ERRATA FOR INTRODUCTION TO
CYCLOTOMIC FIELDS, 2ND EDITION

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page 11, line -2: the = between log \( n \) and the sum should be –
page 13, line -16: “s” should be “is”
page 16, line 14: change “allows” to “allows”
page 17, line 16: change \([5]\) to \([9]\)
page 23, line -3: change “all groups” to “all finite groups”
page 37, lines -3, -1: it would be better to have the summation be from 1 to \( f - 1 \) in order to avoid the necessity of setting \( 0 \log 0 = 0 \)
page 42, line 10: change \( L \) to \( K \)
page 52, line 17: change “\(|\log_p(x)|\) is not less than \( p^{-1/(p-1)} \) for \( all \)” to “\(|\log_p(1+x)|\) is not less than \( p^{-1/(p-1)} \) for \( some \)”
page 56, line -8: change “denominator” to “denominator”
page 63, line -4, and page 68, lines 6, 7: it would be better to have the summation be from 1 to \( f - 1 \) in order to avoid the necessity of setting \( 0 \log 0 = 0 \)
page 73, line 13: change \( \phi \) to \( \emptyset \)
page 75, line -4: change “possible” to “possible”
page 76, line -9: change \( \tau \sigma \) to \( \sigma \tau \)
page 98, line -2: change \( p \) to \( P \) (where \( P \) is defined on line 1 of page 99)
page 100, line -4; the line should be “that when \( i \neq 0 \)”
page 101, lines 12-14: change the paragraph to “Now, suppose \( i \neq 0 \) is even.
Then \( B_1 \omega^{-i} = 0 \) so the above says nothing. If \( i = 0 \) then \( A_0 = 0 \) since \( \varepsilon_0 \) = \( (\text{Norm})/(p - 1) \).”
page 107, line -7: “large” should be “largest”
page 121, Lemma 7.8: insert “and \( d > 1 \)” after \( “(t, d) = 1” \)
page 125, line -1: the character \( \theta = 1 \) should occur in the product
page 126, line 1: the character \( \chi = 1 \) should occur in the product
page 126, line 6: the first product is over all characters; the second product is over all \( \psi \neq 1 \)
page 135, line 10: the \( \prod_{m \neq n} \) before the second integral should be a \( \sum_{m \neq n} \)
page 138, line 2; change \( x'' \) to \( x' \)
page 145, lines -8, -4 (twice): it would be better to have the summation be from 1 to \( p^m - 1 \) in order to avoid the necessity of setting \( 0 \log 0 = 0 \)
page 147, line 5: change \( \zeta_p \) to \( \zeta_n \)
pages 147-149: it would be better to have the summations stop at \( m - 1 \), \( n - 1 \), \( F - 1 \), \( Ft - 1 \) in order to avoid the necessity of setting \( 0 \log 0 = 0 \)

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page 169, Lemma 9.1: The $\alpha$ to which the lemma is applied is non-integral. Therefore, the lemma and its proof should be stated for the localization of $\mathbb{Z}[\zeta_p]$ at $(1 - \zeta_p)$. Alternatively, $\alpha$ could be multiplied by a suitable power (say $(\text{denom})^k$ for some $k$) of the denominator to make it integral and preserve the congruence.

page 199, line -1: change "A" to "A_n"

page 200, line 15: change $\theta_p^s$ to $\theta_p^{n+1}$

page 202, line -11: change "for all $p$" to "for all $s$"

page 202, line 4: change $a_i$ to $a_1$

page 233, lines -12, -11: change $\zeta_i(a, s)$ and $\zeta_i(a, 1 - k)$ to $\zeta_i(s, a)$

page 234, line 3: change $\zeta_i(a, 1 - k)$ to $\zeta_i(1 - k, a)$

page 235, lines 6, 7: change $\phi_i(a)$ to $\phi_i(a/i)$

page 235, line 7: change $\phi_i(b)$ to $\phi_j(b/j)$

page 243, line 9: change "this just" to "this is just"

page 246, line 2 and page 248, lines 8 and 10, and page 250, lines 10 and 12: change $\delta$ to $d\delta$’s (for consistency with the notation established on page 238, line 8, where $\delta$ is the delta distribution and $d\delta$ is the corresponding measure)

page 247, line -13: change $\theta$ to $\theta$

page 258, line 11: insert "on" after "distribution"

page 258, line -2: change $H_{\chi}^i$ to $H_{\chi}$

page 269: Corollary 13.6: (bad notation) the symbol $H$ is used both for a field and for a subgroup of the idèles

page 271, line 13: change $P^k$ to $P^k$

page 285, line 17: change "any exact sequence" to "any finite exact sequence"

page 286, line 11: change $Y$ to $Y_{\nu}$

page 287, line 4: $A_{-n}$ should be defined using the exact sequence on line 10. (This is because the norm is not the same as the norm followed by the map from $A(K_{n+1})$ to $A(K_n)$.)

page 293, line 16: It should be

$$\eta_i = \varepsilon_i \prod_j \varepsilon_j^{-a_{ij}}$$

page 302, line -7: change $1 - T$ to $1 + T$

page 303, lines -3 to -1: change $(\zeta_p - 1)$ to $(1 - \zeta_p)$ (four times) and change $(\zeta_p - 1)$ to $(1 - \zeta_p)$

page 309, line 4: change "2 $\leq k \leq p - 2$" to "$1 \leq k \leq p - 2$"

page 316, line 9: change $\varepsilon_1$ to $\varepsilon_i$

page 317, line 11: change $1 - T$ to $1 + T$ near the right-hand end of the formula
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page 335: Radan Kučera points out the following: Changing the definition of $C'$ to the Sinnott definition of circular units, namely to the group of units of the form

$$\delta = \pm \prod_{n|m} N_{\mathbb{Q}(\zeta_n)/\mathbb{Q}(\zeta_m)} \left( \prod_{a=1}^{n-1} (\zeta_n^a - 1)^b_{an} \right)$$

we obtain Theorem 15.2 in the full strength of Thaine’s theorem. There is no need to change the proof of the theorem; it is enough to improve Lemma 15.3 to cover this more general case. The proof of this lemma is in fact almost the same; it is enough to consider new

$$\varepsilon = \pm \prod_{n|m} N_{\mathbb{Q}(\zeta_{n\ell})/\mathbb{Q}(\zeta_{\ell})} \left( \prod_{a=1}^{n-1} (\zeta_n^a - \zeta_{\ell})^{b_{an}} \right)$$

for this new $\delta$.

page 339, line 15: change $\chi$ to $\rho$
page 345, line -8: change 15.5 to 15.9
page 353, line 8: change “Ker” to “Coker”
page 356, line -5: change $(1 + T)^{-1} - \pi$ to $(1 + T)^{-1} - 1 - \pi$
page 361, line 14: change “Proposition 13.54” to “Theorem 13.54”
page 361, line -2: change $E_1/P_n$ to $E_1^\infty/P_n$
page 366, line 2: the line should be “Let $M|\ell - 1$ and let”
page 366, line 4: change “choice of $\ell$ and $s$” to “choices of $\ell, \lambda, \text{ and } s$”
page 366, line -10: change $\text{Gal}(L/F)$ to $\text{Gal}(H/F)$
page 369, lines -9, -8: change “class group” to “$p$-part of the class group”
page 378, line -1: change $e^{(q-1)/2}$ to $e^{(n-1)/2}$
page 421, line 18: change “When” to “We”
page 423: $h$ for $p = 9829$ should be 5
page 443: Entry [10] of Gras, M-N should not appear, since it is already listed as [6]
page 456: papers numbers 3 and 4 listed under F. Kurihara were written by M. Kurihara

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