

KIC 006587551

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})
006587551-01	OBS	No	0.546700	131.561871	14.4	5.493	10.4	11.3	2.89	8806	1.12	167086.75

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006587551-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_SATURATED

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

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

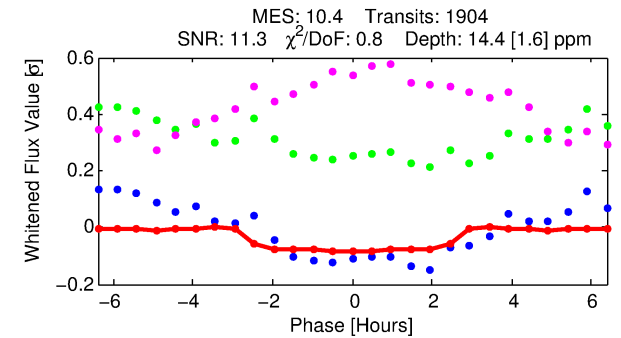
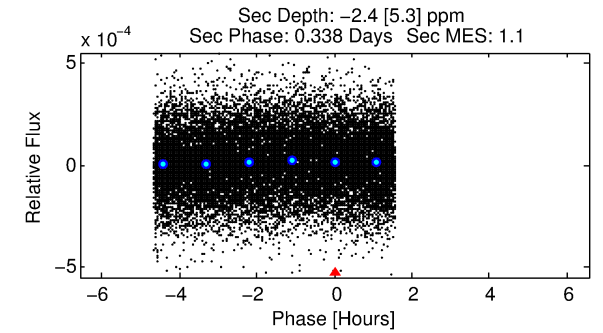
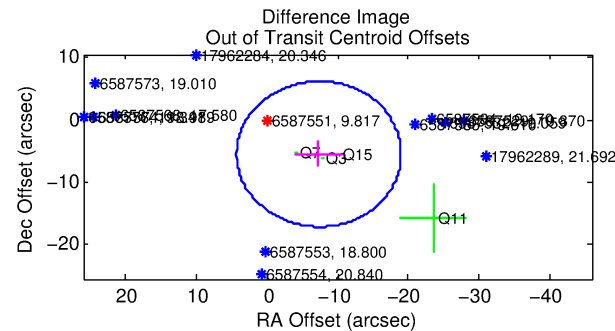
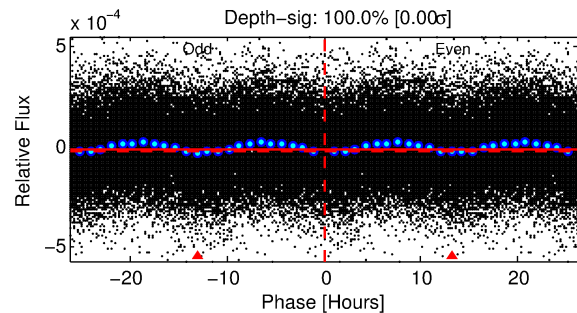
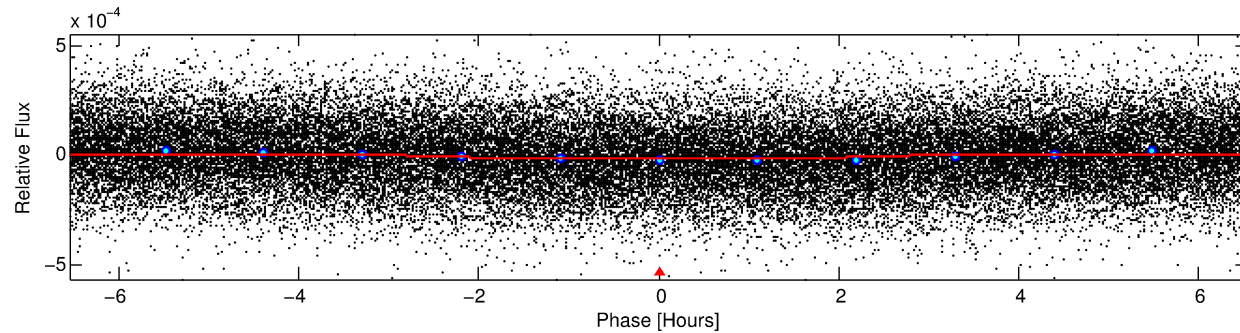
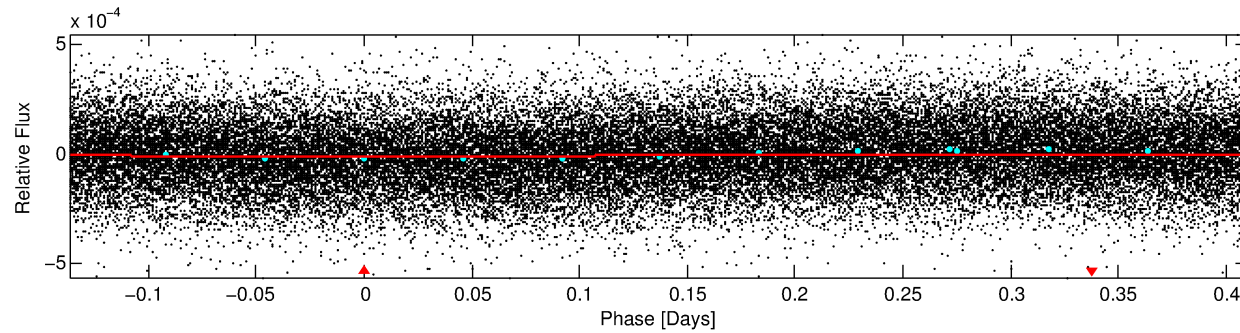
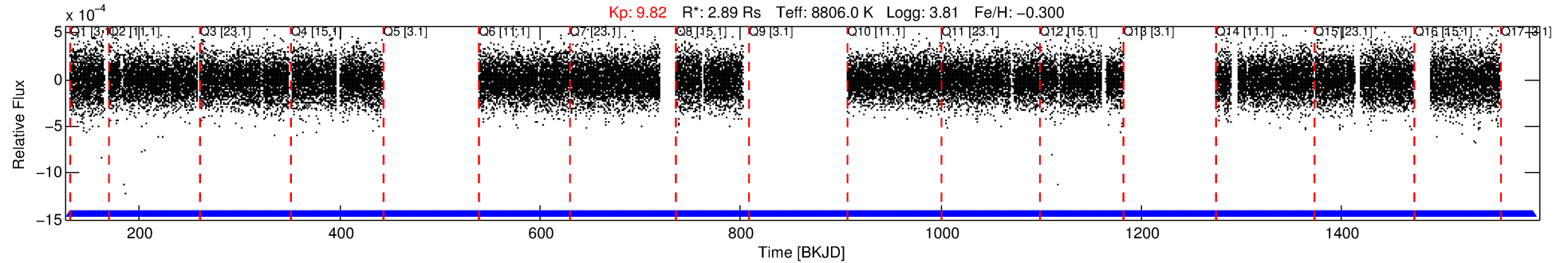
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006587551-01

No Significant Match Found

DV One-Page Summary

KIC: 6587551 Candidate: 1 of 1 Period: 0.547 d



DV Fit Results:

Period = 0.54670 [0.00001] d
Epoch = 131.5619 [0.0047] BKJD
Rp/R* = 0.0036 [0.0024]
a/R* = 1.03 [0.28]
b = 0.30 [13.18]
Seff = 167086.75 [67785.09]
Teq = 5155 [523] K
Rp = 1.12 [0.82] Re
a = 0.0164 [0.0042] AU
Ag = N/A
Teffp = N/A

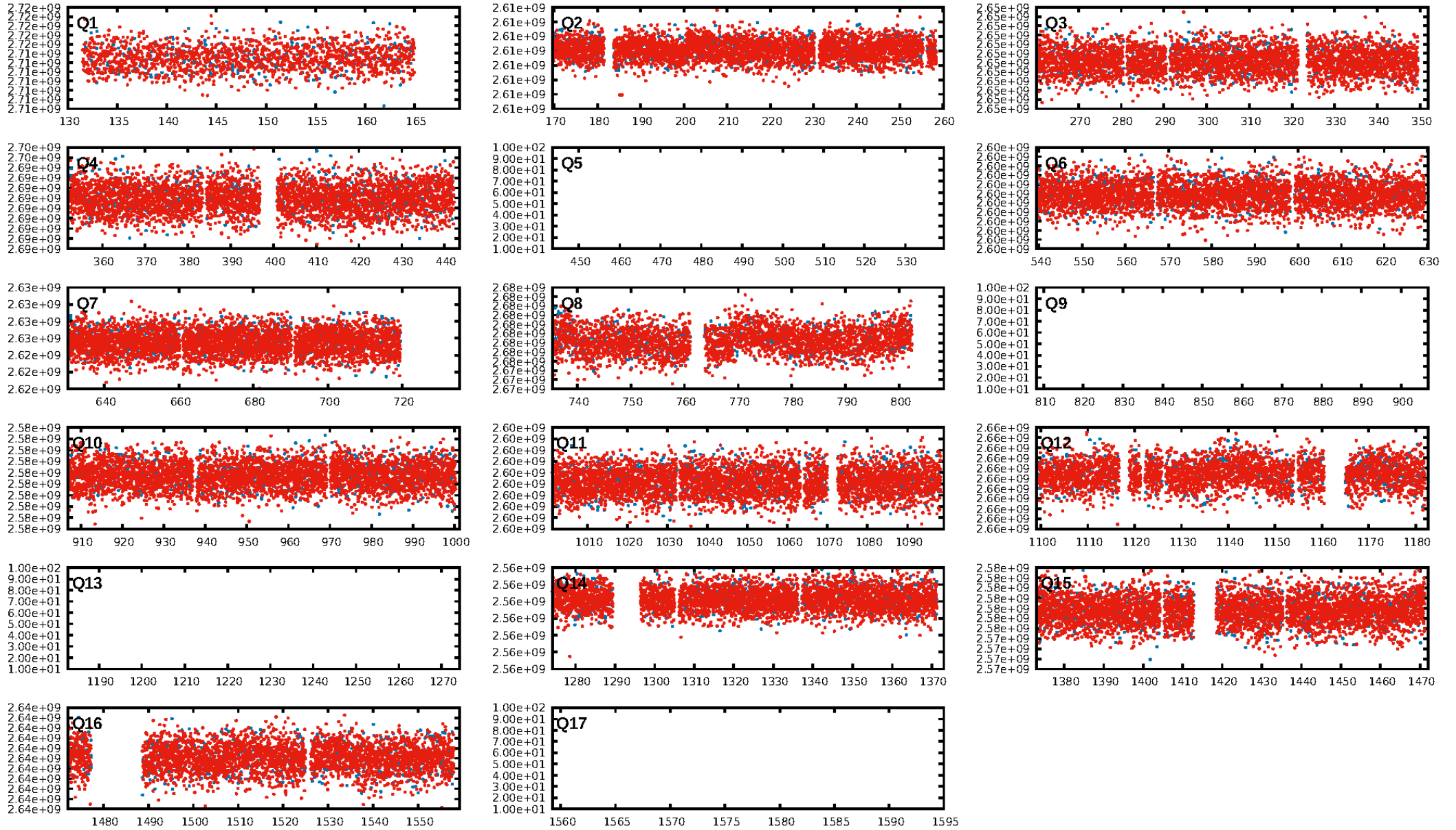
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1842/1842]
GhostDiagnostic-chr: N/A
Centroid-sig: 18.5%
Centroid-so: 0.881 arcsec [1.98 σ]
OotOffset-rm: 9.160 arcsec [2.36 σ]
KicOffset-rm: 7.885 arcsec [1.91 σ]
OotOffset-st: 0/4/0/0 [4]
KicOffset-st: 0/4/0/0 [4]
DiffImageQuality-fgm: 0.00 [0/4]
DiffImageOverlap-fno: 1.00 [13/13]

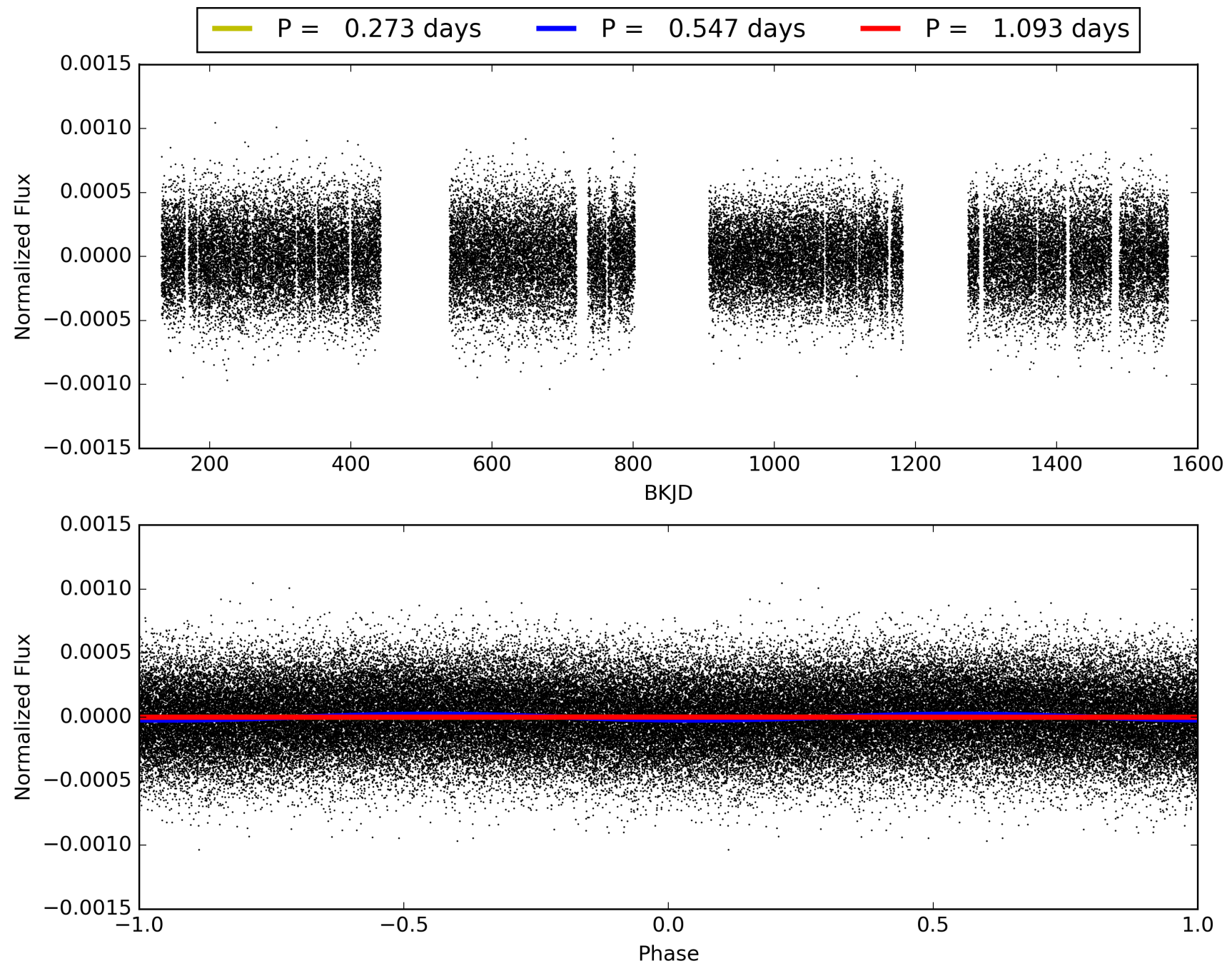
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 03:47:07 Z

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

TCE 006587551-01, PDC Light Curves

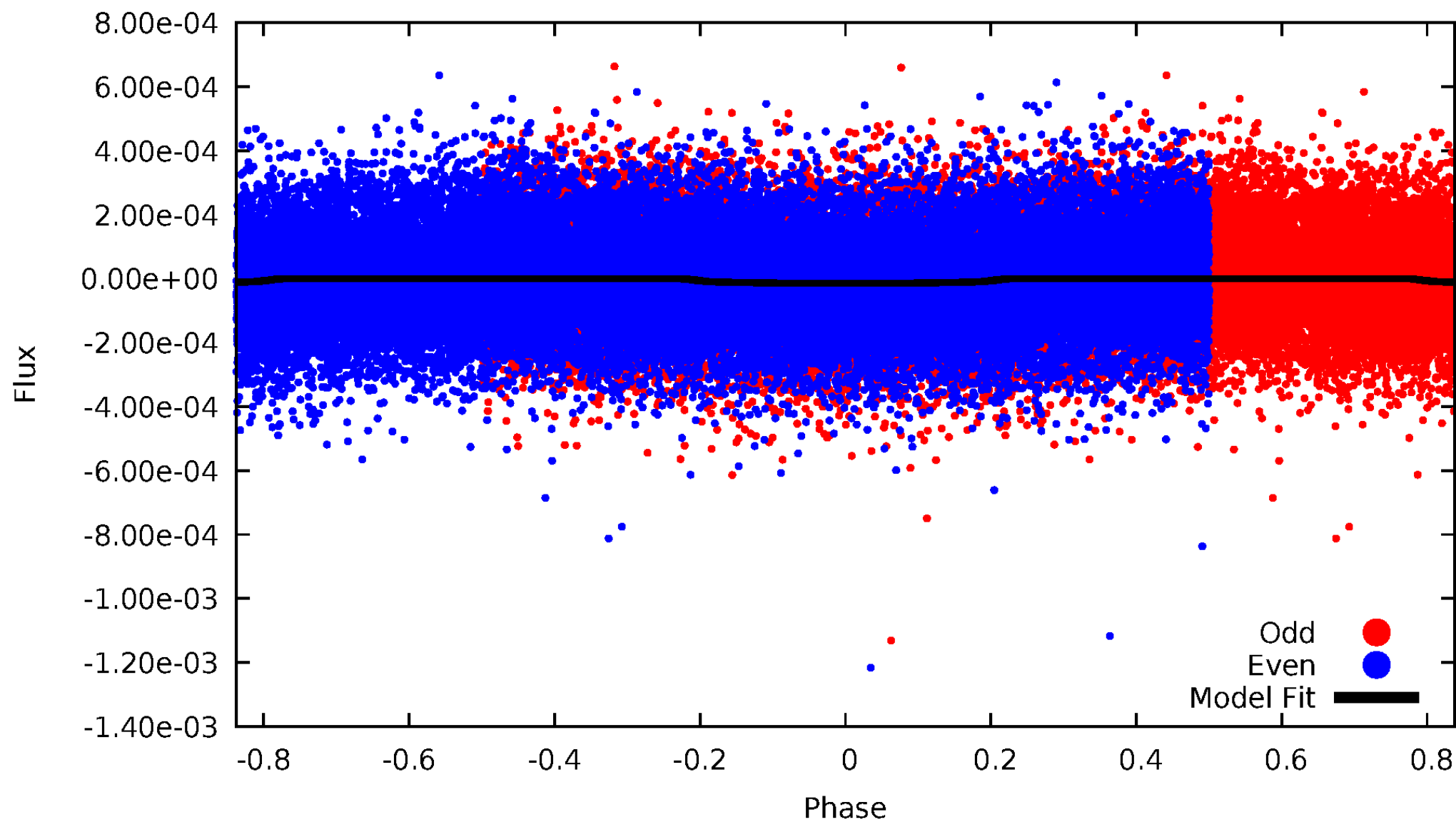


TCE 006587551-01



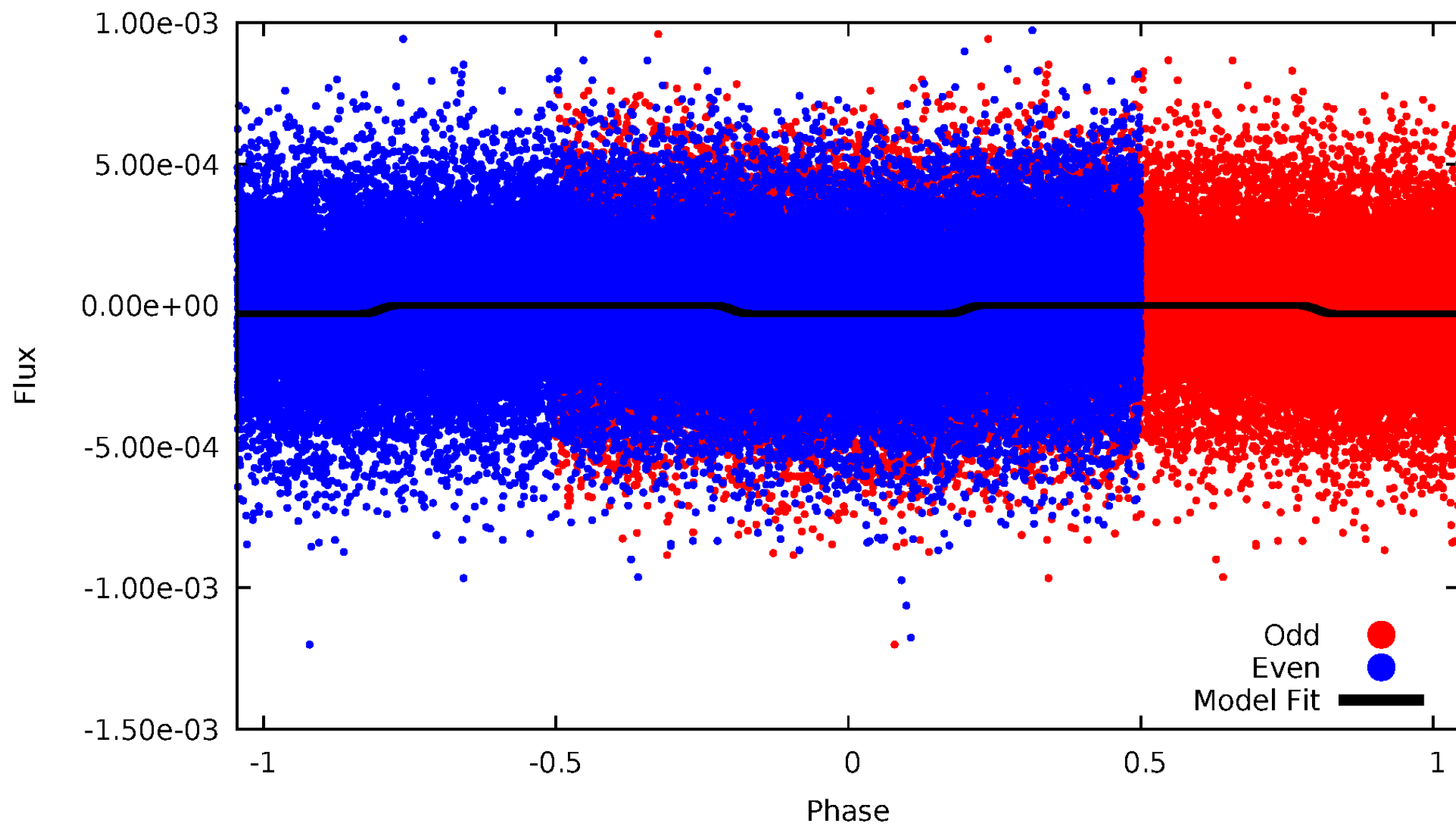
DV Odd/Even

TCE 006587551-01



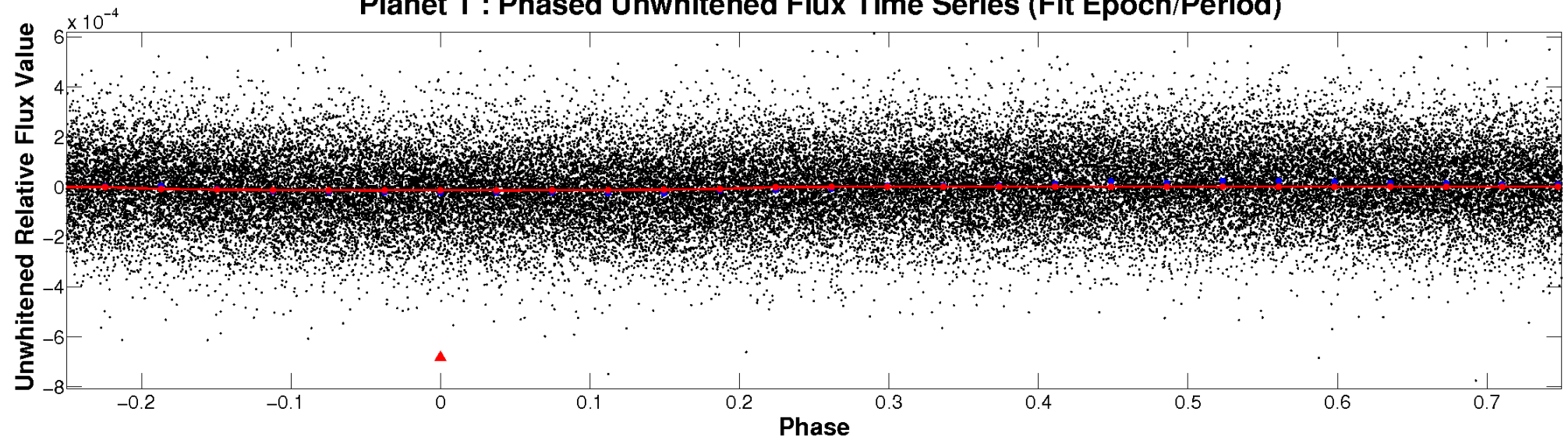
ALT Odd/Even

TCE 006587551-01

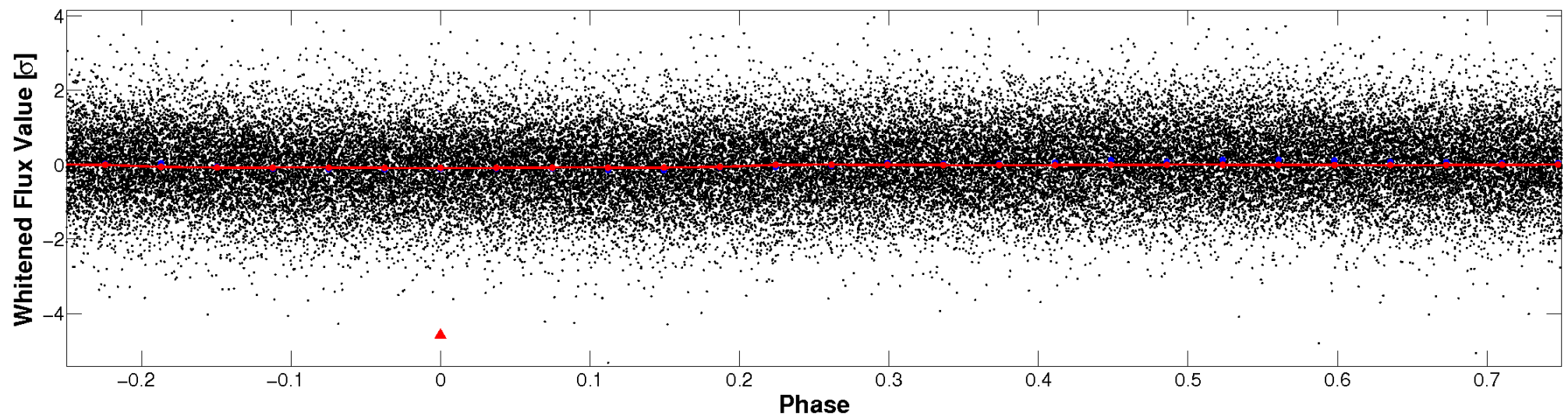


Non-Whitened Vs. Whitened Light Curve

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

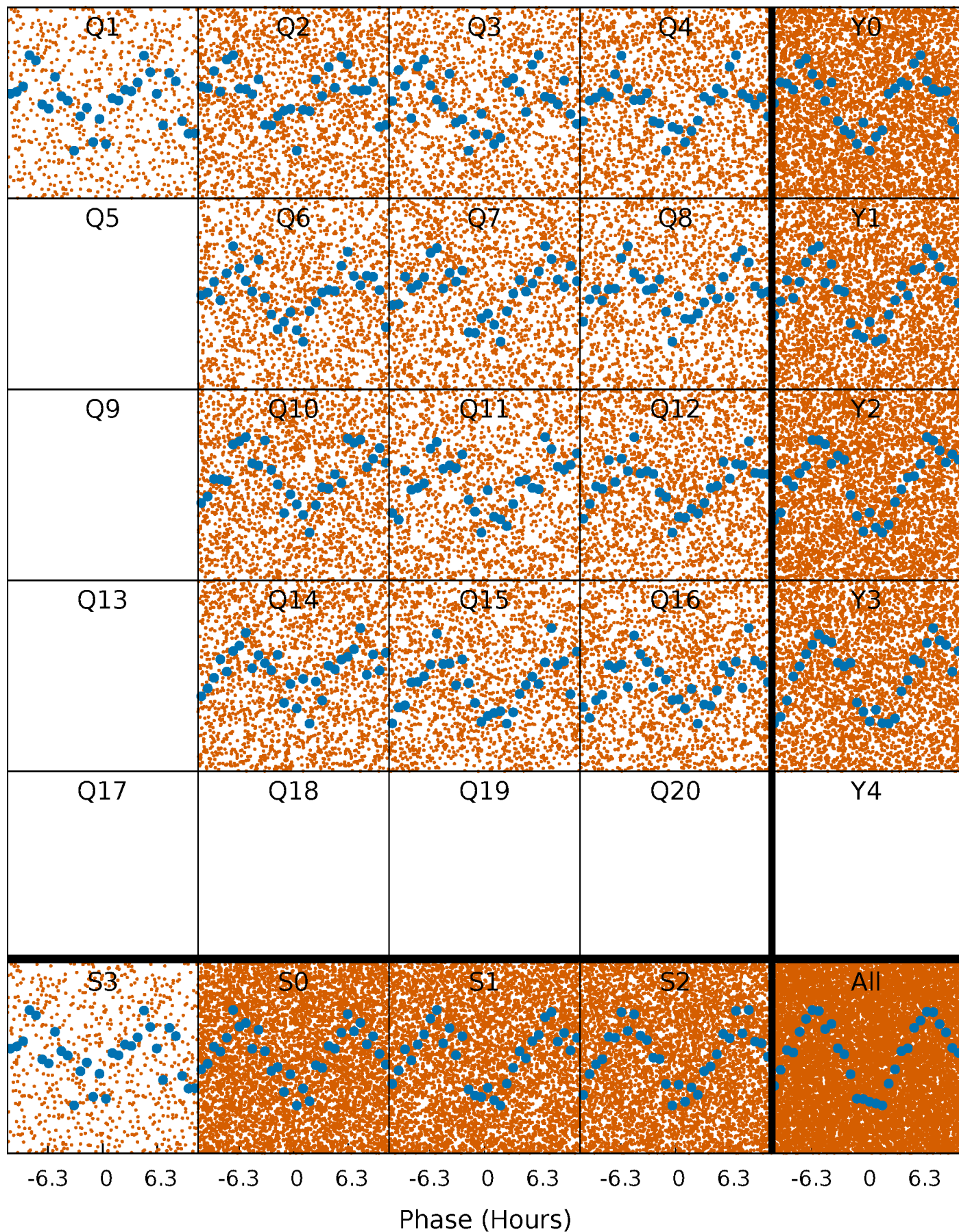


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



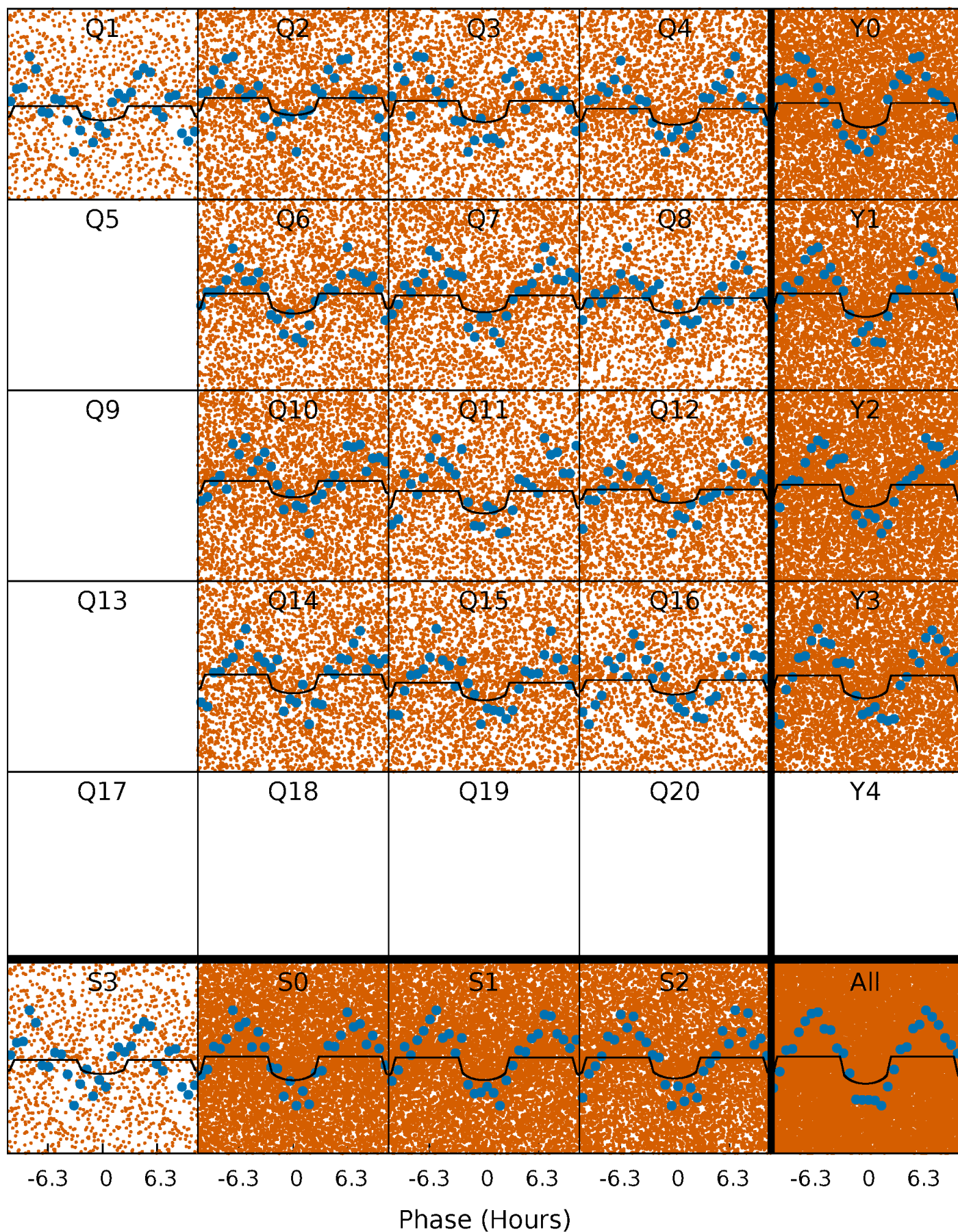
PDC Quarter-Phased Transit Curves

TCE 006587551-01 P= 0.546700 Days $T_0=131.561871$ (BKJD)



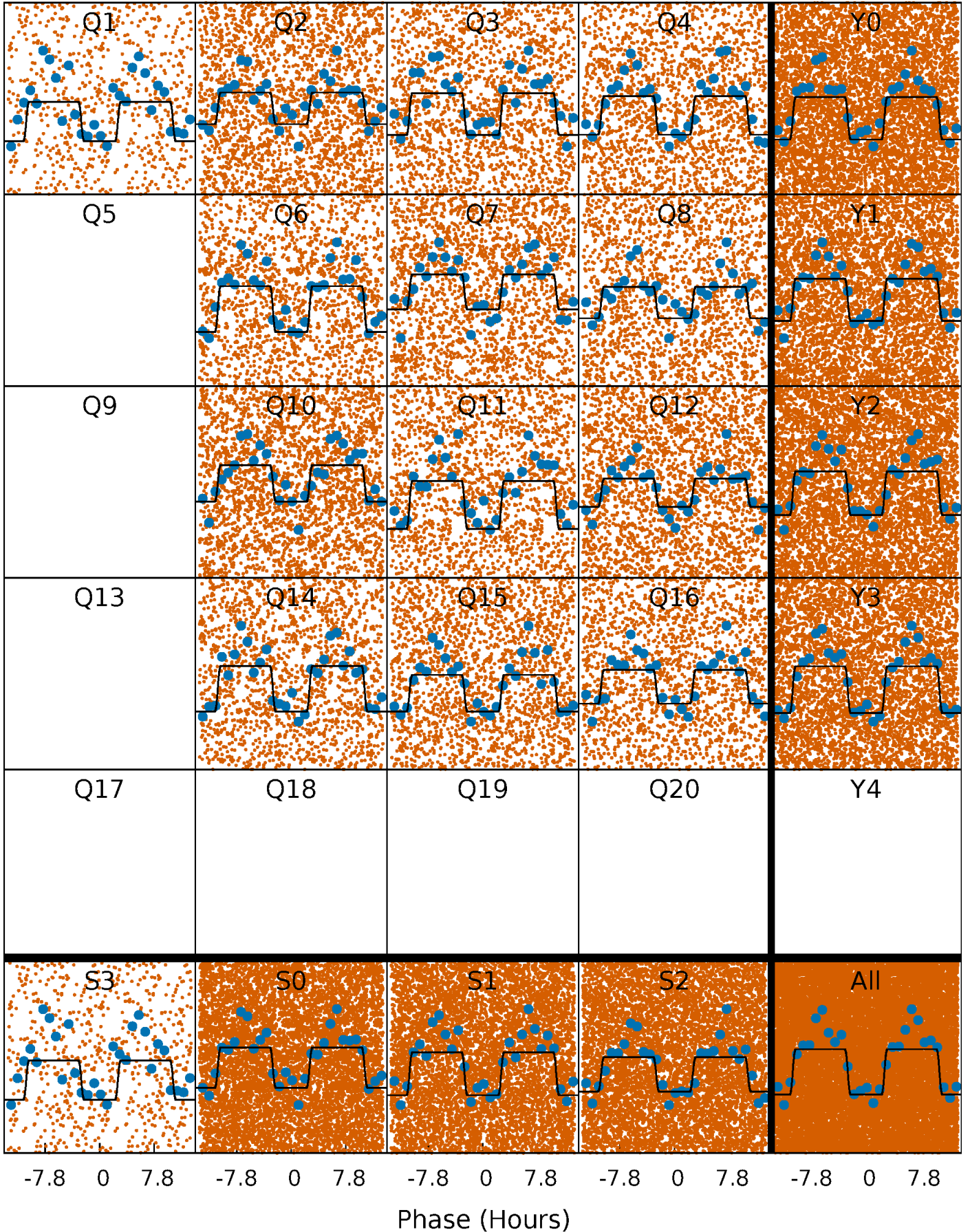
DV Quarter-Phased Transit Curves

TCE 006587551-01 P= 0.546700 Days $T_0=131.561871$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

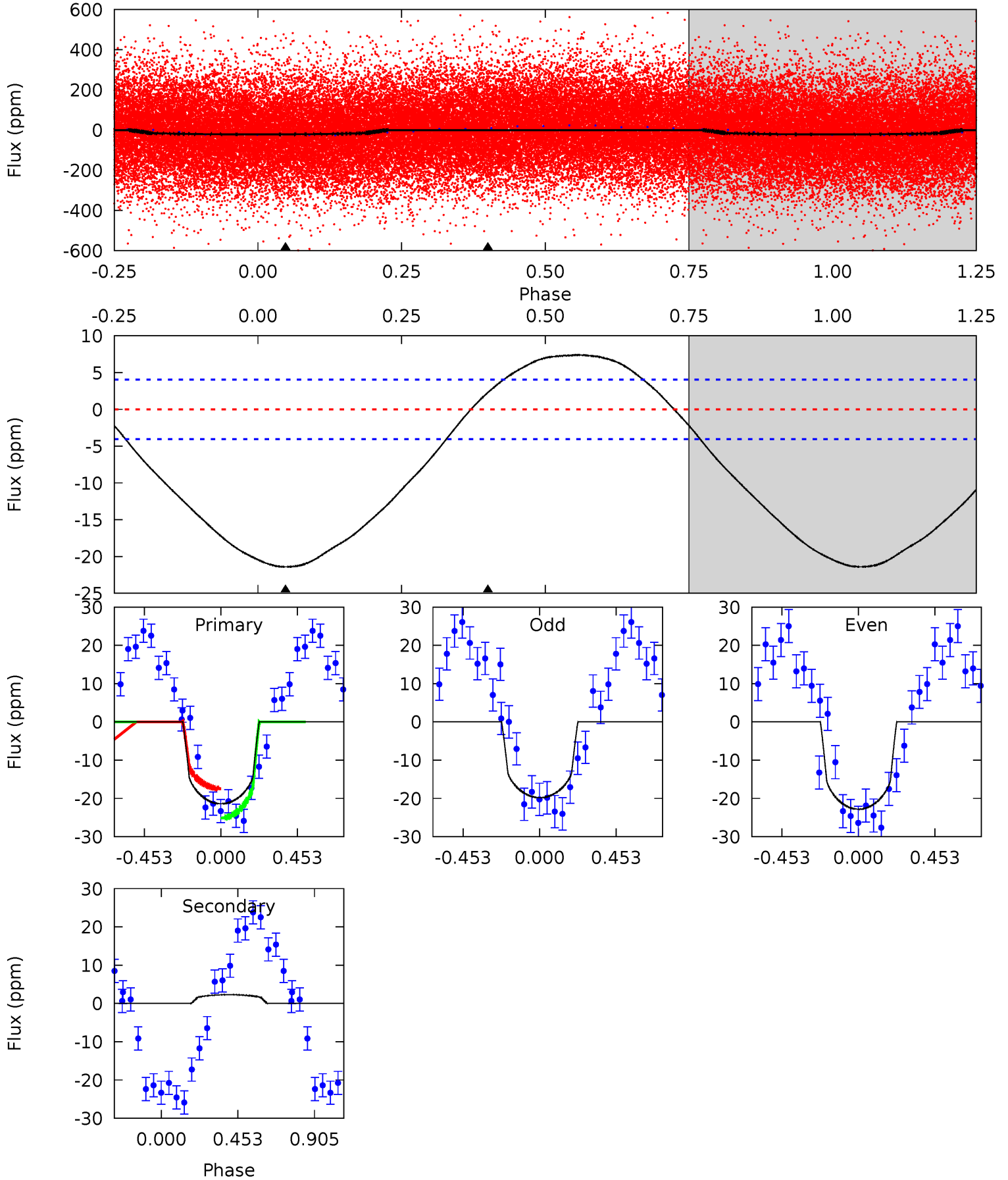
TCE 006587551-01 P= 0.546735 Days $T_0=131.534205$ (BKJD)



DV Model-Shift Uniqueness Test

006587551-01, P = 0.546700 Days, E = 131.015171 Days

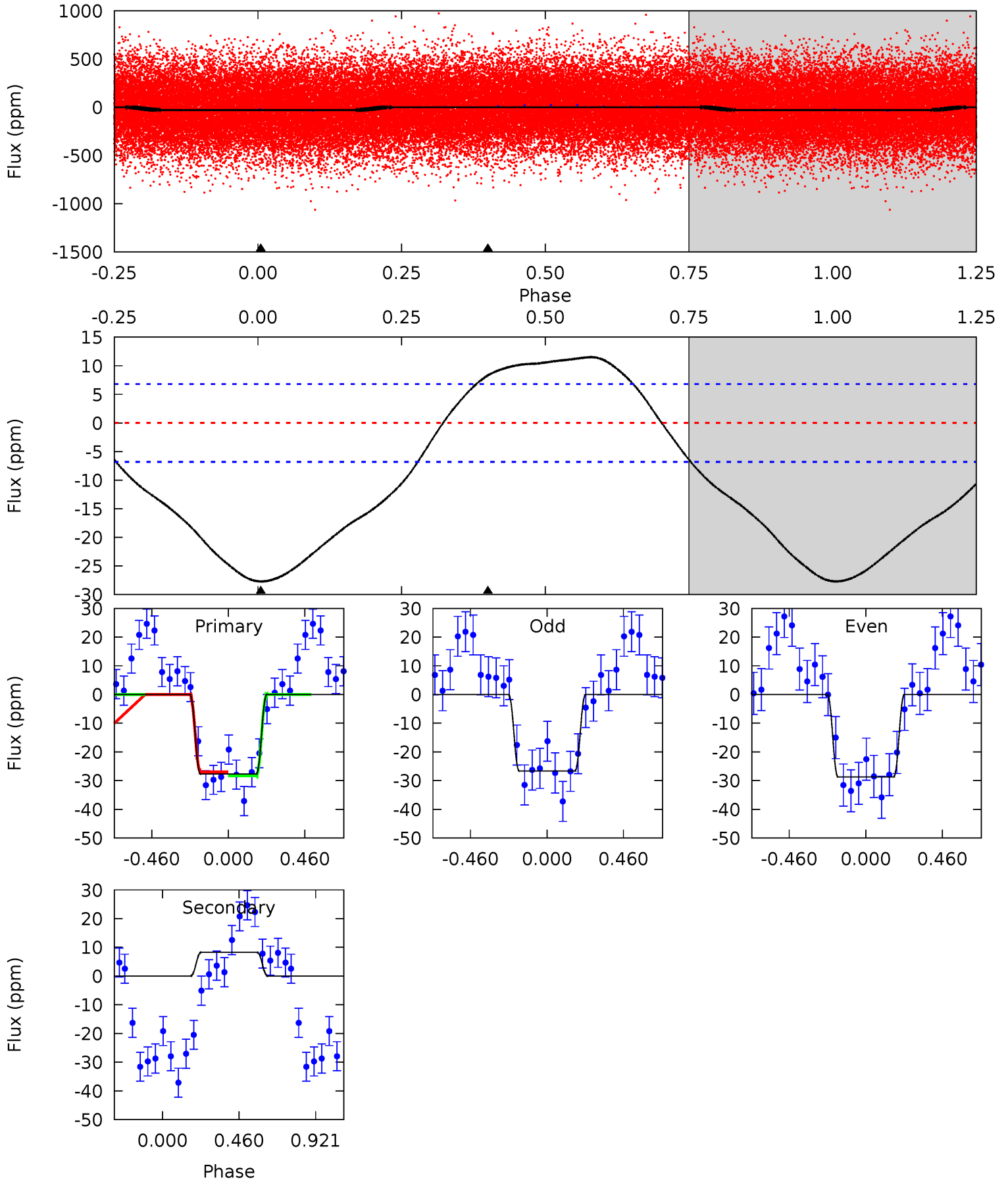
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.4	-2.40	0	0	4.24	0.75	2.53	22.4	22.4	-2.40	-2.40	1.59	1.00	0.26	4.09



Alt Model-Shift Uniqueness Test

006587551-01, P = 0.546735 Days, E = 130.987470 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.3	-5.17	0	0	4.23	0.74	2.57	17.3	17.3	-5.17	-5.17	0.65	1.05	0.29	0.42



Stellar Parameters For KIC 006587551

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	8806^{+177}_{-212}	$3.811^{+0.227}_{-0.105}$	$-0.300^{+0.400}_{-0.200}$	$2.890^{+0.653}_{-0.798}$	$1.971^{+0.503}_{-0.215}$	$0.115^{+0.171}_{-0.042}$
	+2%/-2%	+6%/-3%	+133%/-67%	+23%/-28%	+26%/-11%	+149%/-36%
Source	SPE4	SPE4	SPE4	DSEP		

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

Secondary Eclipse Parameters for KIC 006587551-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	2 ± 1	$1.17^{+0.77}_{-0.66}$	7099^{+417}_{-479}	-6460^{+597}_{-2270}	$-0.242^{+0.166}_{-1.045}$
Alt.	8 ± 2	$1.69^{+0.86}_{-0.73}$	7119^{+428}_{-499}	-7017^{+736}_{-1904}	$-0.437^{+0.246}_{-1.043}$

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 $A_{obs} \gg 1.0$

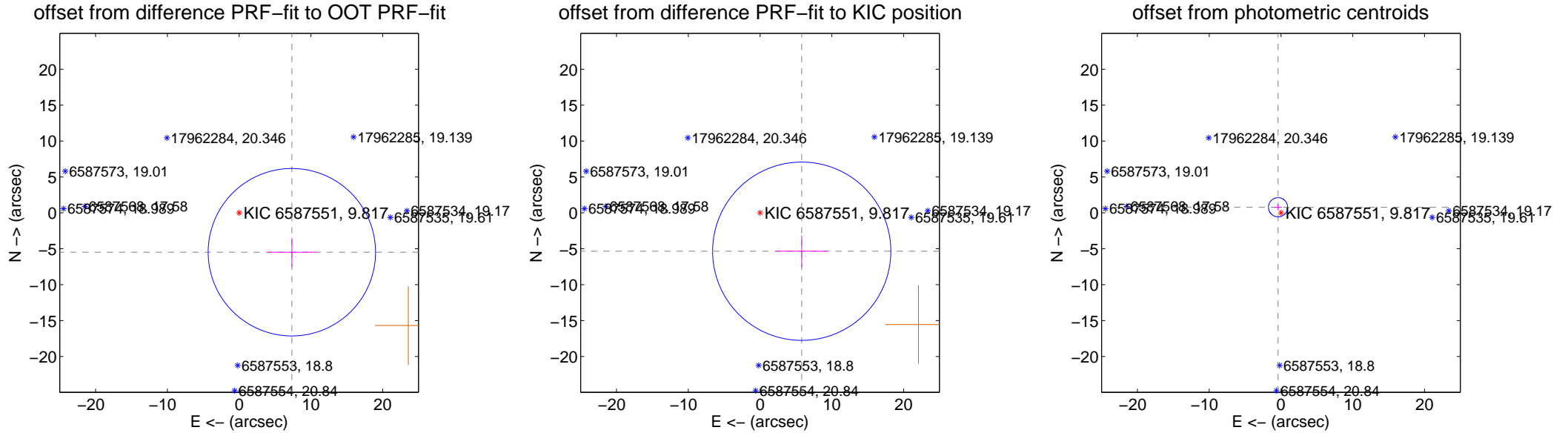
DV Centroid Data

Supplemental centroid analysis for 006587551-01. **Kepler magnitude: 9.82.** Transit SNR 11.33

There are 0 quarters with good PRF difference image offsets

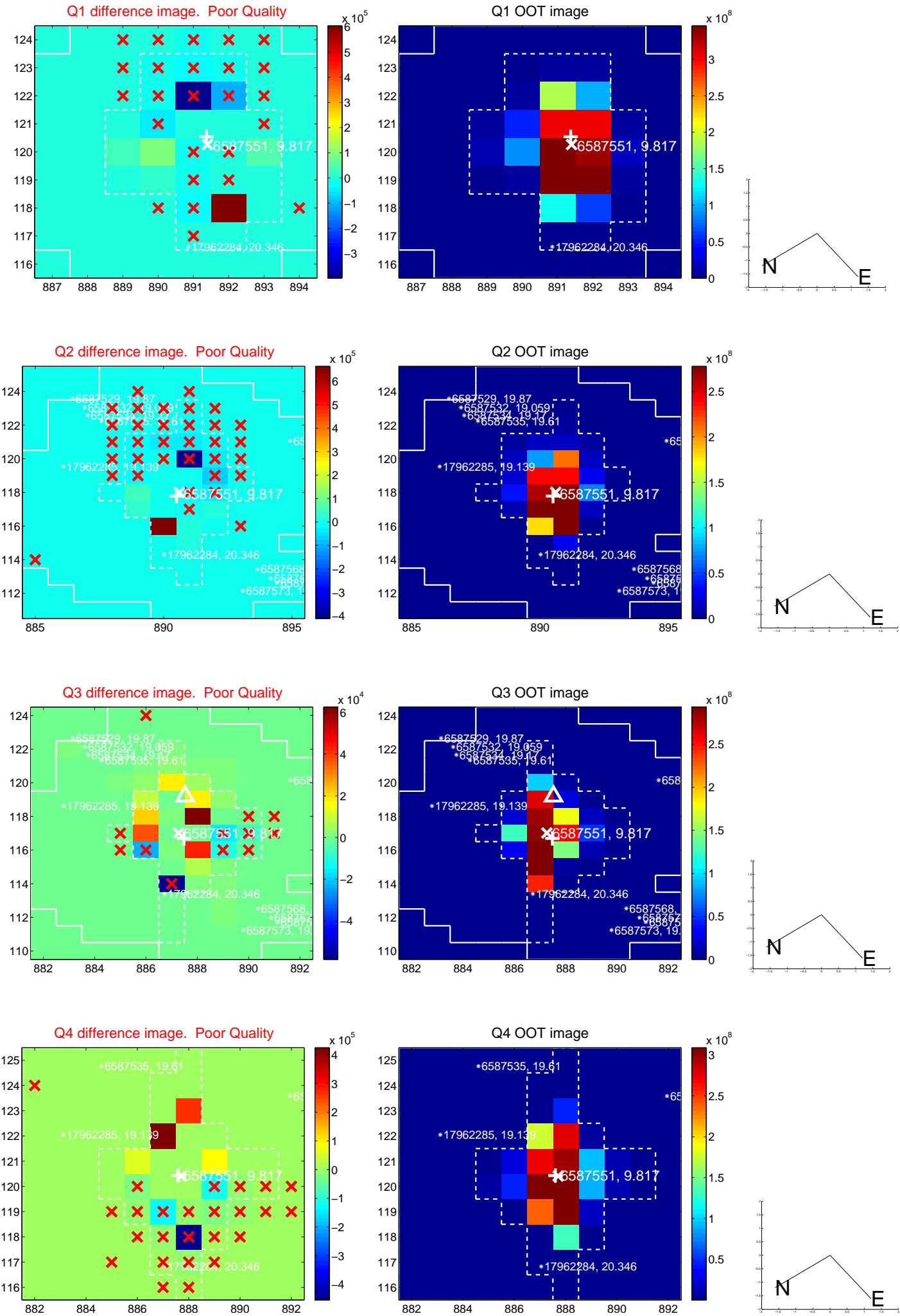
The direct PRF centroid is offset from the target star catalog position by about 1.52 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	9.160 ± 3.885	2.36	-7.342 ± 3.380	-5.477 ± 1.997
PRF-fit source offset from KIC position	7.885 ± 4.137	1.91	-5.802 ± 3.605	-5.339 ± 2.218
photometric centroid source offset	0.88 ± 0.44	1.98	0.41 ± 0.54	0.78 ± 0.42

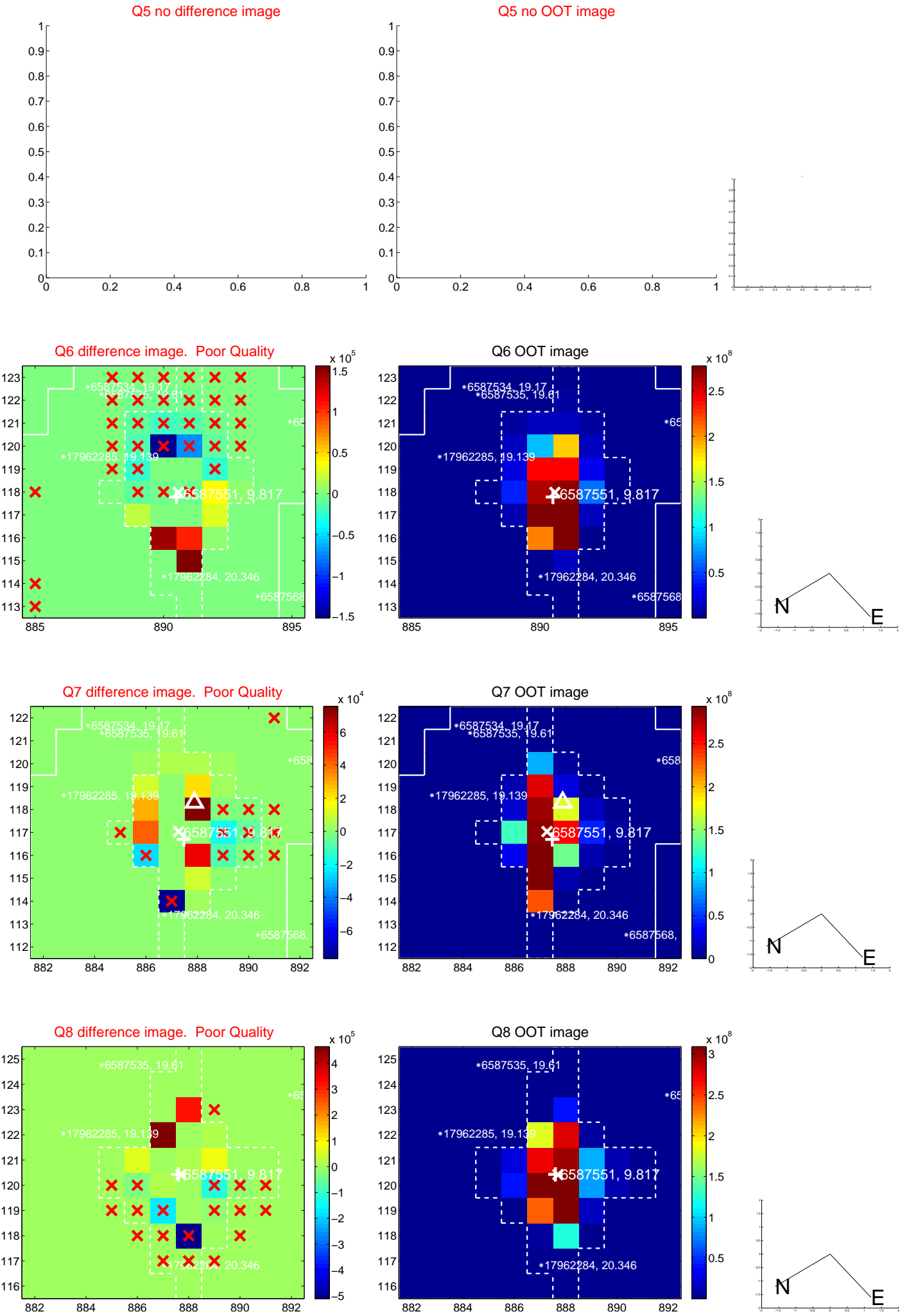


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- 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.

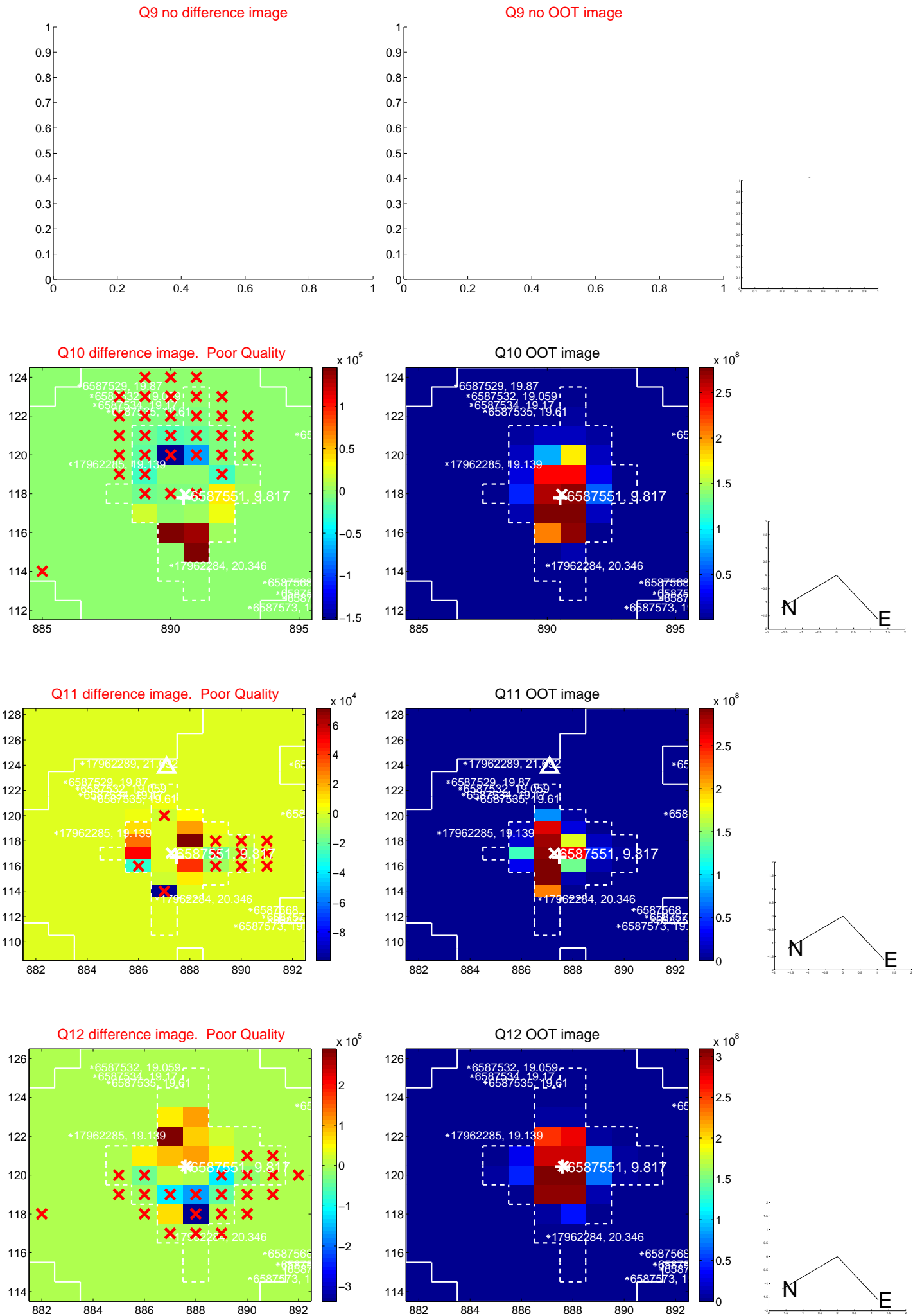
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



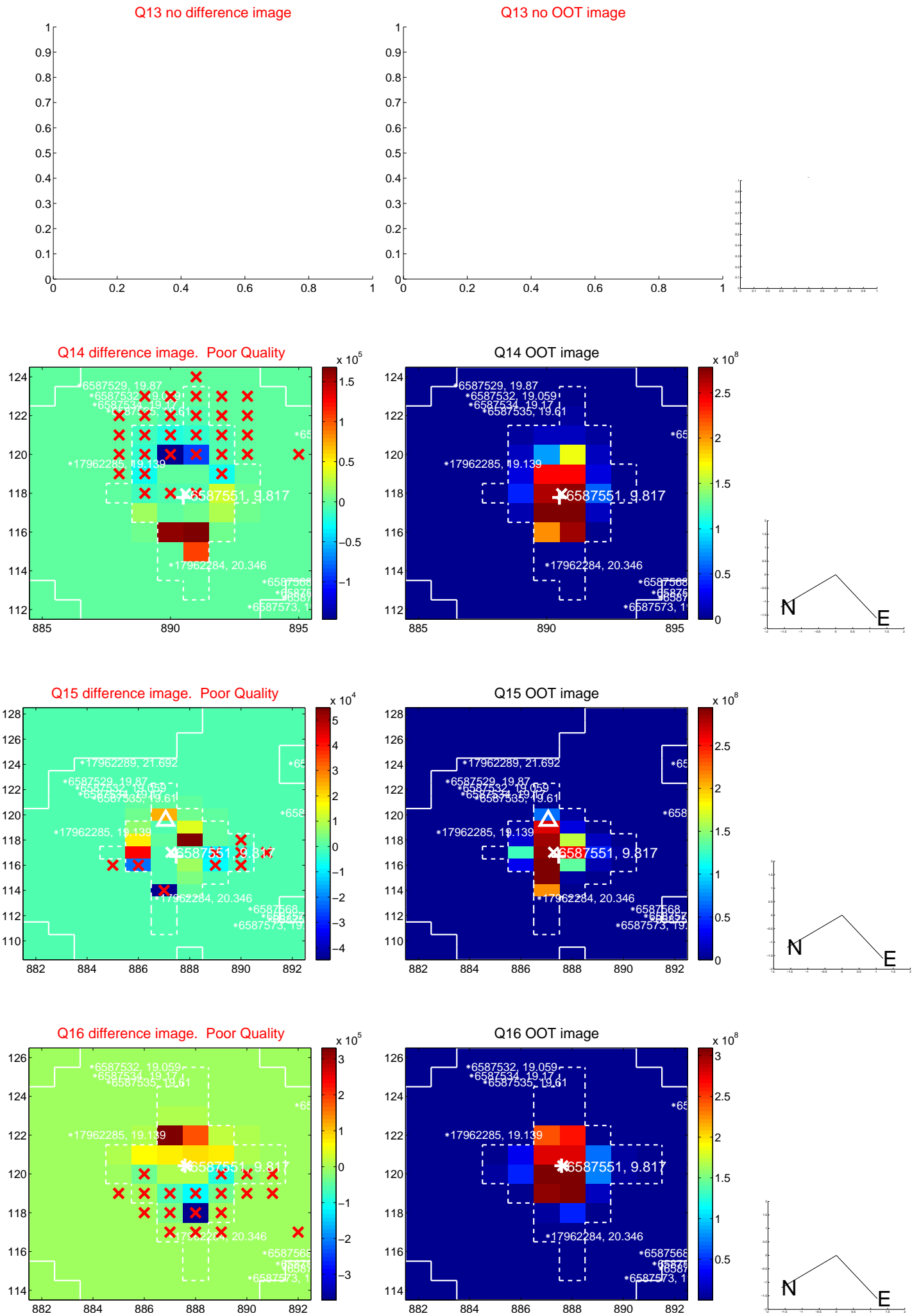
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



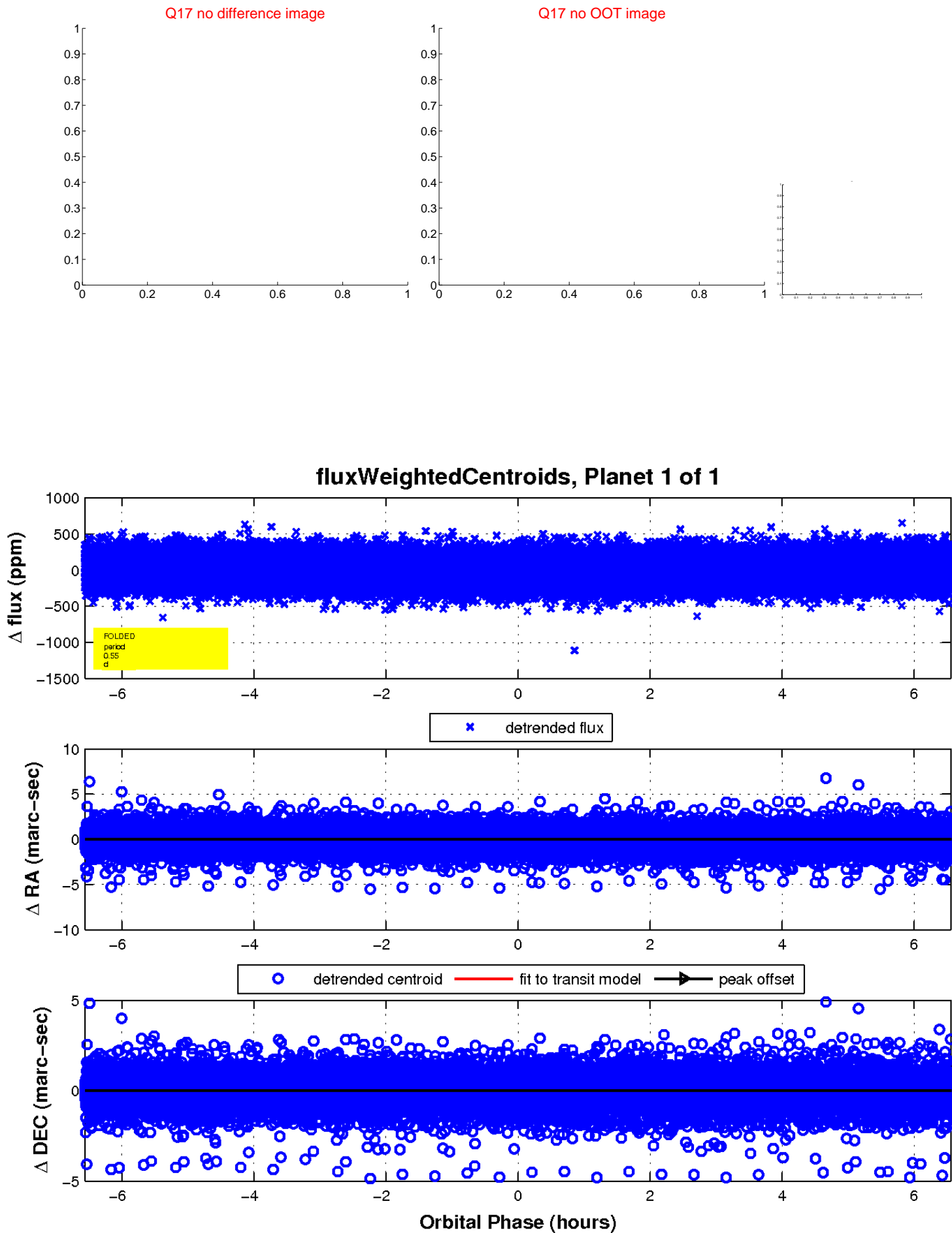
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

