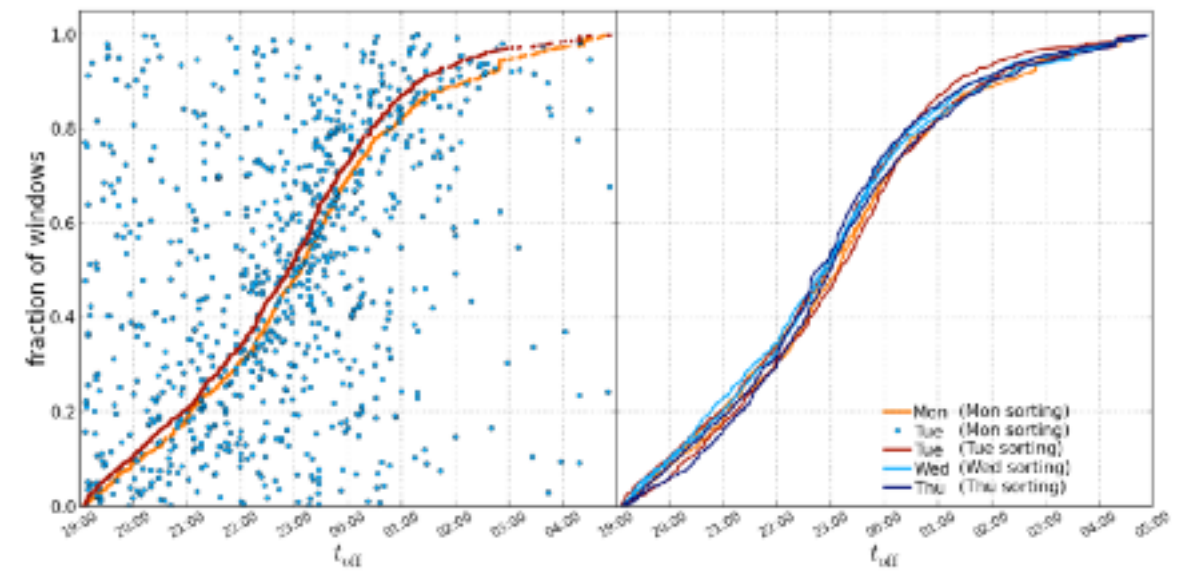
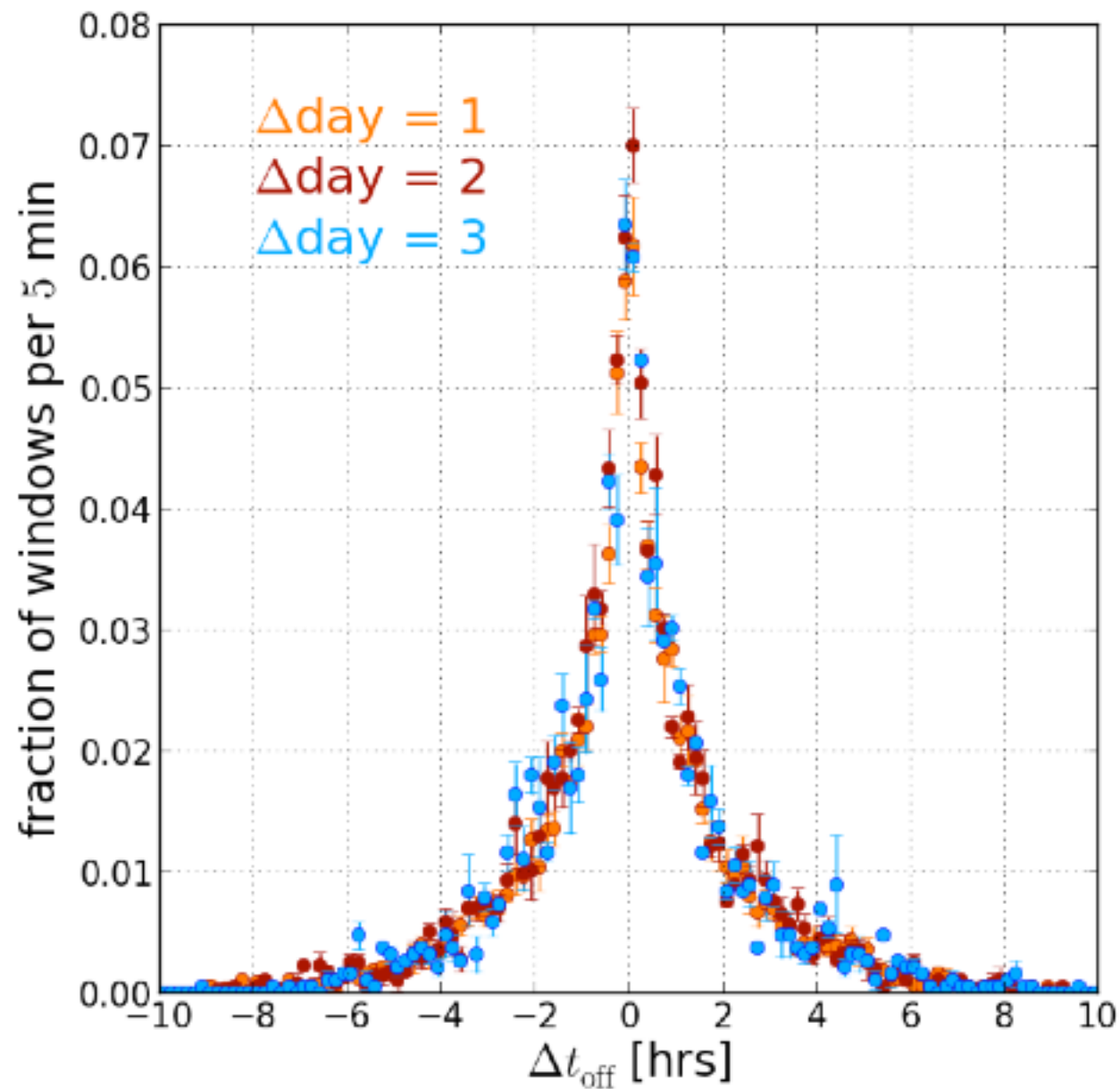


How random is random for individuals?



The main discovery consists of two parts:

- **societal behavior is regular and repeatable**
- **individual behavior is not**

which leads to two questions:

1.) does the randomness of individuals increase with time?

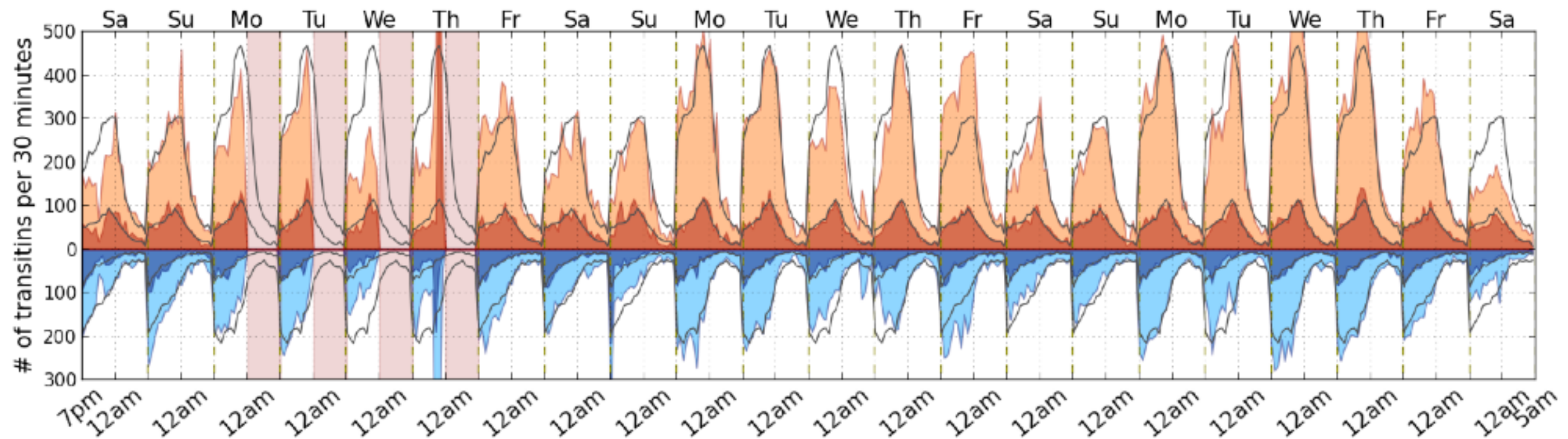
No! The “decoherence” does not increase with time.

2.) what fraction of people **are** creatures of habit?

~20% have big off times within 15 min of the first day

~50% have big off times within 1 hr of the first day

Pulse of the city lights



The success of this type of urban science inquiry is only possible given the combination of high coverage, high granularity, and high persistence.

Although we cannot directly infer behavior from on/off transitions alone, the large scale patterns of light are a measure of **aggregate trends** in the activity of New Yorkers (e.g., sleep/wake cycles, energy use, etc.).