

## Addenda and Corrigenda

This contains a list of updates to the 2nd edition of the **ATLAS** of Finite Groups (2003). It consists, firstly, of those updates which were not considered worthy of inclusion in the “addenda and corrigenda” section of the latter, and, secondly, of updates discovered since. If you discover an update which, you believe, should be included here, please email [r.a.wilson@qmul.ac.uk](mailto:r.a.wilson@qmul.ac.uk) or [s.norton@dpmms.cam.ac.uk](mailto:s.norton@dpmms.cam.ac.uk).

We denote mathematical errors by **\*\*\***, new information by **NEW**, misprints by **M**, and matters of notational convention by **C**. Changes are shown in order of appearance in the **ATLAS**.

It should be noted that one purpose of this list is to provide a signal for what changes should be made to the text if it were to be completely revised (as did not happen in the 2nd edition).

### Introduction

- C** Page iv : Top, insert ‘page’ before ‘number’.
- M** Page vii : Top left, change head of Section 1 to ‘Preliminaries’.
- C** : Section 2, change ‘to’ to ‘from’ after ‘differently’.
- C** Page viii : Table 1, order of O’N, interchange 5 and 7<sup>3</sup>.
- C** Page xiii : Section 6, 2nd paragraph begins: ‘In the Clifford algebra, the vectors ... generate a multiplicative group which is ...’.
- C** Page xiv : Middle left, omit ‘to’ in ‘also to specify’.
- C** Page xx : Middle right, insert ‘it’ between ‘which’ and ‘becomes’.
- M** Page xxv : Section 5, insert i in ‘contans’.
- C** Page xxvi : In character table of 2A<sub>5</sub>, replace –0 by 0.
- \*\*\*** Page xxviii : In section 14, replace  $\chi_{6-8}$  by  $\chi_{7-9}$  (twice).
- C** Page xxix : Middle right, singularize ‘act’.
- NEW** : In Section 18, specify the notational convention where both coset and cohort are ‘squashed’.
- M** Page xxxi : Section 1, replace ‘product’ by ‘produce’.

### The Groups

- C** Page 14 U<sub>3</sub>(3) : In 3rd maximal subgroup, replace 4.S<sub>4</sub>:2 by 2<sup>1+4</sup><sub>+</sub>.S<sub>3</sub>.
- C** Page 29 L<sub>2</sub>(32) : Singularize ‘Presentations’.
- C** Page 31 M<sub>12</sub> : In MINIMOG section close bracket in 6th line.
- M** Page 36 J<sub>1</sub> : Raise most of bottom line in ‘Graph’ section.
- C** : Replace = by  $\cong$  in presentation.
- C** : In 6th maximal subgroup, replace D<sub>6</sub> by S<sub>3</sub>.
- NEW** Page 46 S<sub>6</sub>(2) : 6th maximal subgroup is (2<sup>1+4</sup><sub>+</sub> × 2<sup>2</sup>):(S<sub>3</sub> × S<sub>3</sub>) with alternative Abstract specification  $N(2C^2)$ .
- C** Page 73 U<sub>5</sub>(2) : In 4th maximal subgroup, remove brackets round *AB* and *CD*.
- C** Page 83 J<sub>3</sub> : Replace  $r6 *$  by  $r6 -r6$  in  $\chi_9$ .
- \*\*\*** Page 91 L<sub>3</sub>(11) : In maximal subgroups 1-2, replace 2L<sub>2</sub>(11).2.2 by (5 × 2L<sub>2</sub>(11).2).2.
- C** Page 109 O<sub>7</sub>(3) : Pluralize ‘Presentation’.
- C** Page 113 S<sub>6</sub>(3) : Move ‘Specifications’ to right.
- C** Page 123 : Insert separator between R(27) and S<sub>8</sub>(2).
- NEW** S<sub>8</sub>(2) : 5th maximal subgroup is (2<sup>1+8</sup><sub>+</sub> × 2<sup>2</sup>):(S<sub>6</sub> × S<sub>3</sub>) with alternative Abstract specification  $N(2C^2)$ .
- C** : Pluralize ‘a presentation’.
- C** Page 129 Suz : Replace  $r10 *$  by  $r10 -r10$  in  $\chi_{40}$ .
- C** Page 131 : Pluralize ‘Presentation’.
- C** Page 140 O<sub>8</sub><sup>+</sup>(3) : Pluralize ‘a presentation’.
- NEW** : Maximal subgroups 7–9 are also  $N(3^6)$ .
- C** Page 147 O<sub>10</sub><sup>-</sup>(2) : In last maximal subgroup,  $N(3A_2D_2)$  is also  $N(3^2)$ .
- C** Page 182 Co<sub>1</sub> : Near bottom, pluralize ‘portion’, ‘group’ and ‘parenthesis’.

- C** Page 191  ${}^2E_6(2)$  : In last maximal subgroup, replace  $3^2Q_8$  by  $3^2:Q_8$ .  
**\*\*\*** Page 207  $Fi'_{24}$  : In Map, 76 should be 74.  
**C** Page 220 **M** : Note that when representing the Monster it is now standard to write the letter 'M' in Blackboard Bold font (this applies throughout the **ATLAS**).  
**C** Page 228 **M** : Pluralize 'Presentation'.  
**M** Page 230 : Replace , by . in last line before list of groups.  
**NEW** Page 231 : See "Addenda and Corrigenda" section of 2nd edition of the **ATLAS** for more up to date information about which groups are involved in M. There are some other further changes that should be made. The proof that  $L_2(41)$  is not a subgroup of M is invalid and a unique conjugacy class of this shape has been identified, so this group should be moved from (e) to (a). The occurrences of several simple groups have been completely classified, so that  $L_2(8)$  and  $L_2(16)$  should be moved from (b) to (a), and  $L_2(27)$  from (c) to (e). It was at one time asserted that  $U_3(4)$  should be moved from (b) to (a) but this appears not to be the case as things now stand. This means that the only groups for which complete information is not available are  $L_2(13)$ ,  $Sz(8)$ ,  $U_3(4)$  and  $U_3(8)$ .  
**\*\*\*** Page 234 : In 5th non-local subgroup replace 4 by  $2^2$ .  
**NEW** : All the listed non-local subgroups are maximal.

#### Additional information

- C** Page 239 : Pluralize 'Order'.  
**NEW** : Insert sentence: groups whose full character tables are in the **ATLAS** are starred, while a bracketed star is appended to other **ATLAS** groups and to those for which all or part of the character table exists in **ATLAS** format. Also, insert relevant stars, with or without brackets, in pages 239-242.