

Curriculum Vitae

Denis A. Epifanov

Affiliation: Budker Institute of Nuclear Physics
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Citizenship: Russia

Education:

Budker Institute of Nuclear Physics, Novosibirsk, Russia

- December 2009, Ph.D. (Cand. Phys. Math. Sc.) in Physics of elementary particles.
Thesis: "Study of the $e^+e^- \rightarrow \pi^+\pi^-\pi^0$ reaction in the region of ϕ -meson resonance with the CMD-2 detector"
Scientific adviser: Prof. Boris A. Shwartz
- July 2001 – June 2004: Ph.D. student,
faculty: Physics of elementary particles
institute: Budker Institute of Nuclear Physics

Novosibirsk State University, Novosibirsk, Russia

- Sept. 1999 – June 2001: Postgraduate student,
faculty: Physics of elementary particles,
Master of sciences in physics, diploma:
"Analysis of the dynamics of the $\phi \rightarrow \pi^+\pi^-\pi^0$ decay with the CMD-2 detector".
Scientific adviser: Prof. Boris A. Shwartz
- Sept. 1995 – June 1999: Student,
faculty: Physics of elementary particles,
Bachelor of sciences in physics, diploma:
"Investigation of the semiconductor photodiodes as a light photoconvertors from the different scintillation crystals".
Scientific adviser: Prof. Boris A. Shwartz

Research Interests:

Experimental high energy physics: investigation of e^+e^- annihilation into hadrons at low energies, τ lepton decays, physics of b- and c-quarks, CP symmetry violation, precision tests of the Standard Model, particle detectors, calorimetry.

Research Experience:

07.2016-present - senior researcher at BINP,

11.2015-06.2016 - chief engineer at BINP,

04.2015-09.2015 - postdoctoral fellow, the University of Tokyo,

08.2012-03.2015 - Belle / Belle II project assistant professor, the University of Tokyo,

12.2011-07.2012 - project researcher at the University of Tokyo,

03.2011-12.2011 - senior researcher at BINP,

07.2008-02.2011 - researcher at BINP,

07.2004-06.2008 - junior researcher at BINP,

07.2001-06.2004 - Ph.D. student in Budker Institute of Nuclear Physics (BINP), Novosibirsk, Russia

2002-present - member of the Belle/Belle-II collaboration (KEK)

2000-present - member of the CMD-2/CMD-3 collaboration (BINP)

Summary of the research activities:

- 1) **1999** The main properties of the semiconductor avalanche photodiodes (APD) were studied. The characteristics of the counters based on the CsI(Tl), CsI(Na), BGO and LuAG scintillation crystals and photodiodes (APD and diodes with PIN structure) were investigated with help of the different sources of γ radiation. The prototype of the counter for the new electromagnetic calorimeter (for the CMD-3 detector) was studied.
- 2) **1999-2000** Construction, tests and installation to the KEDR detector of the endcap calorimeter subsystem (inner forward and inner backward parts), consisting of the 48 scintillation counters.
- 3) **2000-2006** Study of $e^+e^- \rightarrow \pi^+\pi^-\pi^0$ reaction in the energy region $2E = 984 \div 1060$ MeV and investigation of the dynamics of the $\phi \rightarrow \pi^+\pi^-\pi^0$ decay with CMD-2 detector at VEPP-2M e^+e^- collider.
- 4) **2002-2007** Study of $\tau^- \rightarrow K_S\pi^-\nu_\tau$ decay with Belle detector at KEKB e^+e^- collider.
- 5) **2006** Participation in the study of the neutron radiation hardness of PIN photodiodes (used in the Belle electromagnetic calorimeter) at Yayoi reactor in Nuclear Professional School, the University of Tokyo.
- 6) **2007** Participation in the study of the radiation hardness of the pure CsI crystals at ELV-6 accelerator at BINP.
- 7) **2007-2008** Search for the $\phi \rightarrow \pi^+\pi^-\gamma\gamma$ and $\phi \rightarrow \pi^+\pi^-\eta$ decays with the CMD-2 detector.
- 8) **2001-2011** Participation in the design, construction, tests and starting up of the new electromagnetic calorimeter, based on the CsI scintillation crystals, for the CMD-3 detector.
- 9) **2002-2008** Participation in the works on the electromagnetic calorimeter (ECL) of the Belle detector. Monitoring of the accumulated radiation dose in the ECL counters, measurement of the dark current in the calorimeter. Tests of the new ECL electronics.
- 10) **2011-present** Participation in the upgrade of the ECL for Belle-II detector. ECL electronics. R&D of the CsI(pure)+SiAPD option for the upgrade of ECL end caps.
- 11) **2011-2016** Anomalous magnetic moment of τ in radiative leptonic decays.
- 12) **2013-2018** Measurement of Michel parameters in radiative leptonic τ decays at Belle.
- 13) **2016-2019** Search for $\tau^- \rightarrow \pi^-\ell^+\ell^-\nu_\tau$ decay at Belle.
- 14) **2011-present** Measurement of Michel parameters in leptonic τ decays

at Belle.

15) **2011-present** Study of 5-body leptonic τ decays at Belle.

16) **2018-present** Project of the Super Charm-tau factory

Teaching Experience:

2005-2011 - Teaching Assistant of the Novosibirsk State University, Novosibirsk, Russia

2012-2015 - Assistant Professor, the University of Tokyo, Tokyo, Japan

2019-present - Senior instructor, Novosibirsk State University, Novosibirsk, Russia

International Conferences and Schools (presentations/lectures):

- 1st Summer Scientific School "Super Charm-Tau Factory", NCFM, Sarov, Russia, 25-29 July, 2022.
- Remote Belle II Physics Week 2021, 29 November – 4 December, 2021.
- Workshop on future Super Charm-Tau Factories 2021, Novosibirsk, Russia, 15-17 November 2021.
- The 16th International Workshop on Tau Lepton Physics (TAU2021), Indiana University, USA, September 27th - October 1st, 2021.
- Workshop of the Department of Nuclear Physics of Russian Academy of Sciences, 10-12 March 2020, Novosibirsk, Academpark.
- BINP-IHEP(China) joint seminar, Budker Institute of Nuclear Physics, Novosibirsk, Russia, 16-18 December, 2019.
- Joint Workshop on Future Charm-Tau Factory, Moscow, Russia 24-28 September, 2019.
- The International Workshop "e+ e- Collisions From Phi to Psi 2019" (PHIPSI19), Budker Institute of Nuclear Physics, Novosibirsk, Russia, 25 February - 1 March, 2019
- The 5th International Workshop on New Photon-Detectors (PD18), The University of Tokyo, Tokyo, Japan, 27-29 November, 2018
- The 15th International Workshop on Tau Lepton Physics, Amsterdam, Netherlands, 24-28 September, 2018
- Super C-Tau factory workshop, Budker Institute of Nuclear Physics, Novosibirsk, Russia, May 26-27, 2018
- Pion-Kaon Interactions Workshop, Thomas Jefferson National Accelerator Facility (J-Lab), Newport News, VA, USA, February 14-15, 2018
- First Workshop on Physics at the Super Charm-Tau Factory, BINP, Novosibirsk, Russia, 18-19 December 2017
- International Workshop on e+ e- collisions from Phi to Psi 2017, Schloss Waldthausen, Mainz, Germany, 26-29 June 2017

- The Mini Workshop on Tau Physics, CINVESTAV, Mexico, Mexico, 22-23 May, 2017
- The 14th International Workshop on Tau Lepton Physics, IHEP, Beijing, China, 19-23 September, 2016
- 17th Lomonosov Conference on Elementary Particle Physics, Moscow State University, Moscow, Russia, August 20-26, 2015
- International Conference on New Photo-detectors (PhotoDet 2015), Moscow, Troitsk, Russia, July 6-9, 2015
- Belle Physics Advisory Committee (9th BPAC) Meeting, KEK, Tsukuba, Japan, 9-11 February 2015
- KEK Flavor Factory Workshop (KEK-FF2014FALL) / Belle II Theory Interface Platform (B2TiP) Meeting, KEK, Tsukuba, Japan, 28-31 October 2014
- The 13th International Workshop on Tau Lepton Physics, Aachen, Germany, 15-19 September, 2014
- Flavor Physics and CP Violation 2014 (FPCP-2014), Marseille, France, May 26-30 2014
- KEK Flavor Factory Workshop (KEK-FF2014), KEK, Tsukuba, Japan, 13-15 February, 2014
- 19th International Symposium on Particles, Strings and Cosmology, PASCOS-2013, Taipei, Taiwan, 20-26 November, 2013
- 2nd Workshop on Tau lepton decays: hadronic currents from Belle, BaBar data and LHC signatures, Institute of Nuclear Physics PAN, Cracow, Poland, 15-22 September, 2013
- Third Workshop on Flavor Symmetries, FLASY13, Niigata, Japan, 1-5 July, 2013
- 24th Rencontres de Blois, Particle Physics and Cosmology, Blois, France, May 27-June 1, 2012
- 1st Workshop on Tau lepton decays: hadronic currents from Belle, BaBar data and LHC signatures, Institute of Nuclear Physics PAN, Cracow, Poland, 14-19 May, 2012
- XIV International Conference on Calorimetry in High Energy Physics, Beijing, China, May 2010
- International School of Subnuclear Physics - 47-th Course "The most unexpected at LHC and the status of high energy frontier", Erice-Sicily, Italy, September 2009
- Lake Louise Winter Institute 2008, Alberta, Canada, February 2008
- IV Workshop on Physics between phi and J/ψ , Novosibirsk, Russia, March 2006
- Physics at Meson Factories (DAΦNE04), Frascati, Italy, June 2004

- XXXIX International Scientific Students Conference, Novosibirsk, Russia, April 2001

Publications:

More than 300 papers and reviews.