The Abdus Salam International Centre for Theoretical Physics

United Nations Educational, Scientific and Cultural Organization

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Summer School in Cosmology

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Dark Energy

Andrew J. Tolley
Perimeter Institute for Theoretical Physics
31 Caroline St.
Waterloo, Ontario N2L 2Y5
Canada

Dark Energy/Modified Gravity - A.J.Tolley

A non-exhaustive selection of Dark Energy/Modified Gravity Reviews

The Physics of Cosmic Acceleration - Caldwell and Kamionkowski
-0903.0866
Dark Energy and the Accelerating Universe - Frieman, Turner and Huterer
-0803.0982
Dark Energy and Dark Gravity: Theory Overview - Durrer and Marteens
-0711.0077
Cosmological Tests of Gravity - Jain and Khoury
-1004.3294
Approaches to Understanding Cosmic Acceleration - Silvestri and Trodden
-0904.0024
The Cosmological Constant and Dark Energy - Peebles and Ratra
-astro-ph/0207347
TASI lectures on the cosmological constant - Bousso
-07408.4231
Mapping the Cosmological Expansion - Linder
- 0801.2968
Dynamics of Dark Energy - Copeland, Sami and Tsujikawa
-0603057
The Cosmological Constant and Dark Energy - Peebles and Ratra
-astro-ph/0207347
Dark Energy in Practice - Sapone
-1006.5694

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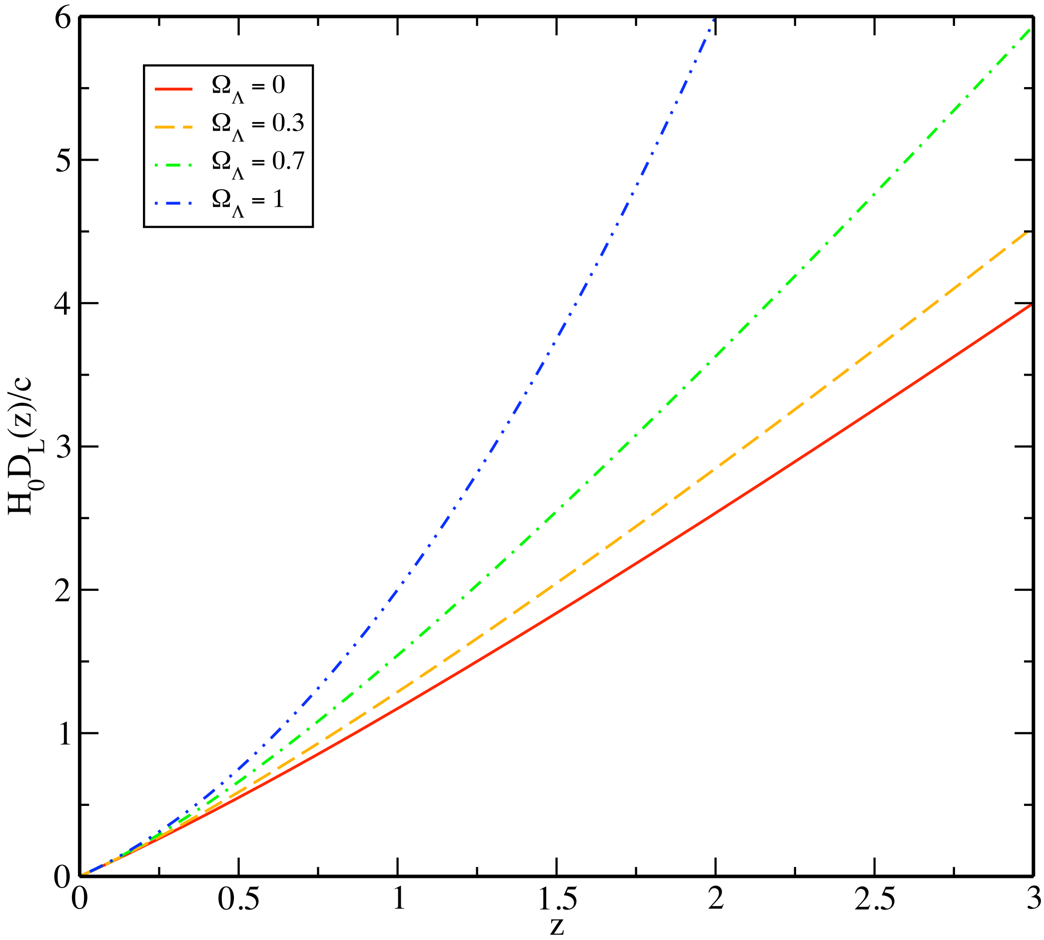

from Sapone 2010 (1006.5694)

Figure 1: The luminosity distance D_L for a flat cosmology with two components, matter $w_m = 0$ and a cosmological constant $w_\Lambda = -1$ for different values of Ω_Λ.

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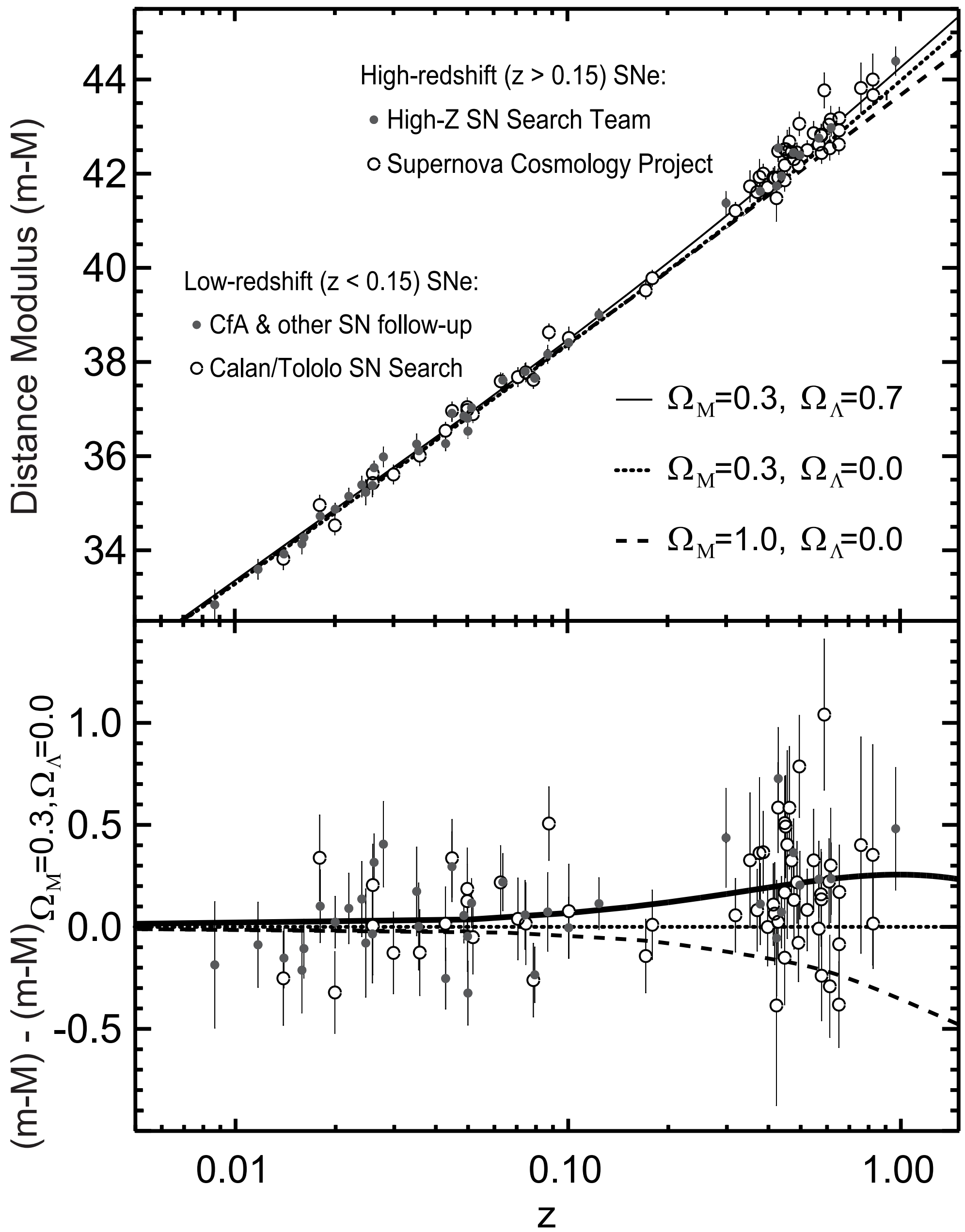

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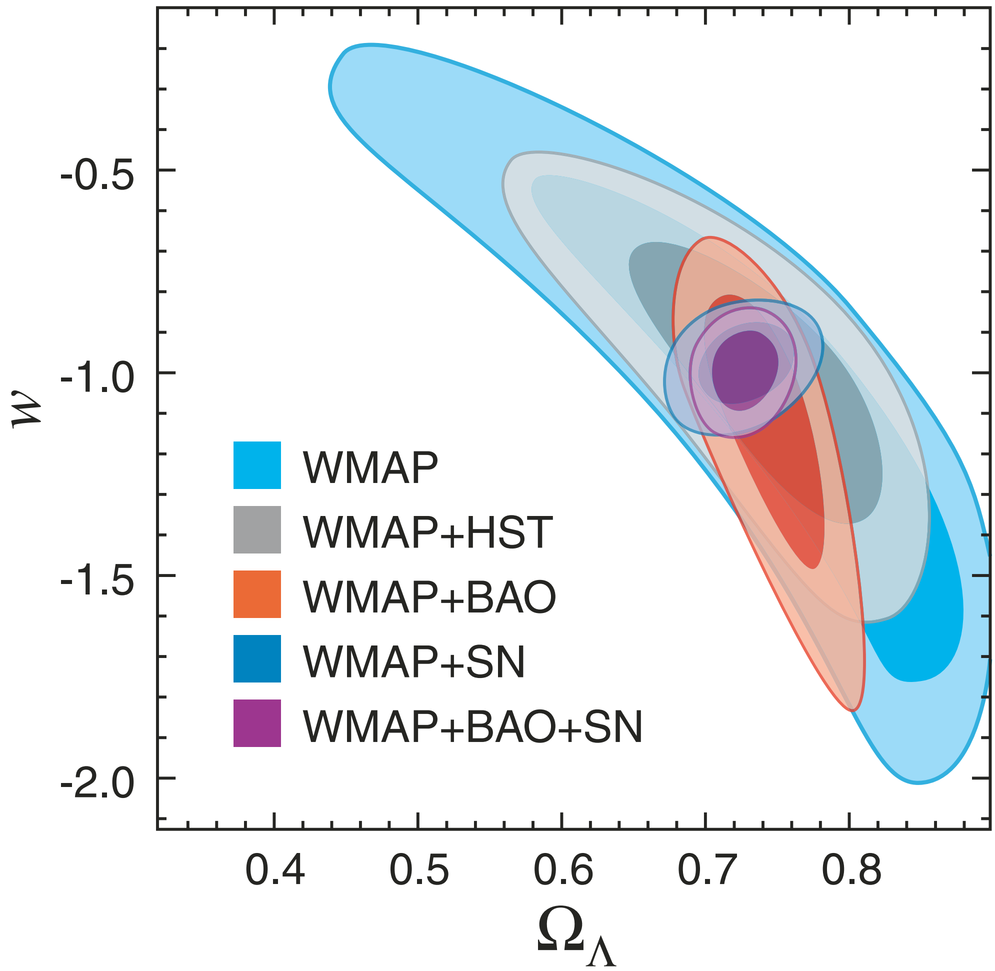
WMAP5 Komatsu et al 2008



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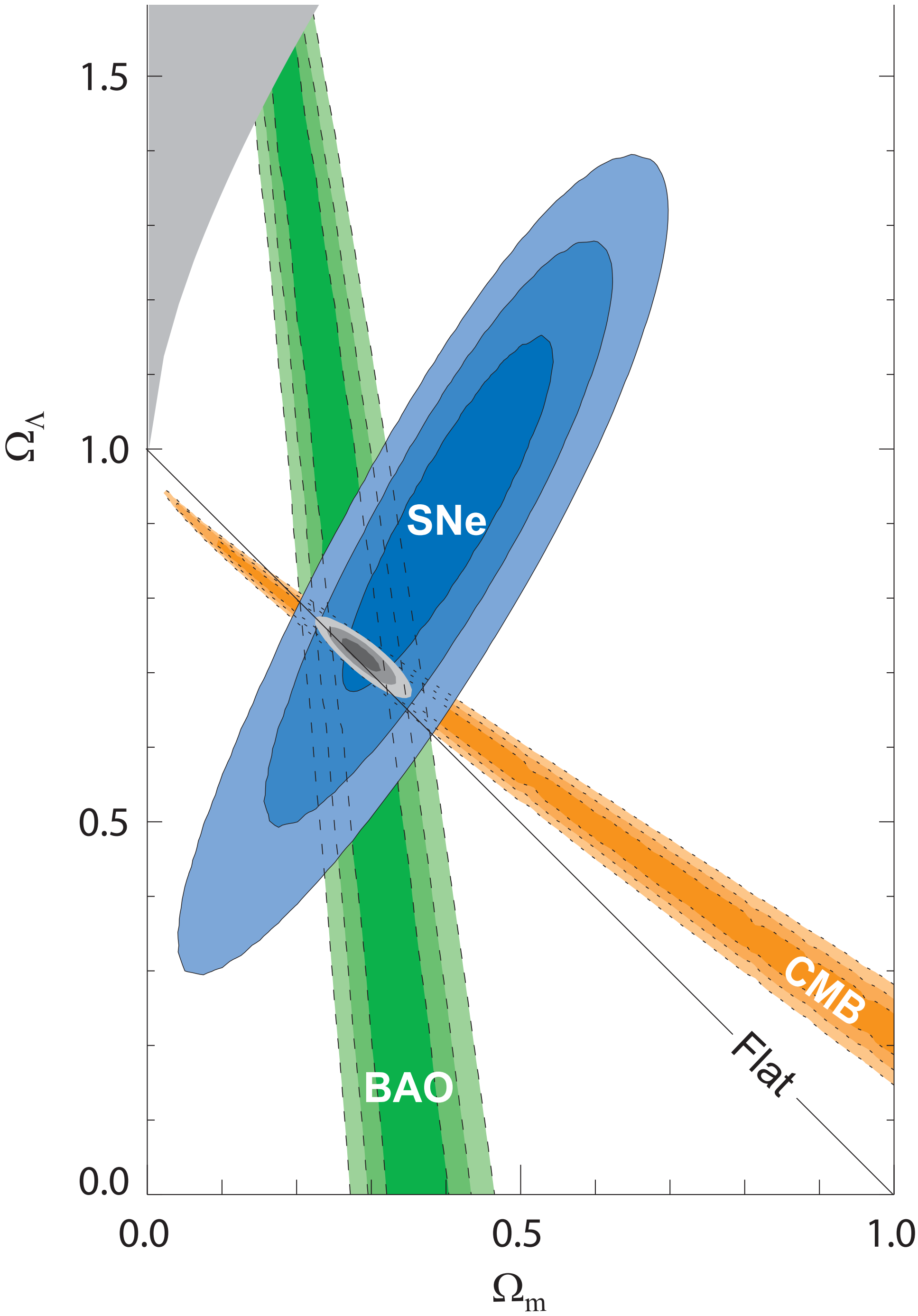

Kowalski 2008

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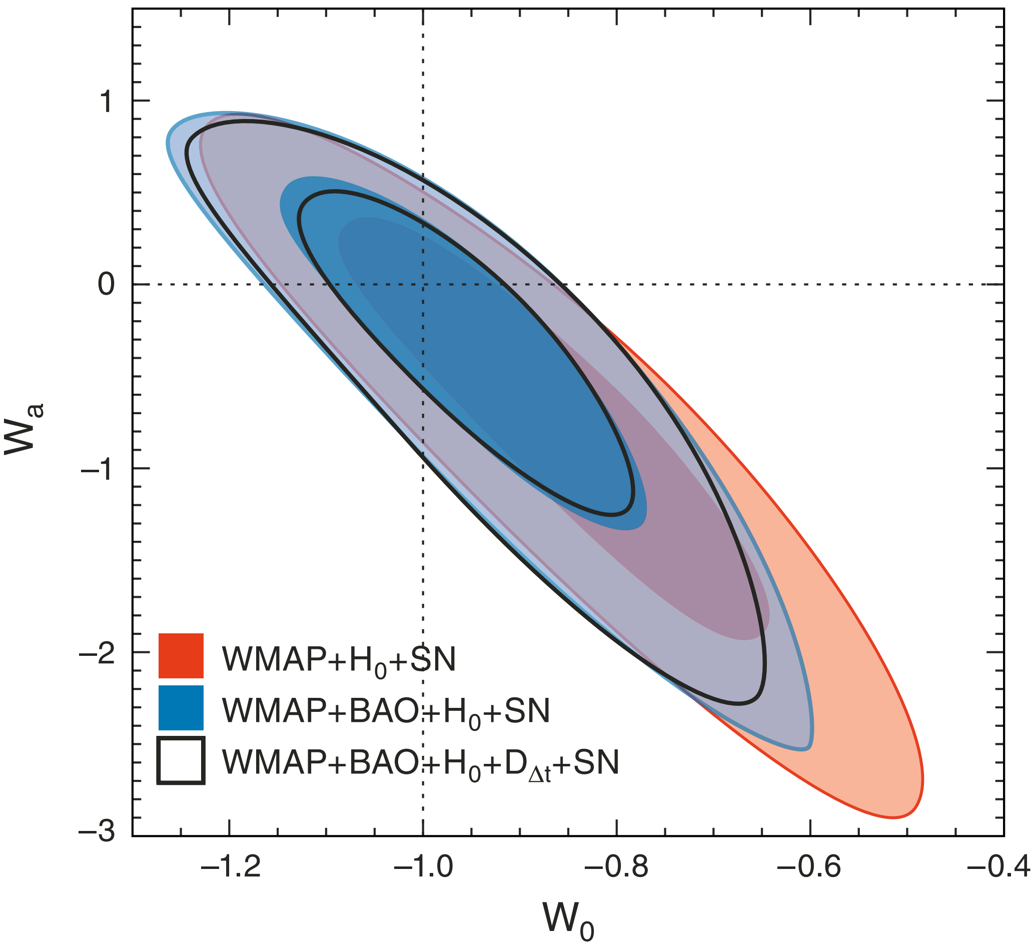

FIG. 13.— Joint two-dimensional marginalized constraint on the linear evolution model of dark energy equation of state, $w(a) = w_0 + w_a(1 - a)$. The contours show the 68% and 95% CL from *WMAP*+H_0+SN (red), *WMAP*+BAO+H_0+SN (blue), and *WMAP*+BAO+H_0+$D_{\Delta t}$+SN (black), for a flat universe.

WMAP7 Komatsu et al 2010

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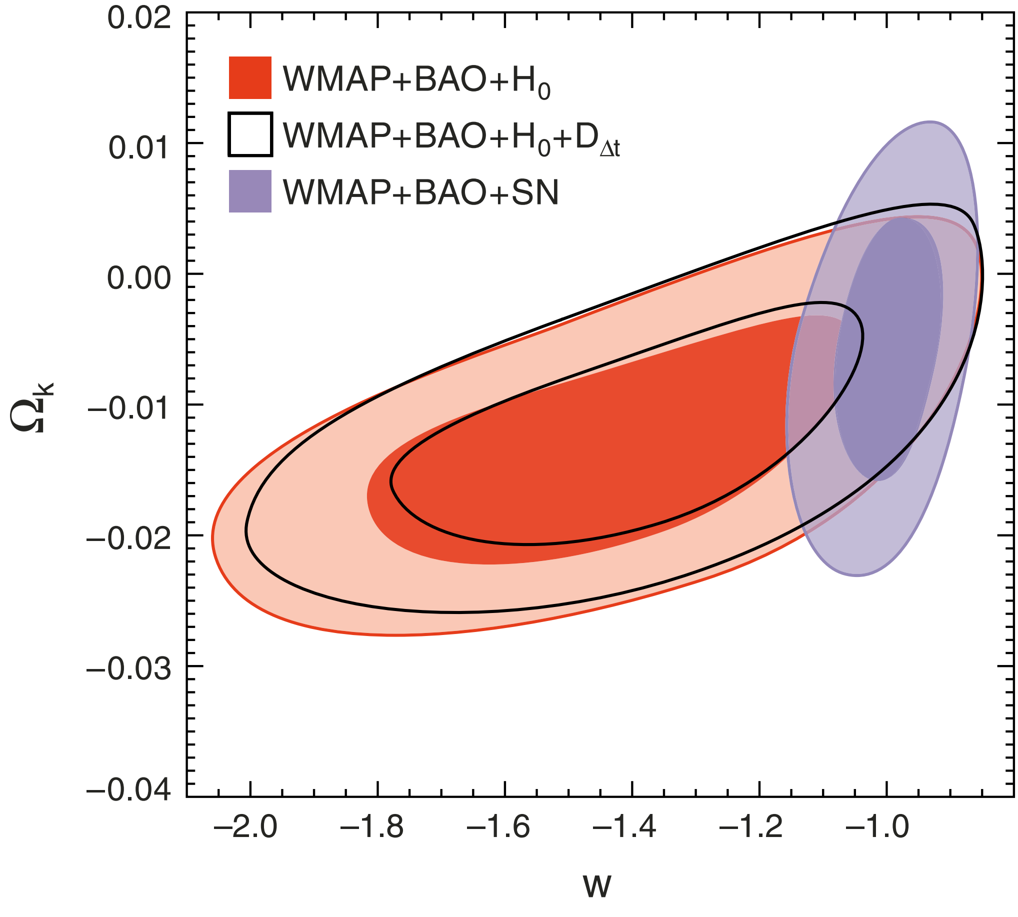

FIG. 12.— Joint two-dimensional marginalized constraint on the time-independent (constant) dark energy equation of state, w, and the curvature parameter, Ω_k. The contours show the 68% and 95% CL from *WMAP*+BAO+H_0 (red), *WMAP*+BAO+H_0+$D_{\Delta t}$ (black), and *WMAP*+BAO+SN (purple).

WMAP7 Komatsu et al 2010

You can find these on the WMAP website http://lambda.gsfc.nasa.gov/product/map/dr4/parameters.cfm

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