

# PHYSICS- USPEKHI

English edition of *Uspekhi Fizicheskikh Nauk*  
March 2003 Volume 173 Number 3

## Contents

<b>Volume 46</b> <b>Number 3</b> <b>2003</b> <b>Pages 227 – 333</b>	REVIEWS OF TOPICAL PROBLEMS	
	<b>Current state of ‘cold’ antihydrogen research</b>	227
	L I Men’shikov, R Landua	
	<b>Effects of weak magnetic fields on biological systems: physical aspects</b>	259
	V N Binhi, A V Savin	
	METHODOLOGICAL NOTES	
	<b>Zero-point oscillations, zero-point fluctuations, and fluctuations of zero-point oscillations</b>	293
	F Ya Khalili	
	FROM THE HISTORY OF PHYSICS	
	<b>Mysteries of diffusion and labyrinths of destiny</b>	309
	O G Bakunin	
	<b>Physics news on the Internet</b>	314
	Yu N Eroshenko	

*Continued overleaf*

*Contents continued*

CONFERENCES AND SYMPOSIA

**Joint scientific session of the Physical Sciences Division  
of the Russian Academy of Sciences  
and the Joint Physical Society of the Russian Federation  
(27 November 2002):**

- Properties of the optical transition in the  $^{229}\text{Th}$  nucleus** 315  
E V Tkalya
- Thermalization phenomenon in hadron physics** 320  
A N Sissakian

PERSONALIA

- Rashid Alievich Sunyaev (on his sixtieth birthday)** 325  
D A Varshalovich, A A Galeev, M R Gil'fanov, S A Grebenev,  
V V Zheleznyakov, E P Mazets, M N Pavlinskiĭ, A A Starobinskiĭ,  
O V Terekhov, A M Cherepashchuk, E M Churazov, N I Shakura

BIBLIOGRAPHY

- New books on physics and related sciences** 329  
E V Zakharova

# Contents

<b>Current state of 'cold' antihydrogen research</b> L I Men'shikov, R Landua	227
<b>Effects of weak magnetic fields on biological systems: physical aspects</b> V N Binhi, A V Savin	259
<b>Zero-point oscillations, zero-point fluctuations, and fluctuations of zero-point oscillations</b> F Ya Khalili	293
<b>Mysteries of diffusion and labyrinths of destiny</b> O G Bakunin	309
<b>Physics news on the Internet</b> Yu N Eroshenko	314
<b>Joint scientific session of the Physical Sciences Division of the Russian Academy of Sciences and the Joint Physical Society of the Russian Federation (27 November 2002):</b>	
<b>Properties of the optical transition in the <math>^{229}\text{Th}</math> nucleus</b> E V Tkalya	315
<b>Thermalization phenomenon in hadron physics</b> A N Sissakian	320
<b>Rashid Alievich Sunyaev (on his sixtieth birthday)</b>	325
<b>New books on physics and related sciences</b> E V Zakharova	329

◇ ◇ ◇

## In the next issue

*The search for black holes*

A M Cherepashchuk

*Electronic Raman scattering in high-temperature superconductors*

O V Misochko

*Strange attractors in rattleback dynamics*

A V Borisov, I S Mamaev

*On the history of fluid dynamics: Russian scientific schools in the 20th century*

S K Betyaev

*Joint scientific session of the Physical Sciences Division of the Russian  
Academy of Sciences and the Joint Physical Society of the Russian Federation  
(29 January 2003):*

*Coherent excitation of relativistic nuclei in a crystal: a tool for fundamental  
SRT and GRT studies*

V V Okorokov

*Superfluid phases of  $^3\text{He}$  in an aerogel*

V V Dmitriev, V V Zav'yalov, D E Zmeev, I V Kosarev, N Mulders

*In memory of Vladimir Markovich Eleonskiĭ*

*New books on physics and related sciences*

*Physics news on the Internet*

