

KIC 010141271

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})
010141271-01	OBS	5768.01	15.402999	138.007721	281.6	3.090	8.3	9.0	0.80	5272	1.59	36.45

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010141271-01	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.

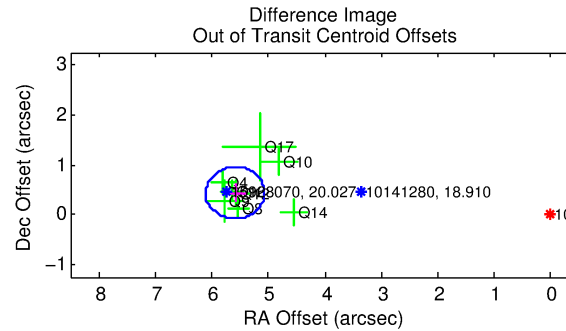
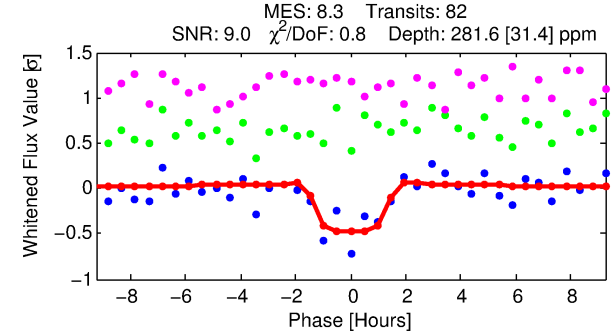
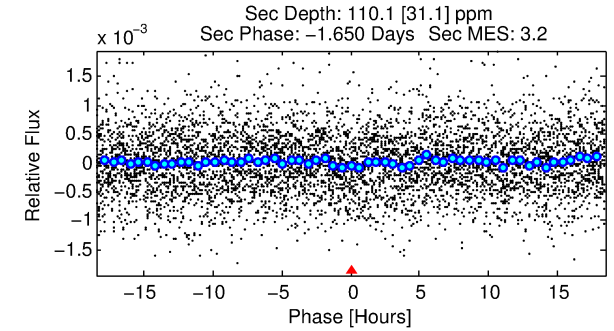
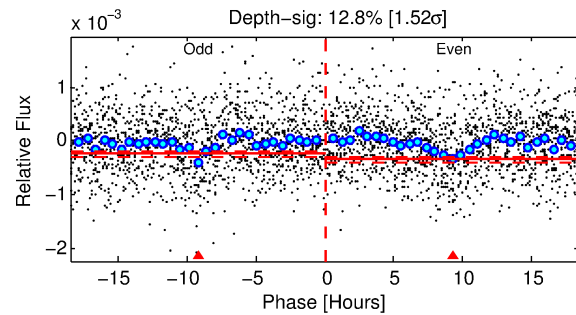
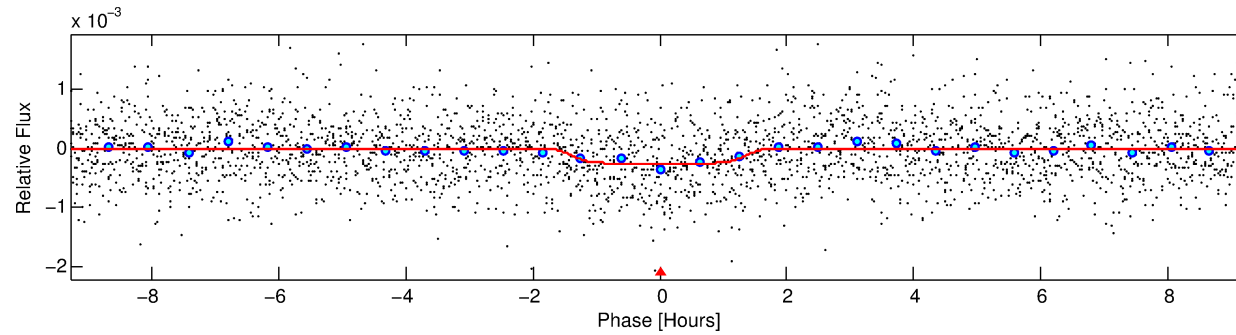
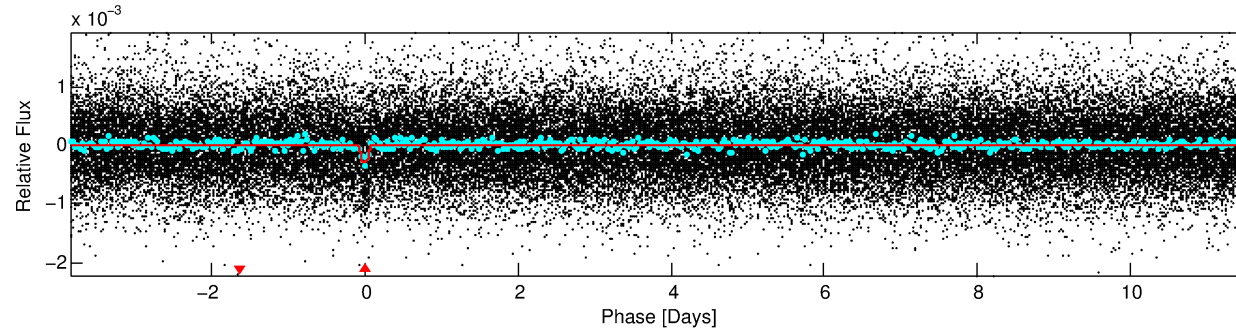
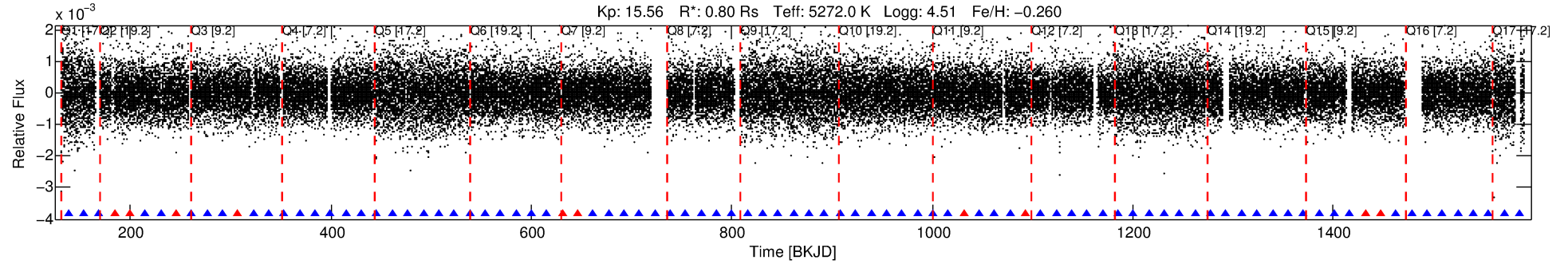
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010141271-01

No Significant Match Found

DV One-Page Summary

KIC: 10141271 Candidate: 1 of 1 Period: 15.403 d
KOI: K05768.01 Corr: 0.951



DV Fit Results:

Period = 15.40300 [0.00014] d
Epoch = 138.0077 [0.0074] BKJD
Rp/R* = 0.0182 [0.0106]
a/R* = 19.29 [47.26]
b = 0.88 [0.62]
Seff = 36.45 [7.71]
Teq = 627 [33] K
Rp = 1.59 [0.95] Re
a = 0.1101 [0.0126] AU
Ag = 291.58 [354.05] [0.82σ]
Teff = 4003 [1209] K [2.79σ]

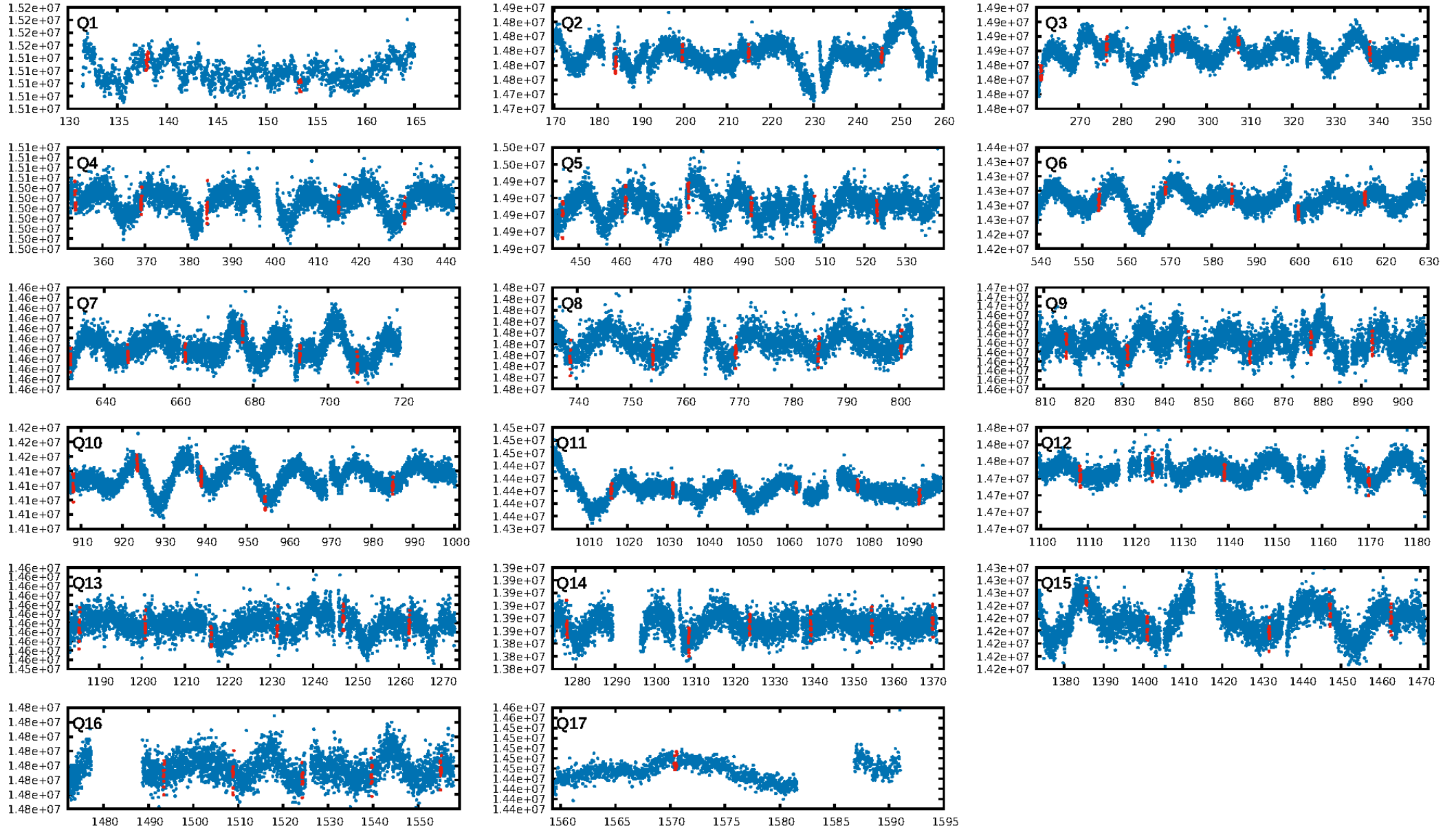
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 81.7%
ModelChiSquareGoF-sig: 100.0%
Bootstrap-pfa: 3.01e-16
RollingBand-fgt: 0.87 [69/79]
GhostDiagnostic-chr: -0.04052
Centroid-sig: 0.0%
Centroid-so: 18.380 arcsec [11.71σ]
OotOffset-rm: 5.605 arcsec [32.39σ]
KicOffset-rm: 5.661 arcsec [34.40σ]
OotOffset-st: 2/0/4/2 [8]
KicOffset-st: 2/0/4/2 [8]
DiffImageQuality-fgm: 1.00 [8/8]
DiffImageOverlap-fno: 1.00 [17/17]

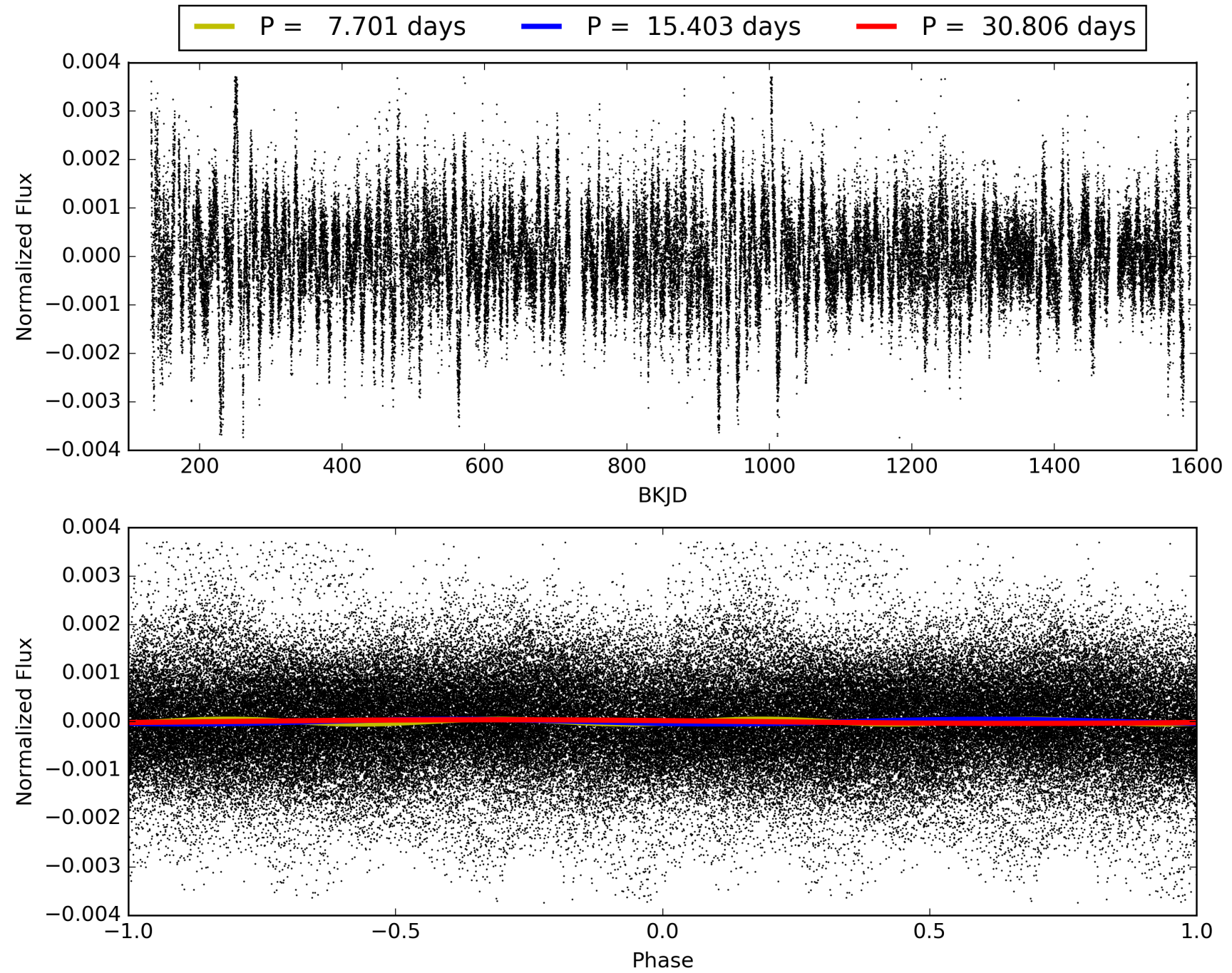
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 21:01:12 Z

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

TCE 010141271-01, PDC Light Curves

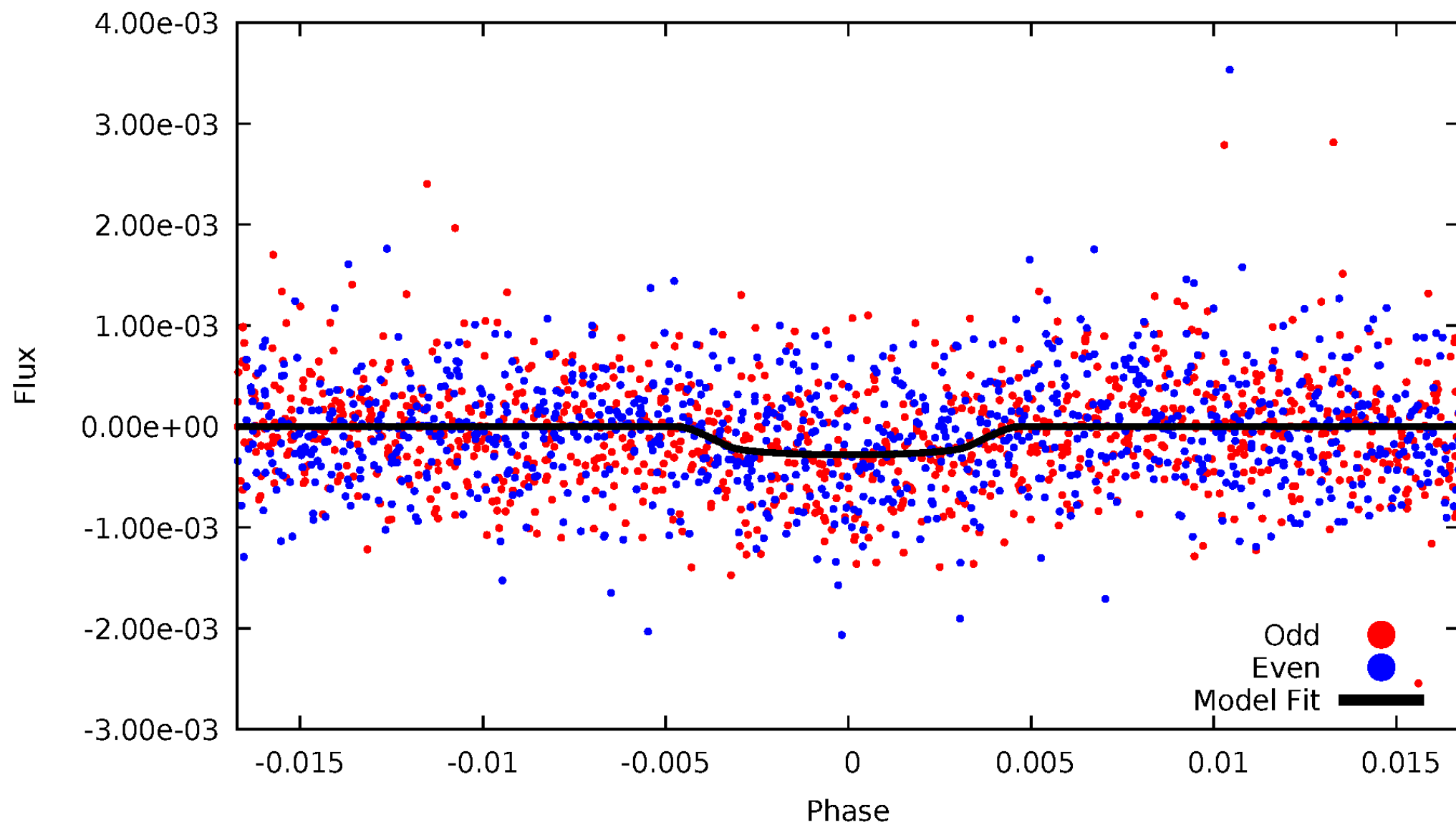


TCE 010141271-01



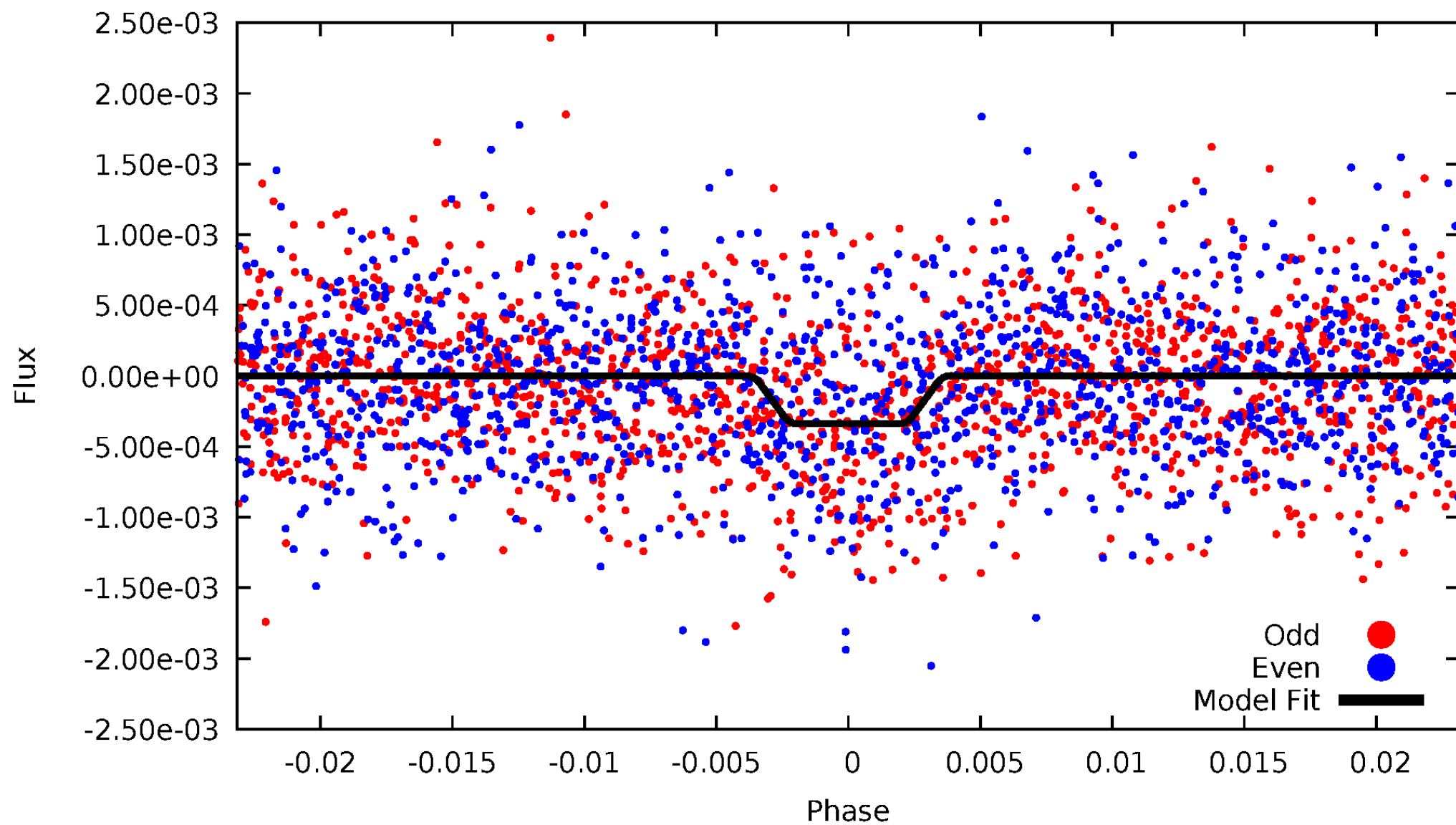
DV Odd/Even

TCE 010141271-01



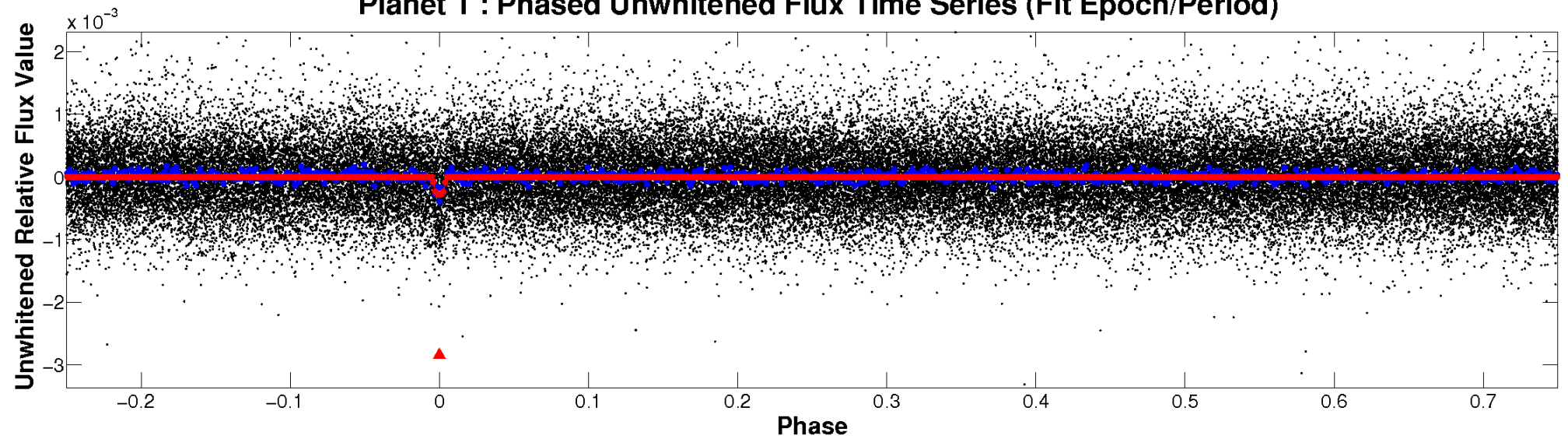
ALT Odd/Even

TCE 010141271-01

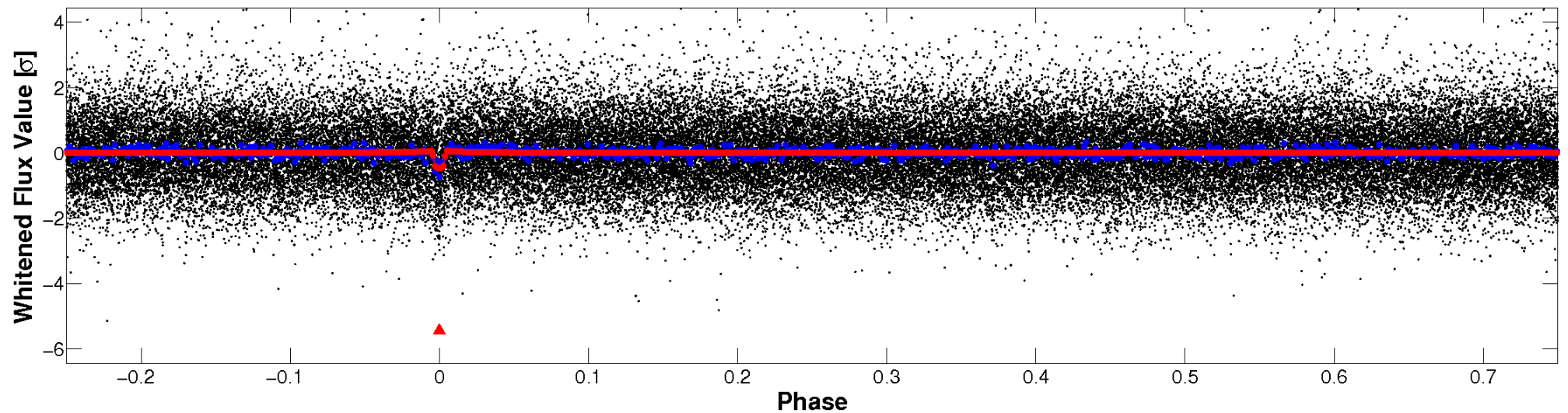


Non-Whitened Vs. Whitened Light Curve

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

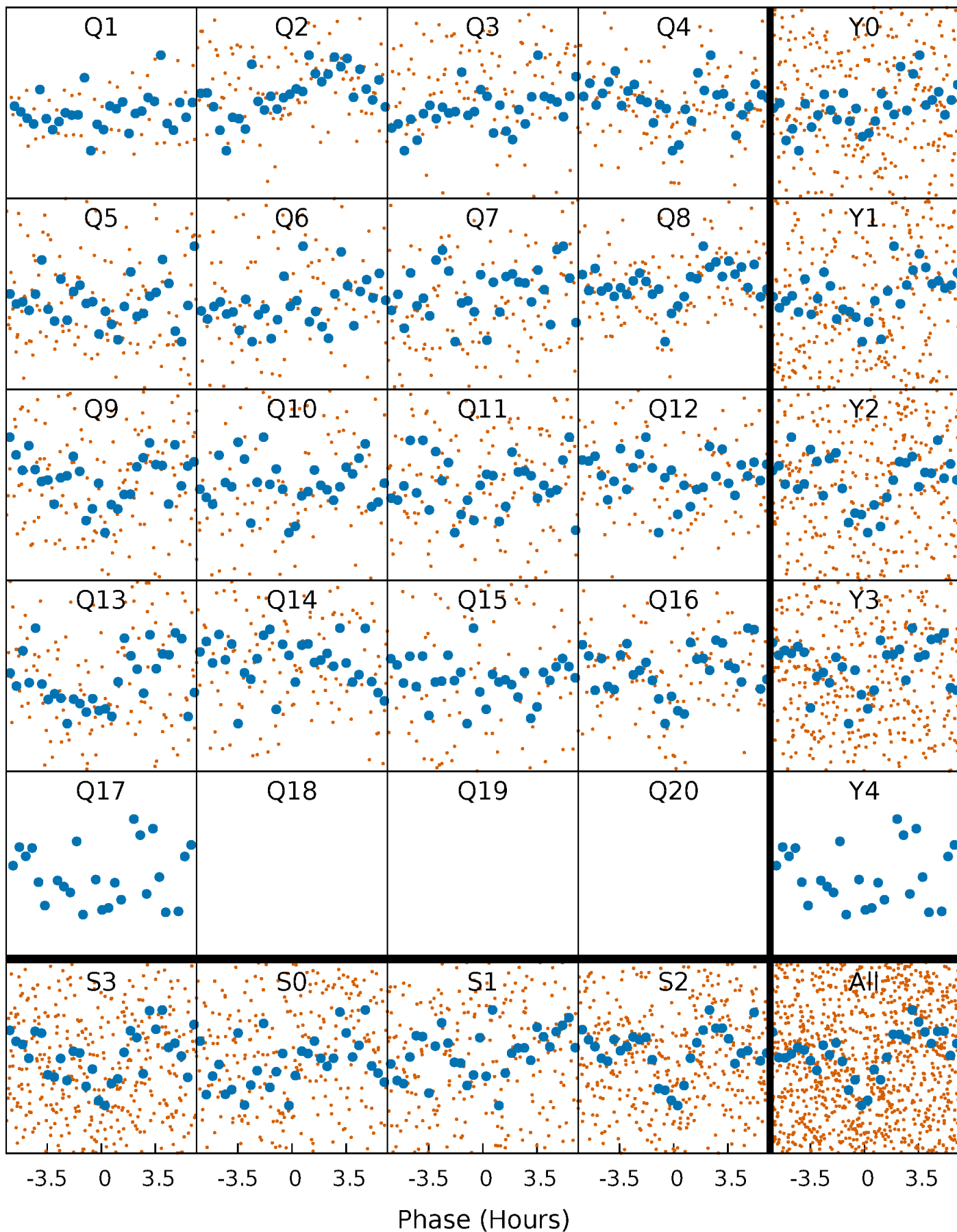


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



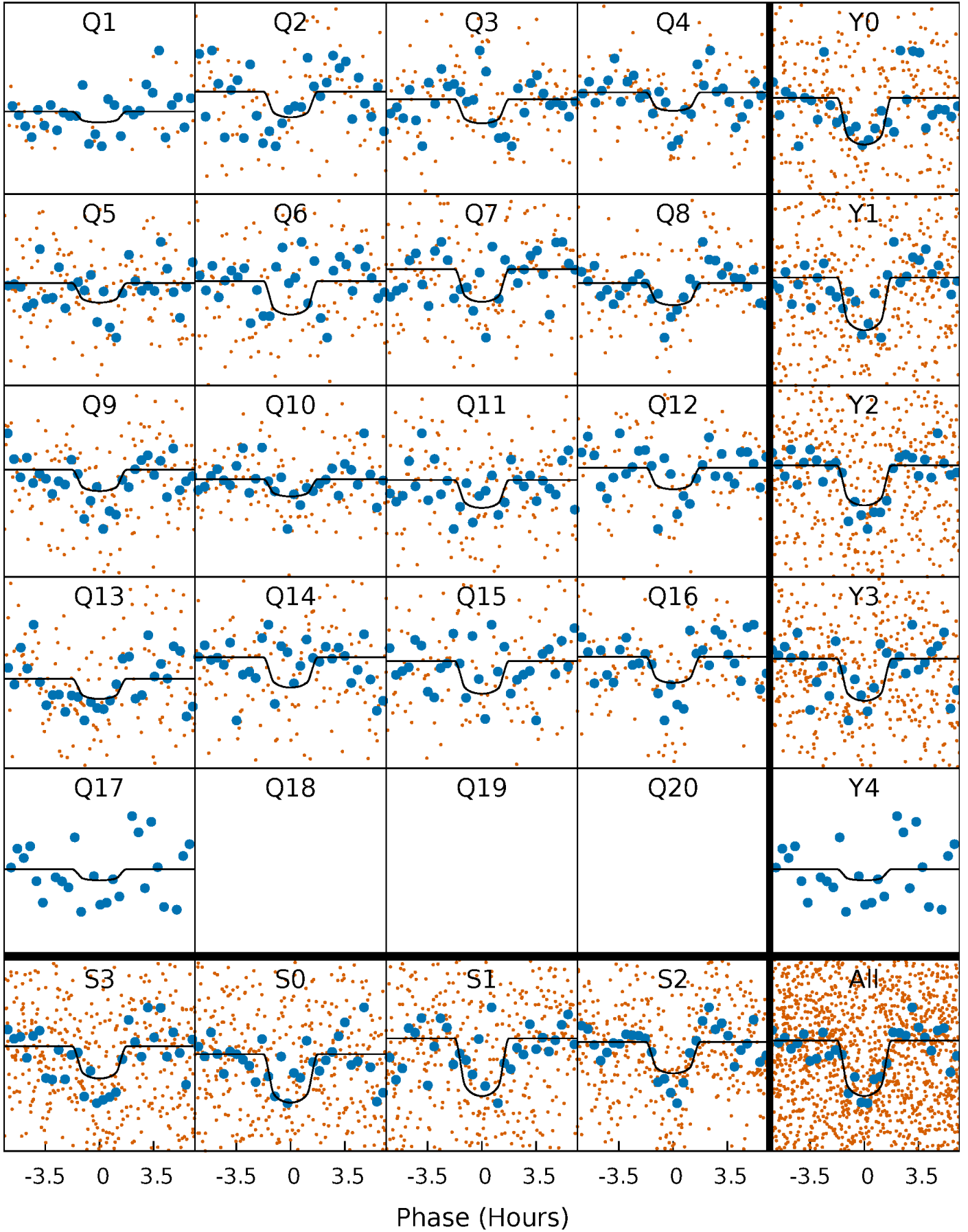
PDC Quarter-Phased Transit Curves

TCE 010141271-01 P= 15.402999 Days $T_0=138.007721$ (BKJD)



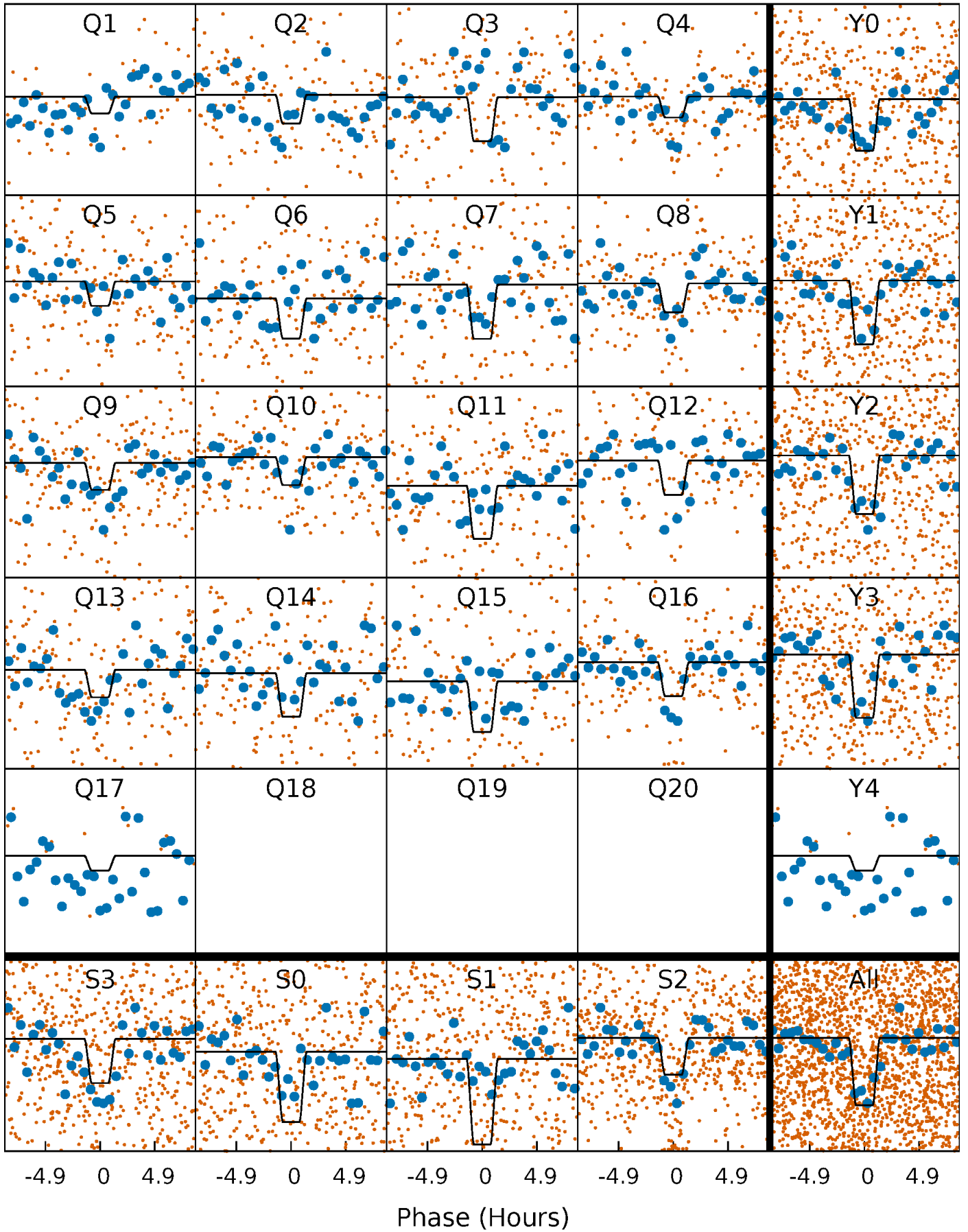
DV Quarter-Phased Transit Curves

TCE 010141271-01 P= 15.402999 Days $T_0=138.007721$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

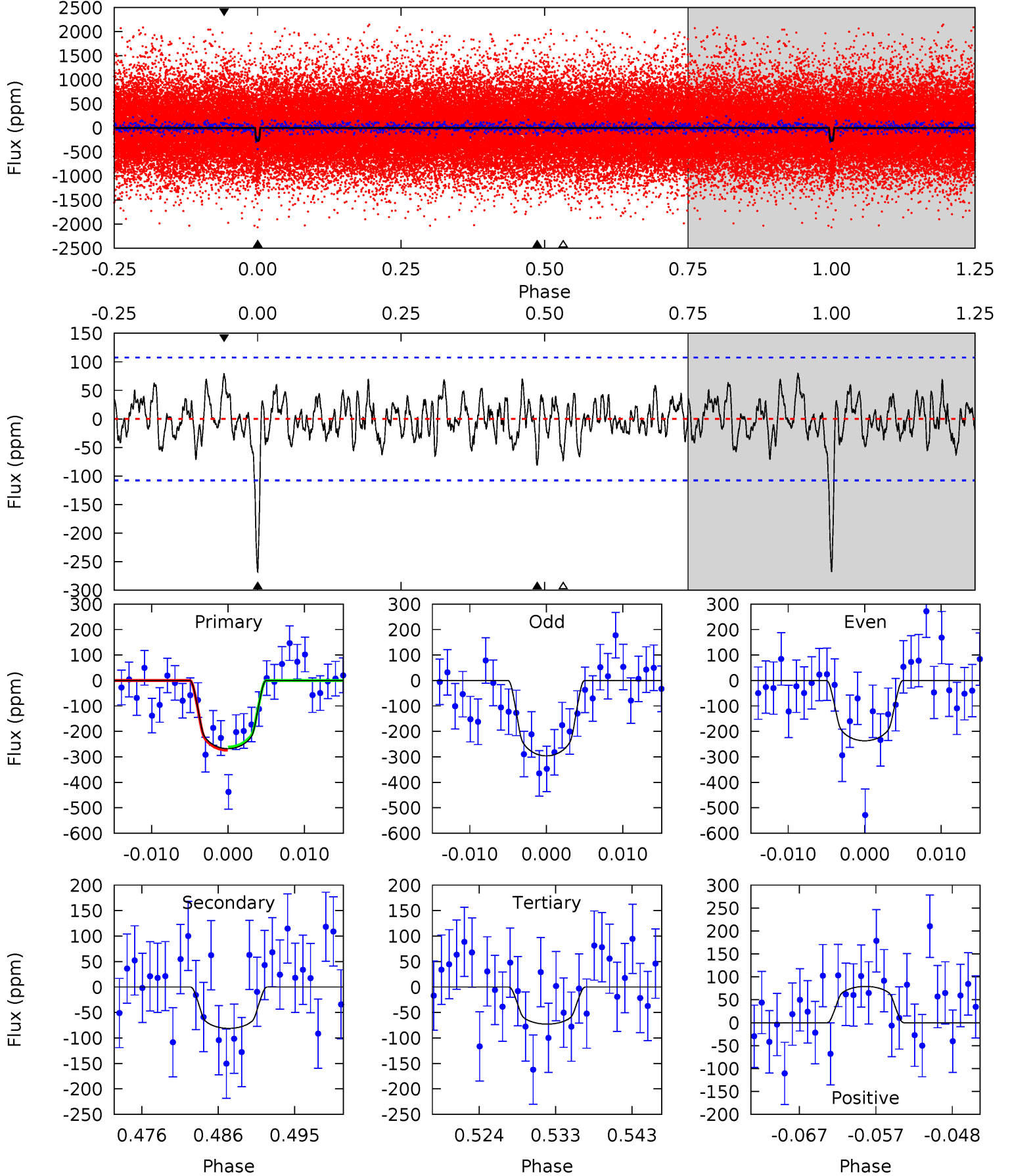
TCE 010141271-01 P= 15.402951 Days $T_0=138.007506$ (BKJD)



DV Model-Shift Uniqueness Test

010141271-01, $P = 15.402999$ Days, $E = 122.604722$ Days

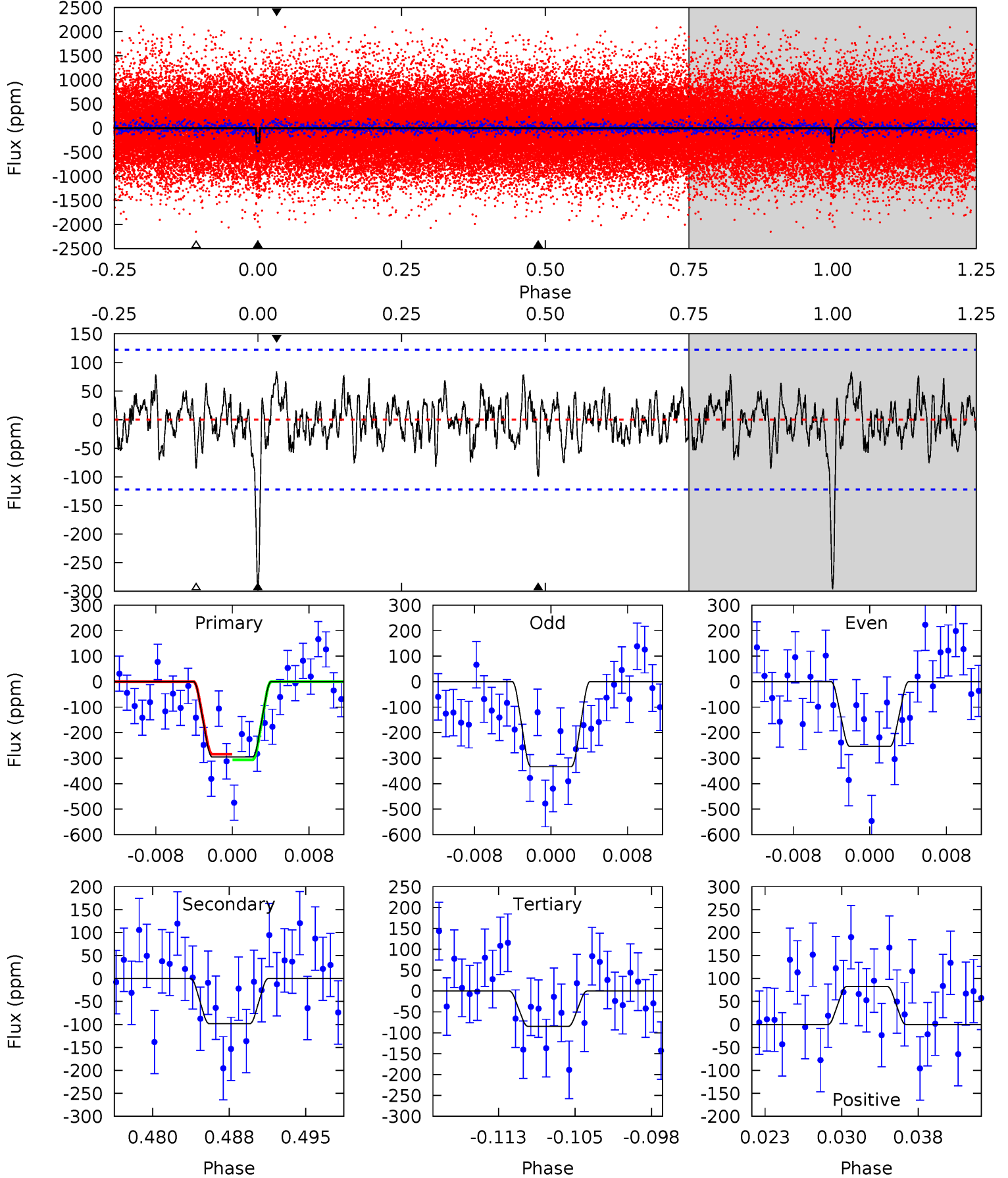
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.5	3.80	3.41	3.70	5.04	2.59	1.30	9.13	8.84	0.39	0.10	1.39	0.91	0.23	0.29



Alt Model-Shift Uniqueness Test

010141271-01, $P = 15.402951$ Days, $E = 122.604555$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.3	4.10	3.51	3.44	5.08	2.67	1.24	8.76	8.83	0.59	0.66	1.66	1.04	0.22	0.45



Stellar Parameters For KIC 010141271

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5272^{+158}_{-158}	$4.508^{+0.099}_{-0.081}$	$-0.260^{+0.300}_{-0.300}$	$0.799^{+0.102}_{-0.091}$	$0.751^{+0.109}_{-0.054}$	$2.071^{+0.763}_{-0.559}$
	+3%/-3%	+2%/-2%	+115%/-115%	+13%/-11%	+15%/-7%	+37%/-27%
Source	PHO1	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 010141271-01 / KOI 5768.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-81 ± 21	$1.58^{+0.86}_{-0.83}$	871^{+42}_{-40}	3969^{+1346}_{-583}	217^{+718}_{-135}
Alt.	-99 ± 24	$1.62^{+0.98}_{-0.82}$	874^{+43}_{-40}	4102^{+1341}_{-612}	248^{+818}_{-156}

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 $A_{obs} \gg 1.0$

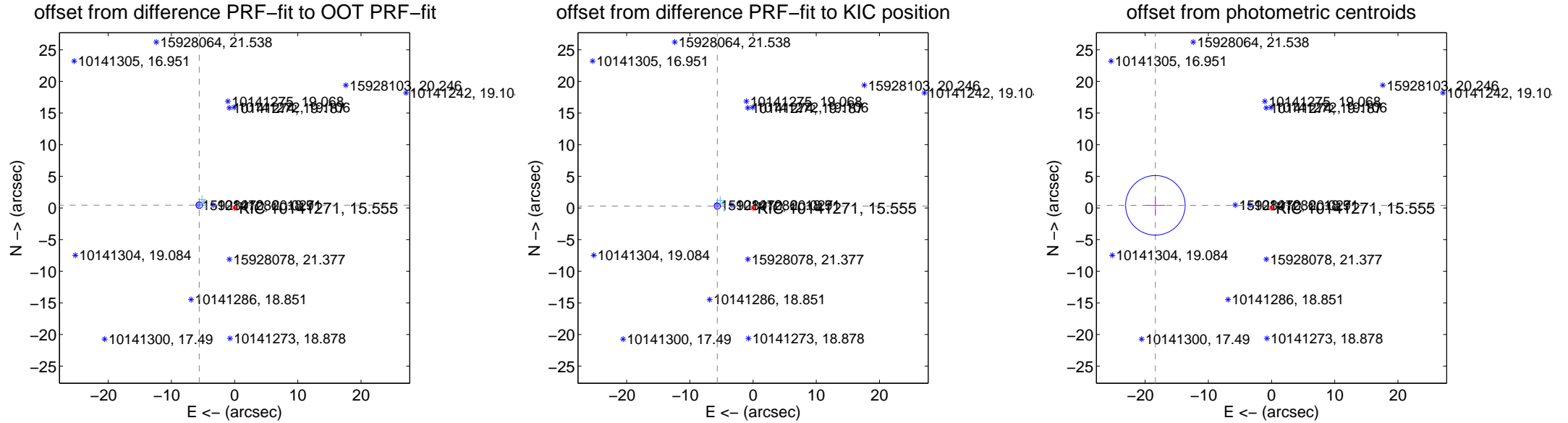
DV Centroid Data

Supplemental centroid analysis for 010141271-01. Kepler magnitude: 15.55. Transit SNR 8.98

There are 8 quarters with good PRF difference image offsets

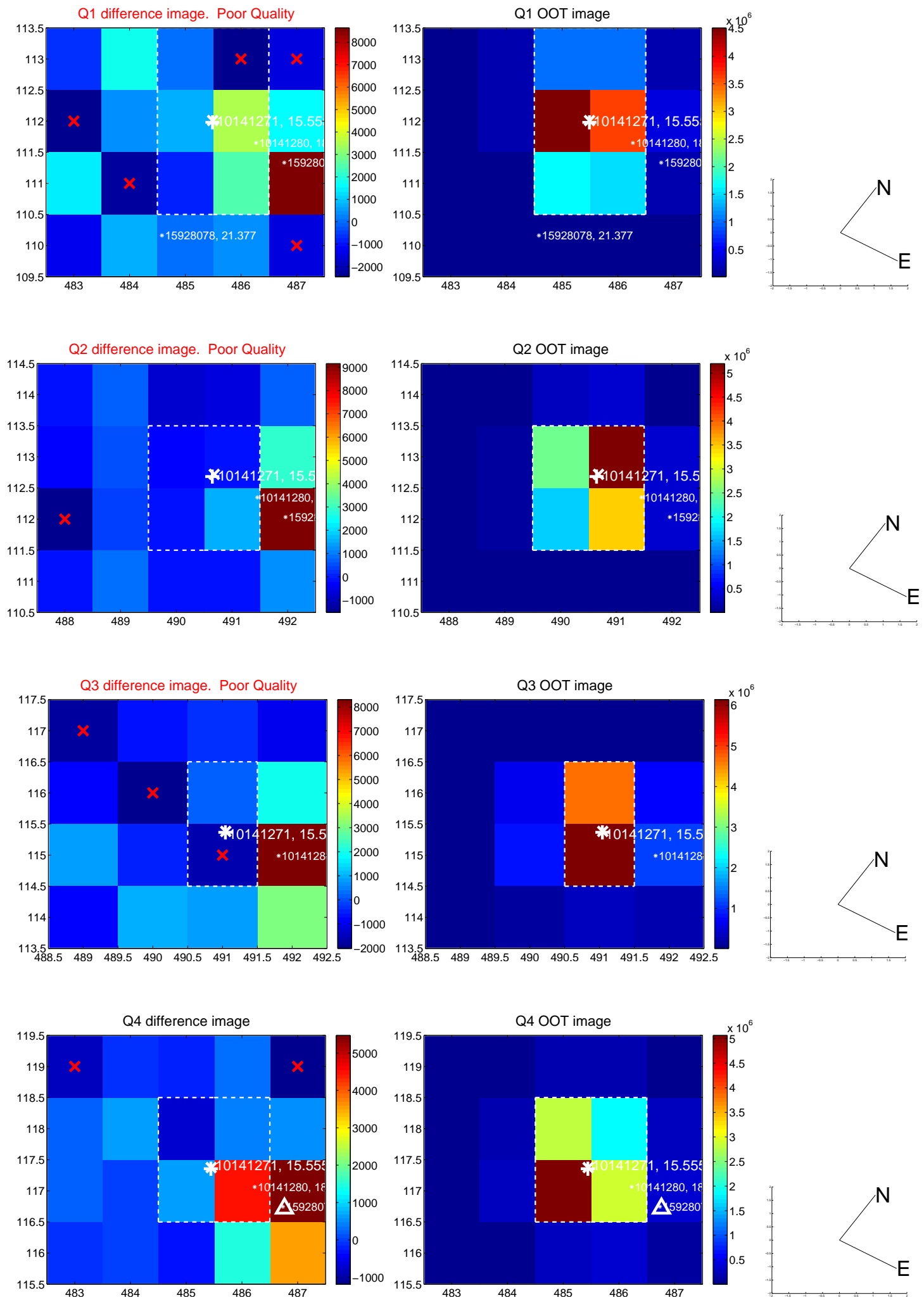
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.605 ± 0.173	32.39	5.588 ± 0.176	0.434 ± 0.175
PRF-fit source offset from KIC position	5.661 ± 0.165	34.40	5.653 ± 0.163	0.296 ± 0.172
photometric centroid source offset	18.38 ± 1.57	11.71	18.38 ± 1.57	0.42 ± 1.53

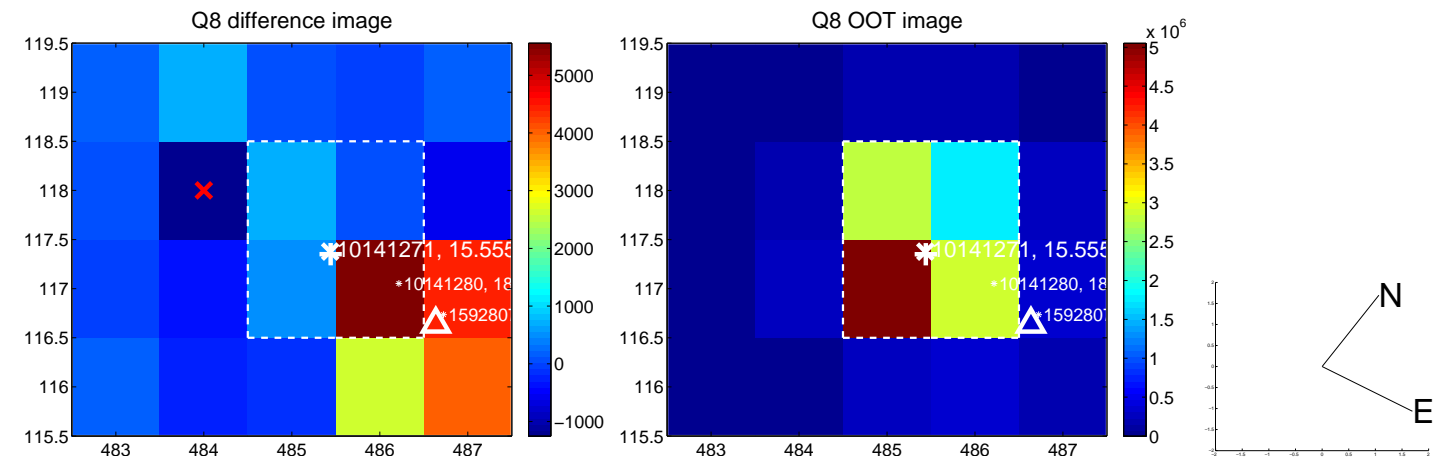
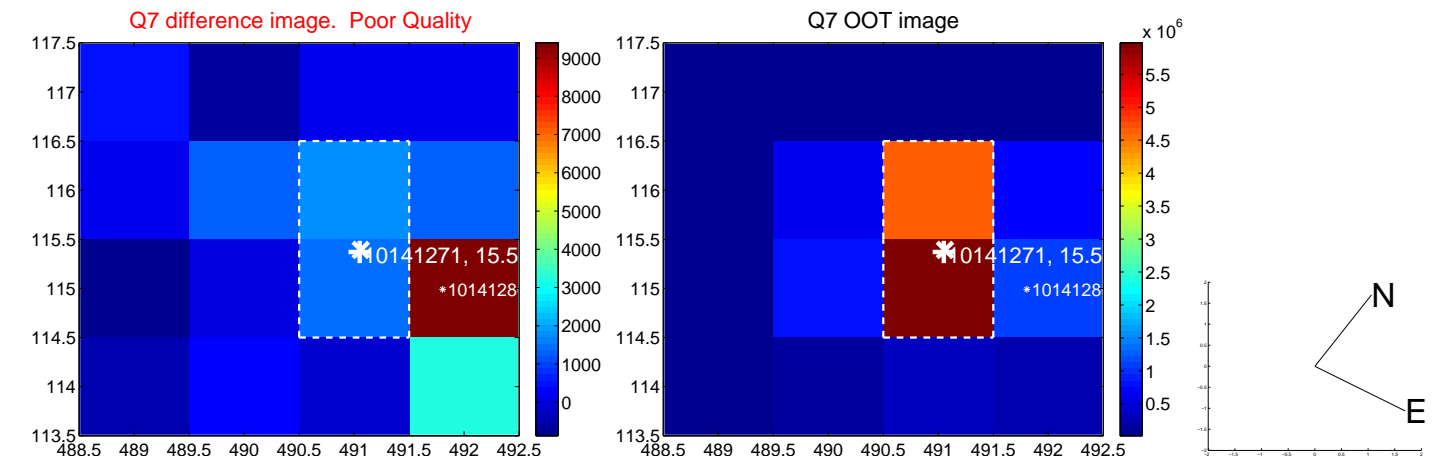
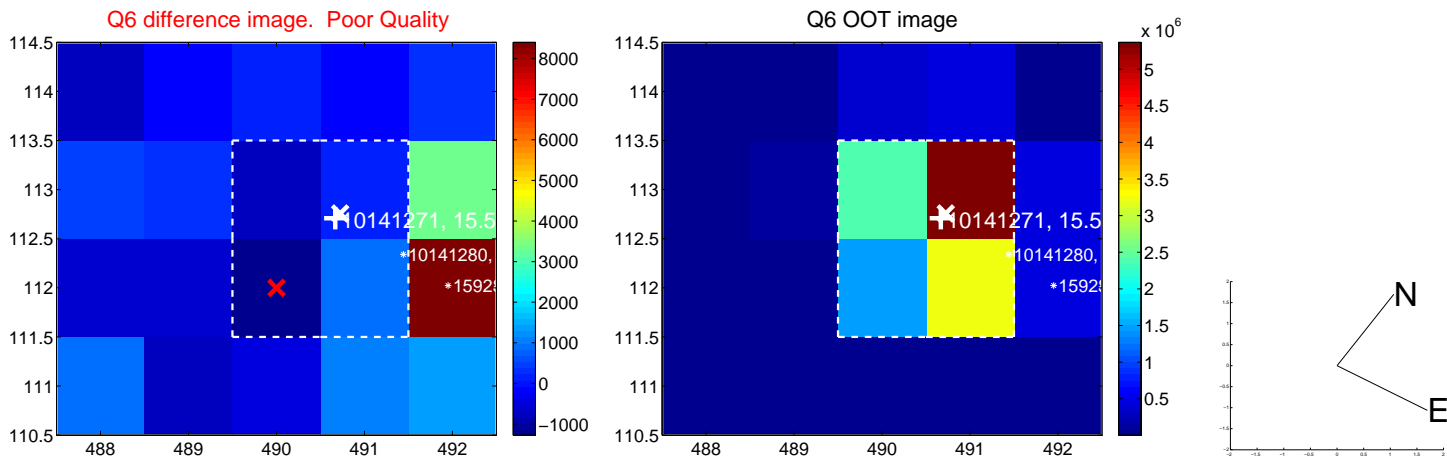
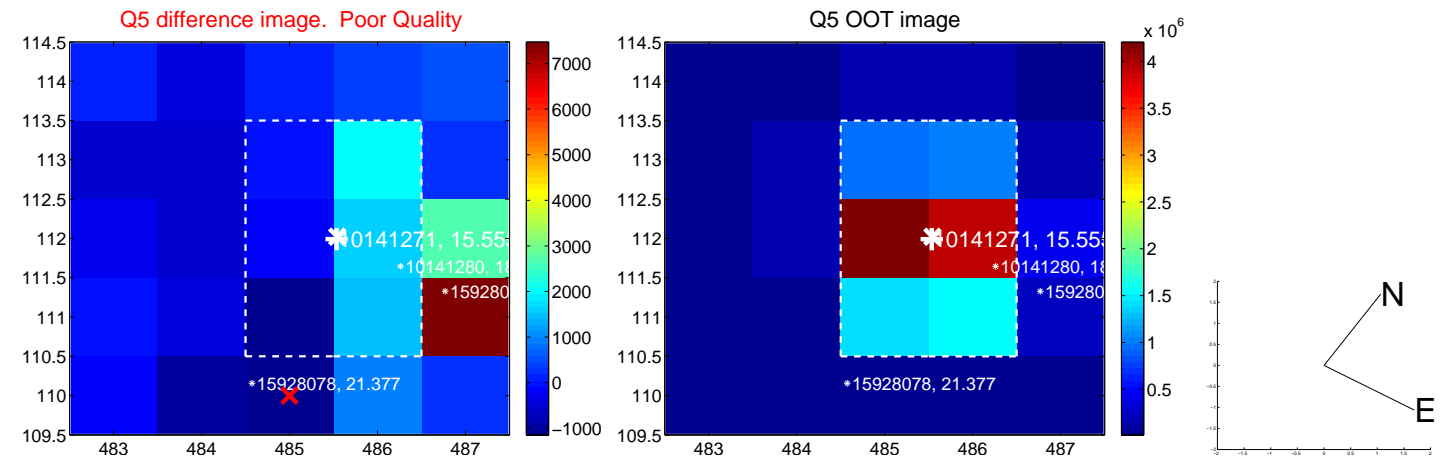


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

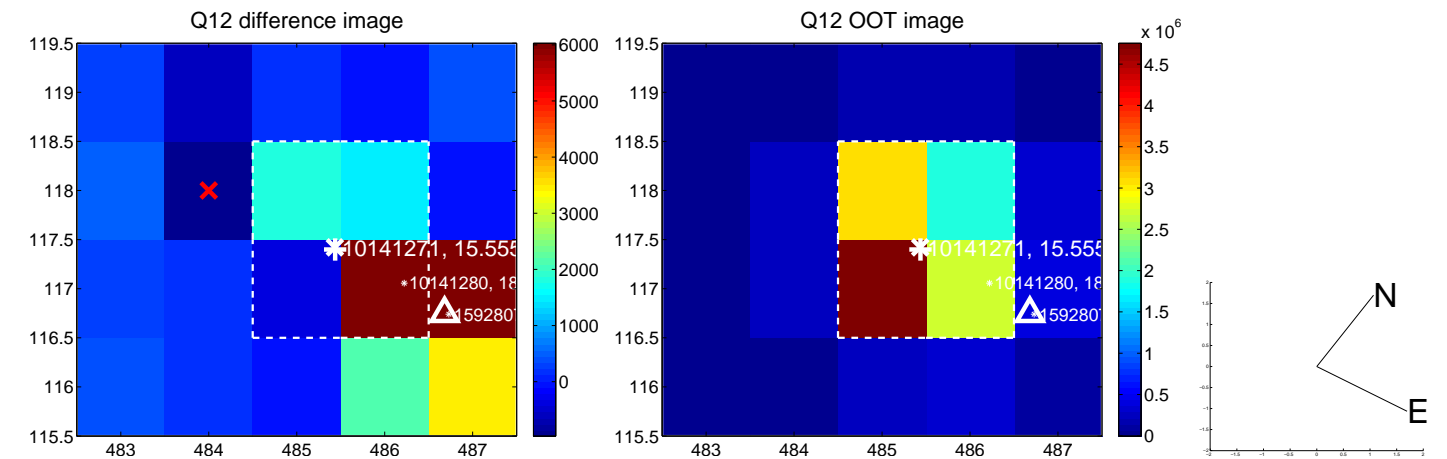
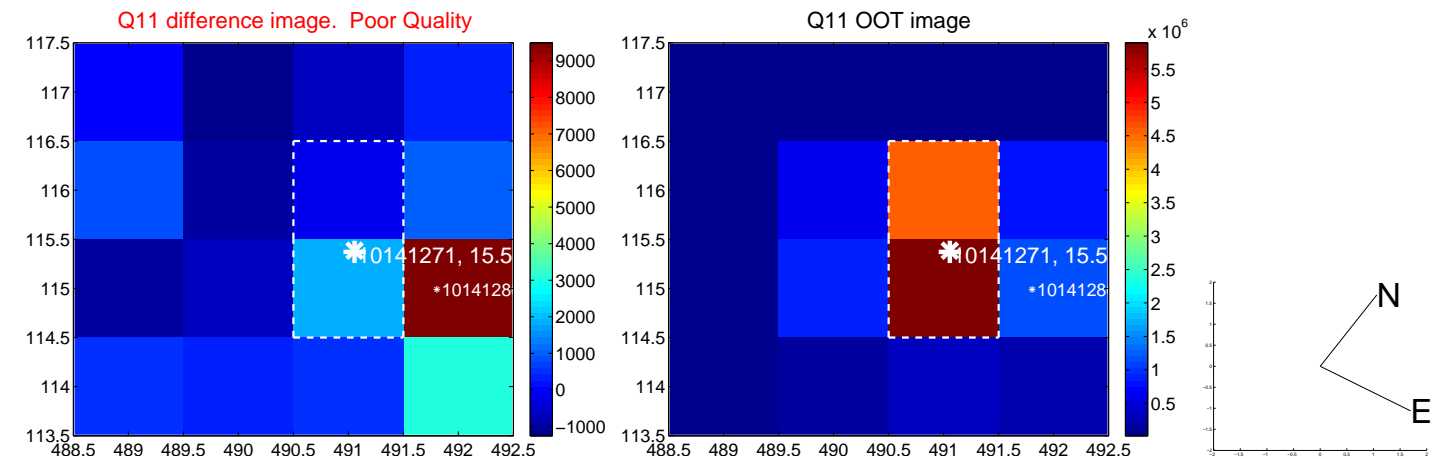
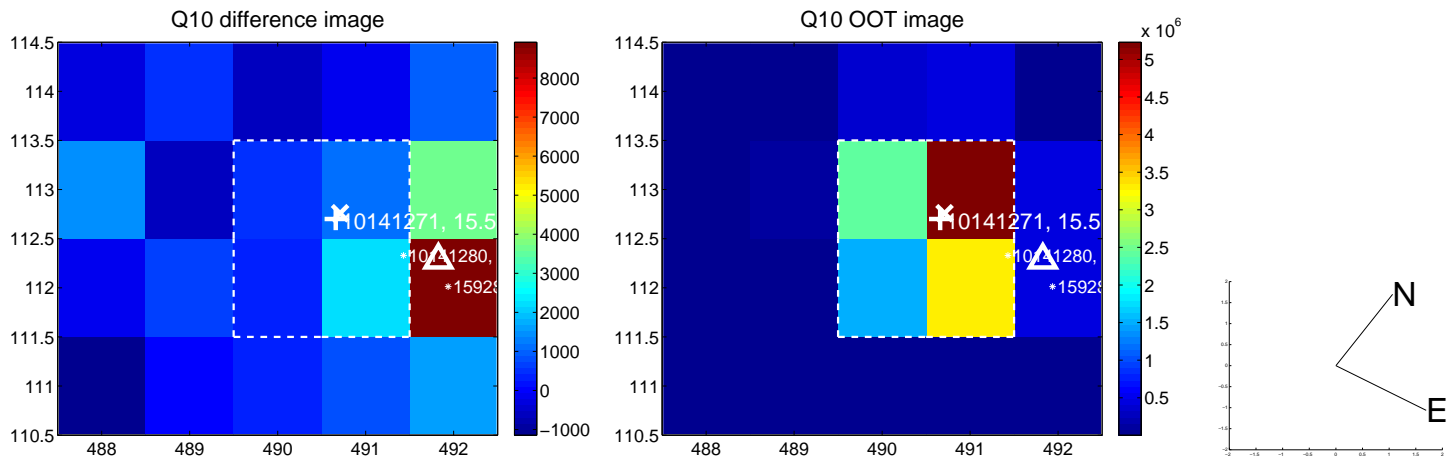
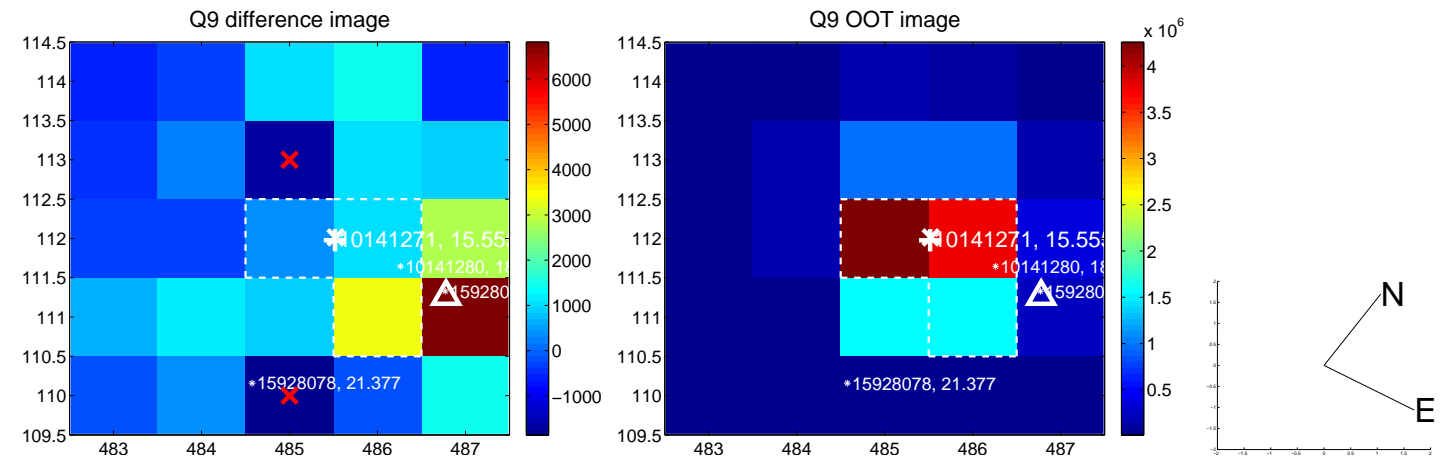
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



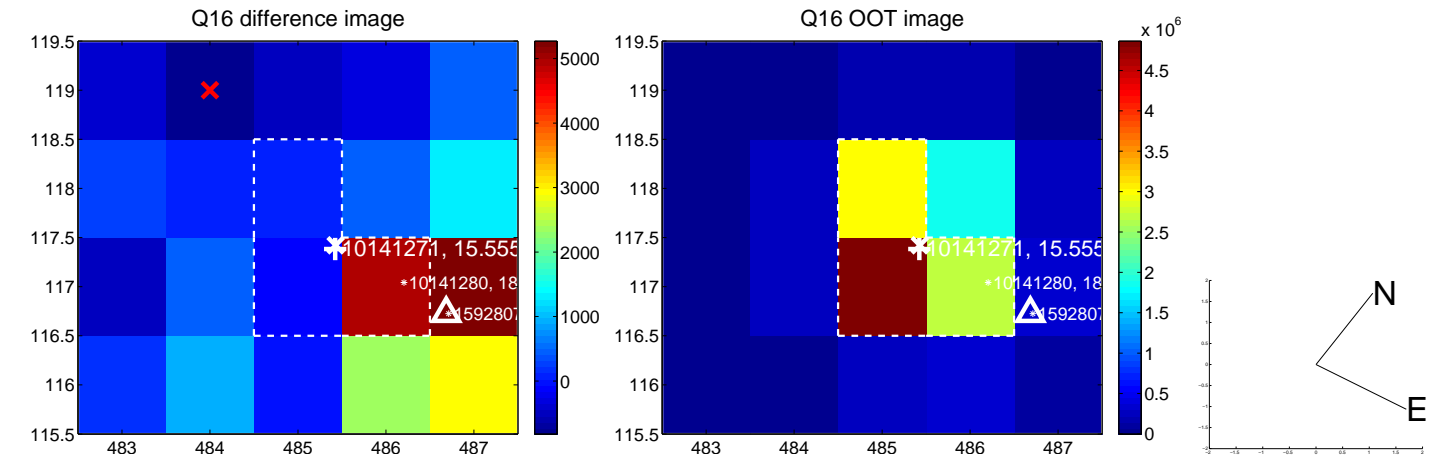
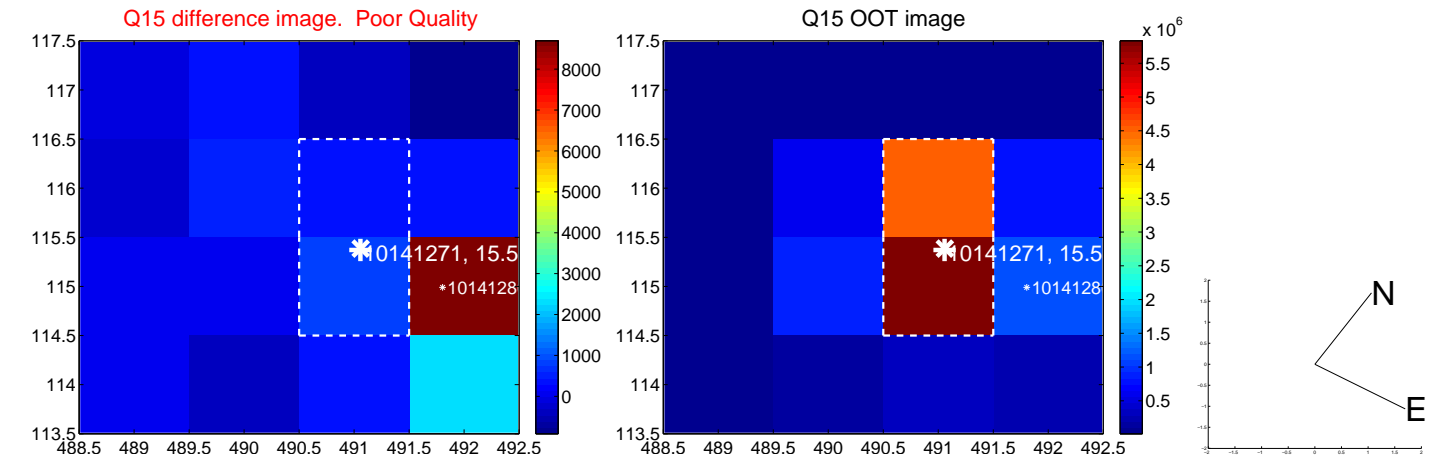
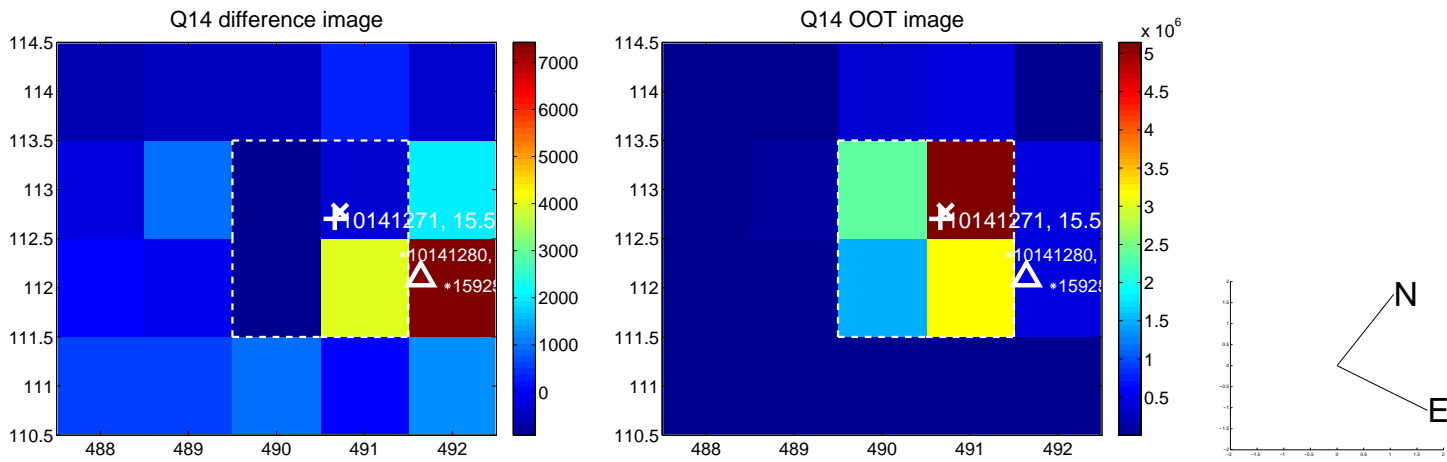
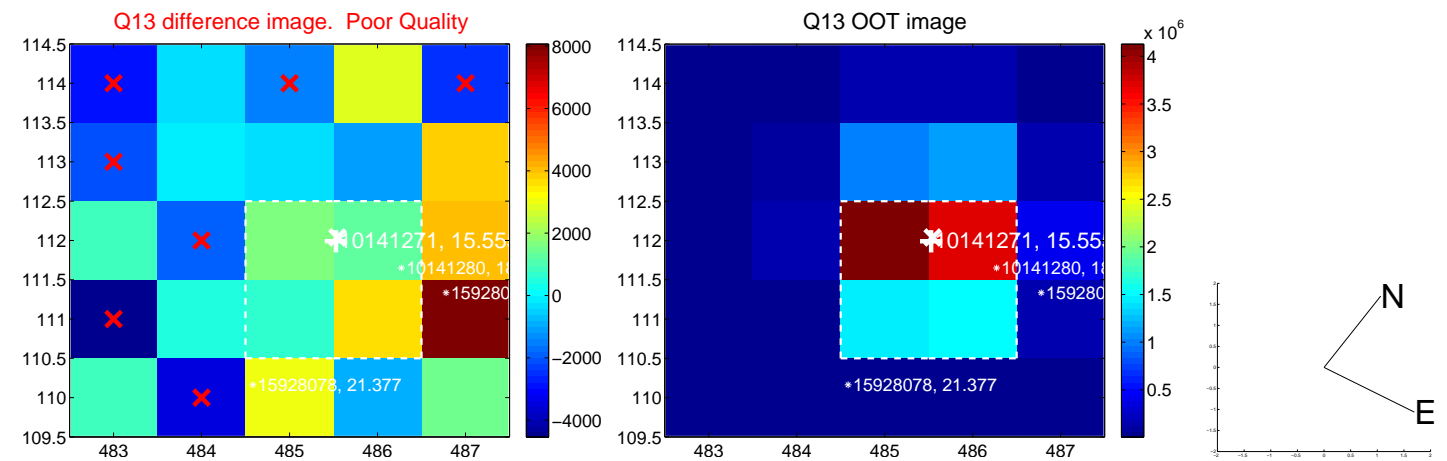
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



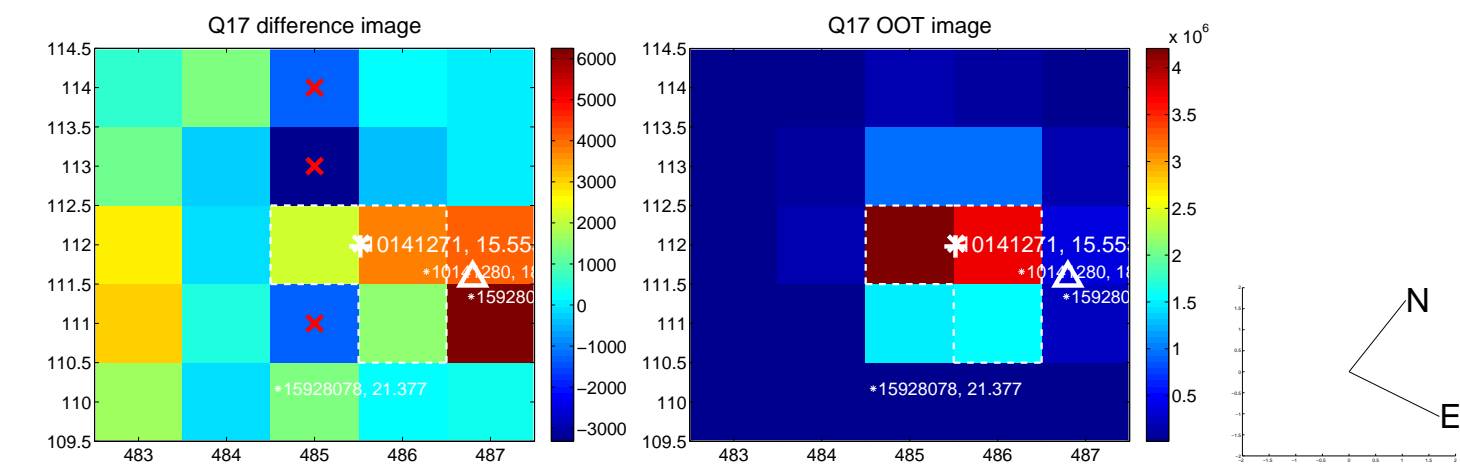
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



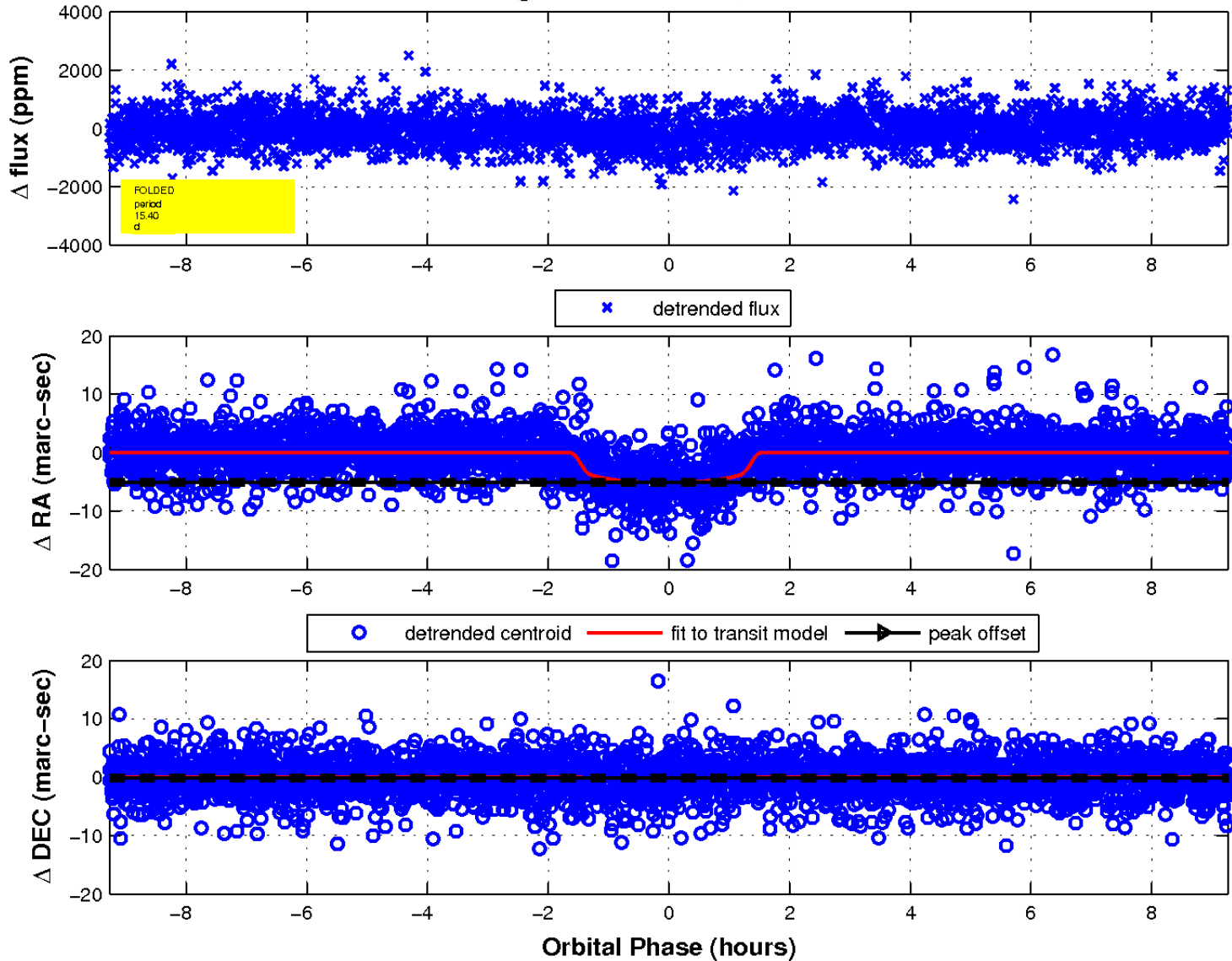
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

