

# studying city lights to improve energy consumption models and predictions



- Institutional Review Board approval of all projects involving non-open data
- CUSP Chief Data Officer, Julia Lane
- limited # of pixels per window (but atmosphere/instrument effects typically dominate)
- aggregate and de-identified analysis only





## Selecting “points of light”



- each frame is “registered” to a common frame by spatial correlations
- 4,200 source apertures are identified by hand (out of approximately 20,000 windows in the scene)
- for each frame, the average brightness of each source is calculated in 3 bands (RGB)
- the brightness of a given source as a function of time is referred to as its “light curve”