

CITATION OF THE SERBIAN ASTRONOMICAL JOURNAL AND ITS COMPARISON WITH OTHER JOURNALS IN ASTRONOMY AND ASTROPHYSICS

B. Arbutina

Astronomical Observatory, Volgina 7, 11160 Belgrade 74, Serbia

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SUMMARY: This editorial provides the results of an independent research on the Serbian Astronomical Journal citation. We have also collected information on a number of astronomical and astronomy related journals that may be useful to authors when preparing their papers for our journal, as well as for all other researchers in the field.

Key words. Publications, bibliography – Sociology of Astronomy – Astronomical databases: miscellaneous.

1. INTRODUCTION

This editorial is meant to present the results of an independent research on the Serbian Astronomical Journal citation and to make comparison of our journal to some other journals in astronomy and astrophysics. We have also collected information on many astronomical and astronomy related journals that may be useful to authors when preparing their papers for our journal, as well as for all other researchers in the field.

The main sources that have been used in preparing this editorial are Thomson Institute for Scientific Information (ISI) Science Citation Index (SCI) database, Astrophysics Data System (ADS) at Harvard, Serbian Astronomical Journal archives, and to a less extent Elsevier's database Scopus and SCIndeks (Serbian Citation Index).

Table 1 gives a list of journals in astronomy, astrophysics, geophysics and space sciences that are covered by ISI and included in the ISI Journal Citation Report (JCR) for the year 2006. Journal's impact factor and other criteria of bibliometric qual-

ity were omitted since they are considered as confidential information and are available through the ISI products. In Table 2 there is a list of leading multidisciplinary, physical and astronomical journals covered by ISI, that are related to astronomy or may include some astronomical content.

Table 3 gives a list of selected journals in astronomy and astrophysics presently not covered by ISI.¹ The list is far from complete and includes only the titles that the author has encountered while searching through the available databases and the Internet. The journals selected are active and generally prominent, they are either journals with long tradition or new journals that show progress in the field, and/or are journals interesting in the context of the geographical distribution of astronomical publications.

2. CITATION

2.1. Serbian Astronomical Journal

First, we present the results of a research on the Serbian Astronomical Journal (SAJ) citation.

¹Tables 1, 2 and 3 are available in electronic form only at: <http://saj.matf.bg.ac.yu/174/pdf/editorial/tables.pdf>

Table 4. Number of articles published in the Serbian Astronomical Journal (SAJ), number of citations to articles published in SAJ (self citations and other citations) and calculated impact factors (IF) for the years 2003–2006.

Year (y)	No. of articles in		Citations to articles from				IF	
	$y - 1$	$y - 2$	$y - 1$		$y - 2$			
			Other citations	Self citations	Other citations	Self citations		
2003	8	16	0	3	2	2	7/24	0.292
2004	26	8	3	9	1	0	13/34	0.382
2005	17	26	4	4	5	0	13/43	0.302
2006	21	17	1	4	1	2	8/38	0.211

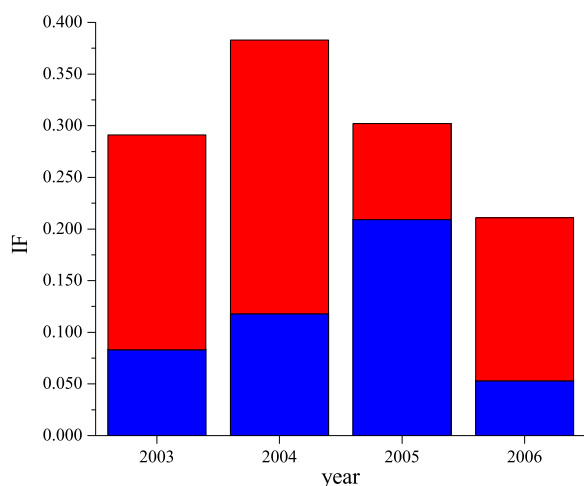


Fig. 1. Impact factors (IF) for the Serbian Astronomical Journal (SAJ), for years 2003–2006. Lower bar gives the impact factor calculated by using only the citations from the journals in the ISI list (IF^*), and the upper bar adds the self citations.

SAJ is published semiannually by the Astronomical Observatory and the Department of Astronomy, Faculty of Mathematics, Belgrade, Serbia. It publishes invited reviews, original scientific papers, preliminary reports, and professional papers over the entire range of astronomy, astrophysics, and related fields.

In the following we give a detail record of SAJ citation from 2003–2006, including references for both, articles that cite and the articles being cited:

2003

Popović et al. (2003) → Popović et al. (2001)
 Ćirković (2003) → Ćirković & Radujkov (2001)

Ninković (2003) → Ninković (2001a)
 Ninković (2003) → Ninković (2001b)
 Urošević et al. (2003a) → Urošević (2002)
 Urošević et al. (2003b) → Urošević (2002)
 Guseinov et al. (2003) → Urošević (2002)

2004

Arbutina et al. (2004) → Urošević (2002)
 Arbutina et al. (2004) → Urošević et al. (2003a)
 Arbutina et al. (2004) → Urošević et al. (2003b)
 Ćirković (2004a) → Duric & Field (2003)

Ninković (2004) → Ninković (2003)
 Čeki et al. (2004) → Vince & Vince (2003)
 Čeki et al. (2004) → Vitas & Vince (2003)
 Djeniže et al. (2004) → Djeniže et al. (2003)
 Guseinov et al. (2004a) → Guseinov et al. (2003)
 Ćirković (2004b) → Duric & Field (2003)
 Atanacković-Vukmanović (2004) → Atanacković-Vukmanović (2003)
 Vince & Vince (2004) → Vince & Vince (2003)
 Guseinov et al. (2004b) → Guseinov et al. (2003)

2005

Urošević & Pannuti (2005) → Urošević et al. (2003a)
 Urošević & Pannuti (2005) → Urošević et al. (2003b)
 Ankaý et al. (2005) → Guseinov et al. (2003)
 Guseinov (2005) → Guseinov et al. (2003)
 Guseinov et al. (2005) → Guseinov et al. (2003)
 Urošević & Pannuti (2005) → Guseinov et al. (2004a)
 Guseinov (2005) → Guseinov et al. (2004a)
 Guseinov et al. (2005) → Guseinov et al. (2004a)
 Guseinov et al. (2005) → Guseinov et al. (2004b)

Danilović et al. (2005) → Danilović & Vince (2004)
 Vince et al. (2005) → Danilović & Vince (2004)
 Caimmi et al. (2005) → Caimmi & Marmo (2004)
 Damljanović (2005) → Vondrak (2004)

2006

Landi et al. (2006) → Guseinov et al. (2004a)
 Soter (2006) → Kovačević & Kuzmanoski (2005)

Novaković & Todorović (2006) → Pavlović & Todorović (2005)
 Damljanović et al. (2006a) → Damljanović (2005)
 Damljanović et al. (2006a) → Vondrak (2004)
 Cvetković et al. (2006) → Pavlović et al. (2005)
 Damljanović et al. (2006b) → Damljanović (2005)
 Damljanović et al. (2006b) → Vondrak (2004)

Table 5. Impact factor (IF*) for selected journals in astronomy and astrophysics for year 2005.

Journal	Articles in		Citations to		IF*	
	2004	2003	2004	2003		
MmSAI	159	200	56	43	99/359	0.276
IBVS	96	130	25	37	62/226	0.274
HvaOB	16	22	4	6	10/38	0.263
SerAJ	17	26	4	5	9/43	0.209
A&AT	49	80	11	14	25/129	0.194
CoSka	13	15	2	3	5/28	0.179
RoAJ	19	21	0	1	1/40	0.025

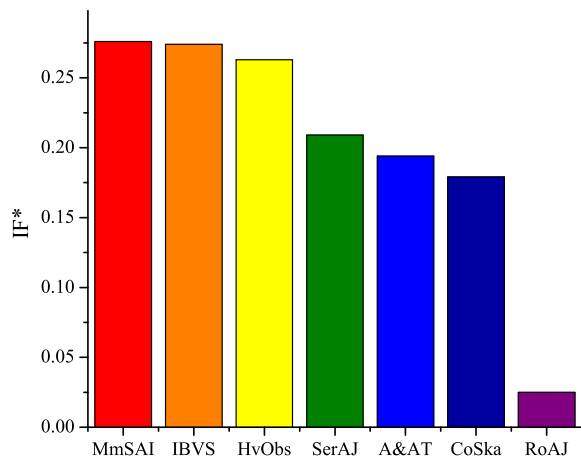
**Fig. 2.** Impact factor (IF*) for selected journals in astronomy and astrophysics for year 2005. Only citations from the journals in the ISI list are included.

Table 1 shows the number of articles published in SAJ, number of citations to articles published in SAJ (self citations and other citations) and calculated impact factors (IF) for years 2003–2006 (see also Fig. 1). Number of articles published does not include editorials, errata, book reviews, etc. *Other citations* include only the citations from the journals in the ISI list, while the *self citations* include citations from SAJ to articles in SAJ. We did not make distinction between auto-citations and hetero-citations, i.e. does an author cites his/her own paper. Impact factor for each year is defined as the total number of citations in a given year (y) to articles published in the past two years ($y - 1$, $y - 2$) divided by the total number of articles published in the past two years:

$$\text{IF}(y) = \frac{\text{Citations in year } y \text{ to articles from } y-1 \text{ to } y-2}{\text{Number of articles in } y-1 \text{ and } y-2}.$$

We have chosen to calculate the impact factor since it best shows to what extent a certain journal or a field is active. There are, of course, many other measures of bibliometric quality of a journal such as overall citation rate, cited half-life, immediacy index, etc.

2.2 Other journals

Among the journals in Table 3 Space weather (SpWea) and Journal of Geophysical Research (JGR) show high standards, continuity in publication and significant citation, and will probably be included among the journals in the ISI JCR for this, or the next year. Meteoritics and Planetary Science (M&PS) and Journal for the History of Astronomy (JHA) are following close behind. A rather good standing journal that has not yet received a deserved attention is the International journal of Astrobiology (IJAsB). All these journals cover quite autonomous subdisciplines and should have significant self-cited rate. A higher self-citation rate may indicate that the field is small or isolated. Journals that cover a wide field tend to have low self-citation rates.

We have focused on minor journals and further limited our analysis geographically to journals in the South-East and Continental Europe (the last nine journals in Table 3). Two of these, Astrophysics and Space Sciences Transactions (ASTRA) and Astrophysical Investigations (ApInv), have irregular frequency, or have recently (re)appeared, and have not been considered here. The relevant data for the remaining seven are given in Table 5 (see also Fig. 2). These are:

Memorie Della Societa Astronomica Italiana (MmSAI),
 Information Bulletin on Variable Stars (IBVS),
 Hvar Observatory Bulletin (HvaOB),
 Serbian Astronomical Journal (SerAJ),
 Astronomical and Astrophysical Transactions (A&AT),
 Contributions of the Astronomical Observatory Skalnate Pleso (CoSka),
 Romanian Astronomical Journal (RoAJ).

Since we were unable to track journal's self-citation we have calculated impact factors (IF*) by counting only citations from the journals in the ISI list. Since the databases for 2006 were not complete at the time of writing this survey, we chose to collect data on 2005.

The numbers given are only illustrative and of limited accuracy. As such, they should not be quoted as definite measures of a journal's quality. Inclusion of self-citation and citation between the journals selected could modify the picture. More importantly, the data presented are for one year only. For more reliable data and firmer conclusions, a full analysis over a period of years is necessary.

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ЦИТИРАНОСТ ЧАСОПИСА SERBIAN ASTRONOMICAL JOURNAL И ПОРЕЂЕЊЕ
СА ДРУГИМ ЧАСОПИСИМА ИЗ ОБЛАСТИ АСТРОНОМИЈЕ И АСТРОФИЗИКЕ

B. Arbutina

Astronomical Observatory, Volgina 7, 11160 Belgrad 74, Serbia

Уређивачки прилог

Овај прилог има за циљ да прикаже резултате независног истраживања цитира-ности часописа Serbian Astronomical Journal и да изврши поређење нашег часописа са неким другим часописима из области астрономије и астрофизике. Такође смо прикупили основне

податке о већем броју астрономских часописа и других часописа везаних за астрономију који, сматрамо, могу користити ауторима код припреме радова за наш часопис, као и свим другим истраживачима на овом пољу.