



PSI, Villigen
February, 2003

**MINUTES "BESCHLUSSKONFERENZ"
OF THE USERS MEETING BV 34 AT PSI
February 4 - 5, 2003**

present: Dr. S. Adam
Prof. R. Eichler (Chairman)
Dr. W. Fischer
Dr. K. Gabathuler
Dr. C. Hoffman
Dr. D. Herlach
Dr. E. Pedroni
Dr. C. Petitjean (Secretary)
Dr. R. Rosenfelder
Dr. L. Simons
Dr. P.A. Schmelzbach

excused: Dr. G. Goitein
Dr. A. Wrulich
Prof. H. Keller

1. Approval of Experiments

The recommendations of the BVR research committee and the μ SR research committee are acknowledged (see minutes).

New Proposals

- R-00-05.2 A new precision measurement of the neutron electric dipole moment (EDM)
M. Daum, A. Serebrov et al., PSI, Gatchina, Grenoble, Ioffe St. Petersburg, Cracow, Caen, Heidelberg, Fribourg, Urbana-Champaign, Vavilov St. Petersburg
The first stage ("mini"-EDM experiment) is approved with highest priority at the future UCN source under the conditions and provisos stated in the short minutes of BVR 34. The detailed layout of the UCN source and the EDM experiment needs to be clarified with respect to the planning of the new medical facility PROSCAN.
- R-03.01.1 High-accuracy measurement of the spin-dependent neutron scattering length of the deuteron
O. Zimmer et al., Garching, Saclay, PSI
Conditional approval at the FUNSPIN facility of SINQ, see short minutes of BVR 34. 2x 2.5 months in 2004 and later.
- RA-03-01.1 Study of $S = 1/2$ pyrochlore lattices
J. Rodriguez-Carvajal, P. Dalmas de Réotier, Saclay, Orsay, Grenoble, Delft
Approved. 2 days GPS in 2003.
- RA-03-02.1 Short range vs. long-range magnetic order in R_2TIn_3 compounds
G.M. Kalvius, D.R. Noakes, Garching, Virginia
Approved. 5 days GPD in 2003.
- RA-03.03.1 Magnetic structure of Nd: a μ SR investigation
T. Chatterji, ILL Grenoble
Approved. 1 day GPS in 2003.
- RA-03.04.1 Local probing of Magnetic Properties in Pu and Pu-based Alloys
R.I Grynszpan, M.J. Fluss, ETCA, Livermore
The topic is considered to be of high scientific interest, but the authors are asked to work out a more focused proposal and present detailed technical solutions to all questions connected with the handling of Pu-based samples.
No beam time allocation recommended in 2003
- RA-03.05.1 A μ SR study of the level crossing in the molecular ring Fe30
A. Lascialfari, Pavia, Ames Laboratory, Parma
Approved. 4 days LTF in 2003.

- RA-03-06.1 Supermagnetic relaxation in antiferromagnetic nanoparticles
L.T. Kuhn, K. Lefmann, Ch. Niedermayer, Roskilde, PSI, ETHZ, Turku, Copenhagen
Approved. 2 days GPS and 3 days Dolly in 2003.
- RA-03-07.1 μ SR study of random bond effects in the quantum spin system
($\text{Ti}_{1-x}\text{K}_x$) CuCl_3
Ch. Niedermayer, A. Oosawa, PSI, ETHZ, Tokyo
Approved. 5 days GPS and 3 days LTF (shared) in 2003.
- RA-03-08.1 μ SR Studies of the Zero Magnetization Ferromagnetic System $\text{Sm}_{1-x}\text{Gd}_x\text{Al}_2$
F. Pratt, S.J. Blundell, ISIS, Oxford, KEK
Approved. 1 day GPS and 2 days Dolly in 2003.
- RA-03-09.1 Molecular Magnetism
S.J. Blundell, F. Pratt, Oxford, ISIS, Oak Ridge, Manchester, Valencia, Strasbourg
Approved. 4 days GPS and 3 days LTF (shared) in 2003.
- RA-03-10.1 Quantum Tunneling of the Magnetic Moment in Mn_{12} clusters
J. Tejada, E. Roduner, R. Scheuermann, Barcelona, Stuttgart, PSI
Approved. 6 days LTF in 2003.
- RA-03-11.1 Superconductivity and Magnetism in Molecular Metals
F. Pratt, S.J. Blundell, ISIS, Oxford, St. Andrews
Approved. 2 days GPS and 2 days LTF (shared) in 2003.
- RA-03-12.1 Muon studies of novel and exotic superconductors
S. Lee, J. Mesot, F. Pratt, St. Andrews, PSI, ISIS, Birmingham, Exeter
Approved. 9 days GPS and 9 days LTF (shared) in 2003.
- RA-03-13.1 Muonium Formation in Semiconductors and Insulators
D. Eshchenko, Zürich, Kurchatov Institute, Vancouver, PSI, Lubbock
Approved. 2 days Dolly and 10 days ALC in 2003.
- RA-03-14.1 Muon dynamics at low temperatures in the tetragonal metals In and Sn
G. Solt, V.S. Egorov, PSI, Kurchatov Institute
Approved. 3 days GPS and 2 days LTF (consecutive) in 2003.
- RA-03-15.1 Muon spin roation and relaxation studies of ferroelectric transitions
E. Morenzoni, PSI, Zürich, Braunschweig
Approved. 4 days Dolly in 2003.
- RA-03-16.1 μ SR Study of novel manganese oxides synthesized under high pressure
A. Prodi, Parma
Approved. 1 day GPS and 3 days Dolly.

Letters of Intent

- R-03-02.0 A new search for the C-noninvariant decay $\pi^0 \rightarrow 3\gamma$
E. Frlez, D. Mzavia, D. Pocanic et al., Charlottesville, PSI, JINR, Swierk, Tbilisi, Tempe, Zagreb
The letter is acknowledged, but no beamtests are assigned, see comments in the short minutes BVR 34.
- R-03-03.0 Precise investigation of the average lifetime of relativistic π -mesons
V. Samoiloov et al., JINR
The letter is acknowledged, see also comments in the short minutes BVR 34

2. Beam schedules, Target E, mE4-beam

The 600 MeV ring accelerator is scheduled for 35 weeks of high intensity beam production from April 24 to December 23, 2003 (see research schedule in the appendix). The last 8 weeks of this production will be operated with the 6 cm long production target .

The μ E4 beam line and area will be shut down next September or October in order to prepare the installation of the new high-flux low-energy muon beam facility LEM. The exact starting date for this operation will be fixed in early July 2003, depending on the state of preparations of the shutdown and the Mucap experiment R-97-05.

As usual, the beam schedule 2003 will be regularly updated and displayed on the internet <http://ltp.web.psi.ch/schedule.pdf>.

3. Acknowledgements

We welcome Prof. Dr. Stephan Paul, TU Munich, and Dr. Patrizia Cenci, INFN Perugia as new members of the BVR committee and wish them an interesting and fruitful activity.

4. Varia

The next meeting BV 35 is scheduled for February 10 - 11, 2004. The **deadline** for beam requests, new proposals and addenda is **December 12, 2003**.

The next meeting BVRA 2004 is foreseen for January 2004 (date not fixed yet). The **deadline** for beam requests and new proposals will be around mid November, 2003.

Attachments

- PSI 590 MeV Program April – December 2003
- BV34 list of PSI HE experiments
- the recommendations of the scientific committees can be found on the internet:
<http://www.psi.ch/ltp/bvr.html>
- conc. experiment R-03-01.1 see also Addendum of April 22, 2003, attached at the end of the short minutes.

PSI 590 MeV Program April – December 2003

Number of week		17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39				
Date of Monday		21.4	28.4	5.5.	12.5	19.5	26.5	2.6	9.6	16.6	23.6	30.6	7.7	14.7	21.7	28.7	4.8	11.8	18.8	25.8	1.9	8.9	15.9	22.9				
590 MeV accelerator, Injector II																												
Area	Proposal	Spokesman	KTR	Experiment																								
pM1		Renker	114100	Detector-Tests																								
	R-99-06	Kirby/Pohl	114150	Fast μ^- lifet.																								
	R-99-05	Mori	114110	Tests $\mu e \gamma$																								
		Robmann	114195	Tests KOPIO																								
		Daum/Kühne	114100	Praktikum LFHA																								
pM3	RA-Progr.	Herlach (coord)	716100	μ SR	GPS + LTF																							
pE1	R-89-01	Gabathuler	114100	LHC Test																								
	R-99-05	Mori	114110	$\mu e \gamma$																								
	RA-Progr.	Herlach	735100	μ SR	Dolly																							
pE3	RA-Progr.	Morenzoni	735200	slow μ^+ exp.																								
	RA-progr.	Herlach (coord)	735100	μ SR	ALC												ALC											
	R-99-07	Hertzog	114140	μ lifetime																								
	Separator 2																											
pE5	R-98-01	Gotta	114175	π Hydrogen																								
	R-98-03	Kottmann	114193	μp Lambshift	Area occupied																							
	R-99-05	Mori	114110	$\mu e \gamma$ tests																								
pE1	RA-Progr.	RA-program	735100	μ SR	GPD																							
		Grab		Praktikum ETH																								
pE4	R-97-05	Kammel/Petitjean	114157	μp Capture																								
	PIREX	Victoria		PIREX																								
NA3	Biomed.	Pedroni-Goitein		p-Therapy																								
				Special exp./Dosimetry																								
SING	R-96-04	Bodek	114130	Time rev viol (n-decay)																								

NA Areas For Details see weekly program

PSI 590 MeV Program April – December 2003

Number of week		39	40	41	42	43	44	45	46	47	48	49	50	51	52
Date of Monday		22.9	29.9	6.10	13.10	20.10	27.10	3.11	10.11	17.11	24.11	1.12	8.12	15.12	22.12
590 MeV accelerator, Injector II															
		Long Target E													
Area	Proposal	Spokesman	KTR	Experiment											
pM1		Renker	114100	Detector-Tests											
	R-99-06	Kirkby/Pohl	114150	Fast μ lifet.											
	R-99-05	Mori	114110	Tests μ ey											
pM3	RA-Progr.	Herlach (coord)	716100	μ SR	GPS + LTF										
pE1	R-89-01	Gabathuler	114100	LHC Test											
	R-99-05	Mori	114110	μ ey											
	RA-Progr.	Herlach	735100	μ SR											
pE3	RA-Progr.	Morenzoni	735200	slow μ + exp.											
	RA-progr.	Herlach (coord)	735100	μ SR											
	R-99-07	Hertzog	114140	μ lifetime											
	Separator 2														
pE5	R-98-01	Gotta	114175	μ Hydrogen											
	R-98-03	Kottmann	114193	μ p Lambshift											
	R-99-05	Mori	114110	μ ey tests											
pE1	RA-Progr.	RA-program	735100	μ SR	GPD										
		Grab		Praktikum ETH											
pE4	R-97-05	Kammel/Petitjean	114157	μ p Capture	Area in Reconstruction										
	PIREX	Victoria		PIREX											
NA3	Biomed.	Pedroni-Goitein		μ -Therapy											
				Special exp./Dosimetry											
SINQ	R-96-04	Bodek	114130	Time rev viol (n-decay)											

NA Areas For Details see weekly program

BV 34 LIST OF PSI HE EXPERIMENTS: BEAM REQUESTS AND ALLOCATIONS 2003 (APRIL 24 - DEC. 23, 2003)

01.05.2003/VA14/list01

AREA	PROPOSAL	SPOKESPERSONS	EXPERIMENT	BEAM STATUS (1 Week = 5 Real Days)			BEAMTIME 2003		
				Used	Allocation	Ref.	Request	Remarks	Allocation
pM1	R-99-06 R-99-05 Praktikum Tests Tests	KIRKBY, POHL MORI DAUM, KUEHNE ROBMANN RENKER	μ^+ lifetime with FAST $\mu \rightarrow e + \gamma$ Praktikum LFHA KOPIO Experiment Crystal and other tests	10 W(T)	appr. (see $\pi E5$)	BV30	15 W(T) 2 W(T) 4 W 2 W(T)	July-Oct. May June June	15 W 2 W 4 W 2 W 4 W
pM3	RA-Props.	(HERLACH, Coord.)	μ SR, GPS + LTF		(see BVRA)		85 W (GPS + LTF)		35 W
pE1	RA_Props. Tests R-99-05	(HERLACH, Coord.) GABATHULER MORI	μ SR with DOLLY Irradiations with π for LHC $\mu e \gamma$		(see BVRA) appr. (see $\pi E5$)		12 W 6 W(T) 8 W(T)	Apr.-July. June/Dec. Oct/Nov.	18 W 6 W 10 W
pE3	slow μ^+ R-99-07 RA-Props.	MORENZONI HERTZOG, CAREY (HERLACH, Coord.)	slow μ^+ facility (LEM) MULAN Det./Beam Tests μ SR (ALC-Expts.)	60 W 5 W(T)	appr. appr. (see BVRA)	BV19 BV29	8 W(Sep) 4+5 W(Sep) 12 W (ALC)	Nov/Dec.long target E July, Oct.	8 W 4+5 W 12 W
pE5	R-98-01 R-98-03 R-99-05	GOTTA KOTTMANN MORI	π Hydrogen Lamb Shift in $\mu H(2s-2p)$ $\mu \rightarrow e + \gamma$ (tests)	21 W 10 W 13 W(T)	appr. appr. Tests appr.	BV27 BV31 BV29	2 W(T) 10 W + 2 T 4 W(T)	May June-August April-May	2 W 12 W 4 W
$\mu E1$	RA-Props. Praktikum	(HERLACH, Coord.) GRAB et al.	μ SR Praktikum Particle Physics ETH		(see BVRA) appr.		21 W (GPD) 3 W	27. Aug - 20 Sept.	21 W 3 W
$\mu E4$	R-97-05	KAMMEL, PETITJEAN	μp singlet capture	26 W(T)	appr.	BV32	8 W + 4 W(T)	May, Sept-Oct	12 W
NA Areas (split-p beam)	R-89-08 PIREX NA3	ZEHNDER, HAJDAS VICTORIA PEDRONI, GOITEIN	PIF (Proton Irrad. Facility) Materials Science p-Therapy (GANTRY), Dosimetry Special exp. and dosimetry		appr. appr. appr.	BV14 FOKO FOKO	8-16 WE (or 8 W in NEB area) (paras.) 35 WE April- December 4x17.5 h/week + last 4 Saturdays 5 WE Mo, Tue, Thurs evenings	OK OK OK	
SINQ "FUNSPIN"	R-96-04 R-03-01	BODEK ZIMMER	Time reversal viol. in n-decay n-scattering length of D	30 W	appr.	BV32 BV34	3M(T) + 2M 20 W	May-July/Oct.-Dec. 3 + 2 M 2004/2005	