

Rebhan, Anton; Turk, Günther

Polarization effects in light-by-light scattering: Euler-Heisenberg versus Born-Infeld. (English) [Zbl 1364.81245](#)

Int. J. Mod. Phys. A 32, No. 10, Article ID 1750053, 16 p. (2017).

MSC:

81V10 Electromagnetic interaction; quantum electrodynamics

81U05 2-body potential quantum scattering theory

Cited in 1 Document

Keywords:

QED; Born-Infeld electrodynamics; light-by-light scattering

Full Text: [DOI](#)

References:

- [1] Euler, H.; Kockel, B., *Naturwiss.*, 23, 246, (1935)
- [2] Euler, H., *Ann. Phys.*, 26, 398, (1936)
- [3] Akhiezer, A.; Landau, L.; Pomeranchuk, I., *Nature*, 138, 206, (1936)
- [4] Akhiezer, A., *Phys. Z. Sowjetunion*, 11, 263, (1937)
- [5] Karplus, R.; Neuman, M., *Phys. Rev.*, 83, 776, (1951)
- [6] Heisenberg, W.; Euler, H., *Z. Phys.*, 98, 714, (1936)
- [7] Weisskopf, V., *Kong. Dan. Vid. Selsk. Mat.-fys. Medd.*, XIV/6, 1, (1936)
- [8] Dittrich, W.; Gies, H., 166, 1, (2000)
- [9] Dunne, G. V.; Shifman, M.; Vainshtein, A.; Wheeler, J., *From Fields to Strings: Circumnavigating Theoretical Physics — Ian Kogan Memorial Collection, Heisenberg-Euler effective Lagrangians: Basics and extensions*, 445-522, (2004), World Scientific, Singapore
- [10] Born, M.; Infeld, L., *Proc. R. Soc. London A*, 144, 425, (1934)
- [11] Schrödinger, E., *Proc. R. Irish Acad. A*, 47, 77, (1942)
- [12] Schrödinger, E., *Proc. R. Irish Acad. A*, 49, 59, (1943)
- [13] Fradkin, E. S.; Tseytlin, A. A., *Phys. Lett. B*, 163, 123, (1985)
- [14] Tseytlin, A. A., *Nucl. Phys. B*, 276, 391, (1986)
- [15] Gibbons, G. W., *Nucl. Phys. B*, 514, 603, (1998)
- [16] Gibbons, G. W.; Herdeiro, C. A. R., *Phys. Rev. D*, 63, 064006, (2001)
- [17] Marklund, M.; Lundin, J., *Eur. Phys. J. D*, 55, 319, (2009)
- [18] Heinzl, T.; Liesfeld, B.; Amthor, K.-U.; Schwoerer, H.; Sauerbrey, R.; Wipf, A., *Opt. Commun.*, 267, 318, (2006)
- [19] Karbstein, F.; Gies, H.; Reuter, M.; Zepf, M., *Phys. Rev. D*, 92, 071301, (2015)
- [20] Klein, J. J.; Nigam, B. P., *Phys. Rev.*, 135, B1279, (1964)
- [21] Baier, R.; Breitenlohner, P., *Nuovo Cimento*, 47, 117, (1967)
- [22] Brezin, E.; Itzykson, C., *Phys. Rev. D*, 3, 618, (1971)
- [23] Fouché, M.; Battesti, R.; Rizzo, C., *Phys. Rev. D*, 93, 093020, (2016)
- [24] Duff, M. J.; Isham, C. J., *Phys. Lett. B*, 86, 157, (1979)
- [25] Grisaru, M. T.; Pendleton, H. N.; van Nieuwenhuizen, P., *Phys. Rev. D*, 15, 996, (1977)
- [26] Schrödinger, E., *Proc. R. Soc. London A*, 150, 465, (1935)
- [27] Białyński-Birula, I.; Jancewicz, B.; Lukierski, J., *Quantum Theory of Particles and Fields — Birthday Volume Dedicated to Jan Łopuszański, Nonlinear electrodynamics: Variations on a theme by Born and Infeld*, 31-48, (1983), World Scientific, Singapore
- [28] Gibbons, G. W.; Rasheed, D. A., *Nucl. Phys. B*, 454, 185, (1995)
- [29] Gaillard, M. K.; Zumino, B., 509, 121, (1998)
- [30] Kuzenko, S. M.; Tyler, S. J., *J. High Energy Phys.*, 05, 081, (2007)

- [31] Cecotti, S.; Ferrara, S., *Phys. Lett. B*, 187, 335, (1987)
- [32] Dávila, J. M.; Schubert, C.; Trejo, M. A., *Int. J. Mod. Phys. A*, 29, 1450174, (2014)
- [33] Itzykson, C.; Zuber, J.-B., *Quantum Field Theory*, (1985), McGraw-Hill
- [34] Liang, Y.; Czarnecki, A., *Can. J. Phys.*, 90, 11, (2012)
- [35] Lifshitz, E.; Berestetskii, V.; Pitaevskii, L., *Quantum Electrodynamics*, (1982), Butterworth-Heinemann
- [36] Hashimoto, K.; Oka, T.; Sonoda, A., *J. High Energy Phys.*, 06, 085, (2014)
- [37] Lutzky, M.; Toll, J. S., *Phys. Rev.*, 113, 1649, (1959)
- [38] Boillat, G., *J. Math. Phys.*, 11, 941, (1970)
- [39] Whitham, G. B., *Linear and Nonlinear Waves*, (1974), Wiley, New York · [Zbl 0373.76001](#)
- [40] Rosly, A. A.; Selivanov, K. G., *Helicity conservation in Born-Infeld theory*, *Proc. 12th Int. Seminar on High Energy Physics, Quarks'2002*, (2002)
- [41] Bern, Z.; Dixon, L. J.; Dunbar, D. C.; Kosower, D. A., *Nucl. Phys. B*, 425, 217, (1994)
- [42] Mignani, R. P.; Testa, V.; Caniulef, D. G.; Taverna, R.; Turolla, R.; Zane, S.; Wu, K., *Mon. Not. R. Astron. Soc.*, 465, 492, (2016)
- [43] Obukhov, Y. N.; Rubilar, G. F., *Phys. Rev. D*, 66, 024042, (2002)

This reference list is based on information provided by the publisher or from digital mathematics libraries. Its items are heuristically matched to zbMATH identifiers and may contain data conversion errors. It attempts to reflect the references listed in the original paper as accurately as possible without claiming the completeness or perfect precision of the matching.