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**Anders Björner\*** (bjorner@kth.se). *Interlacing of  $h$ -vectors for Schlegel diagrams.* Preliminary report.

A Schlegel  $(d-1)$ -diagram is a polytopal subdivision of a  $(d-1)$ -polytope, obtained by projecting the boundary complex of a  $d$ -polytope  $P$  onto one of its facets. It is used to investigate  $P$  by visualization in a lower dimension.

The toric  $h$ -vector  $h = (h_0, h_1, \dots, h_d)$  is recursively defined for any  $(d-1)$ -dimensional polytopal complex. We prove that the toric  $h$ -vector of a Schlegel  $(d-1)$ -diagram satisfies

$$h_d \leq h_0 \leq h_{d-1} \leq h_1 \leq h_{d-2} \leq h_2 \leq \dots \leq h_{\lfloor d/2 \rfloor + 1} \leq h_{\lfloor d/2 \rfloor - 1} \leq h_{\lfloor d/2 \rfloor}$$

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