

Abstract Submitted
for the DFD14 Meeting of
The American Physical Society

On the Physics of Fizziness: How liquid properties control bursting bubble aerosol production? ELISABETH GHABACHE, ARNAUD ANTKOWIAK, CHRISTOPHE JOSSERAND, THOMAS SEON, CNRS & UPMC - Institut d'Alembert — Either in a champagne glass or at the oceanic scales, the tiny capillary bubbles rising at the surface burst in ejecting myriads of droplets. Focusing on the ejected droplets produced by a single bubble, we investigate experimentally how liquid properties and bubble size affect their characteristics: number, ejection velocities, sizes and ejection heights. These results allow us to finely tune the bursting bubble aerosol production. In the context of champagne industry, aerosols play a major role by spreading wine aroma above the glass. We demonstrate that this champagne fizz can be enhanced by selecting the wine viscosity and the bubble size, thanks to specially designed glass.

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Date submitted: 25 Jul 2014

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