

B1.5 (A. Ustinov / G. Weiss / M. Siegel)

- [B1.5:1] ‡ S. Poletto, F. Chiarello, M.G. Castellano, J. Lisenfeld, A. Lukashenko, C. Cosmelli, G. Torrioli, P. Carelli, and A.V. Ustinov, *Coherent oscillations in a superconducting tunable flux qubit manipulated without microwaves*, [New J. Phys. **11**, 013009 \(2009\)](#)
- [B1.5:2] ‡ S. Poletto, F. Chiarello, M.G. Castellano, J. Lisenfeld, A. Lukashenko, P. Carelli, and A.V. Ustinov, *A tunable rf SQUID manipulated as flux and phase qubit*, [Phys. Scr. T **137**, 014011 \(2009\)](#)
- [B1.5:3] * Ch. Kaiser, G. Weiss, T.W. Cornelius, M.E. Toimil-Molares, and R. Neumann, *Low temperature magnetoresistance measurements on bismuth nanowire arrays*, [J. Phys.: Condens. Matter **21**, 205301 \(2009\)](#)
- [B1.5:4] * Ch. Kaiser, R. Schäfer, and M. Siegel, *Dependence of the Macroscopic Quantum Tunneling Rate on Josephson Junction Area*, [arXiv:1011.4241 \(2010\)](#)
- [B1.5:5] ‡ Ch. Kaiser, T. Bauch, F. Lombardi, and M. Siegel, *Quantum Phase Dynamics in an LC shunted Josephson Junction*, [J. Appl. Phys. **109**, 093915 \(2011\)](#)
- [B1.5:6] ‡ Ch. Kaiser, S.T. Skacel, S. Wunsch, R. Dolata, B. Mackrodt, A. Zorin, and M. Siegel, *Measurement of dielectric losses in amorphous thin films at gigahertz frequencies using superconducting resonators*, [Supercond. Sci. Technol. **23**, 075008 \(2010\)](#)
- [B1.5:7] * S.T. Skacel, Ch. Kaiser, S. Wunsch, H. Rotzinger, A. Lukashenko, M. Siegel, and A.V. Ustinov, *Probing the TLS Density of States in SiO using Superconducting Lumped Element Resonators*, in preparation (2010).
- [B1.5:8] ‡ P. Macha, S.H.W. van der Ploeg, G. Oelsner, E. Il'ichev, H.-G. Meyer, S. Wunsch, and M. Siegel, *Losses in coplanar waveguide resonators at millikelvin temperatures*, [Appl. Phys. Lett. **96**, 062503 \(2010\)](#)
- [B1.5:9] ‡ A.N. Price, A. Kemp, D.R. Gulevich, F.V. Kusmartsev, and A.V. Ustinov, *Vortex qubit based on an annular Josephson junction containing a microshort*, [Phys. Rev. B **81**, 014506 \(2010\)](#)
- [B1.5:10] ‡ A.K. Feofanov, V.A. Oboznov, V.V. Bol'ginov, J. Lisenfeld, S. Poletto, V.V. Ryazanov, A.N. Rossolenko, M. Khabipov, D. Balashov, A.B. Zorin, P.N. Dmitriev, V.P. Koshelets, and A.V. Ustinov, *Implementation of superconductor-ferromagnet-superconductor pi-shifters in superconducting digital and quantum circuits*, [Nature Phys. **6**, 593 \(2010\)](#)
- [B1.5:11] * Ch. Kaiser, J.M. Meckbach, K.S. Ilin, J. Lisenfeld, R. Schäfer, A.V. Ustinov, and M. Siegel, *Aluminum Hard Mask Technique for the Fabrication of High-Quality Submicron Nb/Al-AIO_x/Nb Josephson Junctions*, [Supercond. Sci. Technol. **24**, 035005 \(2011\)](#)
- [B1.5:12] *‡ A. Bruno, S.T. Skacel, Ch. Kaiser, S. Wunsch, M. Siegel, A.V. Ustinov, and M.P. Lisitskiy, *Investigation of Dielectric Losses in Hydrogenated Amorphous Silicon (a-Si:H) thin Films Using Superconducting Microwave Resonators*, [Phys. Proc. **36**, 245 \(2012\)](#)
- [B1.5:13] * G.J. Grabovskij, T. Peichel, J. Lisenfeld, G. Weiss, and A.V. Ustinov, *Strain tuning of individual atomic tunneling systems detected by a superconducting qubit*, [Science **338**, 232 \(2012\)](#)
- [B1.5:14] ‡ A.P. Zhuravel, B.G. Ghamsari, C. Kurter, P. Jung, S. Remillard, J. Abrahams, A.V. Lukashenko, A.V. Ustinov, and S.M. Anlage, *Imaging the Anisotropic Nonlinear Meissner Effect in Nodal YBa₂Cu₃O_{7-δ} Thin-Film Superconductors*, [Phys. Rev. Lett. **110**, 087002 \(2013\)](#)

[B1.5:15] *‡ A.A. Kuzmin, S.V. Shitov, A. Scheuring, J.M. Meckbach, K.S. Ilin, S. Wuensch, A. V. Ustinov, and M. Siegel, *TES bolometers with high-frequency readout circuit*, [IEEE Trans. Terahertz Sci. Techn. 3, 25 \(2013\)](#)

Invited Talks at International Conferences

A.V. Ustinov, *Microwave-free manipulation of a SQUID qubit*, Nobel Symposium 2009: Qubits for Future Quantum Computers, Göteborg, Sweden, 25-28 May 2009 (invited talk)

A.V. Ustinov, *Microwave-free manipulation of a SQUID qubit*, Int. Conf. MESO-2009, Chernogolovka, Russia, June 2009 (invited talk)

S. Poletto, *Microwave-free manipulation of a SQUID qubit*, Int. Workshop on Solid State Quantum Information Processing, Herrsching, Germany, 1-3 July 2009 (invited talk)

A.V. Ustinov, *Spectroscopy of material defects using superconducting qubits*, 445. WE-Heraeus Seminar on “Quantum Measurement and Metrology with Solid State Devices”, 1 - 5 November 2009, Physikzentrum Bad Honnef, Germany (invited talk)

A.V. Ustinov, *Decoherence of individual two-level defects in tunnel barriers of Josephson junctions*, Int. Conf. “Arrow of time and the problem of decoherence in closed solid state quantum systems”, Paris, France, 10 – 14 October 2010 (invited talk)

A.V. Ustinov, *Quantum correlations between superconducting artificial atom and microscopic defects in solids*, Int. Workshop “Common perspectives of mesoscopic systems and quantum gases”, Schloss Reinsburg, Günzburg, Germany, 28 November – 2 December 2010 (invited talk)

A.V. Ustinov, *Detection and quantum manipulation of coherent two-level defects in amorphous oxides*, International Symposium on Metastable Amorphous and Nanostructured Materials ISMANAM-2012, Moscow, Russia, 18-22 June, 2012 (invited talk)