

KIC 005534941

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})
005534941-01	OBS	2332.01	3.700618	133.162660	65.8	5.489	22.7	24.4	1.40	5423	1.36	738.58

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005534941-01	OBS	PC	0.99	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.

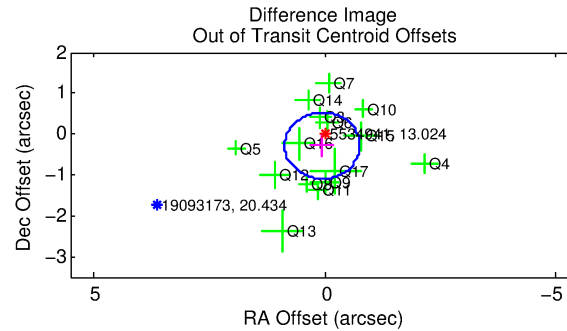
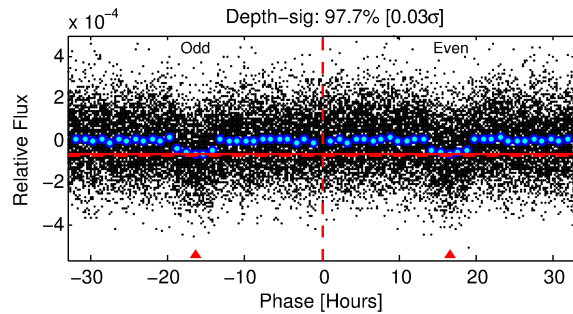
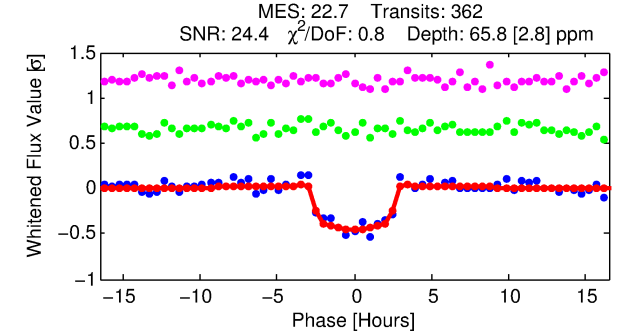
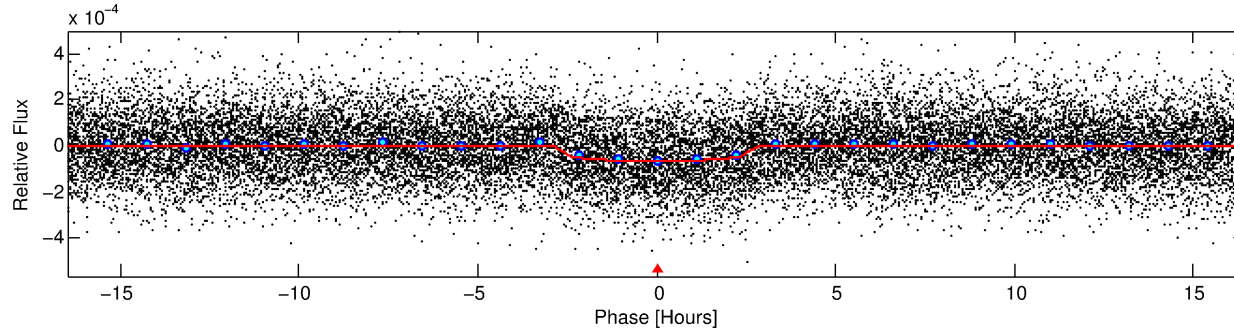
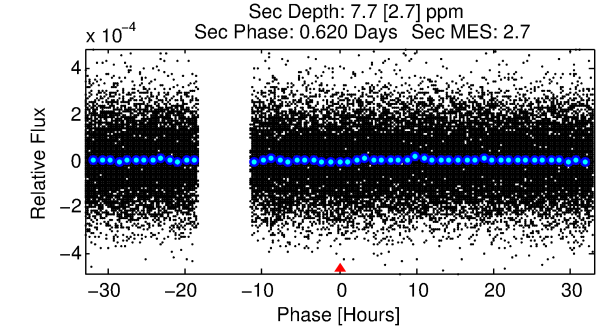
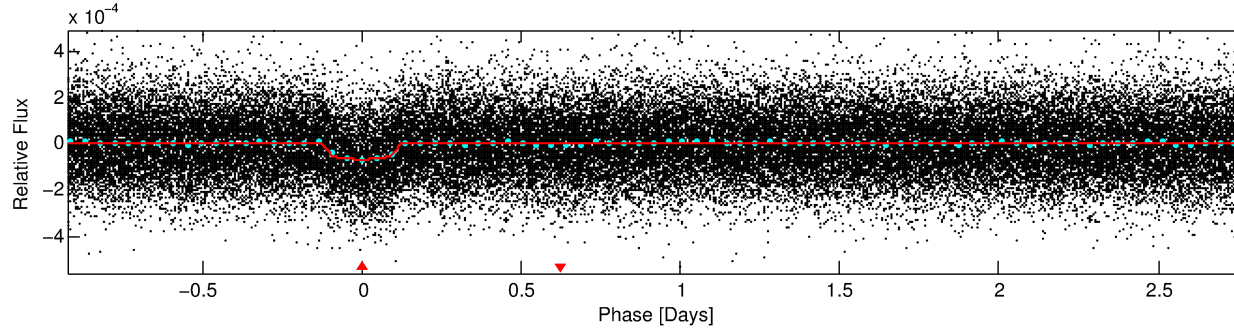
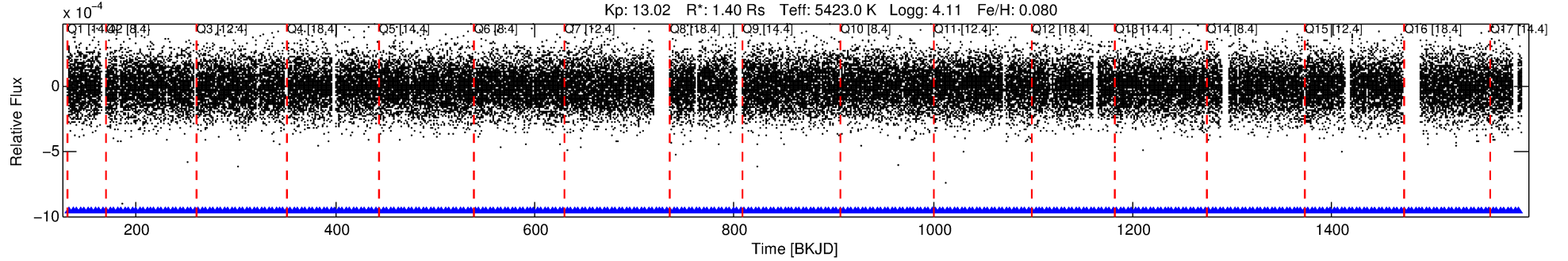
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005534941-01

No Significant Match Found

DV One-Page Summary

KIC: 5534941 Candidate: 1 of 1 Period: 3.701 d
KOI: K02332.01 Corr: 0.983



DV Fit Results:

Period = 3.70062 [0.00002] d
Epoch = 133.1627 [0.0029] BKJD
Rp/R* = 0.0089 [0.0018]
a/R* = 2.61 [1.96]
b = 0.89 [0.21]
Seff = 738.58 [446.75]
Teff = 1329 [201] K
Rp = 1.36 [0.55] Re
a = 0.0455 [0.0164] AU
Ag = 4.77 [3.83] [0.99σ]
Teffp = 3038 [409] K [3.75σ]

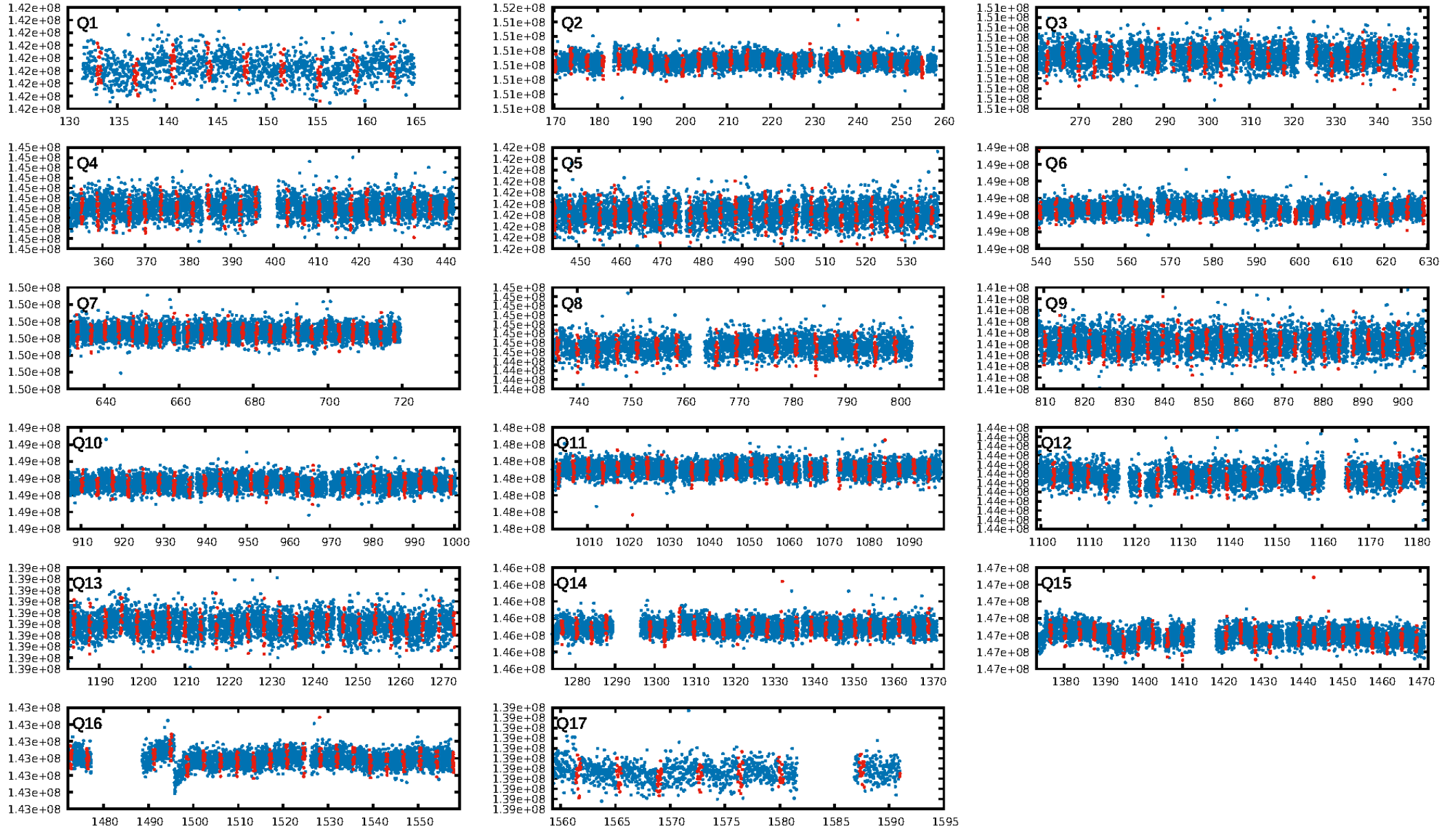
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.49e-107
RollingBand-fgt: 1.00 [346/346]
GhostDiagnostic-chr: 3.623
Centroid-sig: 24.6%
Centroid-so: 0.571 arcsec [1.45σ]
OotOffset-rm: 0.287 arcsec [1.06σ]
KicOffset-rm: 0.060 arcsec [0.23σ]
OotOffset-st: 3/4/4/4 [15]
KicOffset-st: 3/4/4/4 [15]
DiffImageQuality-fgm: 0.87 [13/15]
DiffImageOverlap-fno: 1.00 [17/17]

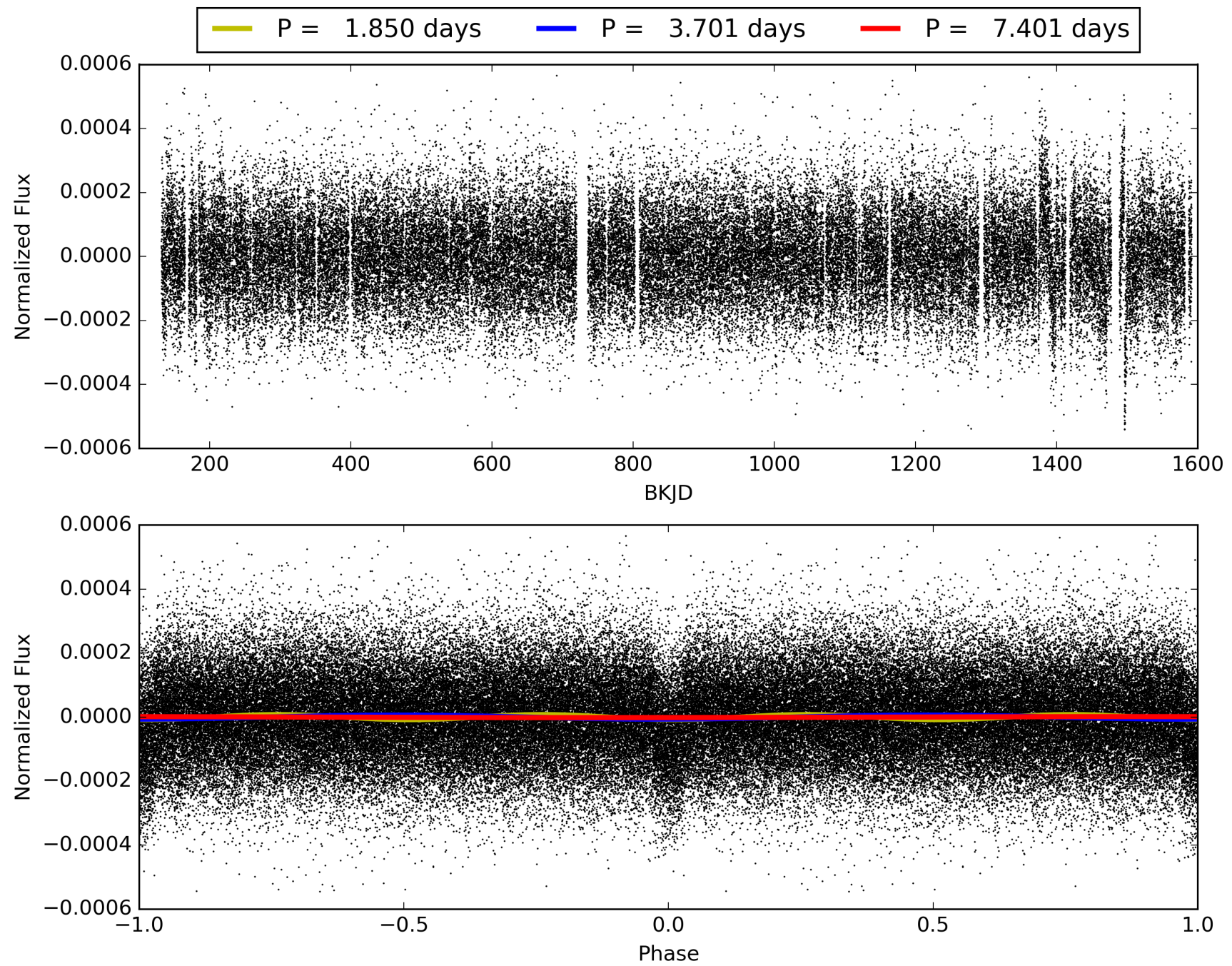
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 18:25:18 Z

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

TCE 005534941-01, PDC Light Curves

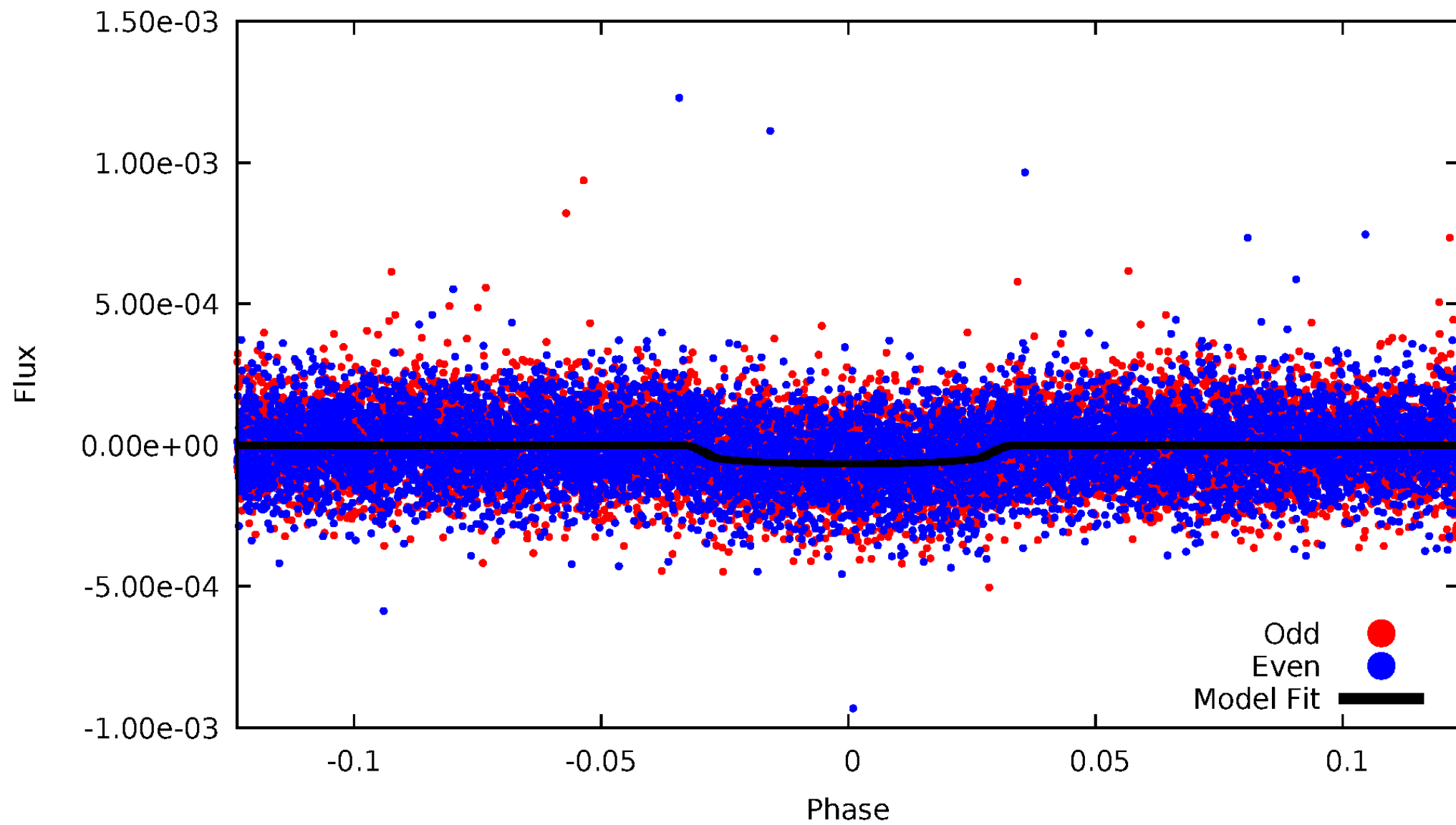


TCE 005534941-01



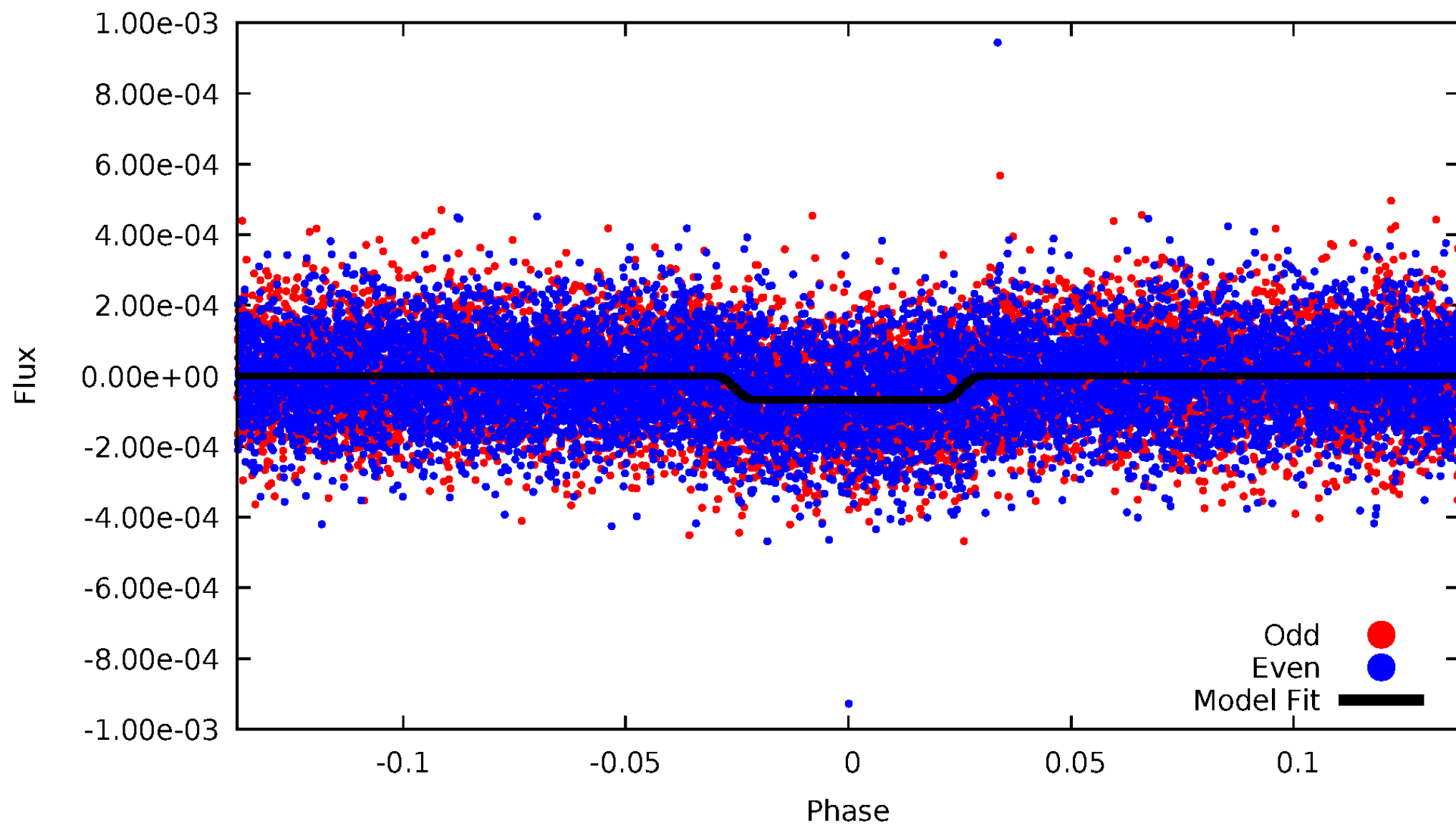
DV Odd/Even

TCE 005534941-01



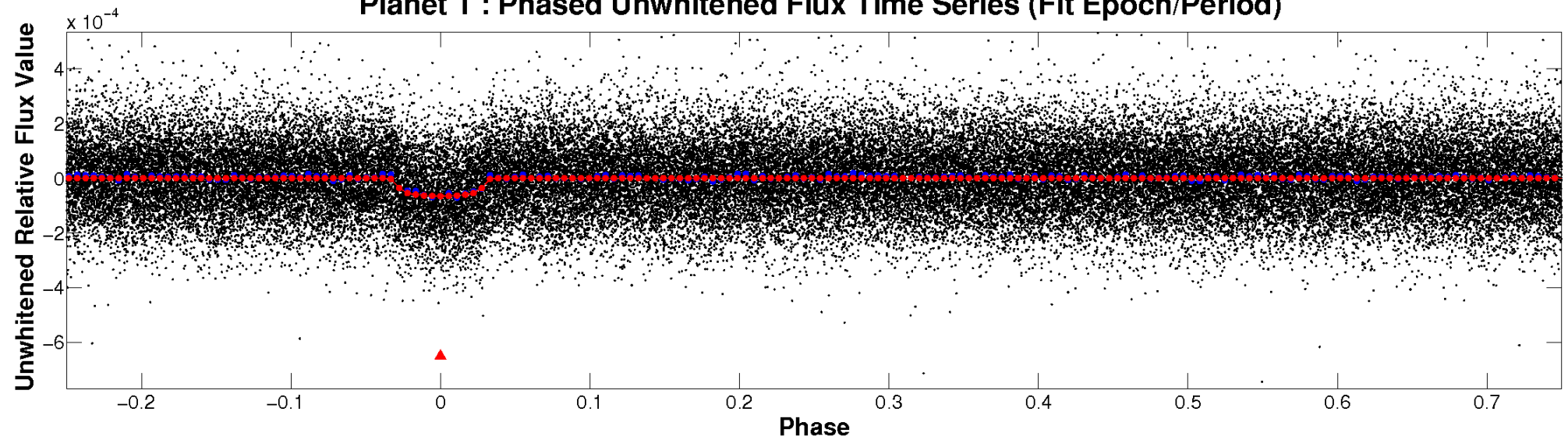
ALT Odd/Even

TCE 005534941-01

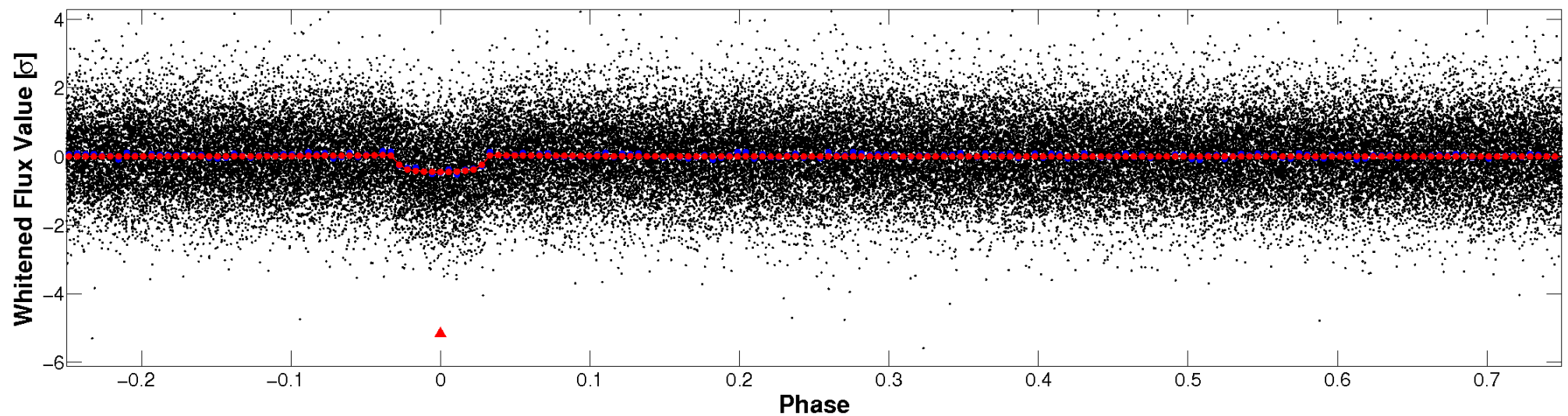


Non-Whitened Vs. Whitened Light Curve

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

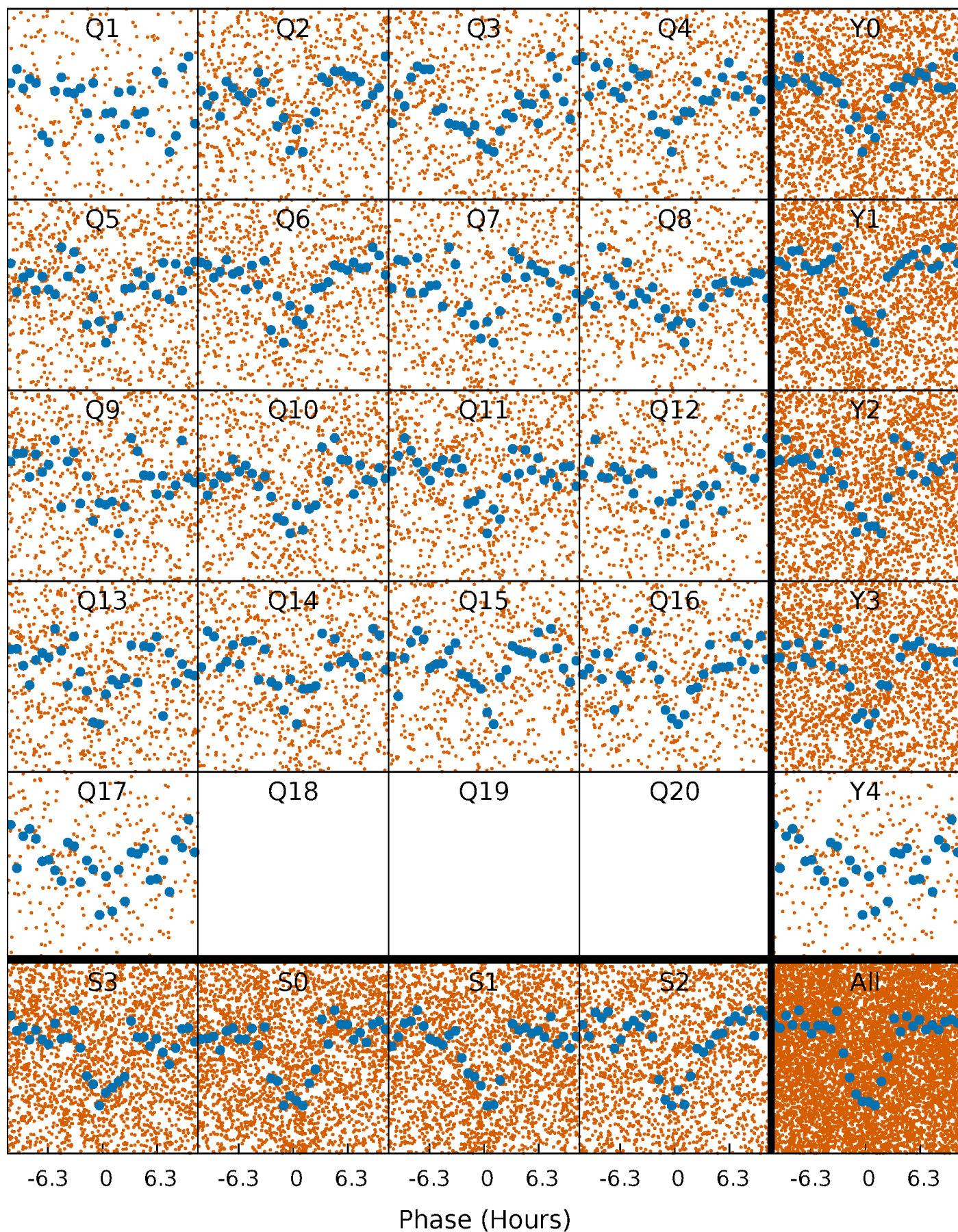


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



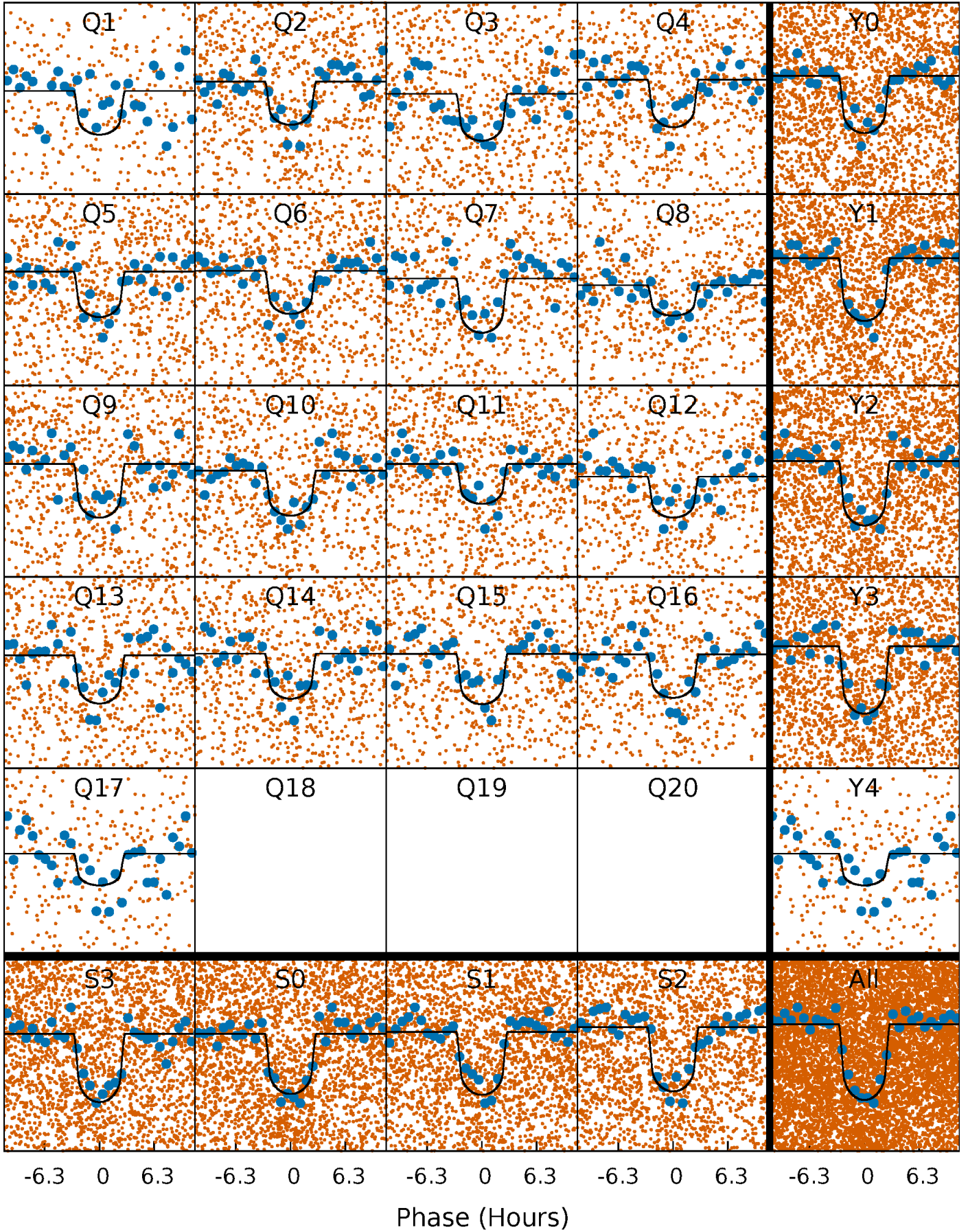
PDC Quarter-Phased Transit Curves

TCE 005534941-01 P= 3.700618 Days $T_0=133.162660$ (BKJD)



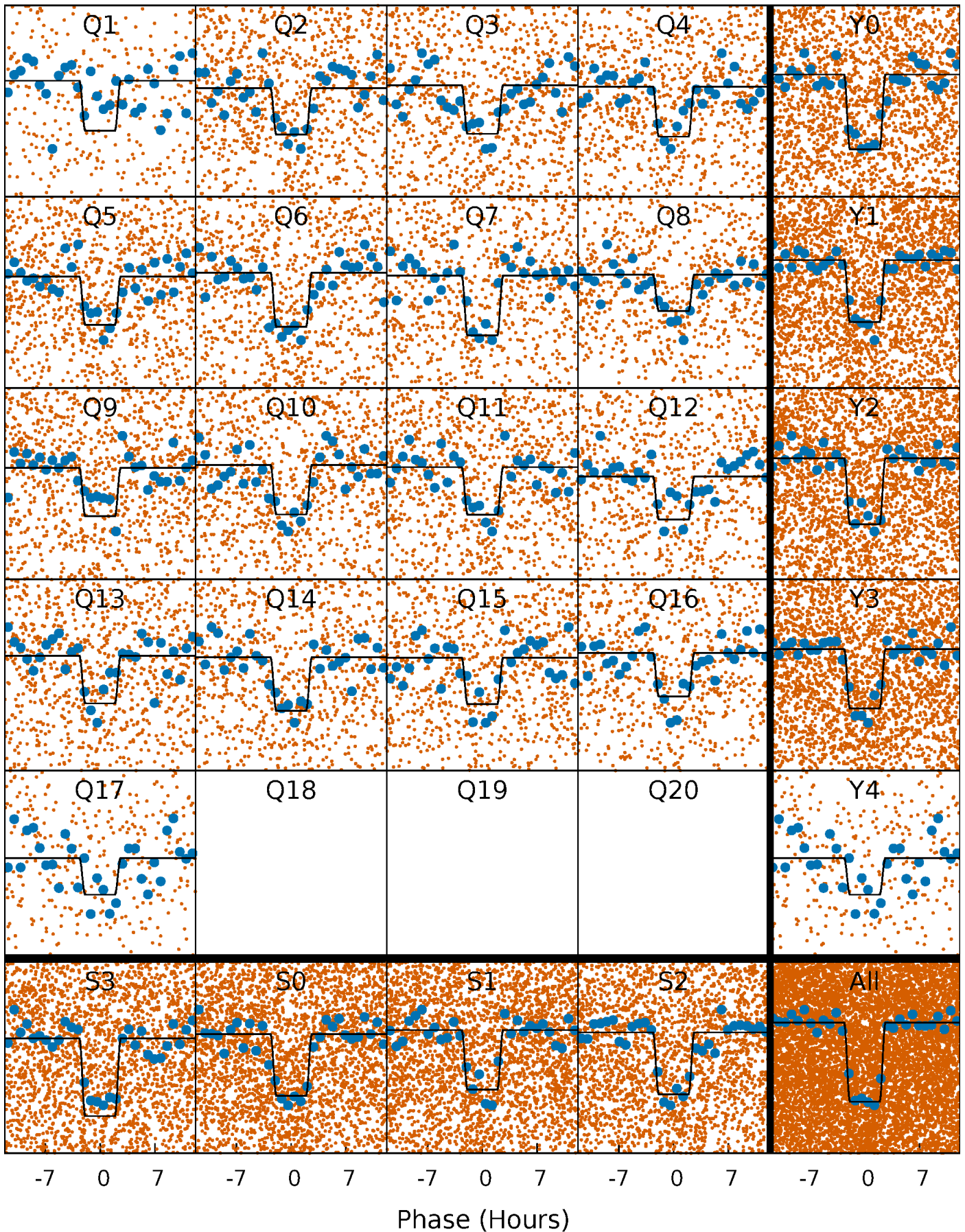
DV Quarter-Phased Transit Curves

TCE 005534941-01 P= 3.700618 Days $T_0=133.162660$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

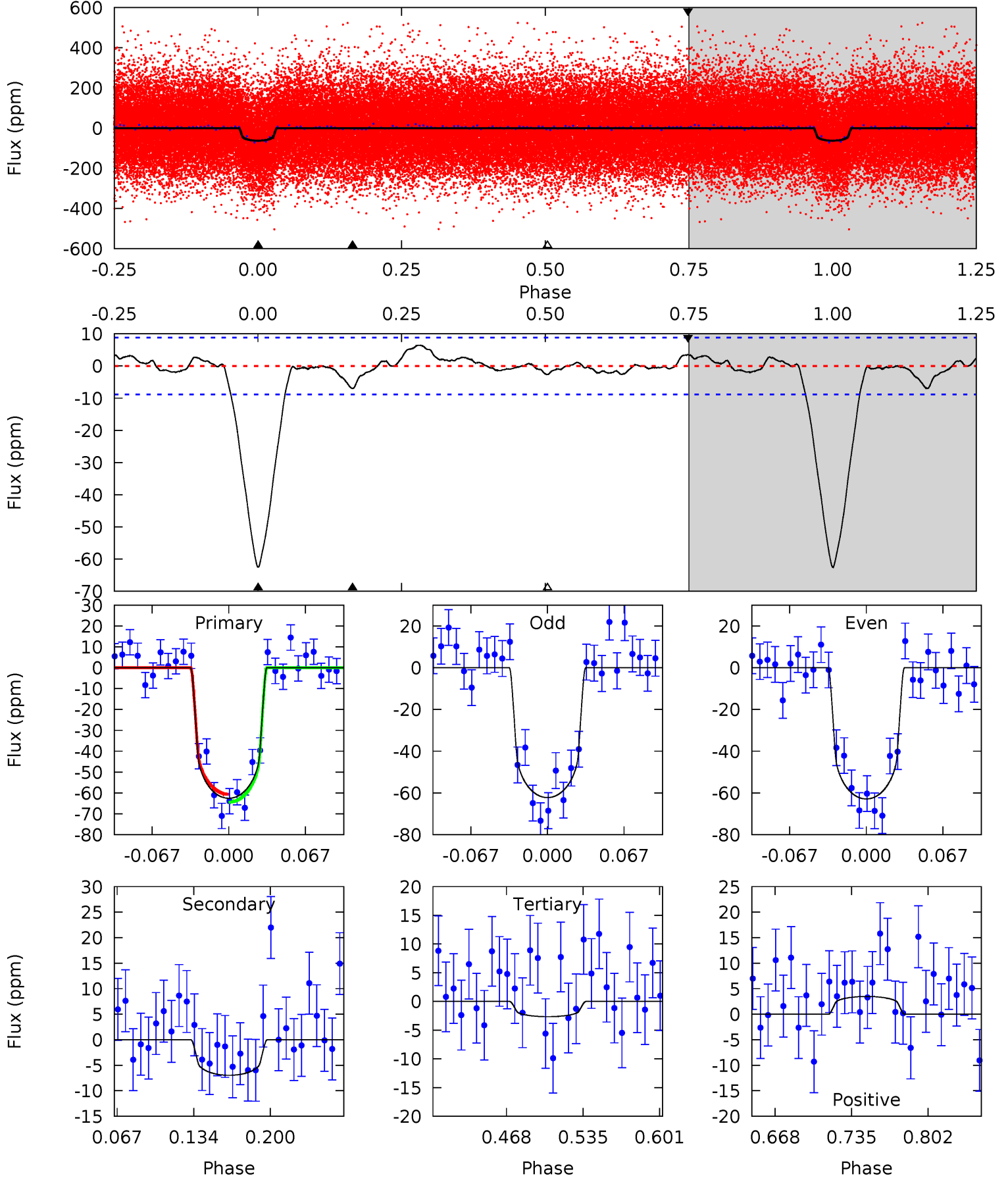
TCE 005534941-01 P= 3.700677 Days $T_0=133.151625$ (BKJD)



DV Model-Shift Uniqueness Test

005534941-01, P = 3.700618 Days, E = 129.462042 Days

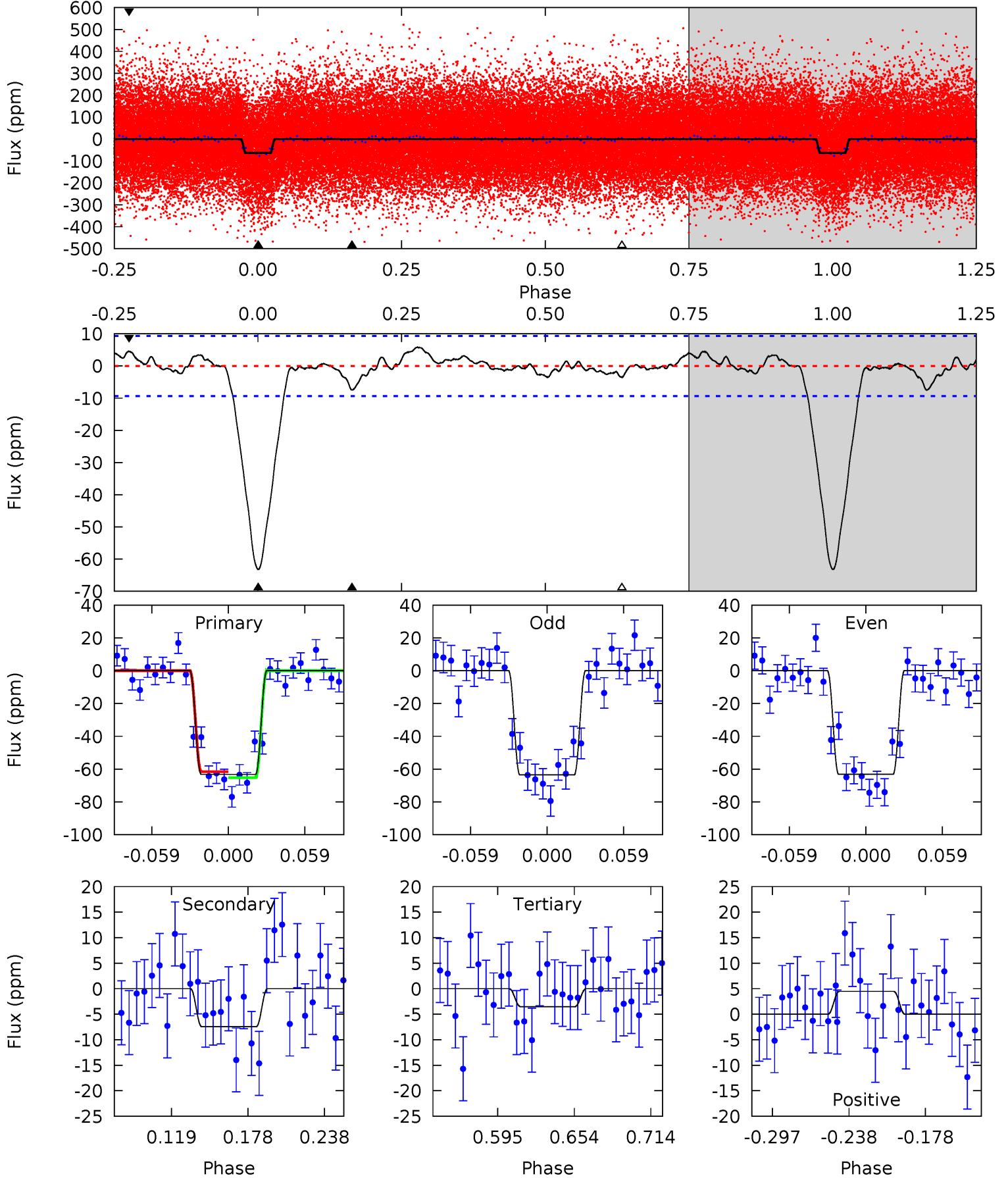
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
32.9	3.67	1.39	1.83	4.65	1.83	1.06	31.5	31.1	2.27	1.84	0.17	0.95	0.09	1.00



Alt Model-Shift Uniqueness Test

005534941-01, P = 3.700677 Days, E = 129.450948 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
31.6	3.72	1.75	2.23	4.67	1.88	1.00	29.8	29.3	1.97	1.48	0.09	0.95	0.08	0.89



Stellar Parameters For KIC 005534941

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5423^{+108}_{-97}	$4.105^{+0.360}_{-0.112}$	$0.080^{+0.150}_{-0.100}$	$1.404^{+0.210}_{-0.490}$	$0.915^{+0.049}_{-0.061}$	$0.466^{+1.125}_{-0.159}$
	+2%/-2%	+9%/-3%	+188%/-125%	+15%/-35%	+5%/-7%	+241%/-34%
Source	SPE59	SPE59	SPE59	DSEP		

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

Secondary Eclipse Parameters for KIC 005534941-01 / KOI 2332.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-7 ± 2	$1.29^{+0.34}_{-0.32}$	1843^{+94}_{-182}	3392^{+300}_{-242}	$4.593^{+3.814}_{-1.842}$
Alt.	-7 ± 2	$1.17^{+0.29}_{-0.32}$	1837^{+97}_{-201}	3549^{+336}_{-292}	$6.050^{+5.939}_{-2.619}$

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

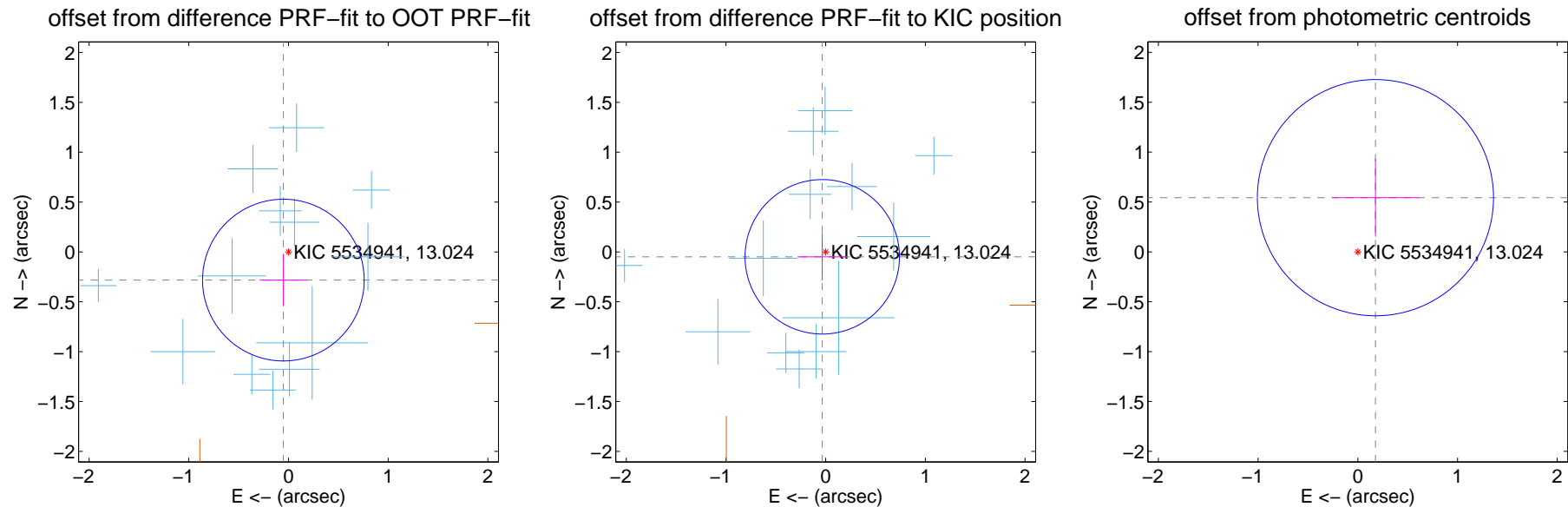
DV Centroid Data

Supplemental centroid analysis for 005534941-01. Kepler magnitude: 13.02. Transit SNR 24.35

There are 13 quarters with good PRF difference image offsets

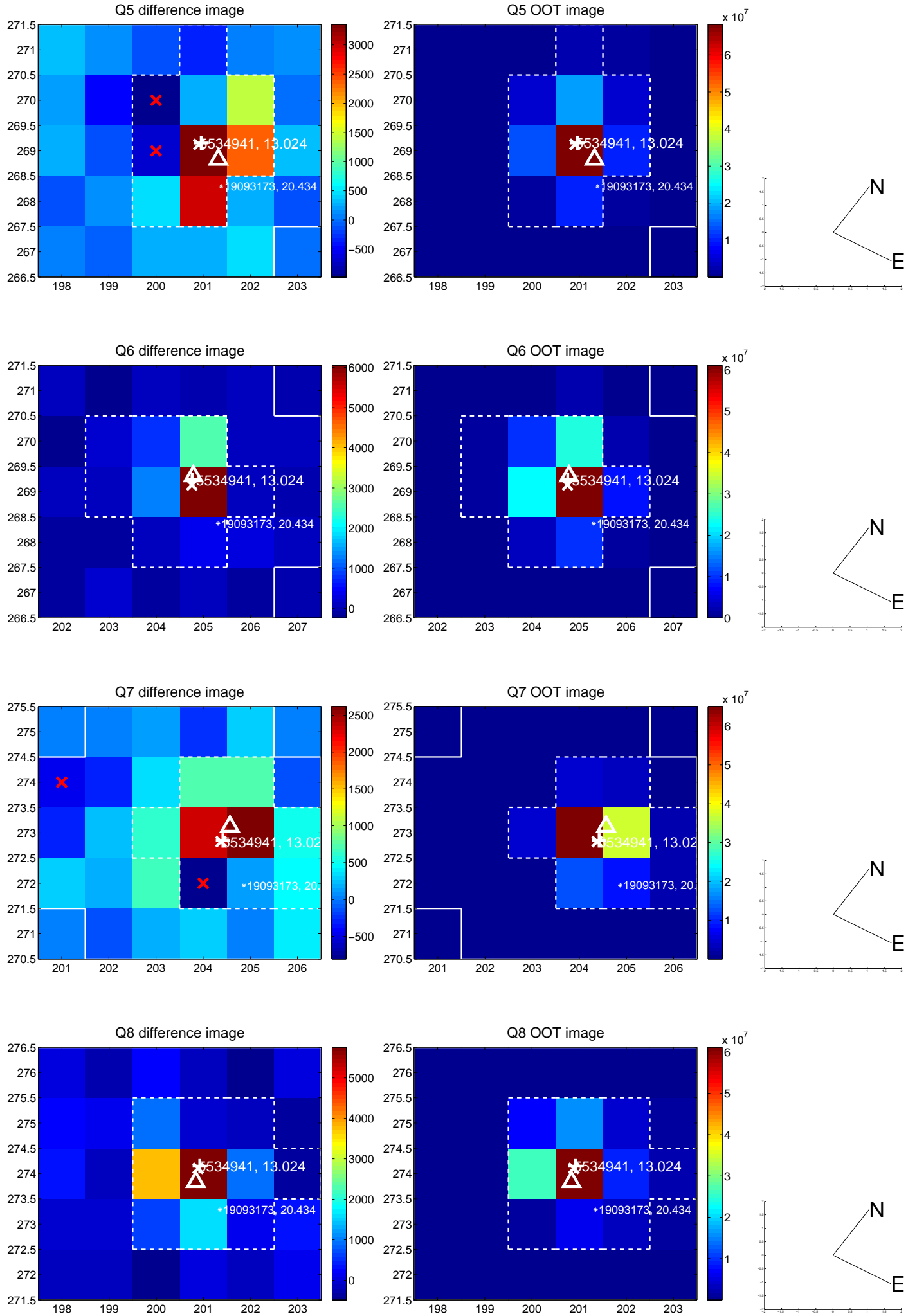
The direct PRF centroid is offset from the target star catalog position by about 0.27 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.287 ± 0.270	1.06	0.051 ± 0.240	-0.283 ± 0.262
PRF-fit source offset from KIC position	0.060 ± 0.258	0.23	0.034 ± 0.249	-0.049 ± 0.237
photometric centroid source offset	0.57 ± 0.39	1.45	-0.18 ± 0.43	0.54 ± 0.39

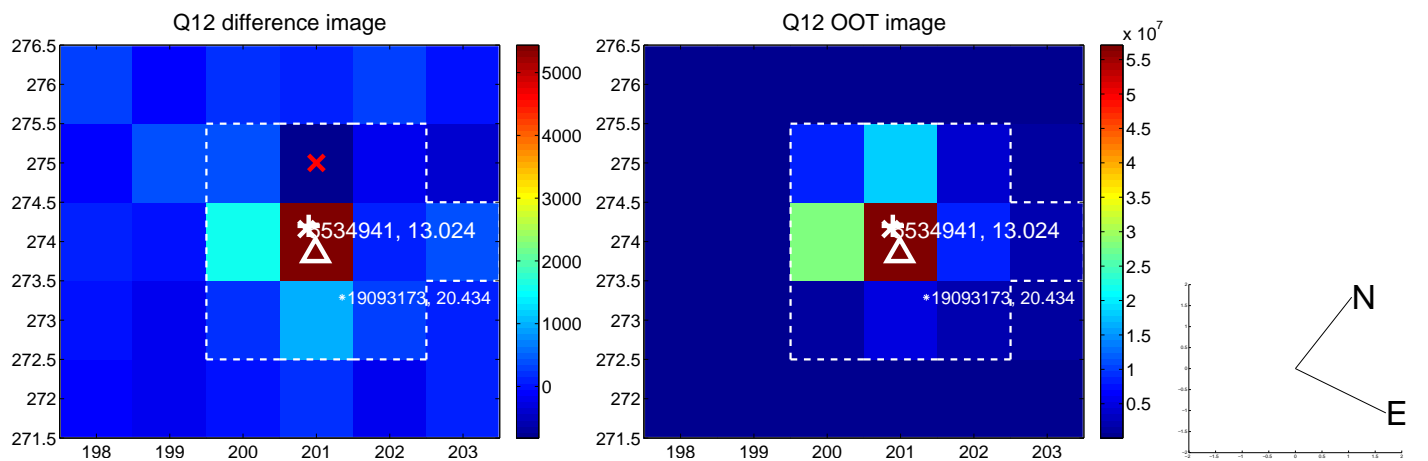
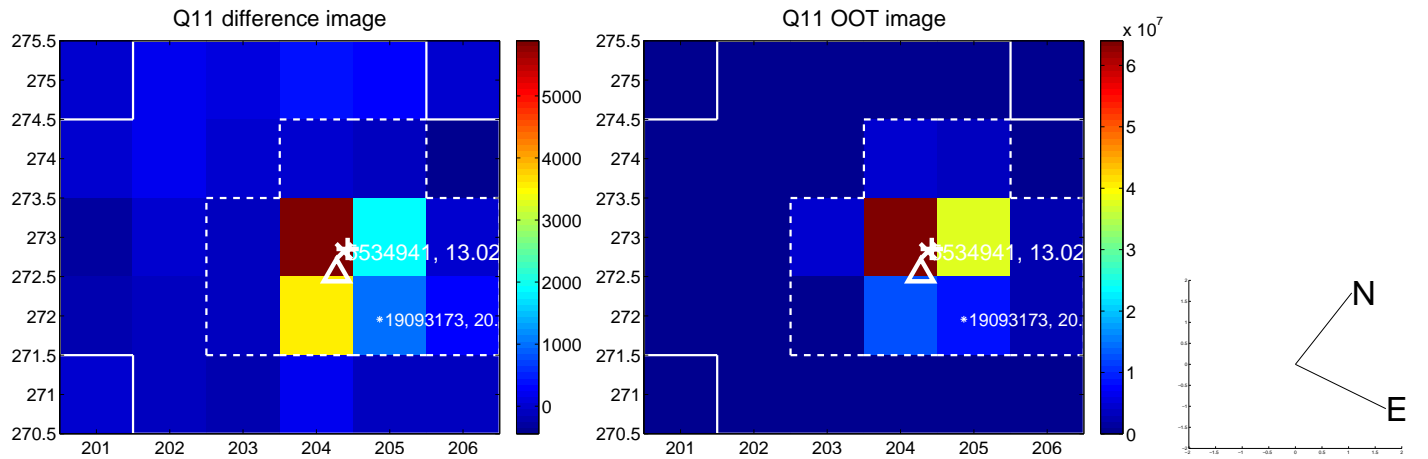
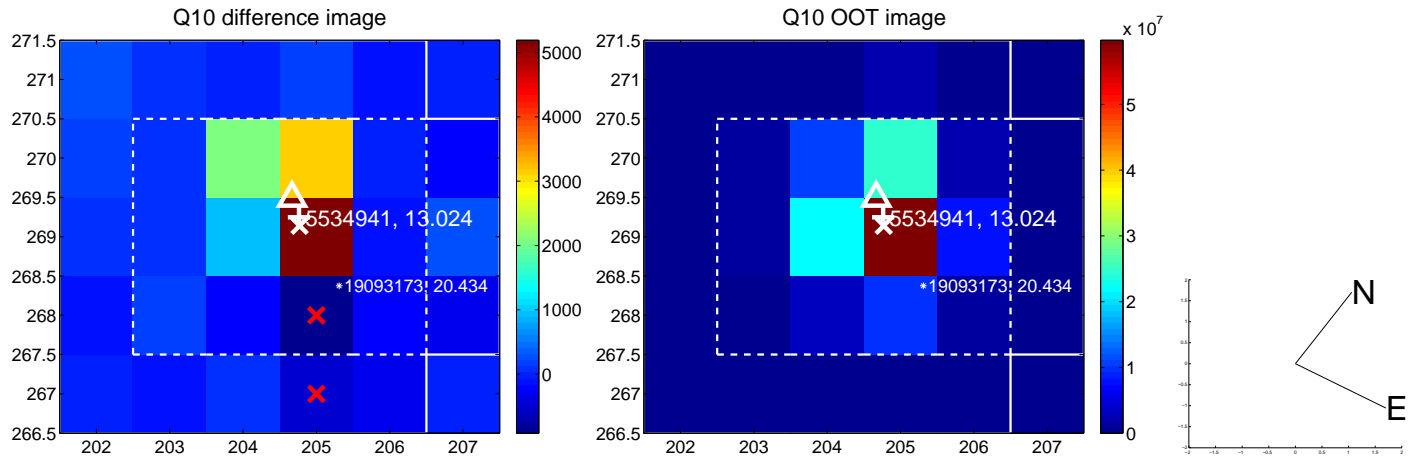
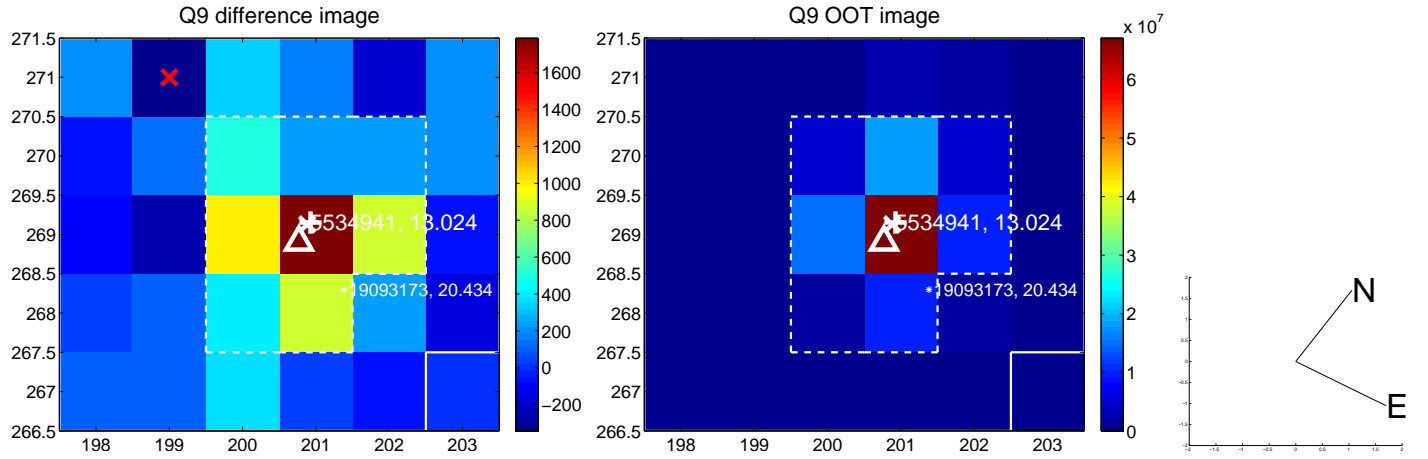


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

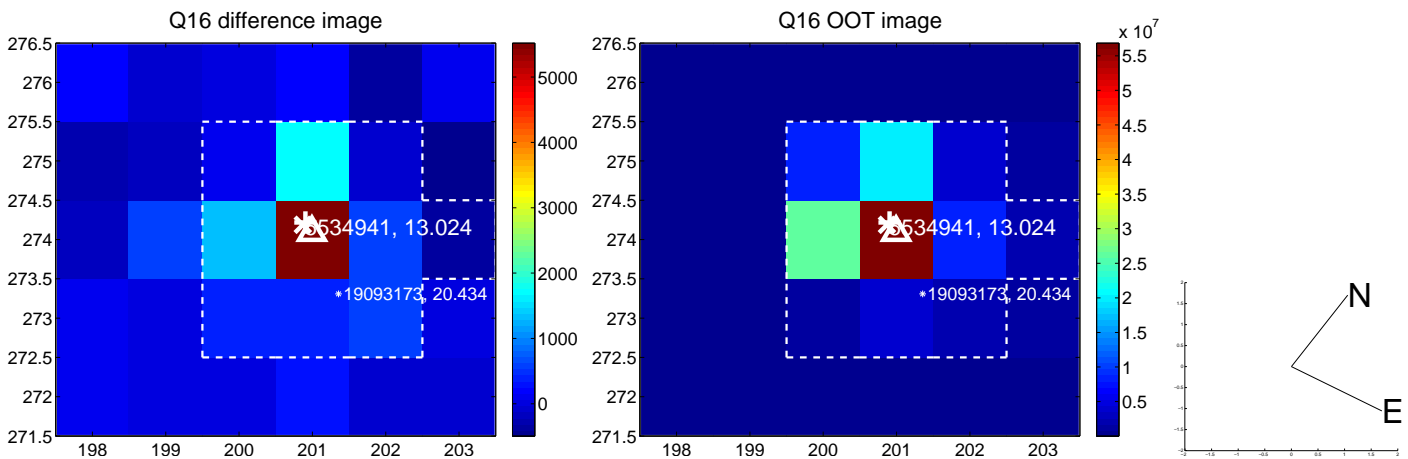
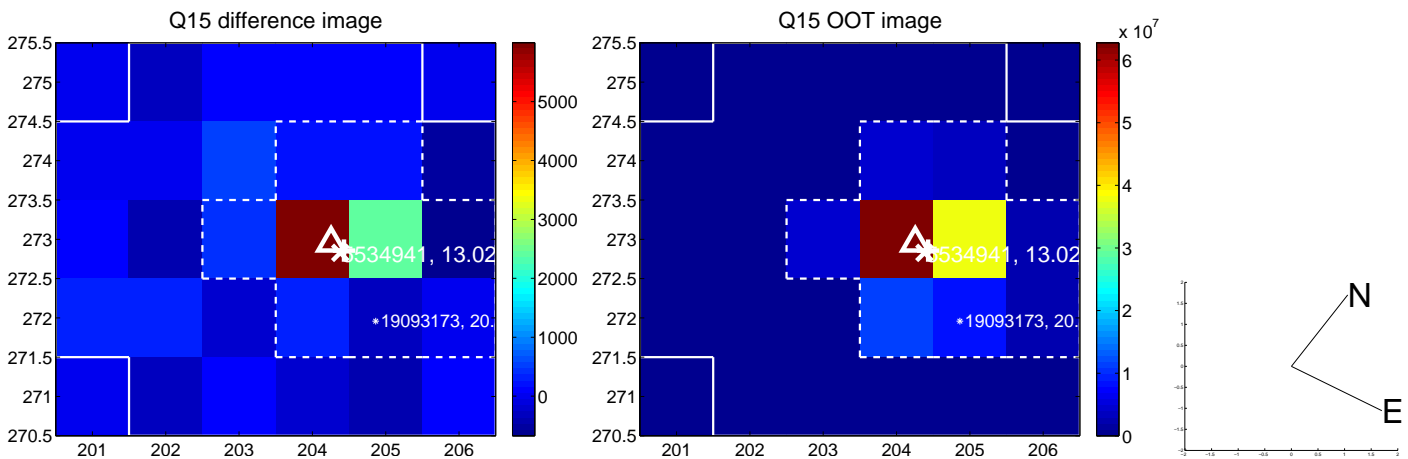
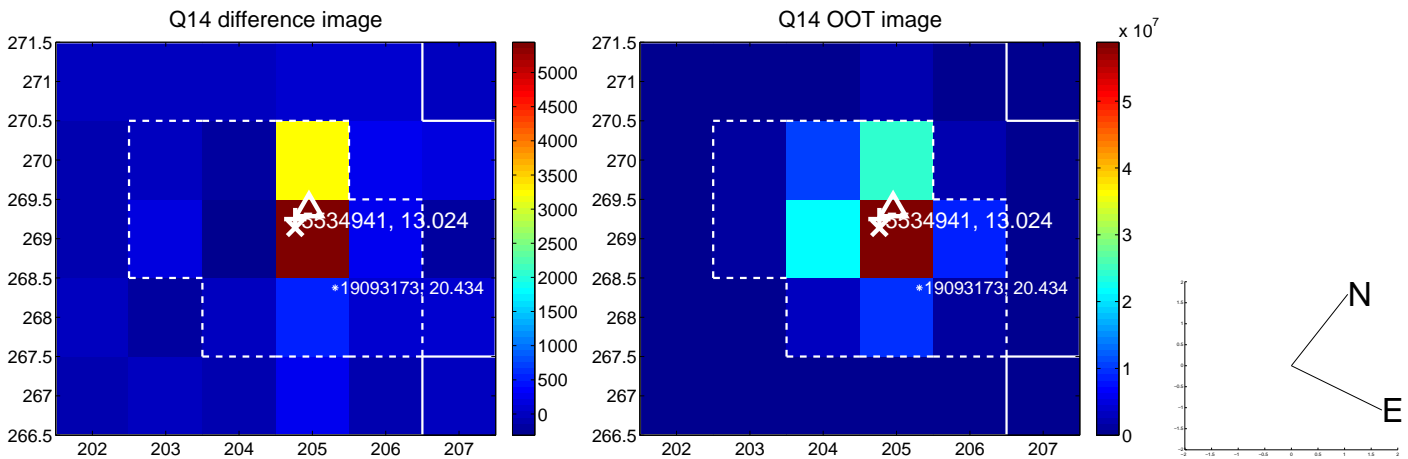
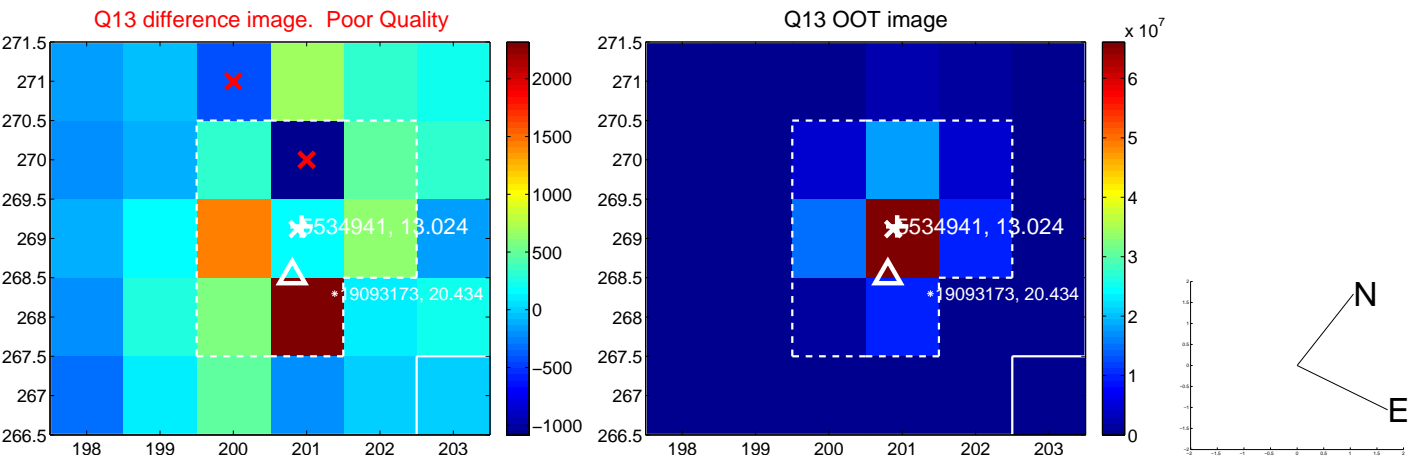
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



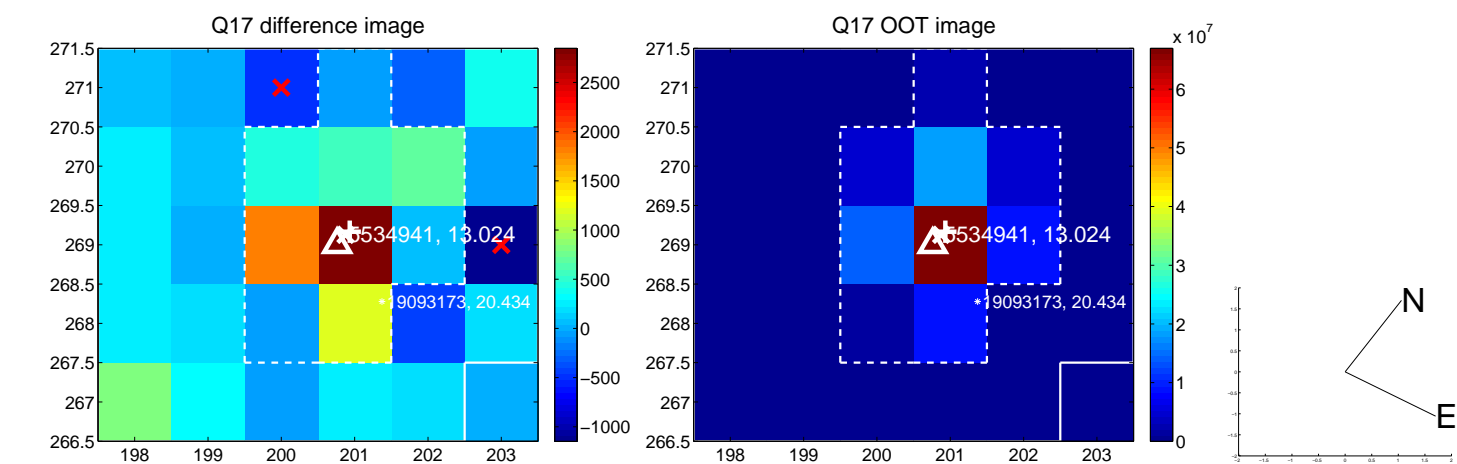
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



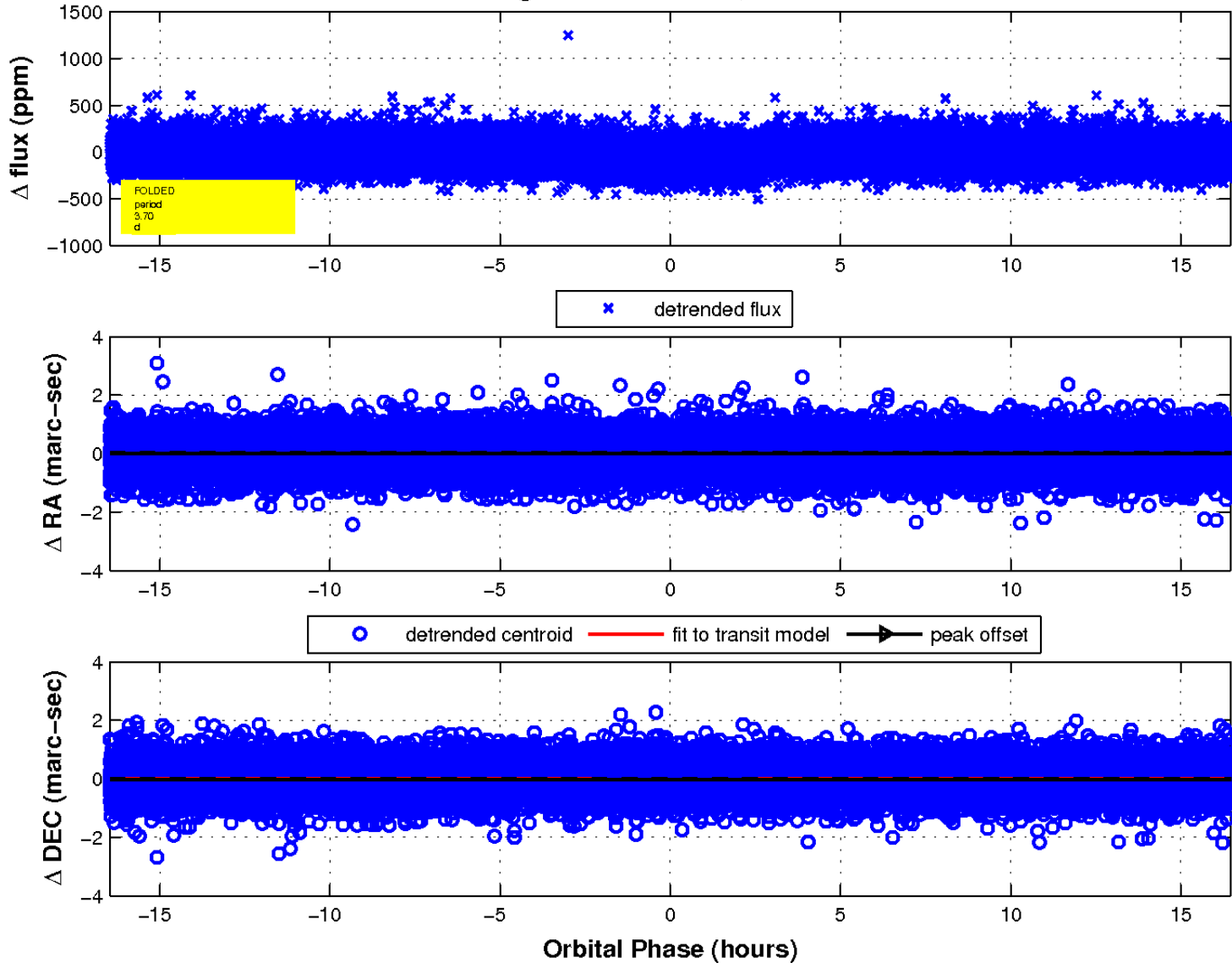
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

