

Report on CORE Construction Budgets

1 - CORE Expenses in 2007.

The CORE Construction Budget for 2007, approved at the RRB meeting on 25 October 2006, amounts to 10,415 kCHF. The actual expenditure during 2007 amounts to 13,670 kCHF. This is detailed in the following tables (unit = kCHF):

Table 1A 2007 CORE Expenditure by System

Table 1B 2007 CORE Expenditure by Funding Agency

The cumulative expenditure 1997 - 2007 is given in the following tables:

Table 2A Cumulative CORE Expenditure 1997 - 2007 by System

Table 2B Cumulative CORE Expenditure 1997 - 2007 by Funding Agency

Note that these tables do not include contributions to the Common Fund and Commissioning and Integration.

The total cumulative expenditure, including payments to the Common Fund and Commissioning and Integration, is given in the following tables:

Table 3A CORE Expenditure 1997 - 2007: Totals by System

Table 3B CORE Expenditure 1997 - 2007: Totals by Funding Agency

2 - Update on Planned CORE Expenses in 2008

The CORE Construction Budget for 2008, approved at the RRB meeting on 24 October 2007, amounts to 8,004 kCHF.

3 - Preliminary Estimate for CORE Expenses in 2009

The preliminary estimates of the CORE Construction Budget requirements for the year 2009 add up to 7,154 kCHF.

The details of the 2009 preliminary budget are given in the following table (unit = kCHF):

Table 4A Preliminary Estimate of 2009 CORE Budget by System

Table 4B Preliminary Estimate of 2009 CORE Budget by Funding Agency

The draft 2009 construction budget will be submitted for approval to the Resources Review Board meeting in November 2008.

Table 1A - 2007 CORE Expenditure by System

Unit = kCHF

Payments			
System	Funding Agency	Description	Total
Pixel	CERN	Pixel	379.0
Drift	United States OSU	ITS Laser alignment	5.0
Strip	CERN	Strip	287.0
TPC	CERN	TPC	16.0
	Germany BMBF	HV / LV	1.2
		Pulser	13.3
	Germany GSI	TPC	160.0
TRD	Germany BMBF	TRD	1,590.0
	Germany GSI	TRD	1,099.0
	Greece	V0	30.4
		Power supplies	89.9
	JINR	TRD	63.0
	Romania NIPNE	Chambers	94.0
TOF	Italy	Cables and geberal (gas system, bus bars, tools)	613.0
		Electronics (incl. trigger, slow control, DAQ)	3,015.2
		HV	28.3
		Modules and SuperModules	1,161.7
	Russia LHC-2	TOF	9.0
HMPID	CERN	HMPID	71.0
PHOS	Norway	Electronics, power supplies, cables, DCS	190.0
	China	Electronics	260.0
	Russia LHC-2	PHOS	214.0
		CPV	14.0
	Russia Other	PHOS	262.0
Forward	Denmark	FMD	70.0
	Finland	T0	35.0
	Greece	T0	25.3
	Mexico	V0	32.0
	Russia LHC-2	T0	71.0
Muons	CERN	Muons	30.0
	France IN2P3	Tracking	20.0
		Trigger cabling	76.0
		Trigger frontend electronics	24.0
	Russia LHC-2	Tracking	95.0
DAQ	CERN	DAQ	671.0
Trigger	United Kingdom	Trigger	17.0
HLT	Germany BMBF	HLT	70.9
Infrastr.	CERN	Manpower	1,170.0
		Services	1,365.0
	Russia Other	Manpower (installation)	136.5
		Manpower (survey)	95.0
Grand Total			13,669.7

Table 1B - 2007 CORE Expenditure by Funding Agency

Unit = kCHF

Payments				
Funding Agency	System	Description	Total	
CERN	Pixel	Pixel	379.0	
	Strip	Strip	287.0	
	TPC	TPC	16.0	
	HMPID	HMPID	71.0	
	Muons	Muons	30.0	
	DAQ	DAQ	671.0	
	Infrastr.	Manpower		1,170.0
			Services	1,365.0
	Denmark	Forward	FMD	70.0
	Finland	Forward	T0	35.0
France IN2P3	Muons	Tracking	20.0	
		Trigger cabling	76.0	
		Trigger frontend electronics	24.0	
Germany BMBF	TPC	HV/LV	1.2	
		Pulser	13.3	
	TRD	TRD	1,590.0	
	HLT	HLT	70.9	
Germany GSI	TPC	TPC	160.0	
	TRD	TRD	1,099.0	
Greece	TRD	V0	30.4	
		Power supplies	89.9	
	Forward	T0	25.3	
Italy	TOF	Cables and general (gas system, bus bars, tools)	613.0	
		Electronics (incl. trigger, slow control, DAQ)	3,015.2	
		HV	28.3	
		Modules and SuperModules	1,161.7	
Norway	PHOS	Electronics, power supplies, cables, DCS	190.0	
United Kingdom	Trigger	Trigger	17.0	
China	PHOS	Electronics	260.0	
JINR	TRD	TRD	63.0	
Mexico	Forward	V0	32.0	
Romania NIPNE	TRD	Chambers	94.0	
Russia LHC-2	TOF	TOF	9.0	
	PHOS	PHOS	214.0	
		CPV	14.0	
	Forward	T0	71.0	
	Muons	Tracking	95.0	
Russia Other	PHOS	PHOS	262.0	
	Infrastr.	Manpower (installation)	136.5	
		Manpower (survey)	95.0	
United States OSU	Drift	ITS Laser alignment	5.0	
Grand Total			13,669.7	

Table 2B - Cumulative CORE Expenditure 1997 - 2007, by Funding Agency
(Unit = kCHF)

Sum of Payments		Year											
Funding Agency	System	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	Grand Total
CERN	Pixel					45.0	335.8	-83.1	166.2	411.0	476.1	379.0	1,730.0
	Strip						33.8	220.4	188.6	201.0	854.4	287.0	1,785.2
	TPC				25.9	257.2	1,221.2	304.8	393.7	154.0	81.6	16.0	2,454.5
	HMPID			13.3		105.9	306.8	82.9	-6.3	47.0	176.6	71.0	797.2
	Muons		50.0	58.5	58.6	438.6	1,825.9	1,804.7	777.4	993.0	126.6	30.0	6,163.2
	DAQ										649.2	671.0	1,320.2
	Infrastr.					557.5	281.1	533.7	522.1	850.0	1,178.2	2,535.0	6,457.7
	ComPro	64.7		9.0	10.7			19.7			242.8		346.8
Czech Republic	Drift	35.9	40.0	40.0	45.0	10.0			2.0	81.4	60.0		314.3
	PHOS						35.0	48.0					83.0
Denmark	TPC					100.0	50.0	100.0	20.0	100.0	50.0		420.0
	Forward									350.0	300.0	70.0	720.0
Finland	Strip					2.4		250.0	194.9	128.0	67.0		642.2
	Forward							29.0	38.0	67.2	93.7	35.0	262.9
France CEA	Muons					139.0	262.0	330.0	529.5	78.0	81.0		1,419.5
France IN2P3	Strip						848.0		450.1	472.2	377.3		2,147.5
	Forward								10.5	160.0	231.0		401.5
	Muons			48.0	84.0	148.0	1,988.0	807.1	290.8	1,517.4	922.0	120.0	5,925.3
Germany BMBF	TPC					1,190.0	504.0	242.8	225.9	67.9	47.0	14.5	2,292.0
	TRD					68.0	523.0	1,935.9	2,724.7	1,490.0	4,585.0	1,590.0	12,916.6
	HLT						10.0	3.2	4.8	21.0	136.0	70.9	245.9
Germany GSI	TPC				230.0	899.0	421.9	819.0	749.1	568.0	526.1	160.0	4,373.1
	TRD							81.0	280.0	363.0	282.6	1,099.0	2,105.6
Greece	TPC								7.7				7.7
	TRD								11.0		56.0	120.3	187.3
	Forward			100.0	150.4							25.3	275.7
Hungary	DAQ										395.3		395.3
Italy	Pixel						478.3	145.7	659.3	190.0	135.0		1,608.3
	Drift			173.0	51.0	30.0	803.1	457.3	873.9	1,604.3	1,856.6		5,849.0
	Strip						38.9	316.0	367.5	654.6	1,182.2		2,559.2
	ITS-CMA				8.0	18.0							26.0
	TOF							1,326.1	1,458.2	2,700.2	5,386.9	4,818.2	15,689.6
	HMPID				50.0	200.0	470.0	224.8	165.0	133.3			1,243.1
	Forward			204.0			262.0	45.0	83.0	81.3	108.3		783.6
	Muons				60.0	138.0	233.0	584.1	189.5	557.8	70.7		1,833.0
Netherlands	Strip		55.0	31.3	67.1	339.6	741.0	350.0	357.0	247.8			2,188.8
Norway	PHOS								255.0	224.0	119.0	190.0	788.0
	HLT								336.0	30.0			366.0
Poland	TPC						60.0	90.0	50.0	40.0	140.0		380.0
	PHOS						90.0	90.0	90.0		50.0		320.0
Slovak Republic	Pixel					45.0		105.0	60.0	30.0	73.0		313.0
	TPC				65.0	50.0	35.0	65.0	50.0	35.0			300.0
	Trigger								20.0	40.0			60.0
	ComPro						16.4						16.4
Sweden	TPC						116.4	560.0	370.0	1,235.0	277.0		2,558.4
United Kingdom	DAQ									646.7			646.7
	Trigger				46.9	29.0		200.0	180.0	193.3	192.0	17.0	858.2
Armenia	ComPro						4.8						4.8
China	PHOS						160.0				150.0	260.0	570.0
	Infrastr.							185.0	188.0	256.0	187.0		816.0
Croatia	TPC							84.8					84.8
India	Forward						5.0	92.1	205.0	425.0	200.0		927.1
	Muons						193.0	730.0	831.7		210.0		1,964.7
	ComPro									42.2	95.0		137.2
JINR	TRD						37.0	80.0	66.0		100.0	63.0	346.0
	PHOS						67.7	222.0			200.0		489.7
	Muons		50.0	75.0		310.0	400.0	163.0					998.0
	ComPro										199.6		199.6
Mexico	Forward									90.1	300.0	32.0	422.1
	ACORDE								30.0		83.6		113.6
Romania NIPNE	TRD							100.0	10.0	121.6	96.0	94.0	421.6
Russia LHC-2	ITS-CMA	21.5	11.9	45.0	23.0	22.3	14.8	13.0					151.5
	TOF				29.4	5.6		44.0	57.0	59.0	71.0	9.0	275.0
	Pestov / PPC	142.6	43.4	210.0									396.0
	HMPID		4.1				6.4	8.0	8.0	9.0			35.5
	PHOS	113.8	40.5	120.0	292.0	161.1	315.3	356.0	527.0	738.0	1,048.0	228.0	3,939.7
	Forward				3.6	16.7	13.3	12.0	16.0	15.0	33.0	71.0	180.6
	Muons	48.8	20.1	190.0	29.0	73.2	236.5	152.0	122.0	68.0	71.0	95.0	1,105.6
	ComPro					60.6	93.0	97.0					250.6
Russia Other	Pixel									9.0			9.0
	ITS-CMA							9.0	9.0				18.0
	PHOS						1,970.0	2,217.0	2,304.0	1,136.0	1,667.0	262.0	9,556.0
	Forward							16.0	9.0				34.0
	Muons								240.0				240.0
	Infrastr.											231.5	231.5
	ComPro									120.0	328.8		448.8
Ukraine	Drift				20.0	30.0	15.0		24.0	66.0	58.0		213.0
	Strip			45.0	130.0	30.0	15.0	15.0	234.0	190.0	58.0		717.0
United States OSU	Drift					22.7	2.2		10.0	5.0	17.6	5.0	62.5
Grand Total		427.3	260.0	1,385.8	1,443.8	5,270.0	15,070.6	16,872.6	18,298.7	20,231.4	27,007.5	13,669.7	119,937.1

Table 3A: CORE Expenditure 1997 - 2007: Totals by System

(Unit = kCHF)

Sum of Payments	Year											
System	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	Grand Total
Pixel					90.0	814.1	167.6	885.5	640.0	684.1	379.0	3,660.3
Drift	35.9	40.0	213.0	116.0	92.7	820.3	457.3	909.9	1,756.7	1,992.2	5.0	6,438.9
Strip			100.0	161.3	99.5	1,275.3	1,542.4	1,785.1	2,002.7	2,786.6	287.0	10,039.9
ITS-CMA	21.5	11.9	45.0	31.0	40.3	14.8	22.0	9.0				195.5
TPC				320.9	2,496.2	2,408.5	2,266.4	1,866.4	2,199.9	1,121.7	190.5	12,870.4
TRD					68.0	560.0	2,196.9	3,091.7	1,974.6	5,119.6	2,966.3	15,977.1
TOF				29.4	5.6		1,370.1	1,515.2	2,759.2	5,457.9	4,827.2	15,964.6
Pestov/PPC	142.6	43.4	210.0									396.0
HMPID		4.1	13.3	50.0	305.9	783.2	315.6	166.7	189.3	176.6	71.0	2,075.8
PHOS	113.8	40.5	120.0	292.0	161.1	2,570.3	2,730.7	3,446.0	2,098.0	3,234.0	940.0	15,746.4
Forward			304.0	154.0	16.7	280.3	194.1	361.5	1,197.6	1,266.1	233.3	4,007.6
Muons	48.8	120.1	371.5	231.6	1,246.8	5,138.4	4,570.9	2,980.9	3,214.2	1,481.3	245.0	19,649.3
DAQ									646.7	1,044.5	671.0	2,362.2
Trigger				46.9	29.0		200.0	200.0	233.3	192.0	17.0	918.2
ACORDE								30.0			83.6	113.6
HLT						10.0	3.2	340.8	51.0	136.0	70.9	611.9
Infrastr.					557.5	281.1	718.7	710.1	1,106.0	1,365.2	2,766.5	7,505.2
ComPro	64.7		9.0	10.7	60.6	114.2	116.7		162.2	86.2		1,404.2
C/F Fee		230.0	252.0	270.0	224.9	255.0	240.7	178.1	230.0	90.0		1,970.7
C/F Cash/C&I		100.0	640.0	1,135.0	1,399.0	1,752.0	342.3	1,237.0	2,046.7	1,195.6	832.4	10,680.0
Grand Total	427.3	590.0	2,277.8	2,848.8	6,893.8	17,077.6	17,455.6	19,713.8	22,508.1	28,293.1	14,502.1	132,587.9

Table 3B: CORE Expenditure 1997 - 2007: Totals by Funding Agency

(Unit = kCHF)

Sum of Payments	Year												
Funding Agency	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	Grand Total	
CERN	64.7	60.0	485.8	595.1	1,663.2	5,426.7	2,883.1	2,041.7	2,661.0	3,785.5	3,989.0	23,655.8	
Czech Republic	35.9	50.0	55.0	55.0	35.0	40.0	45.0	80.0	107.4	60.0		563.3	
Denmark			10.0	5.0	105.0	55.0	105.0	105.0	455.0	399.0	70.0	1,309.0	
Finland		5.0	5.0	5.0	7.4	5.0	284.0	237.8	200.2	259.2	19.3	1,027.9	
France CEA	5.0	5.0	50.0	144.0	290.0	335.0	534.5	196.0	81.0			1,640.5	
France IN2P3	25.0	73.0	569.0	172.9	2,861.0	807.1	1,066.5	2,149.6	1,703.3	543.7		9,971.0	
Germany BMBF	20.0	30.0	10.0	1,298.0	1,357.0	2,217.6	2,985.4	2,373.2	5,258.0	1,675.4		17,224.6	
Germany GSI	5.0	5.0	235.0	904.0	426.9	905.0	1,034.1	1,814.0	888.7	1,259.0		7,476.7	
Greece			110.0	160.4	5.0	10.0		18.7	133.5	163.1		600.7	
Hungary	5.0	5.0	5.0	5.0	5.0	5.0	5.0	17.0	480.3	-10.0		522.3	
Italy	100.0	622.0	334.0	1,471.0	2,285.3	3,350.2	4,199.8	5,921.4	8,739.7	4,818.2		31,841.5	
Netherlands	105.0	110.0	36.3	72.1	344.6	746.0	437.0	362.0	282.8			2,495.8	
Norway	10.0	10.0	10.0	10.0	10.0	61.0	601.0	269.0	189.0	190.0		1,360.0	
Poland	5.0	10.0	25.0	5.0	165.0	202.0	150.0	55.0	200.0	13.0		830.0	
Slovak Republic		20.0	95.0	105.0	61.4	180.0	140.0	125.0	82.6			809.0	
Spain/Cuba											45.0	45.0	
Switzerland				5.0								5.0	
Sweden	5.0	5.0	5.0	5.0	121.4	615.0	546.6	1,402.4	277.0			2,982.4	
United Kingdom	5.0	5.0	51.9	34.0	5.0	225.0	340.0	845.0	201.0	17.0		1,728.9	
Armenia			2.0	5.0	4.8	8.0	8.0	5.0	5.0	5.0		42.8	
China		5.0				160.0	185.0	188.0	256.0	337.0	278.0	1,409.0	
Croatia				5.0	70.0	17.0	84.8	5.0	5.0		5.0	191.8	
India				30.0	15.0	228.0	822.1	1,066.7	562.2	505.0		3,229.0	
Japan											150.0	150.0	
JINR		50.0	85.0		310.0	452.0	310.7	288.0	5.0	514.6	63.0	2,078.3	
Mexico				5.0	5.0	15.0	5.0	30.0	100.1	383.6	52.0	595.7	
Republic of Korea											67.0	67.0	
Romania ESS										45.0		45.0	
Romania NIPNE						15.0	100.0	15.0	167.6	115.0	104.0	516.6	
Russia LHC-2	326.7	120.0	565.0	387.1	349.5	694.3	697.0	745.0	899.0	1,223.0	403.0	6,409.6	
Russia Other						1,970.0	2,242.0	2,562.0	1,274.0	2,005.8	493.5	10,547.3	
South Africa						5.0	5.0		5.0		10.0	25.0	
Ukraine		10.0	50.0	165.0	70.0	40.0	20.0	263.0	261.0	121.0		1,000.0	
United States CalPoly											50.0	50.0	
United States Creighton							5.0	5.0	5.0			15.0	30.0
United States OSU			10.0	5.0	27.7	7.2	5.0	15.0	10.0	17.6	14.0	111.5	
Grand Total	427.3	590.0	2,277.8	2,848.8	6,893.8	17,077.6	17,455.6	19,713.8	22,508.1	28,293.1	14,502.1	132,587.9	

table 4A - Draft 2009 CORE Budget by System

(unit = kCHF)

Sum of Pay			
System	Funding Agency	Description	Total
TRD	Germany GSI	TRD	1,571
TRD Total			1,571
PHOS	China	Electronics	150
	Japan	Commissioning	100
	Russia Other	Crystals (3500)	3,850
		Module mechanics, LED monitoring	253
PHOS Total			4,353
Forward	Denmark	FMD	30
Forward Total			30
DAQ	CERN	Upgrade to full capacity	1,200
DAQ Total			1,200
Grand Total			7,154

Table 4B - Draft 2009 CORE Budget by Funding Agency

(unit = kCHF)

Sum of Pay			
Funding Agency	System	Description	Total
CERN	DAQ	Upgrade to full capacity	1,200
CERN Total			1,200
Denmark	Forward	FMD	30
Denmark Total			30
Germany GSI	TRD	TRD	1,571
Germany GSI Total			1,571
China	PHOS	Electronics	150
China Total			150
Japan	PHOS	Commissioning	100
Japan Total			100
Russia Other	PHOS	Crystals (3500)	3,850
		Module mechanics, LED monitoring	253
Russia Other Total			4,103
Grand Total			7,154