

KIC 010189557

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})
010189557-01	OBS	2427.01	2.931061	131.922999	181.6	2.486	12.9	14.2	0.79	5485	1.26	391.37

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010189557-01	OBS	FP	0.00	0	0	1	0	CENT_RESOLVED_OFFSET

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 010189557-01

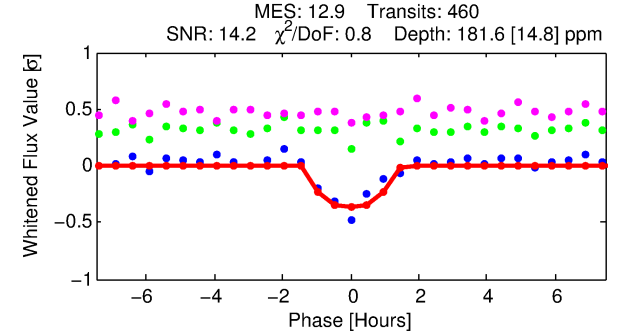
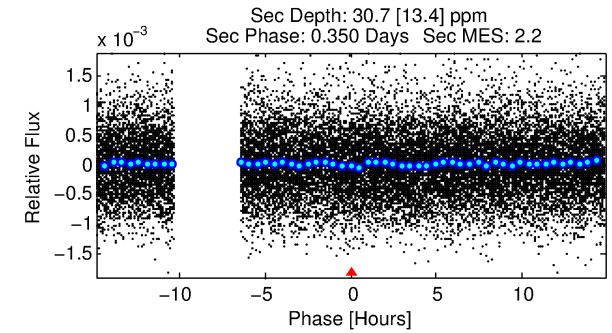
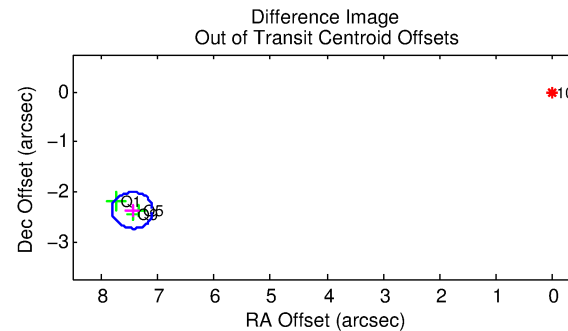
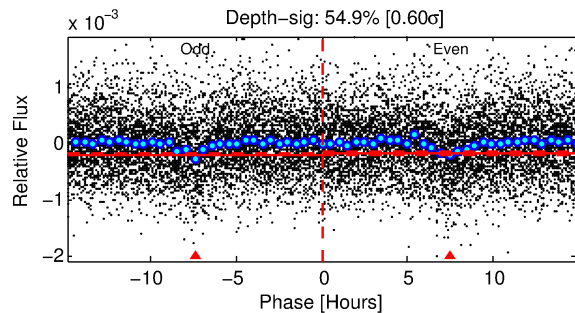
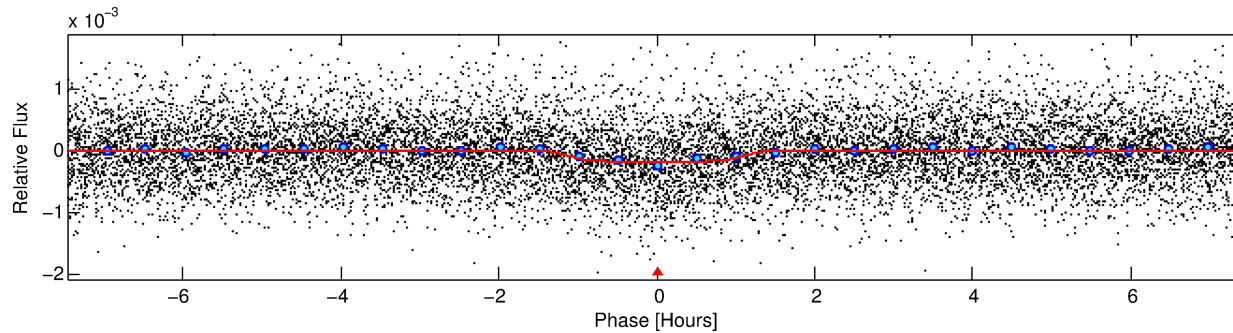
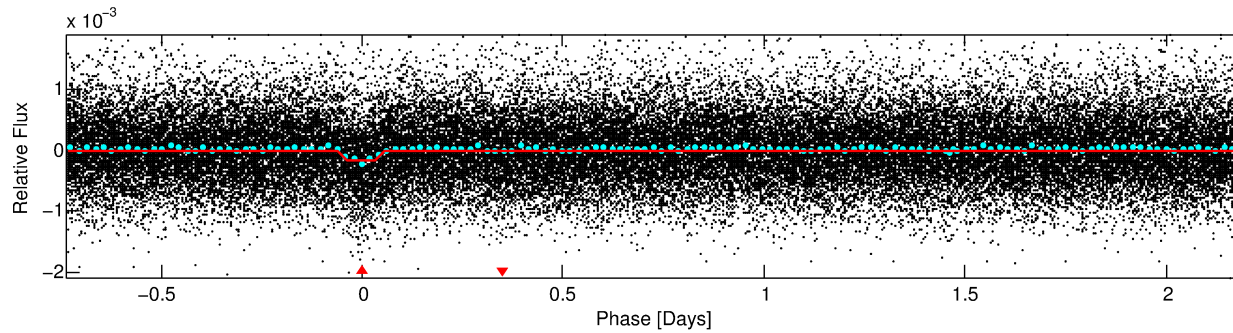
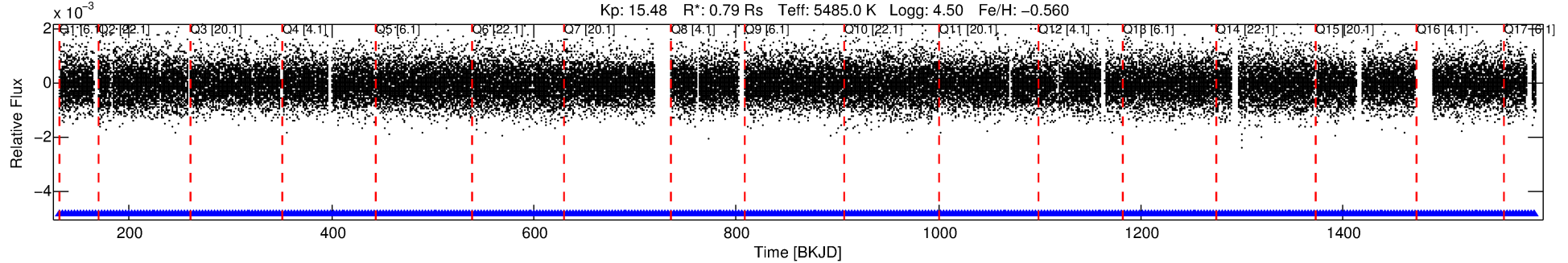
No Significant Match Found

DV One-Page Summary

KIC: 10189557 Candidate: 1 of 1 Period: 2.931 d

KOI: K02427.01 Corr: 0.917

Kp: 15.48 R*: 0.79 Rs Teff: 5485.0 K Logg: 4.50 Fe/H: -0.560



DV Fit Results:

Period = 2.93106 [0.00001] d
Epoch = 131.9230 [0.0029] BKJD
Rp/R* = 0.0146 [0.0077]
a/R* = 4.43 [10.43]
b = 0.89 [0.57]
Seff = 391.37 [90.50]
Teq = 1134 [66] K
Rp = 1.26 [0.69] Re
a = 0.0359 [0.0048] AU
Ag = 13.80 [15.93] [0.80σ]
Teff = 3380 [966] K [2.32σ]

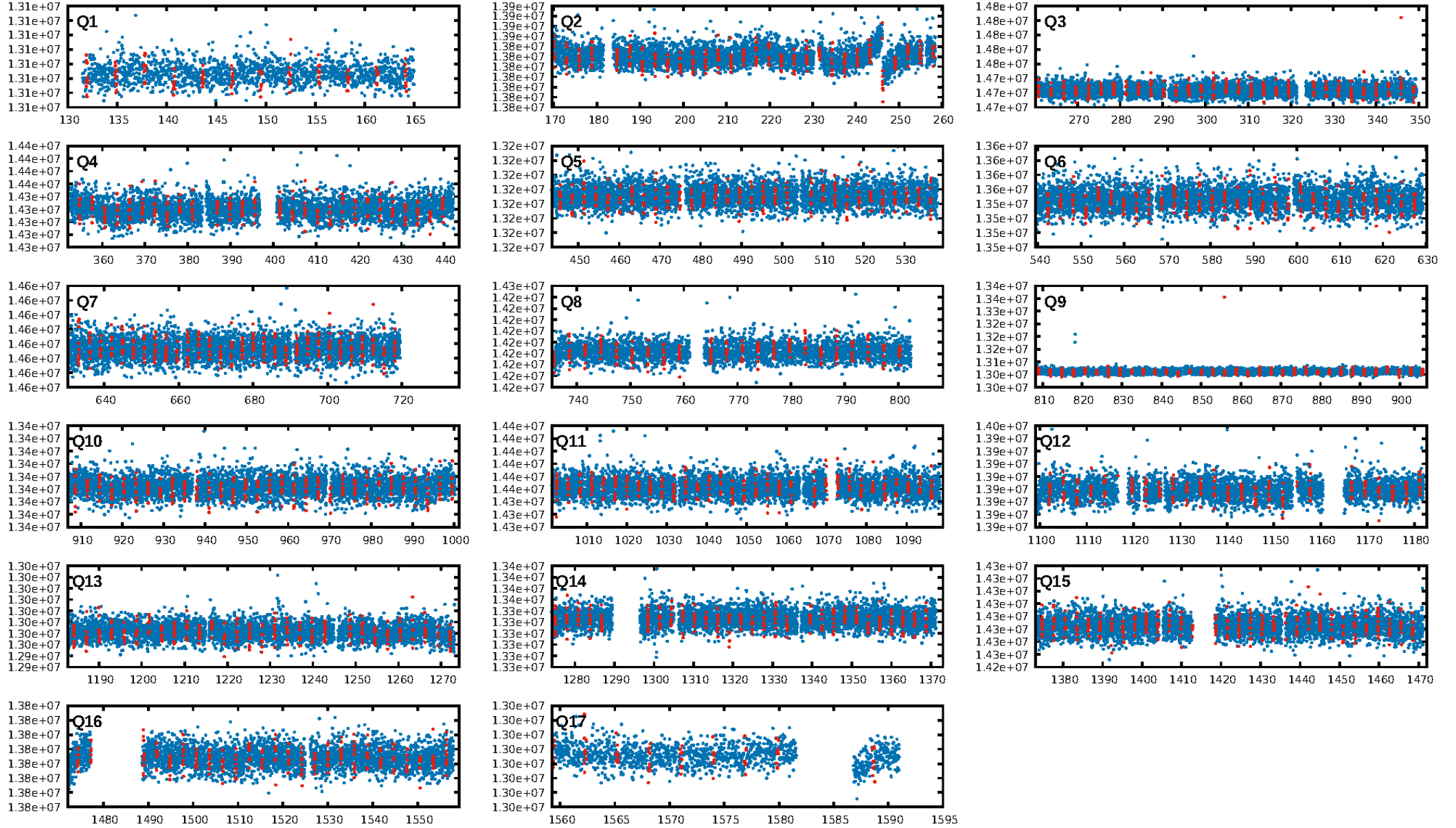
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGoF-sig: N/A
Bootstrap-pfa: 7.87e-38
RollingBand-fgt: 1.00 [439/439]
GhostDiagnostic-chr: -0.2745
Centroid-sig: 0.0%
Centroid-so: 20.301 arcsec [17.36σ]
OotOffset-rm: 7.808 arcsec [64.56σ]
KicOffset-rm: 7.788 arcsec [47.05σ]
OotOffset-st: 0/0/0/3 [3]
KicOffset-st: 0/0/0/3 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [17/17]

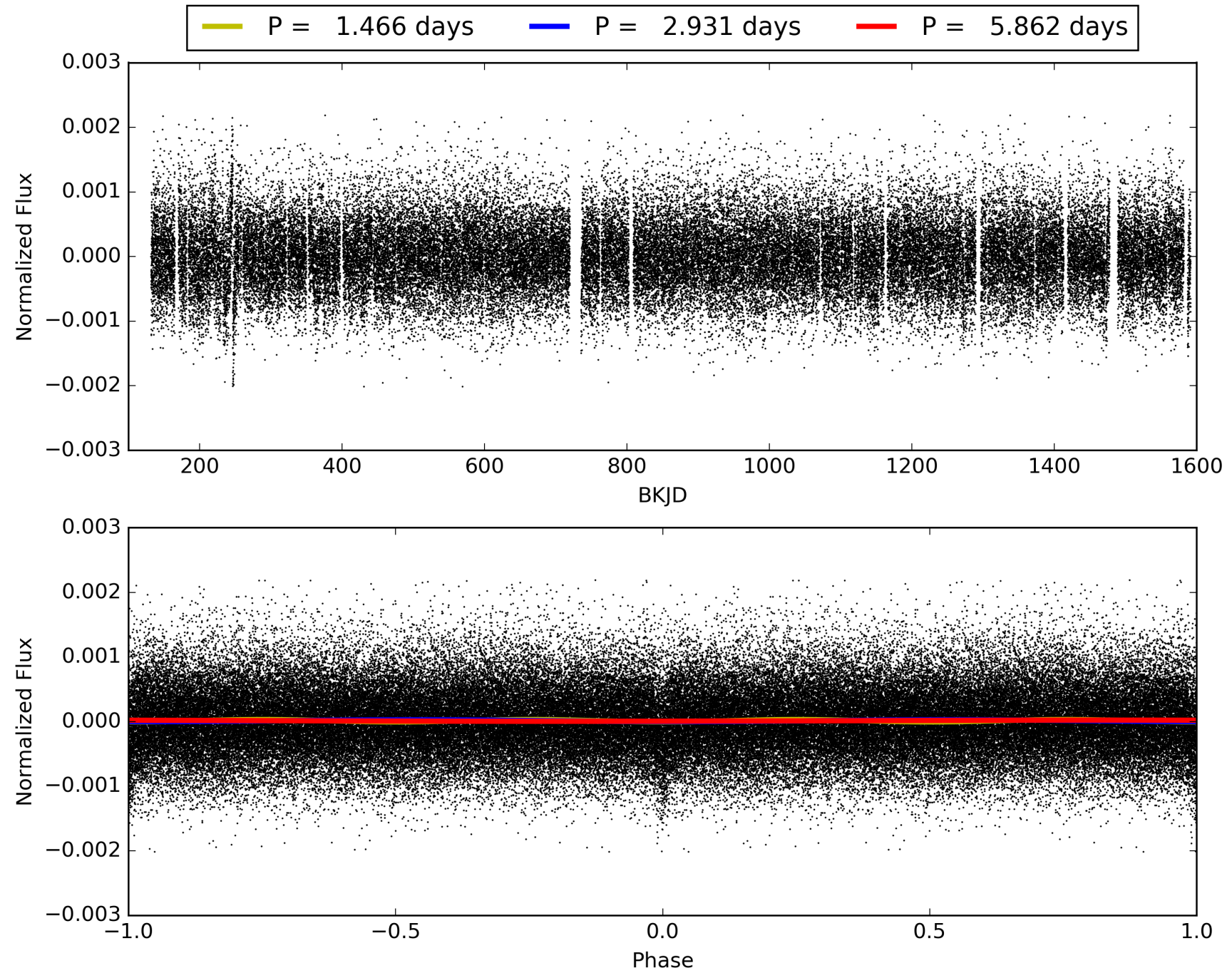
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 00:50:25 Z

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

TCE 010189557-01, PDC Light Curves

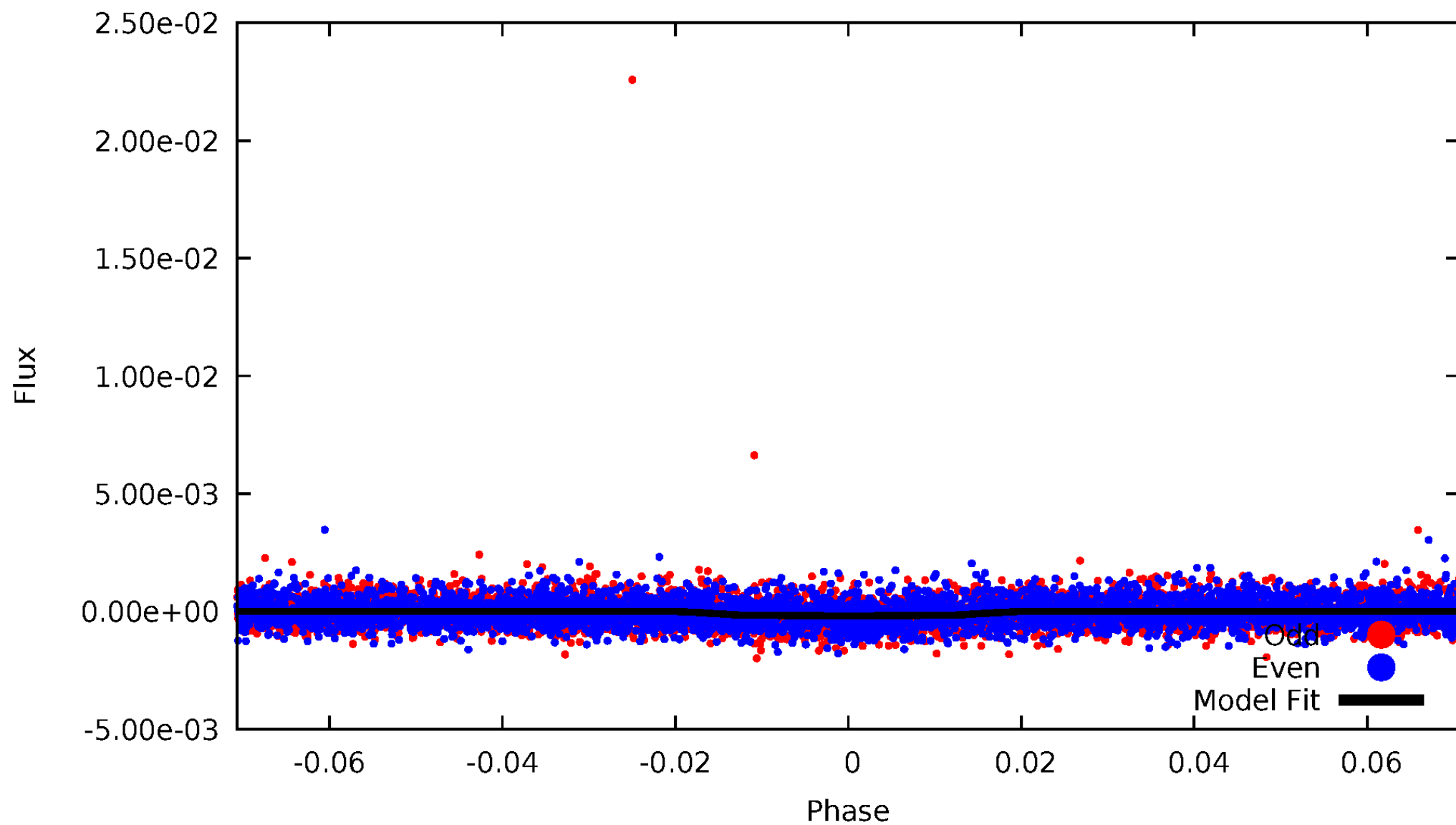


TCE 010189557-01



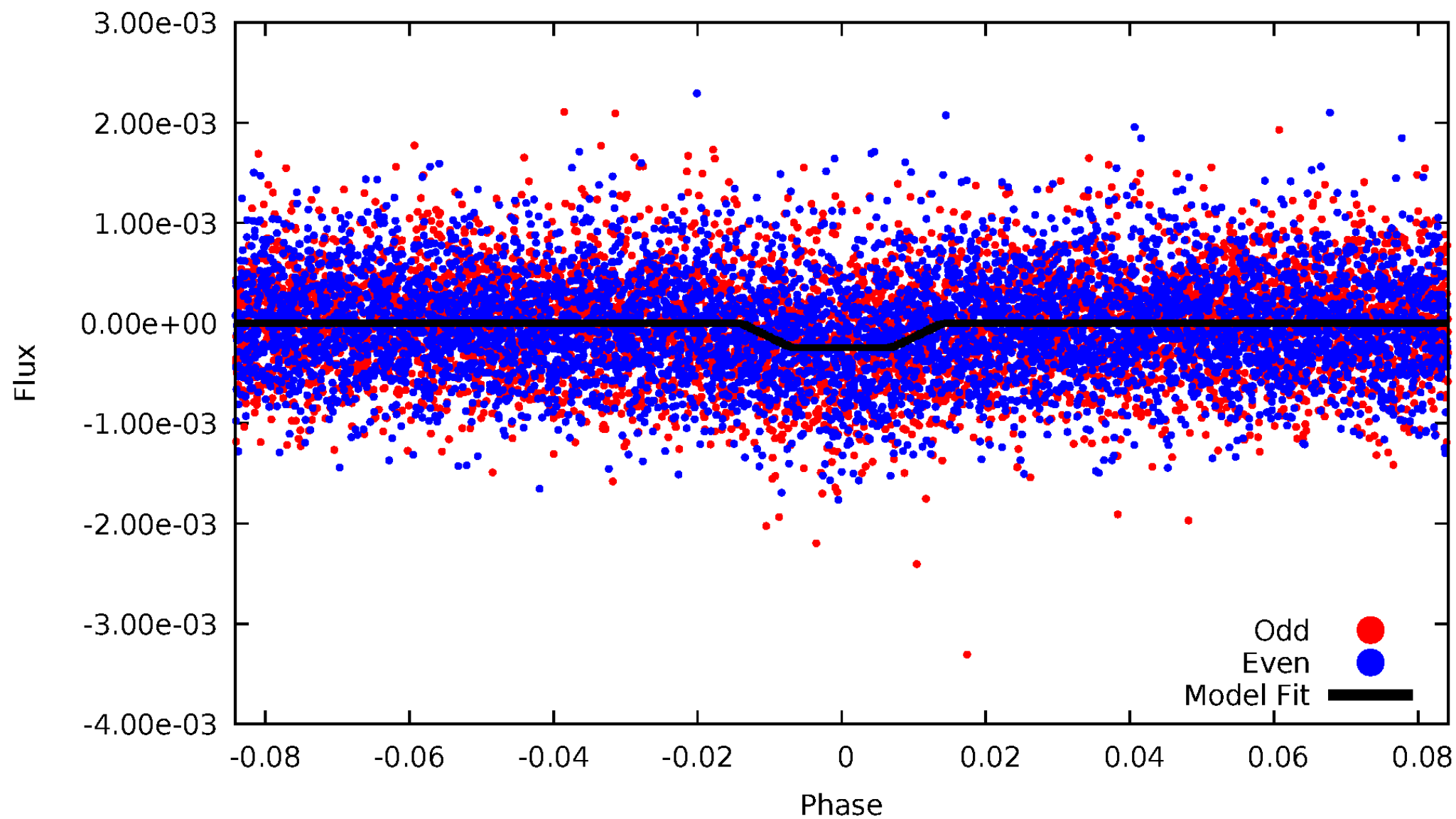
DV Odd/Even

TCE 010189557-01

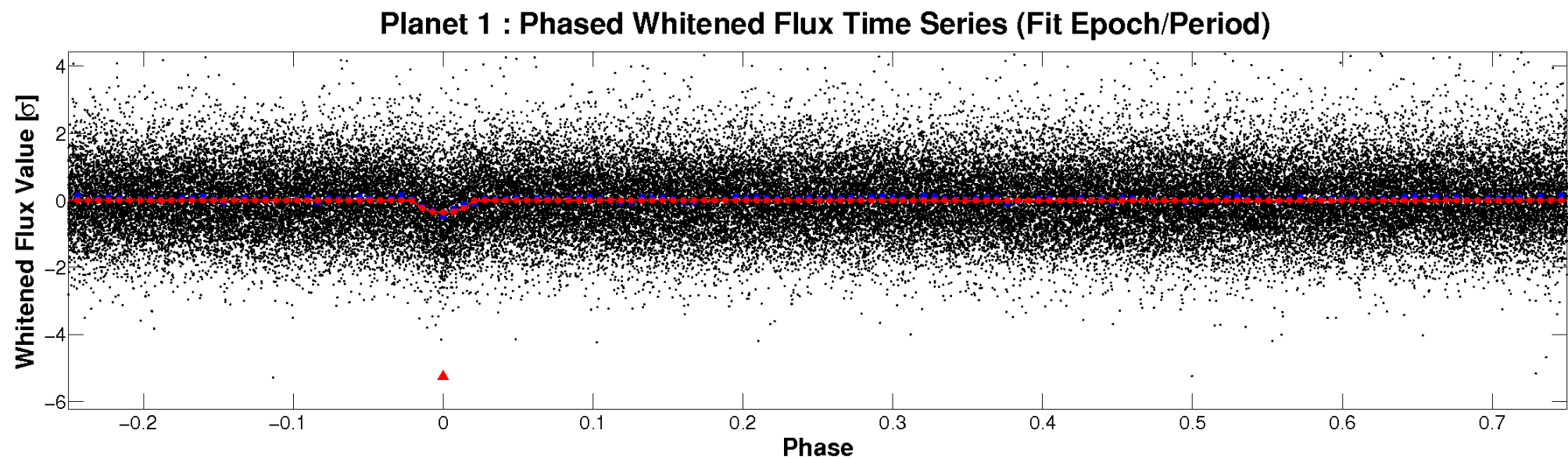
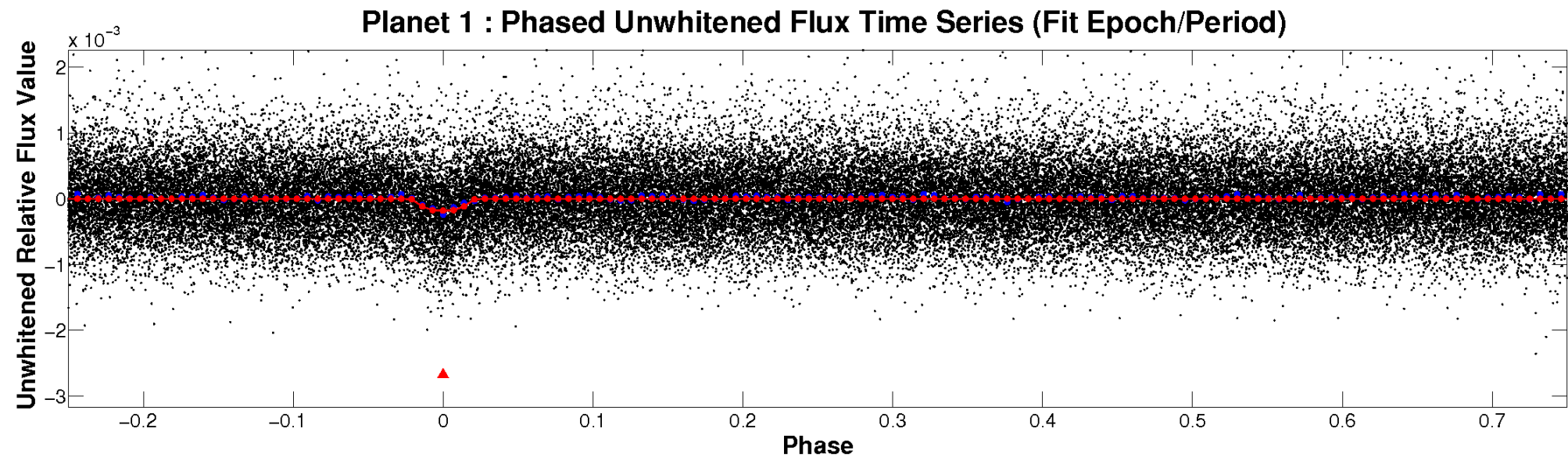


ALT Odd/Even

TCE 010189557-01

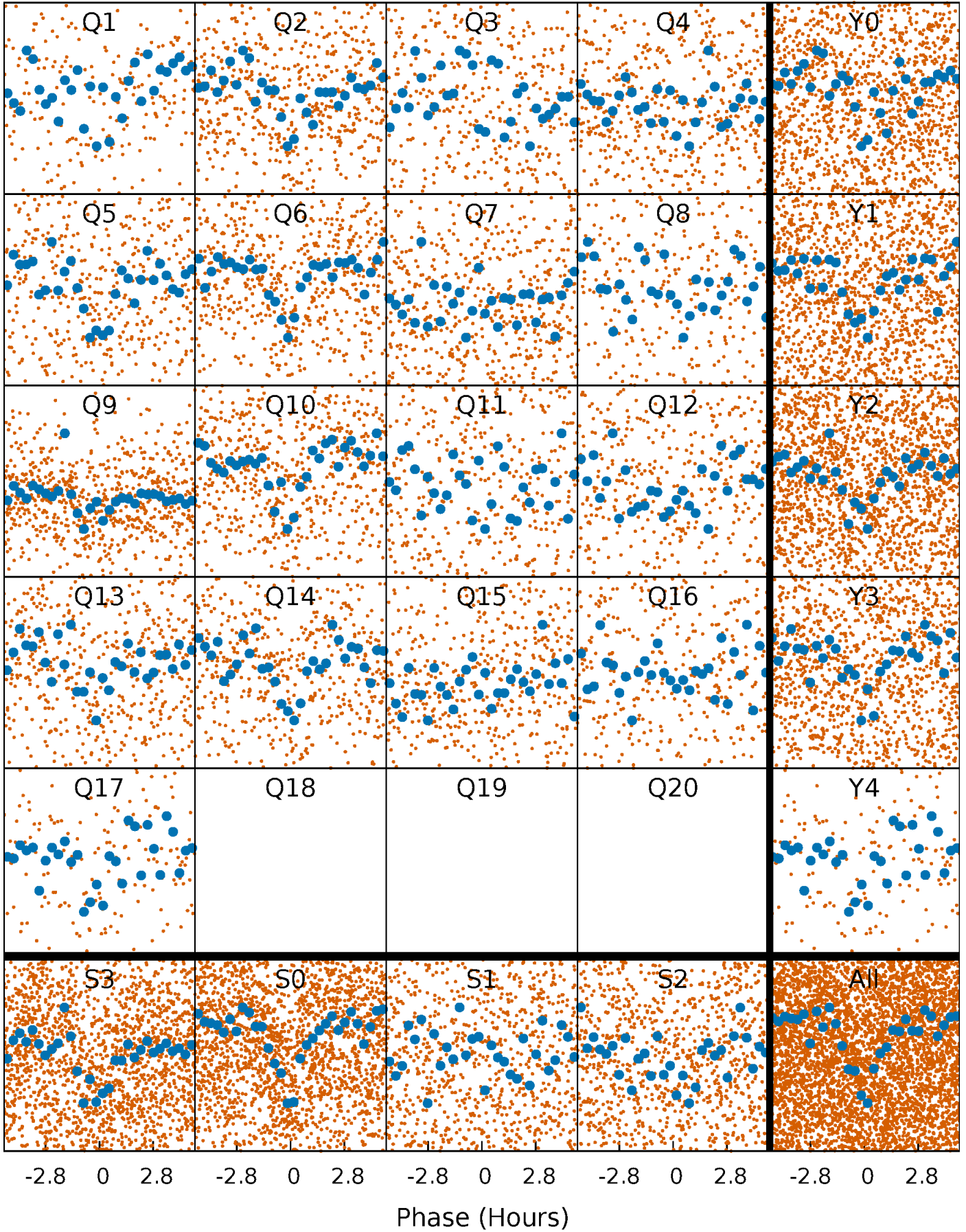


Non-Whitened Vs. Whitened Light Curve



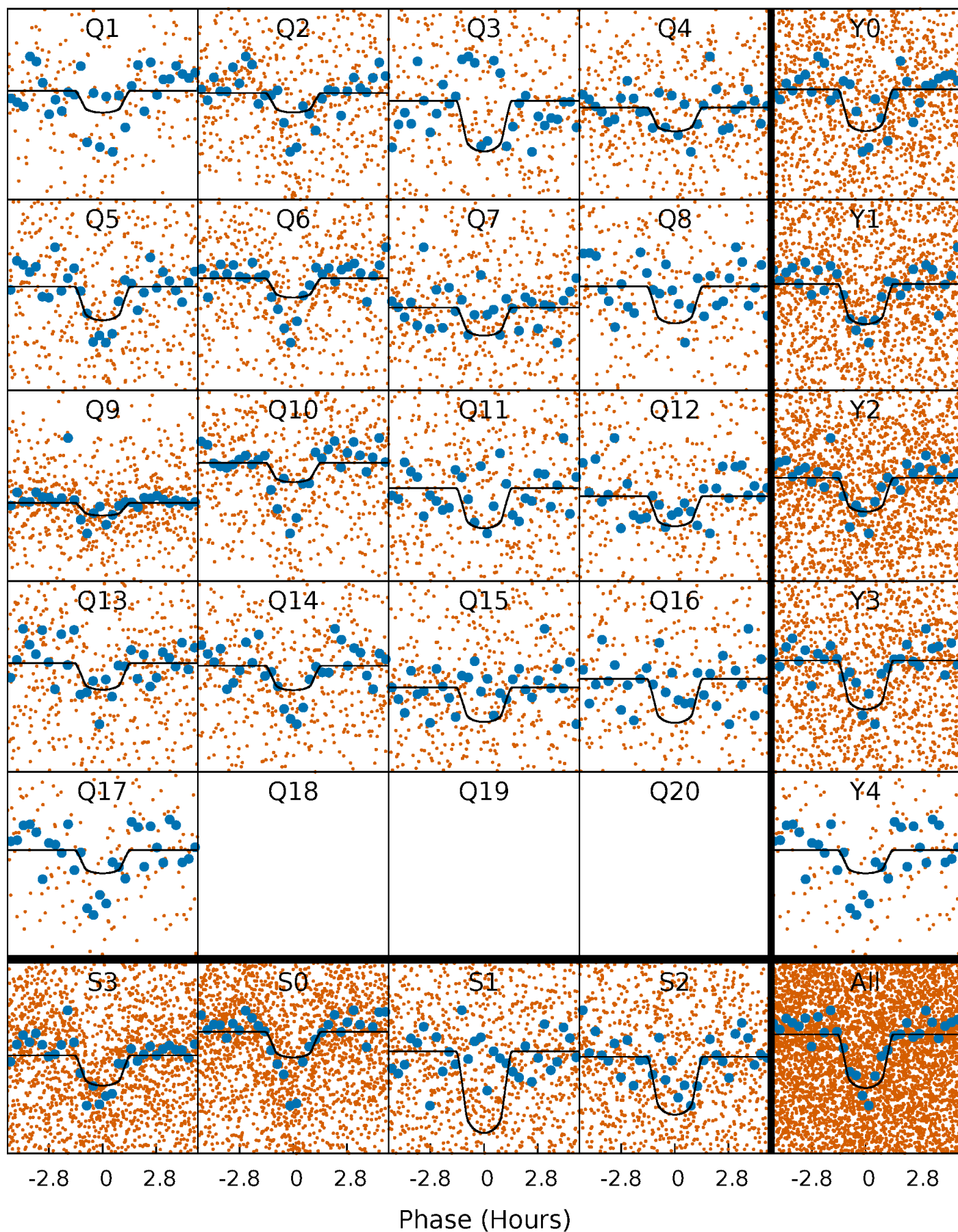
PDC Quarter-Phased Transit Curves

TCE 010189557-01 P= 2.931061 Days $T_0=131.922999$ (BKJD)



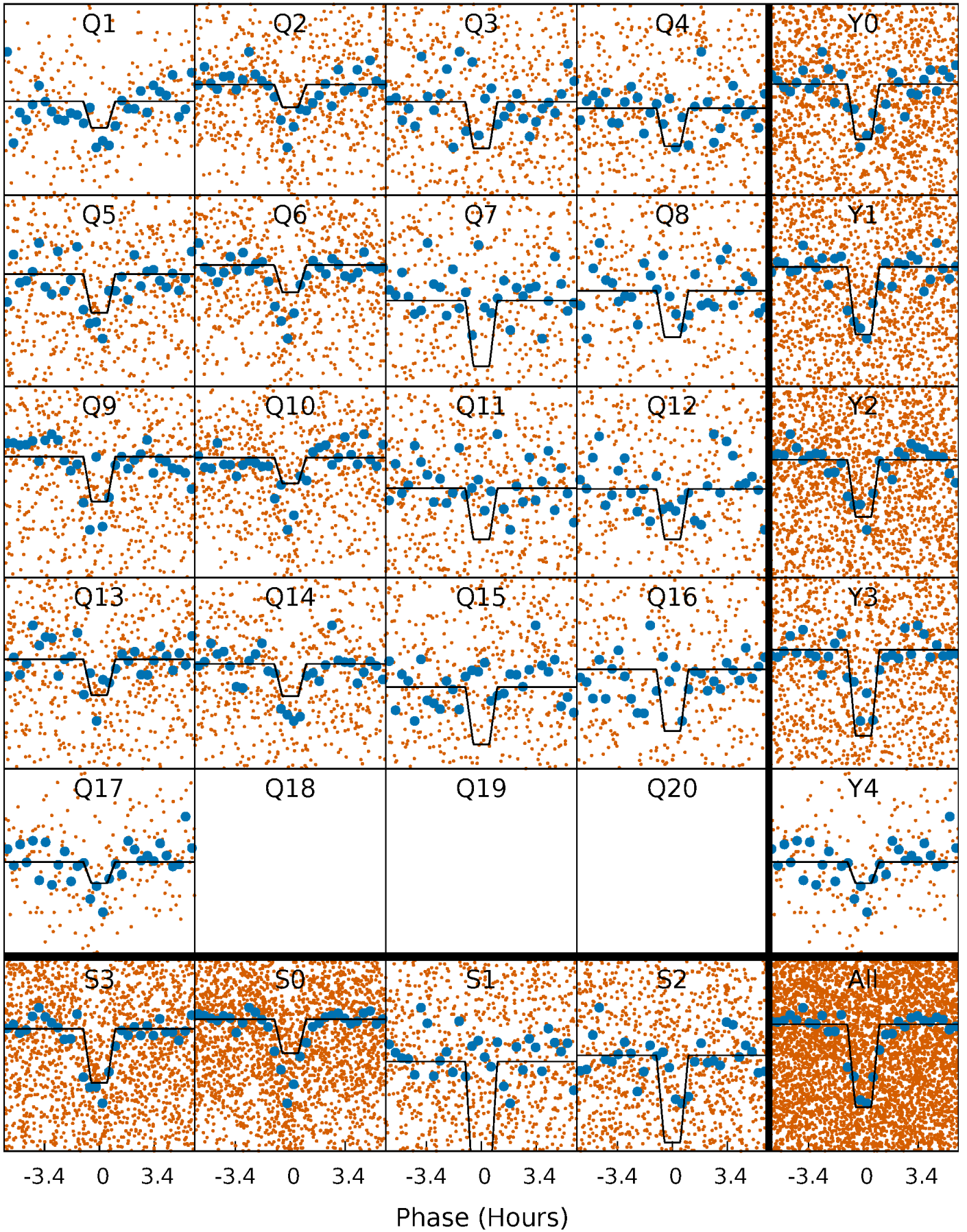
DV Quarter-Phased Transit Curves

TCE 010189557-01 P= 2.931061 Days $T_0=131.922999$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

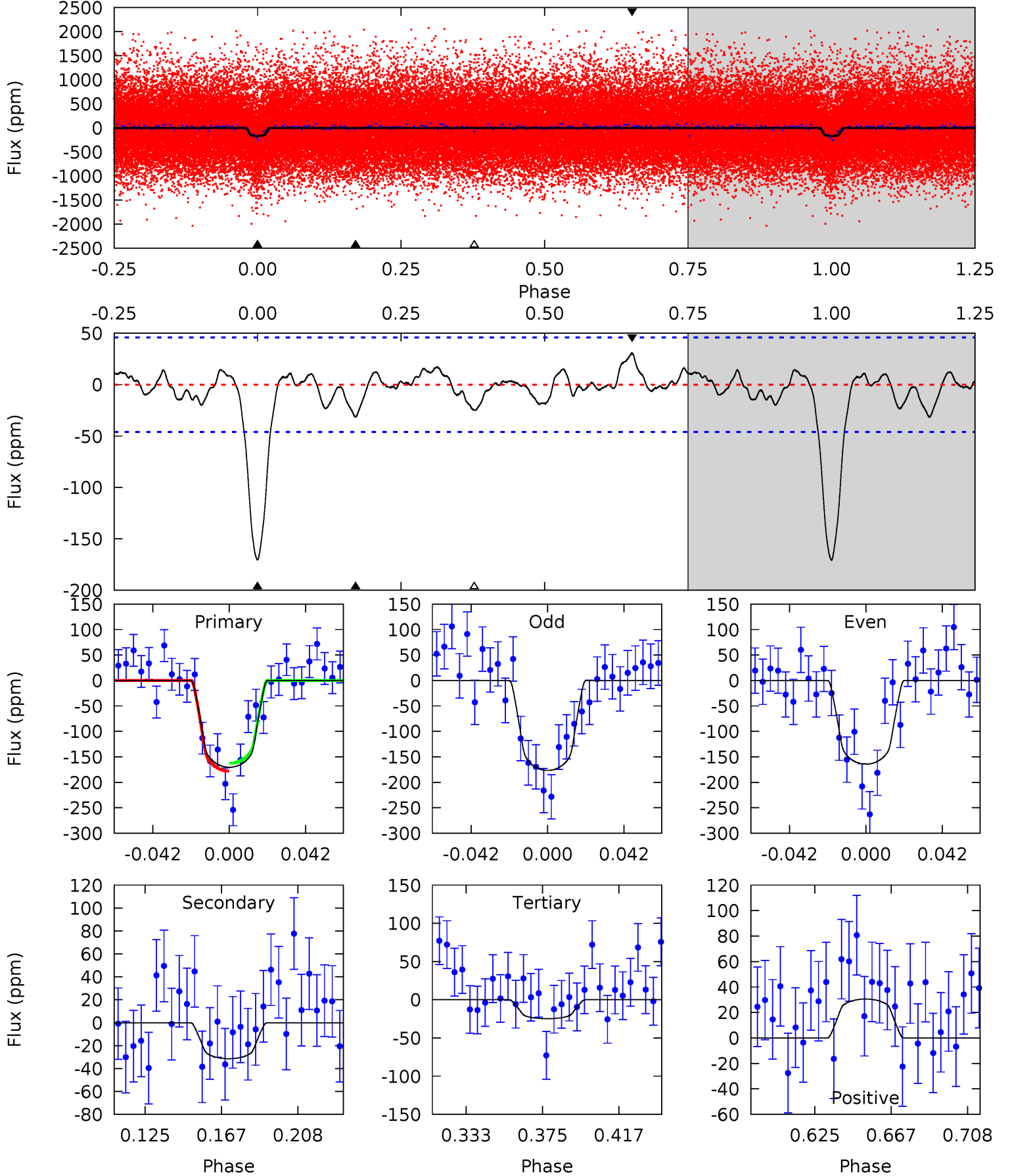
TCE 010189557-01 P= 2.931036 Days $T_0=131.927438$ (BKJD)



DV Model-Shift Uniqueness Test

010189557-01, P = 2.931061 Days, E = 128.991938 Days

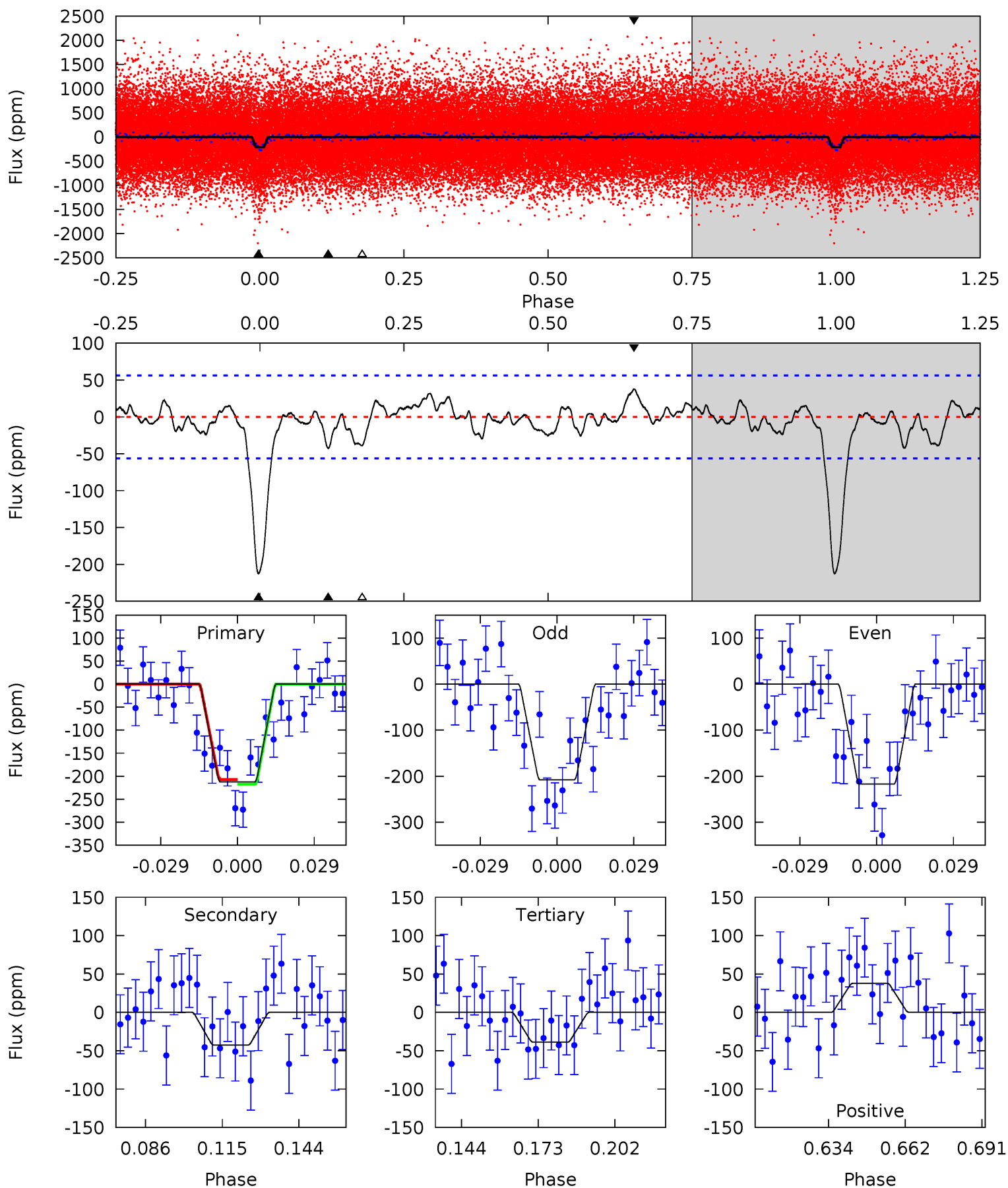
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.6	3.24	2.56	3.16	4.75	2.04	1.09	15.0	14.4	0.69	0.09	0.64	0.97	0.15	0.78



Alt Model-Shift Uniqueness Test

010189557-01, P = 2.931036 Days, E = 128.996402 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.2	3.64	3.34	3.25	4.82	2.19	1.25	14.9	15.0	0.31	0.40	0.41	1.06	0.15	0.43



Stellar Parameters For KIC 010189557

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5485^{+163}_{-163}	$4.500^{+0.110}_{-0.110}$	$-0.560^{+0.350}_{-0.300}$	$0.788^{+0.123}_{-0.101}$	$0.716^{+0.103}_{-0.037}$	$2.063^{+0.975}_{-0.659}$
	+3%/-3%	+2%/-2%	+62%/-54%	+16%/-13%	+14%/-5%	+47%/-32%
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 010189557-01 / KOI 2427.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-31 ± 10	$1.28^{+0.71}_{-0.65}$	1584^{+80}_{-76}	3741^{+1125}_{-554}	13^{+44}_{-8}
Alt.	-43 ± 12	$1.41^{+0.61}_{-0.58}$	1591^{+80}_{-77}	3815^{+916}_{-491}	16^{+32}_{-9}

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 $A_{obs} \gg 1.0$

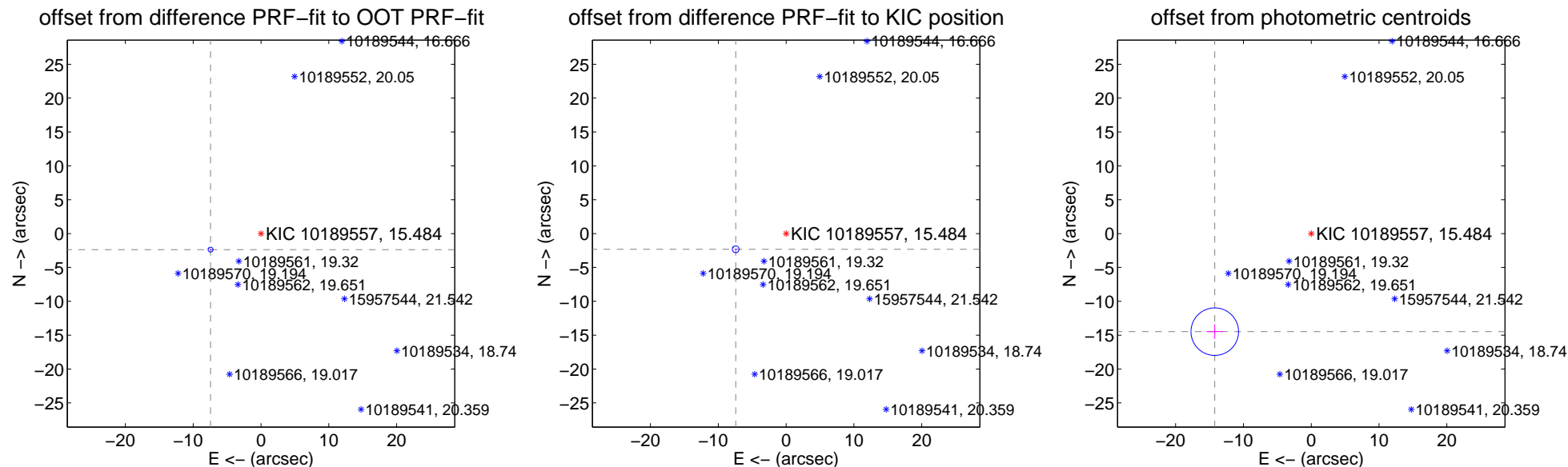
DV Centroid Data

Supplemental centroid analysis for 010189557-01. Kepler magnitude: 15.48. Transit SNR 14.17

There are 3 quarters with good PRF difference image offsets

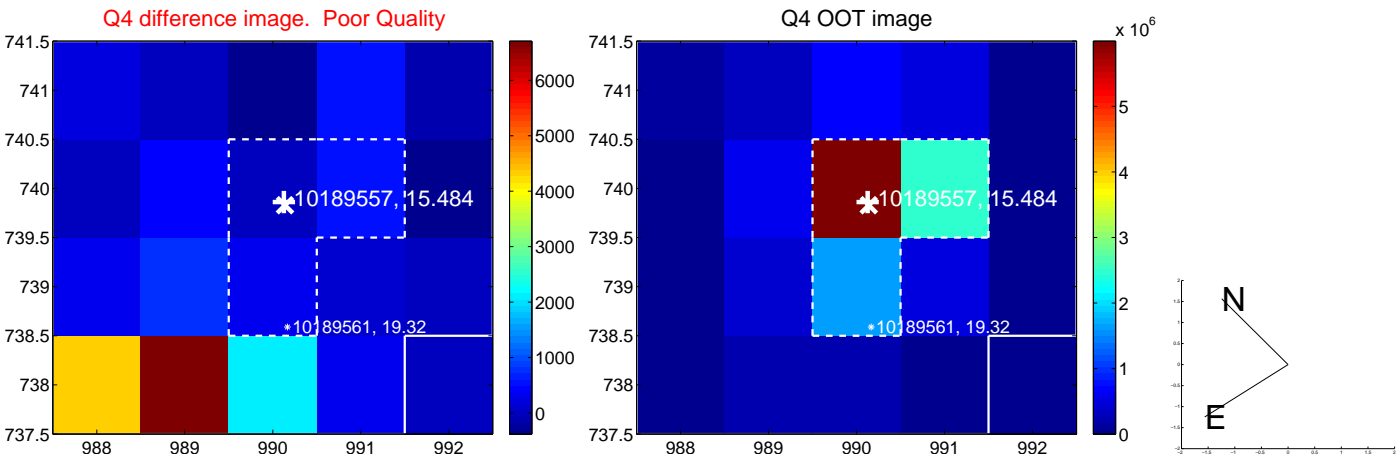
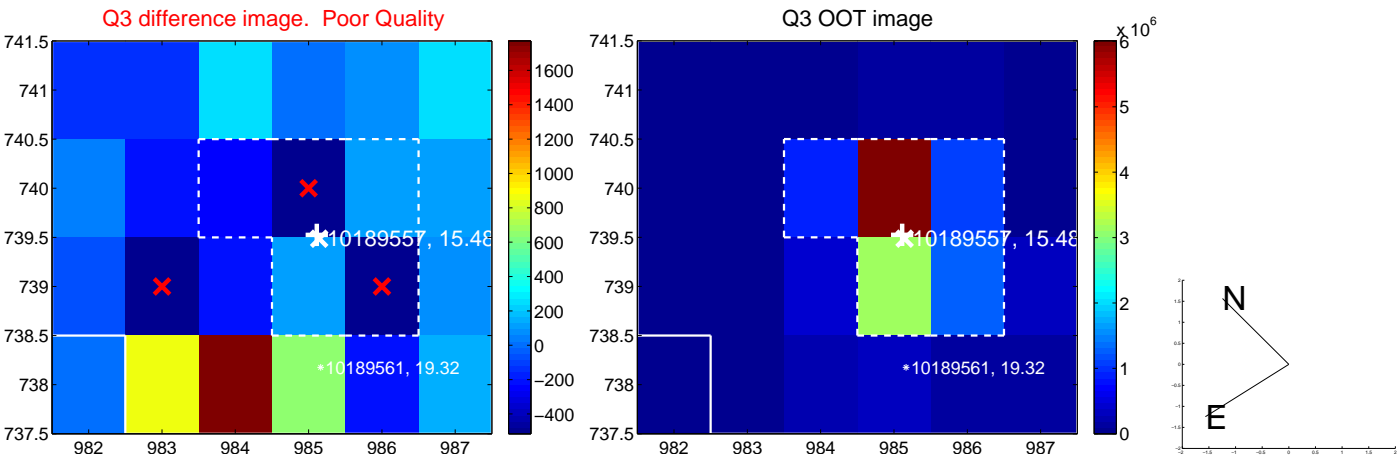
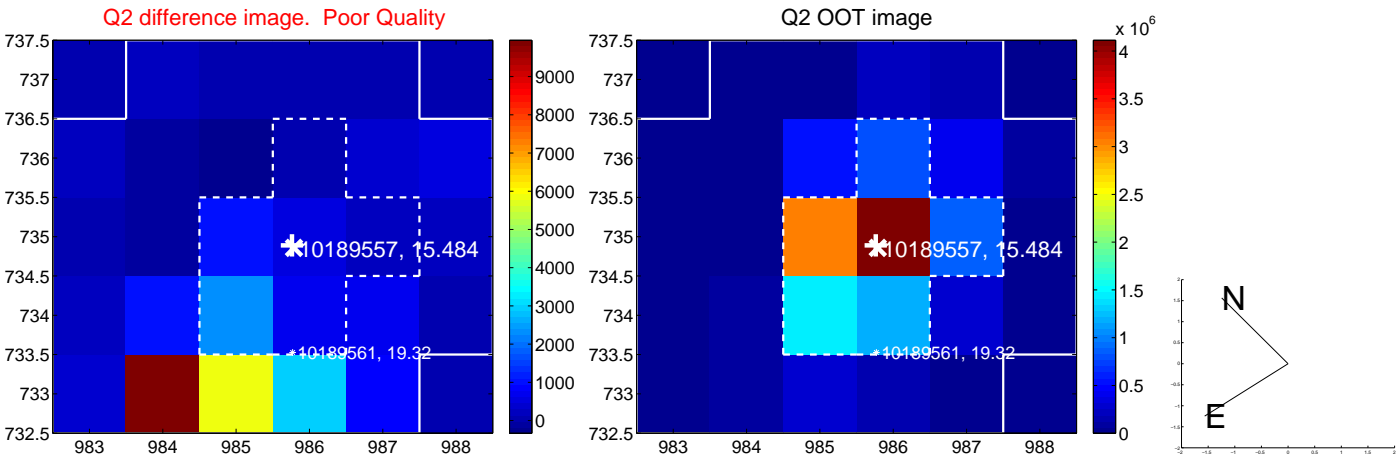
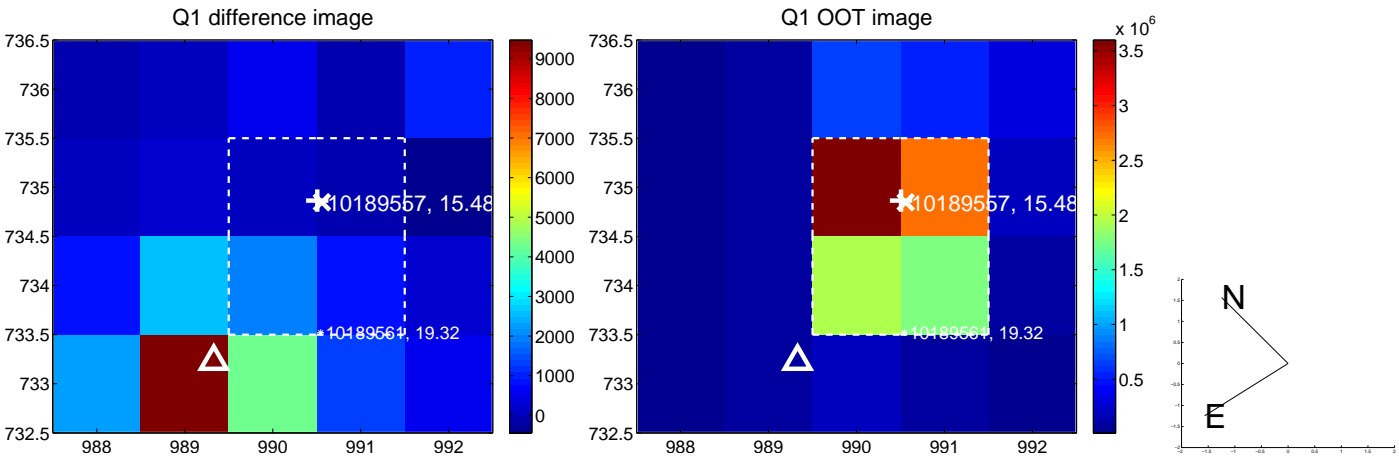
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	7.808 ± 0.121	64.56	7.438 ± 0.123	-2.376 ± 0.099
PRF-fit source offset from KIC position	7.788 ± 0.166	47.05	7.434 ± 0.172	-2.321 ± 0.079
photometric centroid source offset	20.30 ± 1.17	17.36	14.23 ± 1.24	-14.48 ± 1.09

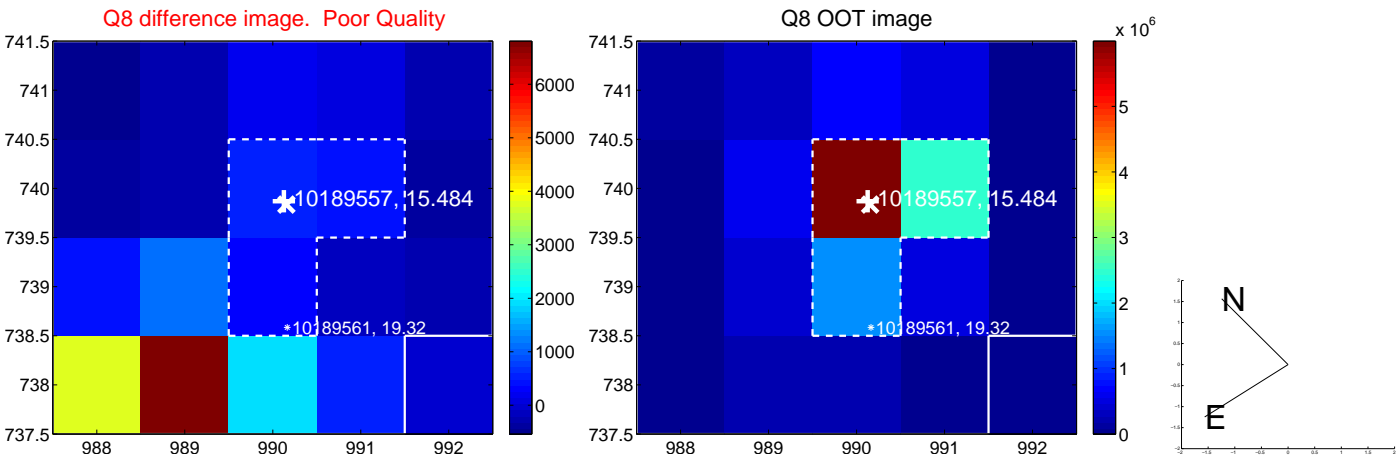
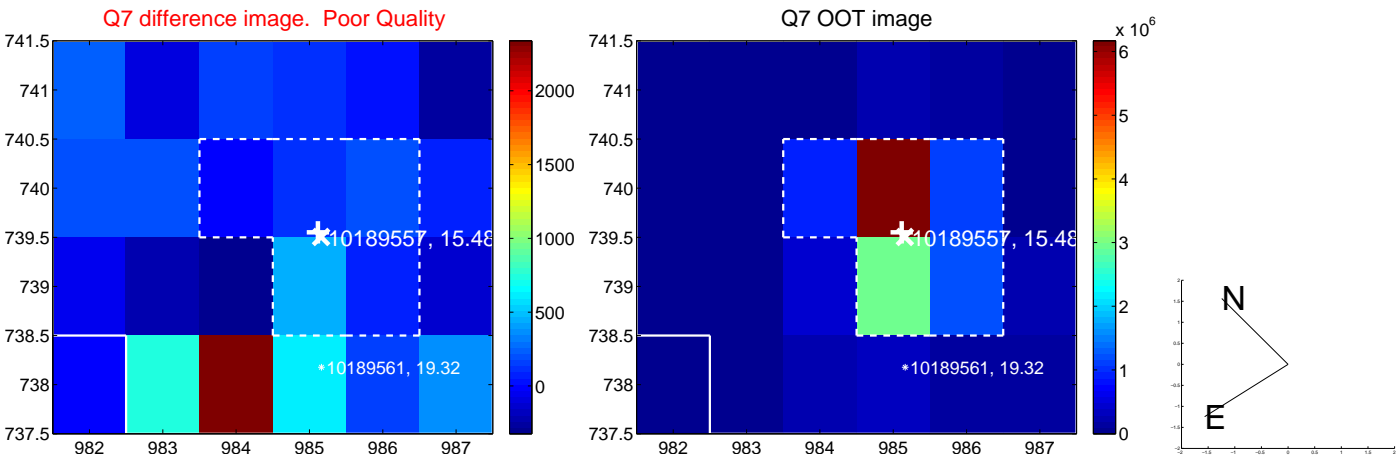
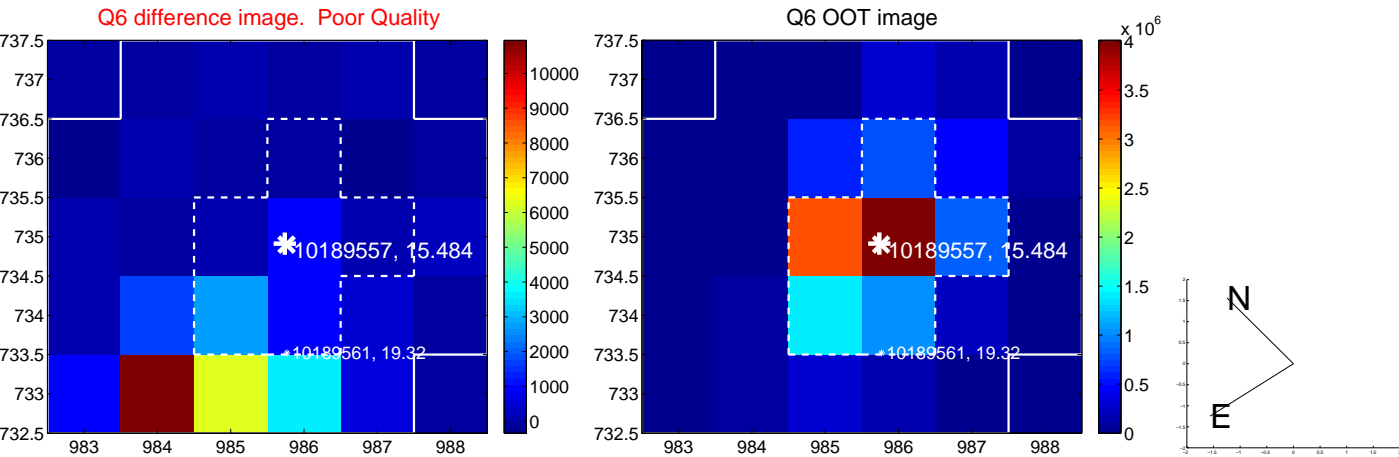
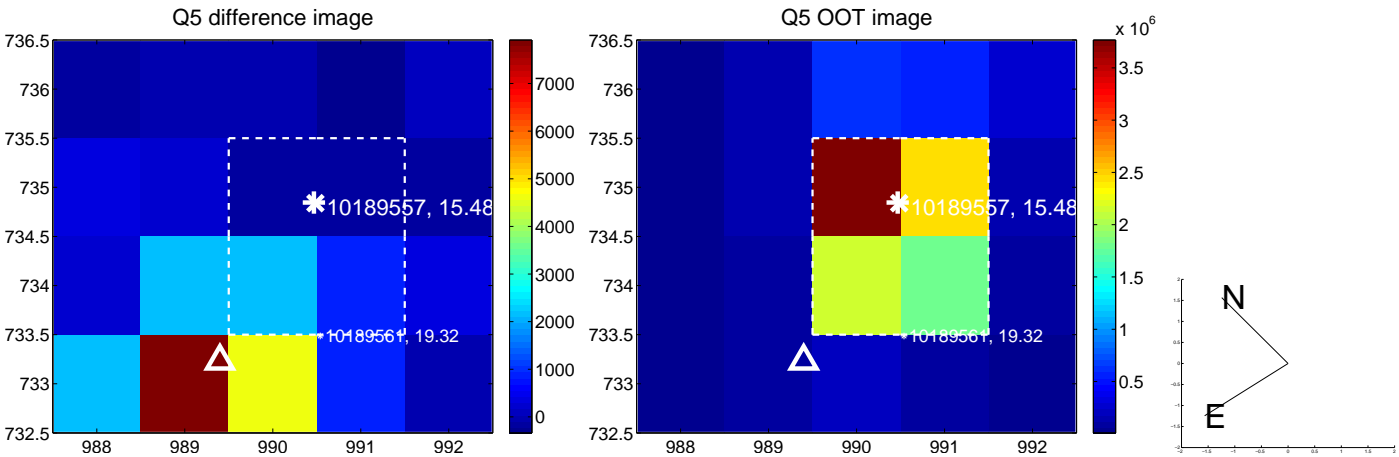


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

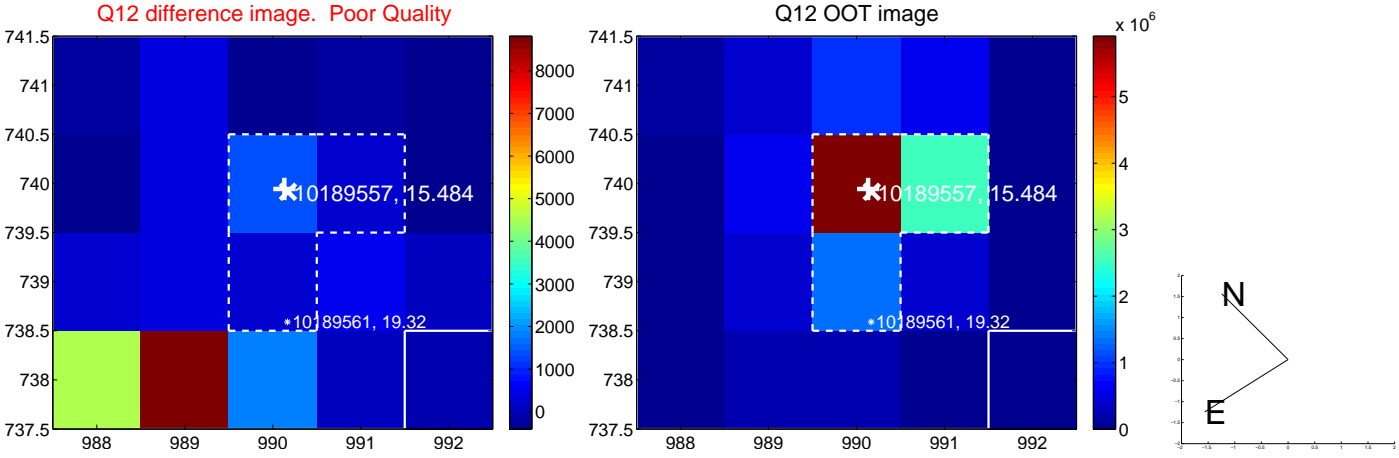
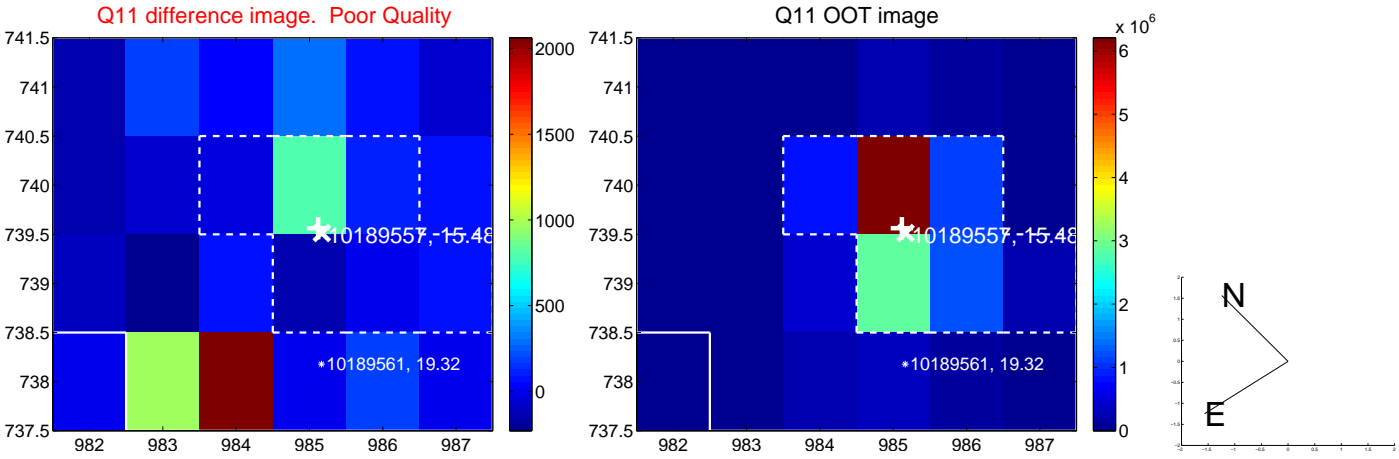
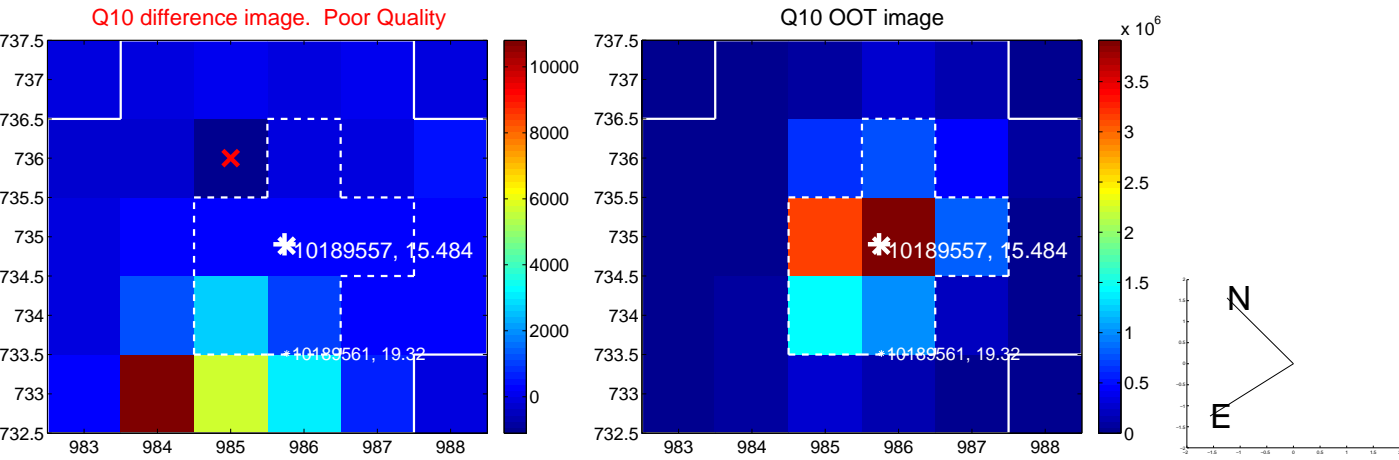
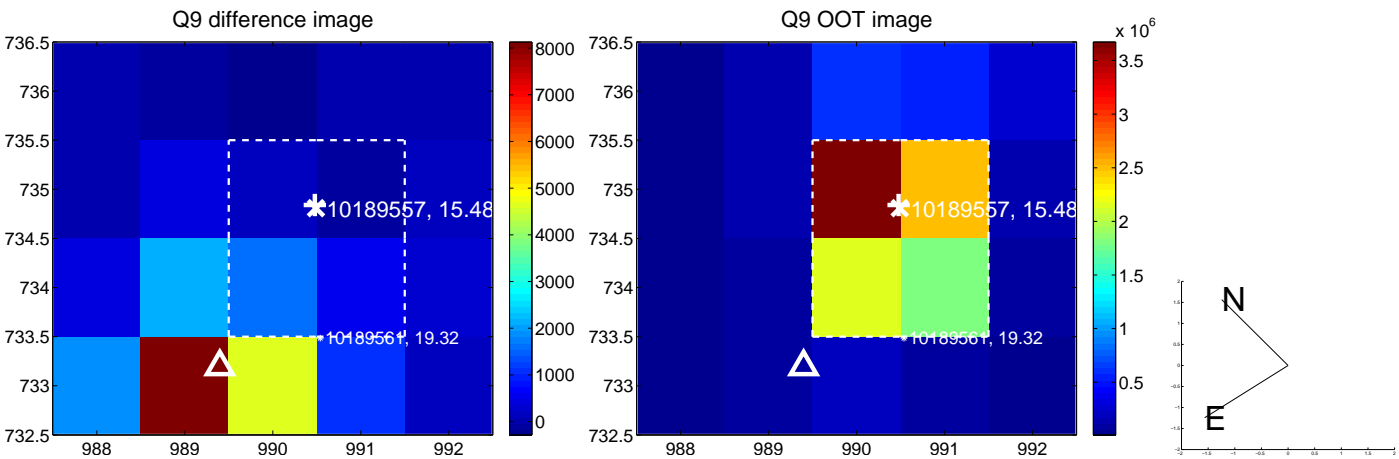
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



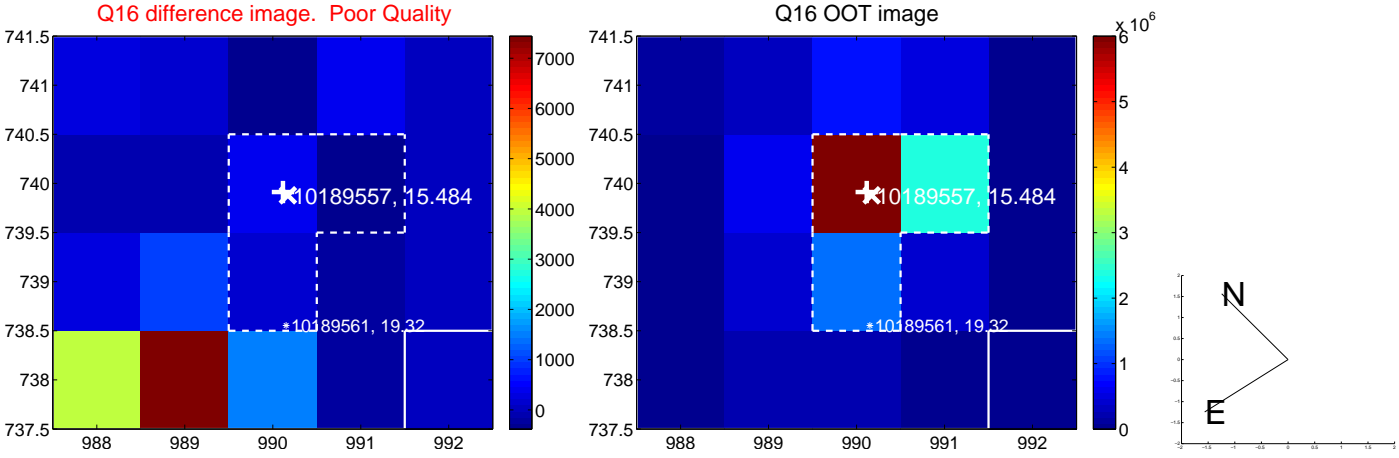
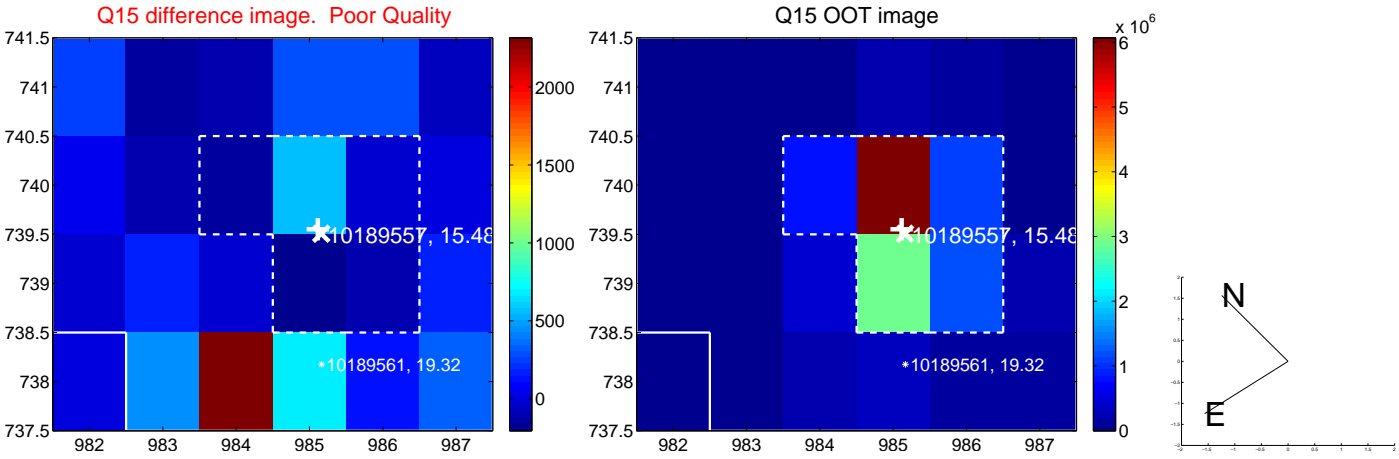
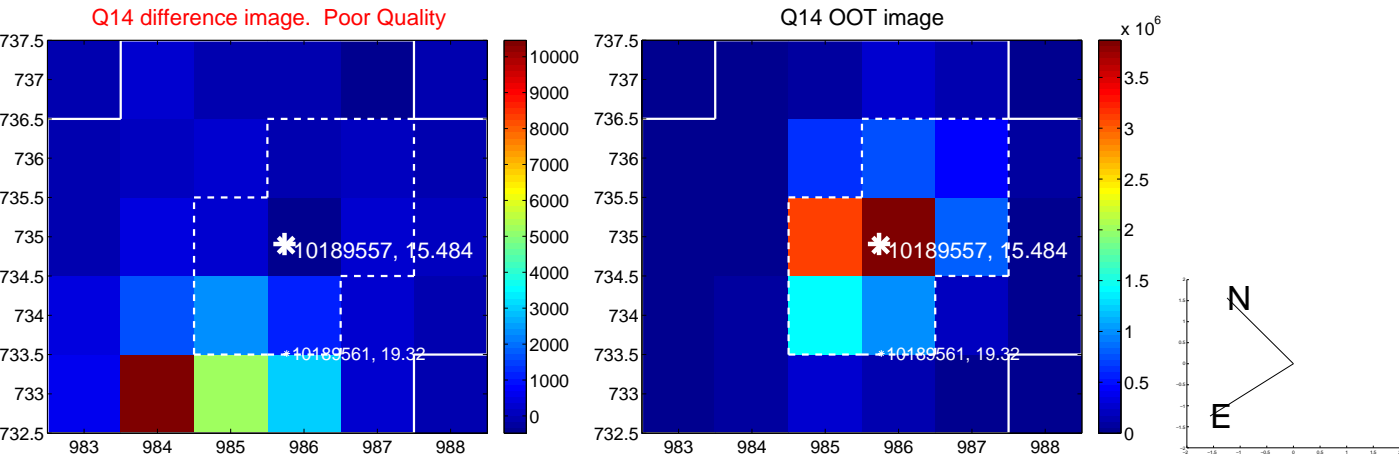
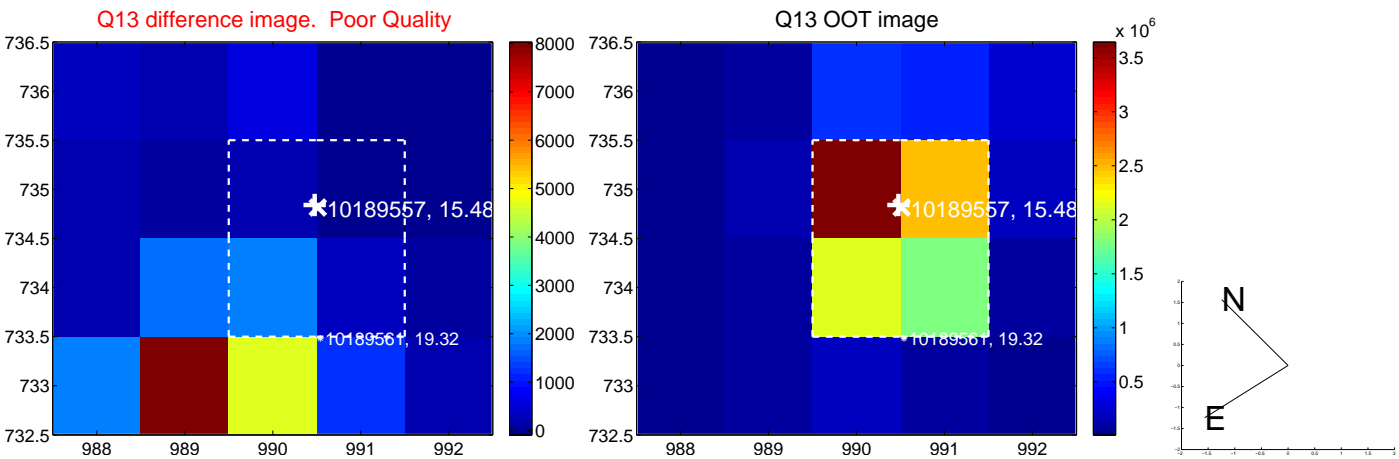
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



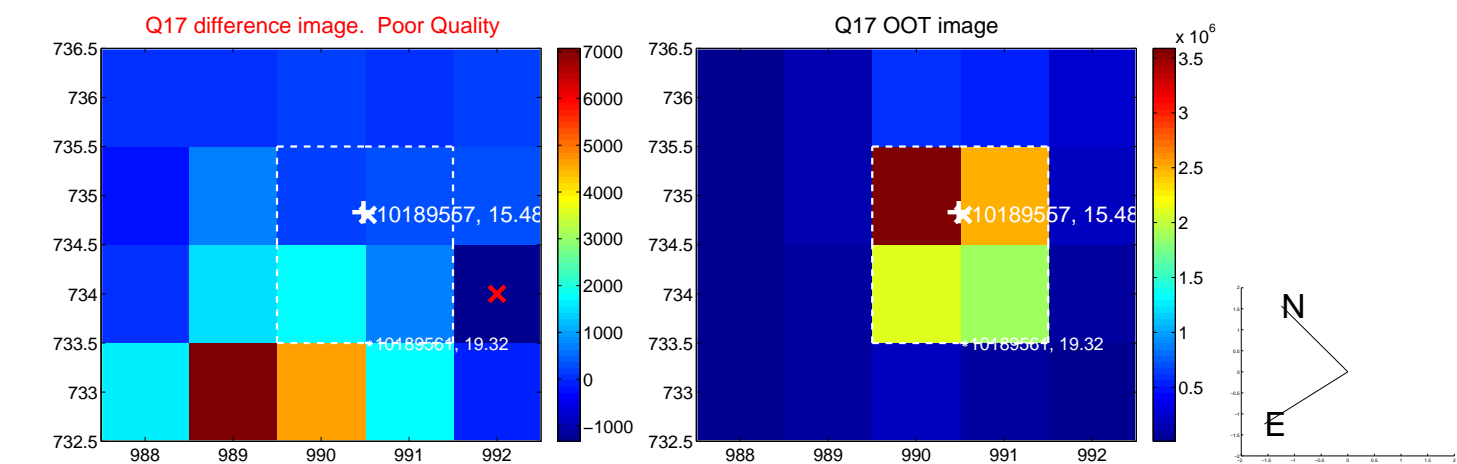
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



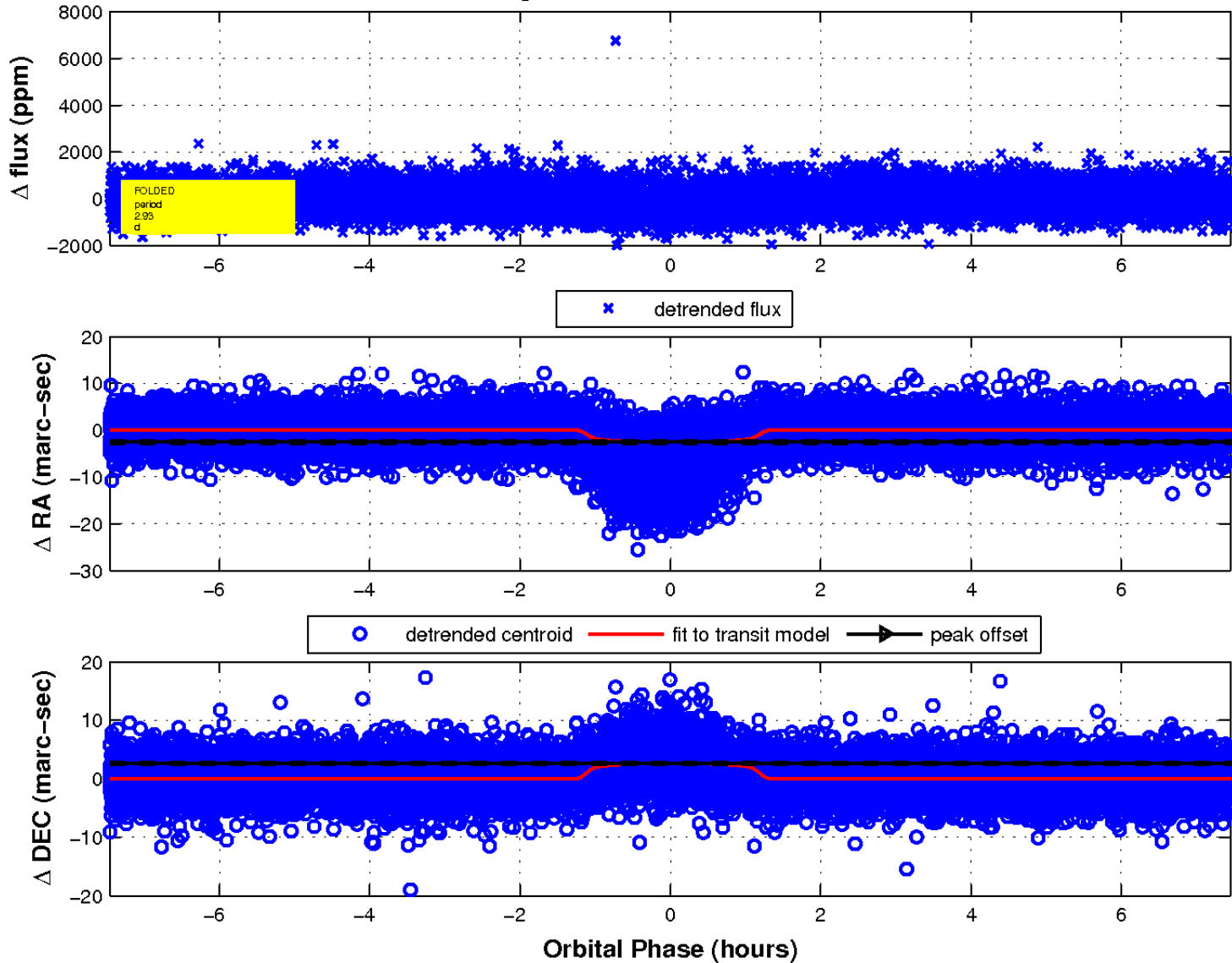
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

