

KIC 006358937

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})
006358937-01	OBS	4794.01	24.503663	140.199080	122.5	6.091	9.3	9.6	0.96	5250	1.22	25.63

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006358937-01	OBS	PC	0.74	0	0	0	0	NO_COMMENT

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

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

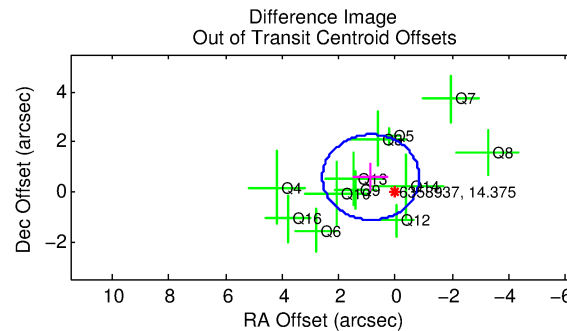
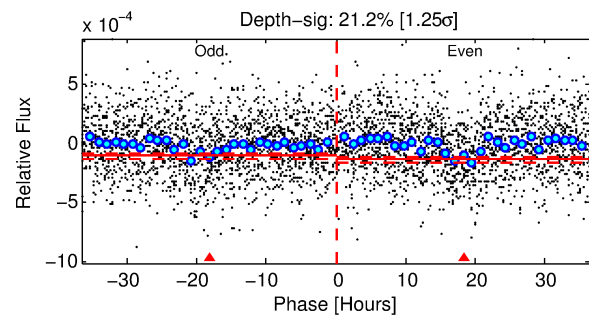
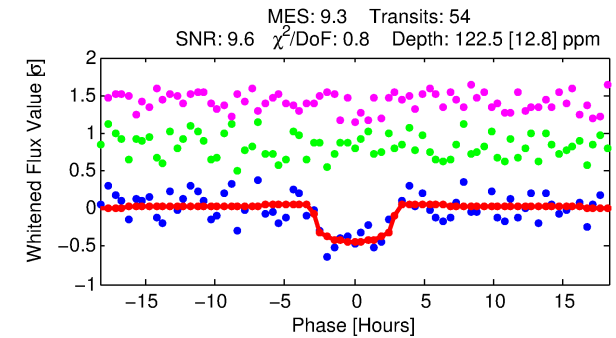
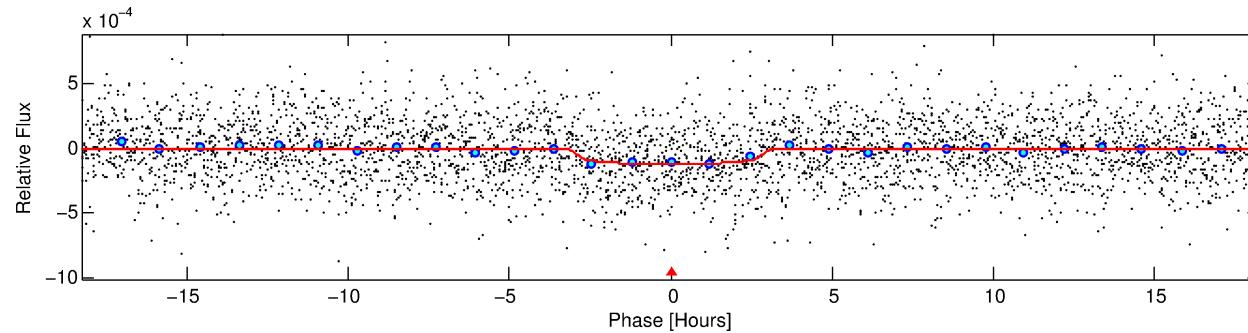
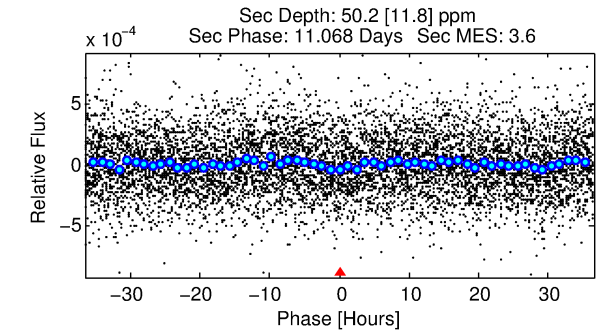
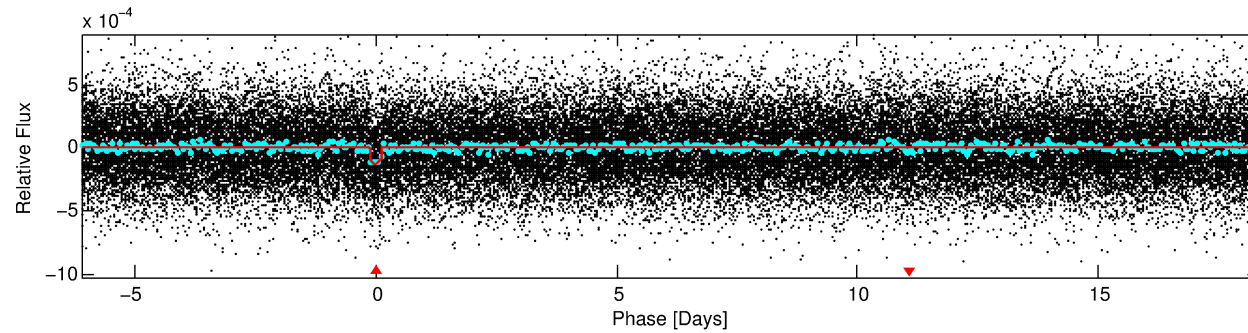
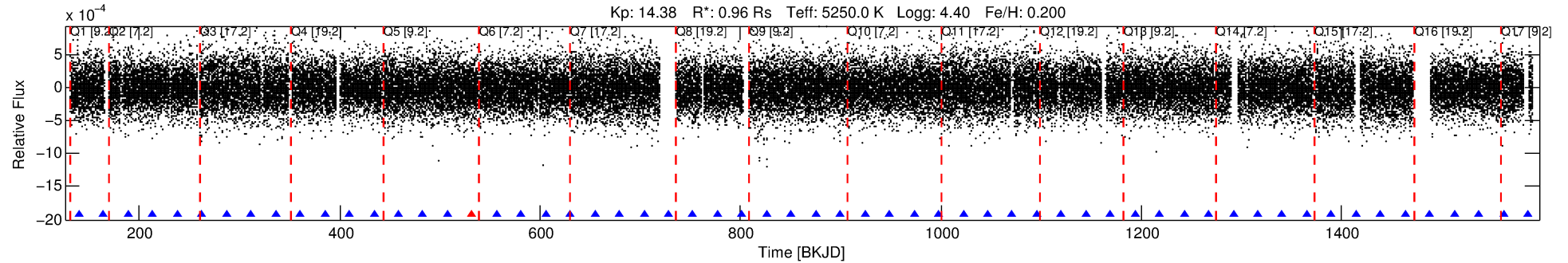
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006358937-01

No Significant Match Found

DV One-Page Summary

KIC: 6358937 Candidate: 1 of 1 Period: 24.504 d
KOI: K04794.01 Corr: 0.967



DV Fit Results:

Period = 24.50366 [0.00033] d
Epoch = 140.1991 [0.0110] BKJD
Rp/R* = 0.0117 [0.0072]
a/R* = 17.22 [41.98]
b = 0.84 [0.86]
Seff = 25.63 [6.60]
Teq = 574 [37] K
Rp = 1.22 [0.79] Re
a = 0.1568 [0.0260] AU
Ag = 453.67 [580.82] [0.78σ]
Teffp = 4094 [1287] K [2.73σ]

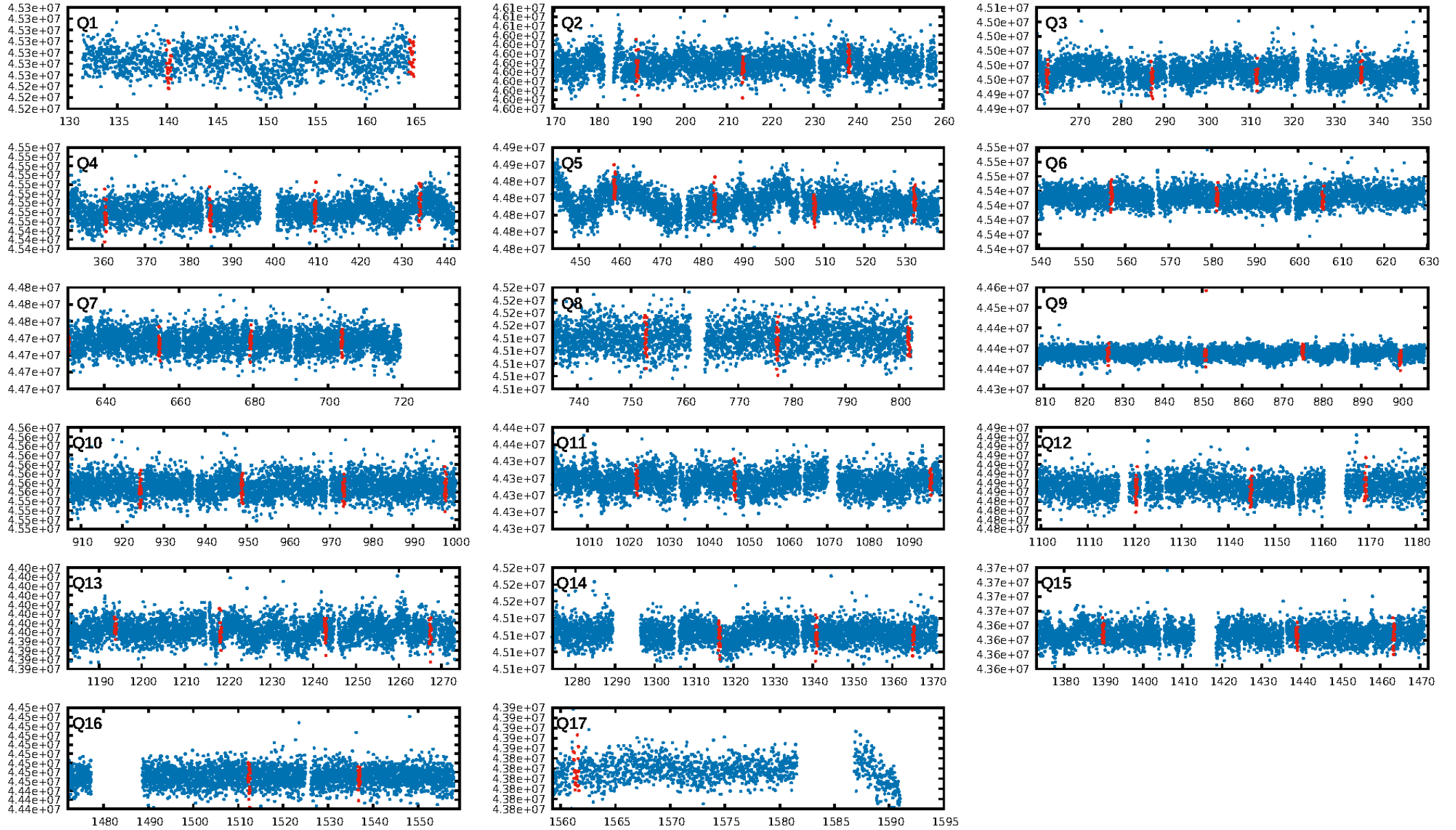
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 6.62e-20
RollingBand-fgt: 0.98 [50/51]
GhostDiagnostic-chr: 2.107
Centroid-sig: 5.9%
Centroid-so: 1.831 arcsec [1.44σ]
OotOffset-rm: 1.040 arcsec [1.82σ]
KicOffset-rm: 1.029 arcsec [1.80σ]
OotOffset-st: 3/2/4/3 [12]
KicOffset-st: 3/2/4/3 [12]
DiffImageQuality-fgm: 0.33 [4/12]
DiffImageOverlap-fno: 1.00 [17/17]

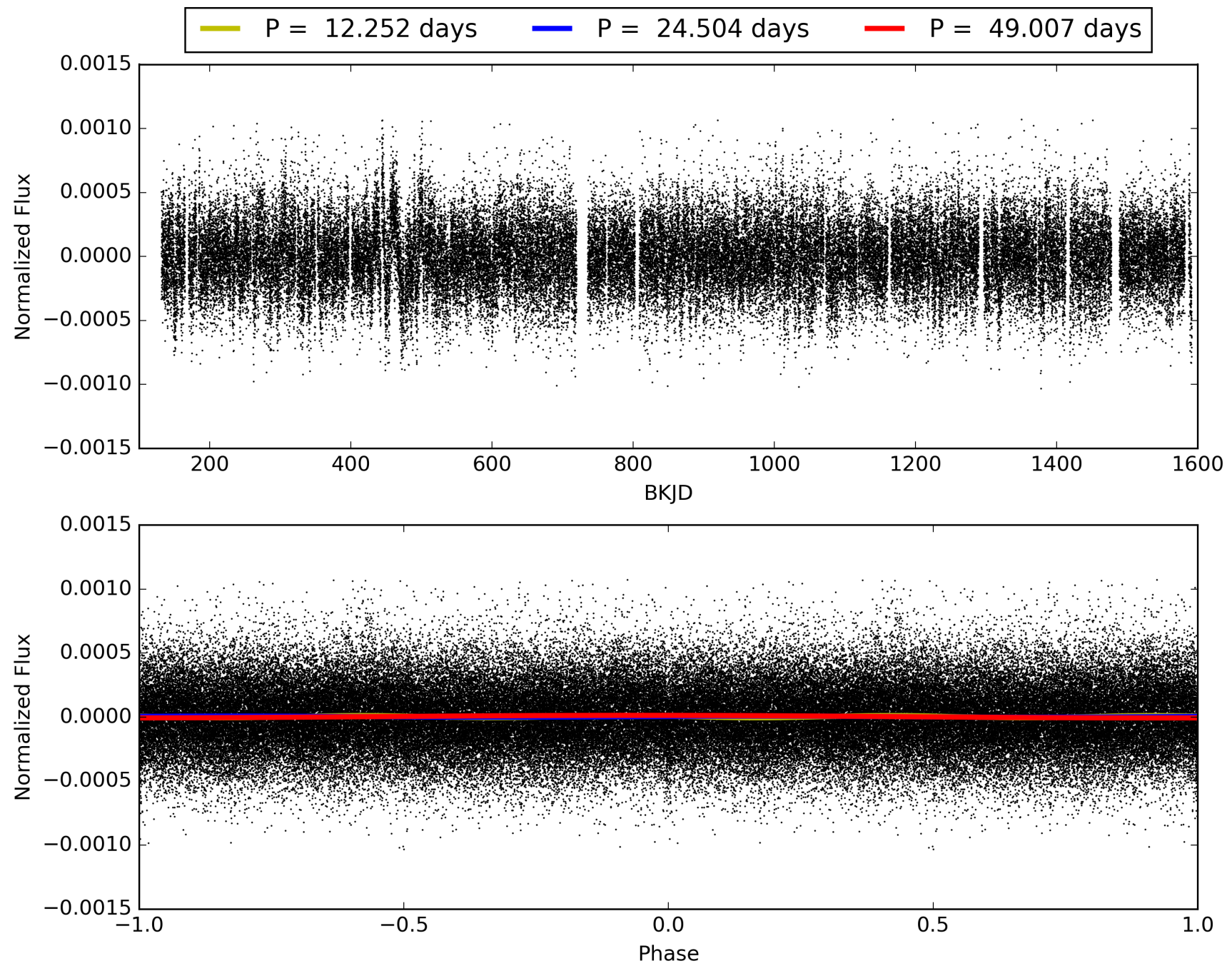
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 15:22:42 Z

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

TCE 006358937-01, PDC Light Curves

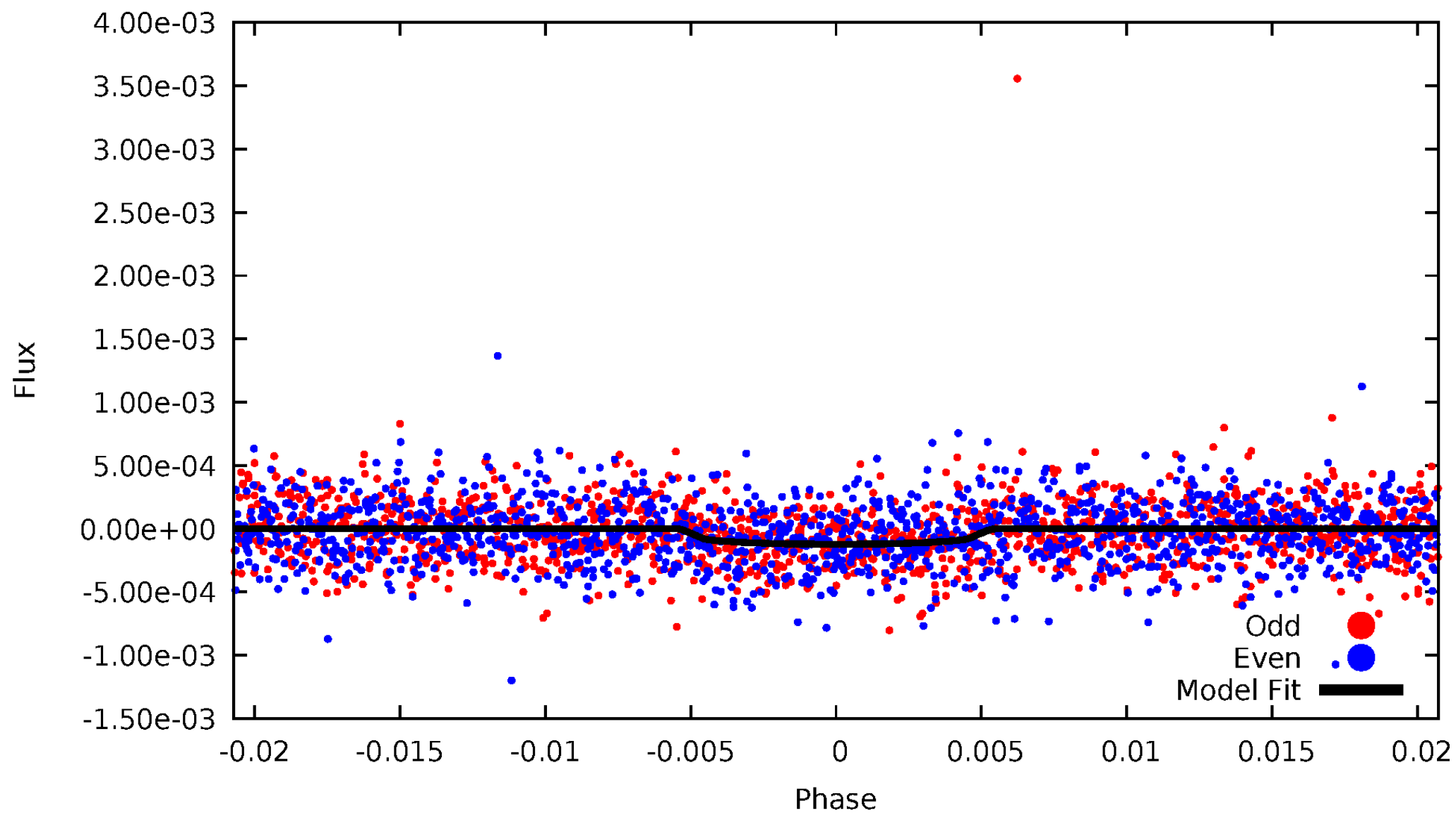


TCE 006358937-01



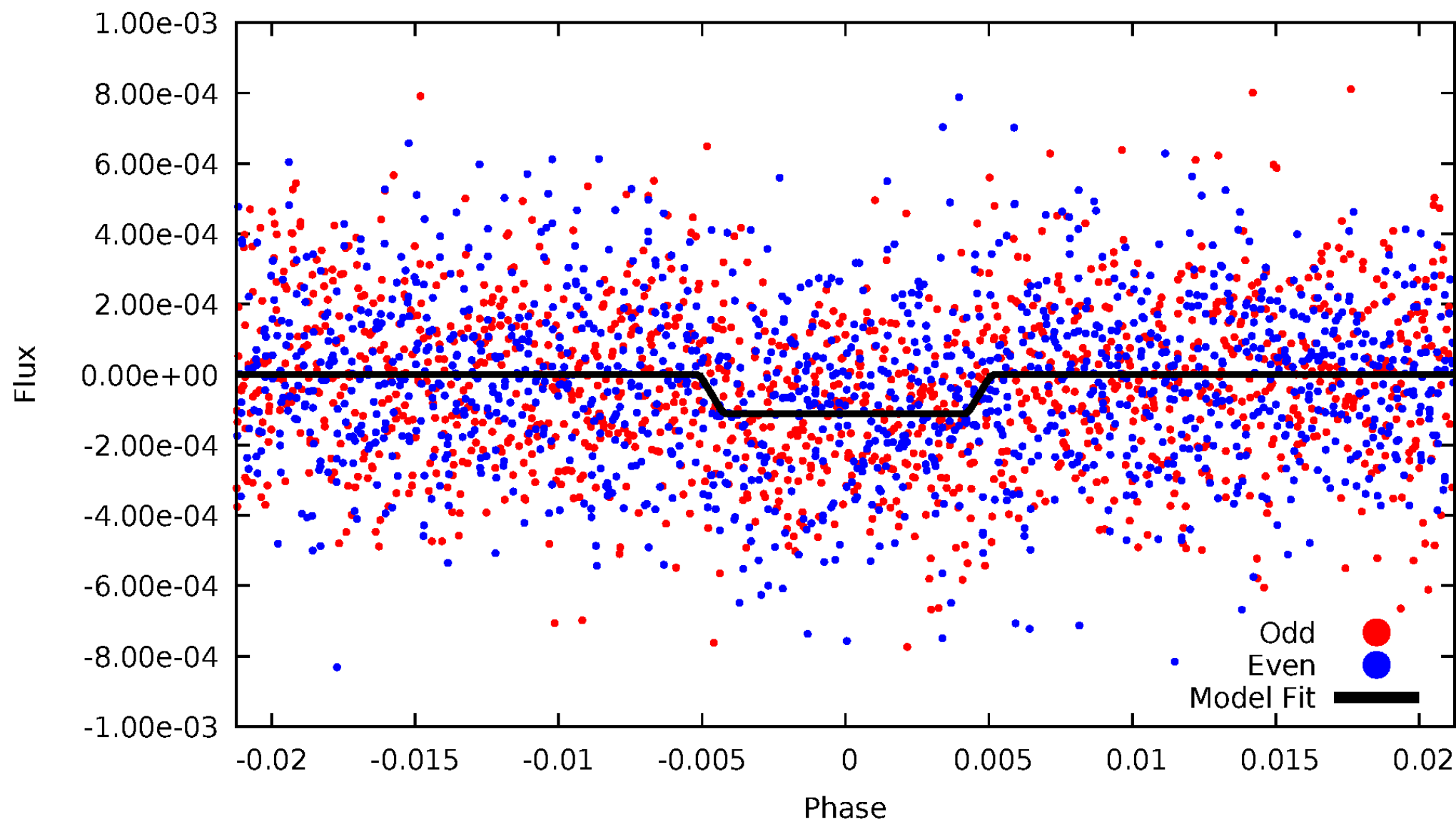
DV Odd/Even

TCE 006358937-01

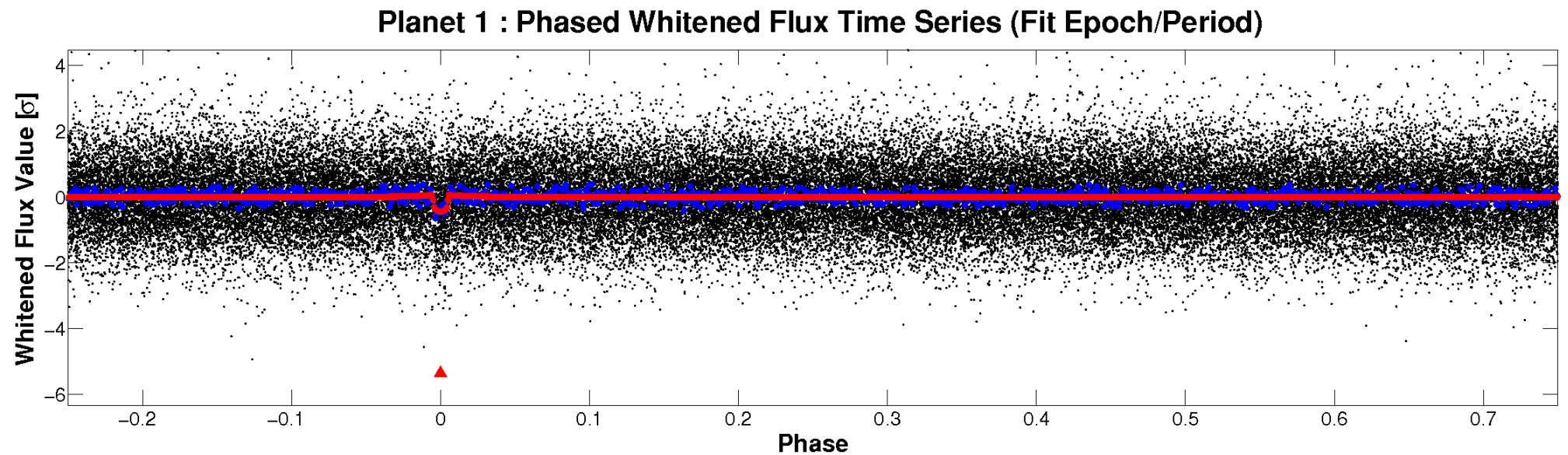
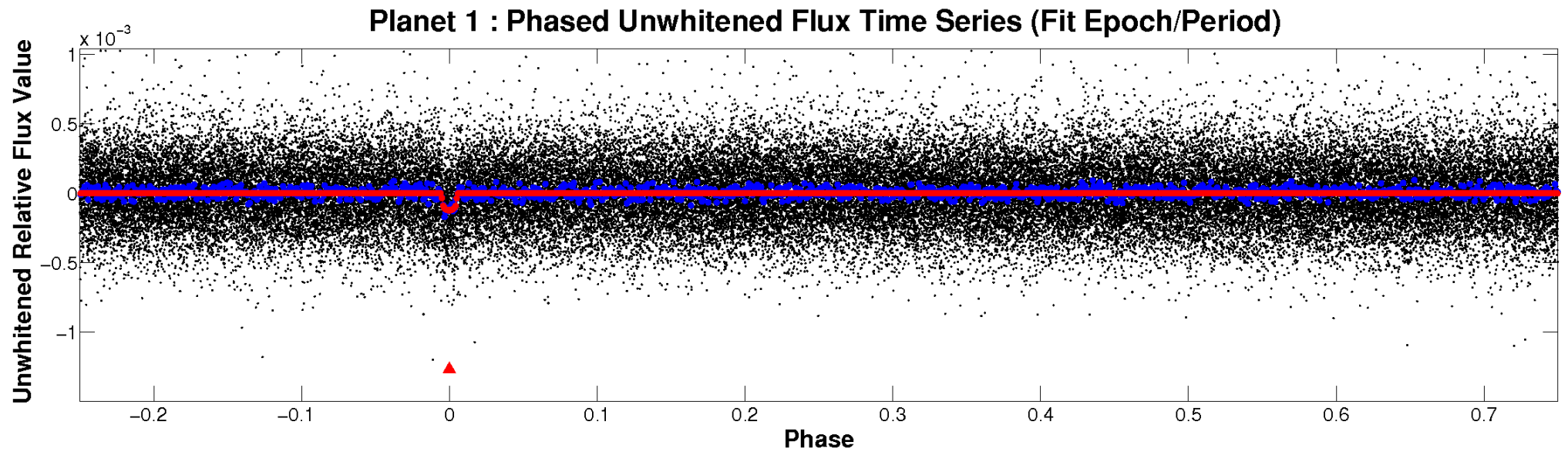


ALT Odd/Even

TCE 006358937-01

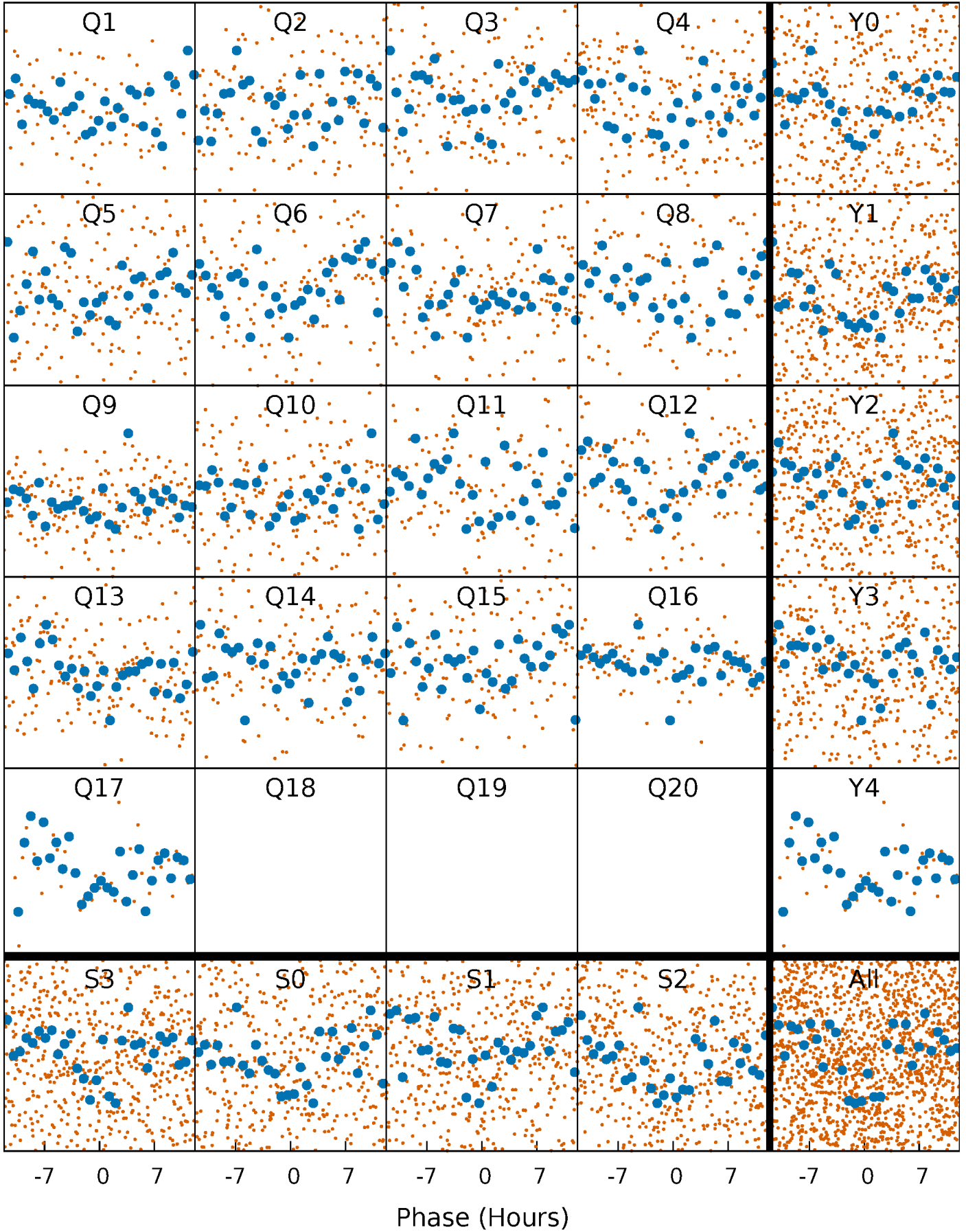


Non-Whitened Vs. Whitened Light Curve



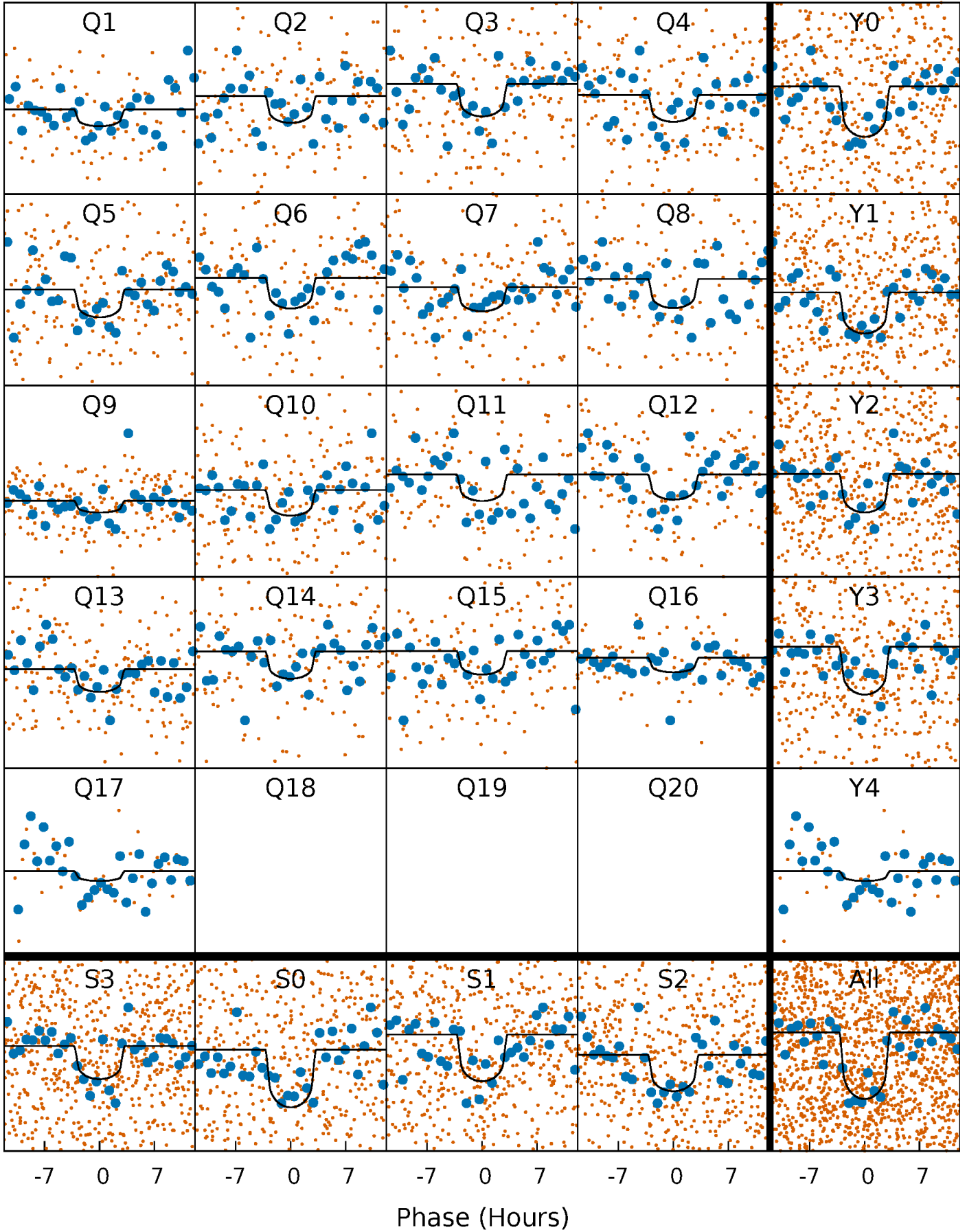
PDC Quarter-Phased Transit Curves

TCE 006358937-01 P= 24.503663 Days $T_0=140.199080$ (BKJD)



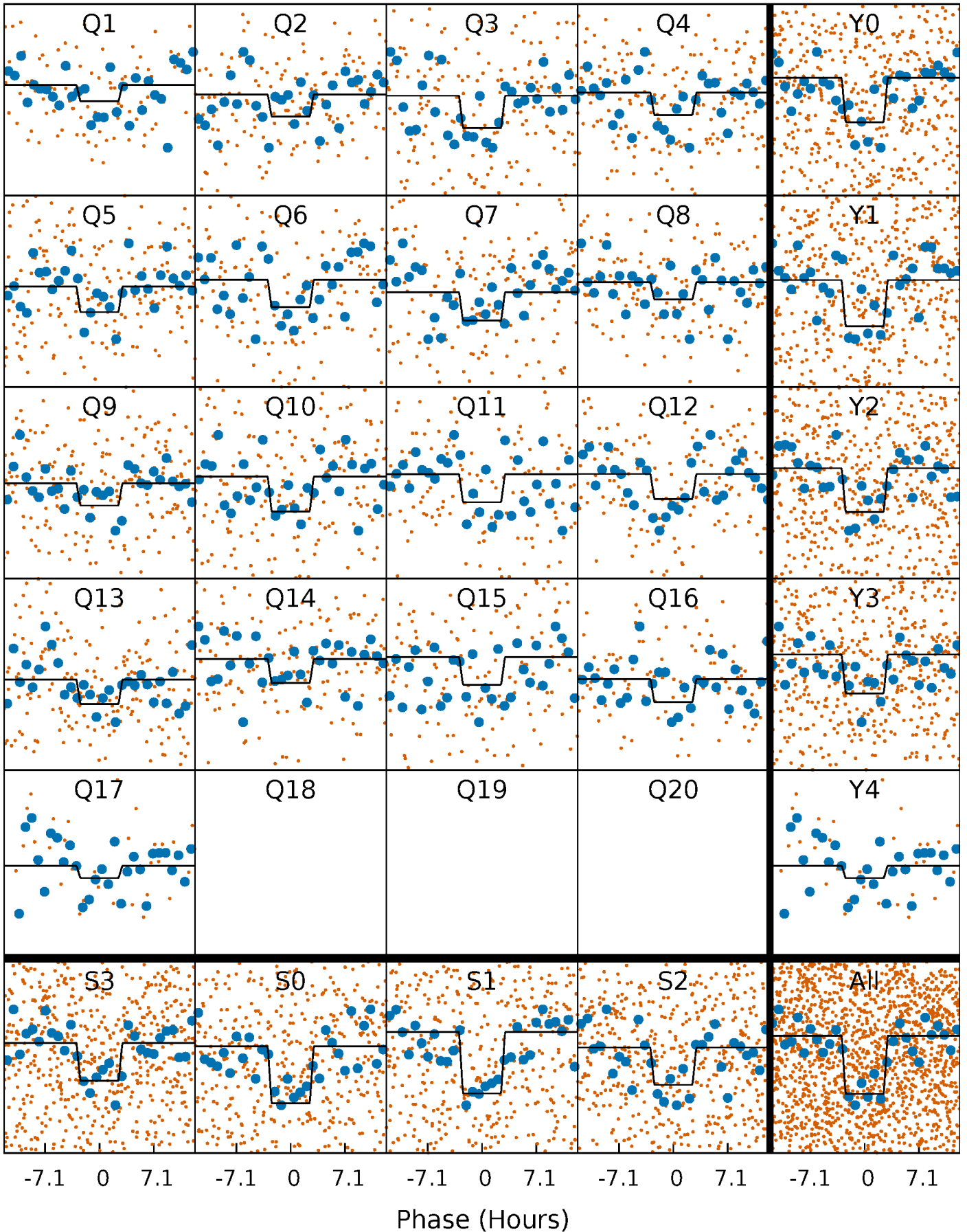
DV Quarter-Phased Transit Curves

TCE 006358937-01 P= 24.503663 Days $T_0=140.199080$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

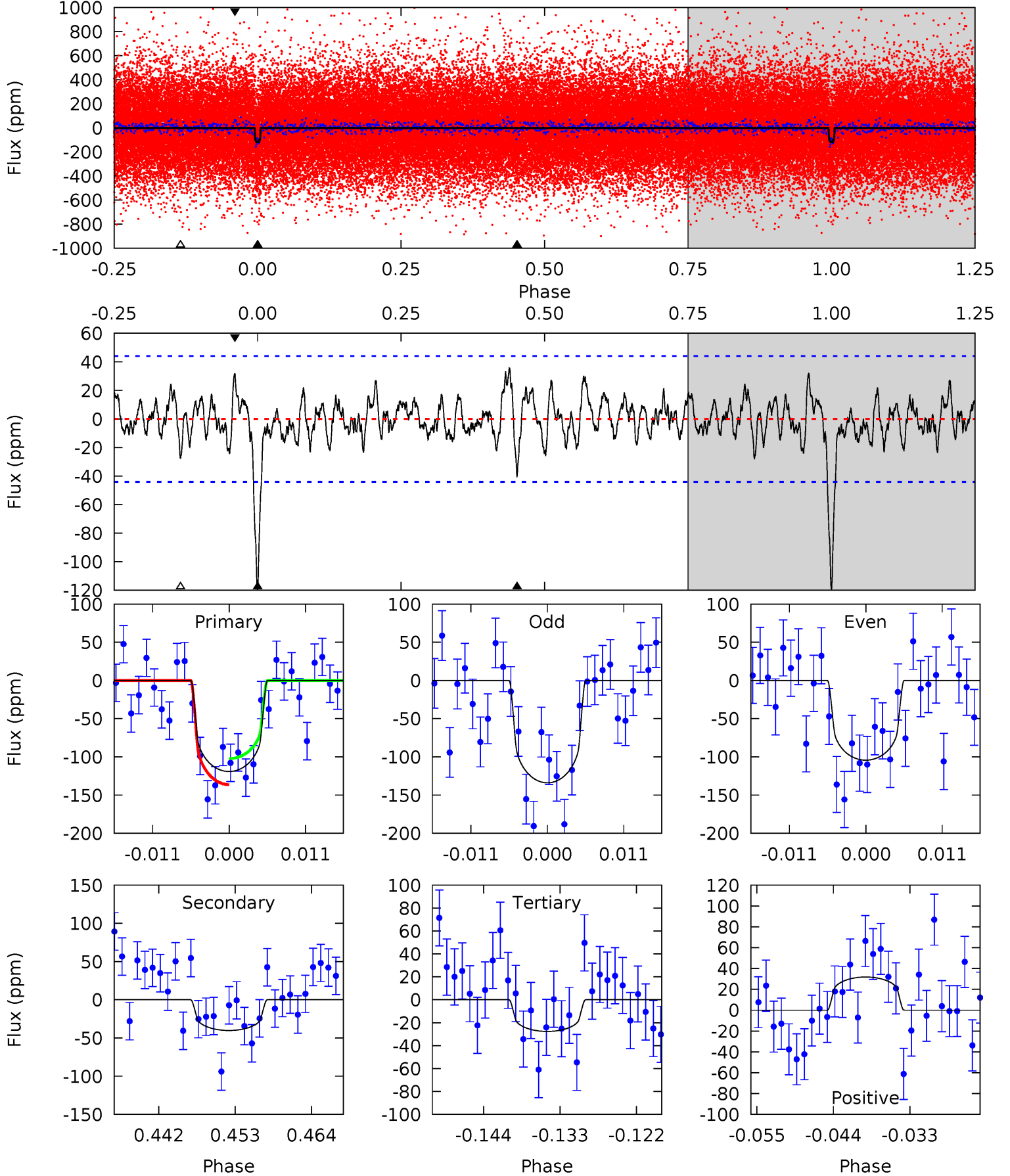
TCE 006358937-01 P= 24.504171 Days $T_0=140.175703$ (BKJD)



DV Model-Shift Uniqueness Test

006358937-01, P = 24.503663 Days, E = 115.695417 Days

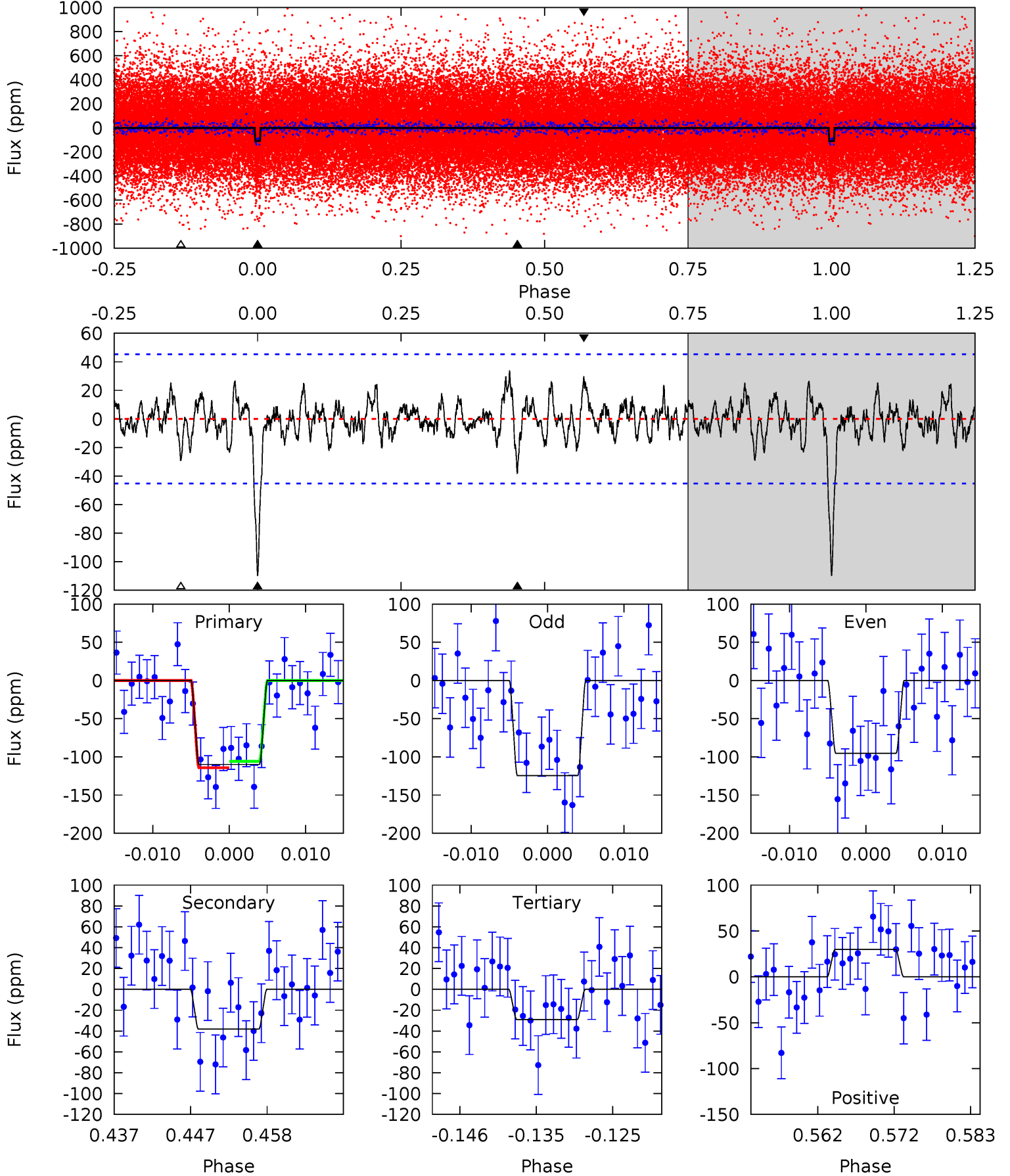
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.5	4.57	3.14	3.62	5.01	2.54	1.26	10.4	9.92	1.43	0.95	1.69	1.06	0.23	1.94



Alt Model-Shift Uniqueness Test

006358937-01, $P = 24.504171$ Days, $E = 115.671532$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.2	4.24	3.22	3.31	5.02	2.56	1.08	8.98	8.88	1.02	0.92	1.63	1.02	0.24	0.46



Stellar Parameters For KIC 006358937

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5250^{+86}_{-78}	$4.404^{+0.098}_{-0.140}$	$0.200^{+0.150}_{-0.150}$	$0.962^{+0.182}_{-0.112}$	$0.854^{+0.059}_{-0.034}$	$1.353^{+0.647}_{-0.548}$
	+2%/-1%	+2%/-3%	+75%/-75%	+19%/-12%	+7%/-4%	+48%/-40%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 006358937-01 / KOI 4794.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-40 ± 9	$1.26^{+0.75}_{-0.68}$	805^{+39}_{-32}	4096^{+1589}_{-601}	344^{+1381}_{-208}
Alt.	-38 ± 9	$1.22^{+0.71}_{-0.70}$	805^{+44}_{-31}	4100^{+1735}_{-617}	339^{+1657}_{-208}

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 $A_{obs} \gg 1.0$

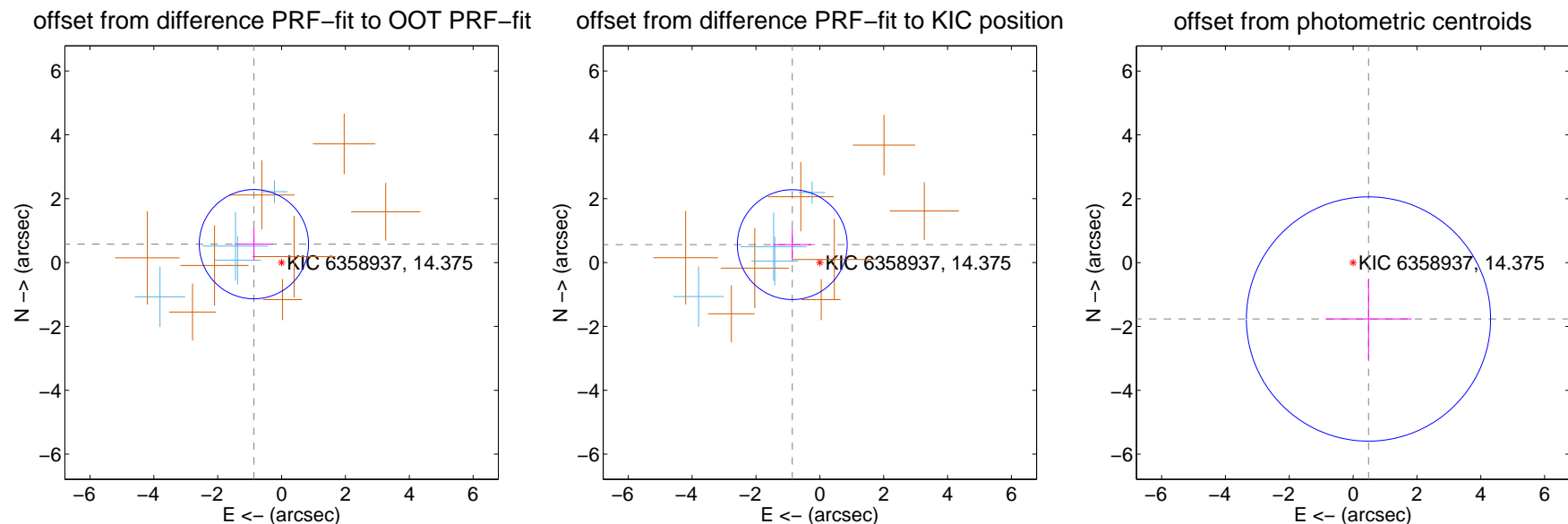
DV Centroid Data

Supplemental centroid analysis for 006358937-01. Kepler magnitude: 14.38. Transit SNR 9.60

There are 4 quarters with good PRF difference image offsets

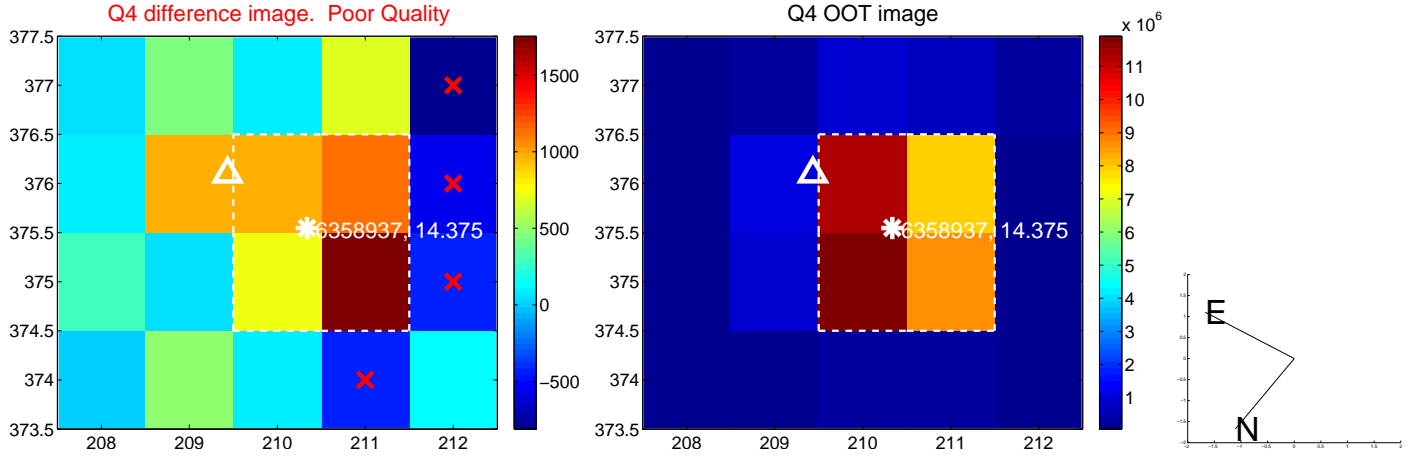
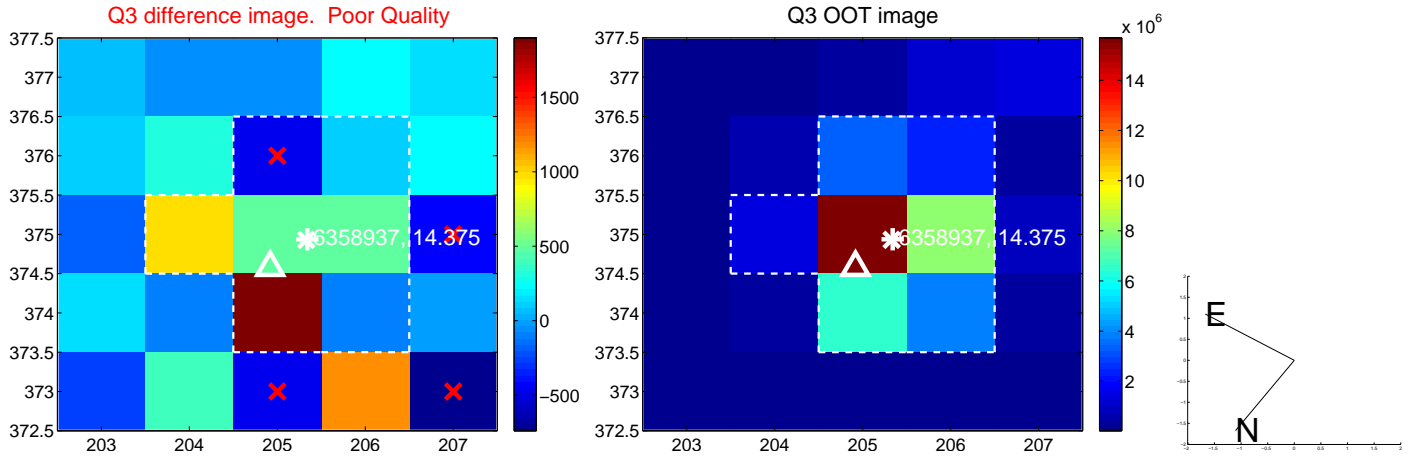
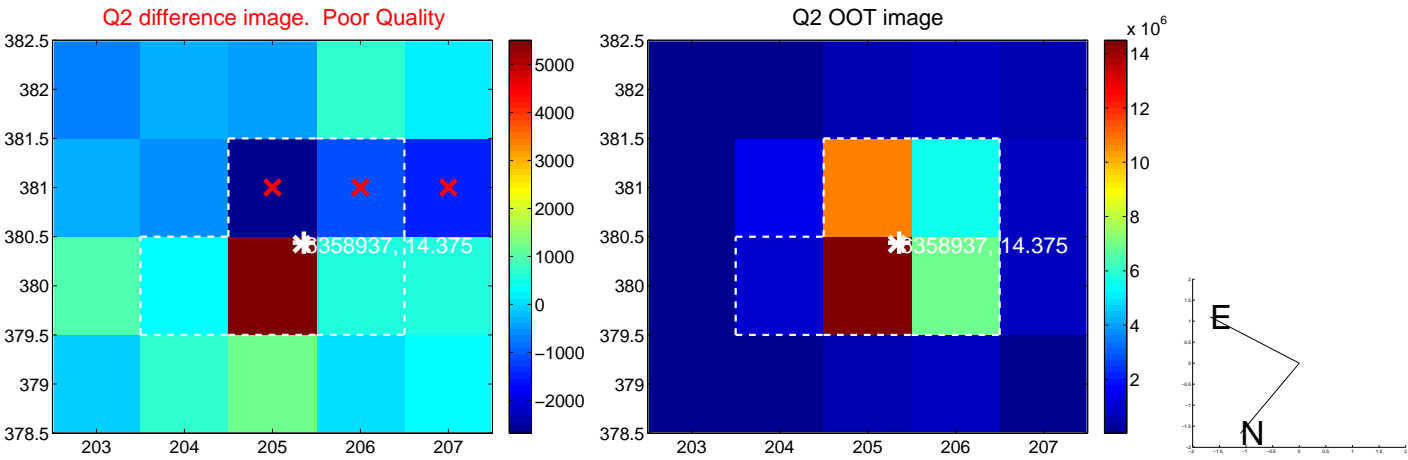
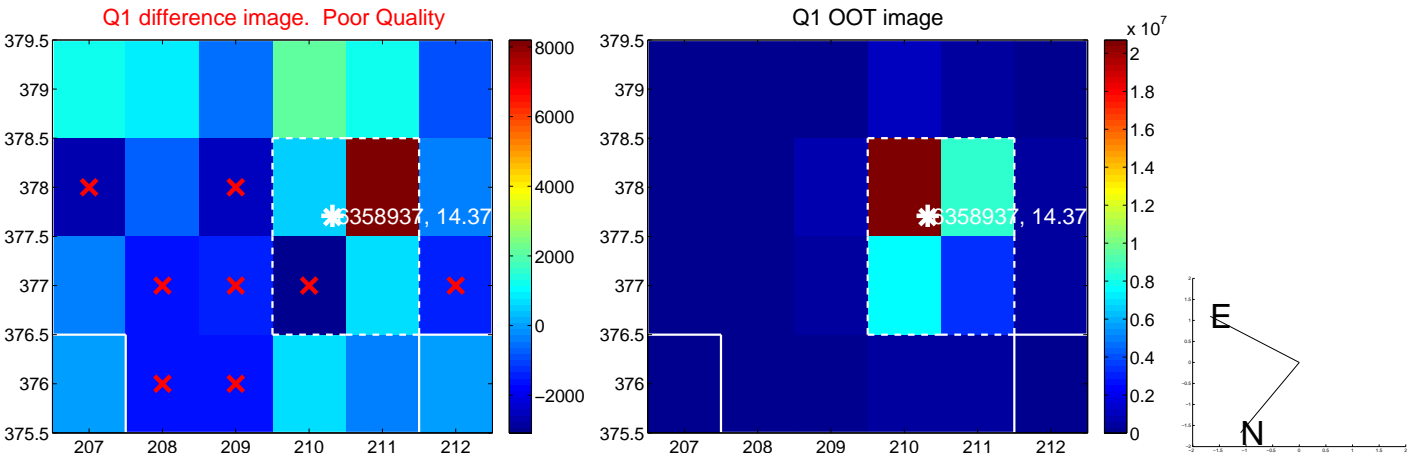
The direct PRF centroid is offset from the target star catalog position by about 0.01 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.040 ± 0.570	1.82	0.866 ± 0.597	0.575 ± 0.505
PRF-fit source offset from KIC position	1.029 ± 0.573	1.80	0.863 ± 0.600	0.561 ± 0.505
photometric centroid source offset	1.83 ± 1.28	1.44	-0.48 ± 1.35	-1.77 ± 1.27

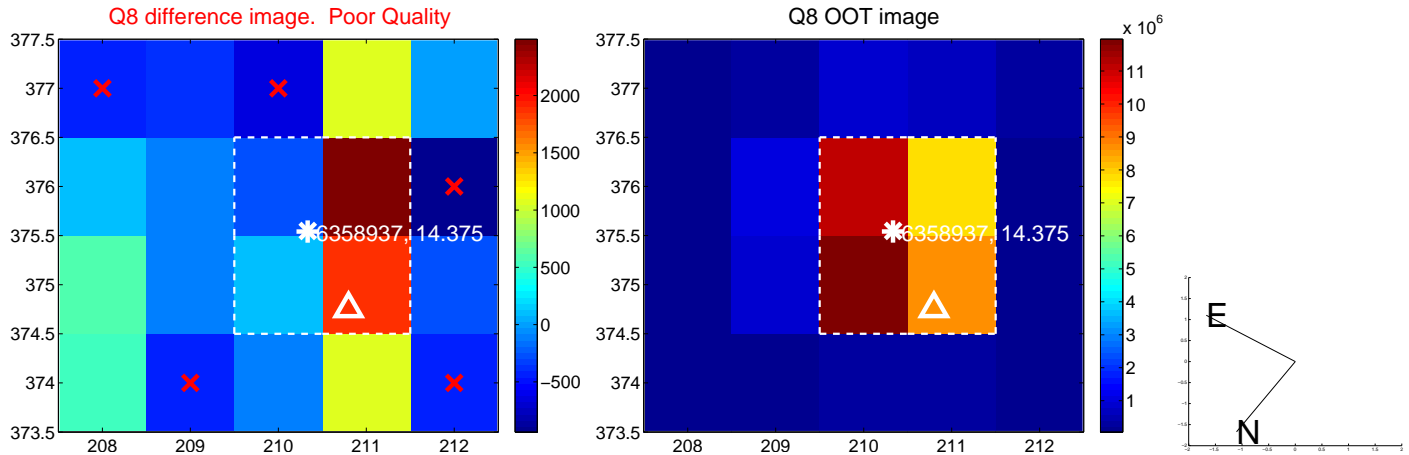
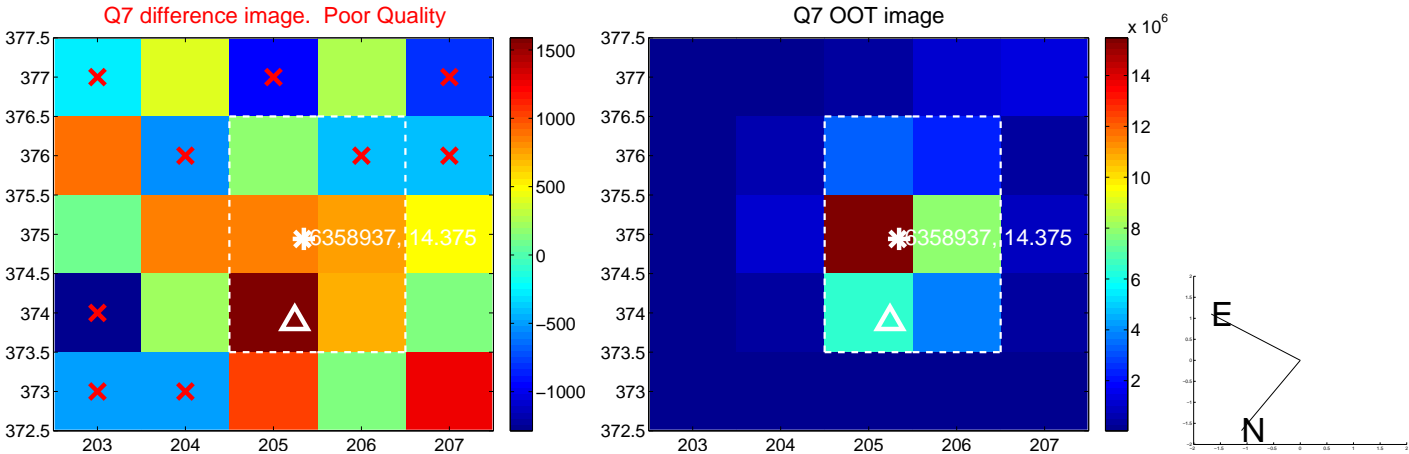
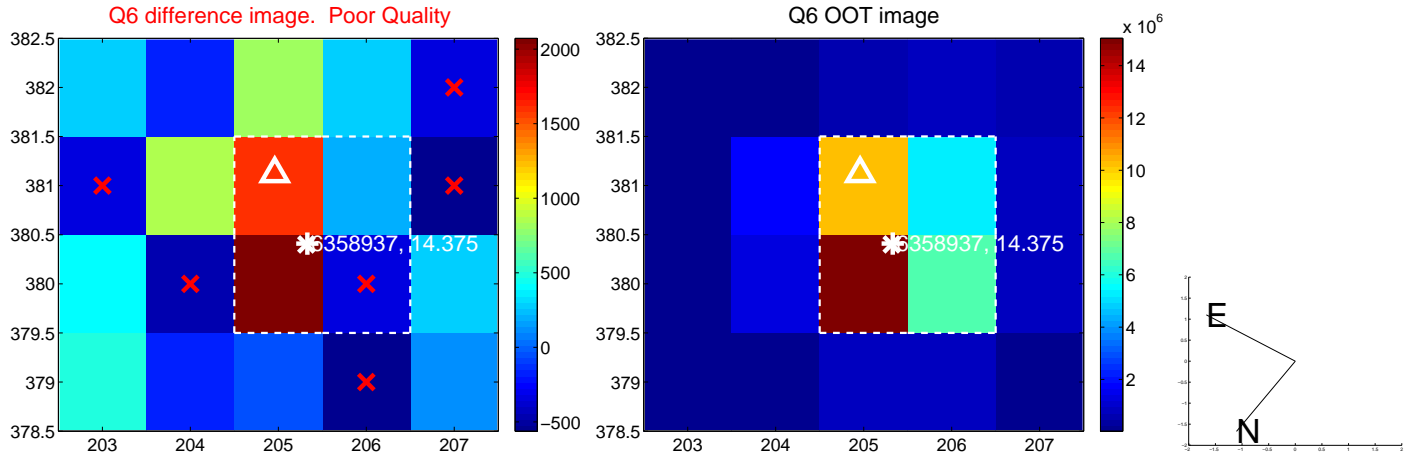
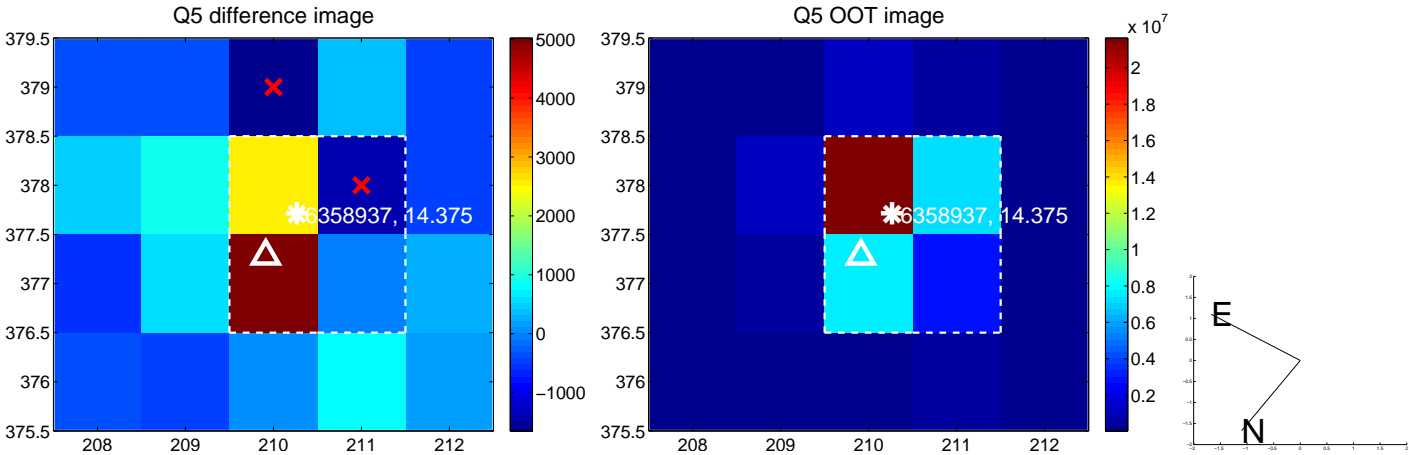


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

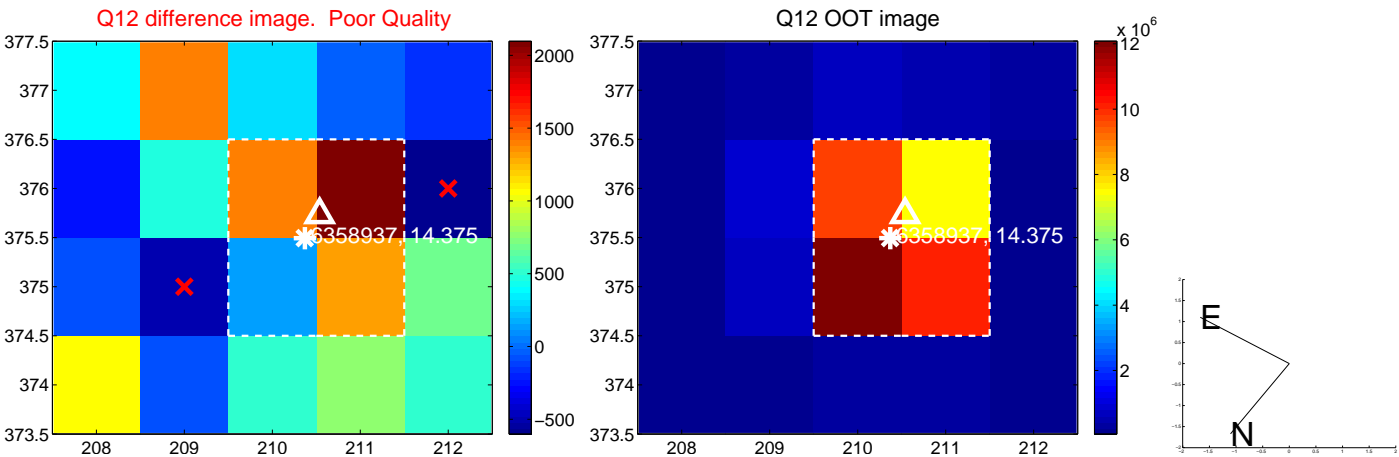
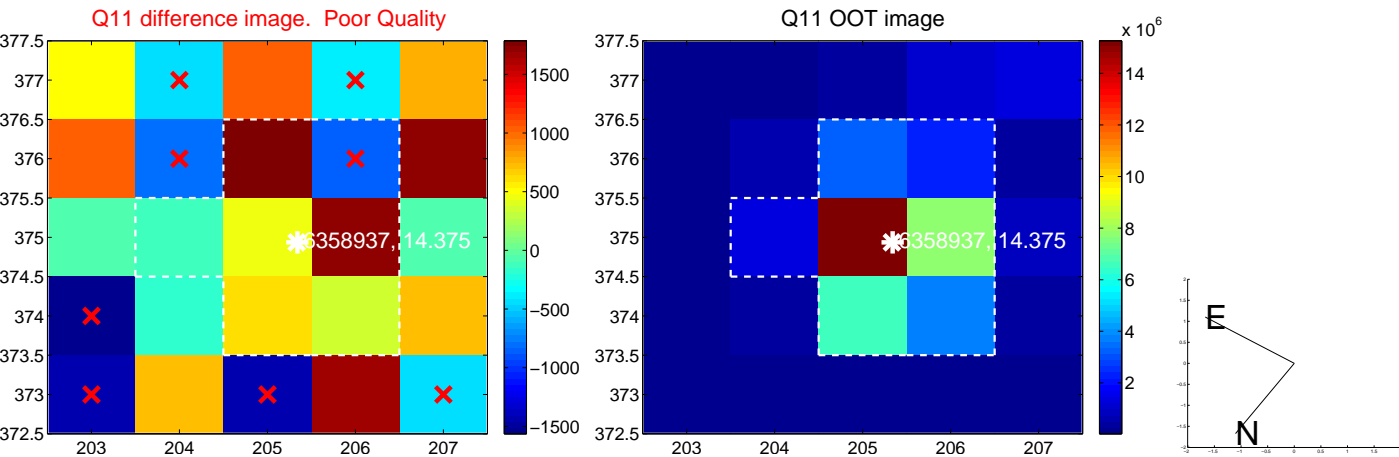
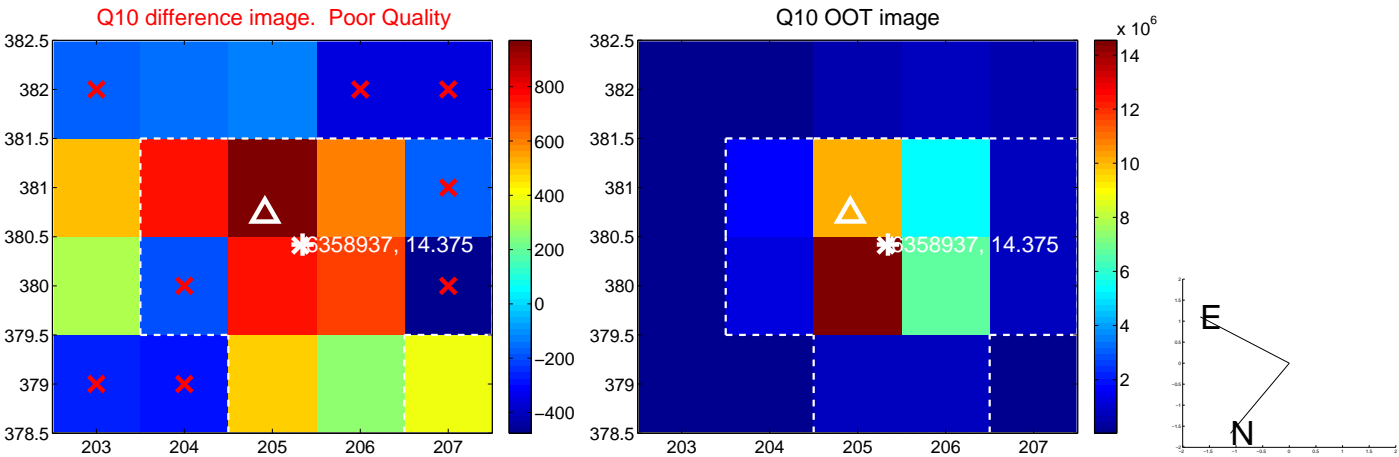
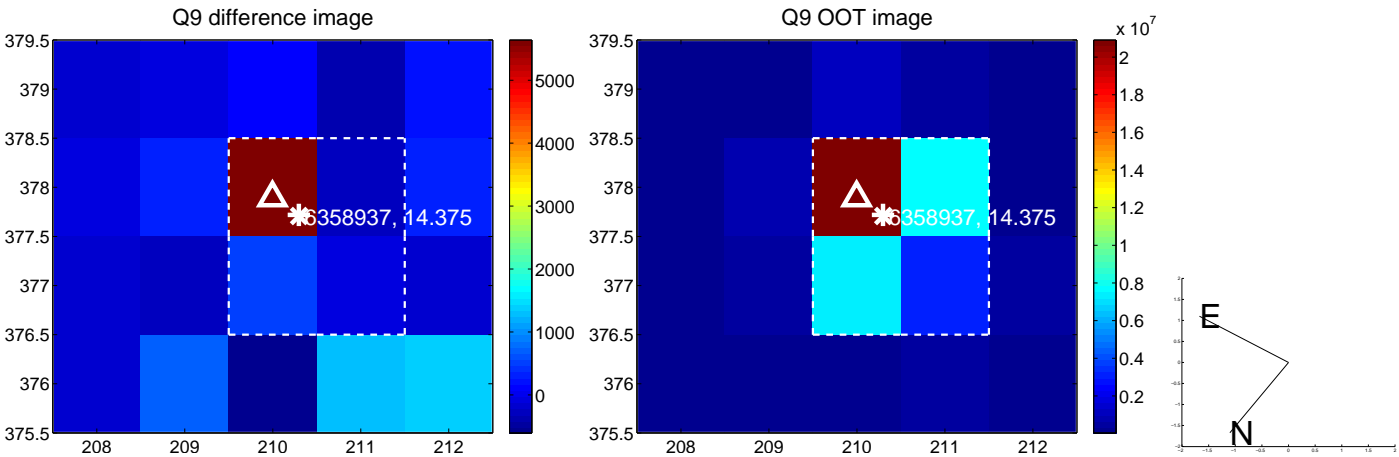
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



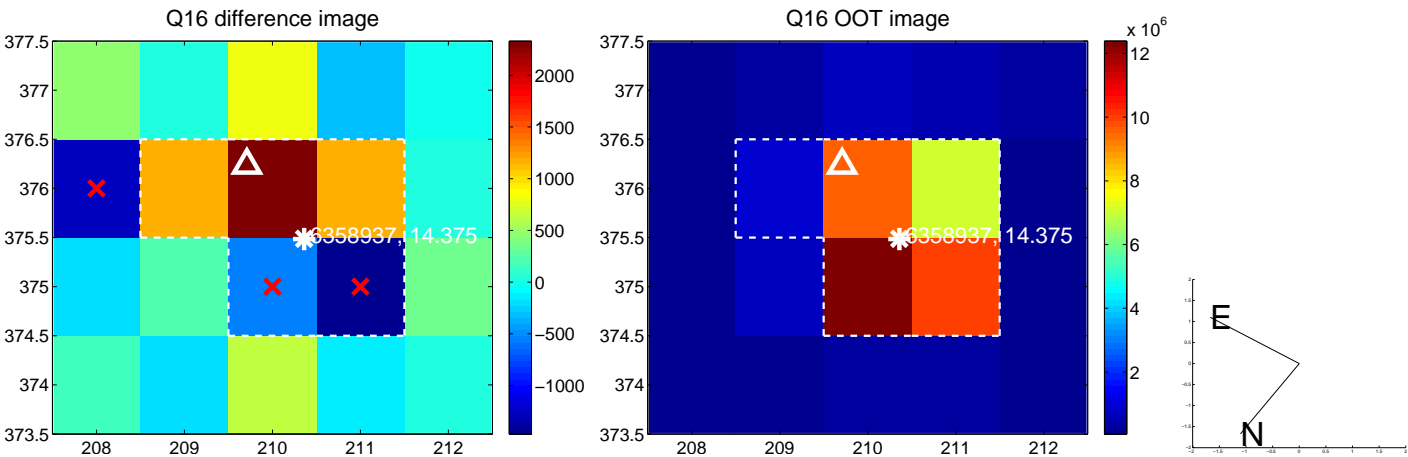
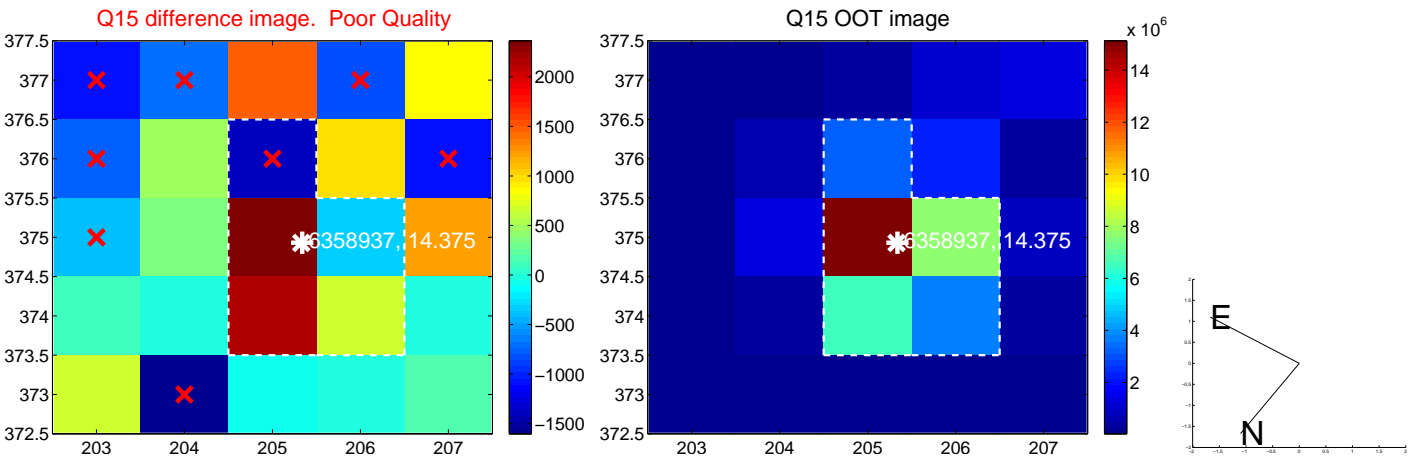
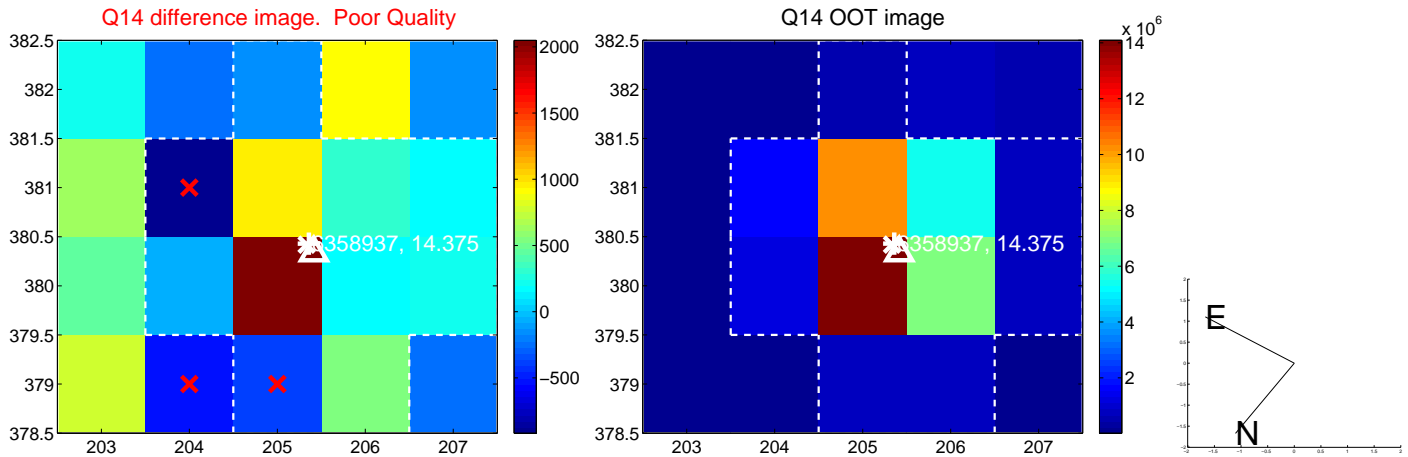
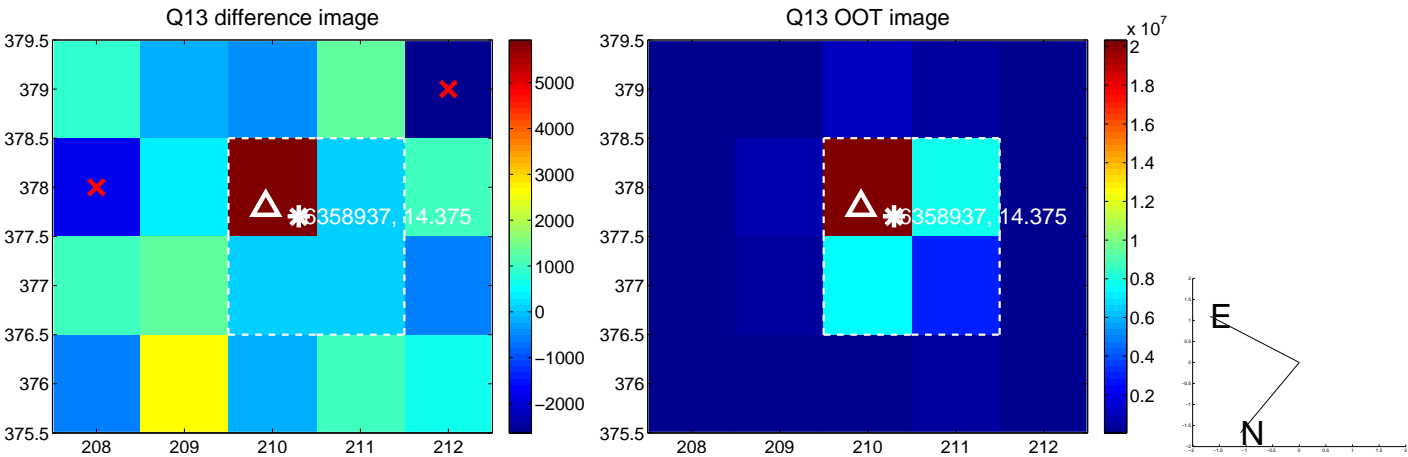
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



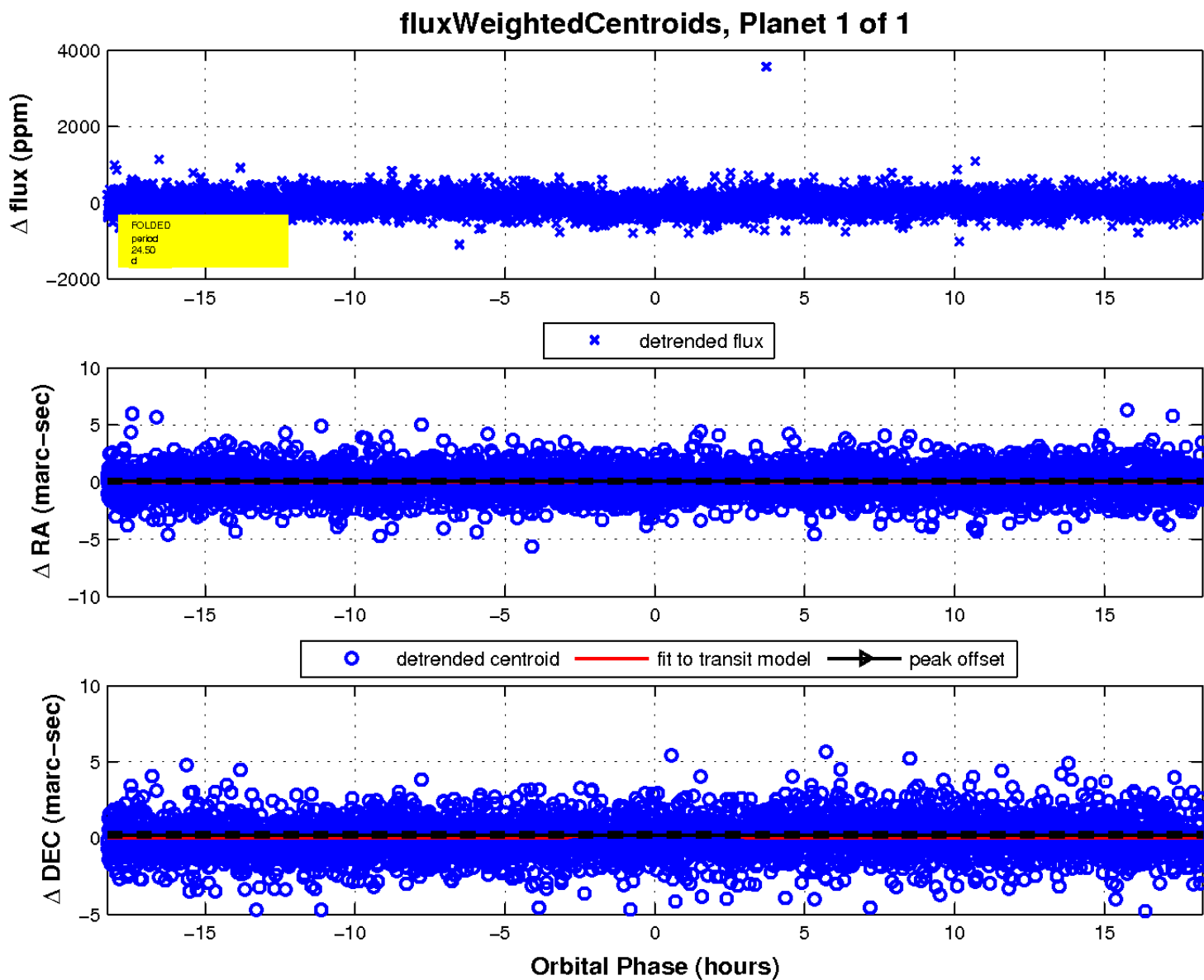
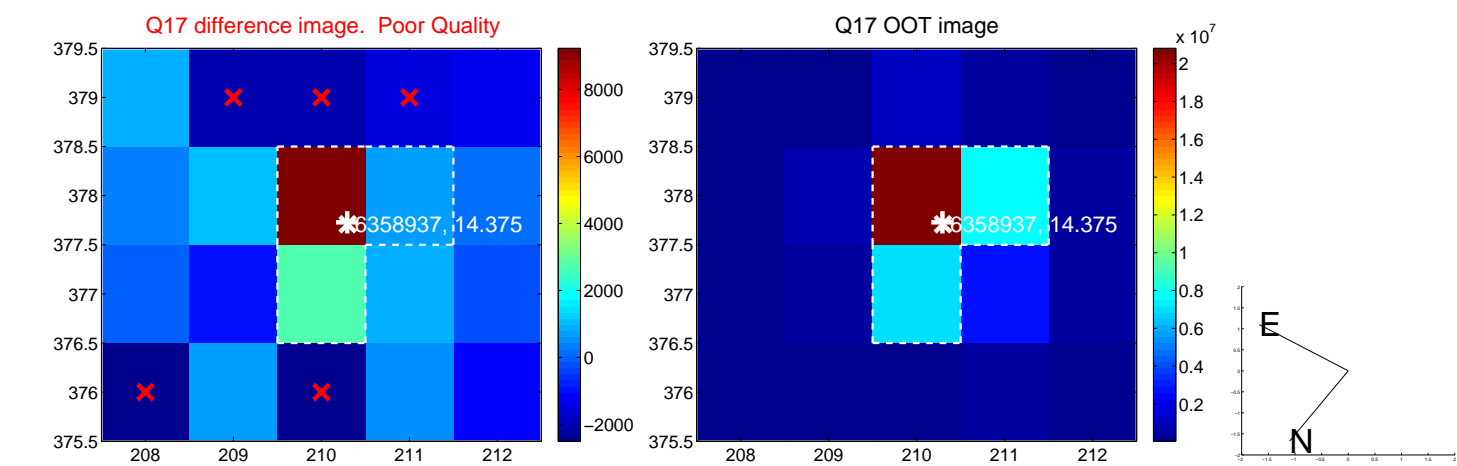
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UKIRT Image

Declination

