

KIC 007986162

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})
007986162-01	OBS	No	0.594071	131.767073	160.4	2.217	8.0	8.2	0.82	5233	1.26	2853.63

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007986162-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_KIC_POS

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

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

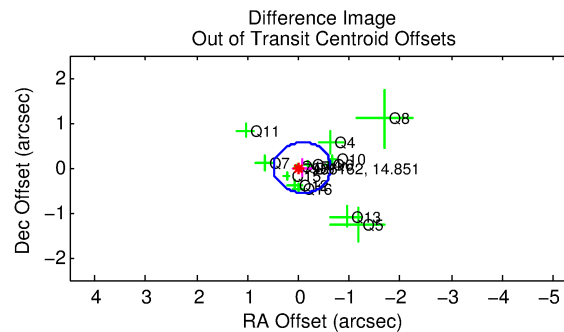
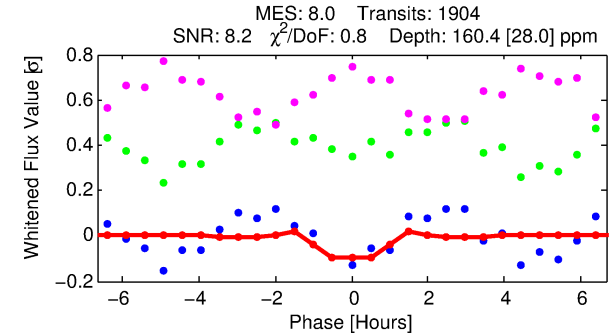
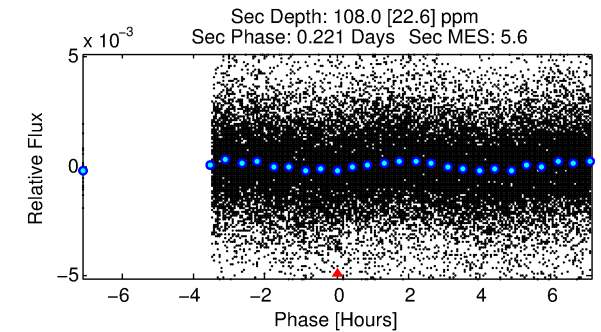
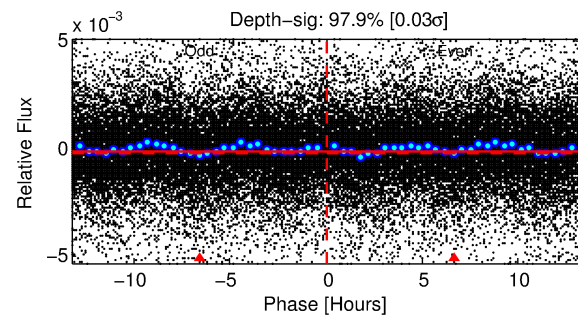
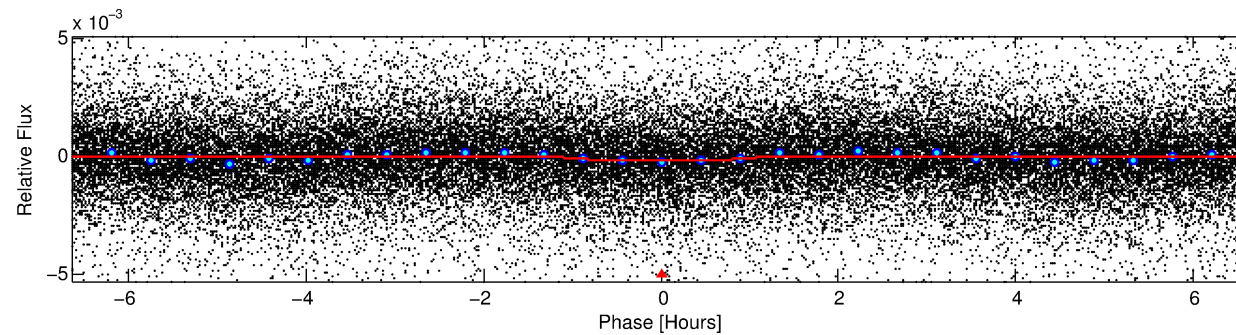
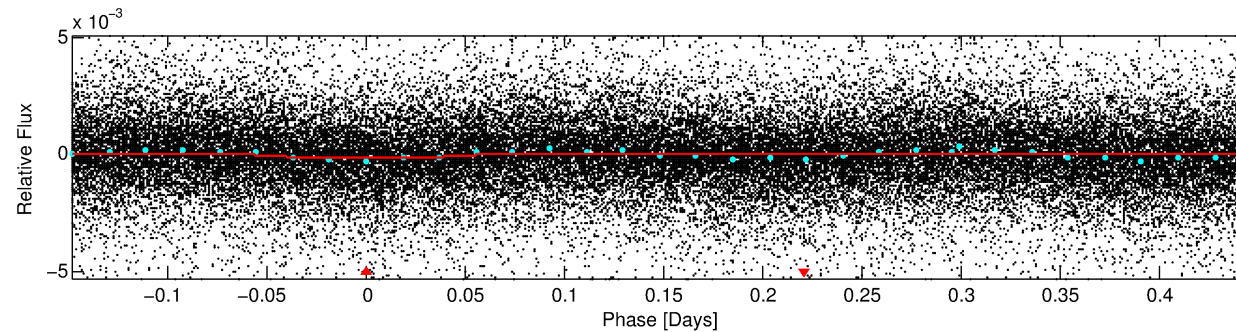
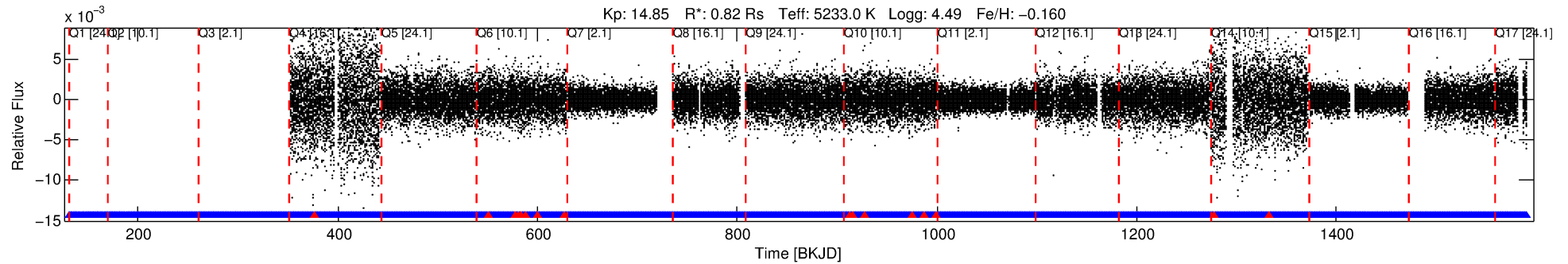
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007986162-01

No Significant Match Found

DV One-Page Summary

KIC: 7986162 Candidate: 1 of 1 Period: 0.594 d



DV Fit Results:

Period = 0.59407 [0.00001] d
Epoch = 131.7671 [0.0030] BKJD
Rp/R* = 0.0141 [0.0113]
a/R* = 1.34 [2.00]
b = 0.90 [0.72]
Seff = 2853.63 [701.61]
Teq = 1864 [115] K
Rp = 1.26 [1.03] Re
a = 0.0126 [0.0016] AU
Ag = 5.94 [9.70] [0.51σ]
Teffp = 4499 [1829] K [1.44σ]

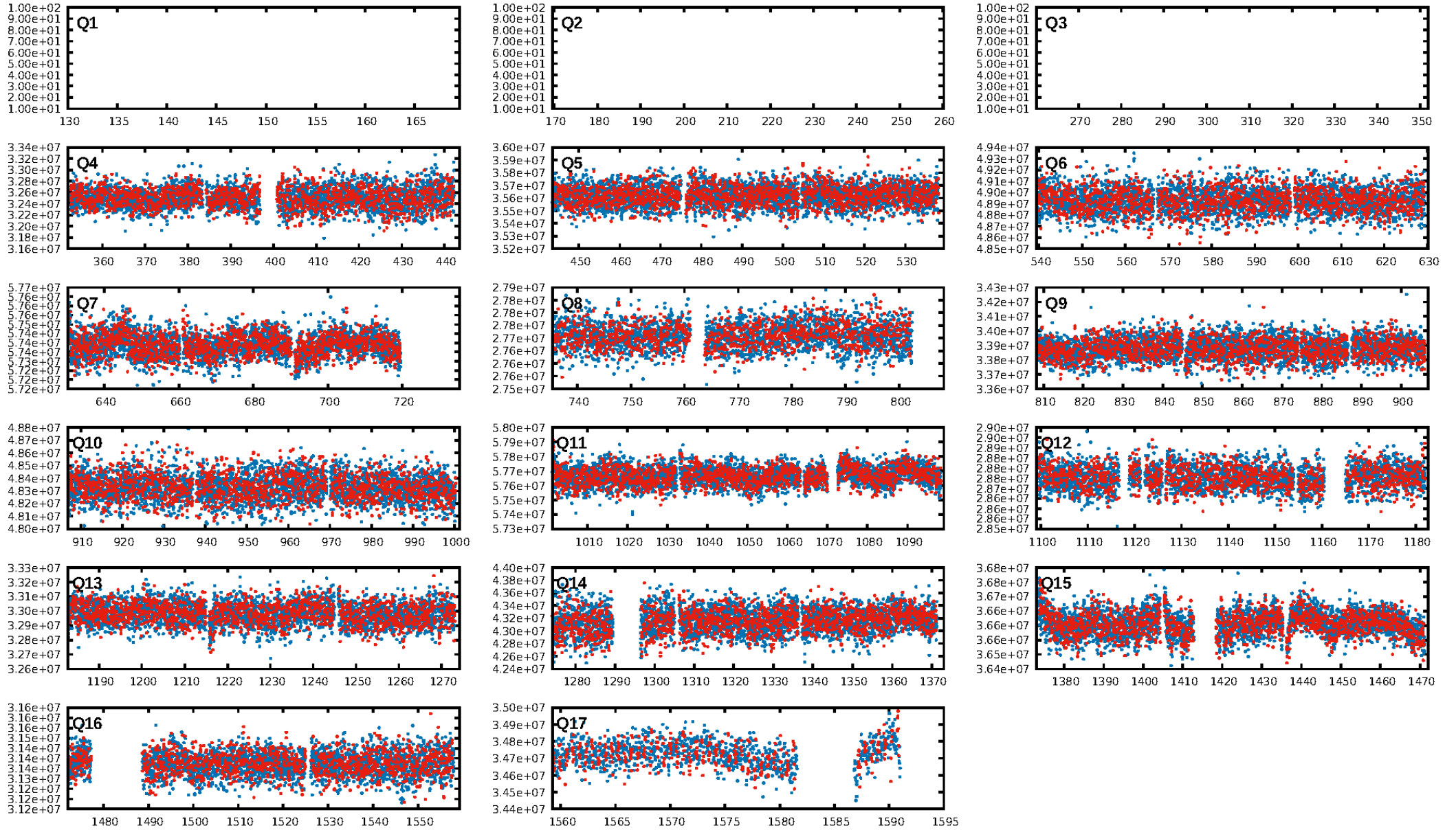
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.62e-12
RollingBand-fgt: 0.99 [1843/1859]
GhostDiagnostic-chr: -1.071
Centroid-sig: 82.4%
Centroid-so: 1.548 arcsec [17.85σ]
OotOffset-rm: 0.073 arcsec [0.39σ]
KicOffset-rm: 4.227 arcsec [23.85σ]
OotOffset-st: 3/3/4/4 [14]
KicOffset-st: 3/3/4/4 [14]
DiffImageQuality-fgm: 0.93 [13/14]
DiffImageOverlap-fno: 1.00 [14/14]

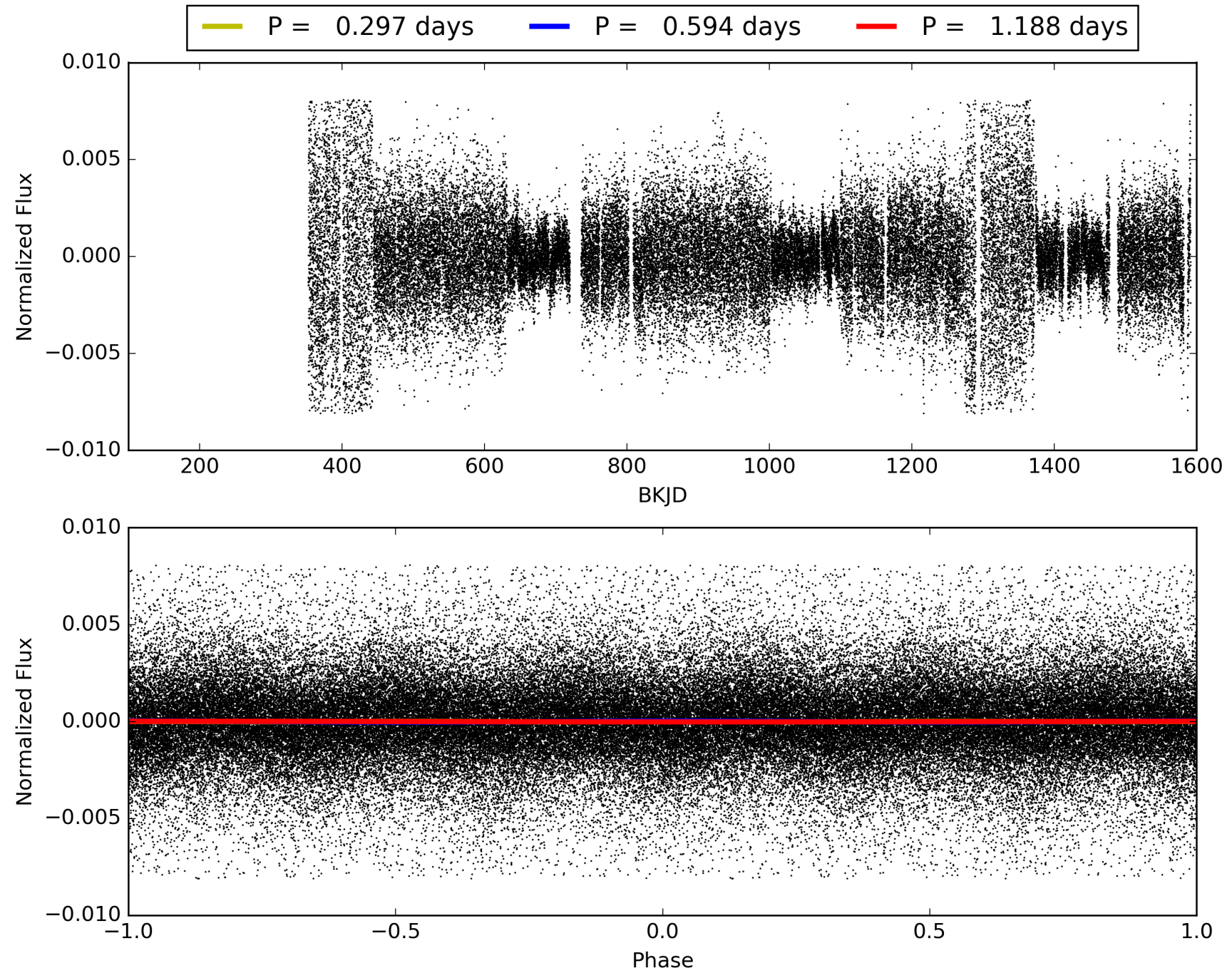
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 22:26:21 Z

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

TCE 007986162-01, PDC Light Curves

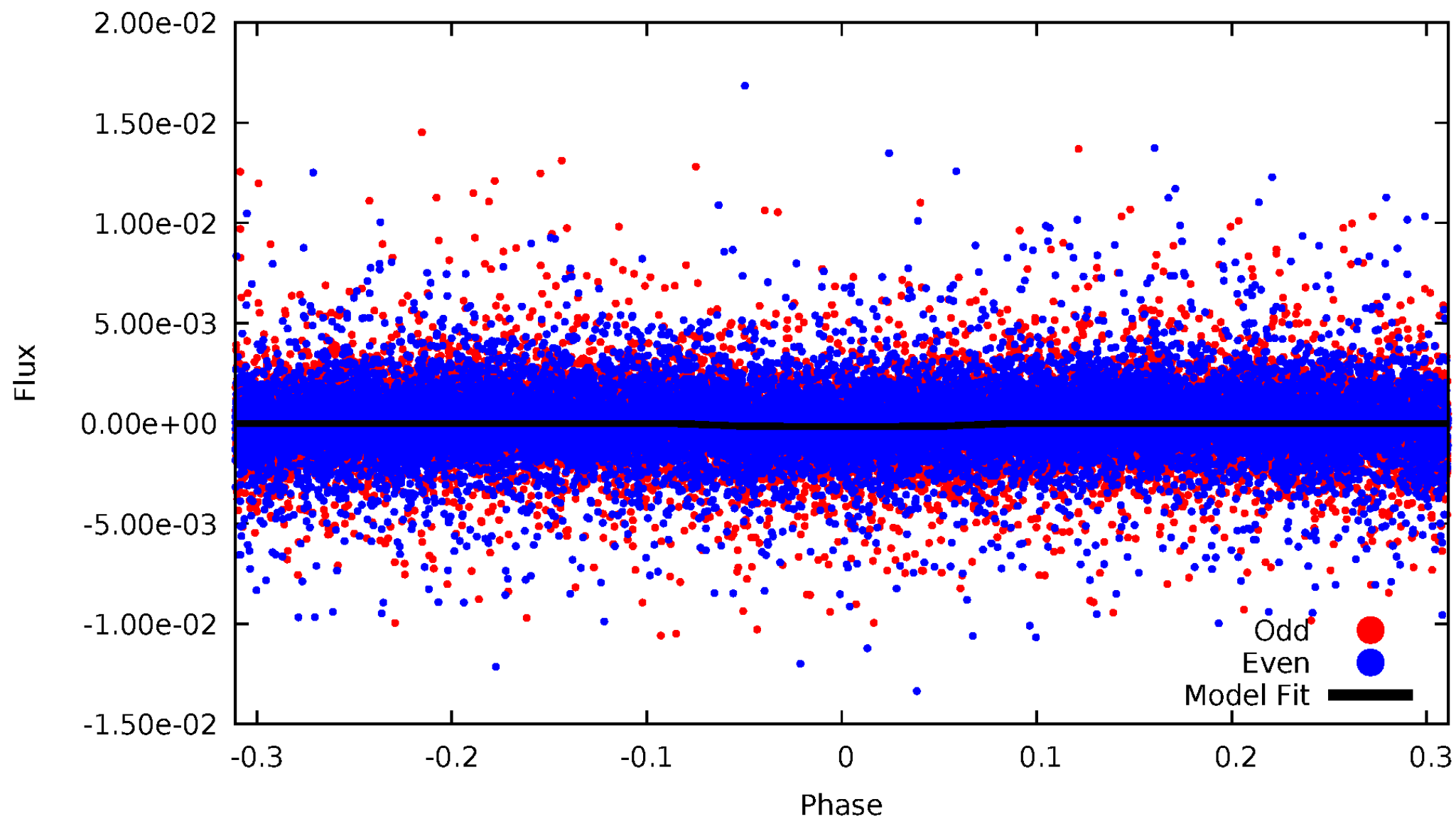


TCE 007986162-01



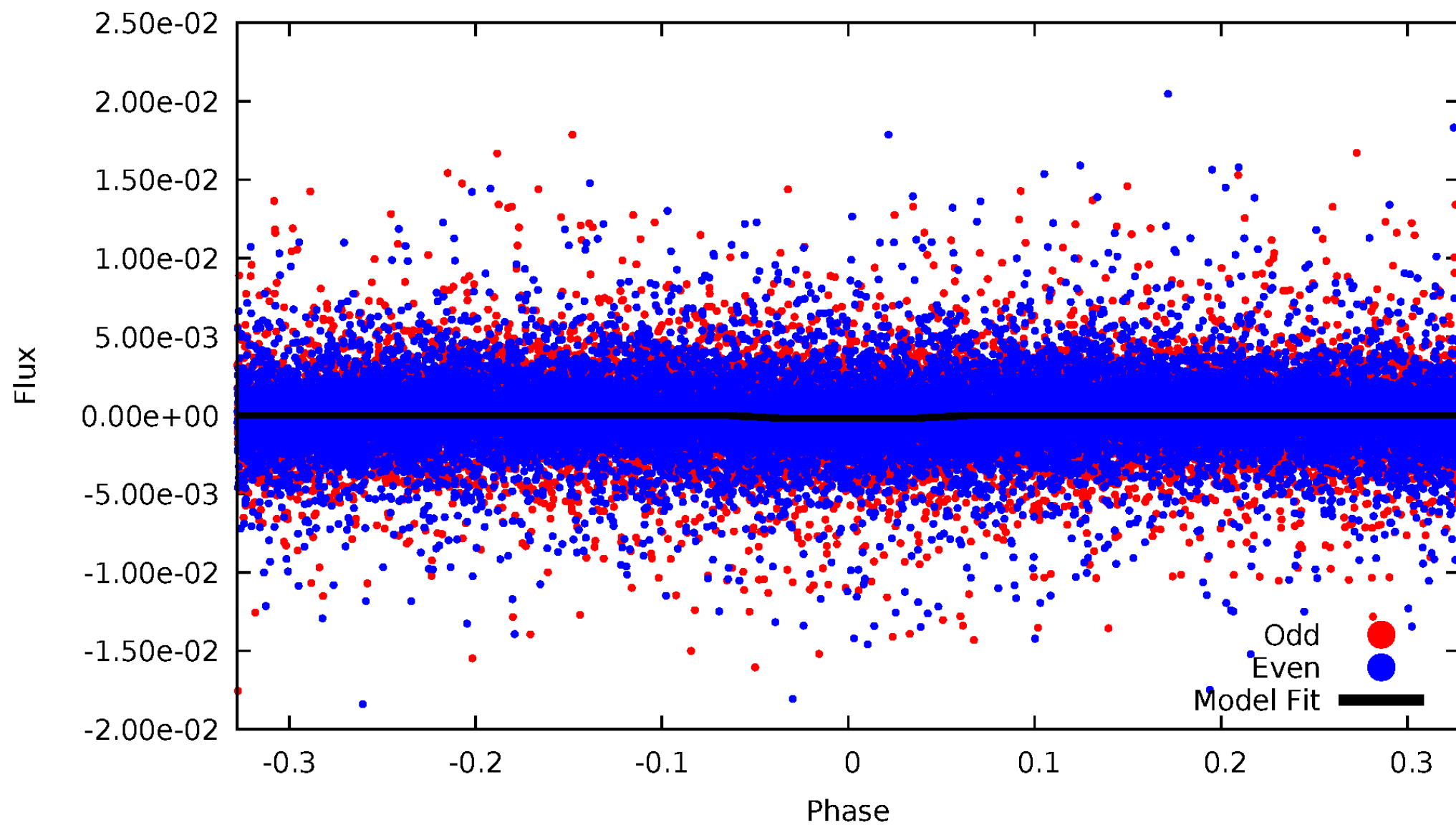
DV Odd/Even

TCE 007986162-01



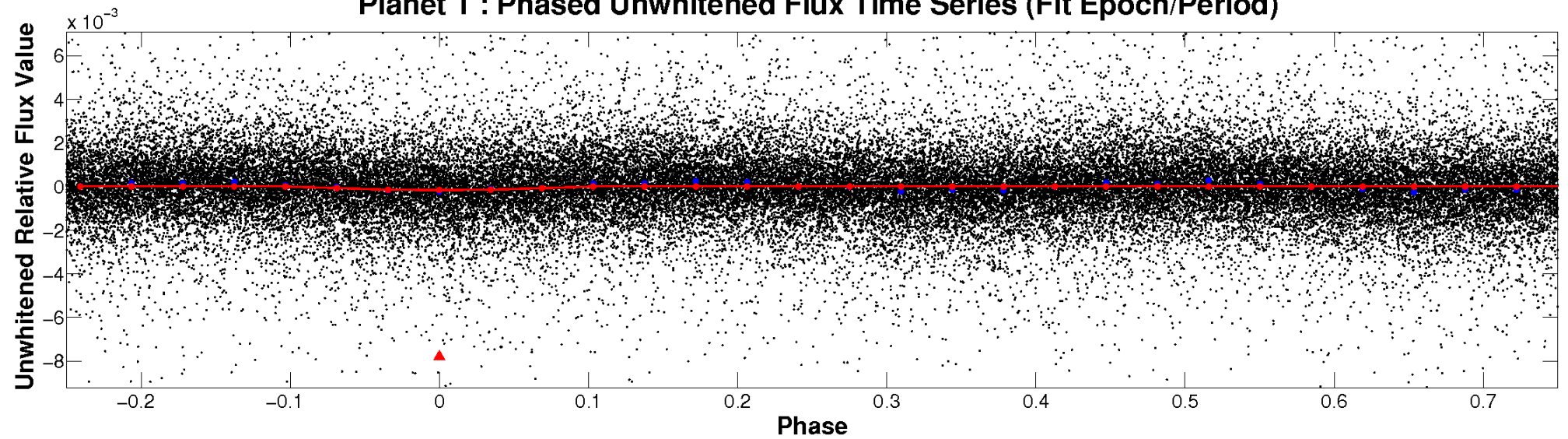
ALT Odd/Even

TCE 007986162-01

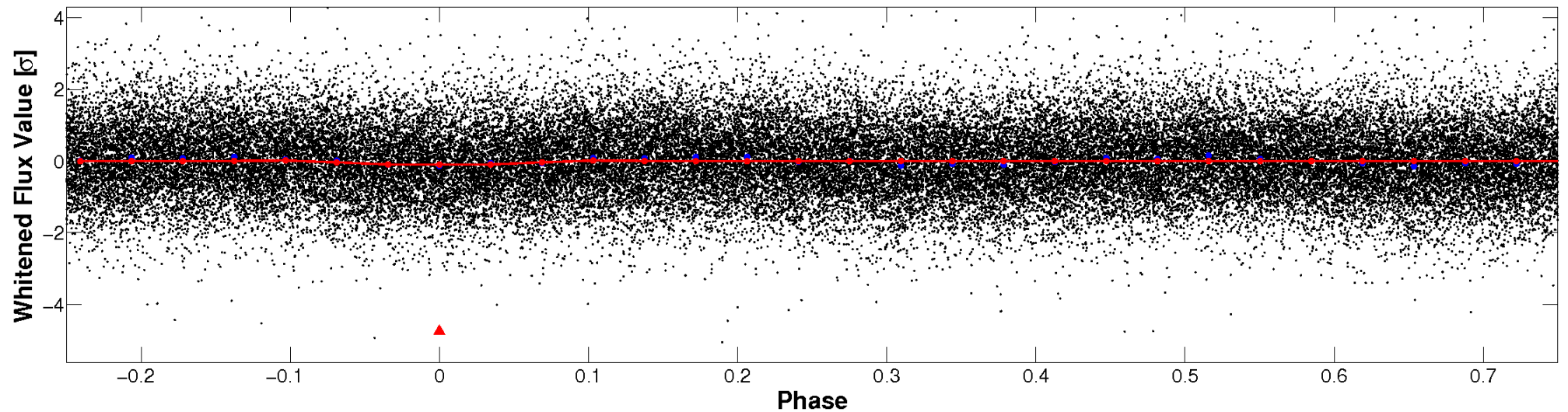


Non-Whitened Vs. Whitened Light Curve

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

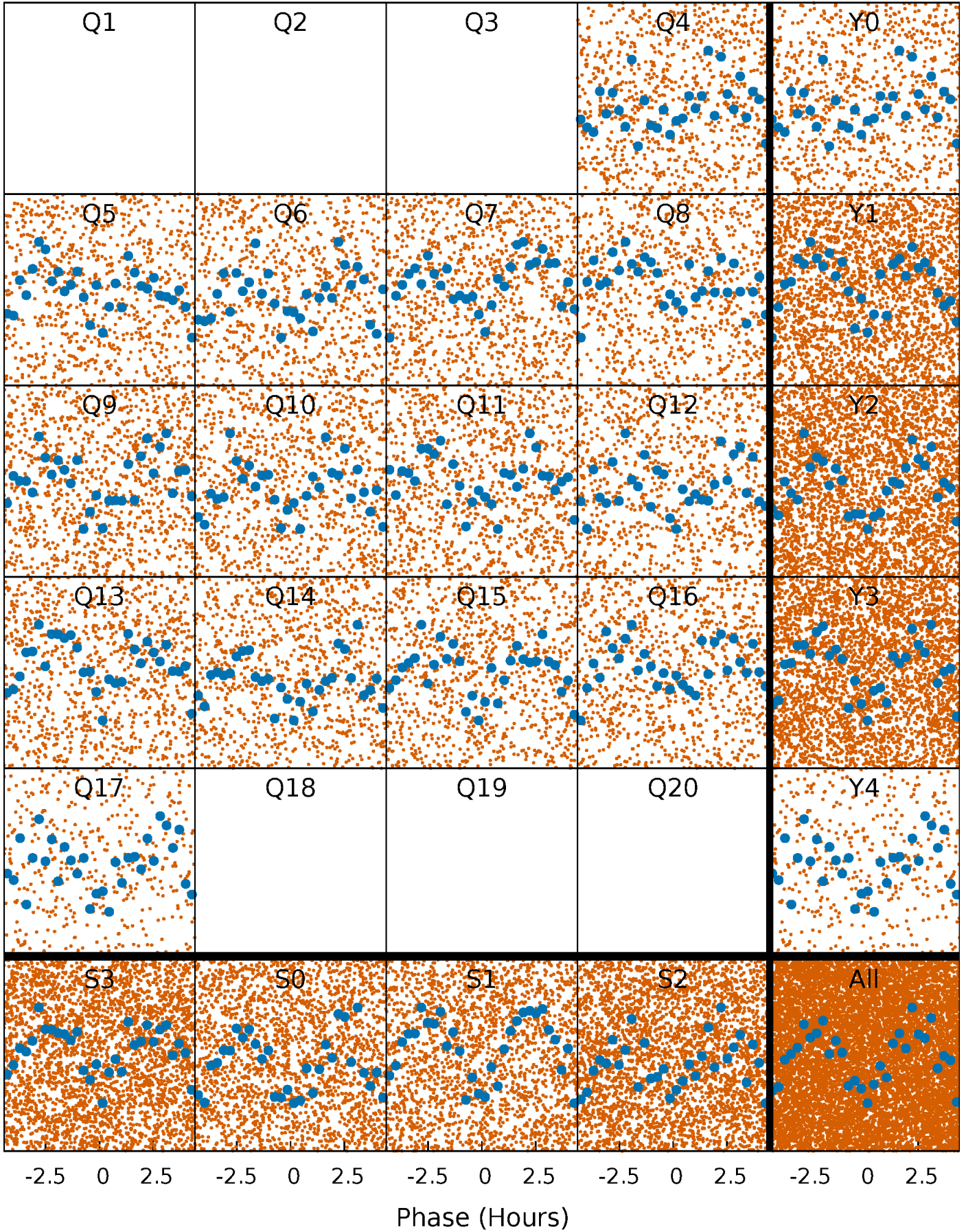


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



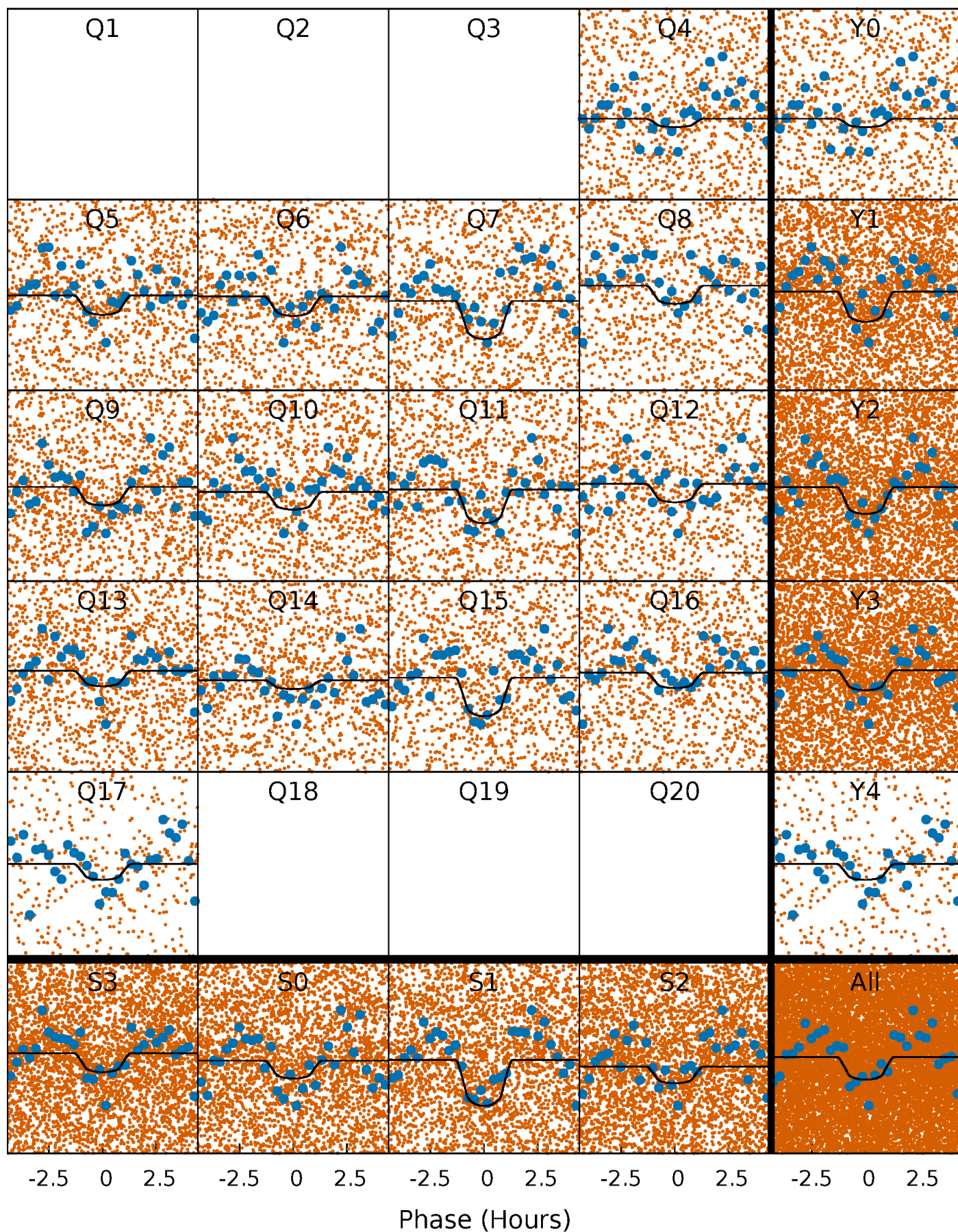
PDC Quarter-Phased Transit Curves

TCE 007986162-01 P= 0.594071 Days $T_0=131.767073$ (BKJD)



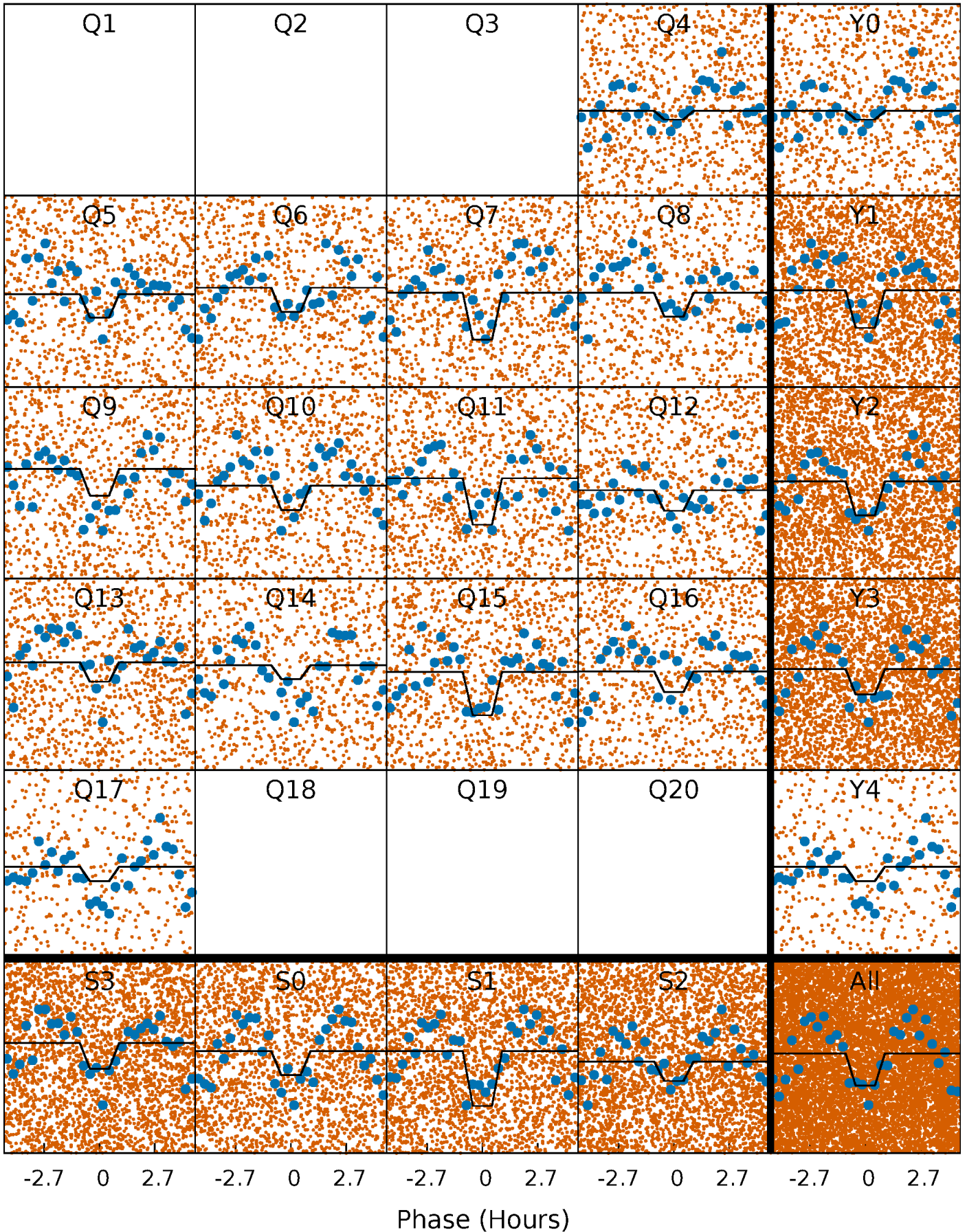
DV Quarter-Phased Transit Curves

TCE 007986162-01 P= 0.594071 Days $T_0=131.767073$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

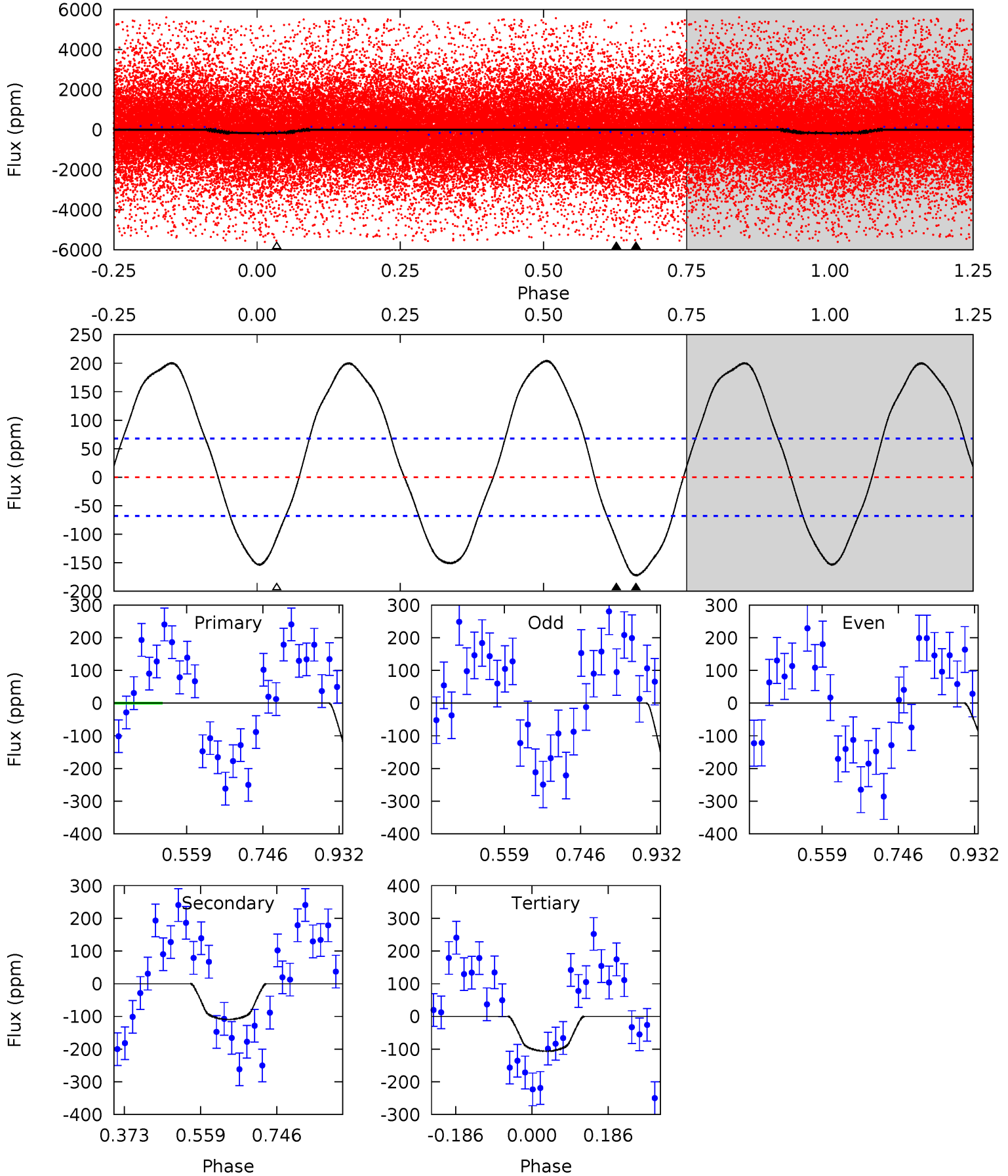
TCE 007986162-01 P= 0.594072 Days $T_0=131.766198$ (BKJD)



DV Model-Shift Uniqueness Test

007986162-01, P = 0.594071 Days, E = 131.767073 Days

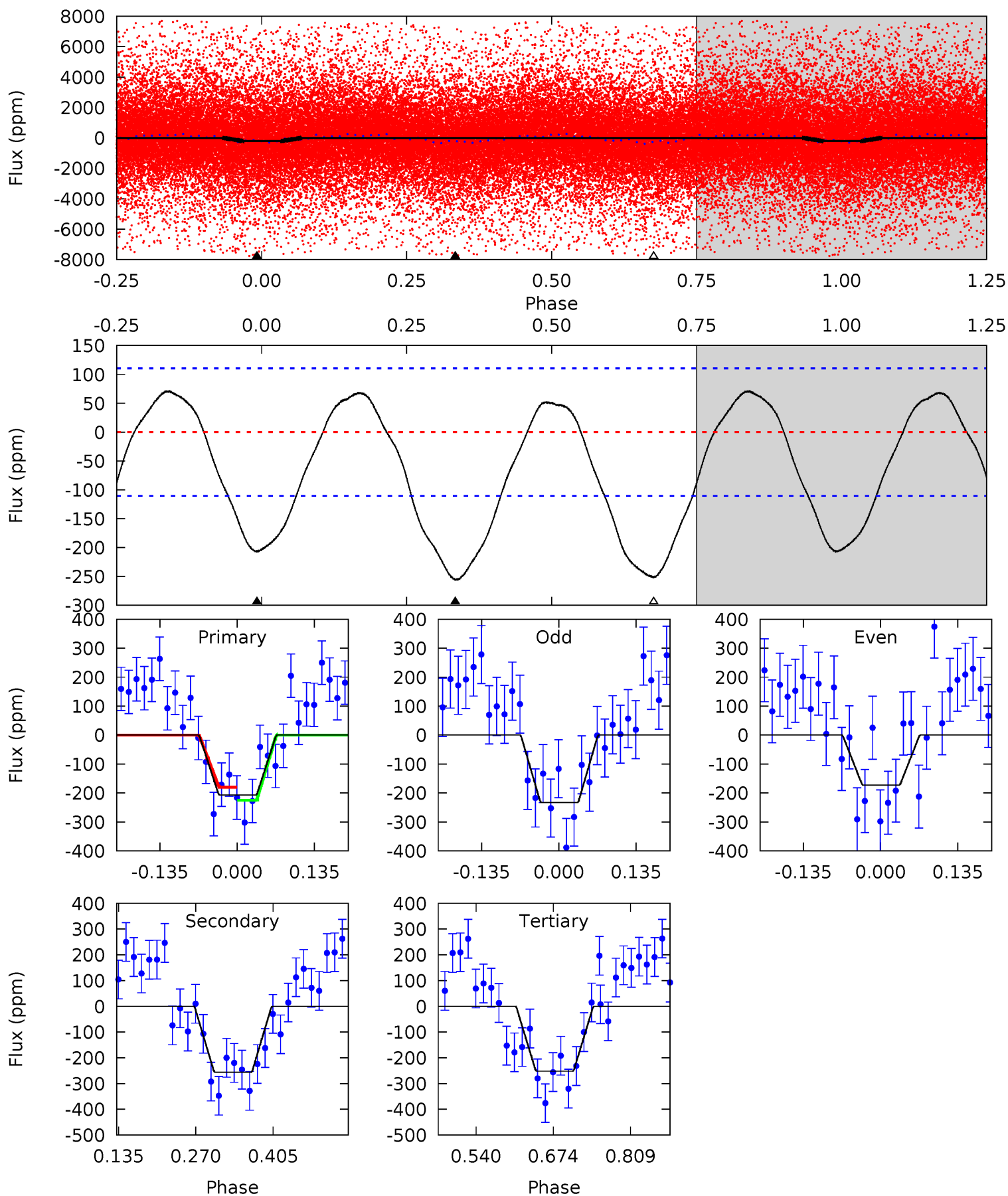
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.2	7.13	6.94	0	4.43	1.32	7.76	4.29	11.2	0.19	7.13	3.08	1.46	0.54	1.56



Alt Model-Shift Uniqueness Test

007986162-01, P = 0.594072 Days, E = 131.766198 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.45	10.4	10.3	0	4.50	1.50	4.65	-1.82	8.45	0.16	10.4	1.26	0.97	0.22	0.90



Stellar Parameters For KIC 007986162

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5233^{+184}_{-184}	$4.489^{+0.105}_{-0.116}$	$-0.160^{+0.300}_{-0.300}$	$0.824^{+0.117}_{-0.105}$	$0.764^{+0.112}_{-0.060}$	$1.925^{+0.885}_{-0.606}$
	+4%/-4%	+2%/-3%	+188%/-188%	+14%/-13%	+15%/-8%	+46%/-31%
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 007986162-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-109 ± 15	$1.42^{+0.96}_{-0.83}$	2613^{+141}_{-128}	4361^{+2043}_{-796}	$4.634^{+23.077}_{-2.927}$
Alt.	-256 ± 25	$1.44^{+0.90}_{-0.83}$	2617^{+134}_{-140}	5223^{+3081}_{-977}	11^{+52}_{-7}

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 $A_{obs} \gg 1.0$

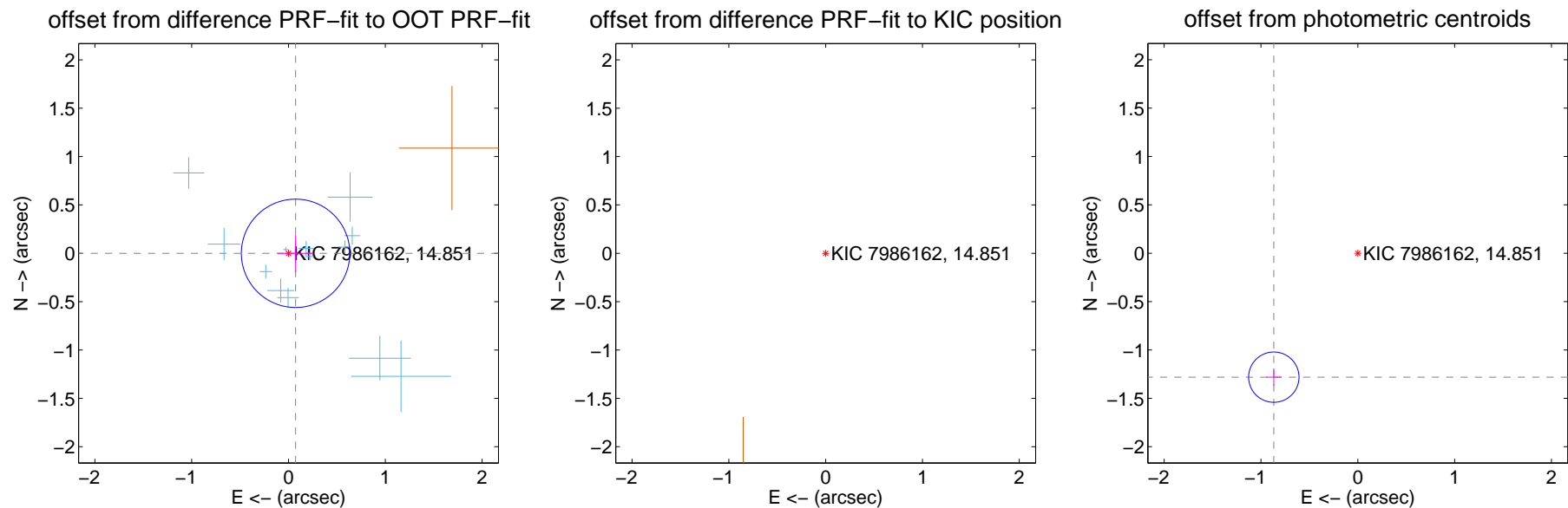
DV Centroid Data

Supplemental centroid analysis for 007986162-01. Kepler magnitude: 14.85. Transit SNR 8.15

There are 13 quarters with good PRF difference image offsets

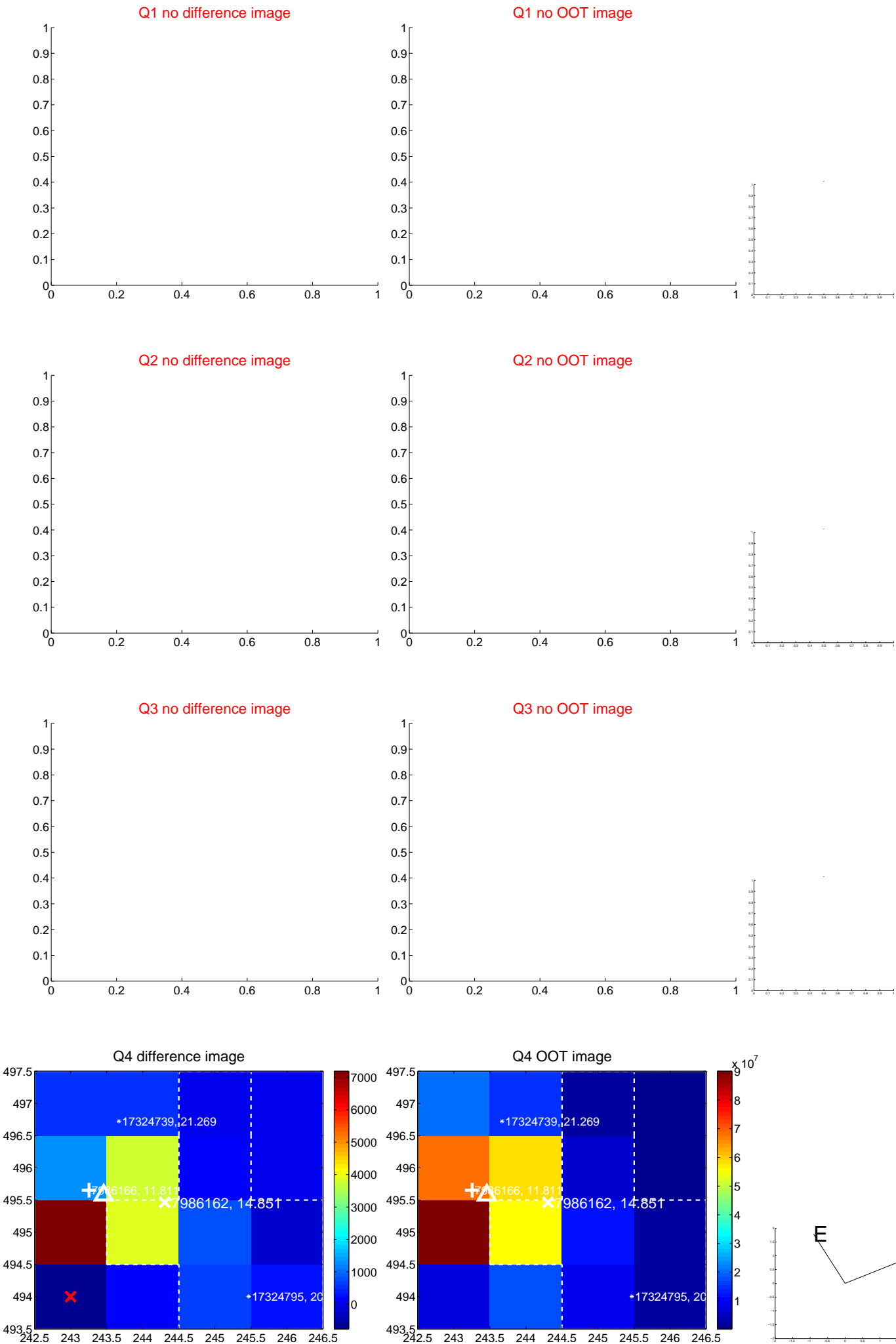
The OOT PRF centroid is offset from the target star catalog position by about 4.35 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.073 ± 0.187	0.39	-0.073 ± 0.187	-0.000 ± 0.194
PRF-fit source offset from KIC position	4.227 ± 0.177	23.85	2.515 ± 0.196	-3.398 ± 0.192
photometric centroid source offset	1.55 ± 0.09	17.85	0.87 ± 0.08	-1.28 ± 0.09

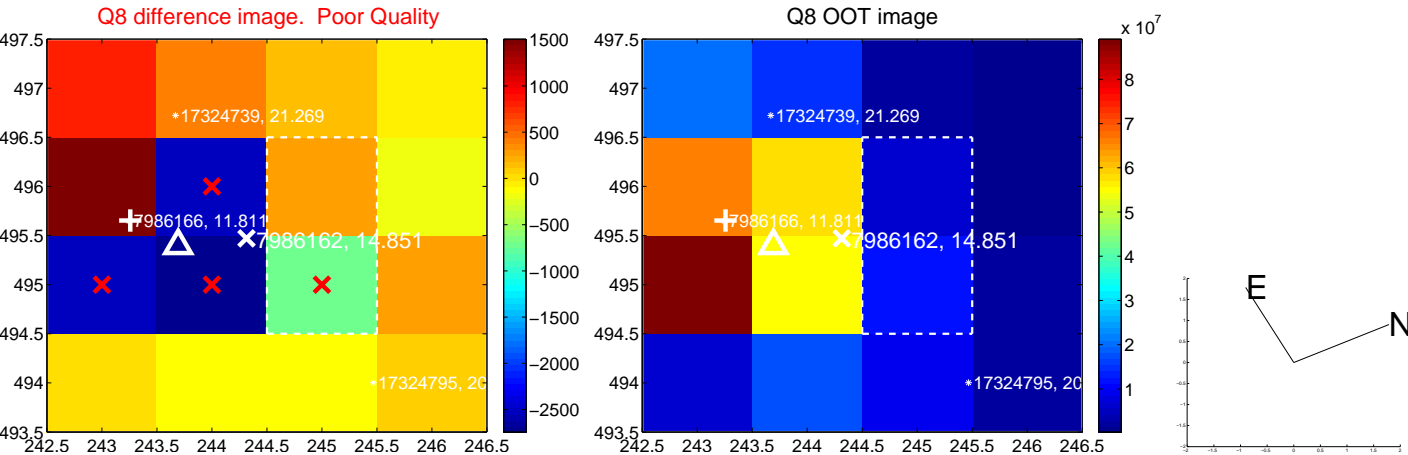
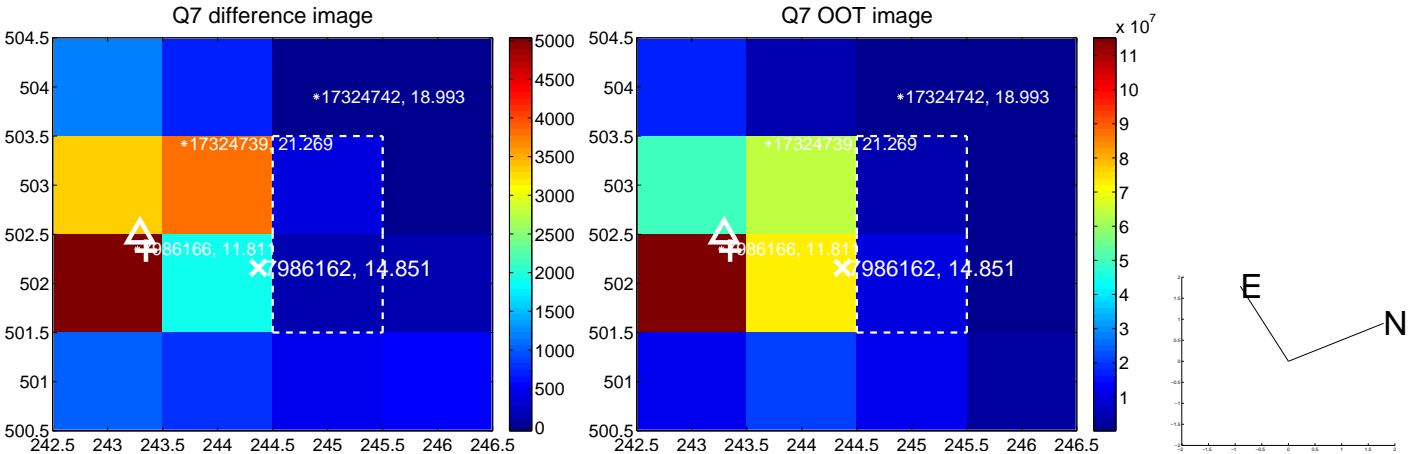
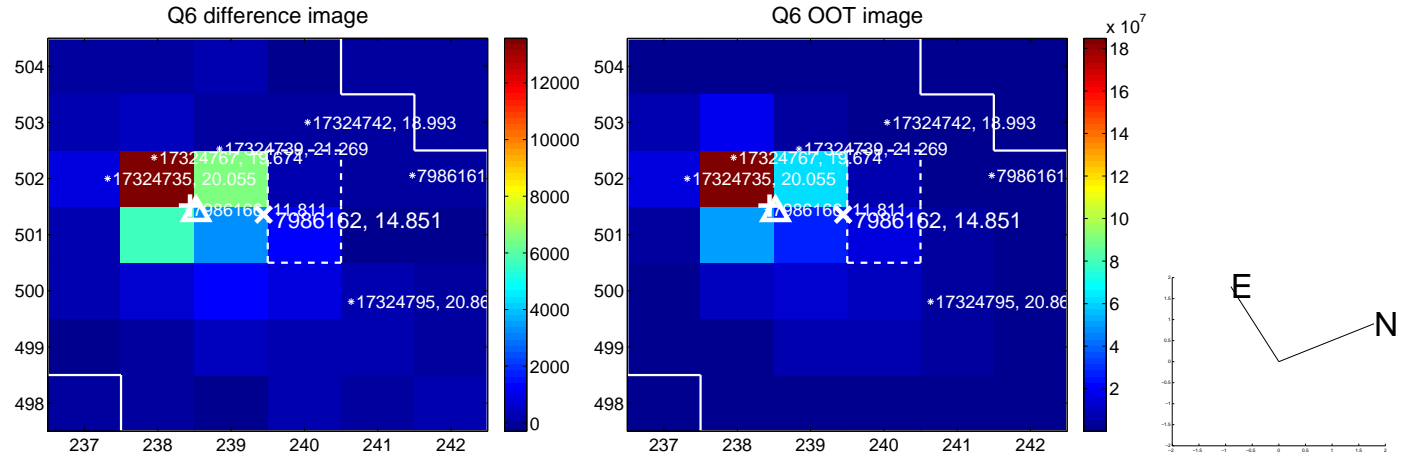
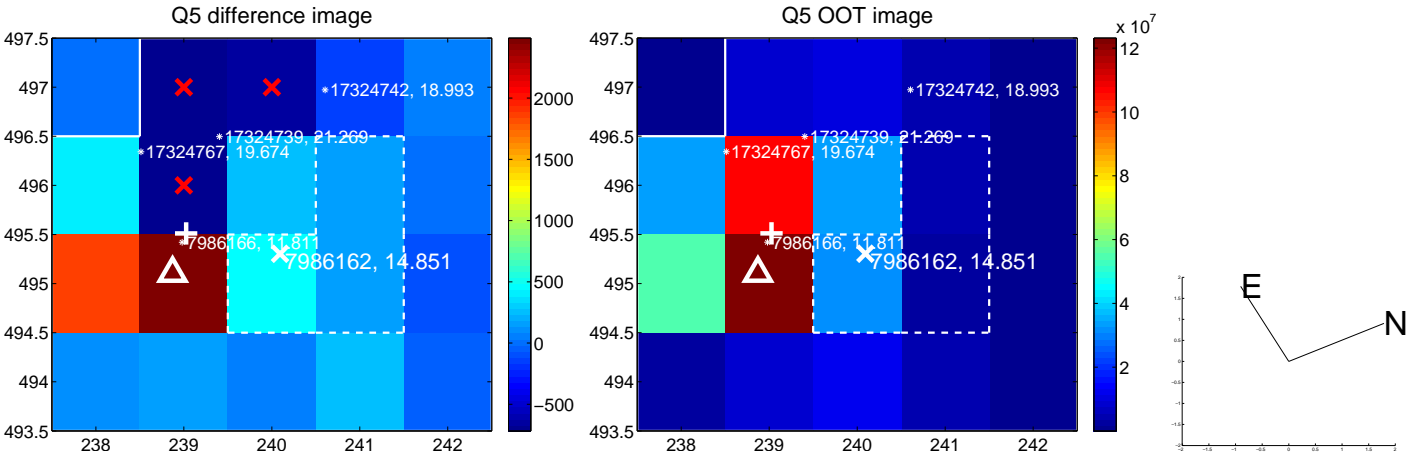


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

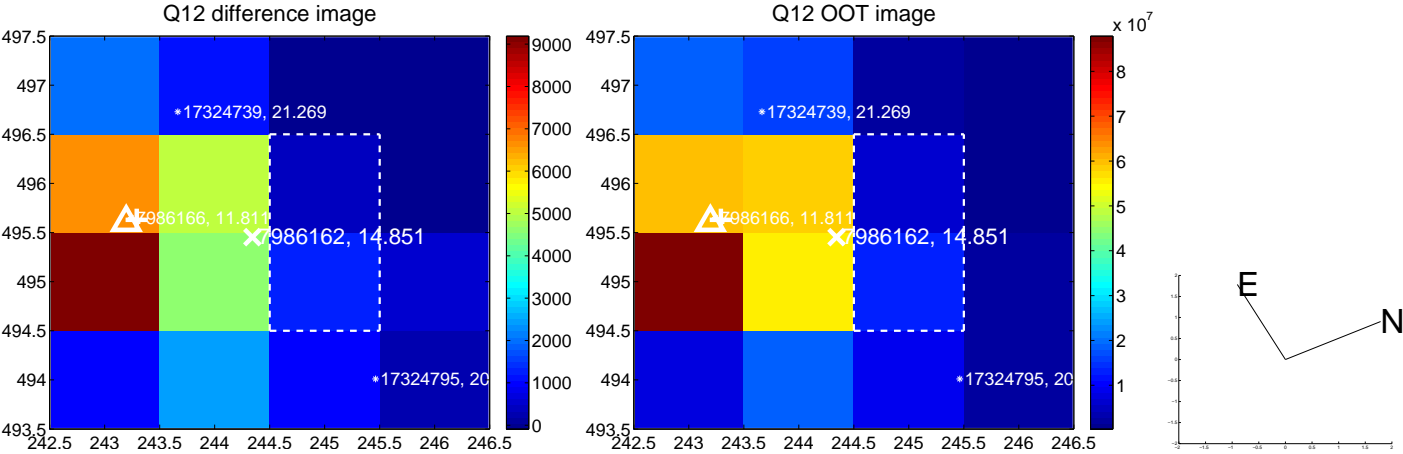
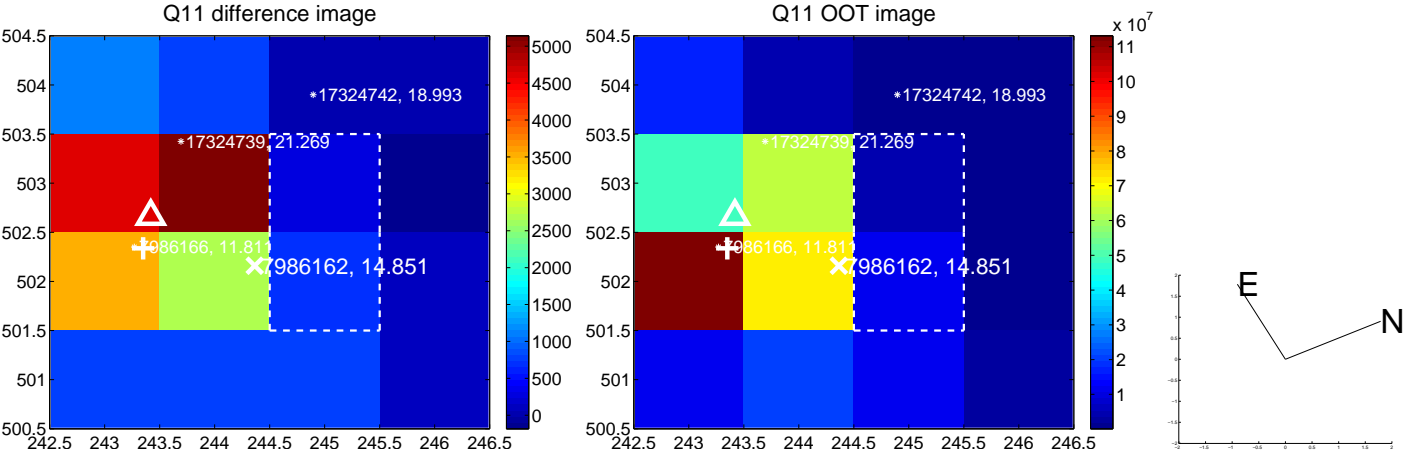
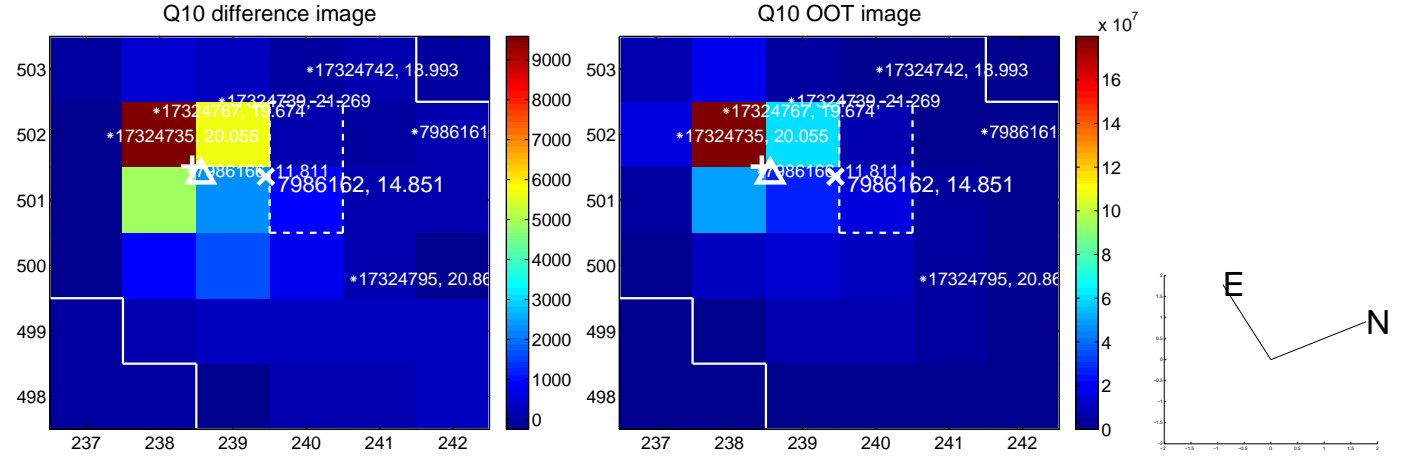
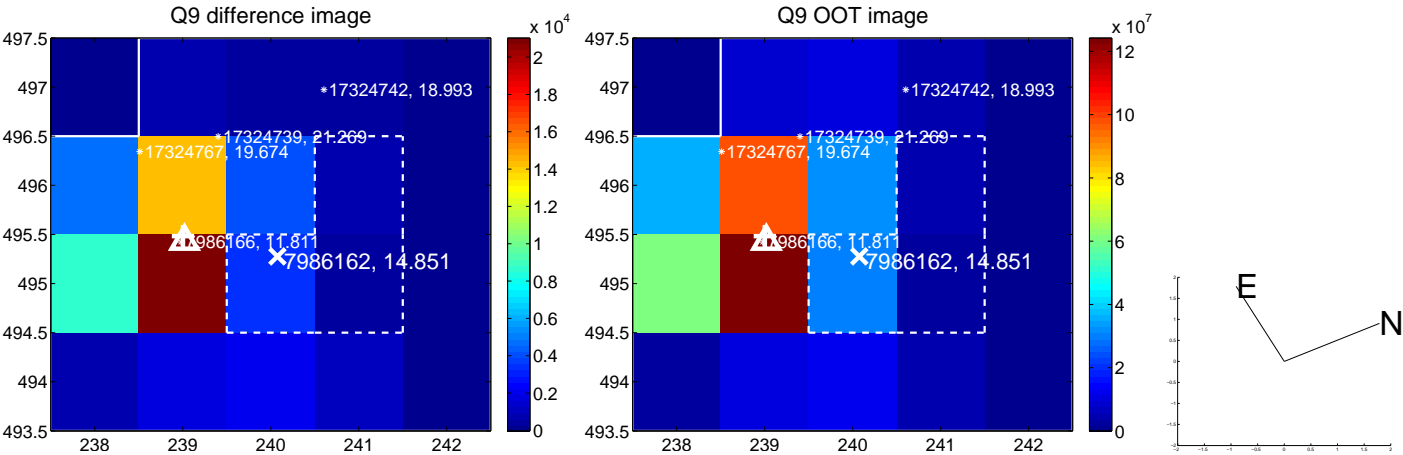
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



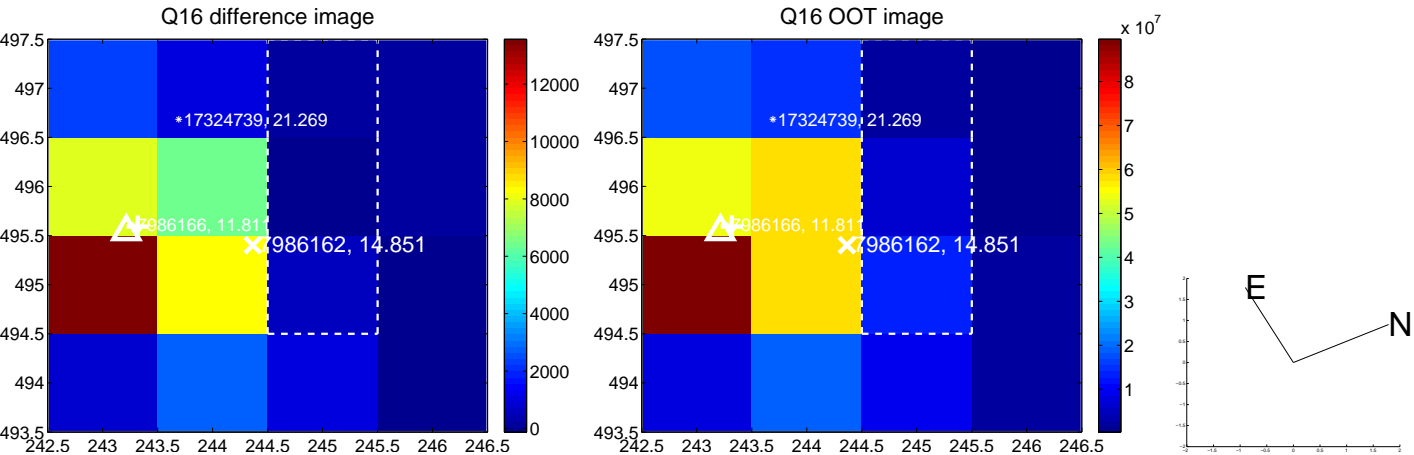
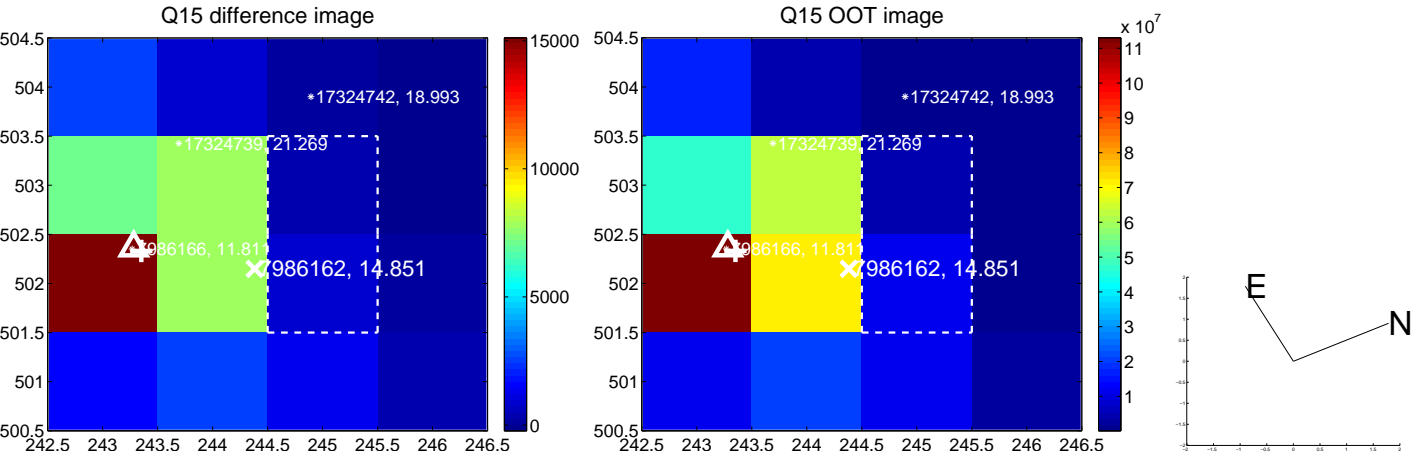
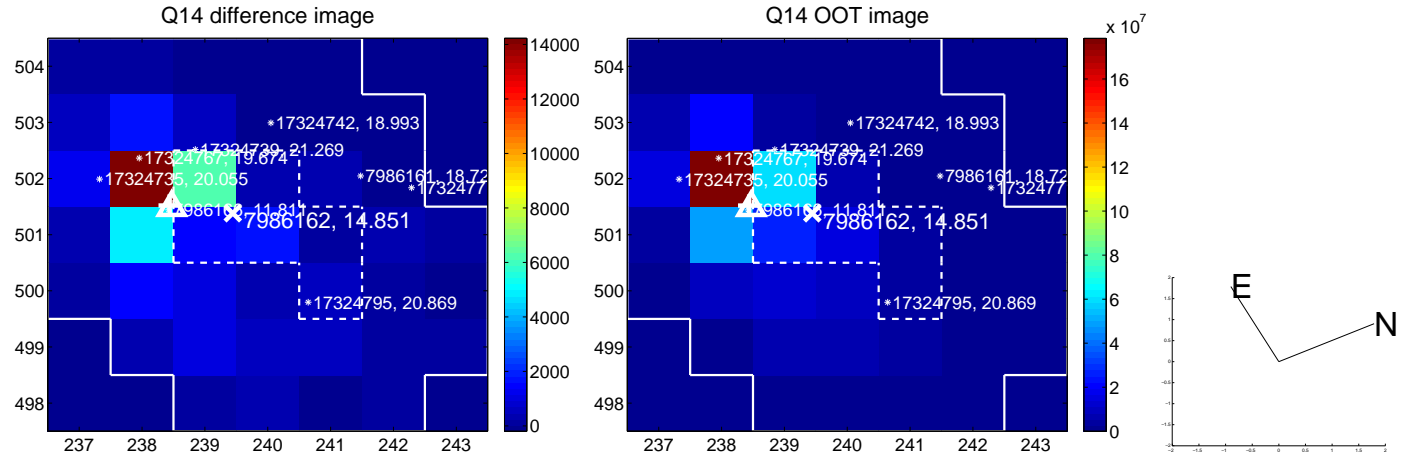
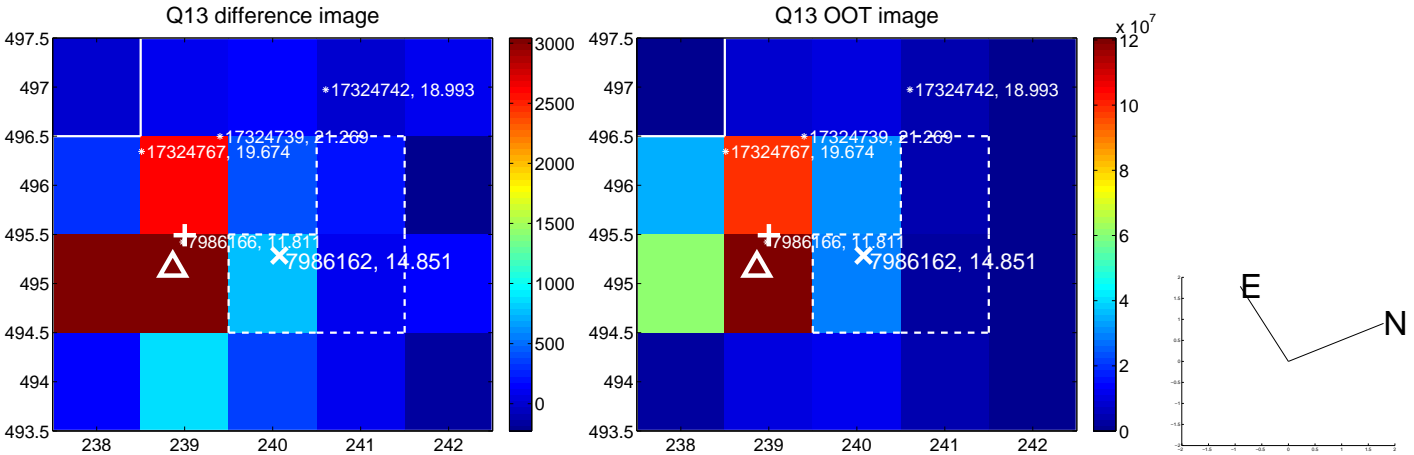
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



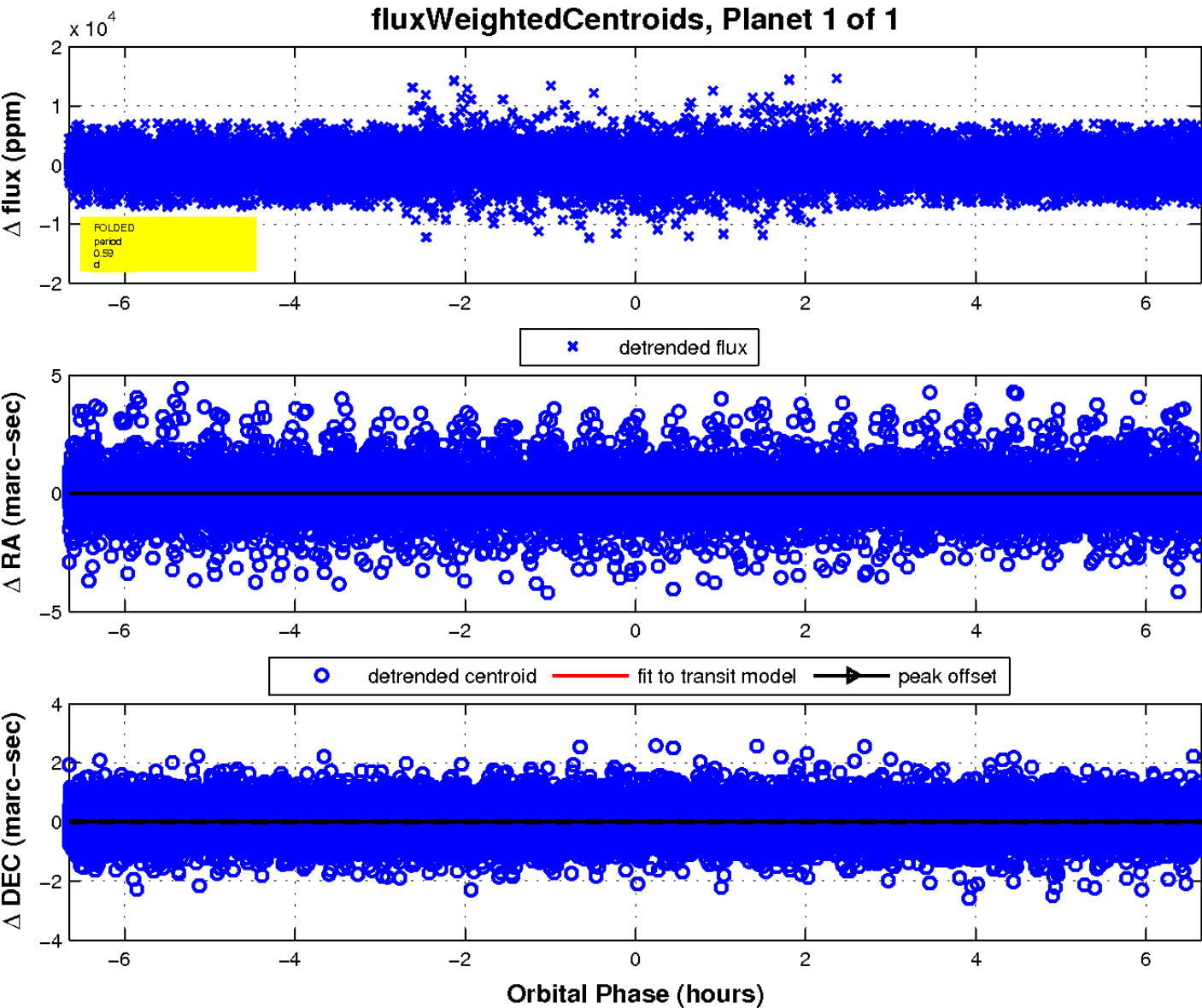
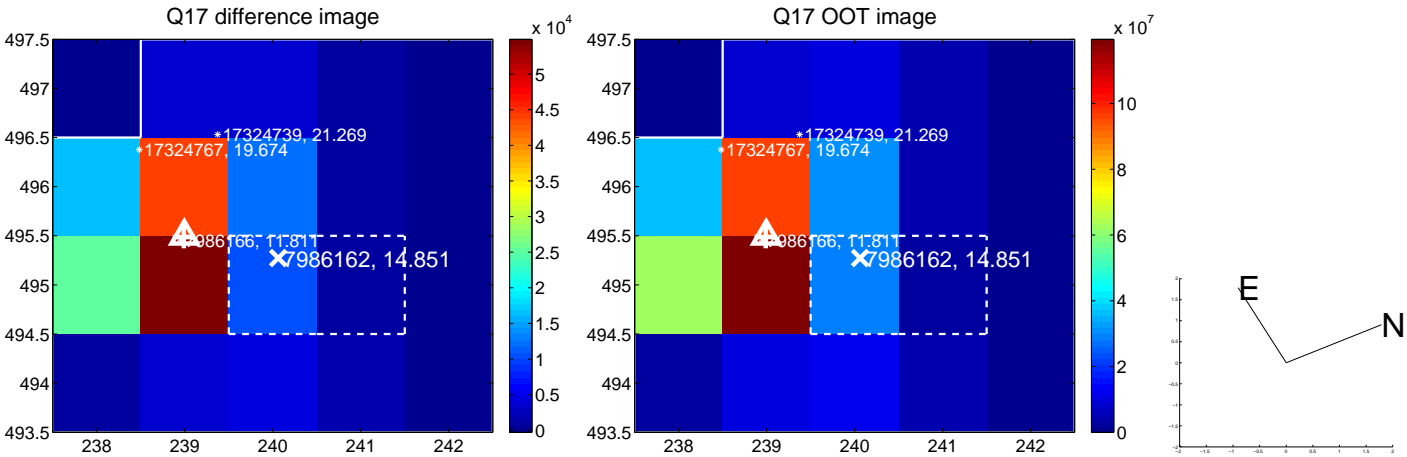
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UKIRT Image

Declination

