

IceCube Maintenance & Operations Common Fund Status Report

M&O Common Fund – The IceCube M&O Common Fund was created in 2007¹, the start of formal operations, to enable collaborating institutions to contribute to the costs of maintaining the computing hardware and software required to manage experimental data prior to processing for analysis. Each institution contributes to the Common Fund based on the total number of the institution's Ph.D. authors. Beginning in 2010 the established rate per Ph.D. author is proposed to increase by 50% from \$9,100 to \$13,650. The author count is revised in conjunction with the annual update to the IceCube Memorandum of Understanding for M&O, traditionally at the time of the spring collaboration meeting.

M&O Common Fund Contributions - The following table summarizes the Common Fund (CF) contributions for the first three years of IceCube maintenance and operations:

Planned and Actual CF Contributions (\$000) For the Initial Three Years of M&O - Status September 30, 2009

	PhD. authors Apr-07	2007 Planned	PhD. authors Apr-08	2008 Planned	PhD. authors Apr-09	2009 Planned
Total CF Planned	122	\$1,110	115	\$1,047	123	\$1,119
U.S. Contribution	73	\$664	73	\$664	73	\$664
Non-U.S. Contribution	49	\$446	42	\$382	50	\$455
		Actual		Actual		Actual
Total CF Contributions		\$1,100		\$787		\$403
U.S. Cash Transfer ²		\$664		\$664		\$332
Non-U.S. Cash Transfer ³		\$360		\$123		\$71
Non-U.S. In-Kind		\$86		\$41		\$44
Balance as of Aug. 2009		\$0		-\$219		-\$672

Actual Common Fund contributions were equal to the plan for 2007, are still \$219k less than planned for 2008, and are currently \$672 less than planned for 2009. It is anticipated that eventually all of the expected contributions for the initial three years of IceCube M&O will be fulfilled.

Common Fund Expenditures – The Common Fund expenditures are divided into two categories: U.S. and Non-U.S. This division was made to ensure that Non-U.S. CF funding is only used for hardware, software, and materials and supplies. The U.S. CF funding can also be used for labor, e.g., the salaries paid for personnel that winter at the South Pole to maintain the South Pole computing systems. The cumulative status of funding available and expenditures is provided in the following table:

¹ The M&O planning year is defined as April 1st – March 31st, i.e., 2007 = April 1, 2007 – March 31, 2008.

² The remaining U.S. balance of \$332K for 2009, the 3rd year of M&O, will be deposited in October 2009.

³ Invoices for 2009 (Year 3) were sent to Non-U.S. collaborating institutions in July 2009.

Status of Common Fund Expenditures (\$000)
April 1, 2007 – August 31, 2009

	U.S. CF	Non-U.S. CF
Funds Available	\$1,661	\$554
Expenditures	\$1,013	\$521
Balance	\$648	\$33

The recent deposit to the U.S. Common Fund of \$664k will be allocated for salaries including the last six months of the two current Winter-Over personnel at the South Pole and for nine months of the two Winter-Over personnel that are now in training for the next South Pole winter season.

U.S. Common Fund Expenditures – The U.S. Common Fund covers computing infrastructure upgrades of the South Pole Systems (SPS) and of the northern hemisphere data center. Expenses include servers, disk storage, tape drives and media, network hardware, service and warranty agreement, shipping and maintain operating system software and license. In addition, the U.S. CF is being used for salaries for Winter-Over personnel.

U.S. Common Fund Expenditures (August 31, 2009)

Cost Category	Item Description	Vendor	Quantity	Amount
WAGES	Salaries for Winter-Over Personnel	UW-Madison		\$440,681
WAGES Total				\$440,681
EQUIPMENT	CONFIGURABLE HP PROLIANT DL380/5	Hewlett Packard	11	\$53,439
	HP 330GB 15 K RPM ULTRA320 HOT	Hewlett Packard	10	\$5,980
	HP OTHERS	Hewlett Packard	1	\$12,984
	PROMISE ARRAY PACKAGE	Cambridge Computing	0.5	\$11,014
	COMPUTE NODE PER QUOTE	Sun Microsystems	1	\$186,703
EQUIPMENT Total				\$270,121
COMPUTING SUPPLIES	HP ULTRIUM 800 GB LABE	Hewlett Packard	54	\$44,532
	HP LT04 ULTRIUM 1.6TB	Hewlett Packard	27	\$39,214
	HP STORAGEWORKS ULTRIUM	Hewlett Packard	7	\$18,008
	HP R5500 VA UPS / UNINTERRUPT	Hewlett Packard	4	\$13,843
	HP OTHERS	Hewlett Packard	1	\$11,273
	LTO-3 400GB/800GB - Tape Media	Cambridge Computing	699	\$37,884
	SYS. 2801CT CONFIGURED T400S P	Lenovo Direct	2	\$5,054
COMPUTING SUPPLIES Total				\$169,808
SERVICES	AEMPO SUPPORT RENEWAL FOR 13	Cambridge Computing	1	\$8,072
	SPECTRA LOGIC SUPPORT RENEWAL	Cambridge Computing	1	\$19,958
	CISCO SMARTNET MAINTENANCE ON	Inacom Information	1	\$35,869
	SMART NET MAINTENANCE - INSTALLATION and MONTHLY RENTAL OF POWER AND COOLING	Inacom Information	1	\$37,592
		5Nines Data, LLC	11	\$31,223
SERVICE AGREEMENT Total				\$132,714
Total U.S. Common Fund Expenditures				\$1,013,323

M&O Non-US Common Fund Expenditures - The Non-US Common Fund cover for Computing Infrastructure upgrades of the South Pole Systems and of the northern hemisphere Data Center. Upgrades may include items such as servers, disk storage, tape drives, network hardware.

Non-U.S. Common Fund Expenditures (August 31, 2009)

Cost Category	Item Description	Vendor	Quantity	Amount
EQUIPMENT	SATABEAST FC-SATA 42 BAY 42X50	Cambridge Computing	2	\$63,742
	SECOND FIBRE RAID CONTROLLER	Cambridge Computing	1	\$7,575
	STORM T3000 1TB RAID DUAL	Cambridge Computing	1	\$40,700
	SANBOX 5602 16X4GB FC RPS, ACCESSORIES	Cambridge Computing	1	\$7,692
	LTO-3 DRIVE, SUPPLIES	Cambridge Computing	2	\$29,000
	SPECTRA T950 STORAGE CHANGE, POWER	Cambridge Computing	18	\$18,947
	HP PROLIANT DL380 G6 SERVER	Hewlett Packard	6	\$28,460
	HP STORAGEWORKS FC1242S	Hewlett Packard	16	\$28,026
	HP XW6600 WORKSTATION	Hewlett Packard	6	\$13,764
	HP R5500 VA UPS NA/JPN	Hewlett Packard	4	\$8,928
	HP LCD MONITORS	Hewlett Packard	7	\$6,331
	HP STORAGEWORKS FC HBA	MNJ Technologies	5	\$7,200
	PROMISE VTRAK E610FD	MNJ Technologies	1	\$7,164
	SAIT1-500 SONY S-AIT 1-500 GB	DISYS	100	\$13,600
	CATALYST 4948, IPB S/W, 48-POR, X4270-S1-AA SYSTEM, PER ADDED	INACOM Information	2	\$13,194
	CONFIGURATION: X2270-H1-AA	AGILYSYS	1	\$6,380
	XSERVE RAID W 14X750GB DRIVES	SUN Microsystems	1	\$59,743
OTHER	DOIT (MAC)	4	\$52,643	
	Other Vendors	21	\$15,643	
EQUIPMENT Total				\$428,733
COMPUTING SUPPLIES	LTO ULTRIUM 3 - 400 GB	MNJ Technologies	190	\$7,695
	RED HAT SATELLITE SE	DLT Solution	3	\$11,500
	OTHER	Other Vendors	25	\$17,078
COMPUTING SUPPLIES Total				\$42,753
SERVICES	SLV-HSM-66TP/200TP-LNX SILVER ANNUA	Cambridge Computing	1	\$9,781
	SERVICE CONTRACT MAINTENANCE	Cambridge Computing	2	\$15,421
	SMARTNET MAINTAINENCE ICECUBE	INACOM Information	1	\$23,848
SERVICE Total				\$49,050
Total Non - U.S. Common Fund Expenditures				\$520,536

IceCube M&O Common Fund Detailed Status 2009.0930.xls

IceCube Maintenance and Operations Common Fund						LEGEND:	Invoiced	Pay notice	Paid	In Kind	Open Issue			
Last updated on: 9/30/2009		Apr 2007	Apr 2008	Apr 2009	Funding Agency	1 April 2007 - 31 March 2008 YEAR 1			1 April 2008 - 31 March 2009 YEAR 2			1 April 2009 - 31 March 2010 YEAR 3		
Collaborating Institution	Institution Lead	PhDs	PhDs	PhDs		Planned Cash Transfer	In-kind	Received	Planned Cash Transfer	In-kind	Received	Planned Cash Transfer	In-kind	Received
RWTH Aachen	C. Wiebusch	1	1	3		BMBF	9,100		9,100	9,100		9,100	27,300	
DESY-Zeuthen	C. Spiering	10	9	10	DESY	91,000		90,970	81,900			91,000		
Ecole Polytechnique Federale de	M. Ribordy	0	2	2	SNSF	0		0	18,200		18,185	18,200		
Stockholm University	P. Hulth	5	5	5	SRC	45,500		45,475	45,500			45,500		
Uppsala University	O. Botner	3	3	3	SRC	27,300		27,300	27,300			27,300		
Universitaet Dortmund	W. Rhode	2	2	2	BMBF	18,200		18,200	18,200		18,170	18,200		18,170
Universitaet Mainz	L. Koepke	2	1	1	BMBF	18,200		18,200	9,100		9,100	9,100		9,100
Universitaet Wuppertal	K. Helbing	3	3	3	BMBF	27,300		27,300	27,300		27,293	27,300		
Universite Libre de Bruxelles	D. Bertrand	3	1	3	FNRS	27,300		27,274	9,100			27,300		
MPI Heidelberg	E. Resconi	2	2	2	DFG	18,200		18,200	18,200		18,200	18,200		18,200
Humboldt Universitaet	M. Kowalski	1	1	1	DFG	9,100		9,100	9,100			9,100		
	H. Kolanoski		1	1	DFG				9,100			9,100		
Universite de Mons-Hainaut	P. Herquet	1	1	1	FNRS	9,100		9,100	9,100			9,100		
University of Canterbury	J. Adams	2	2	3	NSF	18,200		18,200	18,200			27,300		
University of Chiba	S. Yoshida	4	3	3	JSPS		36,400			27,300			27,300	
University of Gent	D. Ryckbosch	2	1	3	FWO	18,200		18,200	9,100		9,100	27,300		9,100
Utrecht University	N. van Eijndhoven	4	1	1	NWO	5,000	31,400	5,000	5,000	4,100	5,000	1,250	7,850	7,558
Vrije Universiteit Brussel	C. De Clercq	2	1	1	FWO	18,200		18,174	9,100			9,100		
University of Oxford	S. Sarkar	2	2	2	STFC		18,200		9,100	9,100	9,000	9,100	9,100	9,100
UA-Anchorage	K. Rawlins	1	1	1	NSF	9,100		9,100	9,100		9,100	9,100		4,550
University of Alabama	D. Williams			2	NSF	0			0		0	18,200		9,100
Clark Atlanta University	G. Japaridze	2	2	1	NSF	18,200		18,200	18,200		18,200	9,100		4,550
Georgia Tech	I. Taboada			1	NSF	0			0		0	9,100		4,550
LBNL	R. Stokstad	7	7	7	NSF	63,700		63,700	63,700		63,700	63,700		31,850
Ohio State University	J. Beatty			4	NSF	0			0		0	36,400		18,200
Pennsylvania State University	D. Cowen	9	9	7	NSF	81,900		81,900	81,900		81,900	63,700		31,850
Southern University	A. Fazely	4	4	4	NSF	36,400		36,400	36,400		36,400	36,400		18,200
UC-Berkeley	B. Price	7	7	5	NSF	63,700		63,700	63,700		63,700	45,500		22,750
UC-Irvine	S. Barwick	2	2	2	NSF	18,200		18,200	18,200		18,200	18,200		9,100
University of Delaware	T. Gaisser	11	11	8	NSF	100,100		100,100	100,100		100,100	72,800		36,400
University of Kansas	D. Besson	2	2	1	NSF	18,200		18,200	18,200		18,200	9,100		4,550
University of Maryland	G. Sullivan	8	8	7	NSF	72,800		72,800	72,800		72,800	63,700		31,850
UW-River Falls	J. Madsen	2	2	4	NSF	18,200		18,200	18,200		18,200	36,400		18,200
UW-Madison	F. Halzen	18	18	19	NSF	163,800		163,800	163,800		163,800	172,900		86,450
Total Common Fund		122	115	123		1,024,200	86,000	1,024,093	1,006,000	40,500	787,448	1,075,050	44,250	403,378
US Common Fund		73	73	73		664,300	0	664,300	664,300	0	664,300	664,300	0	332,150
Non-US Common Fund		49	42	50		359,900	86,000	359,793	341,700	40,500	123,148	410,750	44,250	71,228
Total Balance as of: 9/30/2009								0			(218,552)			(671,672)
US Common Fund								0			0			(332,150)
Non-US Common Fund								(107)			(218,552)			(339,522)