Some changes from previous plots:

- units are now labeled,
- set ΔV parameters to cause a larger instability in χ,
- fixed bug of erroneous divisions by $N_{lattice}$ when calculating ζ.

Throughout these plots the location of ΔV is shown by three verticle lines. The blue dashed line shows the centre of ΔV (ie where ΔV changes from negative to positive), the two red dashed lines are positioned at $\pm 2\sigma$ of the Gaussian envelope of ΔV, the maximum/minimum of ΔV is half way between the blue and red lines.

Units are in parenthesis next to the quantity to which they refer. When *mpl* is shown in the units it is the ratio between the field mass units (M_{Pl}) and the spacetime mass units μ, $mpl \equiv M_{Pl}/\mu$.

- **Difference in Sampled Trajectories** $\phi_{\Delta V} - \phi_{\Delta V=0}$
  This plot is a check of the validity of using $\phi_{\Delta V=0}$ as the timelike variable for plots that compare with ΔV and with $\Delta V = 0$. Up until ϕ_p there is very little discrepancy between $\phi_{\Delta V}$ and $\phi_{\Delta V=0}$. After ϕ_p a discrepancy grows to $\mathcal{O}(10^-2)M_{Pl}$. This is visible on some of the sampled trajectories plots where it looks like a trajectory terminates early. The difference is such that $\phi_{\Delta V=0} < \phi_{\Delta V=0}$, presumably this is due to $V_{,\phi}$ becoming more shallow with the increase in χ. There is a spreading of the ϕ trajectories which shows that the instability is also effecting ϕ and causing it to decohere.
- **Difference in Sampled Trajectories** $\dot{\phi}_{\Delta V} - \dot{\phi}_{\Delta V=0}$
  Shows the greatest rate for the separation of ϕ trajectories occurs shortly after the peak in χ (at $\phi \approx 6.60$ vs $\phi \approx 6.65$). This is a proxy for $\Delta V_{,\phi}$.
- **Horizon**
  This plot shows the horizon as compared to one and two lattice spacing. The horizon shrinks to one lattice spacing at approximately ϕ_p. I'm not sure what to make of this or if a smaller lattice spacing should be used.
- **Sampled Trajectories** $\chi_{\Delta V=0}(\chi_{\Delta V})$
  The larger difference in scales between these two plots makes 'Sampled Trajectories $\chi_{\Delta V}$' look almost identical to 'Difference in Sampled Trajectories $\chi_{\Delta V=0} - \chi_{\Delta V}$'.
- **Sampled Trajectories** $\zeta_{\Delta V}$
  This plot gives an idea of how the magnitude of ζ as caused by the IC fluctuations and ΔV compare. The significant growth in ζ starts around ϕ_p.