

SERBIAN ASTRONOMERS IN SCIENCE CITATION INDEX IN 1946 – 1998 PERIOD

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Abstract. The presence of Serbian astronomers in Science Citation Index within 1946-1998 period has been analyzed and the most cited astronomers and articles have been identified.

1. INTRODUCTION

The description of the Science Citation Index method and its possibilities for scientometric applications, and for the analysis and planing of scientific work have been analysed *e. g.* in Hajtun (1983), Abt (1990) and Dimitrijević (1996, 1997). According to the analysis of Abt (1990), at the beginning of the 20th century, the number of authors per article, was 1.1 on the average and now it is 3.2. Within the same period the contribution of articles with a single author to the total number of articles have decreased from 90 per cent to 10 per cent. It is interesting also that only 5 per cent of the articles published in astronomy have been theoretical ones at the begining of the 20th century, while according to Abt (1990) 45 per cent of astronomical articles are theoretical now wittnessing on the development of this science.

In Dimitrijević (1996) the presence of Serbian astronomers in Science Citation Index within 1961-1995 period has been analyzed, and the most cited astronomers and articles within the considered period have been identified. In this contribution the previous analysis has been enlarged from 1961-1995 period to 1946-1998 period.

2. RESULTS AND DISCUSSION

In order to identify the presence of Serbian astronomers in the Science Citation Index (SCI), a list of all astronomers working on the project "Physics and Dynamics of Celestial Bodies" has been taken as well as the bibliography of the project. Moreover, all who are working or worked as astronomers and have at least one reference in Serbian scientific astronomical publications, as well as all professors of the Department of Astronomy of the Belgrade University and Directors of Belgrade Astronomical Observatory, have been added to the list.

Table 1. Serbian astronomers with at least ten citations registered in the Science Citation Index, within the period 1946-1998.

No.	Name	Year of the first cit.	No. cit.	No cit. as the first author	No. without auto cit.
1.	Milan Dimitrijević	1975	1274	943	576
2.	Milutin Milanković	1945	570	570	570
3.	Zoran Knežević	1982	346	117	269
4.	Dragutin Djurović	1972	113	113	61
5.	Vasilije Oskanjan	1955	87	79	87
6.	Slobodan Ninković	1983	84	38	50
7.	Ištvan Vince	1977	59	17	55
8.	Gojko Djurašević	1981	59	37	27
9.	Aleksandar Kubičela	1966	50	34	40
10.	Slobodan Jankov	1986	47	29	34
11.	Jelisaveta Arsenijević	1981	38	21	30
12.	Djordje Teleki	1972	34	27	29
13.	Vladimir Kršljanin	1986	34	7	28
14.	Sofija Sadžakov	1987	31	28	9
15.	Jelena Milogradov-Turin	1970	29	29	24
16.	Danilo Zulević	1969	26	23	26
17.	Georgije Popović	1969	26	20	22
18.	Luka Popović	1991	25	15	13
19.	Mirjana Vukićević-Karabin	1978	24	3	22
20.	Miodrag Dačić	1988	22	1	7
21.	Milorad Protić	1956	18	18	18
22.	Jovan Lazović	1986	16	16	16
23.	Vera Erceg	1976	16	9	16
24.	Desanka Šulić	1974	16	4	13
25.	Mike Kuzmanoski	1987	13	8	5
26.	Ivan Atanasijević	1953	12	8	12
27.	Dušan Šaletić	1988	12	2	12
28.	Nada Pejović	1985	12	12	10
29.	Ilija Lukačević	1971	11	11	1
30.	Dragomir Olević	1980	11	7	11
31.	Branislav Ševarlić	1951	11	6	11

Table 2. Articles of Serbian astronomers with at least 20 citations registered in the Science Citation Index, within the period 1946-1998.

1. Milanković, M.: 1941, Kanon der Erdbestrahlung und seine Anwendung auf das Eiszeitenproblem, *Königlich Serbische Akademie, Editions Speciales, Sciences mathématiques et naturelles*, Belgrade, **CXXXIII**, 33. [279 citations].
2. Milanković, M.: 1930, Mathematische Klimalehre und Astronomische Theorie der Klimaschwankungen, *Handbuch der Klimatologie*, Bd. I, T.A. Hrsg Von Köppen und R.Geiger, Berlin, Gebrüder Borntraeger [148 citations].
3. Dimitrijević, M.S., Konjević, N.: 1980, Stark widths of doubly- and triply-ionized atom lines, *J. Quant. Spectrosc. Radiative Transfer* **24**, 451 [99 citations].
4. Dimitrijević, M.S., Sahal-Bréchet, S.: 1984, Stark broadening of neutral helium lines, *J. Quant. Spectrosc. Radiative Transfer* **31**, 301 [81 citations].
5. Zappala, V., Farinella, P., Knežević, Z., Paolicchi, P.: 1984, Collisional origin of the asteroid families: Mass and velocity distributions, *Icarus* **59**, 261 [54 citations].
6. Konjević, N., Dimitrijević, M.S., Wiese, W.L.: 1984, Experimental Stark widths and shifts for spectral lines of positive ions (a critical review of selected data for the period 1976 to 1982, *J. Phys. Chem. Reference Data* **13**, 649 [53 citations].
7. Milanković, M.: 1920, Théorie mathématique des phénomènes thermiques produits par la radiation solaire, Paris, Zagreb, Gauthier - Villars et C^{ie}, Ed. Académie Yougoslave des Sciences et des Arts [52 citations].
8. Dimitrijević, M.S., Konjević, N.: 1981, Modified semiempirical formula for the electron-impact widths of ionized atom lines, in *Spectral Line Shapes*, Vol. 1, ed. B.Wende, Walter de Gruyter, Berlin, New York, p.211 [48 citations].
9. Konjević, N., Dimitrijević, M.S., Wiese, W.L.: 1984, Experimental Stark widths and shifts for spectral lines of neutral atoms (a critical review of selected data for the period 1976 to 1982, *J. Phys. Chem. Reference Data* **13**, 619 [47 citations].
10. Dimitrijević, M.S., Sahal-Bréchet, S., Bommier, V.: 1991, Stark broadening of spectral lines of multiply charged ions of astrophysical interest. I. C IV lines, *Astron. Astrophys. Suppl. Series* **89**, 581 [44 citations].
11. Knežević, Z., Milani, A., Farinella, P., Froeschle, C.: 1991, Secular resonances from 2 to 50 AU, *Icarus* **93**, 316 [43 citations].
12. Lanz, T., Dimitrijević, M.S., Artru, M.C.: 1988, Stark broadening of visible Si II lines in stellar atmospheres, *Astron. Astrophys.* **192**, 249 [43 citations].
13. Oskanjan, V.S., Evans, D.S., Lacy, S., McMillan, R.S.: 1977, An Analysis of the slow light variability of BY Draconis, *Astrophys. J.* **214**, 430 [40 citations].
14. Dimitrijević, M.S., Konjević, N.: 1986, Simple estimates for Stark broadening of ion lines in stellar plasmas, *Astron. Astrophys.* **172**, 345 [40 citations].
15. Milanković, M.: 1938, Astronomische Mittel zur Erforschung der Erdgeschichtlichen Klimate, *Handbuch der Geophysik*, Bd IX, Lieferung 3, Abschnitt VII, Hrsg von Beno Gutenberg, Berlin, Gebrüder Borntraeger [37 citations].
16. Zappala, V., Knežević, Z.: 1984, Rotation axes of asteroids: Results for 14 objects, *Icarus* **59**, 436 [36 citations].
17. Milani, A., Knežević, Z.: 1990, Secular perturbation theory and computation of asteroid proper elements, *Celestial Mechanics and Dynamical Astronomy* **49**, 347 [33 citations].

18. Dimitrijević, M.S., Konjević, N.: 1986, Simple formulae for estimating Stark widths and shifts of neutral atom lines, *Astron. Astrophys.* **163**, 297 [30 citations]
19. Milani, A., Knežević, Z.: 1992, Asteroid proper elements and secular resonances, *Icarus* **98**, 211 [27 citations]
20. Platiša, M., Popović, M., Dimitrijević, M., Konjević, N.: 1975, Stark Broadening of A III and A IV Lines, *Zeitschrift für Naturforschung* **30a**, 212 [24 citations]
21. Dimitrijević, M. S.: 1988, Electron-impact widths of doubly and triply charged ion lines of astrophysical importance, *Astron. Astrophys. Suppl. Series* **76**, 53 [23 citations]
22. Brosche, P., Tucholke, H.J., Klemola, A.R., Ninković, S., Geffert, M., Doerenkamp, P.: 1991, Space Motions of Globular Clusters NGC 362 and NGC 6218 (M12), *Astronomical Journal* **102**, 2022.

In Table 1, astronomers with at least ten citations registered in the Science Citation Index, within the period 1946-1998 are presented with the year of the first citation in the Science Citation Index, number of citations, number of citations as the first author and the number of citations without autocitations. In Table 2, articles with at least twenty citations in the considered period, are presented.

References

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- Hajtun, S.D.: 1983, *Naukometriya, sostoyanie i perspektivy*, Nauka, Moskva.