

**Figure 2-figure supplement 1.** The ‘convex’ level cut (top) and rotated (bottom) mask conditions used in Experiment 1. The masks in the top row exclude all surface regions at a greater depth than the level cut contours, and the remaining visible gradients appear vividly convex. These masks have been rotated by 180° in the bottom row, which destroys the geometric relationship between the contours and the 3D surface. The percentage of visible gradients increases with the depth of the level cut from left to right. The top-center image is also shown in Figure 2A.