

KIC 006369131

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})
006369131-01	OBS	4554.01	8.077236	132.643359	67.7	6.648	10.1	10.5	2.03	5684	1.84	539.23

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006369131-01	OBS	PC	0.97	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.

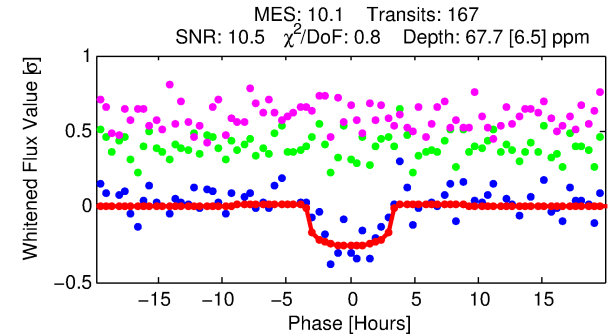
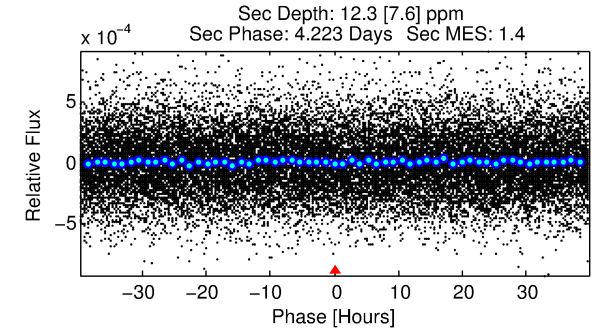
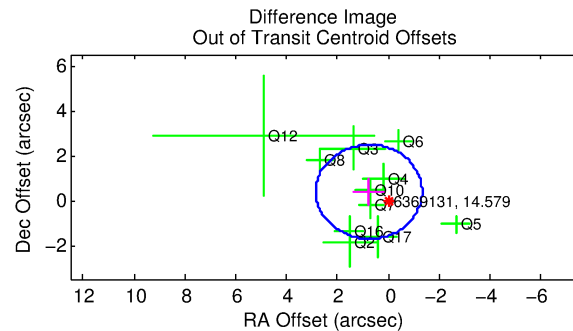
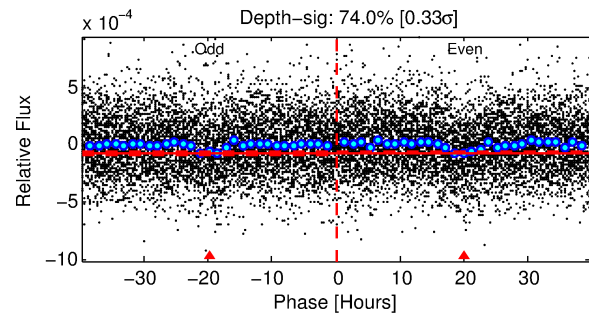
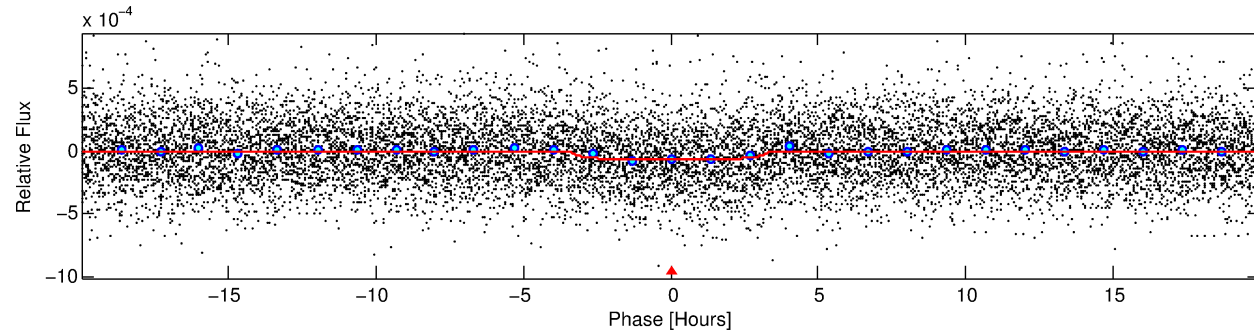
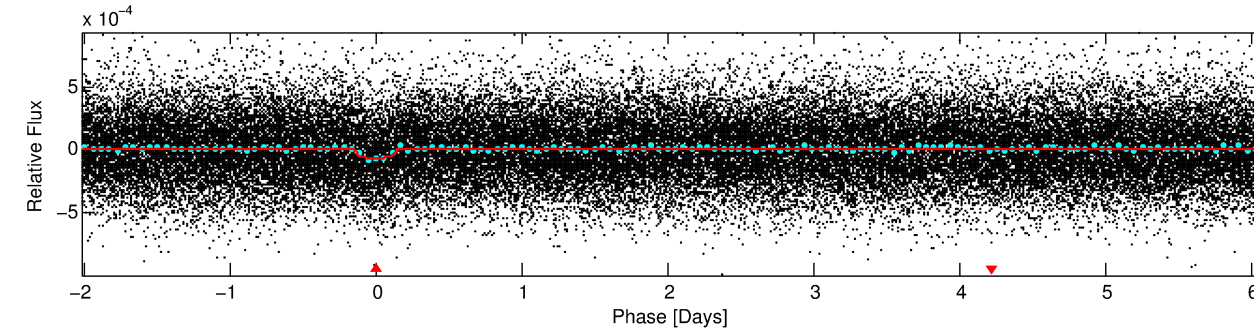
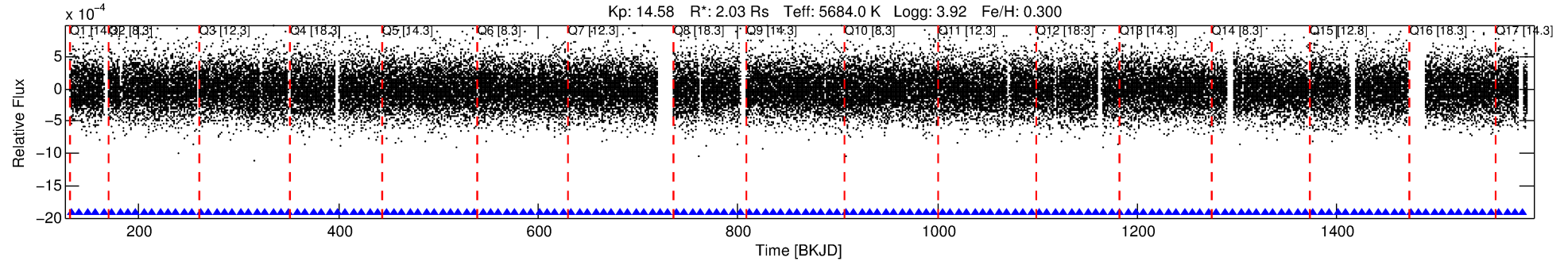
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006369131-01

No Significant Match Found

DV One-Page Summary

KIC: 6369131 Candidate: 1 of 1 Period: 8.077 d
KOI: K04554.01 Corr: 0.887



DV Fit Results:

Period = 8.07724 [0.00011] d
Epoch = 132.6434 [0.0103] BKJD
Rp/R* = 0.0083 [0.0048]
a/R* = 6.01 [14.43]
b = 0.78 [1.27]
Seff = 539.23 [205.58]
Teq = 1229 [117] K
Rp = 1.84 [1.17] Re
a = 0.0846 [0.0205] AU
Ag = 14.36 [19.57] [0.68 σ]
Teffp = 3698 [1212] K [2.03 σ]

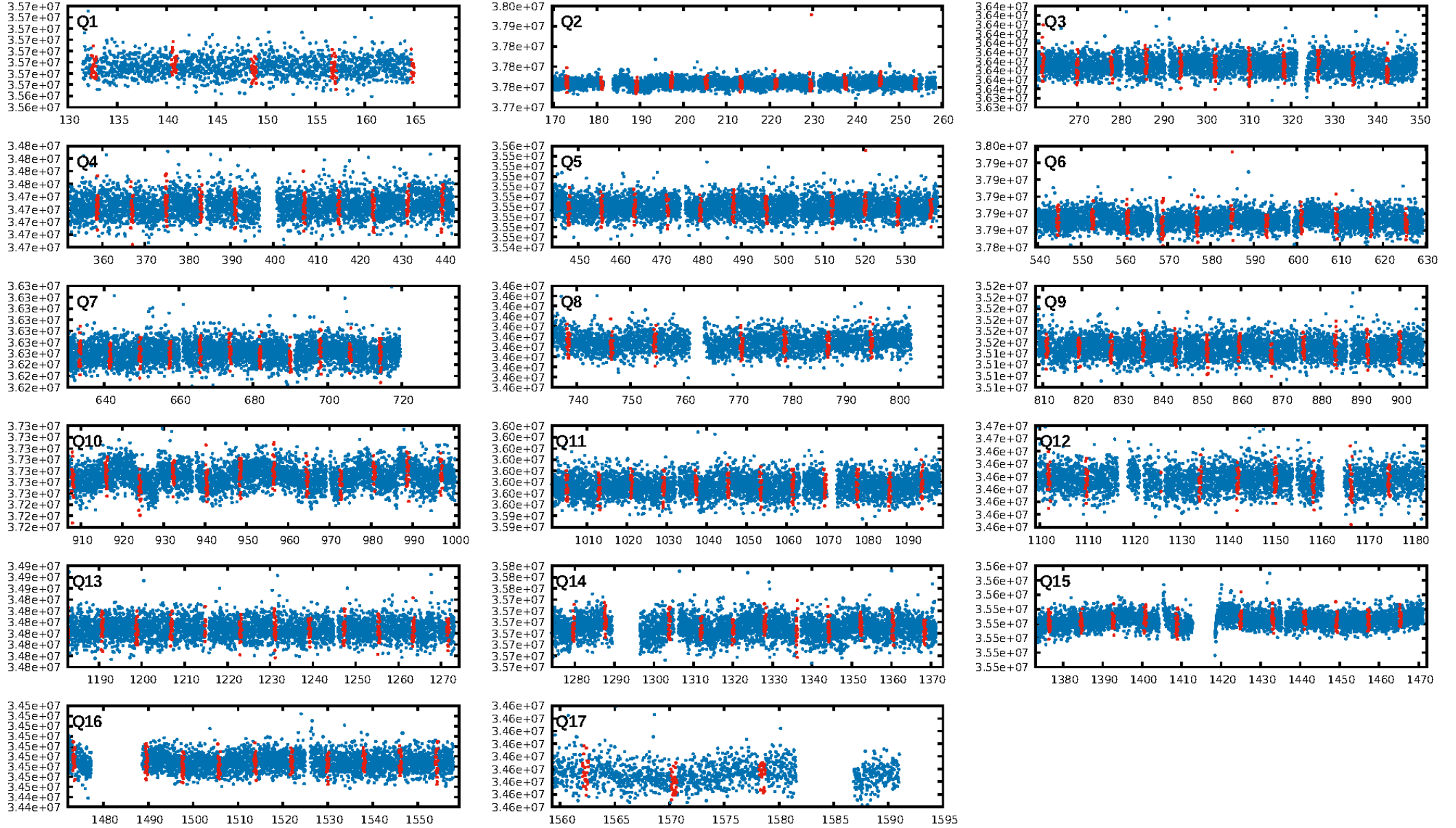
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.21e-23
RollingBand-fgt: 1.00 [159/159]
GhostDiagnostic-chr: -3.02
Centroid-sig: 1.2%
Centroid-so: 2.342 arcsec [1.90 σ]
OotOffset-rm: 0.849 arcsec [1.22 σ]
KicOffset-rm: 0.787 arcsec [1.32 σ]
OotOffset-st: 3/2/4/2 [11]
KicOffset-st: 3/2/4/2 [11]
DiffImageQuality-fgm: 0.82 [9/11]
DiffImageOverlap-fno: 1.00 [17/17]

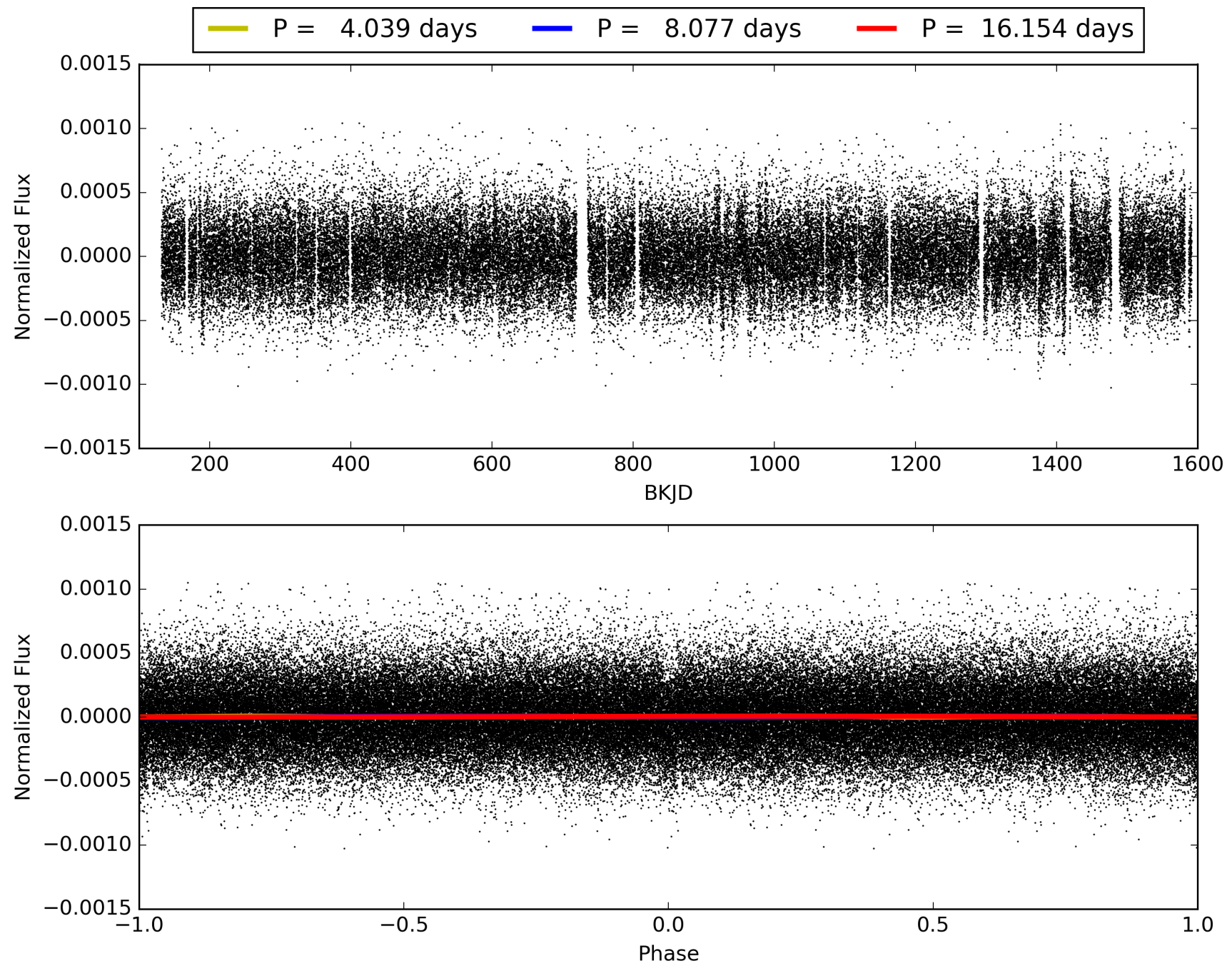
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:44:44 Z

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

TCE 006369131-01, PDC Light Curves

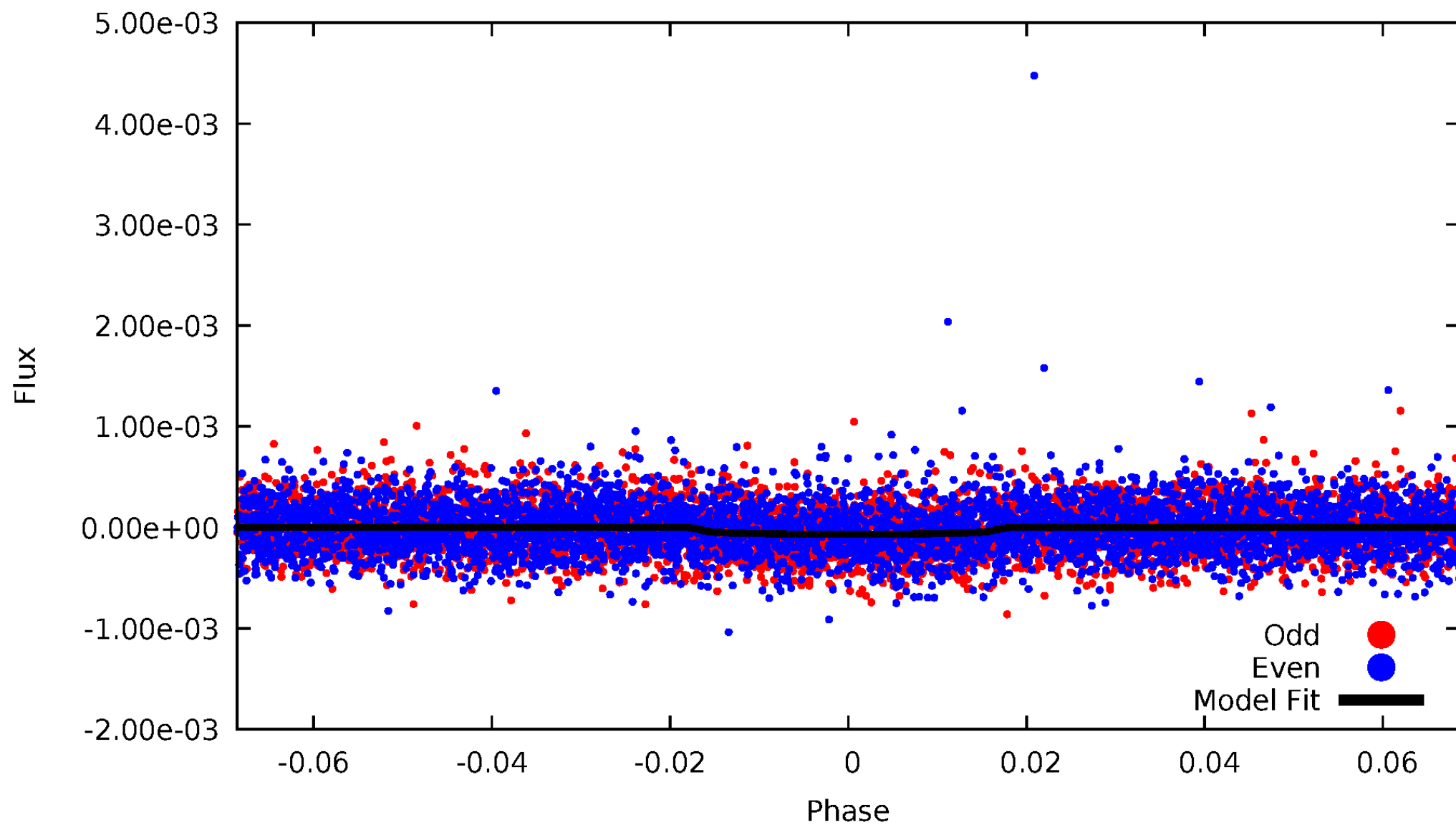


TCE 006369131-01



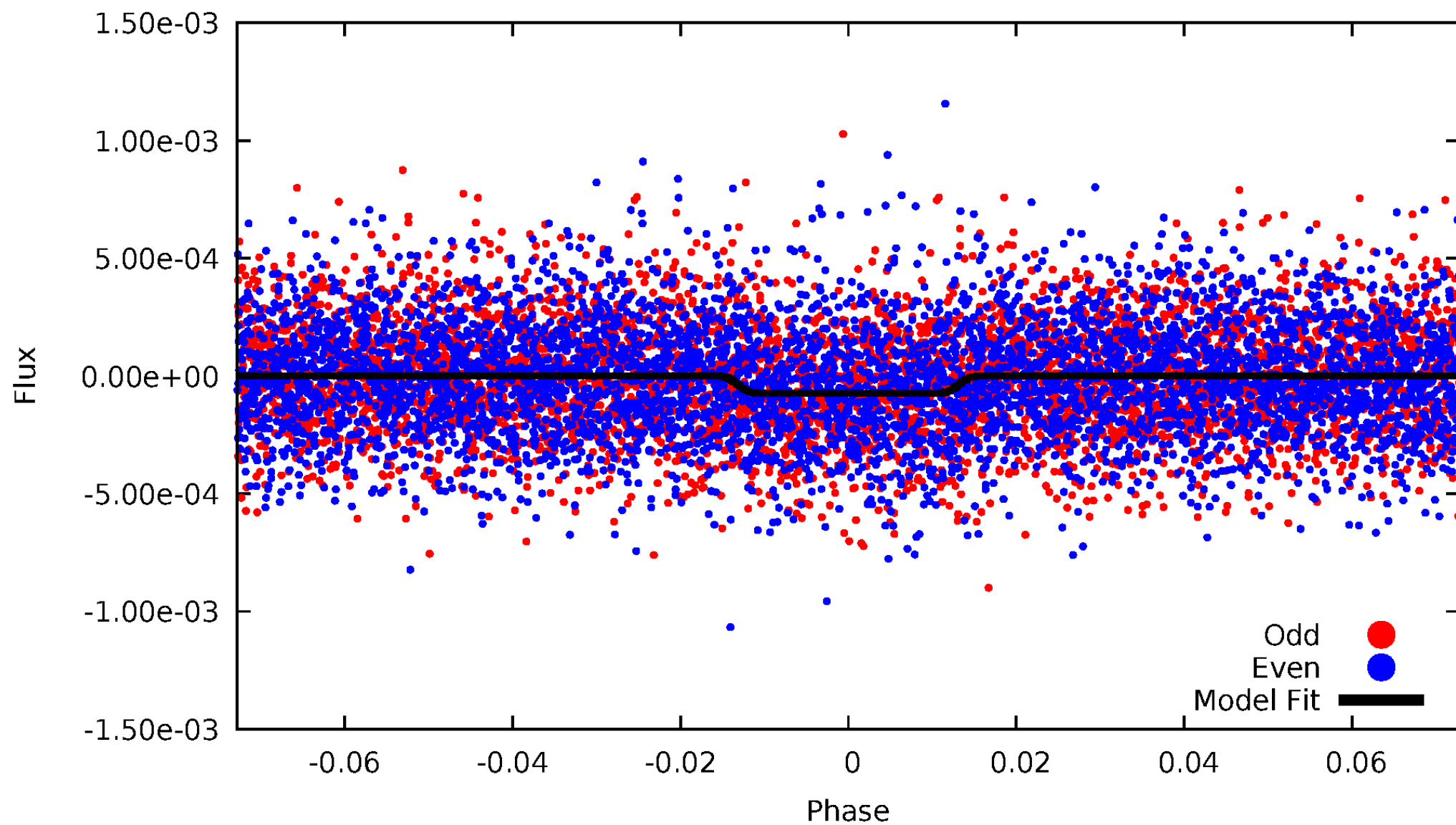
DV Odd/Even

TCE 006369131-01



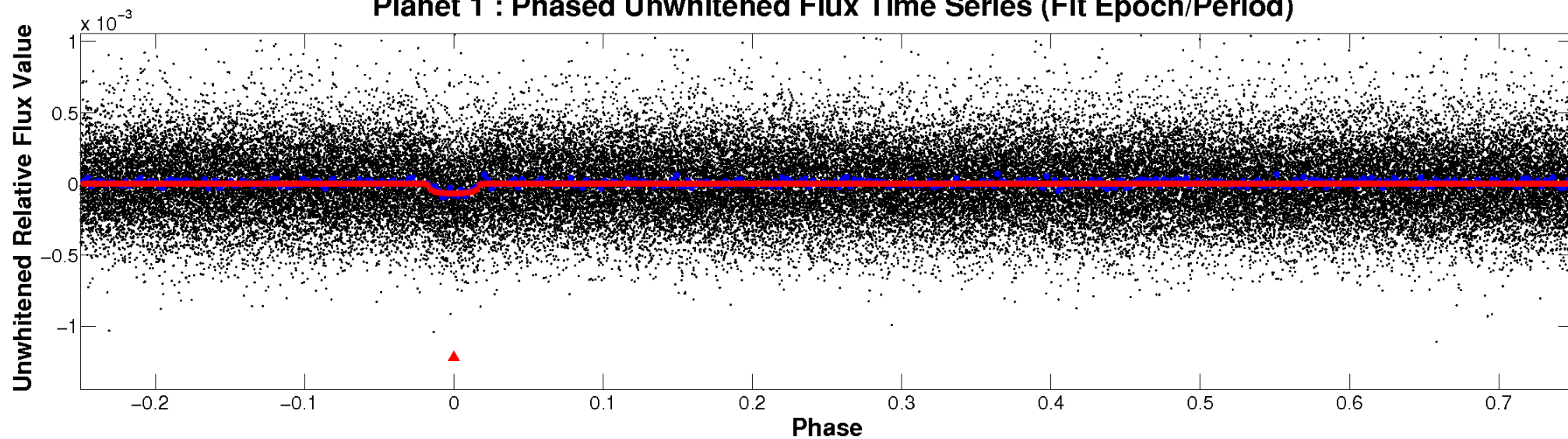
ALT Odd/Even

TCE 006369131-01

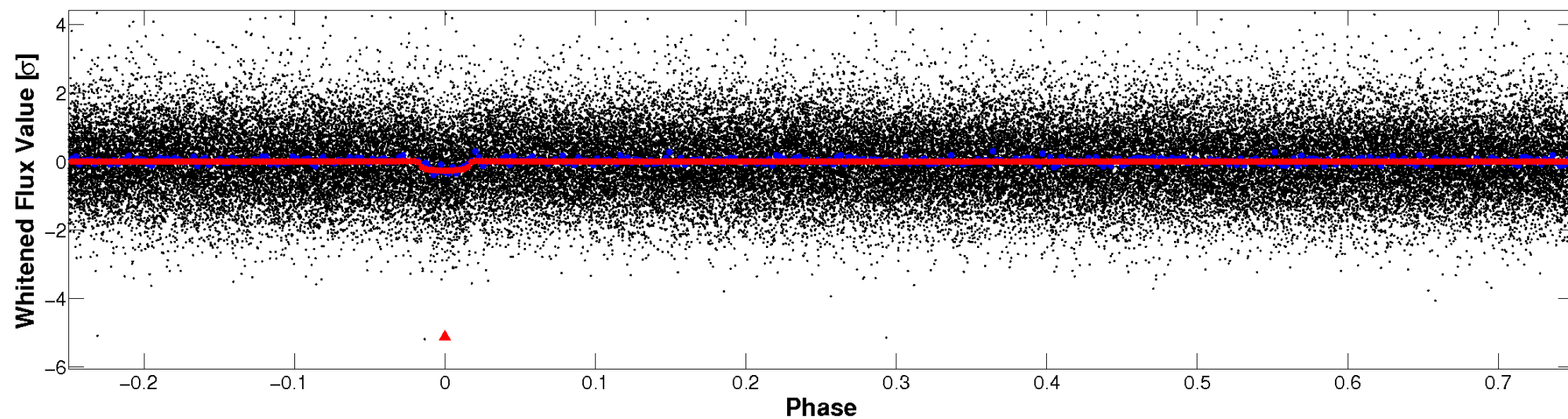


Non-Whitened Vs. Whitened Light Curve

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

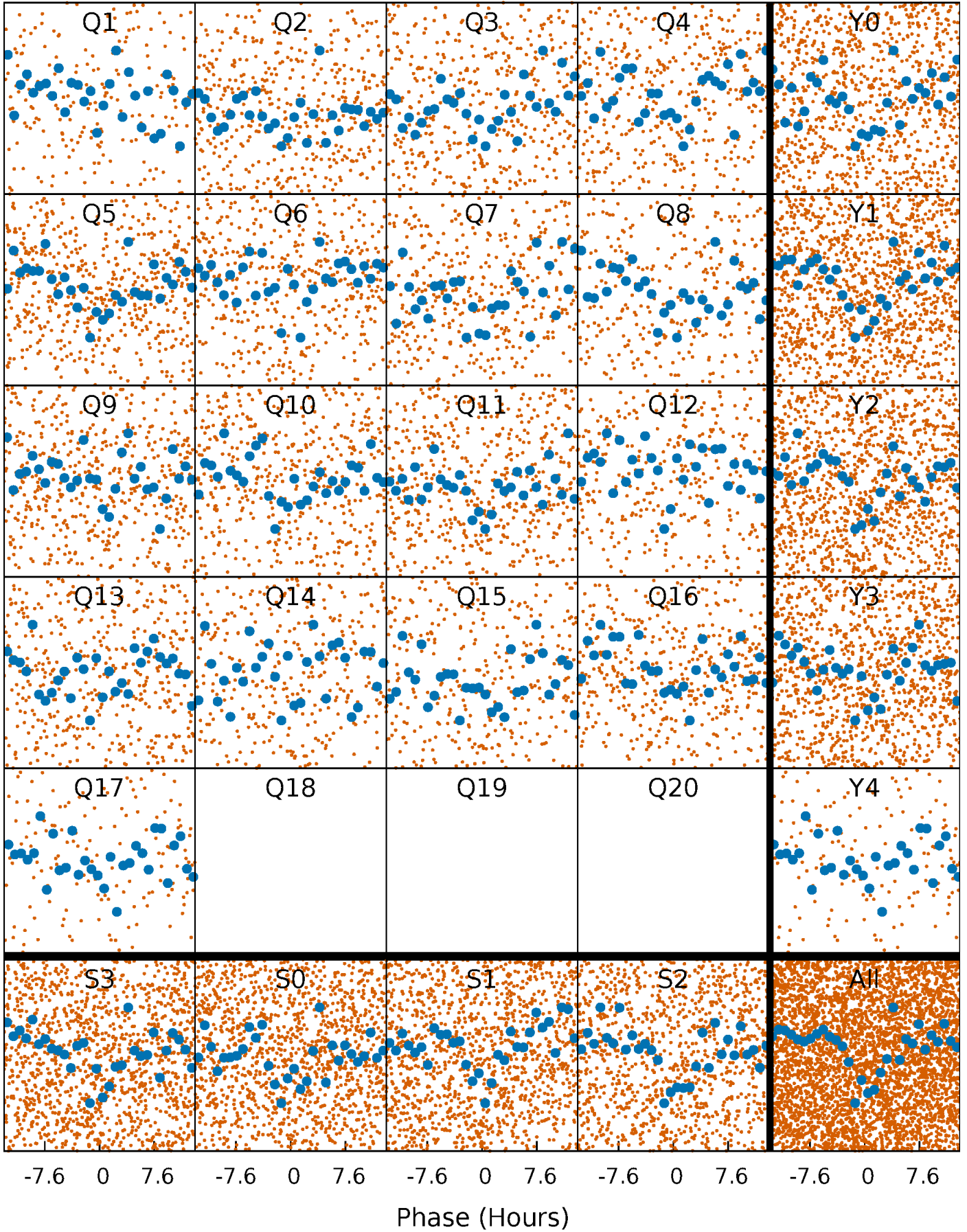


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



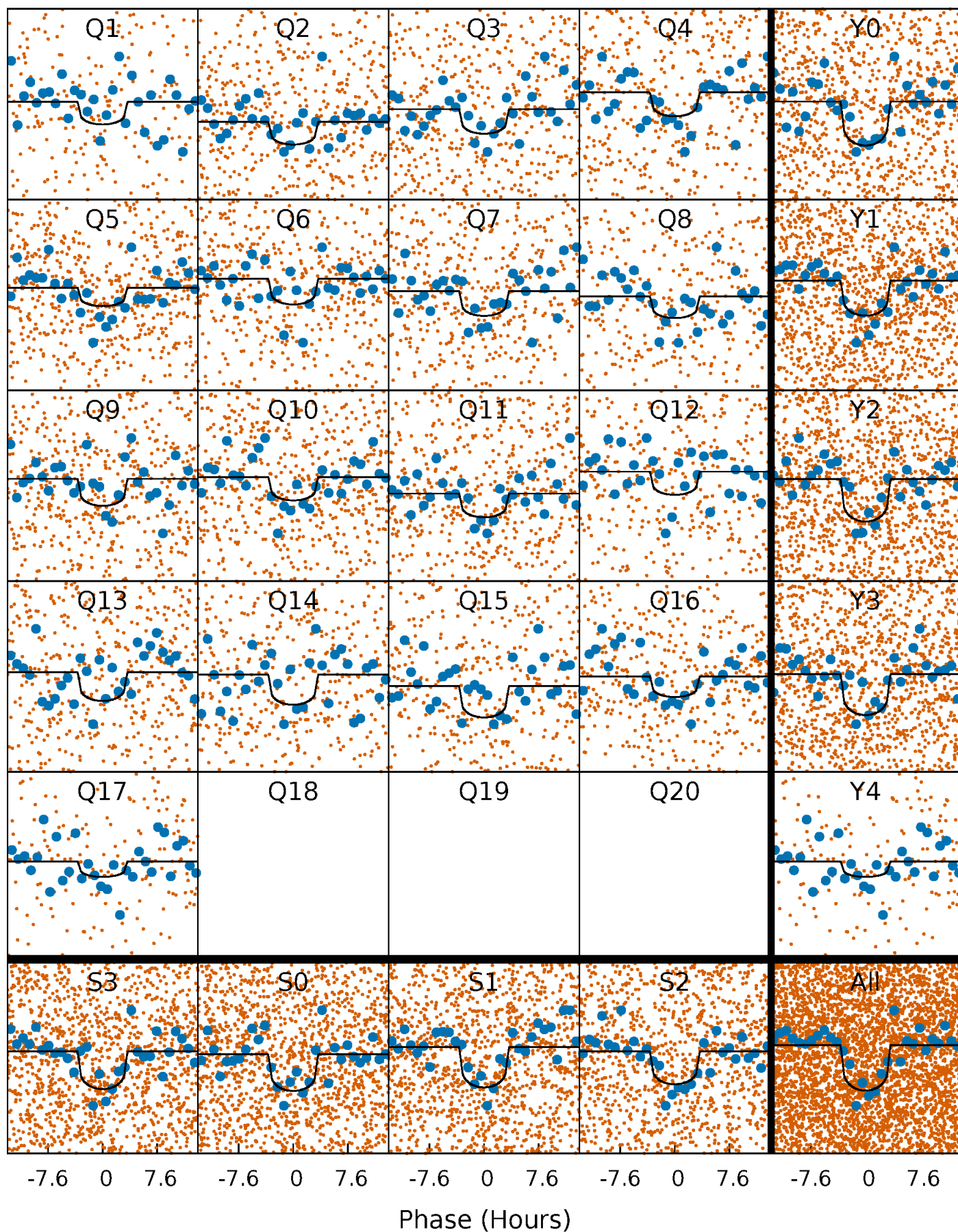
PDC Quarter-Phased Transit Curves

TCE 006369131-01 P= 8.077236 Days $T_0=132.643359$ (BKJD)



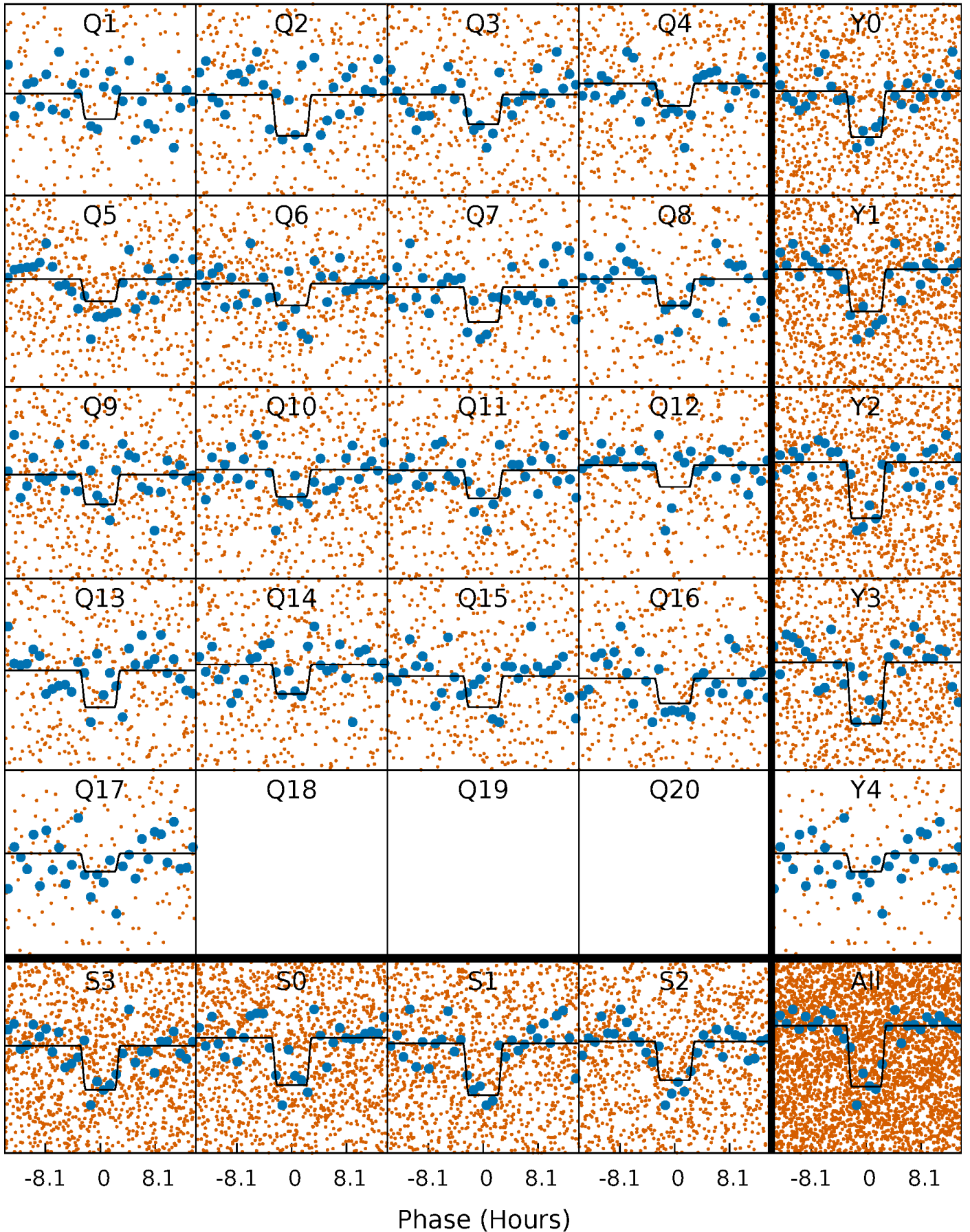
DV Quarter-Phased Transit Curves

TCE 006369131-01 P= 8.077236 Days $T_0=132.643359$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

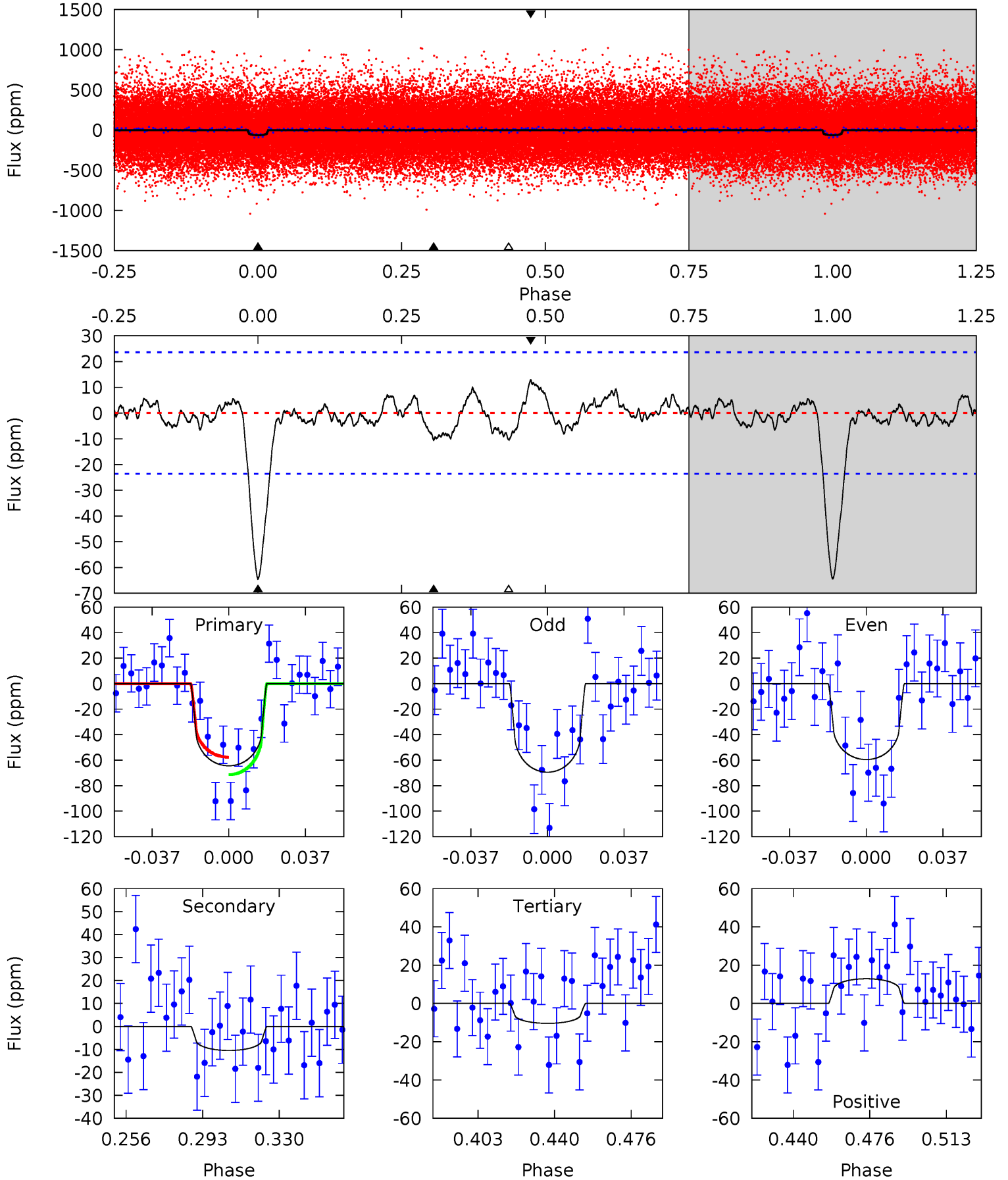
TCE 006369131-01 P= 8.077177 Days $T_0=132.654081$ (BKJD)



DV Model-Shift Uniqueness Test

006369131-01, P = 8.077236 Days, E = 124.566123 Days

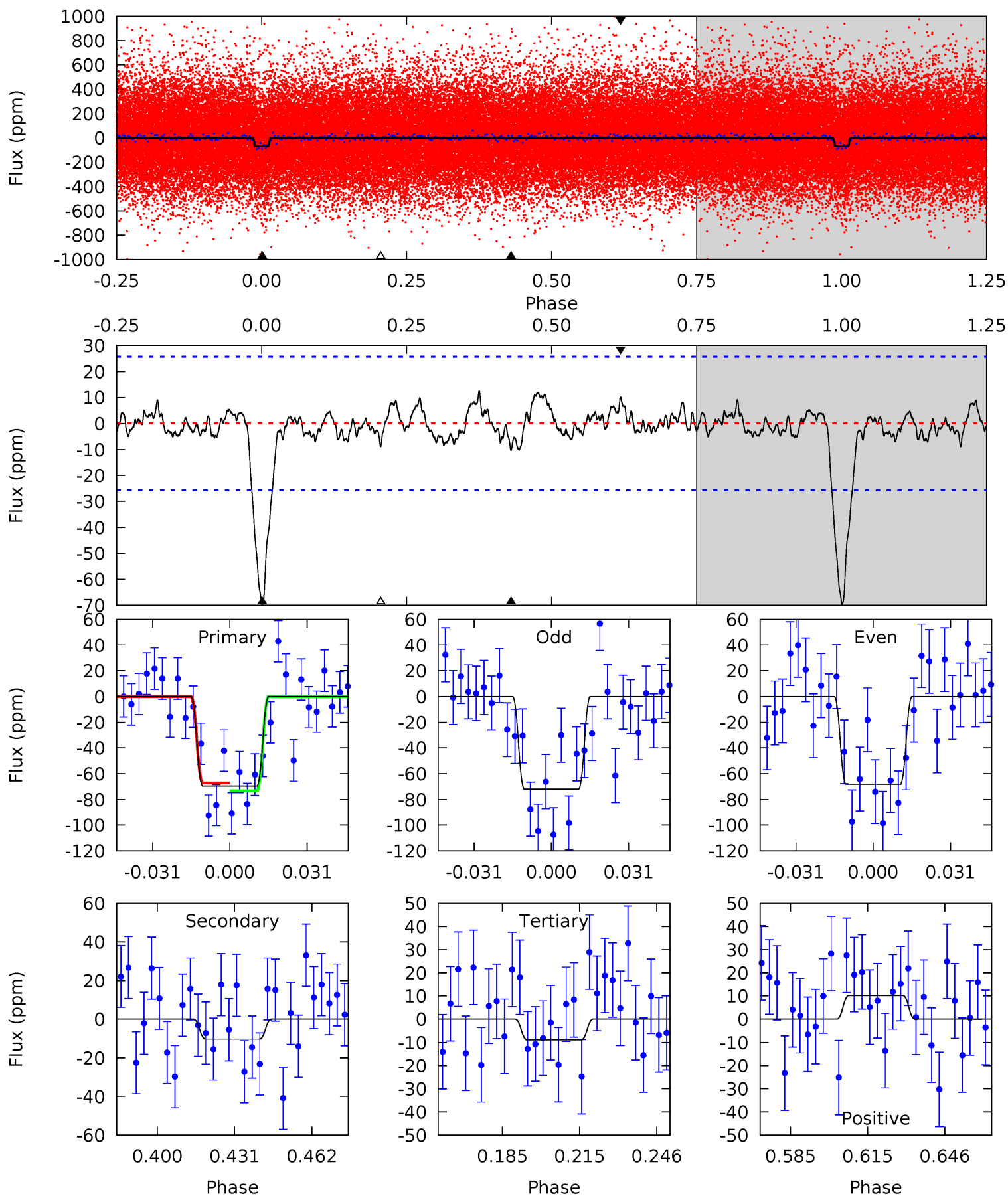
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.0	2.12	2.10	2.61	4.77	2.09	0.86	10.9	10.4	0.02	-0.49	1.00	0.93	0.17	1.39



Alt Model-Shift Uniqueness Test

006369131-01, P = 8.077177 Days, E = 124.576904 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.0	1.92	1.67	1.90	4.81	2.16	0.80	11.3	11.1	0.25	0.02	0.34	0.93	0.15	0.56



Stellar Parameters For KIC 006369131

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5684^{+85}_{-68}	$3.915^{+0.217}_{-0.093}$	$0.300^{+0.150}_{-0.150}$	$2.032^{+0.247}_{-0.535}$	$1.239^{+0.102}_{-0.165}$	$0.208^{+0.254}_{-0.060}$
	+1%/-1%	+6%/-2%	+50%/-50%	+12%/-26%	+8%/-13%	+122%/-29%
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 006369131-01 / KOI 4554.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-10 ± 5	$1.85^{+1.04}_{-1.00}$	1705^{+74}_{-99}	3795^{+1286}_{-629}	12^{+43}_{-8}
Alt.	-10 ± 5	$1.85^{+1.08}_{-0.89}$	1708^{+71}_{-112}	3739^{+1118}_{-612}	11^{+28}_{-8}

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

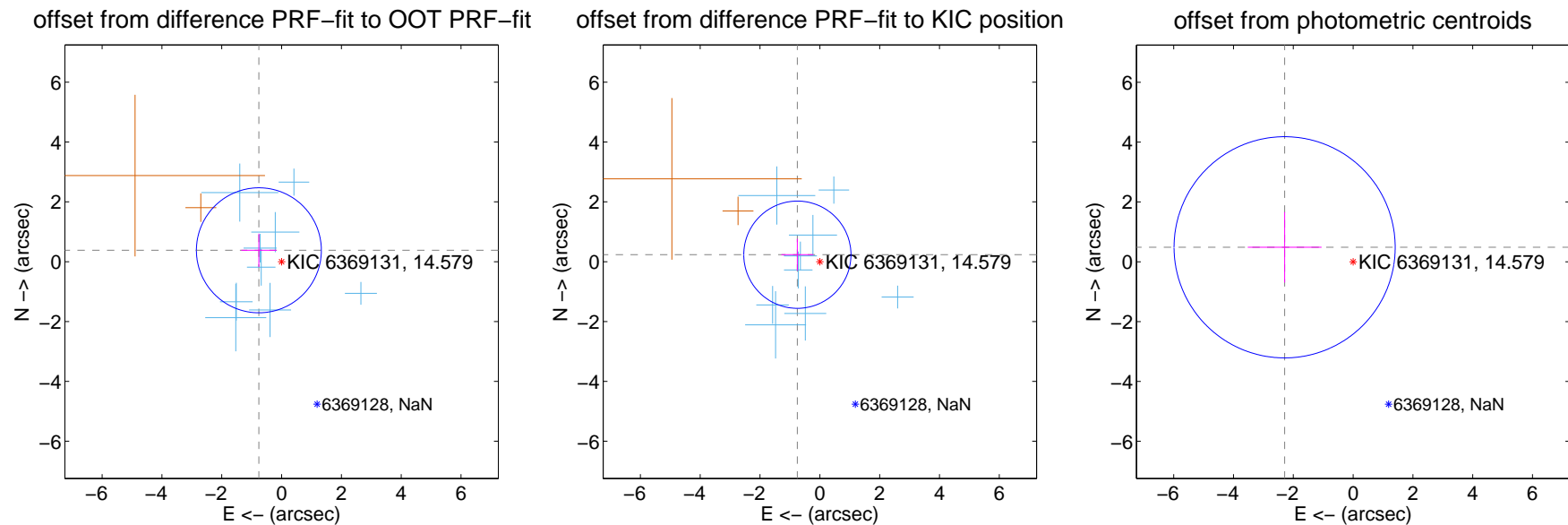
DV Centroid Data

Supplemental centroid analysis for 006369131-01. Kepler magnitude: 14.58. Transit SNR 10.48

There are 9 quarters with good PRF difference image offsets

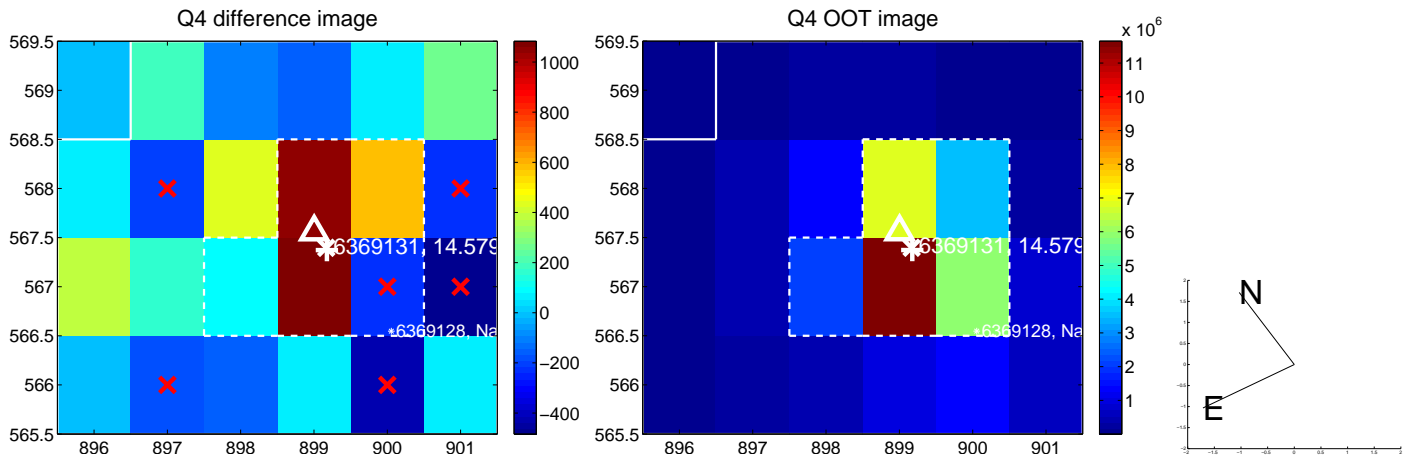
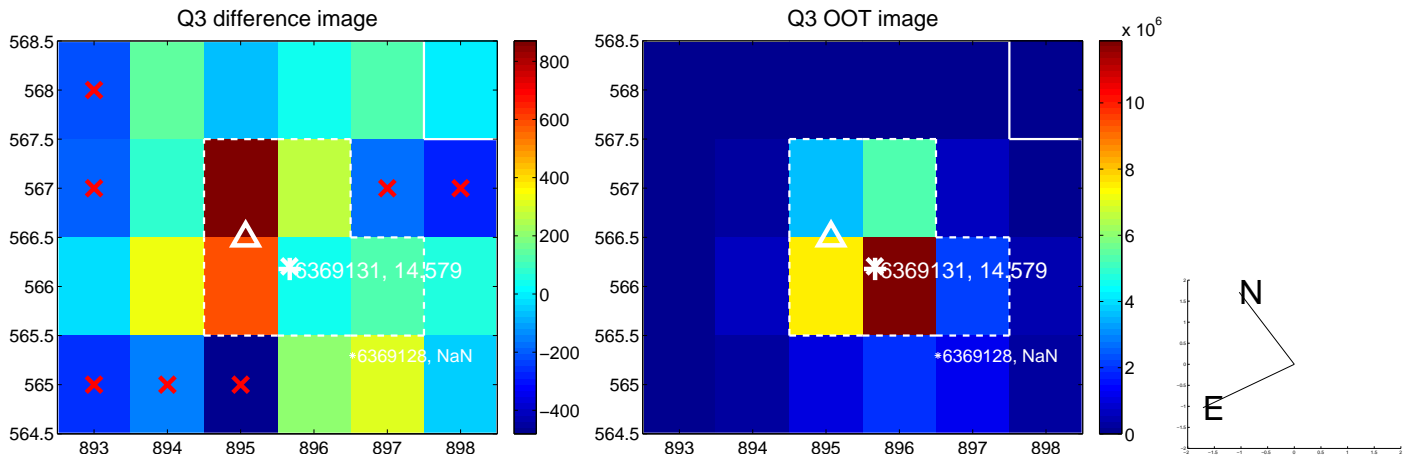
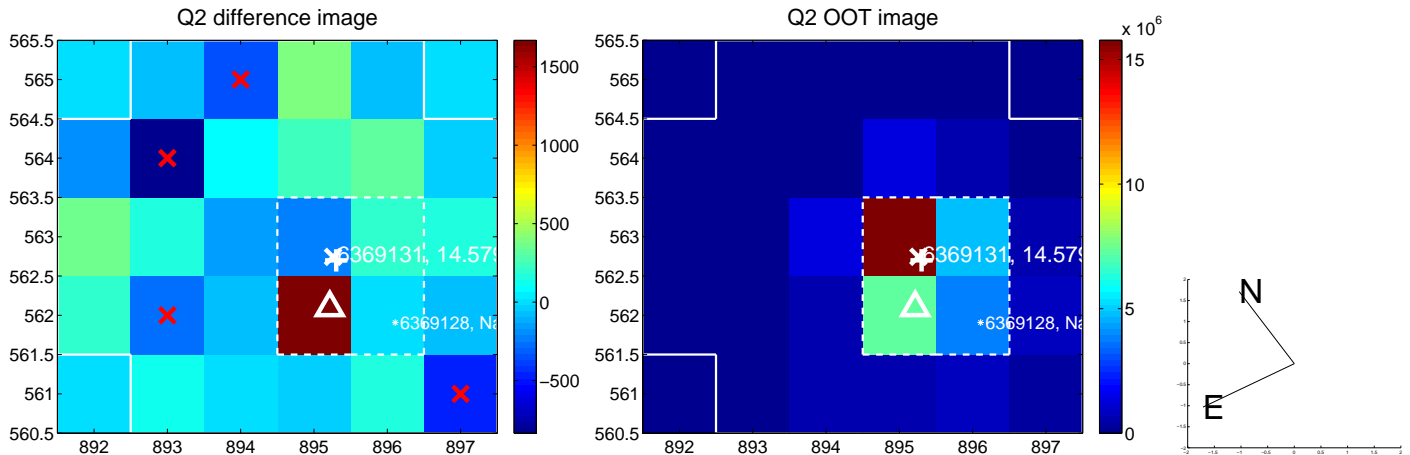
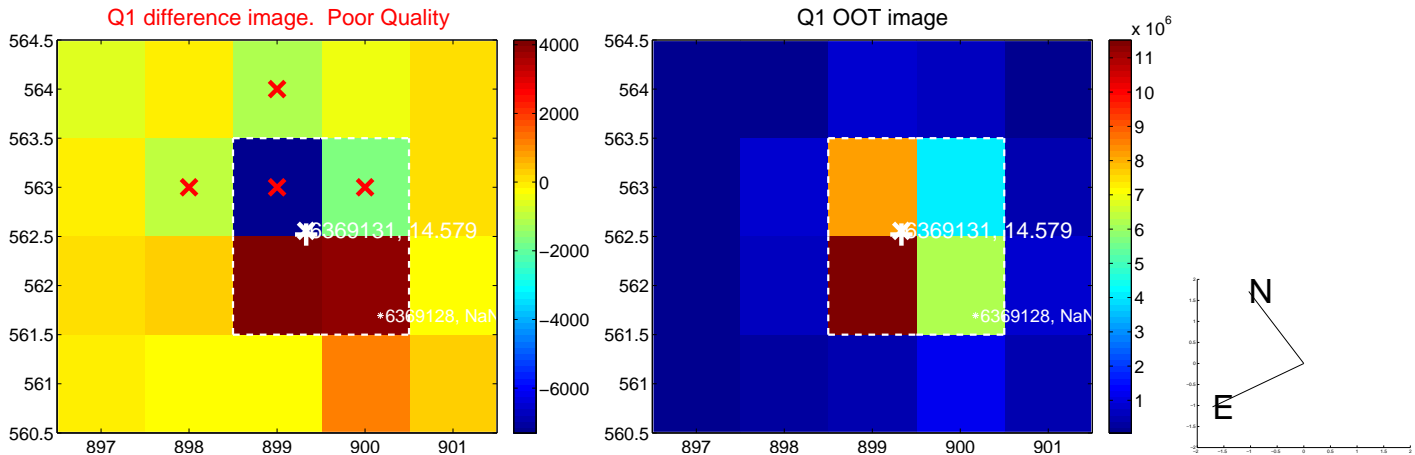
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.849 ± 0.696	1.22	0.759 ± 0.587	0.381 ± 0.559
PRF-fit source offset from KIC position	0.787 ± 0.598	1.32	0.751 ± 0.534	0.234 ± 0.531
photometric centroid source offset	2.34 ± 1.23	1.90	2.29 ± 1.24	0.48 ± 1.18

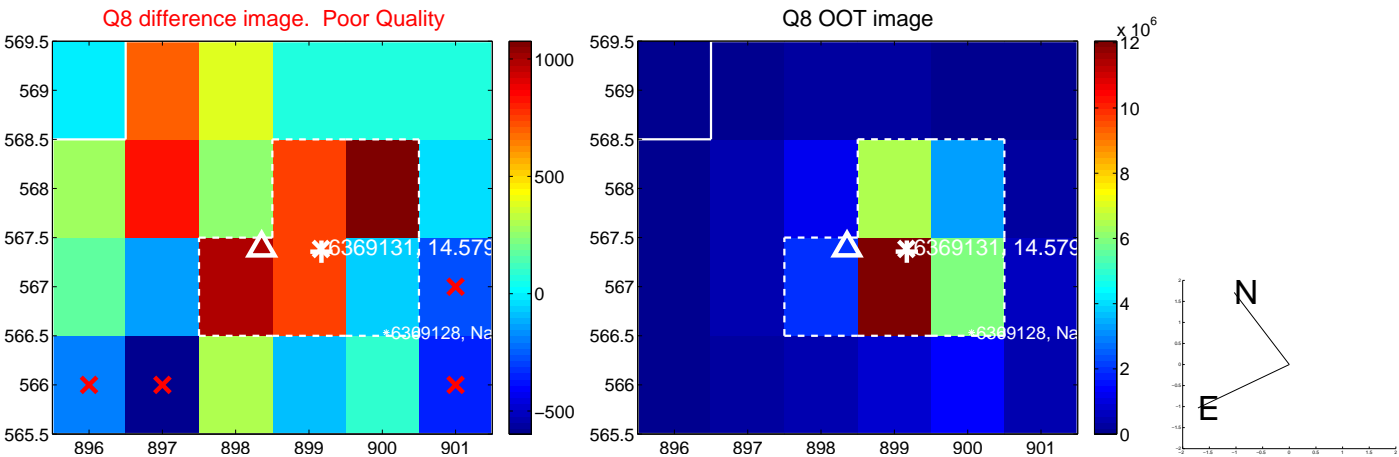
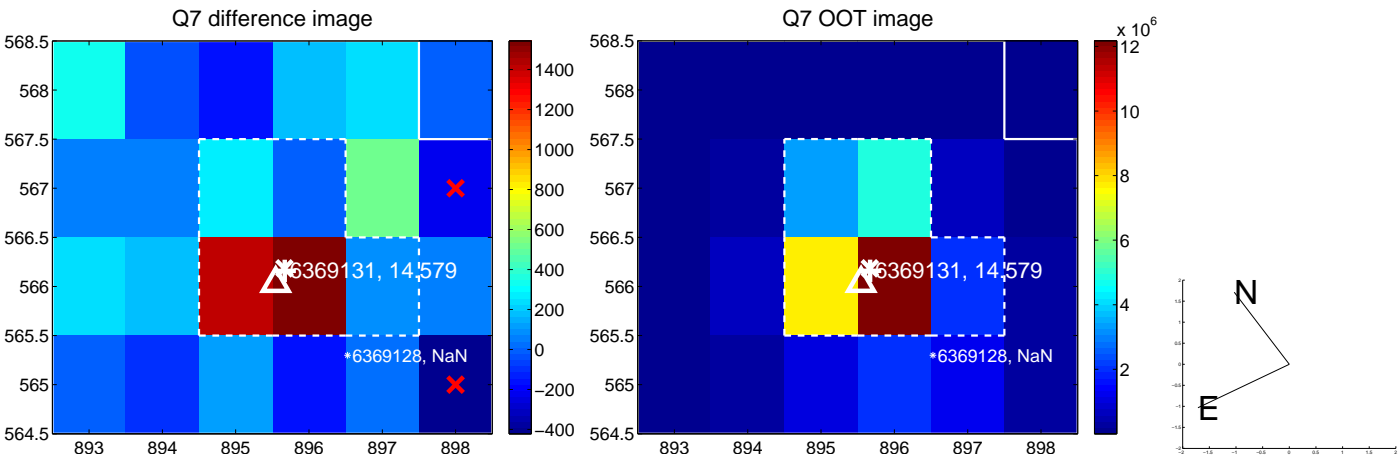
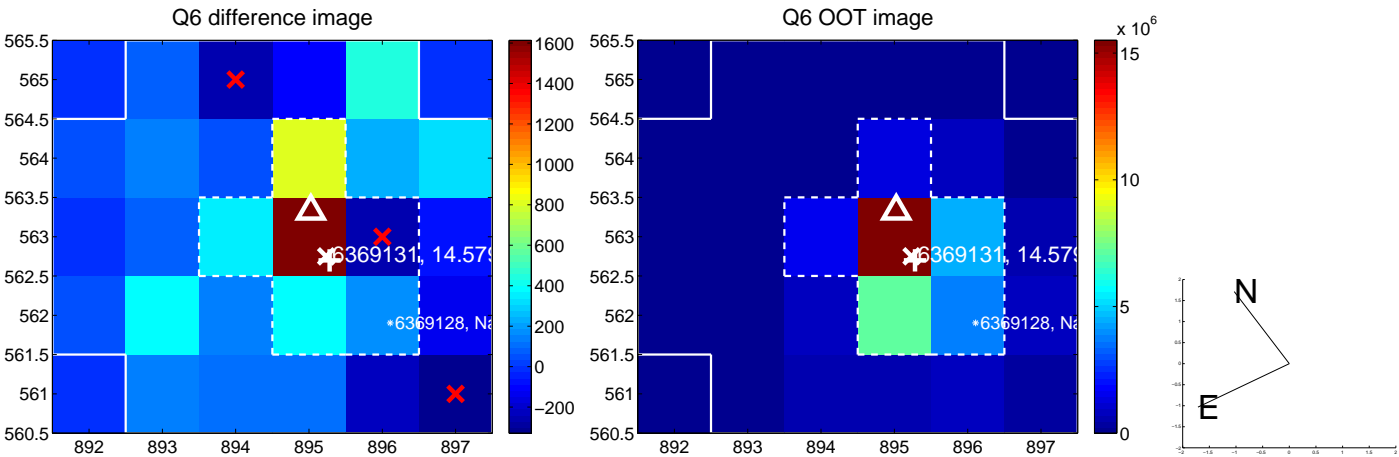
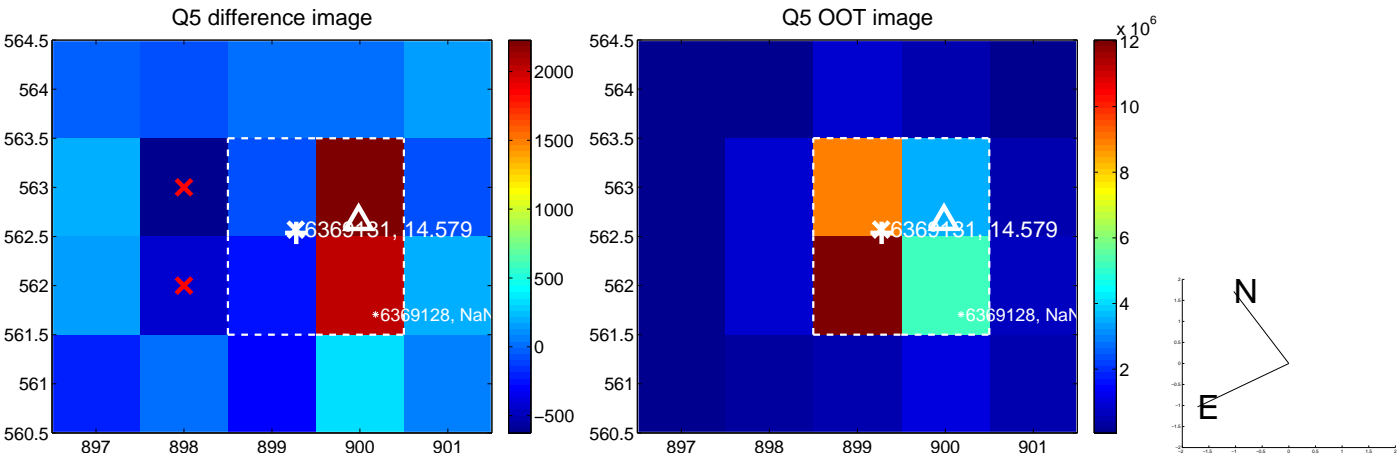


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

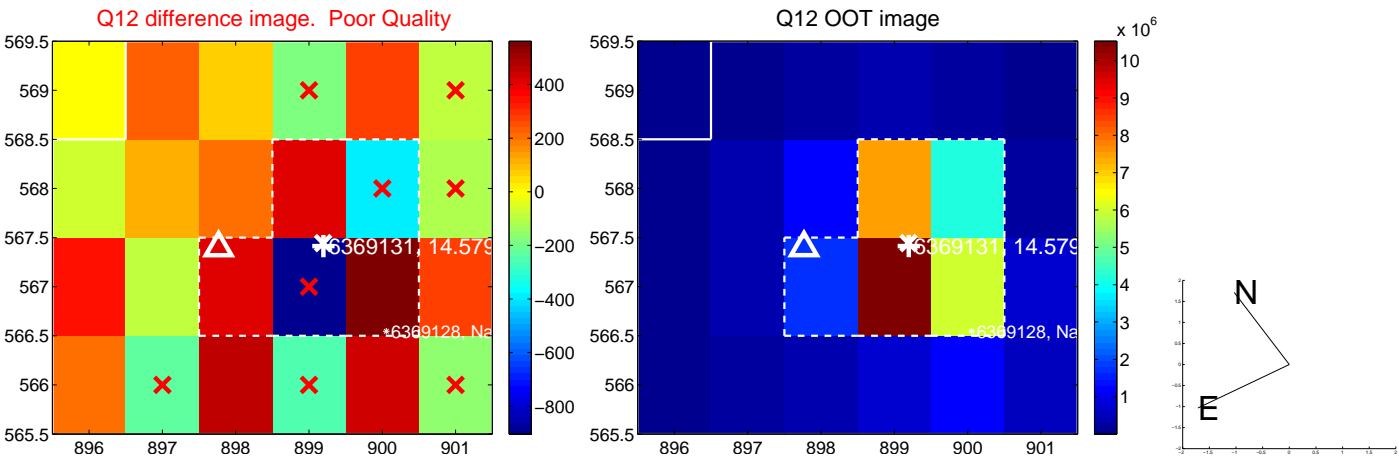
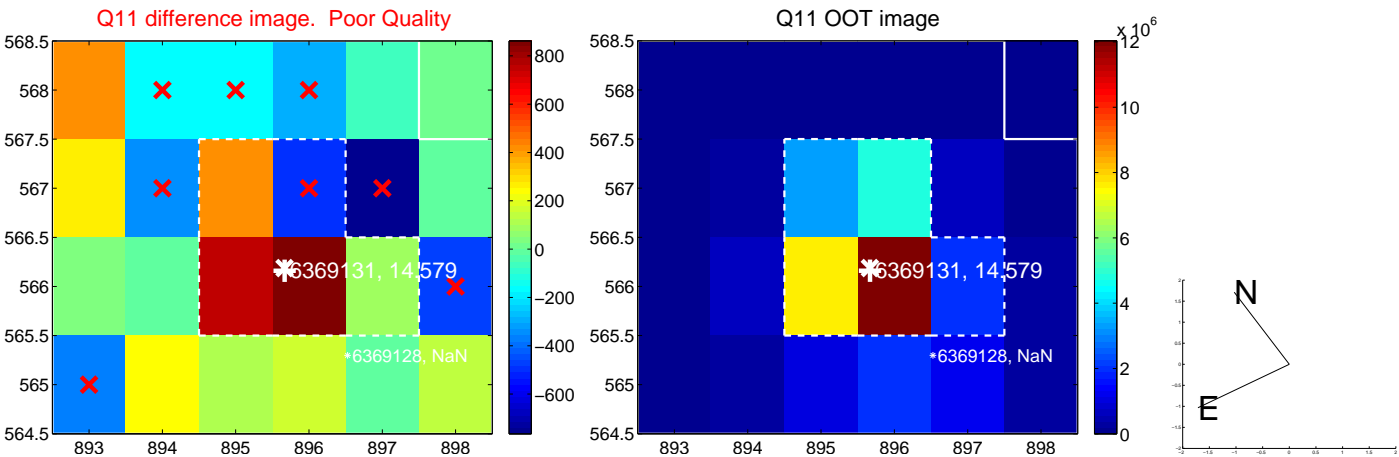
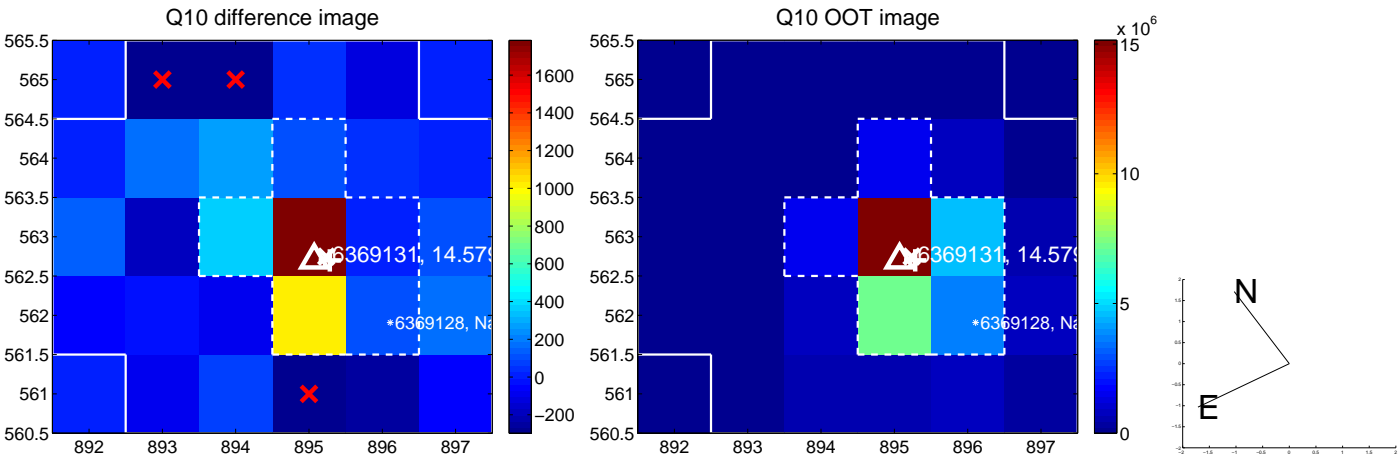
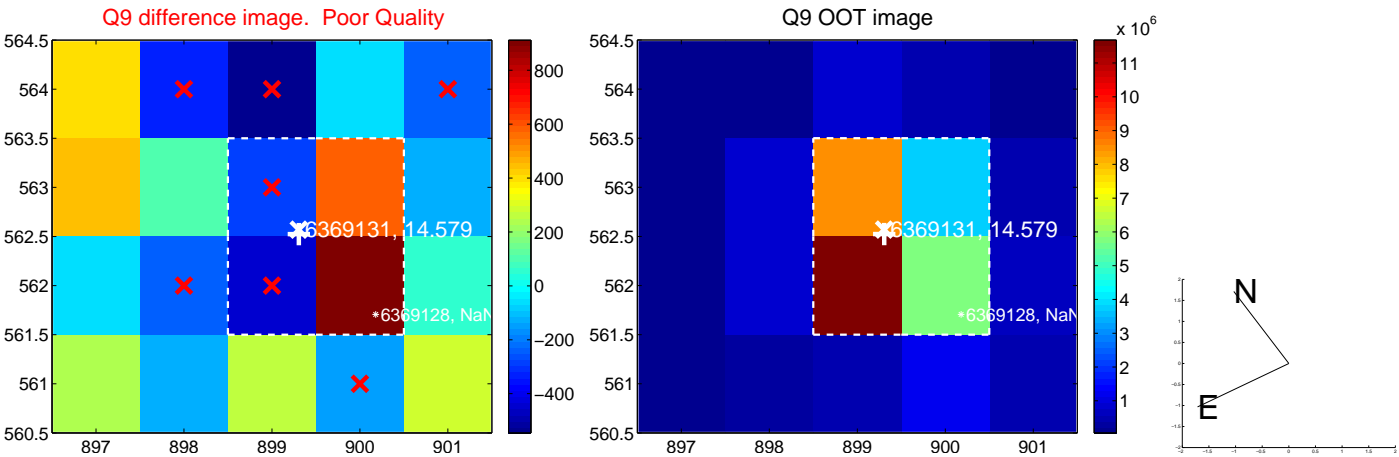
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



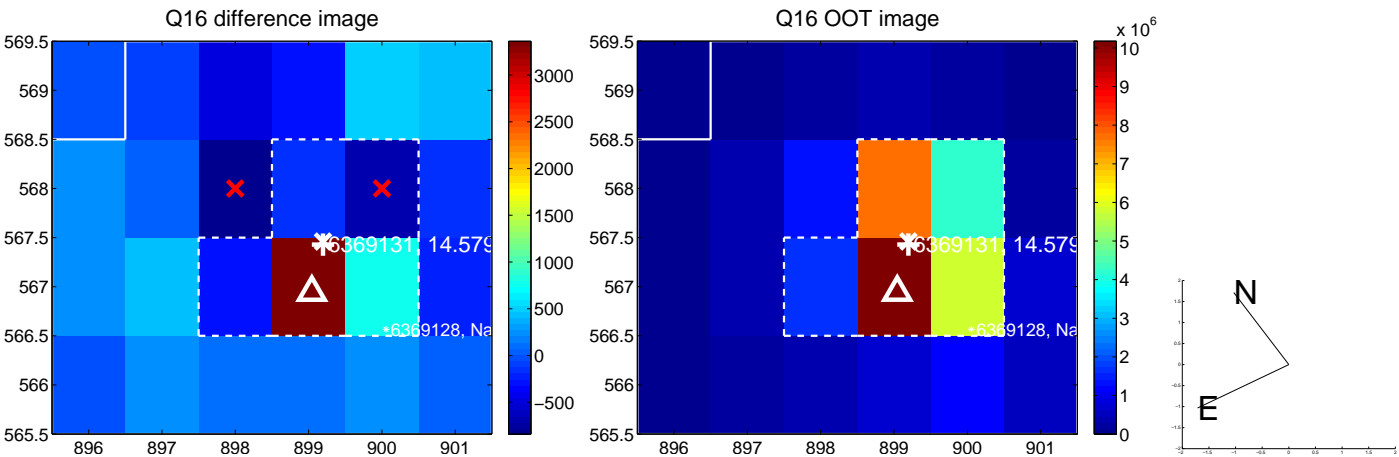
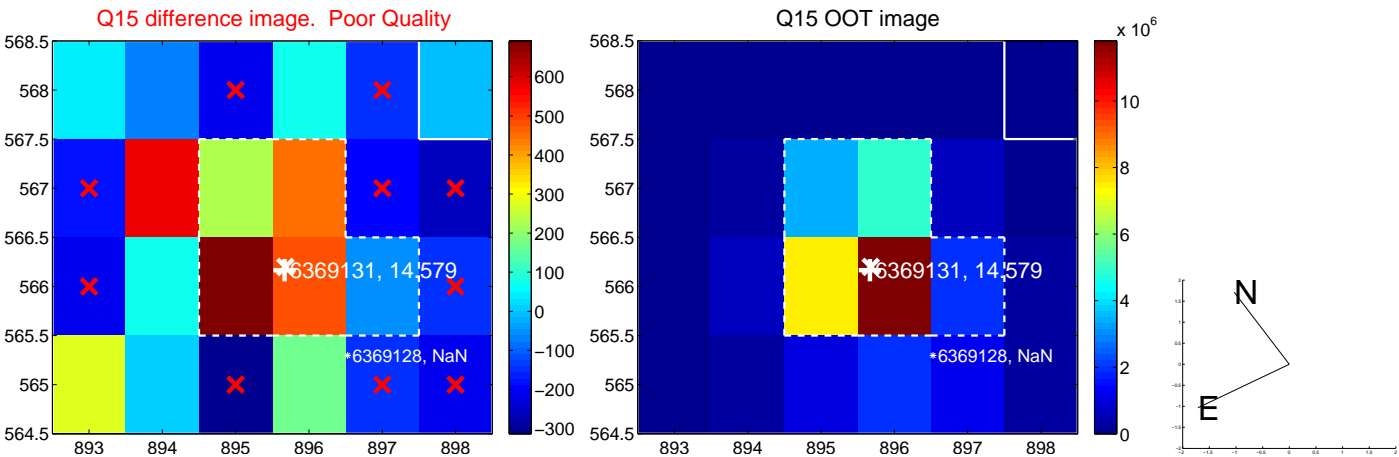
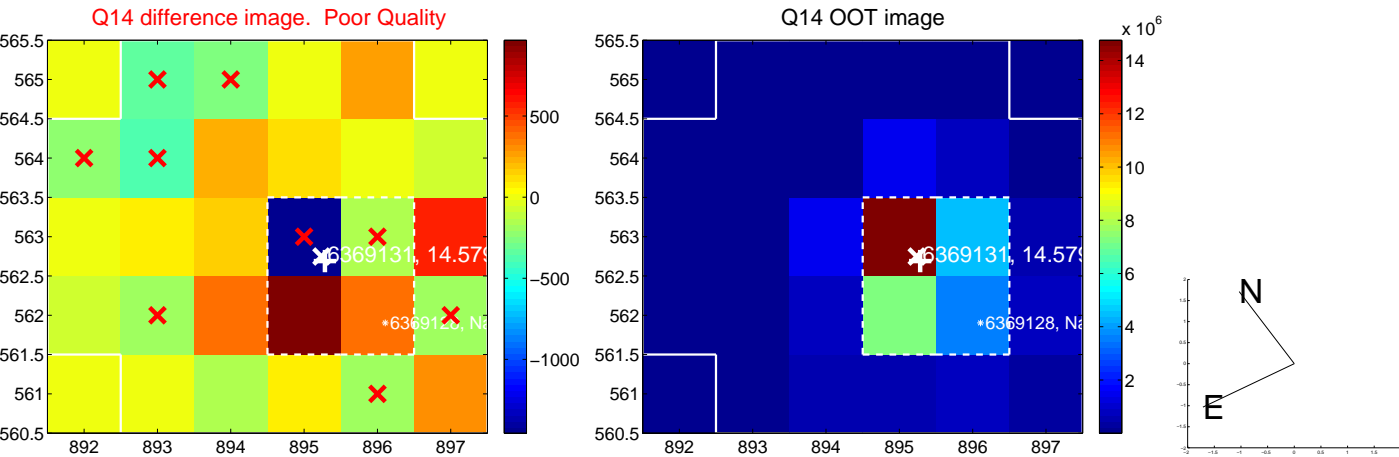
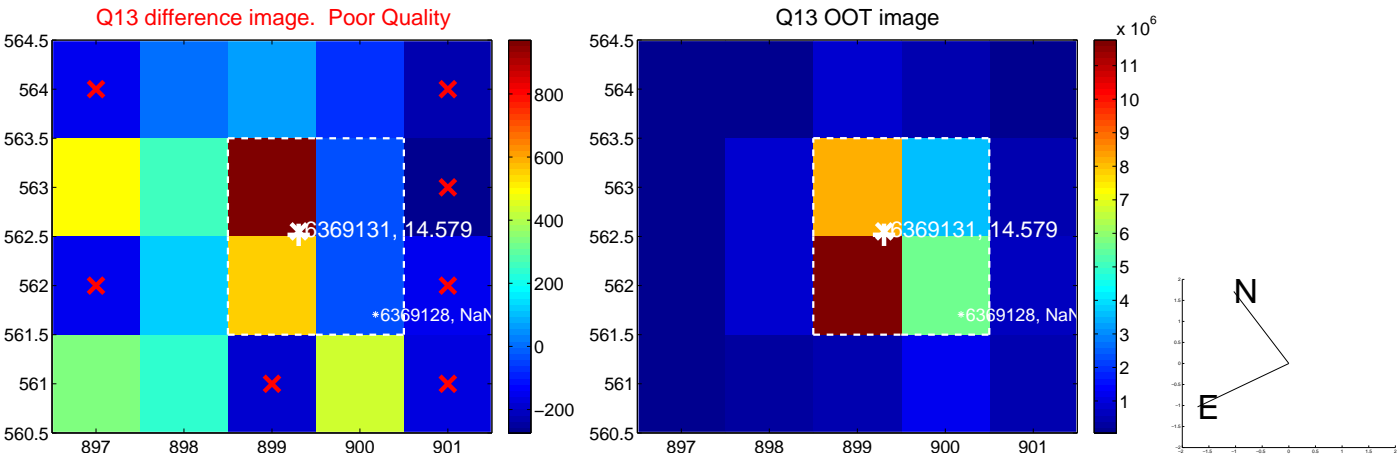
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



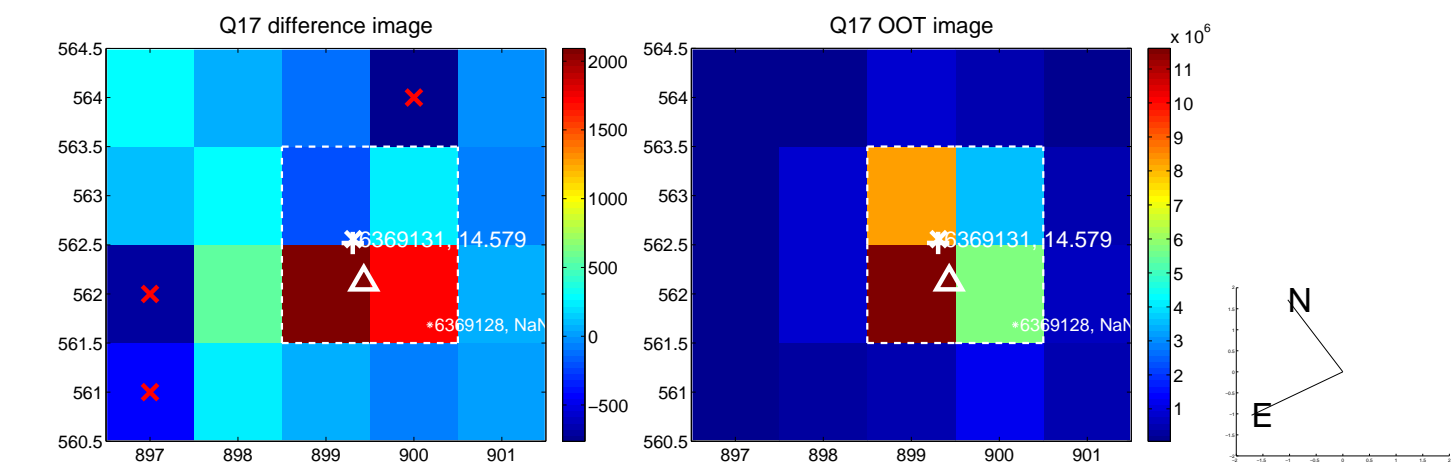
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



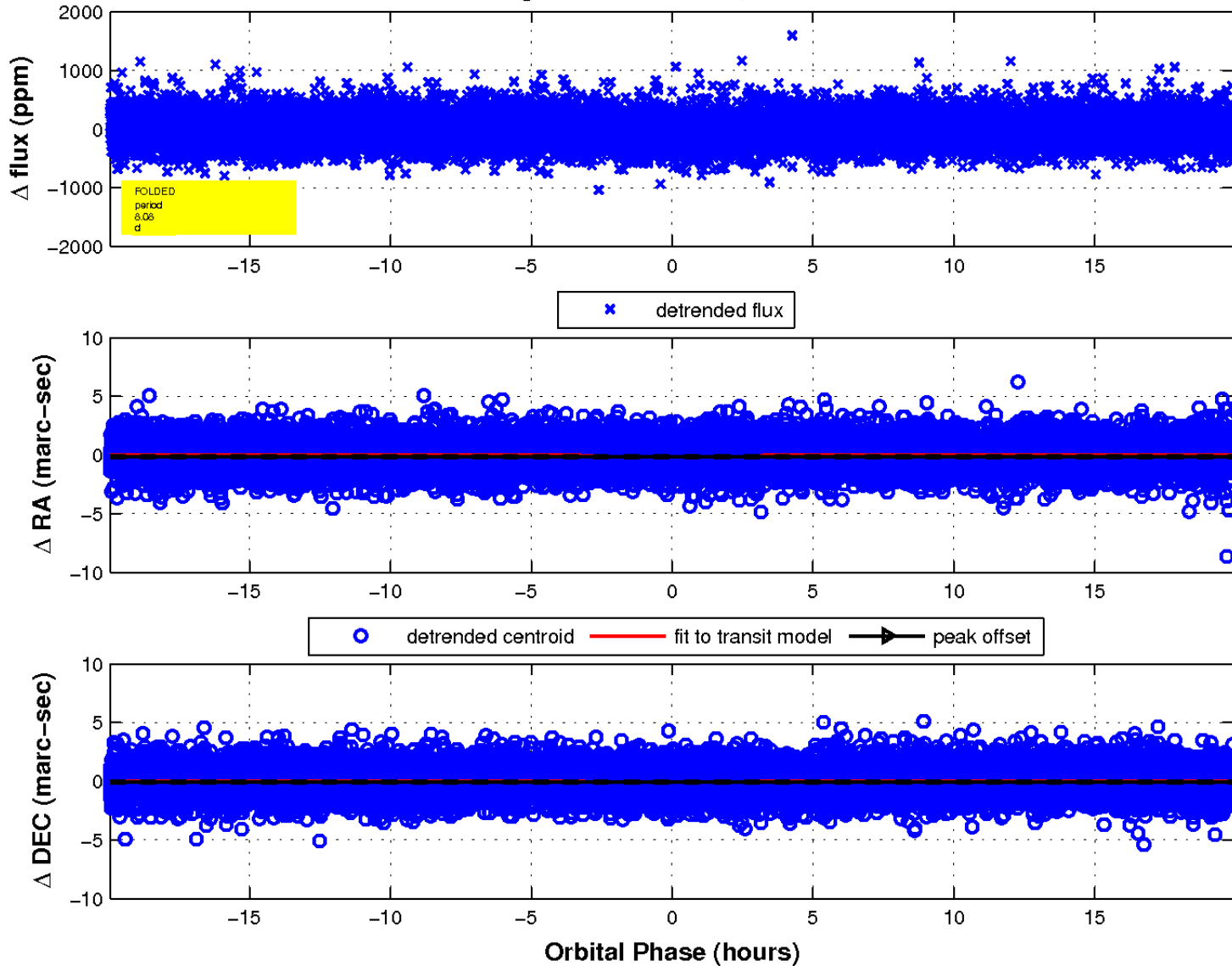
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

