Errata for:

Class Field Theory. The Bonn Lectures. by J. Neukirch, A. Schmidt (ed.)

Online Edition 2.0, May 2015

This file lists known mistakes. If you find a mistake not listed below or have a comment, please send me an e-mail: schmidt@mathi.uni-heidelberg.de.

p. 4, l. 14: The coaugmentation μ is *not* a ring homomorphism. (Thanks to R. Kronenberg)

p. 16, l. 14: Add 'x' between '$(-1)^i$' and '$(\sigma_1, \dots, \sigma_{i-1}, \sigma_i\sigma, \sigma^{-1}, \sigma_{i+1}, \dots, \sigma_q)$'. (Thanks to D. Grinberg)

p. 28, l. 9: Replace 'A^q' by 'A^g' (Thanks to V. Acciaro)

p. 30, l. 14: Replace 'groups' by 'group' (Thanks to V. Acciaro)

S. 127, l. -11: Replace '$m \cdot [K : \mathbb{Q}]$' by '$m \cdot [K : \mathbb{Q}]!$' (!=faculty).

last update: December 13, 2022 by **Alexander Schmidt**

Errata for the printed edition, 2013

p. 4, l. 14: The coaugmentation μ is *not* a ring homomorphism. (Thanks to R. Kronenberg)

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p. 40, Diagram on the bottom: Strictly speaking, the map $\mathrm{cor}_{-1} : H^{-1}(g, I_g) \to H^{-1}(G, I_G)$ is the composition of the natural map $H^{-1}(g, I_g) \to H^{-1}(g, I_G)$ and $\mathrm{cor}_{-1} : H^{-1}(g, I_G) \to H^{-1}(G, I_G)$. (Thanks to J. Kohlhaase)

p. 55, (6.8) Lemma: The assumption that g and f commute is not necessary (and not used in the proof). (Thanks to J. Kohlhaase)

p. 57, Proof of (6.10) Theorem: replace the first three lines by: Since A is finitely generated, we can find a torsion free submodule $A_1 \subset A$ of finite index (e.g. $A_1 = nA$ for suitable chosen n). We have rank $A_1 =$ rank $A = \alpha$ and rank $A_1^G =$ rank $A^G = \beta$.

p. 116, l. -3: replace '$(N^\times)^n \cap K^\times = (K^\times)^n$, since if $(K^\times)^n \subset (N^\times)^n \cap K^\times$, then' by '$(N^\times)^n \cap K^\times = K^\times$, since otherwise'.

p. 127, (3.6) Theorem: the assertion on the Brauer group follows from that on $H^2(G_{\Omega|K}, I_\Omega)$ as soon as we know that

$$Br(K) \longrightarrow H^2(G_{\Omega|K}, I_\Omega)$$

is injective. This will follow from $H^1(G_{\Omega|K}, C_\Omega) = 0$ (Theorem III (4.7)).

S. 127, l. -11: Replace '$m \cdot [K : \mathbb{Q}]$' by '$m \cdot [K : \mathbb{Q}]!$' (!=faculty).