

Abstract Submitted
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Non-axisymmetric flow and sensing around copepods JULIAN HACHMEISTER, DAISUKE TAKAGI, University of Hawaii at Manoa — Microscopic organisms generate a variety of viscous flow fields which are critical for locomotion, feeding, and sensing. We report on a simplified model of the flow field generated by a feeding copepod while sinking, swimming and hovering. In each case, we compare the different flow fields and compute the strength of the hydromechanical signal due to any suspended particle. Among the three modes, hovering is most effective in bringing in a fresh supply of nutrients from its surroundings. Our study shows an approximate range in which a copepod may sense its prey and the role mechanical sensing plays in feeding.

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