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Passively pulsed propulsion of aquatic vehicles[1] ROBERT WHITTLESEY, JOHN DABIRI, California Institute of Technology — Recent work by Ruiz has shown that pulsed-jet propulsion for aquatic vehicles, similar to that used by sea jellies, salps, and squid, requires a significant decrease in energy input ($\sim$ 30%). These results were obtained despite mechanical inefficiencies in the system to generate the pulsed flow. Thus an approach to generate the pulsed flow using a passive means has been explored. This approach uses collapsible tubing in a pressurized chamber to generate oscillatory, unsteady flow through the outlet. Current results will be presented along with a look toward future developments.

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