

KIC 003850086

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})
003850086-01	OBS	No	19.101649	141.223740	260.5	57.728	16.4	47.0	1.85	6461	5.87	242.06

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003850086-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_SATURATED

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

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

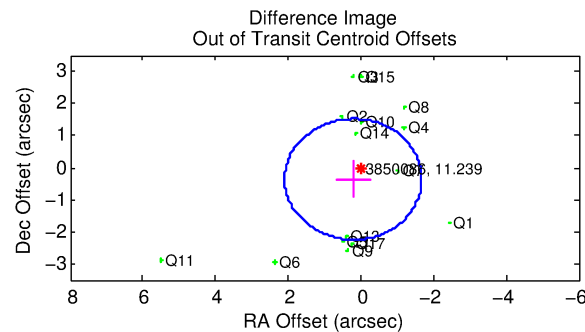
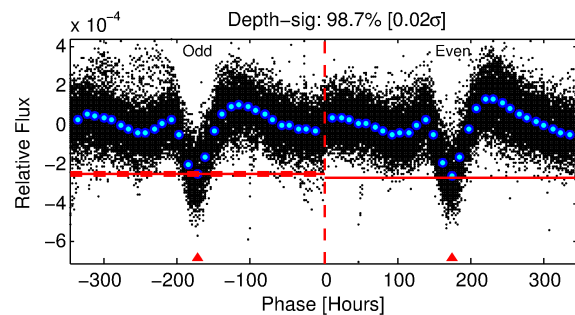
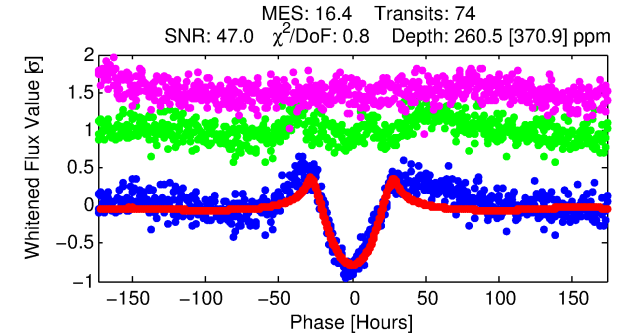
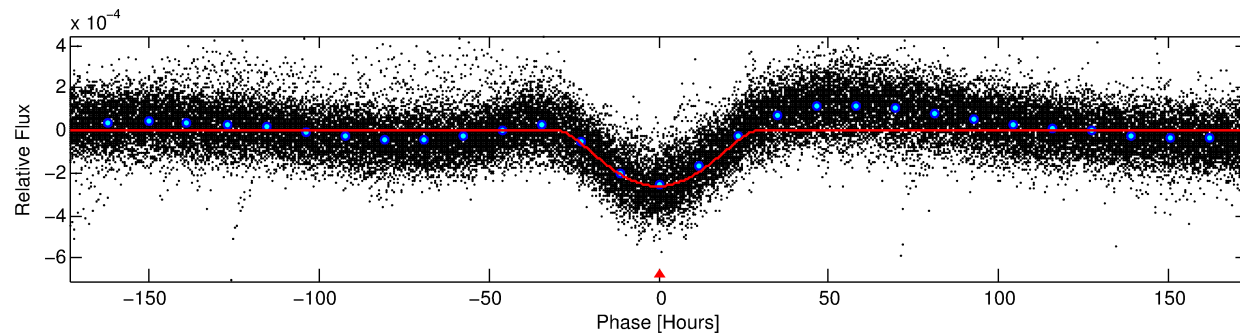
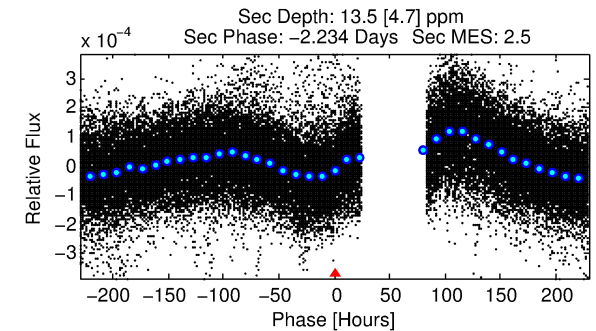
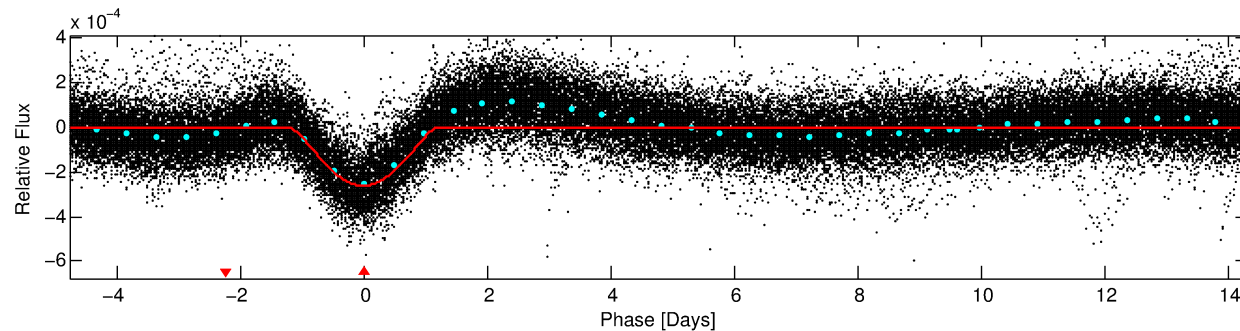
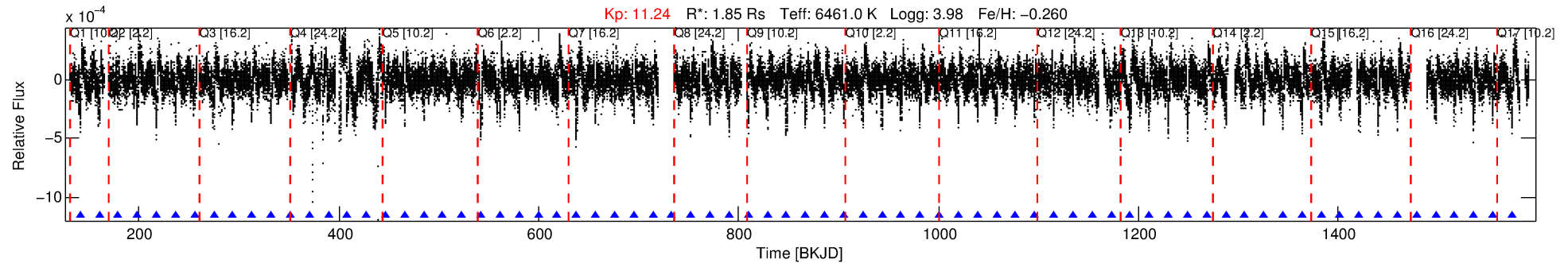
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003850086-01

No Significant Match Found

DV One-Page Summary

KIC: 3850086 Candidate: 1 of 1 Period: 19.102 d



DV Fit Results:

Period = 19.10165 [0.00044] d
Epoch = 141.2237 [0.0190] BKJD
Rp/R* = 0.0290 [0.0083]
a/R* = 1.18 [0.01]
b = 1.00 [0.02]
Seff = 242.06 [107.13]
Teq = 1006 [111] K
Rp = 5.87 [2.46] Re
a = 0.1488 [0.0416] AU
Ag = 4.80 [3.82] [0.99σ]
Teffp = 2301 [389] K [3.20σ]

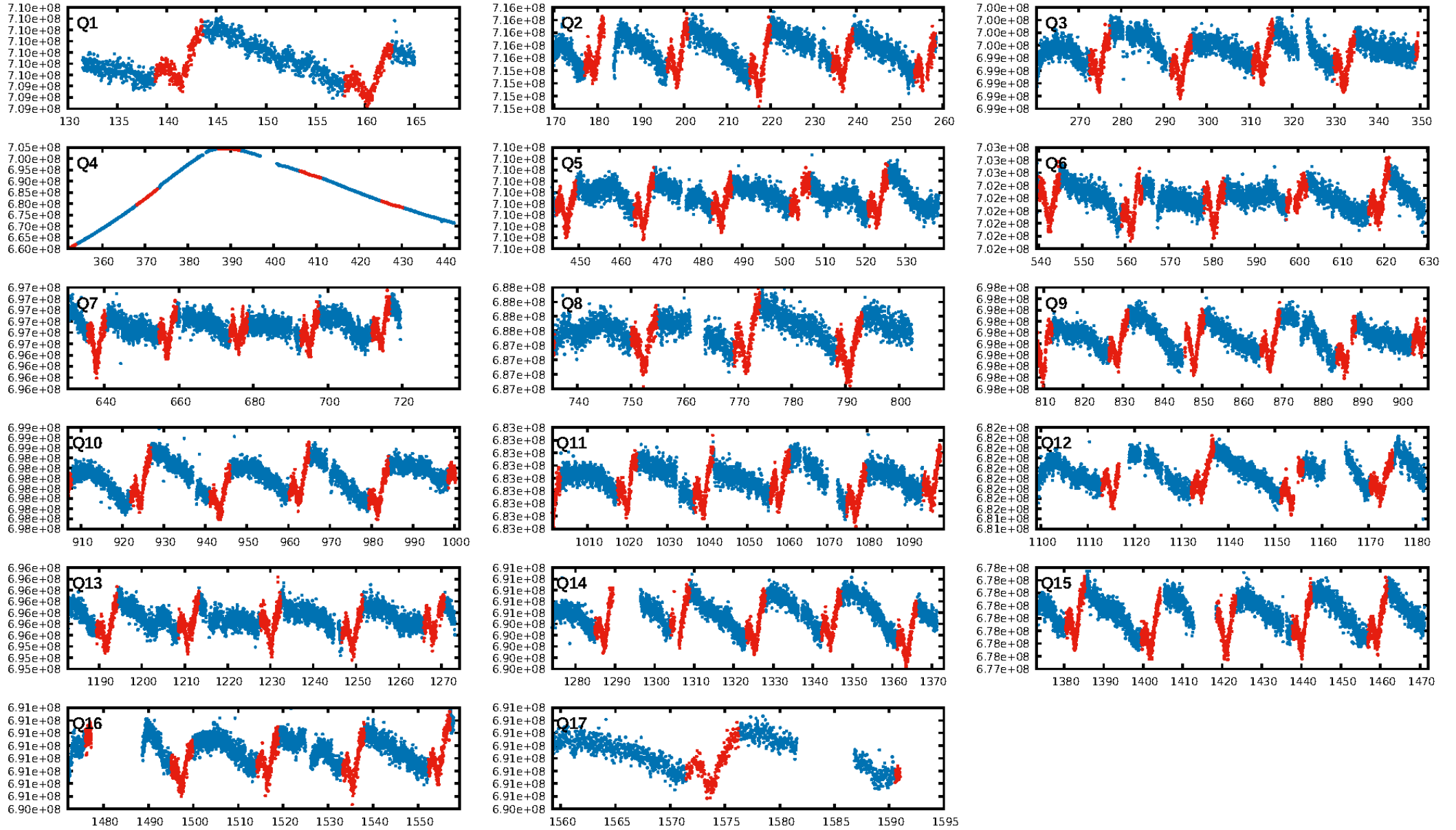
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 30.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 5.44e-58
RollingBand-fgt: 1.00 [71/71]
GhostDiagnostic-chr: 2.319
Centroid-sig: 5.7%
Centroid-so: 0.181 arcsec [1.40σ]
OotOffset-rm: 0.422 arcsec [0.67σ]
KicOffset-rm: 0.499 arcsec [0.80σ]
OotOffset-st: 4/4/2/5 [15]
KicOffset-st: 4/4/2/5 [15]
DiffImageQuality-fgm: 0.73 [11/15]
DiffImageOverlap-fno: 1.00 [15/15]

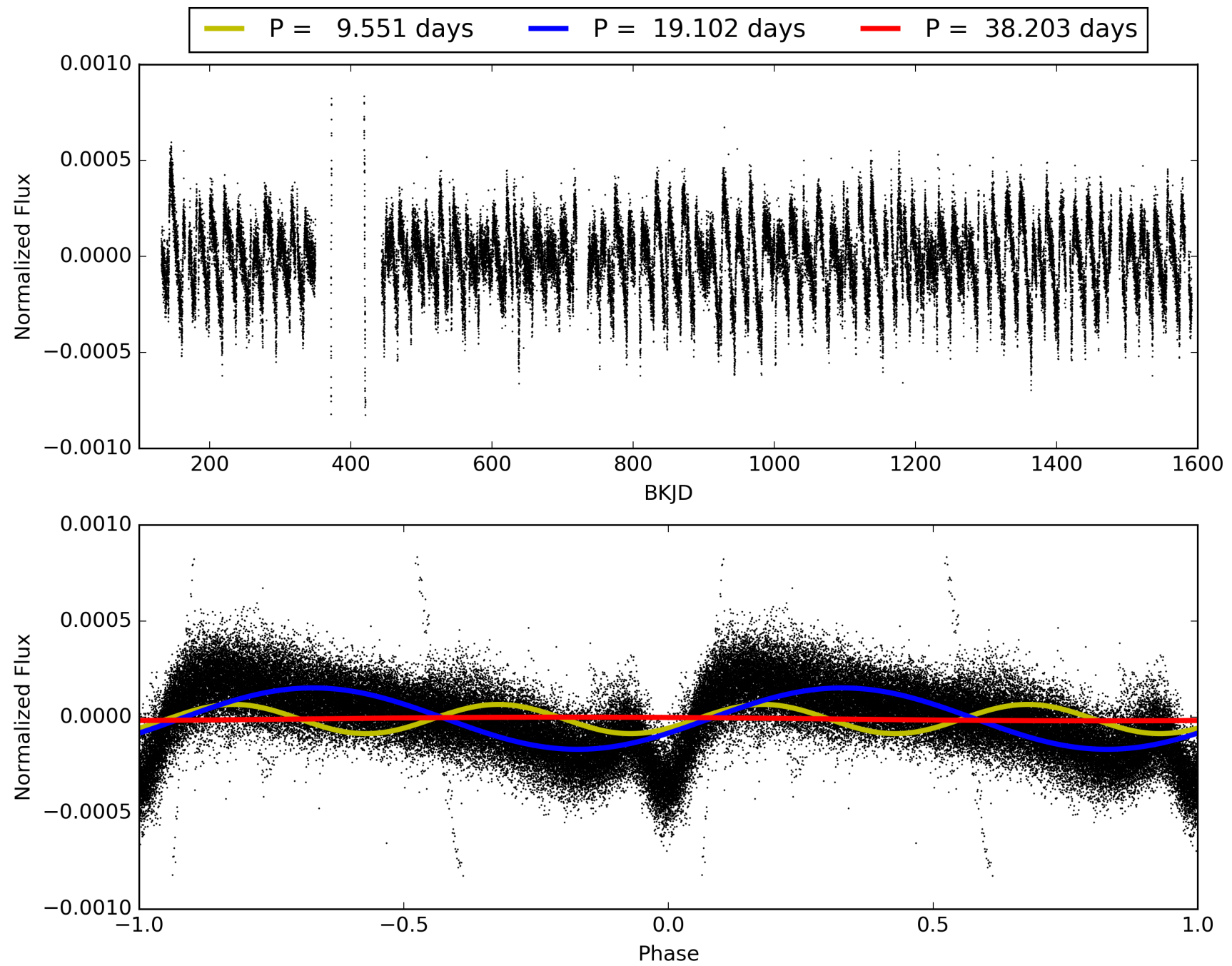
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 01:32:53 Z

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

TCE 003850086-01, PDC Light Curves

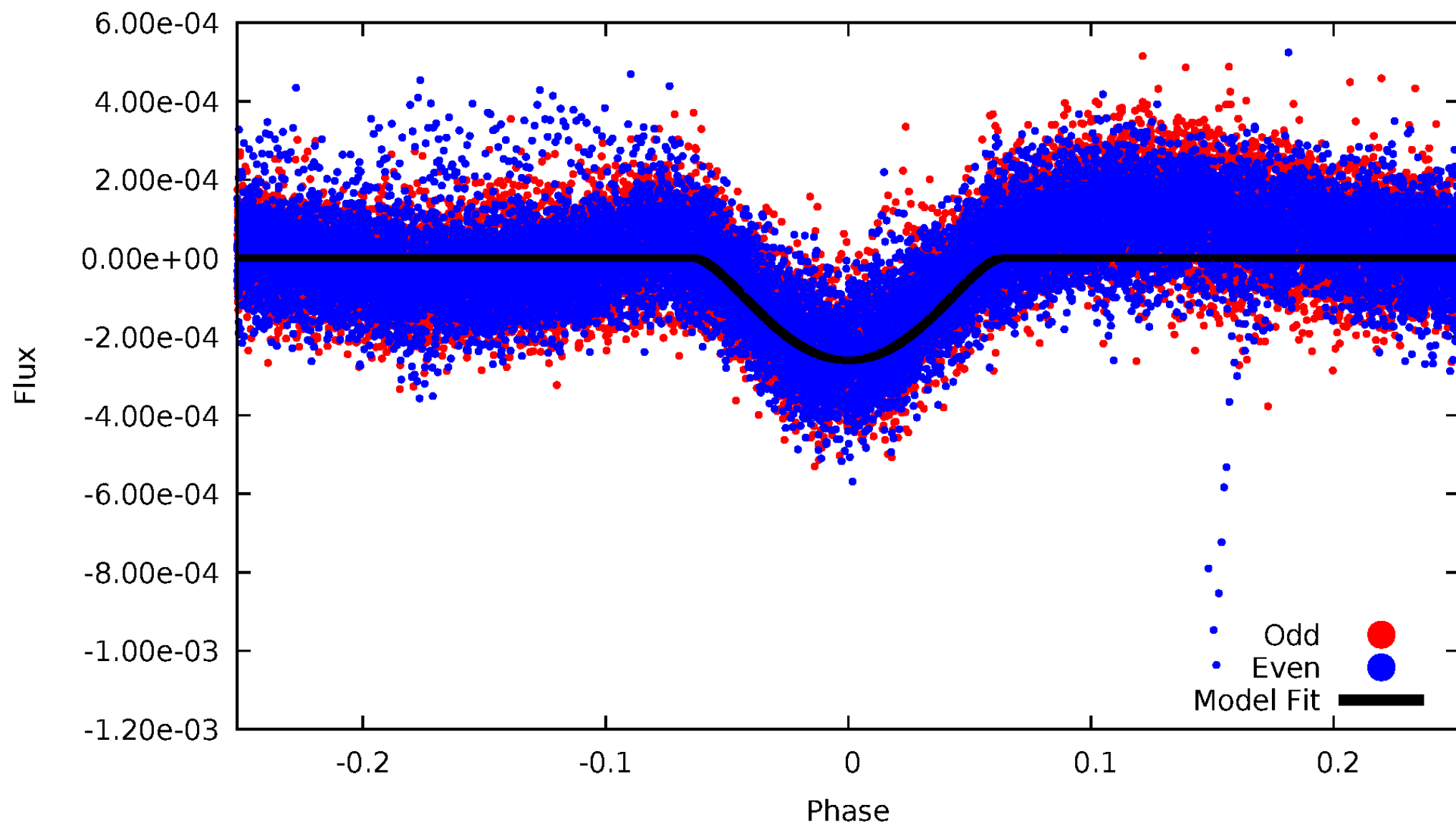


TCE 003850086-01



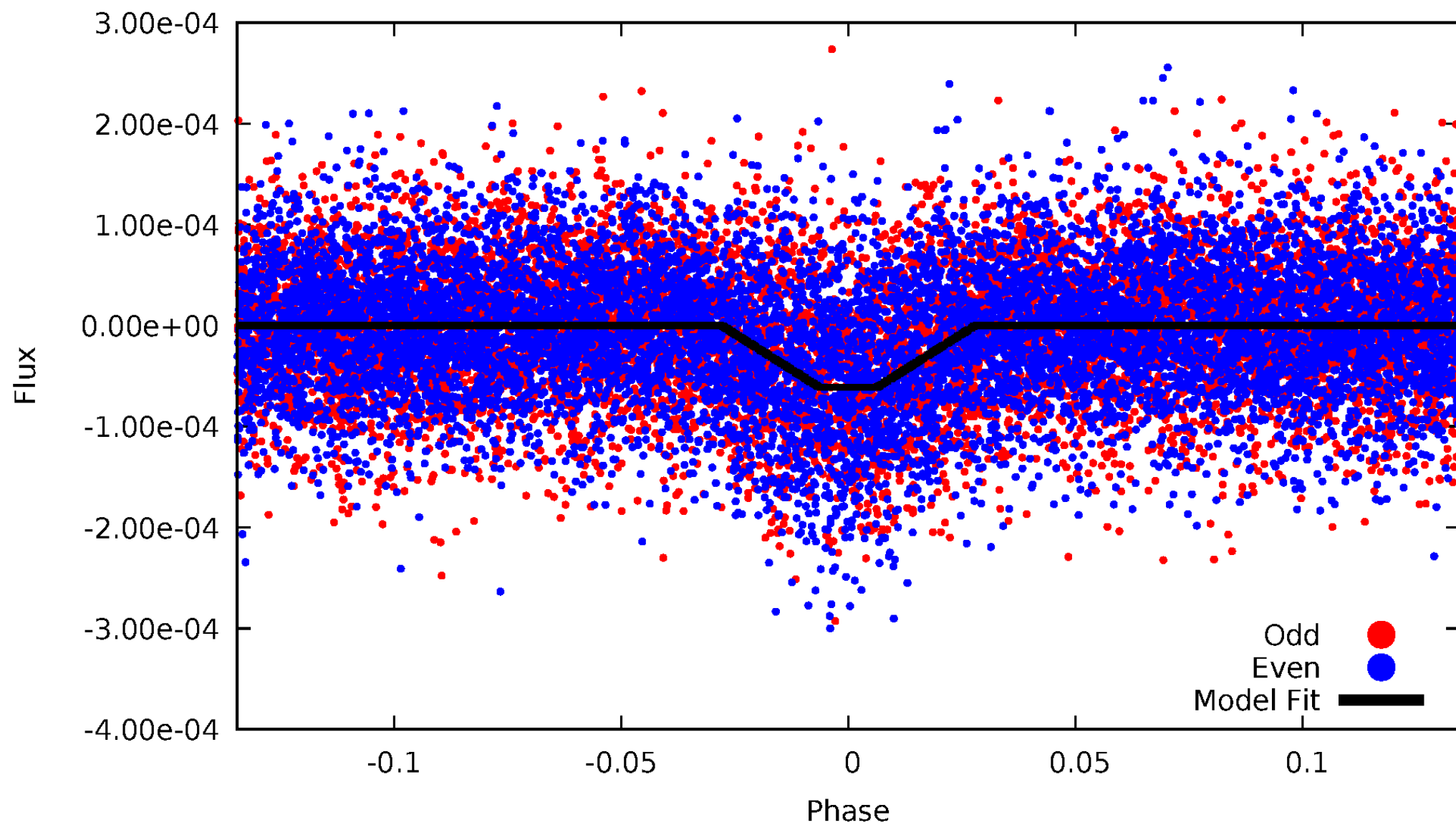
DV Odd/Even

TCE 003850086-01

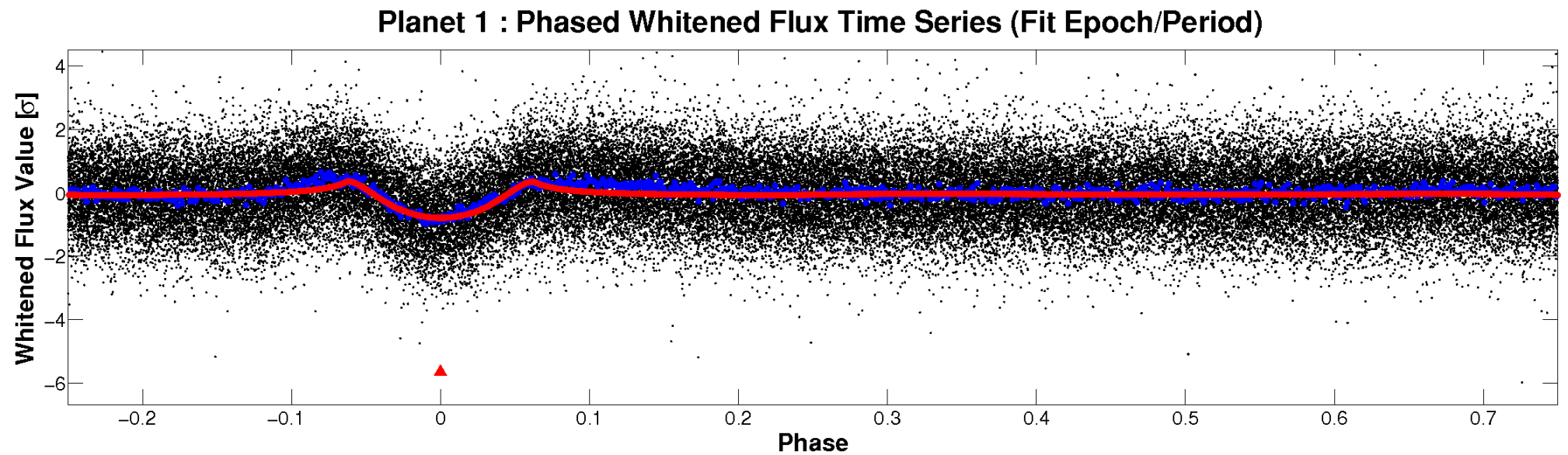
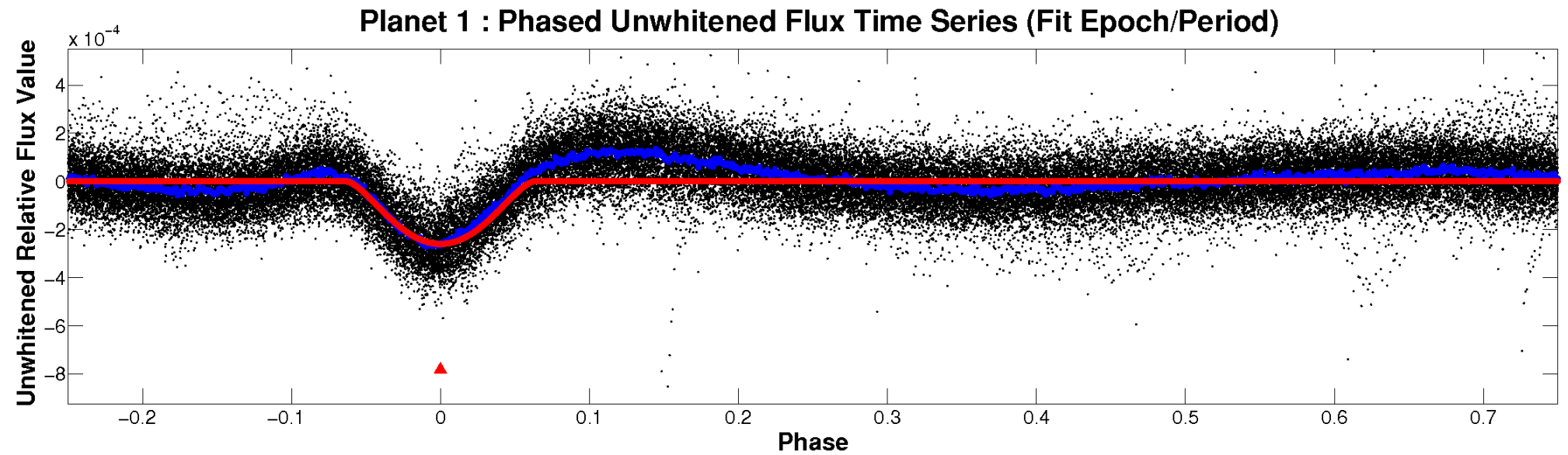


ALT Odd/Even

TCE 003850086-01

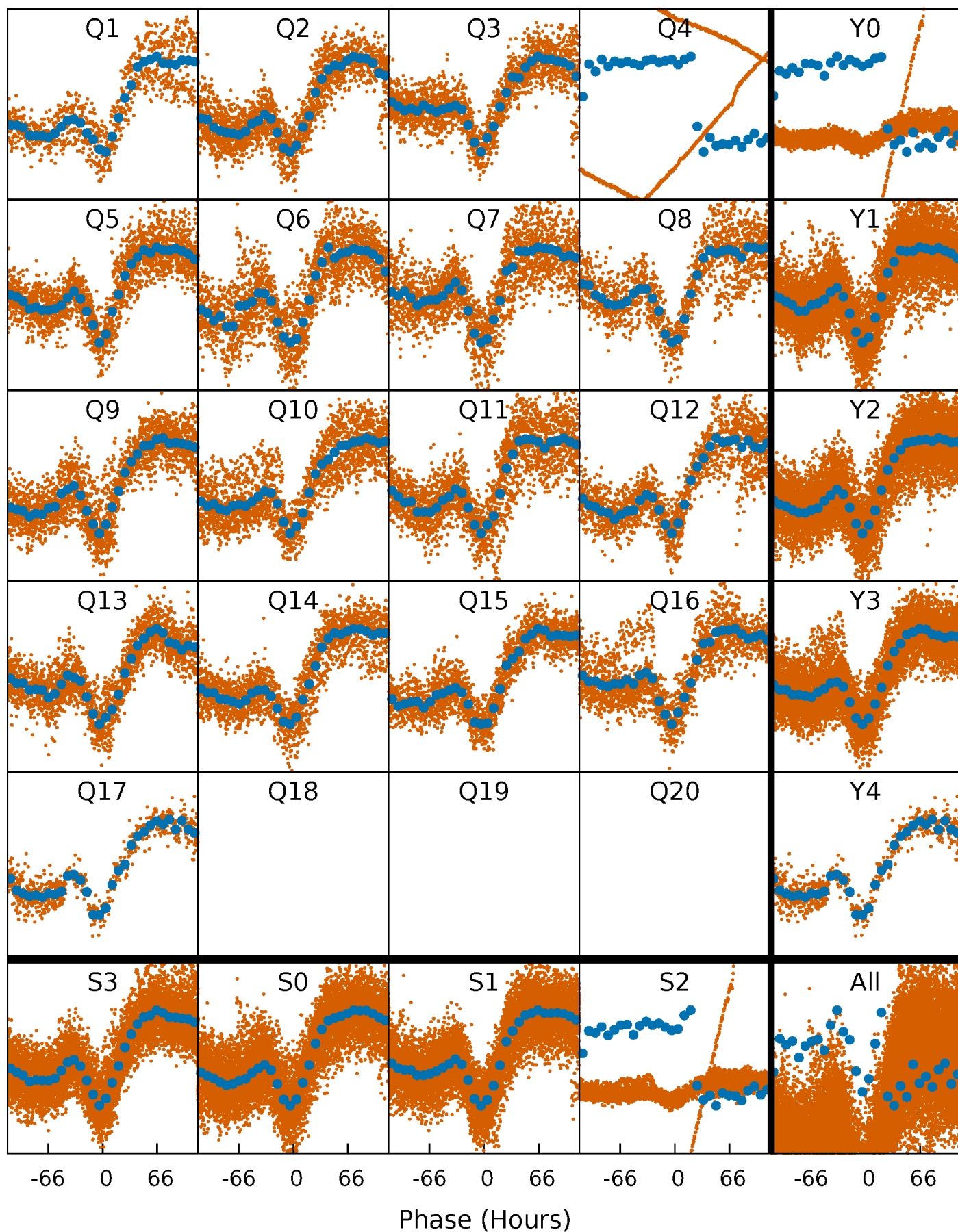


Non-Whitened Vs. Whitened Light Curve



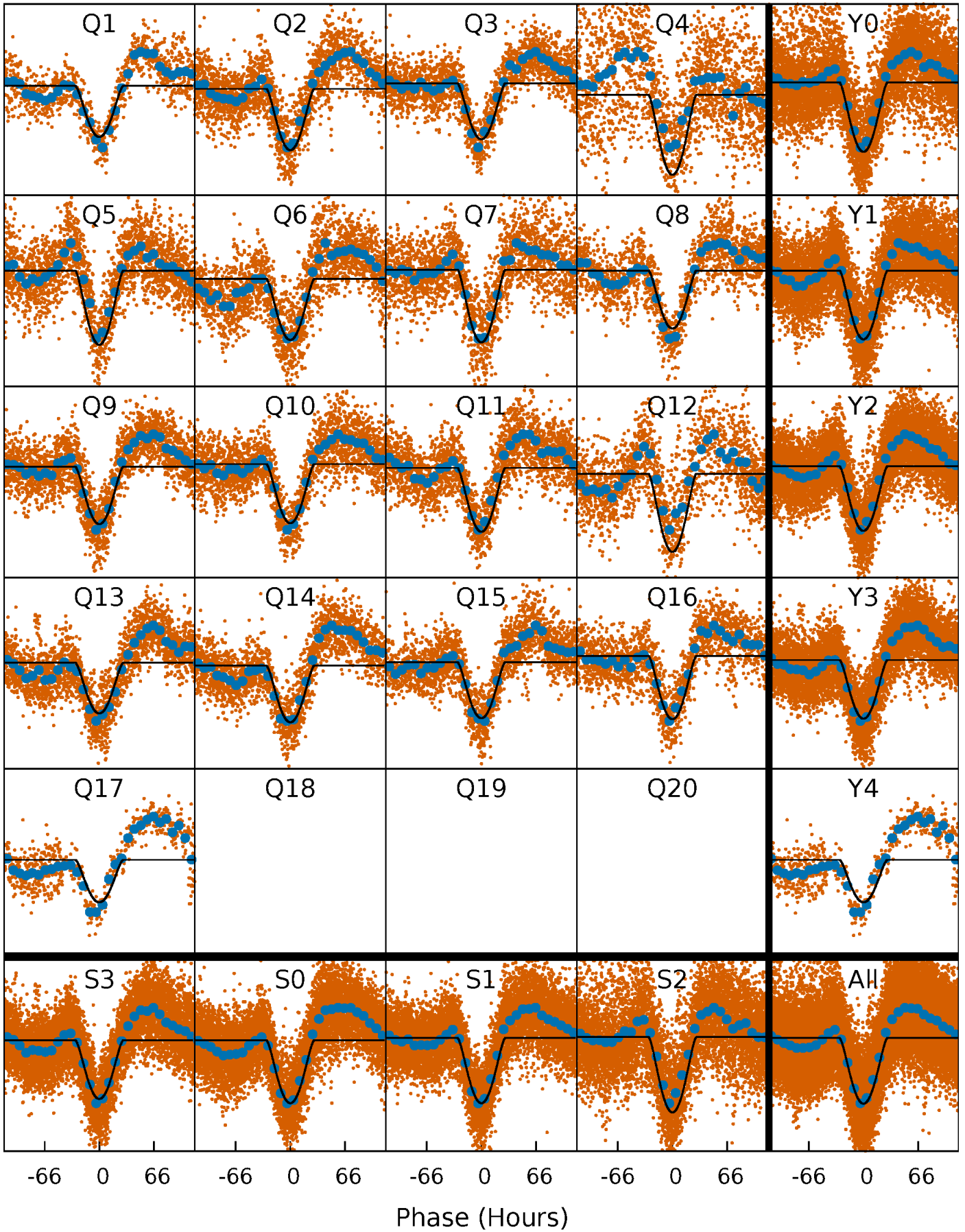
PDC Quarter-Phased Transit Curves

TCE 003850086-01 P= 19.101649 Days $T_0=141.223740$ (BKJD)



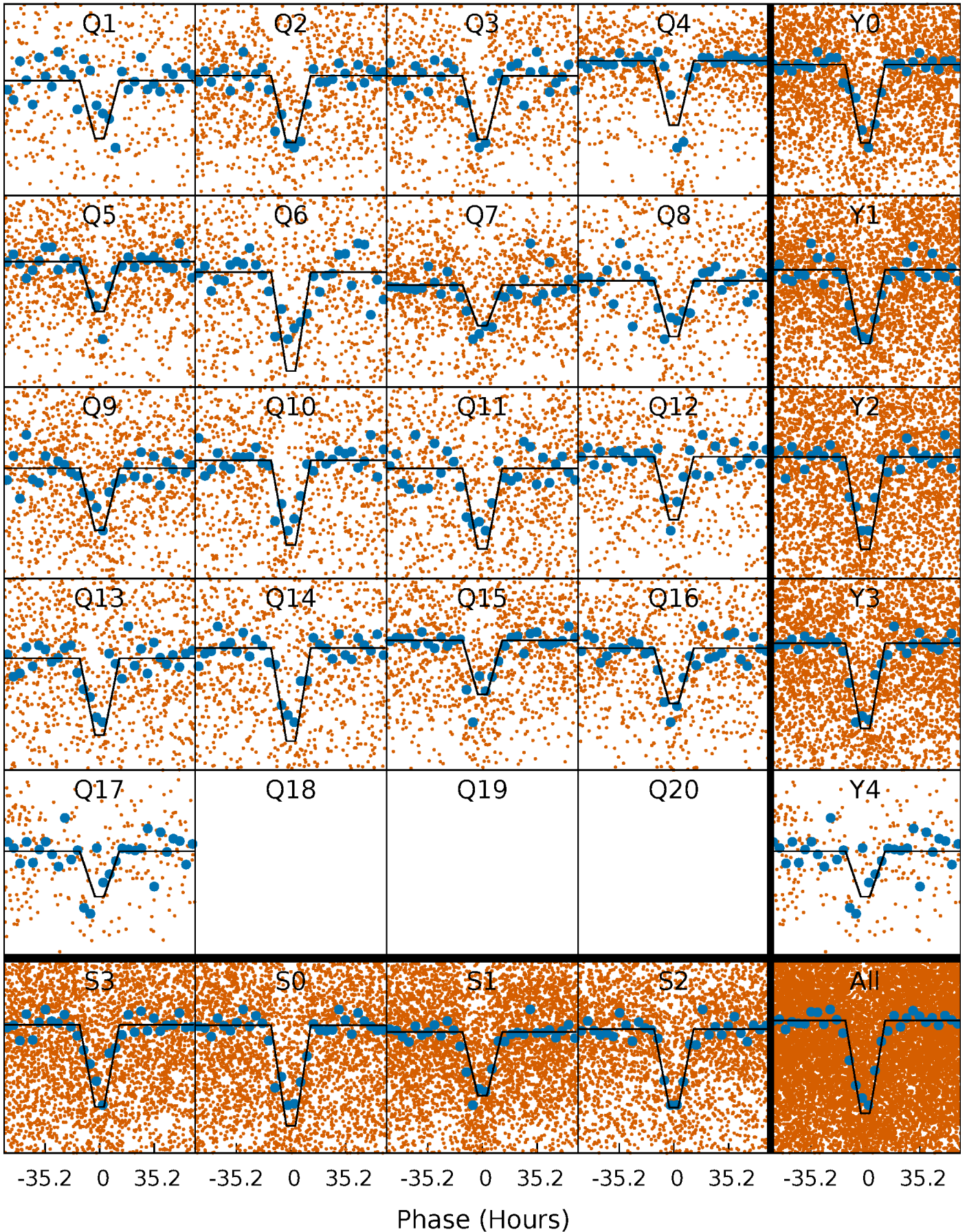
DV Quarter-Phased Transit Curves

TCE 003850086-01 P= 19.101649 Days $T_0=141.223740$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

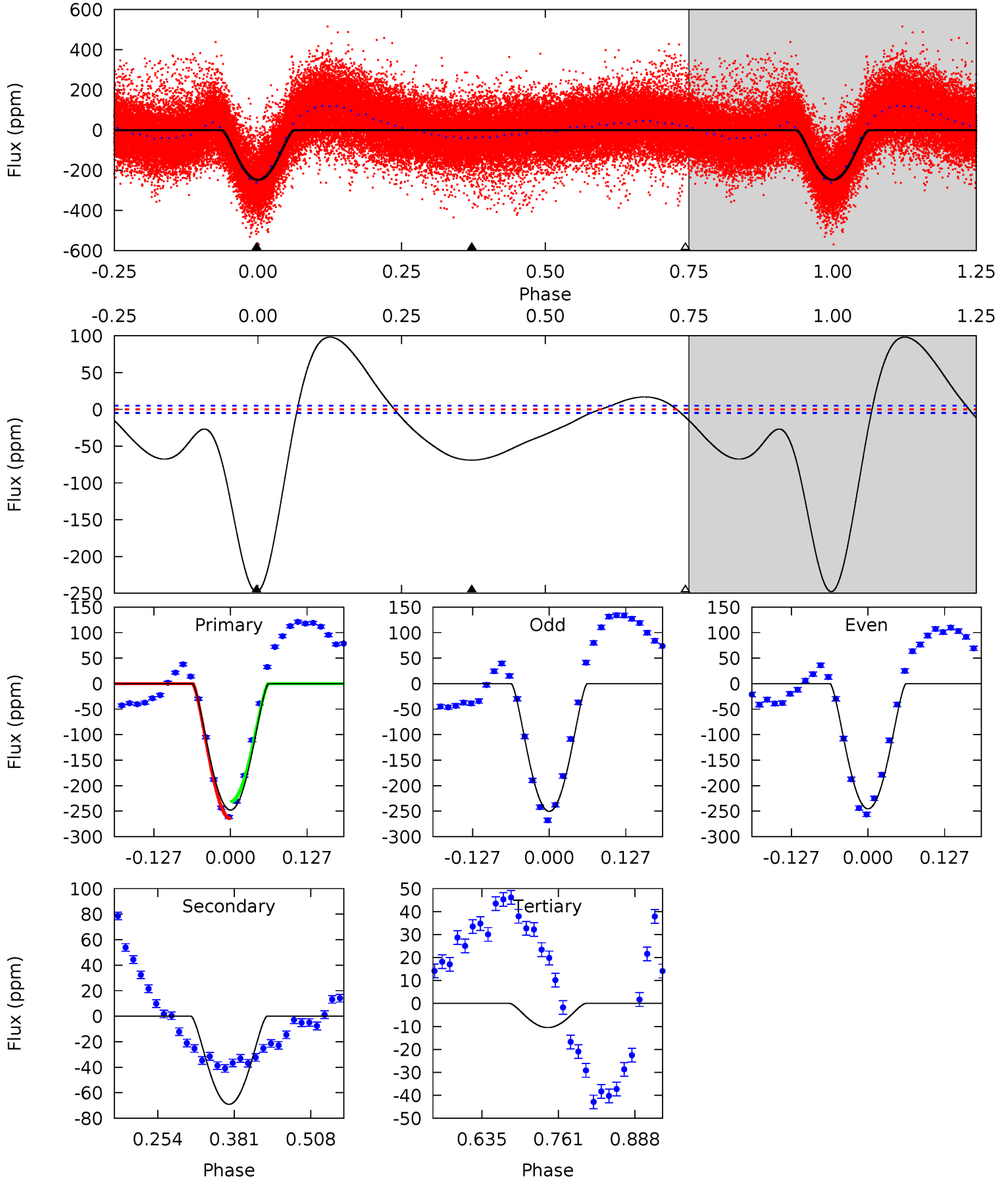
TCE 003850086-01 P= 19.100554 Days $T_0=141.093750$ (BKJD)



DV Model-Shift Uniqueness Test

003850086-01, P = 19.101649 Days, E = 122.122091 Days

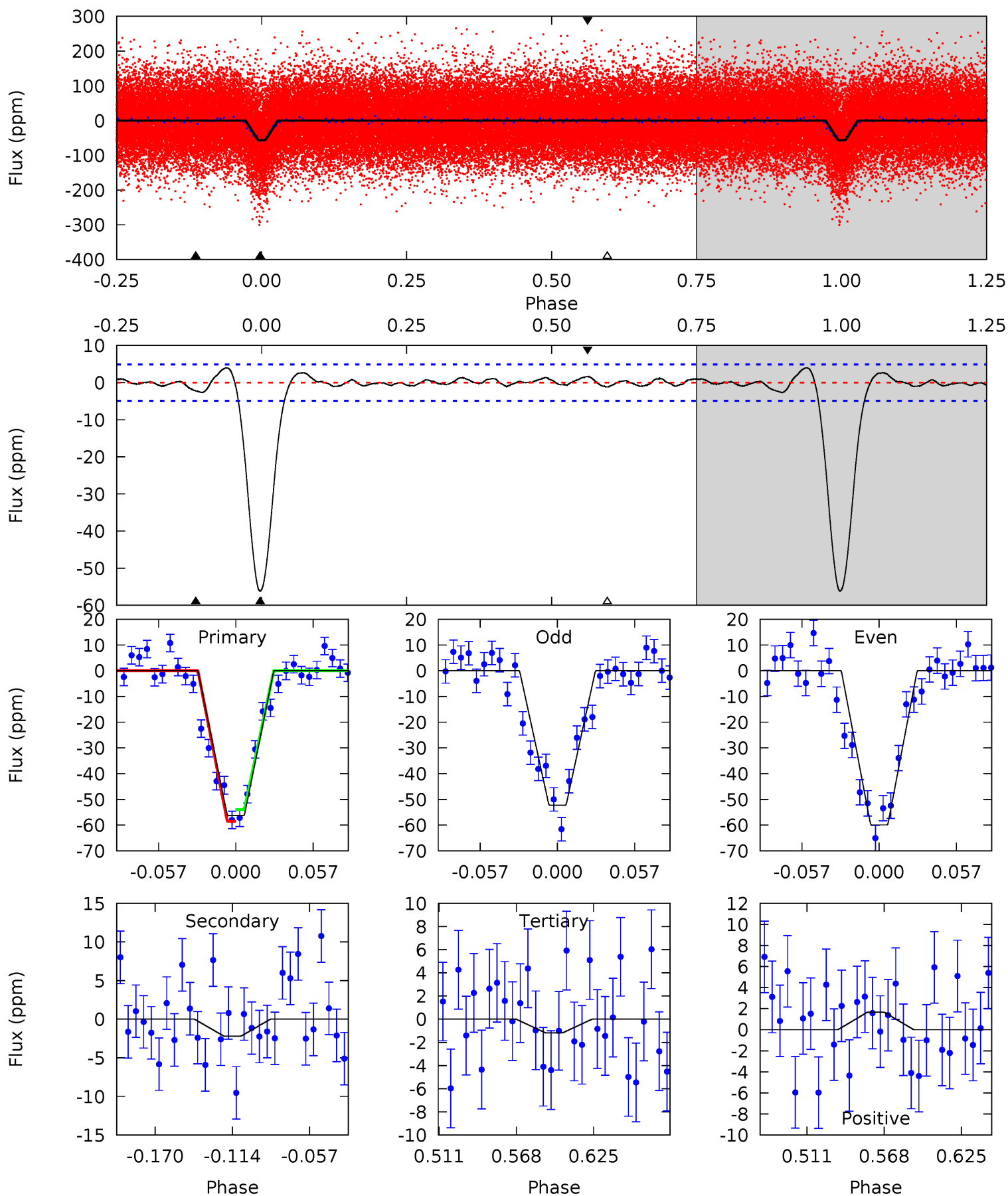
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
222.9	62.1	9.45	0	4.51	1.53	38.1	213.5	222.9	52.6	62.1	2.24	0.68	0.28	14.8



Alt Model-Shift Uniqueness Test

003850086-01, P = 19.100554 Days, E = 121.993196 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
53.6	2.10	1.13	1.58	4.68	1.90	0.74	52.5	52.0	0.97	0.52	3.65	1.02	0.07	2.17



Stellar Parameters For KIC 003850086

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6461^{+162}_{-162}	$3.983^{+0.247}_{-0.133}$	$-0.260^{+0.300}_{-0.250}$	$1.853^{+0.428}_{-0.570}$	$1.204^{+0.206}_{-0.169}$	$0.267^{+0.409}_{-0.106}$
	+3%/-3%	+6%/-3%	+115%/-96%	+23%/-31%	+17%/-14%	+153%/-40%
Source	PHO1	FLK73	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 003850086-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-69±1	$5.78^{+1.91}_{-1.85}$	1394^{+94}_{-112}	3803^{+489}_{-301}	25^{+28}_{-11}
Alt.	-2±1	$1.83^{+1.55}_{-1.20}$	1386^{+94}_{-99}	3115^{+1278}_{-539}	$7.592^{+54.611}_{-5.682}$

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 $A_{obs} \gg 1.0$

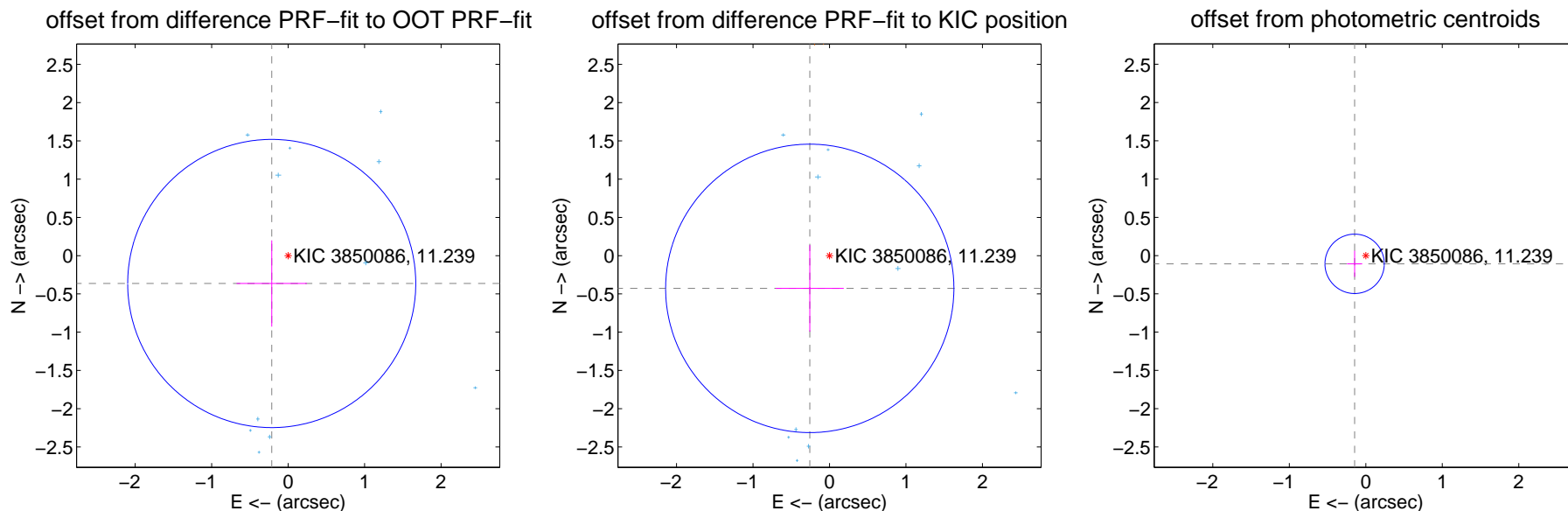
DV Centroid Data

Supplemental centroid analysis for 003850086-01. **Kepler magnitude: 11.24.** Transit SNR 46.99

There are 11 quarters with good PRF difference image offsets

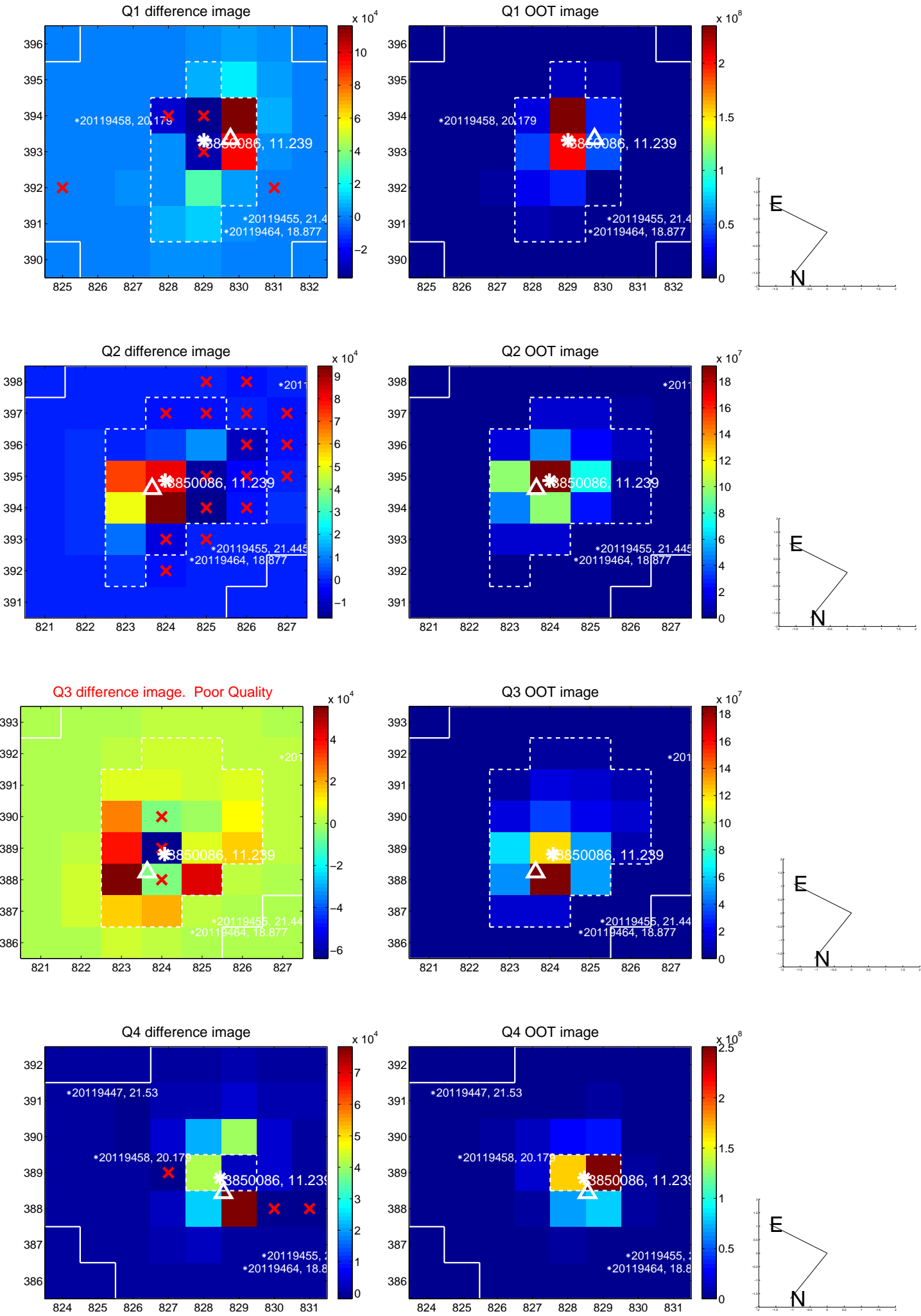
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.422 ± 0.628	0.67	0.214 ± 0.459	-0.364 ± 0.564
PRF-fit source offset from KIC position	0.499 ± 0.628	0.80	0.258 ± 0.445	-0.428 ± 0.566
photometric centroid source offset	0.18 ± 0.13	1.40	0.15 ± 0.10	-0.11 ± 0.17

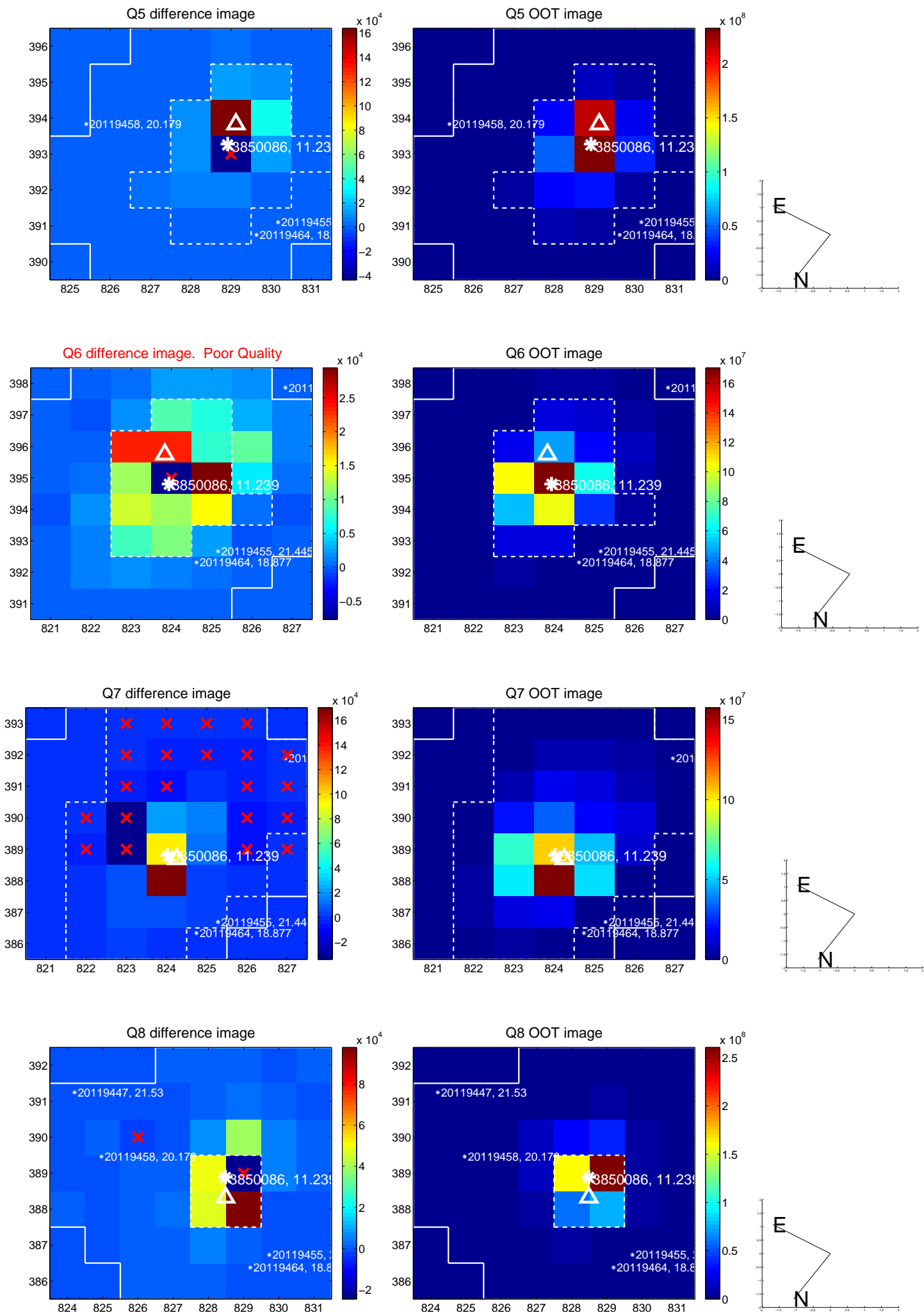


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

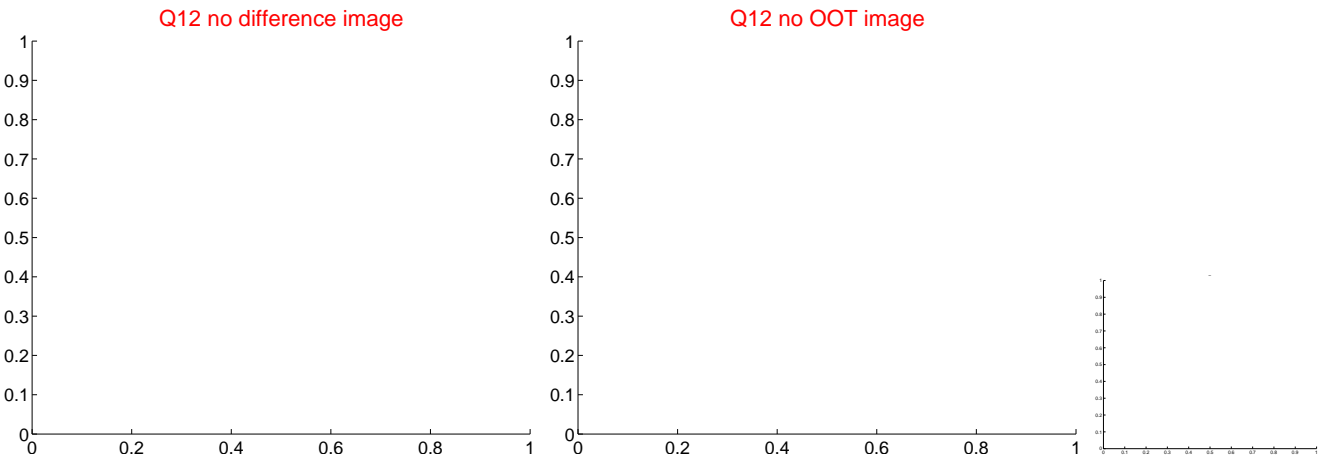
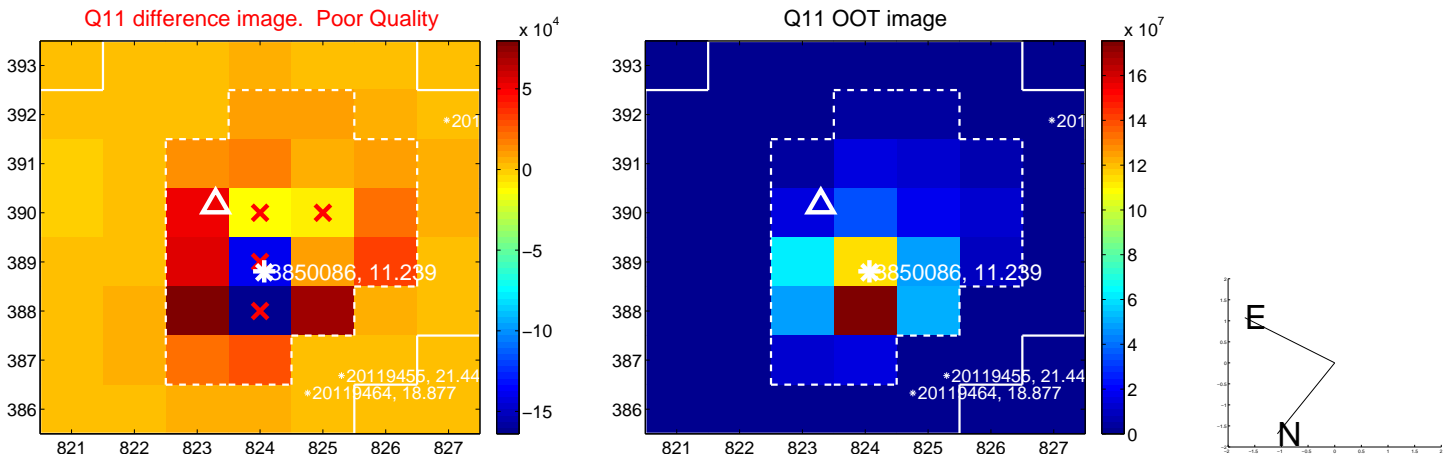
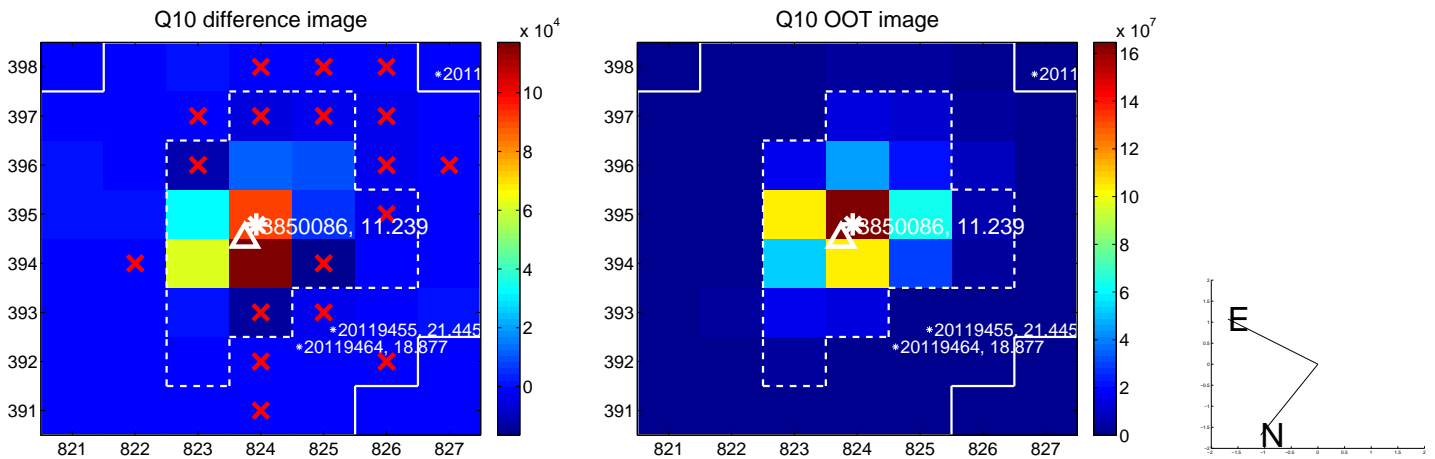
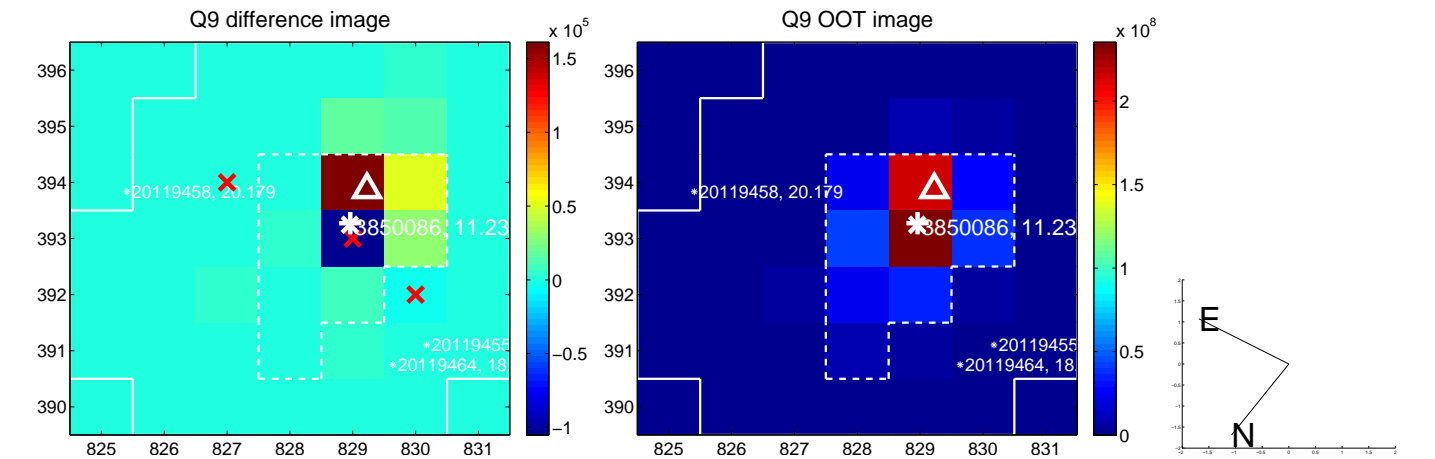
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



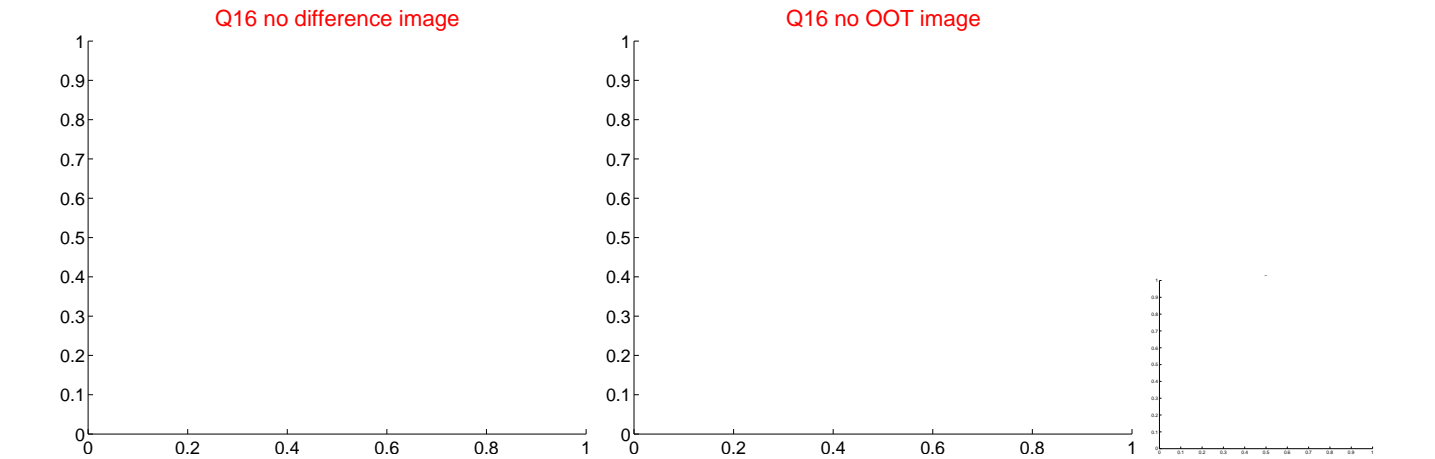
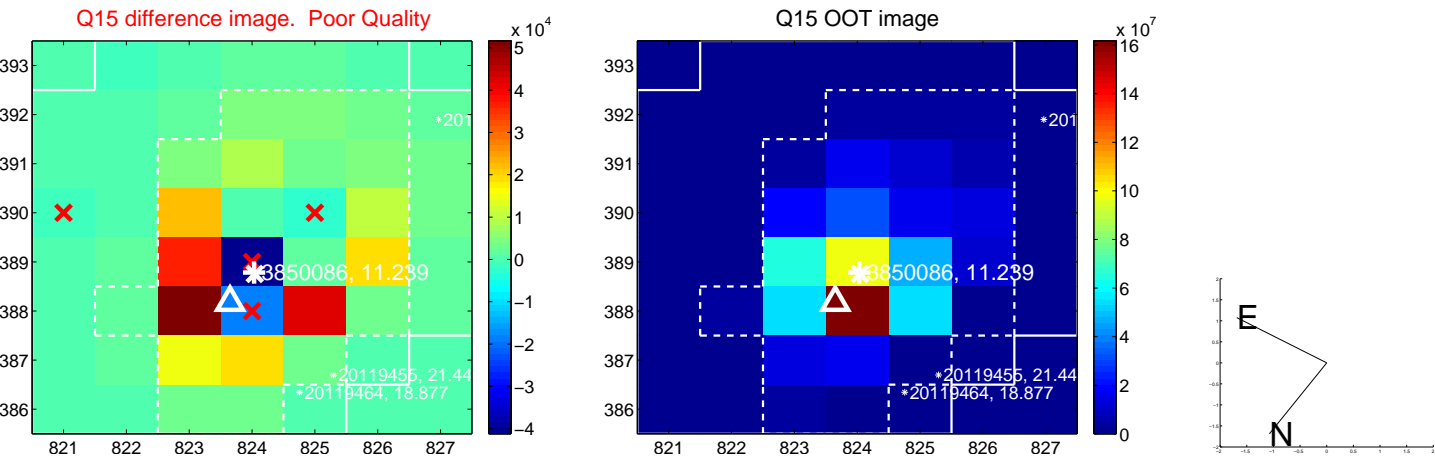
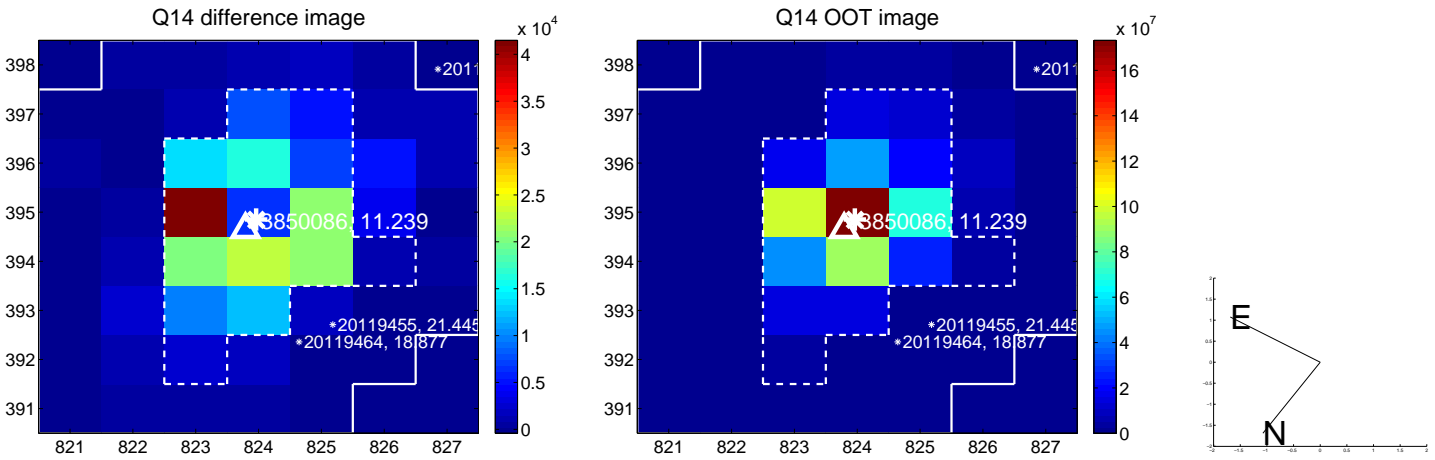
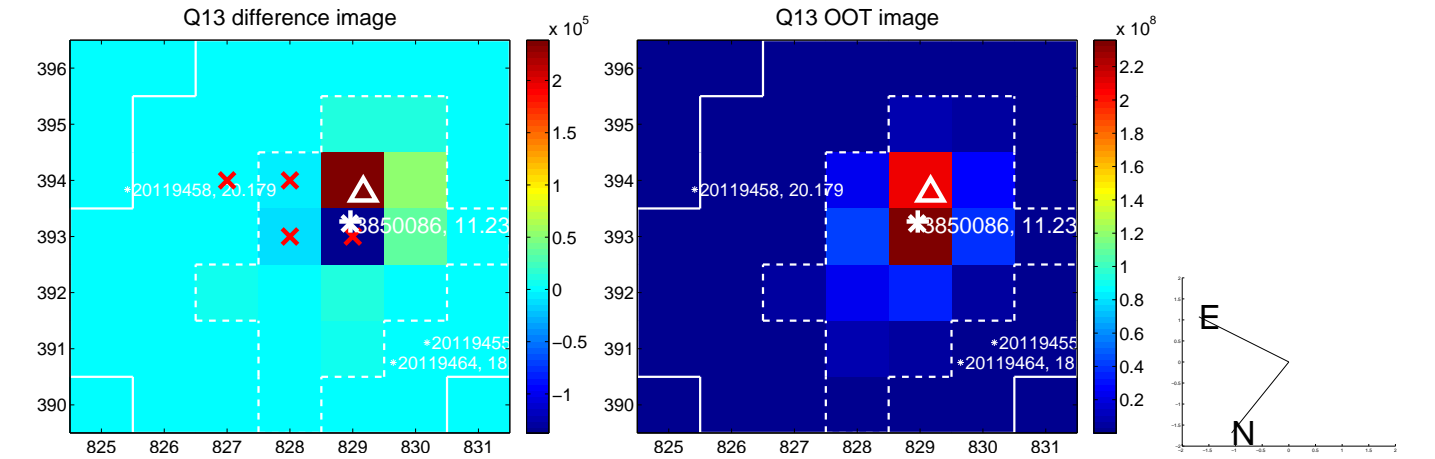
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



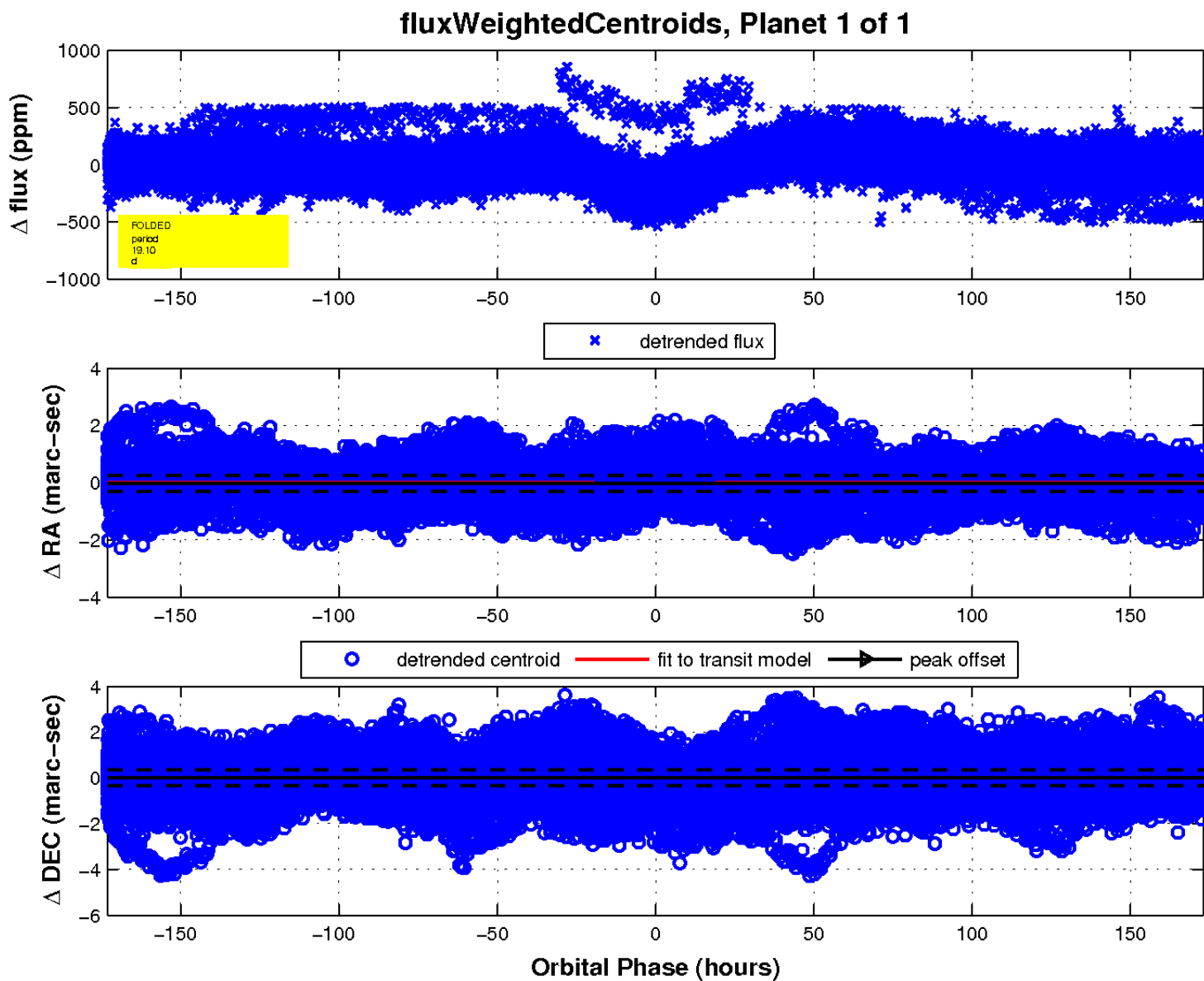
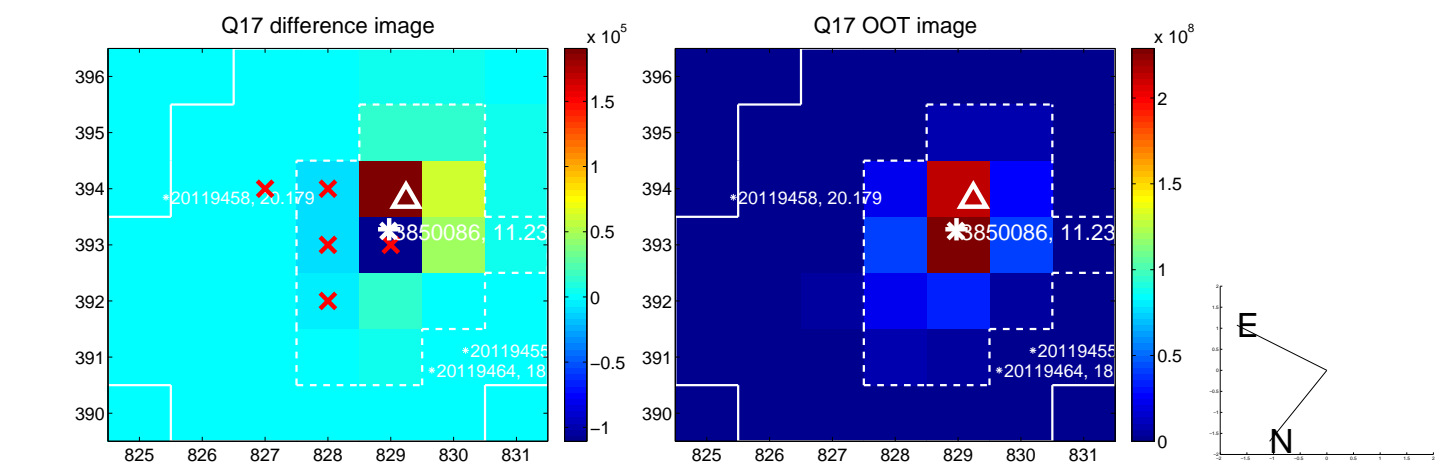
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

