

Experimental approaches

▶ Scale models

- qualitative (visualization) and quantitative (meters) assessments
- difficulties:
 - reproduction of building geometry, materials, details
 - simulation/control of lighting conditions, photometers

Experimental approaches

▶ Scale models

▪ experimental set-up

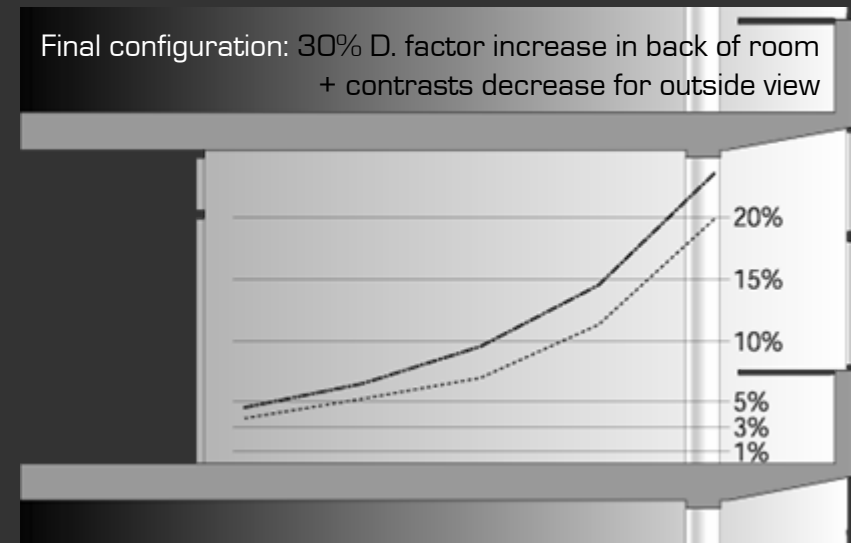
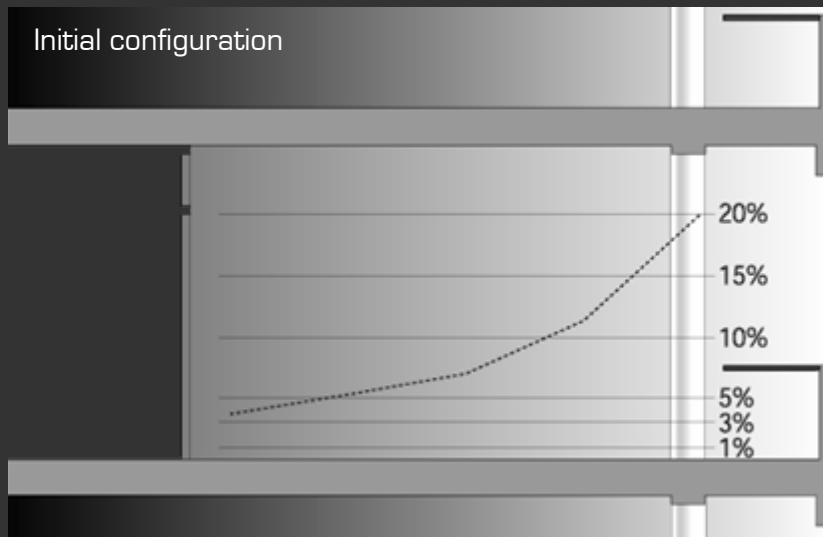
- scale choice (often 1:20 or 1:30)
- reference photometer
- similar surface materials

Experimental approaches

► Scale models

■ experimental set-up

- testing of different alternatives to seek for optimum



Experimental approaches

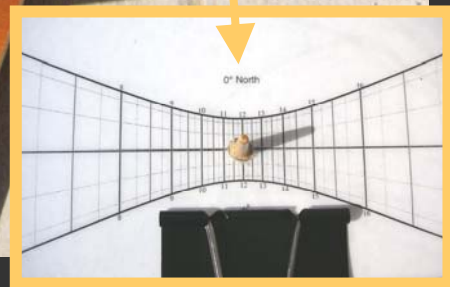
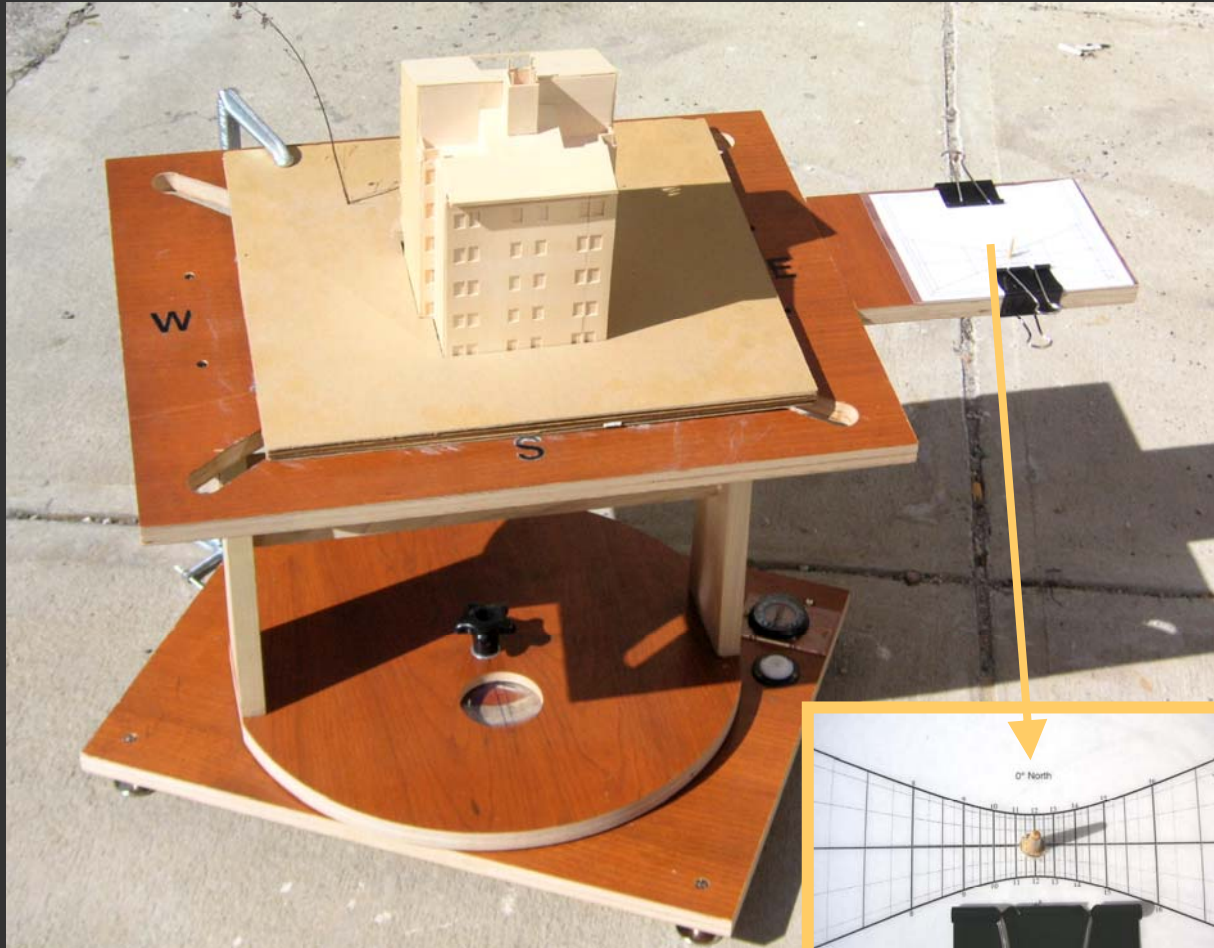
▶ Need for a reliable light source

■ real sun and sky

- sundials (shadows)
- conditions impossible to control, difficult to assess

MIT portable heliodon

► Sunny operation



MIT portable heliodon

► Cloudy operation

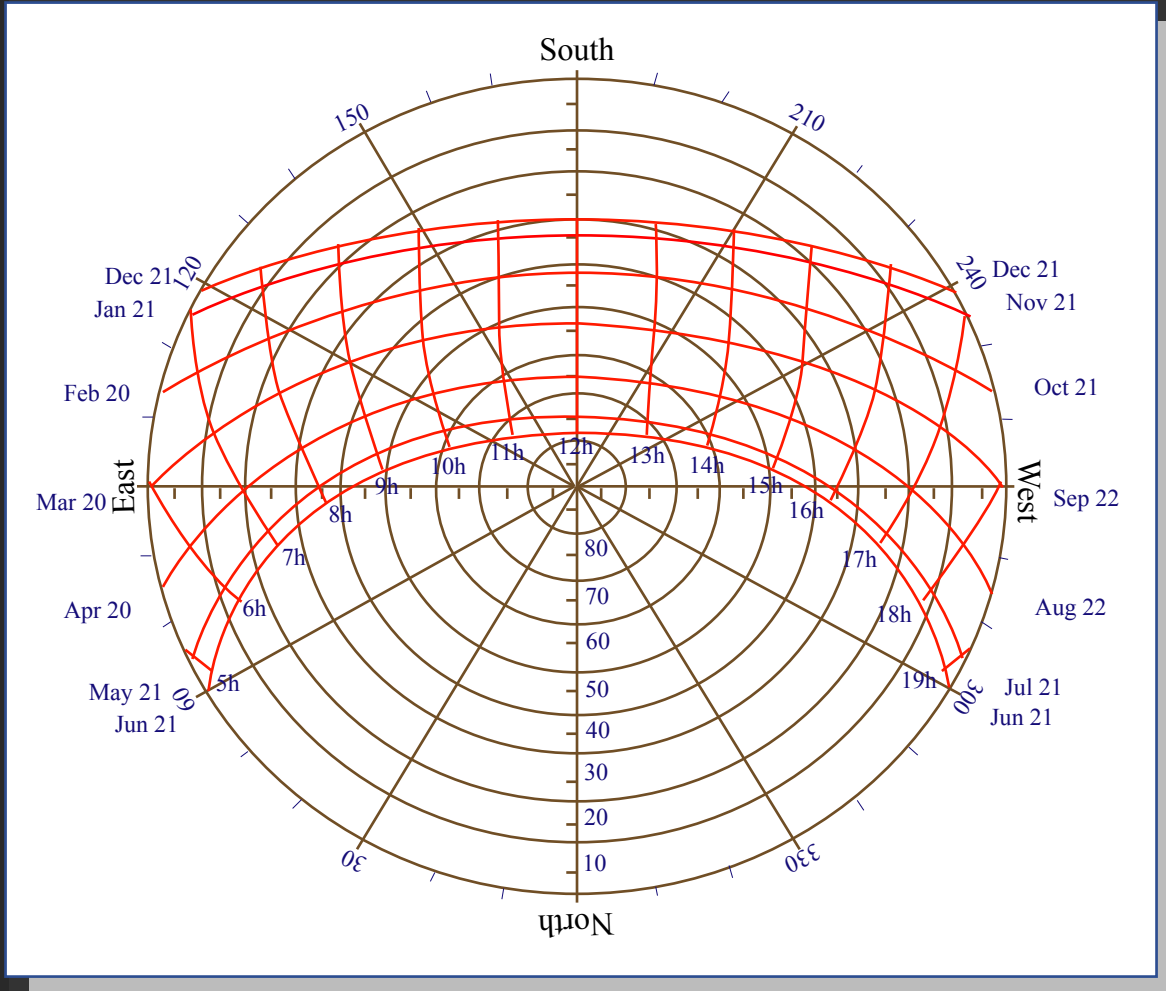


Figure by MIT OCW.



Experimental approaches

▶ Need for a reliable light source

- artificial sun and sky (lamps)
 - Sky Simulator Domes
 - Heliodons

Experimental approaches

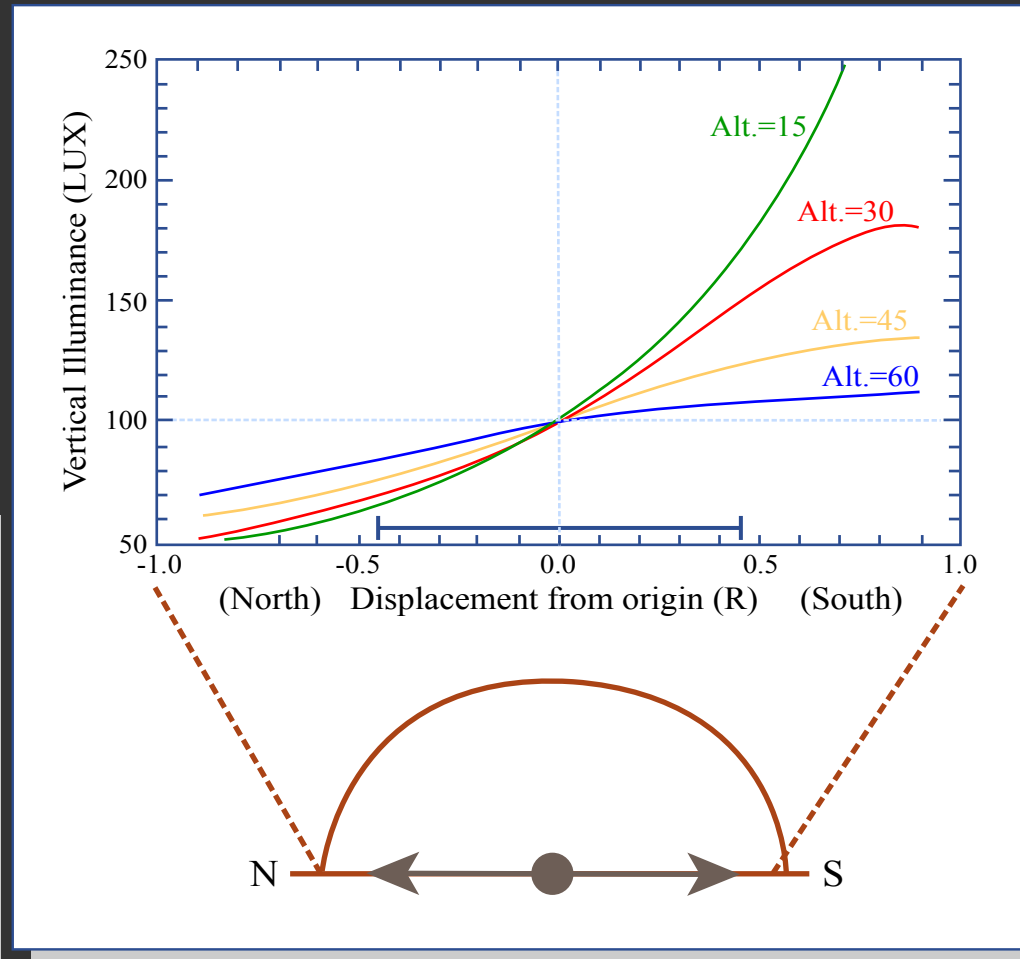
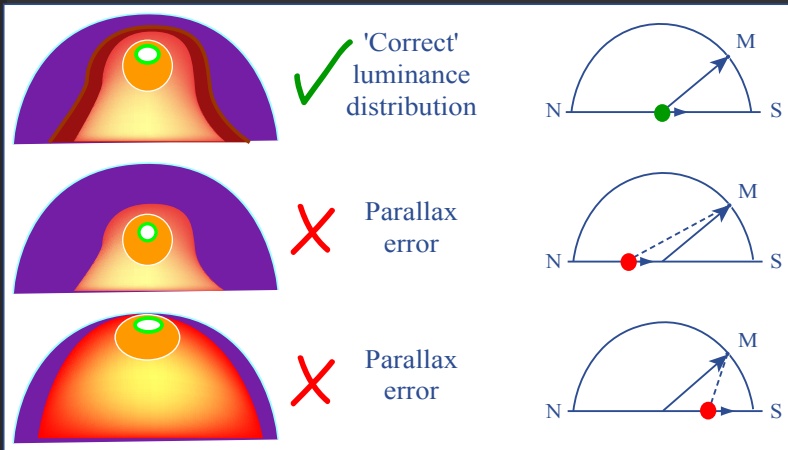
▶ Sky simulators

- mirror sky
- sky dome
- spotlight sky simulator
- scanning sky simulator

Experimental approaches

► Sky simulators

■ Parallax error



Experimental approaches

▶ Sun simulators

▪ Heliodons

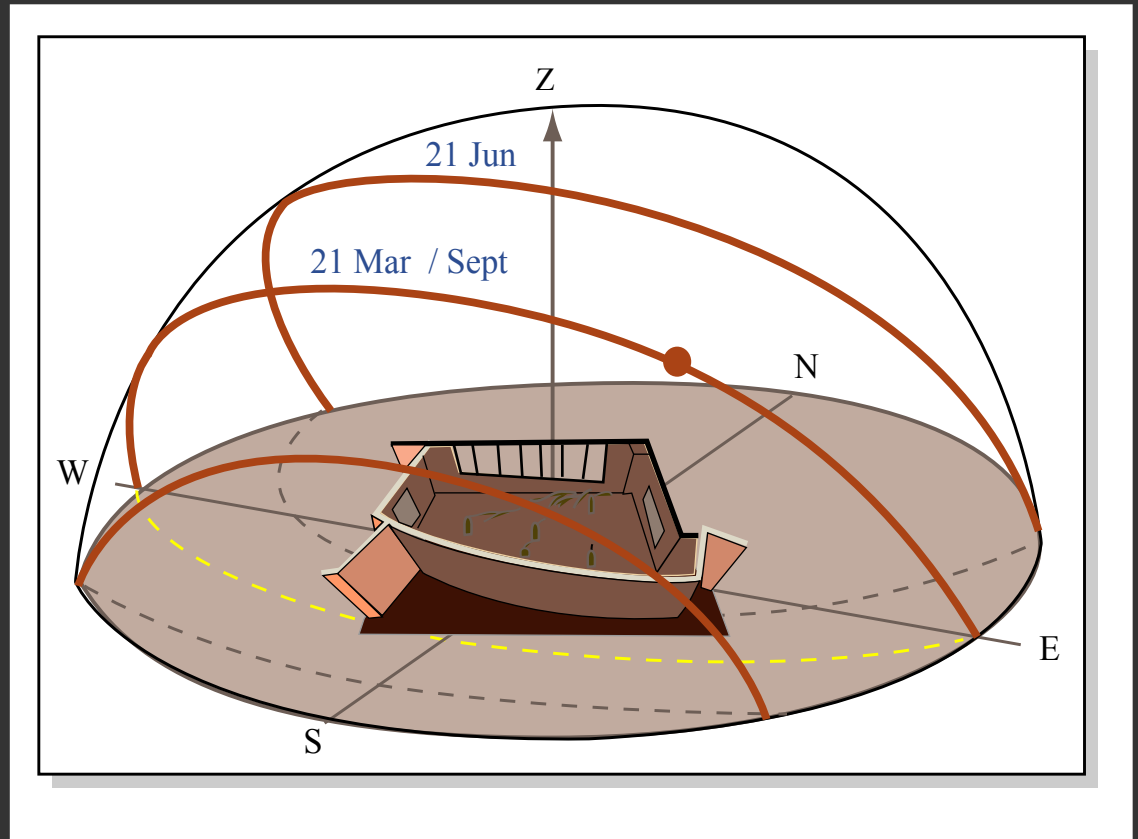


Figure by MIT OCW.