- Friday, March 19, 2004
  Visual Perception of Touchdown Point During Simulated Landing

  Experiments examined the accuracy of visual touchdown point perception during oblique descents (1.5 - 15 deg) towards a ground plane consisting of: (i) randomly positioned dots; (ii) a runway outline; or (iii) a grid. Participants judged whether perceived touchdown was above/below a probe that appeared at a random position following each display. While judgments were unacceptably imprecise and biased for moving dot and runway displays, accurate and unbiased judgments were found for grid displays. We conclude that optic flow per se does not appear to be sufficient for a pilot to land an airplane and that the systematic errors associated with optic flow under sparse conditions may be responsible for the common occurrence of landing incidents in so-called "black hole" situations.

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