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### Partial Differential Equations with Random Noise in Inflationary Cosmology Effects of Noise on Preheating

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### Context: The Expanding Universe

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Credit: NASA/WMAP Science Team

### Optical Telescopes: Gemini Telescope



### Galaxies: Building Blocks of the Cosmology

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#### Large-Scale Structure

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From: talk by O. Lahav

### Power Spectrum of Density Fluctuations



# Microwave Telescopes on the Earth: ACT Telescope



# Microwave Telescopes on the Earth: SPT Telescope



# Microwave Telescopes in Space: WMAP Telescope

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### Isotropic CMB Background





# Map of the Cosmic Microwave Background (CMB)



#### Credit: NASA/WMAP Science Team

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### Angular Power Spectrum of CMB Anisotropies



Credit: NASA/WMAP Science Team