

8.1. STRUCTURE OF LABORATORY AND SCIENTIFIC DEPARTMENTS

Directorate:

Director:

V.L.Aksenov

Deputy Directors:

A.V.Belushkin

W.I.Furman

Scientific Secretary:

V.V.Sikolenko

Reactor and Technical Departments

Chief engineer: V.D.Ananiev

IBR-2 reactor

Chief engineer: A.V.Vinogradov

IBR-30 booster + LUE-40

Head: S.A.Kvasnikov

Nuclear physics and pulsed neutron sources sector

Head: V.L.Lomidze

Mechanical maintenance division

Head: A.A.Belyakov

Electrical engineering department

Head: V.P.Popov

Design office

Head: V.I.Konstantinov

Construction

Head: A.N.Kuznetsov

Scientific Departments and Sectors

Condensed matter department

Head: A.M.Balagurov

Nuclear physics department

Head: V.N.Shvetsov

Department of electronics, computers and networks

Head: V.I.Prikhodko

Department of IREN

Head: A.P.Sumbaev

Activation analysis and radiation research sector

Head: V.A.Sarin

Applied research sector

Head: V.I.Luschikov

Administrative Services

Deputy Director: S.V.Kozenkov

Secretariat

Finances

Personnel

Scientific Secretary Group

Translation

Graphics

Photography

Artwork

THE CONDENSED MATTER DEPARTMENT

Sub-Division	Title	Head
Group No.1	HRFD	V. Yu.Pomjakushin
Group No.2	DN-2	A.I.Beskrovnyi
Group No.3	DN-12	B.N.Savenko
Group No.4	NSVR	K.Ullemeyer
Group No.5	YUMO	M.A.Kiselev
Group No.6	SPN-1	Yu.V.Nikitenko
Group No.7	REFLEX	D.A.Korneev
Group No.8	NERA-PR	I.Natkaniec
Group No.9	KDSOG	E.A.Goremychkin
Group No.10	EG-5	A.P.Kobzev
Group No.11	Automatization	E.S.Kuzmin

THE NUCLEAR PHYSICS DEPARTMENT

Sub-Division	Title	Head
Group No.1	Polarized neutrons and nuclei	V.P.Alfimenkov
Group No.1	Neutron spectroscopy	A.B.Popov
Group No.3	Nuclear reactions	Yu.S.Zamyatnin
Group No.4	Properties of the neutron	Yu.A.Alexandrov
Group No.5	Proton and α -decay	Yu.M.Gledenov
Group No.6	Properties of γ -quanta	A.M.Sukhovoy
Group No.7	Radiation capture of neutrons	G.P. Georgiev
Group No.8	Ultra-cold neutrons	V.N.Shvetsov
Group No.9	Neutron structure	G.S.Samosvat
Group No.10	Rare reactions	Yu.N.Pokotilovsky

8.2. USER POLICY

The IBR-2 reactor usually operates 10 cycles a year (2500 hrs. total) to serve the experimental programme. A cycle is established as of 2 weeks of operation for users, followed by a one week period for maintenance and machine development. There is a long shut-down period between the end of June and the middle of October.

All experimental facilities of IBR-2 are open to the general scientific community. The User Guide for neutron experimental facilities at FLNP is available by request from the Laboratory's Scientific Secretary.

Condensed matter studies at IBR-2 have undergone some changes in accordance with the experience gained during the last several years. It was found to be necessary to establish specialized selection committees formed of independent experts in their corresponding fields of scientific activities. The following four committees were organized:

1. <u>Diffraction</u> Chairman - V.A.Somenkov - Russia	3. <u>Neutron optics</u> Chairman - A.I.Okorokov - Russia
2. <u>Inelastic scattering</u> Chairman - J.Janik - Poland	4. <u>Small angle scattering</u> Chairman - L.Cser - Hungary

Dr. Vadim V. Sikolenko, Scientific Secretary of FLNP, is responsible for the user policy. Two deadlines for proposal submission are: May 16 - for the experimental period from October through February; and October 16 - for the period from March through June.

Scientific Secretary is responsible for:

- distribution of "Application for Beam Time" forms to potential users;
- registration of submitted proposals;
- reviewing of the proposals by instrument scientists to estimate the technical feasibility of the proposed experiment;
- sending of the approved proposals to Members of Selection Committees and registration of their comments and recommendations.

The IBR-2 beam schedules are drawn up by the head of the Condensed Matter Department together with instruments responsible on the basis of experts recommendations and are approved by the FLNP Director or Deputy Director for condensed matter physics. The schedules are sent to Chairmen of Selection Committees.

After the completion of experiments, "Experimental Report" forms are filled out by experimenter(s) and submitted to the Scientific Secretary.

The Application Form and other information about FLNP are available by WWW: <http://nfdfn.jinr.ru/~sikolen/usepol.html>

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E-mail: sikolen@nf.jinr.ru

8.3. MEETINGS AND CONFERENCES

In 1997, FLNP organized the following meetings:

1.	International Seminar "Structure and Properties of Crystalline Materials" SPCM	March 4-7	Dubna
2.	V International Seminar on Interaction of Neutrons with Nuclei (ISINN-5)	May 13-16	Dubna
3.	National Conference on X-ray, Synchrotron, and Neutron Investigations (RSN-97)	May 26-29	Dubna-Moscow
4.	International Workshop on Data Acquisition Systems for Neutron Experimental Facilities (DANEF'97)	June 2-4	Dubna
5.	International Seminar "Neutron Analysis of Textures and Stresses NTSA	June 23-27	Dubna

In 1998, FLNP will organize the following meetings:

1.	International Seminar «Collective Effects in Condensed Matter»	March 7-15	Pamporovo, Bulgaria
2.	VI International Seminar on Interaction of Neutrons with Nuclei (ISINN-6)	May 13-16	Dubna
3.	International Workshop on Deuteration of Biological Molecules for Structural and Dynamic Studies	May 19-25	Dubna
4.	II International Seminar «Ferroelectrics-Relaxors»	June 23-26	Dubna
5.	VIII School on Neutron Physics	August 30 - September 5	Dubna

8.4. COOPERATION

List of Visitors from Non-Member States of JINR in 1997

Name	Organization	Country	Dates
M.A.Ali	NRC, AEA, Cairo	Egypt	01/01-02/01
B.E.Gebauer	HMI, Berlin	Germany	15/01-19/01
M.Hempel	Fraunhofer Inst. for Nondestructive Testing, Dresden	Germany	19/01-03/02
G.Fioni	DSM/DAPNIA/SPHN, CEA, Saclay	France	19/01-22/01
V.Lauter-Pasyuk	ILL, Grenoble	France	19/01-03/02

H.-J. Lauter	ILL, Grenoble	France	19/01-03/02
E.Steinness	Univ. of Trondheim	Norway	31/01-03/02
R.Zamoun	URGN, Draria	Algiers	17/02-15/04
M.Hedibel	URGN, Draria	Algiers	17/02-15/04
B.Meftah	URGN, Draria	Algiers	17/02-22/04
A.Makkar	URGN, Draria	Algiers	17/02-15/04
H.-G.Brockmeier	TU Clausthal	Germany	22/02-26/02
R.F.Koontz	SLAC, Stanford	USA	01/03-07/03
S.L.Gold	SLAC, Stanford	USA	01/03-07/03
M.Stalder	Fraunhofer Inst. for Nondestructive Testing, Dresden	Germany	13/03-25/03
J.Schreiber	Fraunhofer Inst. for Nondestructive Testing, Dresden	Germany	13/03-21/03
P.Hoghoj	ILL, Grenoble	France	17/03-24/03
M.Niffenegger	PSI, Villigen	Switzerland	18/03-25/03
M.Rudalics	Johannes Kepler University	Austria	19/03-08/04
V.Lauter-Pasyuk	ILL, Grenoble	France	19/03-28/03
H.-J.Lauter	ILL, Grenoble	France	19/03-28/03
G.Pepy	LLB, Saclay	France	24/03-25/03
M.Carta	ENEA CRE CASACCIA	Italy	05/04-08/04
A. D'Angelo	ENEA CRE CASACCIA	Italy	05/04-08/04
A.Filip	CEA, Saclay	France	05/04-08/04
G.Bruno	University of Ancona	Italy	06/04-19/04
J.Rowlands	LANL	USA	07/04-08/04
S.Akajima	JAERI	Japan	07/04-08/04
G.Spriggs	LANL, Los Alamos	USA	07/04-08/04
T.Parish	LANL, Los Alamos	USA	07/04-08/04
J.Campbell	LANL, Los Alamos	USA	07/04-08/04
D.Loaiza	LANL, Los Alamos	USA	07/04-08/04
K.Turjan	National Renewable Energy Lab.	USA	23/04-24/04
Ch.Scheffzueck	GeoFRZ, Potsdam	Germany	12/05-18/05
S.Ahmad	Plevsound Ltd., London	UK	12/05-14/05
P.Bordet	CNRS, Grenoble	France	15/05-16/05
H.-J. Lauter	ILL, Grenoble	France	17/05-31/05
V.Lauter-Pasyuk	ILL, Grenoble	France	17/05-31/05
M.L.Mestres Vila	University of Barcelona	Spain	25/05-08/06
A.Wiedenmann	HMI, Berlin	Germany	26/05-01/06
He Jian	China Inst. of Atomic Energy, Beijing	China	27/05-04/06
Ye Chuntang	China Inst. of Atomic Energy, Beijing	China	27/05-04/06
Yang Tonghua	China Inst. of Atomic	China	27/05-04/06

	Energy, Beijing		
M.A.Kilany	NRC, AEA, Cairo	Egypt	02/06-02/06.98
T.Gutberlet	Univ. Leipzig	Germany	07/06-14/06
O.Steinsvoll	Inst. for Energiteknikk, Kieller	Norway	09/06-22/06
M.Stalder	Fraunhofer Inst. for Nondestructive Testing, Dresden	Germany	15/06-15/07
H.H.G.Braun	Univ. Kiel	Germany	16/06-29/06
C.-H. De Novion	LLB, Saclay	France	22/06-27/06
B.Leiss	Univ. Goettiingen	Germany	22/06-02/07
A.Frischbutter	GeoFRZ, Potsdam	Germany	26/06-02/07
B.Leiss	Univ. Goettiingen	Germany	22/06-02/07
A.Frischbutter	GeoFRZ, Potsdam	Germany	26/06-02/07
P.Spalthoff	FRZ, Geesthacht	Germany	27/06-17/07
I.Goldmints	MIT, Cambridge	USA	09/07-09/07
G.Fioni	DSM/DAPNIA/SPHN, CEA, Saclay	France	12/07-15/07
B.Frois	DSM/SPP/CE, Saclay	France	14/07-15/07
M.Utsuro	Kyoto University	Japan	20/07-21/07
K.Sumita	Science Council of Japan	Japan	20/07-21/07
H.Hironobu	University of Tsukuba	Japan	22/07-22/07
J.Schreiber	Fraunhofer Inst. for Nondestructive Testing, Dresden	Germany	31/07-03/08
C.Heater	NIST, Gaithersburg	USA	20/08-21/08
D.Mildner	NIST, Gaithersburg	USA	20/08-21/08
R.Machrafi	University Mohamed V.Rabat	Morocco	25/08-25/08.98
Zhang Guohui	Peking University	China	09/09-24/09
Tang Guoyou	Peking University	China	09/09-24/09
Shi Zhaomin	Peking University	China	09/09-24/09
Chen Jinxiang	Peking University	China	09/09-24/09
P.Lesieur	LURE, Orsay	France	10/09-14/09
K.J.Touryan	NREL, Golden	USA	28/09-29/09
A.C.Touryan	NREL, Golden	USA	28/09-29/09
M.Dahlborg	CRen, Strasbourg	Sweden	08/10-09/10
U.C.A.Dahlborg	CRen, Strasbourg	Sweden	08/10-09/10
R.Huber	"HUBER"	Germany	13/10-17/10
K.Walther	GeoFRZ, Potsdam	Germany	13/10-17/10
H.-J.Lauter	ILL, Grenoble	France	19/11-28/11
F.I.A.Asfour	NRC, AEA, Cairo	Egypt	27/11-25/12
V.Lauter-Pasyuk	ILL, Grenoble	France	19/11-28/11
M.Stadler	Fraunhofer Inst. for Nondestructive Testing,	Germany	02/12-24/12

	Dresden		
R. Van De Kruijs	University of Technology, Delft	The Netherlands	08/12-15/12
M.T.Rekveldt	University of Technology, Delft	The Netherlands	08/12-15/12
J.Schreiber	Fraunhofer Inst. for Nondestructive Testing, Dresden	Germany	11/12-17/12
V. Renugopalakrishnan	UNAM, Mexico	Mexico	14/12-17/12
A.J.Eilert	KTU, Utrecht	The Netherlands	24/12-25/12
R.H.Eilert	KTU, Utrecht	The Netherlands	24/12-25/12

8.5. EDUCATION

The University Centre (UC) affiliated with the Joint Institute for Nuclear Research and based on the faculties of the Moscow State University and Moscow Engineering Physics Institute admits, for continuation studies, undergraduate students of the last two years of study in higher education institutions who have attended introductory specialized courses or lectures in the following topics: particle physics, nuclear physics, investigation of condensed matter at nuclear reactors and accelerators, radiation biology. The second and third specializations are in line with research performed at FLNP, which has at its disposal a good experimental base for both sectors comprising the IBR-2 reactor and the IBR-30 booster pulsed neutron sources.

The education courses and practical training for the students affiliated with FLNP have been organized, to a large extent, to prepare specialists in neutron physics for both the Laboratory and for other Russian neutron centres.

As an example illustrating this aim, we present the list of courses taught by lecturers of the Condensed Matter Physics Chair of the UC (Head: Prof.V.L.Aksenov):

- theoretical methods in condensed matter physics
- methods of investigation of condensed matter at nuclear reactors and accelerators
- fundamentals of neutron physics and neutron sources
- methods for structure analysis of ideal and real crystals
- synchrotron radiation spectroscopy of solid matter
- influence of radiation on solid-state properties
- methods of experimental data processing.

A number of leading FLNP scientists take part in delivering these courses. Each student is allowed access to the Laboratory's computer network. An obligatory condition for successful completion of the 4th year is the capability to use modern personal computers. Earlier, students were included in the research groups led by their instructors, which made it possible for undergraduate students working on their theses to take part in preparing or performing experiments.

In 1997, the teaching process at UC continued successfully. Twelve students who had their UC training course at FLNP were employed by JINR or other scientific centers in Russia.

The Condensed Matter Physics Chair gave graduation certificates to its fifth group of students in the reported year. This group had 6 students, making the total number of students who have graduated from the Chair, 45. One of them have been employed by FLNP and who have renewed the staff of the FLNP Scientific Department of Condensed Matter Physics to a noticeable degree.

8.6. PERSONNEL

Distribution of the Main Staff Personnel per Department as of 01.01.98

Departments	Permanent personnel			Contracts			Trai- nees
	S.	E. & T.	St.	S.	E. & T	St.	
1. Nuclear Physics Department Personnel of the Directorate			3	37.5 13	15 2	6.5	4 1
2. Condensed Matter Physics Department Personnel of the Directorate	4	1		36.5 26	9 3	6	4 2
Physical and Technical Research Sector Personnel of the Directorate	5	2		2 1		1	
Department of Electronics, Computers and Networks Personnel of the Directorate				16 1	23.5	9	
IREN Department Personnel of the Directorate IBR-30 Department	4			3 2	5 15	3 3	
Nuclear Safety Sector Personnel of the Directorate				6	1	1	1
IBR-2 Department Personnel of the Directorate					40 1	7	
Technical services: Mechanical and Technical Department					11	49	
Electric and Technical Department		1	2		11	25	
Central Experimental Workshops			5		6	33	
Design Bureau		3			9		
Tool and Cleaning Services			9		1	15	
Management Services			1		18	5	
	13	7	20	144	170.5	163.5	12
	40 (7.5%)			490 (92.5%)			
Total	530 (100%)						

Comment: S. - Scientists, E. & T. - Engineers & Technicians, St. - Staff

Personnel of the Directorate as of 01.01.98

Country	People
Azerbaijan	4
Armenia	1
Bulgaria	3
China	1
Egypt	1
Germany	4
Georgia	2
Iraq	1
Kazakhstan	1
Mongolia	3
Moldavia	1
Morocco	1
Poland	11
Romania	5
Russia	12
Slovakia	1
Ukraine	1
TOTAL	53

8.7. FINANCE

Financing of the FLNP Scientific Research Plan in 1997

No.	Theme	Financing plan, \$ th.	Expenditures for 12 months, \$ th.	In % of FLNP budget
I	Condensed matter physics	4017.4	2554.8	63.6
	-0864-	1909.9	1850.9	96.9
	-0851-	1592.4	383.5	24.1
	-1012-	446.1	256.8	57.6
	-0975-	69.0	63.6	92.2
II	Neutron nuclear physics	1113.2	938.7	84.3
	-0974-	677.7	722.5	106.6
	-0993-	435.5	216.2	49.6
III	Elementary particle physics			
	-1007-	6.1	40.8	668.9
IV	Relativistic nuclear physics			
	-1008-	41.3	13.0	31.5
V	TOTAL:	5178.0	3547.3	68.5