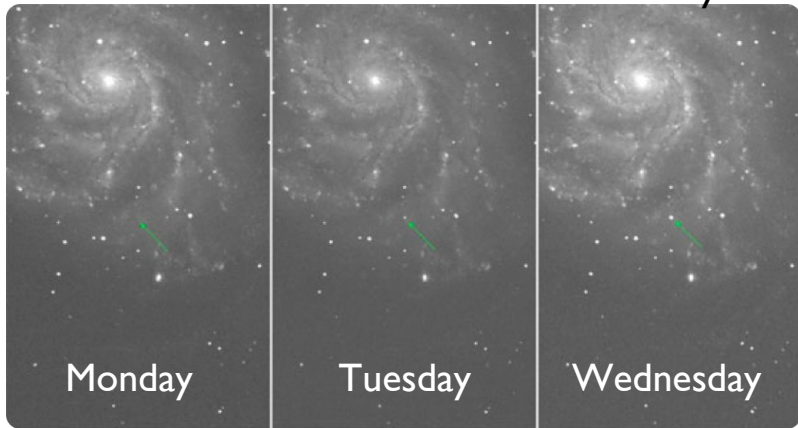


Supernova PTF11kyl:

Event of a Generation found on Tuesday



Most nearby Type Ia supernova in > 25 years
Soon visible with binoculars

<http://bit.ly/ptf11kly>

Astronomy Challenge:
*Quickly find new events in
millions of (mostly bogus)
candidates/night*



Palomar Transient
Factory (2009-
now)

Solution:
*Train a machine to mimic
expert labels*

- **Python Google App Engine** used for training
- **scipy** for expert voting
- **Jython** to run machine-learning on new data

→ 1000 to 1 compression
allows PTF to focus on most
probable candidates

arXiv.org > [astro-ph](#) > arXiv:1106.5491

Bloom et al. 2011