Abstract Submitted
for the DFD14 Meeting of
The American Physical Society

**On the Physics of Fizziness: How Bubble Bursting Controls Droplets Ejection** THOMAS SEON, ELISABETH GHABACHE, ARNAUD ANTKOWIAK, CHRISTOPHE JOSSERAND, CNRS & UPMC - Institut d'Alembert — Either in a champagne glass or at the oceanic scales, the tiny bubbles rising at the surface burst in ejecting myriads of droplets. Focusing on the bubble bursting jet, prelude for these aerosols, we propose a simple scaling for the jet velocity, we unravel experimentally the intricate roles of bubble shape, capillary waves and liquid properties, and we demonstrate that droplets ejection can be tuned by changing the liquid properties. In particular, as capillary waves are shown to always evolve into a self-similar collapsing cavity, faster and smaller droplets can be produced by sheltering this collapse from remnant ripples using damping action of viscosity. These results pave the road to the characterization and control of the bursting bubble aerosols. Applications to champagne aroma diffusion will be discussed.

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Date submitted: 22 Jul 2014 Electronic form version 1.4