

IceCube M&O Staffing Matrix sort by WBS v9.0 2010.0915

WBS L2	WBS L3	US / Non-US	Institution	Labor Cat.	Names	Tasks	NSF M&O Core	NSF Base Grants	U.S. IN-KIND	Non U.S. In Kind	Grand Total						
												Cat.	Description	Cat.	Description	Cat.	Description
												AD	Administration	GR	Graduate Student	PO	Postdoctoral Scientist
CS	Computer Science Eng.	KE	Key Personnel/Faculty	SC	Scientist	WO	Winterover										
EN	Engineer	MA	Management	SE	Senior Engineer												
2.1 Program Management	2.1.1 Administration	US	GTECH	KE	TABOADA, IGNACIO	Chair of speakers' committee			0.25		0.25						
2.1 Program Management	2.1.1 Administration	US	LBNL	KE	KLEIN,SPENCER	Supervise LBNL effort	0.00				0.00						
2.1 Program Management	2.1.1 Administration	US	LBNL	KE	KLEIN,SPENCER	Publications Comm. Member			0.10		0.10						
2.1 Program Management	2.1.1 Administration	US	PSU	KE	COWEN, DOUG	ExecCom member			0.20		0.20						
2.1 Program Management	2.1.1 Administration	US	UA	KE	TOALE, PATRICK	Software Coordinator			0.75		0.75						
2.1 Program Management	2.1.1 Administration	US	UCB	KE	PRICE, BUFORD	Education & Outreach			0.10		0.10						
2.1 Program Management	2.1.1 Administration	US	UCB	SC	WOSCHNAGG, KURT	Speakers Comm member		0.10			0.10						
2.1 Program Management	2.1.1 Administration	US	UD	KE	GAISSER, TOM	Spokesperson			0.30		0.30						
2.1 Program Management	2.1.1 Administration	US	UMD	KE	SULLIVAN, GREG	ExecCom member			0.20		0.20						
2.1 Program Management	2.1.1 Administration	US	UMD	PO	OLIVAS, ALEX	Pubcom member		0.10			0.10						
2.1 Program Management	2.1.1 Administration	US	UMD	PO	WISSING, HENRIKE	Pubcom member		0.10			0.10						
2.1 Program Management	2.1.1 Administration	US	UW	KE	HALZEN, FRANCIS	Principle Investigator	0.08		0.33		0.42						
2.1 Program Management	2.1.1 Administration	US	UW	KE	KARLE, ALBRECHT	Associate Director for Science	0.08		0.33		0.42						
2.1 Program Management	2.1.1 Administration	US	UW	KE	WESTERHOFF, STEFAN	Pubcom member			0.10		0.10						
2.1 Program Management	2.1.1 Administration	US	UW	KE	YECK, JAMES	Project Director	0.75				0.75						
2.1 Program Management	2.1.1 Administration	US	UW	SC	HILL, GARY	Weekly call, ICC support		0.20			0.20						
2.1 Program Management	2.1.1 Administration	US	UW	MA	MERCK, MARTIN	Computing Infrastructure Management	1.00				1.00						
2.1 Program Management	2.1.1 Administration	US	UW	MA	PELES, ADI	Resource Coordinator	0.50				0.50						
2.1 Program Management	2.1.1 Administration	US	UW	AD	UW AD	Administrative Support	0.50				0.50						
2.1 Program Management	2.1.1 Administration	US	UW	AD	UW AD	Host Spring collaboration meeting		0.50			0.50						
2.1 Program Management	2.1.1 Administration	US	US Total				3.29	1.00	2.67		6.58						
2.1 Program Management	2.1.1 Administration	Non-US	DESY	KE	SPIERING, CHRISTIAN	ExecCom member				0.15	0.15						
2.1 Program Management	2.1.1 Administration	Non-US	DESY	AD	DESY AD	Host Fall Collaboration Meeting				0.00	0.00						
2.1 Program Management	2.1.1 Administration	Non-US	MPI	KE	RESCONI, ELISA	Analysis Coordinator				0.50	0.50						
2.1 Program Management	2.1.1 Administration	Non-US	RWTH	KE	WIEBUSCH, CHRISTOPHER	Coordinate BMBF Funding				0.10	0.10						
2.1 Program Management	2.1.1 Administration	Non-US	SU	KE	HULTH, PER OLOF	ExecCom member				0.20	0.20						
2.1 Program Management	2.1.1 Administration	Non-US	SU	KE	HULTH, PER OLOF	Outreach				0.15	0.15						
2.1 Program Management	2.1.1 Administration	Non-US	SU	KE	HULTH, PER OLOF	ICB Member				0.05	0.05						
2.1 Program Management	2.1.1 Administration	Non-US	SU	KE	WALCK, CHRISTIAN	Pubcom member				0.10	0.10						
2.1 Program Management	2.1.1 Administration	Non-US	SU	SC	FINLEY, CHAD SU	Coordination with LIGO				0.10	0.10						
2.1 Program Management	2.1.1 Administration	Non-US	ULB	KE	BERTRAND, DANIEL	ExecCom member				0.20	0.20						
2.1 Program Management	2.1.1 Administration	Non-US	UU	KE	BOTNER, OLGA	Outreach				0.05	0.05						
2.1 Program Management	2.1.1 Administration	Non-US	UU	KE	BOTNER, OLGA	Pubcom Chair				0.40	0.40						
2.1 Program Management	2.1.1 Administration	Non-US	UU	KE	HALLGREN, ALLAN	Outreach				0.05	0.05						
2.1 Program Management	2.1.1 Administration	Non-US	UU	KE	HALLGREN, ALLAN	Speakers Comm member				0.10	0.10						
2.1 Program Management	2.1.1 Administration	Non-US	WUPPERTAL	KE	HELBING, KLAUS	Speakers Comm member				0.10	0.10						
2.1 Program Management	2.1.1 Administration	Non-US	MAINZ	KE	KÖPKE, LUTZ	ExecCom member				0.15	0.15						
2.1 Program Management	2.1.1 Administration	Non-US	BONN	KE	KOWALSKI, MAREK	Pubcom member				0.10	0.10						
2.1 Program Management	2.1.1 Administration	Non-US	BOCHUM	KE	BECKER, JULIA	Pubcom member				0.10	0.10						
2.1 Program Management	2.1.1 Administration	Non-US	Non-US Total							2.60	2.60						
2.1 Program Management	2.1.1 Administration	WBS L3					3.29	1.00	2.67	2.60	9.18						
2.1 Program Management	2.1.2 Engineering And R&D S	US	KU	KE	BESSON, DAVE	EMI - Radio R&D			0.10		0.10						
2.1 Program Management	2.1.2 Engineering And R&D S	US	UMD	KE	HOFFMAN, KARA	Detector R&D			0.20		0.20						
2.1 Program Management	2.1.2 Engineering And R&D S	US	UW	SC	LANDSMAN, YAEL HAGAR	Science Support	0.25				0.25						
2.1 Program Management	2.1.2 Engineering And R&D S	US	UW	SE	LAUNDRIE, ANDREW	EMI, Instrumentation, I/F	0.25				0.25						
2.1 Program Management	2.1.2 Engineering And R&D S	US	UW	SE	LAUNDRIE, ANDREW	Engineering Support	0.65				0.65						
2.1 Program Management	2.1.2 Engineering And R&D S	US	UW	SE	SANDSTROM, PERRY	EMI, Instrumentation, I/F	0.25				0.25						
2.1 Program Management	2.1.2 Engineering And R&D S	US	UW	SE	SANDSTROM, PERRY	Engineering Support	0.25				0.25						
2.1 Program Management	2.1.2 Engineering And R&D S	US	UW	EN	UW EN	Engineering Support	0.10				0.10						
2.1 Program Management	2.1.2 Engineering And R&D S	US	UW	TE	UW TE	EMI, Instrumentation, I/F	0.25				0.25						
2.1 Program Management	2.1.2 Engineering And R&D S	US	US Total				2.00	0.00	0.30		2.30						

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												Cat.	Description	Cat.	Description	Cat.	Description
												AD	Administration	GR	Graduate Student	PO	Postdoctoral Scientist
CS	Computer Science Eng.	KE	Key Personnel/Faculty	SC	Scientist	WO	Winterover										
EN	Engineer	MA	Management	SE	Senior Engineer												
2.1 Program Management	2.1.2 Engineering And R&D S	Non-US	DESY	KE	NAHNHAUER, ROLF	Acoustic R&D Support				0.10	0.10						
2.1 Program Management	2.1.2 Engineering And R&D S	Non-US	EPFL	KE	EPFL KE	Acoustic R&D Support				0.10	0.10						
2.1 Program Management	2.1.2 Engineering And R&D S	Non-US	RWTH	SC	RWTH SC	Acoustic R&D Support				0.10	0.10						
2.1 Program Management	2.1.2 Engineering And R&D S	Non-US	ULB	KE	HANSON, KAEL ULB	EMI/R&D				0.10	0.10						
2.1 Program Management	2.1.2 Engineering And R&D S	Non-US	UU	KE	HALLGREN, ALLAN	Acoustic R&D Support				0.10	0.10						
2.1 Program Management	2.1.2 Engineering And R&D S	Non-US	WUPPERTAL	KE	HELBING, KLAUS	R&D Lead				0.10	0.10						
2.1 Program Management	2.1.2 Engineering And R&D S	Non-US	WUPPERTAL	KE	WUPPERTAL KE	RFI				0.10	0.10						
2.1 Program Management	2.1.2 Engineering And R&D S	Non-US	WUPPERTAL	PO	KARG, TIMO	Acoustic Lead				0.10	0.10						
2.1 Program Management	2.1.2 Engineering And R&D S	Non-US	GENT	SC	UGENT SC	Acoustic R&D Support				0.05	0.05						
2.1 Program Management	2.1.2 Engineering And R&D S	Non-US	GENT	GR	UGENT GR	Acoustic R&D Support				0.05	0.05						
2.1 Program Management	2.1.2 Engineering And R&D S	Non-US	Non-US Total							0.90	0.90						
2.1 Program Management	2.1.2 Engineering And R&D : WBS L3										2.00	0.00	0.30	0.90	3.20		
2.1 Program Management	2.1.3 Usap Support	US	UW	MA	PAULOS, ROBERT	USAP Support	0.25					0.25					
2.1 Program Management	2.1.3 Usap Support	US	US Total				0.25					0.25					
2.1 Program Management	2.1.3 Usap Support WBS L3										0.25			0.25			
2.1 Program Management	2.1.4 Education & Outreach	US	OSU	PO	OSU PO	Outreach			0.05			0.05					
2.1 Program Management	2.1.4 Education & Outreach	US	PSU	KE	COWEN, DOUG	Education & Outreach			0.05			0.05					
2.1 Program Management	2.1.4 Education & Outreach	US	PSU	KE	DEYOUNG, TYCE	Education & Outreach			0.05			0.05					
2.1 Program Management	2.1.4 Education & Outreach	US	UMD	KE	UMD KE	E&O			0.10			0.10					
2.1 Program Management	2.1.4 Education & Outreach	US	UW	AD	MALKUS, EVELYN	Education & Outreach Coordination	0.75					0.75					
2.1 Program Management	2.1.4 Education & Outreach	US	UW	AD	UW AD	Teachers	0.25					0.25					
2.1 Program Management	2.1.4 Education & Outreach	US	UWRF	KE	MADSEN, JIM	Teachers' program and UWRF Upward Bound			0.10			0.10					
2.1 Program Management	2.1.4 Education & Outreach	US	UWRF	TE	UWRF TE	Teachers Program	0.15					0.15					
2.1 Program Management	2.1.4 Education & Outreach	US	US Total				1.15	0.00	0.35			1.50					
2.1 Program Management	2.1.4 Education & Outreach WBS L3										1.15	0.00	0.35	1.50			
2.1 Program Management	WBS L2 Total											6.69	1.00	3.32	3.50	14.13	
2.2 Detector Operations	2.2 Detector Operations & Mai	US	LBNL	KE	NYGREN,DAVID R	Track Engine Trigger			0.10			0.10					
2.2 Detector Operations	2.2 Detector Operations & Mai	US	UW	MA	LAITSCH, DENISE	Detector Operations Manager	0.88					0.88					
2.2 Detector Operations	2.2 Detector Operations & Mai	US	US Total				0.88	0.00	0.10			0.98					
2.2 Detector Operations	2.2 Detector Operations & M WBS L3										0.88	0.00	0.10	0.98			
2.2 Detector Operations	2.2.1 Run Coordination	US	UW	SC	KRASBERG, MARK	Winterovers coordinator	0.25					0.25					
2.2 Detector Operations	2.2.1 Run Coordination	US	UW	WO	UW WO	Operate Detector (Winter-Overs)	3.00					3.00					
2.2 Detector Operations	2.2.1 Run Coordination	US	US Total				3.25					3.25					
2.2 Detector Operations	2.2.1 Run Coordination	Non-US	UC	GR	UC GR	Flasher Runs				0.10		0.10					
2.2 Detector Operations	2.2.1 Run Coordination	Non-US	BONN	PO	BOESER SEBASTIAN	Run Coordinator				0.50		0.50					
2.2 Detector Operations	2.2.1 Run Coordination	Non-US	Non-US Total							0.60		0.60					
2.2 Detector Operations	2.2.1 Run Coordination WBS L3										3.25		0.60	3.85			
2.2 Detector Operations	2.2.2 Data Acquisition	US	LBNL	CS	BEATTIE,KEITH S	Maintain DAQ Software Systems (incl. triggers, DOM SW, etc. up to Event Builder)	0.00					0.00					
2.2 Detector Operations	2.2.2 Data Acquisition	US	LBNL	EN	STEZELBERGER,THORSTEN	Maintain DAQ Hardware (Hubs, DOR, Clocks, GPS,...)	0.15					0.15					
2.2 Detector Operations	2.2.2 Data Acquisition	US	UD	KE	UD KE	DAQ Monitoring			0.05			0.05					
2.2 Detector Operations	2.2.2 Data Acquisition	US	UW	SC	KRASBERG, MARK	DOM Cal Maintenance, DOM Monitoring snd Troubleshooting	0.35					0.35					
2.2 Detector Operations	2.2.2 Data Acquisition	US	UW	SC	KRASBERG, MARK	Provide Real-time System Monitoring and Paging	0.20					0.20					
2.2 Detector Operations	2.2.2 Data Acquisition	US	UW	SC	WENDT, CHRISTOPHER	DOM CAL Maintenance	0.25					0.25					
2.2 Detector Operations	2.2.2 Data Acquisition	US	UW	SE	GLOWACKI, DAVID	Maintain DAQ Software Systems (incl. triggers, DOM SW, etc. up to Event Builder)	1.00					1.00					
2.2 Detector Operations	2.2.2 Data Acquisition	US	UW	SE	SANDSTROM, PERRY	Maintain DAQ Hardware (Hubs, DOR, Clocks, GPS,...)	0.25					0.25					
2.2 Detector Operations	2.2.2 Data Acquisition	US	UW	CS	JACOBSEN, JOHN (NPX)	Maintain DAQ Hardware (Hubs, DOR, Clocks, GPS,...)	0.15					0.15					
2.2 Detector Operations	2.2.2 Data Acquisition	US	UW	GR	WEAVER, CHRISTOPHER	DOM CAL Maintenance			0.20			0.20					
2.2 Detector Operations	2.2.2 Data Acquisition	US	US Total				2.35	0.20	0.05			2.60					

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					Cat.	Description	Cat.	Description	Cat.	Description	Cat.						Description	
					AD	Administration	GR	Graduate Student	PO	Postdoctoral Scientist	TE						Technician	
CS	Computer Science Eng.	KE	Key Personnel/Faculty	SC	Scientist	WO	Winterover											
EN	Engineer	MA	Management	SE	Senior Engineer													
2.2 Detector Operations	2.2.2 Data Acquisition	Non-US	DESY	SC	SULANKE, K.-H.		DAQ Firmware Support							0.15	0.15			
2.2 Detector Operations	2.2.2 Data Acquisition	Non-US	ULB	KE	HANSON, K AEL ULB		Data Acquisition							0.20	0.20			
2.2 Detector Operations	2.2.2 Data Acquisition	Non-US Non-US Total												0.35	0.35			
2.2 Detector Operations	2.2.2 Data Acquisition		WBS L3											2.35	0.20	0.05	0.35	2.95
2.2 Detector Operations	2.2.3 Online Filter (Pnf)	US	UMD	SC	BLAUFUSS, ERIK		Maintain PnF Software and Online Filters			0.20						0.20		
2.2 Detector Operations	2.2.3 Online Filter (Pnf)	US	UMD	SC	SCHMIDT, TORSTEN		Maintain PnF Software and Online Filters			0.25						0.25		
2.2 Detector Operations	2.2.3 Online Filter (Pnf)	US	UMD	GR	REDL, PETER		Online Filter Testing				0.25					0.25		
2.2 Detector Operations	2.2.3 Online Filter (Pnf)	US US Total								0.45	0.25	0.00				0.70		
2.2 Detector Operations	2.2.3 Online Filter (Pnf)		WBS L3							0.45	0.25	0.00				0.70		
2.2 Detector Operations	2.2.4 Sps Operations	US	UW	SE	SANDSTROM, PERRY		Maintain South Pole Computing Hardware Infrastructure and operating systems			0.25						0.25		
2.2 Detector Operations	2.2.4 Sps Operations	US	UW	CS	SOUNDARAPANDIAN, KARTH		Maintain South Pole Computing Hardware Infrastructure and operating systems			0.75						0.75		
2.2 Detector Operations	2.2.4 Sps Operations	US	UW	EN	WISNIEWSKI, PAUL		Networking and Security Maintenance			0.25						0.25		
2.2 Detector Operations	2.2.4 Sps Operations	US US Total								1.25						1.25		
2.2 Detector Operations	2.2.4 Sps Operations		WBS L3							1.25						1.25		
2.2 Detector Operations	2.2.5 Spts Operations	US	UW	SE	LAUNDRIE, ANDREW		Maintain South Pole Test System Hardware and Operating Systems			0.10						0.10		
2.2 Detector Operations	2.2.5 Spts Operations	US	UW	CS	SOUNDARAPANDIAN, KARTH		Maintain South Pole Test System Hardware and Operating Systems			0.25						0.25		
2.2 Detector Operations	2.2.5 Spts Operations	US	UW	EN	UW EN		Maintain South Pole Test System Hardware and Operating Systems			0.50						0.50		
2.2 Detector Operations	2.2.5 Spts Operations	US US Total								0.85						0.85		
2.2 Detector Operations	2.2.5 Spts Operations		WBS L3							0.85						0.85		
2.2 Detector Operations	2.2.6 Experiment Control	US	UW	CS	JACOBSEN, JOHN (NPX)		IceCube Live Maintenance and Upgrades			0.85						0.85		
2.2 Detector Operations	2.2.6 Experiment Control	US US Total								0.85						0.85		
2.2 Detector Operations	2.2.6 Experiment Control		WBS L3							0.85						0.85		
2.2 Detector Operations	2.2.7 Detector Monitoring	US	CAU	KE	JAPARIDZE, GEORGE		Monitoring shifts					0.02				0.02		
2.2 Detector Operations	2.2.7 Detector Monitoring	US	GTECH	GR	GTECH GR		Monitoring shifts					0.03				0.03		
2.2 Detector Operations	2.2.7 Detector Monitoring	US	KU	KE	BESSON, DAVE		Monitoring shifts					0.02				0.02		
2.2 Detector Operations	2.2.7 Detector Monitoring	US	LBNL	SC	KIRYLUK, JOANNA		BadDomList			0.20						0.20		
2.2 Detector Operations	2.2.7 Detector Monitoring	US	LBNL	PO	LBNL PO		Monitoring shifts			0.09						0.09		
2.2 Detector Operations	2.2.7 Detector Monitoring	US	OSU	PO	OSU PO		Monitoring shifts				0.02					0.02		
2.2 Detector Operations	2.2.7 Detector Monitoring	US	OSU	PO	ROTT, CARSTEN		Maintain good run list				0.20					0.20		
2.2 Detector Operations	2.2.7 Detector Monitoring	US	OSU	GR	DAVIS, JAMES		Monitoring shifts				0.01					0.01		
2.2 Detector Operations	2.2.7 Detector Monitoring	US	PSU	PO	KOSKINEN, JASON		Monitoring shifts			0.03						0.03		
2.2 Detector Operations	2.2.7 Detector Monitoring	US	PSU	GR	PSU GR		Monitoring shifts			0.03						0.03		
2.2 Detector Operations	2.2.7 Detector Monitoring	US	SUBR	SC	TER-ANTONYAN, SAMVEL		Detector Monitoring				0.02					0.02		
2.2 Detector Operations	2.2.7 Detector Monitoring	US	UA	GR	XU, DONGLIAN		Monitoring shifts				0.03					0.03		
2.2 Detector Operations	2.2.7 Detector Monitoring	US	UAA	KE	RAWLINS, KATHERINE		Monitoring shifts				0.02					0.02		
2.2 Detector Operations	2.2.7 Detector Monitoring	US	UCB	SC	FILIMONOV, KIRILL		Coordinate Monitoring			0.50						0.50		
2.2 Detector Operations	2.2.7 Detector Monitoring	US	UCB	SC	UCB SC		Monitoring shifts			0.02						0.02		
2.2 Detector Operations	2.2.7 Detector Monitoring	US	UCB	GR	UCB GR		Monitoring shifts			0.02						0.02		
2.2 Detector Operations	2.2.7 Detector Monitoring	US	UCI	PO	SILVERSTRI, ANDREA		Monitoring shifts				0.01					0.01		
2.2 Detector Operations	2.2.7 Detector Monitoring	US	UCI	GR	HANSON, JORDAN		Monitoring shifts				0.01					0.01		
2.2 Detector Operations	2.2.7 Detector Monitoring	US	UD	PO	KUWABARA, TAKAO		Temp. & Pressure atmospheric monitoring			0.25						0.25		
2.2 Detector Operations	2.2.7 Detector Monitoring	US	UMD	PO	UMD PO		Monitoring shifts			0.03						0.03		
2.2 Detector Operations	2.2.7 Detector Monitoring	US	UMD	GR	UMD GR		Monitoring shifts			0.06						0.06		
2.2 Detector Operations	2.2.7 Detector Monitoring	US	UW	PO	UW PO		Monitoring shifts			0.12						0.12		
2.2 Detector Operations	2.2.7 Detector Monitoring	US	UW	GR	BAKER, MICHAEL		Stability			0.10						0.10		
2.2 Detector Operations	2.2.7 Detector Monitoring	US	UW	GR	UW GR		Monitoring shifts			0.12						0.12		
2.2 Detector Operations	2.2.7 Detector Monitoring	US US Total								1.56	0.38					1.94		

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					Tasks		Tasks		Tasks								
					Cat.	Description	Cat.	Description	Cat.	Description							
					AD	Administration	GR	Graduate Student	PO	Postdoctoral Scientist	TE	Technician					
					CS	Computer Science Eng.	KE	Key Personnel/Faculty	SC	Scientist	WO	Winterover					
					EN	Engineer	MA	Management	SE	Senior Engineer							
2.2 Detector Operations	2.2.7 Detector Monitoring	Non-US	CHIBA	GR	CHIBA GR								0.03	0.03			
2.2 Detector Operations	2.2.7 Detector Monitoring	Non-US	DESY	SC	DESY SC								0.06	0.06			
2.2 Detector Operations	2.2.7 Detector Monitoring	Non-US	DESY	SC	BENABDERRAHMANE, LOFTI								0.20	0.20			
2.2 Detector Operations	2.2.7 Detector Monitoring	Non-US	DESY	GR	DESY GR								0.12	0.12			
2.2 Detector Operations	2.2.7 Detector Monitoring	Non-US	DTMND	GR	DTMD GR								0.03	0.03			
2.2 Detector Operations	2.2.7 Detector Monitoring	Non-US	EPFL	GR	EPFL GR								0.03	0.03			
2.2 Detector Operations	2.2.7 Detector Monitoring	Non-US	MPI	GR	MPI GR								0.05	0.05			
2.2 Detector Operations	2.2.7 Detector Monitoring	Non-US	RWTH	GR	RWTH GR								0.09	0.09			
2.2 Detector Operations	2.2.7 Detector Monitoring	Non-US	SU	GR	SU GR								0.06	0.06			
2.2 Detector Operations	2.2.7 Detector Monitoring	Non-US	UC	GR	UC GR								0.02	0.02			
2.2 Detector Operations	2.2.7 Detector Monitoring	Non-US	ULB	GR	ULB GR								0.03	0.03			
2.2 Detector Operations	2.2.7 Detector Monitoring	Non-US	UMH	GR	KOHNNEN, GEORGE								0.03	0.03			
2.2 Detector Operations	2.2.7 Detector Monitoring	Non-US	UOX	KE	SARKAR, SUBIR								0.02	0.02			
2.2 Detector Operations	2.2.7 Detector Monitoring	Non-US	UU	GR	UU GR								0.03	0.03			
2.2 Detector Operations	2.2.7 Detector Monitoring	Non-US	VUB	PO	VUB PO								0.06	0.06			
2.2 Detector Operations	2.2.7 Detector Monitoring	Non-US	VUB	GR	VUB GR								0.03	0.03			
2.2 Detector Operations	2.2.7 Detector Monitoring	Non-US	WUPPERTAL	GR	WUPPERTAL GR								0.15	0.15			
2.2 Detector Operations	2.2.7 Detector Monitoring	Non-US	WUPPERTAL	GR	WUPPERTAL GR								0.45	0.45			
2.2 Detector Operations	2.2.7 Detector Monitoring	Non-US	MAINZ	GR	UM GR								0.05	0.05			
2.2 Detector Operations	2.2.7 Detector Monitoring	Non-US	MAINZ	GR	SCHATTO, KAI								0.35	0.35			
2.2 Detector Operations	2.2.7 Detector Monitoring	Non-US	HUMBOLDT	SC	HUMB SC								0.03	0.03			
2.2 Detector Operations	2.2.7 Detector Monitoring	Non-US	GENT	GR	UGENT GR								0.03	0.03			
2.2 Detector Operations	2.2.7 Detector Monitoring	Non-US	BONN	GR	UBONN GR								0.03	0.03			
2.2 Detector Operations	2.2.7 Detector Monitoring	Non-US	BOCHUM	GR	UBOCHUM GR								0.03	0.03			
2.2 Detector Operations	2.2.7 Detector Monitoring	Non-US	Non-US Total										2.01	2.01			
2.2 Detector Operations	2.2.7 Detector Monitoring	WBS L3											1.56	0.38	2.01	3.95	
2.2 Detector Operations	2.2.8 Detector Calibration	US	GTECH	GR	DAUGHHETEE, JACOB								0.20	0.20			
2.2 Detector Operations	2.2.8 Detector Calibration	US	LBNL	SC	KIRYLUK, JOANNA								0.10	0.10			
2.2 Detector Operations	2.2.8 Detector Calibration	US	UA	KE	WILLIAMS, DAWN								0.15	0.15			
2.2 Detector Operations	2.2.8 Detector Calibration	US	UA	PO	ZARZHITZKY, PAVEL								0.20	0.20			
2.2 Detector Operations	2.2.8 Detector Calibration	US	UA	GR	XU, DONGLIAN								0.25	0.25			
2.2 Detector Operations	2.2.8 Detector Calibration	US	UCB	SC	WOSCHNAGG, KURT								0.15	0.15			
2.2 Detector Operations	2.2.8 Detector Calibration	US	UCB	GR	UCB GR								0.10	0.10			
2.2 Detector Operations	2.2.8 Detector Calibration	US	UW	SC	WENDT, CHRISTOPHER								0.28	0.28			
2.2 Detector Operations	2.2.8 Detector Calibration	US	UW	GR	GLADSTONE, LAURA								0.15	0.15			
2.2 Detector Operations	2.2.8 Detector Calibration	US	UW	GR	SANTANDER, MARCOS								0.20	0.20			
2.2 Detector Operations	2.2.8 Detector Calibration	US	US Total										0.28	0.70	0.80	1.78	
2.2 Detector Operations	2.2.8 Detector Calibration	Non-US	DESY	GR	ACHIM STOESSL								0.20	0.20			
2.2 Detector Operations	2.2.8 Detector Calibration	Non-US	DESY	GR	EIKE MIDDELL								0.10	0.10			
2.2 Detector Operations	2.2.8 Detector Calibration	Non-US	UU	PO	MILLER, JONATHAN								0.20	0.20			
2.2 Detector Operations	2.2.8 Detector Calibration	Non-US	Non-US Total										0.50	0.50			
2.2 Detector Operations	2.2.8 Detector Calibration	WBS L3											0.28	0.70	0.80	0.50	2.28
2.2 Detector Operations	2.2.9 Ictop Operations	US	UD	SC	UD SC								1.00	1.00			
2.2 Detector Operations	2.2.9 Ictop Operations	US	UWRF	KE	SPICZAK, GLENN								0.03	0.03			
2.2 Detector Operations	2.2.9 Ictop Operations	US	UWRF	SC	TAMBURRO, ALESSIO								0.03	0.03			
2.2 Detector Operations	2.2.9 Ictop Operations	US	US Total										1.00	0.00	0.05	1.05	
2.2 Detector Operations	2.2.9 Ictop Operations	Non-US	HUMBOLDT	SC	WALDENMAIER, TILO								0.10	0.10			
2.2 Detector Operations	2.2.9 Ictop Operations	Non-US	Non-US Total										0.10	0.10			
2.2 Detector Operations	2.2.9 Ictop Operations	WBS L3											1.00	0.00	0.05	0.10	1.15
2.2 Detector Operations	2.2.10 Supernova Operations	Non-US	MAINZ	GR	KROLL, GÖSTA								0.50	0.50			
2.2 Detector Operations	2.2.10 Supernova Operations	Non-US	MAINZ	GR	WIEBE, KLAUS								0.10	0.10			
2.2 Detector Operations	2.2.10 Supernova Operations	Non-US	Non-US Total										0.60	0.60			
2.2 Detector Operations	2.2.10 Supernova Operation: WBS L3	WBS L3											0.60	0.60			
2.2 Detector Operator	WBS L2 Total												11.15	2.71	1.38	4.16	19.40

IceCube M&O Staffing Matrix sort by WBS v9.0 2010.0915

WBS L2	WBS L3	US / Non-US	Institution	Labor Cat.	Names		Tasks				NSF M&O Core	NSF Base Grants	U.S. IN-KIND	Non U.S. In Kind	Grand Total		
					Cat.	Description	Cat.	Description	Cat.	Description						Cat.	Description
					AD	Administration	GR	Graduate Student	PO	Postdoctoral Scientist						TE	Technician
CS	Computer Science Eng.	KE	Key Personnel/Faculty	SC	Scientist	WO	Winterover										
EN	Engineer	MA	Management	SE	Senior Engineer												
2.3 Computing And Data	2.3.1 Core Software	US	UMD	SC	BLAUFUSS, ERIK		Core Software				0.00			0.00			
2.3 Computing And Data	2.3.1 Core Software	US	UMD	SC	SCHMIDT, TORSTEN		Maintain Core Analysis Framework (IceTray)				0.50			0.50			
2.3 Computing And Data	2.3.1 Core Software	US	UMD	CS	UMD CS		Maintain Core Software Repository				0.25			0.25			
2.3 Computing And Data	2.3.1 Core Software	US	UMD	GR	UMD GR		Core Software					0.25		0.25			
2.3 Computing And Data	2.3.1 Core Software	US	UMD	GR	EHRlich, RALF		Core Software					0.50		0.50			
2.3 Computing And Data	2.3.1 Core Software	US	UMD	TE	STRASZHEIM, TROY		Maintain Core Analysis Framework (IceTray)				0.88			0.88			
2.3 Computing And Data	2.3.1 Core Software	US	UW	TE	DIAZ-VELEZ, JUAN CARLOS		Simulation Programs: diplopia				0.80			0.80			
2.3 Computing And Data	2.3.1 Core Software	US	UW	TE	FADIRAN, OLADIPO		Maintain Data Processing Software				0.20			0.20			
2.3 Computing And Data	2.3.1 Core Software	US	UW	TE	UW TE		Maintain Data Processing Software				0.30			0.30			
2.3 Computing And Data	2.3.1 Core Software	US	US Total								2.93	0.75	0.00	3.68			
2.3 Computing And Data	2.3.1 Core Software	Non-US	RWTH	SC	RWTH SC		Maintain Reconstruction Framework						0.10	0.10			
2.3 Computing And Data	2.3.1 Core Software	Non-US	RWTH	GR	RWTH GR		Maintain Reconstruction Framework						0.15	0.15			
2.3 Computing And Data	2.3.1 Core Software	Non-US	ULB	PO	MAROTTA, ALBERTO		Maintain and Operate Database Systems (I3OmDb)						0.20	0.20			
2.3 Computing And Data	2.3.1 Core Software	Non-US	Non-US Total										0.45	0.45			
2.3 Computing And Data	2.3.1 Core Software	WBS L3									2.93	0.75	0.00	4.13			
2.3 Computing And Data	2.3.2 Data Storage & Transfer	US	UW	EN	MACKENZIE, CYNTHIA		Transfer Data from S. Pole to UW Data Warehouse and Archive at S. Pole Maintain Data Transfer Software (SPADE) Maintain Data Warehouse Standards, Software (Ingest), Data Access (FTP), and Web Interface				0.50			0.50			
2.3 Computing And Data	2.3.2 Data Storage & Transfer	US	UW	AD	RICHARDS, JOHN		Maintain and Operate Data Storage Infrastructure				1.00			1.00			
2.3 Computing And Data	2.3.2 Data Storage & Transfer	US	UW	TE	FADIRAN, OLADIPO		Transformation of Data for Long-Term Persistence and Archival, e.g., HDF5 Maintain Data Warehouse Standards, Software (Ingest), Data Access (FTP), and Web Interface				0.20			0.20			
2.3 Computing And Data	2.3.2 Data Storage & Transfer	US	UW	TE	MCGUIRE, PAUL		Maintain and Operate Data Storage Infrastructure				0.50			0.50			
2.3 Computing And Data	2.3.2 Data Storage & Transfer	US	UW	TE	UW TE		Transformation of Data for Long-Term Persistence and Archival, e.g., HDF5 Maintain Data Warehouse Standards, Software (Ingest), Data Access (FTP), and Web Interface				0.30			0.30			
2.3 Computing And Data	2.3.2 Data Storage & Transfer	US	UW	TE	MEADE, PATRICK		Transfer Data from S. Pole to UW Data Warehouse and Archive at S. Pole Maintain Data Transfer Software (SPADE) Maintain Data Warehouse Standards, Software (Ingest), Data Access (FTP), and Web Interface				0.50			0.50			
2.3 Computing And Data	2.3.2 Data Storage & Transfer	US	US Total								3.00			3.00			
2.3 Computing And Data	2.3.2 Data Storage & Transfer	WBS L3									3.00			3.00			
2.3 Computing And Data	2.3.3 Computing Resources	US	PSU	PO	PSU PO		Coordination and Support for Grid and distributed computing				0.25			0.25			
2.3 Computing And Data	2.3.3 Computing Resources	US	SUBR	SC	TER-ANTONYAN, SAMVEL		LONI Grid computing					0.30		0.30			
2.3 Computing And Data	2.3.3 Computing Resources	US	UMD	TE	UMD TE		Coordination and Support for Grid and distributed computing				0.25			0.25			
2.3 Computing And Data	2.3.3 Computing Resources	US	UW	EN	BARNET, STEVE		0.75 Maintain Core High Performance Computing Systems 0.25 Coordination and Support for Grid and distributed computing				1.00			1.00			
2.3 Computing And Data	2.3.3 Computing Resources	US	UW	EN	BOGEN, DAVID		Maintain Data Center Infrastructure				1.00			1.00			
2.3 Computing And Data	2.3.3 Computing Resources	US	UW	EN	WISNIEWSKI, PAUL		Maintain Data Center Networking and Security				0.75			0.75			
2.3 Computing And Data	2.3.3 Computing Resources	US	UW	TE	MCGUIRE, PAUL		Maintain Data Center Infrastructure				0.50			0.50			
2.3 Computing And Data	2.3.3 Computing Resources	US	UW	TE	UW TE		Maintain Core High Performance Computing Systems				0.44			0.44			
2.3 Computing And Data	2.3.3 Computing Resources	US	US Total								4.19	0.00	0.30	4.49			

IceCube M&O Staffing Matrix sort by WBS v9.0 2010.0915

WBS L2	WBS L3	US / Non-US	Institution	Labor Cat.	Names		Tasks					NSF M&O Core	NSF Base Grants	U.S. IN-KIND	Non U.S. In Kind	Grand Total					
					Cat.	Description	Cat.	Description	Cat.	Description	Cat.						Description				
					AD	Administration	GR	Graduate Student	PO	Postdoctoral Scientist	TE						Technician	CS	Computer Science Eng.	KE	Key Personnel/Faculty
2.3 Computing And Data	2.3.3 Computing Resources	Non-US	DESY	GR	KISLAT, FABIAN		Reconstrucion Coordinator (acting), Maintain Reconstruction Framework								0.15	0.15					
2.3 Computing And Data	2.3.3 Computing Resources	Non-US	DESY	TE	DESY TE		European Data Center -Distributed Computing and Labor								2.00	2.00					
2.3 Computing And Data	2.3.3 Computing Resources	Non-US	DTMND	SC	PIELOTH, DAMIAN		Coordinate GRID computing in Germany								0.25	0.25					
2.3 Computing And Data	2.3.3 Computing Resources	Non-US	SU	SC	SU SC		Computing Resources								0.50	0.50					
2.3 Computing And Data	2.3.3 Computing Resources	Non-US	UMH	GR	KOHNNEN, GEORGE		IC database management								0.30	0.30					
2.3 Computing And Data	2.3.3 Computing Resources	Non-US Non-US Total													3.20	3.20					
2.3 Computing And Data	2.3.3 Computing Resources WBS L3											4.19	0.00	0.30	3.20	7.69					
2.3 Computing And Data	2.3.4 Data Production Process	US	UW	PO	TOSCANO, SIMONA		Cascade data processing					0.35				0.35					
2.3 Computing And Data	2.3.4 Data Production Process	US	UW	TE	MEADE, PATRICK		0.2 Unpacking, Decoding and Calibration of Raw Data in the North (Level1) 0.3 Run Common Reconstructions on UW IceCube Compute Cluster (Level2)					0.50				0.50					
2.3 Computing And Data	2.3.4 Data Production Process	US US Total										0.50	0.35	0.00		0.85					
2.3 Computing And Data	2.3.4 Data Production Process	Non-US	RWTH	GR	SCHUKRAFT, ANNE		Photonics Production								0.25	0.25					
2.3 Computing And Data	2.3.4 Data Production Process	Non-US Non-US Total													0.25	0.25					
2.3 Computing And Data	2.3.4 Data Production Process WBS L3											0.50	0.35	0.00	0.25	1.10					
2.3 Computing And Data	2.3.5 Simulation Production	US	GTECH	PO	TEPE, ANDREAS		Simulation Production								0.20	0.20					
2.3 Computing And Data	2.3.5 Simulation Production	US	LBNL	SC	KIRYLUK,JOANNA		Simulation Production on PDSF					0.20				0.20					
2.3 Computing And Data	2.3.5 Simulation Production	US	PSU	PO	PSU PO		Simulation Production					0.17				0.17					
2.3 Computing And Data	2.3.5 Simulation Production	US	UD	PO	HUSSAIN, SHAHID		IceTop Simulation Production					0.15				0.15					
2.3 Computing And Data	2.3.5 Simulation Production	US	UMD	GR	CHRISTY, BRIAN		Simulation Production coordination					0.25				0.25					
2.3 Computing And Data	2.3.5 Simulation Production	US	UW	SC	DESIATI, PAOLO		Coordination of Simulation Production					0.70				0.70					
2.3 Computing And Data	2.3.5 Simulation Production	US	UW	PO	HOSHINA, K		Photon prop. Calibration					0.10				0.10					
2.3 Computing And Data	2.3.5 Simulation Production	US	UW	GR	EISCH, JONATHAN		IceTop Simulation Production					0.30				0.30					
2.3 Computing And Data	2.3.5 Simulation Production	US	UW	TE	FADIRAN, OLADIPO		0.30 Coordination of Simulation Production 0.30 Maintain production configurations, manage test production and maintain web portal.					0.60				0.60					
2.3 Computing And Data	2.3.5 Simulation Production	US US Total										1.30	1.17	0.20		2.67					
2.3 Computing And Data	2.3.5 Simulation Production	Non-US	DESY	KE	WALTER, MICHAEL		Simulation Production Cluster								0.20	0.20					
2.3 Computing And Data	2.3.5 Simulation Production	Non-US	DESY	SC	BERGMANN, JENS		Simulation Production Cluster								0.25	0.25					
2.3 Computing And Data	2.3.5 Simulation Production	Non-US	DESY	GR	DESY GR		Simulation Production Cluster								0.15	0.15					
2.3 Computing And Data	2.3.5 Simulation Production	Non-US	DTMND	GR	DTMD GR		Simulation Production								0.40	0.40					
2.3 Computing And Data	2.3.5 Simulation Production	Non-US	RWTH	SC	RWTH SC		Simulation Production on cluster/GRID								0.10	0.10					
2.3 Computing And Data	2.3.5 Simulation Production	Non-US	RWTH	GR	RWTH GR		Simulation Production on cluster/GRID								0.85	0.85					
2.3 Computing And Data	2.3.5 Simulation Production	Non-US	SU	GR	JOHANSSON, HENRIK		GRID/Simulation production & development								0.20	0.20					
2.3 Computing And Data	2.3.5 Simulation Production	Non-US	ULB	PO	MAROTTA, ALBERTO		Computer Cluster - simulation								0.30	0.30					
2.3 Computing And Data	2.3.5 Simulation Production	Non-US	VUB	PO	STRAHLER, ERIK		simulation of ice properties and DOM sensitivities								0.25	0.25					
2.3 Computing And Data	2.3.5 Simulation Production	Non-US	ALBERTA	KE	GRANT, DARREN		WestGrid computing								0.10	0.10					
2.3 Computing And Data	2.3.5 Simulation Production	Non-US	WUPPERTAL	PO	KARG, TIMO		Simulation Production								0.20	0.20					
2.3 Computing And Data	2.3.5 Simulation Production	Non-US	WUPPERTAL	GR	WUPPERTAL GR		Simulation Production								0.20	0.20					
2.3 Computing And Data	2.3.5 Simulation Production	Non-US	MAINZ	SC	AHRENS, JENS		Simulation Production								0.15	0.15					
2.3 Computing And Data	2.3.5 Simulation Production	Non-US	MAINZ	GR	WIEBE, KLAUS		Simulation Production								0.30	0.30					
2.3 Computing And Data	2.3.5 Simulation Production	Non-US Non-US Total													3.65	3.65					
2.3 Computing And Data	2.3.5 Simulation Production WBS L3											1.30	1.17	0.20	3.65	6.32					
2.3 Computing And Data WBS L2 Total																					
2.4 Triggering And Filtering	2.4.1 Tft Coordination	US	UD	KE	SECKEL, DAVID		TFT Board member								0.10	0.10					
2.4 Triggering And Filtering	2.4.1 Tft Coordination	US	UMD	SC	BLAUFUSS, ERIK		Coordinate process for filter requests, bandwidth					0.30				0.30					
2.4 Triggering And Filtering	2.4.1 Tft Coordination	US	UMD	GR	UMD GR		Prepare datasets for filter testing and common MC datasets for testing					0.20				0.20					
2.4 Triggering And Filtering	2.4.1 Tft Coordination	US	UW	KE	MONTARULI, TERESA		TFT Board member								0.10	0.10					
2.4 Triggering And Filtering	2.4.1 Tft Coordination	US US Total										0.30	0.20	0.20		0.70					

IceCube M&O Staffing Matrix sort by WBS v9.0 2010.0915

WBS L2	WBS L3	US / Non-US	Institution	Labor Cat.	Names		Tasks					NSF M&O Core	NSF Base Grants	U.S. IN-KIND	Non U.S. In Kind	Grand Total	
					Cat.	Description	Cat.	Description	Cat.	Description	Cat.						Description
					AD	Administration	GR	Graduate Student	PO	Postdoctoral Scientist	TE						Technician
CS	Computer Science Eng.	KE	Key Personnel/Faculty	SC	Scientist	WO	Winterover										
						EN	Engineer	MA	Management	SE	Senior Engineer						
2.4 Triggering And Filte	2.4.1 Tft Coordination	Non-US	ULB	KE	HANSON, KAEL	ULB	TFT Board member							0.10	0.10		
2.4 Triggering And Filte	2.4.1 Tft Coordination	Non-US	UU	KE	DE LOS HEROS, CARLOS		TFT Board member							0.10	0.10		
2.4 Triggering And Filte	2.4.1 Tft Coordination	Non-US	BONN	KE	KOWALSKI, MAREK		TFT Board member							0.10	0.10		
2.4 Triggering And Filte	2.4.1 Tft Coordination	Non-US Non-US Total												0.30	0.30		
2.4 Triggering And Filte	2.4.1 Tft Coordination	WBS L3										0.30	0.20	0.20	0.30	1.00	
2.4 Triggering And Filte	2.4.2 Physics Filters	US	LBNL	KE	KLEIN, SPENCER		Co. Chair of Cascade WG							0.25	0.25		
2.4 Triggering And Filte	2.4.2 Physics Filters	US	OSU	GR	DAVIS, JAMES		Vertical Events Filter							0.15	0.15		
2.4 Triggering And Filte	2.4.2 Physics Filters	US	PSU	KE	COWEN, DOUG		Hybrid/Tau WG Chair							0.25	0.25		
2.4 Triggering And Filte	2.4.2 Physics Filters	US	PSU	KE	DEYOUNG, TYCE		Deep Core WG - Co Chair							0.25	0.25		
2.4 Triggering And Filte	2.4.2 Physics Filters	US	PSU	PO	KOSKINEN, JASON		develop and verify Deep Core filters						0.18	0.18			
2.4 Triggering And Filte	2.4.2 Physics Filters	US	UCB	SC	WOSCHNAGG, KURT		Diffuse / atmosnu WG chair						0.25	0.25			
2.4 Triggering And Filte	2.4.2 Physics Filters	US	UD	PO	BERGHAUS, PATRICK - UD		muon channel WG Co. Chair						0.25	0.25			
2.4 Triggering And Filte	2.4.2 Physics Filters	US	UMD	SC	BLAUFUSS, ERIK		GRB WG Chair						0.25	0.25			
2.4 Triggering And Filte	2.4.2 Physics Filters	US	UMD	PO	OLIVAS, ALEX		exotics- WG chair						0.25	0.25			
2.4 Triggering And Filte	2.4.2 Physics Filters	US	UW	SC	MARUYAMA, REINA		Supernova WG Chair						0.25	0.25			
2.4 Triggering And Filte	2.4.2 Physics Filters	US	UW	PO	AGUILAR SANCHEZ JUAN AN		muon filter						0.15	0.15			
2.4 Triggering And Filte	2.4.2 Physics Filters	US	UW	PO	TOSCANO, SIMONA		Cascade Online filter						0.15	0.15			
2.4 Triggering And Filte	2.4.2 Physics Filters	US	UW	GR	GLADSTONE, LAURA		Deep Core online Filter						0.15	0.15			
2.4 Triggering And Filte	2.4.2 Physics Filters	US	UW	GR	WHITEHORN, NATHAN		GRB Filter						0.15	0.15			
2.4 Triggering And Filte	2.4.2 Physics Filters	US US Total										2.03	0.90	2.93	2.93		
2.4 Triggering And Filte	2.4.2 Physics Filters	Non-US	CHIBA	KE	YOSHIDA, SHIGERU		EHE WG Lead							0.25	0.25		
2.4 Triggering And Filte	2.4.2 Physics Filters	Non-US	CHIBA	GR	ONO, MIO		EHE Filters							0.15	0.15		
2.4 Triggering And Filte	2.4.2 Physics Filters	Non-US	DESY	GR	FRANKE, ROBERT		Online Filter for Alerts							0.10	0.10		
2.4 Triggering And Filte	2.4.2 Physics Filters	Non-US	DESY	GR	FRANKE, ROBERT		Rate Data Bank South Pole							0.10	0.10		
2.4 Triggering And Filte	2.4.2 Physics Filters	Non-US	RWTH	PO	BOERSMA, DAVID RWTH		Gal Cen Filter (Moon Filter)							0.15	0.15		
2.4 Triggering And Filte	2.4.2 Physics Filters	Non-US	RWTH	PO	BOERSMA, DAVID RWTH		muon channel WG Co. Chair							0.25	0.25		
2.4 Triggering And Filte	2.4.2 Physics Filters	Non-US	SU	KE	HULTH, PER OLOF		Low Energy DeepCore WG Lead							0.25	0.25		
2.4 Triggering And Filte	2.4.2 Physics Filters	Non-US	SU	SC	SEO, SEON-HEE		Develop & verify filters							0.05	0.05		
2.4 Triggering And Filte	2.4.2 Physics Filters	Non-US	SU	SC	FINLEY, CHAD SU		Point Source WG Lead							0.25	0.25		
2.4 Triggering And Filte	2.4.2 Physics Filters	Non-US	SU	GR	JOHANSSON, HENRIK		UHE Trigger & Filter							0.10	0.10		
2.4 Triggering And Filte	2.4.2 Physics Filters	Non-US	SU	GR	DANNINGER, MATTIAS		WIMP Trigger & Filter							0.15	0.15		
2.4 Triggering And Filte	2.4.2 Physics Filters	Non-US	ULB	GR	ULB GR		Study of Tau Filters at South Pole							0.10	0.10		
2.4 Triggering And Filte	2.4.2 Physics Filters	Non-US	UU	KE	HALLGREN, ALLAN		online filter development							0.05	0.05		
2.4 Triggering And Filte	2.4.2 Physics Filters	Non-US	UU	KE	DE LOS HEROS, CARLOS		WIMP WG Lead							0.25	0.25		
2.4 Triggering And Filte	2.4.2 Physics Filters	Non-US	UU	GR	HENRIC, TAAVOLA		Online filter development & testing							0.10	0.10		
2.4 Triggering And Filte	2.4.2 Physics Filters	Non-US	UU	GR	STROM, RICKARD		Online filter development & testing							0.10	0.10		
2.4 Triggering And Filte	2.4.2 Physics Filters	Non-US	VUB	PO	LABARE, MATHIEU		Filter for Southern sky muons							0.25	0.25		
2.4 Triggering And Filte	2.4.2 Physics Filters	Non-US	VUB	PO	SINGH, KALPANA		Filter for Southern sky muons							0.25	0.25		
2.4 Triggering And Filte	2.4.2 Physics Filters	Non-US	BARBADOS	KE	SEUNARINE, SURUJ		Work on cascade filter							0.15	0.15		
2.4 Triggering And Filte	2.4.2 Physics Filters	Non-US	WUPPERTAL	GR	WUPPERTAL GR		New SUSY Filter							0.20	0.20		
2.4 Triggering And Filte	2.4.2 Physics Filters	Non-US	HUMBOLDT	SC	WALDENMAIER, TILO		CR-WG Lead							0.25	0.25		
2.4 Triggering And Filte	2.4.2 Physics Filters	Non-US	HUMBOLDT	SC	WALDENMAIER, TILO		CR-WG Filter							0.15	0.15		
2.4 Triggering And Filte	2.4.2 Physics Filters	Non-US	BONN	KE	KOWALSKI, MAREK		cascades WG Co-Lead							0.25	0.25		
2.4 Triggering And Filte	2.4.2 Physics Filters	Non-US	BONN	GR	FRANCKOWIAK, ANNA		Alert System for follow-up							0.10	0.10		
2.4 Triggering And Filte	2.4.2 Physics Filters	Non-US	BONN	GR	HOMRIER, ANDREAS		Alert System for follow-up							0.10	0.10		
2.4 Triggering And Filte	2.4.2 Physics Filters	Non-US Non-US Total												4.10	4.10		
2.4 Triggering And Filte	2.4.2 Physics Filters	WBS L3										2.03	0.90	4.10	7.03		
2.4 Triggering And Filte	2.4 Triggering And Filte WBS L2 Total											0.30	2.23	1.10	4.40	8.03	
2.5 Data Quality, Recon	2.5 Data Quality, Reconstructi	Non-US	UC	SC	GROSS, ANDREAS		Data Quality, Reco. & Sim. Tools Coordinator ("Low-level" Analysis Coordinator)							0.50	0.50		
2.5 Data Quality, Recon	2.5 Data Quality, Reconstructi	Non-US	BARBADOS	KE	SEUNARINE, SURUJ		Analysis of flasher runs for inice calibration of saturation, and flasher and Standard Candle runs for absolute energy calibration for cascades.							0.15	0.15		
2.5 Data Quality, Recon	2.5 Data Quality, Reconstructi	Non-US Non-US Total												0.65	0.65		
2.5 Data Quality, Recon	2.5 Data Quality, Reconstructi	WBS L3												0.65	0.65		

IceCube M&O Staffing Matrix sort by WBS v9.0 2010.0915

WBS L2	WBS L3	US / Non-US	Institution	Labor Cat.	Names	Tasks	NSF M&O Core	NSF Base Grants	U.S. IN-KIND	Non U.S. In Kind	Grand Total								
												Cat.	Description	Cat.	Description	Cat.	Description	Cat.	Description
												AD	Administration <th>GR</th> <td>Graduate Student <th>PO</th> <td>Postdoctoral Scientist <th>TE</th> <td>Technician </td></td></td>	GR	Graduate Student <th>PO</th> <td>Postdoctoral Scientist <th>TE</th> <td>Technician </td></td>	PO	Postdoctoral Scientist <th>TE</th> <td>Technician </td>	TE	Technician
												CS	Computer Science Eng. <th>KE</th> <td>Key Personnel/Faculty <th>SC</th> <td>Scientist <th>WO</th> <td>Winterover </td></td></td>	KE	Key Personnel/Faculty <th>SC</th> <td>Scientist <th>WO</th> <td>Winterover </td></td>	SC	Scientist <th>WO</th> <td>Winterover </td>	WO	Winterover
EN	Engineer <th>MA</th> <td>Management <th>SE</th> <td>Senior Engineer <th></th> <td> </td></td></td>	MA	Management <th>SE</th> <td>Senior Engineer <th></th> <td> </td></td>	SE	Senior Engineer <th></th> <td> </td>														
2.5 Data Quality, Recon	2.5.1 Simulation Programs	US	LBNL	PO	BUITIN,STIJN	DOM simulator & calibrator		0.35			0.35								
2.5 Data Quality, Recon	2.5.1 Simulation Programs	US	LBNL	PO	GERHARDT,LISA	Simulation Programs: cmc		0.20			0.20								
2.5 Data Quality, Recon	2.5.1 Simulation Programs	US	SUBR	KE	FAZELY, ALI	GEANT Simulation			0.15		0.15								
2.5 Data Quality, Recon	2.5.1 Simulation Programs	US	SUBR	KE	IMLAY, RICHARD	Simulation Programs			0.15		0.15								
2.5 Data Quality, Recon	2.5.1 Simulation Programs	US	UA	PO	ZARZHITZKY, PAVEL	Simulation verification			0.30		0.30								
2.5 Data Quality, Recon	2.5.1 Simulation Programs	US	UCB	SC	WOSCHNAGG, KURT	Maintain and Verify Simulation of Photon Propagation and update Ice Properties	0.50				0.50								
2.5 Data Quality, Recon	2.5.1 Simulation Programs	US	UD	PO	HUSSAIN, SHAHID	Ice Properties Simulation		0.30			0.30								
2.5 Data Quality, Recon	2.5.1 Simulation Programs	US	UD	GR	RUZYBAEV , BAKHTIYAR	Ice Properties Simulation		0.30			0.30								
2.5 Data Quality, Recon	2.5.1 Simulation Programs	US	UD	GR	XU, CHEN	Simulation Programs: sim-services		0.30			0.30								
2.5 Data Quality, Recon	2.5.1 Simulation Programs	US	UMD	PO	OLIVAS, ALEX	Simulation Software Programs coordinator	0.40				0.40								
2.5 Data Quality, Recon	2.5.1 Simulation Programs	US	UMD	PO	WISSING, HENRIKE	Maintain Detector Simulation (IceSim)		0.25			0.25								
2.5 Data Quality, Recon	2.5.1 Simulation Programs	US	UMD	GR	REDL, PETER	Maintain Detector Simulation (IceSim)		0.25			0.25								
2.5 Data Quality, Recon	2.5.1 Simulation Programs	US	UW	SC	CHIRKIN, DMITRY	Simulation Programs: mmc/mmc-icetray & ucr-icetray		0.20			0.20								
2.5 Data Quality, Recon	2.5.1 Simulation Programs	US	UW	SC	HILL, GARY	Maintain and Verify Simulation of Photon Propagation and update Ice Properties	0.25				0.25								
2.5 Data Quality, Recon	2.5.1 Simulation Programs	US	UW	PO	ABBASI, RASHA	DST data checking		0.10			0.10								
2.5 Data Quality, Recon	2.5.1 Simulation Programs	US	UW	PO	AGUILAR SANCHEZ JUAN AN	low level moun data verification (data/mc)		0.10			0.10								
2.5 Data Quality, Recon	2.5.1 Simulation Programs	US	UW	PO	UW PO	Maintain IceSim		0.40			0.40								
2.5 Data Quality, Recon	2.5.1 Simulation Programs	US	UW	GR	WHITEHORN, NATHAN	Photonics tables		0.10			0.10								
2.5 Data Quality, Recon	2.5.1 Simulation Programs	US	UW	GR	SANTANDER, MARCOS	Flasher Analysis		0.15			0.15								
2.5 Data Quality, Recon	2.5.1 Simulation Programs	US	UW	TE	DIAZ-VELEZ, JUAN CARLOS	Maintain Simulation Production Software	0.20				0.20								
2.5 Data Quality, Recon	2.5.1 Simulation Programs	US	US Total				1.35	3.00	0.60		5.35								
2.5 Data Quality, Recon	2.5.1 Simulation Programs	Non-US	DTMND	GR	MILKE, NATALIE	Simulation Programs: noise-generator				0.20	0.20								
2.5 Data Quality, Recon	2.5.1 Simulation Programs	Non-US	SU	KE	WALCK, CHRISTIAN	Photonics/Simulation Work				0.05	0.05								
2.5 Data Quality, Recon	2.5.1 Simulation Programs	Non-US	SU	KE	HULTQVIST, KLAS	Photonics/Simulation Work, hit-maker				0.15	0.15								
2.5 Data Quality, Recon	2.5.1 Simulation Programs	Non-US	SU	SC	FINLEY, CHAD SU	Simulation Programs: neutrino-generator				0.20	0.20								
2.5 Data Quality, Recon	2.5.1 Simulation Programs	Non-US	UOX	KE	SARKAR, SUBIR	Yellow Book-maintenance				0.10	0.10								
2.5 Data Quality, Recon	2.5.1 Simulation Programs	Non-US	UU	PO	MILLER, JONATHAN	Simulation Programs: photonics				0.05	0.05								
2.5 Data Quality, Recon	2.5.1 Simulation Programs	Non-US	GENT	SC	UGENT SC	Support IceTop Simulations, IceTop Calibrations, IceTop Reconstruction				0.10	0.10								
2.5 Data Quality, Recon	2.5.1 Simulation Programs	Non-US	GENT	GR	UGENT GR	Support IceTop Simulations, IceTop Calibrations, IceTop Reconstruction				0.40	0.40								
2.5 Data Quality, Recon	2.5.1 Simulation Programs	Non-US	BOCHUM	GR	OLIVO, MARTINO	Update MMC from Java to C++				0.25	0.25								
2.5 Data Quality, Recon	2.5.1 Simulation Programs	Non-US	Non-US Total							1.45	1.45								
2.5 Data Quality, Recon	2.5.1 Simulation Programs	WBS L3					1.35	3.00	0.60	1.45	6.80								
2.5 Data Quality, Recon	2.5.2 Reconstruction/ Analysis	US	LBNL	KE	KLEIN,SPENCER	co-chair of Diffuse WG			0.25		0.25								
2.5 Data Quality, Recon	2.5.2 Reconstruction/ Analysis	US	PSU	PO	KOSKINEN, JASON	Coordinate Deep Core reconstruction for production		0.12			0.12								
2.5 Data Quality, Recon	2.5.2 Reconstruction/ Analysis	US	PSU	PO	PSU PO	develop starting track reconstruction		0.08			0.08								
2.5 Data Quality, Recon	2.5.2 Reconstruction/ Analysis	US	PSU	GR	HA, CHANG HYON	develop starting track reconstruction		0.13			0.13								
2.5 Data Quality, Recon	2.5.2 Reconstruction/ Analysis	US	SUBR	KE	FAZELY, ALI	Reconstruction/ Analysis tools			0.15		0.15								
2.5 Data Quality, Recon	2.5.2 Reconstruction/ Analysis	US	SUBR	KE	IMLAY, RICHARD	Reconstruction/ Analysis tools			0.15		0.15								
2.5 Data Quality, Recon	2.5.2 Reconstruction/ Analysis	US	UAA	KE	RAWLINS, KATHERINE	flat-ntuple; muon-bundle-reco; Snow correction for IceTop			0.30		0.30								
2.5 Data Quality, Recon	2.5.2 Reconstruction/ Analysis	US	UMD	PO	WISSING, HENRIKE	develop & test reconstruction		0.25			0.25								
2.5 Data Quality, Recon	2.5.2 Reconstruction/ Analysis	US	UMD	GR	REDL, PETER	Reconstruction/ Analysis tools		0.25			0.25								
2.5 Data Quality, Recon	2.5.2 Reconstruction/ Analysis	US	UW	SC	CHIRKIN, DMITRY	Direct photon tracking / iceproperties calibration 0.3 ; FE/pulse extractor 0.1 ; reco software 0.1		0.30			0.30								
2.5 Data Quality, Recon	2.5.2 Reconstruction/ Analysis	US	UW	GR	DUMM, JONATHAN	Reconstruction Tools		0.15			0.15								
2.5 Data Quality, Recon	2.5.2 Reconstruction/ Analysis	US	UW	GR	RODRIGUES, JOAO-PAULO	Supernova simulation / moun energy reconstruction		0.20			0.20								
2.5 Data Quality, Recon	2.5.2 Reconstruction/ Analysis	US	UWRF	KE	MADSEN, JIM	Cosmic ray shower simulations and reconstruction			0.10		0.10								
2.5 Data Quality, Recon	2.5.2 Reconstruction/ Analysis	US	UWRF	SC	TAMBURRO, ALESSIO	Shower simulations, TankTop simulation			0.20		0.20								
2.5 Data Quality, Recon	2.5.2 Reconstruction/ Analysis	US	US Total				1.48	1.15			2.23								

IceCube M&O Staffing Matrix sort by WBS v9.0 2010.0915

WBS L2	WBS L3	US / Non-US	Institution	Labor Cat.	Names	Tasks	NSF M&O Core	NSF Base Grants	U.S. IN-KIND	Non U.S. In Kind	Grand Total						
												Cat.	Description	Cat.	Description	Cat.	Description
												AD	Administration	GR	Graduate Student	PO	Postdoctoral Scientist
CS	Computer Science Eng.	KE	Key Personnel/Faculty	SC	Scientist	WO	Winterover										
EN	Engineer	MA	Management	SE	Senior Engineer												
2.1 Program Management	2.5.2 Reconstruction/ Analysis	Non-US	RWTH	PO	BOERSMA, DAVID RWTH	Reconstruction Coordinator				0.15	0.15						
2.5 Data Quality, Recon	2.5.2 Reconstruction/ Analysis	Non-US	CHIBA	KE	CHIBA KE	Maintain Romeo, EHE Simulations				0.20	0.20						
2.5 Data Quality, Recon	2.5.2 Reconstruction/ Analysis	Non-US	CHIBA	SC	CHIBA SC	Maintain Romeo, EHE Simulations, Maintain reconstruction projects (Portia), MC/Data comparison for EHE-filtered and IceTop events, Standard Candle Analysis				0.20	0.20						
2.5 Data Quality, Recon	2.5.2 Reconstruction/ Analysis	Non-US	CHIBA	GR	CHIBA GR	Improve the Ice Model, Afterpulse Simulator, Standard Candle Analysis, Maintain reconstruction projects (Ophelia, ehe-star)				0.20	0.20						
2.5 Data Quality, Recon	2.5.2 Reconstruction/ Analysis	Non-US	DESY	GR	MIDDELL, EIKE	Cascade Reconstruction				0.30	0.30						
2.5 Data Quality, Recon	2.5.2 Reconstruction/ Analysis	Non-US	EPFL	SC	EPFL SC	SLF, Low Energy, Energy reconstruction (development)				0.25	0.25						
2.5 Data Quality, Recon	2.5.2 Reconstruction/ Analysis	Non-US	RWTH	GR	RWTH GR	Reconstruction Software				0.30	0.30						
2.5 Data Quality, Recon	2.5.2 Reconstruction/ Analysis	Non-US	RWTH	GR	WALLRAFF, MARIUS	New Feature Extractor				0.50	0.50						
2.5 Data Quality, Recon	2.5.2 Reconstruction/ Analysis	Non-US	SU	SC	SEO, SEON-HEE	Photonics/Simulation Work				0.15	0.15						
2.5 Data Quality, Recon	2.5.2 Reconstruction/ Analysis	Non-US	VUB	KE	VUB KE	development of reconstruction tools (IcePack framework)				0.25	0.25						
2.5 Data Quality, Recon	2.5.2 Reconstruction/ Analysis	Non-US	VUB	PO	BOSE, DEBANJAN	muon track reconstruction in IceCube and DeepCore, waveform feature extractor				0.25	0.25						
2.5 Data Quality, Recon	2.5.2 Reconstruction/ Analysis	Non-US	VUB	PO	LABARE, MATHIEU	muon track reconstruction in IceCube and DeepCore				0.13	0.13						
2.5 Data Quality, Recon	2.5.2 Reconstruction/ Analysis	Non-US	VUB	PO	SINGH, KALPANA	muon track reconstruction in IceCube and DeepCore, waveform feature extractor				0.13	0.13						
2.5 Data Quality, Recon	2.5.2 Reconstruction/ Analysis	Non-US	ALBERTA	KE	GRANT, DARREN	Maintenance of IceCube-Photonics interface				0.10	0.10						
2.5 Data Quality, Recon	2.5.2 Reconstruction/ Analysis	Non-US	ALBERTA	PO	ALBERTA, PO	Maintenance of IceCube-Photonics interface				0.30	0.30						
2.5 Data Quality, Recon	2.5.2 Reconstruction/ Analysis	Non-US	WUPPERTAL	GR	WUPPERTAL GR	New SUSY Reconstruction, Simulation, Propagation, Monopole, Photonics				0.50	0.50						
2.5 Data Quality, Recon	2.5.2 Reconstruction/ Analysis	Non-US	MAINZ	GR	LÜNEMANN, JAN	Reconstruction Tools				0.20	0.20						
2.5 Data Quality, Recon	2.5.2 Reconstruction/ Analysis	Non-US	HUMBOLDT	SC	HUMB SC	Reconstruction/ Analysis tools				0.10	0.10						
2.5 Data Quality, Recon	2.5.2 Reconstruction/ Analysis	Non-US	BONN	GR	UBONN GR	Reconstruction/ Analysis tools				0.20	0.20						
2.5 Data Quality, Recon	2.5.2 Reconstruction/ Analysis	Non-US	BONN	GR	PANKNIN, SEBASTIAN	IC-40 L3 processing				0.20	0.20						
2.5 Data Quality, Recon	2.5.2 Reconstruction/ Analysis	Non-US	Non-US Non-US Total							4.60	4.60						
2.5 Data Quality, Recon	2.5.2 Reconstruction/ Analysis WBS L3							1.48	1.15	4.60	6.83						
2.5 Data Quality, Recon	2.5.3 Data Quality	US	OSU	PO	ROTT, CARSTEN	Data Quality				0.10	0.10						
2.5 Data Quality, Recon	2.5.3 Data Quality	US	UA	KE	WILLIAMS, DAWN	Data Quality Lead				0.15	0.15						
2.5 Data Quality, Recon	2.5.3 Data Quality	US US Total						0.00	0.25	0.25	0.25						
2.5 Data Quality, Recon	2.5.3 Data Quality	Non-US	MPI	PO	MPI PO	Data Quality & DeepCore				0.60	0.60						
2.5 Data Quality, Recon	2.5.3 Data Quality	Non-US	VUB	KE	VUB KE	data quality verification				0.25	0.25						
2.5 Data Quality, Recon	2.5.3 Data Quality	Non-US	VUB	PO	STRAHLER, ERIK	verification Deep Core data quality				0.25	0.25						
2.5 Data Quality, Recon	2.5.3 Data Quality	Non-US	VUB	PO	BOSE, DEBANJAN	verification Deep Core data quality				0.25	0.25						
2.5 Data Quality, Recon	2.5.3 Data Quality	Non-US	VUB	PO	LABARE, MATHIEU	verification Deep Core data quality				0.13	0.13						
2.5 Data Quality, Recon	2.5.3 Data Quality	Non-US	VUB	PO	SINGH, KALPANA	verification Deep Core data quality				0.13	0.13						
2.5 Data Quality, Recon	2.5.3 Data Quality	Non-US	Non-US Non-US Total							1.60	1.60						
2.5 Data Quality, Recon	2.5.3 Data Quality WBS L3							0.00	0.25	1.60	1.85						
2.5 Data Quality, Recon	2.5.4 Offline Data Processing	US	UW	SC	HILL, GARY	Offline processing	0.25				0.25						
2.5 Data Quality, Recon	2.5.4 Offline Data Processing	US	UW	GR	DUMM, JONATHAN	Offline Data Processing		0.15			0.15						
2.5 Data Quality, Recon	2.5.4 Offline Data Processing	US US Total					0.25	0.15	0.00	0.40	0.40						
2.5 Data Quality, Recon	2.5.4 Offline Data Processing WBS L3						0.25	0.15	0.00	0.40	0.40						
2.5 Data Quality, Reco WBS L2 Total							1.60	4.63	2.00	8.30	16.53						
Grand Total							31.51	12.83	8.30	28.06	80.31						