

Title: Steven Weinberg - The Origin of the Universe.

Date: Oct 02, 2004 09:00 AM

URL: <http://pirsa.org/04100000>

Abstract: <kw>origin, universe, Steve Weinberg, galaxies, geophysics, light waves, matter, supernova, hydrogen, helium, big bang, cosmic microradioation, cosmic background explorer</kw>



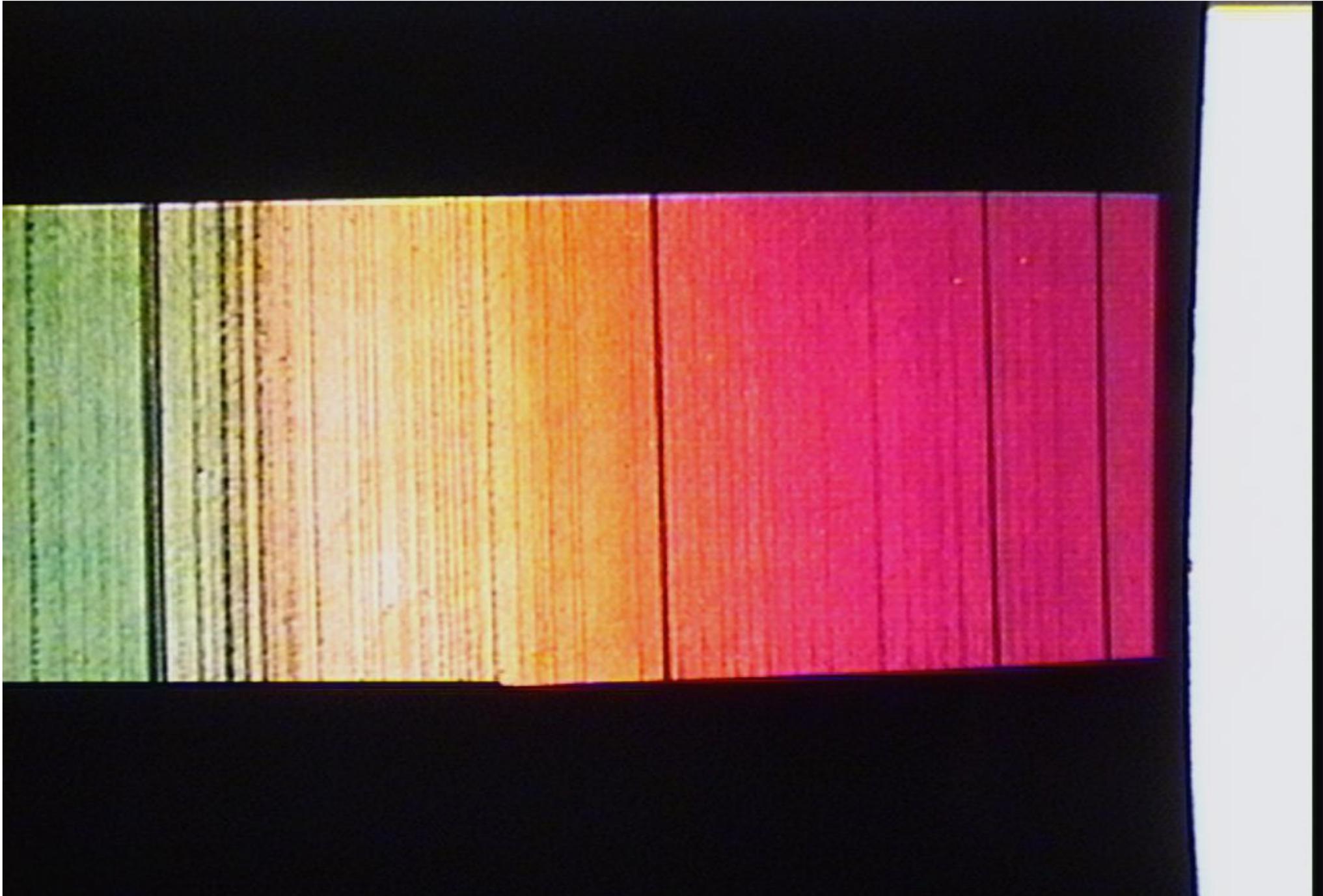
**PERIMETER INSTITUTE
FOR THEORETICAL PHYSICS**



A Modern View of the Origin of the Universe

A Modern View of the Origin of the Universe







Classical Networks in



Step 1



Step 2



Step 3



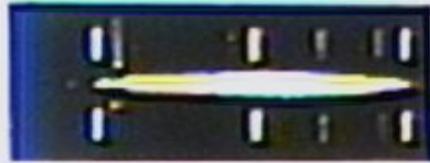
Step 4



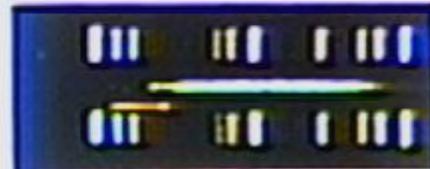
Step 5

Classical networks are shown in order of increasing distance between the top and bottom of the ring.

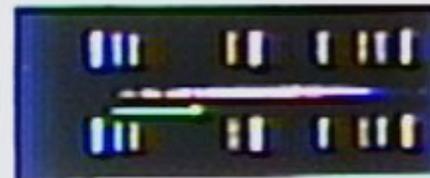
Classical



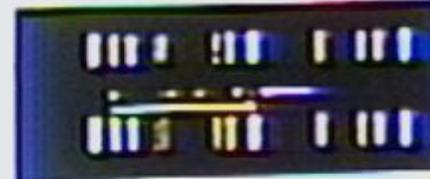
100 nodes per network



1000 nodes per network



10000 nodes per network



100000 nodes per network



1000000 nodes per network

Classical

Clonal Network in



Stage 1



Stage 2



Stage 3



Stage 4



Stage 5

Clonal network
 increases in size
 of increasing distance
 toward the top
 most common genotype

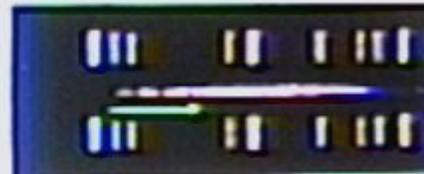
Stage 1



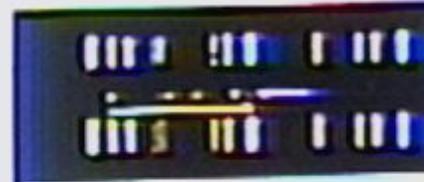
700 hours per year



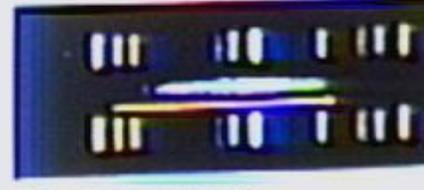
1,000 hours per year



1,800 hours per year



2,600 hours per year



3,400 hours per year

Stage 1

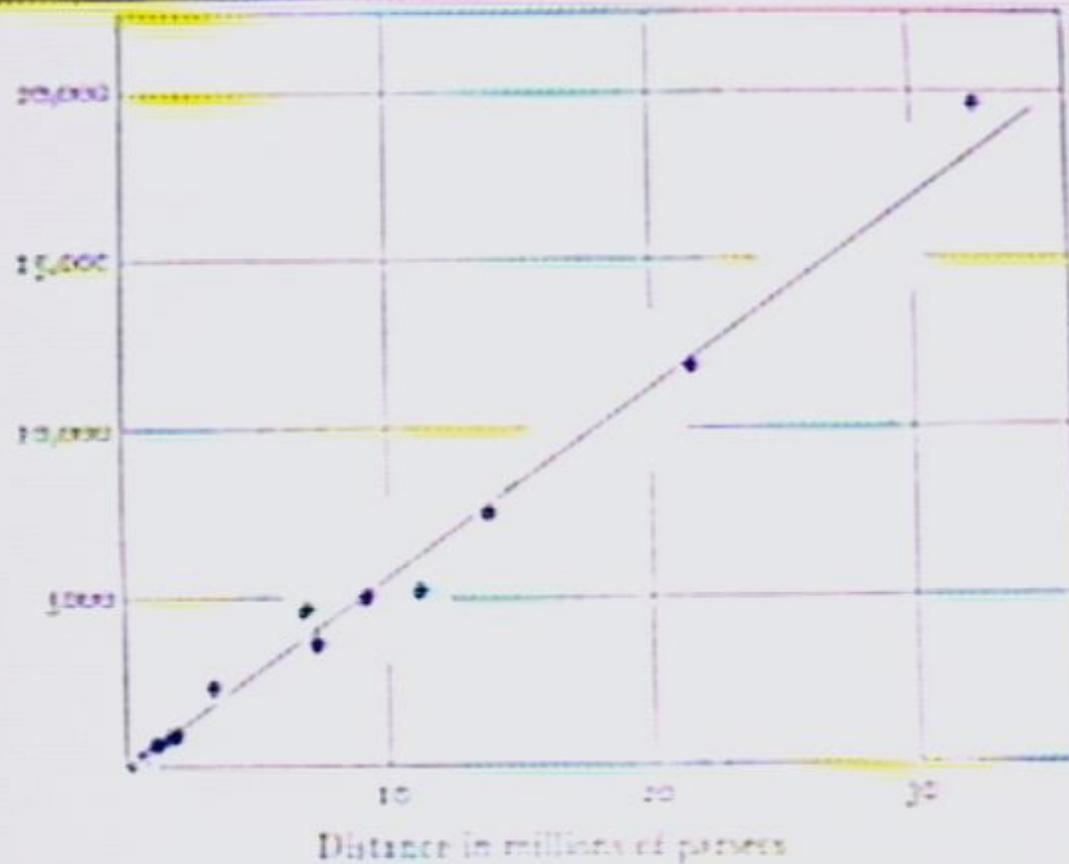


Fig. 1. The velocity-distance relation. The circles represent mean values for clusters or groups of nebulae. The dots near the origin represent individual nebulae, which, together with the groups indicated by the lowest two circles, were used in the first formulation of the velocity-distance relation.

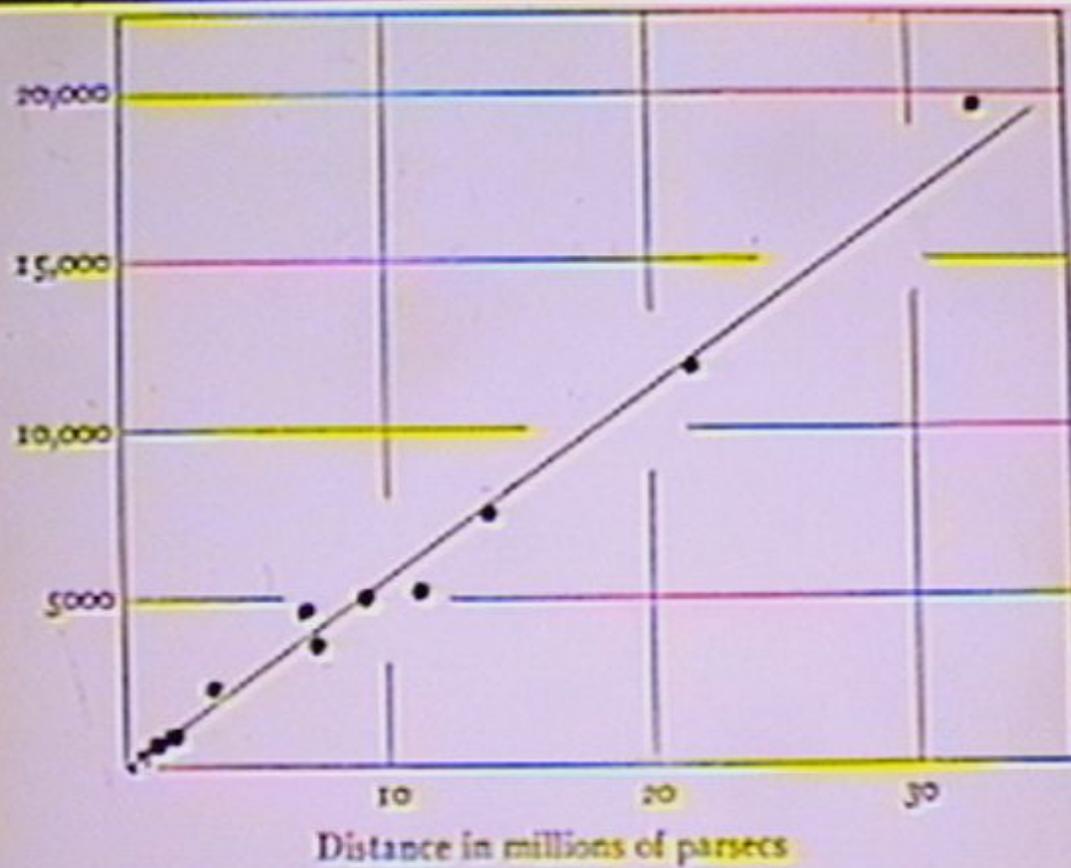


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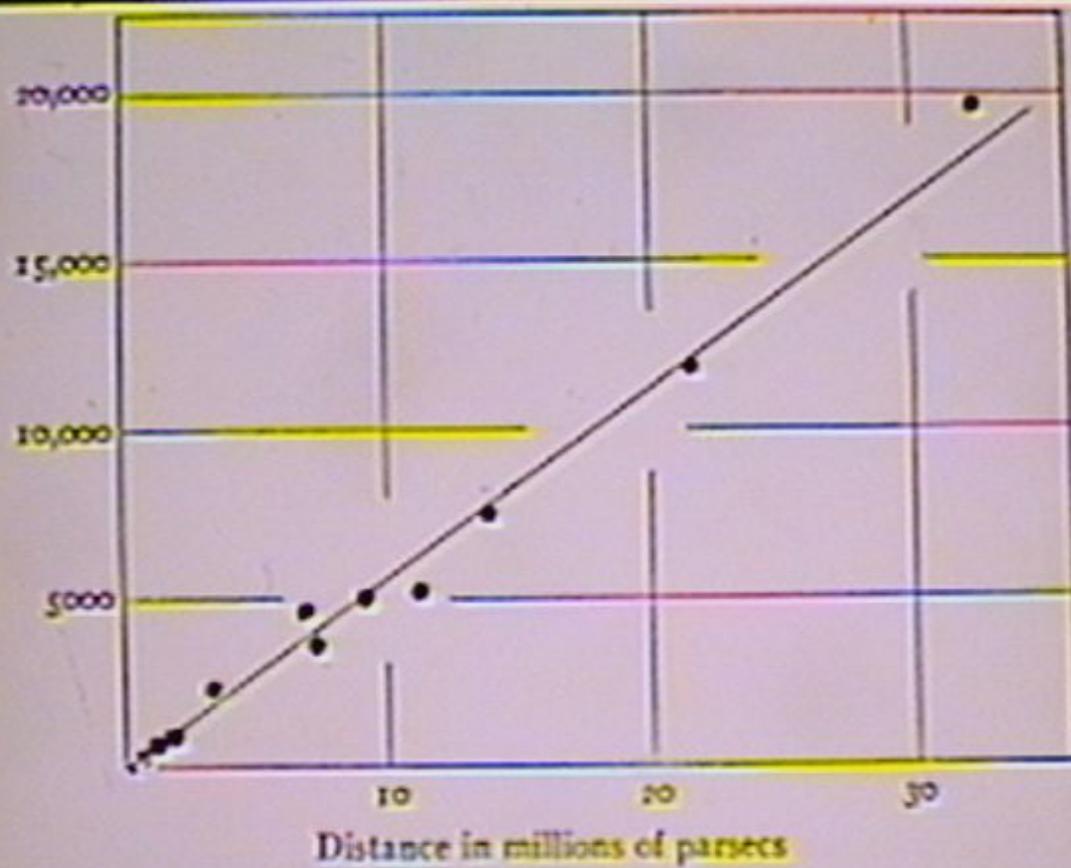
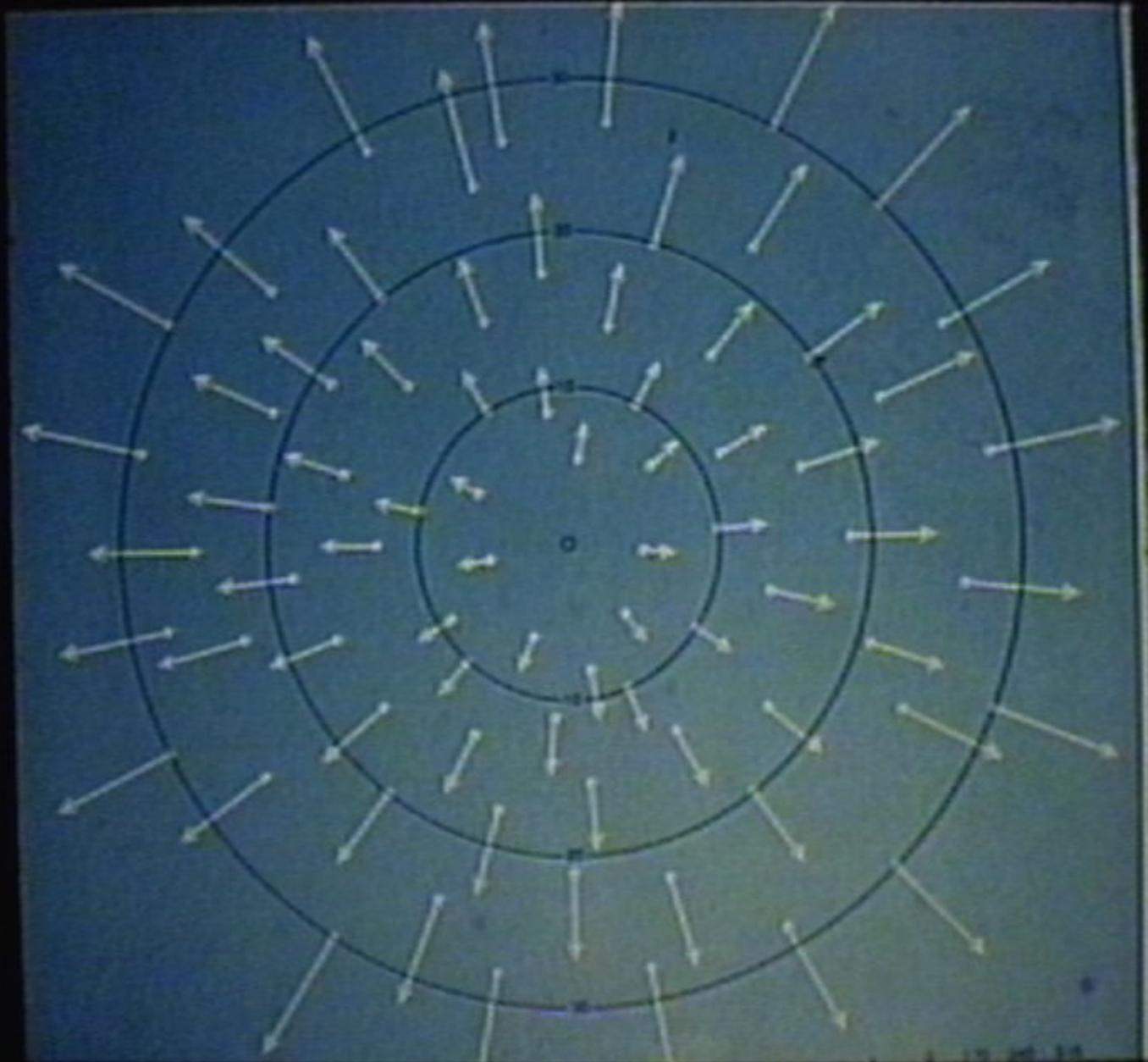
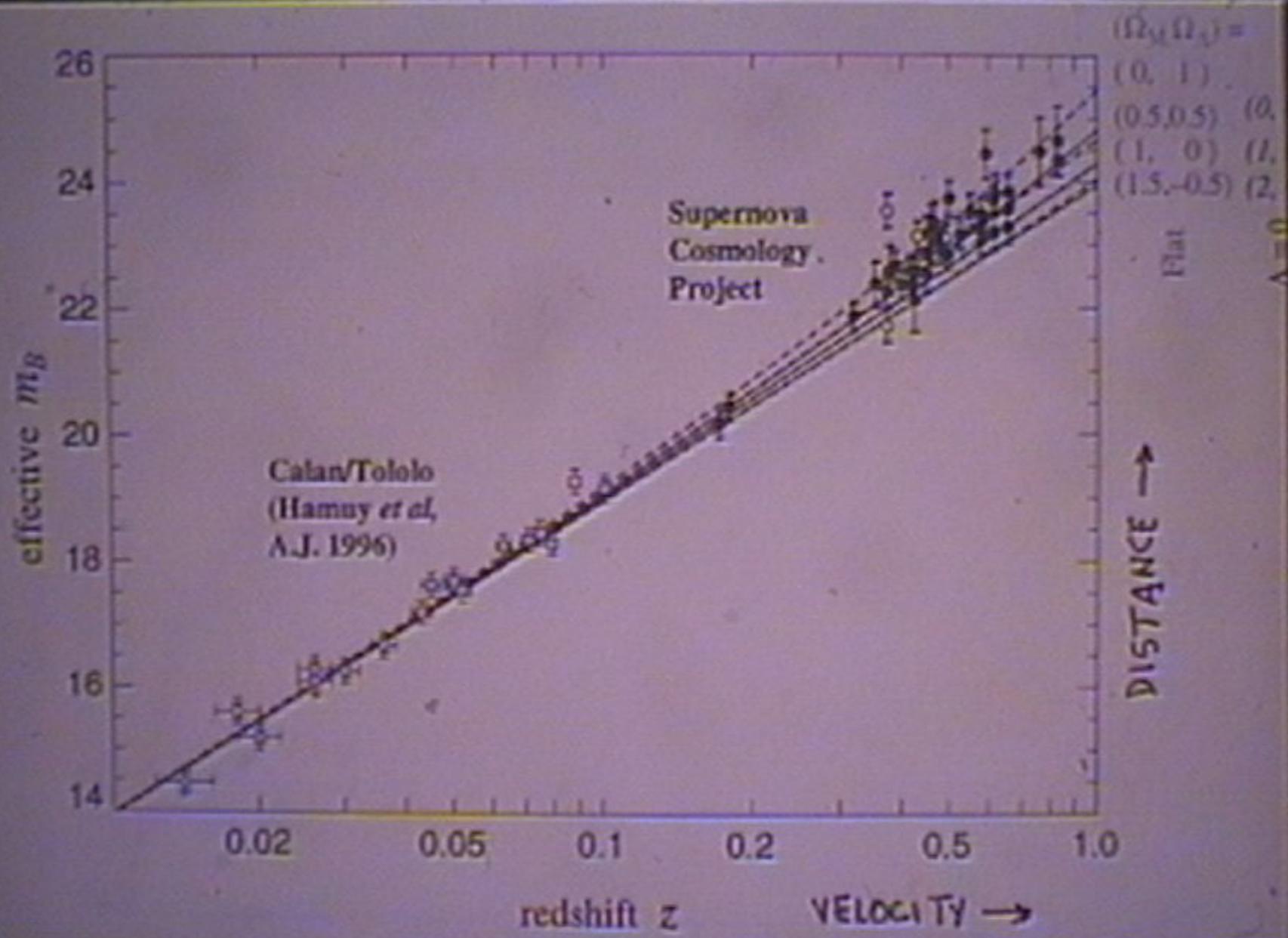
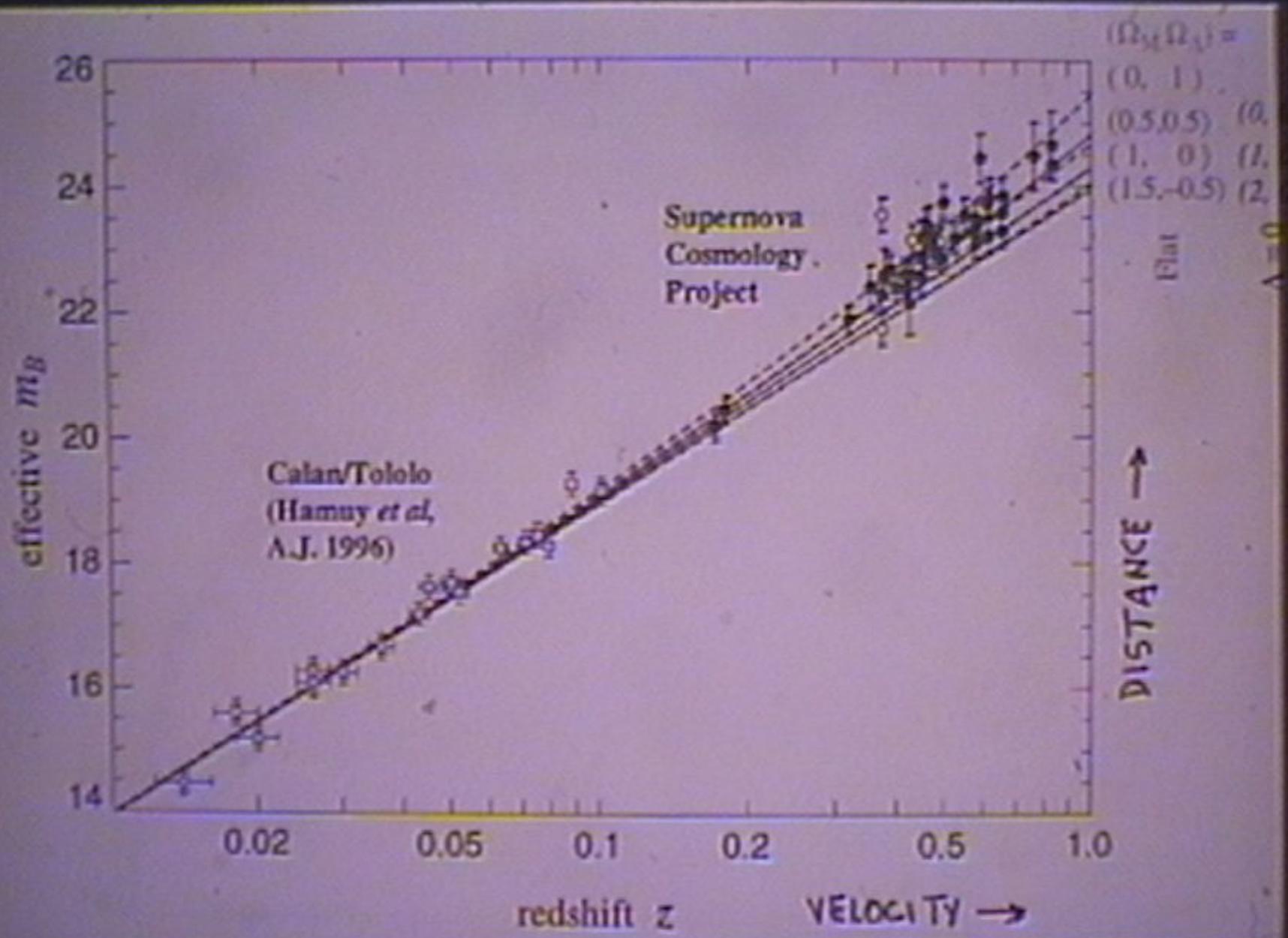


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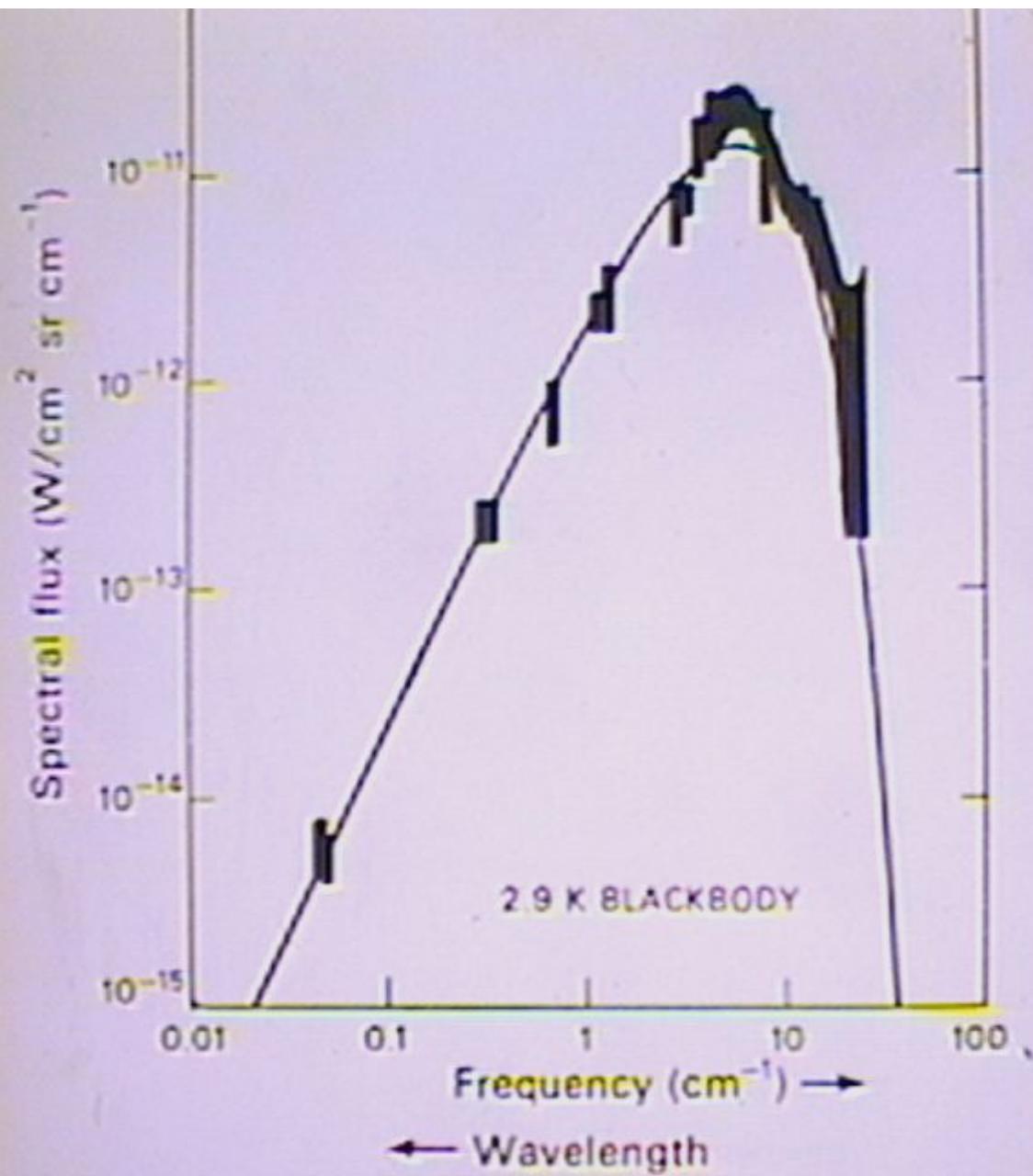


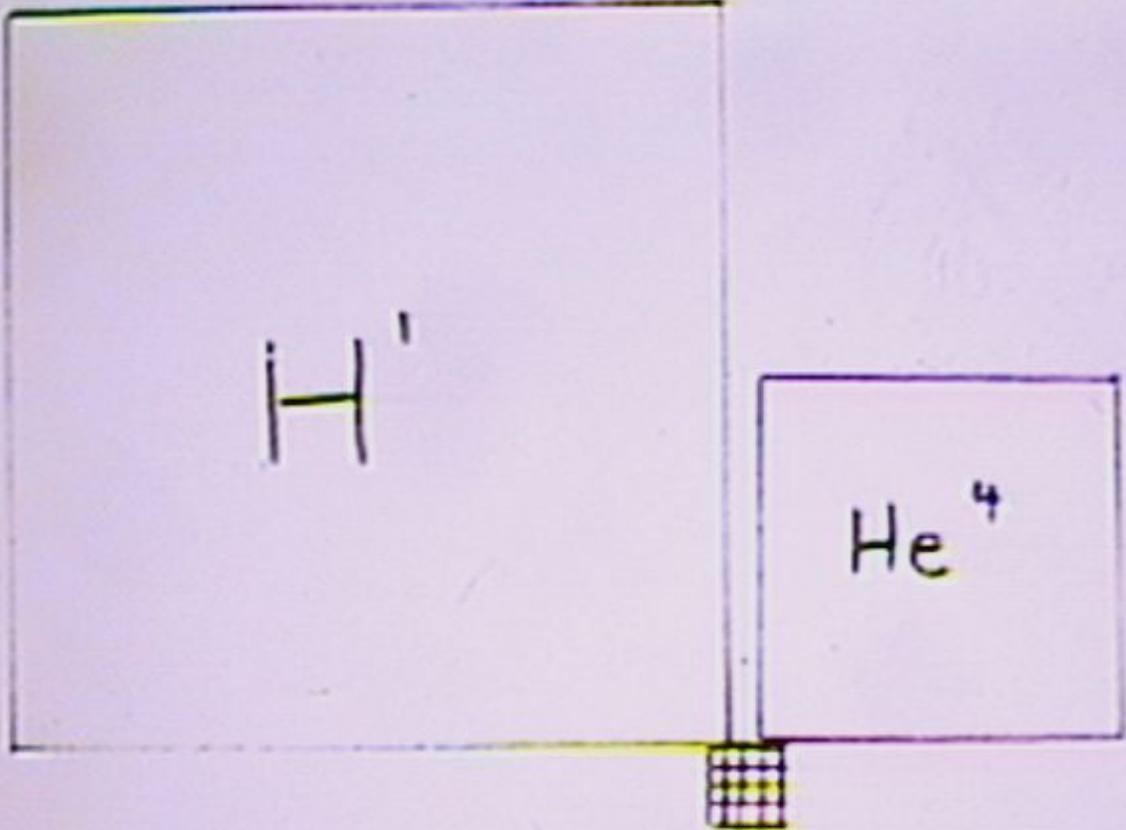






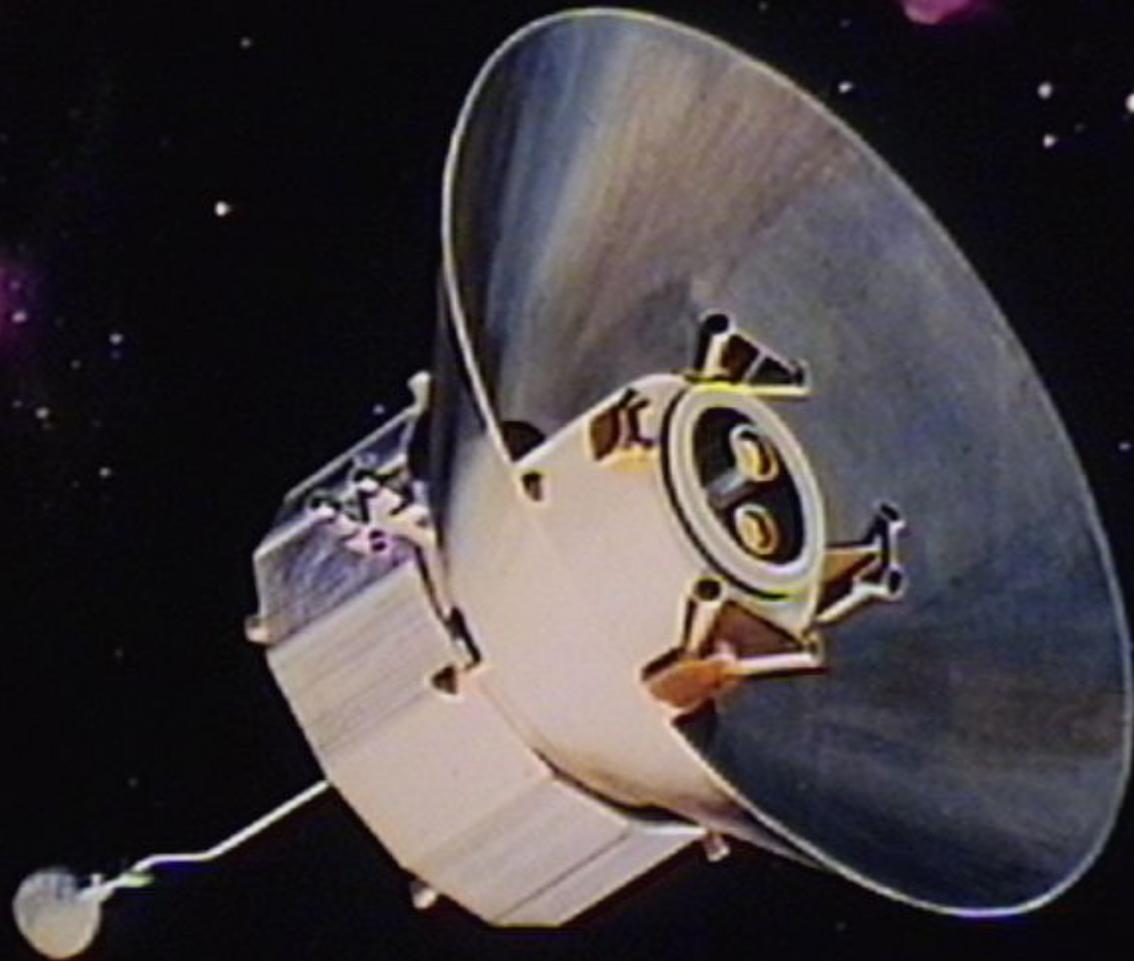


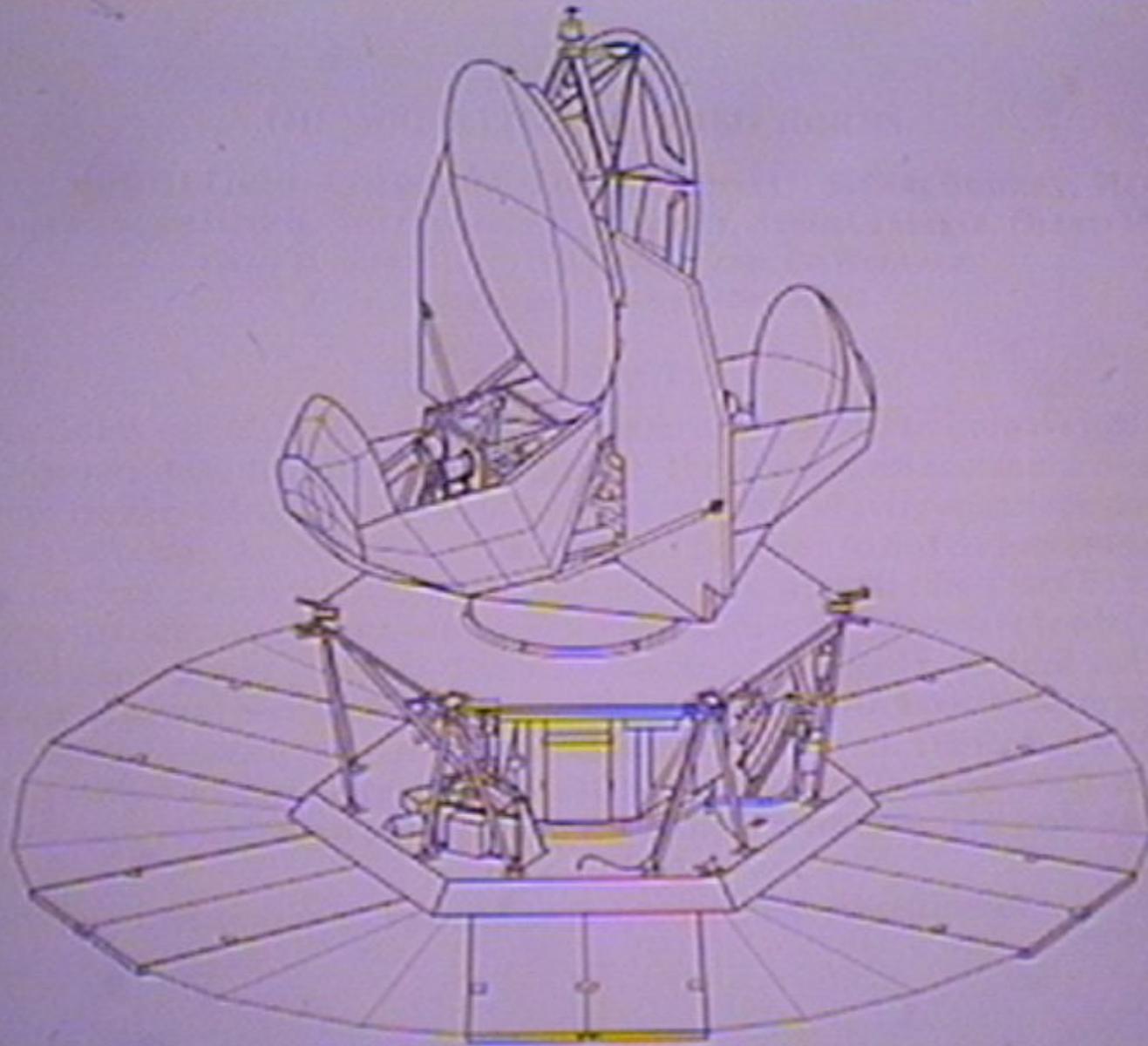




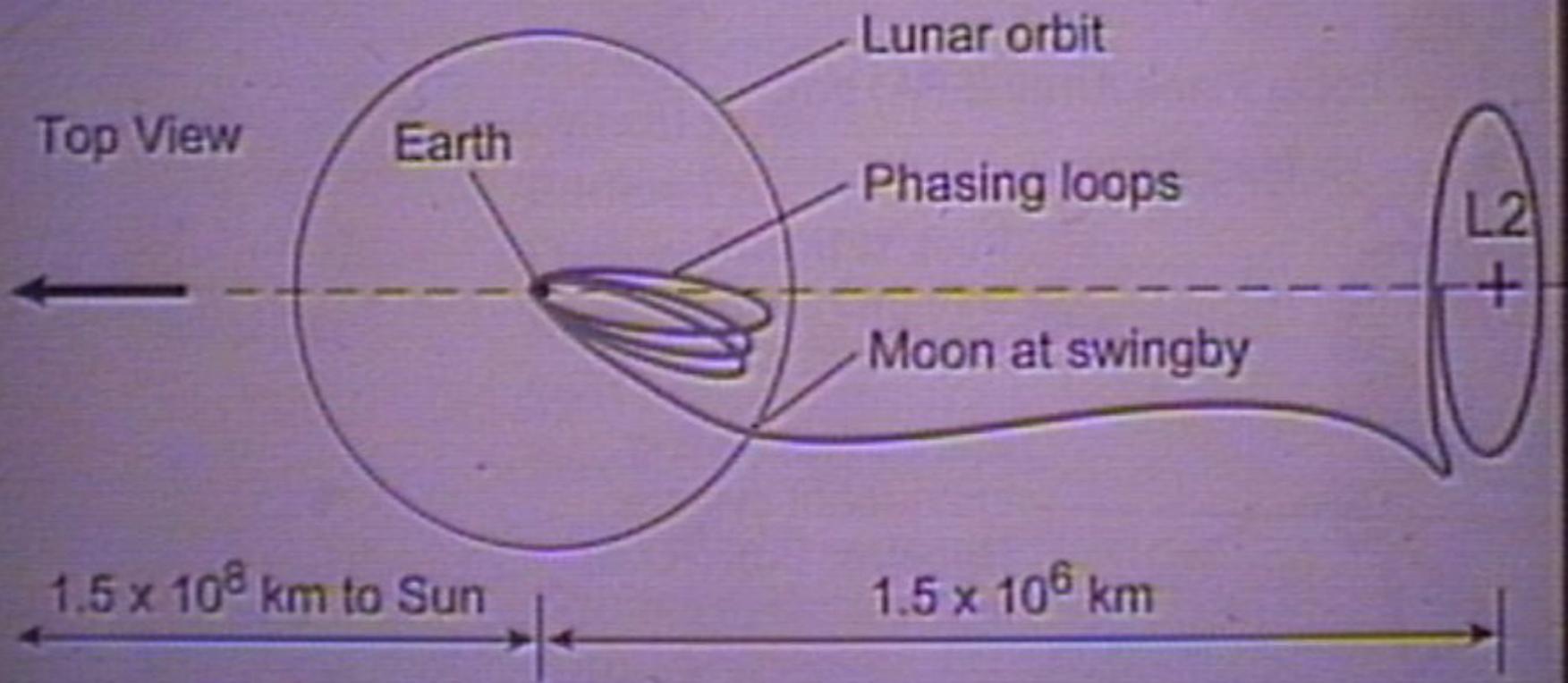
C, N, O, Ne, Fe, etc.

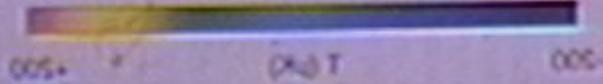
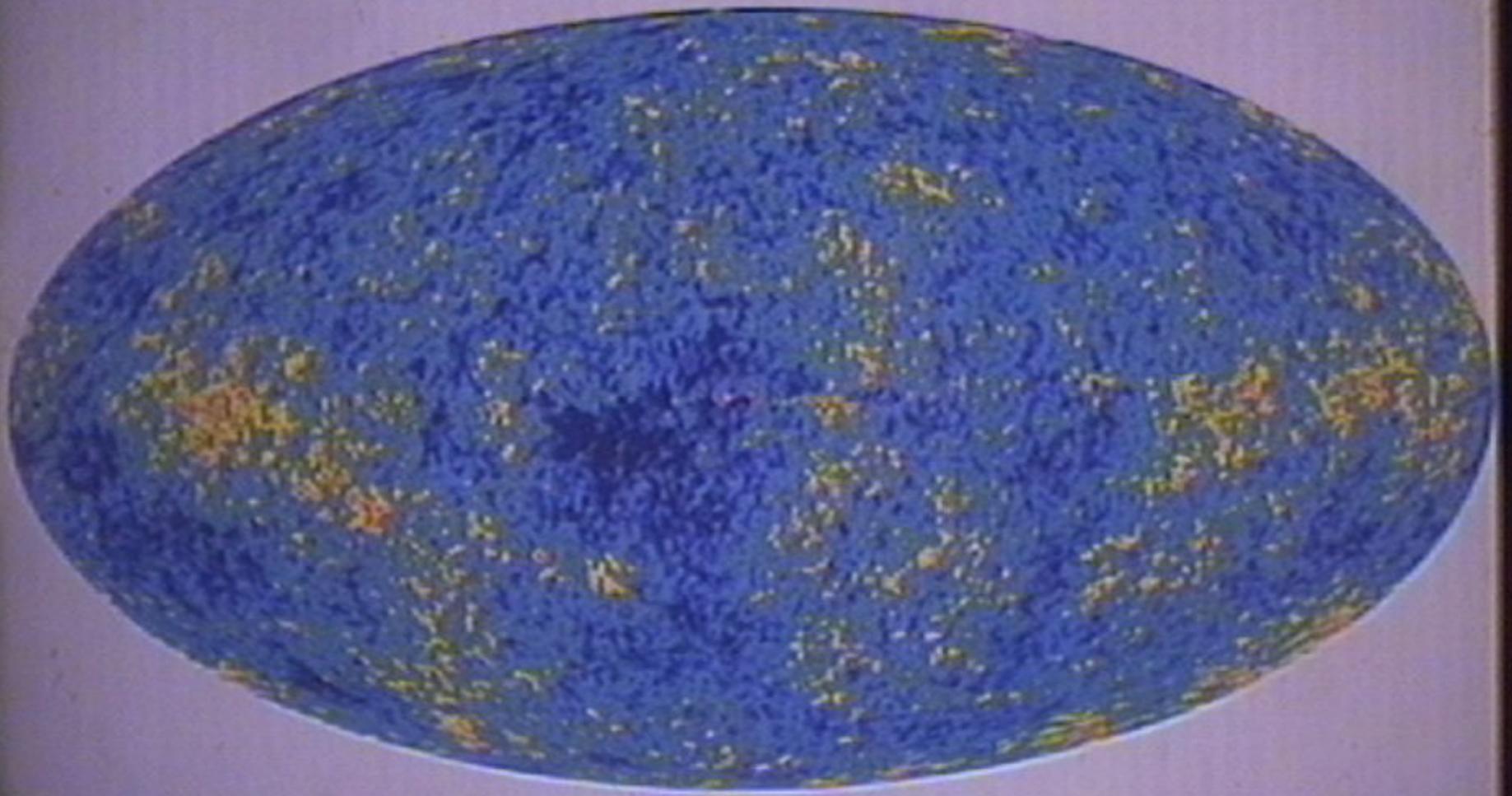
COSMIC BACKGROUND EXPLORER



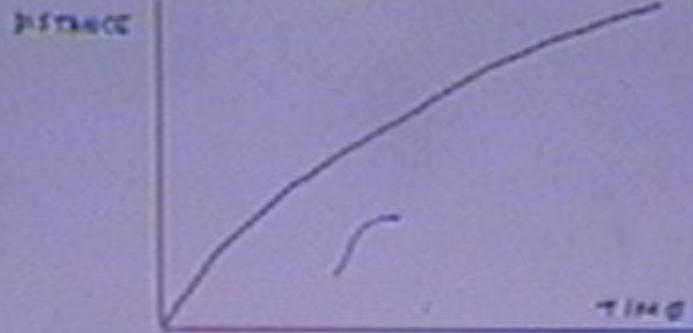


a





OLD BIG BANG

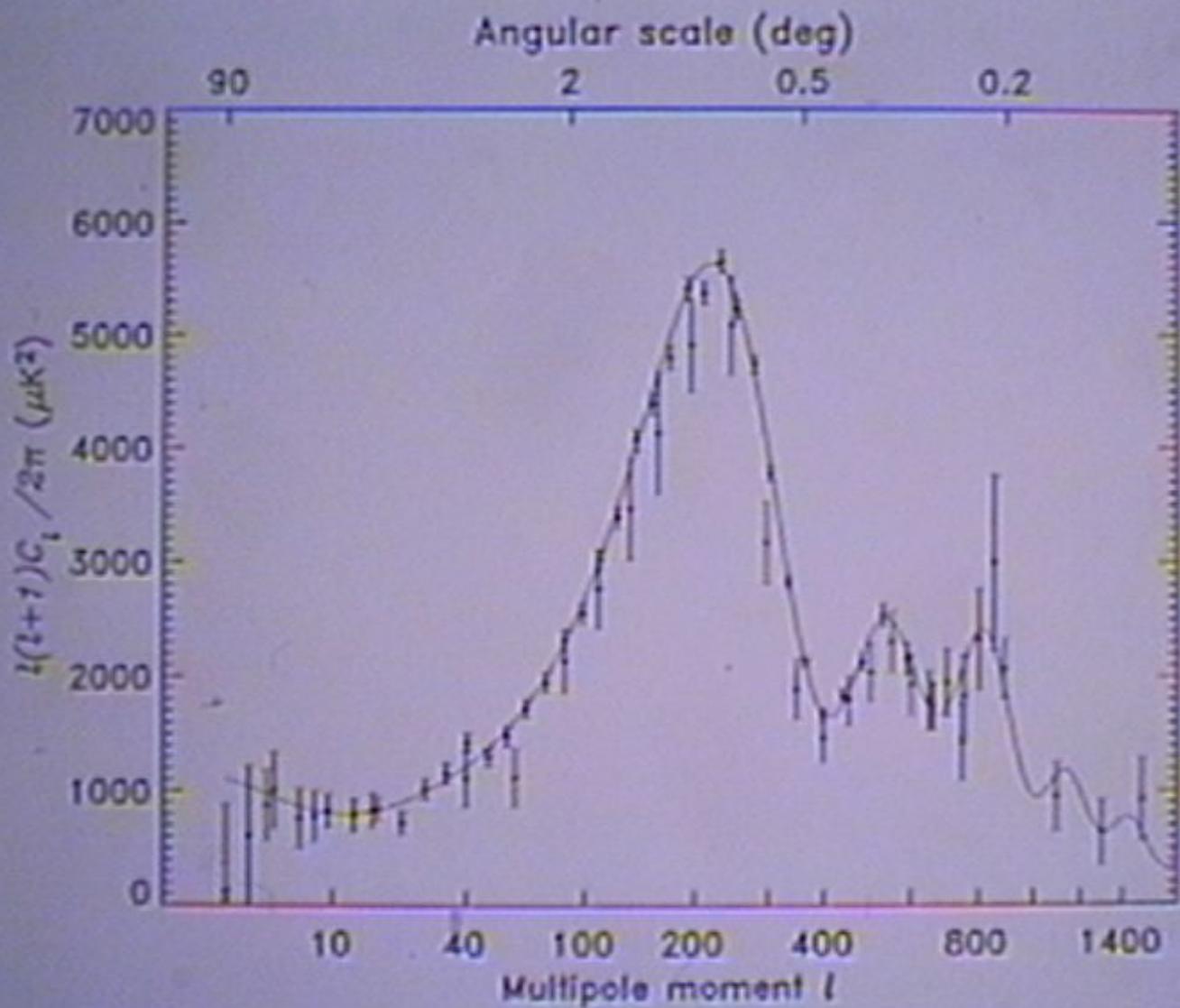


WITH DARK ENERGY

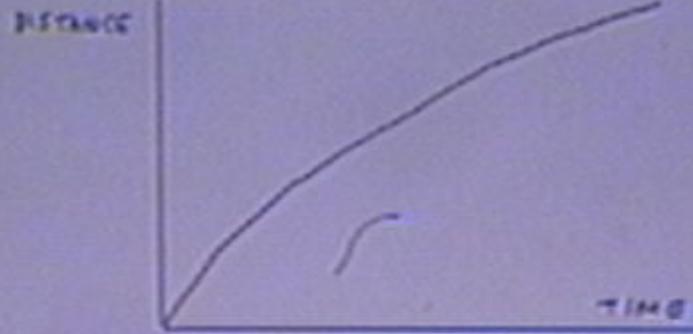


WITH DARK ENERGY
& INFLATION





OLD BIG BANG

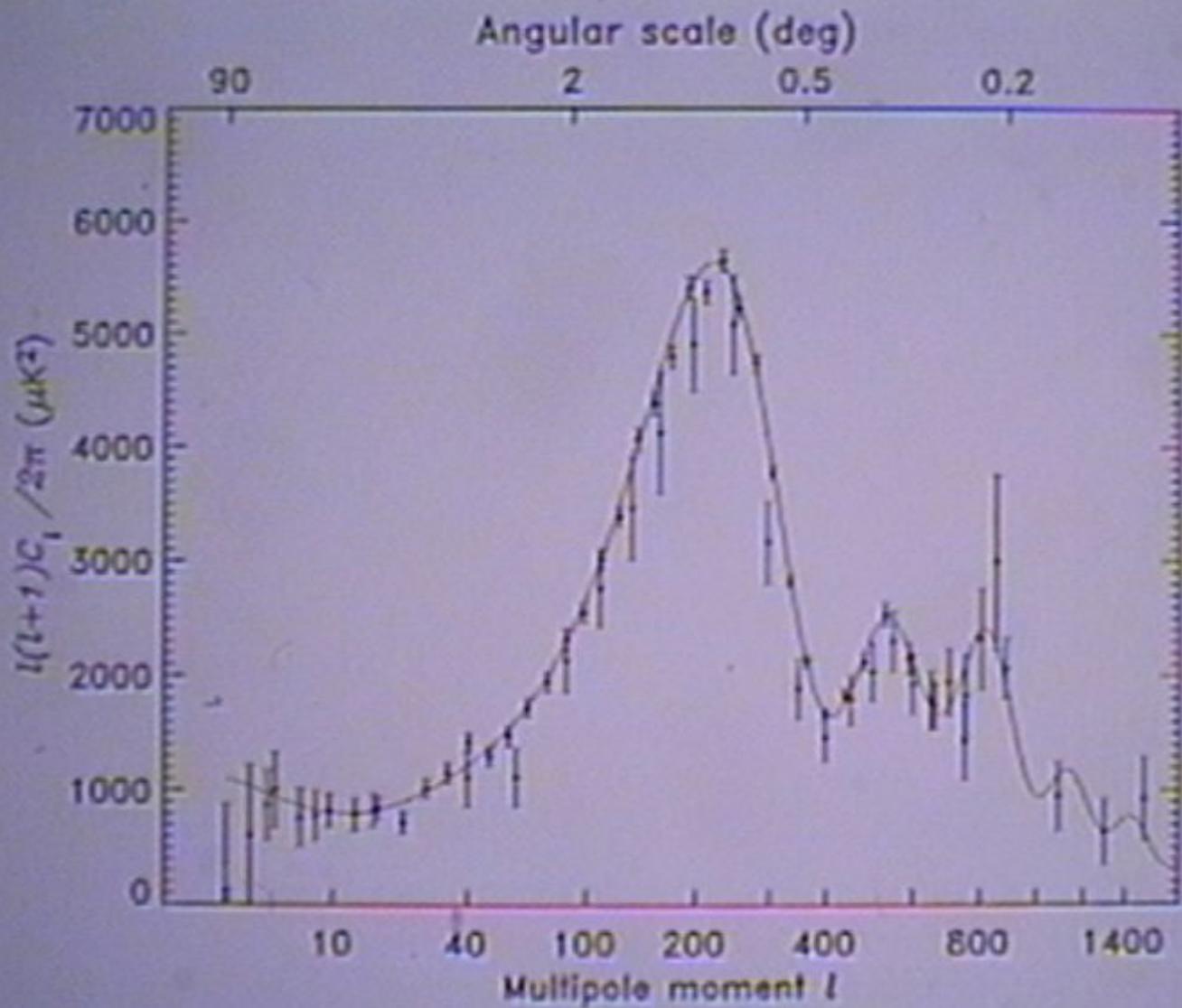


WITH DARK ENERGY



WITH DARK ENERGY
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