ZTF-II

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Landscape: Transients

- ATLAS (19 mag), PS-1 (21.5 mag) are operating in tandem with ZTF
- BlackGEM is being commissioned (21 mag?)
- We are drowning in transient candidates
- Transient object astronomy will probably peak in a few years
- What most astronomers are either missing or not admitting or not thought through
  - In this event-rich field each program must have an end-to-end plan
- Have proposed “Optical Transient Utility”
  - This is basically ZTF-II & SEDMv1, SEDMv2
- Plan is good even in the LSST era

Landscape: Stellar Astronomy

- SDSS Phase V & DESI: Massively Multiplexed Spectroscopy
- Gaia: Astrometry (20^{th} mag)
- ZTF: Richly cadence light curves at 21^{st} mag

It is my thesis that that as a result of this resonance based around 20 mag one of the new frontier in astronomy is stellar astronomy

ZTF-II: Current Roadmap

- Seeking NSF (MSIP) funding for 50% of cost for FY2021-2023 (3 years)
- Partnership & Caltech funds remaining 50%
- MSIP survey: A 2-night g+R band survey of the night sky
- Partnership & Caltech:
  - We should come up with novel & unique surveys that will take advantage of other surveys
  - Focus on “low hanging fruit” (leave faint stuff for LSST!)
  - Build off other surveys: SRG, Gaia, radio (CHIME, VLA etc)
  - Come up with new methodologies that will place young people at the forefront when LSST opens up

Dates

- ZTF-II is approved for ”full proposal” (as were 15 other projects including LCO, SDSSV)
- Deadline for full proposals: May 6, 2020
- Results will be announced in late August and funding can start as early as October 1, 2020
- Partners who have expressed interest in continuing with ZTF-II:
  - WIS, OKC, DESY/HU, Taiwan, UMd, UWM
- Others with expressed interest
  - LBL (DESI), LLNL, UvA (Nissanke), Northwestern, Warwick, Japan, UK