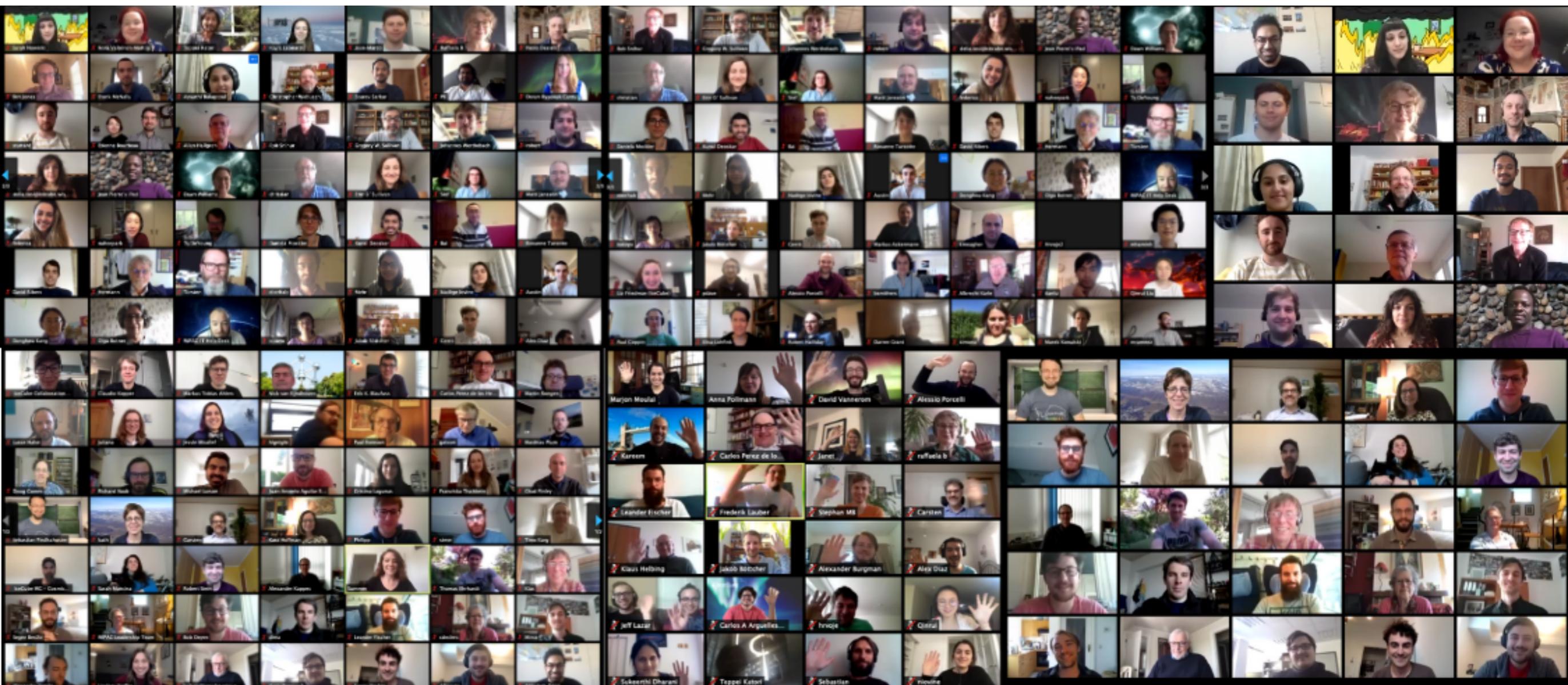




Collaboration Report

Autumn 2019

ICECUBE



IceCube Collaboration — 2020*

* Fall virtual meeting - 312 registered participants; 190 unique contributions

IceCube by the numbers*

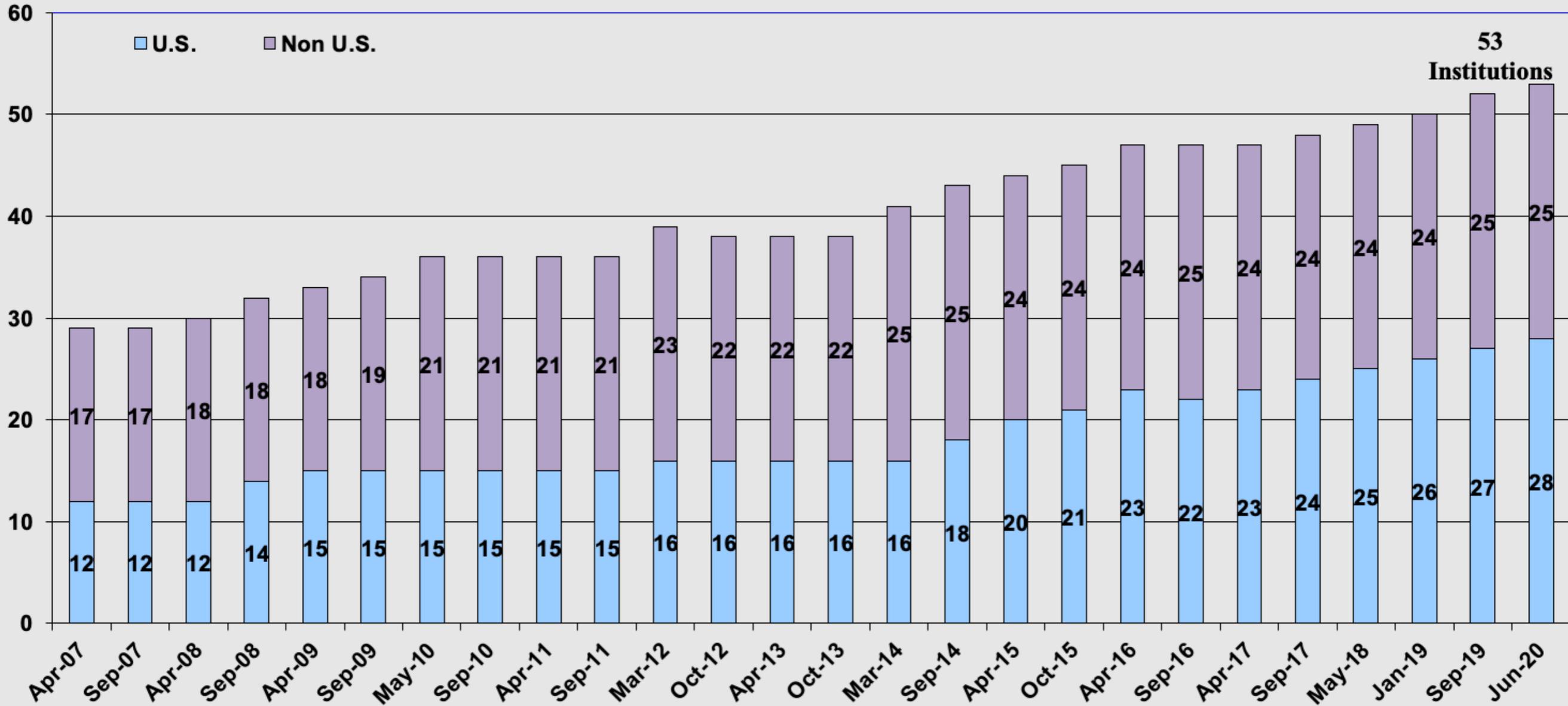
IceCube Collaborative Institutions

Joined IceCube:

EPFL, Alabama G. Tech, Ohio State, Bochum Bonn, Alberta Barbados, Adelaide Geneva, Stony Brook Munich, SKKU, Toronto NBI Erlangen, Yale SDSMT, Drexel MSU MIT, Marquette Rochester, Münster Queen's, Texas, Mercer KIT, UCLA, Loyola, Harvard

Left IceCube:

Utrecht, Heidelberg, Barbados, EPFL, Bonn, Toronto, Mons

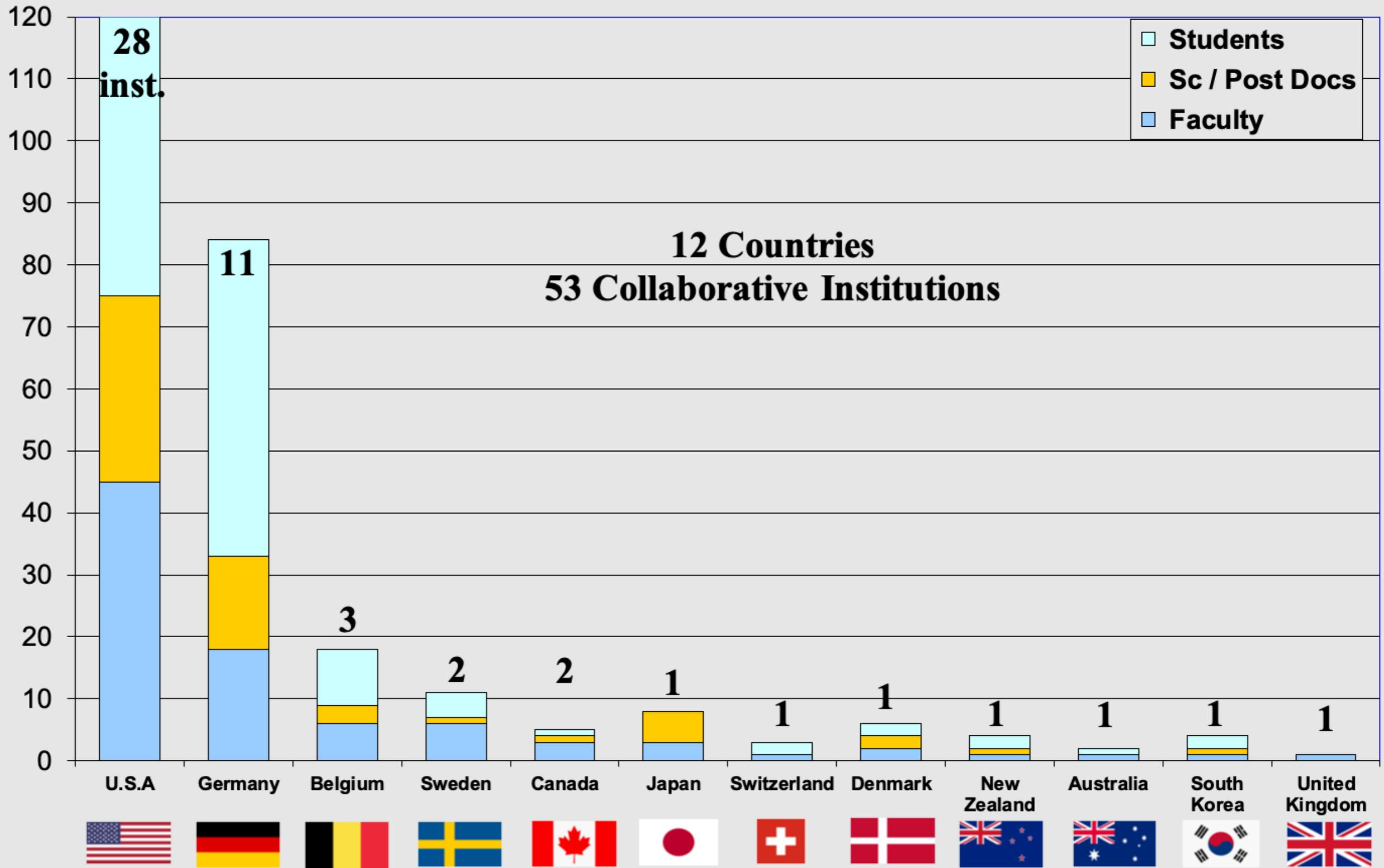


Collaboration Meetings



IceCube Collaborative Institutions

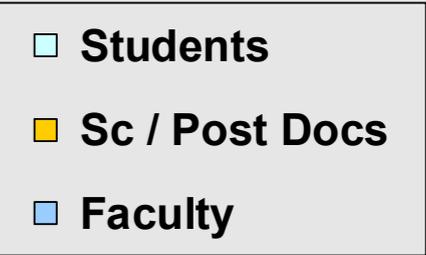
IceCube M&O MoU Summary v 28.0, June 2020



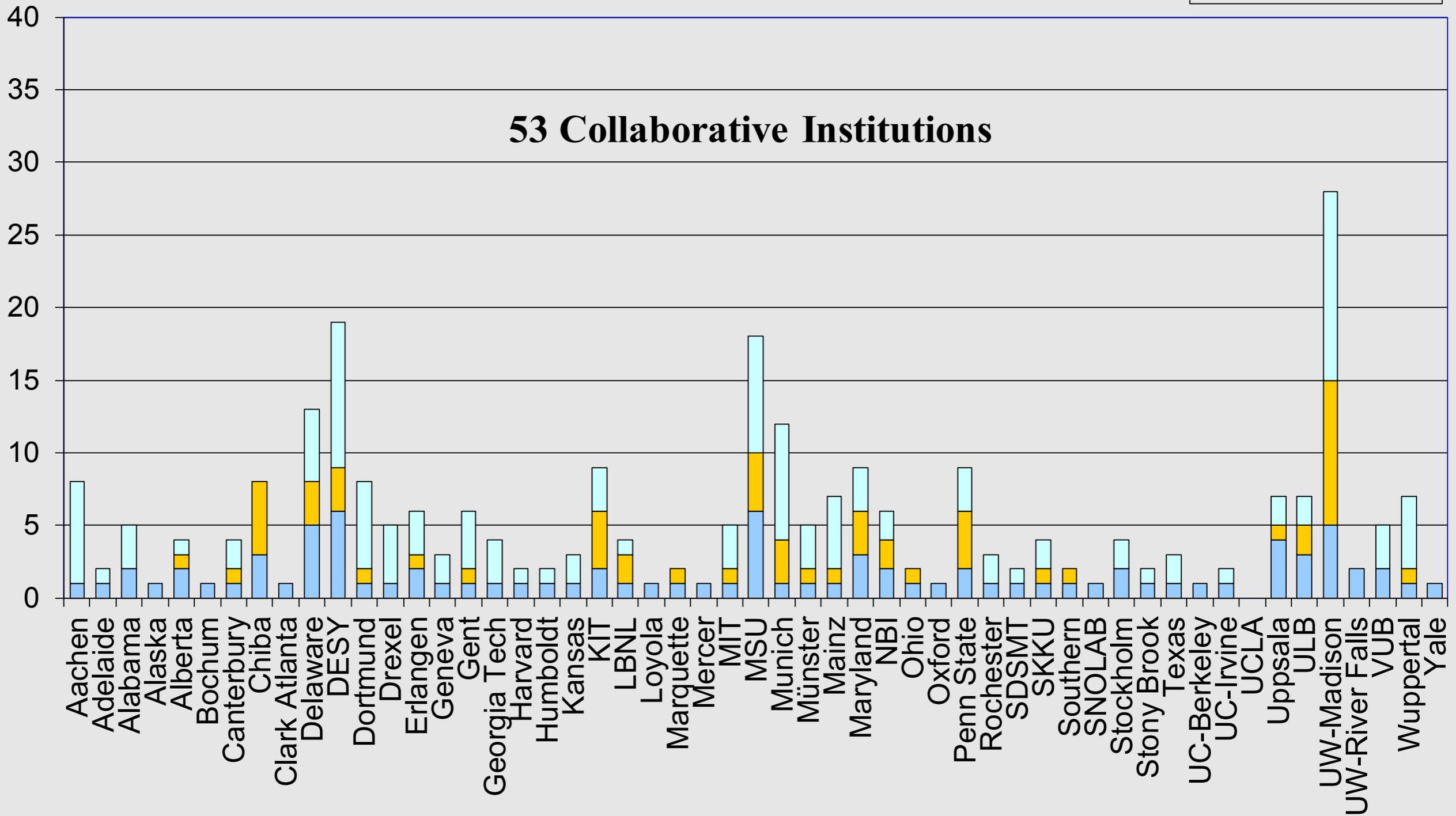
IceCube Collaborative Institutions

IceCube M&O MoU Summary v 28.0, June 2020

Head
count



53 Collaborative Institutions



IceCube M&O MoU Head Count Summary

V27.0, September 2019

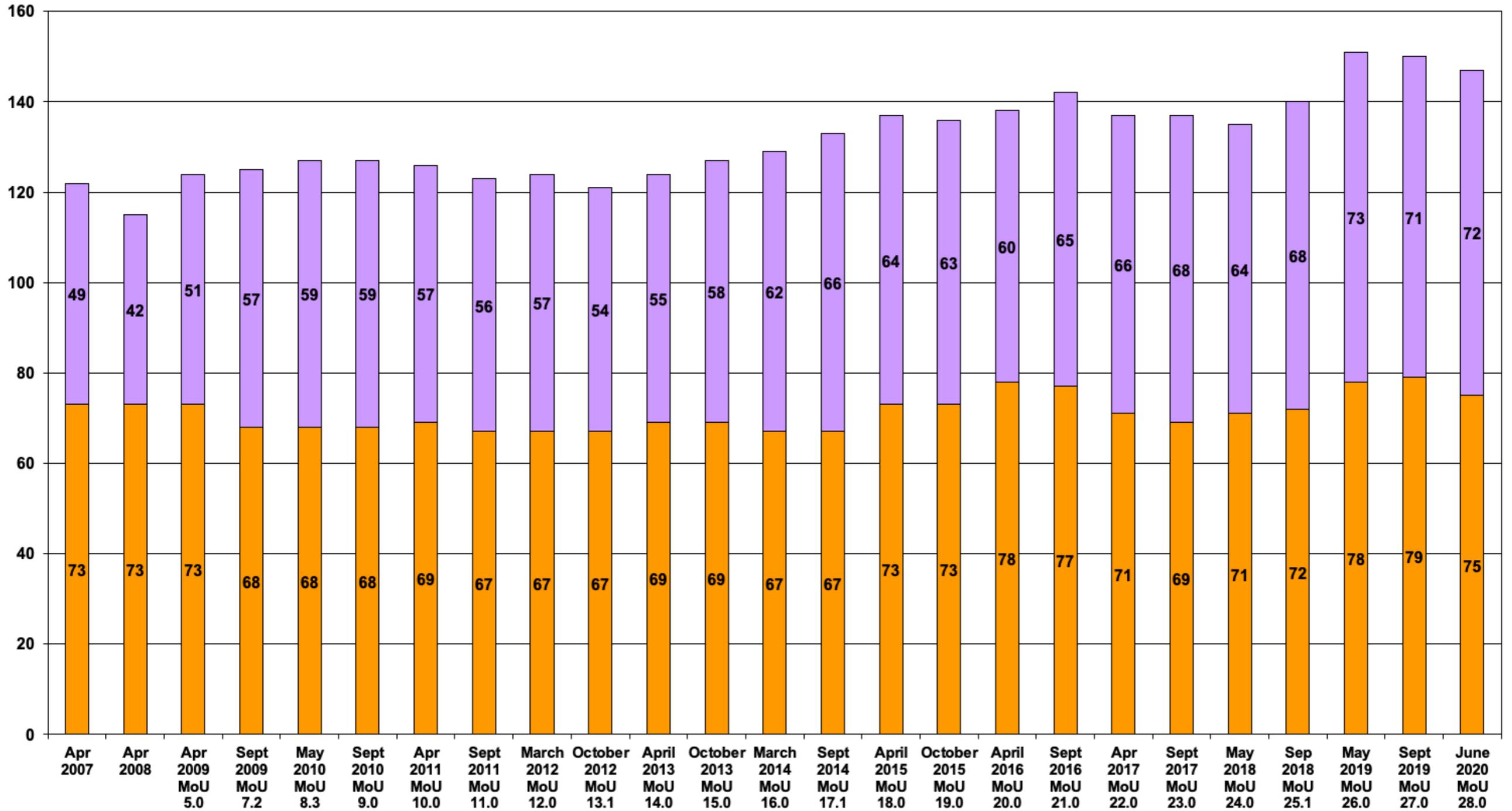
	Head Count				
	Ph.D. Authors	Faculty	Scientists / Post Docs	Students	Total
U.S. Institutions Subtotal	79	48	31	50	129
Non-U.S. Institutions Subtotal	73	44	29	83	156
Total U.S. & Non-U.S.	152	92	60	133	285
	a + b	(a)	(b)	(c)	a + b + c

V28.0, June 2020

	Head Count				
	Ph.D. Authors	Faculty	Scientists / Post Docs	Students	Total
U.S. Institutions Subtotal	75	45	30	56	131
Non-U.S. Institutions Subtotal	72	43	29	74	146
Total U.S. & Non-U.S.	147	88	59	130	277
	a + b	(a)	(b)	(c)	a + b + c

The total number of Ph.D. authors has decreased from 151 in May 2019 to 150 in September 2019, to 147 in June 2020 due to retirement of several members. New IceCube faculty hires have occurred since June 2020.

IceCube Ph.D. Authors Head Count



■ Non-US Common Fund
 ■ US Common Fund

Changes to the working group leadership (since Fall 2019)

Deputy Analysis Coordinator/Systematics Coordinator — Ignacio Taboada (Georgia Tech Univ.)

Calibration — Martin Rongen (Mainz) replaced Summer Blot (DESY)

Supernova — Erin O'Sullivan (Uppsala) replaced Lutz Koepke (Mainz)

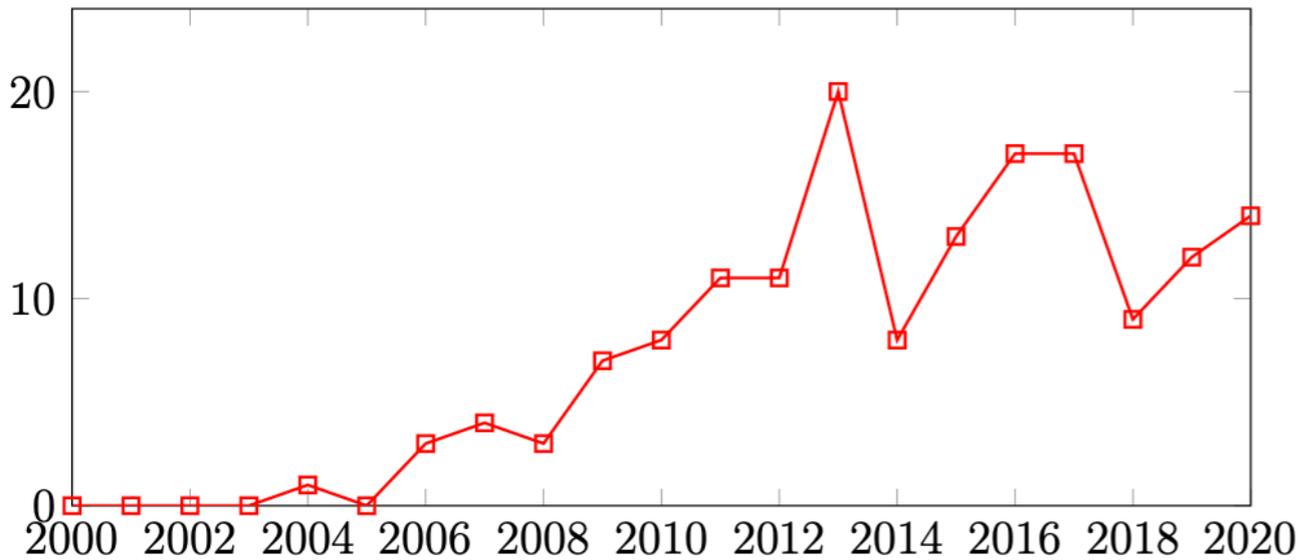
Diffuse — Lu Lu (Chiba/UW-Madison) replaced Claudio Kopper (Michigan State Univ.)

Reconstruction — Christian Haack (Tech. Univ. Munich) replaced Joshua Hignight (Alberta)

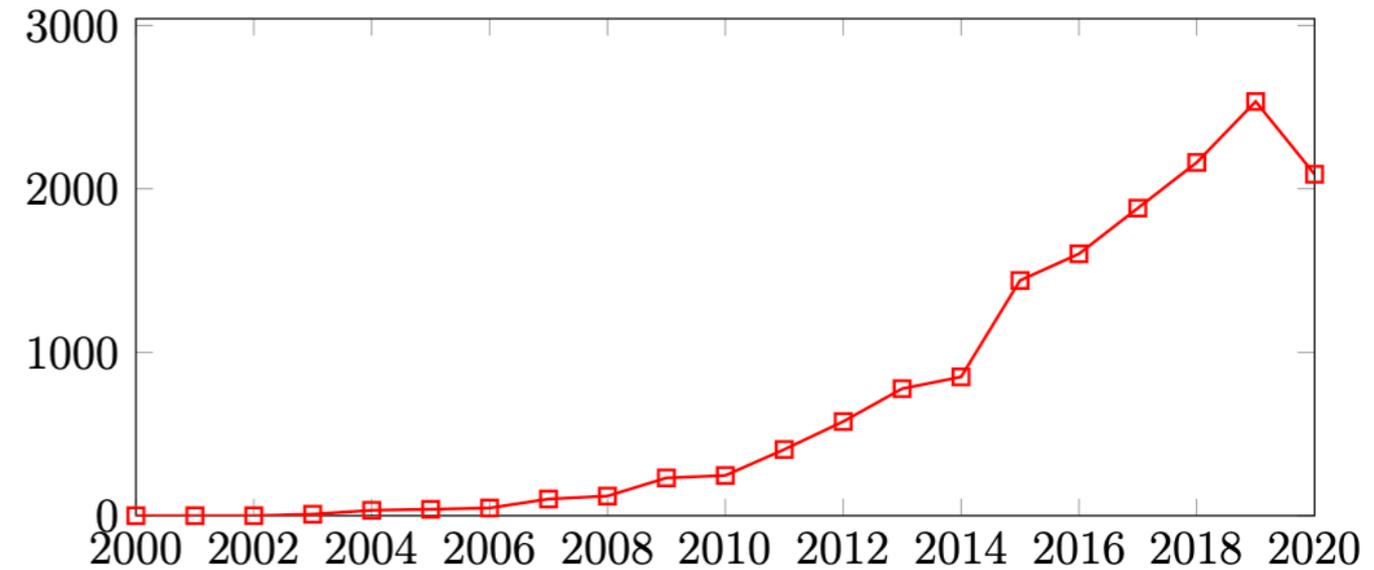
Oscillations — Ben Jones (Univ. Texas-Arlington) replaced Juan Pablo Yanez (Alberta)

Publications:

published papers



citations (no self-cit.)



Top 10 in none self-citations in 2019/2020:

Title	Journal	# cit.
Multi-messenger Observations of a Binary Neutron Star Merger	Astrophys.J.Lett. (2017)	1044
Neutrino emission from the direction of the blazar TXS 0506+056 prior to the IceCube-170922A alert	Science (2018)	253
Evidence for High-Energy Extraterrestrial Neutrinos at the IceCube Detector	Science (2013)	237
Multimessenger observations of a flaring blazar coincident with high-energy neutrino IceCube-170922A	Science (2018)	213
Observation of High-Energy Astrophysical Neutrinos in Three Years of IceCube Data	Phys.Rev.Lett. (2014)	187
Observation and Characterization of a Cosmic Muon Neutrino Flux from the Northern Hemisphere using six years of IceCube data	Astrophys.J. (2016)	143
First observation of PeV-energy neutrinos with IceCube	Phys.Rev.Lett. (2013)	114
A combined maximum-likelihood analysis of the high-energy astrophysical neutrino flux measured with IceCube	Astrophys.J. (2015)	102
The IceCube Neutrino Observatory: Instrumentation and Online Systems	JINST (2017)	81
Differential limit on the extremely-high-energy cosmic neutrino flux in the pres-	Phys.Rev. (2018)	81

Report from the IceCube Board

Relevant documents on docushare (<https://docushare.icecube.wisc.edu/dsweb/View/Collection-16179>)

- **Membership discussions: (updates since Fall 2019)**

Carlos Arguelles/Harvard University (full institute member request — approved)

Columbia University (full institute member request — approved/on-going M&O discussions)

Casten Rott/University of Utah (full institute member request/transition of SKKU group - approved/on-going M&O discussions)

Teppei Katori/King's College London (associate member transition request- approved)

Felicia Krauss/Pennsylvania State Univ. (associate member request - approved) — point source radio source correlation measurements

Iftach Sadeh/DESY (associate member request - approved) — point source gamma ray correlation measurements

Abby Viereggs/U. Chicago (Gen2 full member/IC associate member request - approved) - radio detector developments.

Ilya Kravchenko/U. Nebraska-Lincoln (Gen2 full member/IC associate member request - approved) - radio detector developments.

Amy Connolly/Ohio State Univ. (Gen2 full member/IC associate member request - approved) - radio detector developments.

Stephanie Wissel/ Pennsylvania State Univ. (Gen2 full member/IC associate member request - approved) - radio detector developments.

Report on MOU updates

Draft MOU with the TA collaboration for joint analysis on CR anisotropy - approved

Report from the Analysis Coordinator

Update on preparation of the 10-year data release.

Legacy and emeritus author nominations

Full updates to the existing author list underway.

DEI Task Force transition to working group structure

Initial discussions completed; pending ratification next week.

Report from the ICC

Streamlined service contribution system is nearing completion. Discussion of future updates to data filtering and processing underway; plans developing for making software open source.

IceCube Upgrade and Gen2 status. (see talks by Farshid and Albrecht)

Preparations toward the preliminary design review Fall 2021.

Report from the ECS representatives

Upcoming ECS representative election this Fall - participation is important!

Many conferences have currently transitioned to online formats, providing unique talk opportunities at significantly reduced costs

Plans to create an ECS journal club for review of IceCube papers in preparation

Updates to the Impact Award have recently been introduced; Fall awards will be announced soon including first “group award”

Report from the PubComm

Following 2 year probationary period, recommended to maintain current author acknowledgments policy for recognition of key contribution.

Aachen Collaboration Meeting, Spring 2021

- Pre meeting 20.3.-21.3.
- Full meeting 22.3.-26.3.



HKW Building
for the
meeting

Planning the meeting signing contracts etc. is largely impossible the current situation
Proposal: Set default to Virtual
Keeping the rooms and relaunch if situation changes
Final decision in January 2021



Couven hall for
Social events

Proposed Fall 2021 Collaboration Meeting at UW-Madison

Pre-meetings

Saturday, September 18 and Sunday, September 19

Collaboration Meeting with plenary sessions in the AM; parallel sessions in the PM

Monday, September 20 — day 1

Tuesday, September 21 — day 2

Wednesday, September 22:

10 year anniversary celebration

- ◆ **invited community talks all day**
- ◆ **Dinner banquet @ The Overture Center**

Thursday, September 23 — day 3

Friday, September 24 — day 4

(likely AM only)



A recent view from our winterovers



Thank you! Questions?