

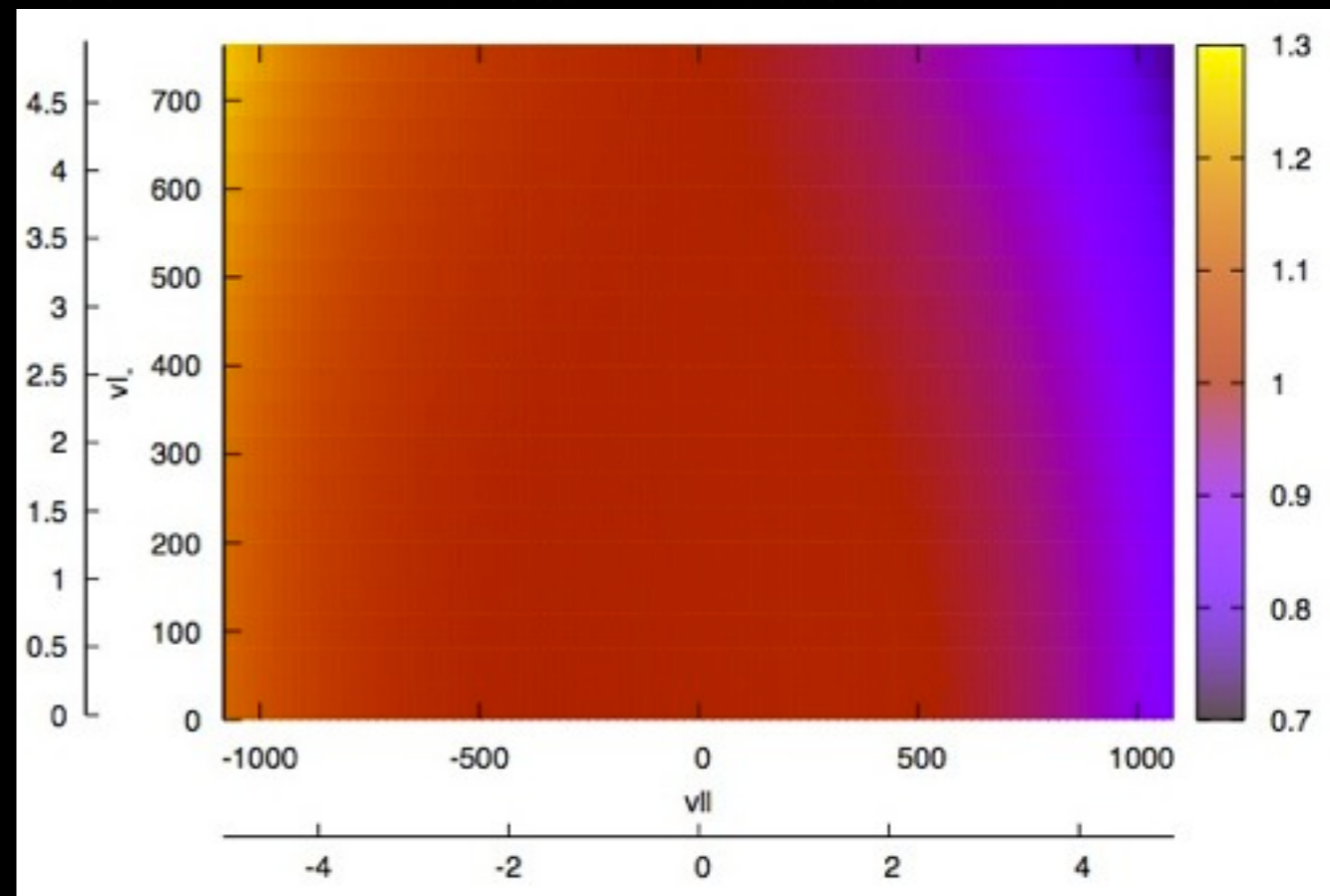
Peculiar Velocity and primordial non-Gaussianity

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Modification in linear relative velocity distribution:

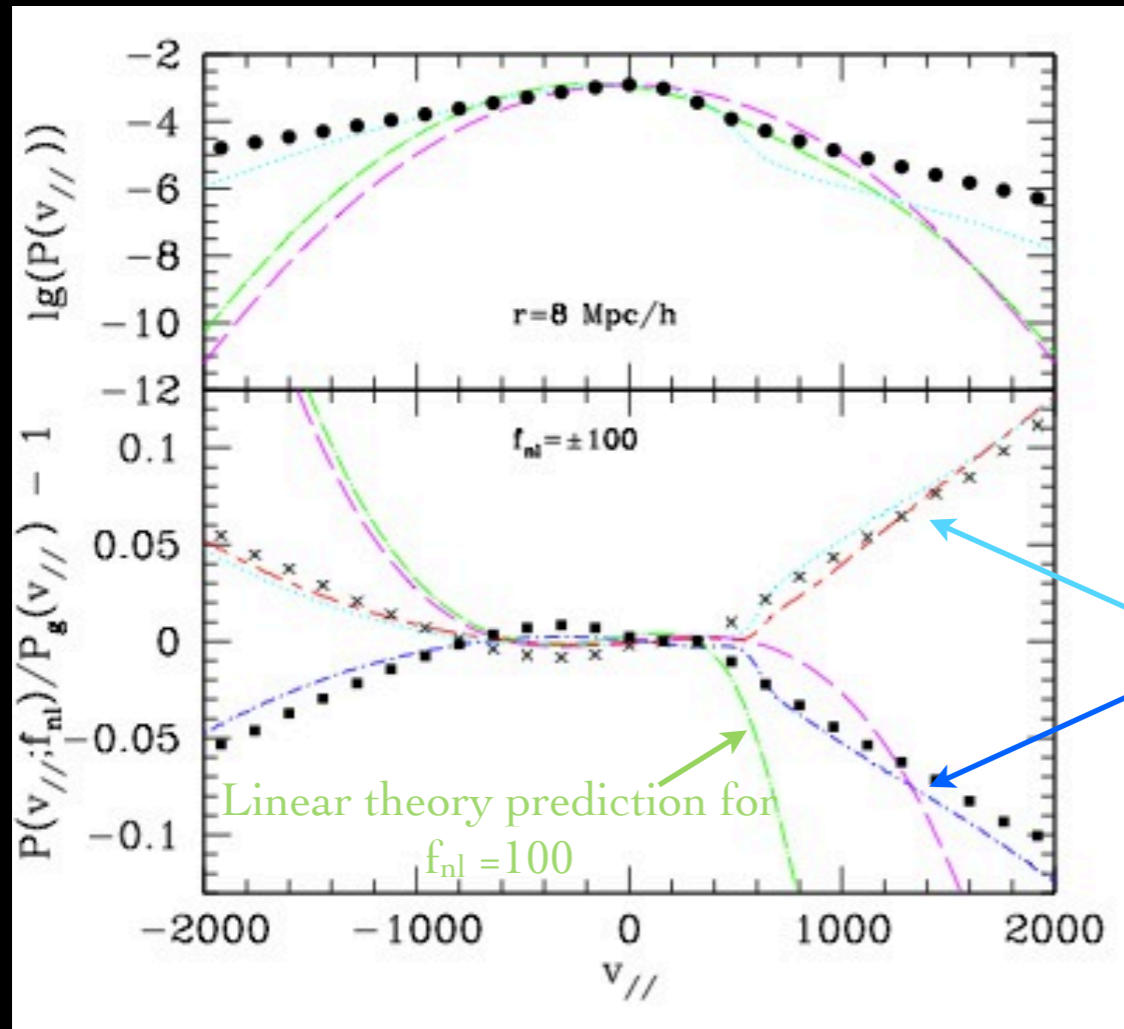
- induces correlation between v_{parallel} and v_{perp}
- marginalized over v_{perp} , ratio < 1 for $v_{\text{parallel}} \gg 0$
- ratio > 1 for $v_{\text{parallel}} \ll 0$
- marginalized over v_{parallel} , ratio $= 1$ for any v_{perp}

$$p(v_{\parallel}, v_{\perp}; r = 8, f_{nl} = 100) / p_g(v_{\parallel}, v_{\perp}; r = 8)$$



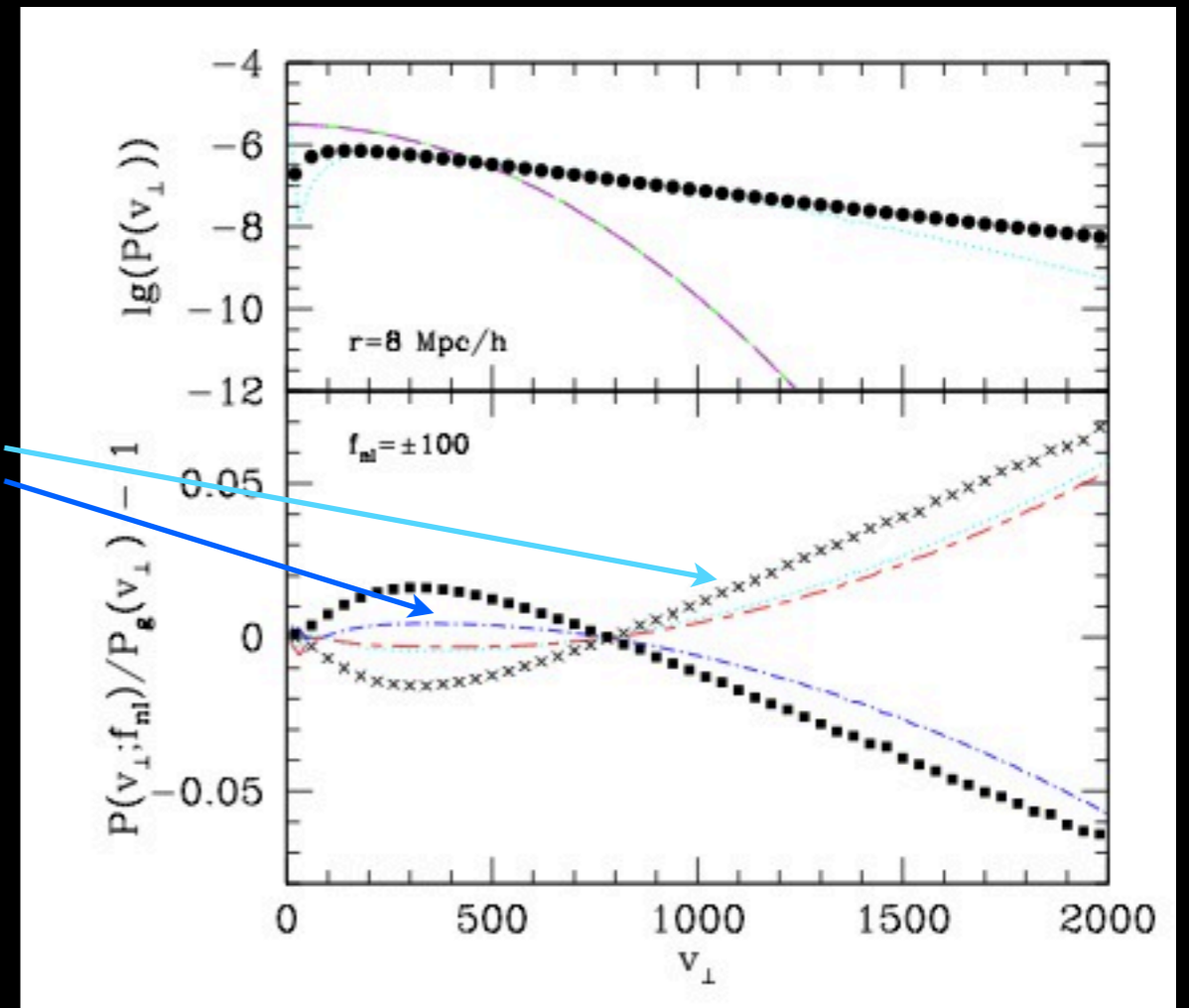
Lam, Nishimichi & Yoshida 2011

Linear theory prediction is wrong



\times = ratio -1 for $f_{nl}=100$
 \square = ratio -1 for $f_{nl}=-100$

our model prediction $f_{nl} = \pm 100$



Predictions using Zeldovich approximation match measurements

Similar results using biased tracers

