

Abstract Submitted
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Experiments on foam stability at different salinities¹ TATSUO IZAWA, LESLEY JAMES, ANAND YETHIRAJ, Memorial University of Newfoundland — A deeper understanding of foam stability in the presence of high salinity levels that are characteristic of ocean brine is important for enhancing oil recovery. We experimentally investigate how 3 dimensional foams drain and collapse under gravitational stress at various temporal and spatial scales. By employing an imaging technique that simultaneously probes the macroscopic and bubble scale features of the foam system, we study the concentration dependence of synthetic ocean brine on foam stability. From our results, we obtain the physical characteristics of foam on time scales from seconds to days. This work may potentially be useful in characterizing different aqueous foam systems. It may also allow us to detect any signals that may arise prior to catastrophic collapses of foams on different length scales.

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