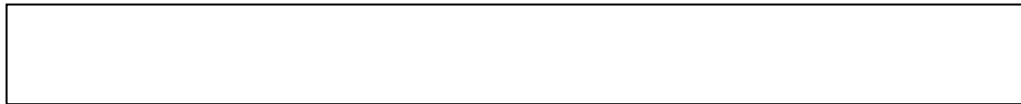
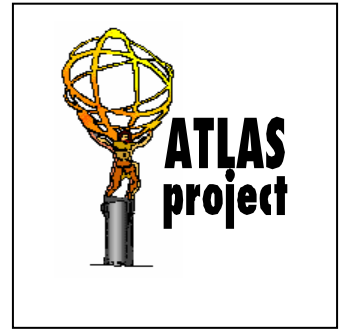


CERN-RRB-2007-018

ATLAS Resources Review Board, April 24, 2007



**2006 – 2008 ATLAS Baseline and Cost to Completion
Budgets**



CERN-RRB-2007-018

ATLAS Resources Review Board, April 24, 2007

For RRB approval




Part 1

Closing Report for 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 approve the final baseline and cost to completion payments for 2006.

The RRB approved the year 2006 baseline budget for construction activities in October 2005, amounting to 14.9 MCHF in commitments and 28.5 MCHF in payments (CERN-RRB-2005-100). The proposed budget levels for cost to completion (CtC), composing of C&I (Commissioning and Integration) and CC-B (Construction Completion Category-B), were also endorsed by the RRB at 3.5 MCHF and 3.3 MCHF in total, respectively. The budget planning and reporting for the cost to completion payments is in line with the Completion Plan (CERN-RRB-2002-114 rev.). Updates were provided in April 2006 (CERN-RRB-2006-018) and in October 2006 (CERN-RRB-2006-071).

BASELINE BUDGET	
REPORT ELEMENTS	
	Activity Description
	Budget Evolution
	Table References

1. Baseline and CC-A Budget for 2006

The initial budget estimates for 2006 were updated in April and October 2006, respectively. Final baseline and CC-A budget figures in 2006 amounted to 20.5 MCHF for commitments and 27.6 MCHF for payments. The commitments were increased in the Common Projects by 3 MCHF w.r.t original plans due to speeding up of commissioning activities at Point 1 in order to meet the present schedule of closing the beam pipe by the end of August, 2007.




Table 1 shows the 2006 ATLAS baseline budget evolution, CC-A is also included for the Common Projects.

Table 1. Evolution of the 2006 ATLAS Baseline and CC-A Budget (MCHF)

Budget Evolution	Sub-systems		Common Projects		Total (MCHF)	
	Comm.	Paym.	Comm.	Paym.	Comm.	Paym.
2006 Budget (Oct '05)	10.0	10.8	4.9	17.7	14.9	28.5
2006 Update (April '06)	12.9	16.2	11.9	28.2	24.6	44.4
2006 Update (Oct'06)	12.5	15.7	9.0	25.3	21.5	41.0
2006 Actual	12.9	7.8	7.7	19.8	20.5	27.6

Details by system/sub-detector and Funding Agencies are presented in **Tables 2 to 4**.

A summary of all CORE expenses since 1995 until the end of 2006 is presented in **Table 5**, excluding costs to completion. Details about the present status of contributions made to the Common Projects by Funding Agencies can be found in document CERN-RRB-2007-017.

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

2. Commissioning and Integration (C&I) for 2006

The concept of C&I was introduced in October 2001 (ATLAS RRB-D 2001-121). C&I activities comprise tasks before the construction phase is completed, taking place (mostly) outside the ATLAS Pit. The C&I costs stem from the ATLAS strategy of decentralizing assembly and integration tasks in existing facilities at CERN, initially chosen to minimize surface building costs at Point 1, and from the use of technical services now charged to the Collaboration. The C&I cost estimates amount to 21 MCHF in total (including hired institute manpower) following a scrutiny process launched by the RRB Chairperson (CERN-RRB-2002-047). C&I does not include test-beam activities which are part of the Maintenance and Operation (M&O) framework (CERN-RRB-2002-149).

In its October 2005 meeting, the RRB accepted the proposed C&I budget of 3.5 MCHF for payments (CERN-RRB-2005-100), it being understood that Funding Agencies were not obliged but encouraged on a best effort basis to contribute their calculated share of these costs as shown in Table 12 of that document. Moreover, it was understood that ATLAS can make well documented cash displacements from its baseline resources (such as deferred money due to staging) to match any eventual gap between the incurred payments and actual income.

As reported in the 2006 RRBs, the C&I budget plan was adjusted to the construction schedule and available funding (including deferral and advanced contributions).

Resulting from these adjustments, the final payments for 2006 were recorded at 2.3 MCHF with remaining commitments worth 0.9 MCHF, shifted to 2007. The share of in-kind contributions included amounted to 395 kCHF.




The overall positive cash balance (+ 1.4 MCHF) contributed to the global budget balance is shown in Table 17.

For the common items (Category-A) which are under the responsibility of the Technical Coordination (TCn), the main cost was associated with the completion of operation of infrastructure and commissioning services in Buildings 185, 180, 191 and at Point 1. In total, these costs amounted to 0.4 MCHF.

For system-specific items (Category-B), the Inner Detector sub-systems got further equipped in the SR-1 building and started their journey into their final position inside the detector in the underground cavern. The commissioning tasks of both the LAr Calorimeter and the Tile Calorimeter continued at Point 1. For the Muons, preparation work in BB5 and Building 180 continued at a steady pace and the integration work for the gas system proceeded as planned. These activities resulted in payments of 2.0 MCHF.

The main cost drivers were consumables and store items such as cables and connectors (0.6 MCHF) as well as the use of gases and coolants (0.3 MCHF). The engineering support and other technical manpower amounted to 0.9 MCHF. Some 71 FTEs were made available by participating institutes as part of their construction commitments.

More details of the payment breakdown per system are shown in **Table 6** and contributions made for 2006 by Funding Agency, including both cash and in-kind contributions, are shown in **Table 7**. The table also shows for reference the calculated amount of the 2006 share of the original, full C&I costs of 21 MCHF to which not all Funding Agencies have yet committed.

CC-B BUDGET	
REPORT ELEMENTS	
	Activity Description
	Payment Report
	Table References

3. Construction Completion (CC-B) for 2006

The CC-B costs are related to the completion of the ATLAS detector systems. CC-B includes tasks and items missing from the original cost estimates as well as cost increases associated with supply contracts. The breakdown of these costs is given in the document CERN-RRB-2002-114 (Annex).

In October 2005, the RRB accepted the proposed CC-B budget of 3.3 MCHF.

The final CC-B payments in 2006 amounted to 1.9 MCHF and remaining open commitments to 3.1 MCHF, respectively.

The main CC-B activities in 2006 focused around completing the Inner Detector facilities in the SR-1 building (tooling, test stations, cabling, related infrastructure) for all of its sub-systems. In the Tiles, LAr and the Muon systems, resources were allocated to finishing the production of trigger cables and electronics. Due to lower production speeds than expected, given also that a large share of the production is coordinated by CERN technical teams, payments were delayed by ca. 1.4 MCHF across the above mentioned systems. As a result, the delayed payments will occur in 2007. The share of in-kind contributions amounted to 70 kCHF.

Table 8 summarizes the Category-B payments per system based on the headings used in the LHCC CORE Review in 2001 (CERN/LHCC 2001-027) and in CERN-RRB-2002-026.

Table 9 shows the CC-B income received from the Funding Agencies for 2006 per system. For reference, it also shows the calculated 2006 share per Funding Agency (based on October 2004 update) of the total CC-B cost of 12 MCHF not yet committed to by all Funding Agencies.

The overall negative cash balance (-0.3 MCHF) was treated as part of the global budget position shown in Table 17.

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						200.0	200
Armenia						9.0	9
Australia	5					25.0	30
Austria					140	13.0	153
Azerbaijan						0.0	0
Belarus						0.0	0
Brazil						0.0	0
Canada						411.0	411
China NSFC+MSTC						13.0	13
Czech Republic						38.0	38
Denmark						13.0	13
Finland						0.0	0
France IN2P3						62.5	63
France CEA						13.0	13
Georgia						25.0	25
Germany BMBF	35	450			278	458.5	1222
Germany DESY						100.0	100
Germany MPI		125				57.5	183
Greece						75.0	75
Israel						288.0	288
Italy					1375	150.0	1525
Japan					1030	749.5	1780
Morocco						13.0	13
Netherlands				30	310	25.0	365
Norway						41.0	41
Poland					15	67.0	82
Portugal					150	45.0	195
Romania						13.0	13
Russia		210		465		0.0	675
JINR		180				25.0	205
Serbia						13.0	13
Slovak Republic						13.0	13
Slovenia						35.0	35
Spain						38.0	38
Sweden					195	128.0	323
Switzerland		150			2635	25.0	2810
Taipei						128.0	128
Turkey					150	25.0	175
United Kingdom					1980	322.5	2303
US DOE+NSF		440			250	3988.0	4678
CERN					2280	12.5	2293
total sub-detector	40	1,555	-	495	10,788	7,658	20,536

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						9.0	9
Australia	5					25.0	30
Austria					10	13.0	23
Azerbaijan						0.0	0
Belarus						0.0	0
Brazil						0.0	0
Canada						581.0	581
China NSFC+MSTC						13.0	13
Czech Republic	5					38.0	43
Denmark	105				25	13.0	143
Finland						0.0	0
France IN2P3	40					62.5	103
France CEA						13.0	13
Georgia						72.0	72
Germany BMBF	35					458.5	494
Germany DESY						138.0	138
Germany MPI						57.5	58
Greece						150.0	150
Israel						288.0	288
Italy					365	150.0	515
Japan	260				280	749.5	1290
Morocco						13.0	13
Netherlands				30	10	25.0	65
Norway						41.0	41
Poland					15	46.0	61
Portugal						34.0	34
Romania						13.0	13
Russia		320		465		375.0	1160
JINR	185	180		5		-115.0	255
Serbia						13.0	13
Slovak Republic		15				13.0	28
Slovenia						35.0	35
Spain						38.0	38
Sweden	5				195	128.0	328
Switzerland		165			635	25.0	825
Taipei						128.0	128
Turkey						25.0	25
United Kingdom					1340	1657.5	2998
US DOE+NSF	400	1045			40	2384.0	3869
CERN					1595	12.5	1608

from past Common Fund contributions

8463.0

missing contributions to meet planned project payments

3,640

total sub-detector

1,040	1,725	-	500	4,510	19,825	27,600
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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	200	200
Armenia	0	0	9	9	0	9	9
Australia	0	0	25	25	0	25	25
Austria	0	0	13	13	0	13	13
Azerbaijan	0	0	0	0	0	0	0
Belarus	0	0	0	0	0	0	0
Brazil	0	0	0	0	0	0	0
Canada	0	493	88	581	0	411	411
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	0	63	63	0	63	63
France CEA	0	0	13	13	0	13	13
Georgia	0	0	72	72	0	25	25
Germany BMBF	0	346	113	459	0	459	459
Germany DESY	0	0	138	138	0	100	100
Germany MPI	0	45	13	58	0	58	58
Greece	0	0	150	150	0	75	75
Israel	0	250	38	288	0	288	288
Italy	0	0	150	150	0	150	150
Japan	0	562	188	750	0	750	750
Morocco	0	0	13	13	0	13	13
Netherlands	0	0	25	25	0	25	25
Norway	0	16	25	41	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	0	0	375	0	0	0
JINR	-140	0	25	-115	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	128	128
Turkey	0	0	25	25	0	25	25
United Kingdom	0	1495	163	1658	0	323	323
US DOE+NSF	1500	471	413	2384	1500	2488	3988
CERN	0	0	13	13	0	13	13
Common Fund	0	8463	0	8463			
missing contributions to meet planned project payments				3640			
total	1,767	12,357	2,062	19,825	1,532	6,126	7,658

Actual Cumulative Expenses for ATLAS Detector Construction

1999 - EoY 2006 by Funding Agency (baseline, kCHF)

Situation as of January 1, 2007

Funding Agency	Inner Det.	LAr Cal.	Tile Cal.	muon cham.	trigger /DAQ	total contrib.	Common Projects				total
							in-kind contrib.	cash contrib.	m.s. contrib.	total contrib.	
Argentina										.0	
Armenia			95			95			101	100.5	196
Australia	1395					1395	250	300	200	750.0	2145
Austria					10	10	200		100	300.0	310
Azerbaijan									100	100.0	100
Belarus									192	192.4	192
Brazil			85			85			75	75.0	160
Canada	100	8590				8690	3360	680	700	4740.0	13430
China NSFC+MSTC		370		765		1135			100	100.0	1235
Czech Republic	470		500			970	315		300	615.0	1585
Denmark	800				25	825	200	1100	100	1400.0	2225
Finland									100	100.0	100
France IN2P3	1755	18630	2110			22495	10595	5805	600	17000.0	39495
France CEA		5715		2175		7890	4420	1280	100	5800.0	13690
Georgia									100	99.6	100
Germany BMBF	7105	3158		2980	3865	17108	13315	7	900	14222.1	31330
Germany DESY									100	100.0	100
Germany MPI	1690	1722		865		4277	2075	1125	100	3300.0	7577
Greece			90	985		1075	260		300	560.0	1635
Israel				2565	335	2900	1000	300	300	1600.0	4500
Italy	4610	4245	1375	10885	4250	25365	18600		1200	19800.0	45165
Japan	6845			6805	3305	16955	11800	100	1500	13400.0	30355
Morocco		210				210			38	37.5	248
Netherlands	1530			3035	495	5060	6700		200	6900.0	11960
Norway	2325					2325	1150	300	200	1650.0	3975
Poland	405				15	420	140	60	200	400.0	820
Portugal			1005			1005	799	88	100	986.5	1992
Romania			300			300	120	30	100	250.0	550
Russia	2790	3950	811	2715		10266	4230	600	613	5442.5	15709
JINR	1120	1495	1099	1765		5479	1660		100	1760.0	7239
Serbia											
Slovak Republic		305	45			350	50	50	100	200.0	550
Slovenia	840					840		600	100	700.0	1540
Spain	1210	2340	1970			5520	4300		300	4600.0	10120
Sweden	3080	1530	895		605	6110	1240	3060	400	4700.1	10810
Switzerland	4955	1055			735	6745	8400	276	200	8875.5	15621
Taipei	1000	700				1700		1219	100	1319.0	3019
Turkey									200	200.0	200
United Kingdom	13170				4145	17315	2852	10851	1300	15003.0	32318
US DOE+NSF	12040	15925	3560	8770	890	41185	15100	14822	3301	33222.6	74408
CERN	9010	8610	3000	1500	4580	26700	7860	19438	100	27398.0	54098

in Common Fund

total sub-detector	78245	78550	16940	45810	23255	242800	120991	62090	14918	197999	440799
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ATLAS C+I (A) and (B) Payments in 2006 (kCHF)

Item & Cost Driver (by RRB/LHCC SG Headings)	Cat. A								Cat. B	Item & Cost Driver (by RRB/LHCC SG Headings)
	C&I	Pixel	SCT	TRT	IDGen	LAr	TileC	Muon	C&I	
Detector related costs Design and engineering tasks				56	258		6		320	Mechanics & Gas & Cooling & Cryogenics Gases (LAr, Tiles, Muons)
Secretariat							6	30	36	Standard electronics FE electronics (LAr)
Communications					14		13		27	Detector controls small components
On-line computing					27		40		67	Areas SR-building operation (ID)
Test beams, facilities					1		1		2	Communications GSM phones
Laboratory operations Infrastructure at Point 1 (cranes, access support structures, tech. services)	352				152	48	13	358	571	Store items Store materials (metal sheet, cables, connectors, components)
General services Heavy transport, crane operations Technical expertise									0	Sub-detector spares
TOTAL	352	0	0	56	452	48	79	388	1,023	(Excluding hired manpower for Category B)
Hired manpower at CERN (in kCHF)	incl. above			59	472	85	308		924	
Hired institute manpower (in kCHF)							30		30	
Institute manpower (in FTE)	0			5	2	26	8	30	71	
TOTAL C&I FOR A	352	0	0	115	924	133	417	388	1,977	TOTAL C&I FOR B

Notes:

1. Category A is charged to the entire Collaboration, B to the respective systems based on CORE.

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

3/29/2007

Funding Agency	Cat. A	Category B item contributions						Total Cat. B	Total A+B	Total Calc.+	
	items	Pixel	SCT	TRT	IDGen	LAr	TileC				Muon
Argentina									0	0	
Armenia									0	0	
Australia									0	0	
Austria									0	0	
Azerbaijan									0	0	
Belarus									0	0	
Brazil									0	0	
Canada						155			155	155	5
China NSFC+MSTC									0	0	
Czech Republic	5			2					2	7	
Denmark				1					1	1	
France IN2P3	740			27		239	106		372	1112	10
France CEA	245								0	245	3
Georgia									0	0	
Germany BMBF	192			65	2				67	259	2
Germany DESY									0	0	
Germany MPI					12				12	12	1
Greece									0	0	
Israel	106								0	106	
Italy	205			31			72	159	262	467	2
Japan									0	0	
Morocco									0	0	
Netherlands									0	0	
Norway									0	0	
Poland	20			2					2	22	
Portugal	6						72		72	78	
Romania									0	0	
Russia					65	26			91	91	3
JINR									0	0	
Serbia									0	0	
Slovak Republic									0	0	
Slovenia	36			35					35	71	
Spain									0	0	1
Sweden				35	73	24	73		205	205	1
Switzerland	433			210	25				235	668	1
Taipei									0	0	
Turkey									0	0	
United Kingdom	232								0	232	
US DOE + NSF									0	0	10
CERN									0	0	5
total contributions	2,220	0	0	38	443	522	349	159	1,511	3,731	44
other income*									0	0	
total payments	352	0	0	115	924	133	417	388	1,977	2,329	
balance										1,402	

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

ATLAS CC-B Payments in 2006 (kCHF)

Pixel	SCT	TRT	IDGen	LAr	TileC	Muon	Cat. B	Item & Cost Driver (by LHCC CORE Headings)
							CC	
				235			235	Non-CORE Infrastructure Storage, test areas, modifications, repairs
			45				45	Additional CORE Tooling, test-stations, detector equipment
634	114	15	317		500	82	1,662	Non-covered CORE Detector equipment
634	114	15	362	235	500	82	1,942	Total

1,942	TOTAL CC FOR B
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Notes

Category B is system-specific and based on CORE sharing
 Payments 2006 CC Category A are included in Table 4

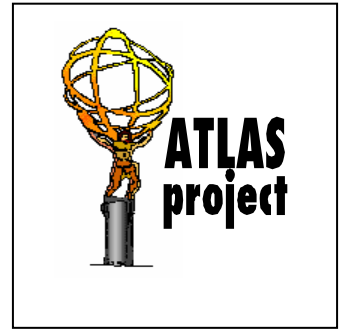
**CC-B Contributions (cash and in-kind)
for ATLAS in 2006 by Funding Agency
(in kCHF)**

3/29/2007

Funding Agency	Category B item contributions							Total	Total
	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	39
China NSFC+MSTC					1		1	2	3
Czech Republic								0	
Denmark								0	
France IN2P3	60		20		65			145	84
France CEA								0	37
Georgia								0	
Germany BMBF	59		6		38		42	145	27
Germany DESY								0	
Germany MPI					22			22	12
Greece								0	5
Israel								0	12
Italy	80		5		28		140	253	60
Japan								0	31
Morocco					1			1	1
Netherlands							13	13	14
Norway								0	
Poland								0	
Portugal								0	
Romania								0	
Russia					51			51	35
JINR			6					6	11
Serbia								0	
Slovak Republic					3			3	1
Slovenia	19							19	
Spain					1			1	11
Sweden	12	38	14		34	37		135	7
Switzerland	38		70		36			144	5
Taipei					4			4	3
Turkey								0	
United Kingdom								0	
US DOE + NSF	43	4	23	10	253		149	482	119
CERN					24			24	47
total contributions	242	73	67	125	741	37	345	1,630	564
other income*								0	
total payments	634	114	15	362	235	500	82	1,942	
balance								(312)	

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.



CERN-RRB-2007-018

ATLAS Resources Review Board, April 24, 2007

For RRB to take note

Part 2

Update on the Planned 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 take note of the updated, planned baseline and cost to completion payments for 2007.

In October 2006, the RRB approved the year 2007 ATLAS baseline and cost to completion budgets (CERN-RRB-2006-071). The baseline and CC-A commitments were planned at 12.9 MCHF and payments 13.2 MCHF, respectively. The payments included an option of 2.1 MCHF as extended member fees. Based on the same document, the RRB also accepted the proposed budget levels for C&I (Commissioning and Integration) and CC-B (Construction Completion) at 0.7 MCHF and 1.6 MCHF, respectively. The present budget planning and reporting for the cost to completion payments is in line with the Completion Plan (CERN-RRB-2002-114 rev.) and completes the C&I (A+B) and CC-B payments..

BASELINE BUDGET REPORT ELEMENTS

 Summary Update

 Budget Evolution

 Table References

1. Baseline and CC-A Budget Update for 2007

The updated planned 2007 baseline commitments are estimated at 16.7 MCHF and payments at 20.4 MCHF, respectively. This represents a 55% increase w.r.t the original budget, within the approved budget envelope. The changes are driven by the following factors:

- Delays generated by technical problems encountered in the End Cap Toroids and detector infrastructure have shifted payments from 2006 to 2007;
- Delayed payments in detector-related electronics, trigger cables and TDAQ equipment;
- Payments, in particular for technical services provided by CERN, have been pushed to the last possible moment as part of the global cash flow management (see Table 17).

Table 10 shows the 2007 ATLAS baseline budget evolution. Commitments include also making available the deferral funds.

Table 10. Evolution of the 2007 ATLAS Baseline Budget (MCHF)




Budget Evolution	Sub-systems		Common Projects		Total (MCHF)	
	Comm.	Paym.	Comm.	Paym.	Comm.	Paym.
2007 Budget (Oct '06)	5.1	5.4	7.8	7.8	12.9	13.2
2007 Update (April '07)	8.6	5.9	8.1	14.6	16.7	20.4

Details by system/sub-detector and Funding Agencies are presented in **Tables 11 to 13**. 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.

It should be noted that the Common Projects income (15 MCHF) is what ATLAS is requesting from the Funding Agencies, including also funds not received as part of the approved 2006 budget. The major due contributions to the Common Fund are: Russia and JINR (3.0 MCHF), United States (2.2 MCHF), Canada (1.5 MCHF), Japan (0.6 MCHF) and Israel (0.5 MCHF).

In October 2006, ATLAS reported additional costs (4.4 MCHF) over and above the Cost to Completion (68.2 MCHF) which it explained can be funded without fresh contributions, provided that Funding Agencies make their full calculated contributions (CERN-RRB-2006-069). This is possible as CERN has contributed 5 MCHF more than its calculated share. While pleading Funding Agencies to make their full calculated contributions, ATLAS proposed extending the member fees in 2007 worth 2.1 MCHF in case the remaining 11 MCHF of 68 MCHF were not all pledged for before April, 2007.

Significant progress has been made since October 2006. Funding Agencies have made 8 MCHF of new pledges (partially on a best effort-basis) w.r.t 11 MCHF remaining unpledged of the 68 MCHF at the time. Therefore, a gap of 3 MCHF still remains. ATLAS continues its efforts to collect commitments to the remaining 3 MCHF of Cost to Completion as soon as possible **and will not request the extension of member fees in 2007**. The consequence of this approach is discussed as part of the global budget position of ATLAS (Table 17).




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

2. Commissioning and Integration (C&I)

In its October 2006 meeting, the RRB accepted the proposed C&I budget of 0.7 MCHF for remaining payments in 2007 (CERN-RRB-2005-100), it being understood that Funding Agencies were not obliged to contribute their calculated share of these costs as shown in Table 12 of that document but that pledged (Category-1) contributions would be made available as soon as possible.

The updated C&I budget estimate for 2007, its final year, amounts to 0.9 MCHF.

Table 14 shows the expected contributions for 2007 for each Funding Agency and system (Categories A and B, both based on CORE sharing). These contributions are part of the present, committed amount of 21 MCHF to C&I and they amount to 1.4 MCHF for Category-A and 0.5 MCHF for Category-B. A positive budget balance (+1.0 MCHF) is treated as part of the global budget position shown in Table 17.

CC-B BUDGET	
REPORT ELEMENTS	
	Summary Update
	Payment Plan
	Table References

3. Construction Completion (CC-B)

In October 2006 the RRB accepted the proposed CC-B budget of 1.6 MCHF for payments (CERN-RRB-2006-071) under the same conditions as for the C&I budget (see Section 2).

The updated CC-B budget estimate for 2007 is 3.1 MCHF, thus absorbing remaining commitments made in 2006.

It should be noted that due to unforeseen technical difficulties, the Inner Detector is facing a potential cost over run of ca. 0.5 MCHF over and above the present budget envelopes. This estimate is not included in the above figures. These costs are currently being reviewed by ATLAS and the outcome will be reported in the October 2007 RRB.

Table 15 shows the expected CC-B contributions for 2007 for each Funding Agency and system. These contributions are part of the present, committed amount of 11 MCHF to CC-B and they amount to 0.6 MCHF.

A negative budget balance (-2.5 MCHF) is observed. This is treated as part of the global budget position in Table 17.

Although the issue of budget balance is globally addressed in Table 17, it is worth noting here that the deferral scheme endorsed by the RRB in 2002 has not so far been entirely successful in avoiding the projected budget deficit.

The deferral scheme was approved 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 (CtC) payments (68 MCHF) and pledged contributions (initially, 47 MCHF). This is achieved by staging certain baseline detector components, mostly TDAQ processors, thus redirecting originally committed baseline CORE MoU funds towards completing the initial detector. These staged items will then be restored centrally by the ATLAS management once the received CtC contributions reach 68 MCHF.

Table 16 shows the present status and allocation of deferral contributions, as part of the Completion Plan (CERN-RRB-2002-114 rev.). These contributions will be included in the final CORE contribution reporting.

A global view of the pledged (Category-1) contributions per each Funding Agency in C&I and CC (Categories A and B) is shown in the **Annex** of Part 3.

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						275.0	275
Armenia						29.0	29
Australia						115.0	115
Austria					160	0.0	160
Azerbaijan						18.0	18
Belarus						75.0	75
Brazil						38.0	38
Canada						429.0	429
China NSFC+MSTC						0.0	0
Czech Republic					40	0.0	40
Denmark						0.0	0
Finland						0.0	0
France IN2P3						710.0	710
France CEA						0.0	0
Georgia						13.0	13
Germany BMBF					120	2.0	122
Germany DESY						0.0	0
Germany MPI						0.0	0
Greece						46.0	46
Israel					60	0.0	60
Italy					365	2288.0	2653
Japan					470	0.0	470
Morocco						13.0	13
Netherlands					35	0.0	35
Norway						40.0	40
Poland					145	0.0	145
Portugal					15	2.0	17
Romania						0.0	0
Russia						263.0	263
JINR					100	25.0	125
Serbia						0.0	0
Slovak Republic						0.0	0
Slovenia						61.0	61
Spain						0.0	0
Sweden						0.0	0
Switzerland					770	0.0	770
Taipei						0.0	0
Turkey						0.0	0
United Kingdom					635	1222.0	1857
US DOE+NSF		500			885	172.0	1557
CERN					4280	0.0	4280
missing contributions to meet planned project payments						2,300	
total sub-detector	-	500	-	-	8,080	8,136	16,716

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						275.0	275
Armenia						29.0	29
Australia						465.0	465
Austria					295	0.0	295
Azerbaijan						18.0	18
Belarus						83.0	83
Brazil						63.0	63
Canada						2289.0	2289
China NSFC+MSTC						340.0	340
Czech Republic					40	0.0	40
Denmark					225	0.0	225
Finland						0.0	0
France IN2P3						710.0	710
France CEA						0.0	0
Georgia						13.0	13
Germany BMBF					120	2.0	122
Germany DESY						0.0	0
Germany MPI						0.0	0
Greece						236.0	236
Israel					60	500.0	560
Italy					365	2288.0	2653
Japan					470	0.0	470
Morocco						125.0	125
Netherlands					35	0.0	35
Norway						190.0	190
Poland					145	0.0	145
Portugal					15	2.0	17
Romania						0.0	0
Russia						2821.0	2821
JINR					100	425.0	525
Serbia						0.0	0
Slovak Republic						0.0	0
Slovenia						61.0	61
Spain						0.0	0
Sweden						0.0	0
Switzerland					770	0.0	770
Taipei						0.0	0
Turkey						0.0	0
United Kingdom					535	1222.0	1757
US DOE+NSF		500			885	2400.0	3785
CERN					1330	0.0	1330

from past Common Fund contributions

0.0

missing contributions to meet planned project payments

-

total sub-detector

-	500	-	-	5,390	14,557	20,447
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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	275	275	0	275	275
Armenia	0	0	29	29	0	29	29
Australia	0	465	0	465	0	115	115
Austria	0	0	0	0	0	0	0
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	2289	0	2289	0	429	429
China NSFC+MSTC	0	340	0	340	0	0	0
Czech Republic	0	0	0	0	0	0	0
Denmark	0	0	0	0	0	0	0
Finland	0	0	0	0	0	0	0
France IN2P3	0	710	0	710	0	710	710
France CEA	0	0	0	0	0	0	0
Georgia	0	0	13	13	0	13	13
Germany BMBF	0	2	0	2	0	2	2
Germany DESY	0	0	0	0	0	0	0
Germany MPI	0	0	0	0	0	0	0
Greece	0	190	46	236	0	46	46
Israel	0	500	0	500	0	0	0
Italy	0	2288	0	2288	0	2288	2288
Japan	0	0	0	0	0	0	0
Morocco	0	50	75	125	0	13	13
Netherlands	0	0	0	0	0	0	0
Norway	0	190	0	190	0	40	40
Poland	0	0	0	0	0	0	0
Portugal	0	0	2	2	0	2	2
Romania	0	0	0	0	0	0	0
Russia	0	2645	176	2821	0	263	263
JINR	0	400	25	425	0	25	25
Serbia	0	0	0	0	0	0	0
Slovak Republic	0	0	0	0	0	0	0
Slovenia	0	61	0	61	0	61	61
Spain	0	0	0	0	0	0	0
Sweden	0	0	0	0	0	0	0
Switzerland	0	0	0	0	0	0	0
Taipei	0	0	0	0	0	0	0
Turkey	0	0	0	0	0	0	0
United Kingdom	0	1222	0	1222	0	1222	1222
US DOE+NSF	0	2400	0	2400	0	172	172
CERN	0	0	0	0	0	0	0
Common Fund	0	0	0	0			
missing contributions to meet planned project payments				-			
total	-	13,752	805	14,557	-	5,836	5,561

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

3/29/2007

Funding Agency	Cat. A	Category B item contributions							Total	Total
	items	Pixel	SCT	TRT	IDGen	LAr	TileC	Muon	Cat. B	A+B
Argentina									0	0
Armenia									0	0
Australia	56			29					29	85
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	13					150		115	265	278
Georgia									0	0
Germany BMBF									0	0
Germany DESY									0	0
Germany MPI									0	0
Greece	36							52	52	88
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	32								0	32
US DOE + NSF	1300					200			200	1500
CERN									0	0
total contributions	1,437	0	0	0	29	350	0	167	546	1,983
other income*									0	0
total payments					242	245	38	401	926	926
balance										1,057

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)**

3/29/2007

Funding Agency	Category B item contributions							Total Cat. B
	Pixel	SCT	TRT	IDGen	LAr	TileC	Muon	
Argentina								0
Armenia								0
Australia	13		4					17
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					213		115	328
Georgia								0
Germany BMBF								0
Germany DESY								0
Germany MPI								0
Greece							52	52
Israel								0
Italy								0
Japan								0
Morocco					3			3
Netherlands								0
Norway								0
Poland								0
Portugal						37		37
Romania								0
Russia								0
JINR					13			13
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	13	0	27	309	37	167	617
other income*								0
total payments		498			1552	327	692	3,069
balance								(2,452)

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)
(February 28, 2007)

3/29/2007

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		100	100						100	
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	810	380	915					275	1190	
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		150	150						150	
United Kingdom		1110	1110						1110	
US DOE + NSF									0	
CERN		2950	2950						2950	
total contributions	1,190	8,130	7,045	0	77	1,089	834	0	275	9,320

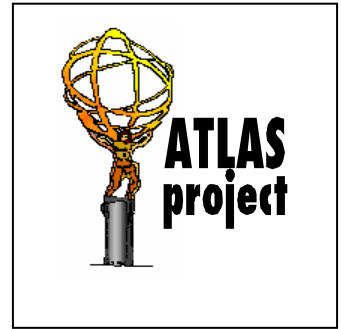
Notes:

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-2007-018

ATLAS Resources Review Board, April 24, 2007

For RRB to take note

Part 3

Preliminary 2008 ATLAS Baseline and Cost to Completion Budget Estimates

Introduction




The ATLAS management, supported by the ATLAS Executive and Collaboration Boards, kindly invites the RRB to take note of the preliminary baseline budget estimates for 2008.

The first budget estimates for the ATLAS detector construction baseline expenses in 2008 amount to 3.8 MCHF in new commitments and 2.2 MCHF in payments. There are no planned cost to completion activities beyond 2007.

The year 2008 represents the first year of full energy physics run, and investments continue in the high-level TDAQ as part of the initial detector configuration to benefit from the full physics discovery potential of ATLAS.

1. Preliminary Baseline Budget Estimate for 2008

BASLINE BUDGET REPORT ELEMENTS

 Budget summary
 Activity Description
 Table References

The preliminary 2008 baseline commitments and payments for the detector systems are estimated at 3.8 MCHF and 2.2 MCHF, respectively. This assumes that all commitments and payments requested in the 2007 budget update are honoured. There are no planned Common Projects (CP) payments left as part of the initial, staged detector. However, there are delayed CP contributions amounting to 0.6 MCHF for covering past payments.

The remaining payments are all part of the Trigger-DAQ system where the processors will be installed at Point 1 by early 2008 ready for data taking in Summer-2008. As a part of the global financial planning (**Table 17**), last remaining new commitments amounting to 3 MCHF will be permitted only after the question of remaining due contributions is resolved. This risks resulting in delays in the TDAQ installation schedule.

Table 17 provides an update of the global view of the budget balance evolution presented in the October 2006 RRB (CERN-RRB-2006-071). The situation has slightly improved due to new pledged contributions, resulting in a cumulative deficit of only 1 MCH in 2006. At present, a 3 MCHF cumulative budget deficit is expected before 2010, assuming that all pledged contributions, as of today, as well as the deferral contributions are received for completing the initial detector.

In Table 17 due baseline contributions worth ca. 6 MCHF are assumed not to be received in 2007. Moreover, some 2 MCHF of deferral contributions will not arrive before 2008. The Funding Agencies in questions are not in a position to write firm pledges in order for ATLAS to obtain financial help from CERN. This means that at least 11 MCHF worth of deferral funds are still needed.

The ATLAS and CERN Management continue their efforts to secure the due contributions from the Funding Agencies and will report on the situation in the October RRB.

While working on the Funding Agencies which have not yet contributed their baseline or calculated shares of Cost to Completion, **ATLAS kindly invites Funding Agencies to make voluntary contributions toward the missing 3 MCHF indicated by Table 17 to avoid any potential cash flow deficit later on.** These voluntary contributions will be accounted for as contributions for the future.

Table 17. Updated evolution of the ATLAS Budget Balance (MCHF)

PAYMENTS	95-01	2002	2003	2004	2005	2006	2007	2008	2009	2010	Total
Baseline + CC(A) <i>of which deferrals</i>	231	71	56	52	43	29	22	3	2	1	509
C&I (A+B)	0	1	3	4	9	2	1	-2			21
CC (B)		1	1	1	4	2	3				12
TOTAL	231	73	61	57	54	30	23	1	2	1	531

INCOME	95-01	2002	2003	2004	2005	2006	2007	2008	2009	2010	Total
Baseline + CC(A)	252	65	55	54	33	15	15	2	2	2	494
C&I (A+B)		1	9	3	4	4	2				23
CC (B)		2	4	2	1	2	1				11
TOTAL	252	68	68	59	38	20	18	2	2	2	528

BUDGET BALANCE	21	-5	7	2	-15	-11	-5	2	1	1	-3
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CUMULATIVE	21	15	23	25	9	-1	-7	-5	-4	-3	
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CUMULATIVE (OCTOBER 2006)	21	15	23	25	9	-3	-4				
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Details of the budget estimates for 2008 by system/sub-detector and Funding Agencies are presented in **Tables 18 to 20**. It should be noted that the extended annual member fees no longer appear in Table 20.

The **Annex** provides a global view of the pledged (Category-1) cost to completion funding per Funding Agency as well as the calculated share of the 68 MCHF which is needed to complete the initial ATLAS detector. It also shows the status of remaining (and calculated) contributions to the baseline and Cost to Completion.

Planned CORE and CC-A Contributions to ATLAS Detector Construction during 2008
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						0.0	0
Australia						0.0	0
Austria						0.0	0
Azerbaijan						0.0	0
Belarus						0.0	0
Brazil						0.0	0
Canada						0.0	0
China NSFC+MSTC						0.0	0
Czech Republic						0.0	0
Denmark						0.0	0
Finland						0.0	0
France IN2P3						0.0	0
France CEA						0.0	0
Georgia						0.0	0
Germany BMBF						0.0	0
Germany DESY						0.0	0
Germany MPI						0.0	0
Greece						0.0	0
Israel						0.0	0
Italy					145	0.0	145
Japan						600.0	600
Morocco						0.0	0
Netherlands						0.0	0
Norway						0.0	0
Poland						0.0	0
Portugal					135	0.0	135
Romania						0.0	0
Russia						0.0	0
JINR						0.0	0
Serbia						0.0	0
Slovak Republic						0.0	0
Slovenia						0.0	0
Spain						0.0	0
Sweden						0.0	0
Switzerland					500	0.0	500
Taipei						0.0	0
Turkey						0.0	0
United Kingdom						0.0	0
US DOE+NSF					1980	0.0	1980
CERN					450	0.0	450
missing contributions to meet planned project payments						-	
total sub-detector	-	-	-	-	3,210	600	3,810

Planned CORE and CC-A Contributions to ATLAS Detector

Construction during 2008 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						0.0	0
Australia						0.0	0
Austria						0.0	0
Azerbaijan						0.0	0
Belarus						0.0	0
Brazil						0.0	0
Canada						0.0	0
China NSFC+MSTC						0.0	0
Czech Republic						0.0	0
Denmark					250	0.0	250
Finland						0.0	0
France IN2P3						0.0	0
France CEA						0.0	0
Georgia						0.0	0
Germany BMBF						0.0	0
Germany DESY						0.0	0
Germany MPI						0.0	0
Greece						0.0	0
Israel						0.0	0
Italy					145	0.0	145
Japan						600.0	600
Morocco						0.0	0
Netherlands					15	0.0	15
Norway						0.0	0
Poland						0.0	0
Portugal					135	0.0	135
Romania						0.0	0
Russia						0.0	0
JINR						0.0	0
Serbia						0.0	0
Slovak Republic						0.0	0
Slovenia						0.0	0
Spain						0.0	0
Sweden						0.0	0
Switzerland					500	0.0	500
Taipei						0.0	0
Turkey						0.0	0
United Kingdom					100	0.0	100
US DOE+NSF						0.0	0
CERN					450	0.0	450

from past Common Fund contributions

0.0

missing contributions to meet planned project payments

-

total sub-detector

-	-	-	-	1,595	600	2,195
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Planned CORE Common Project Contributions
during 2008 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	0	0	0	0	0
Australia	0	0	0	0	0	0	0
Austria	0	0	0	0	0	0	0
Azerbaijan	0	0	0	0	0	0	0
Belarus	0	0	0	0	0	0	0
Brazil	0	0	0	0	0	0	0
Canada	0	0	0	0	0	0	0
China NSFC+MSTC	0	0	0	0	0	0	0
Czech Republic	0	0	0	0	0	0	0
Denmark	0	0	0	0	0	0	0
Finland	0	0	0	0	0	0	0
France IN2P3	0	0	0	0	0	0	0
France CEA	0	0	0	0	0	0	0
Georgia	0	0	0	0	0	0	0
Germany BMBF	0	0	0	0	0	0	0
Germany DESY	0	0	0	0	0	0	0
Germany MPI	0	0	0	0	0	0	0
Greece	0	0	0	0	0	0	0
Israel	0	0	0	0	0	0	0
Italy	0	0	0	0	0	0	0
Japan	0	600	0	600	0	600	600
Morocco	0	0	0	0	0	0	0
Netherlands	0	0	0	0	0	0	0
Norway	0	0	0	0	0	0	0
Poland	0	0	0	0	0	0	0
Portugal	0	0	0	0	0	0	0
Romania	0	0	0	0	0	0	0
Russia	0	0	0	0	0	0	0
JINR	0	0	0	0	0	0	0
Serbia	0	0	0	0	0	0	0
Slovak Republic	0	0	0	0	0	0	0
Slovenia	0	0	0	0	0	0	0
Spain	0	0	0	0	0	0	0
Sweden	0	0	0	0	0	0	0
Switzerland	0	0	0	0	0	0	0
Taipei	0	0	0	0	0	0	0
Turkey	0	0	0	0	0	0	0
United Kingdom	0	0	0	0	0	0	0
US DOE+NSF	0	0	0	0	0	0	0
CERN	0	0	0	0	0	0	0
Common Fund	0	0	0	0			
missing contributions to meet planned project payments				-			
total	-	600	-	600	-	600	600

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

Annex 1

Funding Agency	C&I (A)							Calc. Total	C&I (B)							Calc. Total	Invoiced 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	0	0	0	0	3	4	0	0	0	0	7	13	7	18
Australia	0	0	0	0	0	56	56	56	13	17	0	0	0	29	59	59	115	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	13	258	295	0	0	0	0	0	265	265	265	523	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	36	36	36	0	0	0	0	0	52	52	52	88	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	32	764	764	0	269	174	116	0	0	559	559	1323	1323
US DOE + NSF	0	0	0	0	0	1500	1500	1807	51	25	0	0	0	0	76	2001	1576	3808
CERN	111	5485	0	0	0	0	5596	1428	199	1081	0	0	80	0	1360	1260	6956	2688

All in-kind
All in-kind

total	515	6475	1512	2436	2023	1637	14598	10496	874	2575	1518	1500	1460	346	8273	10410	22871	20906
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calculated total	865	2775	4341	2515	0	0	10496	0	1405	2770	3375	2825	35		10410
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%	139	%	79
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Actual payments	332	1425	1474	6696	352		10279	376	1710	1978	2366	1972		8402
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Income-actual payments	183	5050	38	-4260	1671		2682	498	865	-460	-866	-512		-475
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balance cumulative

ACTUAL & PLANNED INCOME FOR ATLAS CONSTRUCTION COMPLETION (kCHF)

Annex 1

Funding Agency	CC (A)							Calc.	CC (B)							Calc.	Invoice	Calc.
	2002	2003	2004	2005	2006	2007	Total	Total	2002	2003	2004	2005	2006	2007	Total	Total	Total	G.Total
Argentina	0	0	0	0	0	75	75	0	0	0	0	0	0	0	0	0	75	0
Armenia	0	0	0	0	9	29	38	38	0	0	0	0	0	0	0	0	38	48
Australia	0	0	0	50	25	115	190	190	10	14	11	0	0	17	52	52	242	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	0	18	38	38	0	0	0	0	0	0	0	0	38	38
Belarus	0	0	0	0	0	75	75	75	0	0	0	0	0	0	0	0	75	75
Brazil	0	0	0	0	0	38	38	38	2	0	0	0	0	0	2	9	40	47
Canada	0	0	87.5	212	411	428	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	328	379	379	1417	1380
Georgia	0	0	0	0	25	13	38	38	0	0	0	0	0	0	0	0	38	38
Germany BMBF	1992	0	0	0	458	2	2452	2452	430	368	0	0	0	0	798	798	3250	3250
Germany DESY	0	0	0	0	38	0	38	0	0	0	0	0	0	0	0	0	38	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	75	46	121	121	0	0	0	0	0	52	52	52	173	173
Israel	0	0	37	38	288	0	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	0	13	38	38	0	0	0	1	0	3	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	21	2	50	155	0	0	0	73	0	37	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	0	263	263	1381	36	12	3	0	51	0	102	614	365	1995
JINR	0	0	12	0	0	25	37	397	3	76	58	0	2	13	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	13	12	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	1222	2590	2590	137	195	121	21	0	0	474	474	3064	3064
US DOE + NSF	0	1830	232	723	883	173	3841	6129	156	914	778	0	435	0	2283	2308	6124	8437
CERN	978	4523	0	0	0	0	5501	8927	294	949	0	0	0	0	1243	1243	6744	10170

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

Profile (A) changed as in letter RCN 24.9.02

All In-kind

total	3194	10311	4912	4751	3853	5648	32668	40004	1973	3704	2161	1407	1203	617	11065	11670	43733	51674
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calculated total	9550	11900	9350	4700	100	4400	40000	4	2510	2945	4035	1645	535	0	11670	0		
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%	82	%	95
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Actual payments	8415	4490	3690	5940	6930	29465	1126	1007	1044	4207	1941	9325
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Income-actual payments	-5221	5821	1222	-1190	-3078	-2446	847	2697	1117	-2800	-738	1123
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balance cumul.

	Construction MoU obligations (kCHF)					CC and C&I accepted (kCHF)			Grand total committed (CORE-CC-C&I)	Part not yet pledged		Additional contributions (CtC-2)	
		detectors		CF						CC	C&I		
Funding Agency	total paid	remaining deliverables	remaining deferrals	remaining contrib.	total CMoU	total paid	remaining contrib.	total committed					
Argentina				200	200		75	75	275				
Armenia	195				195	16	29	45	240	10	11		
Australia	2145			350	2495	140	217	357	2852				
Austria	360	140	50		550	67		67	617				
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		141	1716				
Czech Republic	1570	40	35		1645	316		316	1961				
Denmark	2725	575			3300	58		58	3358	243	121		
Finland	100				100				100				
France IN2P3	39080				39080	5026	865	5891	44971				
France CEA	13679				13679	1334	606	1940	15619				
Georgia	100				100	25	13	38	138		4		
Germany BMBF	32073				32073	4531		4531	36604				
Germany DESY	100				100	38		38	138				
Germany MPI	7545				7545	1093		1093	8638				
Greece	1585			140	1725	75	186	261	1986				
Israel	4500	35		500	5035	739		739	5774				
Italy	42555		2530		45085	4000	2288	6288	51373	292	58		
Japan	30920	470	185	600	32175	4362		4362	36537				
Morocco	243			113	355	26	16	42	397	5	10		
Netherlands	12085	30			12115	1934		1934	14049				
Norway	3970			150	4120	541	40	581	4701				
Poland	820	135			955	123		123	1078				
Portugal	1955	125	100		2180	300	39	339	2519	105	2		
Romania	550				550	140		140	690				
Russia	15697			2558	18255	1496	263	1759	20014	1232			
JINR	7239	101		540	7880	483	38	521	8401	471	74		
Serbia						300		300	300				
Slovak Republic	550				550	82		82	632				
Slovenia	1500				1500	150	73	223	1723				
Spain	9775				9775	1706		1706	11481				
Sweden	10800				10800	1691		1691	12491				
Switzerland	17245	1260			18505	2372		2372	20877				
Taipei	3000				3000	445		445	3445				
Turkey	350				350	75		75	425	10	10		
United Kingdom	33425	675			34100	4387		4387	38487				
US DOE+NSF	74408	2070	1983	2277	80738	6027	1673	7700	88438				
CERN	57050	2465			59515	9300		9300	68815			4400	
TOTAL	444796	8121	4883	9660	467460	55224	6980	62204	529664	2375	318	4400	
					of which for CtC				5967				0
Available for payments					Total baseline available	461494	RRB accepted CtC(1)		68170	RRB accepted CtC (2)			4400
Notes										Grand total		534064	

1. Column 'Total Paid' in Construction MoU is renormalized, includes also the deferral contributions made so far
2. Total CMoU refers to updated CORE construction figures (March 2007)
3. Original TDR detector staged for 21 MCHF of which < 14.5 MCHF (deferrals) can be used for covering cost over-runs
4. Sharing between BMBF/MPI and RF/JINR based on CORE MoU
5. CEA has contributed 1 MCHF to CF over and above its original MoU share (not shown here)
6. Risk of missing contributions in CF is 5.0 MCHF (Russia&JINR 3.0 MCHF, Canada 1.5 MCHF, China & Morocco 0.5 MCHF)
7. Remaining US C&I contribution of 4.5 MCHF is agreed on a best effort basis