

43D CONGRESS, }
1st Session. }

HOUSE OF REPRESENTATIVES.

{ Ex. Doc.
No. 133.

REPORT OF THE SUPERINTENDENT

OF THE

UNITED STATES COAST SURVEY,

SHOWING

THE PROGRESS OF THE SURVEY

DURING

THE YEAR 1873.

WASHINGTON:
GOVERNMENT PRINTING OFFICE,
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APPENDIX No. 15.

ERRATA IN THE HEIS CATALOGUE OF STARS.

- Page viii, note. For $\delta=30^{\circ} 27'$ read $\delta=31^{\circ} 27'$.
 Page xii, line 2. For sexta read septima.
 Page xii, line 5. Sentence inserted in Heis's Corrigenda.
 Corrigenda, first page, fifth line from bottom, for "*b loco b¹*" read "*dele b¹*".
 Same page, fourth line from bottom, for "*dele b²*" read "*b loco b²*".
 Second page of Corrigenda, fourth line from bottom, for "*dèle g¹*" read "*g¹ loco g*".
 Same page, third line from bottom, for "*g loco g²*" read "*dele g²*".
 Page 1, No. 14. For B. A. C. read R.
 Page 1, No. 16. Dele asterisk.
 Page 1, No. 20. 4966 B. A. C. = 8 Urs. Min.
 Page 3, No. 4. Add an asterisk.
 Page 3, No. 8. This is 2 Draconis.
 Page 3, No. 13. Dele second line.
 Page 3, No. 16. For 4122 B. A. C. read 4112 B. A. C.
 Page 3, No. 29. For 2983 R. read 2985 R., and change the place to R. A. $197^{\circ} 7'$, Decl. $+68^{\circ} 3'$.
 Page 4, No. 37. For 26209 read $\begin{cases} +57^{\circ} 1498 B \\ +57^{\circ} 1499 B \end{cases}$.
 Page 4, No. 46. This is 294 of Struve's second catalogue.
 Page 7, No. 142. Dele asterisk.
 Page 7, No. 161. Dele 18.
 Page 9, No. 216. = 7187 B. A. C.
 Page 9, No. 220. = 7299 B. A. C.
 Page 10, No. 33. = 440.
 Page 11, No. 40. The places should be—
- | A. R. | Decl. |
|-------------------|------------------|
| $322^{\circ} 52'$ | $+66^{\circ} 5'$ |
| $322^{\circ} 54'$ | $+66^{\circ} 8'$ |
- Page 11, No. 51. = Σ 2836.
 Page 11, No. 52. Strike out this star, which is Heis 196 Cygni.
 Page 11, note. For "*min. 5^m*" read "*min. 6^m.5*".
 Page 12, No. 76. = 7799 B. A. C.
 Page 12, No. 78. = Σ 2903.
 Page 12, No. 88. For 7799 B. A. C. read 7871 B. A. C.
 Page 13, No. 99. Dele $+67^{\circ} 48'$. This is Σ 2947.
 Page 13, No. 101. = Σ 2950.
 Page 13, No. 131. For B. A. C. read R.
 Page 15, No. 19. = Σ 3049.
 Page 16, No. 35. Transpose the designations of the two stars.
 Page 16, No. 40. = 16 Cassiopeæ.
 Page 16, No. 46. Should be 175 B. A. C., R. A. $8^{\circ} 22'$, Decl. $+65^{\circ} 20'$.
 Page 17, No. 80. = 35 Cassiopeæ.
 Page 18, No. 99. Dele asterisk.
 Page 18, No. 120. = Σ 302.
 Page 19, No. 9. = *g*.
 Page 19, No. 20. = Σ 268.
 Page 19, No. 21. = Σ 279.
 Page 20, No. 61. For B. A. C. read R.

- Page 21, No. 80. Should be D. M. + $46^{\circ} 762$, A. R. $49^{\circ} 53'$, Decl. $46^{\circ} 27'$.
 Page 21, No. 94. = 38 Persei.
 Page 22, No. 108. Should read 1219 B. A. C.
 Page 22, No. 109. Should read 1228 B. A. C.
 Page 22, No. 115. Should read 73.
 Page 23, No. 9. For 1415 B. A. C. read 3936 A. Oe.
 Page 23, No. 19. Should read D. M. + $8^{\circ} 286$, A. R. $54^{\circ} 22'$, Decl. + $68^{\circ} 3'$.
 Page 24, No. 29. Should read $58^{\circ} 310$ B., A. R. $58^{\circ} 35'$, + $68^{\circ} 8'$.
 Page 25, No. 59. = 8 Camelopardalis.
 Page 25, No. 77. = 18 Camelopardalis.
 Page 25, No. 79. = 19 Camelopardalis.
 Page 26, No. 114. For 2650 B. A. C. read 2059 R.
 Page 26, No. 115. Should read 2650 B. A. C.
 Page 26, No. 117. For 2092 R. read 2722 B. A. C.
 Page 28, No. 28. Dele 475.
 Page 28, No. 32. Should be 44484 L. L., A. R. $339^{\circ} 12'$, Decl. + $46^{\circ} 24'$.
 Page 30, No. 51. = 2732 B. A. C.
 Page 30, No. 56. = 30 Lynceis.
 Page 31, No. 65. Add an asterisk, and for 33 read 32.
 Page 31, No. 67. Dele asterisk. This is 33 Lynceis.
 Page 31, No. Insert as No. 38 $\frac{1}{2}$ *, D. M. $47^{\circ} 1660$, mag. 6.7.
 Page 34, No. 66. Heis has this star on maps III and IV.
 Page 34, No. 66. = 521.
 Page 34, No. 80. Should be 2469 R., A. R. $152^{\circ} 9'$, Decl. $42^{\circ} 10'$.
 Page 35, No. 115. Dele asterisk, and for 40 read 46.
 Page 35, No. 128. For B. A. C. read R., both lines.
 Page 36, No. 148. Should be 3904 B. A. C.
 Page 37, No. 177. Dele 241.
 Page 38, No. 200. = 4300 B. A. C.
 Page 38, No. 208. = 4392 B. A. C.
 Page 40, No. 43. 15 Can. Ven. = 4408 B. A. C.; 17 Can. Ven. = 4415 B. A. C.
 Page 40, No. 45. = 261.
 Page 40, No. 57. Dele 269.
 Page 40, No. 61. = 269.
 Page 41, Nos. 81 and 82. Brace the star identified with 82 as a part of 81, and insert for 82, 4632 B. A. C., A. R. $206^{\circ} 21'$, Decl. + $35^{\circ} 10'$.
 Page 42, No. 25. = 500.
 Page 43, No. 42. = 8345 B. A. C.
 Page 43, No. 61. = 26 Androm. = 5.
 Page 44, No. 86. = 178 B. A. C.
 Page 44, No. 87. = 184 B. A. C.
 Page 44, No. 101. = 515.
 Page 45, No. 108. = Σ 108.
 Page 46. All the stars of Equuleus, except 10, are wrongly identified. They should be as follows:

- | | |
|-----------------------------|----------------------|
| 1. = 7255 B. A. C. | 9. = { 41136 L. L. } |
| 2. = 7276 B. A. C. | { 41147 L. L. } |
| 3. = 7302 B. A. C. | 11. = 7372 B. A. C. |
| 4. = 40806 L. L. | 12. = 7380 B. A. C. |
| 5. = 7318 B. A. C. | 13. = 7405 B. A. C. |
| 6. = 7324 B. A. C. | 14. = 41533 L. L. |
| 7. = 20 ^h 484 P. | 15. = 7421 B. A. C. |
| 8. = 7350 B. A. C. | 16. = 41615 L. L. |

- Page 47, No. 7. For W read W².
 Page 47, No. 11. For W read W².
 Page 47, No. 17. = 7528 B. A. C.
 Page 47, No. 22. For W read W².
 Page 47, No. 26. For W read W².
 Page 47, No. 28. For W read W².
 Page 48, No. 38. For W read W².
 Page 48, No. 54. For W read W².
 Page 48, No. 55. Add π . For 28 read 29.
 Page 48, No. 56. Add 28.
 Page 48, No. 62. For W read W².
 Page 49, No. 64. For W read W².
 Page 49, No. 65. For W read W².
 Page 49, No. 83. For W read W².
 Page 49, No. 84. For W read W².
 Page 49, No. 85. For W read W².
 Page 49, No. 89. For W read W².
 Page 49, No. 96. For W read W².
 Page 54, No. 71. = 299 B. A. C.
 Page 54, No. 77. = 321 B. A. C.
 Page 56, No. 12. Add 5.
 Page 58, No. 42. = 834 B. A. C.
 Page 59, No. 54. Insert before 54: 54a* = 45 Arietis = 901 B. A. C., A. R. $41^{\circ} 55'$, Decl. + $77^{\circ} 44'$. Also, change 54 to 54b, and dele first line.
 Page 60, No. 5. Under $76^{\circ} 27'$, in column A. R., place $70^{\circ} 16'$, and brace. Under + $45^{\circ} 41'$, in column Decl., place + $45^{\circ} 36'$, and brace.
 Page 61, No. 48. Above 5^h 702 W place 5^h 691 W, and brace.
 Page 61, No. 48. Above $81^{\circ} 4'$ place $81^{\circ} 0'$. Above + $32^{\circ} 38'$ place + $32^{\circ} 42'$, and brace.
 Page 61, No. 56. For + $34^{\circ} 18'$ read $54^{\circ} 18'$.
 Page 62, No. 56. Over 10569 L. L. write 10533 L. L.; under same write 10560 L. L., and brace.
 Over $82^{\circ} 30'$ write $82^{\circ} 17'$; under same write $37^{\circ} 54'$, and brace.
 Page 62, No. 72. For 1857 B. A. C. read 1850 B. A. C.
 Page 62, No. 75. = 1875 B. A. C.
 Page 62, No. 83. For + $48^{\circ} 51'$ read + $48^{\circ} 57'$.
 Page 65, No. 35. For 1182 B. A. C. read 1177 B. A. C.; and for $55^{\circ} 7'$ read $55^{\circ} 9'$.
 Page 66, No. 59. For A¹ read A.
 Page 66, No. 61. Dele A².
 Page 67, No. 89. For 4^h 311 W read 1342 B. A. C.
 Page 67, No. 91. For δ^1 read δ .
 Page 67, No. 92. For 1342 B. A. C. read 4^h 311 W.
 Page 67, No. 94. Dele δ^2 .
 Page 67, No. 99. Dele δ^3 .
 Page 67, No. 100. Dele v^1 .
 Page 68, No. 101. For v^2 read v .
 Page 68, No. 130. For c^1 read c .
 Page 69, No. 134. Dele c^2 .
 Page 70, No. 165. For 5^h 606 W read 1734 B. A. C.; for $80^{\circ} 13'$ read $81^{\circ} 16'$; and for + $18^{\circ} 15'$ read + $18^{\circ} 26'$.
 Page 70, No. 175. = 1793 B. A. C.
 Page 71, No. 33. Under 39 write 40; under 2275 B. A. C. write 2278 B. A. C.; for $102^{\circ} 38'$ read $102^{\circ} 28'$, and under it $102^{\circ} 38'$; for + $26^{\circ} 6'$ read $26^{\circ} 16'$, and under it write $26^{\circ} 6'$, and brace.
 Page 71, No. 38. For ω^1 read ω .
 Page 72, No. 45. Dele ω^2 .
 Page 72, No. 70. Dele b^1 .
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- Page 74, No. 16. Dele δ^3 .
 Page 75, No. 28. For 2647 read 2636.
 Page 75, No. 33. In column Dupl. Str. write 1168.
 Page 75, No. 35. For 15667 L. L. read 2647 B. A. C.
 Page 75, No. 35. For $118^\circ 30'$ read $117^\circ 21'$; for $+9^\circ 18'$ read $+9^\circ 2'$.
 Page 75, No. 36. =2673 B. A. C.
 Page 75, No. 37. For $9^\circ 1860$ B read 15667; for $199^\circ 9'$ read $118^\circ 30'$; for $+9^\circ 41'$ read $9^\circ 18'$.
 Page 75, No. 12. Dele μ^1 .
 Page 75, No. 13. For μ^2 read μ .
 Page 76, No. 47. For $127^\circ 59'$ read $128^\circ 2'$.
 Page 77, No. 57. =2991 B. A. C.
 Page 77, No. 66. Dele α^1 .
 Page 77, No. 74. For α^2 read α .
 Page 78, No. 8. For $+23^\circ 34'$ read $+23^\circ 36'$.
 Page 79, No. 27. For $9^h 809$ W read $9^h 780$ W; for $144^\circ 27'$ read $144^\circ 6'$; for $+19^\circ 21'$ read $19^\circ 32'$.
 Page 79, No. 32. Add 20.
 Page 80, No. 66. Add 42.
 Page 83, No. 161. For $177^\circ 32'$ read $177^\circ 34'$.
 Page 84, No. 1. Dele 1596.
 Page 84, No. 2. In column Dupl. Str. place 1596.
 Page 84, No. 13. Add $\begin{cases} 9. \\ 10. \end{cases}$.
 Page 85, No. 14. =4152 B. A. C.
 Page 85, No. 37. For 4232 B. A. C. read $12^h 757$ W.
 Page 87, No. 1. For $+13^\circ 10'$ read $+13^\circ 16'$.
 Page 88, No. 28. For $14^\circ 271$ B. read $14^\circ 2718$ B.
 Page 90, No. 102. In column Dupl. Str. place 288 $^\circ$.
 Page 90, No. 103. In column Dupl. Str. place 289 $^\circ$.
 Page 91, No. 135. =5084 B. A. C.
 Page 93, No. 9. Dele 10.
 Page 93, No. 15. Add 14.
 Page 93, No. 39. Add 34.
 Page 94, No. 43. After $16^h 147$ P. write 5504 B. A. C., and after $16^h 149$ P. write 5582 B. A. C.
 Page 94, No. 63. =5647 B. A. C.
 Page 94, No. 69. Dele 49.
 Page 96, No. 108. For 228 $^\circ$ read 328 $^\circ$.
 Page 96, No. 110. For 31545 read 31514.
 Page 96, No. 117. For ω read W.
 Page 98, No. 192. For 6154 read 6151, and write under it 6152 B. A. C., and brace.
 Page 98, No. 197. In column Dupl. Str. place 344 $^\circ$.
 Page 101, No. 33. =6455 B. A. C.
 Page 101, No. 35. In column Dupl. Str. place 525 $^\circ$.
 Page 103, No. 41. In column Dupl. Str. place 290 $^\circ$.
 Page 104, No. 70. In column Flamst. place 30 opposite 6962, and 31 opposite 6965, and dele bracket.
 Page 105, No. 92. Add 43 $^\circ$.
 Page 105, No. 98. For 7091 read 7085.
 Page 105, No. 100. For 7085 read 7091.
 Page 107, No. 159. In column Litt. Bay. al. place A.
 Page 107, No. 161. Dele A.
 Page 107, No. 179. =7889 B. A. C.
 Page 113, No. 24. Add 14.
 Page 113, No. 29. In column Litt. Bay. al. place ϕ^1 .
 Page 117, No. 156. Add 93.

- Page 118, No. 25. For 937 B. A. C. read 59255 L. L.
 Page 118, No. 27. For 1013 read 997.
 Page 118, No. 29. =1013 B. A. C.
 Page 125, No. 120. Add 68.
 Page 127, No. 18. =2070 B. A. C.
 Page 127, No. 19. For 2070 B. A. C. read 12278 L. L. At bottom of page read 1868 for 1856.
 Page 128, No. 76. Add 24. In column Dupl. Str. place 163 $^\circ$.
 Page 128, No. 77. Dele 24.
 Page 129, No. 105. For 16559 L. L. read 2825 B. A. C.
 Page 132, No. 22. Add 6.
 Page 133, No. 35. Add 12.
 Page 134, No. 18. Add 1.
 Page 139, No. 90. Dele λ^1 .
 Page 139, No. 91. For λ^2 read λ .
 Page 139, No. 113. Dele β^2 .
 Page 139, No. 115. For β^3 read β^2 .
 Page 140, No. 117. For γ^1 read γ .
 Page 140, No. 118. Dele γ^2 .
 Page 140, No. 143. Add 48.
 Page 141, No. 1. =3286 B. A. C.
 Page 141, No. 18. For $140^\circ 9'$ read $149^\circ 9'$.
 Page 141, No. 19. =3449 B. A. C. Add 14.
 Page 142, No. 35. For 5^h read 10^h .
 Page 143, No. 10. For 2 read A^2 .
 Page 143, No. 21. For 503 M read $12^h 46$ W 2 ; for $180^\circ 45'$ read $180^\circ 59'$.
 Page 144, No. 38. =4230 B. A. C.
 Page 147, No. 136. =4666 B. A. C.
 Page 147, No. 157. For v^1 read v .
 Page 147, No. 159. Dele v^2 .
 Page 149, No. 27. =3995 B. A. C.
 Page 149, No. 33. For B^2 read W^2 .
 Page 152, No. 41. For B^2 read B.
 Page 154, No. 31. =5760 B. A. C.
 Page 154, No. 44. For e read e .
 Page 155, No. 66. For $+13^\circ 59'$ read $+13^\circ 55'$.
 Page 155, No. 71. =5985 B. A. C.
 Page 156, No. 93. For $268^\circ 16'$ read $268^\circ 21'$.
 Page 158, No. 30. For ω^1 read ω .
 Page 158, No. 35. Dele ω^2 .
 Page 159, No. 50. =6679 B. A. C.
 Page 159, No. 54. Dele k .
 Page 161, No. 123. =7130 B. A. C.
 Page 162, No. 14. Dele ξ^1 .
 Page 162, No. 15. For ξ^2 read ξ .
 Page 162, No. 35. Dele ζ^1 .
 Page 162, No. 36. Dele ζ^2 .
 Page 162, No. 38. For ζ^2 read ζ .
 Page 163, No. 2*. For ψ read γ .
 Page 163, No. 4*. For ξ read μ .
 Page 164, No. 28. For d read c^2 .
 Page 165, No. 12. =6161 B. A. C.
 Page 166, No. 28. =6343 B. A. C.; for $-23^\circ 38'$ read $-23^\circ 31'$.
 Page 166, No. 43. Dele ξ^1 .
 Page 166, No. 44. For ξ^2 read ξ .

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Page 167, No. 70. Dele *a*.
Page 167, No. 71. For *k* read *h*.
Page 167, No. 76. Dele *e*.
Page 167, No. 77. For *e* read *e*.
Page 167, No. 89. Add 65.
Page 168, No. 24. =7221 B. A. C.; for $-13^{\circ} 4'$ read $-13^{\circ} 5'$.
Page 169, No. 37. For $314^{\circ} 49'$ read $314^{\circ} 54'$; for $-18^{\circ} 1'$ read $-18^{\circ} 2'$.
Page 170, No. 7. =7242 B. A. C.
Page 171, No. 42. =7672 B. A. C.
Page 171, No. 47. Add 36.
Page 172, No. 66. For 7793 read 7804; for $334^{\circ} 11'$ read $333^{\circ} 59'$; for $7^{\circ} 58'$ read $7^{\circ} 56'$.
Page 172, No. 84. For *g* read *g*.
Page 172, No. 85. Dele *g*.
Page 173, No. 96. For $-26^{\circ} 56'$ read $-25^{\circ} 56'$.
Page 175, No. 15. For 7986 read 7987.
Pages 176-177, Cepheus. In column 6^m, for 39 read 38.
Pages 176-177, Urs. Maj. In column 6^m.7, for 100 read 101.
Pages 176-177, Aries. In column 2, place 1; in column 2^m.3, dele 1; in column 6^m, for 22 read 23; in column Summa, for 80 read 81.
Pages 176-177, Cassiopea. In column 5^m.4, for 5 read 4; and in column 6^m, for 24 read 25.
Pages 176-177, Pegasus. In column 4^m, for 3 read 5; and in column 4^m.5, for 5 read 3.
Pages 178-179, Media. In column 2^m, for 7 read 8; in column 6^m, for 584 read 585; in column Summa, for 2184 read 2185.
Pages 178-179, Omnes. In column 2^m, for 27 read 28; in column 6^m, for 1533 read 1534; in column Summa, for 5421 read 5422.

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