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125th anniversary of ZhETF (Physics-JETP)

M I Kaganov

Contents

1. Introduction

1998 was the 125th anniversary of the main physics journal of Russia, the Journal of Experimental and Theoretical Physics (ZhETF, or Physics-JETP), the successor of the Journal of Russian Physico-Chemical Society (ZhRFKhO) (established in 1873).

The story of ZhRFKhO — ZhETF is inseparably tied to the history of Russian and Soviet physics. In fact, the journal and the articles published in it are the written history of physics: all its main achievements were committed to the pages of the journal. A reconstruction of the history of the ZhETF is a reconstruction of the physics of the country as a whole.

On the centenary of ZhRFKhO — ZhETF, ZhETF published a fairly large historical research paper (about 40 pages) written by Yu M Tsipenyuk: "From the history of the Journal of Russian Physico-Chemical Society — ZhETF (on the occasion of the centenary of foundation of a Russian physics journal)" [1]. The article presented not only a list of landmarks in the history of the journal but also described the history of the Russian Physico-Chemical Society and of physics in Russia (and the USSR); the article was based on the papers of leading scientists in the journal, gathering together a large amount of information and illustrations.

Using Tsipenyuk's paper [1] as a basis, we can define the main stages in the evolution of the journal. Each period has a section devoted to it:

— Physics in Russia at the end of the 19th century;
— The first decades of the 20th century;
— ZhRFKhO after October 1917.

The last section of the article is devoted to ZhETF — its title was just that: "The Journal of Experimental and Theoretical Physics".

ЖУРНАЛЪ
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ФИЗИКО-ХИМИЧЕСКАГО
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The Russian Physico-Chemical Society ceased to exist in 1930, and with it died its publication, the Journal of the Russian Physico-Chemical Society. "To replace the physics part of ZhRFKhO, the Journal of Experimental and Theoretical Physics was founded in 1931. The front cover of the new journal (delivered to the subscribers of the physics

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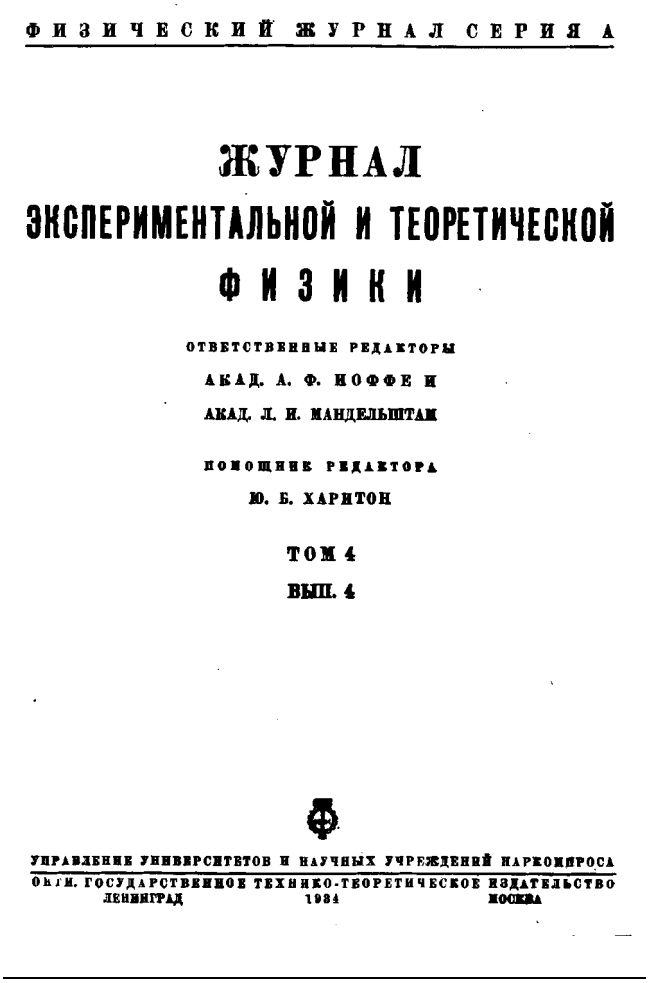

ФИЗИЧЕСКИЙ ЖУРНАЛ СЕРИЯ А

ЖУРНАЛ
ЭКСПЕРИМЕНТАЛЬНОЙ И ТЕОРЕТИЧЕСКОЙ
ФИЗИКИ

ОТВЕТСТВЕННЫЕ РЕДАКТОРЫ
АКАД. А. Ф. ИОФФЕ И
АКАД. Л. И. МАНДЕЛЬШТАМ

ПОМОЩНИК РЕДАКТОРА
Ю. Б. ХАРИТОН

ТОМ 4
ВЫП. 4

УПРАВЛЕНИЕ УНИВЕРСИТЕТОВ И НАУЧНЫХ УЧРЕЖДЕНИЙ НАРКОМПРОСА
ОНТИ. ГОСУДАРСТВЕННОЕ ТЕХНИКО-ТЕОРЕТИЧЕСКОЕ ИЗДАТЕЛЬСТВО
ЛЕНИНГРАД 1934 МОСКВА

part of ZhRFKhO) displayed the names of the two principal editors-in-chief — Abram Federovich Ioffe and Leonid Isaakovich Mandelshtam" (Tsipenyuk [1]).

The length of the last, the shortest, section of the article covered almost half of the jubilee period (in 1973). I think that two factors led to this brevity.

First, a journal article cannot describe in detail and discuss research papers during a period of fantastic advance of physics: the explosion included the birth of new fields and directions and the splitting of physics into almost 'non-intersecting' branches. The impossibility of describing and discussing papers forced Tsipenyuk to merely list them. Although enumeration lead to inevitable losses (the list had to be curtailed) the most important results obtained before World War II are mentioned. Papers published in the post-war period are not listed. This reflected the new realities. A large number of physics journals were created and even though ZhETF retained the position of the 'main' journal, the history of Soviet physics could not be reduced to publications in ZhETF.

Secondly, 'the article written by Yu M Tsipenyuk was commissioned by the ZhETF editorial board'. It appears that the main attention was to be paid to the history of ZhETF. For instance, almost nothing is said about the work of the editorial board and journal editorial staff in the years immediately preceding the jubilee year (1973).

However, it is clear now, 25 years after the commemorative paper was published, that ZhETF as it is known to the contemporary generation of physicists was 'born' on the day when the Presidium of the Academy of Sciences offered the position of the editor-in-chief to Petr Leonidovich Kapitza. Kapitza remained the editor-in-chief until his death (1984). For all these years his acting deputy was Evgeniĭ Mikhaĭlovich Lifshitz. The main topic of the present article is Kapitza's and Lifshitz's ZhETF and ZhETF after their deaths[1].

2. ZhETF: a brief biography

1873 was the year of foundation of the 'Journal of the Russian Chemical Society and Physical Society with the Imperial St. Petersburg University'. The editor-in-chief's responsibilities were entrusted to D K Bobylev. The very first paper published in the journal was written by Bobylev: "On the scattering of electricity in gases".

A year later the Physics and Chemistry parts of the journal were separated. The physics part was given an independent page numbering and was subdivided into two sections. The first section contained the minutes of the Physical Society, the papers presented by the members of the society and read at its sessions, and also the papers written by non-member scientists but who submitted their results to the 'judgement' of the society. The editor of this section was D K Bobylev. The second section consisted of reviews (edited by F F Petrushevsky). It consisted of 'abridged texts of papers on physics subjects appearing in current publications abroad' (something like the current "Journal of Abstracts").

The title that survived until 1930 — the 'Journal of the Russian Physico-Chemical Society" (ZhRFKhO) was adopted in 1878. The editor of its physics part (from 1875 to 1902) was I I Borgman.

The ZhRFKhO editor from 1903 to 1907 was N A Bulgakov, from 1907 to 1911 — V K Lebedinsky, from 1911 to 1918 — N A Gesekhus, and from 1919 to 1930 — A F Ioffe.

By 1930 the reorganization of the research societies and institutes was completed. The physico-chemical society was disbanded and its journal was discontinued. The physical part of ZhRFKhO was replaced in 1931 by the "Journal of Experimental and Theoretical Physics". From 1931 to 1939 it had two editors: A F Ioffe and L I Mandelstam. From 1939 to 1952 Sergei I Vavilov became the editor-in-chief, and after his death in 1951, N N Andreev.

Until the winter of 1941 the editorial offices of ZhRFKhO and then of ZhETF were located in St. Petersburg (Petrograd, then Leningrad). The publication of the journal was temporarily discontinued as the research institutions of Leningrad were evacuated to Kazan soon after the war with Germany began. Publication resumed in Kazan in 1942. The Academy returned to Moscow in the spring of 1943, and the editorial staff of ZhETF moved to Moscow as well. From that time on it remained in Moscow, and since 1955 has been part of the Institute for Physics Problems (IPP).

As mentioned above, the Academy of Sciences of the USSR approached L A Kapitza with a request to accept the position of editor-in-chief of the Journal of Experimental and Theoretical Physics. Kapitza suggested that E M Lifshitz become his principal and actively working deputy.

[1] Sources: documents supplied by ZhETF's editorial staff and the Kapitza museum, Kapitza's talk to the session of the Presidium of the Academy of Sciences in 1973 [2], papers by P E Rubinin [3] and Z I Gorobets – Lifshitz [4], and by Tsipenyuk [1] mentioned above, and also my personal recollections and impressions. Section 2 gives briefly the history of creation of the journal: the main 'biographic' data are given. The facts relating to the 1873 – 1973 centenary are quoted from Tsipenyuk's article [1].

Рис. 3. Meeting of the editorial board of ZhETF (end of the 70s). From left to right: Z P Bunakova, E M Lifshitz, A M Prokhorov, M A Leontovich, P L Kapitza, S Yu Luk'yanov, (facing away) É L Andronikashvili, V P Dzhelepov.

P L Kapitza died 15 years ago. The editor-in-chief of ZhETF from 1984 to 1997 was A S Borovik-Romanov, and now this position is occupied by A F Andreev.

E M Lifshitz was the acting deputy of the editor-in-chief until his death in 1985.

Other deputies of the editor-in-chief were[2]:

I E Dzyaloshinsky (1971 – 1987);

D E Khmelnitsky (1986 – 1990);

A Ya Parshin (from 1986 on);

K A Kikoin (from 1990 on); E I Kats (from 1997 on).

3. Do we need a journal of all physics?

The talk delivered by P L Kapitza 25 years ago on the centenary of the journal still remains interesting and informative. Without fully reprinting it, I'll quote several fragments [2].

Petr Leonidovich had not restricted his talk, as was traditional for jubilee celebrations, to listing the achievements of the journal under his guidance. Using the data of science modeling based on citation indexing (this field was very energetically developed at that time), Kapitza demonstrated the growth of world science, compared it with the growth in the number of science journals and the number of papers published in them. This comprehensive approach allowed him to show that ZhETF played a very significant role in international physics. Petr Leonidovich stated: "Among the Soviet journals, ZhETF thus occupies the top place", and corroborated this with the data from the book by Keenan and Atherton [5].

Kapitza applied a typical statesman's approach. He could not restrict his view to only 'his' journal. Taking in view the science of the entire USSR, he remarked: "... this comparison technique reveals that we have fallen behind in such fields as geophysics and biophysics". Kapitza concluded this with words addressed not only to the top echelon of the Academy of Sciences (being a member of the Presidium, he belonged to this level himself) but to the leaders of the country as well: "... even a *formal* (my emphasis — M K) analysis of publications in science journals supplies interesting and useful data for the organization of science and for its forward planning." Petr Leonidovich could not refrain from giving a useful example.

Having quantitatively proved that ZhETF is one of the leading physics journals on the international scale, he had formulated a question that I used as the heading for this section: "As physics progressed and expanded over the 100 years of existence of ZhETF, its contents inevitably changed but its overall nature has remained intact. It is then natural to ask this: to keep being useful, what goals should be formulated for ZhETF as a non-specialized journal and what should its contents be if in many areas of physics we now have specialized journals where any of the papers accepted by ZhETF could rightly appear? A logical answer to this question seems to be this: in physics, as in other sciences, there are research papers whose significance goes

[2] The names in the list are of those with whom the author was in closer contact over the years.

beyond the interest of experts in any of the specialized fields. These can be discoveries of new phenomena, or novel and original research techniques, or broad theoretical generalizations that cover several fields, etc. These are the kind of papers that must appear in ZhETF and *Physical Review*''.

Meeting these goals of ZhETF, precisely as of a non-specialized journal, made particular demands on the editorial staff of the journal; Kapitza went on to explain this in detail.

When rereading Kapitza's report, I was struck by the very matter-of-fact, absolutely non-jubilee characteristics of his statements. He spoke of the structure of the editorial board, of the need to attract highly knowledgeable referees, on the specific requirements applied to papers that aspire to be published in ZhETF, of the possible conflicts between authors and the editorial board, of the right to reject submitted papers, of the importance of reasonably speedy publication of papers in the journal, of the setting up in 1965 of ''Letters to ZhETF'' — of a journal that would print short papers within 1 to 2 months after submission. We will keep returning to many points raised in Kapitza's report. My quotations from it will be exhausted with its last two paragraphs: ''*... there is every reason to believe that ZhETF in the form we see now continues to be needed, even after a hundred years of life, and still assists our science on its way. It is not easy to be sure that this situation will persist in the future since there are many indications of a crisis brewing in the methods of science information services.*

The scale of research has grown so vast that the dissemination of information through only journals has become very difficult.

... the number [of papers published] is rising incessantly and will exceed 1 million by the year 2000. The number of abstract-publishing journals is also increasing and will reach 3000 by the year 2000. It seems that this method has outlived its useful life too. The need to use the newest information processing methods, based on modern electronics, such as computers and teletype, is felt to be more and more pressing. It is also evident that as international scientific co-operation expands, information exchange must be modified to a largely centralized global format. This field deserves careful attention since there can be no doubt that efficient information exchange is one of the main factors in the successful and efficient development of science'' ([2], pp. 220 – 221).

Petr Leonidovich could achieve more than just peering into the future: he also saw it.

25 years have passed. The global information picture has completely changed. The role played by journals has been modified as well. Computers constitute the main channel of communications between scientists of different research organizations. Scientists inform colleagues about their latest results through computer networks. And not only fellow scientists: there exist, and are replenished virtually everyday, huge databases that are accessible through Internet to practically every researcher. When one needs to look up a paper in a journal, this is also done mostly through a computer.

A natural question that arises in this connection is: given this situation, do we need journals at all, especially journals like the *Physical Review* and ZhETF?

We can repeat an argument that Kapitza formulated in his talk: '' similar journals on general topics are printed in the West as well''. None of the well known journals has been closed; quite the opposite, new ones have been started. I believe that the scientific community recognises that in addition to data bases that include 'everything that exists', there must be a procedure of selection and preliminary evaluation of papers and results. The publication in a journal gains additional weight precisely because a new possibility exists: to make your work known to your colleagues through a computer and without preliminary screening. The following thought is legitimate: if you failed to publish your result in a journal, you may not be quite sure of it, or it may have been refuted since.

An evaluation of submitted papers and results assumes that there exists a 'pecking order' or, as the saying goes, the 'Hamburg ratings' (meaning true but unofficial).

Evaluation according to the 'Hamburg ratings' is obviously an ideal for which any editor seems to strive, as some submitted papers have to be rejected. One also cannot help accepting the fact that papers and the results in them are objectively of different value and generality. In a world where the number of journals is almost infinitely large, they split into groups according to topics but also according to significance (or rating, using sport terminology): the hierarchy of journals lives on. The *Physical Review* in the world and ZhETF on the territory of the former Soviet Union are the principal thick journals. Both the *Physical Review* and ZhETF attempt (and I believe, quite successfully) to print objectively the best papers.

As physics progresses, the growth is accompanied by differentiation, as in any other science. Some of its fields 'branch off' so far away that physicists in these fields cease to understand their colleagues from some others fields. This is a very real process reflected by physics journals. The *Physical Review* split into issues each devoted to a field in which the papers specialize, while ZhETF is split into sections. This signifies that the editors are not always able to select for their non-specialized journal 'research papers whose importance stretches beyond the interest of experts in specific ... fields' [2]. The main criterion for selection becomes the objective quality of a paper, its correspondence to the level of the journal, and the realization that the paper is of interest to great many readers. Obviously, this criterion is almost impossible to formalize. A just selection — as much as possible — is facilitated only by a wise choice of referees by the editors and by a friendly but demanding atmosphere maintained by the upper levels of the journal staff.

ZhETF is a tiny structural unit of our physics. Tiny but very important. To a degree, ZhETF is its shop window. The difficulties that the leadership of the journal encountered and overcame more or less successfully were typical of all of Soviet, and now Russian, science. The experience gained by the ZhETF editorial staff, especially when P L Kapitza and E M Lifshitz were at the helm, is singularly instructive. The situation in the country has changed and keeps changing. It is not possible to learn how to 'overcome the resistance of the medium' from those who did it in the past: the medium is different. However, it is possible and even necessary to learn the attitude towards the job; it is useful to learn the principles that led P L Kapitza and E M Lifshitz when they were moulding ZhETF into a journal that was and remains the principal physics journal of the country.

4. ZhETF under the guidance of P L Kapitza and E M Lifshitz

The designation of P L Kapitza to the position of the editor-in-chief of was the first for him in the Academy of Sciences

after his spell in official disgrace, and that may have been one of the reasons for the seriousness with which Kapitza regarded the job. In fact, Kapitza treated any assignment with the utmost seriousness, and was always a professional. In this case his professionalism lay in the ability to select his team, or rather his comrades-in-arms. Most of all I mean E M Lifshitz.

P L Kapitza and E M Lifshitz has had previous experience of jointly heading a journal: from 1942 to 1947 Petr Leonidovich was the editor-in-chief, and E M Lifshitz his deputy, of the *Journal of Physics USSR*, a Soviet physics journal in English. L P Pitaevsky recalls (quoting E M Lifshitz) that the journal was closed by an order signed by Joseph Stalin.

Before P L Kapitza and E M Lifshitz took the helm, submitted articles languished in the editorial 'portfolio', as in editorial portfolios of other journals of the academy, for a year or two and sometimes longer. The editor-in-chief and his deputy immediately realized that this was caused by the pre-planned, fixed-size volume of each issue of the journal.

A premeditated fight for reasonable publication times started. Kapitza rejected in principle the attitude that can kill any venture: "Do it this way because everybody always does it this way." Fortunately the Department of Science of the Central Committee of the Communist Party of the USSR was headed at that time by a reasonable person, V A Kirillin. On 13 December 1956 Petr Leonidovich went for an appointment at the Central Party Committee and got a promise of support, and on 19 December wrote Kirillin a letter, attaching to it an "Address to the Presidium of the Academy of Sciences", presented as a letter to the president (dated 18/12/56). We quote both letters in full.

19 December 1956

To comrade V A Kirillin, Head of the Department of Science of the Central Committee of the Communist Party of the USSR

Deeply respected Vladimir Alekseevich!

In the spirit of our discussion on 13 December, I addressed the Presidium of the Academy of Sciences with a suggestion not to assign a fixed page budget to the Journal of Experimental and Theoretical Physics and therefore not to restrict the number of papers in an issue to prescribed limit.

I attach here my address to the Presidium of the Academy of Sciences in the form of a letter to the president. This letter was the subject of discussion at the session of the Bureau of the Section of the physico-mathematical science of the Academy and received Bureau's support. I also attach extracts from the minutes of the session.

When you and I discussed the hydrodynamics of transport of a liquid film, I promised to send you a copy of a paper on the subject. Unfortunately, I ran out of them. I attach some other papers that could be of interest to you.

In the copies of the papers "Heat conduction and diffusion in a liquid in periodic flow" and "On wind generation of sea waves" you will find references to the papers that I have mentioned in the discussion. They are underlined in red pencil.

With respect, P L Kapitza

18 December 1956

To the President of the Academy of Sciences of the USSR Academician A N Nesmeyanov

Deeply respected Aleksandr Nikolaevich!

The Journal of Experimental and Theoretical Physics is not only the oldest of our physics journals but is also the principal journal for physics in the USSR. It is translated in full and printed in the USA and is thus distributed even more widely around the world. This leading position of the journal places a considerable responsibility on my shoulders. Obviously, the quality of our journal must be high, as least not lower than of similar journals in the West. Alas, the quality of paper, fonts, drawings and correction procedures still remains inferior to that typical abroad even though we constantly pressure our printing industry to raise standards.

***The speed of publication**, defined as the brevity of the interval from the date of submission of a paper by the author to the date this paper appears in the printed journal should be regarded as a main characteristic of a science journal. This interval varies for the main physics journals in the West from two to six months, while here it is considerably longer and is often greater than a year. This length of publication interval in our journals is imposed exclusively by the queue that forms owing to the insufficient volume of the journal allowed.*

In my opinion, this phenomenon — typical of a number of journals of the Academy of Sciences — is very harmful for our science, and the Presidium of the Academy of Sciences must address this issue very seriously.

If we compare the sum of money spent by the country on average per day per research paper with the cost of its publication, this relation could be pictured by the ratio of the cost of the product of an industrial plant to the cost of the packing in which this product is shipped to the customer. In essence, a journal is the packing in which the product of research is distributed to the customers. If a plant has a shortage of packing stuff, the product remains shelved in warehouses, becomes obsolescent and deteriorates. But it would be even more detrimental to the economy of the country if the amount of industrial output, reaching the consumer, were determined by the amount of packing materials available. The volume of our journals being strictly predetermined, this is precisely what happens to our scientific output in the Academy of Sciences. Papers lie idle for years in editors' portfolios, and over this delay time 'go stale', that is, become obsolescent and irrelevant. They remain unknown both in the West and in our country, and this not only brings down the rate of expansion of science; while a paper is buried in an editor's desk, similar research is independently done by someone else, which is a waste of research time and money. Our research output costs hundreds of millions and rots away in editors' portfolios only because we try to save cents on the number of pages in our journals. There can be no doubt that this is a most harmful attitude and must be fought with the utmost vigor.

In our particular journal, being limited to a specific page budget, we try to counteract this damaging phenomenon with a number of stopgap measures. We raise our requirements on paper acceptance, that is, we do what an industrial plant does to scale down output by more rigorous quality control. We also pressure our authors to cut down the length of their papers, and if an author succeeds in squeezing it into five pages, we let it

jump the queue and print it in the section of Letters to the Editor, where the publication time has been brought down to 2–3 months. However, these are mere makeshift solutions which require huge efforts from the editors and often reduce the quality of presentation in a paper; this causes irritation of our authors who, as so typical of scientists, are overly sensitive, interpret the actions of their editors as a personal affront, and this makes our work even harder.

In view of this, I see only one correct way out of this situation for the Academy, in order not to limit the scientific product to the 'packaging'. What is needed is a resolution of the Presidium ***that the most important task of the printing branch of the Academy is to print original research papers that pay no fees to authors, and to print the journals for such papers without limitation and as a first priority. All other publications of the Academy of Sciences are to be printed only after the printing requirements of the leading science journals are completely satisfied.***

As part of the solution of this wider issue, I ask you to formulate for the Presidium a particular problem of immediately assigning an unlimited page budget to our journal in view of its importance and the huge backlog of submitted papers. My request is that the page budget of each issue not be pre-fixed and must be such that the journal's portfolio should not contain more submitted papers than for 2–3 issues. As a precedent of this method of determination of the required number of pages of the next issue I can refer to the physics journal published by the American Physical Society, "The Physical Review", which is a leading journal, as ZhETF. By its volume (by the number of printed symbols) it is about five time larger than our journal, and the page budget varies from issue to issue as new papers are accepted. The paper input also determines the number of pages in the leading European physics journal, "Nuovo Cimento" published by the Italian Physical Society. As in our country, these journals are non-commercial organizations, are often subsidized by learned societies, pay no authors' fees or royalties, and their editorial board consists of well know scientists. The publication time in these journals is from 1.5 to 6 months.

I request that you initiate before the end of this year at a Presidium session that the Journal of Experimental and Theoretical Physics be given, beginning in 1957, an uncapped page budget and allowed not to pre-fix the size of individual issues.

With respect, P L Kapitza,
Editor-in-chief of the Journal of Experimental and Theoretical Physics

I will share with the readers what came to mind when I was reading these letters. Petr Leonidovich liked to repeat that one talks of matters of love but writes about business matters. He believed that having obtained an oral agreement, he had to send a letter as if to complete the discussion.

Kapitza knew 'the rules of the game' very well, he realized that a reasonable degree of bureaucracy serves a purpose and tried not to break the rules. Note the second paragraph of his letter to Kirillin, where he points out that the Bureau of the Section of physico- mathematical sciences of the Academy supported the initiative of the editorial board of ZhETF (note also: ZhETF was structurally a branch of the Section of Physico-Mathematical Sciences of the Academy of the USSR).

The last two paragraphs of the letter to Kirillin touched a soft spot in me (can't find a better verb). The two administrators that met were also two scientists. It is thus clear that their discussion was not limited to administrative matters but spilled into scientific problems that concerned both.

The main point of the letter to the president of the Academy of Sciences of the USSR Academician A N Nesmeyanov, is Kapitza's rejection of the established order when he regarded this order as harmful. An excellent piece of writing, as all Kapitza's non-science writing is, this letter is an exercise in diplomacy: having evaluated the situation as a whole and having addressed the Presidium with a suggestion to make science journals printing the first priority item which (in Kapitza's opinion) would raise the level of research over the entire Academy of Sciences, he immediately formulates for the Presidium "a particular problem of immediately assigning unlimited page budget to our journal in view of its importance and a huge backlog of submitted papers". He continued: "My request is that the page budget of each issue not be pre- fixed." The problem was never solved for all journals but Kapitza's request concerning ZhETF was satisfied: the decree of the Presidium of the Academy of Sciences on 11 January 1957 put ZhETF in a privileged position.

Presidium of the Academy of Sciences

Decree of 11 January 1957, no 36, Moscow
On the Journal of Experimental and Theoretical Physics (submitted by the Bureau of the Section of Physico-Mathematical Sciences)

In view of the extreme importance of timely publication of original papers on physics, the Presidium of the Academy of Sciences of the USSR DECREES:

1. As an ***exception*** *(highlighted by me, M K), allow the editorial board of the Journal of Experimental and Theoretical Physics to publish the journal without capping its issue and annual page budgets.*
2. In view of the increase in the page budget of the Journal of Experimental and Theoretical Physics, increase
(a) The editorial staff of the journal by an additional permanent position of senior science editor;
(b) The staff of the Publishing House of the Academy of Sciences of the USSR by
(1) two permanent correctors
(2) one permanent typist.
3. The Publishing House of the Academy of Sciences of the USSR will be responsible for preparing by 1 March 1957 a draft proposal of a drastic improvement of the level of printing of the Journal of Experimental and Theoretical Physics.
4. In view of the impossibility of increasing the retail price of the Journal in 1957, to instruct the Planning and Finances division of the Presidium of the Academy of Sciences to allot a subsidy to the Publishing House of the Academy of Sciences of the USSR to cover the losses incurred.

Acting president of the Academy of Sciences of the USSR, Academician I P Bardin
Principal Learned Secretary of the Presidium of the Academy of Sciences of the USSR, Academician A V Topchiev

Let us return to the letter to the president. Rereading it, I noticed the paragraph in which Petr Leonidovich describes how the journal staff tried to solve the problems using stopgap measures. Among other things, "we ... pressure our

authors to cut down the length of their papers.'' And further: ''these are mere makeshift solutions ... which often reduce the quality of presentation in a paper; this causes irritation of our authors who, as so typical of scientists, are overly sensitive and interpret the actions of their editors as a personal affront.'' The allusion to the oversensitivity of scientists is unusual in this context: we feel that it is very important for Petr Leonidovich. We recall other, quite different, problems in his life: his refusal to work under Beria, his letters in defence of innocent imprisoned scientists — things that fall beyond the brief of this article.

Overblown planning is not the only factor that causes delays in publication. Another one (sometimes the main cause) was secretiveness beyond reason. Half a year before his appointment with V A Kirillin, on 8 June, 1956 Petr Leonidovich wrote to the President of the Academy of Sciences and argued in favor of simplification of the procedures of clearing nuclear physics research papers for publication.

8 June 1956
To the President of the Academy of Sciences of the USSR, Academician A N Nesmeyanov

Deeply respected Aleksandr Nikolaevich!

I had a discussion with you several months ago about the desirability of a change in the current regulations on the publication of papers dealing with nuclear physics. The current rules are such that in addition to the vetting that papers pass with the director of the institute concerned, they are to be sent for NTO (Scientific Technical Division) expert vetting, which consumes several months more. The journal suffers especially from the insistence of GlavLit (Central Censorship Office) that all papers be forwarded to NTO even when the director's office deems this unnecessary and sends a paper to a journal for publication without the NTO permission certificate; on top of this, GlavLit interprets the term 'nuclear physics' much too loosely.

In view of the current re-examination of the secrecy and classification procedures for the country as a whole, we think that it would be timely to modify the chain of nuclear physics paper clearing for publication, and to delegate to institute directors full rights to decide whether a paper can be allowed to appear in print.

We also believe that it is high time to question the necessity of requiring that an author of a research paper should 'pledge' in writing every time, that he is aware of the plagues that will follow if the secrecy rules are breached.

With respect
Academician P L Kapitza, Editor-in-chief, Journal of Experimental and Theoretical Physics

It is unlikely that this letter had any consequences. As far as I can see, the secrecy rules were beyond the power of the president of the Academy of Sciences. But even this letter is an evidence of Kapitza's independence and of his attempts to force the authorities to respect scientists, research institutes and their managing staff.

Obviously, the quality of a journal is mostly determined by the quality of papers it contains. Nevertheless, each issue of the journal is a book that needs printing on good-quality paper, with well-readable fonts, and it must be a pleasure to hold in your hands. Petr Leonidovich wrote on the quality of typesetting in the above-mentioned letter to the president of the Academy of Sciences, and sent a special letter to the Director of Academy of Sciences Publishing House in which he suggested ''... to raise the technological level of typesetting to the level at which the best western journals of similar orientation are printed''. Having formulated the problems to be solved, Petr Leonidovich ended the letter with a paragraph that could serve as a model of the 'culture of communications' between high-rank administrators: ''I realize that we can be successful only if we work continuously and in close and friendly cooperation with the Publishing House. In view of this, may I ask you to kindly arrange that one of your senior assistants pay me a visit during which we could discuss the topics raised and work out a specific plan of action''.

Post-1956 ZhETF is very different from that of 1930s-1940s: the paper and typesetting improved, and in appearance the ZhETF ceased to be very different from Western publications.

The conditions under which the editorial staff work are obviously very important for the quality of the journal. At least as important is the work of the editorial board and the quality of work done by the people who produce the journal.

The Statutes
of the Journal of Experimental and Theoretical Physics

ZhETF is a publication administered by the Section of Physico-Mathematical Sciences of the Academy of Sciences of the USSR; the only section empowered to modify the decisions of the Editorial board of ZhETF.

The Working Bureau is formed within the Editorial Board, consisting of the editor-in-chief, deputy editor-in-chief, and the secretary of the journal.

I. The principal goals of the journal are: publication of original papers that have not been published elsewhere within 6 months after submission, and 'Letters to the editor' within 2 months, whereby the journal portfolio must not contain more than six months' worth of accepted papers. To achieve this, careful selection of papers is required. The principles of selection:

1) The papers published in the journal must be of all-encompassing scientific interest in their significance — both in experimental and theoretical physics; their rapid appearance in print must be essential for the successful progress of physics in this country. Other submitted papers are transferred, by the decision of the journal bureau, to the existing specialized journals.

2) ZhETF will not publish papers on the philosophy and history of science, or science-popularizing papers.

3) If the publication of a paper was delayed due to factors beyond control of the author, and this fact has been officially confirmed, the time involved is taken into account in assigning the priority of publication of papers.

4) If necessary, the journal bureau may send a paper of considerable scientific interest to print without waiting for referees' comment.

5) Refereeing is obligatory for all received papers (except Letters to the Editor) with the exception of blatantly ignorant papers that the editor may reject without a referee's confirmation.

6) Letters to the editor are published without refereeing. The size of a letter must not exceed 5 typewritten pages. A detailed presentation of the work cannot be printed earlier than 6 months after the letter.

II. Discussions are welcome provided they stay impersonal and are of general interest to physicists. The journal will not publish an opinion of one author about the skill of others, only remarks on their work, of a purely scientific nature. The journal bureau may, at its discretion, show a critical paper to the author criticized prior to the publication date.

III. The journal is not intrusive and is not responsible for whom the author deemed necessary to cite. The journal may publish statements by individual scientists if their work was quoted by the author of a paper with an obvious error, or if an author plagiarized essential results obtained by the person submitting the statement to the journal, or in other cases of this kind. In all such situations the author(s) must be advised about the impending publication of such material.

IV. Papers will be published in ZhETF only in Russian. Abstracts to papers will be given in English, unless the author specially requests to place them in German or French.

V. The journal may publish brief reports on congresses, conferences, prizes etc (Current events section).

VI. The editorial board is convened at least twice a year or at any moment, if requested by more than two of its members.

Instructions on the procedures for amending and inserting additional material to papers in the journal's portfolio.

1. Corrections initiated by the author

No changes are allowed, or additions, that contain results that are new in comparison with those already presented in the paper. Slight changes may be supplied only at the end of the paper, in an 'Appendix', with the day of its submission indicated. Any substantial revision of a paper will entail a change in the date of submission, that is, the paper is then regarded as submitted afresh. Only very small corrections will be accepted without affecting the submission date if they aim at removing erroneous statements, helping to clarify statement formulations, or improve the clarity of the presentation.

2. Corrections initiated by the editors

The changes made on suggestions of the editors or referees and aimed at editing out errors or improving presentation do not affect the submission date. If the required revision affects the entire paper, the revision date will be indicated in addition to submission date. The journal may request that the author amalgamate into a single text two or more papers that are obvious extensions of previous ones; if these papers are submitted over not more than two months, the joint paper may be dated by the earliest of the submission dates.

A special instruction divided responsibility between members of the editorial board. It is clear that editor-in-chief was responsible for any actions that might lead to conflicts. P L Kapitza shielded the board and thus helped his deputies to implement ZhETF policies as defined by the ZhETF principles.

To lead a journal is a very lively job that requires constant attention. The bureau of the editorial board had meetings every two weeks and made immediate decisions on all problems that had accumulated. The minutes of the meeting fixed the point of view of the bureau and of course became the binding document for all members of the staff. I will give some examples that demonstrate P L Kapitza's desire and ability to administer on the basis of rules and laws. This was a typical feature of Kapitza's administrative activities and which put him in sharp contrast to typical Soviet administrators of any rank. It is especially true since the rules he had formulated were very reasonable and never thwarted work.

Extracts from minutes:

Decided: measures shall be taken to improve the quality of presentation in papers accepted for publication. In particular, authors will be required to provide an introduction and a conclusion to their papers, outlining the purpose of the work, its place among the research of other authors, a characterization of results and their discussion. The authors shall be required to introduce clarifying additions if recommended by a referee.

On requirements to authors to improve the presentation of papers

The board acknowledges that the journal has a right to demand that authors improve the presentation or extend their papers as a condition of publication.

On the procedures of editing undoubtedly meaningless or ignorant papers

Decided: the provision of detailed refereeing to the author of an obviously ignorant or meaningless paper shall not be obligatory; stating zero scientific value shall suffice. The authors shall be given a recommendation to ask for consultation at a research institute.

On the procedures of modifying the submission date in response to authors' introduction of additions and corrections

New data and results shall be added to a paper as separate additional units, accompanied with the dates of their submission to the journal. If it happens to be impossible to exactly indicate added pieces of text, the date of submission of the paper shall be changed. The original submission date (accompanied by a revision date) is retained if the revision involved only the method of presentation but did not introduce new results.

Many a reader will be touched by the following extract from the minutes.

On the publication regime for members of editorial board

The board confirms: the earlier established obligatory refereeing of papers submitted by members of the editorial board holds.

Publications in a journal (and especially a high-standing journal such as ZhETF) often cause priority disputes and complaints on citing or non-citing. As stated in the Statutes, "The journal is not intrusive and is not responsible for whom the author deemed necessary to cite ..." Realizing, however, that these are issues that are important for authors, the journal announced its decision:

On the publication of "Letters to the editor" on non-citing

Decided: to allow publication of short "Letters" claiming non-citing, and to limit the size of such to half of a page.

Having read the statutes, instructions and minutes of the bureau, I understood that answers to problems that, as I thought, arose from the work done on a particular paper, were in fact prescribed by the existing instruction (e.g., notations and sometimes the spelling of physical terms when discrepancies existed in the literature).

Evgeniĭ Mikhaĭlovich Lifshitz was the force behind enforcing the requirements of the statutes and instructions, and especially engaged in carefully selecting from the papers submitted to the journal. The acting deputy editor-in-chief for nearly 30 years, Evgeniĭ Mikhaĭlovich put in place an impeccable technology of communication between the author, the referee and the journal staff. Those who came to replace him still use it. Everyone knew his reluctance to compromise and not everyone liked it. P E Rubinin recollects: "... Evgeniĭ Mikhaĭlovich ... created many an enemy in this field, but continued to do his job unperturbed regardless of this danger, striving to achieve the goal formulated in the statutes." The goal had been achieved: as a rule, papers moved rapidly and ZhETF grew considerably 'thicker'. We will give the statistics on the size of the journal later in this paper.

Quoting Petr Leonidovich ("To administer means not to stand in the way of good people doing their job" [6]), P E Rubinin emphasizes that he avoided intruding into the work of the editorial staff under E M Lifshitz. However, this rule had to be broken now and again. These situations demonstrated another important characteristic of Kapitza as a manager: he was able to defend people working for him. I believe that the accursed 'honor of the uniform' played no part in it.

The relations between the author, referee and journal cannot always be cloudless. In the jubilee report of 1973 that I have already quoted, Kapitza informed the Presidium in detail on the principles and method of selecting among papers submitted. His evaluation of the referee's role is very interesting. The opinion of the expert referee does not always coincide with that of the author. A situation is possible in which the "referee's recommendation is not decisive for the journal. This happens, for example, if the author of a paper is an outstanding authority in a given field" — he admits "but (and this is a very important 'but' — M K) the referee's opinion is still important since it shows how the paper is understood." In all debatable cases "the bureau of the editorial board discusses the papers concerned with special care and takes the final decision".

The seriousness and refusal to compromise in selecting papers for publication can be illustrated with the correspondence with Ivan V Obreimov — Kapitza's friend and one of the very few people with whom Kapitza was able to use the pronoun 'ty' similar to the French 'tu' (inevitably replaced by 'you' in the letter that follows. — *Translator*). Obreimov wrote a very sharp protest to the journal against the rejection of a paper submitted by one of his collaborators. A quotation from his letter, proposing to fire E M Lifshitz from the position of the acting deputy editor-in-chief, can be found in P E Rubinin's article quoted above [3].

Kapitza's reply to Academician Obreimov:

11 February 1972

Dear Vanya[3]

In view of your request, I paid very close attention to the issue of publication of a paper from your laboratory in ZhETF. We invited the referee to the meeting of the Bureau of the editorial board, which met in full (six members) and discussed the paper in detail. I read it too.

I agreed with the unanimous decision of the Bureau that this particular paper is not suitable for publication in ZhETF.

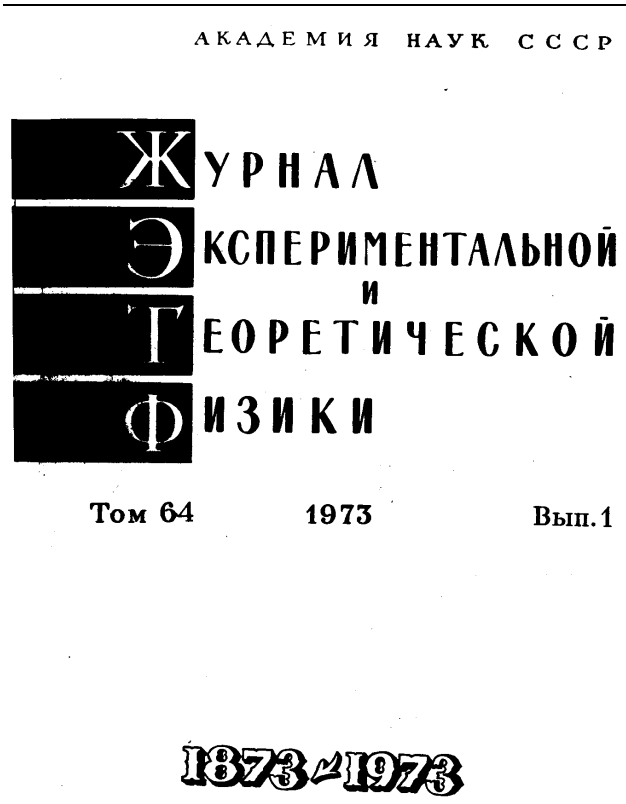
If you are interested in a fuller account of the arguments and the scientific analysis of the paper, I will be able to tell you everything in detail when you happen to be at our institute.

My best regards and best wishes (signed) [P L Kapitza]

The friendly tone of the letter failed to help: P E Rubinin recalls that I V Obreimov was mortally offended and avoided meeting Kapitza for several years. An important detail: Kapitza has not tried to pressurize the editorial staff, accepting that no compromise is possible.

The conflicts between ZhETF's editors and authors or their 'protectors' could not always be confined to academic circles. The next episode helps in visualizing the atmosphere of those years and Kapitza's ability to keep his cool. The conflict happened in 1963. ZhETF rejected a paper by professor A A Sokolov (who worked at Moscow University). The Communist Party Bureau of the Physics Faculty of the University complained to the Ideology Commission of the Central Party Committee (CPC) of the USSR (headed at that time by L F Il'ichev) of ZhETF's actions.

The CPC sent a letter and the complaint of the party bureau to the Section of Physico-Mathematical Sciences of the Academy of Sciences, and the section forwarded both letters to P L Kapitza. The accompanying letter contained the words: "Academician L A Artsimovich (who was at the time the Academician-Secretary of the Section — M K) suggests



[3] An endearing form of Obreimov's name Ivan, another sign of their friendship and closeness. — *Translator*.

that you consider the forwarded letter and make your opinion known to the section''. The speed of response of the section is very revealing: the CPC's letter is dated 21.03.1963, and that from Artsimovich, 27.03. It looks like there was no time to think.

Kapitza's letter to Artsimovich has survived. It is a brilliant document (as are most of Kapitza's letters) that shows that neither he nor the Bureau of the editorial board were inclined to prostrate themselves, were ready to discuss the journal's actions in a businesslike manner but would not confess the invented sins. We will give the letter in full.

April (1963)

To Academician L A Artsimovich, Academician-Secretary of the Section of Physico-Mathematical Sciences of the Academy of Sciences of the USSR

Deeply respected Lev Andreevich,

in response to your request concerning the letter of the party bureau of the Physics Faculty of Moscow University to the chairman of the Ideology Commission of the CPC concerning ZhETF's rejection of the paper by professor Sokolov, alleged to be ''a negative side to the activities of the journal, which harm Soviet science'', I forward this reply. The reply was discussed and seconded by the Bureau of the editorial board, formed of M A Leontovich, G B Zhdanov, E M Lifshitz, S Yu Lukyanov and myself.

Since the composition of the Editorial board is authorized by the Section of Physico-Mathematical Sciences and since its activities are regularly discussed by the scientific community at the sessions of the section, the method of complaining directly to the CPC from such a responsible party organization as the party bureau of the physics faculty of Moscow University, without an attempt of public discussion, is, in my opinion, an insult not only to the journal but to the section as well.

Both for me and for the other members of the editorial board the work at the journal is an unpaid social task, and our goal is to provide physics in this country with rapidly published research papers that are at a high scientific level. It has seemed to me until now that our journal has stayed at the level of the leading journals in the West, so that when a party organization of a large physics organization considers that our activities ''harm Soviet science'' and the Bureau of the Section then forwards this complaint to me, I feel very much surprised: does this admit that the complaint may be justified?

There can be no doubt that we are always ready to present to you the most detailed explanations on the reasons why a paper has been rejected and what other advice and instruction we give the authors to revise their papers. Also, I always feel happy when a specific critical remark is offered concerning errors made by the journal staff, or suggestions are made on how further to improve our work. This helps myself and my colleagues in the journal to raise our standards. The statement made by the party bureau of the physics faculty of Moscow University that we ''harm Soviet science'' is offending and insulting and I believe that the Bureau of the Section ought to protect myself and my colleagues in the journal from this irresponsible slander, and should not forward it to me. Unless this is done, I think you will agree that I will have greatest difficulties if I continue to manage the journal under such conditions.

Respectfully, P L Kapitza

It seems that this 'reporting' (what other term does this deserve?) by the party organization of the physics faculty via a party channel did not result in any 'administrative conclusions', using the Soviet lingo, although Kapitza's KGB file may have got thicker.

The Kapitza archive has a letter of 25 January 1967 to the Academician Secretary of the Section of General and Applied Physics of the Academy of Sciences of the USSR, L A Artsimovich, in which he requests to be relieved of the position of editor-in-chief of ZhETF and pass it on to M A Leontovich, one of the most active members of the Bureau of the editorial board and who was definitely as interested in the health of ZhETF as Kapitza was. Artsimovich's reply could not be found. It may never have existed; everything was settled over the phone. At any rate, that is what P E Rubinin's memory tells him. In his opinion, Petr Leonidovich's letter was caused by a single reason: his wish to resign from a job that, he thought, was well oiled and could move on without his participation. The resignation was not accepted by the editorial board nor by the Bureau of the Section. Everyone felt safer in the knowledge that Petr Leonidovich was at ZhETF's helm; he was probably requested to stay on, and agreed.

Correspondence has survived that confirms with certainty that the privileges won by ZhETF (uncapped page budget etc) did not guarantee the editorial board and its leaders a quiet life.

In 1972, several months before the journal's jubilee, ''... the 4th quarter benefits for 1971 were canceled for the staff on the grounds of the journal going over the pre-planned annual page budget'' (from Kapitza's letter to G D Komkov, director of NAUKA Publishing House, 3/03/72). Petr Leonidovich explains that ''by the special decision of the Presidium of the Academy of Sciences of the USSR (no 36, 11 January 1957), the page budget of ZhETF is not capped. An enlarged page quota meant more work for the journal staff and must be treated as an achievement by the journal, providing clockwork publication of papers''. This last point — crisis-free publication of papers — was Kapitza's main worry over the years. The director of the publishing house kept silent for three weeks, and Petr Leonidovich wrote a letter (29/03/72) to Academician M D Millionshchikov, chairman of RISO (the Editorial and Publication Council of the Academy of Sciences). Note especially the human tone of the letter: ''I am not quite clear on how one acts in such situations and will be very grateful if you can enlighten me in this matter''. We can hope that Millionshchikov did help.

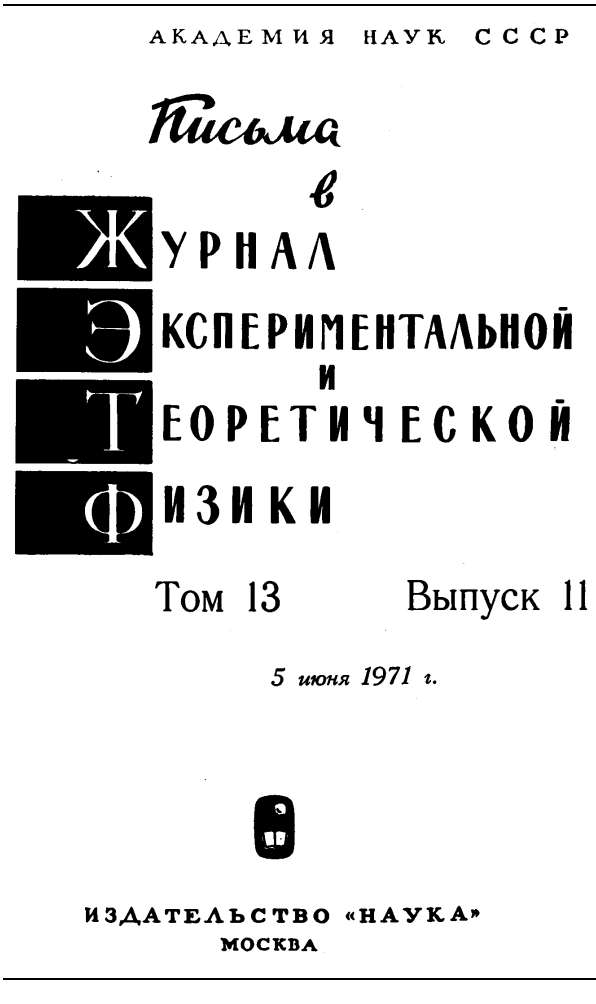
1976 executive order no. 44 for the NAUKA Publishing House, 17/08/76, signed by NAUKA director G D Komkov, ''On reducing the allowed amount of author's and editorial corrections''. An attempt to take away from the journals and authors the right to correct errors should have led to a drop in the quality of journal publications. On behalf of the bureau of the editorial board of ZhETF, E M Lifshitz sent a letter on 14 September 1976 to Academician A M Prokhorov, Academician-Secretary of the Section of General Physics and Astronomy, ''with a request to take urgent measures to cancel Order no 44 for NAUKA publications in that part of it that goes beyond the all-encompassing Order no 199 of the State Committee on Publications'' (it looks like the NAUKA director strove to 'overfulfill the plan').

We find in the RISO correspondence of 1976 that to quash Order no 44, P L Kapitza had to speak to the Presidium session and the editors-in-chief of other journals had to

support him. On the last day of September the RISO authorities sent out information that "the procedures of correction of physico-mathematical journals have been restored" to what they had been before the "executive order no. 44 of the NAUKA Publishing House director of 17 August 1976" was announced (from letter no. 10204-677 of 30.11.76, signed by the RISO chairman P N Fedoseev and the learned secretary E S Likhtenshtein).

As we have pointed out a number of times before, P L Kapitza paid much attention to timely publication of scientific results. At the time of writing, Letters to JETP (Pis'ma v ZhETF) is a formally and de facto independent journal with its own history and jubilee dates. However, it was born in the depths of ZhETF. ZhETF's editorial board, and Petr Leonidovich himself, for many years pushed a specialized edition aimed at brief but speedy presentation of fresh scientific results. Correspondence has survived that allows us to have a look into the prehistory of Letters to JETP.

Brief communications were first published as letters to the editor (a special section of 'Letters to the Editor' first appeared in the ZhETF in 1965). Petr Leonidovich was trying to cut the publication time down to the 'world standard' (at that time Physical Review published a letter in five weeks). He wrote on 26 March 1958 to A I Nazarov, director of the Academy of Sciences Publishing House, attempting to make "the publishing house accept part of the letters from the journal for additional typesetting during the setting of the current issue of ZhETF". Two months elapsed, and Nazarov kept silent. Petr Leonidovich realized that nothing would happen without help from above:


АКАДЕМИЯ НАУК СССР

Письма в ЖУРНАЛ ЭКСПЕРИМЕНТАЛЬНОЙ И ТЕОРЕТИЧЕСКОЙ ФИЗИКИ

Том 13 Выпуск 11

5 июня 1971 г.

ИЗДАТЕЛЬСТВО «НАУКА»
МОСКВА

26 May [195]8

To Academician A V Topchiev, Chief Learned Secretary Presidium of Academy of Sciences of the USSR

Dear Aleksandr Vasilievich!

Further to our telephone conversation, I forward to you a copy of my letter to the Academy of Sciences Publishing House, Director A I Nazarov of 26 March of this year requesting that the ZhETF Letters to the Editor be sent to typesetting while the journal issue is being typeset.

The purpose of this endeavor is to make it possible for our physicists to have short communications on new results published within one to two months. This mechanism works in a number of journals in the West.

I still have not heard from director Nazarov although this type of reform is long overdue. I have discussed it with comrade Kirillin, who is also of the opinion that the reform would be correct and timely.

I would be very grateful if you too supported this initiative and issued a corresponding instruction to the publishing house.

Respectfully yours, P L Kapitza

Alas, I am not aware if it became possible after this letter to hand in the ZhETF Letters to the Editor while the issue was typeset.

By 1964 it became clear that to ensure reasonable publication times for short communications, it was necessary to follow the path already chosen by Western physics journals, i.e. to set up a special journal. ZhETF's editorial board came up with the initiative. On 17/07/64 P L Kapitza wrote a detailed letter on this matter to the same V A Kirillin (who at the time was vice-president of the Academy of Sciences). Here is its text:

14 July [1964]

To Academician V A Kirillin Vice-president of the Academy of Sciences

Dear Vladimir Alekseevich!

I am writing to you on behalf of the editorial board of the Journal of Experimental and Theoretical Physics.

I am sure you know that to sustain the high pace of progress of physics, which is a must in our time, it is singularly important to be able to publish the main results of research rapidly. Two ways to achieve this are currently practiced. Method one is that of preprints in which papers are printed (rotaprinted) in each institute and the individual prints are sent to authors who are most interested in knowing the results. Printing these preprints is very costly and only the largest organizations, such as the Atomic Energy Institute, the Lebedev Physics Institute and Joint Institute of Nuclear Research, can afford it. The second method, open to all scientists, is the publication of letters to the editor. In our journal the time required to print such letters is the shortest in the Academy but, since the limiting factor is the time to publication of the next issue of the journal, it takes two to three months, which is longer than is desirable.

In Europe and the United States special journals have been created over the last several years to print rapidly short communications in the form of letters to the editor. In the

USA such a journal is ''Physical Review Letters'', published weekly, and in Europe this is ''Physics Letters'', published once every two weeks. We do not have anything similar. Scientists were unanimous in pointing out at sessions of the Section of the Academy and during meetings of our editorial board that the need to create a similar journal for rapid publishing of short communications here in the USSR is very pressing. For this reason the Journal of Experimental and Theoretical Physics decided to take the initiative of starting such a journal and began with producing it in the form of an addendum to ZhETF. This addendum will publish short communications in all branches of general and applied physics; after the launch, it will appear once a fortnight. The maximum publication time will not exceed two weeks. At the time of publication of a paper in the addendum its author will receive a sufficient number of offprints to distribute at his discretion to the more interested authors, as is being done now with preprints.

We discussed the method of organizing the printing of this journal at RISO, and they take it on themselves, provided you give the proper order, to start printing this journal as of 1965.

We suggest the following organization for the publication of this addendum. The general administration remains with the ZhETF editorial structure but in order to avoid delays in publication, a special small, permanently functioning editorial unit must be created, formed of capable young scientists. Taking into account the cost of printing and editing, we have calculated together with RISO that the cost of publication per page of the new journal will be 25 – 30 roubles (inclusive of the cost of offprints). We believe that the journal must be run on a self-supporting basis. The costs must be born by the authors or the organizations presenting the paper. These costs will not be a great burden since a preliminary note is rarely more that one or two pages. Furthermore, authors will get offprints, which relieves the institutes of printing preprints. This will make distributing papers as preprints affordable even for small research establishments.

In view of this, I request your permission to start the implementation of this project so that the journal may start regular publication at the beginning of 1965 under the same cover title: ''Journal of Experimental and Theoretical Physics'' with a subtitle ''Addendum. Letters to the Editor''. This addendum could be subscribed independently or together with ZhETF. The journal will not be specialized and will cover all fields of modern physics and its applications (nuclear physics, astronomy, spectroscopy etc).

Respectfully yours, P L Kapitza
Attached: the financial balance sheet provided by the Publishing House.

This ends the prehistory of *Letters to ZhETF*: from 1965 on it became an independent journal with its own editorial board and editor-in-chief. The position of editor-in-chief of *Pis'ma v ZhETF* was occupied for many years (1965 – 1987) by A S Borovik-Romanov. Having mentioned him, we should point out another side of Petr Leonidovich's managerial talents. He was able to find and train a respectable new generation of administrators. The death of a successful leader often results in the decline of the creation to which the deceased had devoted his life. The leadership transfer from Kapitza to Borovik-Romanov must become a textbook example. I feel that the main idea followed by Borovik-Romanov was: keep it running smoothly, do not spoil it. In my opinion, his effort was a success.

Let us return to the day-to-day activities in managing a journal. Letters, statutes and instructions are a good illustration of the ideal of what ZhETF should have been in the mind's eye of its creators. We have mentioned that they were able to claw special favors for ZhETF, which made it possible for the journal to exist in accordance with the principle formulated in the ''Statutes of the Journal of experimental and theoretical physics''.

We know full well, however, how often the desired differs from the achieved: looks fine on paper but is not so impressive in life. For the potential to become the reality, it is necessary to do everyday work, seemingly routine. E M Lifshitz's widow Zinaida Ivanovna Gorobets – Lifshitz, who in the past worked at ZhETF, wrote about how he worked in the journal. The most important point was that he loved doing it. I will give a long quote from her article: ''He usually came down to the journal two or three times a day, sat at a small desk near that of the senior managing editor and started reading the newly arrived papers. The ability to work very fast and to switch instantaneously from one topic to another allowed Lifshitz to cover an almost infinite field: the journal was getting nearly 800 papers yearly up to 21 typewritten pages each, and he concentrated deeply on each one''.

E M Lifshitz was a familiar sight in the editors' rooms. His aversion to, and dislike of, delaying for tomorrow what needs doing today generated in the journal an environment which was both business-like and cosy. Authors were glad to see him, to talk to him, to explain something. One element of this environment was the fact that E M Lifshitz had no personal office in the journal, and the atmosphere that reigned ZhETF was in stark contrast with the majority of Soviet bureaucracies.

Both P L Kapitza and E M Lifshitz died more than 10 years ago. It seems to me — and I wish to think this is true — the environment in the journal remains unchanged. Those who came to replace P L Kapitza and E M Lifshitz believed in and kept the traditions. Traditions survive only if people are active in maintaining them. All those who are involved with the most prestigious — as it was in the past — 'thick' physics journal of the Russian Academy of Sciences (the heir to the Academy of Sciences of the USSR) wish for ZhETF in the difficult conditions of today's Russia to remain what it was before.

It is clear from the text above that to write this article, I needed to read letters and documents that are kept in P L Kapitza's museum. Among the material sent to me was Petr Leonidovich's cable to Andrei Dmitrievich Sakharov in Gorkii where Sakharov lived in exile from January 1980 to December 1986.

603137 GORKII GAGARIN ST 214, APT 3
TO ACADEMICIAN A D SAKHAROV
21.04.80

EVEN THOUGH THE JOURNAL ISSUE HAD ALREADY BEEN TYPESET YOUR PAPER ON BARIONIC SYMMETRY HAS BEEN REMOVED IN ACCORDANCE WITH YOUR WISHES STOP REGARDS KAPITZA

As we find from the bibliography of Sakharov's work [7], three of his papers were published in ZhETF in 1980. Their titles do not refer to baryonic symmetry. However, the Gorkiĭ folder (Appendix IV in the book ''He lived among us ...'' [8])

includes "Information certificate on the scientific papers of A D Sakharov ..." where we find a clarifying footnote: the paper "On the baryonic asymmetry of the Universe" submitted to ZhETF in 1979 appeared in print under the title "Cosmological models of the Universe with a reversed time arrow" (ZhETF 79 689 (1980)). Having revised the paper, A D Sakharov changed the title as well.

As far as my memory goes, the arrival of Sakharov's paper to the journal in the years of his persecution caused agitation; however, I could not recall anything specific. I asked P E Rubinin (Kapitza's personal assistant at the time) who said this: "Anything connected with the publication of Sakharov's paper in ZhETF was always covered with a pall of secrecy. I remember how E M Lifshitz would enter Kapitza's office at any time with a worried expression on his face. I also remember that they would do anything Sakharov asked for, even though the elimination of the already typeset paper caused E M Lifshitz no end of trouble".

This last sentence brings us back to the scenario of the above cable. The words 'pall of secrecy' and the special interest in publications of A D Sakharov's papers in ZhETF may cause raised eyebrows in our readers of the younger generations. One has to remember that beginning almost in 1968, the 'guardians of rights' and the entire propaganda machinery of the state tried their hardest to discredit A D Sakharov, to make people believe that he had stopped working as a theoretical physicist[4]; they accused him of activities against his own people, unleashed and fed anti-Sakharov campaigns[5] during the Gorkii exile, and made communicating with him difficult. Before Sakharov was given the Nobel Peace Prize, they attempted, unsuccessfully, to organize a wall of silence around him.

The reason for mentioning the publication of Sakharov's papers in ZhETF is best explained by referring to the report (secret, of course) of the KGB chairman Andropov to the CPC. This letter, dated February 1973, suggests: "We believe it is advisable to eliminate any mention of the name SAKHAROV (capitalized in the letter — M K) from official publications of the Soviet press". The letter carries several signatures of persons who read it. Chebrikov's name is easily readable. You immediately notice a stamp "CPC approved" and the name of the person who informed the Sector of the General department of CPC of it. The letter was unclassified in 1994.

5. ZhETF statistics

Naturally, ZhETF monitors the amount of work done in the journal. Fairly rich statistics are available on the number of papers submitted and the number of those published (it is thus easy to see what sort of selection is carried out), and what are the topics of the input. The number of papers varies around 300 per year. The average length of a paper comes to 1 signature (now about 40 Kbytes of ASCII text).

The number of papers arriving to ZhETF decreased considerably by the beginning of 1990s; by 1997 the annual number of pages had dropped by one third. This is definitely a reflection of the processes unfolding in the country. It points, among other things, to the 'brain drain': a significant fraction of active physicists left for Western research centers. Furthermore, it became possible, and therefore desirable, for those who continued working in Russia and the CIS countries to be published in Western journals. One recognizes, of course, that this situation is also stimulated by the unjustifiably low international rating of ZhETF in comparison with Western journals.

The ZhETF always was and remains a purely physics journal. It includes the sections (very broad by today's criteria):

— Gravitation and astrophysics;
— Nuclei, particles and their interactions;
— Atoms, spectra and radiation;
— Plasma and gases;
— Solid state and liquids.

'Liquids' split off as an individual section in 1989, and a new section 'Nonlinear physics' was born in 1994. In 1973 P L Kapitza said in the report [2] quoted earlier that "An analysis of the topics of papers published in ZhETF[6] shows that most of them come from solid state physics (46%), then plasma physics (21%), optics-mostly lasers (21%), and nuclear physics (9%). In physics, as in any other science, there are always fields that advance more intensely at a given moment. Some 30 years ago these were nuclear and solid state physics, plasma physics and lasers. The distribution of papers in ZhETF reflects this tendency".

The distribution has not changed significantly over the last 25 years: solid state physics remains the largest. Even after 'Liquids' split off, the number of papers in solid state physics still takes more than 40% of the total number of published papers, and reached 60% in 1990 – 1992.

It must be mentioned that in view of the existence of specialized journals, the editorial board tries to influence the topics of papers accepted for publication. Quotes from the minutes of the Bureau of the Editorial Board will help to clarify the policies of the board regarding the topics.

Quotes from the minutes:

On the termination of acceptance of optics papers

In view of the launch of the journal "Optika i Spektroskopiya" (Optics and Spectroscopy), ZhETF will mostly cease to publish optics papers.

On the publication of papers in related sciences (including biophysics)

The board considers it expedient to publish only those papers whose contents can be understood and appreciated by physicists, and whose refereeing can be provided by physicists.

On papers on quantum generators

The board considers it expedient in the future to publish only those papers on the theory of quantum generators which contain aspects or suggestions of a principally new nature.

Please read carefully the following quote from the minutes "*On papers on nuclear physic*s"

[4] The Larger Soviet Encyclopedia of 1970-1978 has an entry for each full member of the Academy of Sciences of the USSR. The entry "Sakharov Andrei Dmitrievich" in the volume printed in 1976 says: "Ceased doing physics research". I know that this formulation was imposed by Central Party Committee orders.

[5] Neither P L Kapitza nor anyone else in the Institute of Physics Problems ever signed one of the denunciation letters against Sakharov.

[6] Presumably from 1931 to 1973. The period is not indicated in the report.

Taking into account that over the recent months the journal ''Yadernaya Fizika'' (Nuclear Physics) obtained enough papers to sustain publications over 5 to 6 months, the board considers it expedient to restart accepting papers on nuclear physics and elementary particles. Papers will be selected using the same criteria that serve to draw the borderline between ZhETF and other specialized journals.

Being aware of the problems of a newly created journal that lacked the built-up 'portfolio', ZhETF stopped publishing nuclear physics papers in order to ensure that the paper flow went to Yadernaya Fizika. Once the other journal was able to overcome its difficulties, it was possible to return to normal selection principles for nuclear physics and elementary particles papers.

Unlike its predecessor (ZhRFKhO), ZhETF was never the only physics journal in the country. In 1918 P P Lazarev created a special journal to publish review papers on physics: ''Uspekhi Fizicheskikh Nauk'' (UFN, currently known as Physics-Uspekhi). In 1920 E V Shpolsky became UFN's co-editor-in-chief, and then editor-in-chief until his death in 1975. UFN has celebrated its 80th anniversary (for details, see the article at the beginning of this issue).

In 1930, i.e. simultaneously with ZhETF, a ''Journal of Technical Physics'' was formed (by merging the ''Journal of Applied Physics'' and ''Physics and Industry'' that had been appearing for several years).

In mid-1950s a considerable number of specialized physics journals were created in the USSR: ''Kristallografiya'' (Crystallography, 1956), ''Pribory i Tekhnika Eksperimenta'' (Instruments and Experimental Techniques, 1956), ''Radiofizika'' (Radiophysics, 1958), ''Optika i Spektroskopiya'' (Optics and Spectroscopy, 1956), ''Fizika Metallov i Metallovedeniye'' (Metal Physics and Materials Science, 1955), ''Fizika Tverdogo Tela'' (Solid State Physics, 1959), ''Yadernaya Fizika'' (Nuclear Physics) (1965), ''Teoreticheskaya i Matematicheskaya Fizika'' (Theoretical and Mathematical Physics, 1969), ''Fizika i Tekhnika Poluprovodnikov'' (Semiconductor Physics and Technology, 1967) and others.

I am now looking at the alphabetic list of journals published by NAUKA Publishing House. The list is five pages long. In addition to the physics journals mentioned above, there are many more that are directly related to physics. Seven journal titles begin with the word 'physics'. This list ignores the journals not published by the Academy of Sciences (e.g. by the Ministry of Higher and Technical Education). It also does not include journals that were published in the republics of the USSR. As the scientific space covered the entire territory of the USSR (at any rate until the 1990s), these journals cannot be ignored. The abundance of specialized and regional physics journals resulted from the explosive increase in the number of physics papers. The flux of papers submitted to ZhETF did not diminish but the selection criteria were getting progressively stricter. If a paper was correct but failed the ZhETF criteria, it was not difficult to recommend it for publication a of specialized journal (and these were numerous). This stratagem was used by the referees and editorial board of ZhETF.

6. ZhETF today

The editorial board of ZhETF marked its 125th anniversary with a special article in its March issue [9]. Pointing out first that ''the world has changed beyond recognition'' in the years of existence of the journal and that ''all sciences, and especially physics, have made a giant leap forward'', the article states: ''The main thing has remained unchanged: the face of the journal, its traditions, its role at the center of physical thought''. The editorial board is entitled to such a statement. The inflow of papers still allows a strict screening of papers and the publishing of only the best; more than 40% are still rejected. This parameter fell to its lowest level in 1991 – 1993 (a proof that the crisis has been overcome) — despite the fact that a ''sharp decline in the state support of research, the departure of many leading scientists to work abroad and the diminished prestige of fundamental sciences led to a significant decline in the scientific activities in our country'' [9].

A typical feature of our time is the effort made by the country to enter the international community on the generally accepted, and not an exceptional, basis. The paper states: ''The journal is gradually becoming an inalienable part of the international system of scientific relations''.

In the second half of the 20th century English has become the de facto language of international scientific communications: not only are international conferences conducted in English but most journals are switching to publishing in English (even in non-Anglophone countries). Attitudes to this may differ. Some people regard a gradual transition to a single language of science as a bonus, since it facilitates communication; others concentrate on the inevitable losses for national cultures. However, regardless of the attitude, the tendency to communicate in English should not be ignored. The editorial board of ZhETF always took measures to make ZhETF papers accessible where people cannot read in Russian.

A correspondence between P L Kapitza and Robert T Beyer (1955 – 1956) shows that Kapitza started thinking about translating ZhETF into English immediately after accepting the position as editor-in-chief. The letters that laid the cornerstone of a stable relationship between ZhETF and the American Institute of Physics over many years deserve being given here in full.

25 November 1955.

Dear Professor Beyer!

Your letter sent to Dr N N Andreev, an editor of the ''Journal of Experimental and Theoretical Physics'' was forwarded to me since the Academy of Sciences has recently chosen me to manage this journal.

We were happy to learn that American physicists have begun to translate our journal into English.

Closing the gaps between scientists and joining scientific forces on an international scale meets with the complete and unconditional sympathy and support of out scientific community. Your initiative facilitates this process and we applaud it.

Your request that we supply you with three copies of our journal will be readily satisfied. I hope that you have already received the message from Dr G A Chebotarev, director of the Library of the Academy of Sciences, that as of October 1955, you will regularly receive, in accordance with your request, three copies of our journal. The Library of the Academy of Sciences is responsible here for exchange of publications.

You will probably be interested to know that from next year, our journal will run to one and a half times the volume of today.

Please address me directly if you need other assistance in addition to the mailing of the issues.

On the other hand, we — the Soviet scientists — would be touched if you found it possible, as this is done in science publications, to send here at least small numbers of offprints of the papers that you translate. If you send these offprints directly to our journal, we would organize their distribution among authors. Alas, paying for these offprints in hard currency cannot be arranged these days without a great deal of additional work.

We are looking forward with interest to the first issue of your journal.

Sincerely yours, Academician Kapitza

Soviet Physics
ZhETF
Translation of the "Journal of Experimental and Theoretical Physics"
February 1, 1956
American Institute of Physics
Editor-in-chief Robert T Beyer
Brown University Providence, RI

Dear Academician Kapitza:

Thank you for your letter of November 25, 1955. My colleagues and I were very pleased to hear from you. Your approval of our project is most gratifying to us and your assistance in the necessary arrangements is very helpful. We shall doubtless have occasion to refer further questions to you as they arise. May I note that your October exchange copies arrived here on December 27. We hope that you have already received our first translation issue.

On the basis of your letter, and of the information appearing in the November issue of the "Journal of Experimental and Theoretical Physics", the American Institute of Physics will publish the attached statement in the journal, "Physics Today", which goes to all American physicists.

We should be glad to send you six additional copies of each issue of our translation journal so that you could tear them apart and send each author three copies of his work. Thus your authors could see the translations of their own papers.

The Institute had not planned to undergo the expense of making reprints from this journal. In the case of the Institute's other journals, reprints are not made except on order from authors and then only at their expense. In view of this policy for the Institute's own members, we feel that we cannot supply you with actual reprints of the translations. We hope, however, that the arrangement outlined above will serve as a reasonable compromise. Incidentally, we would be happy to receive brief corrections, or clarifications, from the authors if any such seem desirable.

Let me express my personal feelings of appreciation for the friendly sentiments of your letter. I wonder if you could supply us with a recent photograph of yourself so that we could highlight the news of your appointment in a later issue of "Soviet Physics".

American physicists share your interest in the development of scientific cooperation on an international scale, and in the exchange of scientific information. They further welcome the opportunity afforded by the establishment of this translation journal to learn of the valuable research being carried on by your physics community. We hope that there will be further opportunities to expand this exchange of scientific ideas.

Sincerely yours, Robert T. Beyer

Beyer's letter shows the tremendous role that Petr Leonidovich's international reputation played in the rapprochement of the two organizations.

The editorial board states with gratitude: "For 40 years now the ZhETF editorial board has worked in close collaboration with the American Institute of Physics which translates and publishes ZhETF in English and lends us considerable help in producing the Russian version of the journal.

To translate ZhETF papers into English, the American Institute of Physics (AIP) uses professional physicists; the institute helps edit papers that are published in Moscow in English (at the moment, ZhETF accepts papers not only in Russian but in English as well). AIP has exclusive rights for distributing the English version of ZhETF (JETP) worldwide. The English and Russian versions of the journal appear simultaneously.

AIP agreed to accept papers from authors outside Russia and forward them to Moscow; editing these papers in English is done free of charge. The ZhETF editorial board uses physicists who live abroad as referees. AIP helps in communicating with these referees.

In 1997 AIP, through Physics Today, called on authors to write for ZhETF (JETP). To solve the logistics of this, AIP conducts international publishers' forums. Four such forums have place in the USA.

JETP as a rule is taken by all physics centers and taken by university libraries. Through the Internet, it is available to everyone online.

This rather detailed evaluation of the current situation is given to emphasize the firm belief of the ZhETF editorial board that "keeping intact all the traditions ... of the predecessors and integration into international community" should indeed result in a qualitatively new stage in the life of the journal.

It is difficult to believe now that in wishing to retain its circle of authors and trying to help authors to obtain the obligatory (at that time) permission to publish their papers abroad, the editorial board was pushed, and relatively recently at that, to rather artificial measures; a special ruling was passed, "On the admissibility of publishing in ZhETF those papers by Russian authors which are at the same time submitted to journals abroad": "The editorial board considers it allowable to publish papers that their authors submit simultaneously to the ZhETF and a journal abroad, regardless of the actual time of printing of the paper in the journal abroad" (from the minutes of the Bureau of the editorial board).

7. 'My' ZhETF

I wish to believe that what I wrote in this article is impartial and true. Most of the statements, if not all, can be supported by documents, and many of them are quoted. This last section refers to 'my' ZhETF to stress that it is based on my personal impressions and sentiments. I hope these notes are of interest to some readers.

When I began publishing my research papers, at the beginning of the 1950s, the USSR already had a range of

physics journals; also, universities and research institutes published, sometimes regularly, sometimes occasionally, collected papers under the title 'Learned Notes'. All my life in science, myself and I think my colleagues as well were keen on ZhETF publications. Every one of us (or nearly every one, this is difficult to evaluate) felt inside ourselves an internal editor who made a decision when a paper was prepared for publication: ''This one is for ZhETF, but this one is too lightweight''. All the long years until 'perestroika' we were practically banned from publishing abroad. Everything really important that was achieved by Soviet physicists found its reflection on the pages of ZhETF.

I should say that Western scientists were rather well informed about our papers. The leading Soviet physics journals, ZhETF first of all, were read in the West and most of the papers were refereed. Some physicists (e.g. Freeman Dyson) learnt Russian especially to be able to referee papers published in Russian-language journals.

The prestige of ZhETF was enhanced by the fact that the list of publications of a physicist played an important role in finding a job or applying for membership of various organizations (e.g. the Academy of Sciences), and the presence of papers published in ZhETF was always interpreted as an important plus. One could often hear something like: ''Is he a worthy candidate? He only has two publications in ZhETF'' or ''Graduated from university a year ago and already has a paper in ZhETF. Definitely a promising young man''.

Every journal (not only scientific ones) has a circle of authors, and so has ZhETF. Of course, ZhETF authors do not form a fixed, unchanging group. Authors come and authors go. The appearance of new names (especially if their publications are outstanding) and, even more importantly, new research centers always attracts attention and general interest. The 'geography' of authors who published in ZhETF expanded monotonically. Tbilisi, Yerevan, then Novosibirsk, and Krasnoyarsk joined the traditional centers (Moscow, Leningrad-St. Petersburg, Sverdlovsk, Kharkov, Kiev).

One of the important features of the ZhETF is the obligatory refereeing of all papers submitted to the journal. Referees are selected from among the authors of ZhETF. As far as I can see, the choice of referee takes into account not only his expertise in the subject of the paper but also his punctuality and reliability. It seems that the last two qualities play an especially important role in choosing a referee: editors do not want papers to lie idle on referee's desk. The administrative positions of referees affect the choice in a curious manner: editors try to avoid engaging 'bosses', knowing how busy bosses of different ranks are.

To what degree is refereeing objective and impartial? I am sure that if we put that question to various people, the answers would vary. Those whose papers were easily accepted by ZhETF, were not rejected, were not returned for revision, will hold that the refereeing is objective. Those whose papers were rejected or who got through after an exchange of letters that was tedious to both sides are likely to question the impartiality of refereeing. As a rule, this group of authors dislikes the fact that the name of the referee is kept secret, even though this is customary for journals the world over.

I belong to the former group of authors, and referees seemed to be quite impartial to my papers. I was a referee for many years myself and declare that I never took into account any factors outside the results presented by the authors, the current status of the field to which the paper belonged, and how the paper was written, its style. When in doubt, I tried to follows Lev Landau's motto: ''Authors are usually right''. I think most referees acted similarly.

It may have happened that a referee found that a paper was obviously (objectively) incorrect. This was simple: you just suggested that the journal reject the paper. Sometimes (it is hard to say how often) the reason for rejection is not so obvious. In some cases the rejection is based on the referee's opinion that the paper does not meet the requirements that, by his set of criteria, must be met by ZhETF papers. The referee may regard the paper as correct but its subject may be too narrow (or too shallow) and thus the paper should be published in a specialized journal. Sometimes the rejection was caused by the manner in which the paper was written. I have already mentioned that formalizing the criteria is impossible. As a result, such reasons for rejection may lead to conflicts, and did produce conflicts. As in any 'live' activity, errors on both sides are inevitable: some papers were published that should have been rejected while some were rejected that deserved being published. In my opinion, such errors were infrequent, and the normal situation was that of a just decision about publication.

Several decades ago ZhETF resembled *Physical Review* before it split into series for different fields. ZhETF covered the same fields but differed in the size of papers, in their brevity. Even though a paper in the ZhETF should contain a sufficiently detailed presentation of the paper and its size should be dictated by its contents, ZhETF and its referees could not allow the authors to do that. The availability of paper was always insufficient in the USSR and this led to a limit on the size of an article. As a consequence, a special laconic language was formed and became habitual. Writing in this lingo was relatively easy but even we, the cognoscenti, had difficulties reading in it. A typical joke was born: ''Please explain the part which 'is easy to show'. I'll figure out the rest myself''.

The imposed brevity of papers was not the fault of Soviet journals but a curse, even of ZhETF although it was practically always (in my years) in a privileged position relative to other natural science journals. The laconic style of the papers was undoubtedly one of the reasons of the insufficient popularity of Russian-language science journals.

As a rule, authors submitting papers to the journal work at research and educational institutes, and each paper is accompanied by a supportive letter from the administration of the institute where the author works. In such cases the organization where he or she works is indicated in the file. It is easy to discover that ZhETF also published papers in which the author's affiliation was not given. Sometimes this signified that the authors belonged to a 'closed' organization (classified, and never mentioned in open press). Sometimes this meant that the author did not work in a research organization for some reason (a refusnik, a dissident, or could not find a job) or was in conflict with the managers of his organization. My impression was that in such a conflict situation, ZhETF and its editorial board were on the side of the author. Provided, of course, the paper satisfied the criteria of publicability, whose formulations ignored any arguments beyond the realm of scientific evaluation.

Cases of 'reversed' conflict happened as well. A respected director of a respected organization insisted on the publication of a paper of one of his subordinates but the referee would not agree that the paper deserved it. Several episodes described in section 3 show the line of behavior of the ZhETF management.

A publication in a scientific journal inevitably involves questions of author's priority. ZhETF treated these matters very seriously. However, treating the assigning of time of submission and publication of a result quite seriously, ZhETF's referees and editors did not assume judge's powers and did not lead a campaign for impeccable citing. With the abundance of publications typical of the last decades, it is almost impossible to achieve strictly correct citations, so ZhETF never formulated such a goal for its referees. I remember an undoubtedly rare case (which I learnt of from E M Lifshitz) when almost every paper submitted to the journal by one specific author met with objections from different (!) referees owing to the incorrect presentation of the history of the subject[7]. The editorial board sent the author a warning and a suggestion to be impartial when citing earlier work of others. The tone of the letter was approximately this: "We are tired of reading such comment addressed to you..."

Authors and research institutions do not pay when publishing a paper in the ZhETF. Likewise, the journal pays authors no fees. The American Institute of Physics pays authors a certain amount in hard currency for the right to translate their papers. In Soviet times authors were paid in Beryozka certificates, and these days in US dollars. The sums are not very significant but they played and still play a role in the budget balance of researchers whose salaries, to put it very conservatively, are not very large.

I mentioned earlier (in Section 4) that new specialized physics journals were created in the 1950s. As the example of "Yadernaya fizika" shows, the leadership of ZhETF showed no 'jealousy' regarding young journals. The creation of the Physico-Technical Low-Temperatures Institute in Kharkov (FTINT, now named after B I Verkin) necessitated initiating a new journal for the low-temperature field. It was called "Physics of Low Temperatures" and first appeared in 1974. I remember very well that E M Lifshitz did not approve of this decision at all, expecting that the subjects traditional for ZhETF (superconductivity and superfluidity) would leave it. Many of ZhETF's authors who received invitations to join the editorial board of the new journal felt themselves in a quandary because of this attitude. The clouds soon cleared and the conflict died unborn. As in all other fields of physics, authors tried, as before, to send those papers that they deemed worthy of being published in the principal physics journal of the land to ZhETF: superconductivity and superfluidity papers were still published in ZhETF. In some periods, the management of FTINT attempted protectionist policies, creating hurdles for those working at FTINT to publish in an 'alien' journal. As always in such cases, authors learnt tricks of how to get round the bans.

ZhETF is produced not only by its leadership: the editor-in-chief, his deputies and the editorial board. The journal would not appear were it not for the editorial staff (I do not think any men ever have been on this staff). As for us, the authors and referees, we met with these ladies much more often than with the men of the administration. I (as an author and referee) still have pleasant memories of our joint efforts to make a paper clearer, to rid it of inevitable flaws. I was always awed by the patience with which my whims were heard out, and was happy that the time was not wasted: the paper was definitely getting better.

I hope that pure lyricism is not out of place in this context. I do love ZhETF. Not only as a scientific journal in which I had my papers published for nearly 50 years. For many years the window of my working room at the institute faced the door with the inscription "JOURNAL OF EXPERIMENTAL AND THEORETICAL PHYSICS". Entering the editorial offices was a pleasure, I met the wonderful ladies of the staff and we discussed everything that was a hot issue of the moment: for them as well as myself.

There are sad memories too, this is inevitable. Opening the door of the journal, I can't help remembering each time that I will not see, as I did in the past, Evgeinii Mikhailovich Lifshitz. Sometimes I stopped for a second in front of the door and the same mental picture sprang up: two editors smoking nervously by the radiator of the central heating. I saw what state they were in while they ultimately understood that I knew nothing yet. "Dau (the nickname of Lev Landau) was in a car accident. His heart had stopped, and they've taken him to hospital, and doctors are fighting for his life". January 8, 1962.

The ZhETF offices are not simply situated within the area of the Institute for Physical Problems. The members of staff are a part of IPP. Therefore one meets them in the canteen and in the document processing section. They live the life of IPP, attend colloquia open to the public, and various events organized in the session hall of the institute.

I do not know the details but have a feeling that this closeness to IPP is useful to the journal staff: many a problem is solved in a simpler way, and in addition, referees are within reach, as are those who can give an answer to an urgent question; physicists from the L D Landau Institute of Theoretical Physics are also very near. I believe that the symbiosis of the three (in fact, four: the "Pis'ma v ZhETF" offices are also here) smallish teams on the small territory of the Kapitza IPP is a very convenient phenomenon.

8. Conclusion

The author of this article has not aimed at analyzing papers published in ZhETF, or singling out the most important ones that proved to be landmarks in the history of physics in the country. This is a difficult task, if achievable at all. I could, of course, name the papers that I consider the most important. What stops me is an unwillingness to play a judge, to force my opinion on the readers. I am sure everyone has a list based both on objective criteria and on personal preferences.

I deliberately refuse giving here a scale of values (the rating, or impact index) of ZhETF-type physics journals since I believe that the techniques used to evaluate the importance of a journal are far from flawless. Criticizing it goes beyond the bounds of a jubilee article. I intuitively feel that ZhETF was assigned a much too low an impact index but am unable to suggest a fairer scale of values.

I do not think anyone will disagree with the following statement: ZhETF was and still is the principal physics journal in this country, over all the years of its existence.

Not so much time has elapsed since many ZhETF authors left to work abroad. It can be said with certainty that it was on the pages of the jubilee journal that physicists who were able to find prestigious positions in other countries earned their high standing and respect. The editorial I quoted above [9] expressed a sad but unfortunately a true drop in the respect

[7] From the minutes of one of the first sessions of the editorial board: "As of 1 March 1957, the date of submission of a paper to the journal will be recorded as that on the post stamp". — anattempt to take into account poor functioning of post services.

and prestige of the fundamental sciences. ZhETF, and in the past ZhRFKhO, supported the lofty position of fundamental science over all its 125 years.

The 125th anniversary of ZhETF is a glorious day for Russian physics. Anyone who had their papers published on its pages deserves congratulations. But the first to be congratulated are those who produce this journal: the editorial board of ZhETF and its editorial staff. I am sure that you, dear friends, have accumulated, together with the entire country, a lot of experience on how to overcome difficulties. This experience will help, I hope, when ZhETF will be quoted the world over and colleagues will discuss new important results that first appeared on its pages.

I am deeply grateful for help from Pavel Evgenievich Rubinin and Natalia Isaakovna Yankelevich. They brought together all the material on which this article is based. I am grateful to E G Bonner and A N Gribanov for showing me the letter of the KGB chairman Andropov. The advice of A Yu Grosberg, A Ya Parshin, l P Pitaevsky, P E Rubinin and D E Khmelnitsky were extremely helpful. Many thanks!

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