

**IceCube M&O Staffing Matrix sort by WBS v13.1 2012.1022**

WBS L2	WBS L3	US /		Institution	Labor	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									
2.1 Program Management	2.1.1 Administration	US	LBNL	KE	KLEIN,SPENCER		Supervise LBNL effort	0.05				0.05		
2.1 Program Management	2.1.1 Administration	US	LBNL	KE	KLEIN,SPENCER		Pubcom member			0.10		0.10		
2.1 Program Management	2.1.1 Administration	US	UWRF	KE	MADSEN, JIM		Speakers Comm Chair			0.25		0.25		
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	PSU	KE	COWEN, DOUG		PINGU Co-Lead			0.25		0.25		
2.1 Program Management	2.1.1 Administration	US	UCB	SC	FILIMONOV, KIRILL		Pubcom member		0.10			0.10		
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		ExecCom member			0.20		0.20		
2.1 Program Management	2.1.1 Administration	US	UD	KE	STANEV, TODOR		Pubcom member			0.10		0.10		
2.1 Program Management	2.1.1 Administration	US	UMD	KE	SULLIVAN, GREG		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	WISSING, HENRIKE		Pubcom member		0.10			0.10		
2.1 Program Management	2.1.1 Administration	US	StonyBrook	KE	KIRYLUK,JOANNA		Simulation Prod. Comm member			0.05		0.05		
2.1 Program Management	2.1.1 Administration	US	UW	KE	HALZEN, FRANCIS		Principle Investigator	0.35				0.35		
2.1 Program Management	2.1.1 Administration	US	UW	KE	HALZEN, FRANCIS		Principle Investigator			0.15		0.15		
2.1 Program Management	2.1.1 Administration	US	UW	KE	KARLE, ALBRECHT		Associate Director for Science	0.25				0.25		
2.1 Program Management	2.1.1 Administration	US	UW	KE	KARLE, ALBRECHT		Coordination Committee chair	0.10				0.10		
2.1 Program Management	2.1.1 Administration	US	UW	KE	KARLE, ALBRECHT		ExecCom member			0.20		0.20		
2.1 Program Management	2.1.1 Administration	US	UW	KE	YECK, JAMES		Director of Operations	0.38				0.38		
2.1 Program Management	2.1.1 Administration	US	UW	MA	UW Manager		Computing Infrastructure Management	1.00				1.00		
2.1 Program Management	2.1.1 Administration	US	UW	MA	PELES, ADI		Resource Coordinator	0.75				0.75		
2.1 Program Management	2.1.1 Administration	US	UW	AD	Vakhnina, Catherine		Deputy Resource Coordinator	0.50				0.50		
2.1 Program Management	2.1.1 Administration	US	<b>US Total</b>					<b>3.68</b>	<b>0.30</b>	<b>1.80</b>		<b>5.78</b>		
2.1 Program Management	2.1.1 Administration	Non-US	ALBERTA	KE	GRANT, DARREN		Pubcom adjoint member				0.10	0.10		
2.1 Program Management	2.1.1 Administration	Non-US	DESY	KE	SPIERING, CHRISTIAN		ExecCom member				0.20	0.20		
2.1 Program Management	2.1.1 Administration	Non-US	DESY	SC	ACKERMANN, MARKUS		Analysis Coordinator				0.35	0.35		
2.1 Program Management	2.1.1 Administration	Non-US	DPNC	KE	MONTARULI, TERESA		ICB Member				0.10	0.10		
2.1 Program Management	2.1.1 Administration	Non-US	HUMBOLDT	KE	KAPPES, ALEXANDER		Pubcom member				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		ICB Member				0.05	0.05		
2.1 Program Management	2.1.1 Administration	Non-US	SU	KE	HULTQVIST, KLAS		ICB Member				0.05	0.05		
2.1 Program Management	2.1.1 Administration	Non-US	SU	KE	FINLEY, CHAD SU		Coordination with LIGO				0.10	0.10		
2.1 Program Management	2.1.1 Administration	Non-US	SU	KE	WALCK, CHRISTIAN		Publications Bookkeeping				0.10	0.10		
2.1 Program Management	2.1.1 Administration	Non-US	ULB	KE	HANSON, KAEI		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	VUB	KE	DE CLERCQ, CATHERINE		ExecCom member				0.20	0.20		
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	RWTH	KE	WIEBUSCH, CHRISTOPH		ExecCom member				0.20	0.20		
2.1 Program Management	2.1.1 Administration	Non-US	MAINZ	KE	KOPKE, LUTZ		Supernova group Co-Chair				0.25	0.25		
2.1 Program Management	2.1.1 Administration	Non-US	BOCHUM	KE	TJUS, JULIA		Pubcom member				0.10	0.10		
2.1 Program Management	2.1.1 Administration	Non-US	<b>Non-US Total</b>								<b>3.00</b>	<b>3.00</b>		
2.1 Program Management	<b>2.1.1 Administration</b>	<b>WBS L3</b>						<b>3.68</b>	<b>0.30</b>	<b>1.80</b>	<b>3.00</b>	<b>8.78</b>		

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WBS L2	WBS L3	US /		Institution	Labor	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									
2.1 Program Management	2.1.2 Engineering And R&D Support	US	KU	KE	BESSON, DAVE	EMI - Radio R&D				0.10		0.10		
2.1 Program Management	2.1.2 Engineering And R&D Support	US	UMD	KE	HOFFMAN, KARA	Detector R&D				0.20		0.20		
2.1 Program Management	2.1.2 Engineering And R&D Support	US	UW	PO	DAY, MELANIE	PINGU R&D			0.25			0.25		
2.1 Program Management	2.1.2 Engineering And R&D Support	US	UW	SC	DUVERNOIS, MICHAEL	Science Support			0.25			0.25		
2.1 Program Management	2.1.2 Engineering And R&D Support	US	UW	SC	DUVERNOIS, MICHAEL	EMI, Instrumentation, I/F			0.15			0.15		
2.1 Program Management	2.1.2 Engineering And R&D Support	US	UW	SE	LAUNDRIE, ANDREW	EMI, Instrumentation, I/F			0.10			0.10		
2.1 Program Management	2.1.2 Engineering And R&D Support	US	UW	SE	LAUNDRIE, ANDREW	Engineering Support			0.50			0.50		
2.1 Program Management	2.1.2 Engineering And R&D Support	US	UW	SE	SANDSTROM, PERRY	EMI, Instrumentation, I/F			0.15			0.15		
2.1 Program Management	2.1.2 Engineering And R&D Support	US	UW	SE	SANDSTROM, PERRY	Engineering Support			0.15			0.15		
2.1 Program Management	2.1.2 Engineering And R&D Support	US	UW	MA	HAUGEN, JAMES	Engineering Support			0.45			0.45		
2.1 Program Management	2.1.2 Engineering And R&D Support	US	<b>US Total</b>						1.75	0.25	0.30		2.30	
2.1 Program Management	2.1.2 Engineering And R&D Support	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 Support	Non-US	DESY	PO	KARG, TIMO	Acoustic						0.10	0.10	
2.1 Program Management	2.1.2 Engineering And R&D Support	Non-US	ALBERTA	KE	GRANT, DARREN	PINGU Co-Lead						0.10	0.10	
2.1 Program Management	2.1.2 Engineering And R&D Support	Non-US	RWTH	PO	LAIHEM, KARIM	Acoustic R&D Support						0.10	0.10	
2.1 Program Management	2.1.2 Engineering And R&D Support	Non-US	RWTH	PO	LAIHEM, KARIM	Acoustic monitoring						0.10	0.10	
2.1 Program Management	2.1.2 Engineering And R&D Support	Non-US	RWTH	GR	PAUL, LARRISA	RASTA Antenna Construction						0.10	0.10	
2.1 Program Management	2.1.2 Engineering And R&D Support	Non-US	RWTH	GR	PAUL, LARRISA	SPATS SD Maintenance						0.20	0.20	
2.1 Program Management	2.1.2 Engineering And R&D Support	Non-US	RWTH	GR	HEINEN, DIRK	Acoustic R&D Support						0.10	0.10	
2.1 Program Management	2.1.2 Engineering And R&D Support	Non-US	ULB	KE	HANSON, Kael	EMI/R&D						0.10	0.10	
2.1 Program Management	2.1.2 Engineering And R&D Support	Non-US	ULB	PO	O'MURCHADHA, AONG	EMI Measurements						0.10	0.10	
2.1 Program Management	2.1.2 Engineering And R&D Support	Non-US	ULB	GR	MEURES, THOMAS	EMI Measurements						0.25	0.25	
2.1 Program Management	2.1.2 Engineering And R&D Support	Non-US	WUPPERTAL	KE	HELBING, KLAUS	R&D Lead						0.10	0.10	
2.1 Program Management	2.1.2 Engineering And R&D Support	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 Support	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 Support	Non-US	<b>Non-US Total</b>									1.55	1.55	
2.1 Program Management	<b>2.1.2 Engineering And R&amp;D Support</b>	<b>WBS L3</b>							1.75	0.25	0.30	1.55	3.85	
2.1 Program Management	2.1.3 Usap Support	US	UW	AD	Hoefs, Edwin	Pole Planning and coordination			0.25				0.25	
2.1 Program Management	2.1.3 Usap Support	US	UW	MA	HAUGEN, JAMES	USAP Support			0.25				0.25	
2.1 Program Management	2.1.3 Usap Support	US	<b>US Total</b>						0.50				0.50	
2.1 Program Management	<b>2.1.3 Usap Support</b>	<b>WBS L3</b>							0.50				0.50	
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	Bacque, Laurel	Education & Outreach Coordination			0.25				0.25	
2.1 Program Management	2.1.4 Education & Outreach	US	UW	AD	Madsen, Megan	Education & Outreach Coordination			0.75				0.75	
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			0.10				0.10	
2.1 Program Management	2.1.4 Education & Outreach	US	<b>US Total</b>						1.20	0.00	0.25		1.45	
2.1 Program Management	<b>2.1.4 Education &amp; Outreach</b>	<b>WBS L3</b>							1.20	0.00	0.25		1.45	

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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							
<b>2.1 Program Management</b>	<b>WBS L2 Total</b>						<b>7.13</b>	<b>0.55</b>	<b>2.35</b>	<b>4.55</b>	<b>14.58</b>			
2.2 Detector Operations & Maintenance	2.2 Detector Operations & Maintenance	US	LBNL	KE	NYGREN, DAVID R	Track Engine Trigger			0.10		0.10			
2.2 Detector Operations & Maintenance	2.2.2 Data Acquisition	US	UW	SC	KELLEY, JOHN	Deputy Maintenance and Operations Manager	0.75				0.75			
2.2 Detector Operations & Maintenance	2.2 Detector Operations & Maintenance	<b>US US Total</b>					<b>0.75</b>	<b>0.00</b>	<b>0.10</b>		<b>0.85</b>			
2.2 Detector Operations & Maintenance	2.2 Detector Operations & Maintenance	Non-US	UMH	GR	KOHNEN, GEORGES	Database Coordinator				0.10	0.10			
		<b>Non-US Non-US Total</b>								<b>0.10</b>	<b>0.10</b>			
2.2 Detector Operations & Maintenance	<b>2.2 Detector Operations &amp; Maintenance</b>	<b>WBS L3</b>					<b>0.75</b>	<b>0.00</b>	<b>0.10</b>	<b>0.10</b>	<b>0.95</b>			
2.2 Detector Operations & Maintenance	2.2.1 Run Coordination	US	UW	TE	Auer, Ralf	Winter Overs coordinator	0.25				0.25			
2.2 Detector Operations & Maintenance	2.2.1 Run Coordination	US	UW	TE	UW Winter Overs	Operate Detector (Winter-Overs)	3.00				3.00			
2.2 Detector Operations & Maintenance	2.2.1 Run Coordination	<b>US US Total</b>					<b>3.25</b>	<b>0.00</b>	<b>0.00</b>		<b>3.25</b>			
2.2 Detector Operations & Maintenance	2.2.1 Run Coordination	Non-US	UC	GR	UC GR	Flasher Runs				0.10	0.10			
2.2 Detector Operations & Maintenance	2.2.1 Run Coordination	Non-US	BONN	PO	BOSSER, SEBASTIAN	Run Coordinator				0.50	0.50			
2.2 Detector Operations & Maintenance	2.2.1 Run Coordination	<b>Non-US Non-US Total</b>								<b>0.60</b>	<b>0.60</b>			
2.2 Detector Operations & Maintenance	<b>2.2.1 Run Coordination</b>	<b>WBS L3</b>					<b>3.25</b>	<b>0.00</b>	<b>0.00</b>	<b>0.60</b>	<b>3.85</b>			
2.2 Detector Operations & Maintenance	2.2.2 Data Acquisition	US	LBNL	EN	STEZELBERGER, THOR	Maintain DAQ Hardware (Hubs, DOR, Clocks, GPS,...)	0.15				0.15			
2.2 Detector Operations & Maintenance	2.2.2 Data Acquisition	US	UD	KE	SECKEL, DAVID	DAQ Monitoring			0.05		0.05			
2.2 Detector Operations & Maintenance	2.2.2 Data Acquisition	US	UW	SC	KELLEY, JOHN	DOM Cal Maintenance, DOM issues	0.15				0.15			
2.2 Detector Operations & Maintenance	2.2.2 Data Acquisition	US	UW	SC	WENDT, CHRISTOPHE	Flasher output, flasher calibration	0.20				0.20			
2.2 Detector Operations & Maintenance	2.2.2 Data Acquisition	US	UW	SC	WENDT, CHRISTOPHE	DOM charge response, linearity, DOM cal support	0.20				0.20			
2.2 Detector Operations & Maintenance	2.2.2 Data Acquisition	US	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 & Maintenance	2.2.2 Data Acquisition	US	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 & Maintenance	2.2.2 Data Acquisition	US	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 & Maintenance	2.2.2 Data Acquisition	US	UW	TE	BELLINGER, JIM	Maintain South Pole Test System Hardware and Operating Systems	0.25				0.25			
2.2 Detector Operations & Maintenance	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 & Maintenance	2.2.2 Data Acquisition	US	UW	CS	JACOBSEN, JOHN (NP)	Maintain DAQ Hardware (Hubs, DOR, Clocks, GPS,...)	0.15				0.15			
2.2 Detector Operations & Maintenance	2.2.2 Data Acquisition	US	UW	GR	WEAVER, CHRISTOPH	DOM CAL Maintenance			0.20		0.20			
2.2 Detector Operations & Maintenance	2.2.2 Data Acquisition	<b>US US Total</b>					<b>4.10</b>	<b>0.20</b>	<b>0.05</b>		<b>4.35</b>			
2.2 Detector Operations & Maintenance	2.2.2 Data Acquisition	Non-US	ULB	KE	HANSON, KAELE	Data Acquisition				0.20	0.20			
2.2 Detector Operations & Maintenance	2.2.2 Data Acquisition	Non-US	ULB	GR	HEEREMAN, DAVID	Develop Hit Spooling for Supernova & others				0.50	0.50			
2.2 Detector Operations & Maintenance	2.2.2 Data Acquisition	Non-US	ULB	GR	PINAT, ELISA	Data Acquisition				0.20	0.20			
2.2 Detector Operations & Maintenance	2.2.2 Data Acquisition	<b>Non-US Non-US Total</b>								<b>0.90</b>	<b>0.90</b>			
2.2 Detector Operations & Maintenance	<b>2.2.2 Data Acquisition</b>	<b>WBS L3</b>					<b>4.10</b>	<b>0.20</b>	<b>0.05</b>	<b>0.90</b>	<b>5.25</b>			

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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 & Maintenance	2.2.3 Online Filter (Pnf)	US	UMD	SC	BLAUFUSS, ERIK		Maintain PnF S/W and Online Filters	0.20				0.20		
2.2 Detector Operations & Maintenance	2.2.3 Online Filter (Pnf)	US	UMD	GR	REDL, PETER		Online Filter Testing		0.25			0.25		
2.2 Detector Operations & Maintenance	2.2.3 Online Filter (Pnf)	US	<b>US Total</b>					<b>0.20</b>	<b>0.25</b>	<b>0.00</b>		<b>0.45</b>		
2.2 Detector Operations & Maintenance	<b>2.2.3 Online Filter (Pnf)</b>	<b>WBS L3</b>						<b>0.20</b>	<b>0.25</b>	<b>0.00</b>		<b>0.45</b>		
2.2 Detector Operations & Maintenance	2.2.4 Sps Operations	US	UW	SE	SANDSTROM, PERRY		Maintain South Pole Computing H/W Infrastructure and operating systems	0.25				0.25		
2.2 Detector Operations & Maintenance	2.2.4 Sps Operations	US	UW	TE	BRIK, VLADIMIR		Maintain South Pole Computing H/W Infrastructure and operating systems	0.75				0.75		
2.2 Detector Operations & Maintenance	2.2.4 Sps Operations	US	UW	TE	WISNIEWSKI, PAUL		Networking and Security Maintenance	0.25				0.25		
2.2 Detector Operations & Maintenance	2.2.4 Sps Operations	US	<b>US Total</b>					<b>1.25</b>	<b>0.00</b>	<b>0.00</b>		<b>1.25</b>		
2.2 Detector Operations & Maintenance	<b>2.2.4 Sps Operations</b>	<b>WBS L3</b>						<b>1.25</b>	<b>0.00</b>	<b>0.00</b>		<b>1.25</b>		
2.2 Detector Operations & Maintenance	2.2.5 Spts Operations	US	UW	TE	BRIK, VLADIMIR		Maintain South Pole Computing H/W Infrastructure and operating systems	0.25				0.25		
2.2 Detector Operations & Maintenance	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 & Maintenance	2.2.5 Spts Operations	US	<b>US Total</b>					<b>0.35</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.35</b>		
2.2 Detector Operations & Maintenance	<b>2.2.5 Spts Operations</b>	<b>WBS L3</b>						<b>0.35</b>	<b>0.00</b>	<b>0.00</b>		<b>0.35</b>		
2.2 Detector Operations & Maintenance	2.2.6 Experiment Control	US	UW	CS	JACOBSEN, JOHN (NP)		IceCube Live Maintenance and Upgrades	0.65				0.65		
2.2 Detector Operations & Maintenance	2.2.6 Experiment Control	US	<b>US Total</b>					<b>0.65</b>	<b>0.00</b>	<b>0.00</b>		<b>0.65</b>		
2.2 Detector Operations & Maintenance	<b>2.2.6 Experiment Control</b>	<b>WBS L3</b>						<b>0.65</b>	<b>0.00</b>	<b>0.00</b>		<b>0.65</b>		
2.2 Detector Operations & Maintenance	2.2.7 Detector Monitoring	US	CAU	KE	JAPARIDZE, GEORGE		Monitoring shifts			0.02		0.02		
2.2 Detector Operations & Maintenance	2.2.7 Detector Monitoring	US	GTECH	GR	CASEY, JAMES		Monitoring shifts		0.03			0.03		
2.2 Detector Operations & Maintenance	2.2.7 Detector Monitoring	US	KU	KE	BESSON, DAVE		Monitoring shifts			0.02		0.02		
2.2 Detector Operations & Maintenance	2.2.7 Detector Monitoring	US	StonyBrook	KE	KIRYLUK, JOANNA		BadDomList			0.10		0.10		
2.2 Detector Operations & Maintenance	2.2.7 Detector Monitoring	US	StonyBrook	GR	NIEDERHAUSEN, HANS		Detector Monitoring		0.05			0.05		
2.2 Detector Operations & Maintenance	2.2.7 Detector Monitoring	US	LBNL	PO	CHANG, HYON HA		Monitoring shifts		0.09			0.09		
2.2 Detector Operations & Maintenance	2.2.7 Detector Monitoring	US	OSU	PO	OSU PO		Monitoring shifts			0.02		0.02		
2.2 Detector Operations & Maintenance	2.2.7 Detector Monitoring	US	OSU	PO	ROTT, CARSTEN		Maintain good run list			0.10		0.10		
2.2 Detector Operations & Maintenance	2.2.7 Detector Monitoring	US	OSU	PO	PFENDNER, CARL		Maintain good run list			0.10		0.10		
2.2 Detector Operations & Maintenance	2.2.7 Detector Monitoring	US	PSU	PO	CLARK, KEN		Monitoring shifts		0.03			0.03		
2.2 Detector Operations & Maintenance	2.2.7 Detector Monitoring	US	PSU	GR	DUNKMAN, MATT		Monitoring shifts		0.03			0.03		
2.2 Detector Operations & Maintenance	2.2.7 Detector Monitoring	US	SUBR	KE	TER-ANTONYAN, SAMV		Detector Monitoring			0.02		0.02		
2.2 Detector Operations & Maintenance	2.2.7 Detector Monitoring	US	UA	PO	UA PO		Monitoring shifts		0.03			0.03		
2.2 Detector Operations & Maintenance	2.2.7 Detector Monitoring	US	UA	GR	XU, DONGLIAN		Monitoring shifts		0.03			0.03		
2.2 Detector Operations & Maintenance	2.2.7 Detector Monitoring	US	UA	GR	PEPPER, JAMES		Monitoring shifts		0.03			0.03		
2.2 Detector Operations & Maintenance	2.2.7 Detector Monitoring	US	UA	GR	LARSON, MICHAEL		Monitoring shifts		0.03			0.03		
2.2 Detector Operations & Maintenance	2.2.7 Detector Monitoring	US	UAA	KE	RAWLINS, KATHERINE		Monitoring shifts			0.02		0.02		
2.2 Detector Operations & Maintenance	2.2.7 Detector Monitoring	US	UCB	SC	FILIMONOV, KIRILL		Coordinate Monitoring		0.10			0.10		
2.2 Detector Operations & Maintenance	2.2.7 Detector Monitoring	US	UCB	SC	FILIMONOV, KIRILL		Coordinate Monitoring	0.25				0.25		
2.2 Detector Operations & Maintenance	2.2.7 Detector Monitoring	US	UCB	SC	UCB SC		Monitoring shifts		0.10			0.10		
2.2 Detector Operations & Maintenance	2.2.7 Detector Monitoring	US	UCB	GR	UCB GR		Monitoring shifts		0.10			0.10		
2.2 Detector Operations & Maintenance	2.2.7 Detector Monitoring	US	UCI	PO	SILVERSTRI, ANDREA		Monitoring shifts			0.01		0.01		
2.2 Detector Operations & Maintenance	2.2.7 Detector Monitoring	US	UCI	GR	HANSON, JORDAN		Monitoring shifts			0.01		0.01		
2.2 Detector Operations & Maintenance	2.2.7 Detector Monitoring	US	UD	PO	KUWABARA, TAKAO		Temp. & Pressure atmospheric monitoring			0.30		0.30		
2.2 Detector Operations & Maintenance	2.2.7 Detector Monitoring	US	UMD	PO	UMD PO		Monitoring shifts		0.03			0.03		
2.2 Detector Operations & Maintenance	2.2.7 Detector Monitoring	US	UMD	GR	UMD GR		Monitoring shifts		0.06			0.06		
2.2 Detector Operations & Maintenance	2.2.7 Detector Monitoring	US	UW	PO	UW PO		Monitoring shifts		0.12			0.12		
2.2 Detector Operations & Maintenance	2.2.7 Detector Monitoring	US	UW	GR	UW GR		Monitoring shifts		0.12			0.12		
2.2 Detector Operations & Maintenance	2.2.7 Detector Monitoring	US	<b>US Total</b>					<b>0.25</b>	<b>0.98</b>	<b>0.71</b>		<b>1.94</b>		

IceCube M&O Staffing Matrix sort by WBS v13.1 2012.1022

WBS L2	WBS L3	US /	Institution	Labor	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														
2.2 Detector Operations & Maintenance	2.2.7 Detector Monitoring	Non-US	CHIBA	GR	CHIBA GR	Detector Monitoring				0.03	0.03								
2.2 Detector Operations & Maintenance	2.2.7 Detector Monitoring	Non-US	DESY	SC	DESY SC	Detector Monitoring				0.05	0.05								
2.2 Detector Operations & Maintenance	2.2.7 Detector Monitoring	Non-US	DESY	GR	DESY GR	Detector Monitoring				0.12	0.12								
2.2 Detector Operations & Maintenance	2.2.7 Detector Monitoring	Non-US	DTMND	GR	DTMD GR	Detector Monitoring				0.03	0.03								
2.2 Detector Operations & Maintenance	2.2.7 Detector Monitoring	Non-US	EPFL	PO	BRUIJN, RONALD	Detector Monitoring				0.03	0.03								
2.2 Detector Operations & Maintenance	2.2.7 Detector Monitoring	Non-US	Munche	GR	MPI GR	Detector Monitoring				0.05	0.05								
2.2 Detector Operations & Maintenance	2.2.7 Detector Monitoring	Non-US	RWTH	GR	PAUL, LARRISA	RASTA Data Monitoring				0.10	0.10								
2.2 Detector Operations & Maintenance	2.2.7 Detector Monitoring	Non-US	RWTH	GR	RWTH GR	Monitoring (4 weeks)				0.12	0.12								
2.2 Detector Operations & Maintenance	2.2.7 Detector Monitoring	Non-US	SU	GR	SU GR	Detector Monitoring				0.06	0.06								
2.2 Detector Operations & Maintenance	2.2.7 Detector Monitoring	Non-US	UC	GR	UC GR	Detector Monitoring				0.02	0.02								
2.2 Detector Operations & Maintenance	2.2.7 Detector Monitoring	Non-US	ULB	GR	ULB GR	Detector Monitoring				0.06	0.06								
2.2 Detector Operations & Maintenance	2.2.7 Detector Monitoring	Non-US	UOX	KE	SARKAR, SUBIR	Detector Monitoring				0.02	0.02								
2.2 Detector Operations & Maintenance	2.2.7 Detector Monitoring	Non-US	UU	GR	UU GR	Monitoring Shifts				0.03	0.03								
2.2 Detector Operations & Maintenance	2.2.7 Detector Monitoring	Non-US	VUB	PO	VUB PO	Monitoring shifts				0.06	0.06								
2.2 Detector Operations & Maintenance	2.2.7 Detector Monitoring	Non-US	VUB	GR	VUB GR	Monitoring shifts				0.06	0.06								
2.2 Detector Operations & Maintenance	2.2.7 Detector Monitoring	Non-US	WUPPERTAL	GR	WUPPERTAL GR	South Pole EMI Monitoring				0.15	0.15								
2.2 Detector Operations & Maintenance	2.2.7 Detector Monitoring	Non-US	WUPPERTAL	GR	WUPPERTAL GR	AURA, SPATS, surface antenna operations (RASTA)				0.45	0.45								
2.2 Detector Operations & Maintenance	2.2.7 Detector Monitoring	Non-US	MAINZ	GR	UM GR	Detector Monitoring				0.05	0.05								
2.2 Detector Operations & Maintenance	2.2.7 Detector Monitoring	Non-US	GENT	GR	UGENT GR	Detector Monitoring				0.03	0.03								
2.2 Detector Operations & Maintenance	2.2.7 Detector Monitoring	Non-US	DPNC	GR	ASEN, CHRISTOV	Detector Monitoring				0.20	0.20								
2.2 Detector Operations & Maintenance	2.2.7 Detector Monitoring	Non-US	DPNC	GR	RAAMEZ MOHAMED	Detector Monitoring				0.10	0.10								
2.2 Detector Operations & Maintenance	2.2.7 Detector Monitoring	Non-US	BONN	GR	UBONN GR	Detector Monitoring				0.03	0.03								
2.2 Detector Operations & Maintenance	2.2.7 Detector Monitoring	Non-US	BOCHUM	GR	SCHÖNEBERG, SEBAS	Detector Monitoring				0.03	0.03								
2.2 Detector Operations & Maintenance	2.2.7 Detector Monitoring	Non-US	Non-US Total							1.88	1.88								
2.2 Detector Operations & Maintenance	2.2.7 Detector Monitoring	WBS L3					0.25	0.98	0.71	1.88	3.82								
2.2 Detector Operations & Maintenance	2.2.8 Detector Calibration	US	GTECH	GR	CASEY, JAMES	Bubble studies with flashers		0.20			0.20								
2.2 Detector Operations & Maintenance	2.2.8 Detector Calibration	US	UA	KE	WILLIAMS, DAWN	managing flasher runs and other calibrations (stage 2 geometry)			0.20		0.20								
2.2 Detector Operations & Maintenance	2.2.8 Detector Calibration	US	UA	GR	XU, DONGLIAN	Low-energy cascade calibration with flashers			0.10		0.10								
2.2 Detector Operations & Maintenance	2.2.8 Detector Calibration	US	UA	GR	PEPPER, JAMES	Verification monitoring integration into IceCube Live			0.10		0.10								
2.2 Detector Operations & Maintenance	2.2.8 Detector Calibration	US	UCB	SC	WOSCHNAGG, KURT	Calibration Lead		0.10			0.10								
2.2 Detector Operations & Maintenance	2.2.8 Detector Calibration	US	UCB	GR	UCB GR	Calibration		0.10			0.10								
2.2 Detector Operations & Maintenance	2.2.8 Detector Calibration	US	UW	SC	WENDT, CHRISTOPHE	Absolute DOM sensitivity	0.40				0.40								
2.2 Detector Operations & Maintenance	2.2.8 Detector Calibration	US	UW	GR	FEINTZIG, JACOB	Ice Properties			0.10		0.10								
2.2 Detector Operations & Maintenance	2.2.8 Detector Calibration	US	UW	GR	JERO, KYLE	DOM Linearity, sensitivity			0.15		0.15								
2.2 Detector Operations & Maintenance	2.2.8 Detector Calibration	US	UW	GR	JERO, KYLE	Ice properties (anisotropy) Base Grants			0.25		0.25								
2.2 Detector Operations & Maintenance	2.2.8 Detector Calibration	US	UW	GR	VAN SANTEN, JACOB	Calibration of DOM waveforms			0.10		0.10								
2.2 Detector Operations & Maintenance	2.2.8 Detector Calibration	US	US Total				0.40	1.20	0.20		1.80								
2.2 Detector Operations & Maintenance	2.2.8 Detector Calibration	Non-US	DESY	GR	ACHIM STOESSL	Flasher Analysis				0.20	0.20								
2.2 Detector Operations & Maintenance	2.2.8 Detector Calibration	Non-US	Non-US Total							0.20	0.20								
2.2 Detector Operations & Maintenance	2.2.8 Detector Calibration	WBS L3					0.40	1.20	0.20	0.20	2.00								
2.2 Detector Operations & Maintenance	2.2.9 Ictop Operations	US	UD	SC	TILAV, SERAP	Coordinate IceTop Operations	1.00				1.00								
2.2 Detector Operations & Maintenance	2.2.9 Ictop Operations	US	UWRF	KE	SPICZAK, GLENN	IceTop tank Monitoring			0.03		0.03								
2.2 Detector Operations & Maintenance	2.2.9 Ictop Operations	US	US Total				1.00	0.00	0.03		1.03								
2.2 Detector Operations & Maintenance	2.2.9 Ictop Operations	WBS L3					1.00	0.00	0.03	0.00	1.03								

**IceCube M&O Staffing Matrix sort by WBS v13.1 2012.1022**

WBS L2	WBS L3	US /	Institution	Labor	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									
2.2 Detector Operations & Maintenance	2.2.10 Supernova Operations	US		UW	KE	MARUYAMA, REINA	Supernova DAQ and Simulation tools			0.15	0.15			
2.2 Detector Operations & Maintenance	2.2.10 Supernova Operations	US		UW	GR	RIEDEL, BENEDIKT	Supernova DAQ		0.15		0.15			
2.2 Detector Operations & Maintenance	2.2.10 Supernova Operations	<b>US</b>	<b>US Total</b>					<b>0.00</b>	<b>0.15</b>	<b>0.15</b>	<b>0.00</b>	<b>0.30</b>		
2.2 Detector Operations & Maintenance	2.2.10 Supernova Operations	Non-US	MAINZ	GR	KROLL, GÖSTA	SuperNova Operations				0.20	0.20			
2.2 Detector Operations & Maintenance	2.2.10 Supernova Operations	Non-US	MAINZ	GR	EBERHARD, BENJAMIN	SuperNova Operations				0.50	0.50			
2.2 Detector Operations & Maintenance	2.2.10 Supernova Operations	Non-US	MAINZ	GR	BAUM, VOLKER	SuperNova Operations				0.50	0.50			
2.2 Detector Operations & Maintenance	2.2.10 Supernova Operations	Non-US	EPFL	KE	RIBORDY, MATHIEU	Development of the multi-hit detection technique				0.20	0.20			
2.2 Detector Operations & Maintenance	2.2.10 Supernova Operations	Non-US	EPFL	PO	BRUIJN, RONALD	Development of the multi-hit detection technique				0.32	0.32			
2.2 Detector Operations & Maintenance	2.2.10 Supernova Operations	<b>Non-US</b>	<b>Non-US Total</b>							<b>1.72</b>	<b>1.72</b>			
2.2 Detector Operations & Maintenance	<b>2.2.10 Supernova Operations</b>	<b>WBS L3</b>							<b>0.00</b>	<b>0.15</b>	<b>0.15</b>	<b>1.72</b>	<b>2.02</b>	
<b>2.2 Detector Operations &amp; Maintenance</b>	<b>WBS L2 Total</b>								<b>12.20</b>	<b>2.78</b>	<b>1.24</b>	<b>5.40</b>	<b>21.61</b>	
2.3 Computing And Data Management	2.3.1 Core Software	US	UMD	GR	HELLAUER, ROBERT	Core Software		0.25			0.25			
2.3 Computing And Data Management	2.3.1 Core Software	US	UMD	GR	MEAGHER, KEVIN	Core Software		0.50			0.50			
2.3 Computing And Data Management	2.3.1 Core Software	US	UW	TE	DIAZ-VELEZ, JUAN CARLOS	Simulation Programs: diplopia		0.80			0.80			
2.3 Computing And Data Management	2.3.1 Core Software	US	UW	TE	Jackson, Steven	Simulation Programs software		0.25			0.25			
2.3 Computing And Data Management	2.3.1 Core Software	US	UW	TE	FADIRAN, OLADIPO	Maintain Data Processing Software		0.20			0.20			
2.3 Computing And Data Management	2.3.1 Core Software	US	UW	PO	WHITEHORN, NATHAN	IceTray support, software maintenance			0.20		0.20			
2.3 Computing And Data Management	2.3.1 Core Software	US	UW	PO	NEILSON, NAOKO	IceTray Support (Q frame)			0.10		0.10			
2.3 Computing And Data Management	2.3.1 Core Software	<b>US</b>	<b>US Total</b>					<b>1.25</b>	<b>1.05</b>	<b>0.00</b>	<b>2.30</b>			
2.3 Computing And Data Management	2.3.1 Core Software	Non-US	UJ	SC	BOERSMA, DAVID	Maintain Reconstruction Framework				0.10	0.10			
2.3 Computing And Data Management	2.3.1 Core Software	<b>Non-US</b>	<b>Non-US Total</b>							<b>0.10</b>	<b>0.10</b>			
2.3 Computing And Data Management	<b>2.3.1 Core Software</b>	<b>WBS L3</b>							<b>1.25</b>	<b>1.05</b>	<b>0.00</b>	<b>0.10</b>	<b>2.40</b>	
2.3 Computing And Data Management	2.3.2 Data Storage & Transfer	US	UW	TE	FADIRAN, OLADIPO	Transformation of Data for Long-Term Persistence and Archival. Maintain Data Warehouse Standards, Software (Ingest), Data Access (FTP), and Web Interface		0.20			0.20			
2.3 Computing And Data Management	2.3.2 Data Storage & Transfer	US	UW	TE	RICHARDS, JOHN	Maintain and Operate Data Storage Infrastructure		1.00			1.00			
2.3 Computing And Data Management	2.3.2 Data Storage & Transfer	US	UW	TE	Auer, Ralf	Maintain and Operate Data Storage Infrastructure		0.38			0.38			
2.3 Computing And Data Management	2.3.2 Data Storage & Transfer	US	UW	CS	MEADE, PATRICK	Transfer Data from S. Pole to UW Data Warehouse and Archive at S. Pole. Maintain Data Transfer SW (SPADE). Maintain Data Warehouse Standards, Software (Ingest), Data Access (FTP), and Web Interface		0.50			0.50			
2.3 Computing And Data Management	2.3.2 Data Storage & Transfer	<b>US</b>	<b>US Total</b>					<b>2.08</b>	<b>0.00</b>	<b>0.00</b>	<b>2.08</b>			
2.3 Computing And Data Management	2.3.2 Data Storage & Transfer	Non-US	DESY	GR	SCHÖNWALD, ARNE	Data transfer UW-DESY				0.10	0.10			
2.3 Computing And Data Management	2.3.2 Data Storage & Transfer	<b>Non-US</b>	<b>Non-US Total</b>							<b>0.10</b>	<b>0.10</b>			
2.3 Computing And Data Management	<b>2.3.2 Data Storage &amp; Transfer</b>	<b>WBS L3</b>							<b>2.08</b>	<b>0.00</b>	<b>0.00</b>	<b>0.10</b>	<b>2.18</b>	

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WBS L2	WBS L3	US /	Institution	Labor	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 Manage	2.3.3 Computing Resources	US	PSU	PO	CLARK, KEN	Coordination and Support for Grid and distributed computing	0.25				0.25			
2.3 Computing And Data Manage	2.3.3 Computing Resources	US	SUBR	KE	TER-ANTONYAN, SAM	LONI Grid computing			0.30		0.30			
2.3 Computing And Data Manage	2.3.3 Computing Resources	US	UW	TE	SKARLUPKA, HEATH	Maintain Core High Performance Computing Systems Coordination and Support for Grid and distributed computing	1.00				1.00			
2.3 Computing And Data Manage	2.3.3 Computing Resources	US	UW	TE	Barnet, Steve	Maintain Core Computing Systems, Coordination Grid & distributed computing	1.00				1.00			
2.3 Computing And Data Manage	2.3.3 Computing Resources	US	UW	TE	BELLINGER, JIM	Maintain Core High Performance Computing Systems	0.75				0.75			
2.3 Computing And Data Manage	2.3.3 Computing Resources	US	UW	TE	WISNIEWSKI, PAUL	Maintain Data Center Networking and Security	0.75				0.75			
2.3 Computing And Data Manage	2.3.3 Computing Resources	US	UW	TE	Auer, Ralf	Maintain Data Center Infrastructure	0.38				0.38			
2.3 Computing And Data Manage	2.3.3 Computing Resources	<b>US US Total</b>					<b>4.13</b>	<b>0.00</b>	<b>0.30</b>		<b>4.43</b>			
2.3 Computing And Data Manage	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 Manage	2.3.3 Computing Resources	Non-US	DESY	GR	JACOBI, EMANUEL	Reconstruction Release Manager , Maintain Reconstruction Framework				0.20	0.20			
2.3 Computing And Data Manage	2.3.3 Computing Resources	Non-US	UU	GR	TAAVOLA, HENRIC	Computing resources				0.20	0.20			
2.3 Computing And Data Manage	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 Manage	2.3.3 Computing Resources	Non-US	SU	SC	SU SC	Computing Resources				0.40	0.40			
2.3 Computing And Data Manage	2.3.3 Computing Resources	Non-US	UMH	GR	KOHNEN, GEORGES	IC database management				0.30	0.30			
2.3 Computing And Data Manage	2.3.3 Computing Resources	<b>Non-US Non-US Total</b>								<b>3.35</b>	<b>3.35</b>			
2.3 Computing And Data Manage	<b>2.3.3 Computing Resources</b>	<b>WBS L3</b>					<b>4.13</b>	<b>0.00</b>	<b>0.30</b>	<b>3.35</b>	<b>7.78</b>			
2.3 Computing And Data Manage	2.3.4 Data Production Processing	US	UW	GR	SANTANDER, MARCOS	Moon Shadow online		0.15			0.15			
2.3 Computing And Data Manage	2.3.4 Data Production Processing	US	UW	CS	MEADE, PATRICK	Unpacking, Decoding & Calibration of Raw Data (Level1); Run Common Reconstructions on UW IceCube Compute Cluster (Level2)	0.50				0.50			
2.3 Computing And Data Manage	2.3.4 Data Production Processing	<b>US US Total</b>					<b>0.50</b>	<b>0.15</b>	<b>0.00</b>		<b>0.65</b>			
2.3 Computing And Data Manage	2.3.4 Data Production Processing	<b>Non-US Non-US Total</b>								<b>0.00</b>	<b>0.00</b>			
2.3 Computing And Data Manage	<b>2.3.4 Data Production Processing</b>	<b>WBS L3</b>					<b>0.50</b>	<b>0.15</b>	<b>0.00</b>	<b>0.00</b>	<b>0.65</b>			
2.3 Computing And Data Manage	2.3.5 Simulation Production	US	LBLNL	PO	GERHARDT,LISA	Simulation Production on PDSF		0.20			0.20			
2.3 Computing And Data Manage	2.3.5 Simulation Production	US	PSU	PO	KOSKINEN, JASON	Simulation Production		0.08			0.08			
2.3 Computing And Data Manage	2.3.5 Simulation Production	US	PSU	PO	CLARK, KEN	Simulation Production		0.08			0.08			
2.3 Computing And Data Manage	2.3.5 Simulation Production	US	UD	PO	TAMBURRO, ALESSIO	IceTop Simulation Production		0.35			0.35			
2.3 Computing And Data Manage	2.3.5 Simulation Production	US	UD	PO	HUSSAIN, SHAHID	IceTop Simulation Production			0.15		0.15			
2.3 Computing And Data Manage	2.3.5 Simulation Production	US	UMD	GR	CHRISTY, BRIAN	Simulation Production coordination		0.25			0.25			
2.3 Computing And Data Manage	2.3.5 Simulation Production	US	UW	SC	DESIATI, PAOLO	Coordination of Simulation Production	0.20				0.20			
2.3 Computing And Data Manage	2.3.5 Simulation Production	US	UW	SC	DESIATI, PAOLO	Simulation Production panel chair	0.20				0.20			
2.3 Computing And Data Manage	2.3.5 Simulation Production	US	UW	TE	Jackson, Steven	Simulation Production	0.75				0.75			
2.3 Computing And Data Manage	2.3.5 Simulation Production	US	UW	GR	MCNALLY, FRANK	IceTop Simulation ProductionProduction / Data Processing		0.30			0.30			
2.3 Computing And Data Manage	2.3.5 Simulation Production	US	UW	TE	FADIRAN, OLADIPO	Simulation Production Coordination; production configurations, test production and web portal.	0.60				0.60			
2.3 Computing And Data Manage	2.3.5 Simulation Production	<b>US US Total</b>					<b>1.75</b>	<b>1.26</b>	<b>0.15</b>		<b>3.16</b>			

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WBS L2	WBS L3	US /	Institution	Labor	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 Manage	2.3.5 Simulation Production	Non-US		SC	GORA, DARIUSZ	Simulation Production Cluster				0.20	0.20								
2.3 Computing And Data Manage	2.3.5 Simulation Production	Non-US		PO	<b>KARG, TIMO</b>	<b>Simulation Production</b>				0.20	0.20								
2.3 Computing And Data Manage	2.3.5 Simulation Production	Non-US		GR	DESY GR	Simulation Production Cluster				0.15	0.15								
2.3 Computing And Data Manage	2.3.5 Simulation Production	Non-US		GR	DTMD GR	Simulation Production				0.40	0.40								
2.3 Computing And Data Manage	2.3.5 Simulation Production	Non-US		GR	PAUL, LARRISA	Simulation Production on cluster/GRID				0.30	0.30								
<b>2.3 Computing And Data Manage</b>	<b>2.3.5 Simulation Production</b>	Non-US		GR	<b>LEIF RADEL</b>	<b>Geant Simulations</b>				0.10	0.10								
2.3 Computing And Data Manage	2.3.5 Simulation Production	Non-US		GR	WALLRAFF, MARIUS	Simulation Production on GPU				0.10	0.10								
2.3 Computing And Data Manage	2.3.5 Simulation Production	Non-US		PO	<b>ULB PO</b>	Computer Cluster - simulation				0.30	0.30								
2.3 Computing And Data Manage	2.3.5 Simulation Production	Non-US		PO	MILLER, JONATHAN	Ice properties and flasher runs				0.13	0.13								
2.3 Computing And Data Manage	2.3.5 Simulation Production	Non-US		KE	GRANT, DARREN	WestGrid computing				0.10	0.10								
2.3 Computing And Data Manage	2.3.5 Simulation Production	Non-US		GR	WOOD, TANIA	WestGrid computing				0.20	0.20								
2.3 Computing And Data Manage	2.3.5 Simulation Production	Non-US		GR	WUPPERTAL GR	Simulation Production				0.20	0.20								
2.3 Computing And Data Manage	2.3.5 Simulation Production	Non-US		GR	WIEBE, KLAUS	Simulation Production				0.10	0.10								
2.3 Computing And Data Manage	2.3.5 Simulation Production	Non-US		GR	KOHNEN, GEORGES	Simulation Production				0.25	0.25								
2.3 Computing And Data Manage	2.3.5 Simulation Production	Non-US		PO	BRUIJN, RONALD	Run cluster EPFL				0.15	0.15								
2.3 Computing And Data Manage	2.3.5 Simulation Production	Non-US		<b>Non-US Total</b>						<b>2.88</b>	<b>2.88</b>								
2.3 Computing And Data Manage	<b>2.3.5 Simulation Production</b>	<b>WBS L3</b>						<b>1.75</b>	<b>1.26</b>	<b>0.15</b>	<b>2.88</b>	<b>6.04</b>							
<b>2.3 Computing And Data Manag</b>	<b>WBS L2 Total</b>							<b>9.70</b>	<b>2.46</b>	<b>0.45</b>	<b>6.43</b>	<b>19.04</b>							
2.4 Triggering And Filtering	2.4.1 TFT Coordination	US	GTECH	KE	TABOADA, IGNACIO	TFT Board Chair				0.25	0.25								
2.4 Triggering And Filtering	2.4.1 TFT Coordination	US	UA	KE	WILLIAMS, DAWN	TFT Board member			0.10		0.10								
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	Filter requests, bandwidth, TFT Board Member	0.30				0.30								
2.4 Triggering And Filtering	2.4.1 TFT Coordination	US	UMD	GR	HELLAUER, ROBERT	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	<b>US</b>		<b>US Total</b>			<b>0.30</b>	<b>0.45</b>	<b>0.20</b>		<b>0.95</b>								
2.4 Triggering And Filtering	2.4.1 TFT Coordination	Non-US	ALBERTA	KE	GRANT, DARREN	TFT Board member				0.10	0.10								
2.4 Triggering And Filtering	2.4.1 TFT Coordination	Non-US	BONN	PO	BOSSER, SEBASTIAN	TFT Board member				0.10	0.10								
2.4 Triggering And Filtering	2.4.1 TFT Coordination	US	<b>DESY</b>	PO	<b>BERGHAUS, PATRICK</b>	TFT Board member		0.10			0.10								
2.4 Triggering And Filtering	2.4.1 TFT Coordination	US	<b>DESY</b>	PO	<b>KARG, TIMO</b>	TFT Board member		0.10			0.10								
2.4 Triggering And Filtering	2.4.1 TFT Coordination	Non-US	DPNC	KE	MONTARULI, TERESA	TFT Board member				0.10	0.10								
2.4 Triggering And Filtering	2.4.1 TFT Coordination	Non-US	UU	KE	HALLGREN, ALLAN	TFT Board member				0.10	0.10								
2.4 Triggering And Filtering	2.4.1 TFT Coordination	Non-US	UU	KE	DE LOS HEROS, CARL	TFT Board member				0.10	0.10								
2.4 Triggering And Filtering	2.4.1 TFT Coordination	Non-US	<b>Non-US Total</b>							<b>0.50</b>	<b>0.50</b>								
2.4 Triggering And Filtering	<b>2.4.1 TFT Coordination</b>	<b>WBS L3</b>						<b>0.30</b>	<b>0.45</b>	<b>0.20</b>	<b>0.50</b>	<b>1.45</b>							
2.4 Triggering And Filtering	2.4 Triggering And Filtering	US	UA	GR	LARSON, MICHAEL	Track engine				0.15	0.15								
2.4 Triggering And Filtering	2.4 Triggering And Filtering	US	UA	GR	PEPPER, JAMES	<b>2013 DeepCore filter and L2 proposal</b>				0.20	0.20								
2.4 Triggering And Filtering	2.4.2 Physics Filters	US	UA	KE	WILLIAMS, DAWN	<b>Tau WG Chair</b>				0.25	0.25								
2.4 Triggering And Filtering	2.4.2 Physics Filters	US	StonyBrook	KE	KIRYLUK,JOANNA	Cascade WG Co-Chair			0.25		0.25								
2.4 Triggering And Filtering	2.4.2 Physics Filters	US	LBNL	KE	KLEIN,SPENCER	Diffuse WG Co-chair			0.25		0.25								
2.4 Triggering And Filtering	2.4.2 Physics Filters	US	LBNL	PO	CHANG, HYON HA	L2 processing for IC86, studying cascade energy resolution		0.30			0.30								
2.4 Triggering And Filtering	2.4.2 Physics Filters	US	PSU	KE	DEYOUNG, TYCE	Low Energy WG - Co Chair				0.20	0.20								
2.4 Triggering And Filtering	2.4.2 Physics Filters	US	UCB	SC	WOSCHNAGG, KURT	Diffuse / atmosnu WG Co-chair		0.10			0.10								
2.4 Triggering And Filtering	2.4.2 Physics Filters	US	GTECH	GR	DAUGHHETEE, JACOB	Deep Core South Pole filter		0.15			0.15								
2.4 Triggering And Filtering	2.4.2 Physics Filters	US	UD	PO	TAMBURRO, ALESSIO	CR-WG Co Chair		0.25			0.25								
2.4 Triggering And Filtering	2.4.2 Physics Filters	US	UMD	SC	BLAUFUSS, ERIK	GRB WG Chair		0.25			0.25								
2.4 Triggering And Filtering	2.4.2 Physics Filters	US	UMD	PO	WISSING, HENRIKE	EHE and Brights WG co-chair		0.25			0.25								
2.4 Triggering And Filtering	2.4.2 Physics Filters	US	StonyBrook	PO	LESIAK-BZDAK, MARIO	Cascade filters			0.20		0.20								
2.4 Triggering And Filtering	2.4.2 Physics Filters	US	OSU	PO	ROTT, CARSTEN	<b>WIMP WG Co-Chair</b>				0.25	0.25								
2.4 Triggering And Filtering	2.4.2 Physics Filters	Non-US	UWRF	KE	<b>SEUNARINE, SURUJ</b>	<b>Work on cascade filter</b>			0.20		0.20								



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WBS L2	WBS L3	US /	Institution	Labor	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
2.4 Triggering And Filtering	2.4.2 Physics Filters	US		UW	KE WESTERHOFF, STEFA	CR-WG Co Chair			0.25		0.25								
2.4 Triggering And Filtering	2.4.2 Physics Filters	US		UW	PO AUFFENBERG, JAN	Online filters (EHE)		0.15			0.15								
2.4 Triggering And Filtering	2.4.2 Physics Filters	US		UW	GR WEAVER, CHRISTOPH	Online filters		0.10			0.10								
2.4 Triggering And Filtering	2.4.2 Physics Filters	US		US Total			0.00	2.35	1.40	0.00	3.75								
2.4 Triggering And Filtering	2.4.2 Physics Filters	Non-US		SU	GR BOHM, CHRISTIAN	Track engine				0.10	0.10								
2.4 Triggering And Filtering	2.4.2 Physics Filters	Non-US		ALBERTA	KE GRANT, DARREN	Low Energy WG Co-Chair				0.25	0.25								
2.4 Triggering And Filtering	2.4.2 Physics Filters	Non-US		CHIBA	SC ISHIHARA, AYA	EHE and Brights WG co-chair				0.25	0.25								
2.4 Triggering And Filtering	2.4.2 Physics Filters	Non-US		CHIBA	SC ISHIHARA, AYA	EHE Filters				0.15	0.15								
2.4 Triggering And Filtering	2.4.2 Physics Filters	Non-US		DESY	SC GORA, DARIUSZ	Online Filter Alerts / NTOO program				0.15	0.15								
2.4 Triggering And Filtering	2.4.2 Physics Filters	US		DESY	PO BERGHAUS, PATRICK	moun channel WG Co. Chair		0.25			0.25								
2.4 Triggering And Filtering	2.4.2 Physics Filters	Non-US		UU	SC BOERSMA, DAVID	Develop Moon shadow and Galactic center filters				0.15	0.15								
2.4 Triggering And Filtering	2.4.2 Physics Filters	Non-US		SU	KE FINLEY, CHAD SU	Point Source WG Chair				0.25	0.25								
2.4 Triggering And Filtering	2.4.2 Physics Filters	Non-US		SU	GR ZOLL, MARCEL	Filters and Simulations				0.15	0.15								
2.4 Triggering And Filtering	2.4.2 Physics Filters	Non-US		SU	GR DANNINGER, MATTIAS	WIMP Trigger & Filter				0.10	0.10								
2.4 Triggering And Filtering	2.4.2 Physics Filters	Non-US		ULB	GR BECHET, SABRIN	Development of tau --> muon filter				0.15	0.15								
2.4 Triggering And Filtering	2.4.2 Physics Filters	Non-US		UU	KE HALLGREN, ALLAN	Online filter development				0.20	0.20								
2.4 Triggering And Filtering	2.4.2 Physics Filters	Non-US		UU	KE DE LOS HEROS, CARLO	WIMP WG Chair				0.25	0.25								
2.4 Triggering And Filtering	2.4.2 Physics Filters	Non-US		UU	GR STROM, RICKARD	Online filter development & testing				0.20	0.20								
2.4 Triggering And Filtering	2.4.2 Physics Filters	Non-US		VUB	PO LABARE, MATHIEU	Filter for Southern sky muons				0.25	0.25								
2.4 Triggering And Filtering	2.4.2 Physics Filters	Non-US		VUB	GR KUNNEN JAN	Filter for Southern sky muons				0.50	0.50								
2.4 Triggering And Filtering	2.4.2 Physics Filters	Non-US		WUPPERTAL	KE HELBING, KLAUS	Exotics- WG chair				0.25	0.25								
2.4 Triggering And Filtering	2.4.2 Physics Filters	Non-US		WUPPERTAL	GR WUPPERTAL GR	New SUSY Filter				0.20	0.20								
2.4 Triggering And Filtering	2.4.2 Physics Filters	Non-US		DPNC	KE MONTARULI, TERESA	Online filtering				0.10	0.10								
2.4 Triggering And Filtering	2.4.2 Physics Filters	Non-US		DPNC	PO AGUILAR SANCHEZ JU	Online filtering				0.10	0.10								
2.4 Triggering And Filtering	2.4.2 Physics Filters	Non-US		DPNC	GR ASEN, CHRISTOV	Online filtering				0.10	0.10								
2.4 Triggering And Filtering	2.4.2 Physics Filters	Non-US		DPNC	GR RAAMEZ MOHAMED	Muon/EHE Filter				0.20	0.20								
2.4 Triggering And Filtering	2.4.2 Physics Filters	Non-US		BONN	KE KOWALSKI, MAREK	Cascade WG Co-Chair				0.25	0.25								
2.4 Triggering And Filtering	2.4.2 Physics Filters	Non-US		BONN	GR FRANCKOWIAK, ANNA	Alert System for follow-up				0.10	0.10								
2.4 Triggering And Filtering	2.4.2 Physics Filters	Non-US		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		Non-US Total						4.50	4.50								
2.4 Triggering And Filtering	2.4.2 Physics Filters	WBS L3					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, Reconstruction	2.5.1 Simulation Programs	US	LBLN	PO	CHANG, HYON HA	DOM simulator & calibrator		0.10			0.10								
2.5 Data Quality, Reconstruction	2.5.1 Simulation Programs	US	LBLN	PO	GERHARDT,LISA	Simulation Programs: cmc		0.20			0.20								
2.5 Data Quality, Reconstruction	2.5.1 Simulation Programs	US	SUBR	KE	FAZELY, ALI	GEANT Simulation			0.15		0.15								
2.5 Data Quality, Reconstruction	2.5.1 Simulation Programs	US	SUBR	SC	XIANWU, XU	Simulation Programs			0.15		0.15								
2.5 Data Quality, Reconstruction	2.5.1 Simulation Programs	US		KE	PO TOALE, PATRICK	Trigger simulation		0.10			0.10								
2.5 Data Quality, Reconstruction	2.5.1 Simulation Programs	US		UA	GR LARSON, MICHAEL	Noise simulation		0.15			0.15								
2.5 Data Quality, Reconstruction	2.5.1 Simulation Programs	US		UA	KE TOALE, PATRICK	Trigger simulation		0.10			0.10								
2.5 Data Quality, Reconstruction	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, Reconstruction	2.5.1 Simulation Programs	US		UD	PO GONZALEZ, JAVIER	Simulations		0.10			0.10								
2.5 Data Quality, Reconstruction	2.5.1 Simulation Programs	US		UD	GR RUZYBAEV , BAKHTIYA	Ice Properties Simulation		0.30			0.30								
2.5 Data Quality, Reconstruction	2.5.1 Simulation Programs	US		UD	GR UD GR	Simulation Programs: sim-services		0.30			0.30								
2.5 Data Quality, Reconstruction	2.5.1 Simulation Programs	US	UMD	PO	OLIVAS, ALEX	Simulation Software Programs coordinator	0.40				0.40								
2.5 Data Quality, Reconstruction	2.5.1 Simulation Programs	US	UMD	PO	WISSING, HENRIKE	Maintain Detector Simulation (IceSim)		0.13			0.13								
2.5 Data Quality, Reconstruction	2.5.1 Simulation Programs	US	UMD	GR	REDL, PETER	Maintain Detector Simulation (IceSim)		0.25			0.25								

**IceCube M&O Staffing Matrix sort by WBS v13.1 2012.1022**

WBS L2	WBS L3	US /	Institution	Labor	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									
2.5 Data Quality, Reconstruction	2.5.1 Simulation Programs	US	UW	SC	CHIRKIN, DMITRY	Maintain and Verify Simulation of Photon Propagation and update Ice Properties	0.50				0.50			
2.5 Data Quality, Reconstruction	2.5.1 Simulation Programs	US	UW	SC	HOSHINA, KOTOYO	nugen maintenance	0.25				0.25			
2.5 Data Quality, Reconstruction	2.5.1 Simulation Programs	US	UW	PO	KOPPER, CLAUDIO	Direct photon propogation, IceTray, Simulations, Genie		0.25			0.25			
2.5 Data Quality, Reconstruction	2.5.1 Simulation Programs	US	UW	GR	RIEDEL, BENEDICT	Supernova DAQ, simulation		0.20			0.20			
2.5 Data Quality, Reconstruction	2.5.1 Simulation Programs	US	UW	TE	DIAZ-VELEZ, JUAN CARLOS	Maintain Simulation Production Software	0.20				0.20			
2.5 Data Quality, Reconstruction	2.5.1 Simulation Programs	<b>US</b>	<b>US Total</b>				<b>1.85</b>	<b>2.18</b>	<b>0.30</b>		<b>4.33</b>			
2.5 Data Quality, Reconstruction	2.5.1 Simulation Programs	Non-US	DTMND	GR	MILKE, NATALIE	Simulation Programs: noise-generator				0.20	0.20			
2.5 Data Quality, Reconstruction	2.5.1 Simulation Programs	Non-US	SU	KE	HULTQVIST, KLAS	Simulation Work				0.10	0.10			
2.5 Data Quality, Reconstruction	2.5.1 Simulation Programs	Non-US	SU	GR	FLIS, SAMUEL	DOM simulation				0.15	0.15			
2.5 Data Quality, Reconstruction	2.5.1 Simulation Programs	Non-US	UOX	KE	SARKAR, SUBIR	Yellow Book-maintenance				0.10	0.10			
2.5 Data Quality, Reconstruction	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, Reconstruction	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, Reconstruction	2.5.1 Simulation Programs	Non-US	BOCHUM	KE	TJUS, JULIA	Development PROPOSAL simulation software				0.10	0.10			
2.5 Data Quality, Reconstruction	2.5.1 Simulation Programs	Non-US	BOCHUM	GR	SCHÖNEBERG, SEBAS	Monte Carlo Production				0.10	0.10			
2.5 Data Quality, Reconstruction	2.5.1 Simulation Programs	Non-US	BOCHUM	GR	OLIVO, MARTINO	Monte Carlo Validation				0.10	0.10			
2.5 Data Quality, Reconstruction	2.5.1 Simulation Programs	Non-US	RWTH	GR	BLUMENTHAL, JAN	Photonics Production				0.10	0.10			
2.5 Data Quality, Reconstruction	2.5.1 Simulation Programs	Non-US	RWTH	GR	LEIF RADEL	Implementation of new light yield factors in IceCube software				0.10	0.10			
2.5 Data Quality, Reconstruction	2.5.1 Simulation Programs	Non-US	RWTH	GR	SEBASTIAN SCHÖNEN	Data driven Simulation tools for magnetic monopoles				0.10	0.10			
2.5 Data Quality, Reconstruction	2.5.1 Simulation Programs	Non-US	EPFL	KE	RIBORDY, MATHIEU	Supernova detector (extension) responses				0.20	0.20			
2.5 Data Quality, Reconstruction	2.5.1 Simulation Programs	Non-US	EPFL	PO	BRUIJN, RONALD	Supernova detector (extension) responses				0.30	0.30			
2.5 Data Quality, Reconstruction	2.5.1 Simulation Programs	Non-US	<b>Non-US Total</b>							<b>2.15</b>	<b>2.15</b>			
2.5 Data Quality, Reconstruction	2.5.1 Simulation Programs	<b>WBS L3</b>						<b>1.85</b>	<b>2.18</b>	<b>0.30</b>	<b>2.15</b>	<b>6.48</b>		
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	US	LBNL	GR	MIARECKI, SANDRA	Algorithm for measuring muon energy		0.30			0.30			
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools		LBNL	GR	BINDER, GARY	Cascade reconstruction algorithm		0.20			0.20			
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	US	PSU	PO	KOSKINEN, JASON	Integrating the GENIE Monte Carlo software into IceCube software		0.20			0.10			
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	US	PSU	PO	KOSKINEN, JASON	Coordinate reconstruction scripts for production		0.10			0.10			
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	US	PSU	PO	TESIC, GORDANA	Integrate IceCube into AMON			0.50		0.50			
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	US	PSU	GR	DUNKMAN, MATT	develop starting track reconstruction - hybrid reco.		0.50			0.47			
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	US	SUBR	KE	FAZELY, ALI	Reconstruction/ Analysis tools			0.15		0.15			
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	US	SUBR	SC	XIANWU, XU	Reconstruction/ Analysis tools			0.15		0.15			

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WBS L2	WBS L3	US /		Institution	Labor	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									
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	US	UA	KE	TOALE, PATRICK	Double cascade fitter		0.10				0.10		
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	US	UA	GR	XU, DONGLIAN	Improvements to low energy analysis framework		0.10				0.10		
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	US	UA	GR	UA PO	Extension of GENIE to higher energies, GENIE/nugen comparison		0.10				0.10		
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	US	UA	GR	UA PO	Hybrid reconstruction tools		0.20				0.20		
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools		UD	PO	GONZALEZ, JAVIER	Event reconstruction		0.25				0.25		
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	US	UAA	KE	RAWLINS, KATHERINE	flat-ntuple; muon-bundle-reco; Snow correction for IceTop				0.30		0.30		
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	US	UMD	PO	WISSING, HENRIKE	develop & test reconstruction		0.13				0.13		
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	US	UMD	GR	REDL, PETER	Reconstruction/ Analysis tools		0.25				0.25		
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	US	StonyBrook	PO	LESIAK-BZDAK, MARIO	Flashers and Standard Candle				0.10		0.10		
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	US	StonyBrook	PO	LESIAK-BZDAK, MARIO	BadDomList software maintenance				0.10		0.10		
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	US	StonyBrook	GR	NIEDERHAUSEN, HANS	Standard Candle		0.10				0.10		
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	US	StonyBrook	GR	NIEDERHAUSEN, HANS	Cascade reconstruction		0.10				0.10		
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	US	UW	SC	CHIRKIN, DMITRY	Direct photon tracking / iceproperties calibration; FE/pulse extractor; reco S/W		0.15				0.15		
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	US	UW	PO	AUFFENBERG, JAN	Energy Reconstruction		0.15				0.15		
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	US	UW	GR	GLADSTONE, LAURA	Reconstruction tools-Deep Core		0.15				0.15		
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	US	UW	GR	FEINTZIG, JACOB	Event reconstruction (spline fits)		0.10				0.10		
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	US	UW	GR	VAN SANTEN, JACOB	Cascades		0.30				0.30		
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	US	UW	PO	WHITEHORN, NATHAN	Event Reconstruction		0.30				0.30		
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	US	UWRF	KE	MADSEN, JIM	Cosmic ray shower simulations and reconstruction				0.10		0.10		
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	US	UWRF	KE	SEUNARINE, SURUJ	Low-Energy Extensions of IceTop		0.10				0.10		
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	US	<b>US Total</b>						<b>0.00</b>	<b>3.78</b>	<b>1.40</b>		<b>5.18</b>	
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	Non-US	ADELAIDE	KE	HILL, GARY	Event energy and direction reconstruction, millipede					0.40	0.40		
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	Non-US	ADELAIDE	GR	AARTSEN, MARK	Event energy and direction reconstruction, millipede					0.50	0.50		
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	Non-US	CHIBA	KE	YOSHIDA, SHIGERU	Maintain Romeo, EHE Simulations, Calibration using Standard Candles					0.20	0.20		

**IceCube M&O Staffing Matrix sort by WBS v13.1 2012.1022**

WBS L2	WBS L3	US /	Institution	Labor	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														
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	Non-US	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								
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	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, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	Non-US	DESY	GR	SCHÖNWALD, ARNE	Cascade Reconstruction				0.10	0.10								
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	Non-US	UU	SC	BOERSMA, DAVID	Reconstruction Coordinator				0.20	0.20								
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	Non-US	RWTH	GR	VEHRING, MARKUS	Finite track reconstruction				0.10	0.10								
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	Non-US	RWTH	GR	VEHRING, MARKUS	Genie MC development				0.20	0.20								
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	Non-US	RWTH	GR	WALLRAFF, MARIUS	Oscillation Propagation tool for neutrino oscillations in Earth				0.10	0.10								
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	Non-US	SU	GR	FLIS, SAMUEL	Energy Reconstruction				0.10	0.10								
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	Non-US	SU	GR	WOLF, MARTIN	Truncated Mean, EventViewer, cluster tool				0.20	0.20								
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	Non-US	VUB	KE	VAN EIJNDHOVEN, NIC	development of reconstruction tools (IcePack framework)				0.25	0.25								
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	Non-US	VUB	PO	BOSE, DEBANJAN	muon track reconstruction in IceCube and DeepCore, waveform feature extractor				0.25	0.25								
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	Non-US	VUB	PO	LABARE, MATHIEU	muon track reconstruction in IceCube and DeepCore				0.13	0.13								
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	Non-US	VUB	PO	GOLUP, GERALDINA	muon track reconstruction for IceCube and DeepCore				0.25	0.25								
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	Non-US	VUB	GR	CASIER MARTIN	muon track reconstruction in IceCube and DeepCore				0.50	0.50								
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	Non-US	VUB	GR	BRAYEUR LIONEL	muon track reconstruction in IceCube and DeepCore				0.50	0.50								
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	Non-US	ALBERTA	KE	GRANT, DARREN	Maintenance of IceCube-Photonics interface				0.10	0.10								
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	Non-US	WUPPERTAL	GR	WUPPERTAL GR	New SUSY Reconstruction, Simulation, Propagation, Monopole, Photonics				0.50	0.50								
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	Non-US	MAINZ	GR	SCHATTO, KAI	PPC based tables Muon reconstruction				0.10	0.10								
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	Non-US	MAINZ	GR	WIEBE, KLAUS	Angular res. Cascades				0.20	0.20								
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	Non-US	HUMBOLDT	KE	KOLANOSKI, HERMANN	Reconstruction/ Analysis tools				0.10	0.10								
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	Non-US	HUMBOLDT	GR	ALTMANN, DAVID	Improving the track reconstruction.				0.15	0.15								
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	Non-US	BONN	GR	UBONN GR	Reconstruction/ Analysis tools				0.20	0.20								
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	Non-US	BONN	GR	PANKNIN, SEBASTIAN	IC-40 L3 processing				0.20	0.20								
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	Non-US	<b>Non-US Total</b>							<b>5.93</b>	<b>5.93</b>								
2.5 Data Quality, Reconstruction	<b>2.5.2 Reconstruction/ Analysis Tools</b>	<b>WBS L3</b>					<b>0.00</b>	<b>3.78</b>	<b>1.40</b>	<b>5.93</b>	<b>11.10</b>								

**IceCube M&O Staffing Matrix sort by WBS v13.1 2012.1022**

WBS L2	WBS L3	US /	Institution	Labor	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									
2.5 Data Quality, Reconstruction	2.5.3 Data Quality	<b>US</b>	<b>US Total</b>				<b>0.00</b>	<b>0.00</b>	<b>0.00</b>		<b>0.00</b>			
2.5 Data Quality, Reconstruction	2.5.3 Data Quality	Non-US	Munchen	PO	MPI PO	Data Quality & DeepCore				0.60	0.60			
2.5 Data Quality, Reconstruction	2.5.3 Data Quality	Non-US	DPNC	GR	ASEN, CHRISTOV	Data and Simulation Quality				0.20	0.20			
2.5 Data Quality, Reconstruction	2.5.3 Data Quality	Non-US	DPNC	GR	RAAMEZ MOHAMED	Data and Simulation Quality				0.20	0.20			
2.5 Data Quality, Reconstruction	2.5.3 Data Quality	Non-US	DPNC	PO	AGUILAR SANCHEZ JU	Data and Simulation Quality				0.20	0.20			
2.5 Data Quality, Reconstruction	2.5.3 Data Quality	Non-US	VUB	KE	VAN EIJNDHOVEN, NIC	data quality verification				0.25	0.25			
2.5 Data Quality, Reconstruction	2.5.3 Data Quality	Non-US	VUB	PO	GOLUP, GERALDINA	GRB analysis				0.25	0.25			
2.5 Data Quality, Reconstruction	2.5.3 Data Quality	Non-US	VUB	PO	BOSE, DEBANJAN	verification Deep Core data quality				0.25	0.25			
2.5 Data Quality, Reconstruction	2.5.3 Data Quality	Non-US	VUB	PO	LABARE, MATHIEU	verification Deep Core data quality				0.13	0.13			
2.5 Data Quality, Reconstruction	2.5.3 Data Quality	Non-US	VUB	PO	MILLER, JONATHAN	WIMP analysis				0.38	0.38			
2.5 Data Quality, Reconstruction	2.5.3 Data Quality	<b>Non-US</b>	<b>Non-US Total</b>							<b>2.45</b>	<b>2.45</b>			
2.5 Data Quality, Reconstruction	<b>2.5.3 Data Quality</b>	<b>WBS L3</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.45</b>	<b>2.45</b>		
2.5 Data Quality, Reconstruction	2.5.4 Offline Data Processing	US	UW	PO	AUFFENBERG, JAN	Offline Data Processing - EHE				0.15	0.15			
2.5 Data Quality, Reconstruction	2.5.4 Offline Data Processing	US	UW	PO	KOPPER, CLAUDIO	L2 processing support				0.30	0.30			
2.5 Data Quality, Reconstruction	2.5.4 Offline Data Processing	US	UW	PO	NEILSON, NAOKO	L2 Offline Processing				0.30	0.30			
2.5 Data Quality, Reconstruction	2.5.4 Offline Data Processing	US	UW	GR	FEINTZIG, JACOB	L2 processing, muon stream				0.10	0.10			
2.5 Data Quality, Reconstruction	2.5.4 Offline Data Processing	<b>US</b>	<b>US Total</b>				<b>0.00</b>	<b>0.85</b>	<b>0.00</b>		<b>0.85</b>			
2.5 Data Quality, Reconstruction	2.5.4 Offline Data Processing	<b>Non-US</b>	<b>Non-US Total</b>							<b>0.00</b>	<b>0.00</b>			
2.5 Data Quality, Reconstruction	<b>2.5.4 Offline Data Processing</b>	<b>WBS L3</b>						<b>0.00</b>	<b>0.85</b>	<b>0.00</b>	<b>0.00</b>	<b>0.85</b>		
<b>2.5 Data Quality, Reconstruction</b>	<b>WBS L2 Total</b>							<b>1.85</b>	<b>6.80</b>	<b>1.70</b>	<b>10.53</b>	<b>20.88</b>		
<b>Grand Total</b>								<b>31.18</b>	<b>15.39</b>	<b>7.34</b>	<b>31.90</b>	<b>85.80</b>		