

CONTENTS - *Continued*

PHYSICAL REVIEW B

THIRD SERIES, VOLUME 108, NUMBER 17

NOVEMBER 2023-1(I)

Boiling peak heat flux for steady inhomogeneous heat transfer in superfluid ^4He (9 pages)	174509
Sosuke Inui, Mikai Hulse, Toshiaki Kanai, and Wei Guo	
Density of a one-dimensional weakly interacting Bose gas far from an impurity (9 pages)	174510
Aleksandra Petković and Zoran Ristivojevic	
☞ Type-II $t - J$ model and shared superexchange coupling from Hund's rule in superconducting $\text{La}_3\text{Ni}_2\text{O}_7$ (8 pages)	174511
Hanbit Oh and Ya-Hui Zhang	
Absence of electron-phonon-mediated superconductivity in hydrogen-intercalated nickelates (6 pages)	174512
Simone Di Cataldo, Paul Worm, Liang Si, and Karsten Held	
Superconductivity in dense scandium-based phosphides (10 pages)	174513
Kaixuan Zhao, Qianyi Wang, Honggang Li, Bo Gao, Shubo Wei, Li Zhu, Haiyang Xu, Hanyu Liu, and Shoutao Zhang	
Machine learning the relationship between Debye temperature and superconducting transition temperature (9 pages)	174514
Adam D. Smith, Sumner B. Harris, Renato P. Camata, Da Yan, and Cheng-Chien Chen	
Nonthermal superconductivity in photodoped multiorbital Hubbard systems (11 pages)	174515
Sujay Ray, Yuta Murakami, and Philipp Werner	
Josephson transistor from the superconducting diode effect in domain wall and skyrmion magnetic racetracks (14 pages)	174516
Richard Hess, Henry F. Legg, Daniel Loss, and Jelena Klinovaja	
Superconductivity in orthorhombic NbS (7 pages)	174517
Bin-Bin Ruan, Jun-Kun Yi, Le-Wei Chen, Menghu Zhou, Yun-Qing Shi, Qing-Song Yang, Ya-Dong Gu, Gen-Fu Chen, and Zhi-An Ren	
Universal defect density scaling in an oscillating dynamic phase transition (7 pages)	174518
Wei-Can Yang, Makoto Tsubota, Adolfo del Campo, and Hua-Bi Zeng	

COMMENTS

Comment on “Ballistic SNS sandwich as a Josephson junction” (5 pages)	176501
Erkki Thuneberg	
Reply to “Comment on ‘Ballistic SNS sandwich as a Josephson junction’ ” (4 pages)	176502
Edouard B. Sonin	

ERRATA

Erratum: Theory for coherent control of longitudinal optical phonons in GaAs using polarized optical pulses with relative phase locking [Phys. Rev. B 104 , 134301 (2021)] (1 page)	179901(E)
Itsuki Takagi, Yosuke Kayanuma, and Kazutaka G. Nakamura	

Unconventional spin dynamics in the noncollinear phase of a ferrimagnet (<i>7 pages</i>)	174442
D. M. Krichevsky, N. A. Gusev, D. O. Ignatyeva, A. V. Prisyazhnyuk, E. Yu. Semuk, S. N. Polulyakh, V. N. Berzhansky, A. K. Zvezdin, and V. I. Belotelov	
Exceptional points in coupled vortex-based spin-torque oscillators (<i>11 pages</i>)	174443
A. A. Matveev, A. R. Safin, and S. A. Nikitov	
Short nanometer range optically induced magnetic fluctuations accompanying ultrafast demagnetization of nanoscale ferromagnetic domains (<i>10 pages</i>)	174444
Sergey M. Suturin, Andre Philippi-Kobs, Robert Carley, Rafael Gort, Gerhard Grübel, Emmanuelle Jal, Marina V. Baidakova, Eugeniya Yu. Lobanova, Laurent Mercadier, Serguei L. Molodtsov, Leonard Müller, Dmitrii V. Potorochin, Matthias Riepp, Wojciech Roseker, Andreas Scherz, Justine Schlappa, Loïc Le Guyader, Giuseppe Mercurio, Monica Turcato, Benjamin Van Kuiken, Alexander Yaroslavl'tsev, Alexander Y. Deviatov, Yaroslav O. Kvashnin, Alexander I. Lichtenstein, Vladimir V. Mazurenko, and Igor I. Pronin	
Nontrivial Aharonov-Bohm effect and alternating dispersion of magnons in cone-state ferromagnetic rings (<i>9 pages</i>)	174445
Vera Uzunova, Lukas Körber, Agapi Kavvadia, Gwendolyn Quasebarth, Helmut Schultheiss, Attila Kákay, and Boris Ivanov	
Spin transfer exchange torque in ferromagnet/ferromagnet structures made of half-metals with large exchange gaps (<i>15 pages</i>)	174446
V. Shablenko and Ya. B. Bazaliy	
Superfluidity and superconductivity	
Impurity and vortex states in the bilayer high-temperature superconductor $\text{La}_3\text{Ni}_2\text{O}_7$ (<i>7 pages</i>)	174501
Junkang Huang, Z. D. Wang, and Tao Zhou	
On-off switch and sign change for a nonlocal Josephson diode in spin-valve Andreev molecules (<i>8 pages</i>)	174502
Erik Wegner Hodt and Jacob Linder	
Detection of collective modes in unconventional superconductors using tunneling spectroscopy (<i>10 pages</i>)	174503
Patrick A. Lee and Jacob F. Steiner	
Theory of pseudospin resonance for multiband superconductors (<i>10 pages</i>)	174504
Kristian Hauser A. Villegas	
Enhanced chiral edge currents and orbital magnetic moment in chiral d -wave superconductors from mesoscopic finite-size effects (<i>24 pages</i>)	174505
P. Holmvalld and A. M. Black-Schaffer	
Exact solution for finite center-of-mass momentum Cooper pairing (<i>9 pages</i>)	174506
Chandan Setty, Jinchao Zhao, Laura Fanfarillo, Edwin W. Huang, Peter J. Hirschfeld, Philip W. Phillips, and Kun Yang	
Superconducting phases of YH_9 under pressure (<i>7 pages</i>)	174507
Mingyang Du, Zonglun Li, Defang Duan, and Tian Cui	
☞ Persistent Josephson tunneling between $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_{8+x}$ flakes twisted by 45° across the superconducting dome (<i>9 pages</i>)	174508
Yuying Zhu, Heng Wang, Zechao Wang, Shuxu Hu, Genda Gu, Jing Zhu, Ding Zhang, and Qi-Kun Xue	

(Continued)

Domain wall statics and dynamics in nanowires with arbitrary Dzyaloshinskii-Moriya tensors (<i>10 pages</i>)	174427
Adriano Di Pietro, Felipe García-Sánchez, and Gianfranco Durin	
Varying magnetism in the lattice distorted Y_2NiIrO_6 and $\text{La}_2\text{NiIrO}_6$ (<i>7 pages</i>)	174428
Lu Liu, Ke Yang, Di Lu, Yaozhenghang Ma, Yuxuan Zhou, and Hua Wu	
Spin spiral order induced ferroelectricity in MnRe_2O_8 monolayer (<i>8 pages</i>)	174429
Shiqiang Yu, Yushuo Xu, Ying Dai, Dongyue Sun, Baibiao Huang, and Wei Wei	
In-plane canted ferromagnetism, intrinsic Weyl fermions, and large anomalous Hall effect in the kagome semimetal $\text{Rh}_3\text{Sn}_2\text{S}_2$ (<i>9 pages</i>)	174430
Meng-Xin Wu, Yu-Hao Wei, Da-Shuai Ma, Peng Wang, Nan Gao, Shao-Yi Wu, and Min-Quan Kuang	
Magnetic properties of $4f$ adatoms on graphene: Density functional theory investigations (<i>15 pages</i>)	174431
Johanna P. Carbone, Juba Bouaziz, Gustav Bihlmayer, and Stefan Blügel	
☞ $\text{K}_2\text{Co}_2\text{TeO}_6$: A layered magnet with a $S = \frac{1}{2}$ Co^{2+} honeycomb lattice (<i>7 pages</i>)	174432
Xianghan Xu, Lijun Wu, Yimei Zhu, and R. J. Cava	
Room-temperature magnetic skyrmions in Pt/Co/Cu multilayers (<i>10 pages</i>)	174433
Shuyu Cheng, Núria Bagués, Camelia M. Selcu, Jacob B. Freyermuth, Ziling Li, Binbin Wang, Shekhar Das, P. Chris Hammel, Mohit Randeria, David W. McComb, and Roland K. Kawakami	
Magnetoresistance anomaly during the electrical triggering of a metal-insulator transition (<i>10 pages</i>)	174434
Pavel Salev, Lorenzo Fratino, Dayne Sasaki, Soumen Bag, Yayoi Takamura, Marcelo Rozenberg, and Ivan K. Schuller	
Translational symmetry broken magnetization plateau of the $S = 1$ antiferromagnetic Heisenberg chain with competing anisotropies (<i>8 pages</i>)	174435
Tôru Sakai, Kiyomi Okamoto, Kouichi Okunishi, Masaru Hashimoto, Tomoki Houda, Rito Furuchi, and Hiroki Nakano	
Quasispins of vacancy defects in Ising chains with nearest- and next-to-nearest-neighbor interactions (<i>10 pages</i>)	174436
Shijun Sun, Arthur P. Ramirez, and Sergey Syzranov	
Templates for magnetic symmetry and altermagnetism in hexagonal MnTe (<i>9 pages</i>)	174437
S. W. Lovesey, D. D. Khalyavin, and G. van der Laan	
Mapping spin interactions from conductance peak splitting in Coulomb blockade (<i>12 pages</i>)	174438
Eric D. Switzer, Xiao-Guang Zhang, Volodymyr Turkowski, and Talat S. Rahman	
Prediction of giant tunneling magnetoresistance in $\text{RuO}_2/\text{TiO}_2/\text{RuO}_2$ (110) antiferromagnetic tunnel junctions (<i>8 pages</i>)	174439
Yuan-Yuan Jiang, Zi-An Wang, Kartik Samanta, Shu-Hui Zhang, Rui-Chun Xiao, W. J. Lu, Y. P. Sun, Evgeny Y. Tsymbal, and Ding-Fu Shao	
Skyrmion dynamics in moiré magnets (<i>9 pages</i>)	174440
P. S. Shaban, I. S. Lobanov, V. M. Uzdin, and I. V. Iorsh	
Emergence of chaos in magnetic-field-driven skyrmions (<i>6 pages</i>)	174441
Gyuyoung Park and Sang-Koog Kim	

(Continued)

Ferromagnetic monolayer with interfacial Dzyaloshinskii-Moriya interaction: Magnon spectrum and effect of quenched disorder (<i>13 pages</i>)	174414
Oleg I. Utesov and Arseny V. Syromyatnikov	
Effects of Co substitution on the structural and magnetic properties of $\text{Sr}(\text{Ni}_{1-x}\text{Co}_x)_2\text{P}_2$ (<i>16 pages</i>)	174415
J. Schmidt, G. Gorgen-Lesseux, R. A. Ribeiro, S. L. Bud'ko, and P. C. Canfield	
Statistical analysis of magnetic domain wall dynamics to quantify Dzyaloshinskii-Moriya interaction (<i>10 pages</i>)	174416
Xinwei Shi, Panpan Fang, Chen Sun, and Fuxiang Li	
Hidden superuniversality in systems with continuous variation of critical exponents (<i>8 pages</i>)	174417
Indranil Mukherjee and P. K. Mohanty	
Dynamical nuclear polarization for dissipation-induced entanglement in NV centers (<i>12 pages</i>)	174418
Shishir Khandelwal, Shashwat Kumar, Nicolas Palazzo, Géraldine Haack, and Mayeul Chipaux	
Searching for activated transitions in complex magnetic systems (<i>14 pages</i>)	174419
H. Bocquet and P. M. Derlet	
Rich magnetic phase diagram of putative helimagnet $\text{Sr}_3\text{Fe}_2\text{O}_7$ (<i>13 pages</i>)	174420
Nikita D. Andriushin, Justus Grumbach, Jung-Hwa Kim, Manfred Reehuis, Yuliia V. Tymoshenko, Yevhen A. Onykienko, Anil Jain, W. Andrew MacFarlane, Andrey Maljuk, Sergey Granovsky, Andreas Hoser, Vladimir Pomjakushin, Jacques Ollivier, Mathias Doerr, Bernhard Keimer, Dmytro S. Inosov, and Darren C. Peets	
Edge and corner skin effects of chirally coupled magnons characterized by a topological winding tuple (<i>7 pages</i>)	174421
Chengyuan Cai, Dante M. Kennes, Michael A. Sentef, and Tao Yu	
Proximate Dirac spin liquid in the honeycomb lattice J_1 - J_3 XXZ model: Numerical study and application to cobaltates (<i>13 pages</i>)	174422
Anjishnu Bose, Manodip Routh, Sreekar Voleti, Sudip Kumar Saha, Manoranjan Kumar, Tanusri Saha-Dasgupta, and Arun Paramakanti	
Structure and magnetic properties of $\text{Ba}_9\text{V}_3\text{Te}_{15}$ with ferromagnetic spin chains (<i>9 pages</i>)	174423
Jun Zhang, Xinyu Zhang, Yuanhua Xia, Jianfa Zhao, Lei Duan, Guodong Wang, Baosen Min, Huibo Cao, Clarina R. Dela Cruz, Kan Zhao, Hongyi Sun, Jinlong Zhu, Jianfeng Zhang, Tao Xiang, Xiancheng Wang, and Changqing Jin	
Static and dynamical properties of the spin- $\frac{5}{2}$ nearly ideal triangular lattice antiferromagnet $\text{Ba}_3\text{MnSb}_2\text{O}_9$ (<i>12 pages</i>)	174424
Mingfang Shu, Weicen Dong, Jinlong Jiao, Jiangtao Wu, Gaoting Lin, Yoshitomo Kamiya, Tao Hong, Huibo Cao, Masaaki Matsuda, Wei Tian, Songxue Chi, G. Ehlers, Zhongwen Ouyang, Hongwei Chen, Youming Zou, Zhe Qu, Qing Huang, Haidong Zhou, and Jie Ma	
Magnon-magnon interaction in monolayer MnBi_2Te_4 (<i>9 pages</i>)	174425
Yiqun Liu, Liangjun Zhai, Songsong Yan, Di Wang, and Xiangang Wan	
Regulation of magnon-phonon coupling by phonon angular momentum in two-dimensional systems (<i>11 pages</i>)	174426
Qian Wang, Shuang Liu, Meng-Qiu Long, and Yun-Peng Wang	

(Continued)

Magnetism

Understanding the magnetic dynamics and magnetostructural coupling in the paramagnetic phase of TbMnO ₃ by muon-spin spectroscopy (9 pages)	174401
R. Vilarinho, R. C. Vilão, H. V. Alberto, A. G. Marinopoulos, J. M. Gil, H. Luetkens, Z. Guguchia, M. Mihalik, M. Mihalik, Jr., and J. Agostinho Moreira	
Semiconducting Cr ₂ BN monolayer with antiferromagnetic order (6 pages)	174402
Xu Yan, Fanjunjie Han, Yansun Yao, Xiaohua Zhang, Yong Liu, and Guochun Yang	
Quantitative and realistic description of the magnetic potential energy of spin-torque vortex oscillators (9 pages)	174403
Simon de Wergifosse, Chloé Chopin, and Flavio Abreu Araujo	
Magnon junction effect induced by bulk acoustic waves (6 pages)	174404
Hanbing Ling, Liang Wang, Lisha Wang, Syed UI Hasnain Bakhtiar, Zhao Ye, Tao Wang, Yue Zhang, and Qiuyun Fu	
Metastability and dynamics in remanent states of square artificial spin ice with long-range dipole interactions (15 pages)	174405
G. M. Wysin	
Magnetic structure and phase transition in a single crystal of ErCrO ₃ (9 pages)	174406
S. Yano, Chin-Wei Wang, Yinghao Zhu, Kaitong Sun, and Hai-Feng Li	
Magnetoelectric hysteresis of Bragg resonances in a multiferroic crystal based on YIG/HZO (8 pages)	174407
Maria A. Morozova, Oleg V. Matveev, Andrey M. Markeev, Anna G. Chernikova, Alexander M. Mednikov, Sergey A. Gusev, Igor Yu. Pashenkin, Nikita S. Gusev, Dmitry V. Romanenko, and Sergey A. Nikitov	
Scattering of magnetostatic surface modes of ferromagnetic films by geometric defects (18 pages)	174408
R. E. Arias	
Inelastic neutron scattering investigation of the crystal field excitations of NdCo ₅ (8 pages)	174409
F. de Almeida Passos, G. J. Nilsen, C. E. Patrick, M. D. Le, G. Balakrishnan, Santosh Kumar, A. Thamizhavel, D. R. Cornejo, and J. Larrea Jiménez	
Emerging interfacial magnetization in isovalent manganite heterostructures driven by octahedral coupling (9 pages)	174410
Yogesh Kumar, Harsh Bhatt, S. Kakkar, C. J. Kinane, A. Caruana, S. Langridge, Chandan Bera, S. Basu, Manuel A. Roldan, and Surendra Singh	
μ SR study of the dipole-octupole quantum spin ice candidate Ce ₂ Zr ₂ O ₇ (14 pages)	174411
J. Beare, E. M. Smith, J. Dudemaine, R. Schäfer, M. R. Rutherford, S. Sharma, A. Fitterman, C. A. Marjerrison, T. J. Williams, A. A. Aczel, S. R. Dunsiger, A. D. Bianchi, B. D. Gaulin, and G. M. Luke	
 Crystal and magnetic structure of cesium superoxide (13 pages)	174412
R. A. Ewings, M. Reehuis, F. Orlandi, P. Manuel, D. D. Khalyavin, A. S. Gibbs, A. D. Fortes, A. Hoser, A. J. Princep, and M. Jansen	
Magnetism in AV ₃ Sb ₅ (A = Cs, Rb, K): Complex landscape of dynamical magnetic textures (8 pages)	174413
Debjani Karmakar, Manuel Pereiro, Md. Nur Hasan, Ritadip Bharati, Johan Hellsvik, Anna Delin, Samir Kumar Pal, Anders Bergman, Shivalika Sharma, Igor Di Marco, Patrik Thunström, Peter M. Oppeneer, and Olle Eriksson	

(Continued)

Inhomogeneous, disordered, and partially ordered systems

Depinning free of the elastic approximation (<i>8 pages</i>)	174201
A. B. Kolton, E. E. Ferrero, and A. Rosso	
Engineering mobility in quasiperiodic lattices with exact mobility edges (<i>10 pages</i>)	174202
Zhenbo Wang, Yu Zhang, Li Wang, and Shu Chen	
Hydrogen bond network modes in liquid water (<i>7 pages</i>)	174203
David P. Shelton	
Calculations of the Chern number: Equivalence of real-space and twisted-boundary-condition formulas (<i>14 pages</i>)	174204
Ling Lin, Yongguan Ke, Li Zhang, and Chaohong Lee	
Origin of minimal conductivity in Dirac materials: Momentum-dependent self-energy function from long-ranged disorder scattering (<i>23 pages</i>)	174205
Weiwei Chen, Yedi Shen, Bo Fu, Qinwei Shi, and W. Zhu	
General approach to the critical phase with coupled quasiperiodic chains (<i>22 pages</i>)	174206
Xiaoshui Lin, Xiaoman Chen, Guang-Can Guo, and Ming Gong	

Dynamics, dynamical systems, lattice effects:

Electronic and vibrational excitations on the surface of the three-dimensional topological insulator $\text{Bi}_2\text{Te}_{3-x}\text{Se}_x$ ($x = 0, 2, 3$) (<i>8 pages</i>)	174301
A. C. Lee, H.-H. Kung, Xueyun Wang, S.-W. Cheong, and G. Blumberg	
Role of high-order lattice anharmonicity in the phonon thermal transport of silver halide AgX ($X = \text{Cl}, \text{Br}, \text{I}$) (<i>7 pages</i>)	174302
Niuchang Ouyang, Zezhu Zeng, Chen Wang, Qi Wang, and Yue Chen	
Universality classes of thermalization for mesoscopic Floquet systems (<i>16 pages</i>)	174303
Alan Morningstar, David A. Huse, and Vedika Khemani	
Relaxation time as a control parameter for exploring dynamical phase diagrams (<i>17 pages</i>)	174305
Ángel L. Corps, Pedro Pérez-Fernández, and Armando Relaño	
Periodic jumps in binary lattices with a static force (<i>7 pages</i>)	174306
Liwei Duan	
Anomalous second-order skin modes in Floquet non-Hermitian systems (<i>9 pages</i>)	174307
Chun-Hui Liu, Haiping Hu, Shu Chen, and Xiong-Jun Liu	
Purification dynamics in a continuous-time hybrid quantum circuit model (<i>13 pages</i>)	174308
Sebastian Leontica and Max McGinley	
Building entanglement entropy out of correlation functions for interacting fermions (<i>20 pages</i>)	174309
Saranyo Moitra and Rajdeep Sensarma	
Floquet dynamical decoupling at zero bias (<i>7 pages</i>)	174310
Peng Xu and Jun Zhang	

(Continued)

ARTICLES

Structure, structural phase transitions, mechanical properties, defects

- Ferroelectric domain wall clusters in perfectly screened barium titanate type systems (*12 pages*) 174101
Chris Halcrow and Egor Babaev
- High pressure–temperature phase diagram of ammonia hemihydrate (*11 pages*) 174102
L. Andriambarijaona, F. Datchi, H. Zhang, K. Béneut, B. Baptiste, N. Guignot, and S. Ninet
- Bayesian inference of composition-dependent phase diagrams (*16 pages*) 174103
Timofei Miryashkin, Olga Klimanova, Vladimir Ladygin, and Alexander Shapeev
- Prediction for the elastic modulus of polycrystalline materials: Theoretical derivation, verification, and application (*8 pages*) 174104
Z. J. Zhang, X. T. Li, R. H. Li, R. Liu, Z. Qu, A. G. Sheinerman, and Z. F. Zhang
- Bulk-edge correspondences for surface plasmon polaritons: A circuit approach (*19 pages*) 174105
Yosuke Nakata, Toshihiro Nakanishi, Ryo Takahashi, Fumiaki Miyamaru, and Shuichi Murakami
- Pressure-induced crystal structural and insulator-metal transitions in the quantum spin liquid candidate CsYbSe₂ (*7 pages*) 174106
Raimundas Sereika, Xilong Xu, Yizhou Wang, Li Yang, Dongzhou Zhang, Stella Chariton, Jie Xing, Athena Sefat, Yogesh K. Vohra, and Wenli Bi
- Boundary conditions dependence of the phase transition in the quantum Newman-Moore model (*14 pages*) 174107
Konstantinos Sfairopoulos, Luke Causer, Jamie F. Mair, and Juan P. Garrahan
- Long-range and local structure evolution of Y_{1.8}Eu_{0.2}Ge₂O₇ under static high pressures (*15 pages*) 174108
Rahul Kaiwart, Abhilash Dwivedi, M. Modak, Adish Tyagi, Sandeep Nigam, K. K. Pandey, T. Balaganapathi, A. K. Poswal, and H. K. Poswal
- Phase transformations and plasticity in single-crystal iron from shock compression to spall fracture (*10 pages*) ... 174109
N. Amadou and T. de Rességuier
- First-principles insights into the ferroelectric, dielectric, and piezoelectric properties of polar Pca2₁ SbN (*10 pages*) 174110
Shihao Wang, Zunyi Deng, Shuhan Li, Peng Lv, Jing Wang, Xueyun Wang, Gang Tang, and Jiawang Hong
- Extending dephasing time of nitrogen-vacancy center in diamond by suppressing nuclear spin noise (*9 pages*) ... 174111
Xin-Yu Chen, Chu-Dan Qiu, Ya-Nan Lu, Gang-Qin Liu, Dong Ruan, Feihao Zhang, and Guilu Long
- Charge density wave order, local lattice distortions, and topological electronic states in NbTe₄ (*7 pages*) 174112
V. Petkov, R. Amin, M. Jakhar, V. Barone, AM Milinda Abeykoon, M. Sretenovic, and X. Ke



(Continued)



2469-9950(20231101)108:17;1-4