

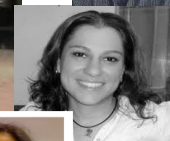
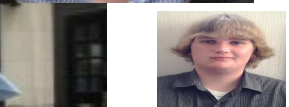
2014



→ 2018

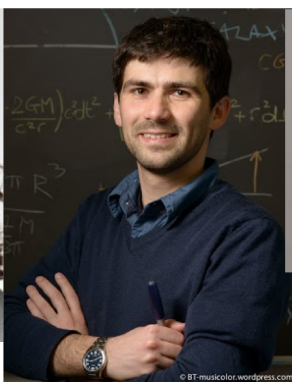


CC SN group



SN group





Anders



Tuomas



Steve



Erik



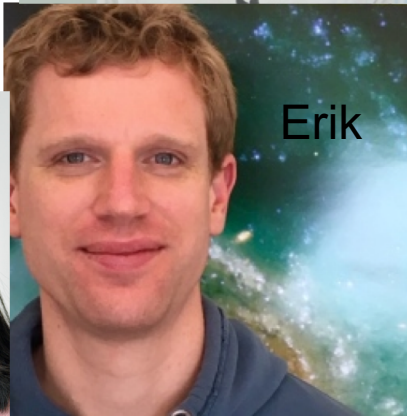
Tassilo



Sheng



janet



[Submitted on 15 Sep 2020]

Supernova SN 2020faa -- an iPTF14hls look-alike

S. Yang, J. Sollerman, T.-W. Chen, E. C. Kool, R. Lunnan, S. Schulze, N. Kasliwal, T. Kupfer, A. A. Mahabal, F. J. Masci, P. Nugent, D. A. Perley, R. Sharma

A. Nyholm¹, J. Sollerman¹, L. Tartaglia¹, F. Taddia¹, C. Fremling², N. Blagorodnova³, A. V. Filippenko^{4,5}, A. Gal-Yam⁶, D. A. Howell^{7,8}, E. Karamahmetoglu¹, S. R. Kulkarni², R. Laher⁹, G. Leloudas¹⁰, F. Masci⁹, M. M. Kasliwal², K. Morā¹¹, T. J. Moriya¹², E. O. Ofek¹³, S. Papadogiannakis¹¹, R. Quimby^{14,15}, U. Rebbapragada¹⁶ and S. Schulze⁶



We present observations of SN 2020faa. This Type II supernova displays a luminous rebrighten from an initial decline. We investigate this in relation to the famous super-

posed a lot of attention and multiple interpretations in the literature. Furthermore,

SN 2018ljp: the explosion of a stripped-envelope star within a dense H-rich shell?

L. Tartaglia, J. Sollerman, C. Barbarino, F. Taddia, E. Mason, M. Berton, K. Taggart, E. C. Bellm, K. De, S. Frederick, C. Fremling, A. Gal-Yam, V. Z. Golkhou, M. Graham, A. Y. Q. Ho, T. Hung, S. Kaye, Y. L. Kim, R. R. Laher, F. J. Masci, D. A. Perley, M. D. Porter, D. J. Reiley, R. Riddle, B. Rusholme, M. T. Soumagnac, R. Walters

In this paper, we discuss the outcomes of the follow-up campaign of SN 2018ljp, discovered by the Zwicky Transient Facility survey for optical transients. SN 2018ljp shows early spectra similar to broad-lined supernovae of Type Ic around maximum light, followed later by strong signatures of interaction between rapidly expanding

Four (Super)luminous Supernovae from the First Months of the ZTF

R. Lunnan¹, Lin Yan², D. A. C. Fremling⁵, M. T. Soumagnac

The Palomar Transient Factory Co Galaxy Sample. I. Host-Galaxy Dis Environment-Dependence of CCSI

Steve Schulze, Ofer Yaron, Jesper Sollerman, Giorgio Lunnan, Avishay Gal-Yam, Eran O. Ofek, Daniel A. Perle, Kulkarni, Peter E. Nugent, Robert M. Quimby, Marl Ben-Ami, Federica Bianco, Joshua S. Bloom, Kishala Assaf Horesh, Joel Johansson, Patrick L. Kelly, Sladj Semell Papadogiannakis, Tanja Petrushevska, Adam Filomena Bufano, Kelsey I. Clubb, Ryan J. Foley, Yoa M. Hook, Griffin Hosseinzadeh, D. Andrew Howell, All Curtis McCully, Dan Millsavljetic, Yen-Chen Pan, Dov

Type IIn supernova light-curve properties measured from an untargeted survey sample^{*,*,*,*}

[Submitted on 10 Aug 2020]

SN 2020bqj: a Type IIn supernova with a long lasting peak plateau

E. C. Kool, E. Karamahmetoglu, J. Sollerman, S. Schulze, R. Lunnan, T. M. Reynolds, C. Barbarino, C. Bellm, K. De, D. A. Duev, C. Fremling, V. Z. Golkhou, M. L. Graham, D. A. Green, A. Horesh, S. Kaye, Y.-L. Kim, R. R. Laher, F. J. Masci¹, J. Nordin, D. A. Perley, E. S. Phinney, M. Porter, D. Reiley, Rodriguez, J. van Roestel, B. Rusholme, Y. Sharma, I. Sfaradi, M. T. Soumagnac, K. Taggart, L. Tartaglia, D. R. A. Williams, L. Yan

Context: Type IIn supernovae (SNe IIn) are a rare class of stripped envelope supernovae interacting with a majority of the SNe IIn reported in the literature display a prominent and are typically found in actively star-forming spiral

[Submitted on 24 Jun 2020]

A non-equipartition shockwave traveling in a dense circumstellar environment around SN2020oi

Assaf Horesh, Itai Sfaradi, Mattias Ergon, Cristina Barbarino, Jesper Sollerman, Javier Morales, Steve Schulze, Miguel Perez-Torres, David R. A. Williams, Christoffer Fremling, Avishay Horesh, Shriniwas R. Kulkarni, Andrew O'Brien, Peter Lundqvist, Tara Murphy, Rob Fender, Justin E. Bellm, Michael W. Coughlin, Eran O. Ofek, V. Zach Golkhou, Matthew J. Graham, Dave A. Thomas Kupfer, Russ R. Laher, Frank J. Masci, Adam A. Miller, James D. Neill, Yvette Perle, Daniel J. Reiley, Mickael Rigault, Hector Rodriguez, Ben Rusholme, David L. Shupe, gton

report the discovery and panchromatic followup observations of the young Type Ic supernova, SN2020bqj, a grand design spiral galaxy at a mere distance of 14 Mpc. We followed up with observations at optical wavelengths from only a few days to several months after explosion. The optical behavior is similar to those of other normal Type Ic supernovae. The event was not detected in the

The luminous and rapidly evolving SN 2018bcc: Clues toward the origin of Type IIn SNe from the Zwicky Transient Facility

E. Karamahmetoglu, C. Fransson, J. Sollerman, L. Tartaglia, F. Taddia, K. De, C. Fremling, A. Bagdasaryan, C. Barbarino, E. C. Bellm, R. Dekaney, A. M. Dugas, M. Glomi, A. Goobar, M. Graham, A. Ho, R. R. Laher, F. J. Masci, J. D. Neill, D. Perley, R. Riddle, B. Rusholme, M. T. Soumagnac

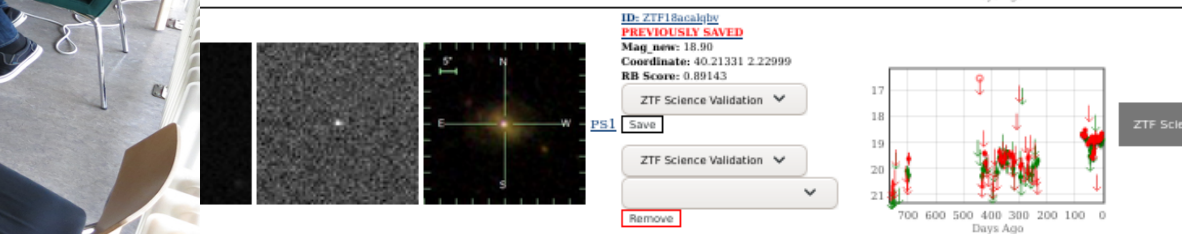
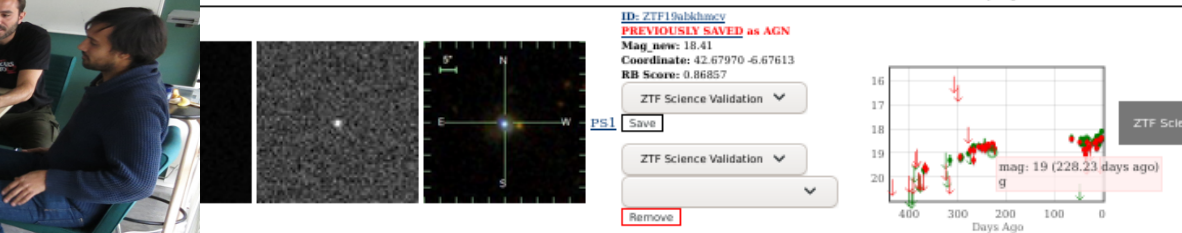
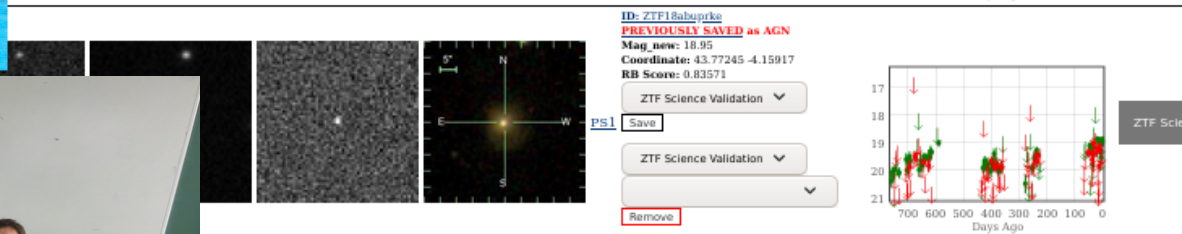
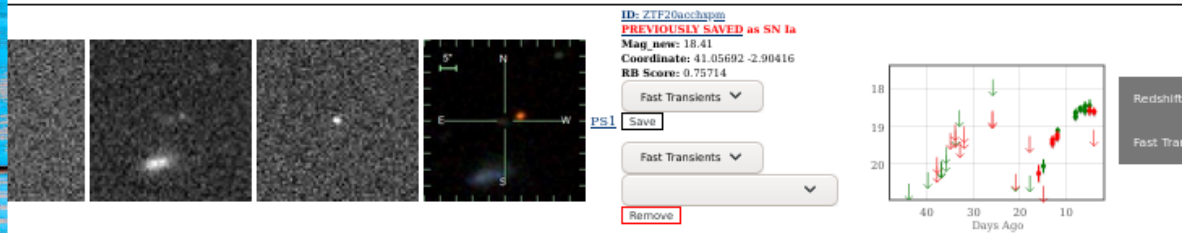
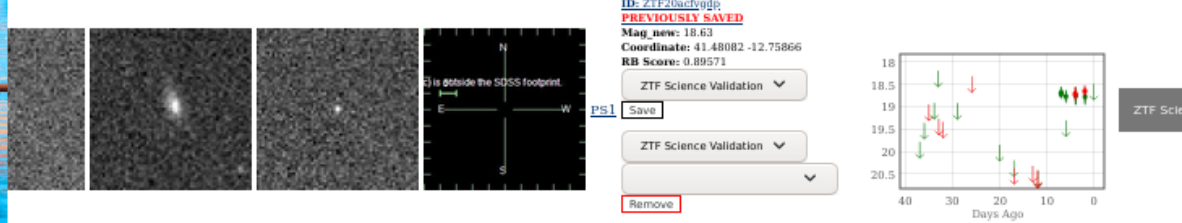
Context: Type IIn supernovae (SNe) are rapidly-evolving and luminous ($M_{R,peak} \sim -19$) transients interacting with He-rich circumstellar material (CSM). SN 2018bcc, detected by the ZTF shortly after explosion, provides the best constraints on the shape of the r SN 2018bcc to study observational signatures offers insights into the debated progenitor properties obtained from empirical models lightcurve with semi-analytical model

Astronomy & Astrophysics manuscript no. output
October 16, 2020

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Type Ic supernovae from the (intermediate) Palomar Transient Factory

C. Barbarino¹, J. Sollerman¹, F. Taddia¹, C. Fremling², E. Karamahmetoglu³, I. Arcavi^{4,5}, A. Gal-Yam⁶, R. Laher⁷, S. Schulze⁸, P. Wozniak⁸, and Lin Yan⁹



ID: ZTF20abvbpw
NOT SAVED

Monday: Total Number of SNe: 4969 | Ia: 3095 | II: 1133 | Ib: 116 | Ic: 121 | Ib/c: 20 | Ic-BL: 43 | SLSNe: 160

Total Number of SNe: 4984 | Ia: 3104 | II: 1137 | Ib: 116 | Ic: 122 | Ib/c: 20 | Ic-BL: 43 | SLSNe: 161

6432 comments,

~ 4000 SNe?

SED Machine SEDmCzar home Objects Request Scheduler Project Statistics Data Access ▾ Night Statistics My account ▾

Expected Obs Time	Object Name	Priority	Project ID	RA	DEC	Start HA	End HA	IFU Exptime	RC Exptime	Total Exptime
2020-10-06 08:33:07.652	ZTF20accxqgo	2.0	BCS	85.8248592	58.0848187	19h54m12.1204s	20h32m35.4093s	2250	Filters:NA Exptime:NA	2297
2020-10-06 09:13:24.652	ZTF20acgnelh	2.0	BCS	33.1254401	-22.4727636	0h15m25.2412s	0h53m48.5302s	2250	Filters:NA Exptime:NA	2297
2020-10-06 09:53:41.652	ZTF20acgbxgi	2.0	BCS	107.1082375	20.7440391	19h59m52.9873s	20h30m45.0443s	1800	Filters:NA Exptime:NA	1847
2020-10-06 10:26:28.652	ZTF20abvtybi	2.0	BCS	120.3614332	36.8191539	19h39m44.6058s	20h18m07.8948s	2250	Filters:NA Exptime:NA	2297
2020-10-06 11:06:45.652	ZTF20accmutv	3.0	BCS	126.0993912	-3.4886311	19h57m11.1135s	20h28m03.1704s	1800	Filters:NA Exptime:NA	1847
2020-10-06	ZTF20acgjlria	3.0	BCS	145.6468456	75.5603961	19h11m52.1099s	19h23m14.9744s	0	Filters:('r,g,i,') Exptime: ('180,180,180',)	681
ZTF20acjixfi 17:39:52.04 +04:51:36.4 264.966836 +4.880101 View another										
ERVIEW	PHOTOMETRY	SPECTROSCOPY	OBSERVABILITY	EXAMINE	FINDING CHART		1125s	2250	Filters:NA Exptime:NA	2297



ZTF20acjixfi

17:39:52.04 +04:51:36.4
204.908630 +4.860101

View another

OVERVIEW PHOTOMETRY SPECTROSCOPY OBSERVABILITY EXAMINE FINDING CHART

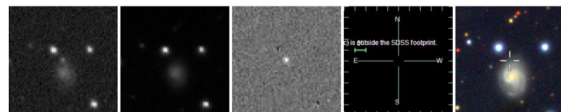
NEW

REF

SUB

SDSS

PS1



g = 18.8 (0.0 d) | Upload New Photometry

Upload New Spectroscopy

AUTO ANNOTATIONS

2020 Oct 21 [jesper](#) [Galactic l & b]: 29.0593, 18.1246
2020 Oct 21 [jesper](#) [Reference]: 2018-03-27 11:44:33 to
2018-09-28 03:02:29
2020 Oct 21 [jesper](#) [passed_filter]: Redshift
Completeness Factor
Auto Annotation Submission Form
COMMENTS
2020 Oct 21 [jesper](#) [info]: RCF SEDM p2

Add a Comment:

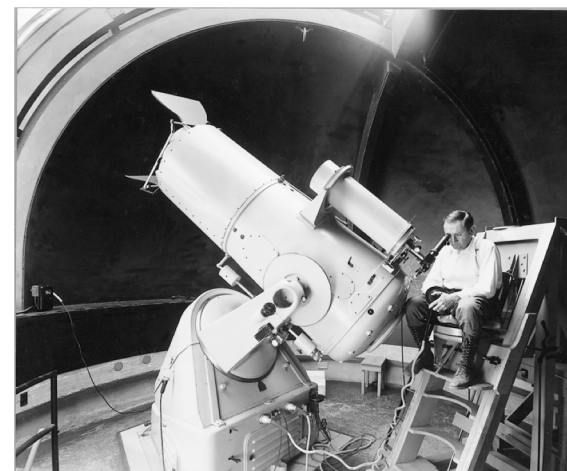
Attach File: No file selected.

Type:

SEND AN ALERT

☐ Soft Alert (email)

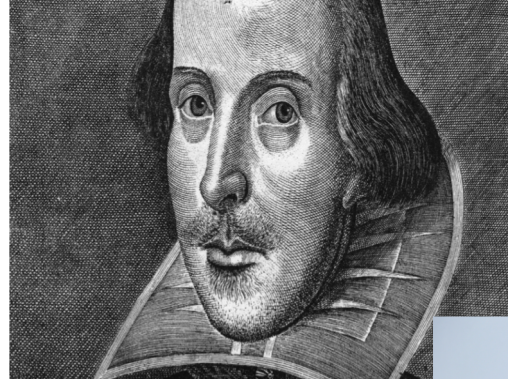
☐ Hard Alert (email + SMS)



120 SNe / 50 years

Weird: Fastest, strongest, tallest

SN 2006gy, iPTF14hls



Well studied
SN 1987A, SN 1993J,
SN 2010jl ...

Samples



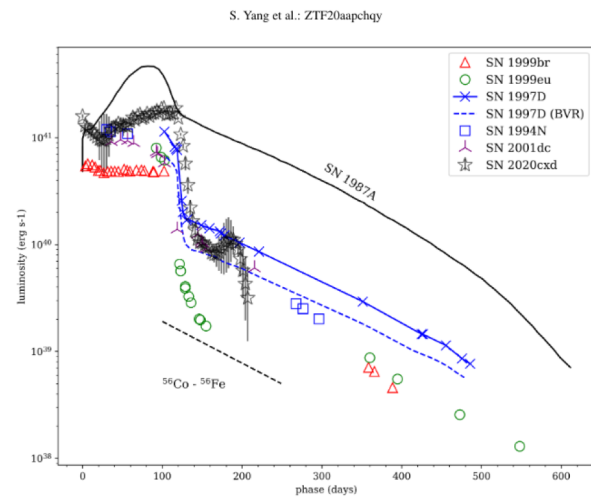
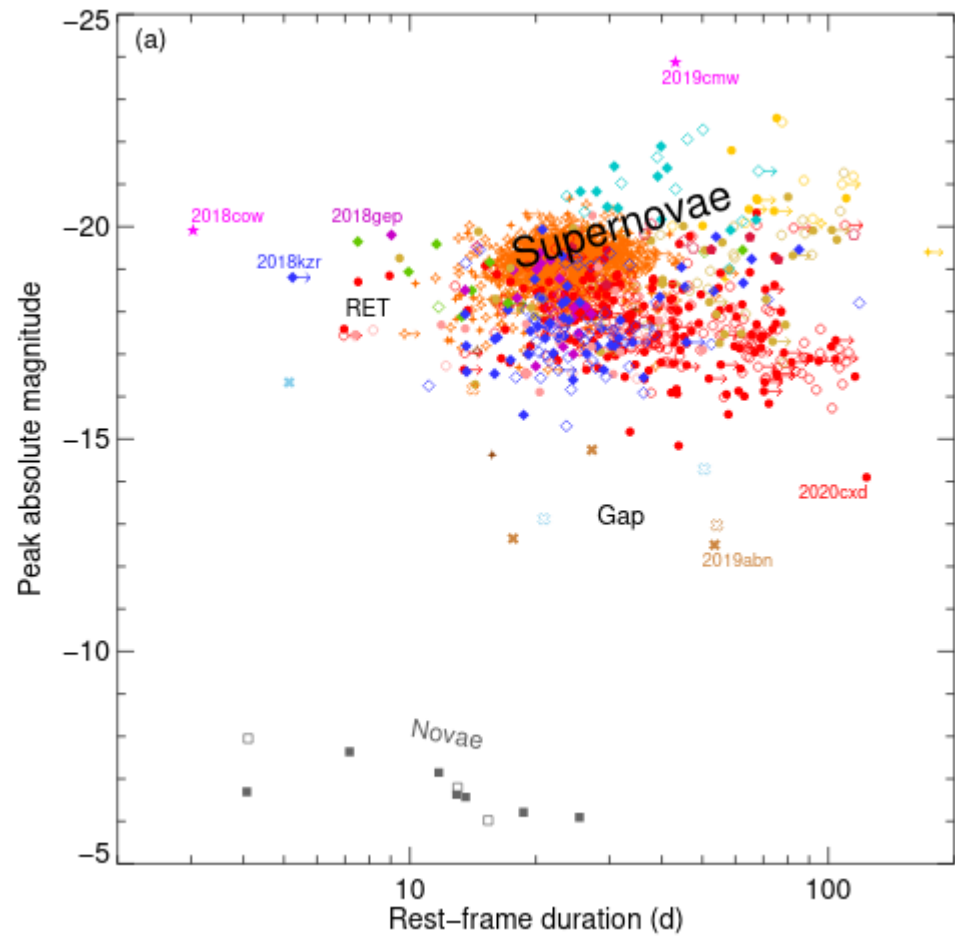
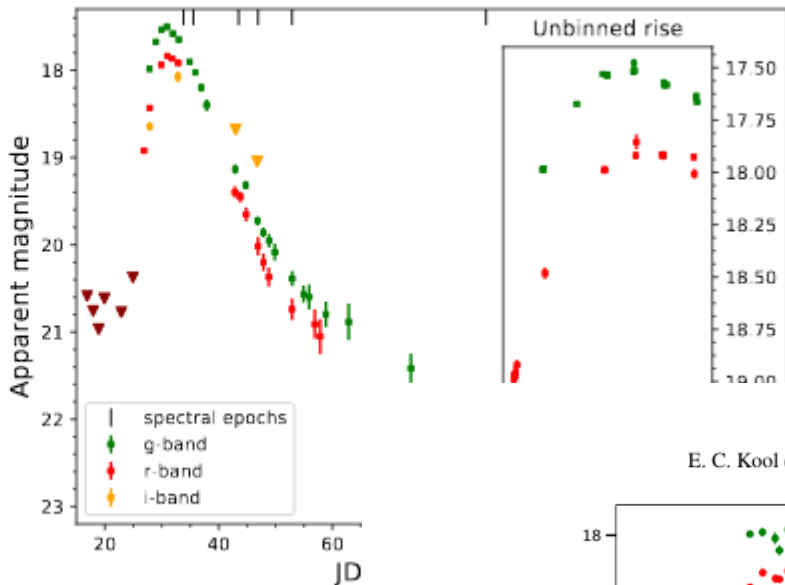
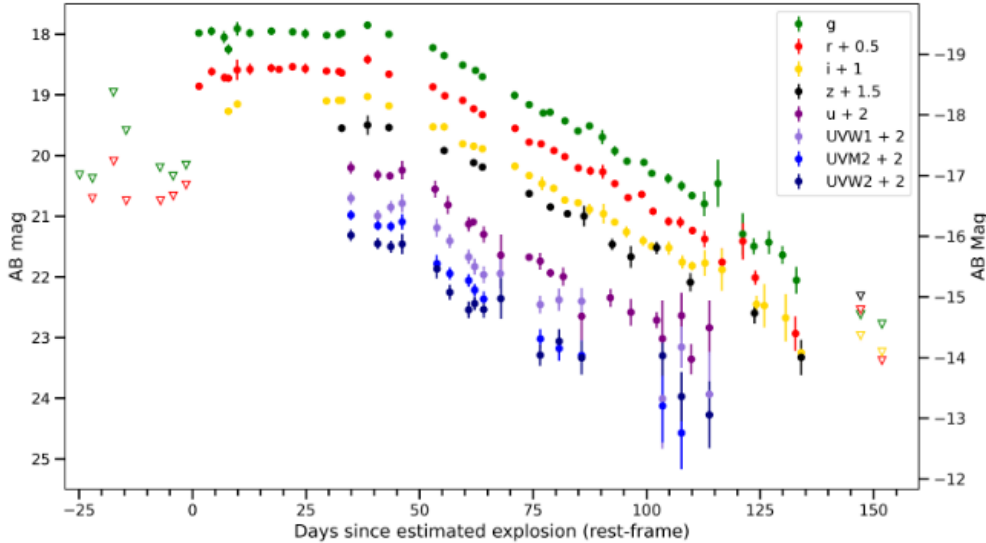


Fig. 8

ent was subsequently discovered
nd by Gaia 5 days later².
on towards the SN is estimated to
laffy & Finkbeiner 2011). We did
cant host extinction (in the form
nes or a reddened spectrum) and
the analysis presented in this pa-
cated in the outskirts of its host
which corroborates our assumption
. The redshift towards the SN is
ect. 4) from a fit to the He emis-
ed via host galaxy emission lines
um. Assuming a cosmology with
 $\Omega_m = 0.27$, $\Omega_\Lambda = 0.73$ (selected to en-
ns), we calculate a distance mod-
ponds to a luminosity distance of



E. C. Kool et al.: SN 2020bqj: a Type Ibn supernova with a long lasting peak plateau



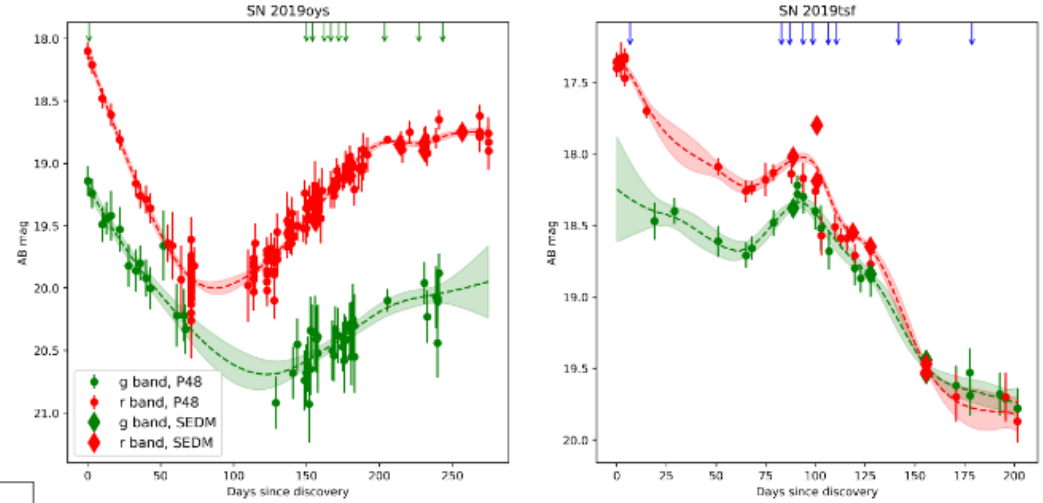
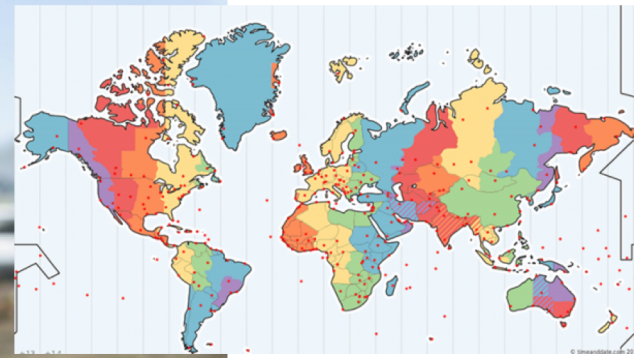


Fig. 4 Absolute magnitudes of SN 2020faa together with the LCs of iPTF14hls, as well as SNe 1999em and 2013ej. has been applied to match these SNe. The inset highlights the early evolution (exactly 200 days), which is where it demonstrates a striking similarity with the early iPTF14hls LCs.



**IF YOU CAN'T
BEAT THEM
JOIN THEM**

