Short Communication

PUBLICATION PATTERNS OF TURKISH ASTRONOMERS

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(Received May 14, 1996)

We studied 187 papers published in the journals on astronomy and astrophysics indexed in the Science Citation Index (SCI) for the decade period 1985–1994. These have been the papers that included at least one author listing an address from an institution in Turkey. We found that a great majority of the papers, whether theoretical or observational, went to only very small number (three) of a total set of 34 journals in the area. The distribution of papers by institutions revealed that about three fourths of the papers came from two universities: the Aegean University, and the Middle East Technical University (METU). We also found that the fraction of multiple authored papers has increased appreciably and the number of citations an "average" paper received has decreased gradually during the period considered.

Introduction

Research in astronomy, as in most other sciences in Turkey, can be considered to begin in the late 1930s, after declaration of new Republican Regime in the country, first in Istanbul Universitya and, on a smaller scale, in the Kandilli Observatoryb in the late 1930s. ¹ During the two decades that followed, much of the research work in the area had been carried out by a few foreign (mostly German) scholars working in the astronomy "chair" of the same university and their research results were published exclusively in the journals of the university at the time.

Starting in the late 1950s the number of papers with Turkish authorship in foreign journals, notably from France, Italy, and the USA, had increased each year and reached a total of 70 in 1981,² and eventually to about 100 in 1984.³ Although Turkey has not yet succeeded to create a world class national observatory, astronomy and astrophysics have developed gradually from the beginning, and substantially in the last

¹ Established in 1900 and reorganized in 1933.
² Founded 1911 and operated by the Ministry of Education until 1981, and then attached to the Bosphorus University in 1982.
three decades. Currently there are more than 100 Ph.D. astronomers actively involved in research on theoretical problems on stellar structure and evolution, neutron stars, and stellar pulsations as well as on the observational studies, mainly on light curves of binary stars, spectroscopic data analyses, analyses of astrophysical data in UV, X-ray, and gamma-ray regions.

Presently, Turkish astronomers are concentrated mainly in five universities and three small observatories which are attached to three of these universities: (1) Ankara University (established in 1944) and its observatory, (2) Bosphorus (Bogazici) University (grown out of the Robert College\textsuperscript{c} in 1971) and its Kandilli Observatory in Istanbul, (3) Aegean (Ege) University (established in 1955) and its observatory in Izmir, (4) Istanbul University, and (5) Middle East Technical University\textsuperscript{d} (METU) in Ankara. Among these centers only the astronomers working in METU are carrying out theoretical research in the areas mentioned above and the rest are doing research based on various observational data.

In the following analysis we attempt to provide an exhaustive inventory of all papers (articles, notes, letters, and reviews) published recently by Turkish astronomers in the leading journals of international communication covered in the Science Citation Index (SCI).

Data and Method

We scanned a total number of 34 journals on astronomy, and astrophysics listed in the Journal Citation Reports (JCR) 1994 to track the number of papers in the decade from 1985 to 1994. General science journals such as Nature, and Science are not surveyed. For each paper, we noted its type (theoretical or observational), the authors, author addresses as well as the citations it received in the successive years from 1986 to 1995 (the citation data for 1995 are estimated as explained in the notes to Table 3). These are the papers that include at least one author listing an address in Turkey. They do not include papers by Turkish authors working at institutions outside of Turkey, whether on sabbatical or foreign exchange programs, for example. This effort will give us a current view of the mainstream of the astronomical research in Turkey, as well as clues to the impact of research.

\textsuperscript{c} Established in 1836 by Christopher Rhinelander Robert.
\textsuperscript{d} Established in 1956. METU has built recently a small observatory which is not yet in full operation.