## 2021 Scientific Ocean Drilling Bibliographic Database and Publication Impact Report

Covering records related to the Deep Sea Drilling Project,
Ocean Drilling Program, Integrated Ocean Drilling Program,
and International Ocean Discovery Program
from 1969 through June 2021

Produced by
International Ocean Discovery Program
Publication Services

## Introduction

This Scientific Ocean Drilling Bibliographic Database and Publication Impact Report demonstrates the impact of Program science through publications from the Deep Sea Drilling Project (DSDP), Ocean Drilling Program (ODP), Integrated Ocean Drilling Program, and International Ocean Discovery Program (IODP). The first section presents statistics from the bibliographic records indexed by the American Geosciences Institute (AGI) in the Scientific Ocean Drilling Bibliographic Database (previously named the Ocean Drilling Citation Database) as of June 2021. The second section covers alternative impact metrics. Citation statistics obtained from Google Scholar in July 2021 and links to Altmetric scores for high-impact papers demonstrate trends in societal relevance and research usage.

### Report categories

Data collected for the annual Scientific Ocean Drilling Bibliographic Database Report are divided into two main categories:

- Program records: publications produced and published by the ocean drilling Programs DSDP, ODP, the Integrated Ocean Drilling Program, and IODP. These records include but are not limited to
  - The Initial Reports of the Deep Sea Drilling Project,
  - The Initial Reports and Scientific Results Proceedings volumes of ODP;
  - The Proceedings volumes of the Integrated Ocean Drilling Program (IODP-1) and IODP (IODP-2),
  - The technical note series from ODP and IODP, and
  - The journal Scientific Drilling from 2006 to 2013.
- Non-Program records: Program-related scientific research published in the open literature. Non-Program publications are further categorized into three groups:
  - Serial records: drawn from any periodically produced analytic or monographic journal or report, especially those that are peer reviewed, but may also include reports from universities, organizations, or government entities (e.g., *Open-File Reports—U.S. Geological Survey*).
  - Theses and dissertations: Bachelor's and Master's theses and Ph.D. dissertations.
  - Miscellaneous records: books, reports, monographs, maps, abstracts, posters, newsletters, videos, and CD-ROM/DVD-ROMs.

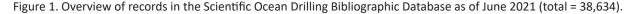
## Scientific Ocean Drilling Bibliographic Database

The Scientific Ocean Drilling Bibliographic Database is a subset of AGI's GeoRef database. To generate the GeoRef database, AGI indexes and records bibliographic data from approximately 3,300 domestic and international publications. AGI also has arrangements to acquire metadata with many publishers including Springer, Elsevier, the American Association for the Advancement of Science, Copernicus, Wiley/ Blackwell, the American Geophysical Union, and most of the Geoscience World publishers. In addition, IODP Publication Services notifies AGI when Program publications are released.

AGI produces the Scientific Ocean Drilling Bibliographic Database in collaboration with IODP. AGI uses a series of keywords to extract bibliographic records related to Program research from the GeoRef database. The database resides on the AGI server (http://iodp.americangeosciences.org/vufind) and is updated weekly. Metadata associated with each record can be saved to a personalized list, texted or emailed, or exported into common bibliographic software. The database also generates references in several formats.

Depending on the source from which AGI acquires its information, there may be a significant delay after publication before a record is included in the GeoRef database and later in the Scientific Ocean Drilling Bibliographic Database. There is no guarantee that all publication venues for Program research are included in GeoRef or the Scientific Ocean Drilling Bibliographic Database, but scientific publications throughout the world are represented.

As of June 2021, the database contains 38,634 records, each including metadata, from publications published from 1969 to 2021 (beginning of DSDP to present), including ~74% non-Program records and ~26% Program records (Figure 1). Since the 2020 report, 864 records have been added to the database. Figure 1 highlights the ~2% theses and dissertations (total = ~800) in the database that illustrate early career scientific research relating to the Program and details serial publications related to IODP and its predecessor programs. Figure 2 shows these records based on all authors' country of affiliation and includes all countries in the database that have a total of 10 or more author contributions; the size of the country names indicates the relative number of author contributions (total number of times affiliations from each country are listed for authors, including first and contributing authors and multiple contributors from a single country per paper), which ranges from 10 (Ukraine) to 106,346 (USA), and the colors indicate current member country funding entities (black = nonmember countries).



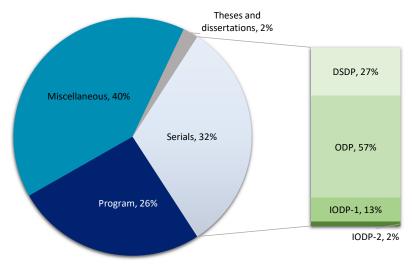
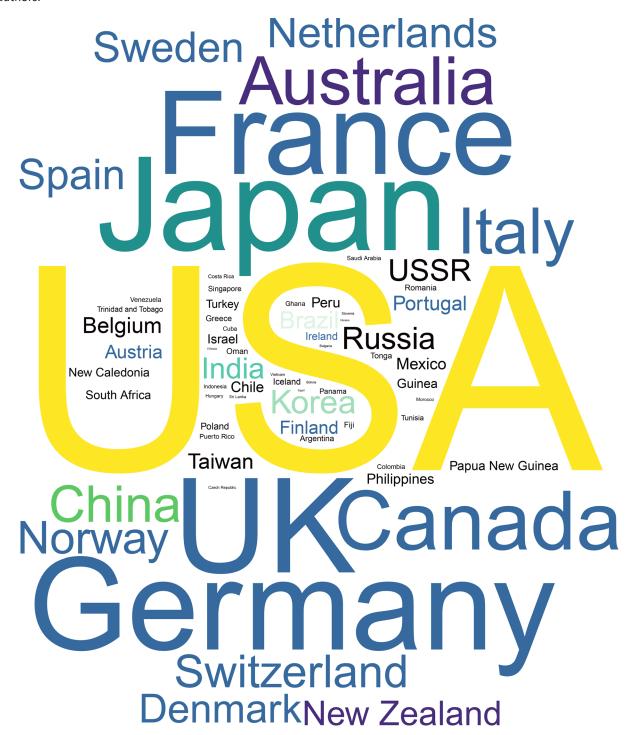


Figure 2. Records in the Scientific Ocean Drilling Bibliographic Database as of June 2021 by affiliation country of all authors.



## All Programs (1969-2021)

#### Publications from top-ranking peer-reviewed journals

Database records indicate that 12,262 Program-related papers have been published in non-Program, primarily peer-reviewed serial publications. A total of 6,284 of these research papers (~51% of the serial publications in the database) were published in 30 highly ranked peer-reviewed journals, based on the Clarivate Analytics 2020 journal impact factor (Figure 3). Starting in 1996, ODP encouraged scientists to publish postcruise research results in English language peer-reviewed journals rather than the Program *Proceedings* volumes. Figure 3 includes the highly ranked journals that have published a total 40 or more research papers related to DSDP and ODP (1969–2002) and IODP-1 and IODP-2 (2003–present). Journal impact factors are shown in parentheses. Table 1 presents the data behind this graph.

Figure 3. Highly ranked peer-reviewed serials publishing Program-related expedition research results (1969–2021). \* = includes Paleoceanography papers (name changed in 2018).

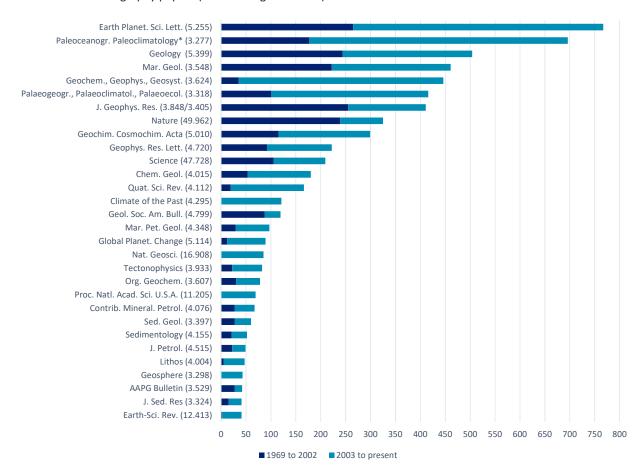


Table 1. Highly ranked peer-reviewed serials publishing Program-related expedition research results (1969–2021). \* = includes Paleoceanography papers (name changed in 2018).

	Journal Impact	Number o	ated	
Journal	Factor (2020)	1969–2002	2003-2021	Total
Nature	49.962	239	86	325
Science	47.728	105	104	209
Nature Geoscience	16.908	0	85	85
Earth-Science Reviews	12.413	2	39	41
Proceedings of the National Academy of Sciences of the U.S.A.	11.205	0	69	69
Geology	5.399	244	260	504
Earth and Planetary Science Letters	5.255	265	502	767
Global and Planetary Change	5.114	12	77	89
Geochimica et Cosmochimica Acta	5.010	115	184	299
Geological Society of America Bulletin	4.799	87	32	119
Geophysical Research Letters	4.720	92	130	222
Journal of Petrology	4.515	22	27	49
Marine and Petroleum Geology	4.348	29	68	97
Climate of the Past	4.295	0	121	121
Sedimentology	4.155	21	31	52
Quaternary Science Reviews	4.112	19	147	166
Contributions to Mineralogy and Petrology	4.076	27	40	67
Chemical Geology	4.015	53	127	180
Lithos	4.004	5	42	47
Tectonophysics	3.933	22	60	82
Journal of Geophysical Research (Solid Earth, Oceans)	3.848/3.405	255	156	411
Geochemistry, Geophysics, Geosystems	3.624	35	411	446
Organic Geochemistry	3.607	30	48	78
Marine Geology	3.548	222	239	461
AAPG Bulletin	3.529	27	15	42
Sedimentary Geology	3.397	27	33	60
Journal of Sedimentary Research	3.324	15	26	41
Palaeogeography, Palaeoclimatology, Palaeoecology	3.318	100	316	416
Geosphere	3.298	0	43	43
Paleoceanography and Paleoclimatology*	3.277	177	519	696

#### Publications by authors from current member countries

Of the 12,262 Program-related papers published in serial publications, 10,777 (~88%) are first-authored by scientists from current IODP funding entities, which include the following:

- National Science Foundation (NSF), United States;
- Ministry of Education, Culture, Sports, Science and Technology (MEXT), Japan;
- European Consortium for Ocean Research Drilling (ECORD);
- Ministry of Science and Technology (MOST), People's Republic of China;
- Korea Institute of Geoscience and Mineral Resources (KIGAM);
- Australia-New Zealand IODP Consortium (ANZIC);
- Ministry of Earth Sciences (MoES), India; and
- Coordination for Improvement of Higher Education Personnel (CAPES), Brazil.

Table 2 shows publication statistics for member countries and consortia, including the following:

- First author: the correspondence author of a paper.
- Contributing authors: co-authors listed on a paper.
- Serial contributions by country: the number papers that list contributing authors from each country. The country is counted once per paper regardless of the number of authors from that country.
- Serial contributions by author: the number of contributing authors from each country. Multiple contributors from a single country are each counted.
- Total contributions: the total number of times researchers from each country are included in the authorship of peer-reviewed serials, including first and contributing authors and multiple contributors from a single country per paper.

Table 2. Serial publication for peer-reviewed serials showing counts by first author, contributing country, contributing authors, and total contributions by all authors from current IODP member countries (1969–2021).

IODP member country		Serial contributions		Total contributions
or consortium	of serials	by country	by author	by all authors
Australia/New Zealand Consortium	369	582	741	1,110
Australia	216	387	473	689
New Zealand	153	195	268	421
Brazil	32	59	65	97
China	546	456	634	1,180
ECORD	4,561	6,171	7,916	12,477
Austria	24	58	60	84
Canada	349	444	528	877
Denmark	62	119	133	195
Finland	10	13	16	26
France	661	887	1,238	1,899
Germany	1,112	1,383	1,798	2,910
Ireland	5	25	27	32
Italy	307	402	528	835
Netherlands	245	317	345	590
Norway	150	212	246	396
Portugal	19	57	68	87
Spain	176	293	364	540
Sweden	118	164	173	291
Switzerland	158	250	271	429
United Kingdom	1,165	1,547	2,121	3,286
India	190	124	154	344
Japan	776	969	2,098	2,874
Republic of Korea	63	114	130	193
United States	4,240	3,713	6,853	11,093
Total papers:	10,777			29,368

Table 3 shows the breakdown of first authors by country or consortium affiliation for all non-Program publication types in the database. Note that theses and dissertations are underreported to AGI and are not fully represented.

Table 3. First-authored non-Program publications by type and current funding consortium (1969–2021).

			Theses and dissertations		
IODP member country or consortium	Serials	Misc.	B.S.	M.S.	Ph.D.
Australia/New Zealand Consortium	369	514	4	6	4
Brazil	32	42	0	0	0
China	546	186	0	0	0
ECORD	4,561	5,415	15	20	122
India	190	73	0	3	3
Japan	776	891	0	0	0
Republic of Korea	63	81	0	0	0
United States	4,240	7,173	30	244	346
Totals:	10,777	14,375	49	273	475

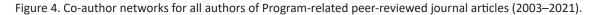
# Integrated Ocean Drilling Program and International Ocean Discovery Program (2003–2021)

#### Publication co-author networks

Figures 4 and 5 show co-author networks based on the serial records in the database. Each time authors publish a paper together, a line connects their countries; no line is shown if authors from the same country publish together. Each connecting line shows a minimum of 5 collaborations; line thickness indicates relative number of individual collaborations between authors from the two countries. Figure 4 includes all countries in the database that have a total of 10 or more author contributions. Figure 5 shows author contributions from current member countries.

In Figure 4, the numbers on the circles indicate the total number of times affiliations from each country are listed for authors and include first and contributing authors and multiple contributors from a single country per paper. For both Figures 4 and 5, the size of the circle indicates the relative number of authors. The circle colors indicate current member country funding entities (black = nonmember countries). Line colors are a mixture of the colors between collaborating countries.

Co-author networks were generated in Gephi (https://gephi.org) with the help of the Convert Excel and CSV files to Networks and Give Colors to Nodes plug-ins (http://www.clementlevallois.net).



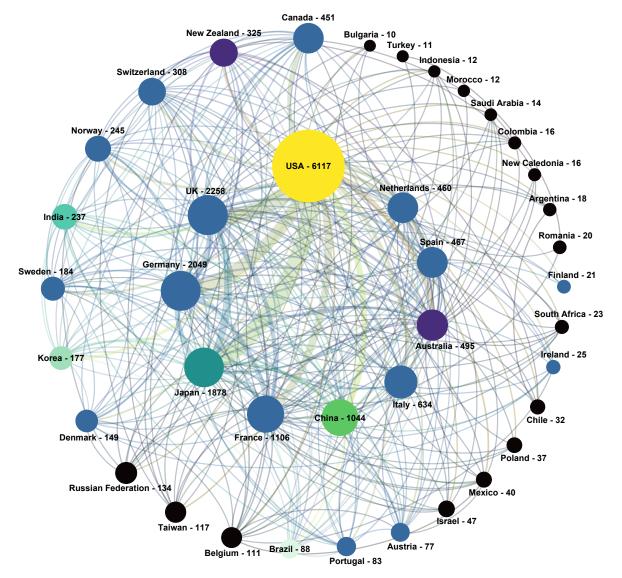
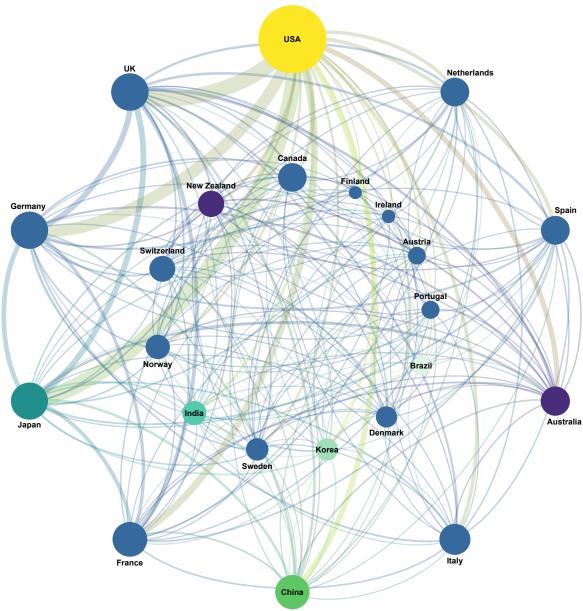


Figure 5. Co-author networks for authors of Program-related peer-reviewed journal articles from current member countries (2003–2021).



#### Publications by expedition

Figures 6 and 7 show the number of Program and non-Program serial publication records for all completed Integrated Ocean Drilling Program and IODP expeditions whose Expedition Reports volumes published before the end of August 2021 (Expeditions 301–372, 374–376, and 379–383). Note that the publication tail for postcruise expedition research in both Program and serial publications extends for several years after the end of the expedition; hence, more recent expeditions have fewer publications credited to them, as illustrated in the figure.

Figure 6. Number of Program and serial publication records for Integrated Ocean Drilling Program Expeditions 301–348 (2003–2021).

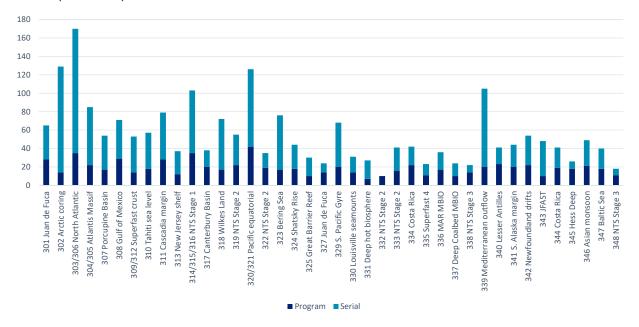
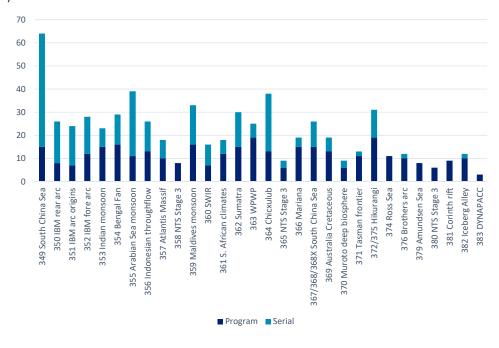


Figure 7. Number of Program and serial publication records for IODP Expeditions 349–372, 374–376, and 379–383 (2003–2021).



## Publications by Science Plan theme

Figure 8 shows Program and non-Program (all types) records related to the Integrated Ocean Drilling Program (Expeditions 301–348) and sorted by *Integrated Ocean Drilling Program Initial Science Plan* (2003–2013) themes. Initial science plan themes are tied to the primary objectives of each expedition

as listed in Developments in Marine Geology 7: Earth and Life Processes Discovered from Subseafloor Environments (A Decade of Science Achieved by the Integrated Ocean Drilling Program [IODP]).

- Deep Biosphere: Expeditions 301, 307, 308, 311, 327, 329–331, 334, 336, 337, and 344.
- Environmental Change, Processes and Effects: Expeditions 302, 303/306, 310, 313, 317, 318, 320/321, 323, 325, 339, 341, 342, 346, and 347.
- Solid Earth Cycles and Geodynamics: Expeditions 304/305, 309/312, 314/315/316, 319, 322, 324, 326, 332, 333, 335, 338, 340, 343, 345, and 348.

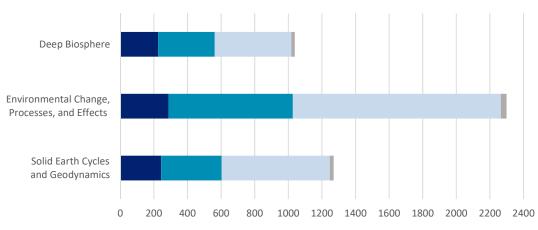


Figure 8. Integrated Ocean Drilling Program publication records (all types) by Initial Science Plan theme (2006–2021).

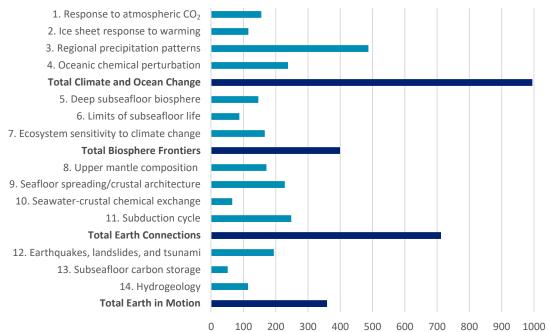
Figure 9 shows Program and non-Program serial, miscellaneous, and thesis/dissertation publication records related to IODP (Expeditions 349–372, 374–376, and 379–383) and sorted by the themes and challenges of the IODP science plan (*Illuminating Earth's Past, Present, and Future: The Science Plan for the International Ocean Discovery Program 2013–2023*). Science plan themes are tied to the primary objectives of each expedition. IODP Science Plan contains four major themes and subsidiary challenges as listed below.

■ Program ■ Serial ■ Misc ■ Thesis

- Climate and Ocean Change: Reading the Past, Informing the Future
  - How does Earth's climate system respond to elevated levels of atmospheric CO<sub>2</sub>? (Expeditions 361, 369, 371, 373, 377, 378, and 382)
  - 2. How do ice sheets and sea level respond to a warming climate? (Expeditions 359, 373, 374, 377, 379, and 383)
  - 3. What controls regional patterns of precipitation, such as those associated with monsoons or El Nino? (Expeditions 353–356, 359, 361, and 363)
  - 4. How resilient is the ocean to chemical perturbations? (Expeditions 364, 369, 374, and 378)
- Biosphere Frontiers: Deep Life and Environmental Forcing of Evolution
  - 5. What are the origin, composition, and global significance of deep subseafloor communities? (Expeditions 357, 366, 374, 376, and 385)
  - 6. What are the limits of life in the subseafloor realm? (Expeditions 370, 374, and 376)
  - 7. How sensitive are ecosystems and biodiversity to environmental change? (Expedition 364)
- Earth Connections: Deep Processes and Their Impact on Earth's Surface Environment

- 8. What are the composition, structure, and dynamics of Earth's upper mantle? (Expeditions 356, 357, and 360)
- 9. How are seafloor spreading and mantle melting linked to ocean crustal architecture? (Expeditions 349, 367/368, 369, 381, and 384)
- 10. What are the mechanisms, magnitude, and history of chemical exchanges between the oceanic crust and seawater? (Expeditions 357 and 376)
- 11. How do subduction zones initiate, cycle volatiles, and generate continental crust? (Expeditions 350–352 and 371)
- Earth in Motion: Processes and Hazards on Human Time Scales
  - 12. What mechanisms control the occurrence of destructive earthquakes, landslides, and tsunami? (Expeditions 358, 362, 365, 372/375, 380, 381, and 386)
  - 13. What properties and processes govern the flow and storage of carbon in the subseafloor? (Expeditions 372 and 386)
  - 14. How do fluids link subseafloor tectonic, thermal, and biogeochemical processes? (Expeditions 357, 366, and 376)

Figure 9. International Ocean Discovery Program publication records (all types) by IODP Science Plan theme (2013–2021).



## Alternative Impact Metrics

#### Citation statistics

As indexing and interconnectivity of scientific research results increase, we are better able to illustrate through citation data how often scientific publications are cited in other research articles. Citation data, in the form of number of times an article has been cited, can be accrued through several venues: Science Direct, Scopus, CrossRef, Web of Science, Plum Analytics, and others. Comprehensive citation data are unavailable at this time because not all publishers utilize citation data compilers. For this report, we

collected citation data through Google Scholar in July 2021. Review of these data shows that Program publications and non-Program serial publications containing research results from Integrated Ocean Drilling Program and IODP expeditions have been cited in other research articles more than 67,400 times between 2003 and 2021. Expedition-related science continues to be cited in other research for many years after publication. Figures 10 and 11 include available citation counts for Expeditions 301–372, 374–376, 379–383, and 385.

Figure 10. Number of times Program or non-Program serial publications from Integrated Ocean Drilling Program expeditions were cited by other research articles (2003–2021).

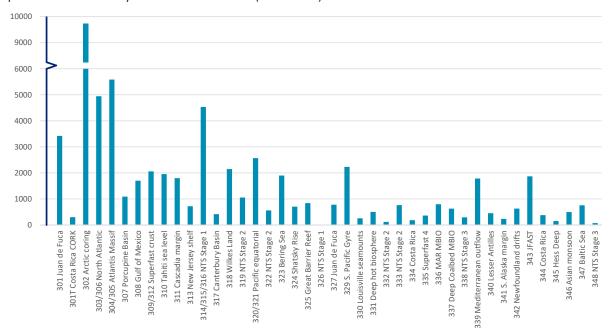


Figure 11. Number of times Program or non-Program serial publications from International Ocean Discovery Program expeditions were cited by other research articles (2003–2021).

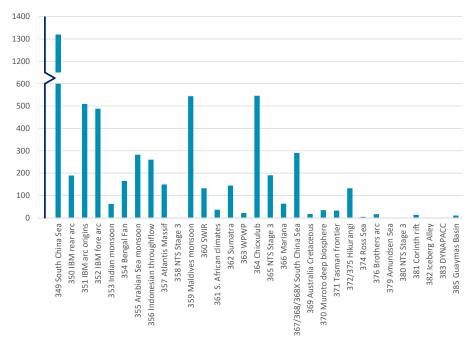


Table 4 lists the ODP, Integrated Ocean Drilling Program, and IODP expedition-related papers that have been most cited as of July 2021. It takes several years for papers to be published, and even more time for them to build up a high cited-by number; all of the most-cited papers are related to volumes published in 2011 or before. All of them are published in the top journals by impact factor, as shown in Figure 3. The Altmetric score for each paper is listed. See the next section for a discussion of Altmetric scores.

Table 4. Top cited Program-related serials as of July 2021 with corresponding Altmetric scores from 17 August 2021. Click on the graphic to view the live Altmetric data.

Article	Citations (N)	Altmetric score
Kallmeyer, J., Pockalny, R., Adhikari, R.R., Smith, D.C., and D'Hondt, S., 2012. Global distribution of microbial abundance and biomass in subseafloor sediment. Proceedings of the National Academy of Sciences of the United States of America, 109(40):16213–16216. https://doi.org/10.1073/pnas.1203849109	739	134
Sluijs, A., Schouten, S., Pagani, M., Woltering, M., Brinkhuis, H., Sinninghe Damsté, J.S., Dickens, G.R., et al., 2006. Subtropical Arctic Ocean temperatures during the Palaeocene/ Eocene Thermal Maximum. Nature, 441(7093):610–613. https://doi.org/10.1038/nature04668	702	88
Lipp, J.S., Morono, Y., Inagaki, F., and Hinrichs, KU., 2008. Significant contribution of Archaea to extant biomass in marine subsurface sediments. Nature, 454(7207):991–994. https://doi.org/10.1038/nature07174	591	4
Moran, K., Backman, J., Brinkhuis, H., Clemens, S.C., Cronin, T., Dickens, G.R., Eynaud, F., et al., 2006. The Cenozoic palaeoenvironment of the Arctic Ocean. Nature, 441(7093):601–605. https://doi.org/10.1038/nature04800	583	28
Grimes, C.B., John, B.E., Kelemen, P.B., Mazdab, F.K., Wooden, J.L., Cheadle, M.J., Hanghøj, K., and Schwartz, J.J., 2007. Trace element chemistry of zircons from oceanic crust: a method for distinguishing detrital zircon provenance. Geology, 35(7):643–646. https://doi.org/10.1130/G23603A.1	549	
Jakobbson, M., Macnab, R., Mayer, L., Anderson, R., Edwards, M., Hatzky, J., Schenke, H.W., and Johnson, P., 2008. An improved bathymetric portrayal of the Arctic Ocean: Implications for ocean modeling and geological, geophysical and oceanographic analyses. Geophysical Research Letters, 35(7):L07602. https://doi.org/10.1029/2008GL033520	516	3
Deschamps, P., Durand, N., Bard, E., Hamelin, B., Camoin, G., Thomas, A.L., Henderson, G.M., Okuno, J., and Yokoyama, Y., 2012. Ice-sheet collapse and sea-level rise at the Bølling warming 14,600 years ago. Nature, 483(7391):559–564. https://doi.org/10.1038/nature10902	462	70
Moore, G.F., Bangs, N.L., Taira, A., Kuramoto, S., Pangborn, E., and Tobin, H.J., 2007. Three-dimensional splay fault geometry and implications for tsunami generation. Science, 318(5853):1128–1131. https://doi.org/10.1126/science.1147195	395	11
Frost, B.R., and Beard, J.S., 2007. On silica activity and serpentinization. Journal of Petrology, 48(7):1351–1368. https://doi.org/10.1093/petrology/egm021	392	Not available
Pagani, M., Pedentchouk, N., Huber, M., Sluijs, A., Schouten, S., Brinkhuis, H., Sinninghe Damsté, J.S., Dickens, G.R., and Expedition 302 Scientists, 2006. Arctic hydrology during global warming at the Palaeocene/Eocene Thermal Maximum. Nature, 443(7103):671–675. https://doi.org/10.1038/nature05043	372	16

#### Altmetric scores

Altmetric scores demonstrate the more immediate impact of papers by tracking mentions of them by news outlets, blogs, Wikipedia pages, and other social media. Table 5 lists the DSDP, ODP, Integrated Ocean Drilling Program, and IODP expedition-related serials with the highest Altmetric scores as of August 2021. All of them are published in the top-ranked journals by impact factor, as shown in Figure 3. Altmetric score colors represent the following sources: red = news outlets, orange = blogs, light blue = Twitter, dark blue = Facebook, gray = Wikipedia, purple = policy source, plum = Google+, light blue = Reddit, light green = video uploader, and pink = research highlight platform. Visit the Altmetric website for more information about Altmetric scores (https://www.altmetric.com).

Table 5. Expedition-related papers with the highest Altmetric scores as of 17 August 2021. Click on the graphic to view the live Altmetric data and links to news articles and social media stories about each article.

Article	Expedition	Citations (N)	Altmetric score
Morono, Y., Ito, M., Hoshino, T., Terada, T., Hori, T., Ikehara, M., D'Hondt, S., and Inagaki, F., 2020. Aerobic microbial life persists in oxic marine sediment as old as 101.5 million years. Nature Communications, 11:3626. https://doi.org/10.1038/s41467-020-17330-1	IODP 329	29	2223
Collins, G.S., Patel, N,. Davison, T.M., Rea, A.S.P., Morgan, J.V., Gulick, S.P.S., the IODP-ICDP Expedition 364 Science Party, and Third-Party Scientists, 2020. A steeply-inclined trajectory for the Chicxulub impact. Nature Communications, 11:1480. https://doi.org/10.1038/s41467-020-15269-x	IODP 364	19	1541
Gulick, S.P.S., Bralower, T.J., Ormo, J., Hall, B., Grice, K., Schaefer, B., Lyons, S., et al., 2019. The first day of the Cenozoic. Proceedings of the National Academy of Sciences of the United States of America, 116(39):19342–19351. https://doi.org/10.1073/pnas.1909479116	IODP 364	48	1010
Morgan, J.V., Gulick, S.P.S., Bralower, T., Chenot, E., Christeson, G., Clayes, P., Cockell, C., et al., 2016. The formation of peak rings in large impact craters. Science, 354(6314):878–882. https://doi.org/10.1126/science.aah6561	IODP 364	137	990
Bova, S., Rosenthal, Y., Liu, Z., Godad, S.P., and Yan, M., 2021. Seasonal origin of the thermal maxima at the Holocene and the last interglacial. Nature, 589:548–553. https://doi.org/10.1038/s41586-020-03155-x	IODP 363	18	931
Henehan, M.J., Ridgwell, A., Thomas, E., Zhang, S., Alegret, L., Schmidt, D.N., Rae, J.W.B., et al., 2019. Rapid ocean acidification and protracted Earth system recovery followed the end-Cretaceous Chicxulub impact. Proceedings of the National Academy of Sciences of the United States of America, 116(45):22500–22504. https://doi.org/10.1073/pnas.1905989116	IODP 364	63	907
Hull, P.M., Bornemann, A., Penman, D.E., Henehan, M.J., Norris, R.D., Wilson, P.A., Blum, P., et al., 2020. On impact and volcanism across the Cretaceous-Paleogene boundary. Science, 367(6475):266–272. https://doi.org/10.1126/science.aay5055	IODP 342	72	852
Schaller, M.F., Fung, M.K., Wright, J.D., Katz, M.E., Kent, D.V., 2016. Impact ejecta at the Paleocene-Eocene boundary. Science, 354(6309):225–229. https://doi.org/10.1126/science.aaf5466	ODP 174AX and 171	46	813

Article	Expedition	Citations (N)	Altmetric score
Sager, W.W., Zhang, J., Korenaga, J., Sano, T., Koppers, A.A.P., Widdowson, M., and Mahoney, J.J., 2013. An immense shield volcano within the Shatsky Rise oceanic plateau, northwest Pacific Ocean. Nature Geoscience, 6:976–981. https://doi.org/10.1038/ngeo1934	IODP 324 with ODP 192 and 198	94	804
Alvarez, S.A., Gibbs, S.J., Bown, P.R., Kim, H., Sheward, R.M., and Ridgwell, A., 2019. Diversity decoupled from ecosystem function and resilience during mass extinction recovery. Nature, 574(7777):242–245. https://doi.org/10.1038/s41586-019-1590-8	IODP 364	24	760

## ScienceOpen indexing

ScienceOpen is a discovery platform with interactive features for scholars. IODP maintains two publication collections at ScienceOpen, and statistics from these collections can be used to demonstrate the wide-reaching impact of Program publications.

Program publications starting with Expedition 301 are indexed in the *Proceedings of the International Ocean Discovery Program* collection (https://www.scienceopen.com/collection/IODP\_Publications). The 758 Program publications included in the collection represent 1,854 authors and cite 8,887 references.

The Scientific Ocean Drilling Expedition Research Results collection contains 9,035 non-Program serials representing DSDP, ODP, Integrated Ocean Drilling Program, and IODP (https://www.scienceopen.com/collection/8b0582f6-47bf-4988-b90a-8533135e6fcc). The publications in the collection have a total Altmetric score of 64,908, represent 19,709 authors, and cite 87,456 references.

## **Customized reports**

IODP funding agencies, implementing organizations, program member offices, and individual member countries may request customized reports that may include combinations of publication data organized by

- Country or consortia;
- Program (DSDP, ODP, Integrated Ocean Drilling Program, or IODP);
- Leg, expedition, complex science program, or geographic area;
- · Publication year; or
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