

KIC 007289158

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 _⊕)
007289158-01	OBS	No	0.536141	131.930343	52.8	2.035	11.8	11.4	2.86	8130	2.30	127672.79

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007289158-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT

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

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

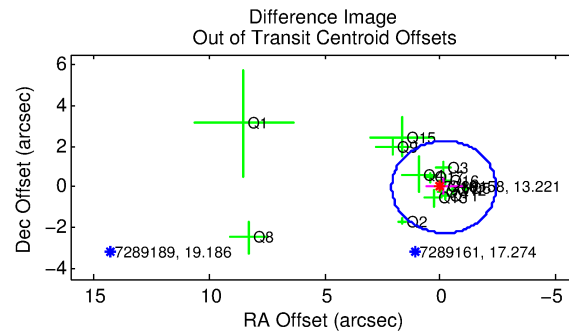
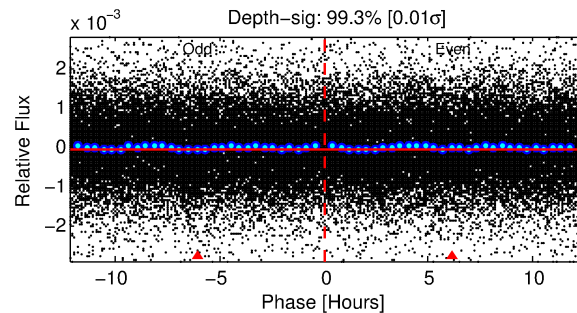
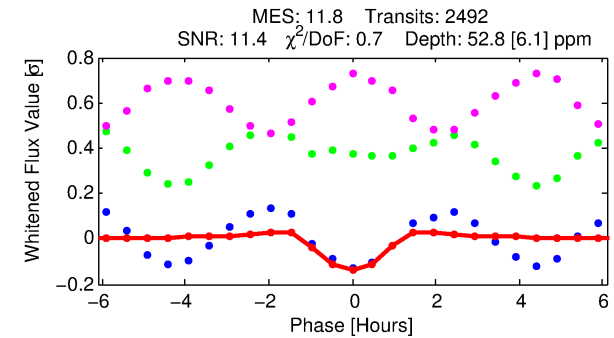
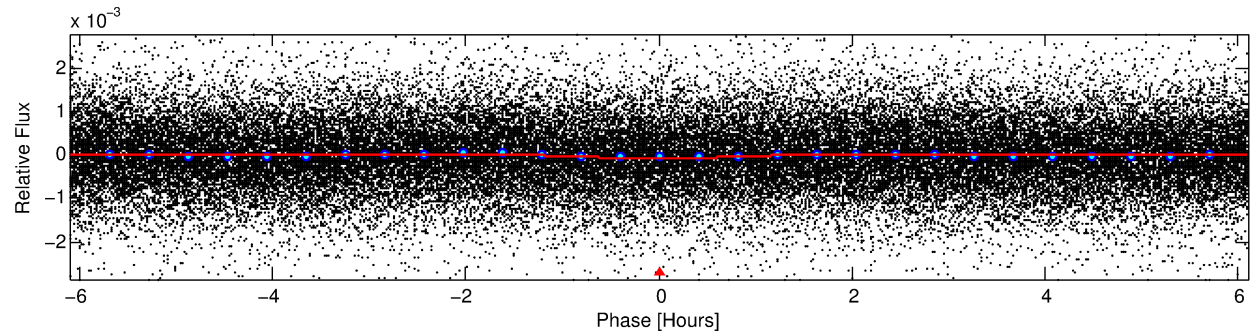
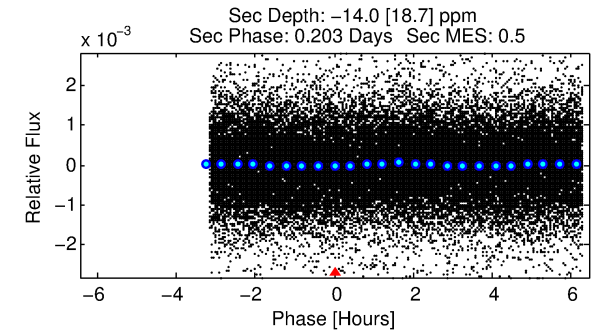
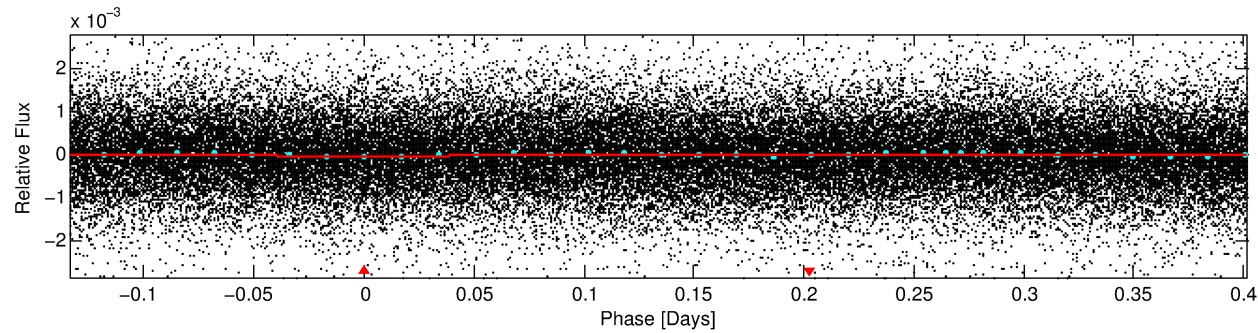
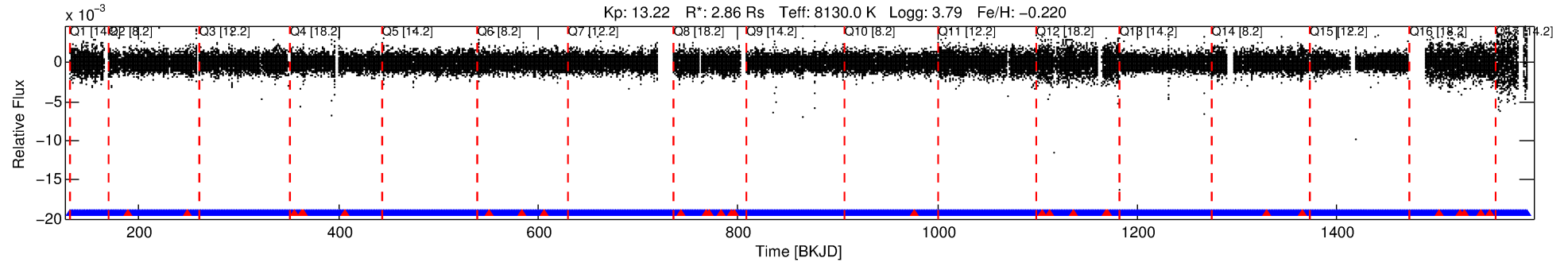
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007289158-01

No Significant Match Found

DV One-Page Summary

KIC: 7289158 Candidate: 1 of 1 Period: 0.536 d



DV Fit Results:

Period = 0.53614 [0.00001] d
Epoch = 131.9303 [0.0024] BKJD
Rp/R* = 0.0074 [0.0026]
a/R* = 1.52 [1.72]
b = 0.80 [0.94]
Seff = 127672.79 [84165.95]
Teff = 4820 [794] K
Rp = 2.30 [1.24] Re
a = 0.0159 [0.0063] AU
Ag = N/A
Teffp = N/A

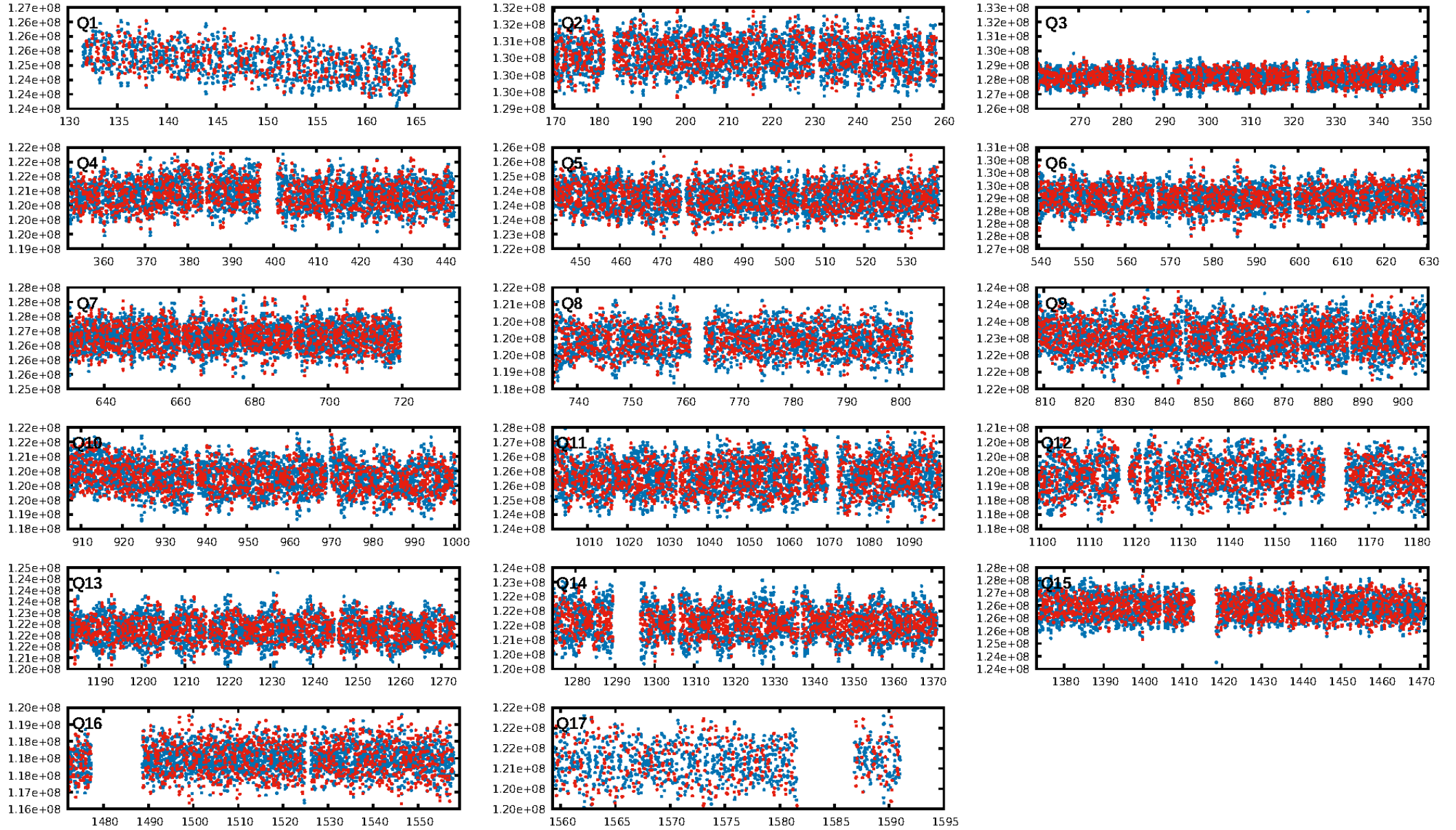
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 7.17e-39
RollingBand-fgt: 0.99 [2353/2381]
GhostDiagnostic-chr: 21.05
Centroid-sig: 90.3%
Centroid-so: 0.127 arcsec [0.38σ]
OotOffset-rm: 0.155 arcsec [0.21σ]
KicOffset-rm: 0.245 arcsec [0.35σ]
OotOffset-st: 2/4/4/5 [15]
KicOffset-st: 2/4/4/5 [15]
DiffImageQuality-fgm: 0.40 [6/15]
DiffImageOverlap-fno: 1.00 [17/17]

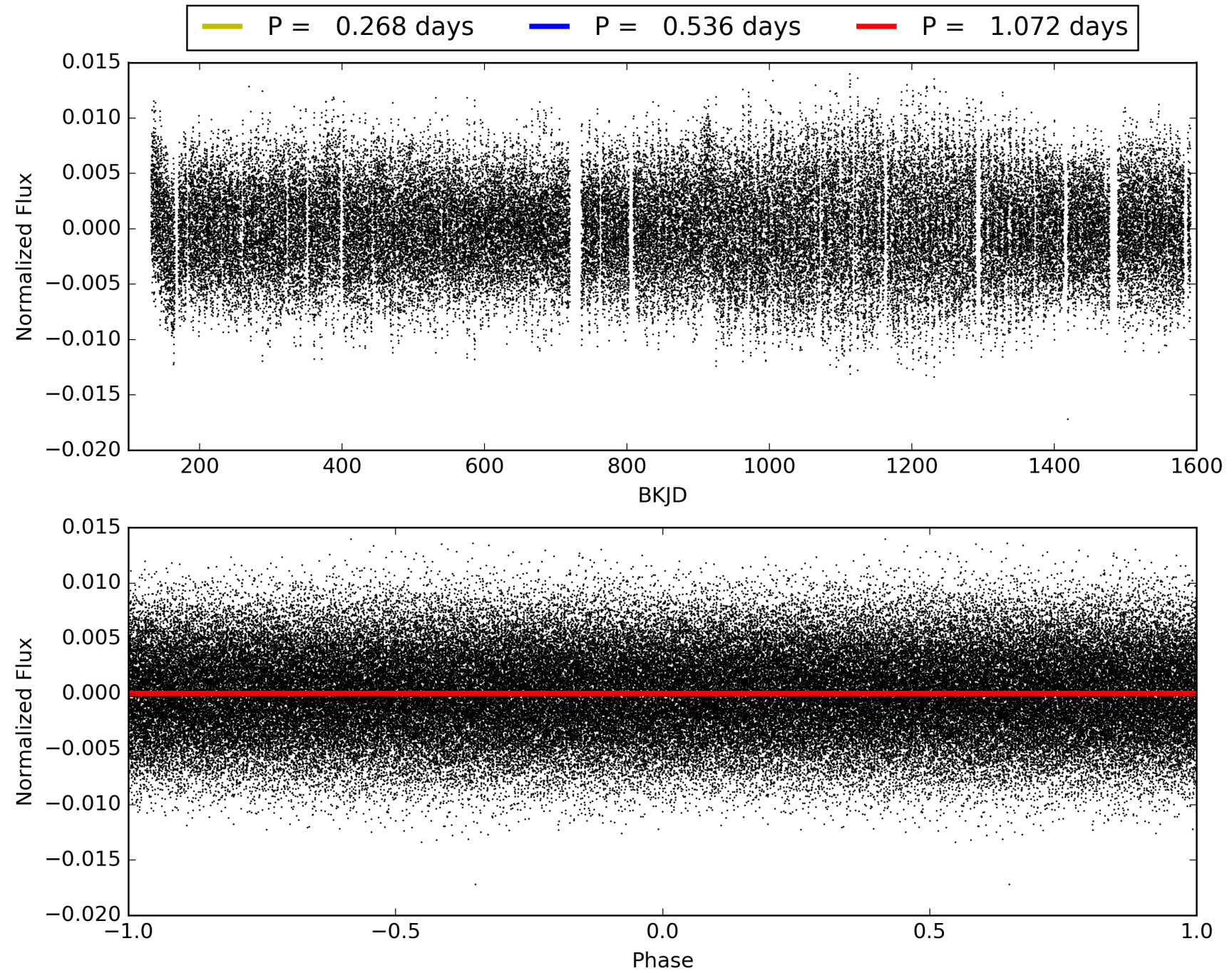
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 15:27:16 Z

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

TCE 007289158-01, PDC Light Curves

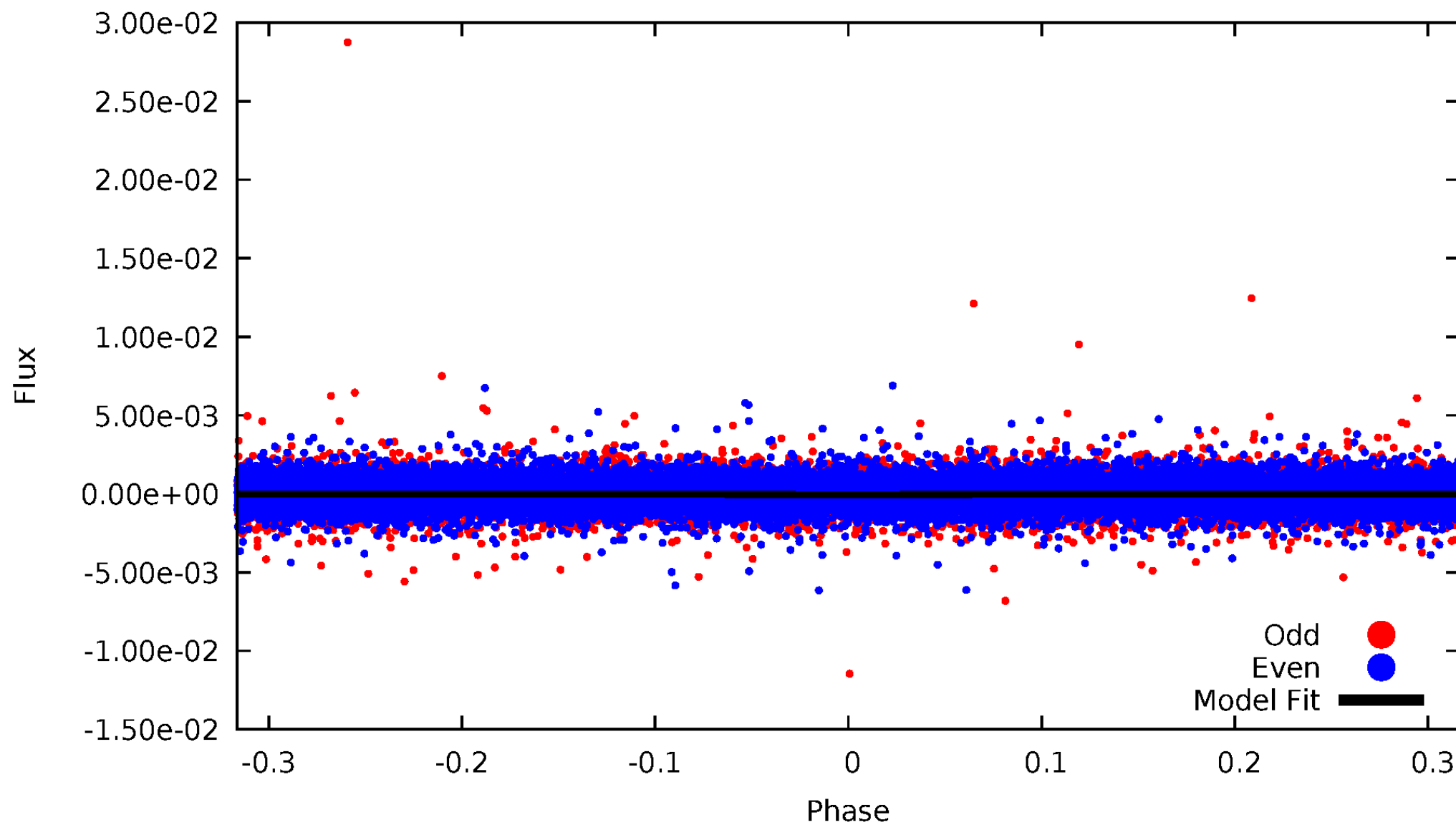


TCE 007289158-01



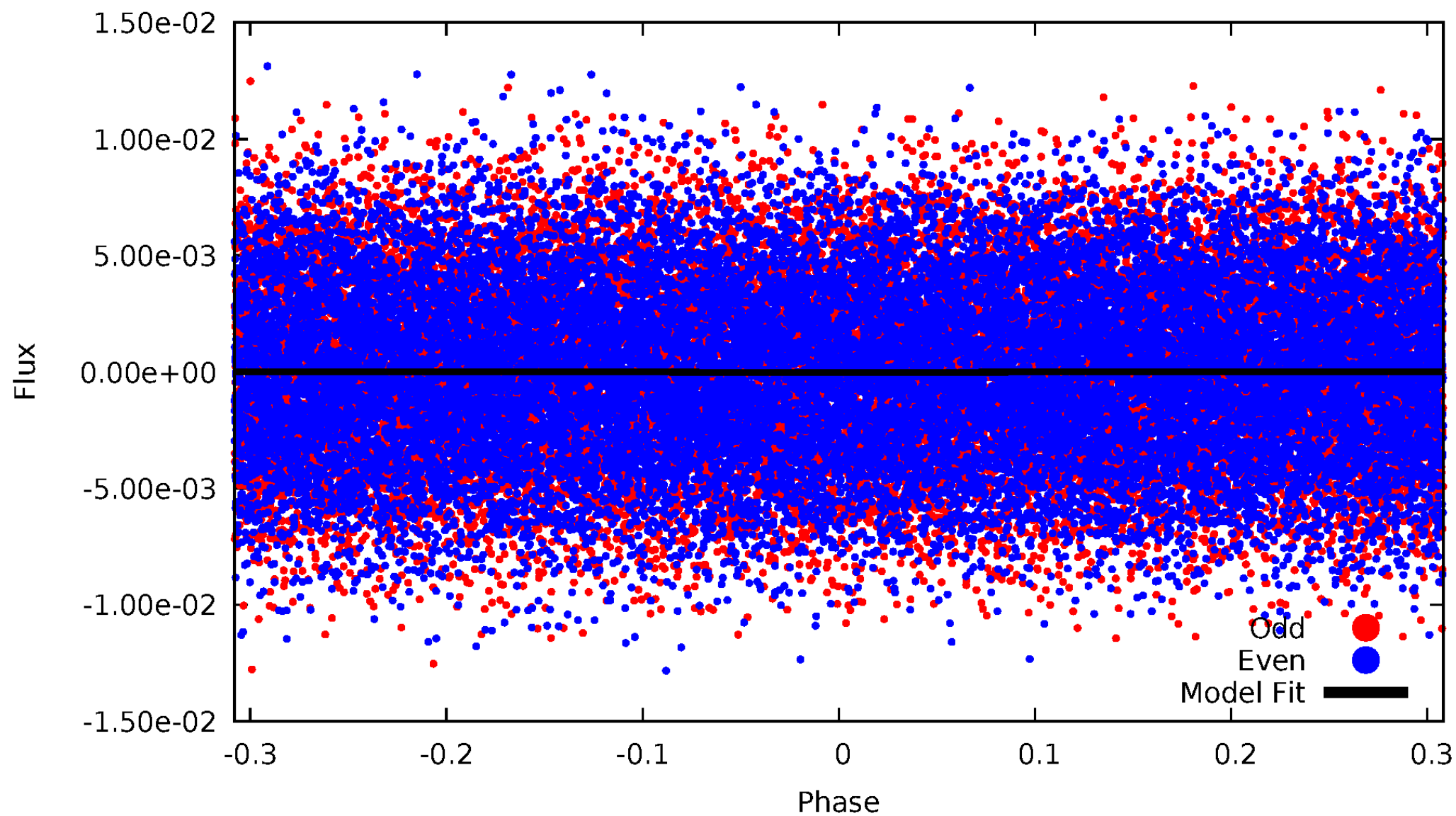
DV Odd/Even

TCE 007289158-01



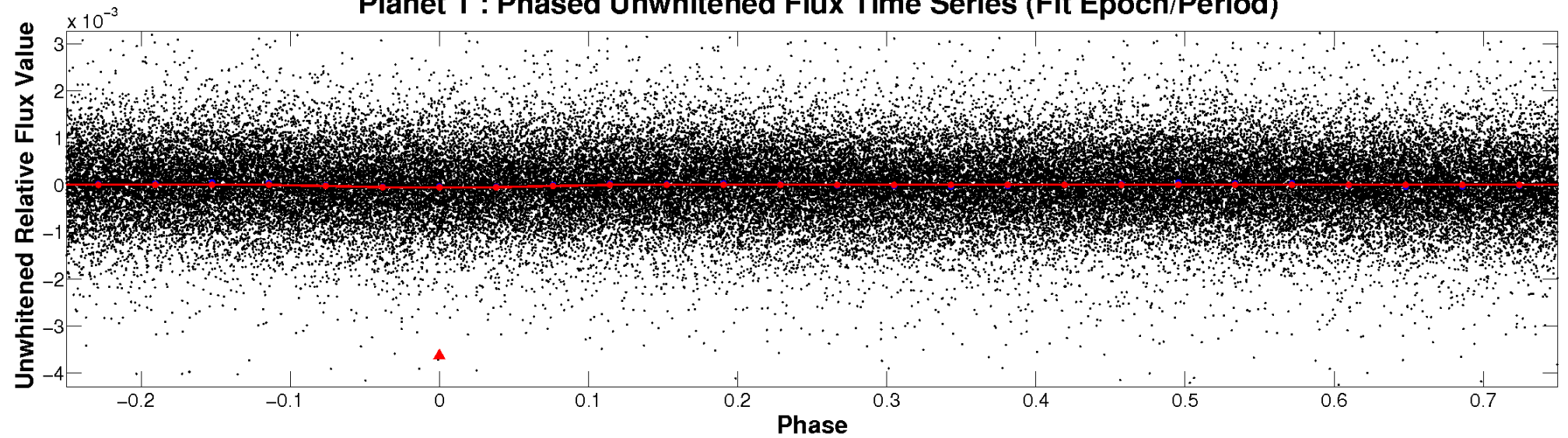
ALT Odd/Even

TCE 007289158-01

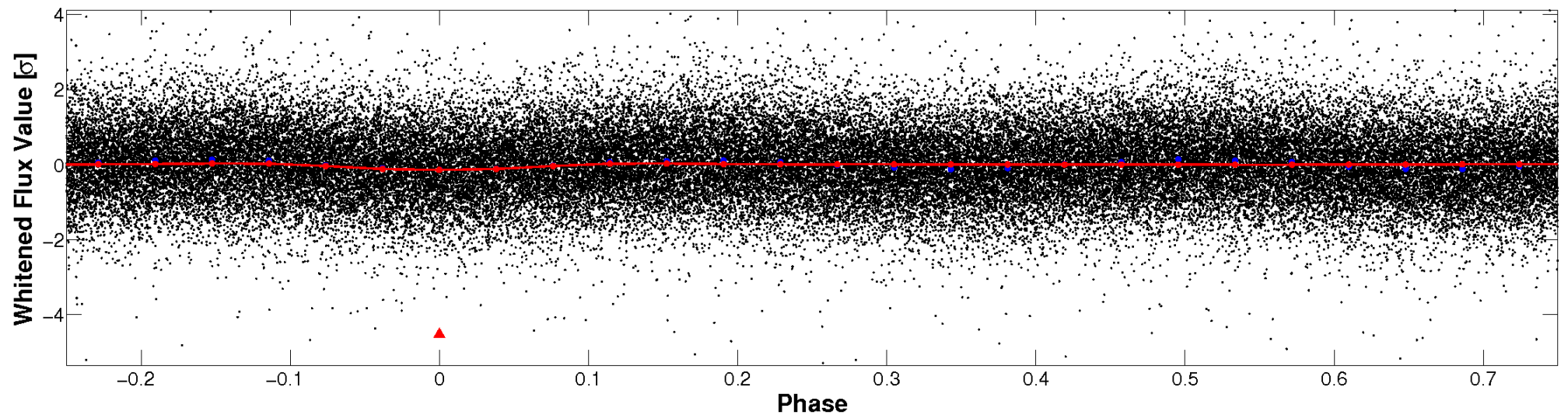


Non-Whitened Vs. Whitened Light Curve

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

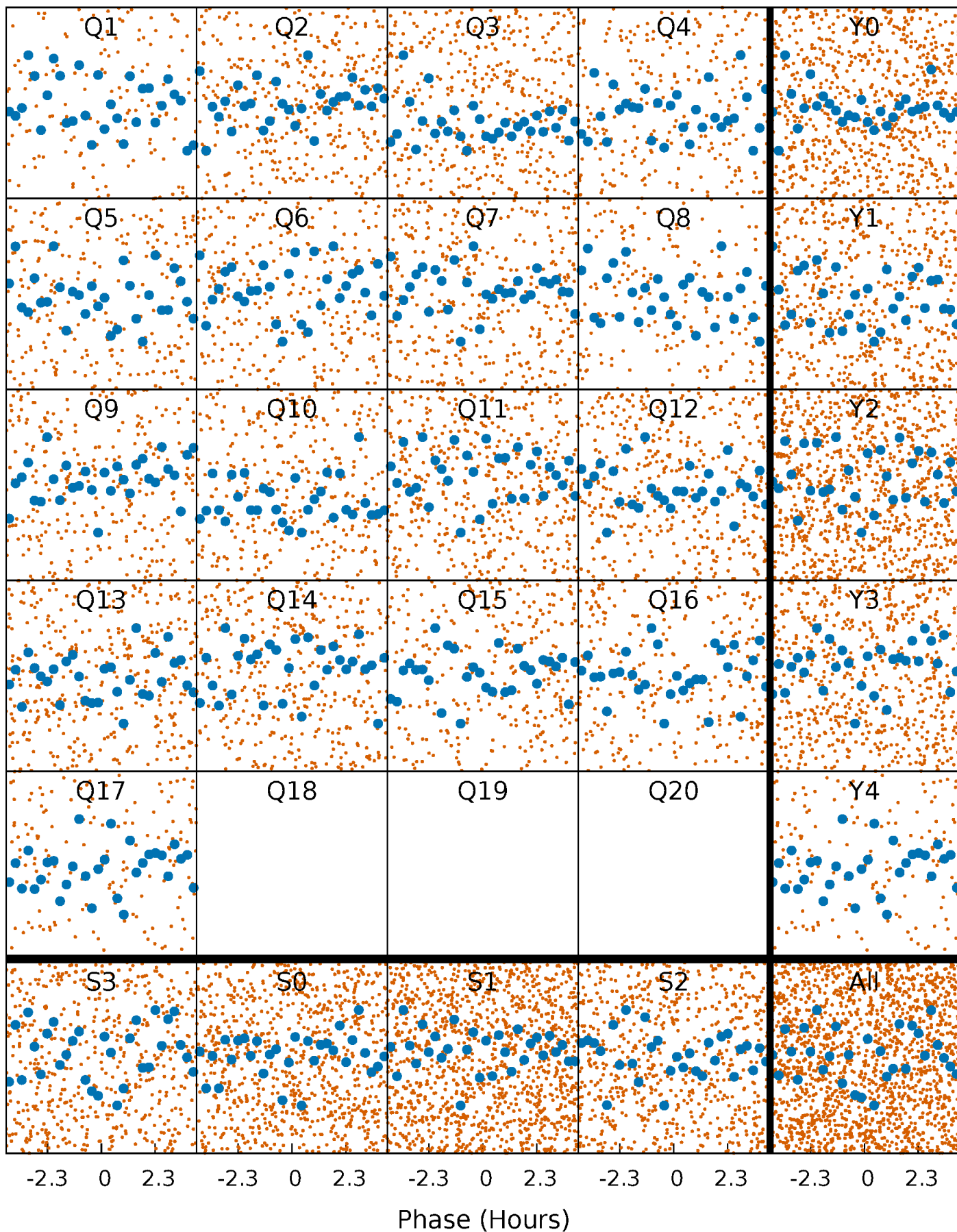


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



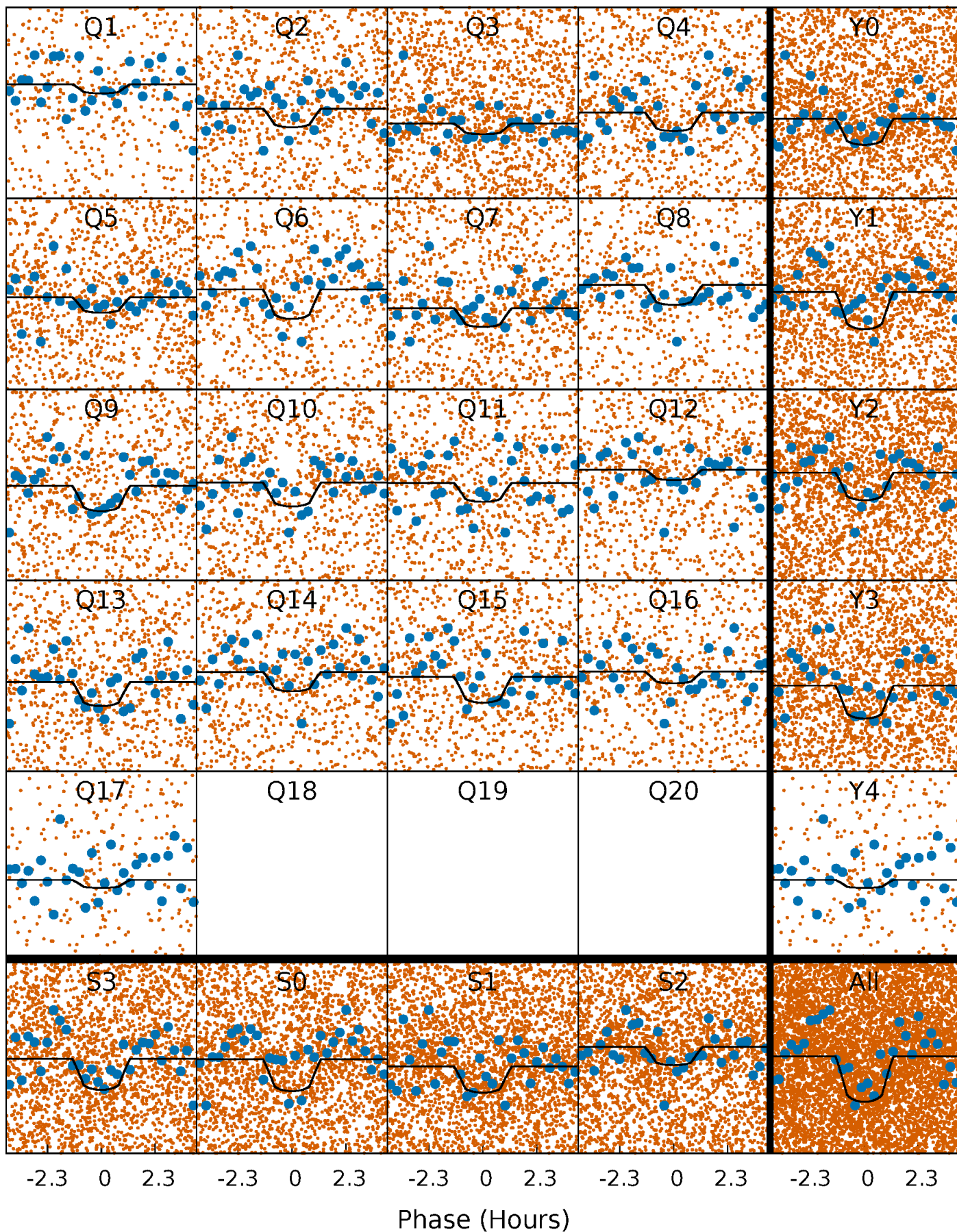
PDC Quarter-Phased Transit Curves

TCE 007289158-01 P= 0.536141 Days $T_0=131.930343$ (BKJD)



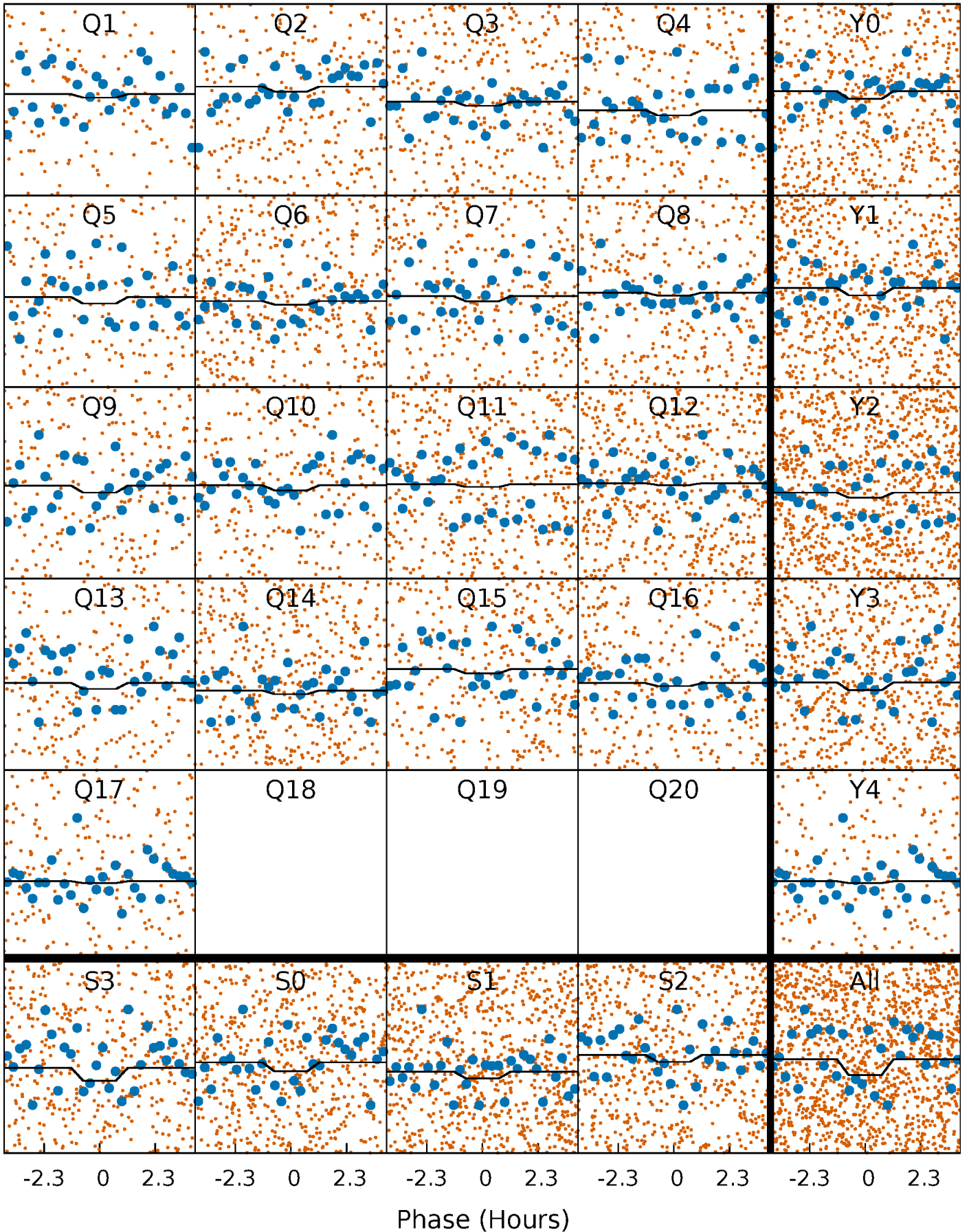
DV Quarter-Phased Transit Curves

TCE 007289158-01 P= 0.536141 Days $T_0=131.930343$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

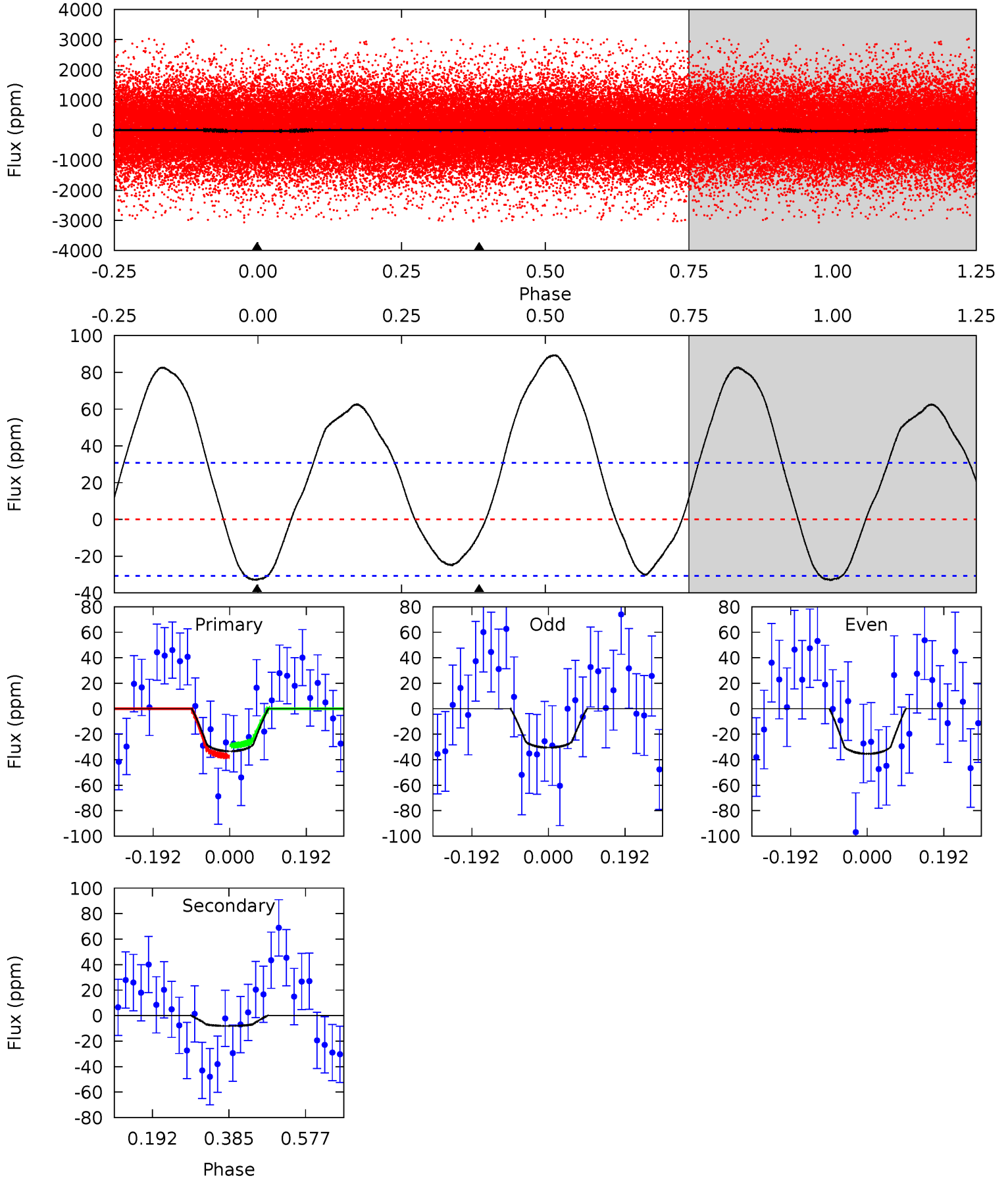
TCE 007289158-01 P= 0.536140 Days $T_0=131.938688$ (BKJD)



DV Model-Shift Uniqueness Test

007289158-01, P = 0.536141 Days, E = 131.394202 Days

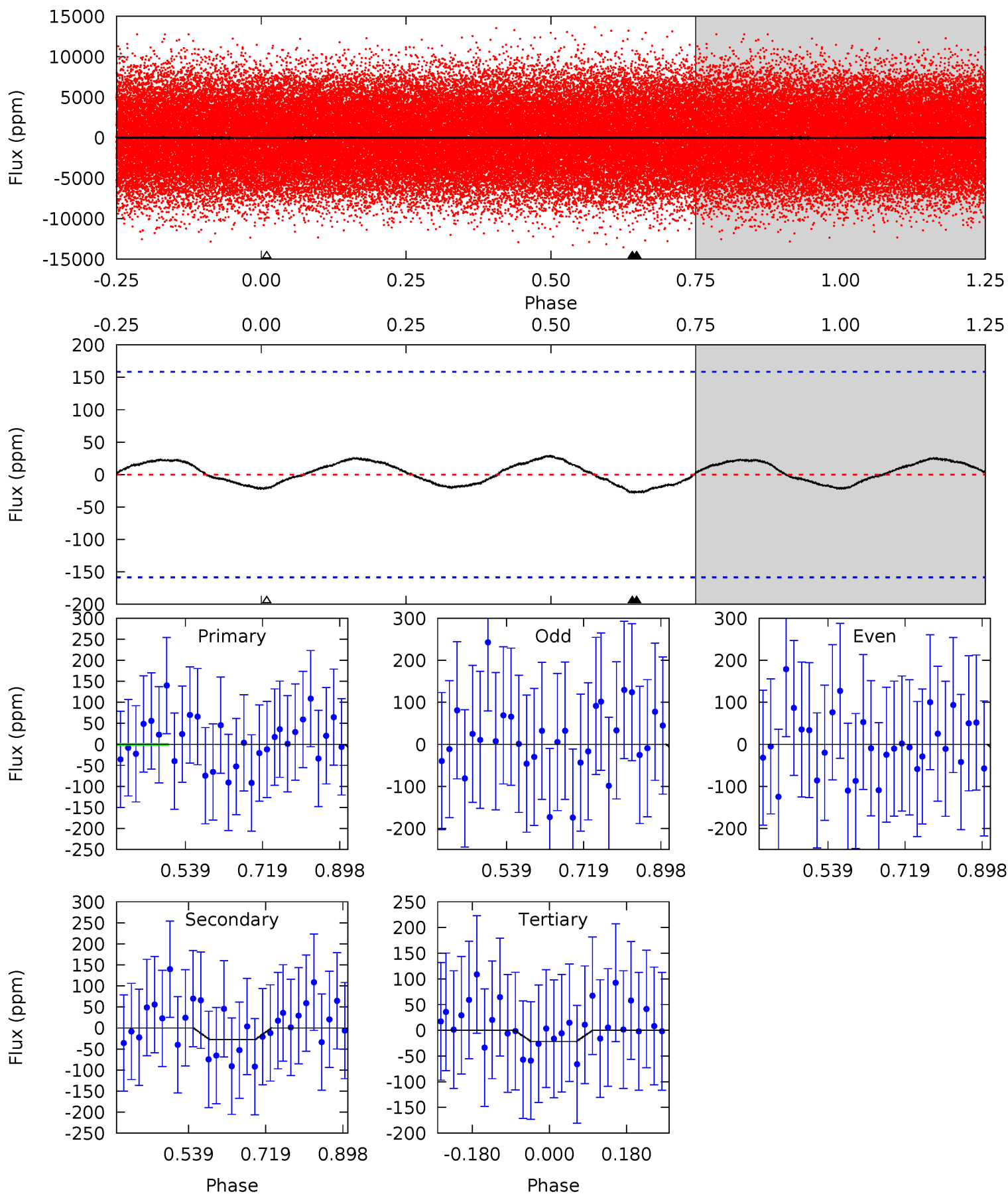
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.80	1.17	0	0	4.43	1.30	4.16	4.80	4.80	1.17	1.17	0.35	0.98	0.73	0.60



Alt Model-Shift Uniqueness Test

007289158-01, P = 0.536140 Days, E = 131.402548 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.79	0.78	0.61	0	4.44	1.34	0.41	0.18	0.79	0.17	0.78	0.06	0.77	0.51	0.36



Stellar Parameters For KIC 007289158

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	8130^{+226}_{-340}	$3.791^{+0.376}_{-0.071}$	$-0.220^{+0.200}_{-0.300}$	$2.863^{+0.388}_{-1.164}$	$1.848^{+0.090}_{-0.381}$	$0.111^{+0.368}_{-0.032}$
	+3%/-4%	+10%/-2%	+91%/-136%	+14%/-41%	+5%/-21%	+331%/-29%
Source	KIC0	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 007289158-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-8 ± 7	$1.99^{+0.89}_{-0.78}$	6511^{+465}_{-763}	-3679^{+9476}_{-1457}	$0.248^{+0.627}_{-0.208}$
Alt.	-28 ± 36	$1.45^{+0.79}_{-0.72}$	6506^{+413}_{-659}	7372^{+5950}_{-13785}	$1.504^{+6.200}_{-1.877}$

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

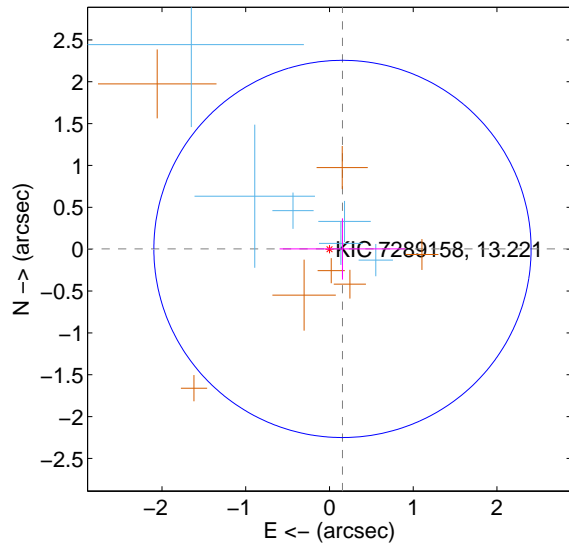
Supplemental centroid analysis for 007289158-01. Kepler magnitude: 13.22. Transit SNR 11.45

There are 6 quarters with good PRF difference image offsets

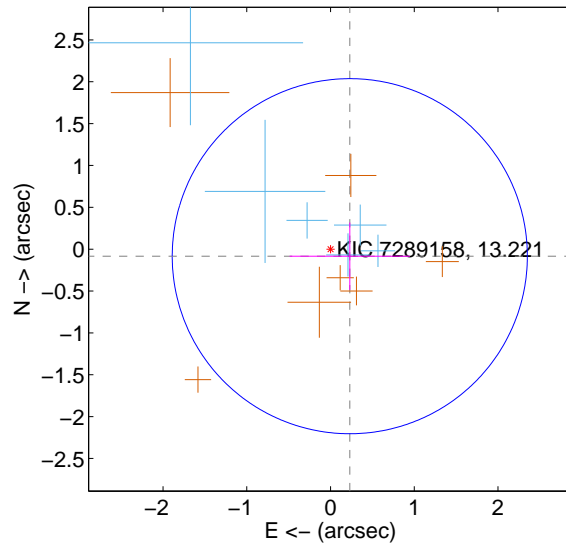
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.155 ± 0.751	0.21	-0.155 ± 0.752	0.003 ± 0.366
PRF-fit source offset from KIC position	0.245 ± 0.707	0.35	-0.230 ± 0.719	-0.084 ± 0.402
photometric centroid source offset	0.13 ± 0.34	0.38	-0.12 ± 0.34	0.03 ± 0.34

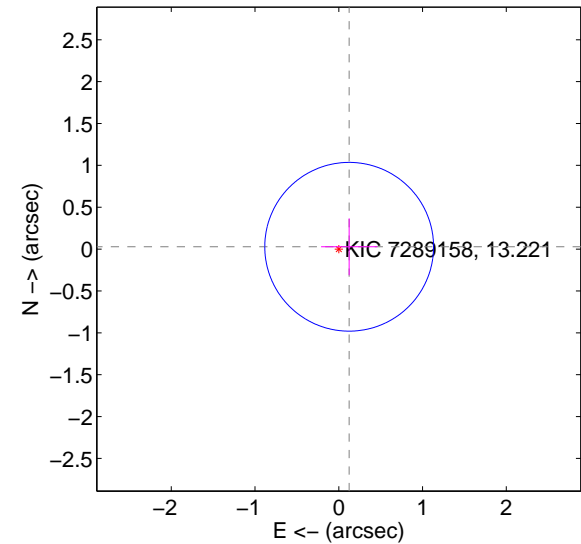
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

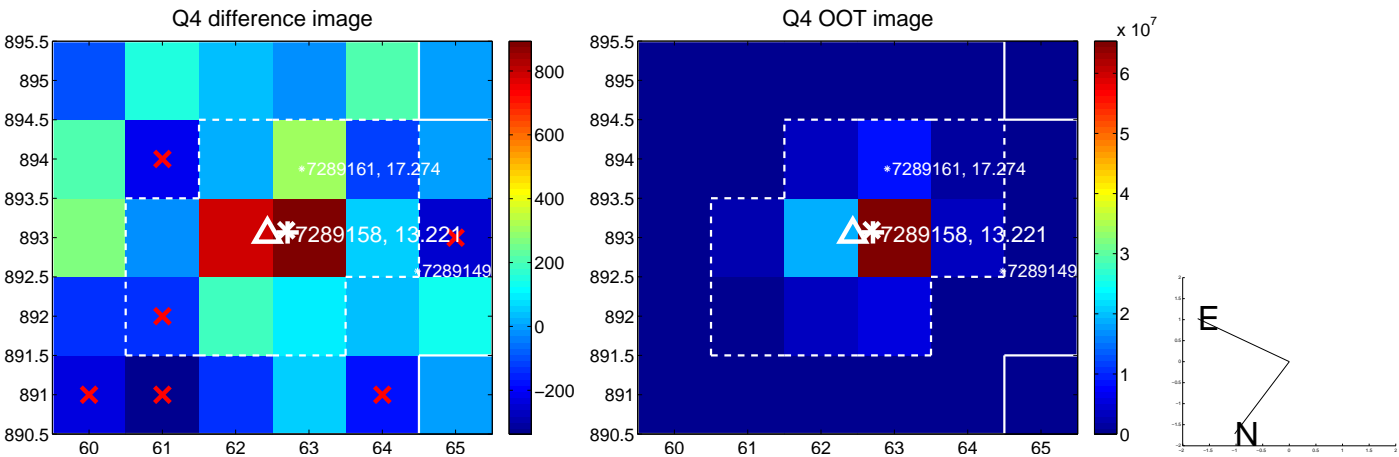
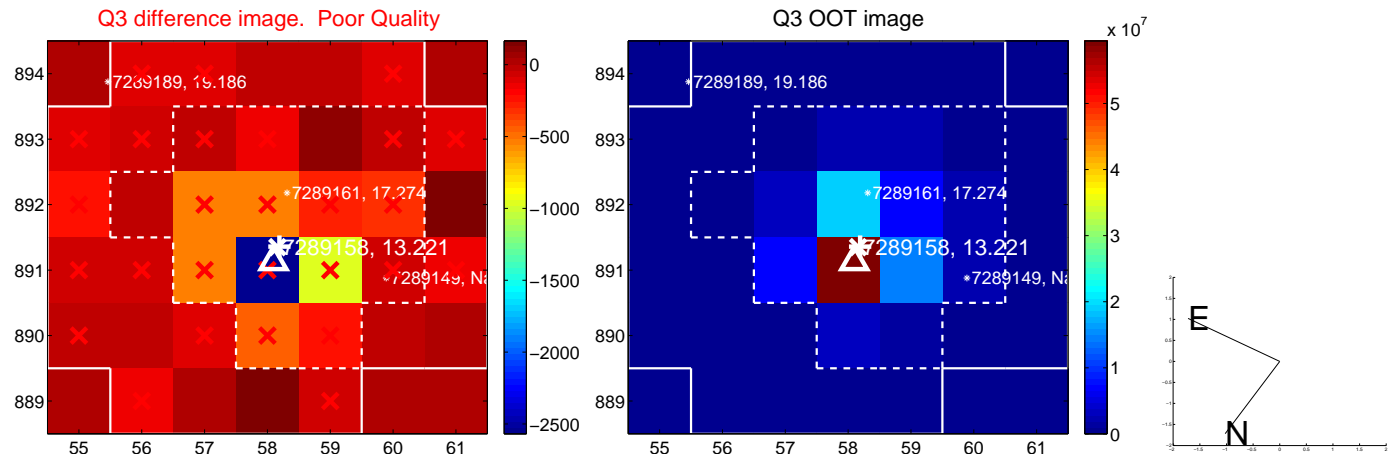
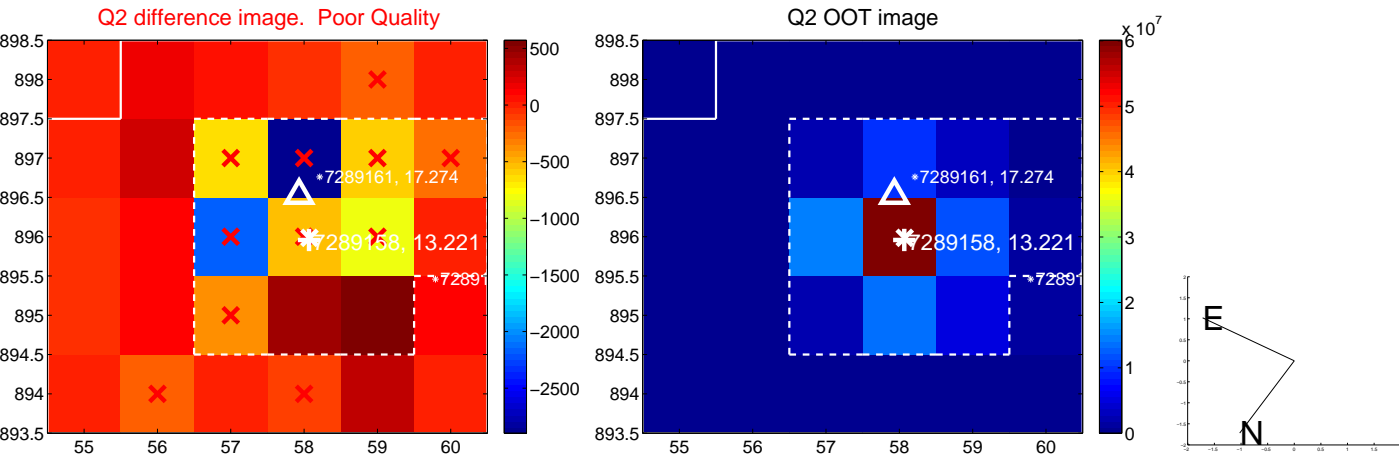
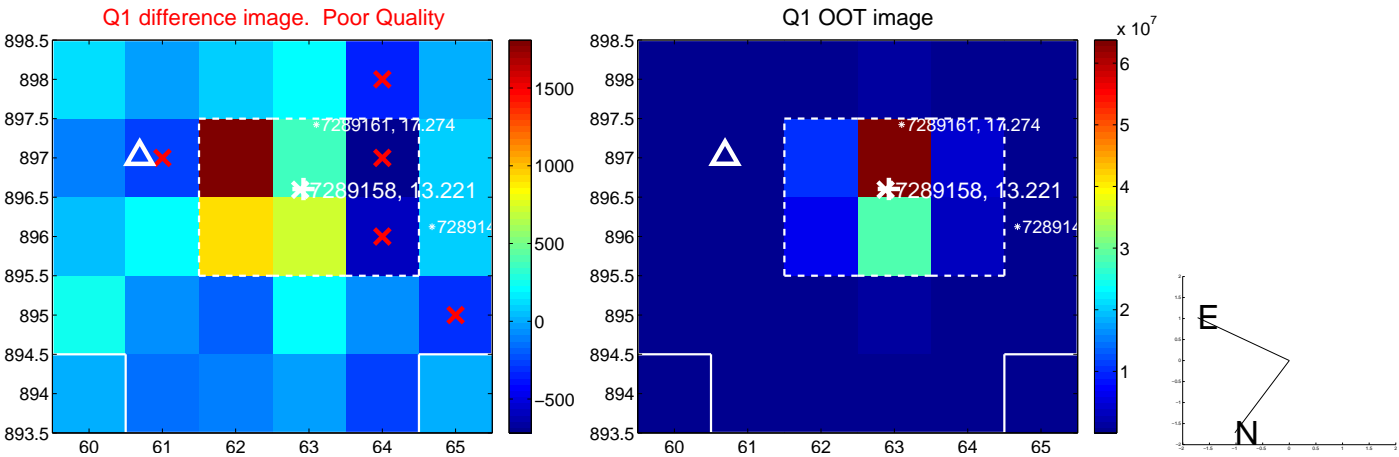


offset from photometric centroids

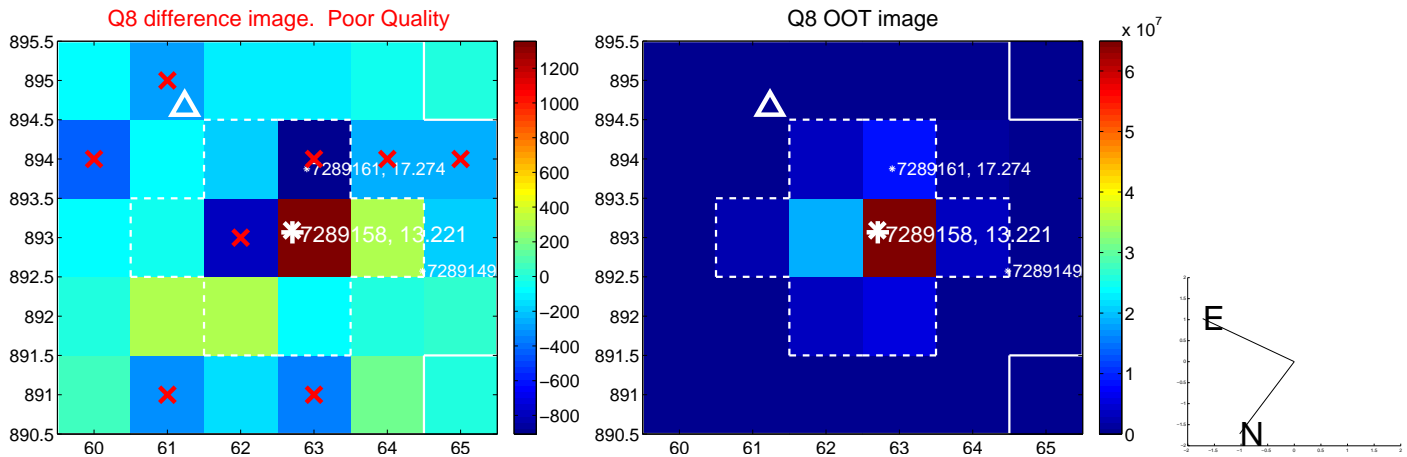
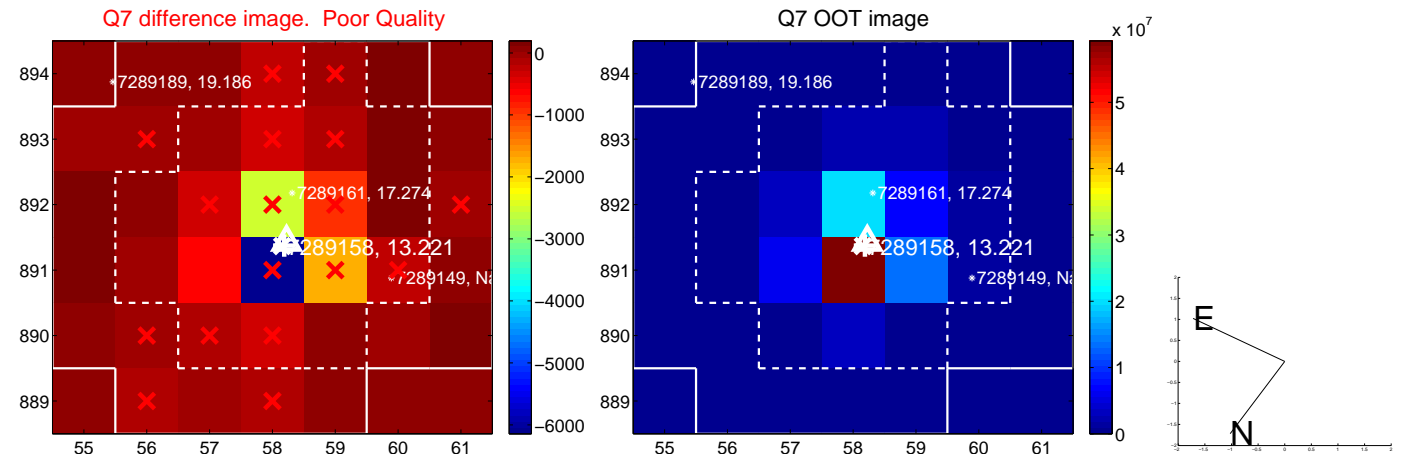
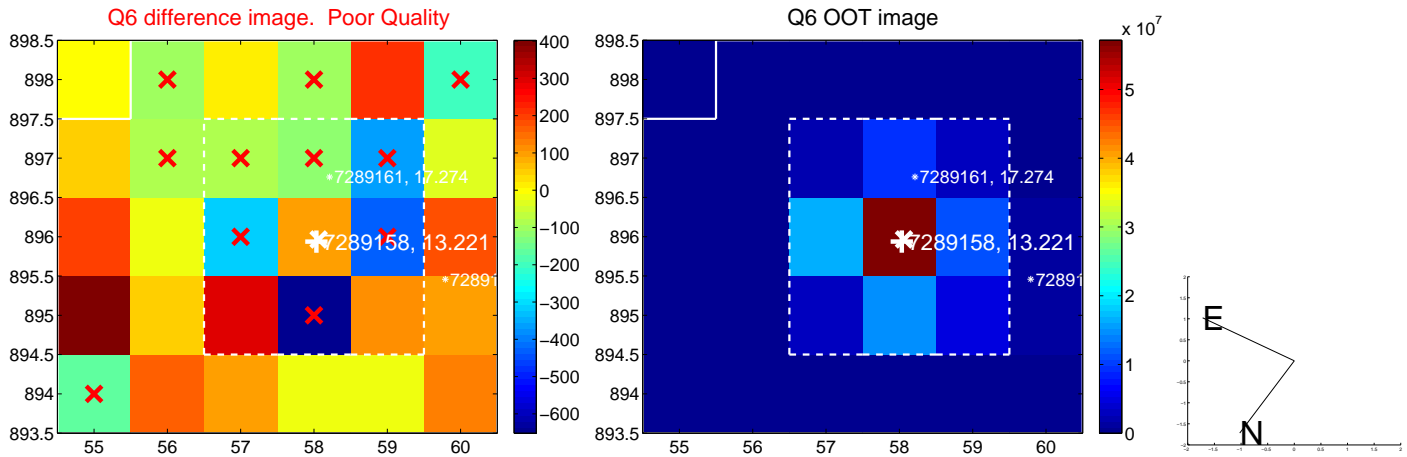
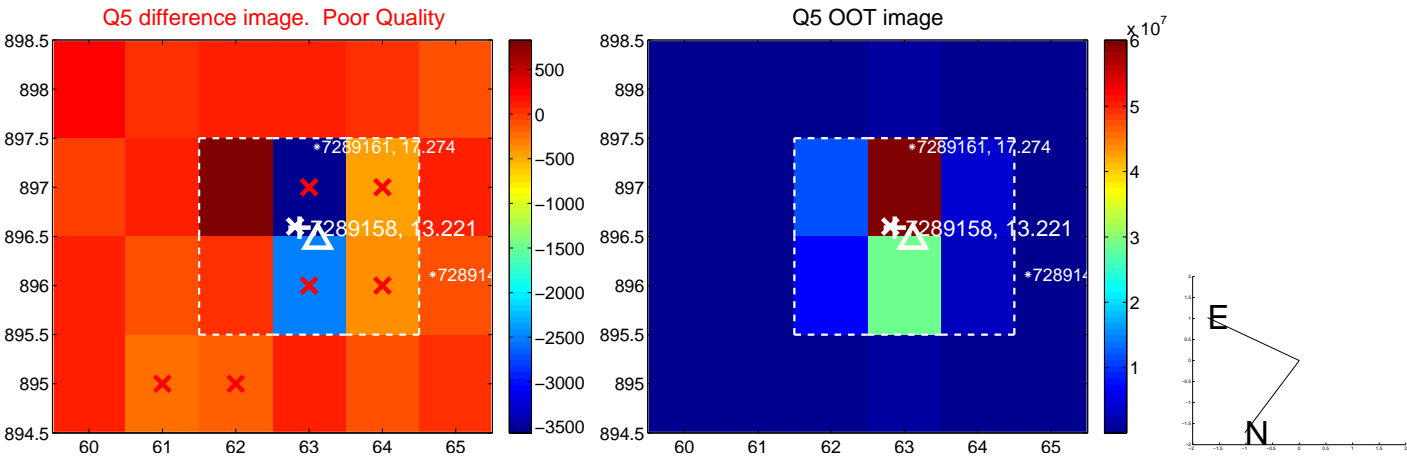


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

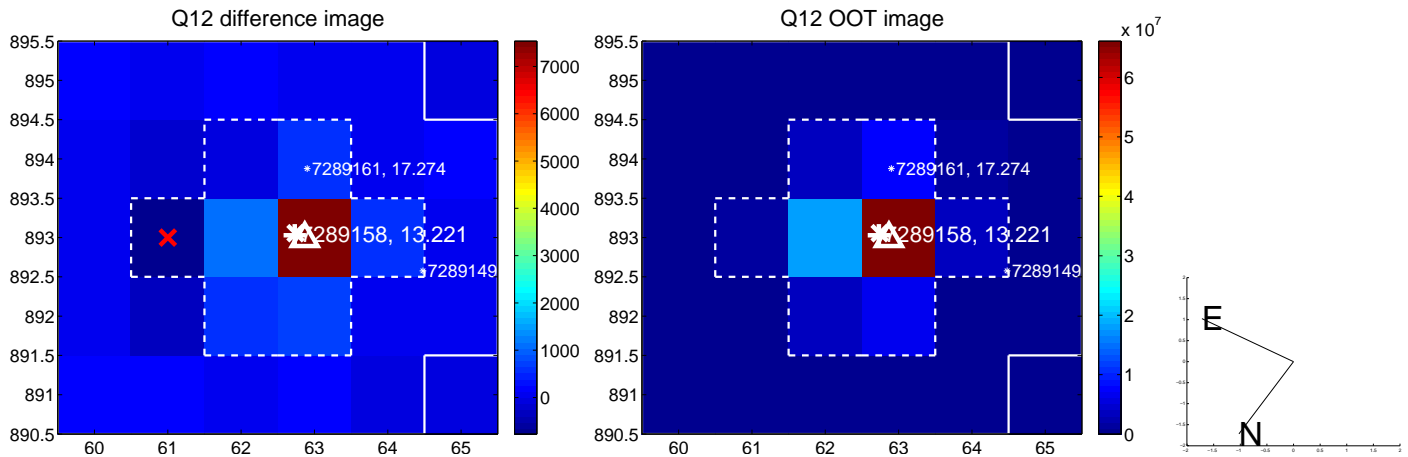
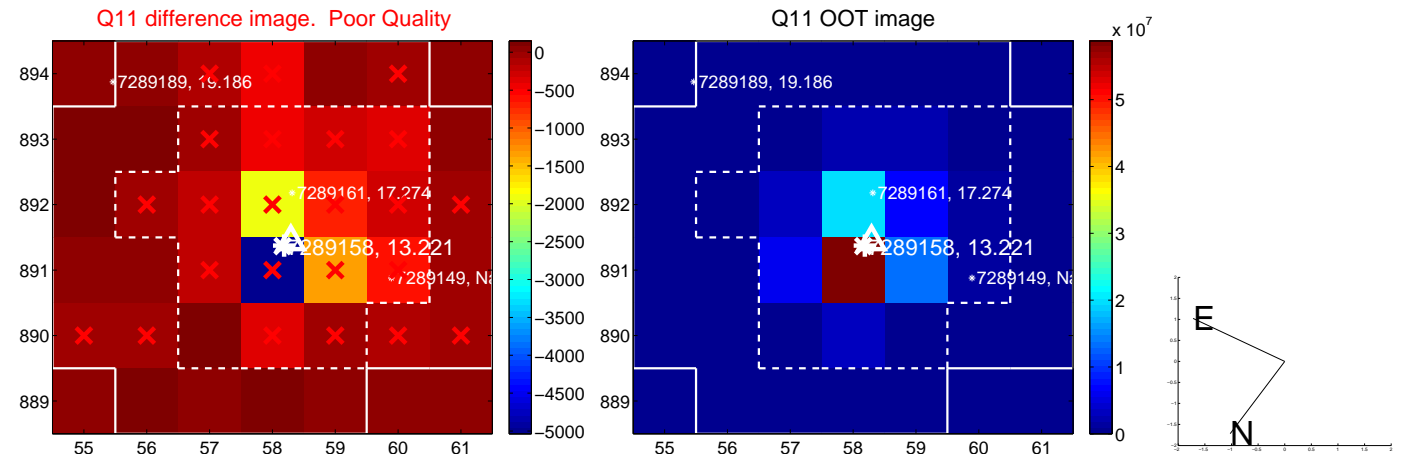
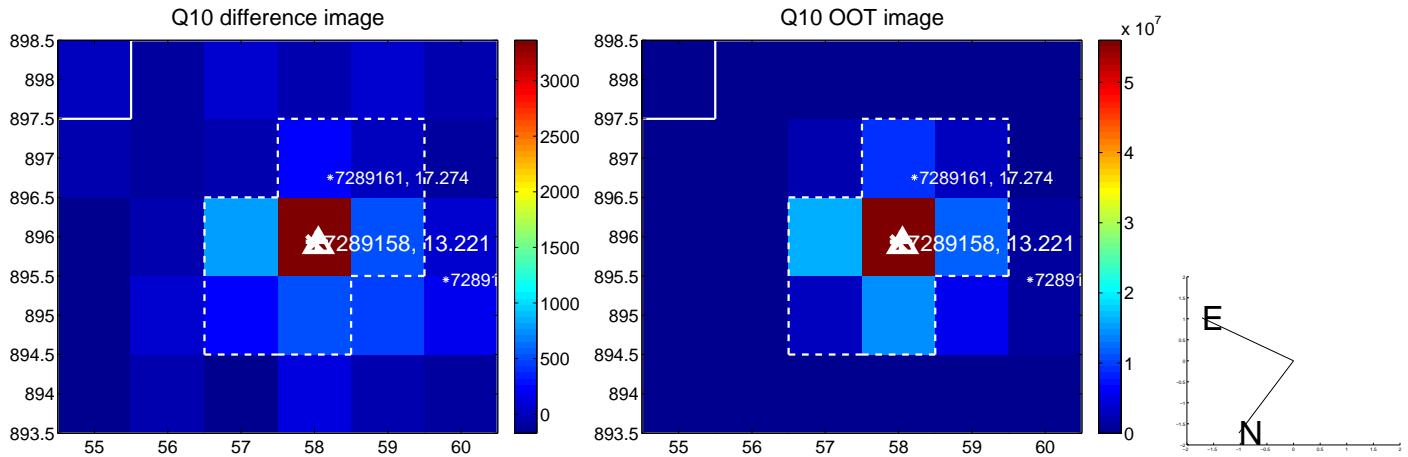
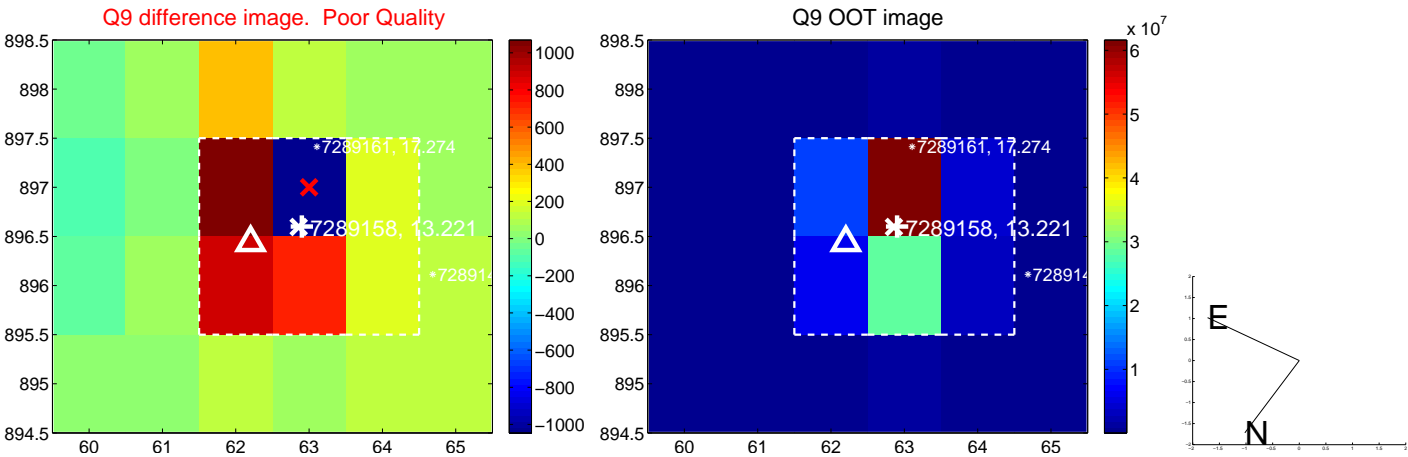
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



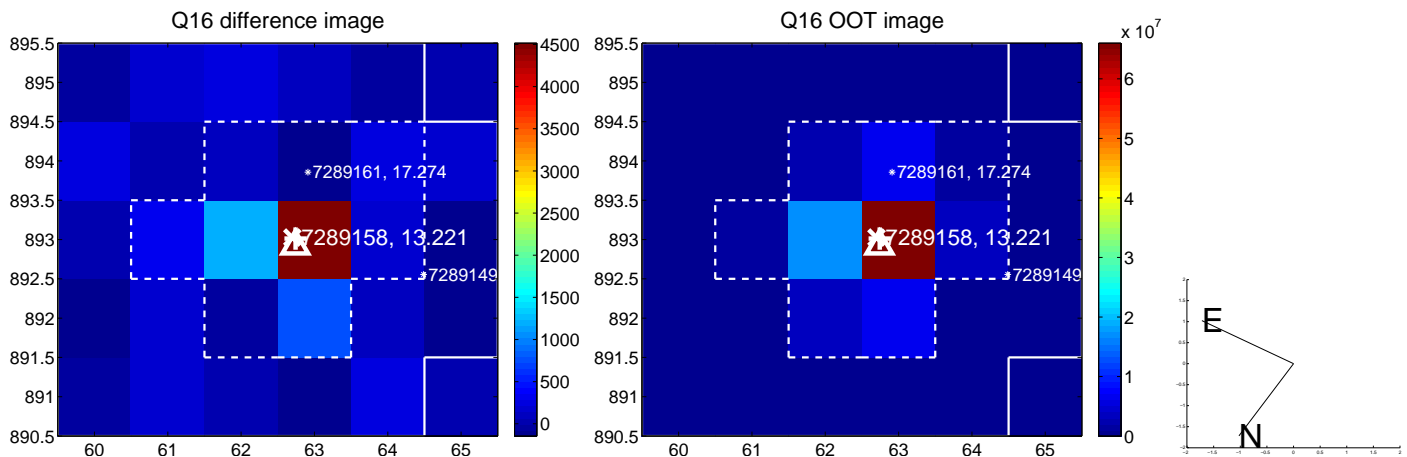
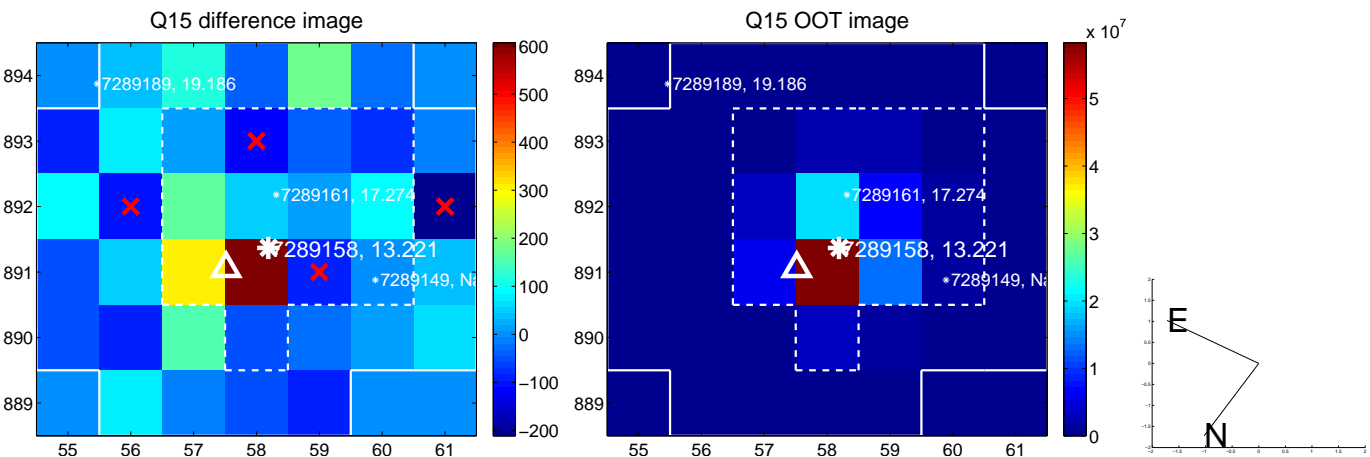
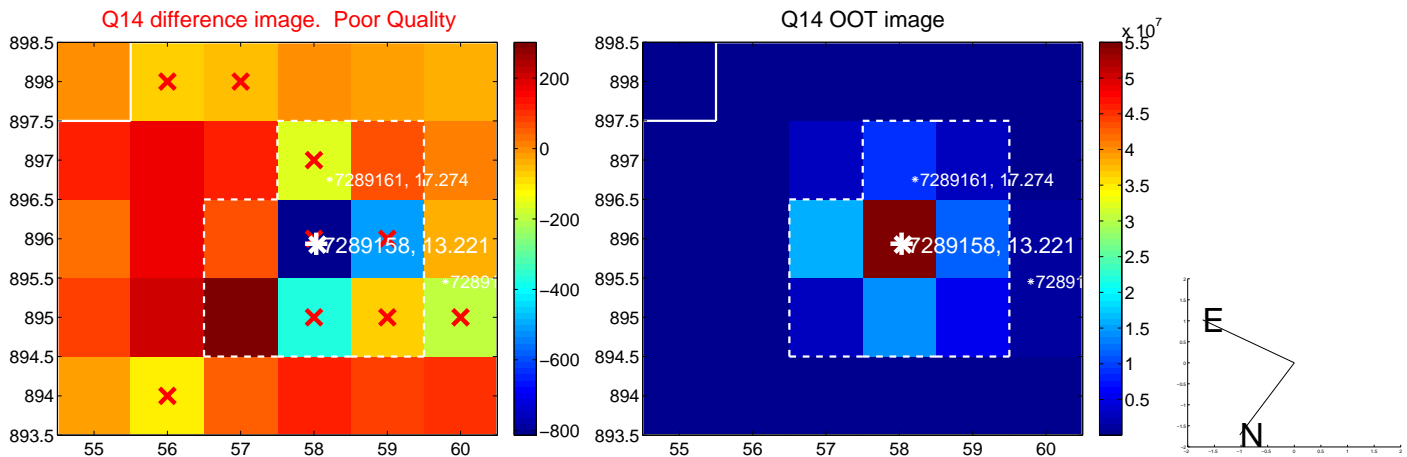
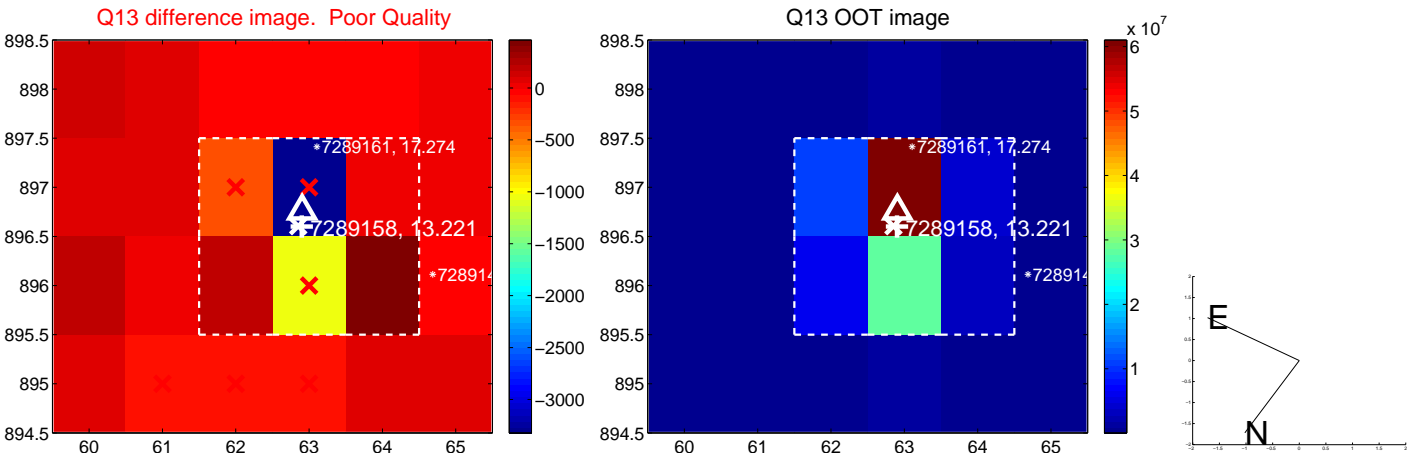
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



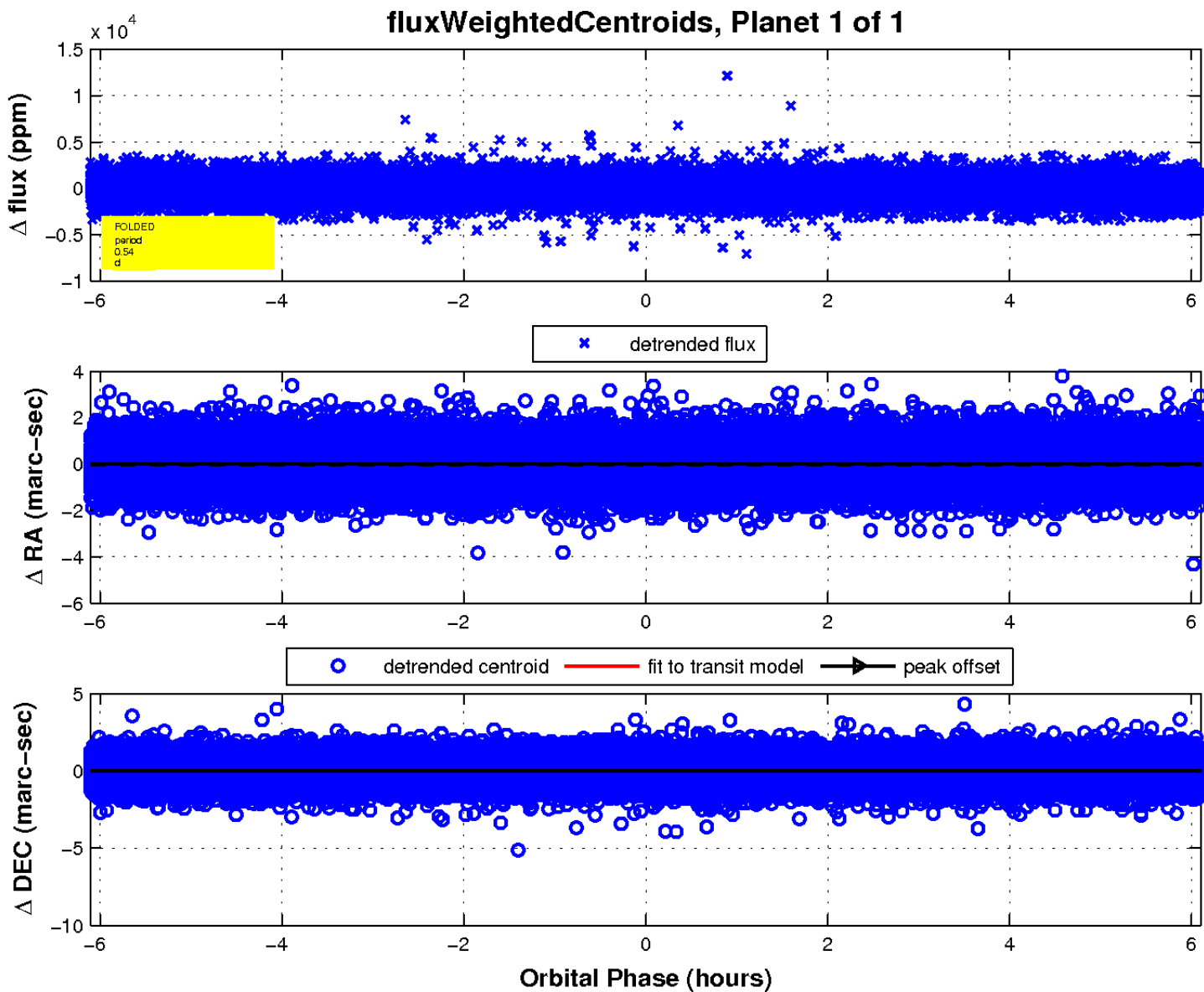
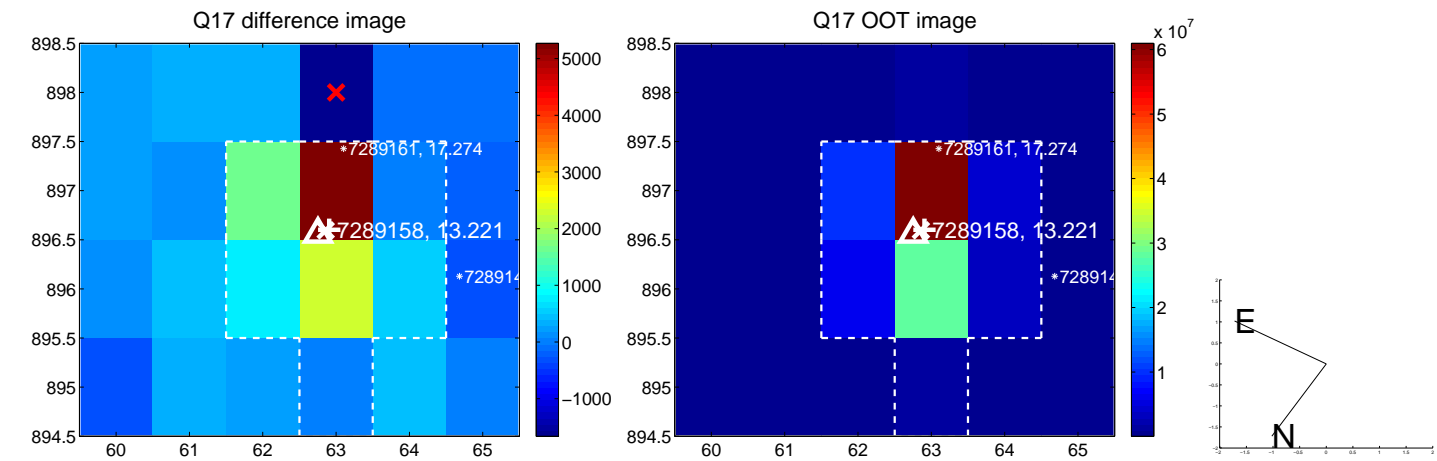
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

