

KIC 004391348

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})
004391348-01	OBS	2514.01	1.964336	131.651233	131.3	2.524	13.1	13.5	1.12	6306	1.50	1706.19

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004391348-01	OBS	FP	0.00	0	0	1	0	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.

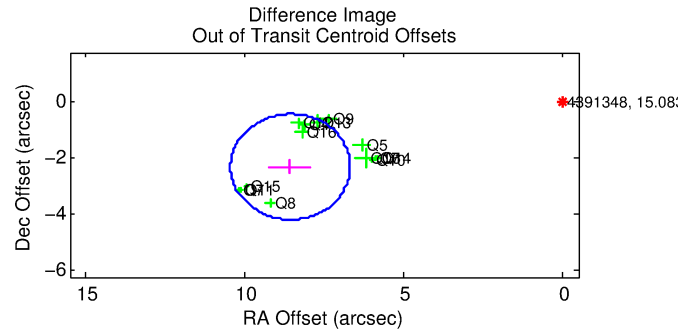
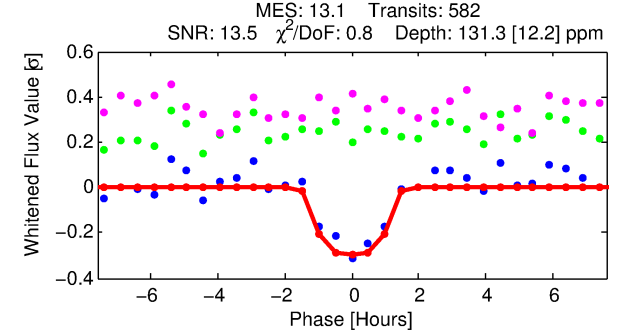
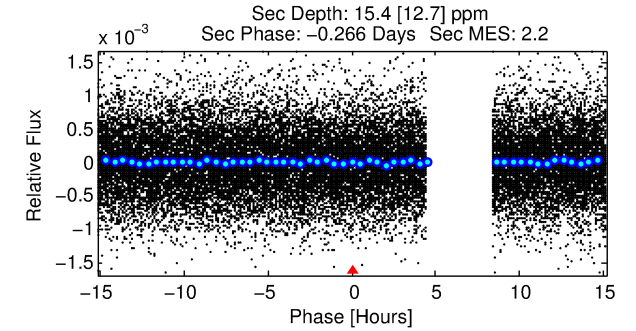
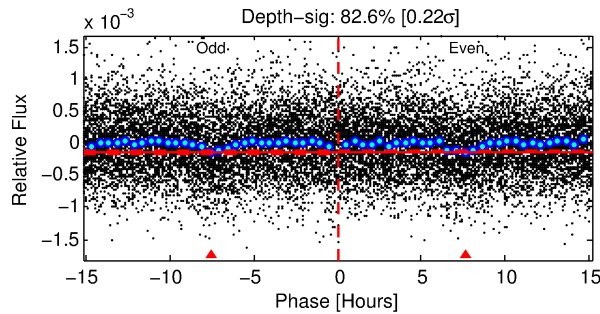
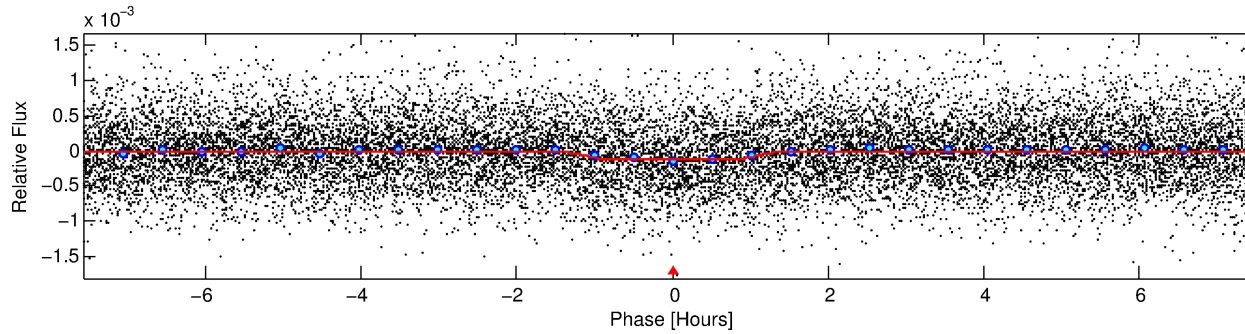
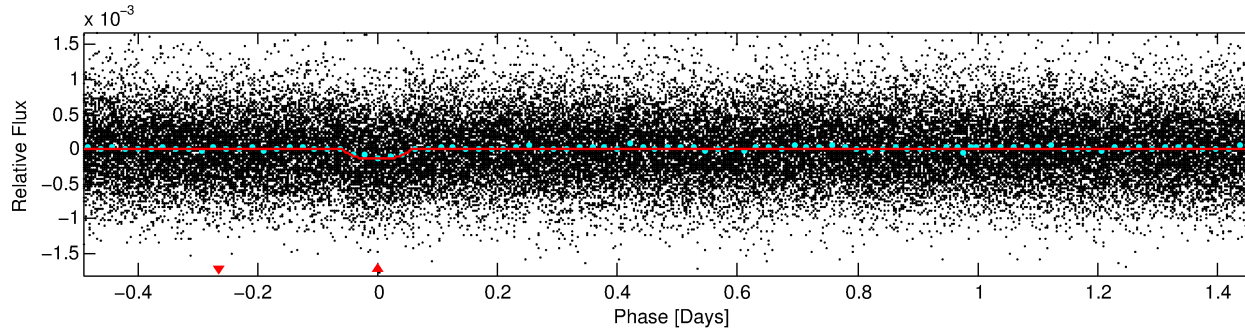
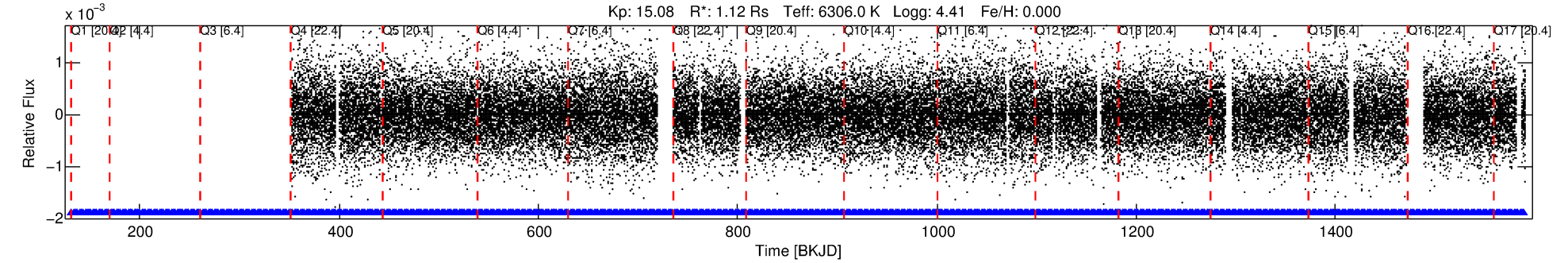
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004391348-01

No Significant Match Found

DV One-Page Summary

KIC: 4391348 Candidate: 1 of 1 Period: 1.964 d
KOI: K02514.01 Corr: 0.994



DV Fit Results:

Period = 1.96434 [0.00001] d
Epoch = 131.6512 [0.0029] BKJD
Rp/R* = 0.0123 [0.0065]
a/R* = 2.99 [7.71]
b = 0.89 [0.67]
Seff = 1706.19 [748.86]
Teq = 1639 [180] K
Rp = 1.50 [0.95] Re
a = 0.0323 [0.0092] AU
Ag = 3.94 [5.55] [0.53 σ]
Teffp = 3569 [1213] K [1.57 σ]

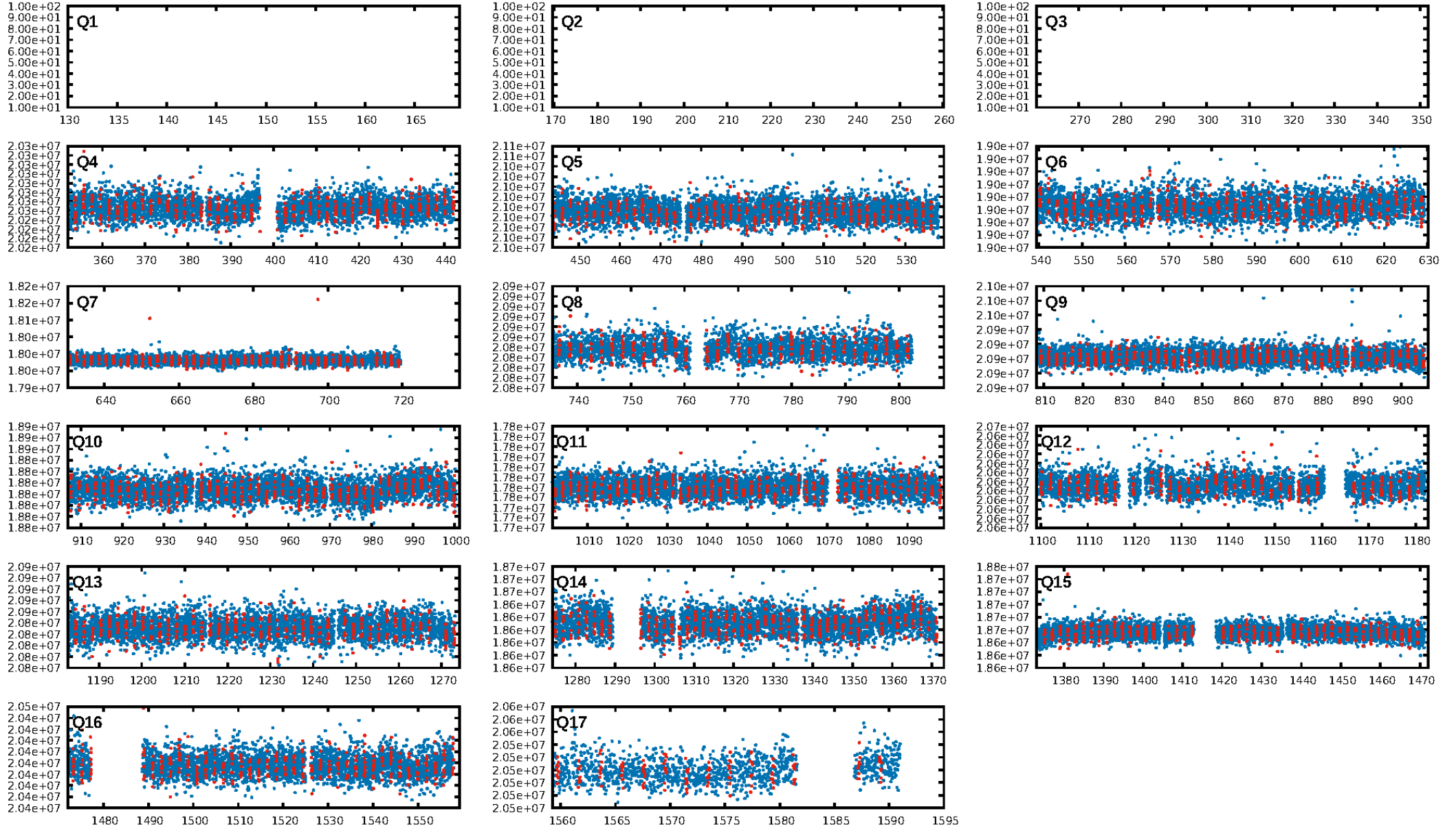
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 9.73e-40
RollingBand-fgt: 1.00 [568/568]
GhostDiagnostic-chr: -0.2194
Centroid-sig: 0.0%
Centroid-so: 19.433 arcsec [18.58 σ]
OotOffset-rm: 8.879 arcsec [14.16 σ]
KicOffset-rm: 8.797 arcsec [14.80 σ]
OotOffset-st: 3/3/4/4 [14]
KicOffset-st: 3/3/4/4 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

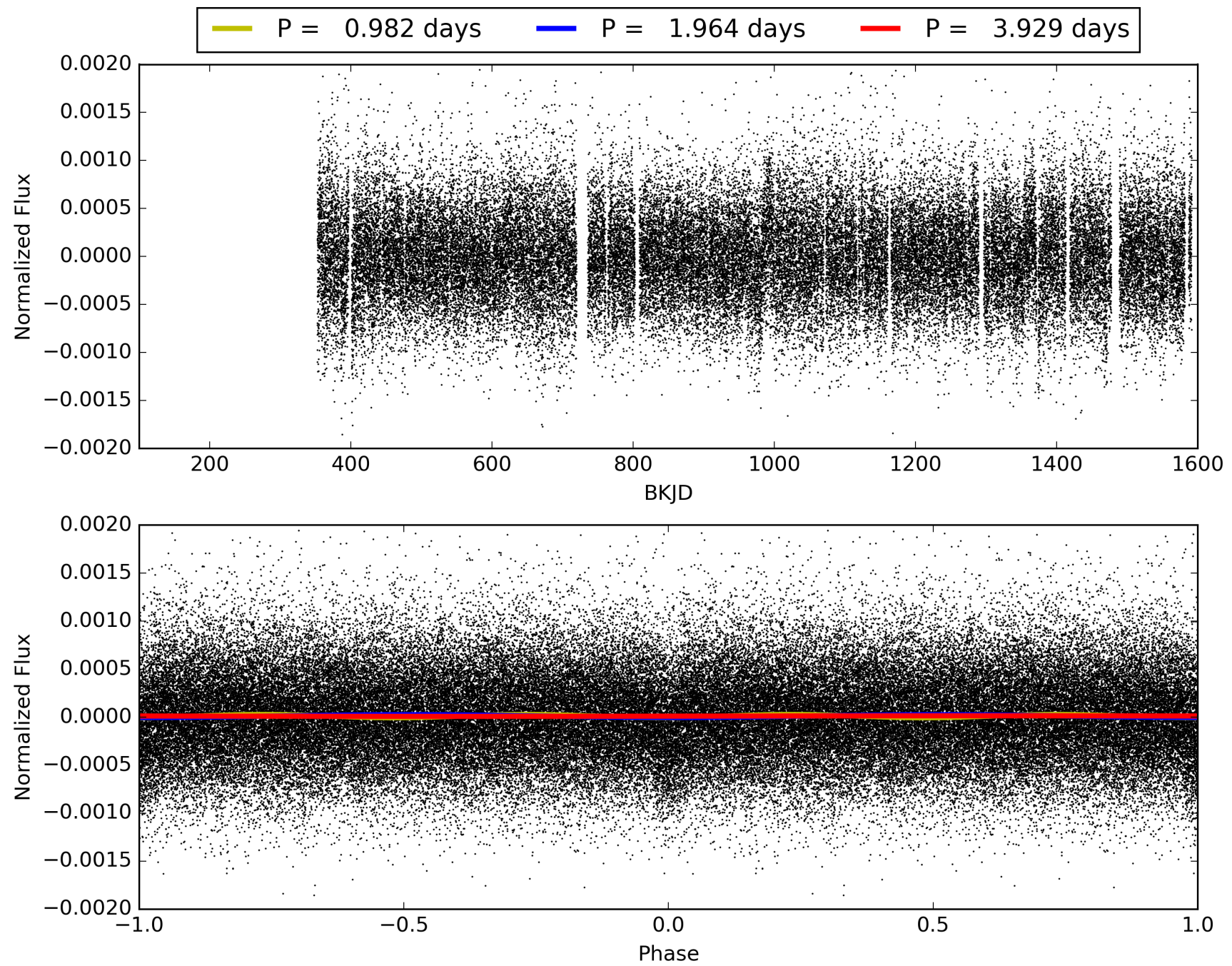
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 09:52:43 Z

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

TCE 004391348-01, PDC Light Curves

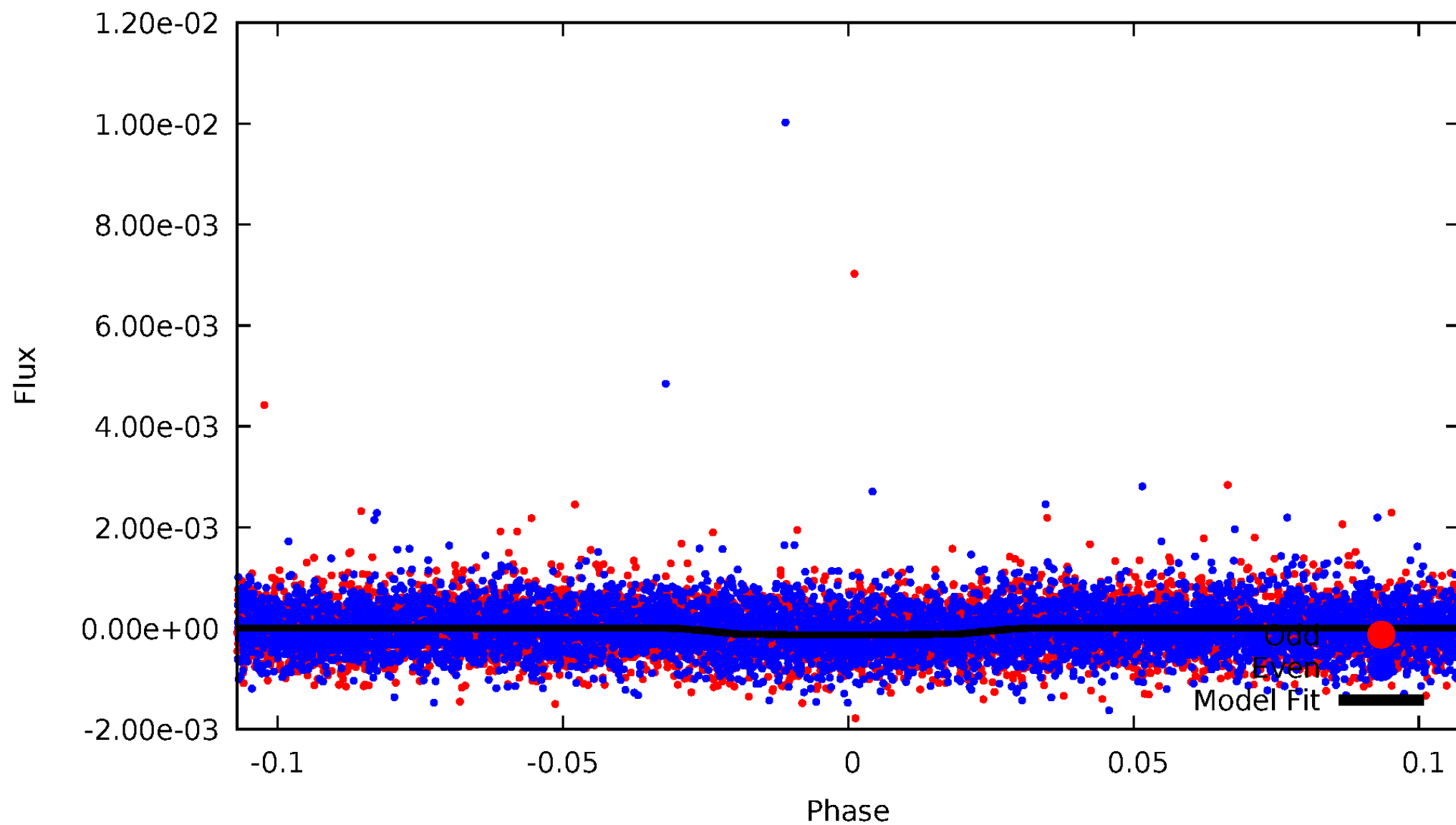


TCE 004391348-01



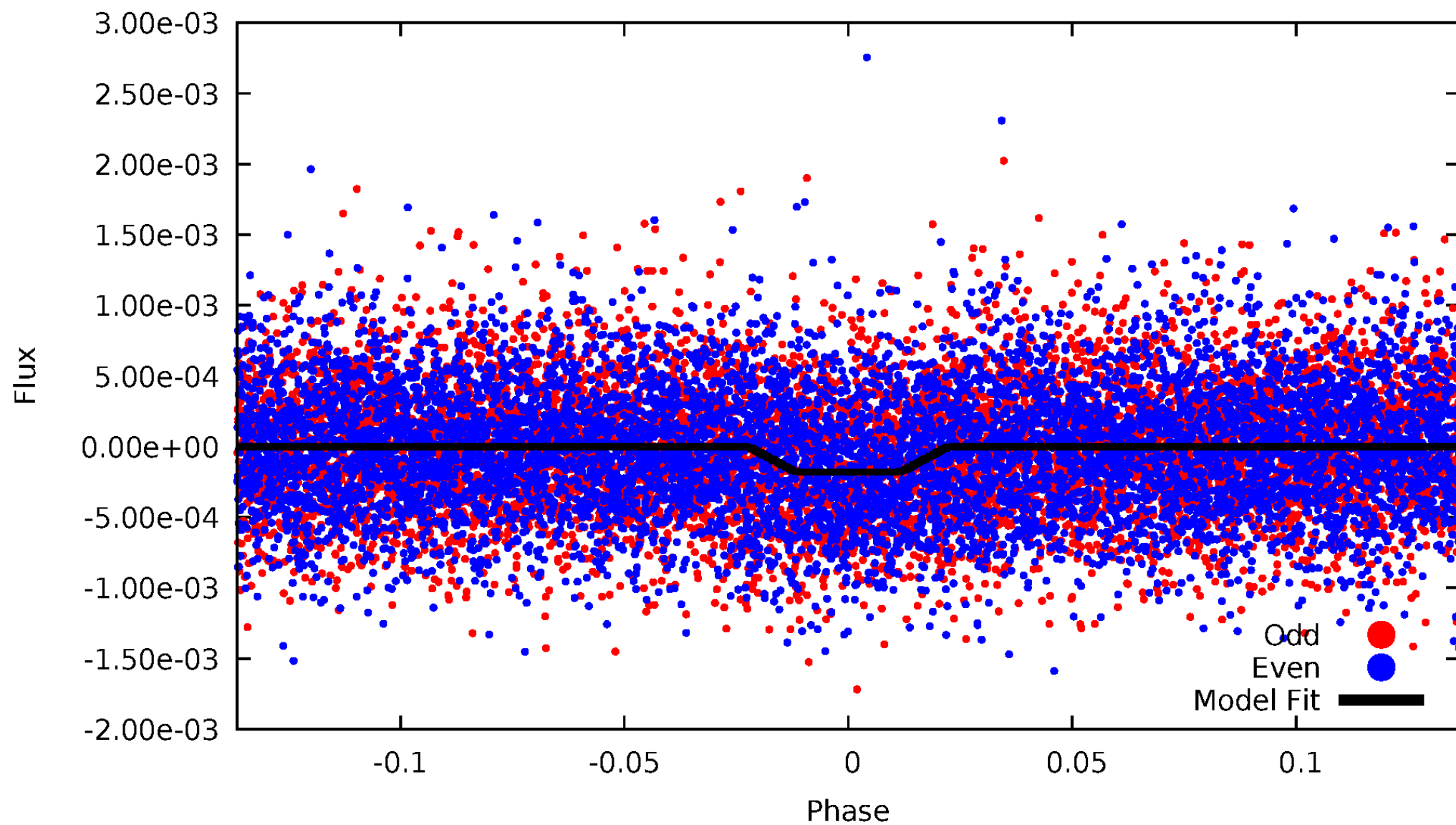
DV Odd/Even

TCE 004391348-01

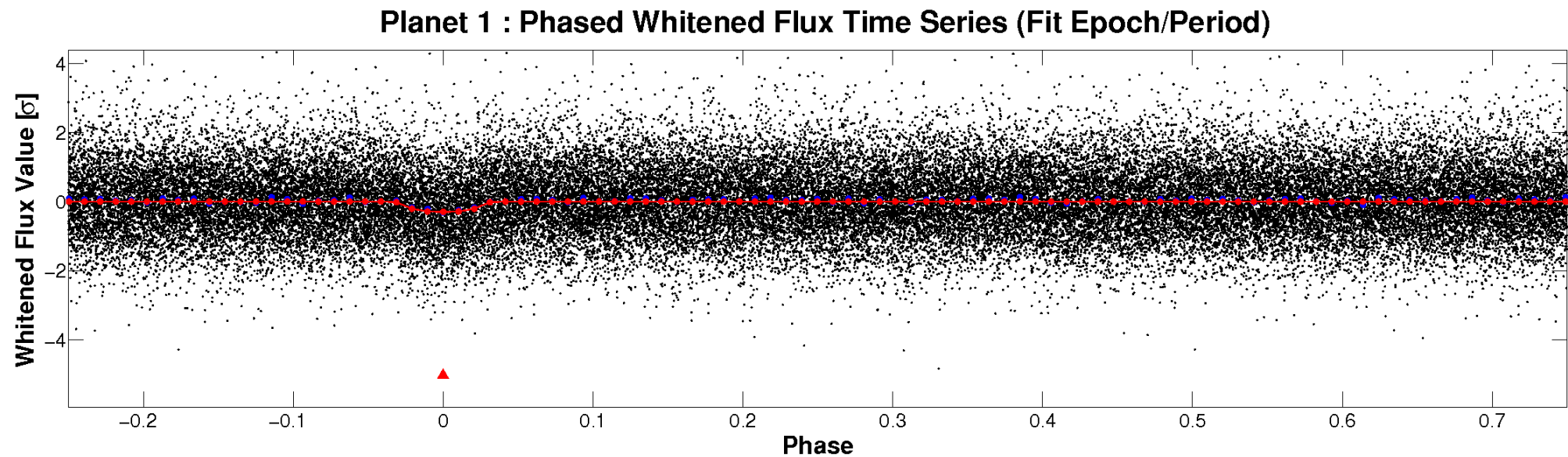
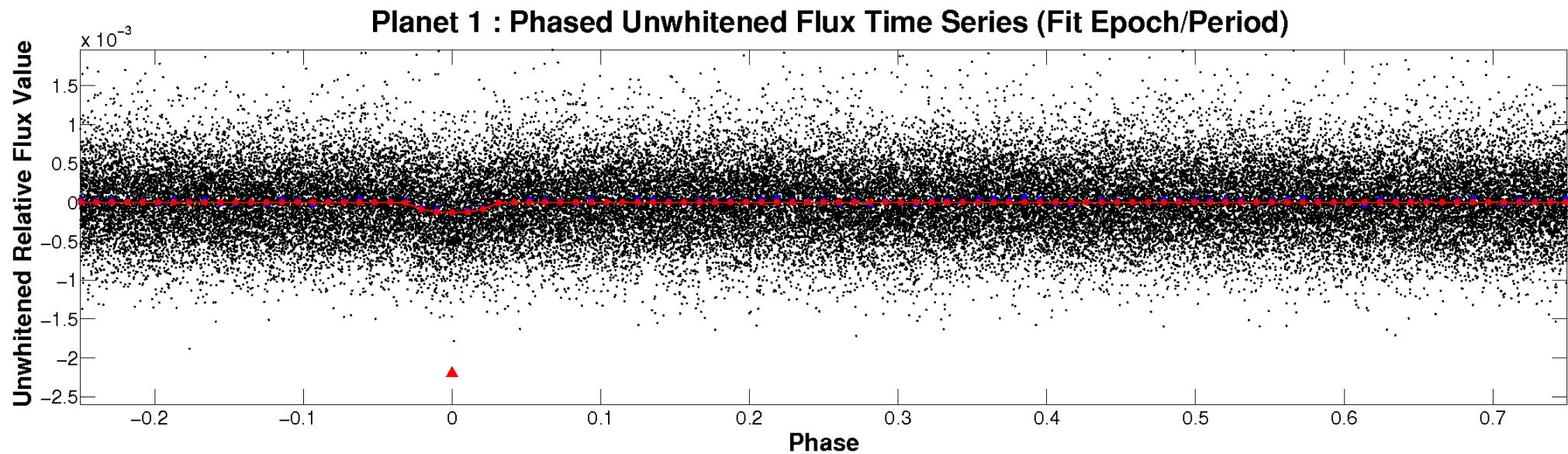


ALT Odd/Even

TCE 004391348-01

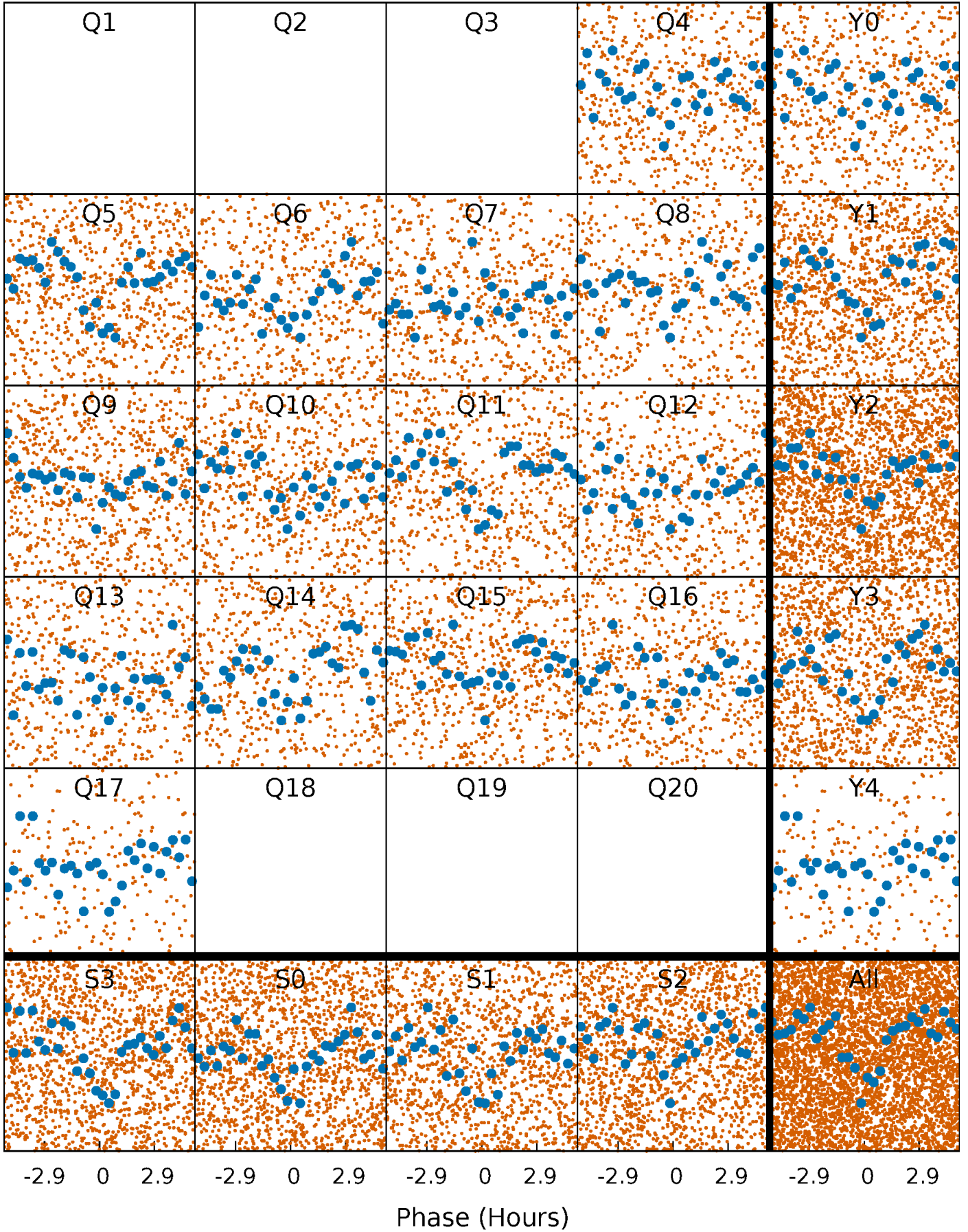


Non-Whitened Vs. Whitened Light Curve



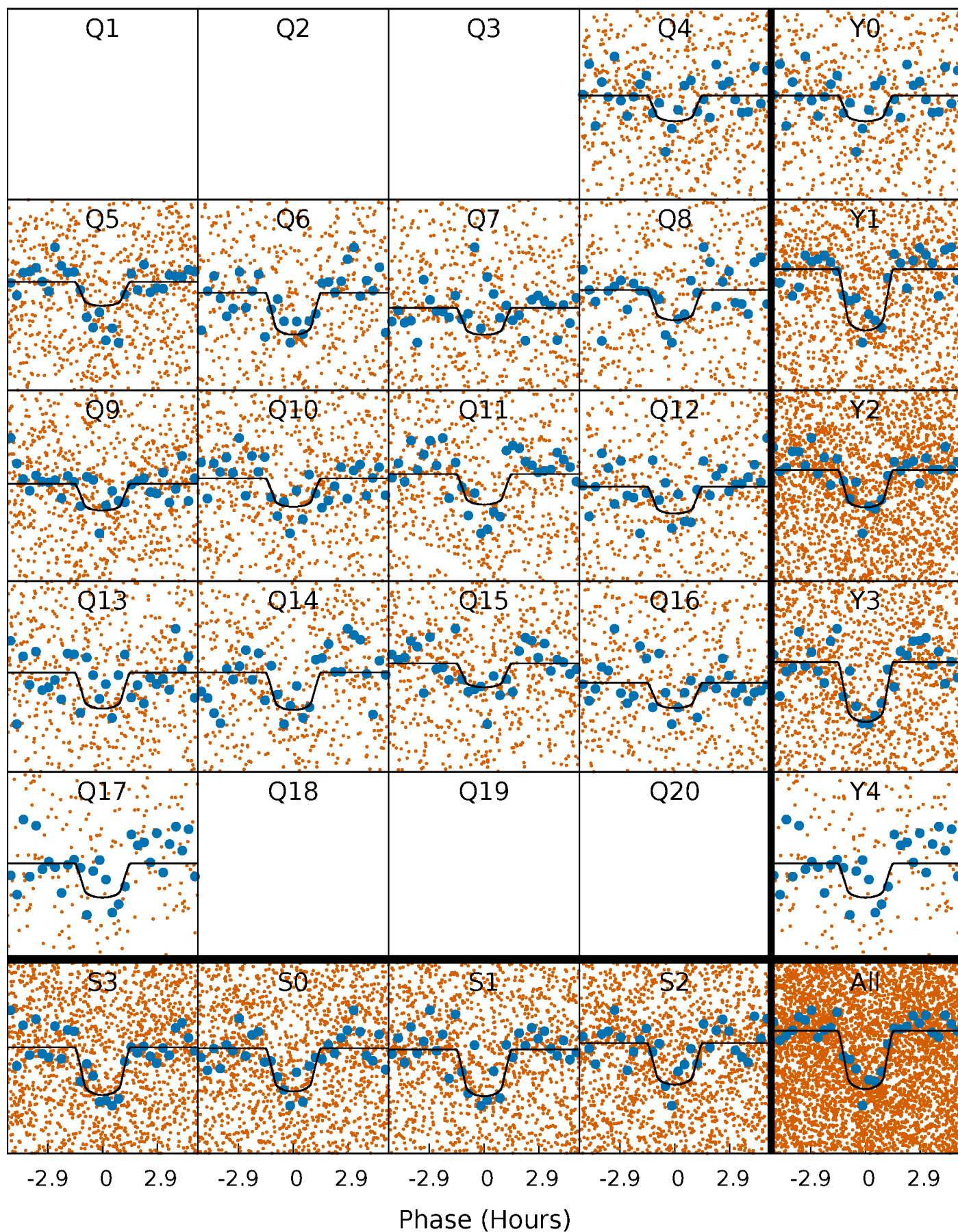
PDC Quarter-Phased Transit Curves

TCE 004391348-01 P= 1.964336 Days $T_0=131.651232$ (BKJD)



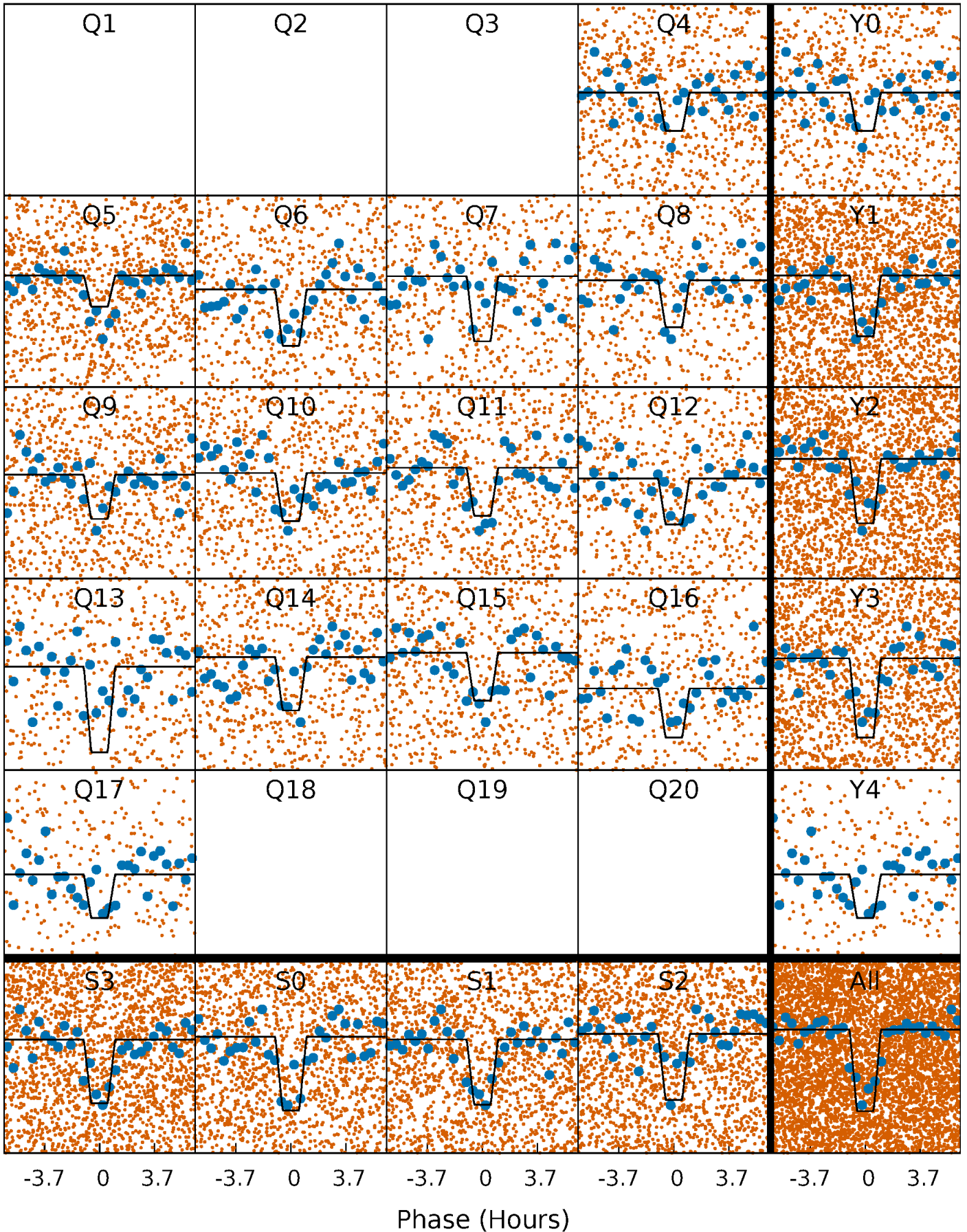
DV Quarter-Phased Transit Curves

TCE 004391348-01 P= 1.964336 Days $T_0=131.651232$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

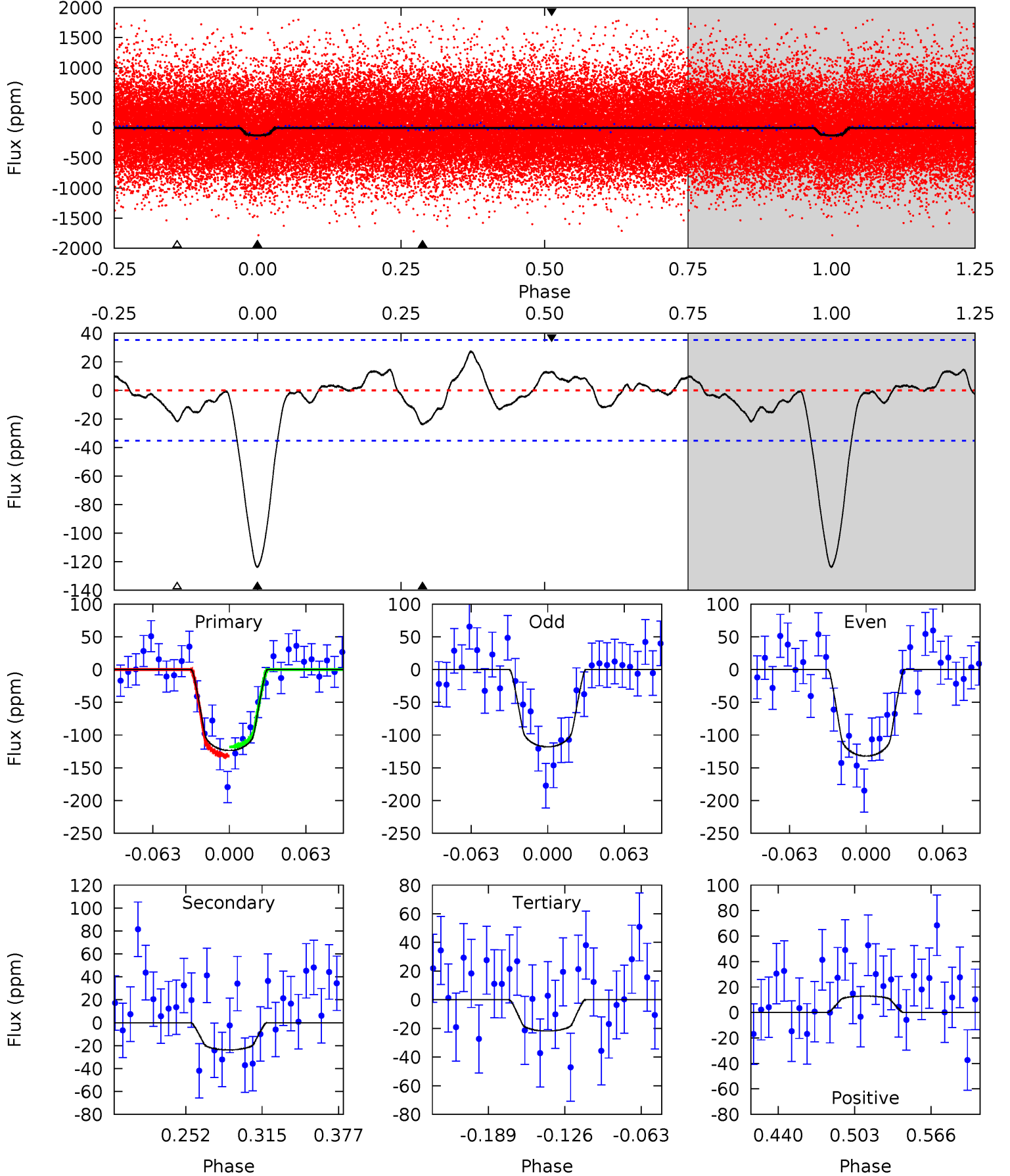
TCE 004391348-01 P= 1.964341 Days $T_0=131.649259$ (BKJD)



DV Model-Shift Uniqueness Test

004391348-01, P = 1.964336 Days, E = 131.651232 Days

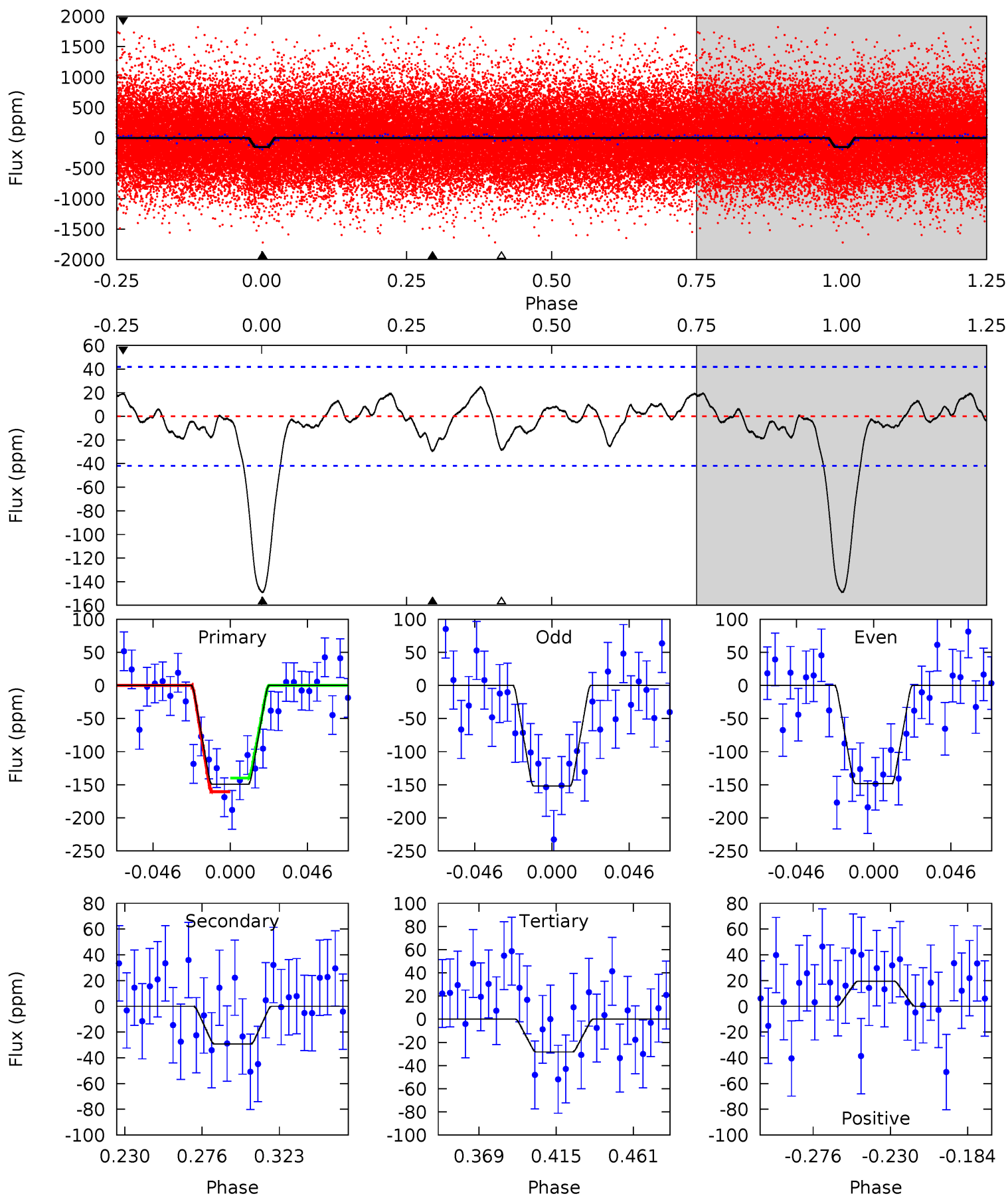
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.3	3.13	2.88	1.70	4.66	1.86	1.22	13.5	14.6	0.25	1.43	0.93	0.90	0.18	0.92



Alt Model-Shift Uniqueness Test

004391348-01, P = 1.964341 Days, E = 131.649259 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.8	3.30	3.19	2.19	4.72	1.99	1.22	13.6	14.6	0.11	1.11	0.20	0.95	0.14	1.17



Stellar Parameters For KIC 004391348

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6306^{+174}_{-261}	$4.405^{+0.073}_{-0.218}$	$0.000^{+0.250}_{-0.300}$	$1.121^{+0.388}_{-0.129}$	$1.166^{+0.169}_{-0.169}$	$1.167^{+0.349}_{-0.631}$
	+3%/-4%	+2%/-5%	+inf%/-inf%	+35%/-12%	+14%/-14%	+30%/-54%
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 004391348-01 / KOI 2514.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-24±8	$1.59^{+0.84}_{-0.75}$	2318^{+190}_{-121}	4102^{+1263}_{-611}	$5.187^{+12.984}_{-3.134}$
Alt.	-29±9	$1.71^{+0.90}_{-0.82}$	2325^{+182}_{-140}	4185^{+1334}_{-686}	$5.384^{+16.067}_{-3.227}$

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming A=0.3)

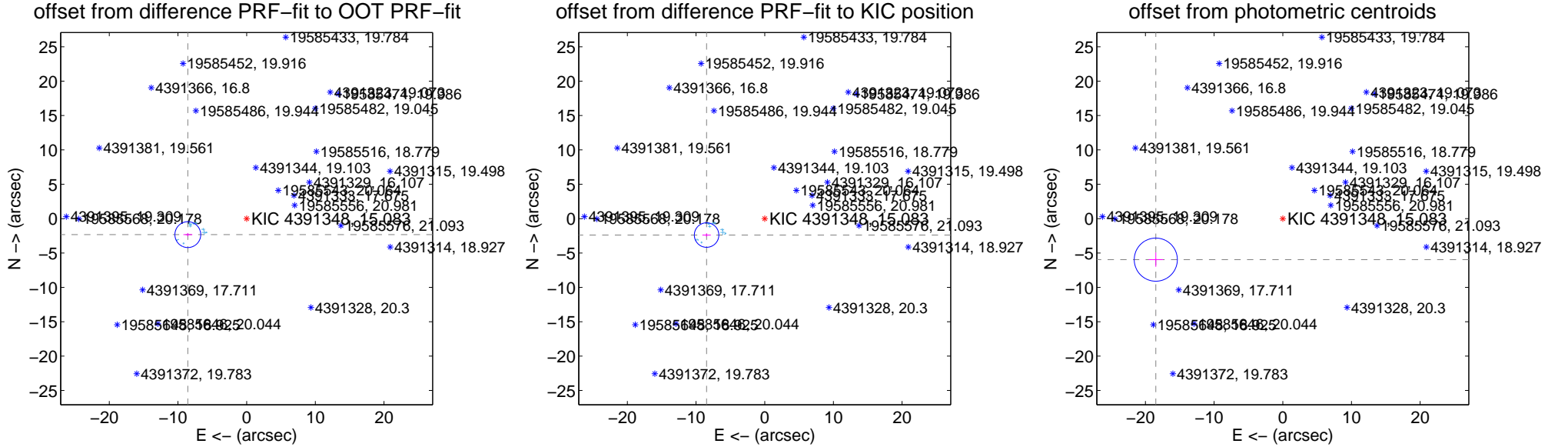
A_{obs} = Observed Albedo (Assuming T=0)

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

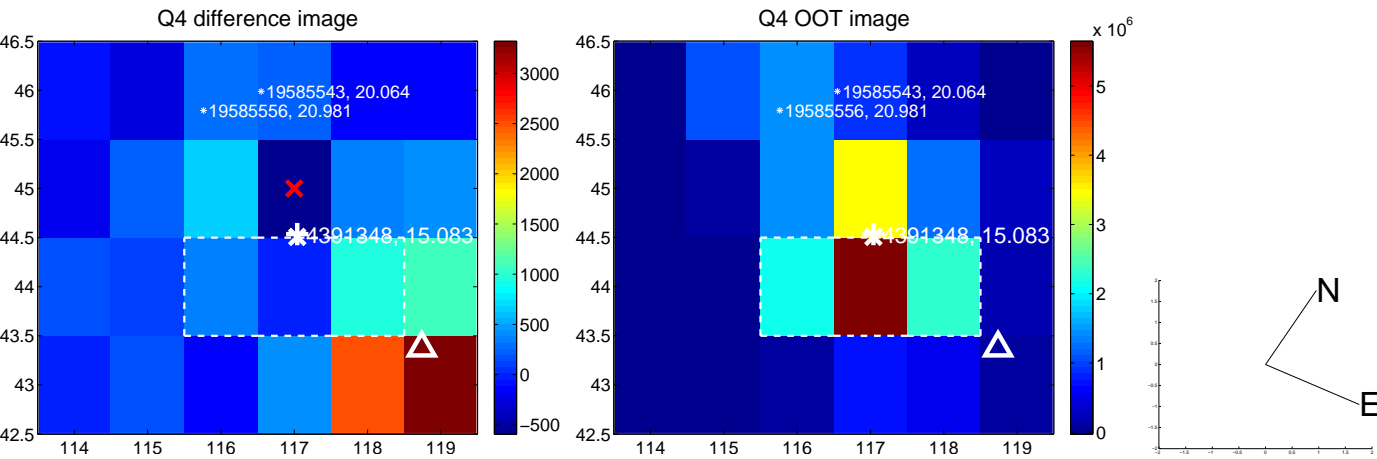
Supplemental centroid analysis for 004391348-01. Kepler magnitude: 15.08. Transit SNR 13.54
 There are 14 quarters with good PRF difference image offsets
 The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	8.879 ± 0.627	14.16	8.568 ± 0.647	-2.327 ± 0.237
PRF-fit source offset from KIC position	8.797 ± 0.595	14.80	8.466 ± 0.614	-2.390 ± 0.226
photometric centroid source offset	19.43 ± 1.05	18.58	18.49 ± 1.05	-5.97 ± 1.04

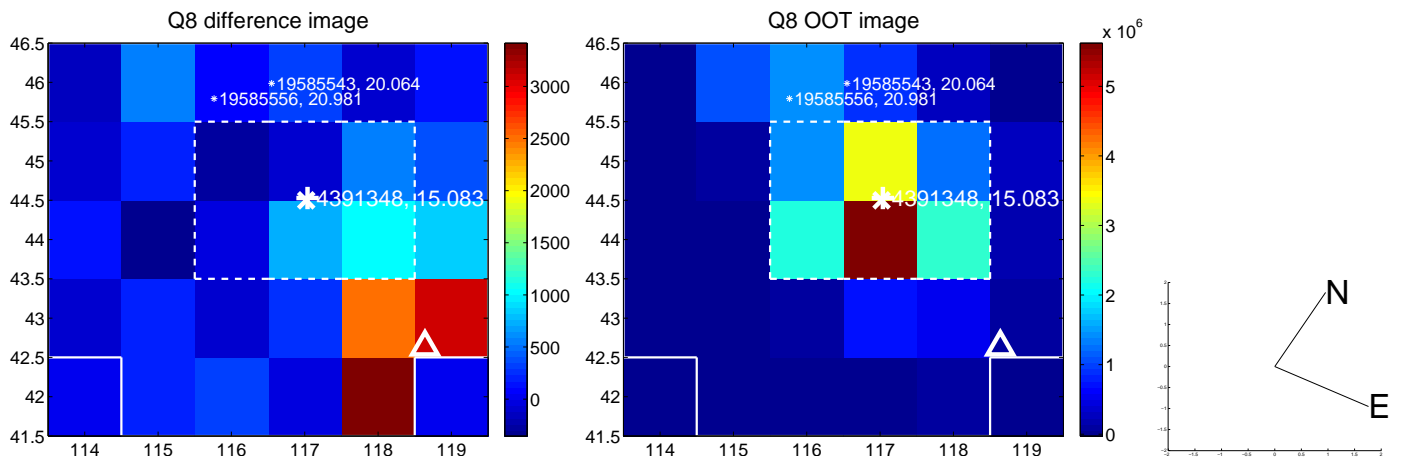
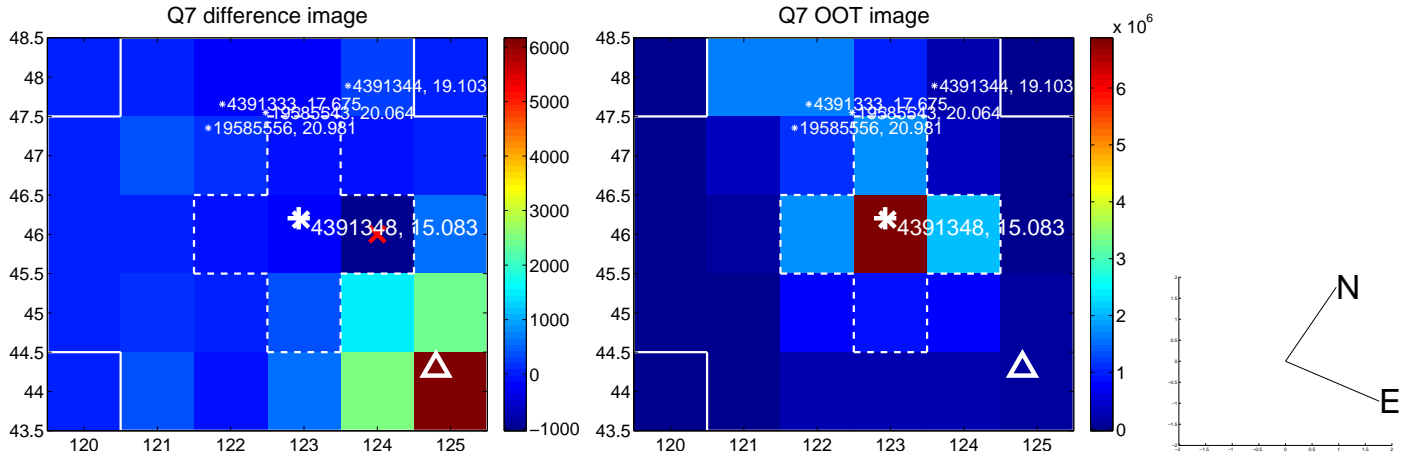
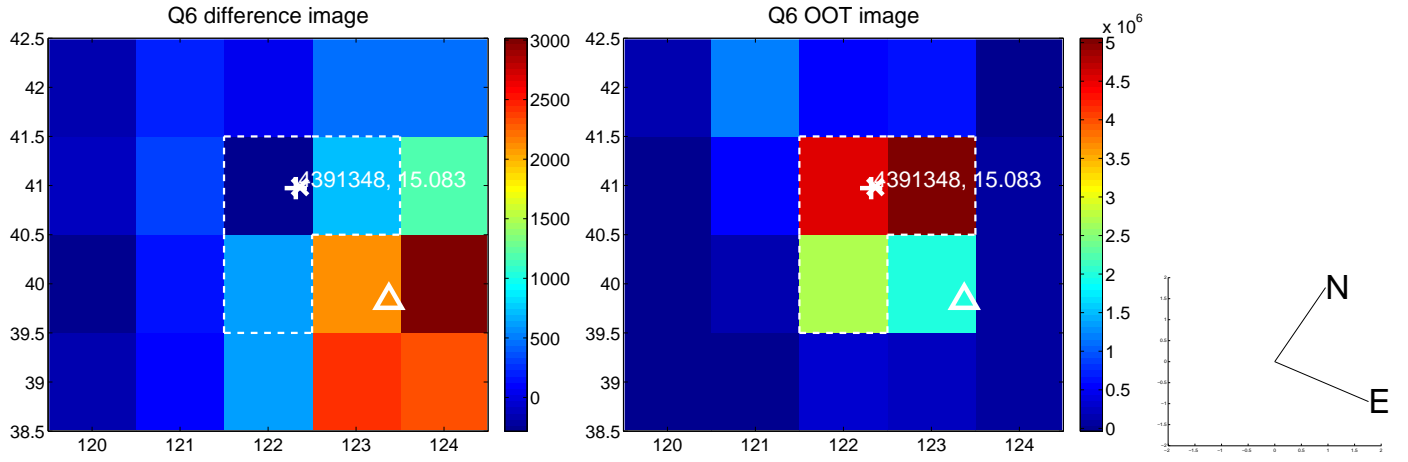
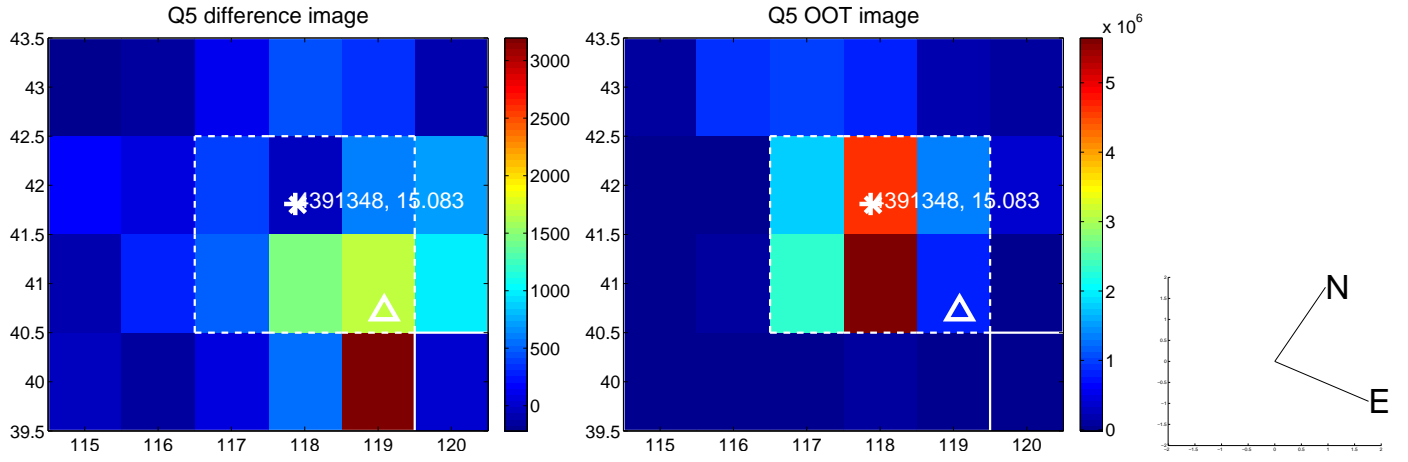


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

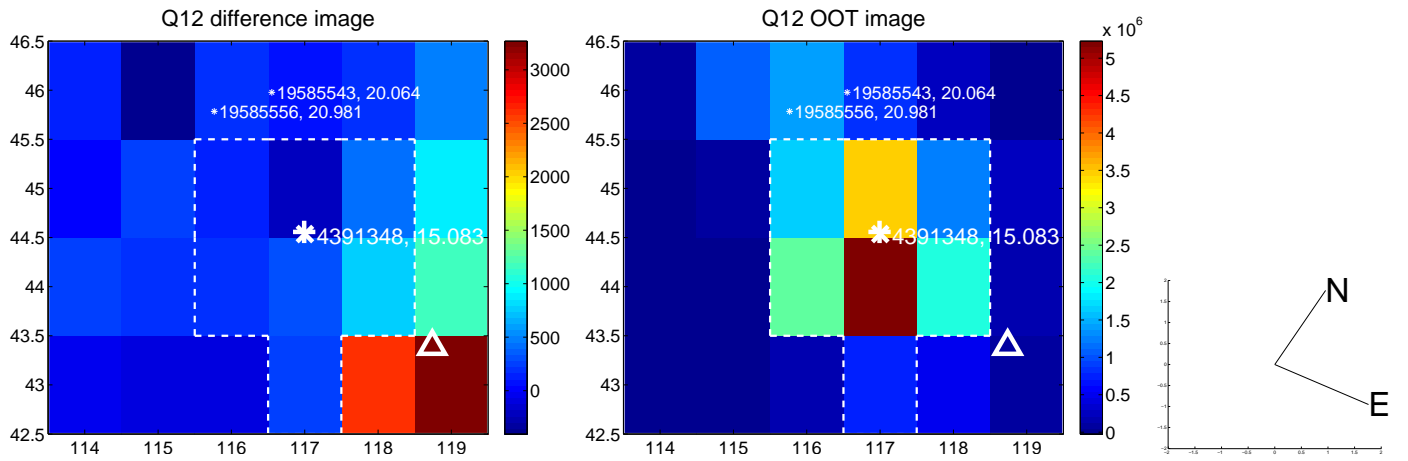
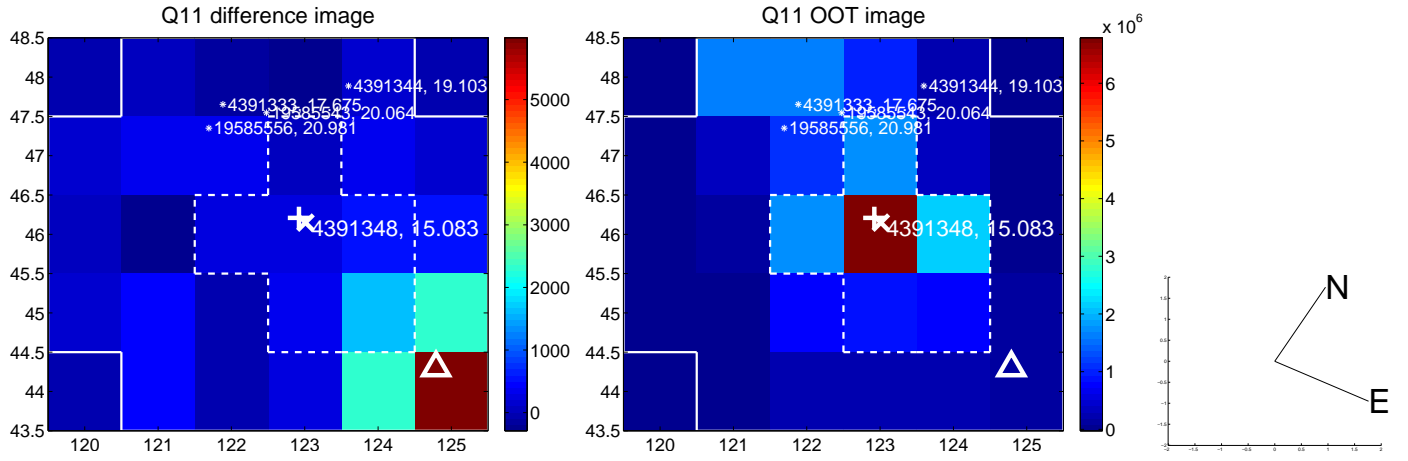
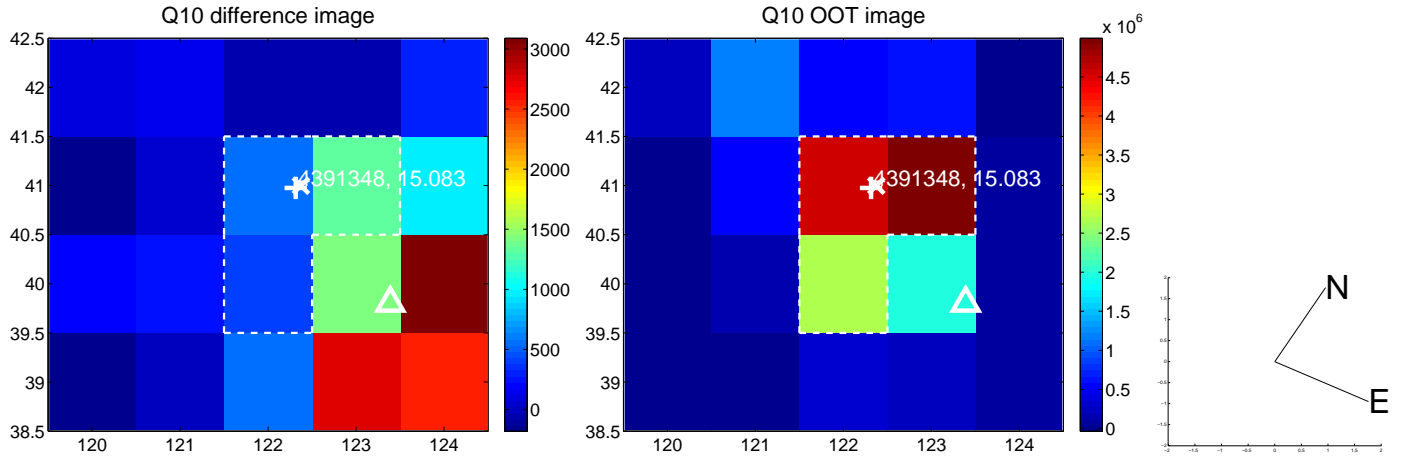
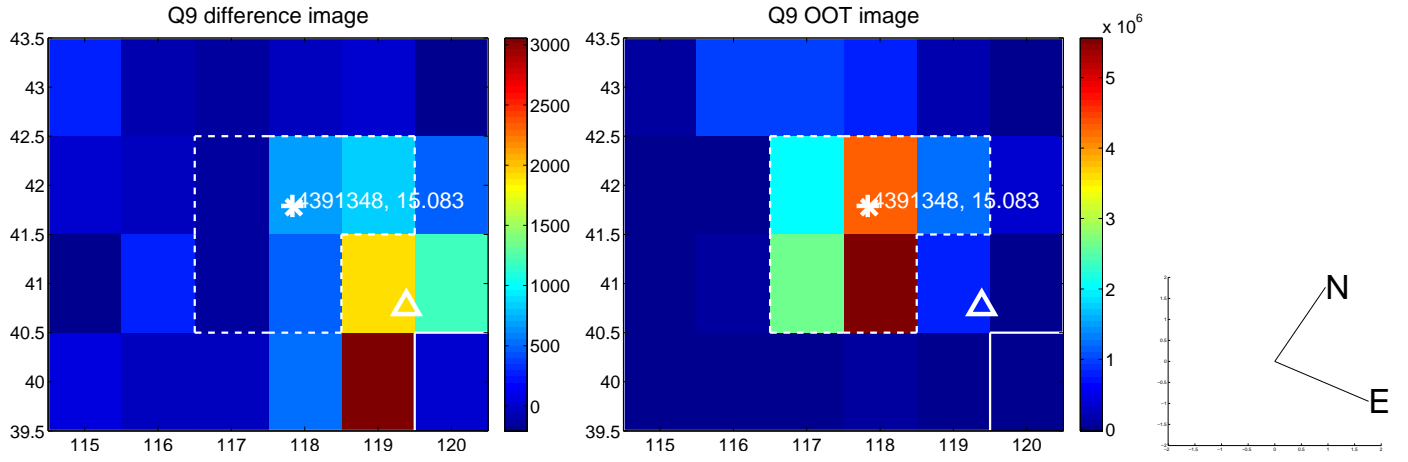
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



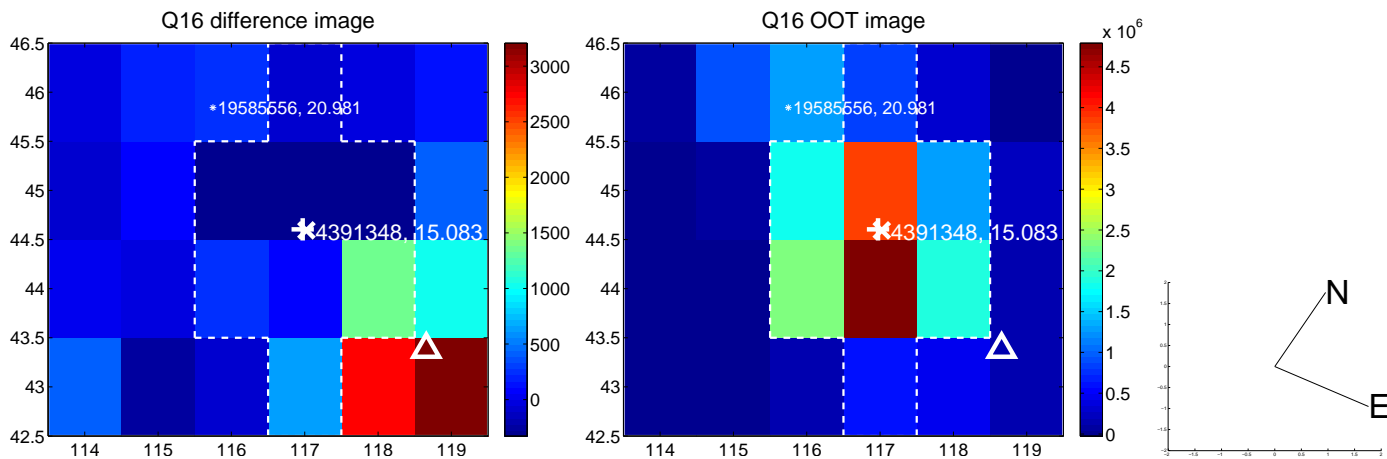
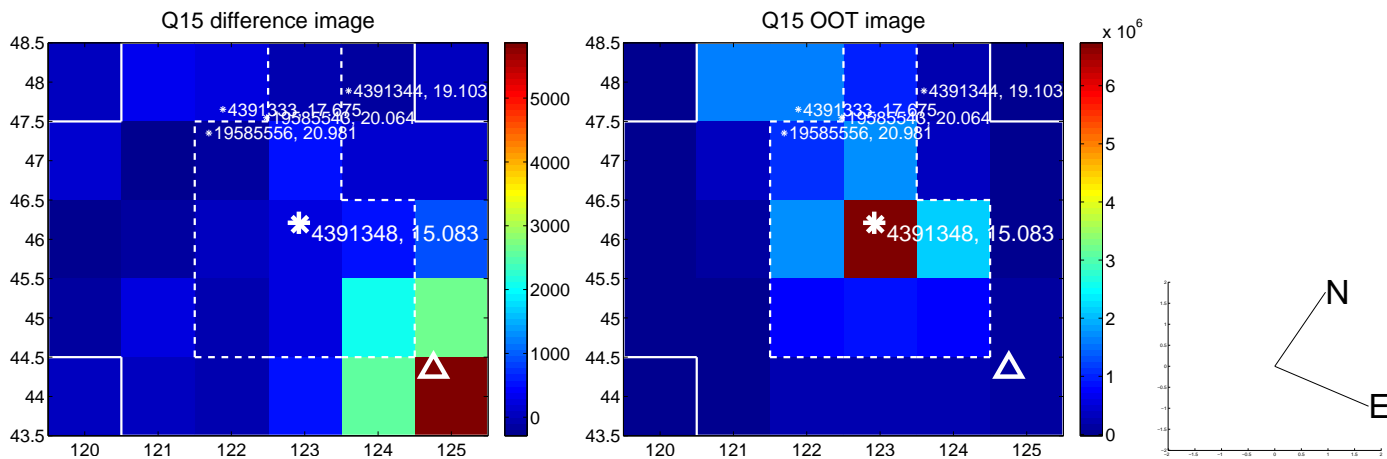
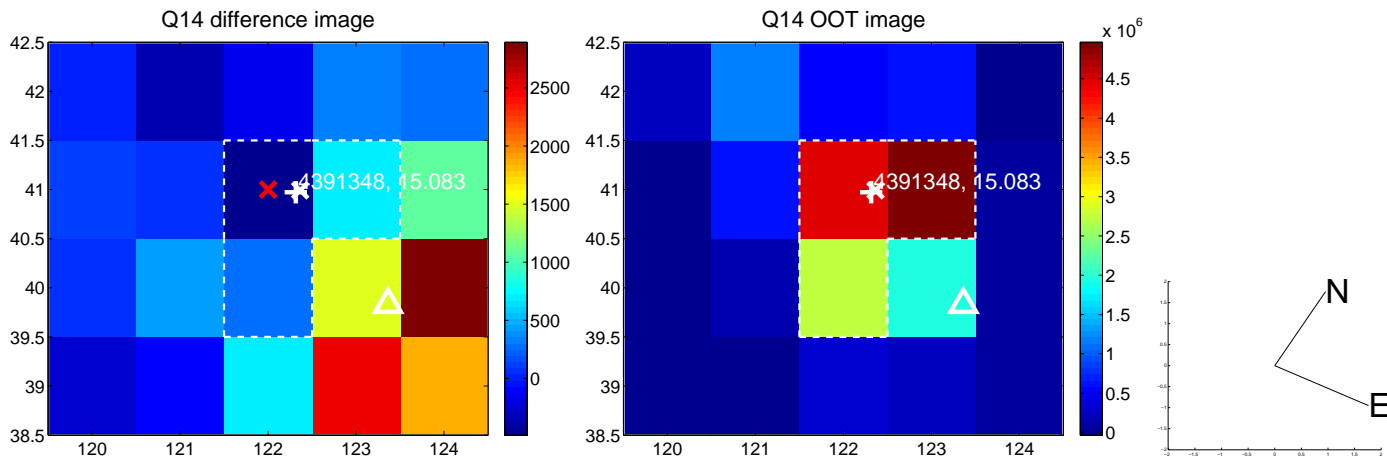
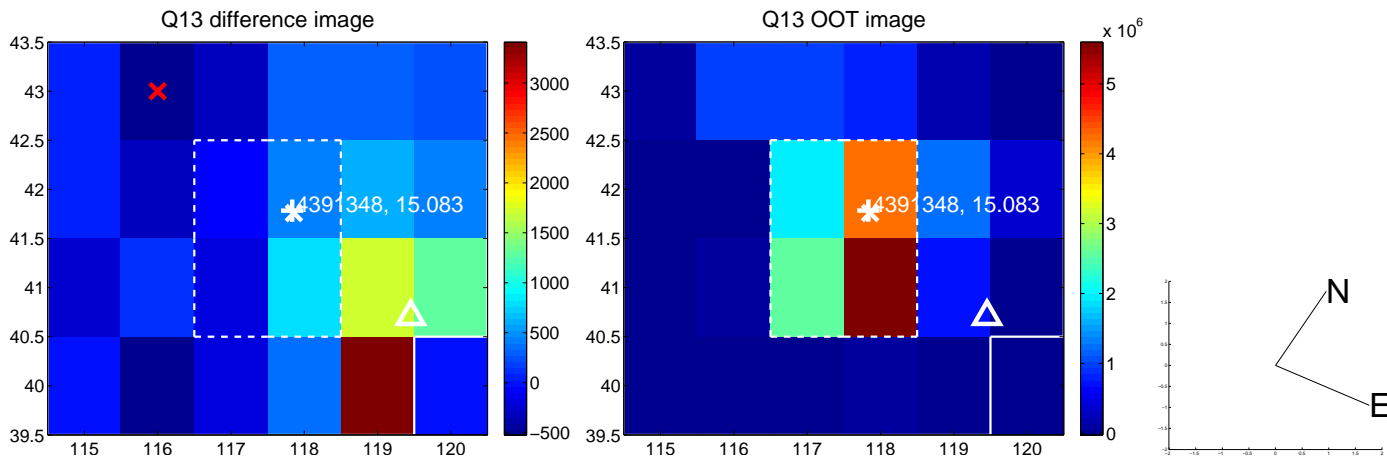
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



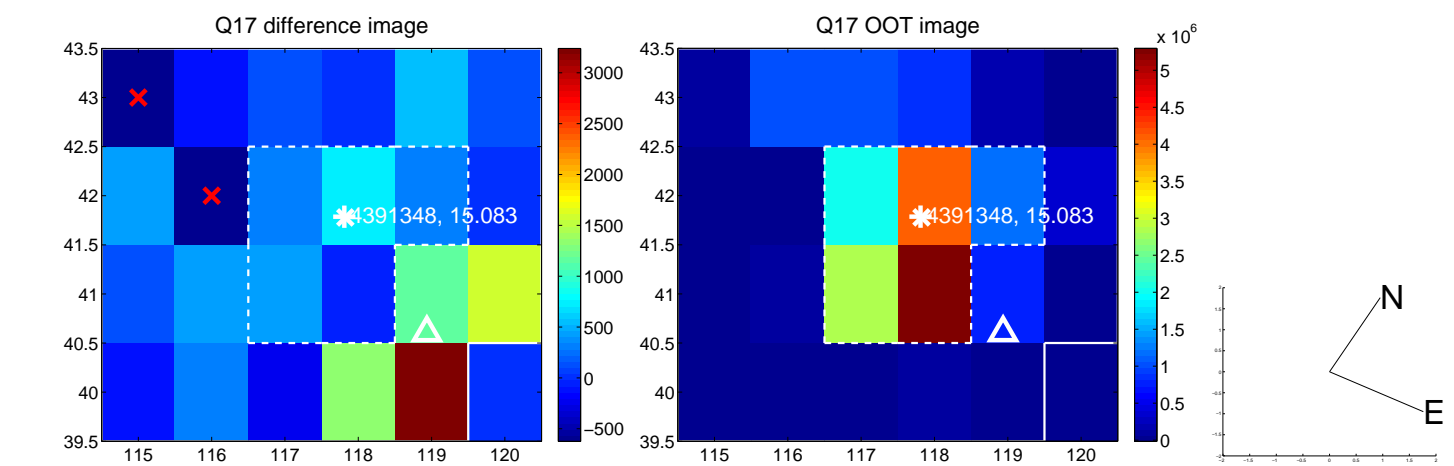
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



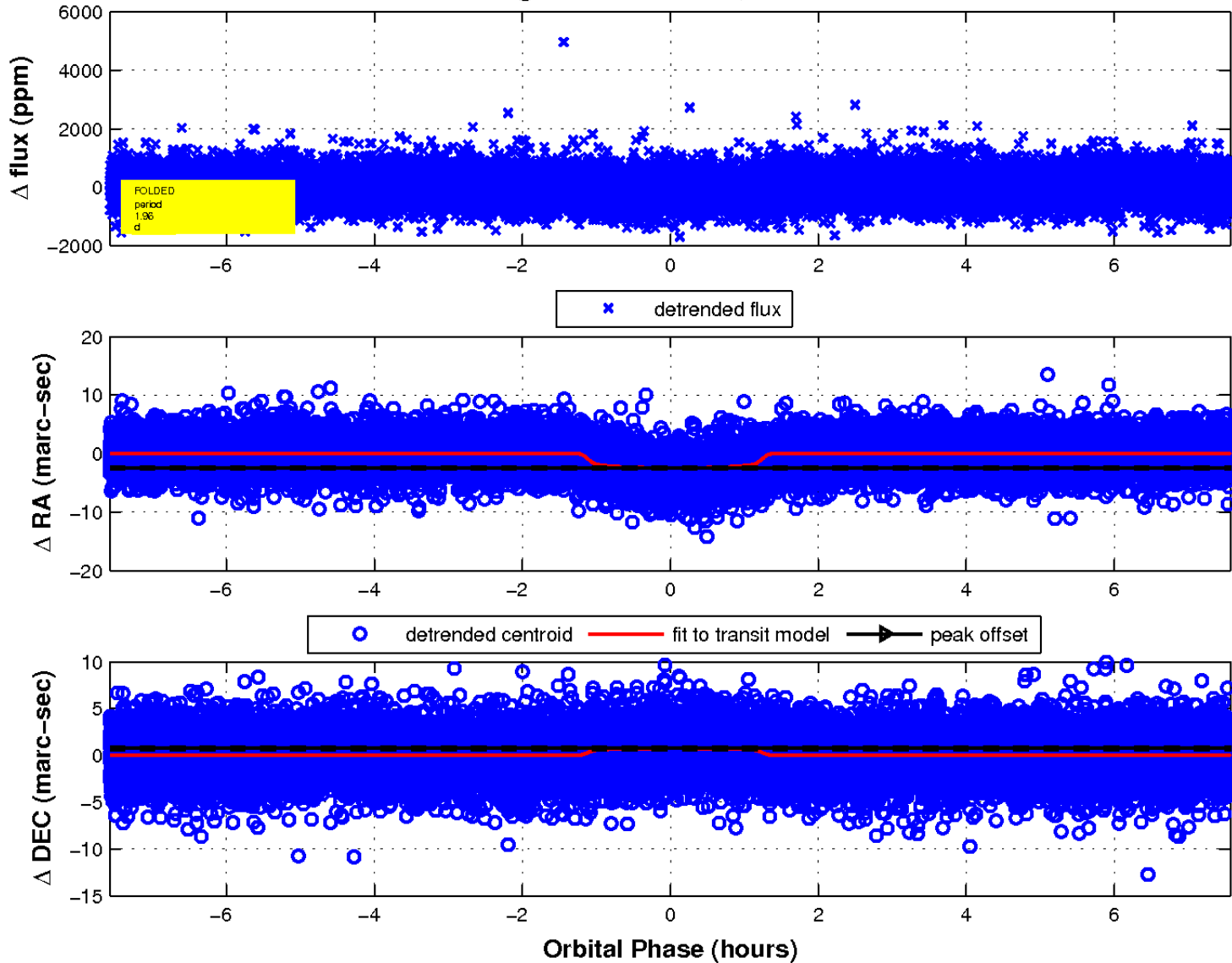
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

