

KIC 005621586

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})
005621586-01	OBS	2415.01	5.254172	133.733305	433.9	3.239	23.0	24.2	0.99	6123	2.42	338.55

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005621586-01	OBS	PC	1.00	0	0	0	0	CENT_KIC_POS

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.

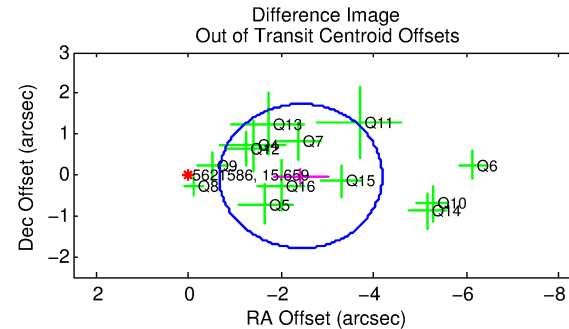
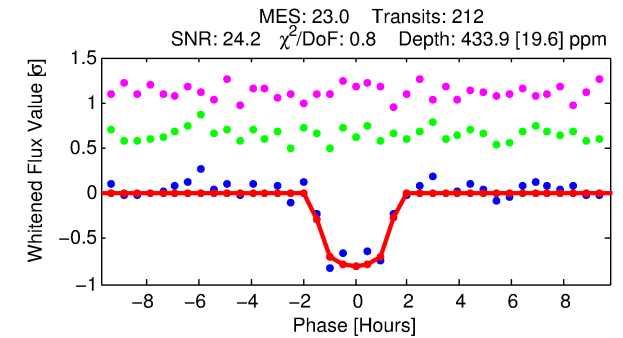
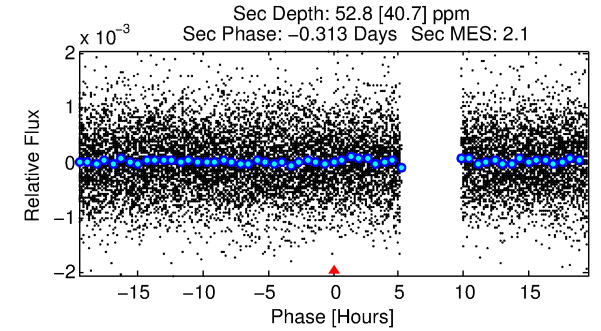
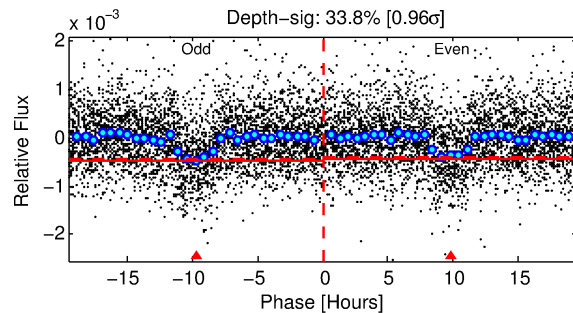
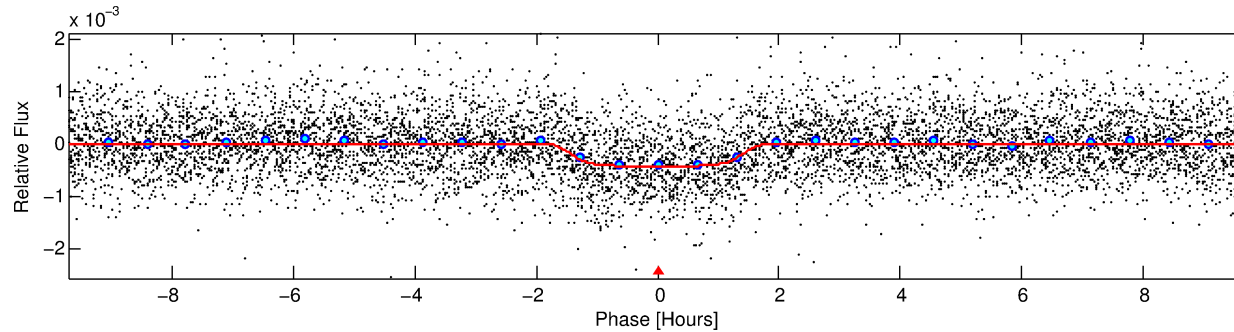
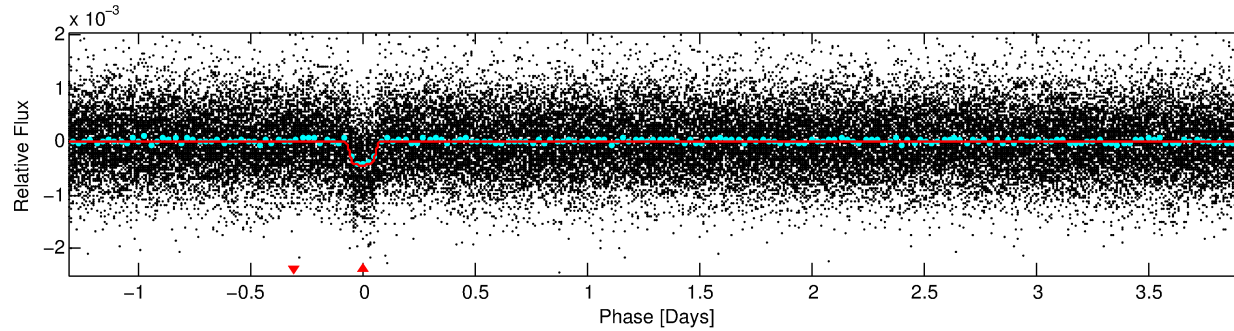
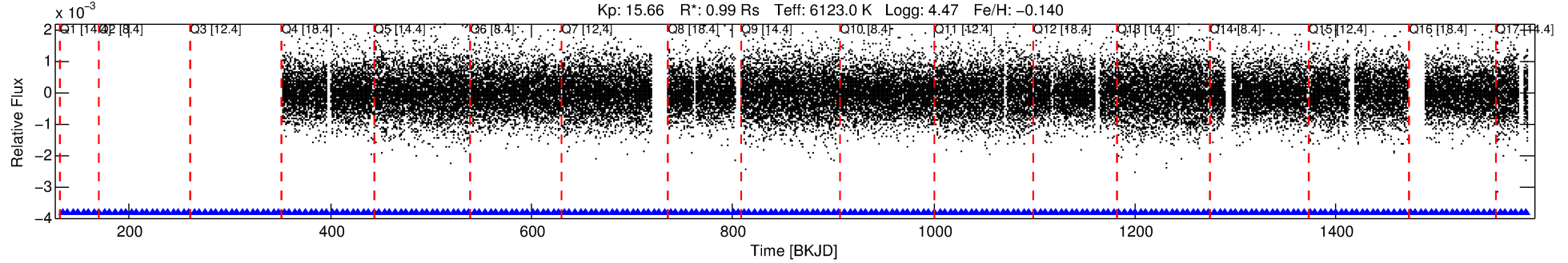
Ephemeris Match Information For 005621586-01

No Significant Match Found

DV One-Page Summary

KIC: 5621586 Candidate: 1 of 1 Period: 5.254 d
KOI: K02415.01 Corr: 0.963

Kp: 15.66 R*: 0.99 Rs Teff: 6123.0 K Logg: 4.47 Fe/H: -0.140



DV Fit Results:

Period = 5.25417 [0.00002] d
Epoch = 133.7333 [0.0027] BKJD
Rp/R* = 0.0224 [0.0029]
a/R* = 6.12 [3.94]
b = 0.90 [0.14]
Seff = 338.55 [143.14]
Teq = 1094 [116] K
Rp = 2.42 [0.84] Re
a = 0.0602 [0.0163] AU
Ag = 18.00 [16.27] [1.05σ]
Teffp = 3483 [720] K [3.28σ]

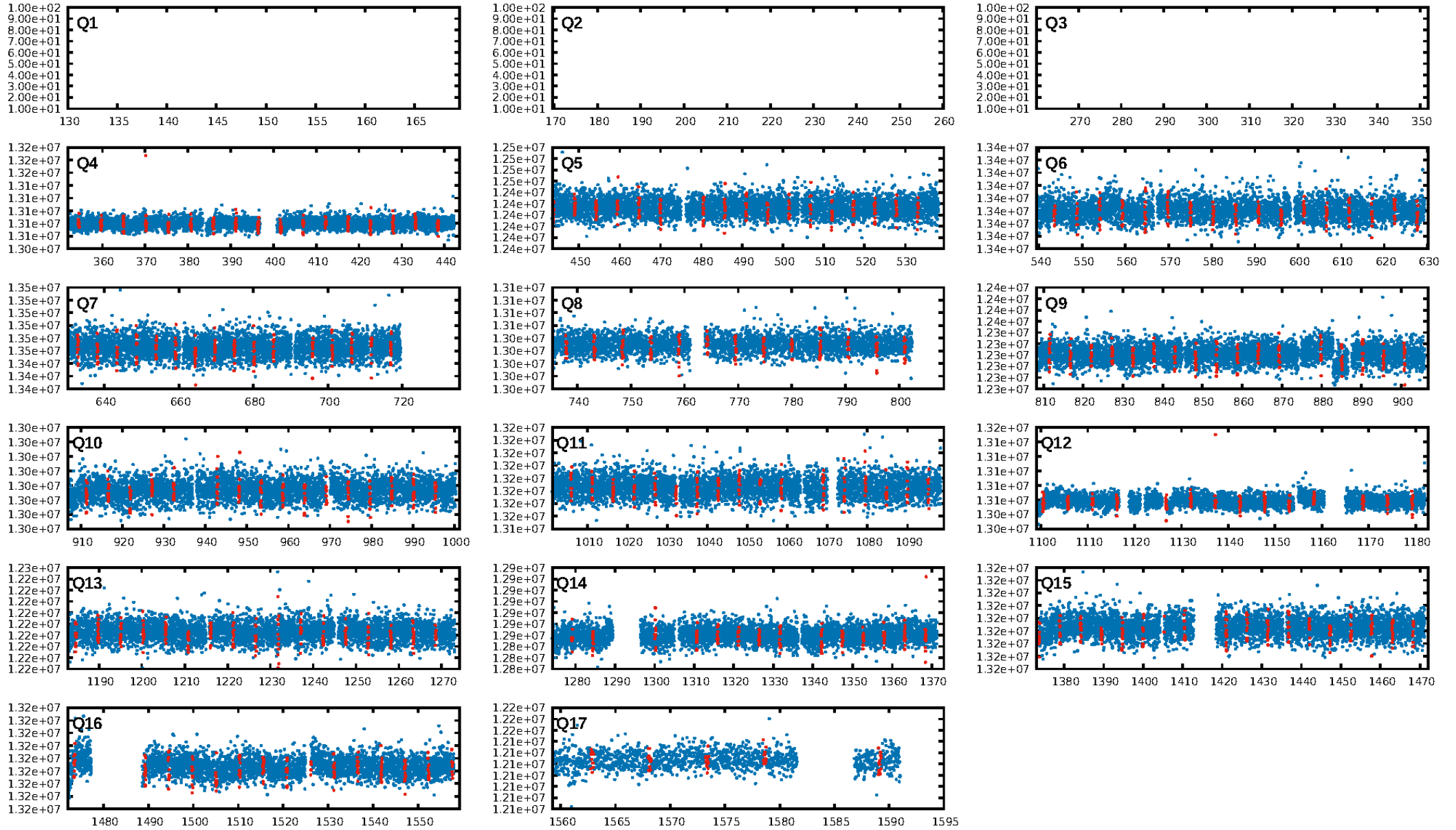
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 5.60e-114
RollingBand-fgt: 1.00 [207/207]
GhostDiagnostic-chr: 7.48
Centroid-sig: 0.0%
Centroid-so: 1.511 arcsec [3.82σ]
OotOffset-rm: 2.421 arcsec [4.12σ]
KicOffset-rm: 0.095 arcsec [0.48σ]
OotOffset-st: 3/3/4/3 [13]
KicOffset-st: 3/3/4/3 [13]
DiffImageQuality-fgm: 1.00 [13/13]
DiffImageOverlap-fno: 1.00 [14/14]

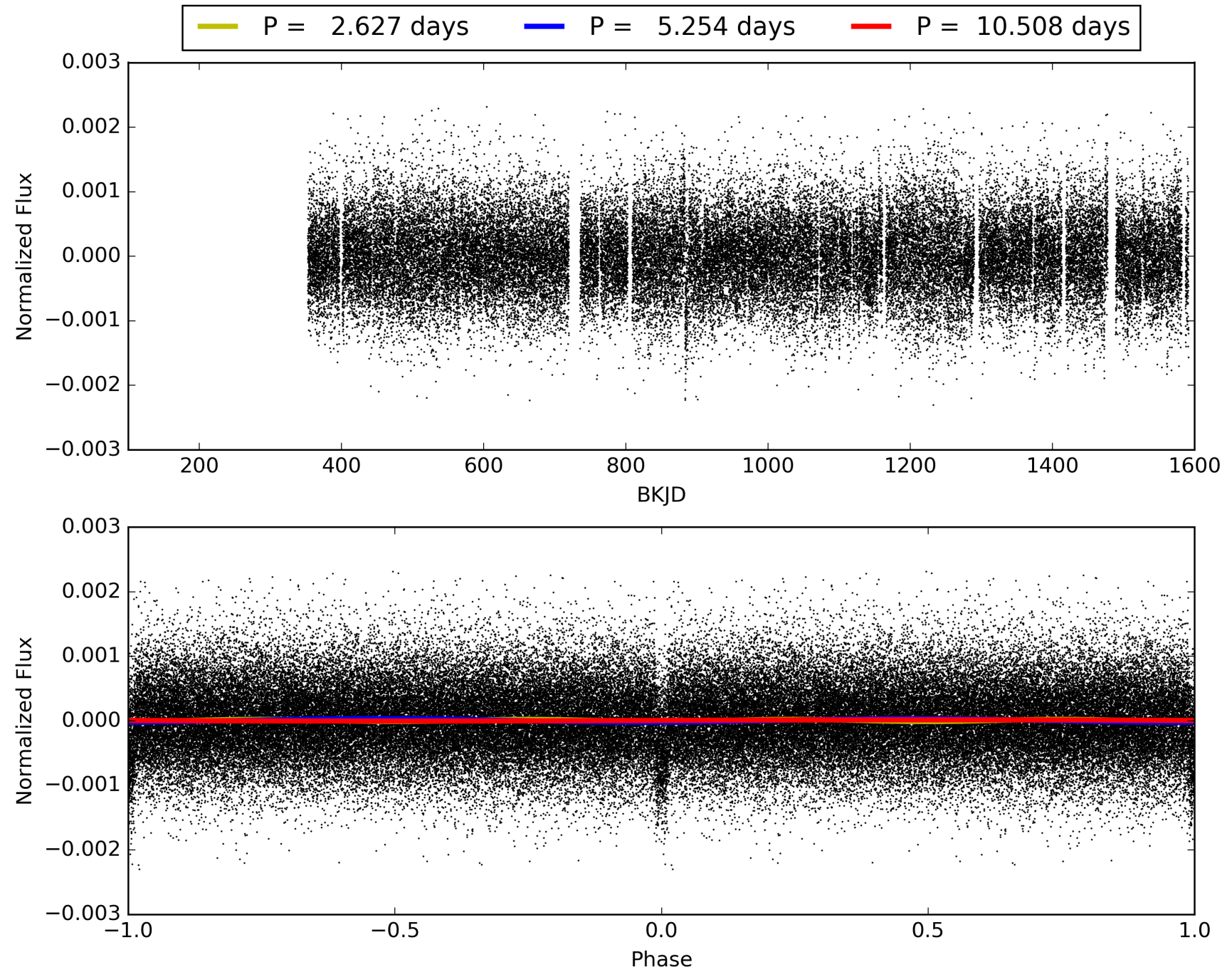
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:50:58 Z

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

TCE 005621586-01, PDC Light Curves

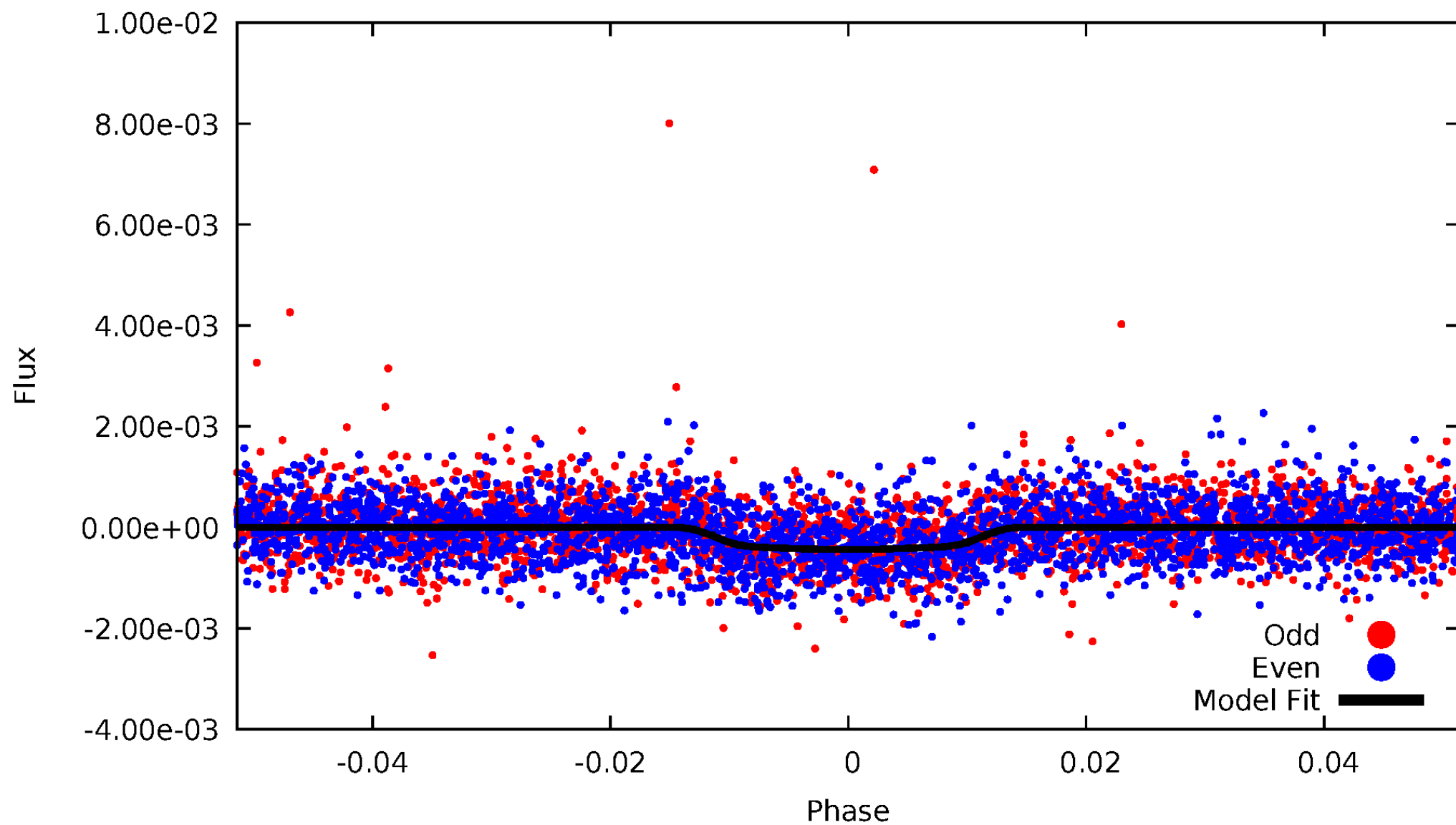


TCE 005621586-01



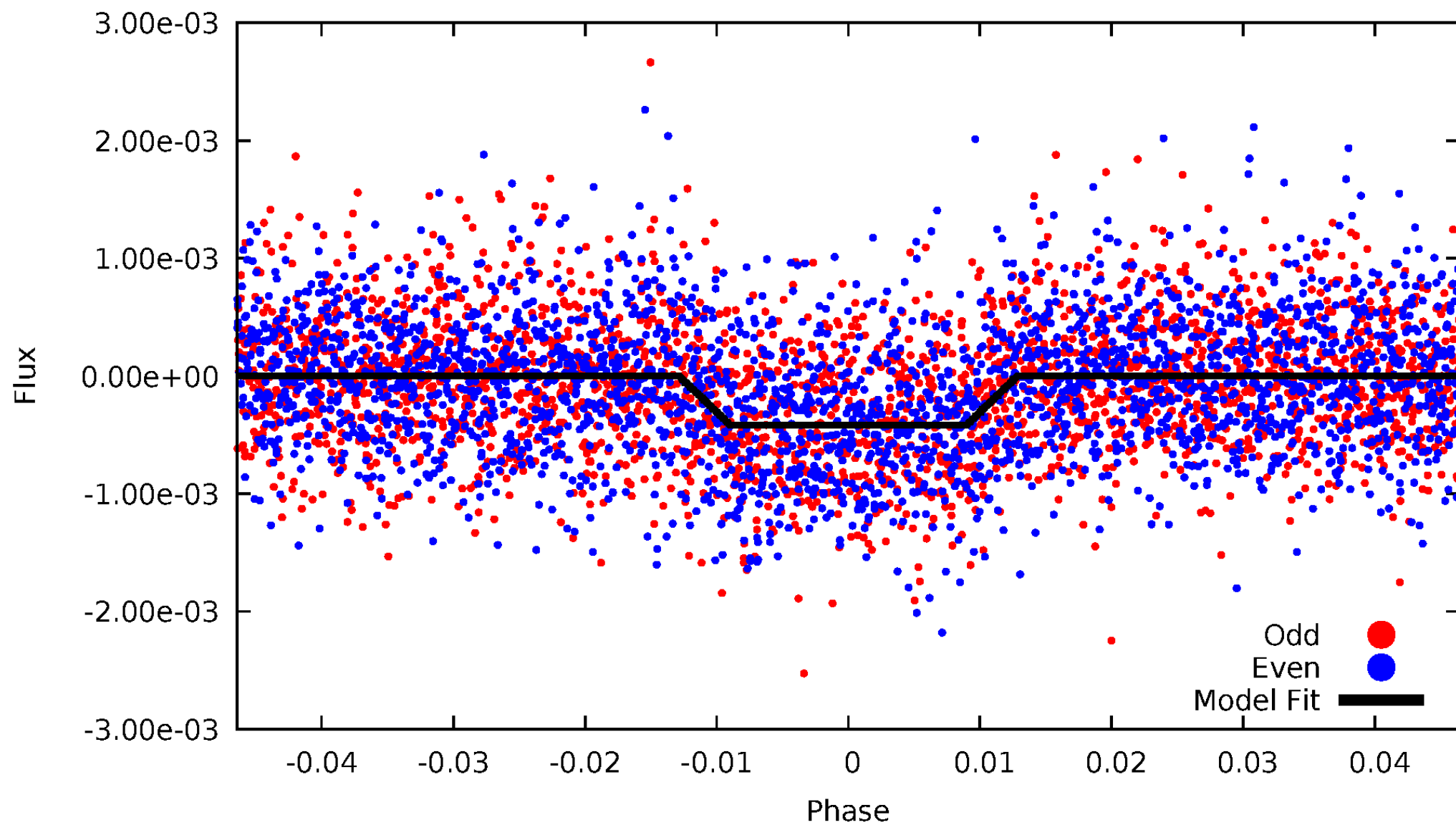
DV Odd/Even

TCE 005621586-01



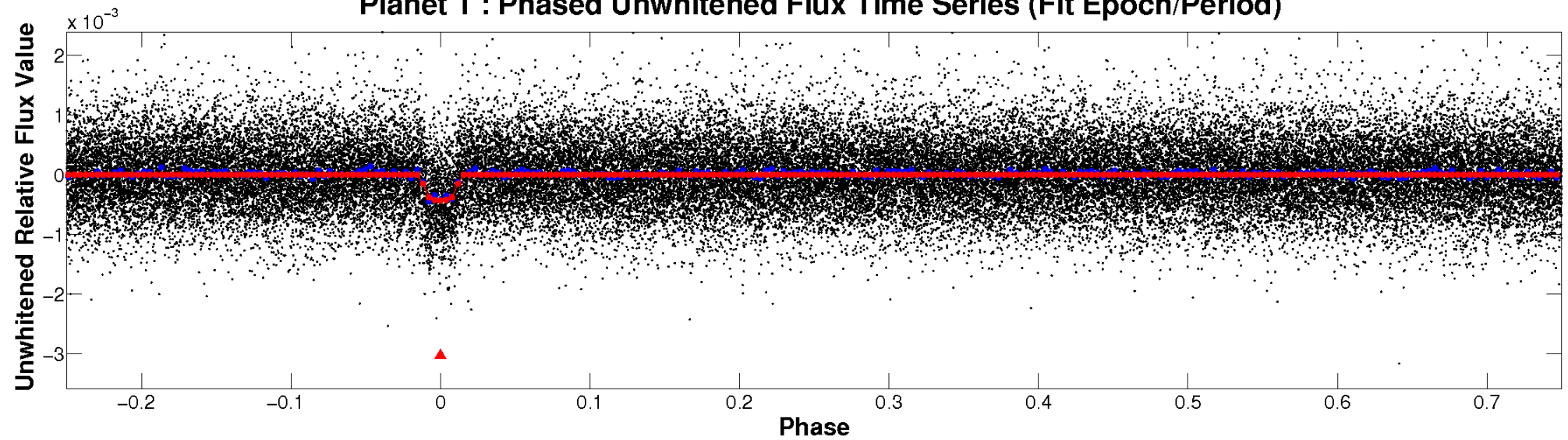
ALT Odd/Even

TCE 005621586-01

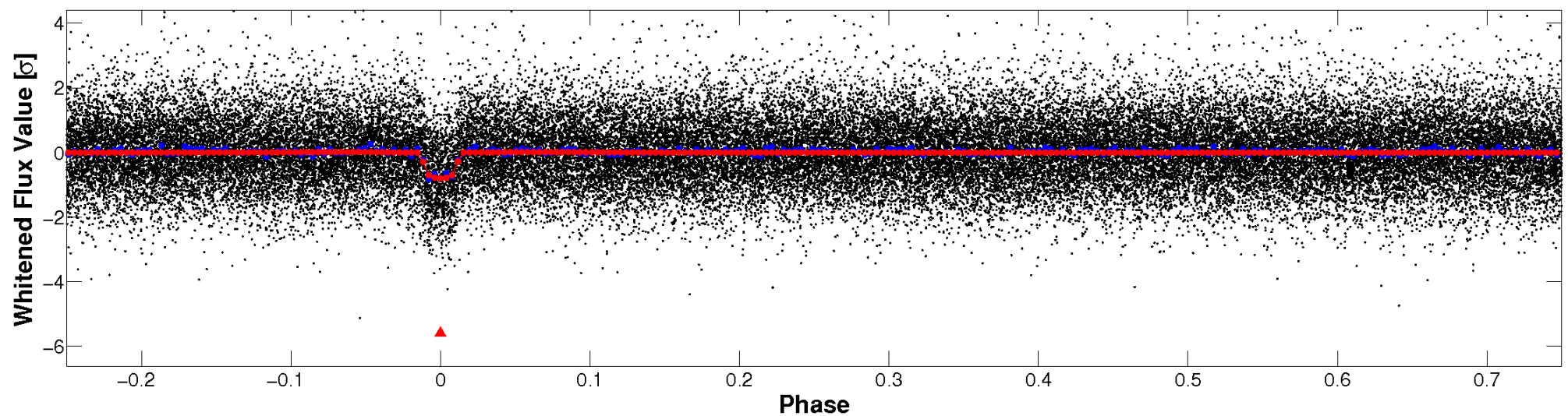


Non-Whitened Vs. Whitened Light Curve

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

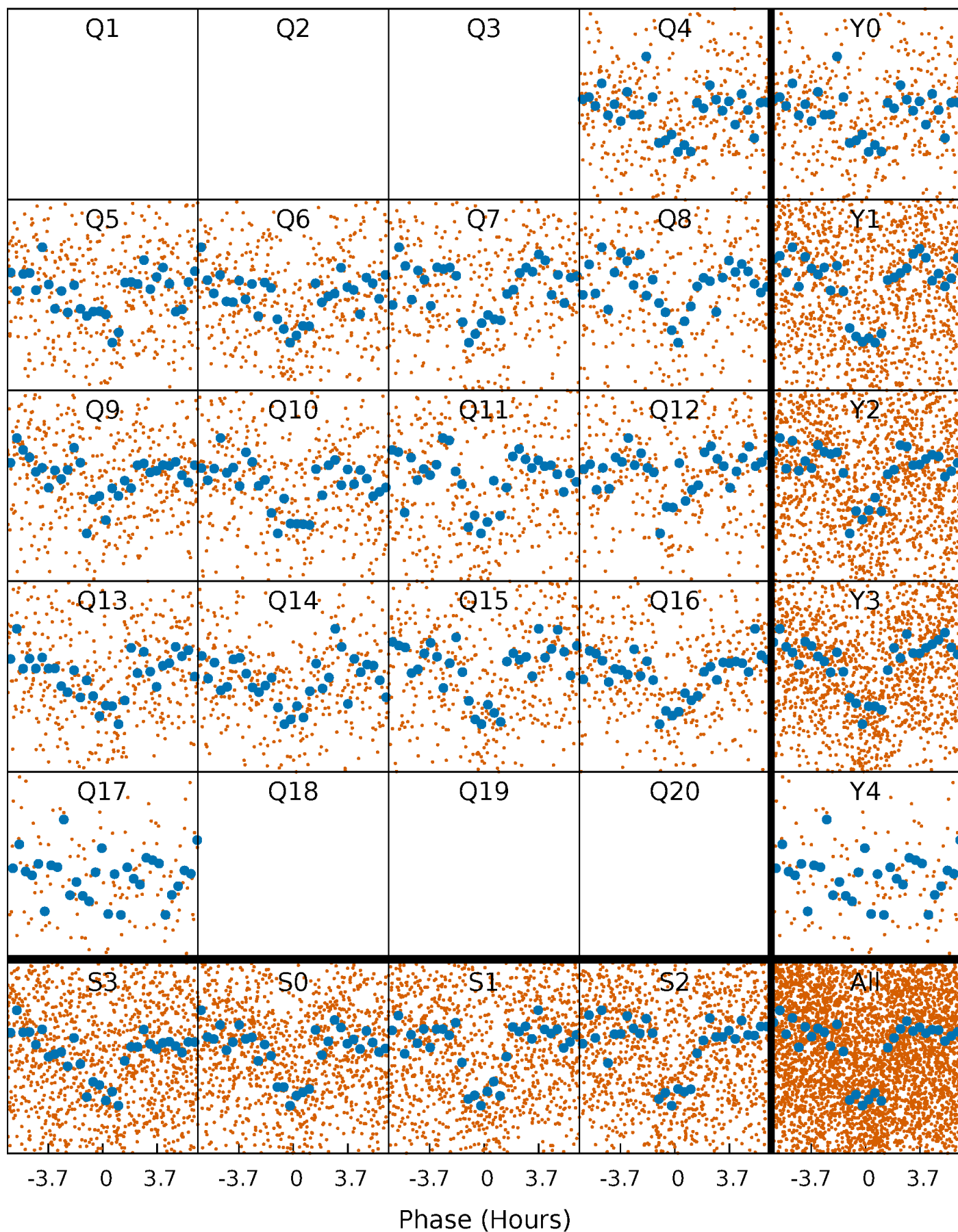


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



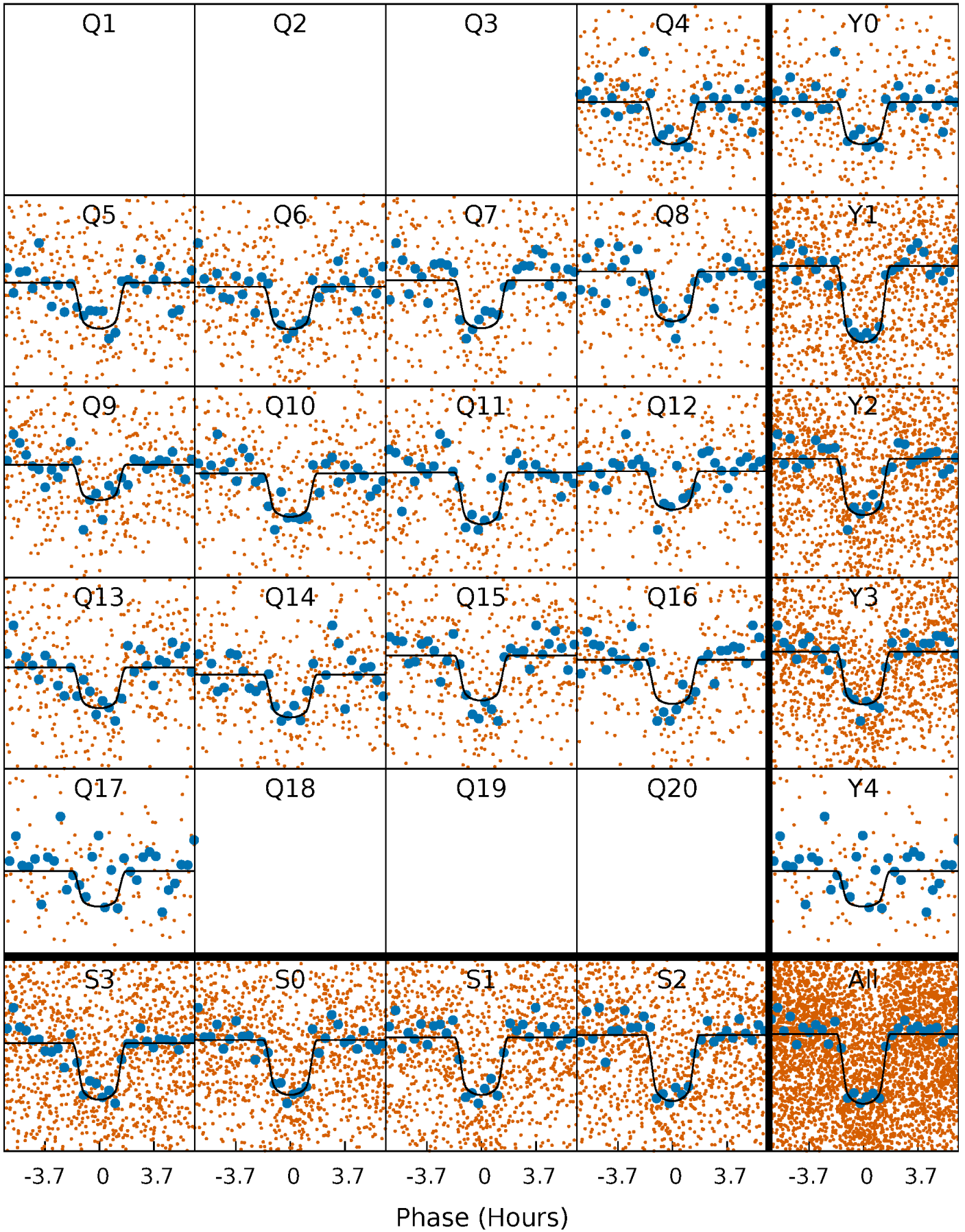
PDC Quarter-Phased Transit Curves

TCE 005621586-01 P= 5.254172 Days $T_0=133.733305$ (BKJD)



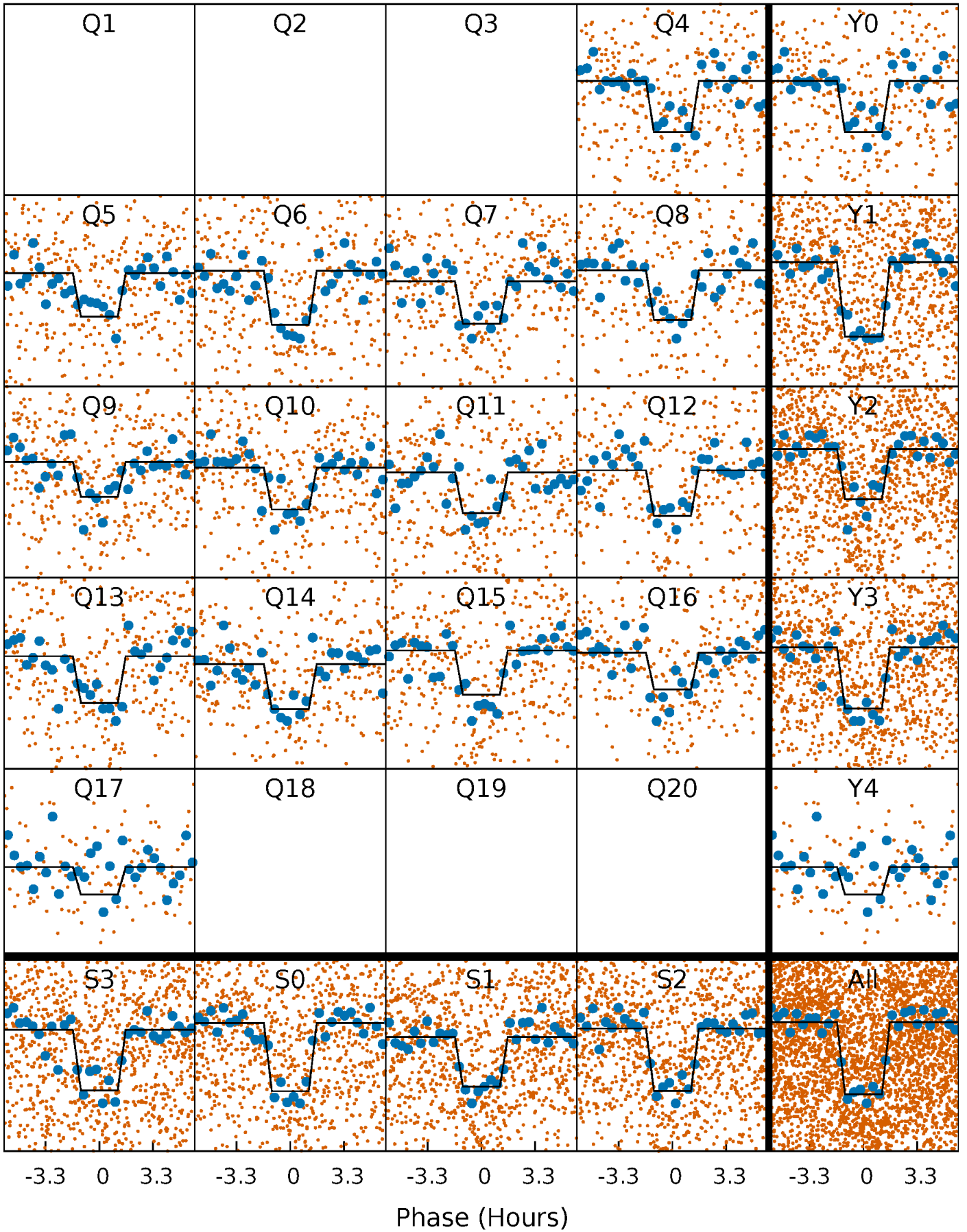
DV Quarter-Phased Transit Curves

TCE 005621586-01 P= 5.254172 Days $T_0=133.733305$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

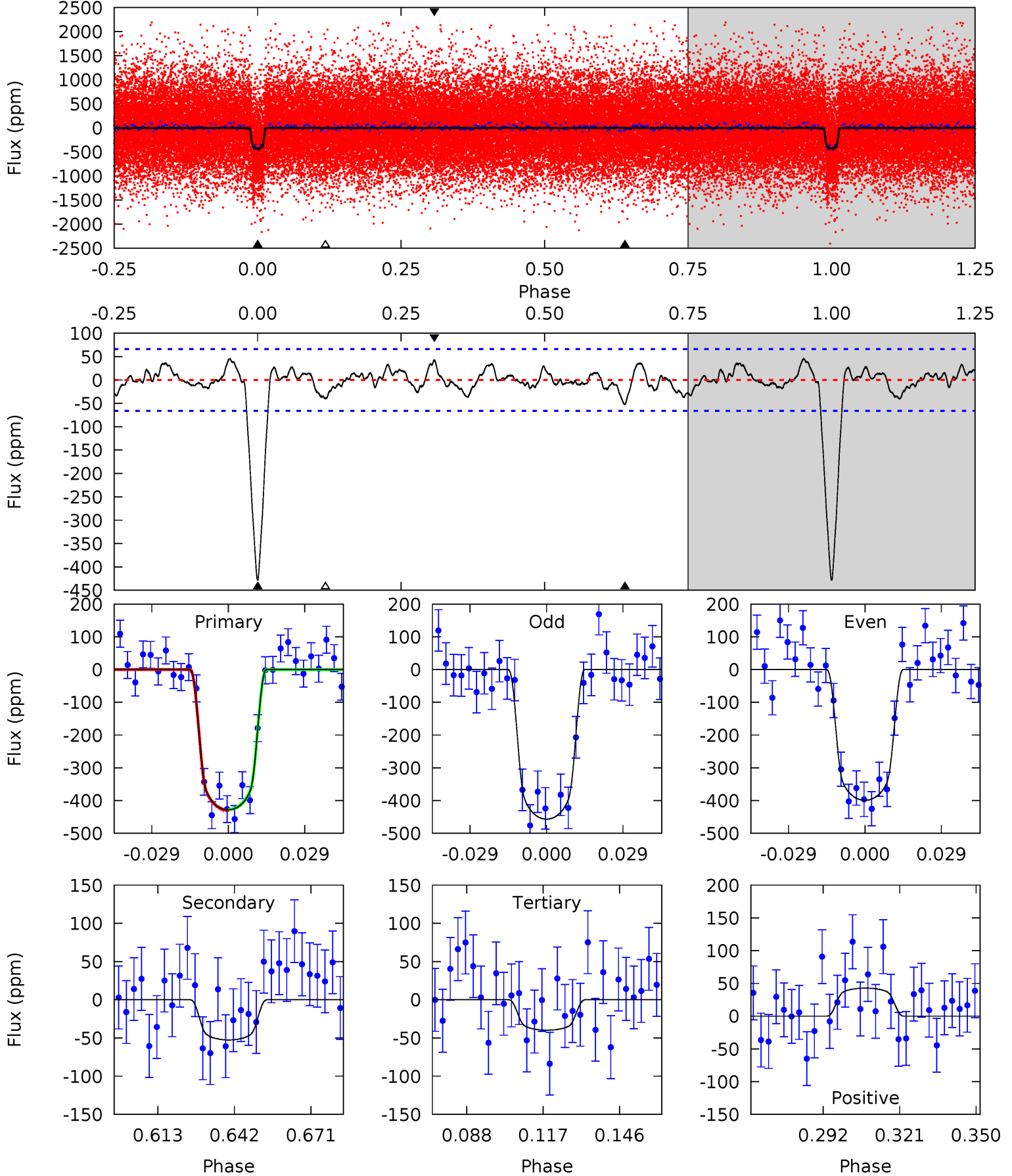
TCE 005621586-01 P= 5.254227 Days $T_0=133.724954$ (BKJD)



DV Model-Shift Uniqueness Test

005621586-01, P = 5.254172 Days, E = 133.733305 Days

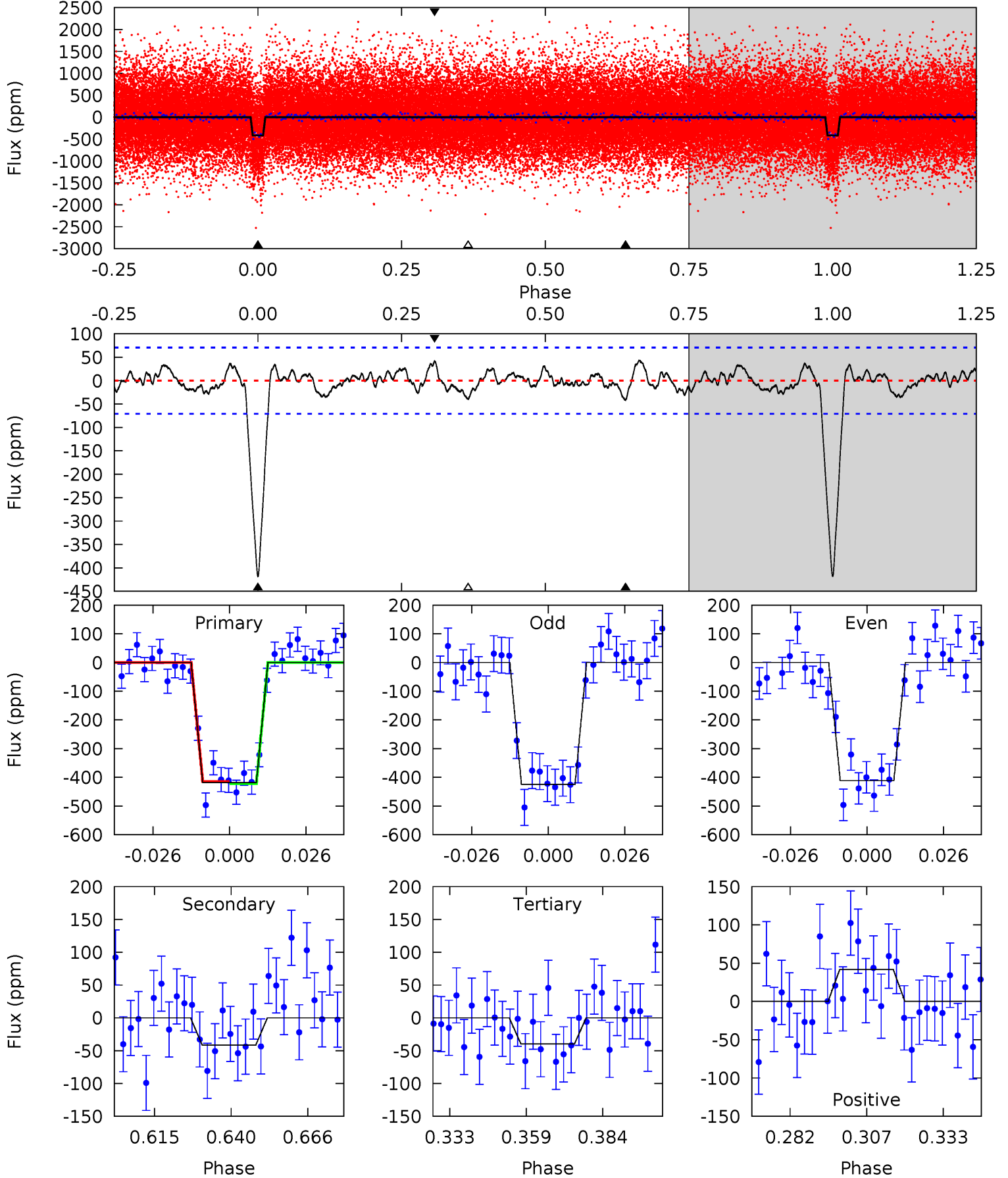
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
31.2	3.83	2.90	3.11	4.82	2.18	1.25	28.3	28.1	0.93	0.72	2.10	0.96	0.10	0.09



Alt Model-Shift Uniqueness Test

005621586-01, P = 5.254227 Days, E = 133.724954 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
28.6	2.83	2.71	2.85	4.84	2.23	1.11	25.9	25.8	0.12	-0.02	0.45	0.98	0.09	0.25



Stellar Parameters For KIC 005621586

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6123^{+190}_{-232}	$4.472^{+0.054}_{-0.216}$	$-0.140^{+0.250}_{-0.350}$	$0.987^{+0.317}_{-0.106}$	$1.053^{+0.140}_{-0.140}$	$1.544^{+0.433}_{-0.809}$
	+3%/-4%	+1%/-5%	+179%/-250%	+32%/-11%	+13%/-13%	+28%/-52%
Source	KIC0	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 005621586-01 / KOI 2415.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-53 ± 14	$2.53^{+0.51}_{-0.40}$	1562^{+118}_{-87}	3816^{+263}_{-264}	15^{+8}_{-5}
Alt.	-41 ± 15	$2.30^{+0.46}_{-0.41}$	1558^{+111}_{-81}	3776^{+311}_{-327}	15^{+9}_{-7}

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 $A_{obs} \gg 1.0$

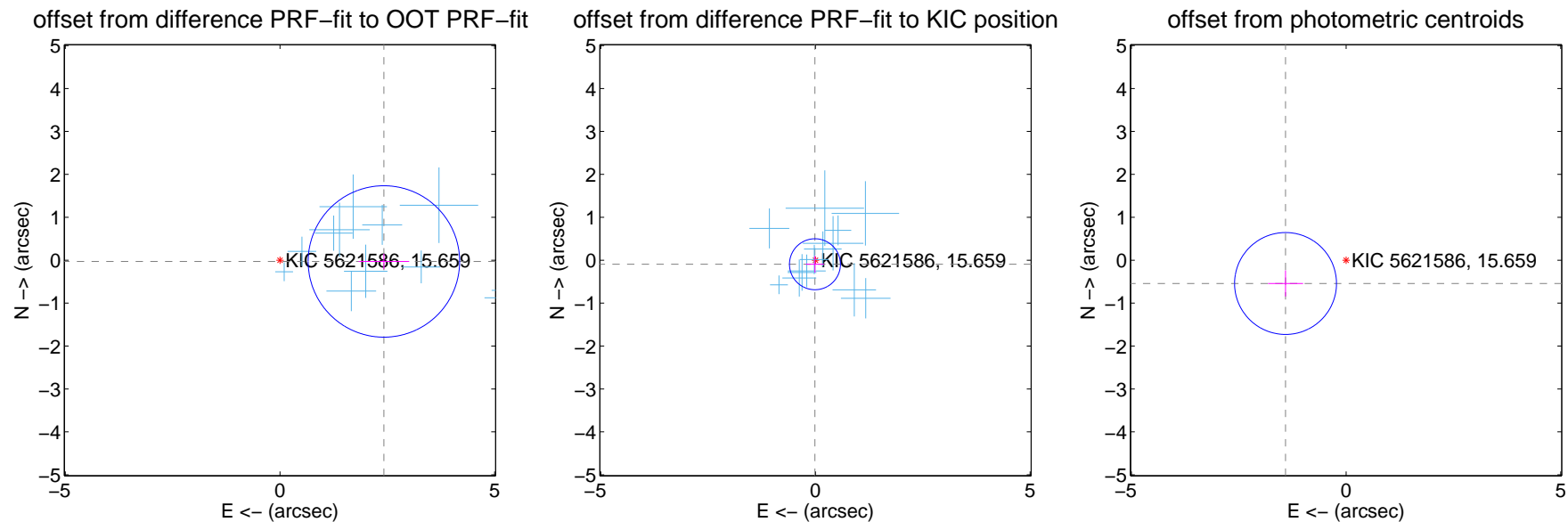
DV Centroid Data

Supplemental centroid analysis for 005621586-01. Kepler magnitude: 15.66. Transit SNR 24.22

There are 13 quarters with good PRF difference image offsets

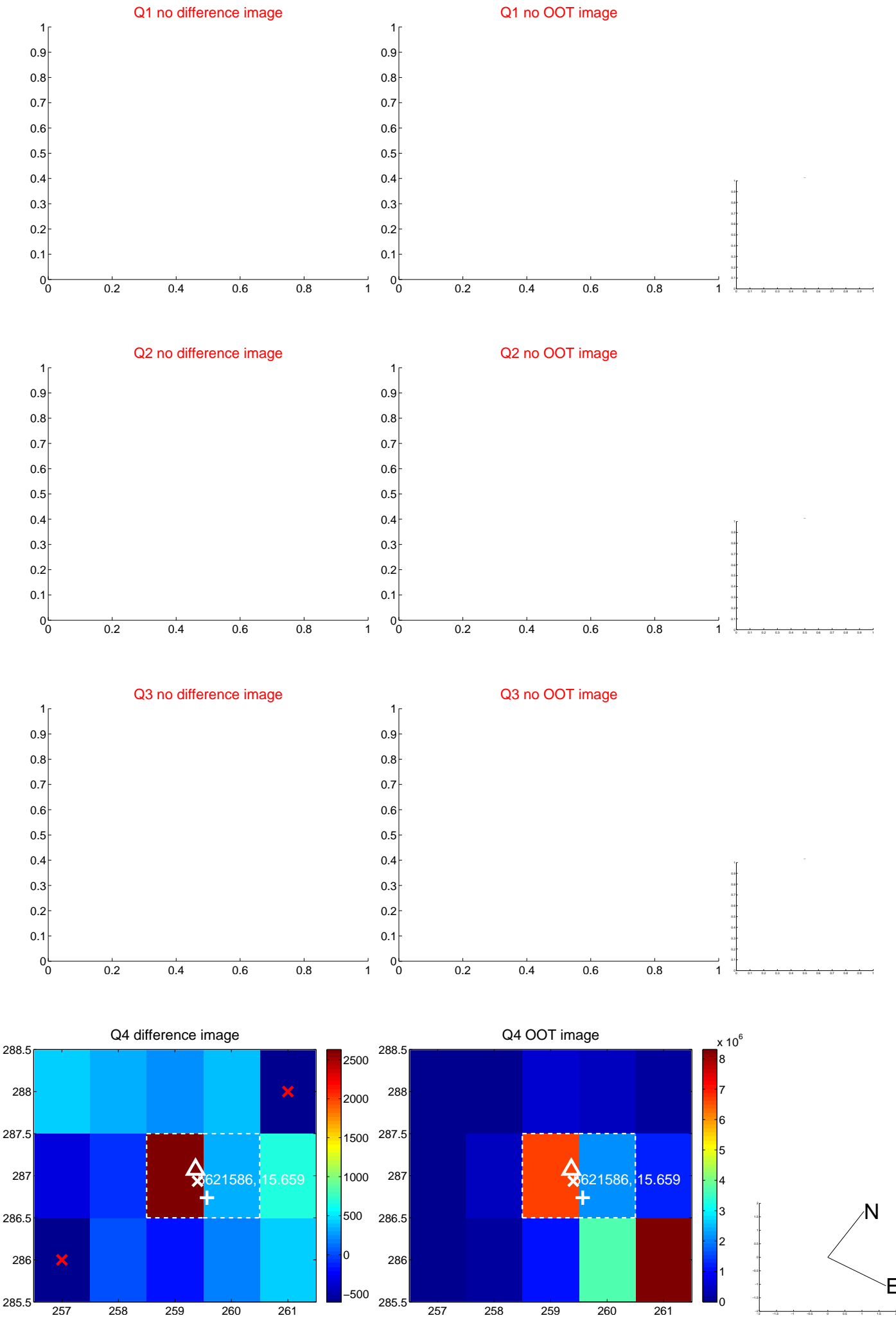
The direct PRF centroid is offset from the target star catalog position by about 1.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.421 ± 0.588	4.12	-2.421 ± 0.588	-0.029 ± 0.181
PRF-fit source offset from KIC position	0.095 ± 0.198	0.48	0.012 ± 0.212	-0.094 ± 0.196
photometric centroid source offset	1.51 ± 0.40	3.82	1.41 ± 0.41	-0.54 ± 0.30

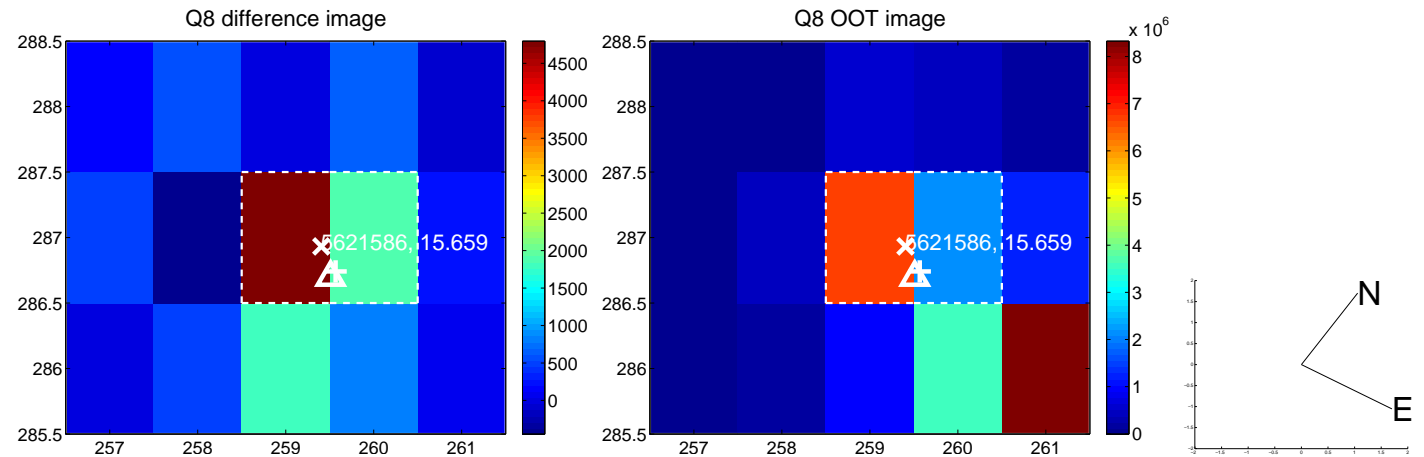
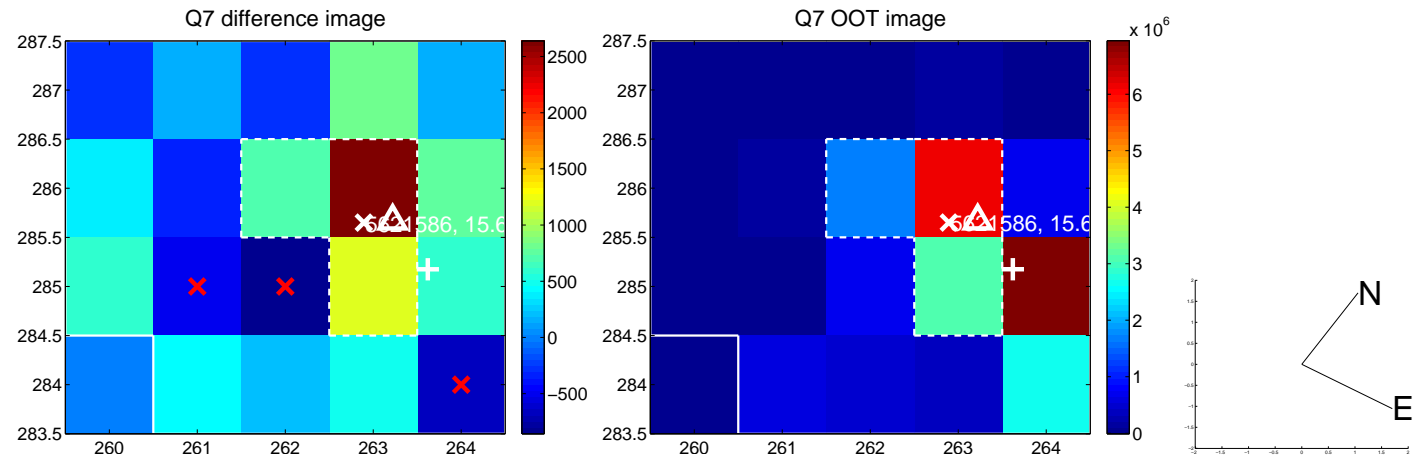
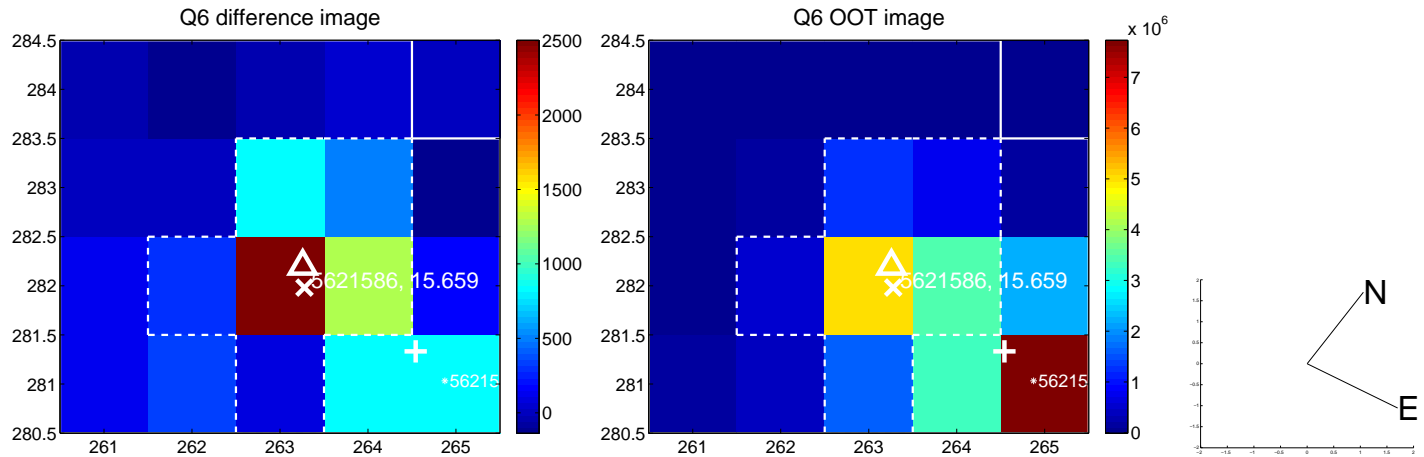
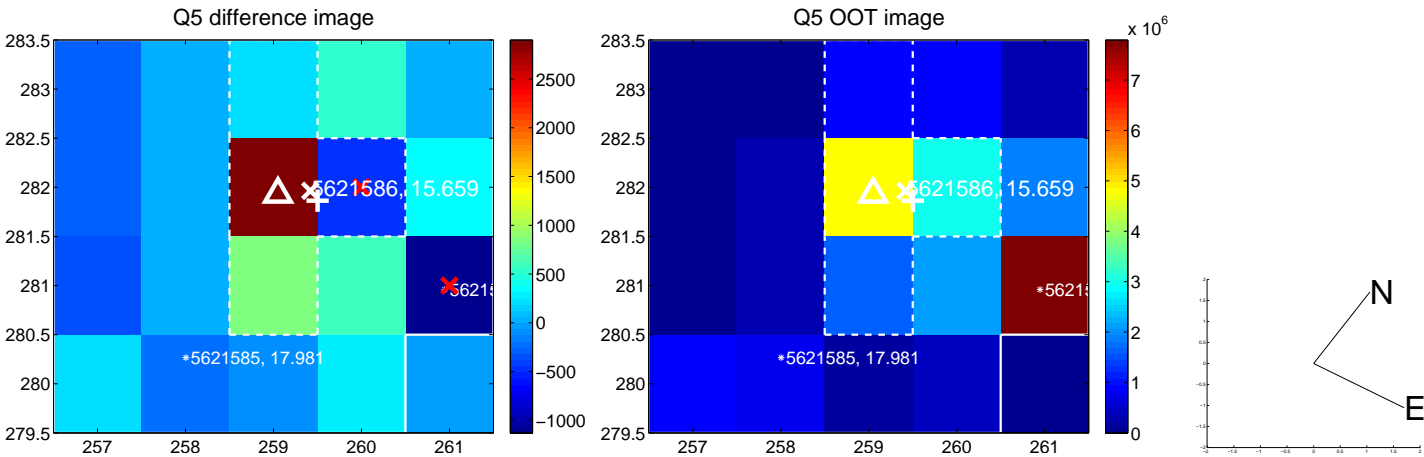


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

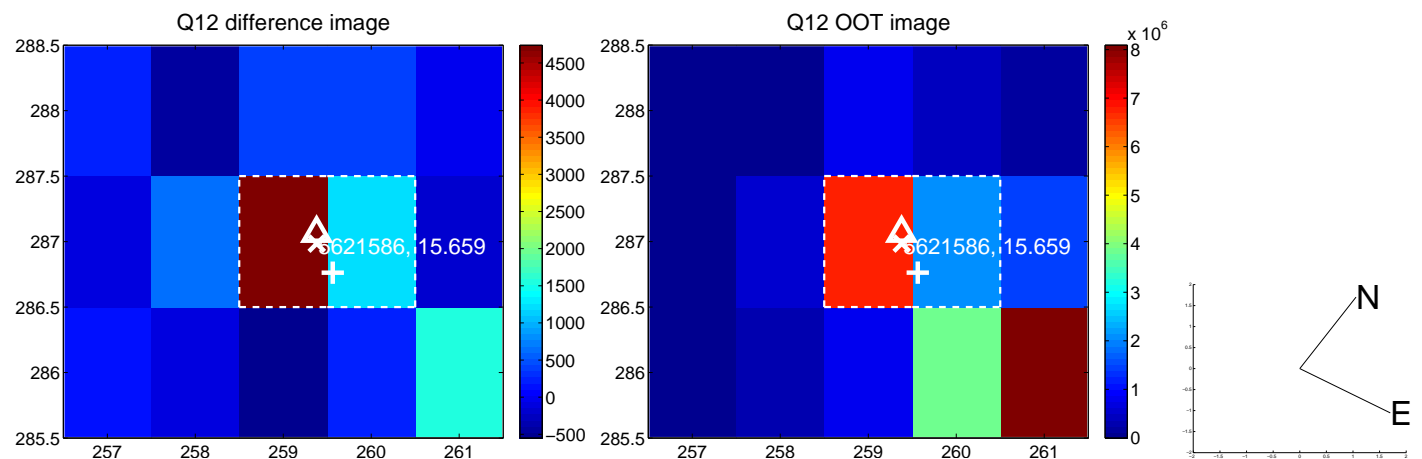
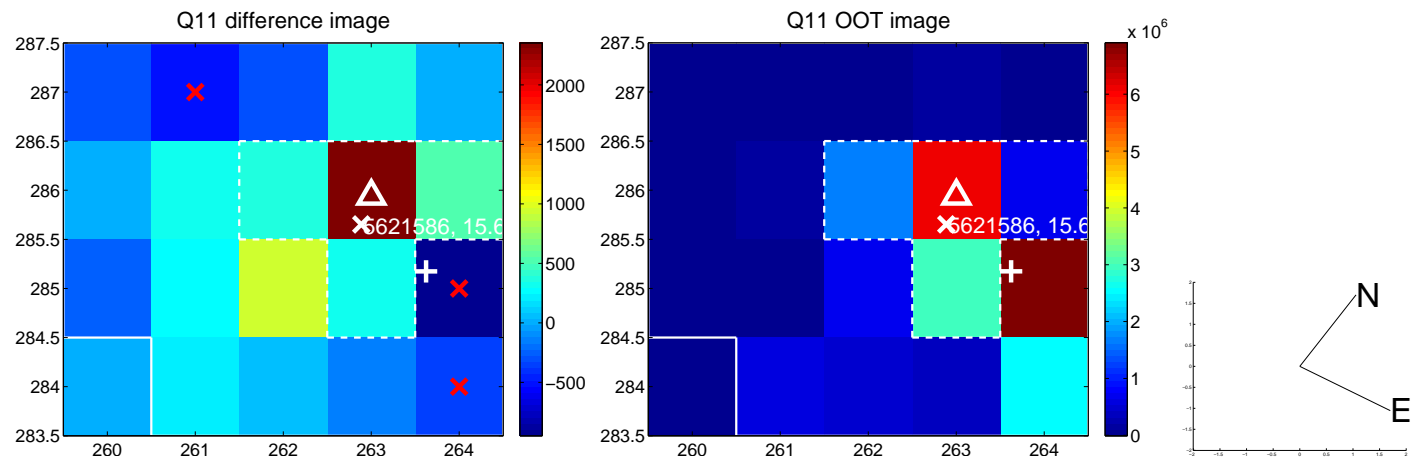
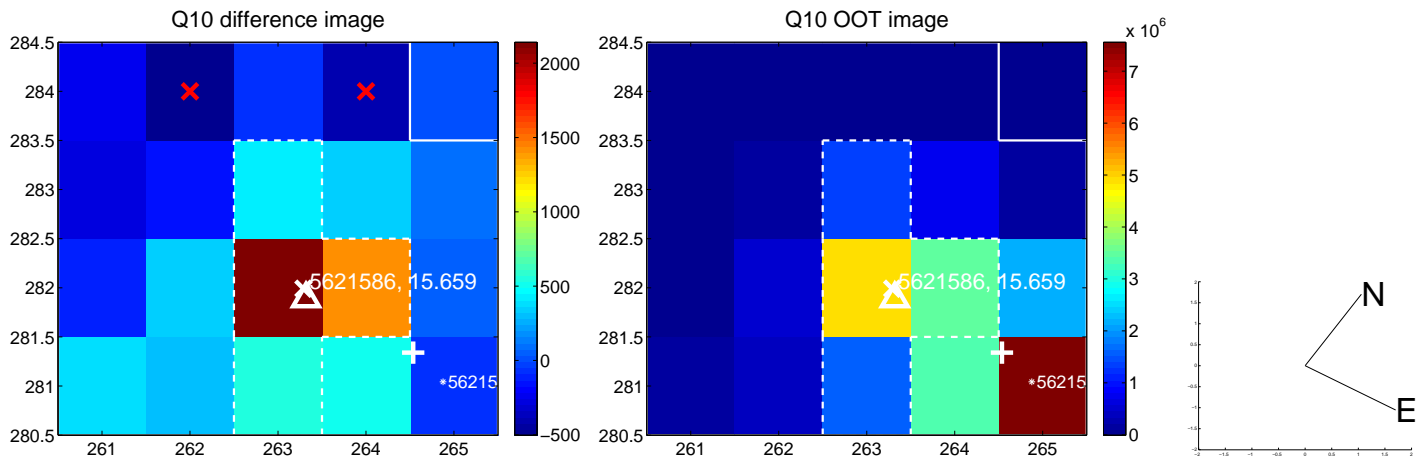
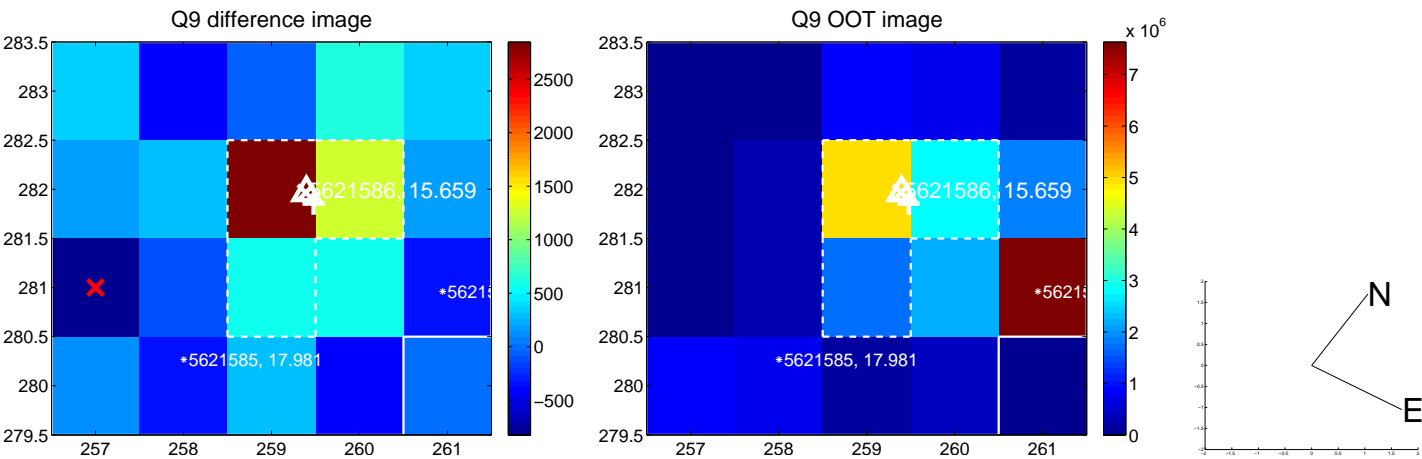
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



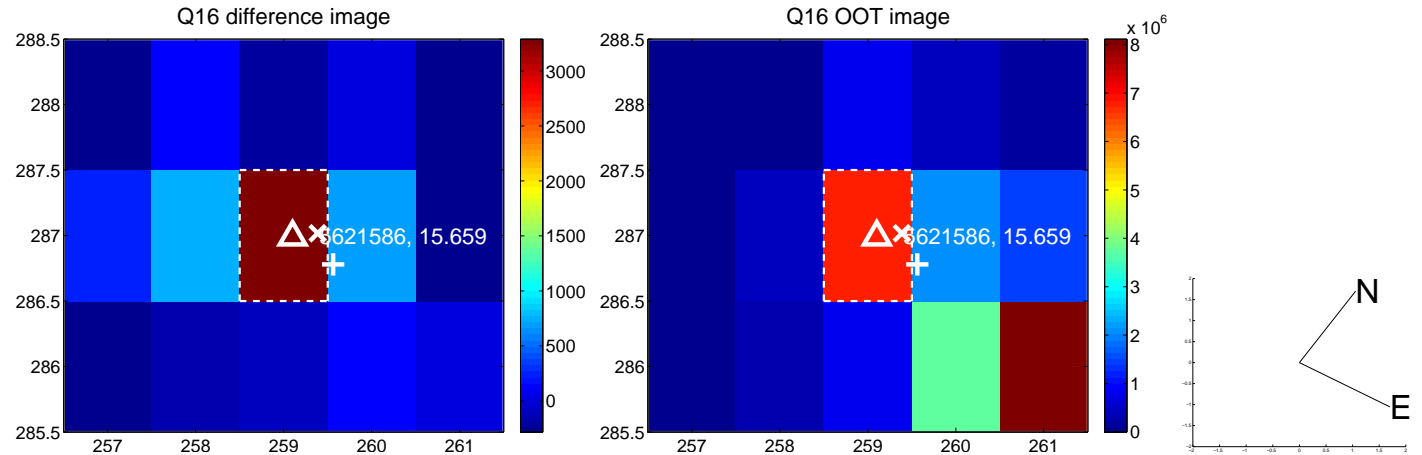
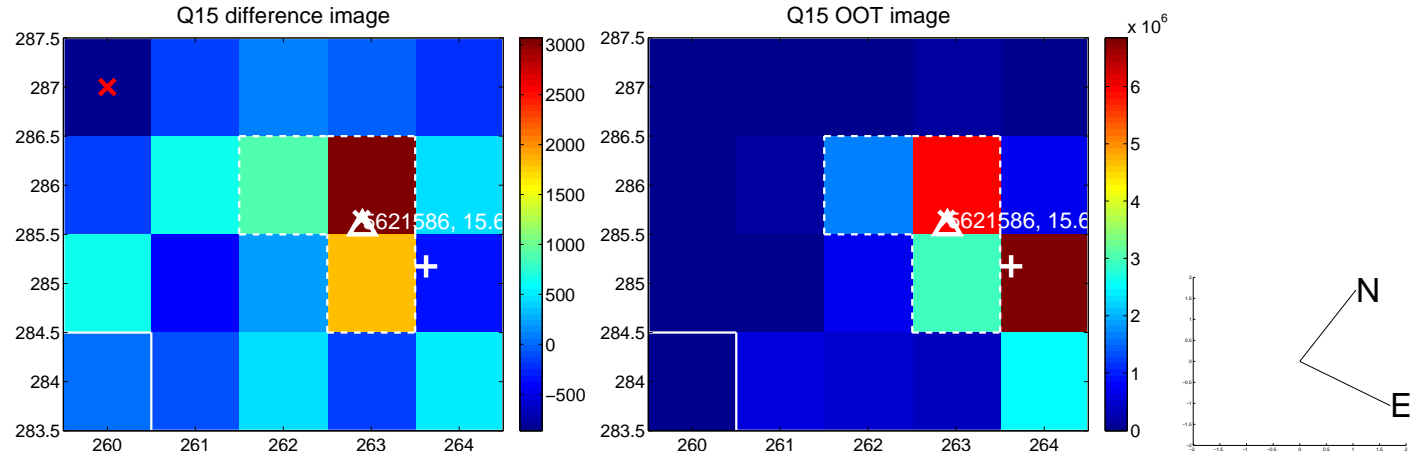
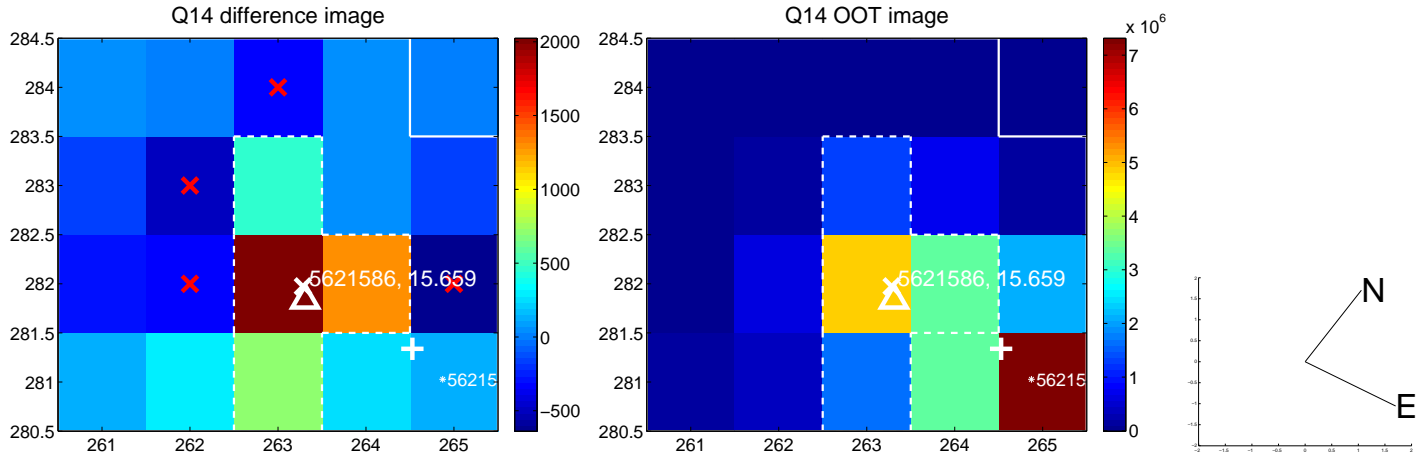
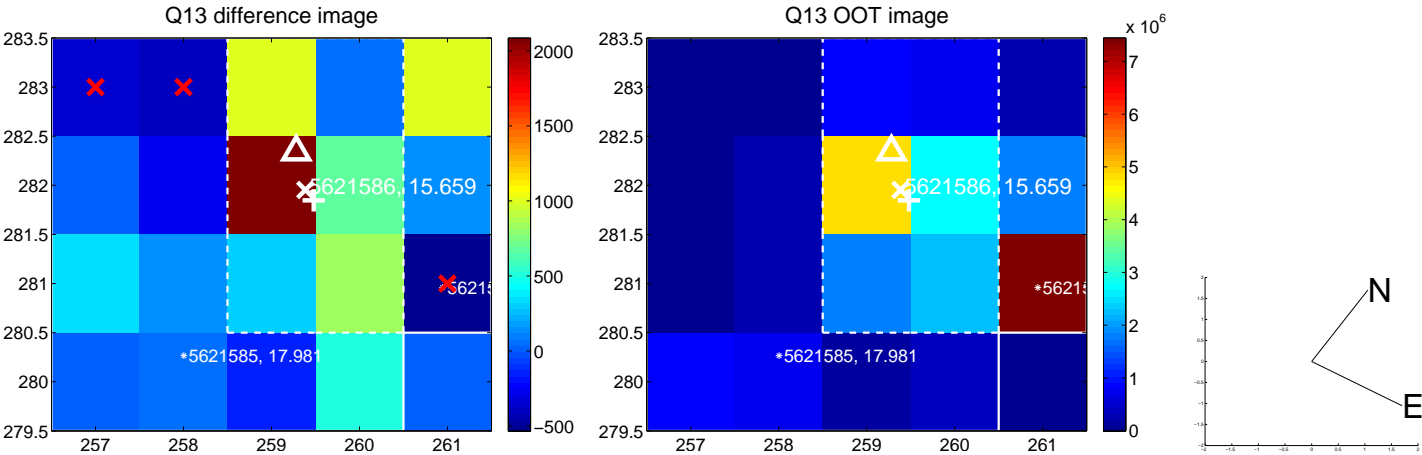
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

