575	141	1	141	1716		
Czech Republic	1580	80	35		1695	316		316	2011		
Denmark	2595	705			3300	58		58	3358	243	121
Finland	100				100				100		
France IN2P3	39080				39080	3652	2240	5891	44971		
France CEA	13680				13680	1089	246	1334	15014	291	315
Georgia	100				100	25	13	38	138		4
Germany BMBF	31399	455	1085		32939	4531		4531	37470		
Germany DESY											
Germany MPI	7545				7545	1092	1	1093	8638		
Greece	1585			190	1775	75	38	113	1888	60	88
Israel	4500	35		500	5035	489	251	739	5774		
Italy	43460		2530		45990	3302	2986	6288	52278	292	58
Japan	30380	1010	185	600	32175	3800	563	4362	36537		
Morocco	245			113	357	26	16	42	399	5	10
Netherlands	12245	70			12315	1934		1934	14249		
Norway	3970			150	4120	500	81	581	4701		
Poland	805	150			955	123		123	1078	13	
Portugal	2042	125	100		2267	212	127	339	2606	105	2
Romania	550				550	140		140	690		
Russia	15124	1274		2458	18855	1354	405	1759	20614	1232	
JINR	6740			540	7280	481	40	521	7801	471	74
Serbia						300		300	300		
Slovak Republic	535	15			550	82		82	632		
Slovenia	1540				1540	115	108	223	1763		
Spain	10075				10075	1671	36	1706	11781		
Sweden	10610	190			10800	1691		1691	12491		
Switzerland	16821	2060			18881	2360	13	2372	21253		
Taipei	2884			116	3000	445	1	445	3445		
Turkey	200		150		350	50	25	75	425	10	10
United Kingdom	32088	2015			34103	3133		3133	37236	1222	32
US DOE+NSF	71423	3555	1985	2228	79191	5281	919	6200	85391		6045
CERN	52503	4060	2950		59513	13677	24	13700	73213		
TOTAL	434039	15954	9070	9477	468540	54044	8722	62766	531305	4093	6883
					<i>of which for CtC</i>			5405			
					-5405						
Available for payments					463135	RRB accepted CtC(1)	68170		531305		

Notes

1. Column 'Total Paid' in Construction MoU includes also the deferral contributions made so far
2. Original TDR detector staged for 21 MCHF of which < 14.5 MCHF (deferrals) can be used for covering cost over-runs
3. Sharing between BMBF/MPI and RF/JINR based on CORE MoU
4. CEA has contributed 1 MCHF to CF over and above its original MoU share (not shown here)
5. Risk of missing contributions in CF is 5 MCHF (Russia&JINR 3 MCHF, Canada 1.5 MCHF, China & Morocco 0.5 MCHF)