



GLEB ALEXANDROVICH CHEBOTAREV

IN MEMORIAM

GLEB ALEXANDROVICH CHEBOTAREV (1913–1975)

Astronomical science suffered a heavy loss when on 4 August 1975 Prof. G. A. Chebotarev died at the age of 62. He was an International Editor of *Celestial Mechanics* and Director of the Institute for Theoretical Astronomy (Leningrad, U.S.S.R.).

Born in Petersburg on 1 August 1913, Chebotarev in 1931 became a student of the mathematics and mechanics department of Leningrad state university and then did post graduate research in the field of celestial mechanics under the corresponding member of the Academy of Sciences Prof. M. F. Subbotin. In 1940 Chebotarev read his candidate dissertation on 'Motion of the Perihelion of Mercury as an Experimental Test on the Theory of Relativity'.

From 1940 he taught at Tomsk state university and in 1943 began to work at the Institute for Theoretical Astronomy. The subject of his doctorate thesis, which he read in 1951, was 'Application of Periodic Orbits for the Investigation of the Motion of Minor Planets'. Soon after he was appointed Director of the Library of the Academy of Sciences. In 1960 he returned to the Institute for Theoretical Astronomy and in 1964 was appointed its Director.

The name of Prof. Chebotarev is associated mainly with research in the motion of small bodies of the Solar System. Even a short account of the results of his investigations illustrates his contribution to science.

To study the motion of minor planets, Chebotarev elaborated an efficient method based on the utilization of periodic orbits of the three-body problem as intermediaries. With this method he constructed analytical theories of motion belonging to the Hestia and Hilda groups. In 1962–1965 Chebotarev suggested a new theory of motion of artificial satellites of the Earth for the case of near circular orbits. In the papers of 1961–1968 he investigated numerically the orbital evolution of satellites of the major planets and established an important result according to which satellites with retrograde motion were in some respect more stable than the direct ones. In 1971 while studying the influence of the Galaxy and nearest stars on the orbits of comets, Chebotarev was the first to estimate the theoretical dimensions of the Solar System. For many years Chebotarev carried on extensive research in the orbital evolution and the statistics of minor planets. He succeeded in finding some new peculiarities in the structure of the asteroid ring which are of great interest for cosmogony. The results of these studies were published in the collaborative monograph *Minor Planets* (Nauka, Moscow, 1973). 1965 saw the publication in the U.S.S.R. of Chebotarev's book *Analytical and Numerical Methods of Celestial Mechanics* which was later translated and published in the U.S.A. The total

number of Chebotarev's scientific publications amounts to 70. He was also the author of a great many popular science and review articles. (Chebotarev's major works are listed in: *Bull. Inst. Theor. Astron.* **13**, 605–608, 1975.)

Chebotarev's activities gained wide recognition. From 1952 he was a member of the International Astronomical Union. In 1967 he was elected President of Commission 20 on minor planets, comets and satellites. In 1958 he was granted the honorary degree of Doctor of Philosophy by Jena University (D.D.R.). He was an International Editor of *Celestial Mechanics* since its foundation.

Prof. Chebotarev was not only a prominent scientist but also a charming personality, modest and simple to deal with. His name will be long remembered by all those who knew him personally.

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