Weekly Meeting

Topic: find property (β)

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Property (β) for $s = 3$

(β): stratifications on $s^2 \times s \times s$, $s \times s^2 \times s$ and $s \times s \times s^2$ grids.

Thm: D has property β iff

1. A is of resolution IV or higher.
2. $(B, B', B'') \subseteq \bar{A}$.
3. (B, B', B'') does not contain any interaction column involving two factors from A.

Construction of (β) for $s = 3$

Let P_0 consists of $e_3, \ldots, e_k$ and all their interactions.

Let $P = (I, P_0)$.

Then, we have

$$S = (P, e_1P, e_1^2P, e_2P, e_2^2P, e_1e_2P, e_1^2e_2^2P, e_1e_2^2P, e_1^2e_2P)$$

Construction of (β) for $s = 3$

For $k = 4$, $P = (I, e_3, e_3^2, e_4, e_4^2, e_3e_4, e_3^2e_4^2, e_3e_4^2, e_3^2e_4)$

$A = (e_1P, e_1^2P)$

$B = (e_2P, e_2^2P)$

$B' = (e_1e_2P, e_1^2e_2^2P)$

$B'' = (e_1e_2^2P, e_1^2e_2P)$