

KIC 007199644

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 _⊕)
007199644-01	OBS	7821.01	1.133529	131.845249	13.9	2.672	7.9	4.8	0.95	6147	0.42	2691.55

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007199644-01	OBS	FP	0.00	0	1	0	1	MOD_SEC_ALT—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.

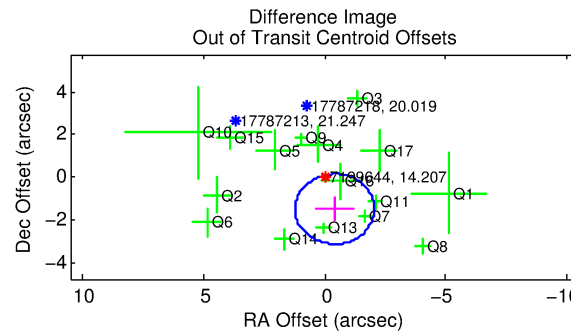
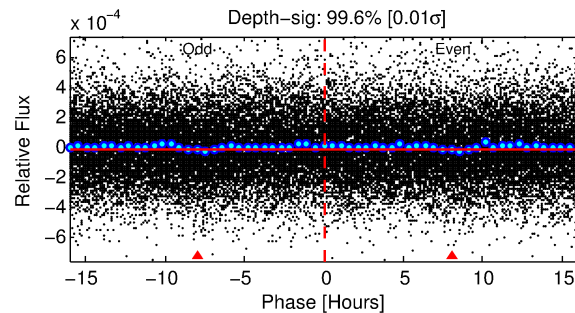
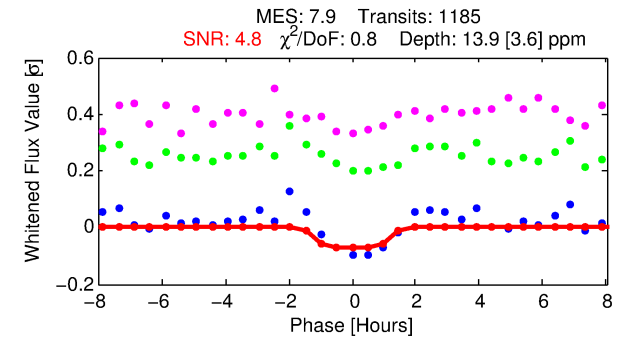
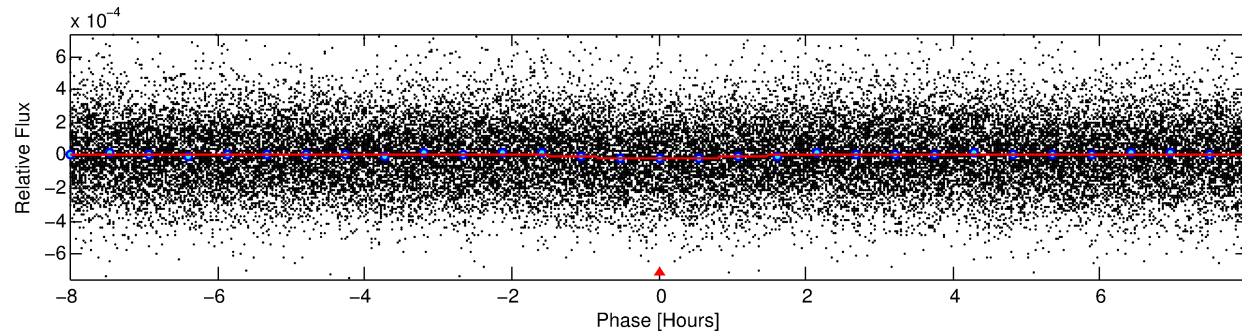
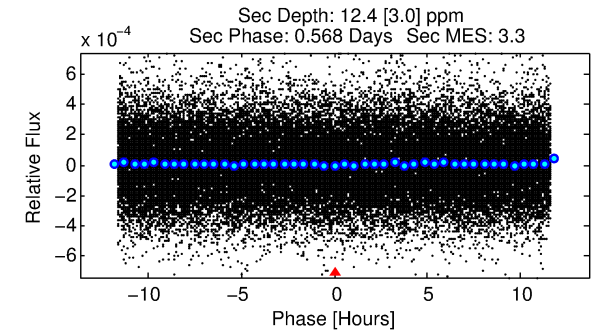
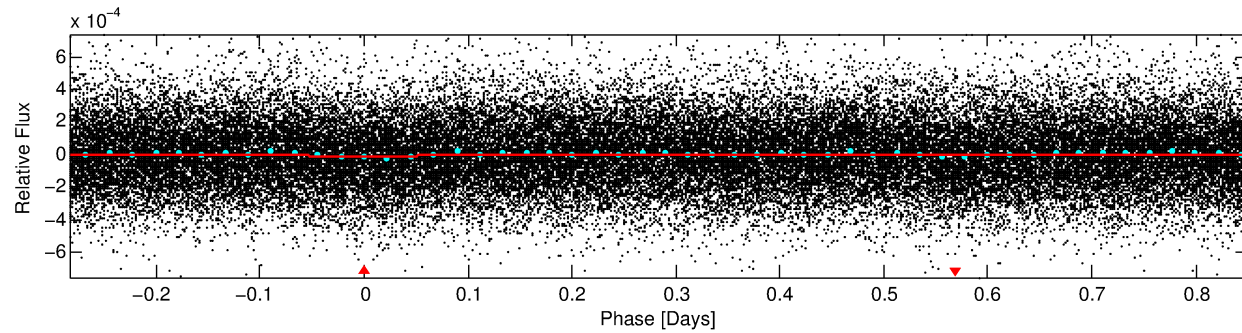
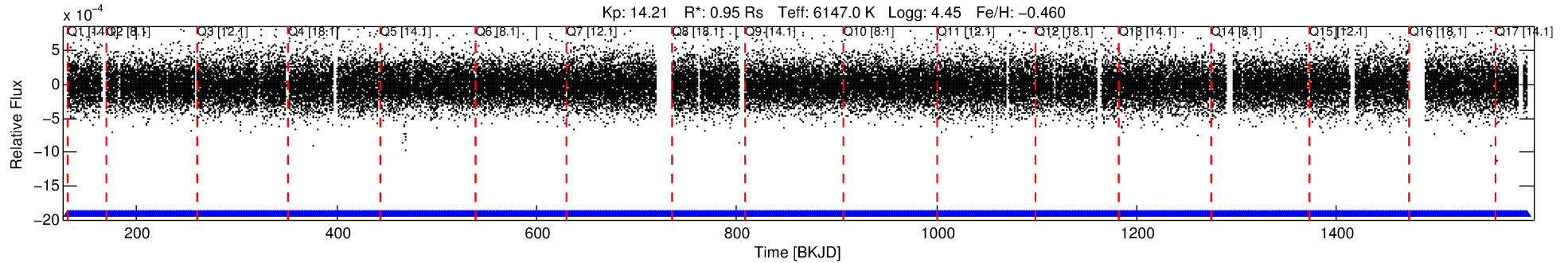
Ephemeris Match Information For 007199644-01

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
007199644-01	7199644	RR-Lyr-pri	7198959	2:1	565.3	108	91	7.86	14.21	44521.00	Direct-PRF	0	1.41	10.99

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: 7199644 Candidate: 1 of 1 Period: 1.134 d



DV Fit Results:

Period = 1.13353 [0.00002] d
Epoch = 131.8452 [0.0075] BKJD
Rp/R* = 0.0040 [0.0028]
a/R* = 1.72 [4.38]
b = 0.90 [0.83]
Seff = 2691.55 [991.35]
Teq = 1837 [169] K
Rp = 0.42 [0.31] Re
a = 0.0208 [0.0049] AU
Ag = 16.91 [24.56] [0.65σ]
Teffp = 5758 [2041] K [1.92σ]

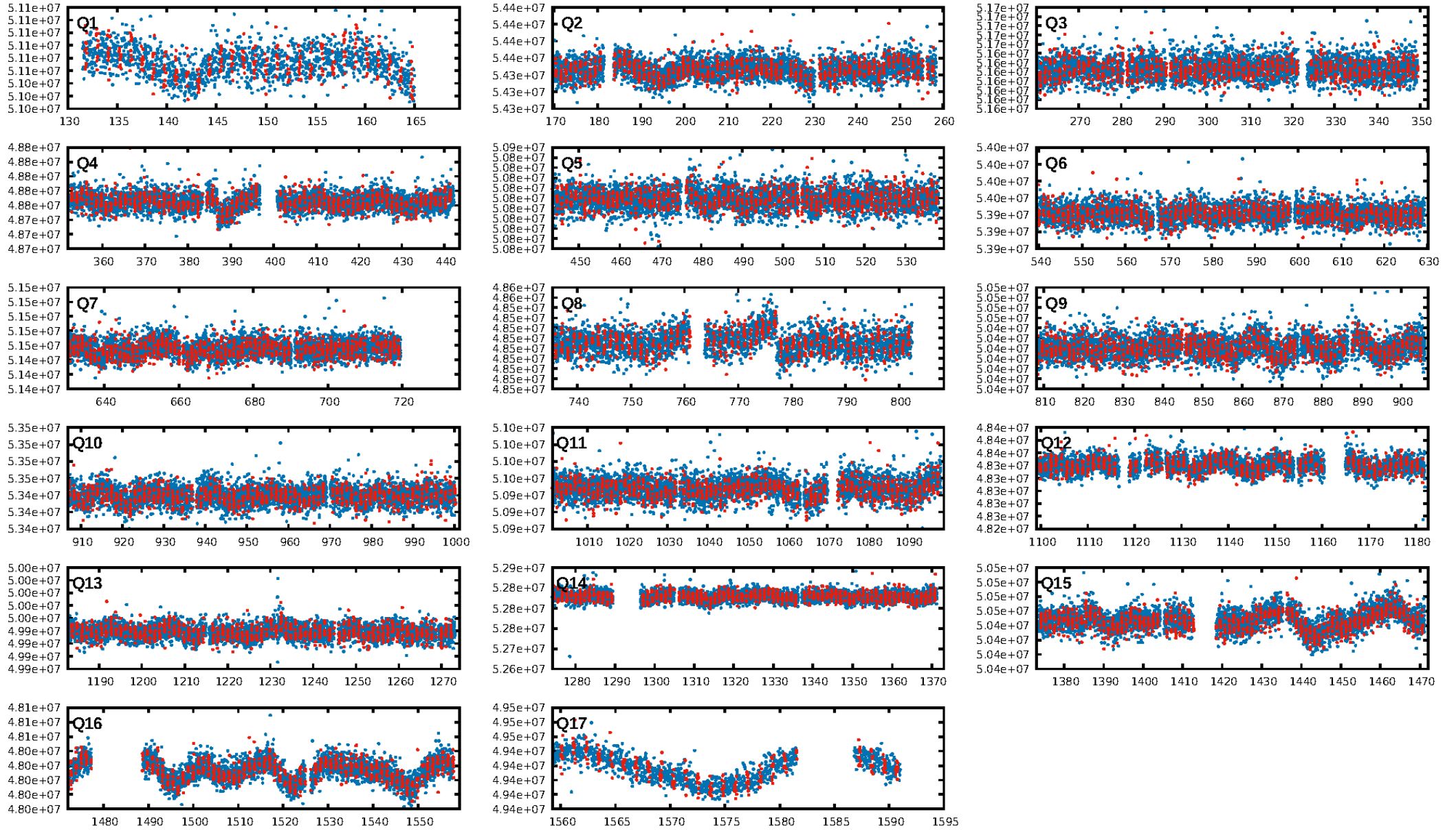
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.65e-16
RollingBand-fgt: 1.00 [1131/1131]
GhostDiagnostic-chr: 0.8315
Centroid-sig: 0.7%
Centroid-so: 5.439 arcsec [2.06σ]
OotOffset-rm: 1.536 arcsec [2.81σ]
OotOffset-st: 4/4/3/5 [16]
KicOffset-rm: 1.635 arcsec [2.97σ]
KicOffset-st: 4/4/3/5 [16]
DiffImageQuality-fgm: 0.19 [3/16]
DiffImageOverlap-fno: 1.00 [17/17]

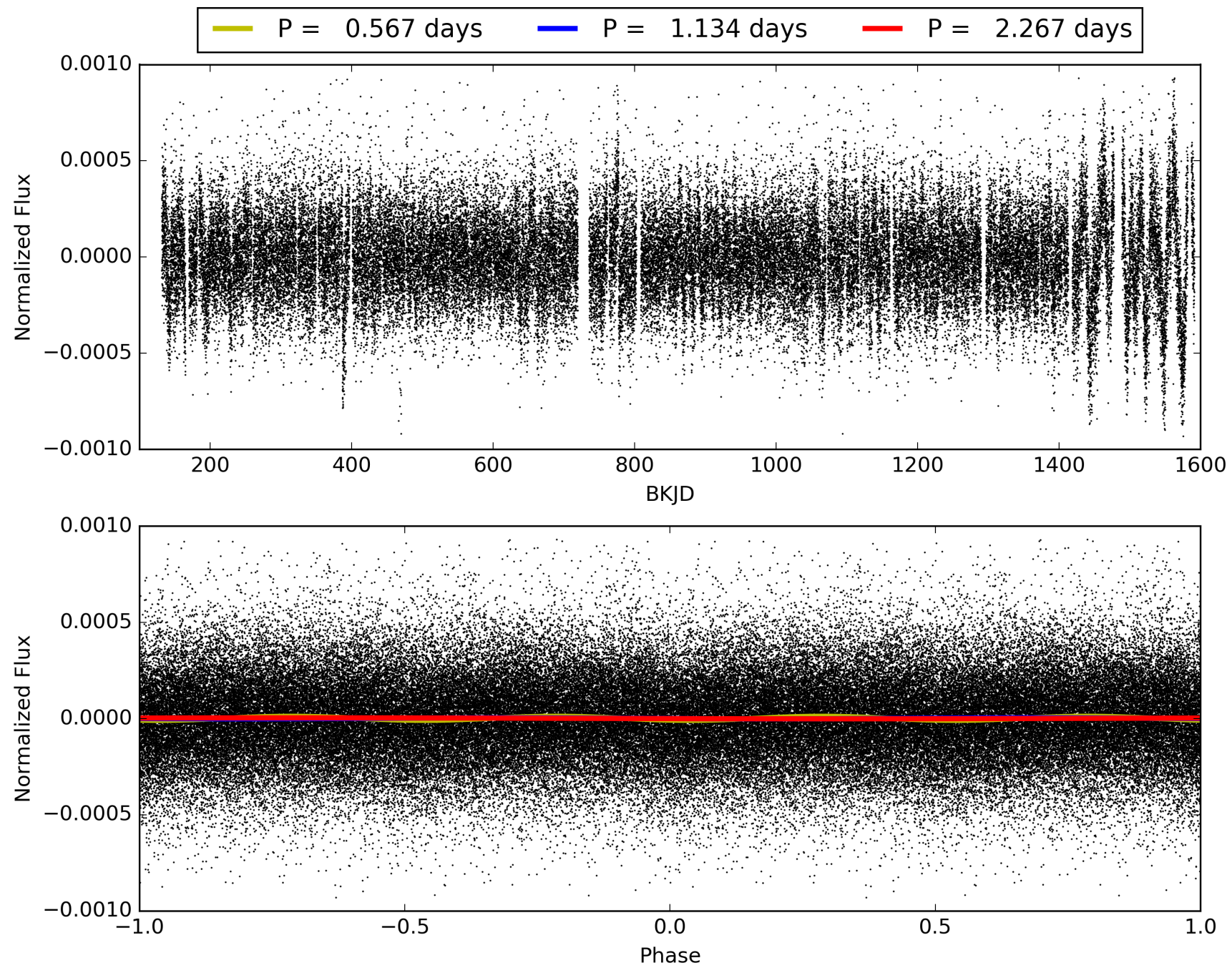
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 06:26:42 Z

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

TCE 007199644-01, PDC Light Curves

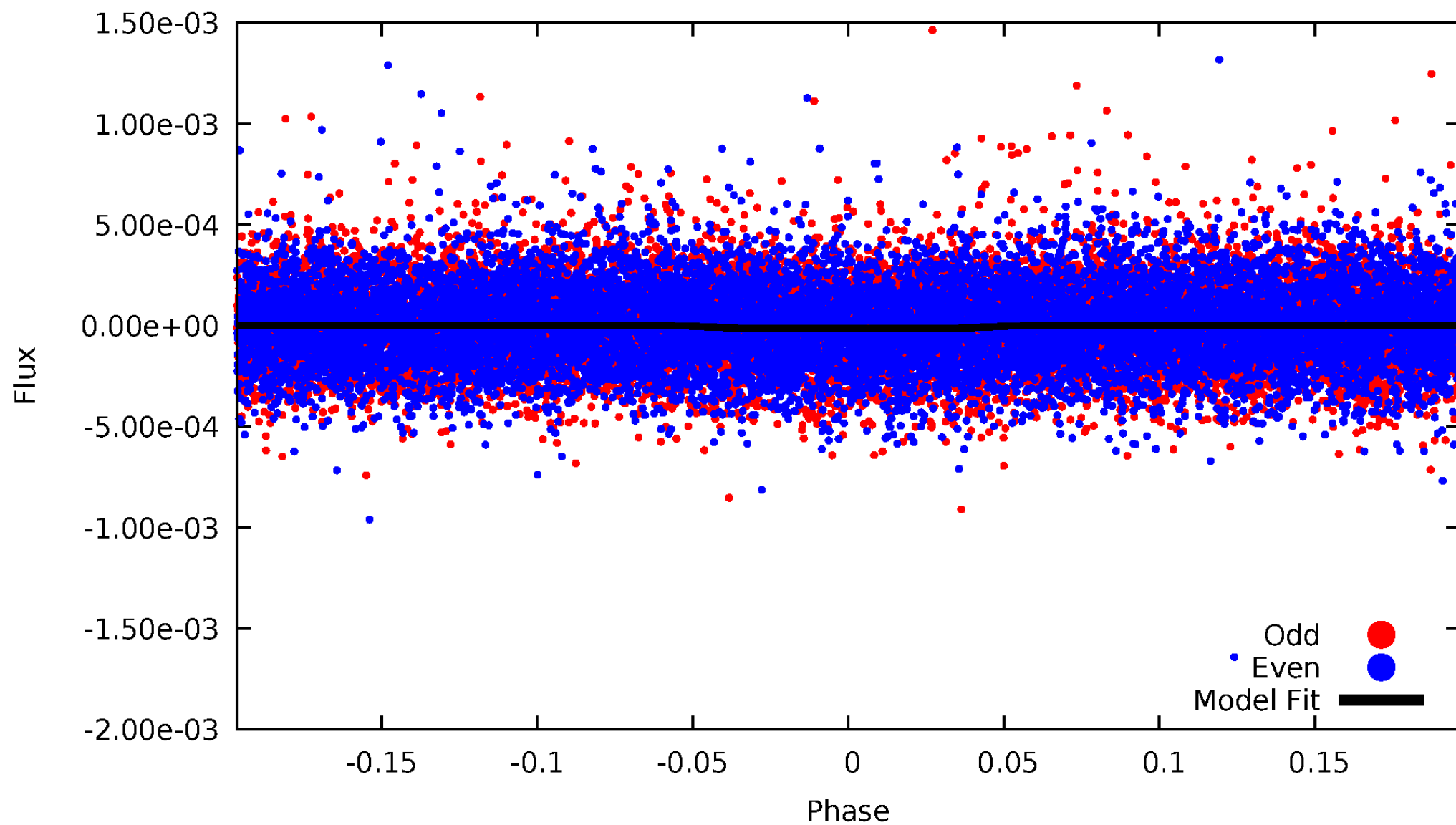


TCE 007199644-01



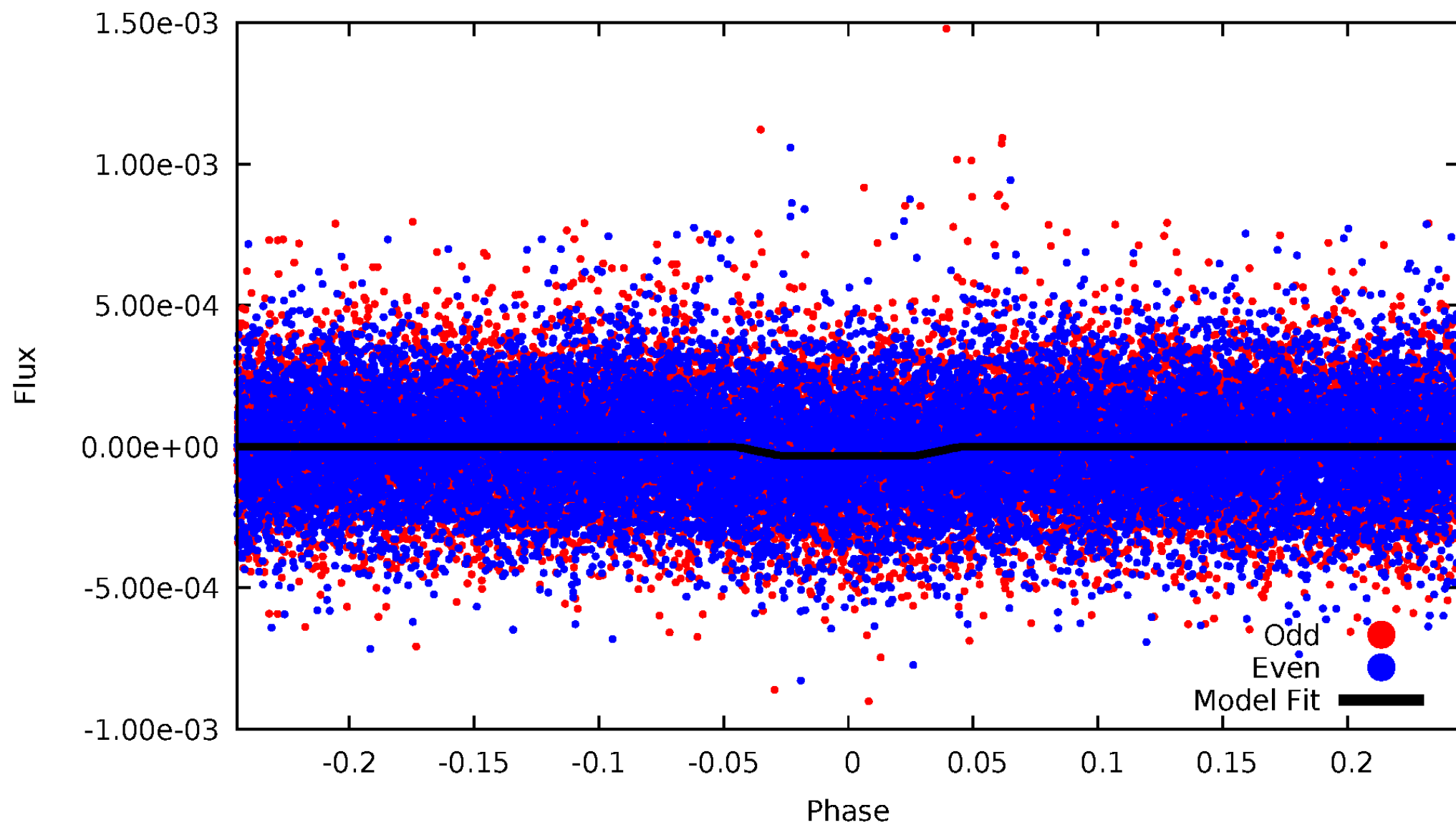
DV Odd/Even

TCE 007199644-01



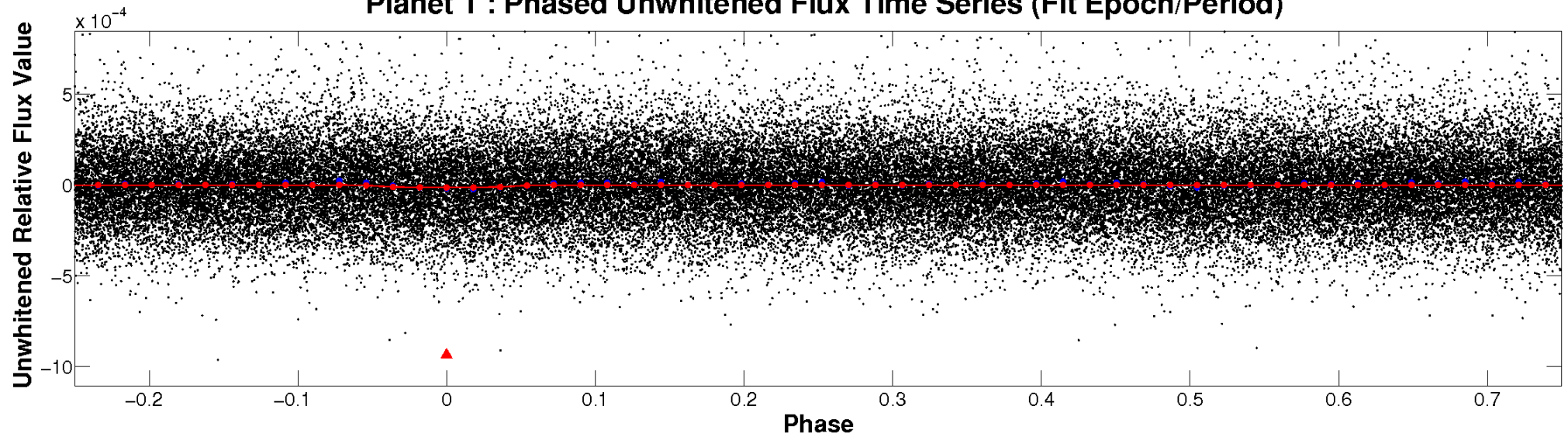
ALT Odd/Even

TCE 007199644-01

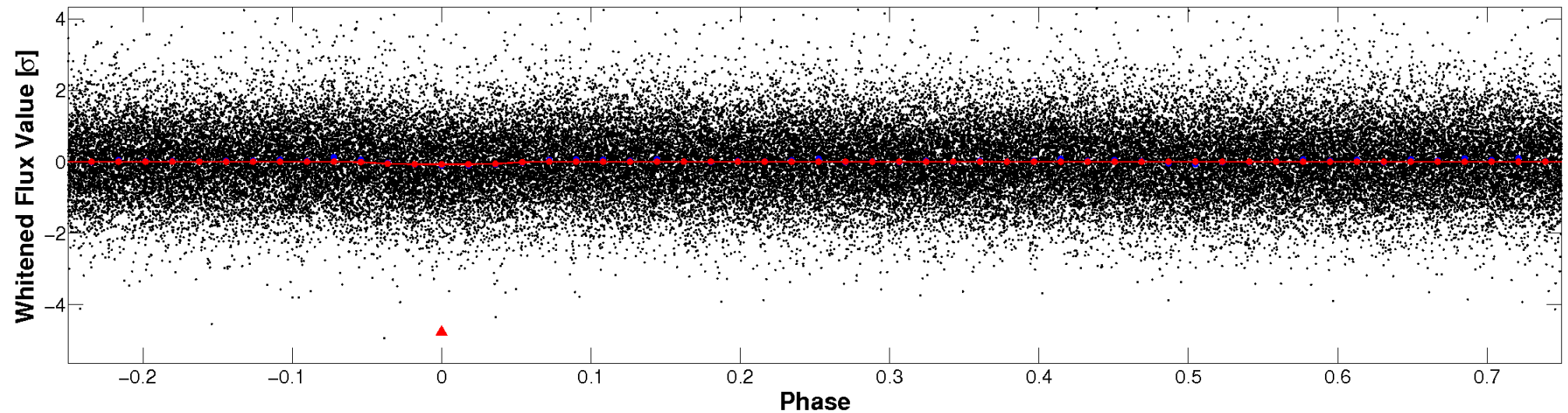


Non-Whitened Vs. Whitened Light Curve

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

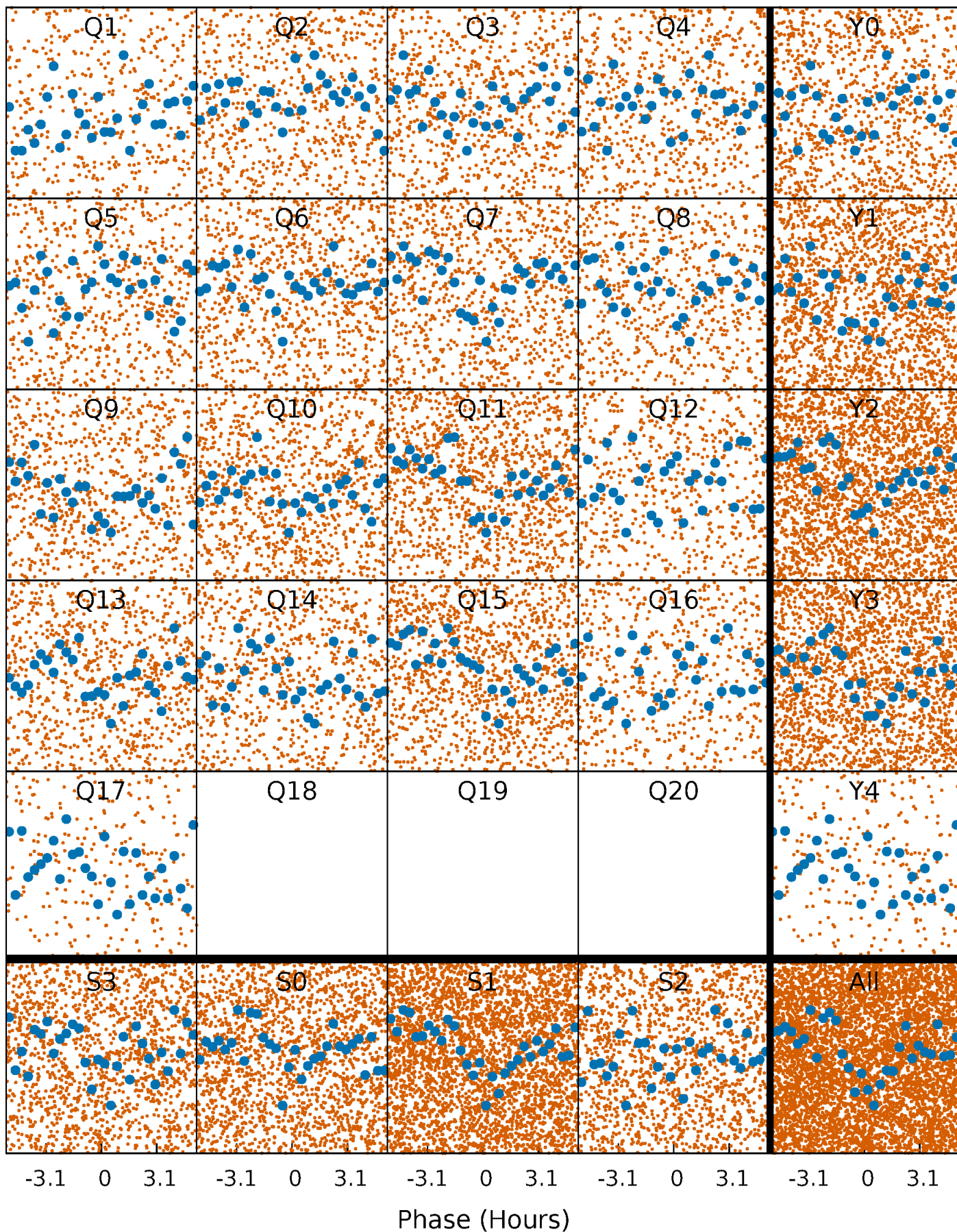


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



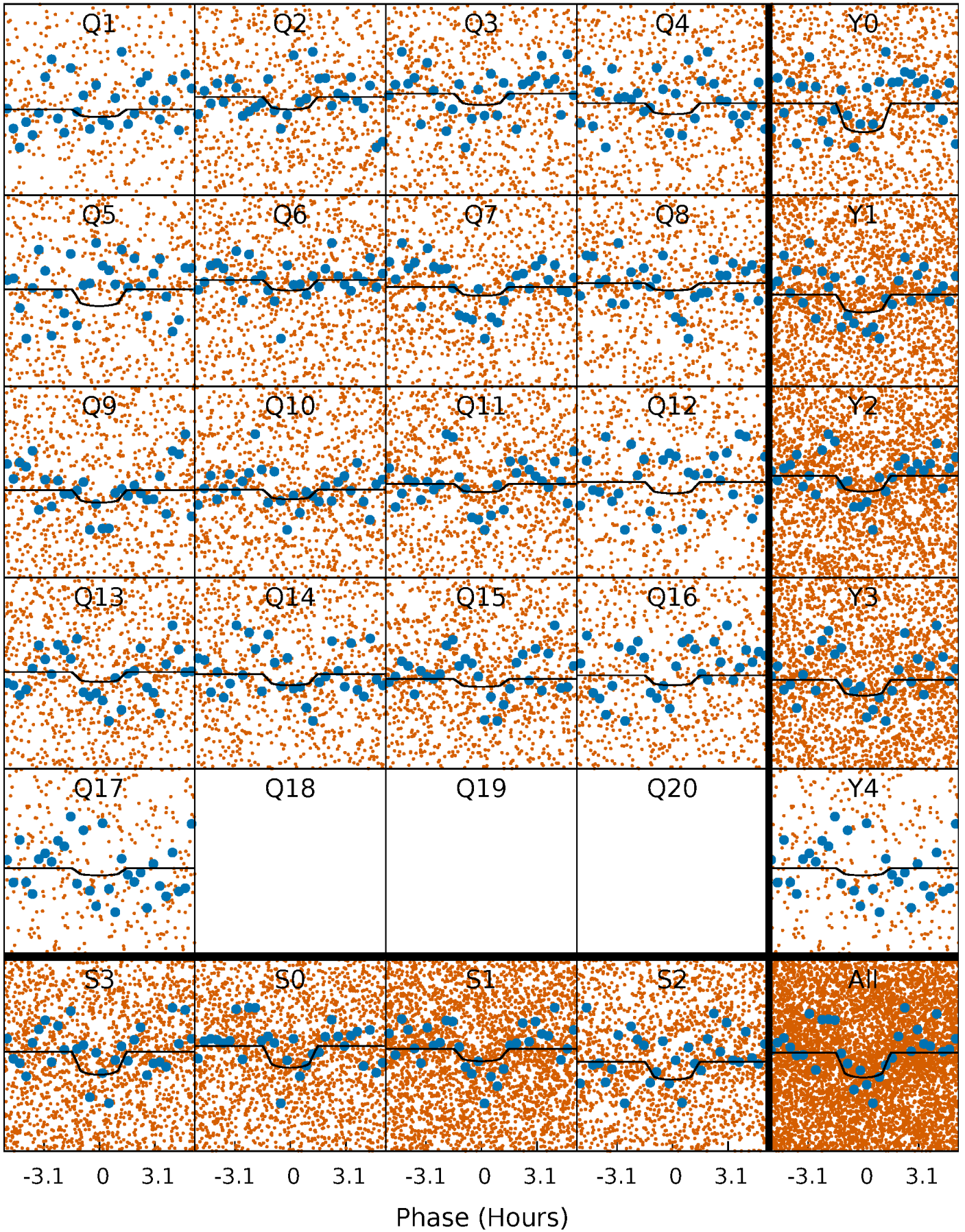
PDC Quarter-Phased Transit Curves

TCE 007199644-01 P= 1.133529 Days $T_0=131.845249$ (BKJD)



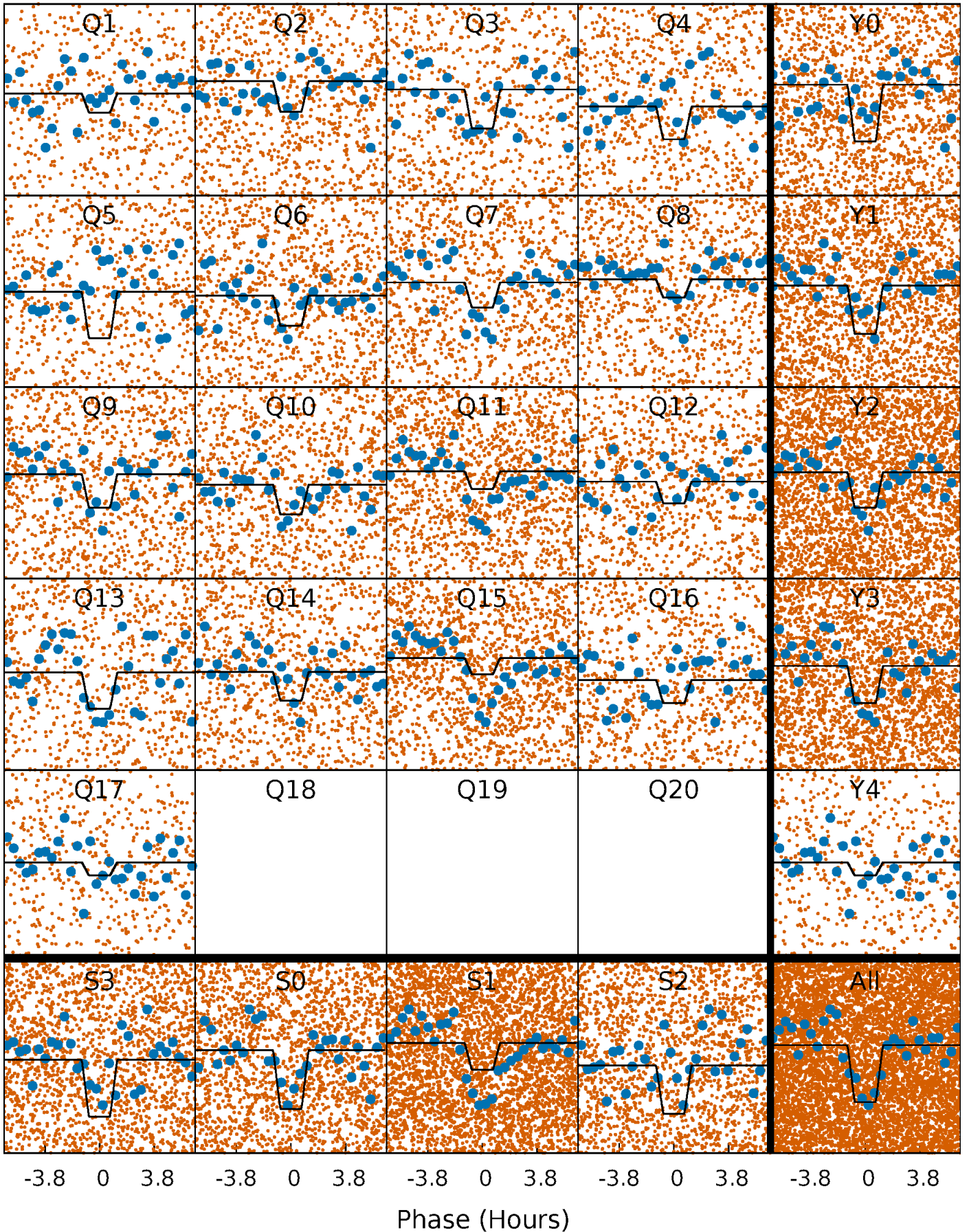
DV Quarter-Phased Transit Curves

TCE 007199644-01 P= 1.133529 Days $T_0=131.845249$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

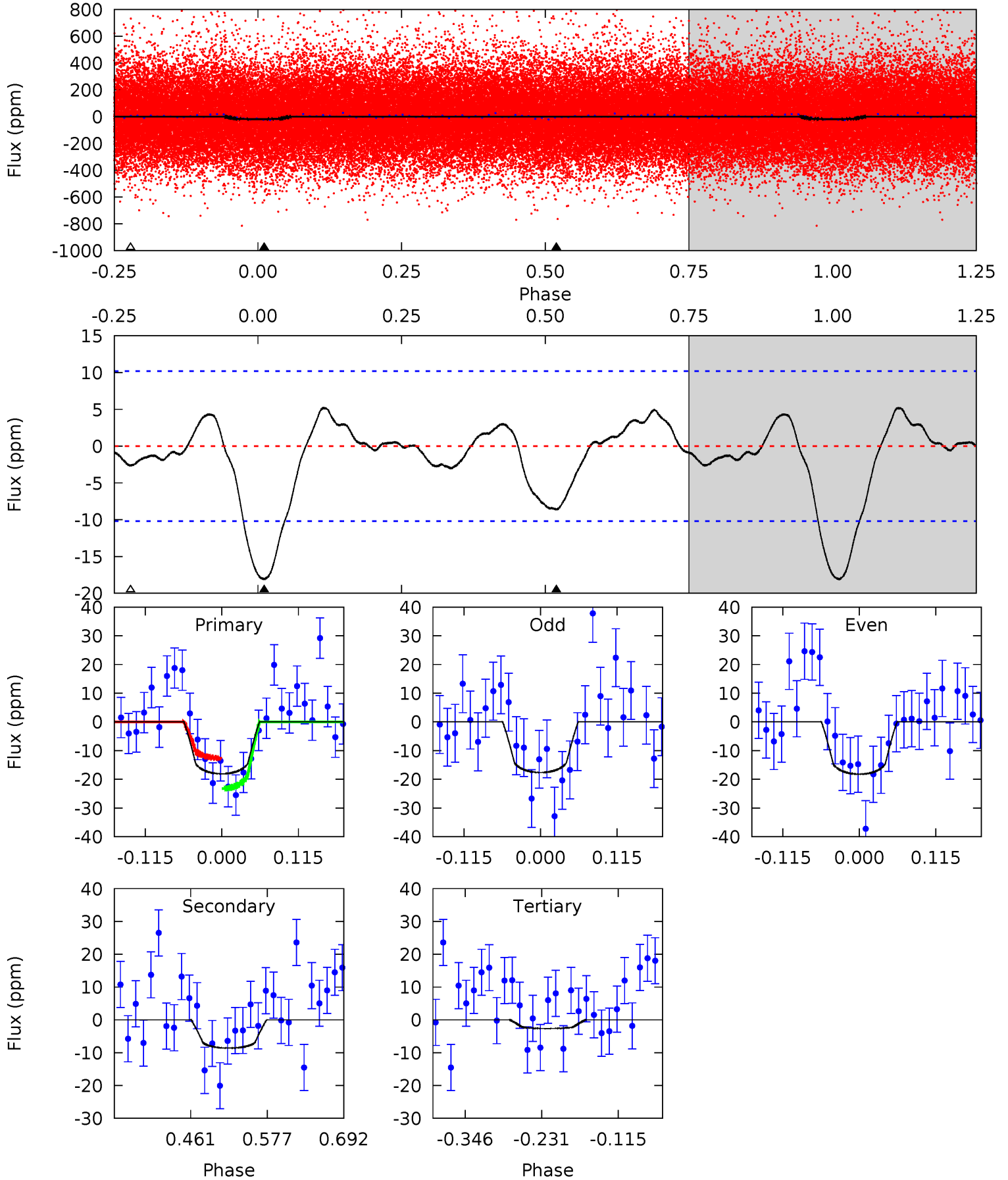
TCE 007199644-01 P= 1.133572 Days $T_0=131.822335$ (BKJD)



DV Model-Shift Uniqueness Test

007199644-01, P = 1.133529 Days, E = 130.711720 Days

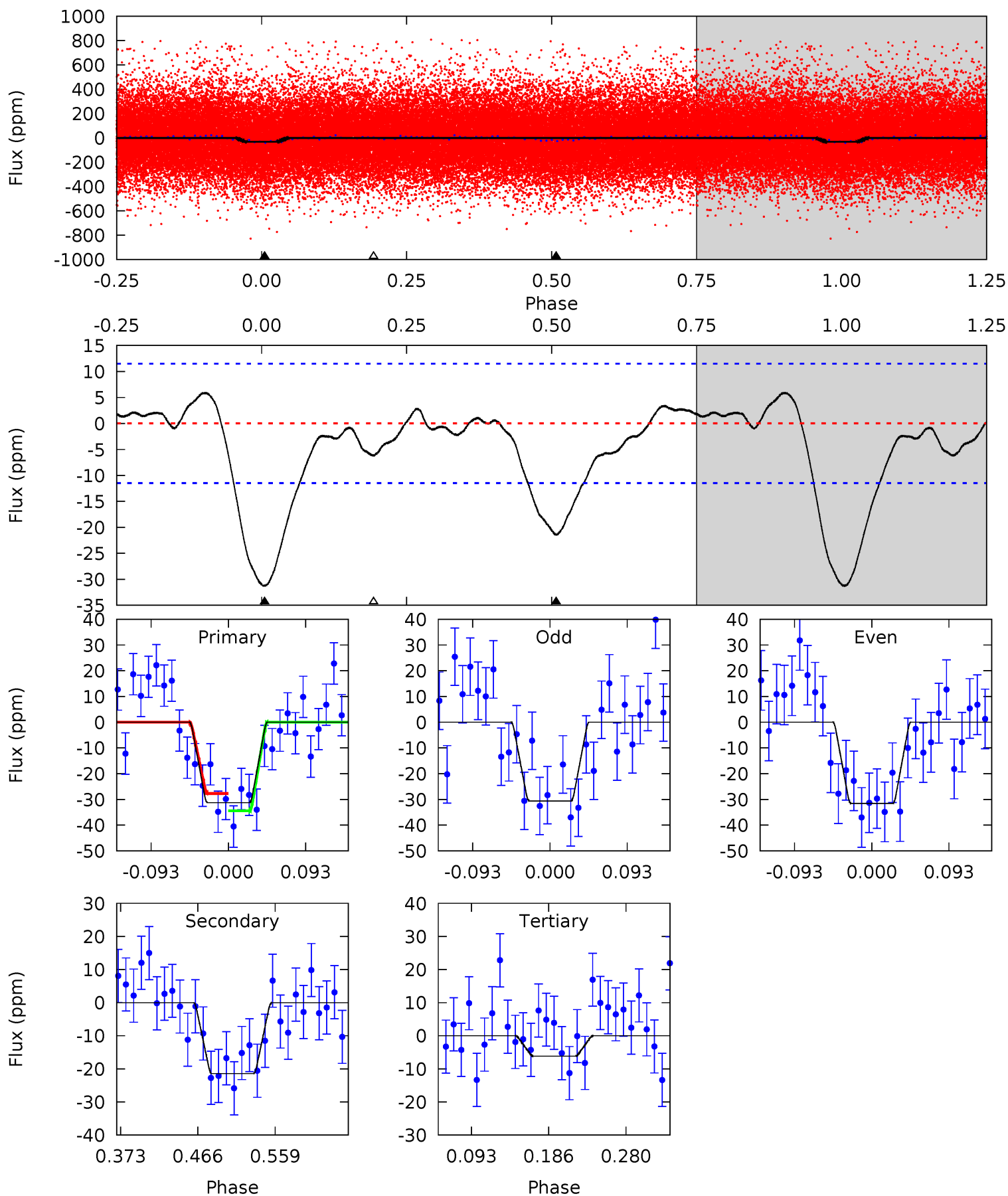
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.04	3.83	1.18	0	4.53	1.57	0.93	6.86	8.04	2.65	3.83	0.13	0.96	0.22	2.36



Alt Model-Shift Uniqueness Test

007199644-01, P = 1.133572 Days, E = 130.688763 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.5	8.54	2.46	0	4.58	1.68	1.10	10.0	12.5	6.08	8.54	0.20	1.02	0.16	1.34



Stellar Parameters For KIC 007199644

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6147^{+166}_{-203}	$4.449^{+0.081}_{-0.189}$	$-0.460^{+0.300}_{-0.300}$	$0.954^{+0.264}_{-0.113}$	$0.932^{+0.116}_{-0.104}$	$1.514^{+0.537}_{-0.768}$
	+3%/-3%	+2%/-4%	+65%/-65%	+28%/-12%	+12%/-11%	+35%/-51%
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 007199644-01 / KOI 7821.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-9 ± 2	$0.46^{+0.30}_{-0.27}$	2594^{+162}_{-133}	5100^{+2713}_{-998}	$9.583^{+44.395}_{-6.318}$
Alt.	-21 ± 3	$0.63^{+0.29}_{-0.29}$	2588^{+199}_{-121}	5469^{+2017}_{-836}	13^{+32}_{-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 $A_{\text{obs}} \gg 1.0$

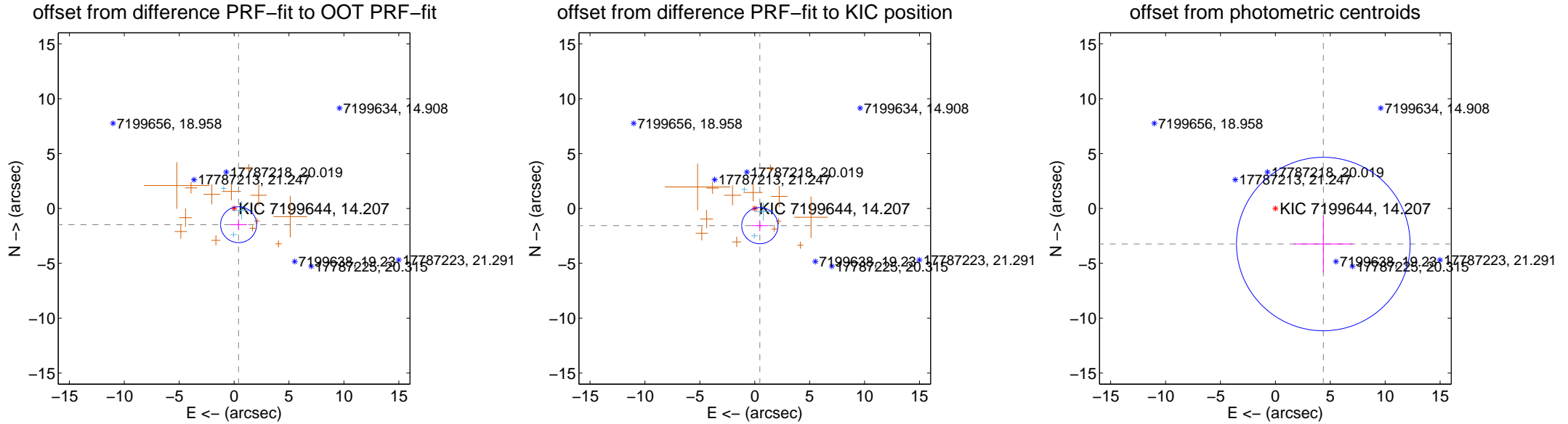
DV Centroid Data

Supplemental centroid analysis for 007199644-01. Kepler magnitude: 14.21. Transit SNR 4.81

There are 3 quarters with good PRF difference image offsets

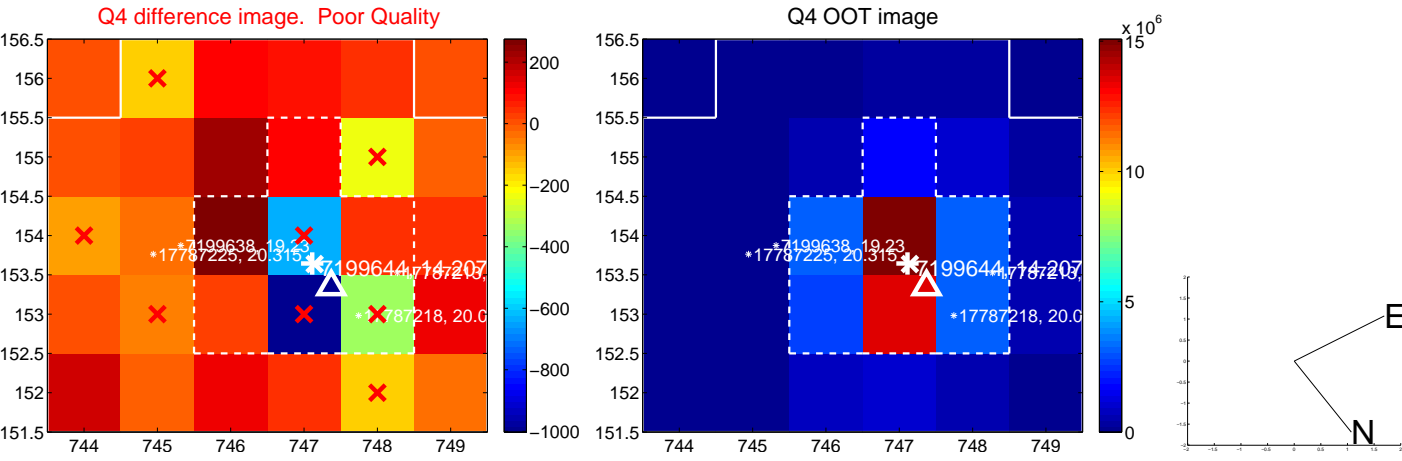
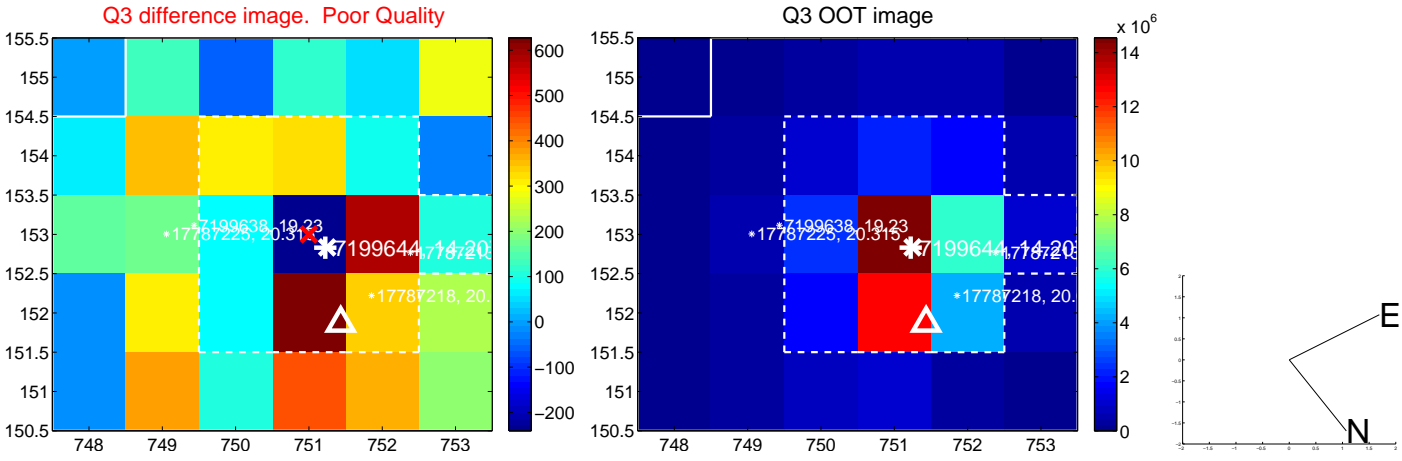
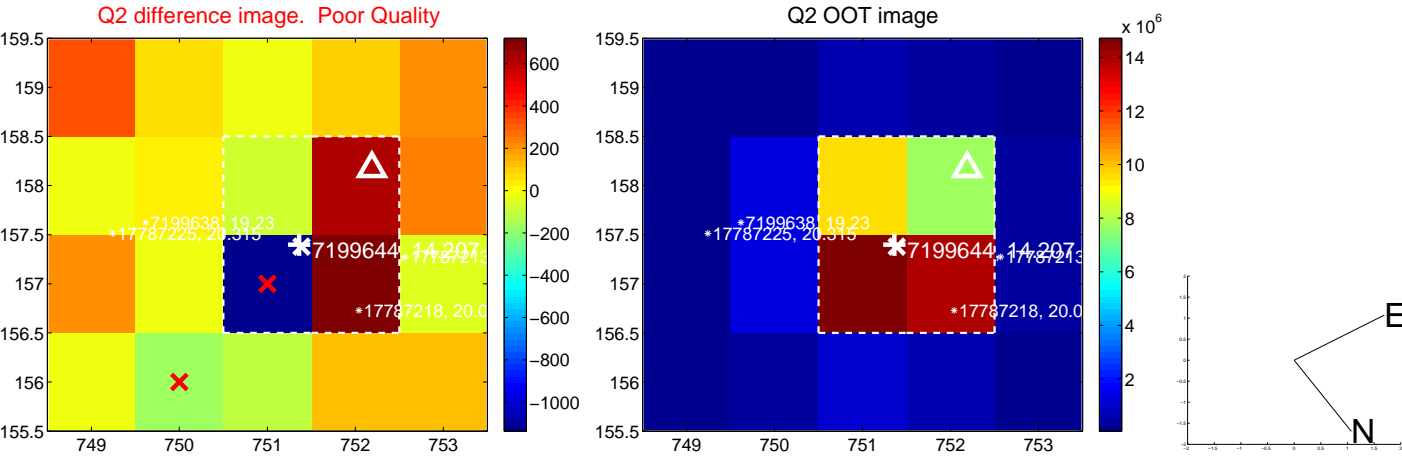
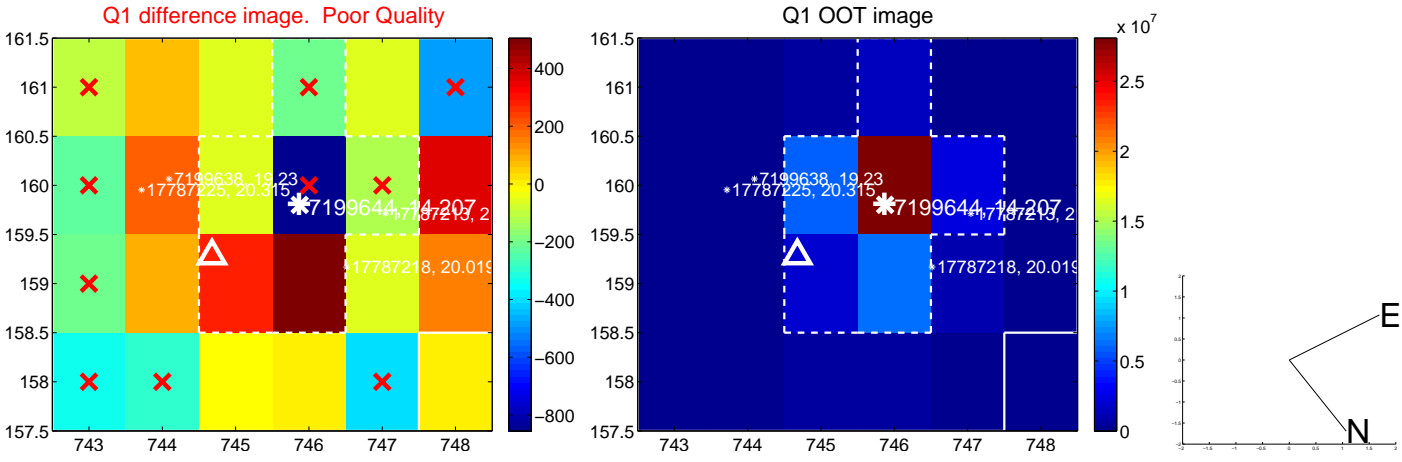
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.536 ± 0.546	2.81	-0.408 ± 0.760	-1.480 ± 0.496
PRF-fit source offset from KIC position	1.635 ± 0.550	2.97	-0.464 ± 0.792	-1.567 ± 0.504
photometric centroid source offset	5.44 ± 2.64	2.06	-4.37 ± 2.67	-3.24 ± 2.58

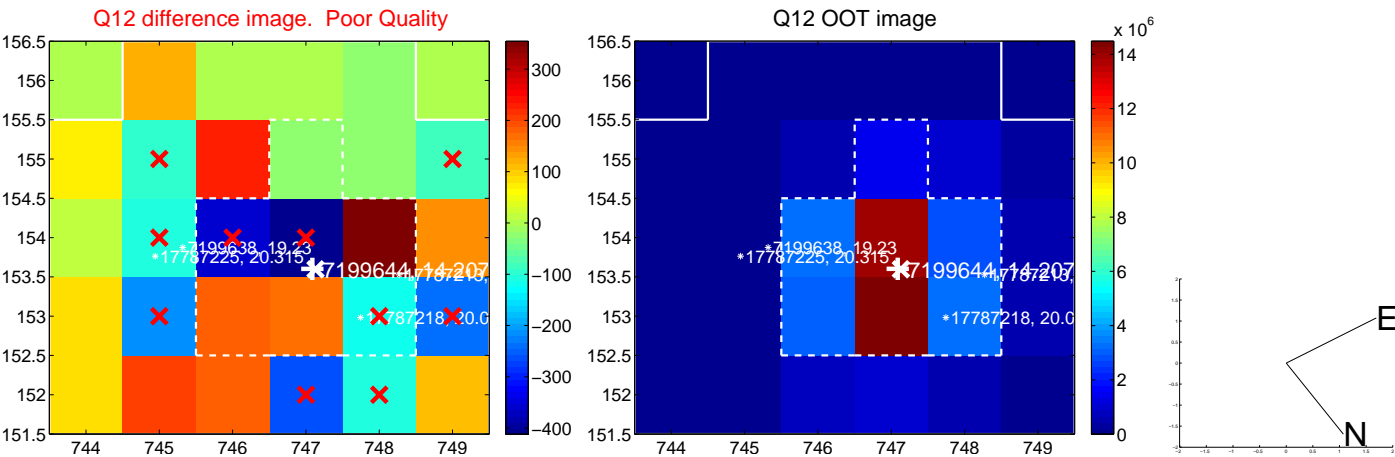
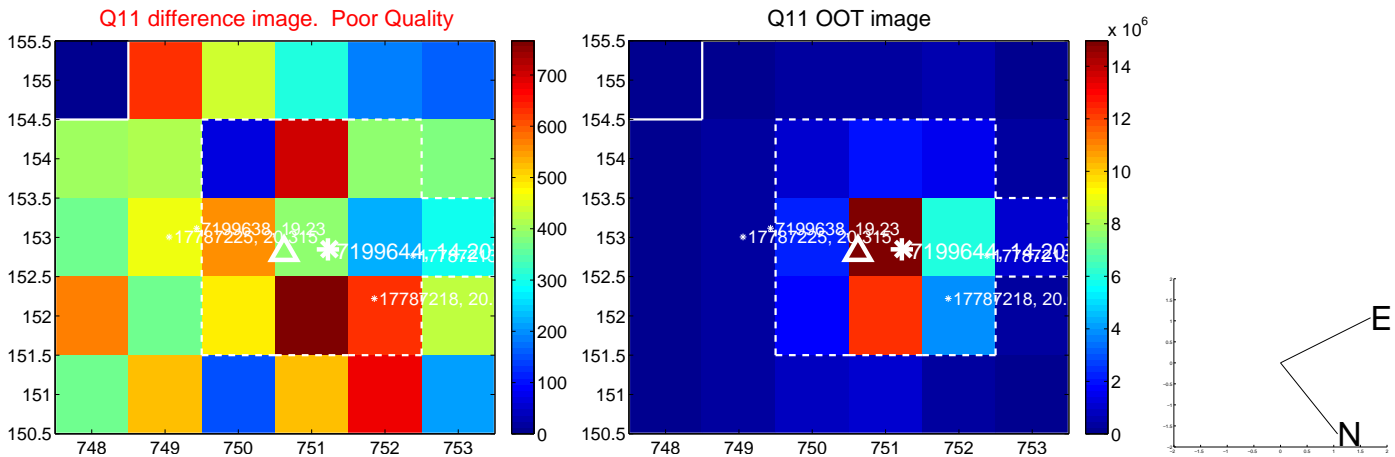
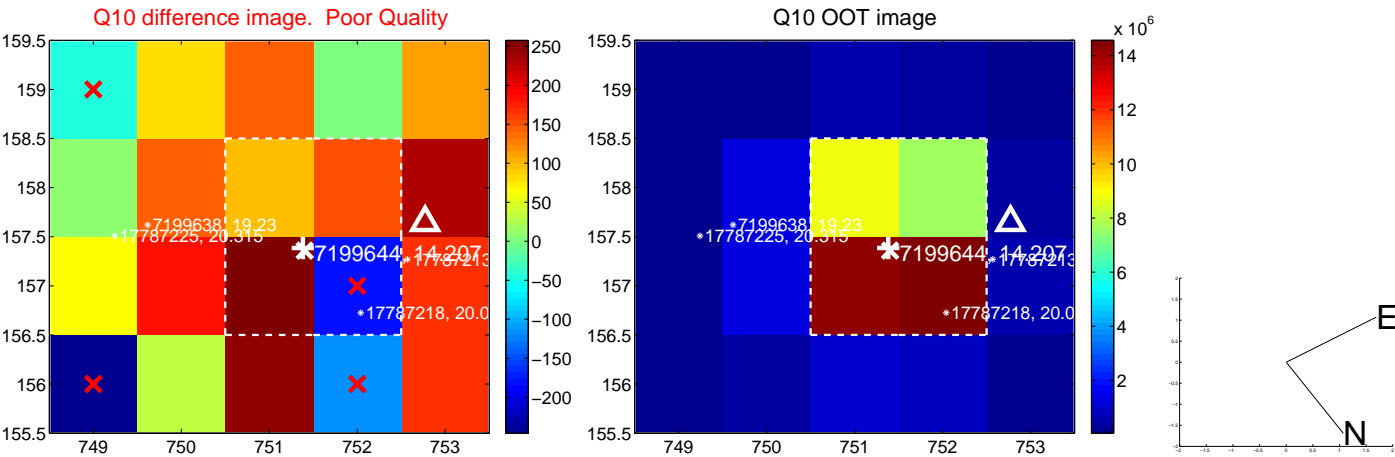
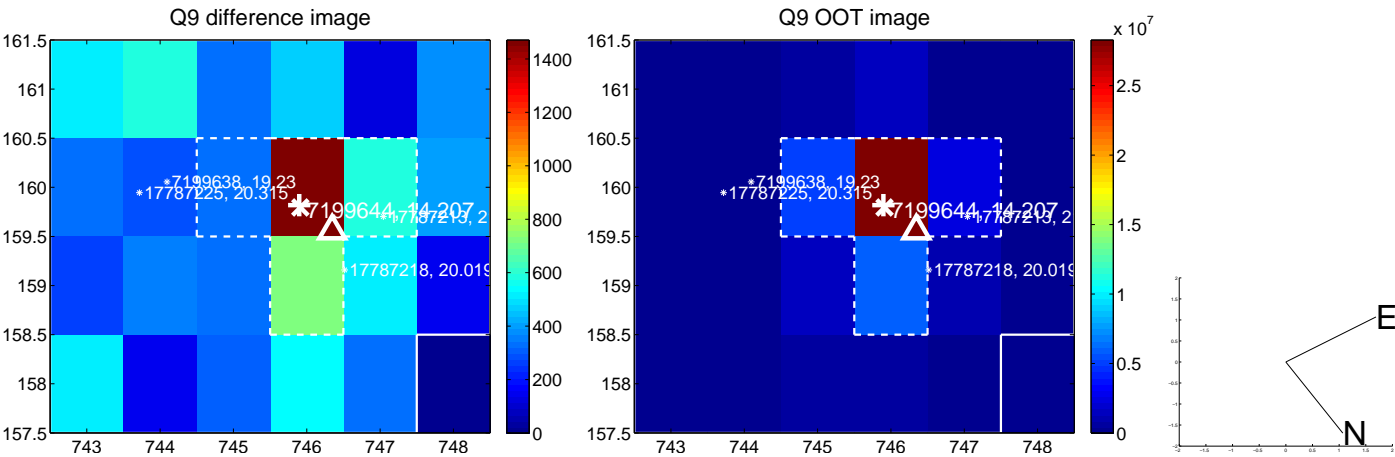


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

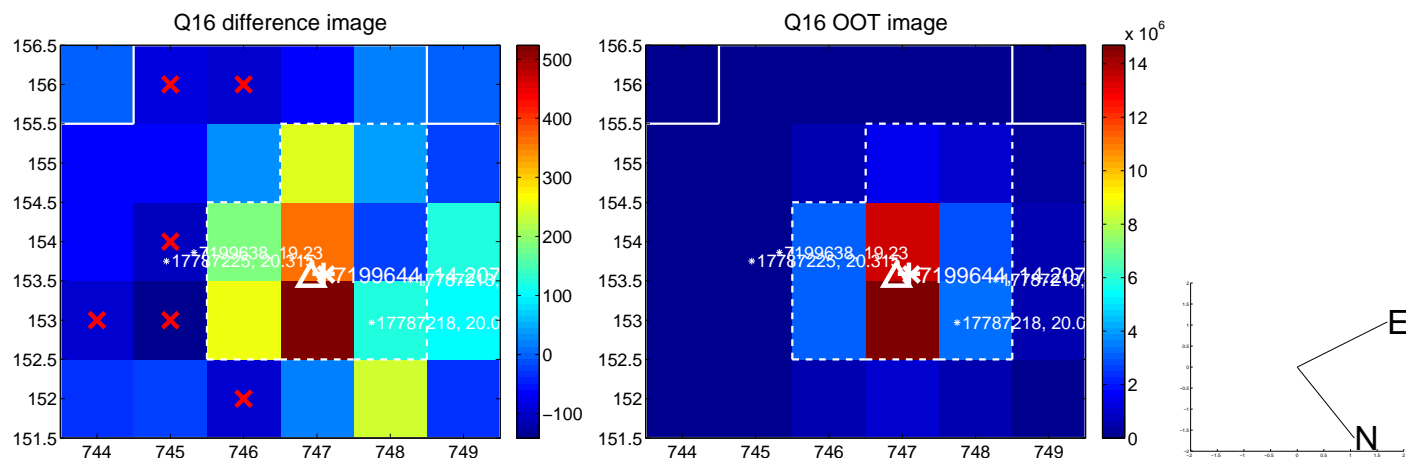
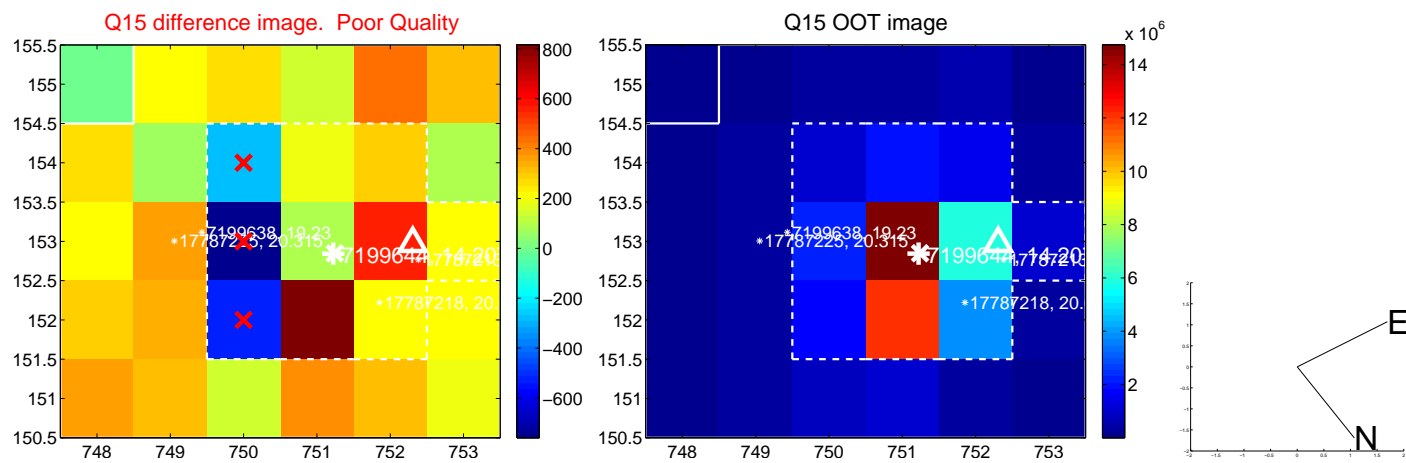
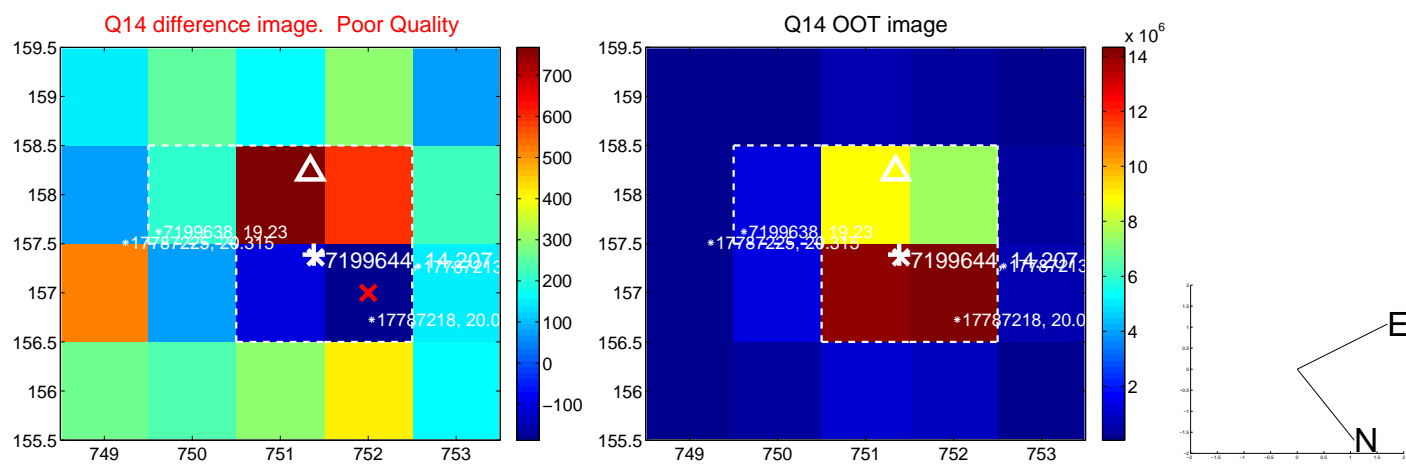
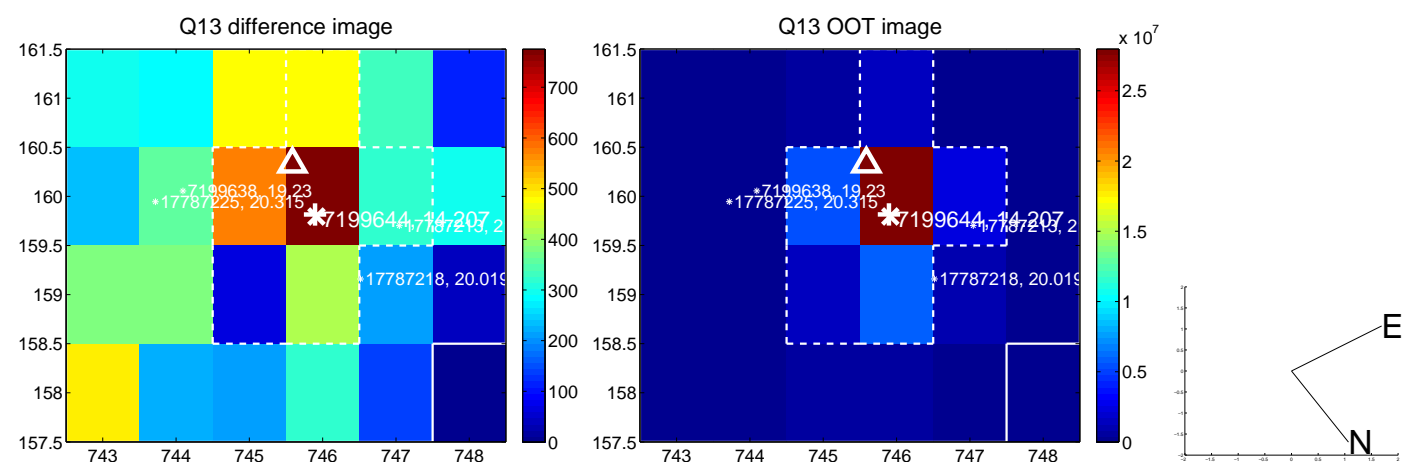
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



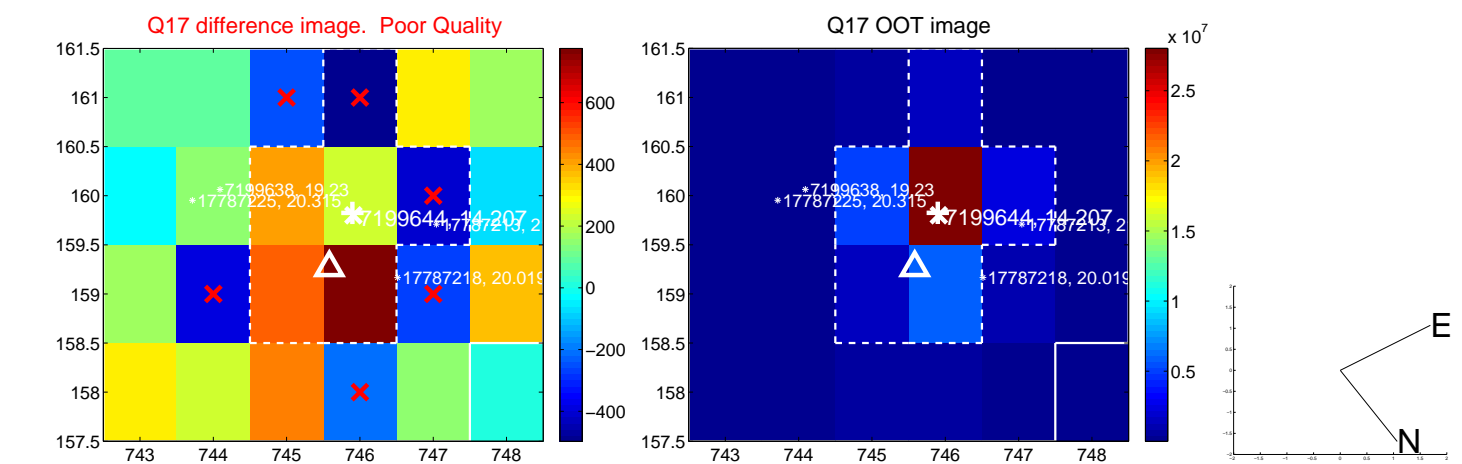
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



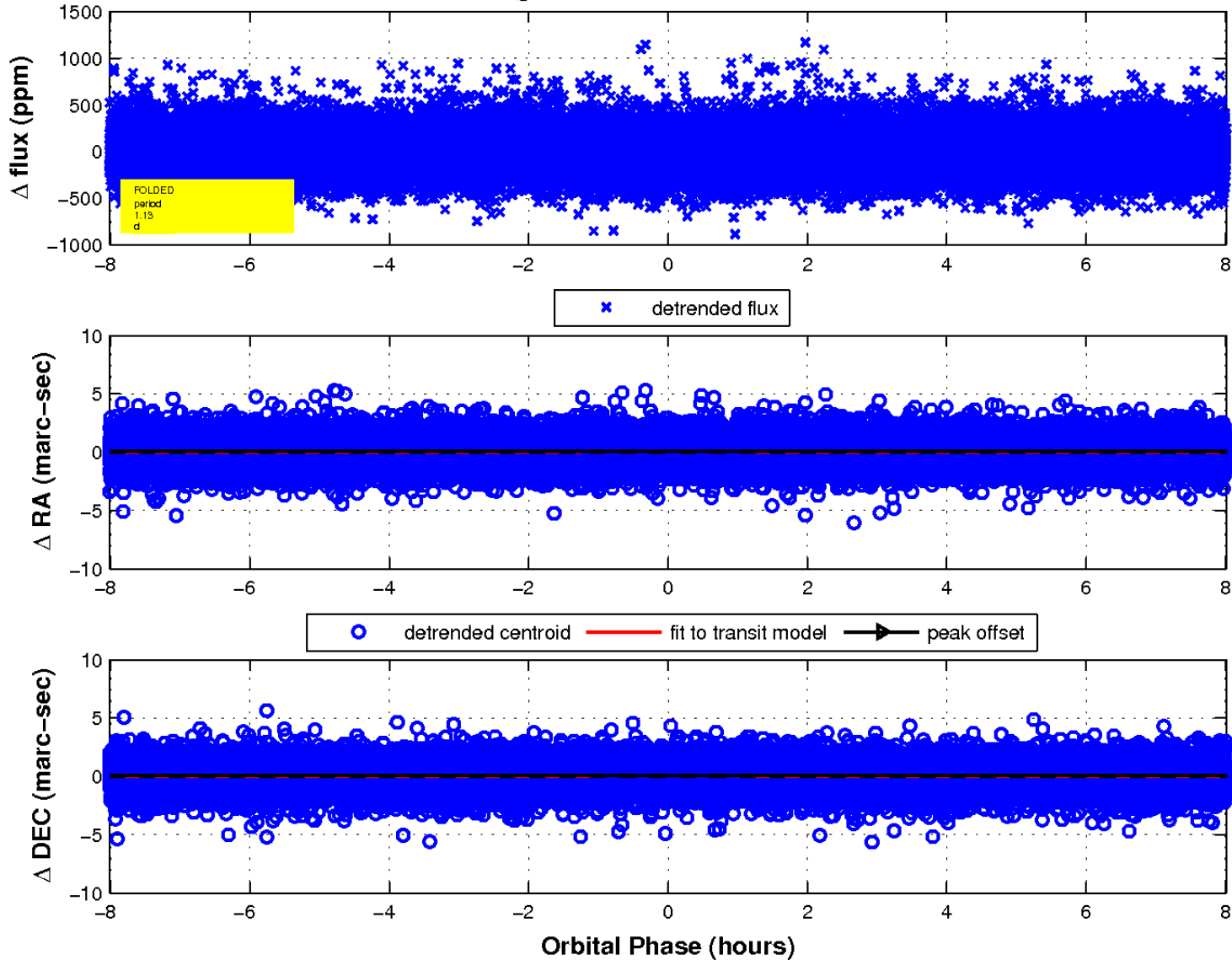
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

