

KIC 008543100

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})
008543100-01	OBS	1975.01	7.560527	134.478523	656.1	4.012	29.6	33.0	0.94	5895	2.75	165.26

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008543100-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT

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

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

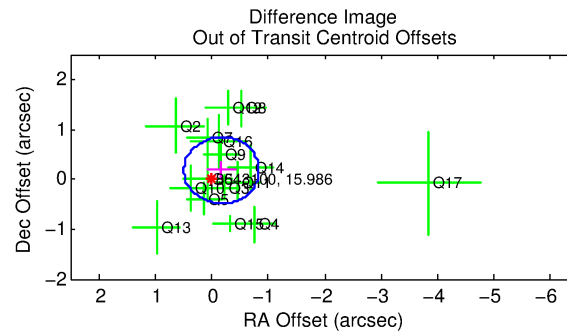
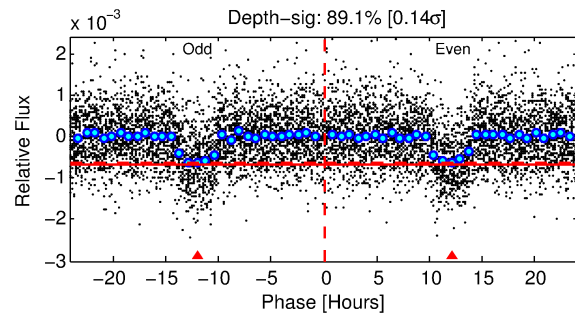
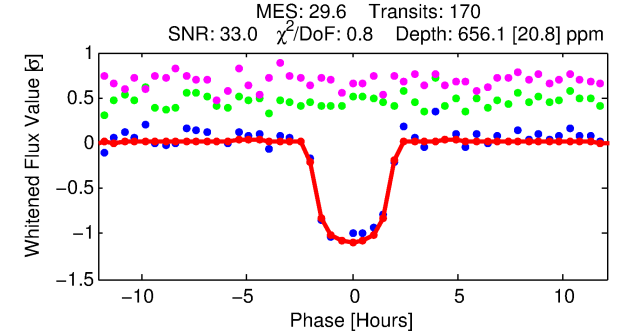
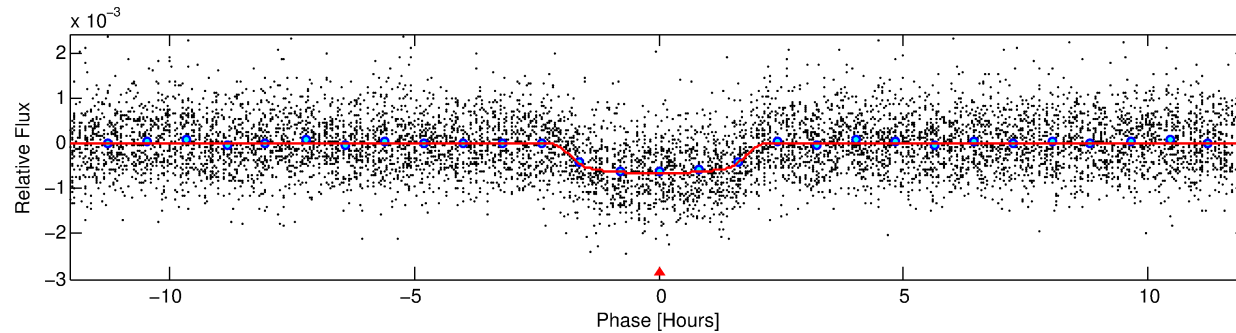
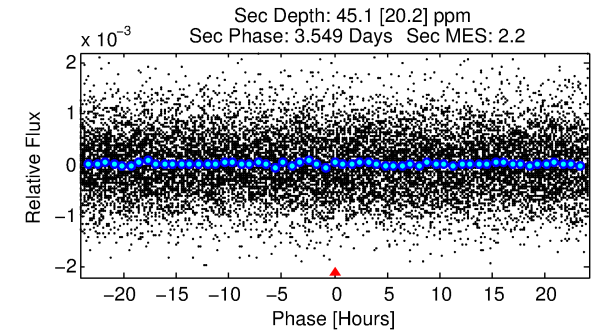
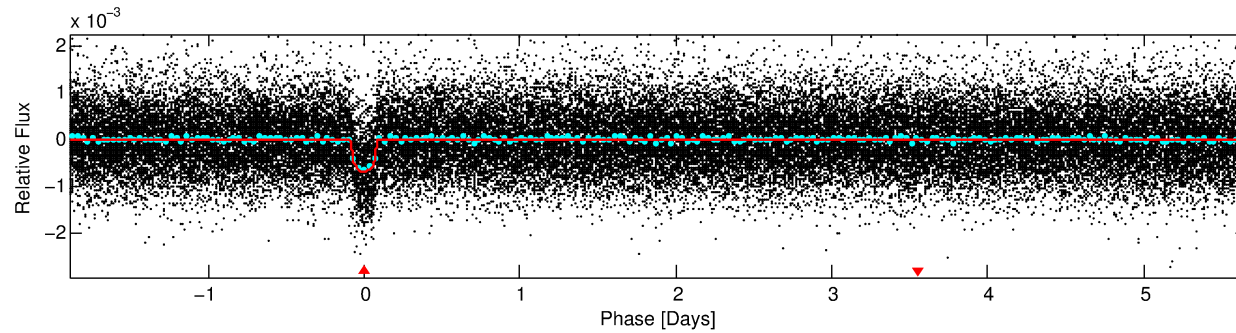
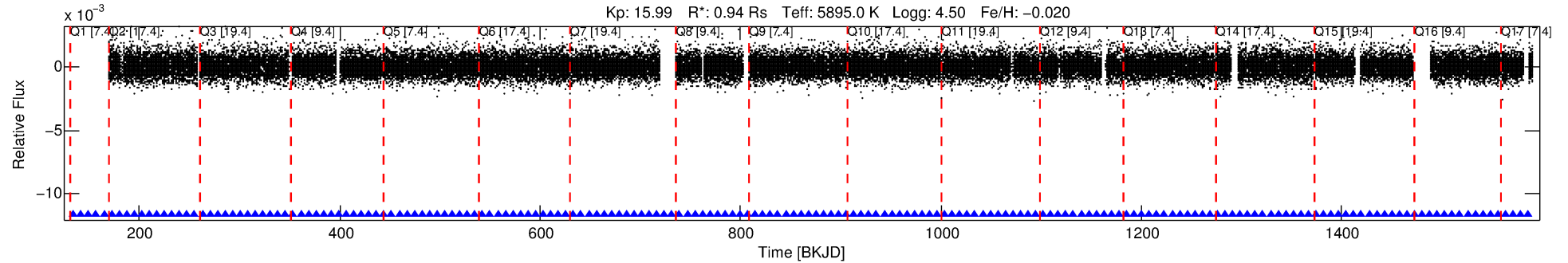
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008543100-01

No Significant Match Found

DV One-Page Summary

KIC: 8543100 Candidate: 1 of 1 Period: 7.561 d
KOI: K01975.01 Corr: 0.977



DV Fit Results:

Period = 7.56053 [0.00002] d
Epoch = 134.4785 [0.0024] BKJD
Rp/R* = 0.0268 [0.0034]
a/R* = 8.32 [4.80]
b = 0.85 [0.19]
Seff = 165.26 [66.61]
Teq = 914 [92] K
Rp = 2.75 [0.89] Re
a = 0.0761 [0.0195] AU
Ag = 19.02 [12.10] [1.49σ]
Teffp = 2952 [393] K [5.05σ]

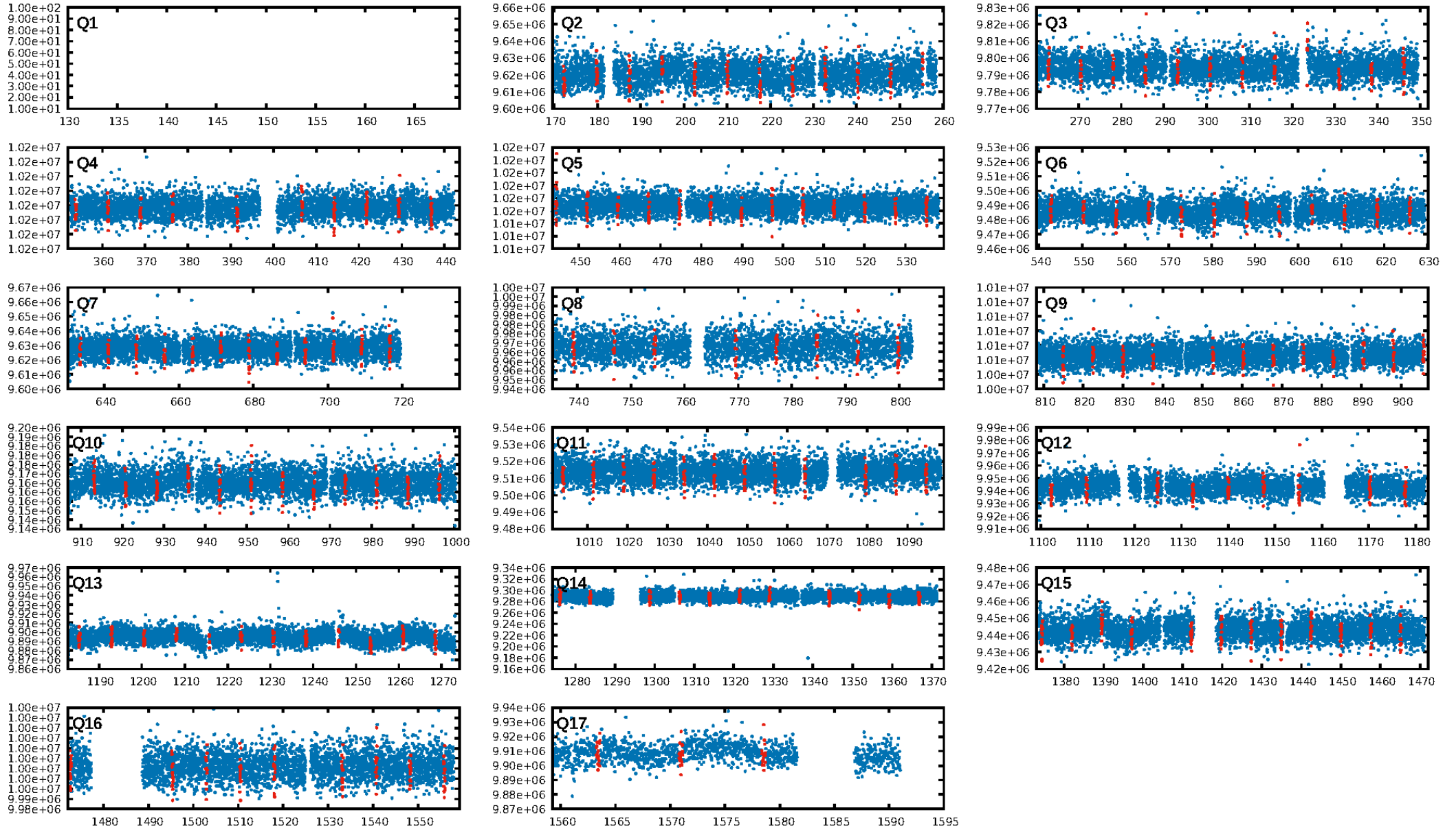
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 5.36e-184
RollingBand-fgt: 1.00 [167/167]
GhostDiagnostic-chr: 7.757
Centroid-sig: 7.7%
Centroid-so: 0.477 arcsec [1.03σ]
OotOffset-rm: 0.248 arcsec [1.12σ]
KicOffset-rm: 0.268 arcsec [1.00σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.94 [15/16]
DiffImageOverlap-fno: 1.00 [16/16]

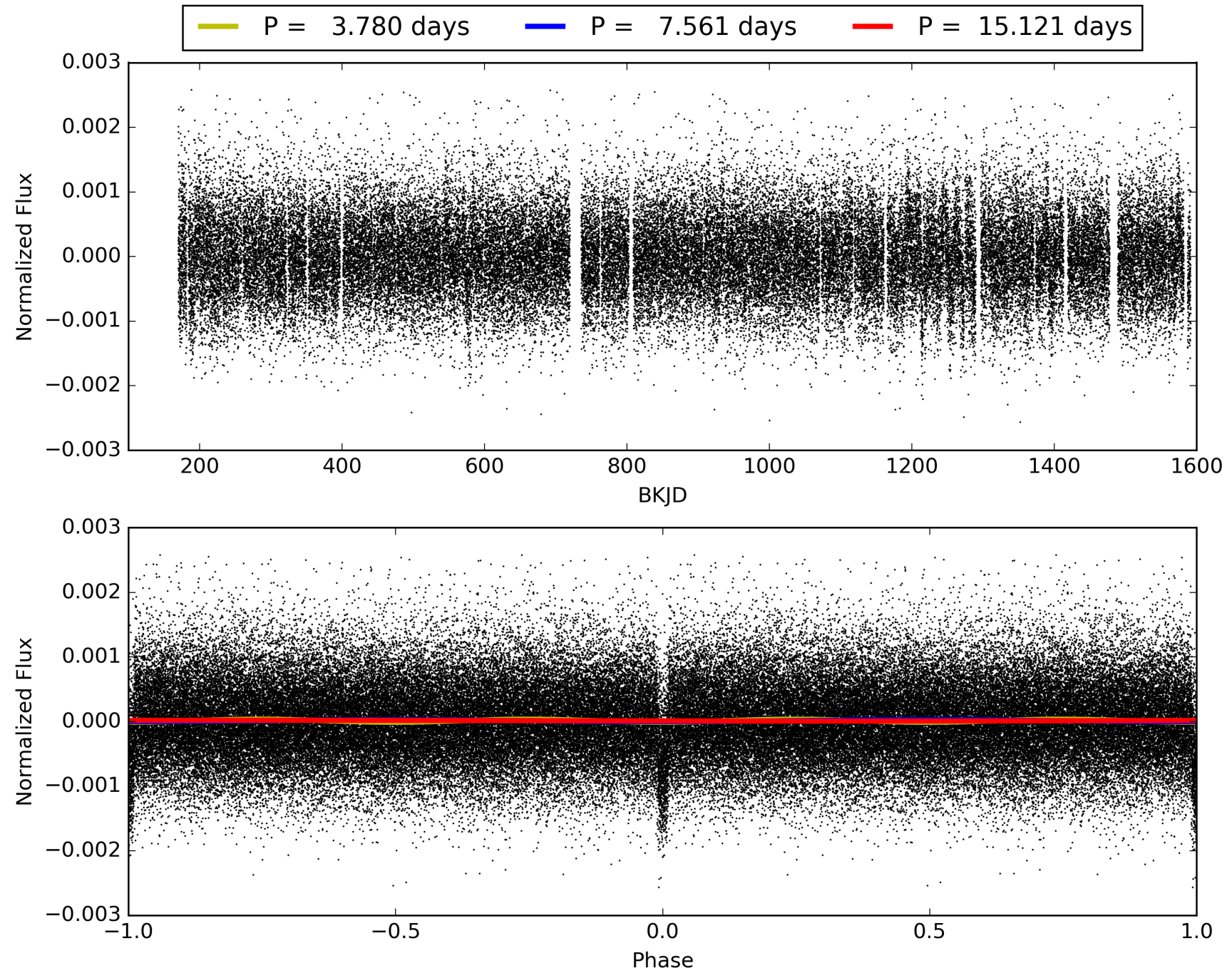
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:27:46 Z

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

TCE 008543100-01, PDC Light Curves

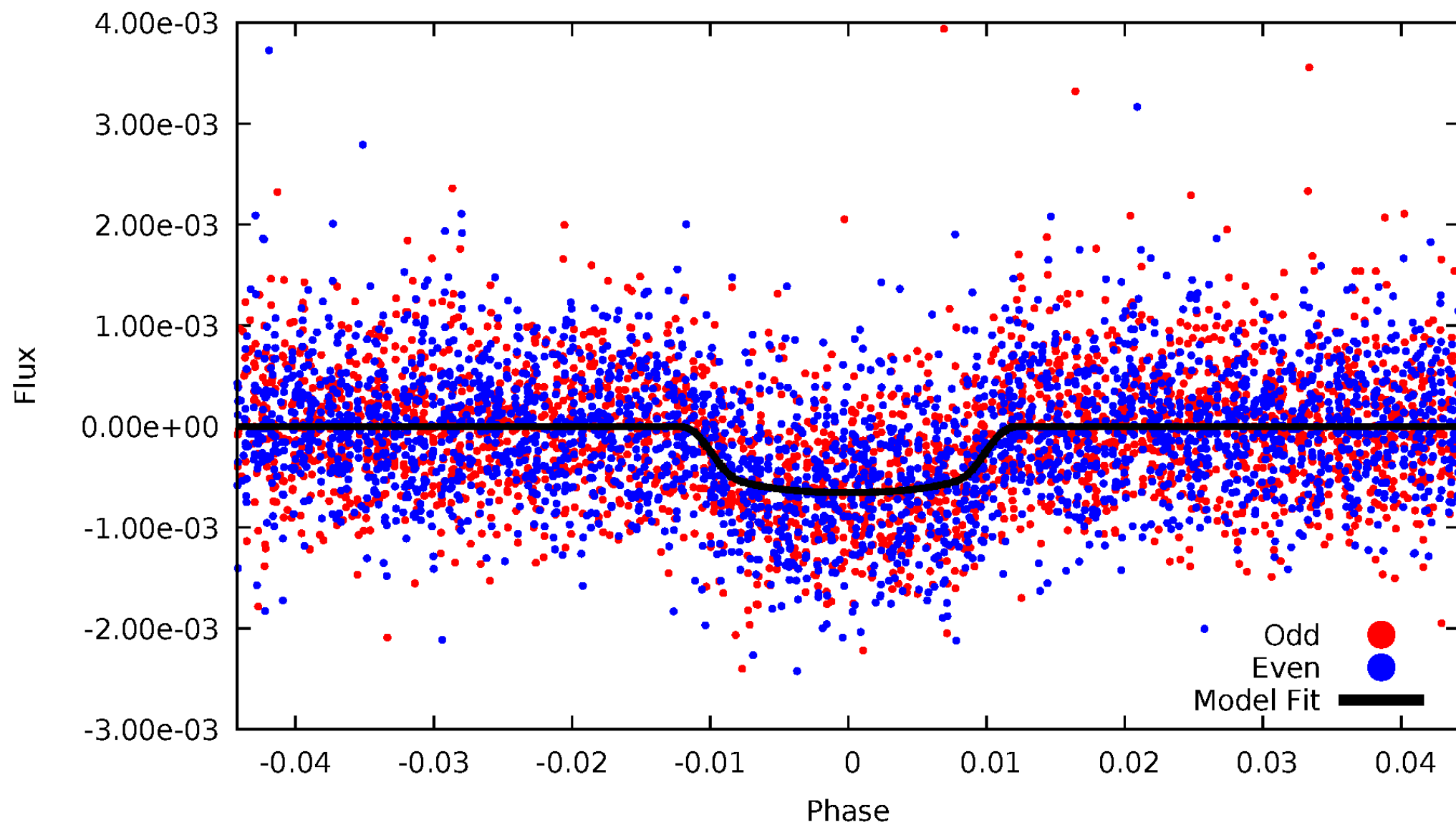


TCE 008543100-01



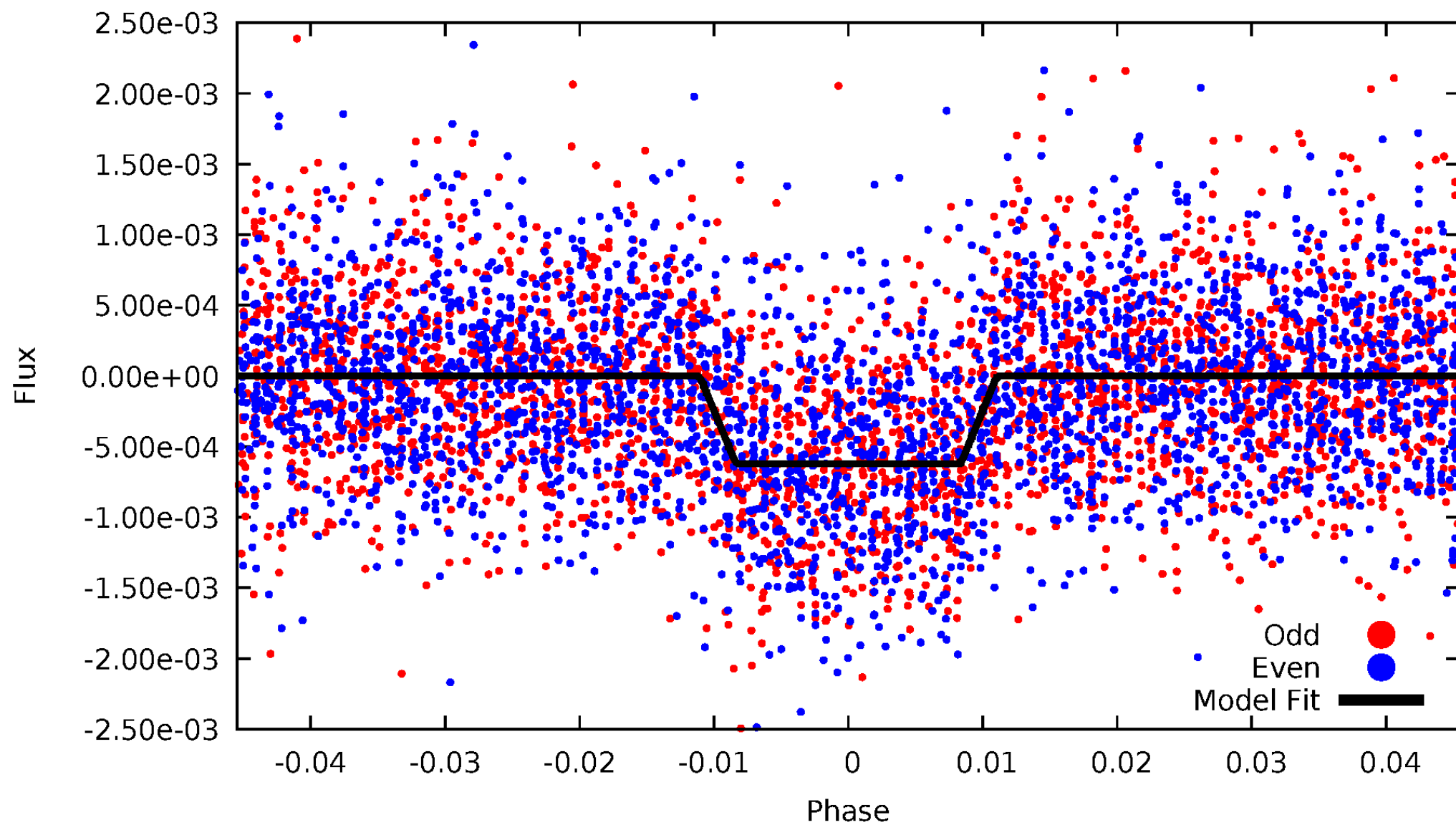
DV Odd/Even

TCE 008543100-01

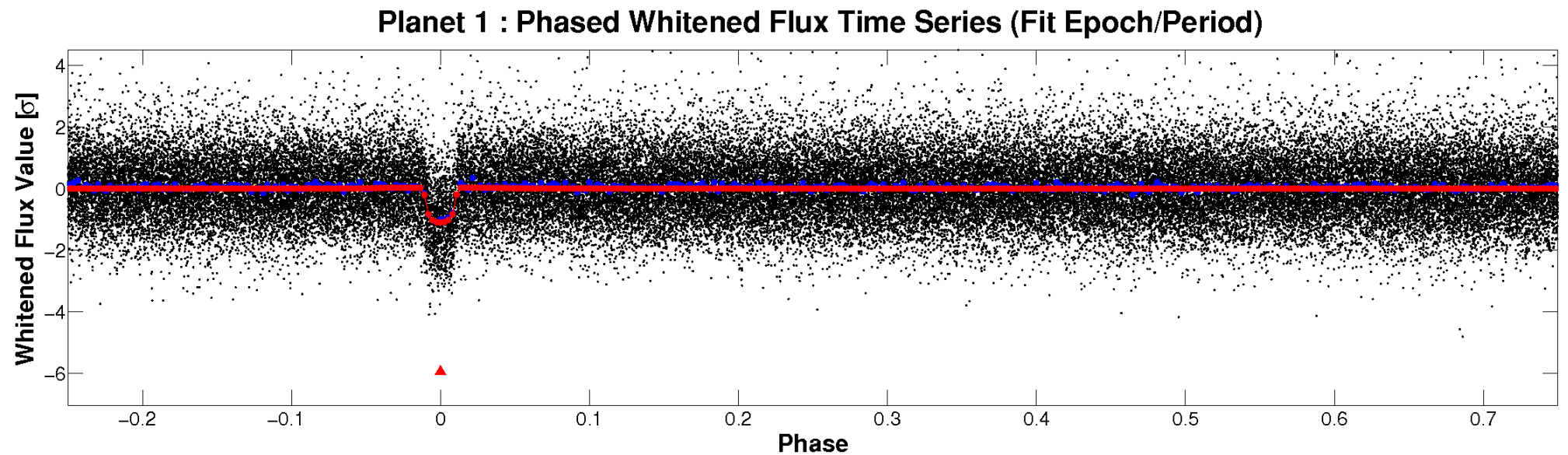
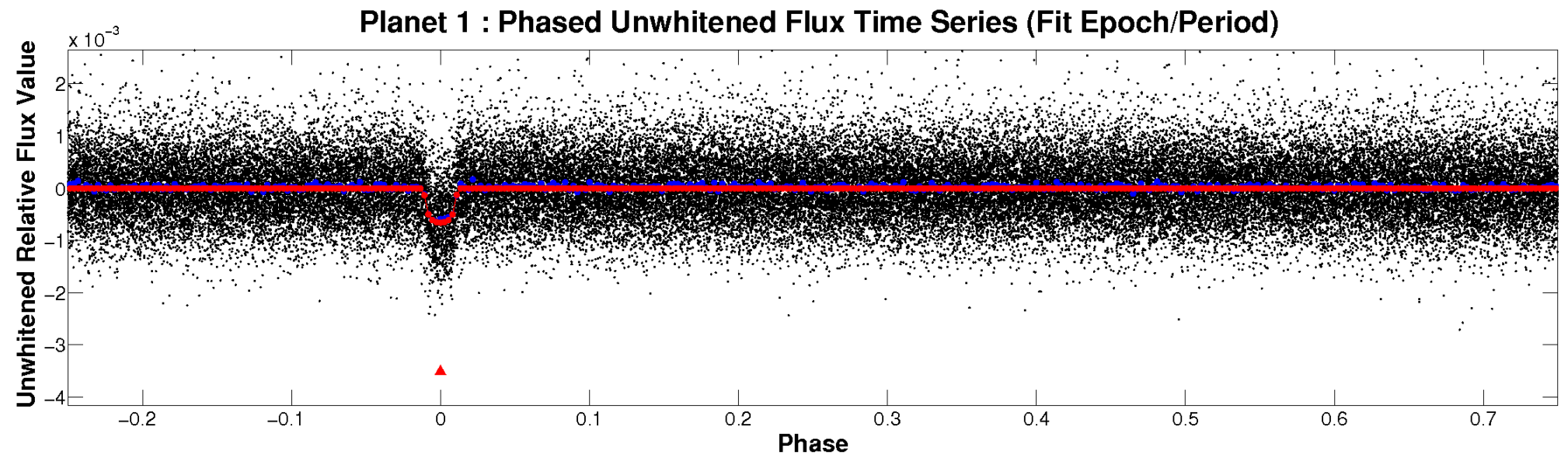


ALT Odd/Even

TCE 008543100-01

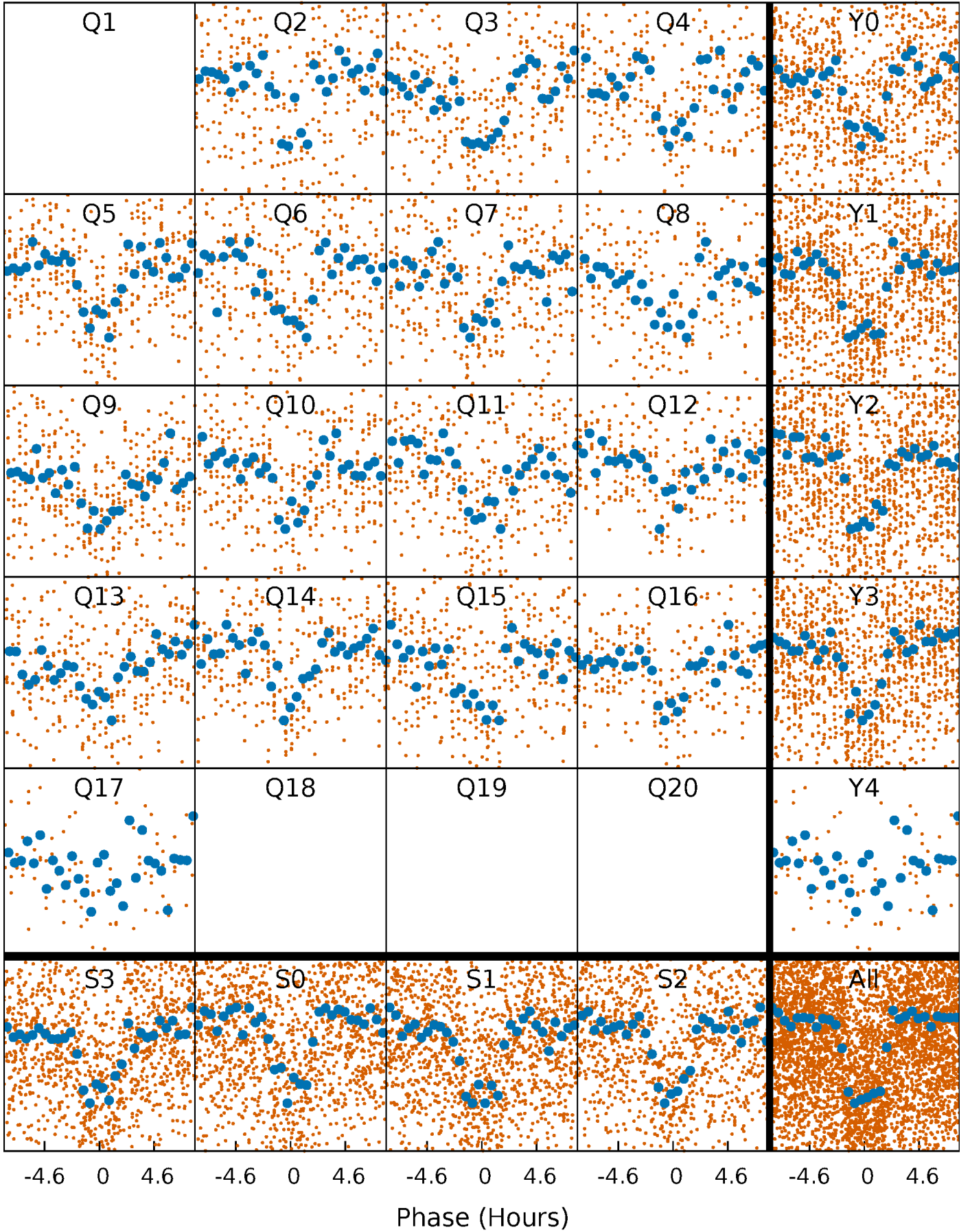


Non-Whitened Vs. Whitened Light Curve



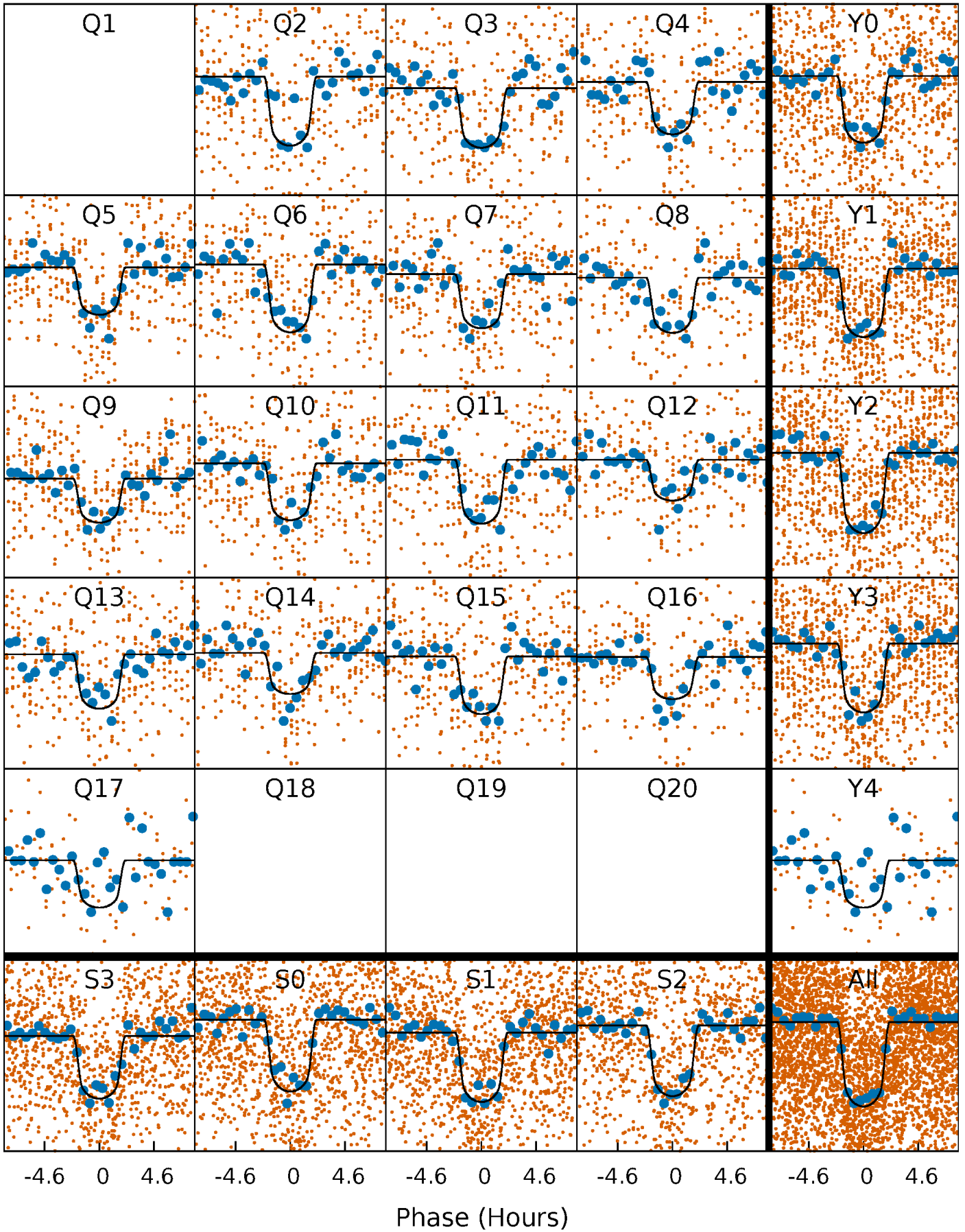
PDC Quarter-Phased Transit Curves

TCE 008543100-01 P= 7.560527 Days $T_0=134.478523$ (BKJD)



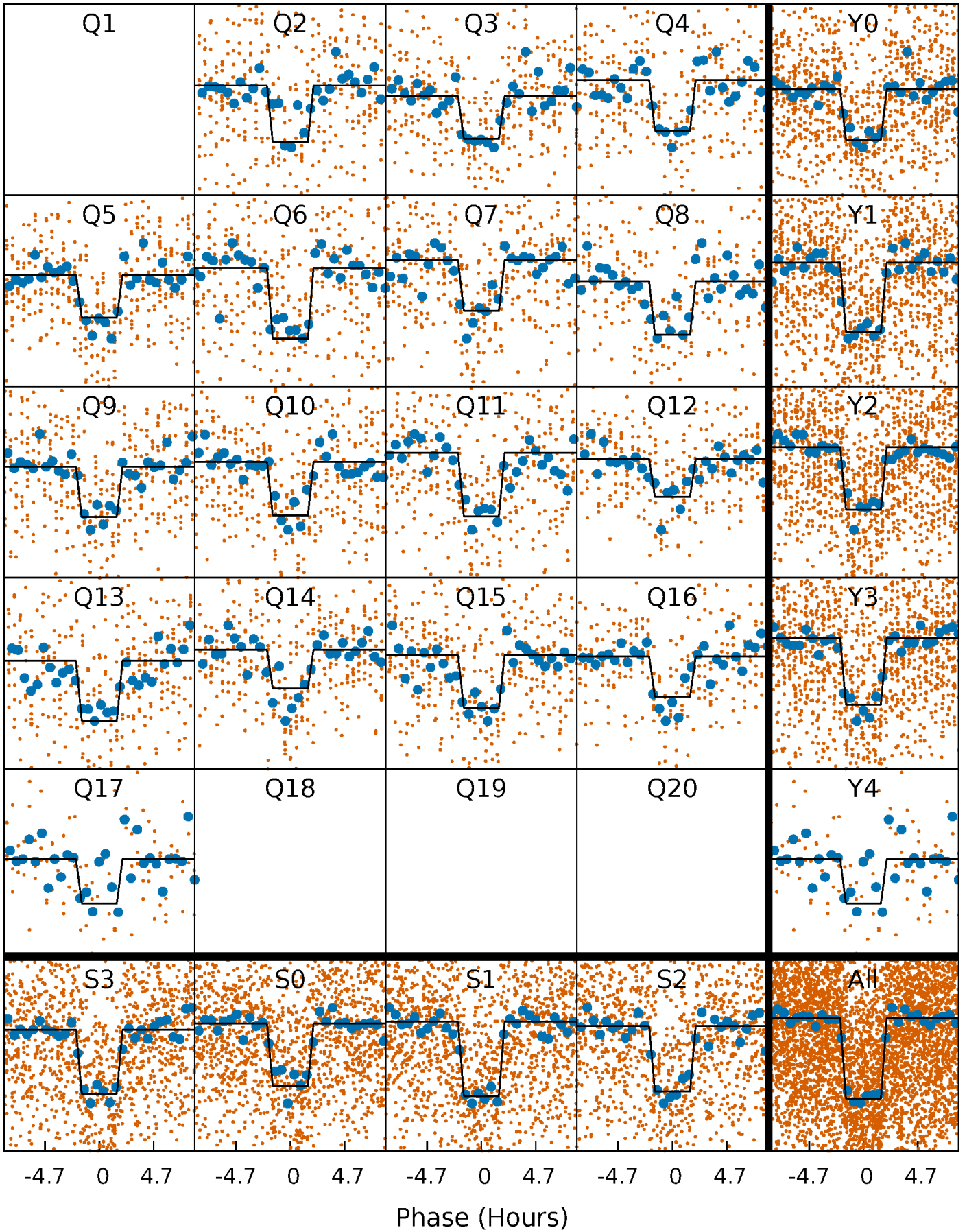
DV Quarter-Phased Transit Curves

TCE 008543100-01 P= 7.560527 Days $T_0=134.478523$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

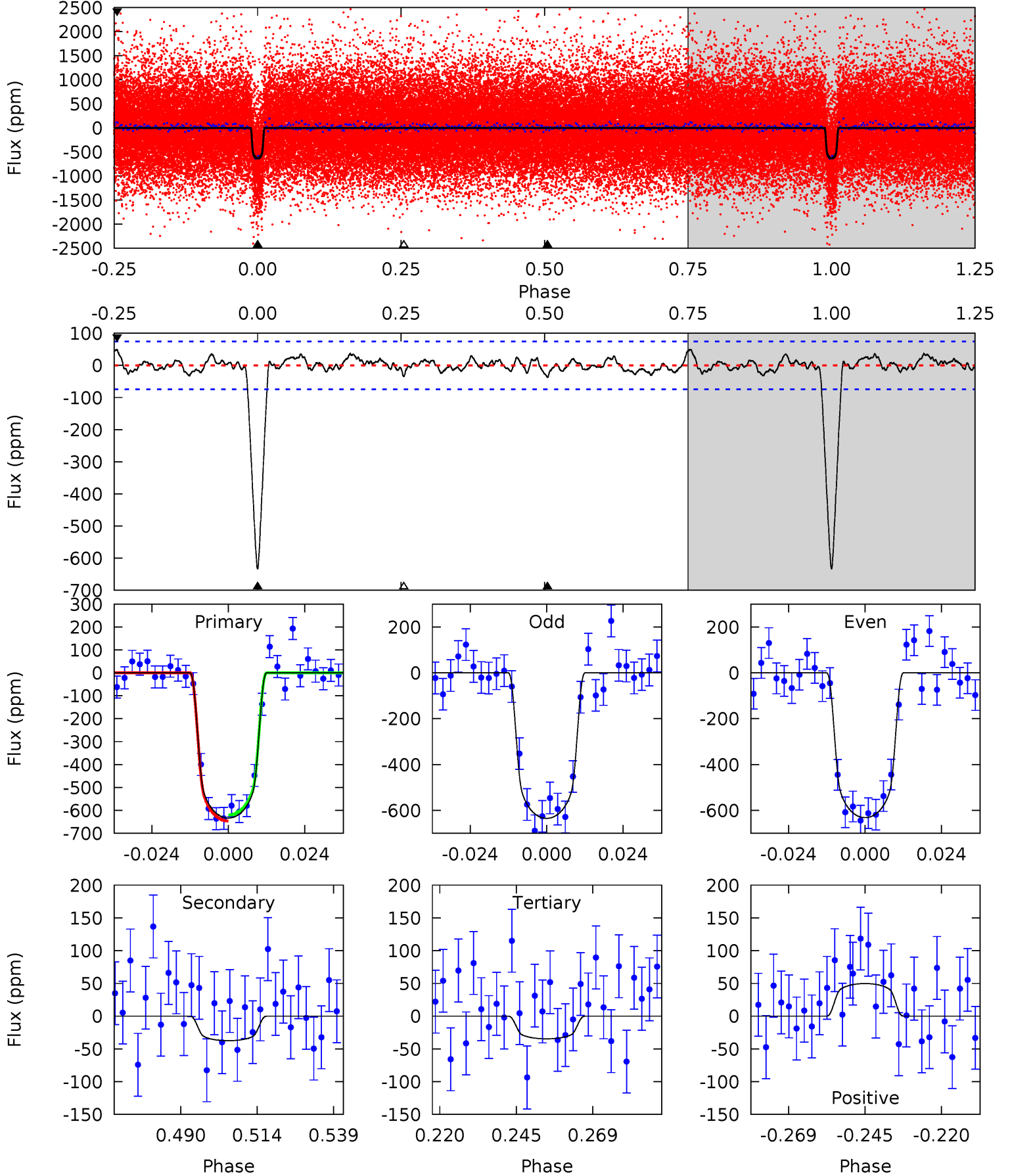
TCE 008543100-01 P= 7.560559 Days $T_0=134.475633$ (BKJD)



DV Model-Shift Uniqueness Test

008543100-01, P = 7.560527 Days, E = 134.478523 Days

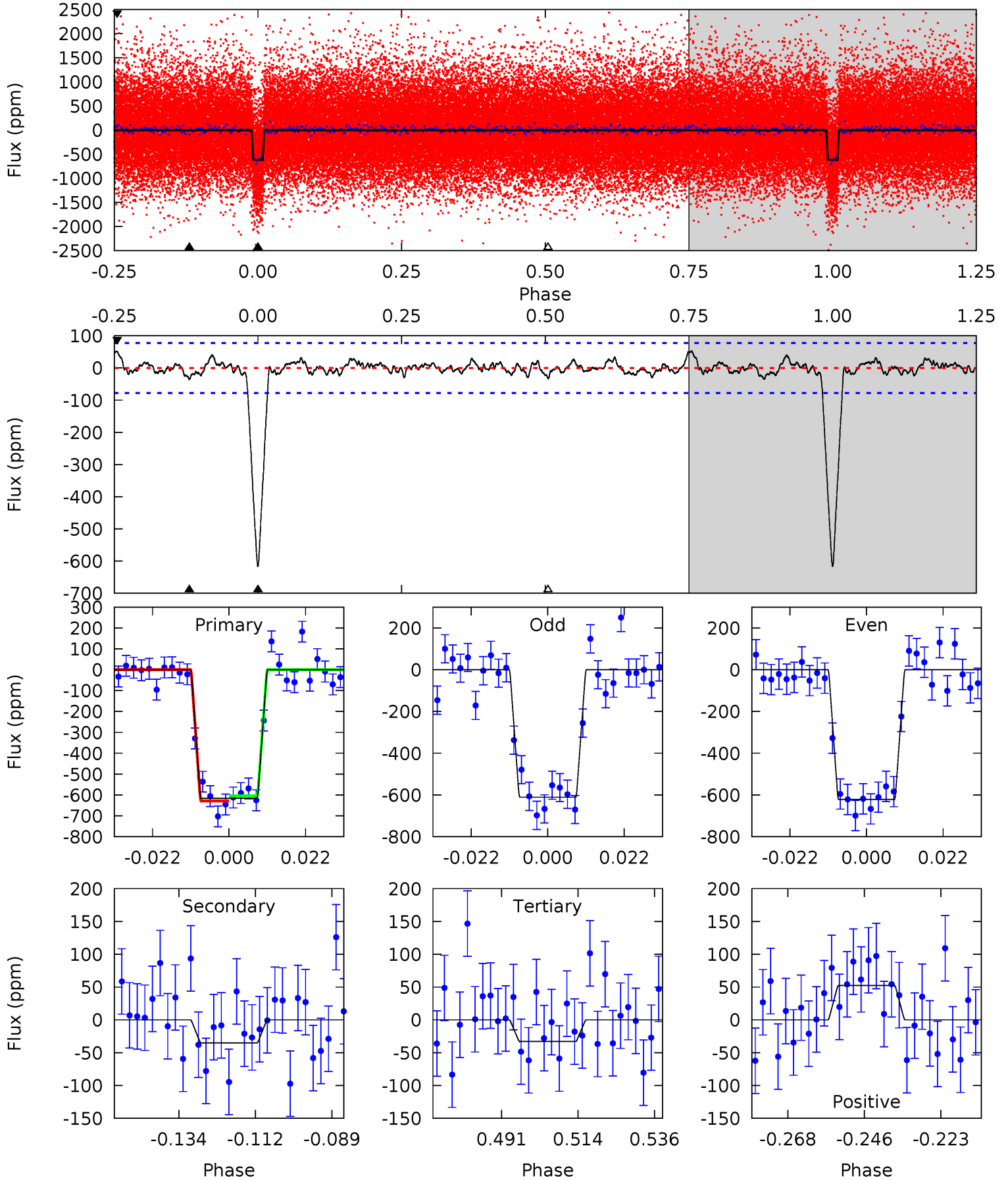
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
41.3	2.45	2.25	3.24	4.85	2.25	1.00	39.0	38.0	0.19	-0.79	0.10	0.98	0.07	0.85



Alt Model-Shift Uniqueness Test

008543100-01, P = 7.560559 Days, E = 134.475633 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
38.7	2.20	2.07	3.29	4.87	2.28	0.89	36.6	35.4	0.14	-1.09	0.33	0.97	0.08	0.77



Stellar Parameters For KIC 008543100

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R \text{ (R}_{\odot})$	$M(\text{M}_{\odot})$	$p_{\star} \text{ (g}\cdot\text{cm}^{-3})$
	5895^{+158}_{-211}	$4.503^{+0.052}_{-0.208}$	$-0.020^{+0.250}_{-0.300}$	$0.940^{+0.282}_{-0.094}$	$1.026^{+0.115}_{-0.140}$	$1.741^{+0.467}_{-0.930}$
	+3%/-4%	+1%/-5%	+1250%/-1500%	+30%/-10%	+11%/-14%	+27%/-53%
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 008543100-01 / KOI 1975.01

Detrend	Depth (ppm)	$R_p \text{ (R}_{\oplus})$	$T_{\text{max}} \text{ (K)}$	$T_{\text{obs}} \text{ (K)}$	A_{obs}
DV	-38 ± 15	$2.87^{+0.52}_{-0.46}$	1304^{+86}_{-67}	3321^{+258}_{-257}	14^{+8}_{-6}
Alt.	-35 ± 16	$2.65^{+0.51}_{-0.41}$	1301^{+94}_{-59}	3395^{+256}_{-331}	15^{+10}_{-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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

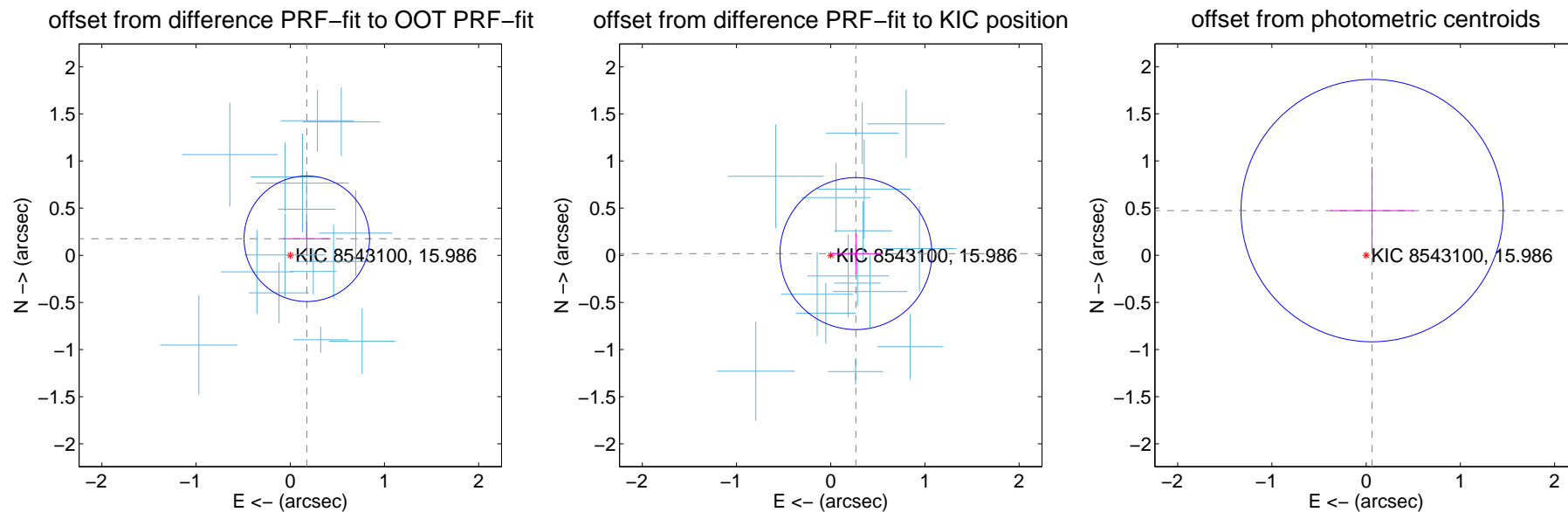
DV Centroid Data

Supplemental centroid analysis for 008543100-01. Kepler magnitude: 15.99. Transit SNR 33.03

There are 15 quarters with good PRF difference image offsets

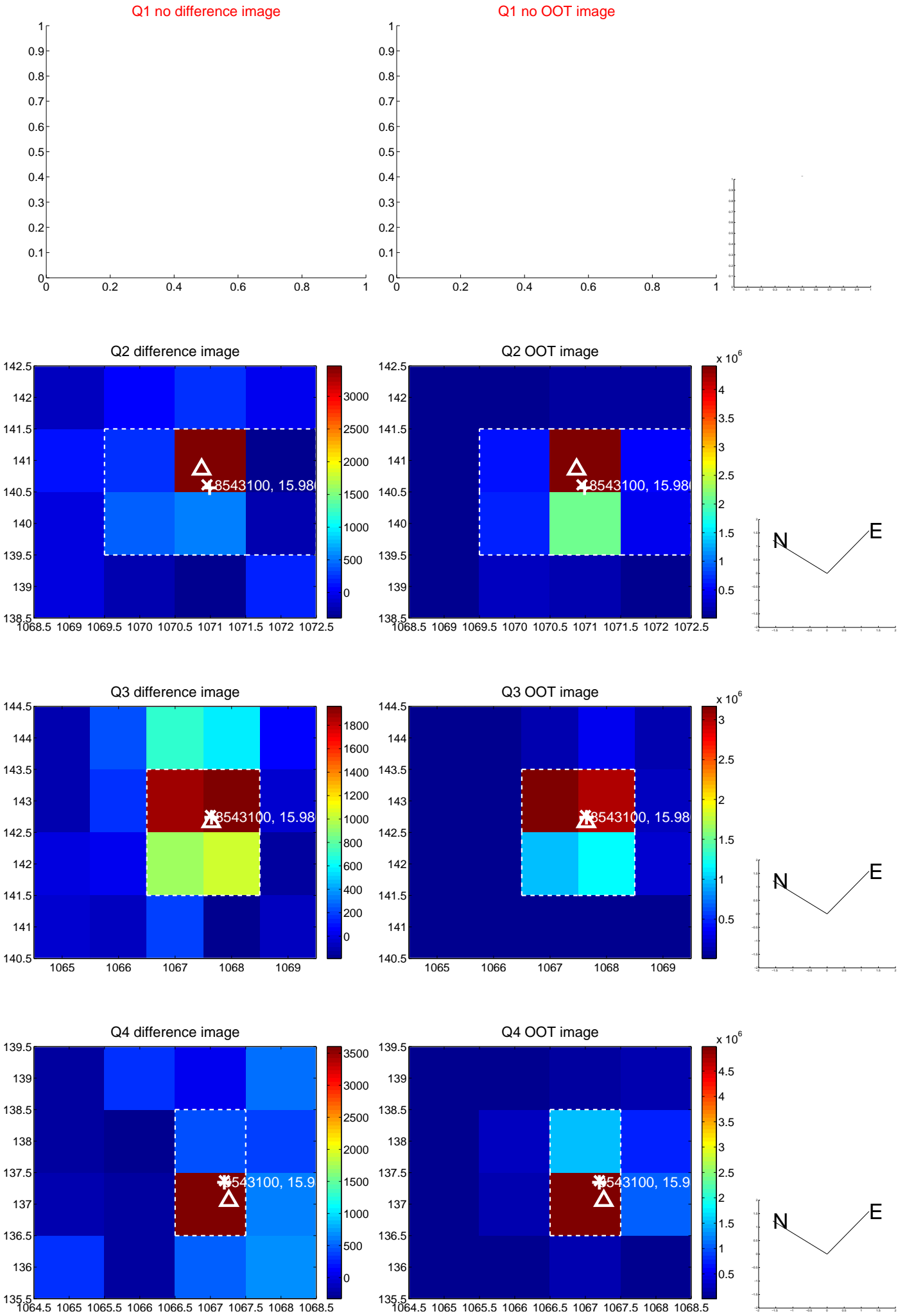
The direct PRF centroid is offset from the target star catalog position by about 0.34 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.248 ± 0.222	1.12	-0.175 ± 0.254	0.175 ± 0.182
PRF-fit source offset from KIC position	0.268 ± 0.269	1.00	-0.267 ± 0.268	0.018 ± 0.217
photometric centroid source offset	0.48 ± 0.46	1.03	-0.06 ± 0.44	0.47 ± 0.46

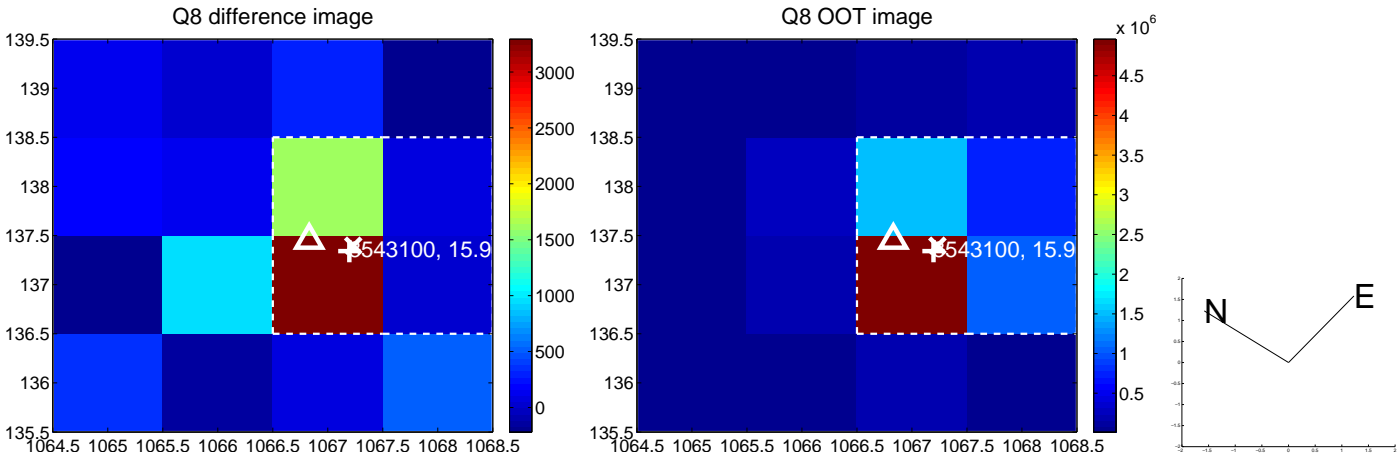
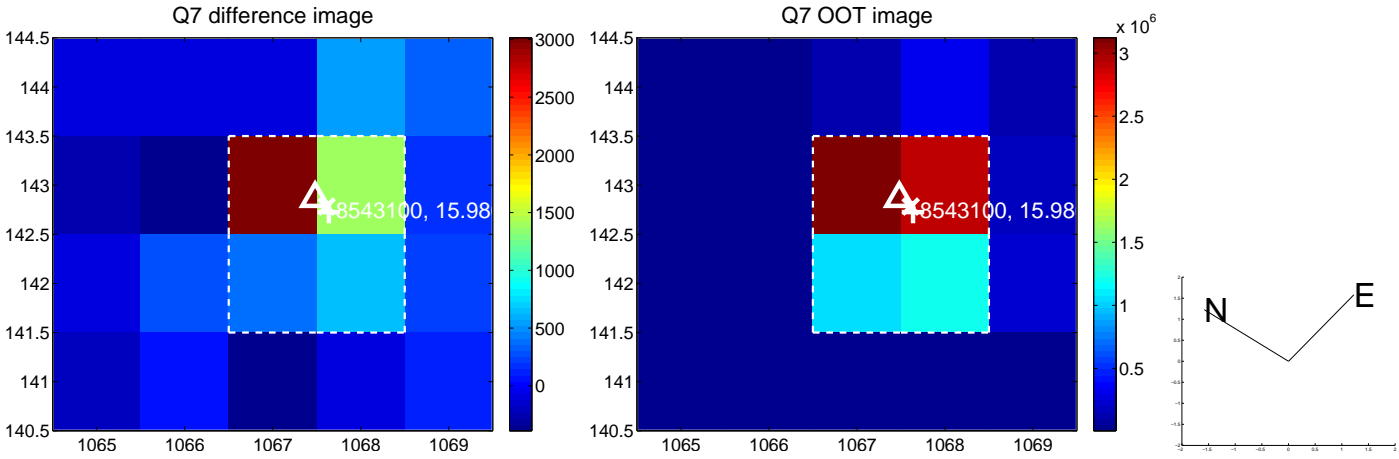
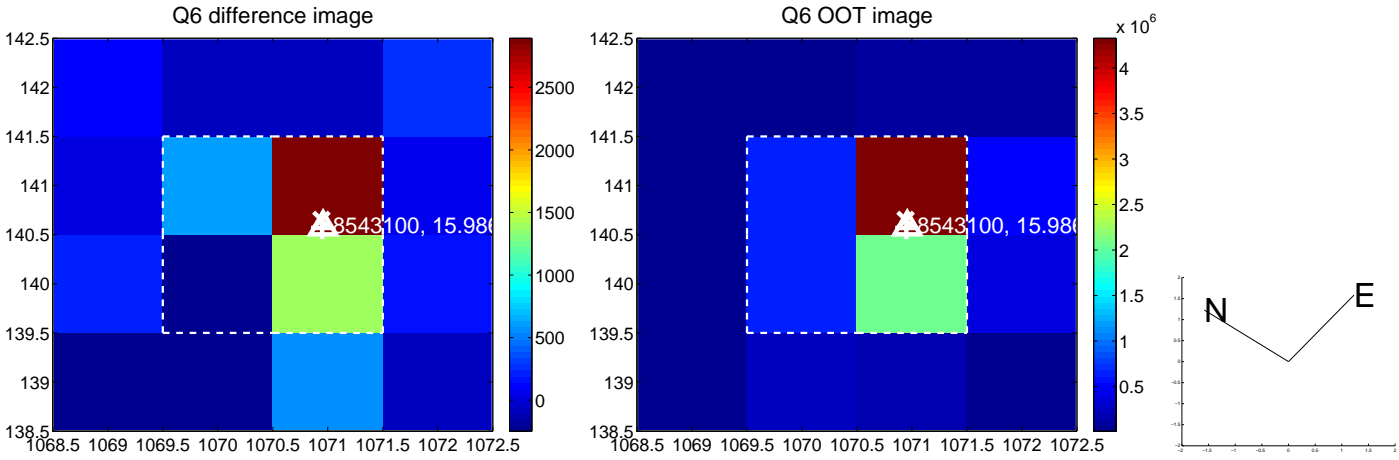
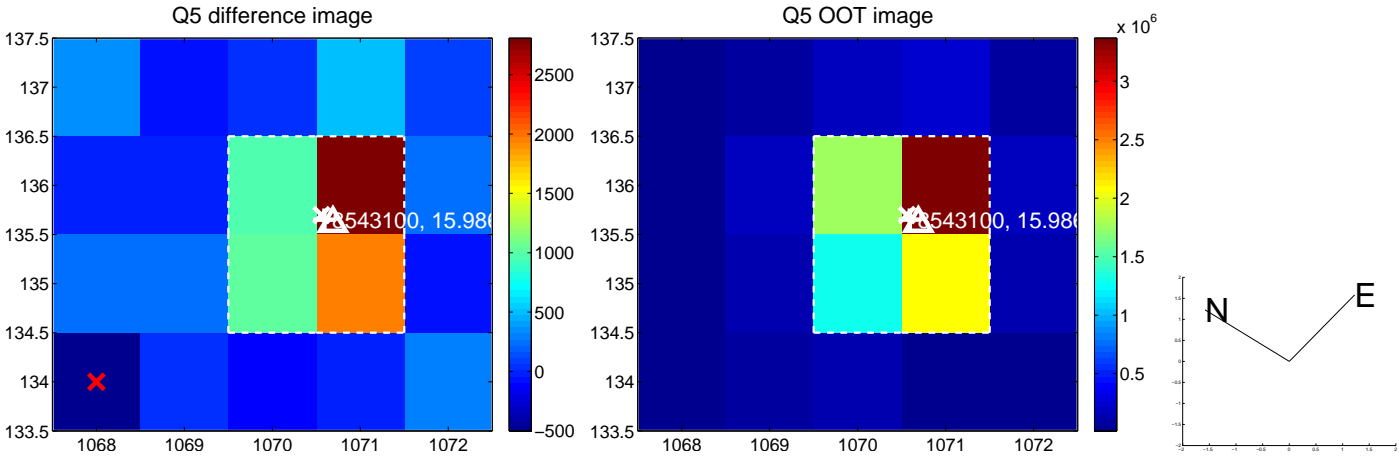


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

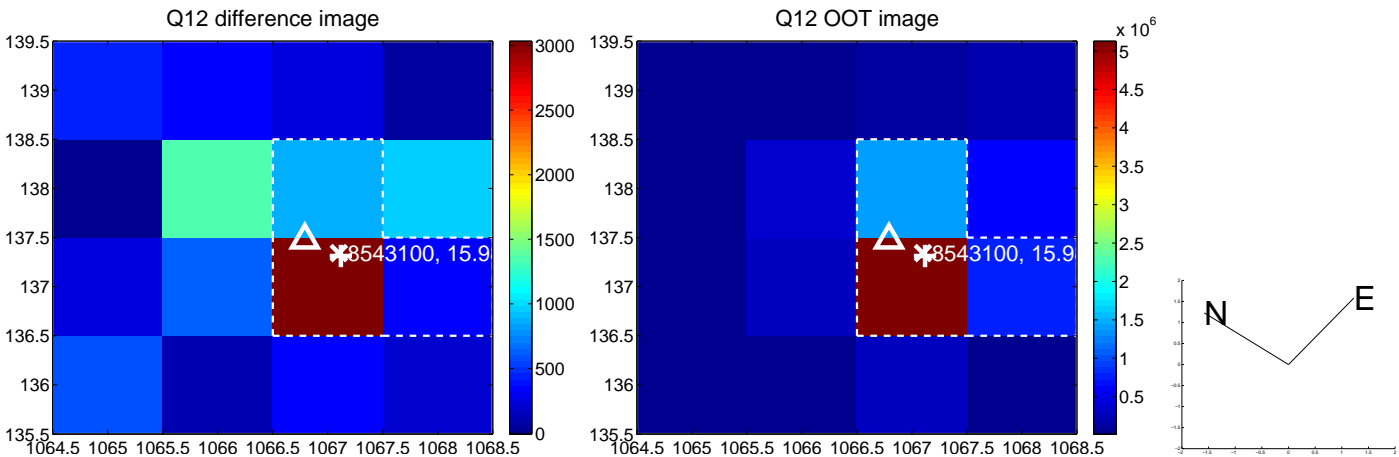
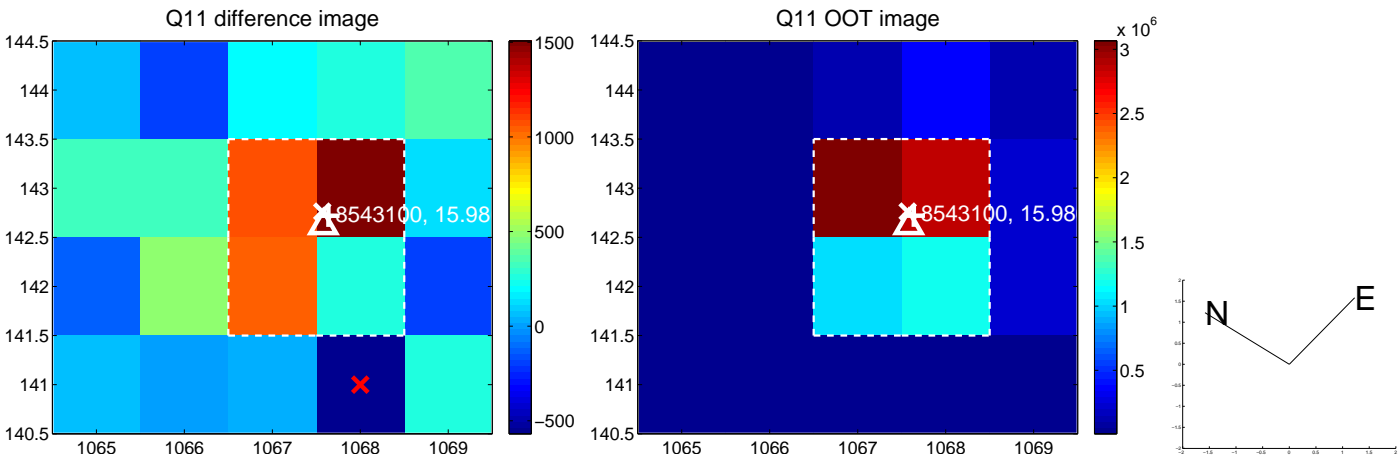
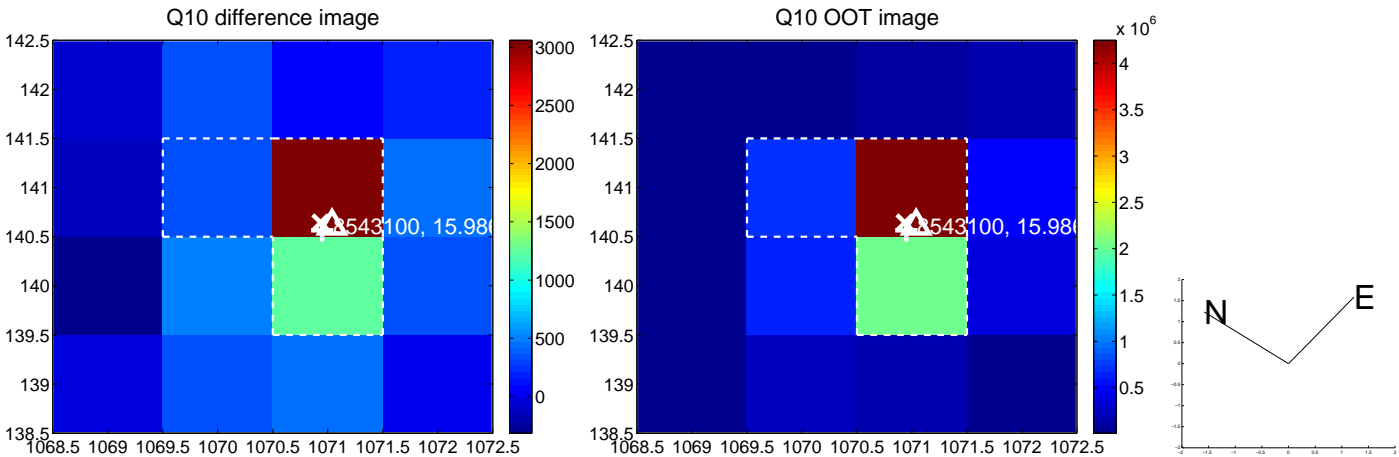
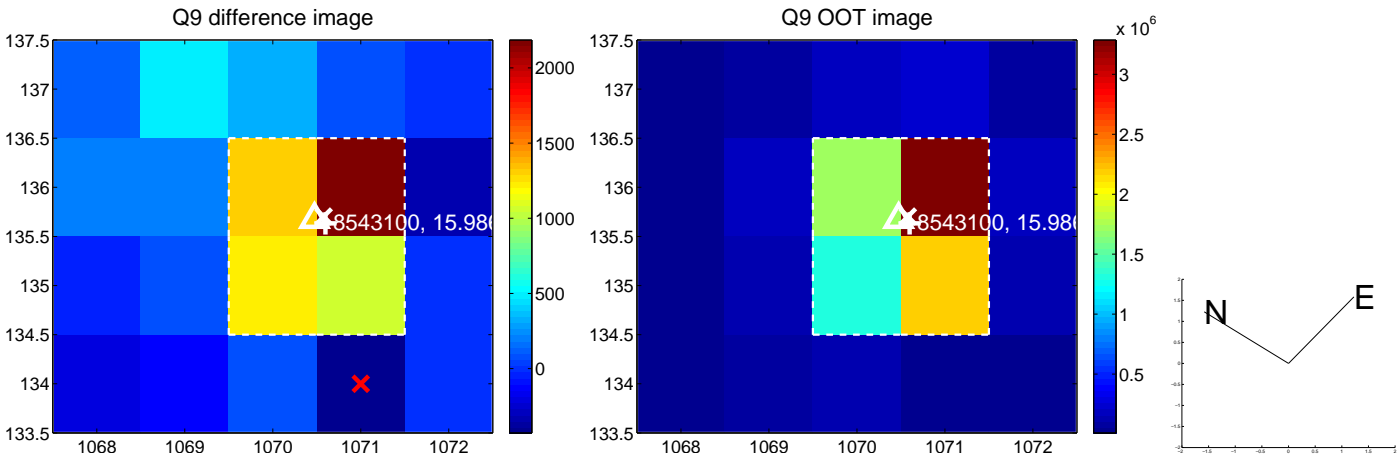
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



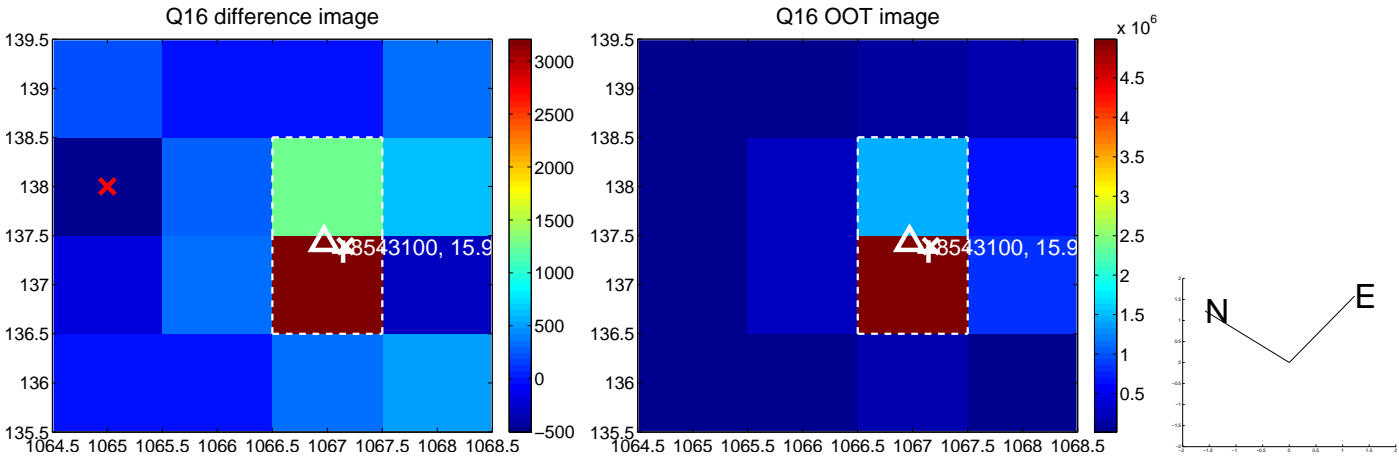
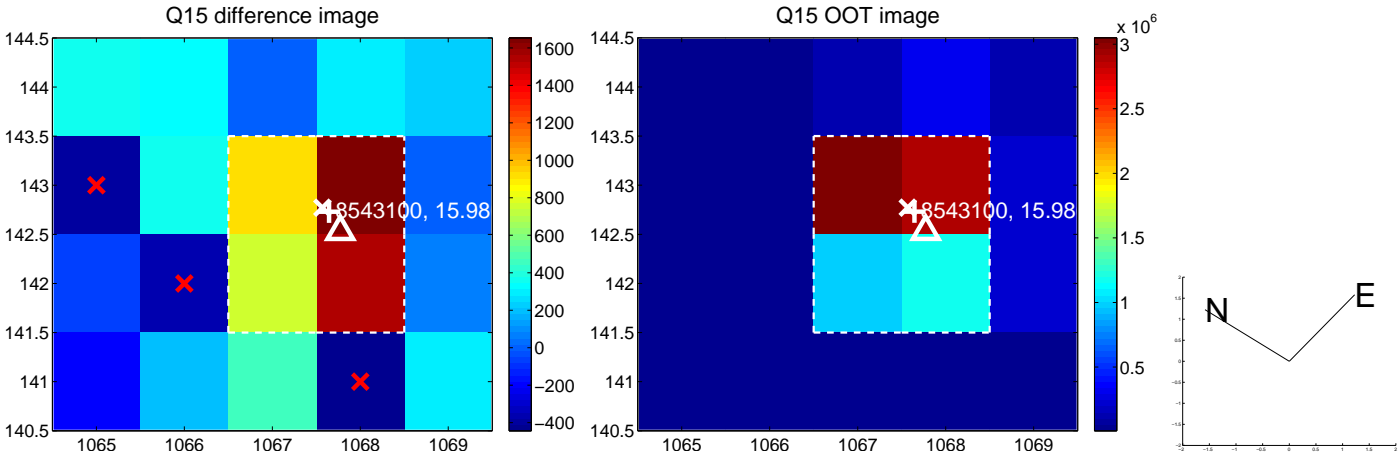
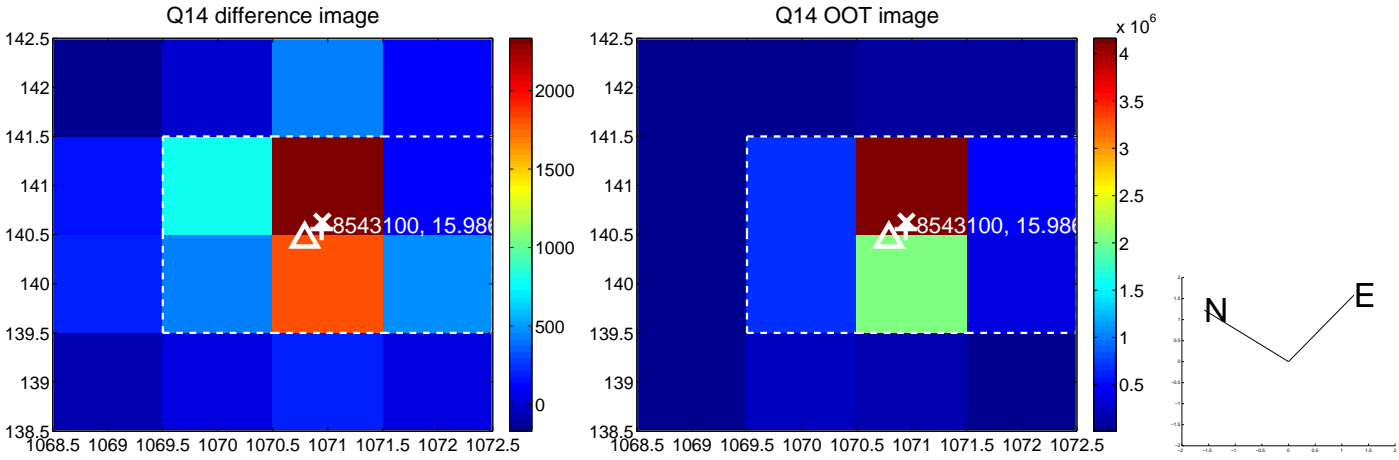
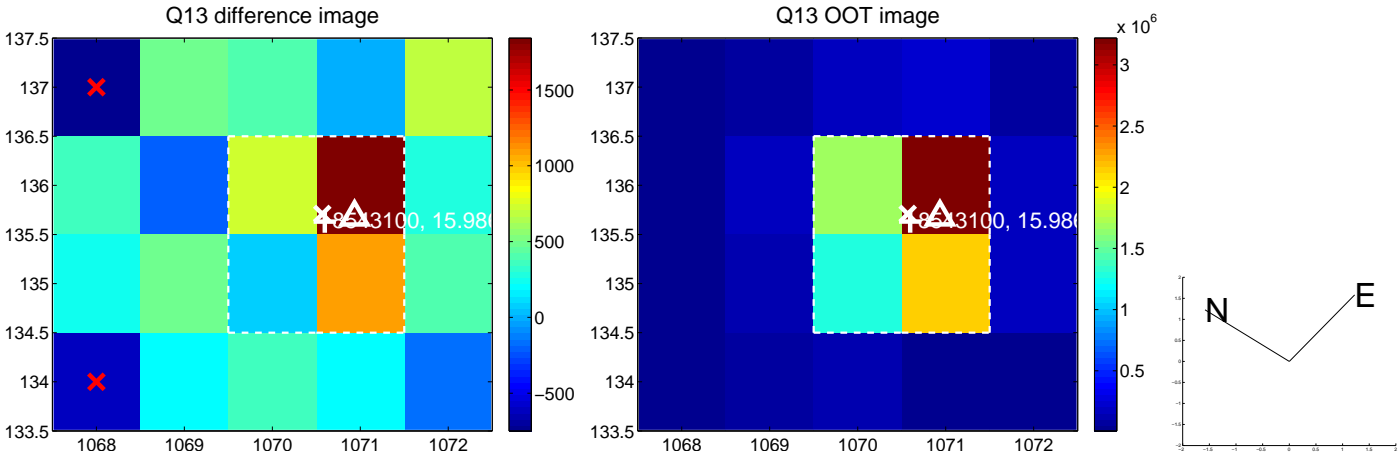
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



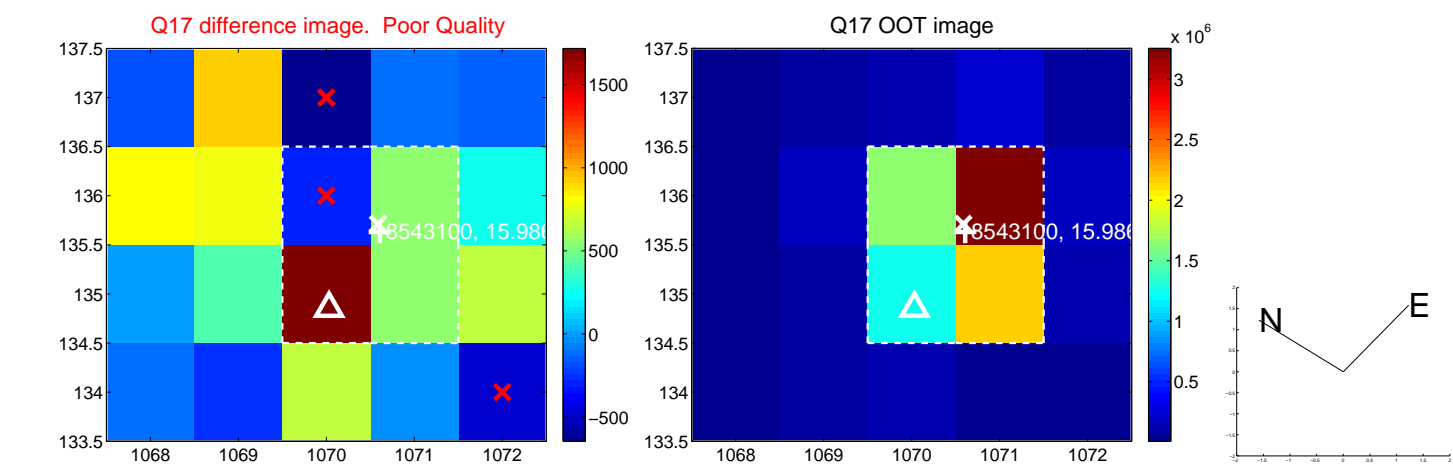
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



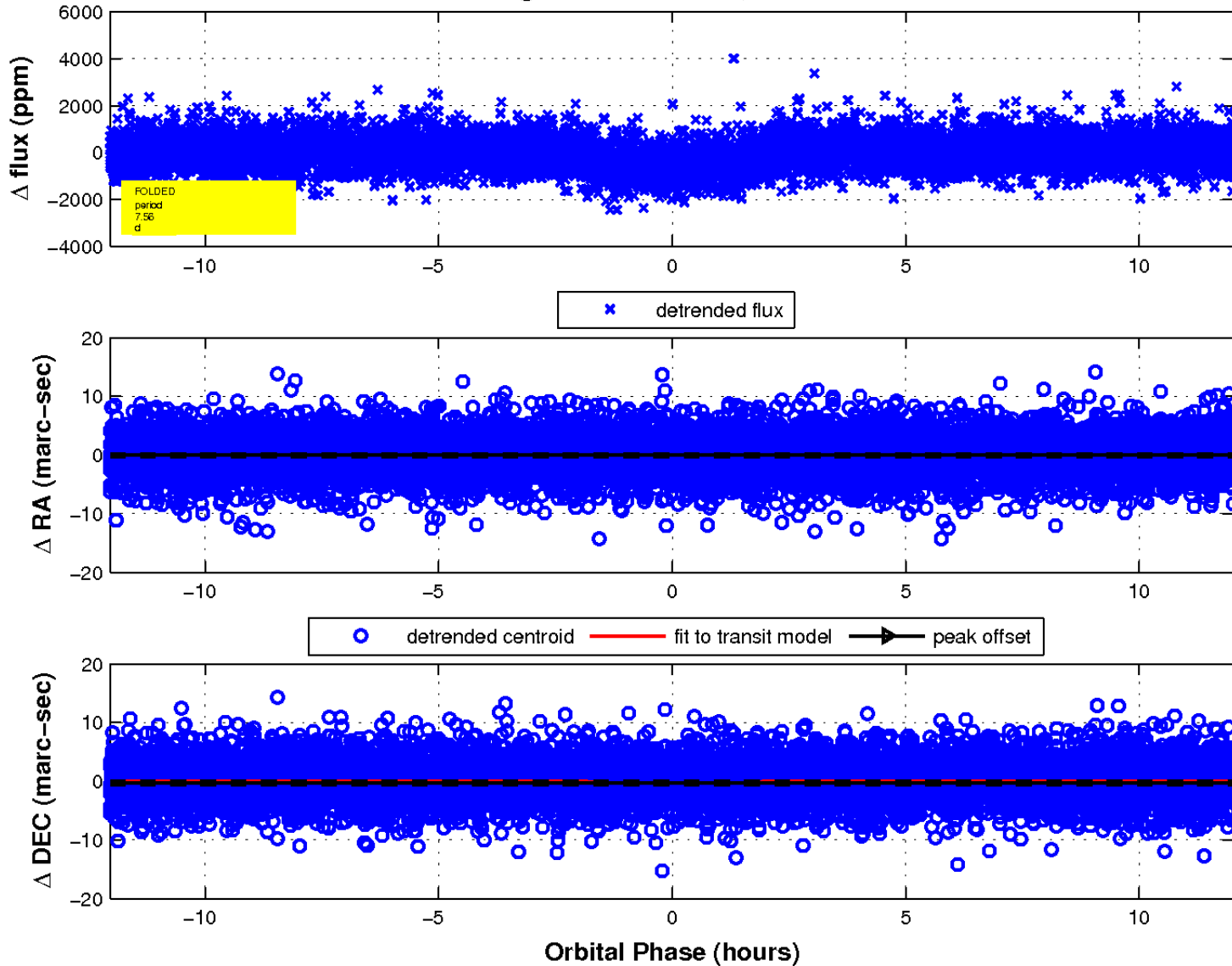
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

