

KIC 007514582

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})
007514582-01	OBS	No	0.572524	131.771612	38.7	2.537	8.4	8.0	0.67	4287	0.51	974.46

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007514582-01	OBS	FP	0.00	1	0	1	1	LPP_DV—CENT_UNRESOLVED_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.

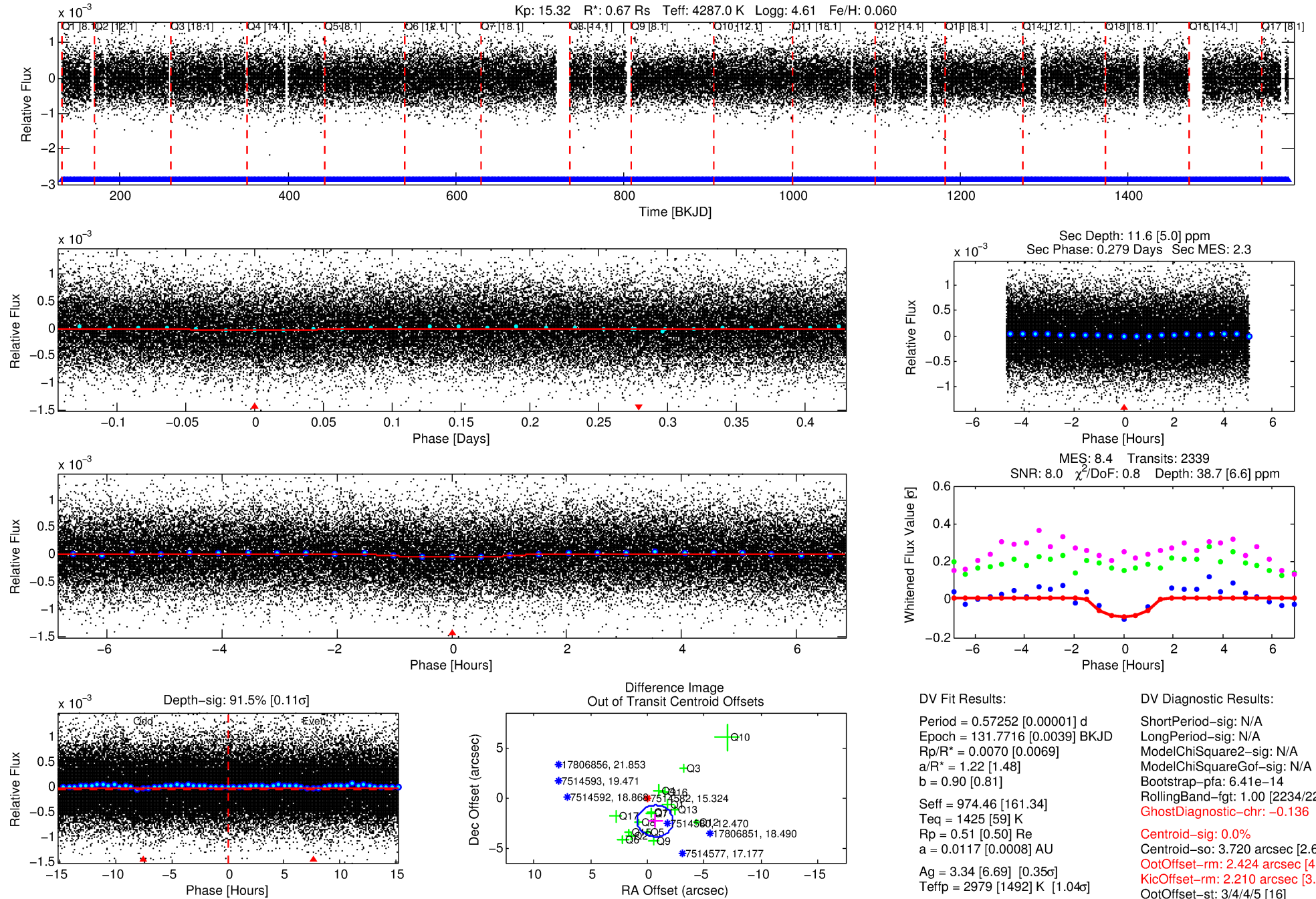
Ephemeris Match Information For 007514582-01

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
007514582-01	7514582	007431703-pri	7431703	1:1	79.0	-2	-20	12.25	15.33	7164.10	Direct-PRF	0	0.28	0.54

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

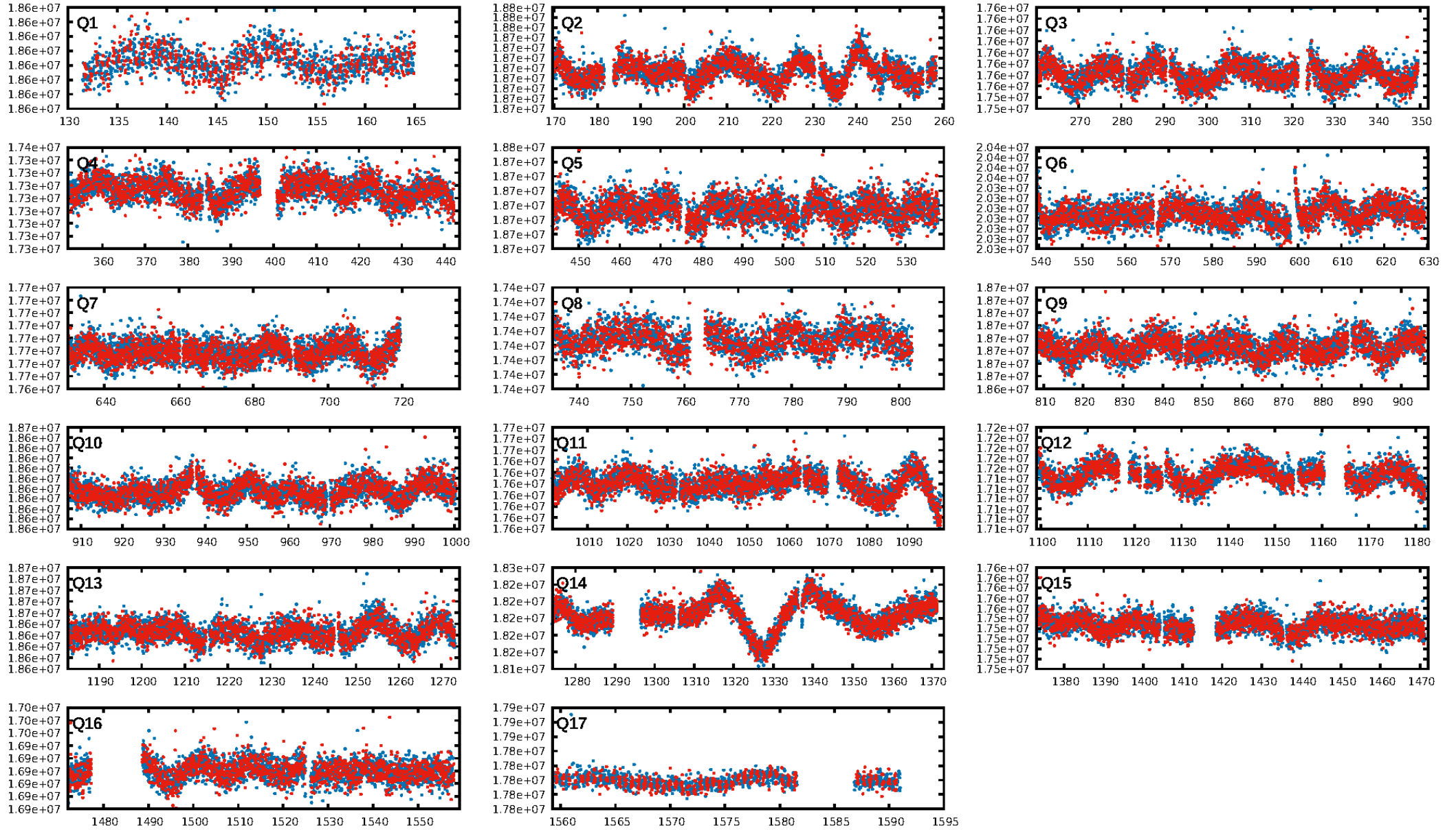
KIC: 7514582 Candidate: 1 of 1 Period: 0.573 d



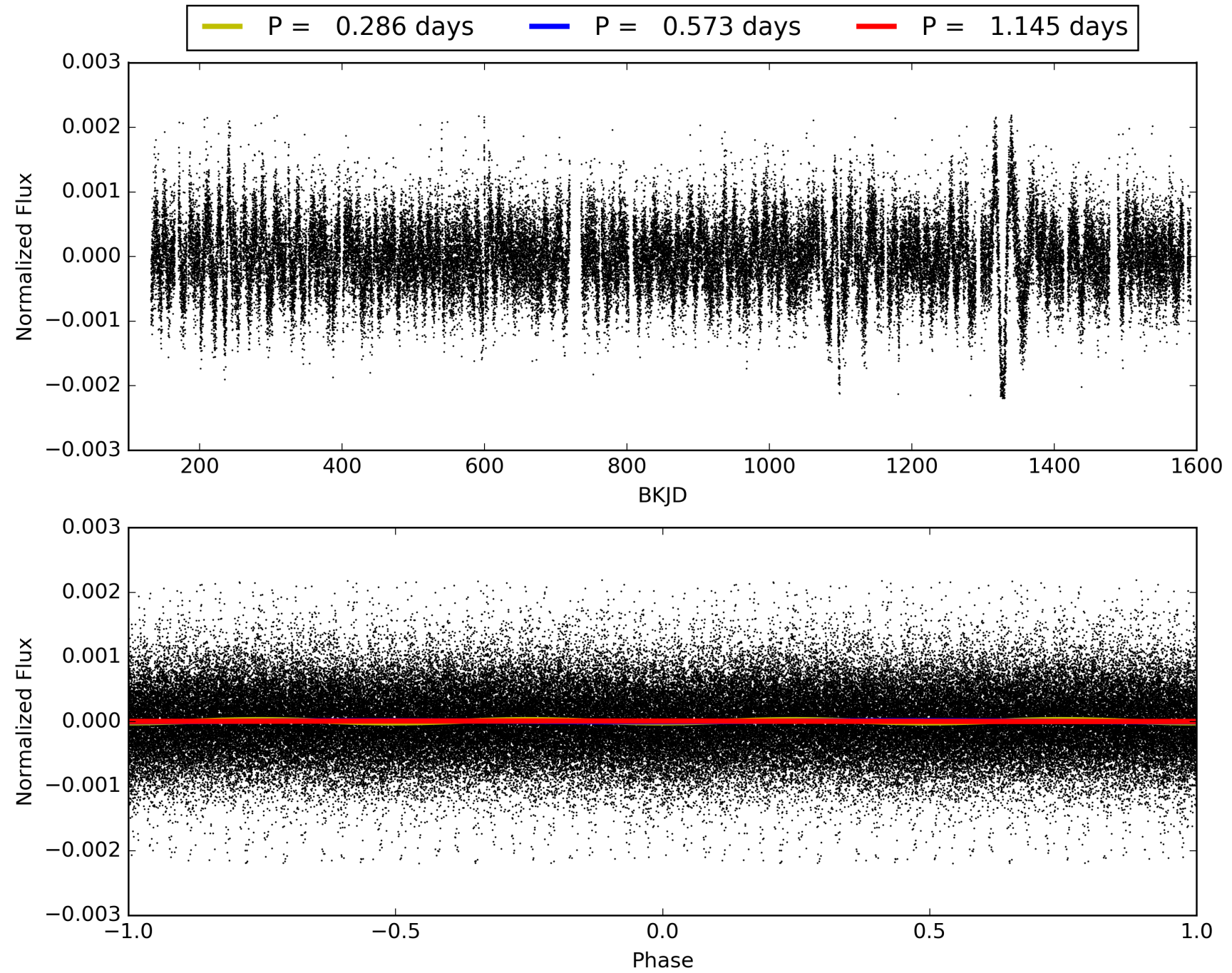
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 04:12:12 Z

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

TCE 007514582-01, PDC Light Curves

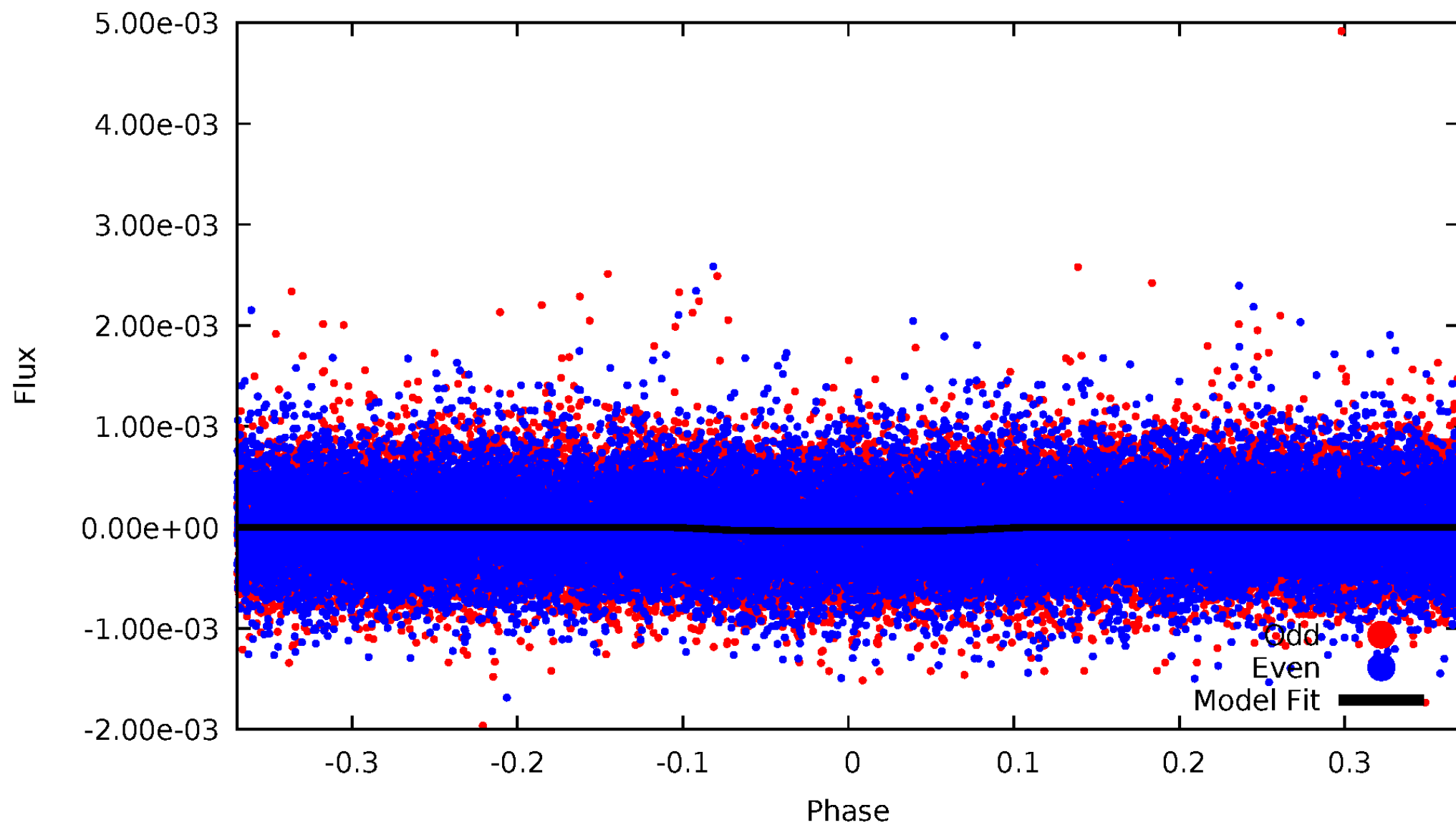


TCE 007514582-01



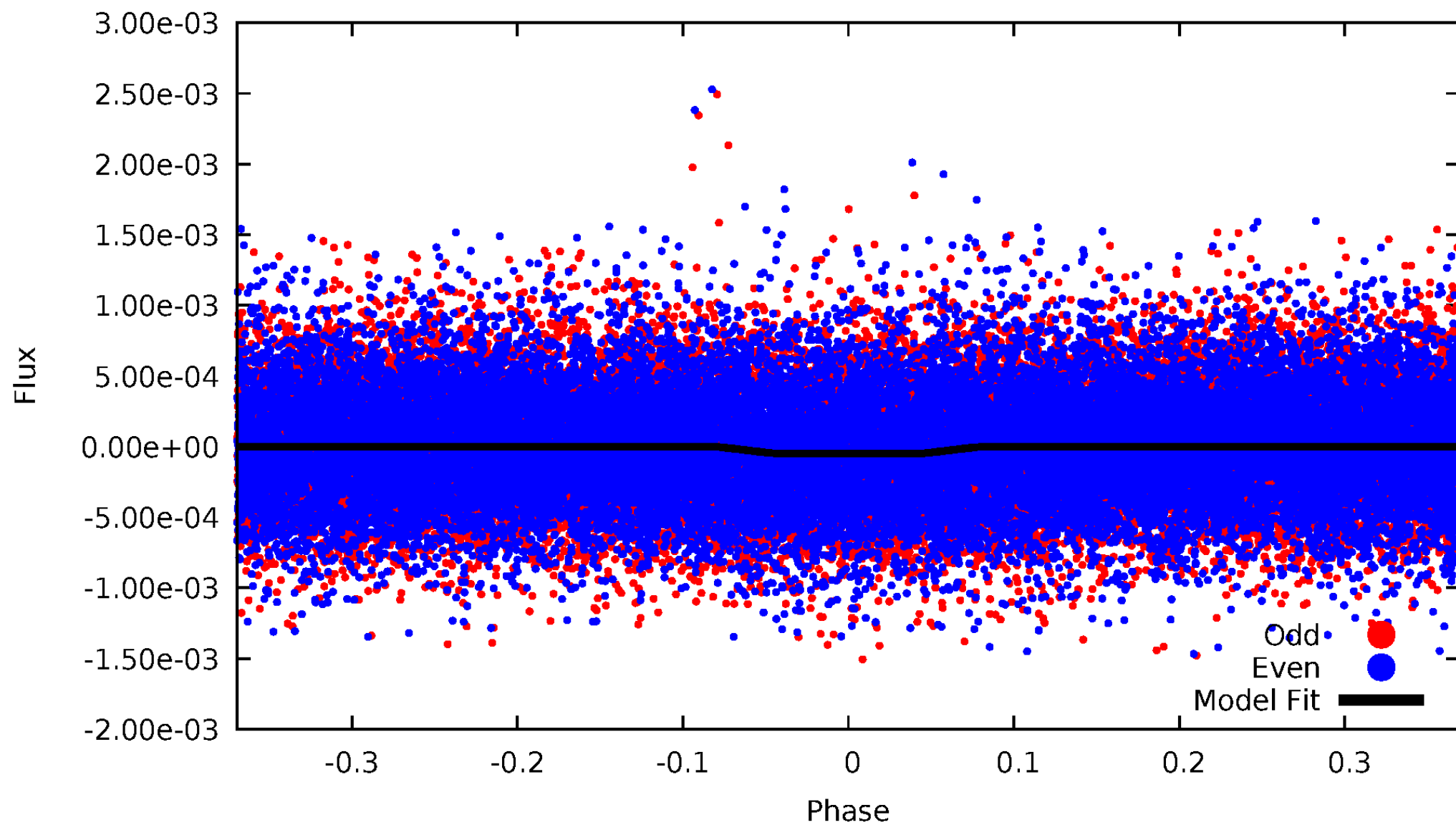
DV Odd/Even

TCE 007514582-01



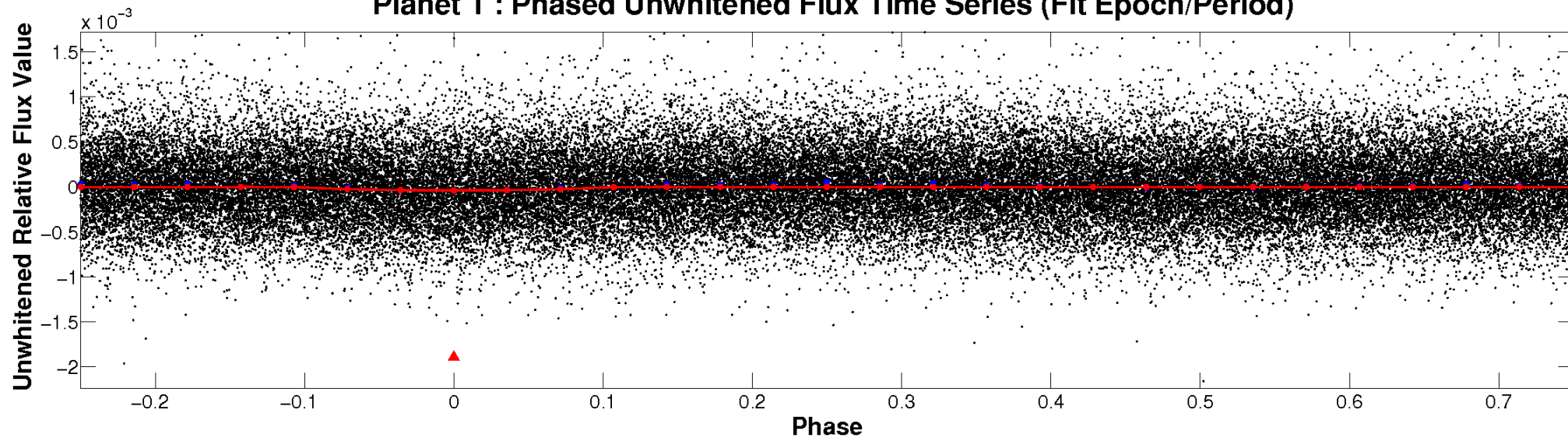
ALT Odd/Even

TCE 007514582-01

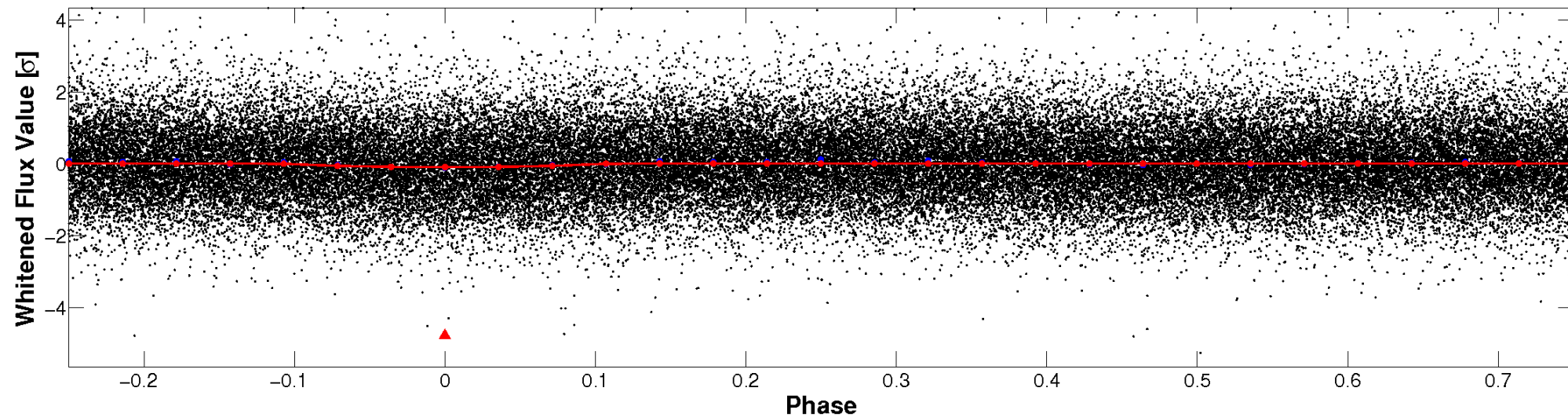


Non-Whitened Vs. Whitened Light Curve

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

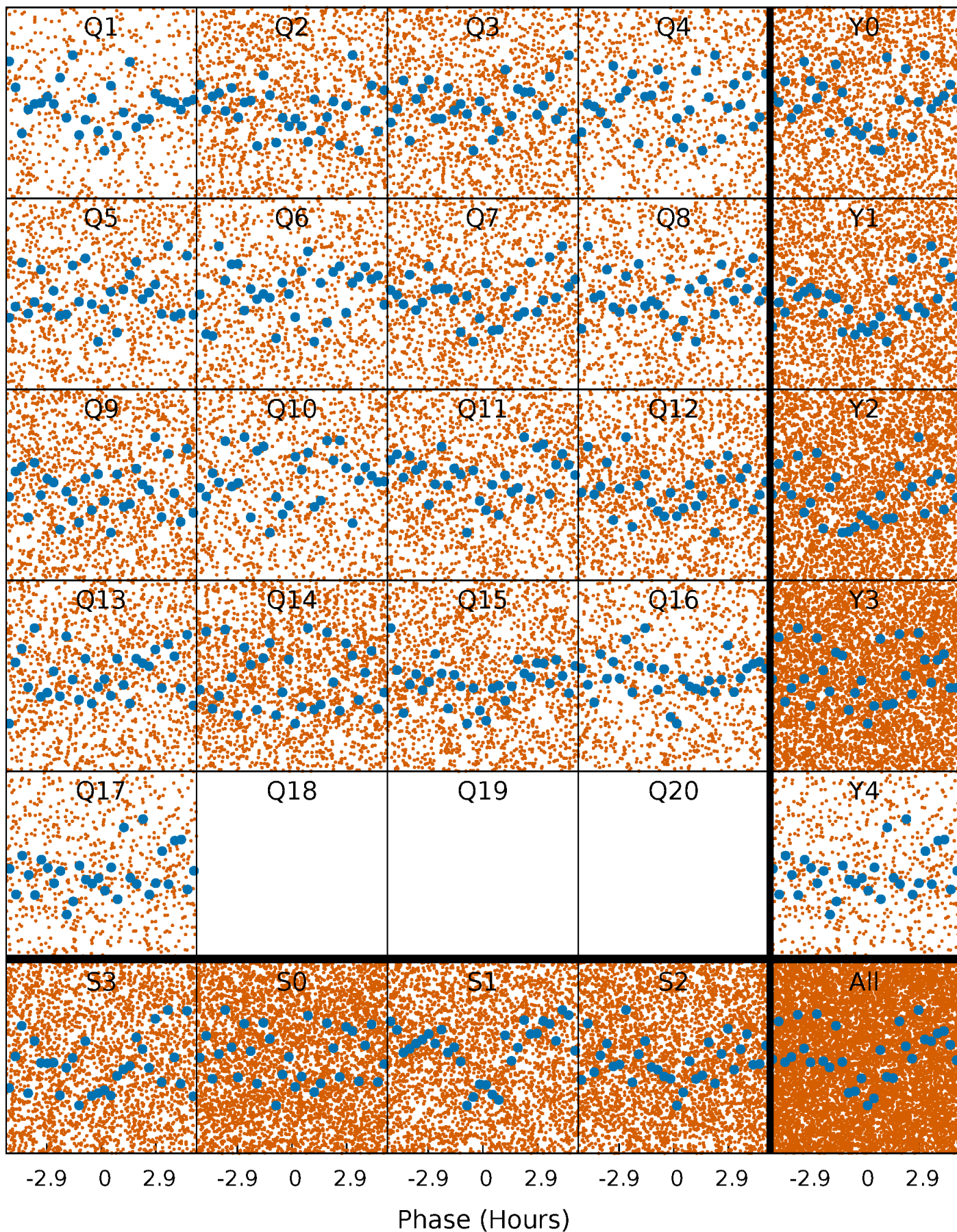


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



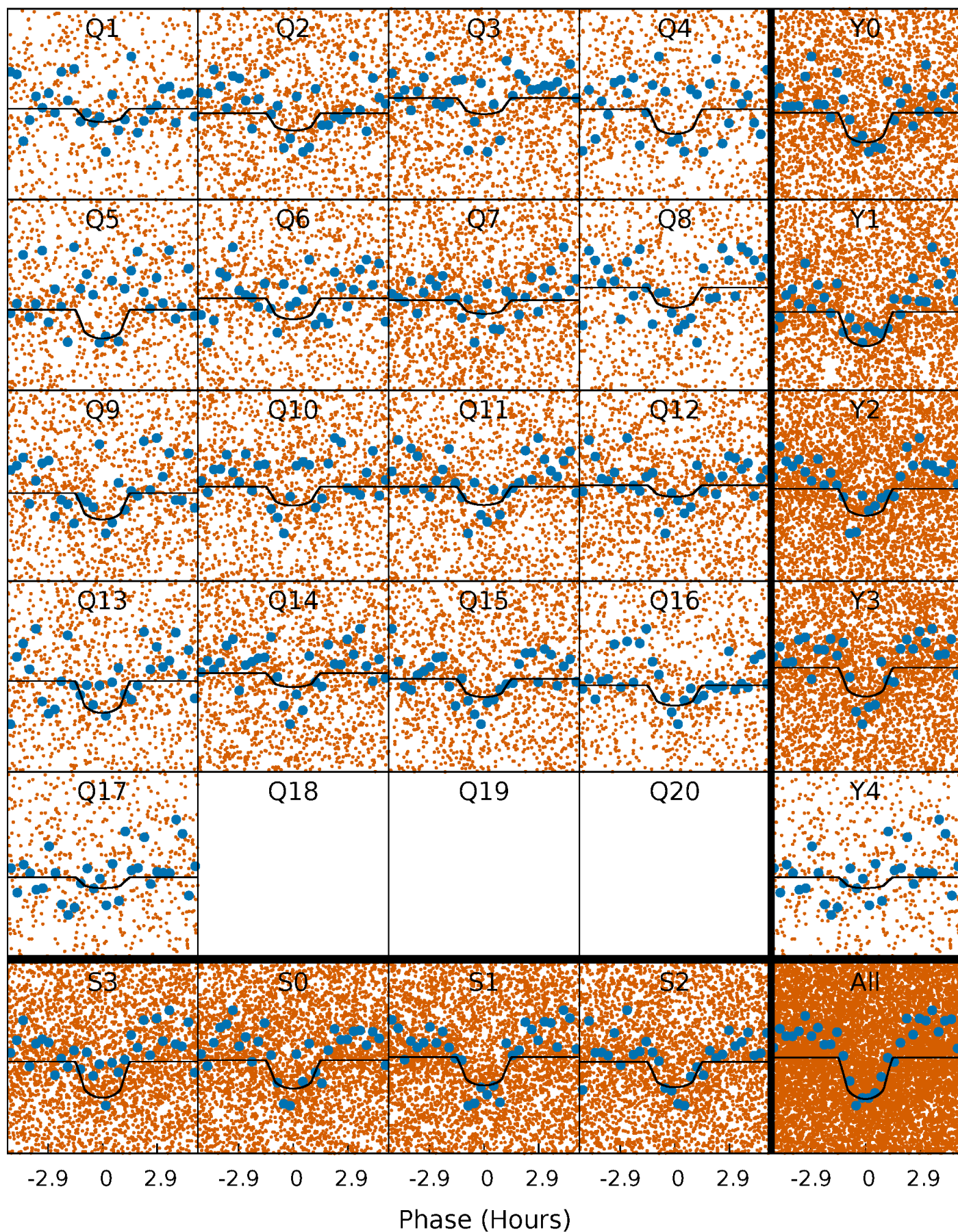
PDC Quarter-Phased Transit Curves

TCE 007514582-01 P= 0.572524 Days $T_0=131.771612$ (BKJD)



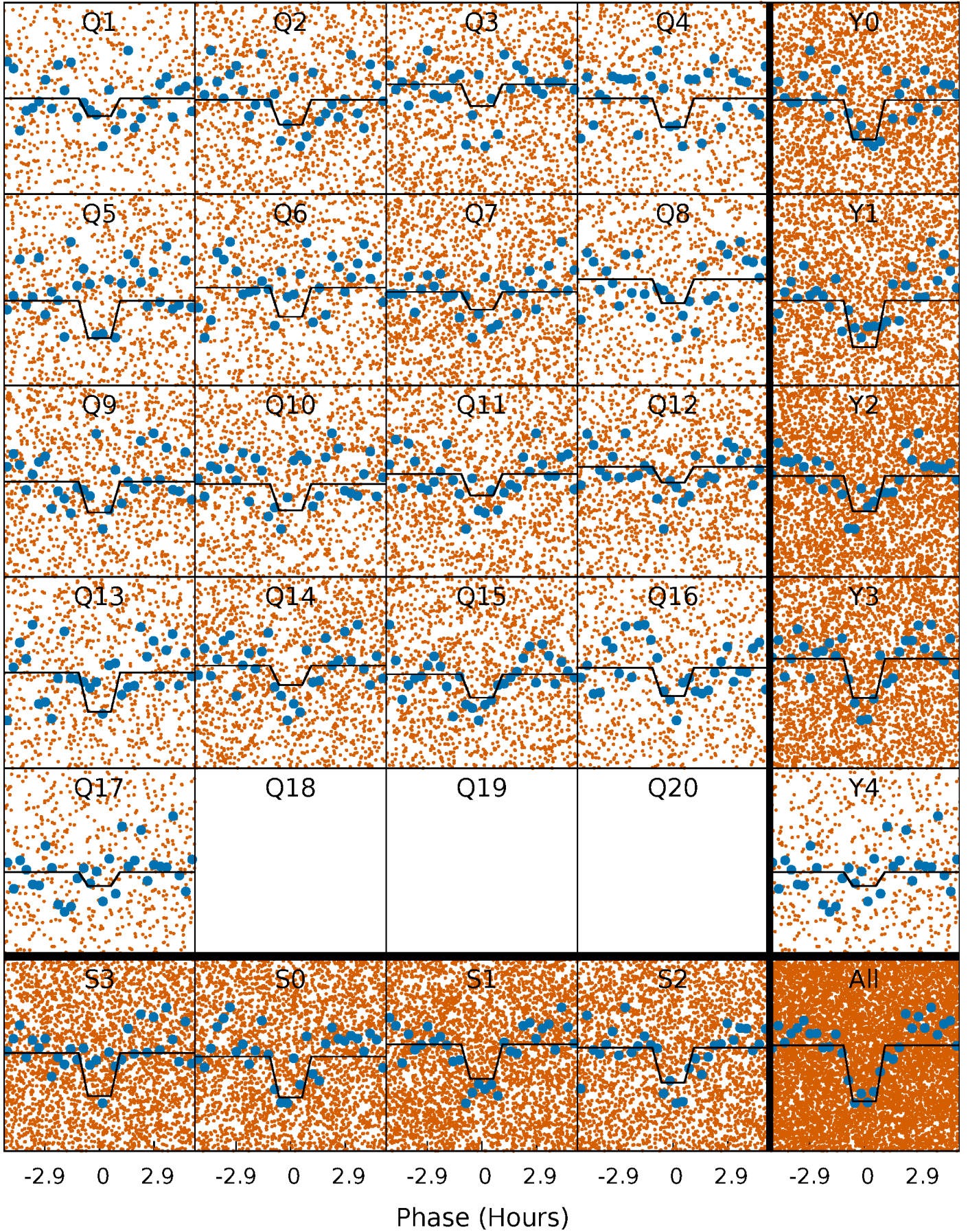
DV Quarter-Phased Transit Curves

TCE 007514582-01 P= 0.572524 Days $T_0=131.771612$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

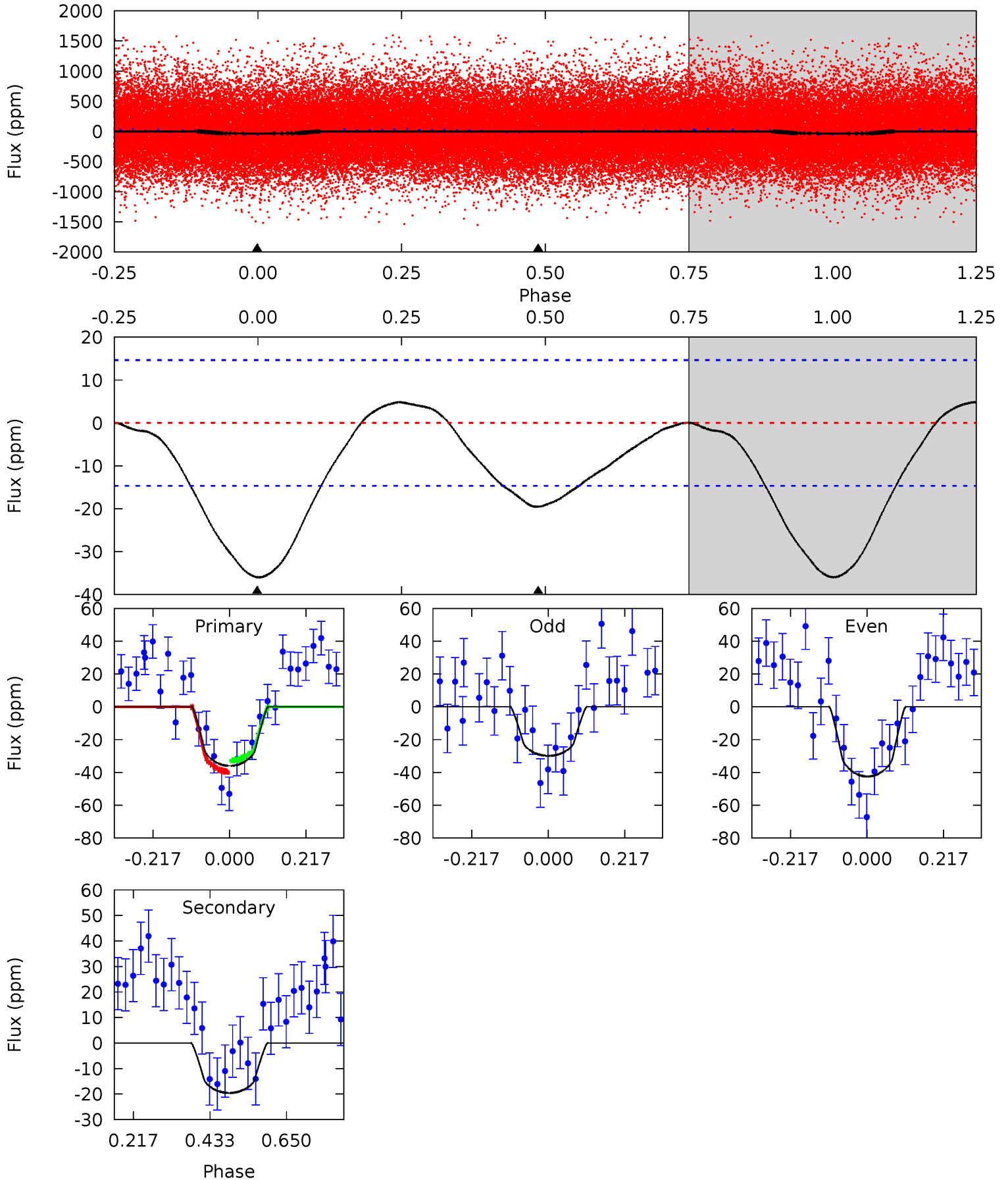
TCE 007514582-01 P= 0.572525 Days $T_0=131.771591$ (BKJD)



DV Model-Shift Uniqueness Test

007514582-01, P = 0.572524 Days, E = 131.199088 Days

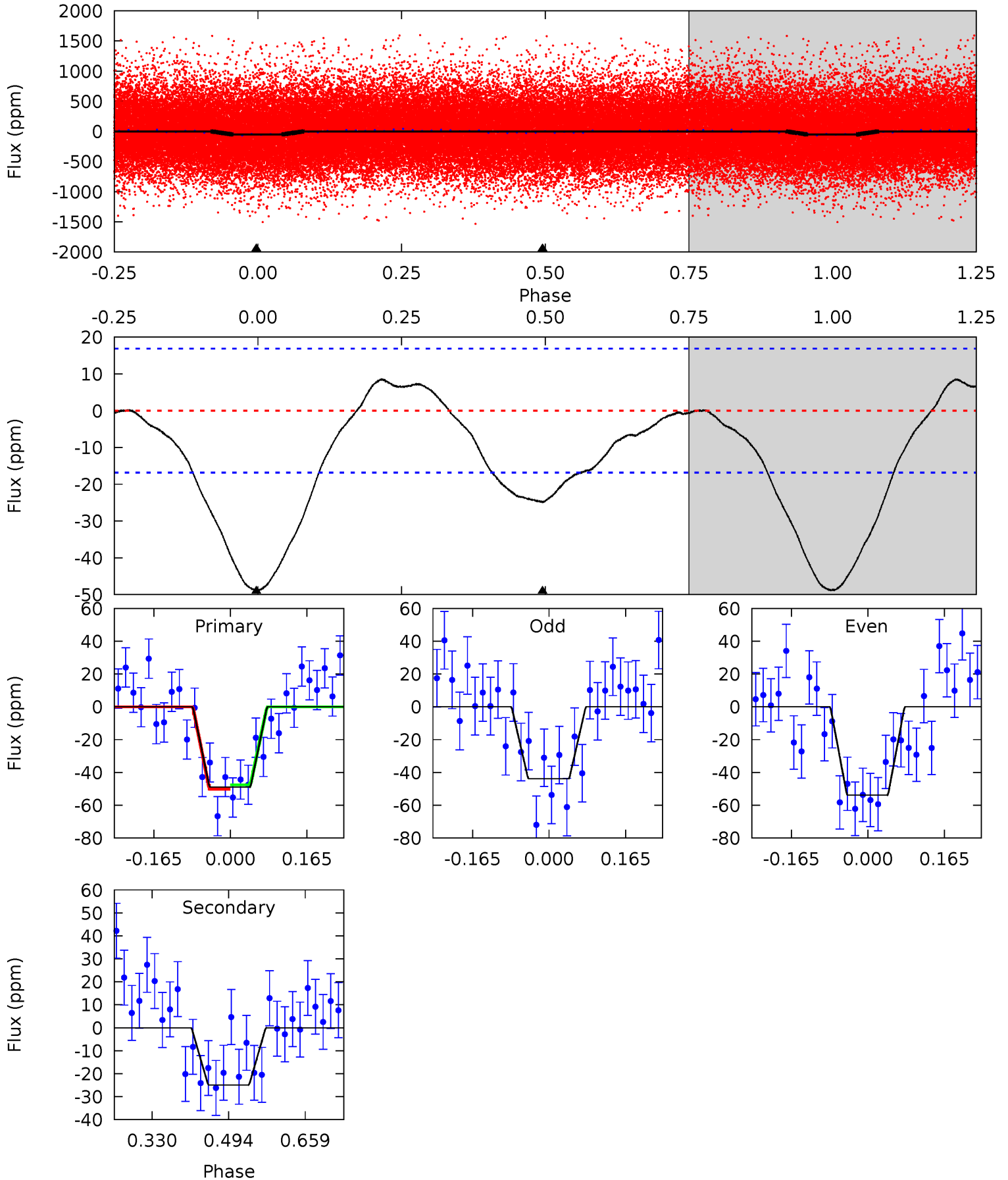
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.8	5.87	0	0	4.40	1.24	0.76	10.8	10.8	5.87	5.87	1.89	0.93	0.12	1.03



Alt Model-Shift Uniqueness Test

007514582-01, P = 0.572525 Days, E = 131.199066 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.9	6.59	0	0	4.46	1.39	1.19	12.9	12.9	6.59	6.59	1.32	1.11	0.15	0.35



Stellar Parameters For KIC 007514582

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4287^{+129}_{-142}	$4.609^{+0.052}_{-0.016}$	$0.060^{+0.250}_{-0.300}$	$0.666^{+0.032}_{-0.059}$	$0.656^{+0.057}_{-0.057}$	$3.135^{+0.736}_{-0.271}$
	+3%/-3%	+1%/-0%	+417%/-500%	+5%/-9%	+9%/-9%	+23%/-9%
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 007514582-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-20 ± 3	$0.61^{+0.44}_{-0.38}$	1980^{+57}_{-82}	3401^{+1486}_{-565}	$4.084^{+24.343}_{-2.700}$
Alt.	-25 ± 4	$0.62^{+0.48}_{-0.39}$	1978^{+66}_{-71}	3527^{+1513}_{-639}	$5.036^{+27.200}_{-3.476}$

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

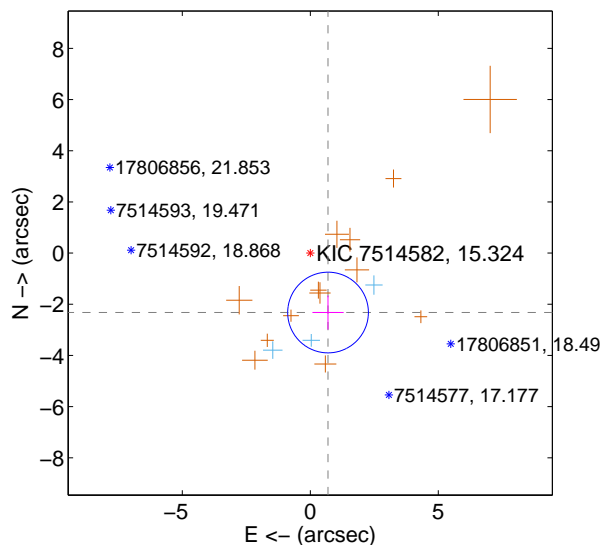
Supplemental centroid analysis for 007514582-01. Kepler magnitude: 15.32. Transit SNR 8.04

There are 3 quarters with good PRF difference image offsets

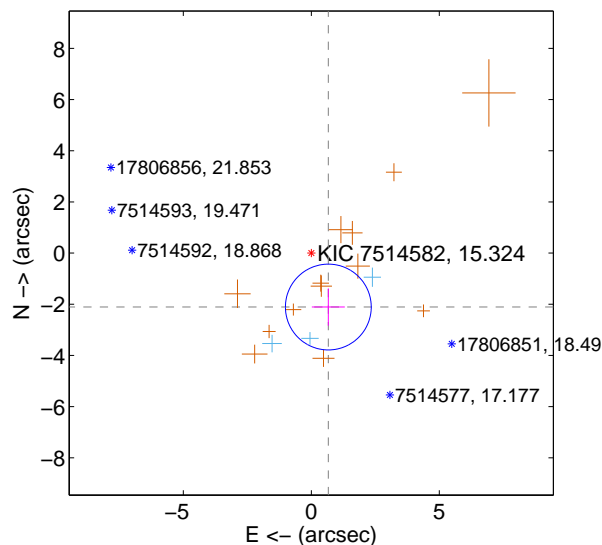
The direct PRF centroid is offset from the target star catalog position by about 0.28 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.424 ± 0.526	4.61	-0.694 ± 0.610	-2.322 ± 0.666
PRF-fit source offset from KIC position	2.210 ± 0.559	3.96	-0.666 ± 0.643	-2.108 ± 0.727
photometric centroid source offset	3.72 ± 1.39	2.68	0.90 ± 1.21	-3.61 ± 1.40

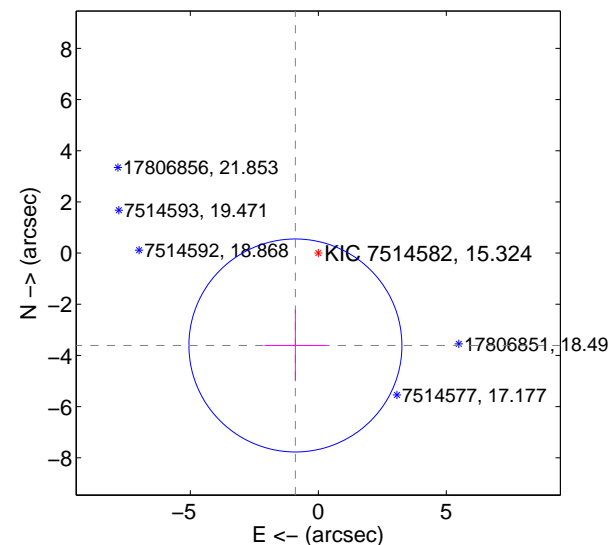
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

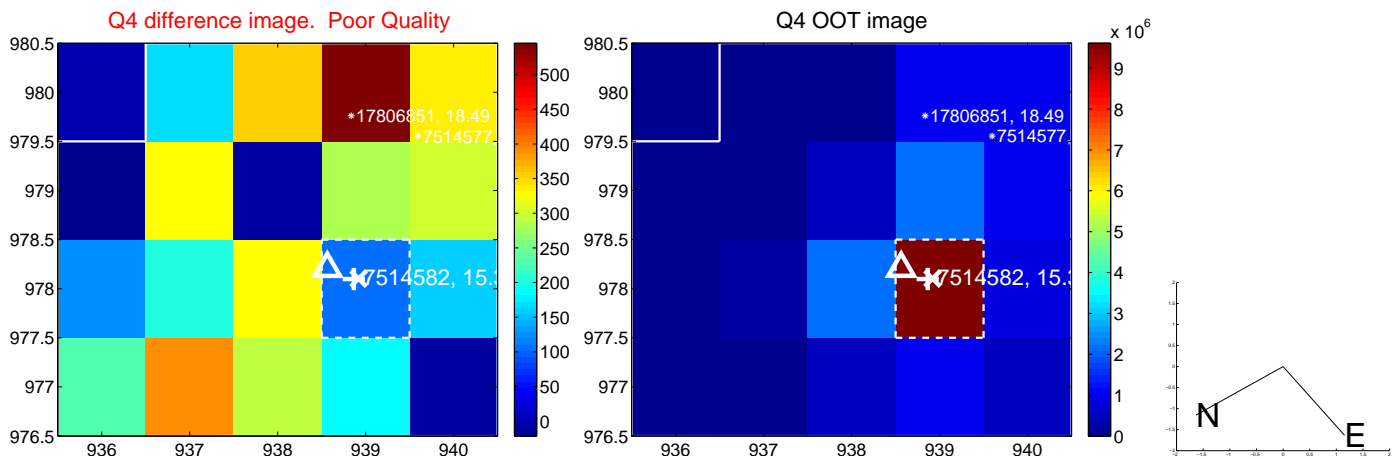
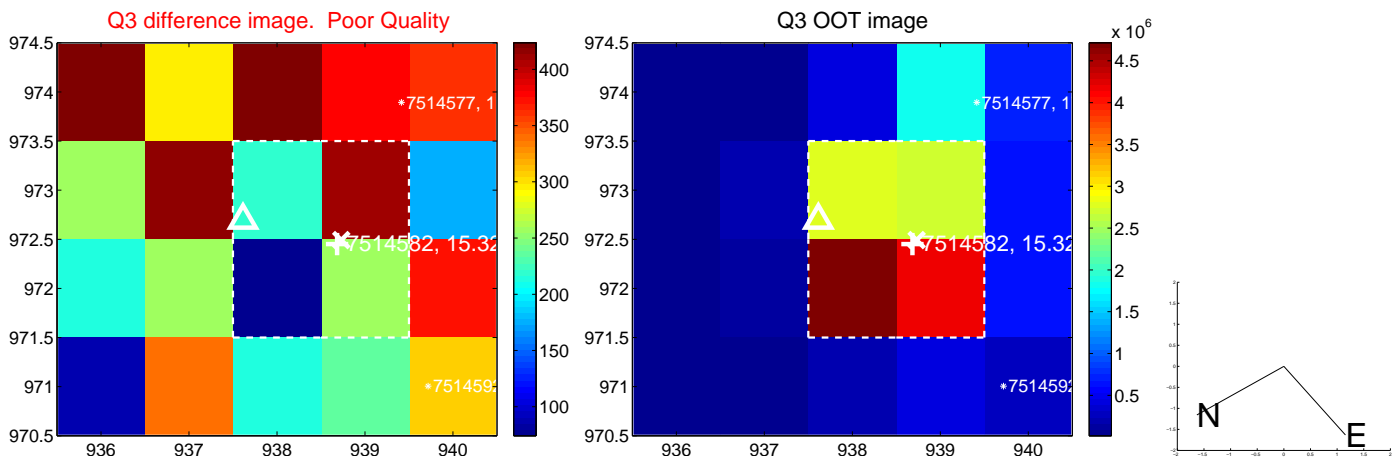
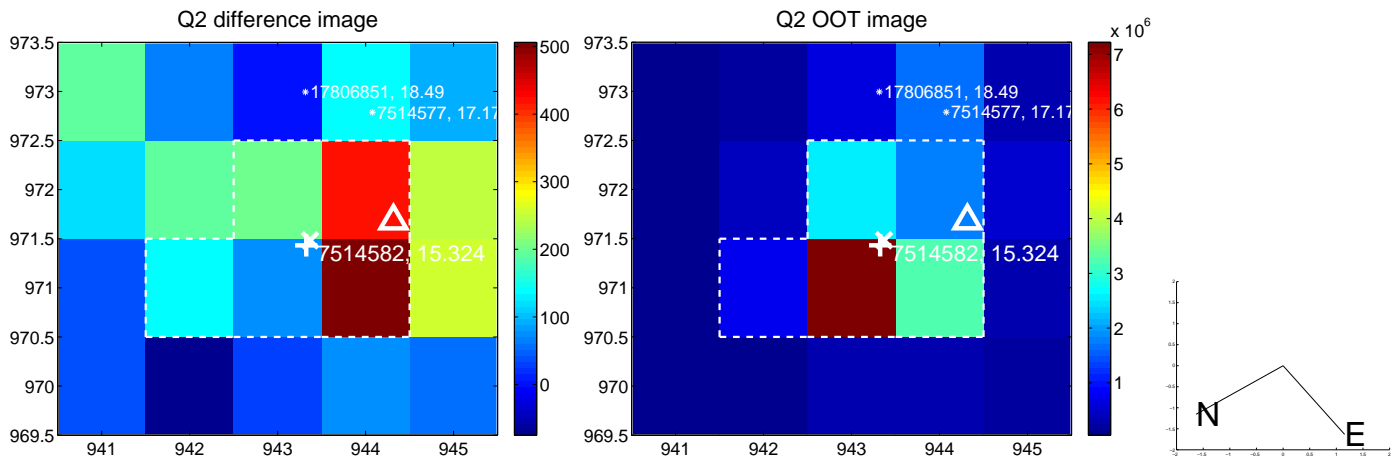
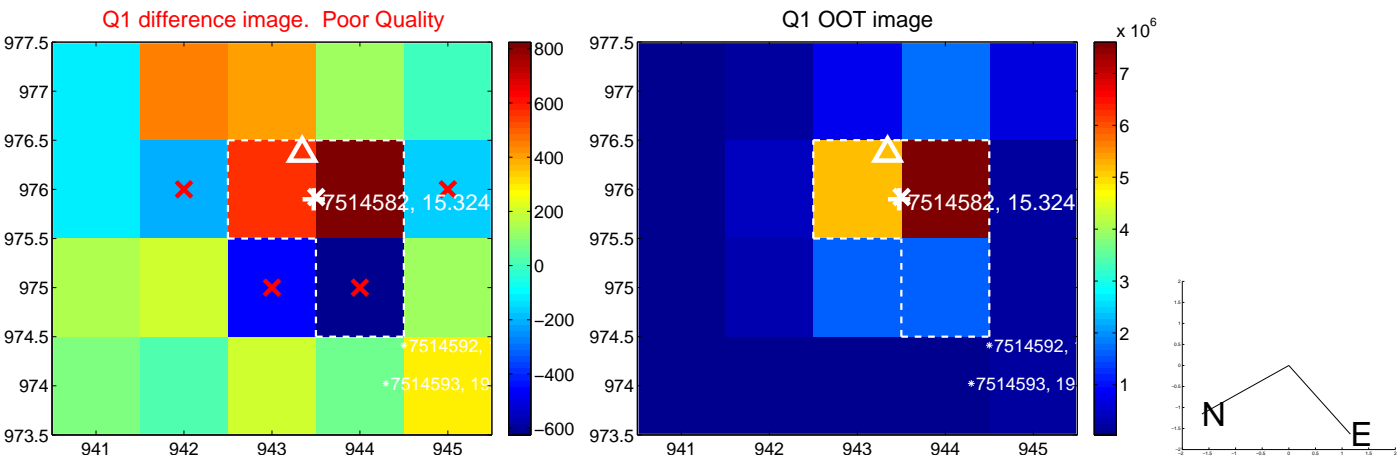


offset from photometric centroids

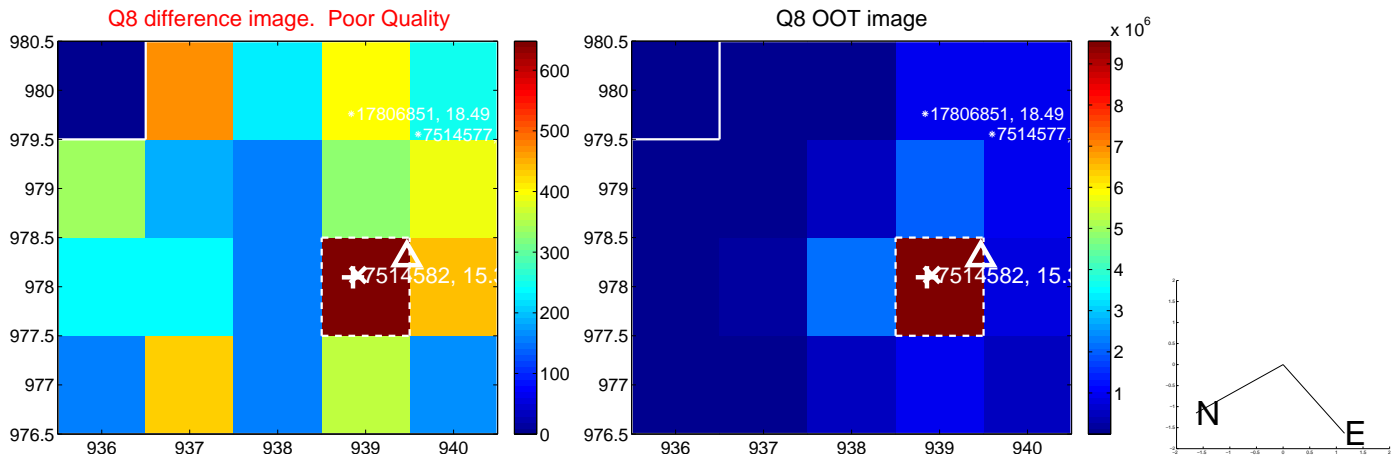
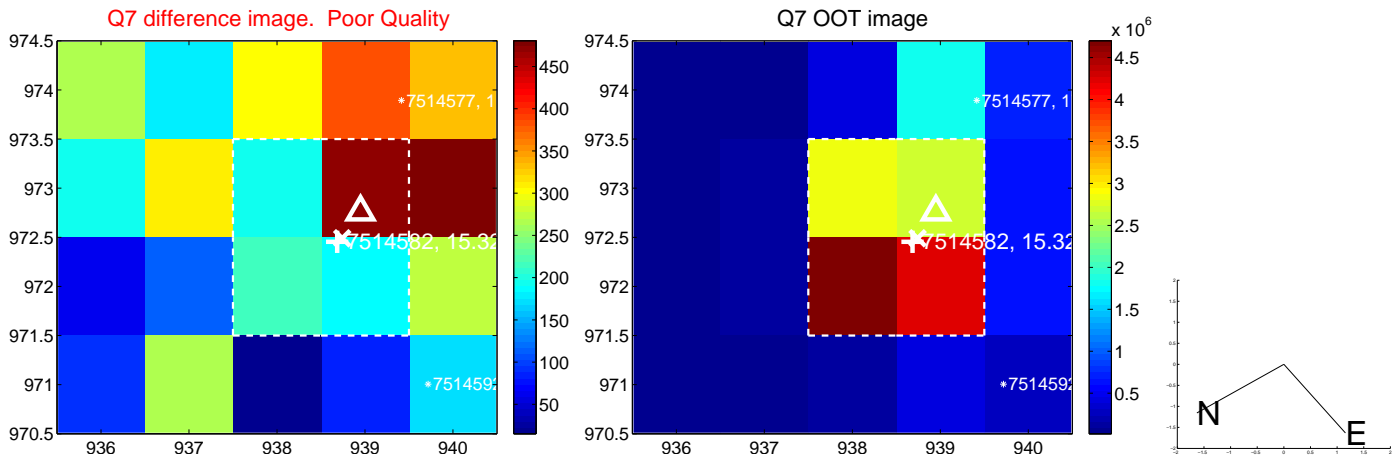
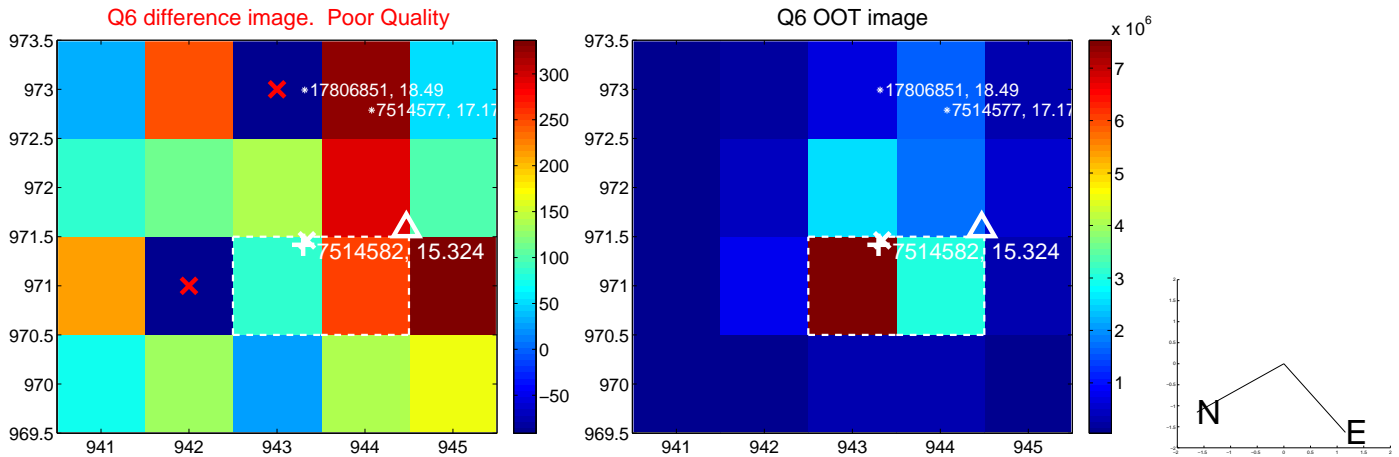
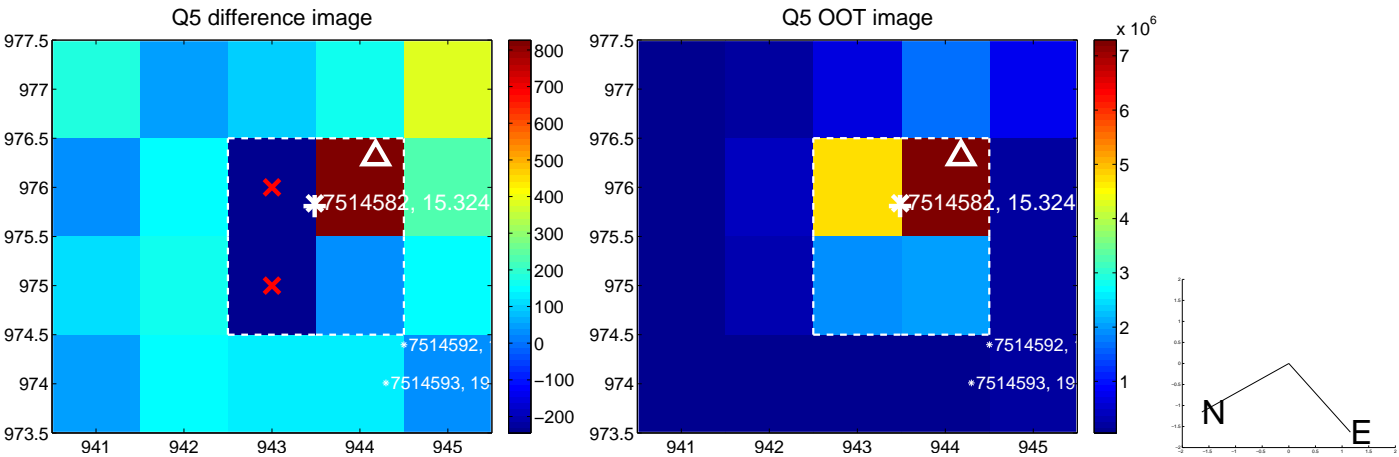


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

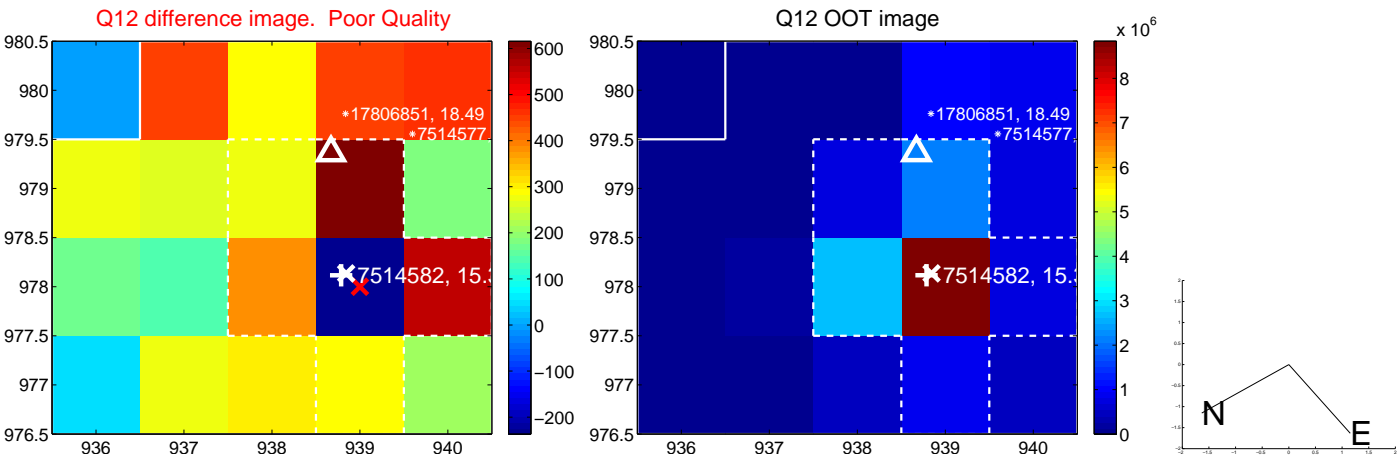
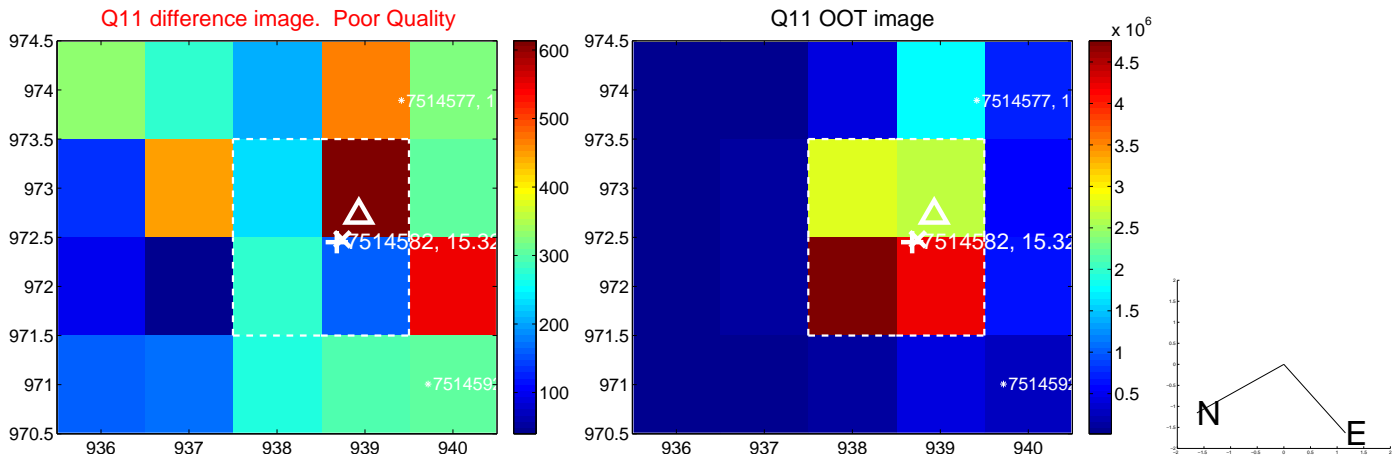
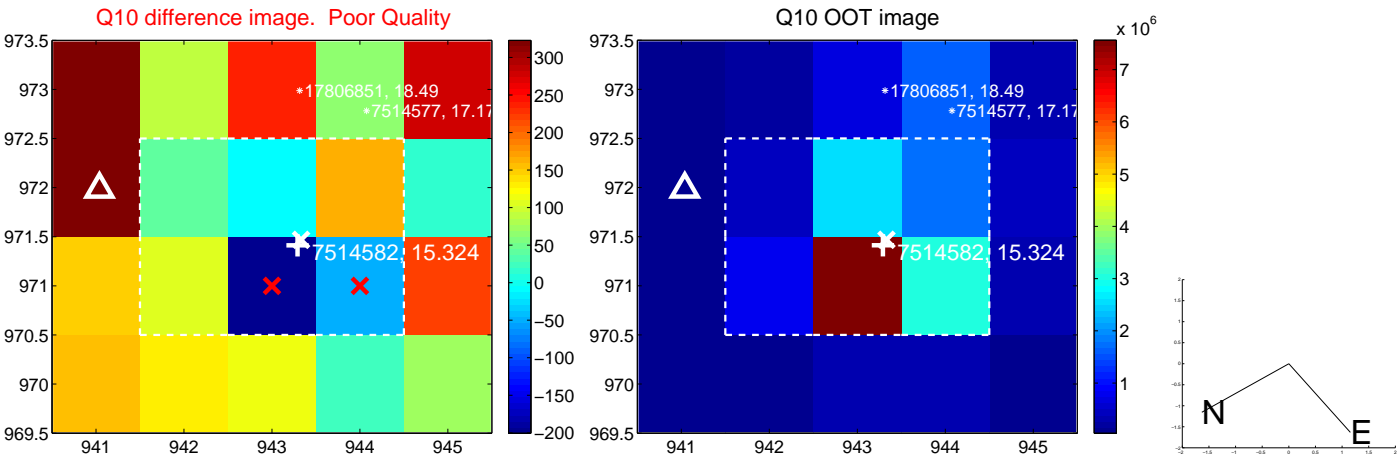
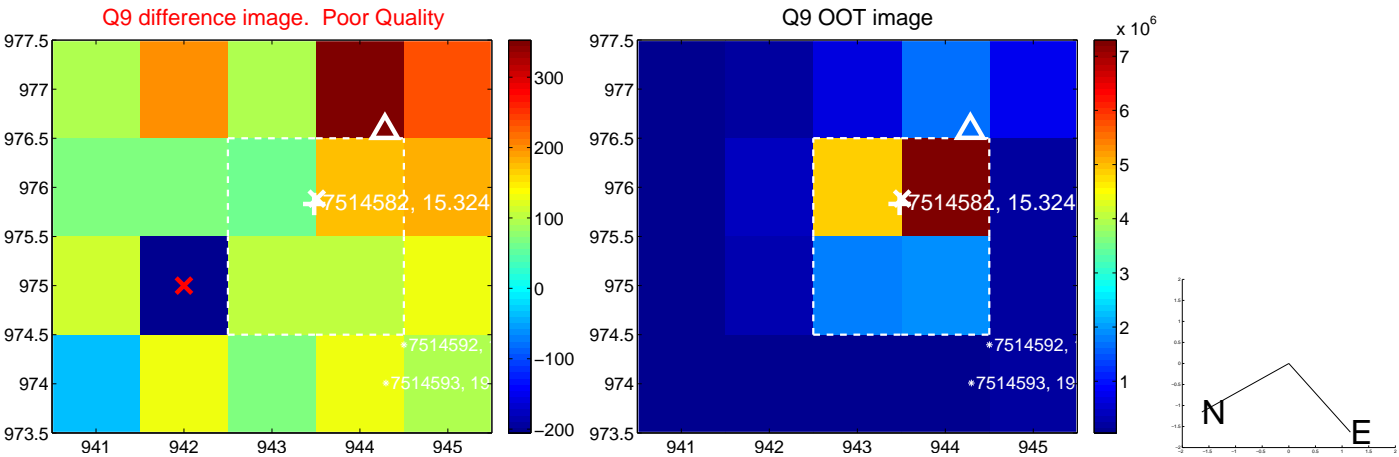
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



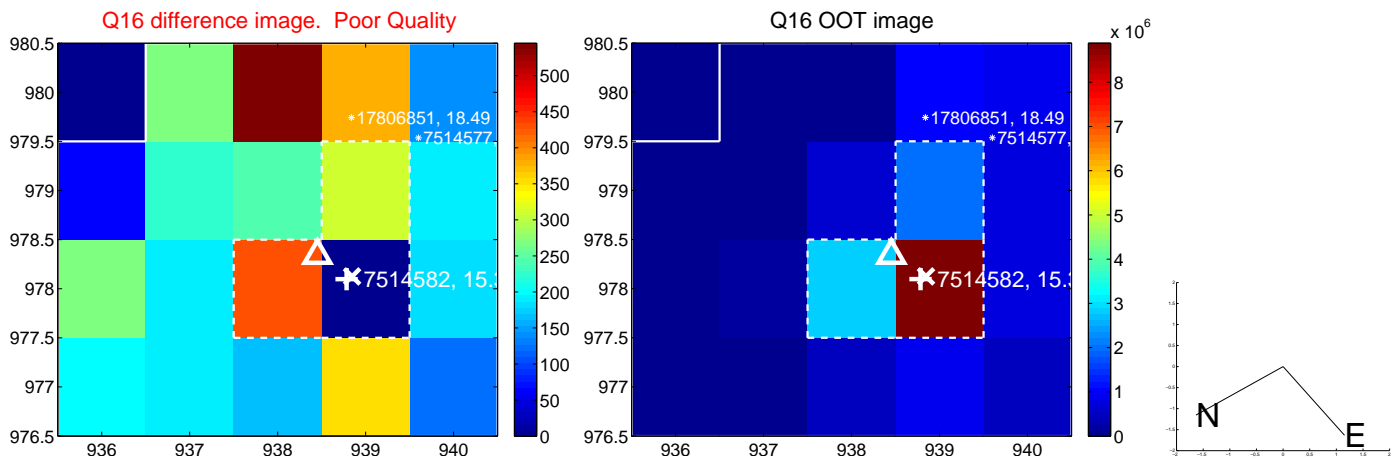
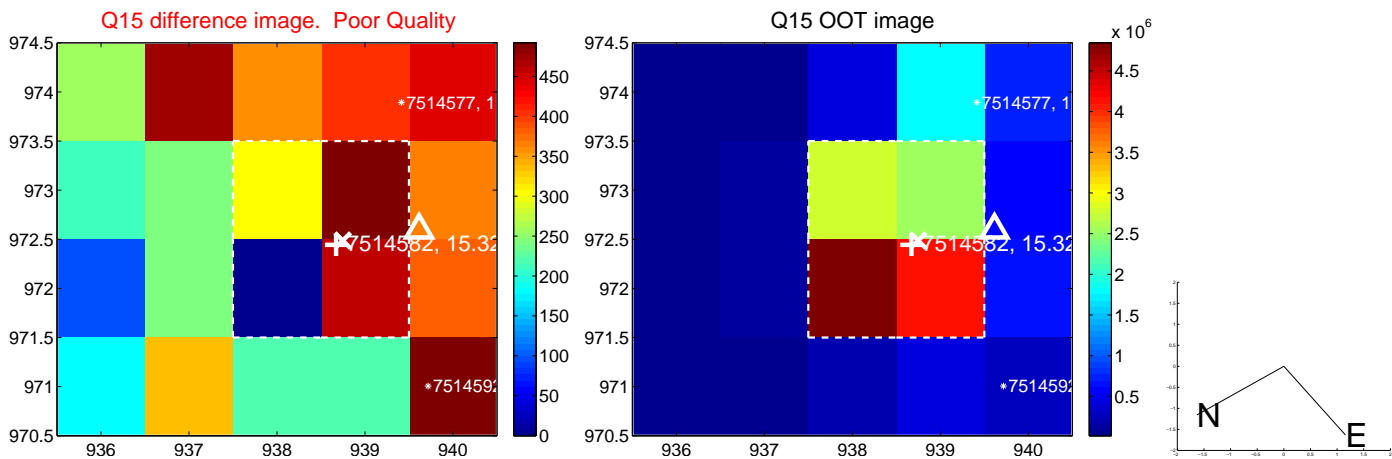
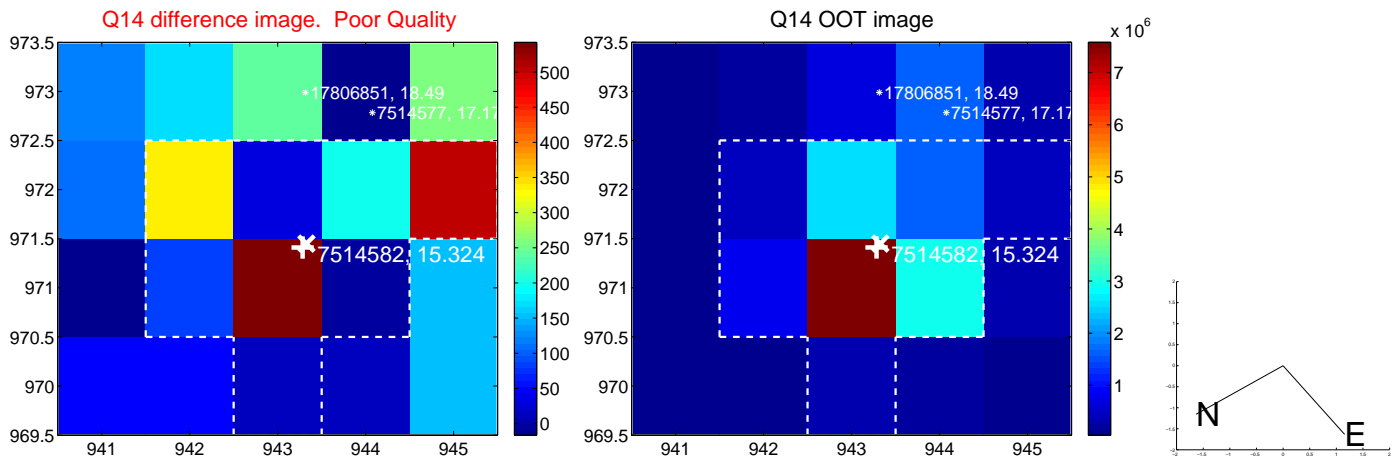
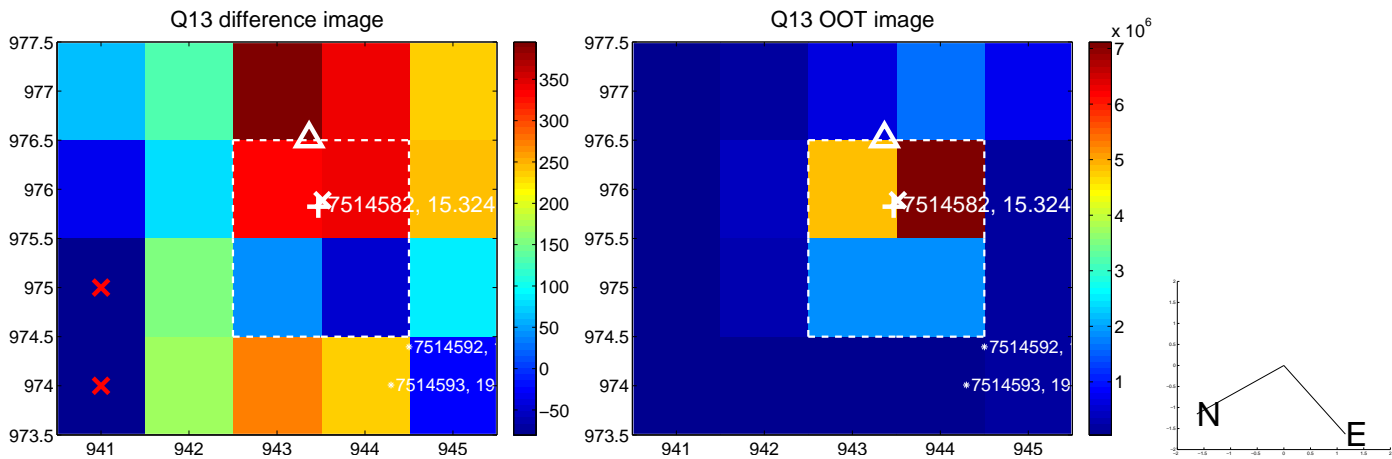
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



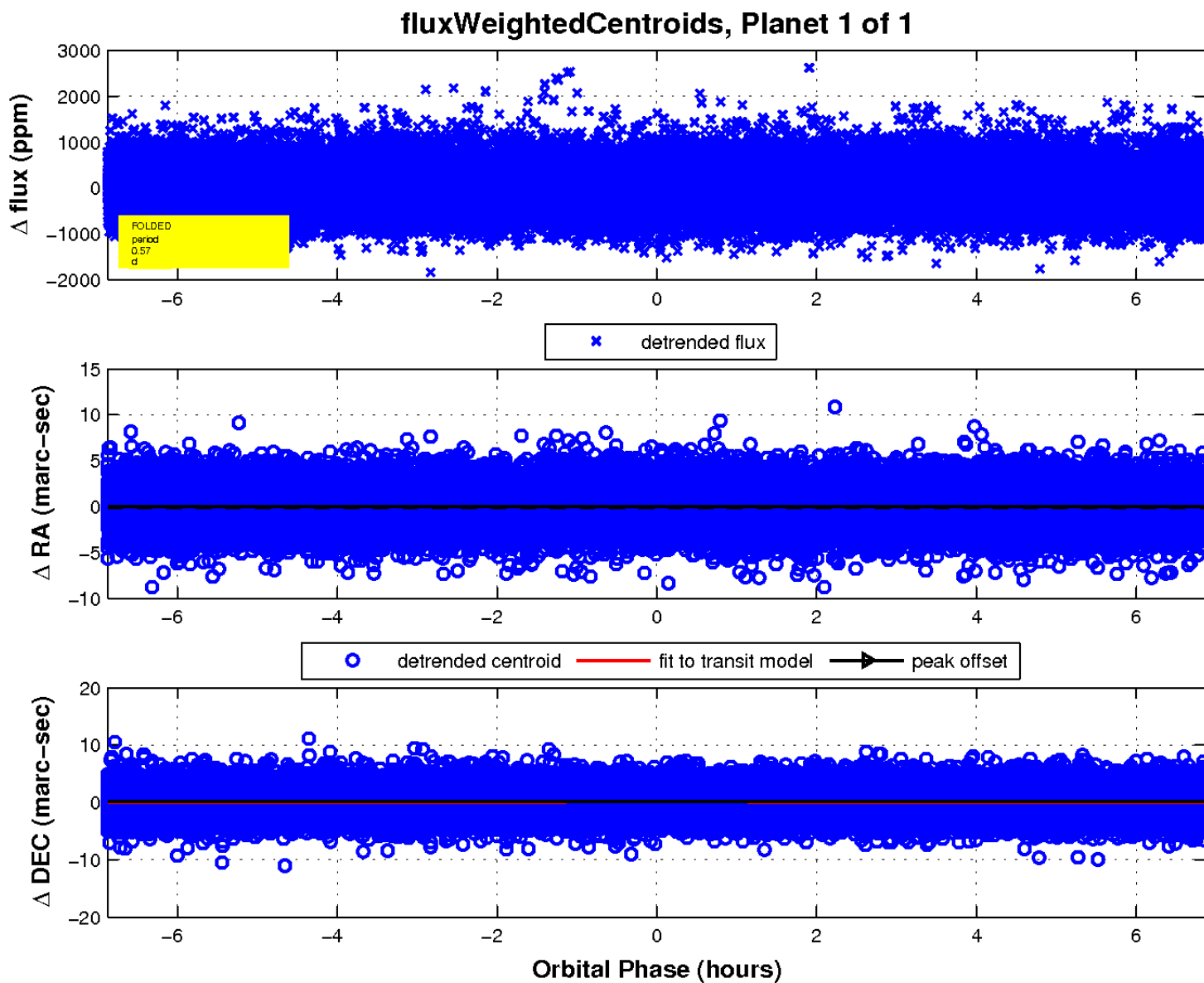
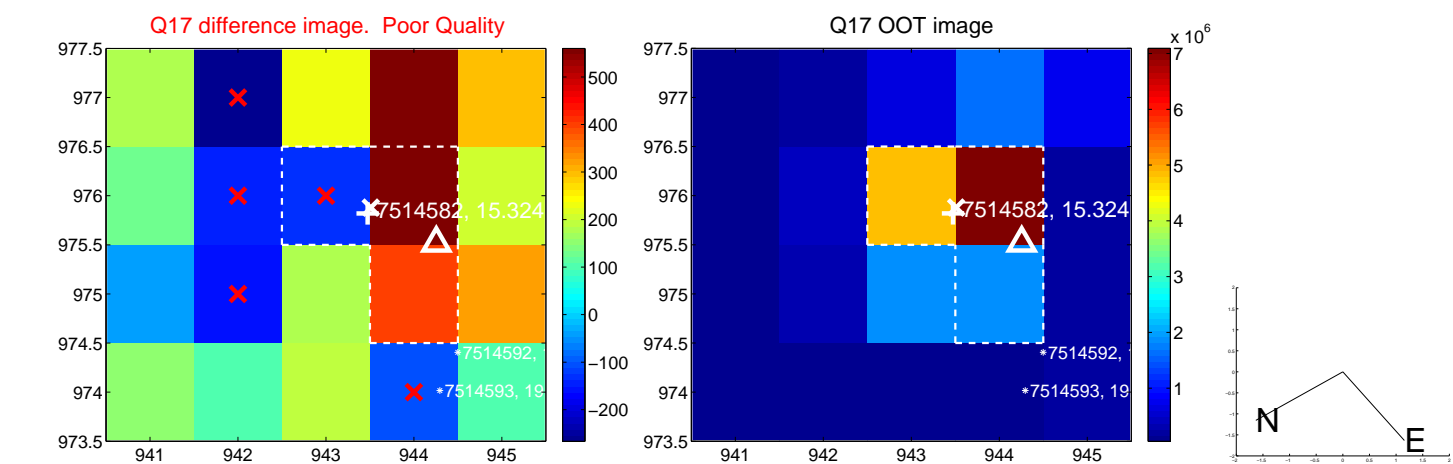
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

