

Minutes

Isotopes and Radiation Division

Virtual Meeting – BlueJeans

June 9, 2021

(Notes taken by Kim Burns)

The following individuals attended the IRD Executive Committee Meeting based on verbal rollcall on the BlueJeans videoconference.

- Sam Glover, Chair
 - Steven R. Biegalski, Vice Chair
 - Kim Burns, Secretary
 - Robert Greg Downing, Treasurer
 - Lin-Wen Hu, Executive Committee Member
 - Jim Bowen, Executive Committee Member
 - Lei “Raymond” Cao, Executive Committee Member
 - Igor Jovanovic, Executive Committee Member
 - Jung Rim, Executive Committee Member
 - Kyle Hartig, Executive Committee Member
 - Brenden Heidrich, Executive Committee Member
 - Vaibhav Sinha, Executive Committee Member
 - Rebecca Steinman, Board Liaison
 - Aubrey Whittington, ANS
 - Derek Haas
 - Edward Cazalas
 - Erik Wilson
 - Evan Gonzalez
 - Jason Nattress
 - Miltos Alamaniotis
 - Farzad Rahnema
 - Sam Dotson – Student
 - Padhraic Milligan
 - Robert Penn
 - Steven LaMont
1. Steven Biegalski called the meeting to order.
 - a. Agenda is included as Attachment 1.
 - b. Quorum is present.
 2. Approval of previous minutes
 - a. Winter Meeting Minutes are included as Attachment 2.

- b. Motion to approve with editorial changes – Steven Biegalski, Seconded – Brenden Heidrich, All Ayes
- 3. Continuing Improvement of *Nuclear Science and Engineering* (NSE), an ANS publication
 - a. Farzad Rahnema spoke about the *Nuclear Science and Engineering* (NSE) journal.
 - i. He requested when requested for people to respond to a one question survey later this month.
 - ii. Possibly remove page charges
 - iii. F-1000 allows for open peer review
- 4. IRD Officers and Executive Committee
 - a. Review recent election results
 - i. Kimberly Burns – Vice Chair
 - ii. Robert Greg Downing – Treasurer
 - iii. Erik Wilson– Executive Committee
 - iv. Kenan Unlu– Executive Committee
 - v. Sam Glover– Executive Committee
 - vi. Padhraic Milligan – Executive Committee
 - vii. Jung Rim – Executive Committee
 - viii. Vaibhav Sinha – Executive Committee
 - ix. No secretary was elected.
 - **Action:** Steve Biegalski set up an electronic vote for Secretary between Miltos Alamaniotis and James Bowen
- 5. Treasurer’s Report
 - a. Division Funds (as of 31 March 2021)

Dues Income:	\$312
Expenditures:	\$0
Current Balance:	\$69,967
 - b. Scholarship Funds

Spend Limit	9.08%
Vogt Funds: \$119,744	\$10,873
Gozani Funds: \$60,000	\$5,448
 - c. Motion to provide \$1,000 in funding to support the conference 2022 student conference with discretion to Greg Downing on how that is allocated – Sam Glover, Seconded – Lin-Wen Hu, All Ayes
 - i. Action: Greg Downing work with Amanda Bachmann (amandab7@illinois.edu) on how to distribute funds.
- 6. Student Conference/Support Topics
 - a. UIUC (2022) – Sam Dotson provided update
 - i. April 14-16, 2022
 - ii. In person meeting planned
 - iii. Amanda Bachman is the sponsorship coordinator – amandab7@illinois.edu
- 7. Division Committees
 - a. Program

- i. Report is included as Attachment 4
- ii. Summer 2021 - Virtual
 - 3 sessions, 10 technical papers and 5 panelists
- iii. Winter 2021 – Washington DC
 - 5 sessions planned
- iv. Summer 2022 – Anaheim, California
 - Currently organizing sessions for Summer 2022
- v. Winter 2022 – Phoenix, Arizona
- vi. MARC – April 3-8, 2022 – In person
 - Motion to provide four \$500 student travel awards (totaling \$2,000) for the 2022 MARC conference – Steve Biegalski, Seconded – Sam Glover, All Ayes
- vii. ANIMMA 2021 – June 21-25, 2021 - Hybrid meeting
- viii. INMM - August 21-26, 2021 - Virtual
- ix. Actinides - October 16-23, 2021 - Virtual
- x. ICI 11 - June 19-23, 2021 – Canada
- xi. RANK Meeting – Delayed to 2023 – Should this be a category 4 ANS meeting
- xii. Discussion
 - Could we get IRD topics on the executive track? Could flash therapy be a topic? Rebecca suggested Steve Biegalski be proactive in socializing this idea.

b. Membership

i. Membership statistics

- Membership distribution is included as Attachment 5.
- Membership in IRD seems to be declining.
- Largest group is student members. Can Aubrey pull the list of students?
- Second largest group is retired / emeritus.
- Virtual meetings have good attendance.

c. Honors and Awards

i. Vogt Award

- Winner - Madison N. Allen - University of Tennessee, Knoxville

ii. Radiation Science and Technology Award

- No award given this year

iii. New Award: Gozani Family Graduate Scholarship

- How are we advertising the new scholarship?
- Create a PowerPoint slide that the student conference can show before sessions
- Suggest ANS promote the scholarship on social media
- How do we say thank you?
- **Action:** Sam will reach out to Tracy and find out more information.

8. Subcommittee Reports

- a. Action: Steve Biegalski will send out the subcommittee meeting.

- b. For the winter meeting, we will request that all the subcommittees provide a few sentence updates.
- 9. Old Business
 - a. Review Rules and Bylaws – no update
 - b. Updating IRD Website
 - i. Secretary has the responsibility to update the website.
- 10. New Business
 - a. Board Liaison Update
 - i. Rebecca Steinman will be transitioning off the board and a new liaison will be assigned to support IRD.
 - ii. A lot of the change plan has already been implemented. Most of the things that are left, the PDC has been very active in adjusting the change plan to address issues with the original change plan.
 - iii. New young members director to the board of directors
 - iv. Overall bylaws and rules are being looked at and determining what things need to change.
 - v. Budget surplus for 2020 overall
 - COVID relief
 - Virtual meetings were successful
 - vi. Membership trends going up
 - Trial memberships in winter
 - Actively recruiting students
 - Go away from annual renewals on the same dates to an anniversary date
 - vii. Proposal put to the board to put the headquarters for sale with constraints on what offers would be acceptable.
 - b. Evan Gonzalez – YMG – Planning Committee for the Young Professionals Conference
 - i. Usually proceeds the winter meeting but has been moved virtually this year to November which will not coincide with the winter meeting
 - ii. After Action: Follow up via email about potential sponsorship of the YPC and determine a YMG Liaison.

11. Meeting Adjourned

Agenda
Isotopes and Radiation Division
On-Line:
June 9, 2021 6:00 – 8:00 pm (ET)

Meeting URL: <https://bluejeans.com/909647837/7790>

Meeting ID: 909 647 837

Phone: +1.408.419.1715 or +1.408.915.6290

(see all numbers - <https://www.bluejeans.com/numbers>)

- 1) IRD Executive Committee Meeting call to order
- 2) Review of Past Minutes from November, 2020 ANS Winter Meeting.
- 3) Continuing Improvement of *Nuclear Science and Engineering* (NSE), an ANS publication
- 4) IRD Officers and Executive Committee
 - a. Review recent election results
 - b. Review membership
- 5) Treasure's Report
- 6) Student Conference/Support Topics:
 - a. 2021 – ANS Student Meeting – North Carolina
 - b. 2022 student meeting??
- 7) Division Committees
 - a. Program
 - i. IRD Sessions at November 2021 ANS Winter Meeting in Washington, DC
 - ii. IRD Sessions at June 2022 ANS Annual Meeting in Anaheim, CA
 - b. Membership
 - i. Review Membership statistics
 - ii. Recruiting?
 - c. Honors and Awards
 - i. Vogt Award
 - ii. Radiation Science & Technology Award
 - iii. New Award : Gozani Family Graduate Scholarship
- 8) Conferences
 - a. MARC
 - b. ICI
 - c. Others?
- 9) Subcommittee Reports
 - a. Industrial Measurements and Applications
 - b. Nuclear and Atomic Analysis
 - c. Radiation Effects
 - d. Transuranics,
 - e. Safeguards, Forensics and Non-Proliferation
 - f. Research Reactors
 - g. Isotope Production
 - h. Neutron Sources, Neutron Beams and Applications
 - i. Gamma and Neutron Imaging Applications
 - j. Development and Applications of Nuclear Technology for the Life Sciences.
- 10) Old Business:
 - a. Review Rules and Bylaws

b. YMG recruiting and IRD membership

c. Updating IRD Website

11) New Business

12) Conclusion

Minutes

Isotopes and Radiation Division

Virtual Meeting – BlueJeans

November 11, 2020

(Notes taken by Kim Burns)

The following individuals attended the IRD Executive Committee Meeting based on verbal rollcall on the BlueJeans videoconference.

- Sam Glover, Chair
 - Kim Burns, Secretary
 - Robert Greg Downing, Treasurer
 - Steven R. Biegalski, Executive Committee Member
 - Lin-Wen Hu, Executive Committee Member
 - Kenan Unlu, Executive Committee Member
 - Jim Bowen, Executive Committee Member
 - Lei “Raymond” Cao, Executive Committee Member
 - Igor Jovanovic, Executive Committee Member
 - Jung Rim, Executive Committee Member
 - Kyle Hartig, Executive Committee Member
 - Brenden Heidrich, Executive Committee Member
 - Robert Steiner, Executive Committee Member
 - Valbhav Sinha, Executive Committee Member
 - Robert Stiner, Executive Committee Member
 - Georg Steinhauser, Executive Committee Member
 - Stephen LaMont, Past Chair
 - Rebecca Steinman, Board Liaison
 - Aubrey Whittington, ANS
1. Sam Glover called the meeting to order.
 - a. A quorum was present at the meeting.
 - b. Agenda is included in Attachment 1.
 2. Approval of previous minutes
 - a. Sam: motion to approve minutes. Kim seconds, All Ayes.
 3. Chairman’s report
 - a. Discuss future elections
 - i. Ad hoc committee formed to fill the open position to the EC and the
 - ii. Need Vice Chair, Treasurer and max 7 or min 4 Executive Committee members
 - iii. Nominations due to November 30th.
 - iv. **ACTION ALL:** Send nominations to Steven, Stephen and Sam as soon as possible

- b. Review current membership
 - i. Young members representation
 - 4. Treasurer's Report
 - a. IRD treasurer report is included in Attachment 2.
 - i. \$57,000 previously identified to build up the awards. Currently on hold due to risks associated with the division being responsible for up to 25% of the loss of a conference.
 - Recommendation – hold this funding until after MARC next year.
 - MARC Discussion
 - a. Minimum number of people who need to stay at the MARK room block is 250. Concerns due to conferences piling up in 2022 due to COVID. RANK was rescheduled until 2023 to reduce conflicting schedules (May 2023).
 - b. JRNC and award are all staying the same and the technical committee is still committed even with the change in dates.
 - ii. Allocated \$2,000 for student support already.
 - iii. BMD budget was merged with the IRD budget.
5. Student Conference/Support Topics
 - a. 2021 – ANS Student Meeting – North Carolina
 - i. Transitioned dates to April 8-10, 2021
 - ii. 8 workshop and 13 panels
 - iii. Planning was already completed due to the lateness of the cancellation
 - iv. Rolled over the \$2,000 from last year due to the conference being postponed
 - v. Current plan to be in person but will be discussing with ANS at the end of the winter meeting.
 - vi. Looking for reviewers.
6. Division Committees
 - a. Program (Chair Kenan Unlu and Igor Jovanovic)
 - i. Report is included as Attachment 3
 - ii. Winter 2020
 - 1 panel session, 8 technical with one joint with NNPD
 - Potential strategy in the future would be to identify a national lab collaboration when selecting topic areas
 - iii. June 2021
 - In Rhode Island if in person. Decision has not been made yet.
 - Two topic areas identified:
 - a. Isotopes and Radiation: General
 - b. US research and test reactor fleet 2021-2040 – supporting advanced nuclear technology –
 - i. Currently 8 focuses identified.
 - ii. Could be separated into 2 sessions – one on research reactors and one on advanced reactors

- iii. Is there a diversity and inclusion aspect that could be included here? Potentially manpower needs for supporting this focus area. That could be a better session for DC.
 - iv. Washington DC 2021
 - ACTION ALL: Send summary to Kenan for proposal for sessions to meeting – Due at the end of November – 100-word summaries
 - Potential conversion session
 - v. Upcoming Meetings
 - MARC – See notes from section 4a.
 - ANIMMA 2021 – blended meeting
 - a. Used to be class 4 but isn't because of the closeness of an ANS meeting. We should try to get it sponsored next time again.
 - INMM – Not approved, just of interest
 - Actinides 2021 – currently planned for in person – class 4
 - IEEE Nuclear Science Symposium and Medical Imaging Conference
 - 11th ICI – class 4
 - vi. Registration
 - Typically, IRD gets 5 invited registrations - 1 day but full meeting for virtual meetings
 - Approval authority for complimentary registrations delegated to the program chair.
 - Virtual meetings allowed for corporate sponsors to include more registrations.
 - a. ANS is making more money from virtual meetings than in person meetings.
 - b. Attendance is up.
 - c. Paper submissions increased.
 - d. Hybrid models are possible in the future. IRD committee is encouraging a 1 and 1 model.
- b. Membership
 - i. Membership statistics
 - ANS membership has been down over the last 5 years but seems to be stabilizing.
 - Current - 861 IRD membership.
 - Where did all the BMD members go?
 - ii. Recruiting
 - May increase over the next few months due to ANS membership perks.
 - Communication with “new people” to keep them after the trial is up.
 - a. Social media
 - b. Nuclear News is focusing on a division for each issue

- Could include the membership fee in the conference attendance fee in the future.
 - c. Honora and Awards
 - i. Radiation Science and Technology Award
 - Kannan Unlu won.
 - ii. Vogt Award
 - Applications open November 15th
 - iii. New Award: Tsahi Gozani (Undergraduate and Graduate Scholarships)
 - Approved but waiting on some of the specifics.
 - Voted remotely on it.
 - Endowment \$60,000
 - \$3,000 annual award
 - iv. Newsletter/Website
 - An outline was completed but content needs to be completed.
 - ACTION Jim and Jung: Get information from people.
 - ACTION Kim: Follow-up to make sure it gets complete
 - Things to include in the newsletter:
 - a. Interview with Tsahi Gozani
 - b. What does your membership dues pay for?
 - c. What is the Vogt award?
 - Consider a shorter newsletter more frequently
 - Kim got access to the website but never updated it. Requested access again but needs help.
 - a. ACTION Kim: find someone to support the website
 - b. ACTION Raymond: help find a student
 - d. Technical Committees
 - i. This is the lifeblood of our division. We need to get active and try to target 2 or 3 committees to determine what should be up next.
 - ii. ACTION Kannan and Igor - Reach out to technical committees to bolster what is coming up and planning for a few years out.
 - iii. Don't lock in the rotation because factors such as location or other meetings close to the meeting time should also be considered.
7. Conferences
- a. Discussed under 6.a.v
8. Old Business
- a. Position Statements
 - i. Lin-Win has updated position statements 72 and 30. Does it need to be reviewed and approved by IRD prior to the meeting on Friday?
 - ACTION Lin-Wen: Send drafts to IRD for review and reach out to the policy committee.
 - ACTION Sam: Add this topic to the agenda for future discussion.

9. New Business

- a. Standards
 - i. ACTION Kim: Send list of standards to IRD Executive Committee after next standards meeting.
- b. Program Committee Chair:
 - i. MOTION: Kannan proposes to transition the Program Committee Chair to Igor and for Kannan to continue to help as second.
 - ii. Igor is willing
 - iii. We need to consider filling the other roles on this committee as well.
- c. Future of meetings
 - i. Only one person a year.
 - ii. Finding other locations for national meetings is of interest.

10. Meeting Adjourned

- a. Stephen motioned
- b. 2nd Kenan
- c. All Ayes

**Isotopes and Radiation Division
Program Committee Report
Virtual Annual Meeting of the American Nuclear Society
June 14–16, 2021**

**Igor Jovanovic, IRD Program Chair
Kenan Ünlü, IRD Assistant Program Chair**

National Meetings

The Isotope and Radiation Division organized one technical session, one panel, and co-sponsored one technical session with RSPD and NNPD at the 2021 Annual Meeting. A total of 10 technical papers will be presented and 5 panelists will participate in these sessions.

IRD Sessions Summer 2021	Organizer/Session Chair
Isotopes and Radiation: General	Jovanovic / Bowen
Highlights from the 2020 Workshop on Accelerated Irradiation for Reactor Structural Materials (Panel)	Heidrich
Radiation Detection for Homeland Security (co-sponsored with NNPD; organized by RSPD)	Abdelrahman

Four technical sessions and one panel are planned for the 2021 ANS Winter Meeting, October 31–November 4, 2021 in Washington, DC.

IRD Sessions Winter 2021	Organizer/Session Chair
Isotopes and Radiation: General	Jovanovic
Measurement techniques for nuclear security applications	Bowen / Lamont
Advancements in radiological interdiction technologies	Woodring / Orlicz
Radiation Effects in Electronics and Electronic/Optical Materials	Cazalas
Radiological interdiction technology programs (Panel)	Woodring / Orlicz

Please also consider organizing session(s) for the 2022 ANS Annual Meeting in Anaheim, CA, June 12–16, 2022. If you would like to organize a session, provide the title, suggested session chair name(s), and one paragraph summary to Igor Jovanovic (ijov@umich.edu) or Kenan Ünlü (kxu2@psu.edu) ASAP.

IRD Related Meetings

12th International Conference on Methods and Applications of Radioanalytical Chemistry (MARC)

<http://www.marconference.org/>

April 3–8, 2022

Kailua-Kona, Hawaii

International conference on Advancement in Nuclear Instrumentation Measurement Methods and their Applications (ANIMMA 2021)

<https://indico.utef.cvut.cz/event/23/>

June 21 – 25, 2021

Prague, Czech Republic [hybrid]

Institute of Nuclear Materials Management Annual Meeting

<https://inmm.org/page/futureannualmeetings>

August 21 – 26, 2021 [virtual]

Actinides 2021

<https://www.actinides2021.com/>

Postponed; TBD

IEEE Nuclear Science Symposium and Medical Imaging Conference

<https://nssmic.ieee.org/2021/>

October 16 – 23, 2021 [virtual]

11th International Conference on Isotopes & Expo

<https://venuewest.eventsair.com/ici-2022/>

June 19 - 23, 2022

Saskatoon, Canada

International Conference on Radioanalytical and Nuclear Chemistry (JRNC-RANC)

<https://akcongress.com/jrnc-ranc/>

Tentative date: May 2023

Budapest, Hungary



Isotopes & Radiation

Membership Snapshot - 2021

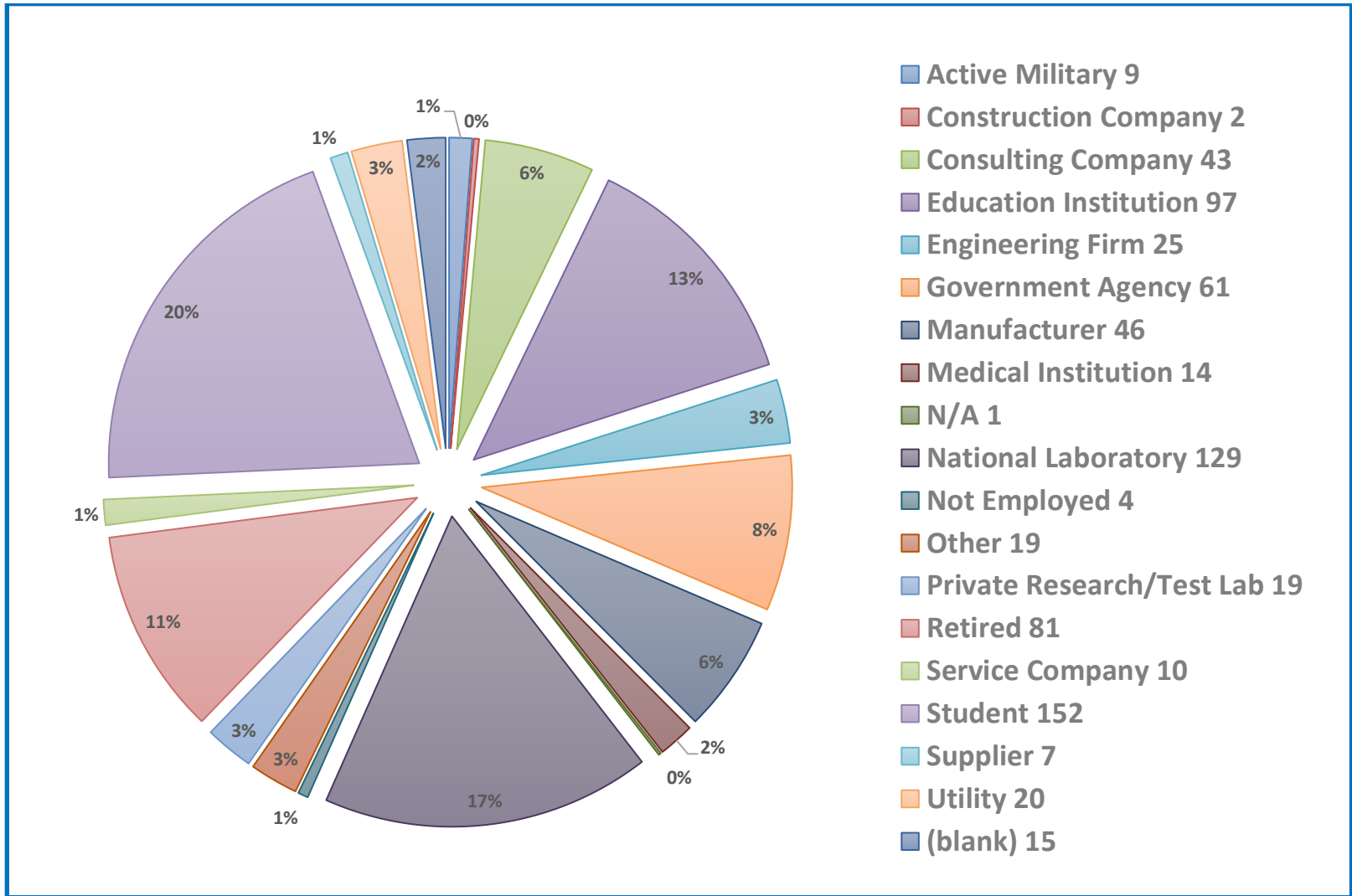
Numbers reflect active members as of April 2021.



IRD Members by Industry

Student	152	20%
National Laboratory	129	17%
Educational Institution	97	13%
Retired	81	11%
Government Agency	61	8%
Manufacturer	46	6%
Consulting Company	43	6%
Engineering Firm	25	3%
Utility	20	3%
Private Research/Test Lab	19	3%
Medical Institution	14	2%
Service Company	10	1%
Active Military	9	1%
Supplier	7	1%
Construction Company	2	0%
Other	19	3%
Not Reported	15	2%
N/A	1	0%
Not Employed	4	1%
Total	754	100%

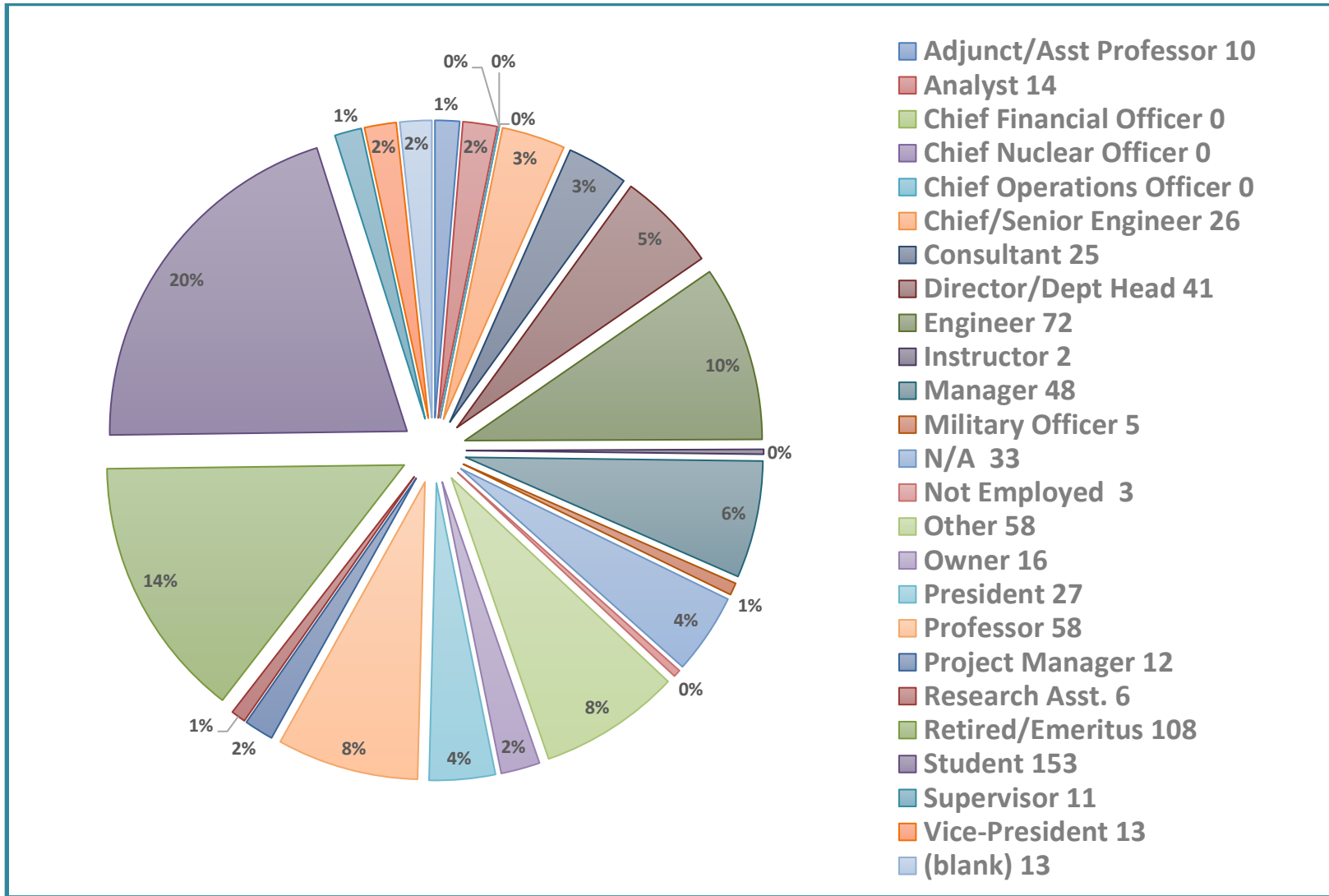
IRD Members by Industry



IRD Members by Position

Student	153	20%
Retired/Emeritus	108	14%
Engineer	72	10%
Professor	58	8%
Manager	48	6%
Direct/Department Head	41	5%
President	27	4%
Chief/Senior Engineer	26	3%
Consultant	25	3%
Owner	16	2%
Analyst	14	2%
Vice-President	13	2%
Project Manager	12	2%
Supervisor	11	1%
Adjunct/Assistant Professor	10	1%
Research Assistant	6	1%
Military Officer	5	1%
Instructor	2	0%
Chief Financial Officer	0	0%
Chief Nuclear Officer	0	0%
Chief Operations Officer	0	0%
Other	58	8%
N/A	33	4%
Not Reported	13	2%
Not Employed	3	0%
Total	754	100%

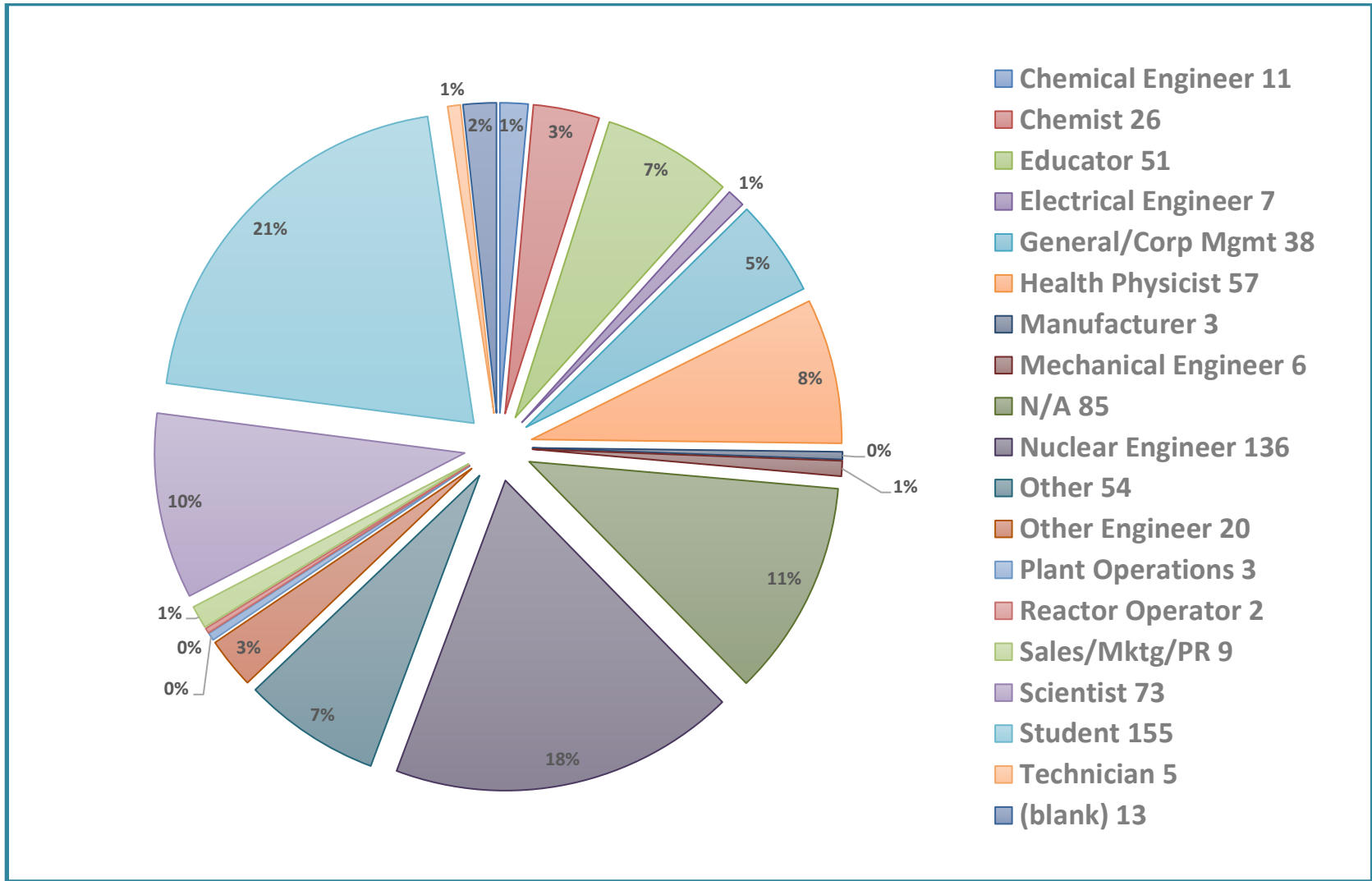
IRD Members by Position



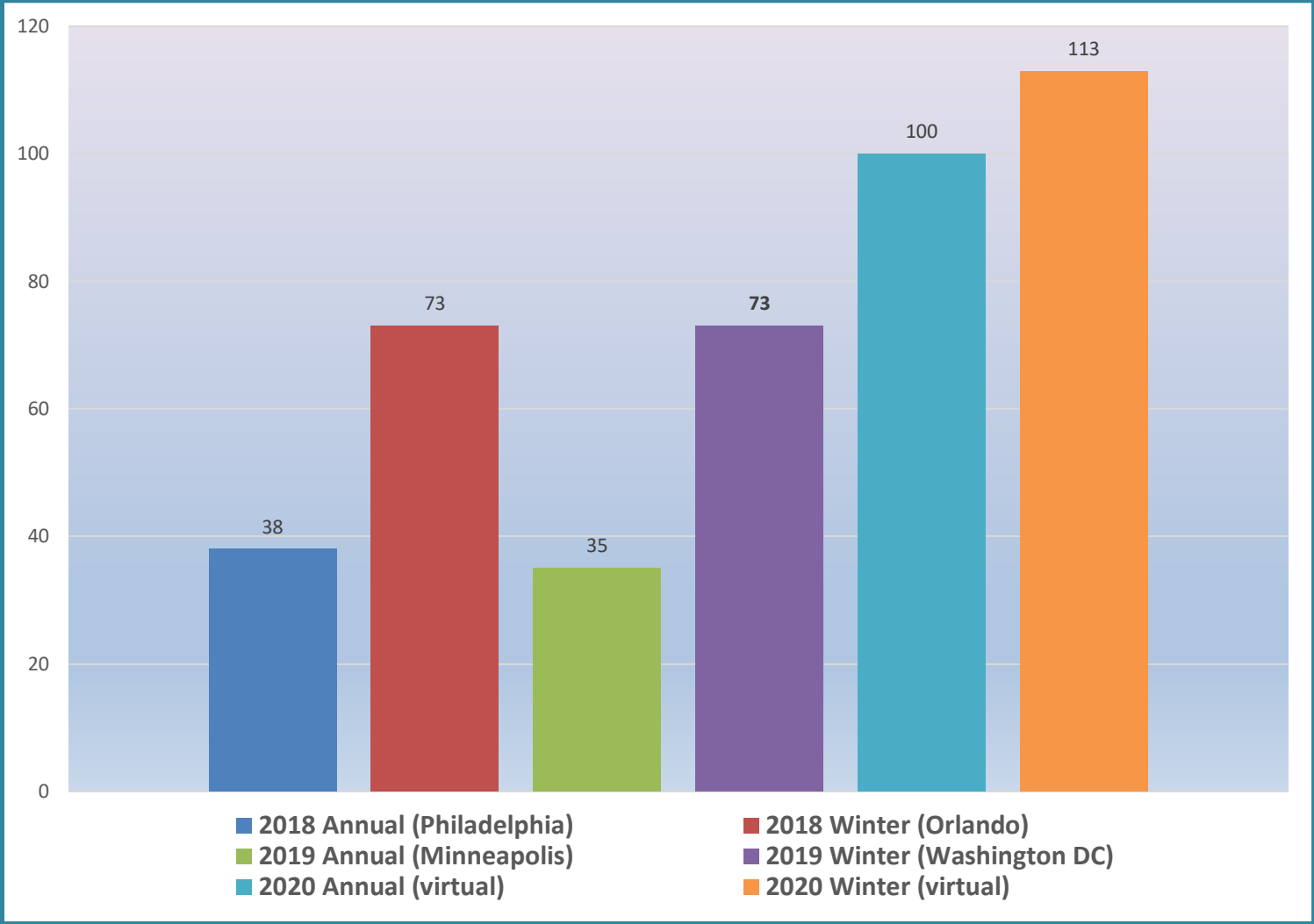
IRD Members by Job Function

Student	155	21%
Nuclear Engineer	136	18%
Scientist	73	10%
Health Physicist	57	8%
Educator	51	7%
General/Corporation Management	38	5%
Chemist	26	3%
Other Engineer	20	3%
Chemical Engineer	11	1%
Sales/Marketing/PR	9	1%
Electrical Engineer	7	1%
Mechanical Engineer	6	1%
Technician	5	1%
Manufacturer	3	0%
Plant Operations	3	0%
Reactor Operator	2	0%
N/A	85	11%
Other	54	7%
Not Reported	13	2%
Total	754	100%

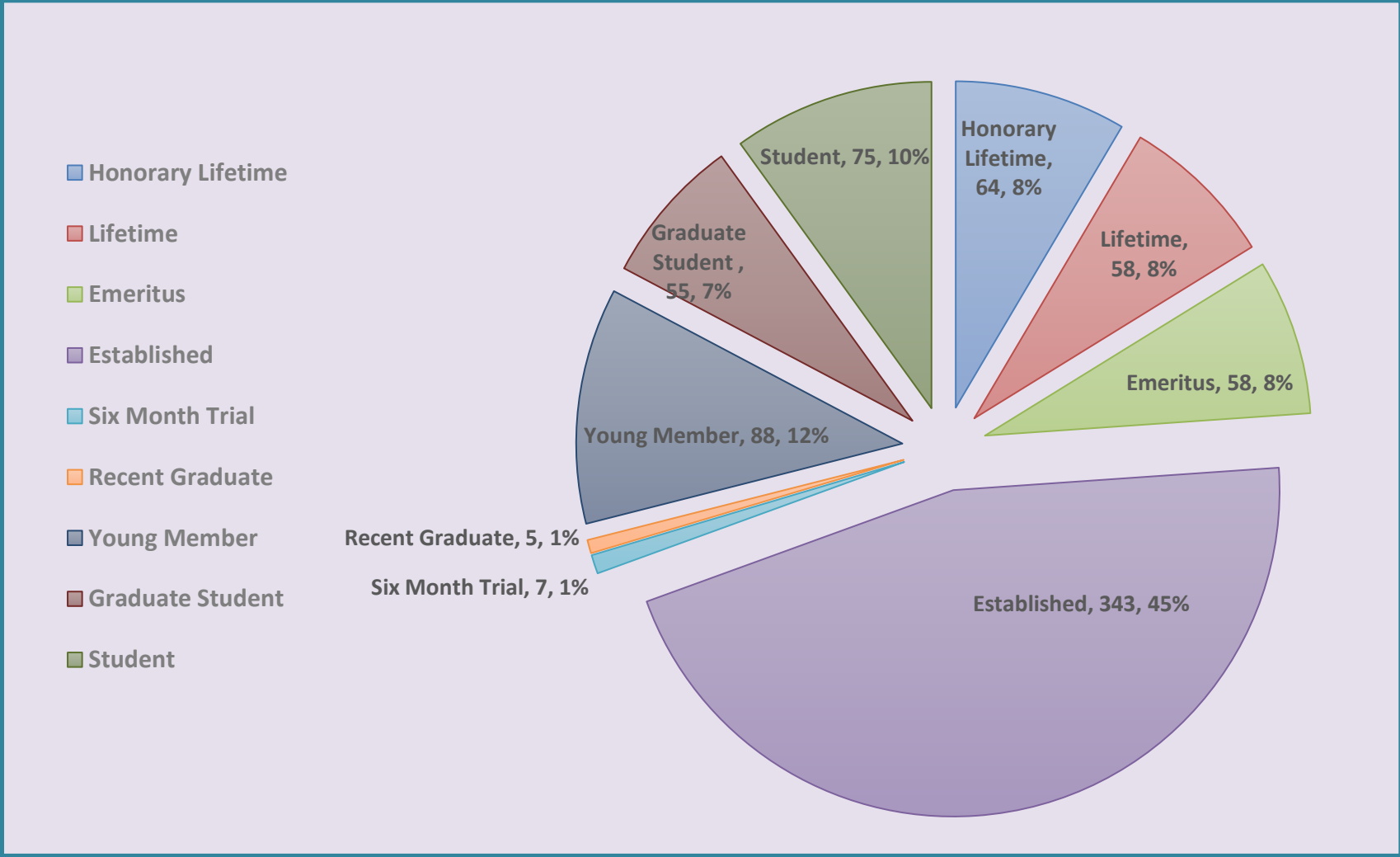
IRD Members by Job Function



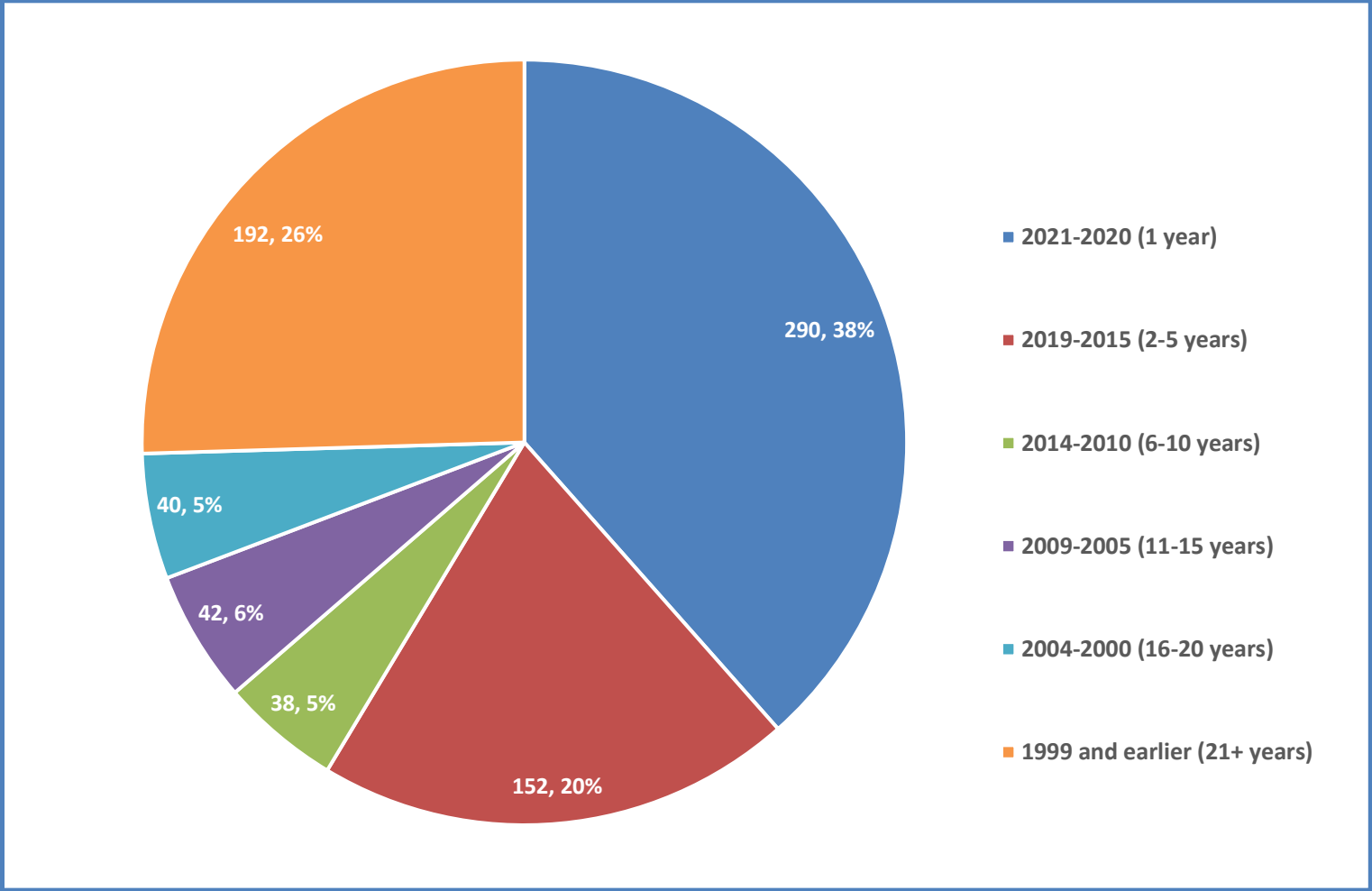
IRD Members by National Meeting Attendance



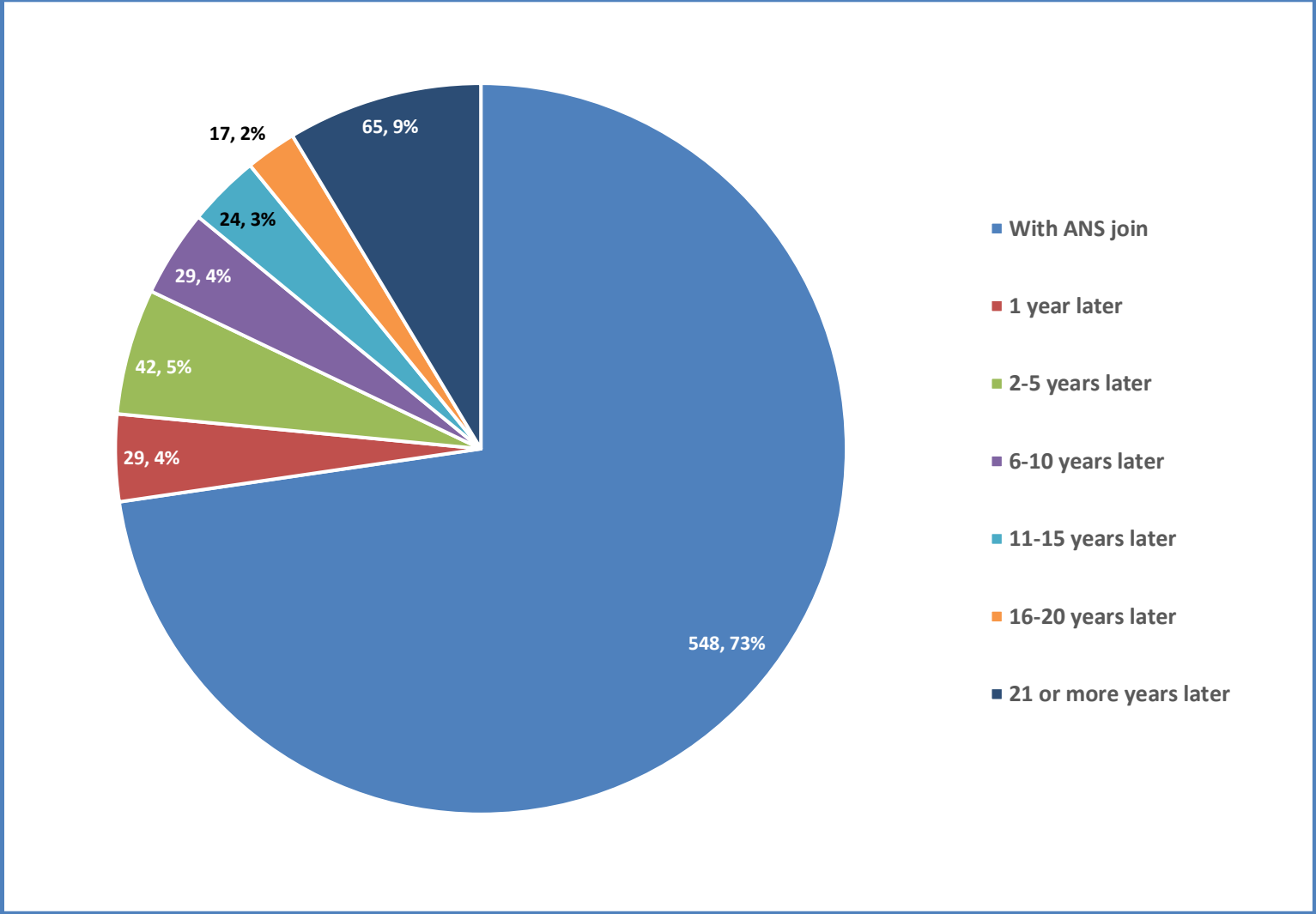
IRD Members by Dues Package



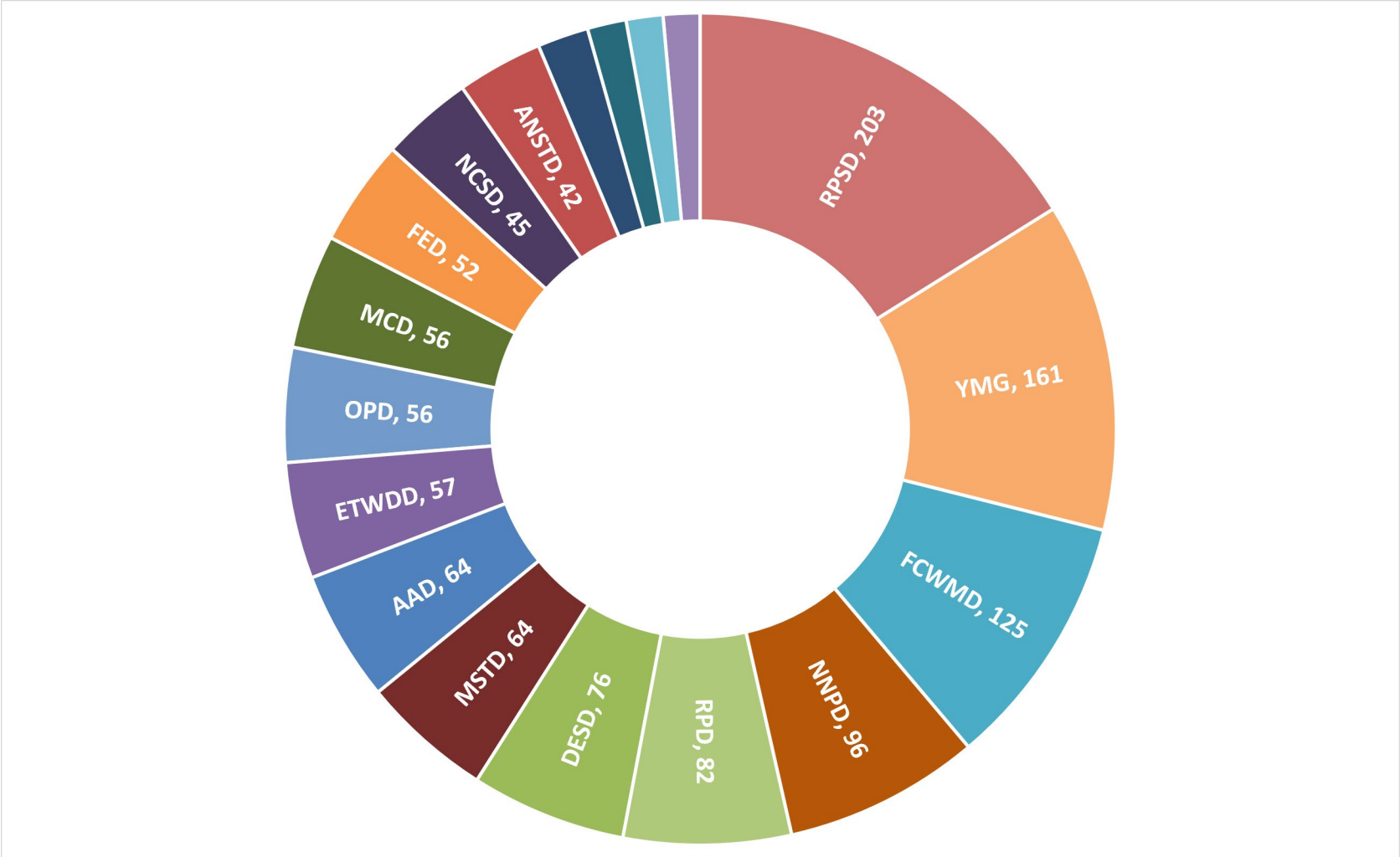
IRD Members by When They Joined Division



IRD Members Division Join Date Compared to ANS Join Date

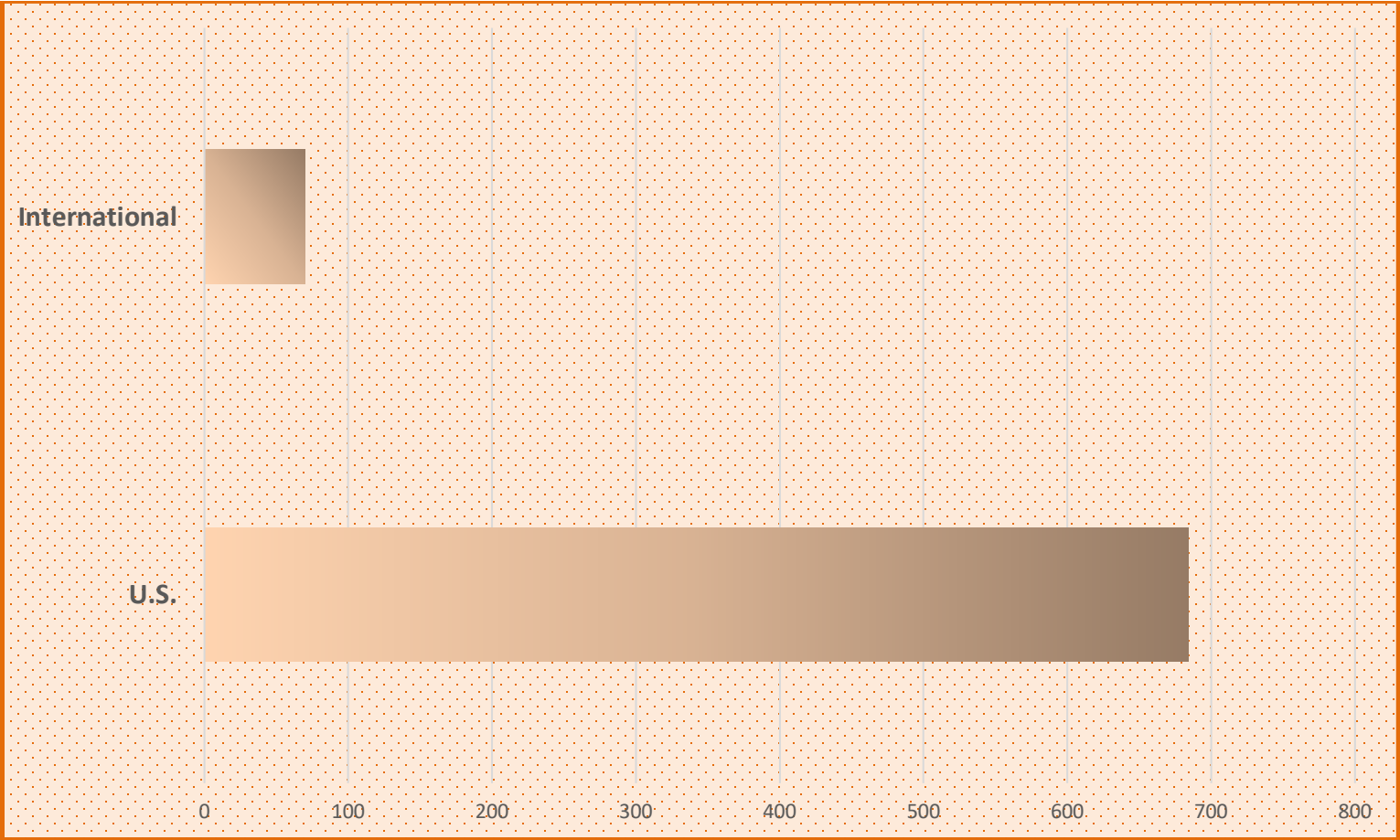


IRD Members by Other Divisions



Smaller Amounts Not Shown Above: HFICD 25, NISD 19, RRSD 18 and THD 18

IRD Members by U.S./International



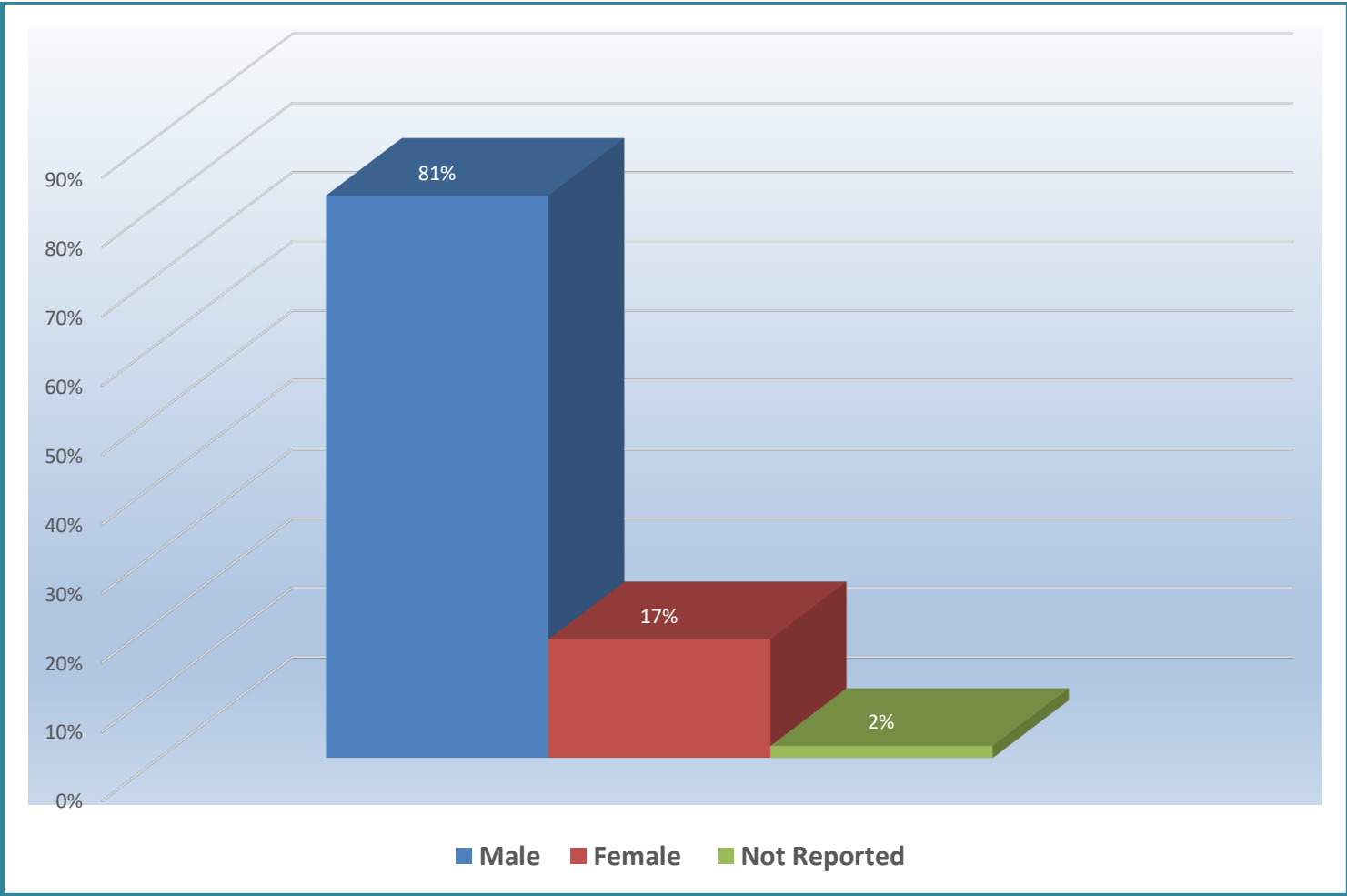
IRD Members by State/Territory

State/ Territory	Count	State/ Territory	Count	State/ Territory	Count
AE/AP	0	KS	7	NY	26
AK	0	KY	2	OH	19
AL	4	LA	3	OK	1
AR	3	MA	14	OR	11
AZ	10	MD	30	PA	25
CA	50	ME	1	SC	13
CO	18	MI	14	SD	0
CT	6	MN	8	TN	55
DC	5	MO	14	TX	37
DE	1	MS	0	UT	16
FL	16	MT	3	VA	41
GA	23	NC	31	VT	1
HI	3	NE	1	WA	34
IA	2	NH	5	WI	14
ID	28	NJ	7	WV	0
IL	20	NM	45	WY	0
IN	6	NV	9	Not Reported	0
				Total US	684

IRD Members by Country

Country	Count	Country	Count
ARGENTINA	2	JAPAN	8
AUSTRIA	1	KOREA (THE REPUBLIC OF)	5
BELGIUM	1	KUWAIT	1
BRAZIL	2	LITHUANIA	1
BULGARIA	1	MEXICO	1
CANADA	17	NIGERIA	1
CHINA	1	PORTUGAL	1
DENMARK	1	PUERTO RICO	2
EGYPT	1	ROMANIA	1
FINLAND	1	SAUDI ARABIA	3
FRANCE	1	SINGAPORE	1
GERMANY	2	SWITZERLAND	1
GREECE	1	TAIWAN	3
ITALY	2	UNITED ARAB EMIRATES	3
		UNITED KINGDOM	4
		Total Foreign	70

IRD Members by Gender



IRD Members by Age

