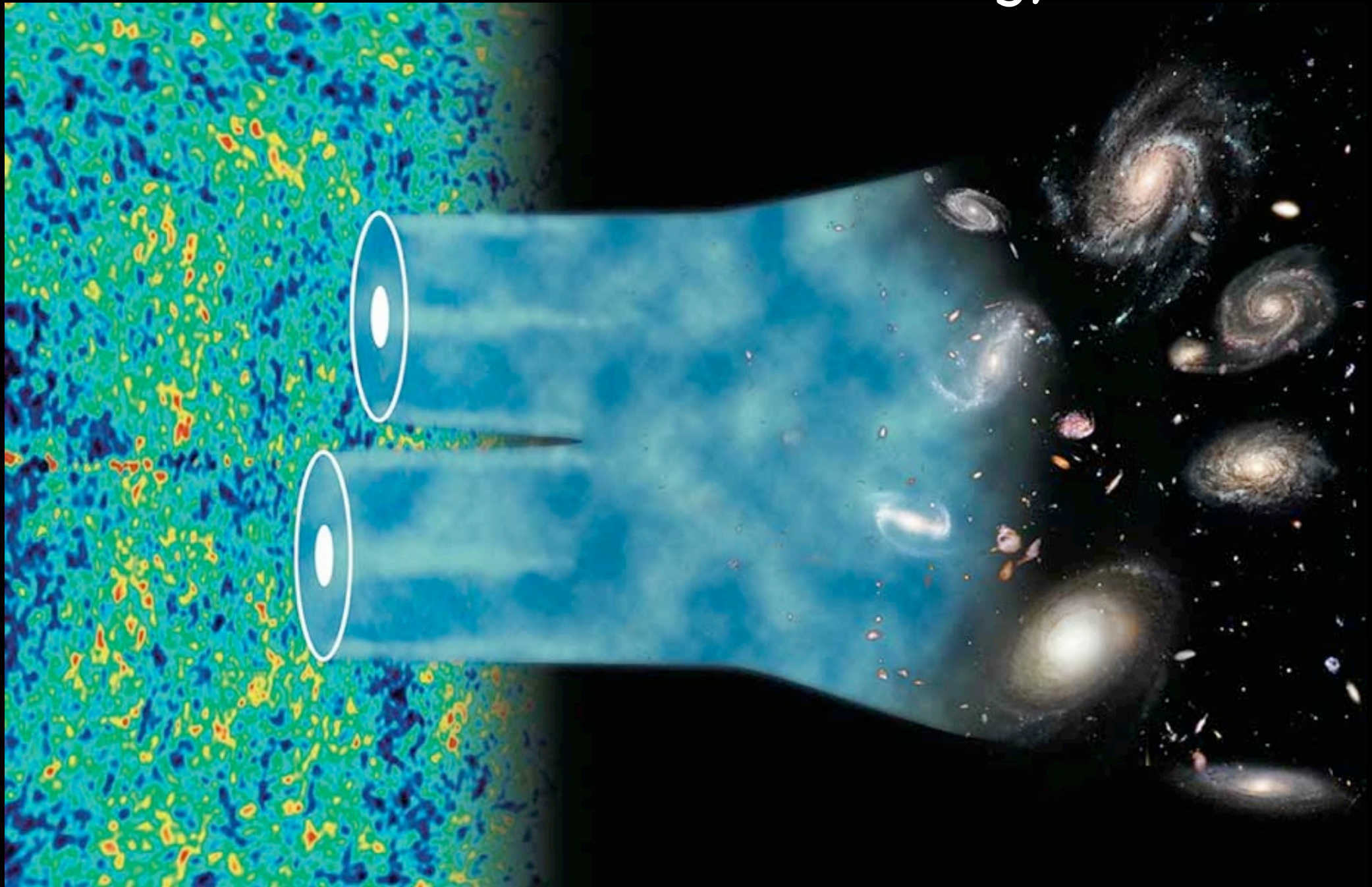
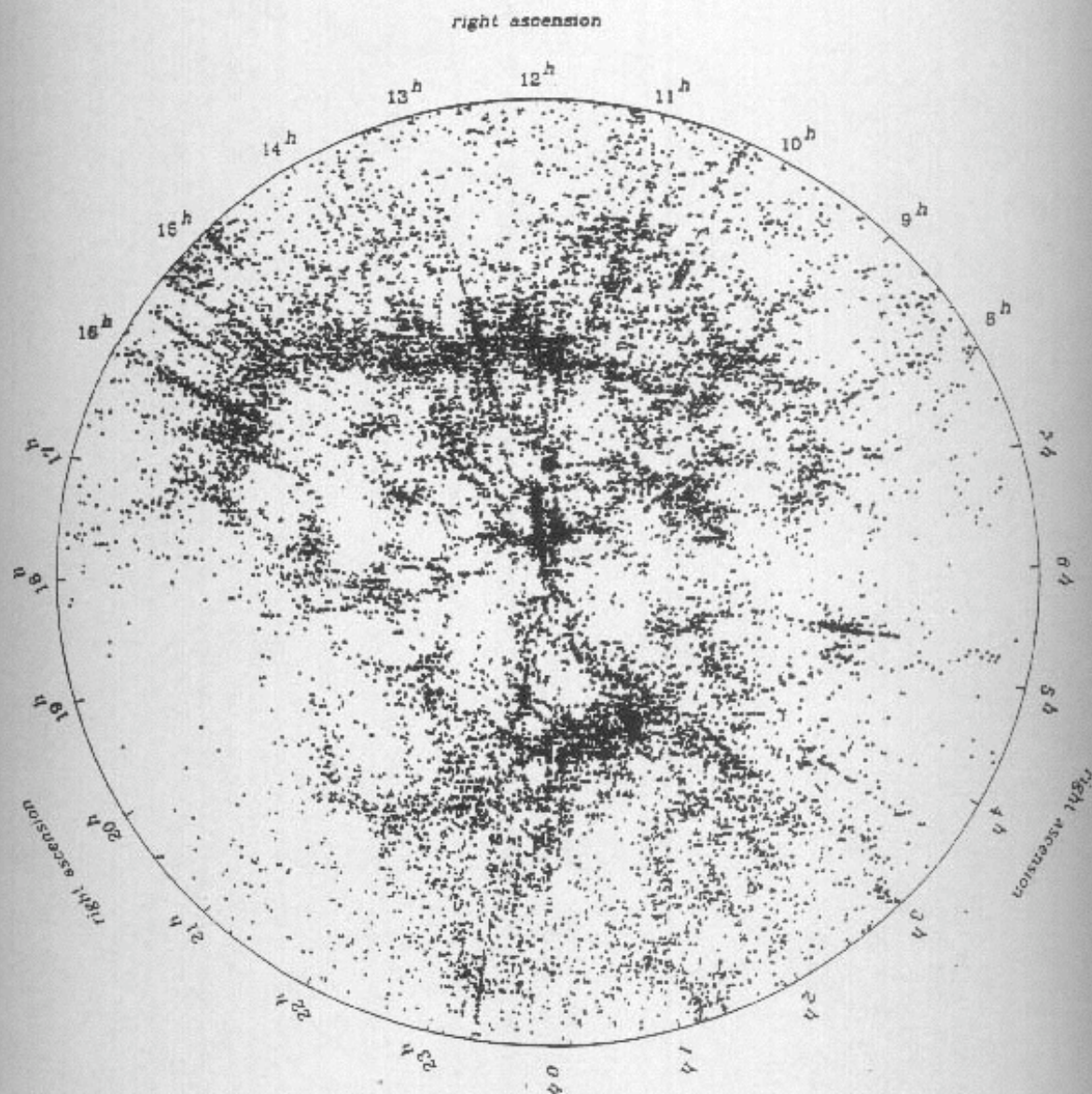


Introduction to Cosmology



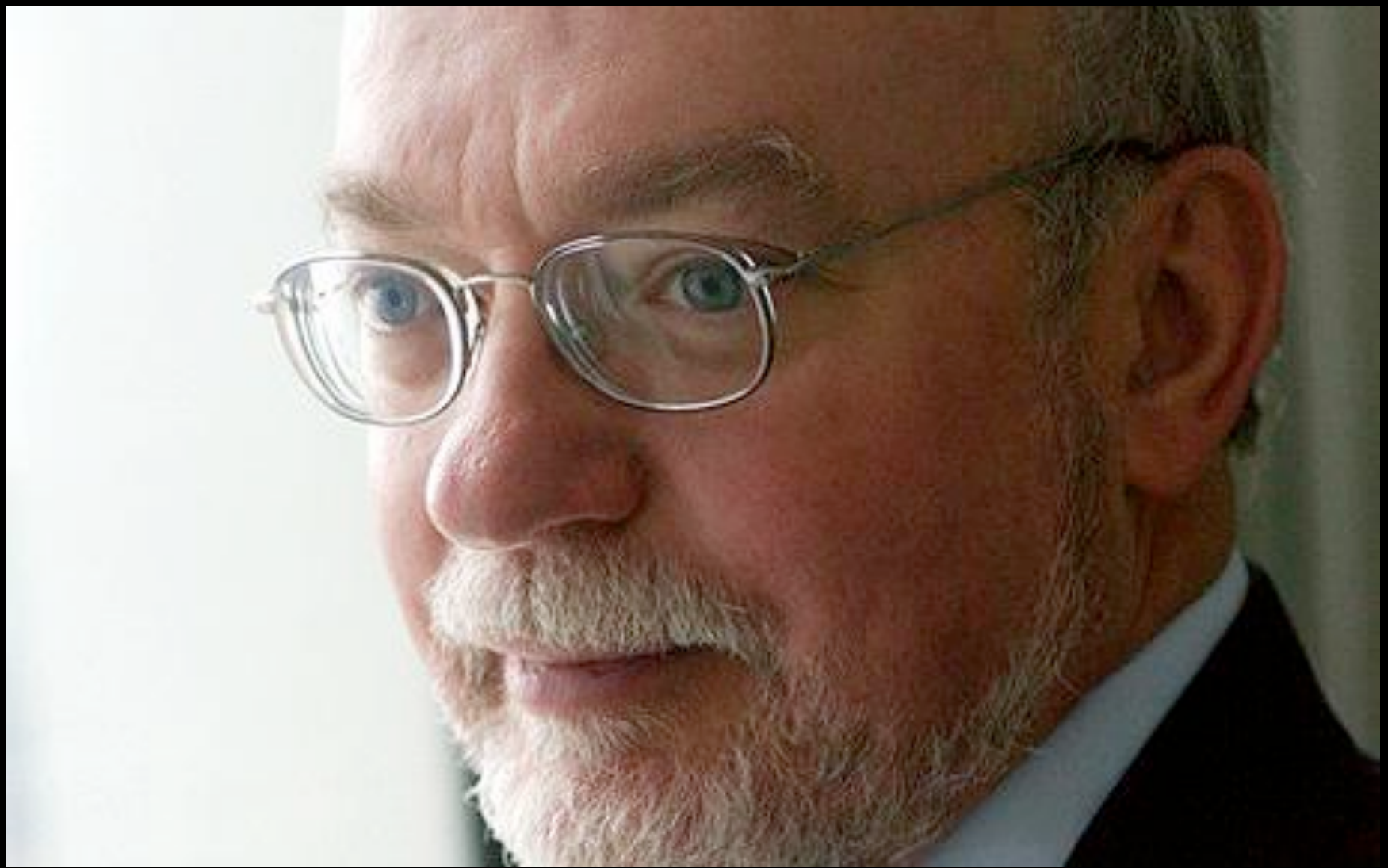
Lecture 14



$$0.0 < m \leq 22.0$$

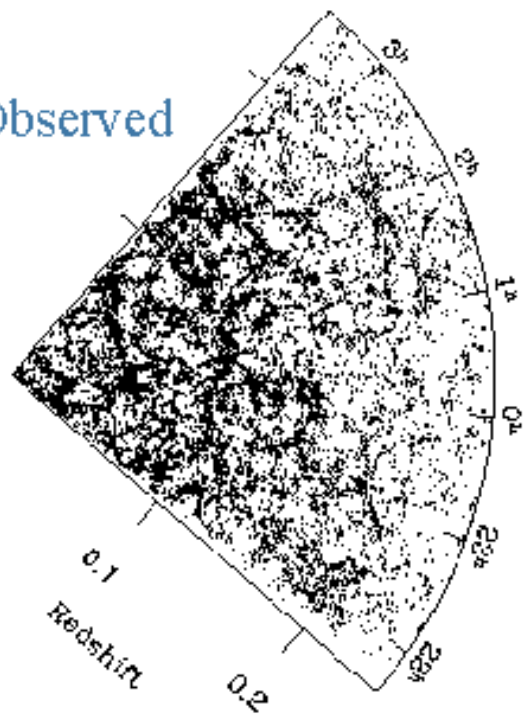
$$0.0 \leq \delta < 40.0^\circ$$

Fig. 1. Redshift space map of the CfA Redshift Catalogue with radius 15,000 km/sec and with $0^\circ \leq \delta \leq 40^\circ$. Note the Great Wall, running between a right ascension of 8 and 16 hours at ~ 7000 km/s, Virgo at 12.5 hours and 1000 km/s, and the Pisces-Perseus supercluster between 0 and 3 hours and at 5000 km/s.

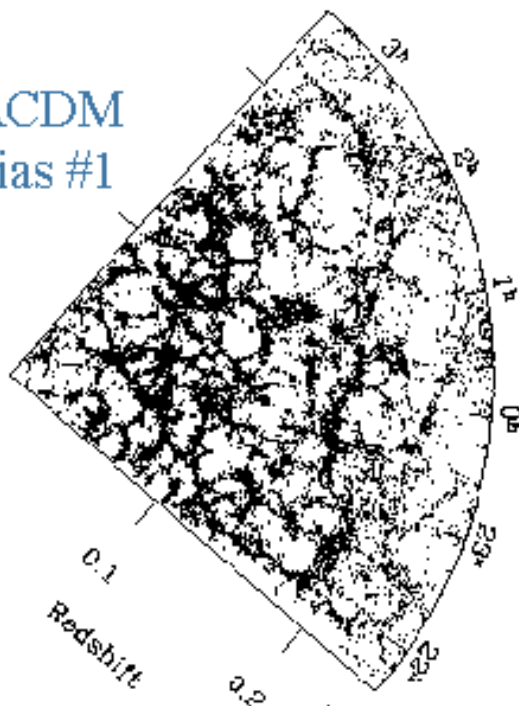


Models vs observations

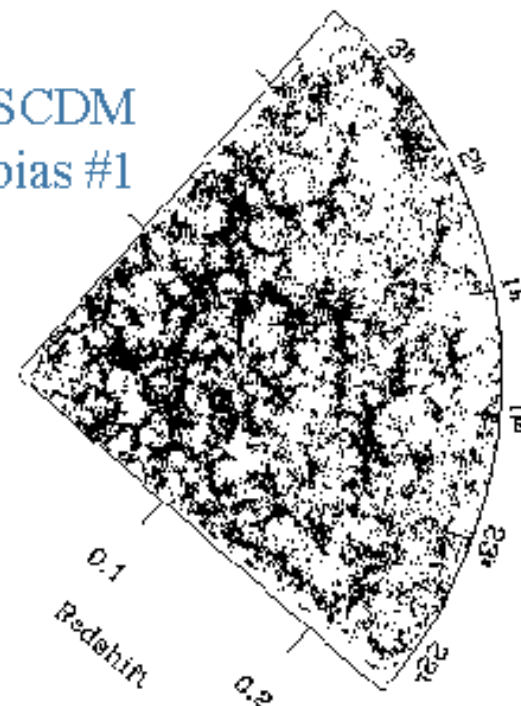
Observed



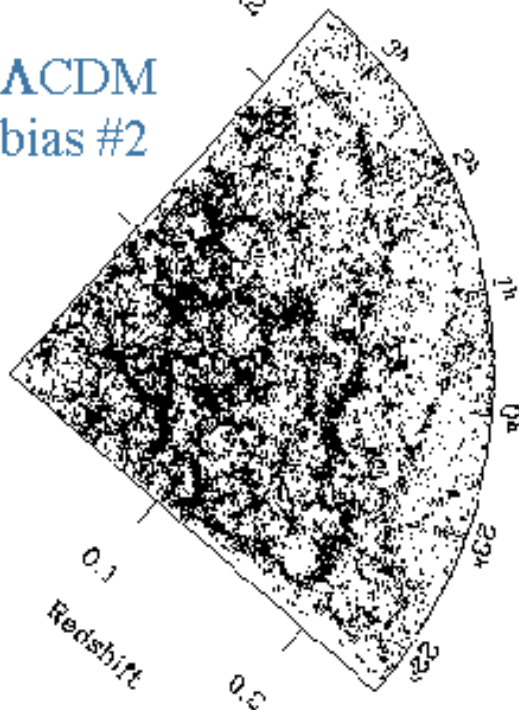
Λ CDM
bias #1



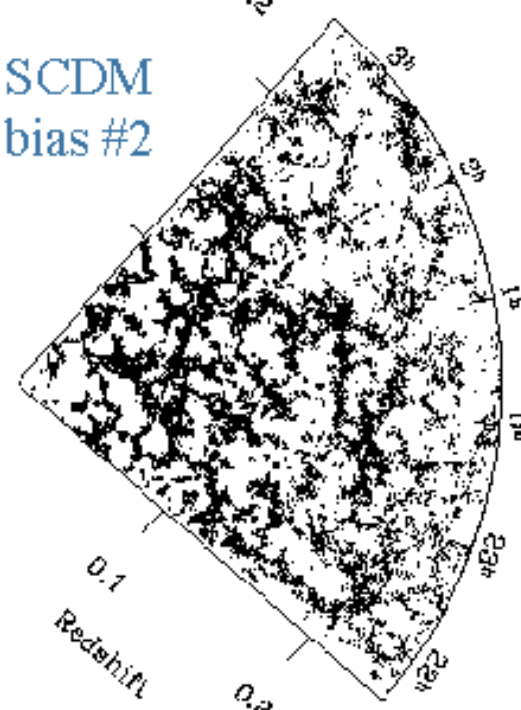
SCDM
bias #1

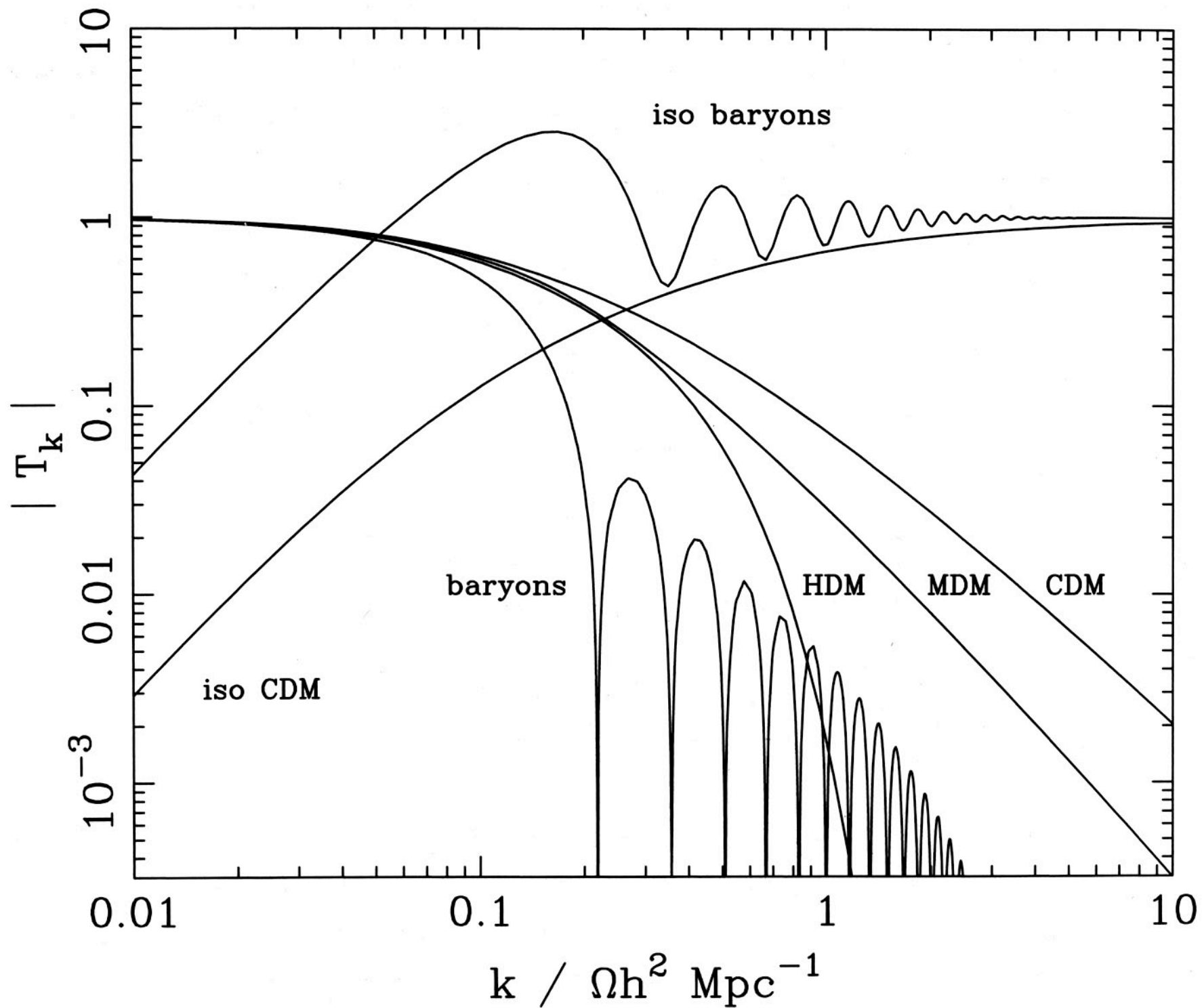


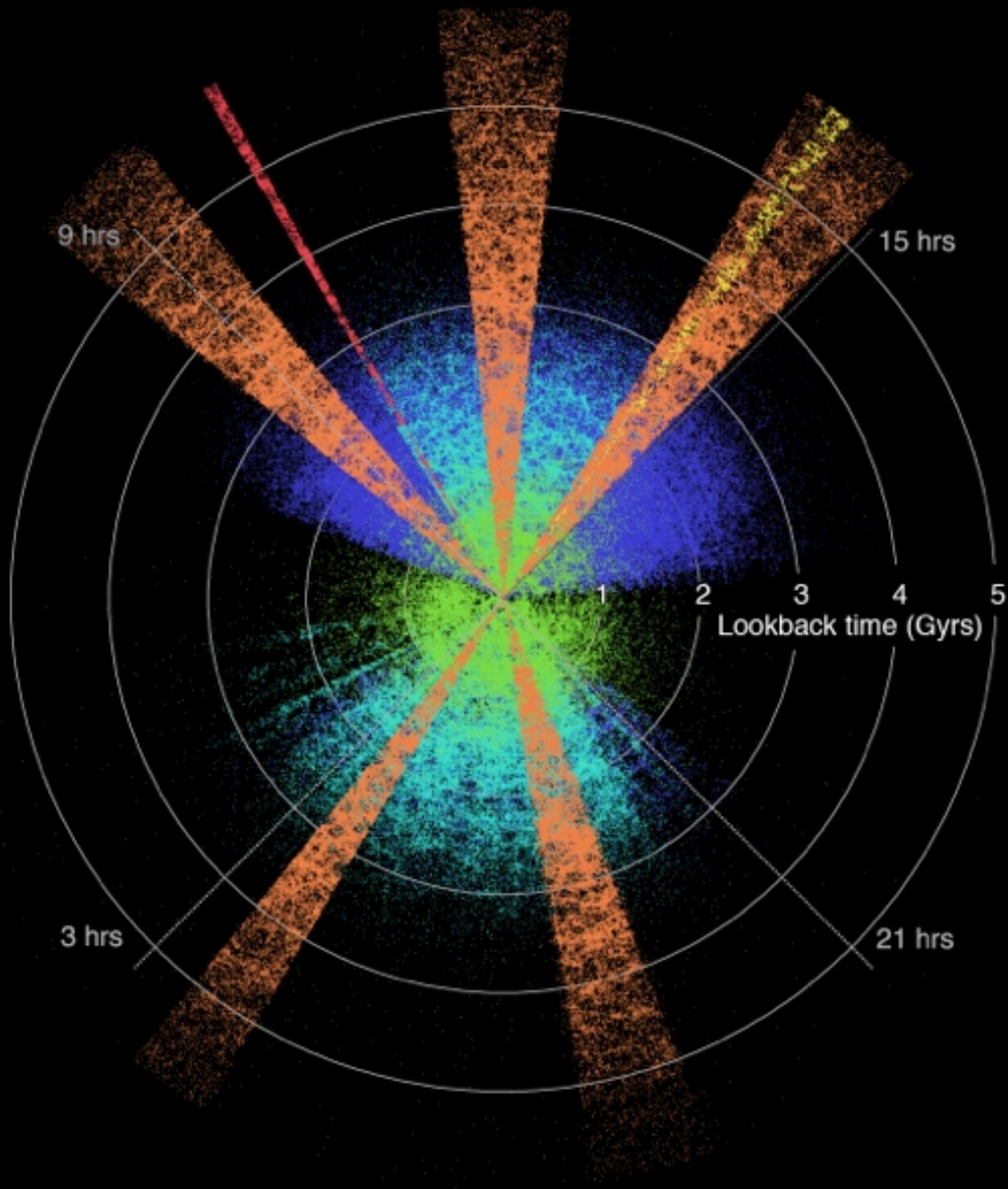
Λ CDM
bias #2



SCDM
bias #2

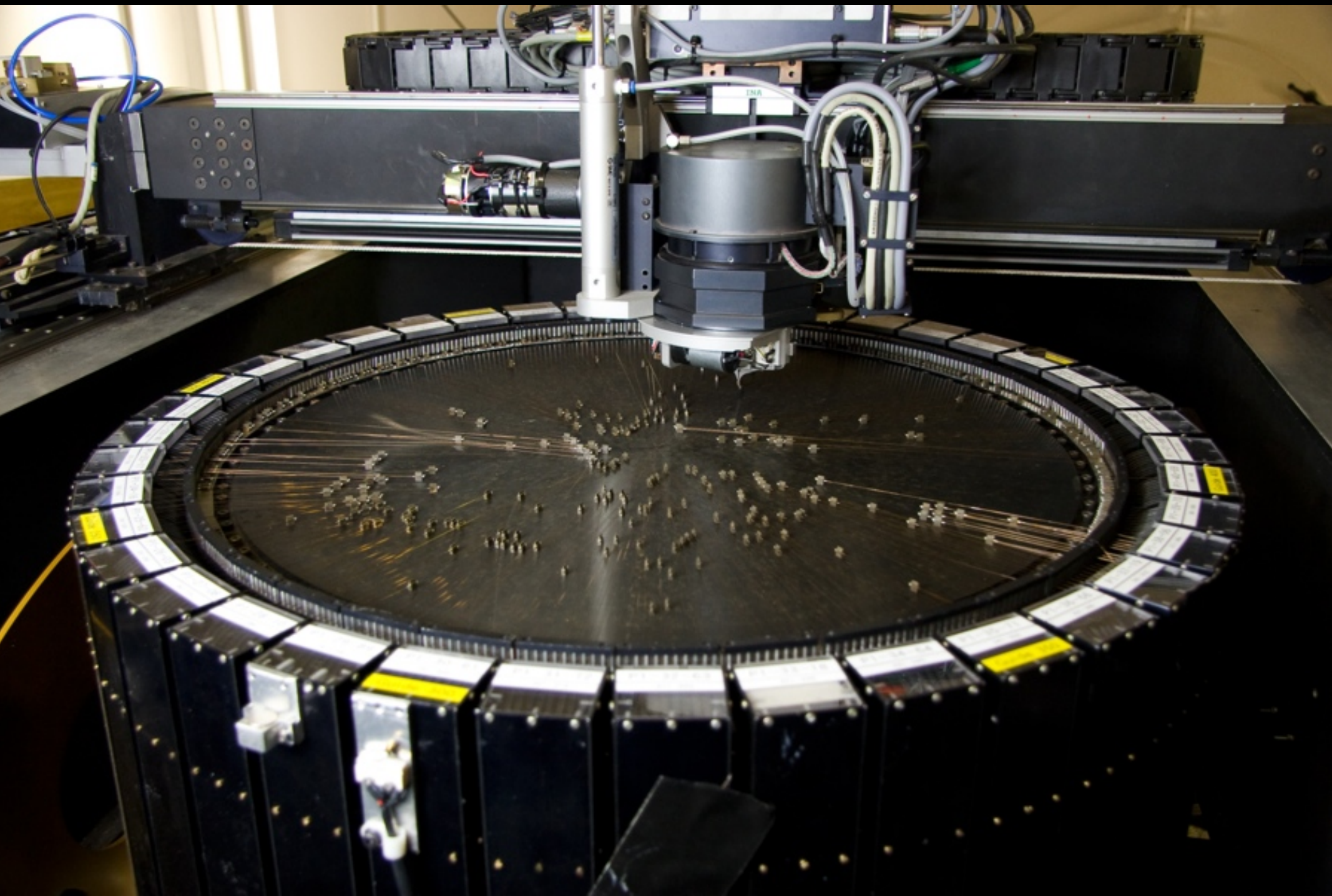


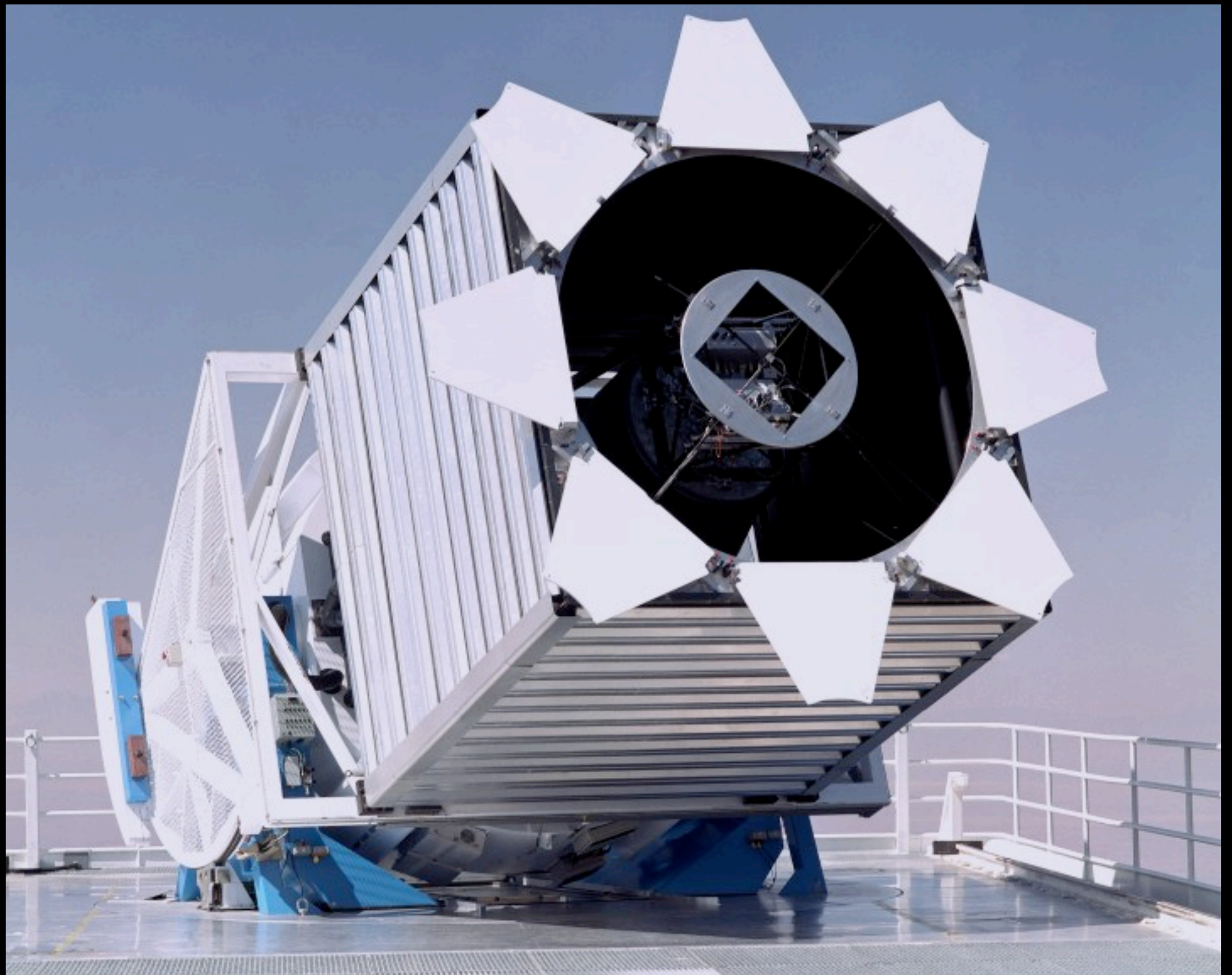




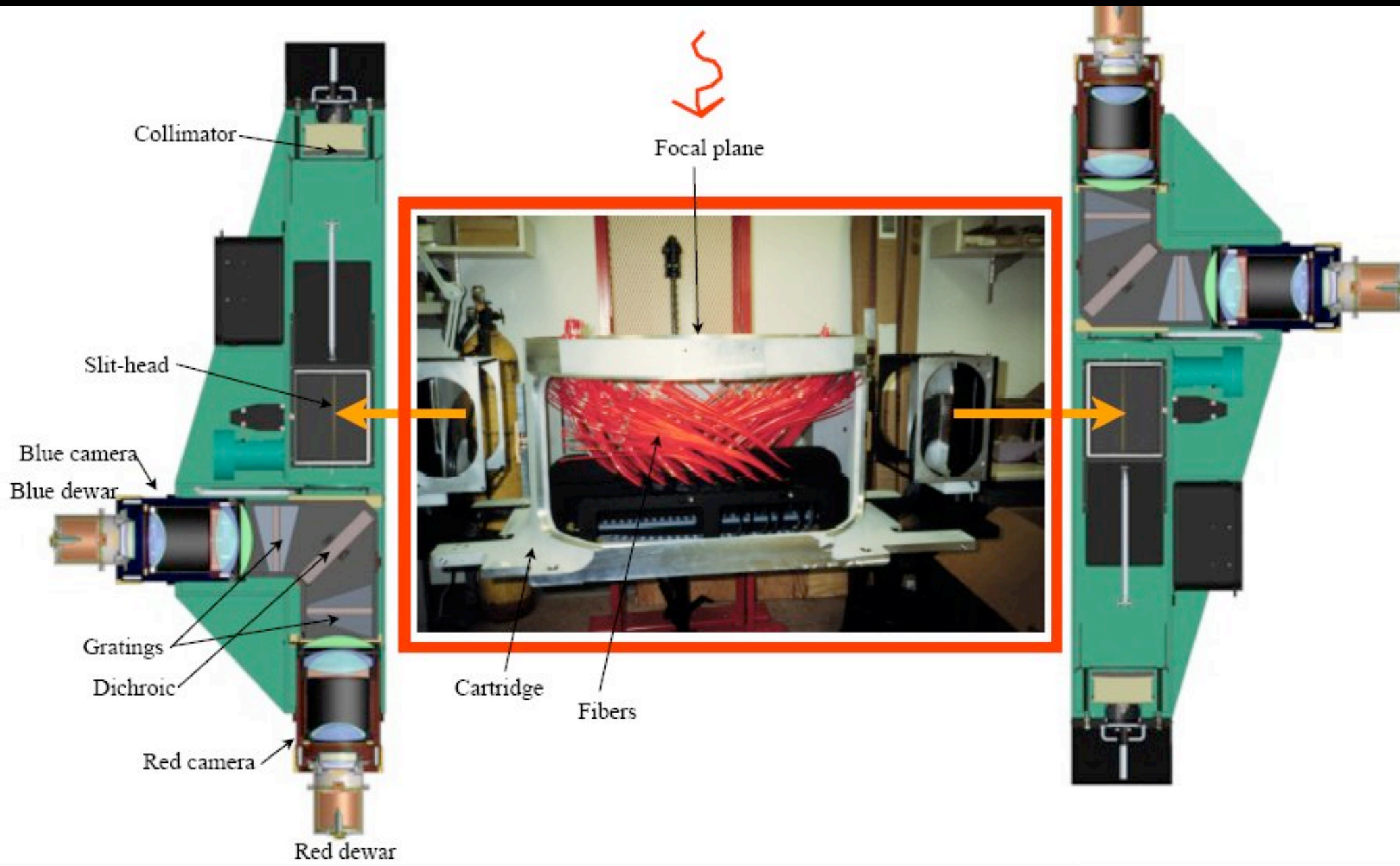
- DEEP2
- zCOSMOS
- GAMA
- 2dFGRS
- SDSS DR9
- 6dFGS











Collimator

Focal plane

Slit-head

Blue camera
Blue dewar

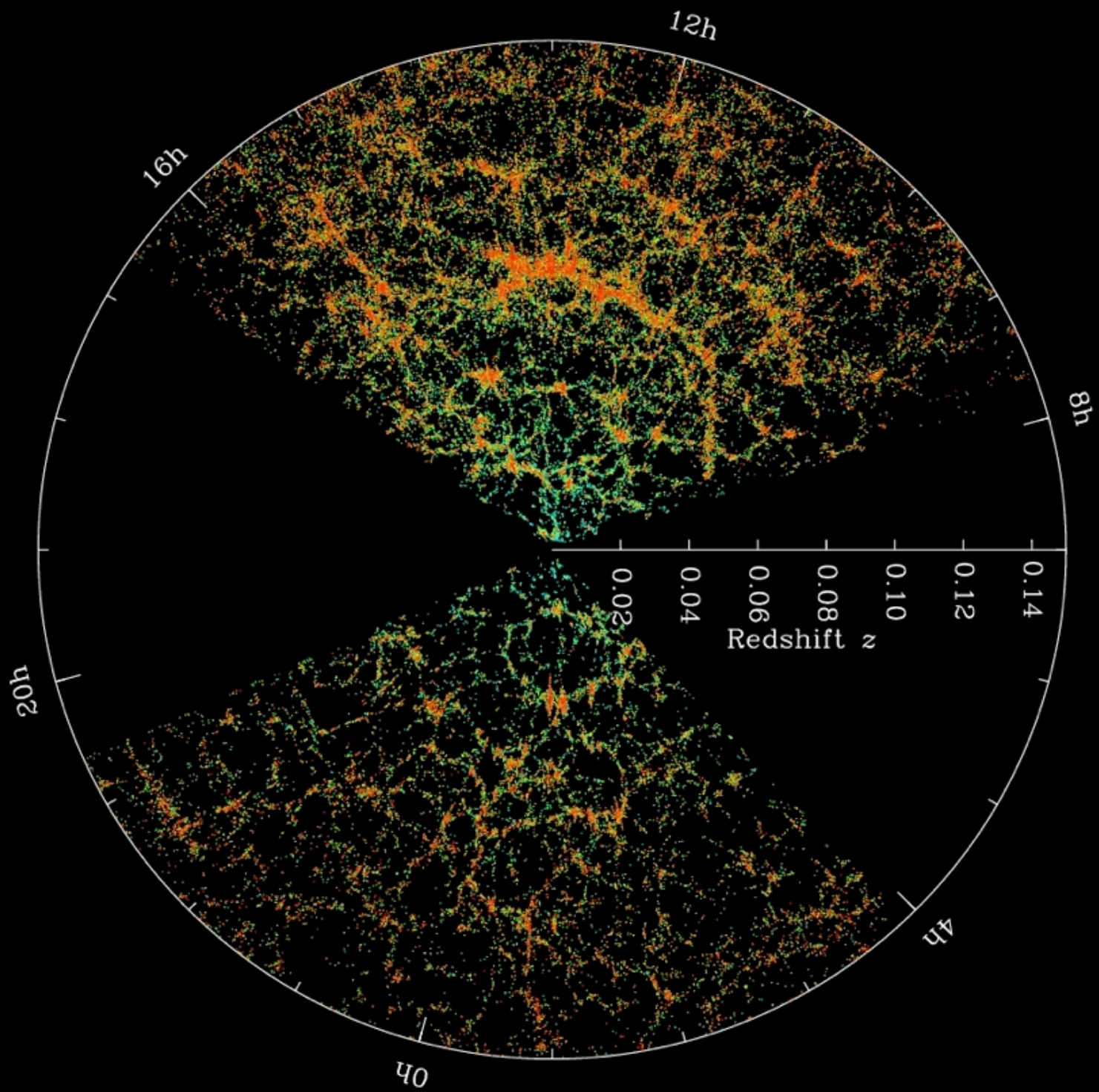
Gratings
Dichroic

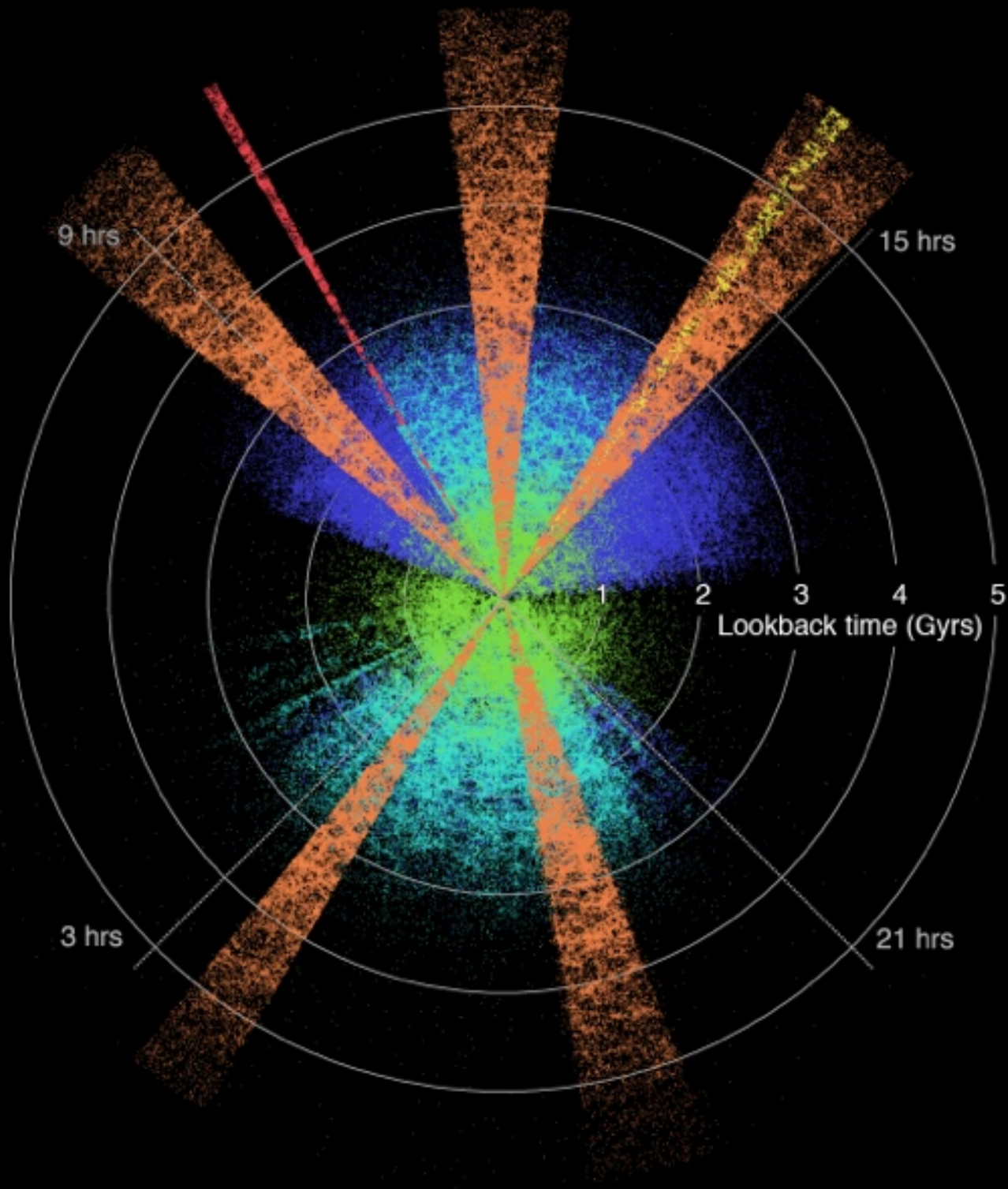
Red camera

Red dewar

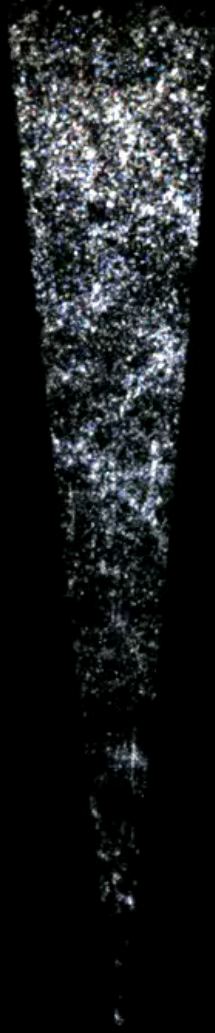
Cartridge

Fibers





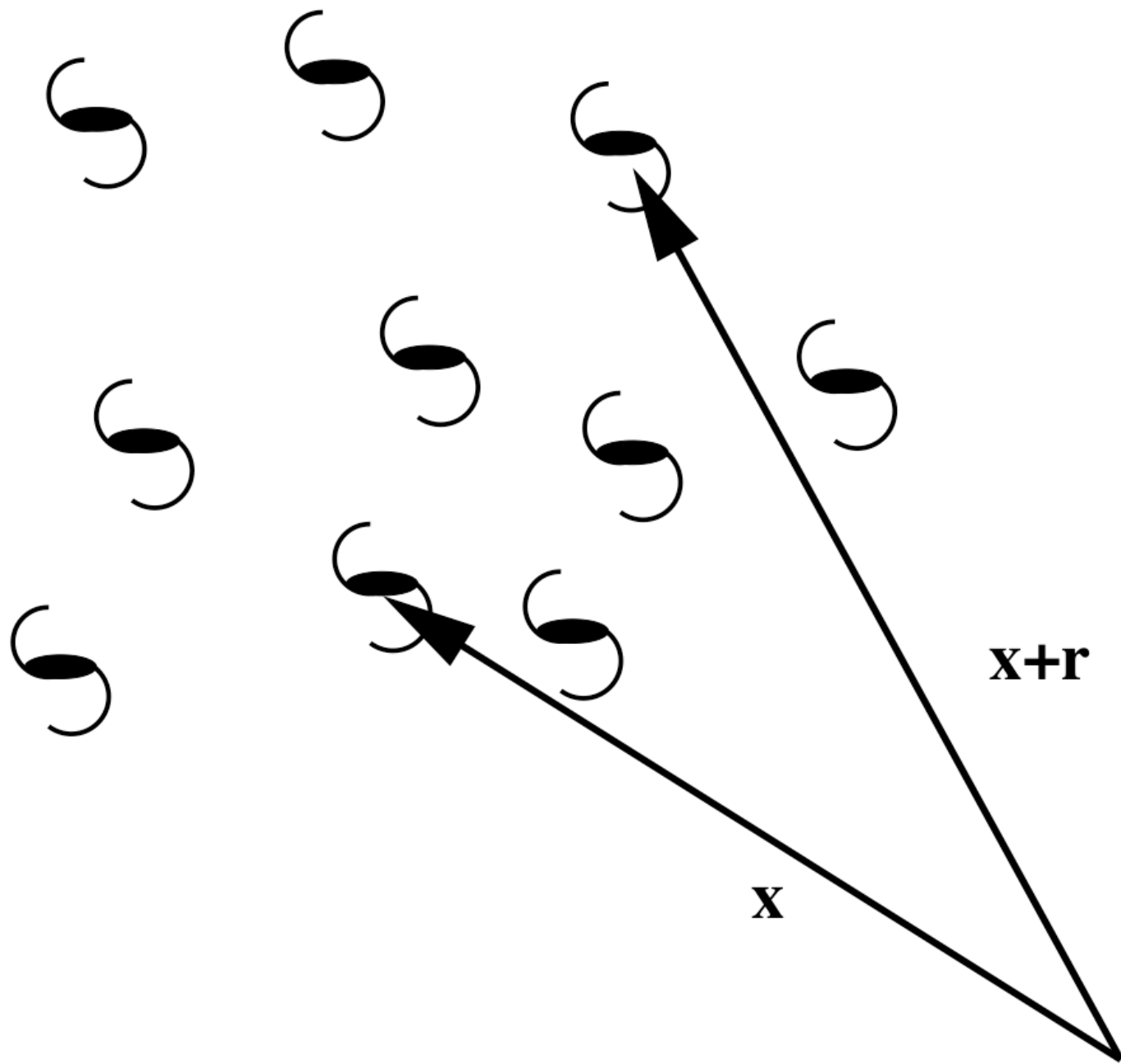
- DEEP2
- zCOSMOS
- GAMA
- 2dFGRS
- SDSS DR9
- 6dFGS



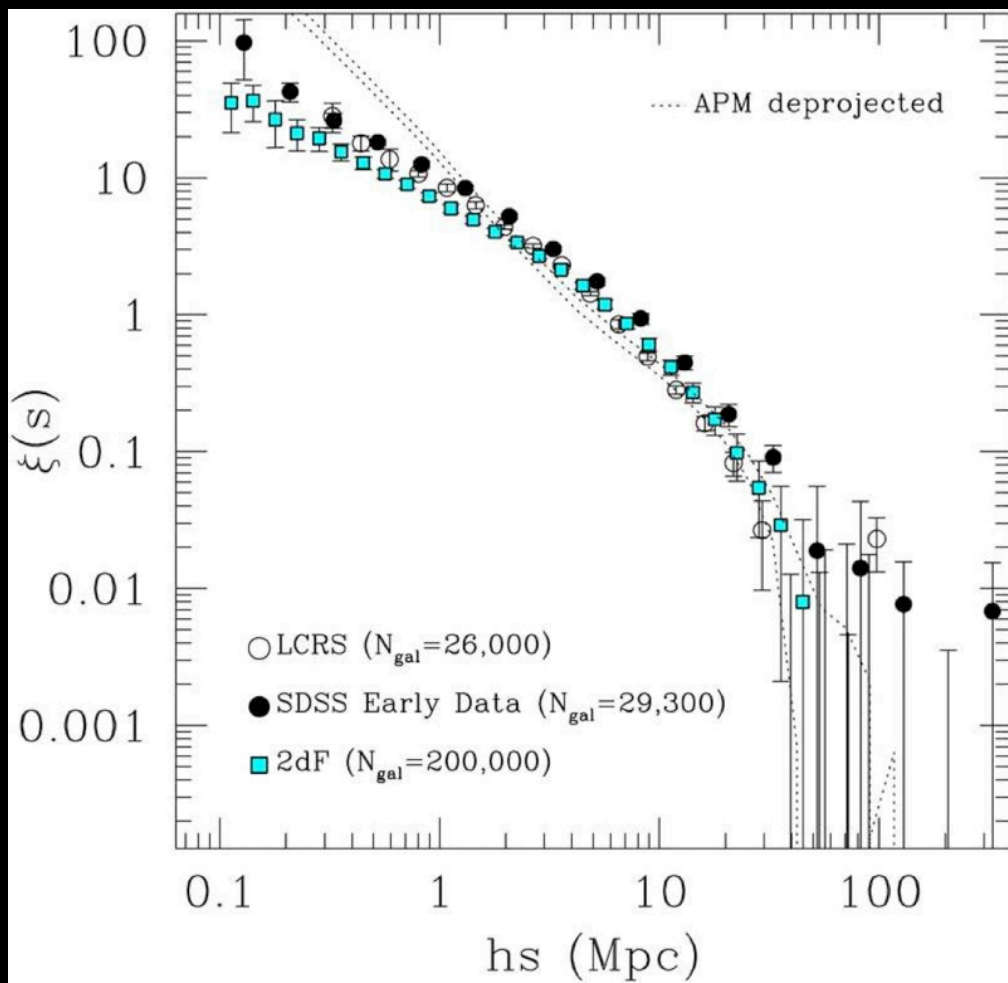


J. Bodly Del.

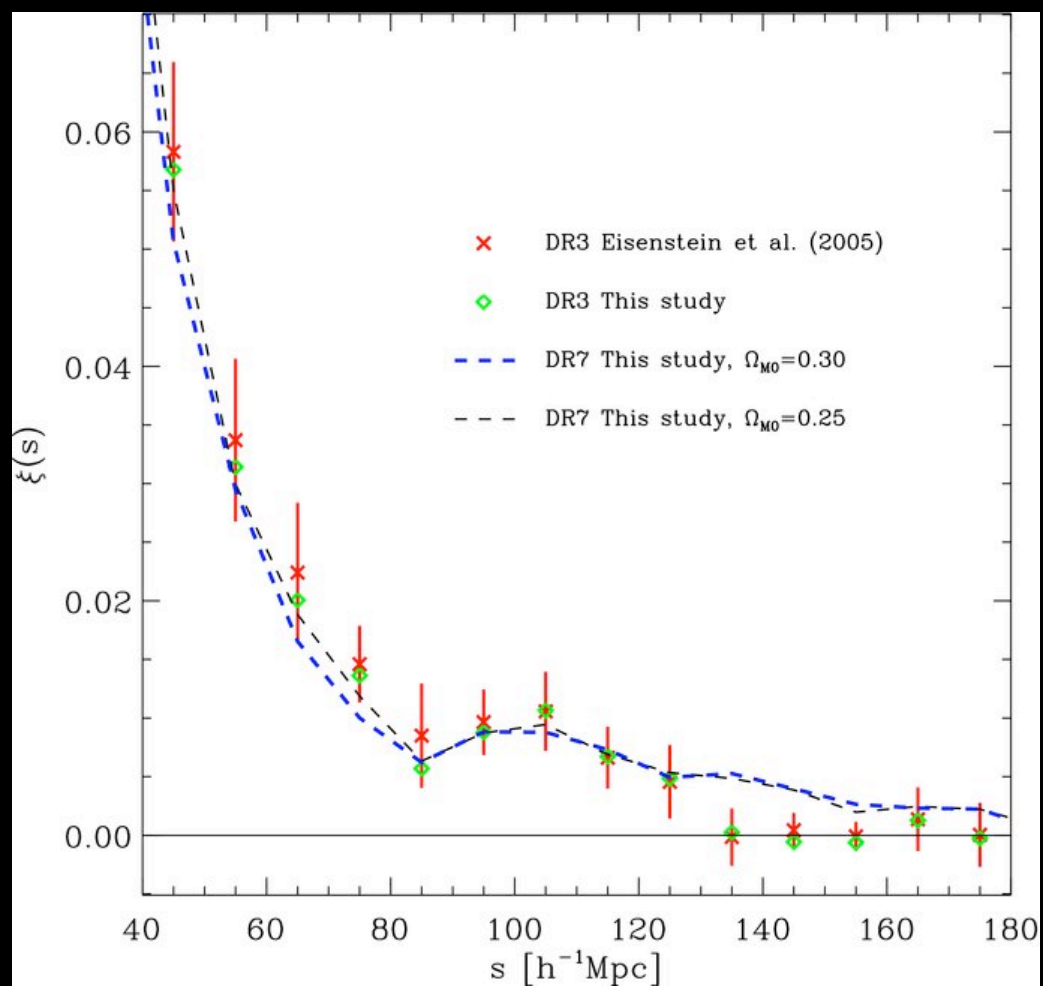
Gille Sculp.

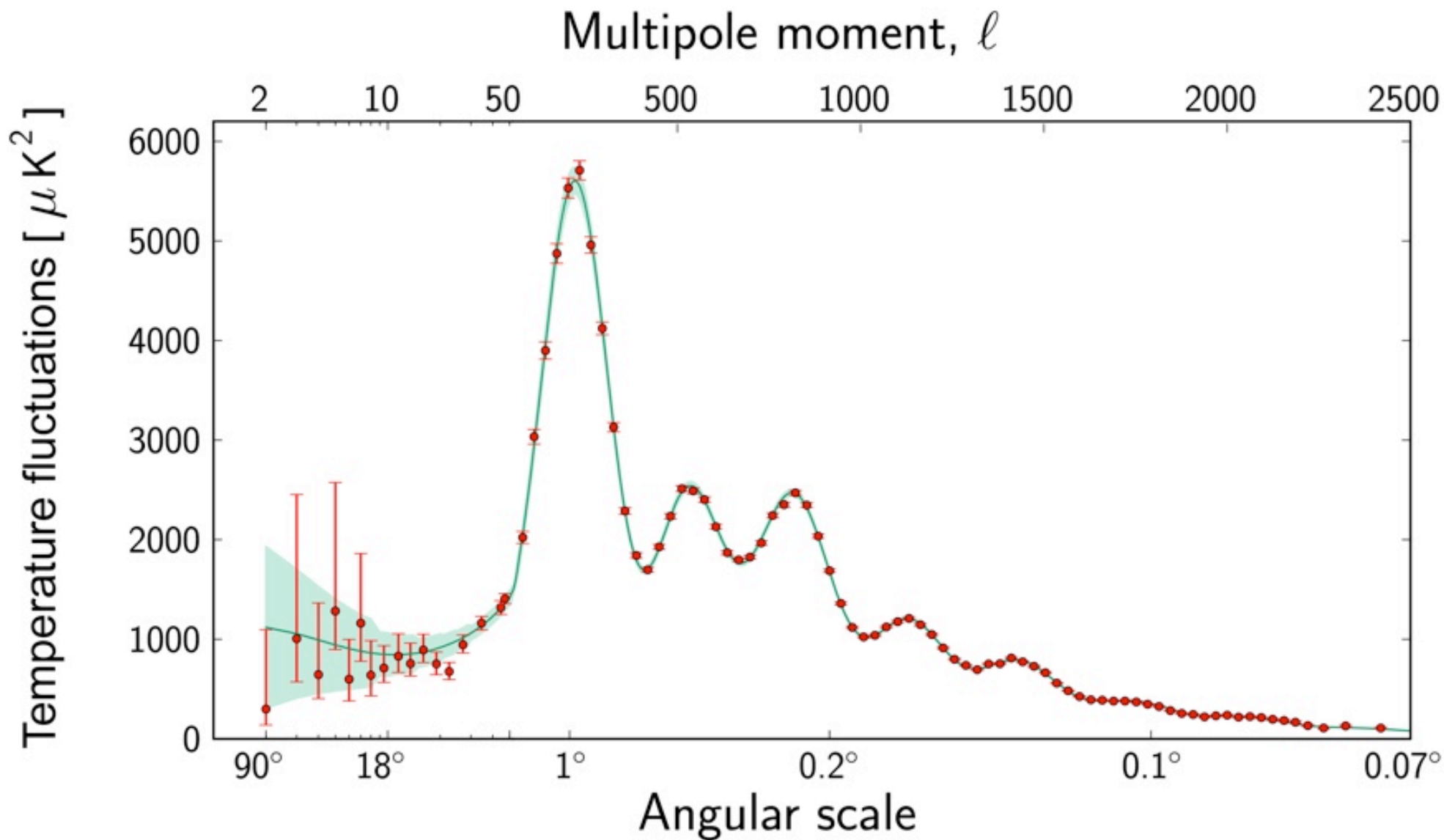


AAT 2dF early 2000s

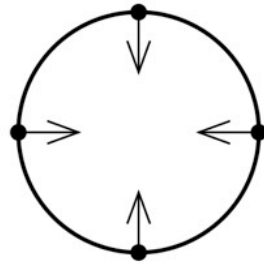


SDSS DR3, 7 2010

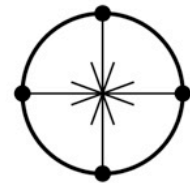




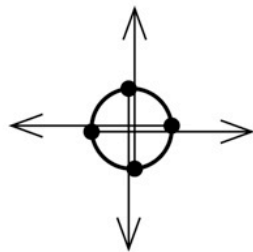
Real space:



Linear regime

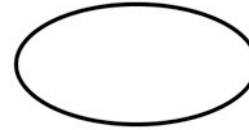


Turnaround



Collapsing

Redshift space:



Squashing effect



Collapsed

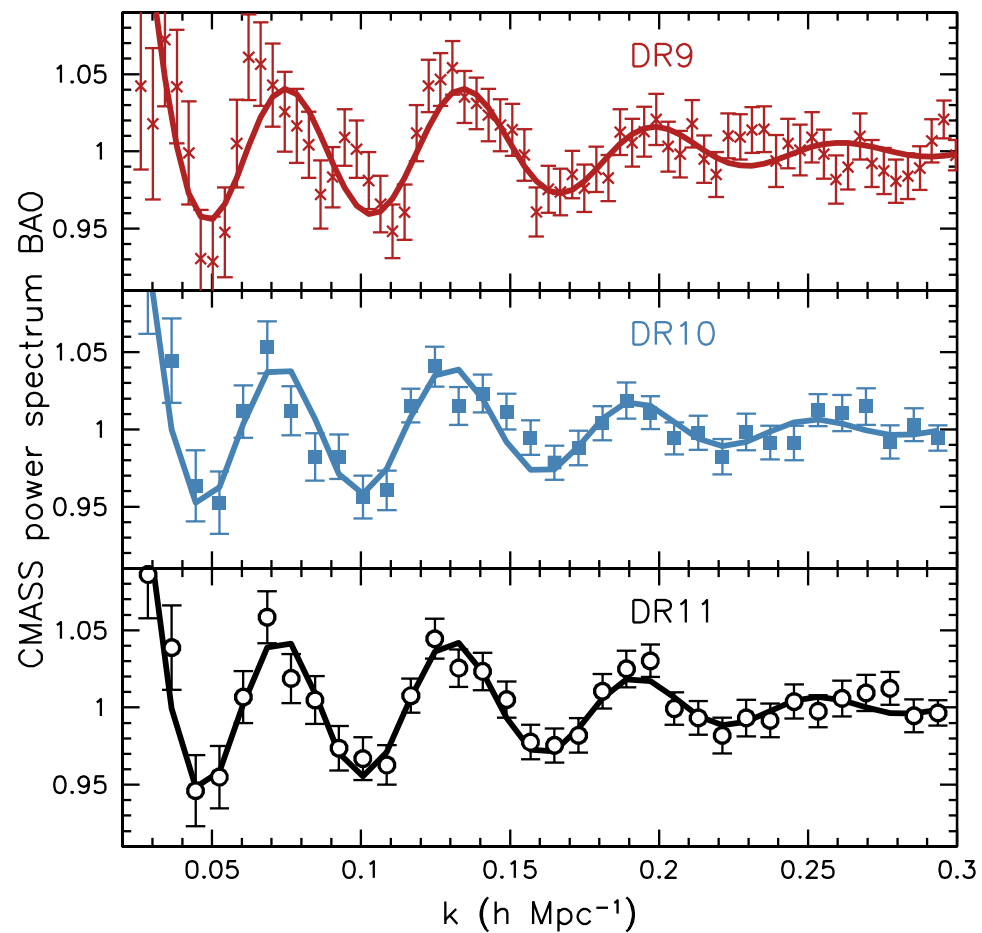
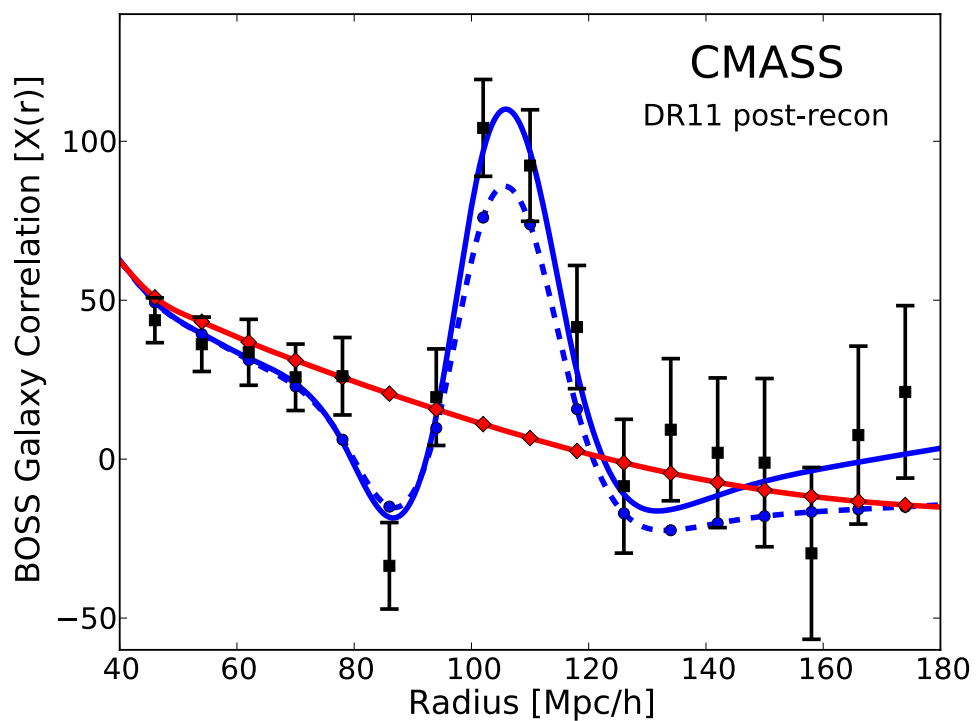


Finger-of-god



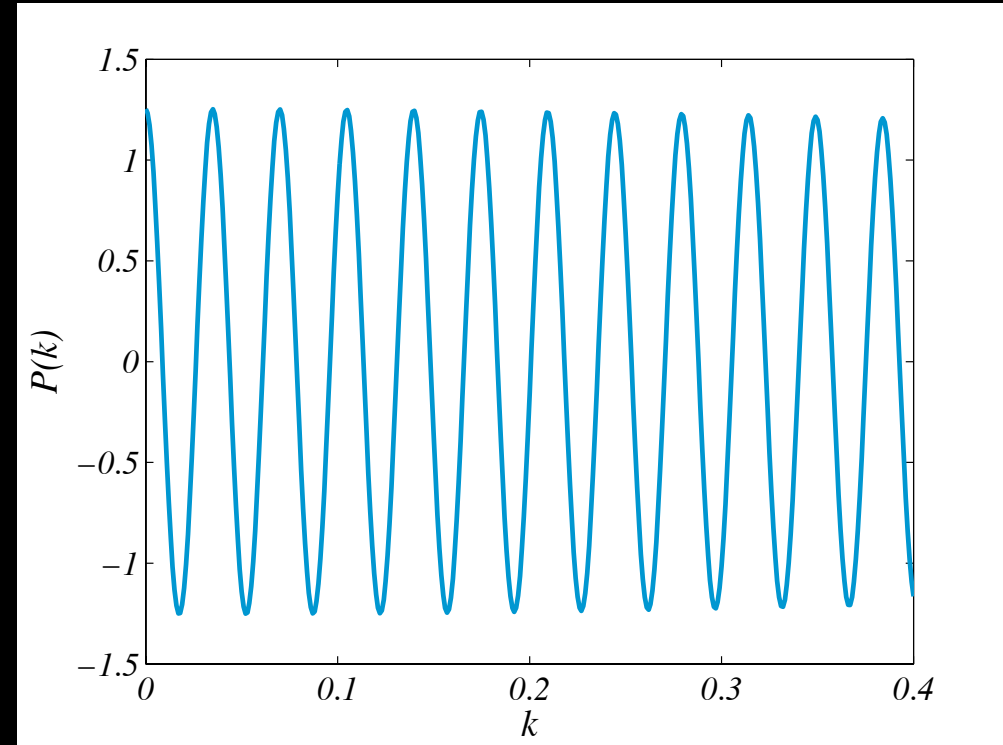
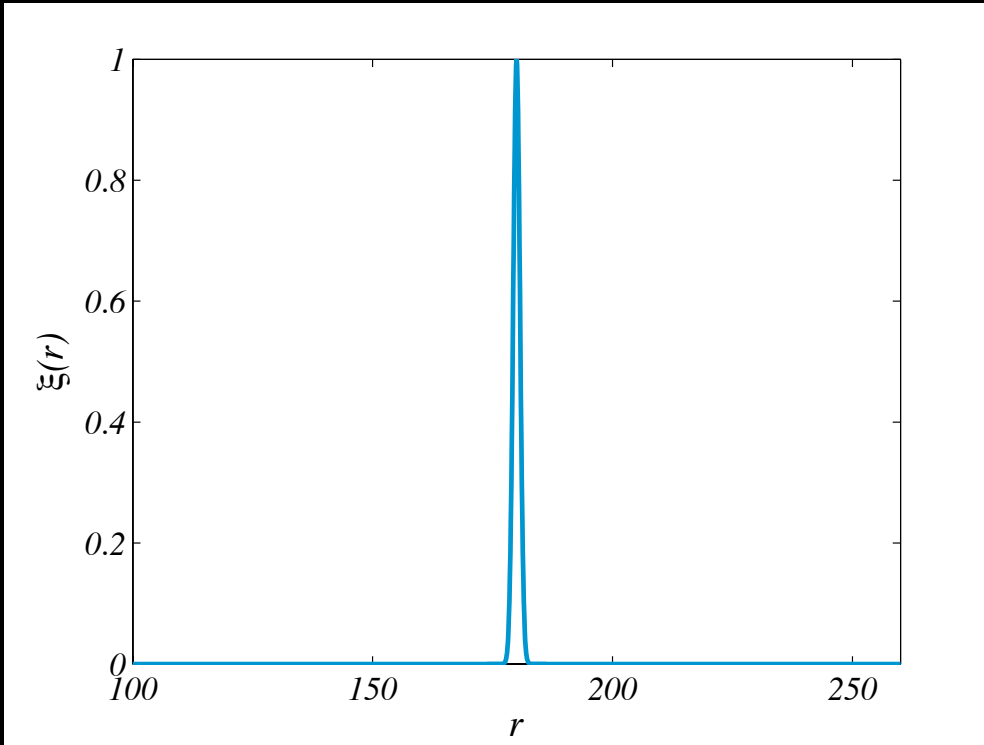
1 Million galaxies at $\langle z \rangle = 0.57$

SDSS BOSS

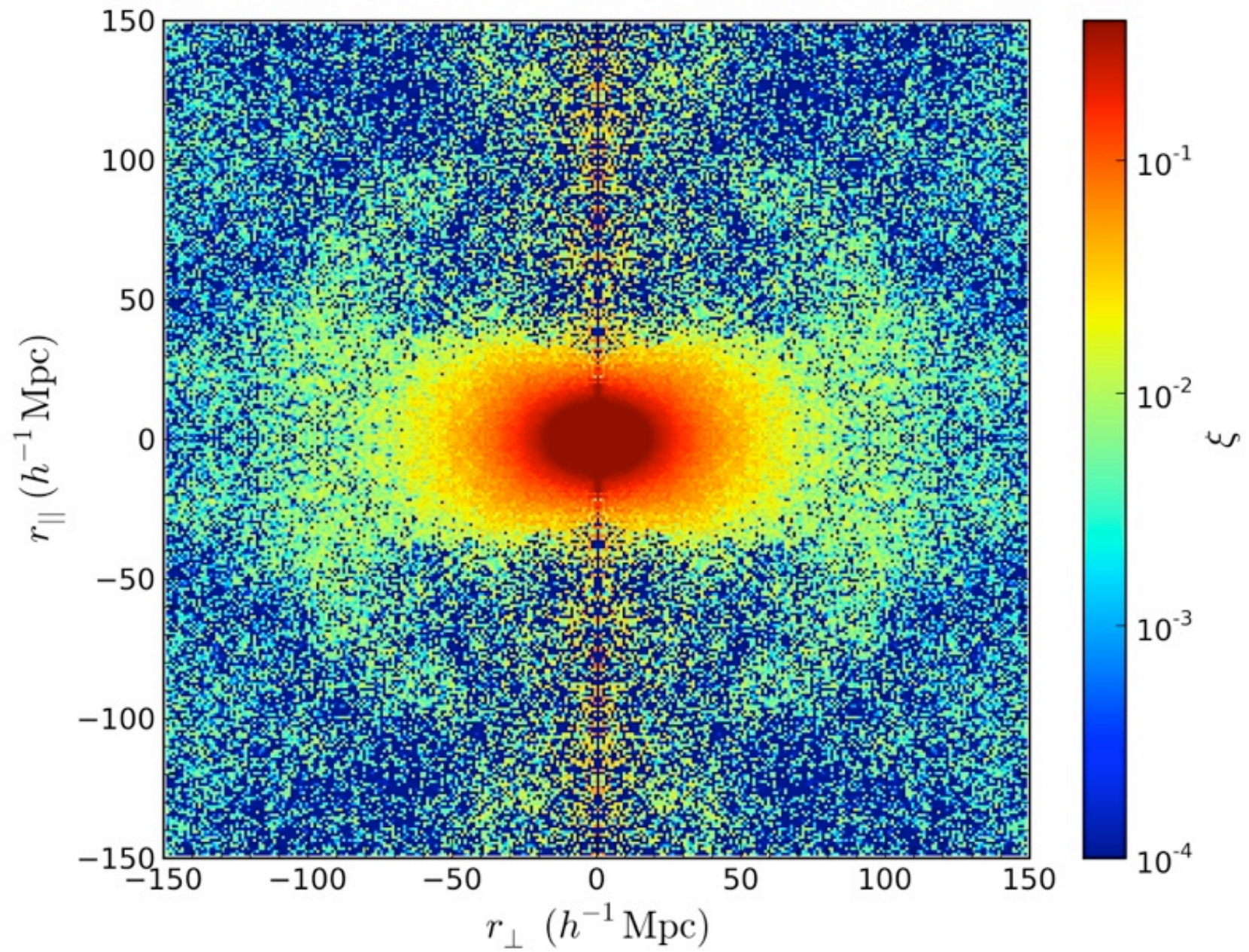


Anderson+ 65 others! (2014)

A sharp peak in the correlation function...

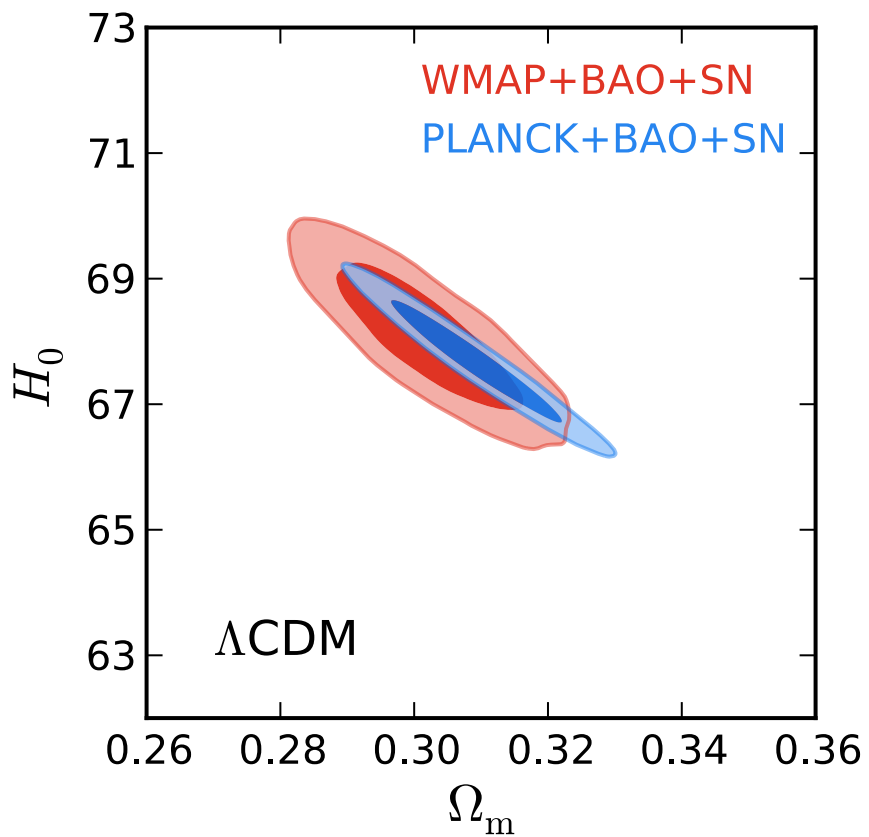


...corresponds to a series of oscillations in the power spectrum

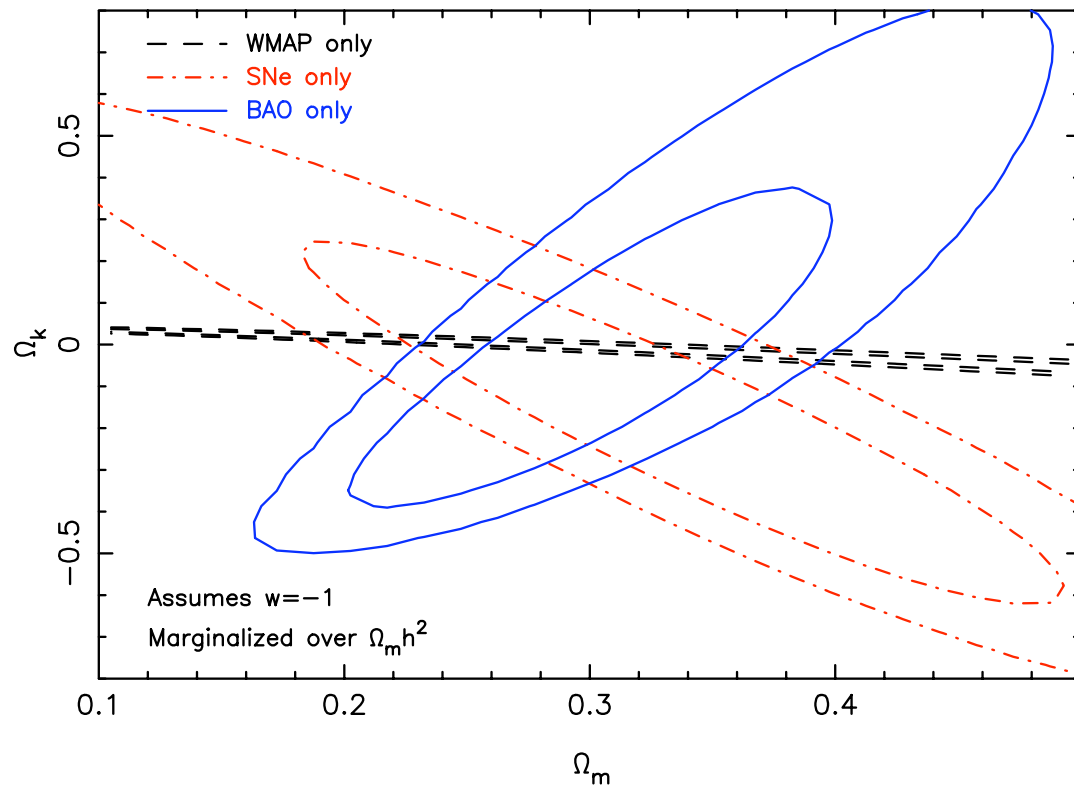


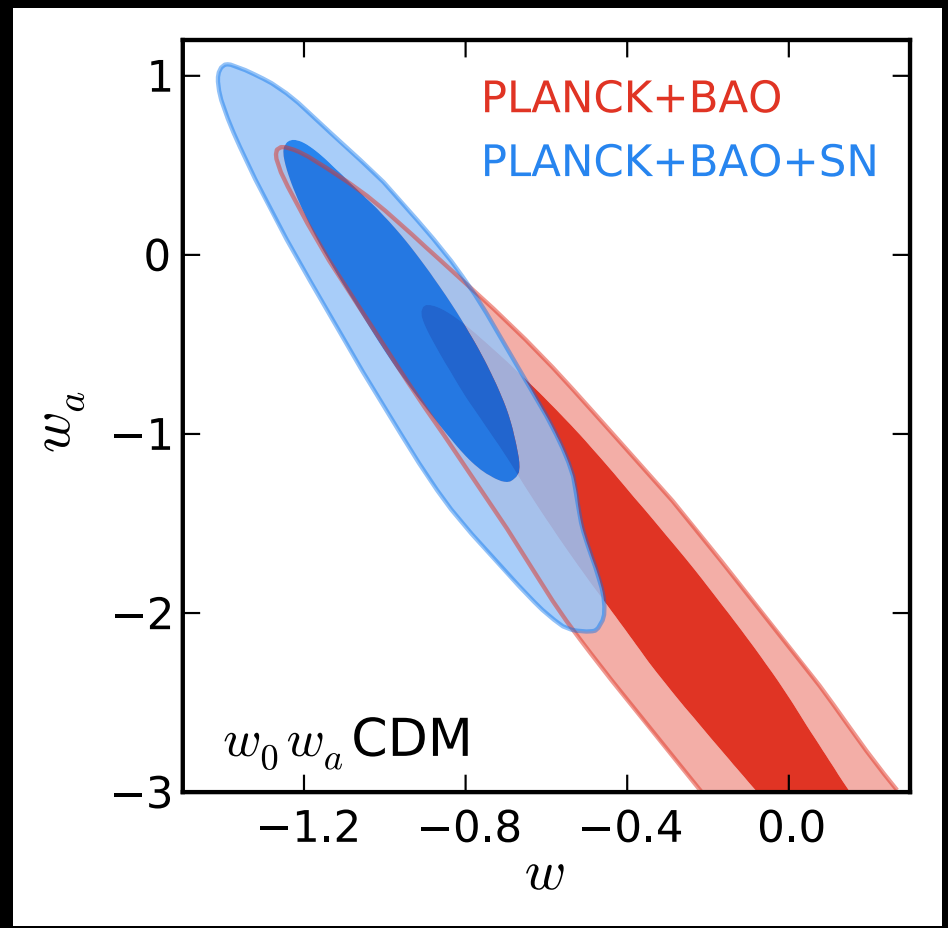
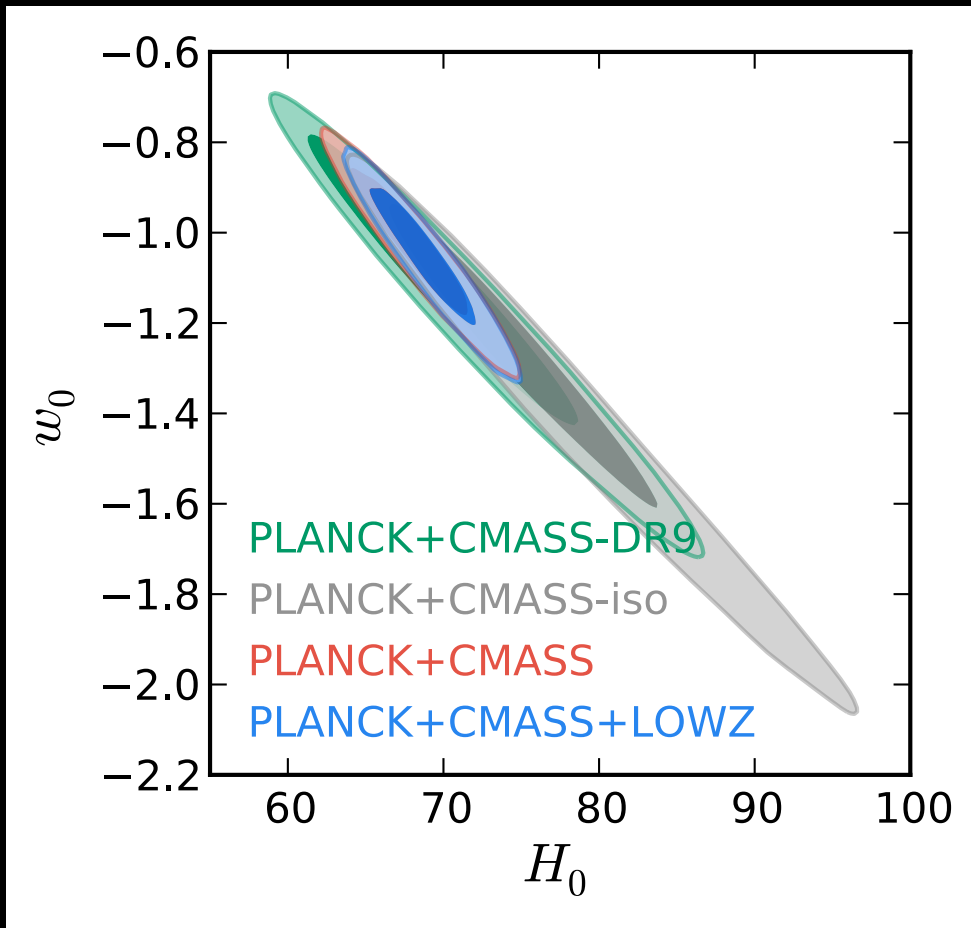
Samushia+ 2014

SDSS BOSS DR11 (2014)

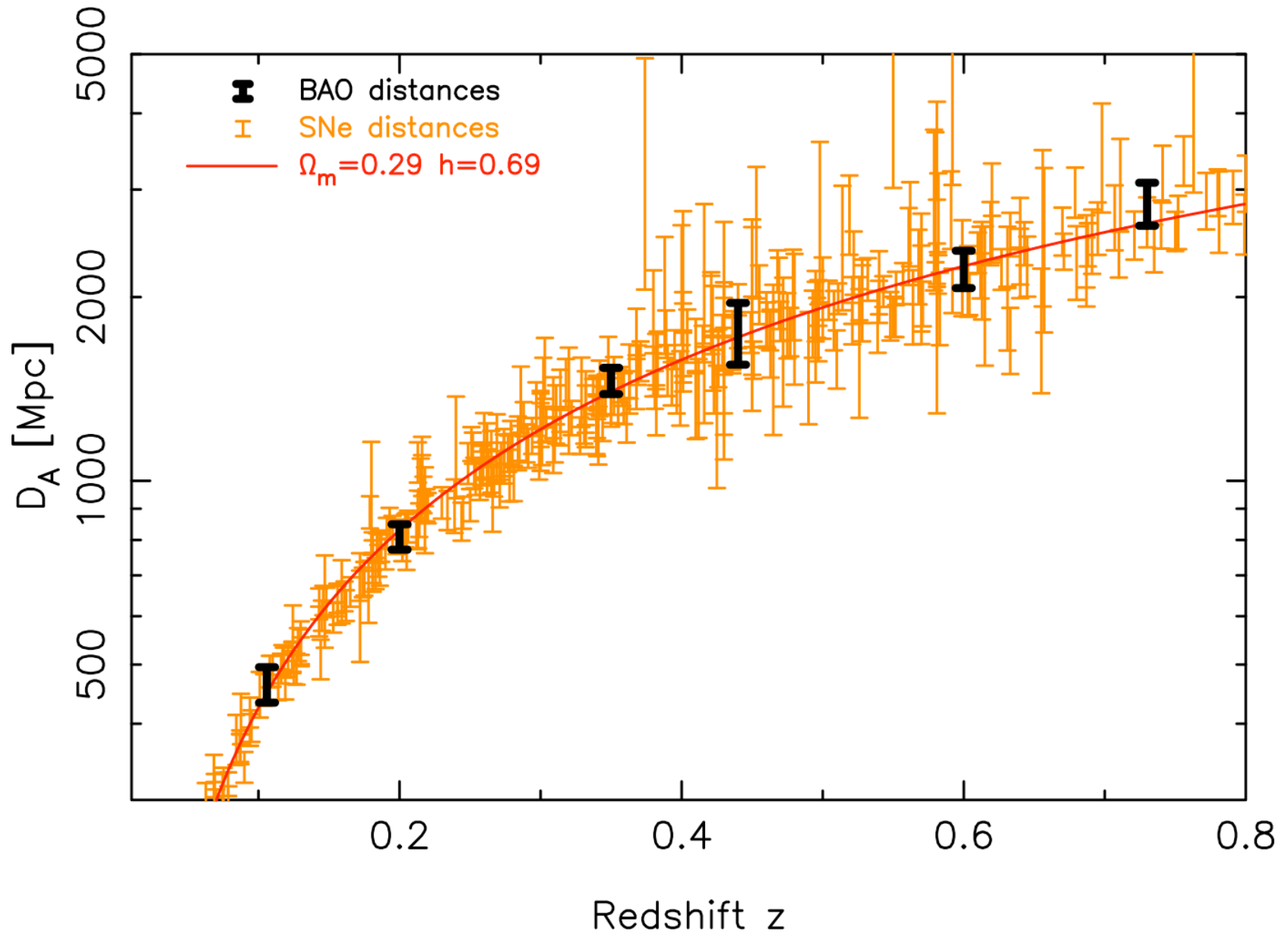


AAT WiggleZ 2011





Anderson+ 65 others! (2014)



Blake+ 2011

