

KIC 007609886

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})
007609886-01	OBS	No	0.566763	131.661073	80.3	4.879	39.6	12.9	0.81	5730	0.79	3988.79

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007609886-01	OBS	FP	0.00	1	0	1	1	LPP_DV—LPP_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.

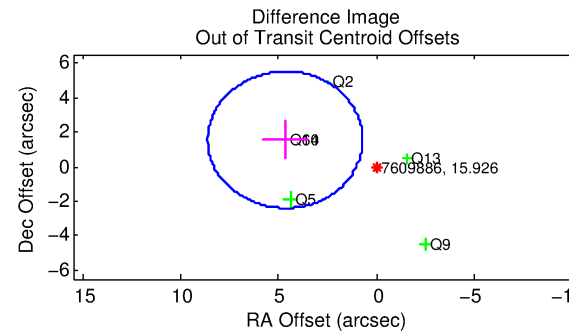
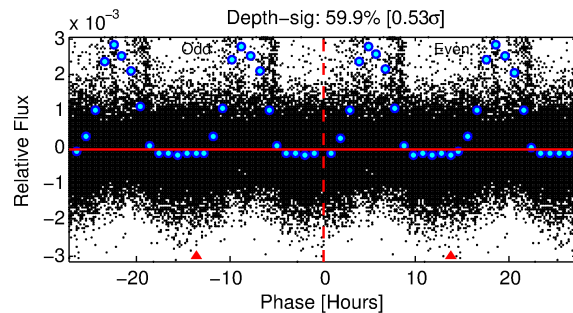
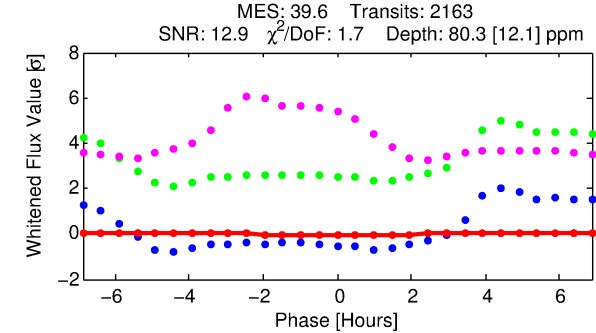
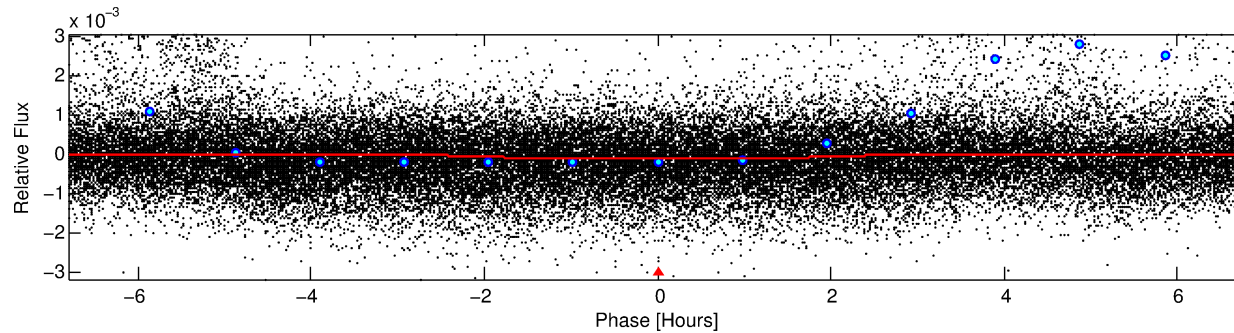
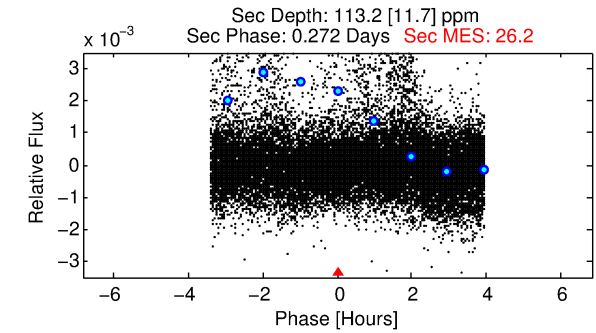
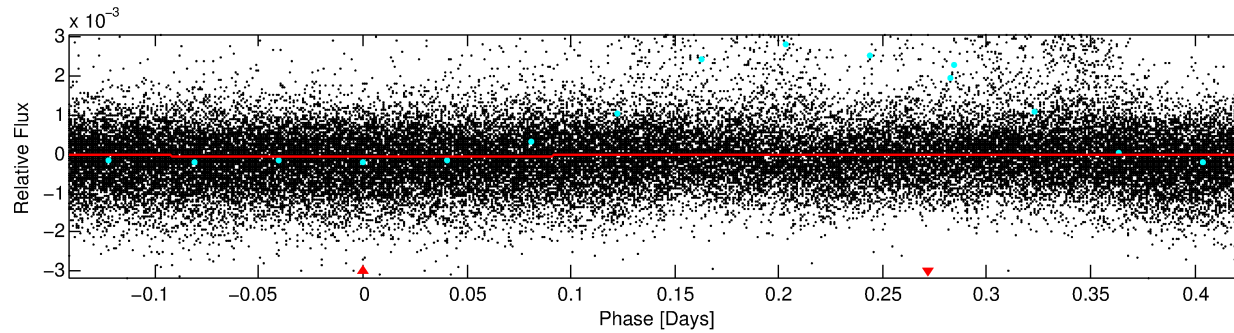
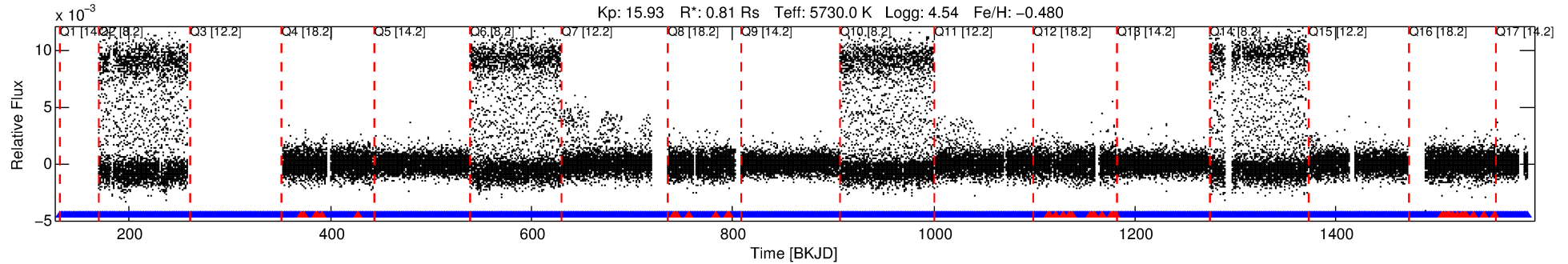
Ephemeris Match Information For 007609886-01

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
007609886-01	7609886	RR-Lyr-pri	7198959	1:1	3592.0	20	1	7.86	15.92	7791.20	Col-Anomaly	0	3.13	10.57

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: 7609886 Candidate: 1 of 1 Period: 0.567 d



DV Fit Results:

Period = 0.56676 [0.00001] d
Epoch = 131.6611 [0.0057] BKJD
Rp/R* = 0.0090 [0.0102]
a/R* = 1.06 [0.58]
b = 0.77 [2.94]
Seff = 3988.79 [1232.59]
Teq = 2026 [157] K
Rp = 0.79 [0.91] Re
a = 0.0125 [0.0025] AU
Ag = 15.69 [35.90] [0.41 σ]
Teffp = 6235 [3545] K [1.19 σ]

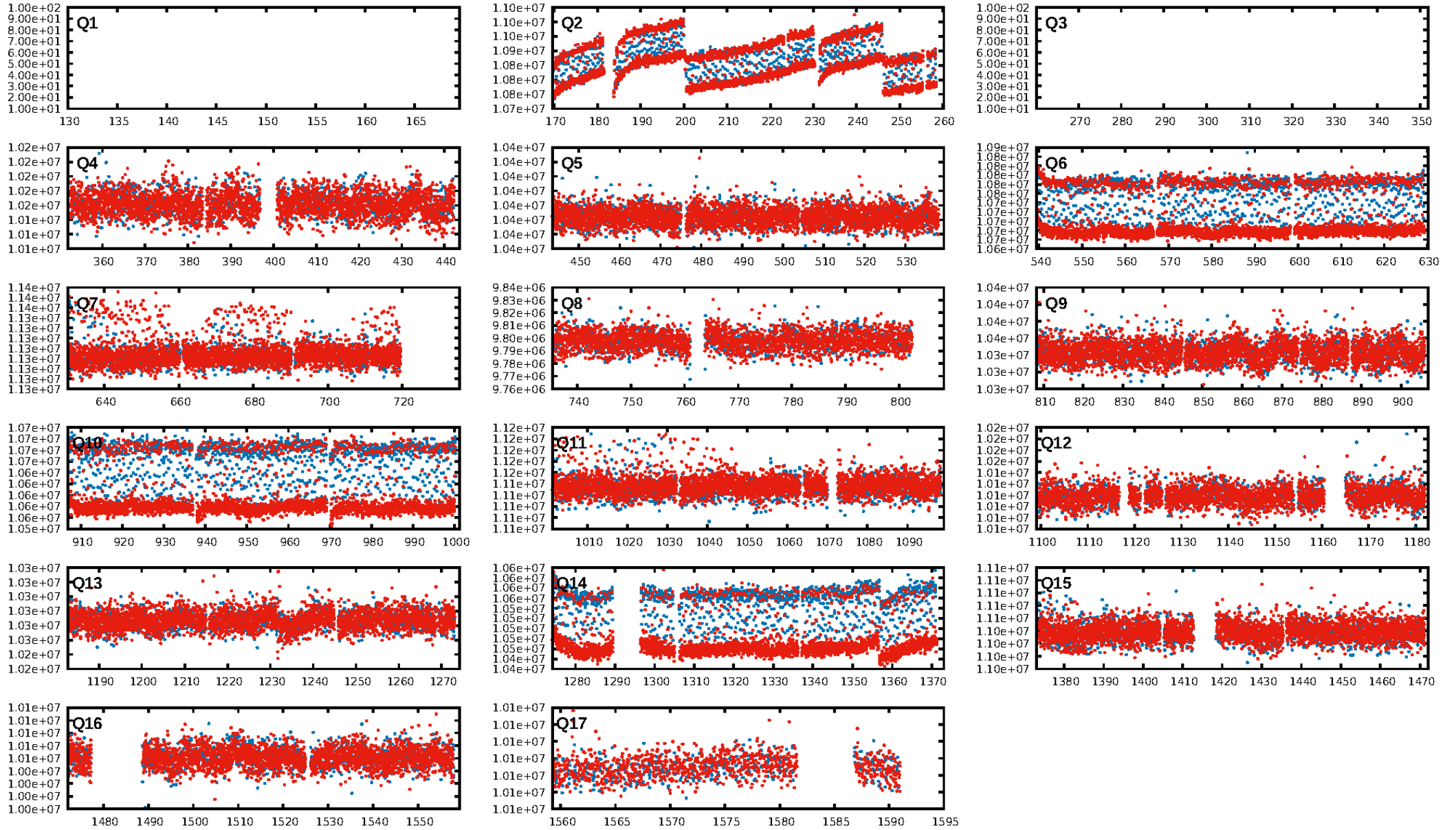
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.98 [2073/2115]
GhostDiagnostic-chr: -272.9
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 4.919 arcsec [3.73 σ]
KicOffset-rm: 5.054 arcsec [4.71 σ]
OotOffset-st: 4/0/0/3 [7]
KicOffset-st: 4/0/0/3 [7]
DiffImageQuality-fgm: 0.14 [1/7]
DiffImageOverlap-fno: 1.00 [15/15]

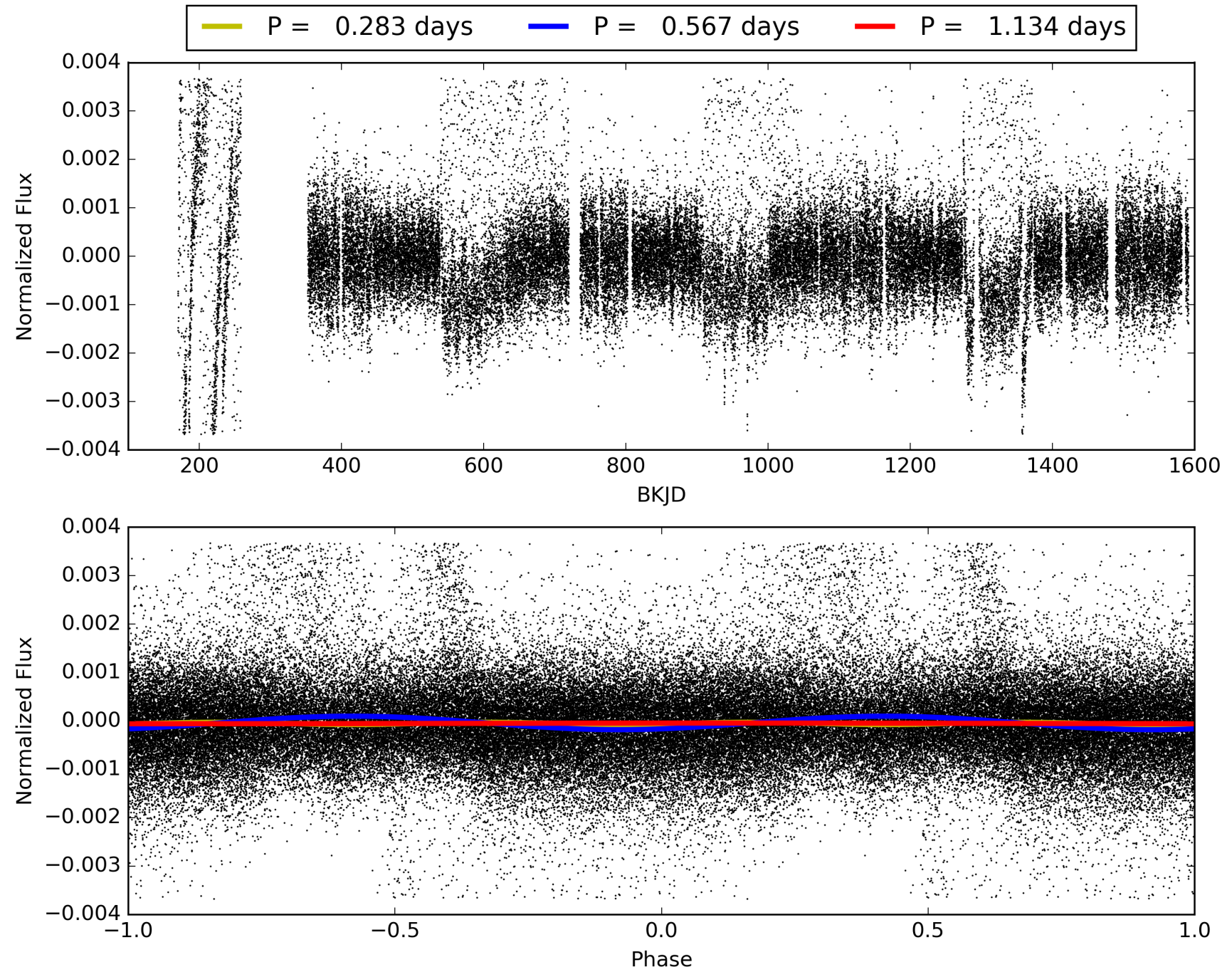
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 16:16:21 Z

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

TCE 007609886-01, PDC Light Curves

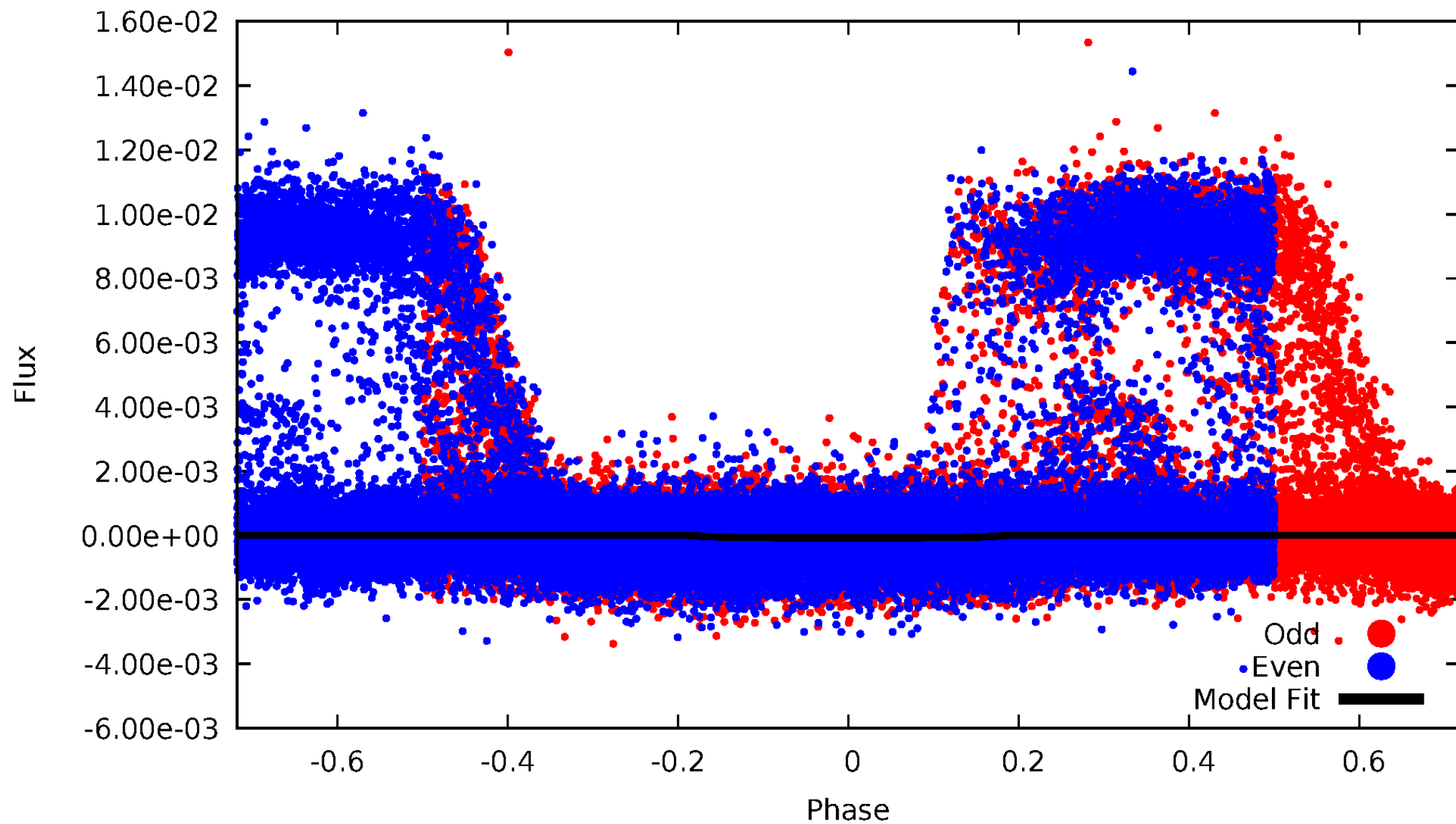


TCE 007609886-01



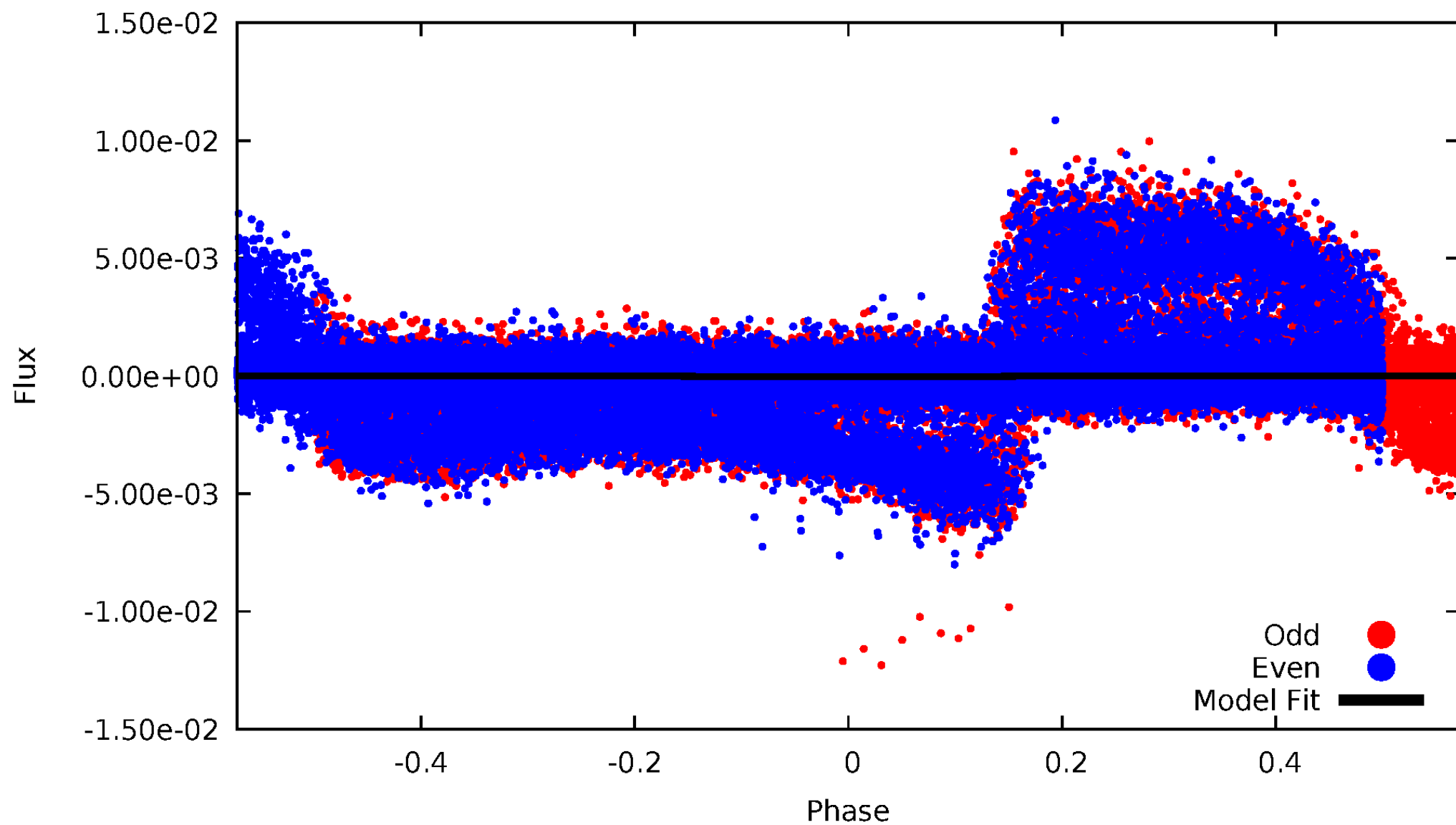
DV Odd/Even

TCE 007609886-01



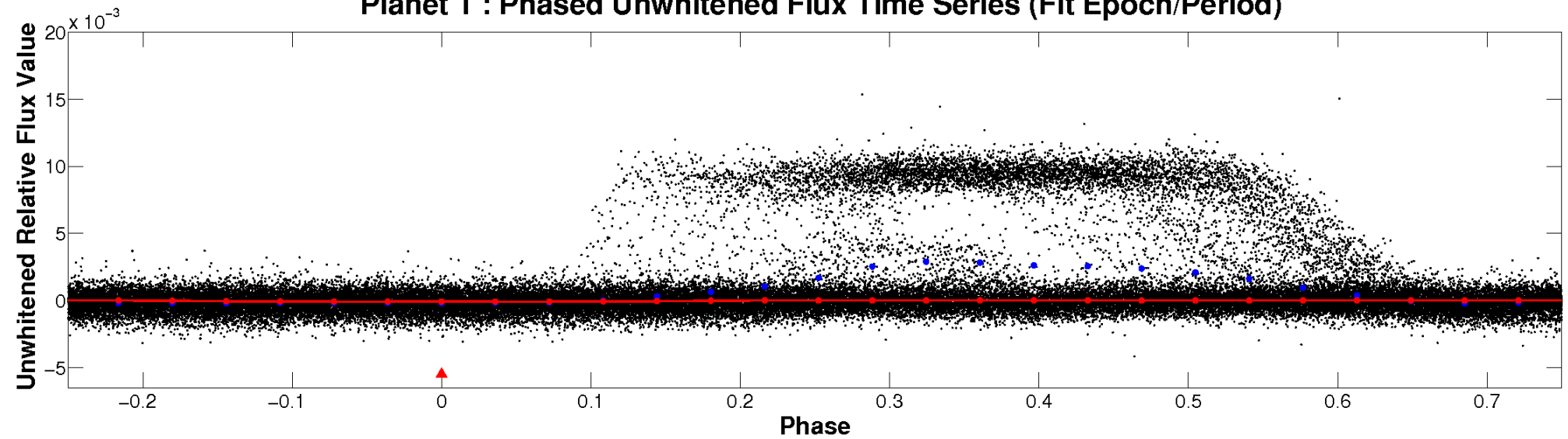
ALT Odd/Even

TCE 007609886-01

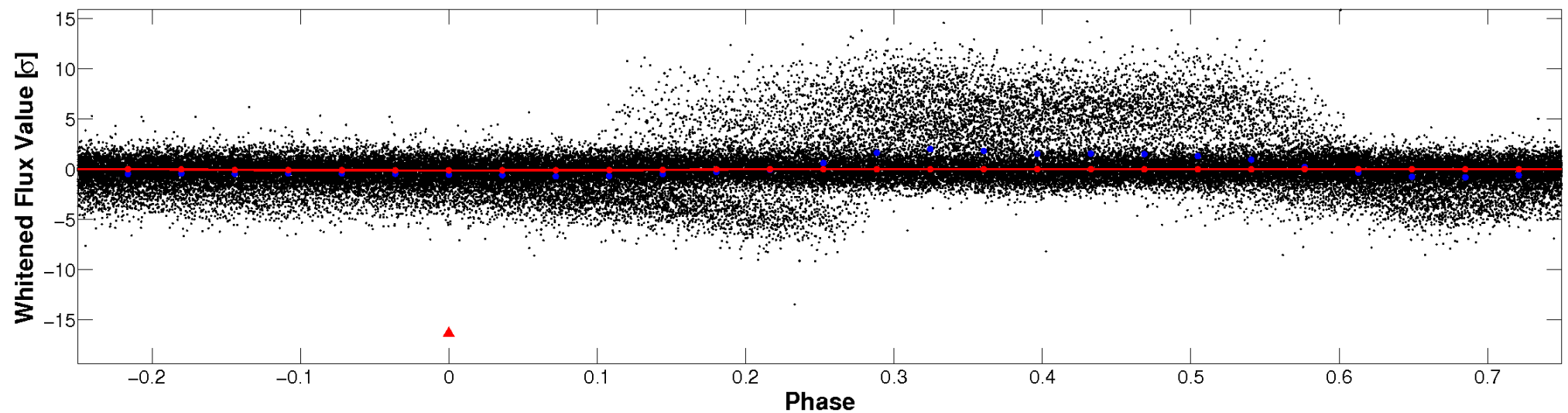


Non-Whitened Vs. Whitened Light Curve

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

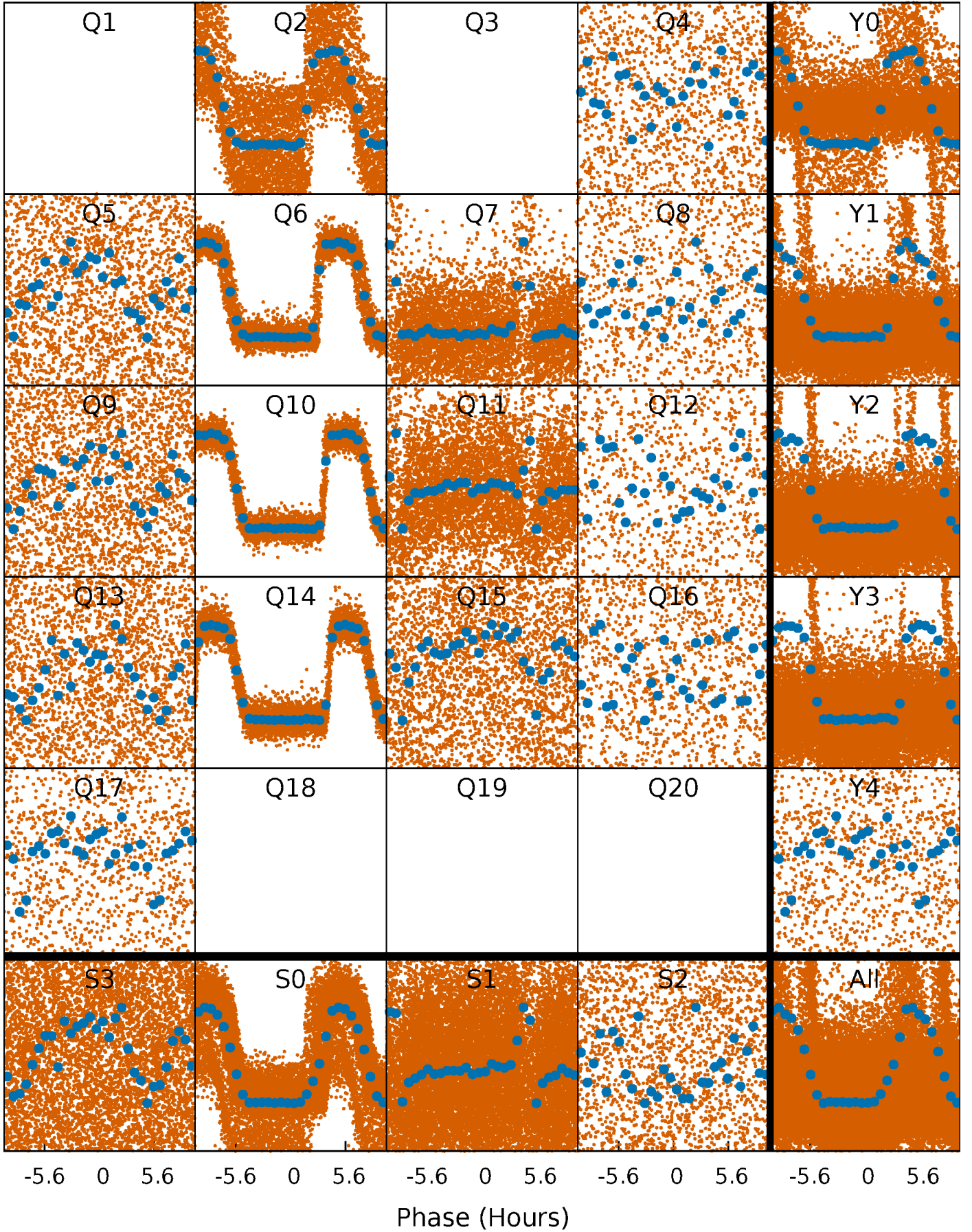


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



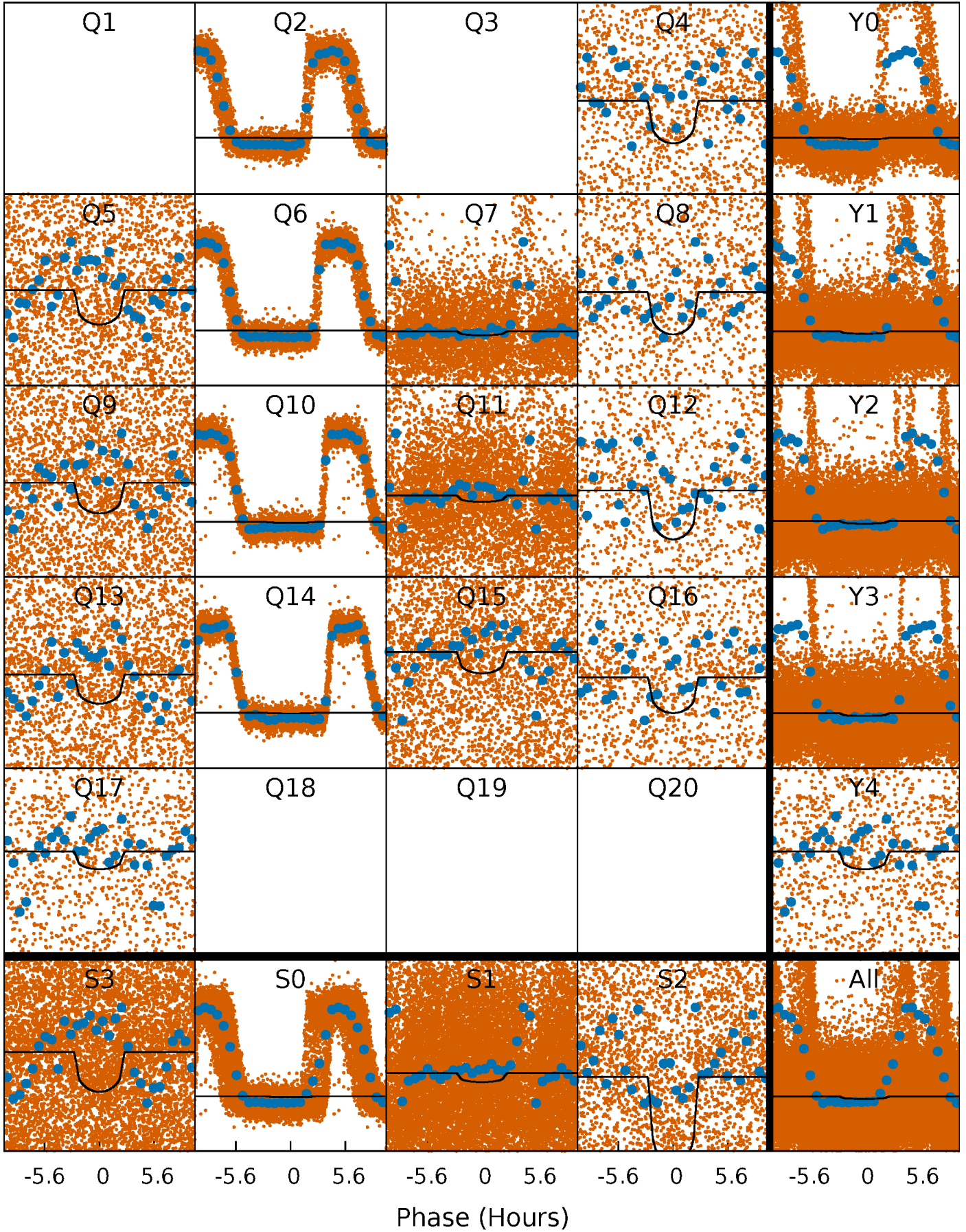
PDC Quarter-Phased Transit Curves

TCE 007609886-01 P= 0.566763 Days $T_0=131.661073$ (BKJD)



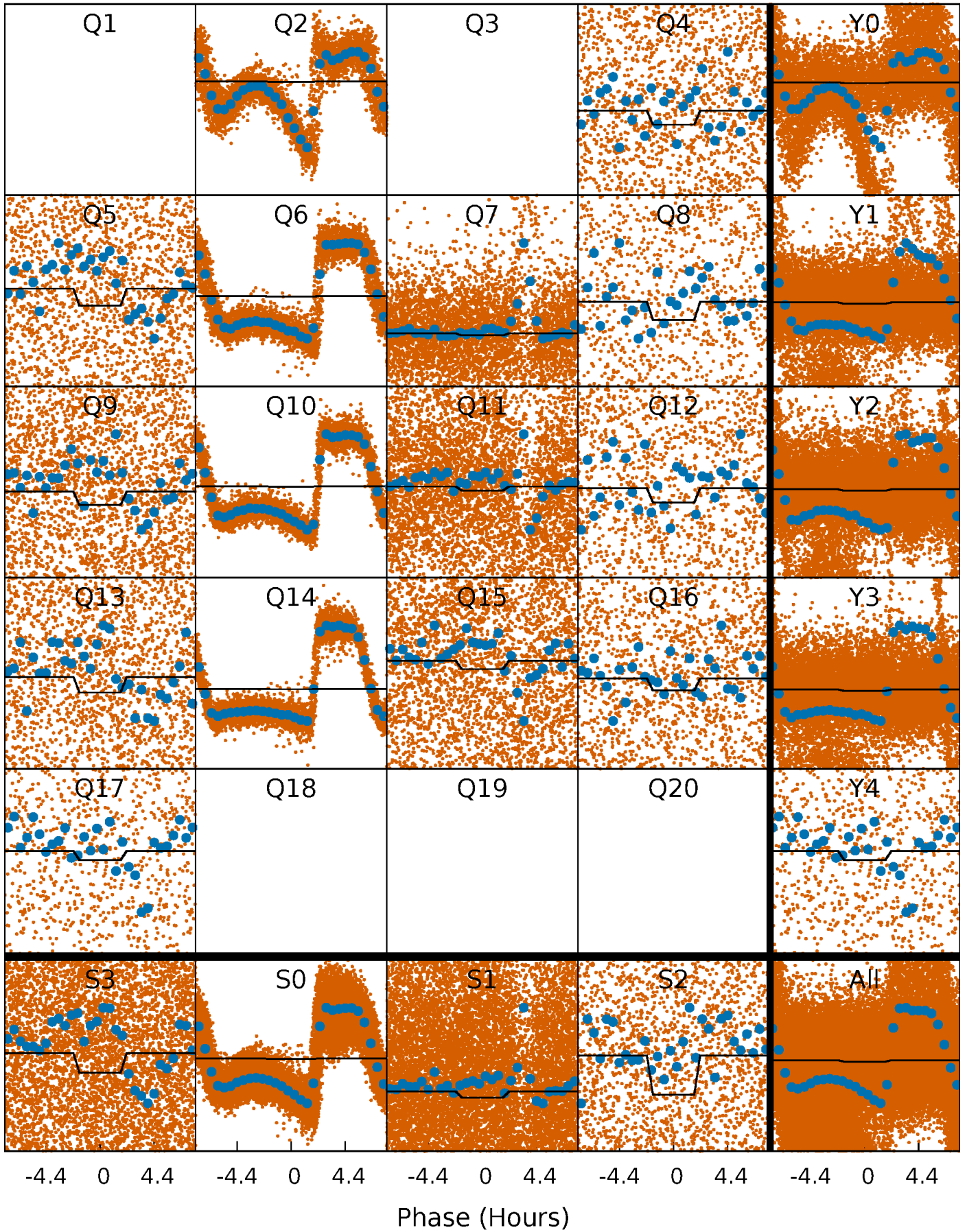
DV Quarter-Phased Transit Curves

TCE 007609886-01 P= 0.566763 Days $T_0=131.661073$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

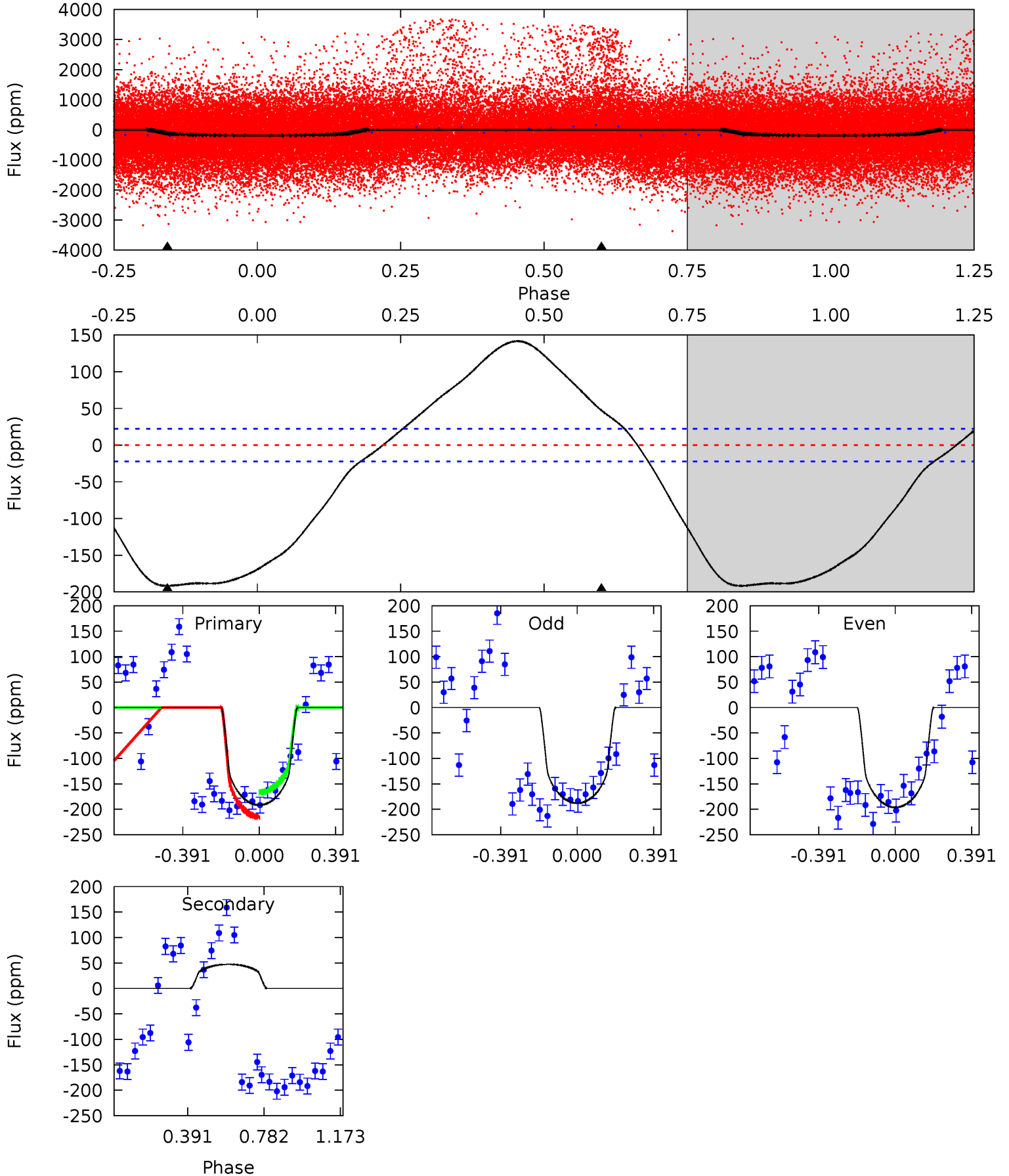
TCE 007609886-01 P= 0.566808 Days $T_0=131.647744$ (BKJD)



DV Model-Shift Uniqueness Test

007609886-01, P = 0.566763 Days, E = 131.661073 Days

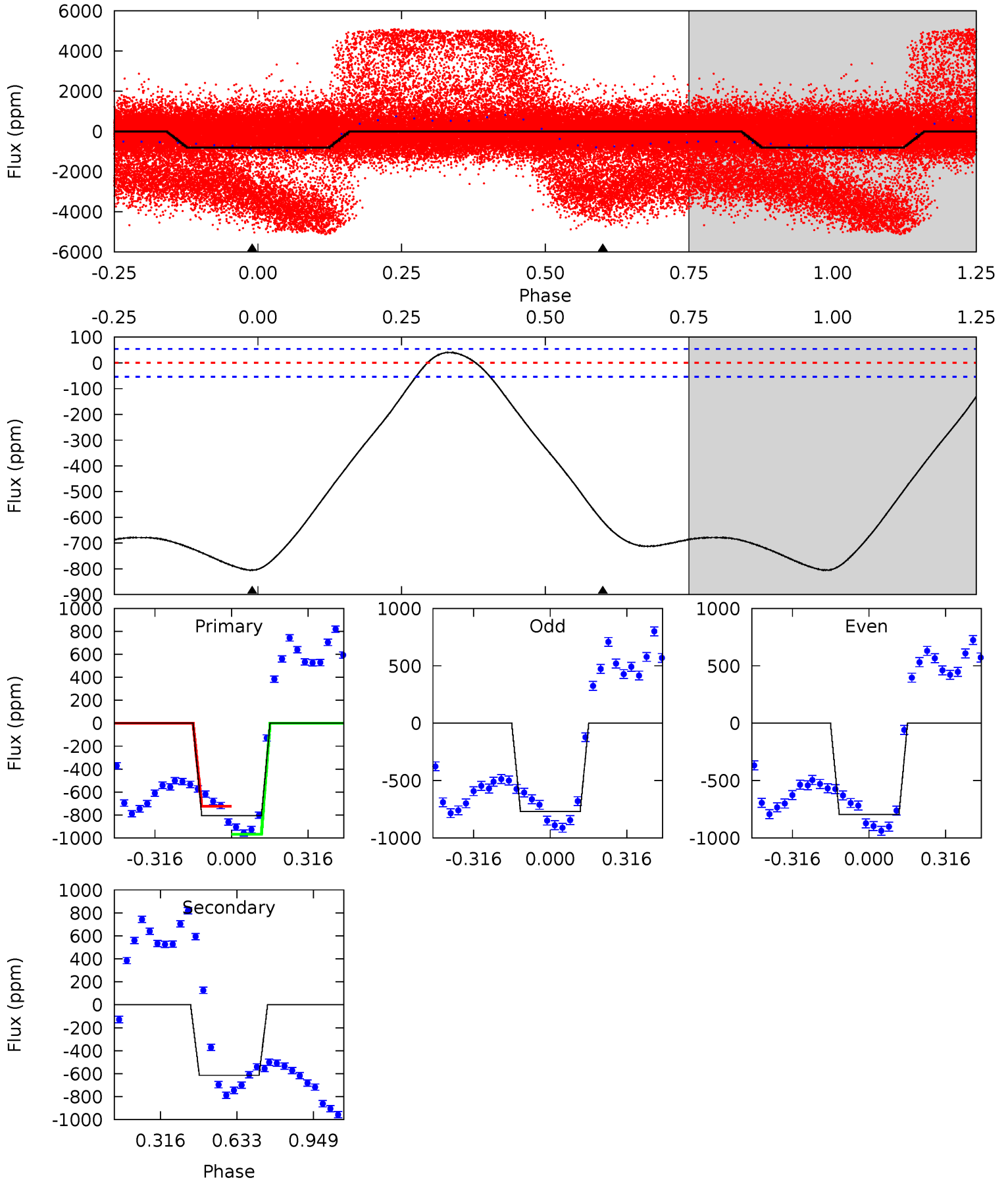
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
36.9	-9.14	0	0	4.27	0.86	3.66	36.9	36.9	-9.14	-9.14	0.79	2.94	0.43	4.70



Alt Model-Shift Uniqueness Test

007609886-01, P = 0.566808 Days, E = 131.647744 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
64.2	49.0	0	0	4.32	1.00	5.26	64.2	64.2	49.0	49.0	1.10	12.6	0.05	10.0



Stellar Parameters For KIC 007609886

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5730^{+173}_{-173}	$4.538^{+0.066}_{-0.154}$	$-0.480^{+0.300}_{-0.300}$	$0.805^{+0.191}_{-0.082}$	$0.817^{+0.096}_{-0.070}$	$2.203^{+0.597}_{-0.941}$
	+3%/-3%	+1%/-3%	+62%/-62%	+24%/-10%	+12%/-9%	+27%/-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 007609886-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	47 ± 5	$0.99^{+0.84}_{-0.64}$	2861^{+154}_{-131}	-4782^{+906}_{-2893}	$-4.272^{+3.057}_{-27.984}$
Alt.	-615 ± 13	$0.88^{+0.81}_{-0.58}$	2859^{+173}_{-132}	9868^{+19234}_{-3181}	69^{+518}_{-50}

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 $A_{\text{obs}} \gg 1.0$

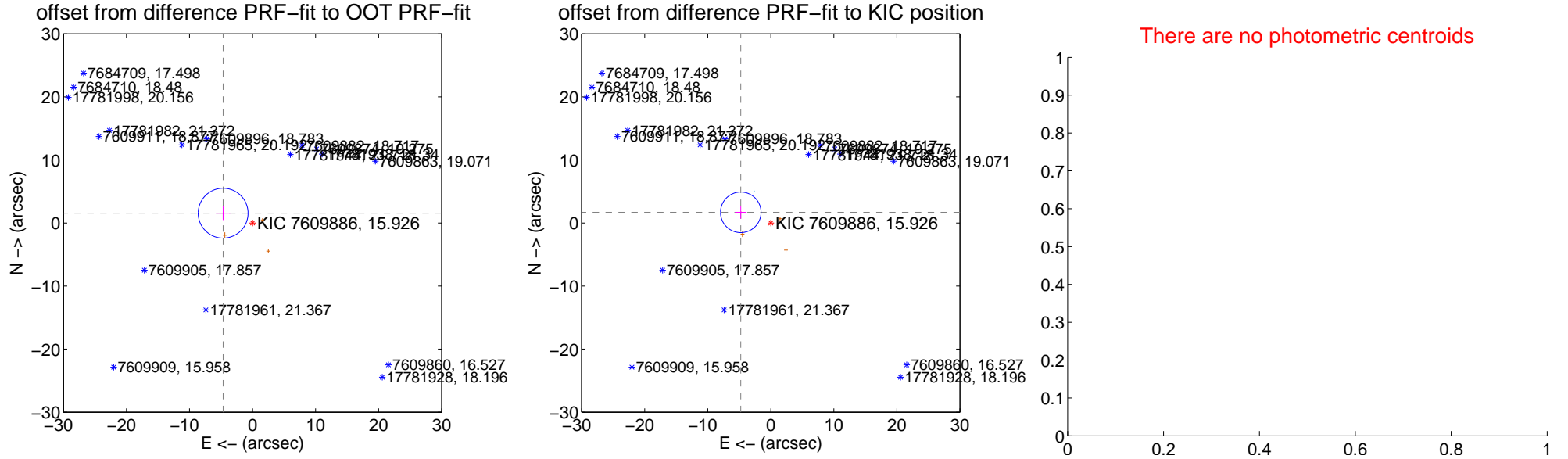
DV Centroid Data

Supplemental centroid analysis for 007609886-01. Kepler magnitude: 15.93. Transit SNR 12.90

There are 1 quarters with good PRF difference image offsets

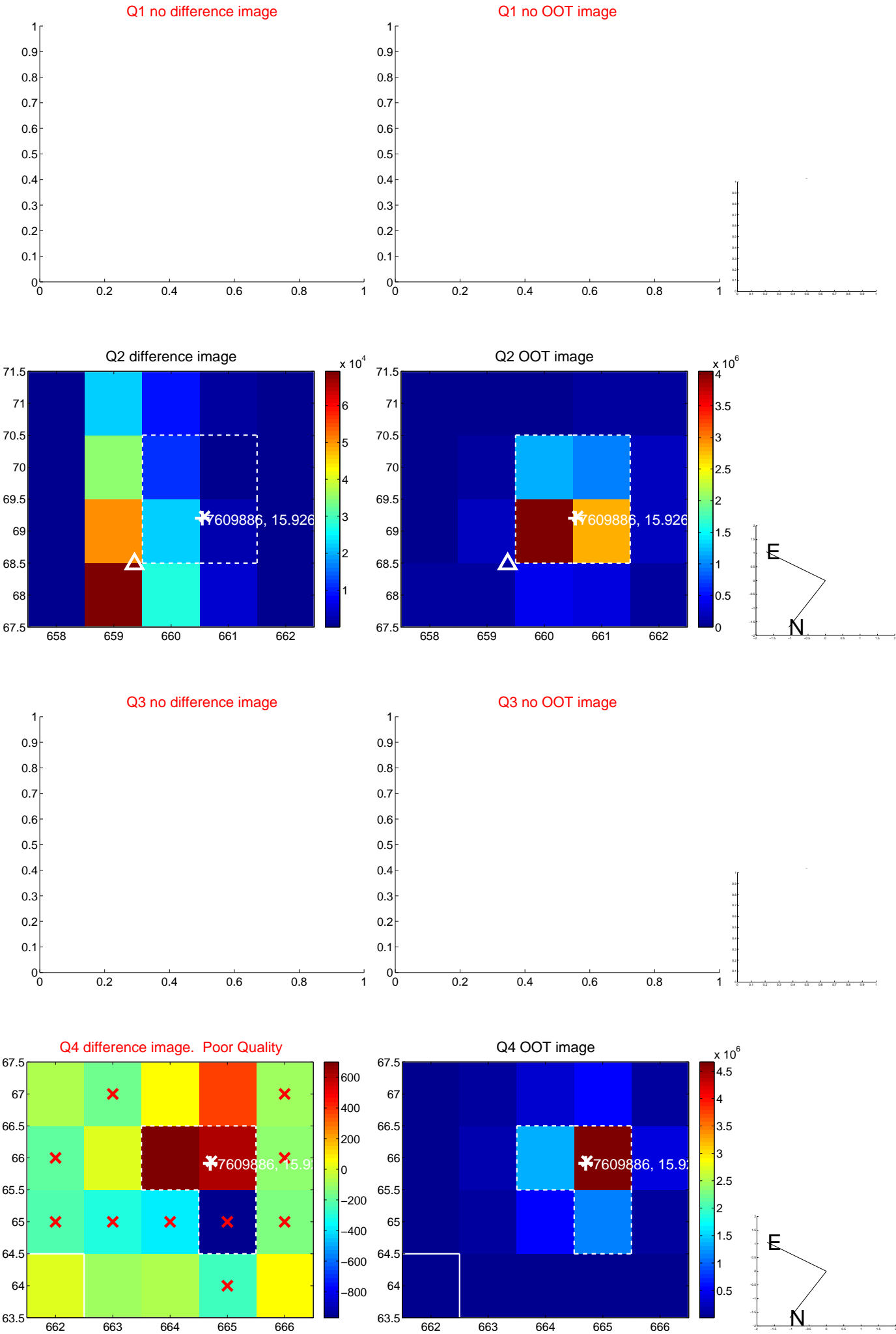
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.919 \pm 1.319	3.73	4.666 \pm 1.159	1.556 \pm 1.096
PRF-fit source offset from KIC position	5.054 \pm 1.072	4.71	4.763 \pm 0.916	1.690 \pm 1.012
photometric centroid source offset	—	—	—	—

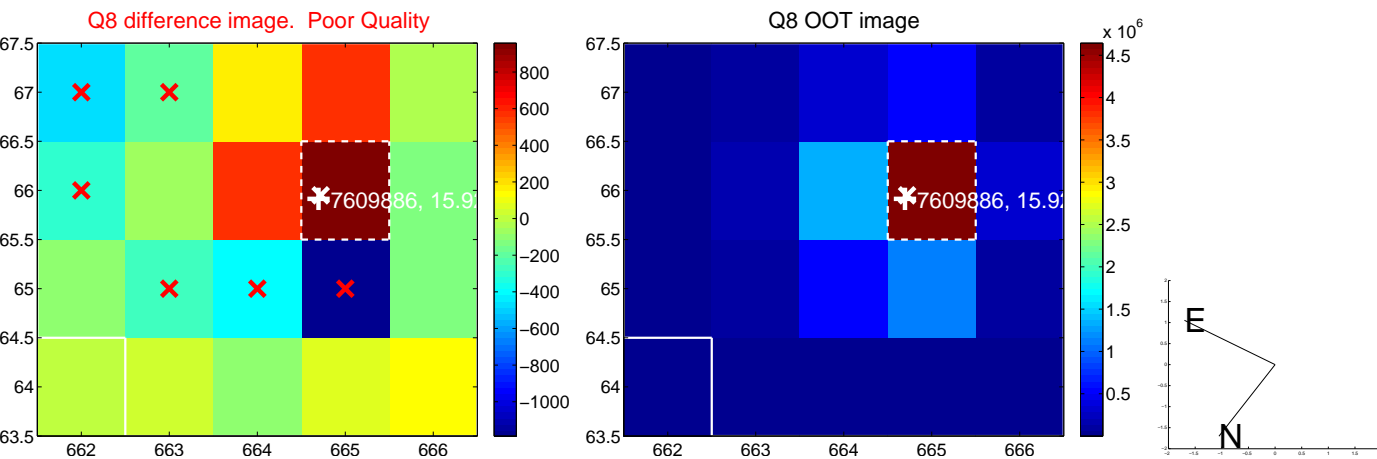
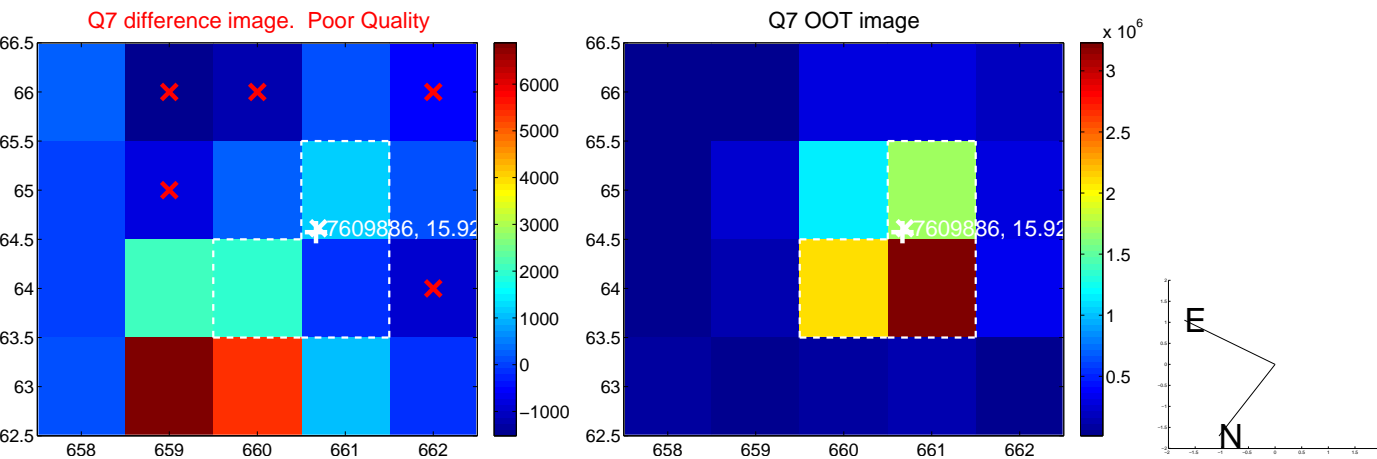
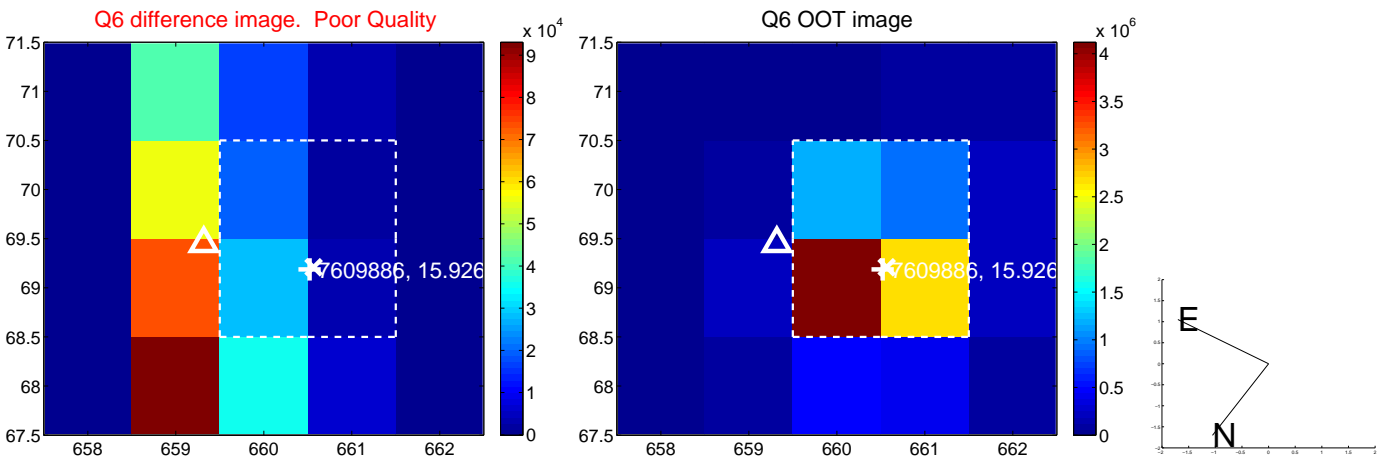
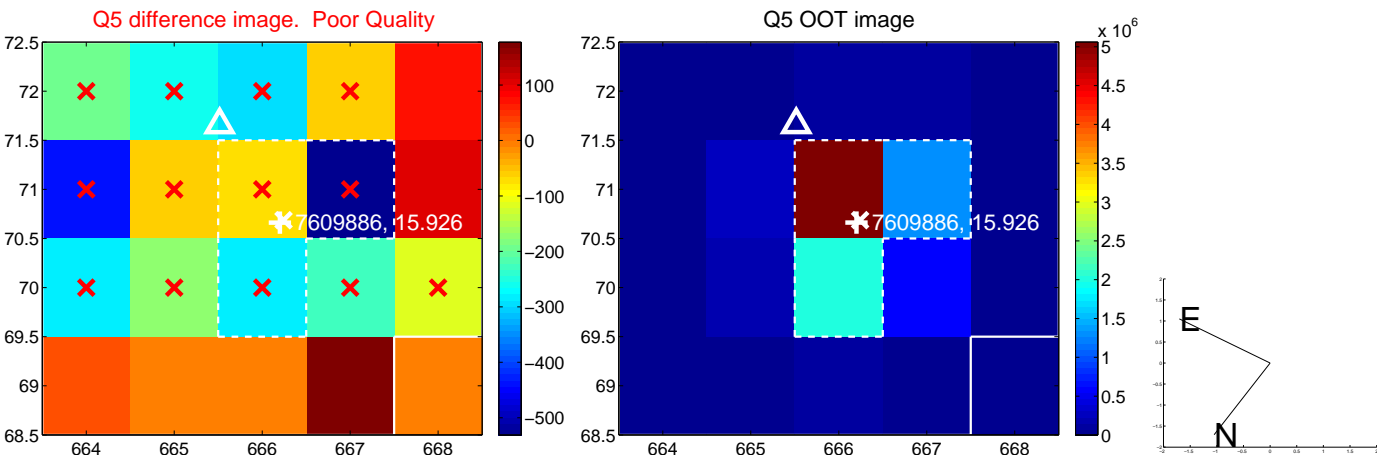


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

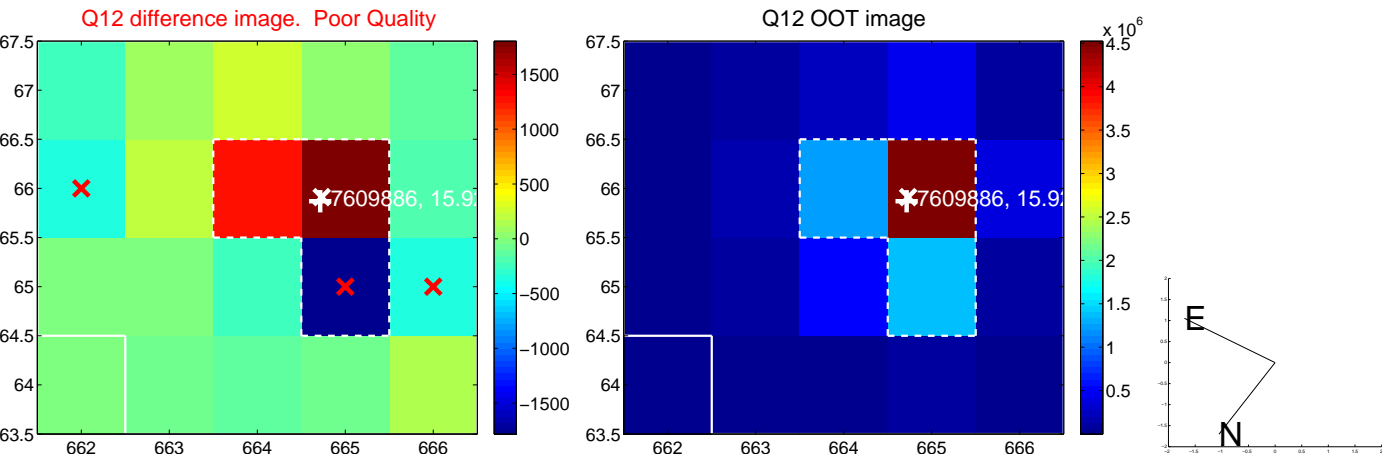
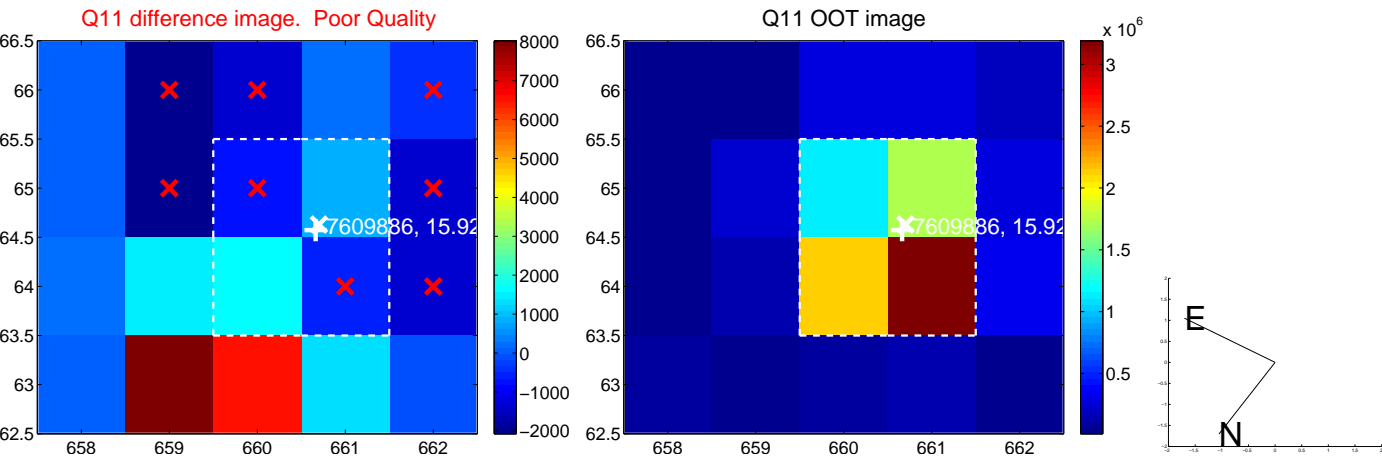
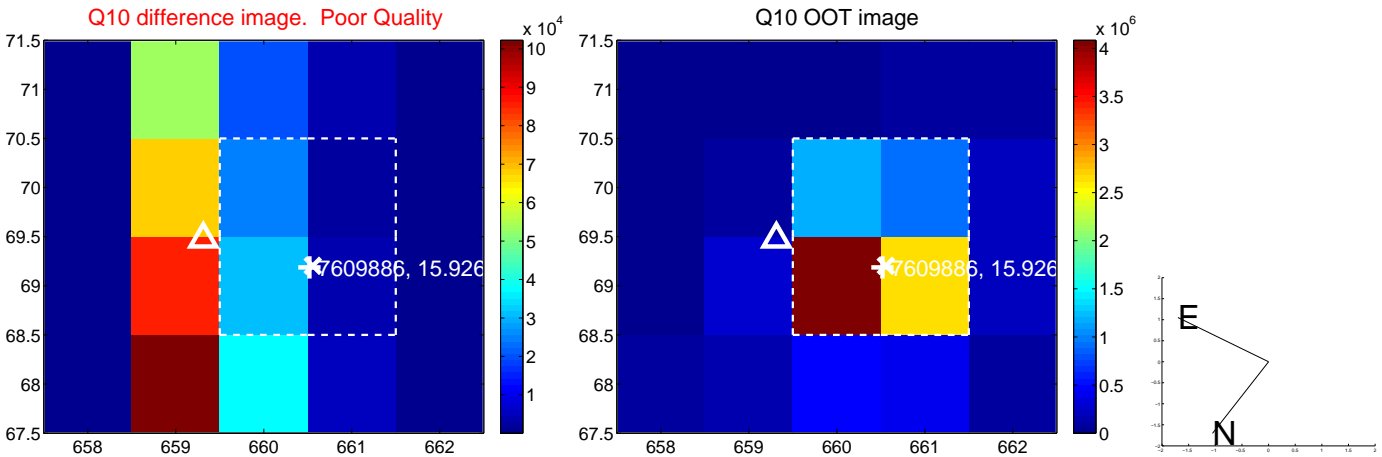
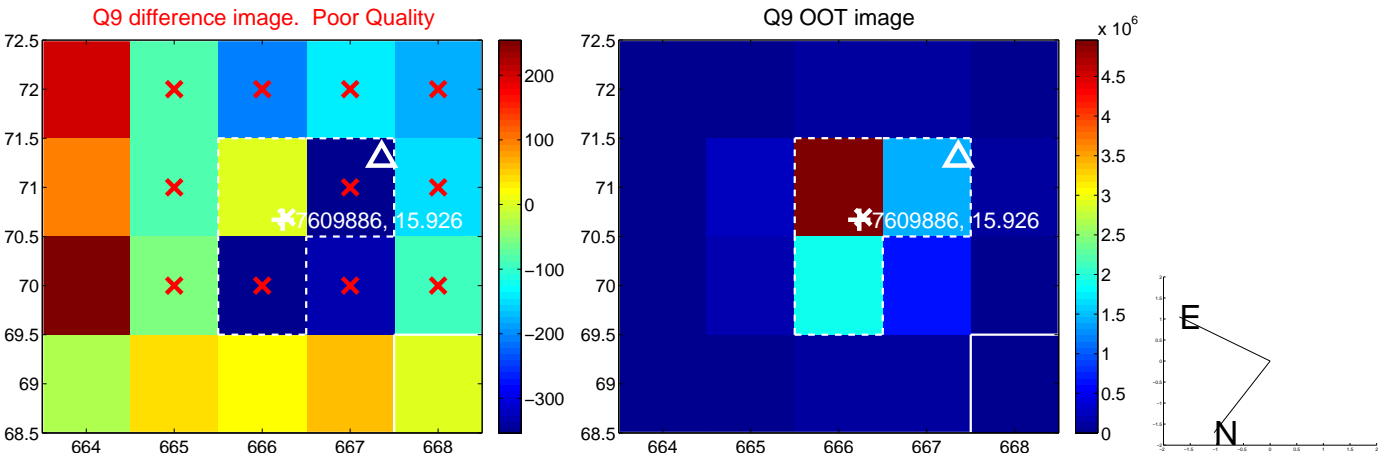
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



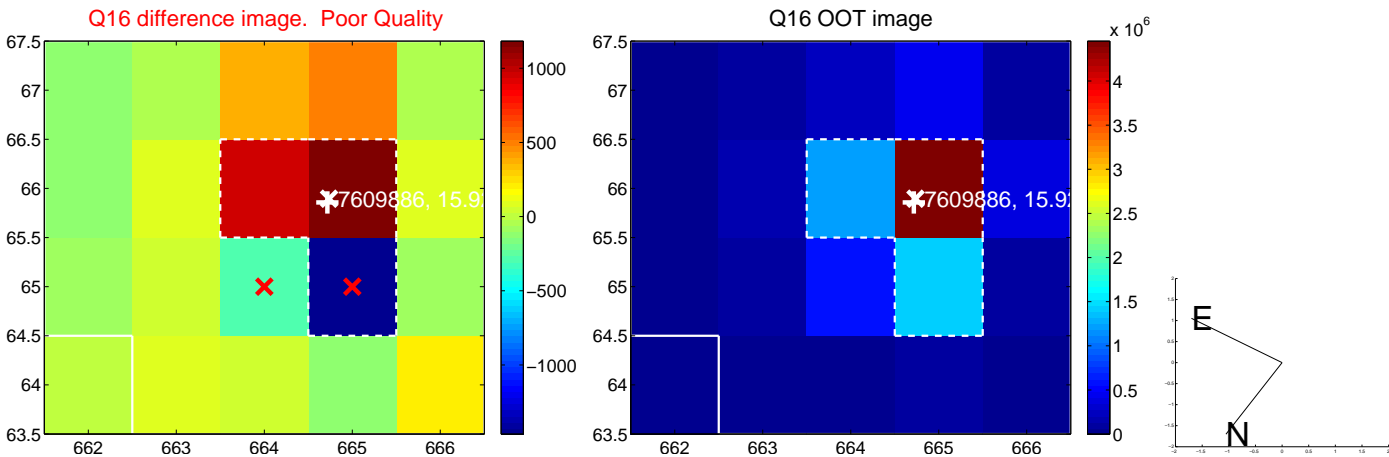
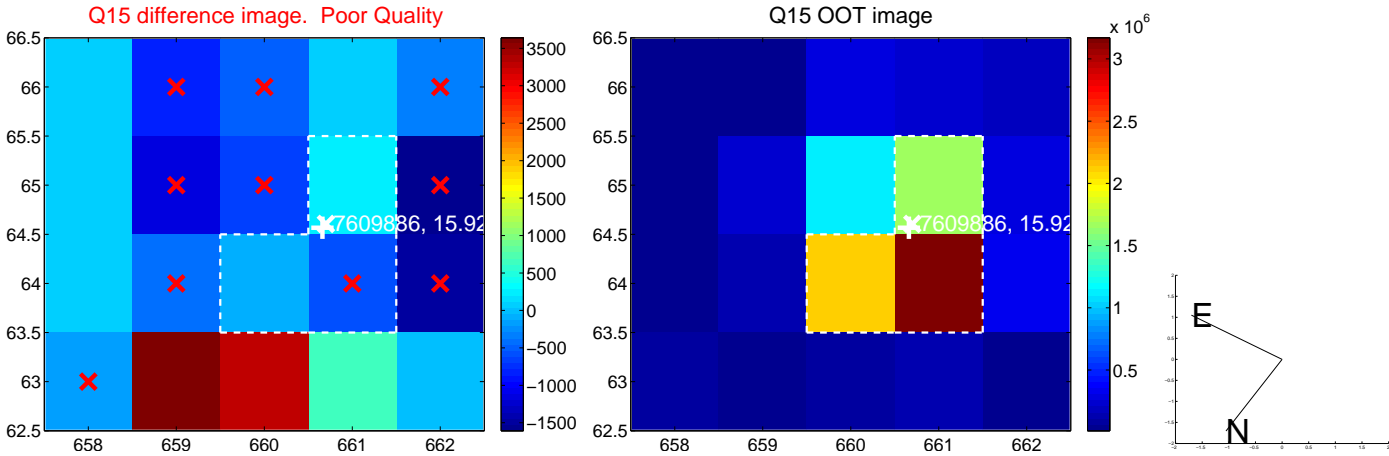
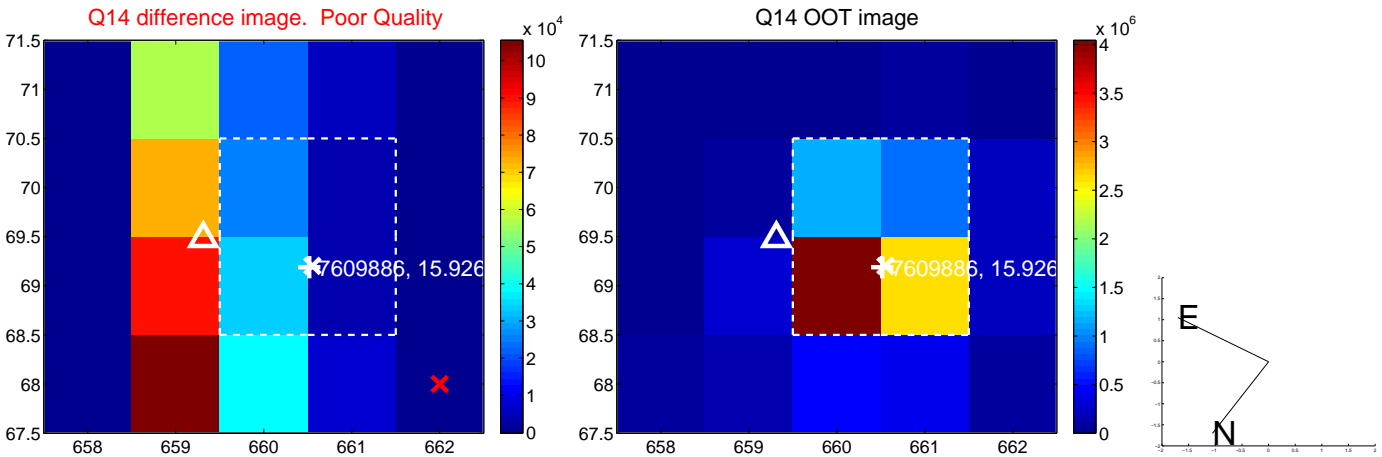
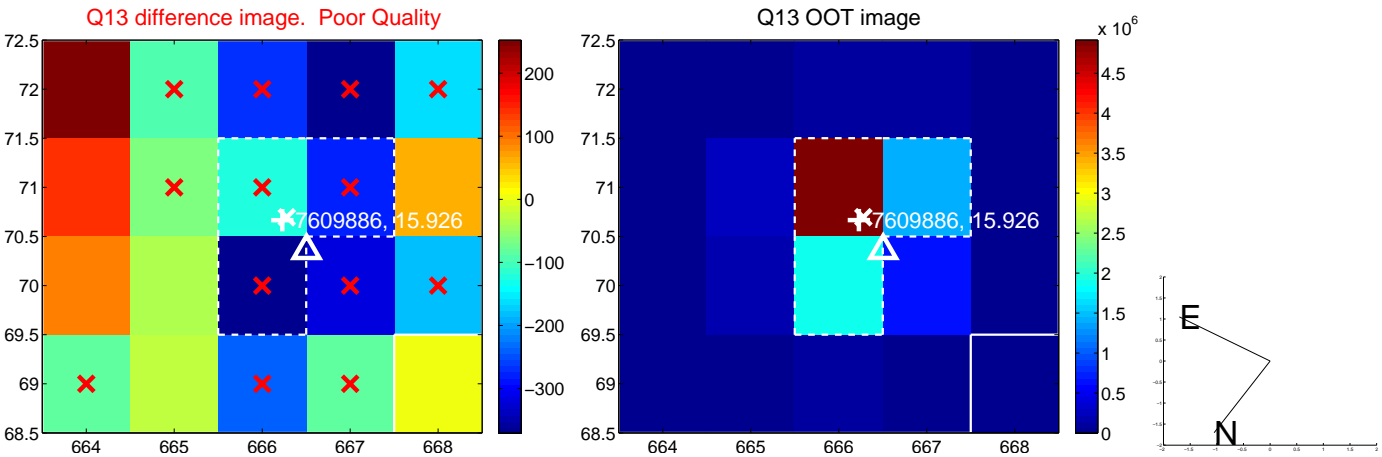
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



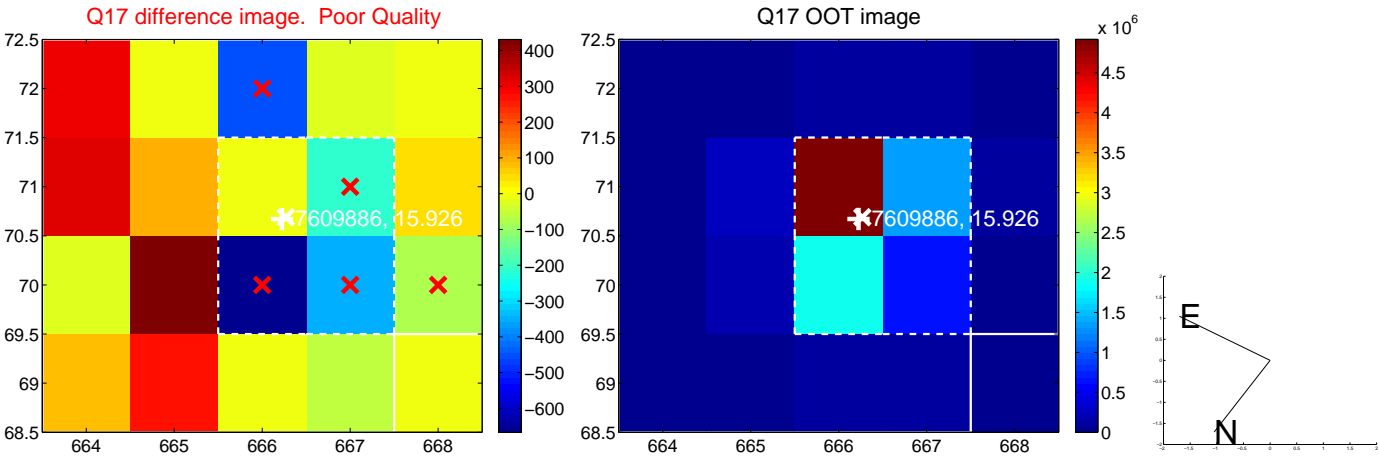
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



folded centroid time series figure for this object.

UKIRT Image

Declination

