

# **2007 OCEAN DRILLING CITATION REPORT**

**Covering Deep Sea Drilling Project-  
and Ocean Drilling Program-related  
American Geological Institute GeoRef Citations  
from 1969 through 2006**

**Produced by**

**IODP-USIO Publication Services  
on behalf of the Integrated Ocean Drilling Program**

September 2007



# OVERVIEW OF THE OCEAN DRILLING CITATION DATABASE

The Ocean Drilling Citation Database, which in February 2007 contained approximately 22,500 citation records related to the Deep Sea Drilling Project (DSDP), Ocean Drilling Program (ODP), and Integrated Ocean Drilling Program (IODP), is produced by the American Geological Institute (AGI) in collaboration with the IODP U.S. Implementing Organization (USIO). Compilation of this database began in 1999, and the database has been online since August 2002. Citation records related to IODP have been included in the database since 2006.

The Ocean Drilling Citation Database is a subset of AGI's GeoRef database. To generate the GeoRef database, AGI indexes and records citation data from approximately 3,500 foreign and domestic publications (called "serials" in this report); books, reports, serial conference proceedings, monographs, maps, and abstracts published in serial publications but not presented at meetings or conferences (called "abstracts and meetings" in this report); and maps, videos, books, monographs, and theses (called "miscellaneous" in this report). In addition, AGI obtains citation information from international data-exchange partners in Australia, Canada, China, Finland, Germany, Hungary, Italy, the Netherlands, New Zealand, Poland, Russia, Spain, and the United Kingdom. AGI also has arrangements to acquire metadata with many publishers, including Elsevier, the American Association for the Advancement of Science, Copernicus, Wiley, and most of the Geoscience World publishers. There is no guarantee that all publication venues for Program research are included, but scientific publications throughout the world are represented. AGI creates the Ocean Drilling Citation Database by using a series of keywords to extract citation records related to DSDP, ODP, and IODP research from the GeoRef database. The Ocean Drilling Citation Database resides on the AGI server (<http://odp.georef.org/dbtw-wpd/qbeodp.htm>) and is updated weekly from the GeoRef database. Users can also access the database via the USIO Web site (<http://iodp.tamu.edu/publications/citations/database.html>) and may download data into common bibliographic software.

## ANNUAL OCEAN DRILLING CITATION REPORT

### INTRODUCTION

Member countries and funding agencies have long been interested in how Program-related research is disseminated into the scientific community through publications, and a review of the records in the Ocean Drilling Citation Database can provide this information. Beginning in 1999, the Publication Services Department at ODP and, since 2004, the USIO on behalf of IODP have produced annual studies of the Ocean Drilling Citation Database. The results of these studies have been included in panel reports and used to track Program publication trends and provide individual reports to member countries.

The USIO receives a CD-ROM copy of the citation database annually from AGI and uses the data on this CD-ROM to generate citation reports and provide statistics for the Program and affiliate organizations that request citation data. The annual CD-ROM provides a snapshot of the database at a specific point in time each year, which allows year-to-year comparisons to be made. A time lag exists between the dates new papers are published and the date a record of the paper is entered into the GeoRef database, depending on the source from which AGI acquires its information.

Reports that document statistics by country are based on author affiliation (institutions and countries of contributing authors). Approximately 9% of the records in the database have no affiliation listed because, prior to 1975, AGI did not record affiliation information. In addition, many records lack such information simply because some publication venues do not require it. The number of records in the database without country affiliation information remains relatively constant from year to year because this information is now required by most publishers and AGI.

## THE 2007 STUDY

The CD-ROM produced in February 2007 for the 2007 Ocean Drilling Citation Report contains 22,431 citation records, which can be divided into Program (38%) and nonprogram (62%) categories. These percentages have remained fairly consistent throughout each annual study since 1999 (**Fig. 1**). Because of the low number of IODP-related citation records (<75) on the 2007 CD-ROM, IODP publications were not analyzed in the 2007 study. Program citations for the 2007 study include publications produced and published directly by DSDP or ODP. These Program publications include but are not limited to the *Initial Reports of the Deep Sea Drilling Project*, *Proceedings of the Ocean Drilling Program*, and the report and technical note series from each Program. The *JOIDES Journal* publications are not included. Nonprogram records for the 2007 study include DSDP- and ODP-related citations for serials, abstracts and meetings, and miscellaneous (books, maps, videos, theses, etc.). **Figure 2** shows a comparison between the number of records for Program publications and each category of nonprogram publications from 1969 through the end of 2006. **Figure 3** shows a year-by-year comparison between the number of citations for Program publications and nonprogram serial publications.

The focus of much of the annual study is on nonprogram publications, with an emphasis on peer-reviewed serial publications. Of special interest are nonprogram peer-reviewed serial publications produced by authors affiliated with Program member countries. Authors from approximately 90 countries have contributed to DSDP and ODP nonprogram publications in all citation record categories (abstracts and meetings, serial, and miscellaneous) (**Table 1**). Because scientists may be affiliated with more than one institution or country over time, reports are based on the country affiliation of the first author at the time of publication. Although countries such as the Soviet Union (USSR) and Czechoslovakia have divided into new geographic and governmental entities, the number of records attributed to each is still recorded under USSR and Czechoslovakia. This reflects an effort to report these data in a manner that is historically consistent rather than in a manner that reflects current political boundaries. The footnote to **Table 1** denotes the current national affiliation of first authors from specific segments of these two reorganized countries.

The 2007 CD-ROM includes records of 11,540 nonprogram publications (~83%) whose first author was affiliated with a DSDP or ODP Program member country. Authors from countries that were members of ODP at the conclusion of ODP drilling in September 2003 account for 11,276 of these publications (see **Table 2** for a breakdown by country). Approximately 56% of these publications were first-authored by authors from the United States. The member countries that were the top ten producers of nonprogram publications from 1969 through 2006 are featured in **Figure 4**.

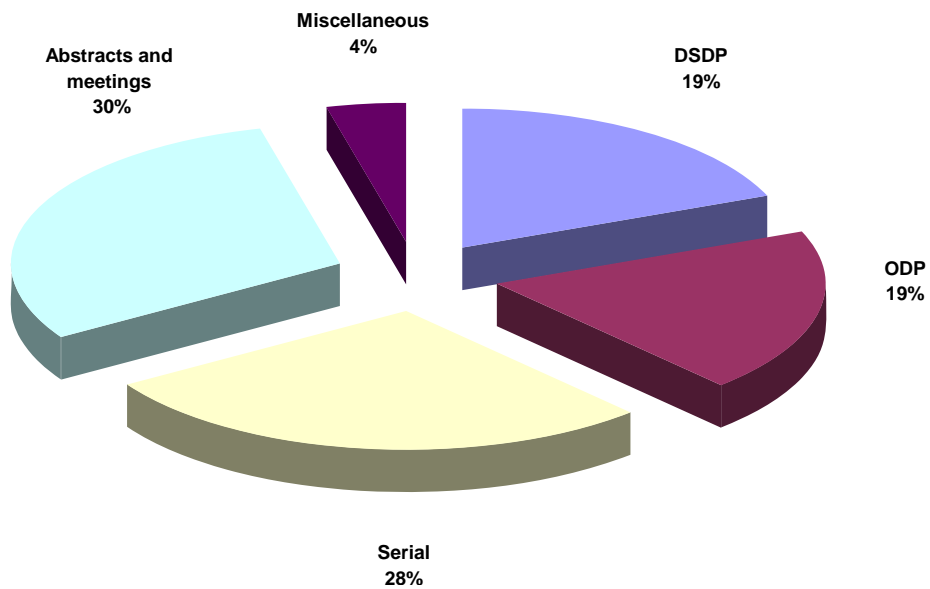
DSDP- and ODP-related research has been published in 926 nonprogram publications. Although many of these publications consist of abstracts or publications that have arisen from professional meetings, a significant number of peer-reviewed journals have published 60 or more DSDP- or ODP-related scientific papers. These journals and the number of Program-related papers published in them are found in **Figure 5**. The figure footnote lists an additional 20 serial publications that have published 30 or more Program-related publications. For the peer-reviewed journals that have published 60 or more DSDP- or ODP-related publications, **Figure 6** shows the annual number of scientific papers per serial publication.

Program publication productivity has generally been tracked on a year-by-year basis rather than the leg-by-leg scheme. However, the Program has also reviewed publication data by leg to track whether beginning with Leg 160, when scientists were given the option of publishing their postcruise research in peer-reviewed journals rather than in the *ODP Proceedings*, the ratio of publications in Program versus nonprogram venues has changed. **Figure 7** presents the number of papers published in the *ODP Proceedings Scientific Results* volumes compared to the number of papers that have appeared in the peer-reviewed serial publications. Although many scientists have elected to publish their research results in peer-reviewed journals, the majority have elected to publish in the *ODP Proceedings Scientific Results* volumes. What appears to be a progressive drop in the number of ODP publications per leg since the beginning of the Program is attributable to three primary factors: research related to more recent ODP legs is ongoing, the final volumes of the *ODP Proceedings Scientific Results* series were not completed until September 2007, and there is a lag time from publication of research papers to entry of those records in the Ocean Drilling Database.

## **ANNUAL UPDATES**

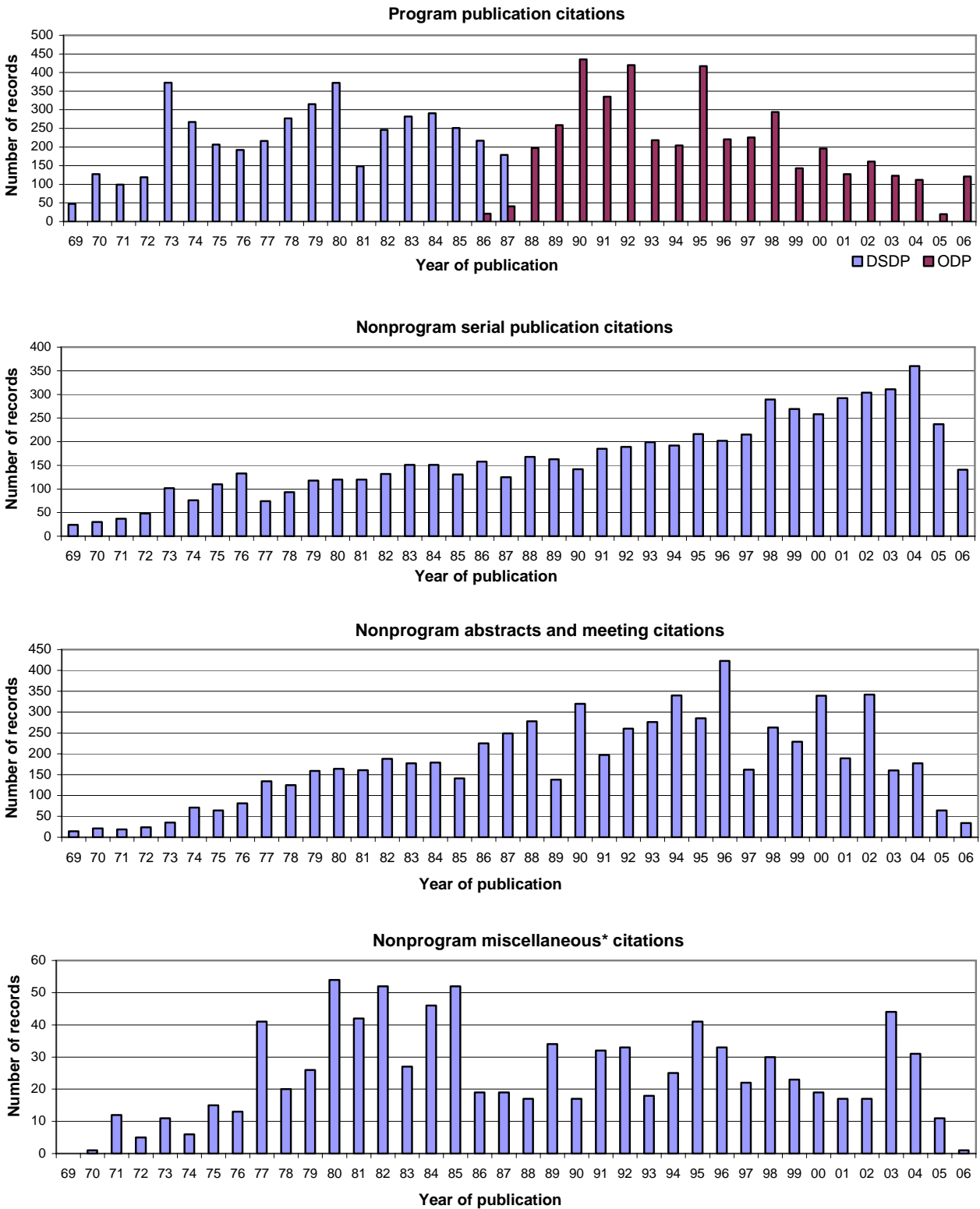
The Ocean Drilling Citation Report is updated annually based on the data that exist in the AGI Ocean Drilling Citation Database as of February of each calendar year and made available online by October of that same year. IODP funding agencies, implementing organizations, program management offices, or individual member countries may request customized reports (contact [CitationStats@iodp.tamu.edu](mailto:CitationStats@iodp.tamu.edu)).

**Figure 1. Percentage of Program versus nonprogram records in the Ocean Drilling Citation Database.**



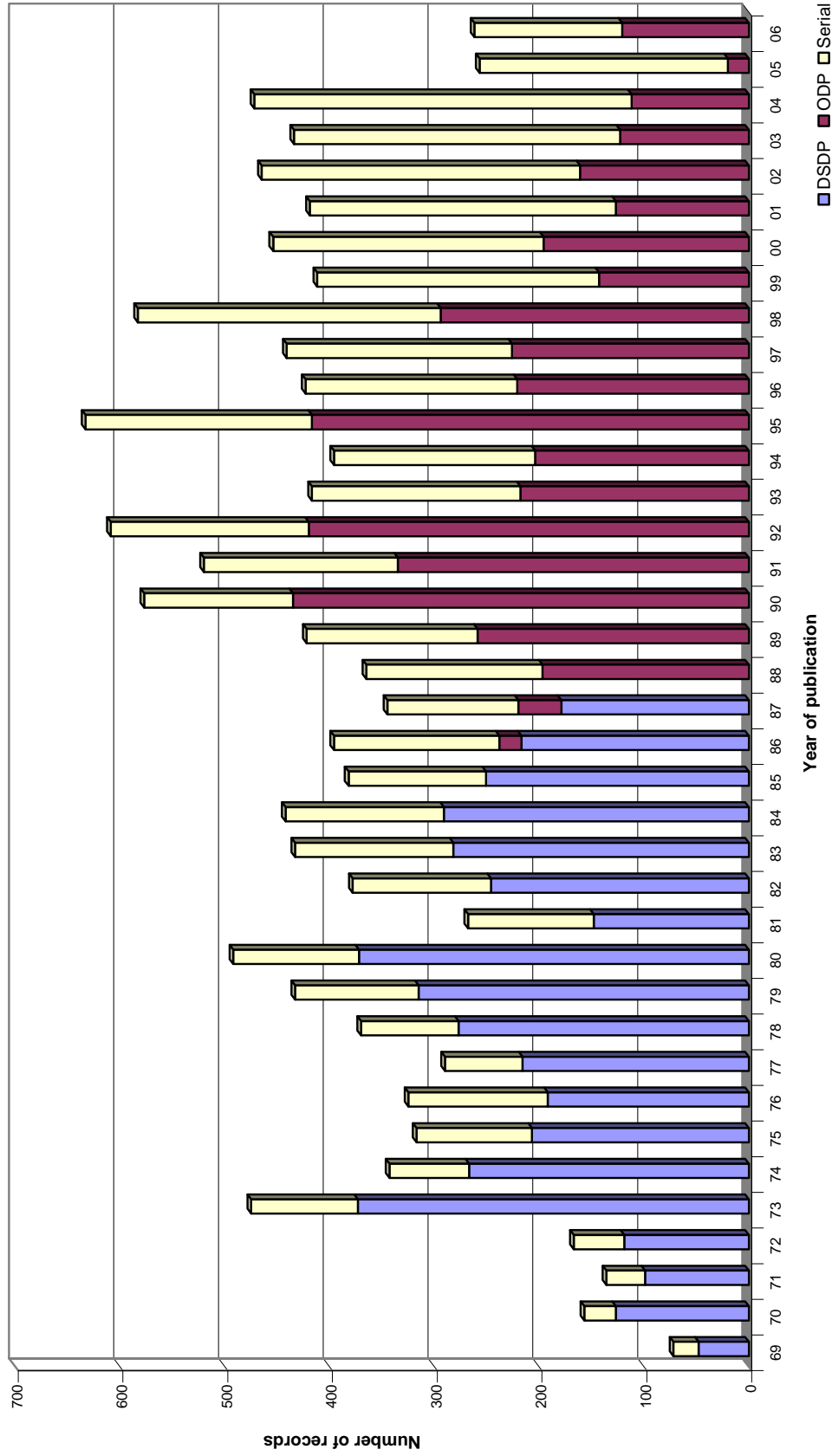
Notes: Citation records for abstracts/meetings come from books, reports, serial conference proceedings, monographs, or maps. They also include abstracts published in serial publications but not presented at meetings or conferences (e.g., *Abstracts with Programs—Geological Society of America*; *Eos*, *Transactions of the American Geophysical Union*; etc.). Serial publication citation records are drawn from any periodically produced analytic or monographic journal or report, especially those that are peer-reviewed (e.g., *Nature*, *Science*, or *Journal of Geophysical Research*) but may also include reports from universities, organizations, or government entities (e.g., *Open-File Reports—U.S. Geological Survey*). Miscellaneous citation records include all other maps, videos, books, monographs, and theses.

**Figure 2. Breakdown of Ocean Drilling Citation Database records.**



Notes: \*Miscellaneous citations include maps, videos, books, monographs, and theses. Note difference in scale for miscellaneous citations.

Figure 3. Number of Program versus nonprogram serial citations per year.





**Table 1. Number of contributions to nonprogram publications by authors from each country represented in the database.**

Country	Number of papers contributed	Number first-authored	Country	Number of papers contributed	Number first-authored	Country	Number of papers contributed	Number first-authored
Argentina	28	23	Hungary	6	6	Philippines	8	3
Australia	455	242	Iceland	8	3	Poland	15	7
<b>Austria</b>	<b>26</b>	<b>12</b>	India	128	119	<b>Portugal</b>	<b>35</b>	<b>11</b>
Barbados	2	1	Indonesia	5	3	Puerto Rico	7	3
<b>Belgium</b>	<b>79</b>	<b>24</b>	Iran	2	1	Romania	3	0
Botswana	1	1	<b>Ireland</b>	<b>9</b>	<b>3</b>	Saudia Arabia	1	0
Brazil	30	19	Israel	26	19	Senegal	1	0
Brunei	4	0	<b>Italy</b>	<b>445</b>	<b>219</b>	Seychelles	1	1
Bulgaria	2	2	Jamaica	6	2	Singapore	0	0
<b>Canada</b>	<b>892</b>	<b>534</b>	<b>Japan</b>	<b>798</b>	<b>509</b>	Solomon Islands	2	1
Chile	10	2	Lebanon	1	0	South Africa	23	11
Taiwan	37	26	Libya	0	0	<b>South Korea</b>	<b>35</b>	<b>22</b>
Colombia	9	6	Malaysia	1	1	<b>Spain</b>	<b>126</b>	<b>61</b>
Costa Rica	3	1	Malta	2	2	Sri Lanka	1	0
Cuba	6	0	Mexico	38	17	<b>Sweden</b>	<b>182</b>	<b>100</b>
Cyprus	6	0	Morocco	4	2	<b>Switzerland</b>	<b>265</b>	<b>134</b>
Czechoslovakia*	9	2	Namibia	1	0	Tanzania	5	3
<b>Denmark</b>	<b>109</b>	<b>49</b>	<b>Netherlands</b>	<b>275</b>	<b>138</b>	Thailand	2	1
Dominican Republic	1	0	New Caledonia	4	2	Tonga	2	0
Ecuador	1	0	New Zealand	160	114	Trinidad/Tobago	2	0
Egypt	3	2	Nicaragua	3	0	Tunisia	4	3
Ethiopia	2	0	Nigeria	4	3	Turkey	12	5
Fiji	1	0	<b>Norway</b>	<b>251</b>	<b>136</b>	Venezuela	2	2
<b>Finland</b>	<b>18</b>	<b>12</b>	Oman	3	1	Vietnam	1	0
<b>France</b>	<b>1176</b>	<b>694</b>	Pakistan	3	0	<b>United Kingdom</b>	<b>1627</b>	<b>924</b>
French Polynesia	2	0	Panama	2	1	United Arab Emirates	3	2
<b>Germany</b>	<b>1550</b>	<b>1024</b>	Papua New Guinea	4	0	<b>USA</b>	<b>7441</b>	<b>6306</b>
Ghana	0	0	<b>P. R. China**</b>	<b>170</b>	<b>105</b>	USSR †	294	240
Greece	9	7	Peru	2	0	Yemen	1	0

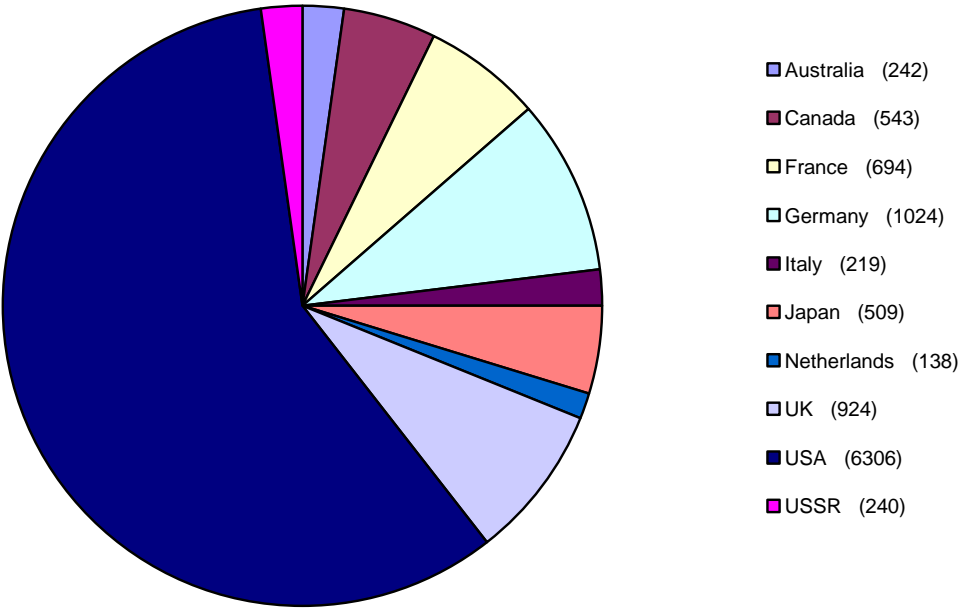
Notes: These figures only account for citations for which author affiliation data was available. Numbers include serial publications, abstracts/meeting publications, and miscellaneous publications (maps, videos, books, monographs, and theses). Data in bold print represent IODP member countries as of February 2007. \*Czechoslovakia records include contributions by authors affiliated with Czechoslovakia, the Czech Republic, and the Slovak Republic. \*\*All Hong Kong records are included in P.R. China. †USSR records include contributions by authors affiliated with the USSR, the Russian Federation, Estonia, Ukraine, and Belarus.

**Table 2. Number of contributions to nonprogram publications first-authored by authors affiliated with ODP member countries.**

Country	Serial publication	Abstract/meeting publication	Miscellaneous	Total
Australia	98	141	3	242
Belgium	12	12	0	24
Canada	202	328	4	534
Denmark	26	23	0	49
Finland	2	10	0	12
France	356	322	16	694
Germany	443	557	24	1024
Iceland	3	0	0	3
Ireland	2	1	0	3
Italy	109	109	1	219
Japan	299	181	29	509
Netherlands	93	44	1	138
Norway	80	55	1	136
People's Republic of China	84	21	0	105
Portugal	2	7	2	11
South Korea	16	6	0	22
Spain	38	23	0	61
Sweden	59	39	2	100
Switzerland	62	68	4	134
Taiwan	19	7	0	26
United Kingdom	505	399	20	924
USA	2653	3520	133	6306

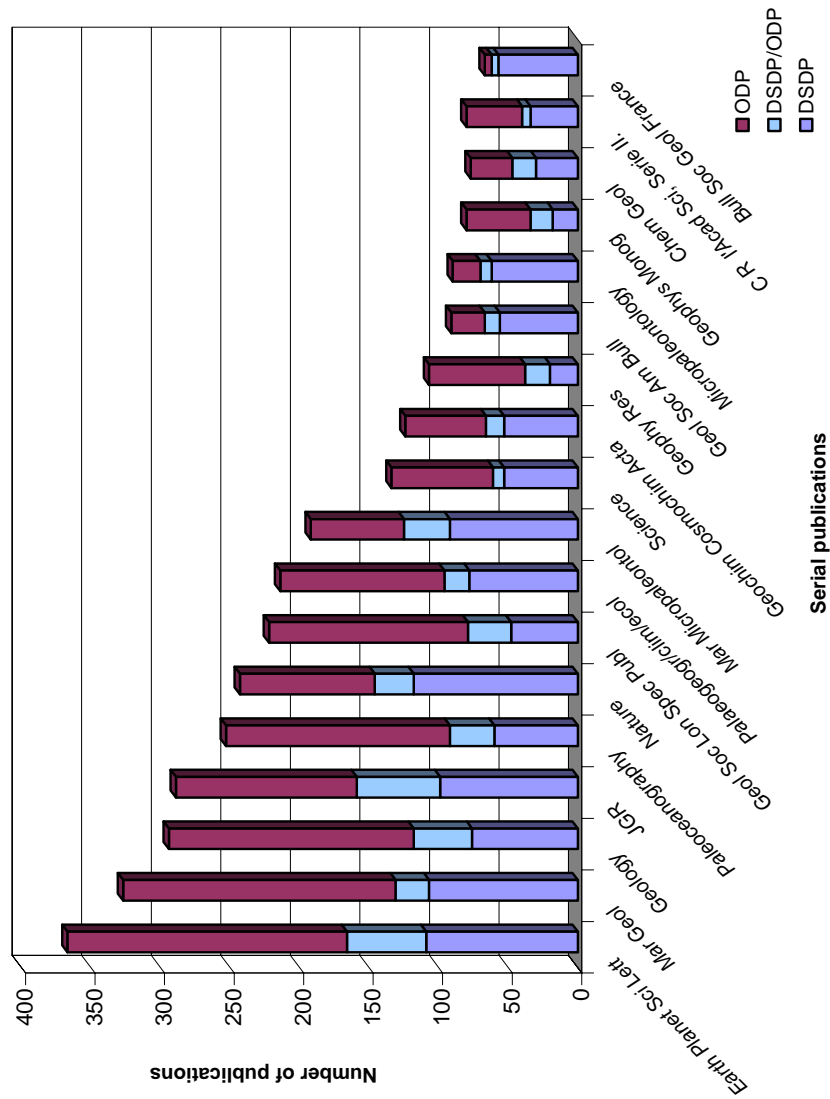
Note: Data represents member countries at the conclusion of ODP drilling in September 2003. Miscellaneous citations include maps, videos, books, monographs, and theses.

**Figure 4. Number of contributions to nonprogram publications by the top ten Program member country producers from 1969 through 2006.**



Note: Data is based on member country affiliation of first author.

**Figure 5. Serial publications with 60 or more DSDP- or ODP-related papers.**



Notes: The chart does not include the following serials that had more than 60 DSDP- or ODP-related papers: *Geotimes* = 200; *Eos, Transactions of the American Geophysical Union* = 148; *JOIDES Journal* = 111. The following serials had more than 30 DSDP- or ODP-related publications: *Organic Geochemistry* = 58; *AAPG Memoir* = 57; *Special Paper—GSA* = 56; *Geochemistry, Geophysics, Geosystems (G3)* = 52; *Preliminary Report—Ocean Research Institute, University of Tokyo* = 52; *Journal of Foraminiferal Research* = 50; *Sedimentary Geology* = 48; *Special Publication—SEPM* = 47; *Maurice Ewing Series* = 46; *Tectonophysics* = 41; *Canadian Journal of Earth Sciences* = 39; *Geophysical Journal International* = 37; *Geologische Rundschau* = 36; *Open-File Report—U.S. Geological Survey* = 35; *Oceanology* = 35; *Akademiya Nauk SSSR, Dagestanskii Filial, Institut Geologii, [Trudy]* = 35; *AAPG Bulletin* = 34; *Marine and Petroleum Geology* = 33; *Journal of Paleontology* = 32; *Global and Planetary Change* = 32.

**Figure 6. Annual number of scientific papers per serial publication with more than 60 DSDP- or ODP-related publications.**

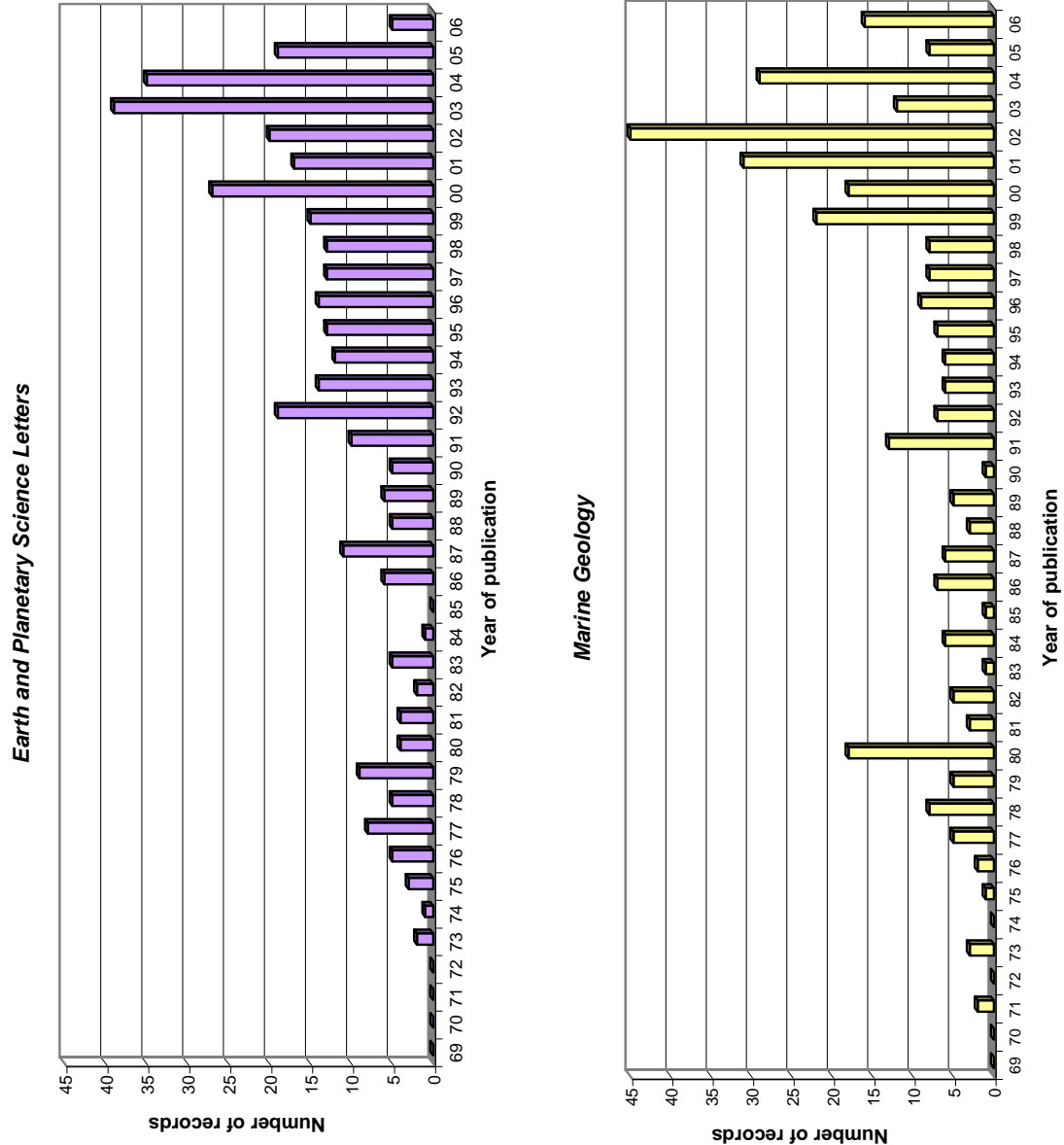


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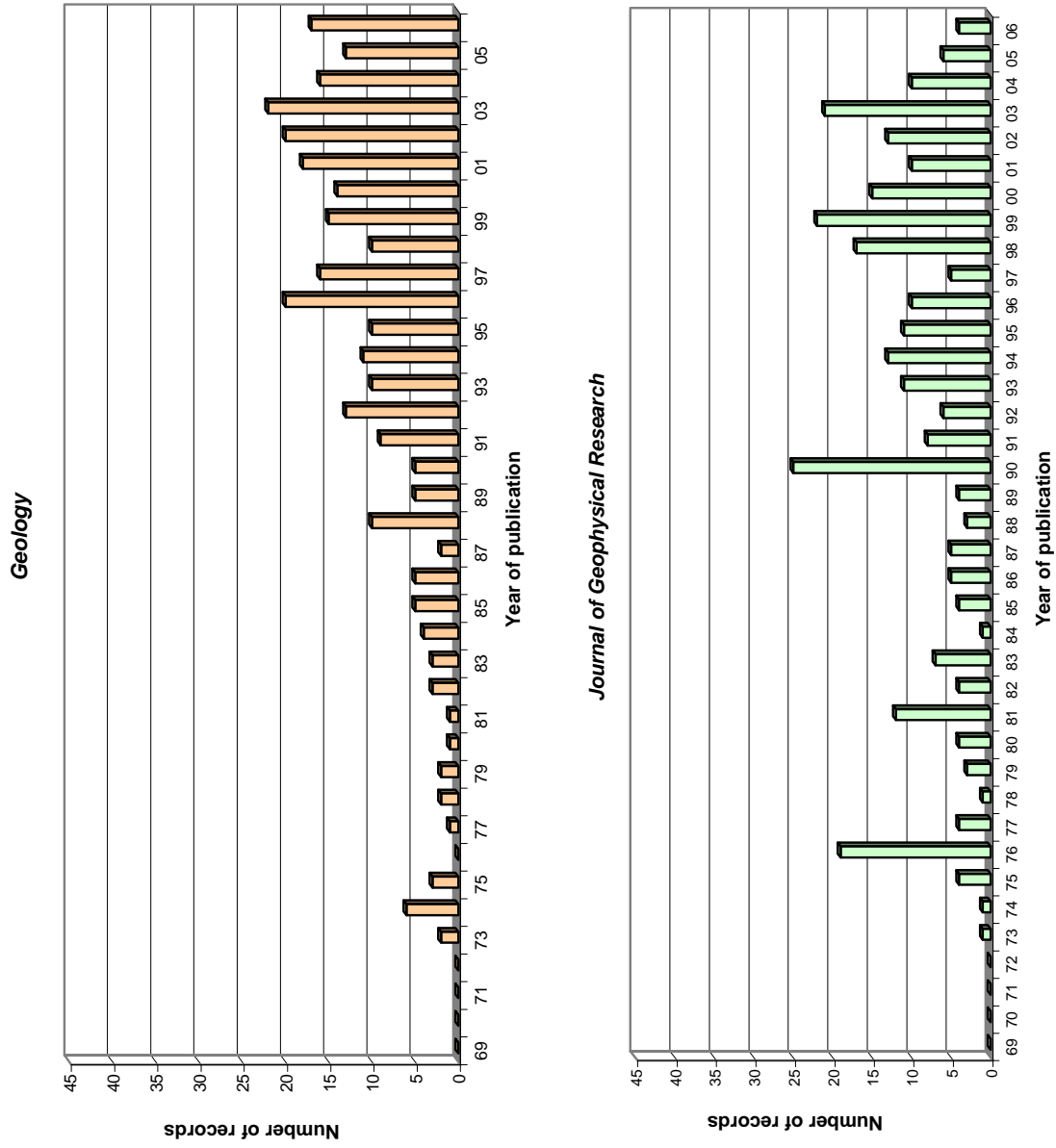


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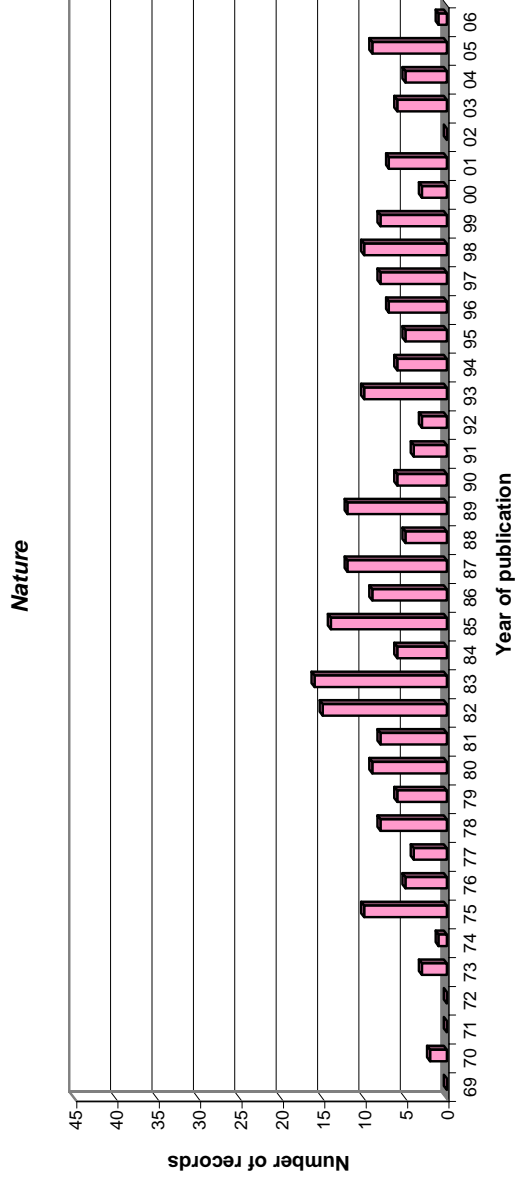
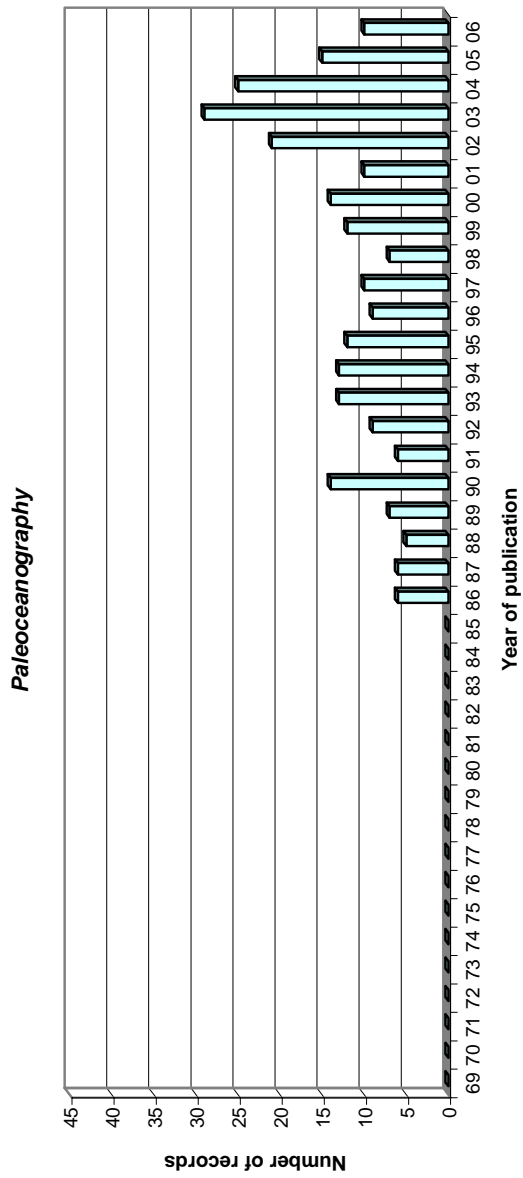


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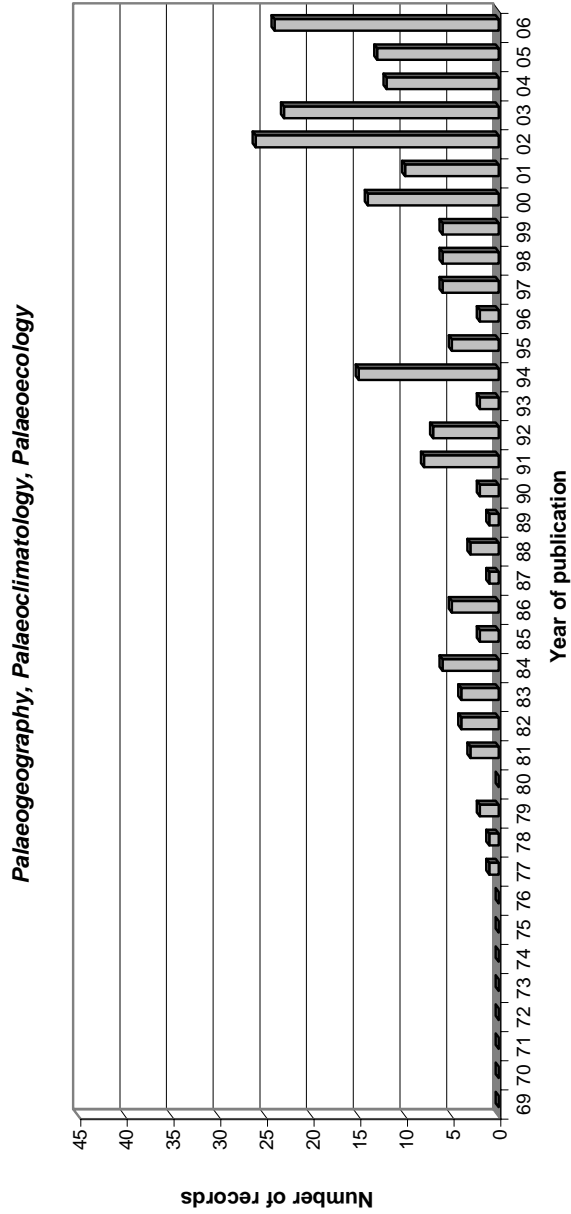
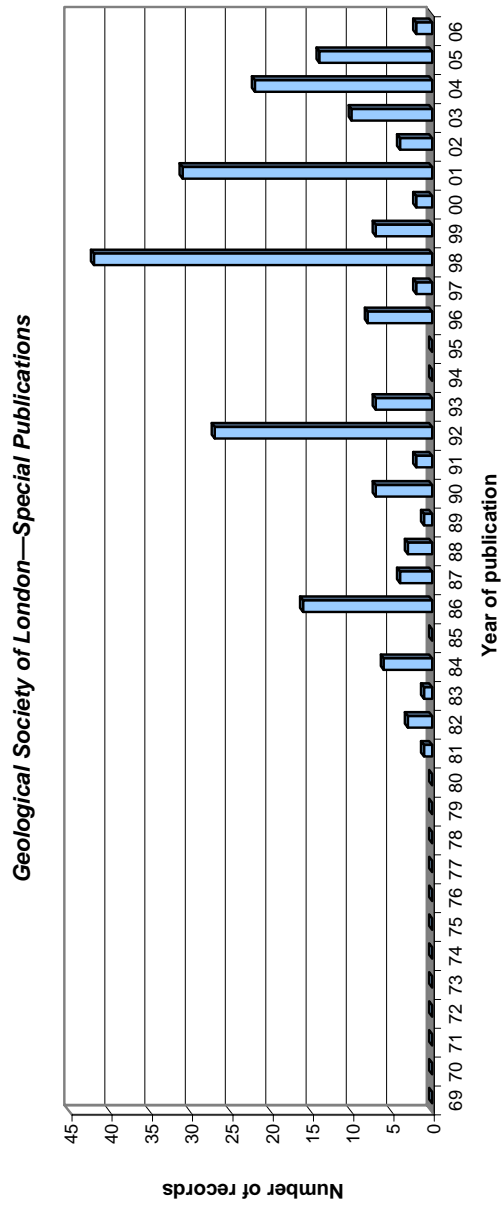




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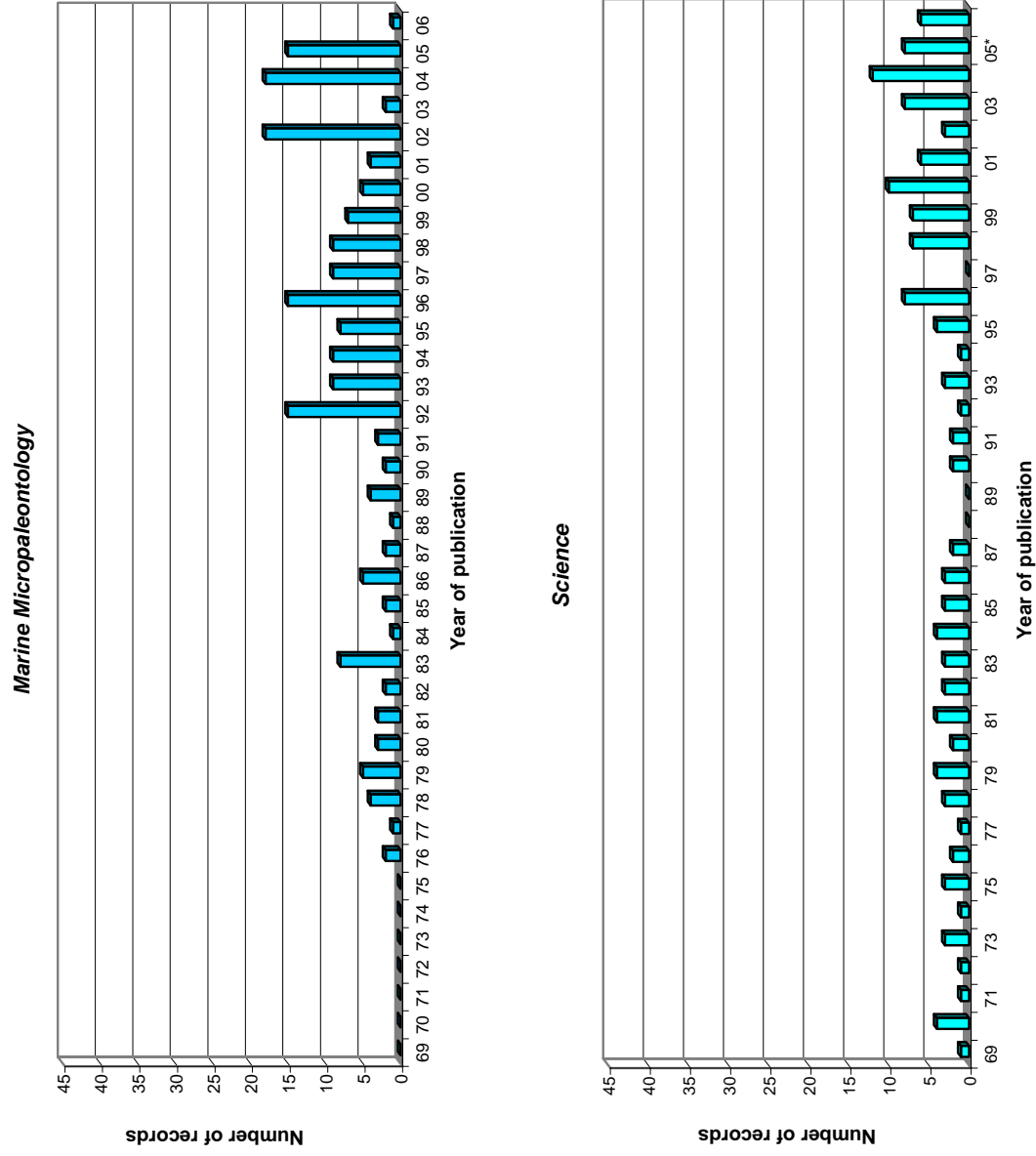


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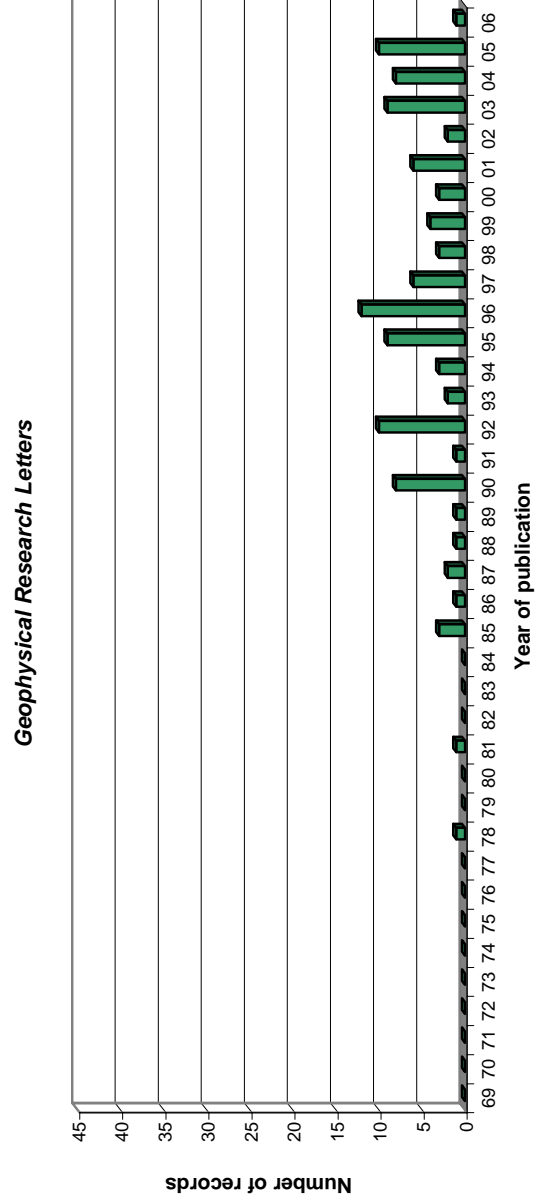
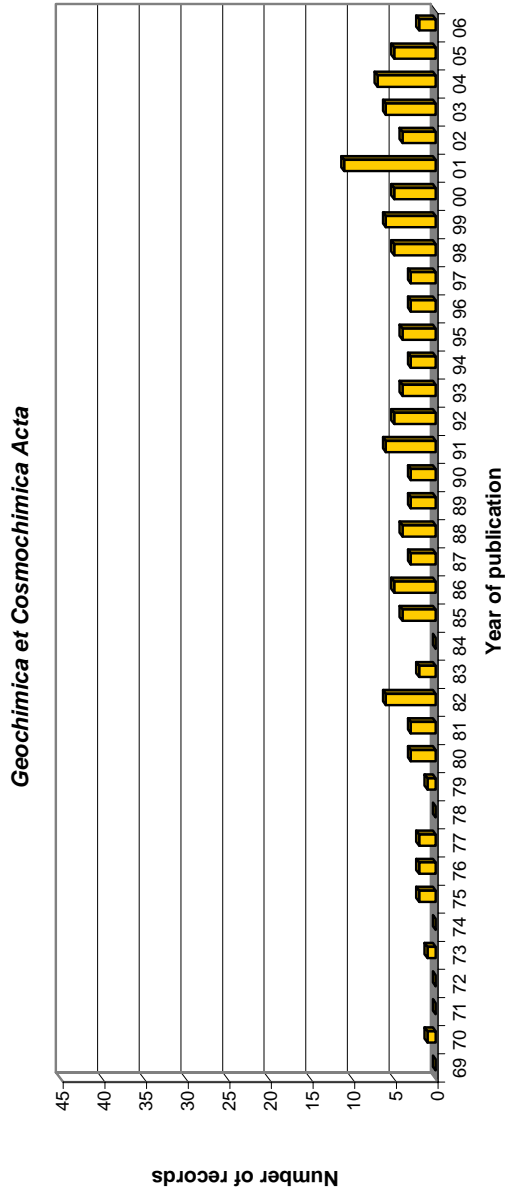


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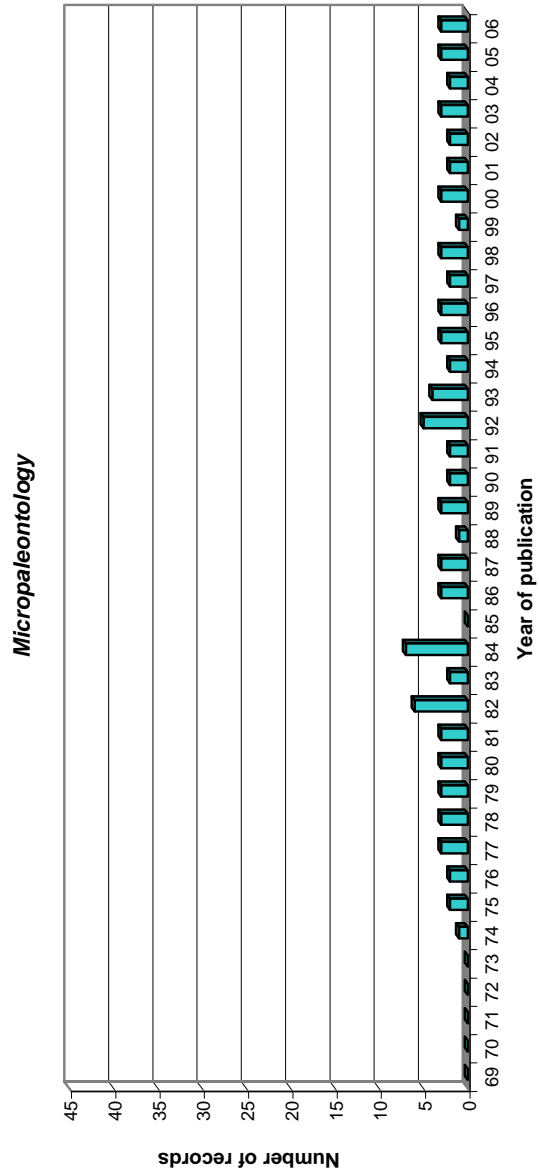
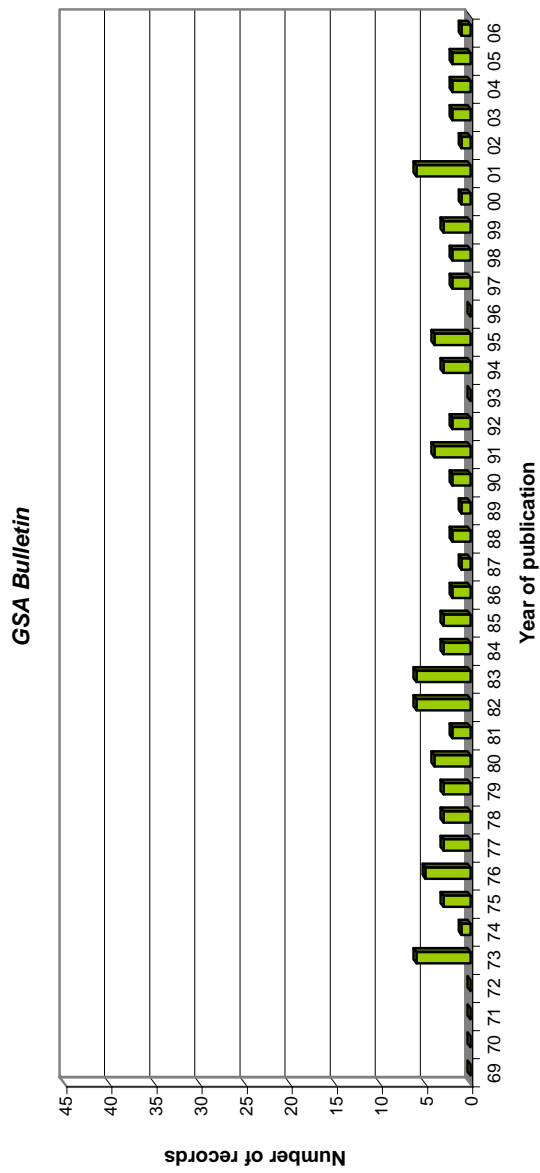


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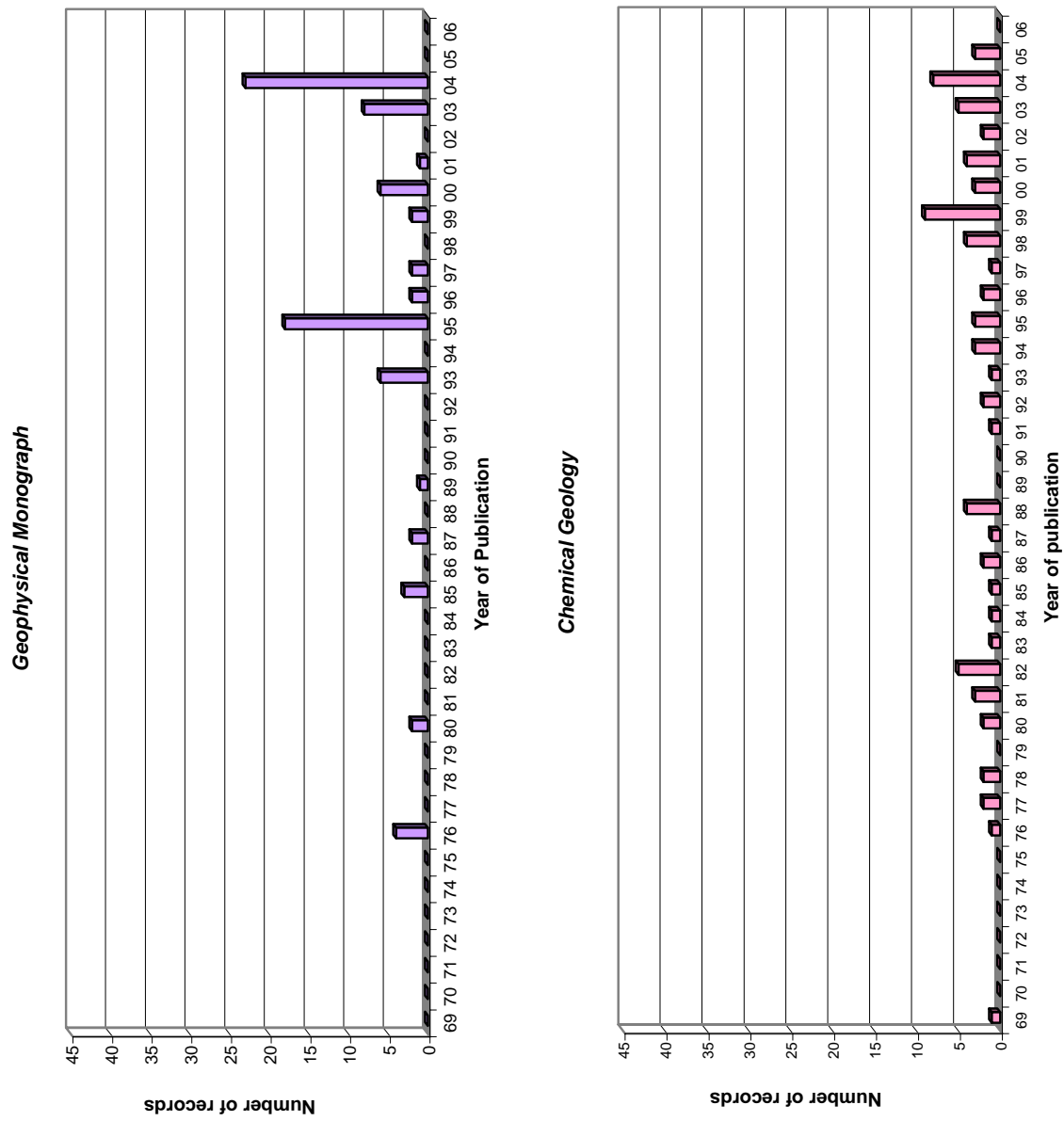
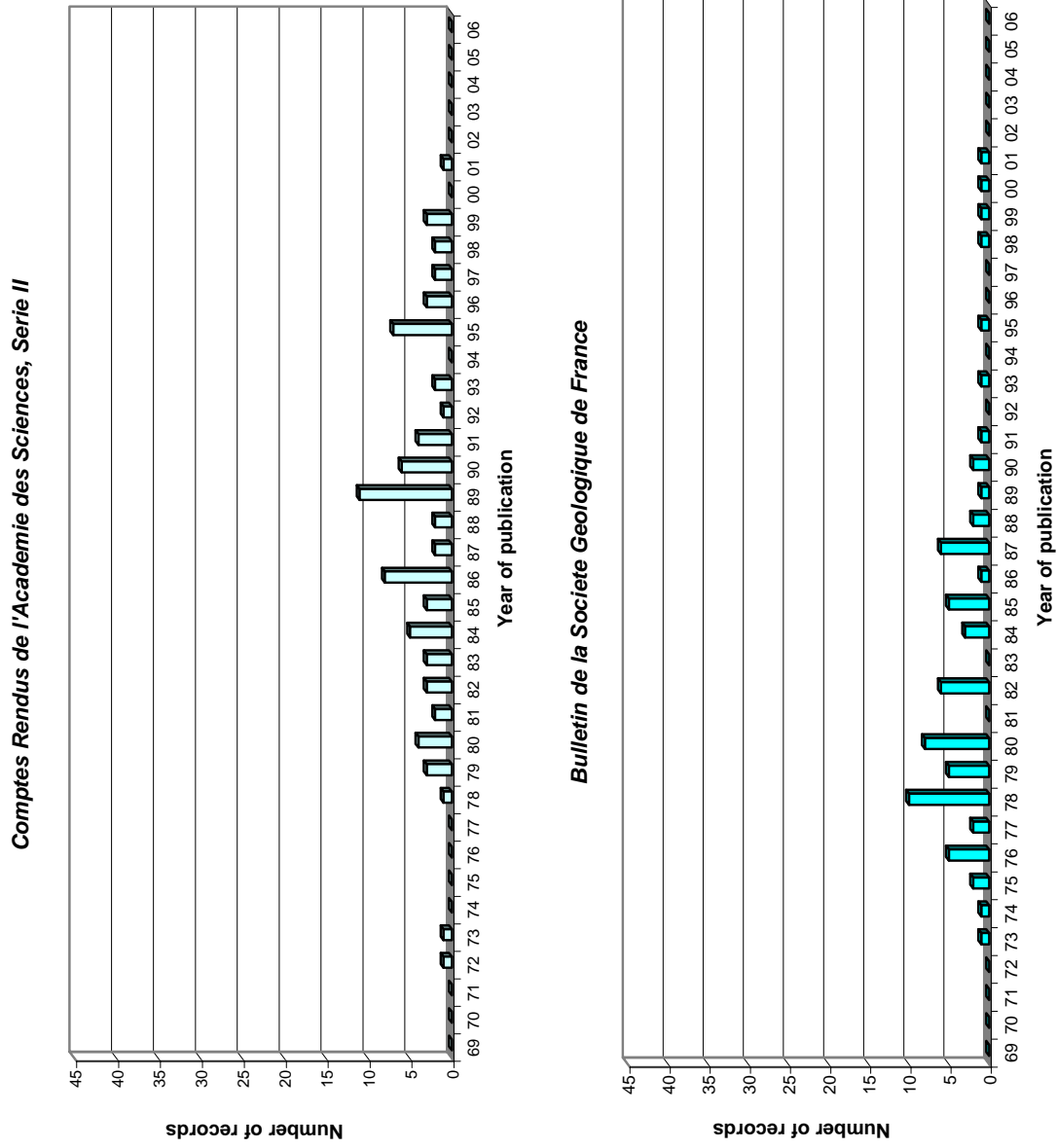


Figure 6 (continued).



**Figure 7. Number of papers published in the ODP *Proceedings Scientific Results* volumes versus number of papers published in nonprogram serial publications for each ODP leg.**

