

KIC 007025526

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})
007025526-01	OBS	1380.01	2.148203	132.770624	37.1	1.490	16.2	19.2	0.68	4699	0.51	233.41

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007025526-01	OBS	FP	0.00	0	1	1	1	MOD_SEC_DV—MOD_SEC_ALT—CENT_RESOLVED_OFFSET—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 007025526-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
007025526-01	7025526	3550.01	7025540	1:1	16.2	1	4	15.78	11.74	14328.00	Direct-PRF	0	0.51	0.20

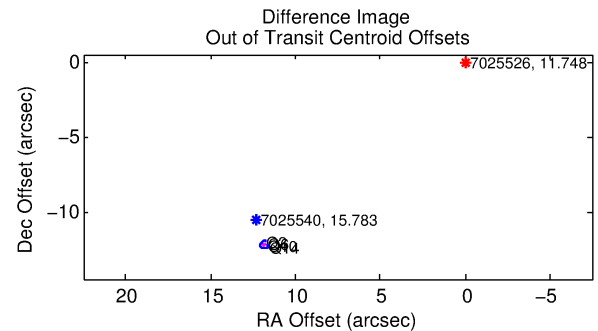
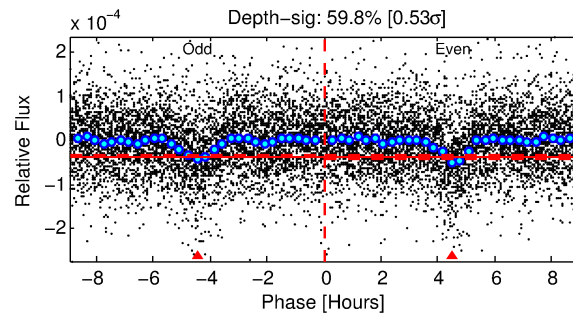
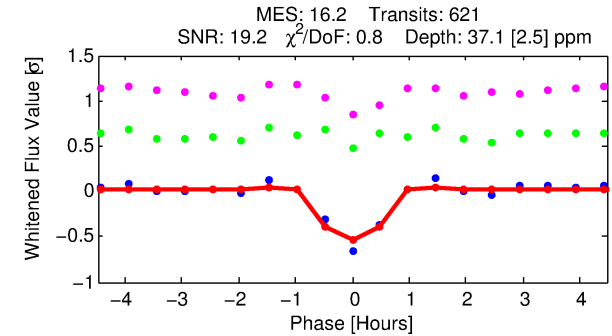
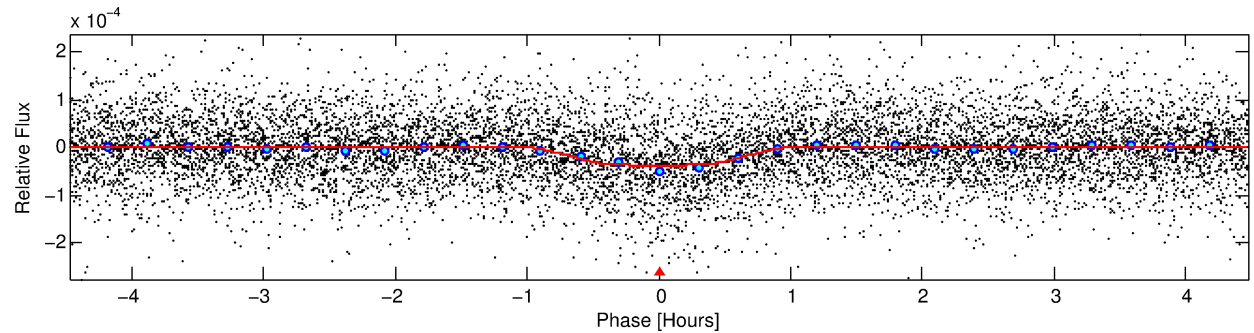
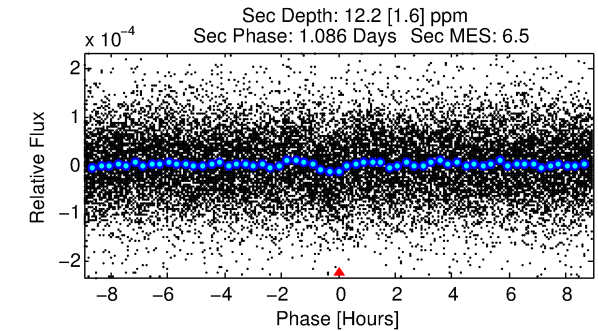
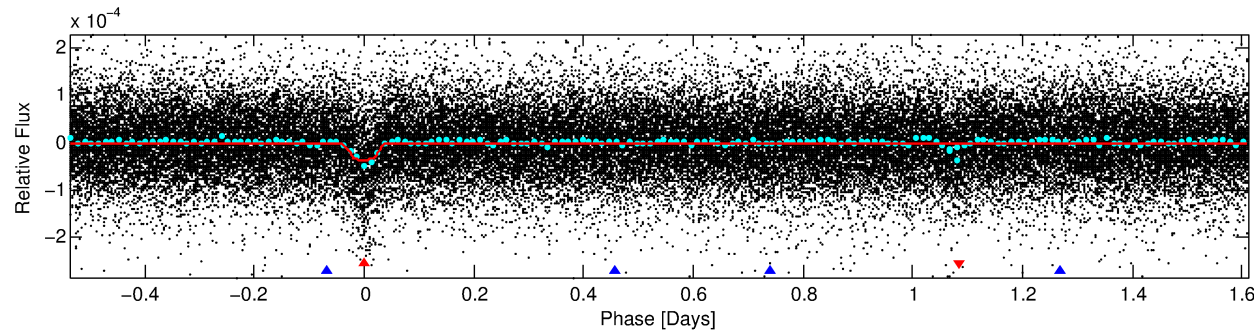
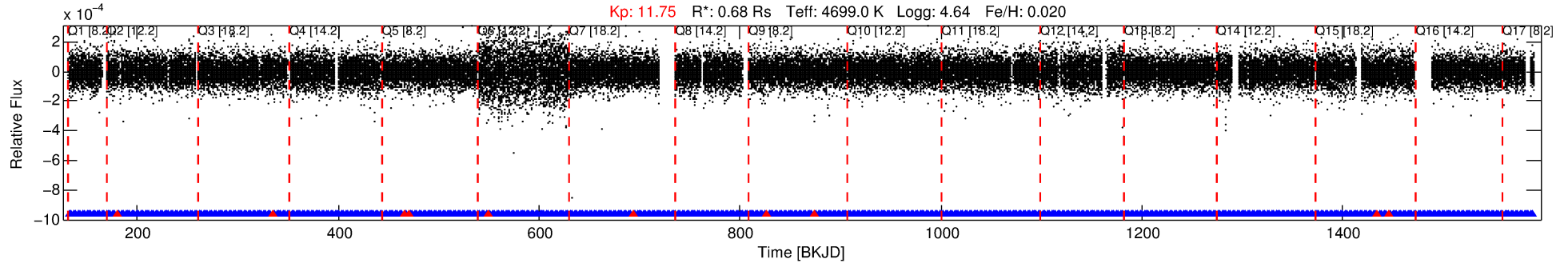
Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. 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: 7025526 Candidate: 1 of 2 Period: 2.148 d

KOI: K01380 Corr: No Ephemeris Match

Kp: 11.75 R*: 0.68 Rs Teff: 4699.0 K Logg: 4.64 Fe/H: 0.020



DV Fit Results:

Period = 2.14820 [0.00001] d
Epoch = 132.7706 [0.0012] BKJD
Rp/R* = 0.0069 [0.0022]
a/R* = 5.06 [5.98]
b = 0.90 [0.27]
Seff = 233.41 [26.22]
Teq = 997 [28] K
Rp = 0.51 [0.17] Re
a = 0.0292 [0.0018] AU
Ag = 22.35 [14.80] [1.44σ]
Teff = 3351 [553] K [4.25σ]

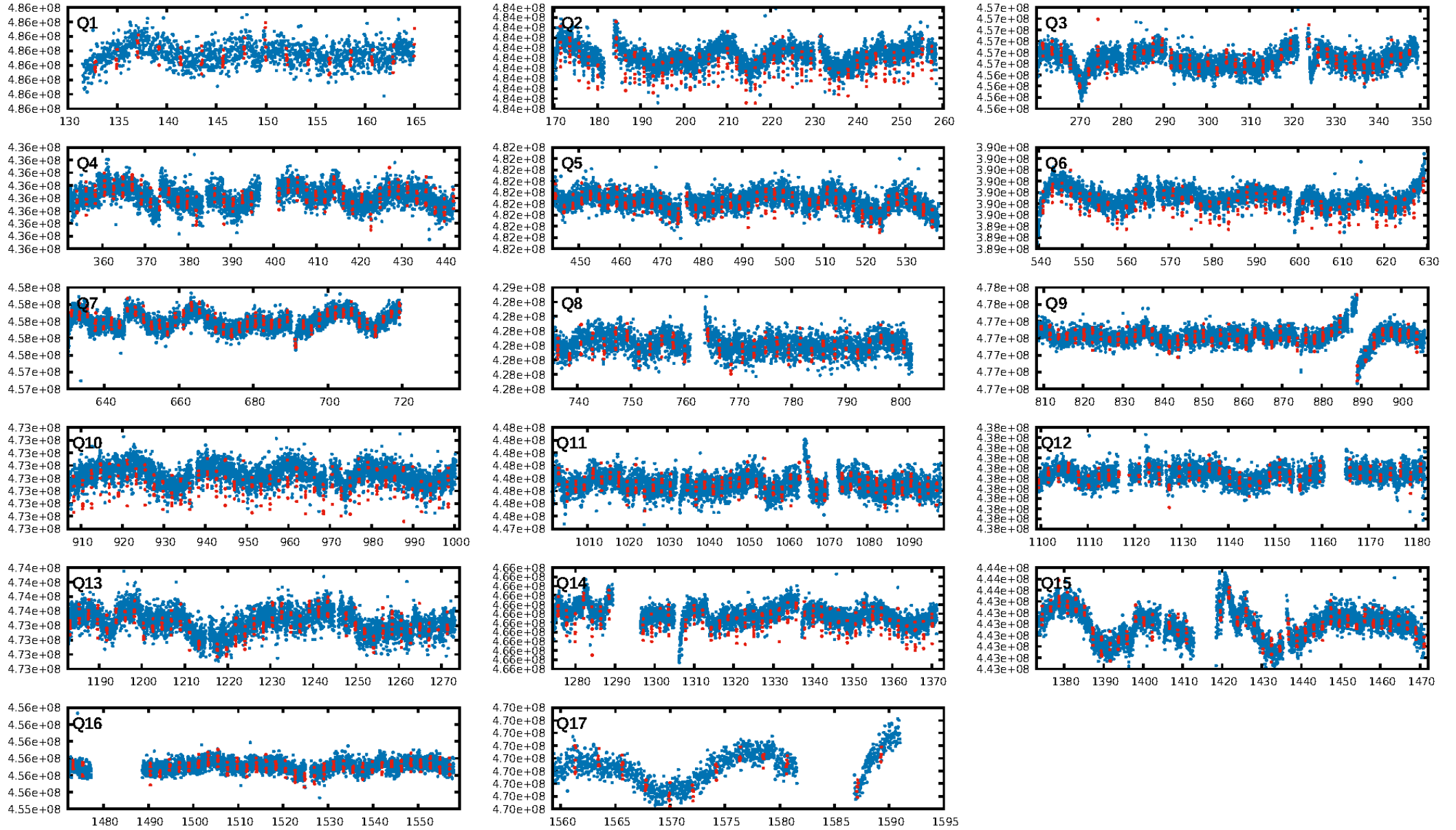
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [315.85σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGoF-sig: N/A
Bootstrap-pfa: 2.88e-56
RollingBand-fgt: 0.98 [583/593]
GhostDiagnostic-chr: -0.1302
Centroid-sig: N/A
Centroid-so: 135.417 arcsec [243.32σ]
OotOffset-rm: 17.035 arcsec [201.54σ]
KicOffset-rm: 16.315 arcsec [235.97σ]
OotOffset-st: 4/0/0/0 [4]
KicOffset-st: 4/0/0/0 [4]
DiffImageQuality-fgm: 1.00 [4/4]
DiffImageOverlap-fno: 1.00 [17/17]

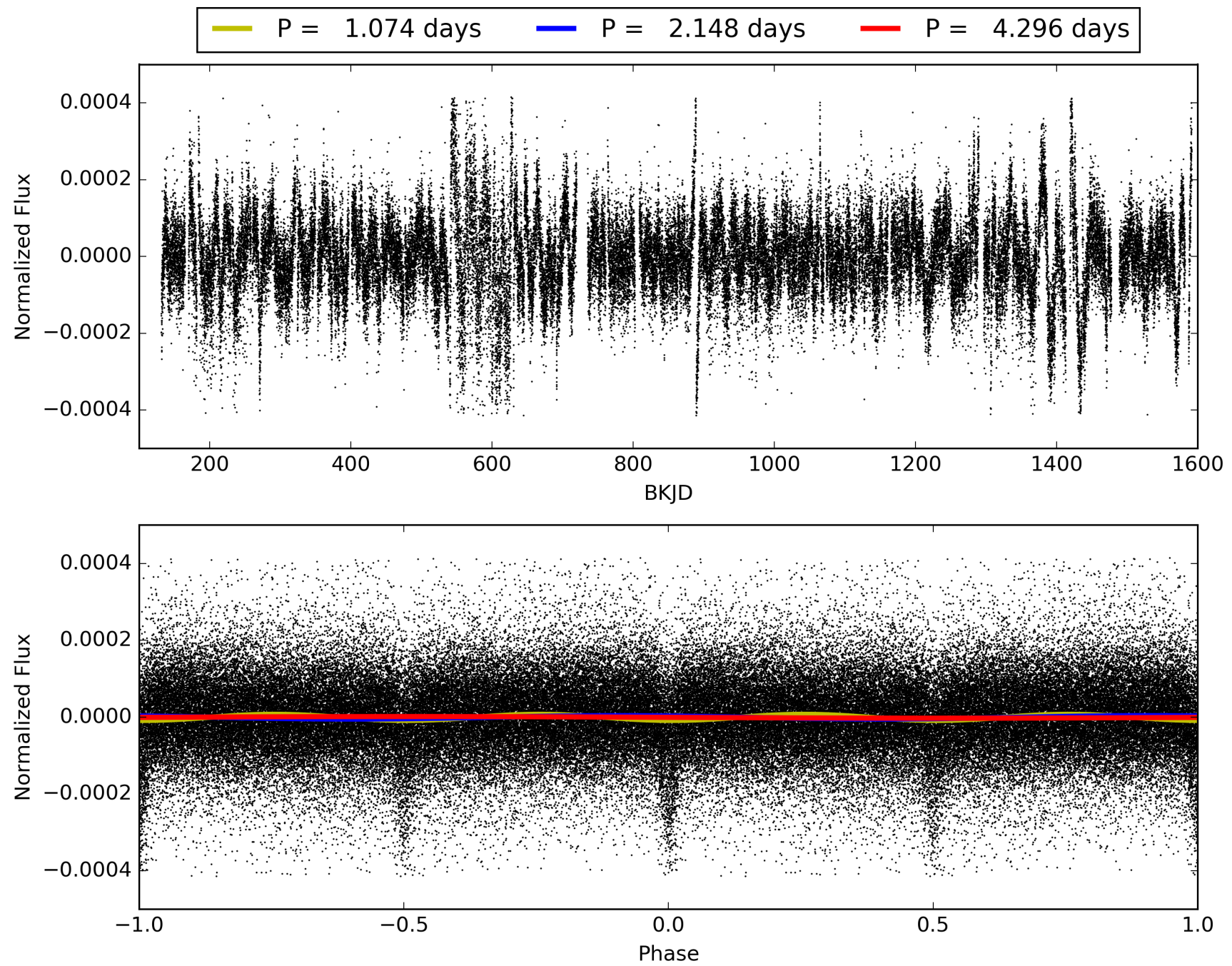
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 04:59:24 Z

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

TCE 007025526-01, PDC Light Curves

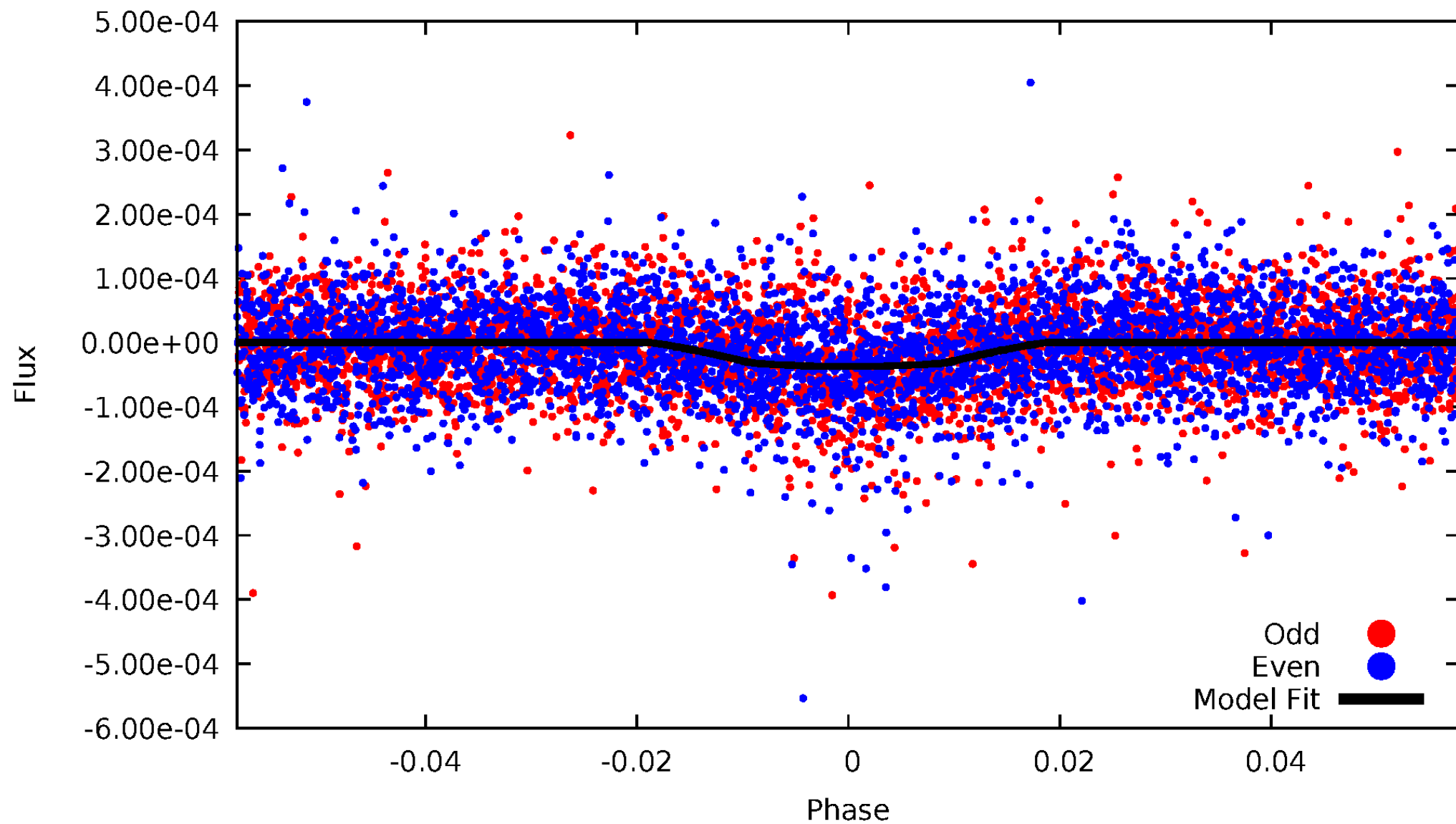


TCE 007025526-01



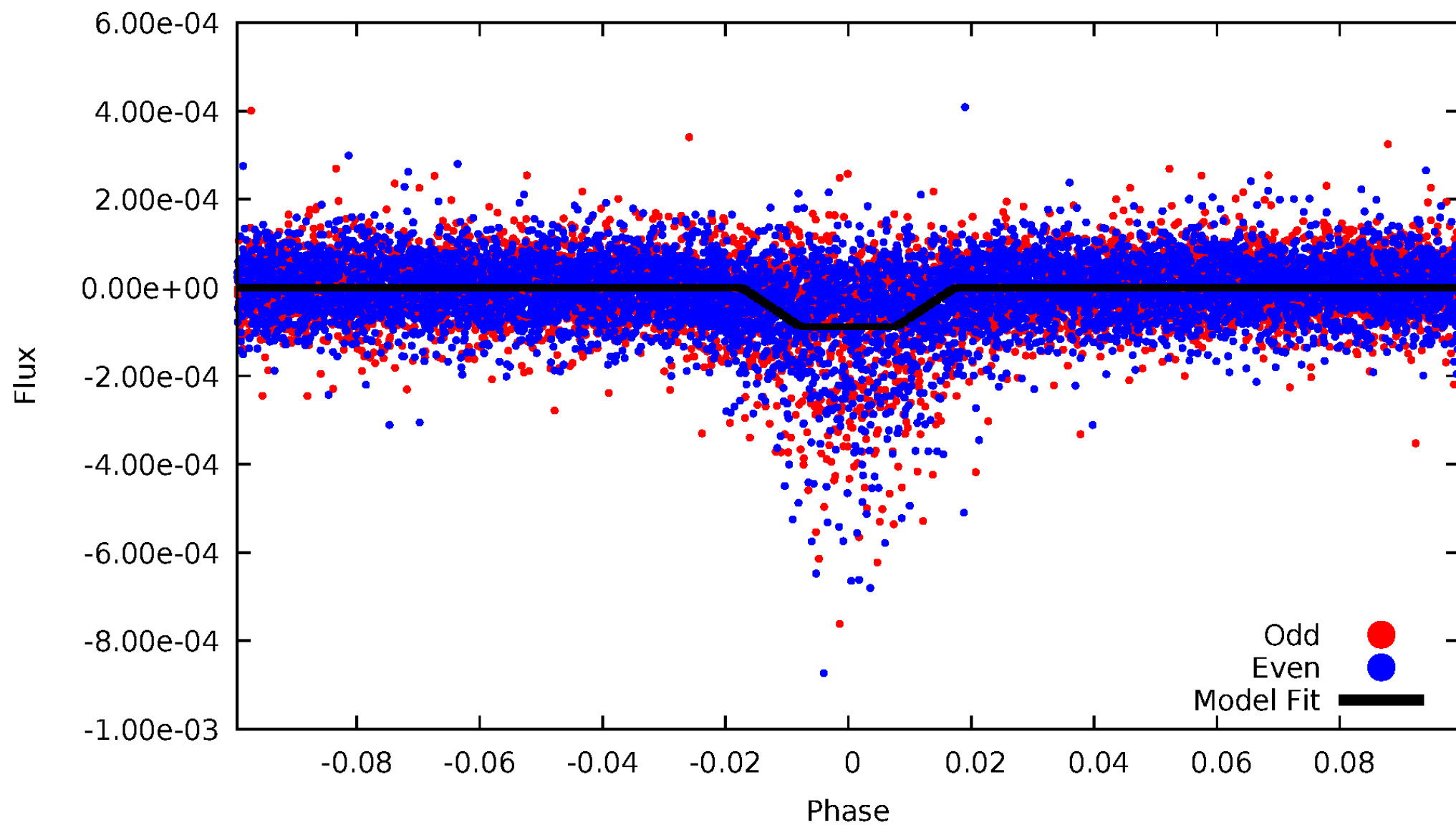
DV Odd/Even

TCE 007025526-01



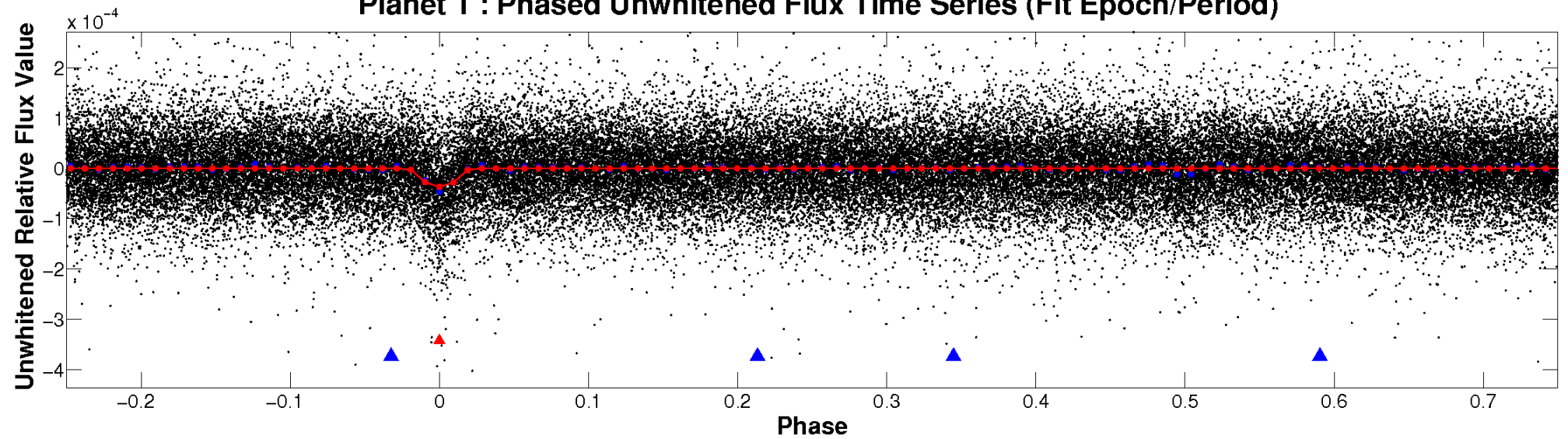
ALT Odd/Even

TCE 007025526-01

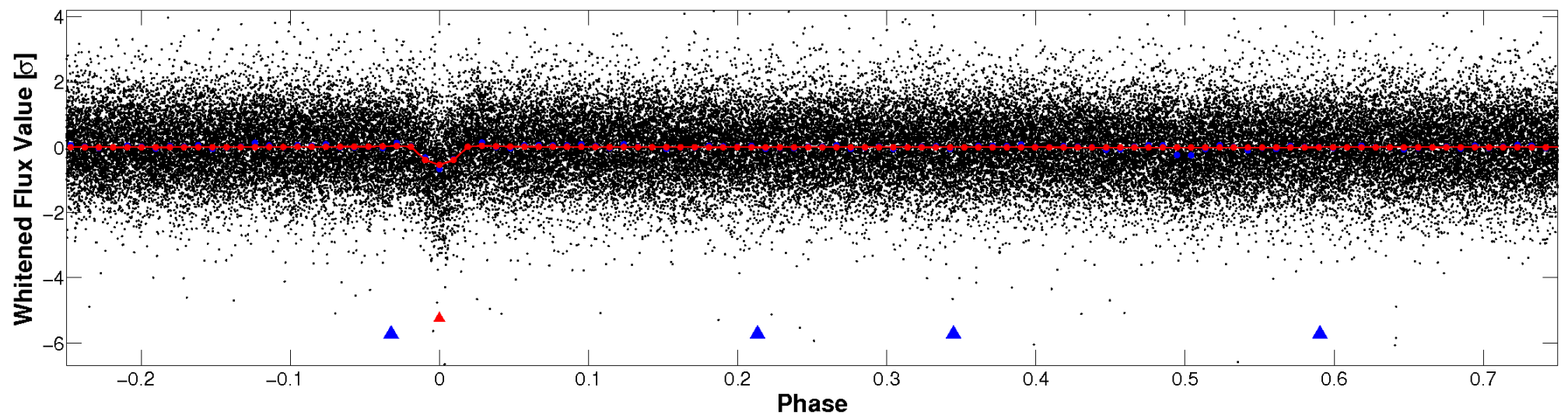


Non-Whitened Vs. Whitened Light Curve

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

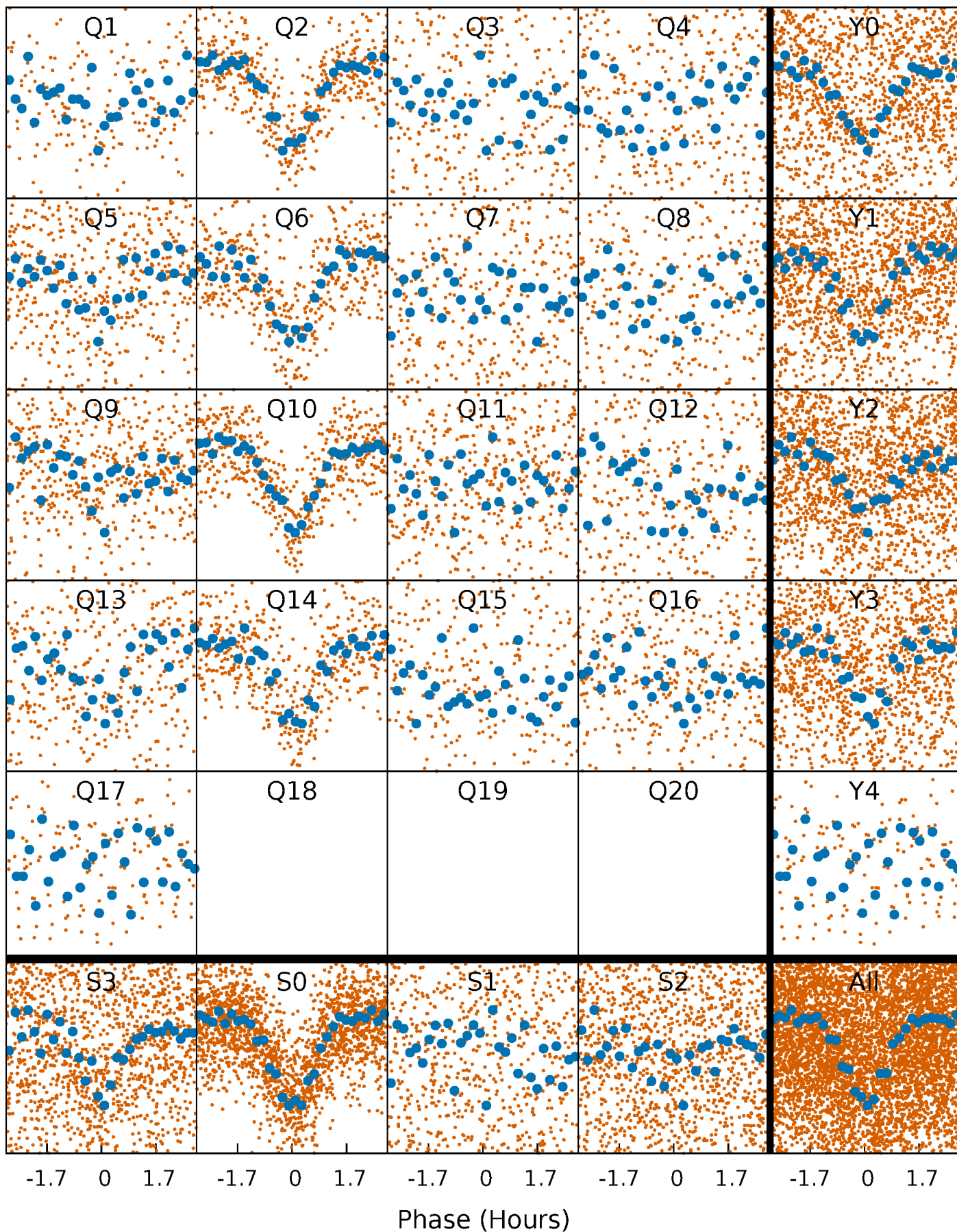


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



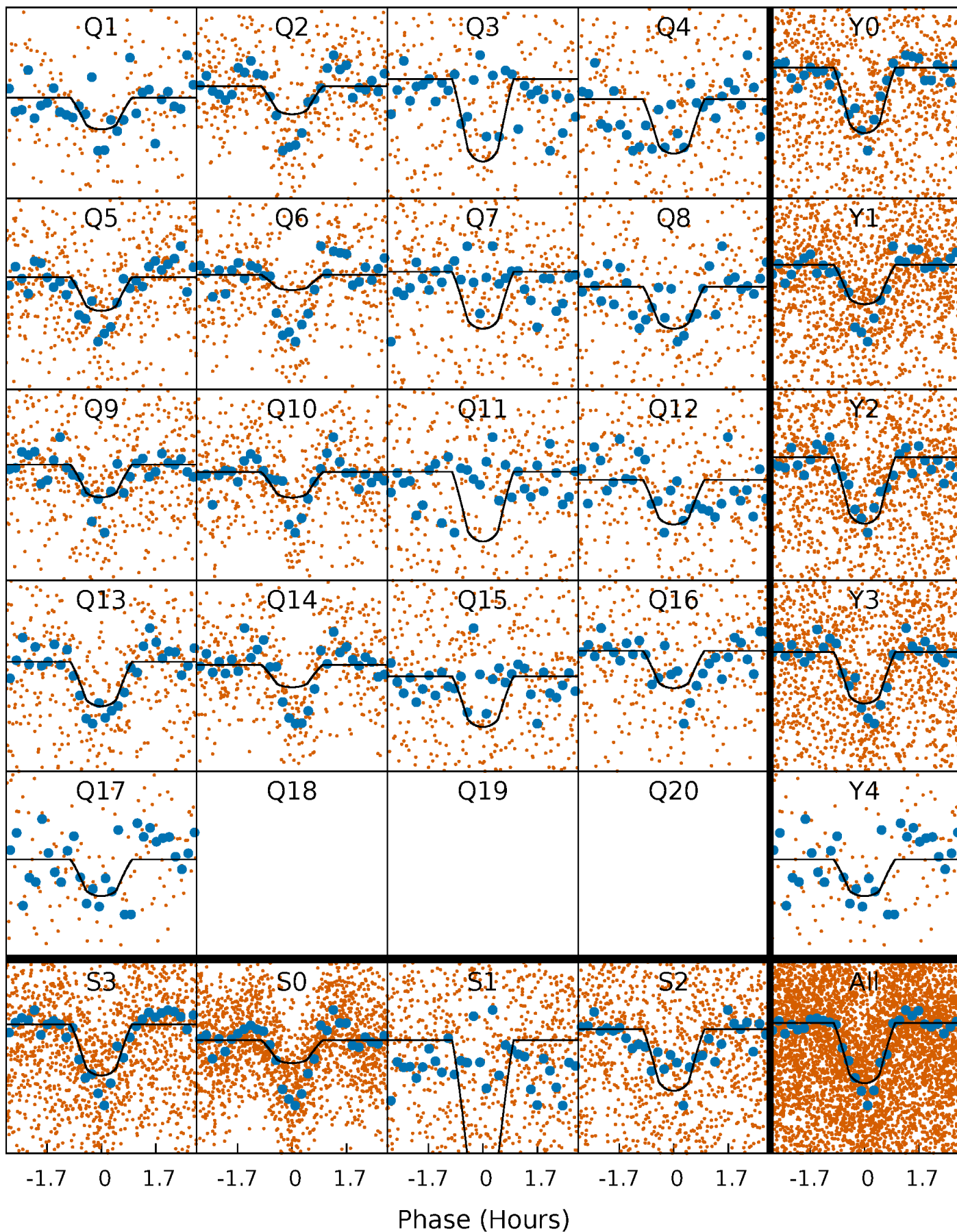
PDC Quarter-Phased Transit Curves

TCE 007025526-01 P= 2.148203 Days $T_0=132.770624$ (BKJD)



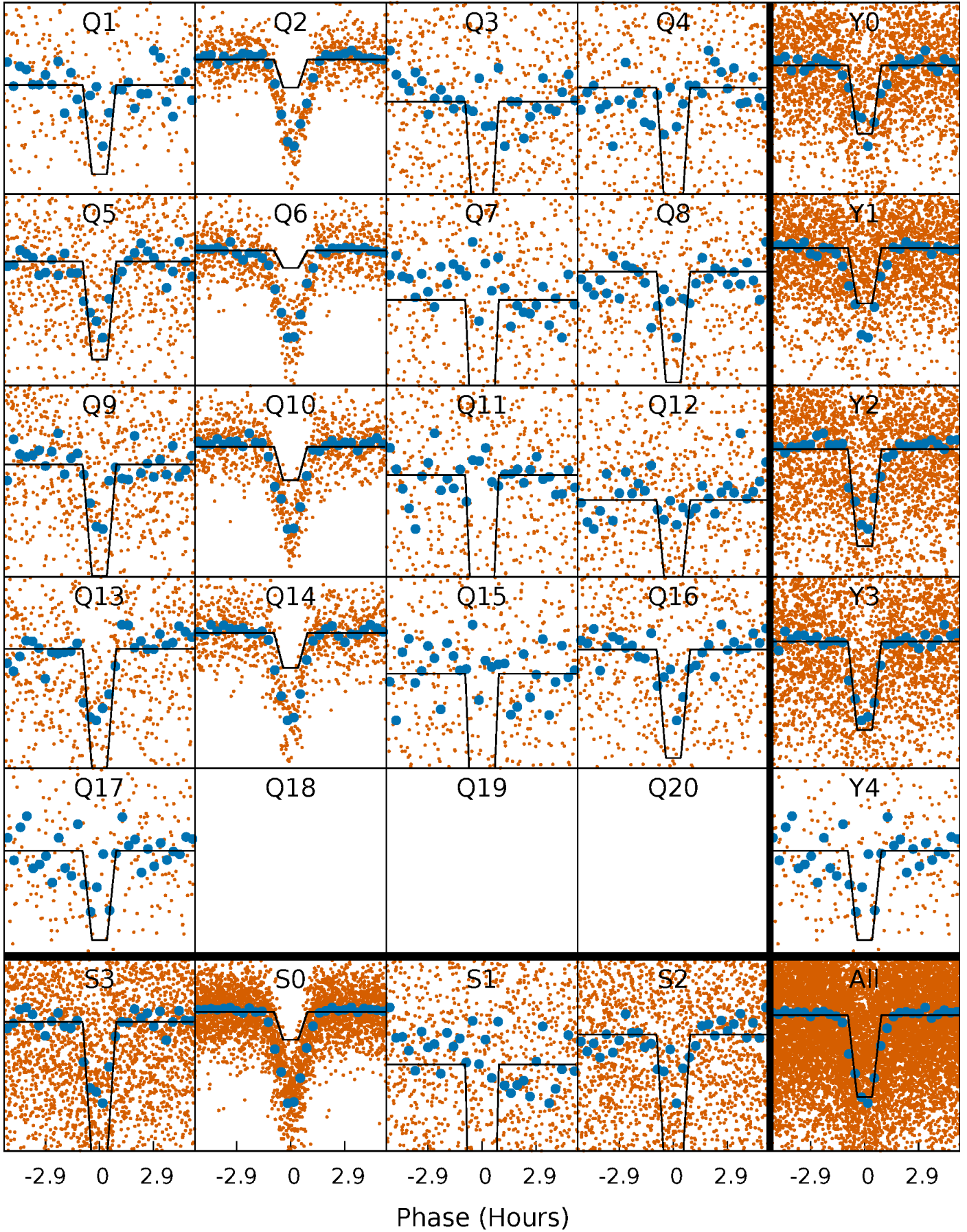
DV Quarter-Phased Transit Curves

TCE 007025526-01 P= 2.148203 Days $T_0=132.770624$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

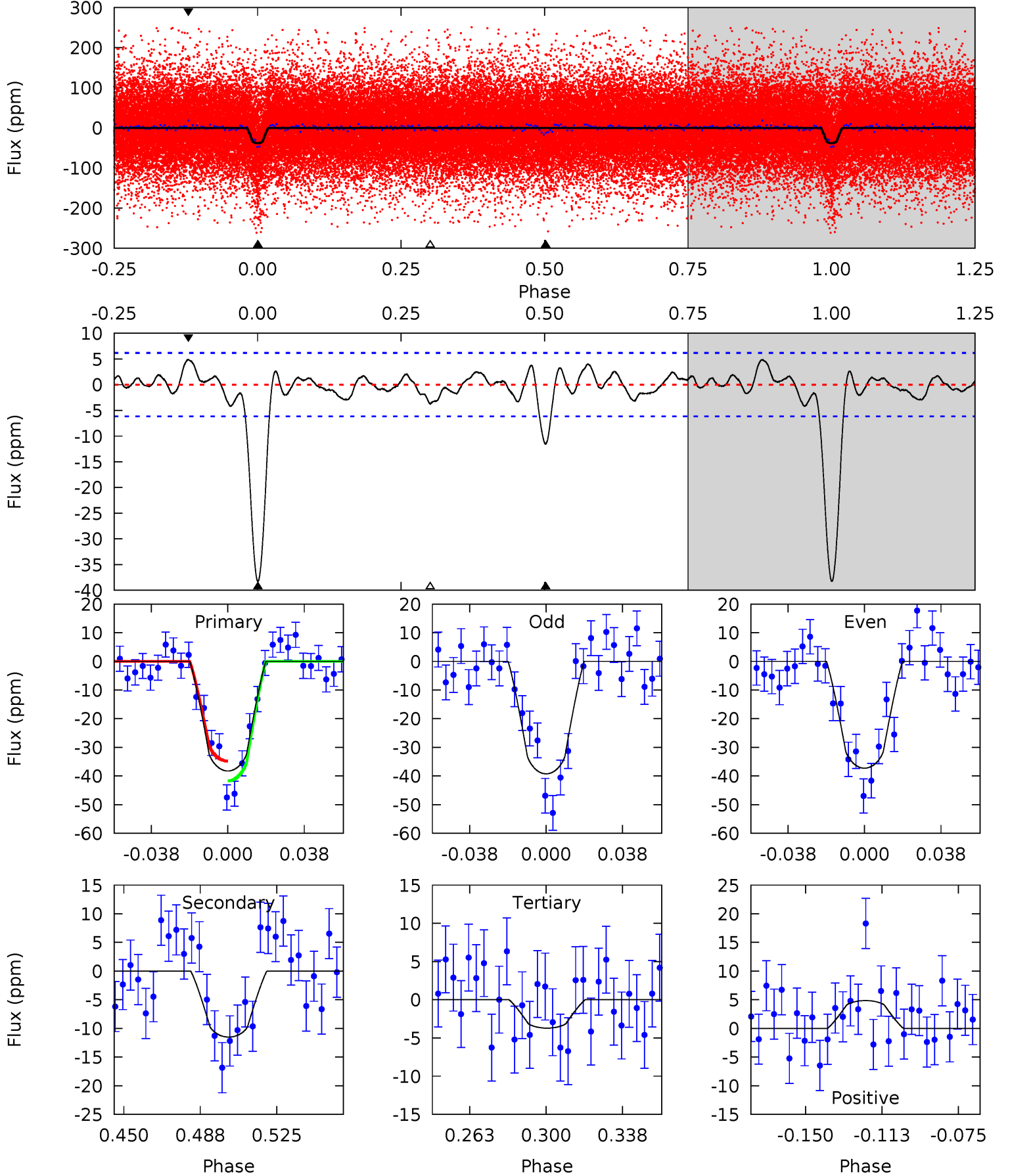
TCE 007025526-01 P= 2.148226 Days $T_0=132.765348$ (BKJD)



DV Model-Shift Uniqueness Test

007025526-01, P = 2.148203 Days, E = 130.622421 Days

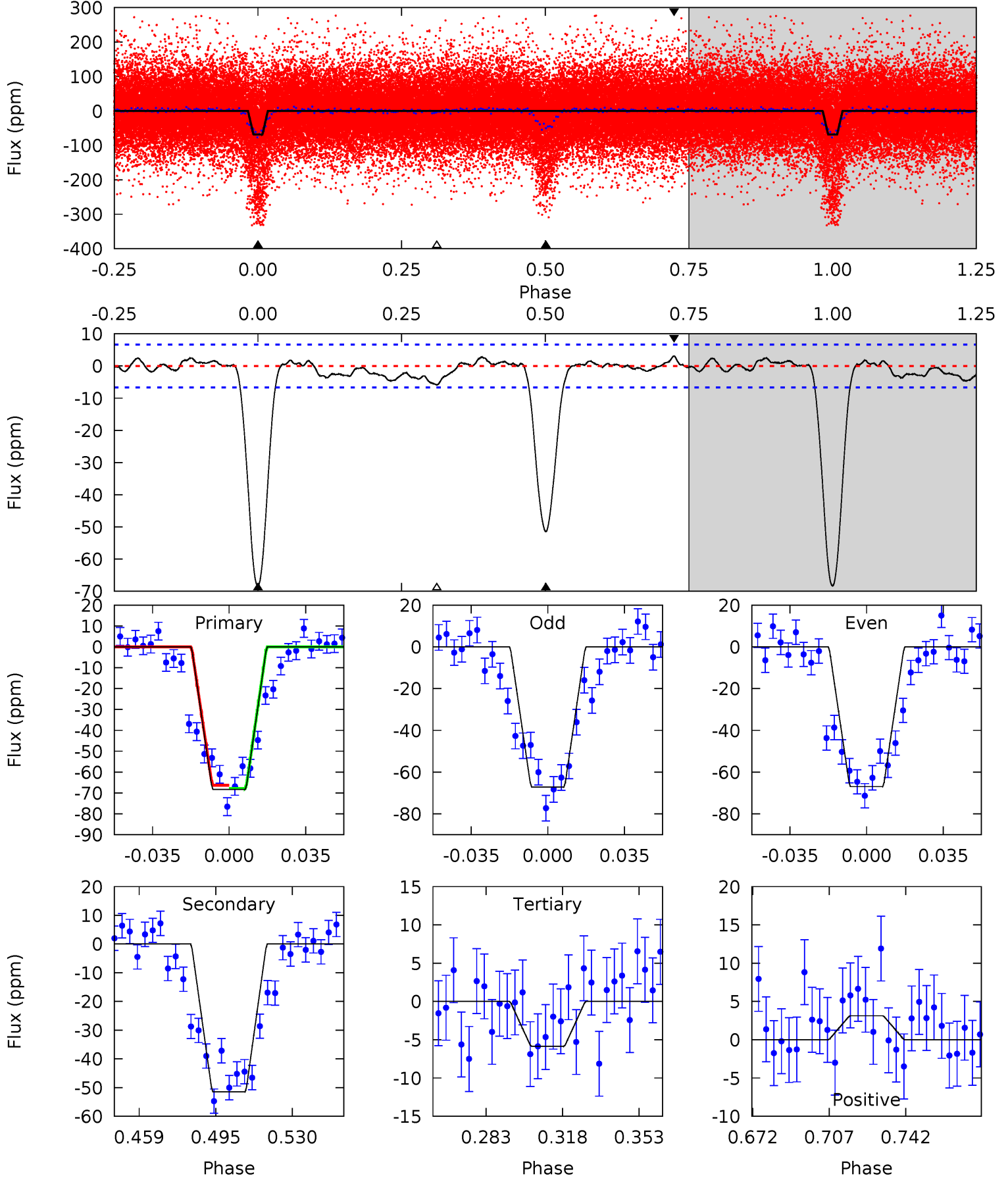
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
29.6	8.91	2.87	3.76	4.77	2.08	1.35	26.7	25.8	6.04	5.15	0.77	1.14	0.11	2.68



Alt Model-Shift Uniqueness Test

007025526-01, P = 2.148226 Days, E = 130.617122 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
48.9	36.9	4.20	2.25	4.78	2.10	1.35	44.7	46.7	32.7	34.6	0.06	1.90	0.04	0.52



Stellar Parameters For KIC 007025526

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4699^{+75}_{-84}	$4.637^{+0.010}_{-0.045}$	$0.020^{+0.150}_{-0.150}$	$0.676^{+0.053}_{-0.021}$	$0.756^{+0.030}_{-0.045}$	$3.451^{+0.179}_{-0.668}$
	+2%/-2%	+0%/-1%	+750%/-750%	+8%/-3%	+4%/-6%	+5%/-19%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 007025526-01 / KOI 1380.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-12 ± 1	$0.52^{+0.17}_{-0.16}$	1406^{+29}_{-28}	3630^{+499}_{-327}	20^{+21}_{-9}
Alt.	-51 ± 1	$0.72^{+0.17}_{-0.17}$	1406^{+33}_{-29}	4216^{+469}_{-308}	48^{+35}_{-17}

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 $A_{obs} \gg 1.0$

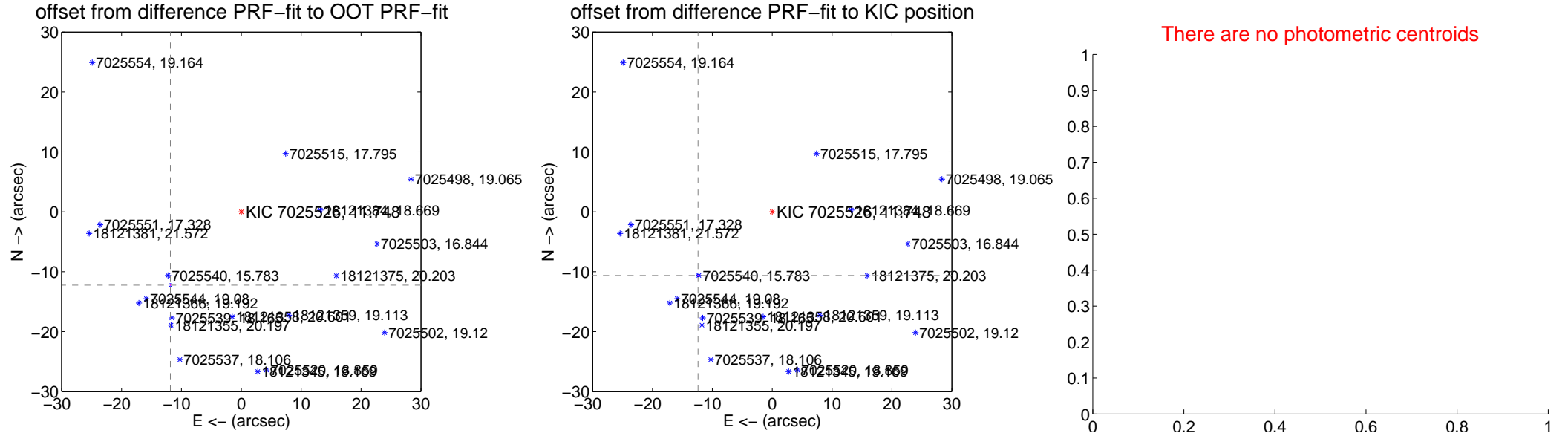
DV Centroid Data

Supplemental centroid analysis for 007025526-01. **Kepler magnitude: 11.75.** Transit SNR 19.16

There are 4 quarters with good PRF difference image offsets

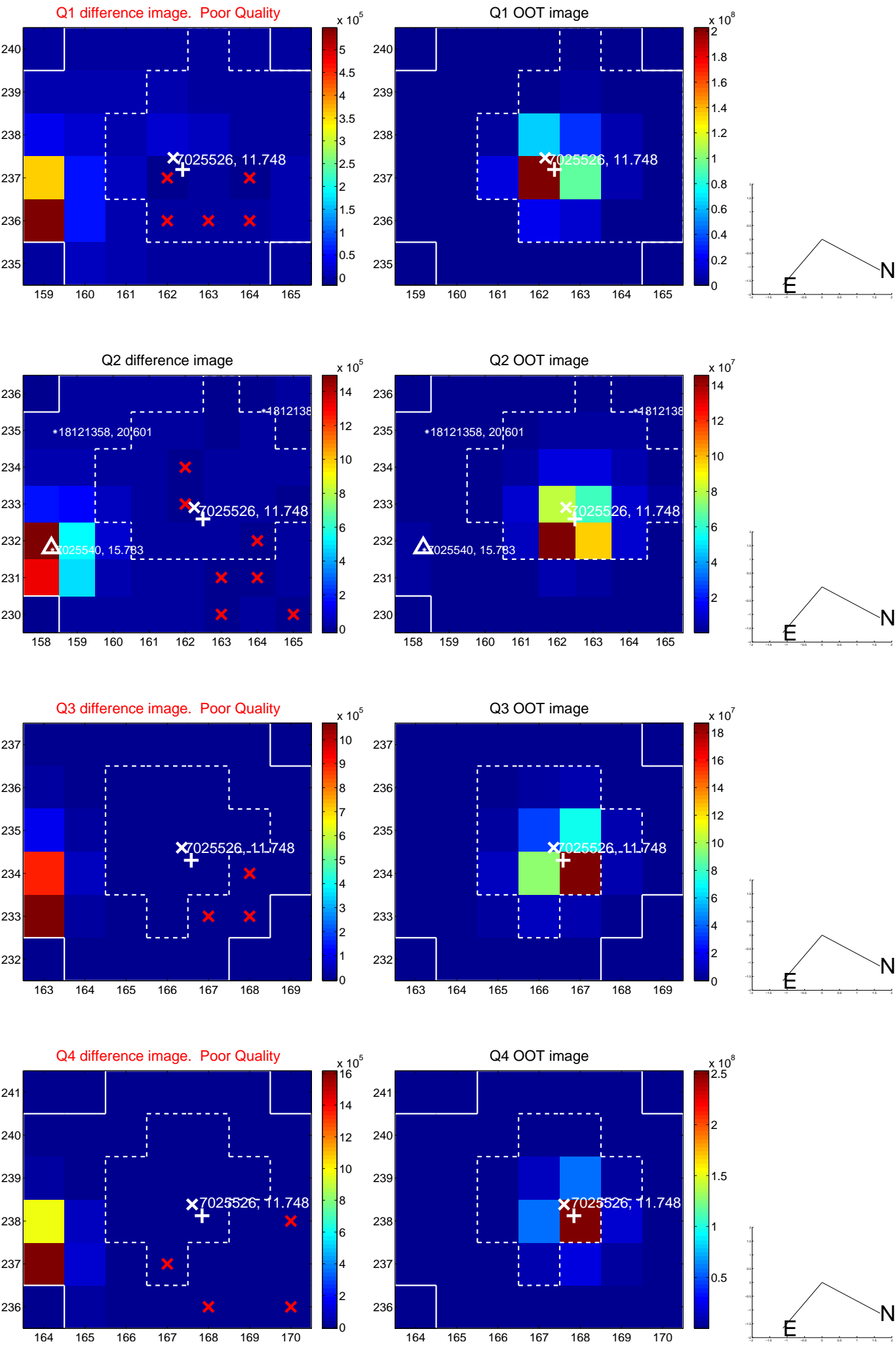
The direct PRF centroid is offset from the target star catalog position by about 1.96 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	17.035 \pm 0.085	201.54	11.844 \pm 0.073	-12.244 \pm 0.094
PRF-fit source offset from KIC position	16.315 \pm 0.069	235.97	12.382 \pm 0.070	-10.625 \pm 0.068
photometric centroid source offset	—	—	—	—

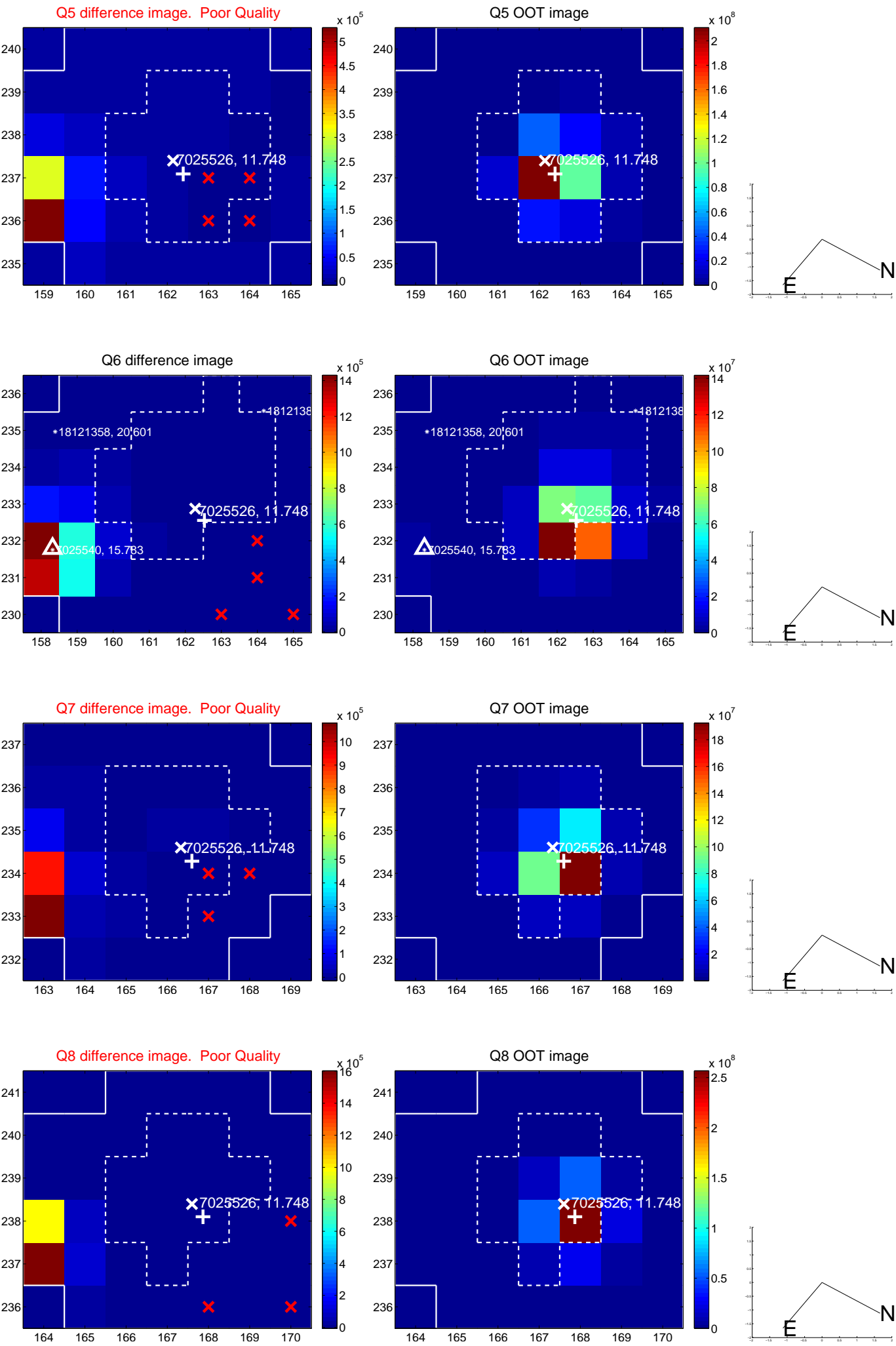


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

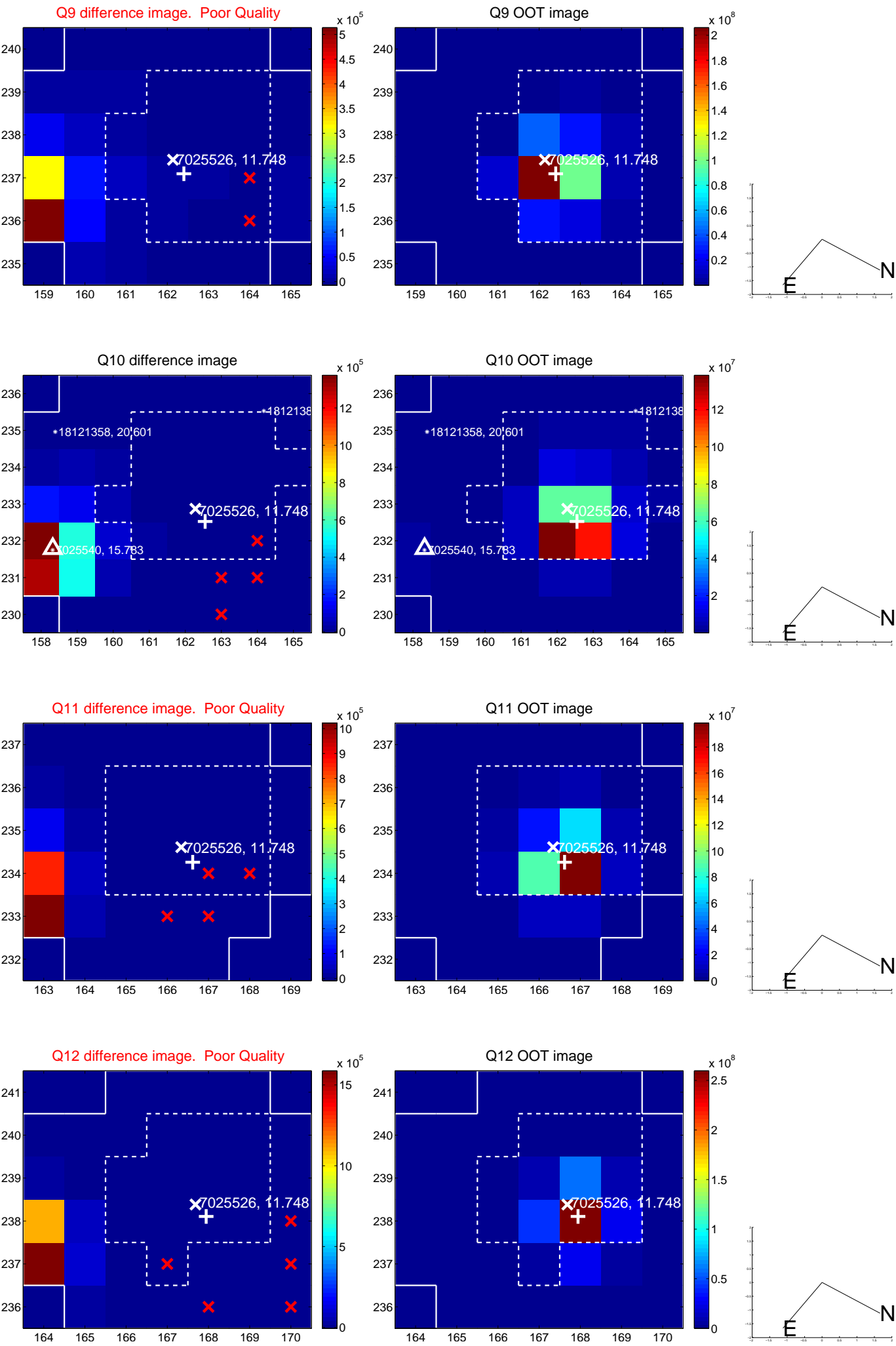
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



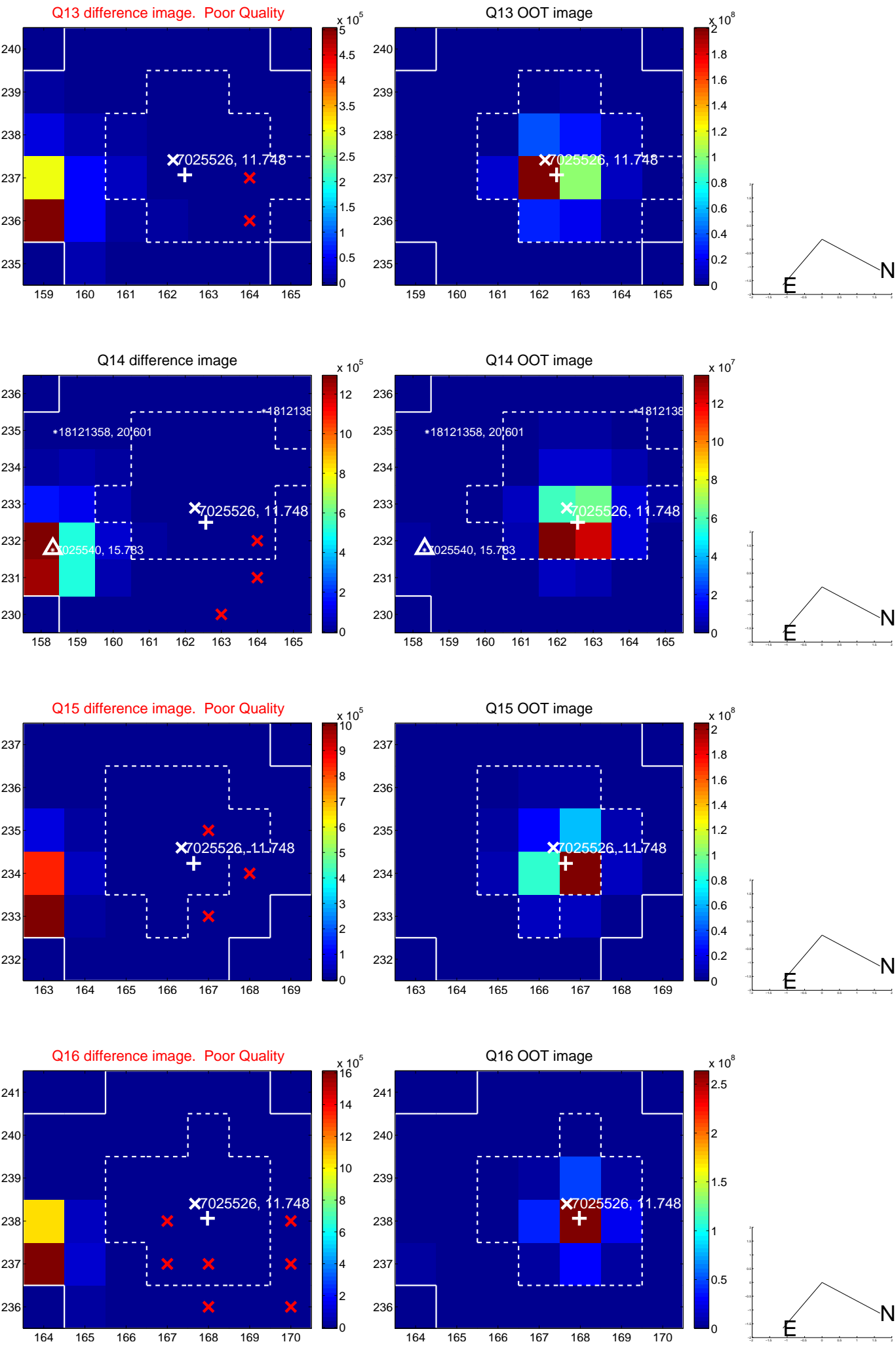
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



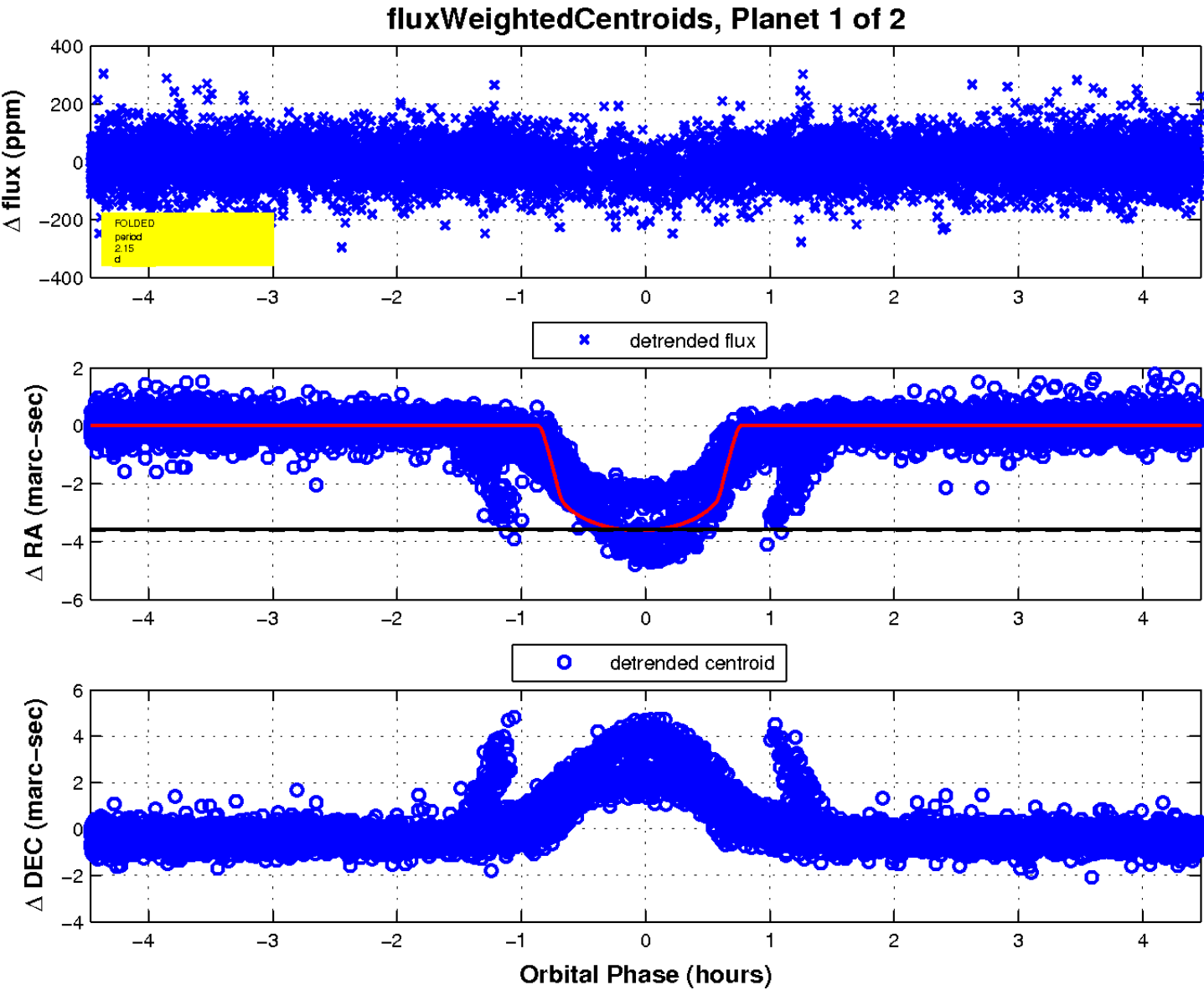
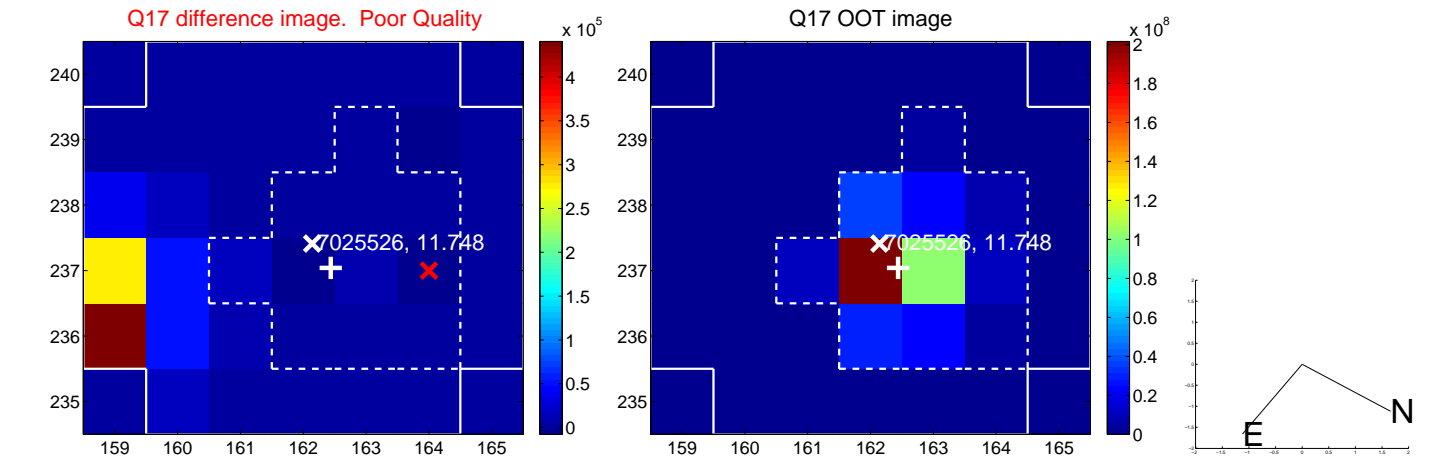
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

