

# A cellular version of Blakers-Massey

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Starting from the homotopy pushout  $D$  of a diagram  $B \leftarrow A \rightarrow C$ , we measure how far the homotopy pushout square is from being a homotopy pullback by studying the fibre of the comparison map  $A \rightarrow P = \text{holim}(B \rightarrow D \leftarrow C)$ . The classical Blakers-Massey theorem does so by just looking at its connectivity. In [1], Wojciech Chachólski generalised this theorem and put it into a more modern framework by establishing a cellular inequality between the homotopy fibres of  $A \rightarrow B$  and  $A \rightarrow C$  and the homotopy fibre of the suspension of the above-mentioned comparison map. By relaxing the cellular inequality relation, we are able to lose the suspension and establish a direct relation between the Bousfield classes of the homotopy fibres involved.

## REFERENCES

- [1] Chachólski W., *A generalization of the triad theorem of Blakers-Massey*, *Topology* 36 (1997), no. 6, 1381–1400.

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