



Figure 14. Diagram showing the relative changes in the geometric properties that occur in the transition from (a) complex craters to (b, c) peak-ring basins and (d) multi-ring basins. The profiles are normalized to one crater diameter for ease in comparison between craters of different sizes and calculated height and distance ratios. The lengths of the vertical and horizontal bars show the relative dimensions of geometric properties. The arrows show the zones and relative magnitudes of central uplifts. The black bar in Figure 14d illustrates the relative decrease in rim-crest diameter that may result from mega-terracing during multi-ring basin formation. A complete description and interpretation of these geometric trends are given in section 6 in the text.

suggested to occur in two major stages [Hawke and Head, 1977; Osinski *et al.*, 2011]. The first occurs during the final moments of the excavation stage, where a fraction of the melted target material is ejected from the excavated zone of the transient cavity. The second stage occurs when uplift of the crater floor imparts an outward momentum to the

impact melt, forcing it to be re-distributed on the crater floor and to points exterior to the crater, where it may form melt flows on the continuous ejecta blanket [Hawke and Head, 1977; Osinski *et al.*, 2011]. It is during this stage that melt may be deposited to cover the toes of slump blocks, creating the observed sharp topographic break between the wall and