

## LISTE DES TRAVAUX

Liste exhaustive à la date du 01/10/2021 des diverses publications et contributions scientifiques (orateur souligné, papier publié avec comité de lecture en bleu, et proceedings en bleu clair ; en vert article soumis) :

“Fils Vibrants Microfabriqués”

S. Triqueneaux, E. Collin, D. J. Cousins, T. Fournier, C. Bäuerle, Yu. M. Bunkov and H. Godfrin

Journées du CRTBT 1999

Saint-Nizier du Moucherotte, France, 21-23 Juin 1999

“ $^3\text{He}$  Solide Antiferromagnétique 2D : Liquide de Spins ?”

E. Collin, S. Triqueneaux, R. Harakaly, C. Bäuerle, Yu. M. Bunkov and H. Godfrin

Physique en Clips 1999

Grenoble, France, 16 Décembre 1999

1)-“Superfluidity of  $^3\text{He}$  Contained in Aerogel”

D. J. Cousins, C. Bäuerle, Yu. M. Bunkov, A.-S. Chen, E. Collin and H. Godfrin

International Conference on Low Temperature Physics LT-22

Espoo and Helsinki, Finland, 4-11 Août 1999

Physica B Vol **284**, p. 311-312 (2000)

2)-“Microfabrication of Silicon Vibrating Wires”

S. Triqueneaux, E. Collin, D. J. Cousins, T. Fournier, C. Bäuerle, Yu. M. Bunkov and H. Godfrin

International Conference on Low Temperature Physics LT-22

Espoo and Helsinki, Finland, 4-11 Août 1999

Physica B Vol. **284**, p. 2141-2142 (2000)

“ $2\text{D-}^3\text{He}$  : A Strongly Frustrated Quantum Magnet” (invité)

E. Collin, S. Triqueneaux, R. Harakaly, C. Bäuerle, Yu. M. Bunkov and H. Godfrin

Conference of the European Physical Society

Condensed Matter Division Meeting CMD-2000

Montreux, Switzerland, 13-17 Mars 2000

“Frustrated Magnetism in Two-Dimensional  $^3\text{He}$ ” (invité)

E. Collin, R. Harakaly, S. Triqueneaux, C. Bäuerle, Yu. M. Bunkov and H. Godfrin

Proc. International Conference on Quantum Fluids and Solids QFS-2000

Minneapolis, Minnesota, USA, 6-11 Juin 2000

“Nuclear Susceptibility of liquid  $^3\text{He}$ ”

S. Triqueneaux, E. Collin, R. Harakaly, C. Bäuerle, Yu. M. Bunkov and H. Godfrin

Proc. International Conference on Quantum Fluids and Solids QFS-2000

Minneapolis, Minnesota, USA, 6-11 Juin 2000

“Anomalous Superfluidity of  $^3\text{He}$  confined inside Aerogel” (invité)

E. Collin, R. Harakaly, A.-S. Chen, D.J. Cousins, S. Triqueneaux, C. Bäuerle, Yu. M. Bunkov and H. Godfrin

Symposium E.U. Large Scale Facility User Meeting

Regensburg, Germany, 14-15 Juillet 2000

“Frustrated Quantum Magnet and "Spin Liquid" Phase in Two-Dimensional  $^3\text{He}$ ”  
E. Collin, S. Triqueneaux, R. Harakaly, C. Bäuerle, Yu. M. Bunkov and H. Godfrin  
Groupement De Recherche Oxydes à propriétés remarquables  
Aussois, France, 13-15 Septembre 2000

“Frustrated Quantum Magnet and "Spin Liquid" Phase in Two-Dimensional  $^3\text{He}$ ”  
E. Collin, S. Triqueneaux, R. Harakaly, C. Bäuerle, Yu. M. Bunkov and H. Godfrin  
Groupement De Recherche Systèmes Fortement Corrélés  
Aussois, France, 25-28 Septembre 2000

“ $^3\text{He}$  Solide 2-Dimensionnel : Frustration Quantique et Liquide de Spins”  
E. Collin, S. Triqueneaux, R. Harakaly, C. Bäuerle, Yu. M. Bunkov and H. Godfrin  
Séminaire du CRTBT  
Grenoble, France, 18 Septembre 2000

3)-“Quantum Frustration and the "Spin Liquid" Phase of Two-Dimensional  $^3\text{He}$ ”  
E. Collin, S. Triqueneaux, R. Harakaly, M. Roger, C. Bäuerle, Yu. M. Bunkov and H. Godfrin  
Phys. Rev. Lett. Vol. **86**, no 11, p. 2447-2450 (12 March 2001)

“Diffusion de Spins dans  $^3\text{He}$  en Milieu Confiné”  
E. Collin, R. Harakaly, Yu. Mukhraskii, Yu. M. Bunkov and H. Godfrin  
Physique en Clips 2001  
Grenoble, France, 23 Mars 2001

“Nanoclusters Ferromagnétiques dans  $^3\text{He}$  Solide Bidimensionnel”  
E. Collin, S. Triqueneaux, R. Harakaly, C. Bäuerle, Yu. M. Bunkov and H. Godfrin  
Journées du CRTBT  
Saint-Hughes de Biviers, France, 16-18 Mai 2001

“Dissemination of the Ultra-Low Temperature Scale, PLTS-2000”  
R. Rusby, D. J. Cousins, D. Head, P. Mohandas, Yu. M. Bunkov, C. Bäuerle, R. Harakaly,  
E. Collin, S. Triqueneaux, C. Lusher, J. Li, J. Saunders, B. Cowan, J. Nyéki, M. Digby,  
J. Pekola, K. Gloos, P. Hernandez, M. de Groot, A. Peruzzi, R. Jochemsen, A. Chinchure,  
W. Bosch, F. Mathu, J. Flokstra, D. Veldhuis, Y. Hermier, L. Pitre, A. Vergé,  
F. Benhalima, B. Fellmuth, J. Engert  
Berlin, Germany, 19-21 Juin 2001  
Proceedings of TEMPMEKO, Vols. **1&2**, B. Fellmuth, J. Seidel, G. Scholz (ed.), Berlin,  
VDE Verlag GmbH (2002)

“ $^3\text{He}$  Confined inside Aerogel”  
E. Collin, R. Harakaly, C. Bäuerle, Yu. M. Bunkov and H. Godfrin  
COSLAB Workshop  
London, England, 7-10 Juillet 2001

“Magnetic susceptibility of liquid  $^3\text{He}$ ”  
E. Collin, R. Harakaly, S. Triqueneaux, C. Bäuerle, Yu. M. Bunkov and H. Godfrin  
International Conference on Quantum Fluids and Solids QFS-2001  
Konstanz, Germany, 21-27 Juillet 2001

“Phase coexistence in 2D solid  $^3\text{He}$  adsorbed on  $^4\text{He}$  preplated Graphite”

E. Collin, R. Harakaly, C. Bäuerle, Yu. M. Bunkov and H. Godfrin  
International Conference on Quantum Fluids and Solids QFS-2001  
Konstanz, Germany, 21-27 Juillet 2001

“Mysterious properties of  $^3\text{He}$  confined inside Aerogel”

E. Collin, R. Harakaly, C. Bäuerle, Yu. M. Bunkov and H. Godfrin  
International Conference on Quantum Fluids and Solids QFS-2001  
Konstanz, Germany, 21-27 Juillet 2001

“2D- $^3\text{He}$  : Quantum Frustration and Spin Liquid”

E. Collin, R. Harakaly, C. Bäuerle, Yu. M. Bunkov and H. Godfrin  
Séminaire Basses températures Royal Holloway  
London, England, 26 Septembre 2001

“Effets de désordre sur l' $^3\text{He}$  à ultra-basses températures”

E. Collin, sous la direction de H. Godfrin et Yu. M. Bunkov, thèse de Doctorat, UJF  
Grenoble, France, 29 Janvier 2002

“Microwave excitation of the Rydberg states of electrons on helium”

E. Collin, W. Bailey, P. Fozooni, P. G. Frayne, P. Glasson, K. Harrabi, M. J. Lea, G.  
Papageorgiou  
19th General Conference of the EPS Condensed Matter Division, Condensed Matter and  
Materials Physics  
CMD19-CMMP 2002  
Brighton, England, 7-11 Avril 2002

“Microwave excitation of the Rydberg states of electrons on helium”

E. Collin, W. Bailey, P. Fozooni, P. G. Frayne, P. Glasson, K. Harrabi, M. J. Lea, G.  
Papageorgiou  
The Annual Low Temperature Group Meeting IoP-2002  
London, England, 28 Mai 2002

4)-“Search for supersymmetric Dark Matter with superfluid  $^3\text{He}$  (MACHe3)”

F. Mayet, D. Santos, Yu. M. Bunkov, E. Collin, H. Godfrin  
Phys. Letts. B Vol. **538**, p. 257-265 (2002)

“Microwave excitation of the Rydberg states of electrons on helium”

“Writing Q-bits using microwave Rabi oscillations”

E. Collin, W. Bailey, P. Fozooni, P. G. Frayne, P. Glasson, K. Harrabi, M. J. Lea, G.  
Papageorgiou  
EU Network meeting electrons on cryogenic substrates  
London, England, 21-22 Juin 2002

“Excitation micro-onde des états électroniques sur Hélium ; vers l’ordinateur quantique”

E. Collin, W. Bailey, P. Fozooni, P. G. Frayne, P. Glasson, K. Harrabi, M. J. Lea, G.  
Papageorgiou  
Séminaire Groupe Quantronique, SPEC-CEA  
Saclay, France, 3 Juillet 2002

“Excitation micro-onde des états électroniques sur Hélium ; vers l’ordinateur quantique”

E. Collin, W. Bailey, P. Fozooni, P. G. Frayne, P. Glasson, K. Harrabi, M. J. Lea, G. Papageorgiou

Séminaire fluides quantiques CRTBT

Grenoble, France, 9 Juillet 2002

“2D-<sup>3</sup>He : from a pure Spin-liquid phase to ferromagnetic nanoclusters” (invité)

E. Collin, R. Harakaly, C. Bäuerle, Yu. M. Bunkov and H. Godfrin

Int. Conf. on Low Temperature Physics LT23, Hiroshima, Japan, 20-27 Août 2002

“Topological defects and coherent magnetization precession of <sup>3</sup>He in aerogel”

Yu. M. Bunkov, E. Collin, H. Godfrin, R. Harakaly

Int. Conf. on Low Temperature Physics LT23, Hiroshima, Japan, 20-27 Août 2002

5)-“Detecting electrons on helium with a single-electron transistor (SET)”

G. Papageorgiou, Yu. Mukharsky, K. Harrabi, P. Glasson, P. Fozooni, P. G. Frayne, E. Collin and M. J. Lea

Int. Conf. on Low Temperature Physics LT23, Hiroshima, Japan, 20-27 Août 2002

Physica E, Vol. **18**, p. 179-181 (2003)

6)-“Microwave saturation and the Rabi frequency of the Rydberg states of electrons on helium”

E. Collin, W. Bailey, P. Fozooni, P. G. Frayne, P. Glasson, K. Harrabi, M. J. Lea, G. Papageorgiou

Int. Conf. on Low Temperature Physics LT23, Hiroshima, Japan, 20-27 Août 2002

Physica E, Vol. **18**, p. 186-187 (2003)

“Microwave excitation of the Rydberg states of electrons on helium ; towards quantum computing”

E. Collin, W. Bailey, P. Fozooni, P. G. Frayne, P. Glasson, K. Harrabi, M. J. Lea, G. Papagergiou

Manchester University Physics department, England, 09 Octobre 2002

7)-“Microwave Saturation of the Rydberg States of Electrons on Helium”

E. Collin, W. Bailey, P. Fozooni, P. G. Frayne, P. Glasson, K. Harrabi, M. J. Lea and G. Papageorgiou

Phys.Rev.Lett. Vol. **89**, no 24 p. 5301-5304 (20 November 2002) ; Cond-mat/0208001

“Electrons 2D confinés sur Hélium : application à l’Ordinateur Quantique”

E. Collin, W. Bailey, P. Fozooni, P. G. Frayne, P. Glasson, K. Harrabi, M. J. Lea, G. Papagergiou

CRTBT Grenoble, France, 07 Avril 2003

8)-“On the Spin-liquid phase of two-dimensional <sup>3</sup>He” (invité)

E. Collin, Yu.M. Bunkov, H. Godfrin

Conférence Highly Frustrated Magnets ILL, Grenoble, France, 26-30 Août 2003

J. Phys. : Condens. Matter Vol. **16** (2004) S691-S699

9)-“Confined electron crystals and Rydberg states on liquid helium”

P.H. Glasson, E. Collin, P. Fozooni, P.G. Frayne, K. Harrabi, W. Bailey, G. Papageorgiou, Y. Mukharsky, M.J. Lea

EP2DS-15

15th International Conference on Electronic Properties of Two-Dimensional Systems

Nara, Japon, 14-18 Juillet 2003

*Physica E*, Vol. **22**, issues 1-3, p. 761-766 (April 2004)

10)-“Topological defects and coherent magnetization precession of  $^3\text{He}$  in aerogel”

Yu. M. Bunkov, E. Collin, H. Godfrin, R. Harakaly

*Physica B*, Vols. **329-333**, p. 305 (2003)

“Counting Electrons on Helium”

P.H. Glasson, E. Collin, P. Fozooni, P.G. Frayne, K. Harrabi, W. Bailey, G. Papageorgiou, M.J. Lea

EU Network meeting electrons on cryogenic substrates

Grenoble, France, 12 septembre 2003

“Project of a superfluid  $^3\text{He}$  detector for direct detection of non-baryonic dark matter : MACHe3”

E. Moulin, F. Naraghi, D. Santos, E. Collin, C. Winkelmann, Yu. Bunkov, and H. Godfrin

Proc. of the 4th. International Conference on "Where Cosmology and Fundamental Physics Meet", Marseille, June 2003, astro-ph/0309325.

“Superconducting Charge-flux Josephson Qubits” (invité)

E. Collin, G. Ithier, P. Joyez, D. Vion, D. Estève

Compte rendu de la conférence EUCAS, R. Vaglio, G. Donaldson, eds. In : *Proceedings of the 6th European Conference on Applied Superconductivity*

Sorrente, Italie, 14-18 septembre 2003

“Present status of the Quantronium Experiment”

A. Aassime, E. Collin, A. Cottet, M. Devoret, D. Estève, G. Ithier, P. Joyez, H. Pothier, C. Urbina, D. Vion

Squbit2 workshop, Pise, Italie, 26-27 septembre 2003

“Qubits Josephson : le Quantronium”

E. Collin, G. Ithier, A. Aassime, P. Joyez, D. Vion, D. Estève

Présentation des nouveaux arrivants, SPEC-CEA Saclay

Saclay, le 2 Décembre 2003

“Counting Electrons on Liquid Helium”

P.Glasson, G.Papageorgiou, K.Harrabi, E.Collin, P.Fozooni, P.G.Frayne, W.Bailey,

Y.Mukharsky, M.I.Dykman, V.Antonov and M.J.Lea

SSQIP 2003, Solid State Quantum Information Processing Conference

Amsterdam, Pays-Bas, 15-18 December 2003

“Operation of a Solid-state Quantum Bit Circuit”

E. Collin, G. Ithier, A. Aassime, P. Joyez, D. Vion, D. Estève

SSQIP 2003, Solid State Quantum Information Processing Conference

Amsterdam, Pays-Bas, 15-18 December 2003

11)-“Vibrating wire thermometry in superfluid  $^3\text{He}$ ”

C. B. Winkelmann, E. Collin, Yu. M. Bunkov, H. Godfrin,  
J. of Low Temp. Phys. Vol. **135**, p. 3 (2004)

12)-“NMR-like Control of a Quantum Bit Superconducting Circuit”

E. Collin, G. Ithier, A. Aassime, P. Joyez, D. Vion, D. Estève  
Phys. Rev. Lett. Vol. **93**, 157005 (2004)

Article selected for the October 2004 issues of :

Virtual Journal of Nanoscale Science & Technology (APS-AIP <http://www.vjnano.org>)

Virtual Journal of Quantum Information (APS-AIP <http://www.vjquantuminfo.org>)

Virtual Journal of Applications of Superconductivity (APS-AIP <http://www.vjsuper.org>)

“Decoherence measurements during the free evolution of a Josephson quantum bit : the quantronium” (invité)

G. Ithier, E. Collin, P. Joyez, P. Meesson, D. Vion, D. Estève, F. Chiarello, A. Shnirman, Y. Makhlin, G. Schön

Compte rendu de la conference MQC2, P. Silvestrini ed. : *IV<sup>th</sup> International Workshop on Macroscopic Quantum Coherence and Computing*, (Kluwer Academic, Plenum Publishers, New York, 2005,

Naples, June 7-10 (2004)

“Analysis of decoherence of a superconducting quantum bit”

G. Ithier, E. Collin, P. Joyez, D. Vion, D. Estève

20<sup>th</sup> Condensed Matter Division Conference (CMD) of the European Physical Society,  
Prague, July 19-23 (2004)

“Fighting Decoherence in a Josephson Qubit Circuit” (invité)

E. Collin, G. Ithier, A. Aassime, P. Joyez, D. Vion, D. Estève

Proceedings of the 39<sup>th</sup> Rencontres de Moriond “Quantum information and Decoherence in Nanosystems”, D. C. Glatli, M. Sanquer and J. Tran Thanh Van (eds., Thê' Giô'i Publishers, Vietnam) (2005), pp. 125-130, La Thuile, Italie, 25 Janvier au 1<sup>er</sup> Février 2004

“Manipulation de l'état quantique d'un circuit électrique supraconducteur”

E. Collin, G. Ithier, P. Joyez, D. Vion, and D. Estève

Conférence organisée par le CEA sur les nanotechnologies,  
Grenoble, 17 juin (2004)

13)-“Magnetization and Spin-Diffusion of Liquid  $^3\text{He}$  in Aerogel”

J.A. Sauls, Yu.M. Bunkov, E. Collin, H. Godfrin and P. Sharma  
Phys. Rev. B Vol. **72**, 024507 (2005)

14)-“Zener enhancement of quantum tunneling in a two-level superconducting circuit”

G. Ithier, E. Collin, P. Joyez, D. Vion, D. Estève, J. Ankerhold, H. Grabert

Phys. Rev. Lett. Vol. **94**, 057004 (2005)

Erratum : G. Ithier, E. Collin, P. Joyez, D. Vion, D. Esteve, J. Ankerhold, and H. Grabert  
Phys. Rev. Lett. Vol. **96**, 029901 (2006)

15)-“ $^3\text{He}$  NMR in aerogel” (invité)

Yu. Bunkov, E. Collin, H. Godfrin

Today International Symposium and the 9<sup>th</sup> ISSP International symposium on Quantum Condensed Systems,

Kashiwa, Chiba, Japan 16-19 November (2004)

Journal of Physics and Chemistry of Solids, Vol. **66**, Issues 8-9, p. 1325-1329 (August-September 2005)

“Semi-Superfluid  $^3\text{He}$ ” Yu. Bunkov, E. Collin, H. Godfrin, (invité)

ESF COSLAB Network Conference “Disorder and Topological Defects, Helium Primer” Chamrousse, Grenoble (France), 17-22 December 2004

16)-“Counting individual trapped electrons on liquid Helium”

G. Papageorgiou, P. Glasson, K. Harrabi, V. Antonov, E. Collin, P. Fozooni, P.G. Frayne, M.J. Lea, D.G. Rees, Yu. Mukharsky

Applied Physics Letters Vol. **86**, 153106 (2005)

Article selected for the April 2005 issue of :

Virtual Journal of Quantum Information (APS-AIP <http://www.vjquantuminfo.org>)

“Counting Individual Electrons on Liquid Helium”

G. Papageorgiou, P. Glasson, K. Harrabi, V. Antonov, E. Collin, P. Fozooni, P.G. Frayne, M.J. Lea, Y. Mukharsky and D.G. Rees.

cond-mat/0405084

“ $^3\text{He}$  NMR in aerogel”

E. Collin, Yu. Bunkov, H. Godfrin

Séminaire au Kapitza Institute, Moscou, 15 juin (2005)

17)-“Decoherence in a superconducting quantum bit circuit”

G. Ithier, E. Collin, P. Joyez, P. J. Meeson, D. Vion, D. Estève, F. Chiarello, A. Shnirman, Y. Makhlin, J. Schrieffer, and G. Schön

Phys. Rev. B, Vol. **72**, 134519 (2005)

“ Solid state quantum bit circuit ”

G. Ithier, F. Nguyen, E. Collin, N. Boulant, P.J. Meeson, P. Joyez, D. Vion, and D. Estève. To be edited by G. Benenti in “*Proceedings of the International School of Physics Enrico Fermi on Quantum Computers, Algorithms and Chaos*”, Varenna, Italy, July 5-15 (2005)

“ Decoherence in a quantum bit ”

G. Ithier, F. Nguyen, E. Collin, N. Boulant, P.J. Meeson, P. Joyez, D. Vion, and D. Estève. Chapter in book edited by B. Duplantier and V. Rivasseau (2005)

“Superfluid  $^3\text{He}$ : application for measurements in astrophysics” (invité)

Yu.M. Bunkov, E. Collin, H. Godfrin,

ULT-2005, Gainesville, Florida, USA, 18-20 August 2005

“How accurately do we know the F0a Landau parameter of liquid  $^3\text{He}$  ?”

H. Godfrin, V. Goudon, S. Triqueneaux, Th. Prouvé, E. Collin, Yu. M. Bunkov

24th. International Conference on Low Temperature Physics LT24

Orlando, Florida, USA, 10-17 august 2005

“Les ultra-basses températures à la recherche de la matière sombre de l’Univers” (invité)

H. Godfrin, Yu. M. Bunkov, E. Collin

Année mondiale de la Physique

Université de Pau, en liaison audiovisuelle avec l’Université de Bordeaux

Pau, 22 septembre 2005.

18)-“Trapping Single Electrons on Liquid Helium”

P. Glasson, G. Papageorgiou, K. Harrabi, D.G. Rees, V. Antonov, E. Collin, P. Fozooni, P.G.

Frayne, Y. Mukharsky and. M.J. Lea

J.Phys.Chem.Solids, Vol. 66, Issues 8-9, Pages 1539-1543, August-September 2005

“Ultra Low Temperature Instrumentation for Measurements in Astrophysics: ULTIMA” (invité)

Yu. Bunkov, E. Collin, H. Godfrin

Séminaires d'intérêt général au Service de Physique de l'Etat Condensé (CEA- Orme des Merisiers), October 19, 2005

El proyecto ULTIMA : detectores de particulas a ultrabajas temperaturas (conférence invitée)

H. Godfrin, Yu. M. Bunkov, E. Collin

50 años del Instituto de Fisica Dr. J. A. Balseiro

Centro Atomico Bariloche

Bariloche, Argentine, 21/12/2005.

“ULTIMA: a 100  $\mu$ K superfluid  $^3\text{He}$  detector”

E. Collin, Yu. M. Bunkov, H. Godfrin

Séminaire à l’université de Cornell, Ithaca, USA, 13 décembre (2005)

19)-“Ferromagnetic Nanoclusters in two-dimensional  $^3\text{He}$ ”

E. Collin, C. Bäuerle, Yu.M. Bunkov and H. Godfrin

Phys. Rev. B Vol. **73**, 125421 (2006)

Article selected for the April 3, 2006 issue of :

Virtual Journal of Nanoscale Science & Technology (<http://www.vjnano.org>)

20)-“ULTIMA : a bolometric detector for Dark Matter search using superfluid  $^3\text{He}$ ”

C.B. Winkelmann, J. Elbs, E. Collin, Yu.M. Bunkov, H. Godfrin

Proceedings of the 11th. International Workshop on Low Temperature Detectors, LTD-11,

Takeda Hall, University of Tokyo, Japan, 31 July - 5 August 2005

Nuclear Instruments and Methods in Physics Research, section A, Vol. 559, issue 2, pp. 384-386, 15 April (2006)

“Semi-superfluidity in  $^3\text{He}$ ” (invité)

Yu.M. Bunkov, E. Collin, H. Godfrin, Quantum Phenomena at low Temperatures, ULTI users meeting, Lammi Biological Station, 21-26 April 2006

21)-“How accurately do we know the F0a Landau parameter of Liquid  $^3\text{He}$ ? ”

H. Godfrin, V. Goudon, S. Triqueneaux, Th. Prouvé, E. Collin, Yu.M. Bunkov

24th. International Conference on Low Temperature Physics, LT24 10-17 August 2005,

Orlando, Florida, USA; AIP Conference Proceedings, Vol. 850, 1627 (2006).



“Status of the Dark Matter search project « ULTIMA »”

Yu. M. Bunkov, E. Collin, J. Elbs, H. Godfrin and C. Winkelmann

XLI Rencontres de Moriond 2006, Contents and Structures of the Universe, La Thuile, Italy (March 18-25, 2006), to be published in the proceedings

“Fighting decoherence in a Josephson qubit circuit”

Author(s): Collin, E; Ithier, G; Joyez, P; Vion, D; Esteve, D

Conference Information: 3rd International Symposium on Mesoscopic Superconductivity and Spintronics, Date: MAR 01-04, 2004 Atsugi City JAPAN

Source: REALIZING CONTROLLABLE QUANTUM STATES Pages: 247-254

Published: 2005

“Decoherence sources of a superconducting quantum bit”

Author(s): Ithier, G (Ithier, G.); Boulant, N (Boulant, N.); Collin, E (Collin, E.); Meeson, PJ (Meeson, P. J.); Joyez, P (Joyez, P.); Vion, D (Vion, D.); Esteve, D (Esteve, D.); Chiarello, F (Chiarello, F.); Shnirman, A (Shnirman, A.); Makhlin, Y (Makhlin, Y.); Schon, G (Schoen, G.)

Conference Information: 24th International Conference on Low Temperature Physics (LT24), Date: AUG 10-17, 2005 Orlando FL

Source: LOW TEMPERATURE PHYSICS, PTS A AND B Volume: 850 Pages: 933-934

Part: A-B Published: 2006

22)-“Heat capacity of adsorbed  $^3\text{He}$  at ultra-low temperatures”

J. Elbs, C.B. Winkelmann, Yu.M. Bunkov, E. Collin, H. Godfrin

Int. Conf. on Quantum Fluids and Solids, QFS 2006, Kyoto, Japan, 1 – 6 august (2006)

J. of Low Temp. Phys. Vol **148**, Num. 5-6, p 749-753, september (2007)

“Silicon Vibrating Wires as Micromechanical probes in Helium Fluids”

E. Collin, H. Godfrin, Yu. M. Bunkov, L. Filleau, and T. Fournier

Int. Conf. on Quantum Fluids and Solids, QFS 2006, Kyoto, Japan, 1 – 6 august (2006)

“The ULTIMA project: superfluid  $^3\text{He}$  detector” (invité)

Johannes Elbs, Clemens Winkelmann, Yuriy Bunkov, Eddy Collin, and Henri Godfrin

Int. Conf. on Quantum Fluids and Solids, QFS 2006, Kyoto, Japan, 1 – 6 august (2006)

“On the sensitivity of superfluid  $^3\text{He}$  bolometers for ULTIMA”

J. Elbs, C.B. Winkelmann, Yu.M. Bunkov, E. Collin, H. Godfrin,

Proceedings of IDM 2006, 6th International Workshop on the Identification of Dark Matter Rhodes, Greece, September 11 - 16th, 2006

World Scientific, ed. M. Axenides, G. Fanourakis and J. Vergados, p 571-575 (2007)

“Project ULTIMA (Particle detector with working temperature 100  $\mu\text{K}$ )” (invité)

Yu.M. Bunkov, E. Collin, H. Godfrin,

Kamioka Neutrino Observatory, Institute for Cosmic Ray Research, Tokyo University, 23 October 2006

23)-“Bolometric calibration of a superfluid  $^3\text{He}$  detector for Dark Matter search: direct measurement of the scintillated energy fraction for neutron, electron and muon events”

C.B. Winkelmann, J. Elbs, Yu. M. Bunkov, E. Collin, H. Godfrin, M. Krusius,

Nuclear Instr. and Methods in Physics Research, A 574, 264-271 (2007).

<http://arXiv.org/abs/physics/0611273>

“Vibrating detectors inside superfluid  $^3\text{He}$ ”

E. Collin, Yu. Bunkov, H. Godfrin

Workshop on Dark Matter Search and Related Topics, Grenoble, le 17/01/2007

“Decoherence of a quantum bit circuit”

Author(s): Ithier, G (Ithier, Gregoire); Nguyen, F (Nguyen, Francois); Collin, E (Collin, Eddy); Boulant, N (Boulant, Nicolas); Meeson, PJ (Meeson, Phil J.); Joyez, P (Joyez, Philippe); Vion, D (Vion, Denis); Esteve, D (Esteve, Daniel)

Conference Information: Poincare Seminar 2005, Date: APR, 2005 Inst Henri Poincare Paris FRANCE

Source: QUANTUM DECOHERENCE: POINCARÉ SEMINAR 2005 Volume: 48 Pages: 125-149, Published: 2007

“Micromécanique à basse température”

Séminaire MCBT-Institut Néel

E. Collin, Grenoble le 06/03/2007

“ULT Group: At the low temperature frontier”

Yu. Bunkov E. Collin, H. Godfrin

Journées du département MCBT 14 mai 2007

24)-“Electron nuclear recoil discrimination by pulse shape analysis”

J. Elbs, Yu. M. Bunkov, E. Collin, H. Godfrin, O. Suvorova

International Symposium on Quantum Fluids and Solids, QFS 2007

1-6 August, 2007 Kazan State University, Russian Federation.

J. of Low Temp. Phys., vol. **150**, no 3-4, p. 536-543 (2008).

DOI: 10.1007/s10909-007-9603-7

25)-“ULTIMA: Magnetic field dependence of the calibration factor”

J. Elbs, Yu. M. Bunkov, E. Collin, H. Godfrin, O. Suvorova, C. Winkelmann

12th International Workshop on Low Temperature Detectors, LTD12, Paris July 22-27, 2007

J. of Low Temp. Phys., Volume: **151**, Issue: 3-4, Pages: 860-864 (Mai 2008)

DOI: 10.2007/s10909-008-9756-z

“A quantum fluid used as a detector for Dark Matter: superfluid  $^3\text{He}$ ”

J. Elbs, Yu.M. Bunkov, E. Collin, H. Godfrin

International Symposium on Quantum Fluids and Solids, QFS 2007

1-6 August, 2007 Kazan State University, Russian Federation

26)-“Silicon Vibrating Wires at Low Temperatures”

Eddy Collin, Laure Filleau, Thierry Fournier, Yuriy M. Bunkov and Henri Godfrin

J. of Low Temp. Phys., vol. **150**, no 5-6, p. 739 – 790 (2008); DOI: 10.1007/s10909-007-9607-3

Erratum Volume **157**, Issue 5, Page 566 (2009); DOI: 10.1007/s10909-009-9989-5

“Micro-mechanics at low temperatures” (invité)

E. Collin, Yu. Bunkov, H. Godfrin

Workshop on Low Temperature Physics

Japan-France Joint Project

12-13 April 2008, Kyoto, Japan

27)-“Strong Orientational Effect of Stretched Aerogel on the  $^3\text{He}$  Order Parameter”

J. Elbs, Yu. M. Bunkov, E. Collin, H. Godfrin, and G. E. Volovik

Phys. Rev. Lett. Vol. **100**, 215304 (2008).

“SETs for Electron Detection”

Philip Glasson, David Rees, Luke Simkins, Vladimir Antonov, Peter Frayne, Mike Lea, Philip Meeson, RHUL

and Eddy Collin, I. NEEL

RIKEN electrons on Helium workshop, japan, 7 avril 2008

Atelier de l’Institut Néel,

H. Godfrin, E. Collin, B. Canals, J-C. Anglès d’Auriac

“frustration magnétique” le 5 juin 2008, Grenoble

Atelier de l’Institut Néel,

Yu. Bunkov, E. Collin, H. Godfrin

“cryogénie” le 11 juin 2008, Grenoble

“Manipulation of the order parameter of superfluid  $^3\text{He}$  by the anisotropy of aerogel”

Yu. Bunkov, E. Collin, J. Elbs, H. Godfrin, G. Volovik

LT25 conference on low temperature physics, Amsterdam 6-13 august 2008

28)-“Magnetic susceptibility of liquid  $^3\text{He}$ ”

V. Goudon, S. Triqueneaux, E. Collin, Yu. Bunkov, H. Godfrin

LT25 conference on low temperature physics, Amsterdam 6-13 august 2008

Published in the proceedings "Journal of Physics: Conference Series" (JPCS), J. of Physics, Conference Series, **150** 032024 (2009)

29)-“Finite size effects in ferromagnetic  $^3\text{He}$  nano-clusters”

E. Collin, B. Canals, J.-C. Anglès d’Auriac, H. Godfrin

LT25 conference on low temperature physics, Amsterdam, Netherlands, 6-13 august 2008

Proceedings "Journal of Physics: Conference Series" (JPCS), J. of Physics, Conference Series, **150**, 042018 (2009)

“Superconductor coated electro-mechanical systems for low and ultra-low temperature physics”

E. Collin, Y. Bilbao-Zarraga, Yu. M. Bunkov, H. Godfrin

ULT 2008 conference frontiers of low temperature physics, Royal Holloway University of London, England, 14-17 August 2008

“ULT MNEMS” (invité)

E. Collin, Yu. Bunkov, H. Godfrin

Séminaire Quantronique,

CEA Saclay, 5 septembre 2008

30)-“Thermally excited tunneling from a metastable electronic state in a single-Cooper-pair transistor”

D. G. Rees, P. Glasson, L. R. Simkins, E. Collin, V. Antonov, P. G. Frayne,

P. J. Meeson, and M. J. Lea

Appl. Phys. Lett. **93**, 173508 (2008)

*Article selected for the November 1, 2008 issue of:*

Virtual Journal of Applications of Superconductivity (<http://www.vjsuper.org>)

Virtual Journal of Nanoscale Science & Technology (<http://www.vjnano.org>)

« Ultima : de l'hélium trois ultra-froid pour traquer la Matière Noire »

H. Godfrin, E. Collin, Yu. Bunkov (invited talk)

Association Française du Froid - Commission de Cryogénie et de Supraconductivité  
9èmes Journées de Cryogénie et de Supraconductivité

AUSSOIS 25-27 mars 2009

31)-“ ‘Fast Exchange’ model visualized with  $^3\text{He}$  confined in aerogel: a Fermi liquid in contact with a Ferromagnetic solid”

E. Collin, S. Triqueneaux, Yu.M. Bunkov and H. Godfrin

Phys. Rev. B **80**, 094422-1 (2009)

32)-“Novel ‘vibrating wire like’ NEMS and MEMS structures for low temperature physics”

E. Collin · J. Kofler · J.-S. Heron · O. Bourgeois · Yu. M. Bunkov · H. Godfrin (invité)

QFS 2009, Northwestern University, 05-11/08/2009

J. of Low Temp. Phys., Volume **158**, Issue 3, page 678 (2010); DOI 10.1007/s10909-009-9960-5

33)-“Evidence for magnon BEC in superfluid  $^3\text{He-A}$ ”

P. Hunger, Yu. M. Bunkov, E. Collin, and H. Godfrin

QFS 2009, Northwestern University, 05-11/08/2009

J. of Low Temp. Phys., Volume **158**, Issue 1, page 129 (2010); DOI 10.1007/s10909-009-9970-3

34)-“Thermal excitation of large charge offsets in a single-Cooper-pair transistor”

L.R. Simkins, D.G. Rees, P.H. Glasson, V. Antonov, E. Collin, P.G. Frayne, P.J. Meeson, M.J. Lea

J. Appl. Phys., online 17 December 2009, in Journal of Applied Physics (Vol.106, Issue 12) 124502 (2009). DOI: 10.1063/1.3266012

*Article selected for the January 1, 2010 issue of:*

Virtual Journal of Applications of Superconductivity (<http://www.vjsuper.org>)

35)-“Metallic coatings of microelectromechanical structures at low temperatures: Stress, elasticity, and nonlinear dissipation”

E. Collin, J. Kofler, S. Lakhroufi, S. Pairis, Yu. M. Bunkov, and H. Godfrin,

Journal of Applied Physics, Vol. **107**, Issue 11, 114905 (7 June 2010)

“Measuring ultra-low temperatures with microfabricated silicon vibrating wire resonators: present developments within the Microkelvin project” (invité)

E. Collin, Yu. Bunkov, H. Godfrin

PTB-Low temperature workshop, Berlin, Germany (10.12.2009).

“Micro & Nano mechanics within Ultra-Low Temperature Physics”

E. Collin, Yu. Bunkov, H. Godfrin

Workshop on "Quantum Transport in Nano Electro Mechanical Systems",  
Bordeaux 08-09 April 2010, France

36)-“Addressing geometric non-linearities with cantilever MEMS: beyond the Duffing model”

E. Collin, Yu.M. Bunkov, H. Godfrin

Phys. Rev. B vol. **82**, 235416 (2010).

“Superfluid  $^3\text{He}$  immersed in radially squeezed aerogel: BEC of magnons and superfluid phase transition”

P. Hunger, Yu.M. Bunkov, E. Collin, H. Godfrin  
QFS 2010 Grenoble, 1st-7th august 2010

37)-“A tunable hybrid electro-magnetomotive NEMS device for low temperature physics”  
QFS 2010 Grenoble, 1st-7th august 2010

E. Collin, T. Moutonet, J.-S. Heron, O. Bourgeois, Yu.M. Bunkov, H. Godfrin  
J. of Low Temp. Phys., Vol. **162**, 653 (2011)

Preface

H. Godfrin, H. Meyer, Y. Bunkov, and E. Collin,  
QFS 2010 Grenoble, 1st-7th august 2010  
J. Low Temp. Phys. Vol. **162**, 81 (2011)

“Ultra-cold micro/nanomechanics”

E. Collin

Journées du département MCBT, Villard de Lans, 12 octobre 2010.

“Microkelvin JRA4 in Grenoble”

E. Collin, Yu. Bunkov, H. Godfrin

Microkelvin JRA4 meeting, Heidelberg, 05/11/2010.

“Micro and Nano mechanics at ultra-low temperature”

E. Collin

France-Japan Collaboration Workshop,  
RIKEN low temperature laboratory,  
17/01/2011, Tokyo, Japan.

“Micro/nano mechanics at very low temperatures”

E. Collin

Topical Meeting on Nanomechanics

23 juin 2011, Institut Néel, CNRS-Grenoble, France

38)-“Nonlinear parametric amplification in a tri-port nanoelectromechanical device”

E. Collin, T. Moutonet, J.-S. Heron, O. Bourgeois, Yu. M. Bunkov, H. Godfrin,  
Phys. Rev. B **84**, 054108 (2011).

“MEMS and NEMS probes for low temperature physics: a nonlinear issue”

E. Collin, M. Defoort, T. Moutonet, J. -S. Heron, O. Bourgeois, Yu. M. Bunkov, H. Godfrin,  
And F. Pistolesi,

OMNT meeting on nanomechanics, 4-5 juillet 2011, Toulouse (France).

“Low temperature nanomechanical probes: from linear to nonlinear regimes” (invité)

E. Collin, Yu. Bunkov, H. Godfrin

The 26<sup>th</sup> international conference on low temperature physics (LT26)  
Beijing, China 10-17 august 2011.

39)-“Superfluid transition in superfluid  $^3\text{He}$  in radially compressed aerogel”

P. Hunger, Yu. M. Bunkov, E. Collin, and H. Godfrin,  
The 26<sup>th</sup> international conference on low temperature physics (LT26)  
Beijing, China 10-17 august 2011,  
J. Phys: Conf. Series **400**, 012019 (2012).

40)-“Audio mixing in a tri-port nano-electro-mechanical device”

M. Defoort, K. Lulla, J-S. Heron, O. Bourgeois, E. Collin, and F. Pistolesi  
Appl. Phys. Lett. **99**, 233107 (2011).  
*Article selected for the December 19, 2011 issue of:*  
Virtual Journal of Nanoscale Science & Technology, <http://www.vjnano.org>

“Micro/nano mechanics at low temperatures: a nonlinear issue”

E. Collin, M. Defoort, K. Lulla, Yu.M. Bunkov, H. Godfrin, O. Bourgeois, F. Pistolesi  
GDR mésophysique, 5-8 December 2011, Aussois (France)

“Micro/nano mechanics at low temperatures: a nonlinear issue” (invité)

E. Collin, M. Defoort, K. Lulla, Yu.M. Bunkov, H. Godfrin, O. Bourgeois, F. Pistolesi  
CMMP11 conference, 13 - 15 December 2011, Manchester, UK

41)-“In-situ comprehensive calibration of a tri-port nano-electro-mechanical device”

E. Collin, M. Defoort, K. Lulla, T. Moutonet, J.-S. Heron, O. Bourgeois, Yu. M. Bunkov, H. Godfrin  
Rev. Sci. Instrum. Vol. **83**, 045005 (2012).

“Nano-mechanics”

E. Collin  
French-Japanese collaboration workshop, 27/01/2012, Institut Néel – Grenoble

“Nonlinear dynamics in nanomechanical resonators” (invited)

E. Collin, M. Defoort, K. Lulla, J-S. Heron, A. Sultan, T. Moutonet, O. Bourgeois, Yu. Bunkov, H. Godfrin, and F. Pistolesi  
Microkelvin meeting, Smolenice, Slovakia, 18-24 march 2012

“Low temperature micro/nano mechanics” (invited)

E. Collin, M. Defoort, K. Lulla, C. Blanc, O. Bourgeois, Yu. Bunkov, H. Godfrin  
OIST workshop on Nonequilibrium Phenomena in Complex Quantum Systems: from Correlated Electrons to Mesoscopic Devices, Okinawa, Japan 23-27 April 2012

“Silicon nitride mechanical nano-resonators”

K. Lulla, M. Defoort, C. Blanc, O. Bourgeois, Yu.M. Bunkov, H. Godfrin, and E. Collin,  
OIST workshop on Nonequilibrium Phenomena in Complex Quantum Systems: from Correlated Electrons to Mesoscopic Devices, Okinawa, Japan 23-27 April 2012

“Nonlinear dynamics in nanomechanical resonators” (invited)

E. Collin, M. Defoort, K. Lulla, C. Blanc, J-S. Heron, T. Moutonet, F. Pistolesi, O. Bourgeois, Yu.M. Bunkov, and H. Godfrin  
QFS 2012, Lancaster 15-21 august 2012, UK

42)-“Stressed Silicon Nitride Nanomechanical Resonators at Helium Temperatures”  
[M. Defoort](#), [K.J. Lulla](#), [C. Blanc](#), [H. Ftouni](#), [O. Bourgeois](#), and [E. Collin](#),  
QFS 2012, Lancaster 15-21 august 2012, UK  
[J. of Low Temp. Phys.](#), Vol. **171**, Issue 5-6, p. 731-736 (June 2013); DOI 10.1007/s10909-012-0693-5.

“Nonlinear dynamics in nanomechanical resonators”  
[E. Collin](#), [M. Defoort](#), [K. Lulla](#), [C. Blanc](#), [J-S. Heron](#), [T. Moutonet](#), [F. Pistolesi](#), [O. Bourgeois](#),  
[Yu.M. Bunkov](#), and [H. Godfrin](#)  
CMD-CMMP 2012, Edinburgh, 02-07 September 2012, UK

“Silicon nitride mechanical nano-resonators”  
[K. Lulla](#), [M. Defoort](#), [C. Blanc](#), [O. Bourgeois](#), [Yu.M. Bunkov](#), [H. Godfrin](#), and [E. Collin](#),  
CMD-CMMP 2012, Edinburgh, 02-07 September 2012, UK

43)-“Thermal conductivity measurement of suspended Si-N membranes from 10 K to 275 K using the  $3\omega$ -Völklein method”  
[H. Ftouni](#), [C. Blanc](#), [A. Sikora](#), [J. Richard](#), [M. Defoort](#), [K. Lulla](#), [E. Collin](#), [O. Bourgeois](#),  
Eurotherm 2012, 04-07 September 2012, Poitiers, France.  
[Journal of Physics: Conference Series](#) Vol. **395**, 012109 (2012).

“Efficient parametric amplification in a nano-electro-mechanical device”  
[E. Collin](#) & [O. Bourgeois](#)  
Néel Institute / Highlights 6 (Sept. 2012).

“Micro/nano mechanics at low temperatures: a nonlinear issue”  
[E. Collin](#)  
Séminaire MCBT-Institut Néel, Grenoble, le 30/10/2012.

44)- “Evidence for the role of normal-state electrons in nanoelectromechanical damping mechanisms at very low temperatures”  
[K.J. Lulla](#), [M. Defoort](#), [C. Blanc](#), [O. Bourgeois](#), and [E. Collin](#)  
[Phys. Rev. Lett.](#) Vol. **110**, 177206 (2013).

“Micro et nano mécanique : pour faire quoi ? Enjeux techniques & Scientifiques”  
[E. Collin](#), groupe UBT  
Séminaire ITA – Néel, février 2013.

“Phonon Thermal Transport in Periodically Structured Nanosystems”  
[C. Blanc](#), [K.J. Lulla](#), [D. Taïnoff](#), [H. Ftouni](#), [Y. I. Liu](#), [A. Rajabpour](#), [S. Volz](#), [T. Fournier](#), [M. Defoort](#), [E. Collin](#), [O. Bourgeois](#)  
Phononics 2013, Egypt, june 2013.

45) “Modal ”self -coupling” as a sensitive probe for nanomechanical detection”  
[M. Defoort](#), [K.J. Lulla](#), [C. Blanc](#), [O. Bourgeois](#), [A.D. Armour](#), and [E. Collin](#)  
[Appl. Phys. Lett.](#) Vol. **103**, pp. 013104 (2013).

46) “Modal Decomposition in Goalpost Micro/nano Electro-mechanical Devices”  
[E. Collin](#), [M. Defoort](#), [K.J. Lulla](#), [C. Blanc](#), [J. Guidi](#), [S. Dufresnes](#), [O. Bourgeois](#), [H. Godfrin](#)  
QFS 2013 Matsue, Japan, 01 – 06 August 2013.  
[J. of low Temp. Phys.](#) Vol. **175**, Issue 1, p. 442 (2014)

“Energy Dissipation in Nano-electro-mechanical Devices at Millikelvin Temperatures”

M. Defoort, K. J. Lulla, C. Blanc, O. Bourgeois, and E. Collin

QFS 2013 Matsue, Japan, 01 – 06 August 2013 (invited).

“Energy dissipation in nano-electro-mechanical devices at mK temperatures”

E. Collin,

Microkelvin meeting, Helsinki, Finland, 09 – 13 September 2013 (invited).

47) "Specific heat measurement of thin suspended SiN membrane from 8 K to 300 K using the  $3\omega$ -Völklein method"

Hossein Ftouni, Dimitri Tainoff, Jacques Richard, Kunal Lulla, Jean Guidi, Eddy Collin, and Olivier Bourgeois

Rev. Sci. Instrum. **84**, 094902 (2013).

« QNM – Quantum Nano Mechanics »

E. Collin

J3N Marseille, France, 04 – 06 novembre 2013

« Micro/nano-mechanical cryogenic resonators: nonlinearities and energy dissipation »

E. Collin

Physics seminar, Lancaster University, UK, 06 décembre 2013

“Micro/nano electro-mechanical cryogenic resonators”

E. Collin

Physics lecture

7 février 2014, Heidelberg, Germany.

48) "Electrical conductance of bolted copper joints for cryogenic applications"

F. Blondelle, A. Sultan, E. Collin, H. Godfrin

J. of Low. Temp. Phys. Vol. **175** (no 5/6), 877 (2014)

“Low Temperature Micro and Nano Electro-Mechanics”

E. Collin

Soutenance de HdR

Grenoble, 21 février 2014

49) “Slippage and boundary layer probed in an almost-ideal gas by a nano-mechanical oscillator”

M. Defoort, K.J. Lulla, T. Crozes, O. Maillet, O. Bourgeois, and E. Collin

Phys. Rev. Lett. **113**, 136101 (2014)

Editor’s suggestion, <http://journals.aps.org/prl>

“From Fermi liquid to Mott-Hubbard localization in 2D  $^3\text{He}$ ”

H. Godfrin and E. Collin

ATOMS2014, Advanced Topics in Magnetism and Superconductivity

San Carlos de Bariloche, 31st of July - 4th of August (2014)

“Low temperature physics with nano-electro-mechanical systems”

E. Collin, M. Defoort, K.J. Lulla, O. Bourgeois, H. Godfrin

LT27, Buenos Aires, 6 - 13 August (2014)



“Fundamental nonlinear phenomena in nano-mechanical devices” (invité)

E. Collin, M. Defoort, K.J. Lulla and O. Bourgeois  
ULT2014, San Carlos de Bariloche, 15-19 august 2014.

“Probing Bogoliubov QP in superfluid  $^3\text{He}$  with a 'vibrating-wire like' MEMS device”

M. Defoort, S. Dufresnes, H. Godfrin and E. Collin (Institut Néel)  
S.L. Ahlstrom, A. J. Woods, E.A. Guise, M. Poole and S.N. Fisher (ULANC)  
ULT2014, San Carlos de Bariloche, 15-19 august 2014.

50) “Scaling laws for the bifurcation-escape rate in a nanomechanical resonator”

M. Defoort, V. Puller, O. Bourgeois, F. Pistolesi, and E. Collin  
Phys. Rev. E **92**, 050903(R) (2015); Rapid Com.

“Low temperature physics with NEMS”

E. Collin  
Séminaire de groupe, RHUL, Londres, 29 september 2014.

« Low temperature damping in a nano-electro-mechanical device »

E. Collin & O. Bourgeois  
Néel Institute / Highlights 8 (Sept. 2014).

51) “Thermal conductivity of silicon nitride membranes is not sensitive to stress”

Hossein Ftouni, Christophe Blanc, Dimitri Tainoff, Andrew Fefferman, Kunal J. Lulla,  
Jacques Richard, Eddy Collin, and Olivier Bourgeois  
Phys. Rev. B Vol. **92**, 125439 (2015).

“Cryogenic nano-electro-mechanical devices as model systems for classical issues in physics”  
(invité)

E. Collin  
30 years of Quantronics Workshop, Paris-Diderot, 22-25 june 2015.

“Probing mesoscopic lengthscales in (super)fluid  $^3\text{He}$ ” (invité)

E. Collin  
Grand Challenges in QFS meeting, Buffalo (USA) 7-8 aout 2015.

“Mesoscopic nano-mechanical probes for quantum fluids & solids” (invité)

E. Collin, H. Godfrin, A. Fefferman,  
International conference on QFS, Niagara Falls (USA) 9-15 aout 2015.

52) “Probing Bogoliubov quasiparticles in superfluid  $^3\text{He}$  with a 'vibrating-wire like' MEMS device”

M. Defoort, S. Dufresnes, S.L. Ahlstrom, E.A. Guise, M. Poole, A.J. Wood, V. Tsepelin,  
S.N. Fisher, H. Godfrin and E.Collin  
International conference on QFS, Niagara Falls (USA) 9-15 aout 2015.  
J. of Low Temp. Phys. Vol. **183**, p. 284 (2016). DOI: [10.1007/s10909-015-1392-9](https://doi.org/10.1007/s10909-015-1392-9)

53) « Classical decoherence in a nanomechanical resonator »

Olivier Maillet, Frantisek Vavrek, Andrew Fefferman, Olivier Bourgeois & Eddy Collin  
New J. Phys. **18**, 073022 (2016); [arXiv:1511.02120v4](https://arxiv.org/abs/1511.02120v4).

“Elastic measurements of TLSs in amorphous silicon at mK temperatures”  
A. Fefferman, E. Collin, Xiao Liu, Thomas Metcalf and Glenn Jernigan  
Gordon Research Conference 6-11 march 2016, Ventura CA USA.

“Classical Decoherence in a Nanomechanical Resonator”  
O. Maillet, F. Vavrek, A.D. Fefferman, O. Bourgeois and E. Collin  
Gordon Research Conference 6-11 march 2016, Ventura CA USA.

“Elastic measurements of TLSs in amorphous silicon at mK temperatures”  
A. Fefferman E. Collin, Xiao Liu, Thomas Metcalf and Glenn Jernigan  
March meeting 14-18 march 2016, Baltimore MD USA.

“Classical Decoherence in a Nanomechanical Resonator”  
O. Maillet, F. Vavrek, R. Gazizulin, A. Maldonado Cid, A.D. Fefferman, O. Bourgeois and E. Collin  
March meeting 14-18 march 2016, Baltimore MD USA.

« Ultra-basse température, système modèle pour la physique fondamentale »  
E. Collin  
Journées du département MCBT, Villard de Lans 12-13 mai 2016

“Nonlinear dynamics and fluctuations in (micro)nanomechanical systems”  
E. Collin  
Séminaire nanoélectronique quantique, Grenoble 31 mai 2016

« Cryo. pour les Ultra-basses températures »  
E. Collin  
Alliance cryogénie LANEF, Grenoble 3 juin 2016

JMC15 Bordeaux 22-26 aout 2016  
“Nonlinearity-induced frequency fluctuations in a nanomechanical resonator”  
O. Maillet, X. Zhou, A.-I. Maldonado-Cid, R. R. Gazizulin, A. D. Fefferman, O. Bourgeois,  
E. Collin

“Nanomechanical beams for sub-coherence length studies in superfluid  $^3\text{He}$ ”  
E. Collin, R. Gazizulin, O. Maillet, A. Fefferman  
QFS 2016, Prague, Rép Tchèque 10-16 aout 2016 (invité)

“Elastic measurements of TLSs in amorphous silicon at mK temperatures”  
A. Fefferman, A. Maldonado-Cid and E. Collin, X. Liu, T. Metcalf and G. Jernigan  
QFS 2016, Prague, Rép Tchèque 10-16 aout 2016

54) “Elastic measurements of amorphous silicon films at mK temperatures”  
A. Fefferman, A. Maldonado, E. Collin, X. Liu, T. Metcalf and G. Jernigan  
J. of Low Temp. Phys. Vol. 187, pp 654 (2017). [arXiv:1610.06778](https://arxiv.org/abs/1610.06778)

“Boundary layer of gaseous  $^4\text{He}$  and superfluid films probed by a nano- mechanical device at Kelvin temperatures”  
R. R. Gazizulin, O. Maillet, A. I. Maldonado Cid, X. Zhou, T. Crozes, O. Bourgeois, A. D. Fefferman, E. Collin  
QFS 2016, Prague, Rép Tchèque 10-16 aout 2016 (Last minute poster)

« Nano/micro mécanique aux ultra-basses températures »

E. Collin

GDR Opto-méca Q

Paris, Jussieu 20-21 sept 2016

“MEMS and NEMS for Quantum fluids & Solids”

E. Collin

Cours CryoSchool Helsinki 26 Sept – 3 Oct. 2016 (cours invité)

“Interplay between amplitude fluctuations and nonlinear dynamics in NEMS”

E. Collin

FNS conference, La Thuile, Italy 05-10 february 2017 (invité)

“Boundary layer in  $^4\text{He}$  gas and superfluid  $^4\text{He}$  films probed by nano-mechanical oscillator”

R. Gazizulin, O. Maillet, A. I. Maldonado Cid, X. Zhou, T. Crozes, O. Bourgeois, A. Fefferman and E. Collin,

FNS conference, La Thuile, Italy 05-10 february 2017

“Elastic measurements of TLSs in amorphous silicon at mK temperatures”

A. Fefferman, A. Maldonado-Cid, and E. Collin, X. Liu, T. Metcalf and G. Jernigan

FNS conference, La Thuile, Italy 05-10 february 2017

“Interplay between amplitude fluctuations and nonlinear dynamics in NEMS”

E. Collin,

Séminaire, 27 janvier 2017, Konstanz, Germany

55) “Universality of thermal transport in amorphous nanowires at low temperatures”

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