

KIC 001577912

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})
001577912-01	OBS	No	0.680139	131.949574	31.2	3.600	8.4	6.9	2.39	8220	1.36	67584.98

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
001577912-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_SATURATED

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

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

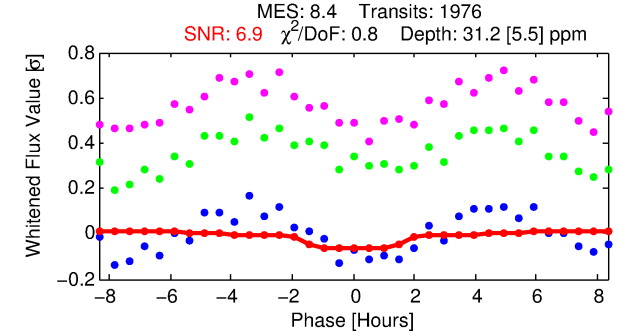
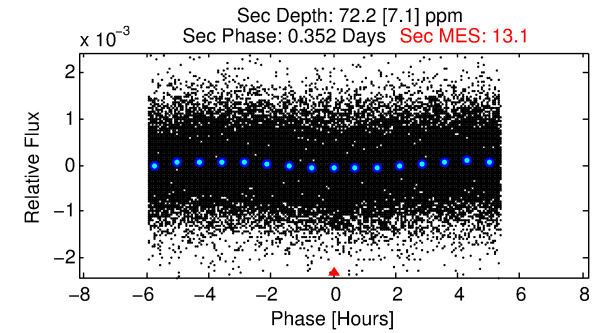
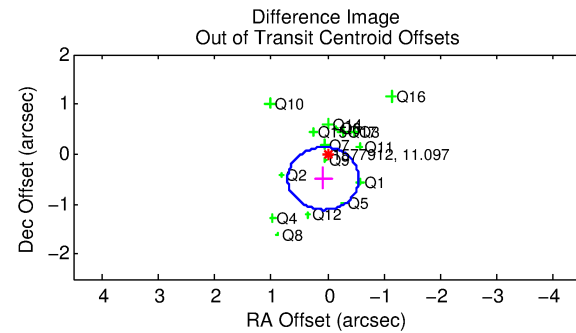
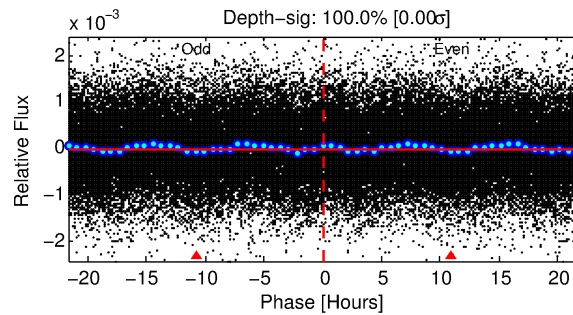
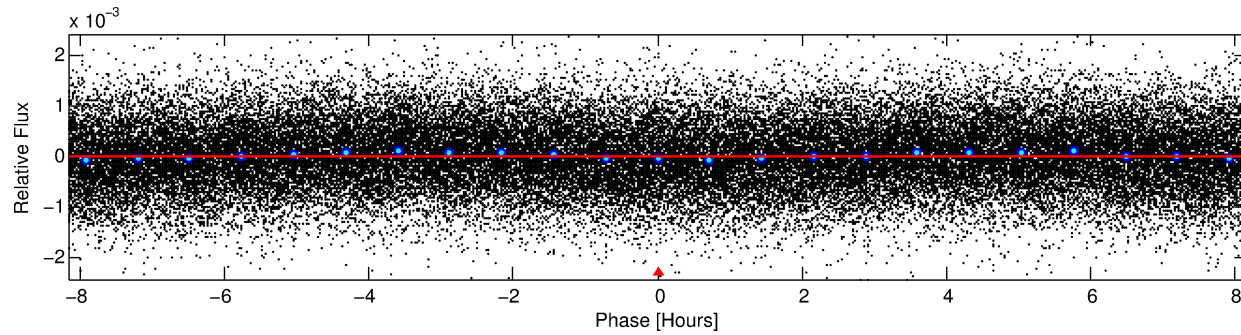
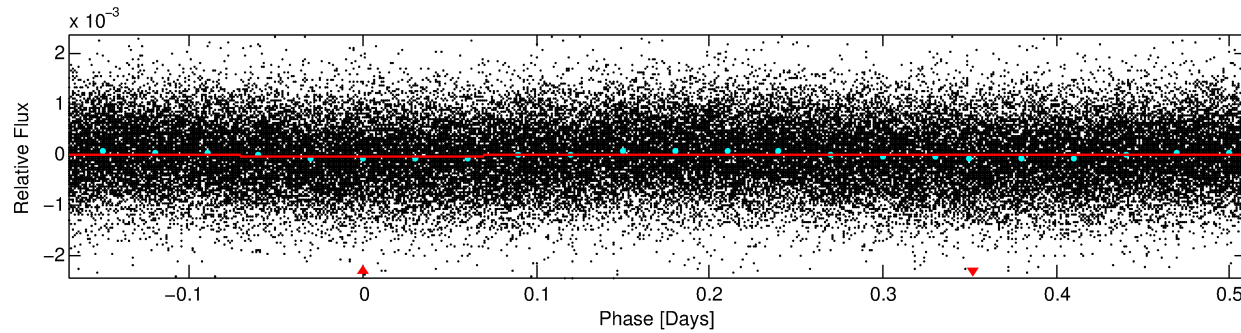
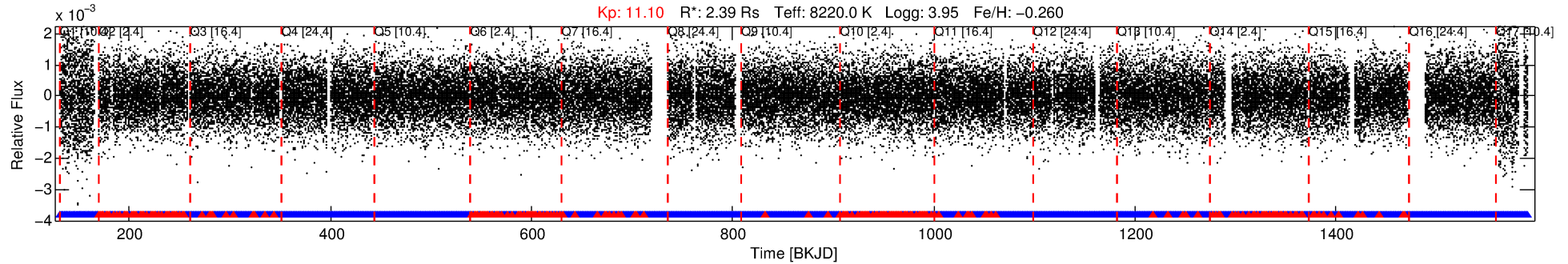
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 001577912-01

No Significant Match Found

DV One-Page Summary

KIC: 1577912 Candidate: 1 of 1 Period: 0.680 d



DV Fit Results:

Period = 0.68014 [0.00002] d
Epoch = 131.9496 [0.0080] BKJD
Rp/R* = 0.0052 [0.0083]
a/R* = 1.53 [8.03]
b = 0.30 [27.94]
Seff = 67584.98 [19205.20]
Teq = 4111 [292] K
Rp = 1.36 [2.19] Re
a = 0.0186 [0.0034] AU
Ag = 7.42 [23.84] [0.27 σ]
Teffp = 10492 [8393] K [0.76 σ]

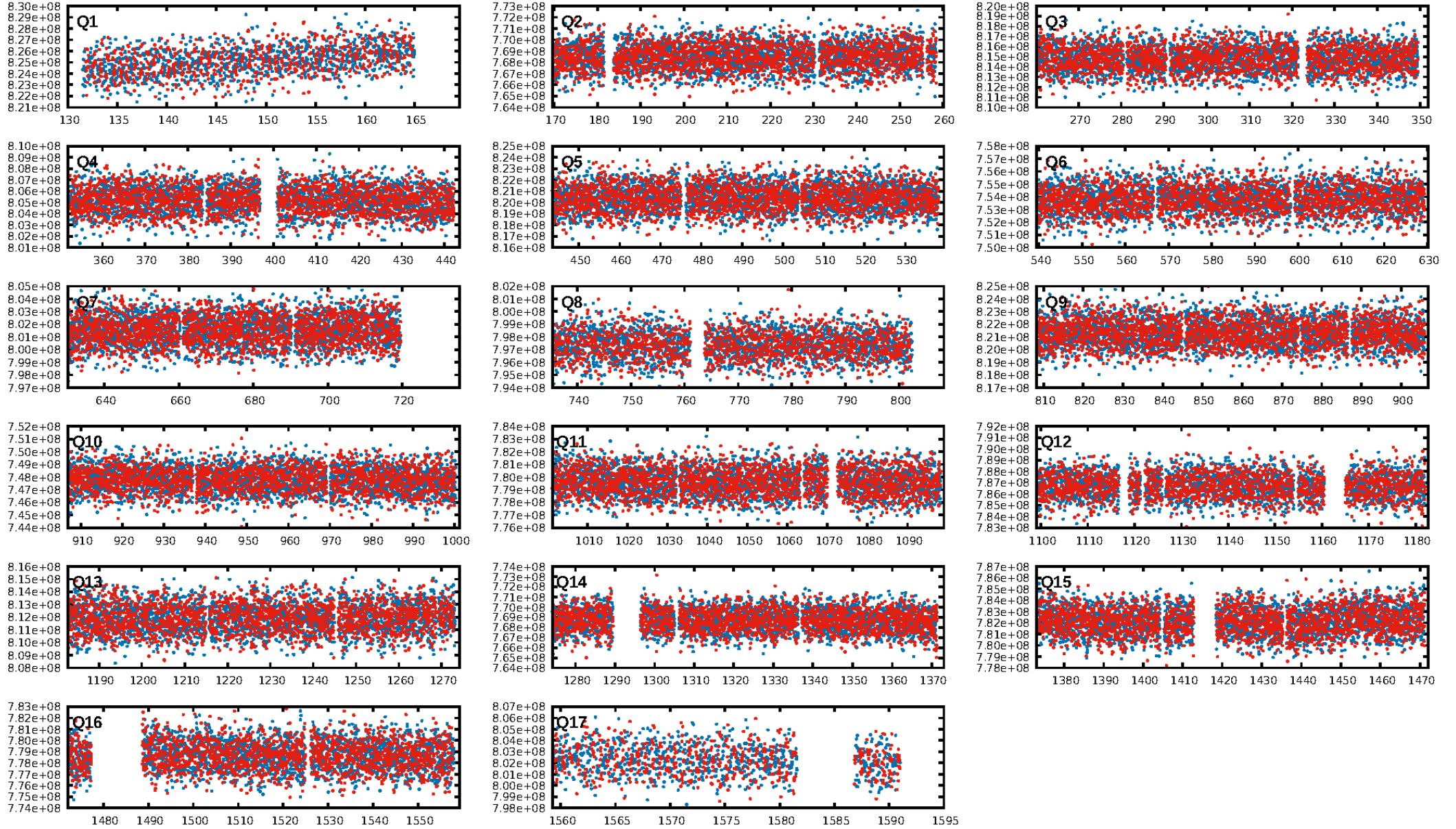
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.61e-12
RollingBand-fgt: 0.87 [1635/1887]
GhostDiagnostic-chr: 0.8839
Centroid-sig: 65.9%
Centroid-so: 0.440 arcsec [1.04 σ]
OotOffset-rm: 0.493 arcsec [2.36 σ]
KicOffset-rm: 0.422 arcsec [1.85 σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.88 [14/16]
DiffImageOverlap-fno: 1.00 [17/17]

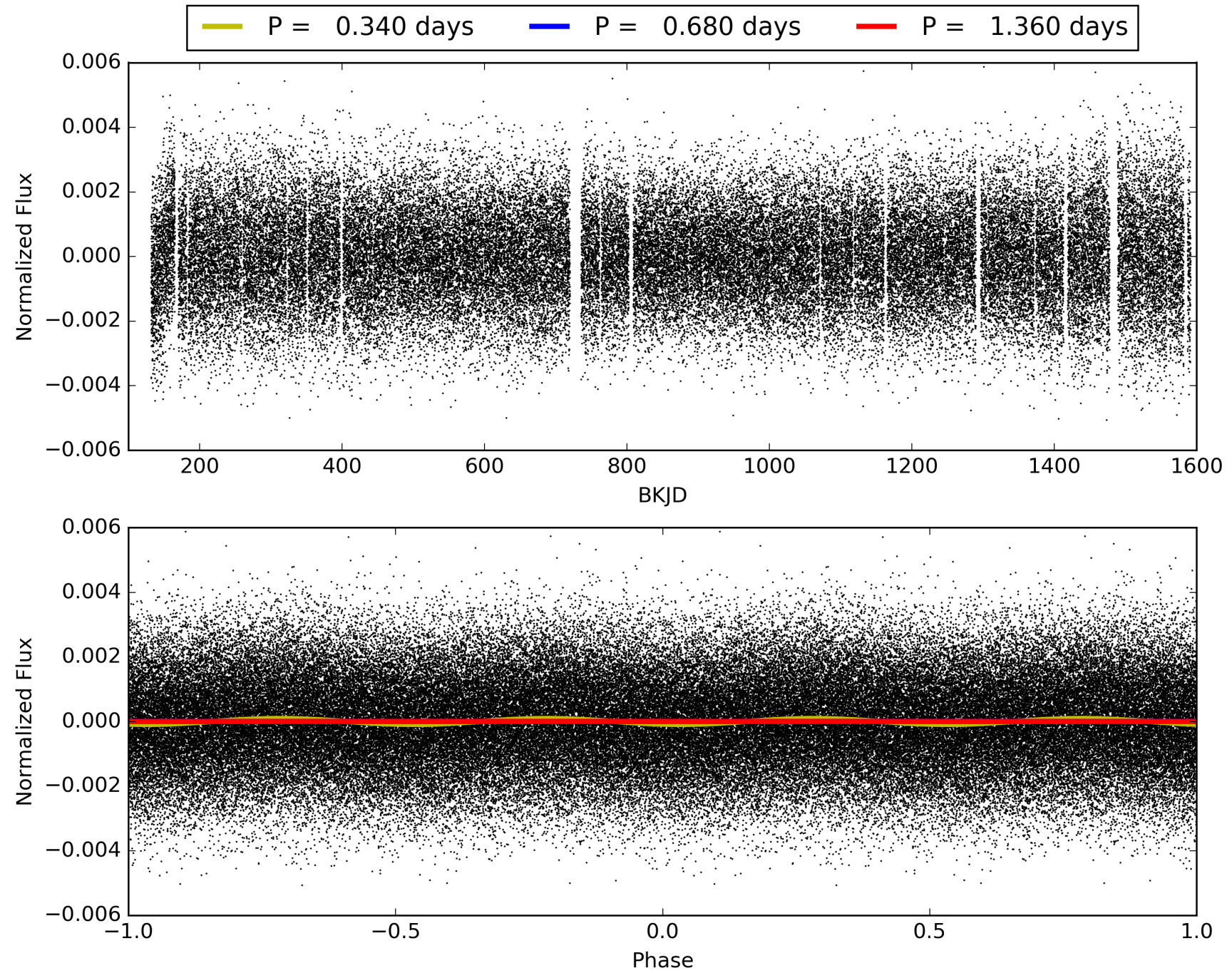
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 01:11:39 Z

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

TCE 001577912-01, PDC Light Curves

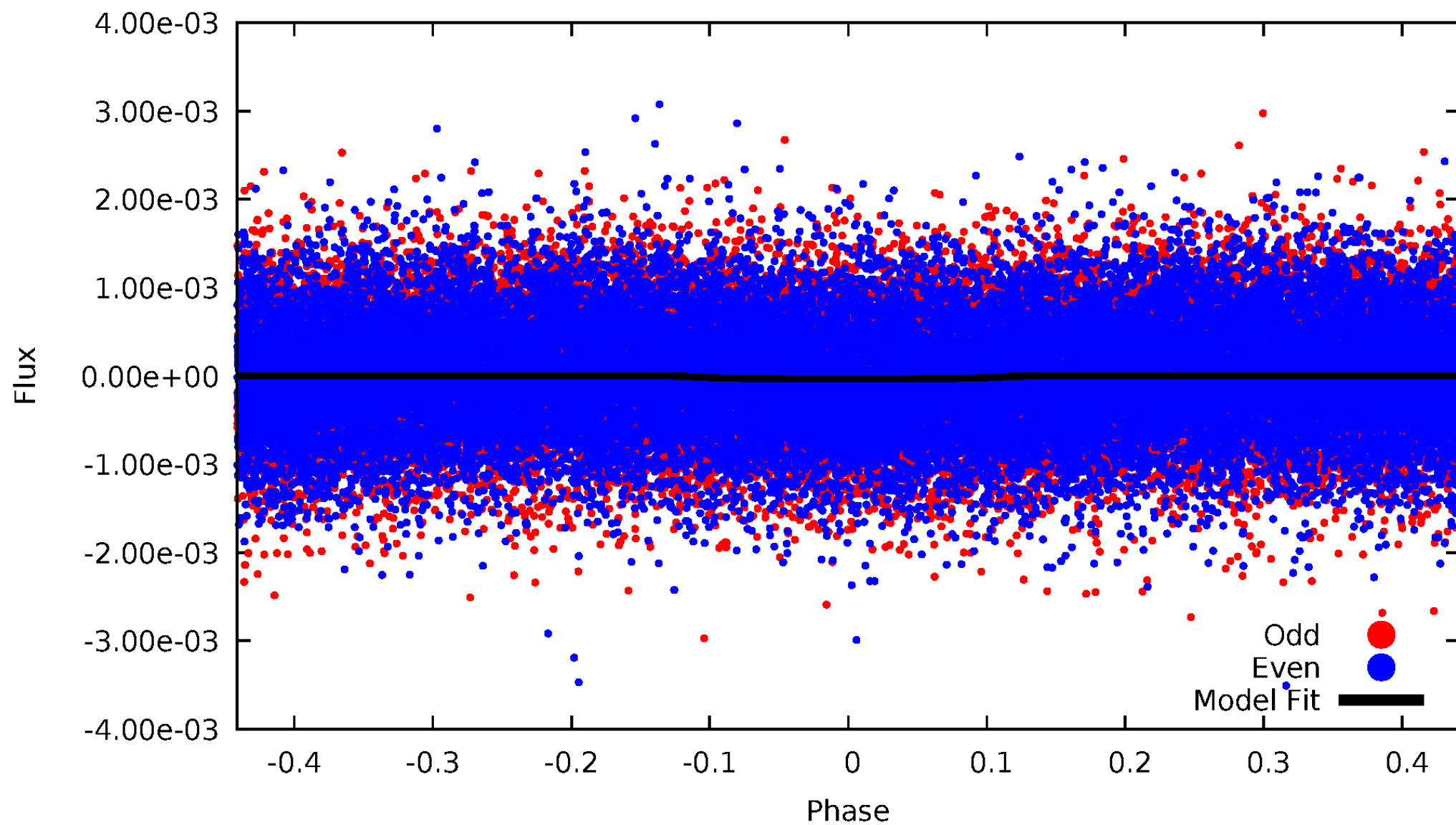


TCE 001577912-01



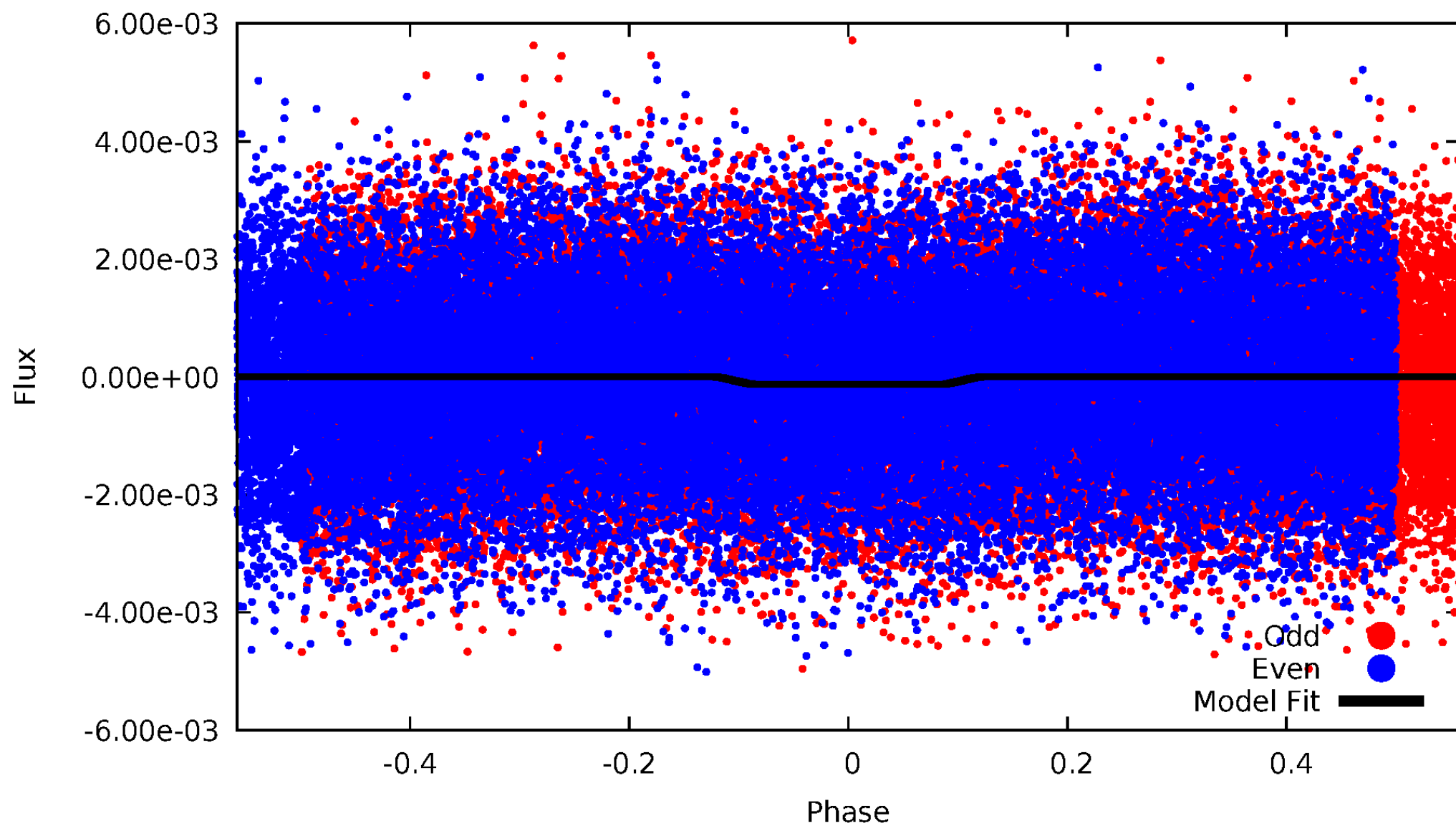
DV Odd/Even

TCE 001577912-01



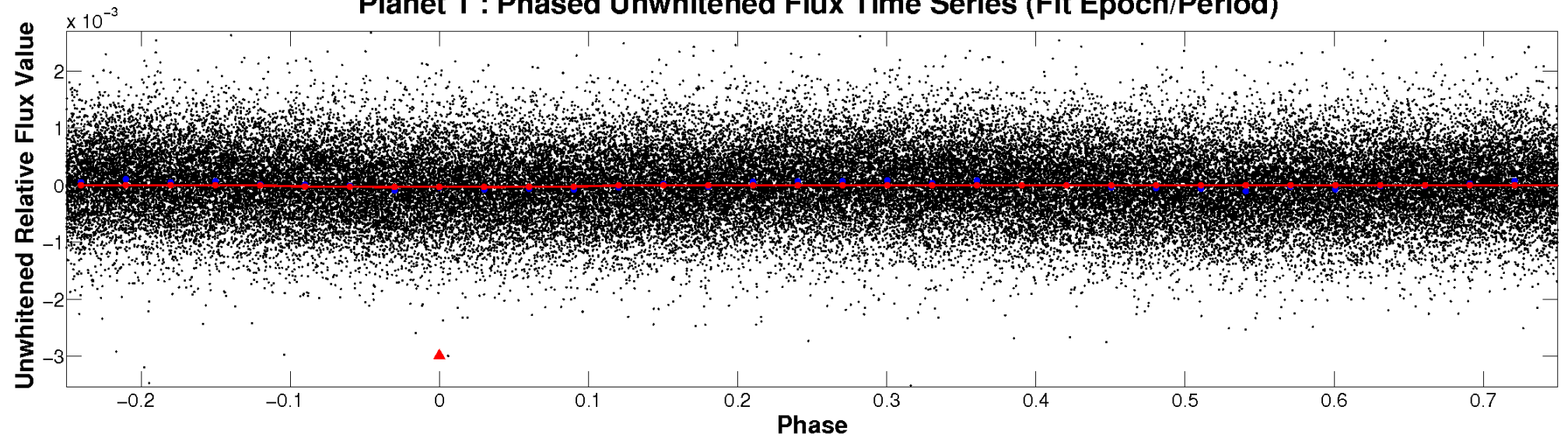
ALT Odd/Even

TCE 001577912-01

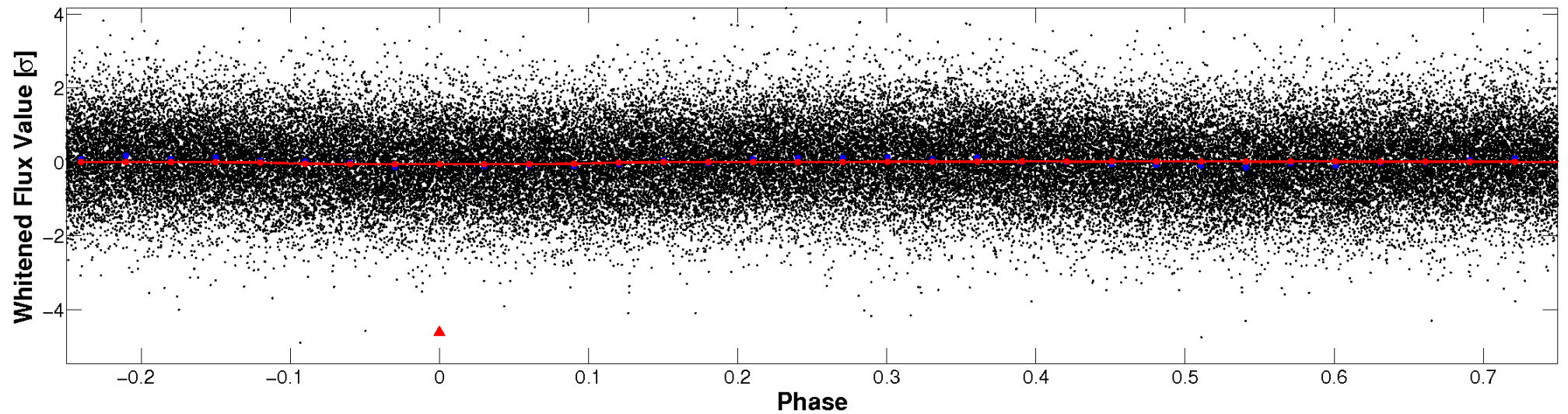


Non-Whitened Vs. Whitened Light Curve

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

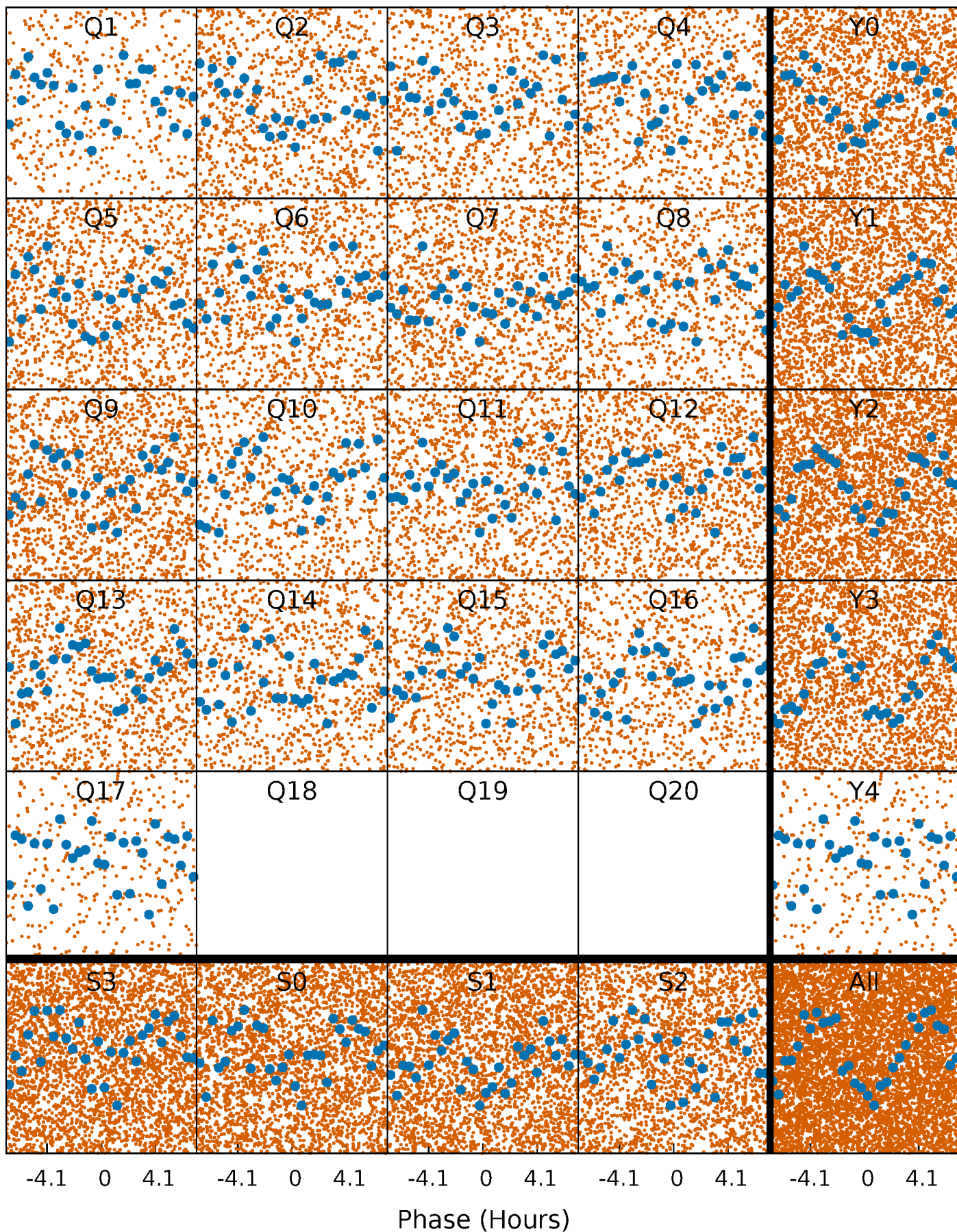


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



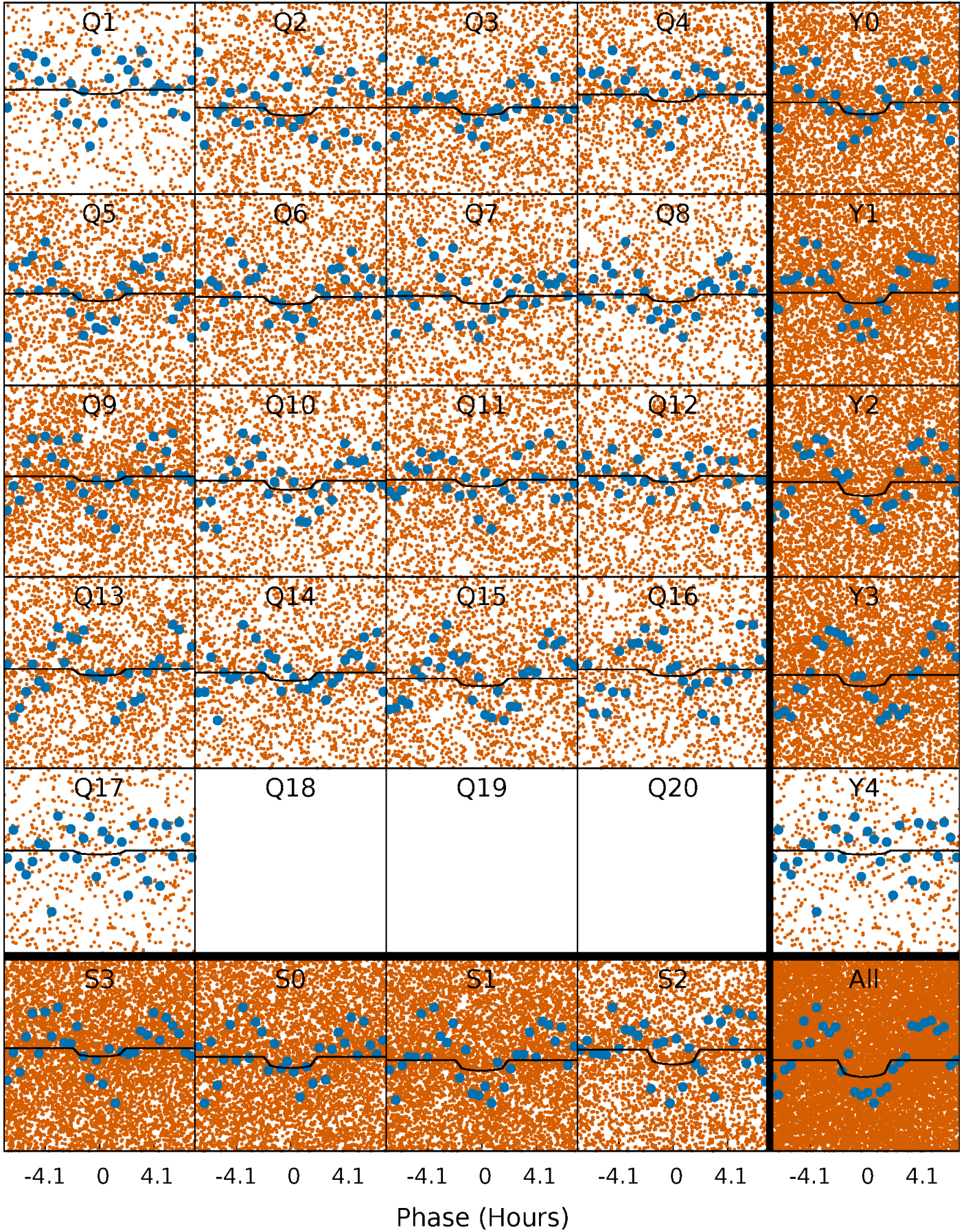
PDC Quarter-Phased Transit Curves

TCE 001577912-01 P= 0.680139 Days $T_0=131.949574$ (BKJD)



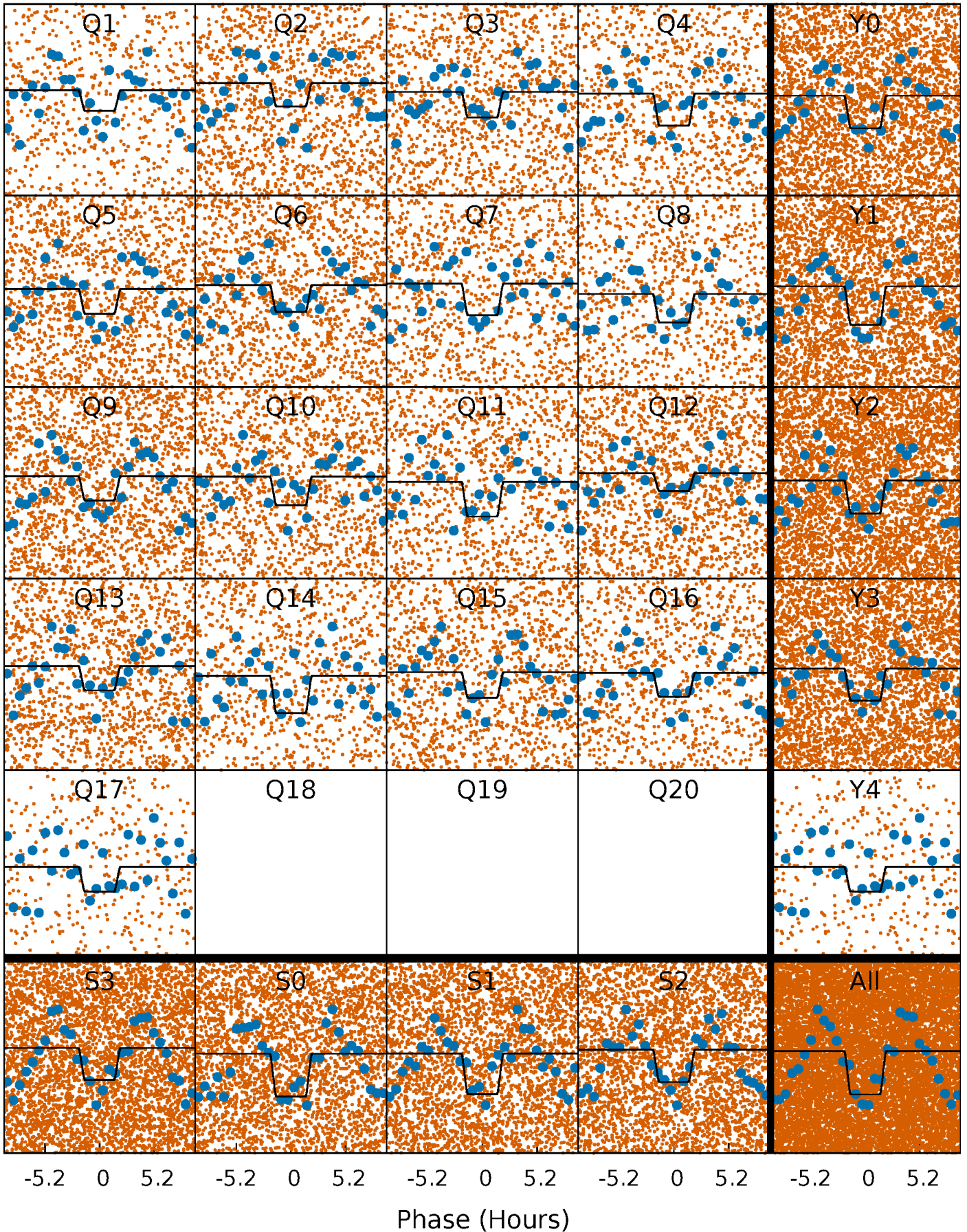
DV Quarter-Phased Transit Curves

TCE 001577912-01 P= 0.680139 Days $T_0=131.949574$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

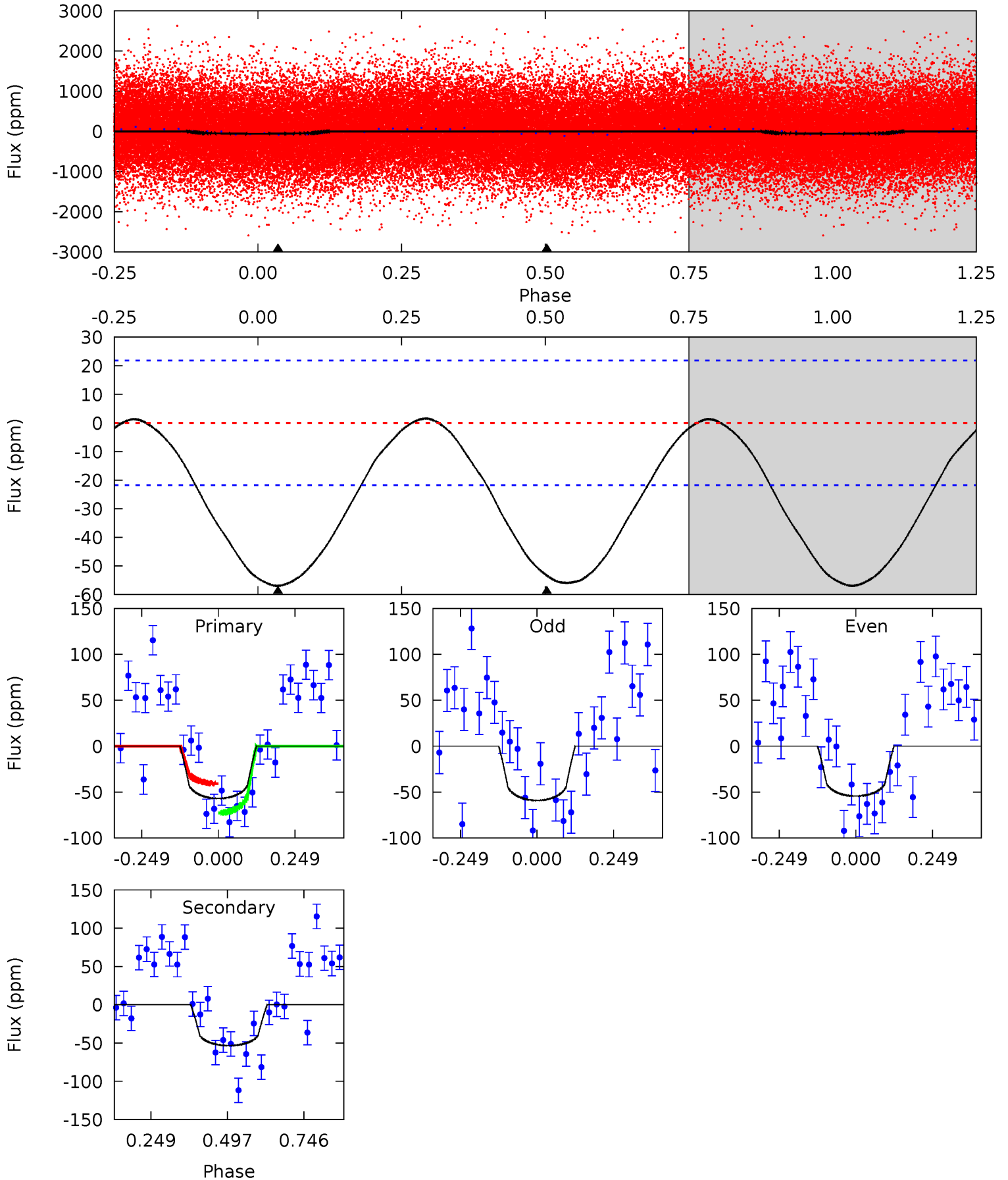
TCE 001577912-01 P= 0.680209 Days $T_0=131.899558$ (BKJD)



DV Model-Shift Uniqueness Test

001577912-01, P = 0.680139 Days, E = 131.269435 Days

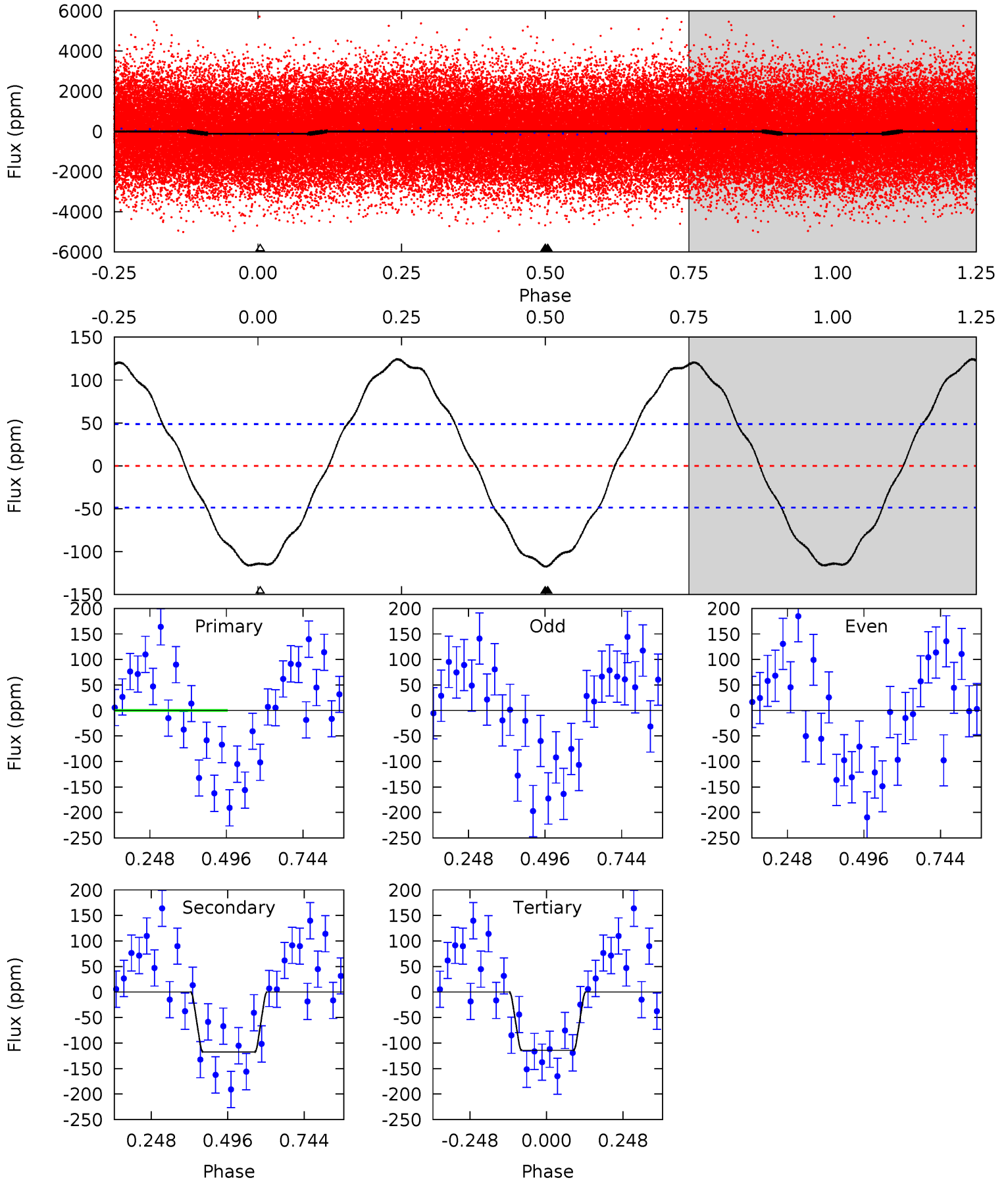
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.4	10.7	0	0	4.37	1.15	0.41	11.4	11.4	10.7	10.7	0.47	0.91	0.03	3.21



Alt Model-Shift Uniqueness Test

001577912-01, P = 0.680209 Days, E = 131.219349 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	10.6	10.3	0	4.37	1.16	7.46	0.24	10.5	0.29	10.6	0.14	0.98	0.51	0.08



Stellar Parameters For KIC 001577912

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8220^{+74}_{-82}	$3.949^{+0.161}_{-0.069}$	$-0.260^{+0.100}_{-0.150}$	$2.390^{+0.222}_{-0.482}$	$1.853^{+0.026}_{-0.206}$	$0.191^{+0.159}_{-0.044}$
	+1%/-1%	+4%/-2%	+38%/-58%	+9%/-20%	+1%/-11%	+83%/-23%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 001577912-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-53 ± 5	$2.00^{+1.84}_{-1.26}$	5724^{+175}_{-286}	7591^{+9608}_{-2688}	$2.524^{+15.206}_{-1.862}$
Alt.	-117 ± 11	$3.08^{+2.06}_{-1.80}$	5704^{+182}_{-279}	7302^{+6933}_{-2077}	$2.288^{+10.734}_{-1.449}$

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

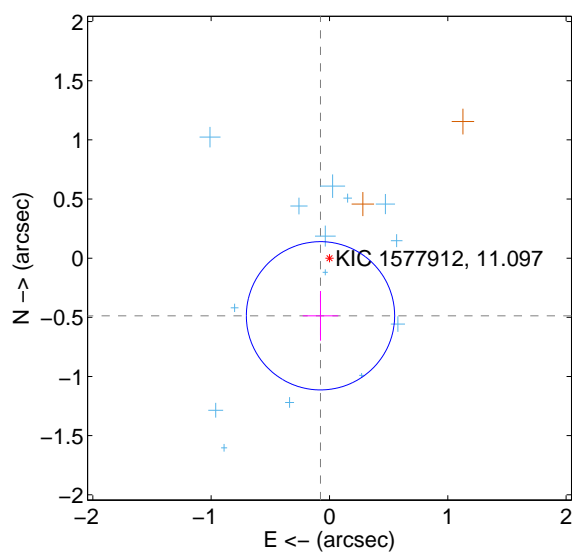
Supplemental centroid analysis for 001577912-01. **Kepler magnitude: 11.10.** Transit SNR 6.93

There are 14 quarters with good PRF difference image offsets

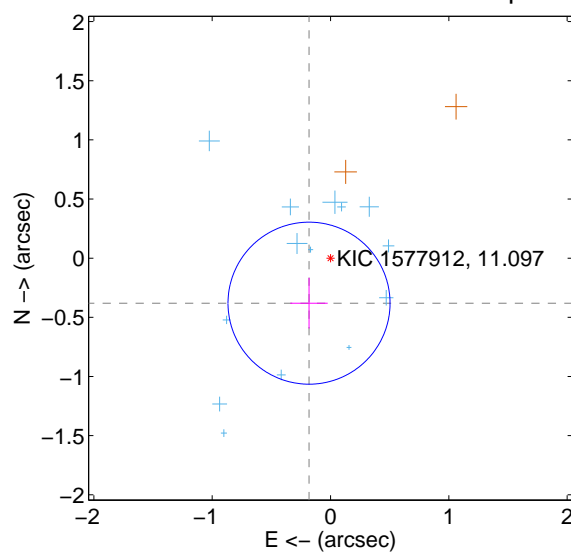
The direct PRF centroid is offset from the target star catalog position by about 0.31 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.493 ± 0.209	2.36	0.076 ± 0.150	-0.487 ± 0.210
PRF-fit source offset from KIC position	0.422 ± 0.228	1.85	0.182 ± 0.158	-0.380 ± 0.214
photometric centroid source offset	0.44 ± 0.42	1.04	0.03 ± 0.25	0.44 ± 0.42

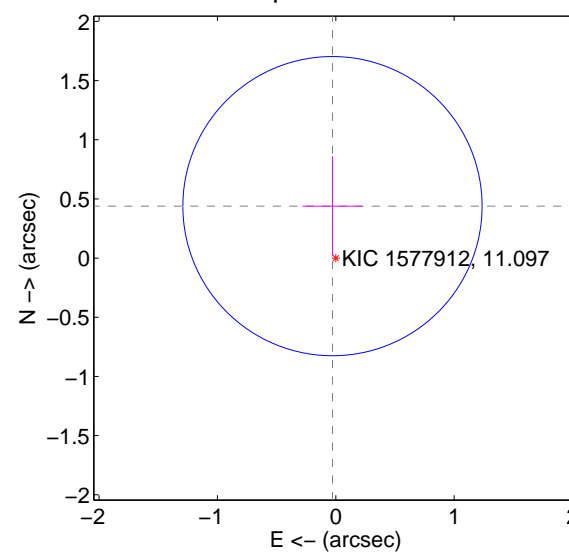
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

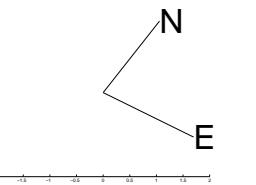
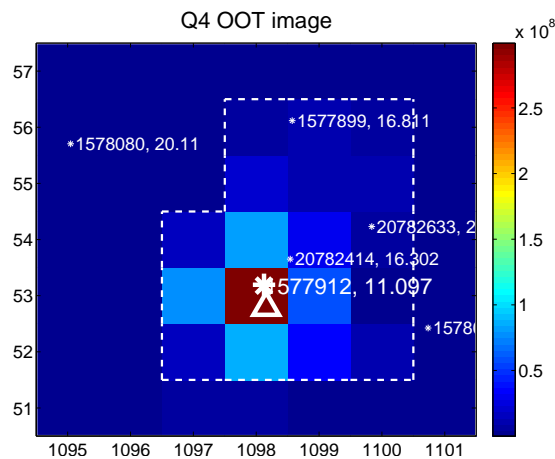
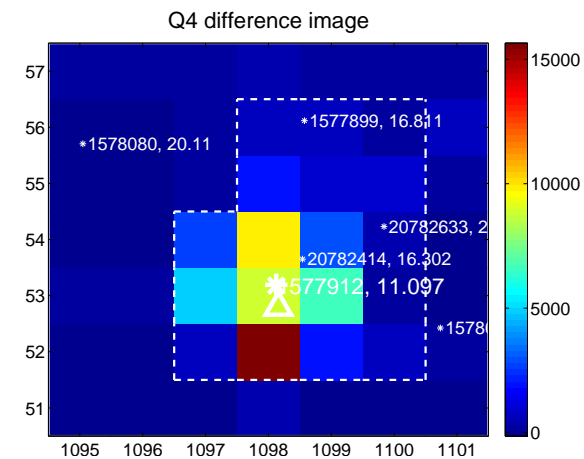
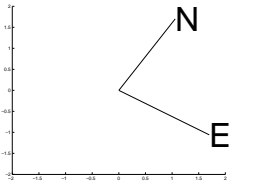
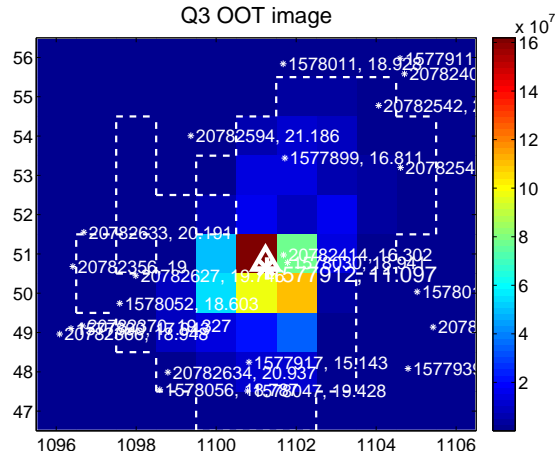
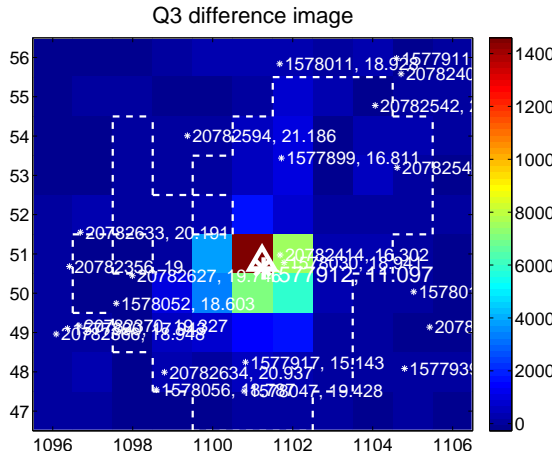
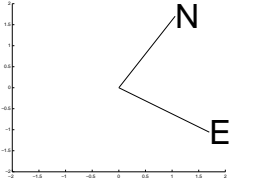
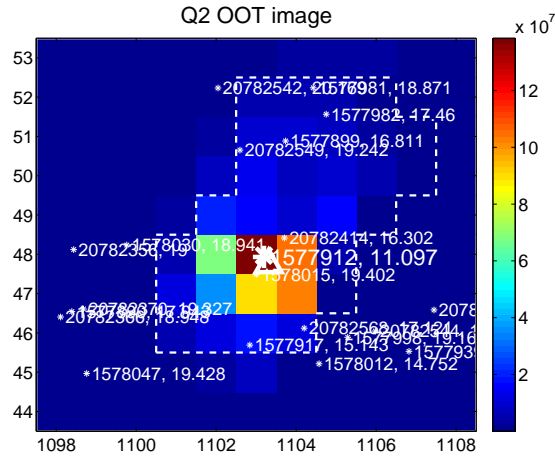
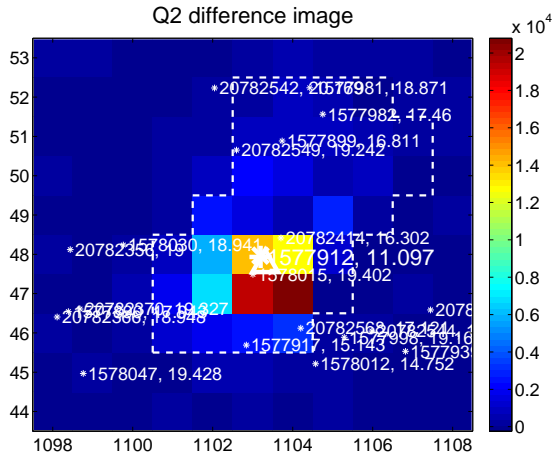
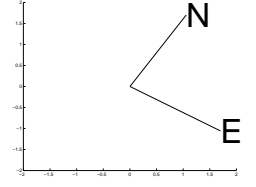
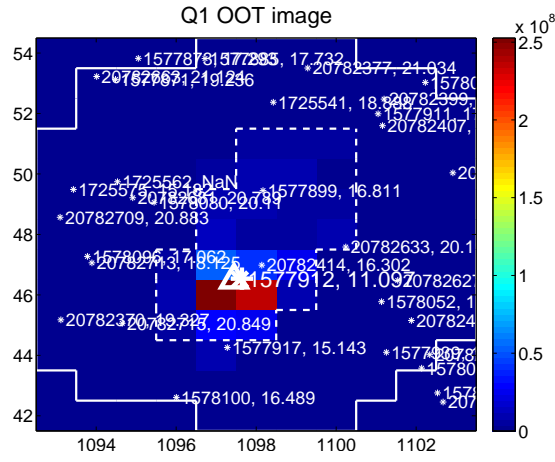
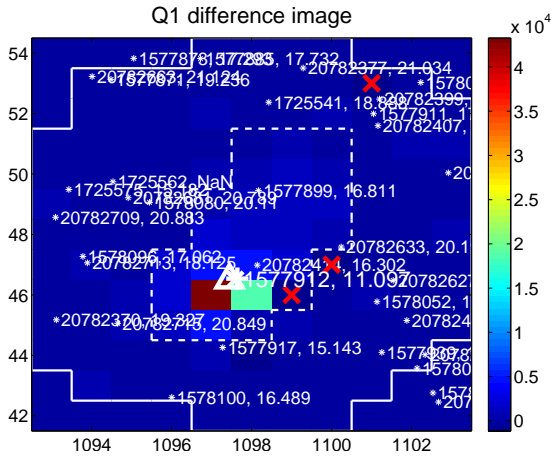


offset from photometric centroids

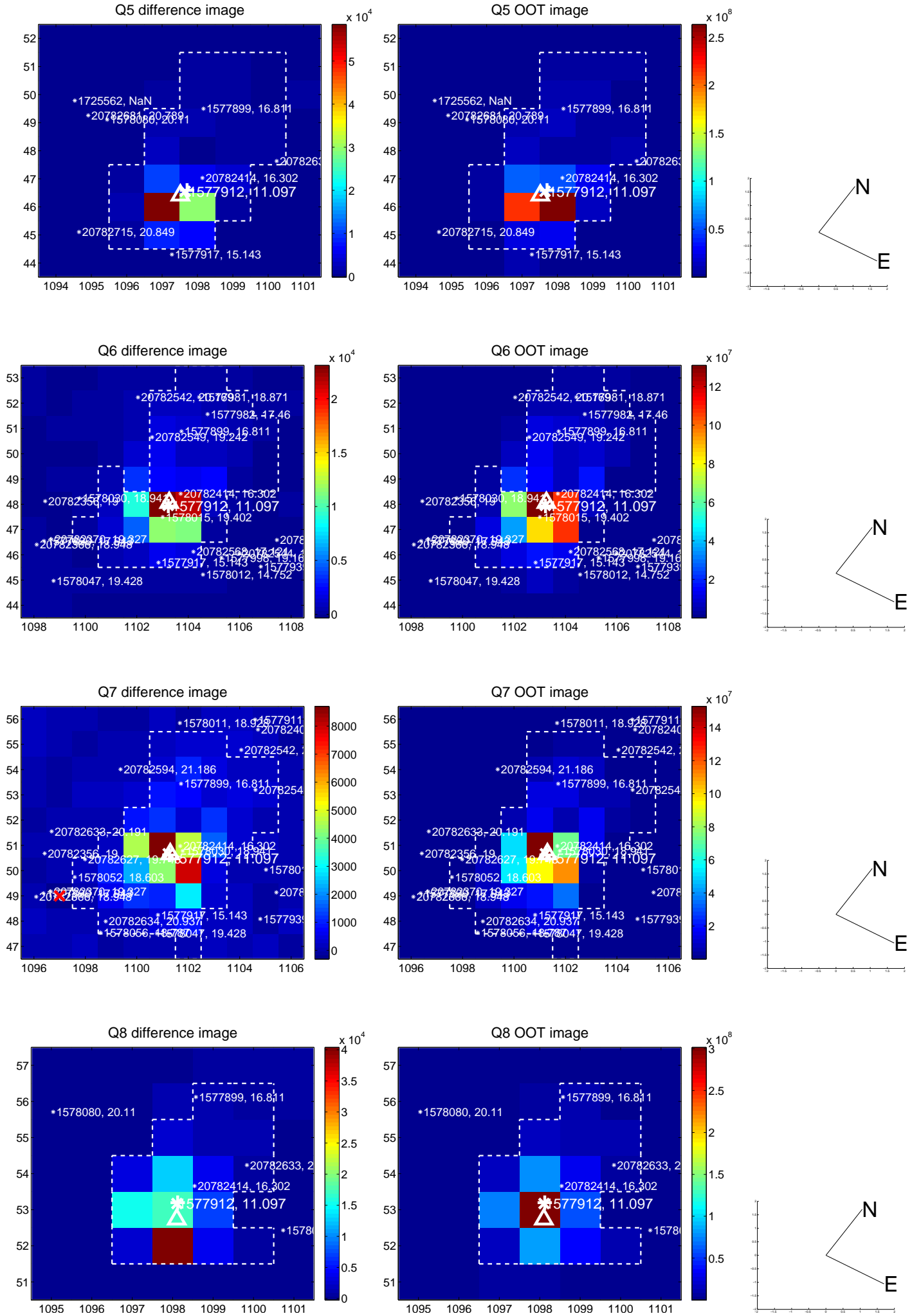


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

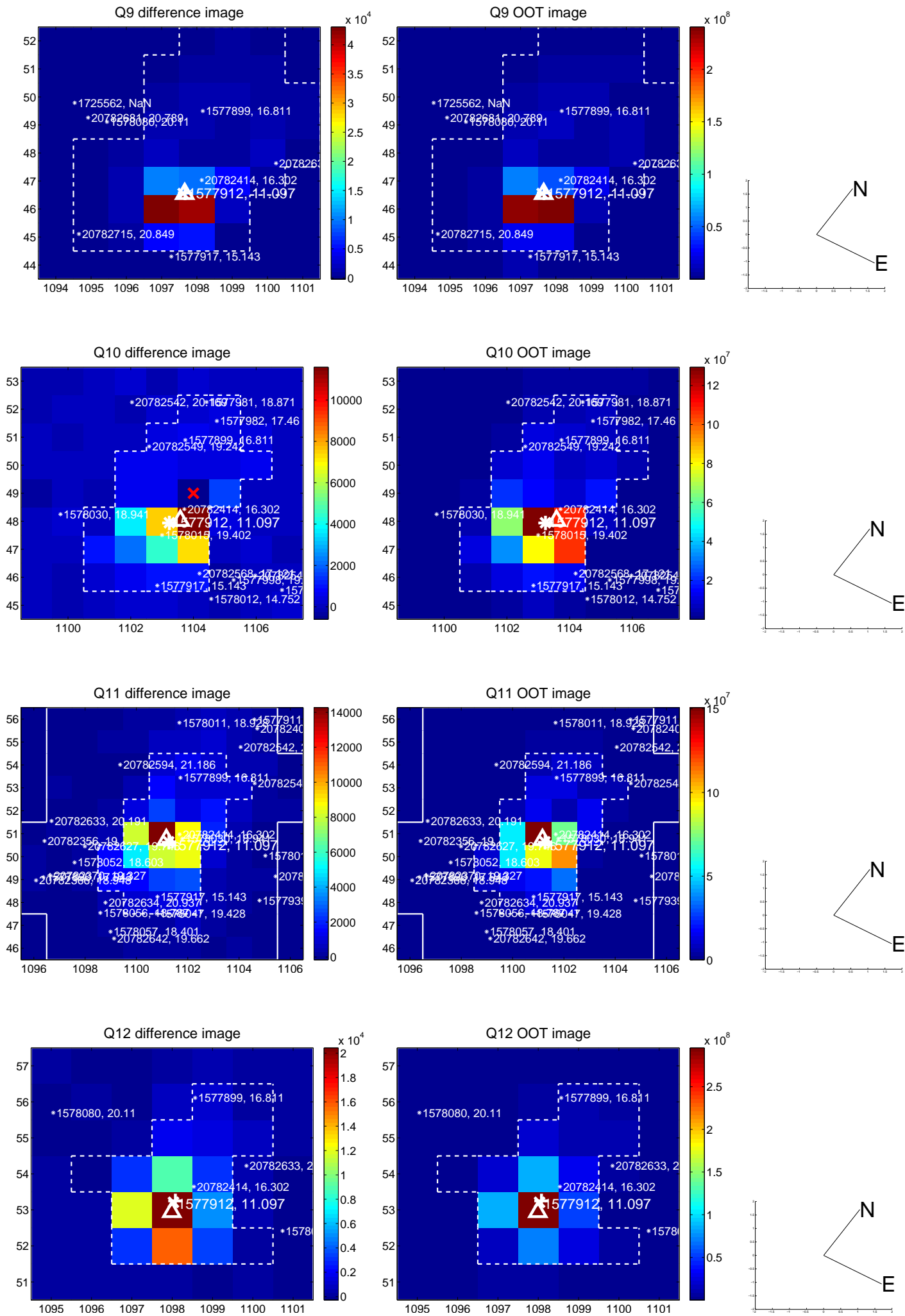
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



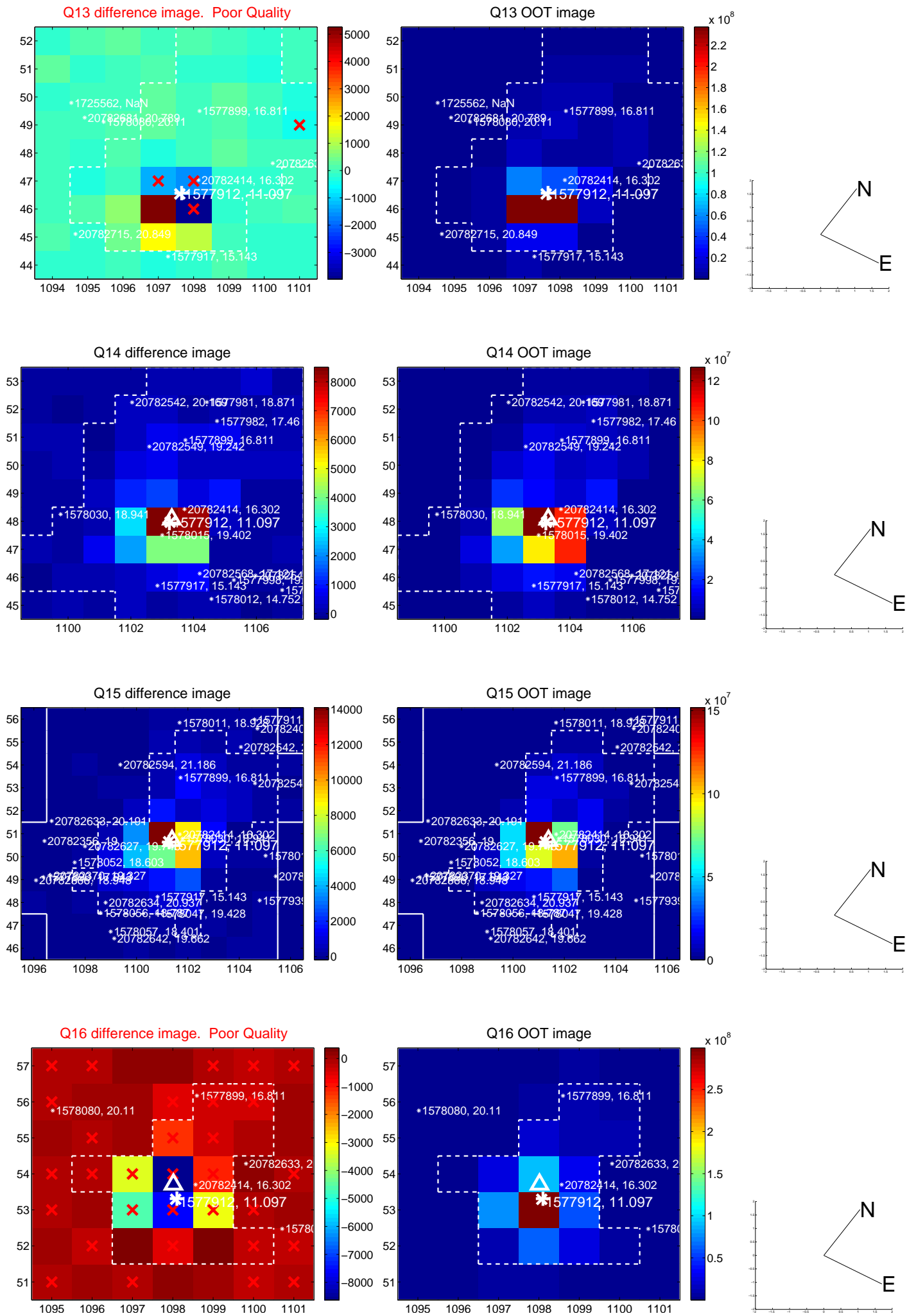
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



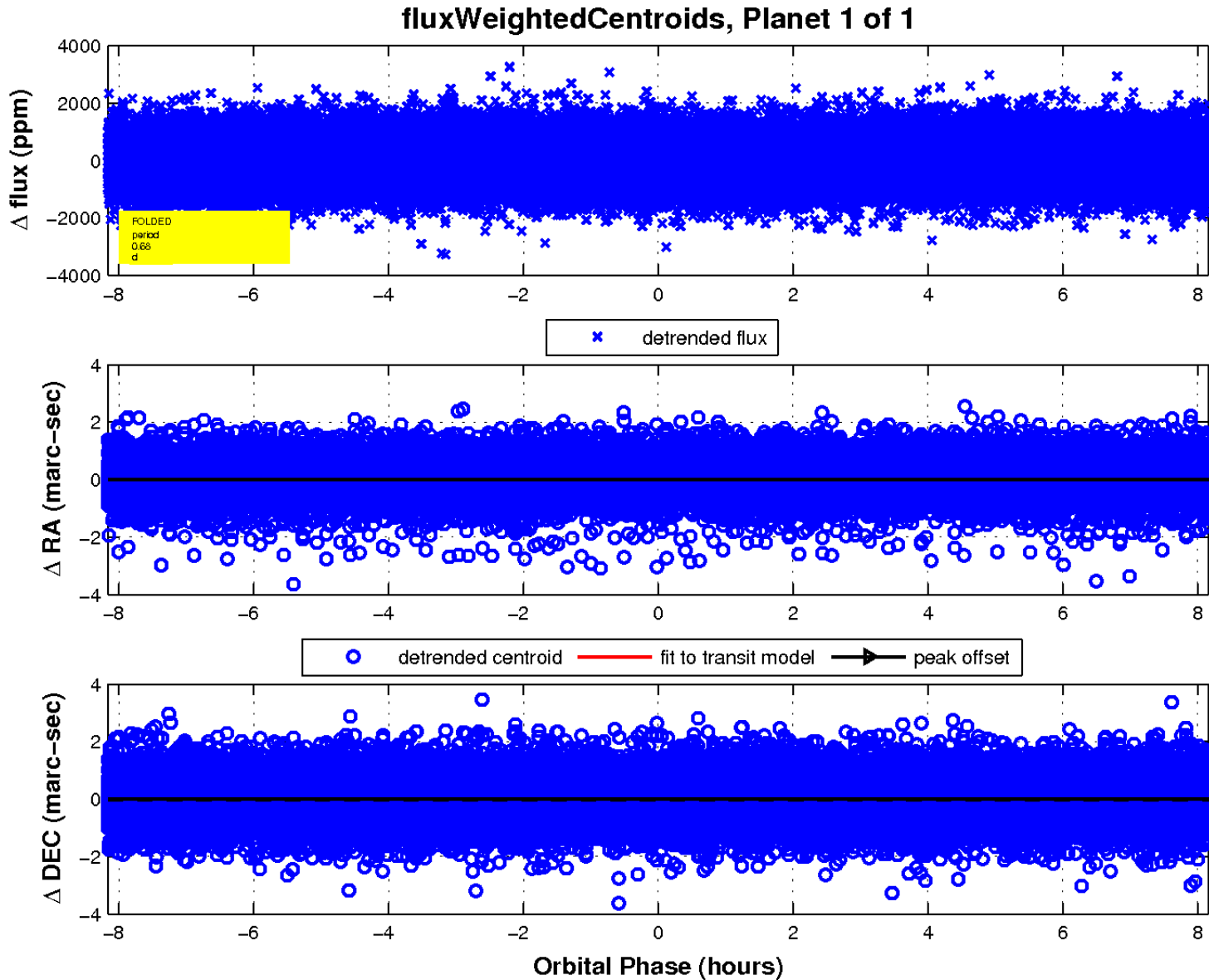
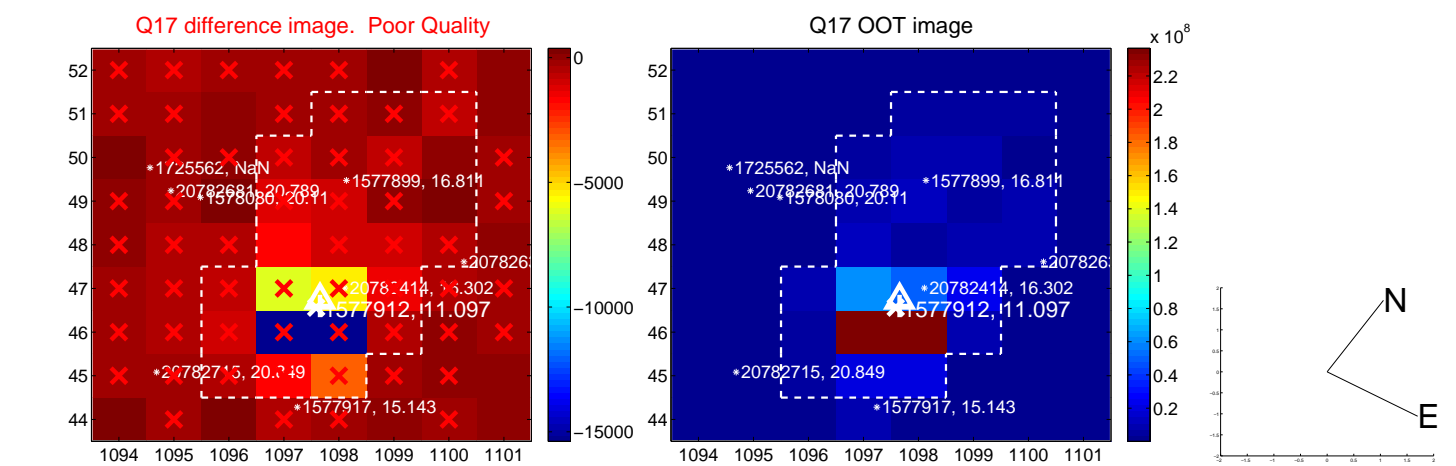
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

