

## Space characteristic

## Effects/consequences

Frequency coverage  
foreground minimum  
foreground separation  
range of science

atmospheric noise and variability

figure of atmospheric transmission and variability,  
ground and balloon

Minimally-constrained scan strategy  
no ground  
no elevation-dependent atmosphere  
Sun "doesn't move"  
"no" weather

simultaneous access to widely-separated sky  
regions  
polarization angle coverage and modulation  
sidelobes only on sky  
Calibration

Stability

instrumental (thermal, etc.)  
"environmental"

Observe different parts of the sky under same  
conditions  
Extends the number, range, and sensitivity of null  
tests  
Calibration

Low background  
No day/night

Direct noise  
More sensitive detectors

No weather

Observing efficiency near unity

Compare one detector-year, ground, balloon, space  
T<sub>sys</sub>, observing time, etc.

(Cosmic rays)