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LIST OF  
PUBLICATIONS

## Publications in International Journals

1. *Closing a window for massive photons;*  
Sergio A. Hojman, Benjamin Koch;  
**AHEP vol.2013 Article.ID.967805**, 2013;  
[arXiv:1209.4907].
2. *An angular formalism for spin one half;*  
Benjamin Koch and Nicolas Rojas;  
Accepted for publication in **Int.J.Geom.Meth.Mod.Phys.**, 2013.
3. *Structural aspects of asymptotically safe black holes;*  
Benjamin Koch and Frank Saueressig;  
**Class.Quantum Grav.31:015006**, 2013;  
[arXiv:1306.1546].
4. *Exact black hole solution for scale dependent gravitational couplings and the corresponding coupling flow;*  
Carlos Contreras, Benjamin Koch, Paola Rioseco;  
**Class.Quantum Grav.30:175009**, 2013;  
[arXiv:1303.3892].
5. *Higher dimensional geometric description of the Quantum Klein Gordon Equation;*  
Benjamin Koch;  
**Int.J.Geom.Meth.Mod.Phys.10:1320014**, 2013.
6. *Nondiagonal charged lepton Yukawa matrix: Effects on neutrino mixing in supersymmetry*  
Giovanna Cottin, Marco Aurelio Díaz, and Benjamin Koch;  
**Phys.Rev.D85:095019**, 2012;  
[arXiv:1112.6351].
7. *Gravitino dark matter and neutrino masses in partial split supersymmetry;*  
Marco Aurelio Díaz, Sebastián García Sáenz, and Benjamin Koch;  
**Phys.Rev.D84:055007**, 2011;  
[arXiv:1106.0308].

8. *Exact renormalization group with optimal scale and its application to cosmology*;  
Benjamin Koch, Israel Ramirez;  
**Class.Quantum Grav.****28:055008**, 2011;  
[arXiv:1010.2799].
9. *Renormalization group improved black hole space-time in large extra dimensions*;  
Thomas Burschil, Benjamin Koch;  
**JETP Lett.****92:4**, 2010;  
[arXiv:0912.4517].
10. *Explaining Solar Neutrinos with Heavy Higgs Masses in Partial Split Supersymmetry*;  
Marco Aurelio Díaz, Benjamin Koch, Francisca Garay;  
**Phys.Rev.D****80:113005**, 2009;  
[arXiv:0918.2987].
11. *Gravity Effects on Neutrino Masses in Split Supersymmetry*;  
Marco Aurelio Díaz, Benjamin Koch, Boris Panes;  
**Phys.Rev.D****79:113009**, 2009;  
[arXiv:0902.1720].
12. *Exclusion of black hole disaster scenarios at the LHC*;  
Benjamin Koch, Marcus Bleicher, Horst Stöcker;  
**Phys.Lett.B****672:71**, 2009;  
[arXiv:0807.3349].
13. *Renormalization group and black hole production in large extra dimensions*;  
Benjamin Koch;  
**Phys.Lett.B****663:334**, 2008;  
[arXiv:0707.4644].
14. *Gravitational radiation from elastic particle scattering in models with extra dimensions*;  
Benjamin Koch, M. Bleicher;  
**JETP Lett.****87:75**, 2008;  
[hep-th/0512353].
15. *First Order Calculation of the Inclusive Cross Section  $pp$  to  $ZZ$  by Graviton Exchange in Large Extra Dimensions*;  
Martin Kober, Benjamin Koch, Marcus Bleicher;  
**Phys.Rev.D****76:125001,2007**, 2007;  
[arXiv:0708.2368].
16. *The Gravitational analogue to the hydrogen atom. A summer study at the borders of quantum mechanics and general relativity*;  
Martin Kober, Benjamin Koch, Marcus Bleicher;  
**J-Phys.E.****28:465**, 2007;  
[arXiv:physics/0703064].

17. *Gravitational Radiation from Ultrahigh Energy Cosmic Rays in Models with Large Extra Dimensions*;  
Benjamin Koch, Hans Joachim Drescher, Marcus Bleicher;  
**Astropart.Phys.****25:291**, 2006;  
[arXiv:astro-ph/0602164].
18. *Black Hole Remnants at the LHC*;  
Benjamin Koch, Marcus Bleicher, Sabine Hossenfelder;  
**JHEP** **0510:053**, 2005;  
[arXiv:hep-ph/0507138].

## Publications in Conference Proceedings

19. *Non-diagonal Charged Lepton Yukawa Matrix: Effects on Neutrino Mixing in Supersymmetry*  
Giovanna Cottin, Marco Aurelio Díaz, and Benjamin Koch;  
FLASY 2011;  
Valencia, Spain;  
**C11-07-11.1**, 2012.
20. *Quantizing Geometry or Geometrizing the Quantum?*  
Benjamin Koch;  
Quantum Theory Reconsideration of Foundations 5;  
Vaxjo, Sweden;  
**AIP Conf.Proc.1232:313**, 2010.
21. *Geometrizing the Quantum - a toy model*  
Benjamin Koch;  
13th Max Born Symposium;  
Wroclaw, Poland;  
**AIP Conf.Proc.1196:161**, 2009.
22. *Heavy Ion Collisions at the LHC - Last Call for Predictions;*  
N. Armesto, (ed.) et al.;  
Workshop on Heavy Ion Collisions at the LHC: Last Call for Predictions;  
Geneva, Switzerland;  
**J.Phys.G35:054001**, 2008;  
[arXiv:0711.0974].
23. *Early black hole signals at the LHC;*  
Benjamin Koch, Marcus Bleicher, Horst Stöcker;  
7th Latin American Symposium on Nuclear Physics and Applications;  
Cusco, Peru;  
**AIP Conf.Proc.947:376**, 2007.
24. *An introduction to mini black holes at LHC;*  
Horst Stöcker, Benjamin Koch, Marcus Bleicher;  
36th International Symposium on Multiparticle Dynamics,  
Rio de Janeiro, Brazil;  
**Braz.J.Phys.37:836**, 2007.
25. *Black Holes at LHC?*  
Benjamin Koch, Marcus Bleicher, Horst Stöcker;  
Quark matter;  
Shanghai;  
**J.Phys.G34:535**, 2007;  
[arXiv:hep-ph/0702187].

26. *Black Holes and Quasistable Remnants at the LHC*;  
Benjamin Koch, Marcus Bleicher, Sabine Hossenfelder;  
Fundamental Interactions;  
Lake Louise, Canada;  
**Fund.Interactions.21:235**, 2006.
27. *Towards a Realistic MSSM Prediction for Neutrino-nucleon Deep-inelastic Scattering*;  
Oliver Brein, Wolfgang Hollik, Benjamin Koch;  
14th International Conference on Supersymmetry and the Unification of Fundamental Interactions; Irvine, USA;  
**IPPP-06-74**, 2006;  
[arXiv:hep-ph/0611033].
28. *Signatures for Black Hole Production from Hadronic Observables at the Large Hadron Collider*;  
Thomas J. Humanic, Benjamin Koch, Horst Stöcker;  
International Symposium on Heavy Ion Physics (ISHIP);  
Frankfurt, Germany;  
**Int.J.Mod.Phys.E16:841**, 2006  
[arXiv:hep-ph/0607097].
29. *Mini Black Holes at the LHC: Discovery through Di-jet Suppression, Mono-jet Emission and a Supersonic boom in the Quark-gluon Plasma in ALICE, ATLAS and CMS*;  
B. Betz, M. Bleicher, U. Harbach, T. Humanic, B. Koch, H. Stöcker;  
22nd Winter Workshop on Nuclear Dynamic;  
La Jolla, USA, 2006;  
[arXiv:hep-ph/0606193].
30. *Large Extra Dimensions and the Minimal Scale Constraints through High Precision Experiments*;  
U. Harbach, B. Koch, M. Bleicher, S. Hossenfelder;  
Annual Meeting of the Division of Particles and Fields;  
Riverside, California, USA;  
**Int.J.Mod.Phys.A20:3334**, 2005.
31. *Radiative Corrections to Deep-inelastic Neutrino-nucleon Scattering in the MSSM*;  
Oliver Brein, Wolfgang Hollik, Benjamin Koch;  
International Conference on Linear Colliders (LCWS 2004);  
Paris, France;  
[arXiv:hep-ph/0408331].

## Submitted Publications

32. *A Comment on the OPERA result and CPT*;  
Benjamin Koch;  
Unpublished, 2011;  
[arXiv:1109.5721].
33. *A Tractable Lagrangian for Arbitrary Spin*;  
Benjamin Koch, Nicolas Rojas;  
[arXiv:1107.3144].
34. *A Relativistic De Broglie Bohm Formalism Equivalent to the Dirac Equation*;  
Benjamin Koch, Nicolas Rojas;  
[arxiv:1101.4619v1].
35. *Trapping Black Hole Remnants*;  
Sabine Hossenfelder, Benjamin Koch, Marcus Bleicher;  
Unpublished, 2005;  
[arXiv:hep-ph/0507140].