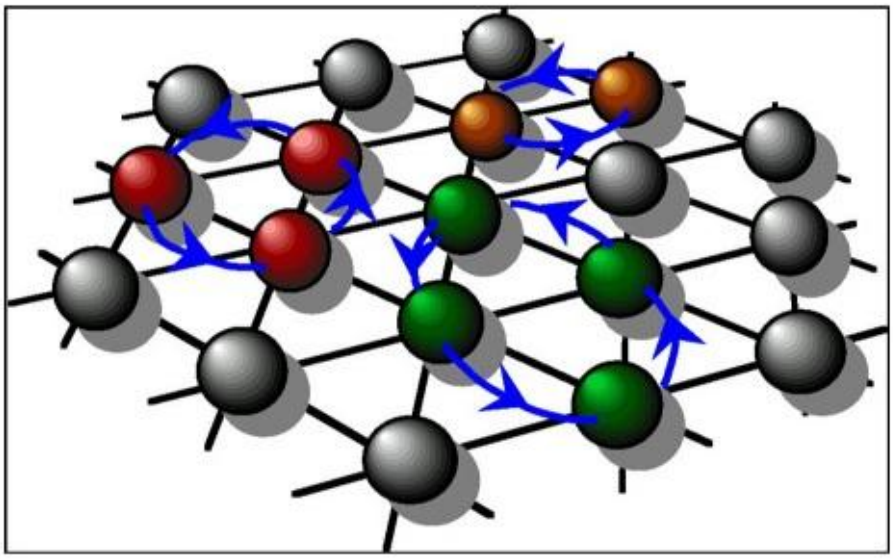

QFS 2010

International Symposium on Quantum Fluids and Solids

PROGRAM

August 1-7

Grenoble - France

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QFS 2010 - Program

Sunday, August 1st

17:00 – 21:00 *Check-in and reception (Grenoble World Trade Center – Atrium)*

Monday, August 2nd

8:00 – 9:00 *Check-in*

Opening Session ***Chair: George R. Pickett***

9:00 – 9:10 Welcome/announcements

9:10 – 9:20 Announcements: Journal of Low Temperature Physics
Horst Meyer

9:20 – 9:40 Superfluidity yesterday, today and tomorrow
Philippe Nozières, membre de l'Académie des Sciences

Session: Hydrogen ***Chair: Horst Meyer***

9:40 – 10:00 Matrix isolation of H atoms at low temperatures
David Lee, Cornell University

10:00 – 10:20 Exchange tunneling chemical reactions of hydrogen isotopes in nanoclusters immersed in superfluid helium
Vladimir Khmelenko, Texas A&M University

10:20 – 10:40 Magnetic resonance study of H atoms in solid H_2 at temperatures below 1K
Sergey Vasiliev, University of Turku

10:40 – 11:10 *Coffee break*

Session: Theory I ***Chair: Philippe Nozières***

11:10 – 11:50 Quantum fluids and solids as seen by Path Integrals
David Ceperley, University of Illinois

11:50 – 12:10 Metastable liquid para-H_2 at very low temperatures
Jordi Boronat, Universitat Politecnica de Catalunya

12:10 – 12:30 Ground-state of spin-polarized hydrogen and its isotopes: from bulk properties to small clusters
Leandra Vranjes Markic, University of Split

12:40 – 14:00 *Lunch*

Session: New trends in ^{4}He ***Chair: Minoru Kubota***

14:00 – 14:40 Giant coupling effects in confined He-4 near T-lambda
Francis Gasparini, Buffalo, SUNY

14:40 – 15:00 Polarization effects in superfluid ^{4}He
Vladimir Mineev, INAC \ SPSMS – CEA Grenoble

15:00 – 15:20 Mass flux and solid growth in solid ^{4}He: 60 mK - 700 mK
Robert B. Hallock, University of Massachusetts, Amherst

Session: Turbulence ***Chair: Ladislav Skrbeck***

15:20 – 15:40 Quantum and classical turbulence in superfluids in the zero temperature limit
Victor L'vov, Weizmann Institute of Science

15:40 – 16:00 Non-classical velocity statistics in superfluid turbulence
Carlo Barenghi, Newcastle upon Tyne

16:00 – 16:20 Dynamics of vortex tangles in superfluid ^{4}He at low temperatures
Andrei Golov, University of Manchester

16:20 – 16:40 Classical turbulence on the surface of quantum liquids
Leonid Abdurakhimov, ISSP-RAS Chernogolovka

16:40 – 17:10 *Coffee break*

Session: Superfluid ^{3}He ***Chair: John Saunders***

17:10 – 17:50 NMR studies of superfluid phases of ^{3}He in aerogel
Vladimir V. Dmitriev, Kapitza Institute, Moscow

17:50 – 18:10 Proximity induced odd frequency pair in liquid ^{3}He in aerogel
Seiji Higashitani, Hiroshima University

18:10 – 18:30 Fourth sound of superfluid ^{3}He in aerogel
Ken Obara, Osaka City University

18:30 – 18:50 Branes, strings and boojums; defects in ^{3}He and the Cosmos
Richard Haley, Lancaster University

Tuesday, August 3rd

Session: Helium and Charges ***Chair: Paul Leiderer***

9:00 – 9:40 Ripplonic Lamb shift for electrons on the Helium surface
Mark Dykman, Michigan State University

9:40 – 10:00 Radiation-induced zero-resistance states in surface electrons on He
Denis Konstantinov, Low Temperature Physics Laboratory, RIKEN

10:00 – 10:20 Phase transitions in 2D electron system over liquid Helium
Vitaliy Syvokon, B. Verkin Institute, Kharkov

10:30 – 11:00 *Coffee break*

Session: Low Dimensional QFS ***Chair: Susana Hernández***

11:00 – 11:40 Novel phases of quantum fluids near solid surfaces
Milton Cole, Penn State University

11:40 – 12:00 Adsorption on a single nanotube
Oscar Vilches, University of Washington

12:00 – 12:20 Quantum gases on graphene
Carmen Gordillo, Universidad Pablo de Olavide de Sevilla

12:20 – 12:40 Superfluidity in one-dimensional state of ^{4}He fluid nanotubes
Nabuo Wada, Nagoya University

12:40 – 14:00 *Lunch*

14:00 – 16:40 ***POSTER SESSION I***

16:40 – 17:10 *Coffee break*

Session: Topological Superfluids ***Chair: William Halperin***

17:10 – 17:50 Topological superconductors and Majorana fermions
Shoucheng Zhang, Stanford University

17:50 – 18:10 Surface Andreev states and surface Majorana states on superfluid ^{3}He-B
Yuichi Okuda, Tokyo Institute of Technology

18:10 – 18:30 Majorana edge modes of superfluid ^{3}He-A and B phases confined in a thin film
Kazushige Machida, Okayama University

18:30 – 18:50 NMR measurements of the deformed superfluid ^{3}He-B confined in a single 0.6 micron slab
Andrew Casey, Royal Holloway, University of London

Wednesday, August 4th

Session: Magnetism ***Chair: Hiroshi Fukuyama***

9:00 – 9:40 Multiple-spin exchange in correlated-fermion systems
Michel Roger, CEA IRAMIS SPEC Saclay

9:40 – 10:00 Solid-liquid interface magnetic ordering
Igor Todoshchenko, LTL, Aalto University, Helsinki

10:00 – 10:20 Bilayer Hubbard model for ^{3}He: a cluster dynamical mean-field calculation
Fakher F. Assaad, University of Würzburg

10:30 – 11:00 *Coffee break*

Session: Vortices ***Chair: Makoto Tsubota***

11:00 – 11:40 Dissipation in vortex dynamics in superfluid ^{3}He-B at low temperatures
Vladimir Eltsov, LTL, Aalto University, Helsinki

11:40 – 12:00 Experiments on quantum vortices in superfluid ^{3}He-B in the T~0 limit
Shaun N. Fisher, Lancaster University

12:00 – 12:20 Excitations and characterization of quantum turbulence in an atomic superfluid
Vanderlei Bagnato, University of Sao Paulo - IFSC

12:20 – 12:40 Observation of some interesting objects in superfluid Helium-4 and their interaction with vortices
Humphrey Maris, Brown University

12:40 – 14:00 *Lunch*

14:00 – 18:00 **Excursions** (meeting point depends on the excursion, see instructions)

Thursday, August 5th

Session: Supersolids I ***Chair: Matthias Graf***

9:00 – 9:40 Review of experimental results on supersolidity
Moses Chan, Penn State University

9:40 – 10:00 NCRI and shear modulus of solid helium at low temperatures
Eunseong Kim, KAIST

10:00 – 10:20 New experiments bearing on the nature of the supersolid state of solid ^{4}He
John D. Reppy, Cornell University

10:30 – 11:00 *Coffee break*

Session: BEC in Condensed Matter ***Chair: Matti Krusius***

11:00 – 11:40 BEC of non-equilibrium quasiparticles in ^{3}He and beyond
Grigori Volovik, LTL, Aalto University, Helsinki

11:40 – 12:00 Exciton polaritons in semiconductors: toward new frontiers of Bose quantum degeneracy
Le Si Dang, Institut Néel, CNRS Grenoble

12:00 – 12:20 Superfluidity and vortices in exciton-polariton condensates
Natalia G. Berloff, DAMTP, CMS, University of Cambridge

12:20 – 12:40 B-E condensates of magnons in superfluid ^{3}He-B and symmetry breaking fields
Peter Skyba, Institute of Experimental Physics SAS, Kosice

12:40 – 14:00 *Lunch*

14:00 – 16:40 ***POSTER SESSION II***

16:40 – 17:10 *Coffee break*

Session: Theory II ***Chair: Jesús Navarro***

17:10 – 17:30 Two-dimensional ^{3}He: a crucial system for understanding fermion dynamics
Eckhard Krotscheck, Linz University

17:30 – 17:50 Quantum processes in superconducting-magnetic Josephson junctions
James Sauls, Northwestern University, Evanston

18:30 Conference Banquet. *Buses depart from World Trade Center.*
Banquet venue: Château du Touvet

23:15 Buses departure from banquet venue.

Friday, August 6th

Session: Supersolids II ***Chair: Kimitoshi Kono***

9:00 – 9:20 Non-equilibrium quantum systems - glasses at ultra-low temperatures
Christian Enss, Heidelberg University

9:20 – 9:40 Quantum dislocations in solid ^{4}He
Anatoly Kuklov, College of Staten Island, CUNY

9:40 – 10:00 Elastic properties of solid helium: Is there a phase transition? Is there a critical velocity?
John Beamish, University of Alberta

10:00 – 10:20 The anomalous softening of helium-4 crystals
Sébastien Balibar, ENS and CNRS, Paris

10:30 – 11:00 *Coffee break*

Session: NEMs and MEMs ***Chair: Jeevak Parpia***

11:00 – 11:40 Putting the mechanics into quantum mechanics
Andrew Cleland, University of California, Santa Barbara

11:40 – 12:00 Nanomechanical measurements of a superconducting qubit
Matthew LaHaye, Syracuse University

12:00 – 12:20 Scheme to probe the quantum dynamics of a mesoscopic mechanical resonator
Miles Blencowe, Dartmouth College, Hanover

12:20 – 12:40 Quantum opto-mechanics: how to use micromechanics in quantum experiments
Simon Gröblacher, University of Vienna

12:40 – 14:00 *Lunch*

Session: Quantum Gases ***Chair: Eckhard Krotscheck***

14:00 – 14:40 Towards quantum magnetism with ultracold atoms
Wolfgang Ketterle, MIT

14:40 – 15:00 Single-site and single-atom resolved imaging of correlated quantum states in optical lattices
Marc Cheneau, Max-Planck-Institut für Quantenoptik, München

15:00 – 15:20 Thermodynamics of strongly interacting Fermi gases
Frédéric Chevy, Laboratoire Kastler Brossel, ENS and CNRS, Paris

15:20 – 15:40 Non-abelian vortices in spinor Bose-Einstein condensates
Michikazu Kobayashi, University of Tokyo

15:40 – 16:00 Quantum interference of Bose-Einstein condensates
William Mullin, University of Massachusetts

Conference closing Session ***Chair: Mikko Paalanen***

16:00 - 16:20 ^{3}He supply: information (W.P. Halperin) and discussion

16:20 - 16:40 Announcements: Conferences and Awards
Closing ceremony

Saturday, August 7th *Satellite Workshops*

List of contributions

Poster contributions are attributed a number : PS1-n or PS2-n means that the poster will be presented in the first or second poster session with number n.

1 Theory of quantum fluids and solids

1.1 Invited talks

Quantum fluids and solids as seen by path integrals, *D. Ceperley*, Monday at 11:10

Two-dimensional ^{3}He: a crucial system for understanding fermion dynamics, *E. Krotscheck*, Thursday at 17:10

Polarization effects in superfluid ^{4}He, *V. Mineev*, Monday at 14:40

Ground-state of spin-polarized hydrogen and its isotopes: from bulk properties to small clusters, *L. Vranjes Markic*, Monday at 12:10

Topological superconductors and Majorana fermions, *S. C. Zhang*, Tuesday at 17:10

1.2 Posters

PS1-1 — Free energy functionals and thermodyanmics for superfluid ^{3}He in aerogel, *S. Ali, L. Zhang, and J. A. Sauls*

PS1-2 — Fast moving electrons in liquid ^{4}He, *F. Ancilotto, M. Barranco, and M. Pi*

PS1-3 — Quantum critical phenomena of ^{4}He in nanoporous media, *T. Eggel, M. Oshikawa, and K. Shirahama*

PS1-4 — Theoretical study of quantum gel formation in superfluid ^{4}He, *J. Eloranta*

PS1-5 — Vortex-loop thermodynamics of superfluid ^{4}He under pressure, *A. Forrester, and G. A. Williams*

PS1-6 — Roton energies in overpressurized ^{4}He inferred from exact quantum Monte Carlo simulations, *D. E. Galli, and L. Reatto*

PS1-7 — Quantum Monte Carlo study of Rb^*, Rb_2 and other alkali in helium clusters, *G. Guillon, A. Viel, M. Leino, A. Zanchet, and R. Zillich*

PS1-8 — Heterophase fluctuations in solid helium near the hcp-bcc phase transformation line and melting curve, *A. I. Karasevskii*

PS1-9 — Complexes in rare-gas solid solutions, *A. I. Karasevskii*

PS1-10 — Excess pressure of the phonon gas in nanocrystals, *A. I. Karasevskii*

PS1-11 — Elementary excitations in superfluid ^{3}He-^{4}He mixtures within a density functional approach, *D. Mateo, M. Barranco, and J. Navarro*

PS1-12 — Accurate density response function of superfluid ^{4}He at freezing pressure: Is DFT successful for superfluid freezing?, *T. Minoguchi, and D. E. Galli*

PS1-13 — Two-time temperature Green's function formalism in the study of bosonic mixtures, *A. Rovenchak, and I. Prunchak*

PS1-14 — New version of quantum mechanics at finite temperatures as a ground for description of nearly perfect fluids, *A. Sukhanov, and O. Golubjeva*

PS1-15 — Kinetic energy of ^{4}He atoms in the solid phase at T=0, *S. A. Vitiello*

2 Superfluid ^{3}He and ^{4}He

2.1 Invited talks

NMR measurements of the deformed superfluid ^{3}He-B confined in a single 0.6 micron slab, *A. J. Casey, L. V. Levitin, R. G. Bennett, B. Cowan, J. Parpia, E. V. Surovtsev, and J. Saunders*, Tuesday at 18:30

NMR studies of superfluid phases of ^{3}He in aerogel, *V. V. Dmitriev*, Monday at 17:10

Branes, strings and boojums; defects in ^{3}He and the cosmos, *R. P. Haley*, Monday at 18:30

Proximity-induced odd-frequency pair in liquid ^{3}He in aerogel, *S. Higashitani, Y. Nagato, and K. Nagai*, Monday at 17:50

Quantum and classical turbulence in superfluids in the zero temperature limit, *V. S. L'vov*, Monday at 15:20

Majorana edge modes of superfluid ^{3}He-A and B phases confined in a thin film, *K. Machida*, Tuesday at 18:10

Fourth sound of superfluid ^{3}He in aerogel, *K. Obara*, Monday at 18:10

Surface Andreev states and surface Majorana states on superfluid ^{3}He-B, *Y. Okuda*, Tuesday at 17:50

2.2 Posters

PS1-16 — High magnetic field transverse acoustics in superfluid ^{3}He-B, *C. Collett, S. Sasaki, J. P. Davis, J. Pollanen, W. Gannon, J. Li, and W. P. Halperin*

PS1-17 — Nuclear spin relaxation in glass states of ^{3}He-A in stretched aerogel, *V. V. Dmitriev, D. A. Krasnikhin, N. Mulders, A. A. Senin, and A. N. Yudin*

PS1-18 — Orbital glass and spin glass states of ^{3}He-A in aerogel, *V. V. Dmitriev, D. A. Krasnikhin, N. Mulders, A. A. Senin, G. E. Volovik, and A. N. Yudin*

PS1-19 — A new experiment using characterised quartz tuning forks to probe the superfluid ^{3}He AB interface, *D. I. Bradley, M. J. Fear, S. N. Fisher, A. M. Guénault, R. P. Haley, C. R. Lawson, G. R. Pickett, R. Schanen, V. Tsepelin, and L. A. Wheatland*

PS1-20 — Absorption spectrum of Mg atoms in pressurized liquid ^{4}He and superfluid helium mixtures, *A. Hernando, D. Mateo, M. Barranco, and M. Pi*

PS1-21 — Superfluid ^{3}He immersed in radially squeezed aerogel : BEC of magnons and superfluid phase transition., *P. Hunger, Yu. M. Bunkov, E. Collin, and H. Godfrin*

PS1-22 — Features of interaction of microwaves with He II, *V. D. Khodusov, and A. S. Naumovets*

PS1-23 — Controlled flow measurements in superfluids, *C. R. Lawson, D. I. Bradley, M. Človečko, S. N. Fisher, A. M. Guénault, R. P. Haley, G. R. Pickett, R. Schanen, V. Tsepelin, and P. Williams*

PS1-24 — Superfluid ^{3}He confined in a single 0.6 micron slab: the phase diagram and properties of the A phase, *L. V. Levitin, R. G. Bennett, A. J. Casey, B. Cowan, J. Parpia, and J. Saunders*

PS1-25 — Superfluid ^{3}He confined in a single 0.6 micron slab: the B phase with a strong planar distortion, *L. V. Levitin, E. V. Surovtsev, R. G. Bennett, A. J. Casey, B. Cowan, J. Parpia, and J. Saunders*

PS1-26 — Effects of Majorana edge fermions on dynamical spin susceptibility in topological superfluid ^{3}He-B, *T. Mizushima, and K. Machida*

PS1-27 — Superfluidity of ^{4}He in a nanopore array of porous alumina, *S. Murakawa, Y. Chikazawa, R. Higashino, K. Yoshimura, Y. Shibayama, K. Kuriyama, K. Honda, and K. Shirahama*

PS1-28 — Surface Majorana cone of the superfluid ^{3}He B phase, *S. Murakawa, Y. Wada, Y. Tamura, M. Wasai, M. Saitoh, Y. Aoki, R. Nomura, Y. Okuda, Y. Nagato, M. Yamamoto, S. Higashitani, and K. Nagai*

PS1-29 — Study for surface states of superfluid ^{3}He in non-unitary phases at high magnetic fields, *S. Murakawa, A. Yamaguchi, M. Arai, M. Wasai, Y. Aoki, H. Ishimoto, R. Nomura, and Y. Okuda*

PS1-30 — Relation between thermodynamic parameters and electric potential in the standing second sound wave, *K. Nemchenko, and S. Rogova*

PS1-31 — Radiation and propagation of phonon pulses in superfluid helium at high pressures, *K. E. Nemchenko, I. N. Adamenko, V. A. Slipko, and A. F. Wyatt*

PS1-32 — Unconventional textural properties of superfluid ^{3}He-B in isotropic aerogel, *J. Pollanen, J. Li, K. Y. Fang, C. Collett, W. J. Gannon, and W. P. Halperin*

PS1-33 — The possibility of magnon BEC in antiferromagnetic $MnCO_3$, *M. S. Tagirov, Yu. M. Bunkov, A. V. Klochkov, and R. R. Gazizulin*

PS1-34 — Majorana edge modes of superfluid ^{3}He A- and B-phases, *Y. Tsutsumi, T. Mizushima, M. Ichioka, and K. Machida*

PS1-35 — A novel approach to measure force-velocity behaviour of flow in superfluid ^{4}He, *P. Williams, D. I. Bradley, S. N. Fisher, A. M. Guénault, R. P. Haley, C. R. Lawson, M. Človečko, G. R. Pickett, R. Schanen, and V. Tsepelin*

PS1-36 — A novel design of a spin pump cell in superfluid ^{3}He-A_1 phase, *A. Yamaguchi, G. Motoyama, A. Sumiyama, Y. Karaki, Y. Aoki, Y. Okuda, and H. Kojima*

PS1-37 — Mg_m clusters in superfluid ^{4}He droplets, *R. E. Zillich, S. Janecek, E. Krotscheck, and M. Liebrecht*

3 Hydrogen

3.1 Invited talks

Metastable liquid para-H_2 at very low temperatures, *J. Boronat, R. Rota, O. Osychenko, and E. Sola*, Monday at 11:50

Exchange tunneling chemical reactions of hydrogen isotopes in nanoclusters immersed in superfluid helium., *V. V. Khmelenko*, Monday at 10:00

Matrix isolation of H atoms at low temperatures, *D. M. Lee*, Monday at 9:40

Magnetic resonance study of H atoms in solid H_2 at temperatures below 1K, *S. Vasiliev*, Monday at 10:20

3.2 Posters

PS1-38 — Detailed low T study of PdH_x system by torsional oscillator: x dependent responses, *S. Harada, T. Donuma, H. Araki, T. Kakuda, R. Nakatsuji, and M. Kubota*

PS1-39 — Atomic hydrogen in thick H_2 films at temperatures 0.05-2 K, *J. Järvinen, V. Khmelenko, D. M. Lee, J. Ahokas, and S. Vasiliev*

PS1-40 — Dynamics of HD molecules trapped in the cages of zeolite, *Yu. Ji, N. S. Sullivan, and J. A. Hamida*

4 Helium hydrodynamics

4.1 Invited talks

Classical turbulence on the surface of quantum liquids, *L. V. Abdurakhimov, M. Yu. Brazhnikov, I. A. Remizov, and A. A. Levchenko*, Monday at 16:20

A study of the motion of particles in superfluid helium-4 and interactions with vortices, *D. Jin, and H. J. Maris*, Wednesday at 12:20

4.2 Posters

PS1-41 — Acoustic resonance of superfluid ^{3}He in parallel plates, *K. Obara, C. Kato, S. Sasamoto, H. Yano, O. Ishikawa, and T. Hata*

PS1-42 — Turbulent convection : does the ultimate regime really follow Kraichnan prediction ?, *P.-E. Roche, F. Gauthier, R. Kaiser, and J. Salort*

PS1-43 — On sound emission of quartz tuning forks in liquid helium, *G. Sheshin, D. Schmoranzer, M. LaMantia, M. Rotter, V. Chagovets, I. Gritsenko, E. Rudavskii, A. Zadorozhko, and L. Skrbek*

PS1-44 — Fractional hydrodynamic of superfluid helium and Galilean non-invariance, *D. A. Tayurskii, and Yu. V. Lysogorskii*

5 Quantum turbulence

5.1 Invited talks

Non-classical velocity statistics in superfluid turbulence, *C. Barenghi*, Monday at 15:40

Dynamics of vortex tangles in superfluid ^{4}He at low temperatures, *A. I. Golov, P. M. Walmsley, and P. Tompsett*, Monday at 16:00

5.2 Posters

PS1-45 — Fractal dimension of quantised vortex filaments and emission of vortex rings in the Kelvin wave cascade, *C. F. Barenghi, and A. W. Baggaley*

PS1-46 — Formation of quantized vortices by vibrating bodies in He II at $T \to 0$ K, *V. Efimov, Deepak Garg, M. Giltrow, W. F. Vinen, L. Skrbek, and P. V. McClintock*

PS1-47 — Turbulent superfluid profiles in a counterflow channel, *L. Galantucci, C. F. Barenghi, M. Quadrio, P. Luchini, and M. Sciacca*

PS1-48 — Strongly interacting charged vortices in superfluid ^{4}He at low temperatures, *P. M. Walmsley, P. Tompsett, and A. I. Golov*

PS1-49 — Numerical studies of superfluid spin down from rotation, *R. Hänninen, and N. Hietala*

PS1-50 — Search for a link between pair-breaking and turbulence in superfluid ^{3}He-B, *D. I. Bradley, S. N. Fisher, A. Ganshyn, A. M. Guénault, R. P. Haley, M. J. Jackson, G. R. Pickett, R. Schanen, and V. Tsepelin*

PS1-51 — Numerical study of the inhomogeneous vortex tangle at zero temperature, *Luiza P. Kondaurova, and Sergey K. Nemirovskii*

PS1-52 — Geometric symmetries in superfluid vortex dynamics, *E. V. Kozik, and B. V. Svistunov*

PS1-53 — Laminar vortex motion in rotating superfluid ^{3}He-B at $0.2\,T_c$, *R. de Graaf, V. B. Eltsov, P. J. Heikkinen, J. J. Hosio, R. Hänninen, and M. Krusius*

PS1-54 — Energy spectra of homogeneous isotropic turbulence in superfluids, *V. S. L'vov*

PS1-55 — Time-of-flight measurements of vortex rings in superfluid ^{4}He at high temperatures, *Y. Nago, T. Ogawa, K. Obara, H. Yano, O. Ishikawa, and T. Hata*

PS1-56 — Motions of vortex lines attached to oscillating objects in turbulent state of superfluid ^{4}He, *Y. Nago, S. Mio, N. Chiba, K. Obara, H. Yano, O. Ishikawa, and T. Hata*

PS1-57 — Dynamics of inhomogeneous vortex tangles in quantum systems, *Sergey K. Nemirovskii*

PS1-58 — Thermal detection of quantum turbulent decay in superfluid ^{3}He-B at ultralow temperatures, *D. A. Potts, D. I. Bradley, S. N. Fisher, A. M. Guénault, R. P. Haley, G. R. Pickett, R. Schanen, and V. Tsepelin*

PS1-59 — Quantum turbulence within the Gross-Pitaevskii model, *D. Proment, S. Nazarenko, and M. Onorato*

PS1-60 — Superfluid high Reynolds number von Kármán experiment, *B. Rousset, C. Baudet, B. Castaing, L. Chevillard, F. Daviaud, P. Diribarne, B. Dubrulle, D. Duri, Y. Gagne, A. Girard, B. Hébral, E. Herbert, T. Lehner, P.-E. Roche, J. Salort, and S. Villerot*

PS1-61 — Velocity spectra in turbulent He II, *J. Salort, C. Baudet, B. Castaing, B. Chabaud, F. Daviaud, T. Didelot, P. Diribarne, B. Dubrulle, Y. Gagne, F. Gauthier, A. Girard, B. Hébral, B. Rousset, P. Thibault, and P.-E. Roche*

PS1-62 — Saturation of counterflow turbulence in He II, *M. Sciacca, Y. A. Sergeev, C. F. Barenghi, and L. Skrbek*

PS1-63 — Interactions of thermal quasiparticles with turbulent structures in ^{3}He-B, *Y. A. Sergeev, C. F. Barenghi, and N. Suramlishvili*

PS1-64 — Quantum turbulence produced by vibrating grids in superfluid ^{3}He-B, *V. Tsepelin, D. I. Bradley, A. M. Guénault, S. N. Fisher, R. P. Haley, M. J. Jackson, and G. R. Pickett*

PS1-65 — Studies of turbulence generated by vibrating wire in He-I and He-II, *V. Tsepelin, D. I. Bradley, A. M. Guénault, S. N. Fisher, R. P. Haley, M. J. Jackson, D. Nye, K. O'Shea, and G. R. Pickett*

PS1-66 — Simulation of counterflow turbulence by vortex filaments *Statistics of vortex reconnections*, *M. Tsubota, and H. Adachi*

PS1-67 — Vortex dynamics in a two-phase sample of superfluid ^{3}He, *V. B. Eltsov, R. de Graaf, P. J. Heikkinen, J. J. Hosio, R. Hänninen, M. Krusius, and P. M. Walmsley*

PS1-68 — Dynamics of polarized quantum turbulence in rotating superfluid ^{4}He, *P. M. Walmsley, and A. I. Golov*

PS1-69 — Transition to quantum turbulence and the propagation of vortex loops at finite temperature, *S. Yamamoto, H. Adachi, and M. Tsubota*

6 Reduced dimensionality, quantum fluids and solids

6.1 Invited talks

Novel phases of quantum fluids near solid surfaces, *M. Cole*, Tuesday at 11:00

Giant coupling effects in confined ^{4}He, *F. M. Gasparini, and J. K. Perron*, Monday at 14:00

Quantum gases on graphene, *M. C. Gordillo, and J. Boronat*, Tuesday at 12:00

Multiple-spin exchange in strongly correlated fermion systems, *M. Roger*, Wednesday at 9:00

Adsorption of atoms on a single carbon nanotube, *O. E. Vilches, Z. Wang, H. Lee, E. R. Mattson, E. Frederickson, and D. H. Cobden*, Tuesday at 11:40

Superfluidity in one-dimensional state of ^{4}He fluid nanotubes, *N. Wada, Y. Minato, T. Matsushita, M. Hieda, K. Yamashita, and D. S. Hirashima*, Tuesday at 12:20

6.2 Posters

PS1-70 — Excitation spectra of two-dimensional hard-core bosons in the superfluid phase, *T. N. Antsygina, I. I. Poltavsky, M. I. Poltavskaya, and K. A. Chishko*

PS1-71 — Tuning surface roughness to momentum-couple highly confined normal ^{3}He, *R. G. Bennett, L. V. Levitin, A. Casey, P. Sharma, J. Saunders, and J. M. Parpia*

PS1-72 — Superfluid ^{3}He-B spinwaves in cylinder of one millimeter in diameter at low pressures, *O. W. Benningshof, and R. Jochemsen*

PS1-73 — Features of magnetoresistance and magnetothermopower in $Bi_{1-x}Sb_x$ wires near the gapless state, *P. Bodiul, A. Nikolaeva, L. Konopko, E. Moloshnik, and I. Popov*

PS1-74 — Hard-core bosons on a square lattice in the random phase approximation, *K. A. Chishko, T. N. Antsygina, I. I. Poltavsky, and M. I. Poltavskaya*

PS1-75 — Fluid helium in a narrow pore at zero temperature, *E. S. Hernández*

PS1-76 — Adsorption of helium in a deformed pore, *E. S. Hernández*

PS1-77 — Path Integral calculation of ^{4}He in quasi-one-dimensional channels, *H. Kiriyama, J. Taniguchi, M. Suzuki, and T. Takagi*

PS1-78 — Superfluid transition in ^{4}He films adsorbed on thin porous golds submicronmeter thick, *S. Kiyota, M. Hieda, T. Matsushita, and N. Wada*

PS1-79 — Quantum interference in bismuth nanowires: evidence for surface charges, *L. Konopko, T. E. Huber, and A. Nikolaeva*

PS1-80 — Quantum Monte Carlo simulations of the Kosterlitz-Thouless transition for two-dimensional disordered Bose-Hubbard model, *H. Kuroyanagi, M. Tsukamoto, and M. Tsubota*

PS1-81 — Low-temperature properties of quantum Heisenberg antiferromagnet and Hubbard model on one dimensional lattices containing equilateral triangles, *M. Maksymenko, O. Derzhko, and J. Richter*

PS1-82 — Helium fluid in extremely narrow 1D channels 1.5 nm in diameter, *T. Matsushita, J. Miura, M. Hieda, and N. Wada*

PS1-83 — Third sound in superfluid ^{4}He films adsorbed on packed multiwall carbon nanotubes, *E. Menachekanian, and G. A. Williams*

PS1-84 — Impurity gel samples in superfluid He-II – results of neutron studies, *L. P. Mezhov-Deglin, V. B. Efimov, A. V. Lokhov, G. V. Kolmakov, and V. V. Nesvizhevsky*

PS1-85 — Phase diagram of ^{4}He film in 3D nanopores of ZTC, *Y. Nakashima, M. Hieda, T. Matsushita, and N. Wada*

PS1-86 — Ground-state properties of electron-electron quantum bilayers, *Mukesh G. Nayak, and L. K. Saini*

PS1-87 — Features of the magnetothermopower and magnetoresistivity of Bi nanowires in weak and strong magnetic fields, *A. Nikolaeva, L. Konopko, T. Huber, Gh. Para, and A. Tsurkan*

PS1-88 — QCM study of 2D superfluid in ^{3}He-^{4}He mixture films on gold, *T. Oda, M. Hieda, T. Matsushita, and N. Wada*

PS1-89 — Ground-state properties of 2D hard-core bosons in superfluid phase within second-order spin wave theory, *M. I. Poltavskaya, T. N. Antsygina, I. I. Poltavsky, and K. A. Chishko*

PS1-90 — Finite temperature phase diagrams of hard-core bosons on a square lattice, *I. I. Poltavsky, T. N. Antsygina, M. I. Poltavskaya, and K. A. Chishko*

PS1-91 — Quantum phase transition of ^{4}He confined in a regular nanoporous structure, *K. Shirahama, N. Yamanaka, T. Kondo, Y. Sogabe, Y. Shibayama, and S. Inagaki*

PS1-92 — Elements of transport theory on the ground of one-dimensional model of quantum stat. hydrodynamics., *A. Sukhanov, and O. Golubjeva*

PS1-93 — Unusual monolayer superfluidity of ^{4}He on lithium, *P. Taborek, and E. Van Cleve*

PS1-94 — Phase diagram of ^{4}He confined in 1D nano-porous material FSM16 with 2.8-nm channel, *J. Taniguchi, R. Fujii, and M. Suzuki*

PS1-95 — Dynamic probes of quantum phase transition in quantum spin chain with three-site interactions, *M. Topilko, O. Derzhko, and T. Krokhmalskii*

PS1-96 — Bose Hubbard model confined in the restricted geometry, *M. Tsukamoto, and M. Tsubota*

PS1-97 — Vortices in superconducting lead nanowires, *W. M. Wu, M. B. Sobnack, and F. V. Kusmartsev*

PS1-98 — Bose condensation and superfluidity of ^{4}He in nanopores, *K. Yamashita, and D. Hirashima*

7 Charges and quantum fluids

7.1 Invited talks

Ripplonic Lamb shift for electrons on helium surface, *M. I. Dykman, K. Kono, D. Konstantinov, E. Collin, and M. J. Lea*, Tuesday at 9:00

Radiation-induced zero-resistance states in surface electrons on He, *D. Konstantinov, and K. Kono*, Tuesday at 9:40

Phase transitions in 2D electron system over liquid helium, *V. E. Syvokon, and K. A. Nasyedkin*, Tuesday at 10:00

7.2 Posters

PS1-99 — A new model for the density-dependence of electron mobility and cavity formation in supercritical and liquid helium, *F. Aitken, Z.-L. Li, N. Bonifaci, A. Denat, and K. von Haeften*

PS1-100 — Electron transport on liquid helium in confined geometry, *M. Ashari, D. Rees, F. Shaban, J. Engelhardt, J. Gleixner, K. Kono, and P. Leiderer*

PS1-101 — Transport measurements of electrons on liquid ^{4}He in the 1.6 μm channel, *H. Ikegami, H. Akimoto, and K. Kono*

PS1-102 — Mixed scenario of the charged helium surface reconstruction, *P. Leiderer, and V. Shikin*

PS1-103 — Dynamic melting of 2D electron crystal over liquid helium induced by damaging electric field, *K. A. Nasyedkin, and V. E. Syvokon*

PS1-104 — Ripplon-limited nonlinear mobility of surface electrons over liquid helium, *K. A. Nasyedkin, V. E. Syvokon, Yu. P. Monarkha, and S. S. Sokolov*

PS1-105 — Transport through a point constriction of an electron liquid on the surface of superfluid ^{4}He, *D. G. Rees, I. Kuroda, M. Höfer, P. Leiderer, and K. Kono*

PS1-106 — Ripplon-phonon interaction in liquid helium governs the mobility of surface state Electrons, *A. I. Safonov, I. I. Safonova, and S. S. Demukh*

PS1-107 — Mobility of the electrons over liquid helium and possible formation of autolocalized state of electron in dense gas, *A. Smorodin, V. Nikolaenko, and S. Sokolov*

8 Normal liquid ^{3}He, ^{4}He and mixtures

8.1 Invited talks

Mass flux and solid growth in solid ^{4}He: 60 mK - 700 mK, *R. B. Hallock*, Monday at 15:00

8.2 Posters

PS2-1 — Mass coupling and Q^{-1} of impurity-limited normal ^{3}He in a torsion pendulum, *R. G. Bennett, A. D. Fefferman, N. Zhelev, K. Y. Fang, J. Pollanen, P. Sharma, W. P. Halperin, and J. M. Parpia*

PS2-2 — Condensation of ^{4}He in Vycor : new hints for the origin of hysteresis, *F. Bonnet, M. Melich, L. Guyon, L. Puech, and P. E. Wolf*

PS2-3 — NMR studies of ^{3}He droplets in dilute ^{3}He-^{4}He solid solutions, *C. Huan, S. S. Kim, L. Yin, J. S. Xia, D. Candela, and N. S. Sullivan*

PS2-4 — The ground state energy of ^{3}He droplet in the LOCV framework, *M. Modarres, S. Motahari, and A. Rajabi*

PS2-5 — Mechanical response of ^{4}He films adsorbed on graphite with a quartz tuning fork, *F. Nihei, K. Ideura, H. Kobayashi, J. Taniguchi, and M. Suzuki*

PS2-6 — Density matrix of the system "Bose-liquids + impurities" in the approximation of pair correlations, *G. Panochko, and I. Vakarchuk*

PS2-7 — The momentum distribution of liquid ^{3}He in the extended lowest order constrained variational framework, *A. Rajabi, and M. Modarres*

PS2-8 — Acoustic resonances excited by quartz tuning forks in helium fluids, *A. Salmela, J. Tuorinemi, and J. Rysti*

PS2-9 — Transport in mesoscopic ^{3}He films on rough surfaces, *P. Sharma, A. Corcoles, A. J. Casey, S. Dimov, J. Parpia, B. Cowan, and J. Saunders*

PS2-10 — High energy study of the roton-like mode in liquid ^{3}He films, *A. Sultan, H. Godfrin, H. J. Lauter, H. Schober, H. M. Böhm, E. Krotscheck, and M. Panholzer*

PS2-11 — Neutron scattering from cryogenic ^{3}He: in critical opalescence and from surface layers adsorbed on He II, *N. D. Vasilev, T. R. Charlton, O. Kirichek, C. J. Kinane, R. M. Dagliesh, A. Ganshin, S. Langridge, and P. V. McClintock*

9 Cold atoms and molecules, Quantum gases

9.1 Invited talks

Single-site and single-atom resolved imaging of correlated quantum states in optical lattices, *M. Cheneau*, Friday at 14:40

Thermodynamics of strongly interacting Fermi gases, *F. Chevy, N. Navon, S. Nascimbène, and C. Salomon*, Friday at 15:00

Towards quantum magnetism with ultracold atoms, *W. Ketterle*, Friday at 14:00

Non-abelian vortices in spinor Bose-Einstein condensates, *M. Kobayashi, Y. Kawaguchi, M. Nitta, and M. Ueda*, Friday at 15:20

Quantum interference of Bose Einstein condensates, *W. J. Mullin*, Friday at 15:40

9.2 Posters

PS2-12 — Monte Carlo study of quantum phase diagram of Rydberg atoms with repulsive $1/r^6$ interaction, *G. E. Astrakharchik, J. Boronat, O. N. Osychenko, Yu. E. Lozovik, and Y. Lutsyshyn*

PS2-13 — On a dynamical self-consistent approach to quantum phase transitions based on the functional integral formalism., *A. M. Dikandé*

PS2-14 — Useful quantum states in the presence of classical noise in a Bose Josephson junction, *G. Ferrini, D. Spehner, A. Minguzzi, and F. W. Hekking*

PS2-15 — Coexistence of positional and superfluid orders in imbalanced Fermi condensates, *Y. Hatakeyama, and R. Ikeda*

PS2-16 — Particle currents in a fluid–dynamical description of two trapped fermion species, *E. S. Hernández, P. Capuzzi, and L. Szybisz*

PS2-17 — Extended fluid–dynamics and collective motion of two trapped fermion species with pairing interactions, *E. S. Hernández, P. Capuzzi, and L. Szybisz*

PS2-18 — Stability of a layer of dipolar bosons, *D. Hufnagl, R. Kaltseis, and R. E. Zillich*

PS2-19 — Counterflow quantum turbulence and the instability in two-component Bose-Einstein condensates, *S. Ishino, H. Takeuchi, and M. Tsubota*

PS2-20 — Two-superfluid model of two-component Bose-Einstein condensates; first sound and second sound, *S. Ishino, H. Takeuchi, and M. Tsubota*

PS2-21 — Analogue of D-branes in Bose-Einstein condensates, *K. Kasamatsu, H. Takeuchi, M. Nitta, and M. Tsubota*

PS2-22 — Soliton and vortex generation in Bose-Einstein condensates under oscillatory excitations, *K. Kasamatsu, M. Kobayashi, M. Tsubota, and V. S. Bagnato*

PS2-23 — Phase diagrams and collective modes of an imbalanced Fermi gas in 2D, *S. N. Klimin, J. Tempere, and J. T. Devreese*

PS2-24 — Phase transition from Bose-Einstein condensate (BEC) to Wigner crystal in two dimensional anisotropic trap, *A. I. Mese, P. Capuzzi, S. Aktas, Z. Akdeniz, and S. E. Okan*

PS2-25 — Exact solution of strongly interacting quasi-onedimensional mixture of Bose and Fermi gases, *F. Yiyuan, P. Vignolo, C. Miniatura, and A. Minguzzi*

PS2-26 — Interference effects in Bose-Einstein condensates at a beam splitter, *W. J. Mullin, and F. Laloë*

PS2-27 — Creation of NOON states by double Fock-state Bose-Einstein condensates, *W. J. Mullin, and F. Laloë*

PS2-28 — Clock shift and interstate coherence of multi-level atoms, *A. I. Safonov, I. I. Safonova, and I. S. Yasnikov*

PS2-29 — Dynamical properties of strongly repulsive Fermi gases, *M. Sandri, A. Minguzzi, and F. Toigo*

PS2-30 — One-dimensional Bose fluid stirred on a ring trap, *C. Schenke, A. Minguzzi, and F. W. Hekking*

PS2-31 — Ground-state properties of small mixed helium and spin-polarized tritium clusters, *P. Stipanovic, L. Vranjes Markic, and J. Boronat*

PS2-32 — Vortex formations from domain wall annihilations in two-component Bose-Einstein condensates, *H. Takeuchi, K. Kasamatsu, M. Nitta, and M. Tsubota*

PS2-33 — Probing polaron physics with impurities in a condensate, *J. Tempere, W. Casteels, and J. T. Devreese*

PS2-34 — Magnetic resonance study of high density atomic hydrogen gas, *S. Vasiliev*

PS2-35 — Magnetic field dependence of internal Josephson effects in spinor dipolar Bose–Einstein condensates, *M. Yasunaga, and M. Tsubota*

PS2-36 — Dipolar Bose gas in 2D with tilted polarization, *R. E. Zillich, D. Hufnagl, A. Macia, and F. Mazzanti*

10 BEC of excitations

10.1 Invited talks

Superfluidity and vortices in exciton-polariton condensates, *N. G. Berloff*, Thursday at 12:00

Exciton polaritons in semiconductors: toward new frontiers of Bose quantum degeneracy, *Le Si Dang*, Thursday at 11:40

Bose-Einstein condensates of magnons in superfluid ^{3}He-B and symmetry breaking fields, *P. Skyba*, Thursday at 12:20

BEC of non-equilibrium quasiparticles in ^{3}He and beyond, *G. E. Volovik*, Thursday at 11:00

10.2 Posters

PS2-37 — The quest for Bose-Einstein condensation in solid ^{4}He, *S. Diallo, R. T. Azuah, and H. R. Glyde*

PS2-38 — Bose-Einstein condensation of magnons in rotating superfluid ^{3}He B, *P. Hunger, P. J. Heikkinen, R. de Graaf, J. J. Hosio, Yu. M. Bunkov, V. B. Eltsov, M. Krusius, and G. E. Volovik*

PS2-39 — Bose-Einstein condensation of rotons revisited, *L. Melnikovsky*

PS2-40 — Magnetic Bose glass in model magnets with static doping, *T. Roscilde, R. Yu, and S. Haas*

11 Quantum vortices

11.1 Invited talks

Excitations and characterization of quantum turbulence in an atomic superfluid, *V. S. Bagnato*, Wednesday at 12:00

Dissipation in vortex dynamics in superfluid ^{3}He-B at low temperatures, *V. B. Eltsov, R. de Graaf, P. J. Heikkinen, J. Hosio, and M. Krusius*, Wednesday at 11:00

Experiments on quantum vortices in superfluid ^{3}He-B in the T$\simeq$0 limit, *S. N. Fisher*, Wednesday at 11:40

11.2 Posters

PS2-41 — Decay of vortex monopoles and dipoles in trapped finite temperature Bose-Einstein condensates, *A. S. Bradley, S. J. Rooney, P. B. Blakie, T. W. Neely, E. C. Samson, and B. P. Anderson*

PS2-42 — Visualization of quantized vortex dynamics using ice nanoparticles, *E. Fonda, K. T. Gaff, M. S. Paoletti, M. E. Fisher, K. R. Sreenivasan, and D. P. Lathrop*

PS2-43 — Dynamics of vortices and solitons in Bose-Einstein condensates by an oscillating potential, *K. Fujimoto, and M. Tsubota*

PS2-44 — Vortex-induced dissipation in current-biased superconducting nanowires, *M. J. Graf, L. N. Bulaevskii, C. D. Batista, and V. G. Kogan*

PS2-45 — Slow vortex rings, *J. L. Helm, A. J. Youd, and C. F. Barenghi*

PS2-46 — Andreev reflection from rectilinear vortices in rotating ^{3}He-B, *J. Hosio, V. B. Eltsov, R. de Graaf, M. Krusius, J. Mäkinen, and D. Schmoranzer*

PS2-47 — Classification of topological excitations with influence of vortices, *S. Kobayashi, M. Kobayashi, Y. Kawaguchi, M. Nitta, and M. Ueda*

PS2-48 — Cold atoms trapping via helical interference patterns of the phase-conjugated Laguerre-Gaussian beams., *A. Yu. Okulov*

PS2-49 — Vortices in superconducting lead nanowires, *W. M. Wu, M. B. Sobnack, and F. V. Kusmartsev*

PS2-50 — Modelling the evolution of topological defects in quasi-2d superfluid ^{3}He-A, *D. E. Zmeev, R. Schanen, and A. I. Golov*

12 Quantum solids: growth, transport, dynamics

12.1 Invited talks

Solid-liquid interface magnetic ordering, *I. A. Todoshchenko, M. S. Manninen, and A. Ya. Parshin*, Wednesday at 9:40

12.2 Posters

PS2-51 — Hydrodynamic instability during non-uniform growth of a helium crystal, *L. Dubovskii, S. Burmistrov, and V. Tsymbalenko*

PS2-52 — Instability of a crystal ^{4}He facet in the field of gravity, *L. Dubovskii, S. Burmistrov, and V. Tsymbalenko*

PS2-53 — Layering transitions in solid ^{4}He growth on graphite, *A. Koga, Y. Shibayama, and K. Shirahama*

PS2-54 — Dynamical transition of ^{4}He crystallization in a very high porosity aerogel, *R. Masumoto, K. Ueno, H. Matsuda, R. Nomura, and Y. Okuda*

PS2-55 — Resonant Raman scattering features in the charge-density-wave phase, *O. Matveev, A. M. Shvaika, and J. K. Freericks*

PS2-56 — The effect of the crystal quality on hcp phase nucleation in bcc ^{4}He overcooled, *N. P. Mikhin, A. P. Birchenko, V. A. Maidanov, E. Ya. Rudavskii, and Ye. O. Vekhov*

PS2-57 — Spectroscopy of vibronic wavepackets in condensed ^{4}He generated by oscillating atomic bubbles, *P. Moroshkin, V. Lebedev, and A. Weis*

PS2-58 — Investigating metastable solid helium below its melting pressure, *F. Souris, J. Grucker, J. Dupont-Roc, and Ph. Jacquier*

PS2-59 — Vacancy nature of the bcc phase in solid helium, *Ye. Vekhov, and N. Mikhin*

13 Supersolids, glasses and defects

13.1 Invited talks

The anomalous softening of helium-4 crystals, *S. Balibar*, Friday at 10:00

Elastic properties of solid helium: Is there a phase transition? Is there a critical velocity?, *J. Beamish*, Friday at 9:40

Review of experimental results on supersolidity, *M. H. Chan*, Thursday at 9:00

Non-equilibrium quantum systems – Glasses at ultra-low temperatures, *C. Enss*, Friday at 9:00

NCRI and shear modulus of solid helium at low temperatures, *E. Kim*, Thursday at 9:40

Quantum dislocations in solid ^{4}He, *A. B. Kuklov, D. Aleinikava, and E. Dedits*, Friday at 9:20

New experiments bearing on the nature of the supersolid state of solid ^{4}He, *J. D. Reppy*, Thursday at 10:00

13.2 Posters

PS2-60 — Supersolid under slow rotation, *H. Choi, D. Takahashi, K. Kono, and E. Kim*

PS2-61 — A high temperature disorder-induced mobile phase in solid ^{4}He, *A. Eyal, O. Pelleg, L. Embon, and E. Polturak*

PS2-62 — Unifying the relaxational, rotational and shear dynamics of solid ^{4}He, *E. J. Pratt, B. Hunt, V. Gadagkar, M. Yamashita, M. J. Graf, A. V. Balatsky, and J. C. Davis*

PS2-63 — The glassy response of double torsion oscillators in solid ^{4}He, *M. J. Graf, J.-J. Su, H. P. Dahal, I. Grigorenko, and Z. Nussinov*

PS2-64 — Search for "direct" evidence of glassy behavior in solid ^{4}He, *P. Gumann, V. Sharma, and H. Kojima*

PS2-65 — Superfluid glass stabilized by elasticity of bose solid with quenched disorder, *R. Ikeda*

PS2-66 — Supersolid behaviors in thin solid ^{4}He films adsorbed on nanoporous media, *T. Kogure, R. Higashino, H. Yoshimura, Y. Shibayama, and K. Shirahama*

PS2-67 — On the lattice dynamics of solid helium, supersolidity and glassy states, *N. Krainyukova*

PS2-68 — Transition into the supersolid(SS) state, supersolid density ρ_{ss} and the critical velocity V_c to destroy the SS state, *M. Kubota, N. Shimizi, Y. Yasuta, A. Kitamura, and M. Yagi*

PS2-69 — Josephson effects in one-dimensional supersolids, *M. Kunimi, Y. Nagai, and Y. Kato*

PS2-70 — Study of the stability of small vacancy clusters in solid ^{4}He, *Y. Lutsyshyn, R. Rota, and J. Boronat*

PS2-71 — Deformation of helium crystal in the supersolid region and formation of a glassy phase, *V. A. Maidanov, A. A. Lisunov, V. Yu. Rubanskii, S. R. Rubets, E. Ya. Rudavskii, A. S. Rybalko, and V. A. Tikhiy*

PS2-72 — Thermal conductivity of glasses induced by nuclear quadrupole interaction at ultra low temperatures, *I. Polishchuk, and A. Burin*

PS2-73 — Isochoric compressibility of solid ^{4}He, *M. W. Ray, and R. B. Hallock*

PS2-74 — Mass flux through a cell filled with solid ^{4}He induced by the thermo-mechanical effect, *M. W. Ray, and R. B. Hallock*

PS2-75 — Path integral Monte Carlo calculation of momentum distribution in solid ^{4}He, *R. Rota, and J. Boronat*

PS2-76 — Observation of non-classical rotational inertia in two-dimensional ^{4}He solid on graphite surface, *Y. Shibayama, H. Fukuyama, and K. Shirahama*

PS2-77 — Coexistence of supersolidity and superfluidity in ^{4}He confined in porous Gelsil and Vycor, *K. Shirahama, H. Yoshimura, R. Higashino, S. Takada, and Y. Shibayama*

PS2-78 — The glass description to the anomalies in solid ^{4}He, *J.-J. Su, M. J. Graf, and A. V. Balatsky*

PS2-79 — Simultaneous measurement of torsional oscillator and NMR in solid ^{4}He with 10 ppm of ^{3}He, *R. Toda, W. Onoe, M. Kanemoto, T. Kakuda, Y. Tanaka, and Y. Sasaki*

PS2-80 — Observation of quantized vortex lines in solid He under DC rotation, *M. Yagi, A. Kitamura, N. Shimizi, Y. Yasuta, and M. Kubota*

PS2-81 — Measurements of dielectric constant of solid helium 4, *L. Yin, J. S. Xia, C. Huan, N. S. Sullivan, and M. H. Chan*

PS2-82 — Simultaneous measurements of the torsional oscillator anomaly and thermal conductivity in solid ^{4}He, *D. E. Zmeev, and A. I. Golov*

14 Magnetic properties of ^{3}He, nuclear magnetism

14.1 Invited talks

Bilayer Hubbard model for ^{3}He: a cluster dynamical mean-field calculation, *K. S. Beach, and F. F. Assaad*, Wednesday at 10:00

14.2 Posters

PS2-83 — Magnetic phase transitions in bcc solid ^{3}He, *K. Kubo, and T. Miura*

PS2-84 — Spin kinetics of ^{3}He in contact with synthesized PrF_3 nanoparticles, *M. S. Tagirov, E. M. Alakshin, R. R. Gazizulin, A. V. Egorov, A. V. Klochkov, S. L. Korableva, V. V. Kuzmin, A. S. Nizamutdinov, K. Kono, A. Nakao, and A. T. Gubaidullin*

PS2-85 — The study of the system "aerogel-^{3}He" by radiospectroscopy methods, *M. S. Tagirov, D. A. Tayurskii, A. V. Klochkov, V. V. Kuzmin, A. A. Rodionov, G. V. Mamin, E. M. Alakshin, R. R. Gazizulin, K. Kono, A. Nakao, and N. Mulders*

15 MEMS, NEMS: resonators, cavities, devices

15.1 Invited talks

Scheme to probe the quantum dynamics of a mesoscopic mechanical resonator, *A. D. Armour, M. P. Blencowe, and A. J. Rimberg*, Friday at 12:00

Putting the mechanics into quantum mechanics, *A. N. Cleland*, Friday at 11:00

Quantum opto-mechanics: how to use micromechanics in quantum experiments, *S. Gröblacher, and M. Aspelmeyer*, Friday at 12:20

Nanomechanical measurements of a superconducting qubit, *M. D. LaHaye*, Friday at 11:40

15.2 Posters

PS2-86 — Suppression of amplitude noise in cavity-driven oscillations of a nanomechanical resonator, *A. D. Armour, and D. A. Rodrigues*

PS2-87 — Graphene membranes for cryogenic NEMS, *A. Allain, and V. Bouchiat*

PS2-88 — A tunable hybrid electro-magnetomotive NEMS device for low temperature physics, *E. Collin, T. Moutonet, J.-S. Heron, O. Bourgeois, Yu. M. Bunkov, and H. Godfrin*

PS2-89 — Detecting phonon blockade with photons, *N. Didier, S. Pugnetti, Y. M. Blanter, and R. Fazio*

PS2-90 — Characterization of MEMS devices for the study of superfluid helium films, *M. González, Y. Lee, P. Bhupathi, B. H. Moon, P. Zheng, G. Ling, and H. B. Chan*

PS2-91 — Dissipation in high-stress silicon nitride nanomechanical resonators at low temperatures, *K. J. Lulla, A. Venkatesan, M. J. Patton, A. D. Armour, C. J. Mellor, and J. R. Owers-Bradley*

PS2-92 — Resonant magneto-conductance through a vibrating nanotube, *G. Rastelli, M. Houzet, and F. Pistolesi*

PS2-93 — Noncontact nanoscale friction probed by low temperature lateral force spectroscopy, *K. Saitoh, K. Hayashi, Y. Shibayama, and K. Shirahama*

PS2-94 — Strong gate coupling of high-Q nanomechanical beam resonators, *J. Sulkko, M. A. Sillanpää, P. Häkkinen, L. Lechner, M. Helle, A. Fefferman, J. Parpia, and P. J. Hakonen*

16 Magnetism, superconductivity, quantum coherence

16.1 Invited talks

Quantum Processes in superconducting-magnetic Josephson junctions, *J. A. Sauls, E. Zhao, and T. Lofwander*, Thursday at 17:30

16.2 Posters

PS2-95 — Ac susceptibility and magnetization hysteresis loops of a thin current-carrying superconducting disk with B-dependent J_c, *A. A. Babaei-Brojeny, and M. Sohrabi*

PS2-96 — Low temperature spin wave excitations in $(\mathrm{Nd}_x\mathrm{Y}_{1-x})_{2/3}\mathrm{Ca}_{1/3}\mathrm{MnO}_3$ ($x = 0, 0.1$) CMR compounds, *A. Feher, S. N. Dolya, E. Fertman, M. Kajňaková, J. Šebek, and E. Šantavá*

PS2-97 — Neutron scattering experiments with the unconventional superconductor UPt_3, *W. J. Gannon, W. P. Halperin, M. R. Eskildsen, and P. Dai*

PS2-98 — Diagrammatic Monte Carlo for correlated fermions, *E. Kozik, K. Van Houcke, E. Gull, L. Pollet, N. Prokof'ev, B. Svistunov, and M. Troyer*

PS2-99 — Probing photon coupling strengths in one-dimensional arrays of Josephson junctions at microwave frequencies, *S. Liou, and W. Kuo*

PS2-100 — Generalized BCS equations for composite superconductors obtained via a Bethe-Salpeter equation: an overview, *G. P. Malik*

PS2-101 — Magnetic resonance in spin-liquid and ordered phases of spin-1/2 antiferromagnet on the anisotropic triangular lattice, *A. I. Smirnov, K. Yu. Povarov, S. V. Petrov, and A. Ya. Shapiro*

17 Techniques: sensors, detectors, methods

17.1 Posters

PS2-102 — CMN1000: a fast, accurate and easy to use thermometer for the range 10 mK - 2 K, *W. A. Bosch, O. W. Benningshof, and R. Jochemsen*

PS2-103 — Research capabilities in quantum fluids and solids at the Spallation Neutron Source, *S. Diallo, L. Solomon, J. Carmichael, E. Robles, A. Church, D. Abernathy, G. Ehlers, and L. Santodonato*

PS2-104 — Quantum rotation sensors: relative merits of devices using photons, cold atoms and superfluid helium, *A. Joshi, and R. Packard*

PS2-105 — Magnetization measurements and surface observation of Grafoil substrate, *M. Morishita*

PS2-106 — On sound emission of quartz tuning forks in liquid helium, *L. Skrbek, D. Schmoranzer, G. Sheshin, M. La Mantia, M. Rotter, V. Chagovets, I. Gritsenko, A. Zadorozhko, and E. Rudavskii*

PS2-107 — Development of a ^{3}He refrigerator for possible experiments of solid ^{4}He on a small jet plane, *T. Takahashi, M. Suzuki, R. Nomura, and Y. Okuda*

PS2-108 — Magnetically driven cold shutters for measuring the influence of 300 K radiation on an optical cryostat, *P. E. Wolf, M. Melich, R. Boltnev, F. Bonnet, and L. Guyon*

PS2-109 — Torsional oscillator experiments under DC rotation with reduced vibration, *M. Yagi, A. Kitamura, T. Obata, T. Igarashi, and M. Kubota*

PS2-110 — An operation circuit of micro-SQUID magnetometer in a dilution refrigerator, *A. Yamaguchi, M. Wada, R. Tani, K. Takeda, T. Matsumoto, H. Kashiwaya, G. Motoyama, S. Kashiwaya, S. Ohkoshi, and A. Sumiyama*

18 Other topics

18.1 Posters

PS2-111 — Application of quantum ensembles to linguistic analysis, *A. Rovenchak, and S. Buk*

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