IceCube M&O Staffing Matrix sort by WBS v15.0 2013.1008

WBS L2	WBS L3	Institution	Labor Cat.	Names	Tasks	Source of Funds (U.S. Only)	NSF M&O Core	NSF Base Grants	U.S. IN-KIND	Non U.S. In-Kind	Grand Total
2.1 Program Management	2.1.1 Administration	LBNL	KE	KLEIN,SPENCER	Supervise LBNL effort	NSF M&O Core	0.05				0.05
2.1 Program Management	2.1.1 Administration	LBNL	KE	KLEIN,SPENCER	Pubcom member	US In-Kind			0.10		0.10
2.1 Program Management	2.1.1 Administration	UWRF	KE	MADSEN, JIM	Speakers Comm Chair	US In-Kind			0.25		0.25
2.1 Program Management	2.1.1 Administration	PSU	KE	DEYOUNG, TYCE	Deputy Spokesperson	US In-Kind			0.20		0.20
2.1 Program Management	2.1.1 Administration	UCB	SC	FILIMONOV, KIRILL	Pubcom member	Base Grants		0.10			0.10
2.1 Program Management	2.1.1 Administration	UCB	SC	WOSCHNAGG, KURT	Speakers Comm member	Base Grants		0.10			0.10
2.1 Program Management	2.1.1 Administration	UD	KE	GAISSER, TOM	ExecCom member	US In-Kind			0.20		0.20
2.1 Program Management	2.1.1 Administration	UD	KE	STANEV, TODOR	Pubcom member	US In-Kind			0.10		0.10
2.1 Program Management	2.1.1 Administration	UMD	KE	SULLIVAN, GREG	ExecCom member	US In-Kind			0.20		0.20
2.1 Program Management	2.1.1 Administration	UMD	KE	SULLIVAN, GREG	M&O/Upgrade planning	US In-Kind			0.30		0.30
2.1 Program Management	2.1.1 Administration	UMD	PO	WISSING, HENRIKE	Pubcom member	Base Grants		0.10			0.10
2.1 Program Management	2.1.1 Administration	SBU	KE	KIRYLUK,JOANNA	Simulation Prod. Comm member	US In-Kind			0.05		0.05
2.1 Program Management	2.1.1 Administration	UW	KE	HALZEN, FRANCIS	Principle Investigator	NSF M&O Core	0.35				0.35
2.1 Program Management	2.1.1 Administration	UW	KE	HALZEN, FRANCIS	Principle Investigator	US In-Kind			0.15		0.15
2.1 Program Management	2.1.1 Administration	UW	KE	KARLE, ALBRECHT	Associate Director for Science	NSF M&O Core	0.25				0.25
2.1 Program Management	2.1.1 Administration	UW	KE	KARLE, ALBRECHT	Coordination Committee chair	NSF M&O Core	0.10				0.10
2.1 Program Management	2.1.1 Administration	UW	KE	KARLE, ALBRECHT	ExecCom member	US In-Kind			0.20		0.20
2.1 Program Management	2.1.1 Administration	UW	KE	UW Manager	Director of Operations (TBD)	NSF M&O Core	0.38				0.38
2.1 Program Management	2.1.1 Administration	UW	MA	MERINO, GONZALO	Computing Infrastructure Manager	NSF M&O Core	0.55				0.55
2.1 Program Management	2.1.1 Administration	UW	MA	PELES, ADI	Resource Coordinator	NSF M&O Core	0.50				0.50
2.1 Program Management	2.1.1 Administration	UW	AD	Vakhnina, Catherine	Deputy Resource Coordinator	NSF M&O Core	0.50				0.50
2.1 Program Management	2.1.1 Administration	**US Total**					**2.68**	**0.30**	**1.75**		**4.73**
2.1 Program Management	2.1.1 Administration	ALBERTA	KE	GRANT, DARREN	Pubcom adjoint member	Non-US In-kind				0.10	0.10
2.1 Program Management	2.1.1 Administration	DESY	KE	ACKERMANN, MARKUS	ExecCom member	Non-US In-kind				0.20	0.20
2.1 Program Management	2.1.1 Administration	DESY	KE	ACKERMANN, MARKUS	Analysis Coordinator	Non-US In-kind				0.35	0.35
2.1 Program Management	2.1.1 Administration	DPNC	KE	MONTARULI, TERESA	ICB Member	Non-US In-kind				0.10	0.10
2.1 Program Management	2.1.1 Administration	HUMBOLDT	KE	KAPPES, ALEXANDER	Pubcom Chair	Non-US In-kind				0.25	0.25
2.1 Program Management	2.1.1 Administration	HUMBOLDT	KE	KAPPES, ALEXANDER	ExecCom member	Non-US In-kind				0.20	0.20
2.1 Program Management	2.1.1 Administration	SU	KE	FINLEY, CHAD	ICB Member	Non-US In-kind				0.05	0.05
2.1 Program Management	2.1.1 Administration	SU	KE	HULTQVIST, KLAS	ICB Member	Non-US In-kind				0.05	0.05
2.1 Program Management	2.1.1 Administration	SU	KE	FINLEY, CHAD SU	Coordination with LIGO	Non-US In-kind				0.10	0.10
2.1 Program Management	2.1.1 Administration	SU	KE	WALCK, CHRISTIAN	Publications Bookkeeping	Non-US In-kind				0.10	0.10
2.1 Program Management	2.1.1 Administration	UC	KE	ADAMS, JENNI	ICB Member	Non-US In-kind				0.05	0.05
2.1 Program Management	2.1.1 Administration	ULB	KE	HANSON, KAEL	ExecCom member	Non-US In-kind				0.20	0.20
2.1 Program Management	2.1.1 Administration	UU	KE	BOTNER, OLGA	Spokesperson	Non-US In-kind				0.30	0.30
2.1 Program Management	2.1.1 Administration	UU	KE	BOTNER, OLGA	ExecCom member	Non-US In-kind				0.20	0.20
2.1 Program Management	2.1.1 Administration	UU	KE	HALLGREN, ALLAN	Speakers Comm member	Non-US In-kind				0.10	0.10
2.1 Program Management	2.1.1 Administration	VUB	KE	DE CLERCQ, CATHERINE	Institutional Lead	Non-US In-kind				0.20	0.20
2.1 Program Management	2.1.1 Administration	WUPPERTAL	KE	HELBING, KLAUS	Speakers Comm member	Non-US In-kind				0.10	0.10
2.1 Program Management	2.1.1 Administration	RWTH	KE	WIEBUSCH, CHRISTOPHER	ExecCom member	Non-US In-kind				0.20	0.20
2.1 Program Management	2.1.1 Administration	MAINZ	KE	KOPKE, LUTZ	Supernova group Co-Chair	Non-US In-kind				0.25	0.25
2.1 Program Management	2.1.1 Administration	BOCHUM	KE	TJUS, JULIA	Pubcom member	Non-US In-kind				0.10	0.10
2.1 Program Management	2.1.1 Administration	**Non-US Total**								**3.20**	**3.20**
2.1 Program Management	**2.1.1 Administration**						**2.68**	**0.30**	**1.75**	**3.20**	**7.93**

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WBS L2	WBS L3	Institution	Labor Cat.	Names	Tasks	Source of Funds (U.S. Only)	NSF M&O Core	NSF Base Grants	U.S. IN-KIND	Non U.S. In-Kind	Grand Total
2.1 Program Management	2.1.2 Engineering And R&D Support	PSU	KE	COWEN, DOUG	PINGU Co-Lead	US In-Kind			0.35		0.35
2.1 Program Management	2.1.2 Engineering And R&D Support	OSU	KE	BEATTY, JAMES	PINGU Electronics and Calibration Development	US In-Kind			0.10		0.10
2.1 Program Management	2.1.2 Engineering And R&D Support	OSU	PO	ANDERSON, TYLER	PINGU Electronics and Calibration Development	US In-Kind			0.25		0.25
2.1 Program Management	2.1.2 Engineering And R&D Support	UMD	KE	HOFFMAN, KARA	Detector R&D	US In-Kind			0.20		0.20
2.1 Program Management	2.1.2 Engineering And R&D Support	UW	SC	DUVERNOIS, MICHAEL	Specialized simulations, designing new filters, unusual data selections, extracting specialized information	NSF M&O Core	0.25				0.25
2.1 Program Management	2.1.2 Engineering And R&D Support	UW	SC	DUVERNOIS, MICHAEL	Ongoing EMI studies & mitigation, South Pole & Northern test site instrumentation, Summer South Pole field work	NSF M&O Core	0.25				0.25
2.1 Program Management	2.1.2 Engineering And R&D Support	UW	EN	LAUNDRIE, ANDREW	Engineering Support: IceCube Lab Summer operations, cabling, & instrumentation testing	NSF M&O Core	0.80				0.80
2.1 Program Management	2.1.2 Engineering And R&D Support	UW	EN	SANDSTROM, PERRY	Ongoing EMI studies & mitigation, South Pole & Northern test site instrumentation, In-field work	NSF M&O Core	0.15				0.15
2.1 Program Management	2.1.2 Engineering And R&D Support	UW	EN	SANDSTROM, PERRY	Engineering Support: IceCube Lab Summer operations, fieldwork management, design of the pDOM, GPS maintenance	NSF M&O Core	0.75				0.75
2.1 Program Management	2.1.2 Engineering And R&D Support	UW	MA	HAUGEN, JAMES	Engineering Support: logistics, northern hemisphere testing, & vendor management	NSF M&O Core	0.55				0.55
2.1 Program Management	2.1.2 Engineering And R&D Support	**US Total**					**2.75**	**0.00**	**0.90**		**3.65**
2.1 Program Management	2.1.2 Engineering And R&D Support	DESY	KE	NAHNHAUER, ROLF	Acoustic R&D Support PINGU R&D	Non-US In-kind				0.10	0.10
2.1 Program Management	2.1.2 Engineering And R&D Support	DESY	SC	SHANIDZE, REVAZ	PINGU calibration / reconstruction studies	Non-US In-kind				0.10	0.10
2.1 Program Management	2.1.2 Engineering And R&D Support	DESY	PO	KARG, TIMO	Acoustic R&D Support PINGU R&D	Non-US In-kind				0.10	0.10
2.1 Program Management	2.1.2 Engineering And R&D Support	DESY	GR	BRETZ, HANS-PETER	PINGU calibration studies	Non-US In-kind				0.10	0.10
2.1 Program Management	2.1.2 Engineering And R&D Support	ALBERTA	KE	GRANT, DARREN	PINGU Co-Lead	Non-US In-kind				0.10	0.10
2.1 Program Management	2.1.2 Engineering And R&D Support	RWTH	GR	PAUL, LARRISA	SPATS SD Maintenance & Analysis	Non-US In-kind				0.10	0.10
2.1 Program Management	2.1.2 Engineering And R&D Support	RWTH	GR	HEINEN, DIRK	Acoustic R&D Support	Non-US In-kind				0.10	0.10
2.1 Program Management	2.1.2 Engineering And R&D Support	SKKU	PO	BOSE, DEBANJAN	Reconstruction tools for PINGU	Non-US In-kind				0.15	0.15
2.1 Program Management	2.1.2 Engineering And R&D Support	ULB	KE	HANSON, KAEL	EMI Measurements	Non-US In-kind				0.10	0.10
2.1 Program Management	2.1.2 Engineering And R&D Support	ULB	PO	O'MURCHADHA, AONGUS	EMI Measurements	Non-US In-kind				0.10	0.10
2.1 Program Management	2.1.2 Engineering And R&D Support	ULB	GR	MEURES, THOMAS	EMI Measurements	Non-US In-kind				0.25	0.25
2.1 Program Management	2.1.2 Engineering And R&D Support	GENT	SC	UGENT SC	Acoustic R&D Support	Non-US In-kind				0.05	0.05
2.1 Program Management	2.1.2 Engineering And R&D Support	GENT	GR	UGENT GR	Acoustic R&D Support	Non-US In-kind				0.05	0.05
2.1 Program Management	2.1.2 Engineering And R&D Support	**Non-US Total**								**1.40**	**1.40**
2.1 Program Management	**2.1.2 Engineering And R&D Support**						**2.75**	**0.00**	**0.90**	**1.40**	**5.05**
2.1 Program Management	2.1.3 Usap Support	UW	MA	HAUGEN, JAMES	USAP Support: yearly sip, coordination with contractor (ASC)	NSF M&O Core	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	PSU	KE	COWEN, DOUG	Education & Outreach	US In-Kind			0.05		0.05
2.1 Program Management	2.1.4 Education & Outreach	PSU	KE	DEYOUNG, TYCE	Education & Outreach	US In-Kind			0.05		0.05
2.1 Program Management	2.1.4 Education & Outreach	UCB	KE	PRICE, BUFORD	Education & Outreach	US In-Kind			0.10		0.10
2.1 Program Management	2.1.4 Education & Outreach	UMD	KE	UMD KE	Education & Outreach	US In-Kind			0.10		0.10
2.1 Program Management	2.1.4 Education & Outreach	UW	AD	Bacque, Laurel	Education & Outreach Coordination	NSF M&O Core	0.25				0.25
2.1 Program Management	2.1.4 Education & Outreach	UW	AD	BRAVO GALLART, SILVIA	Education & Outreach	NSF M&O Core	0.25				0.25
2.1 Program Management	2.1.4 Education & Outreach	UW	AD	Madsen, Megan	Education & Outreach Coordination	NSF M&O Core	0.75				0.75
2.1 Program Management	2.1.4 Education & Outreach	UWRF	KE	MADSEN, JIM	Teachers program and UWRF Upward	NSF M&O Core	0.10				0.10
2.1 Program Management	2.1.4 Education & Outreach	UWRF	AD	UWRF AD	Teachers Program	NSF M&O Core	0.10				0.10
2.1 Program Management	2.1.4 Education & Outreach	**US Total**					**1.45**	**0.00**	**0.30**		**1.75**
2.1 Program Management	**2.1.4 Education & Outreach**						**1.45**	**0.00**	**0.30**		**1.75**

WBS L2	WBS L3	Institution	Labor Cat.	Names	Tasks	Source of Funds (U.S. Only)	NSF M&O Core	NSF Base Grants	U.S. IN-KIND	Non U.S. In-Kind	Grand Total
2.1 Program Management	2.1.4 Education & Outreach	UU	KE	HALLGREN, ALLAN	Education & Outreach	Non-US In-kind				0.05	0.05
2.1 Program Management	2.1.4 Education & Outreach	UU	KE	BOTNER, OLGA	Education & Outreach	Non-US In-kind				0.05	0.05
2.1 Program Management	2.1.4 Education & Outreach	SU	KE	HULTH, PER OLOF	Organisation of outreach events in Stockholm	Non-US In-kind				0.05	0.05
2.1 Program Management	2.1.4 Education & Outreach	SKKU	KE	ROTT, CARSTEN	Education & Outreach	Non-US In-kind				0.05	0.05
2.1 Program Management	2.1.4 Education & Outreach	**Non-US Total**								0.20	0.20
2.1 Program Management	**2.1.4 Education & Outreach**						1.45	0.00	0.30	0.20	1.95
2.1 Program Management	**WBS L2 Total**						7.13	0.30	2.95	4.80	15.18
2.2 Detector Operations & Mai	2.2 Detector Operations & Maintenance	LBNL	KE	NYGREN,DAVID R	Track Engine Trigger	US In-Kind			0.10		0.10
2.2 Detector Operations & Mai	2.2 Detector Operations & Maintenance	UW	SC	KELLEY, JOHN	Detector Maintenance and Operations Manager	NSF M&O Core	0.75				0.75
2.2 Detector Operations & Mai	2.2 Detector Operations & Maintenance	**US Total**					0.75	0.00	0.10		0.85
2.2 Detector Operations & Mai	2.2 Detector Operations & Maintenance	UMH	GR	KOHNEN, GEORGES	Database Coordinator	Non-US In-kind				0.10	0.10
2.2 Detector Operations & Mai	2.2 Detector Operations & Maintenance	**Non-US Total**								0.10	0.10
2.2 Detector Operations & Mai	**2.2 Detector Operations & Maintenance**						0.75	0.00	0.10	0.10	0.95
2.2 Detector Operations & Mai	2.2.1 Run Coordination	UW	IT	Auer, Ralf	Winterovers coordinator, hiring and training of winterovers	NSF M&O Core	0.25				0.25
2.2 Detector Operations & Mai	2.2.1 Run Coordination	UW	WO	UW Winter Overs	Operate Detector (Winter-Overs)	NSF M&O Core	3.00				3.00
2.2 Detector Operations & Mai	2.2.1 Run Coordination	**US Total**					3.25	0.00	0.00		3.25
2.2 Detector Operations & Mai	2.2.1 Run Coordination	UC	GR	UC GR	Flasher Runs	Non-US In-kind				0.10	0.10
2.2 Detector Operations & Mai	2.2.1 Run Coordination	BONN	PO	BOSSER, SEBASTIAN	Run Coordinator	Non-US In-kind				0.50	0.50
2.2 Detector Operations & Mai	2.2.1 Run Coordination	**Non-US Total**								0.60	0.60
2.2 Detector Operations & Mai	**2.2.1 Run Coordination**						3.25	0.00	0.00	0.60	3.85
2.2 Detector Operations & Mai	2.2.2 Data Acquisition	LBNL	EN	STEZELBERGER,THORSTE	Maintain DAQ Hardware (Hubs, DOR, Clocks, GPS,...)	NSF M&O Core	0.15				0.15
2.2 Detector Operations & Mai	2.2.2 Data Acquisition	UD	KE	SECKEL, DAVID	DAQ Monitoring	US In-Kind			0.05		0.05
2.2 Detector Operations & Mai	2.2.2 Data Acquisition	UW	SC	KELLEY, JOHN	DOM Cal Maintenance, DOM issues	NSF M&O Core	0.15				0.15
2.2 Detector Operations & Mai	2.2.2 Data Acquisition	UW	CS	Frere, Michael	Maintain DAQ Software Systems (IceCube Live) and track changes with time in the detector	NSF M&O Core	1.00				1.00
2.2 Detector Operations & Mai	2.2.2 Data Acquisition	UW	CS	GLOWACKI, DAVID	Maintain DAQ Software Systems (incl. triggers, up to Event Builder) and track changes with time in the detector	NSF M&O Core	1.00				1.00
2.2 Detector Operations & Mai	2.2.2 Data Acquisition	UW	CS	Newcomb, Matthew	Maintain DAQ Software Systems experiment control and monitoring, DOM and DOMhub software) and track changes with time in the detector	NSF M&O Core	0.75				0.75
2.2 Detector Operations & Mai	2.2.2 Data Acquisition	UW	CS	JACOBSEN, JOHN (NPX)	Maintain low-level DAQ software (DOR device driver, DOM software)	NSF M&O Core	0.15				0.15
2.2 Detector Operations & Mai	2.2.2 Data Acquisition	UW	GR	WEAVER, CHRISTOPHER	DOM CAL Maintenance	Base Grants		0.20			0.20
2.2 Detector Operations & Mai	2.2.2 Data Acquisition	**US Total**					3.20	0.20	0.05		3.45
2.2 Detector Operations & Mai	2.2.2 Data Acquisition	ULB	KE	HANSON, KAEL	Data Acquisition	Non-US In-kind				0.20	0.20
2.2 Detector Operations & Mai	2.2.2 Data Acquisition	ULB	GR	HEEREMAN, DAVID	Develop Hit Spooling for Supernova & others	Non-US In-kind				0.50	0.50
2.2 Detector Operations & Mai	2.2.2 Data Acquisition	ULB	GR	DeWasseige, Gwen	Detector Noise Studies	Non-US In-kind				0.10	0.10
2.2 Detector Operations & Mai	2.2.2 Data Acquisition	ULB	GR	PINAT, ELISA	Data Acquisition	Non-US In-kind				0.20	0.20
2.2 Detector Operations & Mai	2.2.2 Data Acquisition	**Non-US Total**								1.00	1.00
2.2 Detector Operations & Mai	**2.2.2 Data Acquisition**						3.20	0.20	0.05	1.00	4.45
2.2 Detector Operations & Mai	2.2.3 Online Filter (Pnf)	UMD	SC	BLAUFUSS, ERIK	Maintain PnF S/W and Online Filters	NSF M&O Core	0.20				0.20
2.2 Detector Operations & Mai	2.2.3 Online Filter (Pnf)	UMD	CS	Schmidt, Torsten	Maintain PnF Software and Online Filters	NSF M&O Core	0.30				0.30
2.2 Detector Operations & Mai	2.2.3 Online Filter (Pnf)	UMD	GR	RICHMAN, MIKE	Online Filter Testing	Base Grants		0.13			0.13
2.2 Detector Operations & Mai	2.2.3 Online Filter (Pnf)	**US Total**					0.50	0.13	0.00		0.63
2.2 Detector Operations & Mai	**2.2.3 Online Filter (Pnf)**						0.50	0.13	0.00		0.63
2.2 Detector Operations & Mai	2.2.4 Sps Operations	UW	IT	Auer, Ralf	Maintain South Pole Computing H/W Infrastructure and operating systems	NSF M&O Core	0.50				0.50
2.2 Detector Operations & Mai	2.2.4 Sps Operations	UW	IT	WISNIEWSKI, PAUL	Networking and Security Maintenance	NSF M&O Core	0.25				0.25
2.2 Detector Operations & Mai	2.2.4 Sps Operations	**US Total**					0.75	0.00	0.00		0.75
2.2 Detector Operations & Mai	**2.2.4 Sps Operations**						0.75	0.00	0.00		0.75

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2.2 Detector Operations & Mai	2.2.5 Spts Operations	UW	IT	Auer, Ralf	Maintain South Pole Computing H/W Infrastructure and operating systems	NSF M&O Core	0.25				0.25
2.2 Detector Operations & Mai	2.2.5 Spts Operations	**US Total**					**0.25**	**0.00**	**0.00**	**0.00**	**0.25**
2.2 Detector Operations & Mai	**2.2.5 Spts Operations**						**0.25**	**0.00**	**0.00**		**0.25**
2.2 Detector Operations & Mai	2.2.6 Experiment Control	UW	CS	JACOBSEN, JOHN (NPX)	IceCube Live Maintenance and Upgrades	NSF M&O Core	0.65				0.65
2.2 Detector Operations & Mai	2.2.6 Experiment Control	**US Total**					**0.65**	**0.00**	**0.00**		**0.65**
2.2 Detector Operations & Mai	**2.2.6 Experiment Control**						**0.65**	**0.00**	**0.00**		**0.65**
2.2 Detector Operations & Mai	2.2.7 Detector Monitoring	CAU	KE	JAPARIDZE, GEORGE	Monitoring shifts	US In-Kind			0.02		0.02
2.2 Detector Operations & Mai	2.2.7 Detector Monitoring	GTECH	GR	CASEY, JAMES	Monitoring shifts	Base Grants		0.03			0.03
2.2 Detector Operations & Mai	2.2.7 Detector Monitoring	KU	KE	BESSON, DAVE	Monitoring shifts	US In-Kind			0.02		0.02
2.2 Detector Operations & Mai	2.2.7 Detector Monitoring	SBU	KE	KIRYLUK,JOANNA	BadDomList	US In-Kind			0.05		0.05
2.2 Detector Operations & Mai	2.2.7 Detector Monitoring	SBU	PO	LESIAK-BZDAK, MARIOLA	Detector Monitoring	Base Grants		0.05			0.05
2.2 Detector Operations & Mai	2.2.7 Detector Monitoring	LBNL	PO	CHANG, HYON HA	Monitoring shifts	Base Grants		0.09			0.09
2.2 Detector Operations & Mai	2.2.7 Detector Monitoring	PSU	PO	ARLEN, TIM	Monitoring shifts	Base Grants		0.03			0.03
2.2 Detector Operations & Mai	2.2.7 Detector Monitoring	PSU	GR	DUNKMAN, MATT	Monitoring shifts	Base Grants		0.03			0.03
2.2 Detector Operations & Mai	2.2.7 Detector Monitoring	SUBR	KE	TER-ANTONYAN, SAMVEL	Detector Monitoring	US In-Kind			0.02		0.02
2.2 Detector Operations & Mai	2.2.7 Detector Monitoring	UA	PO	PALCZEWSKI, TOMASZ	Monitoring shifts	Base Grants		0.05			0.05
2.2 Detector Operations & Mai	2.2.7 Detector Monitoring	UA	PO	PALCZEWSKI, TOMASZ	Moni 2.0 development	Base Grants		0.05			0.05
2.2 Detector Operations & Mai	2.2.7 Detector Monitoring	UAA	KE	RAWLINS, KATHERINE	Monitoring shifts	US In-Kind			0.02		0.02
2.2 Detector Operations & Mai	2.2.7 Detector Monitoring	UCB	SC	FILIMONOV, KIRILL	Coordinate Monitoring	Base Grants		0.25			0.25
2.2 Detector Operations & Mai	2.2.7 Detector Monitoring	UCB	SC	FILIMONOV, KIRILL	Coordinate Monitoring	NSF M&O Core	0.25				0.25
2.2 Detector Operations & Mai	2.2.7 Detector Monitoring	UCB	SC	UCB SC	Monitoring shifts	Base Grants		0.02			0.02
2.2 Detector Operations & Mai	2.2.7 Detector Monitoring	UCI	PO	SILVERSTRI, ANDREA	Monitoring shifts	US In-Kind			0.01		0.01
2.2 Detector Operations & Mai	2.2.7 Detector Monitoring	UCI	GR	HANSON, JORDAN	Monitoring shifts	US In-Kind			0.01		0.01
2.2 Detector Operations & Mai	2.2.7 Detector Monitoring	UD	PO	KUWABARA, TAKAO	Temp. & Pressure atmospheric monitoring	US In-Kind			0.30		0.30
2.2 Detector Operations & Mai	2.2.7 Detector Monitoring	UMD	GR	UMD GR	Monitoring shifts	Base Grants		0.06			0.06
2.2 Detector Operations & Mai	2.2.7 Detector Monitoring	UW	PO	UW PO	Monitoring shifts	Base Grants		0.12			0.12
2.2 Detector Operations & Mai	2.2.7 Detector Monitoring	UW	GR	UW GR	Monitoring shifts	Base Grants		0.12			0.12
2.2 Detector Operations & Mai	2.2.7 Detector Monitoring	**US Total**					**0.25**	**0.90**	**0.44**		**1.59**
2.2 Detector Operations & Mai	2.2.7 Detector Monitoring	CHIBA	GR	CHIBA GR	Detector Monitoring	Non-US In-kind				0.03	0.03
2.2 Detector Operations & Mai	2.2.7 Detector Monitoring	DESY	SC	DESY SC	Detector Monitoring	Non-US In-kind				0.05	0.05
2.2 Detector Operations & Mai	2.2.7 Detector Monitoring	DESY	GR	DESY GR	Detector Monitoring	Non-US In-kind				0.12	0.12
2.2 Detector Operations & Mai	2.2.7 Detector Monitoring	DTMND	GR	DTMD GR	Detector Monitoring	Non-US In-kind				0.03	0.03
2.2 Detector Operations & Mai	2.2.7 Detector Monitoring	TUM	GR	MPI GR	Detector Monitoring	Non-US In-kind				0.05	0.05
2.2 Detector Operations & Mai	2.2.7 Detector Monitoring	RWTH	GR	BLUMENTHAL, JAN	Monitoring contact	Non-US In-kind				0.05	0.05
2.2 Detector Operations & Mai	2.2.7 Detector Monitoring	RWTH	GR	PAUL, LARRISA	RASTA Data Monitoring	Non-US In-kind				0.10	0.10
2.2 Detector Operations & Mai	2.2.7 Detector Monitoring	RWTH	GR	RWTH GR	Monitoring (4 weeks)	Non-US In-kind				0.12	0.12
2.2 Detector Operations & Mai	2.2.7 Detector Monitoring	SKKU	GR	JEONG, DONGVOUNG	Detector Monitoring	Non-US In-kind				0.03	0.03
2.2 Detector Operations & Mai	2.2.7 Detector Monitoring	SU	KE	HULTH, PER OLOF	IceCube camera system events in Stockholm	Non-US In-kind				0.10	0.10
2.2 Detector Operations & Mai	2.2.7 Detector Monitoring	SU	GR	SU GR	Detector Monitoring	Non-US In-kind				0.06	0.06
2.2 Detector Operations & Mai	2.2.7 Detector Monitoring	UC	KE	ADAMS, JENNI	Detector Monitoring	Non-US In-kind				0.05	0.05
2.2 Detector Operations & Mai	2.2.7 Detector Monitoring	ULB	GR	ULB GR	Detector Monitoring	Non-US In-kind				0.06	0.06
2.2 Detector Operations & Mai	2.2.7 Detector Monitoring	UOX	KE	SARKAR, SUBIR	Detector Monitoring	Non-US In-kind				0.02	0.02
2.2 Detector Operations & Mai	2.2.7 Detector Monitoring	UU	GR	UU GR	Monitoring Shifts	Non-US In-kind				0.03	0.03
2.2 Detector Operations & Mai	2.2.7 Detector Monitoring	VUB	PO	VUB PO	Monitoring shifts	Non-US In-kind				0.06	0.06
2.2 Detector Operations & Mai	2.2.7 Detector Monitoring	VUB	GR	VUB GR	Monitoring shifts	Non-US In-kind				0.06	0.06
2.2 Detector Operations & Mai	2.2.7 Detector Monitoring	WUPPERTAL	GR	WUPPERTAL GR	South Pole EMI Monitoring	Non-US In-kind				0.15	0.15
2.2 Detector Operations & Mai	2.2.7 Detector Monitoring	WUPPERTAL	GR	WUPPERTAL GR	SPATS	Non-US In-kind				0.35	0.35
2.2 Detector Operations & Mai	2.2.7 Detector Monitoring	MAINZ	GR	UM GR	Detector Monitoring	Non-US In-kind				0.05	0.05
2.2 Detector Operations & Mai	2.2.7 Detector Monitoring	GENT	GR	UGENT GR	Detector Monitoring	Non-US In-kind				0.03	0.03
2.2 Detector Operations & Mai	2.2.7 Detector Monitoring	DPNC	GR	ASEN, CHRISTOV	Detector Monitoring	Non-US In-kind				0.10	0.10
2.2 Detector Operations & Mai	2.2.7 Detector Monitoring	DPNC	GR	RAAMEZ MOHAMED	Detector Monitoring	Non-US In-kind				0.10	0.10
2.2 Detector Operations & Mai	2.2.7 Detector Monitoring	BONN	GR	UBONN GR	Detector Monitoring	Non-US In-kind				0.05	0.05
2.2 Detector Operations & Mai	2.2.7 Detector Monitoring	BOCHUM	GR	SABA, ISAAC	Detector Monitoring	Non-US In-kind				0.03	0.03
2.2 Detector Operations & Mai	2.2.7 Detector Monitoring	**Non-US Total**								**1.88**	**1.88**
2.2 Detector Operations & Mai	**2.2.7 Detector Monitoring**						**0.25**	**0.90**	**0.44**	**1.88**	**3.47**

WBS L2	WBS L3	Institution	Labor Cat.	Names	Tasks	Source of Funds (U.S. Only)	NSF M&O Core	NSF Base Grants	U.S. IN-KIND	Non U.S. In-Kind	Grand Total
2.2 Detector Operations & Mai	2.2.8 Detector Calibration	GTECH	GR	CASEY, JAMES	Bubble studies with flashers	Base Grants		0.20			0.20
2.2 Detector Operations & Mai	2.2.8 Detector Calibration	UA	KE	WILLIAMS, DAWN	managing flasher runs coordinating low level calibration effort	NSF M&O Core	0.20				0.20
2.2 Detector Operations & Mai	2.2.8 Detector Calibration	UA	PO	PALCZEWSKI, TOMASZ	SPE recalibration	Base Grants		0.05			0.05
2.2 Detector Operations & Mai	2.2.8 Detector Calibration	UA	GR	XU, DONGLIAN	Low-energy cascade calibration with flashers	Base Grants		0.10			0.10
2.2 Detector Operations & Mai	2.2.8 Detector Calibration	UA	GR	PEPPER, JAMES	IceCube Live C&V	Base Grants		0.05			0.05
2.2 Detector Operations & Mai	2.2.8 Detector Calibration	UCB	SC	WOSCHNAGG, KURT	Ice Properties calibration	Base Grants		0.15			0.15
2.2 Detector Operations & Mai	2.2.8 Detector Calibration	UW	SC	WENDT, CHRISTOPHER	Absolute DOM sensitivity	NSF M&O Core	0.40				0.40
2.2 Detector Operations & Mai	2.2.8 Detector Calibration	UW	SC	WENDT, CHRISTOPHER	Flasher output, flasher calibration	NSF M&O Core	0.20				0.20
2.2 Detector Operations & Mai	2.2.8 Detector Calibration	UW	SC	WENDT, CHRISTOPHER	DOM charge response, linearity, DOM calibration support	NSF M&O Core	0.20				0.20
2.2 Detector Operations & Mai	2.2.8 Detector Calibration	UW	GR	FEINTZIG, JACOB	Ice Properties	Base Grants		0.10			0.10
2.2 Detector Operations & Mai	2.2.8 Detector Calibration	UW	GR	JERO, KYLE	DOM Linearity, sensitivity	Base Grants		0.15			0.15
2.2 Detector Operations & Mai	2.2.8 Detector Calibration	UW	GR	JERO, KYLE	Ice properties (anisotropy)	Base Grants		0.25			0.25
2.2 Detector Operations & Mai	2.2.8 Detector Calibration	US Total					1.00	1.05	0.00		2.05
2.2 Detector Operations & Mai	2.2.8 Detector Calibration	DESY	GR	STOESSL, ACHIM	Flasher Analysis	Non-US In-kind				0.20	0.20
2.2 Detector Operations & Mai	2.2.8 Detector Calibration	Non-US Total								0.20	0.20
2.2 Detector Operations & Mai	**2.2.8 Detector Calibration**						**1.00**	**1.05**	**0.00**	**0.20**	**2.25**
2.2 Detector Operations & Mai	2.2.9 Icetop Operations	UD	SC	TILAV, SERAP	Coordinate IceTop Operations	NSF M&O Core	1.00				1.00
2.2 Detector Operations & Mai	2.2.9 Icetop Operations	UWRF	KE	SPICZAK, GLENN	IceTop tank Monitoring	US In-Kind			0.03		0.03
2.2 Detector Operations & Mai	2.2.9 Icetop Operations	US Total					1.00	0.00	0.03		1.03
2.2 Detector Operations & Mai	**2.2.9 Icetop Operations**						**1.00**	**0.00**	**0.03**	**0.00**	**1.03**
2.2 Detector Operations & Mai	2.2.10 Supernova Operations	UW	GR	RIEDEL, BENEDIKT	Supernova DAQ	Base Grants		0.15			0.15
2.2 Detector Operations & Mai	2.2.10 Supernova Operations	US Total					0.00	0.15	0.00	0.00	0.15
2.2 Detector Operations & Mai	2.2.10 Supernova Operations	MAINZ	GR	KROLL, GÖSTA	SuperNova Operations	Non-US In-kind				0.20	0.20
2.2 Detector Operations & Mai	2.2.10 Supernova Operations	MAINZ	GR	EBERHARD, BENJAMIN	SuperNova Operations	Non-US In-kind				0.50	0.50
2.2 Detector Operations & Mai	2.2.10 Supernova Operations	MAINZ	GR	BAUM, VOLKER	SuperNova Operations	Non-US In-kind				0.50	0.50
2.2 Detector Operations & Mai	2.2.10 Supernova Operations	Non-US Total								1.20	1.20
2.2 Detector Operations & Mai	**2.2.10 Supernova Operations**						**0.00**	**0.15**	**0.00**	**1.20**	**1.35**
2.2 Detector Operations & M	**WBS L2 Total**						**11.60**	**2.43**	**0.62**	**4.98**	**19.62**
2.3 Computing And Data Mana	2.3.1 Core Software	UMD	GR	HELLAUER, ROBERT	Core Software	Base Grants		0.25			0.25
2.3 Computing And Data Mana	2.3.1 Core Software	UMD	CS	Schmidt, Torsten	Maintain Core Analysis Framework (IceTray)	NSF M&O Core	0.50				0.50
2.3 Computing And Data Mana	2.3.1 Core Software	UMD	CS	Straszheim, Troy	Maintain Core Analysis Framework (IceTray)	NSF M&O Core	1.00				1.00
2.3 Computing And Data Mana	2.3.1 Core Software	UMD	CS	UMD CS	Maintain Core Software Repository	NSF M&O Core	0.50				0.50
2.3 Computing And Data Mana	2.3.1 Core Software	UMD	GR	MAUNU, RYAN	Detector R&D	Base Grants		0.25			0.25
2.3 Computing And Data Mana	2.3.1 Core Software	UW	DH	DIAZ-VELEZ, JUAN CARLOS	Simulation production & data processing software framework (IceProd), and simulation programs (detector response)	NSF M&O Core	0.80				0.80
2.3 Computing And Data Mana	2.3.1 Core Software	UW	CS	Jackson, Steven	Development of IceCube event viewer software	NSF M&O Core	0.75				0.75
2.3 Computing And Data Mana	2.3.1 Core Software	UW	CS	Jackson, Steven	Software support, code reviews	NSF M&O Core	0.25				0.25
2.3 Computing And Data Mana	2.3.1 Core Software	UW	DH	FADIRAN, OLADIPO	Maintain Data Processing Software	NSF M&O Core	0.20				0.20
2.3 Computing And Data Mana	2.3.1 Core Software	UW	PO	WHITEHORN, NATHAN	IceTray support, software maintenance	Base Grants		0.15			0.15
2.3 Computing And Data Mana	2.3.1 Core Software	US Total					4.00	0.65	0.00		4.65
2.3 Computing And Data Mana	2.3.1 Core Software	UU	SC	BOERSMA, DAVID	Maintain Reconstruction Framework	Non-US In-kind				0.10	0.10
2.3 Computing And Data Mana	2.3.1 Core Software	Non-US Total								0.10	0.10
2.3 Computing And Data Mana	**2.3.1 Core Software**						**4.00**	**0.65**	**0.00**	**0.10**	**4.75**

WBS L2	WBS L3	Institution	Labor Cat.	Names	Tasks	Source of Funds (U.S. Only)	NSF M&O Core	NSF Base Grants	U.S. IN-KIND	Non U.S. In-Kind	Grand Total
2.3 Computing And Data Mana	2.3.2 Data Storage & Transfer	UW	DH	FADIRAN, OLADIPO	Transformation of Data for Long-Term Persistence and Archival. Maintain Data Warehouse Standards, Software (Ingest), Data Access (FTP), and Web Interface	NSF M&O Core	0.20				0.20
2.3 Computing And Data Mana	2.3.2 Data Storage & Transfer	UW	IT	RICHARDS, JOHN	Maintain and Operate Data Storage Infrastructure	NSF M&O Core	1.00				1.00
2.3 Computing And Data Mana	2.3.2 Data Storage & Transfer	UW	IT	BELLINGER, JIM	Maintain and Operate Data Storage Infrastructure	NSF M&O Core	0.75				0.75
2.3 Computing And Data Mana	2.3.2 Data Storage & Transfer	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	NSF M&O Core	0.50				0.50
2.3 Computing And Data Mana	2.3.2 Data Storage & Transfer	**US Total**					**2.45**	**0.00**	**0.00**		**2.45**
2.3 Computing And Data Mana	2.3.2 Data Storage & Transfer	DESY	GR	STOESSL, ACHIM	Data Storage & Transfer	Non-US In-kind				0.10	0.10
2.3 Computing And Data Mana	2.3.2 Data Storage & Transfer	**Non-US Total**								**0.10**	**0.10**
2.3 Computing And Data Mana	**2.3.2 Data Storage & Transfer**						**2.45**	**0.00**	**0.00**	**0.10**	**2.55**
2.3 Computing And Data Mana	2.3.3 Computing Resources	PSU	PO	JOAO PEDRO DE ANDRES	Coordination and Support for Grid and distributed computing	NSF M&O Core	0.25				0.25
2.3 Computing And Data Mana	2.3.3 Computing Resources	SUBR	KE	TER-ANTONYAN, SAMVEL	LONI Grid computing	US In-Kind			0.30		0.30
2.3 Computing And Data Mana	2.3.3 Computing Resources	UMD	IT	UMD IT	Coordination and Support for Grid and distributed computing	NSF M&O Core	0.25				0.25
2.3 Computing And Data Mana	2.3.3 Computing Resources	UW	IT	STOCK, BEN	Maintain Data Center Infrastructure	NSF M&O Core	1.00				1.00
2.3 Computing And Data Mana	2.3.3 Computing Resources	UW	IT	Barnet, Steve	Maintain Core Computing Systems, Coordination Grid & distributed computing	NSF M&O Core	1.00				1.00
2.3 Computing And Data Mana	2.3.3 Computing Resources	UW	IT	BELLINGER, JIM	Maintain Core High Performance Computing Systems	NSF M&O Core	0.25				0.25
2.3 Computing And Data Mana	2.3.3 Computing Resources	UW	IT	BRIK, VLADIMIR	Maintain Core High Performance Computing Systems	NSF M&O Core	0.50				0.50
2.3 Computing And Data Mana	2.3.3 Computing Resources	UW	IT	WISNIEWSKI, PAUL	Maintain Data Center Networking and Security	NSF M&O Core	0.75				0.75
2.3 Computing And Data Mana	2.3.3 Computing Resources	UW	IT	BRIK, VLADIMIR	Maintain Data Center Infrastructure	NSF M&O Core	0.50				0.50
2.3 Computing And Data Mana	2.3.3 Computing Resources	**US Total**					**4.50**	**0.00**	**0.30**		**4.80**
2.3 Computing And Data Mana	2.3.3 Computing Resources	DESY	IT	DESY IT	European Data Center -Distributed Computing and Labor	Non-US In-kind				2.00	2.00
2.3 Computing And Data Mana	2.3.3 Computing Resources	UU	GR	TAAVOLA, HENRIC	Computing resources	Non-US In-kind				0.20	0.20
2.3 Computing And Data Mana	2.3.3 Computing Resources	DTMND	SC	PIELOTH, DAMIAN	Coordinate GRID computing in Germany	Non-US In-kind				0.25	0.25
2.3 Computing And Data Mana	2.3.3 Computing Resources	SU	SC	SU SC	Computing Resources	Non-US In-kind				0.10	0.10
2.3 Computing And Data Mana	2.3.3 Computing Resources	UMH	GR	KOHNEN, GEORGES	IC database management	Non-US In-kind				0.30	0.30
2.3 Computing And Data Mana	2.3.3 Computing Resources	**Non-US Total**								**2.85**	**2.85**
2.3 Computing And Data Mana	**2.3.3 Computing Resources**						**4.50**	**0.00**	**0.30**	**2.85**	**7.65**
2.3 Computing And Data Mana	2.3.4 Data Production Processing	UW	PO	SANTANDER, MARCOS	optimize the efficiency of Simulation Production	NSF M&O Core	0.50				0.50
2.3 Computing And Data Mana	2.3.4 Data Production Processing	GTECH	GR	DAUGHHETTEE, JACOB	online / L2 / L3 processing for low energy group	Base Grants		0.20			0.20
2.3 Computing And Data Mana	2.3.4 Data Production Processing	UMD	PO	FELDE, JOHN	Implement near real time GRB analysis	Base Grants		0.40			0.40
2.3 Computing And Data Mana	2.3.4 Data Production Processing	UW	CS	MEADE, PATRICK	Unpacking, Decoding & Calibration of Raw Data (Level1); Run Common Reconstructions on UW IceCube Compute Cluster (Level2)	NSF M&O Core	0.50				0.50
2.3 Computing And Data Mana	2.3.4 Data Production Processing	**US Total**					**1.00**	**0.60**	**0.00**		**1.60**
2.3 Computing And Data Mana	2.3.4 Data Production Processing	**Non-US Total**								**0.00**	**0.00**
2.3 Computing And Data Mana	**2.3.4 Data Production Processing**						**1.00**	**0.60**	**0.00**	**0.00**	**1.60**

WBS L2	WBS L3	Institution	Labor Cat.	Names	Tasks	Source of Funds (U.S. Only)	NSF M&O Core	NSF Base Grants	U.S. IN-KIND	Non U.S. In-Kind	Grand Total
2.3 Computing And Data Mana	2.3.5 Simulation Production	LBNL	PO	CHANG, HYON HA	Simulation Production on PDSF	Base Grants		0.20			0.20
2.3 Computing And Data Mana	2.3.5 Simulation Production	PSU	PO	ARLEN, TIM	Simulation Production	Base Grants		0.08			0.08
2.3 Computing And Data Mana	2.3.5 Simulation Production	PSU	PO	JOAO PEDRO DE ANDRES	Simulation Production, IceSim vetting for LowEn	Base Grants		0.08			0.08
2.3 Computing And Data Mana	2.3.5 Simulation Production	OSU	PO	SUTHERLAND, MICHAEL	Simulation Production	US In-Kind			0.10		0.10
2.3 Computing And Data Mana	2.3.5 Simulation Production	UD	PO	TAMBURRO, ALESSIO	IceTop Simulation Production	Base Grants		0.35			0.35
2.3 Computing And Data Mana	2.3.5 Simulation Production	UMD	GR	CHEUNG, ELIM	Simulation Production coordination	Base Grants		0.25			0.25
2.3 Computing And Data Mana	2.3.5 Simulation Production	UW	SC	DESIATI, PAOLO	Coordination of Simulation Production, identifying resources, streamlining programs for the cloud, GPU	NSF M&O Core	0.40				0.40
2.3 Computing And Data Mana	2.3.5 Simulation Production	UW	SC	DESIATI, PAOLO	Simulation Production panel chair	US In-Kind			0.20		0.20
2.3 Computing And Data Mana	2.3.5 Simulation Production	UW	PO	DAY, MELANIE	Low energy simulation production, event reconstruction	Base Grants		0.25			0.25
2.3 Computing And Data Mana	2.3.5 Simulation Production	UW	GR	MCNALLY, FRANK	IceTop Simulation ProductionProduction / Data Processing	Base Grants		0.30			0.30
2.3 Computing And Data Mana	2.3.5 Simulation Production	UW	DH	SCHULTZ, DAVID	Simulation Production	NSF M&O Core	1.00				1.00
2.3 Computing And Data Mana	2.3.5 Simulation Production	**US Total**					**1.40**	**1.51**	**0.30**		**3.21**
2.3 Computing And Data Mana	2.3.5 Simulation Production	DESY	GR	DESY GR	Simulation Production Cluster	Non-US In-kind				0.15	0.15
2.3 Computing And Data Mana	2.3.5 Simulation Production	DTMND	GR	ZIEMANN, JAN	Maintenance of the local IceCube MC Production	Non-US In-kind				0.20	0.20
2.3 Computing And Data Mana	2.3.5 Simulation Production	RWTH	GR	REIMAN, RENE	GPU Mass production on AC-RZ cluster	Non-US In-kind				0.10	0.10
2.3 Computing And Data Mana	2.3.5 Simulation Production	RWTH	GR	PAUL, LARRISA	Simulation Production on cluster/GRID	Non-US In-kind				0.15	0.15
2.3 Computing And Data Mana	2.3.5 Simulation Production	RWTH	GR	VEHRING, MARKUS	Simulation Production on GPU /CPU	Non-US In-kind				0.20	0.20
2.3 Computing And Data Mana	2.3.5 Simulation Production	RWTH	GR	LEIF RADEL	Geant Simulations	Non-US In-kind				0.10	0.10
2.3 Computing And Data Mana	2.3.5 Simulation Production	ULB	PO	AMARY, SAMIR	Computer Cluster - simulation	Non-US In-kind				0.20	0.20
2.3 Computing And Data Mana	2.3.5 Simulation Production	ALBERTA	KE	GRANT, DARREN	WestGrid computing	Non-US In-kind				0.10	0.10
2.3 Computing And Data Mana	2.3.5 Simulation Production	ALBERTA	GR	NOWICKI, SARAH	WestGrid computing	Non-US In-kind				0.20	0.20
2.3 Computing And Data Mana	2.3.5 Simulation Production	WUPPERTAL	GR	WUPPERTAL GR	Simulation Production	Non-US In-kind				0.20	0.20
2.3 Computing And Data Mana	2.3.5 Simulation Production	MAINZ	GR	WIEBE, KLAUS	Simulation Production	Non-US In-kind				0.10	0.10
2.3 Computing And Data Mana	2.3.5 Simulation Production	UMH	GR	KOHNEN, GEORGES	Simulation Production	Non-US In-kind				0.25	0.25
2.3 Computing And Data Mana	2.3.5 Simulation Production	**Non-US Total**								**1.95**	**1.95**
2.3 Computing And Data Mana	**2.3.5 Simulation Production**						**1.40**	**1.51**	**0.30**	**1.95**	**5.16**
2.3 Computing And Data Mar	**WBS L2 Total**						**13.35**	**2.76**	**0.60**	**5.00**	**21.71**
2.4 Triggering And Filtering	2.4.1 TFT Coordination	GTECH	KE	TABOADA, IGNACIO	TFT Board Chair	Base Grants		0.25			0.25
2.4 Triggering And Filtering	2.4.1 TFT Coordination	UA	KE	WILLIAMS, DAWN	TFT Board member	US In-Kind			0.10		0.10
2.4 Triggering And Filtering	2.4.1 TFT Coordination	UD	KE	SECKEL, DAVID	TFT Board member	US In-Kind			0.10		0.10
2.4 Triggering And Filtering	2.4.1 TFT Coordination	UMD	SC	BLAUFUSS, ERIK	Filter requests, bandwidth, TFT Board Member	US In-Kind			0.30		0.30
2.4 Triggering And Filtering	2.4.1 TFT Coordination	UMD	GR	HELLAUER, ROBERT	Prepare datasets for filter testing and common MC datasets for testing	Base Grants		0.20			0.20
2.4 Triggering And Filtering	2.4.1 TFT Coordination	**US Total**					**0.00**	**0.45**	**0.50**		**0.95**
2.4 Triggering And Filtering	2.4.1 TFT Coordination	ALBERTA	KE	GRANT, DARREN	TFT Board member	Non-US In-kind				0.10	0.10
2.4 Triggering And Filtering	2.4.1 TFT Coordination	BONN	PO	BOSSER, SEBASTIAN	TFT Board member	Non-US In-kind				0.10	0.10
2.4 Triggering And Filtering	2.4.1 TFT Coordination	DESY	PO	BERGHAUS, PATRICK	TFT Board member	Non-US In-kind				0.10	0.10
2.4 Triggering And Filtering	2.4.1 TFT Coordination	DESY	PO	KARG, TIMO	TFT Board member	Non-US In-kind				0.10	0.10
2.4 Triggering And Filtering	2.4.1 TFT Coordination	DPNC	KE	MONTARULI, TERESA	TFT Board member	Non-US In-kind				0.10	0.10
2.4 Triggering And Filtering	2.4.1 TFT Coordination	UU	KE	HALLGREN, ALLAN	TFT Board member	Non-US In-kind				0.10	0.10
2.4 Triggering And Filtering	2.4.1 TFT Coordination	UU	KE	DE LOS HEROS, CARLOS	TFT Board member	Non-US In-kind				0.10	0.10
2.4 Triggering And Filtering	2.4.1 TFT Coordination	**Non-US Total**								**0.70**	**0.70**
2.4 Triggering And Filtering	**2.4.1 TFT Coordination**						**0.00**	**0.45**	**0.50**	**0.70**	**1.65**

WBS L2	WBS L3	Institution	Labor Cat.	Names	Tasks	Source of Funds (U.S. Only)	NSF M&O Core	NSF Base Grants	U.S. IN-KIND	Non U.S. In-Kind	Grand Total
2.4 Triggering And Filtering	2.4.2 Physics Filters	UA	KE	WILLIAMS, DAWN	Tau WG Chair	US In-Kind			0.25		0.25
2.4 Triggering And Filtering	2.4.2 Physics Filters	SBU	KE	KIRYLUK,JOANNA	Cascade WG Co-Chair	US In-Kind			0.25		0.25
2.4 Triggering And Filtering	2.4.2 Physics Filters	LBNL	KE	KLEIN,SPENCER	Diffuse WG Co-chair	US In-Kind			0.25		0.25
2.4 Triggering And Filtering	2.4.2 Physics Filters	LBNL	PO	CHANG, HYON HA	L2 processing for IC86, studying cascade energy resolution	Base Grants		0.25			0.25
2.4 Triggering And Filtering	2.4.2 Physics Filters	PSU	KE	DEYOUNG, TYCE	Oscillations WG - Co Chair	US In-Kind			0.15		0.15
2.4 Triggering And Filtering	2.4.2 Physics Filters	UCB	SC	WOSCHNAGG, KURT	Oscillations WG chair	Base Grants		0.25			0.25
2.4 Triggering And Filtering	2.4.2 Physics Filters	UD	PO	TAMBURRO, ALESSIO	CR-WG Co Chair	Base Grants		0.25			0.25
2.4 Triggering And Filtering	2.4.2 Physics Filters	UMD	SC	BLAUFUSS, ERIK	GRB WG Chair	Base Grants		0.25			0.25
2.4 Triggering And Filtering	2.4.2 Physics Filters	UMD	PO	WISSING, HENRIKE	EHE and Brights WG co-chair	Base Grants		0.25			0.25
2.4 Triggering And Filtering	2.4.2 Physics Filters	SBU	PO	LESIAK-BZDAK, MARIOLA	Cascade filters	Base Grants		0.20			0.20
2.4 Triggering And Filtering	2.4.2 Physics Filters	UWRF	KE	SEUNARINE, SURUJ	Calibration-Flasher Studies	US In-Kind			0.20		0.20
2.4 Triggering And Filtering	2.4.2 Physics Filters	UW	PO	AUFFENBERG, JAN	Online filters (EHE)	Base Grants		0.15			0.15
2.4 Triggering And Filtering	2.4.2 Physics Filters	UW	GR	WEAVER, CHRISTOPHER	Online filters	Base Grants		0.10			0.10
2.4 Triggering And Filtering	2.4.2 Physics Filters	**US Total**					**0.00**	**1.70**	**1.10**	**0.00**	**2.80**
2.4 Triggering And Filtering	2.4.2 Physics Filters	SU	KE	BOHM, CHRISTIAN	Track engine	Non-US In-kind				0.10	0.10
2.4 Triggering And Filtering	2.4.2 Physics Filters	ALBERTA	KE	GRANT, DARREN	Low Energy WG Co-Chair	Non-US In-kind				0.25	0.25
2.4 Triggering And Filtering	2.4.2 Physics Filters	CHIBA	SC	ISHIHARA, AYA	Diffuse WG co-chair	Non-US In-kind				0.25	0.25
2.4 Triggering And Filtering	2.4.2 Physics Filters	CHIBA	SC	ISHIHARA, AYA	EHE Filters	Non-US In-kind				0.15	0.15
2.4 Triggering And Filtering	2.4.2 Physics Filters	DESY	PO	KARG, TIMO	CR WG co-chair	Non-US In-kind				0.25	0.25
2.4 Triggering And Filtering	2.4.2 Physics Filters	UC	GR	MUNAWARA, KIRAN	Cascade filters	Non-US In-kind				0.20	0.20
2.4 Triggering And Filtering	2.4.2 Physics Filters	UU	SC	BOERSMA, DAVID	Maintain Moon shadow and Galactic center filters	Non-US In-kind				0.15	0.15
2.4 Triggering And Filtering	2.4.2 Physics Filters	SKKU	KE	ROTT, CARSTEN	WIMP WG Co-Chair	Non-US In-kind				0.25	0.25
2.4 Triggering And Filtering	2.4.2 Physics Filters	SKKU	GR	JEONG, DONGVOUNG	Online filter development & testing	Non-US In-kind				0.20	0.20
2.4 Triggering And Filtering	2.4.2 Physics Filters	SU	KE	FINLEY, CHAD SU	Point Source WG Chair	Non-US In-kind				0.25	0.25
2.4 Triggering And Filtering	2.4.2 Physics Filters	SU	KE	HULTQVIST, KLAS	Diffuse WG Co-chair	Non-US In-kind				0.25	0.25
2.4 Triggering And Filtering	2.4.2 Physics Filters	SU	GR	ZOLL, MARCEL	Filters and Simulations	Non-US In-kind				0.15	0.15
2.4 Triggering And Filtering	2.4.2 Physics Filters	SU	GR	AHRENS, MARYON	PhD-related work	Non-US In-kind				0.10	0.10
2.4 Triggering And Filtering	2.4.2 Physics Filters	UU	KE	DE LOS HEROS, CARLOS	WIMP WG Chair	Non-US In-kind				0.25	0.25
2.4 Triggering And Filtering	2.4.2 Physics Filters	UU	GR	UU GR	Filter maintenance	Non-US In-kind				0.15	0.15
2.4 Triggering And Filtering	2.4.2 Physics Filters	VUB	GR	KUNNEN JAN	Filter for Southern sky muons	Non-US In-kind				0.50	0.50
2.4 Triggering And Filtering	2.4.2 Physics Filters	DTMND	KE	RUHE, TIM	Physics filters	Non-US In-kind				0.20	0.20
2.4 Triggering And Filtering	2.4.2 Physics Filters	DTMND	GR	SCHMITZ, MARTIN	Physics filters	Non-US In-kind				0.20	0.20
2.4 Triggering And Filtering	2.4.2 Physics Filters	DTMND	GR	SCHERIAU, FLORIAN	Physics filters	Non-US In-kind				0.20	0.20
2.4 Triggering And Filtering	2.4.2 Physics Filters	WUPPERTAL	KE	HELBING, KLAUS	Exotics- WG chair	Non-US In-kind				0.25	0.25
2.4 Triggering And Filtering	2.4.2 Physics Filters	WUPPERTAL	GR	WUPPERTAL GR	New SUSY Filter	Non-US In-kind				0.20	0.20
2.4 Triggering And Filtering	2.4.2 Physics Filters	RWTH	GR	LEIF RADEL	L3 IC86-1/2 diffuse data stream	Non-US In-kind				0.10	0.10
2.4 Triggering And Filtering	2.4.2 Physics Filters	RWTH	GR	ZIERKE, SIMON	Kalman Filter for L2 slow particle filter	Non-US In-kind				0.10	0.10
2.4 Triggering And Filtering	2.4.2 Physics Filters	DPNC	KE	MONTARULI, TERESA	Online filtering	Non-US In-kind				0.10	0.10
2.4 Triggering And Filtering	2.4.2 Physics Filters	DPNC	PO	AGUILAR SANCHEZ JUAN ANTONIO	Online filtering	Non-US In-kind				0.10	0.10
2.4 Triggering And Filtering	2.4.2 Physics Filters	DPNC	PO	AGUILAR SANCHEZ JUAN ANTONIO	Muon working group co-Chair	Non-US In-kind				0.25	0.25
2.4 Triggering And Filtering	2.4.2 Physics Filters	DPNC	PO	VALLECORSA, SOFIA	DeepCore filtering	Non-US In-kind				0.20	0.20
2.4 Triggering And Filtering	2.4.2 Physics Filters	DPNC	GR	ASEN, CHRISTOV	Online filtering	Non-US In-kind				0.10	0.10
2.4 Triggering And Filtering	2.4.2 Physics Filters	DPNC	GR	RAAMEZ MOHAMED	Muon/EHE Filter	Non-US In-kind				0.10	0.10
2.4 Triggering And Filtering	2.4.2 Physics Filters	BONN	GR	VOGE, MARKUS	Online L2 Filter	Non-US In-kind				0.20	0.20
2.4 Triggering And Filtering	2.4.2 Physics Filters	BONN	GR	HOMRIER, ANDREAS	Alert System for follow-up	Non-US In-kind				0.20	0.20
2.4 Triggering And Filtering	2.4.2 Physics Filters	**Non-US Total**								**5.95**	**5.95**
2.4 Triggering And Filtering	**2.4.2 Physics Filters**						**0.00**	**1.70**	**1.10**	**5.95**	**8.75**
2.4 Triggering And Filtering	**WBS L2 Total**						**0.00**	**2.15**	**1.60**	**6.65**	**10.40**

WBS L2	WBS L3	Institution	Labor Cat.	Names	Tasks	Source of Funds (U.S. Only)	NSF M&O Core	NSF Base Grants	U.S. IN-KIND	Non U.S. In-Kind	Grand Total
2.5 Data Quality, Reconstructio	2.5.1 Simulation Programs	LBNL	PO	CHANG, HYON HA	DOM simulator & calibrator	Base Grants		0.10			0.10
2.5 Data Quality, Reconstructio	2.5.1 Simulation Programs	LBNL	PO	CHANG, HYON HA	Simulation Programs: cmc	Base Grants		0.10			0.10
2.5 Data Quality, Reconstructio	2.5.1 Simulation Programs	SUBR	KE	FAZELY, ALI	GEANT Simulation	US In-Kind			0.15		0.15
2.5 Data Quality, Reconstructio	2.5.1 Simulation Programs	SUBR	SC	XIANWU, XU	Simulation Programs	US In-Kind			0.15		0.15
2.5 Data Quality, Reconstructio	2.5.1 Simulation Programs	OSU	PO	STAMATIKOS, MICHAEL	GRB Analysis Tools	US In-Kind			0.05		0.05
2.5 Data Quality, Reconstructio	2.5.1 Simulation Programs	UA	PO	PALCZEWSKI, TOMASZ	Ice simulation	Base Grants		0.35			0.35
2.5 Data Quality, Reconstructio	2.5.1 Simulation Programs	UA	GR	PEPPER, JAMES	Dark Matter signal simulation	Base Grants		0.15			0.15
2.5 Data Quality, Reconstructio	2.5.1 Simulation Programs	UA	GR	LARSON, MICHAEL	Noise simulation	Base Grants		0.15			0.15
2.5 Data Quality, Reconstructio	2.5.1 Simulation Programs	UCB	SC	WOSCHNAGG, KURT	Maintain and Verify Simulation of Photon Propagation and update Ice Properties	NSF M&O Core	0.50				0.50
2.5 Data Quality, Reconstructio	2.5.1 Simulation Programs	UD	PO	GONZALEZ, JAVIER	Simulations	Base Grants		0.10			0.10
2.5 Data Quality, Reconstructio	2.5.1 Simulation Programs	UD	PO	RUZYBAEV , BAKHTIYAR	Ice Properties Simulation	Base Grants		0.30			0.30
2.5 Data Quality, Reconstructio	2.5.1 Simulation Programs	UD	GR	PANDYA, HERSHAL	Simulation Programs: sim-services	Base Grants		0.10			0.10
2.5 Data Quality, Reconstructio	2.5.1 Simulation Programs	UD	GR	KOIRALA, RAMESH	Simulation Programs: sim-services	Base Grants		0.10			0.10
2.5 Data Quality, Reconstructio	2.5.1 Simulation Programs	UMD	SC	OLIVAS, ALEX	Simulation Software Programs coordinator	US In-Kind			0.40		0.40
2.5 Data Quality, Reconstructio	2.5.1 Simulation Programs	UMD	PO	WISSING, HENRIKE	Maintain Detector Simulation (IceSim)	Base Grants		0.13			0.13
2.5 Data Quality, Reconstructio	2.5.1 Simulation Programs	UMD	GR	RICHMAN, MIKE	Maintain Detector Simulation (IceSim)	Base Grants		0.13			0.13
2.5 Data Quality, Reconstructio	2.5.1 Simulation Programs	UW	SC	CHIRKIN, DMITRY	Maintain and Verify Simulation of Photon Propagation and update Ice Properties	NSF M&O Core	0.35				0.35
2.5 Data Quality, Reconstructio	2.5.1 Simulation Programs	UW	SC	HOSHINA, KOTOYO	nugen maintenance	NSF M&O Core	0.25				0.25
2.5 Data Quality, Reconstructio	2.5.1 Simulation Programs	UW	GR	VAN SANTEN, JACOB	Muongun	Base Grants		0.20			0.20
2.5 Data Quality, Reconstructio	2.5.1 Simulation Programs	UW	PO	KOPPER, CLAUDIO	Direct photon propogation, IceTray, Simulations, Genie	Base Grants		0.25			0.25
2.5 Data Quality, Reconstructio	2.5.1 Simulation Programs	UW	GR	RIEDEL, BENEDICT	Supernova DAQ, simulation	Base Grants		0.20			0.20
2.5 Data Quality, Reconstructio	2.5.1 Simulation Programs	UW	DH	DIAZ-VELEZ, JUAN CARLOS	Maintain Simulation Production Software, maintain, test and update physics aspects of the atmospheric muon and neutrino simulation	NSF M&O Core	0.20				0.20
2.5 Data Quality, Reconstructio	2.5.1 Simulation Programs	**US Total**					**1.30**	**2.35**	**0.75**		**4.40**
2.5 Data Quality, Reconstructio	2.5.1 Simulation Programs	DTMND	GR	FACHS, THOMAS	PROPOSAL-IceProd integration and maintenance/support	Non-US In-kind				0.50	0.50
2.5 Data Quality, Reconstructio	2.5.1 Simulation Programs	SU	GR	FLIS, SAMUEL	DOM simulation	Non-US In-kind				0.15	0.15
2.5 Data Quality, Reconstructio	2.5.1 Simulation Programs	UOX	KE	SARKAR, SUBIR	Yellow Book-maintenance	Non-US In-kind				0.10	0.10
2.5 Data Quality, Reconstructio	2.5.1 Simulation Programs	GENT	GR	UGENT GR	Support IceTop Simulations, IceTop Calibrations, IceTop Reconstruction	Non-US In-kind				0.40	0.40
2.5 Data Quality, Reconstructio	2.5.1 Simulation Programs	BOCHUM	KE	TJUS, JULIA	Development PROPOSAL simulation software	Non-US In-kind				0.10	0.10
2.5 Data Quality, Reconstructio	2.5.1 Simulation Programs	BOCHUM	GR	SCHöNEBERG, SEBASTIAN	Monte Carlo Production	Non-US In-kind				0.10	0.10
2.5 Data Quality, Reconstructio	2.5.1 Simulation Programs	BONN	KE	KOWALSKI, MAREK	Simulation tools	Non-US In-kind				0.05	0.05
2.5 Data Quality, Reconstructio	2.5.1 Simulation Programs	RWTH	GR	LEIF RADEL	Implementation of new light yield factors in IceCube software	Non-US In-kind				0.10	0.10
2.5 Data Quality, Reconstructio	2.5.1 Simulation Programs	RWTH	GR	SEBASTIAN SCHÖNEN	Data systematics & Simulations for magnetic monopoles	Non-US In-kind				0.10	0.10
2.5 Data Quality, Reconstructio	2.5.1 Simulation Programs	**Non-US Total**								**1.60**	**1.60**
2.5 Data Quality, Reconstructio	**2.5.1 Simulation Programs**						**1.30**	**2.35**	**0.75**	**1.60**	**6.00**
2.5 Data Quality, Reconstructio	2.5.2 Reconstruction/ Analysis Tools	LBNL	GR	MIARECKI, SANDRA	Algorithm for measuring muon energy	Base Grants		0.25			0.25
2.5 Data Quality, Reconstructio	2.5.2 Reconstruction/ Analysis Tools	LBNL	GR	BINDER, GARY	PMT saturation corrections for analysis	Base Grants		0.50			0.50
2.5 Data Quality, Reconstructio	2.5.2 Reconstruction/ Analysis Tools	PSU	PO	JOAO PEDRO DE ANDRES	Low energy reconstruction techniques for DeepCore	Base Grants		0.10			0.10
2.5 Data Quality, Reconstructio	2.5.2 Reconstruction/ Analysis Tools	PSU	PO	ARLEN, TIM	Develop analysis tools for systematics study	Base Grants		0.10			0.10
2.5 Data Quality, Reconstructio	2.5.2 Reconstruction/ Analysis Tools	PSU	PO	TESIC, GORDANA	Integrate IceCube into AMON	US In-Kind			0.50		0.50
2.5 Data Quality, Reconstructio	2.5.2 Reconstruction/ Analysis Tools	PSU	GR	DUNKMAN, MATT	develop starting track reconstruction - hybrid reco.	Base Grants		0.47			0.47
2.5 Data Quality, Reconstructio	2.5.2 Reconstruction/ Analysis Tools	SUBR	KE	FAZELY, ALI	Reconstruction/ Analysis tools	US In-Kind			0.15		0.15
2.5 Data Quality, Reconstructio	2.5.2 Reconstruction/ Analysis Tools	SUBR	SC	XIANWU, XU	Reconstruction/ Analysis tools	US In-Kind			0.15		0.15

WBS L2	WBS L3	Institution	Labor Cat.	Names	Tasks	Source of Funds (U.S. Only)	NSF M&O Core	NSF Base Grants	U.S. IN-KIND	Non U.S. In-Kind	Grand Total
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	UA	KE	TOALE, PATRICK	Double cascade fitter	US In-Kind			0.05		0.05
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	UA	GR	XU, DONGLIAN	Improvements to low energy analysis framework	Base Grants		0.10			0.10
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	UD	PO	GONZALEZ, JAVIER	Event reconstruction	Base Grants		0.25			0.25
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	UAA	KE	RAWLINS, KATHERINE	Laputop and software development; Snow correction for IceTop	US In-Kind			0.30		0.30
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	UMD	PO	WISSING, HENRIKE	develop & test reconstruction	Base Grants		0.13			0.13
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	UMD	GR	RICHMAN, MIKE	Reconstruction/ Analysis tools	Base Grants		0.13			0.13
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	SBU	KE	KIRYLUK,JOANNA	BadDomList software maintenance	US In-Kind			0.05		0.05
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	SBU	GR	NIEDERHAUSEN, HANS	Standard Candle	Base Grants		0.10			0.10
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	SBU	GR	NIEDERHAUSEN, HANS	Flashers	Base Grants		0.10			0.10
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	SBU	GR	NIEDERHAUSEN, HANS	Cascade reconstruction	Base Grants		0.10			0.10
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	UW	SC	CHIRKIN, DMITRY	Reconstruction software	NSF M&O Core	0.15				0.15
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	UW	SC	CHIRKIN, DMITRY	Direct photon tracking / iceproperties calibration; FE/pulse extractor; reco S/W	Base Grants		0.15			0.15
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	UW	PO	NEILSON, NAOKO	Point source coordinator	Base Grants		0.20			0.20
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	UW	PO	AUFFENBERG, JAN	Energy Reconstruction	Base Grants		0.15			0.15
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	UW	GR	GLADSTONE, LAURA	Reconstruction tools-Deep Core	Base Grants		0.15			0.15
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	UW	GR	FEINTZIG, JACOB	Event reconstruction (spline fits)	Base Grants		0.10			0.10
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	UW	GR	VAN SANTEN, JACOB	Cascades	Base Grants		0.15			0.15
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	UW	PO	WHITEHORN, NATHAN	Event Reconstruction	Base Grants		0.20			0.20
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	UWRF	KE	MADSEN, JIM	Low-energy IceTop Extensions	US In-Kind			0.10		0.10
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	UWRF	KE	SEUNARINE, SURUJ	Low-Energy Extensions of IceTop	US In-Kind			0.10		0.10
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	**US Total**					**0.15**	**3.42**	**1.40**		**4.97**
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	ADELAIDE	KE	HILL, GARY	Event energy and direction reconstruction, millipede	Non-US In-kind				0.40	0.40
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	ADELAIDE	PO	WHELAN, BEN	Event energy and direction reconstruction, millipede	Non-US In-kind				1.00	1.00
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	ADELAIDE	GR	AARTSEN, MARK	Event energy and direction reconstruction, millipede	Non-US In-kind				0.50	0.50
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	ALBERTA	GR	WOOD, TANIA	Detector systematics with LED data	Non-US In-kind				0.20	0.20
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	CHIBA	KE	YOSHIDA, SHIGERU	Maintain Romeo, EHE Simulations, Calibration using Standard Candles	Non-US In-kind				0.20	0.20
2.5 Data Quality, Reconstruction	2.5.2 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	Non-US In-kind				0.20	0.20
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	CHIBA	GR	CHIBA GR	Improve the Ice Model, Afterpulse Simulator, Standard Candle Analysis, Maintain reconstruction projects (Ophelia, ehe-star)	Non-US In-kind				0.20	0.20
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	DESY	SC	SHANIDZE, REVAZ	Low-energy reconstruction	Non-US In-kind				0.10	0.10
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	DESY	GR	MOHRMANN, LARS	Likelihood fit package	Non-US In-kind				0.10	0.10
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	UU	SC	BOERSMA, DAVID	Reconstruction Coordinator	Non-US In-kind				0.20	0.20
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	RWTH	GR	VEHRING, MARKUS	Genie MC development & data production	Non-US In-kind				0.20	0.20
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	RWTH	GR	WALLRAFF, MARIUS	Finite track reconstruction	Non-US In-kind				0.10	0.10
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	RWTH	GR	WALLRAFF, MARIUS	nuCraft	Non-US In-kind				0.25	0.25
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	SKKU	PO	BOSE, DEBANJAN	Photon tracking / ice-properties calibration	Non-US In-kind				0.20	0.20
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	SU	GR	WOLF, MARTIN	STTools, EventViewer	Non-US In-kind				0.20	0.20
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	VUB	KE	VAN EIJNDHOVEN, NICK	development of reconstruction tools (IcePack framework)	Non-US In-kind				0.25	0.25
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	VUB	PO	DE VRIES, KRIJN	muon track reconstruction in IceCube and DeepCore	Non-US In-kind				0.25	0.25
2.5 Data Quality, Reconstruction	2.5.2 Reconstruction/ Analysis Tools	VUB	GR	MAGGI, GIULIANO	muon track reconstruction in IceCube and DeepCore	Non-US In-kind				0.25	0.25

IceCube M&O Staffing Matrix sort by WBS v15.0 2013.1008

WBS L2	WBS L3	Institution	Labor Cat.	Names	Tasks	Source of Funds (U.S. Only)	NSF M&O Core	NSF Base Grants	U.S. IN-KIND	Non U.S. In-Kind	Grand Total
2.5 Data Quality, Reconstructio	2.5.2 Reconstruction/ Analysis Tools	VUB	PO	GOLUP, GERALDINA	muon track reconstruction for IceCube and DeepCore	Non-US In-kind				0.25	0.25
2.5 Data Quality, Reconstructio	2.5.2 Reconstruction/ Analysis Tools	VUB	GR	CASIER MARTIN	muon track reconstruction in IceCube and DeepCore	Non-US In-kind				0.50	0.50
2.5 Data Quality, Reconstructio	2.5.2 Reconstruction/ Analysis Tools	VUB	GR	BRAYEUR LIONEL	muon track reconstruction in IceCube and DeepCore	Non-US In-kind				0.50	0.50
2.5 Data Quality, Reconstructio	2.5.2 Reconstruction/ Analysis Tools	ALBERTA	KE	GRANT, DARREN	Maintenance of IceCube-Photonics interface	Non-US In-kind				0.10	0.10
2.5 Data Quality, Reconstructio	2.5.2 Reconstruction/ Analysis Tools	WUPPERTAL	GR	WUPPERTAL GR	New SUSY Reconstruction, Simulation, Propagation, Monopole, Photonics, muon detection with IceTop	Non-US In-kind				0.60	0.60
2.5 Data Quality, Reconstructio	2.5.2 Reconstruction/ Analysis Tools	MAINZ	GR	SCHATTO, KAI	PPC based tables Muon reconstruction	Non-US In-kind				0.10	0.10
2.5 Data Quality, Reconstructio	2.5.2 Reconstruction/ Analysis Tools	MAINZ	GR	WIEBE, KLAUS	Angular res. Cascades	Non-US In-kind				0.20	0.20
2.5 Data Quality, Reconstructio	2.5.2 Reconstruction/ Analysis Tools	HUMBOLDT	GR	DE WITH, MEIKE	Reconstruction Release Manager, Maintain Reconstruction Framework	Non-US In-kind				0.25	0.25
2.5 Data Quality, Reconstructio	2.5.2 Reconstruction/ Analysis Tools	HUMBOLDT	GR	ALTMANN, DAVID	Improving the track reconstruction.	Non-US In-kind				0.15	0.15
2.5 Data Quality, Reconstructio	2.5.2 Reconstruction/ Analysis Tools	BONN	GR	UBONN GR	Reconstruction/ Analysis tools	Non-US In-kind				0.20	0.20
2.5 Data Quality, Reconstructio	2.5.2 Reconstruction/ Analysis Tools	BONN	GR	VOGE, MARKUS	Reconstruction	Non-US In-kind				0.10	0.10
2.5 Data Quality, Reconstructio	2.5.2 Reconstruction/ Analysis Tools	BONN	GR	USNER, MARCEL	Reconstruction/ Analysis tools	Non-US In-kind				0.20	0.20
2.5 Data Quality, Reconstructio	2.5.2 Reconstruction/ Analysis Tools	**Non-US Total**								7.95	7.95
2.5 Data Quality, Reconstructio	**2.5.2 Reconstruction/ Analysis Tools**						0.15	3.42	1.40	7.95	12.92
2.5 Data Quality, Reconstructio	2.5.3 Data Quality	**US Total**					0.00	0.00	0.00		0.00
2.5 Data Quality, Reconstructio	2.5.3 Data Quality	TUM	PO	MPI PO	Data Quality & DeepCore	Non-US In-kind				0.60	0.60
2.5 Data Quality, Reconstructio	2.5.3 Data Quality	DPNC	GR	ASEN, CHRISTOV	Data and Simulation Quality	Non-US In-kind				0.30	0.30
2.5 Data Quality, Reconstructio	2.5.3 Data Quality	DPNC	GR	RAAMEZ MOHAMED	Data and Simulation Quality	Non-US In-kind				0.30	0.30
2.5 Data Quality, Reconstructio	2.5.3 Data Quality	DPNC	PO	AGUILAR SANCHEZ JUAN ANTONIO	Data and Simulation Quality	Non-US In-kind				0.15	0.15
2.5 Data Quality, Reconstructio	2.5.3 Data Quality	DPNC	PO	VALLECORSA, SOFIA	Data and Simulation Quality for low energy searches	Non-US In-kind				0.30	0.30
2.5 Data Quality, Reconstructio	2.5.3 Data Quality	VUB	KE	VAN EIJNDHOVEN, NICK	data quality verification	Non-US In-kind				0.25	0.25
2.5 Data Quality, Reconstructio	2.5.3 Data Quality	VUB	PO	GOLUP, GERALDINA	GRB analysis	Non-US In-kind				0.25	0.25
2.5 Data Quality, Reconstructio	2.5.3 Data Quality	VUB	GR	MAGGI, GIULIANO	AGN analysis	Non-US In-kind				0.25	0.25
2.5 Data Quality, Reconstructio	2.5.3 Data Quality	VUB	PO	DE VRIES, KRIJN	GRB/AGN analysis	Non-US In-kind				0.25	0.25
2.5 Data Quality, Reconstructio	2.5.3 Data Quality	**Non-US Total**								2.65	2.65
2.5 Data Quality, Reconstructio	**2.5.3 Data Quality**						0.00	0.00	0.00	2.65	2.65
2.5 Data Quality, Reconstructio	2.5.4 Offline Data Processing	UW	PO	AUFFENBERG, JAN	Offline Data Processing - EHE	Base Grants		0.15			0.15
2.5 Data Quality, Reconstructio	2.5.4 Offline Data Processing	UW	DH	FADIRAN, OLADIPO	Simulation Production Coordination; production configurations, test production and web portal.	NSF M&O Core	0.60				0.60
2.5 Data Quality, Reconstructio	2.5.4 Offline Data Processing	UW	PO	KOPPER, CLAUDIO	L2 processing support	NSF M&O Core		0.30			0.30
2.5 Data Quality, Reconstructio	2.5.4 Offline Data Processing	UW	PO	NEILSON, NAOKO	L2 Offline Processing	NSF M&O Core	0.25				0.25
2.5 Data Quality, Reconstructio	2.5.4 Offline Data Processing	UW	GR	FEINTZIG, JACOB	L2 processing, muon stream	Base Grants		0.10			0.10
2.5 Data Quality, Reconstructio	2.5.4 Offline Data Processing	**US Total**					0.85	0.55	0.00		1.40
2.5 Data Quality, Reconstructio	2.5.4 Offline Data Processing	**Non-US Total**								0.00	0.00
2.5 Data Quality, Reconstructio	**2.5.4 Offline Data Processing**						0.85	0.55	0.00	0.00	1.40
2.5 Data Quality, Reconstruc WBS L2 Total							2.30	6.32	2.15	12.20	22.97
Grand Total							34.38	13.96	7.92	33.63	89.87