

KIC 011560382

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R _★ (R _☉)	T _★ (K)	R _p (R _⊕)	S _p (S _⊕)
011560382-01	OBS	7456.01	0.527686	131.809923	82.9	1.026	11.5	12.4	0.86	5799	0.90	4736.65

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011560382-01	OBS	FP	0.00	0	0	1	1	CENT_FEW_DIFFS—HALO_GHOST—EPHEM_MATCH

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 011560382-01

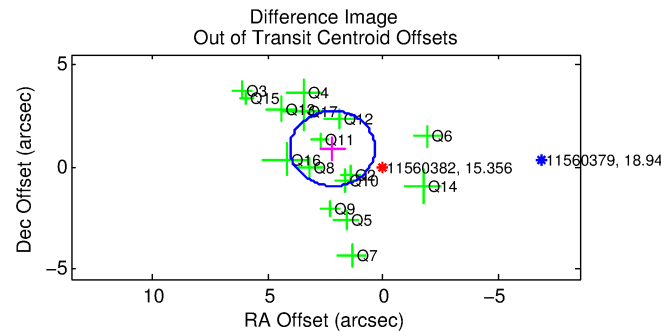
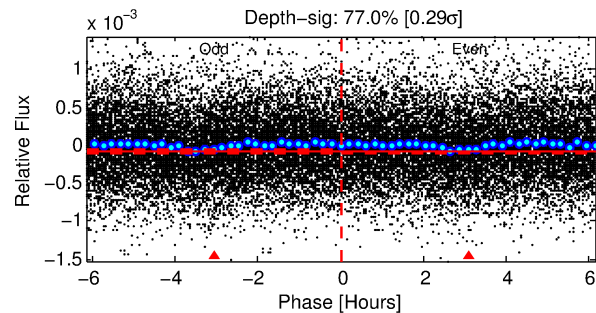
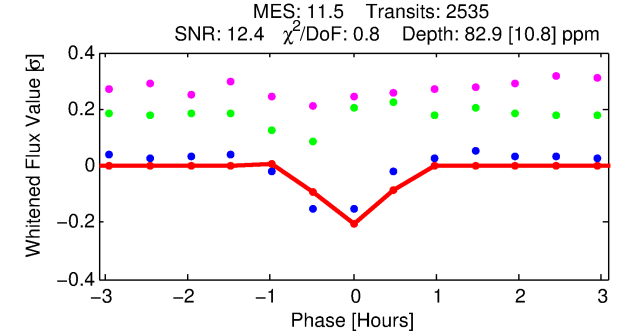
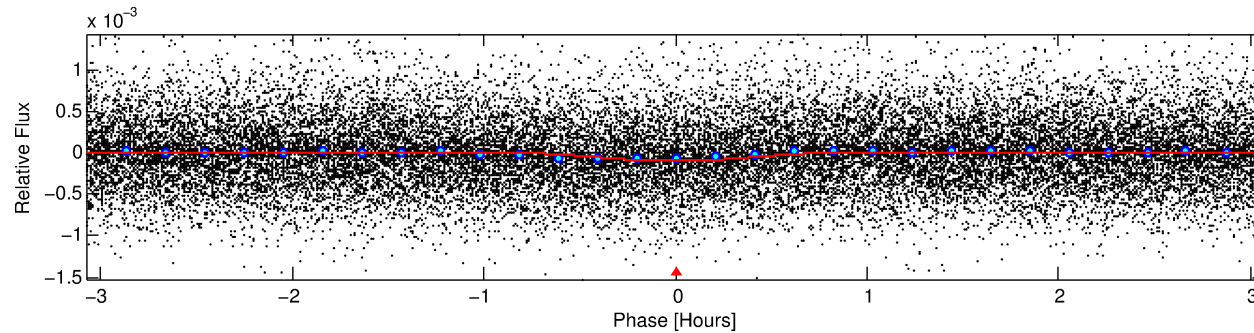
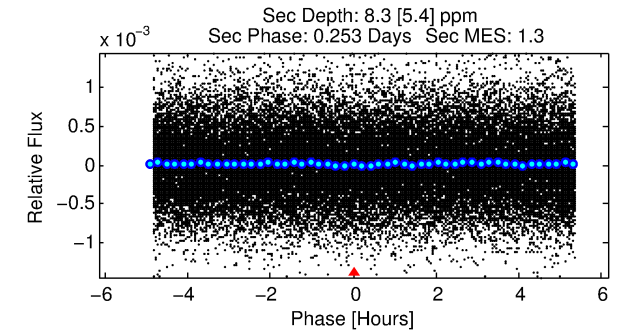
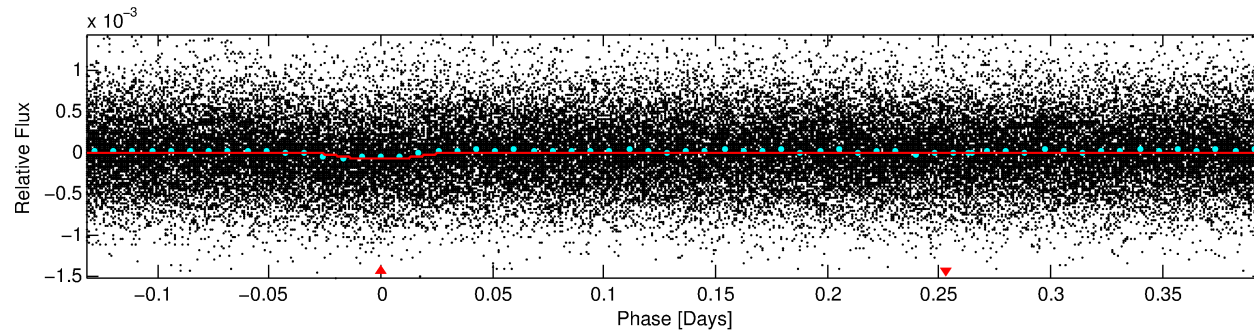
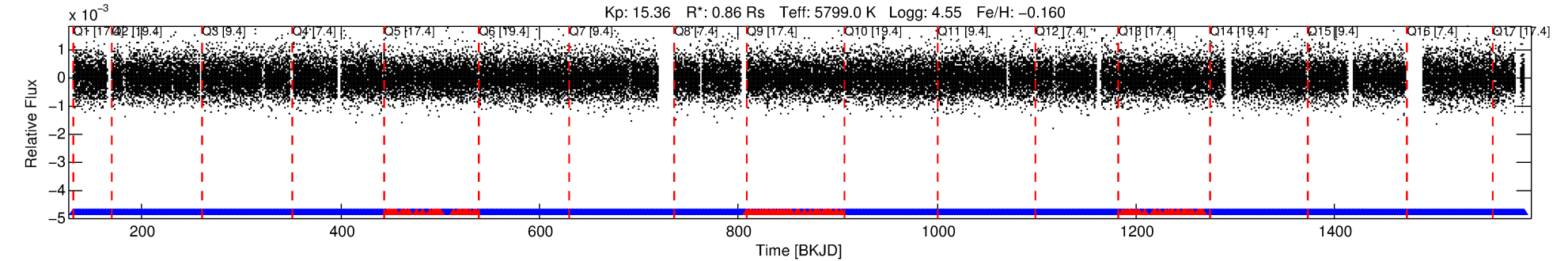
TCE (1)	KIC	Parent (2)	Parent KIC	P ₁ :P ₂	Dist (″)	ΔRow	ΔCol	m ₂	m ₁	D ₂ /D ₁	Mechanism	Flag	σ _P	σ _T
011560382-01	11560382	011560447-pri	11560447	1:1	99.0	-22	12	10.83	15.35	3136.10	Direct-PRF	0	1.65	0.15

Notes: P₁:P₂ is the period ratio. Dist is the distance in arcseconds. ΔRow and ΔCol are the number of pixels apart in row and column. m₂ and m₁ are the magnitudes of the parent and child. D₂/D₁ is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant σ_P < 5.0 and σ_T < 5.0. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 11560382 Candidate: 1 of 1 Period: 0.528 d

KOI: K07456.01 Corr: 0.782



DV Fit Results:

Period = 0.52769 [0.00001] d
Epoch = 131.8099 [0.0015] BKJD
Rp/R* = 0.0095 [0.0033]
a/R* = 2.39 [3.12]
b = 0.84 [0.57]
Seff = 4736.65 [1770.97]
Teq = 2115 [198] K
Rp = 0.89 [0.40] Re
a = 0.0126 [0.0030] AU
Ag = 0.90 [0.91] [-0.11σ]
Teffp = 3186 [757] K [1.37σ]

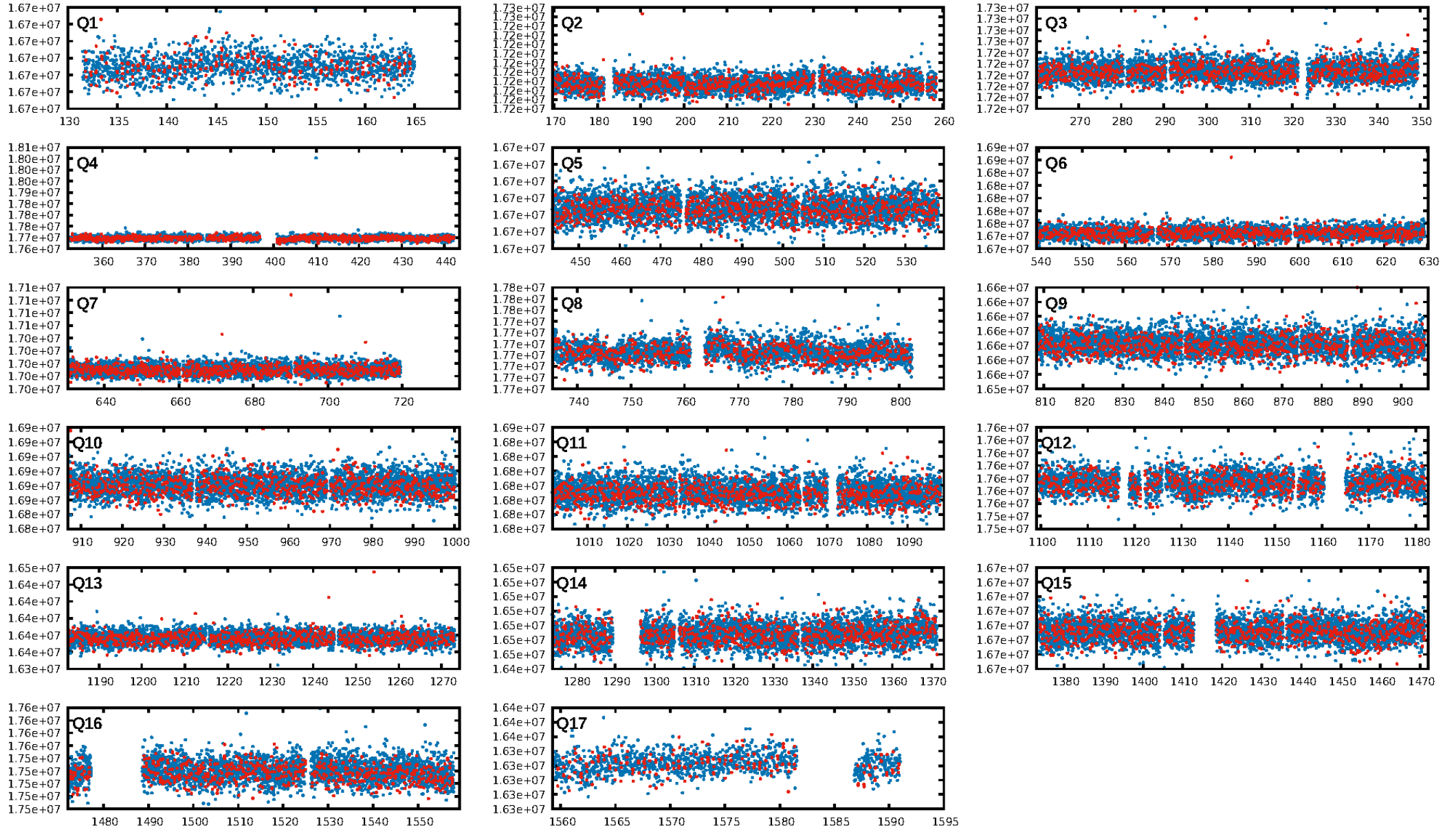
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 5.30e-30
RollingBand-fgt: 0.96 [2317/2422]
GhostDiagnostic-chr: -0.003444
Centroid-sig: 0.2%
Centroid-so: 2.866 arcsec [2.49σ]
OotOffset-rm: 2.368 arcsec [3.86σ]
KicOffset-rm: 2.307 arcsec [3.43σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.06 [1/16]
DiffImageOverlap-fno: 1.00 [17/17]

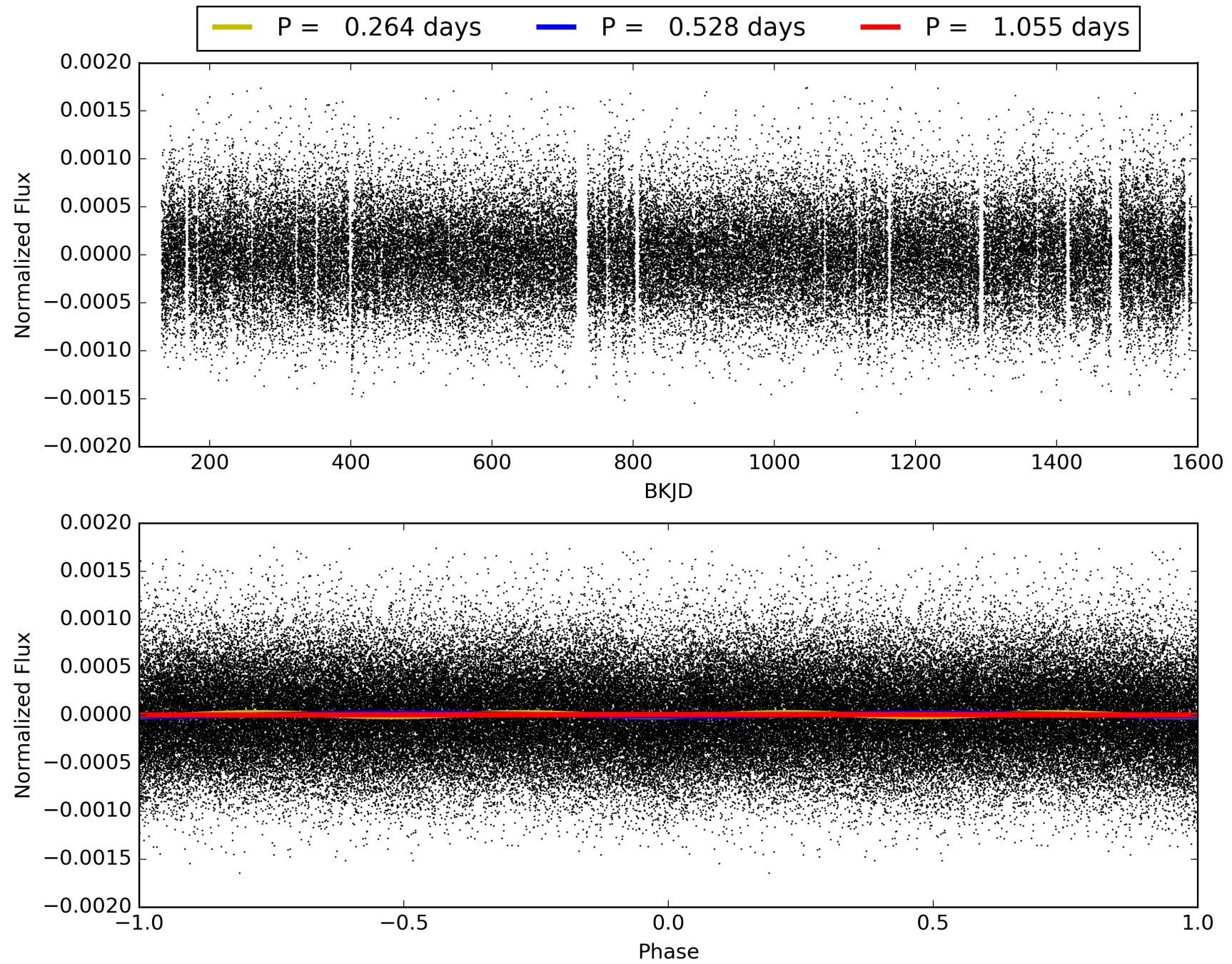
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 11:11:43 Z

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

TCE 011560382-01, PDC Light Curves

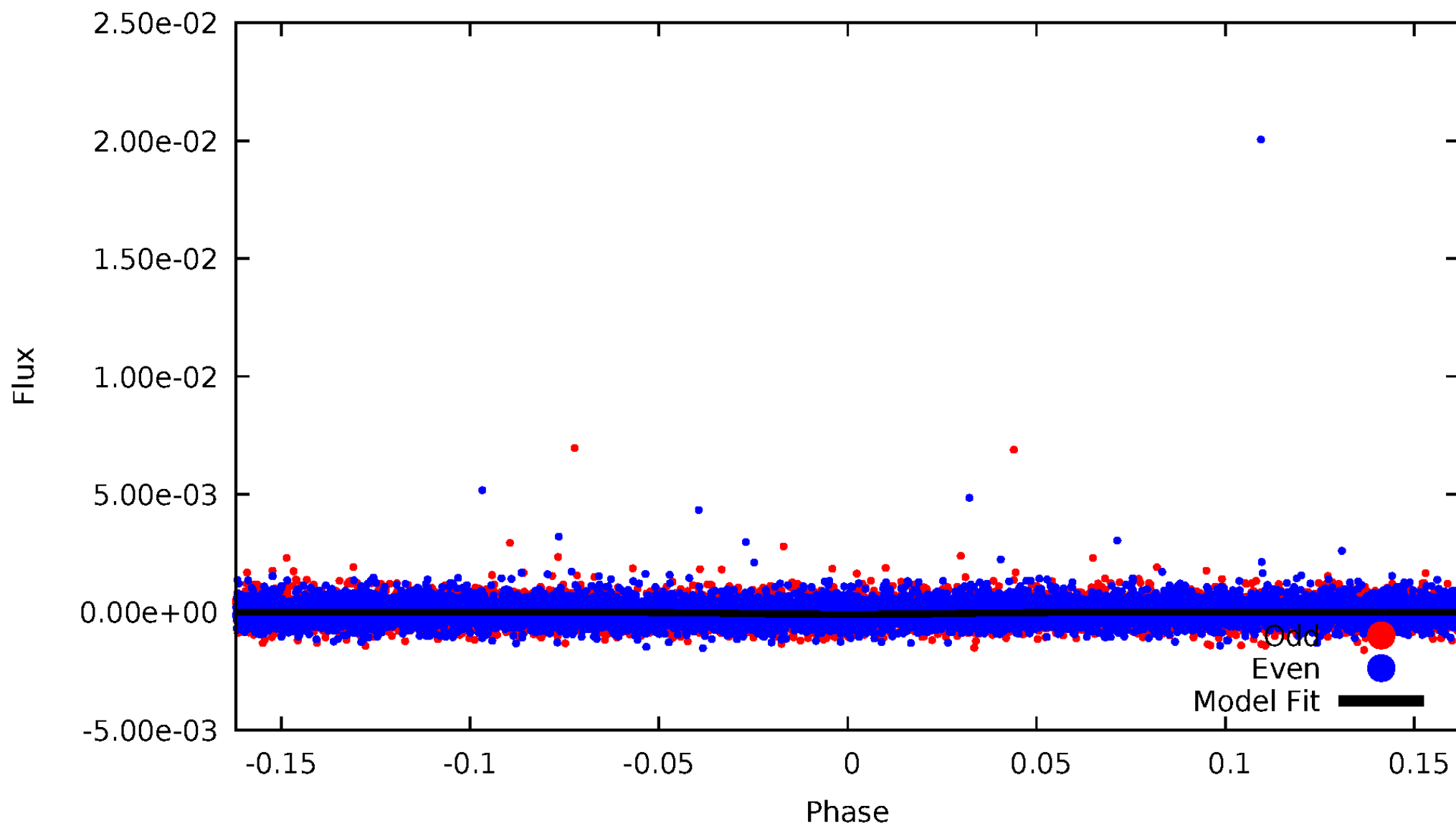


TCE 011560382-01



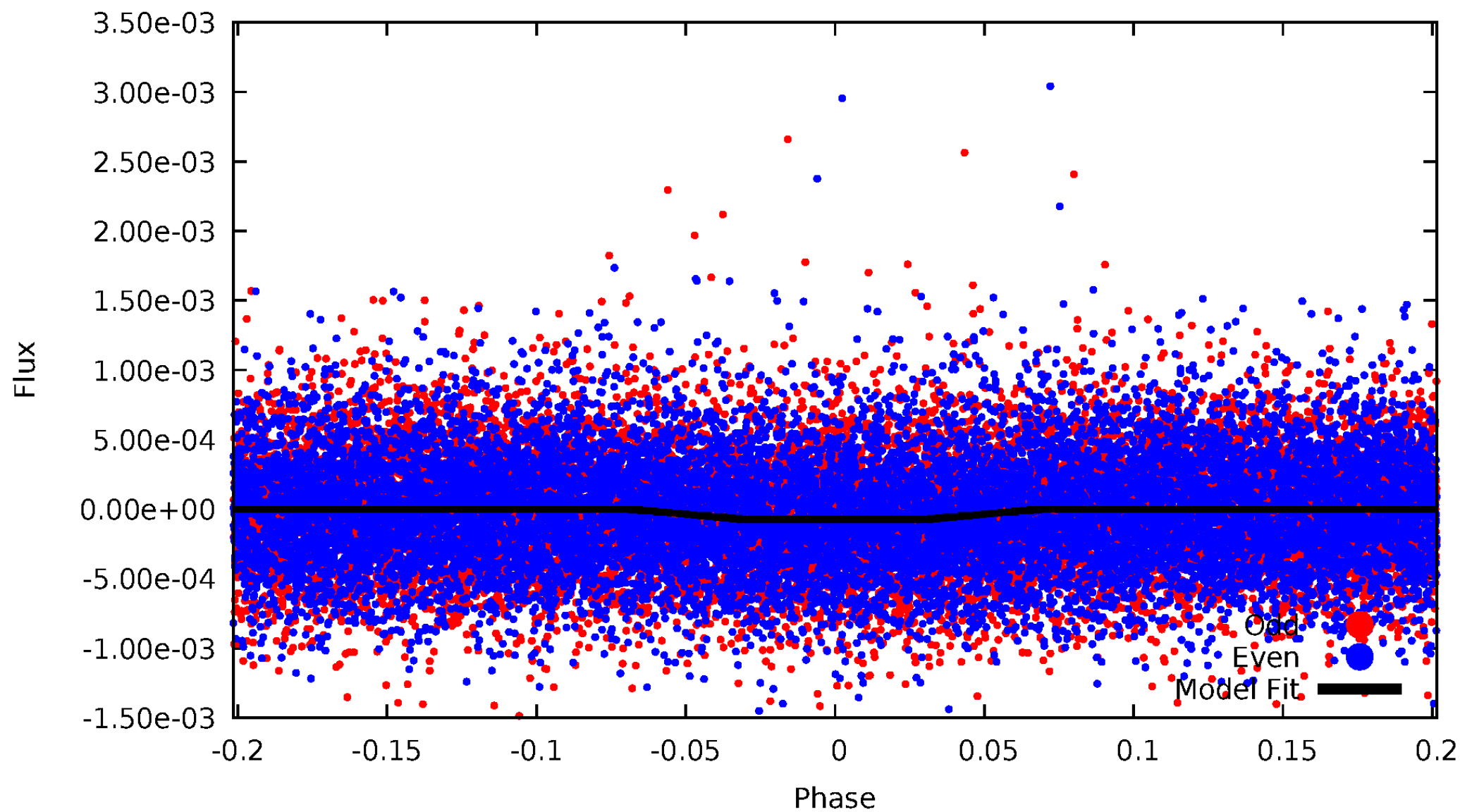
DV Odd/Even

TCE 011560382-01



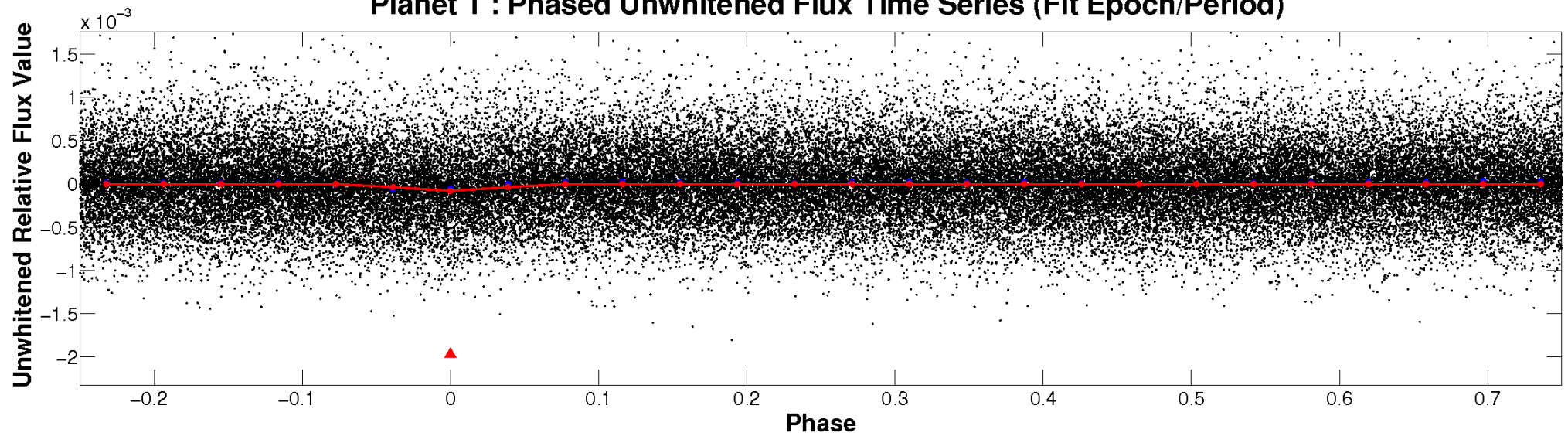
ALT Odd/Even

TCE 011560382-01

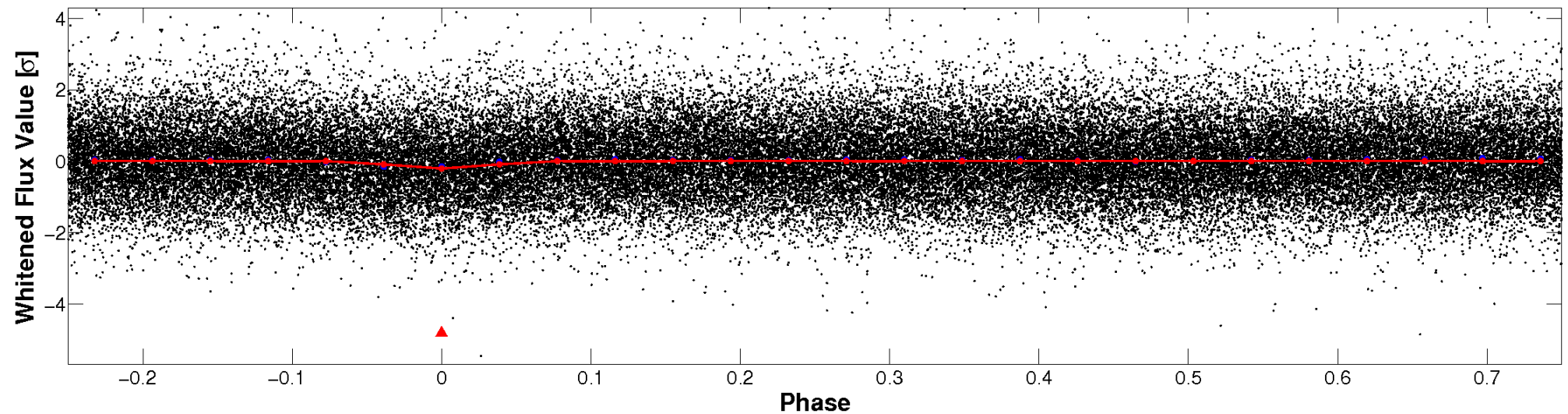


Non-Whitened Vs. Whitened Light Curve

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

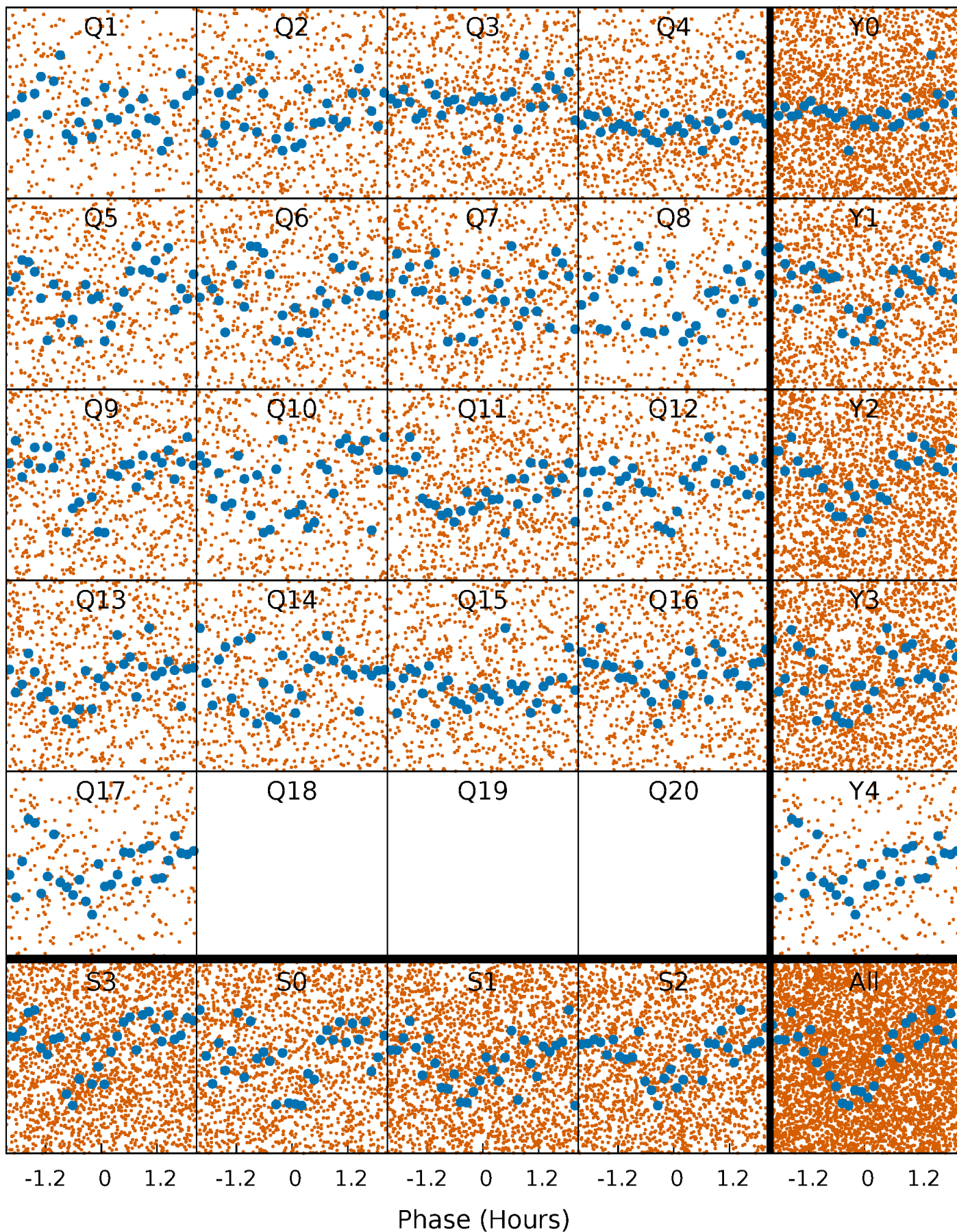


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



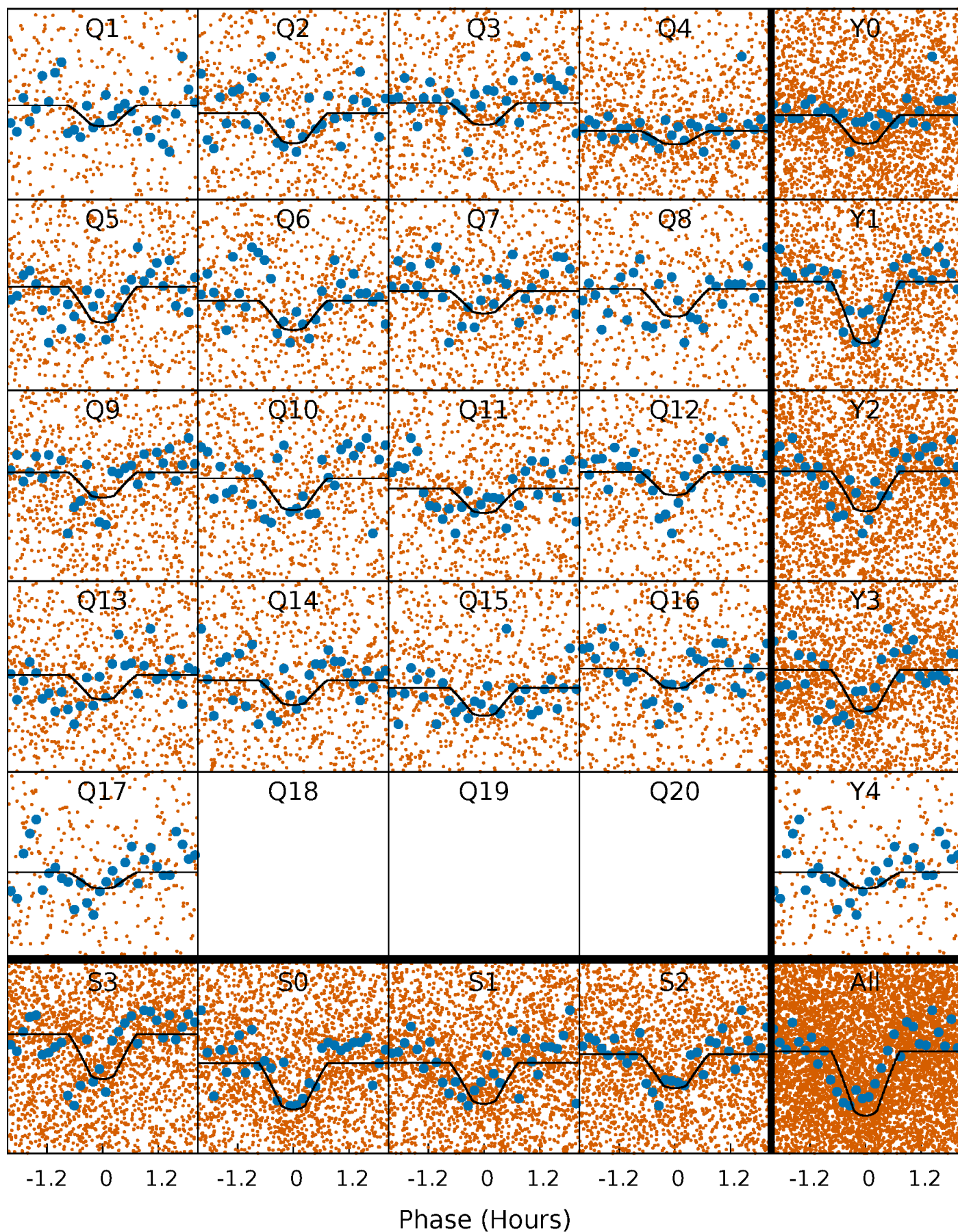
PDC Quarter-Phased Transit Curves

TCE 011560382-01 P= 0.527686 Days $T_0=131.809923$ (BKJD)



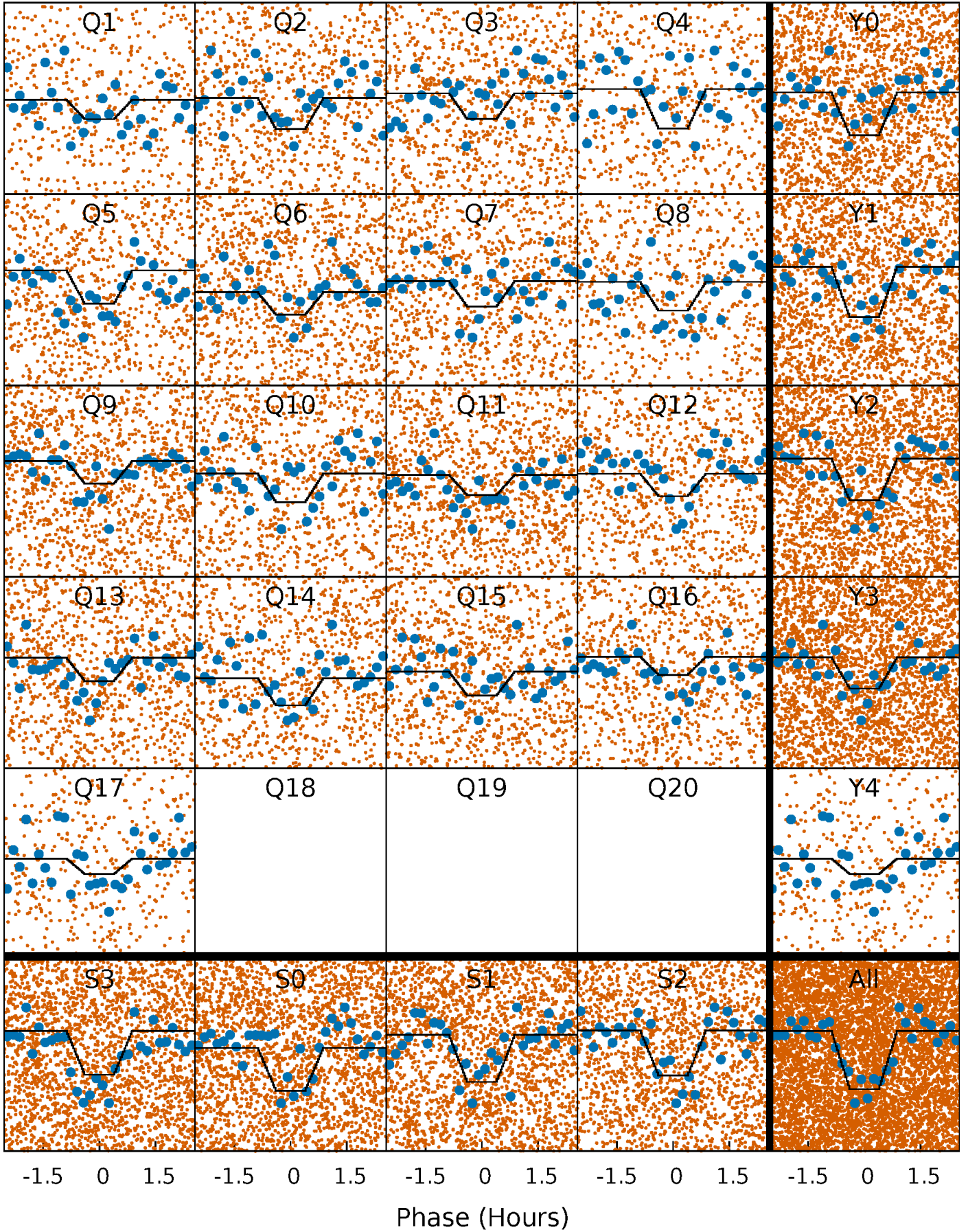
DV Quarter-Phased Transit Curves

TCE 011560382-01 P= 0.527686 Days $T_0=131.809923$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

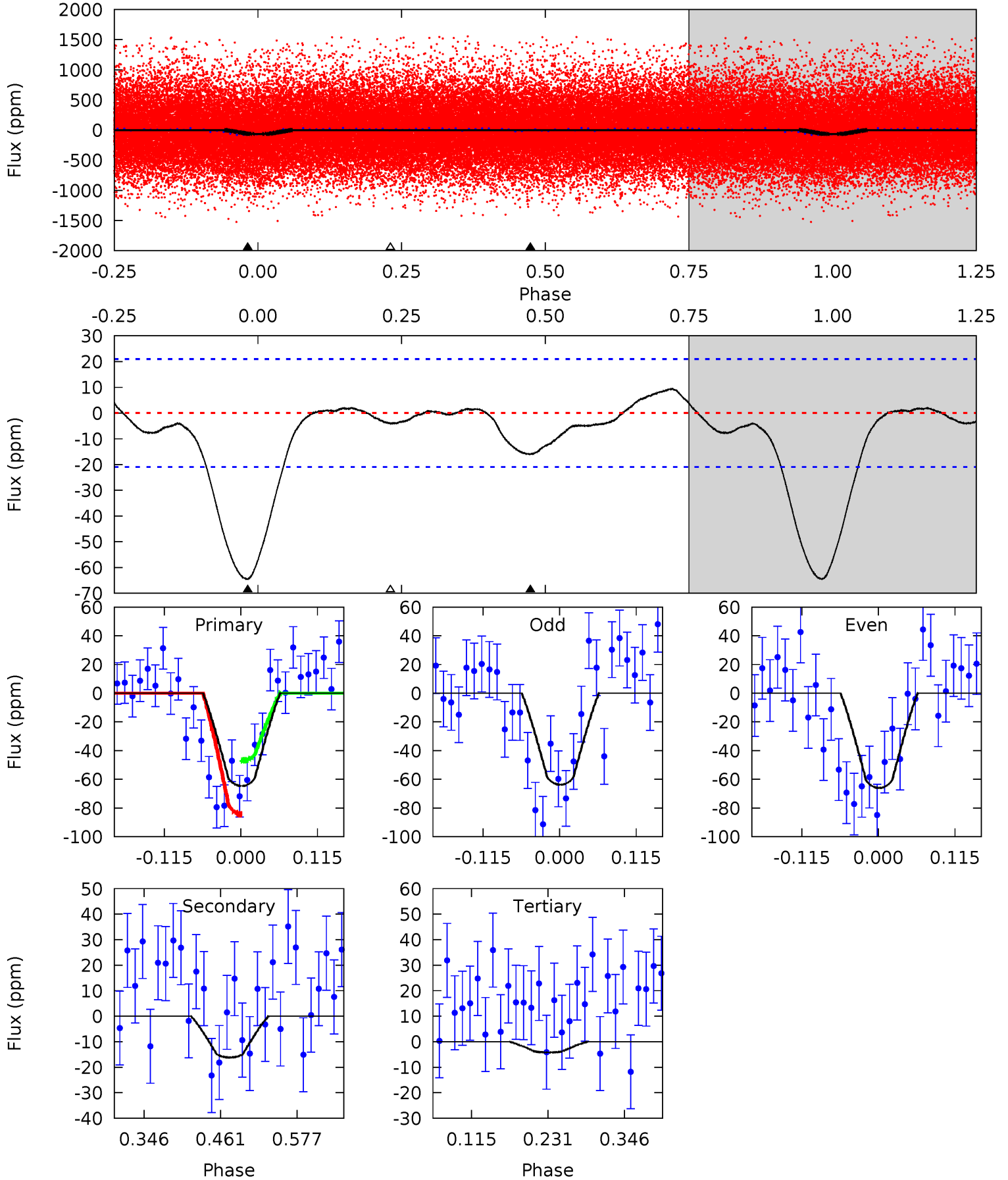
TCE 011560382-01 P= 0.527678 Days $T_0=131.811918$ (BKJD)



DV Model-Shift Uniqueness Test

011560382-01, P = 0.527686 Days, E = 131.282237 Days

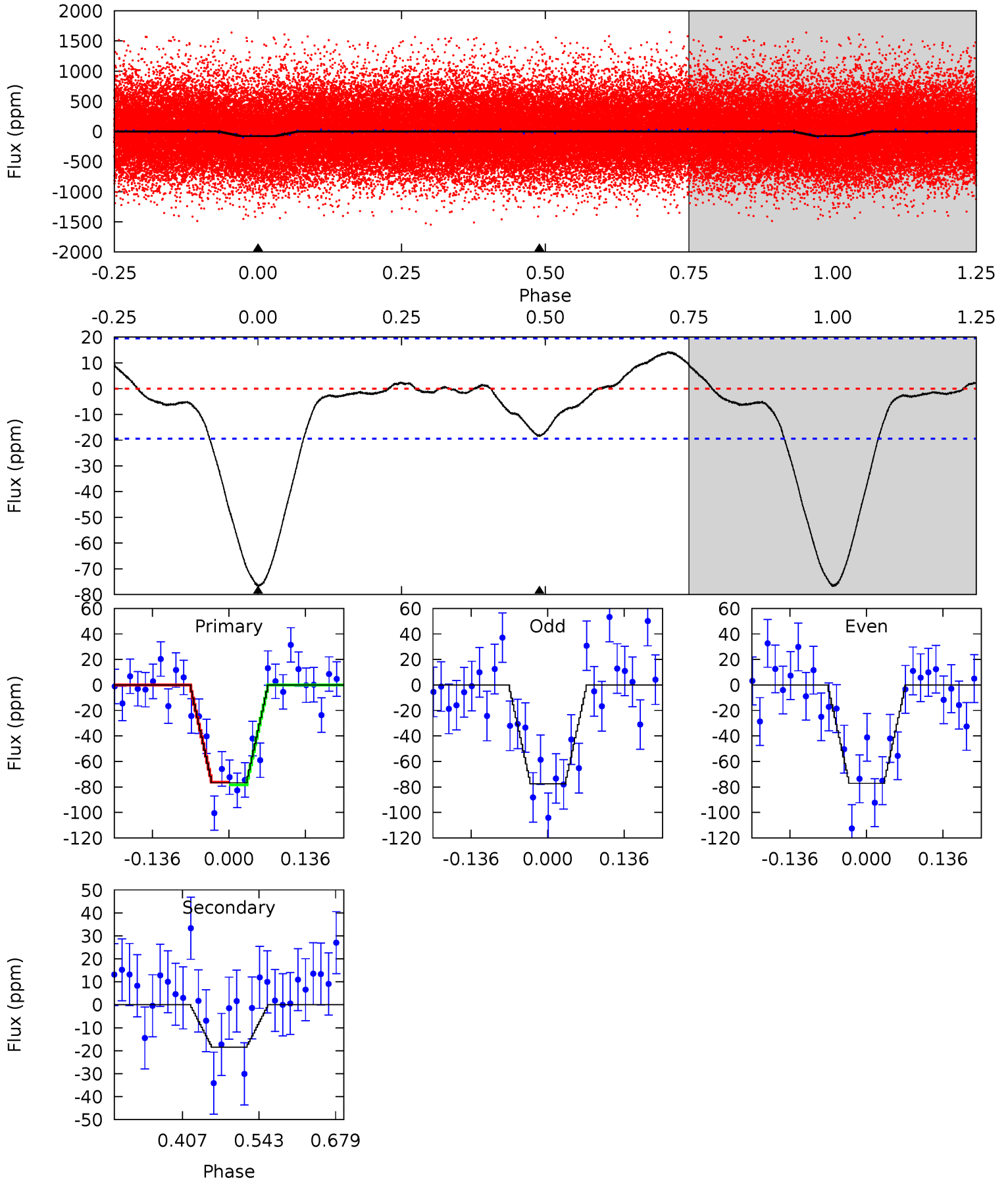
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.0	3.50	0.91	0	4.53	1.57	0.92	13.1	14.0	2.59	3.50	0.24	0.83	0.13	4.07



Alt Model-Shift Uniqueness Test

011560382-01, P = 0.527678 Days, E = 131.284240 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.7	4.27	0	0	4.50	1.49	1.35	17.7	17.7	4.27	4.27	0.04	0.90	0.16	0.25



Stellar Parameters For KIC 011560382

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5799^{+155}_{-172}	$4.548^{+0.035}_{-0.196}$	$-0.160^{+0.300}_{-0.300}$	$0.860^{+0.242}_{-0.081}$	$0.955^{+0.100}_{-0.111}$	$2.112^{+0.388}_{-1.033}$
	+3%/-3%	+1%/-4%	+188%/-188%	+28%/-9%	+10%/-12%	+18%/-49%
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 011560382-01 / KOI 7456.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-16 ± 5	$0.94^{+0.37}_{-0.33}$	3027^{+208}_{-130}	3857^{+854}_{-576}	$1.486^{+2.145}_{-0.763}$
Alt.	-18 ± 4	$0.87^{+0.32}_{-0.33}$	3030^{+191}_{-127}	4168^{+956}_{-565}	$2.031^{+3.319}_{-0.993}$

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 $A_{obs} \gg 1.0$

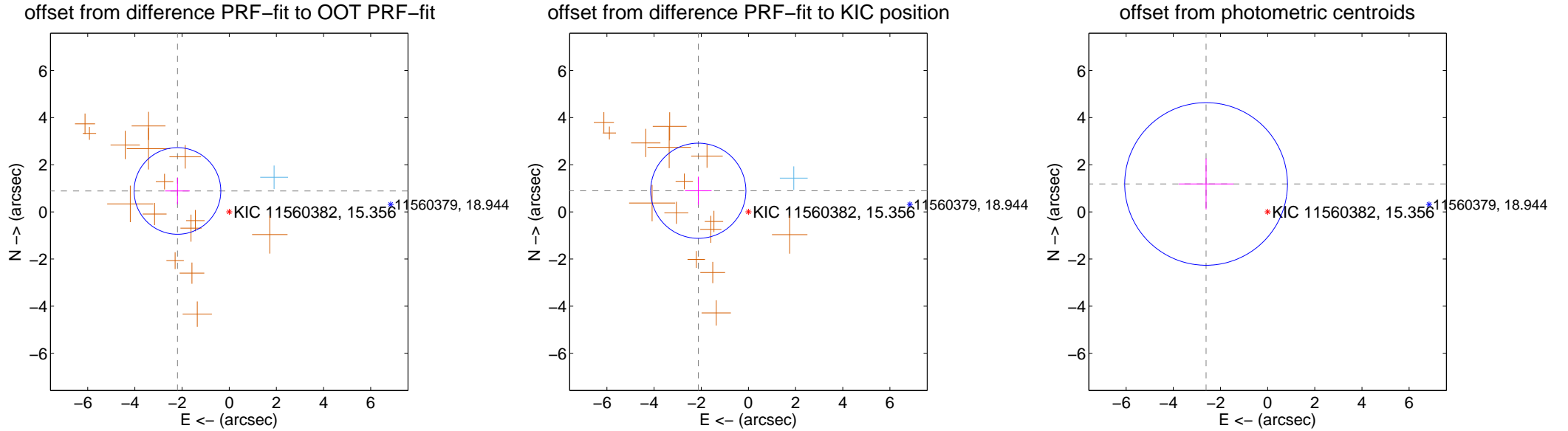
DV Centroid Data

Supplemental centroid analysis for 011560382-01. Kepler magnitude: 15.36. Transit SNR 12.35

There are 1 quarters with good PRF difference image offsets

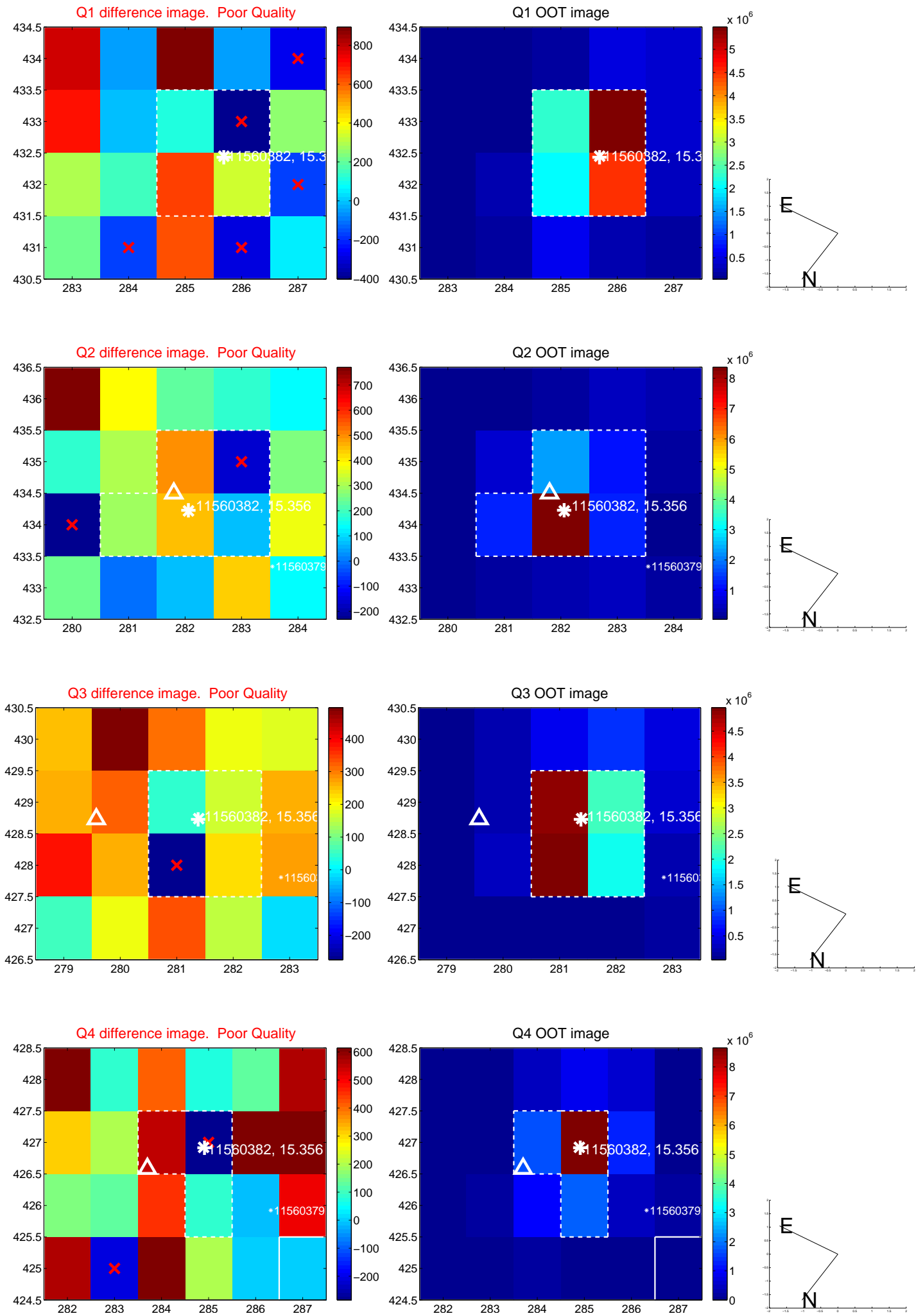
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.368 ± 0.613	3.86	2.195 ± 0.521	0.888 ± 0.559
PRF-fit source offset from KIC position	2.307 ± 0.673	3.43	2.126 ± 0.564	0.897 ± 0.599
photometric centroid source offset	2.87 ± 1.15	2.49	2.61 ± 1.16	1.18 ± 1.08

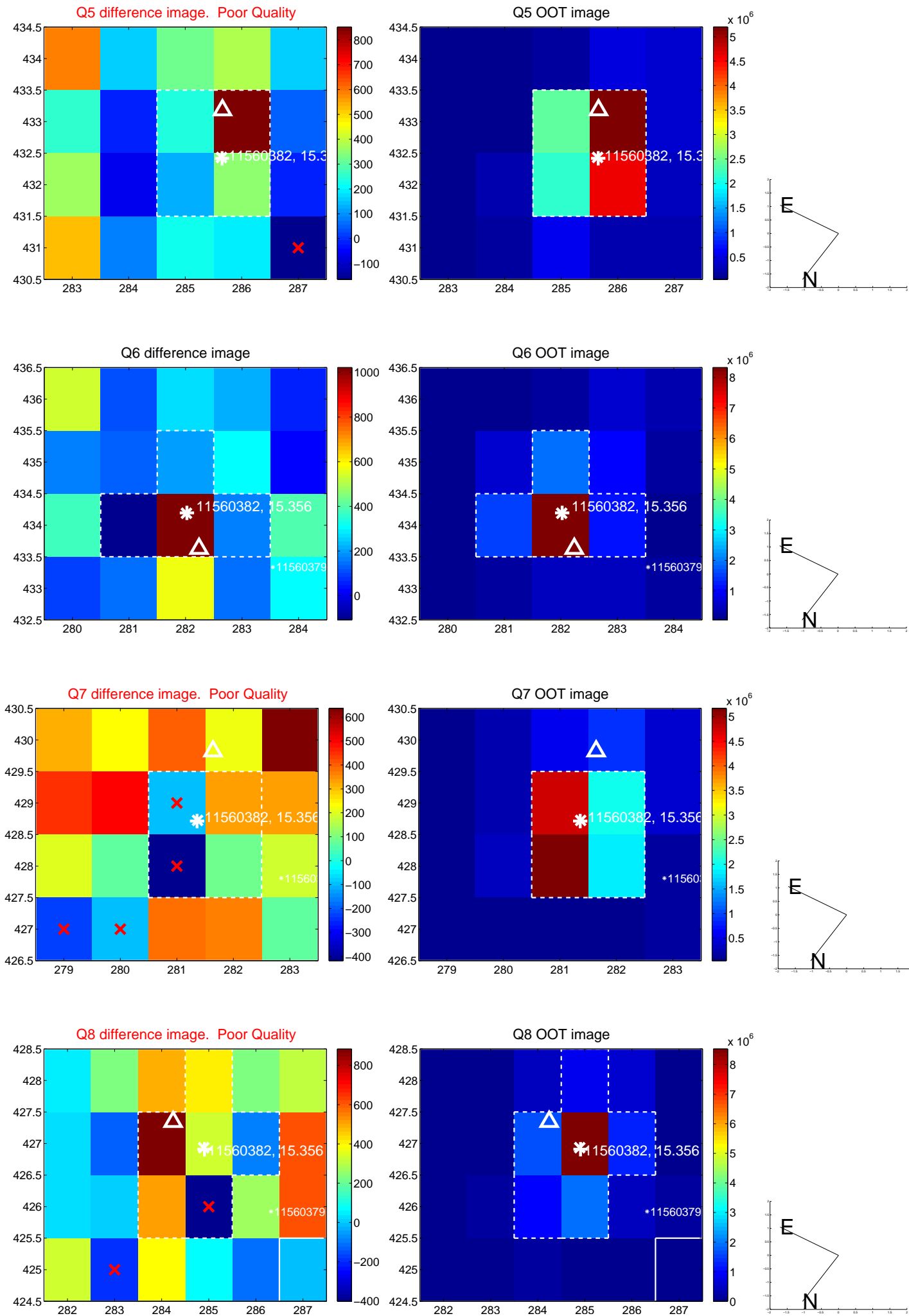


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

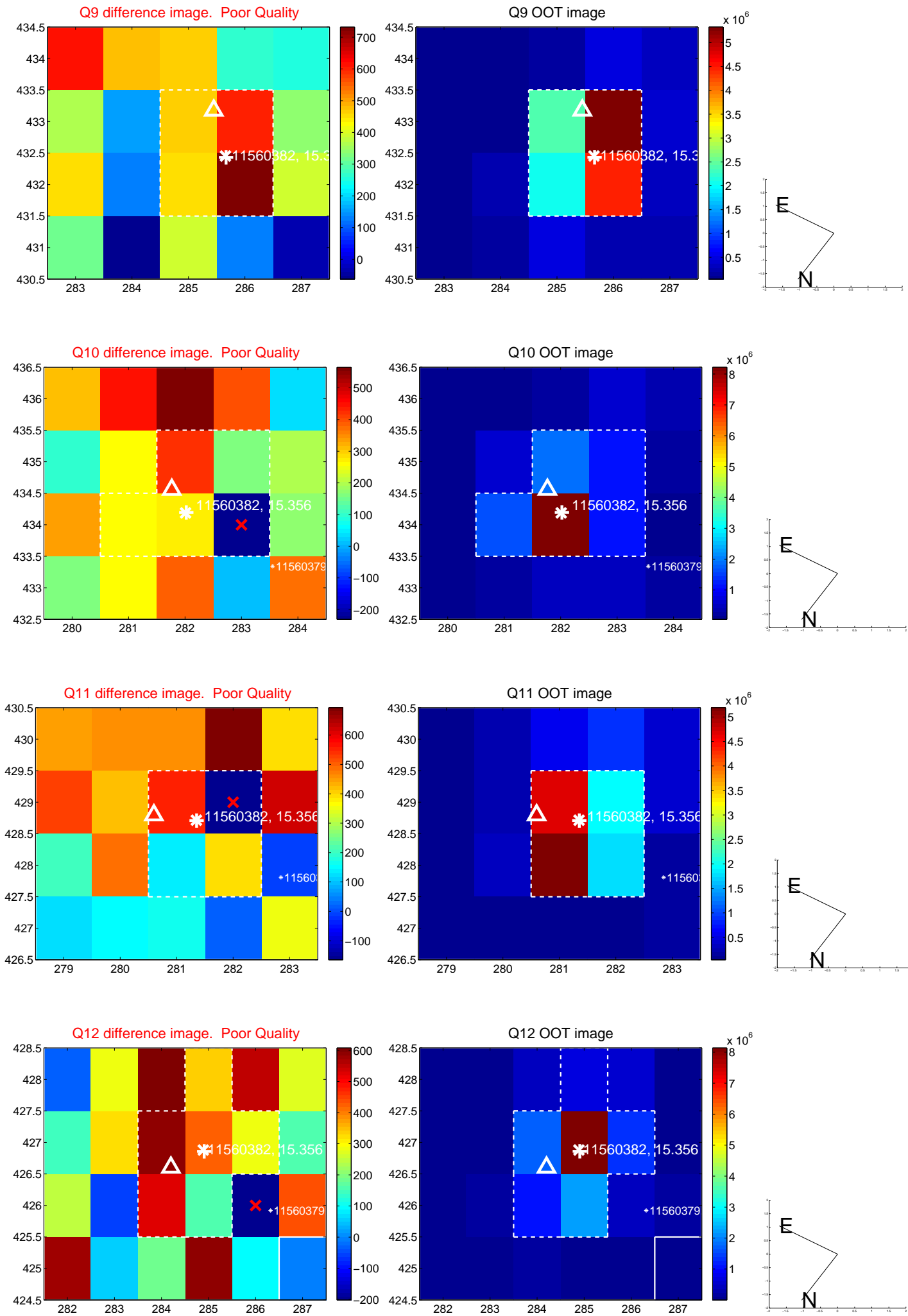
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



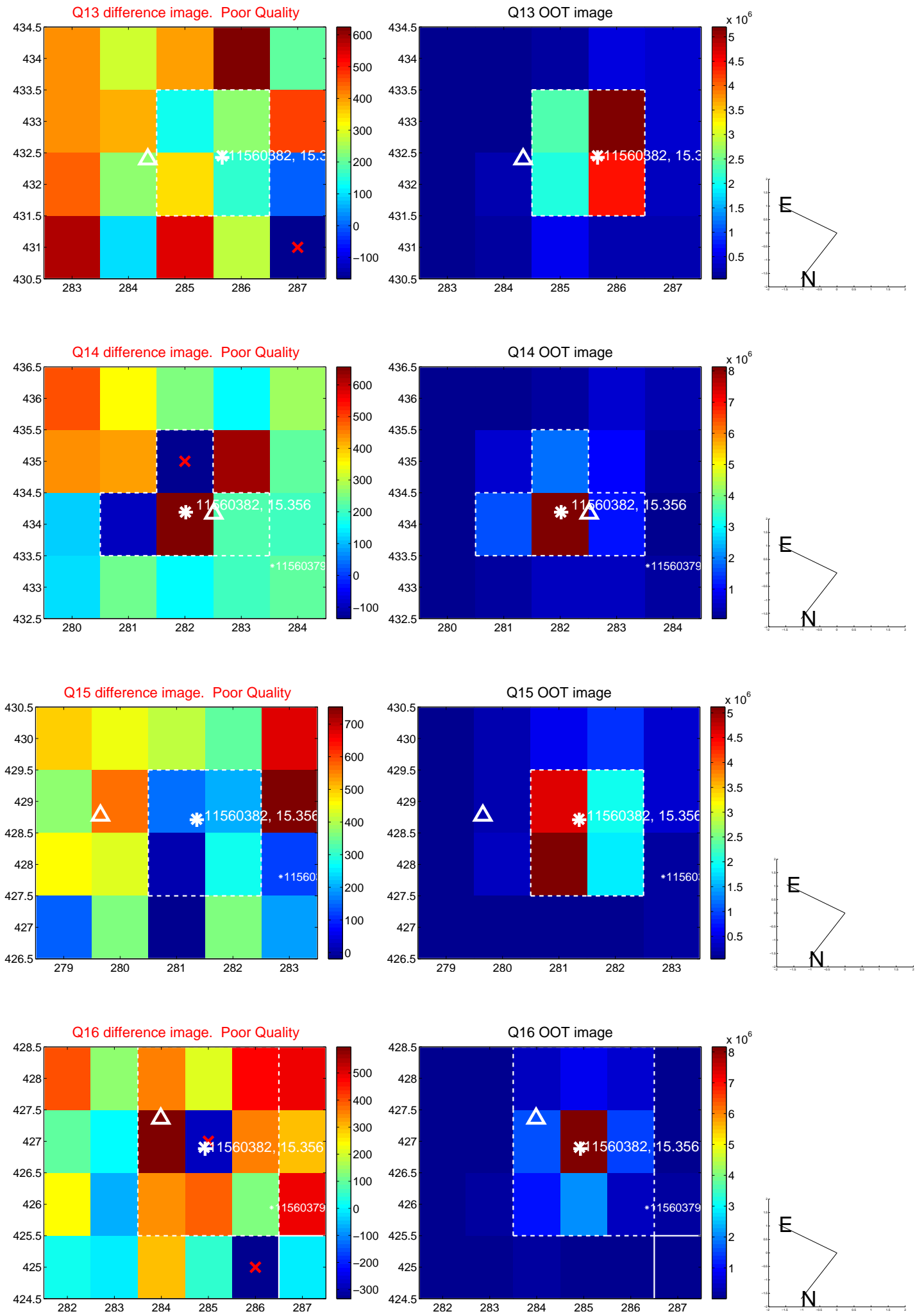
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



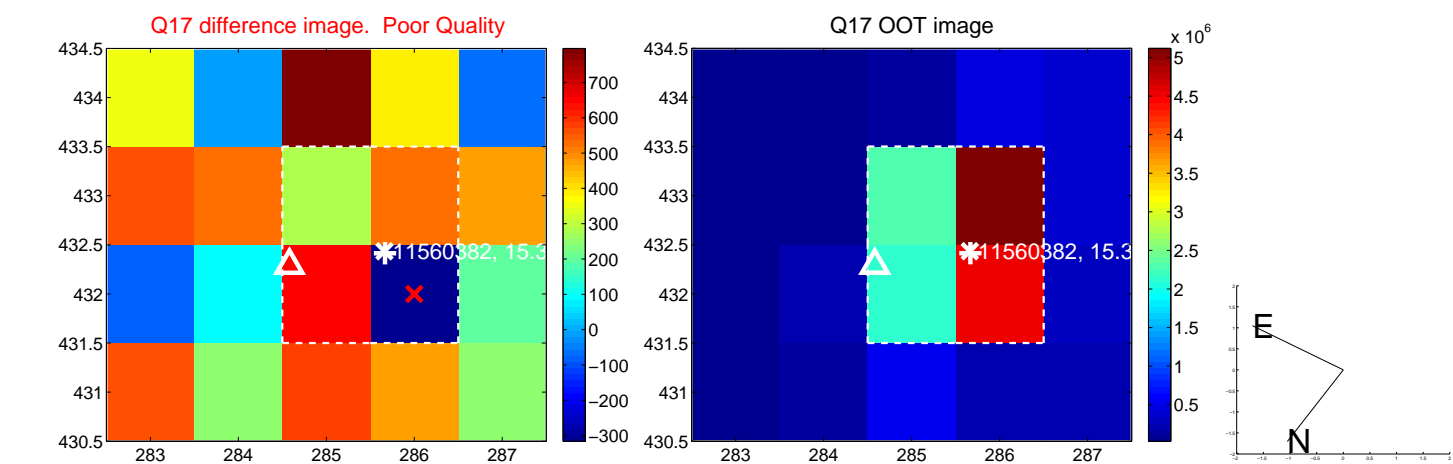
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



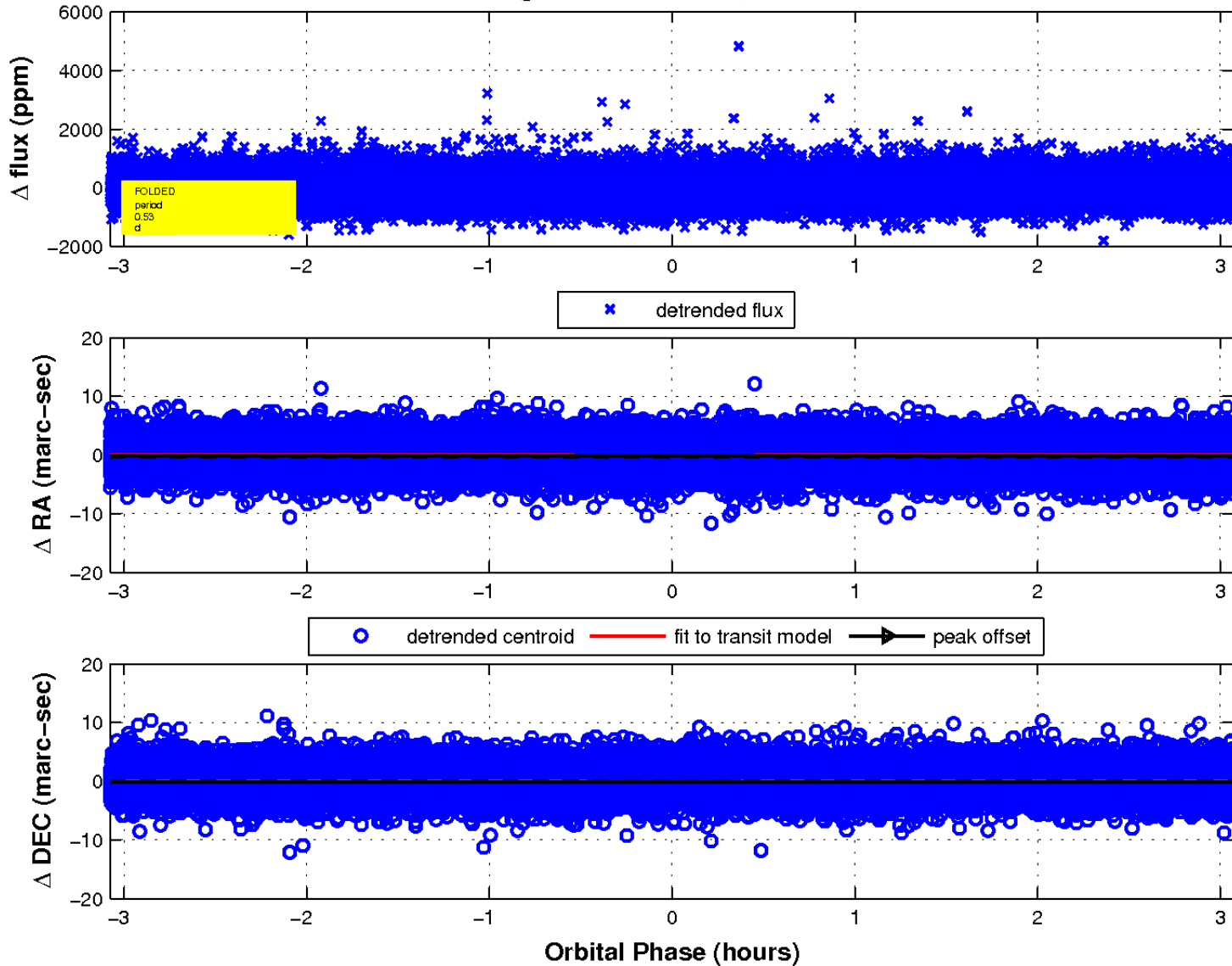
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

