

KIC 010936786

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})
010936786-01	OBS	4179.01	0.569960	131.801766	36.1	1.624	14.7	16.0	1.55	5814	1.11	13397.89

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010936786-01	OBS	FP	0.00	0	1	1	0	MOD_SEC_DV—MOD_SEC_ALT—CENT_RESOLVED_OFFSET—HALO_GHOST

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.

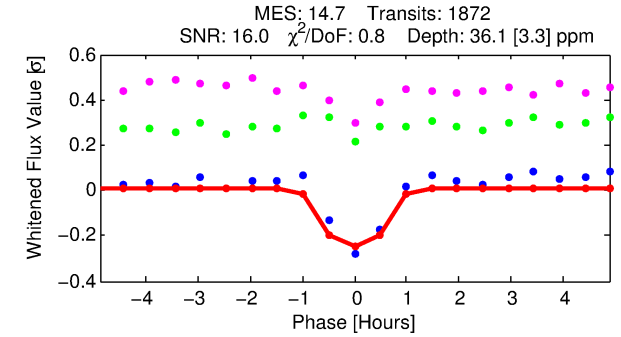
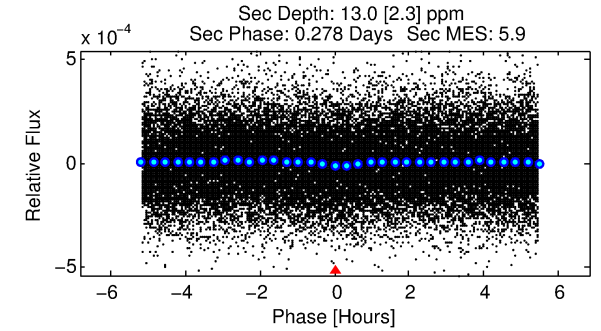
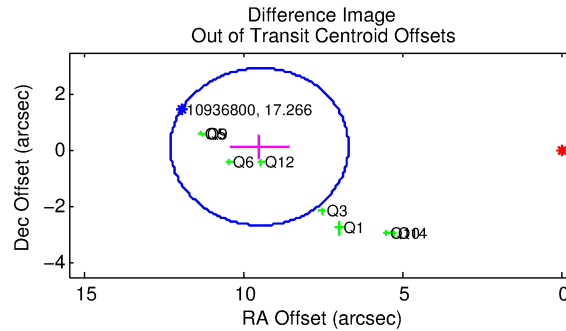
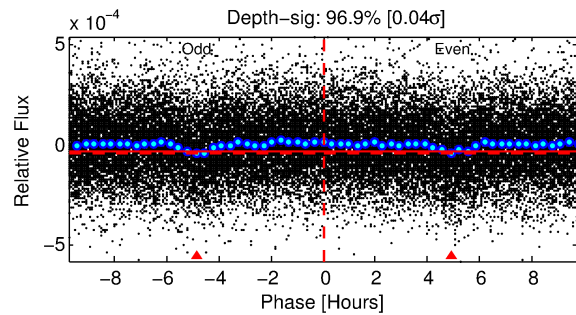
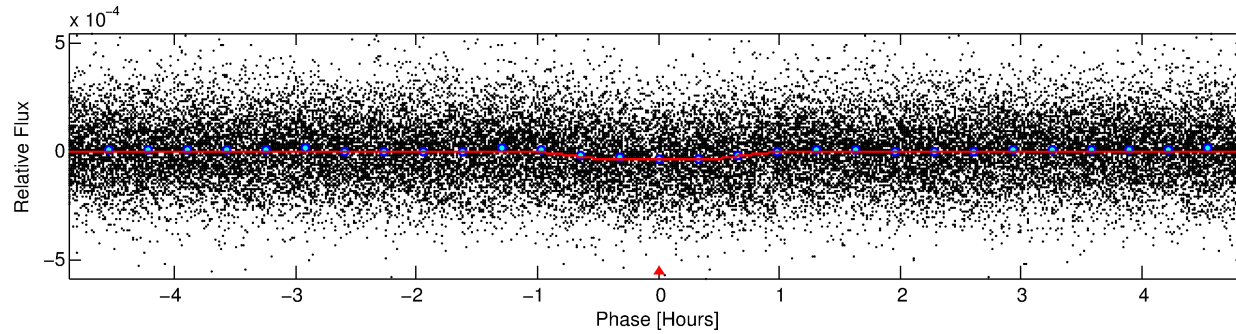
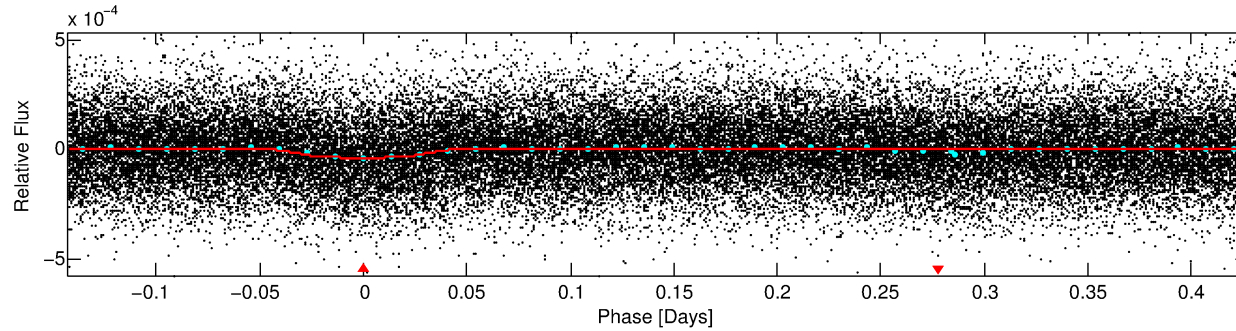
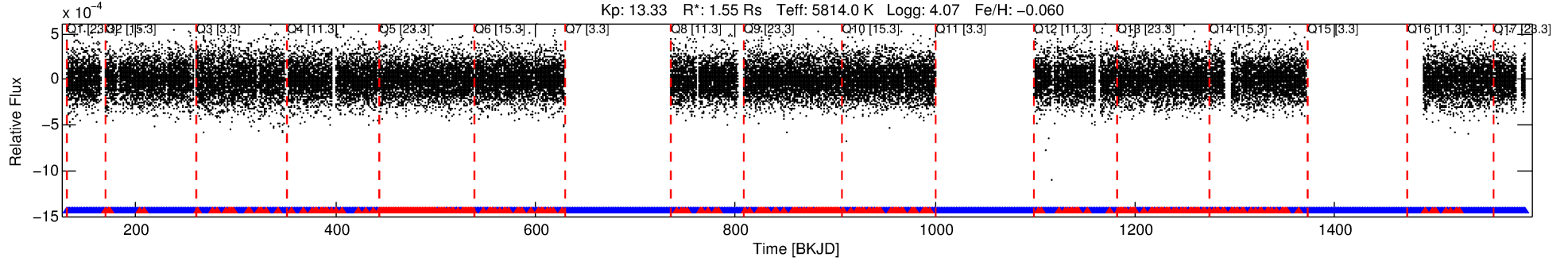
Ephemeris Match Information For 010936786-01

No Significant Match Found

DV One-Page Summary

KIC: 10936786 Candidate: 1 of 1 Period: 0.570 d
KOI: K04179.01 Corr: 0.927

Kp: 13.33 R*: 1.55 Rs Teff: 5814.0 K Logg: 4.07 Fe/H: -0.060



DV Fit Results:

Period = 0.56996 [0.00001] d
Epoch = 131.8018 [0.0015] BKJD
Rp/R* = 0.0066 [0.0026]
a/R* = 1.51 [1.66]
b = 0.90 [0.40]
Seff = 13397.89 [8208.61]
Teq = 2743 [420] K
Rp = 1.11 [0.60] Re
a = 0.0135 [0.0050] AU
Ag = 1.06 [1.07] [0.06σ]
Teffp = 4303 [878] K [1.60σ]

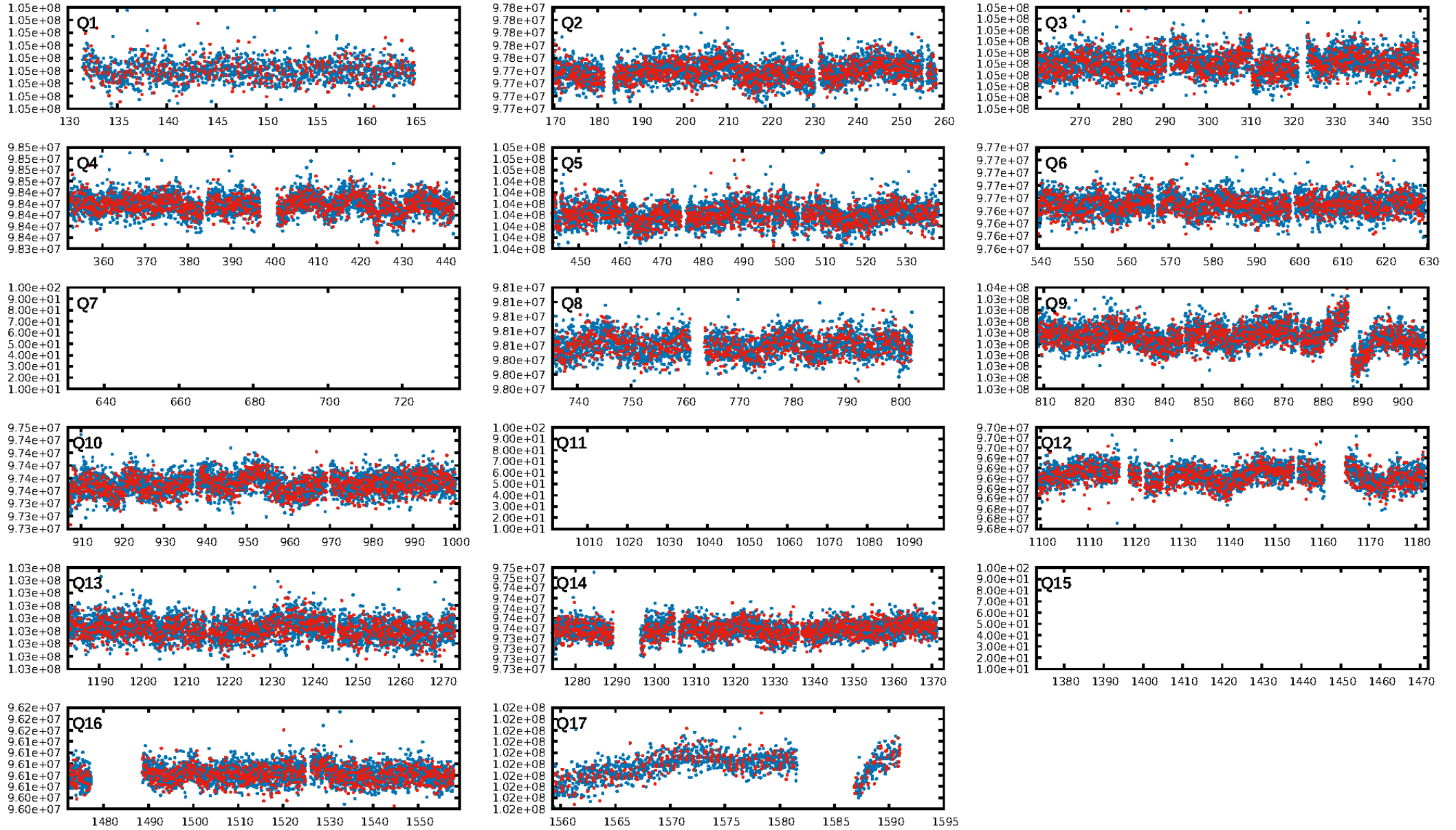
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.62e-45
RollingBand-fgt: 0.79 [1396/1766]
GhostDiagnostic-chr: -0.216
Centroid-sig: 0.0%
Centroid-so: 7.605 arcsec [8.43σ]
OotOffset-rm: 9.506 arcsec [10.19σ]
KicOffset-rm: 9.690 arcsec [10.52σ]
OotOffset-st: 3/1/1/3 [8]
KicOffset-st: 3/1/1/3 [8]
DiffImageQuality-fgm: 0.88 [7/8]
DiffImageOverlap-fno: 1.00 [14/14]

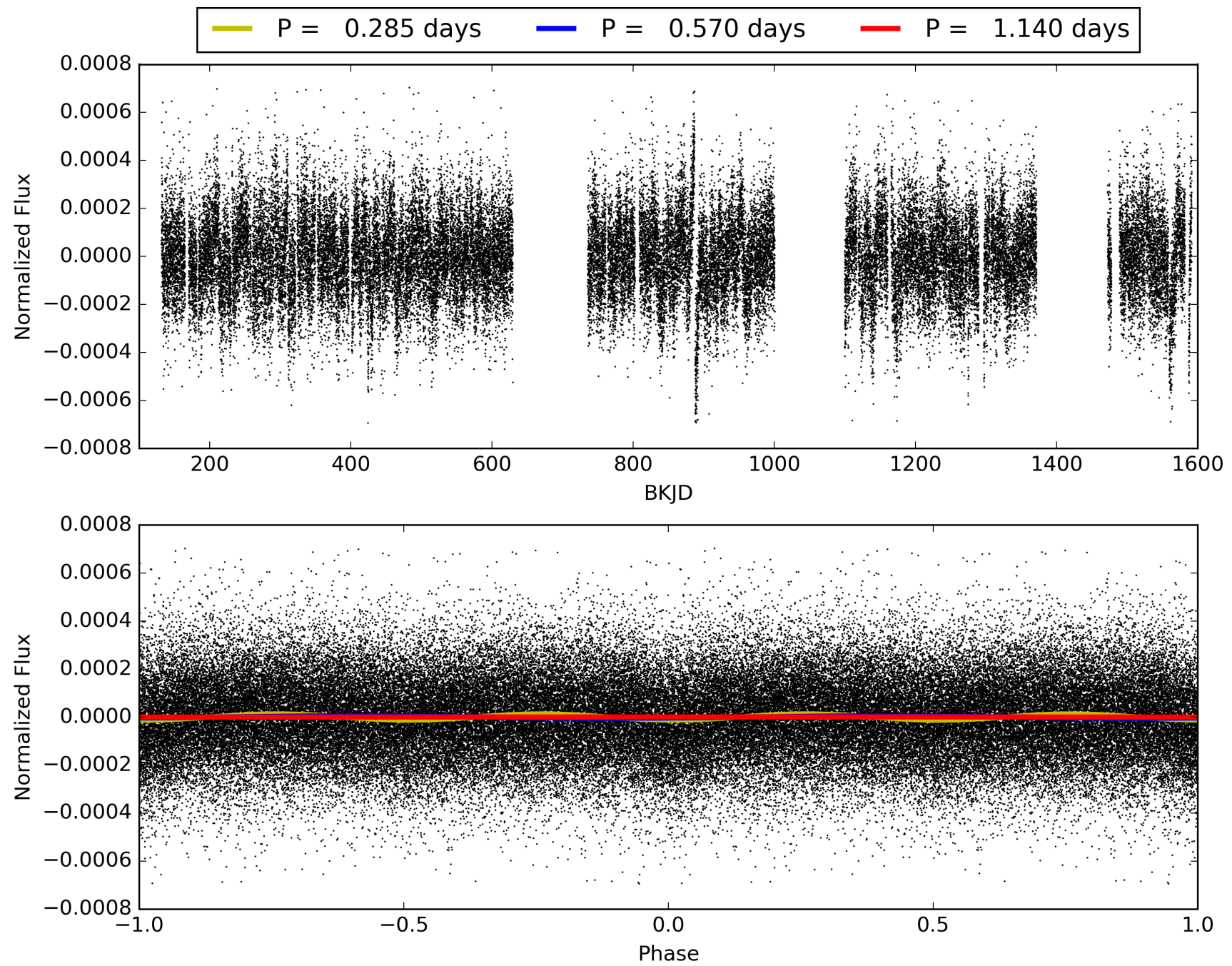
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 07:06:39 Z

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

TCE 010936786-01, PDC Light Curves

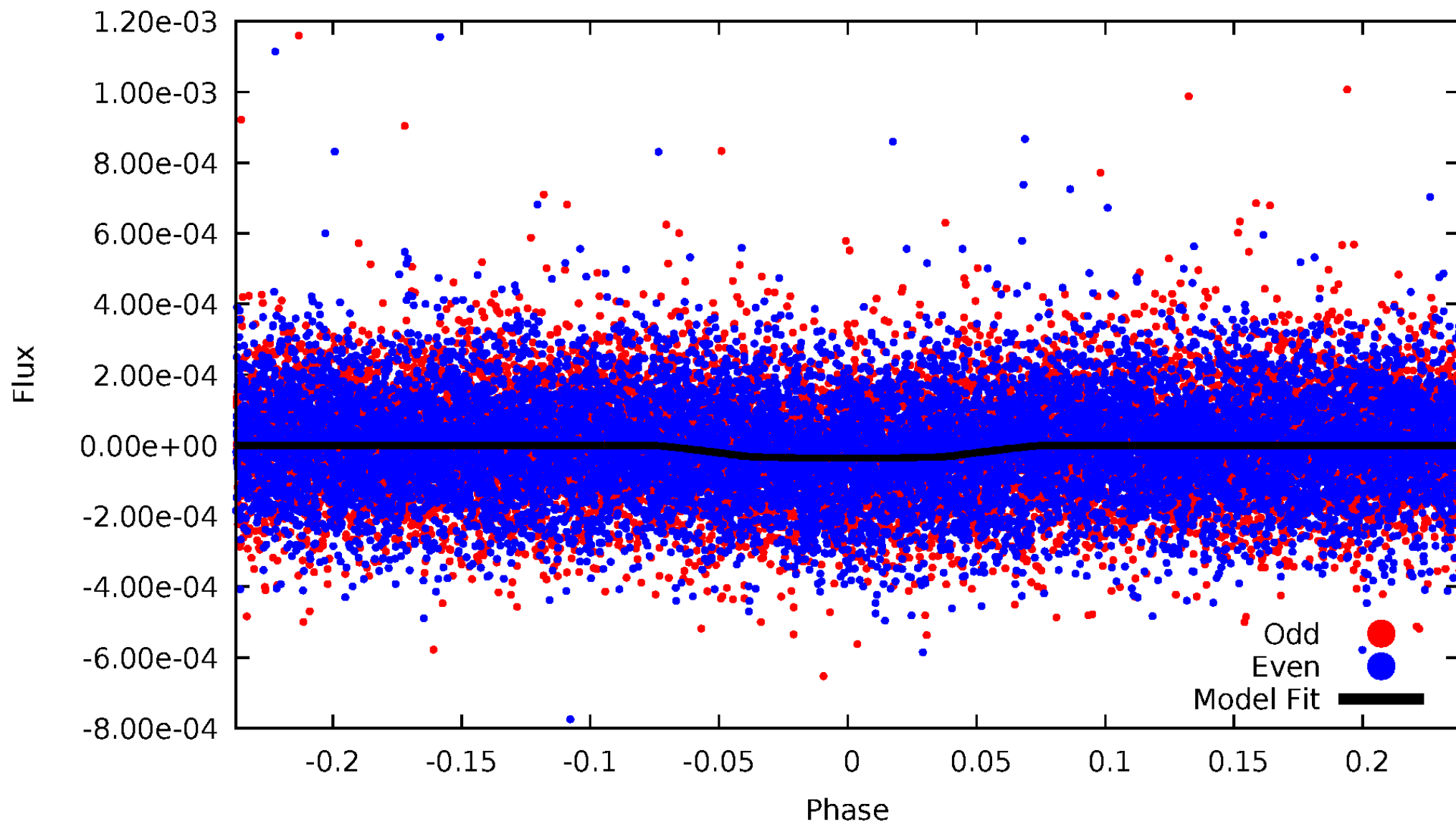


TCE 010936786-01



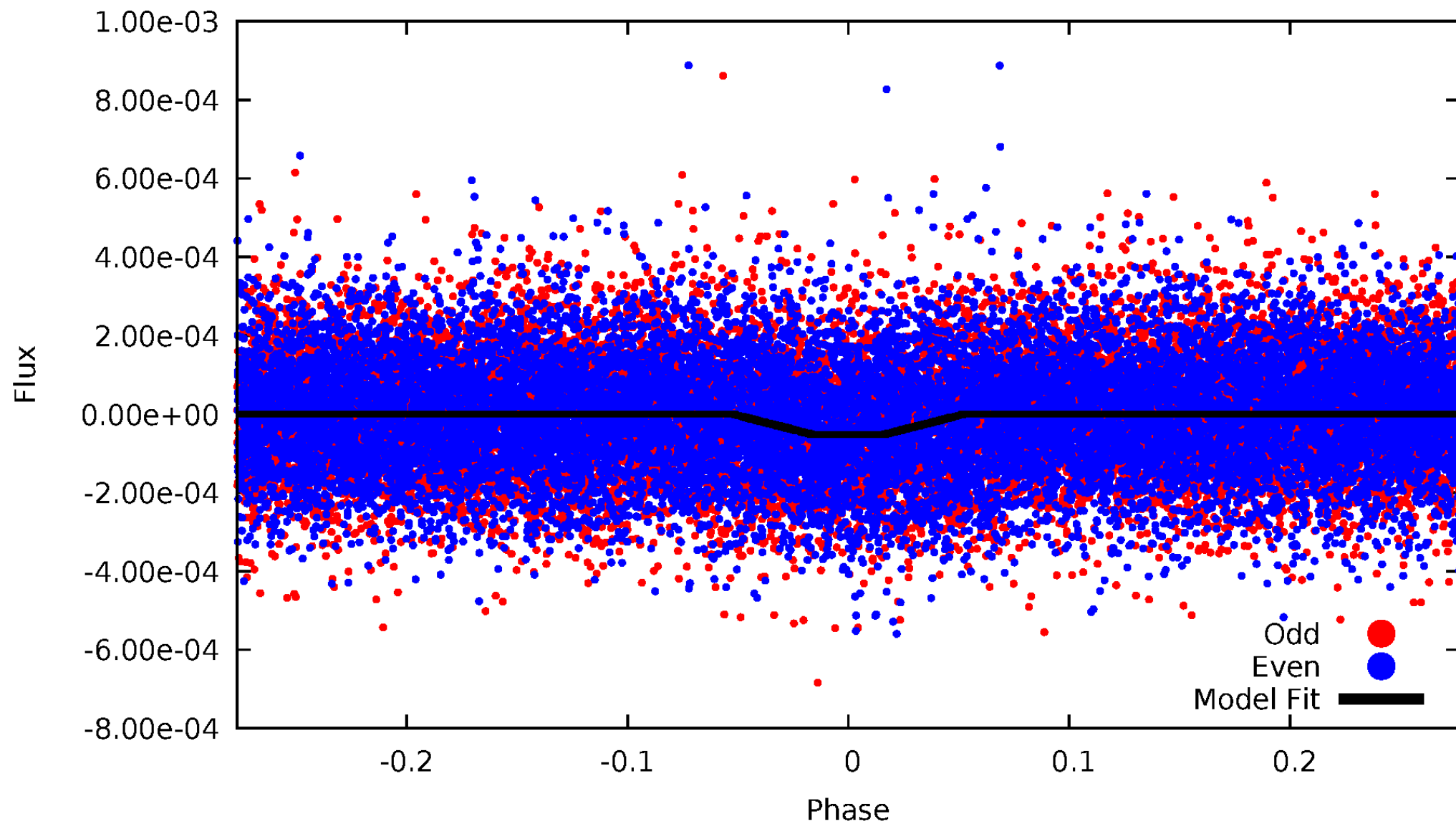
DV Odd/Even

TCE 010936786-01



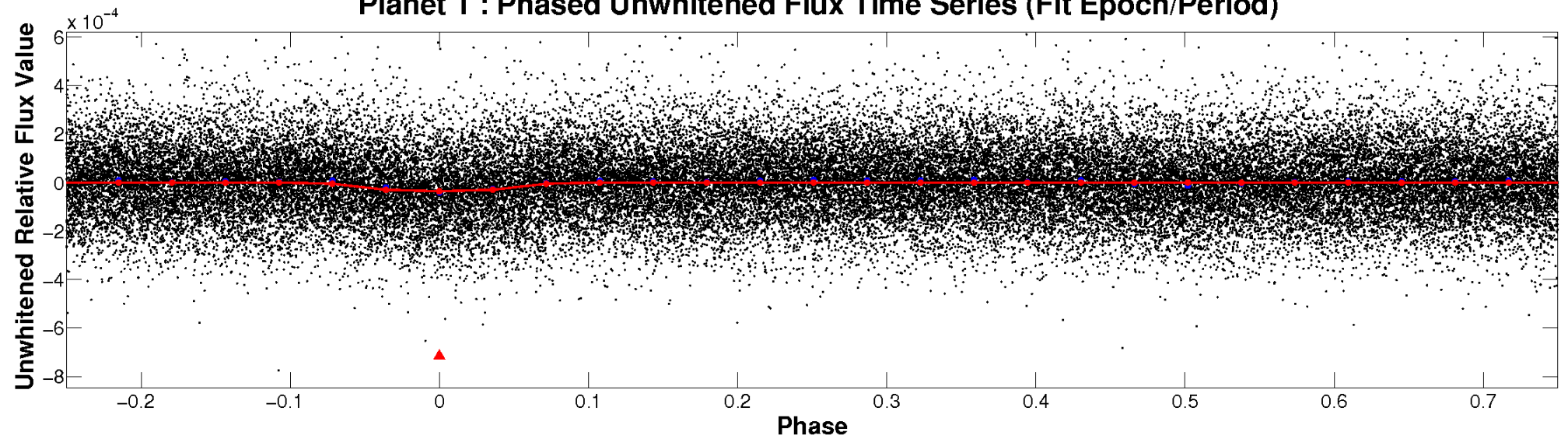
ALT Odd/Even

TCE 010936786-01

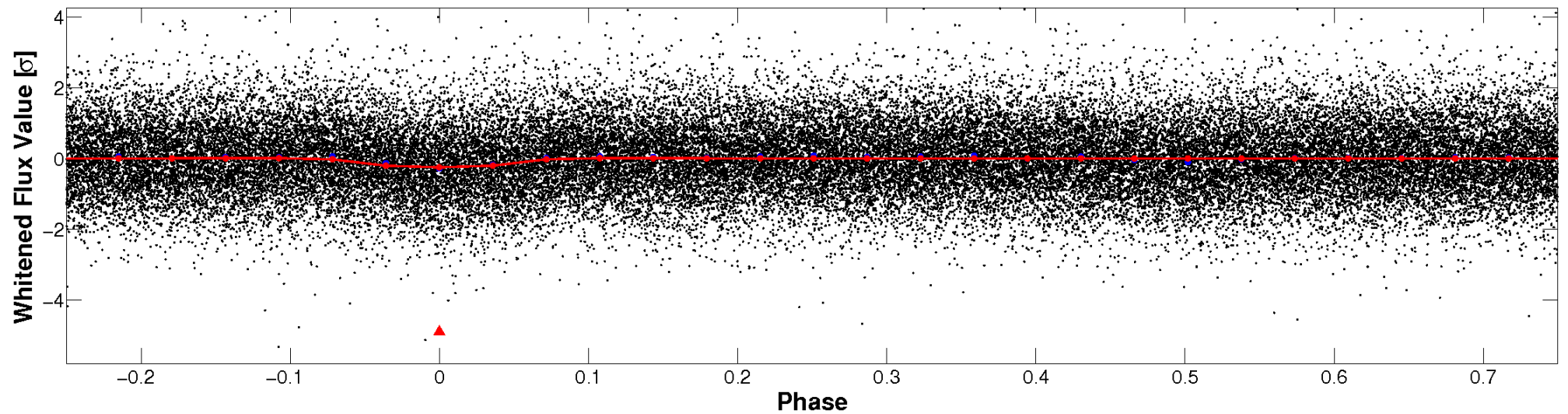


Non-Whitened Vs. Whitened Light Curve

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

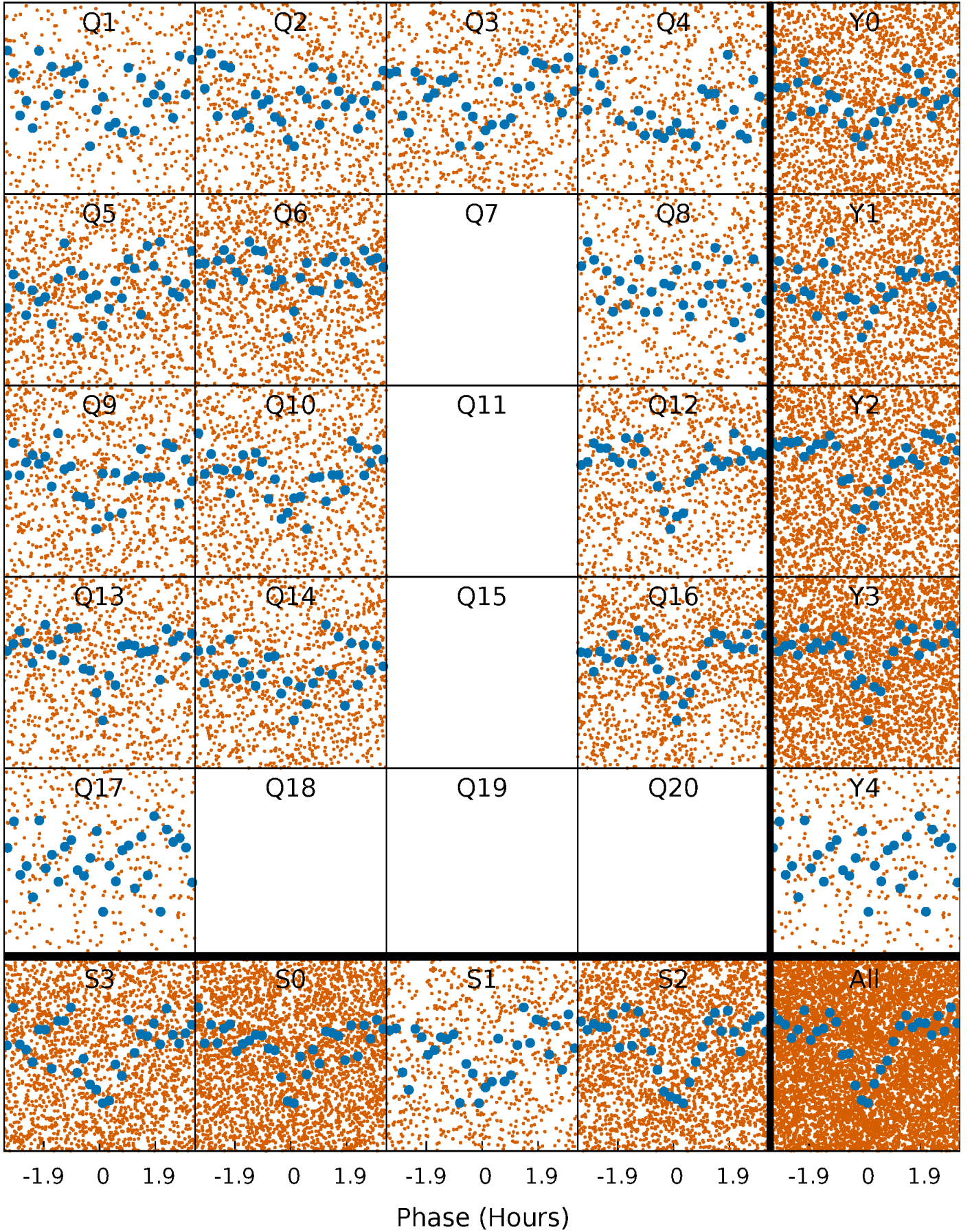


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



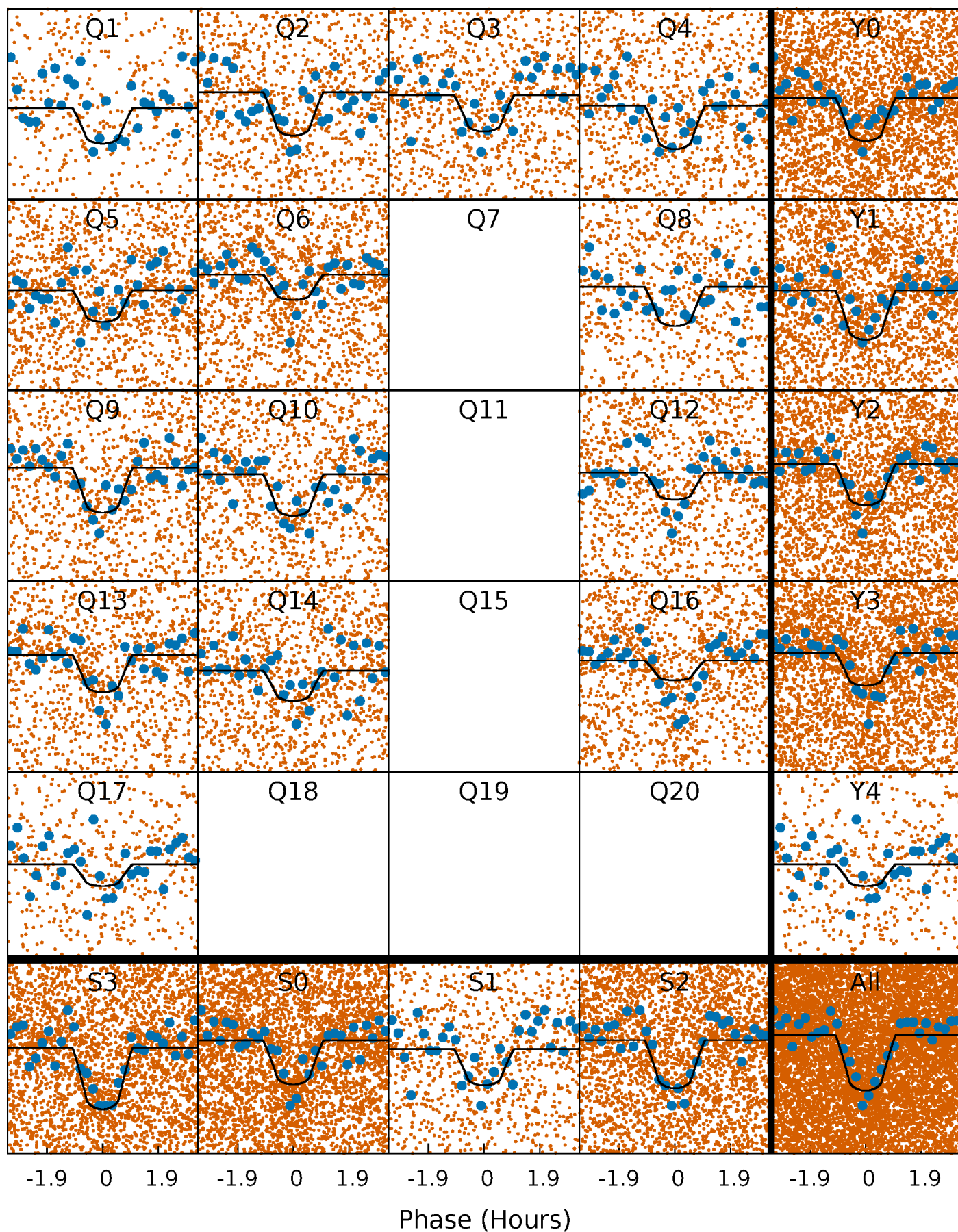
PDC Quarter-Phased Transit Curves

TCE 010936786-01 P= 0.569960 Days $T_0=131.801766$ (BKJD)



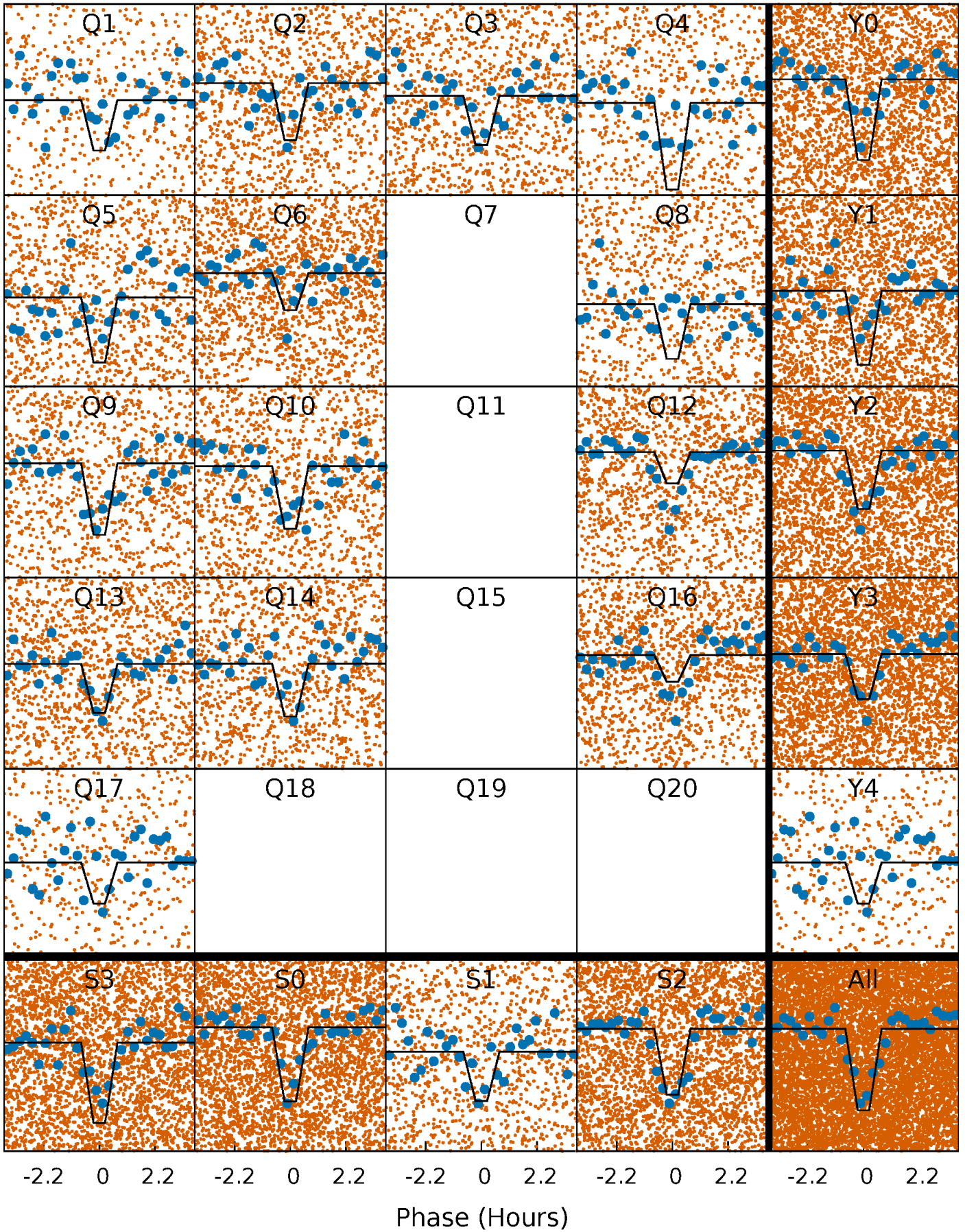
DV Quarter-Phased Transit Curves

TCE 010936786-01 P= 0.569960 Days $T_0=131.801766$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

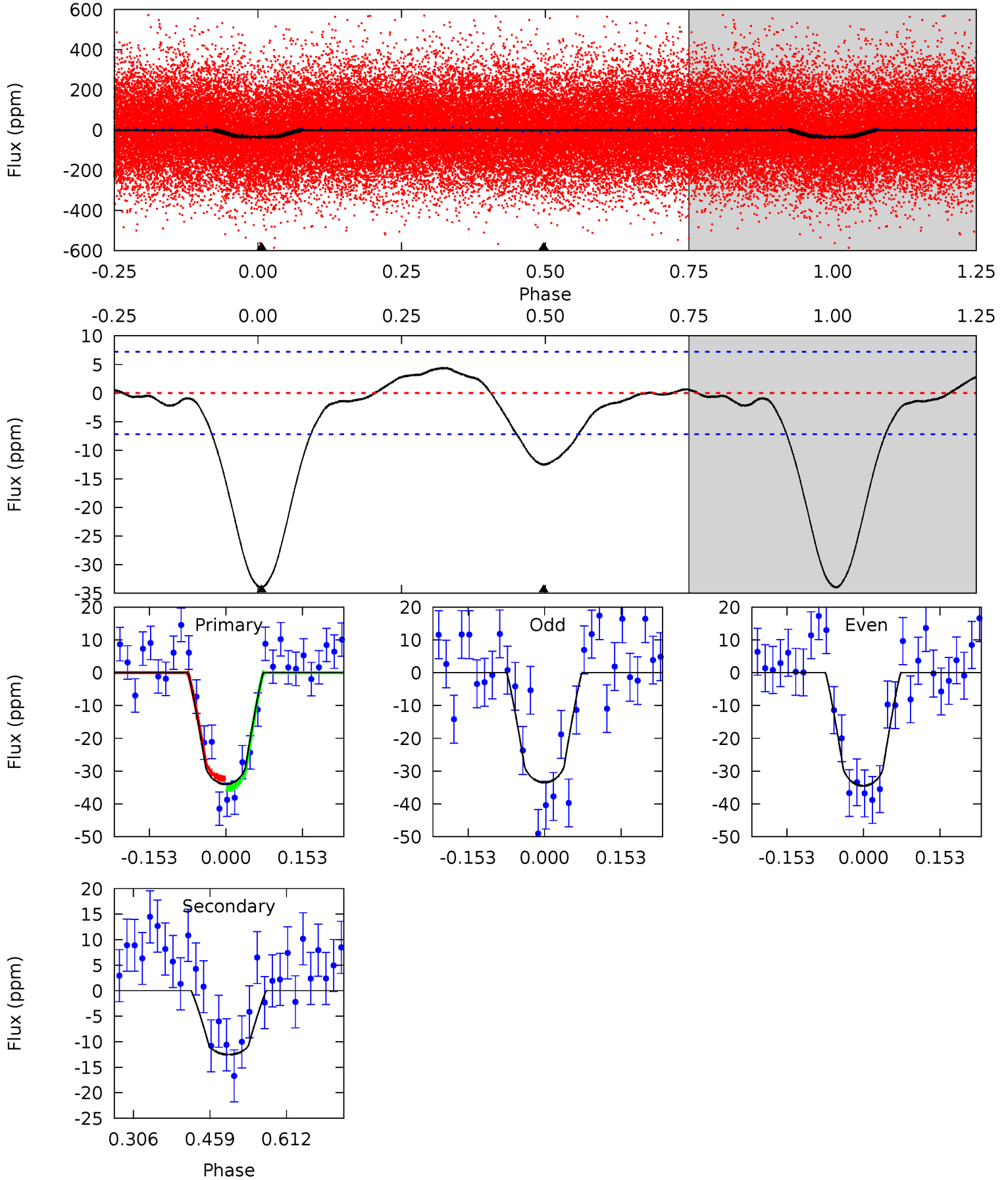
TCE 010936786-01 P= 0.569962 Days $T_0=131.800548$ (BKJD)



DV Model-Shift Uniqueness Test

010936786-01, P = 0.569960 Days, E = 131.231806 Days

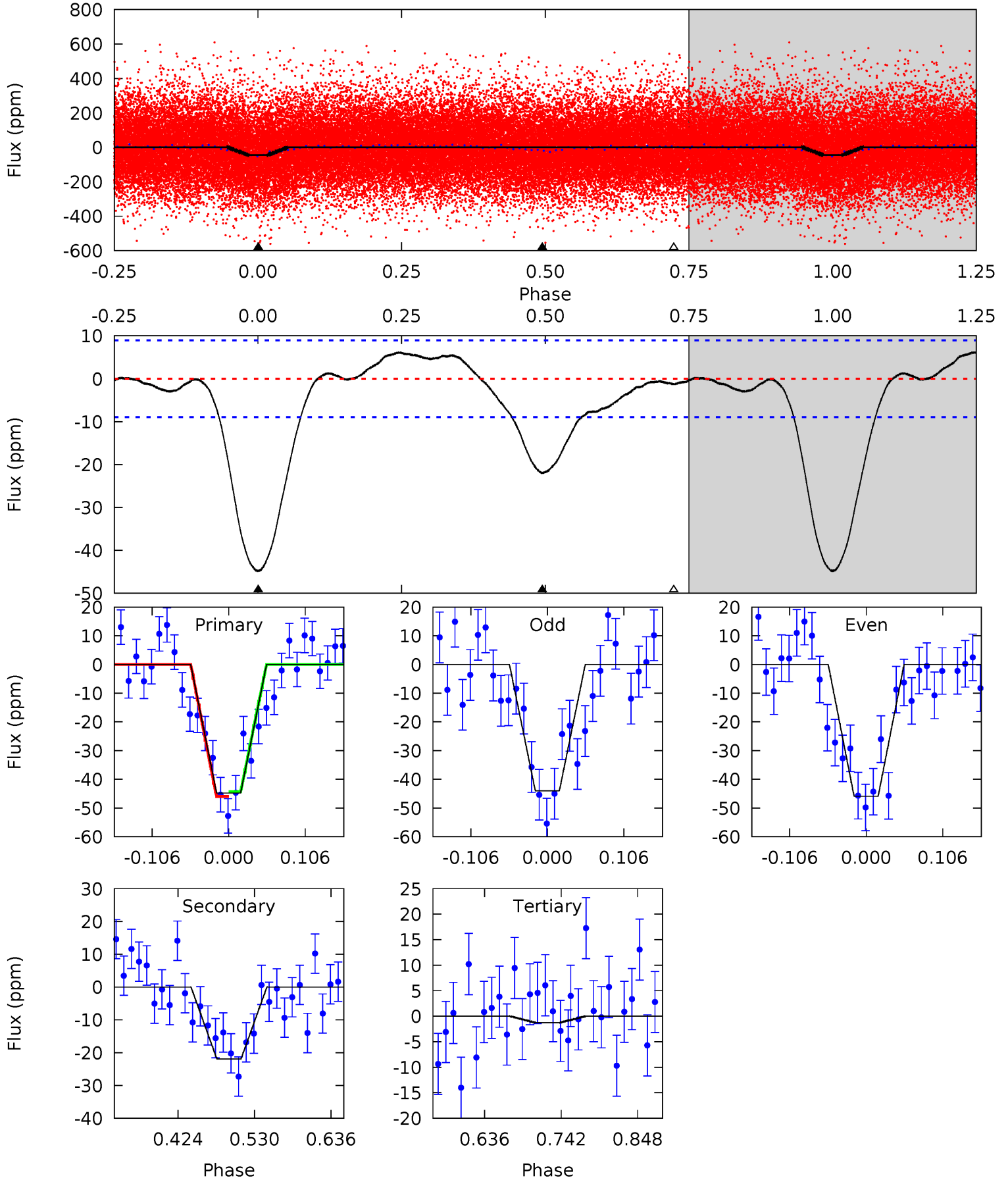
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.1	7.78	0	0	4.47	1.43	1.18	21.1	21.1	7.78	7.78	0.31	0.92	0.11	0.95



Alt Model-Shift Uniqueness Test

010936786-01, P = 0.569962 Days, E = 131.230586 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.8	11.2	0.64	0	4.55	1.62	1.65	22.1	22.8	10.5	11.2	0.49	1.00	0.12	0.43



Stellar Parameters For KIC 010936786

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5814^{+158}_{-176}	$4.066^{+0.357}_{-0.127}$	$-0.060^{+0.300}_{-0.300}$	$1.549^{+0.381}_{-0.571}$	$1.019^{+0.127}_{-0.140}$	$0.386^{+0.990}_{-0.162}$
	+3%/-3%	+9%/-3%	+500%/-500%	+25%/-37%	+12%/-14%	+257%/-42%
Source	PHO1	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 010936786-01 / KOI 4179.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-13 ± 2	$1.03^{+0.51}_{-0.42}$	3767^{+289}_{-351}	4175^{+1201}_{-776}	$1.144^{+2.368}_{-0.628}$
Alt.	-22 ± 2	$1.12^{+0.49}_{-0.45}$	3744^{+280}_{-397}	4626^{+1135}_{-661}	$1.798^{+2.911}_{-0.915}$

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 $A_{\text{obs}} \gg 1.0$

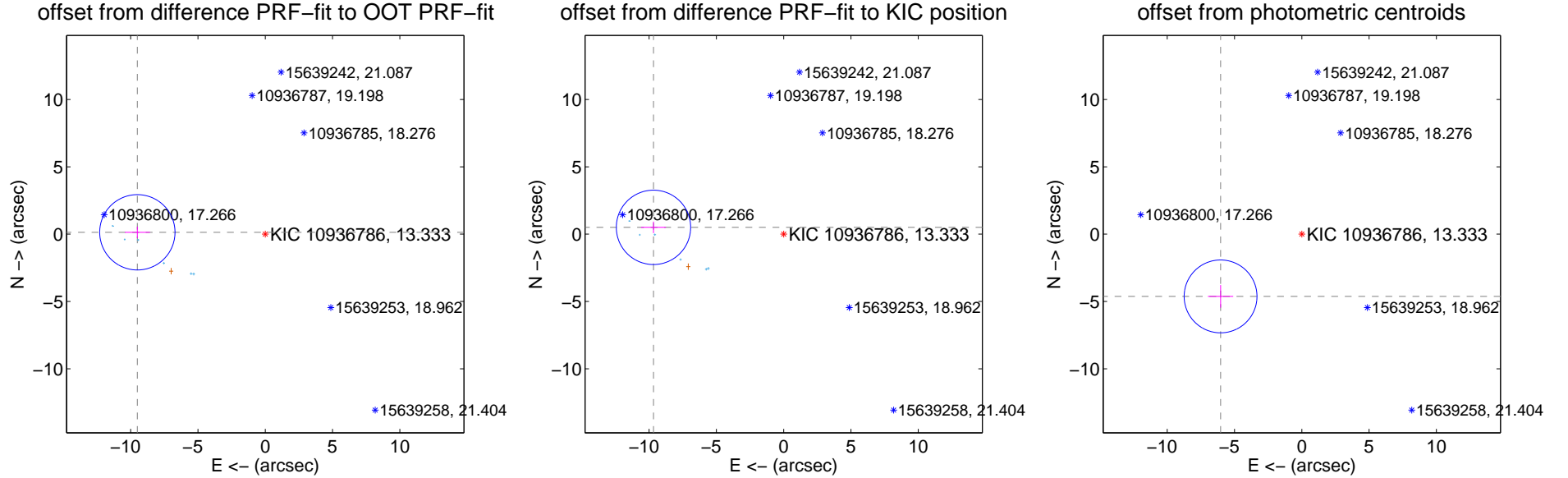
DV Centroid Data

Supplemental centroid analysis for 010936786-01. Kepler magnitude: 13.33. Transit SNR 15.97

There are 7 quarters with good PRF difference image offsets

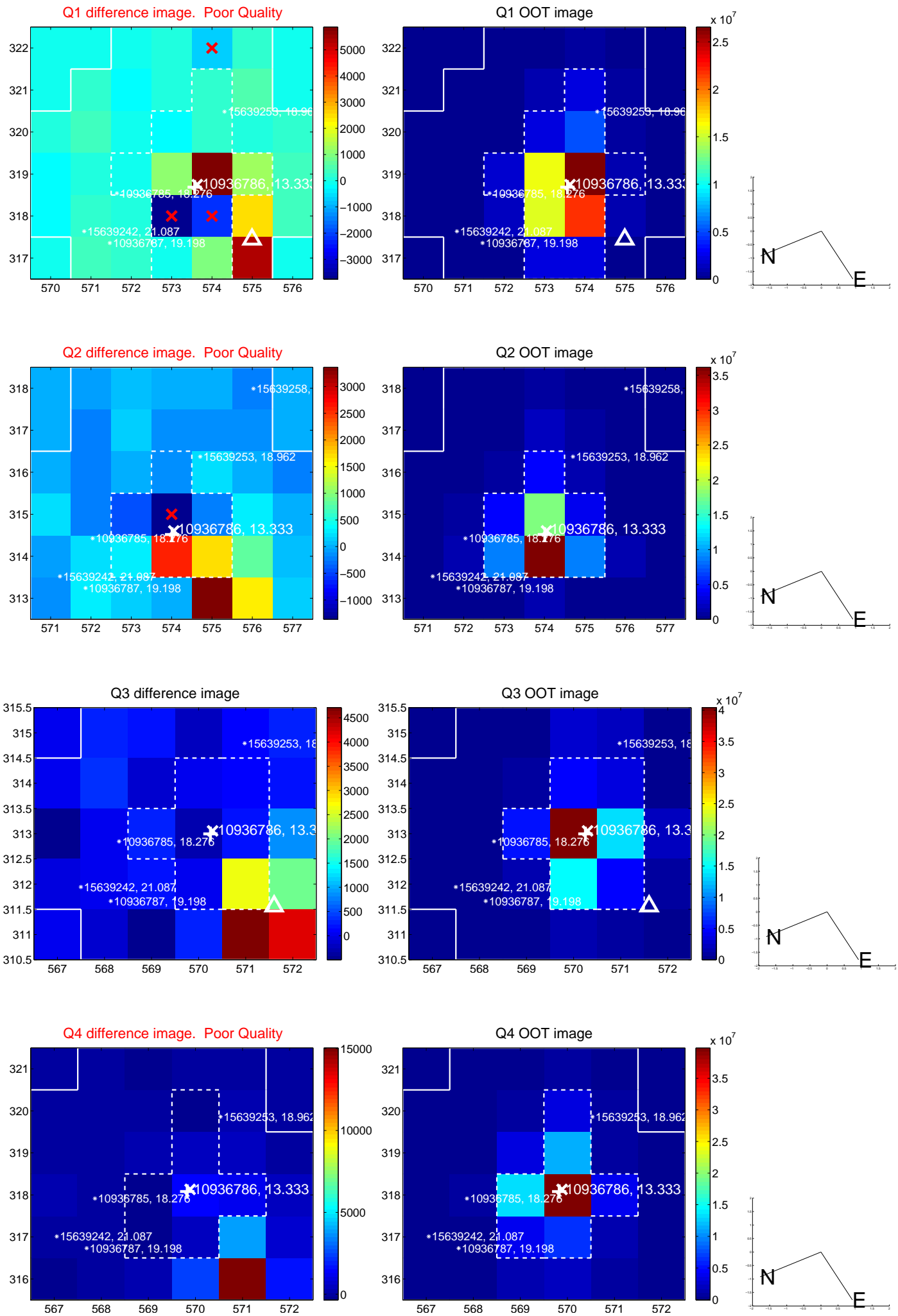
The direct PRF centroid is offset from the target star catalog position by about 0.50 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	9.506 ± 0.933	10.19	9.505 ± 0.933	0.137 ± 0.425
PRF-fit source offset from KIC position	9.690 ± 0.921	10.52	9.676 ± 0.922	0.506 ± 0.430
photometric centroid source offset	7.60 ± 0.90	8.43	6.04 ± 0.94	-4.62 ± 0.84

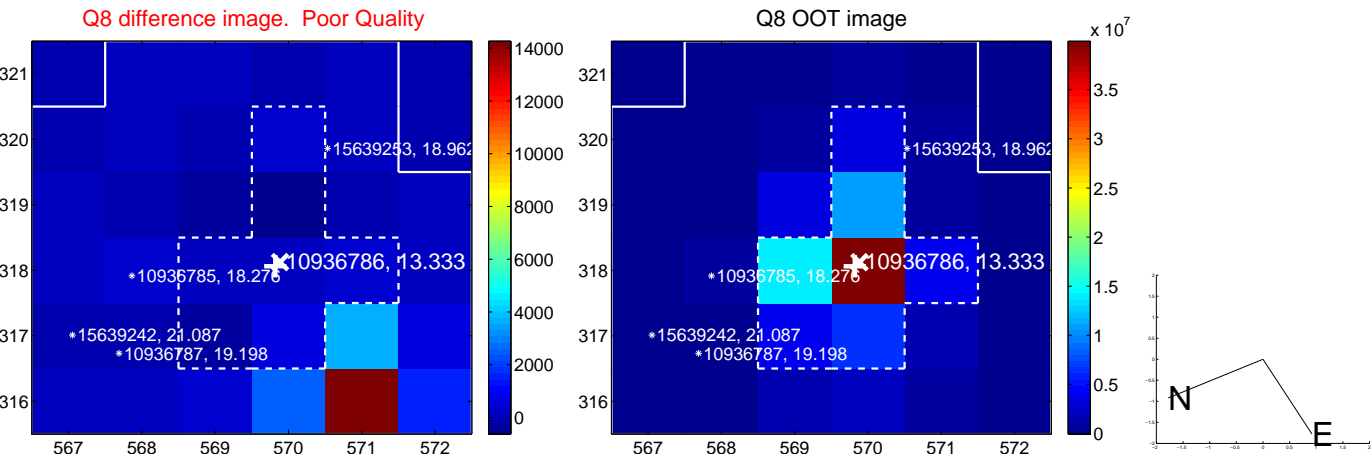
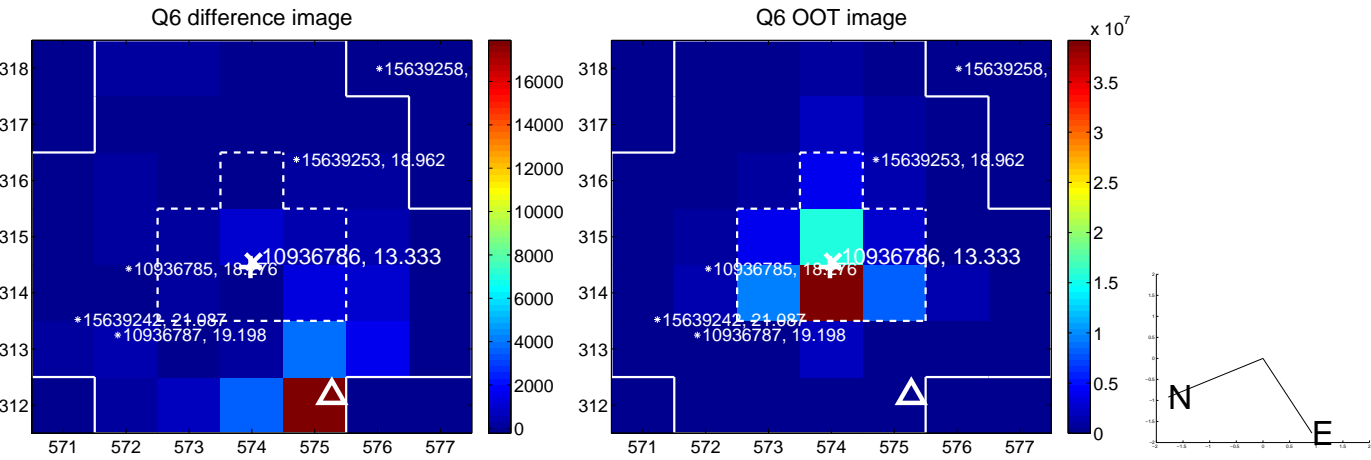
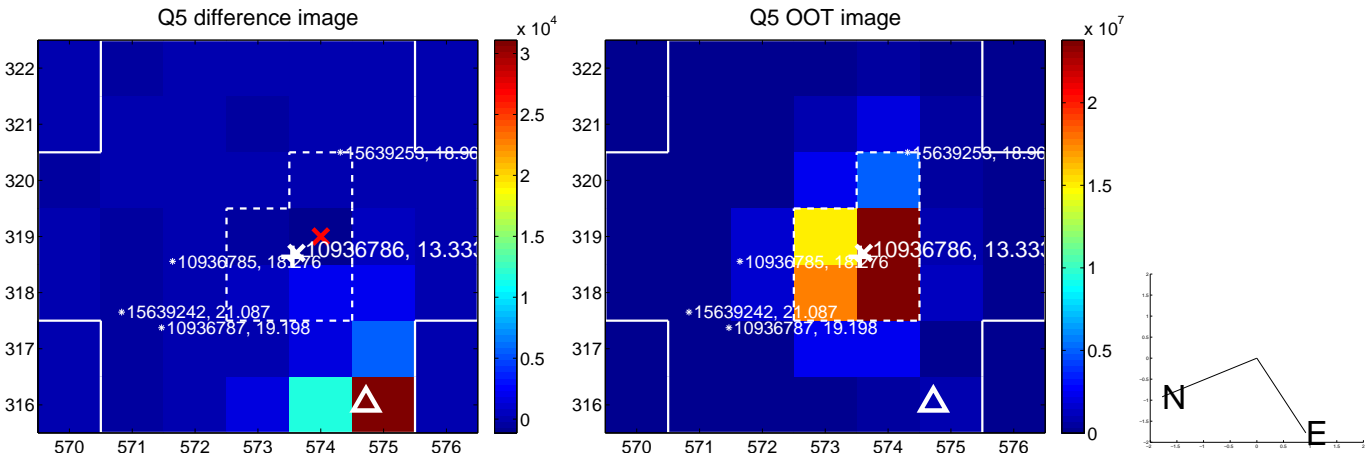


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

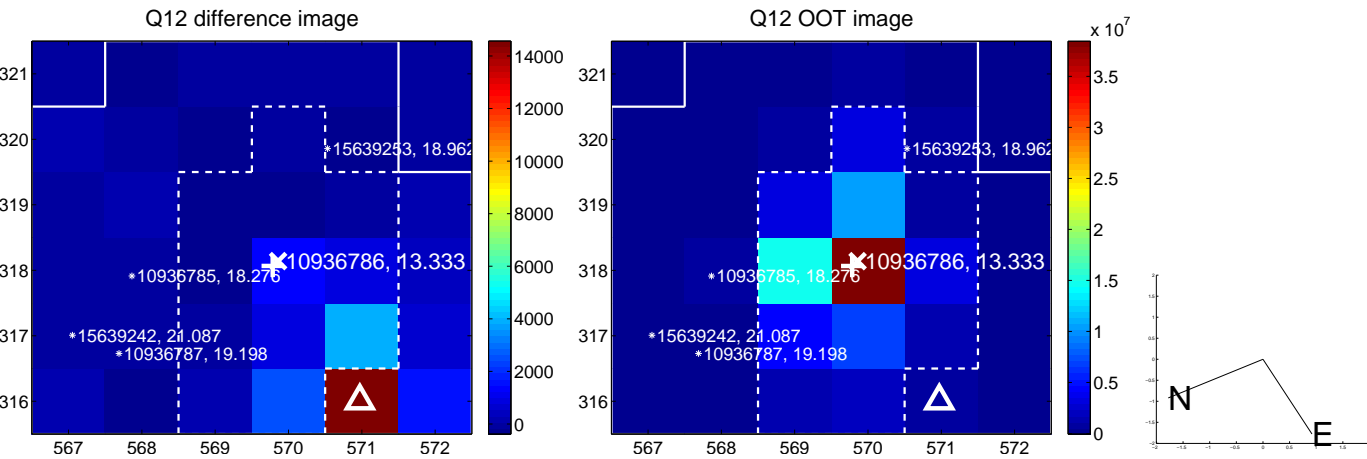
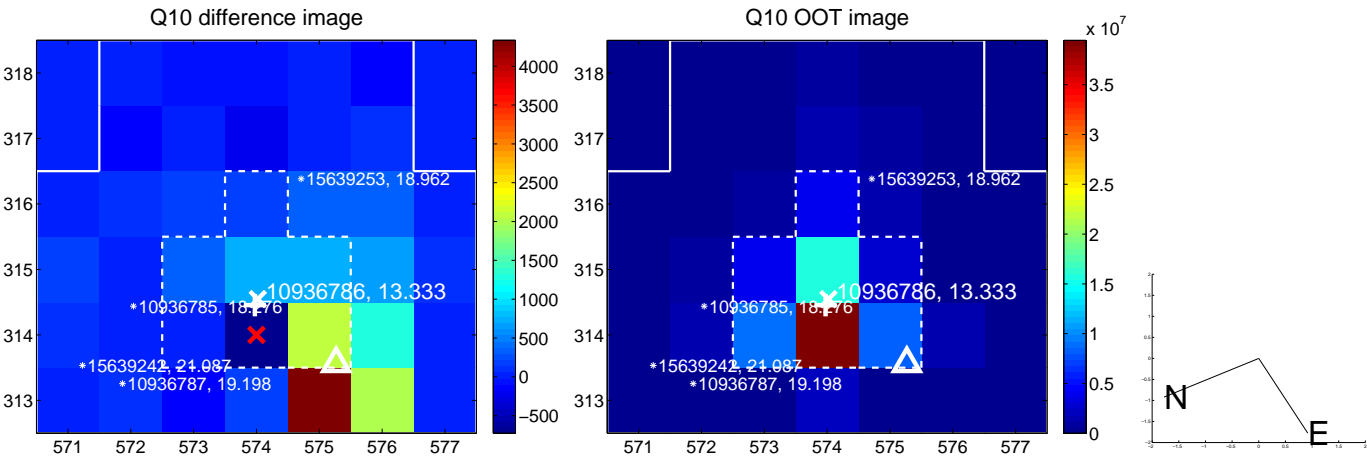
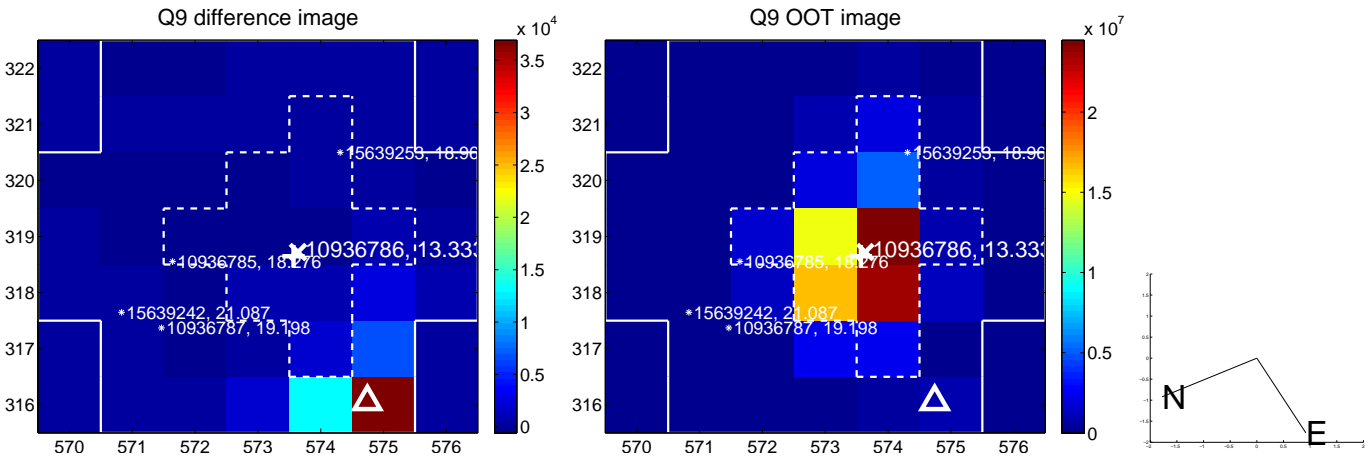
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



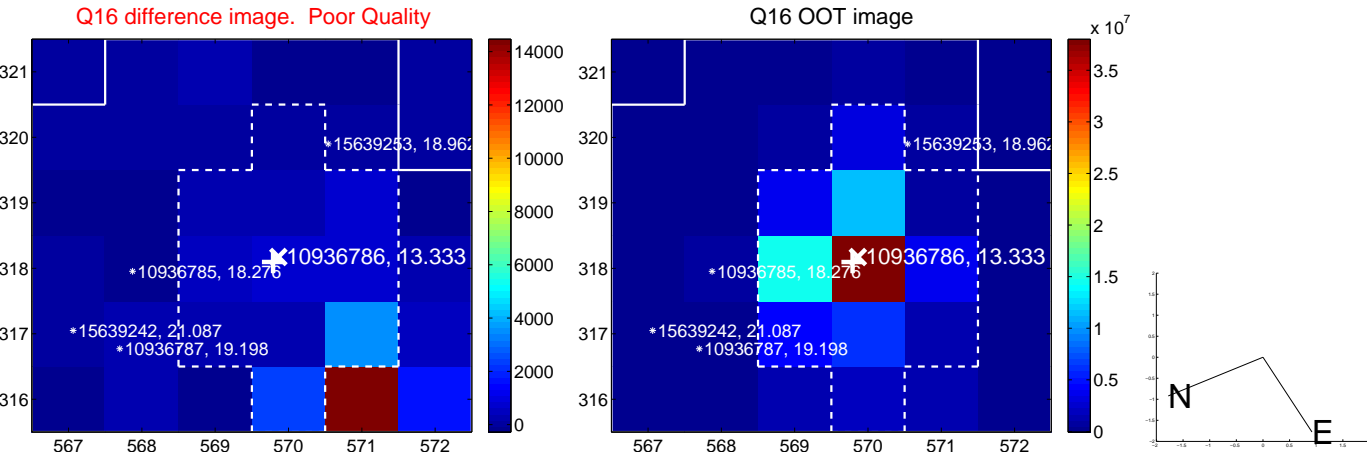
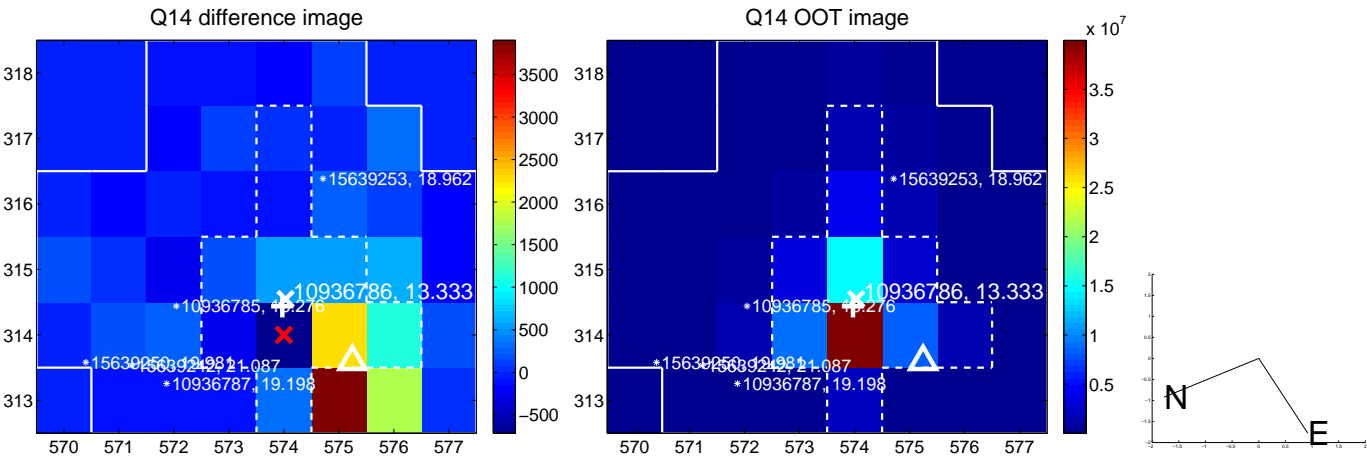
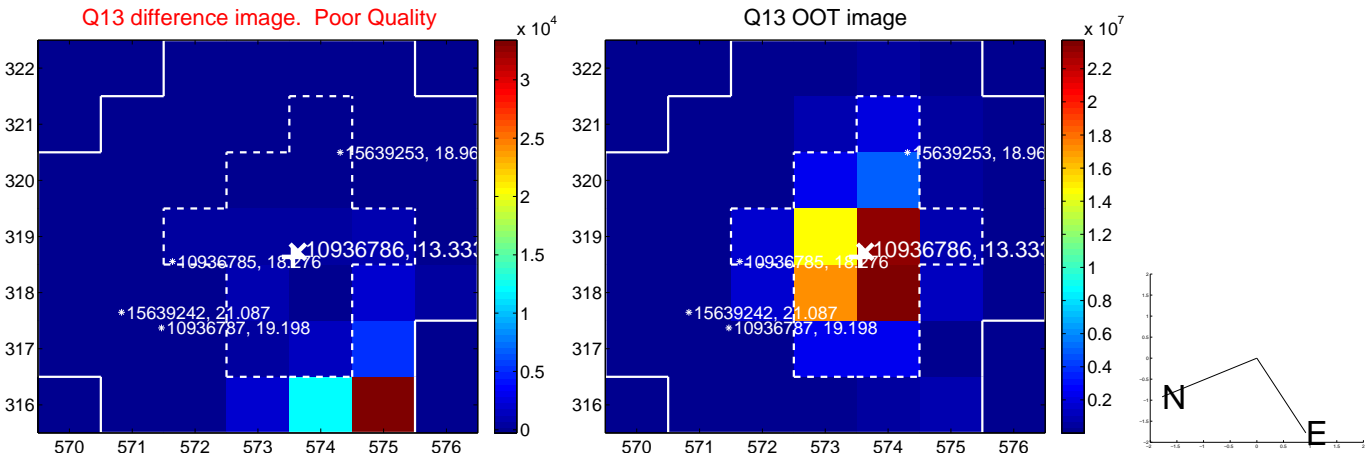
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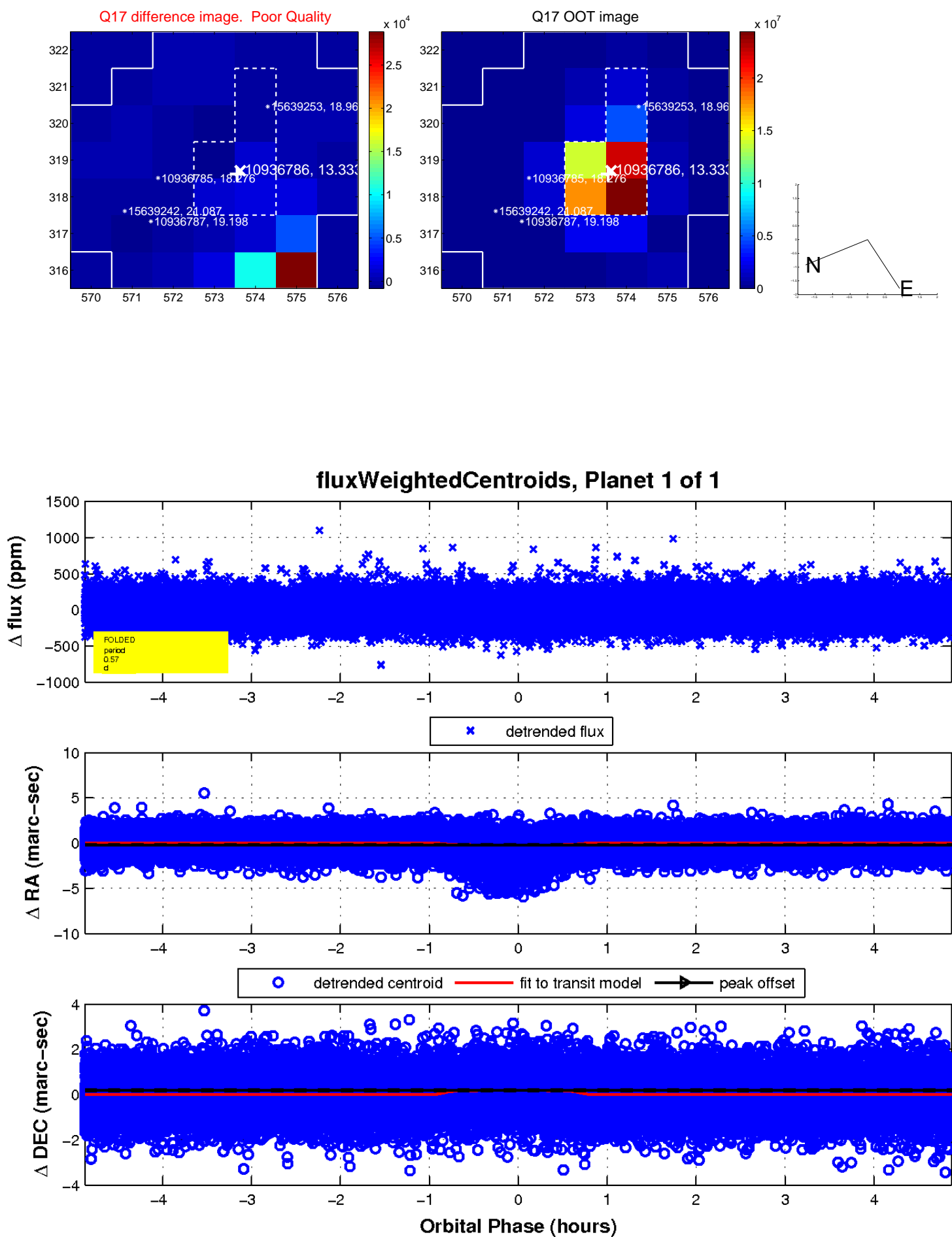
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

