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Phase transitions with symmetry restoration - When does the bubble stop running?

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We consider phase transitions with symmetry restoration, where particles become massless inside the bubbles, and the leading order friction is negative, causing the expanding bubble walls to accelerate, contrary to standard phase transitions. We study the next to leading order corrections arising from transition radiation in this case, which are known to prevent runaway behavior in standard phase transitions. We find that the friction component changes from negative to positive friction as the wall boost factor increases to moderate values, so that runaway behavior occurs for longer compared to standard transitions but terminates at intermediate regimes.

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