

Ya.B. Zeldovich and Foundation of the Accretion Theory*‡

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Abstract—This brief review is dedicated to academician Yakov Borisovich Zeldovich, the science of his epoch and the creation of modern accretion theory.

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1. INTRODUCTION

Yakov Borisovich Zeldovich was born on March 8, 1914, in Minsk. His father Boris Naumovich Zeldovich was a lawyer, a member of a College of Lawyers. His mother Anna Petrovna Zeldovich (Kiveliovich) was a translator, a member of the Union of Writers (Fig. 1).

My first acquaintance with Ya.B. Zeldovich began with buying his book “Further mathematics for beginners”. In the middle school my math teacher Alfred Viktorovich Baranovskiy explained us a method of finding a parabola extremum using Vieta’s formulas. And he told us by the way that using of the methods of further mathematics allows making this process easier and more elegant. He did not tell any details and I was intrigued. Suddenly I have seen this Ya.B. Zeldovich math book in a book store of Bobruisk city (not far from my town). I have bought it hoping to find out the method of finding a parabola extremum (Fig. 2). But few days later I have to pass entrance exams to Faculty of Physics of the Moscow University.

In 1963, I entered the Astronomical Division of the Lomonosov Moscow State University (MSU). My decision to study astronomy was inspired by another book that somehow found its way to Belarus of my childhood, “Essays About The Universe” written by Boris Aleksandrovich Vorontsov-Velyaminov, a professor of astronomy at the MSU (Fig. 3). Later I attended his lectures as a MSU student and was examined by him, I could not even dream about it



Fig. 1. Parents of Ya.B. Zeldovich.

two or three years ago when I studied his textbook “Astronomy” in school.

In my first three years at the MSU, Ya.B. Zeldovich was nowhere in my surroundings, nor did I ever remember the book I had bought in Bobruisk. This book was not included in the list of recommended texts, by no means because it was bad, but because the academician addressed it to beginning engineers and technicians as a self-education book on mathematics. Academician Ya.B. Zeldovich is known as an author of more than ten high-quality books on many issues of science.

For the first time I met Yakov Borisovich when the Dean’s office of Faculty of Physics organized a meeting of students with the editorial board of the famous Soviet scientific magazine *Physics Uspekhi*. It was the third year of my studying at the MSU. The Large Physics Audience was full. I was, of course, very impressed with the brilliance of Eduard Vladimirovich Shpolsky, the Editor-in-Chief (Fig. 4). Yakov Borisovich Zeldovich was silent all the time, sitting with his densely hairy hands crossed under his chin and being deep in his own minds. Later on,

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