

IceCube M&O MoU SOW Summary v30.0 2021.09
Authors Contribution

v 30.0 September 2021		Authors Head Count				IceCube Authors: M&O Responsibilities (FTE)						
Institution	Institutional 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	Total	
University of Alabama*	Dawn Williams	3	(2 1 3)		0.50	0.10	0.00	0.00	0.10	0.35	1.05	
University of Alaska	Katherine Rawlins	1	(1 0 0)			0.25			0.20		0.45	
Clark Atlanta	George Japaridze	1	(1 0 0)		0.00	0.02	0.00	0.00	0.00	0.00	0.02	
Drexel University	Naoko Kurahashi Neilson	1	(1 0 4)		0.20	0.35	0.00	0.25	0.00	0.00	0.80	
Georgia Tech	Ignacio Taboada	1	(1 0 3)		0.35	0.25	0.00	0.00	0.10	0.00	0.70	
Harvard University	Carlos A. Argüelles	1	(1 0 1)		0.25	0.00	0.00	0.00	0.30	0.00	0.55	
LBNL*	Spencer Klein	2	(1 1 1)		0.05	0.24	1.08	0.00	0.10	0.00	1.47	
Loyola University Chicago	Rasha Abbasi	1	(1 0 0)		0.10	0.05	0.00	0.00	0.00	0.00	0.15	
Marquette University	Karen Andeen	2	(1 1 0)		0.20	0.65	0.00	0.00	0.00	0.00	0.85	
Massachusetts Institute of Technology	Janet Conrad	2	(1 1 2)		0.10	0.00	0.00	0.20	0.50	0.00	0.80	
Mercer University	Frank McNally	1	(1 0 0)		0.15	0.00	0.00	0.00	0.10	0.00	0.25	
Michigan State University*	Tyce DeYoung	12	(6 6 12)		0.72	0.37	0.40	0.20	0.85	0.20	2.74	
Ohio State University	James Beatty	3	(2 1 1)		0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Pennsylvania State University*	Doug Cowen	6	(2 4 3)		0.30	0.46	0.00	0.00	0.10	0.00	0.86	
South Dakota School of Mines & Technology	Xinhua Bai	1	(1 0 1)		0.73	0.07	0.00	0.20	1.00	0.00	2.00	
Southern University	Ali Fazely	2	(1 1 0)			0.02	0.30		0.60		0.92	
Stony Brook University	Joanna Kiryluk	2	(1 1 2)		0.15	0.10	0.00	0.10	0.45	0.00	0.80	
University of California, Berkeley	Buford Price	1	(1 0 0)		0.10						0.10	
University of California, Irvine	Steve Barwick	1	(1 0 1)			0.02					0.02	
University of Delaware*	David Seckel	8	(5 3 5)		0.45	1.45		0.80	0.40	0.05	3.15	
University of Kansas	Dave Besson	1	(1 0 2)							0.60	0.60	
University of Maryland*	Greg Sullivan	6	(3 3 3)		1.15	1.76	0.00	0.15	1.55	0.00	4.61	
University of Rochester	Segev BenZvi	1	(1 0 1)		0.25	0.30	0.00	0.00	0.10	0.00	0.65	
University of Texas at Arlington	Benjamin Jones	1	(1 0 2)		0.20	0.00	0.00	0.00	0.35	0.85	1.40	
University of Utah	Carsten Rott	1	(1 0 0)		0.15	0.03	0.00	0.00	0.00	0.00	0.18	
University of Wisconsin, River Falls	Suruj Seunarine	2	(2 0 0)		0.00	0.00	0.00	0.00	0.10	0.20	0.30	
University of Wisconsin, Madison	Albrecht Karle	27	(5 22 16)		2.23	3.45	0.00	2.10	2.55	1.75	12.08	
Yale University	Reina Maruyama	1	(1 0 0)			0.05			0.05		0.10	
U.S. Institutions Subtotal		92	(47 45 63)		8.33	9.98	1.78	4.00	9.50	4.00	37.59	
DESY-Zeuthen	Marek Kowalski	9	(6 3 10)		0.95	0.82	1.35	0.00	0.20	0.00	3.32	
Karlsruhe Institute of Technology	Andreas Haungs	12	(2 10 6)		0.40	2.10	0.15	0.55	0.45	0.00	3.65	
RWTH Aachen	Christopher Wiebusch	2	(1 1 10)		0.62	0.42	0.05	0.50	0.60	0.30	2.49	
Universität Dortmund	Wolfgang Rhode	2	(1 1 5)		0.00	1.03	0.00	0.30	0.50	0.00	1.83	
Universität Mainz	Lutz Köpke	2	(1 1 7)		0.50	0.65	0.00	0.00	0.20	0.00	1.35	
University of Münster	Alexander Kappes	2	(1 1 6)		0.50	0.00	0.00	0.00	0.00	0.00	0.50	
Universität Wuppertal	Klaus Helbing	2	(1 1 5)			0.93			0.40	0.20	1.53	
Humboldt Universität Berlin	Marek Kowalski	1	(1 0 1)		0.00	0.05	0.00	0.00	0.00	0.00	0.05	
Universität Bochum	Julia Tjus	3	(2 1 1)		0.50	0.30	0.00	0.00	0.10	0.00	0.90	
Technische Universität München	Elisa Resconi	4	(1 3 8)		0.00	0.05	0.00	0.70	0.40	0.20	1.35	
Université Libre de Bruxelles	J. A. Aguilar Sanchez	4	(3 1 2)		1.15	0.67	0.00	0.00	0.00	0.00	1.82	
University of Gent	Dirk Ryckbosch	1	(1 0 2)		0.05	0.03	0.00	0.55	0.05	0.00	0.68	
Vrije Universiteit Brussel	Nick van Eijndhoven	2	(2 0 4)		1.00	0.06	0.00	0.10	0.35	0.00	1.51	
Stockholm University	Klas Hultqvist	3	(3 0 2)		0.35	0.11	0.00	0.00	0.40	0.80	1.66	
Uppsala University	Olga Botner	5	(4 1 1)		0.70	0.58	0.00	0.00	0.00	0.15	1.43	
University of Alberta	Juan Pablo Yáñez	3	(2 1 3)		0.00	0.10	0.10	0.45	0.00	0.85	1.50	
University of Oxford	Subir Sarkar	1	(1 0 0)		0.10	0.00	0.00	0.00	0.00	0.00	0.10	
University of Canterbury	Jenni Adams	1	(1 0 1)		0.05	0.08	0.00	0.00	0.00	0.00	0.13	
University of Adelaide	Gary Hill	1	(1 0 1)						0.90		0.90	
Chiba University	Shigeru Yoshida	6	(3 3 0)		0.25	0.15	0.00	0.20	0.90	0.00	1.50	
Université de Genève	Teresa Montaruli	1	(1 0 1)		0.35	0.05	0.00	0.70	0.00	0.00	1.10	
Universität Erlangen-Nürnberg	Uli Katz	2	(1 1 4)		0.20	0.00	0.00	0.00	0.90	0.00	1.10	
Niels Bohr Institute	Jason Koskinen	4	(2 2 1)		0.10	0.30	0.00	0.40	0.00	0.10	0.90	
Sungkyunkwan University	Carsten Rott	3	(1 2 4)		0.00	0.03	0.00	0.00	0.00	0.80	0.83	
Queen's University	Nahee Park	1	(1 0 0)		0.00	0.00	0.00	0.00	0.10	0.00	0.10	
University of Padova	Elisa Bernardini	1	(1 0 1)		0.47	0.55	0.00	0.00	0.00	0.00	1.02	
Non-U.S. Institutions Subtotal		78	(45 33 86)		8.24	9.06	1.65	4.45	6.45	3.40	33.25	
Total U.S. & Non-U.S.		170	(92 78 149)		16.57	19.04	3.43	8.45	15.95	7.40	70.84	

Changes since last official version are colored red

* IceCube M&O Subawardee Institutions