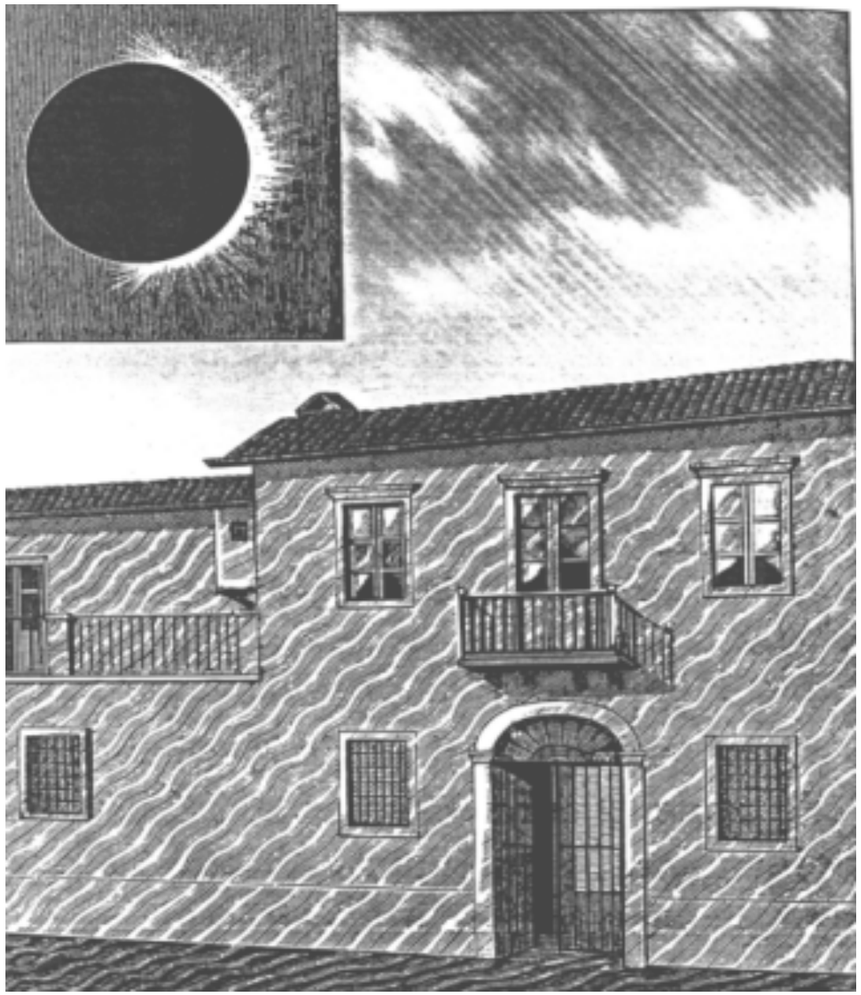
# What Are Shadow Bands?



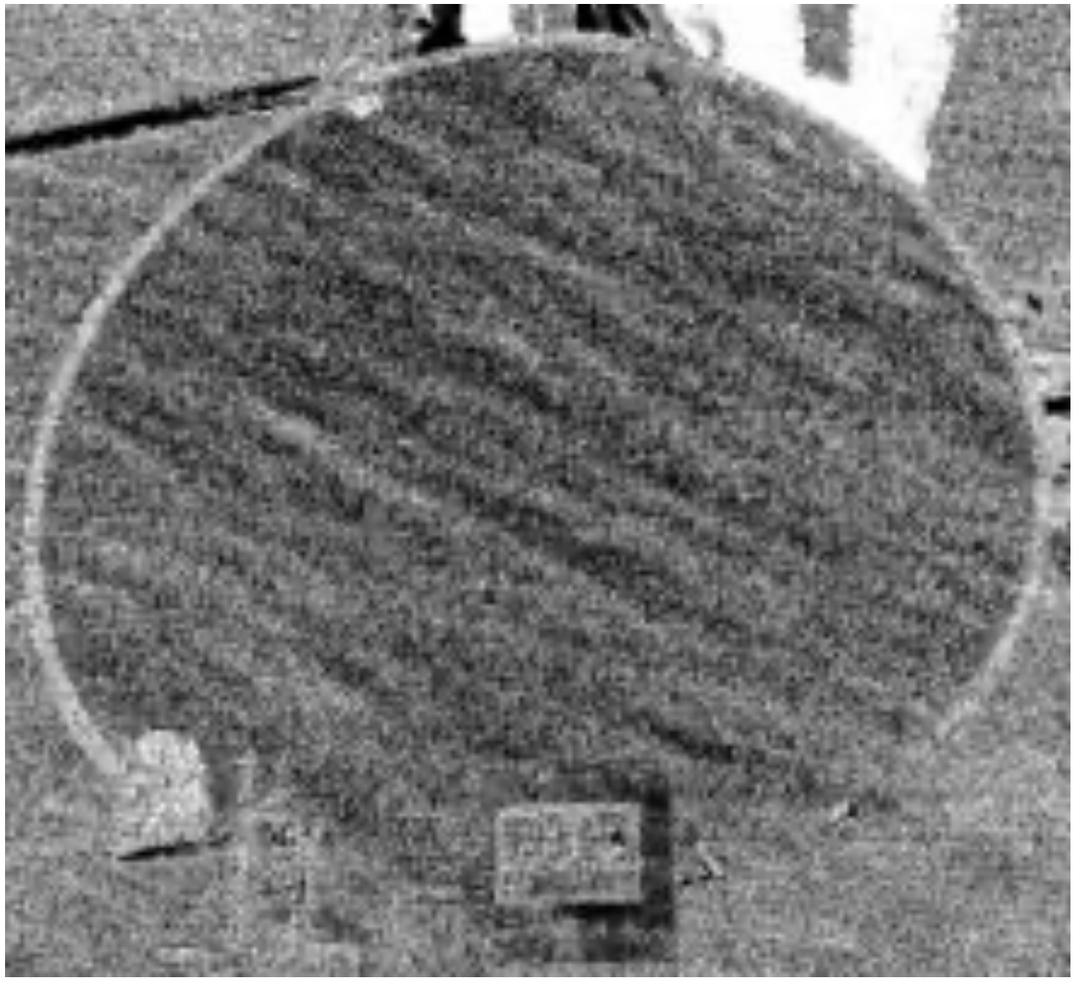
Shadow bands are dark bands interspaced by white, like undulating shadows, seen on the ground and building sides immediately before and after totality.

Although observed since antiquity, shadow bands were first described by Hermann Goldschmidt in 1820 with subsequent observations made to record and understand this phenomenon.

# What Are Shadow Bands?

The following features of shadow bands change depending on whether they are being recorded before or after totality:

- The direction in which the bands lie
- The direction and speed of their motion
- The width of the bands
- The distance between adjacent bands



# How Do Shadow Bands Form?

Similar to why stars twinkle! Our atmosphere has random swirls and eddies, known as turbulence. These fluctuations in density and temperature lead to different indices of refraction. The light from our Sun will bend slightly.

As we near totality, turbulence thousands of feet from the ground will focus and de-focus the crescent of light.

*We tried to see and take video of shadow bands during the April 8 eclipse but did not observe any, maybe due to the thin, high clouds.*