

KIC 006962109

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})
006962109-01	OBS	2182.01	17.132633	147.156293	784.9	3.226	22.9	23.9	0.79	5477	2.51	32.95

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006962109-01	OBS	PC	0.97	0	0	0	0	CENT_KIC_POS

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 006962109-01

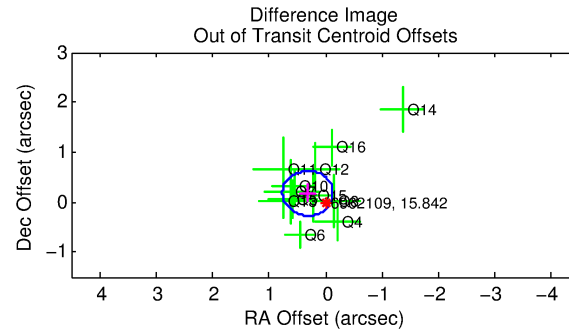
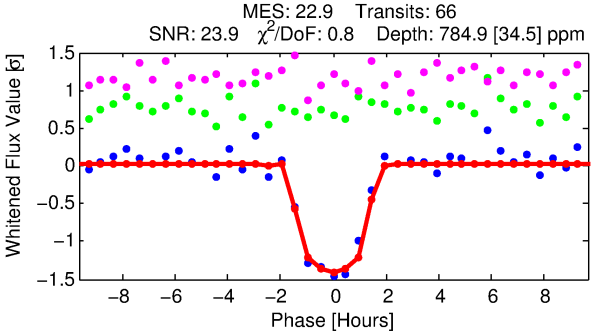
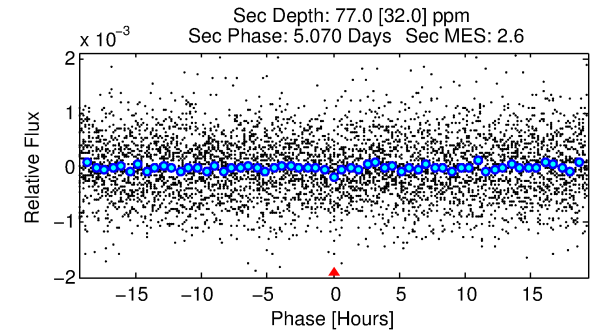
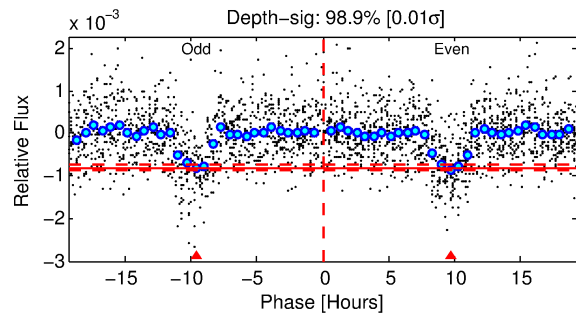
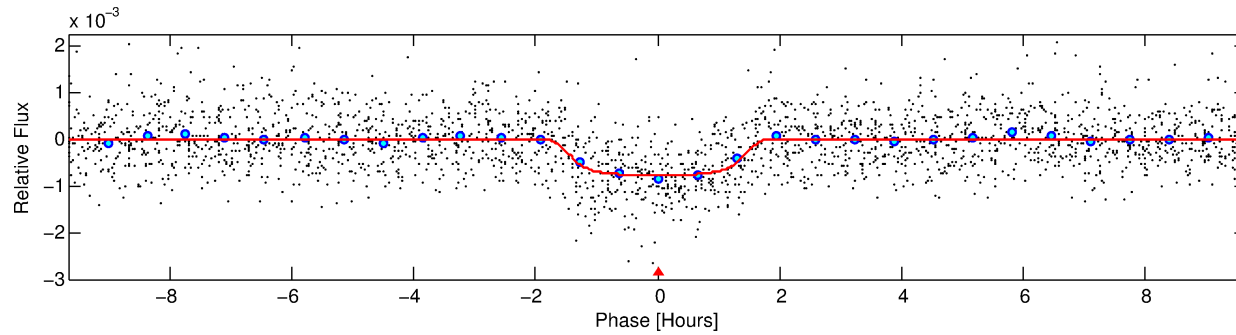
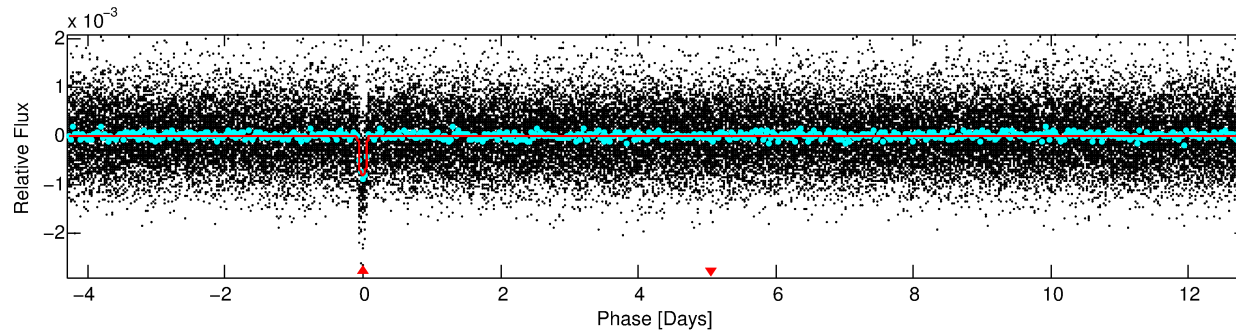
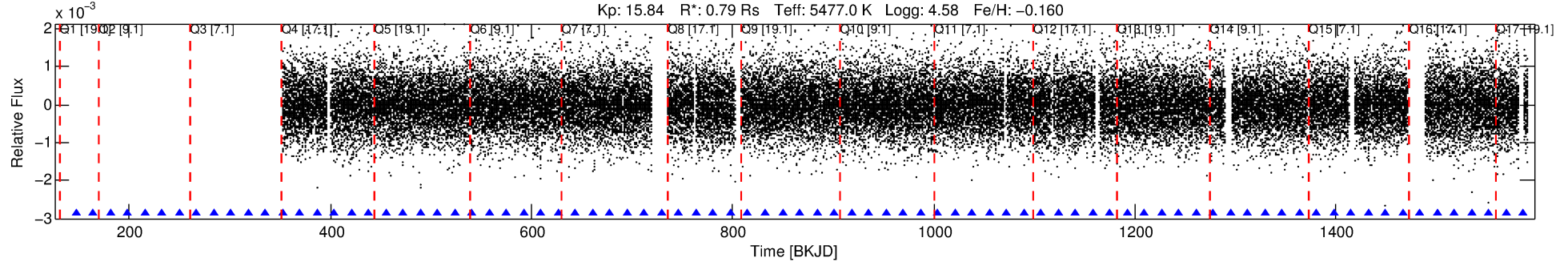
No Significant Match Found

DV One-Page Summary

KIC: 6962109 Candidate: 1 of 1 Period: 17.133 d

KOI: K02182.01 Corr: 0.973

Kp: 15.84 R*: 0.79 Rs Teff: 5477.0 K Logg: 4.58 Fe/H: -0.160



DV Fit Results:

Period = 17.13263 [0.00008] d
Epoch = 147.1563 [0.0039] BKJD
Rp/R* = 0.0289 [0.0080]
a/R* = 25.13 [29.03]
b = 0.82 [0.47]
Seff = 32.95 [9.79]
Teq = 611 [45] K
Rp = 2.51 [0.89] Re
a = 0.1242 [0.0229] AU
Ag = 103.91 [77.21] [1.33σ]
Teffp = 3016 [533] K [4.50σ]

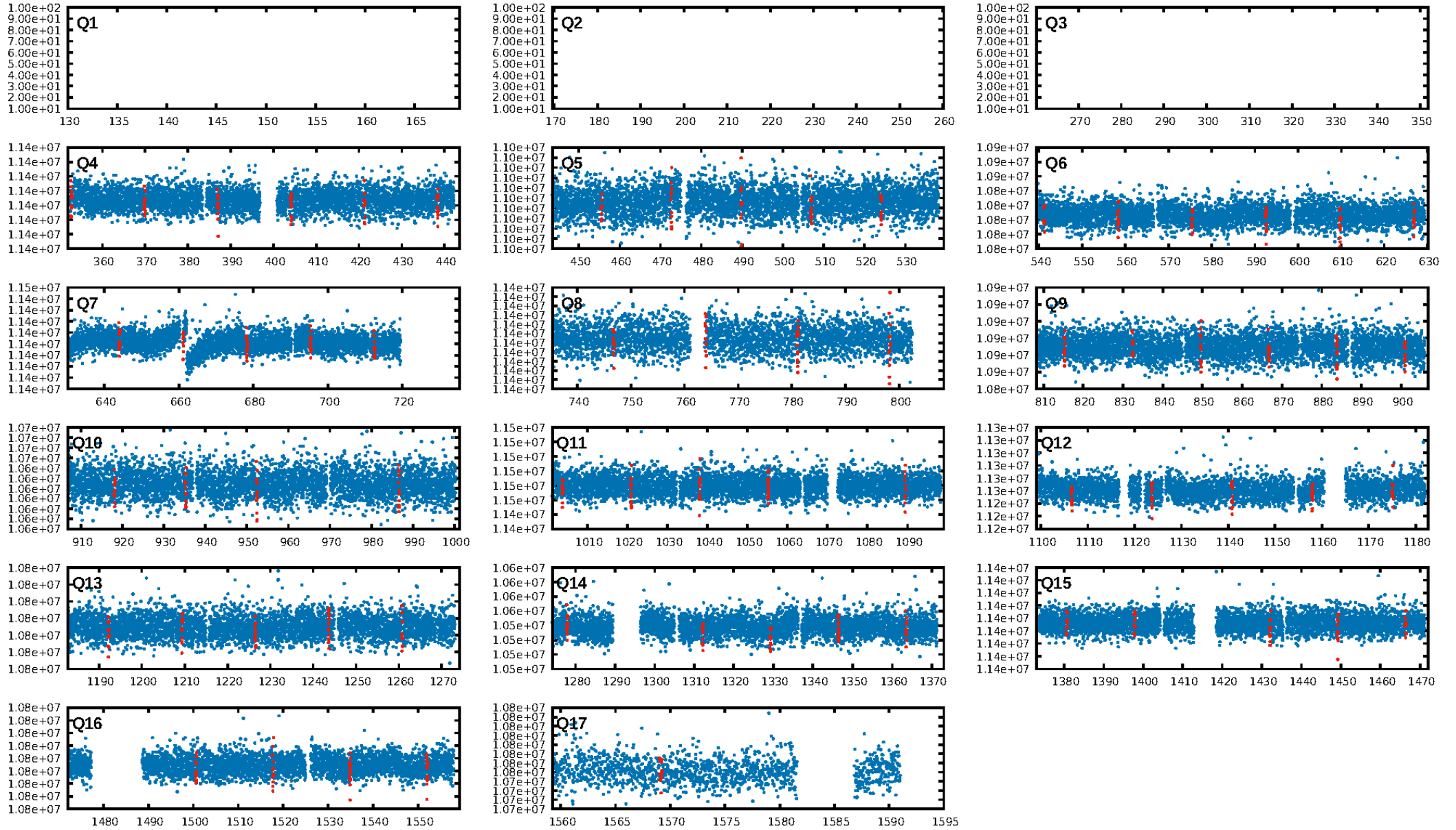
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 95.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.33e-112
RollingBand-fgt: 1.00 [65/65]
GhostDiagnostic-chr: 3.174
Centroid-sig: 13.5%
Centroid-so: 1.451 arcsec [2.49σ]
OotOffset-rm: 0.362 arcsec [2.43σ]
KicOffset-rm: 0.511 arcsec [2.43σ]
OotOffset-st: 3/3/4/2 [12]
KicOffset-st: 3/3/4/2 [12]
DiffImageQuality-fgm: 1.00 [12/12]
DiffImageOverlap-fno: 1.00 [14/14]

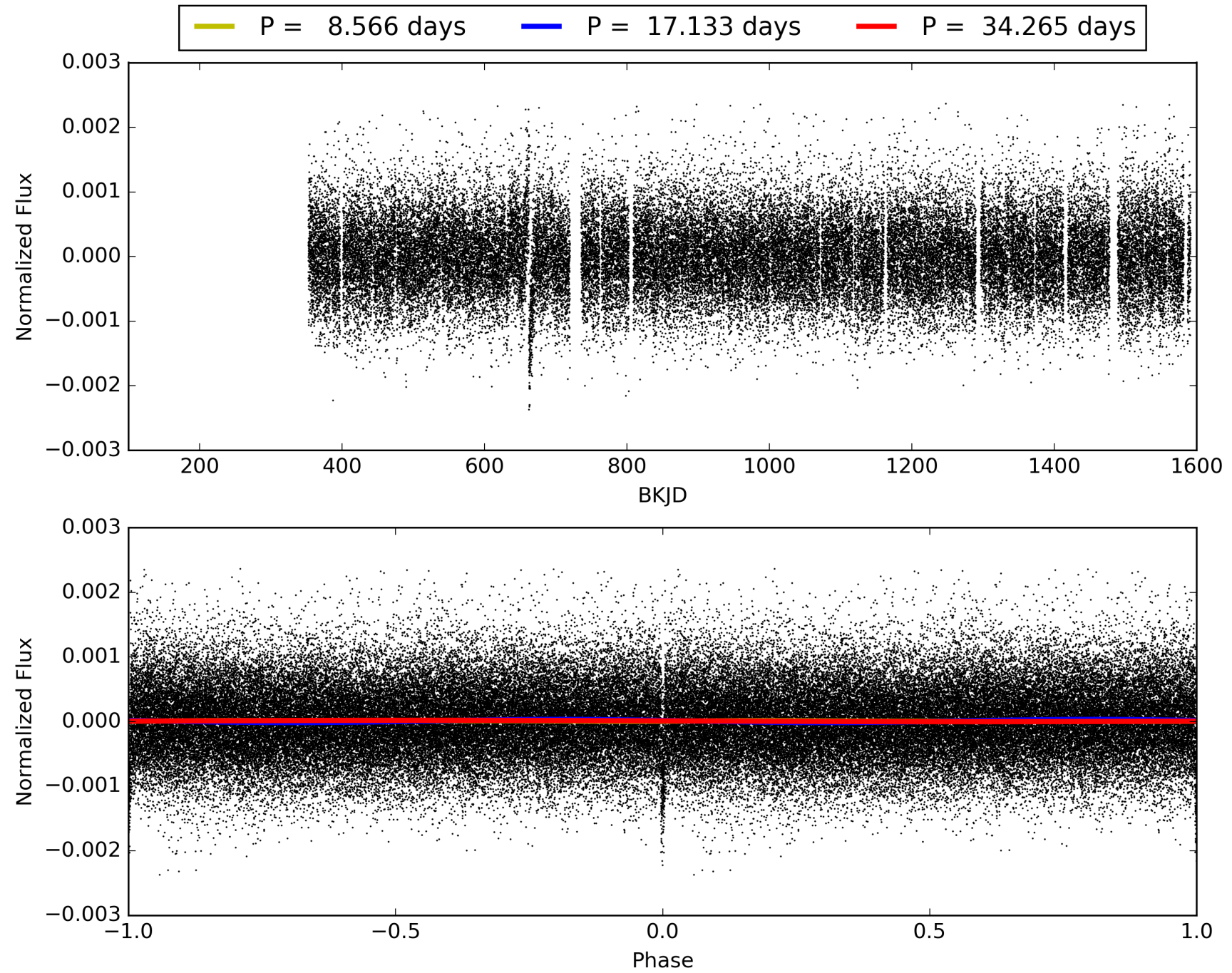
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:00:30 Z

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

TCE 006962109-01, PDC Light Curves

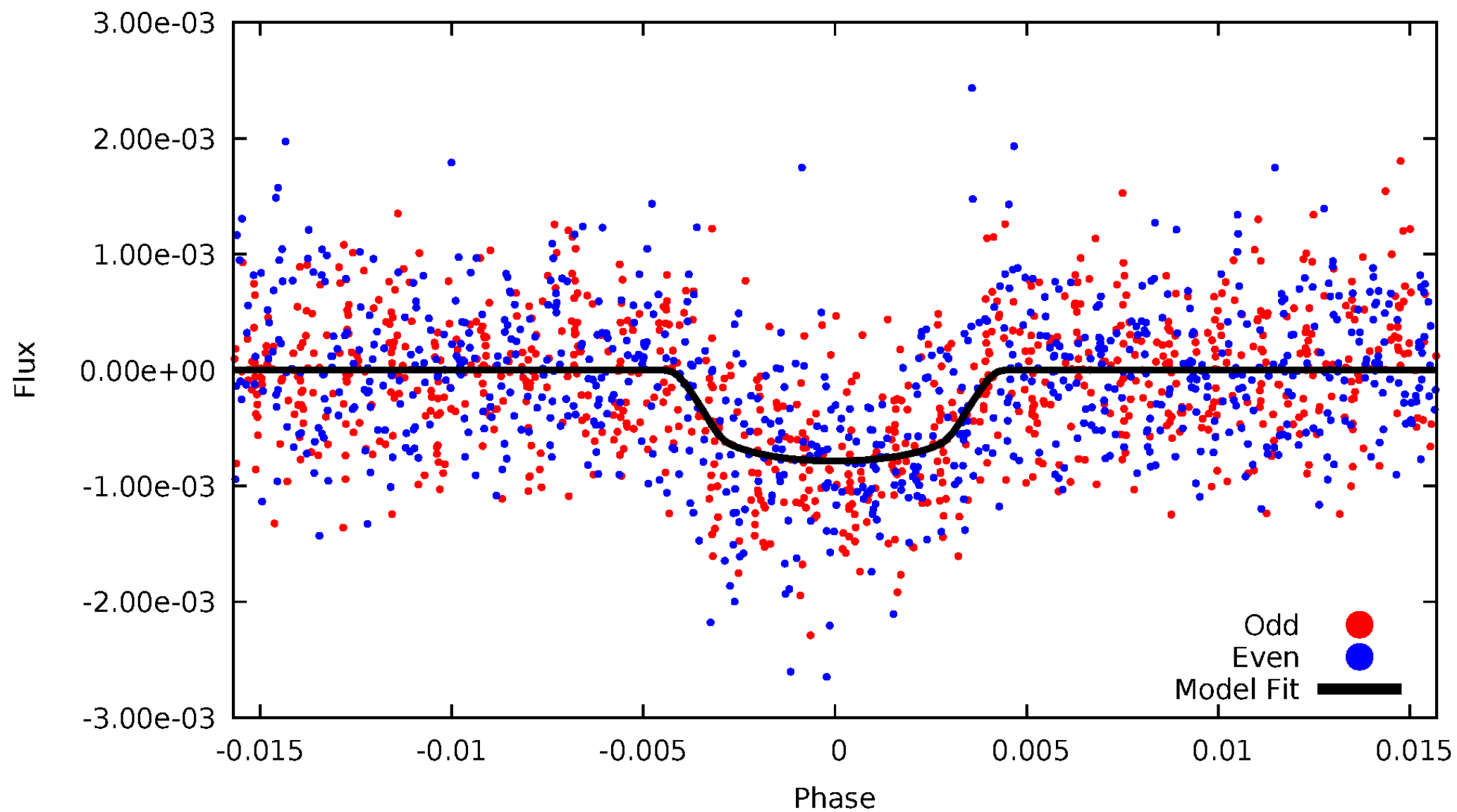


TCE 006962109-01



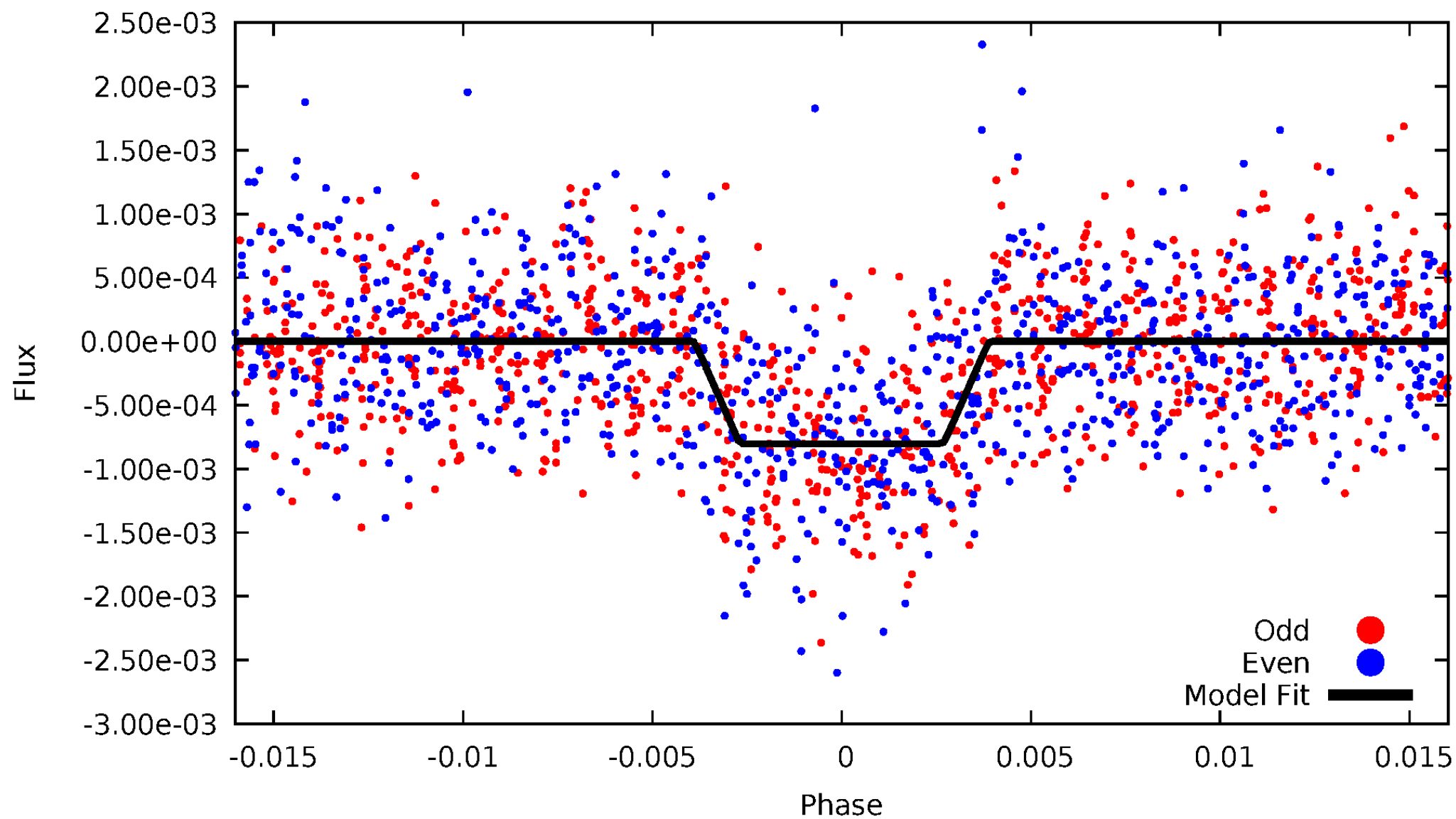
DV Odd/Even

TCE 006962109-01

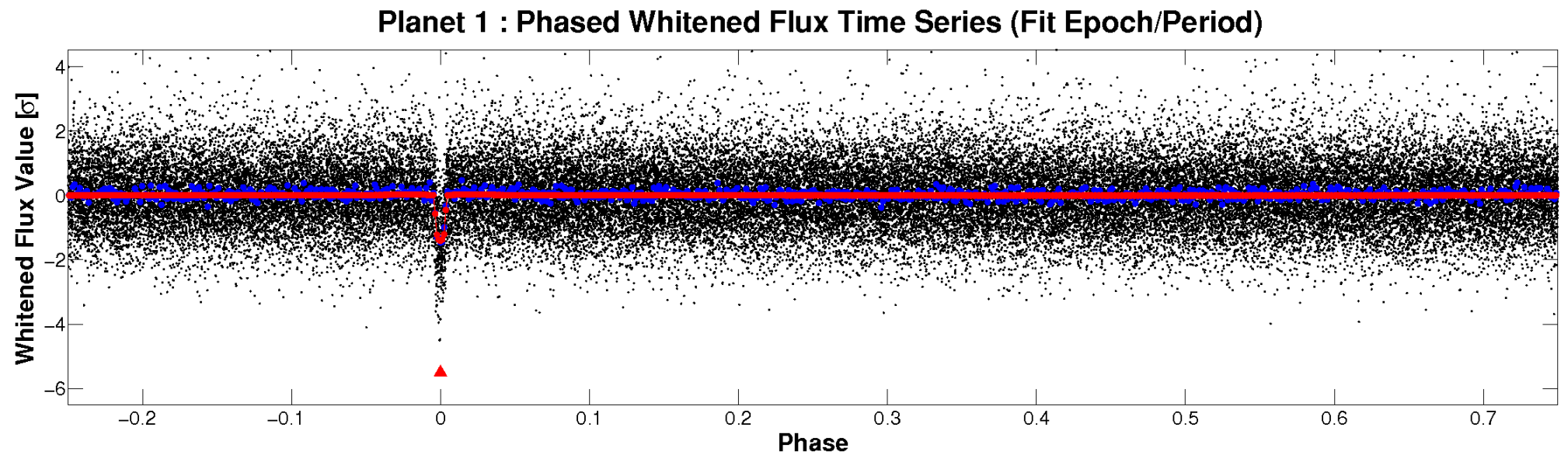
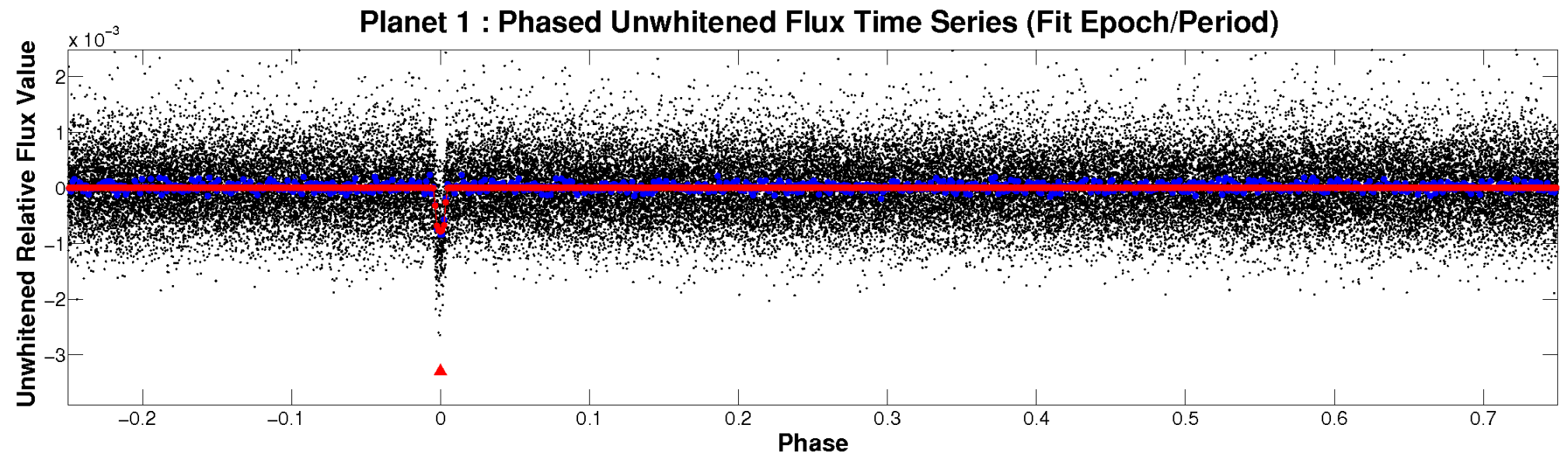


ALT Odd/Even

TCE 006962109-01

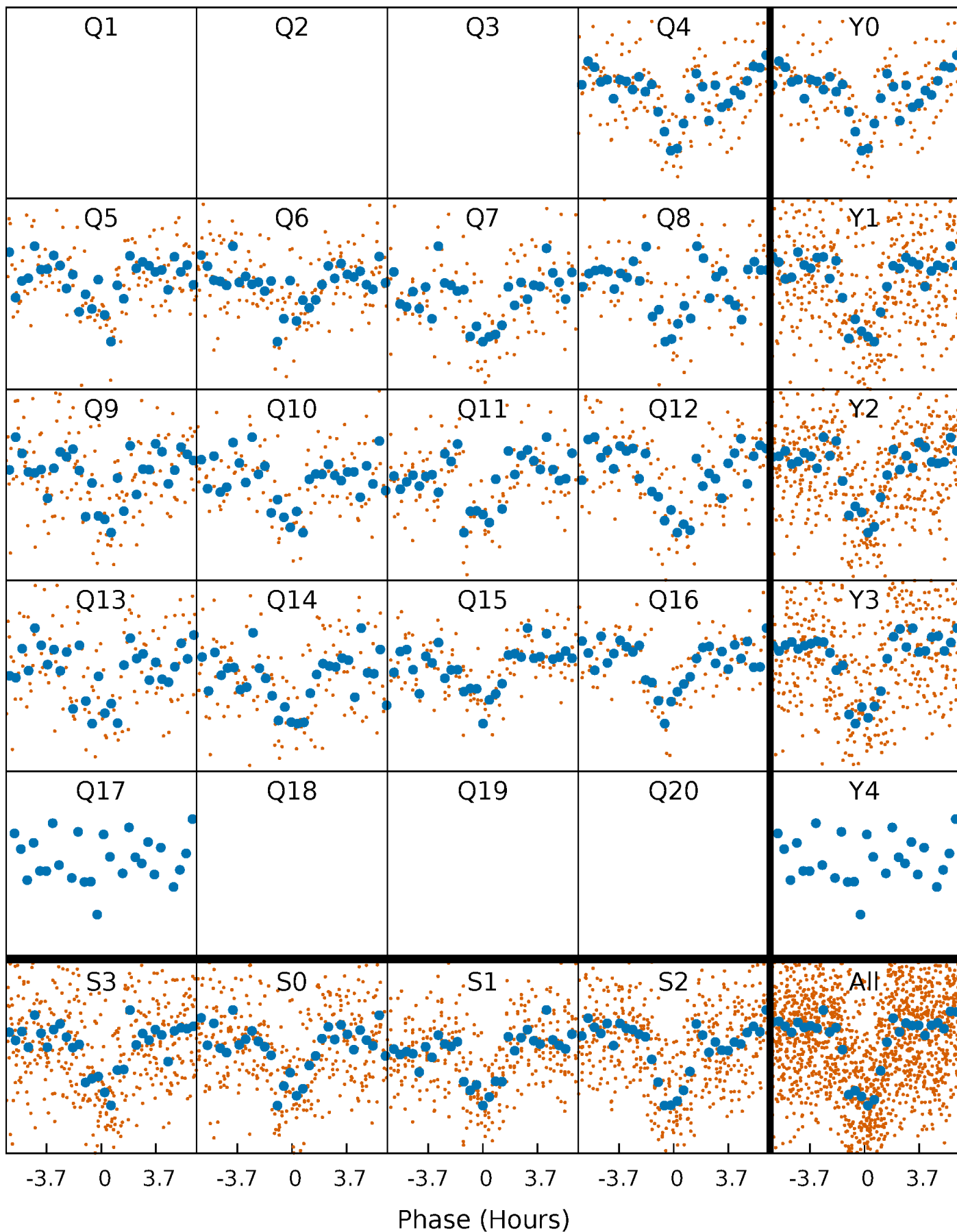


Non-Whitened Vs. Whitened Light Curve



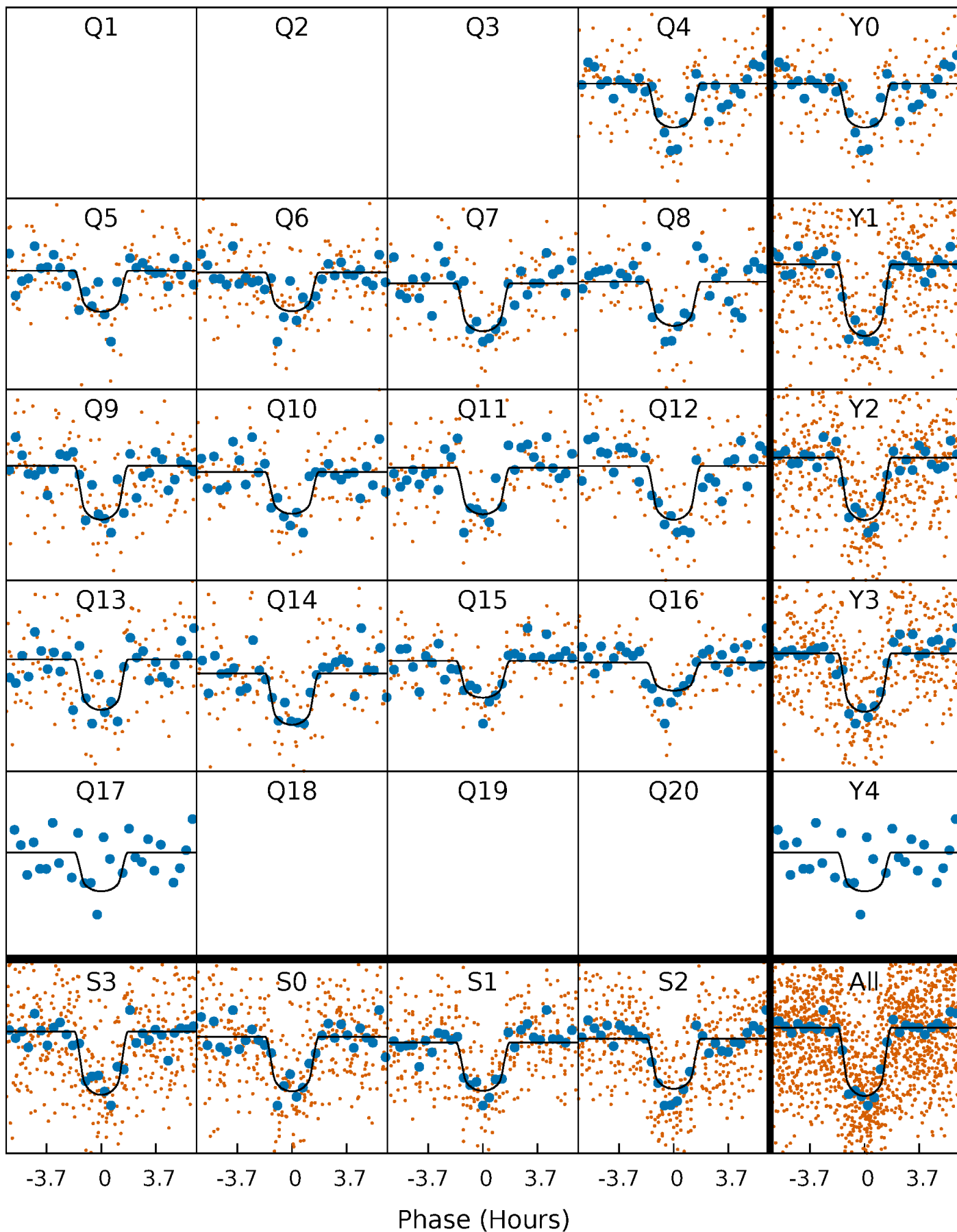
PDC Quarter-Phased Transit Curves

TCE 006962109-01 P= 17.132633 Days $T_0=147.156293$ (BKJD)



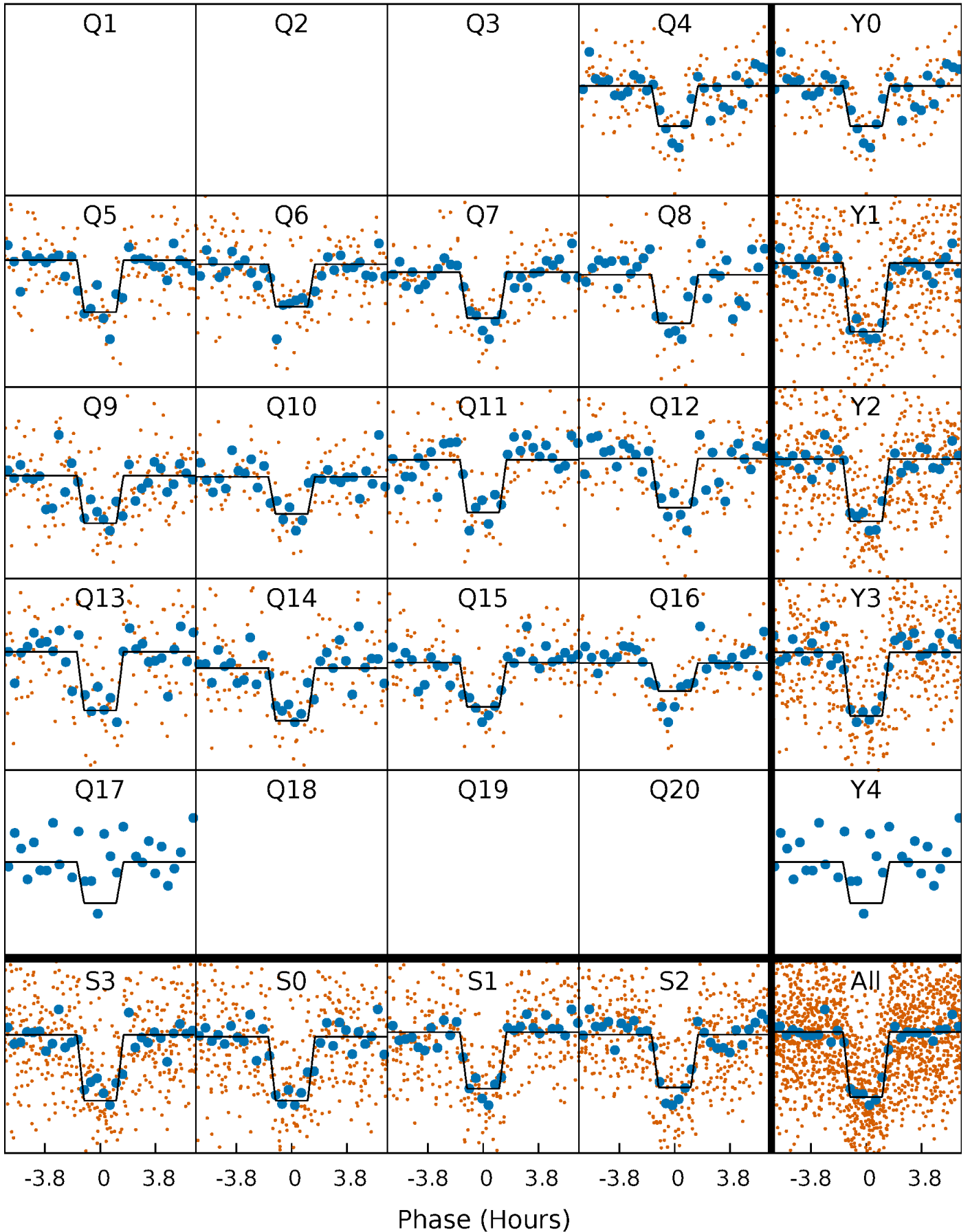
DV Quarter-Phased Transit Curves

TCE 006962109-01 P= 17.132633 Days $T_0=147.156293$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

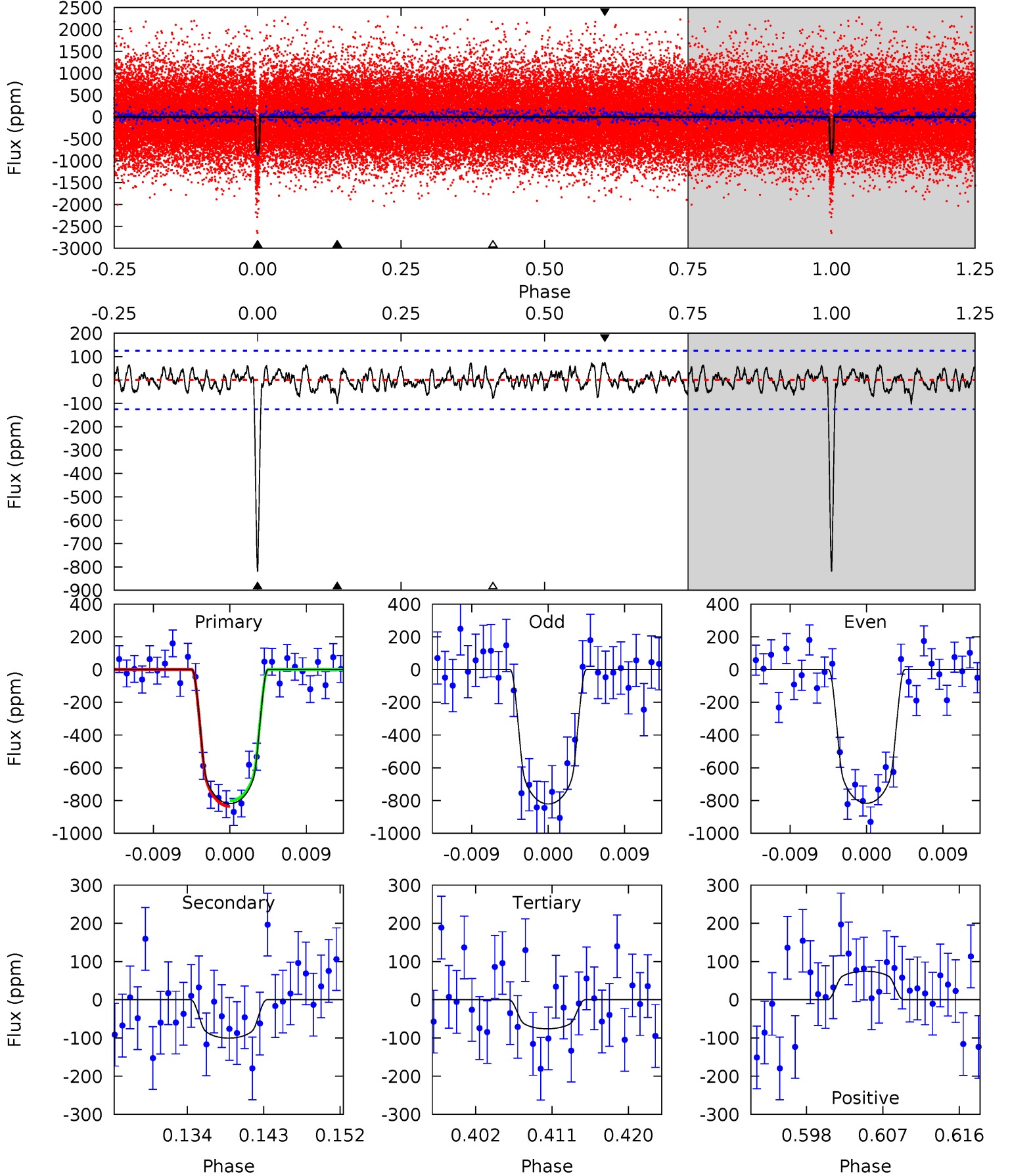
TCE 006962109-01 P= 17.132651 Days $T_0=147.153331$ (BKJD)



DV Model-Shift Uniqueness Test

006962109-01, $P = 17.132633$ Days, $E = 147.156293$ Days

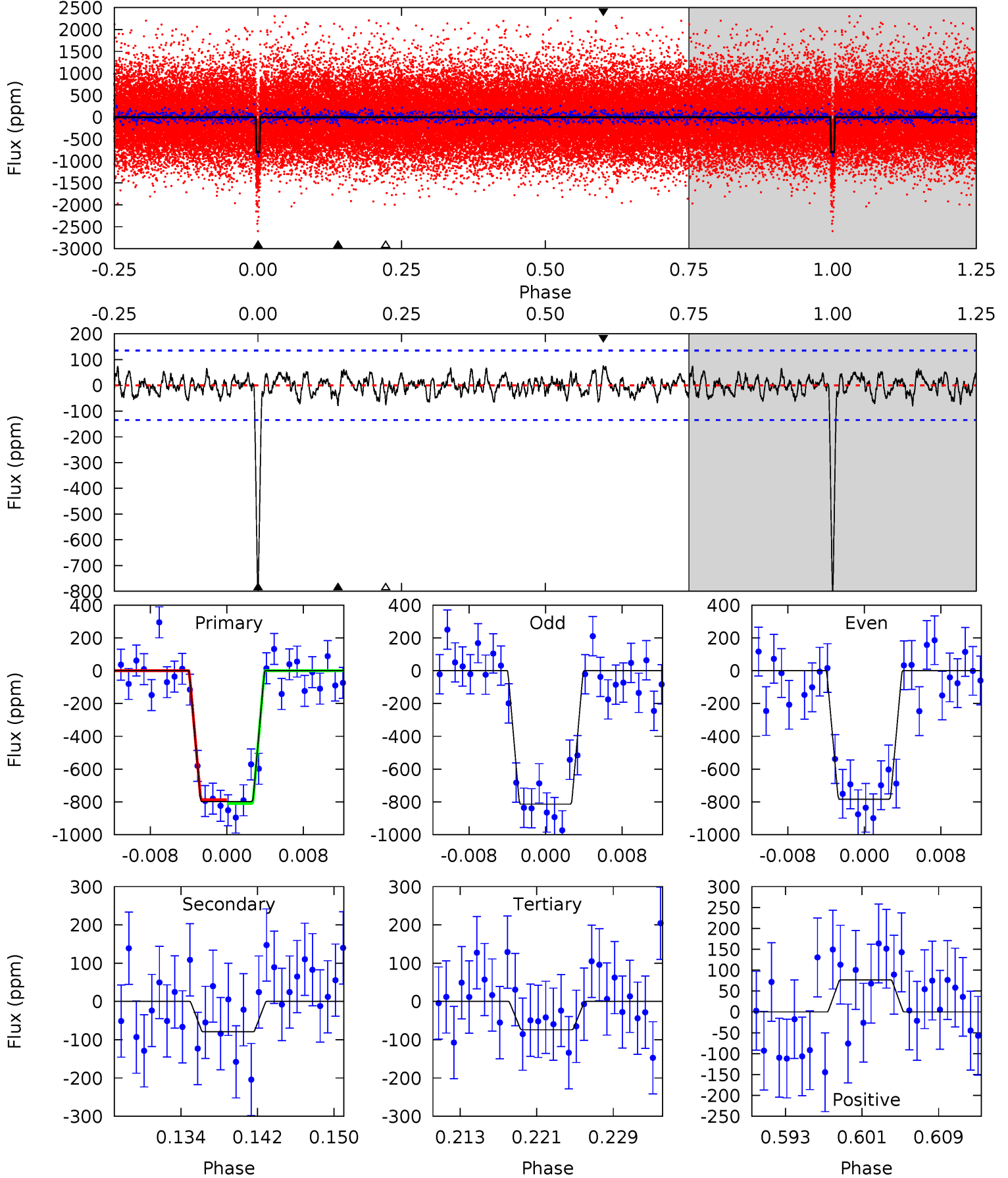
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
33.0	4.05	3.07	3.01	5.05	2.61	1.18	30.0	30.0	0.98	1.04	0.09	1.04	0.08	0.69



Alt Model-Shift Uniqueness Test

006962109-01, P = 17.132651 Days, E = 147.153331 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
30.0	2.98	2.77	2.88	5.07	2.66	1.05	27.2	27.1	0.20	0.10	0.57	1.04	0.09	0.43



Stellar Parameters For KIC 006962109

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5477^{+182}_{-182}	$4.578^{+0.036}_{-0.144}$	$-0.160^{+0.300}_{-0.300}$	$0.794^{+0.176}_{-0.075}$	$0.876^{+0.083}_{-0.102}$	$2.462^{+0.467}_{-1.001}$
	+3%/-3%	+1%/-3%	+188%/-188%	+22%/-9%	+9%/-12%	+19%/-41%
Source	KIC0	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 006962109-01 / KOI 2182.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-100 ± 25	$2.61^{+0.81}_{-0.71}$	873^{+46}_{-38}	3620^{+459}_{-292}	120^{+120}_{-52}
Alt.	-79 ± 27	$2.50^{+0.82}_{-0.73}$	871^{+52}_{-40}	3525^{+512}_{-347}	101^{+113}_{-49}

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

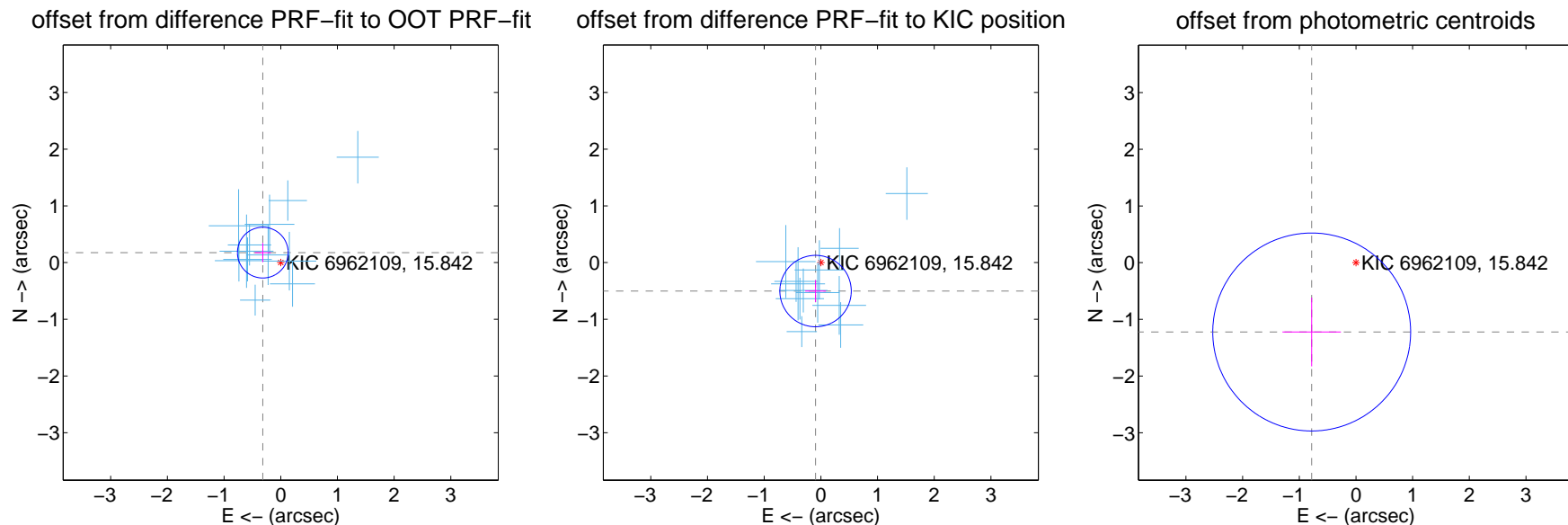
DV Centroid Data

Supplemental centroid analysis for 006962109-01. Kepler magnitude: 15.84. Transit SNR 23.88

There are 12 quarters with good PRF difference image offsets

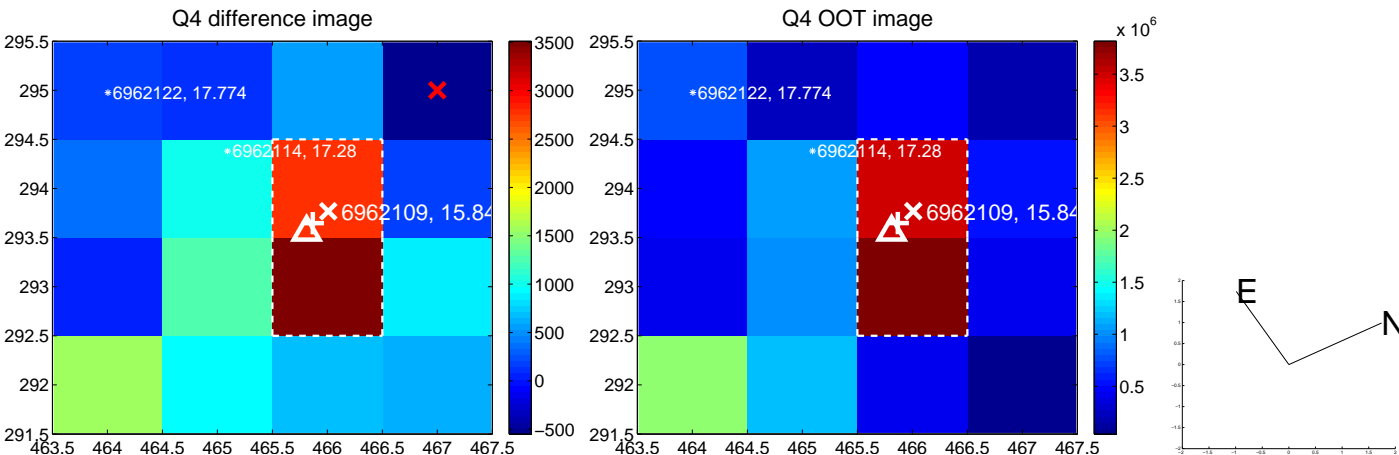
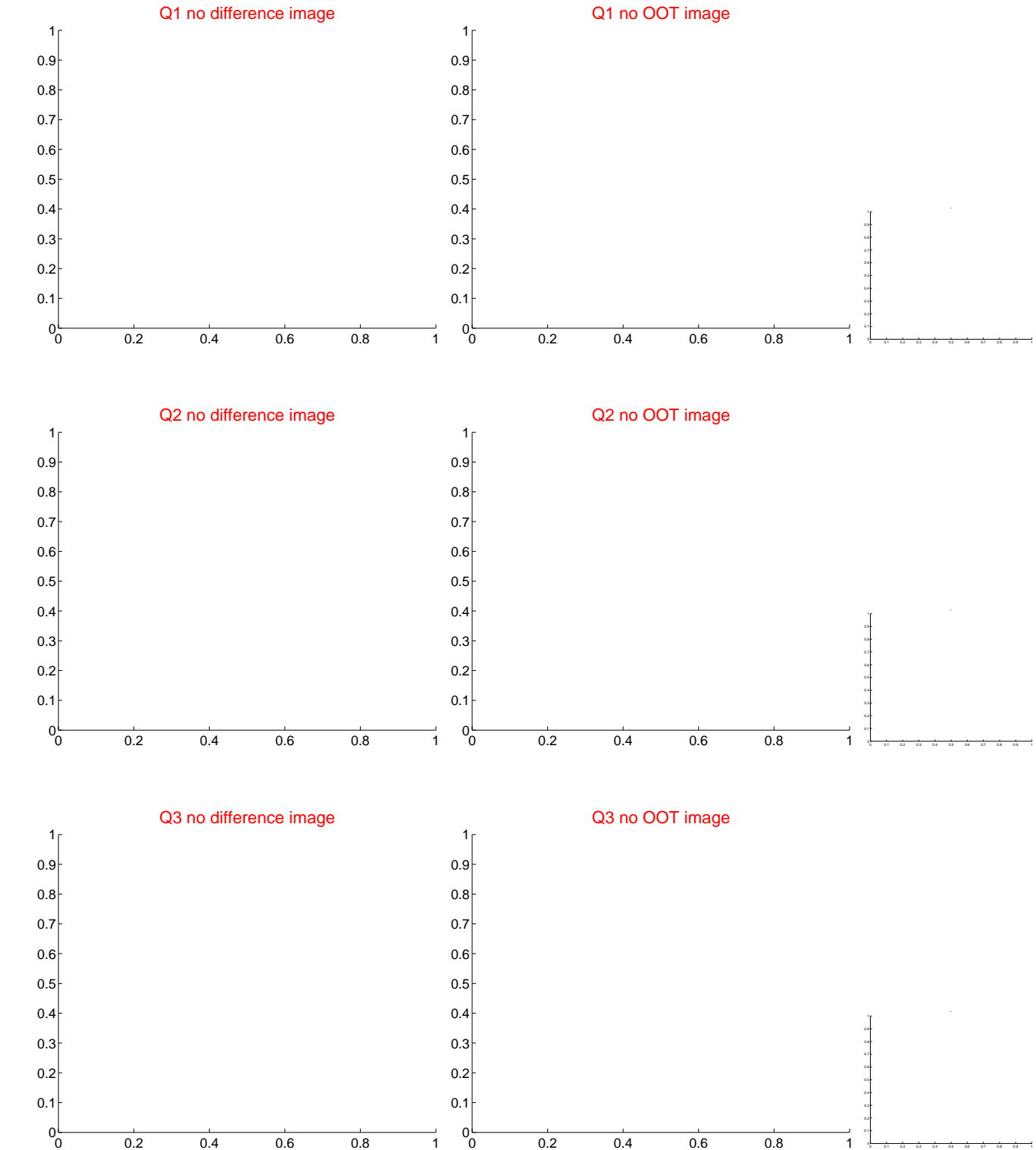
The direct PRF centroid is offset from the target star catalog position by about 0.87 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.362 ± 0.149	2.43	0.317 ± 0.142	0.176 ± 0.169
PRF-fit source offset from KIC position	0.511 ± 0.210	2.43	0.093 ± 0.184	-0.502 ± 0.193
photometric centroid source offset	1.45 ± 0.58	2.49	0.78 ± 0.52	-1.22 ± 0.61

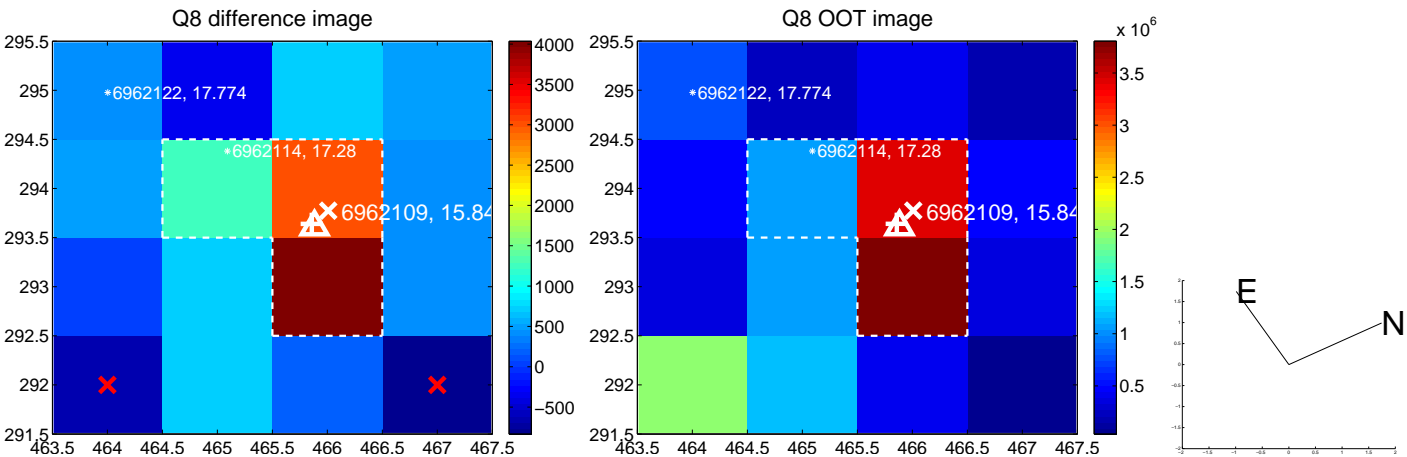
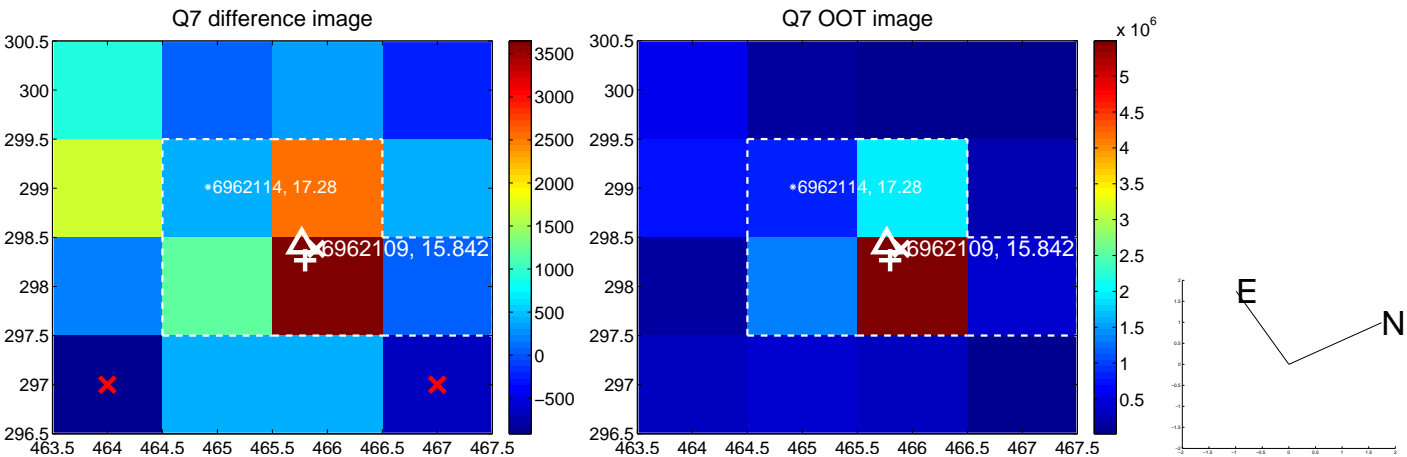
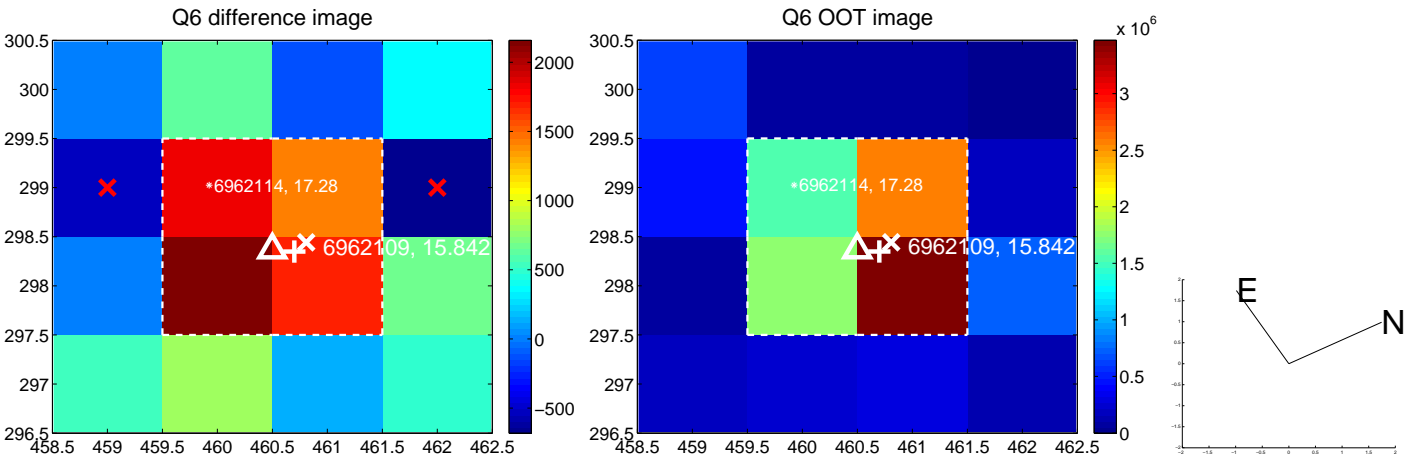
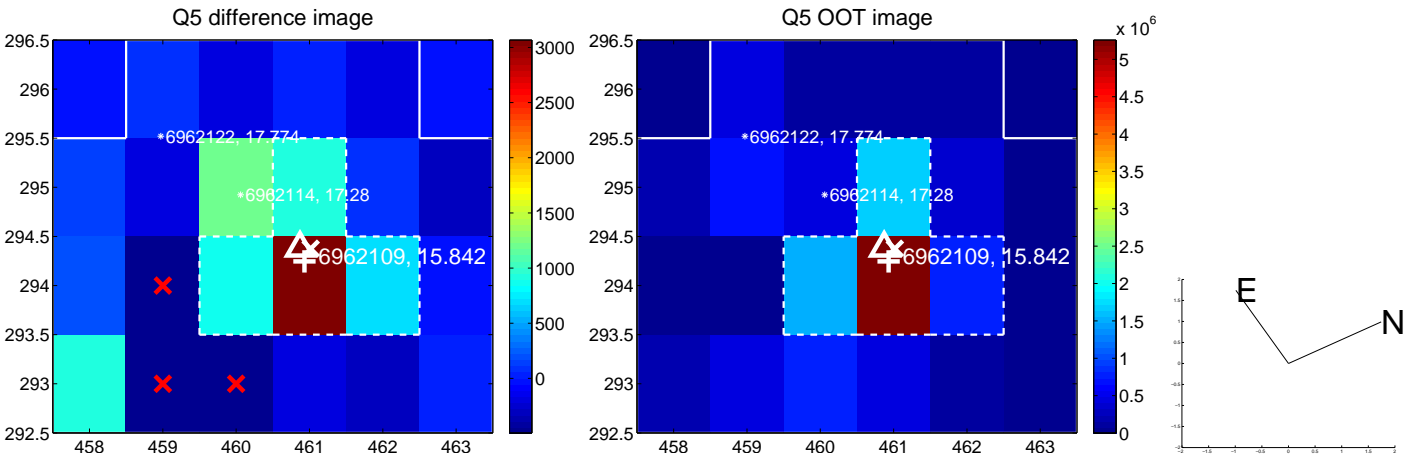


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

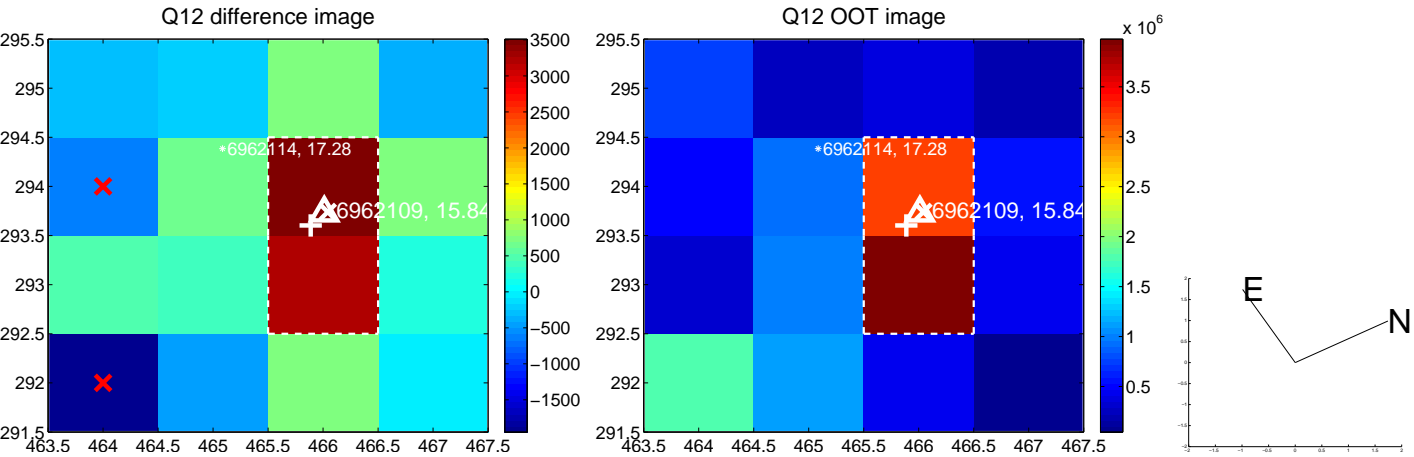
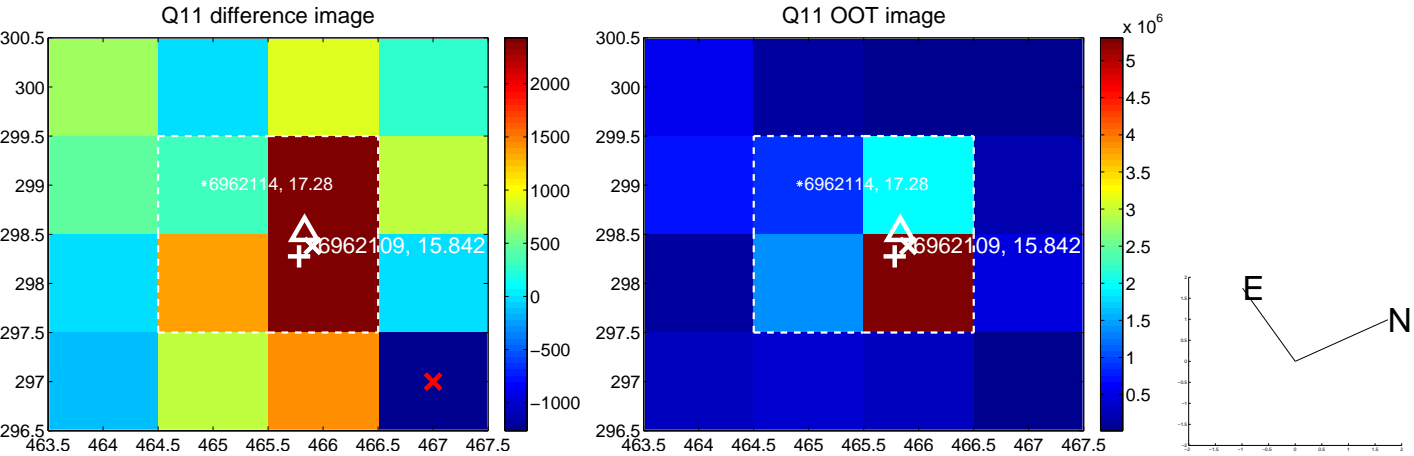
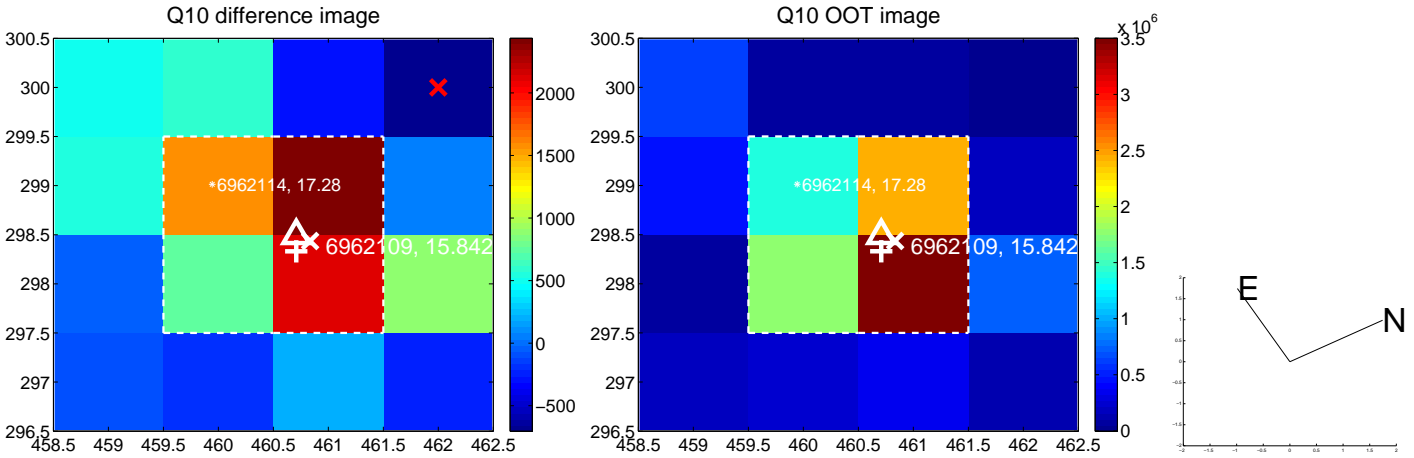
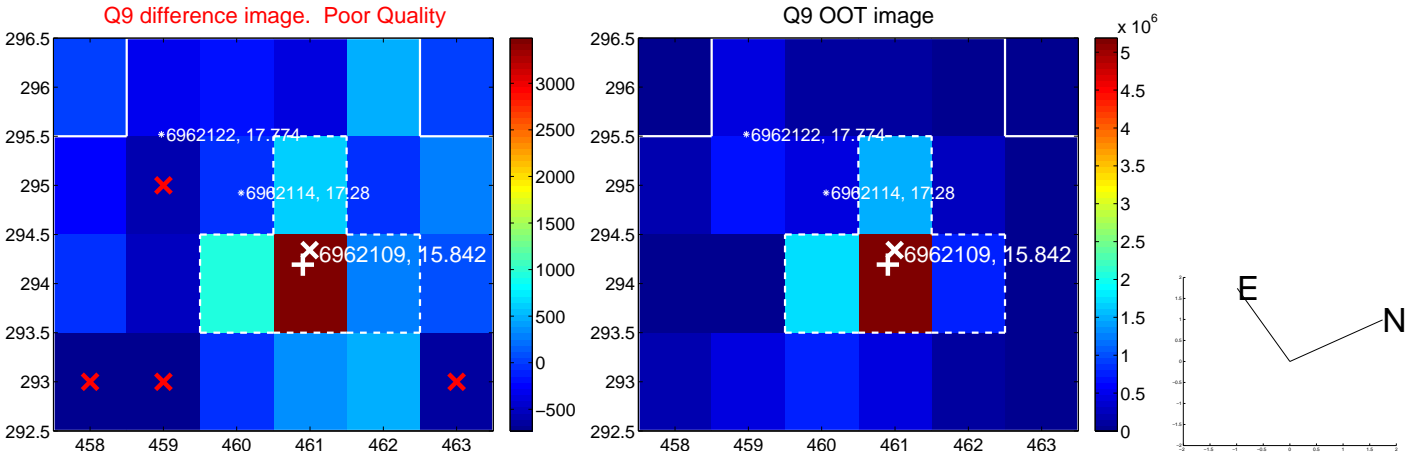
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



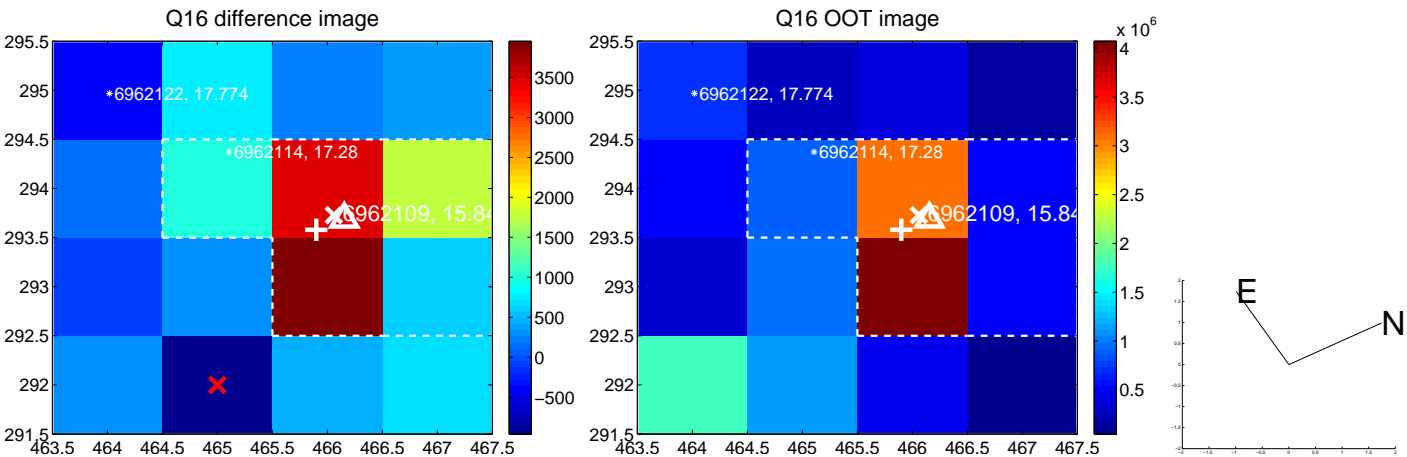
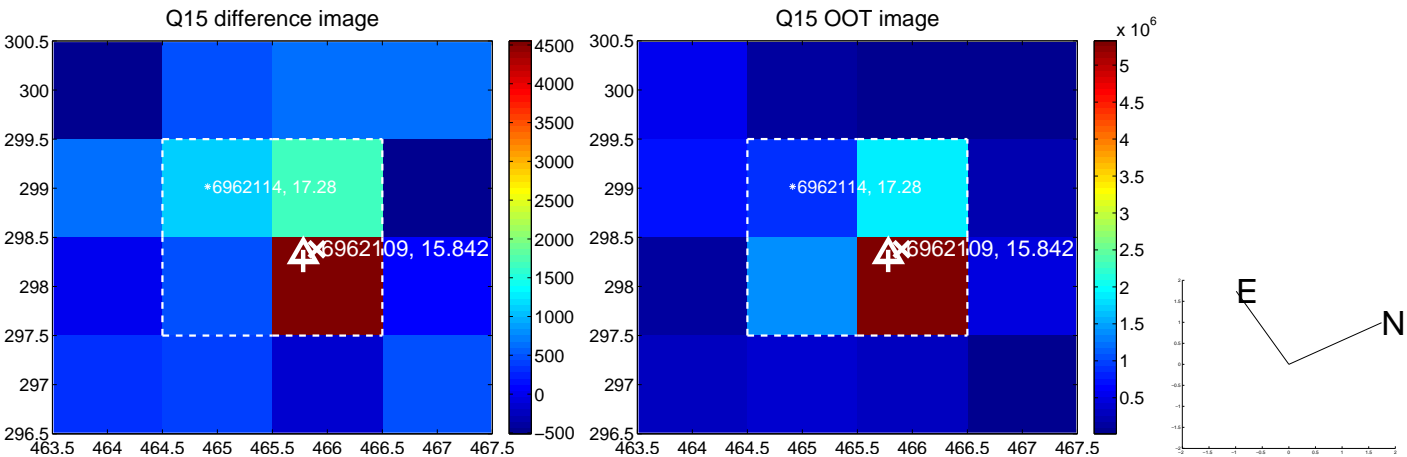
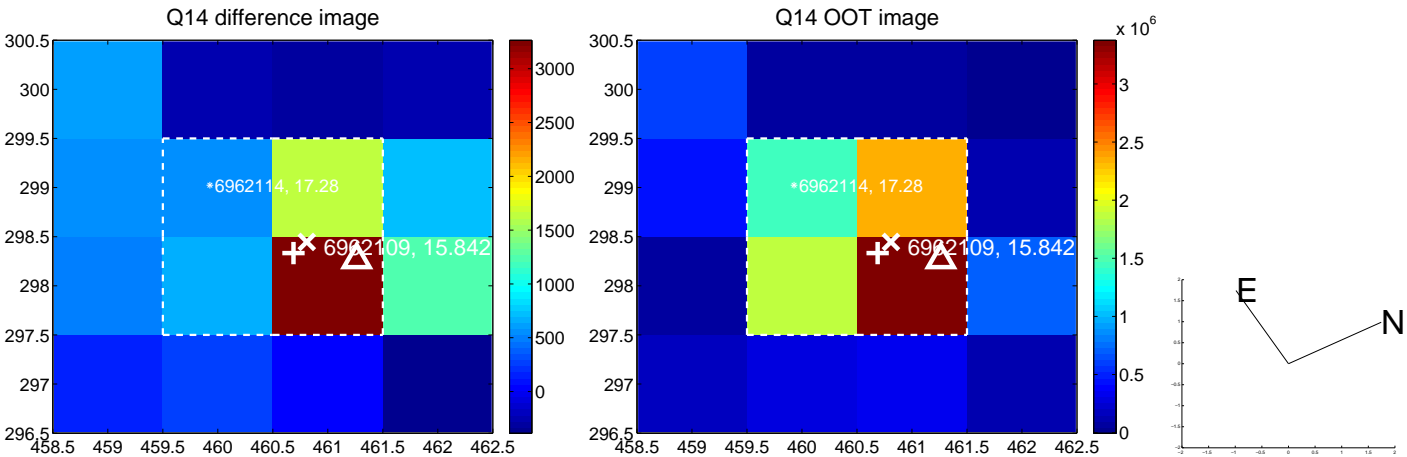
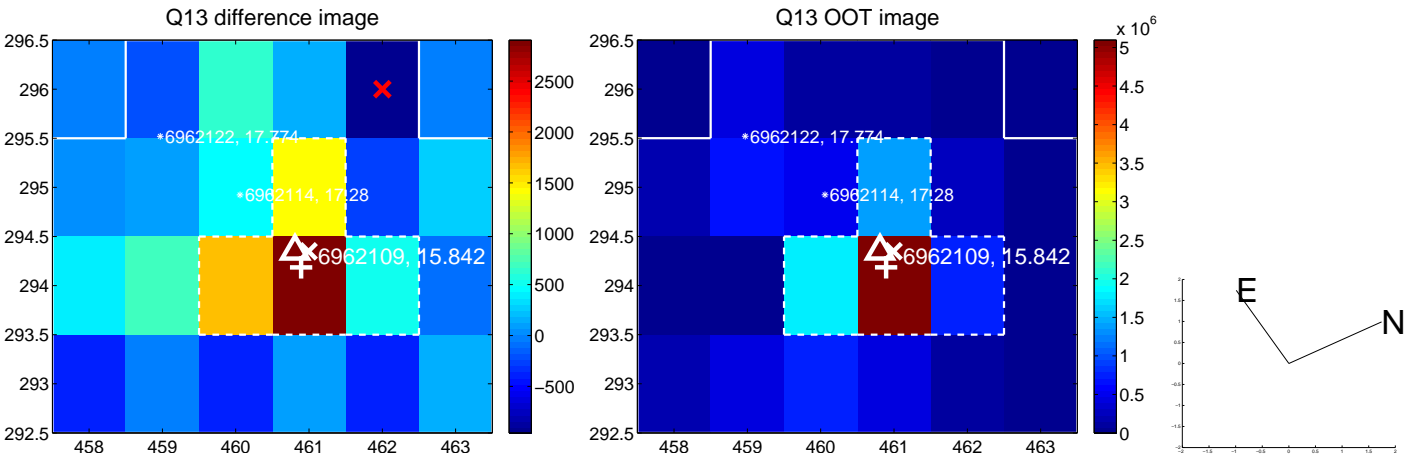
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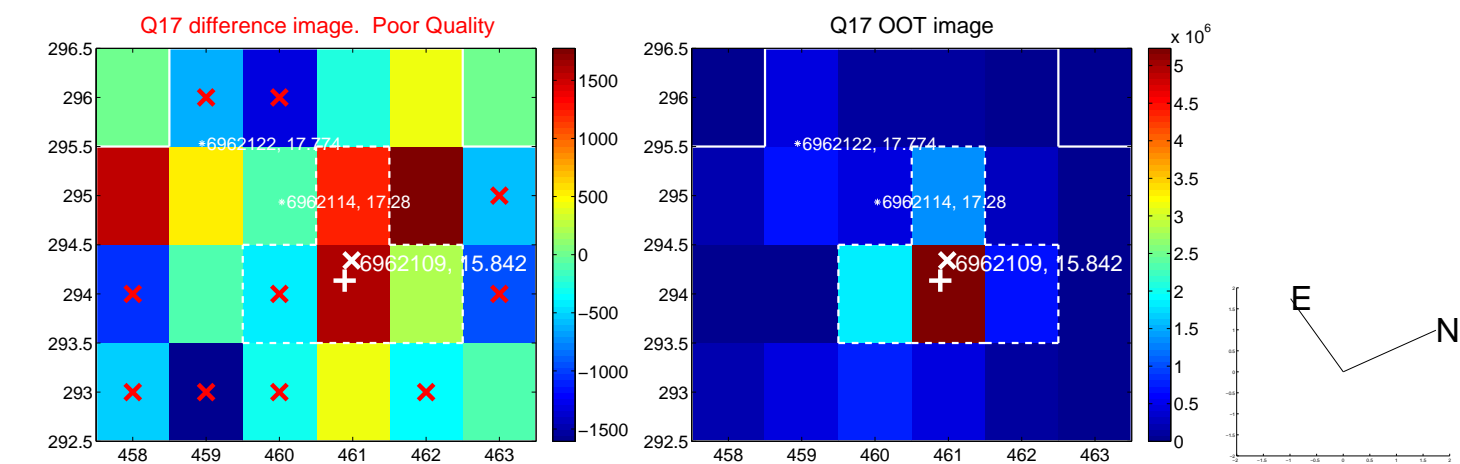
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



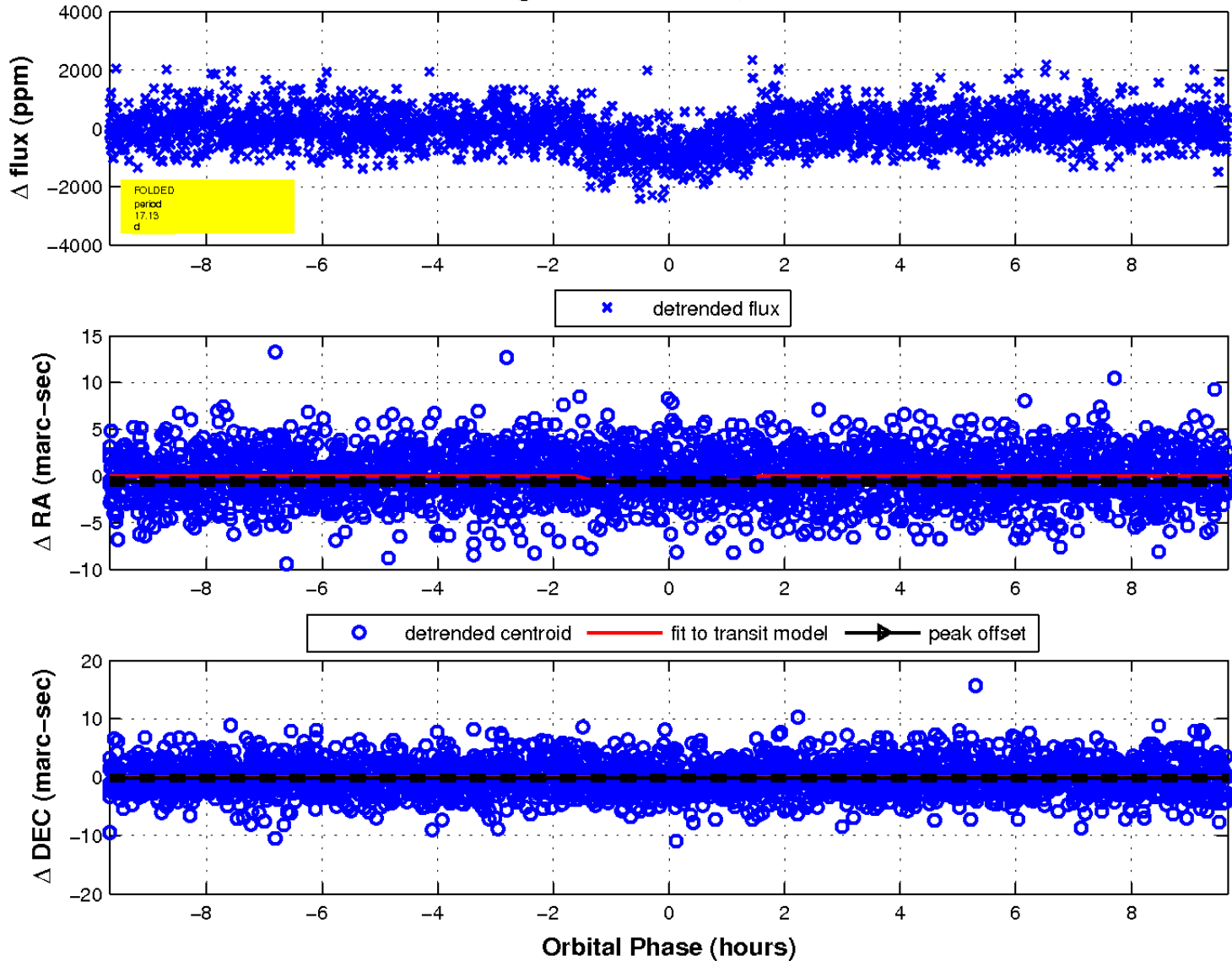
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

