

KIC 005108214

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})
005108214-01	OBS	1924.01	2.119269	132.528073	24.2	4.915	14.9	13.6	2.38	5799	1.24	4515.90

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005108214-01	OBS	PC	1.00	0	0	0	0	CENT_SATURATED

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 005108214-01

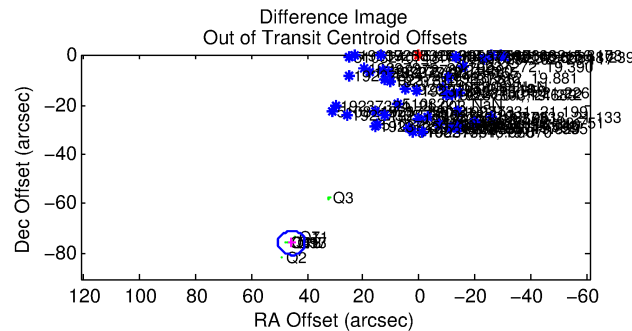
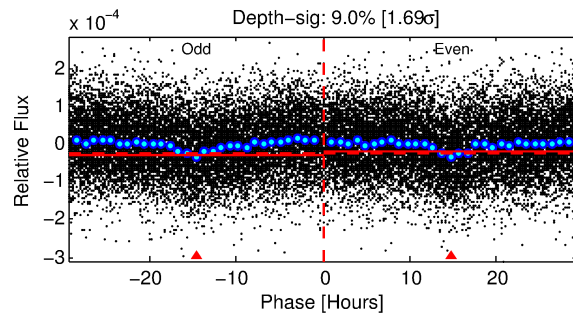
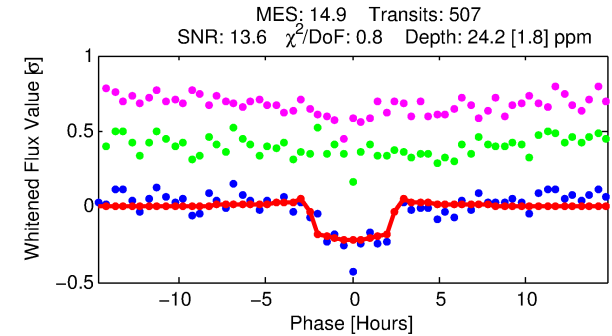
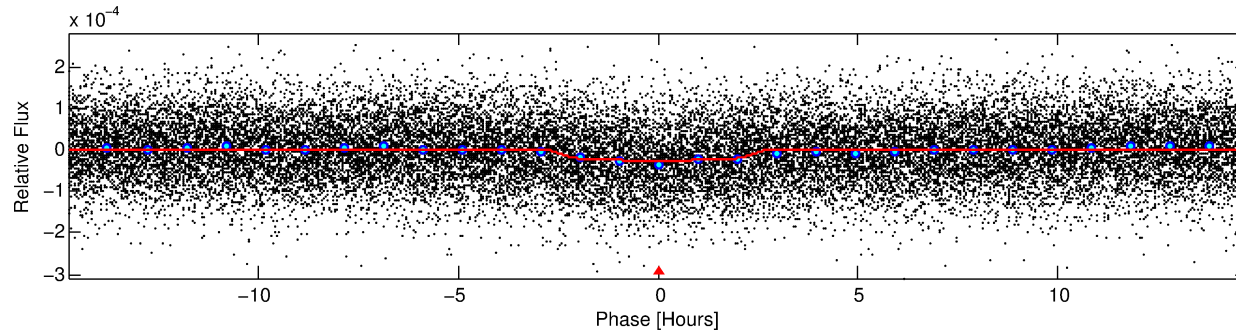
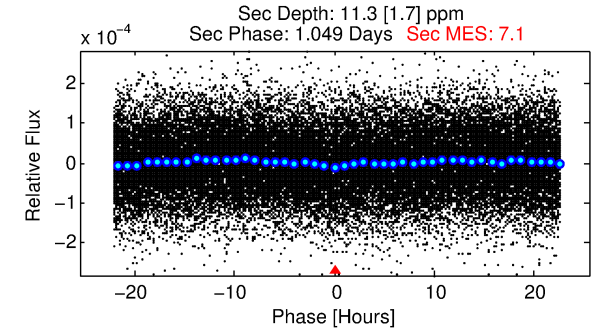
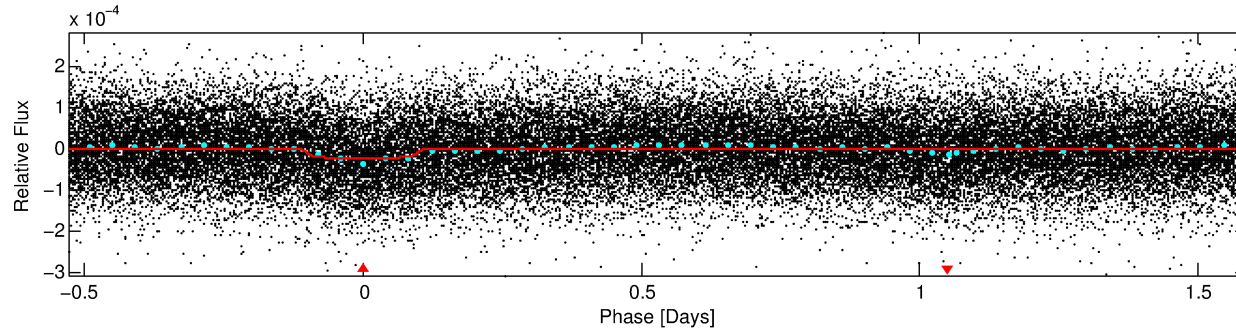
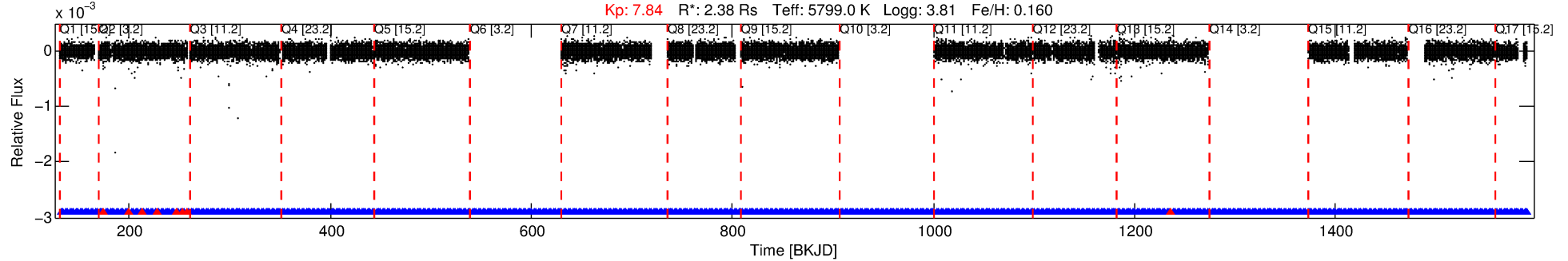
No Significant Match Found

DV One-Page Summary

KIC: 5108214 Candidate: 1 of 1 Period: 2.119 d

KOI: K01924.01 Corr: 0.830

Kp: 7.84 R*: 2.38 Rs Teff: 5799.0 K Logg: 3.81 Fe/H: 0.160



DV Fit Results:

Period = 2.11927 [0.00001] d
Epoch = 132.5281 [0.0031] BKJD
Rp/R* = 0.0048 [0.0008]
a/R* = 2.60 [1.58]
b = 0.67 [0.60]
Seff = 4515.90 [678.12]
Teq = 2090 [78] K
Rp = 1.24 [0.25] Re
a = 0.0356 [0.0034] AU
Ag = 5.15 [2.01] [2.06σ]
Teff = 4868 [448] K [6.10σ]

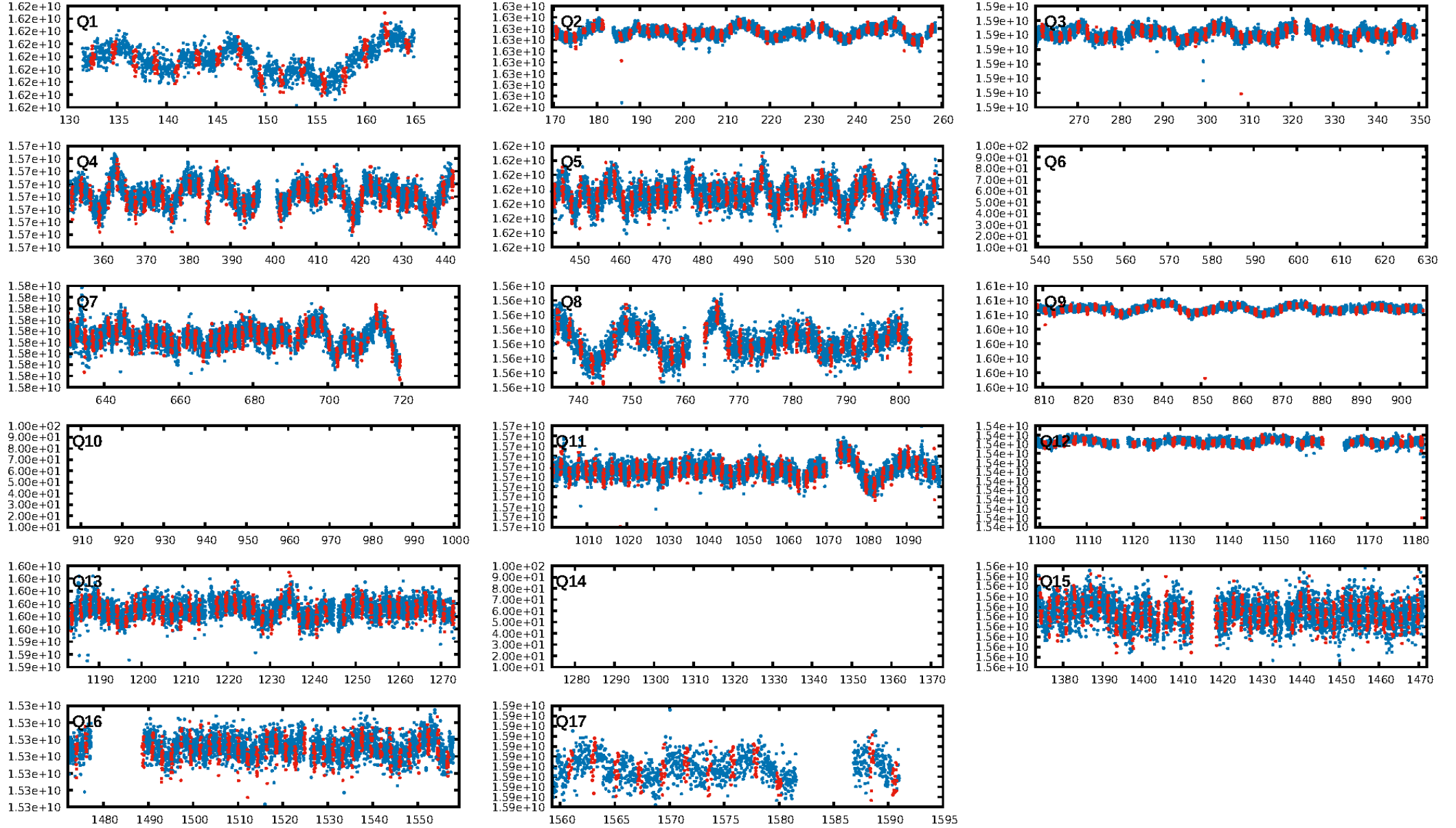
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 8.41e-40
RollingBand-fgt: 0.98 [471/479]
GhostDiagnostic-chr: N/A
Centroid-sig: 0.0%
Centroid-so: 47.415 arcsec [33.01σ]
OotOffset-rm: 88.581 arcsec [54.75σ]
KicOffset-rm: 89.647 arcsec [62.41σ]
OotOffset-st: 1/3/4/5 [13]
KicOffset-st: 1/3/4/5 [13]
DiffImageQuality-fgm: 0.54 [7/13]
DiffImageOverlap-fno: 1.00 [14/14]

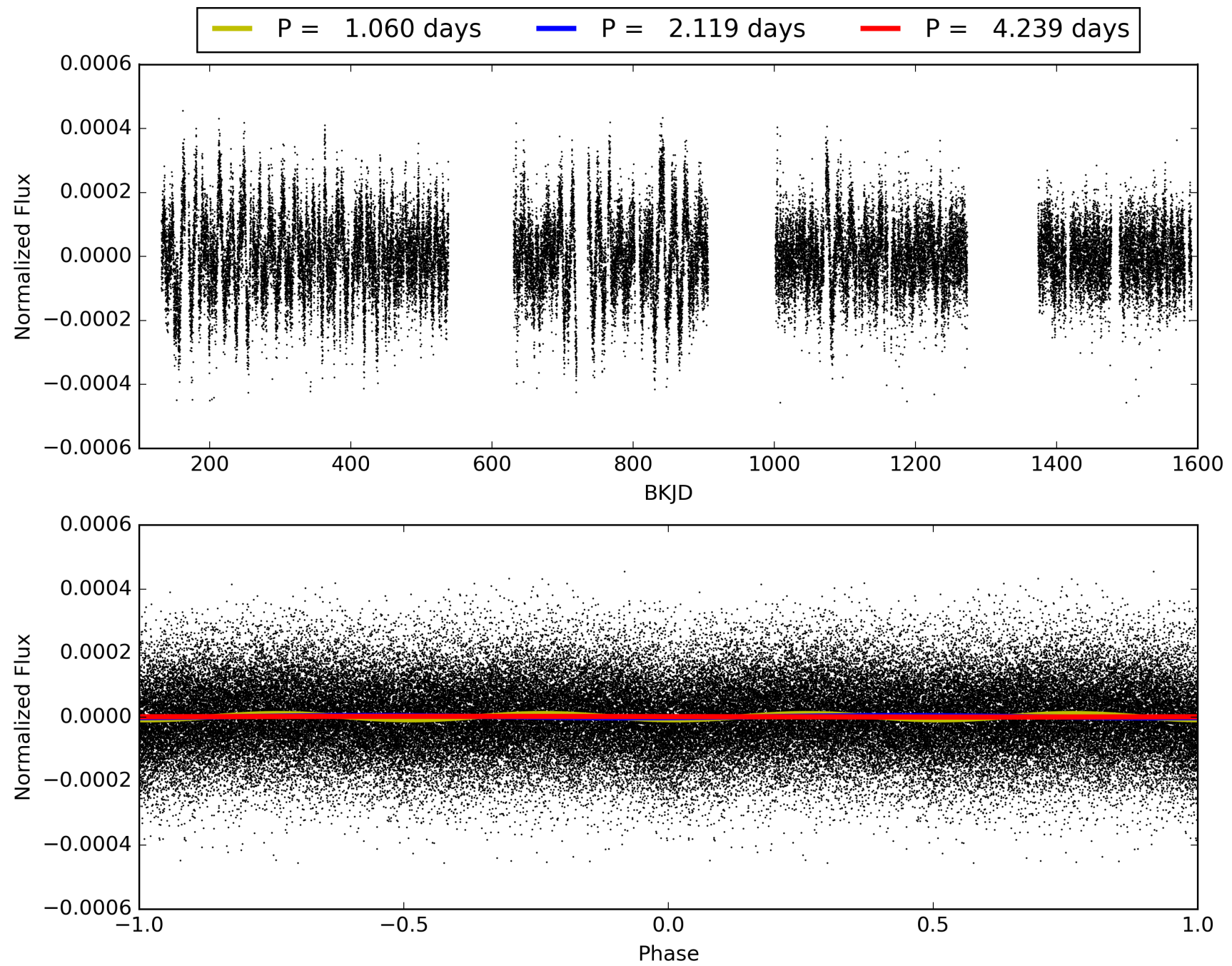
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 05:34:17 Z

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

TCE 005108214-01, PDC Light Curves

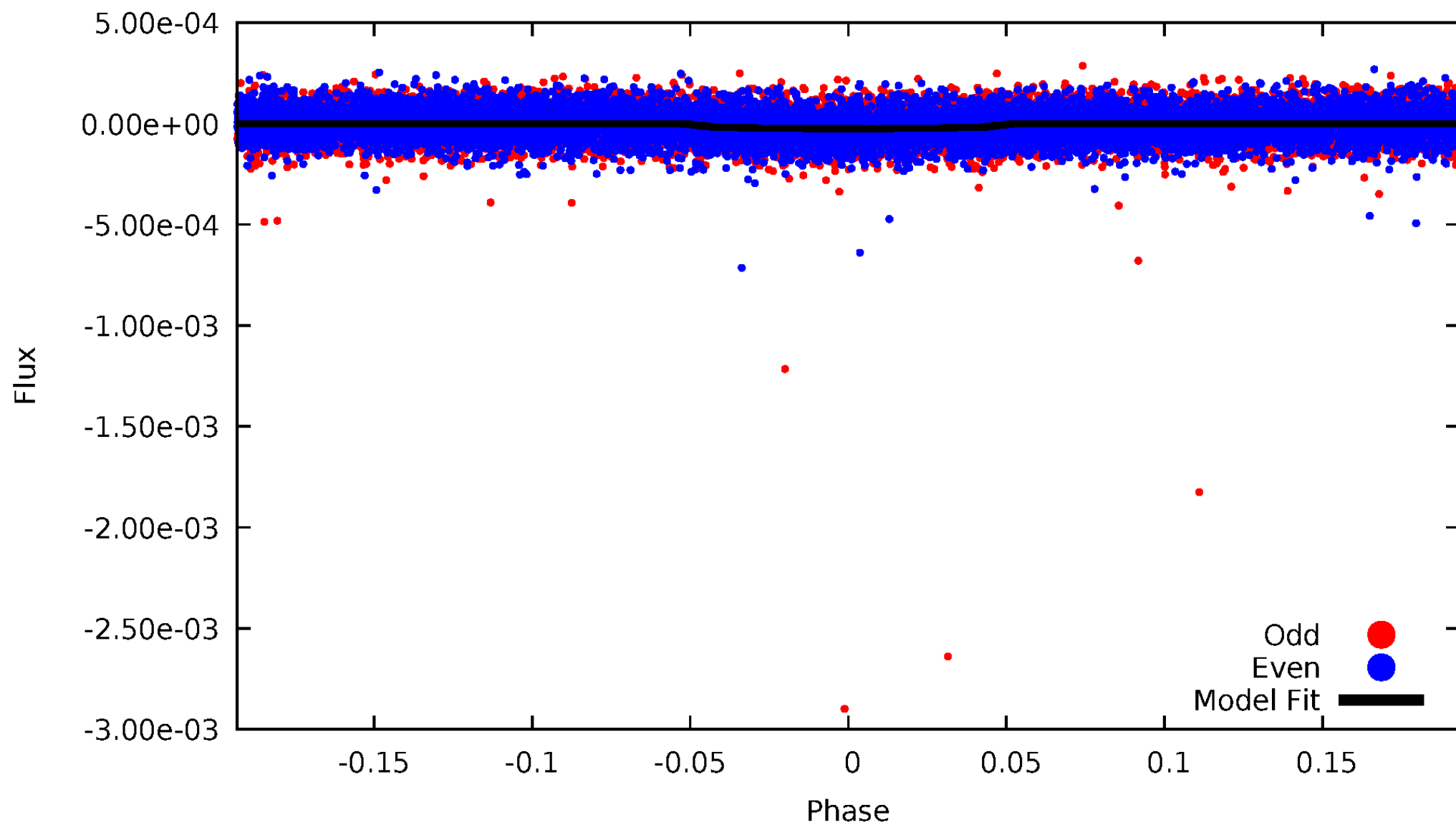


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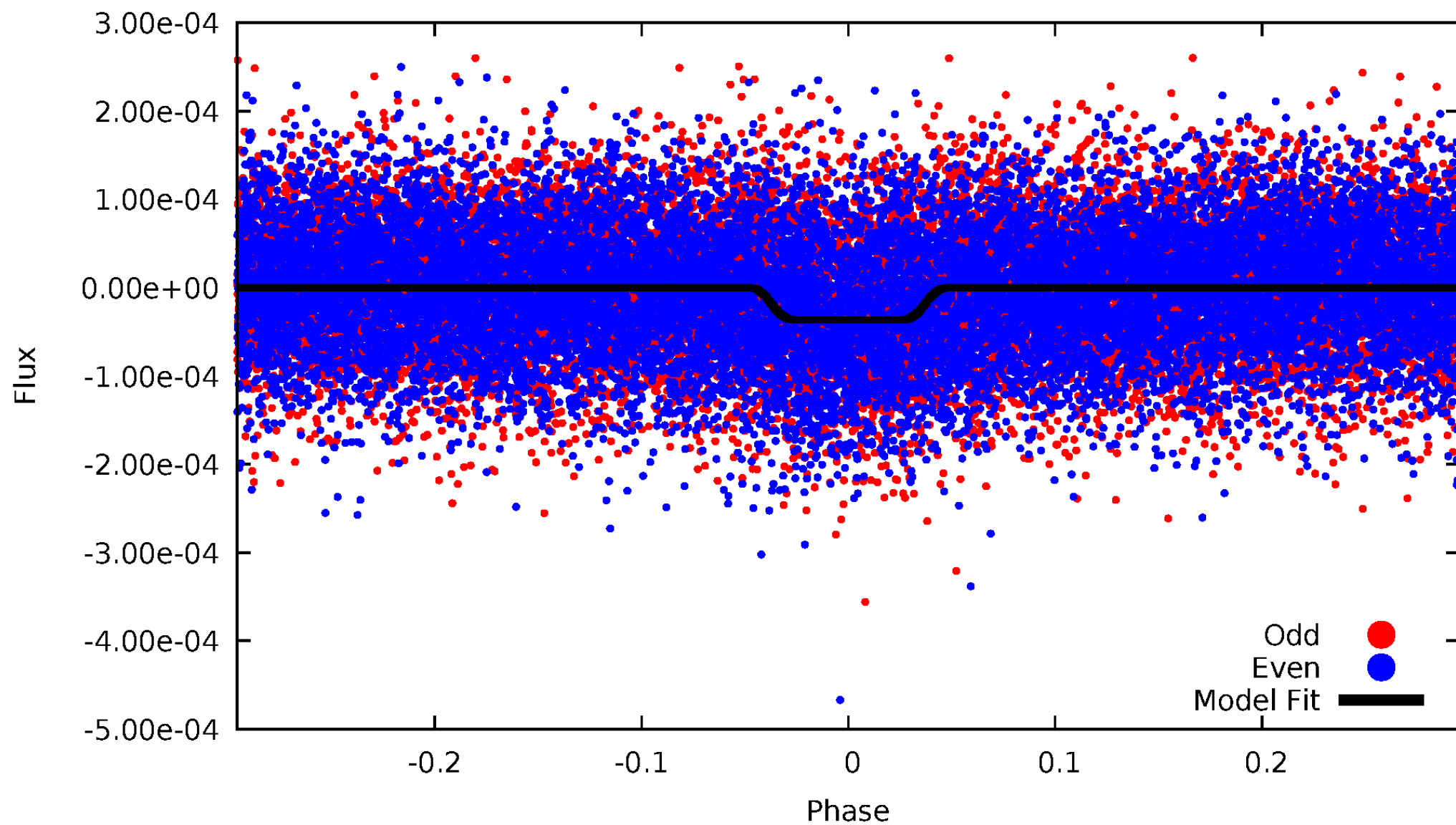
DV Odd/Even

TCE 005108214-01



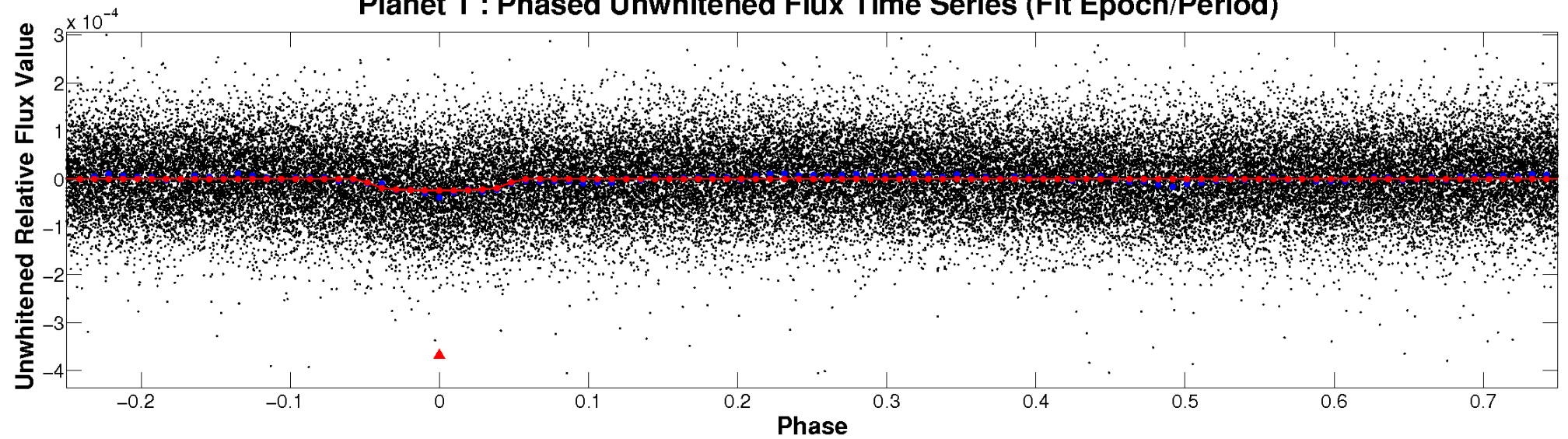
ALT Odd/Even

TCE 005108214-01

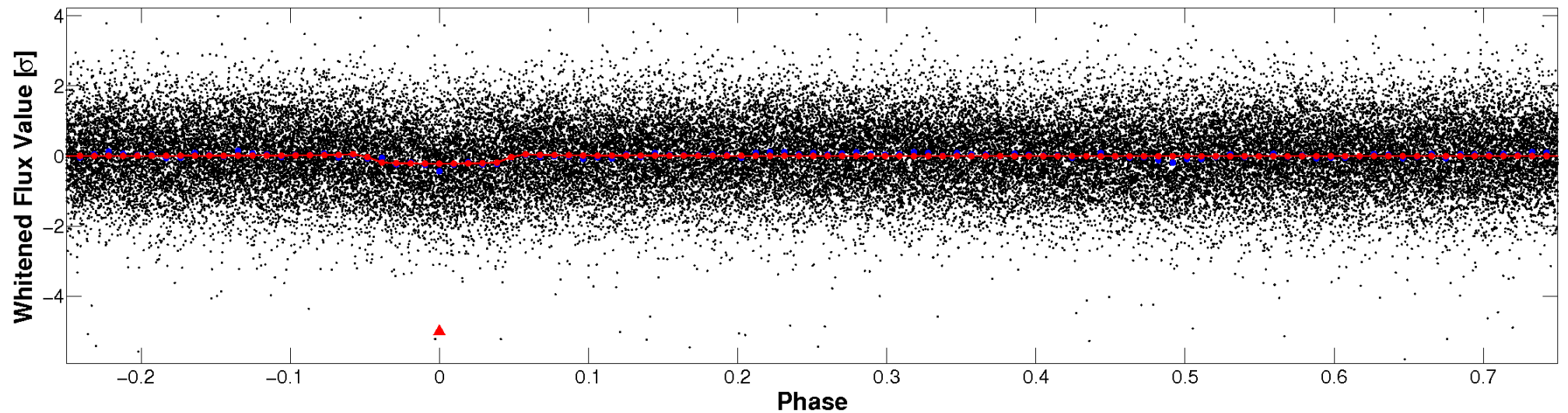


Non-Whitened Vs. Whitened Light Curve

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

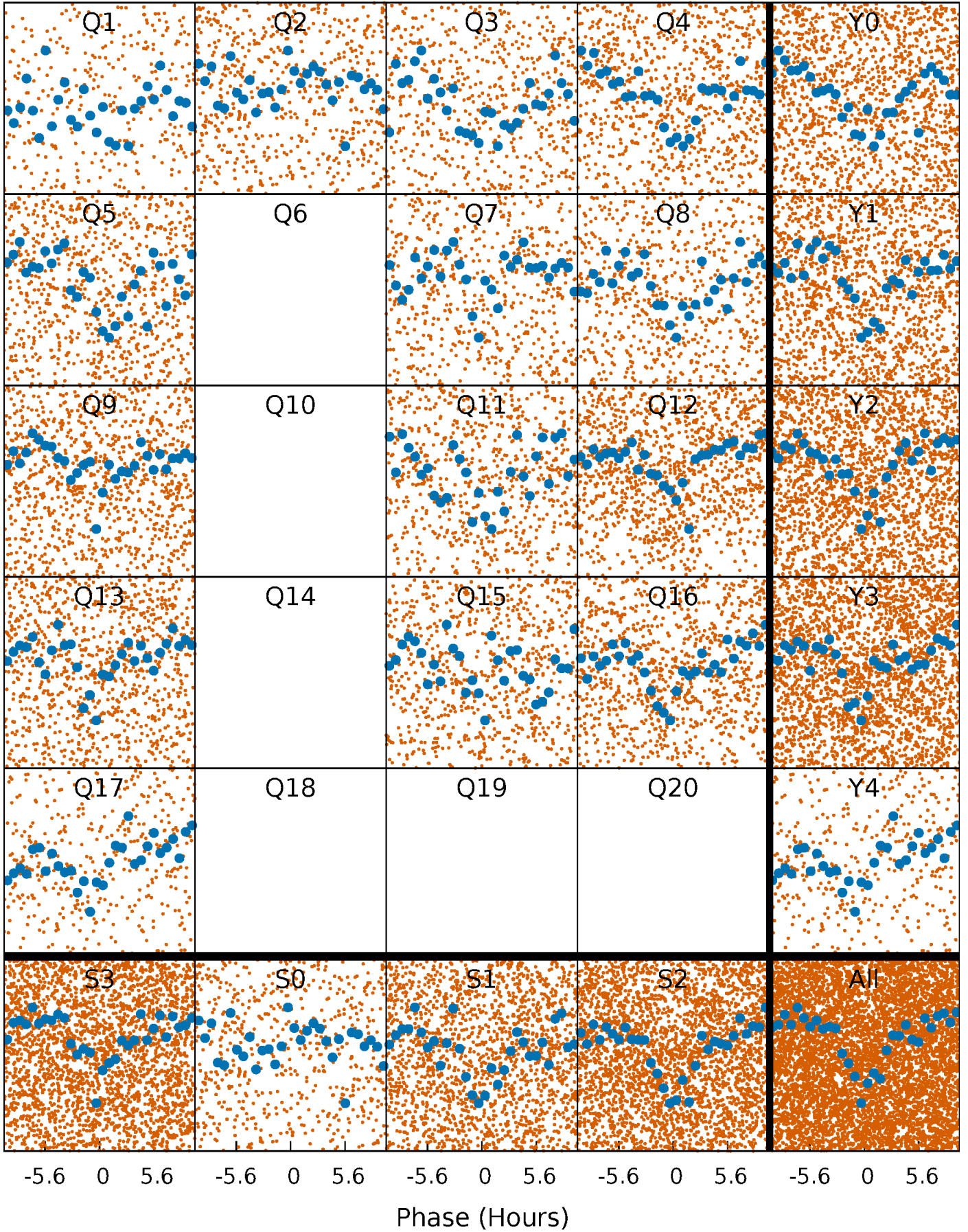


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



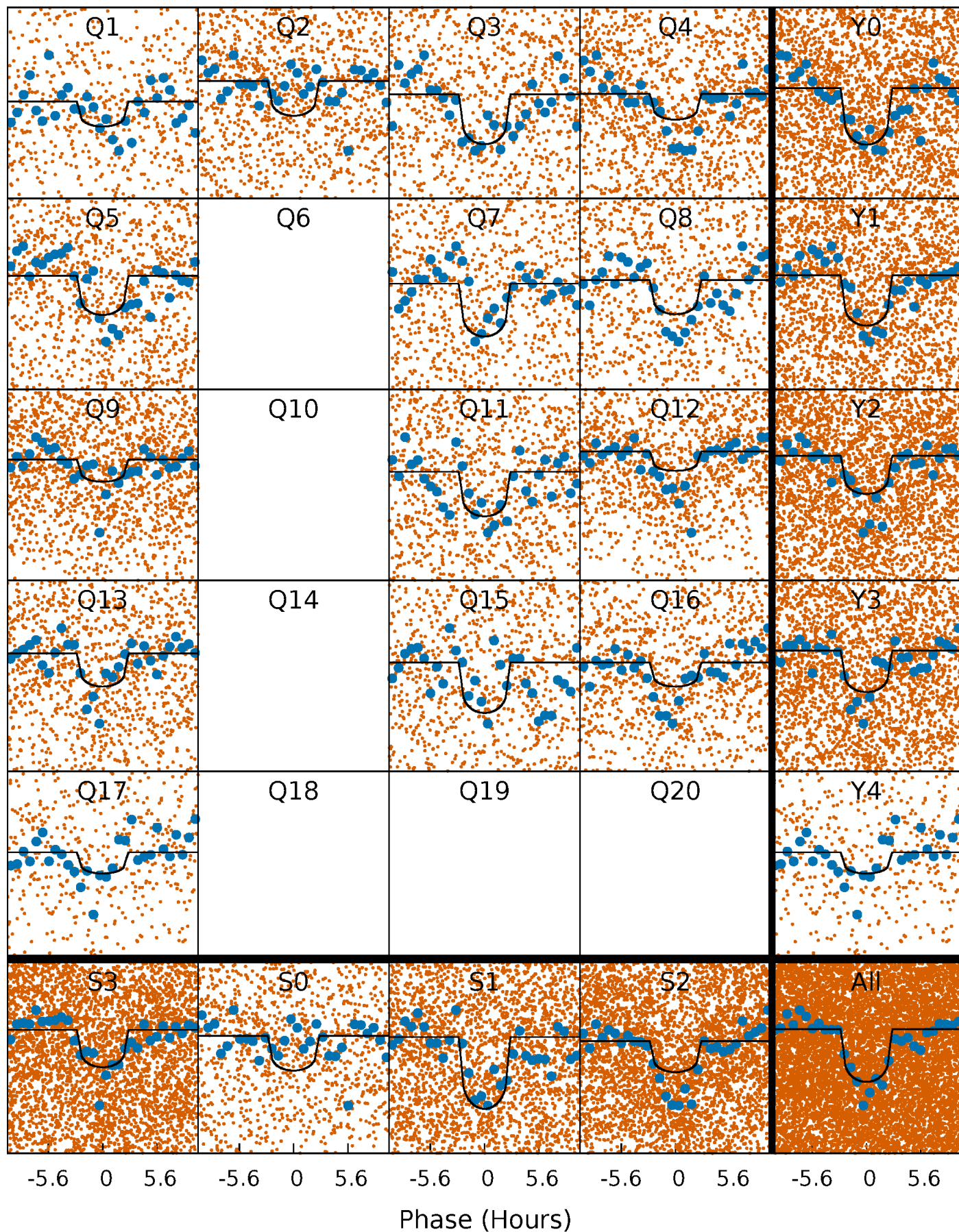
PDC Quarter-Phased Transit Curves

TCE 005108214-01 P= 2.119269 Days $T_0=132.528073$ (BKJD)



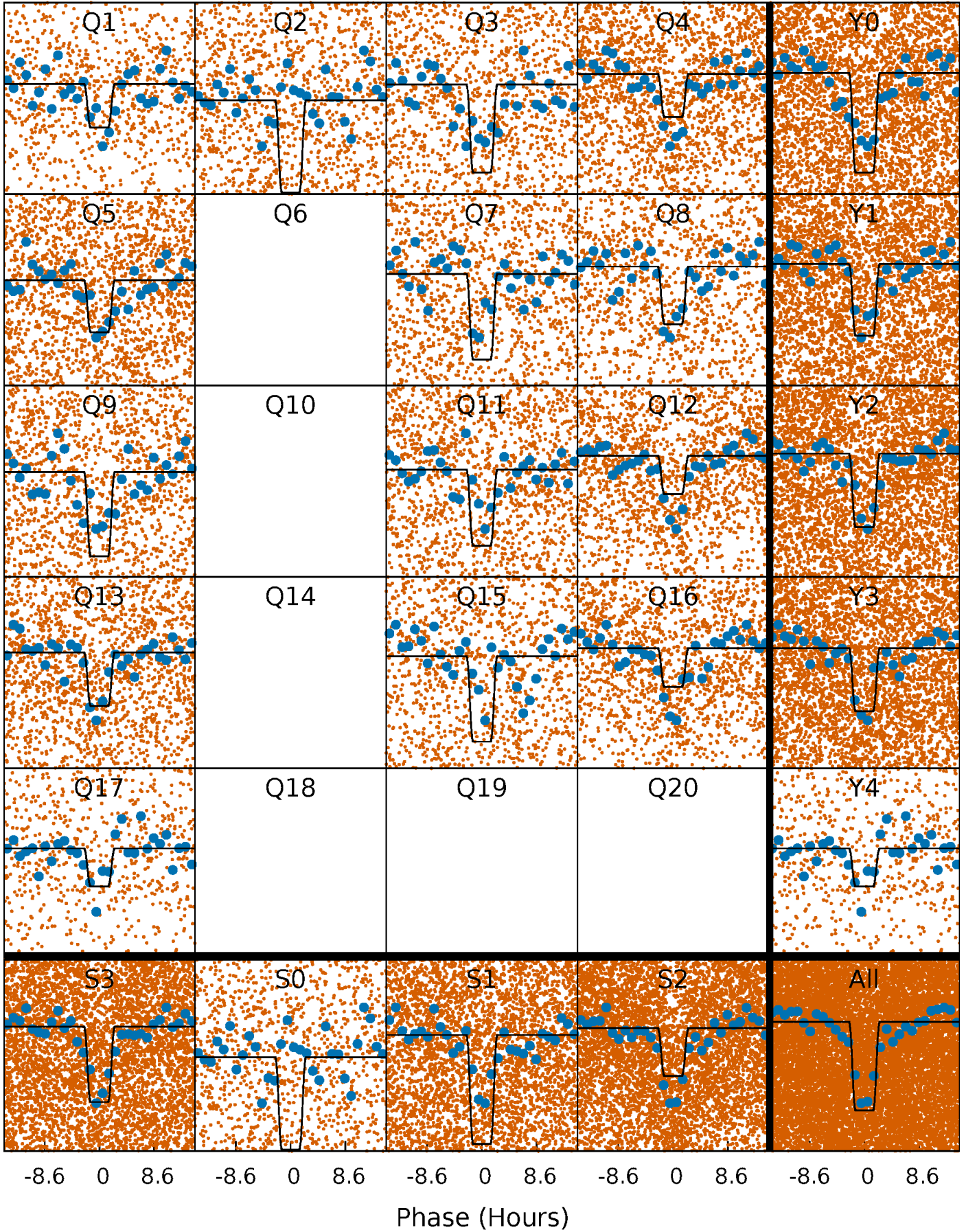
DV Quarter-Phased Transit Curves

TCE 005108214-01 P= 2.119269 Days $T_0=132.528073$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

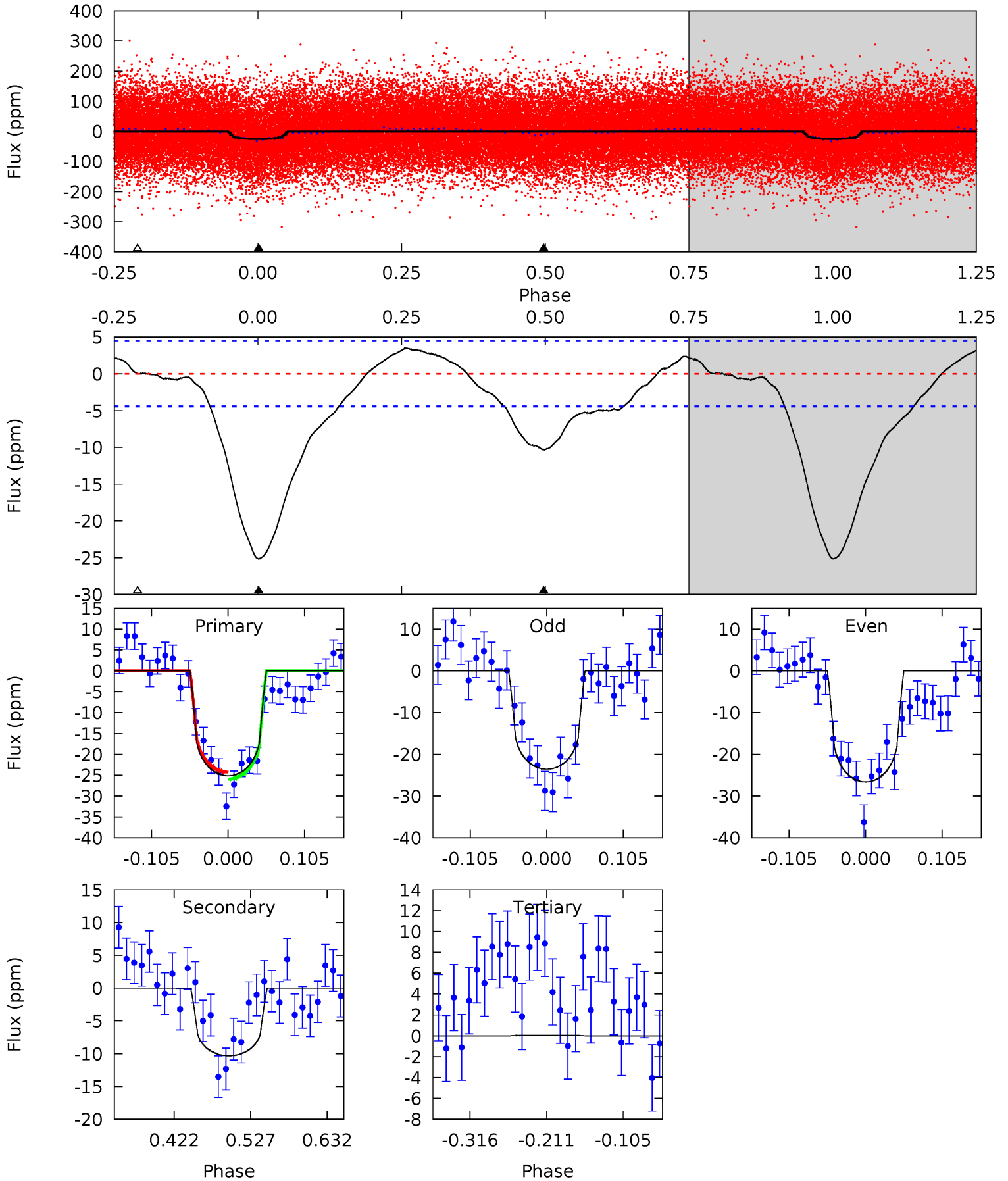
TCE 005108214-01 P= 2.119170 Days $T_0=132.569578$ (BKJD)



DV Model-Shift Uniqueness Test

005108214-01, P = 2.119269 Days, E = 130.408804 Days

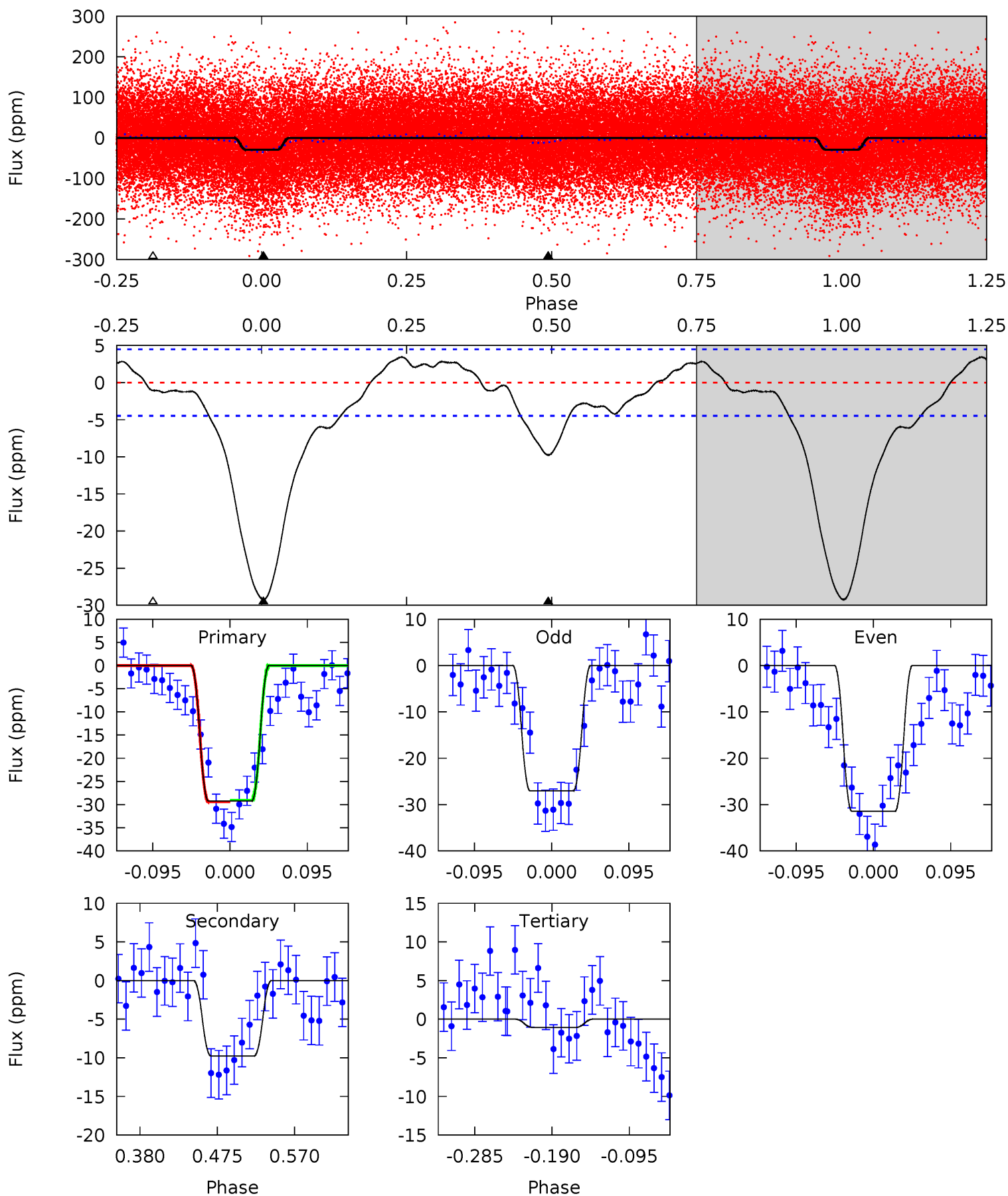
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.8	10.6	-0.05	0	4.55	1.62	2.67	25.8	25.8	10.6	10.6	1.57	1.07	0.12	0.85



Alt Model-Shift Uniqueness Test

005108214-01, P = 2.119170 Days, E = 130.450408 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
29.9	9.97	1.08	0	4.58	1.67	2.61	28.8	29.9	8.88	9.97	2.24	1.05	0.11	0.15



Stellar Parameters For KIC 005108214

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5799^{+78}_{-78}	$3.813^{+0.078}_{-0.052}$	$0.160^{+0.150}_{-0.150}$	$2.377^{+0.212}_{-0.260}$	$1.339^{+0.096}_{-0.107}$	$0.141^{+0.045}_{-0.026}$
	+1%/-1%	+2%/-1%	+94%/-94%	+9%/-11%	+7%/-8%	+32%/-18%
Source	SPE72	AST8	SPE72	DSEP		

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

Secondary Eclipse Parameters for KIC 005108214-01 / KOI 1924.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-10 ± 1	$1.23^{+0.22}_{-0.21}$	2920^{+74}_{-92}	4808^{+418}_{-331}	$4.792^{+2.239}_{-1.402}$
Alt.	-10 ± 1	$1.54^{+0.23}_{-0.22}$	2912^{+76}_{-80}	4295^{+285}_{-237}	$2.860^{+1.059}_{-0.711}$

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

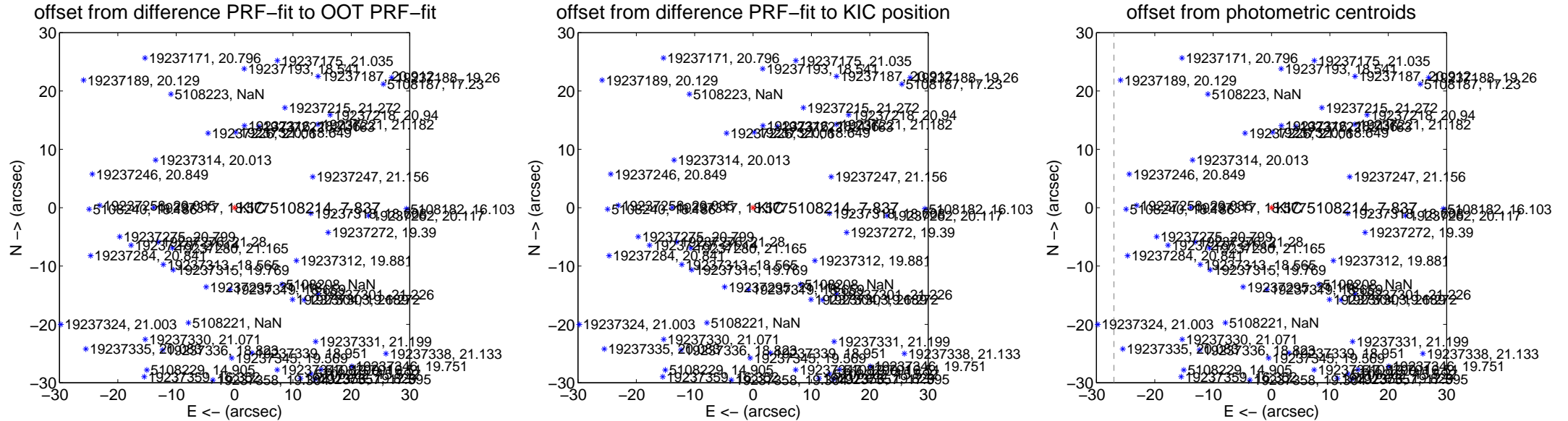
DV Centroid Data

Supplemental centroid analysis for 005108214-01. **Kepler magnitude: 7.84.** Transit SNR 13.64

There are 7 quarters with good PRF difference image offsets

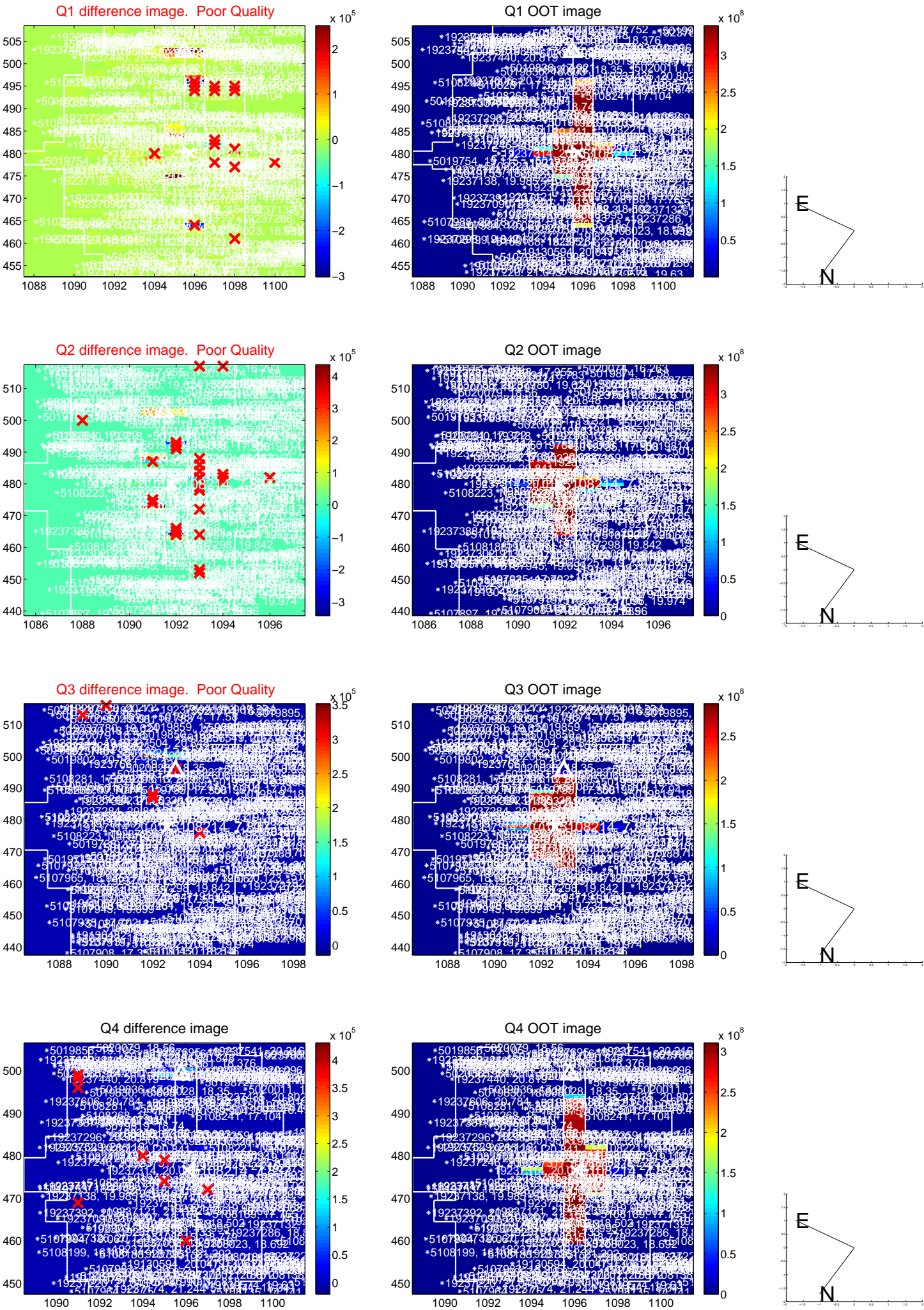
The direct PRF centroid is offset from the target star catalog position by about 1.93 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	88.581 \pm 1.618	54.75	45.684 \pm 0.972	-75.892 \pm 1.325
PRF-fit source offset from KIC position	89.647 \pm 1.436	62.41	46.570 \pm 0.896	-76.602 \pm 1.138
photometric centroid source offset	47.42 \pm 1.44	33.01	27.00 \pm 1.05	-38.98 \pm 1.59

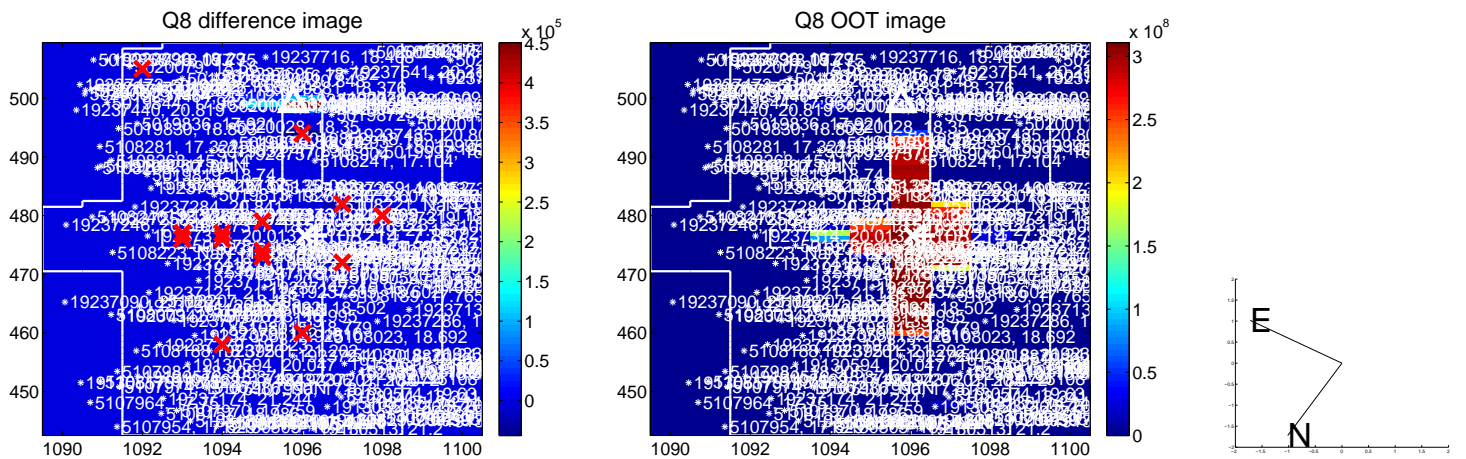
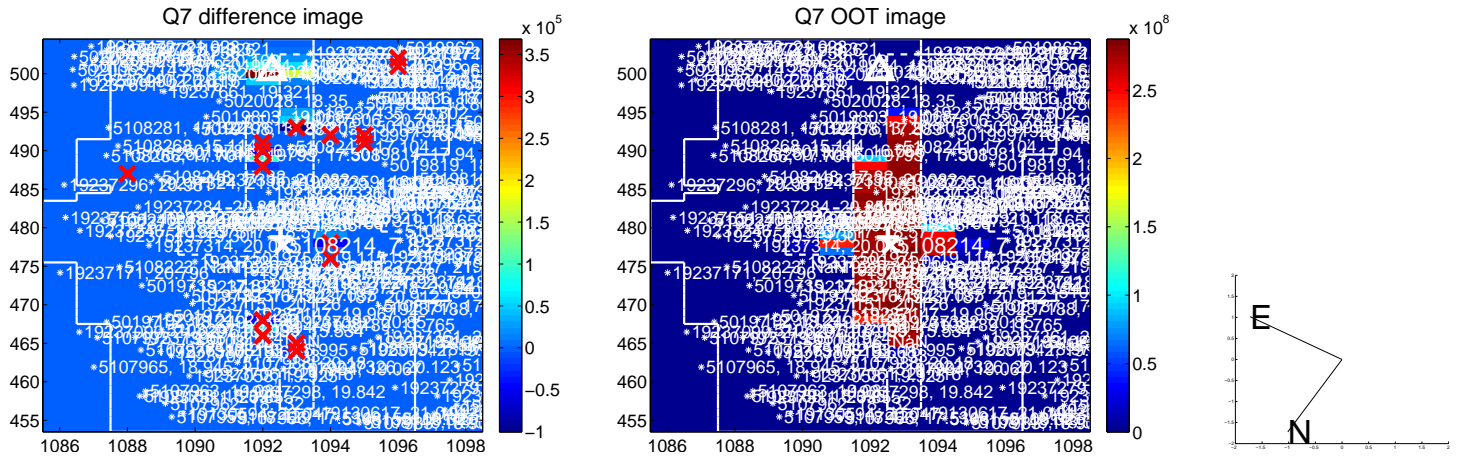
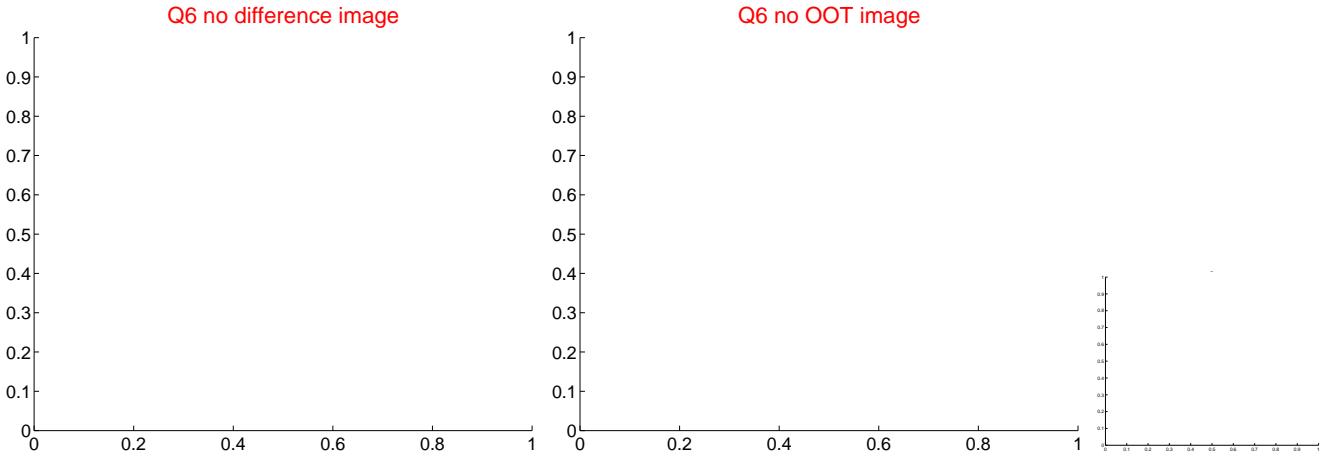
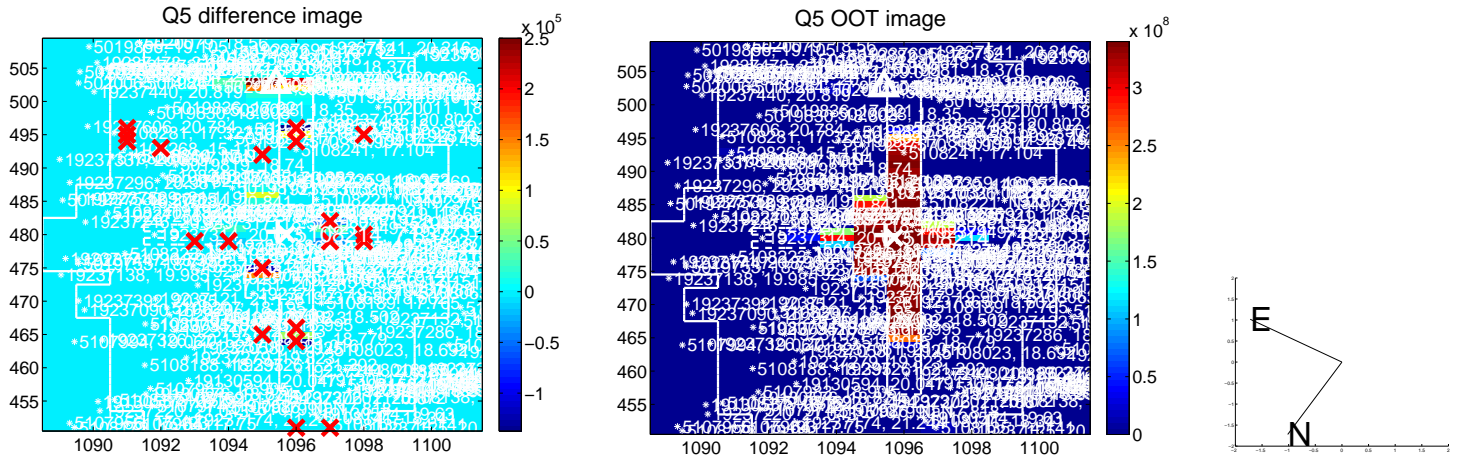


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

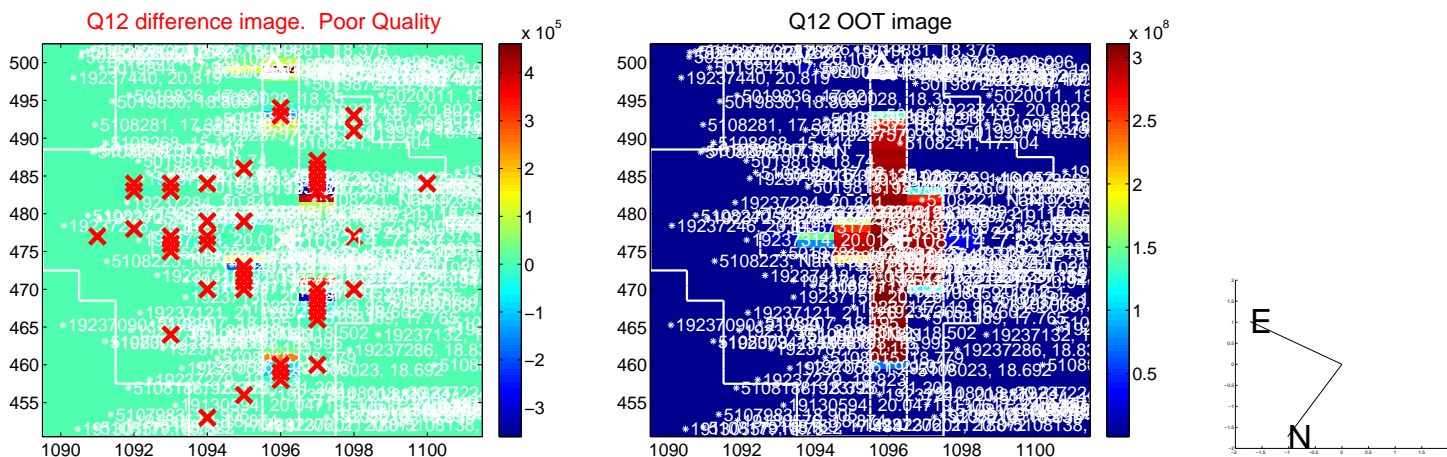
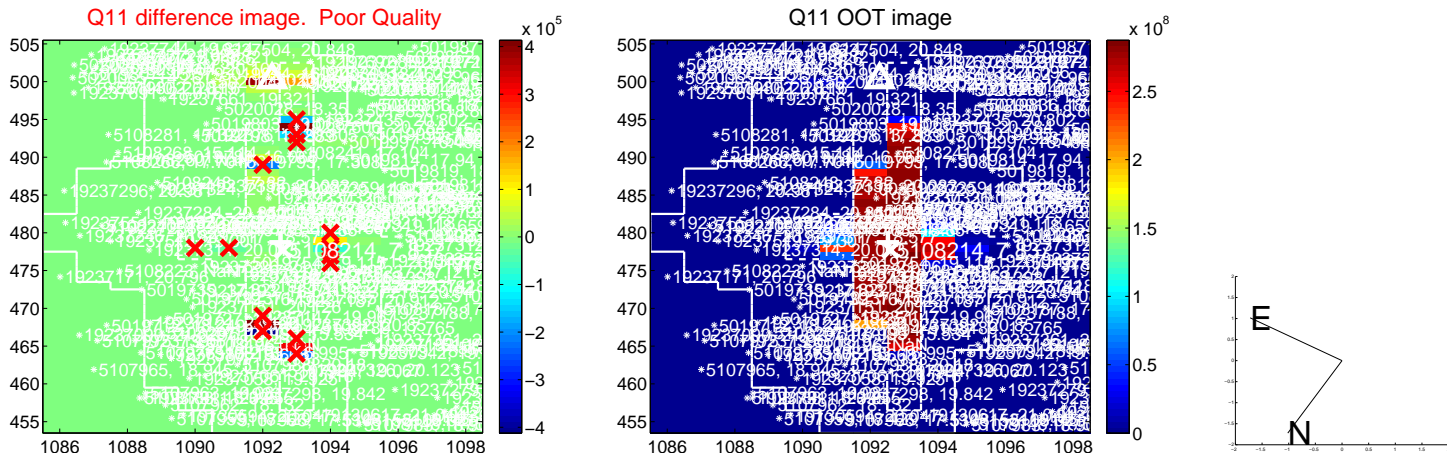
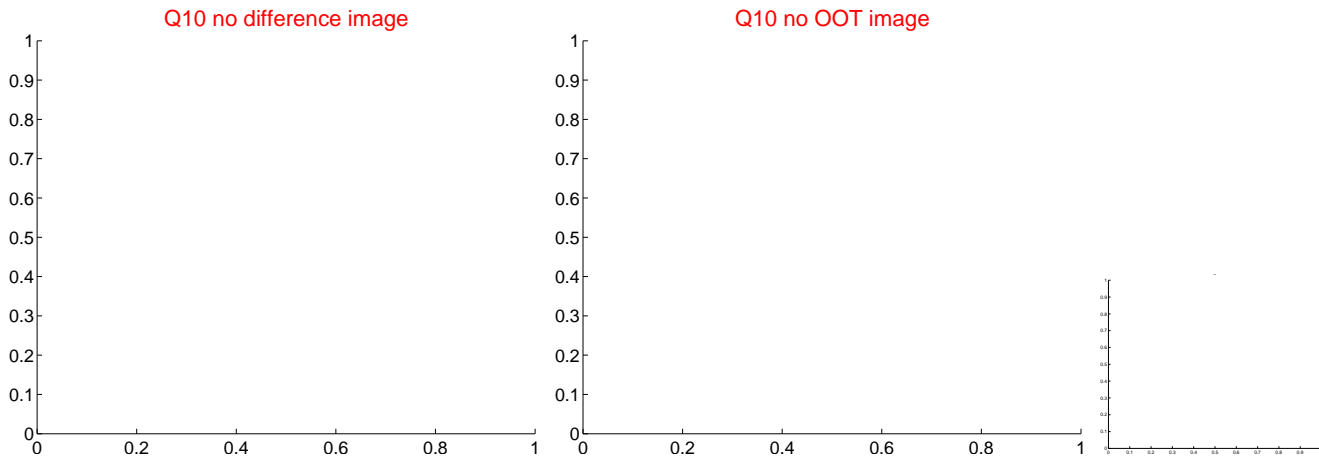
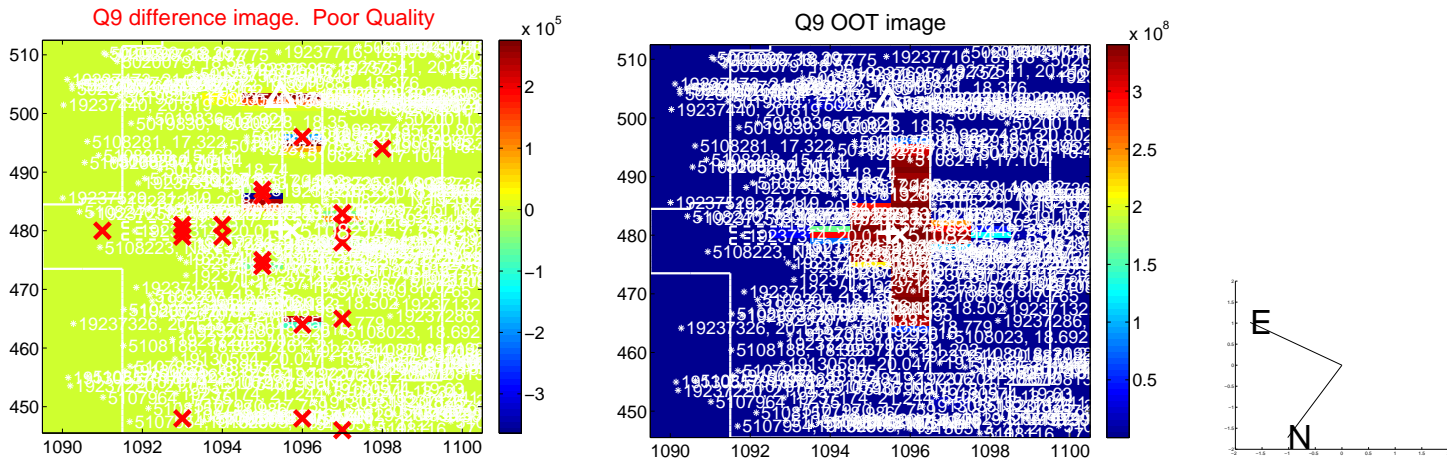
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



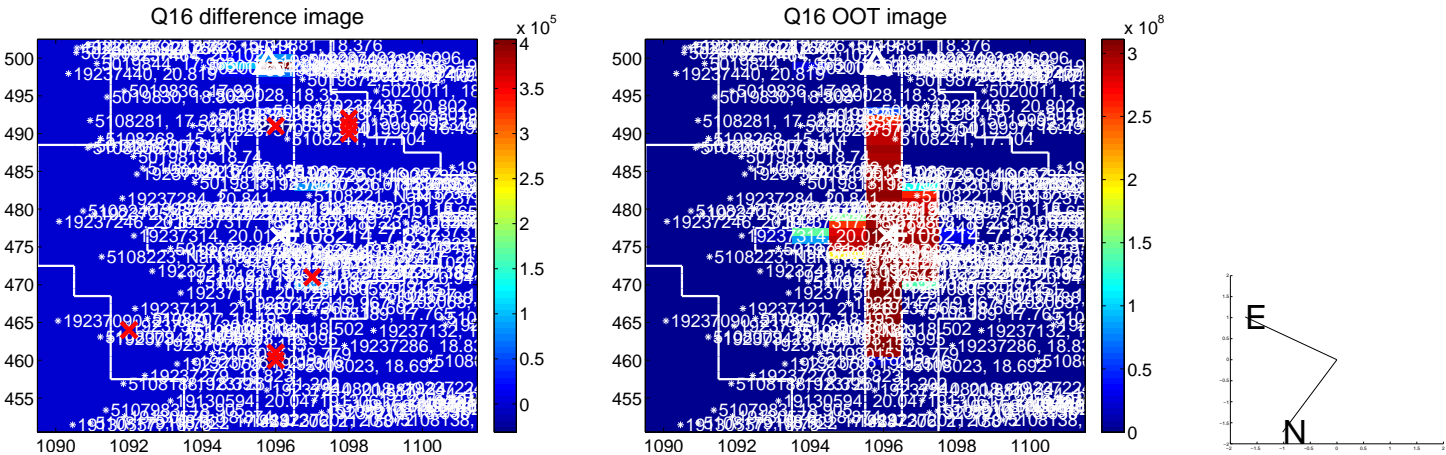
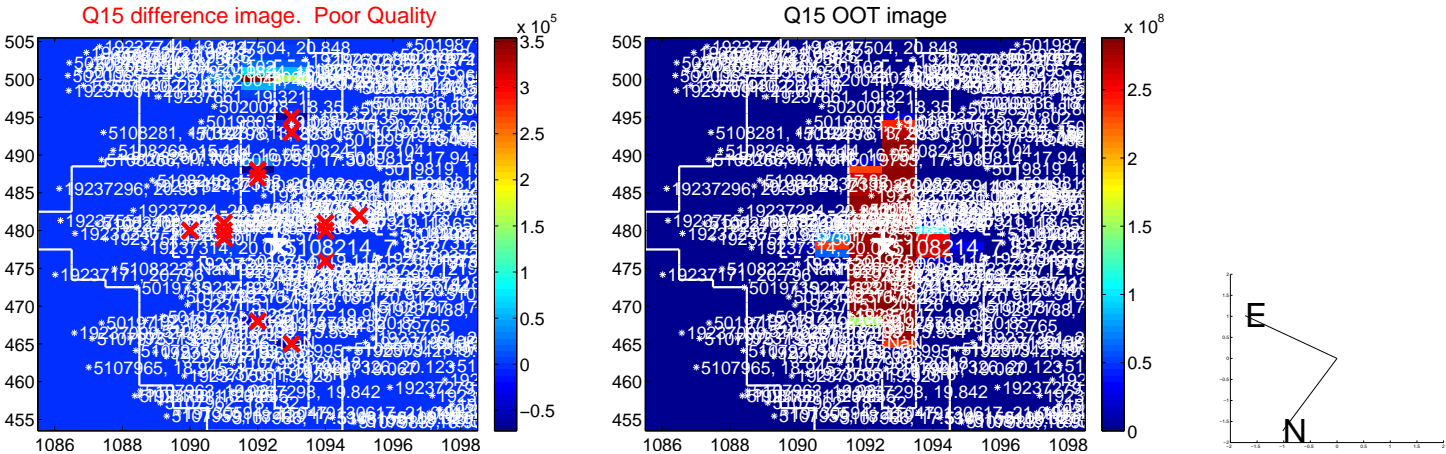
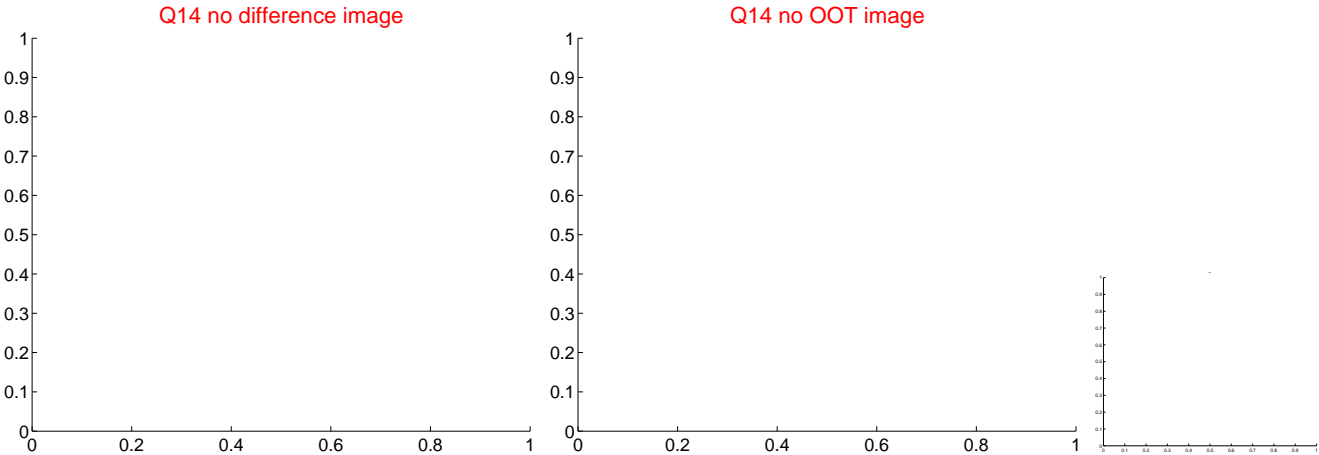
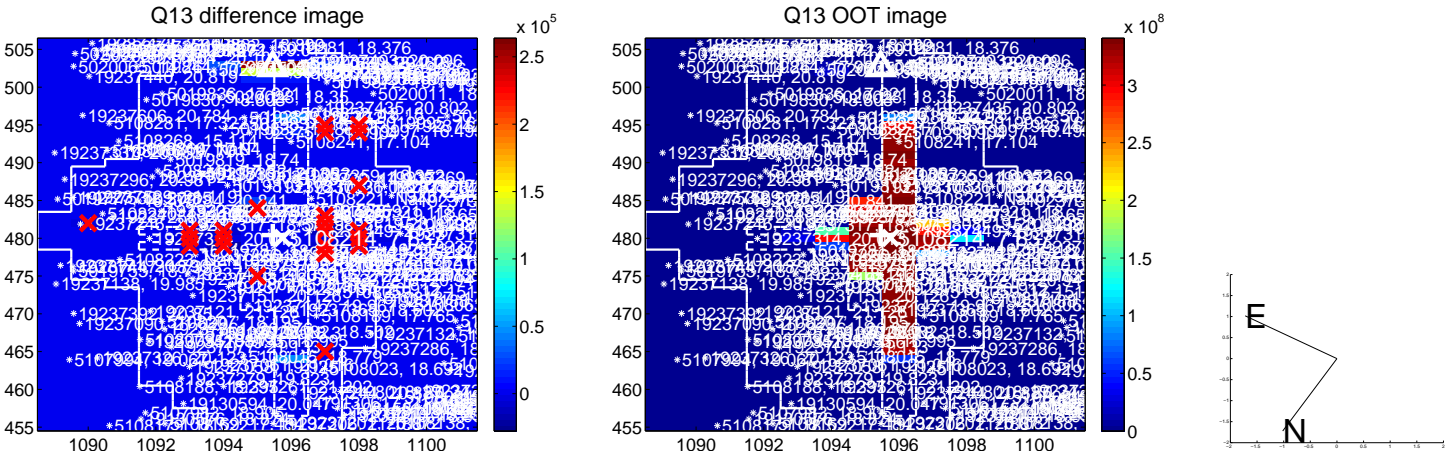
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



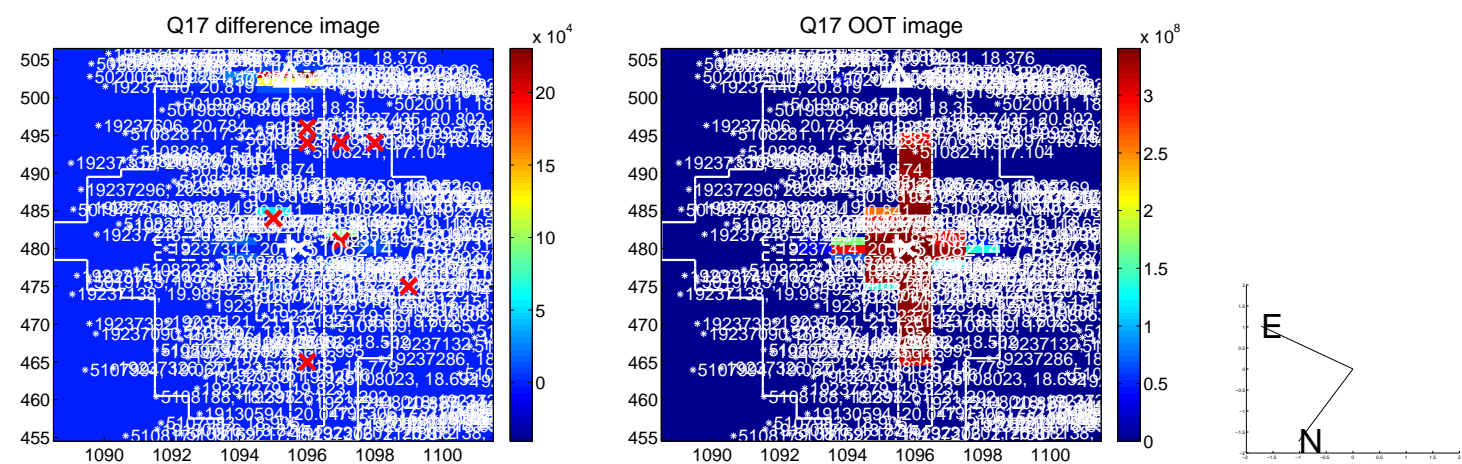
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



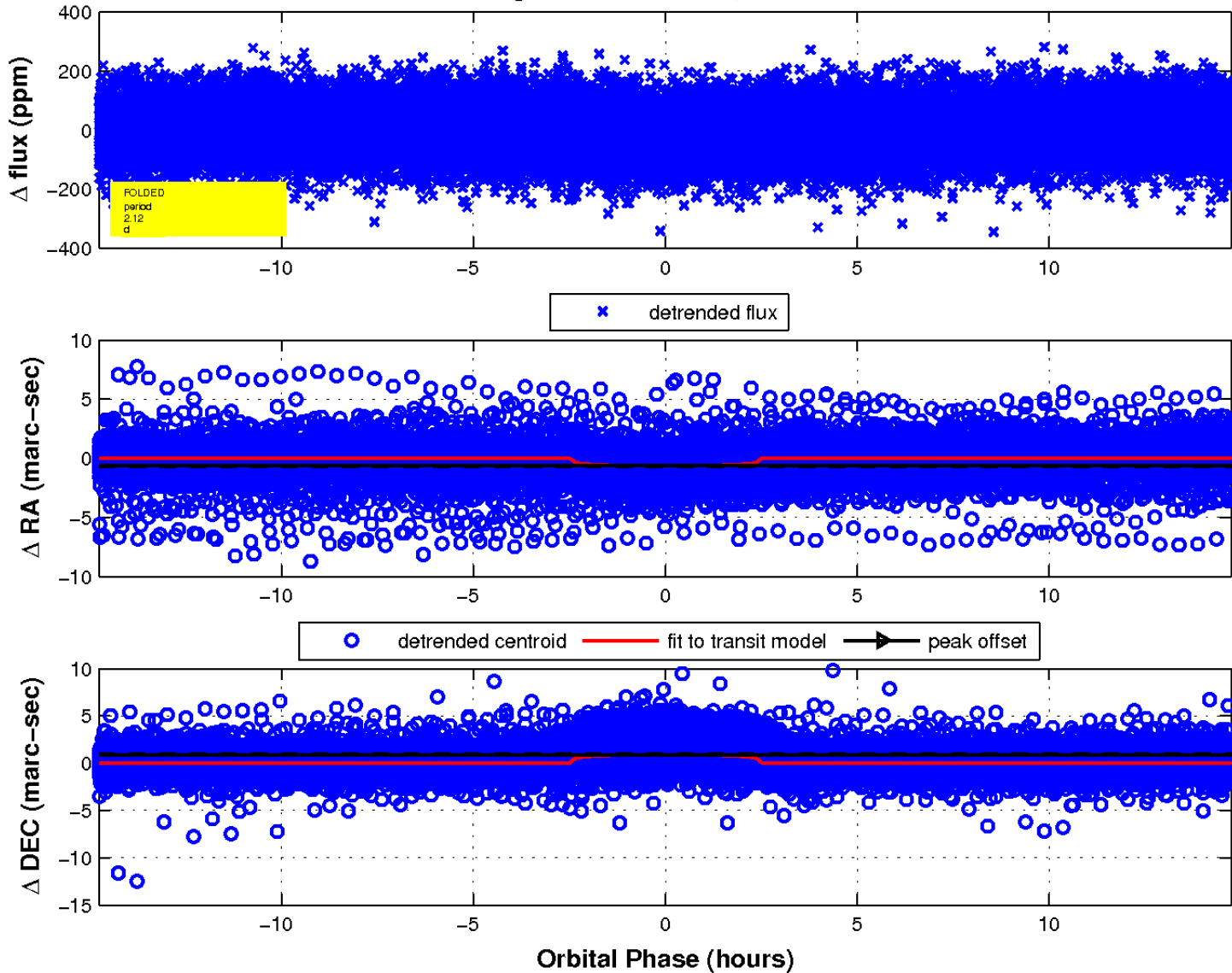
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

