

KIC 005039228

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})
005039228-01	OBS	1597.01	7.796696	134.419775	366.8	4.874	51.7	55.8	1.28	6521	2.74	367.14

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005039228-01	OBS	PC	1.00	0	0	0	0	CENT_CROWDED

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 005039228-01

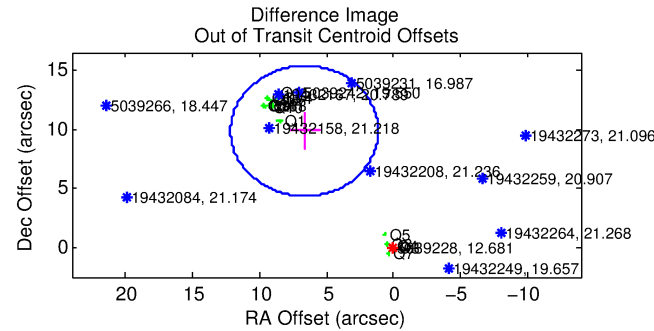
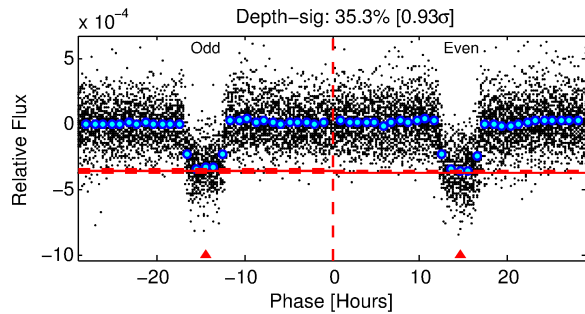
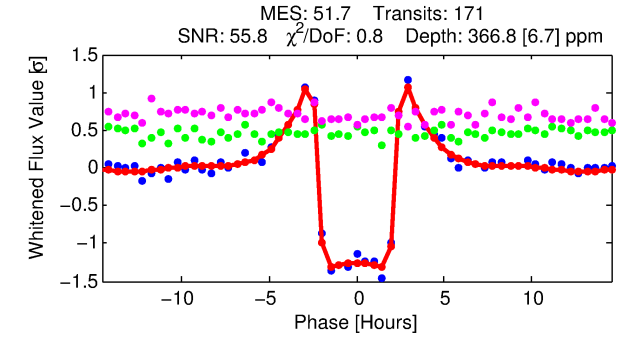
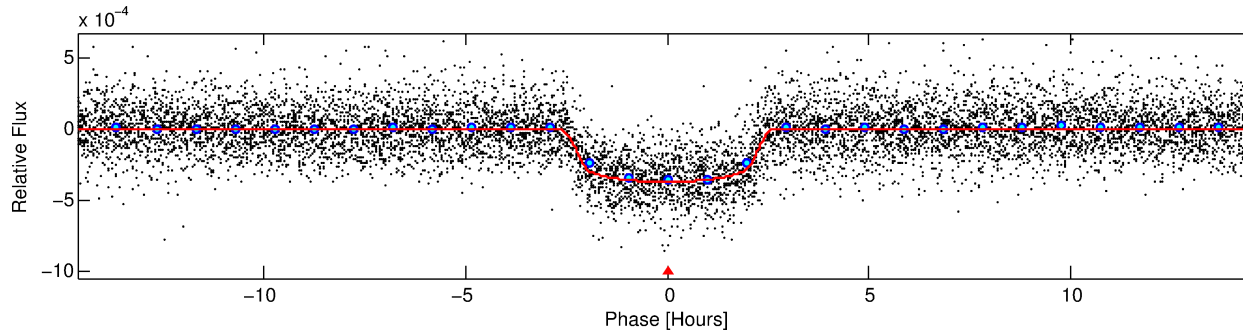
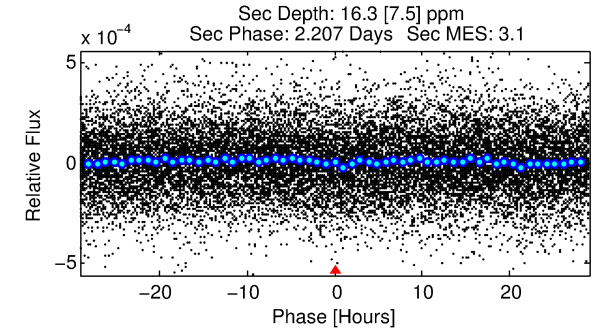
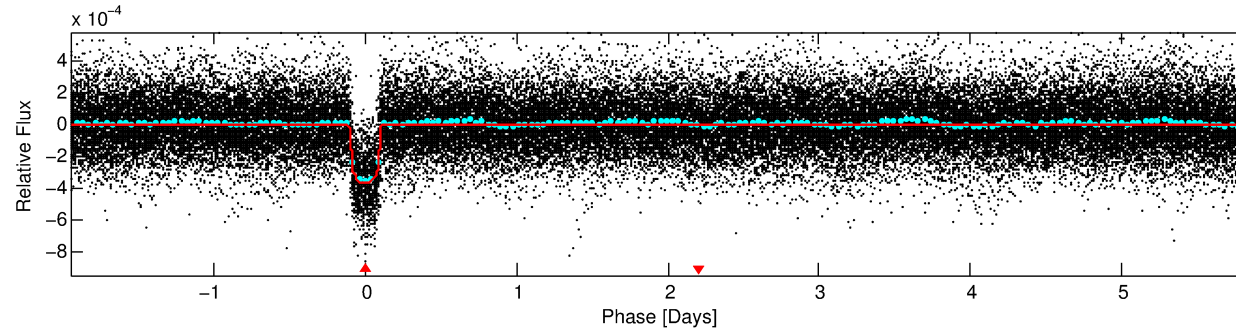
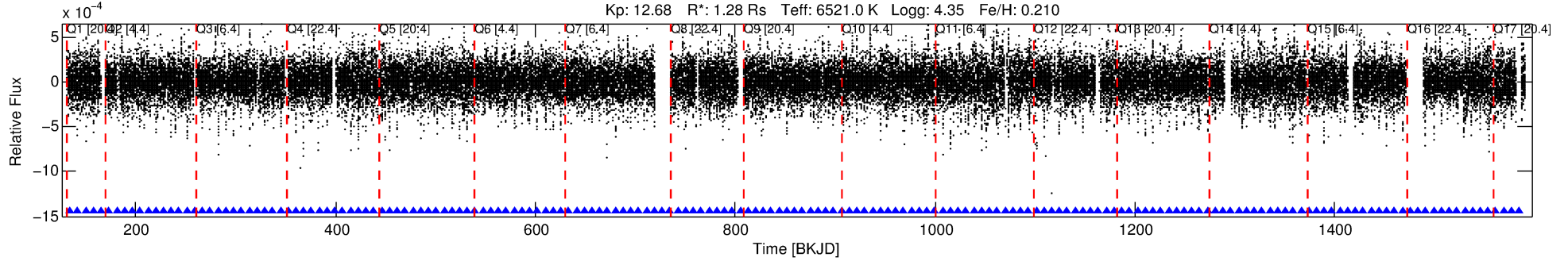
No Significant Match Found

DV One-Page Summary

KIC: 5039228 Candidate: 1 of 1 Period: 7.797 d

KOI: K01597.01 Corr: 0.980

Kp: 12.68 R*: 1.28 Rs Teff: 6521.0 K Logg: 4.35 Fe/H: 0.210



DV Fit Results:

Period = 7.79670 [0.00001] d
Epoch = 134.4198 [0.0008] BKJD
Rp/R* = 0.0197 [0.0008]
a/R* = 7.29 [1.55]
b = 0.83 [0.08]
Seff = 367.14 [96.46]
Teq = 1116 [73] K
Rp = 2.74 [0.56] Re
a = 0.0848 [0.0143] AU
Ag = 8.59 [4.53] [1.67σ]
Teffp = 2954 [350] K [5.14σ]

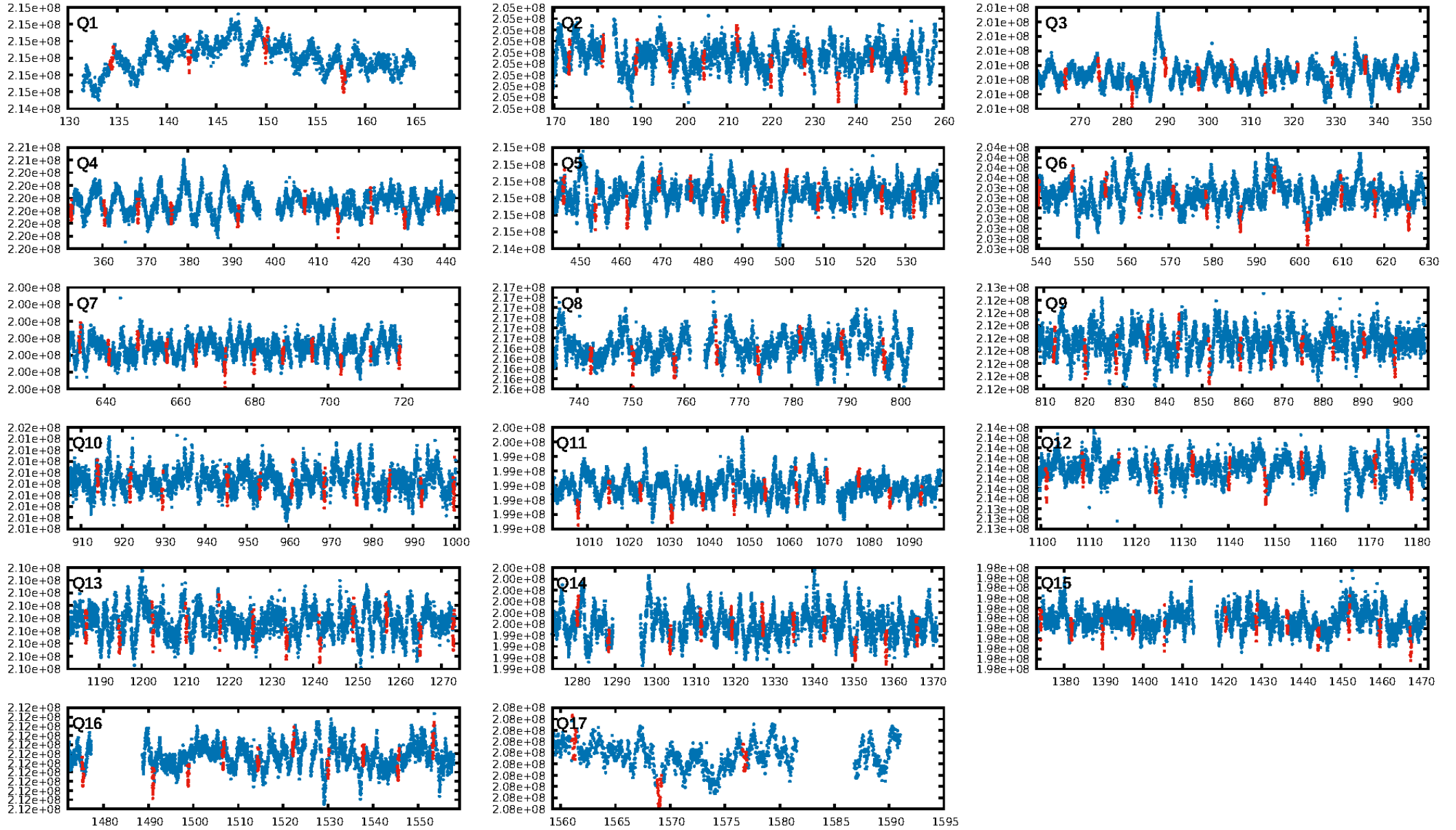
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [164/164]
GhostDiagnostic-chr: 5.144
Centroid-sig: 0.0%
Centroid-so: 0.374 arcsec [2.46σ]
OotOffset-rm: 11.878 arcsec [6.47σ]
KicOffset-rm: 0.222 arcsec [1.50σ]
OotOffset-st: 2/4/4/5 [15]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.94 [16/17]
DiffImageOverlap-fno: 1.00 [17/17]

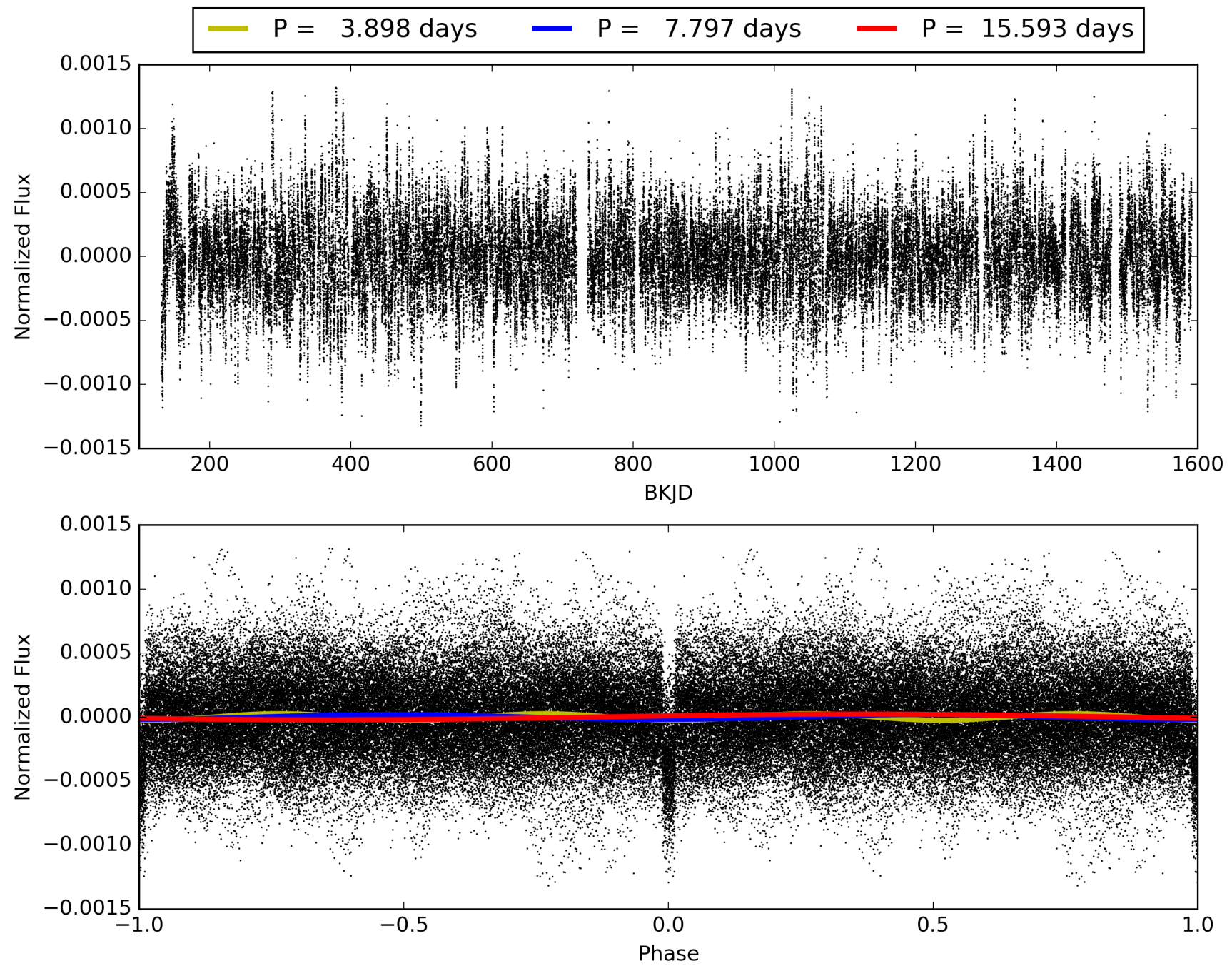
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 11:28:17 Z

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

TCE 005039228-01, PDC Light Curves

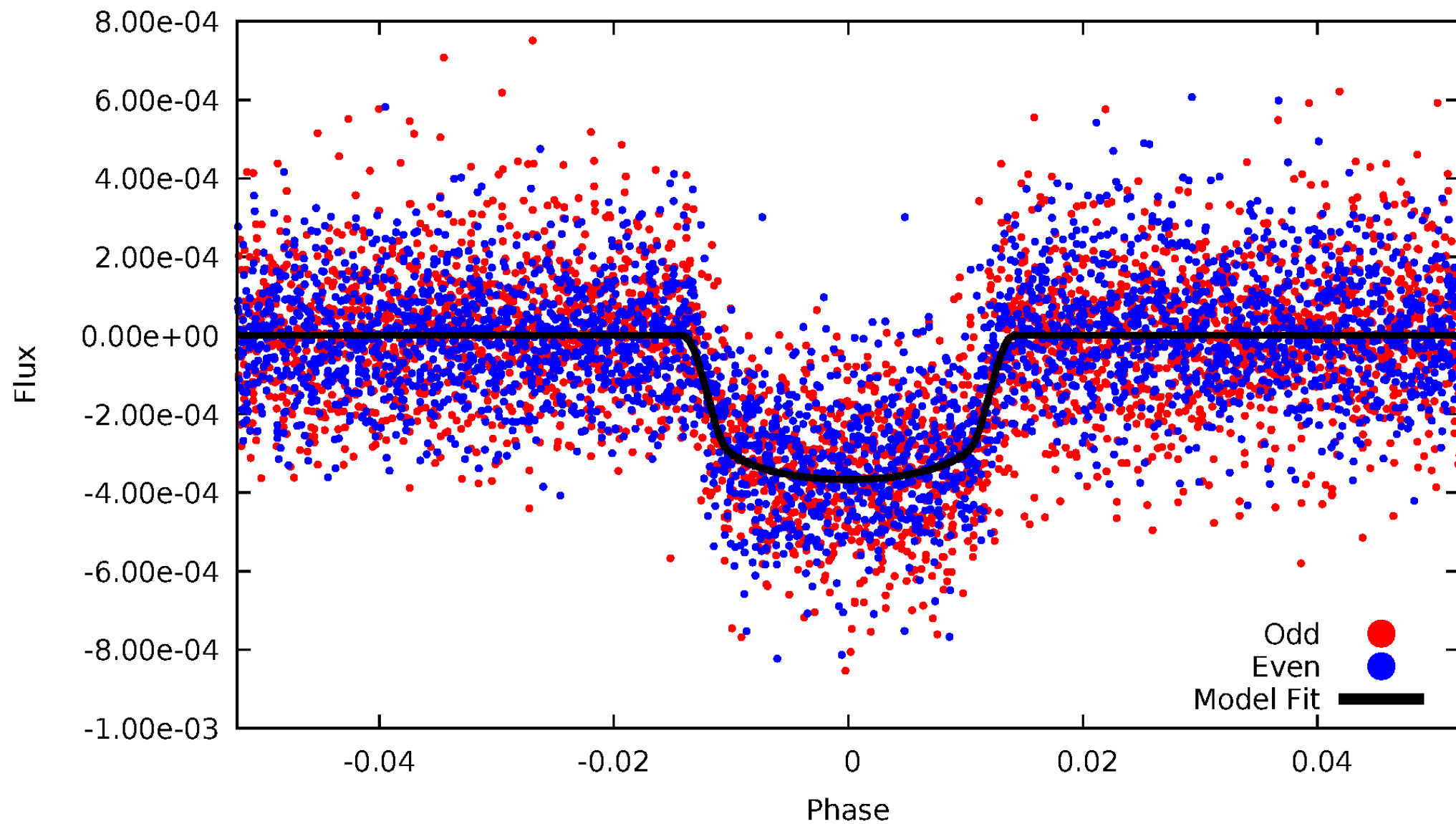


TCE 005039228-01



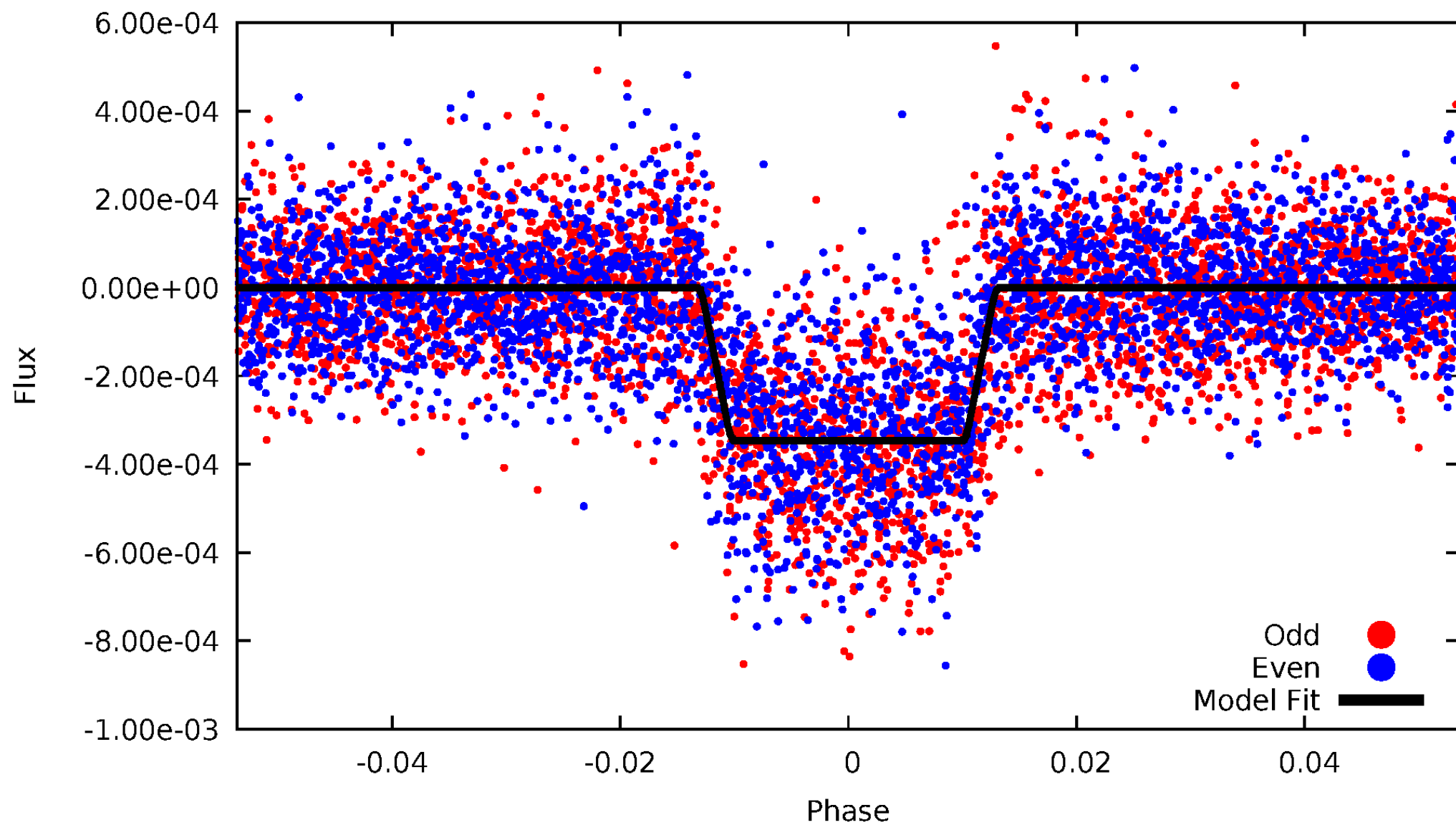
DV Odd/Even

TCE 005039228-01

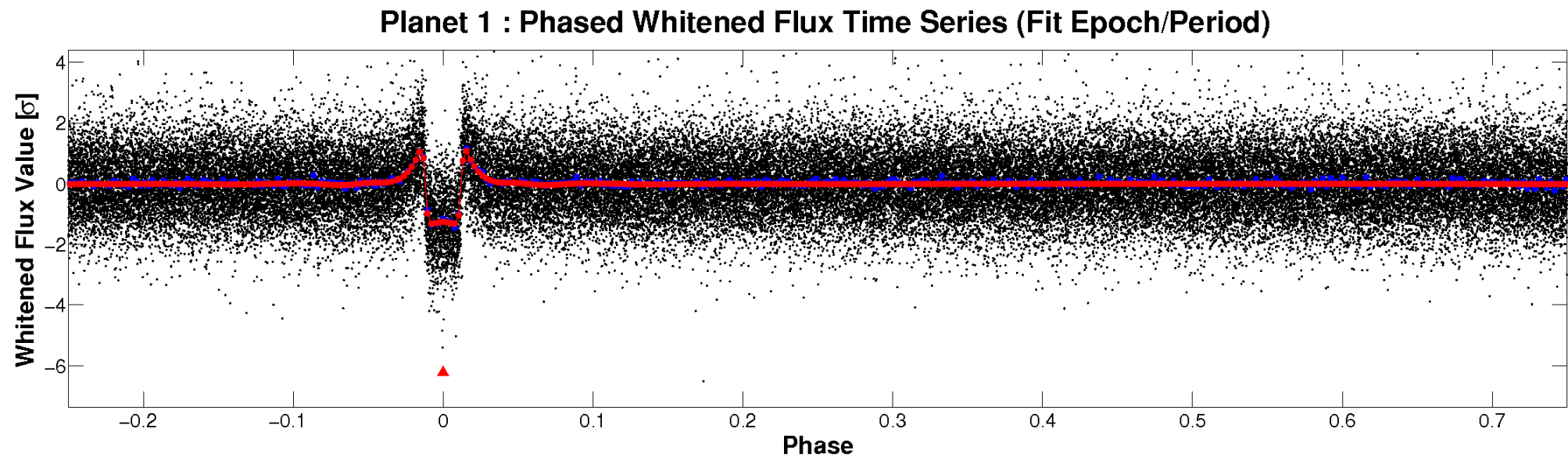
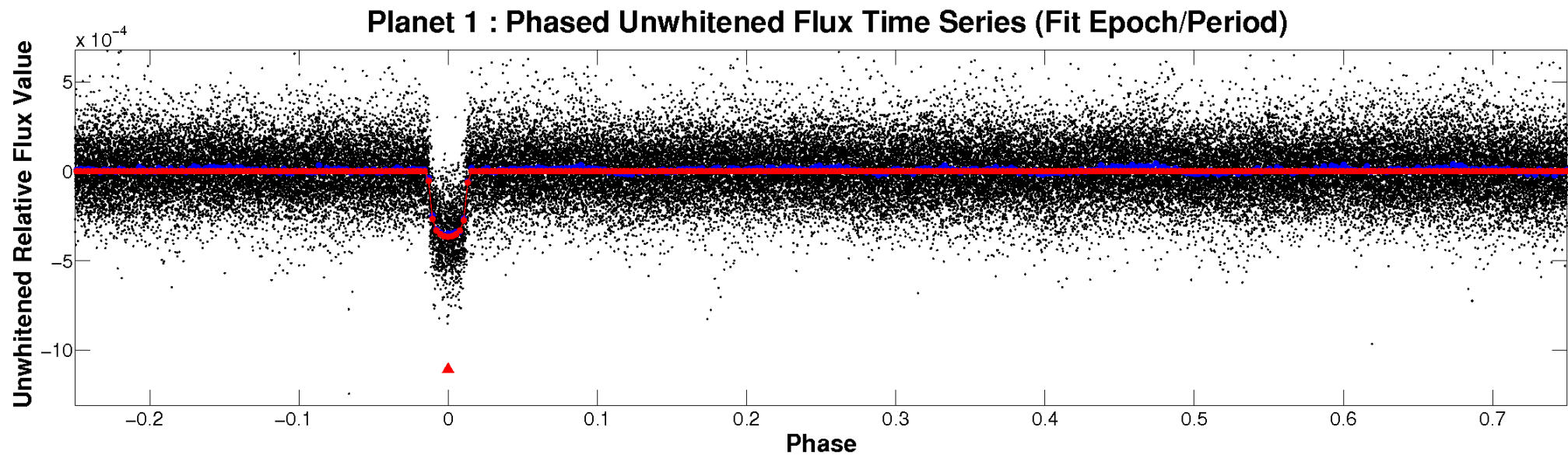


ALT Odd/Even

TCE 005039228-01

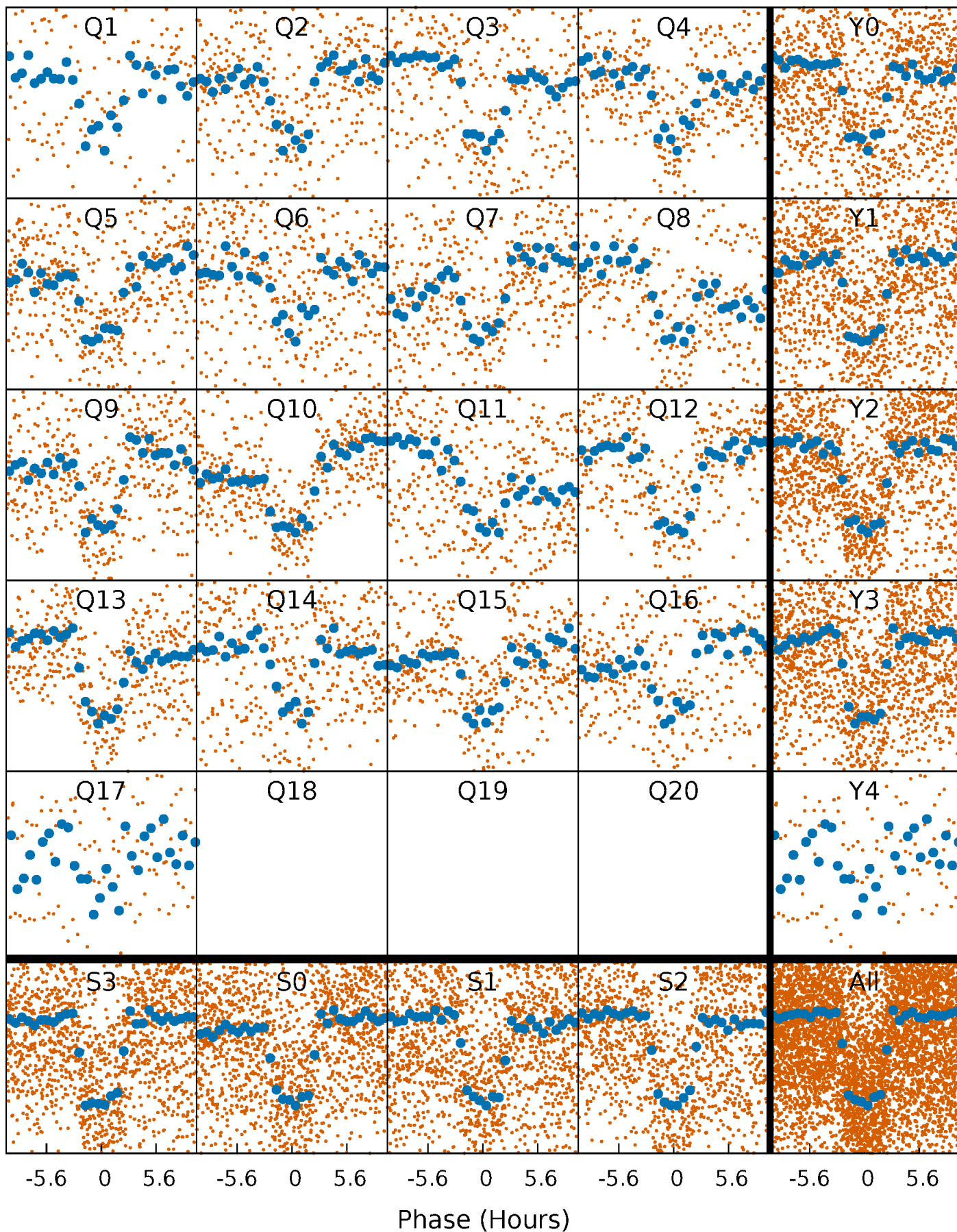


Non-Whitened Vs. Whitened Light Curve



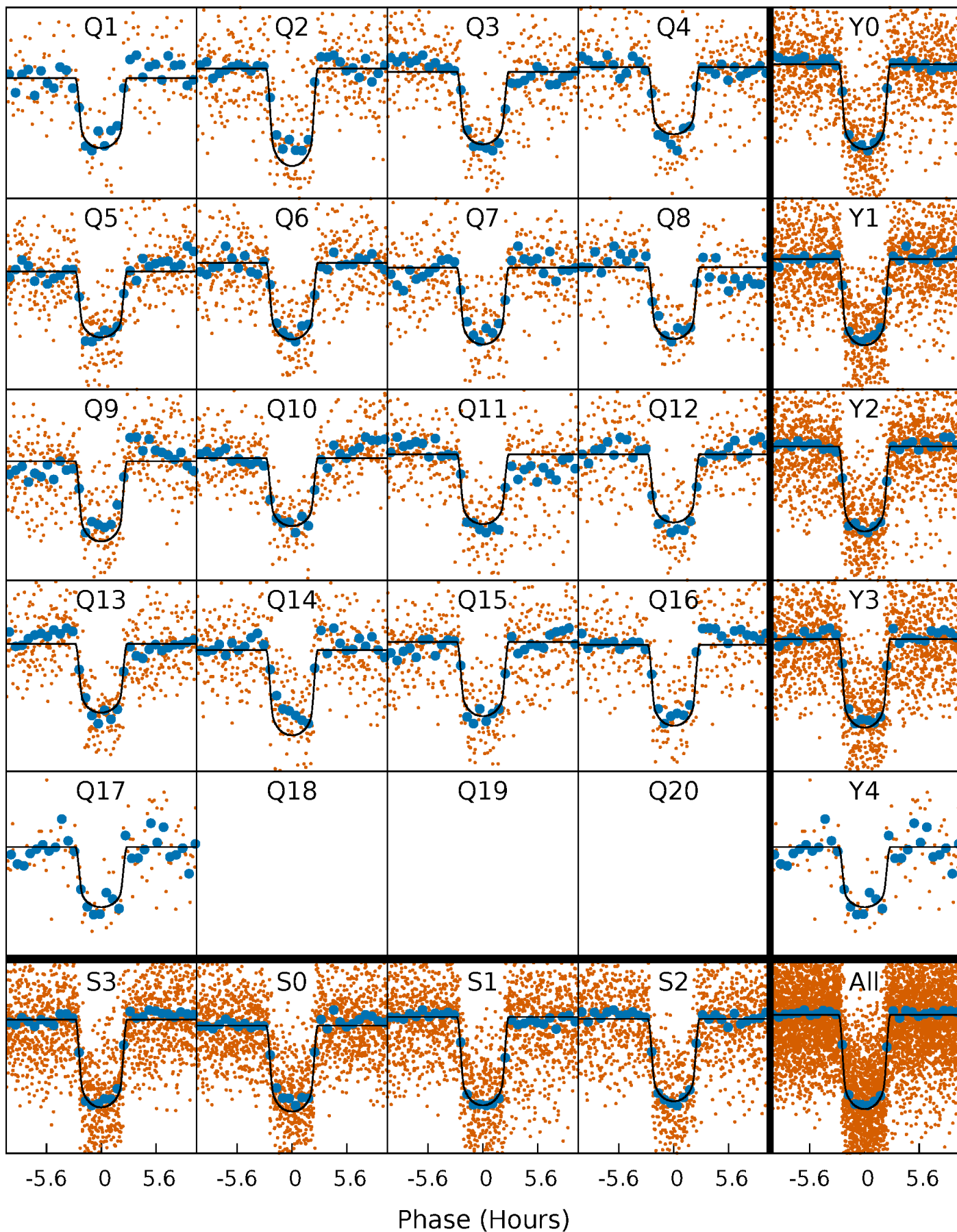
PDC Quarter-Phased Transit Curves

TCE 005039228-01 P= 7.796696 Days $T_0=134.419775$ (BKJD)



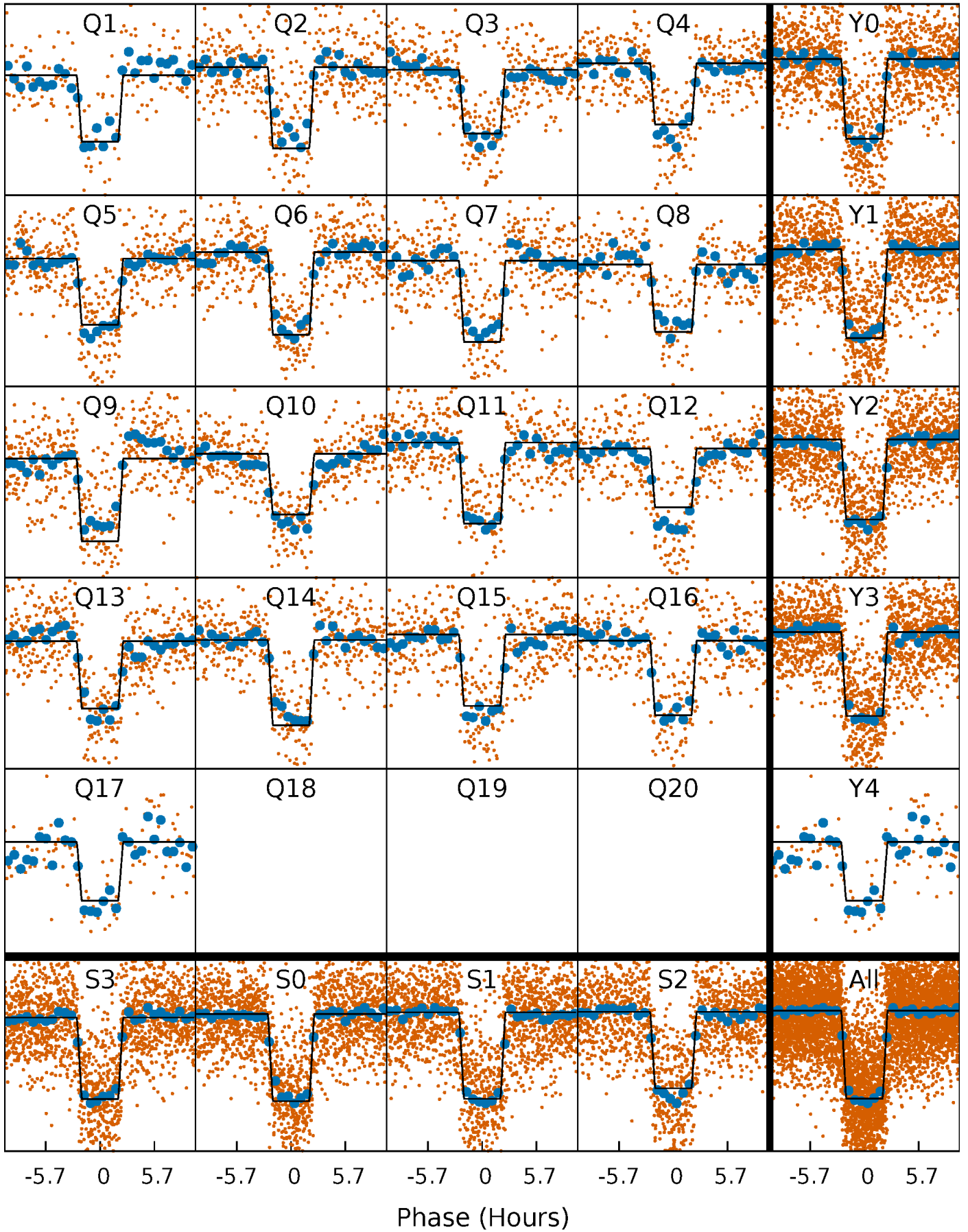
DV Quarter-Phased Transit Curves

TCE 005039228-01 P= 7.796696 Days $T_0=134.419775$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

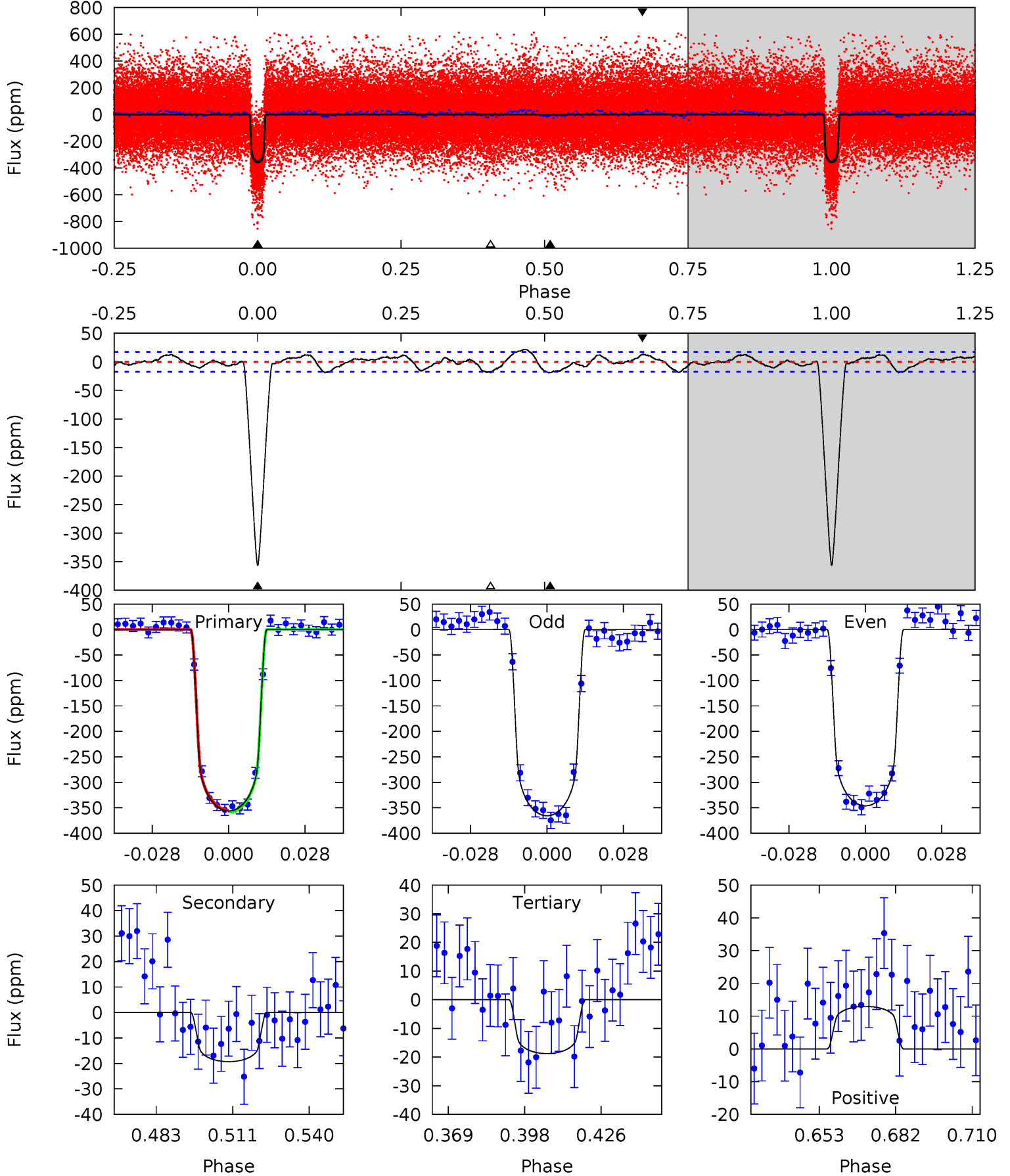
TCE 005039228-01 P= 7.796694 Days $T_0=134.420624$ (BKJD)



DV Model-Shift Uniqueness Test

005039228-01, P = 7.796696 Days, E = 126.623079 Days

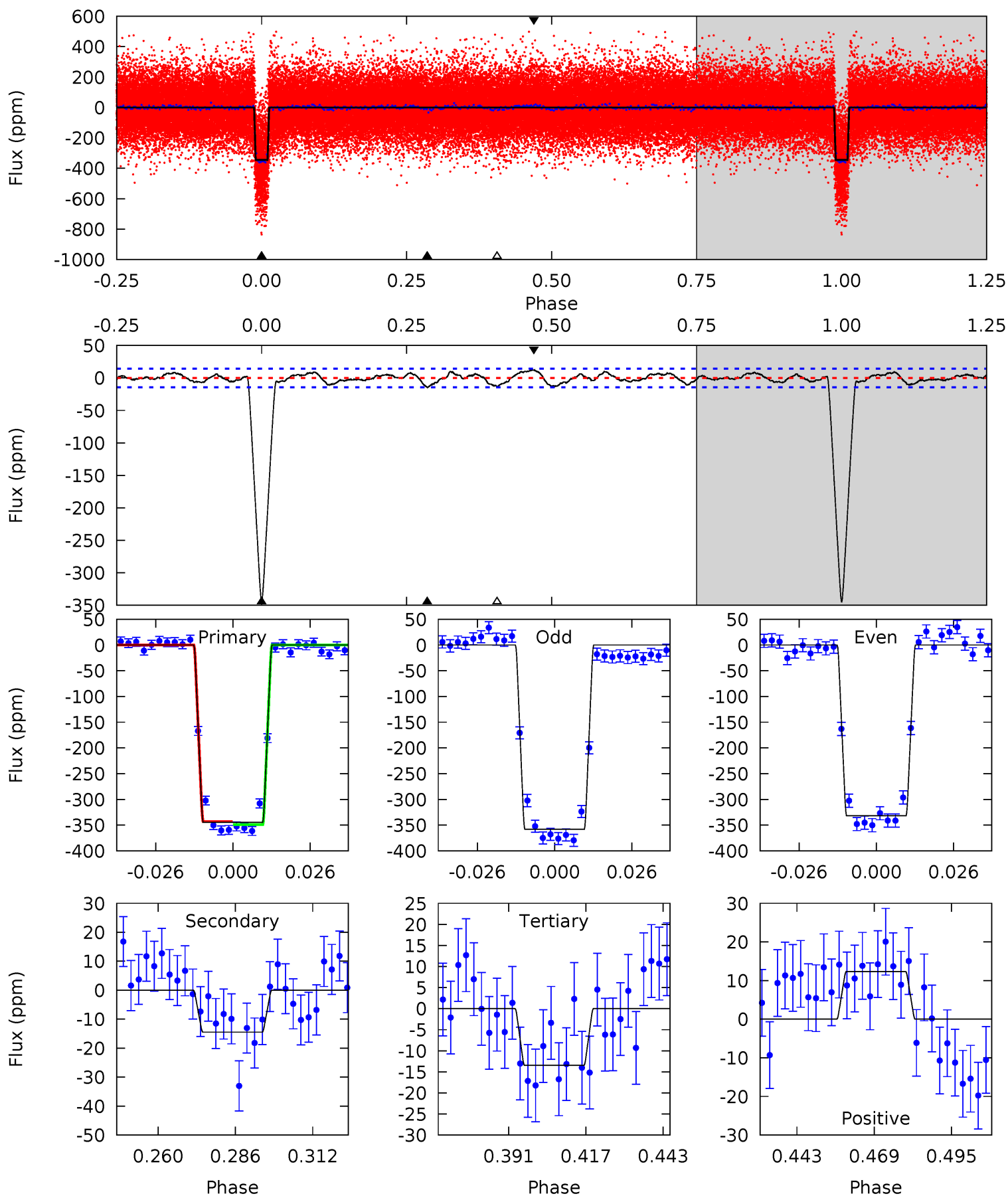
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
99.1	5.37	5.23	3.61	4.82	2.19	2.36	93.9	95.5	0.14	1.76	2.70	1.00	0.06	0.39



Alt Model-Shift Uniqueness Test

005039228-01, P = 7.796694 Days, E = 126.623930 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
116.2	4.87	4.53	4.15	4.84	2.23	1.86	111.7	112.1	0.34	0.73	4.37	1.04	0.03	0.98



Stellar Parameters For KIC 005039228

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6521^{+117}_{-143}	$4.352^{+0.025}_{-0.136}$	$0.210^{+0.150}_{-0.150}$	$1.276^{+0.255}_{-0.068}$	$1.334^{+0.095}_{-0.086}$	$0.905^{+0.120}_{-0.356}$
	+2%/-2%	+1%/-3%	+71%/-71%	+20%/-5%	+7%/-6%	+13%/-39%
Source	SPE3	SPE3	SPE3	DSEP		

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

Secondary Eclipse Parameters for KIC 005039228-01 / KOI 1597.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-19 ± 4	$2.81^{+0.28}_{-0.18}$	1583^{+62}_{-46}	3526^{+123}_{-143}	$9.362^{+2.507}_{-2.169}$
Alt.	-14 ± 3	$2.66^{+0.27}_{-0.19}$	1580^{+74}_{-47}	3411^{+134}_{-138}	$7.786^{+2.056}_{-2.035}$

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

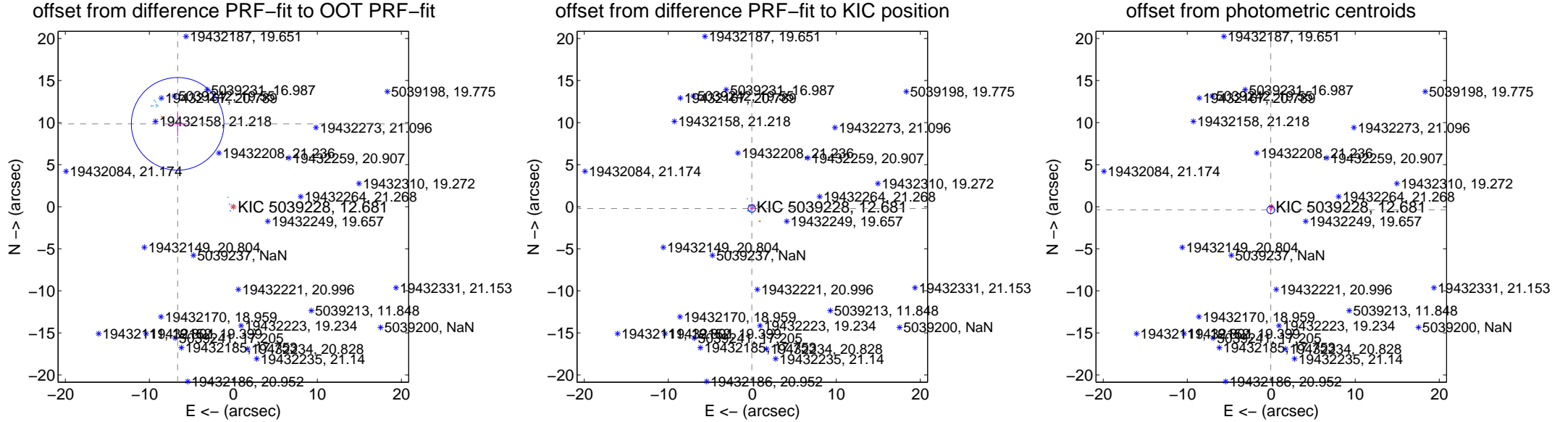
DV Centroid Data

Supplemental centroid analysis for 005039228-01. Kepler magnitude: 12.68. Transit SNR 55.85

There are 16 quarters with good PRF difference image offsets

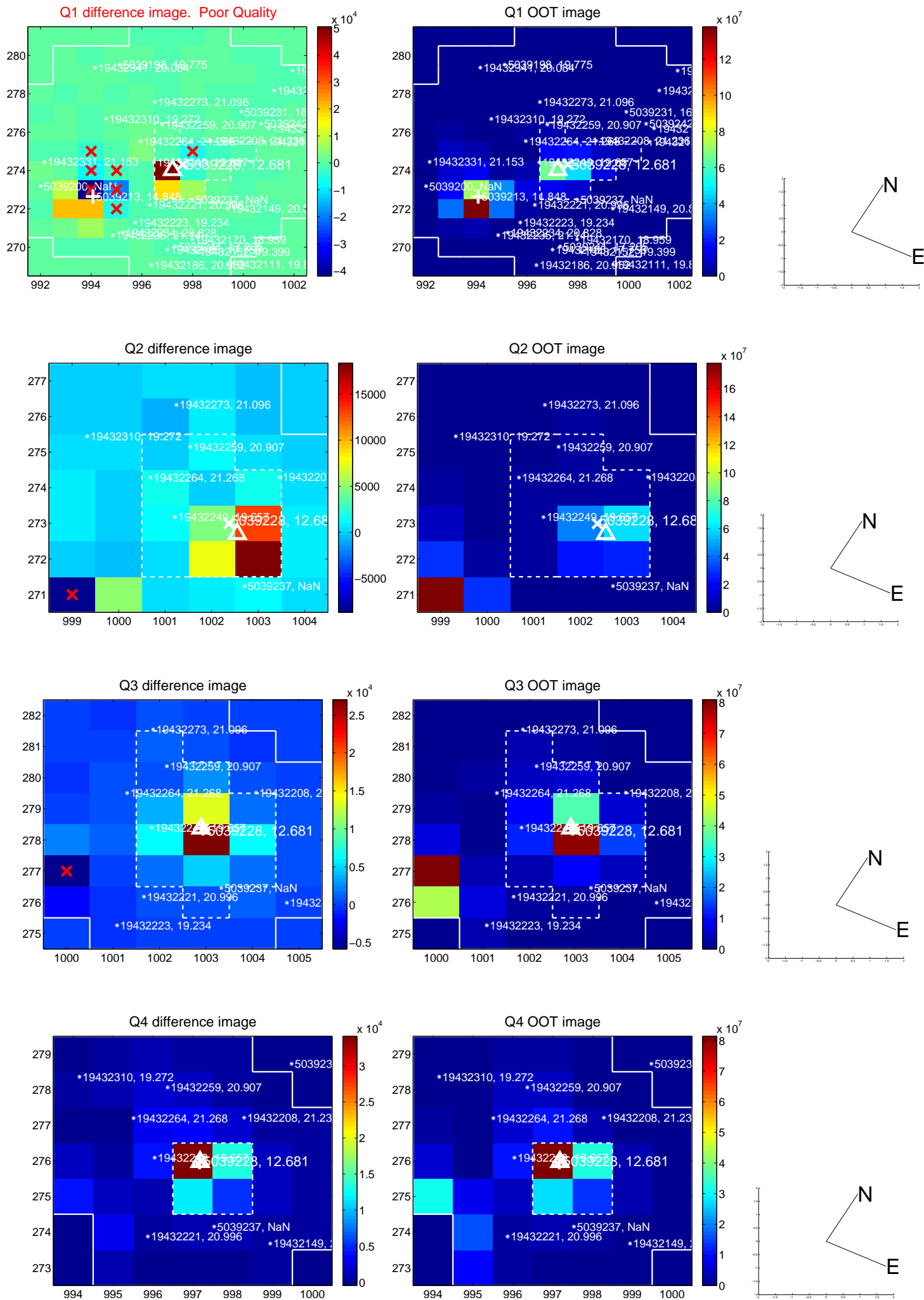
The OOT PRF centroid is offset from the target star catalog position by about 15.09 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	11.878 \pm 1.836	6.47	6.633 \pm 1.093	9.854 \pm 1.483
PRF-fit source offset from KIC position	0.222 \pm 0.148	1.50	0.056 \pm 0.129	-0.215 \pm 0.154
photometric centroid source offset	0.37 \pm 0.15	2.46	0.05 \pm 0.12	-0.37 \pm 0.15

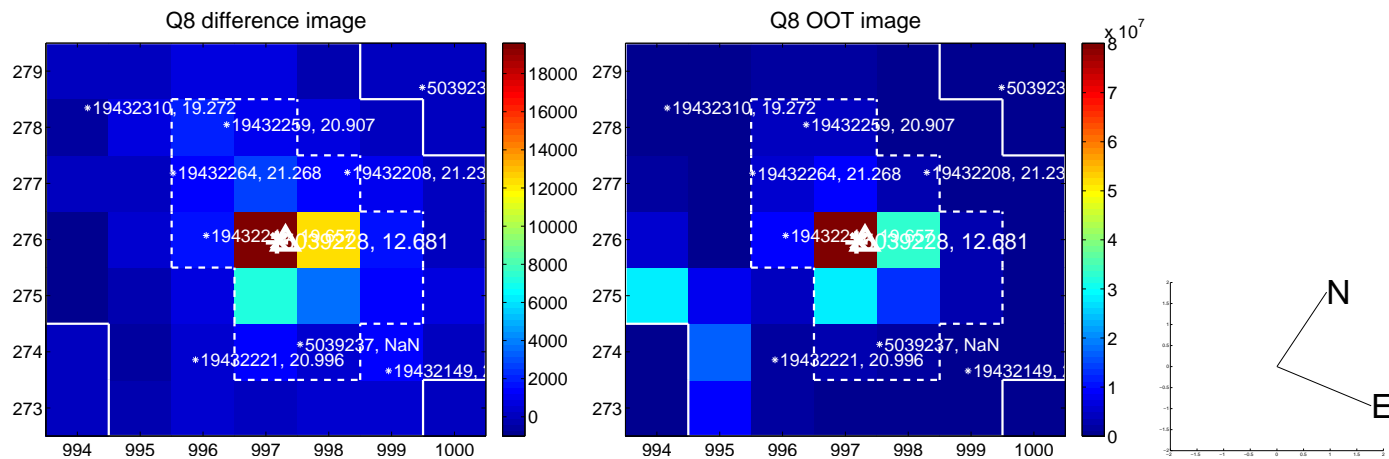
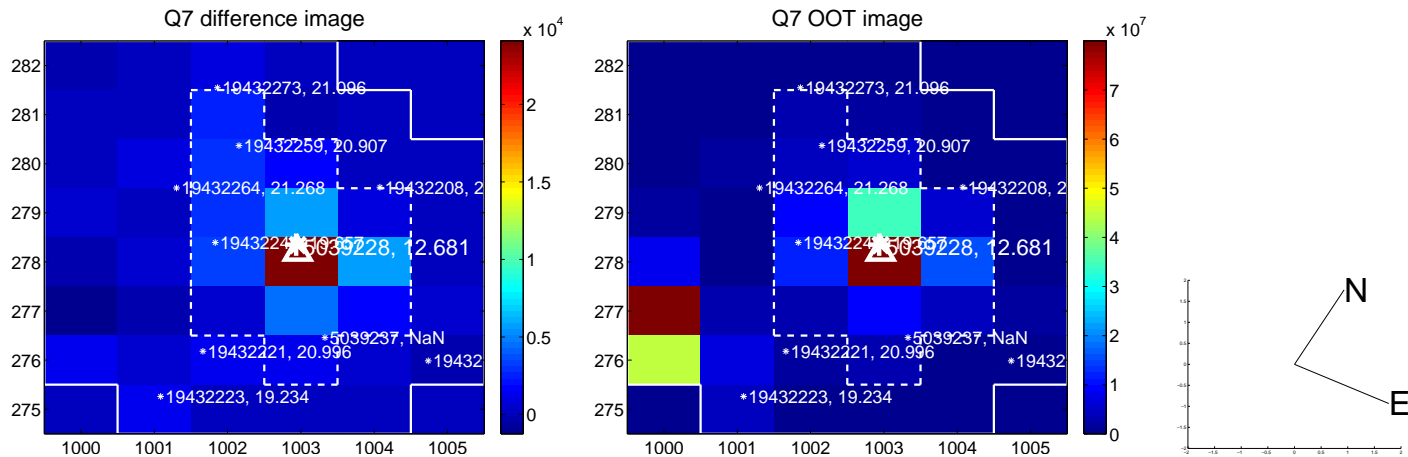
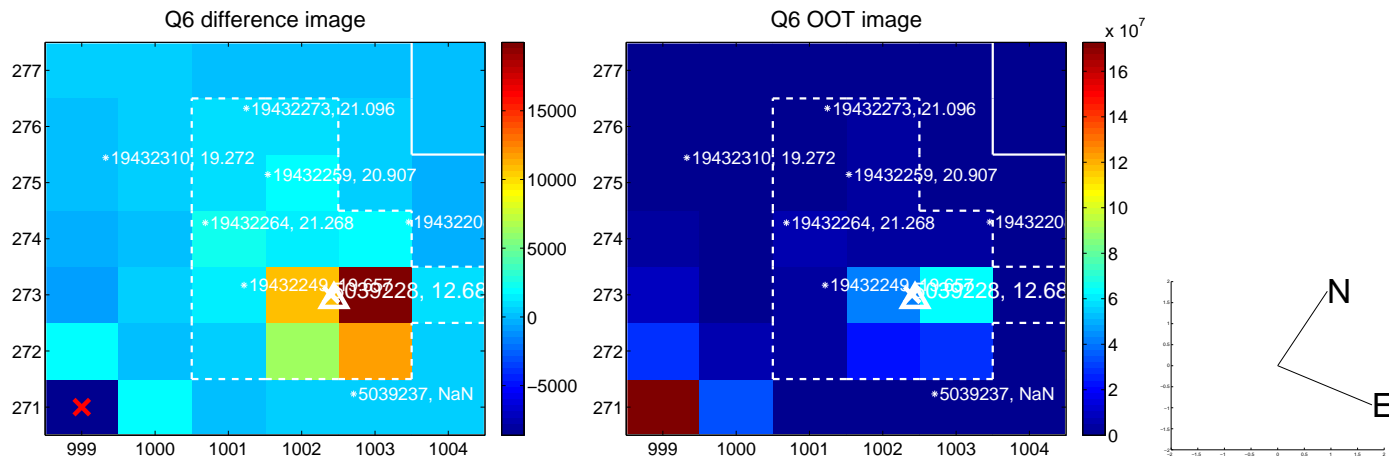
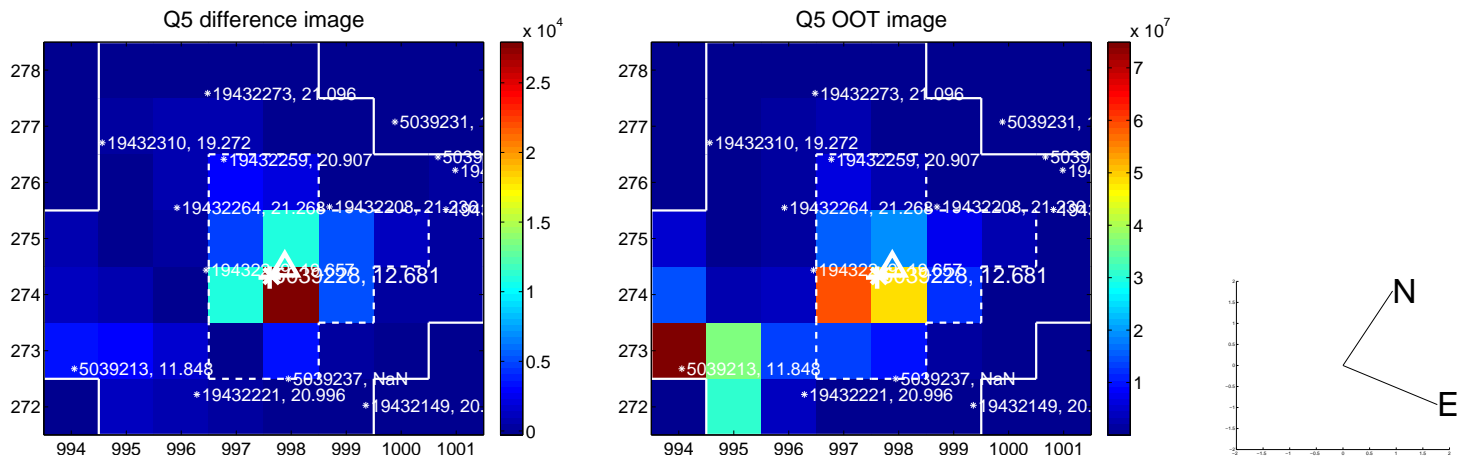


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

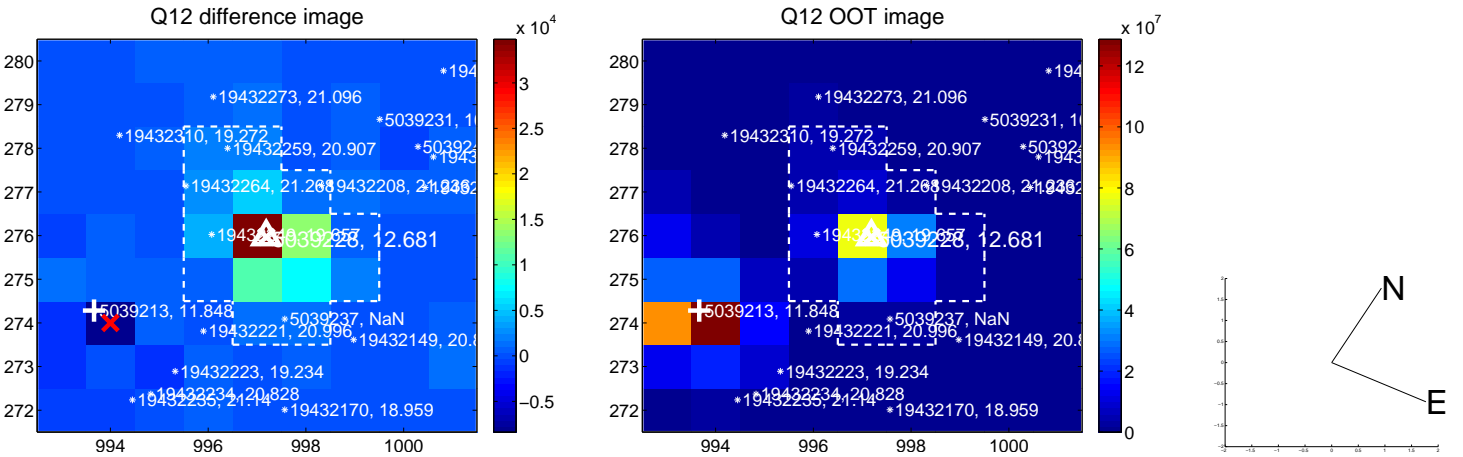
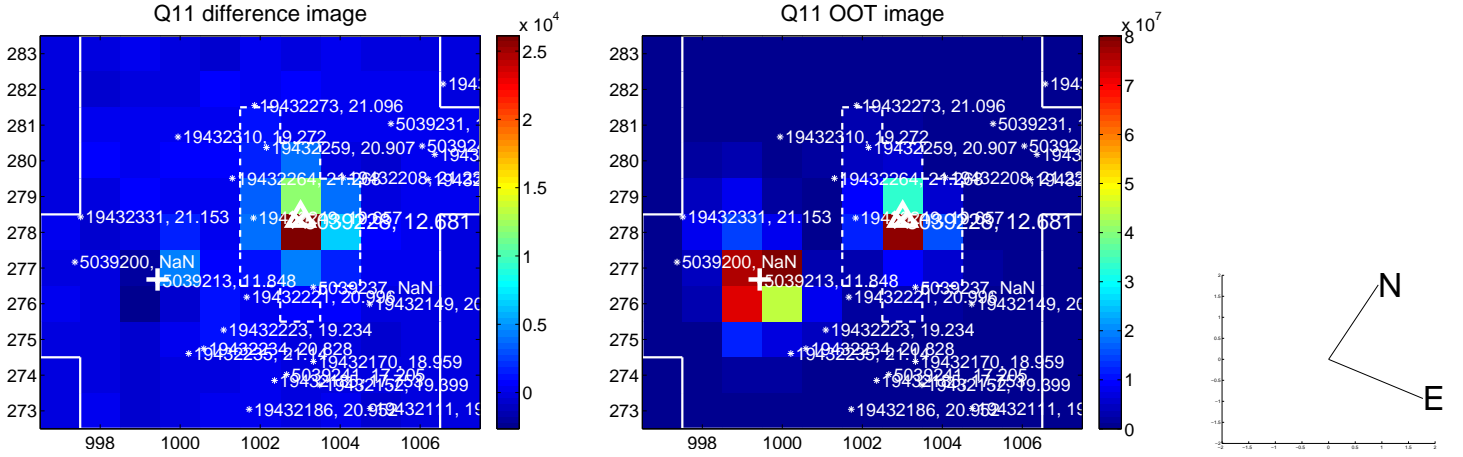
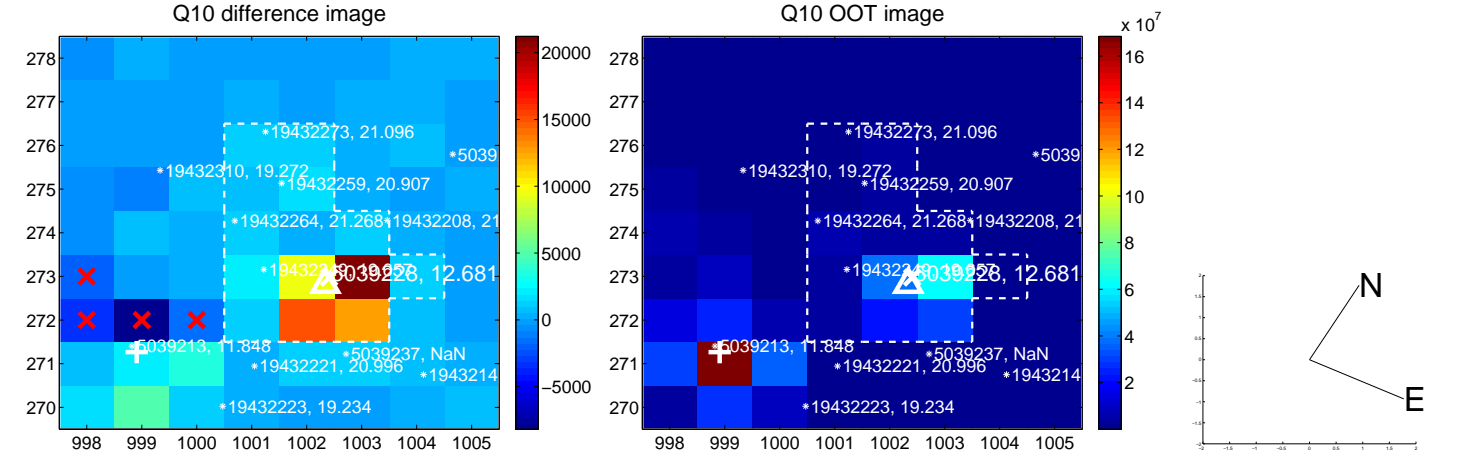
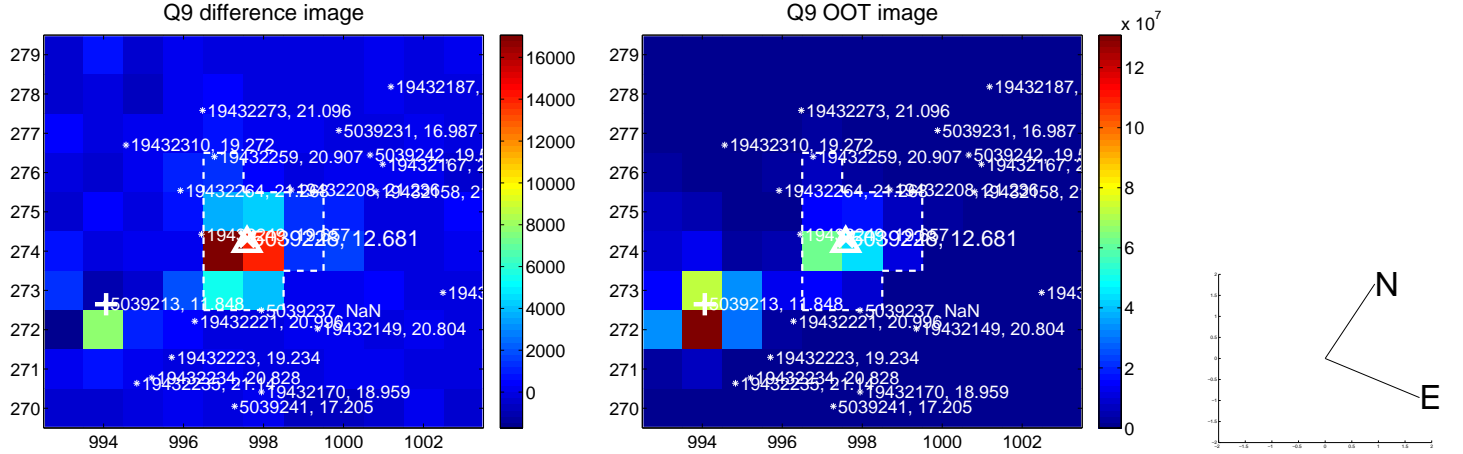
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



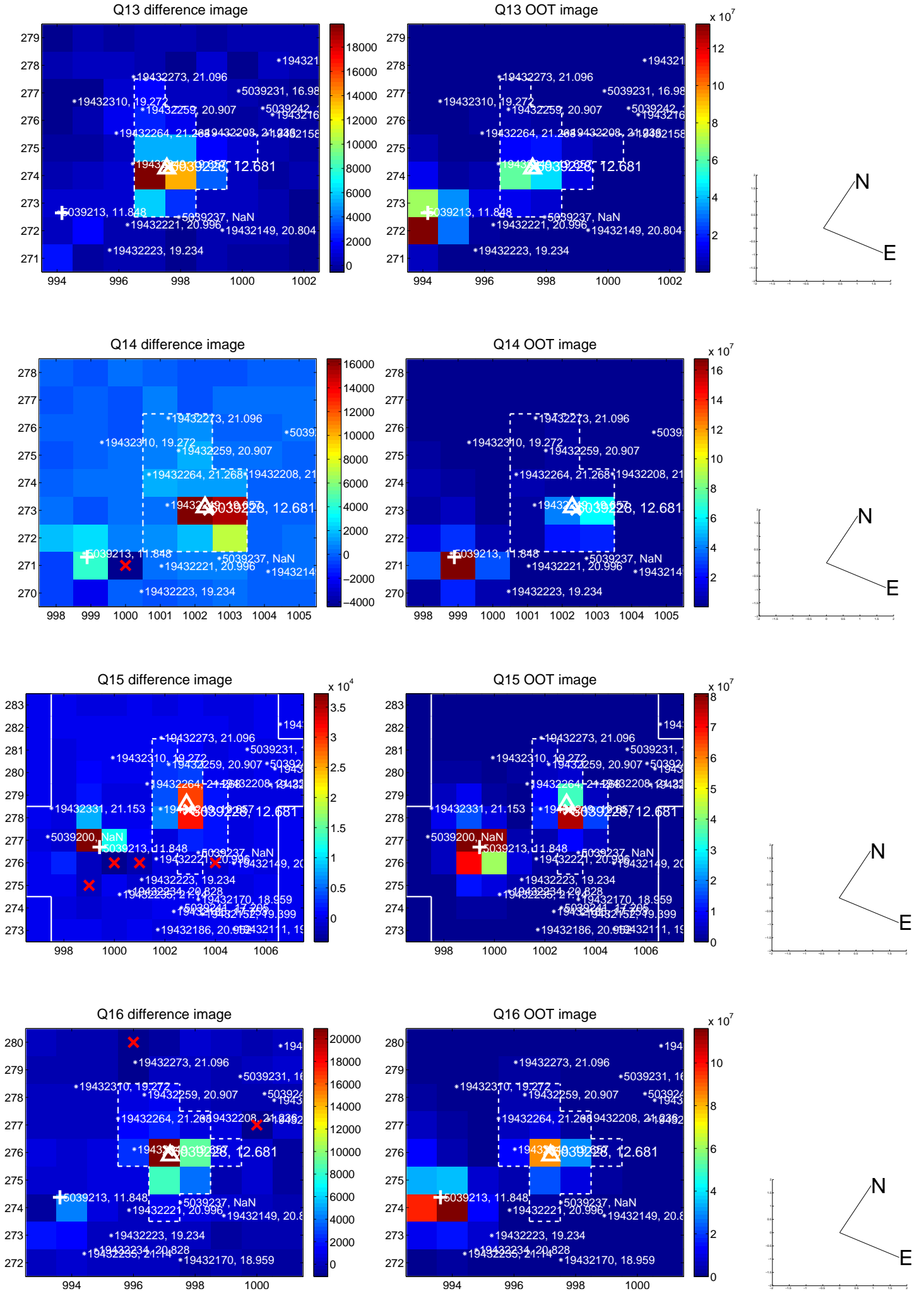
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



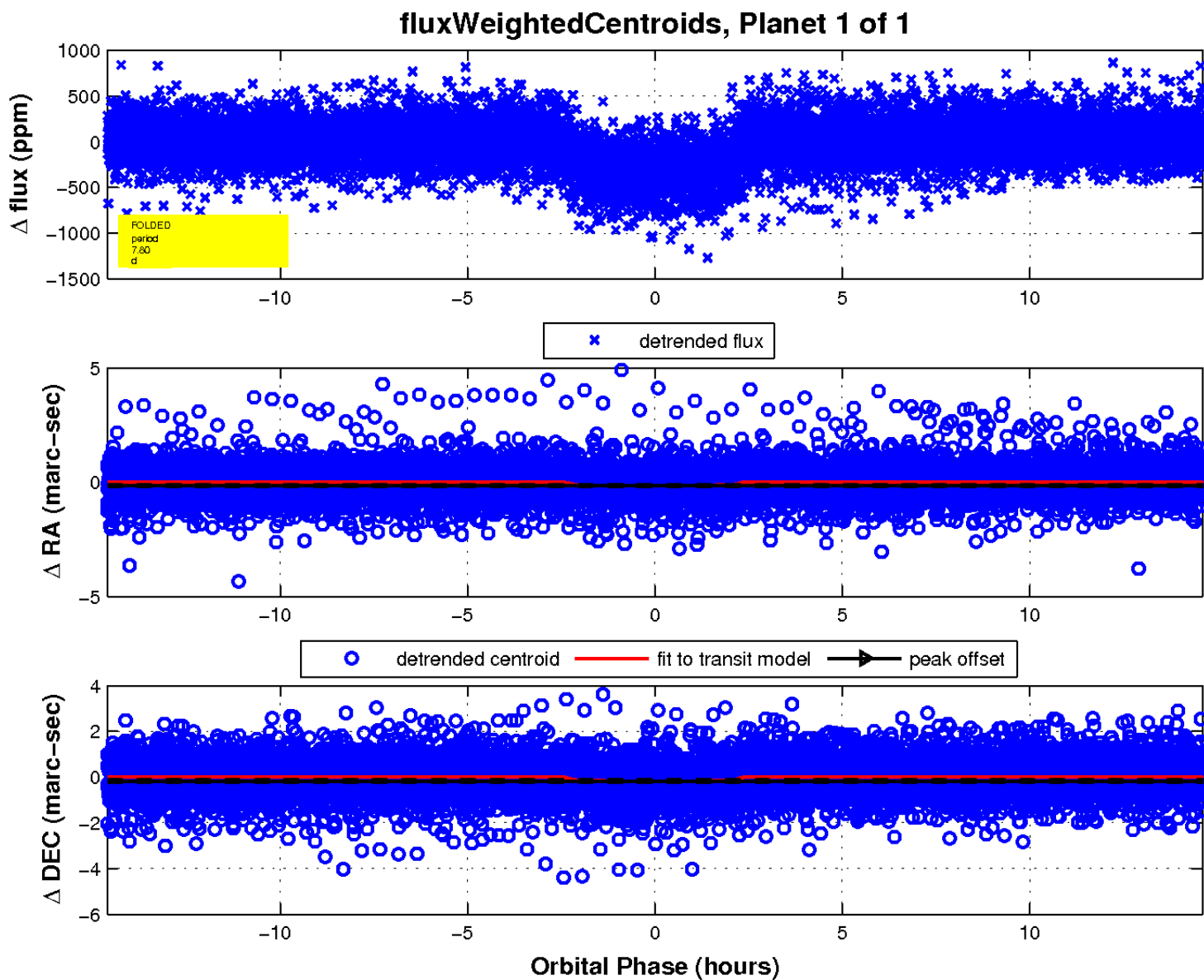
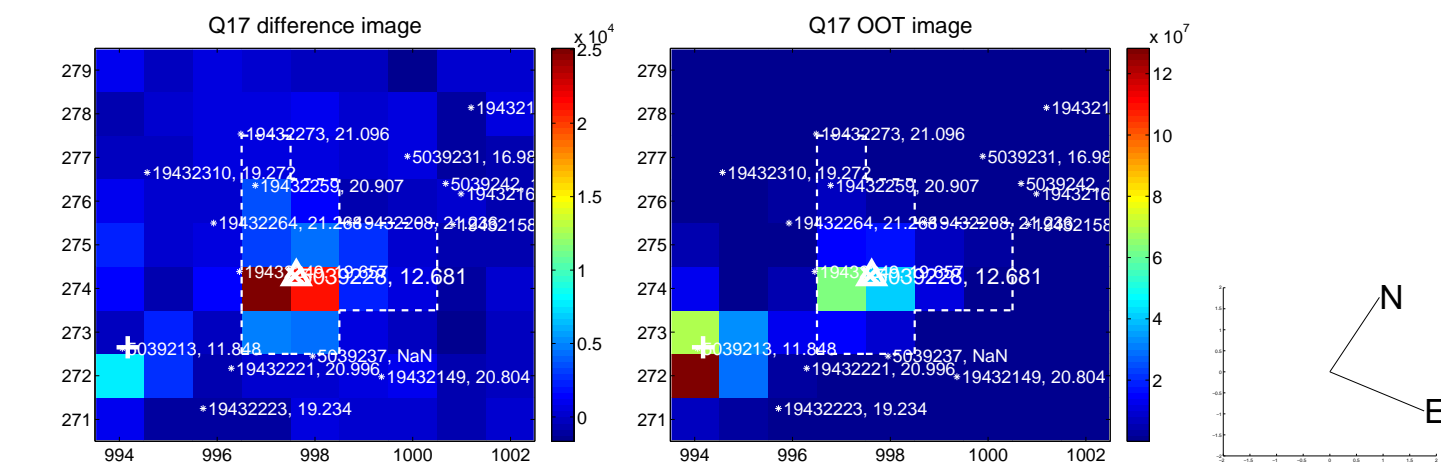
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

