

# MAPPING OF PHYSICS PERIODICALS : A BIBLIOMETRIC STUDY

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## Abstract

The present study is to provide a sketch on Physics periodicals published all over the world represented in Ulrich's Periodical Directory. The present study is limited to 2131 periodicals appended to publish in International Ulrich's Periodical Directory during the period of 2012 in 50<sup>th</sup> edition. The aim of Mapping is to provide quantitative characterization of scientific activity.

**KEYWORDS :** Mapping , Physics , Periodicals , Bibliometrics.

## INTRODUCTION :

The term 'Bibliometrics' was first used by Alan Pritchard in 1969 to denote a new discipline where quantitative methods were employed to probe scientific communication process by measuring and analyzing various aspects of written documents. Bibliometrics is an emerging thrust area of research from different branches of human knowledge. Bibliometrics has become a standard tool of science policy and research management in the last decades. All significant compilations of science indicators heavily rely on publication and citation statistics and other, more sophisticated bibliometric techniques. Bibliometrics is a quantitative evaluation of publication patterns of all macro and micro communication along with their authorship by mathematical and statistical calculation.[Sengupta,1985] Bibliometrics can be applied to any subject area and to most of the problems concerned with written communication. It helps to monitor growth of literature and patterns of research. This paper studies the bibliometric analysis of the literature published in the Journal of Documentation.

## INTERNATIONAL ULRICH PERIODICAL DIRECTORY :

Ulrich Periodicals Directory is a bibliographic database providing detailed, comprehensive, and authoritative information on serials Published throughout the world. It covers all subjects, and includes publications that are published regularly or irregularly and are circulated free of charge or by paid subscription. Updated weekly, the database is searchable and browsable by title, subject, language, electronic availability and more.

### **REVIEW OF LITERATURE:**

Bibliometrics is recent and most active field of “Library and Information science. The word bibliometrics appeared in print in Alan pitchards article statistical bibliography or bibliometrics. (Khaparde, 2011). Bibliometrics has been known by other names, including “Statistical analysis of the literature” while Hulme used the term “Statistical bibliography” in 1923. (Khaparde, 2013).

Verma, Tamrakar and Sharma (2007) revealed that majority of the articles in the journal are two-authored and majority of the contributions are from New Delhi. Singh, Mittal and Ahmad (2006) conducted a bibliometric study of literature on digital libraries. The important findings are that most articles (61 percent) are single authored; author productivity is not in agreement with Lotka's Law, except in one case where the number of articles is three; the maximum number of articles were published in 2003 with English being the most productive language; maximum articles were published in the journal D-lib Magazine; distribution of articles nearly follows Bradford's Law; and USA ranked first for maximum number of journals. Tiew (2000) found that 53% of articles contained journal self-citations, and a tendency is noticed for authors affiliated to the institution publishing the journal to cite the journal. Patra, Bhattacharya and Verma (2006) analyzed the growth pattern, core journals and authors' distribution in the field of bibliometric using data from Library and Information Science Abstract (LISA) and found that the growth of literature does not show any definite pattern. Dhiman (2000) has done ten year bibliometric study Ethno botany Journal published during 1989-1998. In this paper examines year-wise, institution-wise, country-wise, authorship pattern, range of references cited and length of the articles.

### **SCOPE AND LIMITATION OF THE STUDY :**

The present study is to provide a sketch of Physics Periodicals published all over the world represented in Ulrich’s Periodical Directory. A total number of 2131 Periodicals were identified in the directory from the discipline of Physics. The present study is limited to 2131 periodicals in Physics published in International Ulrich Periodical Directory during the period of 2012 in 50<sup>th</sup> edition.

### **DATA COLLECTION :**

The list of periodicals published in the fields of Physics were collected from the latest (50<sup>th</sup>) edition of Ulrich international periodical directory 2012 with adequate details such as periodicals name year of publication, place of publication, frequency etc. these have been classified grouped and analyzed to find the various dimensions of the study.

## DEFINITIONAL ANALYSIS :

### MAPPING

Mapping is a structured process, focused on a topic or construct of interest, involving input from one or more participants that produces an interpretable pictorial view (concept map) of their ideas concepts and how these are interrelated.

### PERIODICALS

The term periodical refers to publication such as magazines, involves, newspapers. Periodicals are usually published relatively frequently and in an ongoing manner year after year. Periodicals are not limited to the print format some periodicals are published as online, digitized information residing in a remote database or in CD-ROM or other optical disc format.

### PHYSICS

Physics is the basic physical science. Until rather recent times *physics* and *natural philosophy* were used interchangeably for the science whose aim is the discovery and formulation of the fundamental laws of nature. As the modern sciences developed and became increasingly specialized, physics came to denote that part of physical science not included in astronomy, chemistry, geology, and engineering. Physics plays an important role in all the natural sciences, however, and all such fields have branches in which physical laws and measurements receive special emphasis, bearing such names as astrophysics, geophysics, biophysics, and even psychophysics. Physics can, at base, be defined as the science of matter, motion, and energy. Its laws are typically expressed with economy and precision in the language of mathematics. (<http://www.britannica.com/science/physics-science>).

## DATA ANALYSIS :

1. To analyze the continent-wise distribution of periodicals.
2. To analyze the country wise distribution of periodicals.
3. To find out the State wise distribution of periodicals in India.
4. To indicate the Languages wise distribution of periodicals.
5. To indicate the Ranking of languages.
6. To indicate the Periodicity wise distribution of periodicals.
7. To find out distribution of periodicals based on Publishers.
8. To indicate the Form wise distribution of periodicals.
9. To indicate the Year wise distribution of periodicals.
10. To indicate Ranking of Editors.
11. To identify ISSN Number wise distribution of periodicals.
12. To indicate Ranking of websites.
13. To identify the distribution of periodical coverage in Databases.

### 1. Continent Wise Distribution of Periodicals

| Table No.1 Continent Wise Distribution of Periodicals |                          |                        |                    |                |
|-------------------------------------------------------|--------------------------|------------------------|--------------------|----------------|
| Sr. No.                                               | Continents               | Contributing Countries | No. of Periodicals | Percentage     |
| 1                                                     | European Continent       | 34                     | 973                | 45.66%         |
| 2                                                     | North American Continent | 05                     | 541                | 25.39%         |
| 3                                                     | Asian Continent          | 24                     | 558                | 26.18%         |
| 4                                                     | South American Continent | 07                     | 23                 | 1.08%          |
| 5                                                     | Australian Continent     | 3                      | 14                 | 0.66%          |
| 6                                                     | African Continent        | 3                      | 12                 | 0.56%          |
| 7                                                     | Not Mentioned            | 0                      | 10                 | 0.47%          |
| <b>Total</b>                                          |                          | <b>76</b>              | <b>2131</b>        | <b>100.00%</b> |

Figure No. 1 Continent wise distribution of periodicals

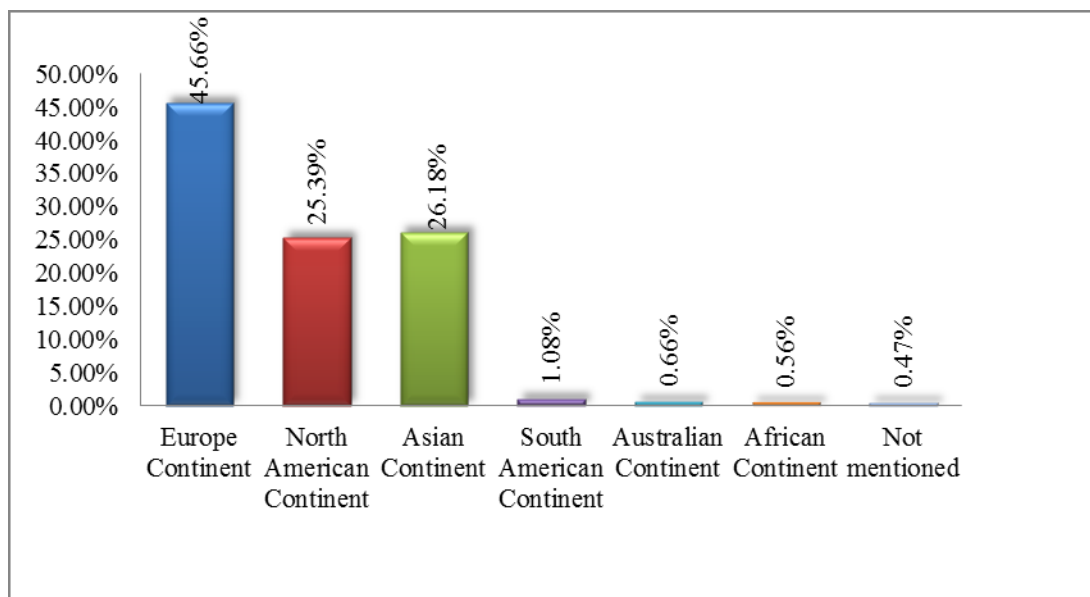


Table No.1 & Figure No. 1 shows the Continents wise analyze of periodicals of different continents. At the comprehensive level, the European continent stood in the first place with the highest publication i.e. 45.66% (973) and other periodicals published in other five continents.

## 2 Country wise distribution of periodicals

| Table No. 2 Country wise distribution of periodicals |              |                             |            |            |
|------------------------------------------------------|--------------|-----------------------------|------------|------------|
| Sr.No                                                | Country Code | Country                     | Periodical | Percentage |
| 1                                                    | USA          | UNITED STATES               | 514        | 24.12      |
| 2                                                    | JPN          | JAPAN                       | 263        | 12.34      |
| 3                                                    | GBR          | UNITED KINGDOM              | 195        | 9.15       |
| 4                                                    | NLD          | NETHERLANDS                 | 158        | 7.41       |
| 5                                                    | DEU          | GERMANY                     | 143        | 6.71       |
| 6                                                    | RUS          | RUSSIAN FEDERATION          | 138        | 6.48       |
| 7                                                    | CHN          | CHINA                       | 113        | 5.30       |
| 8                                                    | SGP          | SINGAPORE                   | 76         | 3.57       |
| 9                                                    | IND          | INDIA                       | 48         | 2.25       |
| 10                                                   | FRA          | FRANCE                      | 38         | 1.78       |
| 11                                                   | POL          | POLAND                      | 35         | 1.64       |
| 12                                                   | UKR          | UKRAINE                     | 35         | 1.64       |
| 13                                                   | ITA          | ITALY                       | 30         | 1.41       |
| 14                                                   | ROM          | ROMANIA                     | 29         | 1.36       |
| 15                                                   | CHE          | SWITZERLAND                 | 28         | 1.31       |
| 16                                                   | CAN          | CANADA                      | 19         | 0.89       |
| 17                                                   | AUS          | AUSTRALIA                   | 12         | 0.56       |
| 18                                                   | HUN          | HUNGARY                     | 12         | 0.56       |
| 19                                                   | KOR          | KOREA REPUBLIC OF           | 12         | 0.56       |
| 20                                                   | CZE          | CZECH REPUBLIC              | 11         | 0.52       |
| 21                                                   | ESP          | SPAIN                       | 11         | 0.52       |
| 22                                                   | FIN          | FINLAND                     | 11         | 0.52       |
| 23                                                   | SWE          | SWEDEN                      | 10         | 0.47       |
| 24                                                   | ARG          | ARGENTINA                   | 10         | 0.47       |
| 25                                                   | BGR          | BULGARIA                    | 10         | 0.47       |
| 26                                                   | AUT          | AUSTRIA                     | 9          | 0.42       |
| 27                                                   | SRB          | SERBIA                      | 9          | 0.42       |
| 28                                                   | TUR          | TURKEY                      | 9          | 0.42       |
| 29                                                   | BEL          | BELGIUM                     | 8          | 0.38       |
| 30                                                   | EGY          | EGYPT                       | 8          | 0.38       |
| 31                                                   | DNK          | DENMARK                     | 7          | 0.33       |
| 32                                                   | GRC          | GREECE                      | 7          | 0.33       |
| 33                                                   | BLR          | BELARUS                     | 6          | 0.28       |
| 34                                                   | BRA          | BRAZIL                      | 6          | 0.28       |
| 35                                                   | SVN          | SLOVENIA                    | 6          | 0.28       |
| 36                                                   | IRN          | IRAN,ISLAMIC<br>REPUBLIC OF | 5          | 0.23       |

|    |     |                          |   |      |
|----|-----|--------------------------|---|------|
| 37 | MEX | MEXICO                   | 5 | 0.23 |
| 38 | PRT | PORTUGAL                 | 5 | 0.23 |
| 39 | TWN | TAIWAN REPUBLIC OF CHINA | 5 | 0.23 |
| 40 | ISR | ISRAEL                   | 4 | 0.19 |
| 41 | LTU | LITHUANIA                | 4 | 0.19 |
| 42 | MYS | MALAYSIA                 | 4 | 0.19 |
| 43 | ARM | ARMENIA                  | 3 | 0.14 |
| 44 | LVA | LATVIA                   | 3 | 0.14 |
| 45 | PER | PERU                     | 3 | 0.14 |
| 46 | SVK | SLOVEKIA                 | 3 | 0.14 |
| 47 | UZB | UZBEKISTAN               | 2 | 0.09 |
| 48 | NGA | NIGERIA                  | 2 | 0.09 |
| 49 | NOR | NORWAY                   | 2 | 0.09 |
| 50 | PAK | PAKISTAN                 | 2 | 0.09 |
| 51 | THA | THAILAND                 | 2 | 0.09 |
| 52 | ZAF | SOUTH AFRICA             | 2 | 0.09 |
| 53 | KAZ | KAZAKHSTAN               | 2 | 0.09 |
| 54 | IRL | IRELAND                  | 2 | 0.09 |
| 55 | HKG | HONG KONG                | 2 | 0.09 |
| 56 | HRV | CROATIA                  | 2 | 0.09 |
| 57 | CUB | CUBA                     | 2 | 0.09 |
| 58 | AZE | AZERBAIJAN               | 1 | 0.05 |
| 59 | BIH | BOSNIA                   | 1 | 0.05 |
| 60 | BOL | BOLIVIA                  | 1 | 0.05 |
| 61 | COL | COLOMBIA                 | 1 | 0.05 |
| 62 | CRI | COSTA RICA               | 1 | 0.05 |
| 63 | IDN | INDONESIA                | 1 | 0.05 |
| 65 | JOR | JORDON                   | 1 | 0.05 |
| 66 | MDA | MOLDOVA, REPUBLIC OF     | 1 | 0.05 |
| 67 | NZL | NEW ZEALAND              | 1 | 0.05 |
| 68 | PHL | PHILIPPINES              | 1 | 0.05 |
| 69 | PNG | PAPUA NEW GUINEA         | 1 | 0.05 |
| 70 | PRK | PHASE REVERSAL KEYING    | 1 | 0.05 |
| 71 | SAU | SAUDI ARABIA             | 1 | 0.05 |
| 72 | TJK | TAJIKISTAN               | 1 | 0.05 |
| 73 | TKM | TURKMENISTAN             | 1 | 0.05 |
| 74 | UAE | UNITED ARAB EMIRATES     | 1 | 0.05 |
| 75 | CHL | CHILE                    | 1 | 0.05 |

|              |               |           |             |                |
|--------------|---------------|-----------|-------------|----------------|
| 76           | VEN           | VENEZUELA | 1           | 0.05           |
| 77           | VNM           | VIET NAM  | 1           | 0.05           |
| 78           | Not Available |           | 10          | 0.47           |
| <b>Total</b> |               |           | <b>2131</b> | <b>100.00%</b> |

Table No . 2 Depicts the Country Wise distribution of Periodicals. It can be seen from the table that the Highest Number of Periodicals are published from USA 514 i. e. (24.12%). followed by Japan 263 (12.34%) & United Kingdom 195(9.15%) respectively. It was also seen that India stood in the 9<sup>th</sup> Position with 48 (2.25%) periodicals.

### 3 .State wise distribution of periodicals in India

| <b>Table No. 3 State wise distribution of periodicals</b> |                |                    |                   |
|-----------------------------------------------------------|----------------|--------------------|-------------------|
| <b>Sr. No</b>                                             | <b>State</b>   | <b>Periodicals</b> | <b>Percentage</b> |
| 1                                                         | Kerala         | 13                 | 27.08             |
| 2                                                         | Maharashtra    | 8                  | 16.67             |
| 3                                                         | New Delhi      | 8                  | 16.67             |
| 4                                                         | Uttar Pradesh  | 6                  | 12.50             |
| 5                                                         | West Bengal    | 6                  | 12.50             |
| 6                                                         | Rajasthan      | 3                  | 6.25              |
| 8                                                         | Vishakhapatnam | 1                  | 2.08              |
| 9                                                         | Hyderabad      | 1                  | 2.08              |
| 10                                                        | Karnataka      | 1                  | 2.08              |
| 11                                                        | Madhya Pradesh | 1                  | 2.08              |
| <b>Total</b>                                              |                | <b>48</b>          | <b>100</b>        |

Table No.3 Shows that among the 48 Periodicals Published in India . Kerala is at the top position with highest 13 (27.08%) periodicals , 8 (16.67%) Periodicals are Published in Maharashtra & New Delhi . followed by 6 (12.50%) Periodicals in Uttar Pradesh & West Bengal.

### 4. Languages wise distribution of periodicals

| <b>Table No. 4 Languages wise distribution of periodicals</b> |                    |                   |            |
|---------------------------------------------------------------|--------------------|-------------------|------------|
| <b>Sr. No</b>                                                 | <b>Languages</b>   | <b>Periodical</b> | <b>%</b>   |
| 1                                                             | Single Language    | 1544              | 72.45      |
| 2                                                             | Two Languages      | 286               | 13.42      |
| 3                                                             | Three Languages    | 203               | 9.53       |
| 4                                                             | Four Languages     | 78                | 3.66       |
| 5                                                             | Multiple Languages | 20                | 0.94       |
| <b>Total</b>                                                  |                    | <b>2131</b>       | <b>100</b> |

Table No. 4 Depicts the Languages wise distribution of Periodicals. Out of 2131 physics periodicals. 1544 (72.45%) periodicals were published in single language , 286 (13.42%) periodicals published in Two languages , 203 (9.53%) periodicals published in Three languages , 78 (3.66%) periodicals published in Four languages and 20 (0.94%) periodicals published in Three languages.

### 5 . Ranking of Languages

| Sr. No | Languages  | Periodical | Rank | %     |
|--------|------------|------------|------|-------|
| 1      | ENGLISH    | 1542       | 1    | 64.71 |
| 2      | JAPANESE   | 190        | 2    | 7.97  |
| 3      | RUSSIAN    | 152        | 3    | 6.38  |
| 4      | GERMAN     | 116        | 4    | 4.87  |
| 5      | CHINESE    | 103        | 5    | 4.32  |
| 6      | FRENCH     | 85         | 6    | 3.57  |
| 7      | SPANISH    | 35         | 7    | 1.47  |
| 8      | DUTCH      | 24         | 8    | 1.01  |
| 9      | ITALIAN    | 19         | 9    | 0.80  |
| 10     | POLISH     | 16         | 10   | 0.67  |
| 11     | ROMANIAN   | 15         | 11   | 0.63  |
| 12     | MULTIPLE   | 12         | 12   | 0.50  |
| 13     | PORTUGUESE | 11         | 13   | 0.46  |
| 14     | KOREAN     | 8          | 14   | 0.34  |
| 15     | SLOVENIAN  | 5          | 15   | 0.21  |
| 16     | BULGERIAN  | 5          | 15   | 0.21  |
| 17     | HUNGARIAN  | 5          | 15   | 0.21  |
| 18     | SWEDISH    | 5          | 15   | 0.21  |
| 19     | CZECH      | 5          | 15   | 0.21  |
| 20     | FINNISH    | 5          | 15   | 0.21  |
| 21     | TURKISH    | 3          | 16   | 0.13  |
| 22     | DANISH     | 3          | 16   | 0.13  |
| 23     | ARABIC     | 3          | 16   | 0.13  |
| 24     | PERSIAN    | 3          | 16   | 0.13  |
| 25     | UKRANIAN   | 2          | 17   | 0.08  |
| 26     | SERBIAN    | 2          | 17   | 0.08  |
| 27     | LITHUANIAN | 2          | 17   | 0.08  |
| 28     | GREEK      | 1          | 18   | 0.04  |
| 29     | NORWEGIAN  | 1          | 18   | 0.04  |
| 30     | ARMENIAN   | 1          | 18   | 0.04  |
| 31     | BENGALI    | 1          | 18   | 0.04  |
| 32     | LATVIAN    | 1          | 18   | 0.04  |
| 33     | SLOVAK     | 1          | 18   | 0.04  |

|              |        |             |    |               |
|--------------|--------|-------------|----|---------------|
| 34           | HEBREW | 1           | 18 | 0.04          |
| <b>TOTAL</b> |        | <b>2383</b> |    | <b>100.00</b> |

Table No.5 Depicts the Ranking of Languages It can be seen from that the Highest Number of Periodicals are published in English languages 1542 (64.71%) . followed by Japanese 190 (7.97%), Russian 152 (6.38%) respectively.

#### 6. Distribution of periodicals according to periodicity

| <b>Distribution of periodicals according to periodicity</b> |                    |                   |                   |
|-------------------------------------------------------------|--------------------|-------------------|-------------------|
| <b>Sr. No</b>                                               | <b>Periodicity</b> | <b>periodical</b> | <b>Percentage</b> |
| 1                                                           | IRREG              | 468               | 21.96             |
| 2                                                           | Q                  | 370               | 17.36             |
| 3                                                           | M                  | 295               | 13.84             |
| 4                                                           | BI-M               | 260               | 12.20             |
| 5                                                           | A                  | 180               | 8.45              |
| 6                                                           | S-A                | 130               | 6.10              |
| 7                                                           | 8/yr               | 40                | 1.88              |
| 8                                                           | 3/yr               | 35                | 1.64              |
| 9                                                           | 6/yr               | 32                | 1.50              |
| 10                                                          | 12/yr              | 29                | 1.36              |
| 11                                                          | 4/yr               | 28                | 1.31              |
| 12                                                          | W                  | 25                | 1.17              |
| 13                                                          | 10/yr              | 24                | 1.13              |
| 14                                                          | 24/yr              | 22                | 1.03              |
| 15                                                          | S-M                | 20                | 0.94              |
| 16                                                          | 2/yr               | 18                | 0.84              |
| 17                                                          | S-W                | 14                | 0.66              |
| 18                                                          | 5/yr               | 12                | 0.56              |
| 19                                                          | 15/yr              | 9                 | 0.42              |
| 20                                                          | 16/yr              | 7                 | 0.33              |
| 21                                                          | 18/yr              | 6                 | 0.28              |
| 22                                                          | 36/yr              | 6                 | 0.28              |
| 23                                                          | 50/yr              | 5                 | 0.23              |
| 24                                                          | 7/yr               | 4                 | 0.19              |
| 25                                                          | 11/yr              | 4                 | 0.19              |
| 26                                                          | 14/yr              | 4                 | 0.19              |
| 27                                                          | 21/yr              | 4                 | 0.19              |
| 28                                                          | 20/yr              | 3                 | 0.14              |
| 29                                                          | 30/yr              | 3                 | 0.14              |
| 30                                                          | 32/yr              | 3                 | 0.14              |

|              |               |             |                |
|--------------|---------------|-------------|----------------|
| 31           | 48/yr         | 3           | 0.14           |
| 32           | BI-W          | 3           | 0.14           |
| 33           | 26/yr         | 3           | 0.14           |
| 34           | 40/yr         | 2           | 0.09           |
| 35           | 42/yr         | 2           | 0.09           |
| 36           | 54/yr         | 2           | 0.09           |
| 37           | 2/M           | 1           | 0.05           |
| 38           | 9/yr          | 1           | 0.05           |
| 39           | 28/yr         | 1           | 0.05           |
| 40           | 46/yr         | 1           | 0.05           |
| 41           | 60/yr         | 1           | 0.05           |
| 42           | 68/yr         | 1           | 0.05           |
| 43           | 90/yr         | 1           | 0.05           |
| 44           | Daily         | 1           | 0.05           |
| 45           | Not mentioned | 48          | 2.25           |
| <b>Total</b> |               | <b>2131</b> | <b>100.00%</b> |

Table no.6 Depicts the periodicals according to periodicity 468 (21.96%) periodicals were published Irregularly , where as 370 (1736%) periodicals were published Quarterly , 295 (13.84%) periodicals were published Monthly, 260 (12.20%) periodicals were published Bi-monthly and 180 (8.45%) periodicals were published Annually.

### 7. Publishers wise Distribution of periodicals

| <b>Sr. No</b> | <b>Publishers</b>                                           | <b>No. of Periodicals</b> | <b>Rank</b> | <b>%</b> |
|---------------|-------------------------------------------------------------|---------------------------|-------------|----------|
| 1             | Elsevier BV                                                 | 96                        | 1           | 4.50     |
| 2             | World scientific publishing co. pte.ltd                     | 73                        | 2           | 3.43     |
| 3             | I E E E (Institute of Electrical and Electronics Engineers) | 50                        | 3           | 2.35     |
| 4             | Springer New York LLC                                       | 45                        | 4           | 2.11     |
| 5             | Institute of physics Publishing Ltd.                        | 43                        | 5           | 2.02     |
| 6             | American institute of physics.                              | 38                        | 6           | 1.78     |
| 7             | Springer                                                    | 38                        | 6           | 1.78     |
| 8             | Russian Academy of Sciences.                                | 30                        | 7           | 1.41     |
| 9             | Springer Netherlands                                        | 30                        | 7           | 1.41     |
| 10            | VINITI RAN                                                  | 30                        | 7           | 1.41     |
| 11            | American physical society                                   | 22                        | 8           | 1.03     |
| 12            | Pergamon                                                    | 22                        | 8           | 1.03     |
| 13            | Hindawi Publishing Corporation                              | 21                        | 9           | 0.99     |
| 14            | Taylor & Francis Ltd.                                       | 20                        | 10          | 0.94     |

|              |                                                        |             |    |            |
|--------------|--------------------------------------------------------|-------------|----|------------|
| 15           | Academic Press                                         | 19          | 11 | 0.89       |
| 16           | M A I K Nauka-Interperiodica                           | 17          | 12 | 0.80       |
| 17           | Russian federation                                     | 17          | 12 | 0.80       |
| 18           | S P I E -International society for optical engineering | 15          | 13 | 0.70       |
| 19           | Taylor & Francis inc.                                  | 15          | 13 | 0.70       |
| 20           | Wiley-V C H Verlag GmbH & Co. KGaA                     | 15          | 13 | 0.70       |
| 21           | <b>Single Publisher (675)</b>                          | 675         | 26 | 31.68      |
| 22           | <b>Not mentioned publishers</b>                        | 27          |    | 1.27       |
| <b>Total</b> |                                                        | <b>2131</b> |    | <b>100</b> |

Table no. 7 analyzed publishers wise distribution of periodicals to find ranking of the publisher and most prominent publishers in the field of physics. It was seen that out of these first 20 prominent publishers are listed below in which Elsevier BV occupies the top position. World scientific publishing , I E E E, Springer new York LLC, institute of physics publishing Ltd , American institute of physics, Springer, Russian academy of sciences ,springer Netherlands , VINITI RAN , American physical society, Pergamon, hindawi publishing corporation, Taylor & Francis Ltd, Academic press, M A I K Nauka-Interperiodica, Russian federation ,S P I E, Taylor and Francis Inc, Wiley-V C H Verlag GmbH& co.KGaA are at the leading position having nearly 654 (30.78%) periodicals. Other publishers 775 (36.37%). It was also seen that 675 periodicals were published by single publishers.

### 8. Form wise distribution of periodicals

| Sr.No | Document Type         | Periodical | Percentage |
|-------|-----------------------|------------|------------|
| 1     | Journal               | 1169       | 54.86      |
| 2     | Monographic series    | 292        | 13.70      |
| 3     | Trade                 | 150        | 7.04       |
| 4     | Proceedings           | 123        | 5.77       |
| 5     | Abstract/index        | 78         | 3.66       |
| 6     | Magazine              | 60         | 2.82       |
| 7     | Newsletter            | 59         | 2.77       |
| 8     | Bulletin              | 31         | 1.45       |
| 9     | Government            | 28         | 1.31       |
| 10    | Report                | 24         | 1.13       |
| 11    | Corporate             | 13         | 0.61       |
| 12    | Consumer              | 12         | 0.56       |
| 13    | Directory             | 10         | 0.47       |
| 14    | Handbook/manual/guide | 9          | 0.42       |
| 15    | Guide                 | 3          | 0.14       |
| 16    | Yearbook              | 4          | 0.19       |

|    |               |             |            |
|----|---------------|-------------|------------|
| 17 | Bibliography  | 2           | 0.09       |
| 18 | Database      | 2           | 0.09       |
| 19 | Not available | 62          | 2.91       |
|    | <b>Total</b>  | <b>2131</b> | <b>100</b> |

Table No. 8 gives the Form wise distribution of periodicals out of the total 2131 periodicals, 1169 (54.86%) periodical were in journal form. Followed by other document type such as Monographic series 292 (13.70%) Trade 150 (7.04%) , Proceeding 123 ( 5.77%) respectively.

### 9. Year wise distribution of periodicals

| Sr.No | Year                   | Periodical  | Percentage |
|-------|------------------------|-------------|------------|
| 1     | 1660-1780              | 2           | 0.09       |
| 2     | 1781-1880              | 12          | 0.56       |
| 3     | 1881-1980              | 856         | 40.17      |
| 4     | 1981-2012              | 1068        | 50.12      |
| 5     | Not Clearly Identified | 62          | 2.91       |
| 6     | Not Mentioned          | 131         | 6.15       |
|       | <b>Total</b>           | <b>2131</b> | <b>100</b> |

Table No. 9 gives the year wise distribution of periodical which shows that highest number of Periodicals were published in the years 1981-2012 in 1068 (50.12%) periodicals, whereas in the year 1881-1980, 856 (40.17%) Periodicals were published. However in 62 periodicals the year was not clearly identified, and in 131 periodicals the year was not mentioned.

### 10. Ranking of Editors

| Sr.No | Editors                | No. of Periodicals | Rank | %    |
|-------|------------------------|--------------------|------|------|
| 1     | Stephen Montgormery    | 6                  | 1    | 0.28 |
| 2     | Angela Olendri         | 6                  | 1    | 0.28 |
| 3     | Weng Cho Chew          | 5                  | 2    | 0.23 |
| 4     | Chusei Namba           | 5                  | 2    | 0.23 |
| 5     | Yoshihiro F Mizugai    | 5                  | 2    | 0.23 |
| 6     | E P Volchkov           | 4                  | 3    | 0.19 |
| 7     | A Zichichi             | 4                  | 3    | 0.19 |
| 8     | Stefan Seelecke        | 4                  | 3    | 0.19 |
| 9     | B R V Hughes           | 3                  | 4    | 0.14 |
| 10    | Dwight E Neunschwander | 3                  | 4    | 0.14 |

|    |                       |   |   |      |
|----|-----------------------|---|---|------|
| 11 | Yurii Arskii          | 3 | 4 | 0.14 |
| 12 | Maricel Agop          | 2 | 5 | 0.09 |
| 13 | Dmitri Rabounski      | 2 | 5 | 0.09 |
| 14 | A B Balantekin        | 2 | 5 | 0.09 |
| 15 | Y Itakura             | 2 | 5 | 0.09 |
| 16 | Alistair Duffy        | 2 | 5 | 0.09 |
| 17 | P Thomas              | 2 | 5 | 0.09 |
| 18 | T Ohiwa               | 2 | 5 | 0.09 |
| 19 | Alan Chodos           | 2 | 5 | 0.09 |
| 20 | Elzbieta Nachlik      | 2 | 5 | 0.09 |
| 21 | S V Garimella         | 2 | 5 | 0.09 |
| 22 | Ruggero Maia Santilli | 2 | 5 | 0.09 |
| 23 | Barbara Goode         | 2 | 5 | 0.09 |
| 24 | Jaroslav Nevrala      | 2 | 5 | 0.09 |
| 25 | William T Rhodes      | 2 | 5 | 0.09 |
| 26 | F R de Boer           | 2 | 5 | 0.09 |
| 27 | james G Speight       | 2 | 5 | 0.09 |
| 28 | H John Caulfield      | 2 | 5 | 0.09 |
| 29 | S A Zhdanok           | 2 | 5 | 0.09 |
| 30 | Atef Elsherbeni       | 2 | 5 | 0.09 |
| 31 | Teruo Kishi           | 2 | 5 | 0.09 |
| 32 | J D Achenbach         | 2 | 5 | 0.09 |
| 33 | Allan D Pierce        | 2 | 5 | 0.09 |
| 34 | Zofia Golab-Meyer.    | 2 | 5 | 0.09 |
| 35 | Minas Ensanian        | 2 | 5 | 0.09 |
| 36 | Marsha I Lester       | 2 | 5 | 0.09 |
| 37 | Ben Bakker            | 2 | 5 | 0.09 |
| 38 | Stuart A Wolf         | 2 | 5 | 0.09 |
| 39 | Iam-Choon khoo        | 2 | 5 | 0.09 |
| 40 | Frank Columbus.       | 2 | 5 | 0.09 |
| 41 | K Iakovac             | 2 | 5 | 0.09 |
| 42 | Ayahiko Ichimiya      | 2 | 5 | 0.09 |
| 43 | Daniel Fargue         | 2 | 5 | 0.09 |
| 44 | Jacob Bear            | 2 | 5 | 0.09 |
| 45 | Andrea Luke           | 2 | 5 | 0.09 |
| 46 | I Muelier             | 2 | 5 | 0.09 |
| 47 | Vladmir M Aroutounian | 2 | 5 | 0.09 |
| 48 | William M Haynes      | 2 | 5 | 0.09 |
| 49 | Rongjia Tao           | 2 | 5 | 0.09 |
| 50 | Roger Wappling        | 2 | 5 | 0.09 |
| 51 | Bang-Fen Zhu          | 2 | 5 | 0.09 |

|    |                    |             |   |            |
|----|--------------------|-------------|---|------------|
| 52 | Nghi Q Lam         | 2           | 5 | 0.09       |
| 53 | R Reznicek         | 2           | 5 | 0.09       |
| 54 | Ding-Sheng Wang    | 2           | 5 | 0.09       |
| 55 | Matthias Laasch    | 2           | 5 | 0.09       |
| 56 | K H J Buschow      | 2           | 5 | 0.09       |
| 57 | Vladimir I Trukhin | 2           | 5 | 0.09       |
| 58 | Margaret Malloy    | 2           | 5 | 0.09       |
| 59 | R Jochemsen        | 2           | 5 | 0.09       |
| 60 | Radu Ibanescu      | 2           | 5 | 0.09       |
| 61 | Wen-Jei Yang       | 2           | 5 | 0.09       |
| 62 | Young I cho        | 2           | 5 | 0.09       |
| 63 | single Editors     | 1178        | 6 | 55.28      |
| 64 | Not Mentioned      | 803         | 7 | 37.68      |
|    | <b>Total</b>       | <b>2131</b> |   | <b>100</b> |

It can be noted from table no. 10 that in overall physics periodicals, Stephen Montgomery and Angela Olendri were found most prolific editors with 6 individually. Single editors are 1178 (55.28%) and they edited one each periodical.

### 11 ISSN Number wise distribution of periodicals

| Sr.No | ISSN Number  | Periodicals | %          |
|-------|--------------|-------------|------------|
| 1     | With ISSN    | 1783        | 83.67      |
| 2     | Without ISSN | 348         | 16.33      |
|       | <b>Total</b> | <b>2131</b> | <b>100</b> |

Table No. 11 shows that, the 1783 (83.67%) periodicals having ISSN number and 348 (16.33%) periodicals are without ISSN.

### 12. Ranking of Websites

| Sr.No | Websites                                                                      | No. of periodicals published | Rank | Percentage |
|-------|-------------------------------------------------------------------------------|------------------------------|------|------------|
| 1     | <a href="http://www.elsevier.nl">http://www.elsevier.nl</a>                   | 76                           | 1    | 3.57       |
| 2     | <a href="http://www.worldscientific.com">http://www.worldscientific.com</a>   | 74                           | 2    | 3.47       |
| 3     | <a href="http://www.springer.com">http://www.springer.com</a>                 | 65                           | 3    | 3.05       |
| 4     | <a href="http://www.publishing.iop.org/">http://www.publishing.iop.org/</a>   | 46                           | 4    | 2.16       |
| 5     | <a href="http://www.ieee.org">http://www.ieee.org</a>                         | 44                           | 5    | 2.06       |
| 6     | <a href="http://www.elsevier.ed">http://www.elsevier.ed</a>                   | 33                           | 6    | 1.55       |
| 7     | <a href="http://www.aip.org">http://www.aip.org</a>                           | 32                           | 7    | 1.50       |
| 8     | <a href="http://www.taylorandfrancis.com">http://www.taylorandfrancis.com</a> | 32                           | 7    | 1.50       |

|              |                          |             |   |               |
|--------------|--------------------------|-------------|---|---------------|
| 9            | http://www.viniti.ru.    | 29          | 8 | 1.36          |
| 10           | http://www.eastview.com. | 23          | 9 | 1.08          |
| <b>Total</b> |                          | <b>2131</b> |   | <b>100.00</b> |

Table no. 12 shows that out of these first 10 prominent websites are listed below in which elsevier.nl. occupies the top position. Following sequence World scientific, springer, publishing.iop, ieee, Elsevier. ed , aip, taylor and francis, viniti & eastview are at the leading position having nearly 836 (39.23%) periodicals. It was also seen that 605 (28.39%) periodicals were published by single websites.

### 13. Distribution of periodicals coverage in Databases

| Sr.No | Coverage in Databases | No. of Periodicals | %    |
|-------|-----------------------|--------------------|------|
| 1     | METADEX               | 808                | 4.56 |
| 2     | SCOPUS                | 657                | 3.70 |
| 3     | AESIS                 | 618                | 3.49 |
| 4     | BIOBASE               | 595                | 3.36 |
| 5     | ExcerPMed             | 498                | 2.81 |
| 6     | PhotoAb               | 442                | 2.49 |
| 7     | PollutAb              | 386                | 2.18 |
| 8     | FLUIDEX               | 375                | 2.11 |
| 9     | Emerald               | 295                | 1.66 |
| 10    | ChemTitl              | 280                | 1.58 |
| 11    | A08                   | 275                | 1.55 |
| 12    | SoftBase              | 274                | 1.55 |
| 13    | VITIS                 | 270                | 1.52 |
| 14    | MycolAb               | 266                | 1.50 |
| 15    | FS&TA                 | 264                | 1.49 |
| 16    | CurCont               | 260                | 1.47 |
| 17    | BrCerAb               | 255                | 1.44 |
| 18    | SCI                   | 249                | 1.40 |
| 19    | A & AAb               | 245                | 1.38 |
| 20    | INIS Atomind          | 239                | 1.35 |
| 21    | E&CAJ                 | 232                | 1.31 |
| 22    | SpeleoIAb             | 228                | 1.29 |
| 23    | AS&TA                 | 225                | 1.27 |
| 24    | H15                   | 225                | 1.27 |
| 25    | SPAA                  | 215                | 1.21 |

|    |             |     |      |
|----|-------------|-----|------|
| 26 | Inspec      | 212 | 1.20 |
| 27 | E15         | 209 | 1.18 |
| 28 | GeoRef      | 207 | 1.17 |
| 29 | PGegResA    | 205 | 1.16 |
| 30 | M&TEA       | 202 | 1.14 |
| 31 | P26         | 199 | 1.12 |
| 32 | ISMEC       | 195 | 1.10 |
| 33 | BIOSIS Prev | 189 | 1.07 |
| 34 | RefZh       | 187 | 1.05 |
| 35 | C33         | 184 | 1.04 |
| 36 | A20         | 180 | 1.02 |
| 37 | LeadAb      | 178 | 1.00 |
| 38 | B25         | 173 | 0.98 |
| 39 | H&SSA       | 173 | 0.98 |
| 40 | P51         | 173 | 0.98 |
| 41 | IABS        | 166 | 0.94 |
| 42 | M&GPA       | 166 | 0.94 |
| 43 | B&BAb       | 162 | 0.91 |
| 44 | NucAcAb     | 162 | 0.91 |
| 45 | SoftAbEng   | 158 | 0.89 |
| 46 | P36         | 156 | 0.88 |
| 47 | G10         | 153 | 0.86 |
| 48 | PhysBer     | 151 | 0.85 |
| 49 | S05         | 151 | 0.85 |
| 50 | RM&VM       | 151 | 0.85 |
| 51 | SCI         | 145 | 0.82 |
| 52 | PQC         | 140 | 0.79 |
| 53 | B12         | 138 | 0.78 |
| 54 | A37         | 115 | 0.65 |
| 55 | CABA        | 115 | 0.65 |
| 56 | P38         | 110 | 0.62 |
| 57 | PHN&I       | 108 | 0.61 |
| 58 | VirolAbstr  | 105 | 0.59 |
| 59 | S01         | 105 | 0.59 |
| 60 | Zincscan    | 105 | 0.59 |
| 61 | P22         | 99  | 0.56 |
| 62 | Reac        | 98  | 0.55 |
| 63 | APIAb       | 97  | 0.55 |
| 64 | CCMJ        | 97  | 0.55 |
| 65 | R07         | 97  | 0.55 |
| 66 | SSCI        | 97  | 0.55 |

|              |           |              |            |
|--------------|-----------|--------------|------------|
| 67           | ERIC      | 97           | 0.55       |
| 68           | R13       | 95           | 0.54       |
| 69           | HGA       | 95           | 0.54       |
| 70           | Z02       | 95           | 0.54       |
| 71           | C&ISA     | 93           | 0.52       |
| 72           | SolstAB   | 93           | 0.52       |
| 73           | P30       | 93           | 0.52       |
| 74           | CA/WCA    | 92           | 0.52       |
| 75           | BibLing   | 92           | 0.52       |
| 76           | E -Psyche | 89           | 0.50       |
| 77           | GSA       | 89           | 0.50       |
| 78           | Cadscan   | 89           | 0.50       |
| 79           | SpeleoIAb | 89           | 0.50       |
| 80           | WildRev   | 87           | 0.49       |
| 81           | TAR       | 87           | 0.49       |
| 82           | AgrForAb  | 85           | 0.48       |
| 83           | V03       | 85           | 0.48       |
| 84           | P48       | 85           | 0.48       |
| 85           | TCEA      | 83           | 0.47       |
| 86           | T02       | 83           | 0.47       |
| 87           | CEABA     | 83           | 0.47       |
| 88           | ToxAb     | 83           | 0.47       |
| 89           | IndMed    | 79           | 0.45       |
| 90           | OceAb     | 79           | 0.45       |
| 91           | WSCA      | 82           | 0.46       |
| 92           | GenetAb   | 82           | 0.46       |
| 93           | CerAb     | 78           | 0.44       |
| 94           | TM        | 76           | 0.43       |
| 95           | IBuildSA  | 74           | 0.42       |
| 96           | E08       | 74           | 0.42       |
| 97           | LISTA     | 68           | 0.38       |
| 98           | W08       | 65           | 0.37       |
| 99           | IBR       | 65           | 0.37       |
| 100          | SWRA      | 60           | 0.34       |
| <b>Total</b> |           | <b>17733</b> | <b>100</b> |

It can be noted from table no. 13 that the periodicals were covered in 100 databases. It is noted that out of 100 indexing database, Metadex database covered in 808 Physics periodicals. Followed by Scopus (657), AESIS (618), BIOBASE (595), ExcerptMed (498), PhotoAb (442), periodicals respectively. However the long forms of the database is given in the Appendix III.

## CONCLUSIONS:

Total 2131 periodicals in Physics published in 50<sup>th</sup> edition of Ulrich Periodical Directory , 2012 was considered to the present study. The Continents wise analysis of Periodicals in different continents , the European continent stood in the first place with 45.66% (973) and another 54.34% Periodicals published in North American, Asian, South American, and Australian & African Continent. 77 Countries published 2131 Physics Periodicals. The State wise distribution of periodicals 48 Periodicals Published in India. English is Predominant Language of Periodicals Publication. Publishers wise distribution of periodicals to find ranking of the publisher and most prominent publishers in the field of physics. Journals type of documents are higher in number the other type of documents. . Mapping of journal will help the librarians to guide, subscribe useful Periodical. The analysis will help the librarian to handle librarian and information centers.

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