

KIC 005646170

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R_{\star} (R_{\odot})	T_{\star} (K)	R_p (R_{\oplus})	S_p (S_{\oplus})
005646170-01	OBS	No	2.199019	133.046943	0.1	19.378	9.0	0.1	2.62	6620	0.08	8163.69

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005646170-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL —LPP_DV —CENT_FEW_DIFFS

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

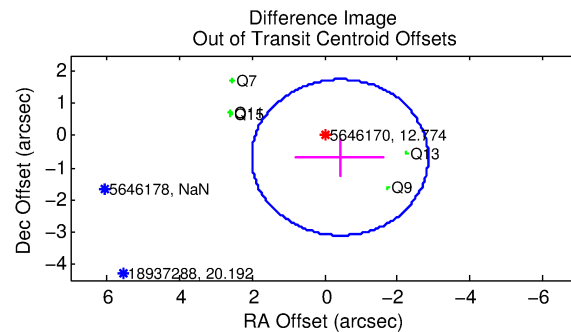
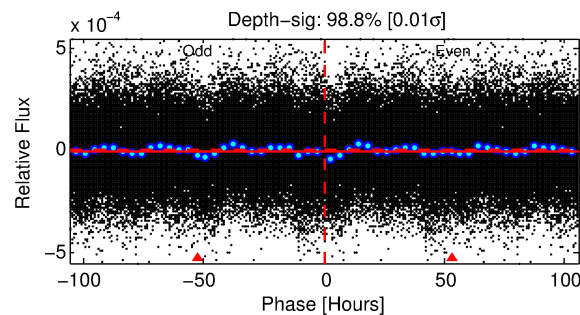
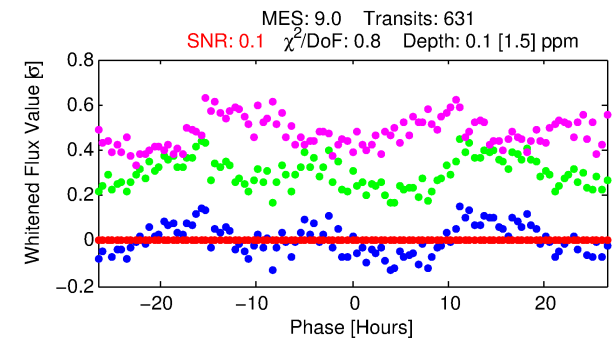
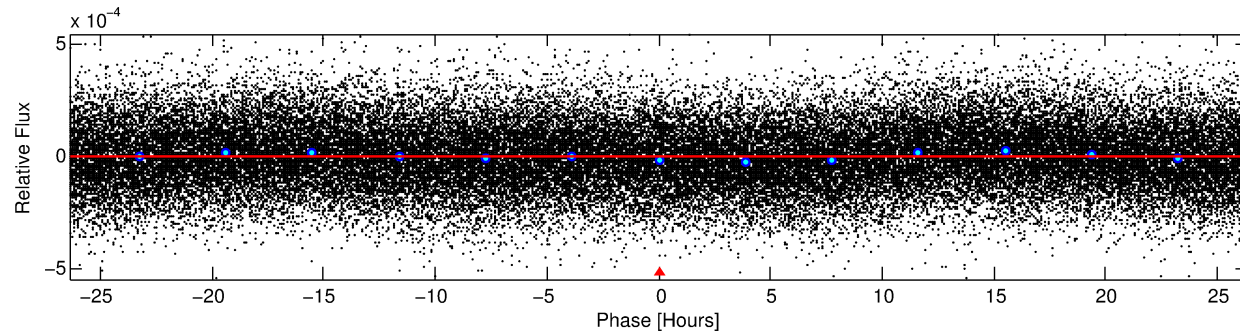
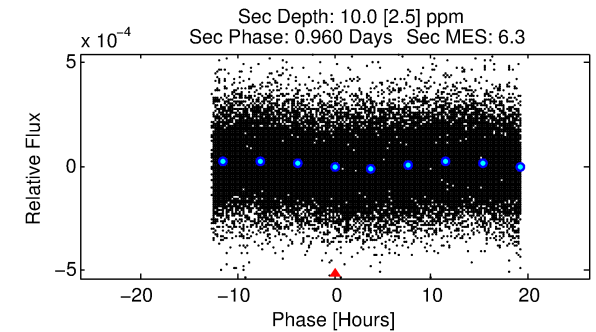
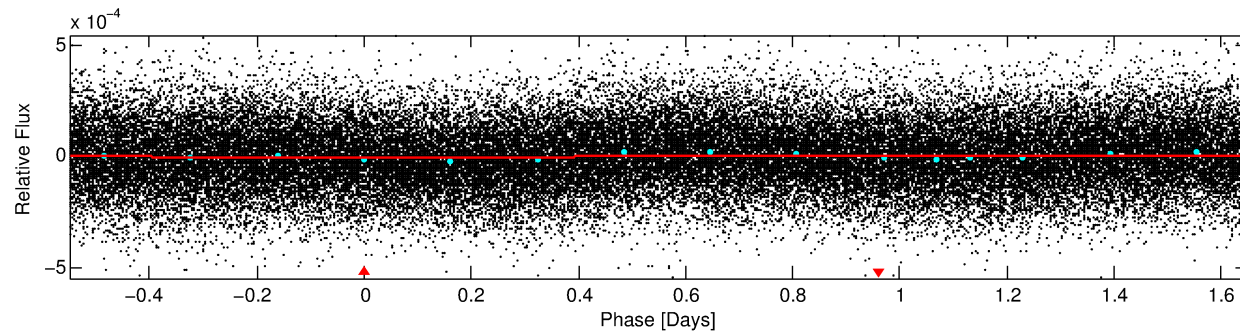
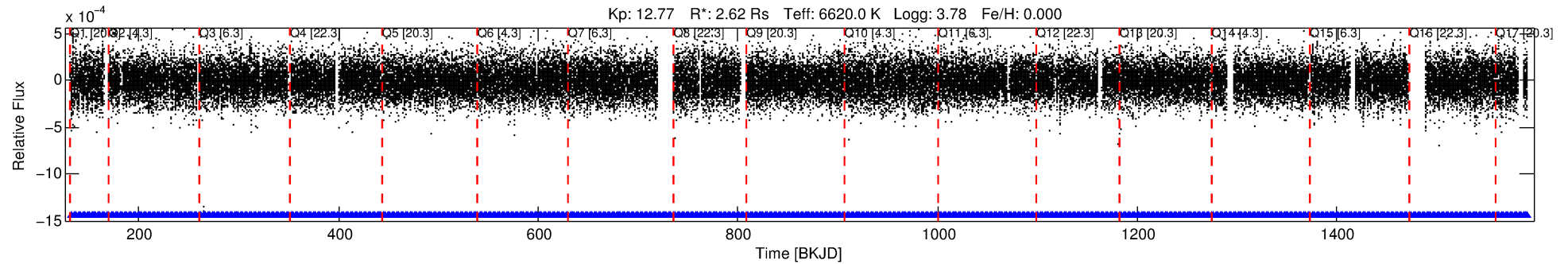
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005646170-01

No Significant Match Found

DV One-Page Summary

KIC: 5646170 Candidate: 1 of 1 Period: 2.199 d



DV Fit Results:

Period = 2.19902 [0.00736] d
Epoch = 133.0469 [1.7332] BKJD
Rp/R* = 0.0003 [0.0110]
a/R* = 1.09 [39.16]
b = 0.02 [12307.60]
Seff = 8163.69 [4169.35]
Teff = 2424 [309] K
Rp = 0.08 [3.14] Re
a = 0.0381 [0.0118] AU
Ag = 1309.38 [105506.61] [0.01σ]
Teffp = 22543 [454102] K [0.04σ]

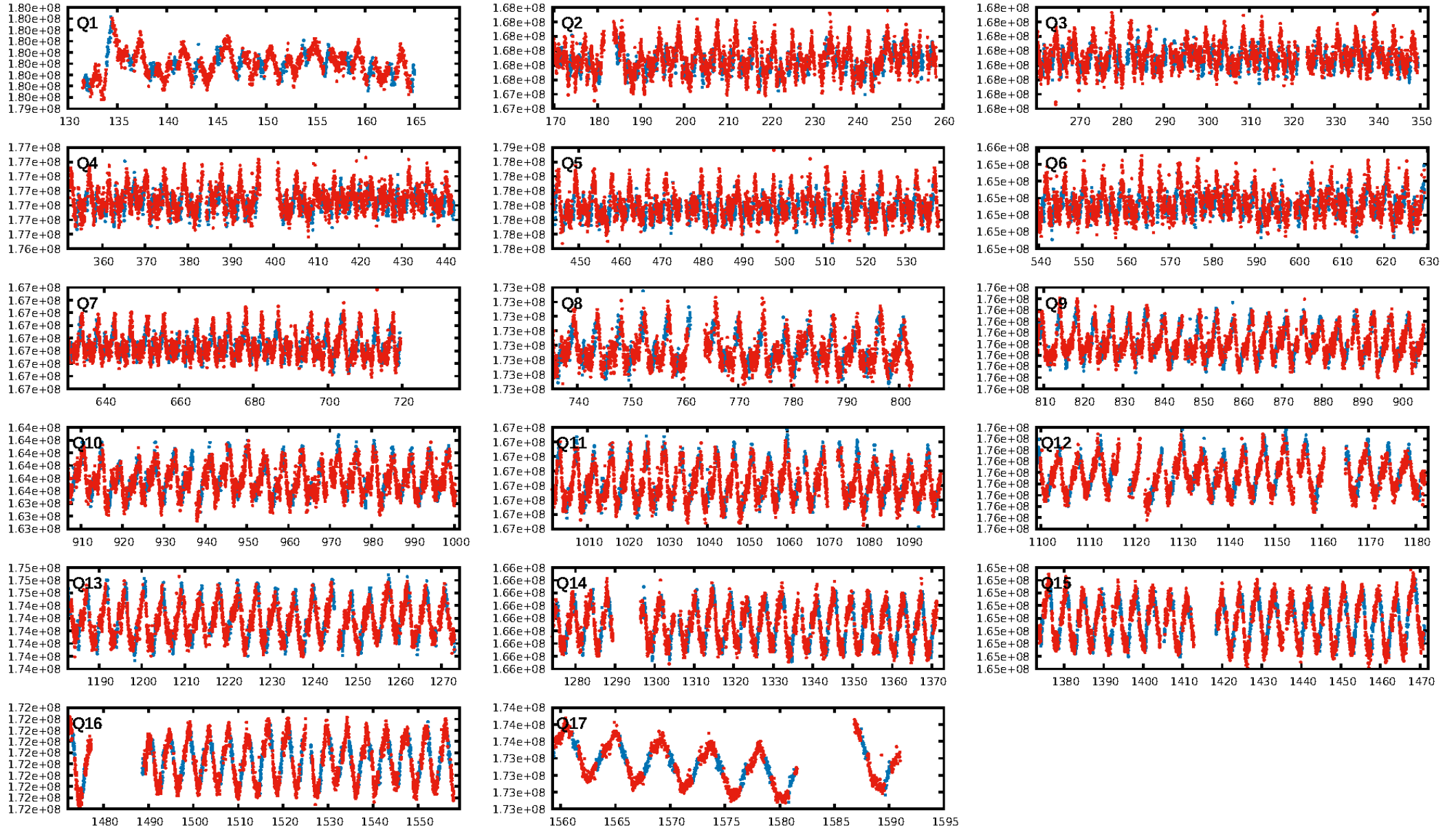
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [603/603]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.802 arcsec [0.99σ]
KicOffset-rm: 0.980 arcsec [1.11σ]
OotOffset-st: 0/3/0/2 [5]
KicOffset-st: 0/3/0/2 [5]
DiffImageQuality-fgm: 0.40 [2/5]
DiffImageOverlap-fno: 1.00 [17/17]

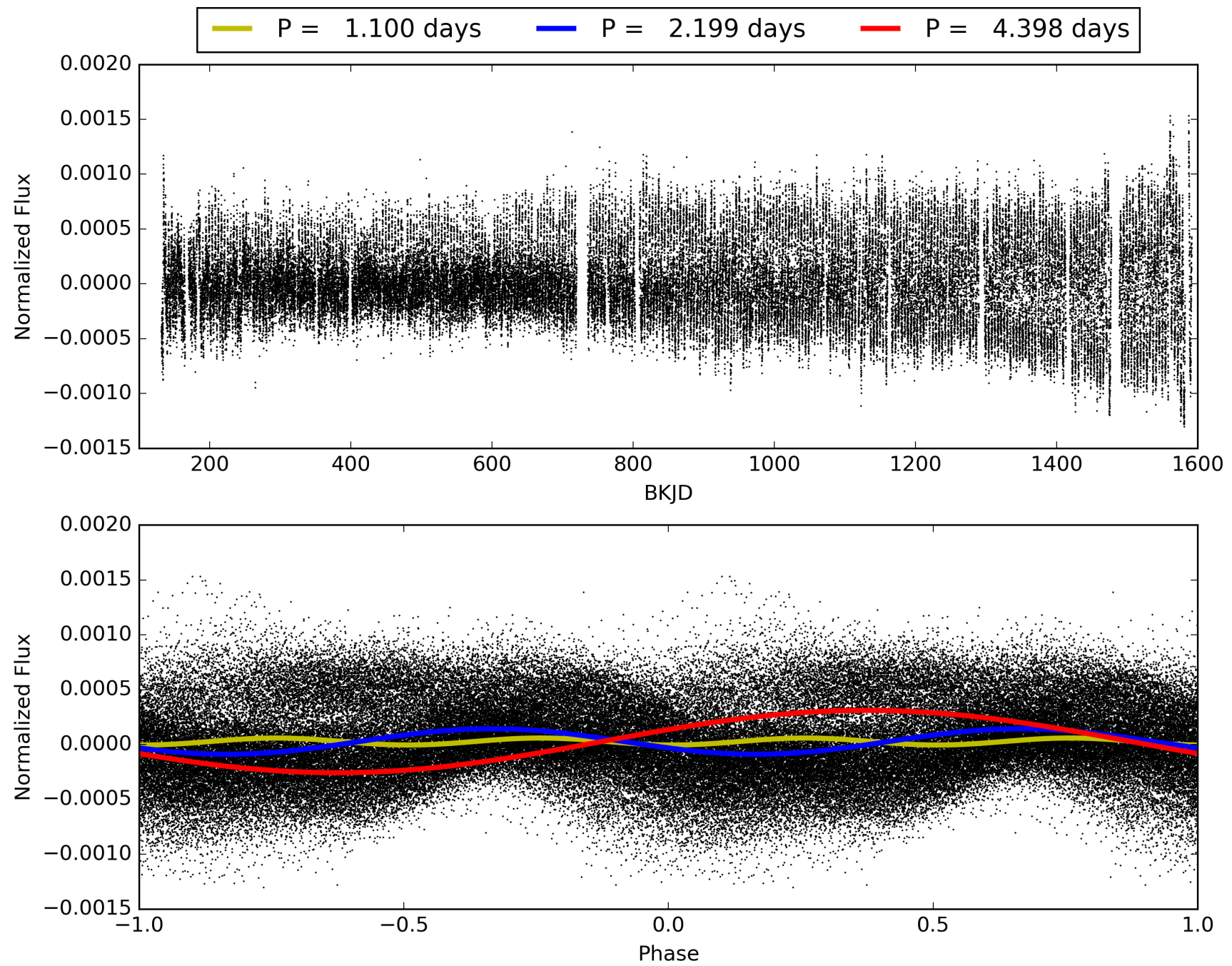
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 05:47:31 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 005646170-01, PDC Light Curves

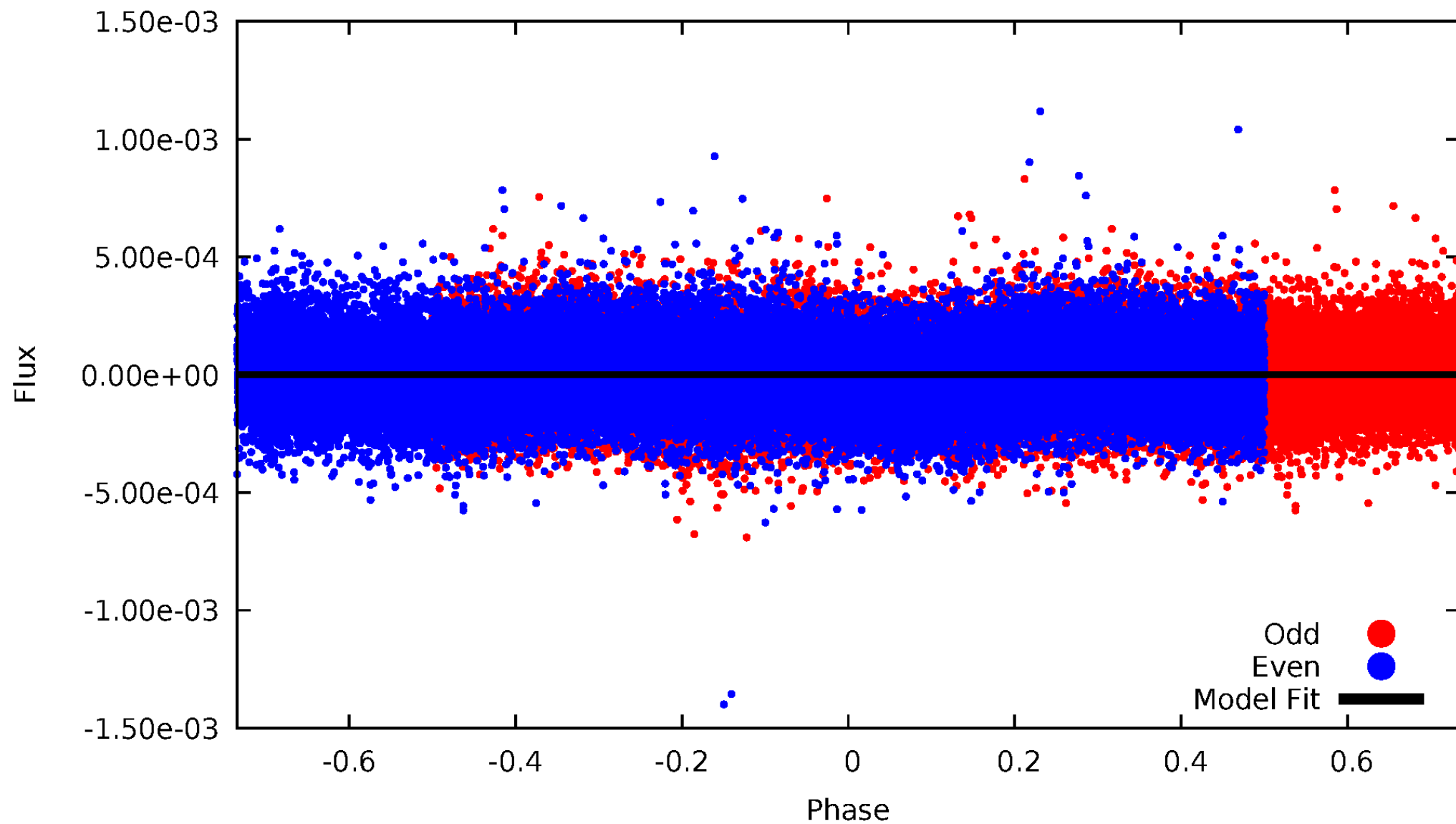


TCE 005646170-01



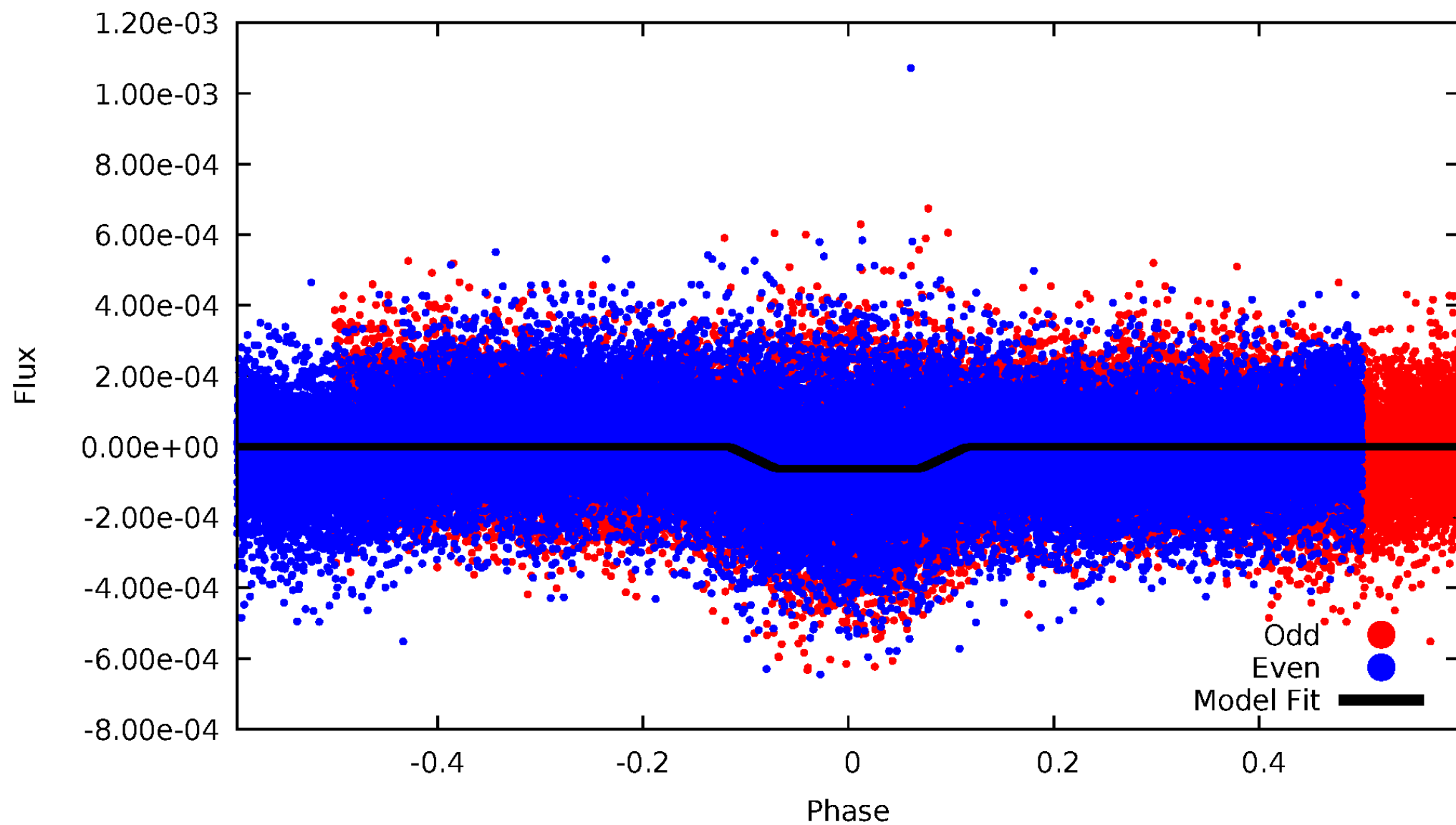
DV Odd/Even

TCE 005646170-01



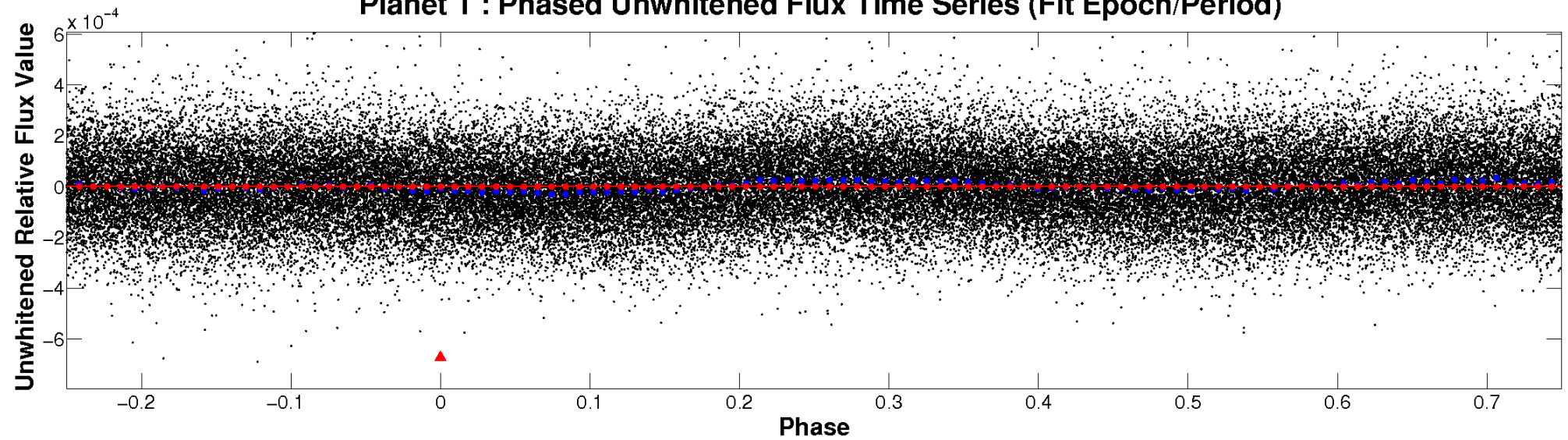
ALT Odd/Even

TCE 005646170-01

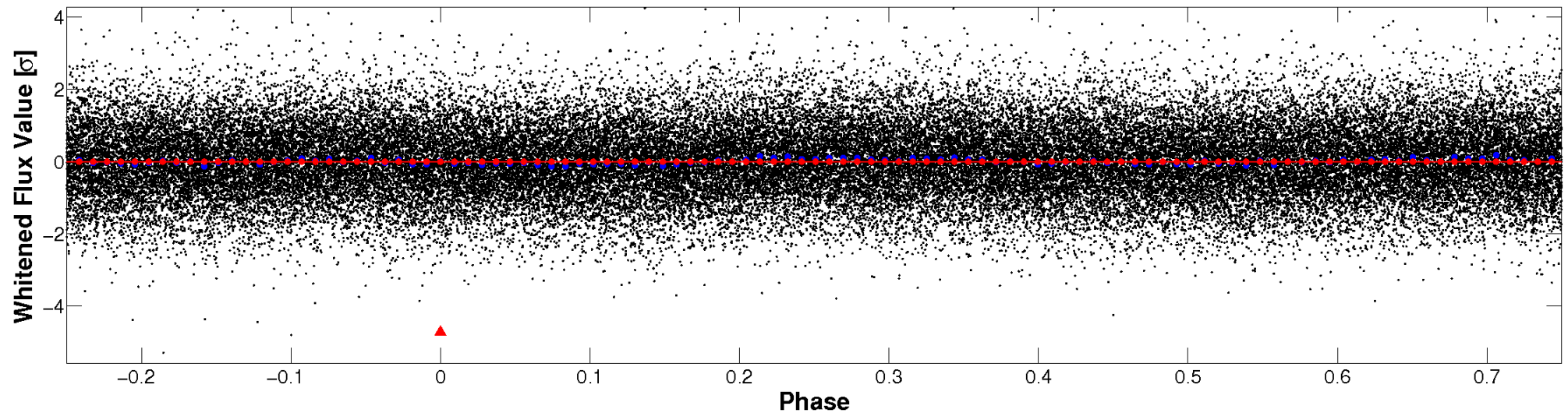


Non-Whitened Vs. Whitened Light Curve

Planet 1 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

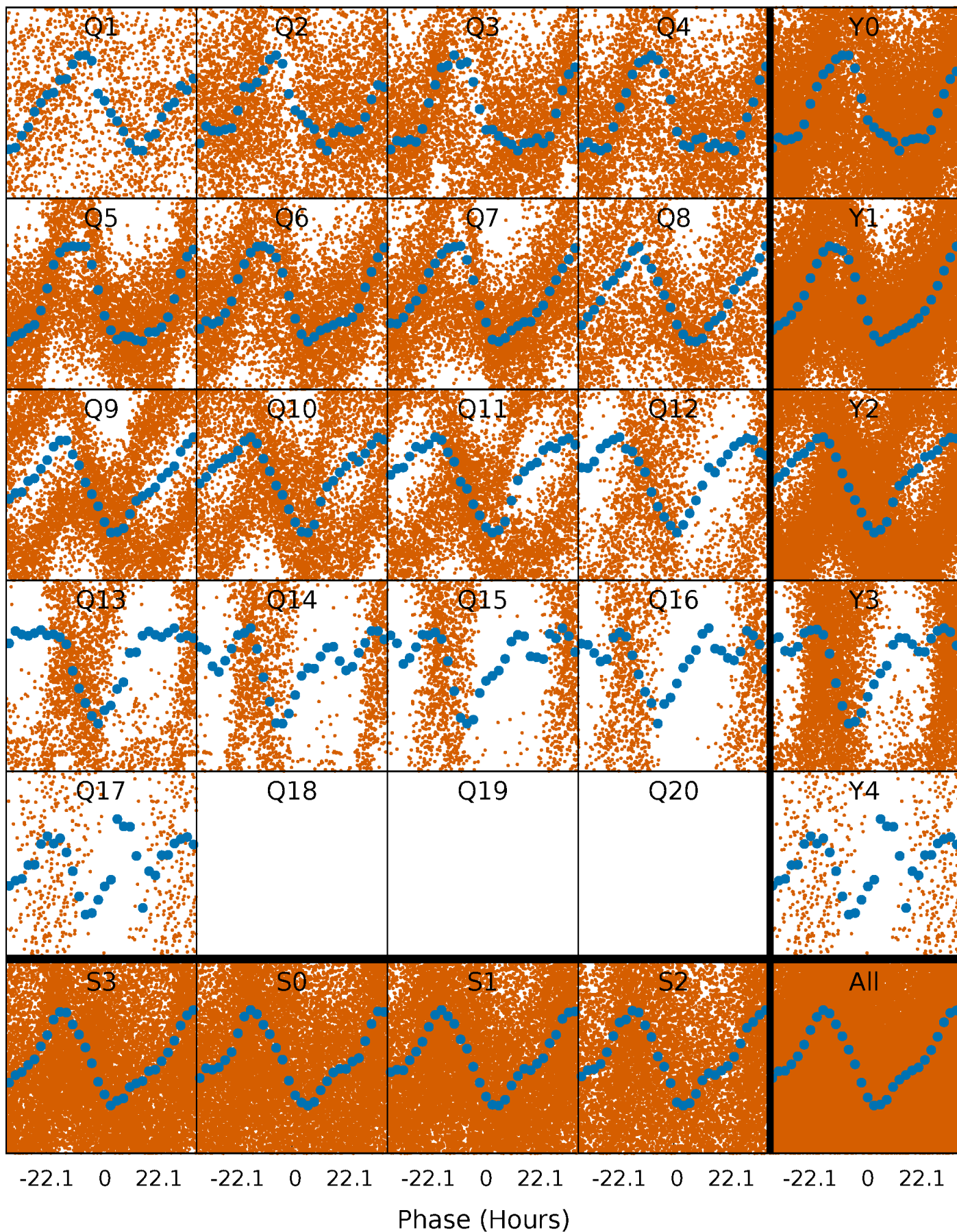


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



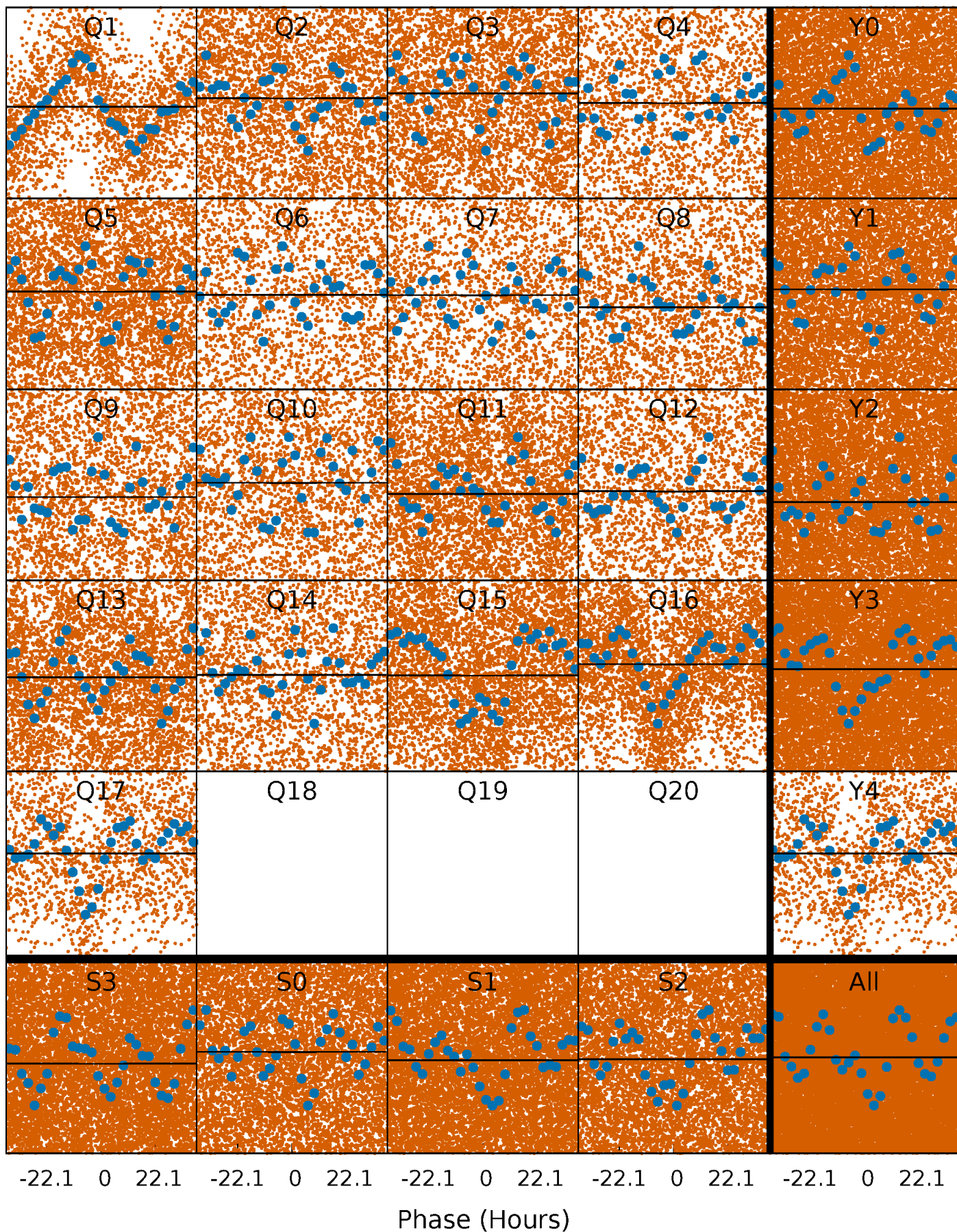
PDC Quarter-Phased Transit Curves

TCE 005646170-01 P= 2.199019 Days $T_0=133.046943$ (BKJD)



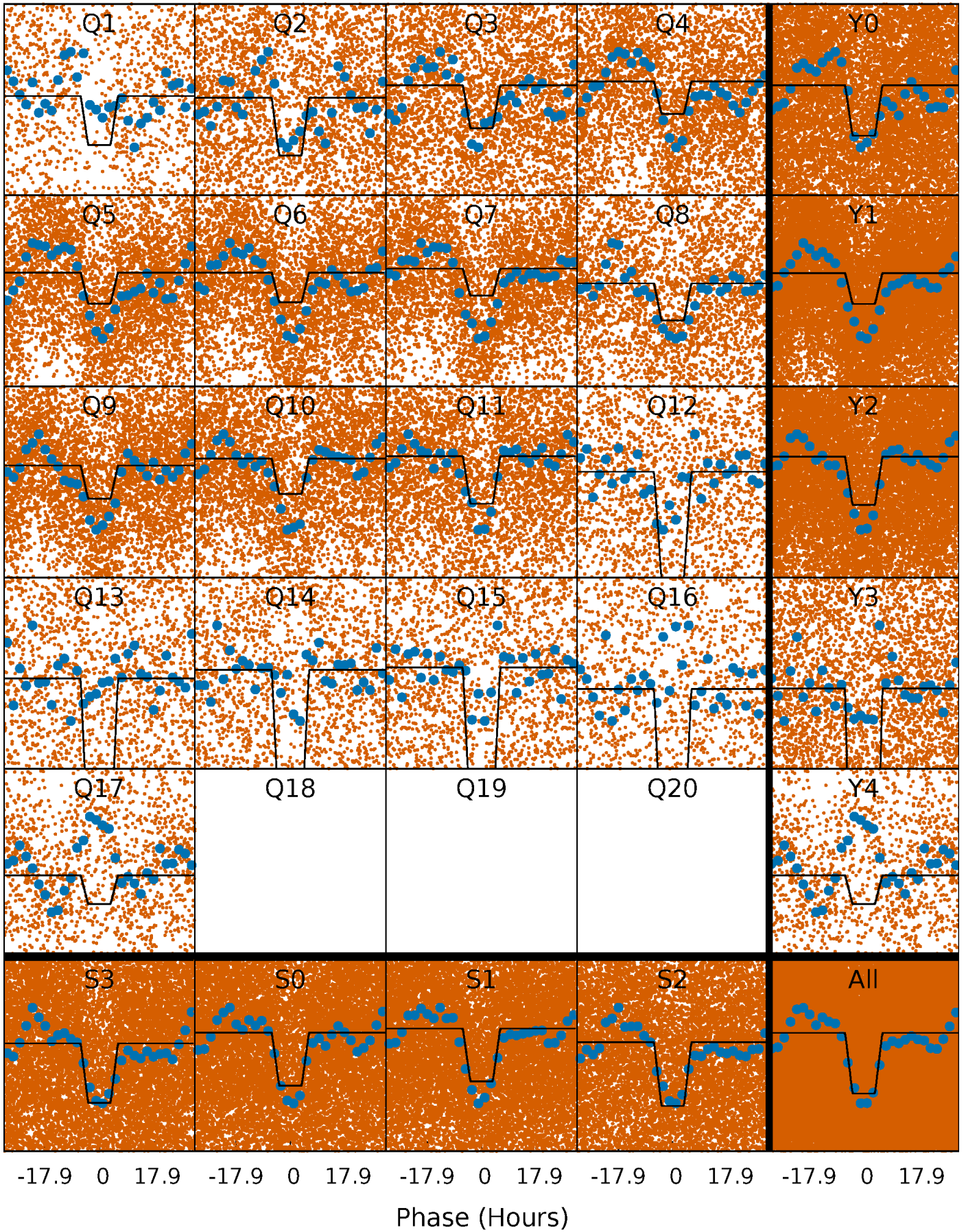
DV Quarter-Phased Transit Curves

TCE 005646170-01 P= 2.199019 Days $T_0=133.046943$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

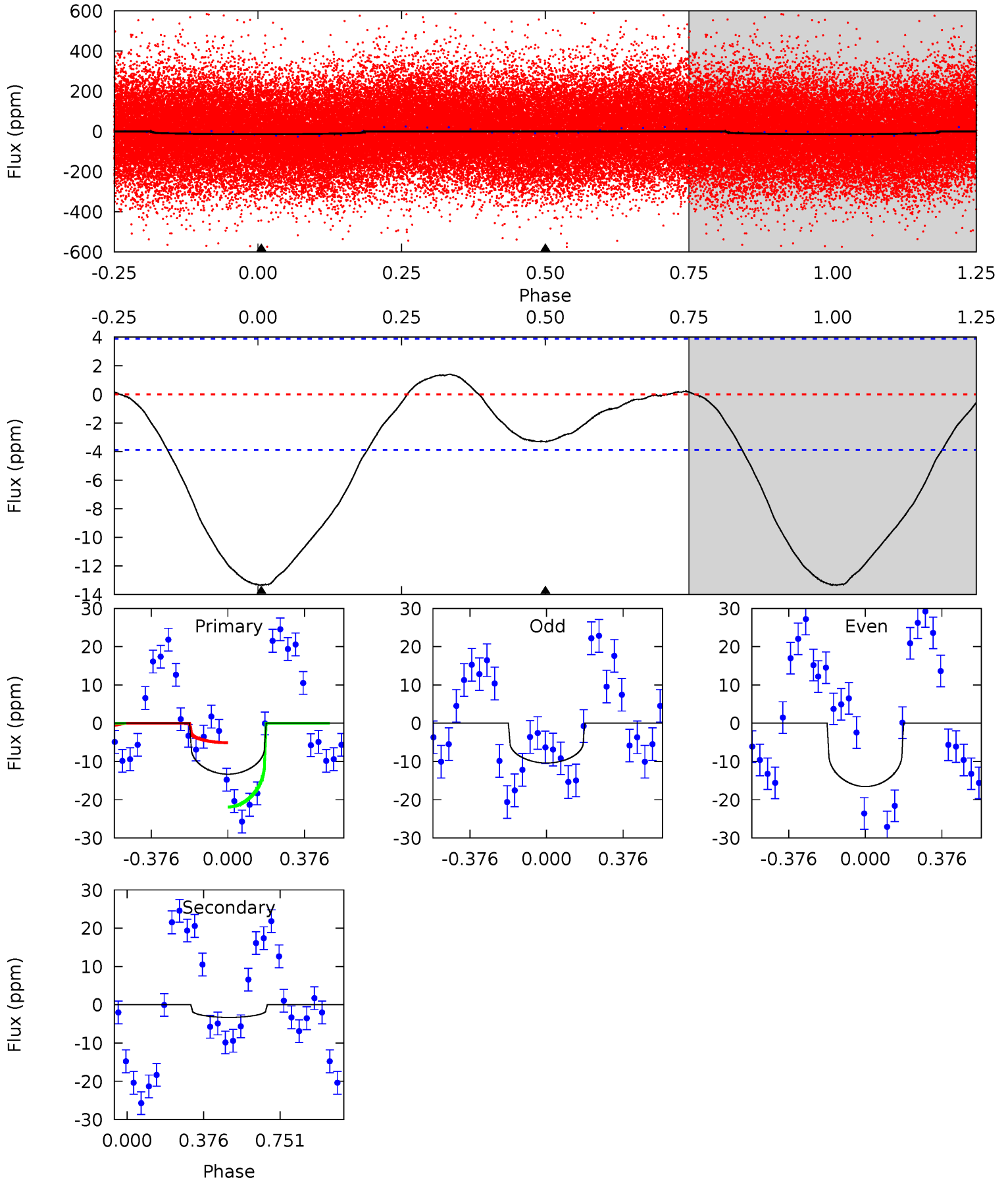
TCE 005646170-01 P= 2.199477 Days $T_0=133.117117$ (BKJD)



DV Model-Shift Uniqueness Test

005646170-01, P = 2.199019 Days, E = 130.847924 Days

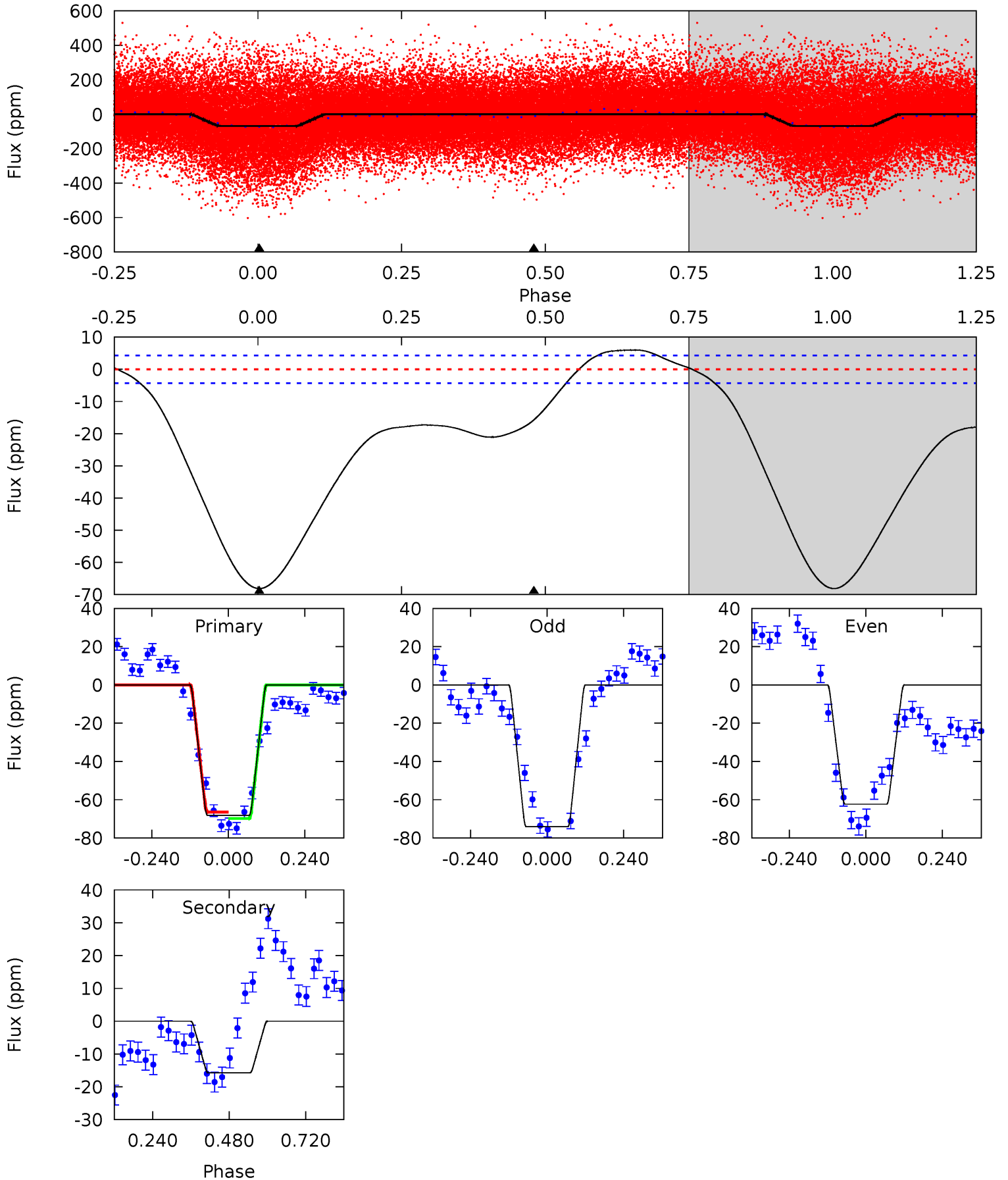
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.7	3.64	0	0	4.28	0.89	0.58	14.7	14.7	3.64	3.64	3.38	1.18	0.10	9.46



Alt Model-Shift Uniqueness Test

005646170-01, P = 2.199477 Days, E = 130.917640 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
69.6	16.1	0	0	4.38	1.17	8.86	69.6	69.6	16.1	16.1	6.05	0.94	0.08	1.71



Stellar Parameters For KIC 005646170

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6620^{+162}_{-195}	$3.783^{+0.292}_{-0.097}$	$0.000^{+0.250}_{-0.250}$	$2.623^{+0.492}_{-0.844}$	$1.524^{+0.222}_{-0.247}$	$0.119^{+0.237}_{-0.042}$
	+2%/-3%	+8%/-3%	+inf%/-inf%	+19%/-32%	+15%/-16%	+199%/-35%
Source	PHO1	FLK73	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 005646170-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-3 ± 1	$1.95^{+2.07}_{-1.33}$	3326^{+197}_{-294}	3350^{+2248}_{-6294}	$0.698^{+5.847}_{-0.544}$
Alt.	-16 ± 1	$3.01^{+2.84}_{-1.97}$	3297^{+208}_{-298}	3967^{+2529}_{-1307}	$1.349^{+9.673}_{-0.975}$

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)

A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

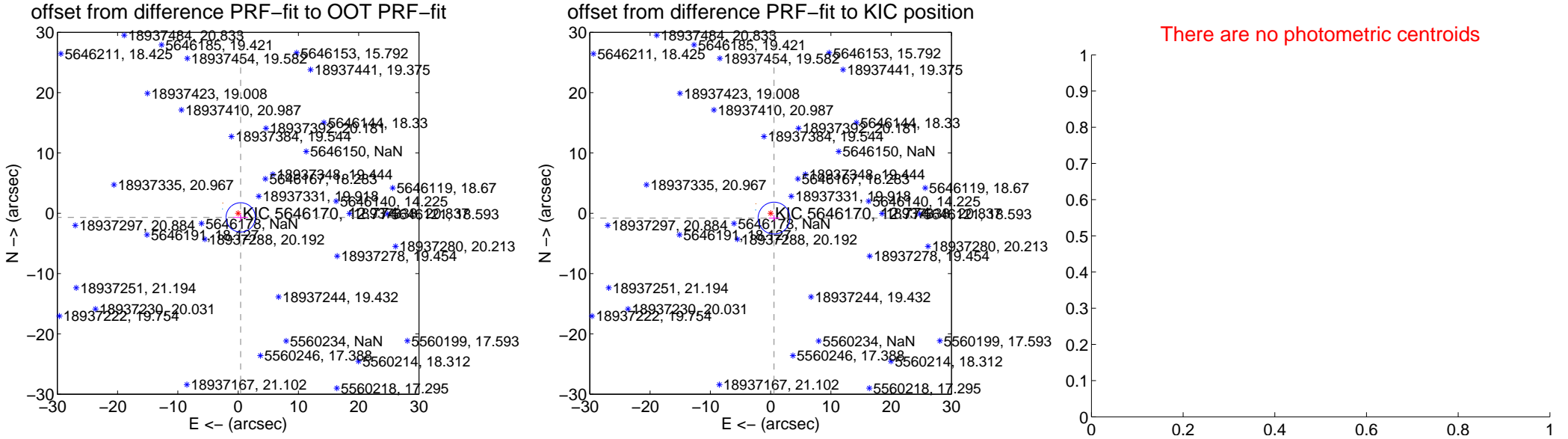
DV Centroid Data

Supplemental centroid analysis for 005646170-01. Kepler magnitude: 12.77. Transit SNR 0.06

There are 2 quarters with good PRF difference image offsets

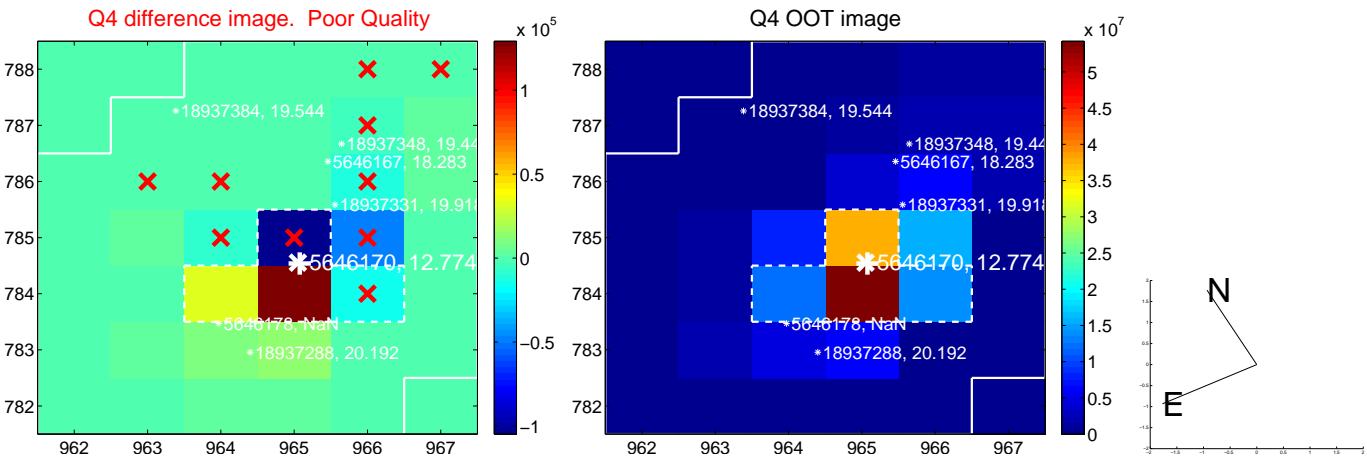
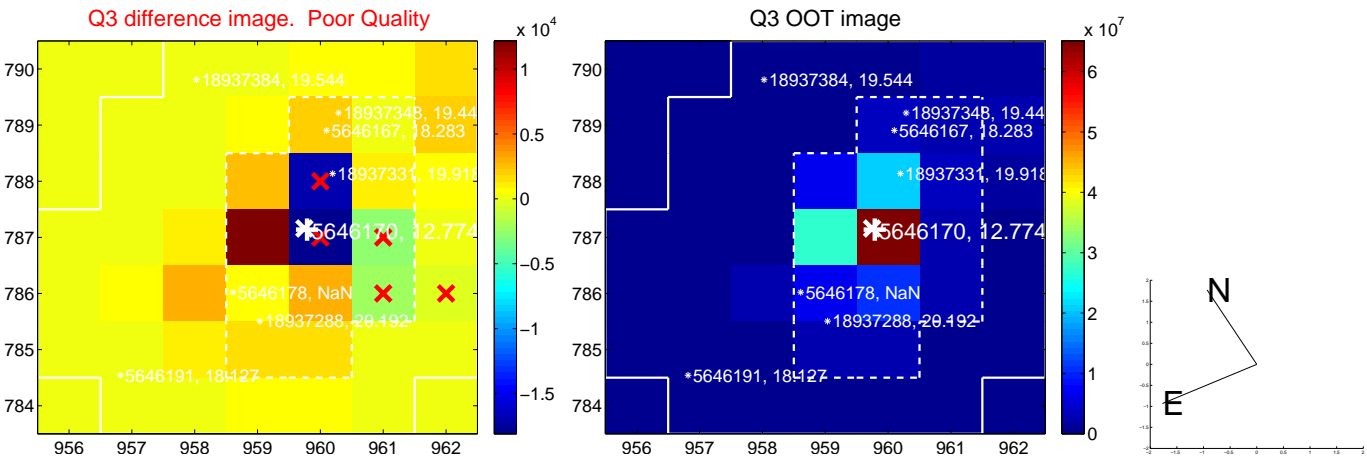
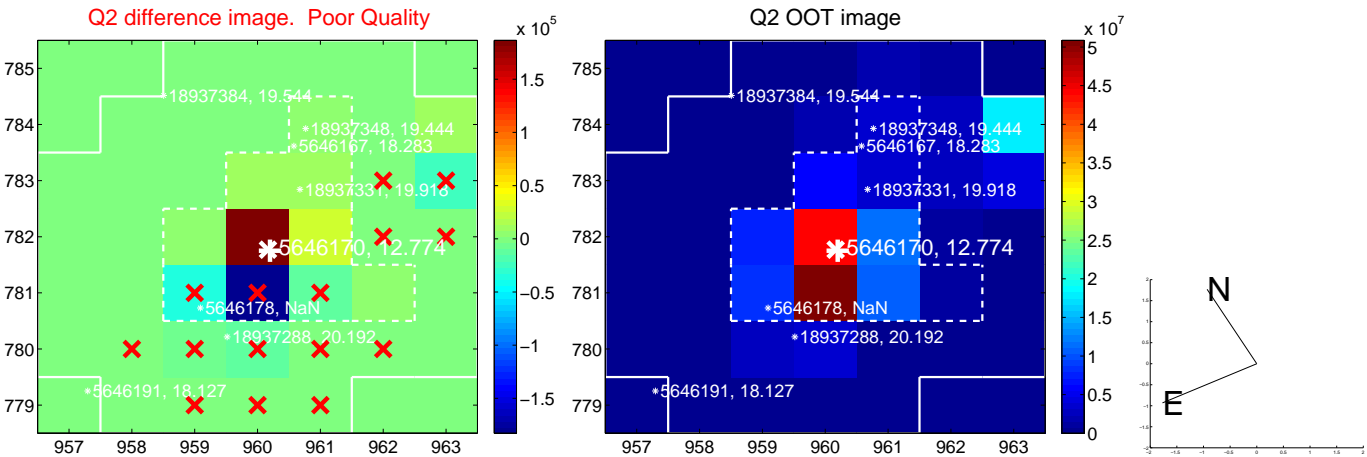
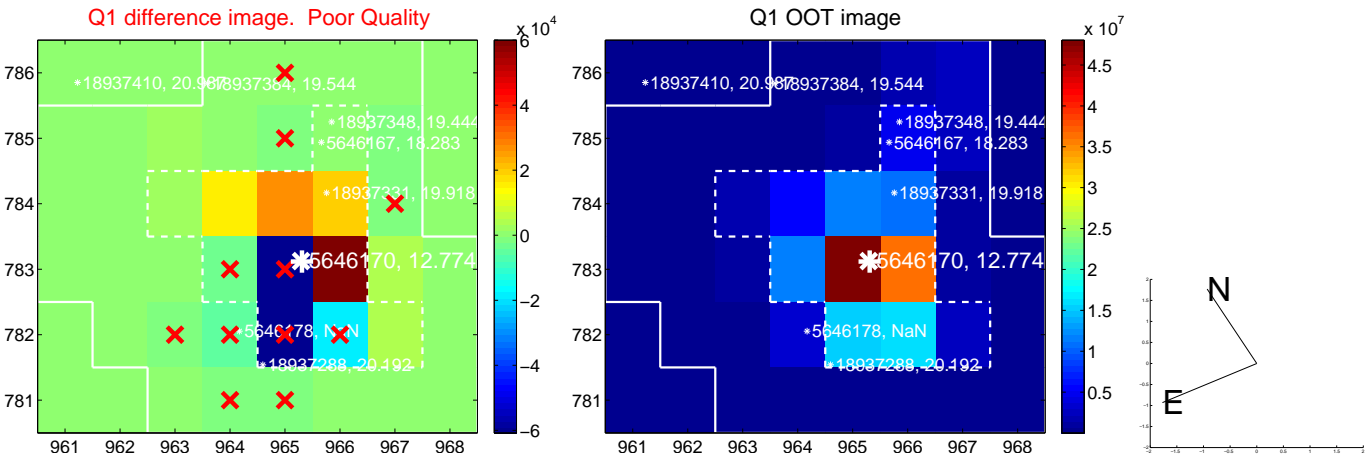
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.802 ± 0.810	0.99	-0.423 ± 1.219	-0.682 ± 0.580
PRF-fit source offset from KIC position	0.980 ± 0.881	1.11	-0.563 ± 0.873	-0.802 ± 0.513
photometric centroid source offset	—	—	—	—

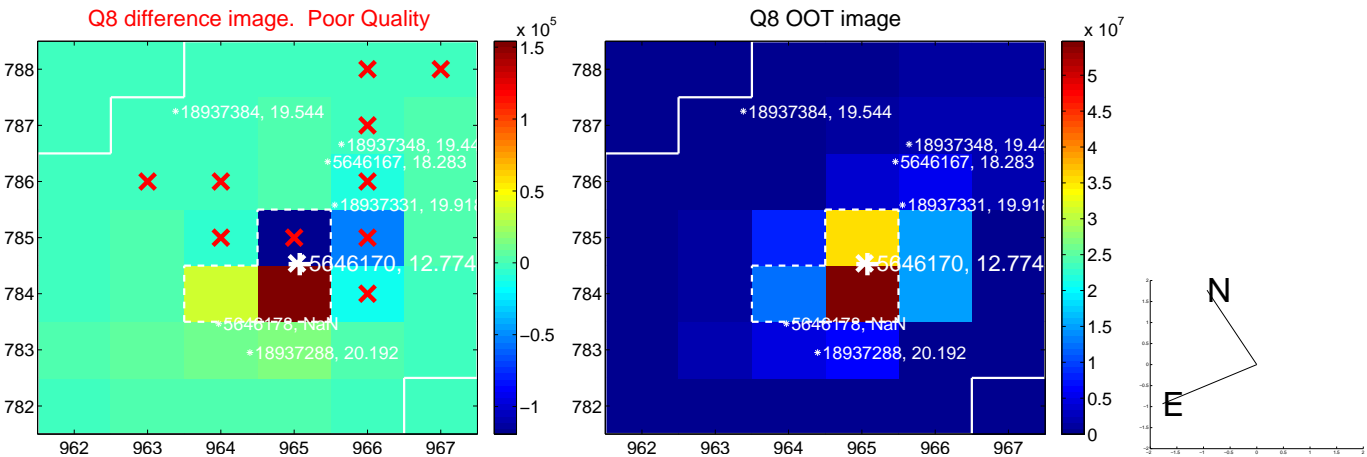
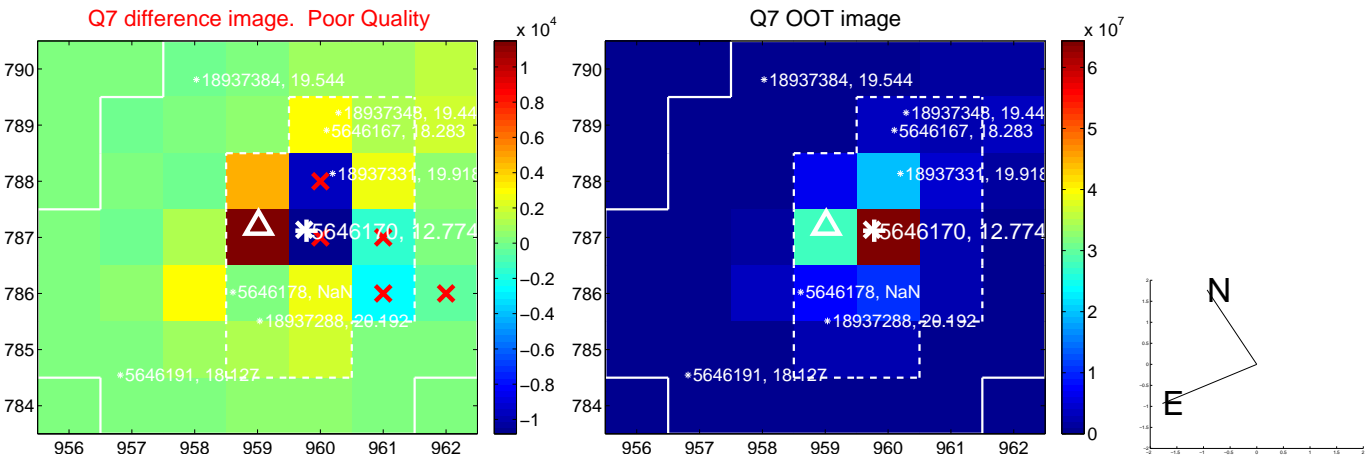
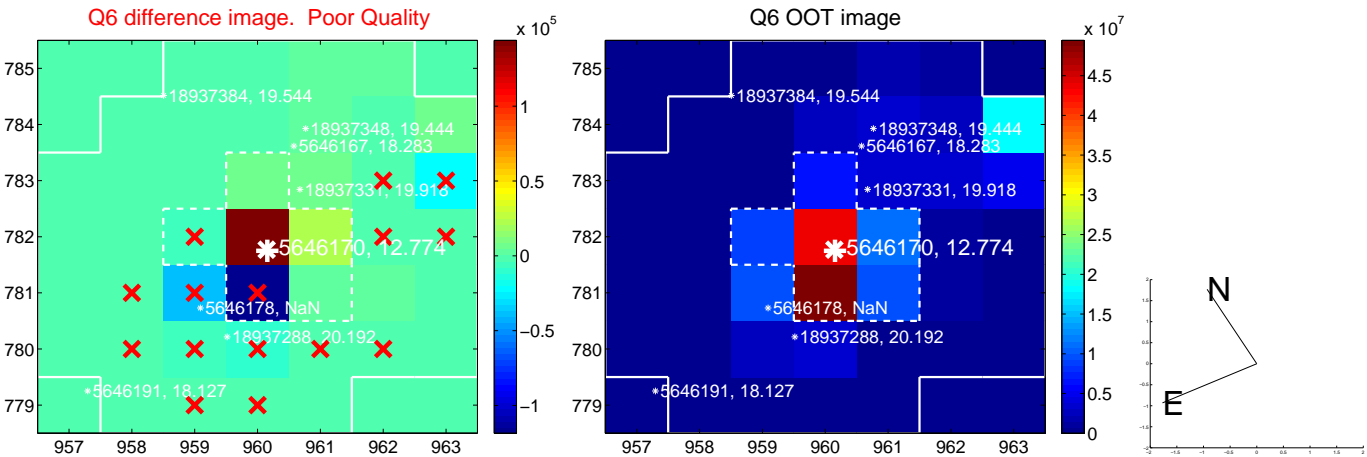
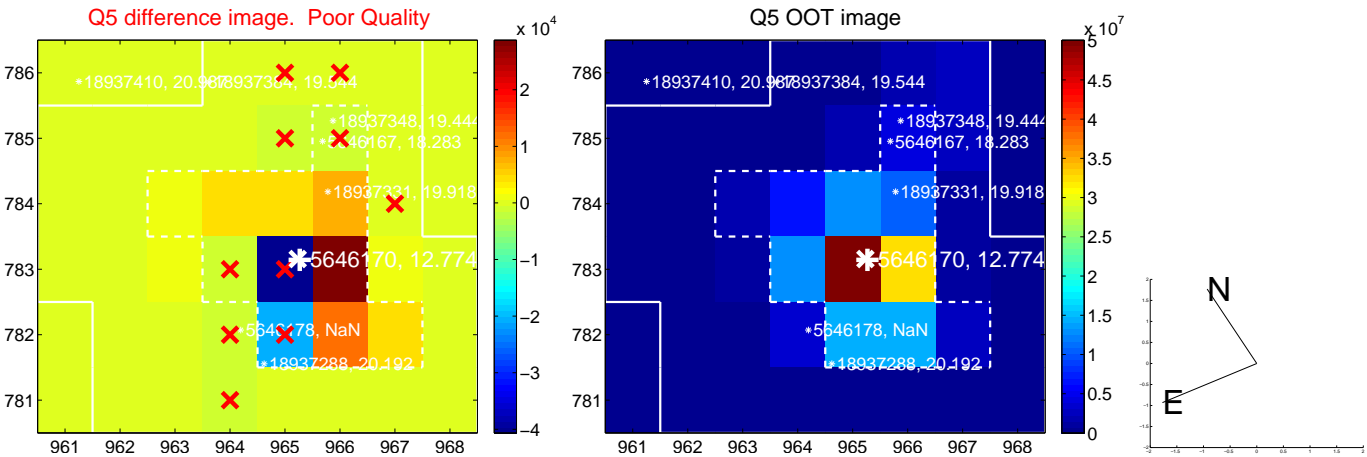


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

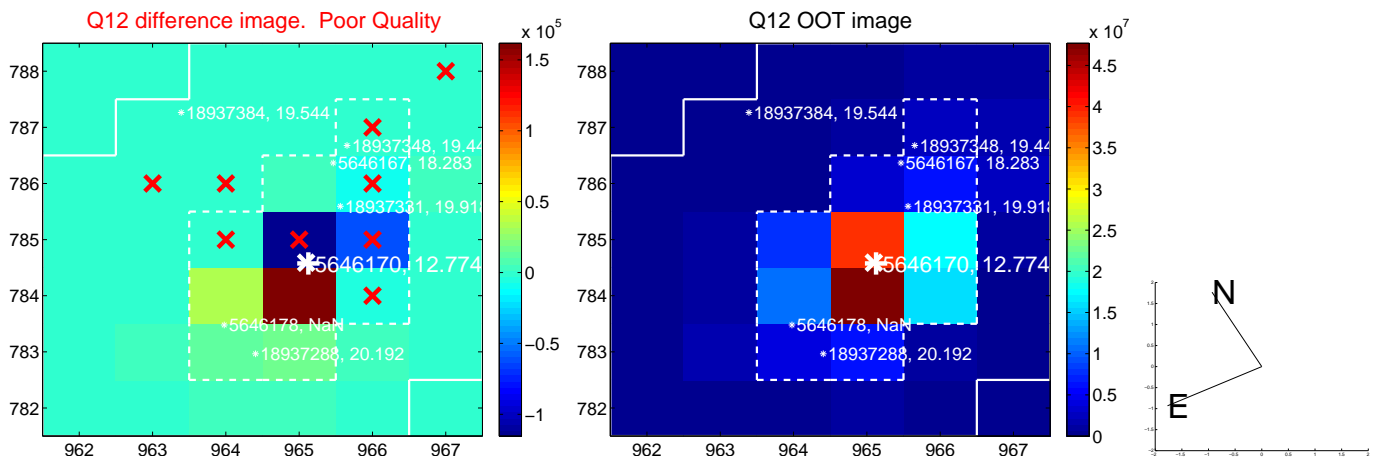
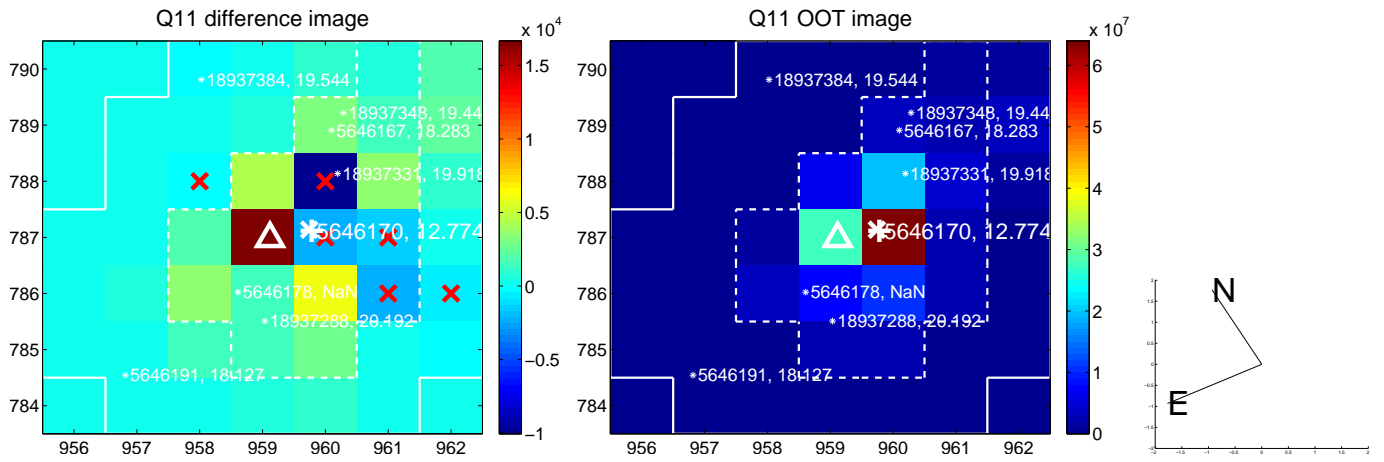
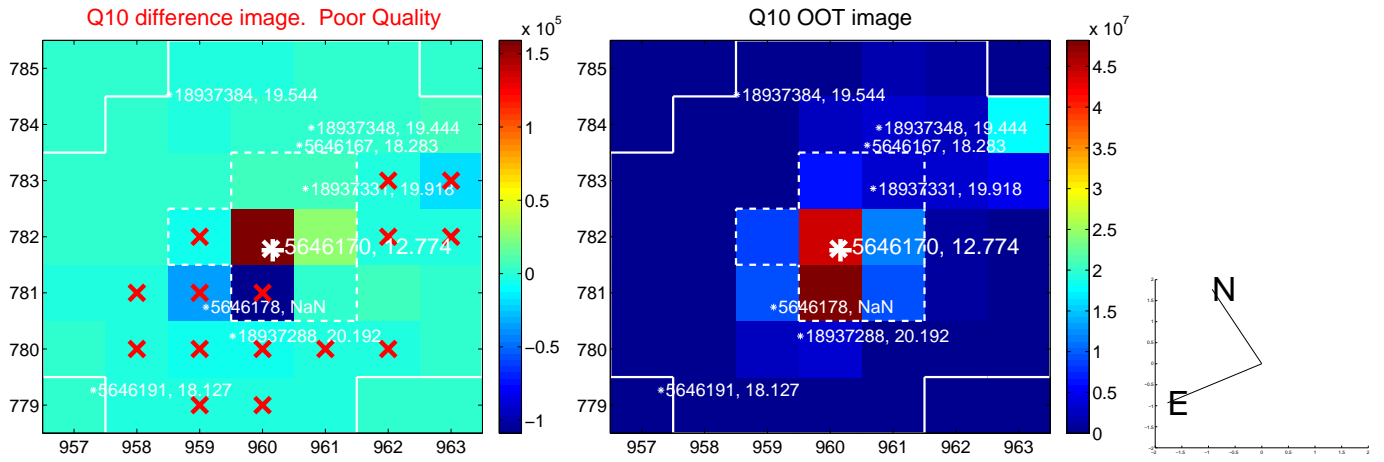
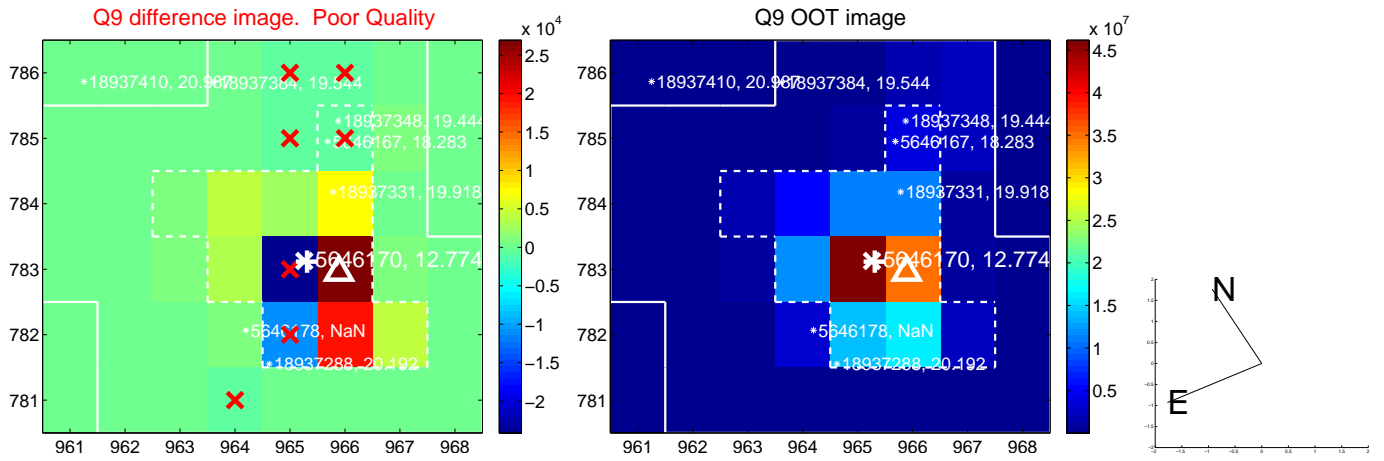
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



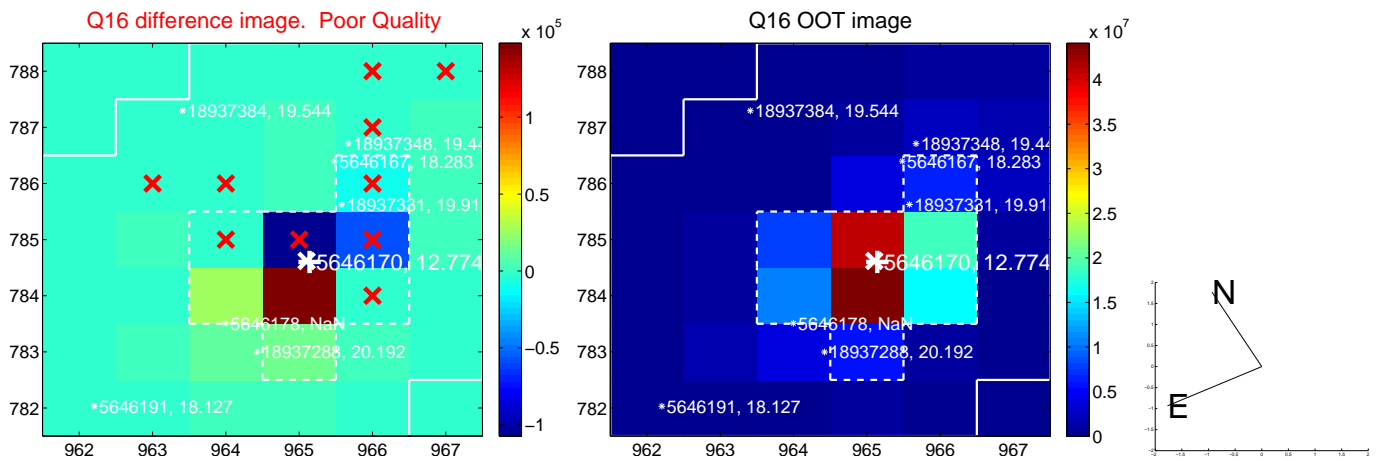
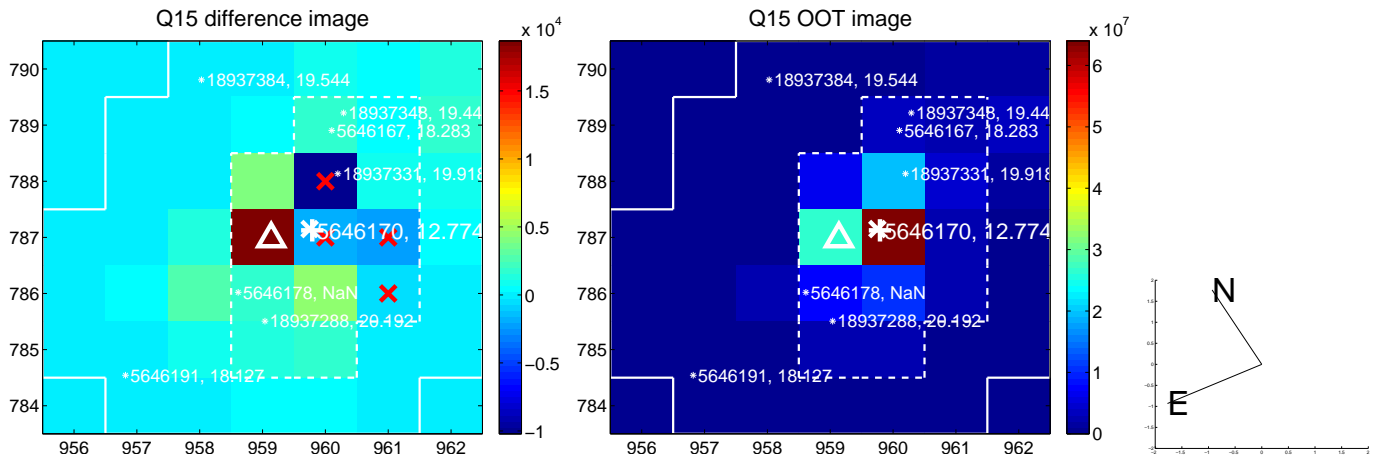
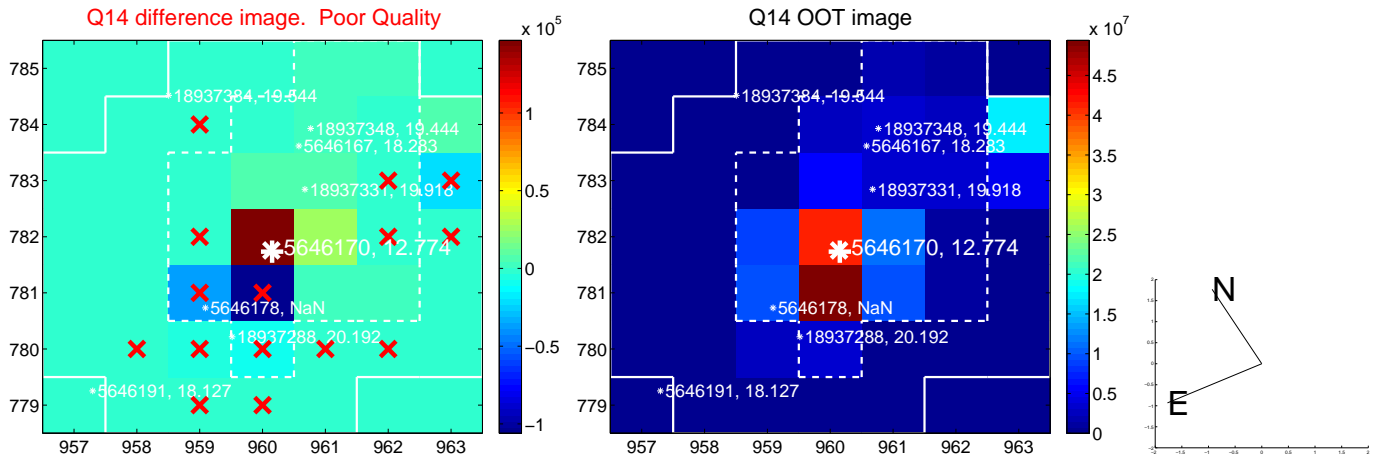
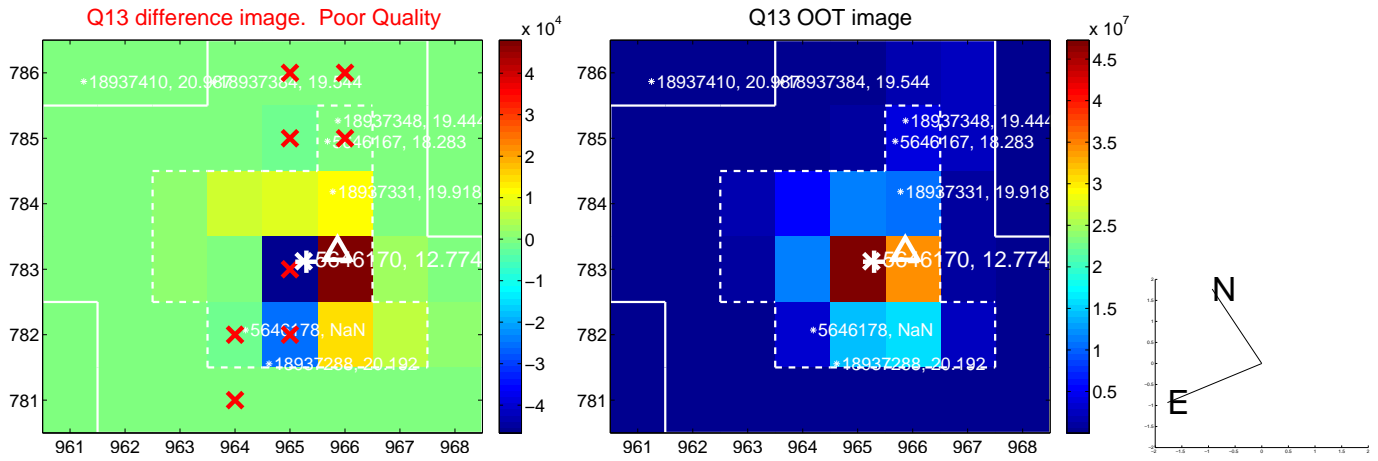
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



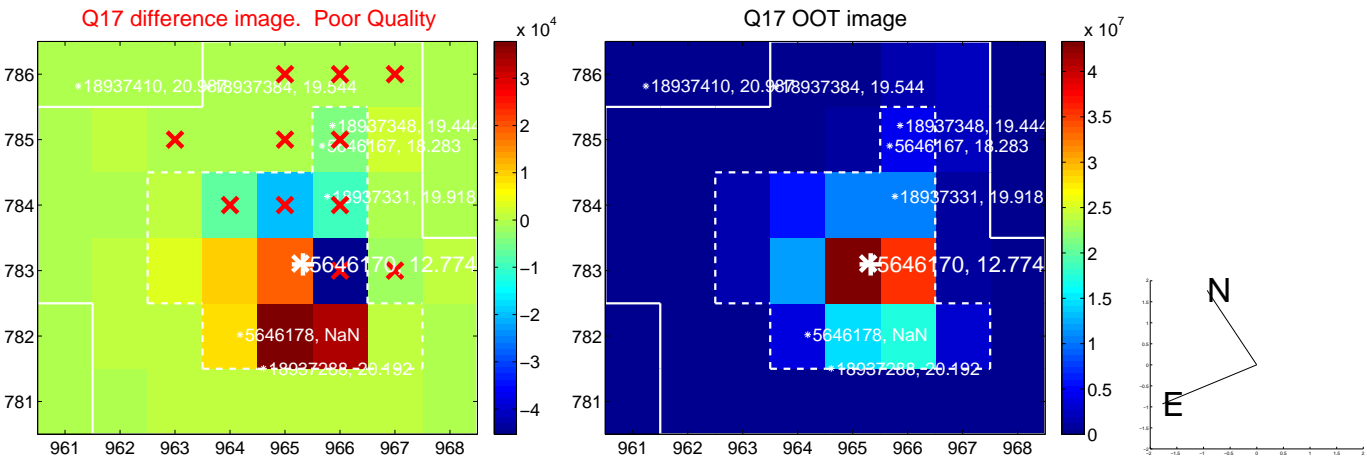
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination

