

LETTERS TO PROGRESS IN PHYSICS**Valery N. Smirnov (1939–2009) and His Detector**

Victor A. Panchelyuga

Research Institute of Hypercomplex Systems in Geometry and Physics, Friazino, Russia
 Institute of Theoretical and Experimental Biophysics, Russian Academy of Science, Pushchino, Russia
 E-mail: panvic333@yahoo.com

Dr. Valery N. Smirnov who passed away recently, was an experimental physicist working on accelerator physics. Despite this fact, the main achievement of his scientific creation was the detector for measurement of perturbations in gravitational fields. This detector, having originally construction suggested by Smirnov, was launched at Moscow Engineer Physical Institute, Russia. Valery N. Smirnov continued his observations with the detector until his last days. We therefore refer to this device as Smirnov's detector.



Dr. Valery N. Smirnov. Pictured in the last decade.

Valery N. Smirnov was born in October 6, 1939, in Magadan, Russia, where his parents worked as reporters. In 1945, his family returned to Moscow, where he lived all his life.

After high school, in 1958, he was employed at the Institute of Radio Engineering. In 1960 he entered to Moscow Engineer Physical Institute, where was graduated in 1966. Then he returned to the Institute of Radio Engineering. In 1975 he was employed at Kurchatov Institute of Atomic Energy, as an experimental physicist in the field of accelerator physics. Smirnov designed "Fakel" (touch), the linear accelerator, and also numerous other accelerators for Kurchatov Institute. In 1983, he awarded Kurchatov Prize for the best engineering work done in the field. As one of the staff of Kurchatov Institute, Smirnov produced some studies at Chernobyl Nuclear

Power Station, in 1987 and 1989, after the catastrophe. He was gratituted by the Government for this job.

Some persons work in order only to earn money for live. In contrast, Smirnov spent all his life for scientific studies. He found the main task of his scientific creation when read the papers, published by Prof. Nikolai A. Kozyrev, the famous astronomer and physicist of Pulkovo Observatory, Leningrad. Kozyrev pointed out that, in his regular experiments with gyroscopes, the devices experienced small fluctuations at the moments connected to the dynamics of celestial bodies, e.g. the planets. This effect remained unexplained.

Smirnov supposed that the source of this effect is hidden in the imperfect suspension of Kozyrev's gyroscope. Thus, every period of revolution may be broken due to an external influence. In aim to study his supposition, Smirnov designed a special device, containing a gyroscope which was rotating in a special regime of braking (different braking regimes were ruled by special control electronics). Experiments conducted by him confirmed his initially supposition: the device showed steady sensitivity to the specific moments of celestial bodies dynamics, exact according to Kozyrev.

During the years and until his last days, Smirnov conducted regular observations with the device. He also improved its construction, making it more sensitive. The experimental results and the technical descriptions were presented by him in the publication [1]. Complete review of the experiments will be submitted to *Progress in Physics* later.

Dr. Valery N. Smirnov passed away in November 4, 2009, being full of new plans for research and creative ideas. In our memory he is still live amongst us, with his device we refer to as Smirnov's detector.

Submitted on November 15, 2009 / Accepted on December 01, 2009

References

1. Smirnov V. N., Egorov N. V., Schedrin I. S. A new detector for perturbations in gravitational field. *Progress in physics*, 2008, v. 2, 129–133.