

KIC 005306787

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})
005306787-01	OBS	No	1.232218	132.141952	55.8	5.087	9.5	6.8	1.22	6408	1.06	4088.24

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005306787-01	OBS	FP	0.00	1	0	1	0	LPP_DV—MOD_NONUNIQ_DV—HALO_GHOST

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

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

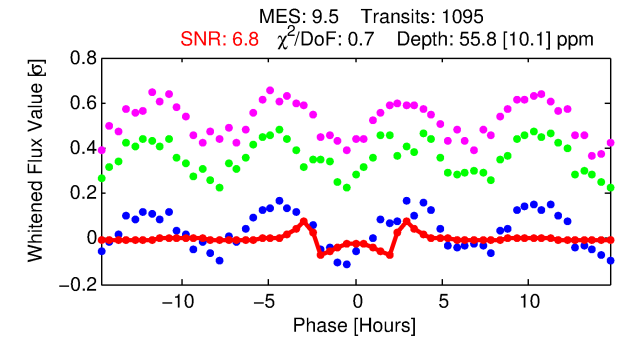
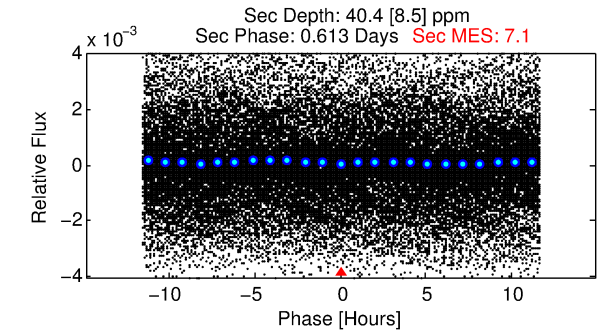
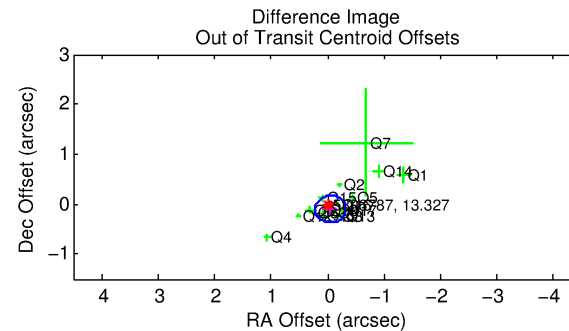
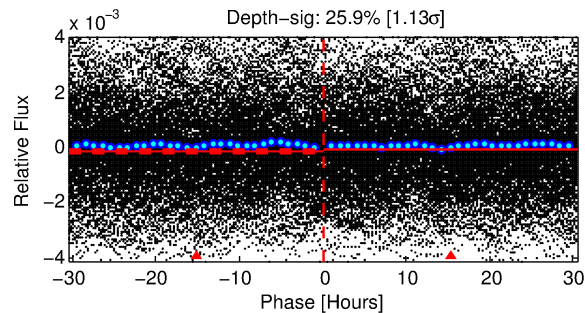
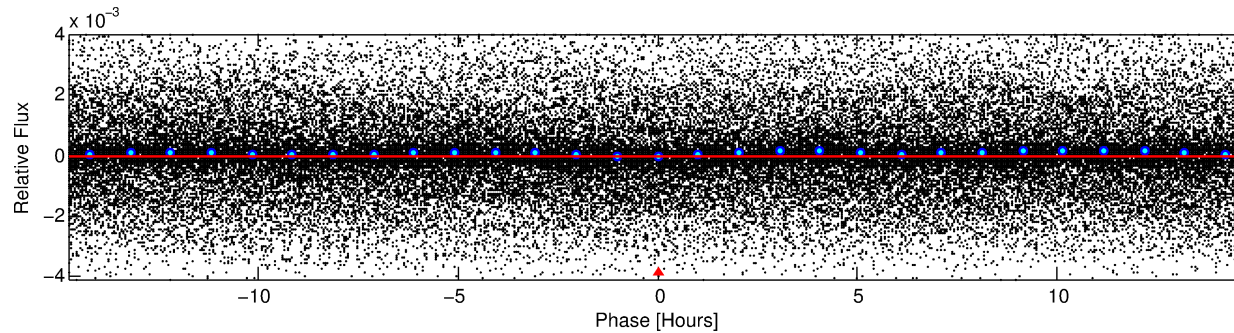
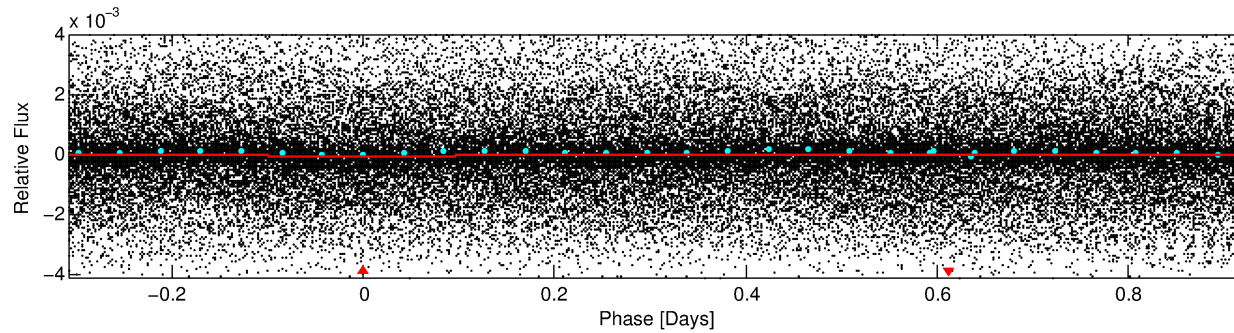
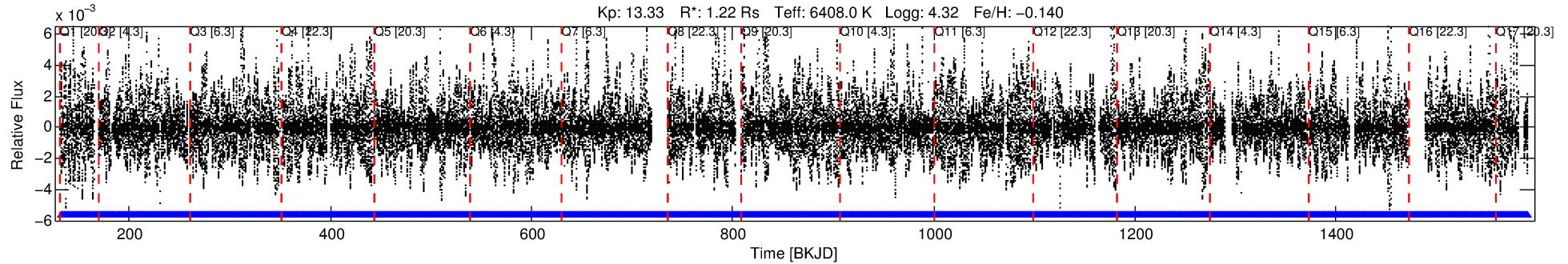
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005306787-01

No Significant Match Found

DV One-Page Summary

KIC: 5306787 Candidate: 1 of 1 Period: 1.232 d



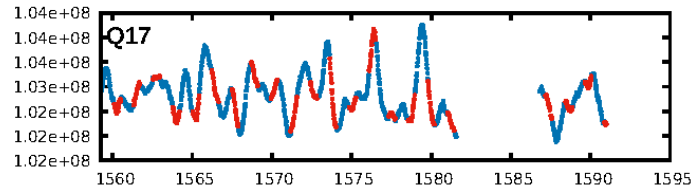
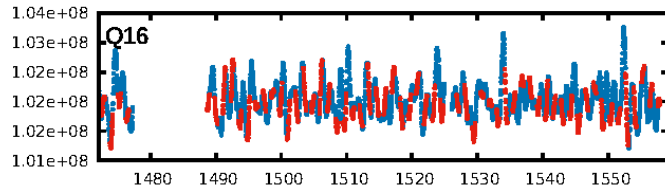
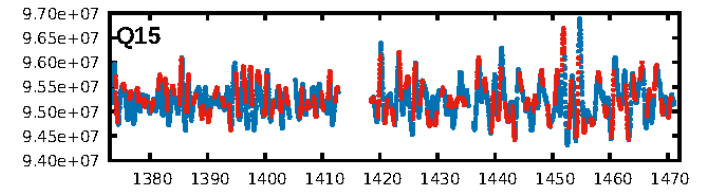
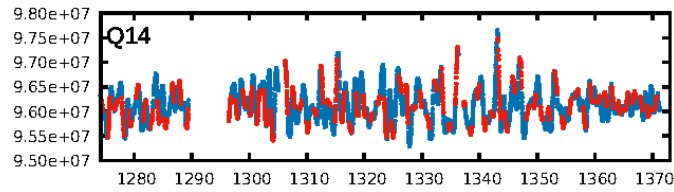
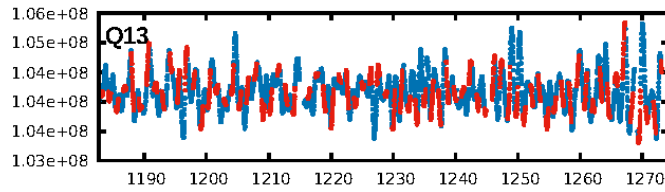
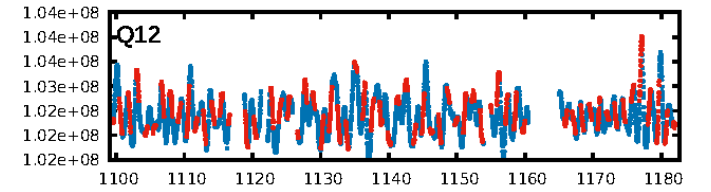
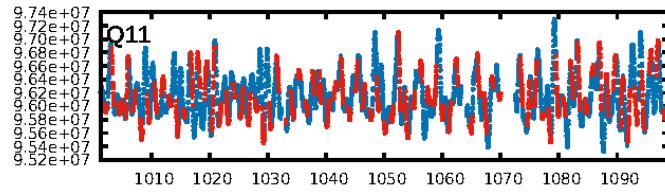
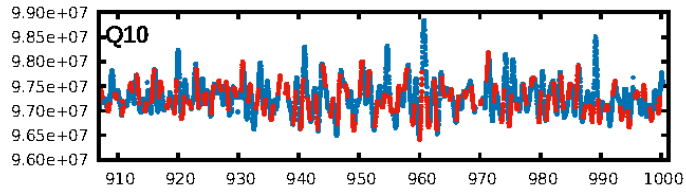
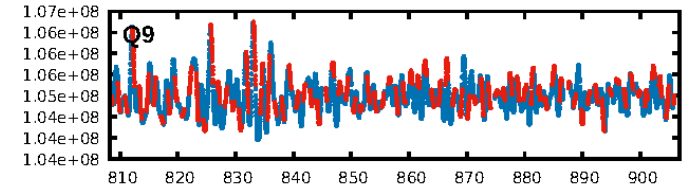
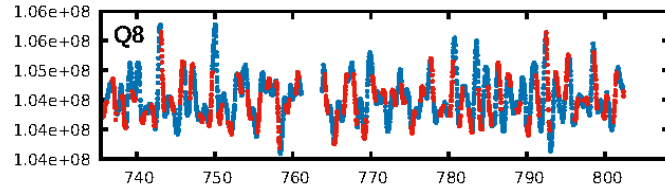
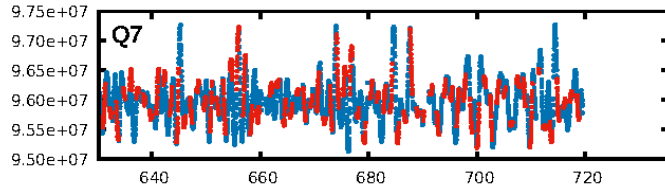
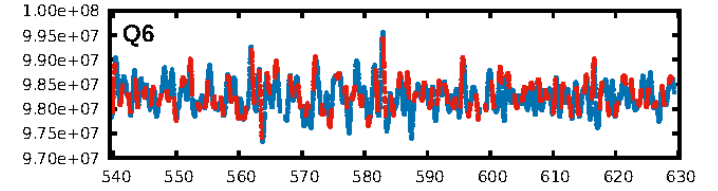
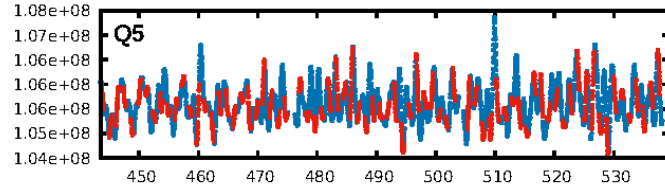
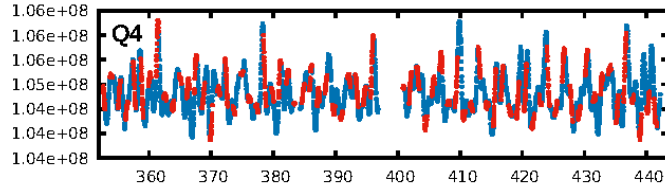
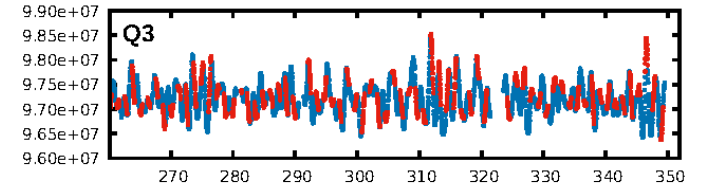
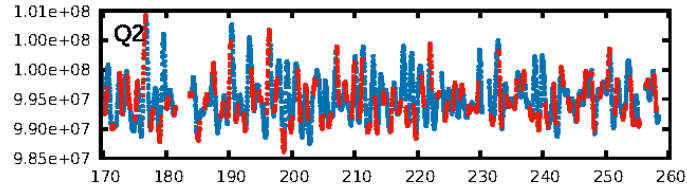
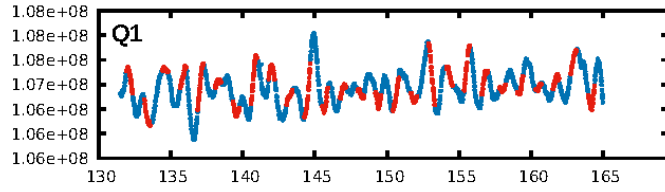
DV Fit Results:

Period = 1.23222 [0.00001] d
Epoch = 132.1420 [0.0023] BKJD
Rp/R* = 0.0080 [0.0016]
a/R* = 1.26 [0.45]
b = 0.90 [0.20]
Seff = 4088.24 [1605.98]
Teq = 2039 [200] K
Rp = 1.06 [0.41] Re
a = 0.0234 [0.0062] AU
Ag = 10.77 [6.34] [1.54 σ]
Teffp = 5711 [679] K [5.19 σ]

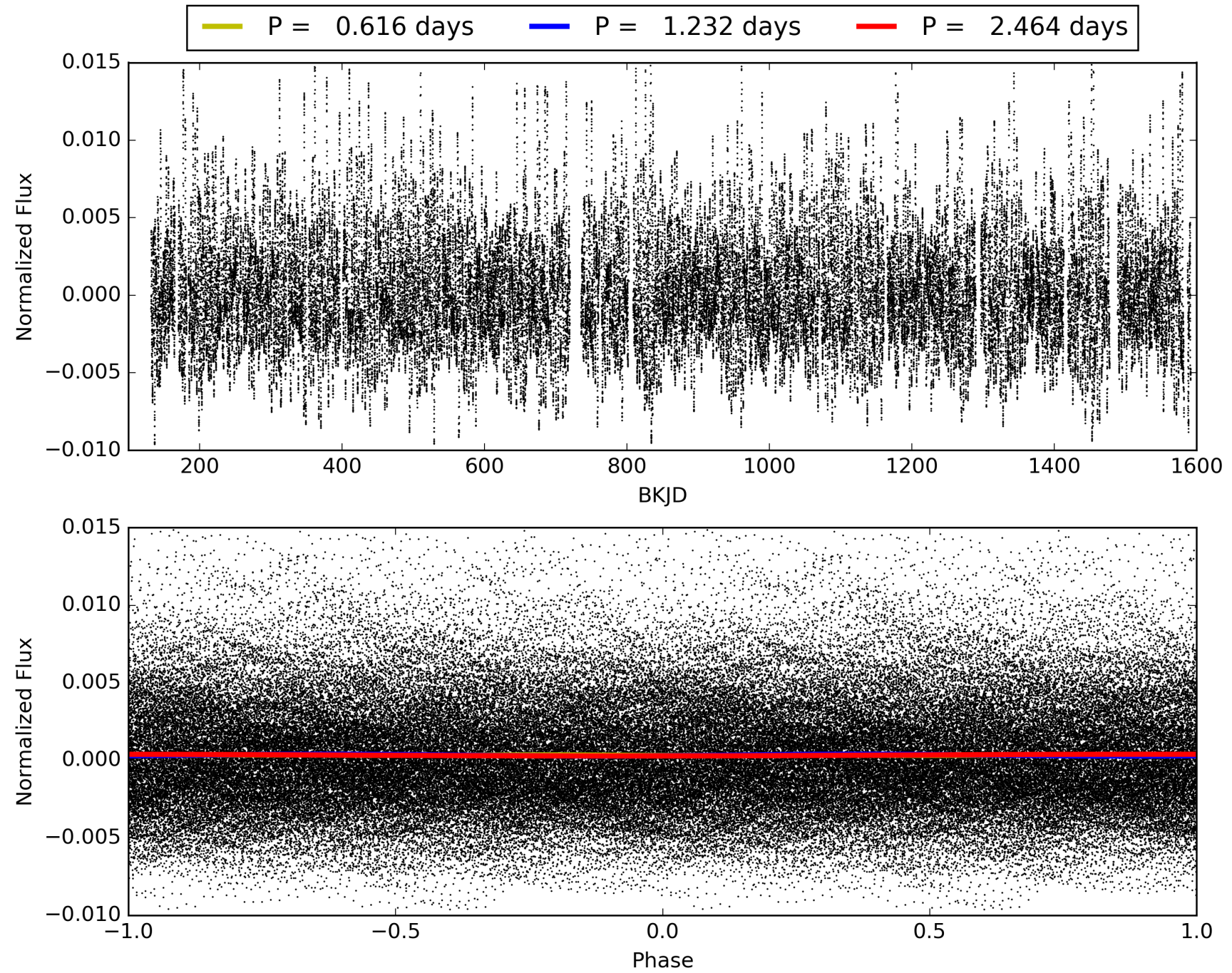
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 5.20e-24
RollingBand-fgt: 1.00 [1046/1046]
GhostDiagnostic-chr: 0.1838
Centroid-sig: 10.6%
Centroid-so: 0.644 arcsec [0.99 σ]
OotOffset-rm: 0.113 arcsec [1.24 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-rm: 0.051 arcsec [0.30 σ]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.53 [9/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 005306787-01, PDC Light Curves

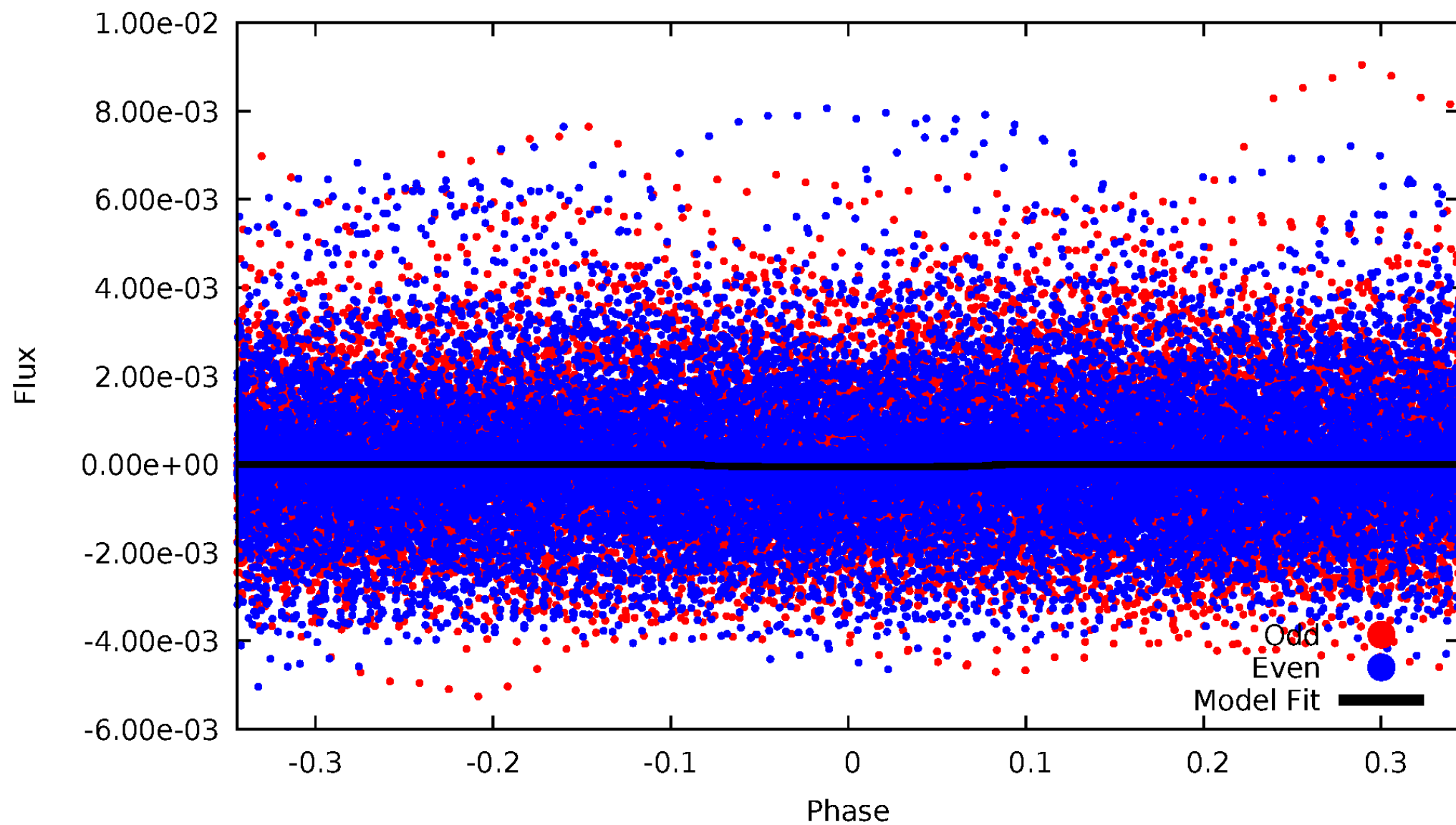


TCE 005306787-01



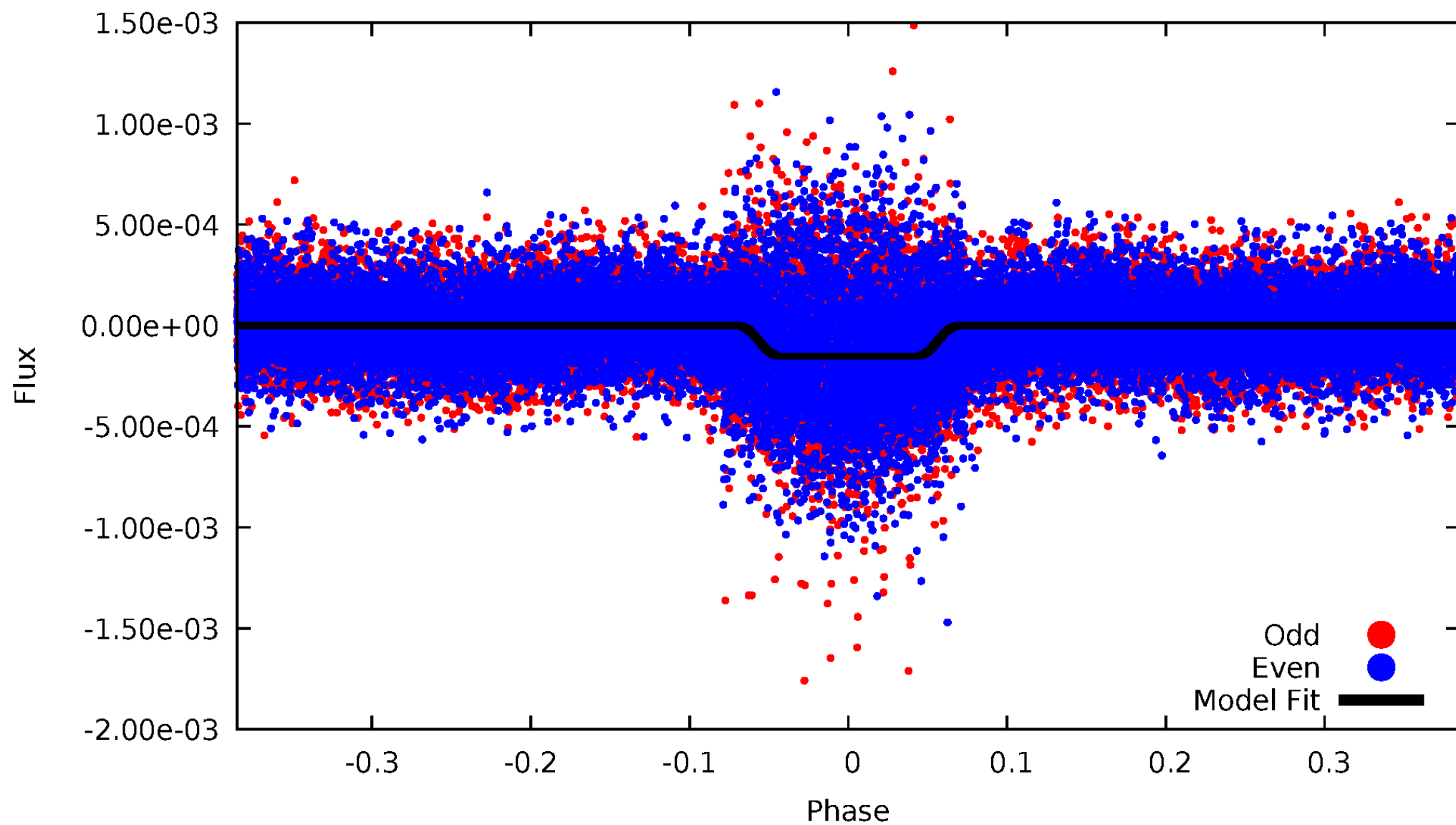
DV Odd/Even

TCE 005306787-01



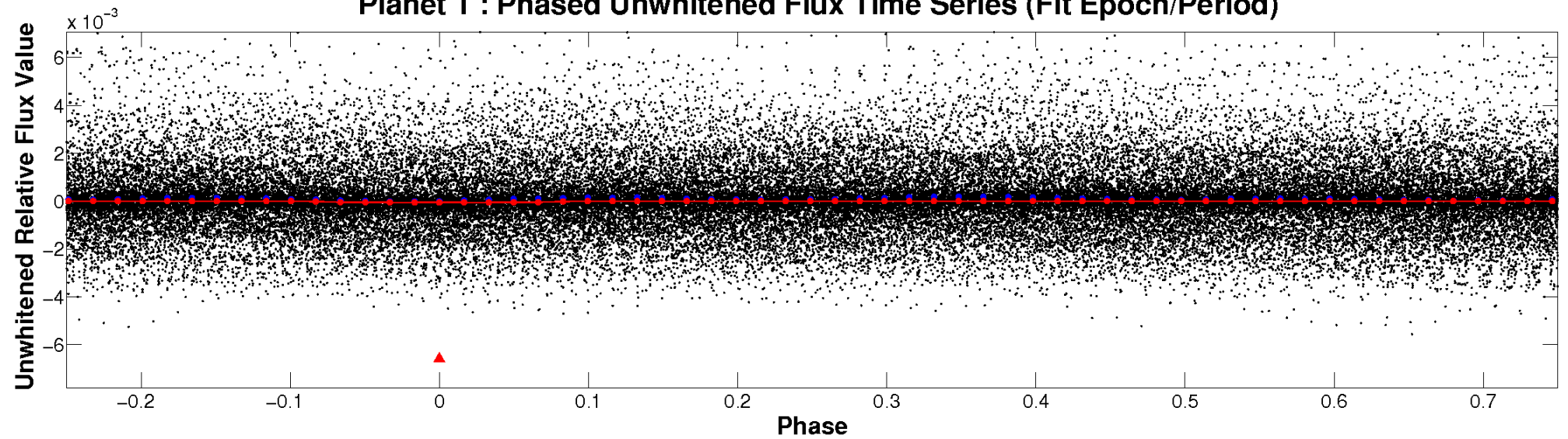
ALT Odd/Even

TCE 005306787-01

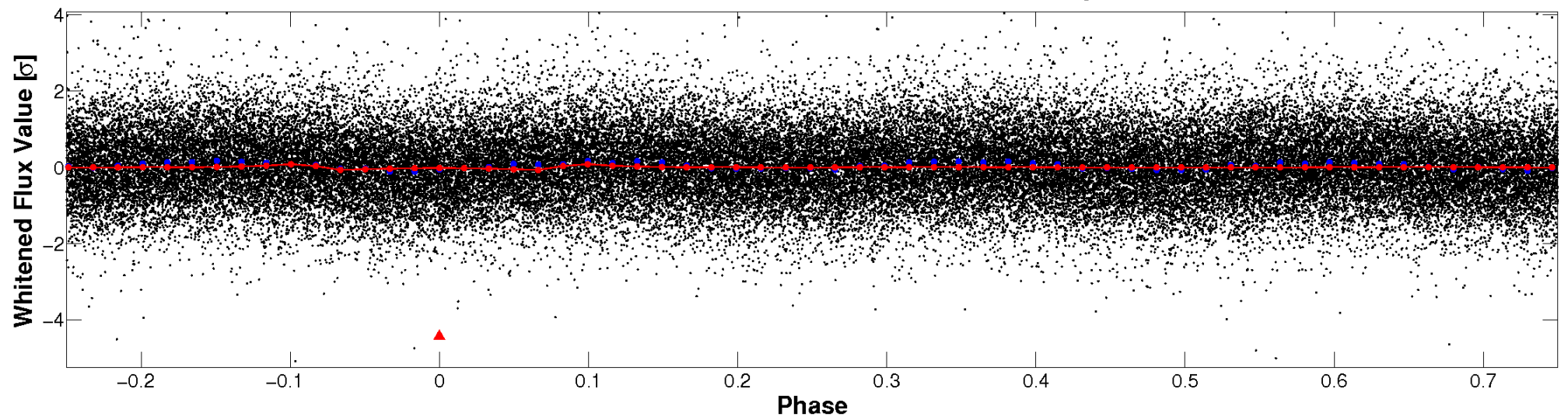


Non-Whitened Vs. Whitened Light Curve

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

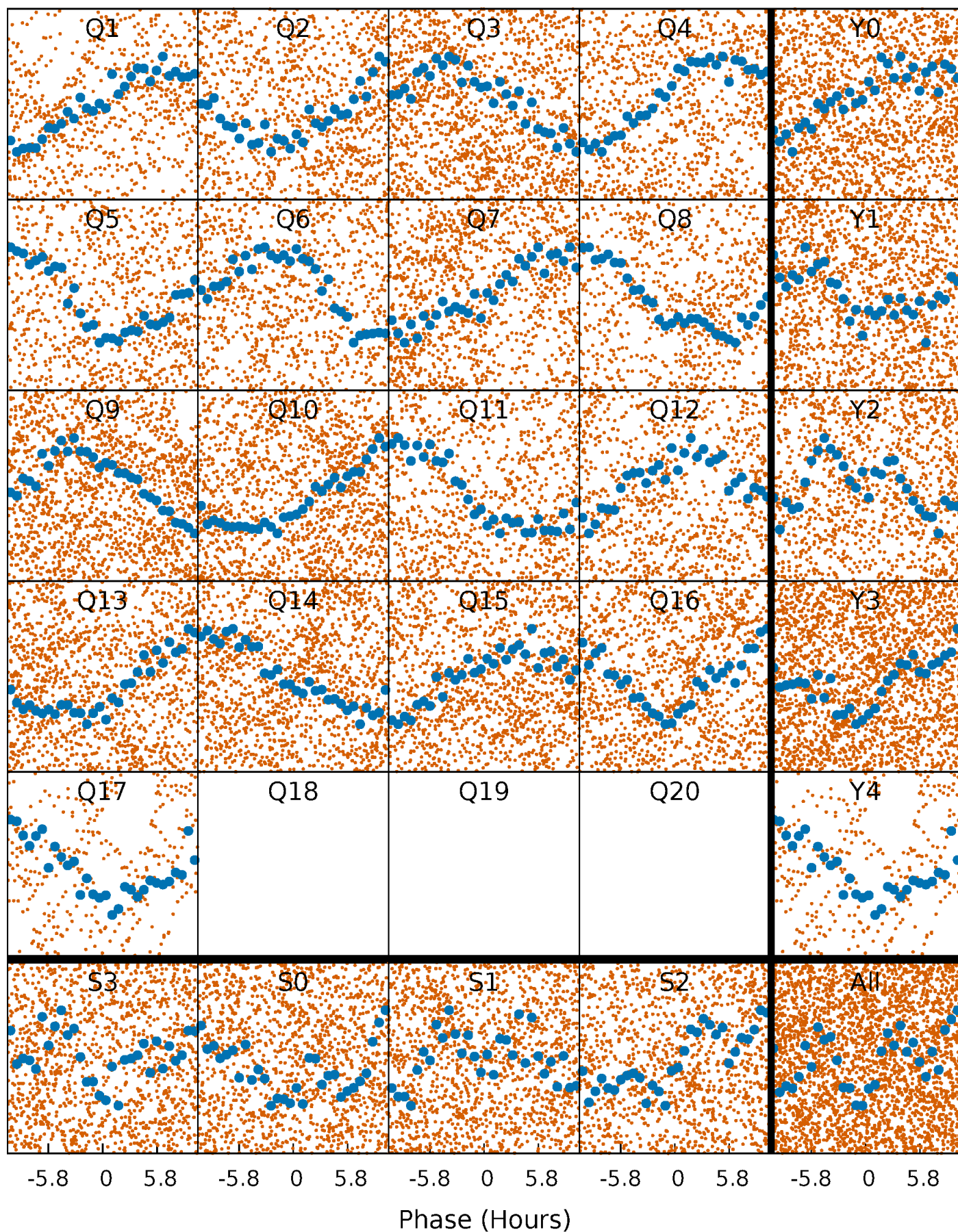


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



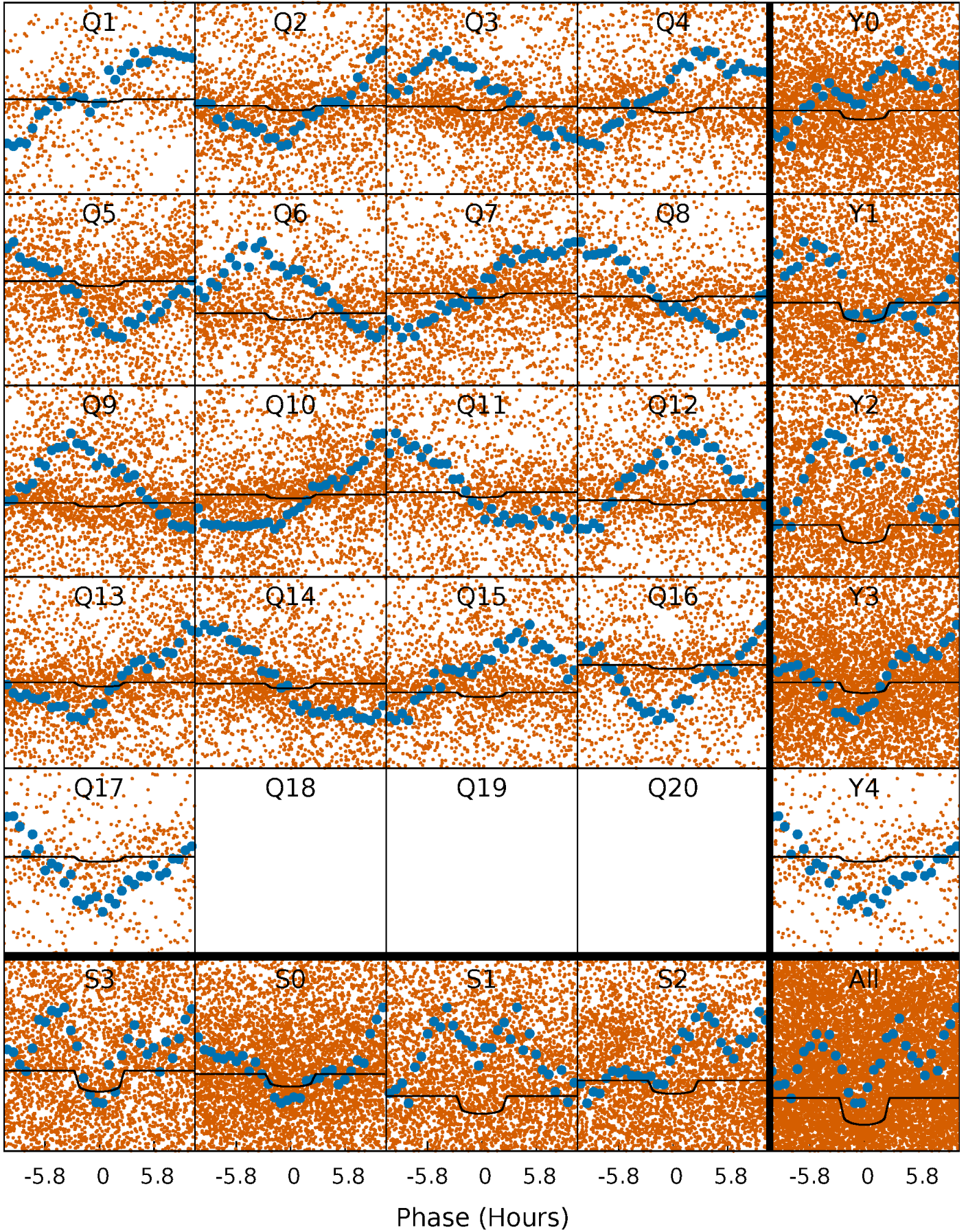
PDC Quarter-Phased Transit Curves

TCE 005306787-01 P= 1.232218 Days $T_0=132.141952$ (BKJD)



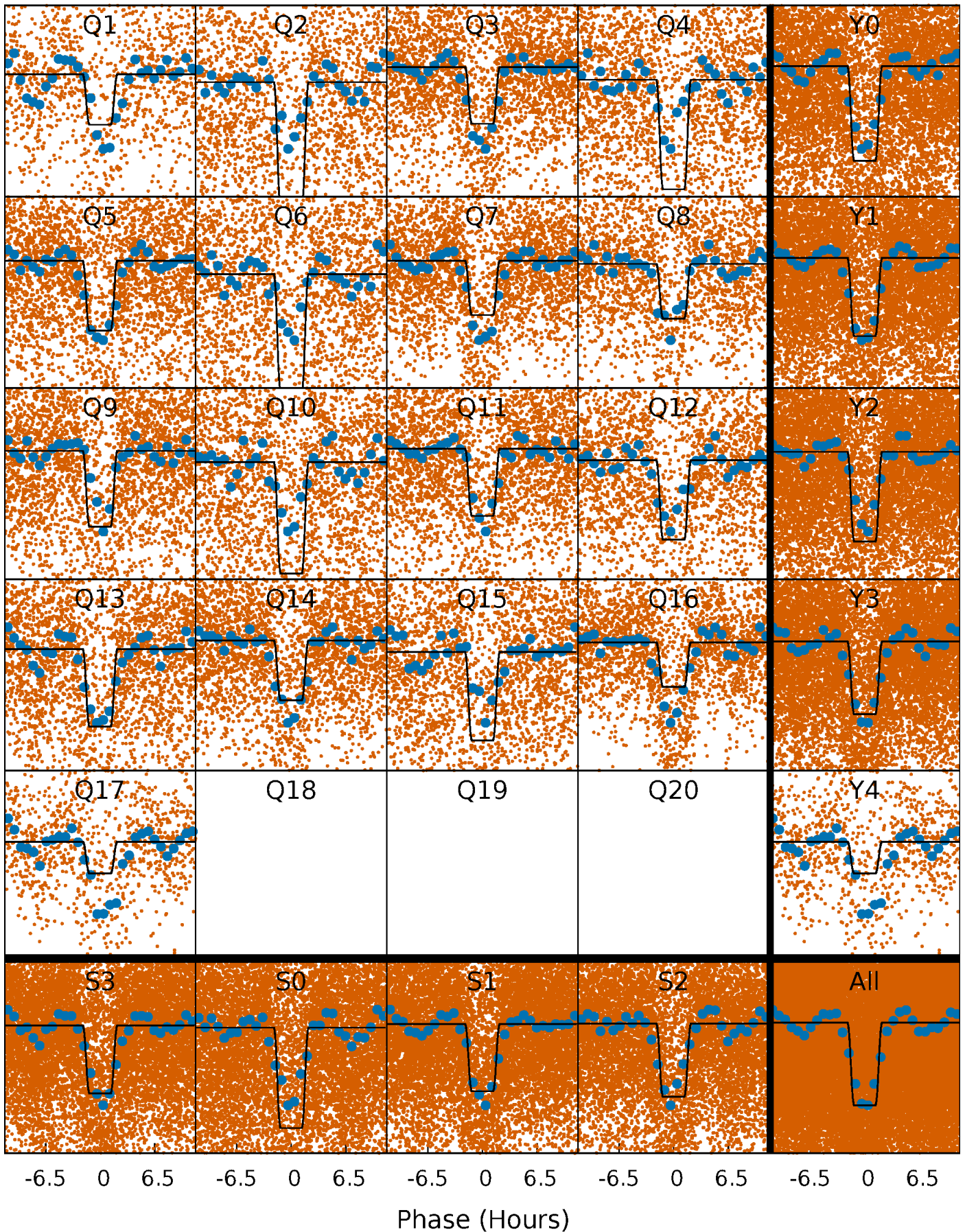
DV Quarter-Phased Transit Curves

TCE 005306787-01 P= 1.232218 Days $T_0=132.141952$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

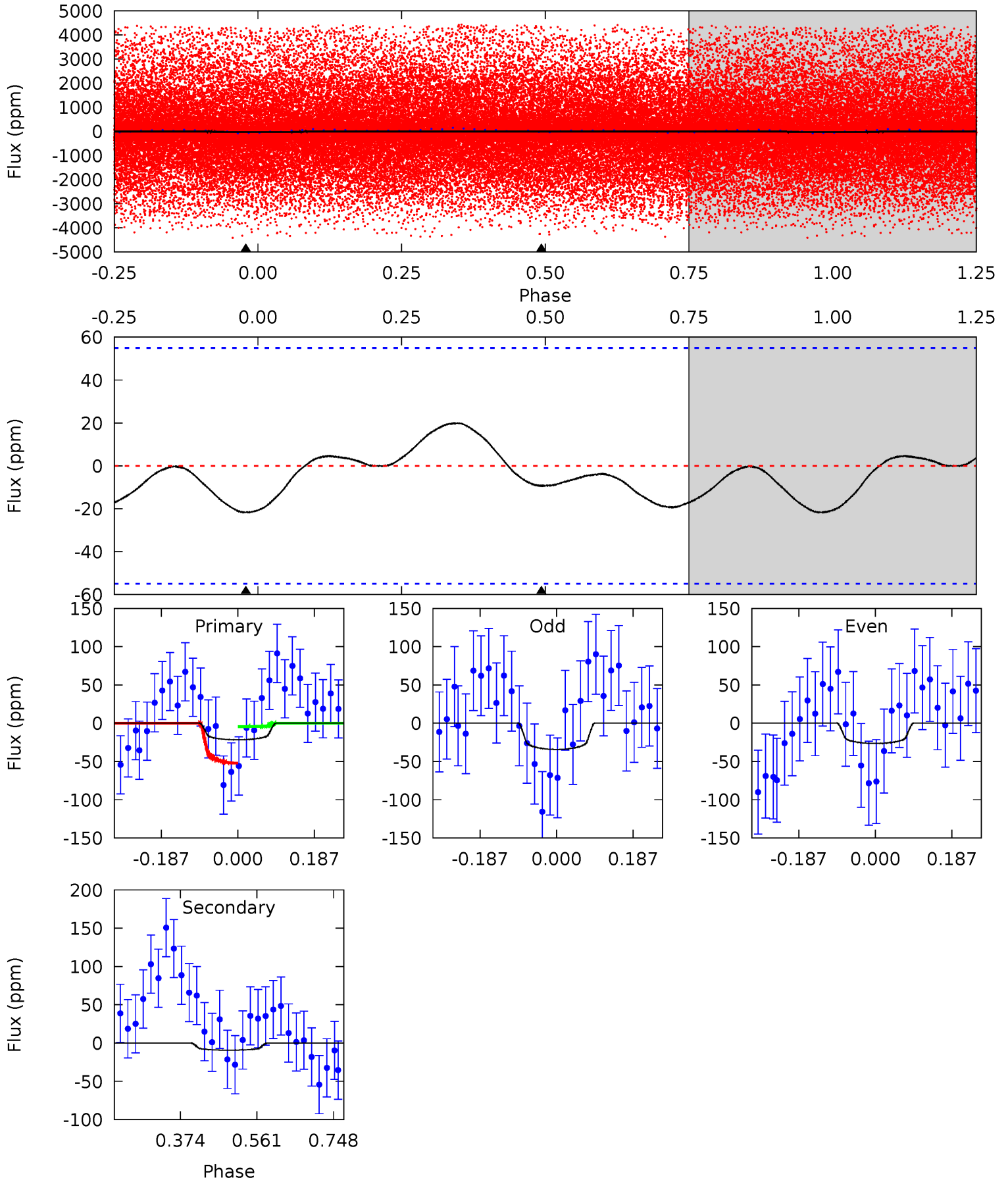
TCE 005306787-01 P= 1.232223 Days $T_0=132.108280$ (BKJD)



DV Model-Shift Uniqueness Test

005306787-01, P = 1.232218 Days, E = 130.909734 Days

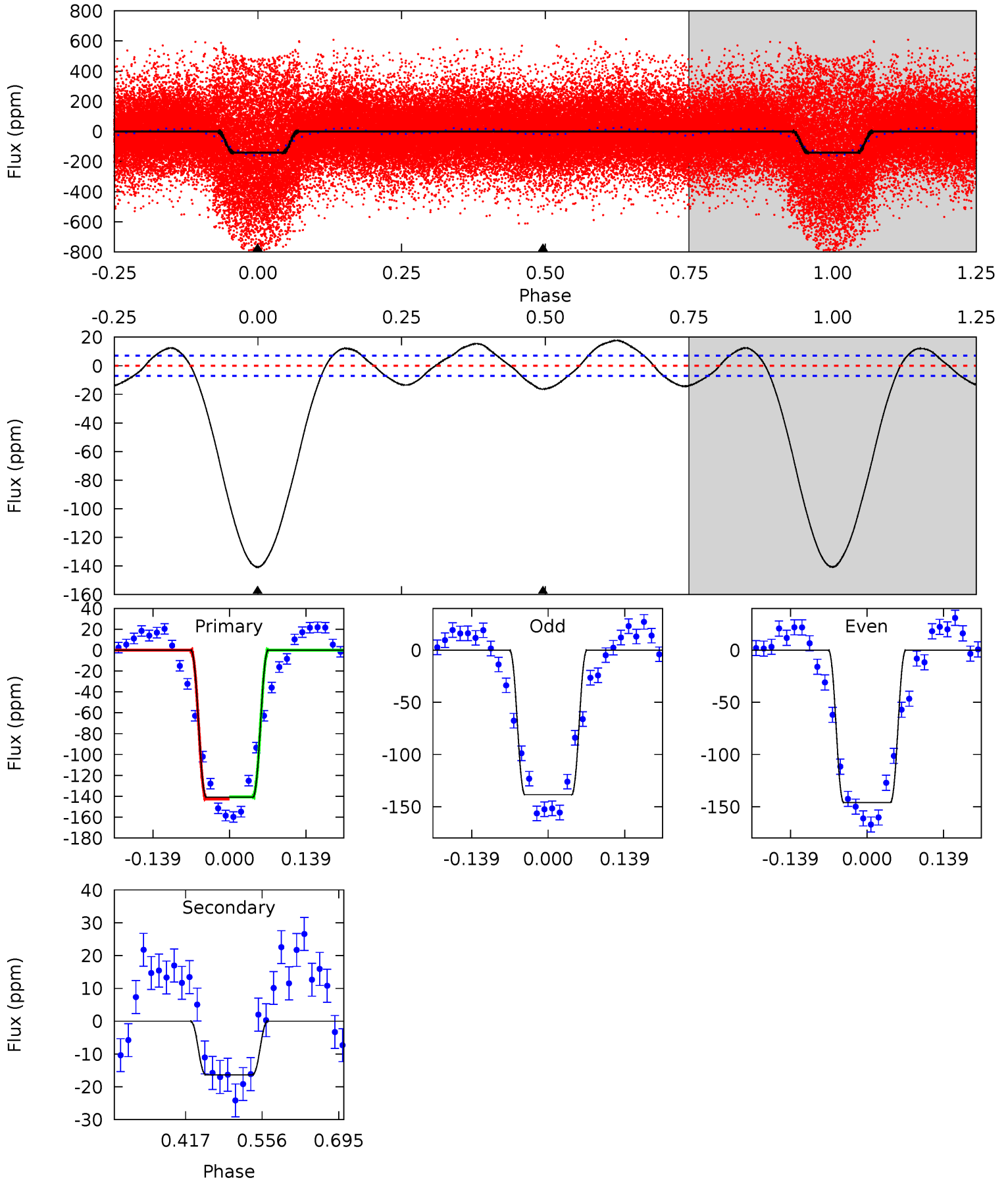
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.75	0.75	0	0	4.43	1.32	0.92	1.75	1.75	0.75	0.75	0.32	-0.45	0.48	1.94



Alt Model-Shift Uniqueness Test

005306787-01, P = 1.232223 Days, E = 130.876057 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
89.0	10.3	0	0	4.50	1.48	5.97	89.0	89.0	10.3	10.3	2.38	0.95	0.11	0.70



Stellar Parameters For KIC 005306787

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6408^{+144}_{-208}	$4.319^{+0.105}_{-0.195}$	$-0.140^{+0.250}_{-0.300}$	$1.219^{+0.400}_{-0.171}$	$1.129^{+0.185}_{-0.135}$	$0.878^{+0.422}_{-0.453}$
	+2%/-3%	+2%/-5%	+179%/-214%	+33%/-14%	+16%/-12%	+48%/-52%
Source	PHO1	KIC0	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 005306787-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-9 ± 12	$1.08^{+0.28}_{-0.24}$	2862^{+217}_{-151}	4150^{+952}_{-7688}	$2.478^{+4.136}_{-3.008}$
Alt.	-16 ± 2	$1.68^{+0.33}_{-0.26}$	2858^{+198}_{-144}	3834^{+249}_{-229}	$1.743^{+0.700}_{-0.521}$

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 $A_{obs} \gg 1.0$

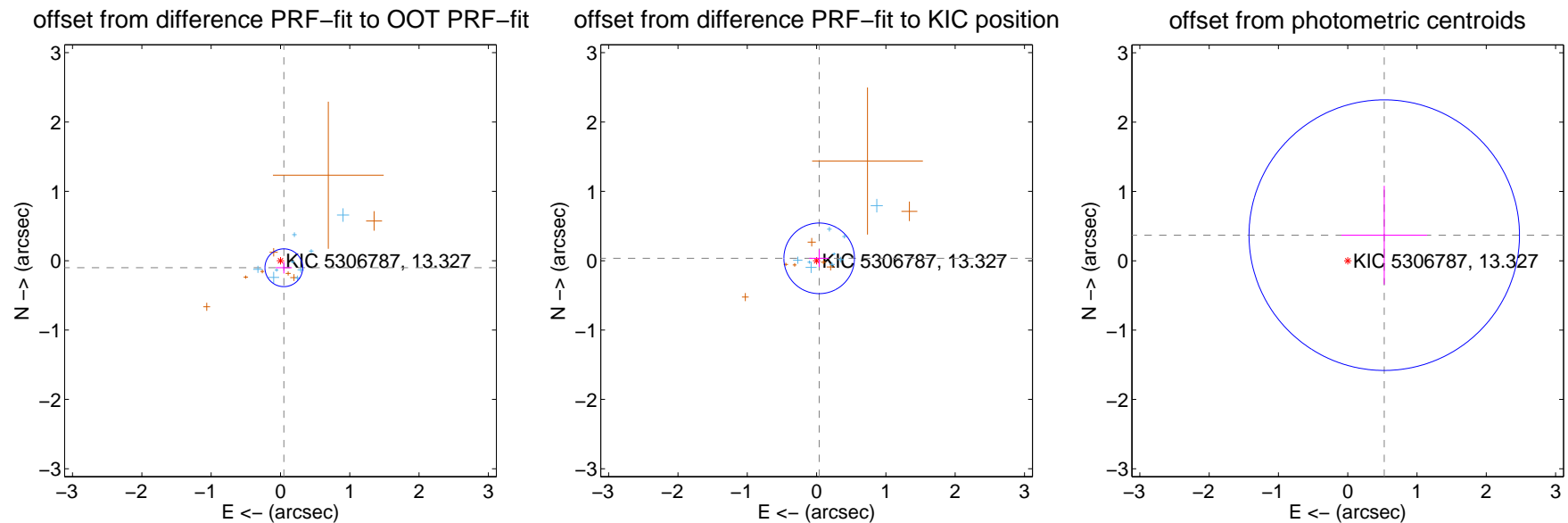
DV Centroid Data

Supplemental centroid analysis for 005306787-01. Kepler magnitude: 13.33. Transit SNR 6.81

There are 9 quarters with good PRF difference image offsets

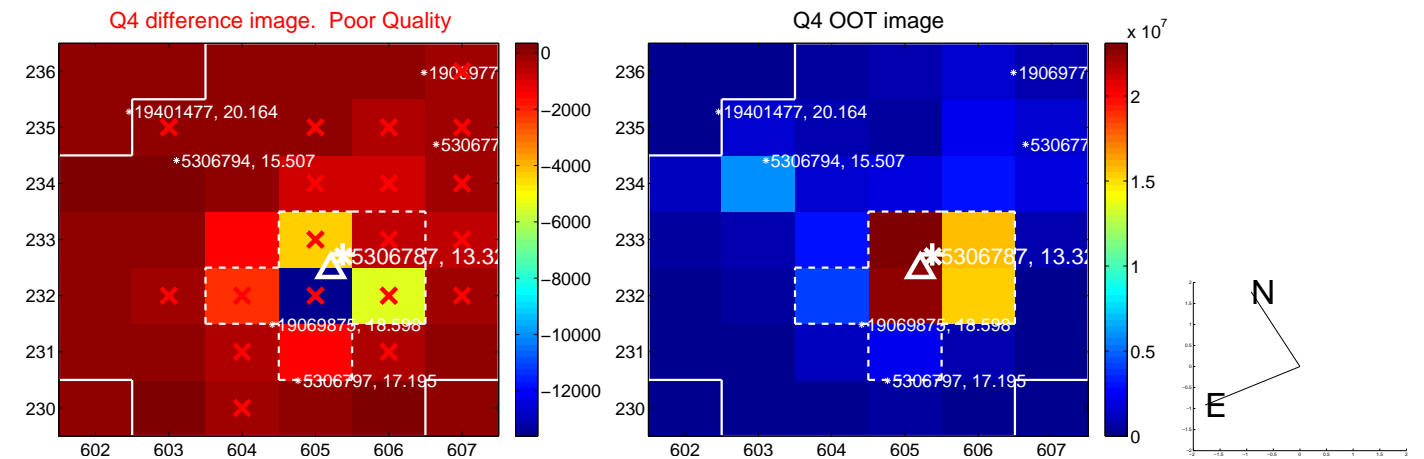
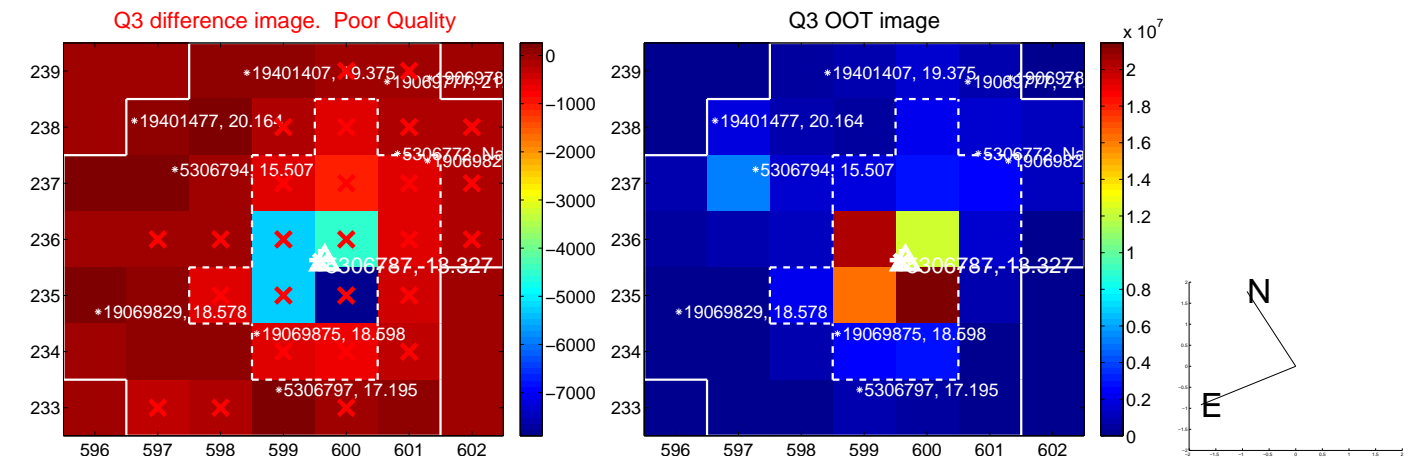
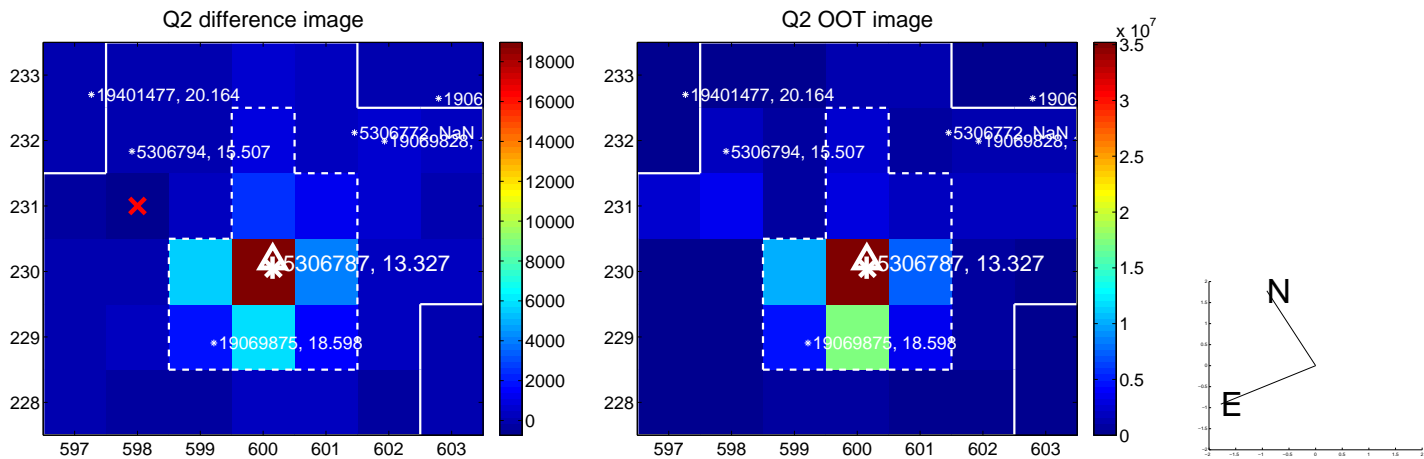
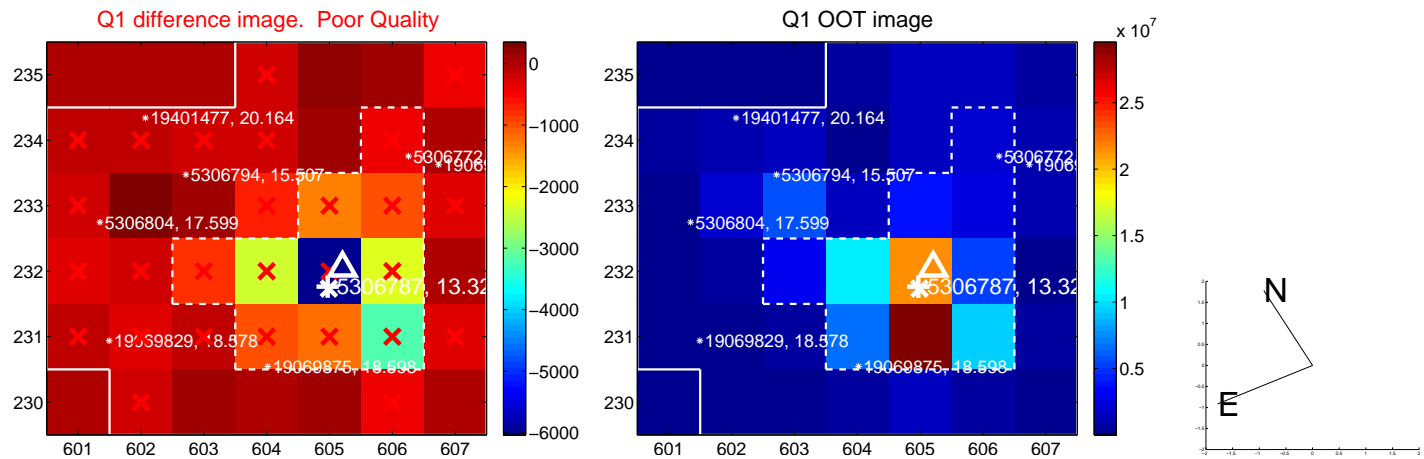
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.113 ± 0.091	1.24	-0.049 ± 0.116	-0.102 ± 0.084
PRF-fit source offset from KIC position	0.051 ± 0.170	0.30	-0.037 ± 0.143	0.034 ± 0.126
photometric centroid source offset	0.64 ± 0.65	0.99	-0.53 ± 0.62	0.37 ± 0.71

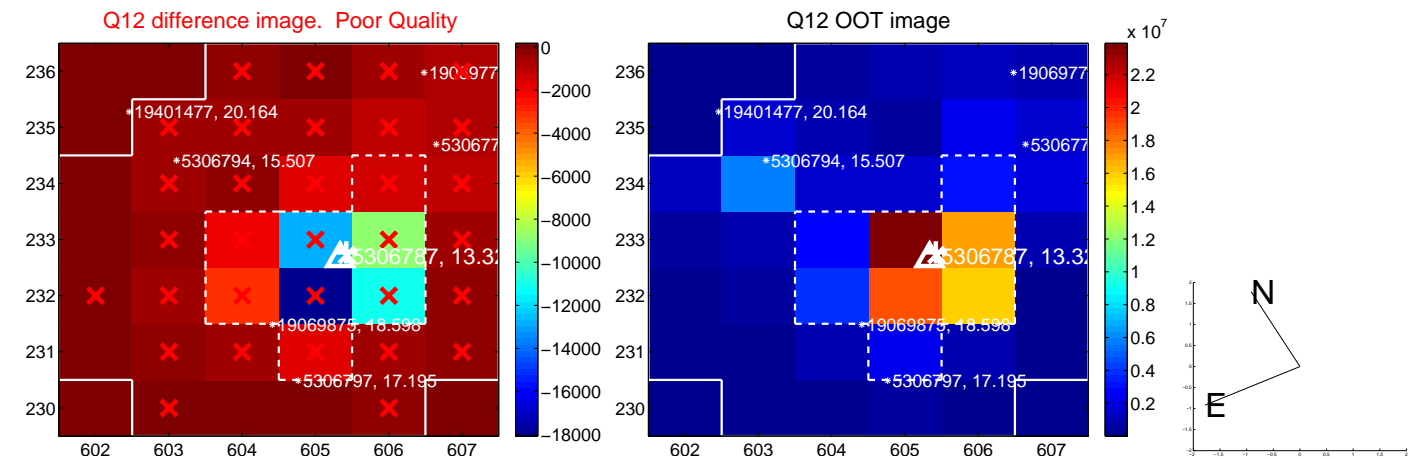
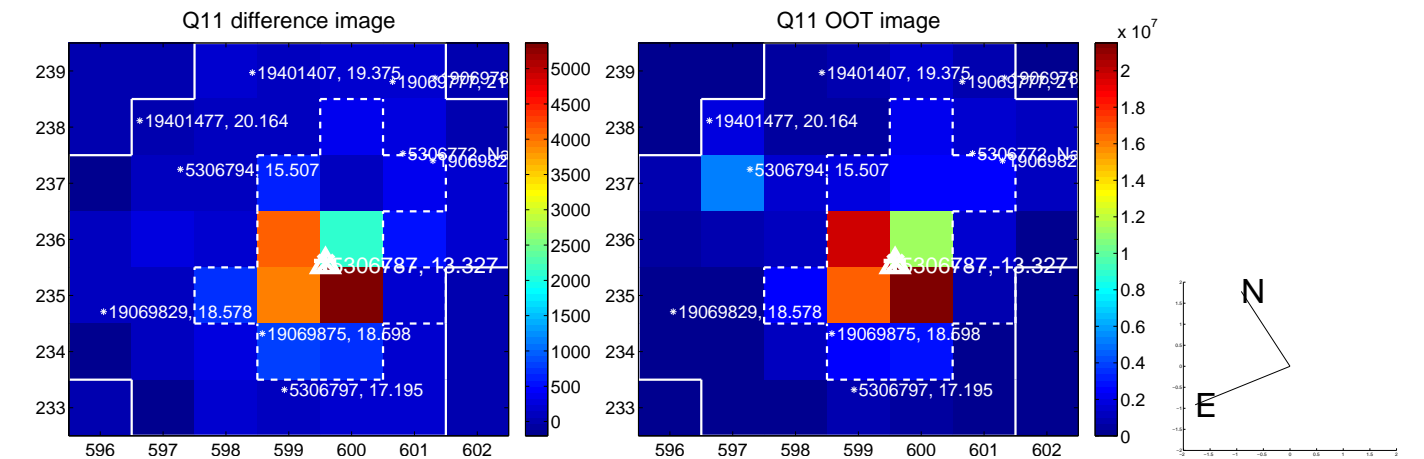
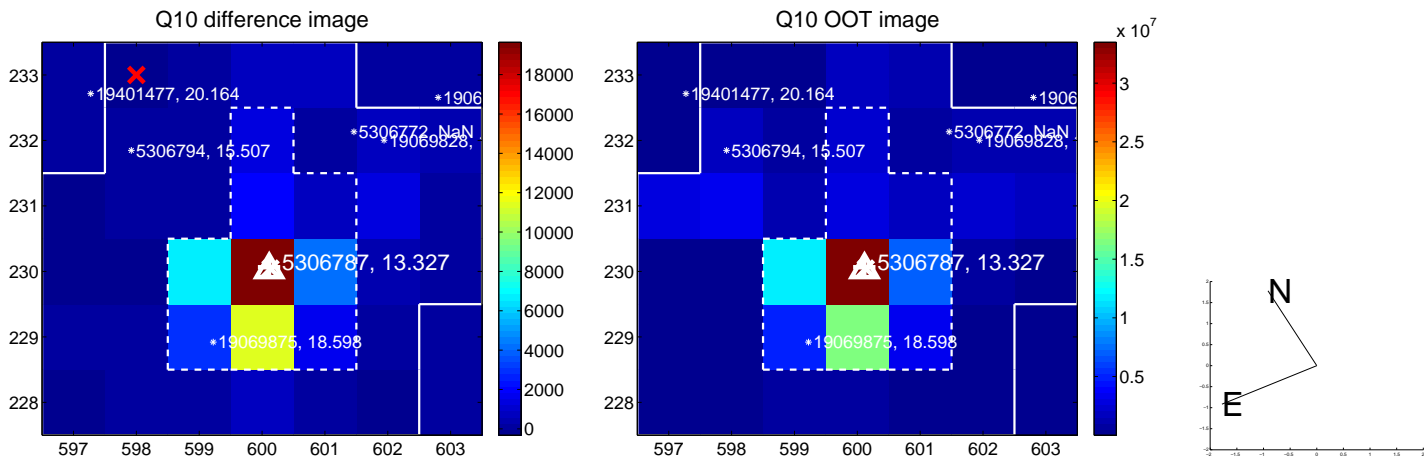
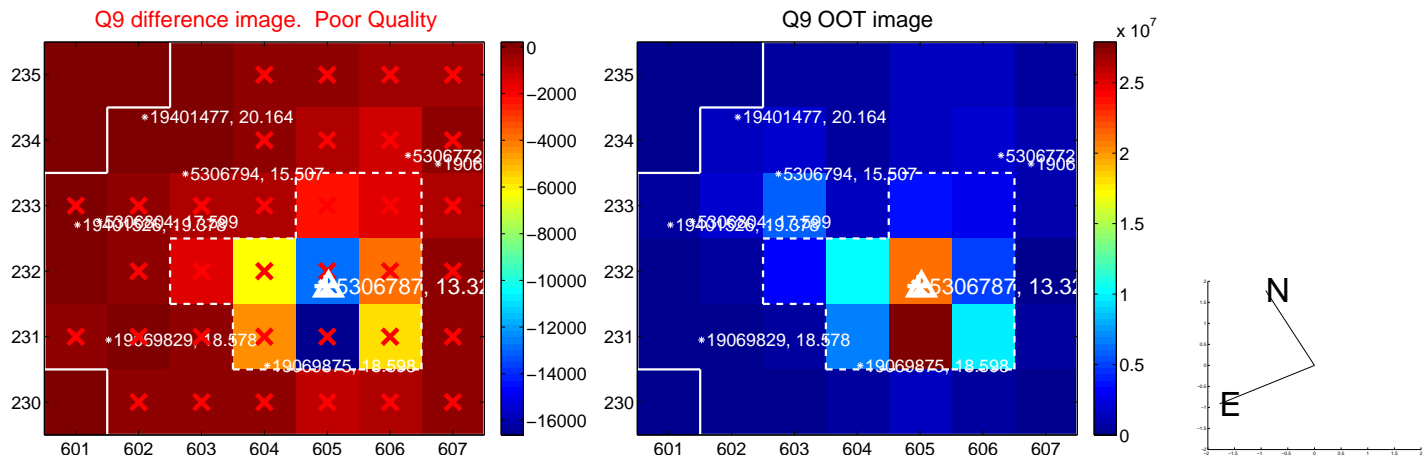


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

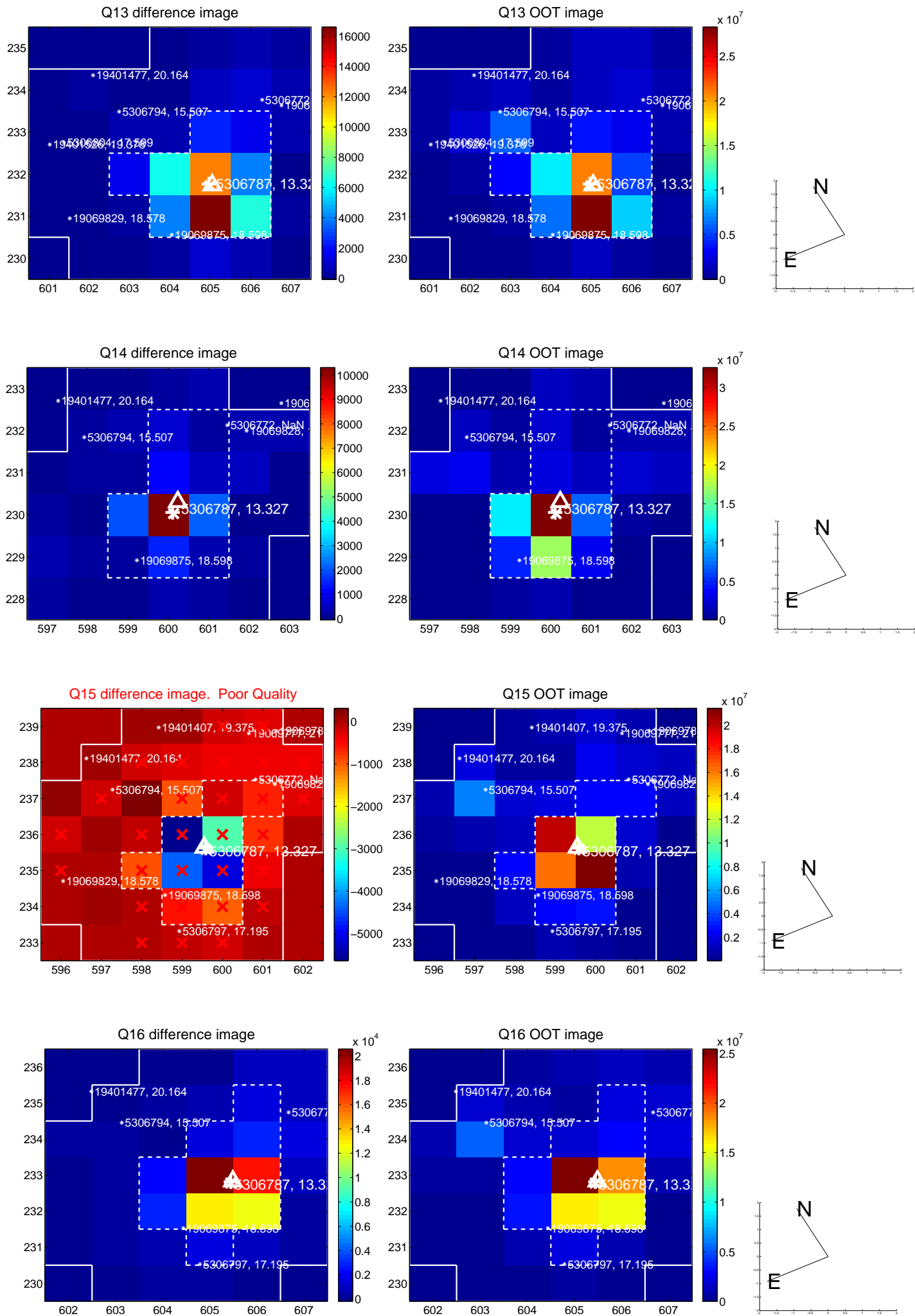
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

