

IceCube M&O Staffing Matrix sort by WBS v13.0 2012.1001

WBS L2	WBS L3	Institution		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						
2.1 Program Management	EN	Engineer	MA	Management	SE	Senior Engineer							
2.1 Program Management	2.1.1 Administration	LBNL	KE	KLEIN, SPENCER		Supervise LBNL effort		0.05				0.05	
2.1 Program Management	2.1.1 Administration	LBNL	KE	KLEIN, SPENCER		Pubcom member			0.10			0.10	
2.1 Program Management	2.1.1 Administration	UWRF	KE	MADSEN, JIM		Speakers Comm Chair			0.25			0.25	
2.1 Program Management	2.1.1 Administration	PSU	KE	COWEN, DOUG		ExecCom member			0.20			0.20	
2.1 Program Management	2.1.1 Administration	PSU	KE	COWEN, DOUG		PINGU Co-Lead			0.25			0.25	
2.1 Program Management	2.1.1 Administration	UCB	SC	FILIMONOV, KIRILL		Pubcom member			0.10			0.10	
2.1 Program Management	2.1.1 Administration	UCB	KE	PRICE, BUFORD		Education & Outreach			0.10			0.10	
2.1 Program Management	2.1.1 Administration	UCB	SC	WOSCHNAGG, KURT		Speakers Comm member			0.10			0.10	
2.1 Program Management	2.1.1 Administration	UD	KE	GAISER, TOM		ExecCom member			0.20			0.20	
2.1 Program Management	2.1.1 Administration	UD	KE	STANEV, TODOR		Pubcom member			0.10			0.10	
2.1 Program Management	2.1.1 Administration	UMD	KE	SULLIVAN, GREG		Spokesperson		0.30				0.30	
2.1 Program Management	2.1.1 Administration	UMD	KE	SULLIVAN, GREG		ExecCom member			0.20			0.20	
2.1 Program Management	2.1.1 Administration	UMD	PO	WISSING, HENRIKE		Pubcom member		0.10				0.10	
2.1 Program Management	2.1.1 Administration	StonyBrook	KE	KIRYLUK, JOANNA		Simulation Prod. Comm member			0.05			0.05	
2.1 Program Management	2.1.1 Administration	UW	KE	HALZEN, FRANCIS		Principle Investigator		0.35				0.35	
2.1 Program Management	2.1.1 Administration	UW	KE	HALZEN, FRANCIS		Principle Investigator			0.15			0.15	
2.1 Program Management	2.1.1 Administration	UW	KE	KARLE, ALBRECHT		Associate Director for Science		0.25				0.25	
2.1 Program Management	2.1.1 Administration	UW	KE	KARLE, ALBRECHT		Coordination Committee chair		0.10				0.10	
2.1 Program Management	2.1.1 Administration	UW	KE	KARLE, ALBRECHT		ExecCom member			0.20			0.20	
2.1 Program Management	2.1.1 Administration	UW	KE	YECK, JAMES		Director of Operations		0.50				0.50	
2.1 Program Management	2.1.1 Administration	UW	MA	UW Manager		Computing Infrastructure Management		1.00				1.00	
2.1 Program Management	2.1.1 Administration	UW	MA	PELES, ADI		Resource Coordinator		0.50				0.50	
2.1 Program Management	2.1.1 Administration	UW	AD	Vakhnina, Catherine		Administrative Support		0.50				0.50	
	US Total								3.55	0.30	1.80	5.65	
2.1 Program Management	2.1.1 Administration	ALBERTA	KE	GRANT, DARREN		Pubcom adjoint member			0.10			0.10	
2.1 Program Management	2.1.1 Administration	DESY	KE	SPIERING, CHRISTIAN		ExecCom member			0.20			0.20	
2.1 Program Management	2.1.1 Administration	DESY	SC	ACKERMANN, MARKUS		Analysis Coordinator			0.35			0.35	
2.1 Program Management	2.1.1 Administration	DPNC	KE	MONTARULI, TERESA		ICB Member			0.10			0.10	
2.1 Program Management	2.1.1 Administration	HUMBOLDT	KE	KAPPES, ALEXANDER		Pubcom member			0.10			0.10	
2.1 Program Management	2.1.1 Administration	SU	KE	HULTH, PER OLOF		ExecCom member			0.20			0.20	
2.1 Program Management	2.1.1 Administration	SU	KE	HULTH, PER OLOF		ICB Member			0.05			0.05	
2.1 Program Management	2.1.1 Administration	SU	KE	HULTQVIST, KLAS		ICB Member			0.05			0.05	
2.1 Program Management	2.1.1 Administration	SU	KE	FINLEY, CHAD SU		Coordination with LIGO			0.10			0.10	
2.1 Program Management	2.1.1 Administration	SU	KE	WALCK, CHRISTIAN		Publications Bookkeeping			0.10			0.10	
2.1 Program Management	2.1.1 Administration	ULB	KE	HANSON, KAEL		ExecCom member			0.20			0.20	
2.1 Program Management	2.1.1 Administration	UU	KE	BOTNER, OLGA		Outreach			0.05			0.05	
2.1 Program Management	2.1.1 Administration	UU	KE	BOTNER, OLGA		Pubcom Chair			0.40			0.40	
2.1 Program Management	2.1.1 Administration	UU	KE	HALLGREN, ALLAN		Outreach			0.05			0.05	
2.1 Program Management	2.1.1 Administration	UU	KE	HALLGREN, ALLAN		Speakers Comm member			0.10			0.10	
2.1 Program Management	2.1.1 Administration	VUB	KE	DE CLERCQ, CATHERINE		ExecCom member			0.20			0.20	
2.1 Program Management	2.1.1 Administration	WUPPERTAL	KE	HELBING, KLAUS		Speakers Comm member			0.10			0.10	
2.1 Program Management	2.1.1 Administration	RWTH	KE	WIEBUSCH, CHRISTOPHER		ExecCom member			0.20			0.20	
2.1 Program Management	2.1.1 Administration	MAINZ	KE	KOPKE, LUTZ		Supernova group Co-Chair			0.25			0.25	
2.1 Program Management	2.1.1 Administration	BOCHUM	KE	TJUS, JULIA		Pubcom member			0.10			0.10	
	Non-US Total								3.00	3.00			
2.1 Program Management	2.1.1 Administration								3.55	0.30	1.80	3.00	8.65
2.1 Program Management	2.1.2 Engineering And R&D Support	KU	KE	BESSON, DAVE		EMI - Radio R&D				0.10		0.10	
2.1 Program Management	2.1.2 Engineering And R&D Support	UMD	KE	HOFFMAN, KARA		Detector R&D				0.20		0.20	
2.1 Program Management	2.1.2 Engineering And R&D Support	UW	SC	DUVERNOIS, MICHAEL		Science Support			0.25			0.25	
2.1 Program Management	2.1.2 Engineering And R&D Support	UW	SC	DUVERNOIS, MICHAEL		EMI, Instrumentation, I/F			0.15			0.15	
2.1 Program Management	2.1.2 Engineering And R&D Support	UW	SE	LAUNDRIE, ANDREW		EMI, Instrumentation, I/F			0.10			0.10	
2.1 Program Management	2.1.2 Engineering And R&D Support	UW	SE	LAUNDRIE, ANDREW		Engineering Support			0.65			0.65	
2.1 Program Management	2.1.2 Engineering And R&D Support	UW	SE	SANDSTROM, PERRY		EMI, Instrumentation, I/F			0.25			0.25	
2.1 Program Management	2.1.2 Engineering And R&D Support	UW	SE	SANDSTROM, PERRY		Engineering Support			0.25			0.25	
2.1 Program Management	2.1.2 Engineering And R&D Support	UW	MA	HAUGEN, JAMES		Engineering Support			0.10			0.10	
	US Total								1.75	0.00	0.30	2.05	
2.1 Program Management	2.1.2 Engineering And R&D Support	DESY	KE	NAHNHAUER, ROLF		Acoustic R&D Support				0.10		0.10	
2.1 Program Management	2.1.2 Engineering And R&D Support	DESY	PO	KARG, TIMO		Acoustic				0.10		0.10	
2.1 Program Management	2.1.2 Engineering And R&D Support	ALBERTA	KE	GRANT, DARREN		PINGU Co-Lead				0.10		0.10	
2.1 Program Management	2.1.2 Engineering And R&D Support	RWTH	PO	LAIHEM, KARIM		Acoustic R&D Support				0.10		0.10	
2.1 Program Management	2.1.2 Engineering And R&D Support	RWTH	PO	LAIHEM, KARIM		Acoustic monitoring				0.10		0.10	
2.1 Program Management	2.1.2 Engineering And R&D Support	RWTH	GR	PAUL, LARRISA		RASTA Antenna Construction				0.10		0.10	
2.1 Program Management	2.1.2 Engineering And R&D Support	RWTH	GR	PAUL, LARRISA		SPATS SD Maintenance				0.20		0.20	
2.1 Program Management	2.1.2 Engineering And R&D Support	RWTH	GR	HEINEN, DIRK		Acoustic R&D Support				0.10		0.10	
2.1 Program Management	2.1.2 Engineering And R&D Support	ULB	KE	HANSON, KAEL		EMI/R&D				0.10		0.10	

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		Cat.	Description	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														
2.1 Program Management	2.1.2 Engineering And R&D Support	ULB	PO	O'MURCHADHA, AONGUS	EMI Measurements								0.10	0.10			
2.1 Program Management	2.1.2 Engineering And R&D Support	ULB	GR	MEURES, THOMAS	EMI Measurements								0.25	0.25			
2.1 Program Management	2.1.2 Engineering And R&D Support	WUPPERTAL	KE	HELBLING, KLAUS	R&D Lead								0.10	0.10			
2.1 Program Management	2.1.2 Engineering And R&D Support	GENT	SC	UGENT SC	Acoustic R&D Support								0.05	0.05			
2.1 Program Management	2.1.2 Engineering And R&D Support	GENT	GR	UGENT GR	Acoustic R&D Support								0.05	0.05			
2.1 Program Management	2.1.2 Engineering And R&D Support	Non-US Total												1.55	1.55		
2.1 Program Management	2.1.2 Engineering And R&D Support												1.75	0.00	0.30	1.55	3.60
2.1 Program Management	2.1.3 Usap Support	UW	MA	HAUGEN, JAMES	USAP Support								0.25			0.25	
2.1 Program Management	2.1.3 Usap Support	US Total											0.25			0.25	
2.1 Program Management	2.1.3 Usap Support												0.25			0.25	
2.1 Program Management	2.1.4 Education & Outreach	OSU	PO	OSU PO	Outreach								0.05			0.05	
2.1 Program Management	2.1.4 Education & Outreach	PSU	KE	COWEN, DOUG	Education & Outreach								0.05			0.05	
2.1 Program Management	2.1.4 Education & Outreach	PSU	KE	DEYOUNG, TYCE	Education & Outreach								0.05			0.05	
2.1 Program Management	2.1.4 Education & Outreach	UMD	KE	UMD KE	E&O								0.10			0.10	
2.1 Program Management	2.1.4 Education & Outreach	UW	AD	Gianopoulos, Andrea	Education & Outreach Coordination								0.75			0.75	
2.1 Program Management	2.1.4 Education & Outreach	UWRF	KE	MADSEN, JIM	Teachers' program and UWRF Upward Bound								0.10			0.10	
2.1 Program Management	2.1.4 Education & Outreach	UWRF	TE	UWRF TE	Teachers Program								0.10			0.10	
2.1 Program Management	2.1.4 Education & Outreach	US Total											0.95	0.00	0.25	1.20	
2.1 Program Management	2.1.4 Education & Outreach												0.95	0.00	0.25	1.20	
2.1 Program Management	WBS L2 Total												6.50	0.30	2.35	4.55	13.70
2.2 Detector Operations &	2.2.2 Detector Operations & Maintenance	LBNL	KE	NYGREN, DAVID R	Track Engine Trigger								0.10			0.10	
2.2 Detector Operations &	2.2.2 Data Acquisition	UW	SC	KELLEY, JOHN	Deputy Maintenance and Operations Manager								0.75			0.75	
2.2 Detector Operations &	2.2.2 Detector Operations & Maintenance	UW	MA	LAITSCH, DENISE	Detector Operations Manager								1.00			1.00	
2.2 Detector Operations &	2.2.2 Detector Operations & Maintenance	US Total											1.75	0.00	0.10	1.85	
2.2 Detector Operations &	2.2.2 Detector Operations & Maintenance	UMH	GR	KOHNNEN, GEORGES	Database Coordinator								0.10			0.10	
2.2 Detector Operations &	2.2.2 Detector Operations & Maintenance	Non-US Total											0.10			0.10	
2.2 Detector Operations &	2.2.2.1 Run Coordination	UW	TE	Auer, Raif	Winter Overs coordinator								0.25			0.25	
2.2 Detector Operations &	2.2.2.1 Run Coordination	UW	TE	UW Winter Overs	Operate Detector (Winter-Overs)								3.00			3.00	
2.2 Detector Operations &	2.2.2.1 Run Coordination	US Total											3.25	0.00	0.00	3.25	
2.2 Detector Operations &	2.2.2.1 Run Coordination	UC	GR	UC GR	Flasher Runs								0.10			0.10	
2.2 Detector Operations &	2.2.2.1 Run Coordination	BONN	PO	BOSSER, SEBASTIAN	Run Coordinator								0.50			0.50	
2.2 Detector Operations &	2.2.2.1 Run Coordination	Non-US Total											0.60			0.60	
2.2 Detector Operations &	2.2.2.1 Run Coordination												3.25	0.00	0.00	0.60	3.85
2.2 Detector Operations &	2.2.2.2 Data Acquisition	LBNL	EN	STEZELBERGER, THORSTEN	Maintain DAQ Hardware (Hubs, DOR, Clocks, GPS,...)								0.15			0.15	
2.2 Detector Operations &	2.2.2.2 Data Acquisition	UD	KE	SECKEL, DAVID	DAQ Monitoring								0.05			0.05	
2.2 Detector Operations &	2.2.2.2 Data Acquisition	UW	SC	KELLEY, JOHN	DOM Cal Maintenance, DOM issues								0.15			0.15	
2.2 Detector Operations &	2.2.2.2 Data Acquisition	UW	SC	WENDT, CHRISTOPHER	Flasher output, flasher calibration								0.20			0.20	
2.2 Detector Operations &	2.2.2.2 Data Acquisition	UW	SC	WENDT, CHRISTOPHER	DOM charge response, linearity, DOM cal support								0.20			0.20	
2.2 Detector Operations &	2.2.2.2 Data Acquisition	UW	CS	Frere, Michael	Maintain DAQ Software Systems (incl. triggers, DOM SW, etc. up to Event Builder)								1.00			1.00	
2.2 Detector Operations &	2.2.2.2 Data Acquisition	UW	CS	GLOWACKI, DAVID	Maintain DAQ Software Systems (incl. triggers, DOM SW, etc. up to Event Builder)								1.00			1.00	
2.2 Detector Operations &	2.2.2.2 Data Acquisition	UW	CS	Newcomb, Matthew	Maintain DAQ Software Systems (incl. triggers, DOM SW, etc. up to Event Builder)								0.75			0.75	
2.2 Detector Operations &	2.2.2.2 Data Acquisition	UW	TE	BELLINGER, JIM	Maintain South Pole Test System Hardware and Operating Systems								0.25			0.25	
2.2 Detector Operations &	2.2.2.2 Data Acquisition	UW	SE	SANDSTROM, PERRY	Maintain DAQ Hardware (Hubs, DOR, Clocks, GPS,...)								0.25			0.25	
2.2 Detector Operations &	2.2.2.2 Data Acquisition	UW	CS	JACOBSEN, JOHN (NPX)	Maintain DAQ Hardware (Hubs, DOR, Clocks, GPS,...)								0.15			0.15	
2.2 Detector Operations &	2.2.2.2 Data Acquisition	UW	GR	WEAVER, CHRISTOPHER	DOM CAL Maintenance								0.20			0.20	
2.2 Detector Operations &	2.2.2.2 Data Acquisition	US Total											4.10	0.20	0.05	4.35	
2.2 Detector Operations &	2.2.2.2 Data Acquisition	ULB	KE	HANSON, KAEL	Data Acquisition								0.20			0.20	
2.2 Detector Operations &	2.2.2.2 Data Acquisition	ULB	GR	HEEREMAN, DAVID	Develop Hit Spooling for Supernova & others								0.50			0.50	
2.2 Detector Operations &	2.2.2.2 Data Acquisition	ULB	GR	PINAT, ELISA	Data Acquisition								0.20			0.20	
2.2 Detector Operations &	2.2.2.2 Data Acquisition	Non-US Total											0.90			0.90	
2.2 Detector Operations &	2.2.2.2 Data Acquisition												4.10	0.20	0.05	0.90	5.25
2.2 Detector Operations &	2.2.2.3 Online Filter (Pnf)	UMD	SC	BLAUFUSS, ERIK	Maintain Pnf S/W and Online Filters								0.20			0.20	
2.2 Detector Operations &	2.2.2.3 Online Filter (Pnf)	UMD	GR	REDL, PETER	Online Filter Testing								0.25			0.25	
2.2 Detector Operations &	2.2.2.3 Online Filter (Pnf)	US Total											0.20	0.25	0.00	0.45	
2.2 Detector Operations &	2.2.2.3 Online Filter (Pnf)												0.20	0.25	0.00	0.45	

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		Cat.	Description	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 &	2.2.4 Sps Operations	UW	SE	SANDSTROM, PERRY	Maintain South Pole Computing H/W Infrastructure and operating systems	0.25						0.25					
2.2 Detector Operations &	2.2.4 Sps Operations	UW	TE	UW Technician	Maintain South Pole Computing H/W Infrastructure and operating systems	0.75						0.75					
2.2 Detector Operations &	2.2.4 Sps Operations	UW	TE	WISNIEWSKI, PAUL	Networking and Security Maintenance	0.25						0.25					
2.2 Detector Operations &	2.2.4 Sps Operations	US Total						1.25	0.00	0.00		1.25					
2.2 Detector Operations &	2.2.4 Sps Operations											1.25	0.00	0.00		1.25	
2.2 Detector Operations &	2.2.5 Spts Operations	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	UW	TE	UW Technician	Maintain South Pole Test System Hardware and Operating Systems	0.25						0.25					
2.2 Detector Operations &	2.2.5 Spts Operations	US Total						0.35	0.00	0.00		0.35					
2.2 Detector Operations &	2.2.5 Spts Operations											0.35	0.00	0.00		0.35	
2.2 Detector Operations &	2.2.6 Experiment Control	UW	CS	JACOBSEN, JOHN (NPX)	IceCube Live Maintenance and Upgrades	0.65						0.65					
2.2 Detector Operations &	2.2.6 Experiment Control	US Total						0.65	0.00	0.00		0.65					
2.2 Detector Operations &	2.2.6 Experiment Control											0.65	0.00	0.00		0.65	
2.2 Detector Operations &	2.2.7 Detector Monitoring	CAU	KE	JAPARIDZE, GEORGE	Monitoring shifts	0.02						0.02					
2.2 Detector Operations &	2.2.7 Detector Monitoring	GTECH	GR	CASEY, JAMES	Monitoring shifts	0.03						0.03					
2.2 Detector Operations &	2.2.7 Detector Monitoring	KU	KE	BESSON, DAVE	Monitoring shifts	0.02						0.02					
2.2 Detector Operations &	2.2.7 Detector Monitoring	StonyBrook	KE	KIRYLUK, JOANNA	BadDomList	0.10						0.10					
2.2 Detector Operations &	2.2.7 Detector Monitoring	StonyBrook	GR	NIEDERHAUSEN, HANS	Detector Monitoring	0.05						0.05					
2.2 Detector Operations &	2.2.7 Detector Monitoring	LBNL	PO	CHANG, HYON HA	Monitoring shifts	0.09						0.09					
2.2 Detector Operations &	2.2.7 Detector Monitoring	OSU	PO	OSU PO	Monitoring shifts	0.02						0.02					
2.2 Detector Operations &	2.2.7 Detector Monitoring	OSU	PO	ROTT, CARSTEN	Maintain good run list	0.10						0.10					
2.2 Detector Operations &	2.2.7 Detector Monitoring	OSU	PO	PFENDNER, CARL	Maintain good run list	0.10						0.10					
2.2 Detector Operations &	2.2.7 Detector Monitoring	PSU	PO	CLARK, KEN	Monitoring shifts	0.03						0.03					
2.2 Detector Operations &	2.2.7 Detector Monitoring	PSU	GR	DUNKMAN, MATT	Monitoring shifts	0.03						0.03					
2.2 Detector Operations &	2.2.7 Detector Monitoring	SUBR	KE	TER-ANTONYAN, SAMVEL	Detector Monitoring	0.02						0.02					
2.2 Detector Operations &	2.2.7 Detector Monitoring	UA	PO	UA PO	Monitoring shifts	0.03						0.03					
2.2 Detector Operations &	2.2.7 Detector Monitoring	UA	GR	XU, DONGLIAN	Monitoring shifts	0.03						0.03					
2.2 Detector Operations &	2.2.7 Detector Monitoring	UA	GR	PEPPER, JAMES	Monitoring shifts	0.03						0.03					
2.2 Detector Operations &	2.2.7 Detector Monitoring	UA	GR	LARSON, MICHAEL	Monitoring shifts	0.03						0.03					
2.2 Detector Operations &	2.2.7 Detector Monitoring	UAA	KE	RAWLINS, KATHERINE	Monitoring shifts	0.02						0.02					
2.2 Detector Operations &	2.2.7 Detector Monitoring	UCB	SC	FILIMONOV, KIRILL	Coordinate Monitoring	0.10						0.10					
2.2 Detector Operations &	2.2.7 Detector Monitoring	UCB	SC	FILIMONOV, KIRILL	Coordinate Monitoring	0.25						0.25					
2.2 Detector Operations &	2.2.7 Detector Monitoring	UCB	SC	UCB SC	Monitoring shifts	0.10						0.10					
2.2 Detector Operations &	2.2.7 Detector Monitoring	UCB	GR	UCB GR	Monitoring shifts	0.10						0.10					
2.2 Detector Operations &	2.2.7 Detector Monitoring	UCI	PO	SILVERSTRI, ANDREA	Monitoring shifts	0.01						0.01					
2.2 Detector Operations &	2.2.7 Detector Monitoring	UCI	GR	HANSON, JORDAN	Monitoring shifts	0.01						0.01					
2.2 Detector Operations &	2.2.7 Detector Monitoring	UD	PO	KUWABARA, TAKAO	Temp. & Pressure atmospheric monitoring	0.30						0.30					
2.2 Detector Operations &	2.2.7 Detector Monitoring	UMD	PO	UMD PO	Monitoring shifts	0.03						0.03					
2.2 Detector Operations &	2.2.7 Detector Monitoring	UMD	GR	UMD GR	Monitoring shifts	0.06						0.06					
2.2 Detector Operations &	2.2.7 Detector Monitoring	UW	PO	UW PO	Monitoring shifts	0.12						0.12					
2.2 Detector Operations &	2.2.7 Detector Monitoring	UW	GR	UW GR	Monitoring shifts	0.12						0.12					
2.2 Detector Operations &	2.2.7 Detector Monitoring	US Total						0.25	0.98	0.71		1.94					
2.2 Detector Operations &	2.2.7 Detector Monitoring	CHIBA	GR	CHIBA GR	Detector Monitoring	0.03						0.03					
2.2 Detector Operations &	2.2.7 Detector Monitoring	DESY	SC	DESY SC	Detector Monitoring	0.05						0.05					
2.2 Detector Operations &	2.2.7 Detector Monitoring	DESY	GR	DESY GR	Detector Monitoring	0.12						0.12					
2.2 Detector Operations &	2.2.7 Detector Monitoring	DTMND	GR	DTMD GR	Detector Monitoring	0.03						0.03					
2.2 Detector Operations &	2.2.7 Detector Monitoring	EPFL	PO	BRUIJN, RONALD	Detector Monitoring	0.03						0.03					
2.2 Detector Operations &	2.2.7 Detector Monitoring	Munchen	GR	MPI GR	Detector Monitoring	0.05						0.05					
2.2 Detector Operations &	2.2.7 Detector Monitoring	RWTH	GR	PAUL, LARRISA	RASTA Data Monitoring	0.10						0.10					
2.2 Detector Operations &	2.2.7 Detector Monitoring	RWTH	GR	RWTH GR	Monitoring (4 weeks)	0.12						0.12					
2.2 Detector Operations &	2.2.7 Detector Monitoring	SU	GR	SU GR	Detector Monitoring	0.06						0.06					
2.2 Detector Operations &	2.2.7 Detector Monitoring	UC	GR	UC GR	Detector Monitoring	0.02						0.02					
2.2 Detector Operations &	2.2.7 Detector Monitoring	ULB	GR	ULB GR	Detector Monitoring	0.06						0.06					
2.2 Detector Operations &	2.2.7 Detector Monitoring	UOX	KE	SARKAR, SUBIR	Detector Monitoring	0.02						0.02					
2.2 Detector Operations &	2.2.7 Detector Monitoring	UU	GR	UU GR	Monitoring Shifts	0.03						0.03					
2.2 Detector Operations &	2.2.7 Detector Monitoring	VUB	PO	VUB PO	Monitoring shifts	0.06						0.06					
2.2 Detector Operations &	2.2.7 Detector Monitoring	VUB	GR	VUB GR	Monitoring shifts	0.06						0.06					
2.2 Detector Operations &	2.2.7 Detector Monitoring	WUPPERTAL	GR	WUPPERTAL GR	South Pole EMI Monitoring AURA, SPATS, surface antenna operations (RASTA)	0.15						0.15					
2.2 Detector Operations &	2.2.7 Detector Monitoring	WUPPERTAL	GR	WUPPERTAL GR		0.45						0.45					
2.2 Detector Operations &	2.2.7 Detector Monitoring	MAINZ	GR	UM GR	Detector Monitoring	0.05						0.05					
2.2 Detector Operations &	2.2.7 Detector Monitoring	GENT	GR	UGENT GR	Detector Monitoring	0.03						0.03					
2.2 Detector Operations &	2.2.7 Detector Monitoring	DPNC	GR	ASEN, CHRISTOV	Detector Monitoring	0.20						0.20					
2.2 Detector Operations &	2.2.7 Detector Monitoring	DPNC	GR	RAAMEZ MOHAMED	Detector Monitoring	0.10						0.10					
2.2 Detector Operations &	2.2.7 Detector Monitoring	BONN	GR	UBONN GR	Detector Monitoring	0.03						0.03					
2.2 Detector Operations &	2.2.7 Detector Monitoring	BOCHUM	GR	SCHÖNEBERG, SEBASTIAN	Detector Monitoring	0.03						0.03					
2.2 Detector Operations &	2.2.7 Detector Monitoring	Non-US Total						0.25	0.98	0.71		1.88					
2.2 Detector Operations &	2.2.8 Detector Calibration	GTECH	GR	CASEY, JAMES	Bubble studies with flashers	0.20						0.20					
2.2 Detector Operations &	2.2.8 Detector Calibration	UA	KE	WILLIAMS, DAWN	managing flasher runs and other calibrations (stage 2 geometry)	0.20						0.20					
2.2 Detector Operations &	2.2.8 Detector Calibration	UA	GR	XU, DONGLIAN	Low-energy cascade calibration with flashers	0.10						0.10					
2.2 Detector Operations &	2.2.8 Detector Calibration	UA	GR	PEPPER, JAMES	Verification monitoring integration into IceCube Live	0.10						0.10					
2.2 Detector Operations &	2.2.8 Detector Calibration	UCB	SC	WOSCHNAGG, KURT	Calibration Lead	0.10						0.10					
2.2 Detector Operations &	2.2.8 Detector Calibration	UCB	GR	UCB GR	Calibration	0.10						0.10					
2.2 Detector Operations &	2.2.8 Detector Calibration	UW	SC	WENDT, CHRISTOPHER	Absolute DOM sensitivity	0.40						0.40					
2.2 Detector Operations &	2.2.8 Detector Calibration	UW	GR	FEINTZIG, JACOB	Ice Properties	0.15						0.15					
2.2 Detector Operations &	2.2.8 Detector Calibration	UW	GR	JERO, KYLE	DOM Linearity, sensitivity	0.15						0.15					
2.2 Detector Operations &	2.2.8 Detector Calibration	UW	GR	JERO, KYLE	Ice properties (anisotropy) Base Grants	0.25						0.25					

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WBS L2	WBS L3	Institution						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	Cat.	Description						
2.2 Detector Operations &	2.2.8 Detector Calibration	AD	Administration	GR	Graduate Student	PO	Postdoctoral Scientist	TE	Technician								
2.2 Detector Operations &	2.2.8 Detector Calibration	CS	Computer Science Eng.	KE	Key Personnel/Faculty	SC	Scientist	WO	Winterover								
2.2 Detector Operations &	2.2.8 Detector Calibration	EN	Engineer	MA	Management	SE	Senior Engineer										
2.2 Detector Operations &	2.2.8 Detector Calibration																
2.2 Detector Operations &	2.2.8 Detector Calibration	UW	GR	VAN SANTEN, JACOB									0.10			0.10	
2.2 Detector Operations &	2.2.8 Detector Calibration	US Total											0.40	1.25	0.20	1.85	
2.2 Detector Operations &	2.2.8 Detector Calibration	DESY	GR	ACHIM STOESSL												0.20	
2.2 Detector Operations &	2.2.8 Detector Calibration	Non-US Total														0.20	
2.2 Detector Operations &	2.2.8 Detector Calibration															0.40	
2.2 Detector Operations &	2.2.9 Icetop Operations	UD	SC	TILAV, SERAP									1.00			1.00	
2.2 Detector Operations &	2.2.9 Icetop Operations	UWRF	KE	SPICZAK, GLENN												0.03	
2.2 Detector Operations &	2.2.9 Icetop Operations	US Total											1.00	0.00	0.03	1.03	
2.2 Detector Operations &	2.2.9 Icetop Operations															1.00	
2.2 Detector Operations &	2.2.10 Supernova Operations	UW	KE	MARUYAMA, REINA										0.15		0.15	
2.2 Detector Operations &	2.2.10 Supernova Operations	UW	GR	RIEDEL, BENEDIKT										0.15		0.15	
2.2 Detector Operations &	2.2.10 Supernova Operations	US Total											0.00	0.15	0.15	0.30	
2.2 Detector Operations &	2.2.10 Supernova Operations	MAINZ	GR	KROLL, GÖSTA										0.20		0.20	
2.2 Detector Operations &	2.2.10 Supernova Operations	MAINZ	GR	EBERHARD, BENJAMIN										0.50		0.50	
2.2 Detector Operations &	2.2.10 Supernova Operations	MAINZ	GR	BAUM, VOLKER										0.50		0.50	
2.2 Detector Operations &	2.2.10 Supernova Operations	EPFL	KE	RIBORDY, MATHIEU										0.20		0.20	
2.2 Detector Operations &	2.2.10 Supernova Operations	EPFL	PO	BRUIJN, RONALD											0.32		
2.2 Detector Operations &	2.2.10 Supernova Operations	Non-US Total													1.72	1.72	
2.2 Detector Operations &	2.2.10 Supernova Operations													0.00	0.15	0.15	
2.2 Detector Operations &	WBS L2 Total												13.20	2.83	1.24	5.40	
2.3 Computing And Data N	2.3.1 Core Software	UMD	GR	HELLAUER, ROBERT										0.25		0.25	
2.3 Computing And Data N	2.3.1 Core Software	UMD	GR	MEAGHER, KEVIN										0.50		0.50	
2.3 Computing And Data N	2.3.1 Core Software	UW	TE	DIAZ-VELEZ, JUAN CARLOS										0.80		0.80	
2.3 Computing And Data N	2.3.1 Core Software	UW	TE	FADIRAN, OLADIPO										0.20		0.20	
2.3 Computing And Data N	2.3.1 Core Software	UW	PO	WHITEHORN, NATHAN										0.20		0.20	
2.3 Computing And Data N	2.3.1 Core Software	UW	PO	NEILSON, NAOKO										0.10		0.10	
2.3 Computing And Data N	2.3.1 Core Software	US Total											1.00	1.05	0.00	2.05	
2.3 Computing And Data N	2.3.1 Core Software	UU	SC	BOERSMA, DAVID											0.10	0.10	
2.3 Computing And Data N	2.3.1 Core Software	Non-US Total												1.00	1.05	0.00	
2.3 Computing And Data N	2.3.1 Core Software															2.15	
2.3 Computing And Data N	2.3.2 Data Storage & Transfer	UW	TE	FADIRAN, OLADIPO										0.20		0.20	
2.3 Computing And Data N	2.3.2 Data Storage & Transfer	UW	TE	RICHARDS, JOHN										1.00		1.00	
2.3 Computing And Data N	2.3.2 Data Storage & Transfer	UW	TE	Auer, Ralf										0.38		0.38	
2.3 Computing And Data N	2.3.2 Data Storage & Transfer	UW	CS	MEADE, PATRICK										0.50		0.50	
2.3 Computing And Data N	2.3.2 Data Storage & Transfer	US Total												2.08	0.00	0.00	
2.3 Computing And Data N	2.3.2 Data Storage & Transfer	DESY	GR	SCHÖNWALD, ARNE										0.10		0.10	
2.3 Computing And Data N	2.3.2 Data Storage & Transfer	Non-US Total												0.10		0.10	
2.3 Computing And Data N	2.3.2 Data Storage & Transfer													2.08	0.00	0.10	
2.3 Computing And Data N	2.3.3 Computing Resources	PSU	PO	CLARK, KEN										0.25		0.25	
2.3 Computing And Data N	2.3.3 Computing Resources	SUBR	KE	TER-ANTONYAN, SAMVEL										0.30		0.30	
2.3 Computing And Data N	2.3.3 Computing Resources	UW	TE	SKARLUPKA, HEATH										1.00		1.00	
2.3 Computing And Data N	2.3.3 Computing Resources	UW	TE	Barnet, Steve										1.00		1.00	
2.3 Computing And Data N	2.3.3 Computing Resources	UW	TE	BELLINGER, JIM										0.50		0.50	
2.3 Computing And Data N	2.3.3 Computing Resources	UW	TE	WISNIEWSKI, PAUL										0.75		0.75	
2.3 Computing And Data N	2.3.3 Computing Resources	UW	TE	Auer, Ralf										0.38		0.38	
2.3 Computing And Data N	2.3.3 Computing Resources	US Total												3.88	0.00	0.30	
2.3 Computing And Data N	2.3.3 Computing Resources	DESY	TE	DESY TE											2.00		2.00
2.3 Computing And Data N	2.3.3 Computing Resources	DESY	GR	JACOBI, EMANUEL											0.20		0.20
2.3 Computing And Data N	2.3.3 Computing Resources	UU	GR	TAAVOLA, HENRIC											0.20		0.20
2.3 Computing And Data N	2.3.3 Computing Resources	DTMND	SC	PIELOTH, DAMIAN											0.25		0.25
2.3 Computing And Data N	2.3.3 Computing Resources	SU	SC	SU SC											0.40		0.40
2.3 Computing And Data N	2.3.3 Computing Resources	UMH	GR	KOHNEN, GEORGES											0.30		0.30
2.3 Computing And Data N	2.3.3 Computing Resources	Non-US Total													3.35	3.35	
2.3 Computing And Data N	2.3.3 Computing Resources													3.88	0.00	0.30	
2.3 Computing And Data N	2.3.4 Data Production Processing	UW	GR	SANTANDER, MARCOS											0.15		0.15
2.3 Computing And Data N	2.3.4 Data Production Processing	UW	CS	MEADE, PATRICK											0.50		0.50

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		Cat.	Description	Cat.	Description	Cat.	Description	Cat.	Description	Cat.	Description					
2.3 Computing And Data	2.3.4 Data Production Processing	AD	Administration	GR	Graduate Student	PO	Postdoctoral Scientist	TE	Technician							
2.3 Computing And Data	2.3.4 Data Production Processing	CS	Computer Science Eng.	KE	Key Personnel/Faculty	SC	Scientist	WO	Winterover							
2.3 Computing And Data	2.3.4 Data Production Processing	EN	Engineer	MA	Management	SE	Senior Engineer									
2.3 Computing And Data	2.3.4 Data Production Processing															
2.3 Computing And Data	2.3.4 Data Production Processing	US Total										0.50	0.15	0.00		0.65
2.3 Computing And Data	2.3.4 Data Production Processing	Non-US Total												0.00		0.00
2.3 Computing And Data	2.3.4 Data Production Processing											0.50	0.15	0.00	0.00	0.65
2.3 Computing And Data	2.3.5 Simulation Production	LBNL	PO	GERHARDT, LISA								0.20				0.20
2.3 Computing And Data	2.3.5 Simulation Production	PSU	PO	KOSKINEN, JASON								0.08				0.08
2.3 Computing And Data	2.3.5 Simulation Production	PSU	PO	CLARK, KEN								0.08				0.08
2.3 Computing And Data	2.3.5 Simulation Production	UD	PO	TAMBURRO, ALESSIO								0.35				0.35
2.3 Computing And Data	2.3.5 Simulation Production	UD	PO	HUSSAIN, SHAHID								0.15				0.15
2.3 Computing And Data	2.3.5 Simulation Production	UMD	GR	CHRISTY, BRIAN								0.25				0.25
2.3 Computing And Data	2.3.5 Simulation Production	UW	SC	DESIATI, PAOLO								0.20				0.20
2.3 Computing And Data	2.3.5 Simulation Production	UW	SC	DESIATI, PAOLO								0.20				0.20
2.3 Computing And Data	2.3.5 Simulation Production	UW	GR	MCNALLY, FRANK								0.30				0.30
2.3 Computing And Data	2.3.5 Simulation Production	UW	TE	FADIRAN, OLADIPO								0.60				0.60
2.3 Computing And Data	2.3.5 Simulation Production	US Total										1.00	1.26	0.15		2.41
2.3 Computing And Data	2.3.5 Simulation Production	DESY	SC	GORA, DARIUSZ								0.20				0.20
2.3 Computing And Data	2.3.5 Simulation Production	DESY	PO	KARG, TIMO								0.20				0.20
2.3 Computing And Data	2.3.5 Simulation Production	DESY	GR	DESY GR								0.15				0.15
2.3 Computing And Data	2.3.5 Simulation Production	DTMND	GR	DTMD GR								0.40				0.40
2.3 Computing And Data	2.3.5 Simulation Production	RWTH	GR	PAUL, LARRISA								0.30				0.30
2.3 Computing And Data	2.3.5 Simulation Production	RWTH	GR	LEIF RADEL								0.10				0.10
2.3 Computing And Data	2.3.5 Simulation Production	ULB	PO	ULB PO								0.10				0.10
2.3 Computing And Data	2.3.5 Simulation Production	VUB	PO	MILLER, JONATHAN								0.13				0.13
2.3 Computing And Data	2.3.5 Simulation Production	ALBERTA	KE	GRANT, DARREN								0.10				0.10
2.3 Computing And Data	2.3.5 Simulation Production	ALBERTA	GR	WOOD, TANIA								0.20				0.20
2.3 Computing And Data	2.3.5 Simulation Production	WUPPERTAL	GR	WUPPERTAL GR								0.20				0.20
2.3 Computing And Data	2.3.5 Simulation Production	MAINZ	GR	WIEBE, KLAUS								0.10				0.10
2.3 Computing And Data	2.3.5 Simulation Production	UMH	GR	KOHNNEN, GEORGES								0.25				0.25
2.3 Computing And Data	2.3.5 Simulation Production	EPFL	PO	BRUIJN, RONALD								0.15				0.15
2.3 Computing And Data	2.3.5 Simulation Production	Non-US Total										2.88				2.88
2.3 Computing And Data	2.3.5 Simulation Production											1.00	1.26	0.15	2.88	5.29
2.3 Computing And Data	WBS L2 Total											8.45	2.46	0.45	6.43	17.79
2.4 Triggering And Filtering	2.4.1 TFT Coordination	GTECH	KE	TABOADA, IGNACIO								0.25				0.25
2.4 Triggering And Filtering	2.4.1 TFT Coordination	UA	KE	WILLIAMS, DAWN								0.10				0.10
2.4 Triggering And Filtering	2.4.1 TFT Coordination	UD	KE	SECKEL, DAVID								0.10				0.10
2.4 Triggering And Filtering	2.4.1 TFT Coordination	UMD	SC	BLAUFUSS, ERIK								0.30				0.30
2.4 Triggering And Filtering	2.4.1 TFT Coordination	UMD	GR	HELLAUER, ROBERT								0.20				0.20
2.4 Triggering And Filtering	2.4.1 TFT Coordination	US Total										0.30	0.45	0.20		0.95
2.4 Triggering And Filtering	2.4.1 TFT Coordination	ALBERTA	KE	GRANT, DARREN								0.10				0.10
2.4 Triggering And Filtering	2.4.1 TFT Coordination	BONN	PO	BOSSER, SEBASTIAN								0.10				0.10
2.4 Triggering And Filtering	2.4.1 TFT Coordination	DESY	PO	BERGHAUS, PATRICK								0.10				0.10
2.4 Triggering And Filtering	2.4.1 TFT Coordination	DESY	PO	KARG, TIMO								0.10				0.10
2.4 Triggering And Filtering	2.4.1 TFT Coordination	DPMC	KE	MONTARULI, TERESA								0.10				0.10
2.4 Triggering And Filtering	2.4.1 TFT Coordination	UU	KE	HALLGREN, ALLAN								0.10				0.10
2.4 Triggering And Filtering	2.4.1 TFT Coordination	UU	KE	DE LOS HEROS, CARLOS								0.10				0.10
2.4 Triggering And Filtering	2.4.1 TFT Coordination	Non-US Total										0.50				0.50
2.4 Triggering And Filtering	2.4.1 TFT Coordination											0.30	0.45	0.20	0.50	1.45
2.4 Triggering And Filtering	2.4.2 Physics Filters	UA	GR	LARSON, MICHAEL								0.15				0.15
2.4 Triggering And Filtering	2.4.2 Physics Filters	UA	GR	PEPPER, JAMES								0.20				0.20
2.4 Triggering And Filtering	2.4.2 Physics Filters	StonyBrook	KE	WILLIAMS, DAWN								0.25				0.25
2.4 Triggering And Filtering	2.4.2 Physics Filters	StonyBrook	KE	KIRYLUK, JOANNA								0.25				0.25
2.4 Triggering And Filtering	2.4.2 Physics Filters	StonyBrook	KE	KLEIN, SPENCER								0.25				0.25
2.4 Triggering And Filtering	2.4.2 Physics Filters	StonyBrook	PO	CHANG, HYON HA								0.30				0.30
2.4 Triggering And Filtering	2.4.2 Physics Filters	PSU	KE	DEYOUNG, TYCE								0.20				0.20
2.4 Triggering And Filtering	2.4.2 Physics Filters	UCB	SC	WOSCHNAGG, KURT								0.10				0.10
2.4 Triggering And Filtering	2.4.2 Physics Filters	GTECH	GR	DAUGHHETEE, JACOB								0.15				0.15
2.4 Triggering And Filtering	2.4.2 Physics Filters	UD	PO	TAMBURRO, ALESSIO								0.25				0.25
2.4 Triggering And Filtering	2.4.2 Physics Filters	UMD	SC	BLAUFUSS, ERIK								0.25				0.25
2.4 Triggering And Filtering	2.4.2 Physics Filters	UMD	PO	WISSING, HENRIKE								0.25				0.25
2.4 Triggering And Filtering	2.4.2 Physics Filters	StonyBrook	PO	LESIAK-BZDAK, MARIOLA								0.20				0.20
2.4 Triggering And Filtering	2.4.2 Physics Filters	OSU	PO	ROTT, CARSTEN								0.25				0.25
2.4 Triggering And Filtering	2.4.2 Physics Filters	UWRF	KE	SEUNARAJAN, SURUJ								0.20				0.20
2.4 Triggering And Filtering	2.4.2 Physics Filters	UW	KE	WESTERHOFF, STEFAN								0.25				0.25
2.4 Triggering And Filtering	2.4.2 Physics Filters	UW	PO	AUFFENBERG, JAN								0.15				0.15
2.4 Triggering And Filtering	2.4.2 Physics Filters	UW	GR	WEAVER, CHRISTOPHER								0.10				0.10
2.4 Triggering And Filtering	2.4.2 Physics Filters	UU	SC	BOERSMA, DAVID								0.00	2.35	1.40	0.00	3.75
2.4 Triggering And Filtering	2.4.2 Physics Filters	SU	GR	BOHM, CHRISTIAN								0.10				0.10
2.4 Triggering And Filtering	2.4.2 Physics Filters	ALBERTA	KE	GRANT, DARREN								0.25				0.25
2.4 Triggering And Filtering	2.4.2 Physics Filters	CHIBA	SC	ISHIHARA, AYA								0.25				0.25
2.4 Triggering And Filtering	2.4.2 Physics Filters	CHIBA	SC	ISHIHARA, AYA								0.15				0.15
2.4 Triggering And Filtering	2.4.2 Physics Filters	DESY	SC	GORA, DARIUSZ								0.15				0.15
2.4 Triggering And Filtering	2.4.2 Physics Filters	DESY	PO	BERGHAUS, PATRICK								0.25				0.25
2.4 Triggering And Filtering	2.4.2 Physics Filters	UU	SC	BOERSMA, DAVID								0.15				0.15
2.4 Triggering And Filtering	2.4.2 Physics Filters	SU	KE	FINLEY, CHAD SU								0.25				0.25

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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													
2.4 Triggering And Filtering	2.4.2 Physics Filters	SU	GR	ZOLL, MARCEL		Filters and Simulations								0.15	0.15	0.15		
2.4 Triggering And Filtering	2.4.2 Physics Filters	SU	GR	DANNINGER, MATTIAS		WIMP Trigger & Filter								0.10	0.10			
2.4 Triggering And Filtering	2.4.2 Physics Filters	ULB	GR	BECHET, SABRIN		Development of tau --> muon filter								0.15	0.15			
2.4 Triggering And Filtering	2.4.2 Physics Filters	UU	KE	HALLGREN, ALLAN		Online filter development								0.20	0.20			
2.4 Triggering And Filtering	2.4.2 Physics Filters	UU	KE	DE LOS HEROS, CARLOS		WIMP WG Chair								0.25	0.25			
2.4 Triggering And Filtering	2.4.2 Physics Filters	UU	GR	STROM, RICKARD		Online filter development & testing								0.20	0.20			
2.4 Triggering And Filtering	2.4.2 Physics Filters	VUB	PO	LABARE, MATHIEU		Filter for Southern sky muons								0.25	0.25			
2.4 Triggering And Filtering	2.4.2 Physics Filters	VUB	GR	KUNNEN JAN		Filter for Southern sky muons								0.50	0.50			
2.4 Triggering And Filtering	2.4.2 Physics Filters	WUPPERTAL	KE	HELBLING, KLAUS		Exotics- WG chair								0.25	0.25			
2.4 Triggering And Filtering	2.4.2 Physics Filters	WUPPERTAL	GR	WUPPERTAL GR		New SUSY Filter								0.20	0.20			
2.4 Triggering And Filtering	2.4.2 Physics Filters	DPNC	KE	MONTARULI, TERESA		Online filtering								0.10	0.10			
2.4 Triggering And Filtering	2.4.2 Physics Filters	DPNC	PO	AGUILAR SANCHEZ JUAN A		Online filtering								0.10	0.10			
2.4 Triggering And Filtering	2.4.2 Physics Filters	DPNC	GR	ASEN, CHRISTOV		Online filtering								0.10	0.10			
2.4 Triggering And Filtering	2.4.2 Physics Filters	DPNC	GR	RAAMEZ MOHAMED		Muon/EHE Filter								0.20	0.20			
2.4 Triggering And Filtering	2.4.2 Physics Filters	BONN	KE	KOWALSKI, MAREK		Cascade WG Co-Chair								0.25	0.25			
2.4 Triggering And Filtering	2.4.2 Physics Filters	BONN	GR	FRANCKOWIAK, ANNA		Alert System for follow-up								0.10	0.10			
2.4 Triggering And Filtering	2.4.2 Physics Filters	BONN	GR	HOMRIER, ANDREAS		Alert System for follow-up								0.10	0.10			
2.4 Triggering And Filtering	2.4.2 Physics Filters	Non-US Total												4.50	4.50			
2.4 Triggering And Filtering	2.4.2 Physics Filters													0.00	2.35	1.40	4.50	8.25
2.4 Triggering And Filtering	WBS L2 Total													0.30	2.80	1.60	5.00	9.70
2.5 Data Quality, Reconstr	2.5.1 Simulation Programs	LBNL	PO	CHANG, HYON HA		DOM simulator & calibrator								0.10	0.10			
2.5 Data Quality, Reconstr	2.5.1 Simulation Programs	LBNL	PO	GERHARDT,LISA		Simulation Programs: cmc								0.20	0.20			
2.5 Data Quality, Reconstr	2.5.1 Simulation Programs	SUBR	KE	FAZELY, ALI		GEANT Simulation								0.15	0.15			
2.5 Data Quality, Reconstr	2.5.1 Simulation Programs	SUBR	SC	XIANWU, XU		Simulation Programs								0.15	0.15			
2.5 Data Quality, Reconstr	2.5.1 Simulation Programs	KE	PO	TOALE, PATRICK		Trigger simulation								0.10	0.10			
2.5 Data Quality, Reconstr	2.5.1 Simulation Programs	UA	GR	LARSON, MICHAEL		Noise simulation								0.15	0.15			
2.5 Data Quality, Reconstr	2.5.1 Simulation Programs	UA	KE	TOALE, PATRICK		Trigger simulation								0.10	0.10			
2.5 Data Quality, Reconstr	2.5.1 Simulation Programs	UCB	SC	WOSCHNAGG, KURT		Maintain and Verify Simulation of Photon Propagation and update Ice Properties								0.50	0.50			
2.5 Data Quality, Reconstr	2.5.1 Simulation Programs	UD	PO	GONZALEZ, JAVIER		Simulations								0.10	0.10			
2.5 Data Quality, Reconstr	2.5.1 Simulation Programs	UD	GR	RUZYBAEV , BAKHTIYAR		Ice Properties Simulation								0.30	0.30			
2.5 Data Quality, Reconstr	2.5.1 Simulation Programs	UD	GR	UD GR		Simulation Programs: sim-services								0.30	0.30			
2.5 Data Quality, Reconstr	2.5.1 Simulation Programs	UMD	PO	OLIVAS, ALEX		Simulation Software Programs coordinator								0.40	0.40			
2.5 Data Quality, Reconstr	2.5.1 Simulation Programs	UMD	PO	WISSING, HENRIKE		Maintain Detector Simulation (IceSim)								0.13	0.13			
2.5 Data Quality, Reconstr	2.5.1 Simulation Programs	UMD	GR	REDL, PETER		Maintain Detector Simulation (IceSim)								0.25	0.25			
2.5 Data Quality, Reconstr	2.5.1 Simulation Programs	UW	SC	CHIRKIN, DMITRY		Maintain and Verify Simulation of Photon Propagation and update Ice Properties								0.35	0.35			
2.5 Data Quality, Reconstr	2.5.1 Simulation Programs	UW	SC	HOSHINA, KOTOYO		nuigen maintenance								0.25	0.25			
2.5 Data Quality, Reconstr	2.5.1 Simulation Programs	UW	PO	KOPPER, CLAUDIO		Direct photon propagation, IceTray, Simulations, Genie								0.25	0.25			
2.5 Data Quality, Reconstr	2.5.1 Simulation Programs	UW	GR	RIEDEL, BENEDICT		Supernova DAQ, simulation								0.20	0.20			
2.5 Data Quality, Reconstr	2.5.1 Simulation Programs	UW	TE	DIAZ-VELEZ, JUAN CARLOS		Maintain Simulation Production Software								0.20	0.20			
2.5 Data Quality, Reconstr	2.5.1 Simulation Programs	US Total												1.70	2.18	0.30	4.18	
2.5 Data Quality, Reconstr	2.5.1 Simulation Programs	DTMND	GR	MILKE, NATALIE		Simulation Programs: noise-generator								0.20	0.20			
2.5 Data Quality, Reconstr	2.5.1 Simulation Programs	SU	KE	HULTQVIST, KLAS		Simulation Work								0.10	0.10			
2.5 Data Quality, Reconstr	2.5.1 Simulation Programs	SU	GR	FLIS, SAMUEL		DOM simulation								0.15	0.15			
2.5 Data Quality, Reconstr	2.5.1 Simulation Programs	UOX	KE	SARKAR, SUBIR		Yellow Book-maintenance								0.10	0.10			
2.5 Data Quality, Reconstr	2.5.1 Simulation Programs	GENT	SC	UGENT SC		Support IceTop Simulations, IceTop Calibrations, IceTop Reconstruction								0.10	0.10			
2.5 Data Quality, Reconstr	2.5.1 Simulation Programs	GENT	GR	UGENT GR		Support IceTop Simulations, IceTop Calibrations, IceTop Reconstruction								0.40	0.40			
2.5 Data Quality, Reconstr	2.5.1 Simulation Programs	BOCHUM	KE	TJUS, JULIA		Development PROPOSAL simulation software								0.10	0.10			
2.5 Data Quality, Reconstr	2.5.1 Simulation Programs	BOCHUM	GR	SCH6NEBERG, SEBASTIAN		Monte Carlo Production								0.10	0.10			
2.5 Data Quality, Reconstr	2.5.1 Simulation Programs	BOCHUM	GR	OLIVO, MARTINO		Monte Carlo Validation								0.10	0.10			
2.5 Data Quality, Reconstr	2.5.1 Simulation Programs	RWTH	GR	BLUMENTHAL, JAN		Photonics Production								0.10	0.10			
2.5 Data Quality, Reconstr	2.5.1 Simulation Programs	RWTH	GR	LEIF RADEL		Implementation of new light yield factors in IceCube software								0.10	0.10			
2.5 Data Quality, Reconstr	2.5.1 Simulation Programs	RWTH	GR	SEBASTIAN SCHÖNEN		Data driven Simulation tools for magnetic monopoles								0.10	0.10			
2.5 Data Quality, Reconstr	2.5.1 Simulation Programs	EPFL	KE	RIBORDY, MATHIEU		Supernova detector (extension) responses								0.20	0.20			
2.5 Data Quality, Reconstr	2.5.1 Simulation Programs	EPFL	PO	BRUIJN, RONALD		Supernova detector (extension) responses								0.30	0.30			
2.5 Data Quality, Reconstr	2.5.1 Simulation Programs	Non-US Total												2.15	2.15			
2.5 Data Quality, Reconstr	2.5.2 Reconstruction/ Analysis Tools	LBNL	GR	MIARECKI, SANDRA		Algorithm for measuring muon energy								0.30	0.30			
2.5 Data Quality, Reconstr	2.5.2 Reconstruction/ Analysis Tools	LBNL	GR	BINDER, GARY		Cascade reconstruction algorithm								0.20	0.20			
2.5 Data Quality, Reconstr	2.5.2 Reconstruction/ Analysis Tools	PSU	PO	KOSKINEN, JASON		Integrating the GENIE Monte Carlo software into IceCube software								0.20	0.20			
2.5 Data Quality, Reconstr	2.5.2 Reconstruction/ Analysis Tools	PSU	PO	KOSKINEN, JASON		Coordinate reconstruction scripts for production								0.10	0.10			
2.5 Data Quality, Reconstr	2.5.2 Reconstruction/ Analysis Tools	PSU	PO	TESIC, GORDANA		Integrate IceCube into AMON								0.50	0.50			
2.5 Data Quality, Reconstr	2.5.2 Reconstruction/ Analysis Tools	PSU	GR	DUNKMAN, MATT		develop starting track reconstruction - hybrid reco.								0.50	0.50			
2.5 Data Quality, Reconstr	2.5.2 Reconstruction/ Analysis Tools	SUBR	KE	FAZELY, ALI		Reconstruction/ Analysis tools								0.15	0.15			
2.5 Data Quality, Reconstr	2.5.2 Reconstruction/ Analysis Tools	SUBR	SC	XIANWU, XU		Reconstruction/ Analysis tools								0.15	0.15			
2.5 Data Quality, Reconstr	2.5.2 Reconstruction/ Analysis Tools	UA	KE	TOALE, PATRICK		Double cascade fitter								0.10	0.10			

IceCube M&O Staffing Matrix sort by WBS v13.0 2012.1001

WBS L2	WBS L3	Institution						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	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															
2.5 Data Quality, Reconstruction/ Analysis Tools	UA XU, DONGLIAN	Improvements to low energy analysis framework				0.10		0.10		0.10		0.10		0.10		0.10	
2.5 Data Quality, Reconstruction/ Analysis Tools	UA GR UA PO	Extension of GENIE to higher energies, GENIE/nugen comparison				0.10		0.10		0.10		0.10		0.10		0.10	
2.5 Data Quality, Reconstruction/ Analysis Tools	UA GR UA PO	Hybrid reconstruction tools				0.20		0.20		0.20		0.20		0.20		0.20	
2.5 Data Quality, Reconstruction/ Analysis Tools	UD PO GONZALEZ, JAVIER	Event reconstruction				0.25		0.25		0.25		0.25		0.25		0.25	
2.5 Data Quality, Reconstruction/ Analysis Tools	UAA KE RAWLINS, KATHERINE	flat-ntuple; muon-bundle-reco; Snow correction for IceTop				0.30		0.30		0.30		0.30		0.30		0.30	
2.5 Data Quality, Reconstruction/ Analysis Tools	UMD PO WISSING, HENRIKE	develop & test reconstruction				0.13		0.13		0.13		0.13		0.13		0.13	
2.5 Data Quality, Reconstruction/ Analysis Tools	UMD GR REDL, PETER	Reconstruction/ Analysis tools				0.25		0.25		0.25		0.25		0.25		0.25	
2.5 Data Quality, Reconstruction/ Analysis Tools	StonyBrook PO LESIAK-BZDAK, MARIOLA	Flashers and Standard Candle				0.10		0.10		0.10		0.10		0.10		0.10	
2.5 Data Quality, Reconstruction/ Analysis Tools	StonyBrook PO LESIAK-BZDAK, MARIOLA	BadDomList software maintenance				0.10		0.10		0.10		0.10		0.10		0.10	
2.5 Data Quality, Reconstruction/ Analysis Tools	StonyBrook GR NIEDERHAUSEN, HANS	Standard Candle				0.10		0.10		0.10		0.10		0.10		0.10	
2.5 Data Quality, Reconstruction/ Analysis Tools	StonyBrook GR NIEDERHAUSEN, HANS	Cascade reconstruction				0.10		0.10		0.10		0.10		0.10		0.10	
2.5 Data Quality, Reconstruction/ Analysis Tools	UW SC CHIRKIN, DMITRY	Direct photon tracking / iceproperties calibration; FE/pulse extractor; reco S/W				0.30		0.30		0.30		0.30		0.30		0.30	
2.5 Data Quality, Reconstruction/ Analysis Tools	UW PO AUFFENBERG, JAN	Energy Reconstruction				0.15		0.15		0.15		0.15		0.15		0.15	
2.5 Data Quality, Reconstruction/ Analysis Tools	UW GR GLADSTONE, LAURA	Reconstruction tools-Deep Core				0.15		0.15		0.15		0.15		0.15		0.15	
2.5 Data Quality, Reconstruction/ Analysis Tools	UW GR FEINTZIG, JACOB	Event reconstruction (spline fits)				0.15		0.15		0.15		0.15		0.15		0.15	
2.5 Data Quality, Reconstruction/ Analysis Tools	UW GR VAN SANTEN, JACOB	Cascades				0.30		0.30		0.30		0.30		0.30		0.30	
2.5 Data Quality, Reconstruction/ Analysis Tools	UWRF KE MADSEN, JIM	Event Reconstruction				0.30		0.30		0.30		0.30		0.30		0.30	
2.5 Data Quality, Reconstruction/ Analysis Tools	UWRF KE SEUNARINE, SURUJ	Cosmic ray shower simulations and reconstruction				0.10		0.10		0.10		0.10		0.10		0.10	
US Total												0.00		3.98		1.40	
2.5 Data Quality, Reconstruction/ Analysis Tools	ADELAIDE KE HILL, GARY	Event energy and direction reconstruction, millipede				0.40		0.40		0.40		0.40		0.40		0.40	
2.5 Data Quality, Reconstruction/ Analysis Tools	ADELAIDE GR AARTSEN, MARK	Event energy and direction reconstruction, millipede				0.50		0.50		0.50		0.50		0.50		0.50	
2.5 Data Quality, Reconstruction/ Analysis Tools	CHIBA KE YOSHIDA, SHIGERU	Maintain Romeo, EHE Simulations, Calibration using Standard Candles				0.20		0.20		0.20		0.20		0.20		0.20	
2.5 Data Quality, Reconstruction/ Analysis Tools	CHIBA SC KEIICHI MASE	Maintain Romeo, EHE Simulations, Maintain reconstruction projects (Portia), MC/Data comparison for EHE-filtered and IceTop events, Standard Candle Analysis				0.20		0.20		0.20		0.20		0.20		0.20	
2.5 Data Quality, Reconstruction/ Analysis Tools	CHIBA GR CHIBA GR	Improve the Ice Model, Afterpulse Simulator, Standard Candle Analysis, Maintain reconstruction projects (Ophelia, ehe-star)				0.20		0.20		0.20		0.20		0.20		0.20	
2.5 Data Quality, Reconstruction/ Analysis Tools	DESY GR SCHÖNWALD, ARNE	Cascade Reconstruction				0.10		0.10		0.10		0.10		0.10		0.10	
2.5 Data Quality, Reconstruction/ Analysis Tools	UU SC BOERSMA, DAVID	Reconstruction Coordinator				0.20		0.20		0.20		0.20		0.20		0.20	
2.5 Data Quality, Reconstruction/ Analysis Tools	RWTH GR VEHRING, MARKUS	Finite track reconstruction				0.10		0.10		0.10		0.10		0.10		0.10	
2.5 Data Quality, Reconstruction/ Analysis Tools	RWTH GR VEHRING, MARKUS	Genie MC development				0.20		0.20		0.20		0.20		0.20		0.20	
2.5 Data Quality, Reconstruction/ Analysis Tools	RWTH GR WALLRAFF, MARIUS	Oscillation Propagation tool for neutrino oscillations in Earth				0.10		0.10		0.10		0.10		0.10		0.10	
2.5 Data Quality, Reconstruction/ Analysis Tools	SU GR FLIS, SAMUEL	Energy Reconstruction				0.10		0.10		0.10		0.10		0.10		0.10	
2.5 Data Quality, Reconstruction/ Analysis Tools	SU GR WOLF, MARTIN	Truncated Mean, EventViewer, cluster tool				0.20		0.20		0.20		0.20		0.20		0.20	
2.5 Data Quality, Reconstruction/ Analysis Tools	VUB KE VAN EIJDHOVEN, NICK	development of reconstruction tools (IcePack framework)				0.25		0.25		0.25		0.25		0.25		0.25	
2.5 Data Quality, Reconstruction/ Analysis Tools	VUB PO BOSE, DEBANJAN	muon track reconstruction in IceCube and DeepCore, waveform feature extractor				0.25		0.25		0.25		0.25		0.25		0.25	
2.5 Data Quality, Reconstruction/ Analysis Tools	VUB PO LABARE, MATHIEU	muon track reconstruction in IceCube and DeepCore				0.13		0.13		0.13		0.13		0.13		0.13	
2.5 Data Quality, Reconstruction/ Analysis Tools	VUB PO GOLUP, GERALDINA	muon track reconstruction for IceCube and DeepCore				0.25		0.25		0.25		0.25		0.25		0.25	
2.5 Data Quality, Reconstruction/ Analysis Tools	VUB GR CASIER MARTIN	muon track reconstruction in IceCube and DeepCore				0.50		0.50		0.50		0.50		0.50		0.50	
2.5 Data Quality, Reconstruction/ Analysis Tools	VUB GR BRAYEUR LIONEL	muon track reconstruction in IceCube and DeepCore				0.50		0.50		0.50		0.50		0.50		0.50	
2.5 Data Quality, Reconstruction/ Analysis Tools	ALBERTA KE GRANT, DARREN	Maintenance of IceCube-Photonics interface				0.10		0.10		0.10		0.10		0.10		0.10	
2.5 Data Quality, Reconstruction/ Analysis Tools	WUPPERTAL GR WUPPERTAL GR	New SUSY Reconstruction, Simulation, Propagation, Monopole, Photonics				0.50		0.50		0.50		0.50		0.50		0.50	

IceCube M&O Staffing Matrix sort by WBS v13.0 2012.1001

WBS L2	WBS L3	Institution						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	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											
2.5 Data Quality, Reconstr	2.5.2 Reconstruction/ Analysis Tools	MAINZ	GR	SCHATTO, KAI		PPC based tables	Muon reconstruction								0.10	0.10
2.5 Data Quality, Reconstr	2.5.2 Reconstruction/ Analysis Tools	MAINZ	GR	WIEBE, KLAUS		Angular res. Cascades									0.20	0.20
2.5 Data Quality, Reconstr	2.5.2 Reconstruction/ Analysis Tools	HUMBOLDT	KE	KOLANOSKI, HERMANN		Reconstruction/ Analysis tools									0.10	0.10
2.5 Data Quality, Reconstr	2.5.2 Reconstruction/ Analysis Tools	HUMBOLDT	GR	ALTMANN, DAVID		Improving the track reconstruction.									0.15	0.15
2.5 Data Quality, Reconstr	2.5.2 Reconstruction/ Analysis Tools	BONN	GR	UBONN GR		Reconstruction/ Analysis tools									0.20	0.20
2.5 Data Quality, Reconstr	2.5.2 Reconstruction/ Analysis Tools	BONN	GR	PANKNIN, SEBASTIAN		IC-40 L3 processing									0.20	0.20
2.5 Data Quality, Reconstr	Non-US Total														5.93	5.93
2.5 Data Quality, Reconstr	2.5.2 Reconstruction/ Analysis Tools											0.00	3.98	1.40	5.93	11.30
2.5 Data Quality, Reconstr	2.5.3 Data Quality	US Total										0.00	0.00	0.00	0.00	0.00
2.5 Data Quality, Reconstr	2.5.3 Data Quality	Munchen	PO	MPI PO		Data Quality & DeepCore									0.60	0.60
2.5 Data Quality, Reconstr	2.5.3 Data Quality	DPNC	GR	ASEN, CHRISTOV		Data and Simulation Quality									0.20	0.20
2.5 Data Quality, Reconstr	2.5.3 Data Quality	DPNC	GR	RAAMEZ MOHAMED		Data and Simulation Quality									0.20	0.20
2.5 Data Quality, Reconstr	2.5.3 Data Quality	DPNC	PO	AGUILAR SANCHEZ JUAN A		Data and Simulation Quality									0.20	0.20
2.5 Data Quality, Reconstr	2.5.3 Data Quality	VUB	KE	VAN EIJNDHOVEN, NICK		data quality verification									0.25	0.25
2.5 Data Quality, Reconstr	2.5.3 Data Quality	VUB	PO	GOLUP, GERALDINA		GRB analysis									0.25	0.25
2.5 Data Quality, Reconstr	2.5.3 Data Quality	VUB	PO	BOSE, DEBANJAN		verification Deep Core data quality									0.25	0.25
2.5 Data Quality, Reconstr	2.5.3 Data Quality	VUB	PO	LABARE, MATHIEU		verification Deep Core data quality									0.13	0.13
2.5 Data Quality, Reconstr	2.5.3 Data Quality	VUB	PO	MILLER, JONATHAN		WIMP analysis									0.38	0.38
2.5 Data Quality, Reconstr	Non-US Total														2.45	2.45
2.5 Data Quality, Reconstr	2.5.3 Data Quality											0.00	0.00	0.00	2.45	2.45
2.5 Data Quality, Reconstr	2.5.4 Offline Data Processing	UW	PO	AUFFENBERG, JAN		Offline Data Processing - EHE									0.15	0.15
2.5 Data Quality, Reconstr	2.5.4 Offline Data Processing	UW	PO	KOPPER, CLAUDIO		L2 processing support									0.30	0.30
2.5 Data Quality, Reconstr	2.5.4 Offline Data Processing	UW	PO	NEILSON, NAKO		L2 Offline Processing									0.30	0.30
2.5 Data Quality, Reconstr	2.5.4 Offline Data Processing	UW	GR	FEINTZIG, JACOB		L2 processing, muon stream									0.20	0.20
2.5 Data Quality, Reconstr	US Total														0.60	0.35
2.5 Data Quality, Reconstr	Non-US Total														0.00	0.00
2.5 Data Quality, Reconstr	2.5.4 Offline Data Processing											0.60	0.35	0.00	0.00	0.95
2.5 Data Quality, Reconstr WBS L2 Total												2.30	6.50	1.70	10.53	21.03
Grand Total												30.75	14.89	7.34	31.90	84.87