

Abstract Submitted
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Modified Propagation of Belousov-Zhabotinsky Waves in a Quasi-1D System¹ JACK MERSHON, CHASE FULLER, NIKLAS MANZ, College of Wooster — The Belousov-Zhabotinsky (BZ) reaction was used to investigate the effect of fluid flow on the behavior of reaction-diffusion waves. Solutions were filled into glass capillary with inner diameter of 0.45 mm to create a quasi-1D system. The solutions were then advected by fluid flow. Normal reaction-diffusion waves were subjected to flow in opposition to the wave's propagation at a rate equal to the wave's speed without flow. The advection resulted in the initial fronts propagating at a significantly reduced speed than normal, though some forward propagation was still observed suggesting that the flow was not sufficient to stop forward wave propagation. Additionally, investigations into anomalous solutions behavior in these circumstances were investigated. We will report about initial experimental findings of the fluid flow effect on the wavelength of the waves and the effect on the anomalous behavior.

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