

Note  
stability

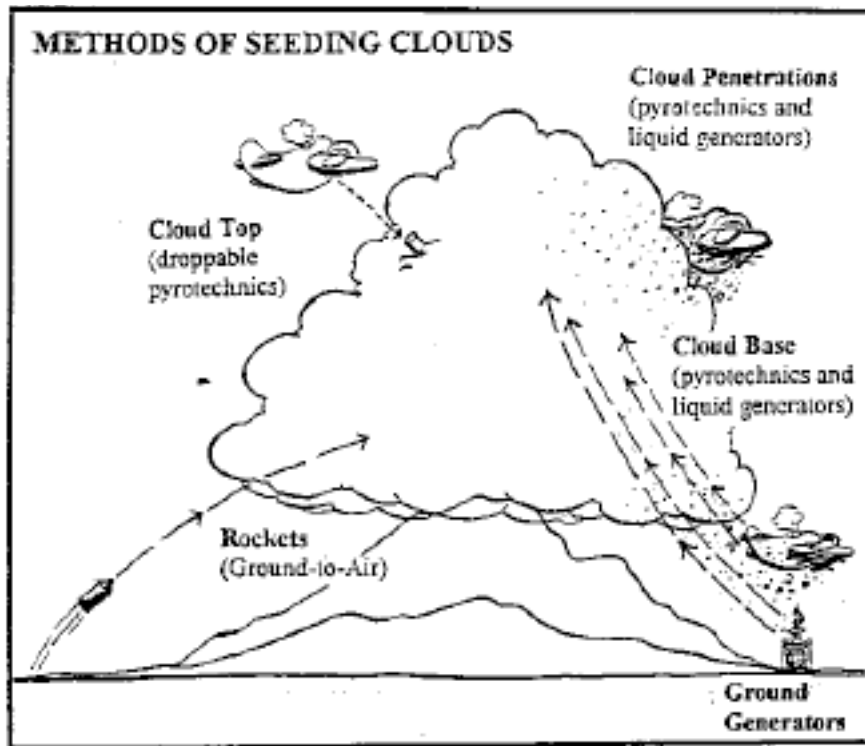


**Figure 6.47.** A  $\gamma$ -shaped path cut in a layer of supercooled cloud by seeding with Dry Ice. [Photograph courtesy of General Electric Company, Schenectady, New York.]

Artificial IN: silver iodide most common  
Works best when cloudtops ~ -14 C (why?)

Who ? Israel, South Africa, Australia, US, more recently,  
China, Thailand

11/4/05



## Weather

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### Wyoming hopes cloud seeding will increase snowfall

CASPER, Wyo. (AP) — Wyoming water officials hope that eventually cloud seeding will increase the snowfall on Wyoming mountains by 10% by catching moisture before it moves on and evaporates.

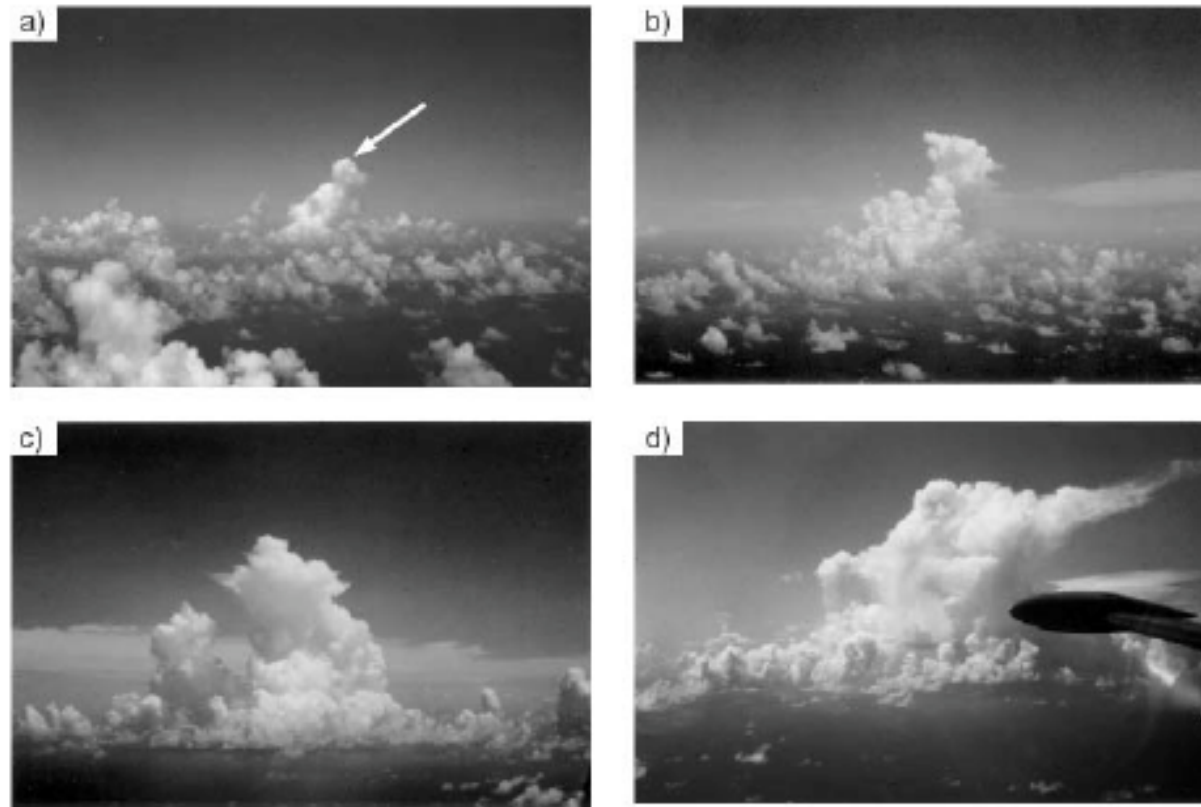


Snowfall could increase across several of Wyoming's mountain ranges if the cloud-seeding program is successful.

Garth Dowling, AP/Jackson Hole News

arguably works best in mountainous terrain

Under the right conditions (weak stable layer cap),  
Can release further cloud buoyancy

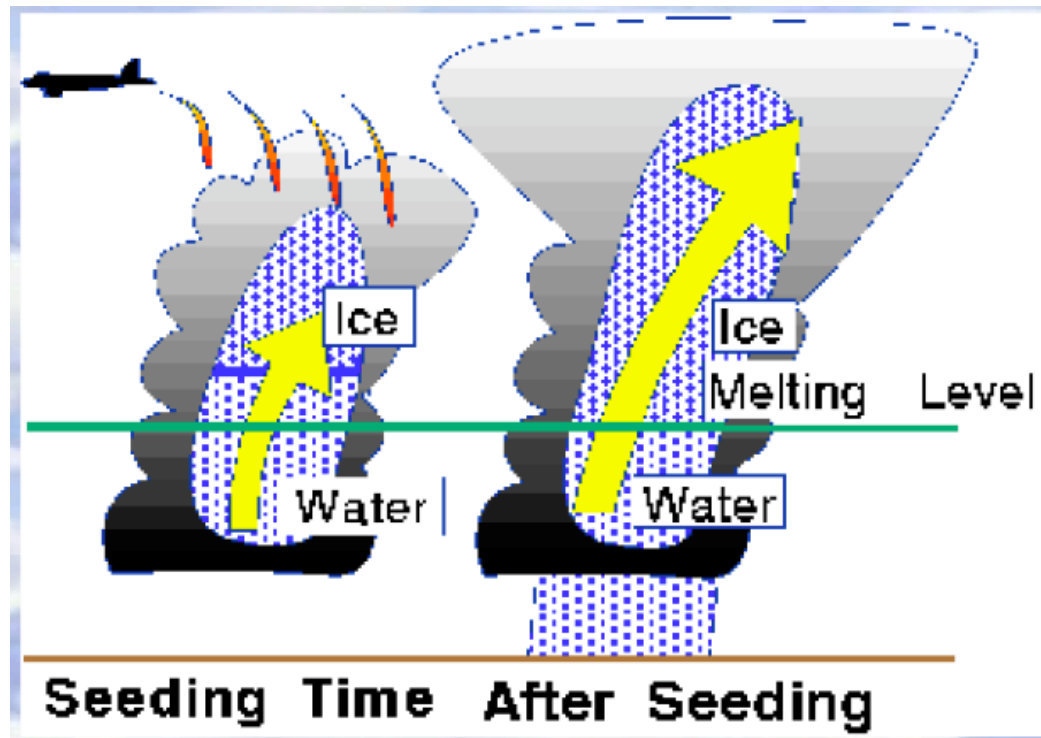


**Figure 6.48.** The “explosive” growth of a cumulus cloud (indicated by the arrow) following seeding with silver iodide. (a) About 10 min after seeding; (b) 19 min after seeding; (c) 29 min after seeding; (d) 48 min after seeding. Note that the neighboring unseeded clouds have not grown significantly. [Photographs courtesy of J. Simpson.]

Picture from either Caribbean or Florida. More recent experiments in Texas show less dramatic cloud changes

Diffusing hurricanes through seeding:  
STORMFURY: Willoughby et al., BAMS, 1985

Seeding moves all freezing to 0C level, lower level of latent Heat release strengthens updrafts, intensifying hurricane, Ultimately widening eyewall & reducing wind speed.



# Urban island effects on precipitation

## *HEAT*

### The Houston Environmental Aerosol Thunderstorm Project

Authored and Edited by

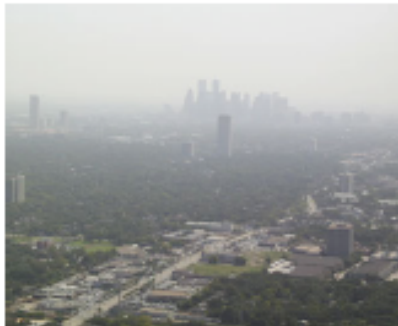
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With contributions from many scientists listed in Table 1 of this document.



A Summer Day in Houston, Texas

Cloud-to-Ground Lightning in the  
Suburbs of Houston



Plenty of IN

Aerosols found to decrease  
Droplet spectra,  
Leading to greater  
Separation of charge  
In mixed-phase regions,  
⇒ Increased lightning

But

Also increased precipitation