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Scaling of Foam Flows near Jamming MARTIN VAN HECKE, ERIK WOLDHUIS, BRIAN TIGHE, Leiden University, JORIS REMMERS, Eindhoven University, WIM VAN SAARLOOS, Leiden University — We probe the scaling behavior of flows near the jamming transition of soft, viscous discs in a variant of the well known bubble-model for foams, where we assume that the viscous forces between contacting bubbles scale with the relative velocity with an adjustable exponent α. This allows us to explore the non-trivial dependence of global flow exponents on the local exponent α. Even though we find that elastic stresses dominate the global stresses in the system, the exponent α which governs the sub-dominant viscous interactions still sets the global scaling exponents.

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