Source of temperature and pressure pulsations during sessile droplet evaporation into multi-component atmospheres:

Supporting Information

Aaron H. Persad,[†] Khellil Sefiane,^{†,‡} and Charles A. Ward^{*,†} Thermodynamics and Kinetics Laboratory, Department of Mechanical and Industrial Engineering, University of Toronto, 5 King's College Road, Toronto, Canada, M5S 3G8 Received September 19, 2013; E-mail: charles.ward@utoronto.ca

Experimental Apparatus



Figure S1. A sessile droplet of ethanol resting on the PTFE substrate inside the evaporation chamber may be seen in the photograph.

Droplet Shape



Figure S2. The calculated interface shapes of a water droplet evaporating into a water-methanol vapor mixture from images taken at 2141 and 3761 s. The points contain the error bars and were measured using ImageJ software. The values of z_0 , R_{cl} and θ are shown for the image taken at 3761 s. The parameters of the fitted shapes are given in Table 1.

Experimental support of SRT



Figure S3. The constant-pressure specific heat of water determined from SRT agrees well with independent measurements below the triple point temperature. The source of the data can be found in the work of Duan et al 16 .



Figure S4. The constant-pressure specific heat of ethanol determined from SRT agrees well with independent measurements, even in an extrapolated temperature range. The data can be found in the work of Persad and Ward ¹².

[†]Thermodynamics and Kinetics Laboratory, Department of Mechanical and Industrial Engineering, University of Toronto, 5 King's College Road, Toronto, Canada, M5S 3G8

 $^{^{\}ddagger}$ The Institute for Materials and Processes, School of Engineering, The University of Edinburgh, Edinburgh EH9 3JL, UK