

IceCube M&O MoU SOW Summary v21.0 2016.0930.xlsx
Authors Contribution

v 21.0, September 30, 2016	Authors Head Count		IceCube Authors: M&O Responsibilities (FTE)							Total	
	Institution (Lead)	Ph.D. Authors	Faculty Scientists / Post Docs	Ph.D. Students	WBS 2.1 Program Management	WBS 2.2 Detector Operations & Maintenance	WBS 2.3 Computing & Data Management	WBS 2.4 Data Processing & Simulation	WBS 2.5 Software		WBS 2.6 Calibration
University of Alabama (Dawn Williams)	2	(2	0	2)	0.05	0.35				0.70	1.10
University of Alaska (Katherine Rawlins)	1	(1	0	0)		0.20			0.20		0.40
Clark Atlanta (George Japaridze)	1	(1	0	0)		0.02					0.02
Drexel University (Naoko Kurahashi Neilson)	2	(1	1	2)	0.05	0.73			0.70		1.48
Georgia Tech (Ignacio Taboada)	1	(1	0	1)		0.25					0.25
LBNL (Spencer Klein)	5	(3	2	2)	0.13	0.24	0.23	0.15	0.15	0.20	1.10
Marquette University (Karen Andeen)	2	(1	1	0)	0.20	0.50	0.15		0.55		1.40
Massachusetts Institute of Technology (Janet Conrad)	3	(1	2	4)	0.10				1.60	0.10	1.80
Michigan State University (Tyce DeYoung)	4	(2	2	2)	0.35	0.03	0.25	0.28	0.38	0.50	1.79
Ohio State University (James Beatty)	4	(1	3	0)		0.35		0.10	0.05		0.50
Pennsylvania State University (Doug Cowen)	5	(1	4	3)	0.40	0.82	0.25	0.08	1.37		2.92
South Dakota School (Xinhua Bai)	1	(1	0	1)	0.10	0.02		0.10	0.55		0.77
Southern University (Ali Fazely)	3	(2	1	0)		0.02	0.30		0.60		0.92
Stony Brook University (Joanna Kiryluk)	1	(1	0	2)	0.10	0.35		0.20	0.05	0.10	0.80
University of California, Irvine (Steve Barwick)	1	(1	0	1)		0.02					0.02
University of Delaware (Tom Gaisser)	6	(4	2	2)	0.30	1.10			0.55		1.95
University of Kansas (Dave Besson)	1	(1	0	0)		0.02					0.02
University of Maryland (Greg Sullivan)	6	(3	3	4)	1.20	0.96	1.63	0.40	0.73		4.91
University of Rochester (Segev BenZvi)	1	(1	0	1)		0.35			0.40		0.75
University of Wisconsin, River Falls (Jim Madsen)	3	(3	0	0)	0.60				0.10	0.20	0.90
University of Wisconsin, Madison (Albrecht Karle)	20	(6	14	14)	2.23	2.90	0.10	1.20	1.80	2.95	11.18
Yale University (Reina Maruyama)	1	(1	0	0)		0.05			0.05		0.10
U.S. Institutions Subtotal	74	(39	35	41)	5.81	9.27	2.91	2.51	9.83	4.75	35.07
DESY-Zeuthen (Marek Kowalski)	10	(6	4	9)	0.65	1.22	1.20	0.25	0.50	0.10	3.92
RWTH Aachen (Christopher Wiebusch)	2	(1	1	10)	0.30	0.57	0.30	0.50	1.15	0.50	3.32
Universität Dortmund (Wolfgang Rhode)	2	(1	1	6)		0.83		0.30	1.00		2.13
Universität Mainz (Lutz Köpke)	3	(2	1	7)	0.50	1.75					2.25
University of Münster (Alexander Kappes)	1	(1	0	4)	0.20				0.10		0.30
Universität Wuppertal (Klaus Helbing)	2	(1	1	5)		0.93			0.40	0.20	1.53
Humboldt Universität Berlin (Marek Kowalski)	1	(1	0	5)	0.10	0.20			0.05		0.35
Universität Bochum (Julia Tjus)	2	(1	1	3)		0.13			0.20		0.33
Technische Universität München (Elisa Resconi)	1	(1	0	4)		0.05		1.00	0.50		1.55
Université Libre de Bruxelles (Juan Antonio Aguilar Sanchez)	2	(1	1	3)	0.20	1.07		0.20	0.55		2.02
Université de Mons (Evelyne Daubie)	1	(0	1	0)		0.10	0.30	0.25			0.65
University of Gent (Dirk Ryckbosch)	2	(1	1	4)	0.10	0.03			0.40		0.53
Vrije Universiteit Brussel (Catherine de Clercq)	4	(2	2	2)	0.45	0.37			1.25		2.07
Stockholm University (Klas Hultqvist)	5	(4	1	2)	0.50	0.91			0.15		1.56
Uppsala University (Olga Botner)	3	(3	0	2)	0.90	0.48			0.25		1.63
University of Alberta (Darren, Grant)	3	(2	1	3)	0.85	0.25	1.35		0.15	0.35	2.95
University of Oxford (Subir Sarkar)	1	(1	0	0)	0.10	0.02					0.12
University of Canterbury (Jenni Adams)	2	(1	1	2)	0.05	0.30			0.05	0.10	0.50
University of Adelaide (Gary Hill)	2	(1	1	1)					1.90		1.90
Chiba University (Shigeru Yoshida)	6	(3	3	1)		0.23		0.05	0.70	0.60	1.58
Université de Genève (Teresa Montaruli)	3	(1	2	3)	0.30	0.10		0.10	1.50		2.00
Universität Erlangen-Nürnberg (Gisela Anton)	3	(2	1	2)	0.20				0.50		0.70
Niels Bohr Institute (Jason Koskinen)	1	(1	0	2)	0.15	0.31		0.10	0.15		0.71
Sungkyunkwan University (Carsten Rott)	2	(1	1	5)	0.30	0.97				0.55	1.82
Queen's University (Ken Clark)	1	(1	0	0)							0.00
Non-U.S. Institutions Subtotal	65	(40	25	85)	5.85	10.82	3.15	2.75	11.45	2.40	36.42
Total U.S. & Non-U.S.	139	(79	60	126)	11.66	20.09	6.06	5.26	21.28	7.15	71.49

Changes since last official version are colored red