

KIC 010515986

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})
010515986-01	OBS	No	0.749185	132.012839	165.4	5.630	11.0	6.7	0.32	3407	0.43	103.74

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010515986-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_KIC_POS

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

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

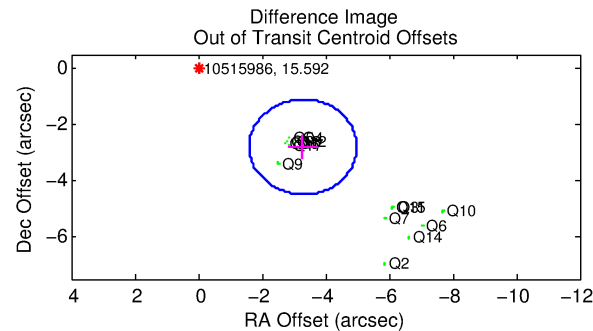
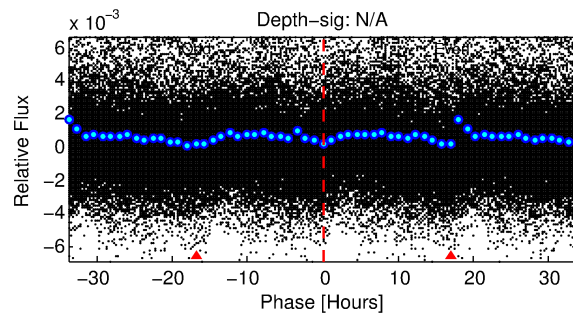
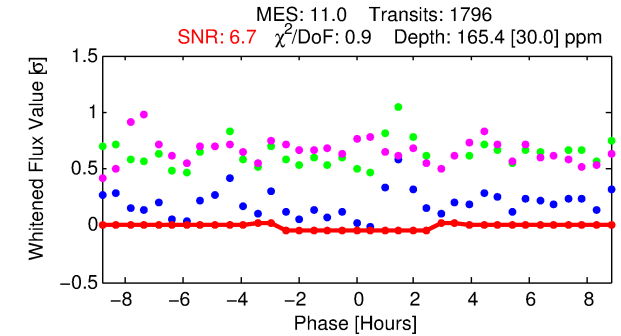
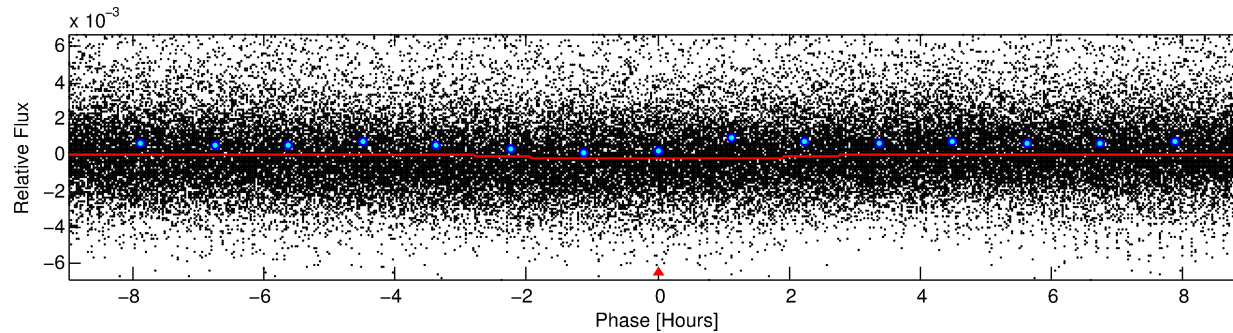
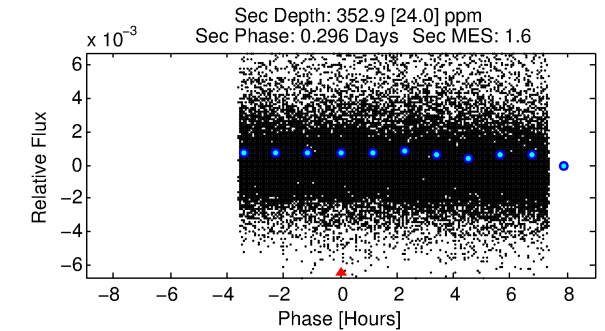
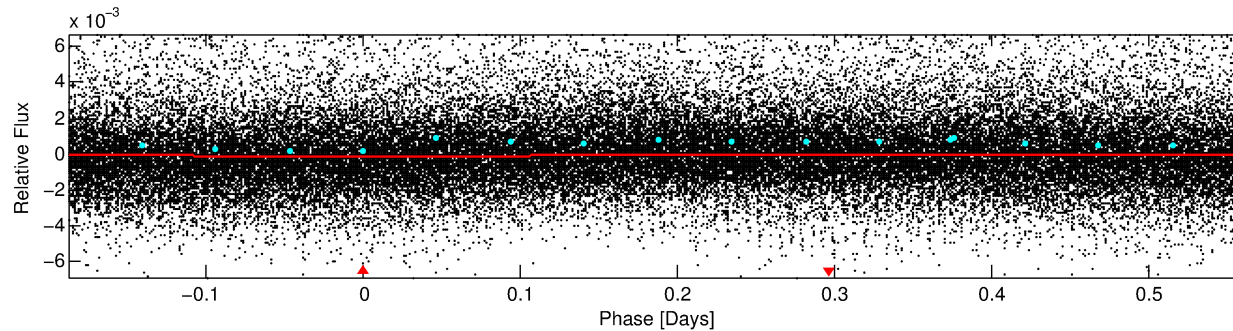
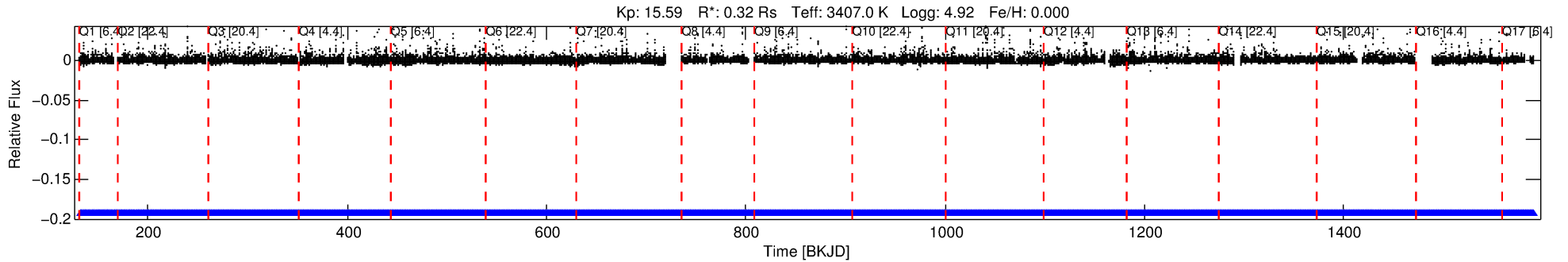
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010515986-01

No Significant Match Found

DV One-Page Summary

KIC: 10515986 Candidate: 1 of 1 Period: 0.749 d



DV Fit Results:

Period = 0.74918 [0.00002] d
Epoch = 132.0128 [0.0043] BKJD
Rp/R* = 0.0123 [0.0148]
a/R* = 1.14 [1.36]
b = 0.63 [5.01]
Seff = 103.74 [14.20]
Teq = 814 [28] K
Rp = 0.43 [0.53] Re
a = 0.0111 [0.0011] AU
Ag = 125.37 [302.78] [0.41σ]
Teffp = 4210 [2539] K [1.34σ]

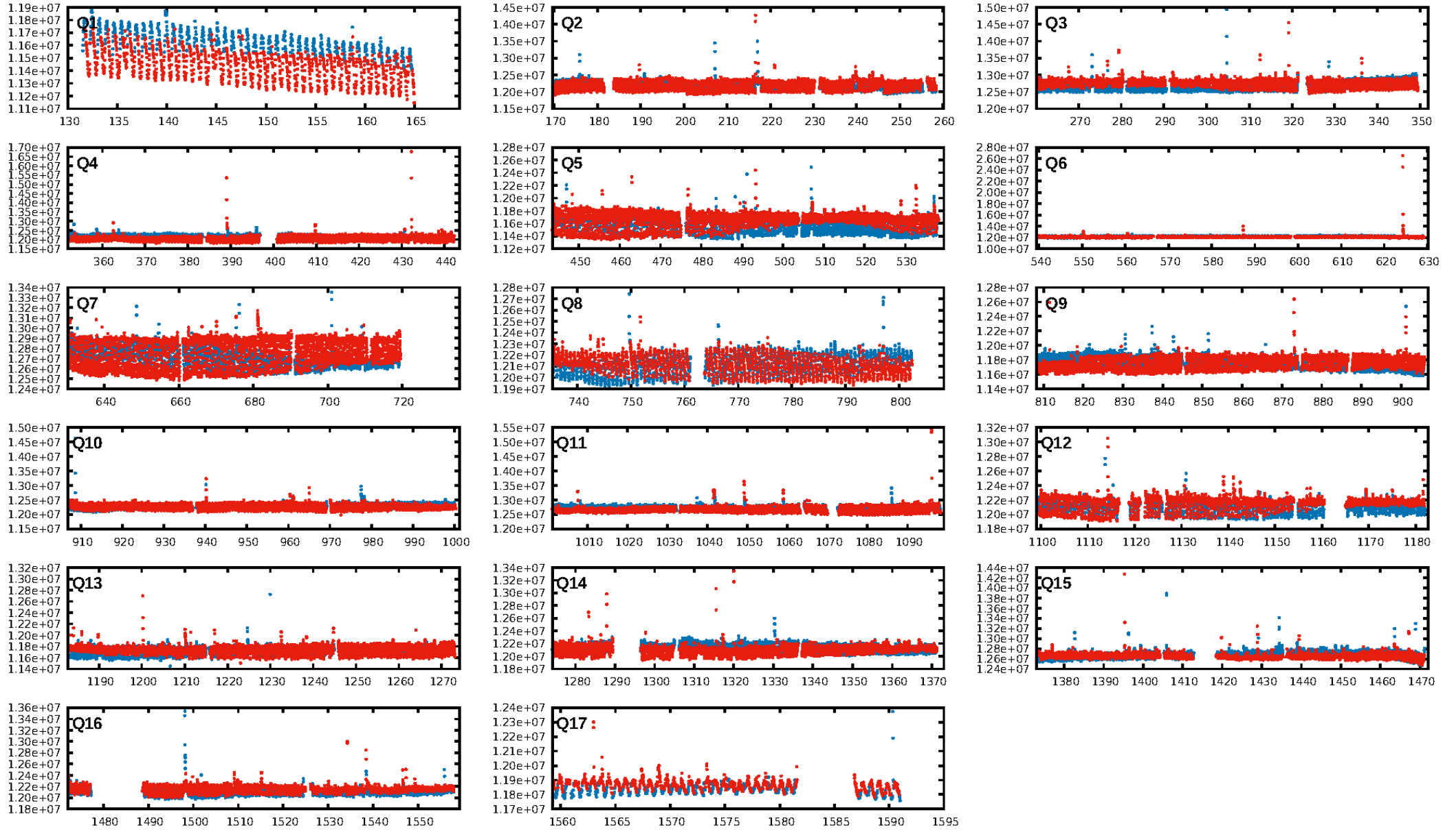
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 9.30e-29
RollingBand-fgt: 1.00 [1714/1714]
GhostDiagnostic-chr: 2.495
Centroid-sig: 0.0%
Centroid-so: 1.692 arcsec [3.23σ]
OotOffset-rm: 4.315 arcsec [7.65σ]
KicOffset-rm: 0.473 arcsec [3.30σ]
OotOffset-st: 4/4/3/5 [16]
KicOffset-st: 4/4/3/5 [16]
DiffImageQuality-fgm: 0.56 [9/16]
DiffImageOverlap-fno: 1.00 [17/17]

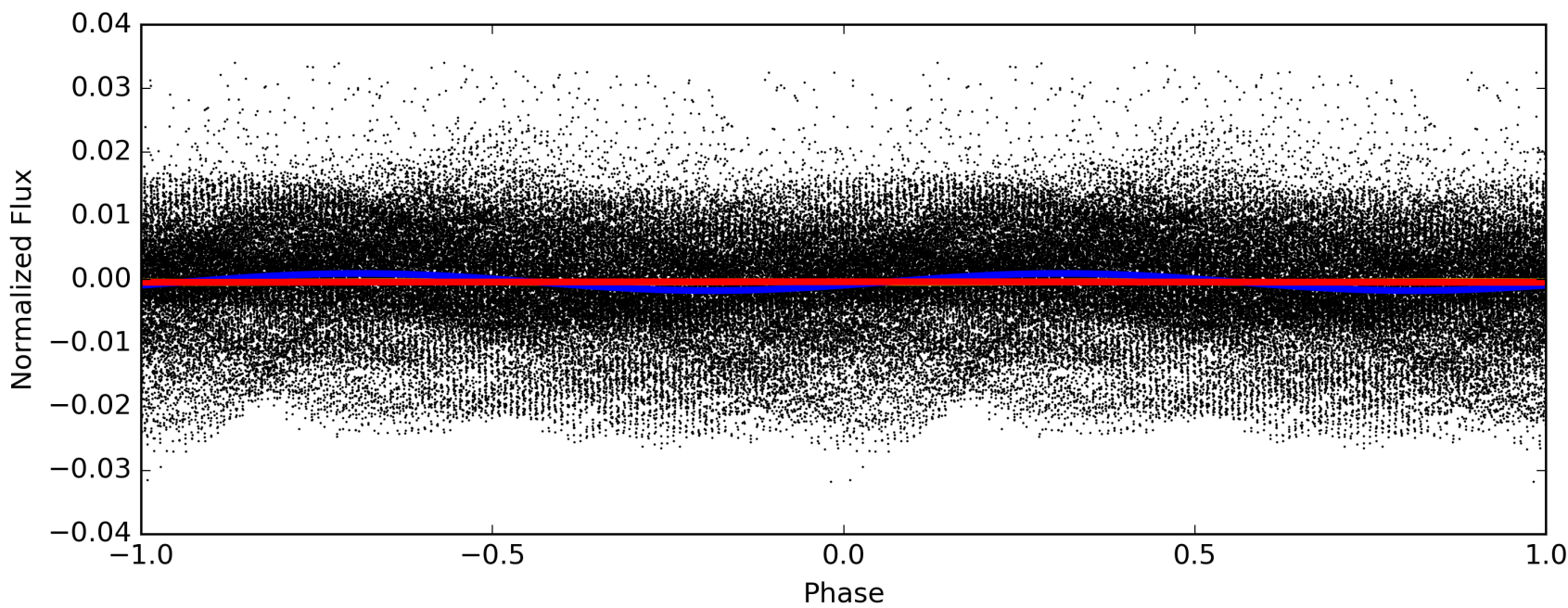
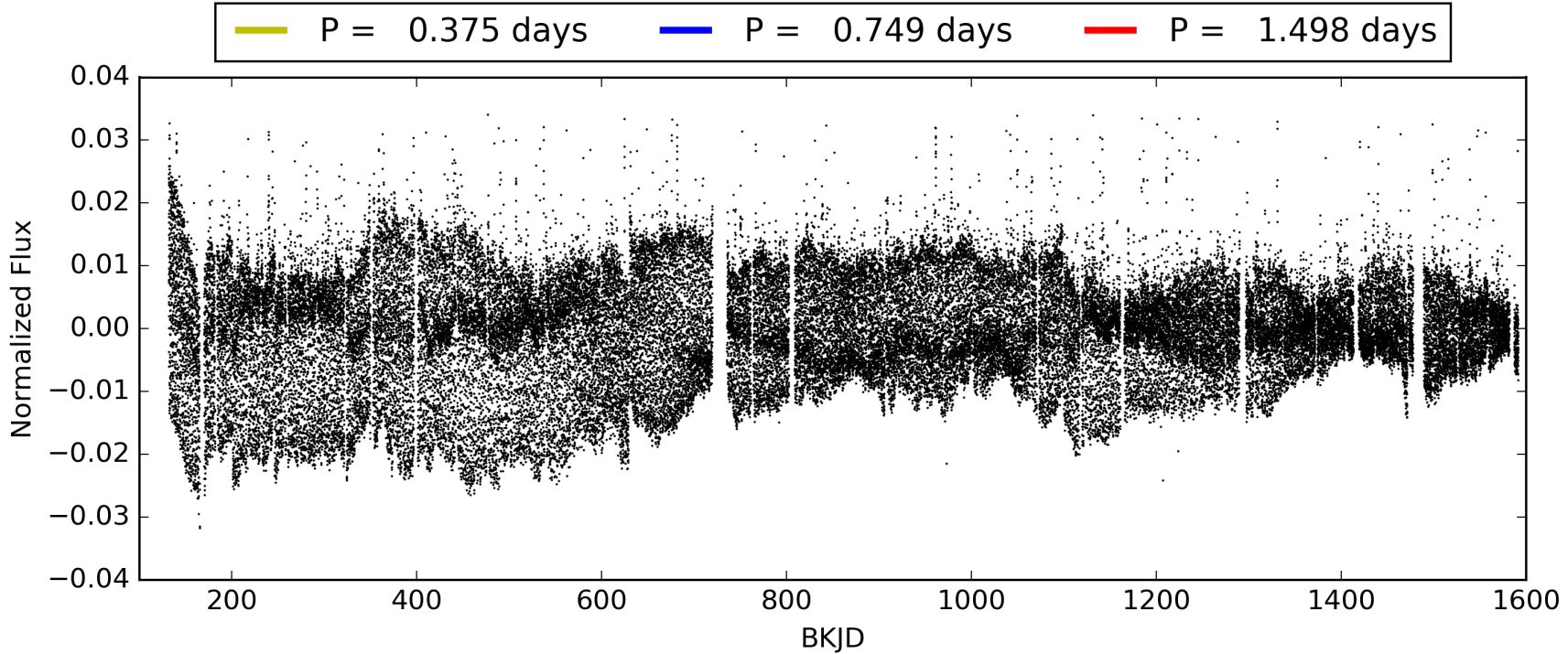
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 07:44:46 Z

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

TCE 010515986-01, PDC Light Curves

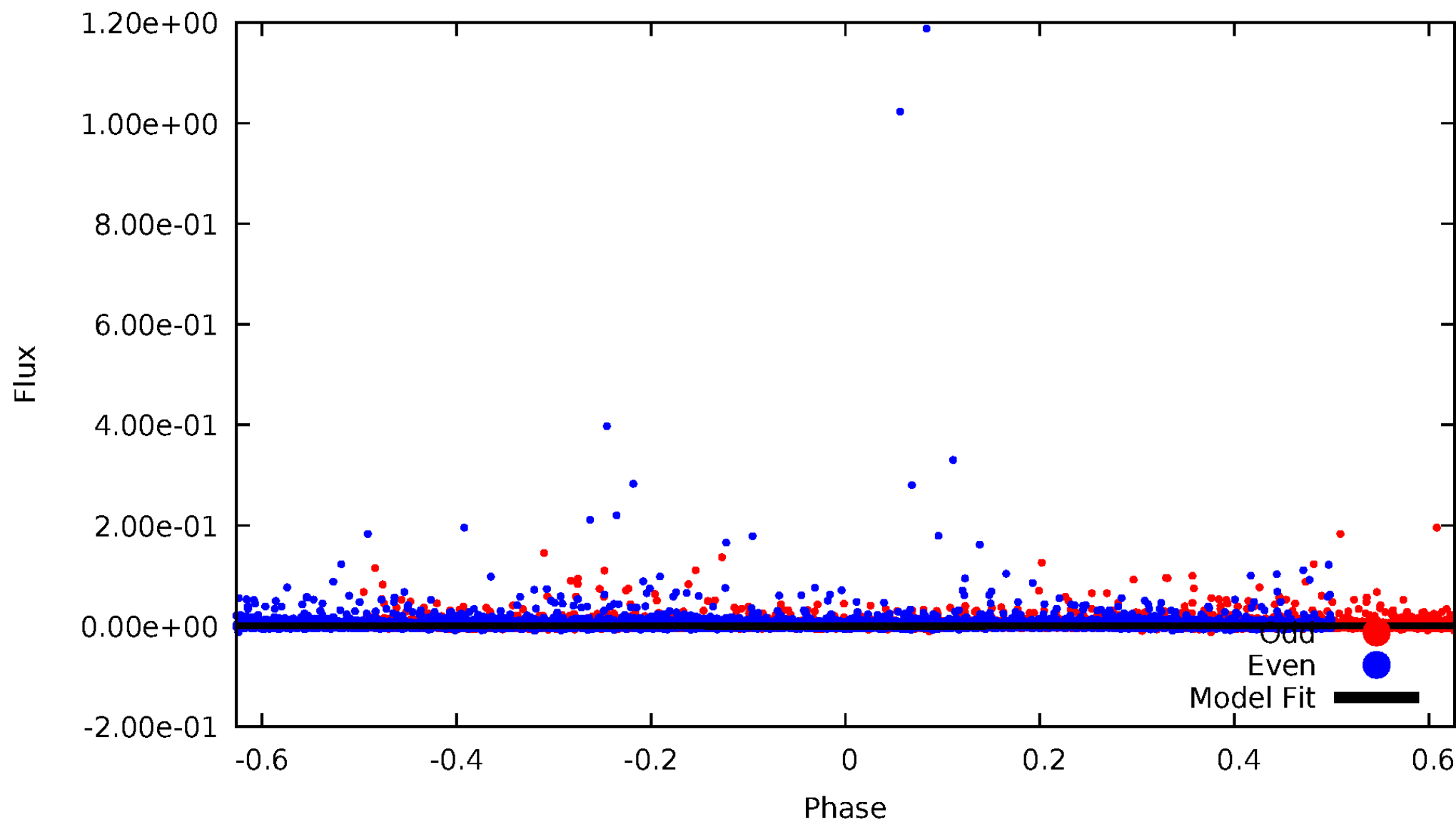


TCE 010515986-01



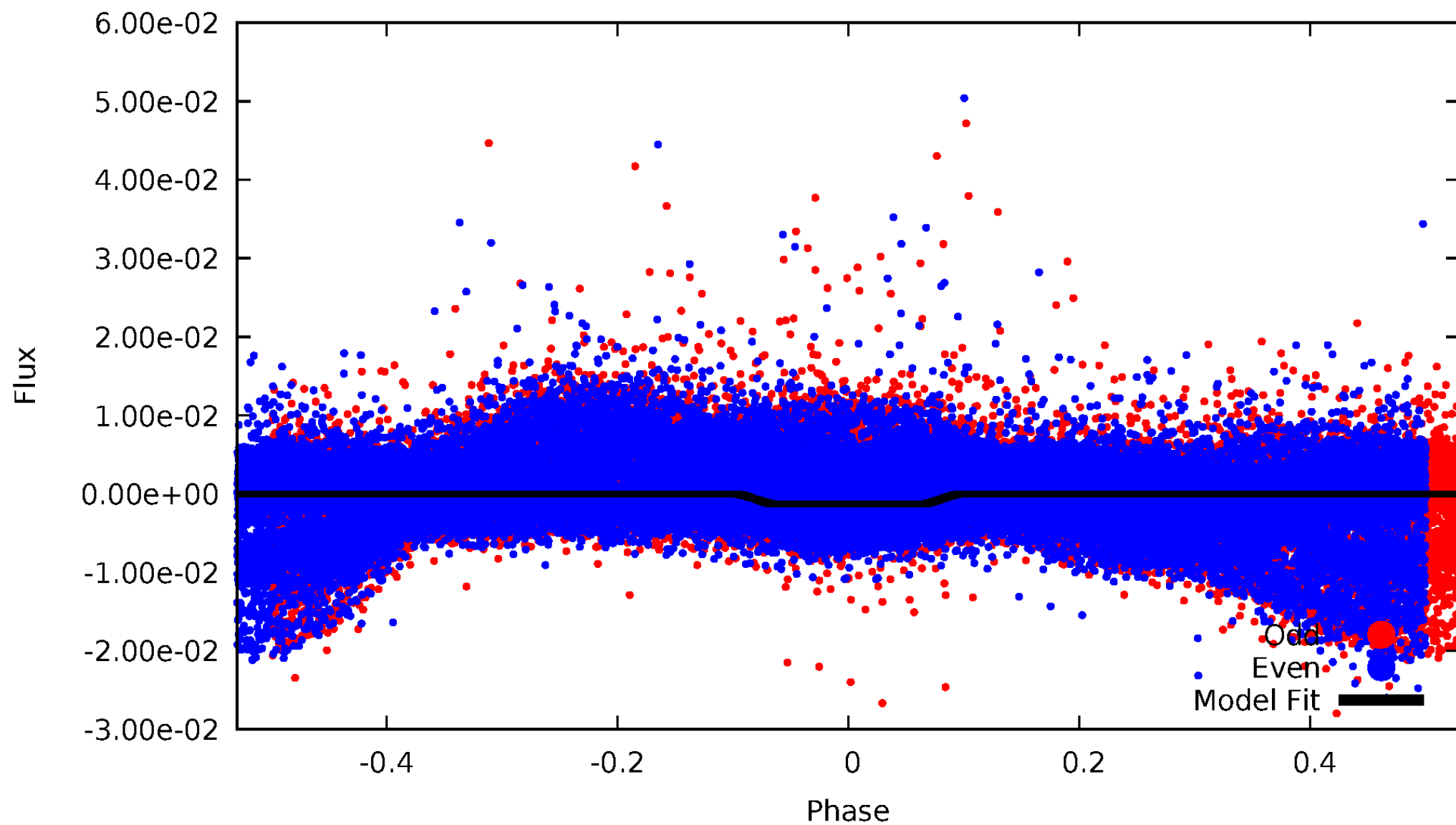
DV Odd/Even

TCE 010515986-01



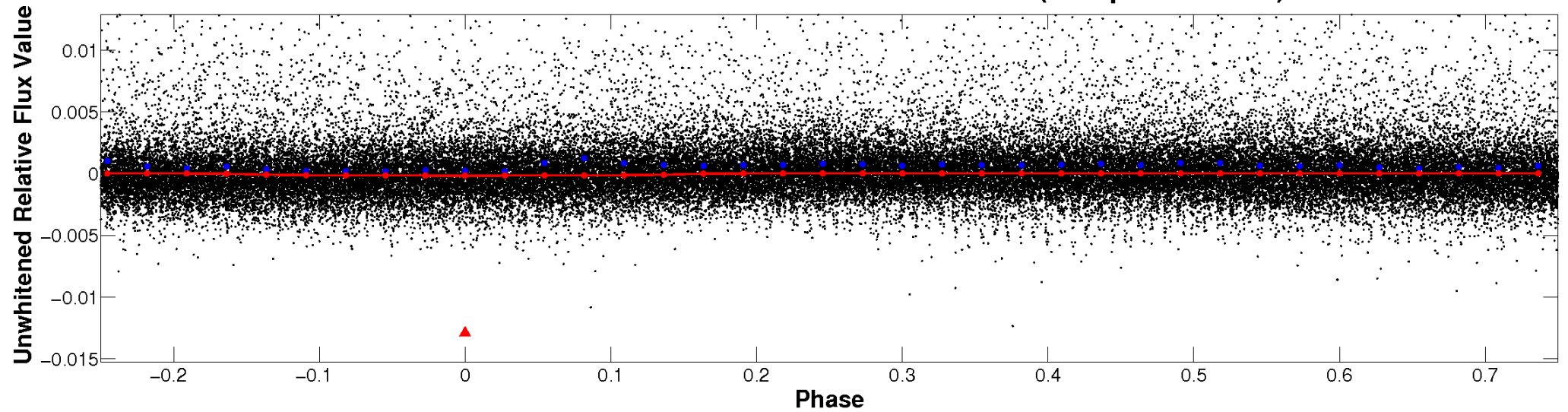
ALT Odd/Even

TCE 010515986-01

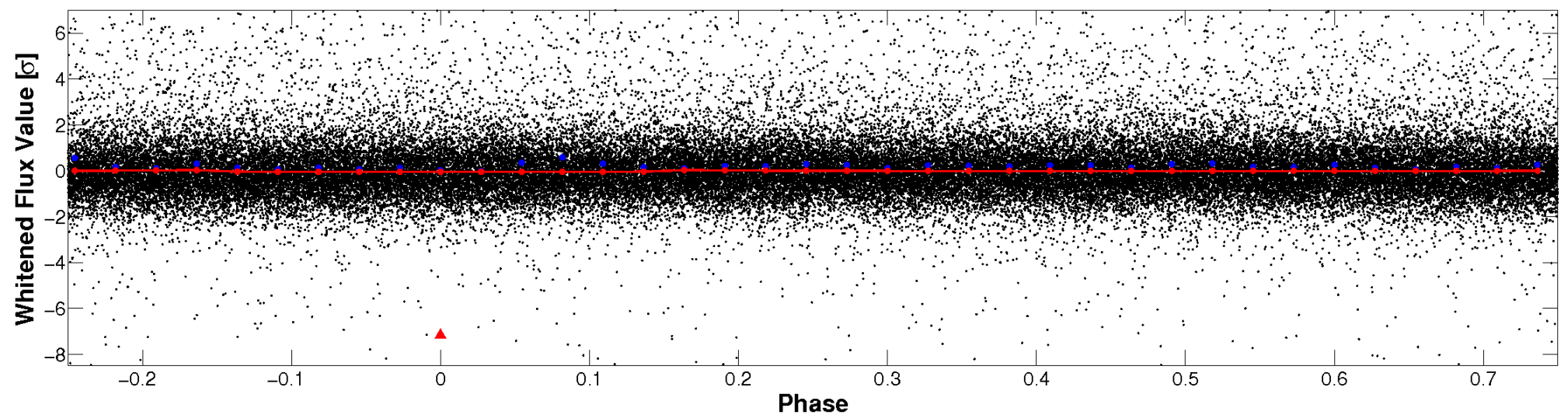


Non-Whitened Vs. Whitened Light Curve

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

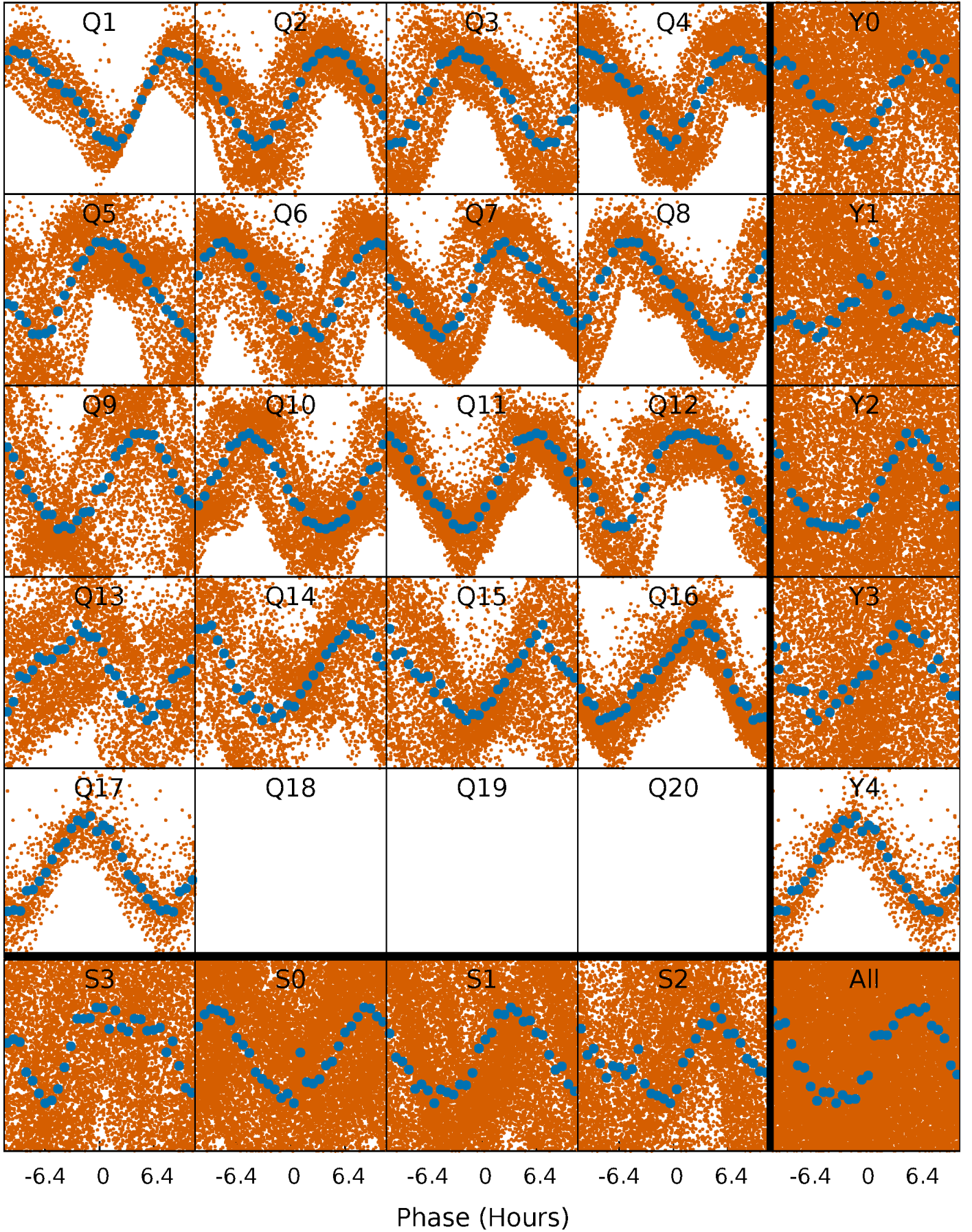


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



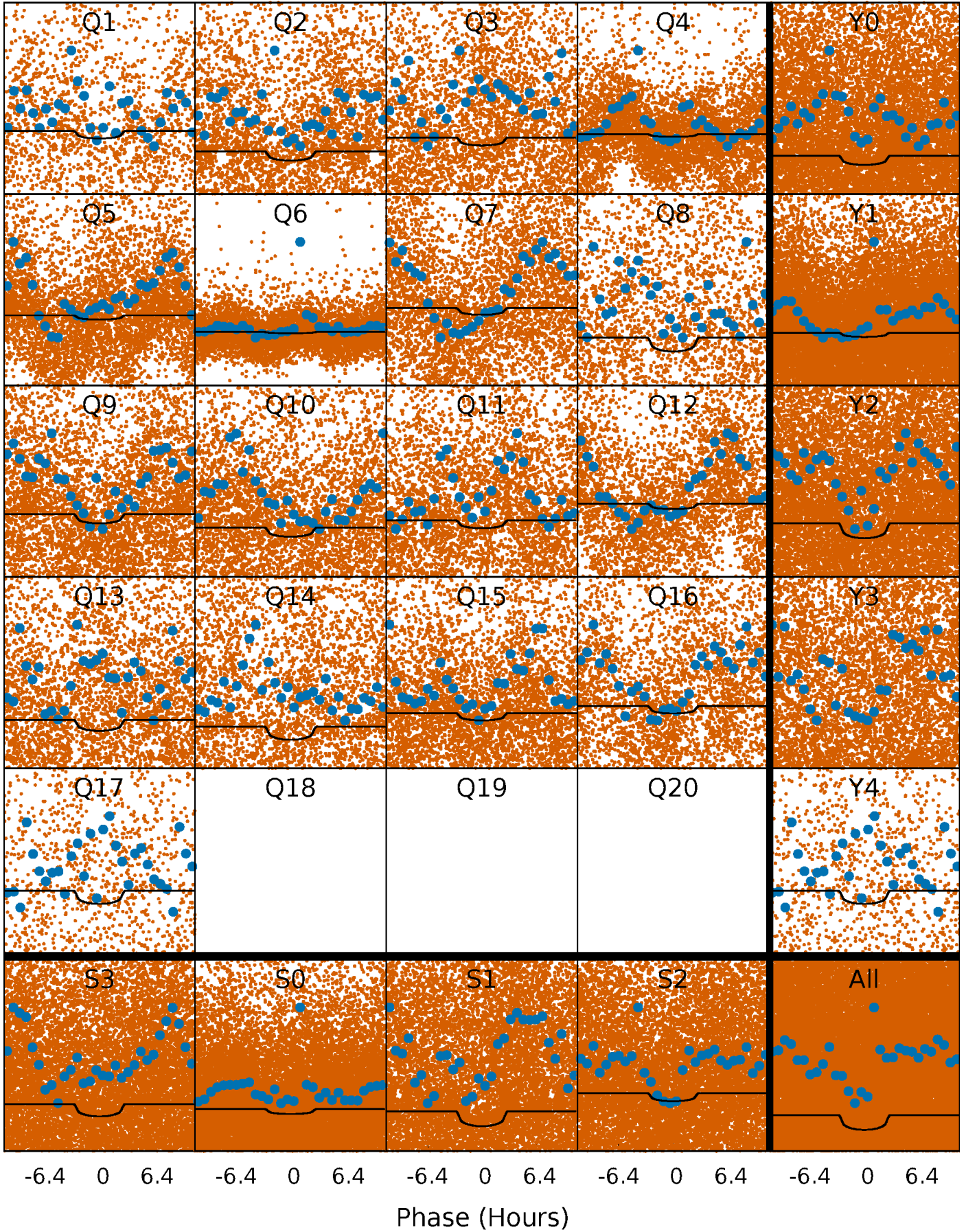
PDC Quarter-Phased Transit Curves

TCE 010515986-01 P= 0.749185 Days $T_0=132.012839$ (BKJD)



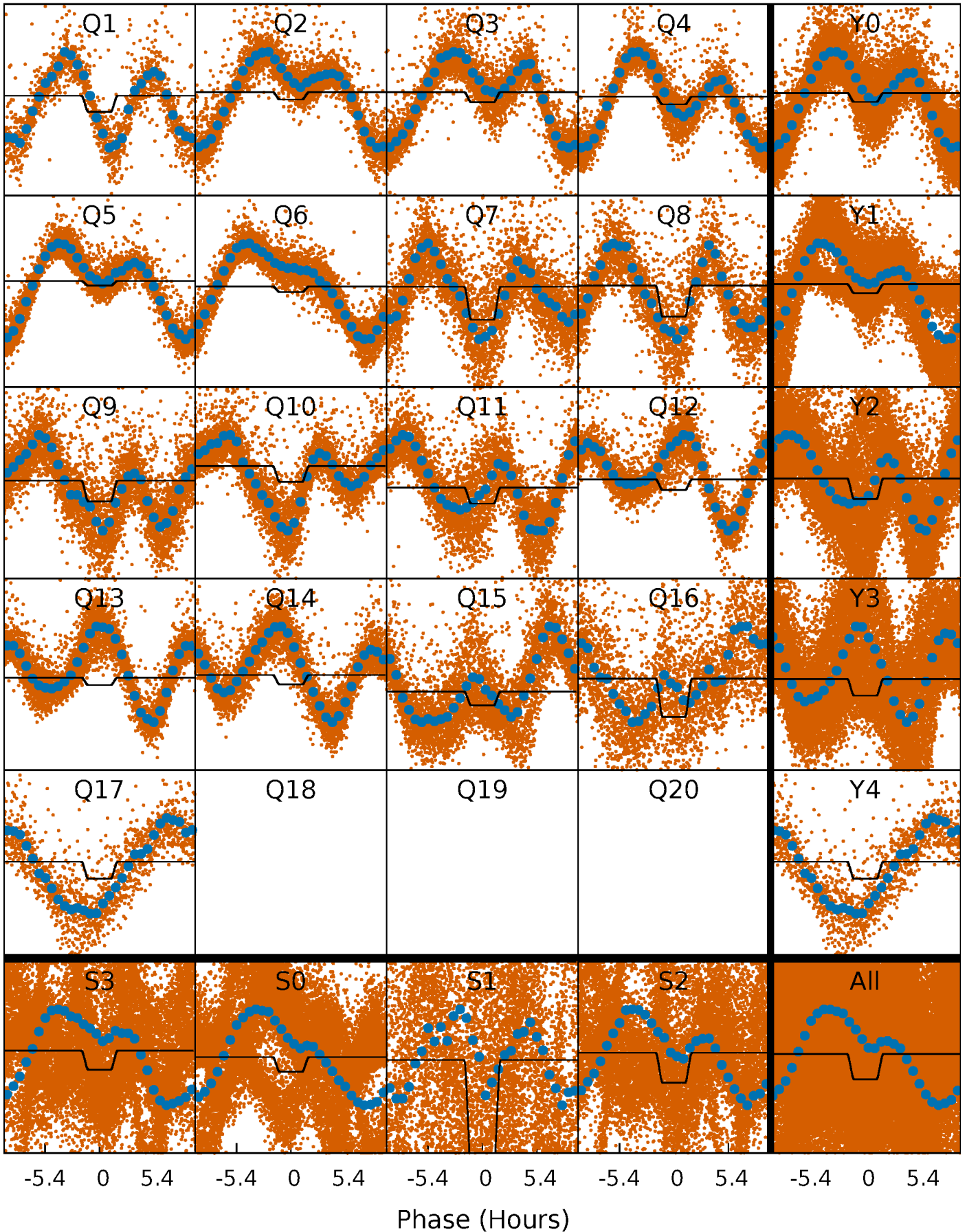
DV Quarter-Phased Transit Curves

TCE 010515986-01 P= 0.749185 Days $T_0=132.012839$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

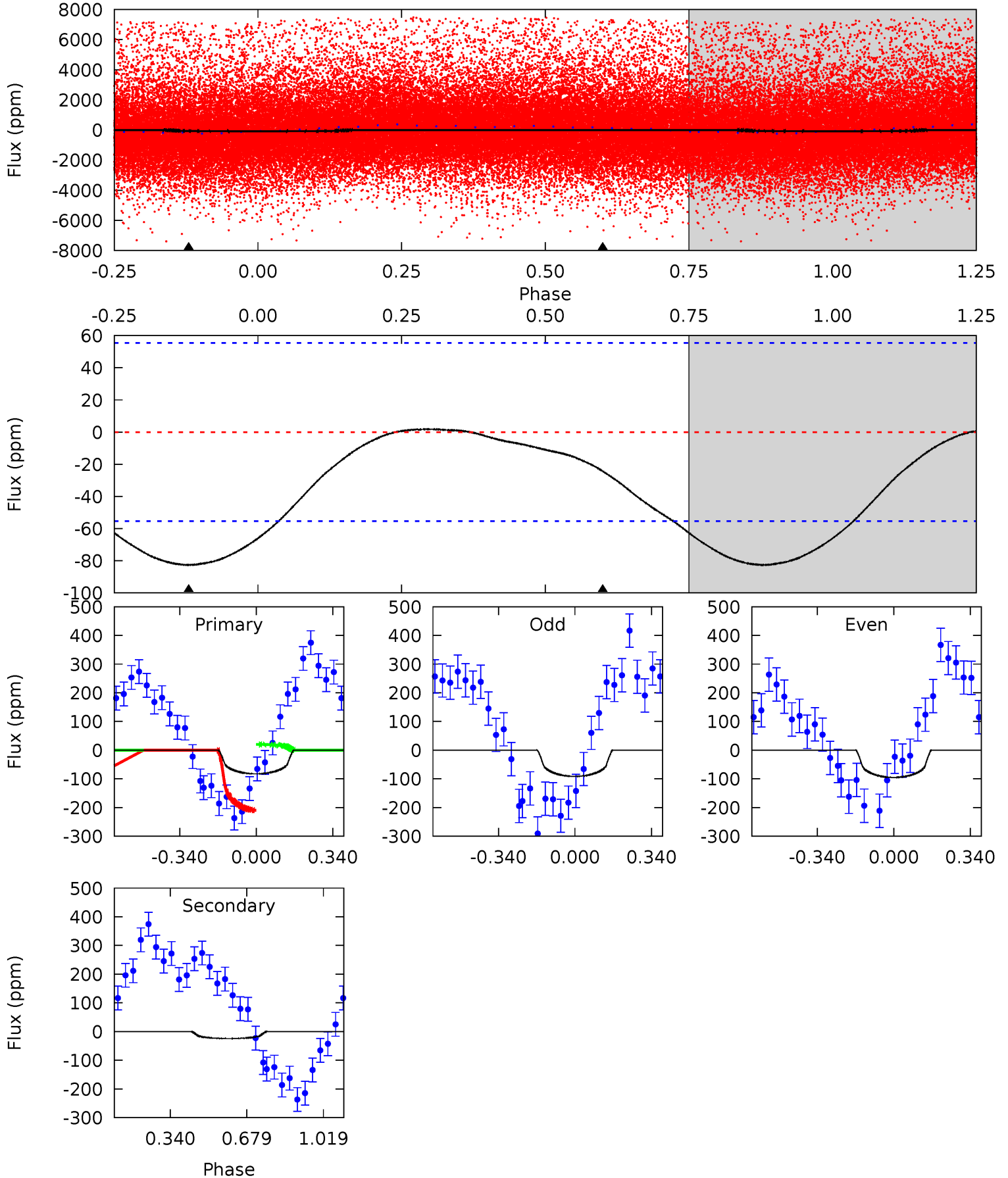
TCE 010515986-01 P= 0.746796 Days $T_0=131.759580$ (BKJD)



DV Model-Shift Uniqueness Test

010515986-01, P = 0.749185 Days, E = 131.263654 Days

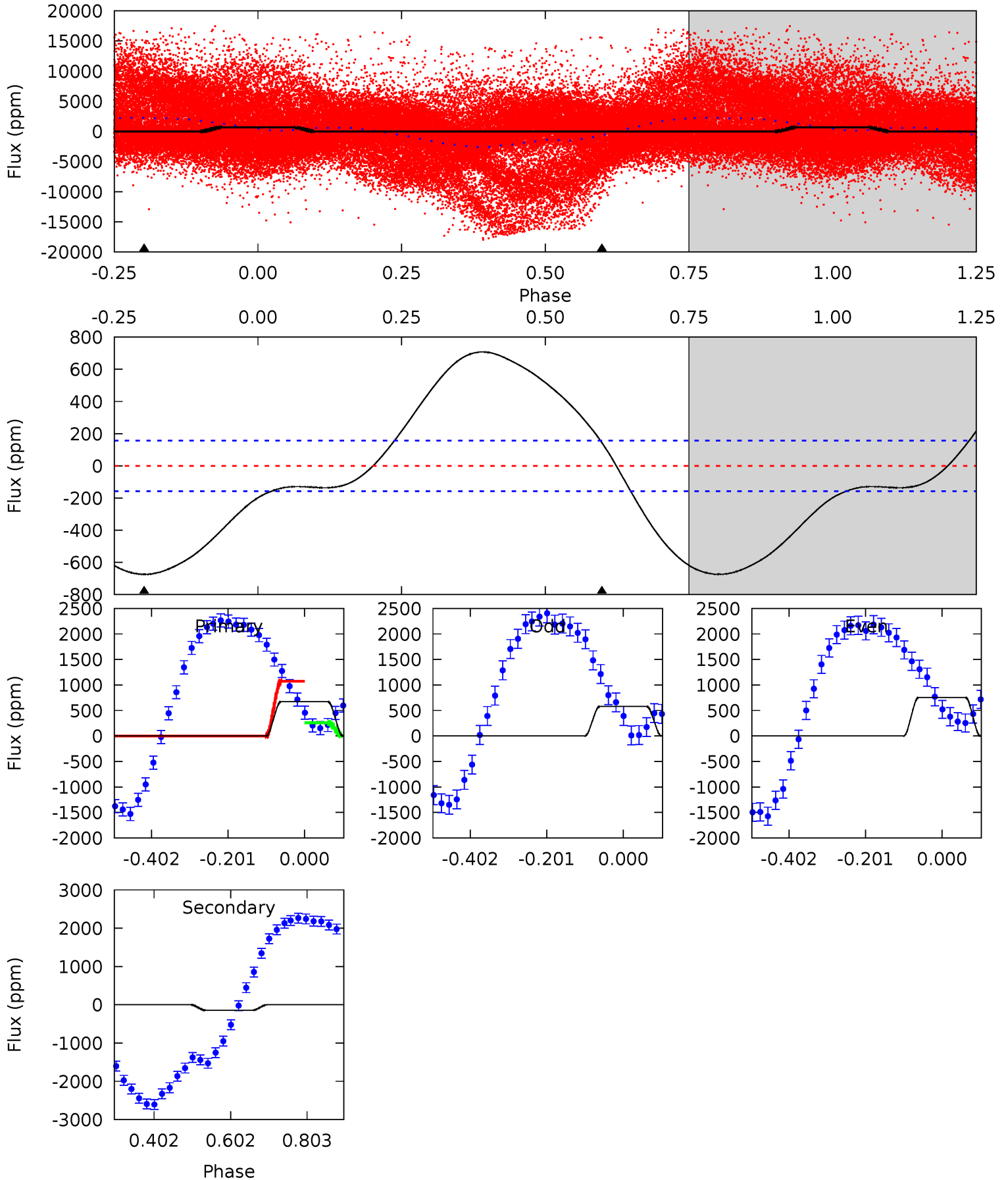
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.41	1.89	0	0	4.30	0.95	0.21	6.41	6.41	1.89	1.89	0.15	59.9	0.02	7.35



Alt Model-Shift Uniqueness Test

010515986-01, P = 0.746796 Days, E = 131.012784 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.9	-4.05	0	0	4.42	1.28	8.98	18.9	18.9	-4.05	-4.05	2.48	4.38	0.51	12.0



Stellar Parameters For KIC 010515986

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3407^{+44}_{-47}	$4.923^{+0.055}_{-0.035}$	$0.000^{+0.100}_{-0.100}$	$0.324^{+0.033}_{-0.045}$	$0.320^{+0.047}_{-0.047}$	$13.280^{+4.267}_{-2.256}$
	+1%/-1%	+1%/-1%	+inf%/-inf%	+10%/-14%	+15%/-15%	+32%/-17%
Source	PHO2	PHO2	PHO2	DSEP		

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

Secondary Eclipse Parameters for KIC 010515986-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-24 ± 13	$0.56^{+0.50}_{-0.37}$	1132^{+28}_{-27}	2404^{+895}_{-401}	$4.612^{+39.968}_{-3.510}$
Alt.	144 ± 36	$1.29^{+0.54}_{-0.54}$	1134^{+26}_{-29}	-2515^{+210}_{-363}	$-5.697^{+2.970}_{-11.218}$

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

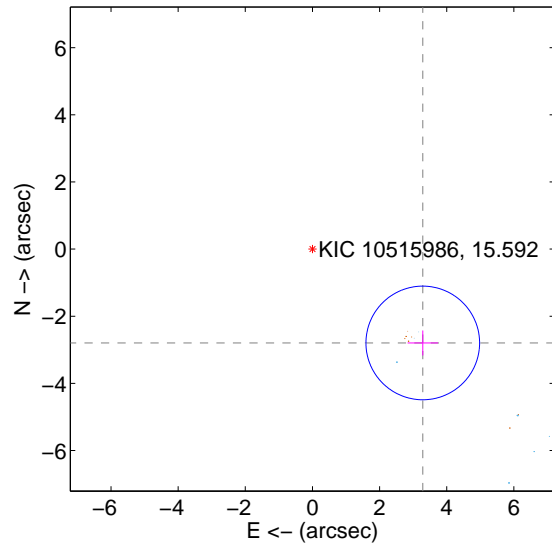
Supplemental centroid analysis for 010515986-01. Kepler magnitude: 15.59. Transit SNR 6.72

There are 9 quarters with good PRF difference image offsets

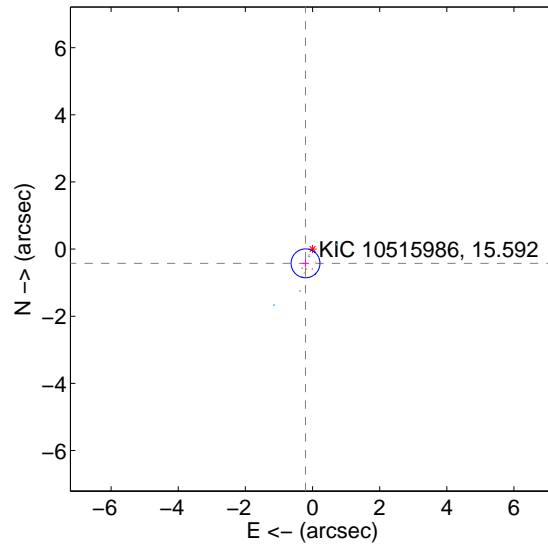
The OOT PRF centroid is offset from the target star catalog position by about 3.75 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.315 ± 0.564	7.65	-3.287 ± 0.453	-2.796 ± 0.372
PRF-fit source offset from KIC position	0.473 ± 0.143	3.30	0.209 ± 0.109	-0.424 ± 0.123
photometric centroid source offset	1.69 ± 0.52	3.23	1.67 ± 0.52	-0.29 ± 0.50

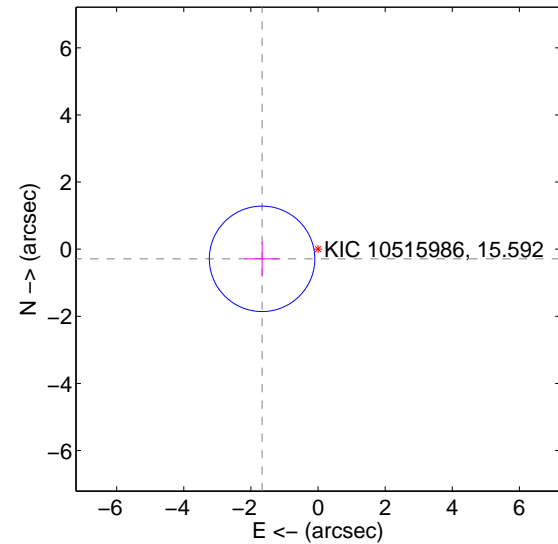
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

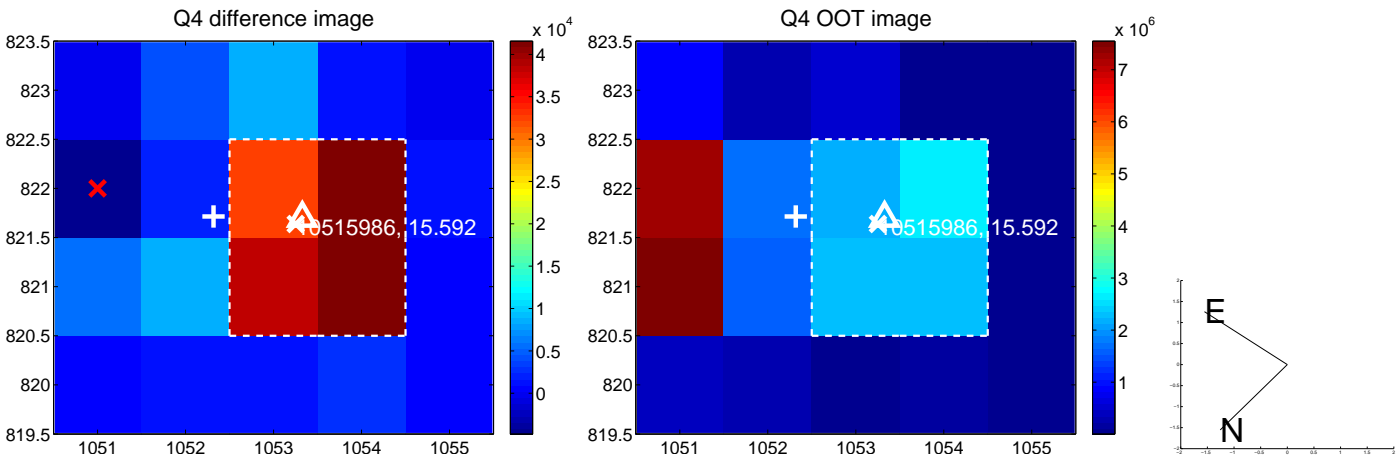
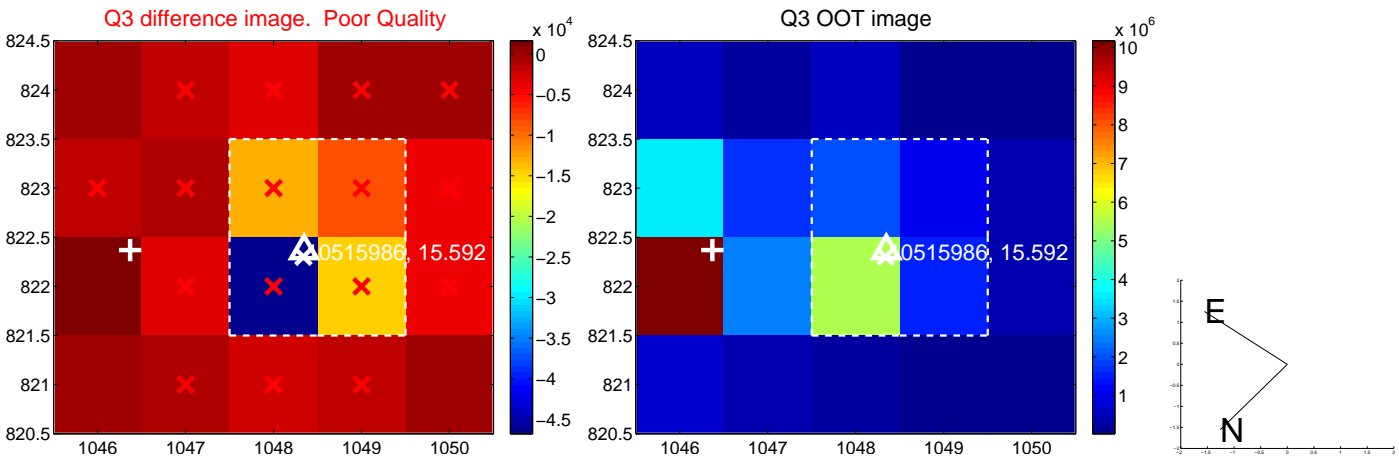
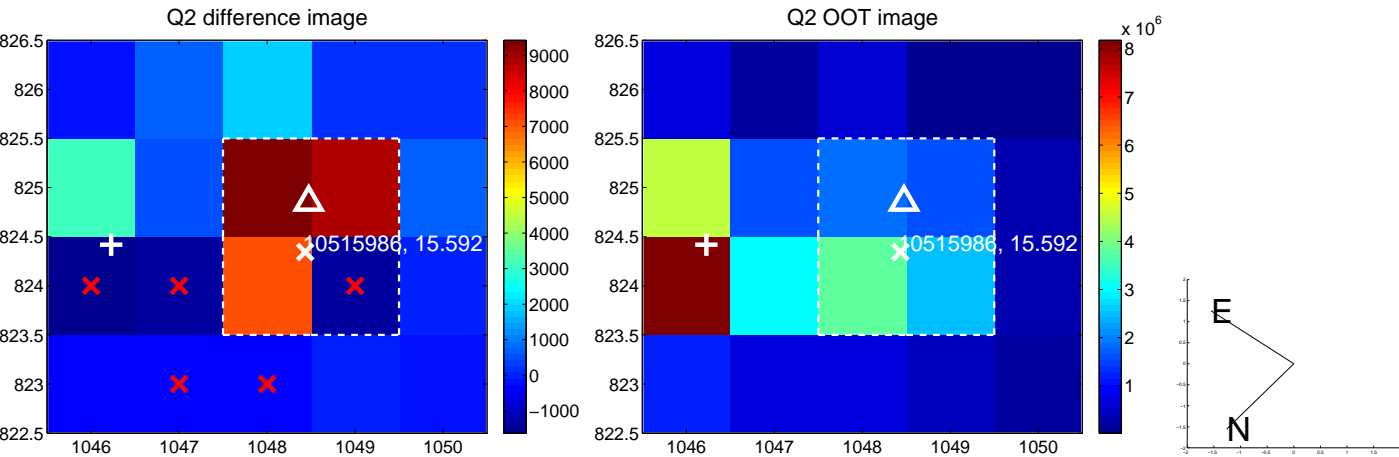
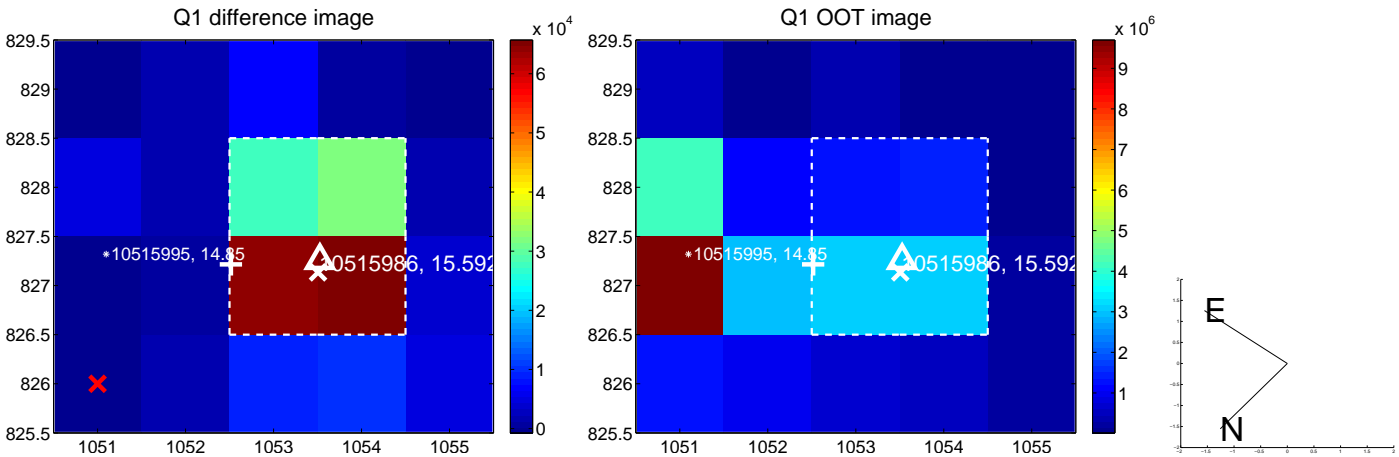


offset from photometric centroids

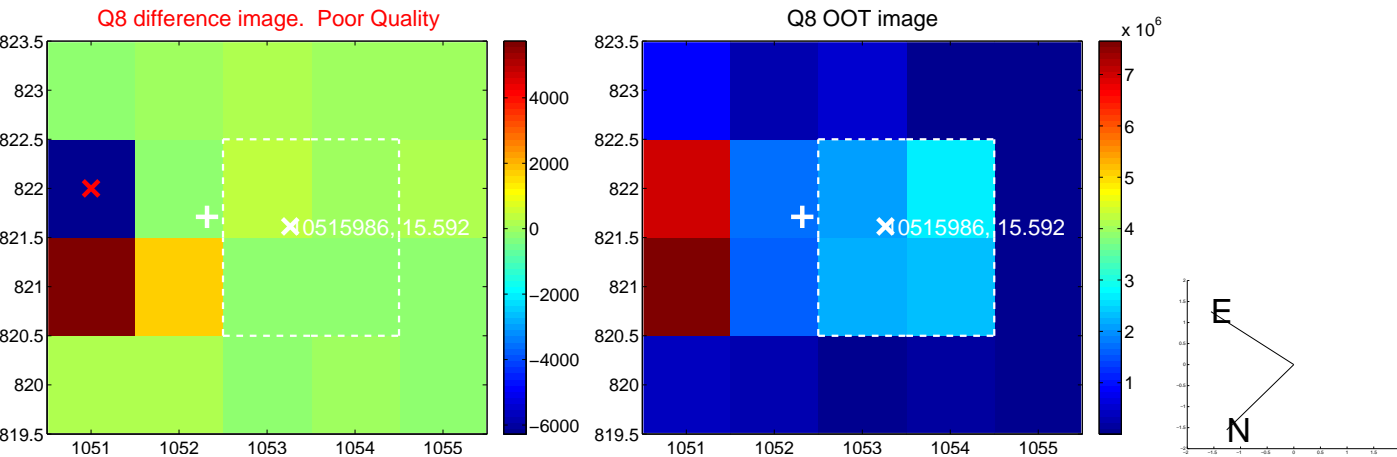
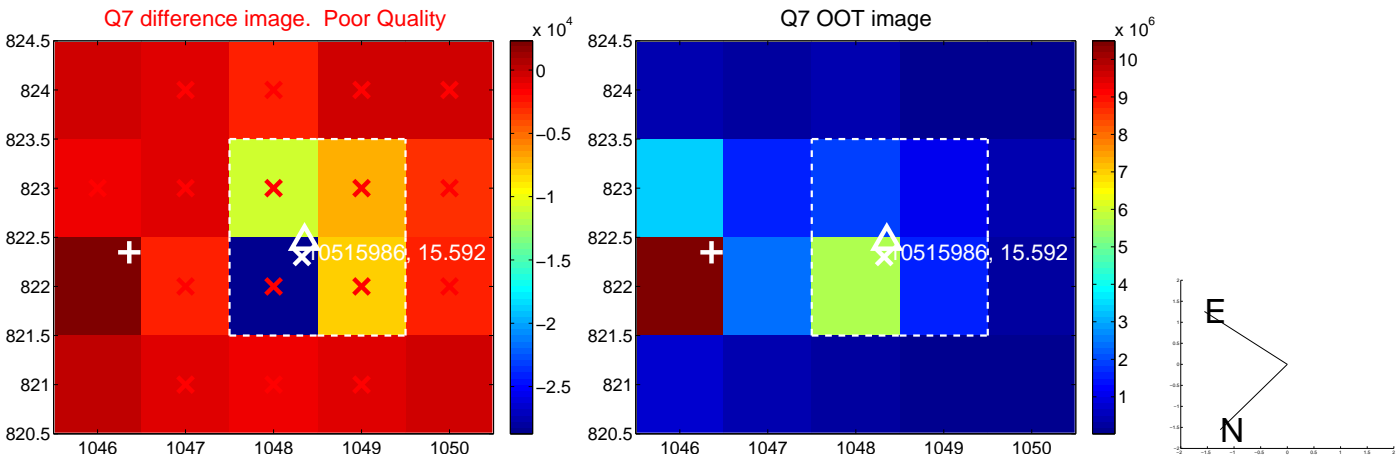
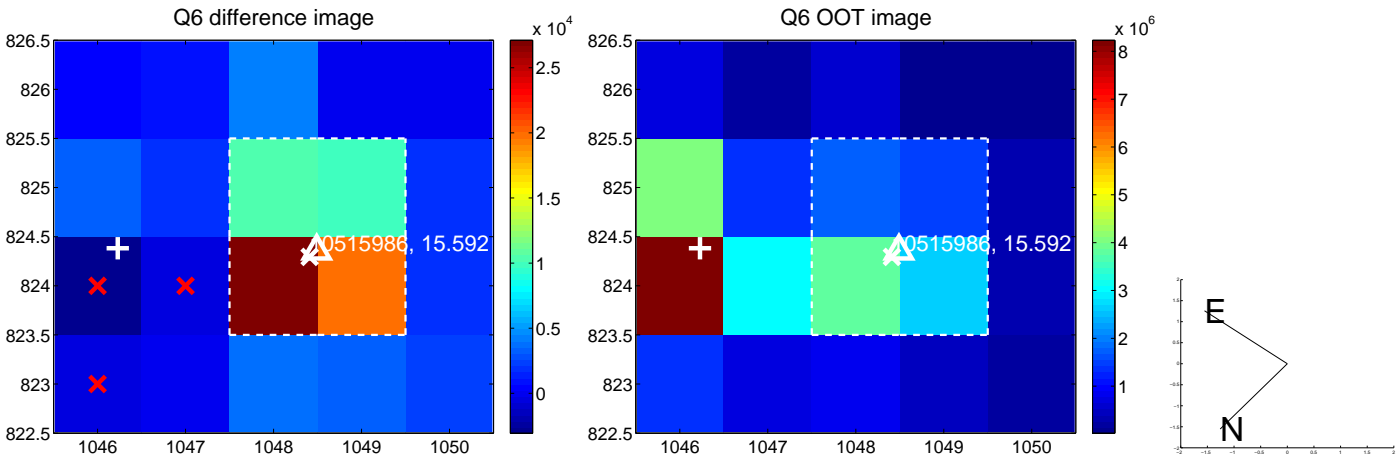
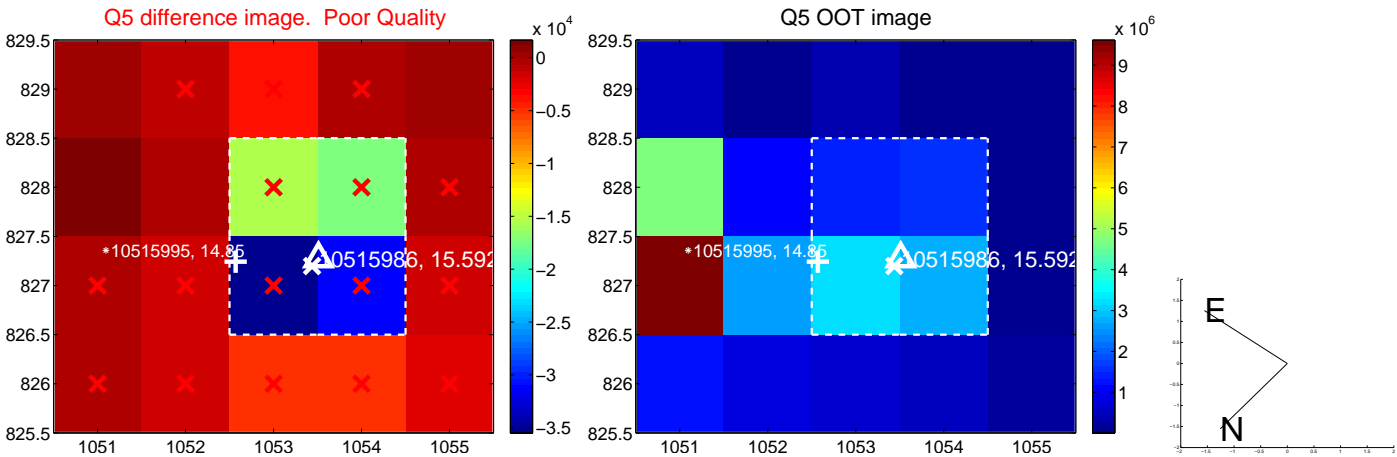


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

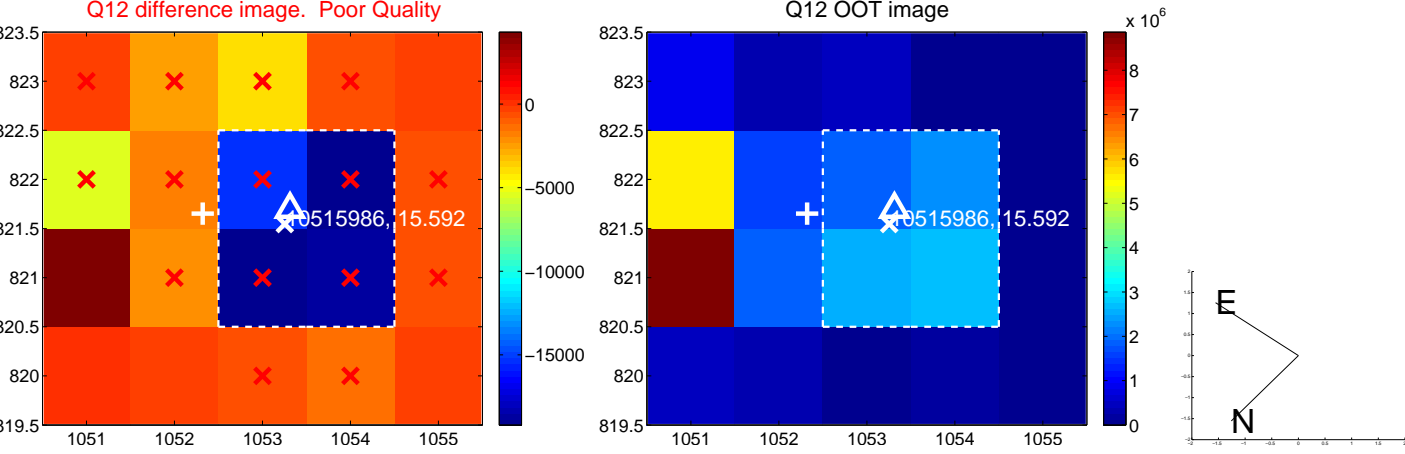
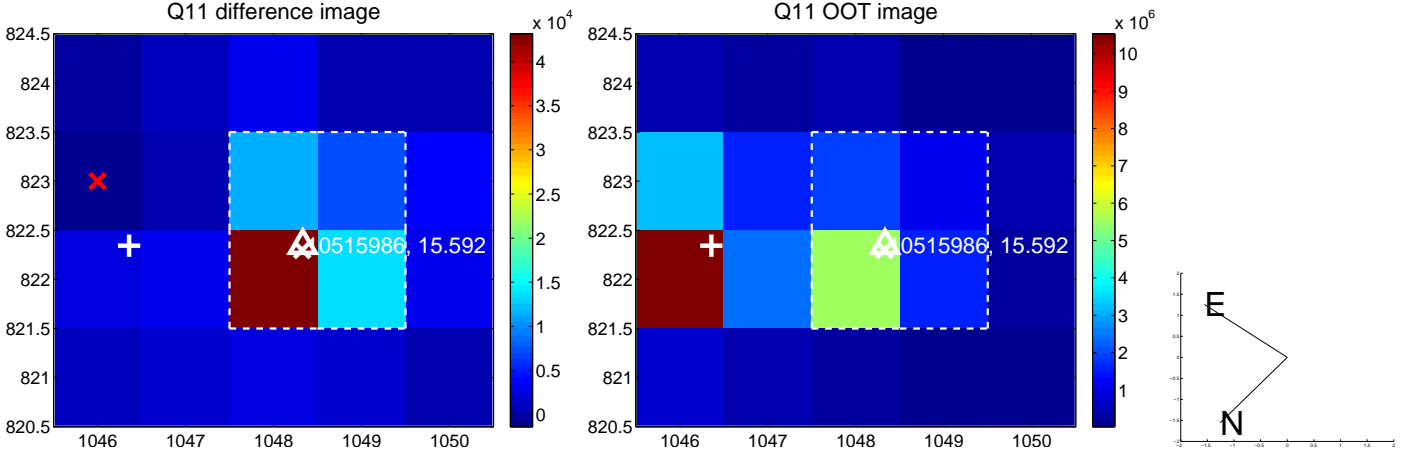
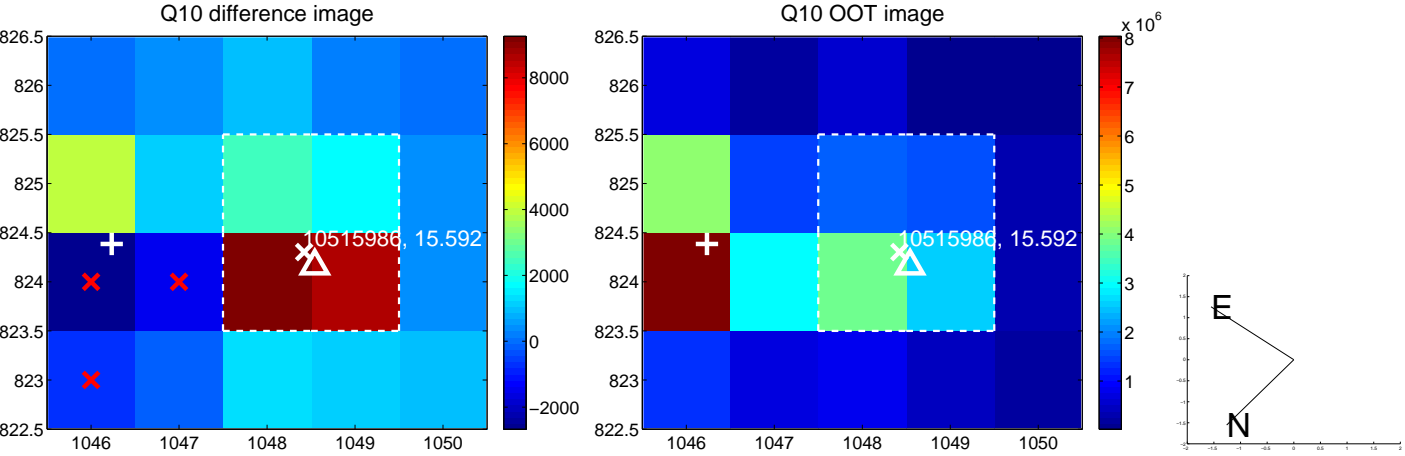
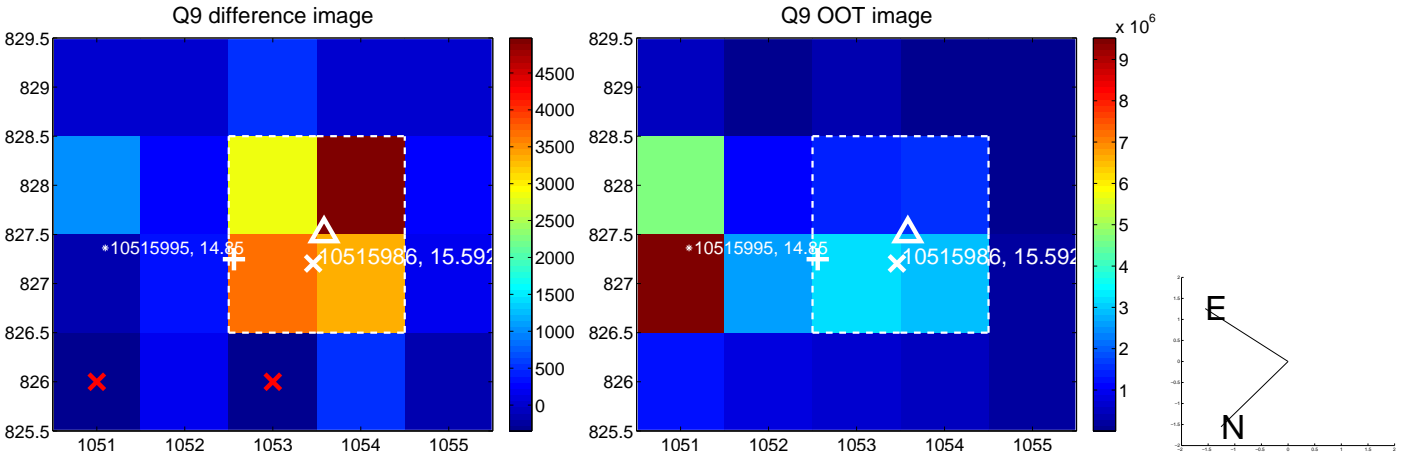
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



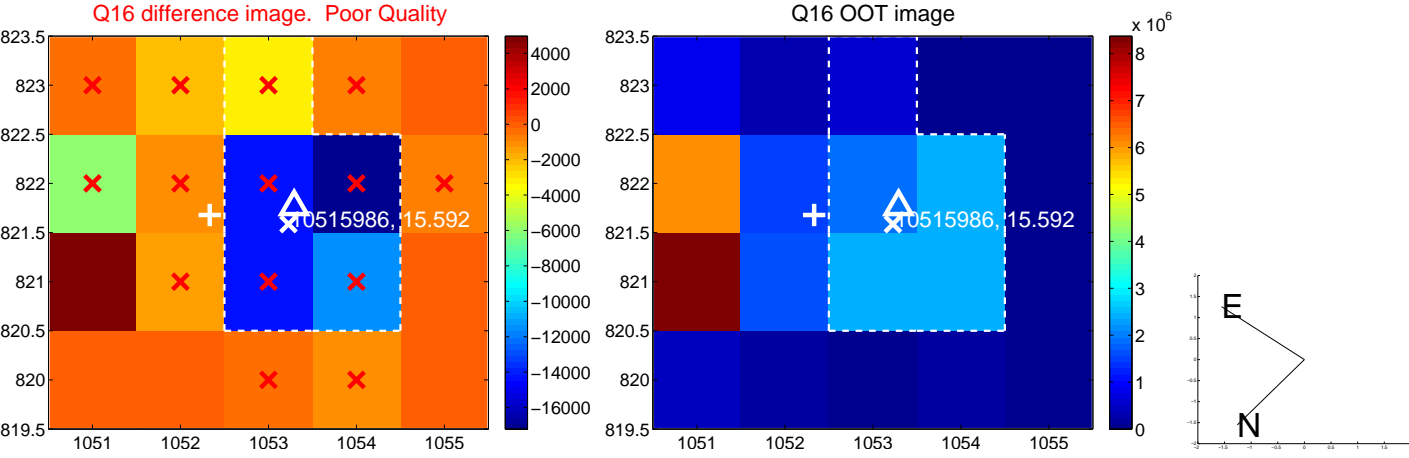
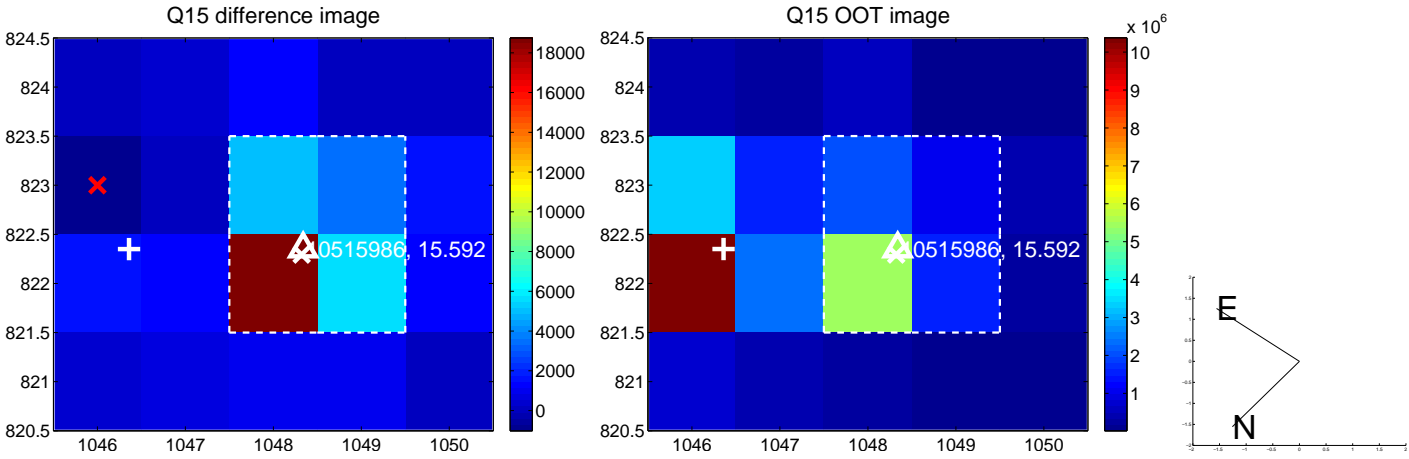
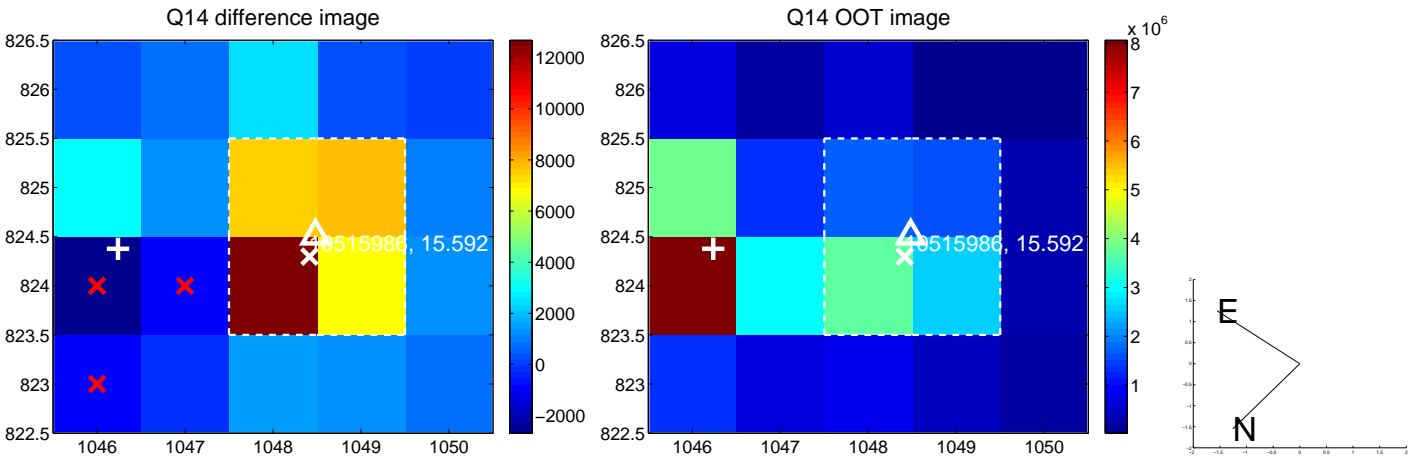
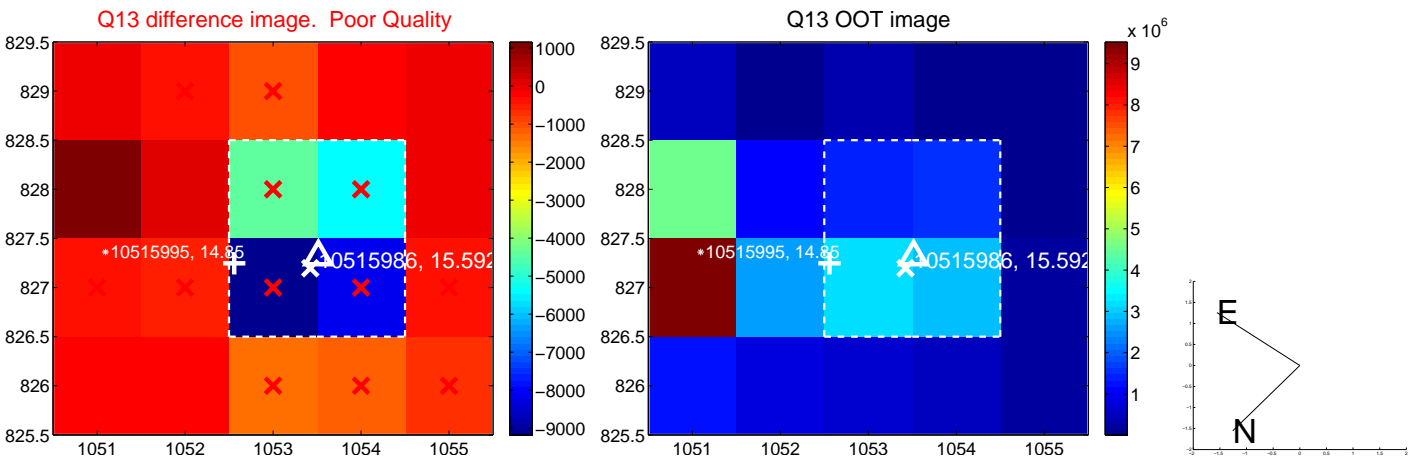
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



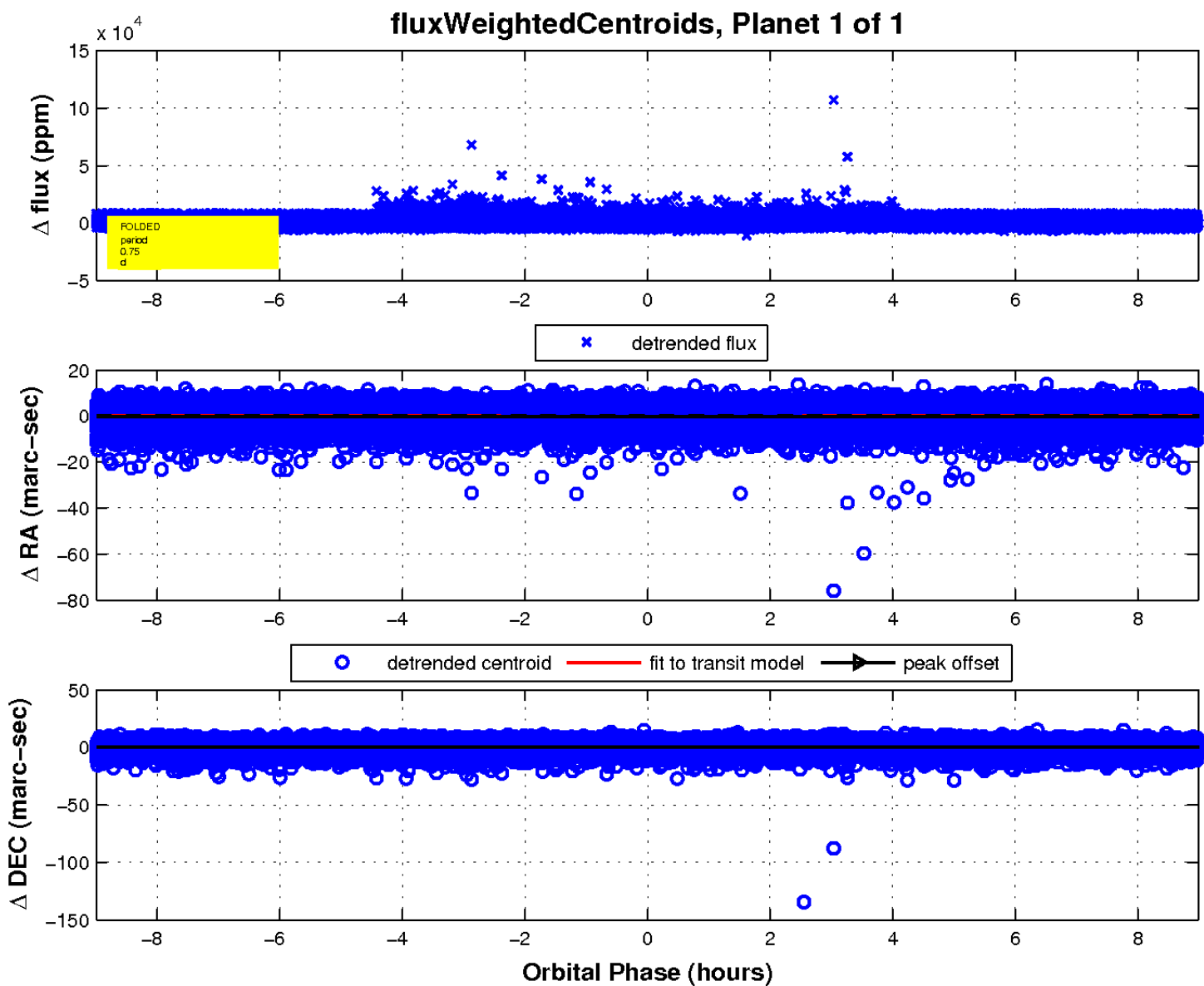
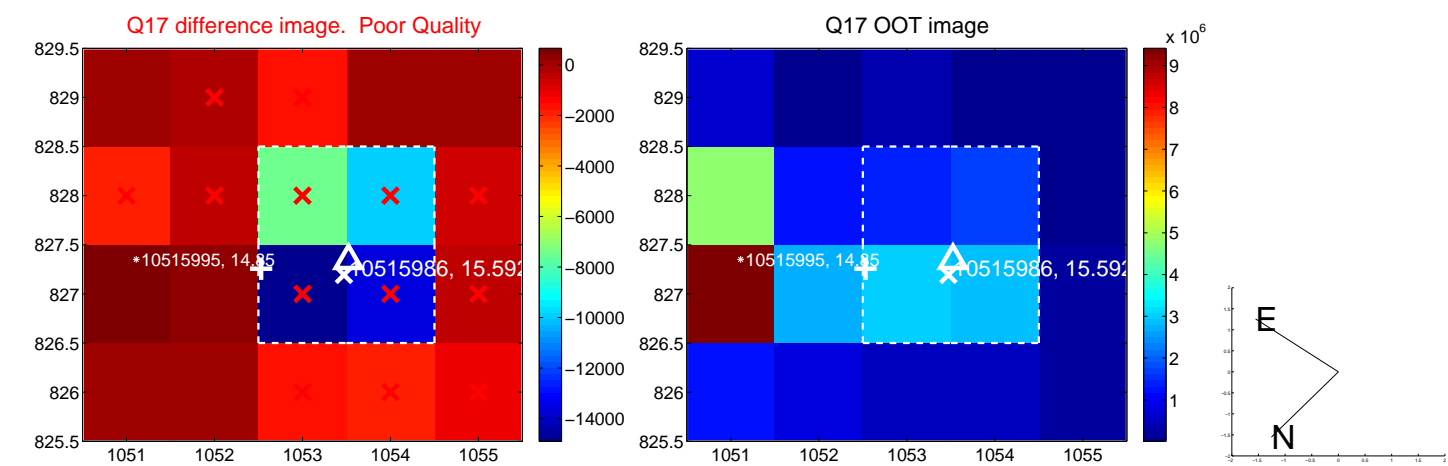
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

