Multi-run quads

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I. INTRODUCTION

II. RESULTS

2-runs/0-aux case:

$$b_1b_2b_3b_4 = \min\left(b_1b_2, b_3b_4\right) \tag{1}$$

3-runs/0-aux case to be applied in Computer Vision and LHZ lattice:

$$b_1b_2b_3b_4 + b_3b_4b_5b_6 = \min\left(b_2b_3 + b_3b_6, b_1b_4 + b_4b_5, b_1b_2 + b_5b_6 - b_3 - b_4 + 2\right) \tag{2}$$

Linearization:

$$b_1b_2b_3\ldots b_k = \min\left(b_1, b_2, b_3, \ldots, b_k\right) \tag{3}$$

3-runs/0-aux case:

$$b_1b_2b_3b_4 + b_2b_3b_4b_5 + b_3b_4b_5b_6 : \qquad (k,n) = (4,6). \tag{4}$$
$$\longrightarrow\ 3b_3b_4 + b_3b_5 + b_4b_5 - b_3 - b_4 - b_5 + 1 \tag{5}$$
$$\longrightarrow\ b_1b_4 + b_3b_5 + b_4b_5 \tag{6}$$
$$\longrightarrow\ b_1b_2 + b_2b_6 + b_3b_5 + b_5b_6 + b_2 - b_3 - b_4 - b_5 + 2 \tag{7}$$

III. EXAMPLES

IV. DISCUSSION

V. ACKNOWLEDGMENTS