

Open Access Online Journals on Astronomy: A Study

By

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Introduction

- **The proliferation of freely accessible online journals, the development of subject specific pre- and e-print archives and collections of learning objects provides a very valuable supplement of scientific knowledge to the existing types of published scientific information.**
- **However these valuable collections are difficult to overview and integrate in the library and information services provided by libraries for their user constituency.**
- **Open access journals as journals that use a funding model that does not charge readers or their institutions for access.**
- **Open access means users can read, download, copy, distribute, print, search, or link to the full texts of these articles.**

DOAJ (Directory of Open Access Journals)

- **At the First Nordic Conference on Scholarly Communication in Lund/Copenhagen.**
- **Valuable service for the global research and education community. Available technologies make it possible to collect and organize these resources in a way that allow libraries worldwide to integrate these resources in existing services thus offering added value both for the service providers of these resources and for the global research and education community.**
- **Directory of Open Access Journals is a service that provides access to quality controlled Open Access Journals.**
- **The Directory aims to be comprehensive and cover all open access scientific and scholarly journals that use an appropriate quality control system, and it will not be limited to particular languages or subject areas.**
- **Directory of Open Access Journals is hosted, maintained and partly funded by Lund University Libraries Head Office. DOAJ is receiving funding from:**
 - **Open Society Institute / SPARC / SPARC Europe /Axiell**

Objectives of the paper

- **To enumerate the Free E-journals on Astronomy on DOAJ.**
- **To know the country wise distribution of E-journals on Astronomy on DOAJ.**
- **To find out the Language wise distribution of E-journals on Astronomy on DOAJ.**
- **To know the accessibility of Archives of E-journals on Astronomy on DOAJ.**
- **To know the usefulness and applicability of Astronomy E-journals to other disciplines.**

Research Methodology

- Total 17 Astronomy E-journals from DOAJ site were analyzed based on Country, Languages, Subject Headings and accessibility of Archives of E-journal.

Limitation of the study

The study is limited to Astronomy E-journals which is listed on Directory of Open Access Journal. For the present paper DOAJ data is accessible from 12 /4/ 2009 to 10/6 /2009.

Table: 1 List of Free E-Journals on Astronomy on DOAJ

S.N	Title of E-Journals	URL	ISSN No	Publisher
1	<u>Advances in Geosciences</u>	www.advances.in.geosciences.net	16807340	Copernicus Publications
2	<u>Apeiron (Montreal) : studies in infinite nature</u>	www.redshift.vif.com	08436061	C. Roy Keys Inc.
3	<u>Astronomy Education Review</u>	www.aer.nano.edu	15391515	Association of Universities for Research in Astronomy
4	<u>Astrophysics and Space Sciences Transactions (ASTRA)</u>	www.astra.science.net	18106528	Copernicus Publications
5	<u>Boletim de Ciências Geodésicas</u>	www.calvados.c3sl.vfer.br.ojs2.index.php	14134853	Curso de Pós-Graduação em Ciências Geodésicas - UFPR
6	<u>Bulletin astronomique de Belgrade</u>	www.saj.matf.bg.ac.yu	03542955	Astronomical Observatory, Department of Astronomy, Belgrade
7	<u>Communicating Astronomy with the Public Journal</u>	www.capjournal.org	19965621	International Astronomical Union
8	<u>Geodetski vestnik</u>	www.geoetski.vestnik.com	03510271	Association of Surveyors of Slovenia

9	<u>Information bulletin on variable stars</u>	www.konkoly.hu/ibvs	03740676	Konkoly Observatory
10	<u>Journal of astrophysics and astronomy</u>	www.ias.ac.in	02506335	Indian Academy of Sciences
11	<u>Living Reviews in Solar Physics</u>	www.solarphysics.livingreviews.org	16144961	Max Planck Institute for Solar System Research
12	<u>MARS : The International Journal of Mars Science and Exploration</u>	www.marsjournal.org	15481921	Mars Informatics Inc. United States
13	<u>Open Astronomy Journal</u>	www.bentham.org	18743811	Bentham Open United States
14	<u>Revista Brasileira de Cartografia</u>	www.rbc.ufrj.br	05604613	Sociedade Brasileira de Cartografia, Geodésia, Fotogrametria e Sensoriamento Remoto. Brazil
15	<u>Revista Mexicana de Astronomía y Astrofísica : Universidad Nacional Autónoma de México. Instituto de Astronomía</u>	www.redlyc.vaemex.mx/redalyc/src/inicio/HomRevRed.jsp?iCveEntRev	01851101	Universidad Nacional Autónoma de México. Mexico
16	<u>Serbian Astronomical Journal</u>	www.sajmatf.bg.ac.yu	1450698X	Astronomical Observatory, Department of Astronomy, Belgrade. Serbia
17	<u>Living Reviews in Solar Physics</u>	www.solarphysics.livingreviews.org	16144961	Max Planck Institute for Solar System Research

Table: 2 Country wise Distribution of E-Journals on Astronomy

S.N	Name of the E-Journals	Place of Publication
1	<u>Advances in Geosciences</u>	Germany
2	<u>Apeiron (Montreal) : studies in infinite nature</u>	Canada
3	<u>Astronomy Education Review</u>	United States
4	<u>Astrophysics and Space Sciences Transactions (ASTRA)</u>	Germany
5	<u>Boletim de Ciências Geodésicas</u>	Brazil
6	<u>Bulletin astronomique de Belgrade</u>	Serbia
7	<u>Communicating Astronomy with the Public Journal</u>	France
8	<u>Geodetski vestnik</u>	Slovenia
9	<u>Information bulletin on variable stars</u>	Hungary
10	<u>Journal of astrophysics and astronomy</u>	India
11	<u>Living Reviews in Solar Physics</u>	Germany
12	<u>MARS : The International Journal of Mars Science and Exploration</u>	United States
13	<u>Open Astronomy Journal</u>	United States
14	<u>Revista Brasileira de Cartografia</u>	Brazil
15	<u>Revista Mexicana de Astronomía y Astrofísica : Universidad Nacional Autónoma de México. Instituto de Astronomía</u>	Mexico
16	<u>Serbian Astronomical Journal</u>	Serbia
17	<u>Living Reviews in Solar Physics</u>	Germany

Table- 2.a. Analysis of Country wise Distribution of E-Journals on Astronomy

S.N.	Name of the Country	No. of E-journals	Rank
1	Germany	04	1
2	Canada	01	4
3	United States	03	2
4	Brazil	02	3
5	Serbia	02	3
6	France	01	4
7	Slovenia	01	4
8	Hungary	01	4
9	India	01	4
10	Mexico	01	4

Table : 3 Language wise Distribution of E-Journals on Astronomy

SN	Name of the E-Journals	Language
1	<u>Advances in Geosciences</u>	English
2	<u>Apeiron (Montreal) : studies in infinite nature</u>	English
3	<u>Astronomy Education Review</u>	English
4	<u>Astrophysics and Space Sciences Transactions (ASTRA)</u>	English
5	<u>Boletim de Ciências Geodésicas</u>	Portuguese
6	<u>Bulletin astronomique de Belgrade</u>	English
7	<u>Communicating Astronomy with the Public Journal</u>	English
8	<u>Geodetski vestnik</u>	Slovenian, English
9	<u>Information bulletin on variable stars</u>	English
10	<u>Journal of astrophysics and astronomy</u>	English
11	<u>Living Reviews in Solar Physics</u>	English
12	<u>MARS : The International Journal of Mars Science and Exploration</u>	English
13	<u>Open Astronomy Journal</u>	English
14	<u>Revista Brasileira de Cartografia</u>	English, Portuguese, Spanish
15	<u>Revista Mexicana de Astronomía y Astrofísica : Universidad Nacional Autónoma de México. Instituto de Astronomía</u>	English
16	<u>Serbian Astronomical Journal</u>	English
17	<u>Living Reviews in Solar Physics</u>	English

Table-3. a Analysis of Language wise Distribution of E-Journals on Astronomy

S.N.	Languages	No. of E-journals	Rank
1	English	14	1
2	Portuguese,	01	2
3	Slovenian, English	01	2
4	English, Portuguese, Spanish	01	2

**Table: 4 Distributions of Subject Headings of E-Journals on
Astronomy**

S.N.	Name of the E-Journals	Subject Headings
1	<u>Advances in Geosciences</u>	<u>Astronomy (General) -Earth Sciences - Geology</u>
2	<u>Apeiron (Montreal) : studies in infinite nature</u>	<u>Astronomy (General)</u>
3	<u>Astronomy Education Review</u>	<u>Astronomy (General) - Education</u>
4	<u>Astrophysics and Space Sciences Transactions (ASTRA)</u>	<u>Physics (General) - Astronomy (General)</u>
5	<u>Boletim de Ciências Geodésicas</u>	<u>Geography -- Astronomy (General)</u>
6	<u>Bulletin astronomique de Belgrade</u>	<u>Astronomy (General)</u>
7	<u>Communicating Astronomy with the Public Journal</u>	<u>Astronomy (General)</u>
8	<u>Geodetski vestnik</u>	<u>Astronomy (General)</u>
9	<u>Information bulletin on variable stars</u>	<u>Astronomy (General)</u>
10	<u>Journal of astrophysics and astronomy</u>	<u>Astronomy (General)</u>
11	<u>Living Reviews in Solar Physics</u>	<u>Astronomy (General)</u>
12	<u>MARS : The International Journal of Mars Science and Exploration</u>	<u>Astronomy (General)</u>
13	<u>Open Astronomy Journal</u>	<u>Astronomy (General)</u>
14	<u>Revista Brasileira de Cartografia</u>	<u>Astronomy (General) -- Geography</u>
15	<u>Revista Mexicana de Astronomía y Astrofísica : Universidad Nacional Autónoma de México. Instituto de Astronomía</u>	<u>Astronomy (General)</u>
16	<u>Serbian Astronomical Journal</u>	<u>Astronomy (General)</u>
17	<u>Living Reviews in Solar Physics</u>	<u>Astronomy (General)</u>

Table: - 4.a Analysis of Subject Headings of E-Journals on Astronomy

S.N.	Subject Headings	No. of E-journals
1	<u>Astronomy(General)</u> -- <u>Earth Sciences</u> -- <u>Geology</u>	01
2	<u>Astronomy (General)</u>	12
3	<u>Astronomy (General)</u> -- <u>Education</u>	01
4	<u>Physics(General)</u> -- <u>Astronomy (General)</u>	01
5	<u>Geography</u> -- <u>Astronomy (General)</u>	02

Table:- 5 Availability of Archives of E-Journals on Astronomy

S. N.	Name of E-Journals	Starti ng Year	Availability Year											
			1987-1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
			1987-1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
				1	2	2	2	2	2	2	2	2	2	2
				0	0	0	0	0	0	0	0	0	0	0
				0	0	0	0	0	0	0	0	0	0	0
				0	1	2	3	4	5	6	7	8		
1	<u>Advances in Geosciences</u>	2003	--	--	--	--	--	V 1		v.2-5	V6-9	V.10-13	V. 14-19	v.20
2	<u>Apeiron (Montreal) : studies in infinite nature</u>	1990	V. 1-5 Numb ered1-20	V.6 (1-4)	V.7 (1-4)	V8 (1-4)	V. 9 (1-4)	10 (1-4)	V. 11 (1-4)	V. 12 (1-4)	V.13 (1-4)	V. 14 (1-4)	V-15(1-4)	V. 15
3	<u>Astronomy Education Review</u>	2001	---	---	---	V 1(1)	V1(1)	V 2(1-2)	V 3(1-2)	V4(1-2)	V5(1-2)	V 6 (1-2)	V.7 (1-2)	V.7(2)
4	<u>Astrophysics and Space Sciences Transactions (ASTRA)</u>	2005	---	---	---	---	---	---		V.1 (1)	V.2(1-2)	V.3 (1)	V.4(1-2)	V 5(1)

5	<u>Boletim de Ciências Geodésicas</u>	1997	V.2 & 3)	V.4 & 5(1)	V. 6 (1-2)	V. 7 (1-2)	V. 8 (1-2)	V. 9 (1-2)	V. 10 (1-2)	V. 11 (1-2)	V. 12 (1-2)	V.13 (1-2)	V.14 (1-4)	V.15 (1)
6	<u>Bulletin astronomique de Belgrade</u>	1992	---	---	---	---	---	---	---	-- -	---	---	---	--
7	<u>Communicating Astronomy with the Public Journal</u>	2007										No. 1	No. 2-4	No. 5
8	<u>Geodetski vestnik</u>	2000	---	---	V. 44 (1-4)	V. 45 (1-4)	V. 46 (1-4)	V. 47 (1-4)	V. 48 (1-4)	V. 49 (1-4)	V. 50 (1-4)	V.57 (1-4)	V. 58 (1-4)	---
9	<u>Information bulletin on variable stars</u>	1994	No. 0001-4600	No. 4601-4800	N o. 4801 - 00	N o. 5001 - 00	N o. 5201 - 00	N o. 5301 - 00	N o. 5401 - 00	N o. 5501 - 00	N o. 5601 - 00	No. 5701 - 5800	---	---

10	<u>Journal of astrophysics and astronomy</u>	2001	---	-- -	-- -	V. 2 2(1- 4)	V. 2 3(1- 4)	V 2 4(1- 4)	V 2 5 (1 - 4)	V 2 6 (1 - 4)	V 2 7(1- 4)	V. 28(1- 4)	V. 29 (1- 2)	-- -
11	<u>Living Reviews in Solar Physics</u>	2004	---	-- -	-- -	-- -	-- -	-- -	V. 1	V. 2	V. 3	V.4	V.5	V. 6
12	<u>MARS : The International Journal of Mars Science and Exploration</u>	2005	---	-- -	-- -	-- -	-- -	-- -	-- -	V. 1	V. 2	V. 3	V. 4	---
13	<u>Open Astronomy Journal</u>	2008	---	-- -	-- -	-- -	-- -	-- -	-- -	-- -	-- -	---	V.1	V. 2
14	<u>Revista Brasileira de Cartografia</u>	2001	---	-- -	-- -	V. 5 3	V. 5 4	V. 5 5	V. 5 6	V . 5 7	V. 58	V.59	---	---

15	<u>Revista Mexicana de Astronomía y Astrofísica : Universidad Nacional Autónoma de México. Instituto de Astronomía</u>	2000	---	---	---	---	---	---	---	---	---	---	---	---
16	<u>Serbian Astronomical Journal</u>	1998	No. 145-157	No. 159-158	N o. 161-162	N o. 163-164	N o. 165-166	N o. 167-168	N o. 169-170	N o. 171-172	N o. 173-174	No. 174-75	No. 176-177	---
17	<u>Living Reviews in Solar Physics</u>	2004	---	---	---	---	---	---	V. 1	V. 2	V. 3	V.4	V.5	V. 6

Findings

- It is observed that Germany was in 1st rank in publishing 4 e-journals followed by Brazil. (From Table. 2)
- English is the most common communication language which is used by 14 E-journals out of 17 e-journals on Astronomy. Some of E-journals also published in English, Portuguese, French and Spanish languages. (From Table 3)
- It is observed that Astronomy E-journals are interdisciplinary in nature. Out of 17 E-journals, 4 e-journals are useful for Astronomy (General) followed by Geography (03).
- Maximum no (15) of e-journals achieves are accessible from year of starting the Journal except two e-journals Revista Mexicana de Astronomía y Astrofísica: Universidad Nacional Autónoma de México. Instituto de Astronomía and Bulletin astronomique de Belgrade were not opened (Connect) after trying frequently accessed. (From Table. 5)

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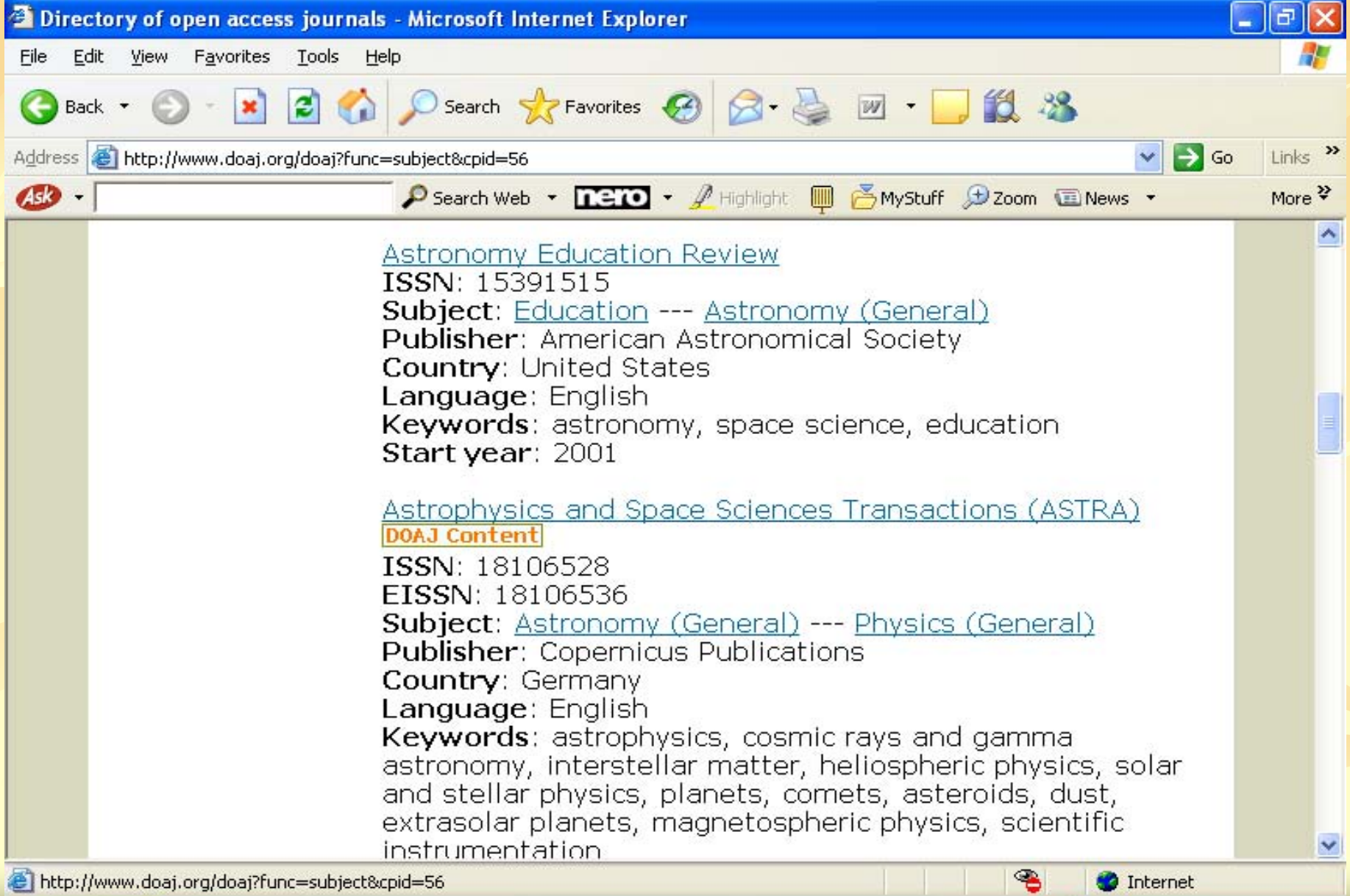
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greater pedagogical value and provide a greater potential to gather accurate research results than do the use of cl

[The Effect of 3D Computer Modeling and Observation-Based Instruction on Change Regarding Basic Concepts of Astronomy in Elementary School Students](#)

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H. Asuman Küçüközer *Department of Science Education, Necatibey Education Faculty, Balıkesir University, Balıkesir, Turkey*

Kemal Yürümezoğlu *Department of Physics Education, Education Faculty, Muğla University, Muğla, Turkey*
2009, AER, 8 (1), 010104, 10.3847/AER2009006

Published 14 April 2009

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This study has examined the impact of teaching certain basic concepts of astronomy through a predict-observe-explain three-dimensional (3D) computer modeling and observations on conceptual changes seen in sixth-grade elementary school students (number of students: 131). A pre- and postastronomy instruction conceptual survey and interviews were used to evaluate changes. In the analysis of the data, the methodology used was the classification of explanations with similar meaning categories. The most significant finding of the study was that instruction supported by observations and 3D computer modeling was effective in bringing about conceptual change and learning.

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The Effect of 3D Computer Modeling and Observation-Based Instruction on the Conceptual Change Regarding Basic Concepts of Astronomy in Elementary School Students

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Conclusion

- DOAJ is comprehensive and cover all open access scientific and scholarly journals that use an appropriate quality control system, and it will not be limited to particular languages or subject areas.
- DOAJ is to increase the visibility and ease of use of open access scientific and scholarly journals thereby promoting their increased usage and impact.
- Research scholars, Scientists, Professionals should browse the DOAJ site and access the free online journals on their Subject areas.

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The image features the text "Thank You" in a large, bold, sans-serif font. Each letter is filled with a different color from a rainbow gradient: 'T' is purple, 'h' is red, 'a' is orange, 'n' is yellow, 'k' is green, 'Y' is blue, and 'u' is purple. The text is set against a background of stylized, overlapping autumn leaves in shades of yellow and orange. The letters have a slight drop shadow, giving them a 3D appearance.

Thank You

- Table No. 1 enumerates the free E-journals on Astronomy along with their URL so that any user can browse the e-journals directly by entering the URL in address bar.
- Table No.2.a depicts the country wise distribution of E-journals on Astronomy on DOAJ. Germany was in 1st rank because 04 e-journals are published from Germany followed by U.S. and Brazil, 03 E-journals. Serbia published 2 e-journals which are in 3rd rank.
- Table no. 3 and 3.a gives the information about the publication language of the E-journals on Astronomy. English is the most common communication language to spread the knowledge in all over the world which is used by 14 E-journals out of 17 e-journals on Astronomy. 01 E-journals is published in Portuguese language which is 2nd rank in table. Only one E-journal ([Revista Brasileira de Cartografia](#)) published in three languages i.e. English Portuguese and Spanish.

- Table No. 4.a shows the interdisciplinary scope of the E-journals. Astronomy E-journals can also be used in Astronomy (General), Earth Sciences, Geology, Education, Physics and Geography. Out of 17 E-journals 2 e-journals are useful for Geography.
- Table No. 5 shows the archives of E-journals of Astronomy available on DOAJ. DOAJ content facility is also available to link with archives. After accessing the individual e-journals website, achieves were find and it is observed that maximum no (15) of e-journals achieves are accessible except two e-journals [Revista Mexicana de Astronomía y Astrofísica: Universidad Nacional Autónoma de México. Instituto de Astronomía](#) and [Bulletin astronomique de Belgrade](#) were not opened (Connect) after trying frequently accessed.