Strong New Evidence for Oscillaton of the Cosmological Scale Factor Observed in the LSS

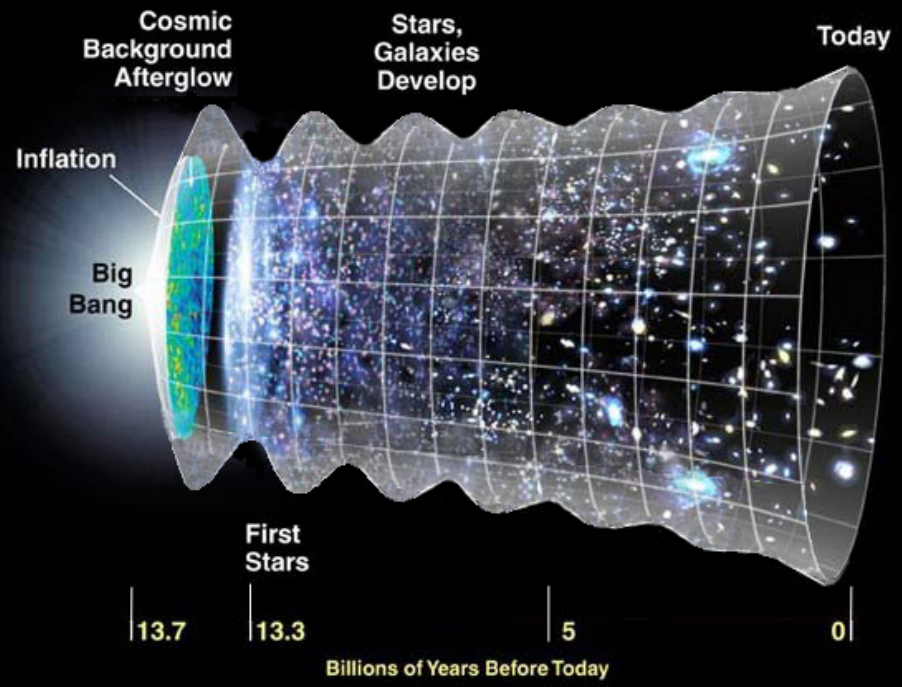
Harry I. Ringermacher
and
Lawrence R. Mead
Dept. of Physics and Astronomy
U. Of Southern Mississippi

AAS 229, 1/6/2017, Grapevine, TX

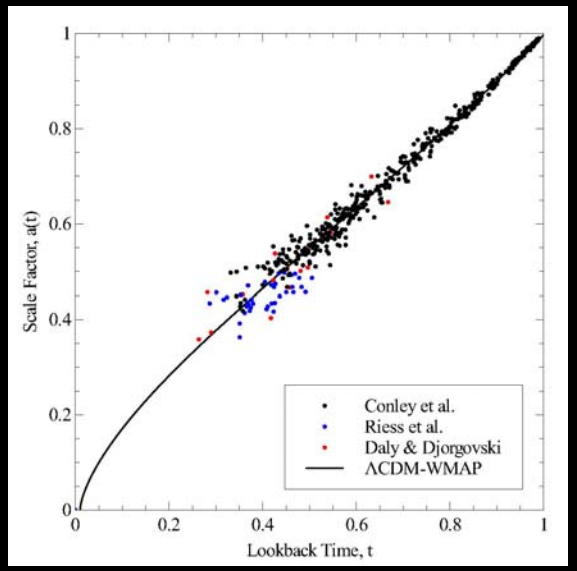
Oscillations in the Scale Factor

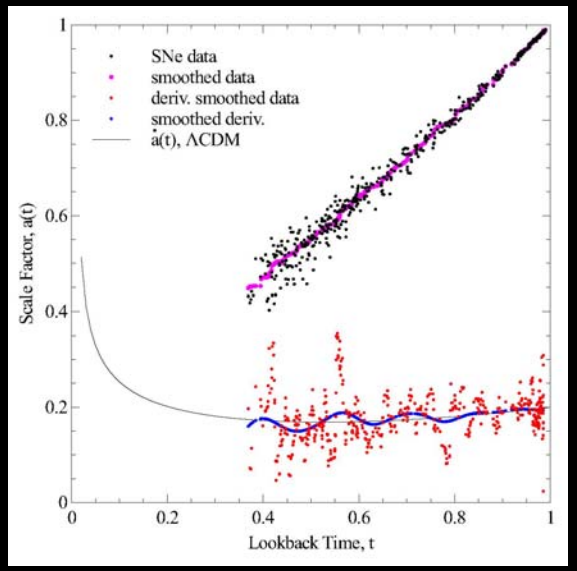
Presented AAS224, 2014

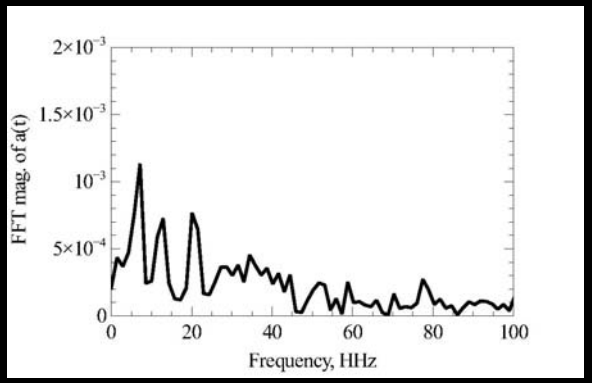
oscillations in a(t) vs. t



Oscillations in the Scale Factor







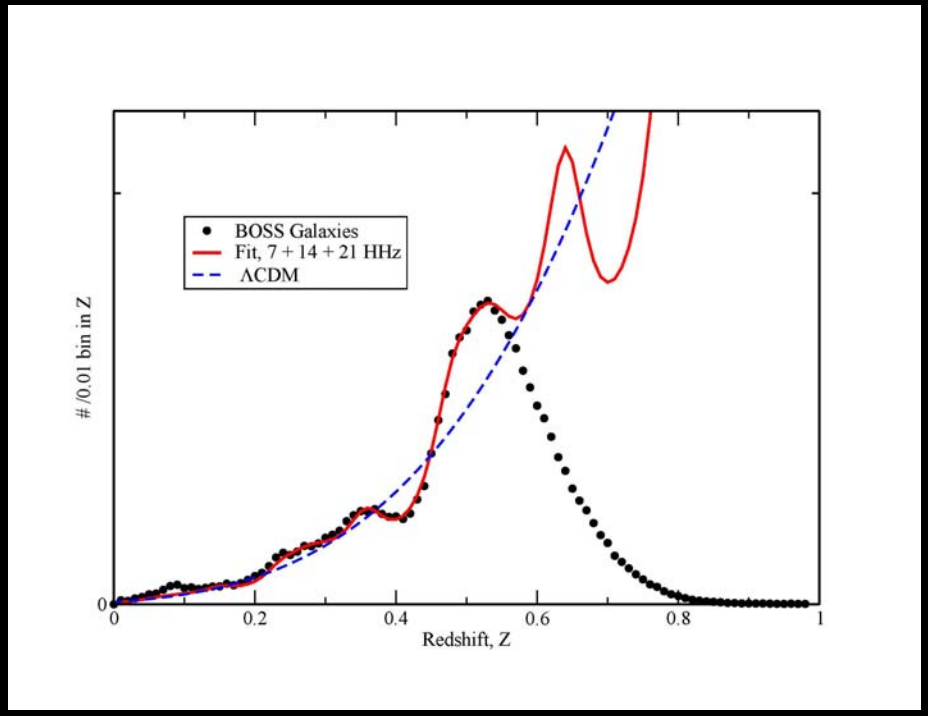
f_1 = 6.5 ± 0.5 HHz
f_2 = 13 HHz
f_3 = 20 HHz

HHz = Hubble-Hertz

Published
AJ **148,** 94 **(**2014)
AJ **149**,137 (2015)

Prediction: **LSS effects**

SDSSIII-DR9 Galaxy Number Count

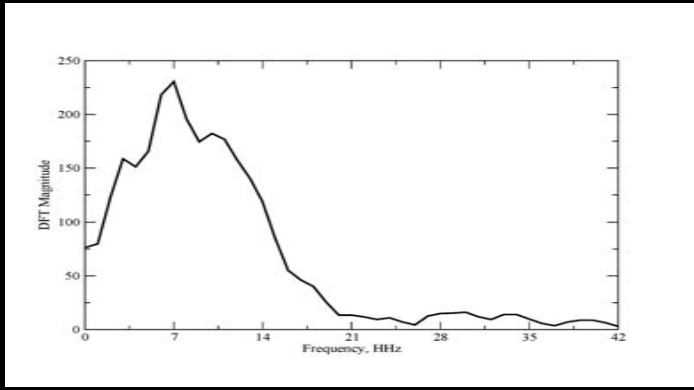


$$N(z) = \left(\frac{N(z_1)}{D_L(z_1)^3} \right) D_L(z)^3$$

$$n(z) = const \frac{dN(z)}{d\tilde{z}}$$

$$R^2 = 99.8\%$$

New peak predicted at z = 0.64



Fourier xform showing 7 HHz signal in SDSS residuals – after subtracting ΛCDM.