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A new approach to rescue the trapped vacuum

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The first-order phase transition is one of the promising scenarios as it can explain the observed matter-antimatter asymmetry of the early universe. In most cases, the transition proceeds through the nucleation of bubbles of the true vacuum. If the nucleation rate is highly suppressed, then vacuum trapping may occur so that the transition ceases. In this work, we will discuss a new approach where the trapped vacuum can be rescued to realize the EW symmetry breaking and also produce the gravitational wave signals.

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