6. ACADEMIC ACTIVITIES

6.1 PELLETRON BEAM UTILIZATION BY USERS

6.1.1 Pelletron Beam Time Utilization and Experiments performed (April 2002-March 2003)

Users	No. of shifts Allotted 1 shift = 8 hr.	Projects in			
		Nuclear Physics	Materials Science	Radia-tion Biology	Atomic physics
A. Universities / Colleges					
Agra University	2		1		
Allahabad University	6		1		
AMUniversity, Aligarh	26	2			1
Anna University	9	1	1		
Bangalore University	2		1		
Banaras Hindu University	18	1	1		
Calcutta University	24	1	3		
Calicut University	9	1			
Cochin University	2		1		
Cochin University of Sc. & Tech.	3		1		
Gauhati University	15	1			
GNDUniversity, Amritsar	17	1	1		
Gulbarga University	18		3		
Himachal Pradesh University	6		3		
Hyderabad University	9		2		
Jammu University	2		1		
Kiel University, Germany	3		1		
Kurukshetra University	5		1		
Mangalore University	10				1
Mumbai University	18	1	1		
North Maharashtra Univ., Jalgaon	3		1		
Pune University	8		3		
Punjab University	61	4	2		1

Users	No. of shifts Allotted 1 shift = 8 hr.	Projects in			
		Nuclear Physics	Materials Science	Radia-tion Biology	Atomic physics
Rajasthan University	7		3		
REC, Kurukshetra	4		2		
Saurashtra University	8		2		
Stuttgart University, Germany	4		1		
Tezpur University	3		1		
B. Institutions					
BARC, Mumbai	1			1	
CSNSM, France	3		1		
Dayalbagh Educational Inst, Agra	5		1		
IIT, Mumbai	13	1	1		
IOP, Bhubaneswar	20		2		
ISRO, Bangalore	2		1		
IUC-DAE, Indore	5		2		
IUC-DAE, Kolkata	18	1			
NPL, New Delhi	3		1		
NSC, New Delhi	57	2	5		
SINP, Kolkata	61	3			
TIFR, Mumbai	35	1			
VECC, Kolkata	18	1			
Facility tests	41				
Total	584	22	52	1	3

6.1.2 List of Users Family

The following list includes universities/colleges/institutions that have used the NSC Pelletron facility (once or more) since 1991.

(A) UNIVERSITIES - (67)

01. Agra University Agra

02.	Aligarh Muslim University	Aligarh
03.	Allahabad University	Allahabad
04.	Andhra University	Waltair
05.	Anna University	Chennai
06.	Assam University	Silchar
07.	Banaras Hindu University	Varanasi
08.	Bangalore University	Bangalore
09.	Berhampur University	Berhampur
10.	Bhagalpur University	Bhagalpur
11.	Bombay University	Mumbai
12.	Burdwan University	Burdwan
13.	Calcutta University	Kolkata
14.	Calicut University	Calicut
15.	Cochin University	Cochin
16.	Cochin University of Science & Technology	Cochin
17.	Delhi University	Delhi
18.	Devi Ahilya University	Indore
19.	G.B. Pant University	Pantnagar
20.	Gauhati University	Guwahati
21.	Gulbarga University	Gulbarga
22.	Guru Ghasidas University	Bilaspur
23.	Guru Nanak Dev University	Amritsar
24.	Himachal Pradesh University	Simla
25.	HNB Garhwal University	Srinagar Garhwal
26.	Hyderabad University	Hyderabad
27.	Jamia Milia Islamia University	New Delhi
28.	Jammu University	Jammu
29.	Jawaharlal Nehru University	New Delhi
30.	Kalyani University	Kalyani
31.	Karnataka University	Dharwad
32.	Kiel University	Germany
33.	Kurukshetra University	Kurukshetra
34.	Lucknow University	Lucknow
35.	Ludwig Maximillian University	Munich, Germany
36.	M.D. University	Rohtak
37.	M.L. Sukhadia University	Udaipur
38.	M.S. University	Baroda
39.	Madras University	Chennai
40.	Mahatama Gandhi University	Kottayam

41.	Mangalore University	Mangalore
42.	Manipur University	Imphal
43.	Mannonmaniam Sundarnar University	Tirunelveli
44.	Mysore University	Mysore
45.	Nagpur University	Nagpur
46.	North Eastern Hill University	Shillong
47.	North Maharashtra University	Nandurban
48.	Osmania University	Hyderabad
49.	Patna University	Patna
50.	Pondichery University	Pondichery
51.	Poona University	Pune
52.	Punjab Agricultural University	Ludhiana
53.	Punjab University	Chandigarh
54.	Punjabi University	Patiala
55.	Rani Durgawati University	Jabalpur
56.	S.K. University	Anantpur
57.	Stuttgart University	Germany
58.	Saurashtra University	Rajkot
59.	Technical University	Darmstadt, Germany
60.	Tezpur University	Tezpur
61.	Shivaji University	Kolhapur
62.	University of Maryland	Maryland, USA
63.	University of Notre Dame	Notre Dame, USA
64.	University of Rajasthan	Jaipur
65.	Utkal University	Bhubaneswar
66.	Vikram University	Ujjain
67.	Vishwa Bharti University	Bolpur
(B)	**COLLEGES - (41)**	
01.	Anand Mohan College	Kolkata
02.	Armed Forces Medical College	Pune
03.	Belonia College	Belonia, Tripura
04.	Bharatiya Jain Sanghatana College	Pune
05.	Bhiwandi College	Mumbai
06.	BNN College	Bhivandi, Madhya Pradesh
07.	CHM College	Ulhasnagar, Maharashtra
08.	College of Engineering and Technology	Aligarh
09.	DAV College	Mumbai
10.	DBS College	Dehradun
11	Doodhsakhar Mahavidyalaya	Bidri, Maharashtra

12	Govt. Art College	Rajamundri, Andhra Pradesh
13	Govt. College	Ajmer
14.	Govt. College	Mehendragarh
15.	Govt. College	Kota
16.	Goyalpara College	Goyalpara, Assam
17.	Jai Hind College	Mumbai
18.	Kongunadu Arts & Science College	Coimbatore
19.	Koshi College	Khagaria, Bihar
20.	Mahila Degree College	Lucknow
21.	MR College	Vizianagram (AP)
22.	Malviya Regional Engg. College	Jaipur
23.	Nayagarh College	Nayagarh
24.	Nizam College	Hyderabad
25.	NSAM College	Mangalore
26.	Orissa Univ. of Agriculture & Tech.	Bhubneshwar
27.	Poorna Prajna College	Udipi, Karnataka
28.	Punjab Engineering College	Chandigarh
29.	RBS College	Agra
30.	RD & DJ College	Munger, Bihar
31.	Regional Engineering College	Kurukshetra
32.	School of Physical Sciences	Nanded, Maharashtra
33.	School of Tech. & Applied Sciences	Kottayam, Kerala
34.	SDM College	Ujire, Mysore
35.	Sharanabasaveshwar College of Science	Gulbarga
36.	Sri Bhuvanendra College	Karkala
37.	St. Edmunds College	Shillong
38.	Swami Shardhanand College	New Delhi
39.	University College	Kurukshetra
40.	University College of Science & Tech.	Kolkata
41.	Vaish College	Rohtak

(C) OTHER INSTITUTIONS - (39)

01.	AICTE	New Delhi
02.	Bhabha Atomic Research Centre	Mumbai
03.	C.E.E.R.I.	Pilani
04.	CAT	Indore
05.	Centre for Superconductivity research	USA
06.	CSNSM, Orsay Cedex	France

07.	D.M.R.L.	Hyderabad
08.	Dayalbagh Educational Institute	Agra
09.	Defence Laboratory	Jodhpur
10.	Defence Research & Development Orgn.	Dehradun
11.	Ginetic Institute of Manufacturing Technology	Singapore
12.	Harcourt Butler Technological Institute	Kanpur
13.	I.G.C.A.R.	Kalpakkam
14.	Indian Institute of Science	Bangalore
15.	Indian Institute of Technology	Chennai
16.	Indian Institute of Technology	Kanpur
17.	Indian Institute of Technology	Kharagpur
18.	Indian Institute of Technology	Mumbai
19.	Indian Institute of Technology	New Delhi
20.	Indian Space Research Organisation	Bangalore
21.	INFN-LEGNARO	Italy
22.	INMAS	New Delhi
23.	Institute of Basic Sciences	Agra
24.	Institute of Materials Science	Bhubaneswar
25.	Institute of Physics	Bhubaneswar
26.	Institute of Science	Mumbai
27.	IUC-DAEF, Calcutta Centre	Kolkata
28.	IUC-DAEF, Indore Centre	Indore
29.	Joint Inst. of Nuclear Research	Dubna, Russia
30.	Massachusetts Inst. of Technology	USA
31.	Nanocrystals Technology	USA
32.	National Academy of Science	Allahabad
33.	National Physical Laboratory	New Delhi
34.	Oak Ridge National Laboratory	USA
35.	Saha Institute of Nuclear Physics	Kolkata
36.	Sant Longowal Institute of Technology	Sangrur
37.	SSPL	New Delhi
38.	Tata Institute of Fundamental Research	Mumbai
39.	VECC	Kolkata

6.2 M.Sc. ORIENTATION PROGRAMME

The two-week M.Sc. orientation programme has been providing hands on training in fields associated with accelerator based research to selected M.Sc. students by way of short projects. Those M.Sc. students desirous of taking part in this programme may get

their applications forwarded through their department giving the relevant details such as the marks in all the exams till date, broad field of interest and the period convenient to them. Efforts are made to give chance to students from various parts of the country.

The details of the projects carried out in various fields in the year 2002-2003 are given below.

Name of student	Affiliation	Project title	Guide/Lab. at NSC
Mr. Ram Pravesh R. Yadav	Mumbai Univ.	Study of X-Ray Spectra	Dr. A. Mandal, Atomic Physics
Mr. Vivek V. Parkar	Mumbai Univ.	Study of Surface Barrier Detector	Dr. A. Mandal, Atomic Physics
Mr. Rakesh Sharma	GNDU, Amritsar	Thin film deposition and thickness measurement	Mr. D. Kabiraj, Target Development Lab.
Mr. Rajeev Kumar Jain	IIT, Delhi	Characteristic study of a Clover detector	Mr. Rakesh Kumar, GDA Lab.
Ms. Nidhi Mathur	IIT, Delhi	Characteristic study of a Clover detector	Mr. Rakesh Kumar, GDA Lab.
Mr. Sumit Kumar	GNDU, Amritsar	Study of thermoluminescence dosimetry by using TLD-700H at different heating rates	Mr. R.G. Sonkawade, Health Physics Lab.
Mr. S. Praveen Kumar	NUPG Center, Nuzvid, A.P.	Study on Oscillators	Mr. S. Venkataraman-an, Electronics Lab.
Mr. Harmanjit Singh	GNDU, Amritsar	Synthesis and Characterization of Bi based High Tc Superconductor	Dr. Ravi Kumar, Materials Science Lab.
Ms. Jharna Kamthan	H.N.B. Garhwal Univ., Uttaranchal	Radiation Dosimetry	Mr. R. Sonkawade, Health Physics Lab.
Ms. Pooja Nautiyal	H.N.B. Garhwal Univ., Uttaranchal	Study of detectors and Testing of ADC	Mr. Akhil Jhingan, Detector Lab.
Mr. Jayakrishna Khatei	Utkal Univ., Orissa	Determination of relative efficiency of Ge-detector by using 152Eu as Gamma ray source	Mr. R. P. Singh, GDA Lab.
Mr. M. Gowtham	Bharathiar Univ., Tamil Nadu	Thin film deposition and characterization by Photoluminescence spectroscopy	Mr. Fouran Singh, Materials Science Lab.

6.3 LIBRARY

Priyambada Nayak, R.N. Dhyani

Salient features:

Working hours:	:	Round the clock, all days of the week
Total Books:	:	~2250 (broadly covering the subjects Nuclear Physics, Materials Science, Electronics, Computers, Vacuum Instrumentation, Radio-biology, Radiation Physics, Cryogenics, Atomic Physics, Mathematical Physics, Quantum Mechanics, Astrophysics etc.)
New Books added in 2002-03	:	80
Current Journals	:	41
New Journals added in 2002-03	:	02
Bound Journals	:	~6000
Laboratory Reports	:	~900 (from nearly 50 labs)
New Reports arrived in 2002-03	:	30
Reprints/Photocopies	:	~700
Newsletters, House magazines etc.	:	50
Databooks, Manuals etc.	:	~550
Ph.D. Thesis	:	77
CD-ROM Database	:	INIS 1976-present
Microfilm Collection	:	IEEE Transactions on Nuclear Science Vol. 1-32 (1954-85)
Hardware	:	Cyrix M II with 64MB RAM & 2.1GB HD. Minolta RP 503 Microfilm reader-printer
Collaborating Arrangements	:	Photocopy Service from INSDOC
Clientele	:	Apart from NSC staff and students, the library is consulted by students, teaching and research staff from over 100 academic and research institutions in different parts of the country.

The technical reports and technical memos of various projects carried out at NSC are also compiled and kept in the library for reference purpose. ERL server from Silver Platter has been installed on intranet server to access the INIS database. Web-based lib-

rary cataloging software package has been installed for the computerisation of library documents. With the advent of the facility for online access of various journals through internet, full-text of a number of journals are now accessable and we plan to exploit this facility to its full extent in near future.The library is open round the clock. Hence, automatic monitoring system has been installed.

6.3.1 Integrated Library System

Sugathan P.

An ILS (Integrated Library System) has been implemented in our main library for the automation of library management. This system is based on the open source ILS system "**Koha"** which is being used by many academic libraries around the world. Koha system is a full cataloging, opac, circulation & acquisition tool, which supports MARC (MAchine Readable Catalog) data standards and Z39.50 information retrieval protocol. Koha is built using the open source components like perl, apache, MySQL and can be customized.

At NSC library, the system is installed on our intranet server which is also the ERL server for INIS database. The Koha database table represents books, thesis, print journals, and technical reports. The web interface is integrated with the main intranet server where the main web page provide the link to search and on-line access to journals. To search the INIS database, The ERL server and web interface package WEBSPIRS from silver platter has been installed and integrated along with the ILS. After searching for the MARC records of the books according to the ISBN, these records are downloaded from the Z39.50 servers. The saved MARC records were imported into the Koha database after modifying certain fields.

Features of ILS

web interface

search by author, keyword,title,accession number

INIS abstract search using webspirs

online access to journals

links to database servers

6.4 THE PH.D. TEACHING PROGRAMME AT NSC

The basic idea of these lectures is provide a sound foundation of the experimental techniques, accelerator and related topics to the university research scholars.

The July 2002 semester was attended by 17 students from 10 universities and one from National Physical Laboratory. The representation were from Aligarh Muslim University, Anna University, Allahabad University, Saurashtra University, Delhi University, Banaras Hindu University, Agra University, Gwalior University, Cochin University. In addition, 5 Junior Research Fellows of NSC also attended the course. The course modules on materials science and data acquisition were taught in this semester.

The January 2003 semester was attended by 22 students from 10 universities. The representations were from Allahabad University, Agra University, Jawaharlal Nehru University, Gauhati University, Jammu University, Karnataka University, Aligarh Muslim University and Lucknow University. In addition, 2 Junior Research Fellows and 3 Scientist Trainees attended the course. The course modules on experimental physics and accelerator physics were taught in this semester.

6.5 ACADEMIC ACTIVITIES HELD IN 2002-2003

16-17 May	Workshop on Nuclear Physics with Gamma Detector Array Coupled to Recoil Separator
18 May	Workshop on Nuclear Structure & Reaction Theory
19 June	NSC Acquaintance Programme at Bangalore Univ.
6-7 July	User Workshop : Accelerator Users Presentations for Beam Time Proposals
8 July	AUC Meeting
30 July	NSC Ph.D. Teaching Programme (Fall Semester)
23 August	NSC Acquaintance Programme at Banaras Hindu Univ.
6 September	Workshop on Molecular Radiation Biology at NSC
29 September	NSC Acquaintance Programme at Visva Bharati Univ.
4 October	NSC Acquaintance Programme at Patiala Univ.
21-25 October	21st International Conference on Nuclear Tracks in Solids (ICNTS-21)
29 November	Workshop on Materials Science with Pulsed Heavy Ion Beams at NSC
4-5 December	NSC Academic Workshop
17-18 December	User Workshop : Accelerator Users Presentations for Beam Time Proposals
19 December	Foundation Day & AUC Meeting
14 January, 2003	NSC Ph.D Teaching Program (Spring semester)
10 February	NSC Academic Workshop
15 February	Seminar on Accelerators in Physics and Medicine at Manipal

24 February	Workshop on Radon Studies in Environment at NSC
28 February	National Science Day
14 March	Workshop on Radiation Detectors

6.6 CALENDAR OF EVENTS: 2003

20th May	NSC Acquaintance Programme at Bilaspur (Contact Person: A. Tripathi, NSC)
10th June	Workshop on Physics with Neutron array at NSC (Contact Person: S. K. Datta, NSC)
6th - 7th July	USER WORKHSOP - Accelerator Users Presentations for Beam Time Proposals
8th July	AUC meeting
25th July	Workshop on Signal processing & RF instrumentation at NSC (Contact Person: B. P. Ajithkumar, NSC)
29th July	NSC Ph.D. Teaching Program, Fall Semester starts
11th - 13th August	NSC Academic Workshop
26th August	Workshop on Atomic Physics with Low energy ions (Contact person : C. P. Safvan, NSC) at NSC
16th September	Workshop on Nuclear Physics with INGA at NSC (Contact Person: S. Murlithar, NSC)
23rd September	NSC Acquaintance Programme at Udaipur (Contact person: R.P. Singh, NSC)
10th October	NSC Acquaintance Programme at Garhwal (Contact Person: S. Chopra, NSC)
3rd November	Workshop on Device grade material development using ion beams at NSC (Contact Person: Ravi Kumar, NSC)
25th November	NSC Acquaintance Programme at Patna (Contact person: A. Mandal, NSC)
17th - 18th December	"USER WORKSHOP" - Accelerator Users Presentations for Beam Time Proposals
19th December	Foundation day & AUC meeting

6.7 LIST OF SEMINARS CONDUCTED IN THE YEAR 2002-2003

Sr. No.	Date	Title	Name & Affiliation
1.	21.05.02	Quantal Calculations of the Breakup of one-neutron Halo Systems	Prof. Radhey Shyam, SINP Kolkata
2.	15.07.02	Phase Transitions in a doped Quantum Paraelectric[$(Sr_{1-x}Ca_x)TiO_3$]	Dr. Dhananjai Pandey, BHU
3.	17.07.02	Potential Energy Landscapes of simple liquids	Dr.Charusita Chakravarty, IIT Delhi
4.	26.08.02	Nanocomposites of vapour phase deposited teflon AF containing nickel clusters	Dr. Abhijit Biswas, University of Kiel, Germany
5.	02.09.02	An overview of Large Hadron Collider (LHC) and cryogenics	Mr. T.S.Datta NSC
6.	09.09.02	An overview of studies with high resolution spectrometer	Mr. A.Tripathi NSC
7.	10.09.02	Frontline atomic collision experiments at Banaras Hindu University	Dr. R. Shankar BHU
8.	23.09.02	Development of next generation HTS-ESR ion source	Dr. D.Kanjial NSC
9.	27.09.02	High resolution ERDA/RBS studies at MPI, Stuttgart	Prof. H.D.Carstanjen MPI, Stuttgart
10.	31.10.02	Recent results in materials research at GSI	Prof. R. Neumann GSI
11.	11.11.02	Basics of positron annihilation in semiconductors: few results	Dr.Asmita Sengupta Viswabharti Univ.
12.	02.12.02	SHE research at Dubna	Mr. Subir Nath NSC
13.	03.12.02	Recent development of research in radiobiology at GANIL (France)	Dr. Isabelle Testard GANIL, France
14.	09.12.02	Exploring the possible path for the beam from future HCI to the present LINAC	Dr. A.Mandal NSC
15.	20.12.02	Selected Problems in classical and quantum meachnics: Lecture I	Prof. N.G. Puttaswamy Bangalore Univ.
16.	23.12.02	Selected Problems in classical and quantum meachnics: Lecture I	Prof. N.G. Puttaswamy Bangalore Univ.

Sr. No.	Date	Title	Name & Affiliation
17.	23.12.02	TOMOTHERAPY - A new age in adaptive radiotherapy	Dr. Susanta Hui Univ. of Wisconsin, Madison,USA
18.	02.01.03	Gaseous detectors at LHC: State of the Art	Dr. Archana Sharma CERN, Geneva, Switzerland
19.	07.01.03	Radio Frequency quadrupole cooler and buncher: a novel device in RIB facilities	Mr. Manas Mukherjee GSI, Darmstadt & CERN, Geneva, Switzerland
20.	10.01.03	Hartree-Fock calculations for deformed nuclei	Prof. C.R. Praharaj IOP Bhubaneswar
21.	13.01.03	Precision measurement of the proton	Dr. Lagy T. Baby
22.	14.01.03	Pulsed Electron beam deposition technique to grow thin films of HTSC materials	Mr. Ram Janay Choudhary Univ. of Maryland, USA and NSC
23.	21.01.03	Introduction to Geology and its relation to other sciences	Prof. K.K. Sharma Wadia Institute of Himalya Geology
24.	23.01.03	Geology and Geomorphology of India	Prof. K.K. Sharma Wadia Institute of Himalya Geology
25.	27.01.03	Two dimensional nano-materials: A review	Prof. K.L. Chopra IIT, Delhi
26.	31.01.03	High resolution spectrometer for ERD/RBS studies	Mr. Ambuj Tripathi NSC
27.	20.02.03	Heavy Ions at GSI: Status and future	Prof. H. Juergen Kluge GSI/Darmstadt & Univ. of Heidelberg
28.	03.03.03	Raman and photoluminescence spectroscopy of silicon nanostructures	Dr. K.P. Jain IIT, Delhi
29.	04.03.03	Self organisation ofr nickel-oxide layers under swift heavy ion bombardment	Dr. Wolfgag Bolse Stuttgart Univ. Germany
30.	10.03.03	Experience with ALPI and PIAVE at INFN-LNL, Italy	Mr. B.K. Sahu NSC
31.	12.03.03	Shape co-existence at high spins in ^{170}Hf & ^{140}Nd	Dr. Andrea Neusser Univ. of Bonn, Germany

Sr. No.	Date	Title	Name & Affiliation
32.	13.03.03	Clover electronics modules and related development for INGA at NSC	Mr. S. Venkataraman NSC
33.	13.03.03	Triaxial superdeformation in ^{161}/^{162}Lu and the wobbling mode	Dr. Patrick Bringel Univ. of Bonn, Germany
34.	17.03.03	Role of entrance channel properties in the fission fragment angular distribution studies	Mr. Bivash Behera INFN-LNL, Italy
35.	21.03.03	Wave Form Digitizer(WFD) & SDRAM controller design in FPGA at Yale Univ.	Mr. Kundan Singh NSC
36.	24.03.03	Frontiers of nuclear structure research and the GSI future facility	Prof. Gottfried Muenzenberg GSI, Germany

6.8 LIST OF PUBLICATIONS (2002-2003)

A. NUCLEAR PHYSICS

Inelastic scattering of 28.0 MeV proton on ^{56}Fe. A. Kumar, D.K. Avasthi, A. Tripathi, S.K. Datta and I. M. Govil *Phys. Rev. C. 65 (2002), 014305*

Isotopic Dependence and Channel Coupling Effects in the Fusion of ^{16}O + ^{112,116}Sn and ^{32}S + $^{112, 116, 120}$Sn at Energies Around the Barrier V. Tripathi, L.T. Baby, J.J. Das, P. Sugathan, N. Madhavan, A.K. Sinha, P.V. M. Rao, S.K.Hui, R.Singh, and K.Hagino *Phys. Rev. C65 (2002), 014614.*

Rotational Bands and Noncollective Structures in ^{85}Zr S.K. Tandel, S.R. Kore, S.B. Patel, S. Muralithar, R.P. Singh, and R.K. Bhowmik *Phys.Rev. C65 (2002), 054307.*

Recoil Distance lifetime measurements in ^{118}Xe I. M. Govil, A. Kumar, H. Iyer, P. Joshi, S. K. Chamoli, Rakesh Kumar, R. P. Singh and U. Garg *Phys. Rev. C 66 (2002), 064318*

Configuration dependence of deformation in ^{183}Au. P. Joshi, A. Kumar, G. Mukherjee, R.P. Singh, S. Muralithar, U. Garg, R.K. Bhowmik and I.M. Govil. *Phys. Rev. C. 66 (2002), 044306.*

Search for entrance channel effects in the heavy ion induced fusion reaction through the compound system ^{79}Rb. J. Kaur, I. M. Govil, G. Singh, Ajay Kumar, A. Kumar, B. R. Behera and S. K. Datta. *Phys. Rev. C 66 (2002), 034601.*

Configuration dependent shapes in the ^{177}Re. S. K. Chamoli, P. Joshi, A. Kumar, R. P. Singh, S. Muralithar, R. K. Bhowmik, Z. Naik, C. R. Praharaj and I. M. Govil. *Phys. Rev C 66 (2002), 024307.*

First evidence for triaxial superdeformation in ^{161}Lu and ^{162}Lu P. Bringel, H. Hubel, H. Amro, M. Axiotis, D. Bazzacco, S. Bhattacharya, R. Bhowmik, J. Domscheit, G.B. Hagemann, D.R. Jensen, Th.Kroll, S. Lunardi, D.R. Napoli, A. Neusser, S.C. Pancholi, C.M. Petrache, G. Schonwasser, A.K. Singh, C.Ur
Eur. Phys. J. A 16 (2003), 155.

Status of measurement of ^{7}Be(d,n)^{8}B reaction to determine the astrophysical $S_{17}(0)$ factor using ANC method J.J. Das, V.M. Datar, P. Sugathan, N. Madhavan, P.V. Madhusudhana Rao, A. Navin, T. Varughese, A. Jhingan, S. Nath, A. Ray, S. Barua, A.K. Sinha, J. Zacharias, R. Singh, R. Shyam, S.K. Dhiman, R.G. Kulkarni, and D.L. Sastry, *Ind. J. Phys., 76 (2002), 133.*

Characteristics of a Compton suppressed Clover detector up to 5 MeV
M. Saha Sarkar, P. Datta, I. Ray, C.C. Dey, S. Chattopadhyay, A. Goswami, P. Banerjee, R.P. Singh, P.K. Joshi, S.D. Paul, S. Bhattacharya, R. Bhowmik, J.M. Chatterjee, H.C. Jain, S. Sen, and B. Dasmahapatra *Nucl. Instr. And Meth. A 491 (2002) 113121.*

B. MATERIALS SCIENCE

50 MeV Li^{3+} irradiation effects on the thermal expansion of $Ca_{1-x}Sr_xZr_4P_6O_{24}$., B. Angadi, V.M. Jali, M.T. Lagare, N.S. Kini, A.M. Umarji, Ravi Kumar, S.K. Arora and D. Kanjilal, *Nucl. Instr. and Meth., B, 187 (2002) 87.*

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6.9 LIST OF TECHNICAL REPORTS / TECHNICAL MEMOS (Submitted for the Year 2002-2003)

A. LIST OF TECHNICAL REPORTS : 2002-2003

Sl. No.	Title	Authors	Category	Reference No.
1.	A survey of detectors for fast timing measurements in low and medium energy heavy ion accelerators	K.S. Golda	Instrumentation	NSC/TR/KSG/ 2002-03/01
2.	Study of nanocrystalline thin films deposition by rf reactive magnetron sputtering	V.V.Siva Kumar, T.Mohanty, N.C. Mishra & D.K.Avasthi	Materials Sc.	NSC/TR/VVSK/ 2002-03/02
3.	Set up for ferrite thin films growth by rf magnetron sputtering	V.V.Siva Kumar, Anjana Dogra and Ravi Kumar	Materials Sc.	NSC/TR/VVSK/ 2002-03/03

4.	On line test of the Linac superbuncher with DC and pulsed beam	SG/RM/PNP/AM/GKC/SSKS/DSM/KK/ARAI/SR/PB/AP/BKS/AS/GJ/SKD/RKB/AR	Accelerator	NSC/TR/SG/2002-03/04
5.	Attenuation of gamma rays (Co-60/Cs-137) in different density shielding materials and techniques of external radiation protection	R.G. Sonkawade & S.P. Lochab	Health Physics	NSC/TR/RGS/2002-03/05
6.	Radon Studies in the vertical 15UD Pelletron accelerator facility	R.G.Sonkawade, S.P. Lochab, R.C. Ramola & Rewa Ram	Health Physics	NSC/TR/RGS/2002-03/06
7.	Record keeping for effective management of civil maintenance	M.K. Gupta	Civil	NSC/TR/MKG/2002-03/07
8.	Modus operandi for effective management of preventive maintenance and major maintenance	M.K. Gupta	Civil	NSC/TR/MKG/2002-03/08
9.	Facility test of the offset Faraday cup for Be-10 measurements	T.Nandi, Rewa Ram, Rajan Joshi, Satinath Gargari, S.Chopra and S.K.Datta	Accelerator Mass Spectroscopy	NSC/TR/TKN/2002-03/09
10.	Simulation of gamma irradiation chamber using MCNP and TLD-700H, THY-AC-III survey meters	R.G.Sonkawade, S.P.Lochab	Radiation Physics	NSC/TR/RGS/2002-03/10

11.	A versatile facility for atomic spectroscopy and collision experiments using the Pelletron and LINAC	T. Nandi	Atomic Physics	NSC/TR/TKN/ 2002-03/11
12.	Double slit controller	U.K.Rao, V.V.V. Satyanarayana	Instrumentation	NSC//TR/UKR/ 2002-03/12
13.	Steerer power supply controller	U.K.Rao	Instrumentation	NSC/TR/UKR/ 2002-03/13
14.	Central control room facility for helium refrigeration system	Raj Kumar	Electrical Group	NSC/TR/RK/ 2002-03/14
15.	Harmonics in NSC power distribution system	Raj Kumar, U.G.Naik	Electrical Group	NSC/TR/RK/ 2002-03/15
16.	Offline testing of the Wien filter using source	J.K.Pattnaik, T.Nandi, Rajesh Kumar, Suraj Kumar, A.Mandal and S.K.Datta	Accelerator Mass Spectroscopy	NSC/TR/JKP/ 2002-03/16
17.	Linux based remote access server	S.Bhatnagar	Computer	NSC/TR/SB/ 2002-03/17
18.	Outdoor CCTV system at NSC	Raj Kumar, Rajan Joshi	Electrical	NSC/TR/RK/ 2002-03/18
19.	New EPABX system at NSC	S.Bhatnagar	Communication	NSC/TR/SB/ 2002-03/19
20.	Fast Ethernet LAN(Main building)	S.Bhatnagar	Computer	NSC/TR/SB/ 2002-03/20
21.	New focal plane detector system at NSC	Akhil Jhingan/P. Sugathan/JJD/TV/NM/SN/SB/PVMR	Instrumentation	NSC/TR/AJ/ 2002-03/21
22.	Firewall for the administration network	Sanjiv Bhatnagar	Computer	NSC/TR/SB/ 2002-03/22

23.	A VME based cryogenic data acquisition and control system (CRYO-DACS)	Joby Antony, Raj Kumar and T.S. Datta	Cryogenics	NSC/TR/JA/ 2002-03-23
24	WEB based on line telephone directory	Sanjiv Bhatnagar	Communication	NSC/TR/SB/ 2002-03/24
25.	Performance of the 8 channel peak sensing 4K ADC CAEN C420	K.S.Golda, P.Sugathan, S.K. Datta and R.K. Bhowmik	Instrumentation	NSC/TR/KSG/ 2002-03/25
26.	TCP/IP LAN in administration	S.Bhatnagar, S. Mookerjee	Computers	NSC/TR/SB/ 2002-03/26
27.	Technical report on timing filter amplifier and constant fraction discriminator (TFA+CFD)	S.Venkataraman , Kusum Rani, R.K.Bhowmik	Instrumentation	NSC/TR/SV/ 2002-03/27
28.	Technical report on anti-coincidence logic unit	S.Venkataraman , R.K.Bhowmik	Instrumentation	NSC/TR/SV/ 2002-03/28
29.	Technical report on spectroscopy amplifier	S.Venkataraman , Arti Gupta	Instrumentation	NSC/TR//SV/ 2002-03/29
30.	Technical report on clover electronics module	S.Venkataraman, Arti Gupta, Kusum, R.P.Singh, S.Muralithar, B.P.Ajith Kumar, R.K.Bhowmik	Instrumentation	NSC/TR/SV/ 2002-03/30
31	Technical report on ACS preamplifier	Arti Gupta, S.Venkataraman	Instrumentation	NSC/TR/AG/ 2002-03/31
32.	4 Channel 12 Bit Peak measuring ADC	V.V.V. Satyanarayna, B.P.Ajith Kumar, Kundan Singh	Instrumentation	NSC/TR/VVVS/ 2002-03/32
33.	Current Amplifier	V.V.V. Satyanarayna	Instrumentation	NSC/TR/VVVS/ 2002-03/33

34.	Quality control in concrete work	M.K.Gupta	Civil	NSC/TR/MKG/ 2002-03/34
35.	Mass production of DN100 conflat flanges using CNC machine	Abhilash S.R., S.K. Saini, Jimson Zacharias	Development	NSC/TR/ASR/ 2002-03/35

B.	**LIST OF TECHNICAL MEMOS: 2002-03**			
1.	Failure of high voltage power supply in LEIBF	U.K. Rao, C.P.Safvan	Instrumentation	NSC/TM/UKR/ 2002-03/01
2.	Repairing of temperature controller in LEIBF	U.K. Rao, C.P.Safvan	Instrumentation	NSC/TM/UKR/ 2002-03/02
3.	Rectification of the failure of P.S.A. System control panel	Suresh Babu M.V., Joby Antony, Manoj Kumar, T.S.Datta	Maintenance	NSC/TM/S.Babu/ 2002-03/03
4.	Rectification of extended type cryogenic valve	Suresh Babu M.V., Manoj Kumar, T.S.Datta	Maintenance	NSC/TM/S.Babu/ 2002-03/04
5.	Rectification of LN2 level controller of helium liquefier	Suresh Babu M.V., Anup C., Manoj Kumar	Instrumentation	NSC/TM/S.Babu/ 2002-03/05