

# Re: dose tree-level results in effective potential incorporate loop effects?

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- *From:* Xiao <[noncommutate@xxxxxxxxxxxx](mailto:noncommutate@xxxxxxxxxxxx)>
  - *Date:* Tue, 24 May 2005 18:26:12 +0000 (UTC)
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Many thanks.

So the second derivative of the effective potential with respect to the field  $\phi$  gives  $\phi$ 's physical mass which is scale independent, since there are no longer loop diagrams here?

The second derivative is usually a polynomial of the parameters which is scale dependent. So if the second derivative is the physical mass, it implies that there are some automatic cancellations between the scale dependent quantities in the polynomial?

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    - ◇ *From:* Igor Khavkine
- *References:*
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