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Induced mappings of homology decompositions. (English) [Zbl 0941.55008](#)

Oprea, John (ed.) et al., Homotopy and geometry. Proceedings of the workshop, Banach Center, Warsaw, Poland, June 9-13, 1997. Warsaw: Polish Academy of Sciences, Banach Cent. Publ. 45, 225-233 (1998).

Summary: We give conditions for a map of spaces to induce maps of the homology decompositions of the spaces which are compatible with the homology sections and dual Postnikov invariants. Several applications of this result are obtained. We show how the homotopy type of the $(n + 1)$ st homology section depends on the homotopy type of the n th homology section and the $(n + 1)$ st homology group. We prove that all homology sections of a co-H-space are co-H-spaces, all n -equivalences of the homology decomposition are co-H-maps and, under certain restrictions, all dual Postnikov invariants are co-H-maps. We give a new proof of a result of Bernstein and Hilton which gives conditions for a co-H-space to be a suspension.

For the entire collection see [\[Zbl 0906.00019\]](#).

MSC:

- [55P30](#) Eckmann-Hilton duality
- [55P45](#) H -spaces and duals
- [55S99](#) Operations and obstructions in algebraic topology

Cited in 1 Document

Keywords:

[dual Postnikov invariants](#); [homology sections](#); [co-H-space](#)

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