

KIC 005210475

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})
005210475-01	OBS	1568.01	1.008909	131.891779	269.8	1.755	26.5	29.3	0.80	5708	1.55	1698.01

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005210475-01	OBS	FP	0.00	0	0	1	0	CENT_UNRESOLVED_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 005210475-01

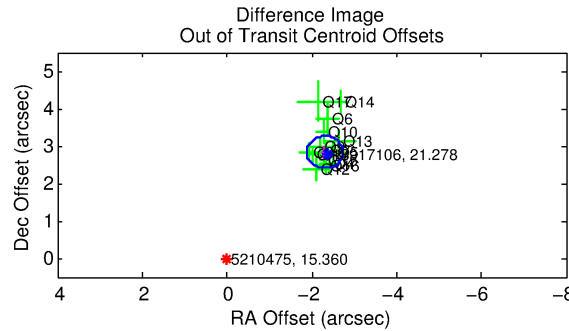
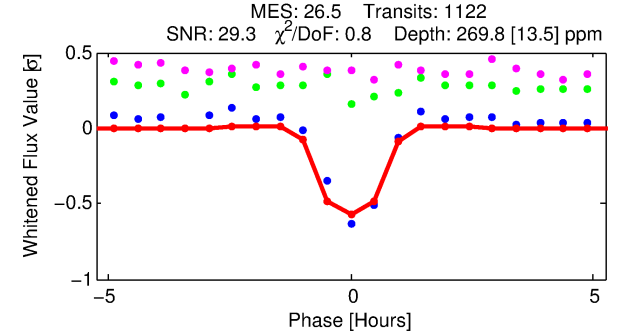
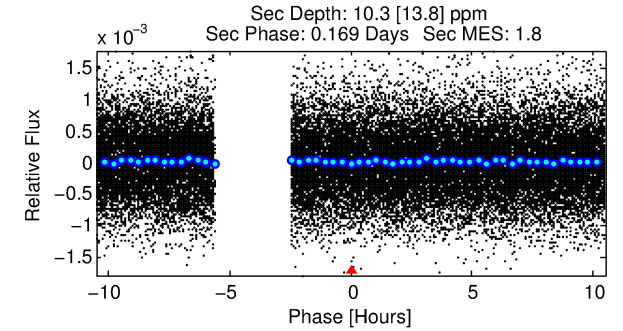
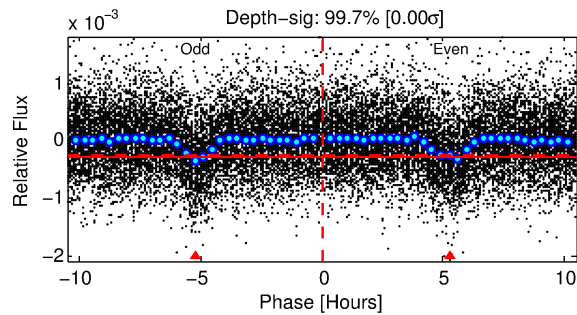
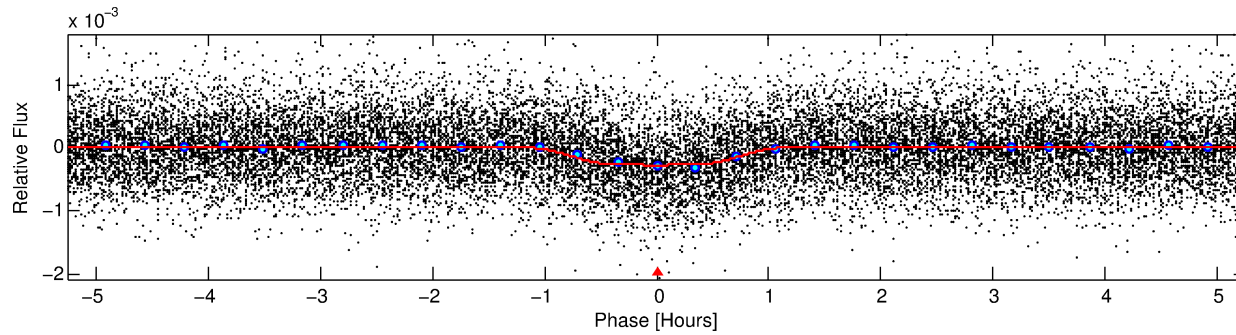
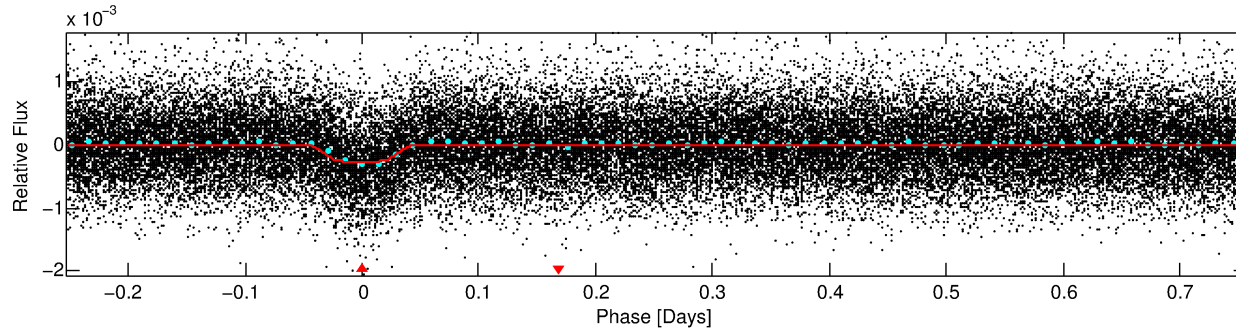
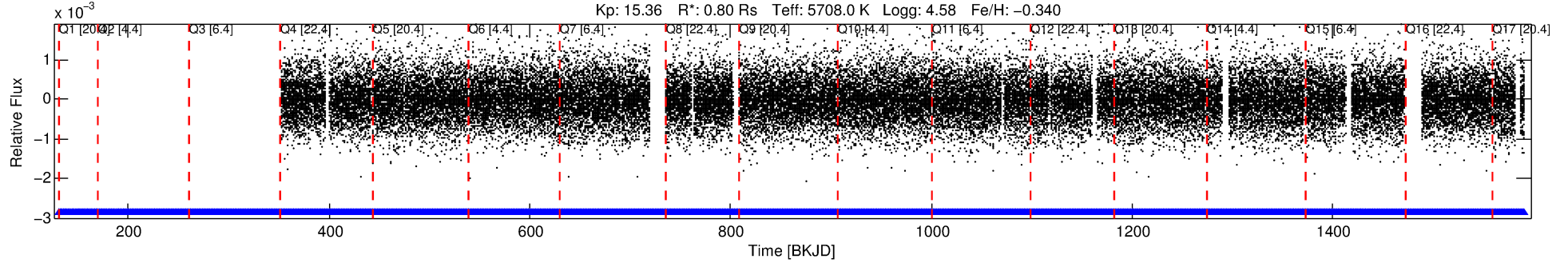
No Significant Match Found

DV One-Page Summary

KIC: 5210475 Candidate: 1 of 1 Period: 1.009 d

KOI: K01568.01 Corr: 0.907

Kp: 15.36 R*: 0.80 Rs Teff: 5708.0 K Logg: 4.58 Fe/H: -0.340



DV Fit Results:

Period = 1.00891 [0.00000] d
Epoch = 131.8918 [0.0009] BKJD
Rp/R* = 0.0179 [0.0045]
a/R* = 2.28 [2.25]
b = 0.90 [0.26]
Seff = 1698.01 [549.18]
Teq = 1637 [132] K
Rp = 1.55 [0.55] Re
a = 0.0188 [0.0038] AU
Ag = 0.83 [1.21] [-0.14σ]
Teff = 2415 [867] K [0.89σ]

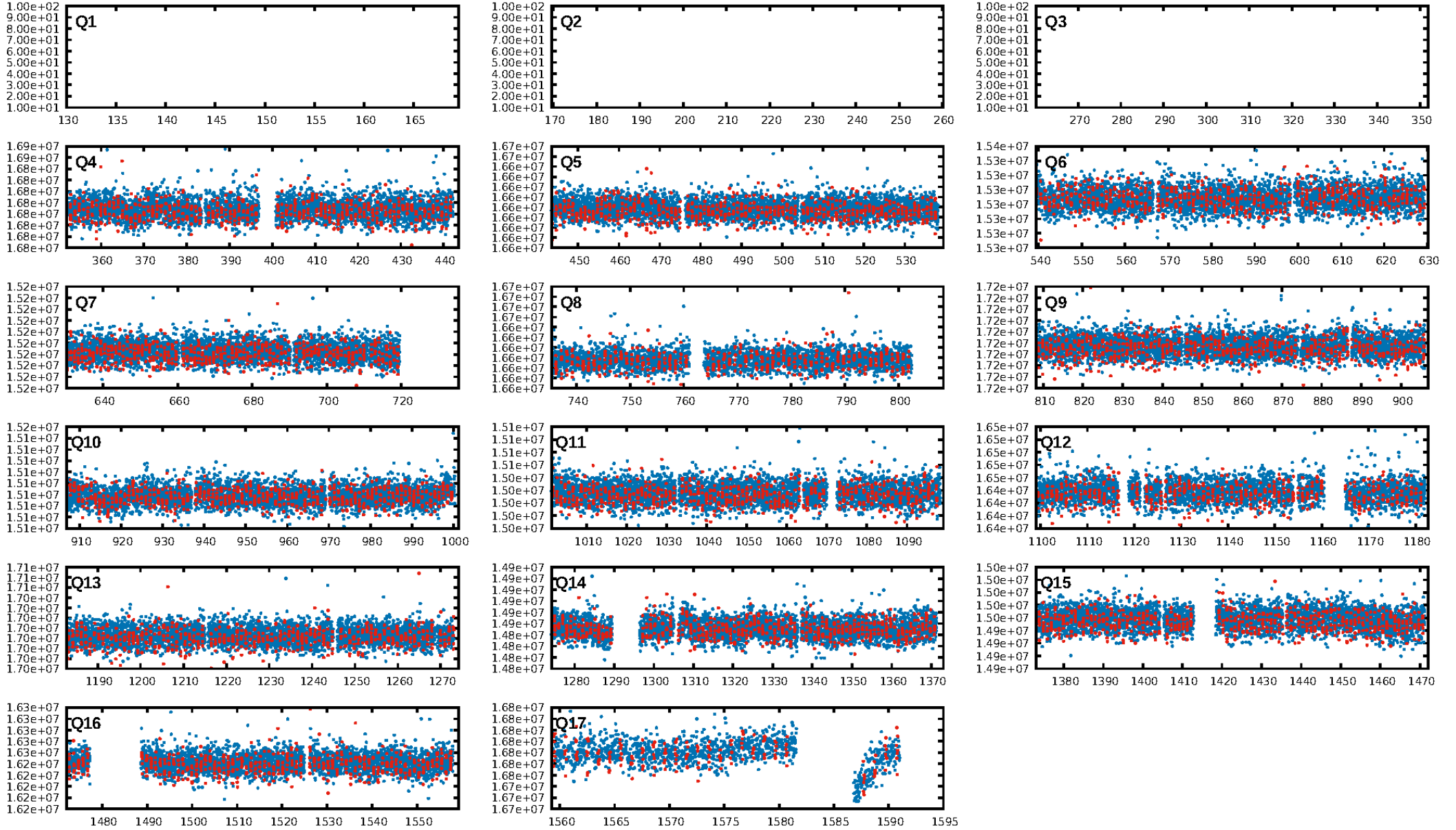
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.87e-145
RollingBand-fgt: 1.00 [1096/1096]
GhostDiagnostic-chr: 0.877
Centroid-sig: 0.0%
Centroid-so: 3.910 arcsec [9.39σ]
OotOffset-rm: 3.655 arcsec [25.67σ]
KicOffset-rm: 3.473 arcsec [33.70σ]
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]

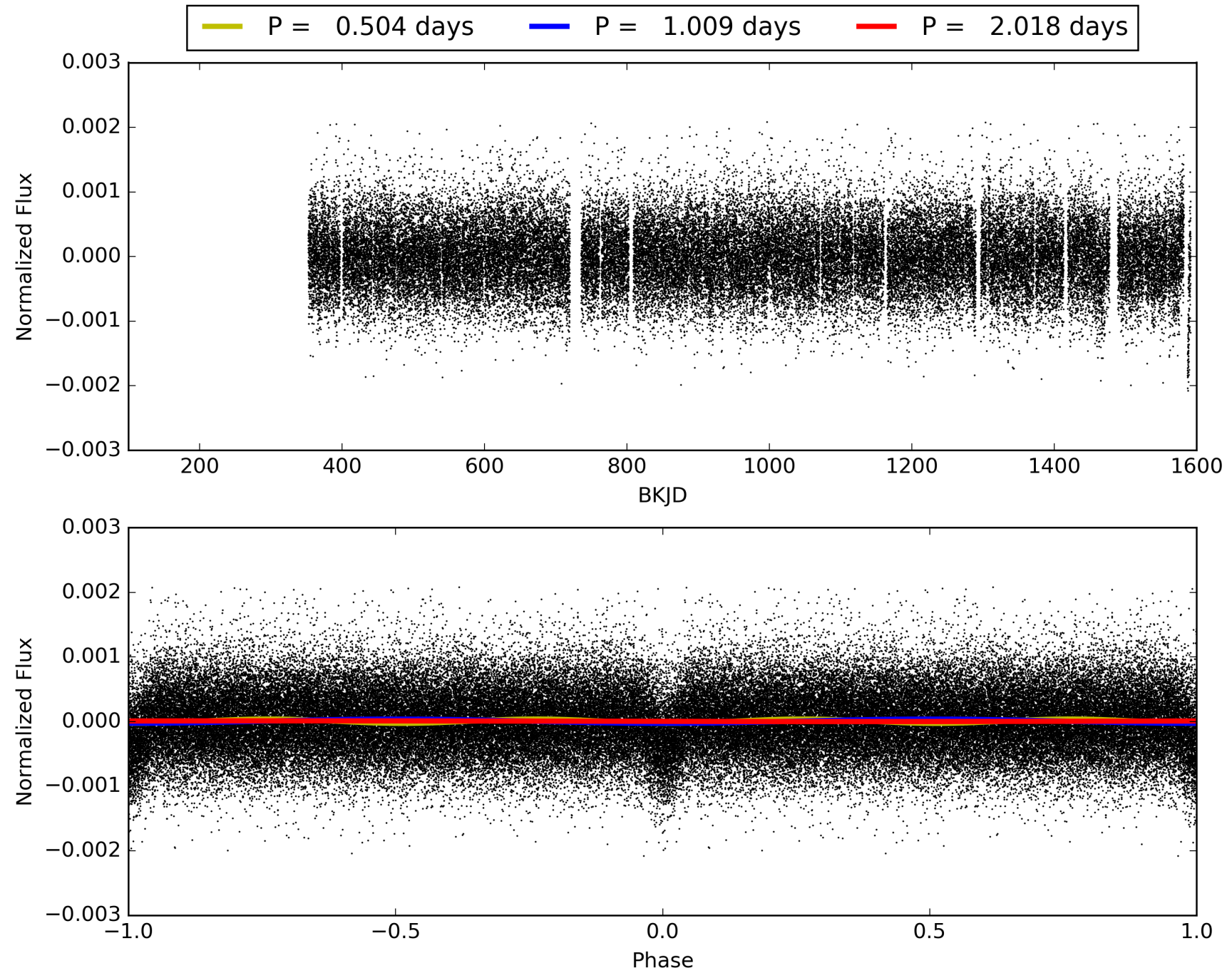
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 11:37:08 Z

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

TCE 005210475-01, PDC Light Curves

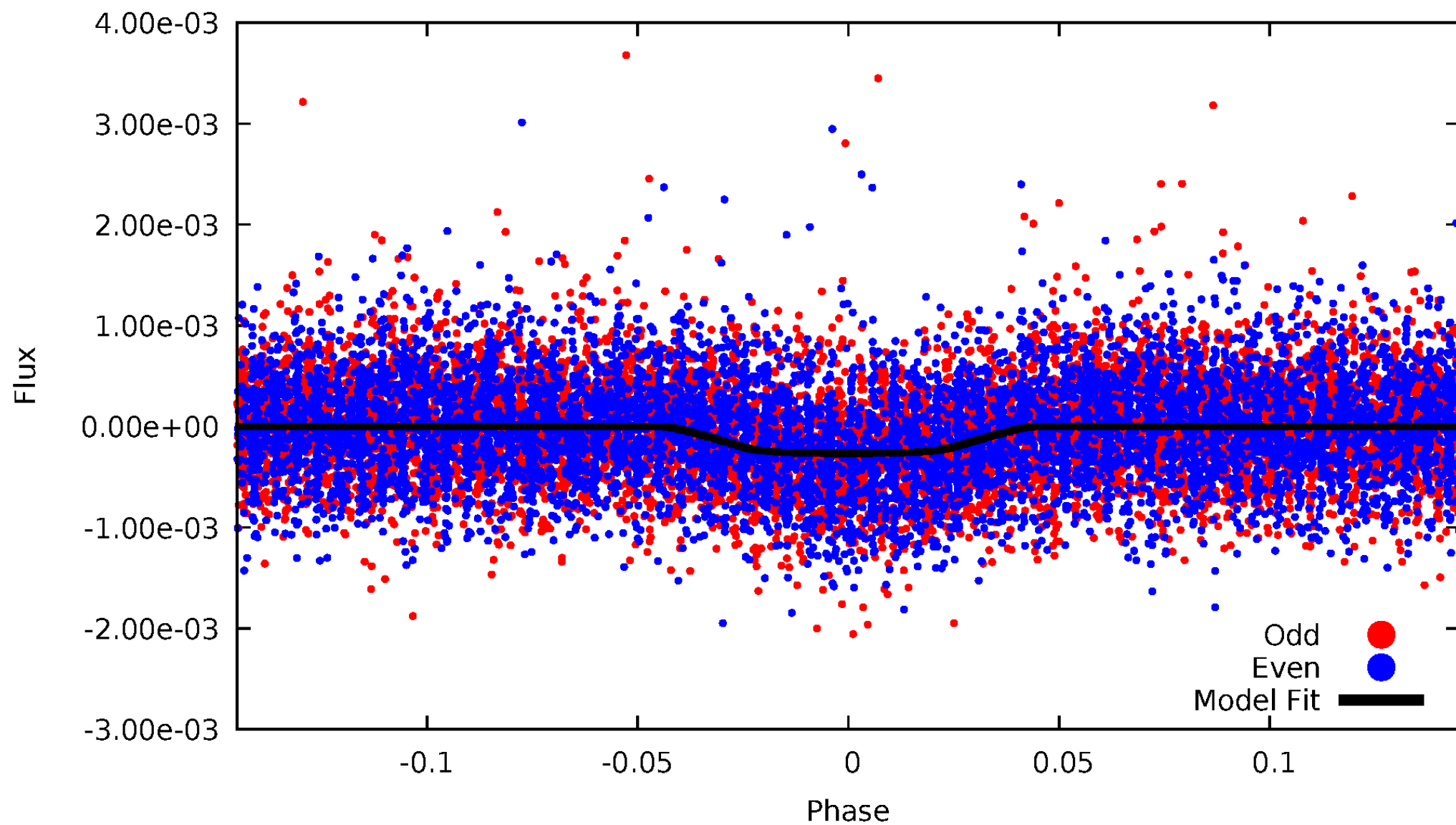


TCE 005210475-01



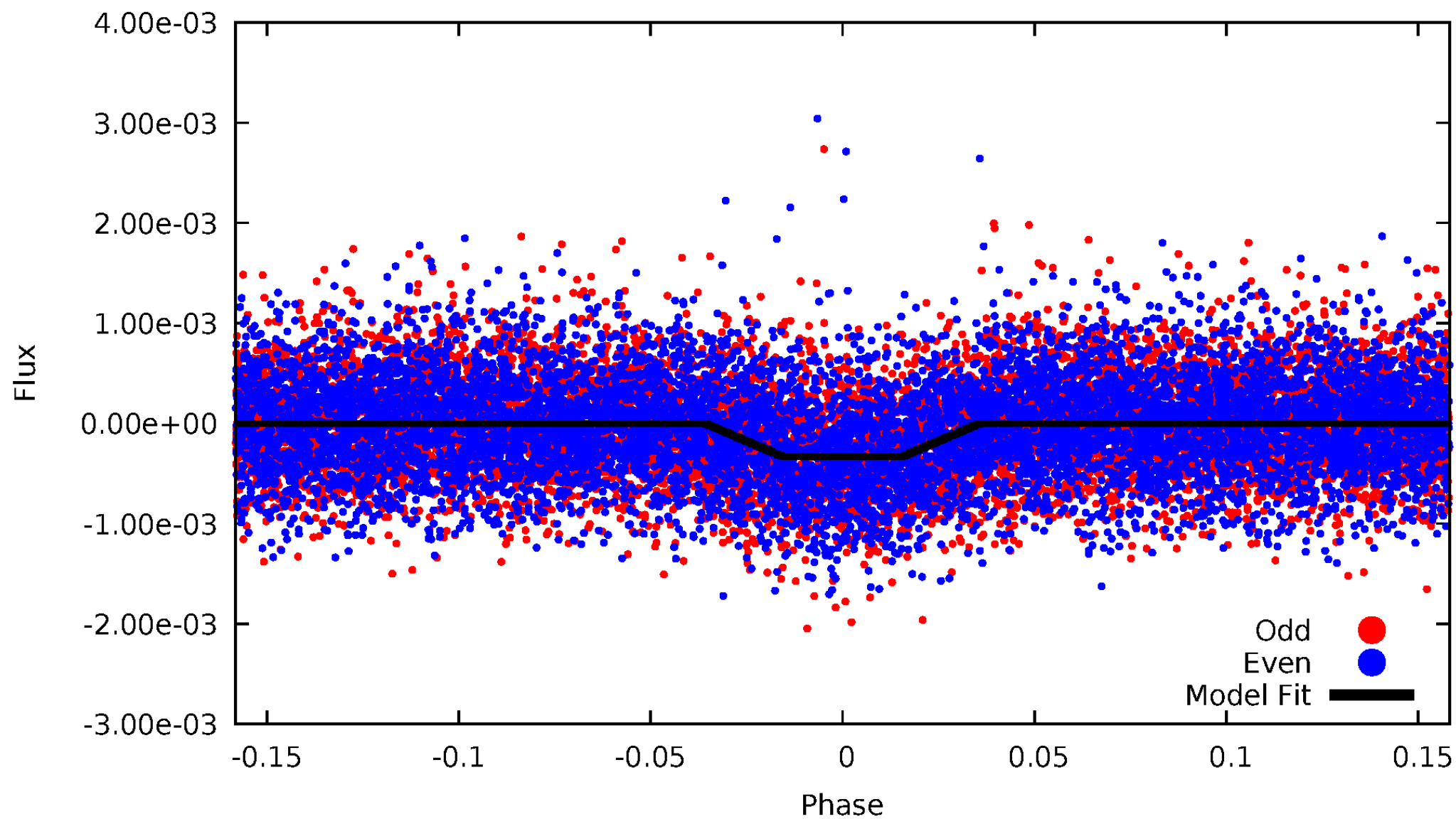
DV Odd/Even

TCE 005210475-01



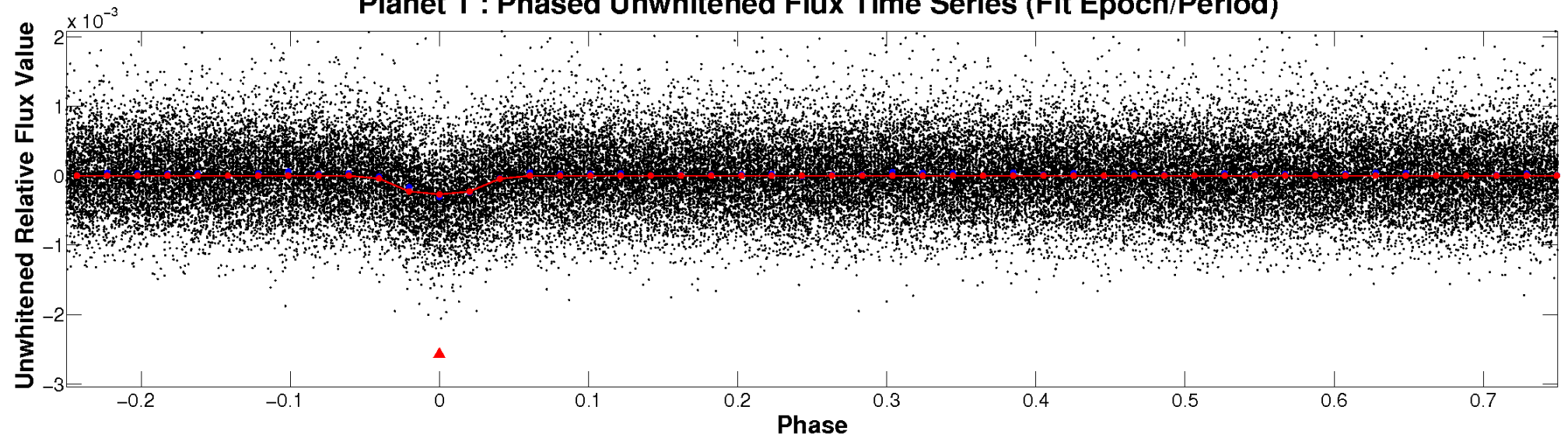
ALT Odd/Even

TCE 005210475-01

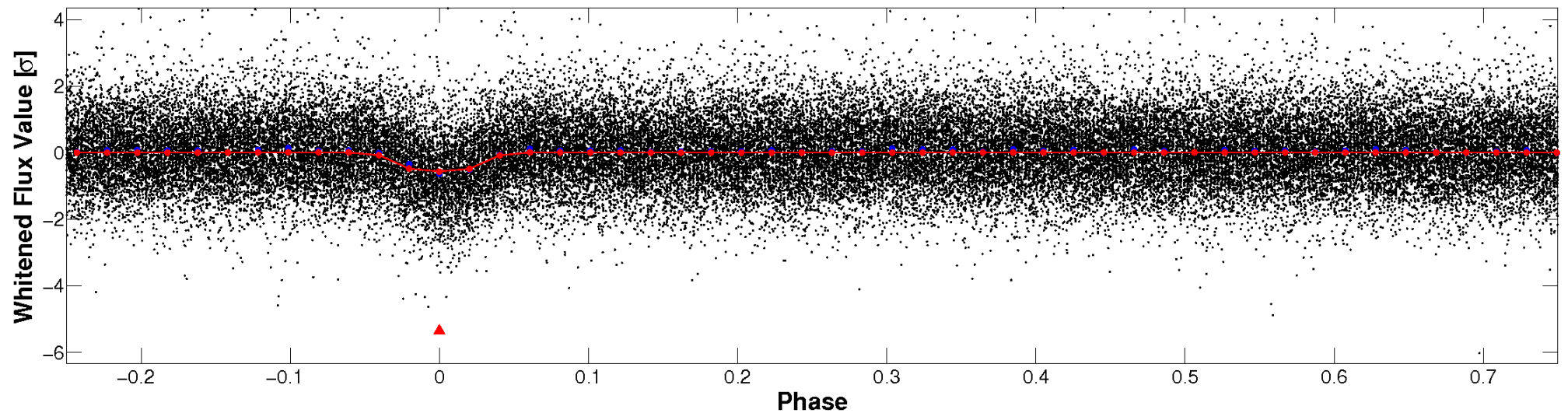


Non-Whitened Vs. Whitened Light Curve

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

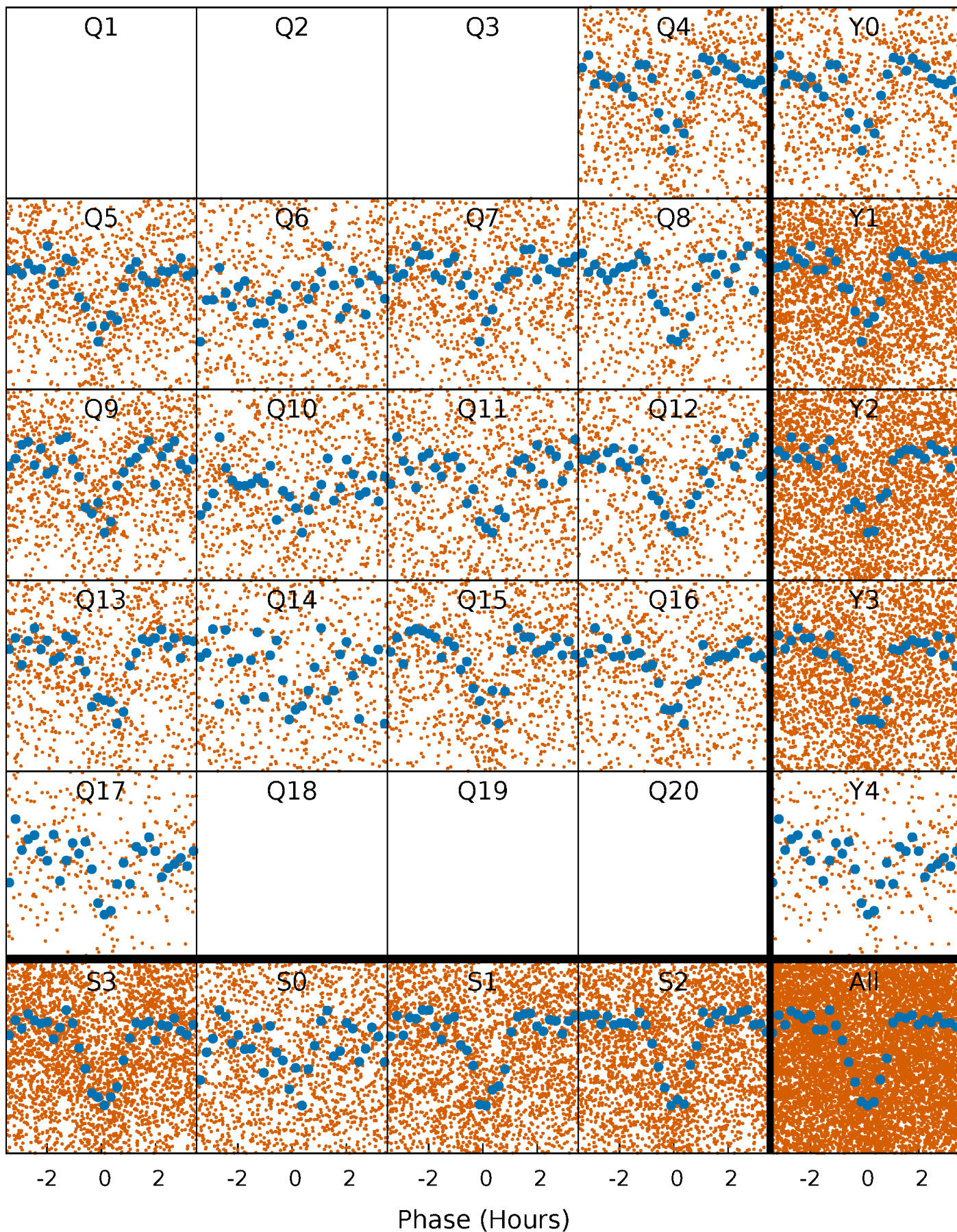


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



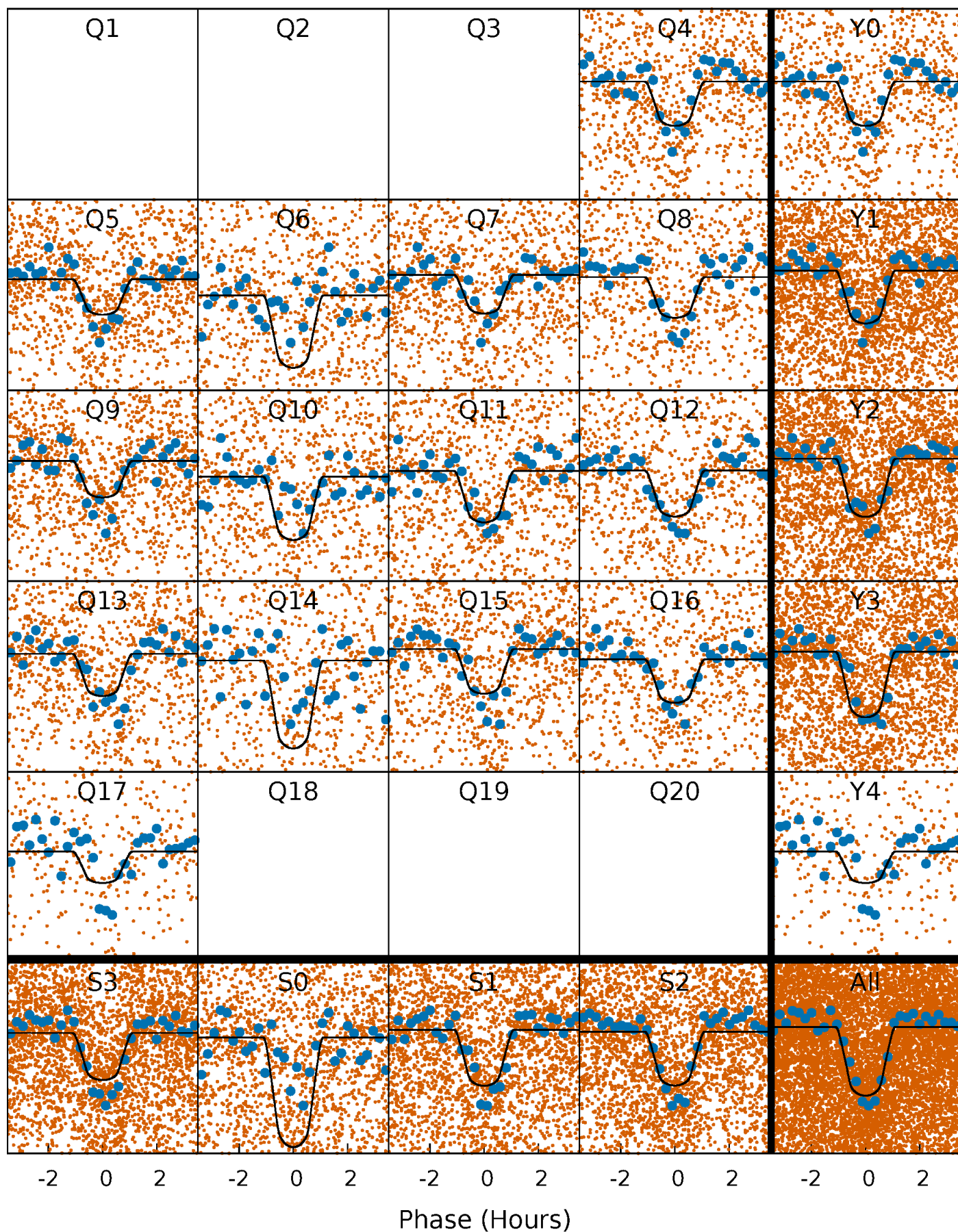
PDC Quarter-Phased Transit Curves

TCE 005210475-01 P= 1.008909 Days $T_0=131.891779$ (BKJD)



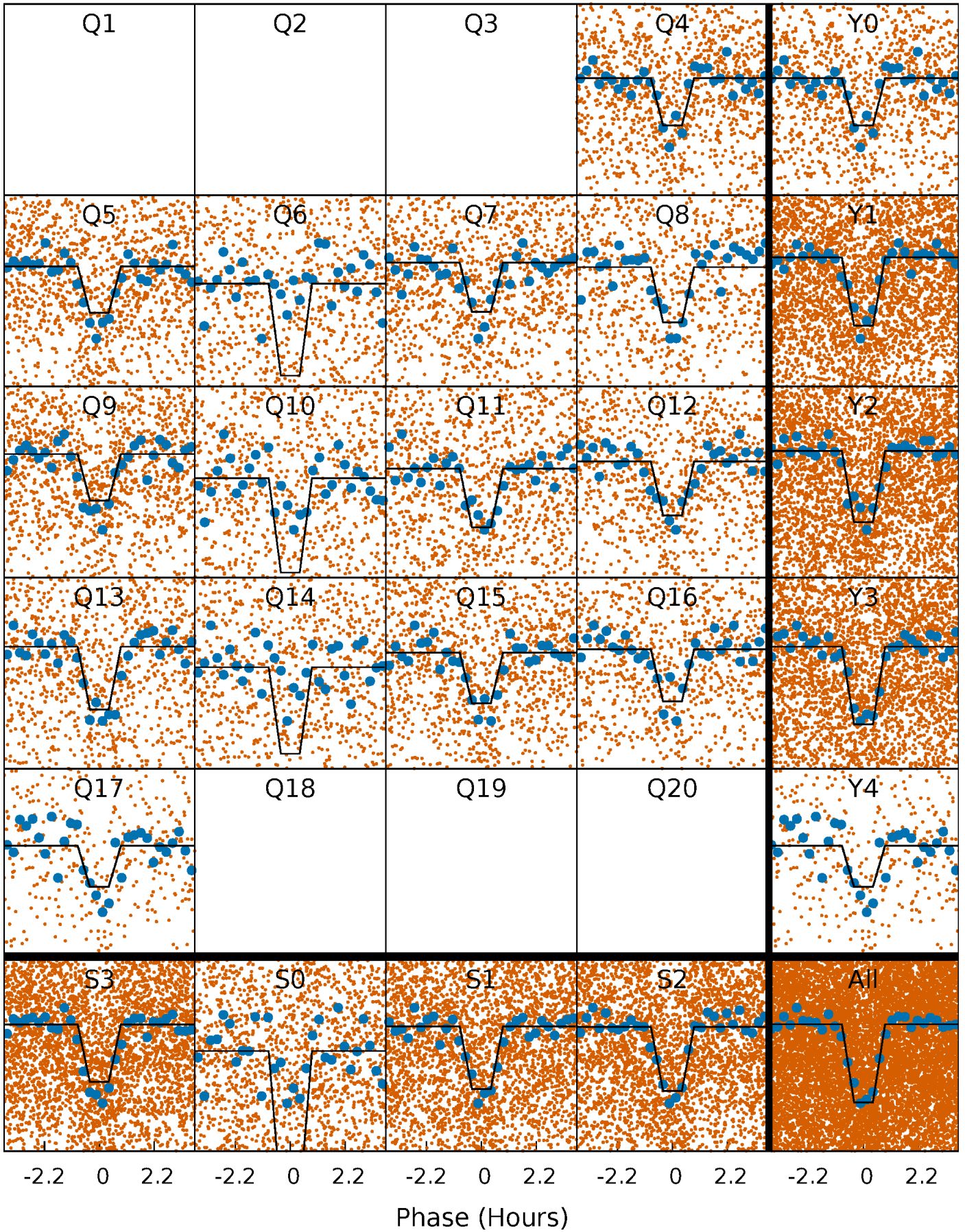
DV Quarter-Phased Transit Curves

TCE 005210475-01 P= 1.008909 Days $T_0=131.891779$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

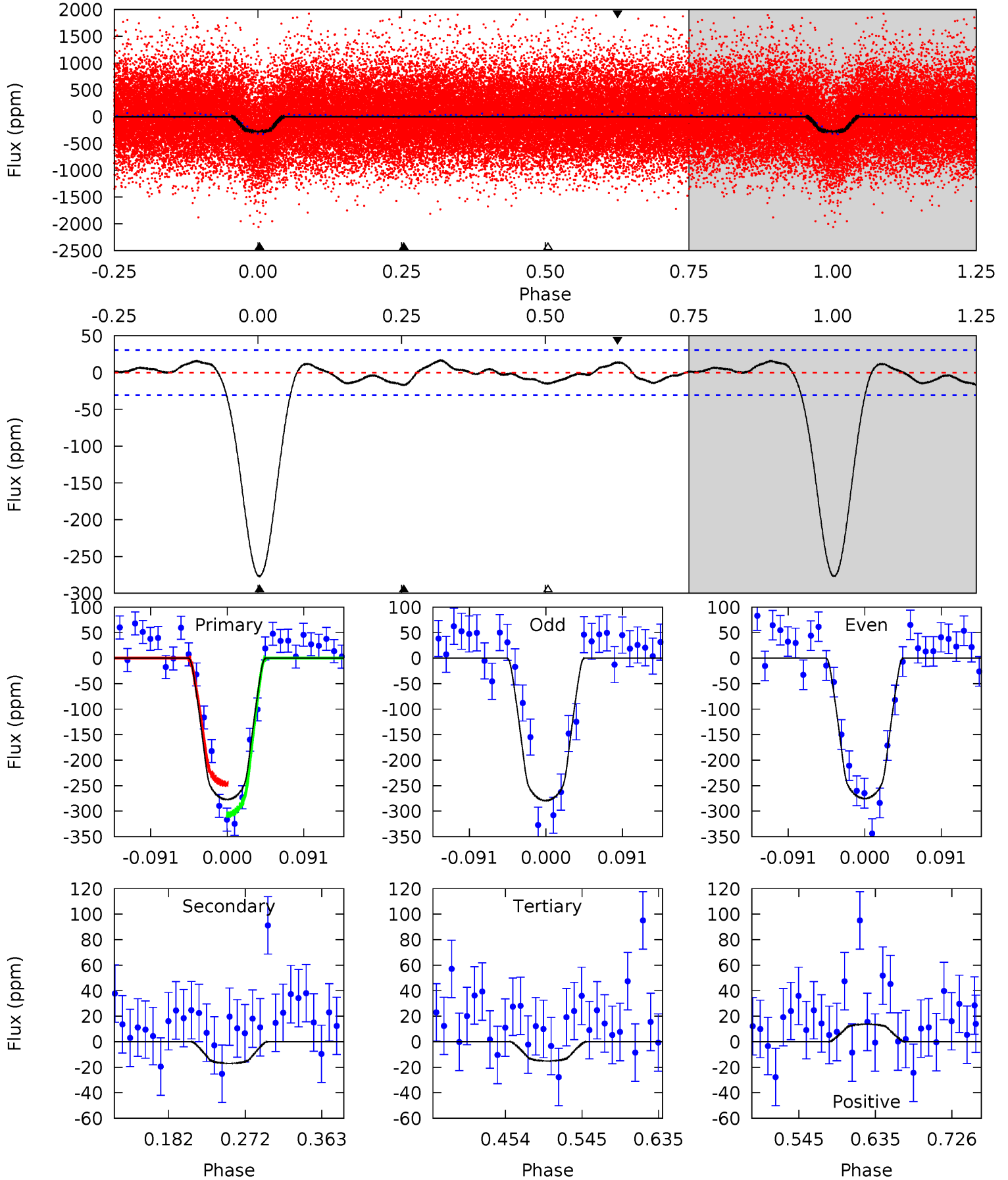
TCE 005210475-01 P= 1.008912 Days $T_0=131.891970$ (BKJD)



DV Model-Shift Uniqueness Test

005210475-01, P = 1.008909 Days, E = 131.891779 Days

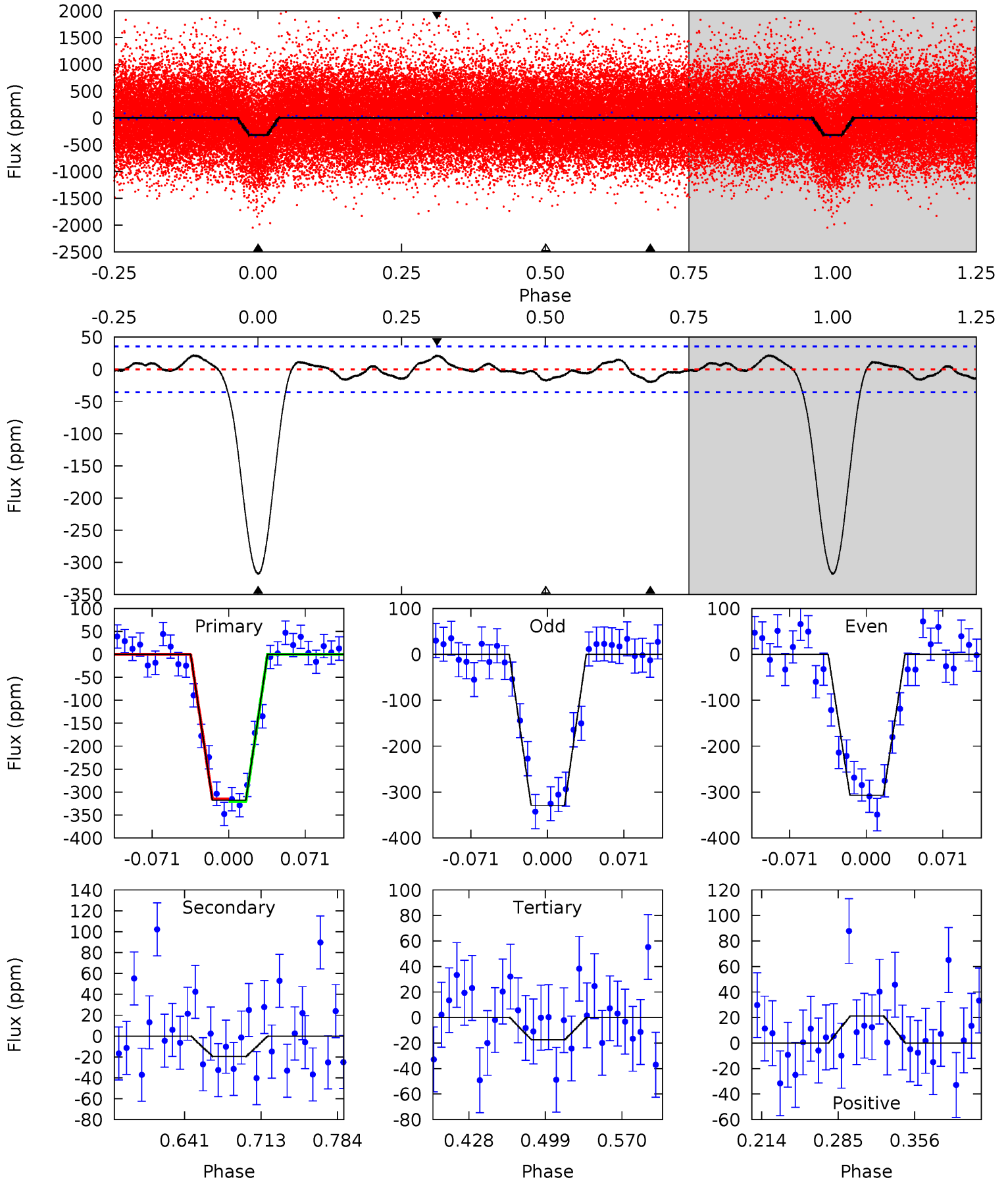
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
41.3	2.53	2.25	2.05	4.59	1.69	1.17	39.1	39.3	0.28	0.48	0.30	0.98	0.06	4.50



Alt Model-Shift Uniqueness Test

005210475-01, P = 1.008912 Days, E = 131.891970 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
41.5	2.56	2.27	2.77	4.64	1.80	1.20	39.3	38.8	0.29	-0.21	1.43	0.97	0.06	0.36



Stellar Parameters For KIC 005210475

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5708^{+189}_{-189}	$4.578^{+0.040}_{-0.160}$	$-0.340^{+0.300}_{-0.300}$	$0.795^{+0.195}_{-0.065}$	$0.883^{+0.089}_{-0.107}$	$2.479^{+0.422}_{-1.105}$
	+3%/-3%	+1%/-3%	+88%/-88%	+25%/-8%	+10%/-12%	+17%/-45%
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 005210475-01 / KOI 1568.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-17 ± 7	$1.61^{+0.43}_{-0.41}$	2329^{+134}_{-106}	3143^{+418}_{-436}	$1.219^{+1.063}_{-0.635}$
Alt.	-20 ± 8	$1.62^{+0.47}_{-0.40}$	2333^{+141}_{-105}	3213^{+441}_{-400}	$1.354^{+1.386}_{-0.648}$

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 $A_{obs} \gg 1.0$

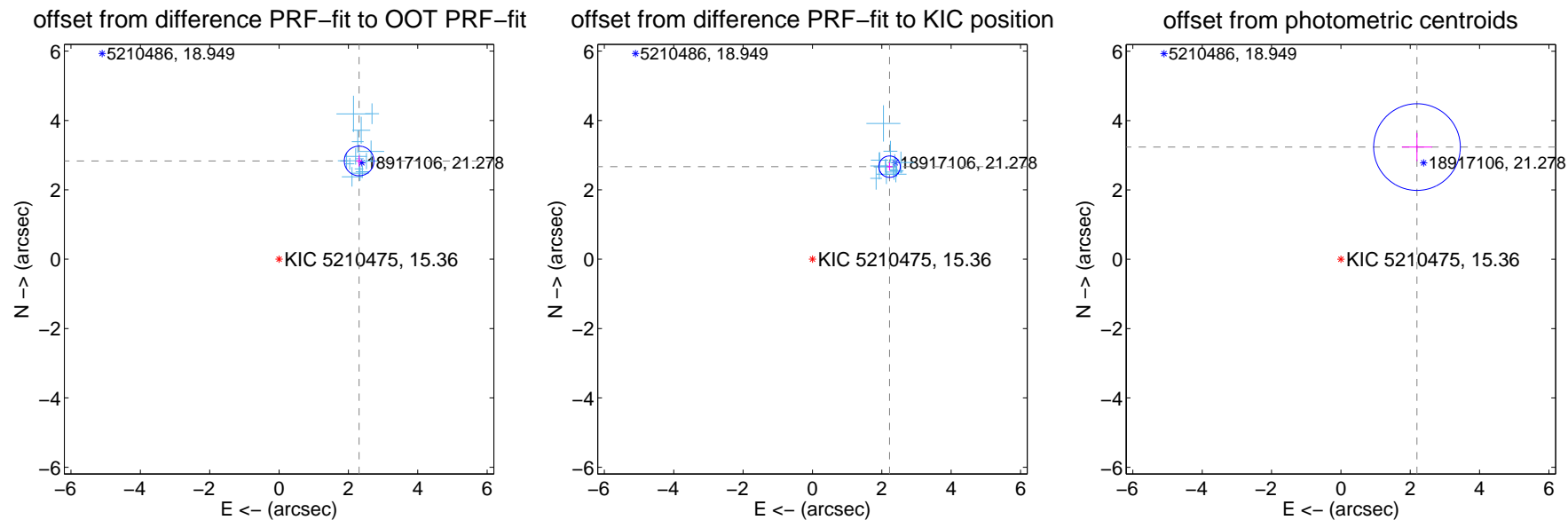
DV Centroid Data

Supplemental centroid analysis for 005210475-01. Kepler magnitude: 15.36. Transit SNR 29.34

There are 14 quarters with good PRF difference image offsets

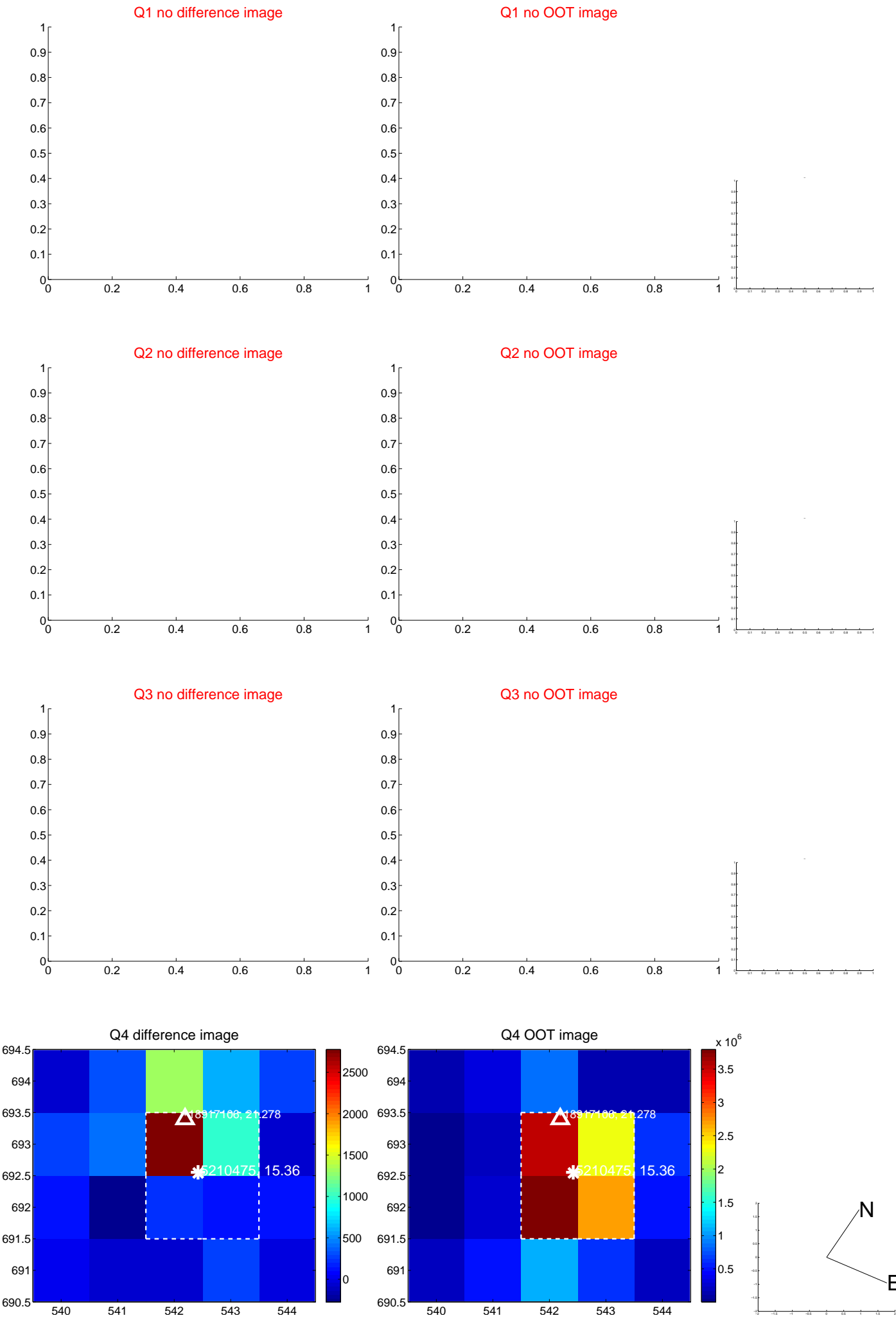
The direct PRF centroid is offset from the target star catalog position by about 0.29 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.655 ± 0.142	25.67	-2.308 ± 0.086	2.834 ± 0.158
PRF-fit source offset from KIC position	3.473 ± 0.103	33.70	-2.224 ± 0.085	2.668 ± 0.118
photometric centroid source offset	3.91 ± 0.42	9.39	-2.19 ± 0.43	3.24 ± 0.41

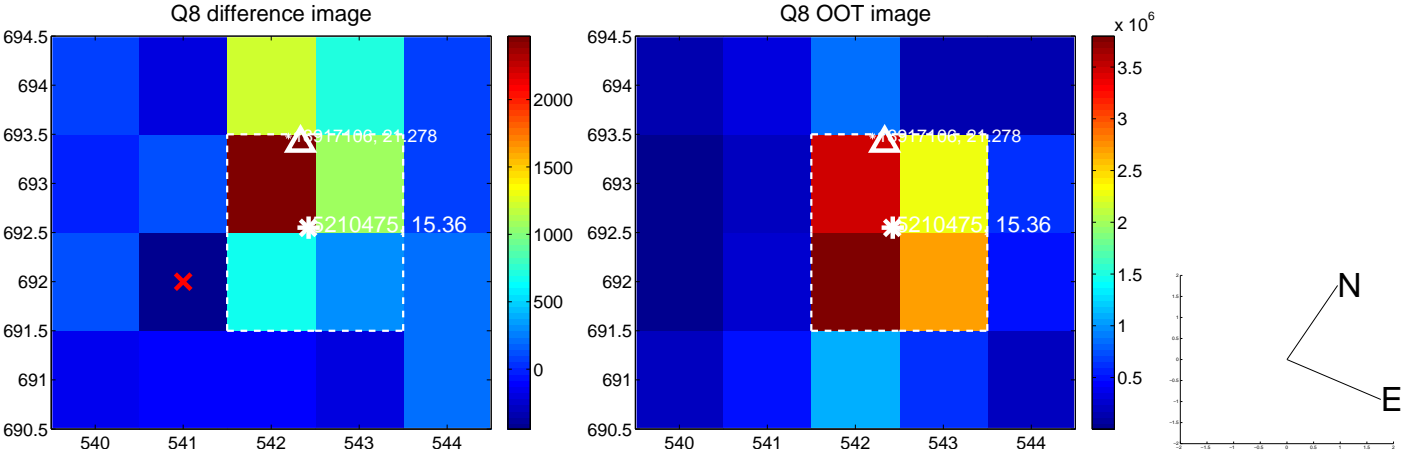
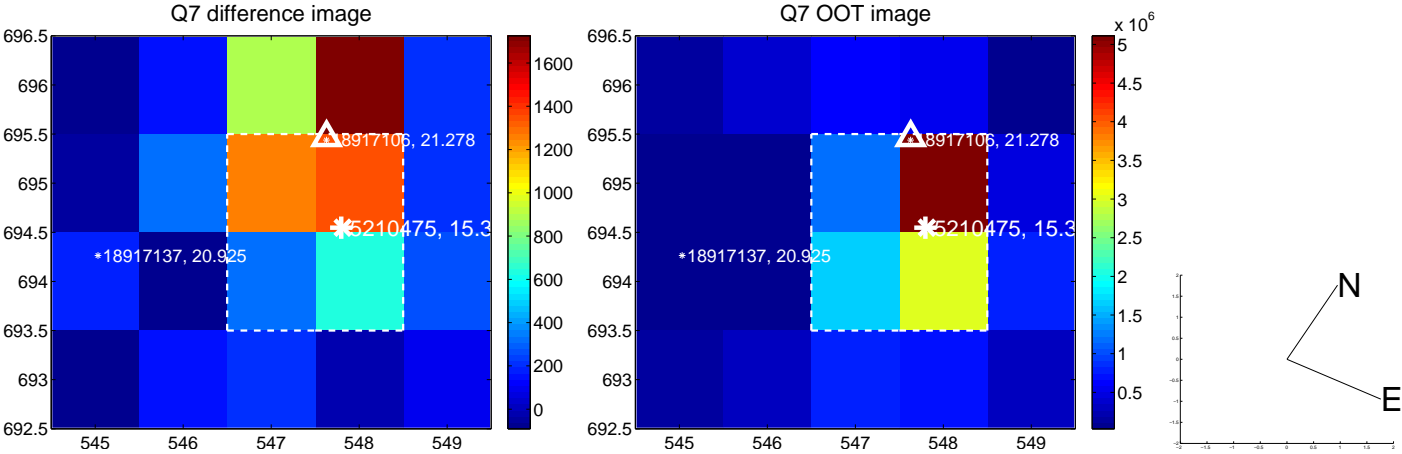
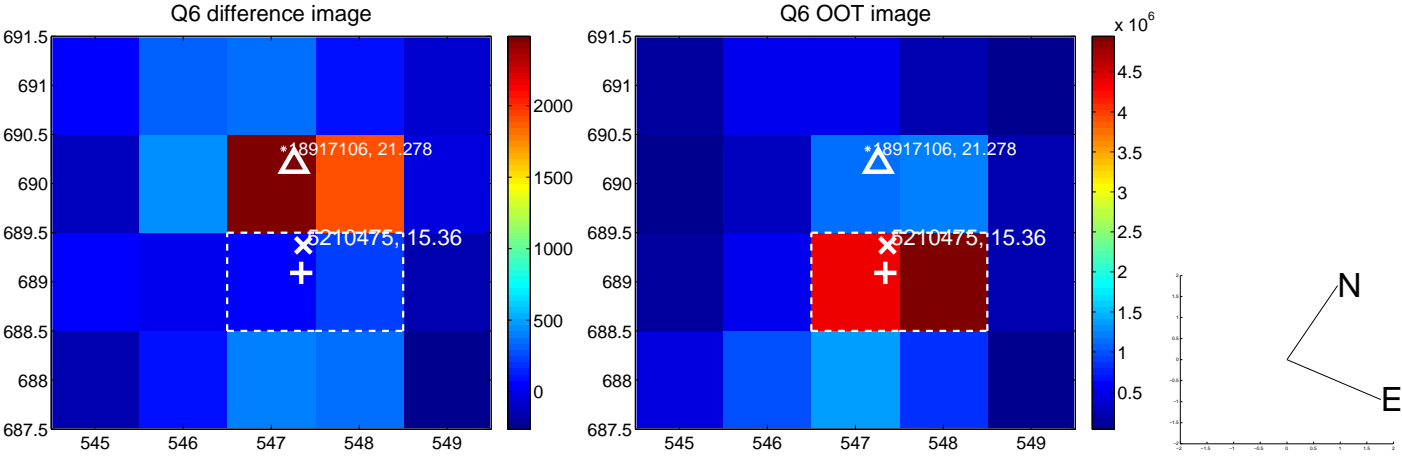
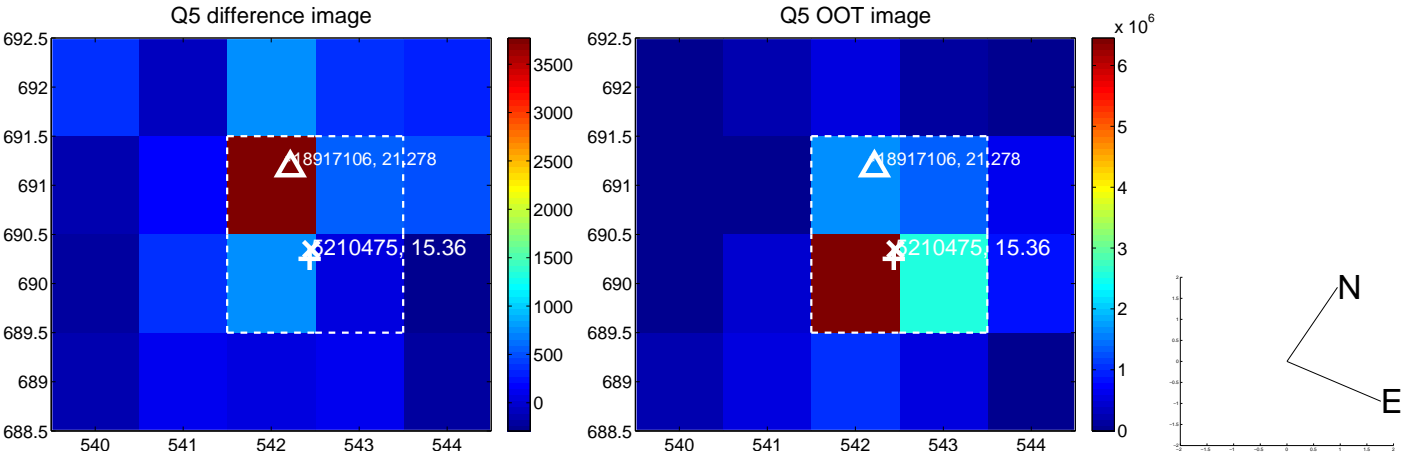


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

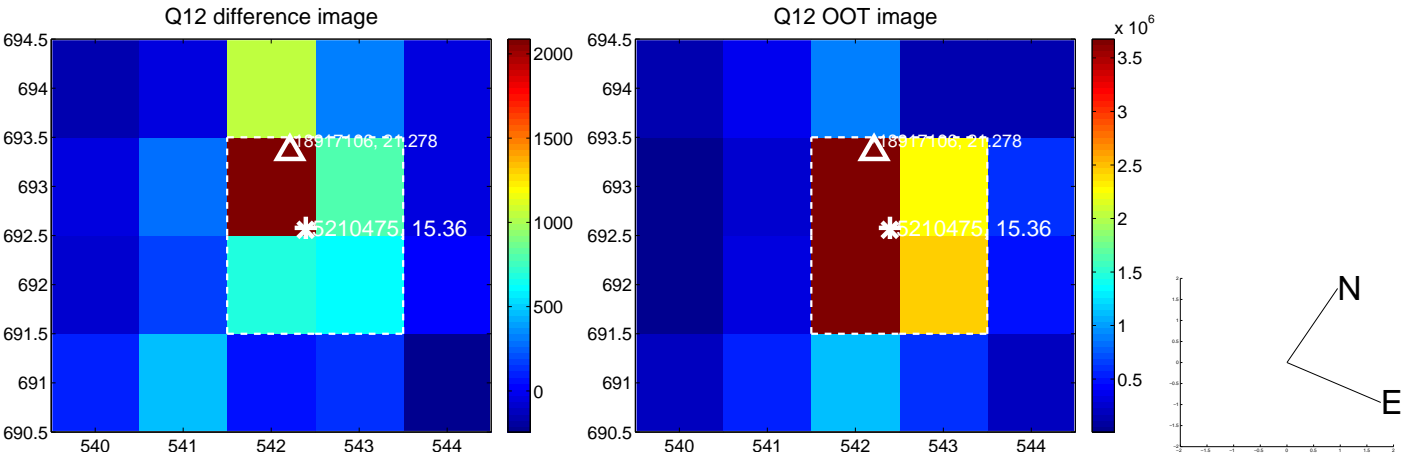
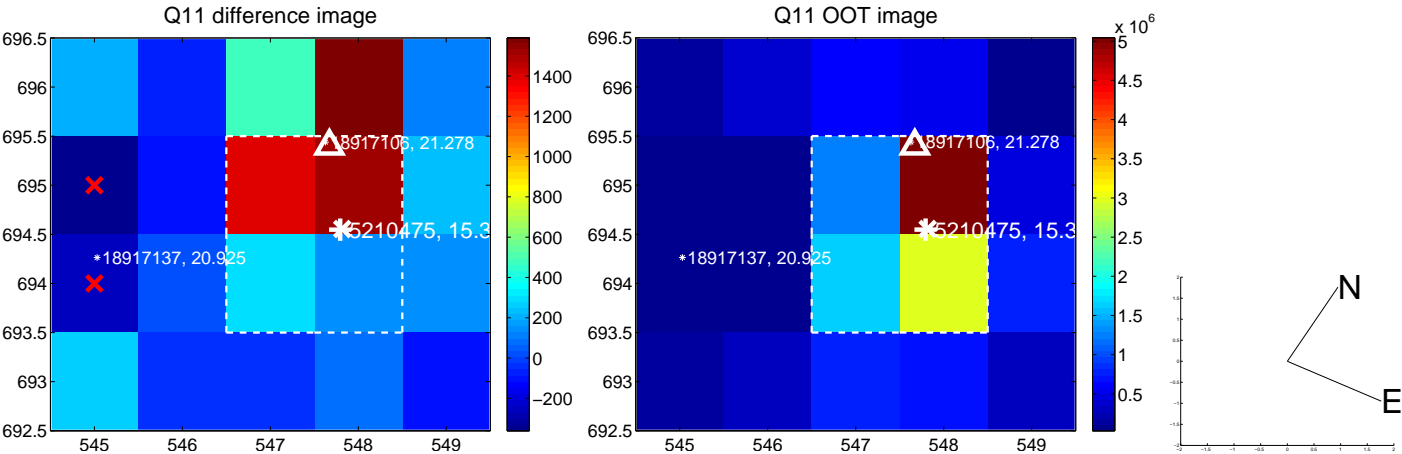
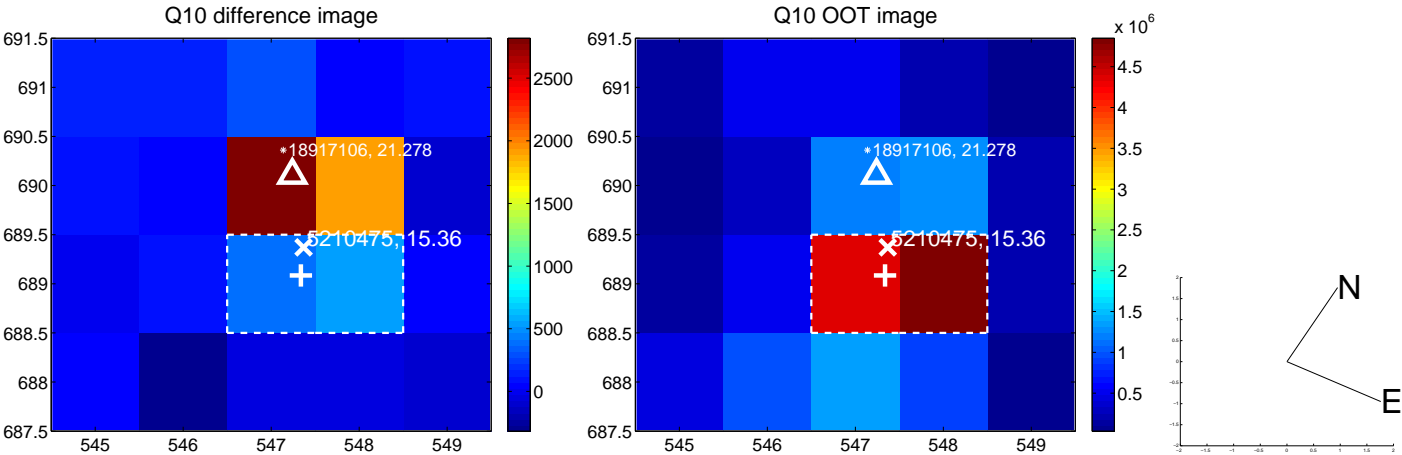
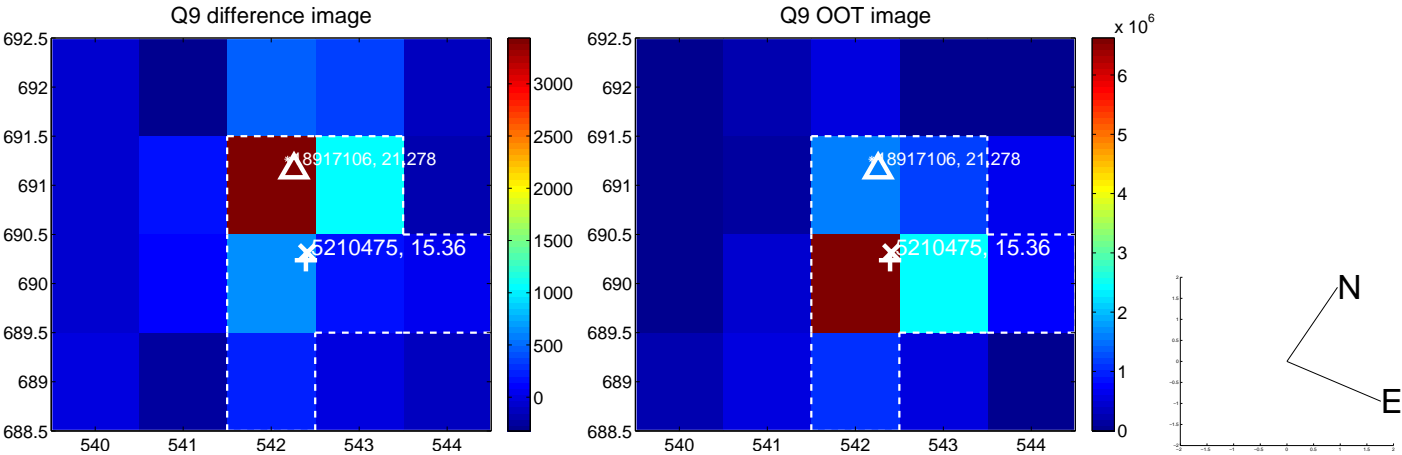
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



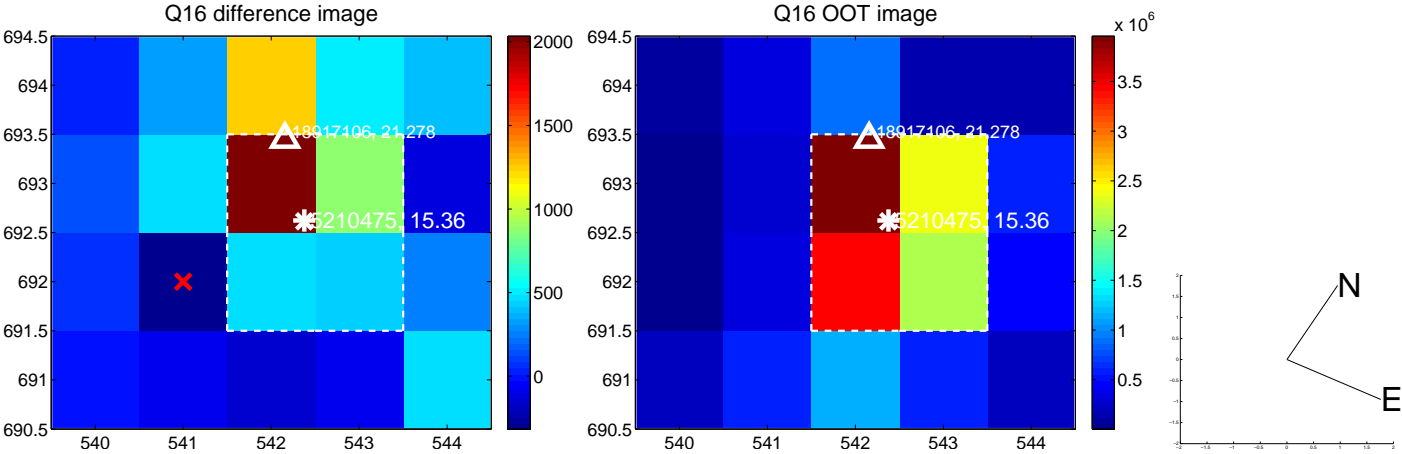
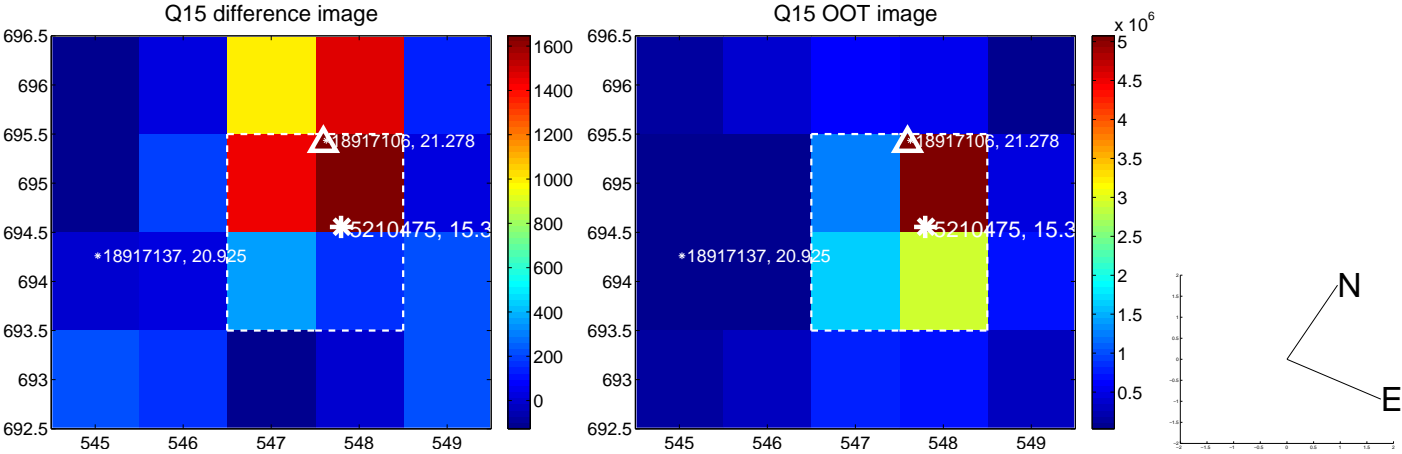
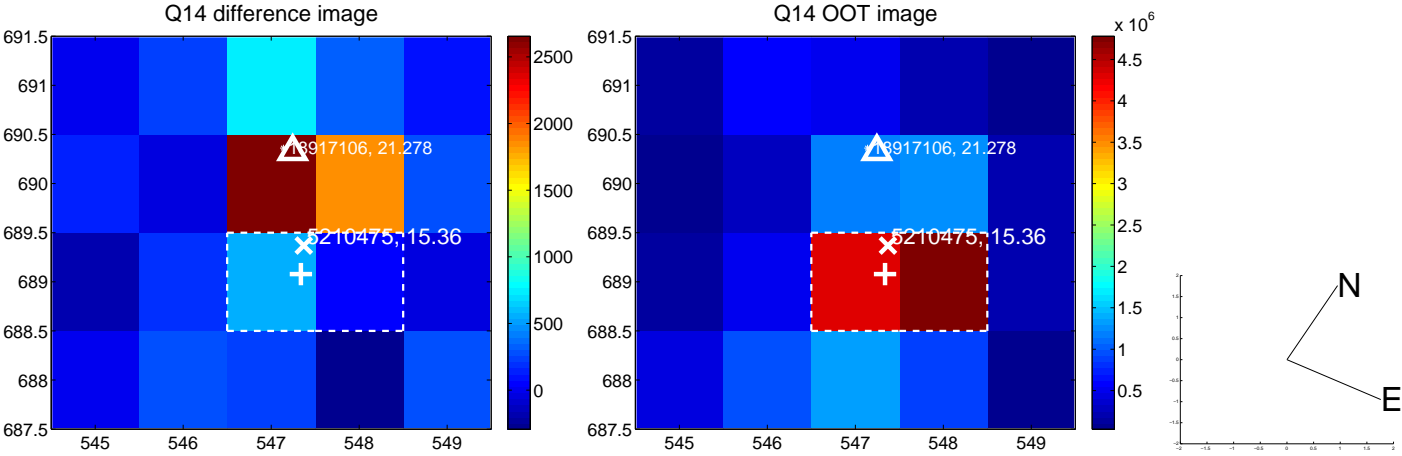
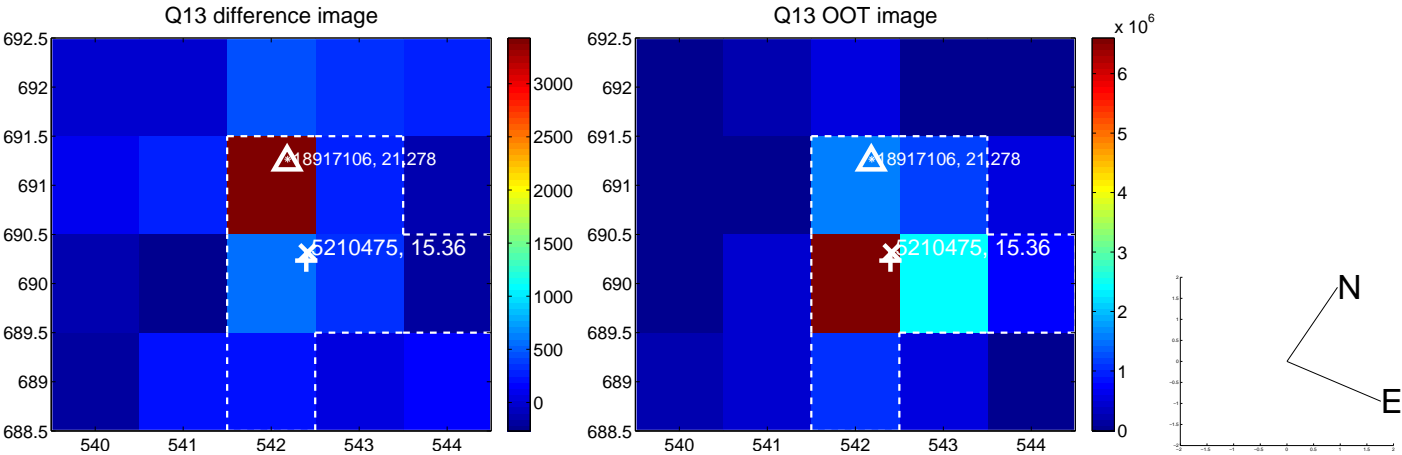
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



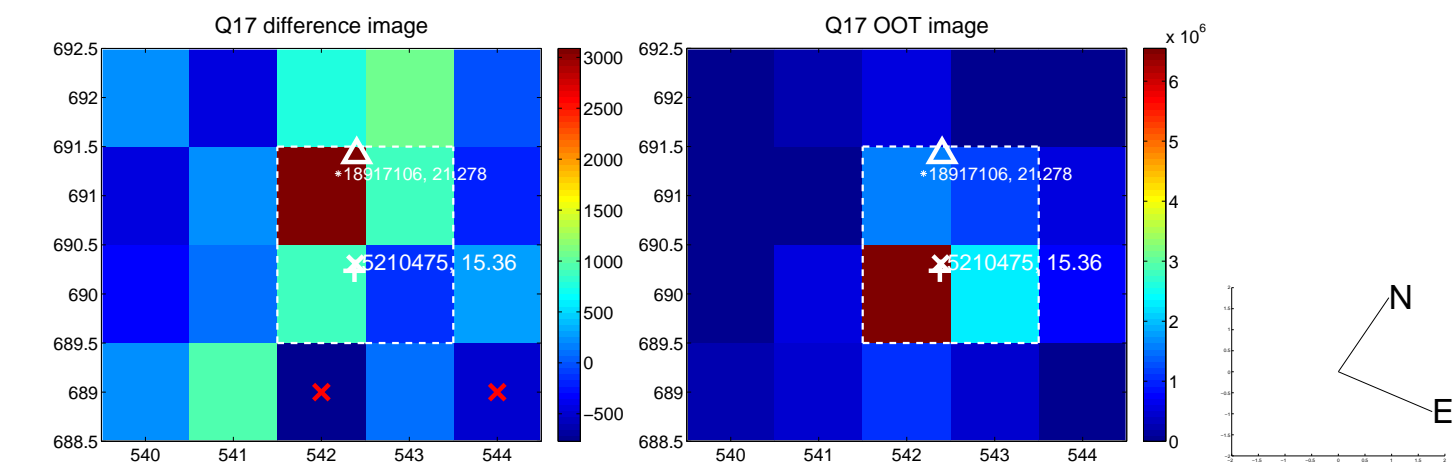
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



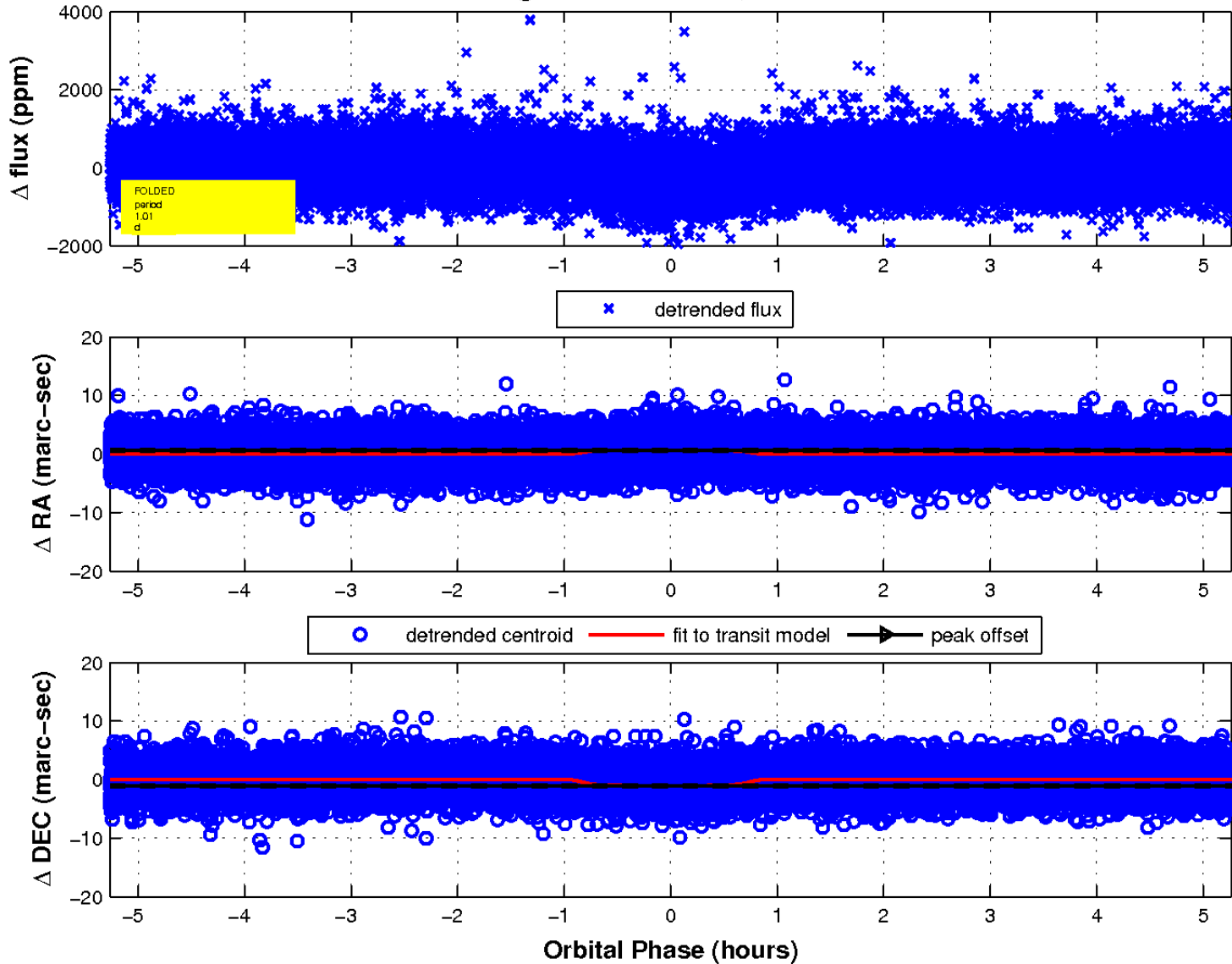
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

