Atlas of Brauer Characters – Corrections

October 17, 2024

This is the list of known errors in the Atlas of Brauer Characters.

We denote mathematical errors by ***. We use C to denote improvements concerning grammar or notational consistency. Changes are shown in order of appearance.

Introduction

*** p. xi : Replace the last paragraph of Section 10 by the following.

> If the indicator is 0, then $D(G)$ may or may not embed in a suitable unitary group. Let $*q$ be the map on the Brauer characters induced by the field automorphism $x \mapsto x^q$. Then D is unitary if and only if $D(G)$ is defined over a field with q^2 elements and φ^{*q} is the complex conjugate of φ.

The Tables

***	p.	22	$L_3(3)$	: In the 13 modular table, change $12A\ 12A$ to $12A\ *$.
***	p.	30–32	$L_2(25)$	: Change element orders of $4C$, $12C$, $12D$ in $4.G.2_3$ to 4, 12, 12.
***	p.	71–73	$U_3(4)$	: Change class names $10A$–B in $G.2$ to $10E$–F.
***	p.	79–81	$U_3(5)$	: In $G.2$, change $6C$ to $6D$ and $8B$ to $8C$ where applicable.
***	p.	108	$S_4(4)$	: In $G.4$, insert fusion signs joining characters 3 and 4, 6 and 7, 9 to 12, 13 and 14.
***	p.	118	$L_3(7)$	: Change $D*40$ to $D**5$.
***	p.	130–139	$U_4(3)$	: Change class name $12J$ in $G.2_3$ to $12K$.
C	p.	170	$L_4(3)$	: Swap the two fusion markers for φ_{27}–φ_{30} in $2.G.2_1$.
C	p.	181	$U_5(2)$	: Change chis to phis.
C	p.	186	$L_3(8)$	: Rewrite $y'63**-z21*10\&17$ to $y'63**+z7$. (Both expressions are equal.)
***				: In the third and fourth degree 511 rows of the 73 modular table, exchange the indicators $\circ 6$ and $\circ 2$ in $G.3$.
***	p.	204–205	$L_3(9)$	: In the 7 modular table of $G.2_1$, change the indicator of the second degree 910 character from $++$ to $++2$. In the 13 modular table of $G.2_3$, change the indicator of the second degree 91 character from $\circ\circ$ to $\circ\circ 2$.
***	p.	206	$U_3(9)$	: Change the value of the first degree 584 character on the class $5EF$ from $*$ to $2+b5*$.
***	p.	219	J_3	: Swap the character values in G and $3.G$ on the classes $17A$ and $17B$, and the character values in $G.2$ on the classes $34A$ and $34B$.

Appendix 1

C p. 284 : Add the entry $w41 * 3 | X^3 + X^2 + X | C_5$.

*** p. 286 : The entries for $b29$ and $b29*$ must be as follows. $b29 | X + 2 | C_2$, $b29 * | 2X | C_2$.

*** p. 288 : Replace $y9 * *$ by $y9 * 2$.

Appendix 2

C p. 300 : Remove the last change for $U_3(8)$, which suggests to add a note to the map. Note that the isoclines of $3.G.3_1$ are in fact isomorphic.

The number of changes of each type is as follows: 14 *** 5 C.

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