

KIC 003124286

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})
003124286-01	OBS	No	164.539887	200.101933	677.9	3.452	7.1	6.6	0.85	5713	2.46	2.08

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003124286-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS

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

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

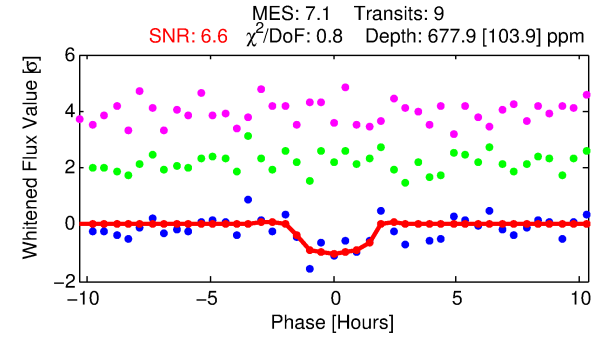
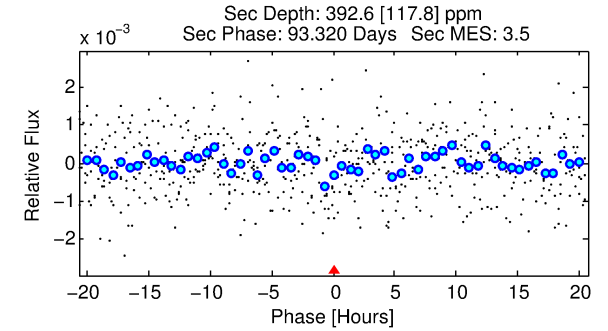
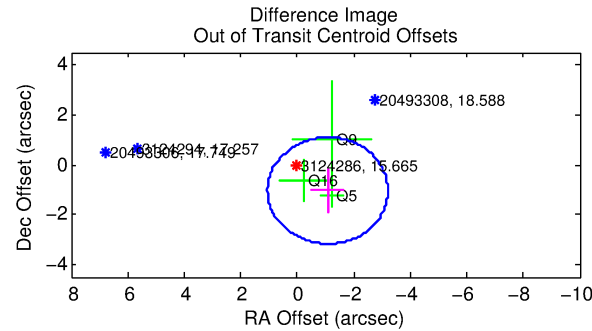
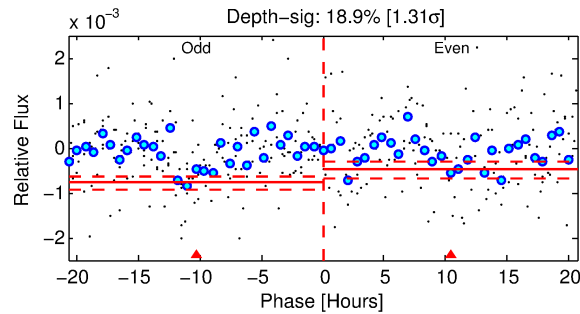
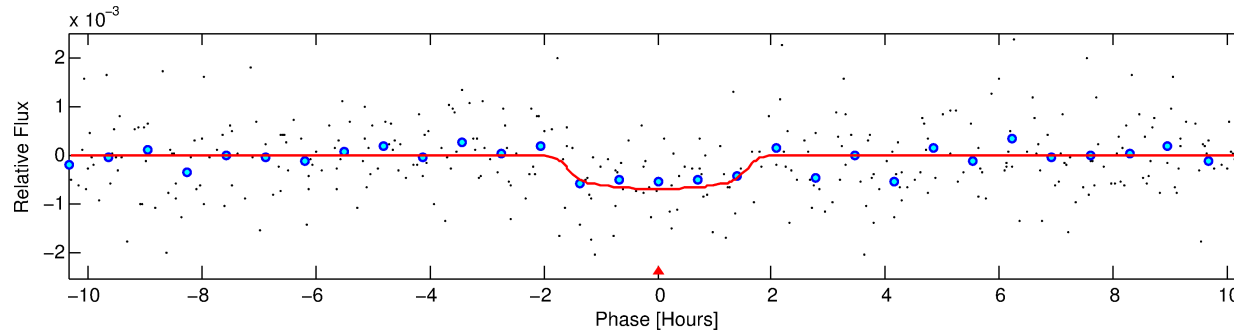
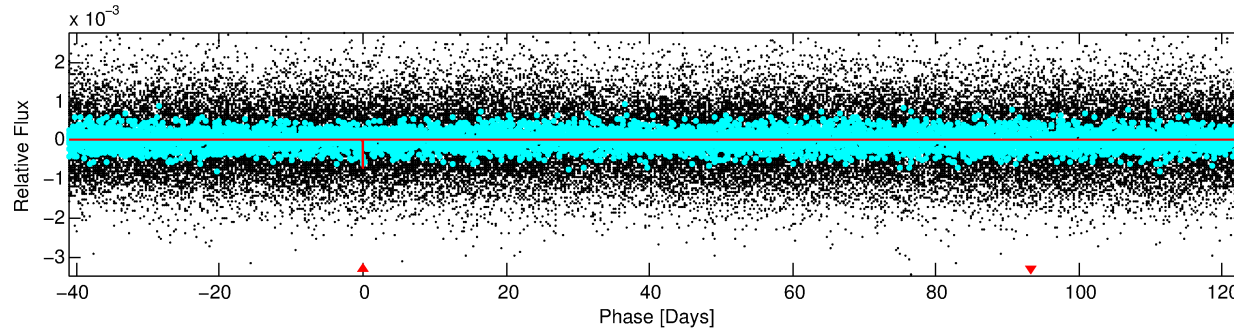
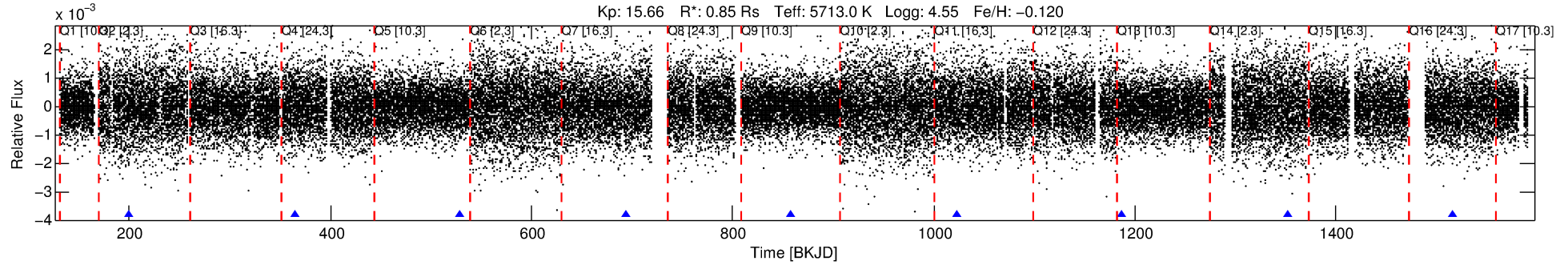
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003124286-01

No Significant Match Found

DV One-Page Summary

KIC: 3124286 Candidate: 1 of 1 Period: 164.540 d



DV Fit Results:

Period = 164.53989 [0.00268] d
Epoch = 200.1019 [0.0122] BKJD
Rp/R* = 0.0265 [0.0288]
a/R* = 234.63 [1128.46]
b = 0.80 [2.22]
Seff = 2.08 [0.65]
Teq = 306 [24] K
Rp = 2.46 [2.73] Re
a = 0.5770 [0.1127] AU
Ag = 11880.63 [26300.60] [0.45 σ]
Teffp = 4941 [2715] K [1.71 σ]

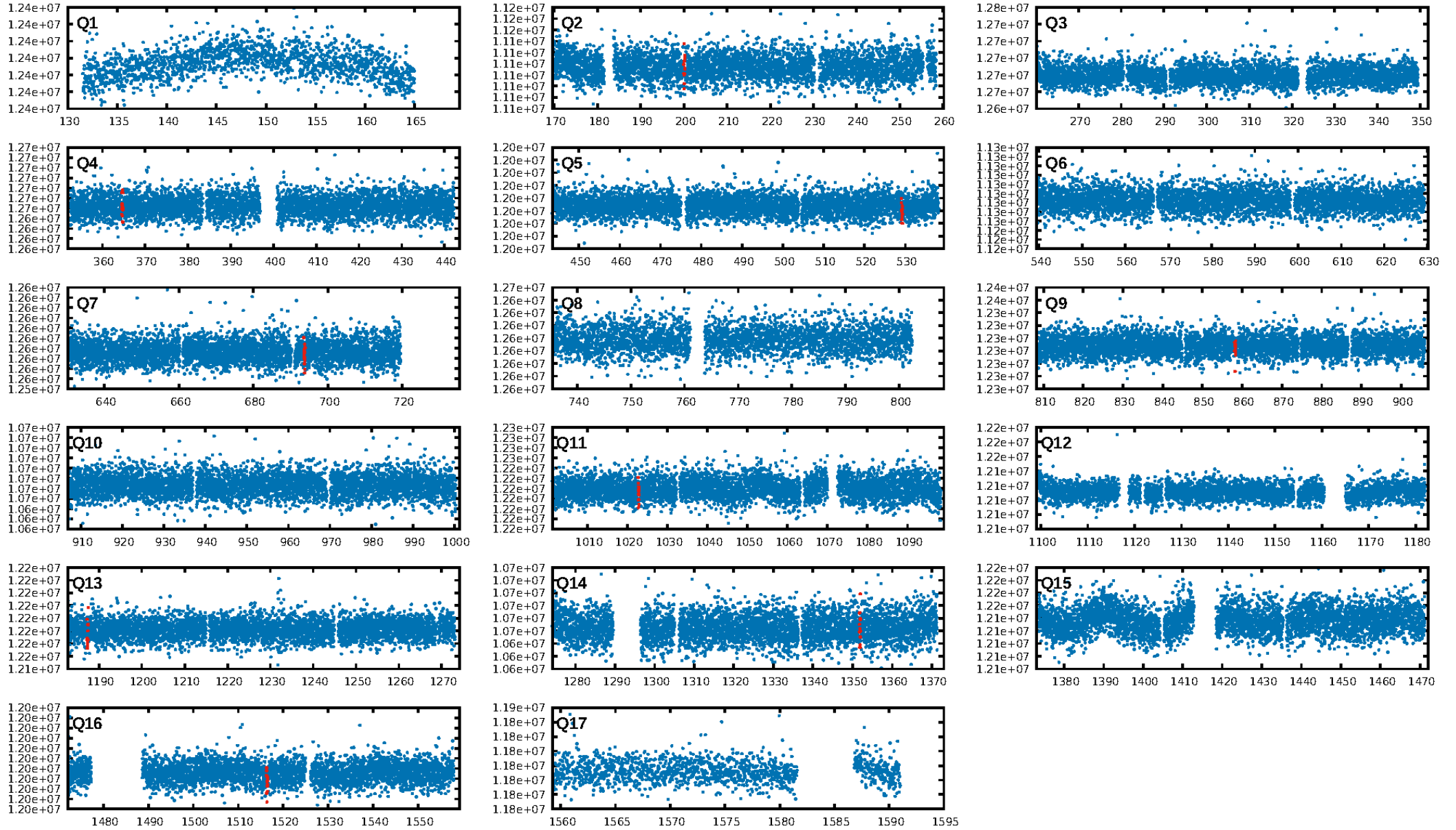
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 60.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 6.64e-13
RollingBand-fgt: 1.00 [9/9]
GhostDiagnostic-chr: 5.678
Centroid-sig: 10.9%
Centroid-so: 2.209 arcsec [0.98 σ]
OotOffset-rm: 1.495 arcsec [2.10 σ]
KicOffset-rm: 1.426 arcsec [2.03 σ]
OotOffset-st: 0/0/1/2 [3]
KicOffset-st: 0/0/1/2 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [7/7]

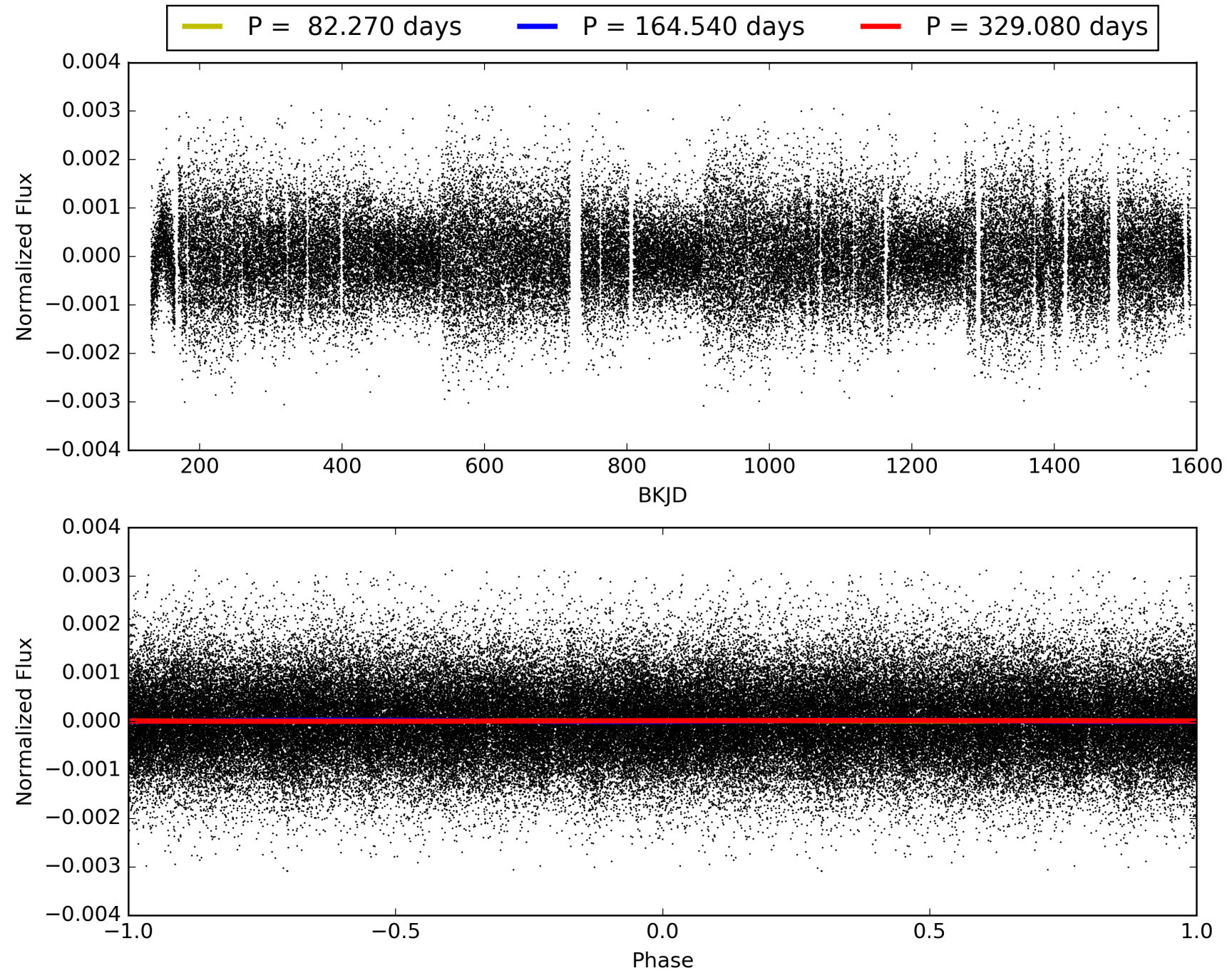
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 19:19:59 Z

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

TCE 003124286-01, PDC Light Curves

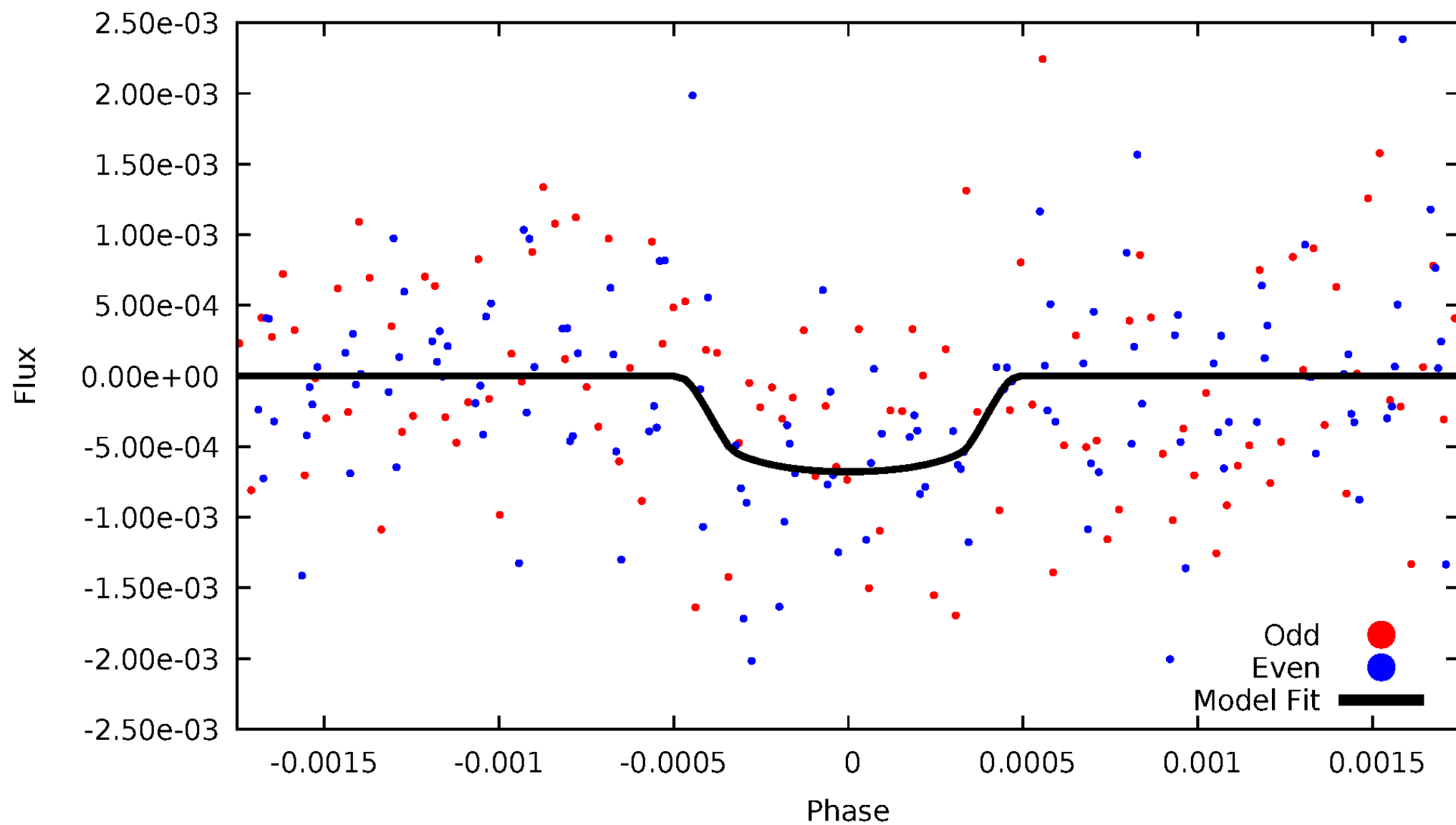


TCE 003124286-01



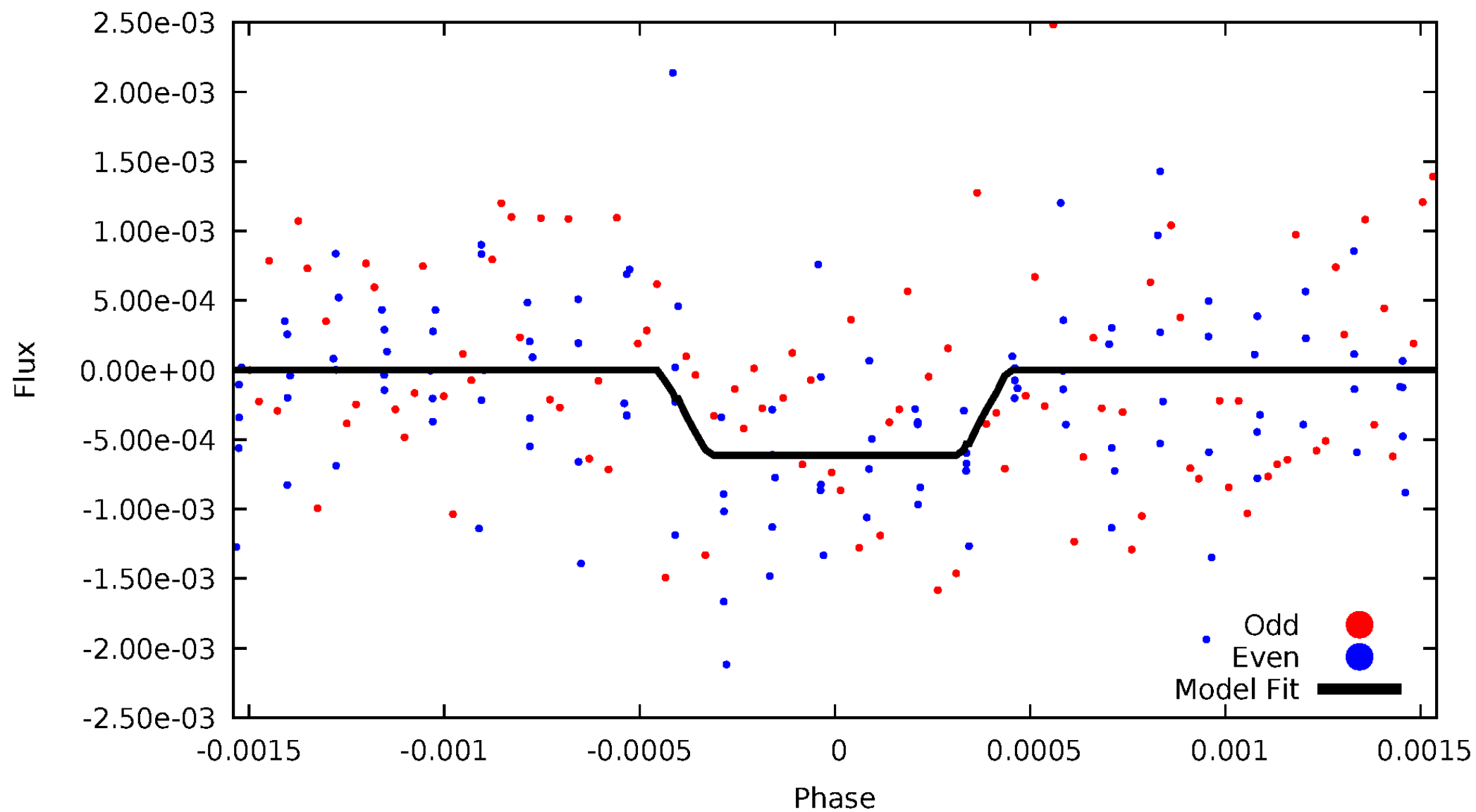
DV Odd/Even

TCE 003124286-01



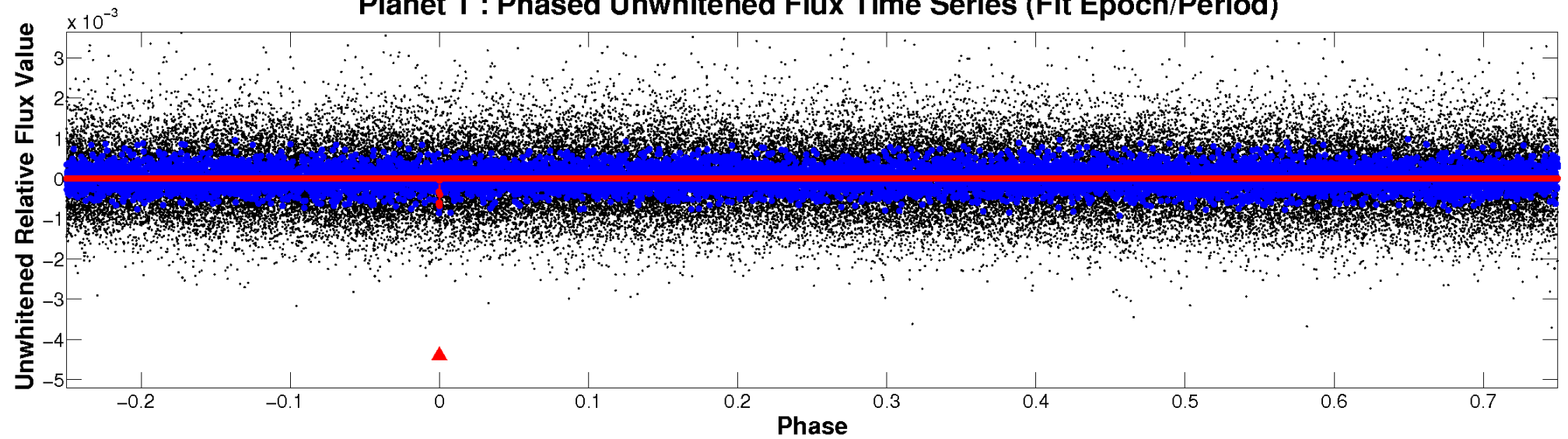
ALT Odd/Even

TCE 003124286-01

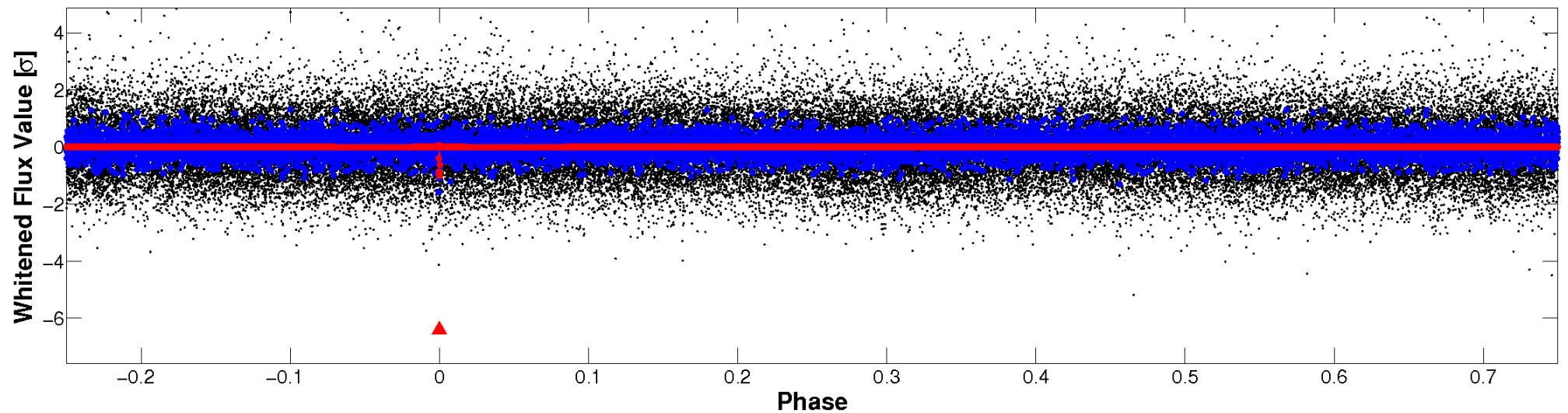


Non-Whitened Vs. Whitened Light Curve

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

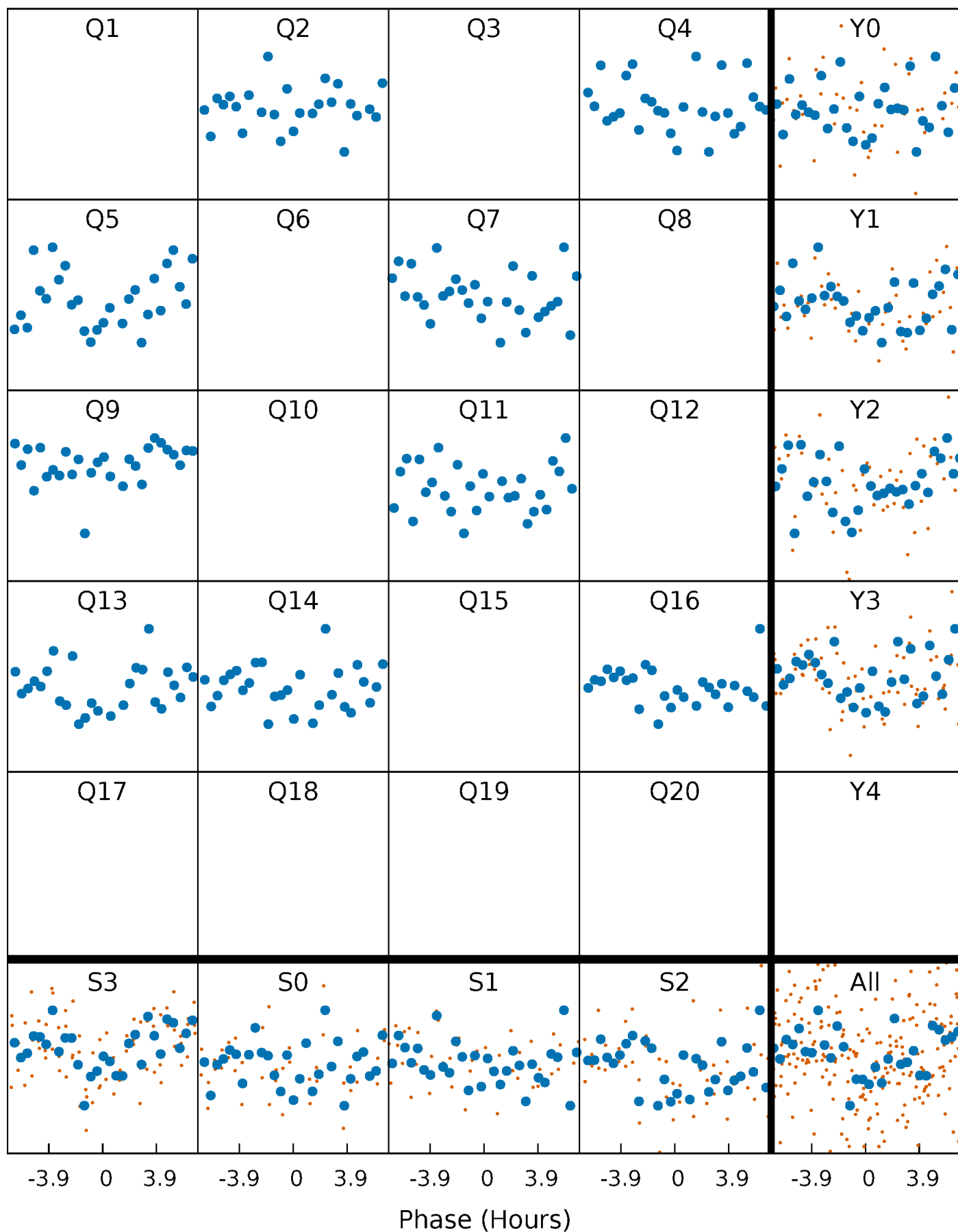


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



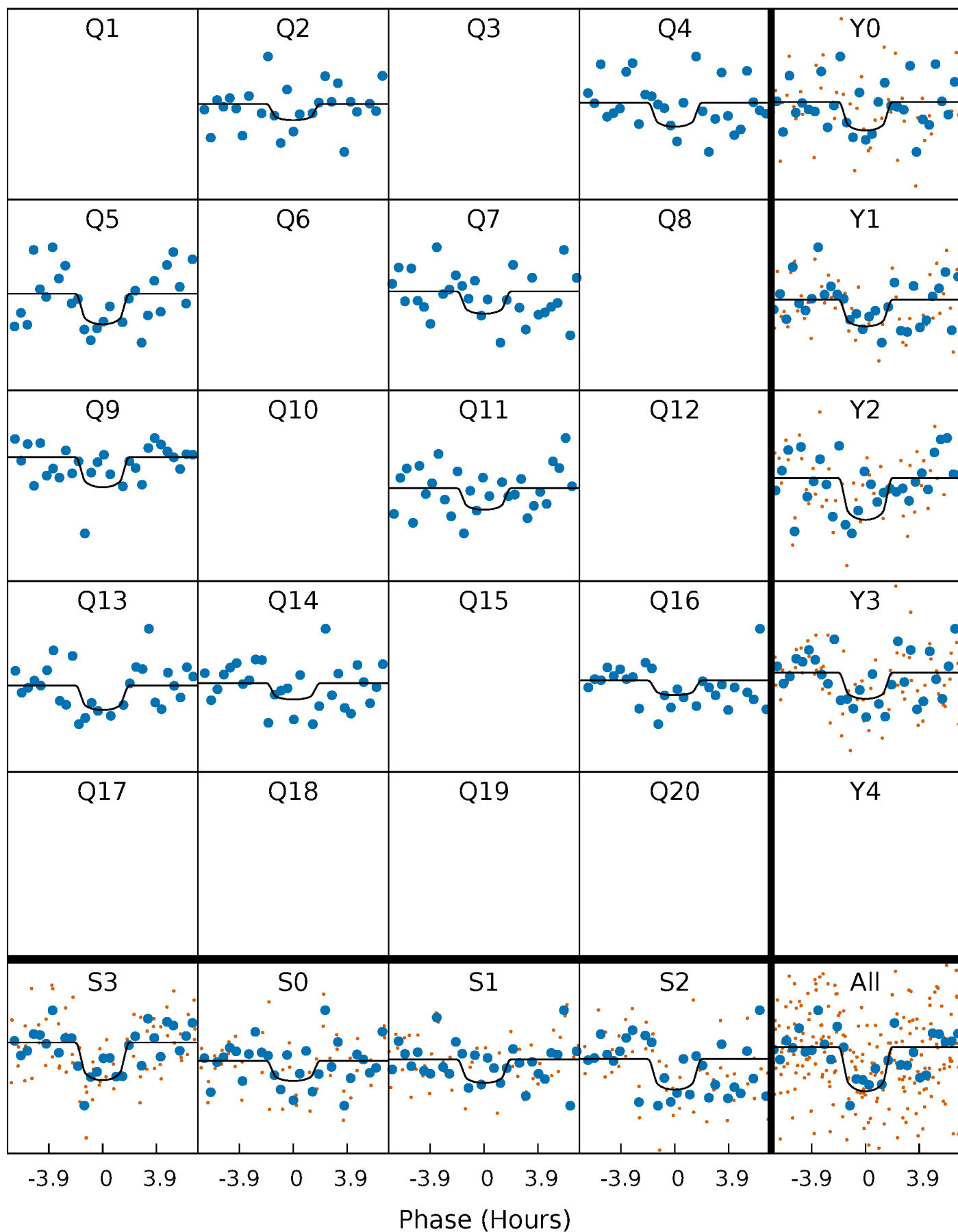
PDC Quarter-Phased Transit Curves

TCE 003124286-01 P=164.539887 Days $T_0=200.101933$ (BKJD)



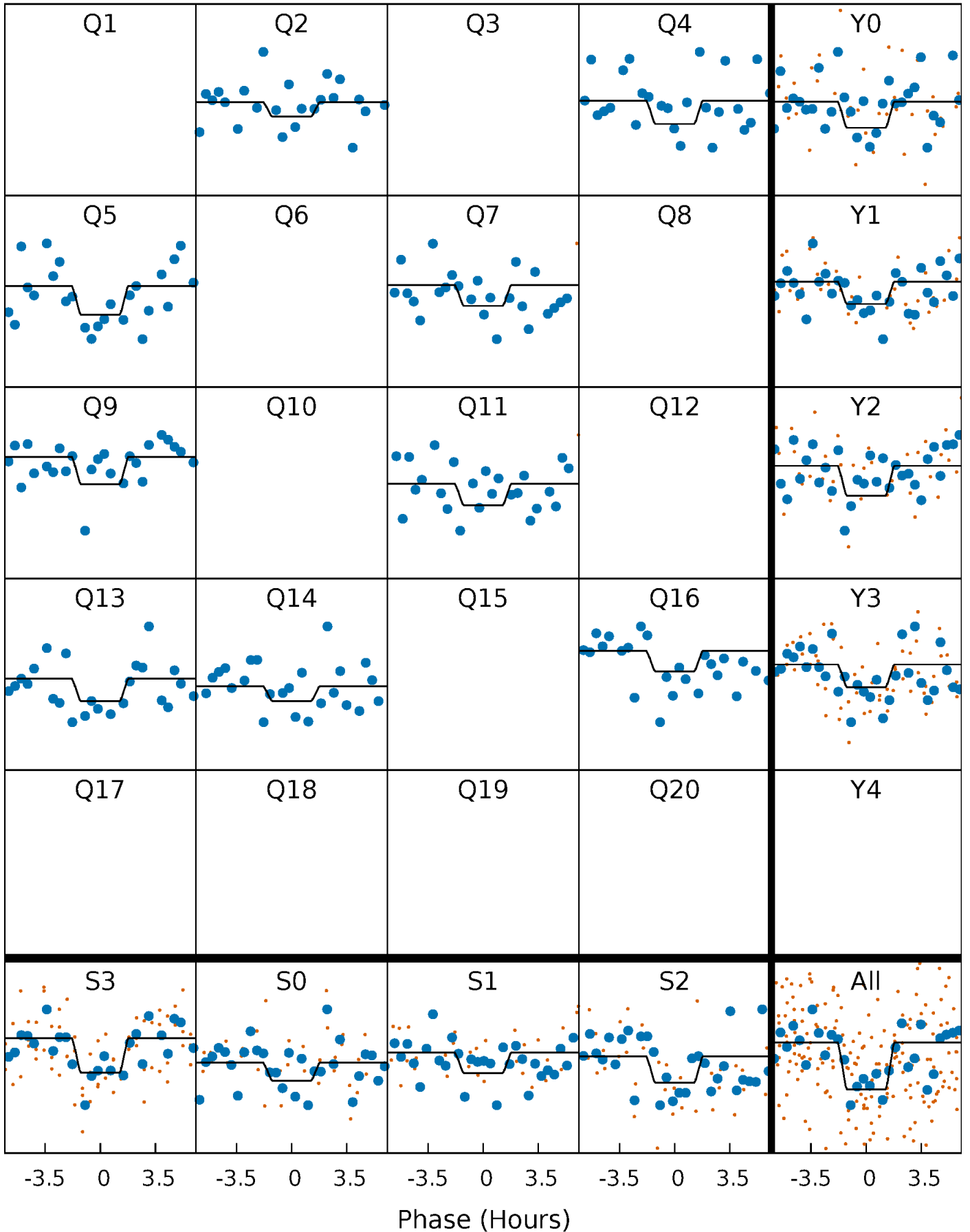
DV Quarter-Phased Transit Curves

TCE 003124286-01 P=164.539887 Days $T_0=200.101933$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

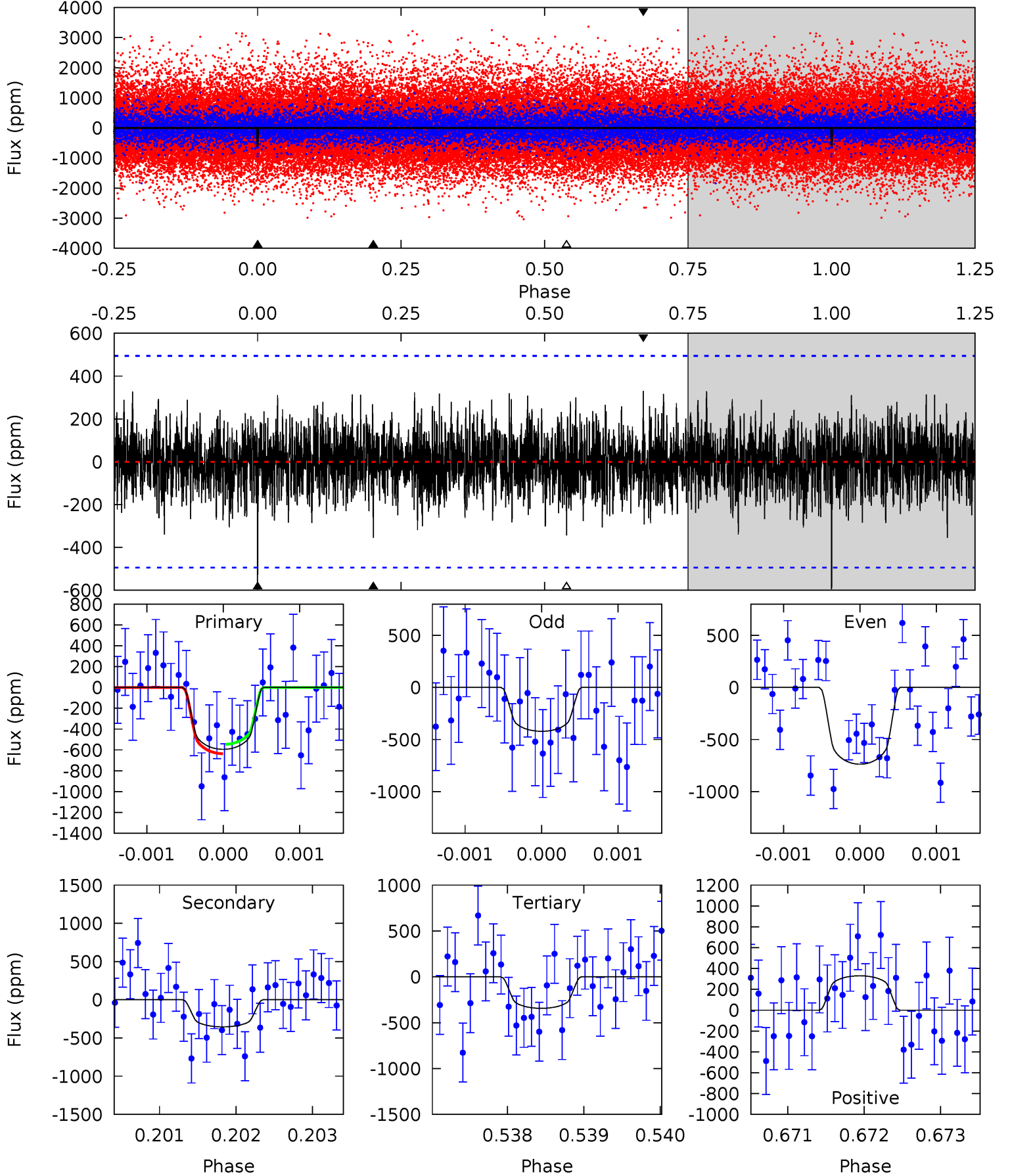
TCE 003124286-01 P=164.540525 Days $T_0=200.096937$ (BKJD)



DV Model-Shift Uniqueness Test

003124286-01, P = 164.539887 Days, E = 35.562046 Days

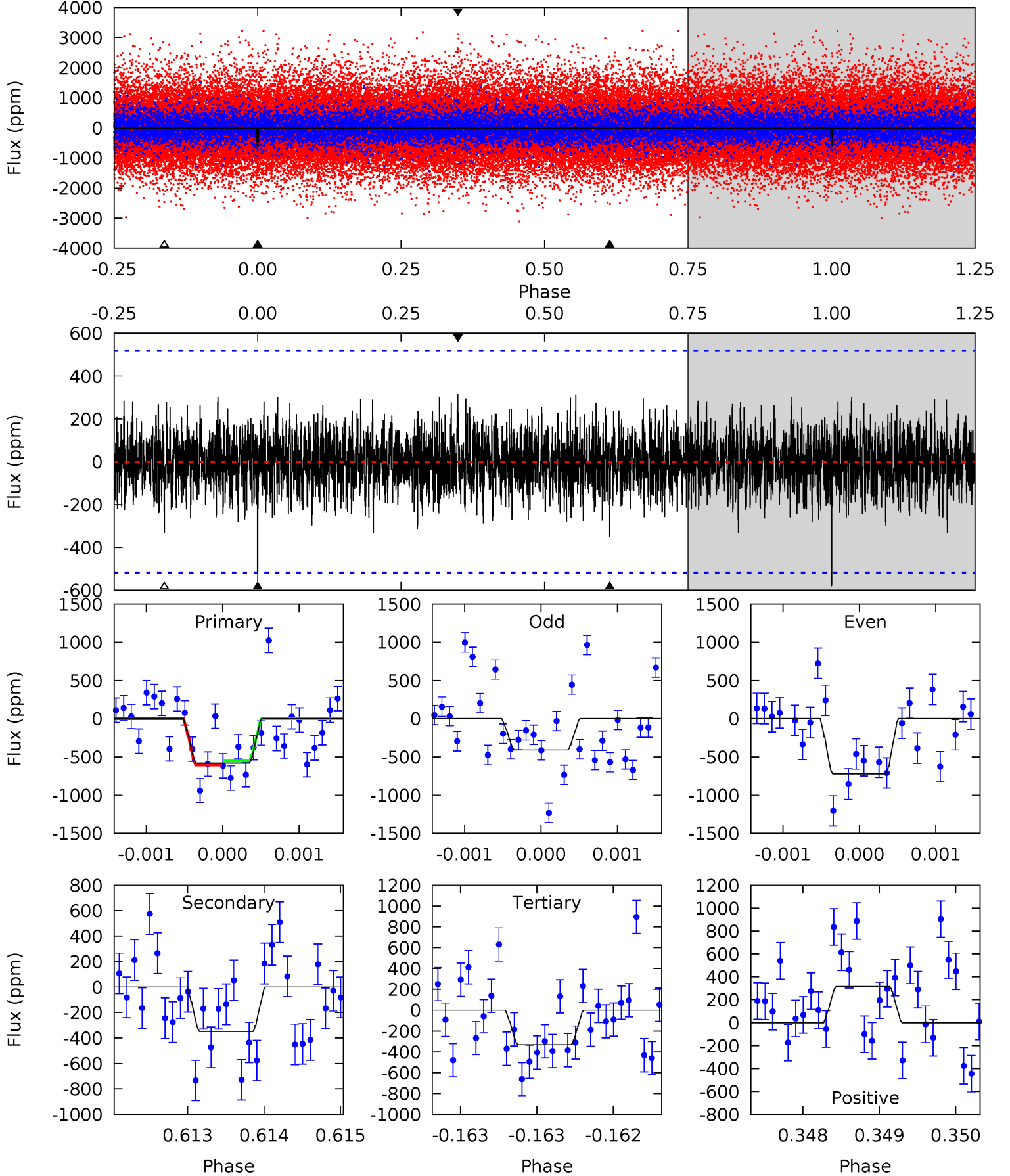
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.56	3.92	3.80	3.65	5.46	3.31	1.14	2.77	2.92	0.12	0.27	1.72	1.05	0.36	0.50



Alt Model-Shift Uniqueness Test

003124286-01, P = 164.540525 Days, E = 35.556412 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.14	3.70	3.50	3.33	5.47	3.32	1.03	2.64	2.81	0.20	0.36	1.64	1.14	0.35	0.28



Stellar Parameters For KIC 003124286

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5713^{+153}_{-170}	$4.554^{+0.040}_{-0.160}$	$-0.120^{+0.300}_{-0.300}$	$0.851^{+0.194}_{-0.069}$	$0.948^{+0.095}_{-0.116}$	$2.164^{+0.449}_{-0.932}$
	+3%/-3%	+1%/-4%	+250%/-250%	+23%/-8%	+10%/-12%	+21%/-43%
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 003124286-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-355 ± 91	$3.12^{+2.47}_{-2.10}$	435^{+21}_{-17}	4489^{+3157}_{-834}	6071^{+54345}_{-4176}
Alt.	-349 ± 95	$3.15^{+2.35}_{-2.12}$	436^{+23}_{-18}	4443^{+3178}_{-804}	5991^{+52591}_{-4081}

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

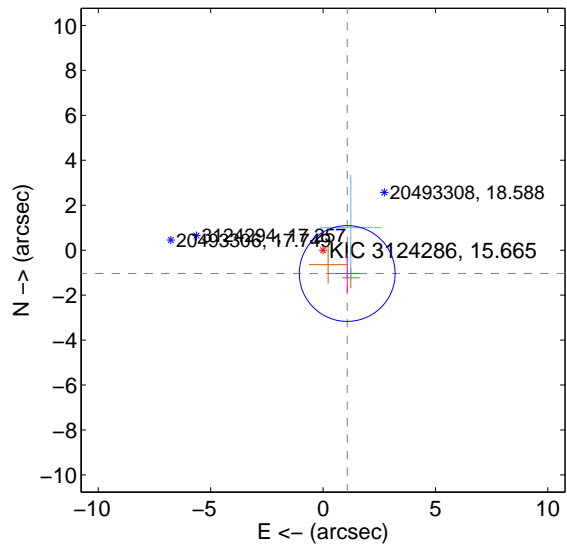
Supplemental centroid analysis for 003124286-01. Kepler magnitude: 15.66. Transit SNR 6.65

There are 1 quarters with good PRF difference image offsets

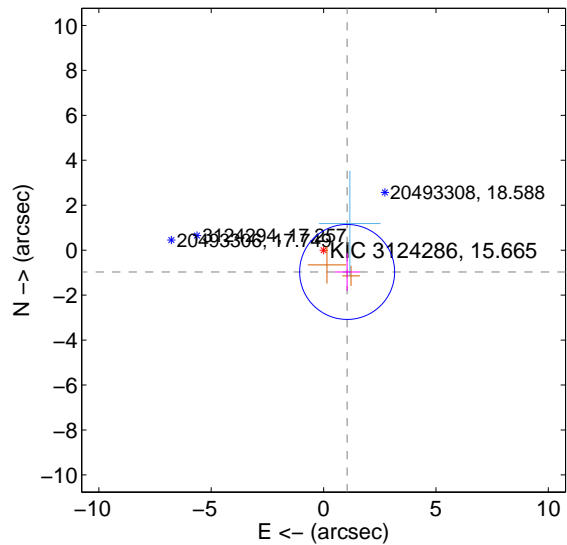
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.495 ± 0.710	2.10	-1.075 ± 0.557	-1.038 ± 0.844
PRF-fit source offset from KIC position	1.426 ± 0.704	2.03	-1.047 ± 0.557	-0.969 ± 0.844
photometric centroid source offset	2.21 ± 2.25	0.98	-2.19 ± 2.26	-0.29 ± 2.01

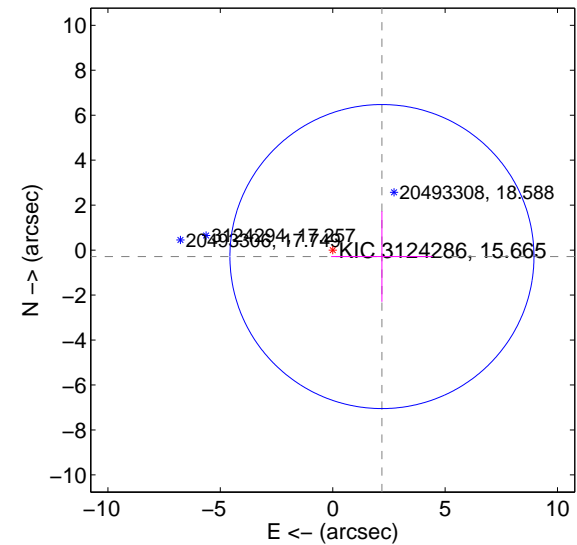
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

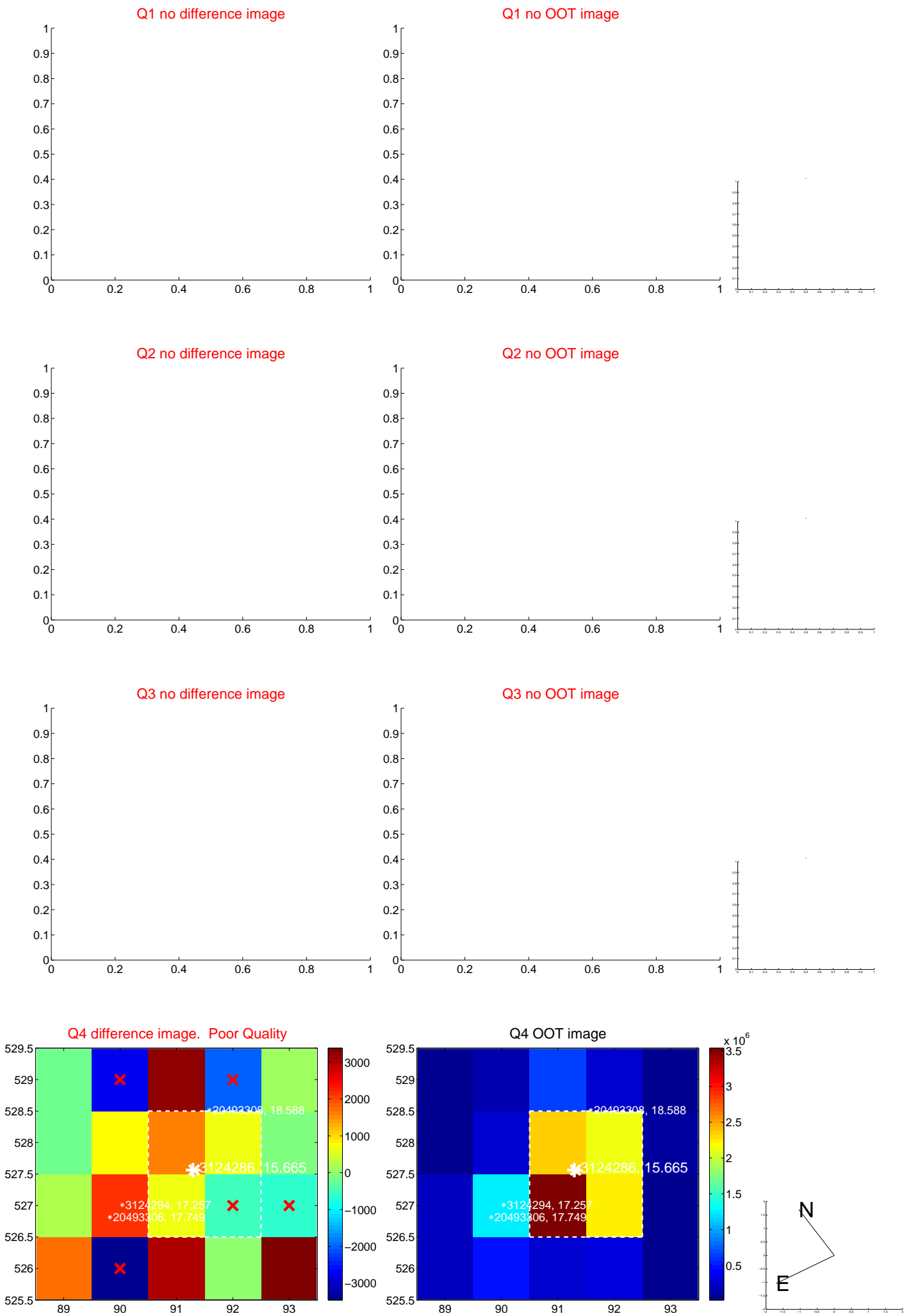


offset from photometric centroids

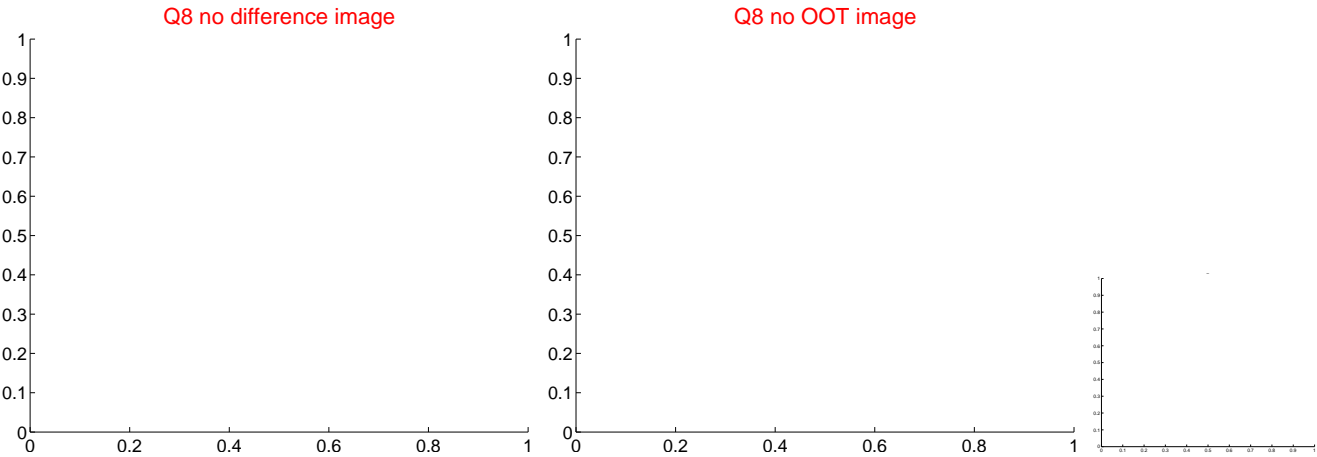
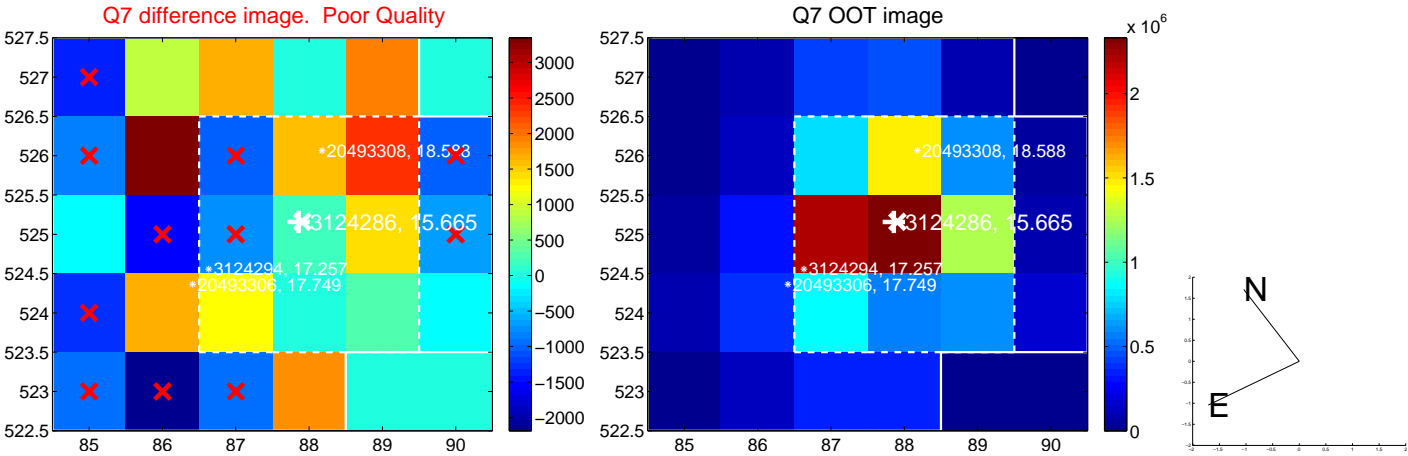
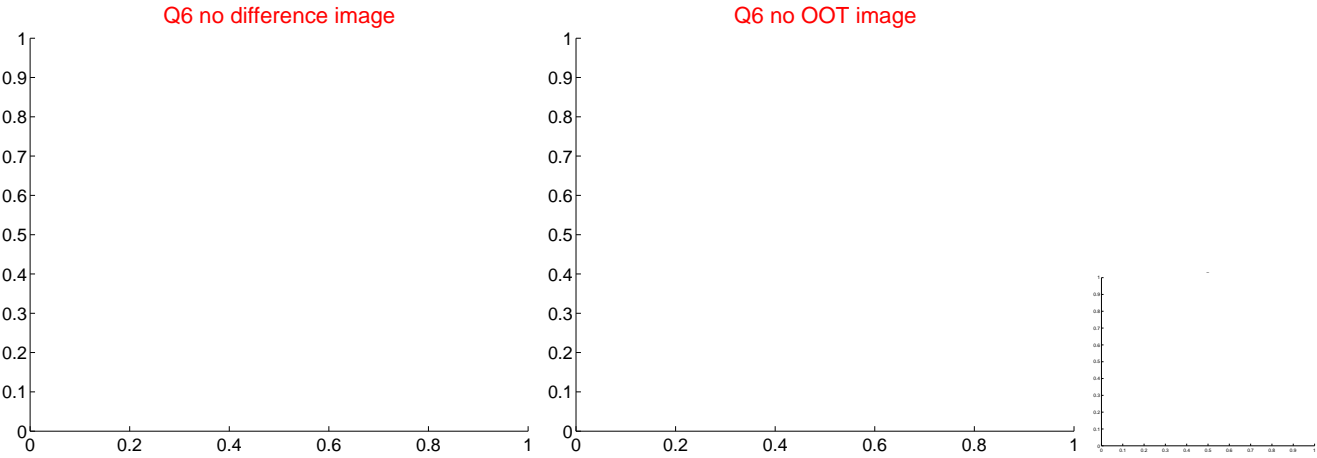
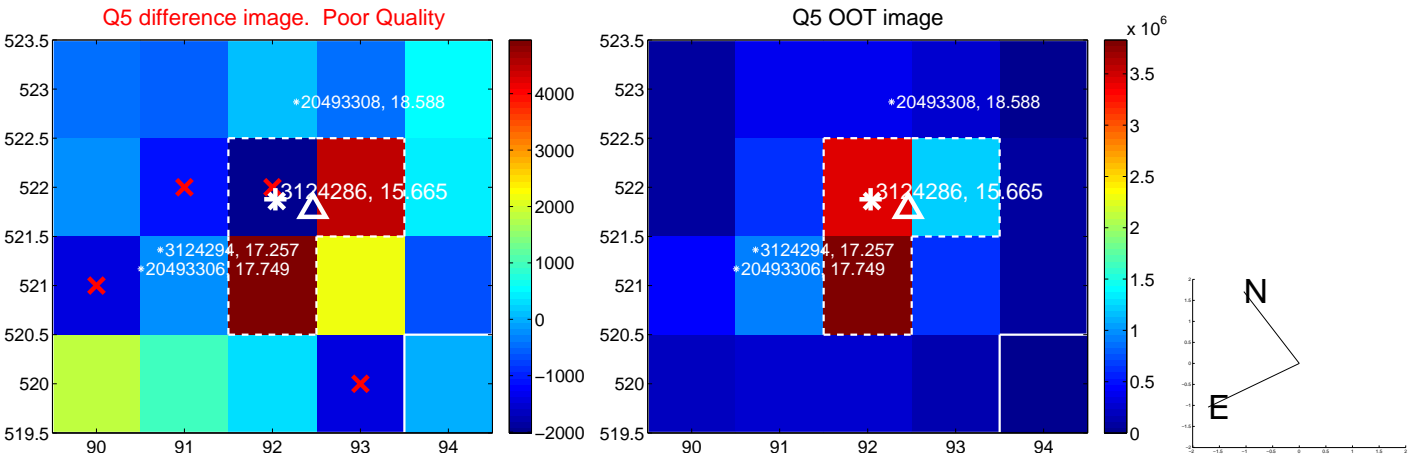


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

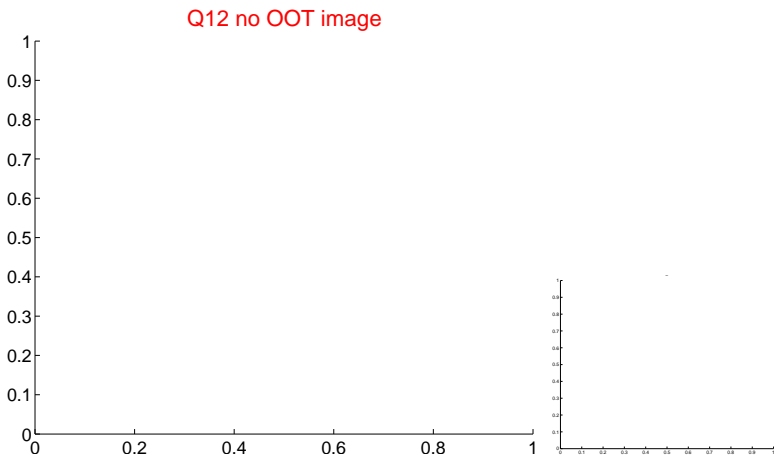
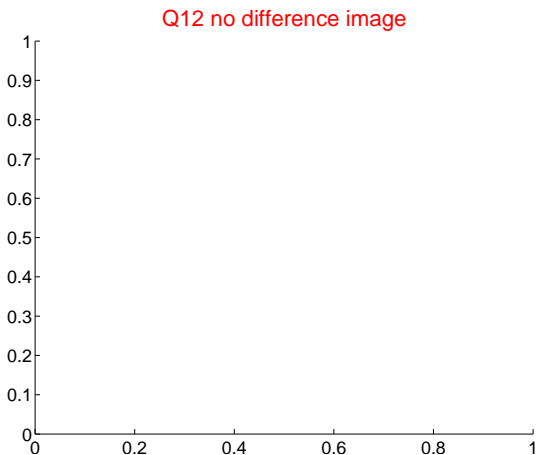
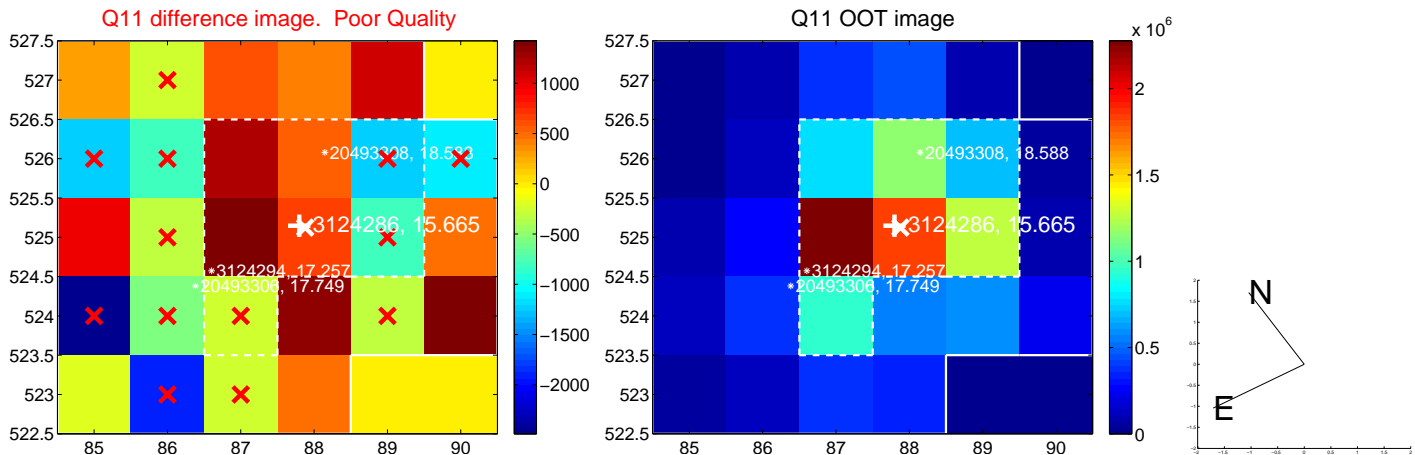
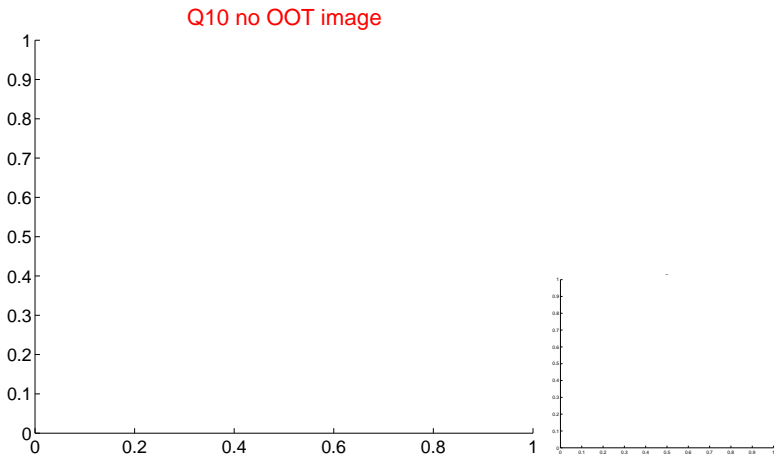
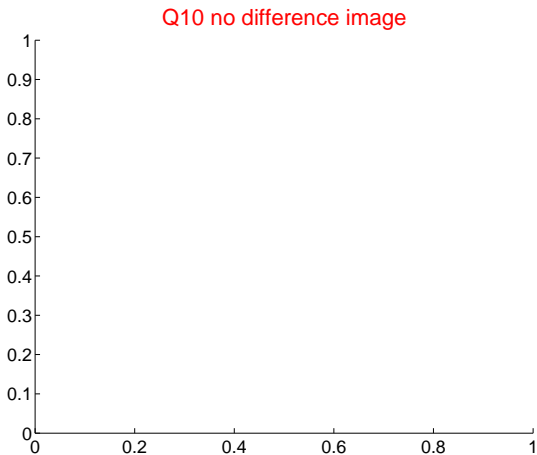
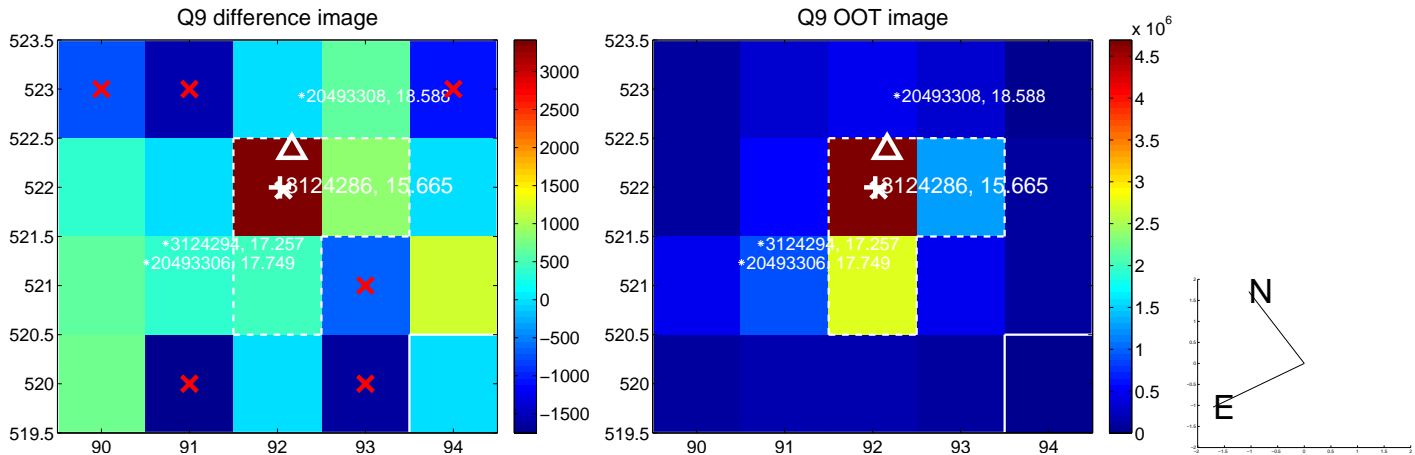
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



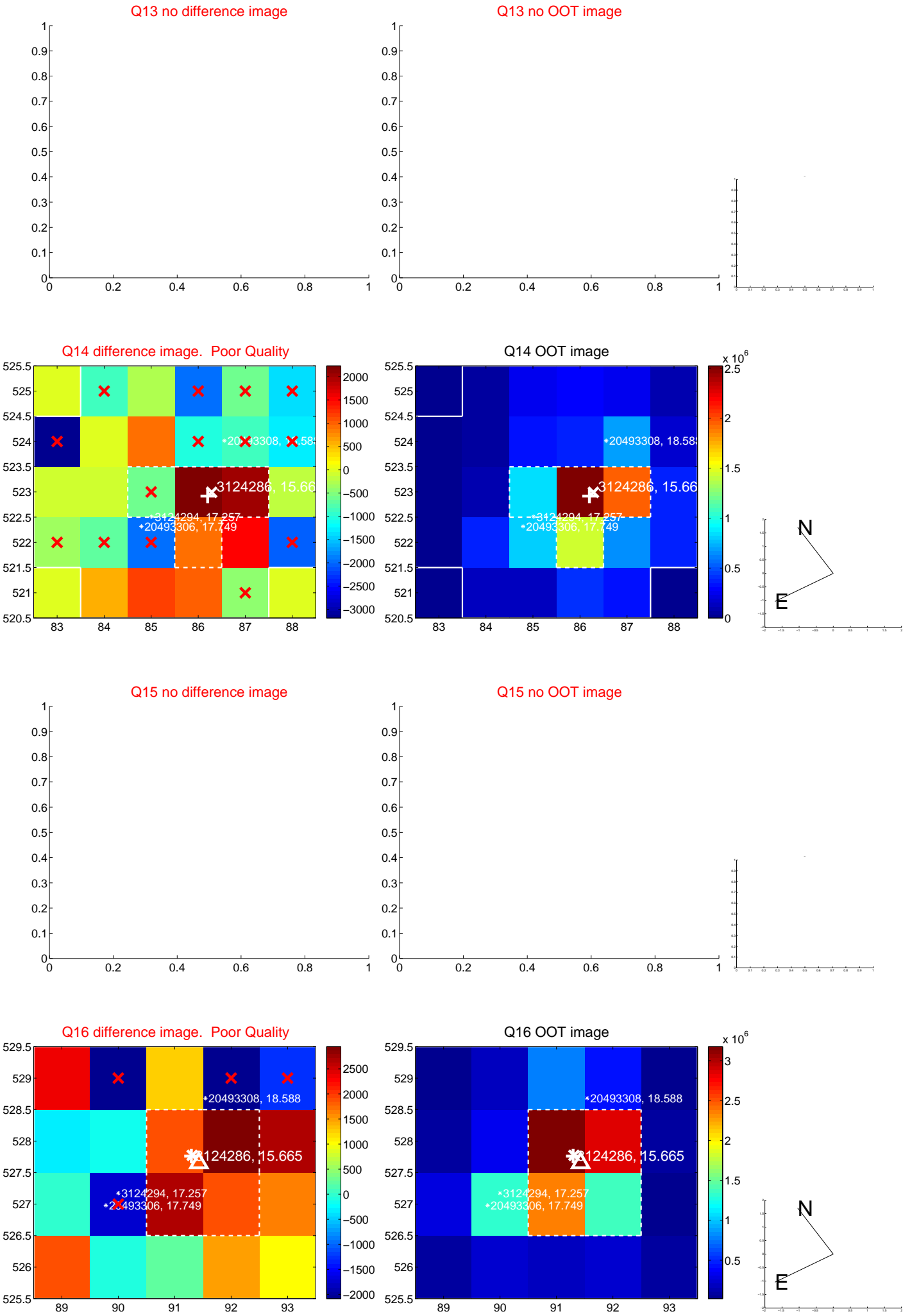
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



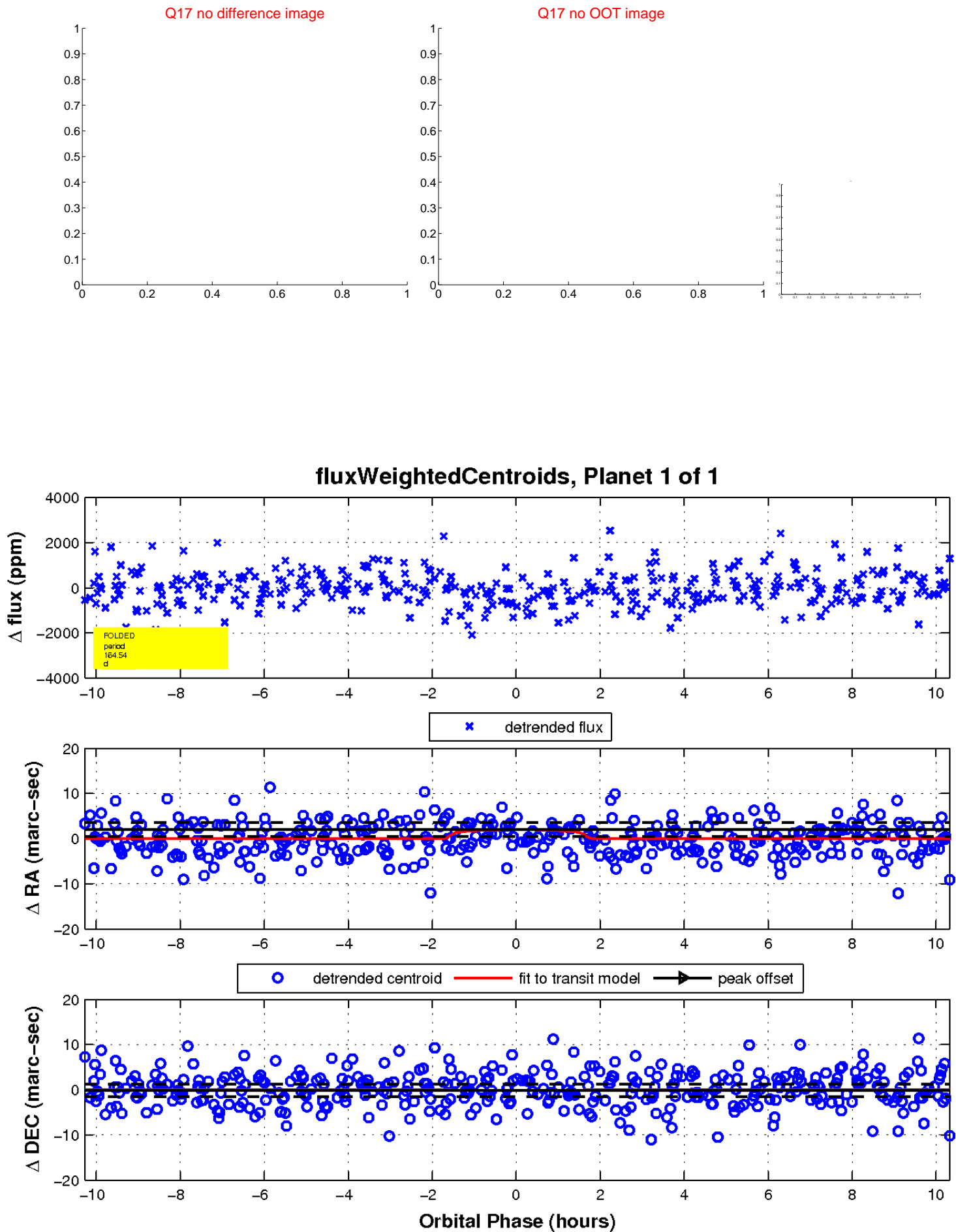
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

