Speculation on the Higg's Boson

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Abstract: I take a look at the rumored Higg's at 125 GeV and abstract a bit with a Non-Standard decay of a metastable vacuum state. In this model you end up with a Cold Dark Matter state that while appearing as the Neutralino, is actually more a decayed Higg's resultant.

The key insight that leads to this is that a false vacuum with positive potential energy density is a de Sitter vacuum, in which the potential energy acts as a cosmological constant and the Universe is undergoing the exponential expansion of de Sitter space. This leads to a number of interesting effects, first studied by Coleman and de Luccia.(1)

With h2 as SM-like:

$$h_2 \sim h_u + h_d \cot\beta - \frac{2\varepsilon v m_Z}{m_Z^2 + \mu^2} h_n \qquad \varepsilon = \frac{\lambda\mu}{m_Z}\left(\frac{A_\lambda}{\mu\tan\beta} - 1\right)$$

h1 is the lightest CP-even scalar:

$$m_{h_1}^2 \approx -4\varepsilon^2 v^2 + \frac{4\lambda^2 v^2}{\tan^2\beta} + \frac{\kappa A_\kappa \mu}{\lambda} + \frac{4\kappa^2\mu^2}{\lambda^2}$$

And Loop correction:

$$\Delta m_{h_1}^2 \approx \frac{\lambda^2\mu^2}{2\pi^2} \log\frac{\mu^2\tan^3\beta}{m_Z^2}$$

A light CP-odd Higgs a1:

$$m_{a_1}^2 \approx -\frac{3\kappa A_\kappa \mu}{\lambda}$$

A lightest neutralino x1:

$$m_{\chi_1} \approx \frac{\lambda^2 v^2}{\mu}\sin 2\beta + \frac{2\kappa\mu}{\lambda}$$

Usually, h1 is the dark matter particle in the R-symmetry limit, h1 and x1 are typically not so light and h1 is SM-like(2).

But lets suppose x1 is actually light, in say the 62.5 GeV range and that h1 is at 125 GeV giving us a metastable vacuum with possible decay. This being the case the heavier Higg's states should be around 250 GeV. With that the neutralino is a direct result of a decayed Higg's Boson. Thus, Dark Matter would only grow over time in relation to the specific decay mechanism in the first place. This could well account for how Dark Matter seems to have played little role in the early cosmos until later times when it has started to dominate. The question then becomes can a mechanism be found that allows slower decay and slower effects of that decay without a violent result or big rip?

References

1.) S. Coleman and F. De Luccia (1980). "Gravitational effects on and of vacuum decay". Physical Review D21: 3305. Bibcode 1980PhRvD..21.3305C. doi:10.1103/PhysRevD.21.3305

2.) B. A. Dobrescu et al., Phys. Rev. D 63, 075003 (2001); R. Dermisek et al., Phys. Rev. Lett. 95, 041801 (2005)