

# A SURVEY OF SCI PUBLICATIONS BY ASTRONOMERS IN TAIWAN

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Not quite out of curiosity, we did a survey of the SCI database (<http://apps.isiknowledge.com/>) to get some statistics of publication record by astronomers in Taiwan.

Search in the SCI database:

journal source titles = *astro\* or ica\* or new astronomy or monthly notices \**

address = *taiwan*

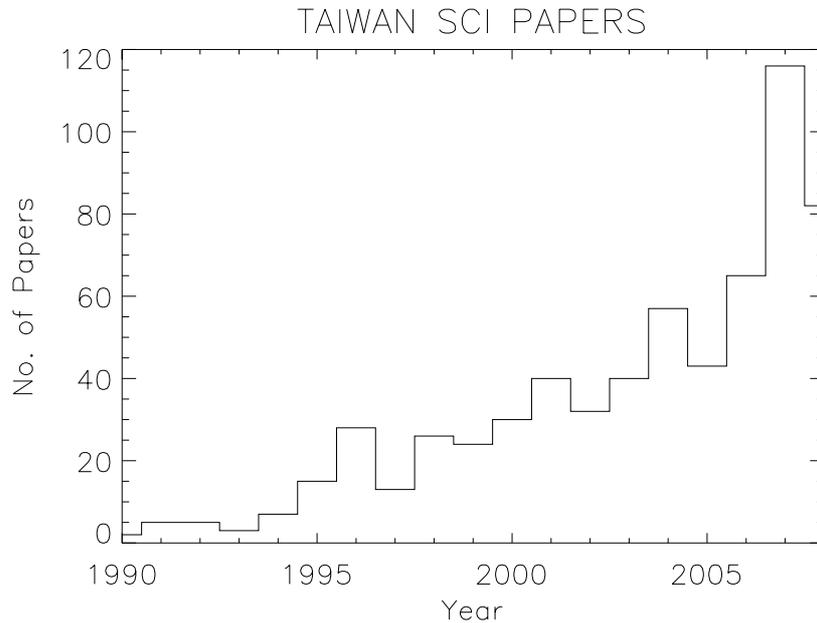
publication year = *1999-2008*

→ Total hits: 529

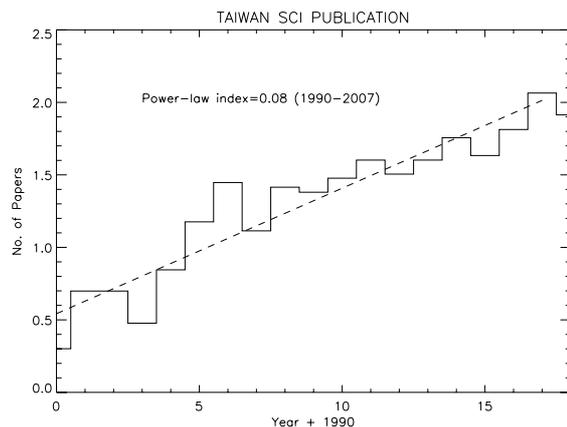
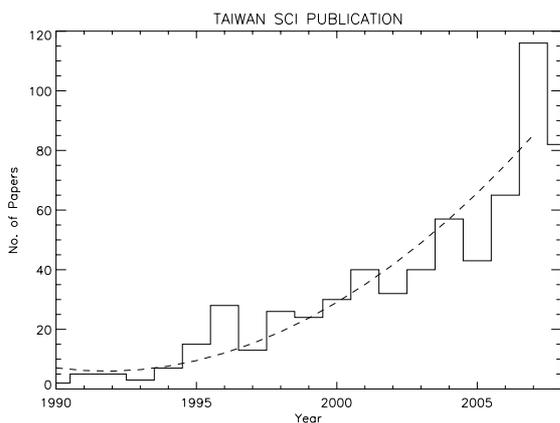
Note that this includes only SCI-E (expanded) journals, and searched for all journals (1) with names starting with ‘astro’, (2) *Icarus*, (3) *New Astronomy*, and (4) *MNRAS*, but not instrument papers or those in, for example, *JGR* or *Physics Reviews*. *Nature*, *Science*, and *ARAA* are not included in the statistics. SCI allows only up to 10 years of analysis, so I later included earlier years to come up with the result, summarized in the following table. The first two columns are the year of publication and number of papers. Each paper is counted only once. The next four columns list the major institutes. NTNU no doubt will soon make its presence. Here each paper may be counted more than once, depending on the affiliations. AS refers to Academia Sinica, with no distinction among individual divisions.

YEAR	NO	AS	NCU	NTHU	NTU
1990	2		2		
1991	5	1	2	2	
1992	5	1	3	1	
1993	3		3		
1994	7		7		
1995	15	5	9	1	
1996	28	12	12	2	
1997	13	6	5	2	
1998	26	13	10	2	
1999	24	18	3	4	2
2000	30	20	6	2	6
2001	40	28	6	4	5
2002	32	21	8	3	5
2003	40	20	10	5	3
2004	57	38	17	4	3
2005	43	27	14	6	0
2006	65	34	15	13	8
2007	116	60	27	26	11
2008/10	82	57	12	12	8

The same is plotted in the figure below.



As one can see, there is really a steep increase over the last nearly two decades, and then a leap in 2007. The statistics for 2008 is completed only up to September/October. At NTHU, it is probably because of a jump in number of new hires, whereas for everyone else, my guess is that it may have something to do with the CosPA and other initiatives. For those hard-core theoreticians, the following figures show the same data as in the figure above, but fitted from 1990 to 2007, with (*left*) a second-order polynomial ( $0.34 \text{ year}^2$ ), and (*right*) a power law ( $\text{year}^{0.08}$ ).



In conclusion, our community fairs reasonably well in terms of publication, particularly in the last decade. This must largely attribute to the surged number of high-quality researchers joining the community, and the generous financial support from various funding agents. We published overwhelmingly in prestigious and highly cited journals. ASIAA remains leading in publication power, trailing competitively by NCU and NTHU. The US is our most favorable foreign partner, especially the CfA, followed by China.

## APPENDIX

In the following, we quote directly what the SCI analyzed, based on a search set during 1998 to 2007. Only the first 10 entries are listed.

### Publication Year Record Count % of 475

2007	116	24.4211%
2006	65	13.6842%
2004	57	12.0000%
2005	43	9.0526%
2001	40	8.4211%
2003	40	8.4211%
2002	32	6.7368%
2000	30	6.3158%
1998	28	5.8947%
1999	24	5.0526%

### Institution Name Record Count % of 475

ACAD SINICA	279	58.7368%
NATL CENT UNIV	116	24.4211%
HARVARD SMITHSONIAN CTR ASTROPHYS	89	18.7368%
NATL TSING HUA UNIV	69	14.5263%
CHINESE ACAD SCI	51	10.7368%
NATL TAIWAN UNIV	43	9.0526%
UNIV CALIF BERKELEY	38	8.0000%
CALTECH	34	7.1579%
UNIV MARYLAND	23	4.8421%
UNIV ARIZONA	21	4.4211%

### Country/Territory Record Count % of 475

TAIWAN	475	100.0000%
USA	274	57.6842%
PEOPLES R CHINA	80	16.8421%
JAPAN	69	14.5263%
GERMANY	54	11.3684%
FRANCE	51	10.7368%
CANADA	41	8.6316%
SPAIN	40	8.4211%
ENGLAND	33	6.9474%
SOUTH KOREA	30	6.3158%

### Source Title Record Count % of 475

ASTROPHYSICAL JOURNAL 285 60.0000%  
ASTRONOMY & ASTROPHYSICS 58 12.2105%  
ASTRONOMICAL JOURNAL 34 7.1579%  
MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY 29 6.1053%  
ASTRONOMY AND ASTROPHYSICS 12 2.5263%  
ASTROPHYSICAL JOURNAL SUPPLEMENT SERIES 12 2.5263%  
ASTROPHYSICS AND SPACE SCIENCE 10 2.1053%  
ASTROPARTICLE PHYSICS 8 1.6842%  
ASTRONOMISCHE NACHRICHTEN 6 1.2632%  
ICARUS 5 1.0526%  
NEW ASTRONOMY 5 1.0526%