# The (Chaotic) Life of a MM-School Student

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# Observational supernova research

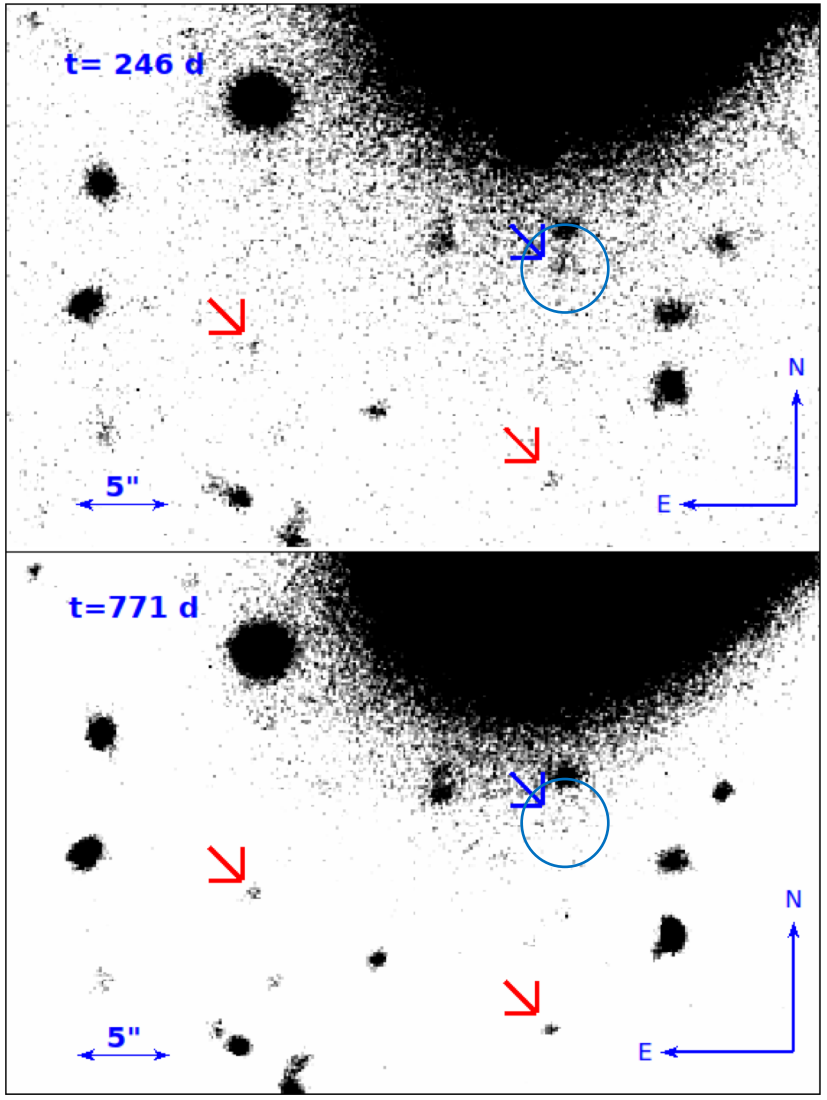
- Core-Collpase SNe host environments
- SNe Classification
- Spectroscopic Instrumentation
- Modelling SN light curves (if time permits)

Observing for ePESSTO+ in La-Silla, Chile

# SN 2016hil

(S. Schulze, PTF)

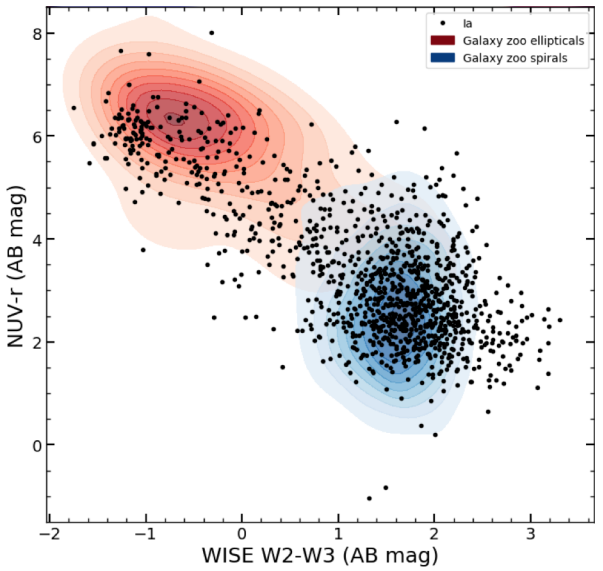
- A Type II SN, 27.2 kpc from a non star-forming elliptical galaxy
- No underlying host
- Published in Irani et al. 2019

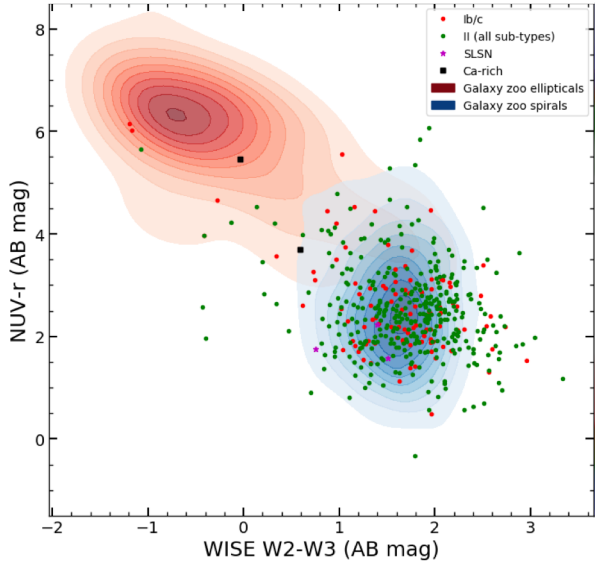


# ZTF CCSNe in elliptical galaxies

(S. Schulze, S. Prentice, ZTF-BTS team)

- 3 in the bright transient survey sample (~1% of CCSNe)
  - 2 Type II (in the outskirts)
  - 1 Type Ic (in the main part)
- Residual star formation/different progenitor channels?
- MIR/NUV-r color cuts



# Classifying SNe with SuperFit

(S. Goldwasser, ZTF-BTS team)

- New template bank for a python superfit (Howel et al. 2004)
- Better classifications for more SNe subtypes
- Prospects for an automatic classifier
- Incorporating into ZTF-BTS Zooniverse project

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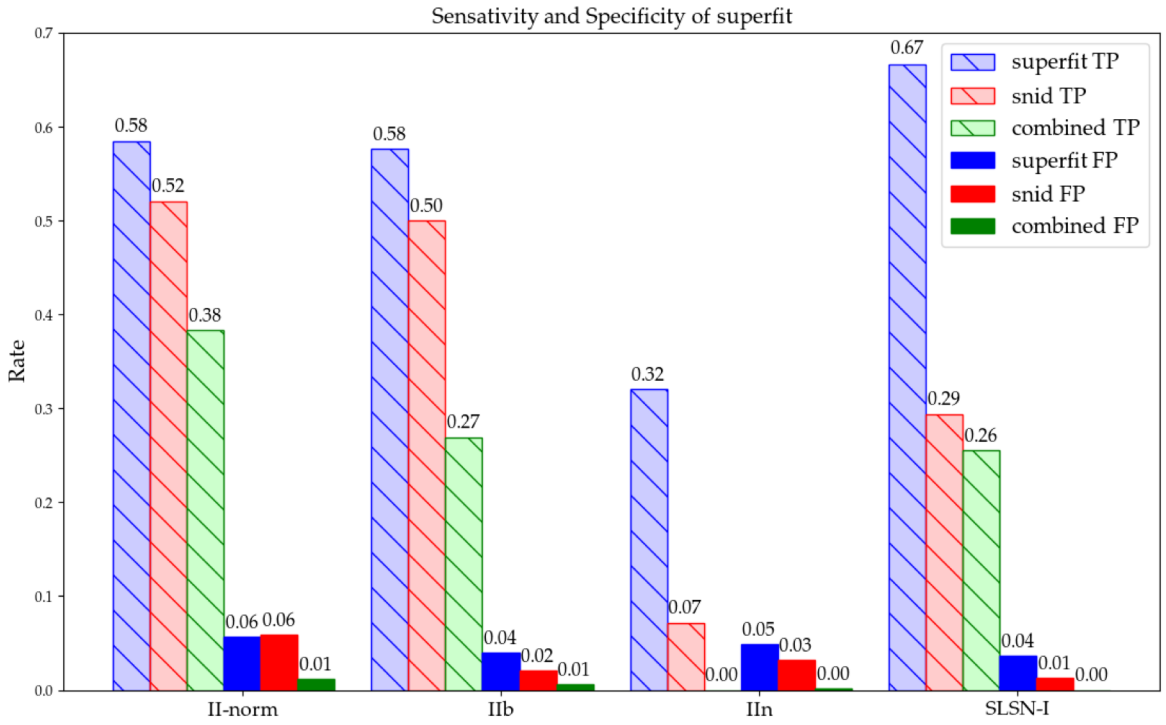

# Multi-telescope Spectroscopic Array

(Sagi Ben-ami, Eran Ofek)

- Multi-telescope arrays – a cheap alternative
- Telescope coupling methods
  - Multiplexing Vs. Direct
- Characterizing custom fibers


24" f/3.3  Dobsonian Telescope (10,000$)

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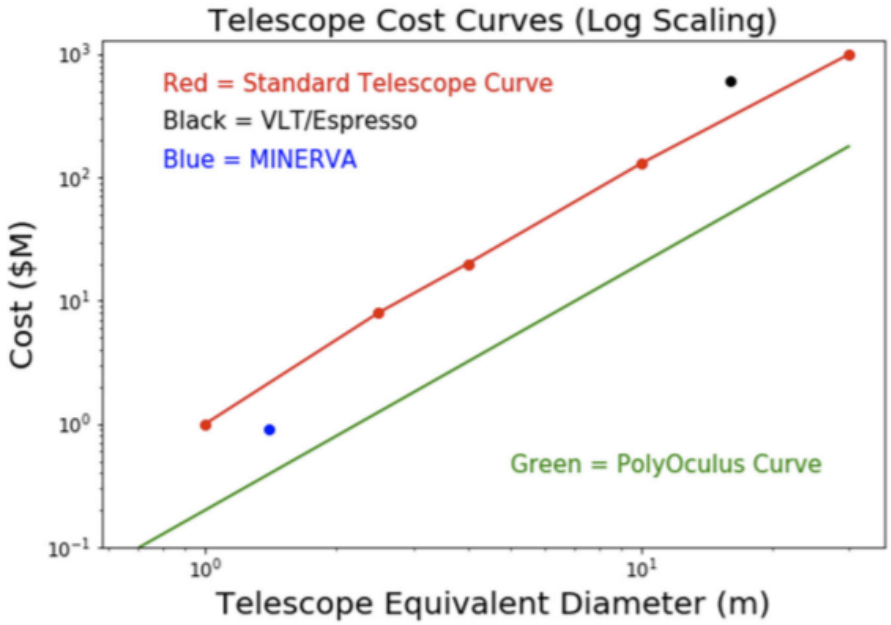


Eikenberry et al 2019

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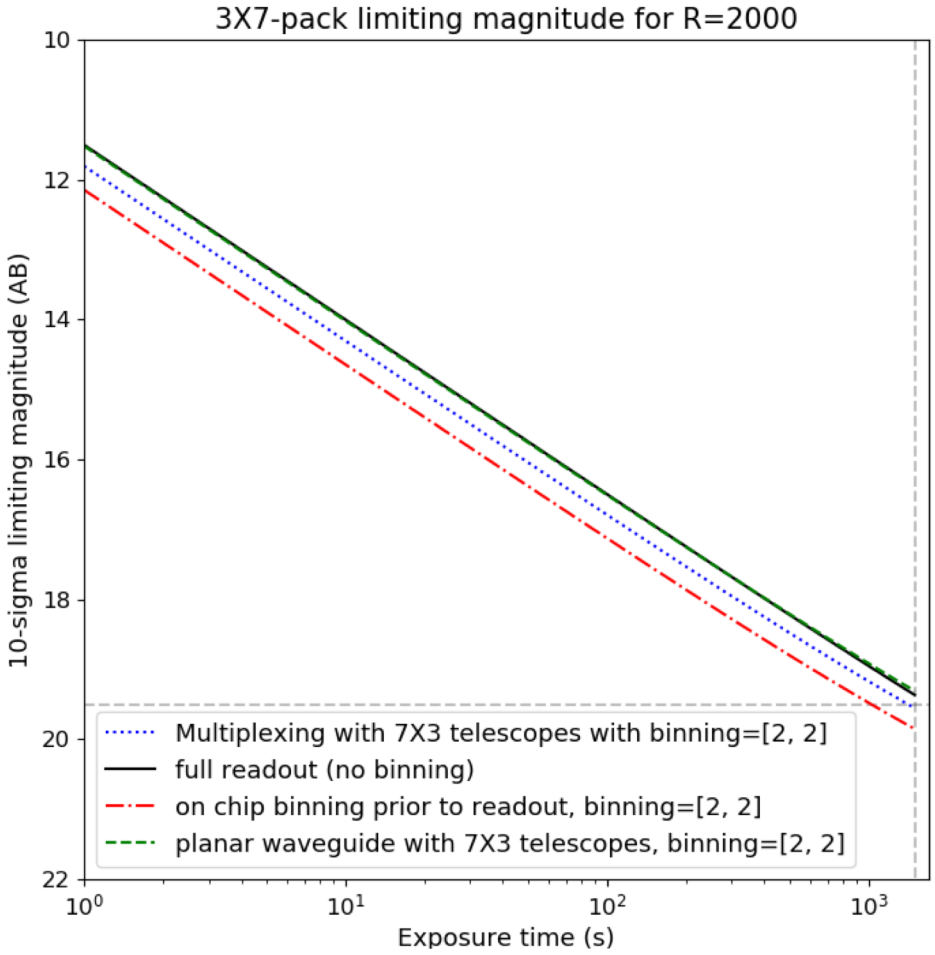
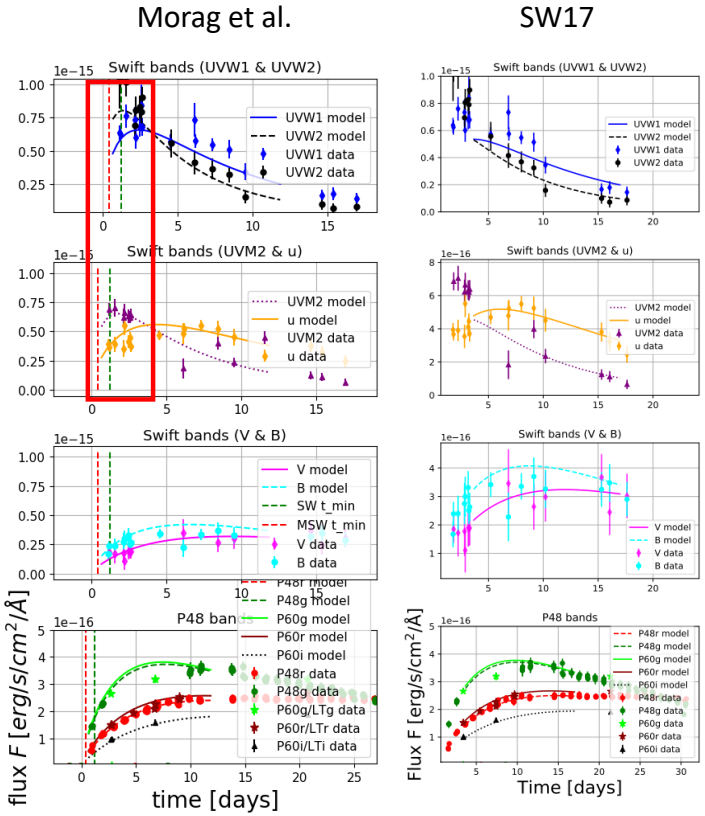


# Early time extension of shock-cooling models

(M. Soumagnac , J. Morag, E. Waxman, ZTF infant SN team)

- Light curve models - early UV data
- Strong impact of fits (e.g. 18fif; Soumagnac et al. 2019):
  - SW17 -> 1150 Rs
  - New models -> 750 Rs
- Challenges in fitting many objects




Soumagnac et al. (2019)


Questions?