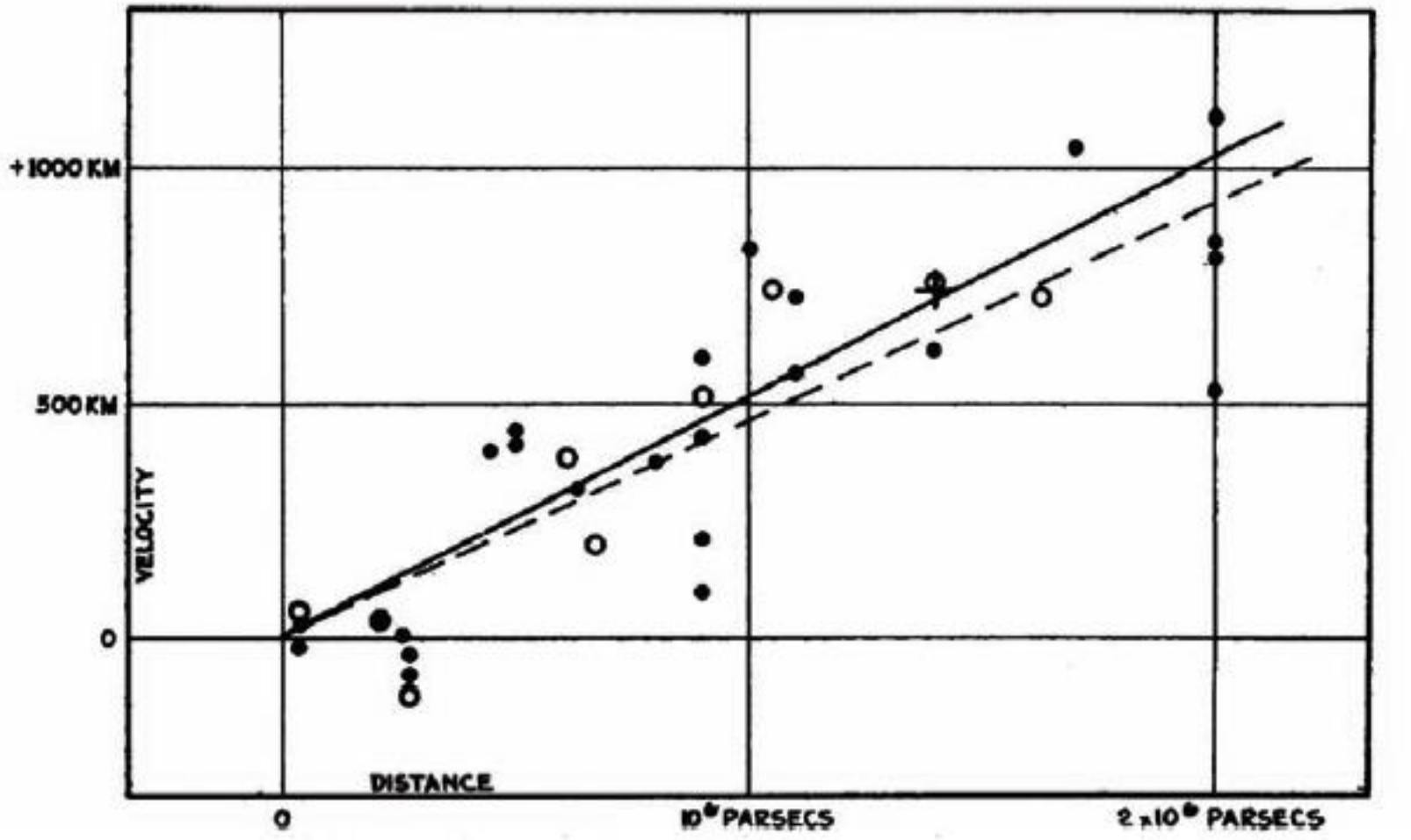
Chameleons

Manwei Chan

Hubble (1929)

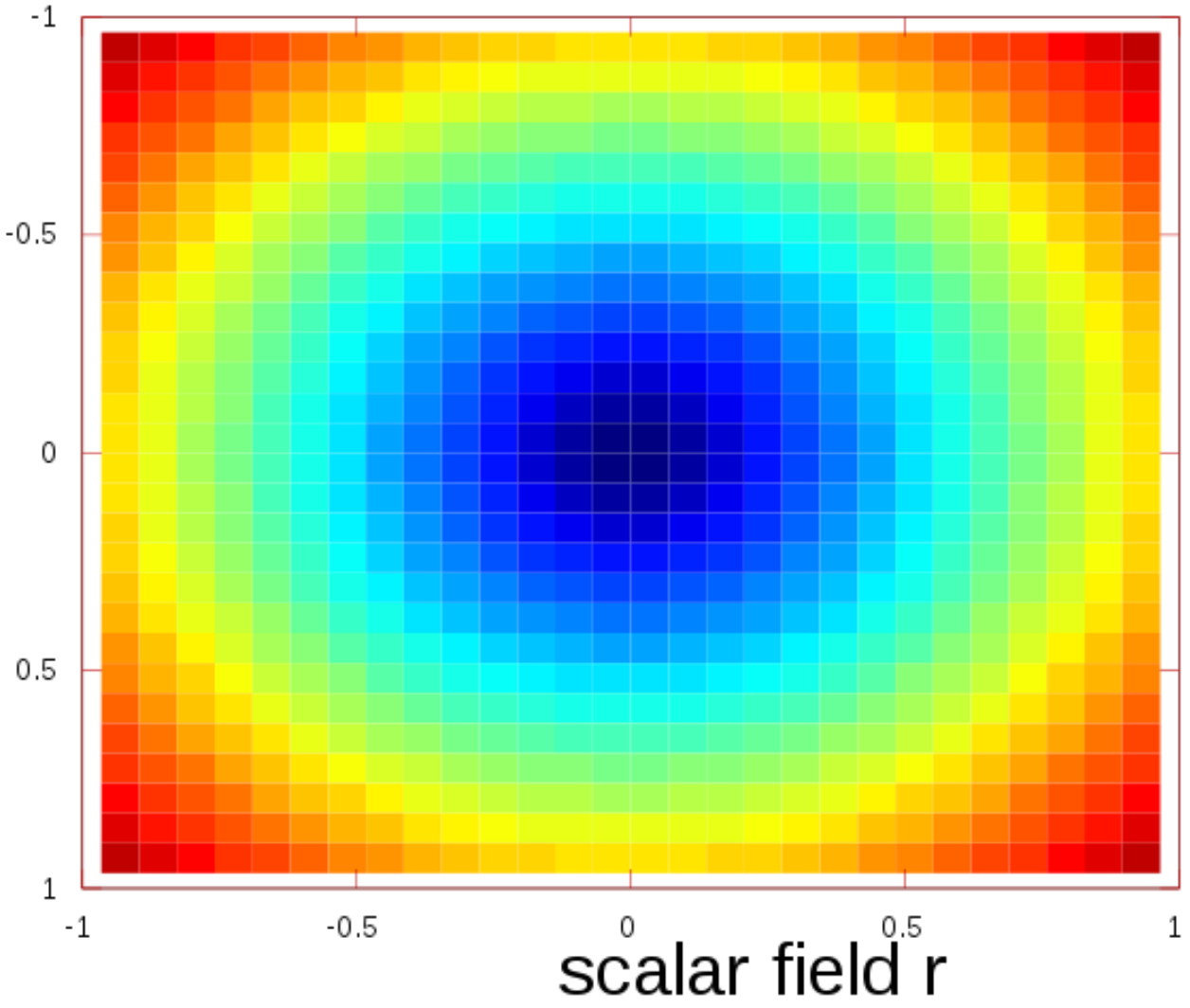

+1000 KM
500 KM
0
VELOCITY
DISTANCE
0
10⁶ PARSECS
2 x 10⁶ PARSECS

Adam Reiss

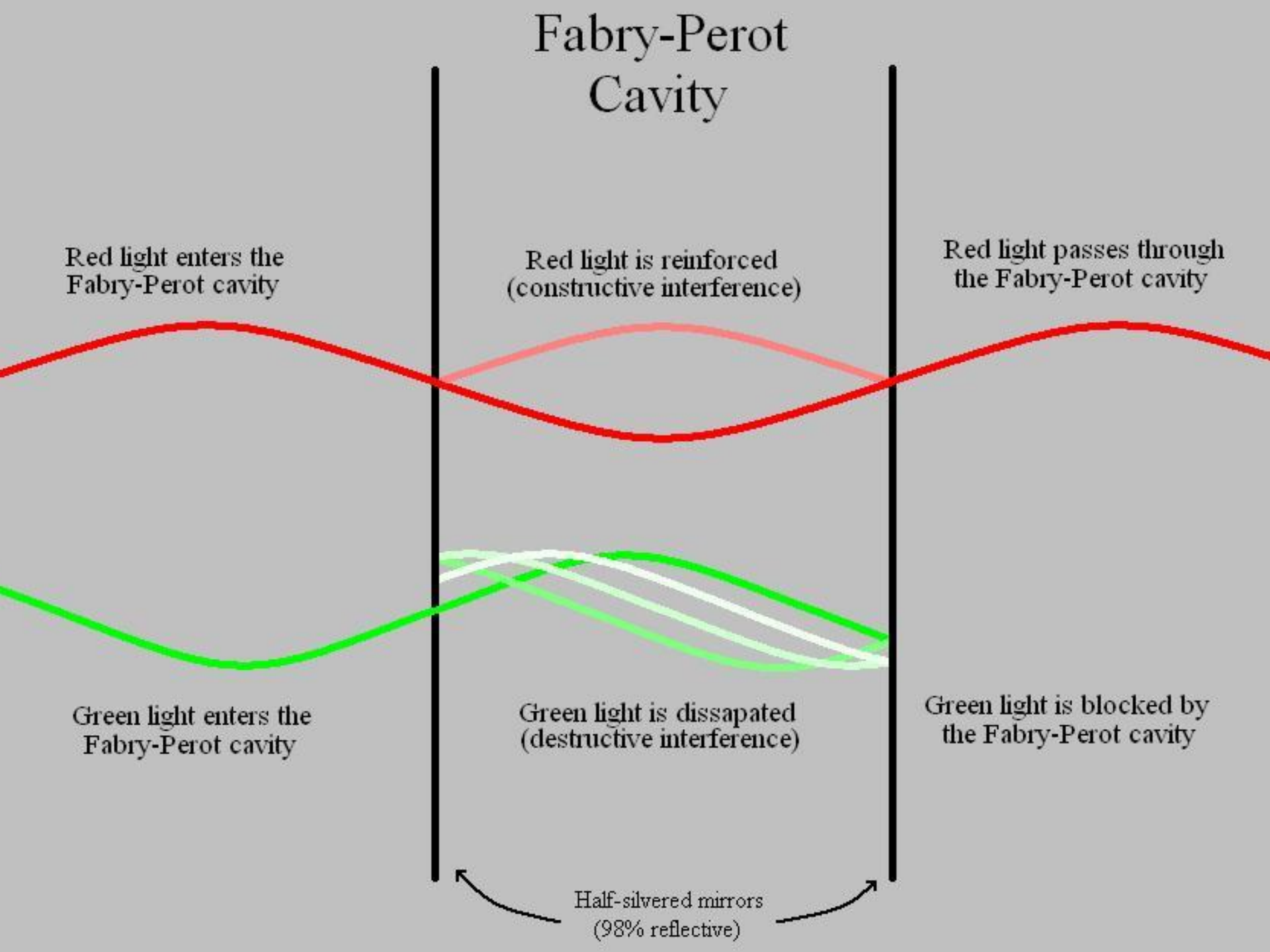
"Everything we know about dark energy could be summarized on a fortune cookie strip"

Chameleons

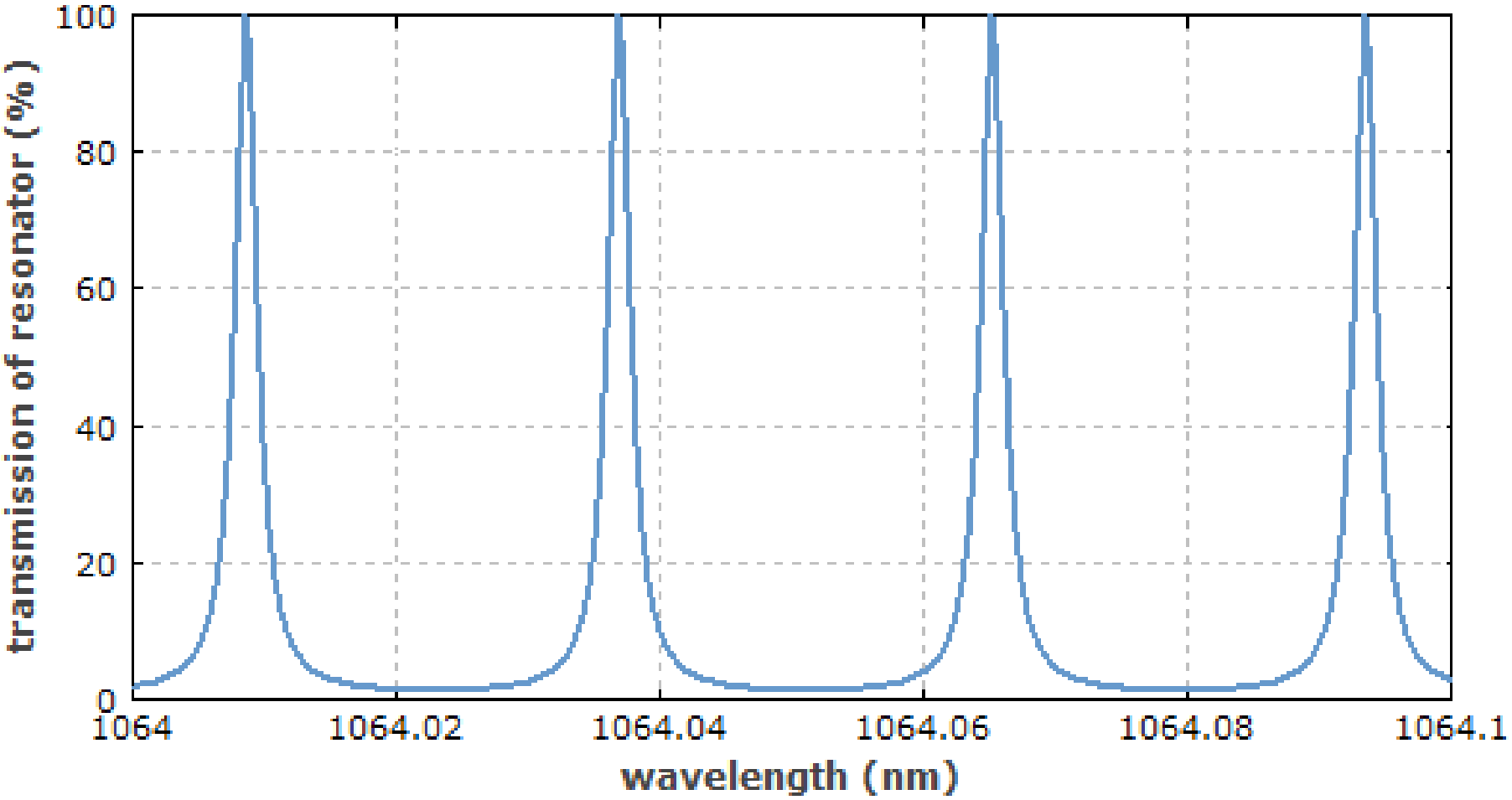
Scalar Field



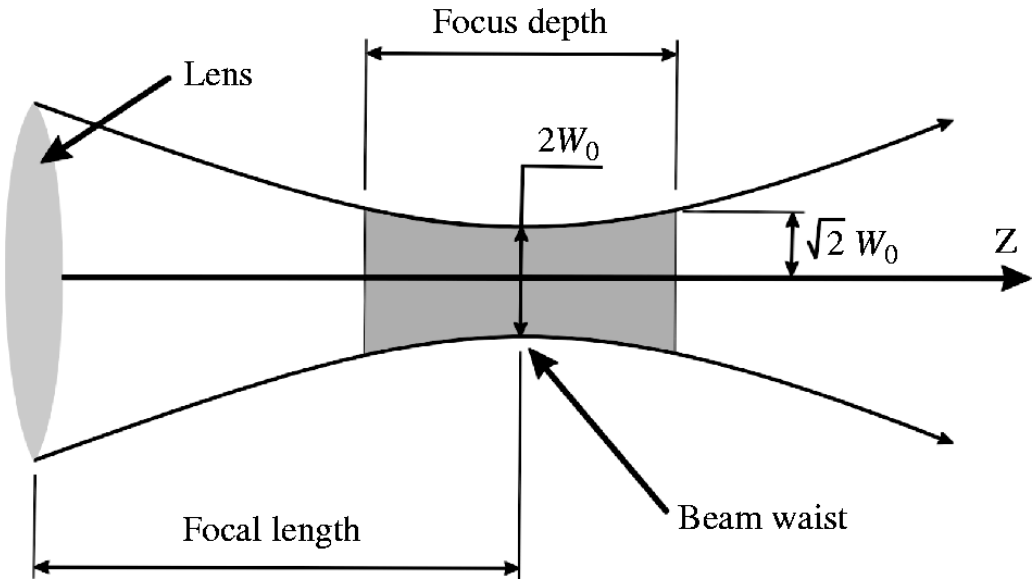
CAST

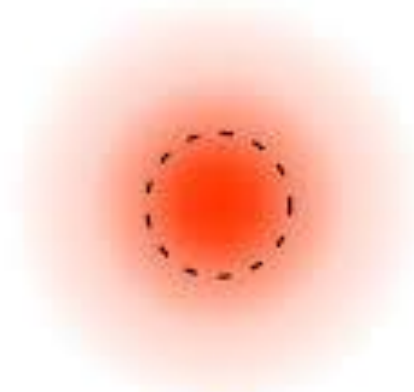

Fabry-Perot Cavity
Red light enters the Fabry-Perot cavity
Red light is reinforced (constructive interference)
Red light passes through the Fabry-Perot cavity
Green light enters the Fabry-Perot cavity
Green light is dissapated (destructive interference)
Green light is blocked by the Fabry-Perot cavity
Half-silvered mirrors (98% reflective)

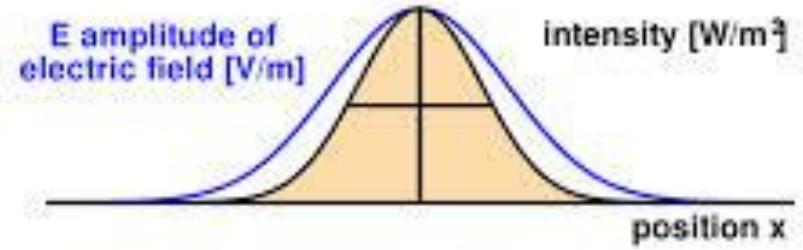
Sensitivity



Gaussian Beam







Questions?