K. Scharnhorst: *Zur effektiven Wirkung in der QCD und zu Strahlungskorrekturen zum Casimir-Effekt in der QED [On the effective action in QCD and on radiative corrections to the Casimir effect in QED]*. Doctoral Thesis, Humboldt University Berlin, 1987, 98 pp.. [in German]

Misprints, errata, addenda:

- P. 9, fourth line from bottom: '1-Loop-Miveau' should read correctly: '1-Loop-Niveau'
- The discussion on pp. 33-43 is superseded by the later analysis in:
  - H.J. Kaiser, K. Scharnhorst, E. Wieczorek: *Non-abelian gauge theory in a homogeneous background field.* In: E. Wieczorek (Ed.): Proceedings of the XXI. International Symposium Ahrenshoop on the Theory of Elementary Particles, Sellin, October 12-16, 1987. IfH Berlin-Zeuthen Preprint PHE 87-13, Institut für Hochenergiephysik (IfH), Berlin-Zeuthen, 1987, pp. 123-136 (in particular see pp. 132-134).
  - K. Scharnhorst: *Background field method and effective action.* Harvard University Cambridge Preprint HUTP 87/A087, 32 pp. (in particular Appendix B, pp. 27-31).
  - H.J. Kaiser, K. Scharnhorst, E. Wieczorek: *Euclidean Yang-Mills theory in constant background fields and unstable modes.* Journal of Physics G: Nuclear and Particle Physics **16**(1990)161-174 (DOI: 10.1088/0954-3899/16/2/005), (in particular Sec. 4, pp. 172-174).
- P. 53, midpage, the symbol $\varphi_{ab}(x)$ should read correctly: $\varphi_a(x)$.
- P. 75, eq. (3.5.14), the sign of the r.h.s. should be reversed as the result should be obtained from an analytic continuation of eq. (3.5.10) and not from eq. (3.5.11), cf.:
  - footnote 1 on p. 357 of: K. Scharnhorst: *On propagation of light in the vacuum between plates.* Physics Letters **B 236**(1990)354-359 (DOI: 10.1016/0370-2693(90)90997-K),
  - also, H. Gies: *QED effective action at finite temperature: Two loop dominance* Physical Review **D 61**(2000)085021, 18 pp. [arXiv:hep-ph/9909500] (DOI: 10.1103/PhysRevD.61.085021), (in particular footnote 8 on p. 085021-14).

  The physical interpretation of the imaginary part has to be adjusted correspondingly.
- P. 84, above of eq. (A 6), $\binom{c}{c+1}$ should read correctly: $\binom{c}{c+1} = 0$.
- P. 87, above of eq. (C 4), $T = 0$ should read correctly: $T \neq 0$

February 2010