Errors and Typos in Griffiths&Harris

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Errors/Omissions

p35, #2,3: the completeness conditions for a sheaf need to be stated for an infinite cover. The book's definition does not imply the infinite-cover condition even for sheaves over $\mathbb{Z}\subset\mathbb{R}$. Without the infinite-cover condition, $\check{H}^0$ need not be the space of global sections.

p104, Lemma: the proof is completely wrong. It is based on the premise that a linear subspace W of an inner-product product space V is dense in V if and only if the orthogonal complement of W in V is 0. The "only if" is of course true. The "if" part is true if V is complete. It need not be true if V is not complete, an example is in Remark on p10 of

http://www.math.sunysb.edu/∼azinger/mat531-spr11/hw10/ps10sol.pdf

p139, middle: the definition of $c_1(L)$ in $H^2_{\rm DR}$ is off by sign. It implicitly uses an identification between Čech and de Rham cohomologies. The only such identification described in the book is at the bottom of p44. This identification differs by $(-1)^{p(p-1)/2}$ on the p-level from the identification induced via the double complex

$$\big(\check{C}^p(\mathfrak{U},\mathcal{A}^q),D_{p,q}\equiv\delta+(-1)^pd\big).$$

The latter is the "natural" identification of $\check{H}^2$ and $H^2_{\rm DR}$ for the purposes of defining $c_1(L)$ in the de Rham cohomology, so that both statements in Proposition on p141 hold. The proof of this proposition contains another sign error on p141 (which cancels the sign error in the definition of $c_1(L)$ in the de Rham cohomology): the 3rd and 4th displayed equations in the proof reverse the relation between θ_α and θ_β *worked out in Section 5 Chapter 1* (bottom of p72). The 4th equation is off by sign even from the last equation on the followig page. Once the latter sign error is fixed, one gets -1 for $\int_{\mathbb{P}^1}c_1(\mathcal{O}(1))$ with the book's definition of $c_1(L)$ in the de Rham cohomology.

Typos

p16, lines 9,10: need *regular* covering
p16, line -2: *local* antiholomorphic functions
p27, line -5: the last denominator is $\partial\bar{z}_j$
p40, line above Basic Fact: $\delta^*\sigma=\mu$
p63, line -4: *compact* analytic subvarieties
p64, line 11: *compact* analytic subvariety
p77, line 4: $\theta^*\longrightarrow\theta$
p78, middle, above θ_E matrix: which lemma?
p78, middle, θ_E matrix: (1,2)-entry should be $-{}^t\bar{A}$
p78, middle, Θ_E matrix: the term in (1,1)- and (2,2)-entries should have +
p78, next display: last terms come with − signs; the identities hold only after the projections

p85, bottom displayed expression: first lines missing $\sum\limits_{\xi,\xi'}$
p87, 2nd displayed expression: last exponent of 1/2 should be outside of the square bracket

p105, line 3: $+\bar{\partial}^*_N\bar{\partial}^*_M$
p123, line -12: $n-k=p+q$ (try $p,q=0$ and $n=2$)
p129, line 3: *begin*
p130, top: f is square free
p134, line -9: $f^*([D])=[f^*(D)]$
p148, Proposition: $\Theta=(2\pi/\sqrt{-1})\omega$
p153, lines 13,14,-1 (twice); p154, lines 3,-6,-2: $\sqrt{-1}/2\longrightarrow\sqrt{-1}$ (see bottom of p111)
p153, lines -10,-8,-7,-5,-3: second summands are missing $(-1)^{p+q}$
p153, line -3: $\sum\limits_{\alpha}$
p153, line -1: RHS missing $(-1)^{p+q}$
p154, bottow 2 displayed expressions (6 times);
p155, lines 2,4: $2\sqrt{-1}\longrightarrow\sqrt{-1}$
p155, lines 4,5: $4\pi\longrightarrow 2\pi$

p160, line -5: $-\sqrt{-1}/2\longrightarrow-\sqrt{-1}$ (see bottom of p111)
p160, lines -3,-2 (3 times); p161 lines 2,3,6,10,11 (7 times): there should be no factor of 2 in front
p160, line -2: $+1/2\sqrt{-1}\longrightarrow-\sqrt{-1}$
p161, line 3: $-1/2\sqrt{-1}\longrightarrow+\sqrt{-1}$
p161, lines 10,11: $4\pi\longrightarrow 2\pi$ (with the above changes)
p162, line 7: missing) before $\neq$
p162, line 11: *a* section
p169, line -5: $\mathbb{P}^{k+1}\supset\mathbb{P}^k$
p170, 1.: smooth *projective*
p180, middle, (*): $\otimes\longrightarrow\oplus$
p188, middle, $g_{ij}=\det J_{ij}=z(i)_j^{-n+1}$

p193, subsection heading: only Definitions here; the other two are in the next two subsections
p195, line 12: equality holds for $\Lambda\in W_{a_1,\ldots,a_k}$
p202, line -14: $b_{\beta-1}\longrightarrow b_\beta-1$
p206, line 2: left-hand row $\longrightarrow$last column
p206, top display: missing $(-1)^d$ in front the last expression
p206, line -10: $(n+1)$-planes $\longrightarrow n$-planes

p215, line -12: in Section 4 of Chapter 1 $\longrightarrow$on page 173 (this is in Section 3 of Chapter 1)
p216, line 17: in Section 2 of Chapter 1 $\longrightarrow$on page 77 (this is in Section 5 of Chapter 0)
p217, line 7: in Section 2 of Chapter 1 $\longrightarrow$on page 141 (this is in Section 1 of Chapter 1)
p220, line -4: in Section 2 of Chapter 1 $\longrightarrow$on page 147 (this is in Section 1 of Chapter 1)
p220, line -1: that section $\longrightarrow$pages 146,141
p227, line 14: $D=(g)\longrightarrow D=(f)$
p228, line 8: $\mathbb{C}^q\longrightarrow\mathbb{C}^g$
p228, line 16: $\Lambda_{2g}\longrightarrow\Pi_{2g}$
p229, line 16: $\int_{s_0}^s\longrightarrow\int_{p_0}^s$
p230, line 6: $\int_{s_0}^s\longrightarrow\int_{p_0}^s$
p235, line 7: $\varphi(D)\longrightarrow\mu(D)$
p235, 3rd display: left arrow should be pointing and is now an inclusion

p236, line -10: $\sum_i \longrightarrow \sum_\lambda$
p236, line -4: $(\mu^{(g)}(D')) \longrightarrow (\mu^{(g)}(D'))_j$
p236, line -1: $\mu^{(d)} \longrightarrow \mu^{(g)}$
p237, lines 2,4: $\mu^{(d)} \longrightarrow \mu^{(g)}$
p237, line -10: $df^*\omega \longrightarrow f^*\omega$
p238, line -5, RHS: $+[-2]$
p238, line -3: $\omega = dz \longrightarrow \omega = -2dz$
p239, line 14: $\omega = dz \longrightarrow dz$
p239, line 14: $\omega \longrightarrow \frac{1}{2}dz$
p239, lines -8,-1: $(\lambda) \longrightarrow (\Lambda)$
p239, line -4: Then $\longrightarrow$Since
p239, line -2, short sentence: under the assumption that RHS of previous display holds
p241, line 2: $s_0 \in S \longrightarrow s_0 \in S$
p241, lines 5,13,-5: $\int_{s_0} \longrightarrow \int_{p_0}$
p245, line -4: $h^0(K-D) > \max(0, g-d)$
p248, line 5: $h^0(K-D) \longrightarrow h^0(K-D)-1$; number $\longrightarrow$dimension of the space
p248, line 17: a $(d-r-1)$-plane $\overline{D}$
p251, Corollary: any *nondegenerate* curve
p251, Proof, line 2: second = should $\geq$ and the equality holds if and only if C is normal
p251, line -12: a *nondegenerate* curve
p252, line -7: $(l+m) \longrightarrow (l+m)-$
p252, line -3: in the section on rules surfaces $\longrightarrow$on page 533
p253, Noether's Theorem: l $\longrightarrow l$