ZTF Cosmo DR2

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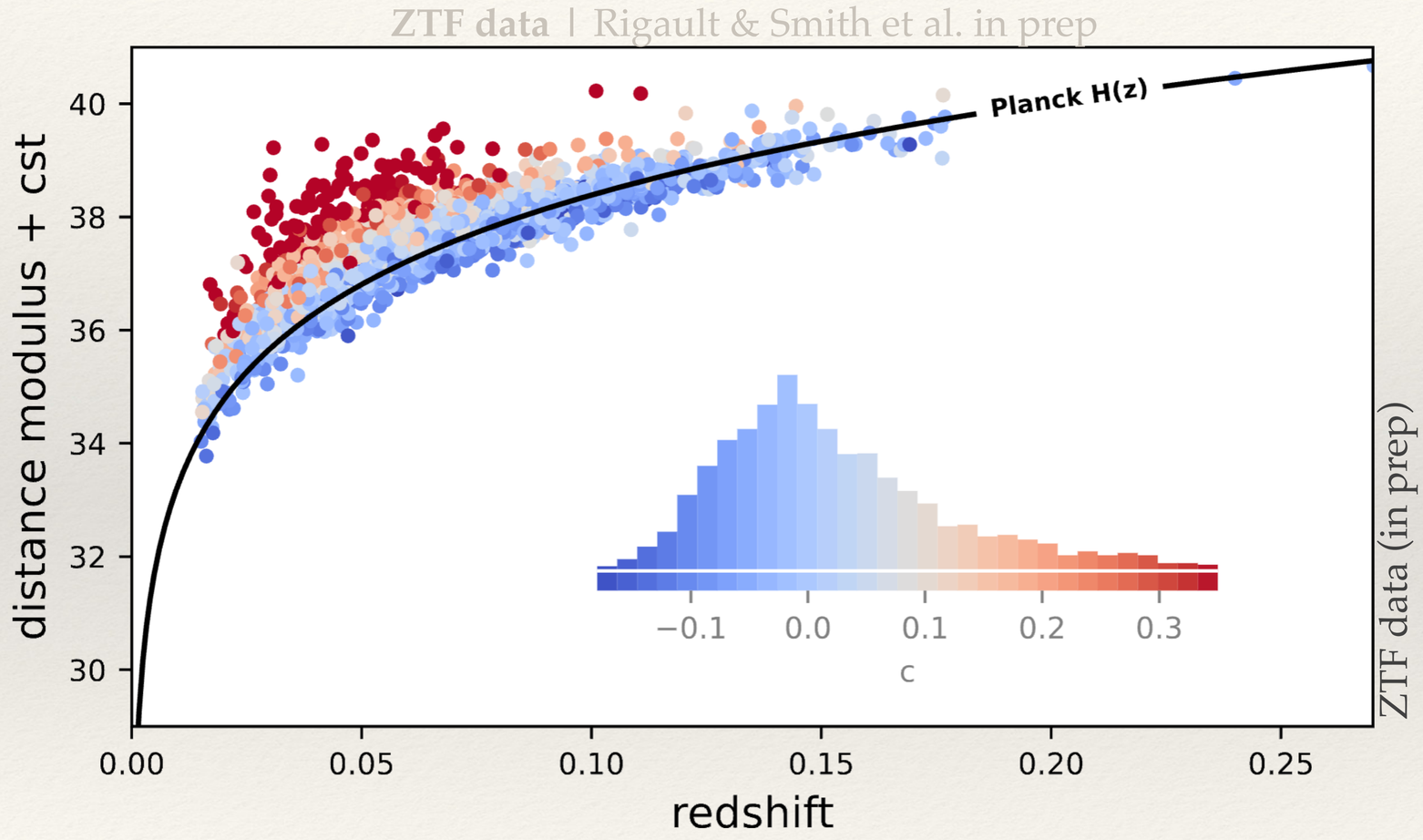
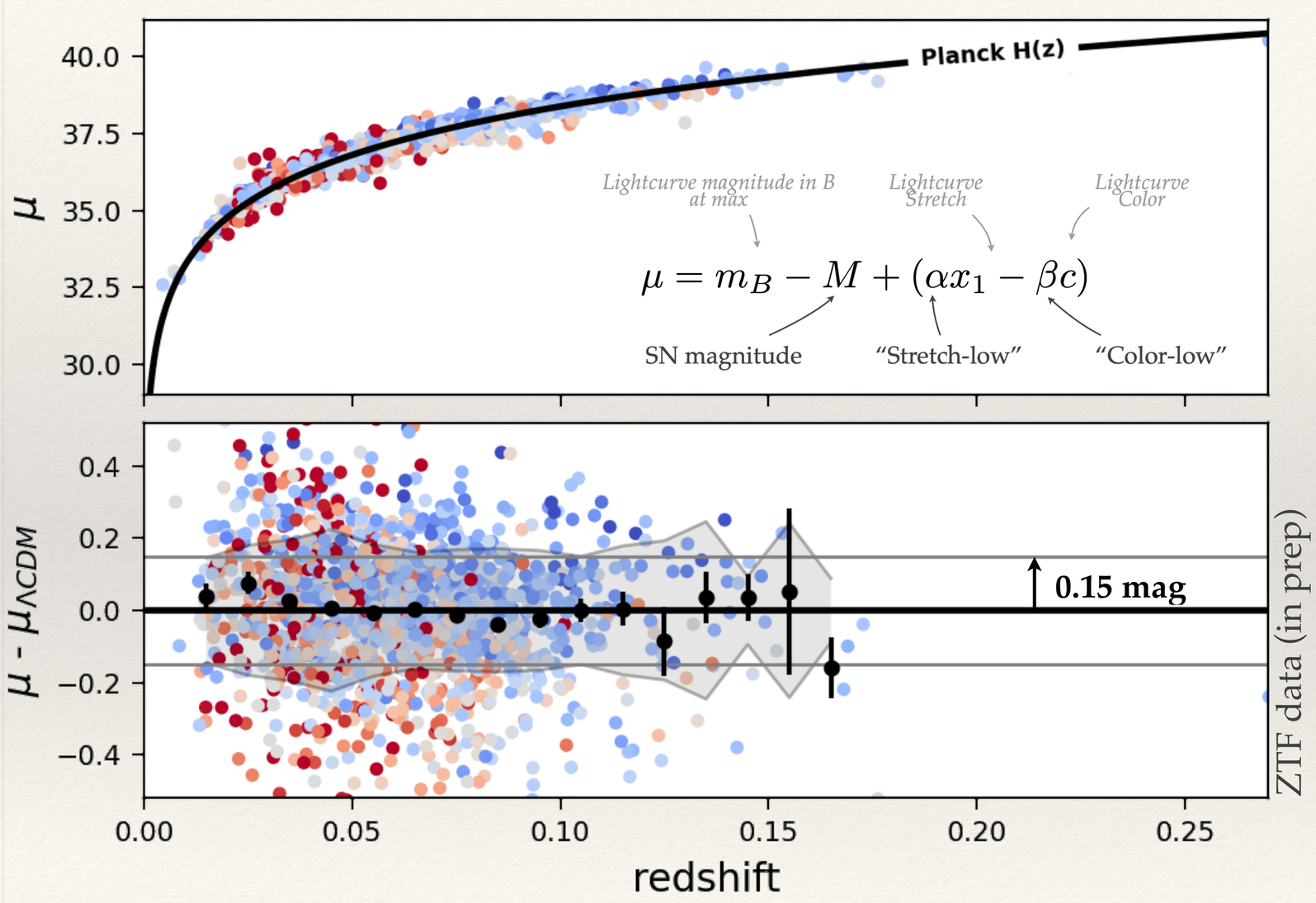
Type Ia Supernovae



Cuts	Number left
Master list	3793
has a spectrum	3681
secured Ia typing	3644
has a lightcurve	3627
Basic cuts	
good sampling	3184
$x_1 \in [-4, +4]$	3148
$c \in [-0.3, 0.8]$	3106
$\delta t_0 \leq 1$	3062
$\delta x_1 \leq 1$	3035
$\delta c \leq 0.1$	3011
Additional cuts	
volume ltd (z<0.06)	1196
non-peculiar SNe Ia*	2703
non-SN redshift**	1558

Type Ia Supernovae



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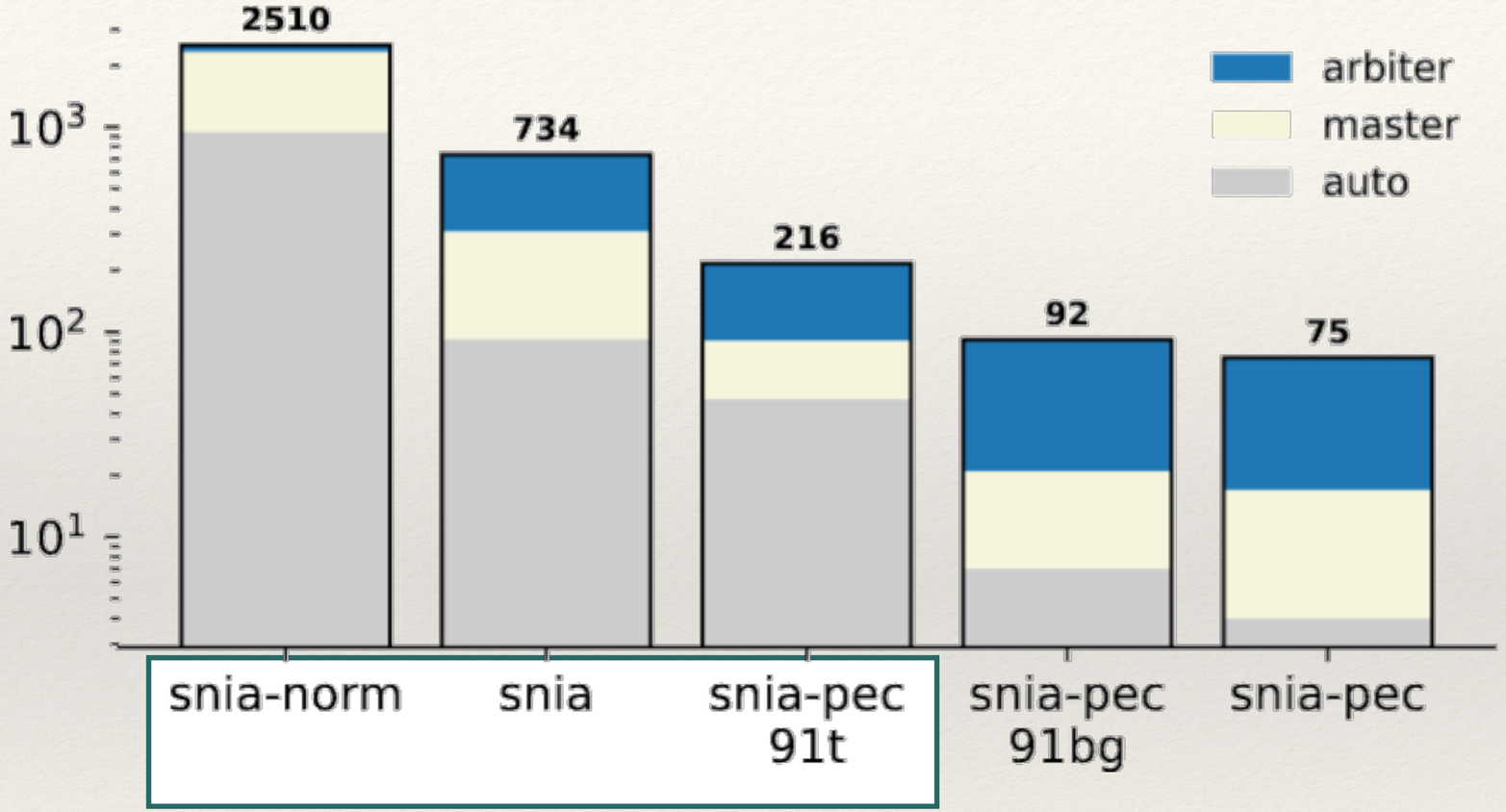
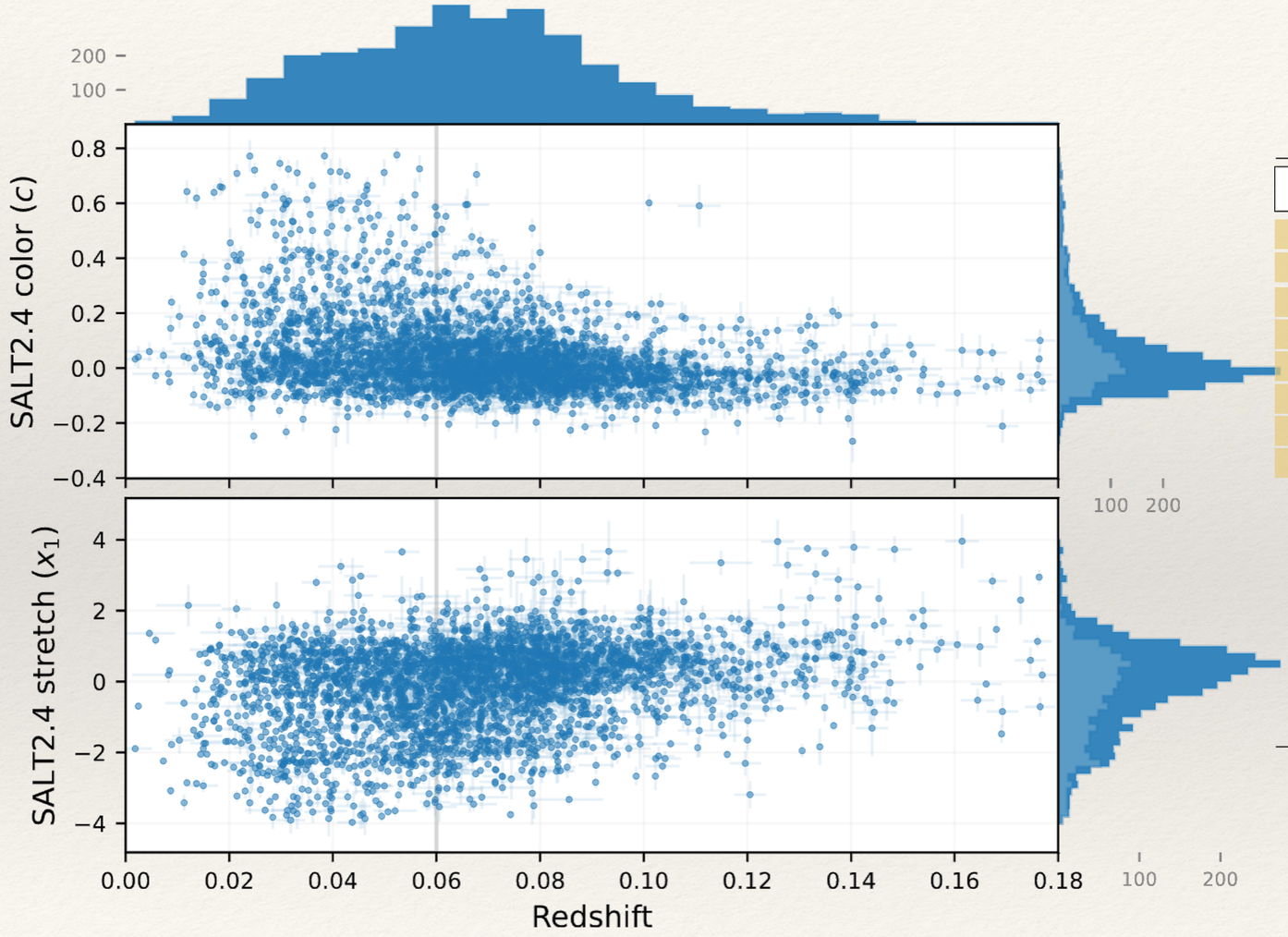
SNe Ia subtypes



Cosmology SNe Ia

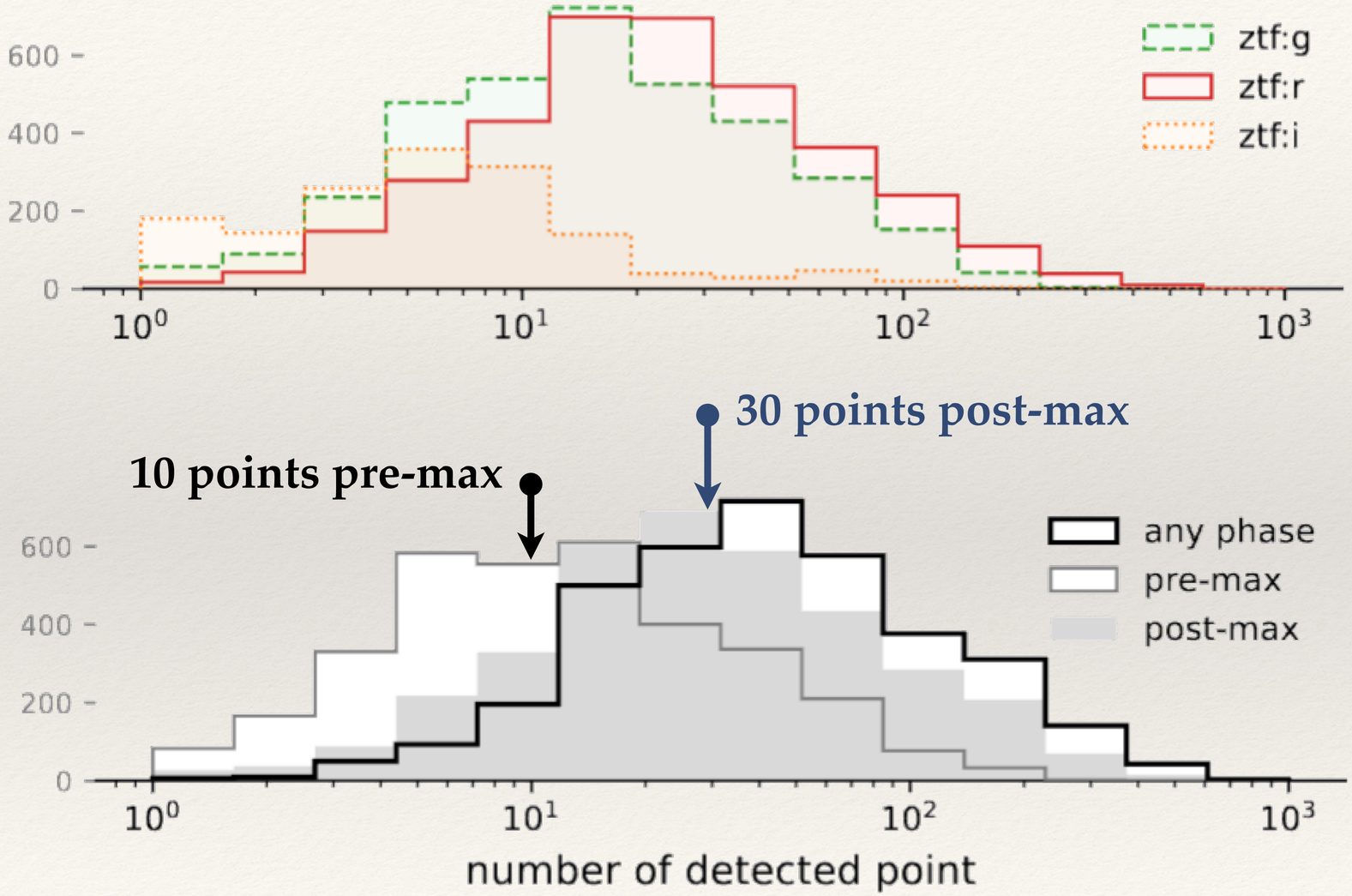
LightCurve Parameters



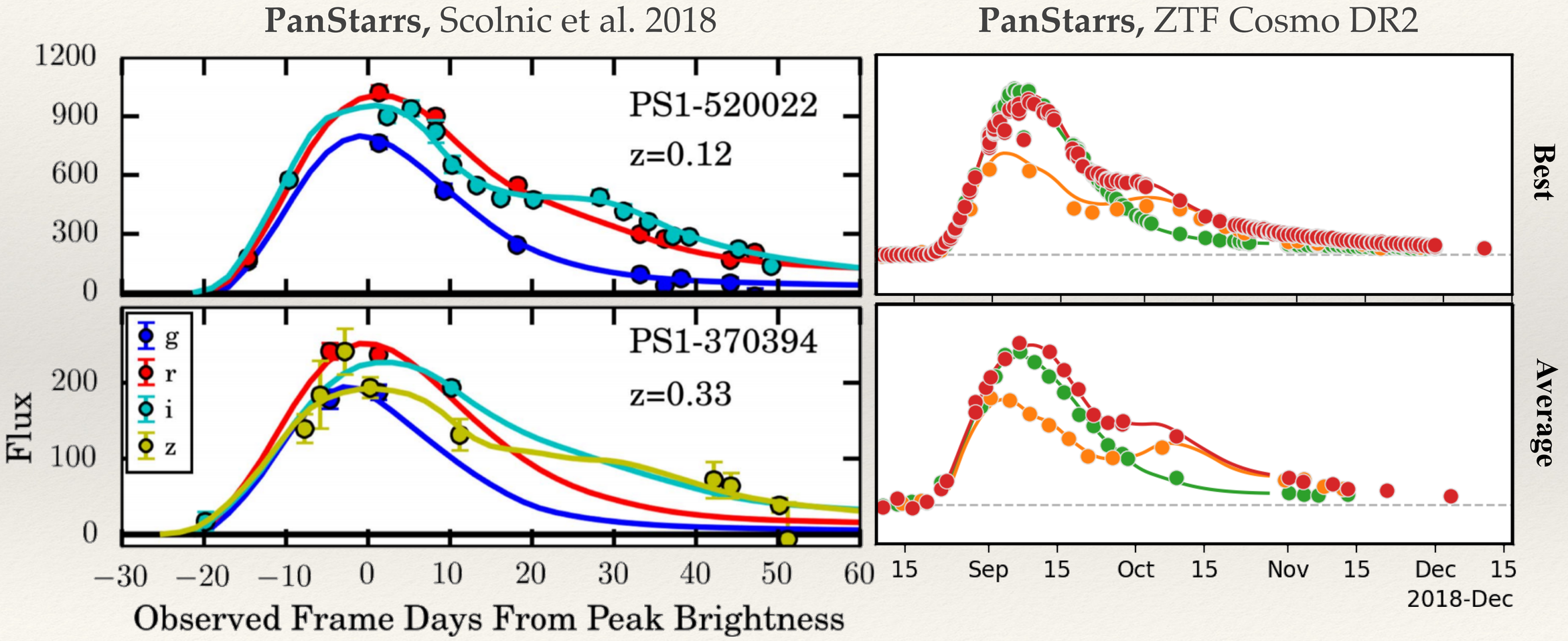
First ZTF Curated Sample release

First Author	subject	keyword
This paper	ZTF Cosmo DR2 overview paper	–
[TBC] Smith-or-Rigault et al.	Prospects for Cosmology	–
Rigault et al.	Study of lightcurve fit residuals	overleaf
Ginolin et al.a	SNe Ia Standardisation, stretch and step	overleaf
Ginolin et al.b	SNe Ia Standardisation, color and BS21	overleaf
Ruppin et al.	SNe Ia in Clusters	overleaf
Lacroix et al.	ZTF Cosmo DR2 photometry: known issues and future solutions	–
Amenouche et al.	ZTF Cosmo DR2 simulations	overleaf
Dimitriadis et al.	Properties of the Type Ia Supernovae populations	–
Harvey et al.	High Velocity Silicon Features	overleaf
Burgaz et al.a	spectral diversity of Type Ia supernovae	overleaf
Burgaz et al.b	Spectral properties of low-mass host SNeIa	overleaf
Terwel et al.	CSM interaction in late-time lightcurves	overleaf
Johansson et al.	Spectroscopic properties of ZTF-Cosmo-DR2 SNeIa	–
Dhawan et al.	Siblings of ZTF-Cosmo-DR2 SNeIa	overleaf
Sagues-Carracedo et al.	Search for strongly lensed SNeIa	overleaf

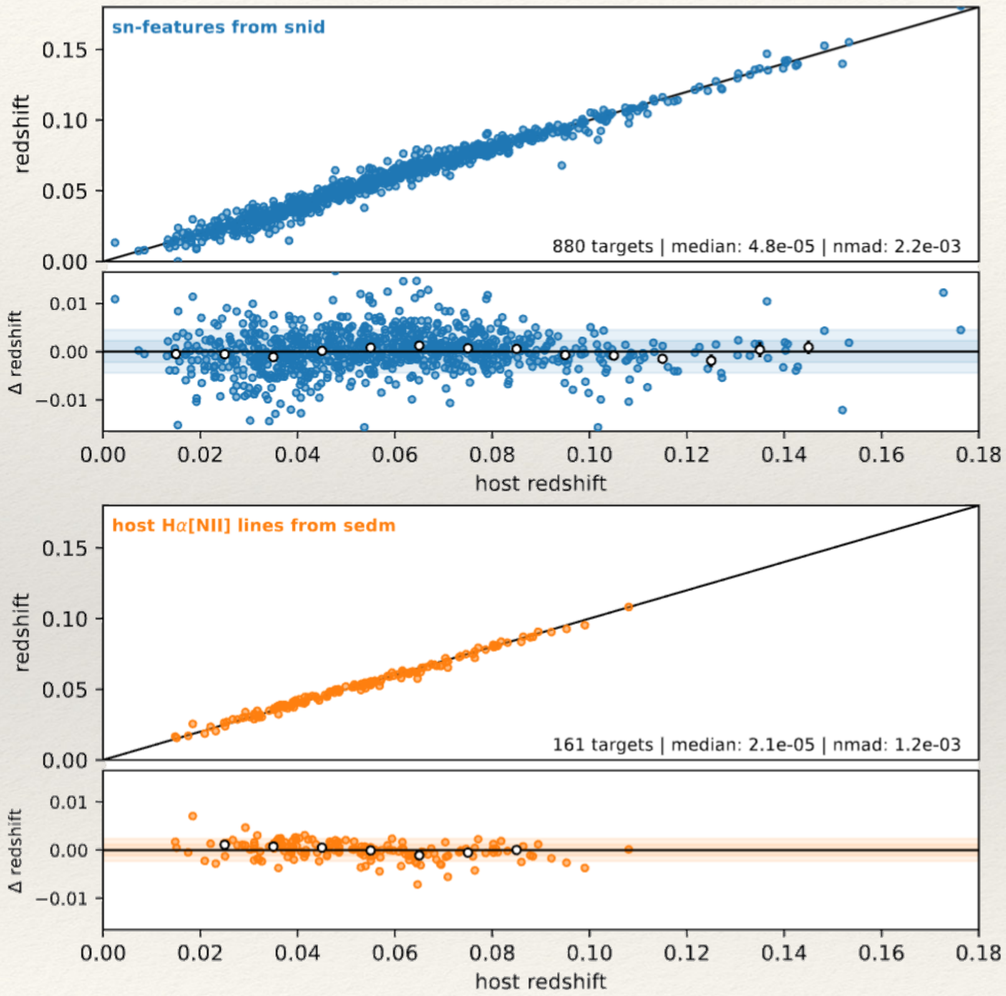
Sampling statistic



Unprecedented sampling statistic



Redshifts | *while waiting for DESI*

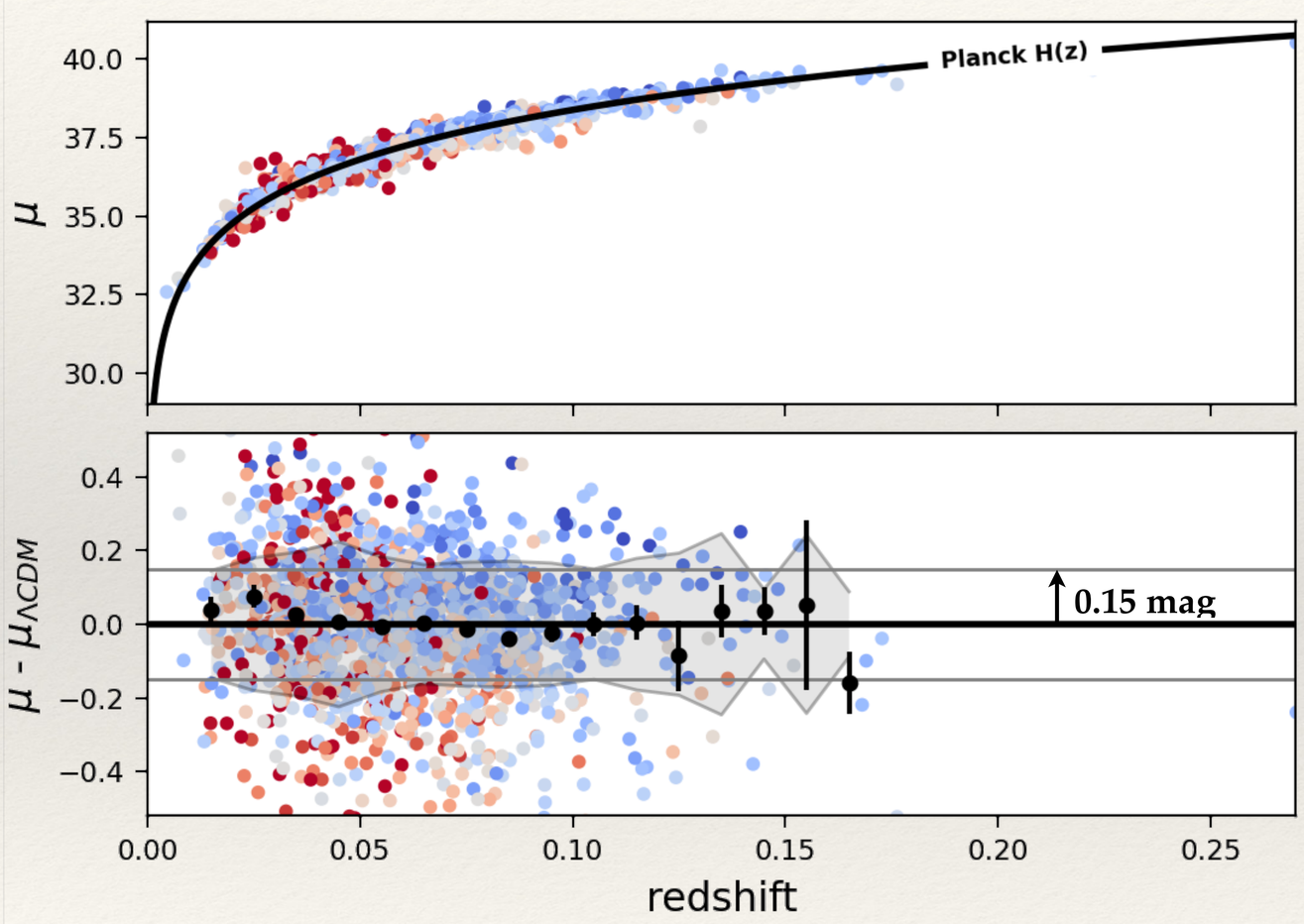


precision

50% with ≤10^{-4} | 50% with 10^{-3}

source	number	used	median offset	scatter [nMAD]
host catalog	1825	1378 (38%)	–	–
host lines (non-SEDm)	548	346 (10%)	–	–
host lines (SEDm)	504	221 (6%)	$2e^{-5}$	$1.2e^{-3}$
sn-features (snid)	3572	1662 (45%)	$5e^{-5}$	$2.2e^{-3}$

ZTF Cosmo DR2



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Rigault et al. in prep

ZTF Ia Sample

9 000

6 000

3 000

Planned

7500

On disc

DR2

Cosmo spectro

Current SNeIa Data (20 years)

ZTF

ZTF III

LSST

Rolling

2019 2020 2021 2022 2023 2024 2025 2026 2027

Rigault et al. in prep

ZTF Ia Sample

simplistic simulations

48 000

40 000

36 000

DR3

24 000

Cosmo photo

12 000

6 000

3 000

DR2

Cosmo spectro

Current SNeIa Data (20 years)

ZTF III

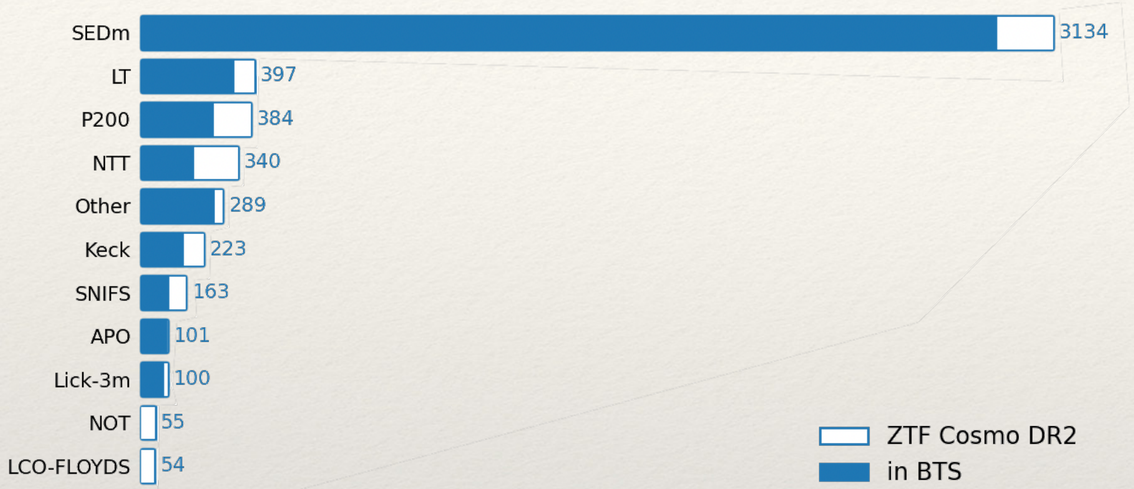
ZTF

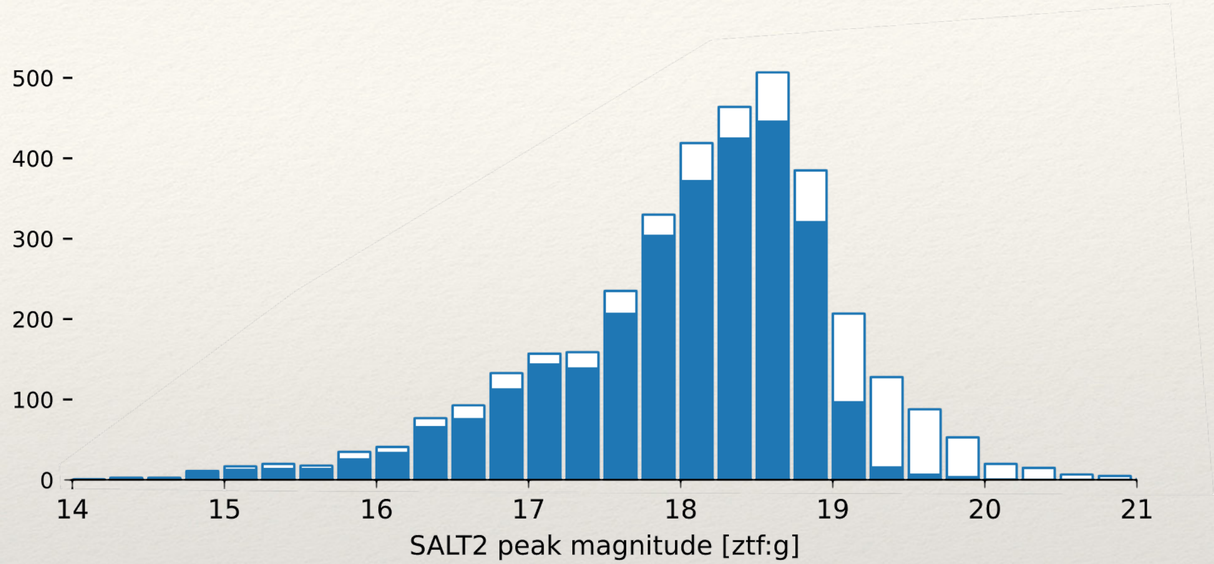
LSST

→Rolling

2019 2020 2021 2022 2023 2024 2025 2026 2027

Spectroscopy





5240 Spectra

29% of targets have multiple-spectra

86 targets have >=4

Phase dist.