Review of: "Compound jetting from bubble bursting at an air-oil-water interface"

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The work presents the bursting of bubbles at a liquid surface, which is widely present in nature. The authors applied high-speed transient photography to visualize the evolution of compound jetting from bubble bursting at an air-oil-water interface. In particular, the author demonstrated evidence that the coupling of oil spreading and cavity collapse dynamics results in a multi-phase jet and the follow-up droplet size change. The results have significant implications for environment, biology and public health. In my assessment, the paper has a good reference value for studying the cavity collapse process of composite interface. Minor comments are provided as suggestions to improve the comprehensibility of the paper.

1. Capillary waves at the water-oil interface were analyzed when the cavity collapses. In the process of cavity surface wave evolving to the lowest point, the author simplified the three-dimensional spherical wave into the two-dimensional wave. The author does not elaborate the rationality and precision of this simplified analysis. In addition, in the process of cavity collapse, three-dimensional surface waves evolve to the lowest point. What is the interaction between waves at the same height (horizontal plane) and the interaction between adjacent horizontal plane waves when they converge? What is the effect of the interaction of these waves on the size and velocity of the jet formed in the process of moving towards the lowest point of the cavity?
2. When the bubbles burst, the velocity distribution of the oil-water interface is the fundamental reason to induce the jet flow. Therefore, the analysis of oil-water velocity field near the cavity is the key to study the size and velocity of jet. In the process of cavity collapse, if PIV or numerical simulation technology is used to reproduce or restore the oil and water flow velocity field during cavity collapse, it will boost the revelation of jet size and velocity.
3. In Fig.5, when $h/R=0.8$, the numerical fluctuation of wave velocity under various viscous conditions is large, which is obviously greater than the corresponding value of other oil layer thickness. No relevant explanation can be found in this paper.