

KIC 007657926

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})
007657926-01	OBS	No	0.949075	131.905893	51.6	2.862	8.3	9.0	0.87	5356	0.76	1589.29

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007657926-01	OBS	FP	0.00	1	0	1	1	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET—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.

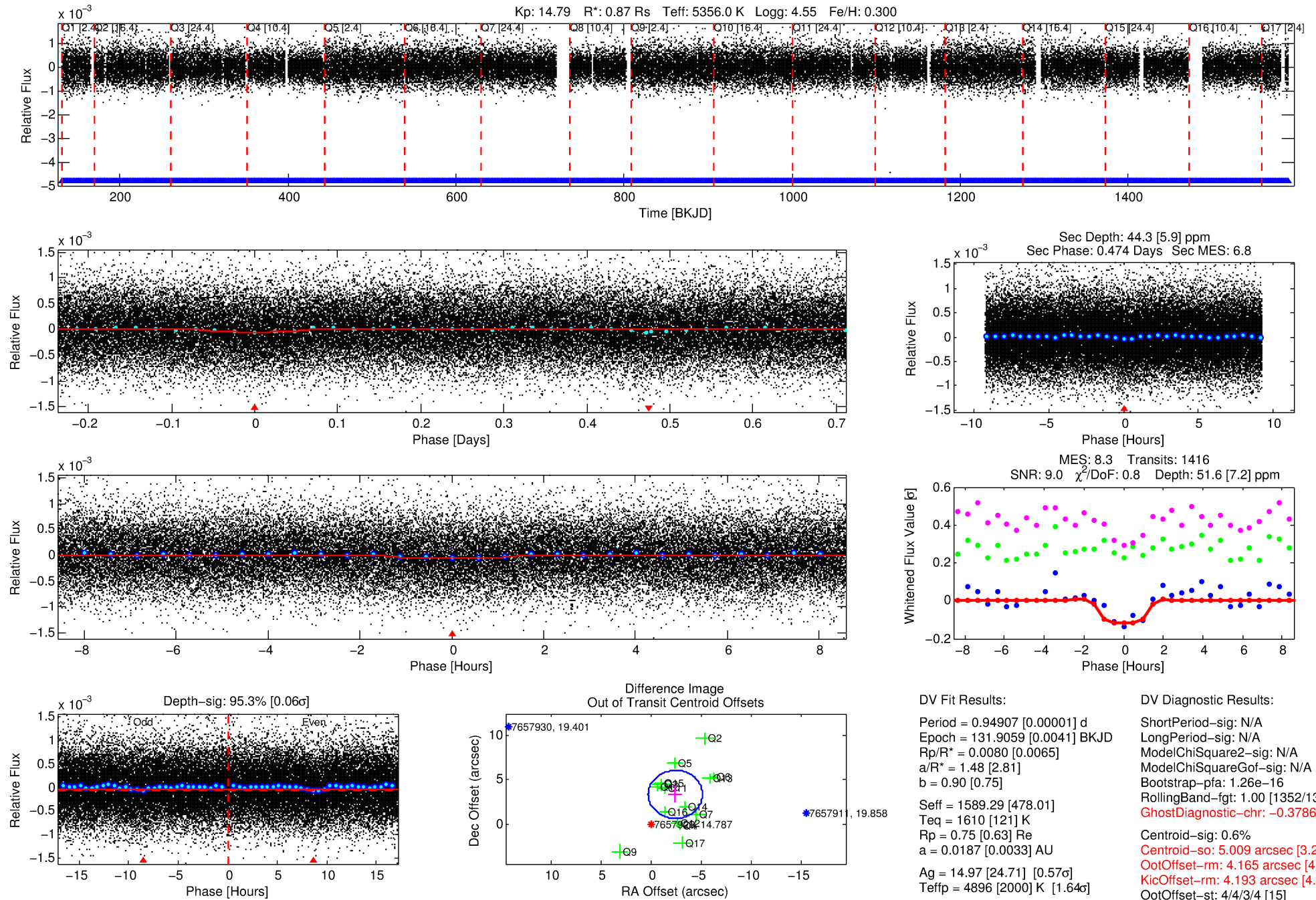
Ephemeris Match Information For 007657926-01

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
007657926-01	7657926	007657914-pri	7657914	2:1	50.8	-6	11	12.91	14.79	7805.80	Direct-PRF	0	4.56	1.03

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: 7657926 Candidate: 1 of 1 Period: 0.949 d



DV Fit Results:

Period = 0.94907 [0.00001] d
Epoch = 131.9059 [0.0041] BKJD
Rp/R* = 0.0080 [0.0065]
a/R* = 1.48 [2.81]
b = 0.90 [0.75]
Seff = 1589.29 [478.01]
Teff = 1610 [121] K
Rp = 0.75 [0.63] Re
a = 0.0187 [0.0033] AU
Ag = 14.97 [24.71] [0.57 σ]
Teffp = 4896 [2000] K [1.64 σ]

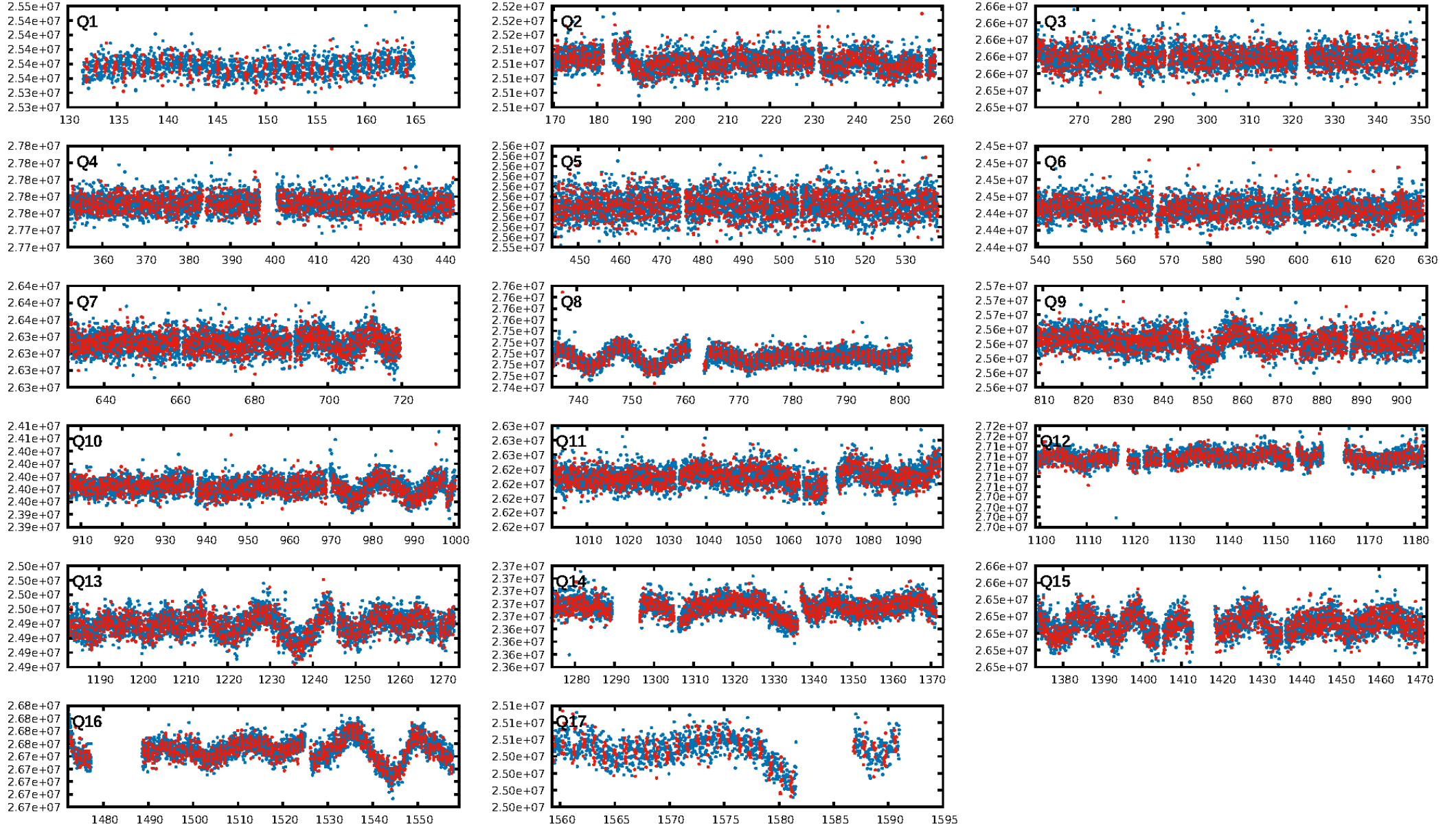
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.26e-16
RollingBand-fgt: 1.00 [1352/1352]
GhostDiagnostic-chr: -0.3786
Centroid-sig: 0.6%
Centroid-so: 5.009 arcsec [3.28 σ]
OotOffset-rm: 4.165 arcsec [4.61 σ]
KicOffset-rm: 4.193 arcsec [4.42 σ]
OotOffset-st: 4/4/3/4 [15]
KicOffset-st: 4/4/3/4 [15]
DiffImageQuality-fgm: 0.13 [2/15]
DiffImageOverlap-fno: 1.00 [17/17]

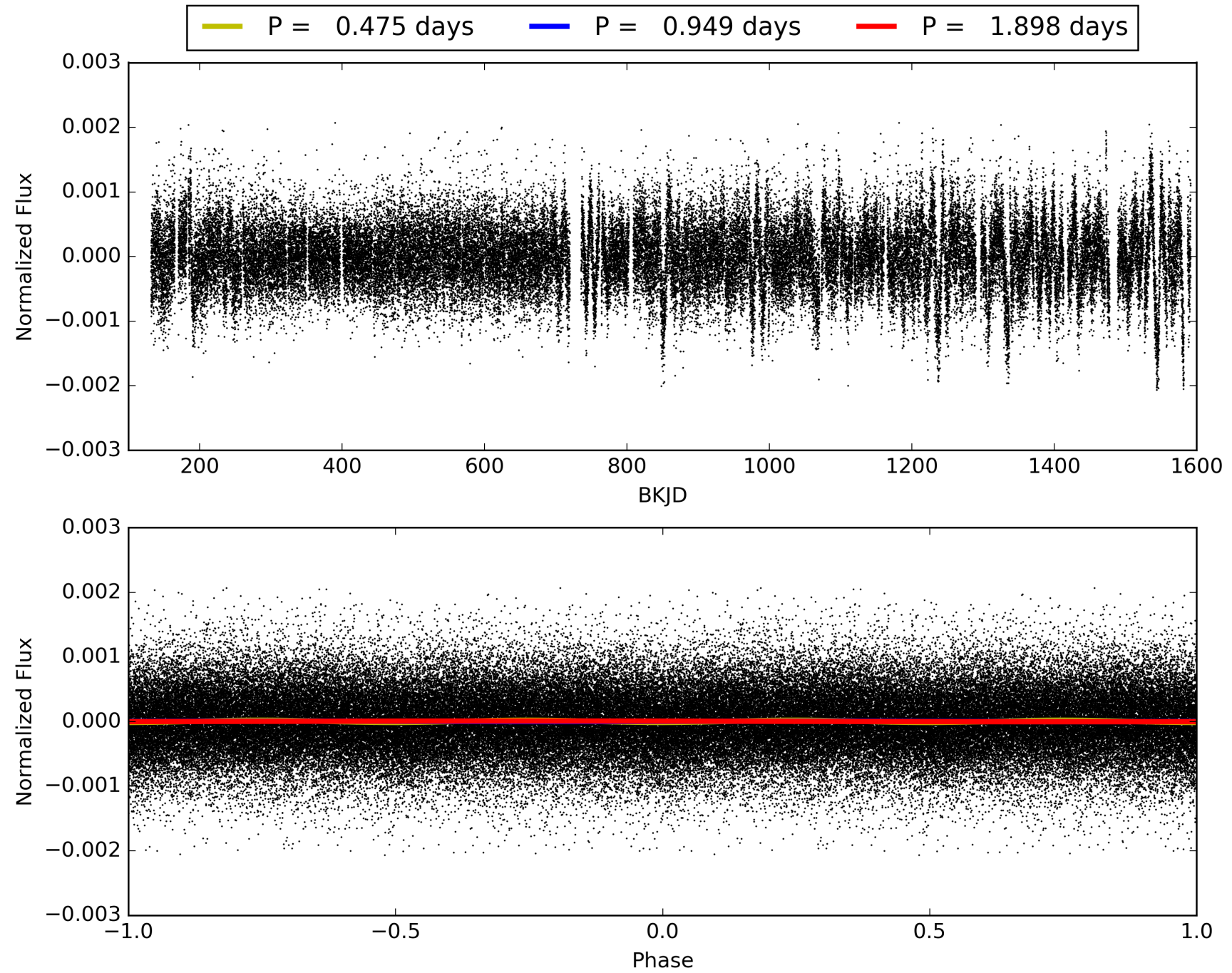
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 09:51:51 Z

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

TCE 007657926-01, PDC Light Curves

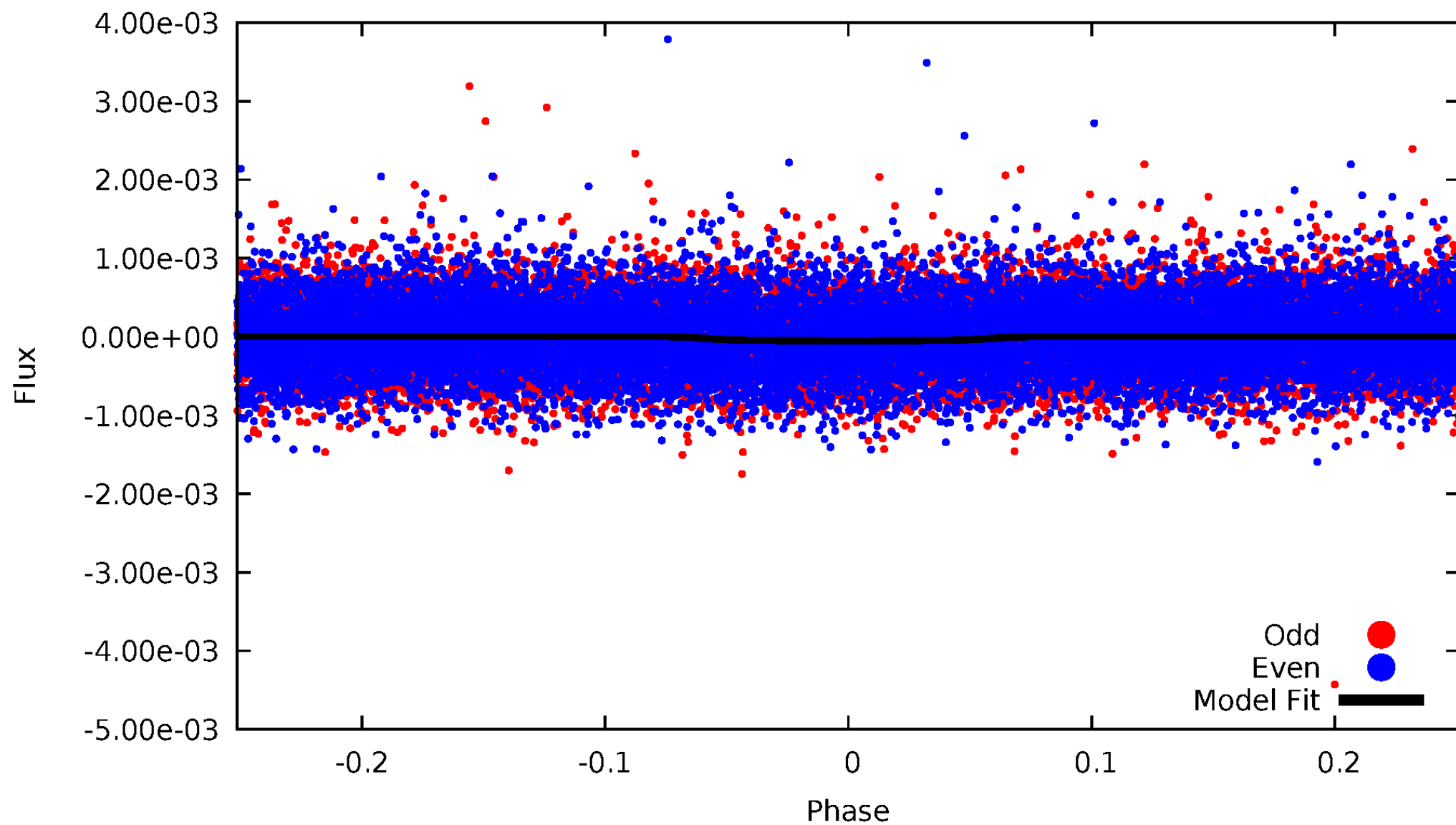


TCE 007657926-01



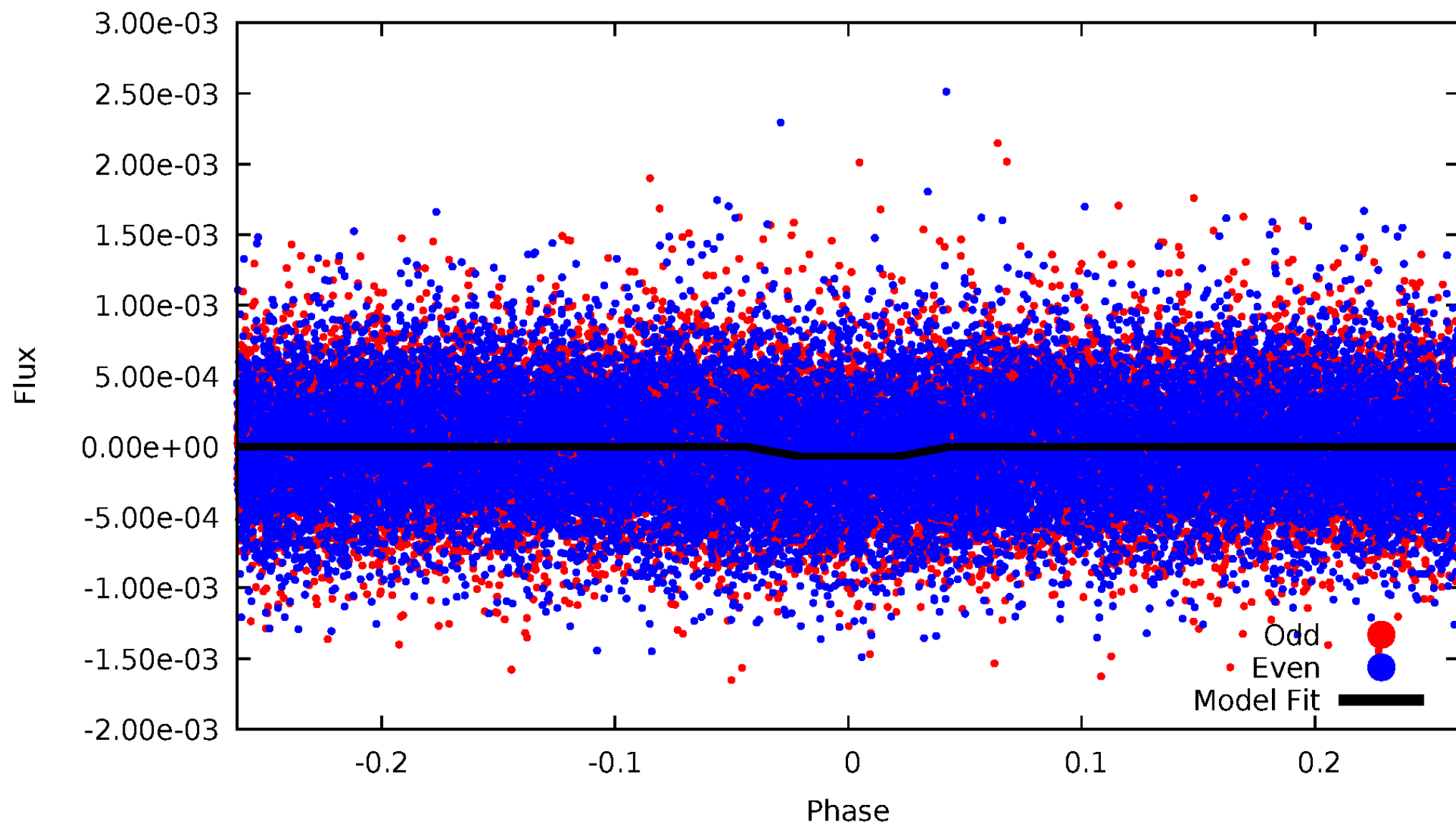
DV Odd/Even

TCE 007657926-01



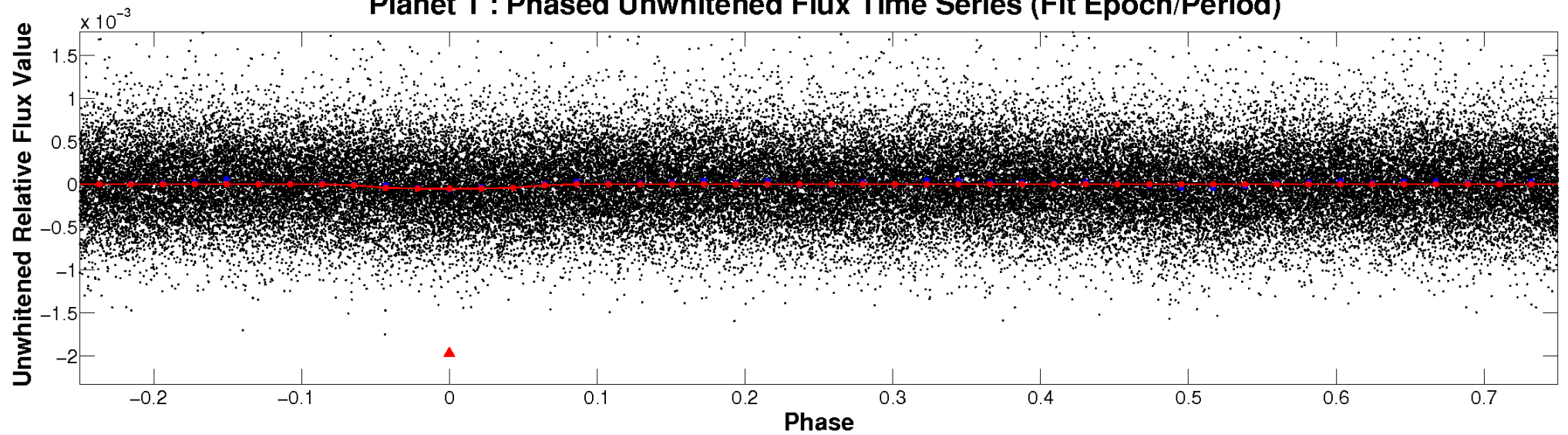
ALT Odd/Even

TCE 007657926-01

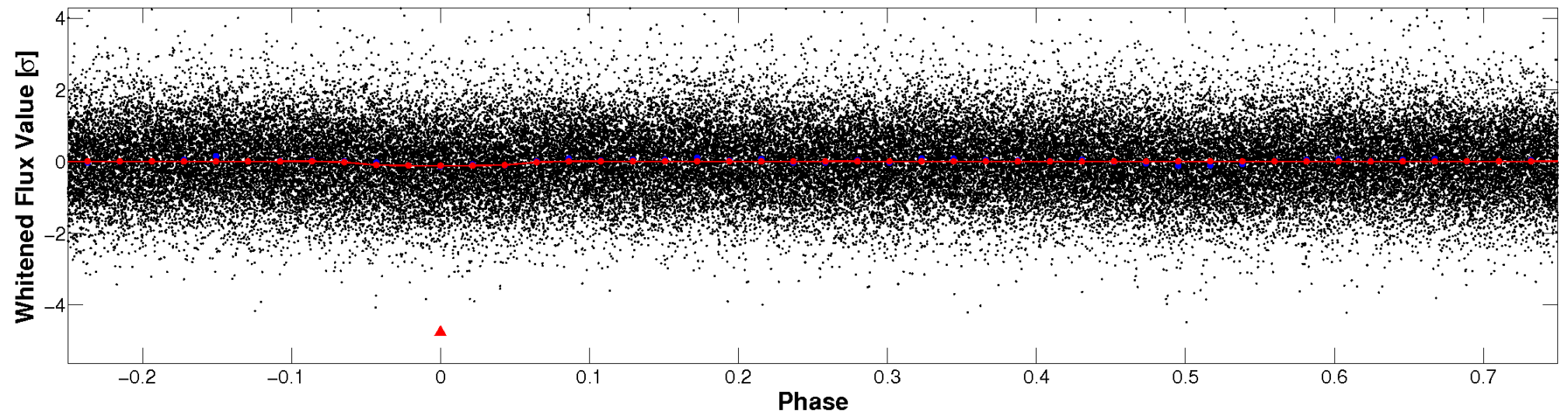


Non-Whitened Vs. Whitened Light Curve

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

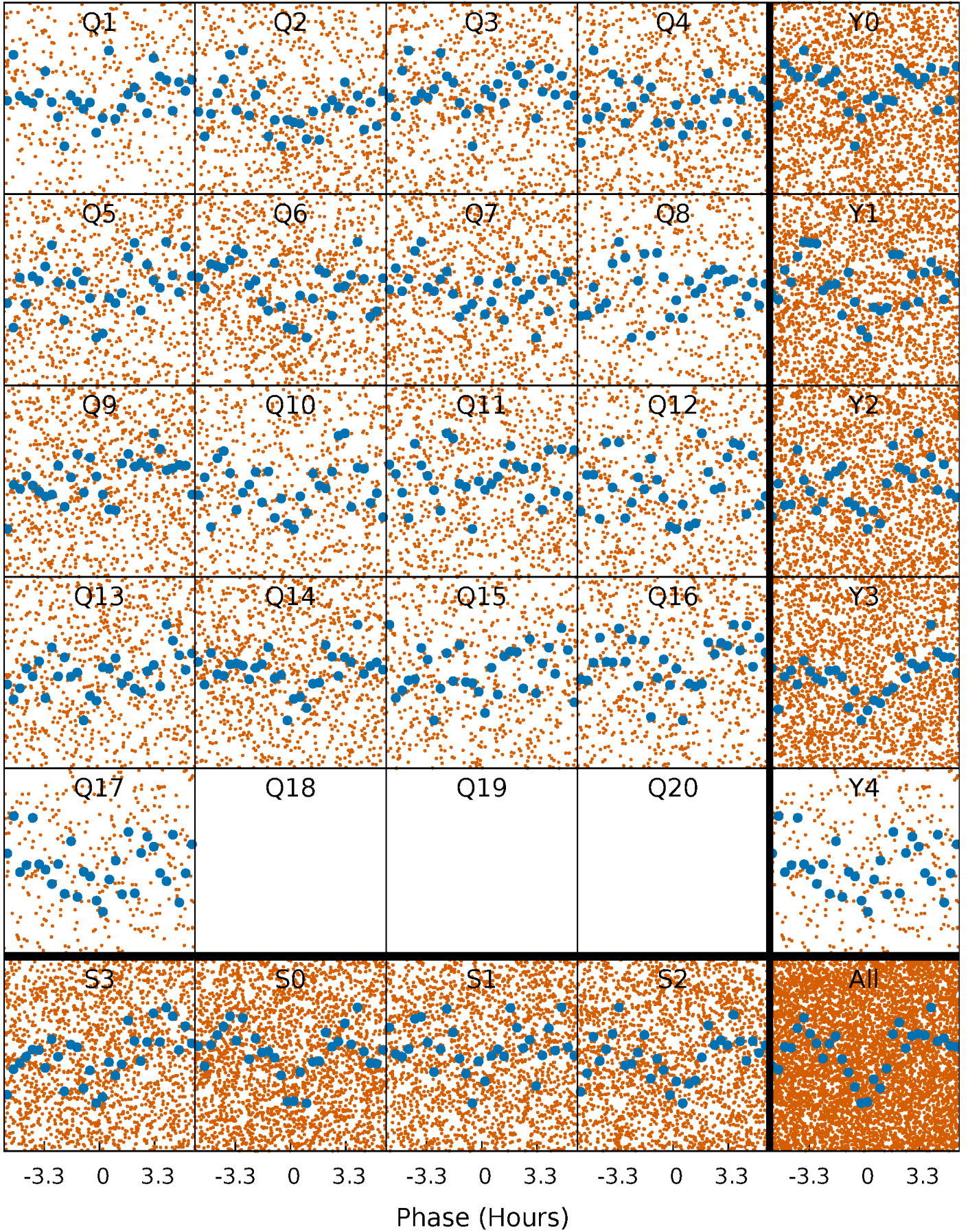


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



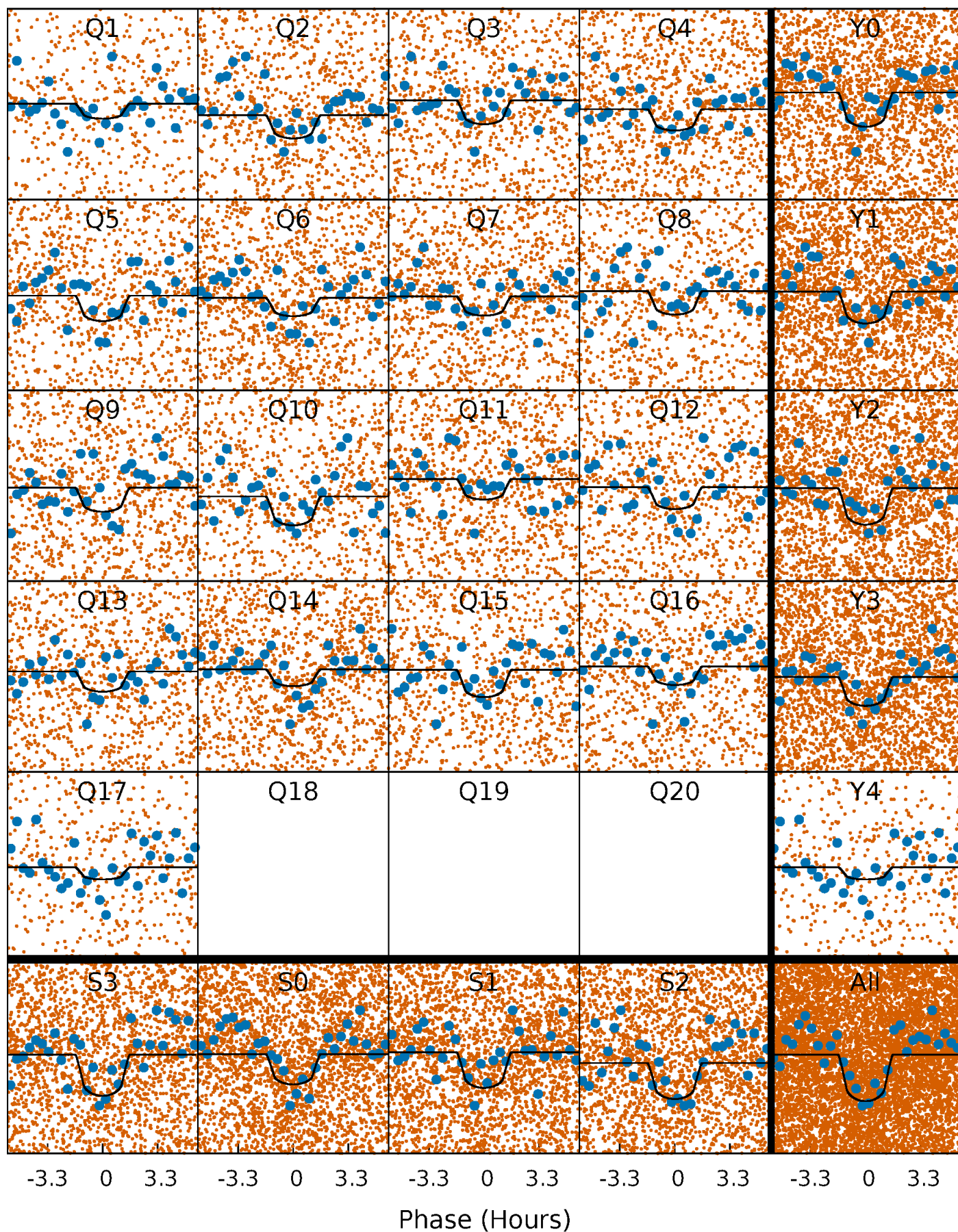
PDC Quarter-Phased Transit Curves

TCE 007657926-01 P= 0.949075 Days $T_0=131.905893$ (BKJD)



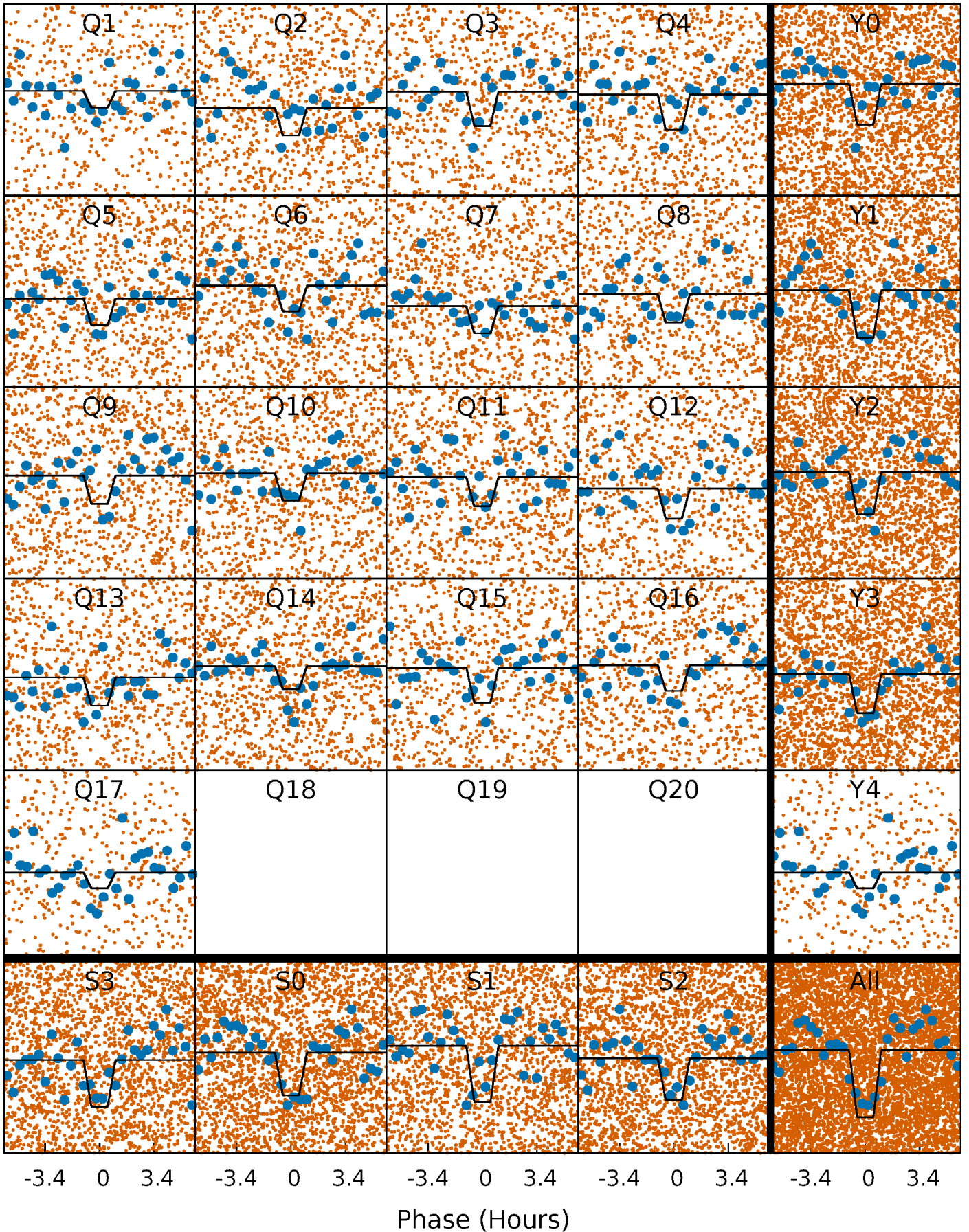
DV Quarter-Phased Transit Curves

TCE 007657926-01 P= 0.949075 Days $T_0=131.905893$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

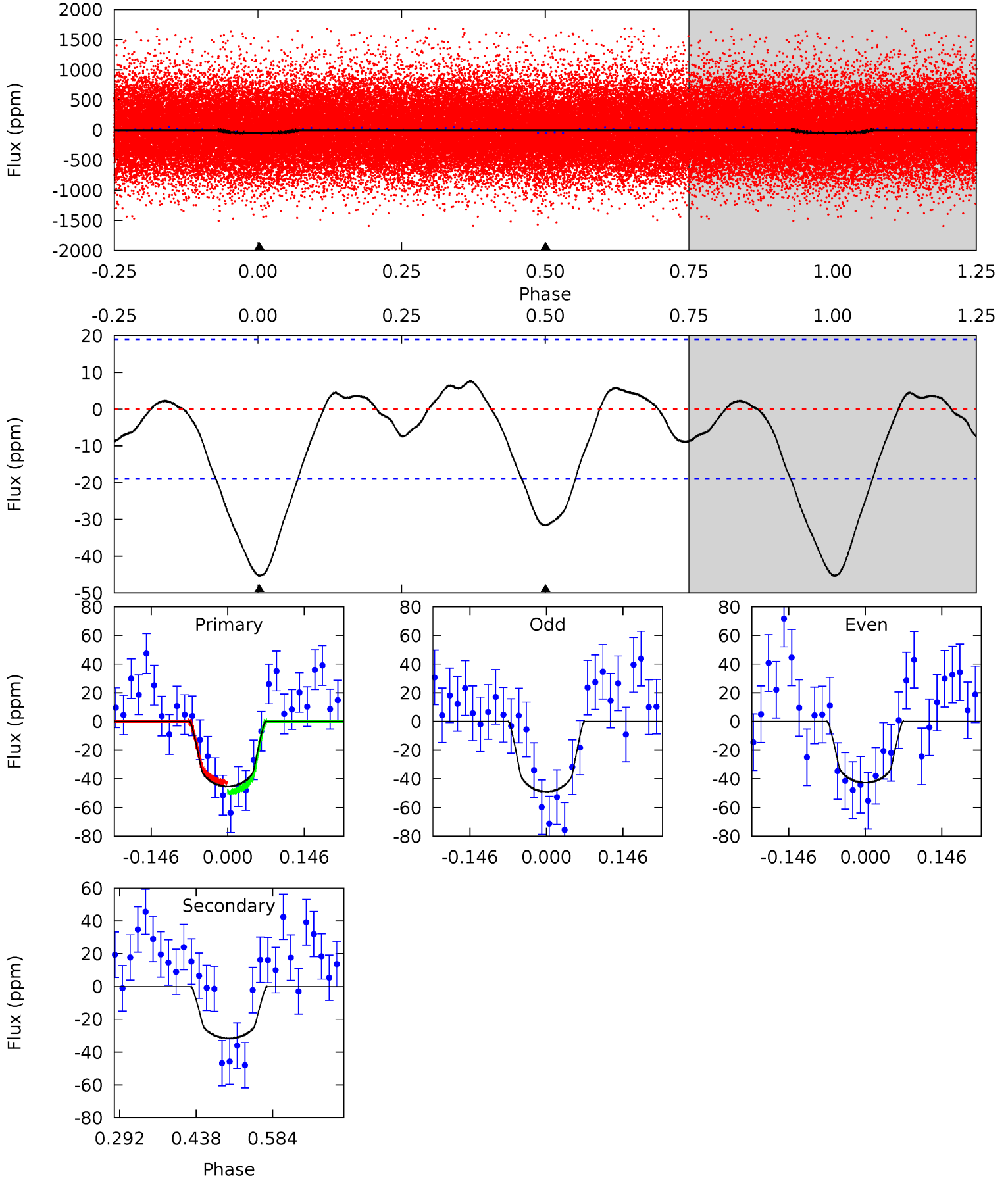
TCE 007657926-01 P= 0.949081 Days $T_0=131.905804$ (BKJD)



DV Model-Shift Uniqueness Test

007657926-01, P = 0.949075 Days, E = 130.956818 Days

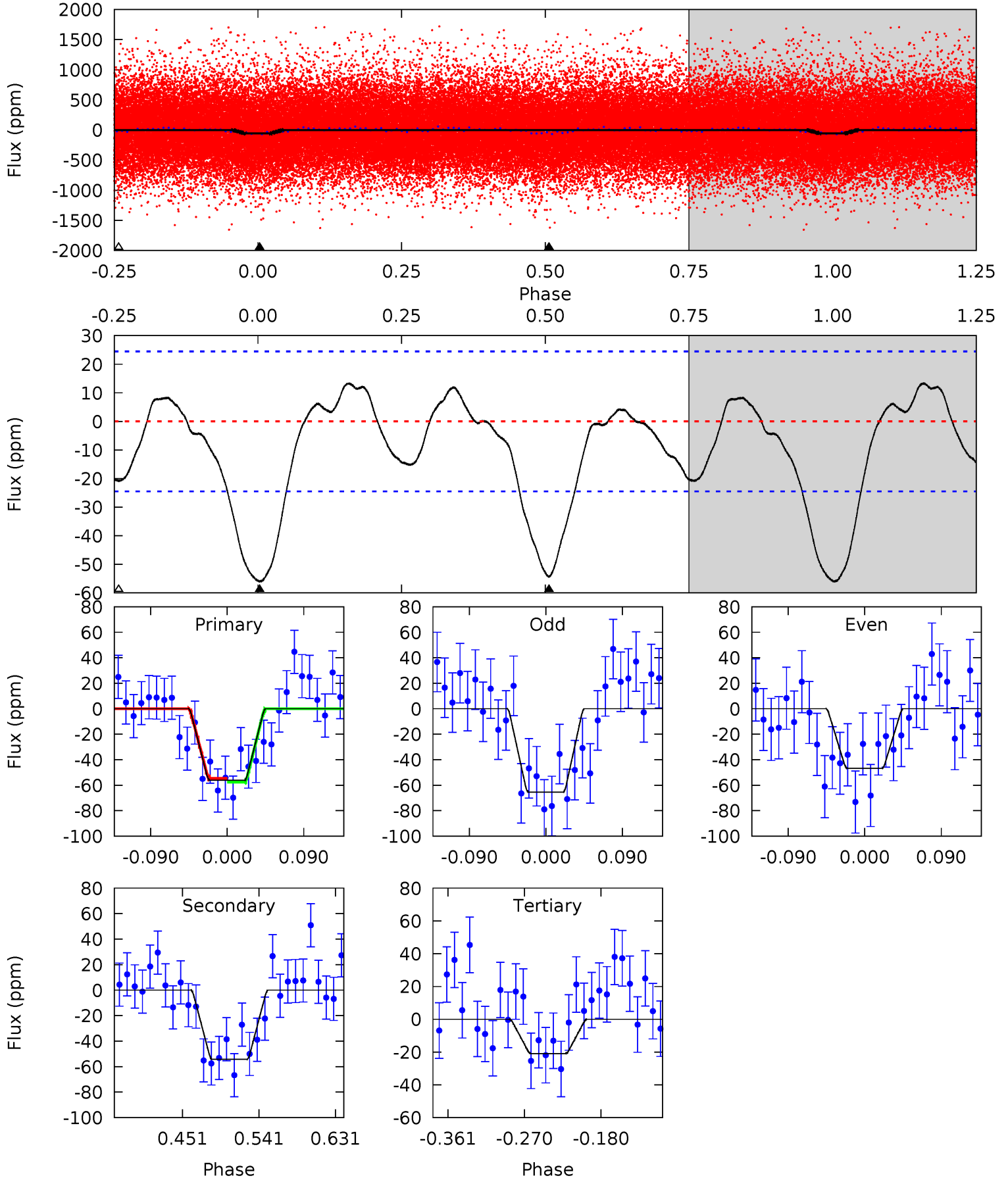
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.7	7.45	0	0	4.48	1.45	1.07	10.7	10.7	7.45	7.45	0.75	1.06	0.14	0.79



Alt Model-Shift Uniqueness Test

007657926-01, P = 0.949081 Days, E = 130.956723 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.5	10.2	3.91	0	4.59	1.69	1.68	6.59	10.5	6.27	10.2	1.75	1.03	0.19	0.26



Stellar Parameters For KIC 007657926

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5356^{+176}_{-160}	$4.547^{+0.027}_{-0.153}$	$0.300^{+0.150}_{-0.300}$	$0.869^{+0.175}_{-0.063}$	$0.969^{+0.055}_{-0.095}$	$2.081^{+0.298}_{-0.863}$
	+3%/-3%	+1%/-3%	+50%/-100%	+20%/-7%	+6%/-10%	+14%/-41%
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 007657926-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-32 ± 4	$0.88^{+0.63}_{-0.54}$	2304^{+126}_{-101}	4393^{+2351}_{-825}	$7.568^{+42.139}_{-5.005}$
Alt.	-54 ± 5	$0.90^{+0.65}_{-0.53}$	2299^{+115}_{-90}	4867^{+2832}_{-916}	13^{+63}_{-9}

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

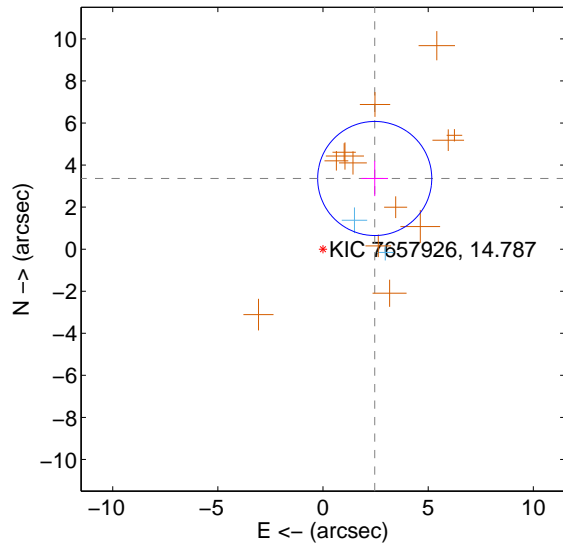
Supplemental centroid analysis for 007657926-01. Kepler magnitude: 14.79. Transit SNR 9.01

There are 2 quarters with good PRF difference image offsets

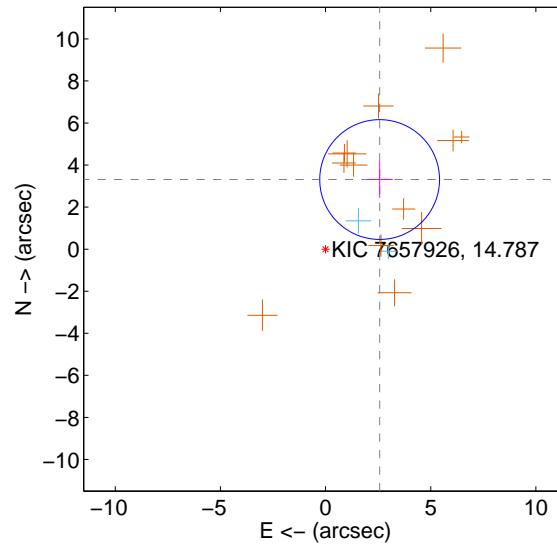
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.165 ± 0.904	4.61	-2.458 ± 0.634	3.362 ± 0.839
PRF-fit source offset from KIC position	4.193 ± 0.949	4.42	-2.571 ± 0.621	3.312 ± 0.870
photometric centroid source offset	5.01 ± 1.53	3.28	-4.67 ± 1.51	-1.82 ± 1.66

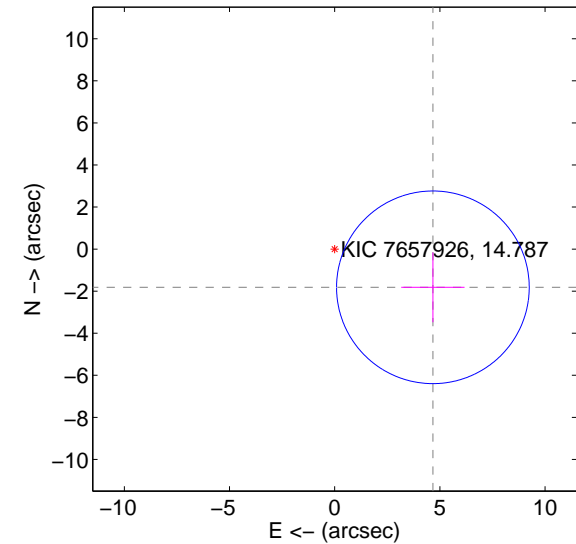
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

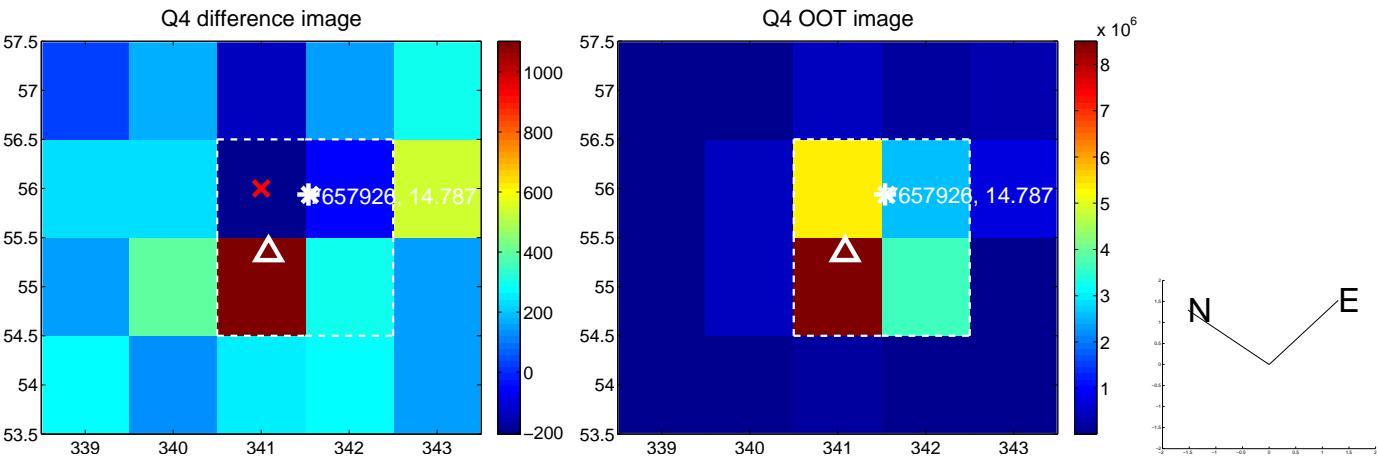
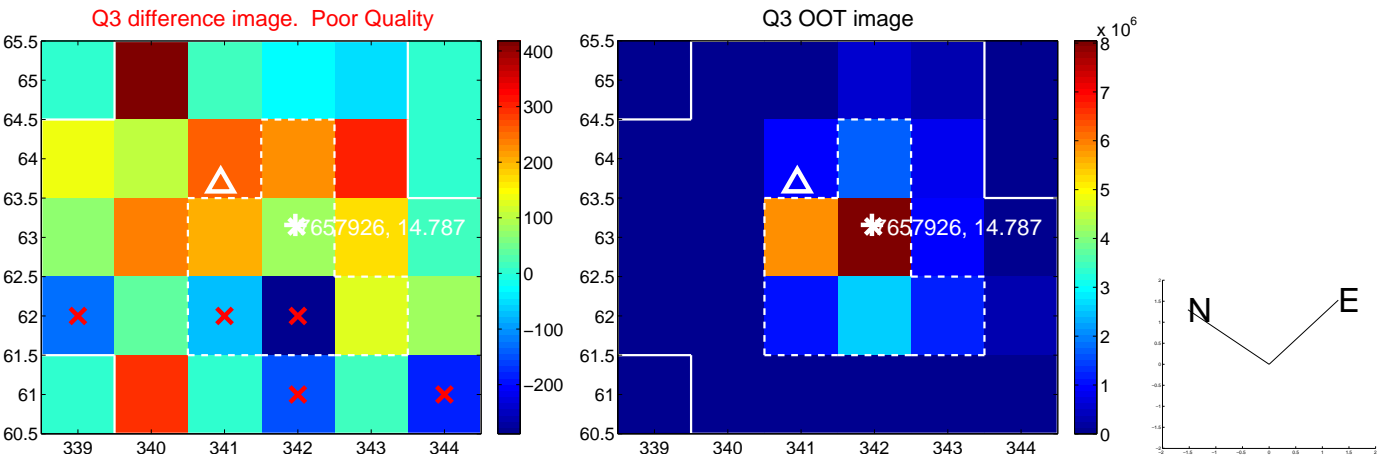
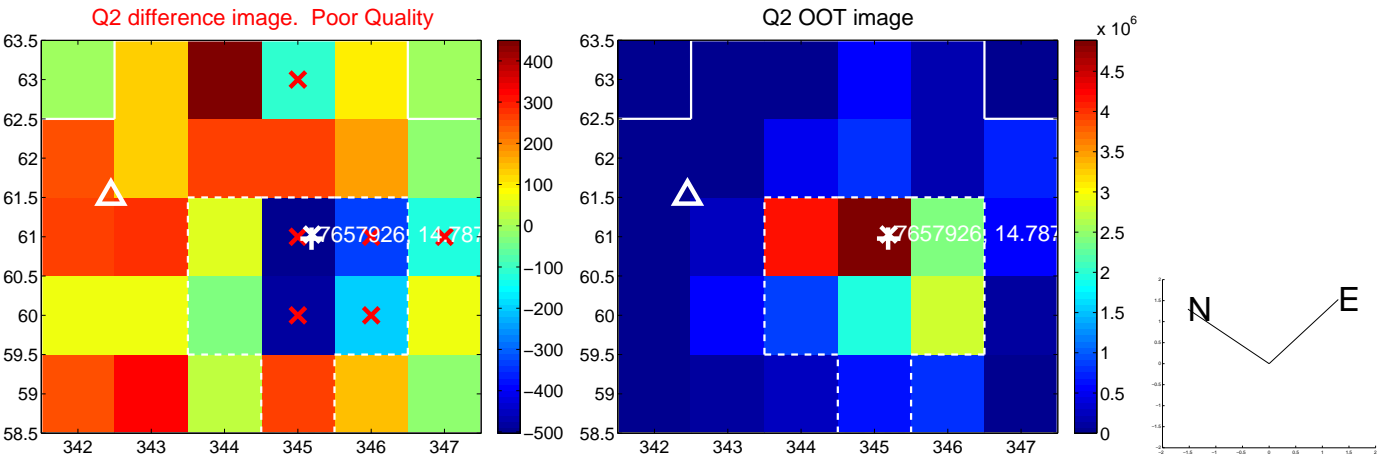
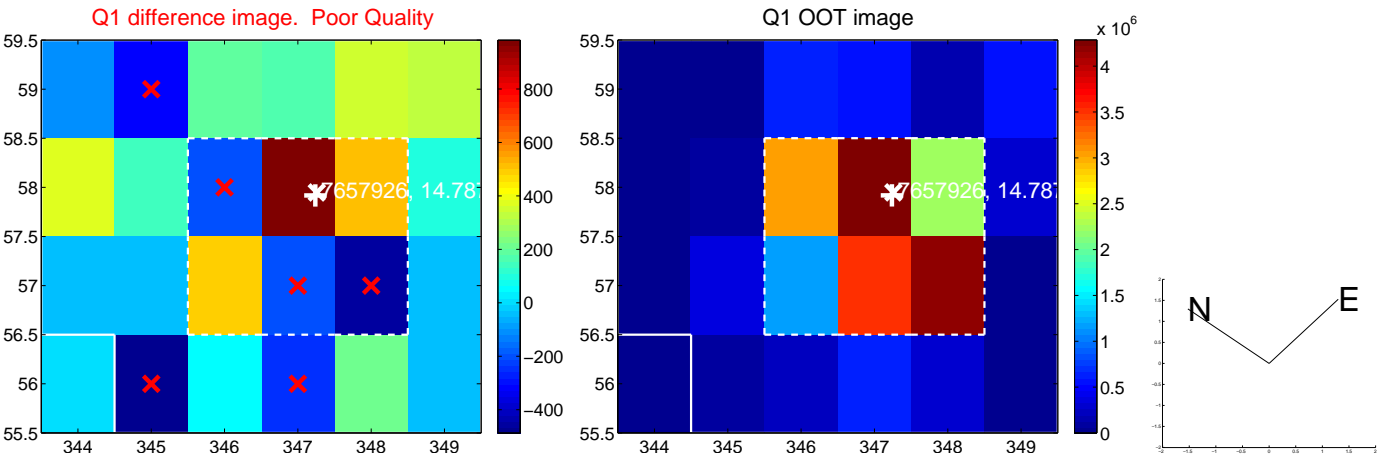


offset from photometric centroids

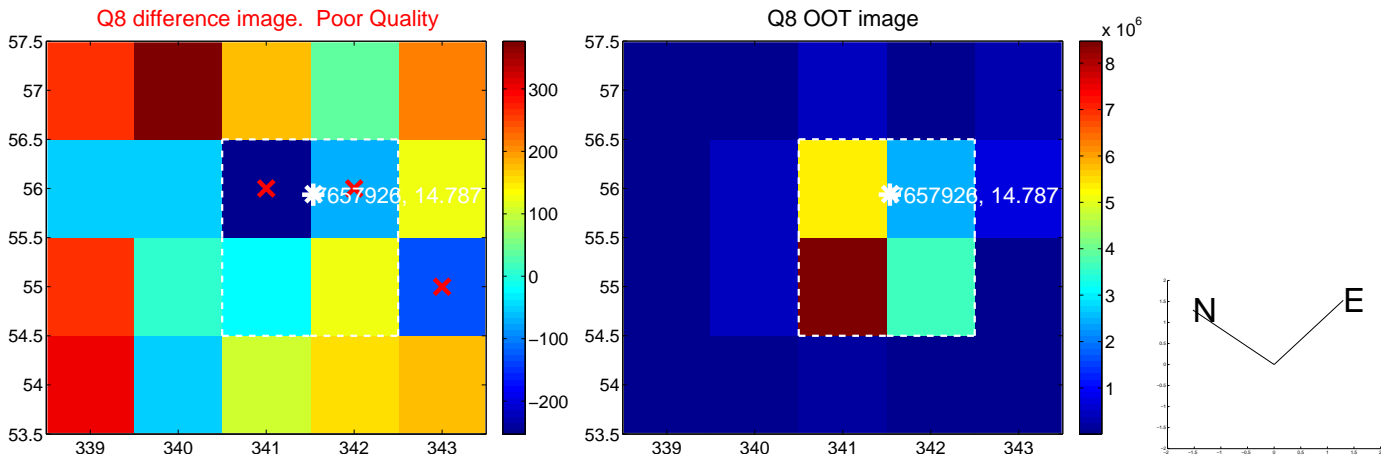
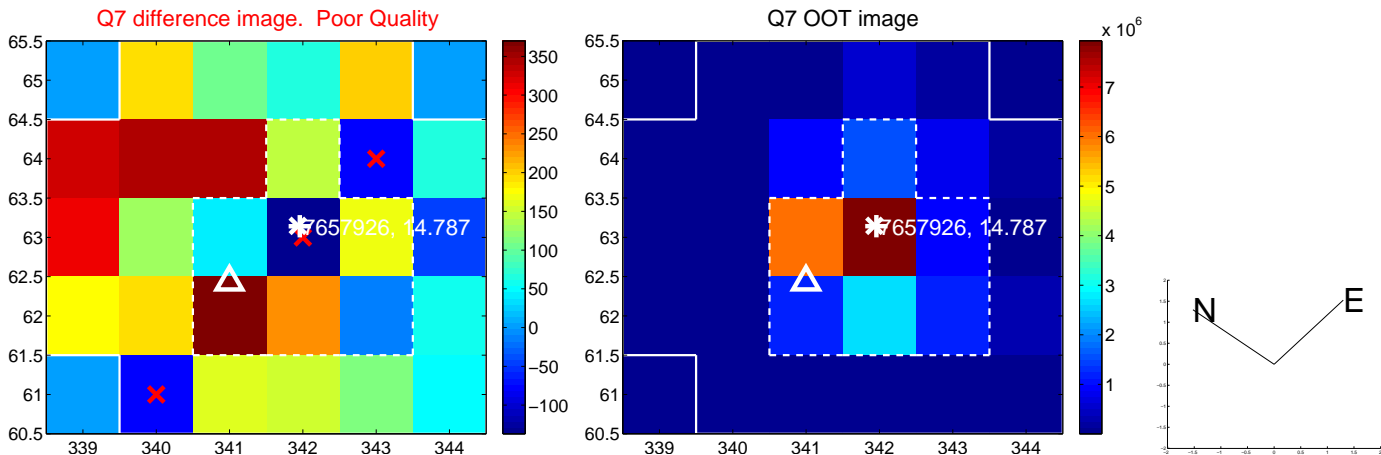
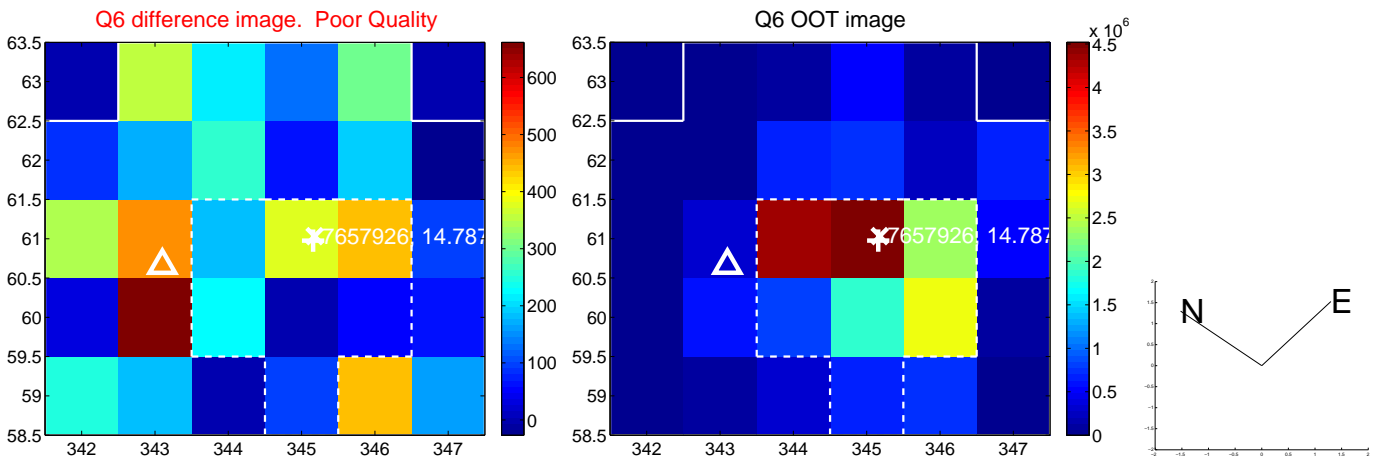
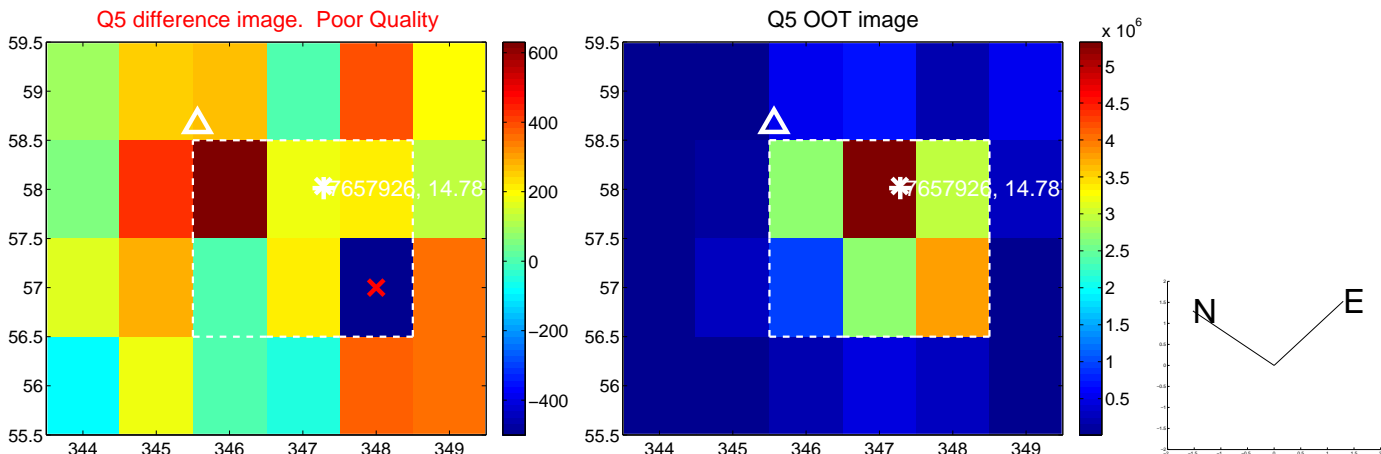


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

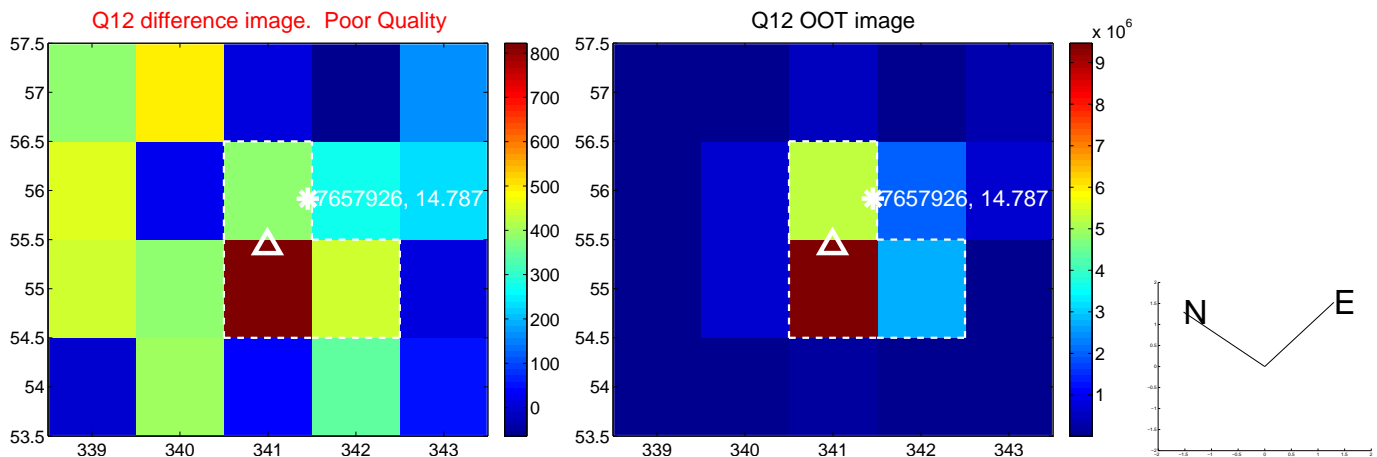
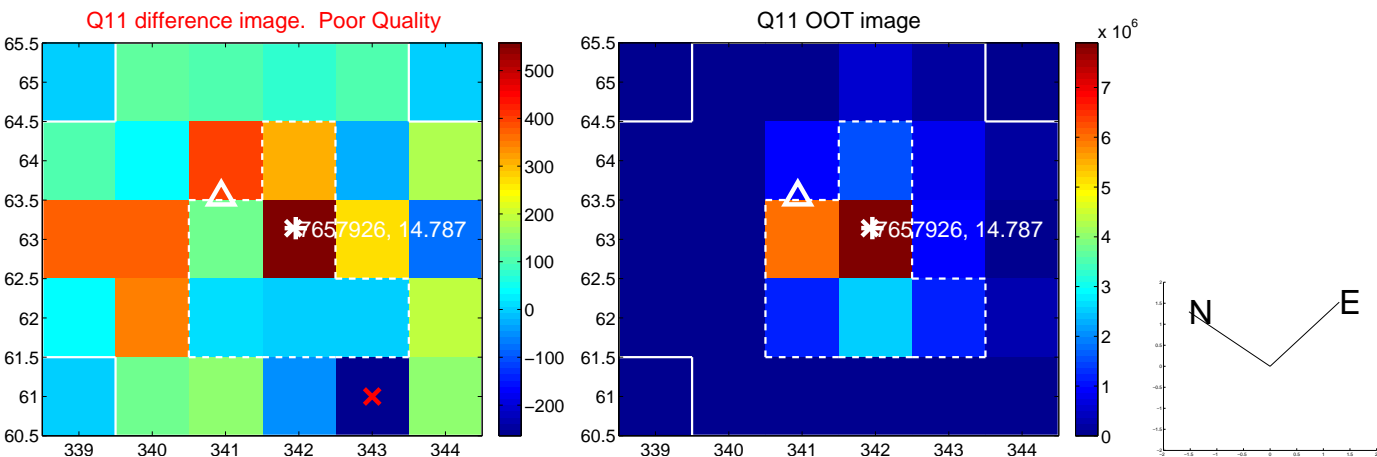
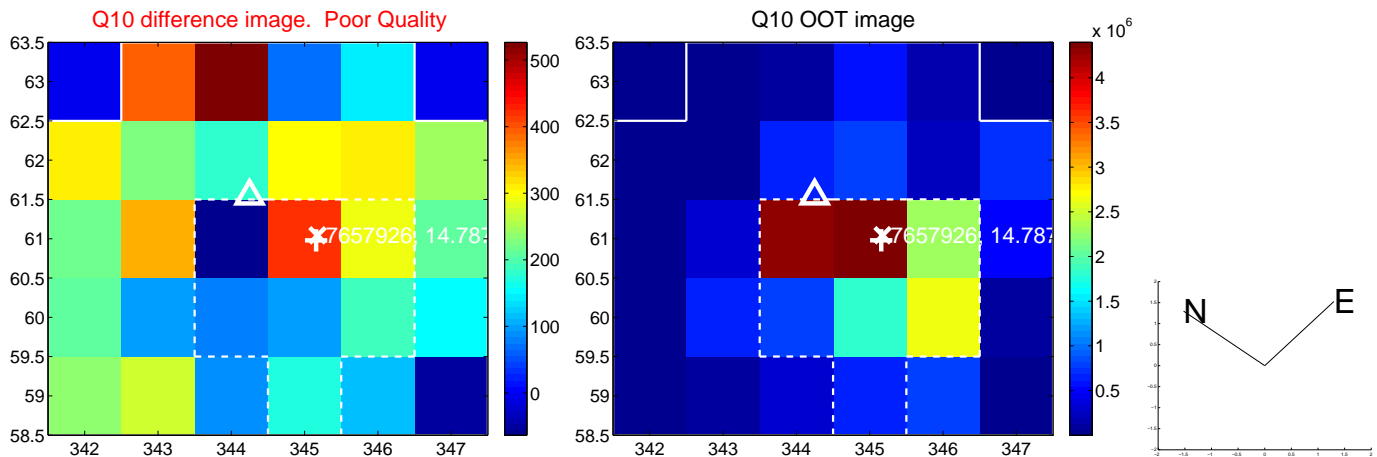
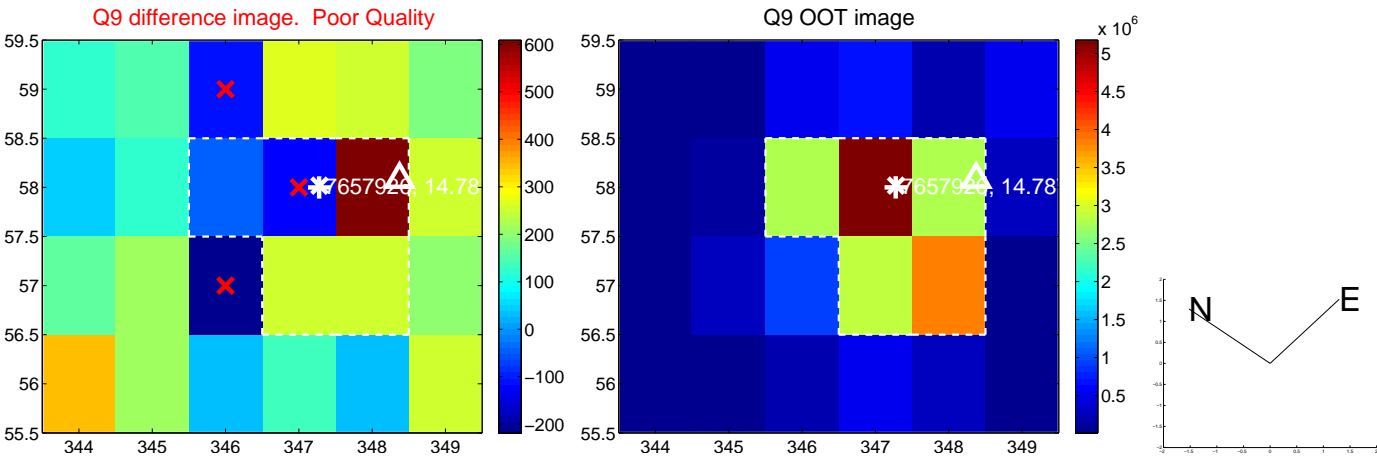
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



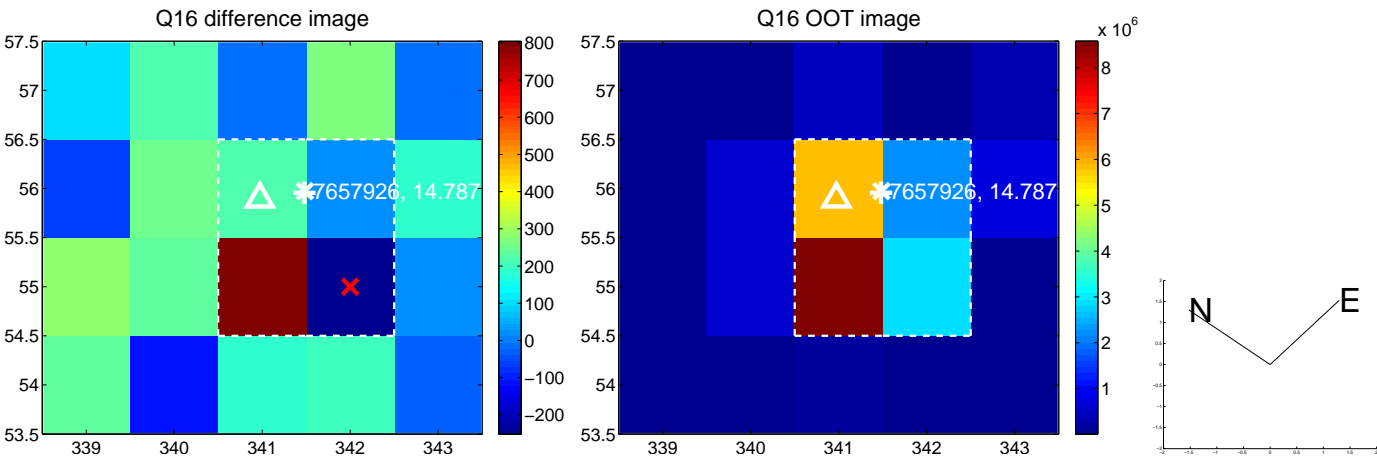
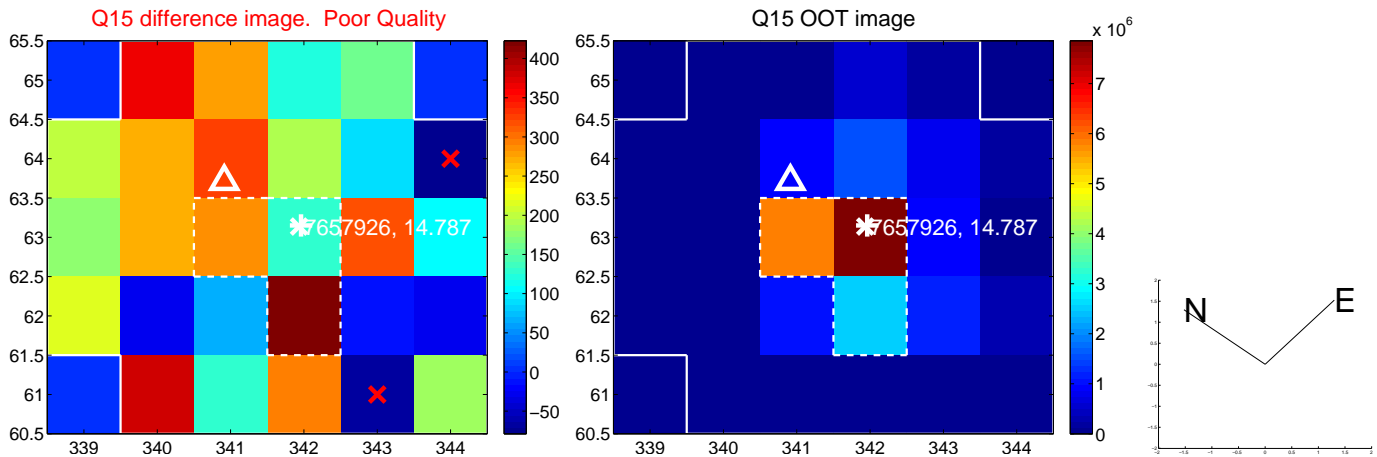
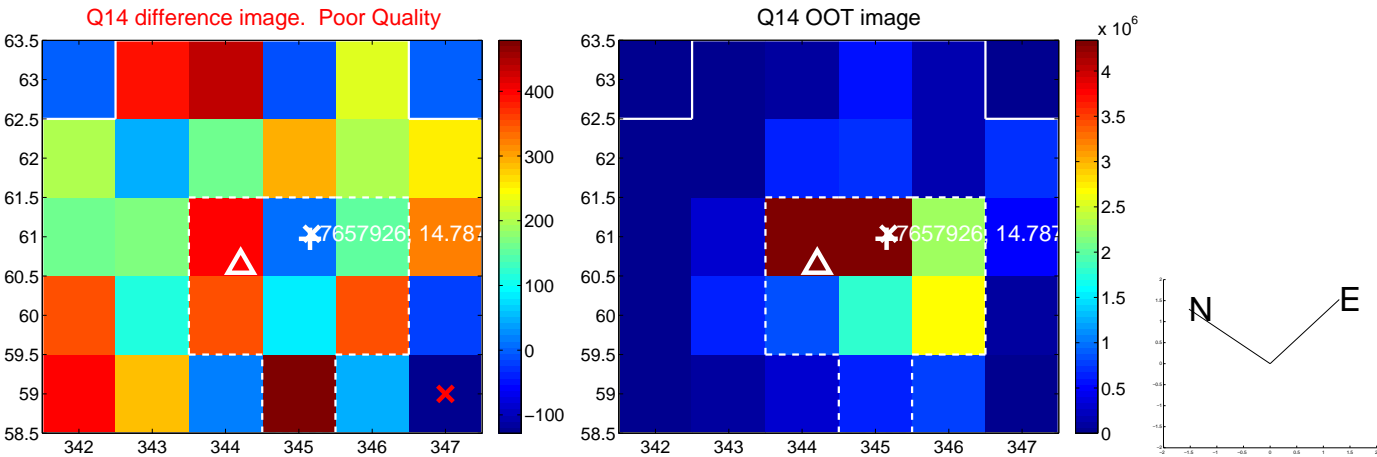
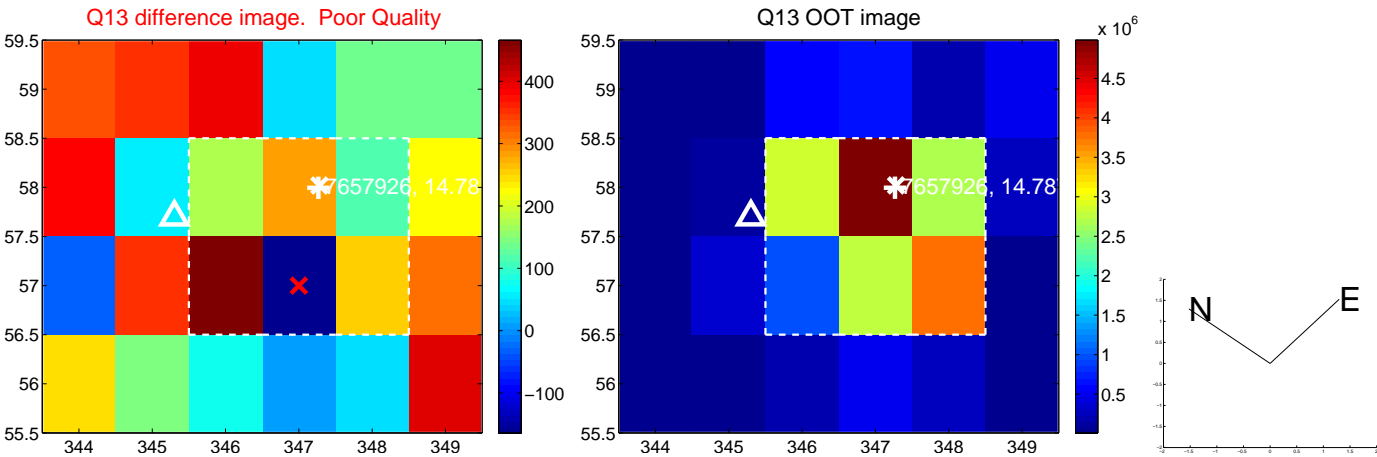
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



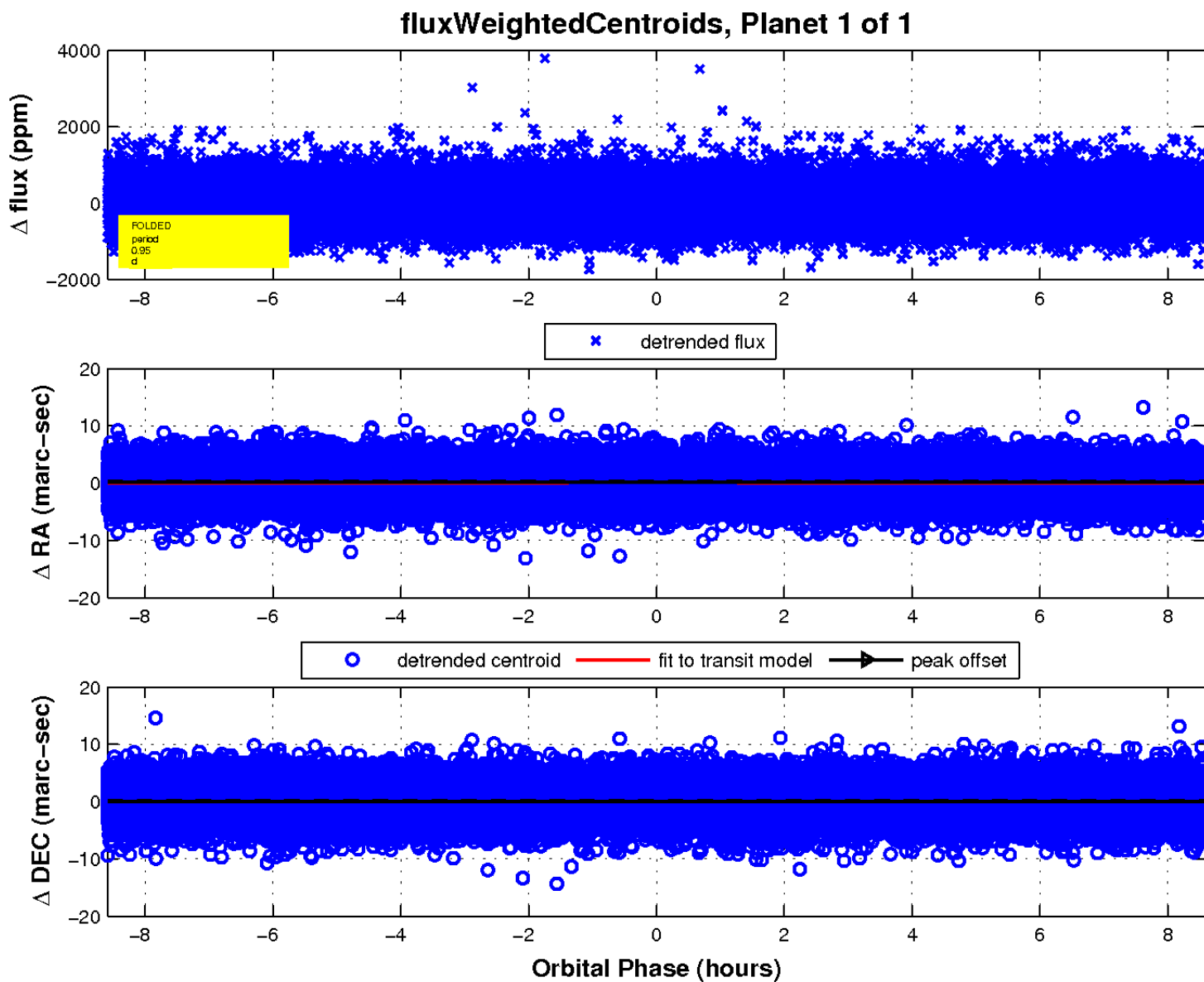
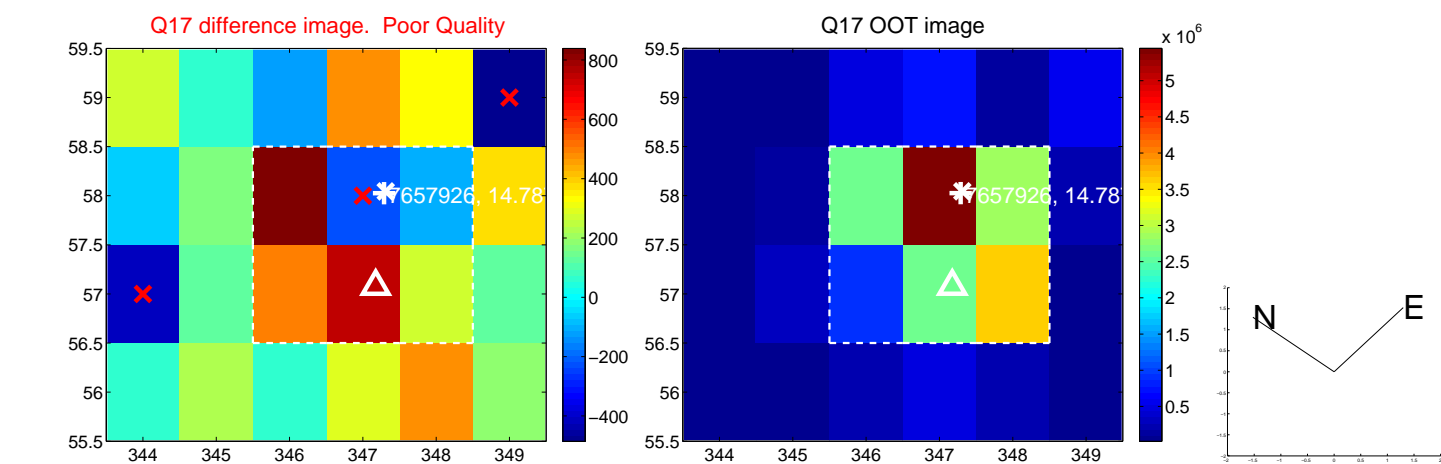
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

