

KIC 011412250

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})
011412250-01	OBS	No	7.165113	136.670347	20.7	12.533	7.9	7.7	2.17	7848	1.18	2347.50

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011412250-01	OBS	FP	0.00	1	0	1	0	LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS—HALO_GHOST

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

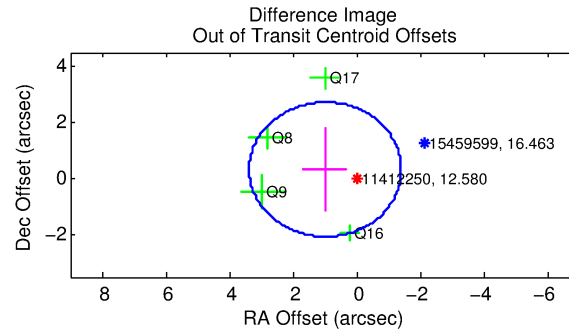
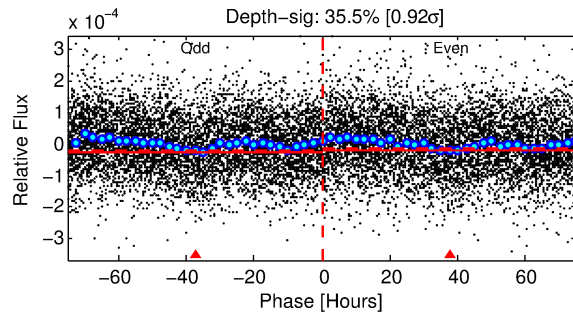
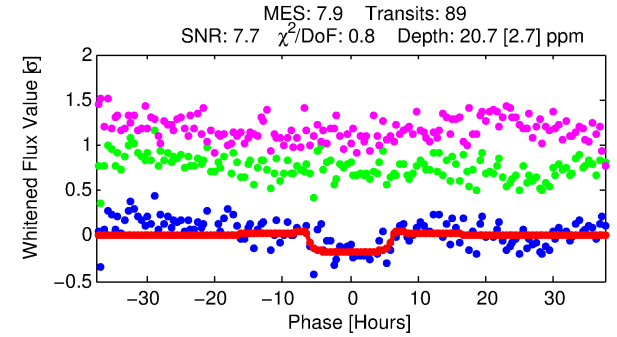
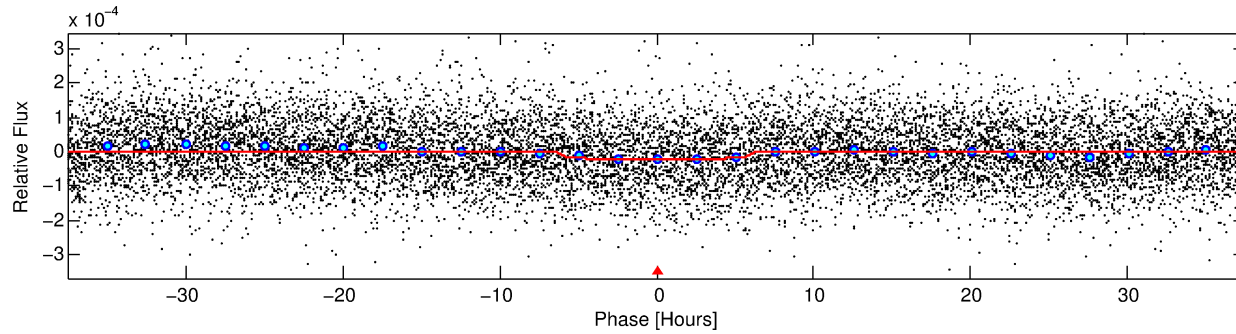
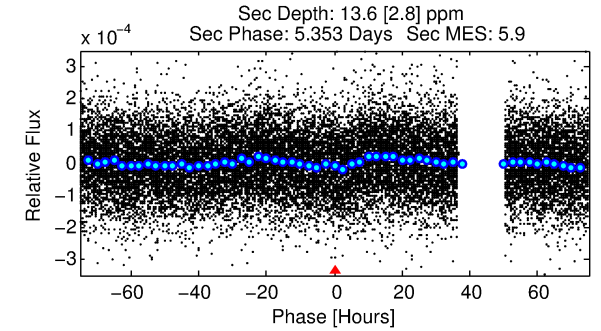
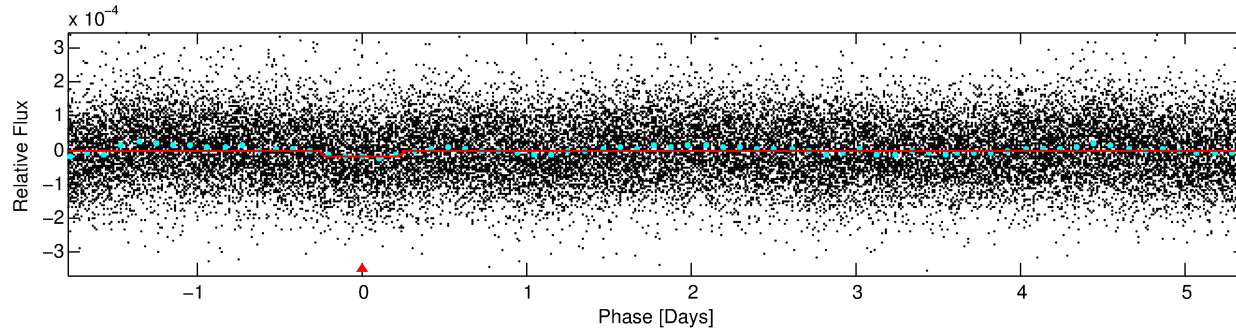
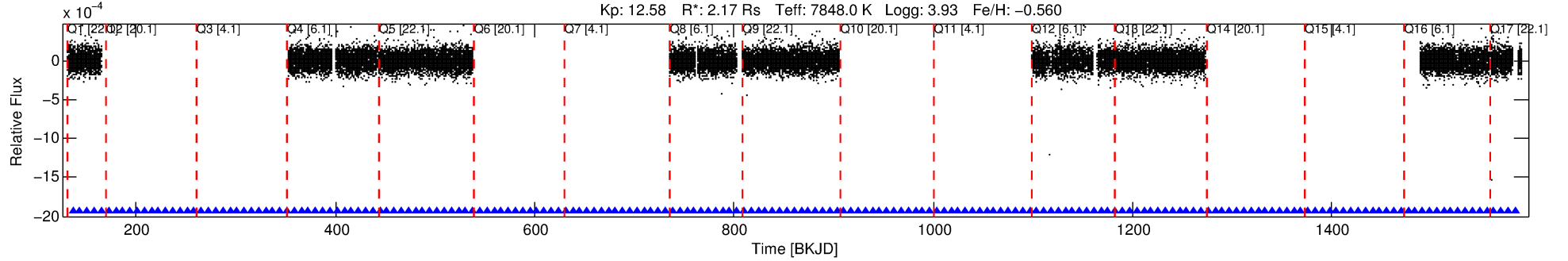
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011412250-01

No Significant Match Found

DV One-Page Summary

KIC: 11412250 Candidate: 1 of 1 Period: 7.165 d



DV Fit Results:

Period = 7.16511 [0.00017] d
Epoch = 136.6703 [0.0183] BKJD
Rp/R* = 0.0050 [0.0008]
a/R* = 1.89 [1.41]
b = 0.93 [0.15]
Seff = 2347.50 [1383.88]
Teq = 1775 [262] K
Rp = 1.18 [0.46] Re
a = 0.0828 [0.0288] AU
Ag = 36.45 [25.26] [1.40σ]
Teffp = 6743 [719] K [6.50σ]

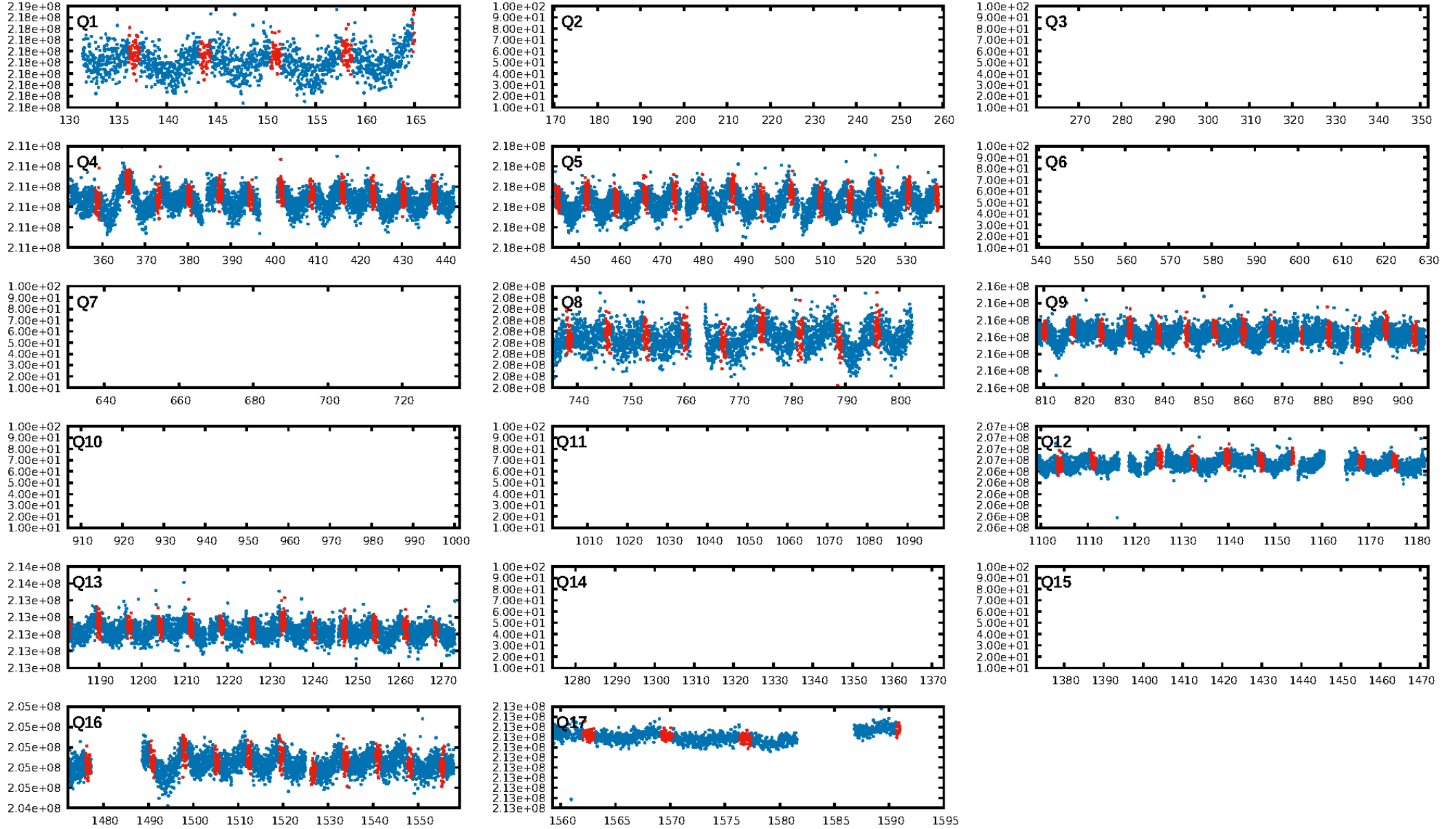
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 82.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 9.38e-15
RollingBand-fgt: 1.00 [81/81]
GhostDiagnostic-chr: 0.1161
Centroid-sig: 58.5%
Centroid-so: 1.421 arcsec [0.84σ]
OotOffset-rm: 1.036 arcsec [1.30σ]
OotOffset-st: 0/0/2/2 [4]
KicOffset-rm: 1.036 arcsec [1.19σ]
KicOffset-st: 0/0/2/2 [4]
DiffImageQuality-fgm: 1.00 [4/4]
DiffImageOverlap-fno: 1.00 [9/9]

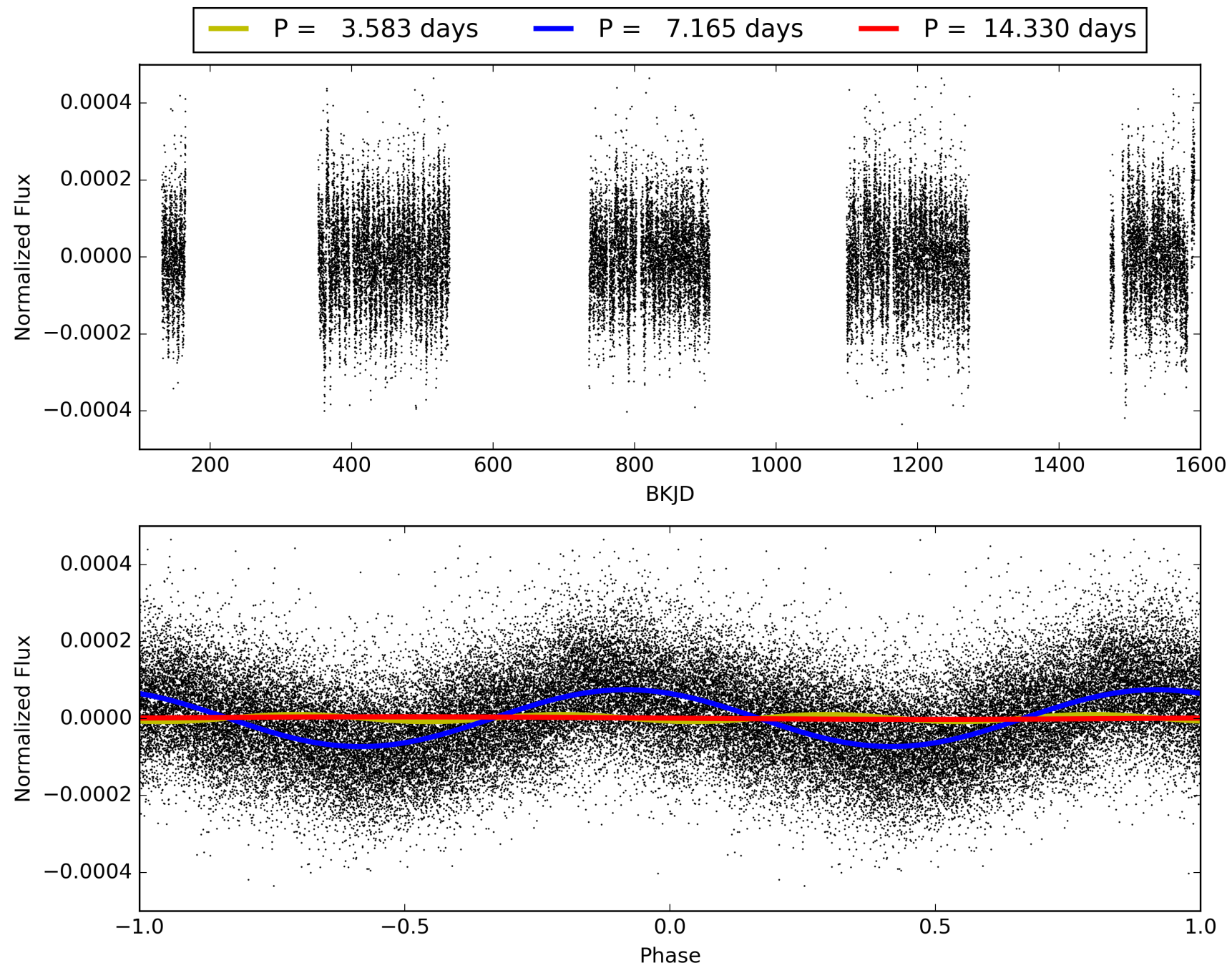
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 18:59:33 Z

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

TCE 011412250-01, PDC Light Curves

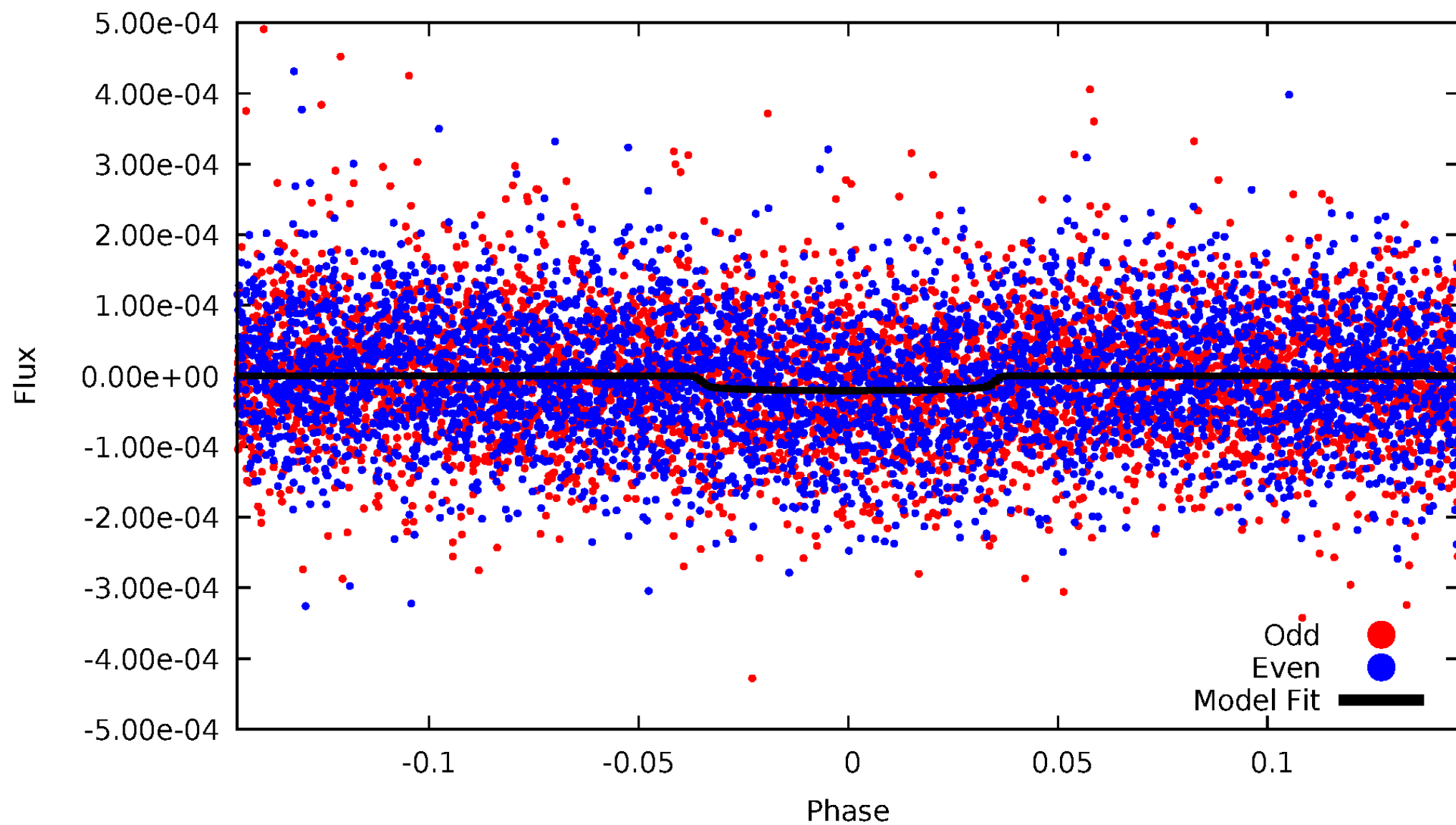


TCE 011412250-01



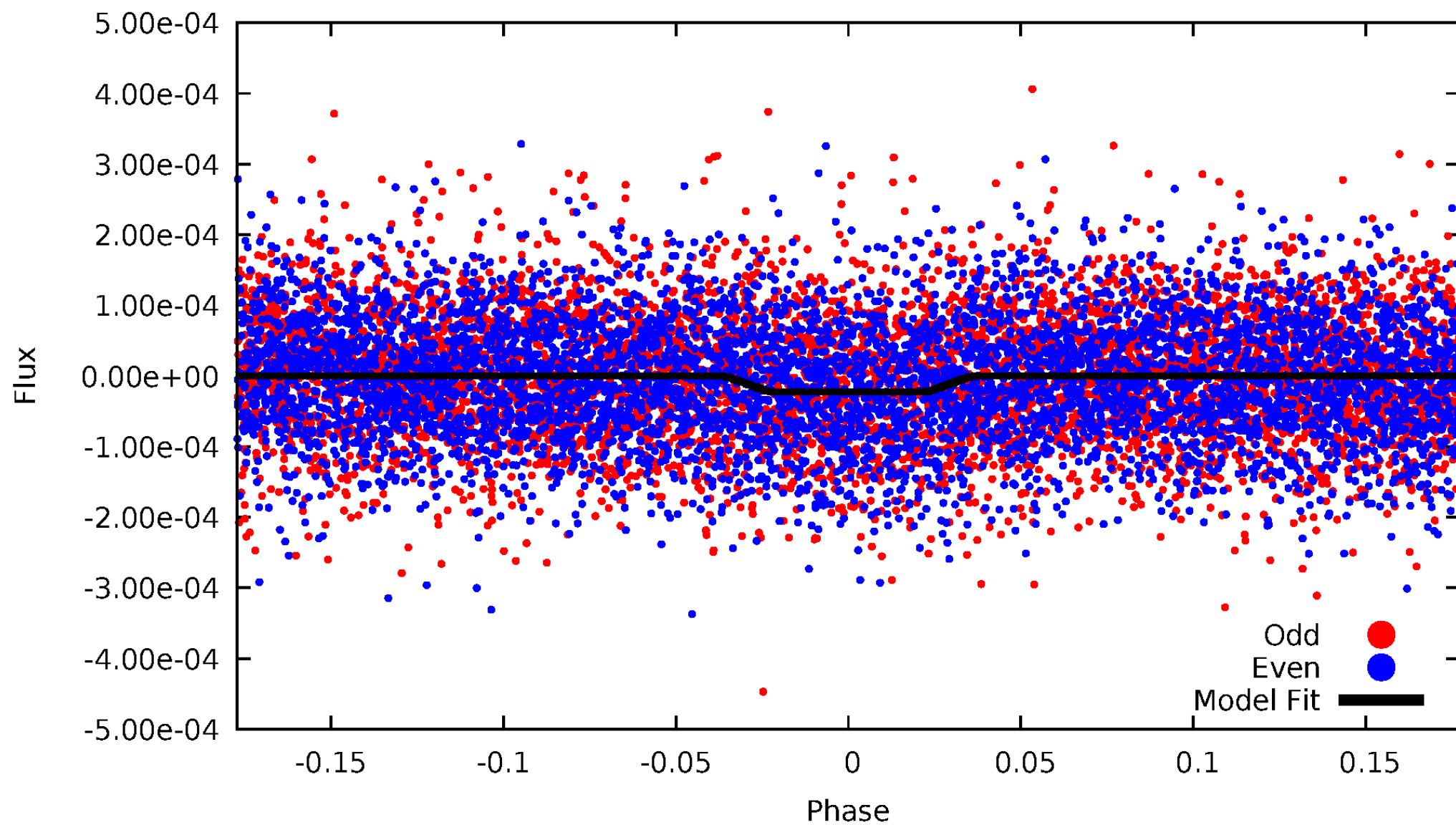
DV Odd/Even

TCE 011412250-01



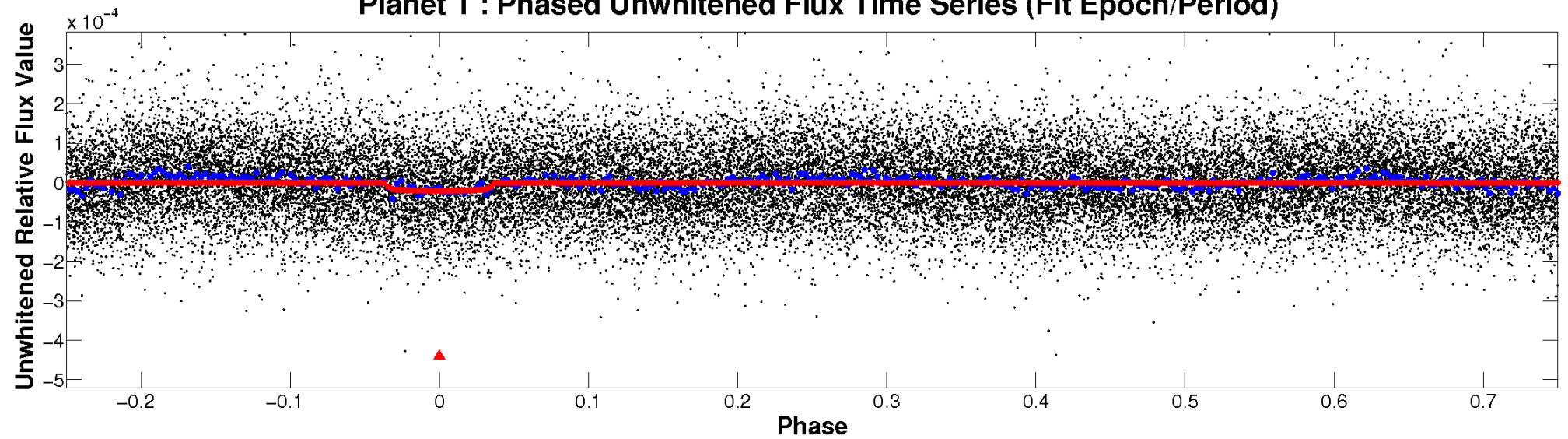
ALT Odd/Even

TCE 011412250-01

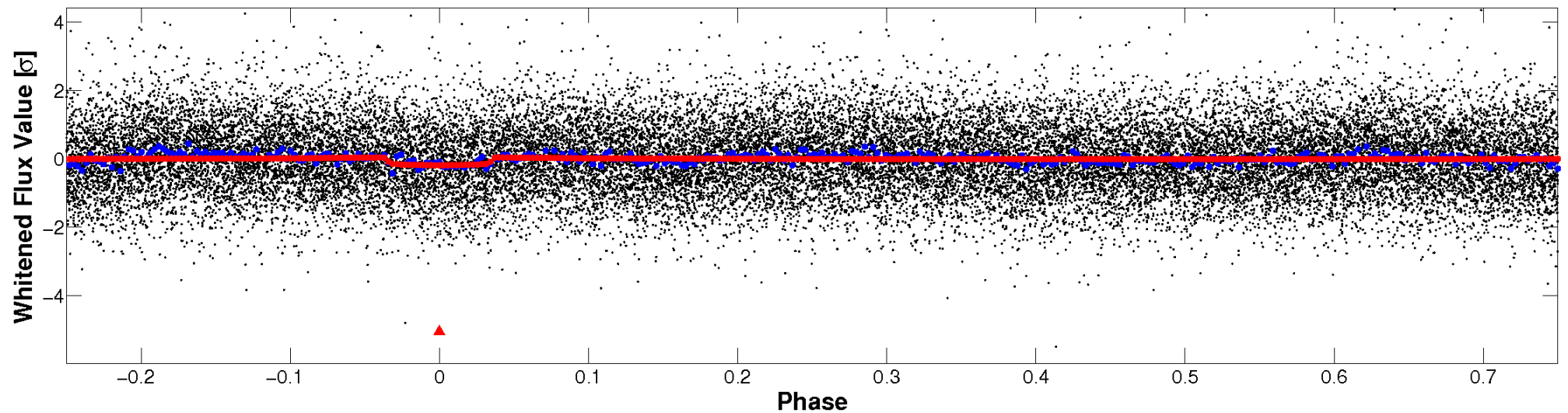


Non-Whitened Vs. Whitened Light Curve

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

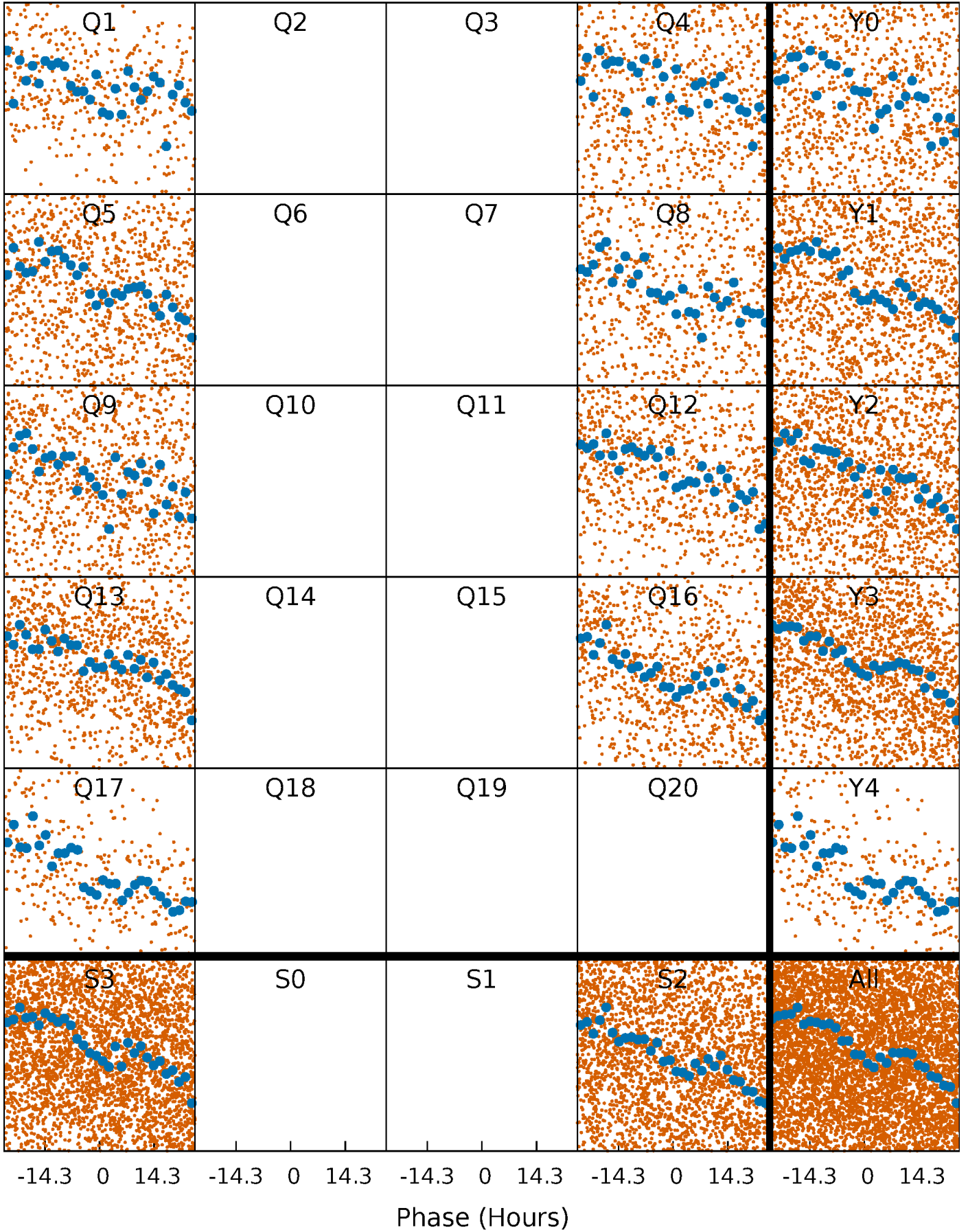


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



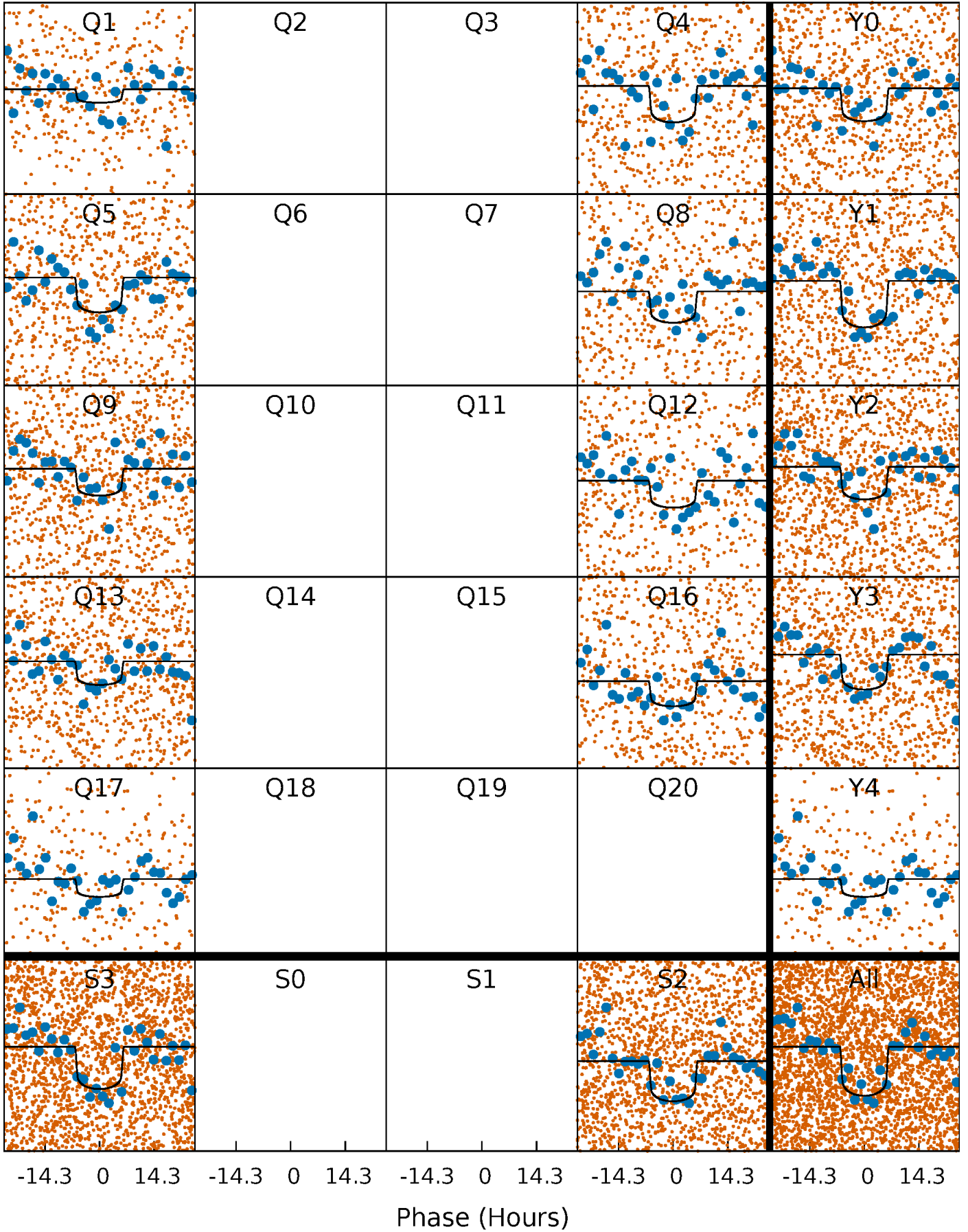
PDC Quarter-Phased Transit Curves

TCE 011412250-01 P= 7.165113 Days $T_0=136.670346$ (BKJD)



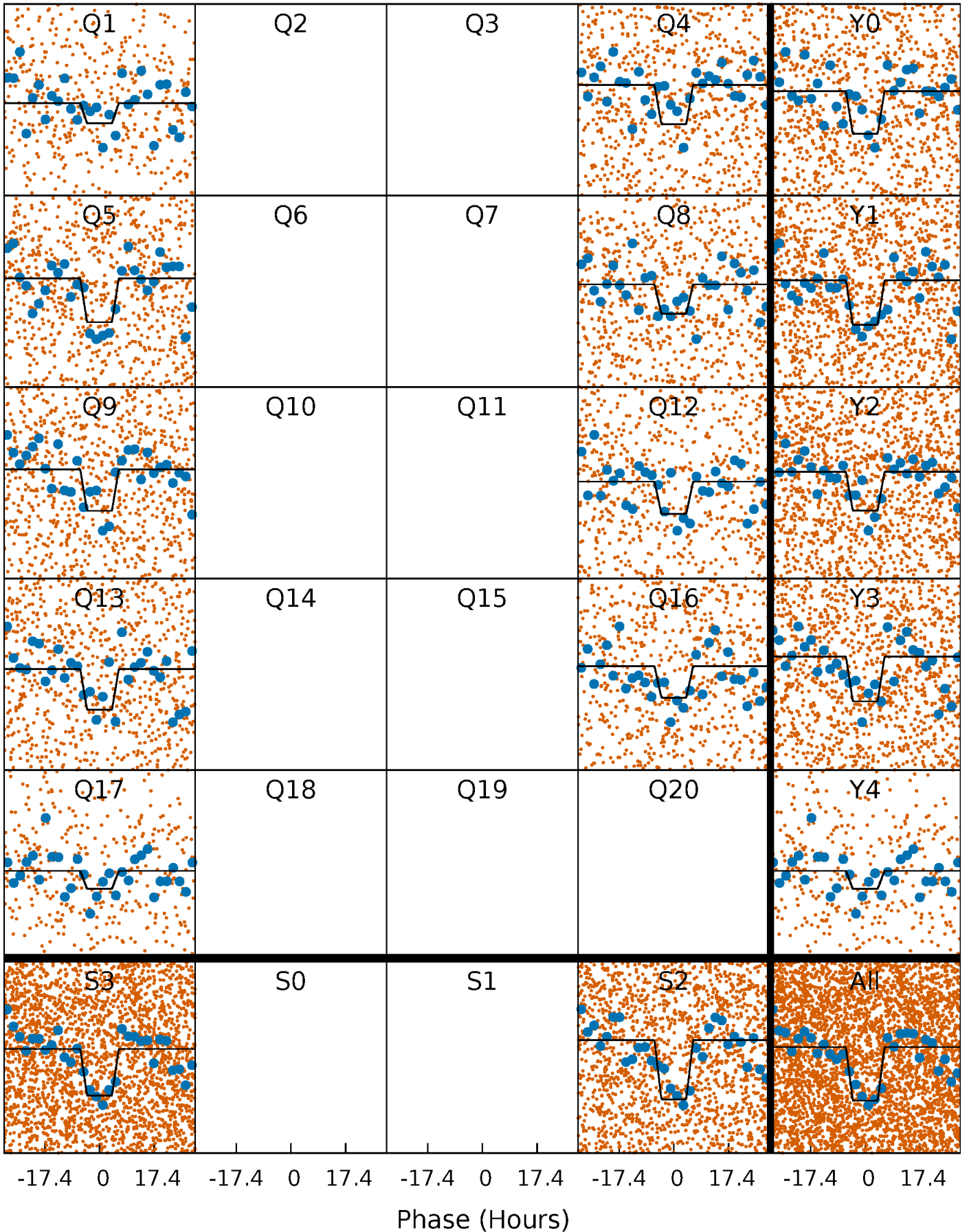
DV Quarter-Phased Transit Curves

TCE 011412250-01 P= 7.165113 Days $T_0=136.670346$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

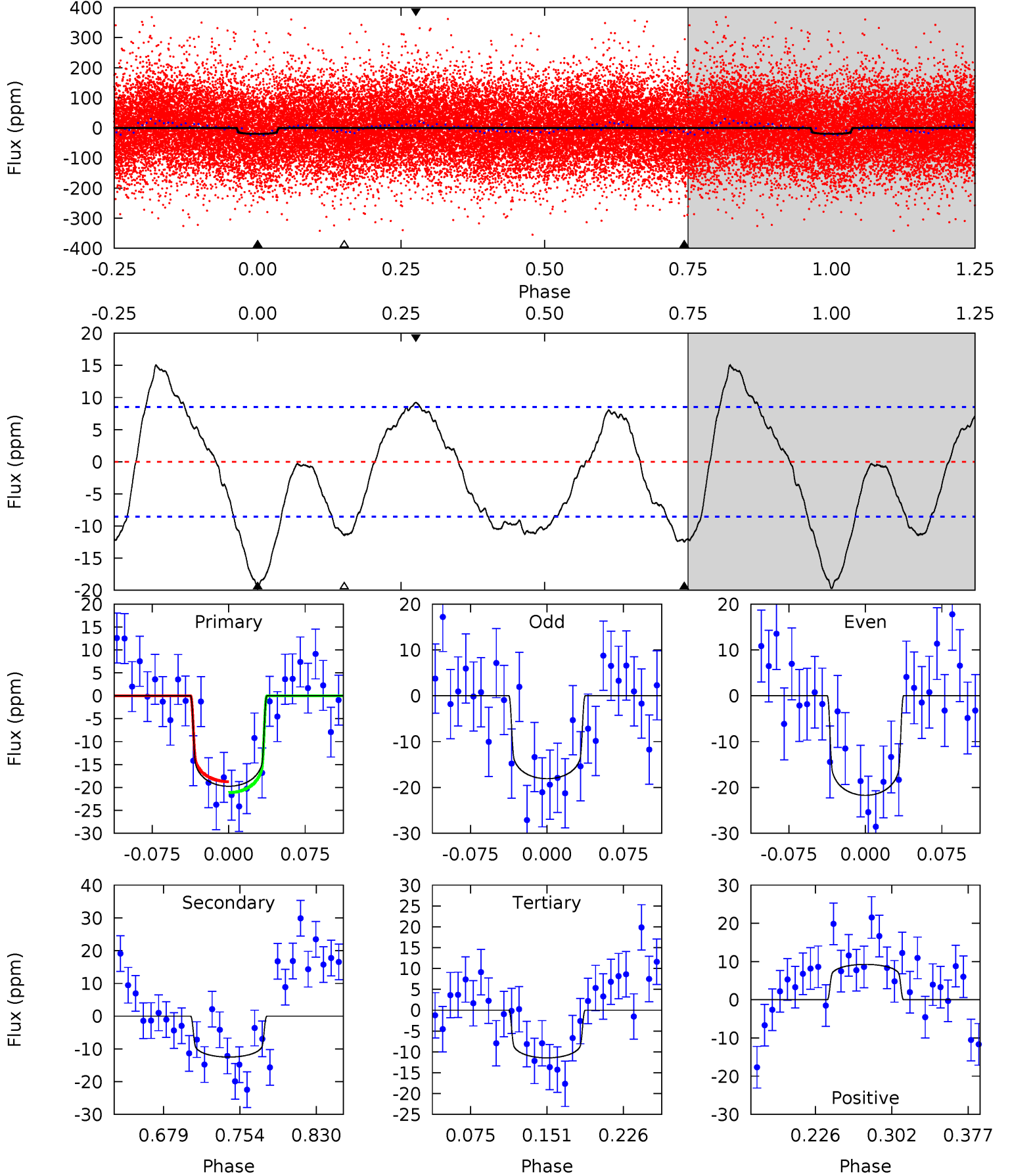
TCE 011412250-01 P= 7.164814 Days $T_0=136.710242$ (BKJD)



DV Model-Shift Uniqueness Test

011412250-01, P = 7.165113 Days, E = 129.505233 Days

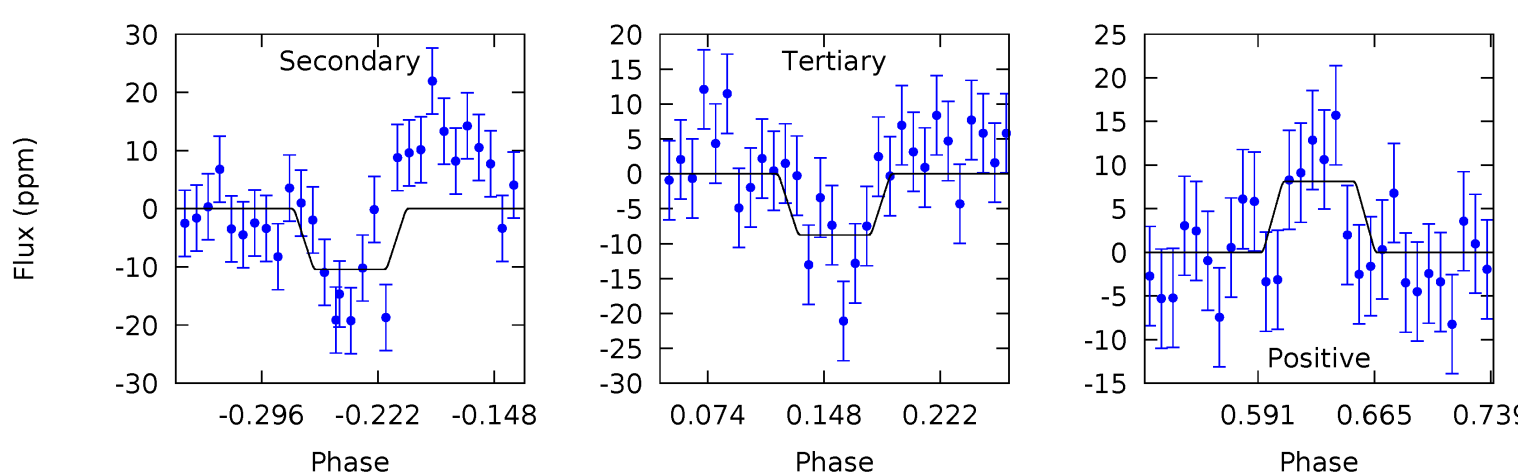
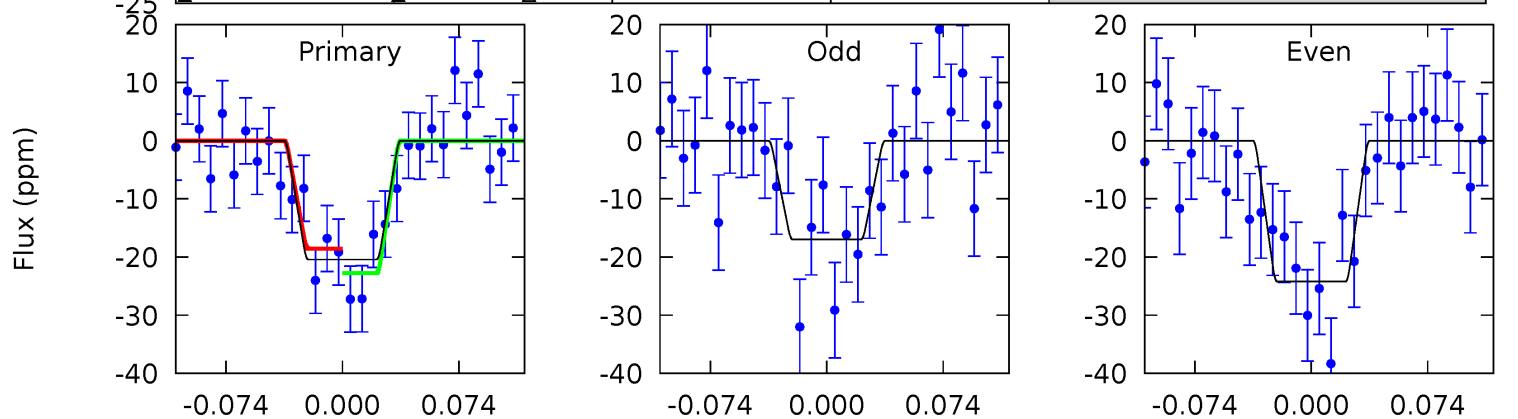
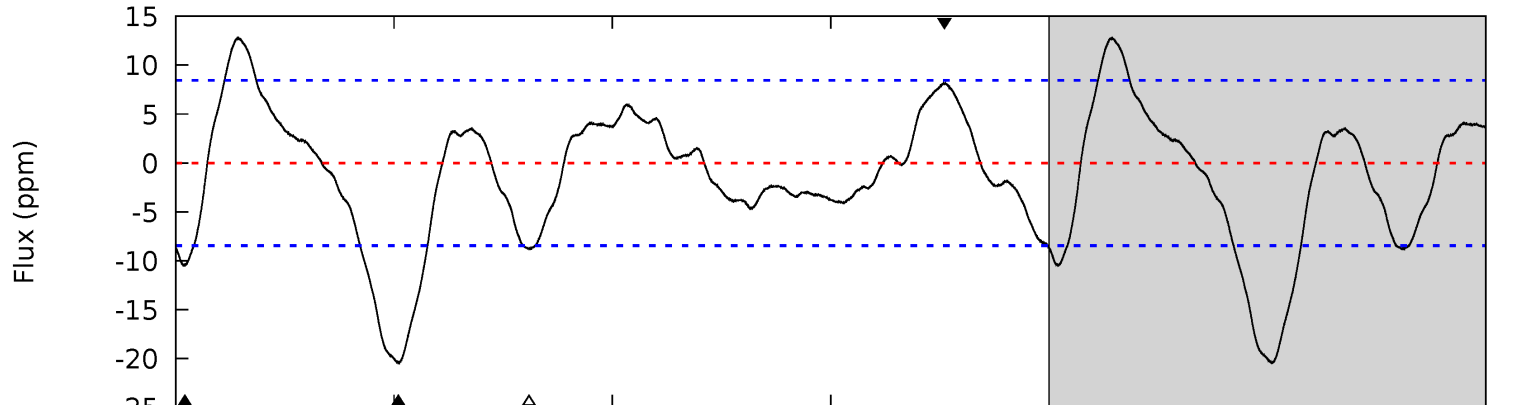
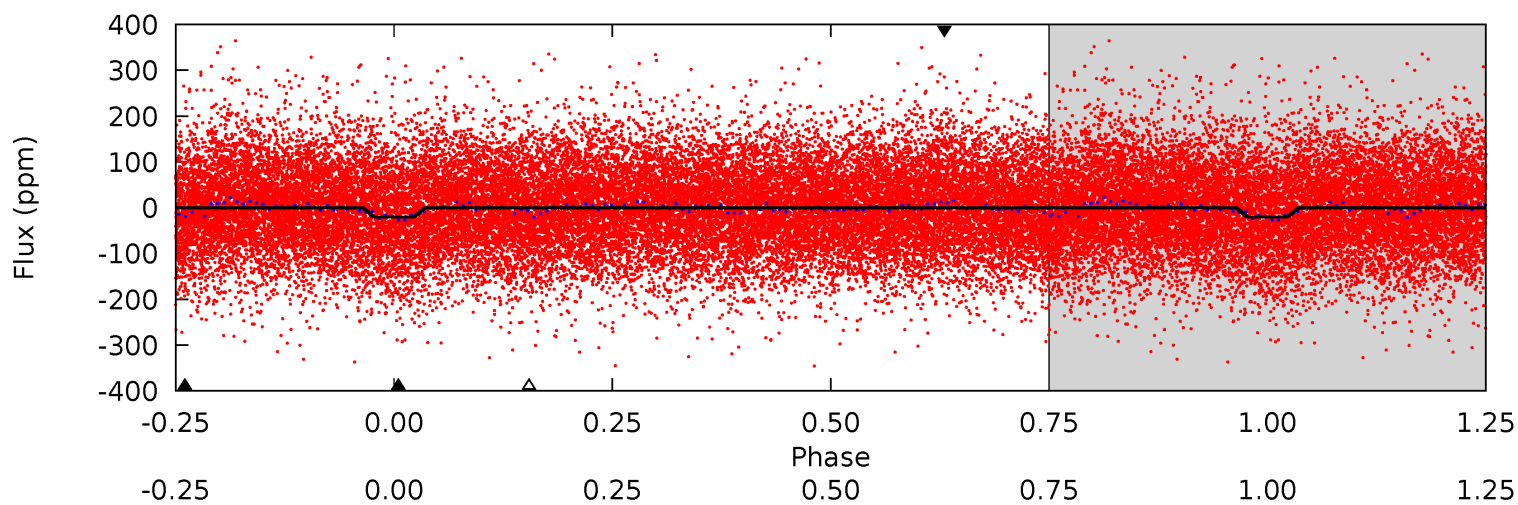
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.7	6.77	6.20	5.01	4.62	1.78	4.06	4.50	5.69	0.57	1.76	0.99	0.98	0.43	0.65



Alt Model-Shift Uniqueness Test

011412250-01, P = 7.164814 Days, E = 129.545428 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.2	5.72	4.80	4.46	4.63	1.79	2.32	6.39	6.73	0.92	1.27	1.99	1.01	0.38	1.14



Stellar Parameters For KIC 011412250

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7848^{+251}_{-307}	$3.931^{+0.338}_{-0.113}$	$-0.560^{+0.250}_{-0.300}$	$2.175^{+0.441}_{-0.757}$	$1.474^{+0.205}_{-0.250}$	$0.202^{+0.520}_{-0.070}$
	+3%/-4%	+9%/-3%	+45%/-54%	+20%/-35%	+14%/-17%	+258%/-35%
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 011412250-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-12 ± 2	$1.11^{+0.27}_{-0.27}$	2419^{+180}_{-251}	6429^{+763}_{-544}	39^{+27}_{-14}
Alt.	-10 ± 2	$1.05^{+0.27}_{-0.26}$	2417^{+189}_{-230}	6293^{+839}_{-576}	35^{+28}_{-13}

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 $A_{obs} \gg 1.0$

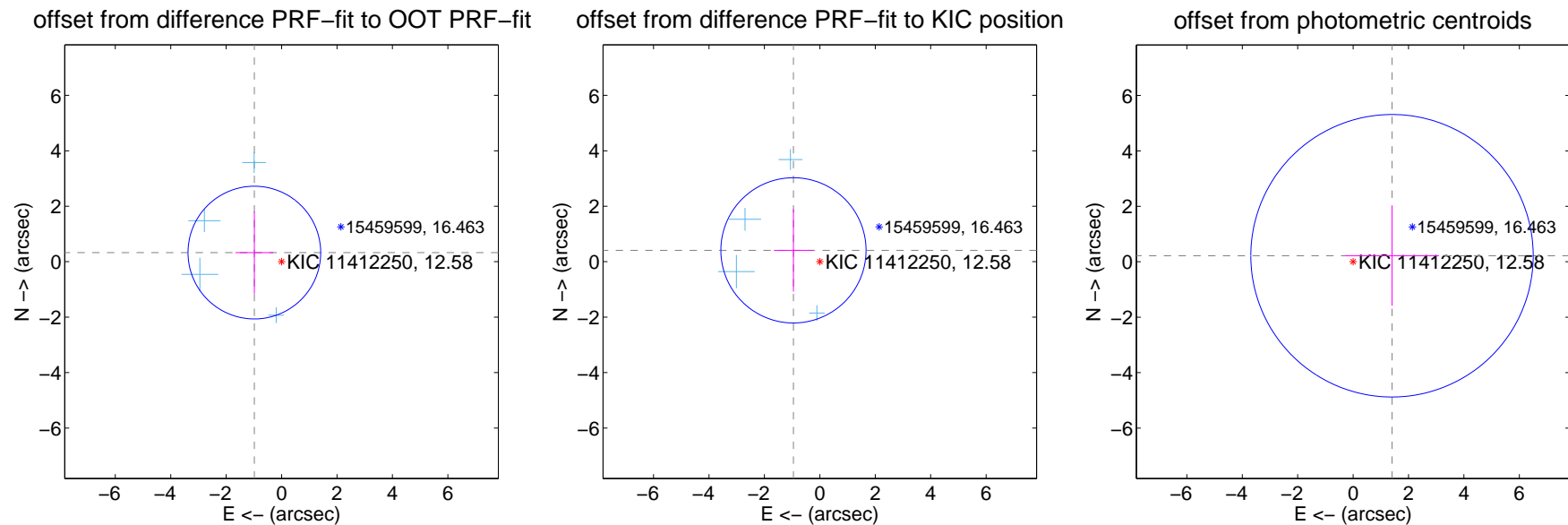
DV Centroid Data

Supplemental centroid analysis for 011412250-01. Kepler magnitude: 12.58. Transit SNR 7.70

There are 4 quarters with good PRF difference image offsets

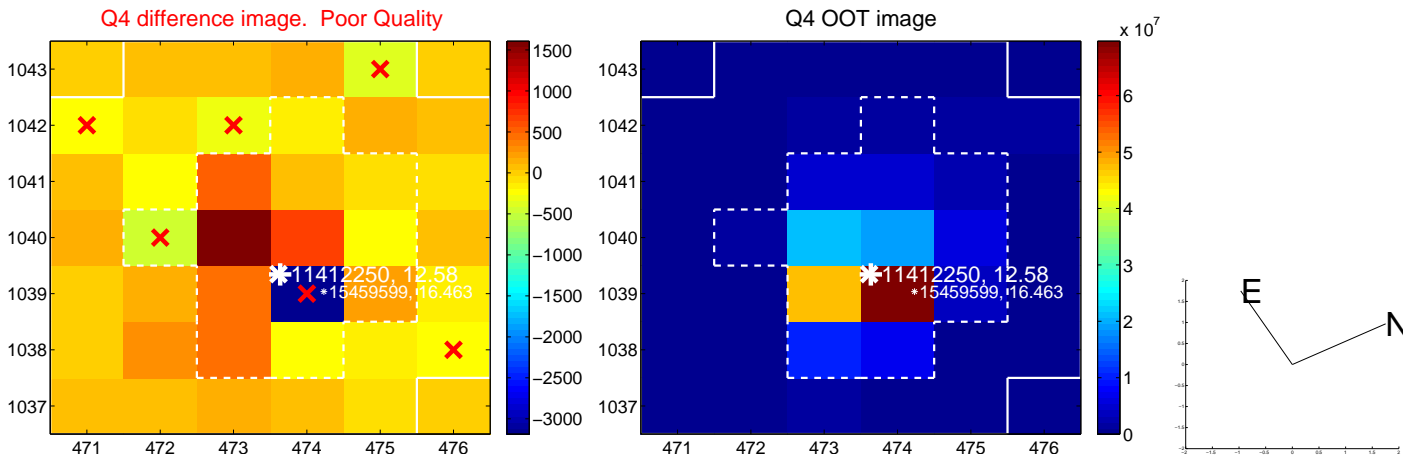
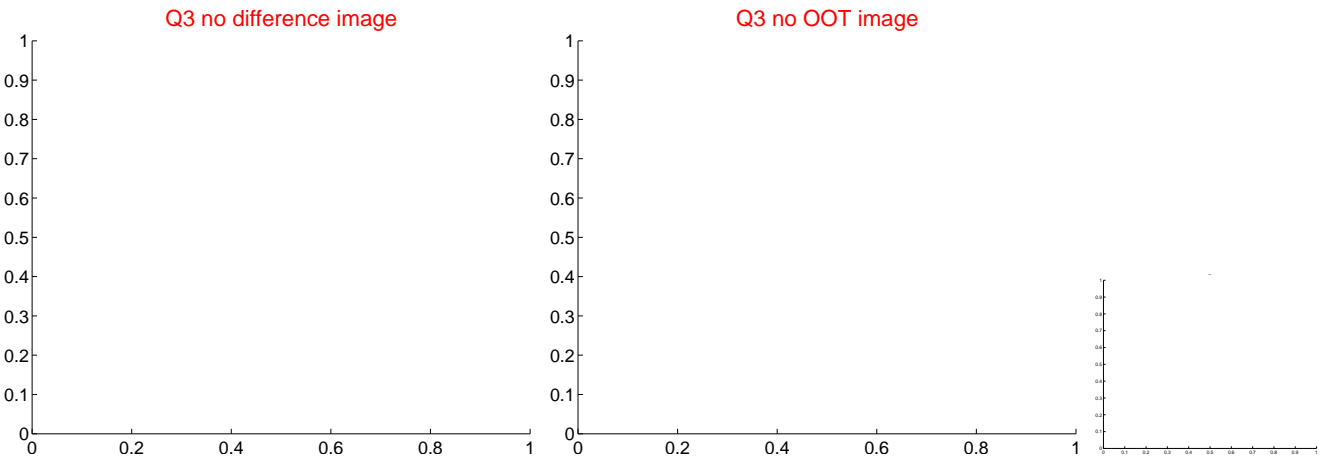
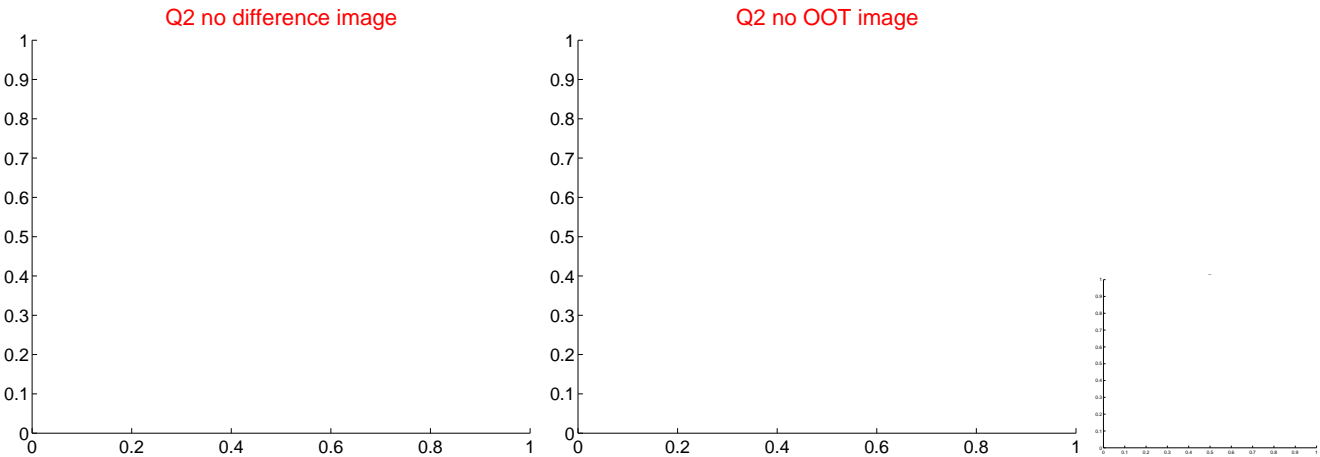
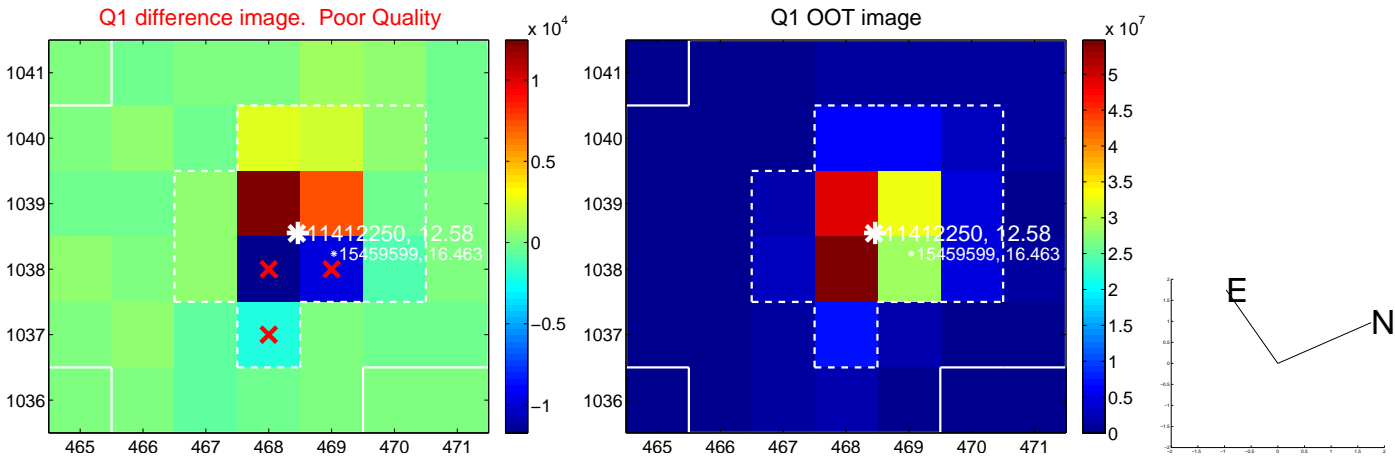
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.036 ± 0.798	1.30	0.982 ± 0.680	0.329 ± 1.482
PRF-fit source offset from KIC position	1.036 ± 0.873	1.19	0.952 ± 0.703	0.409 ± 1.487
photometric centroid source offset	1.42 ± 1.70	0.84	-1.40 ± 1.70	0.22 ± 1.80

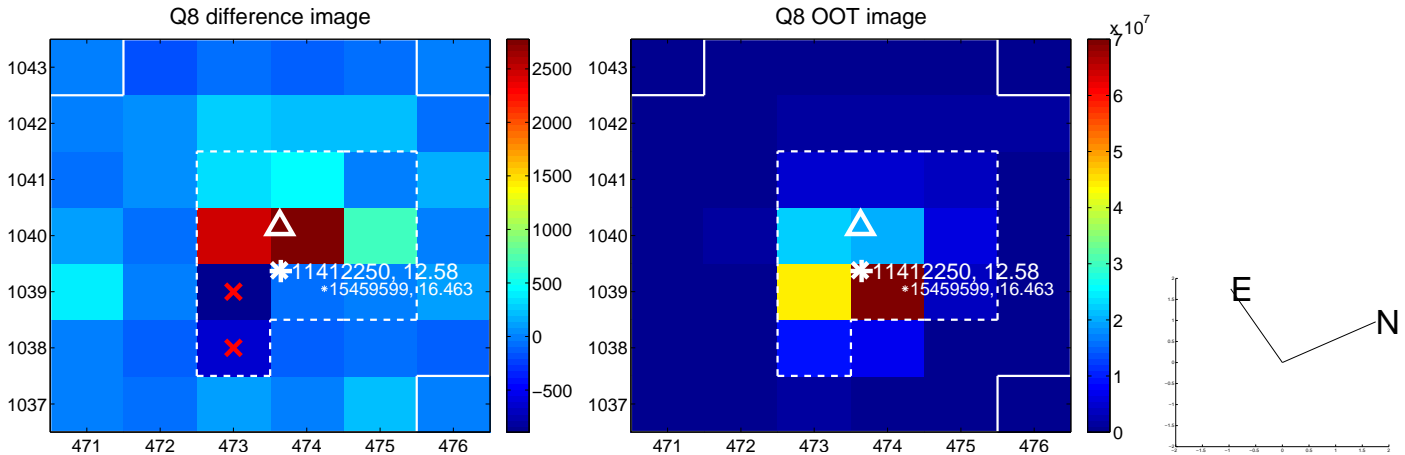
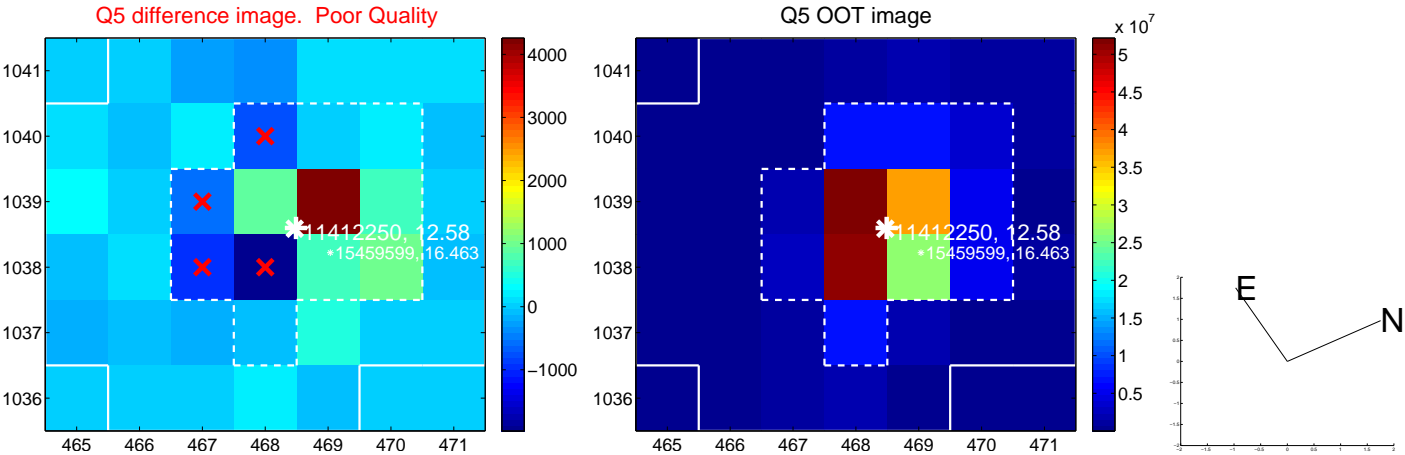


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

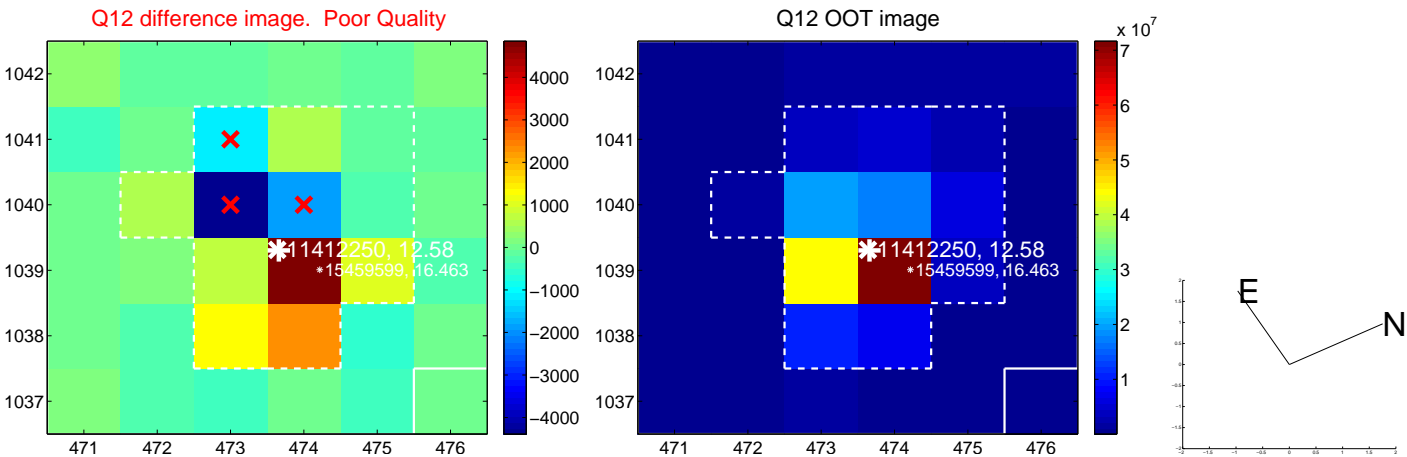
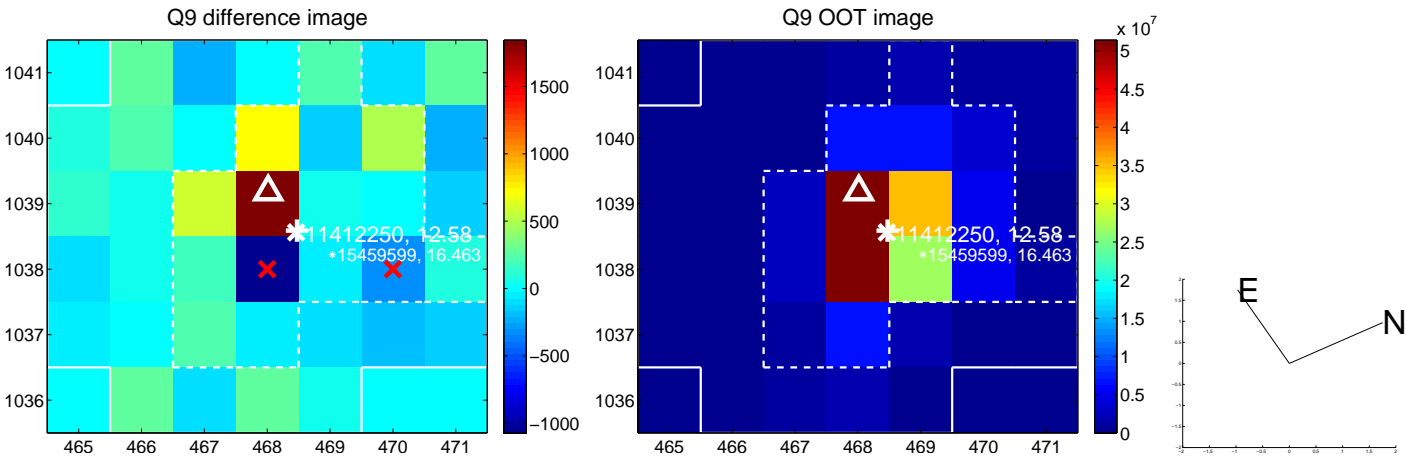
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



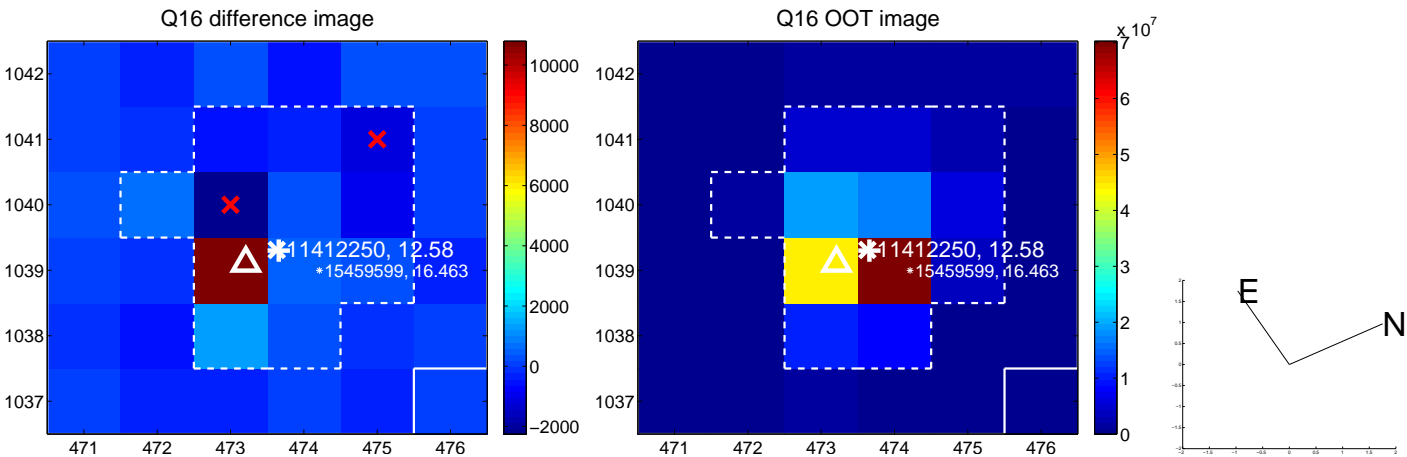
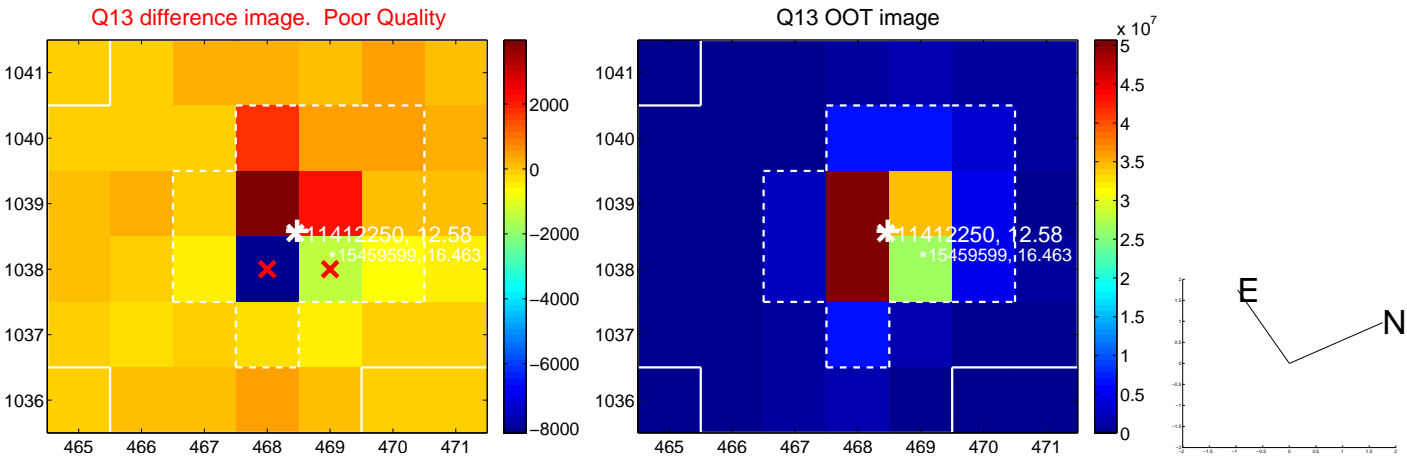
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



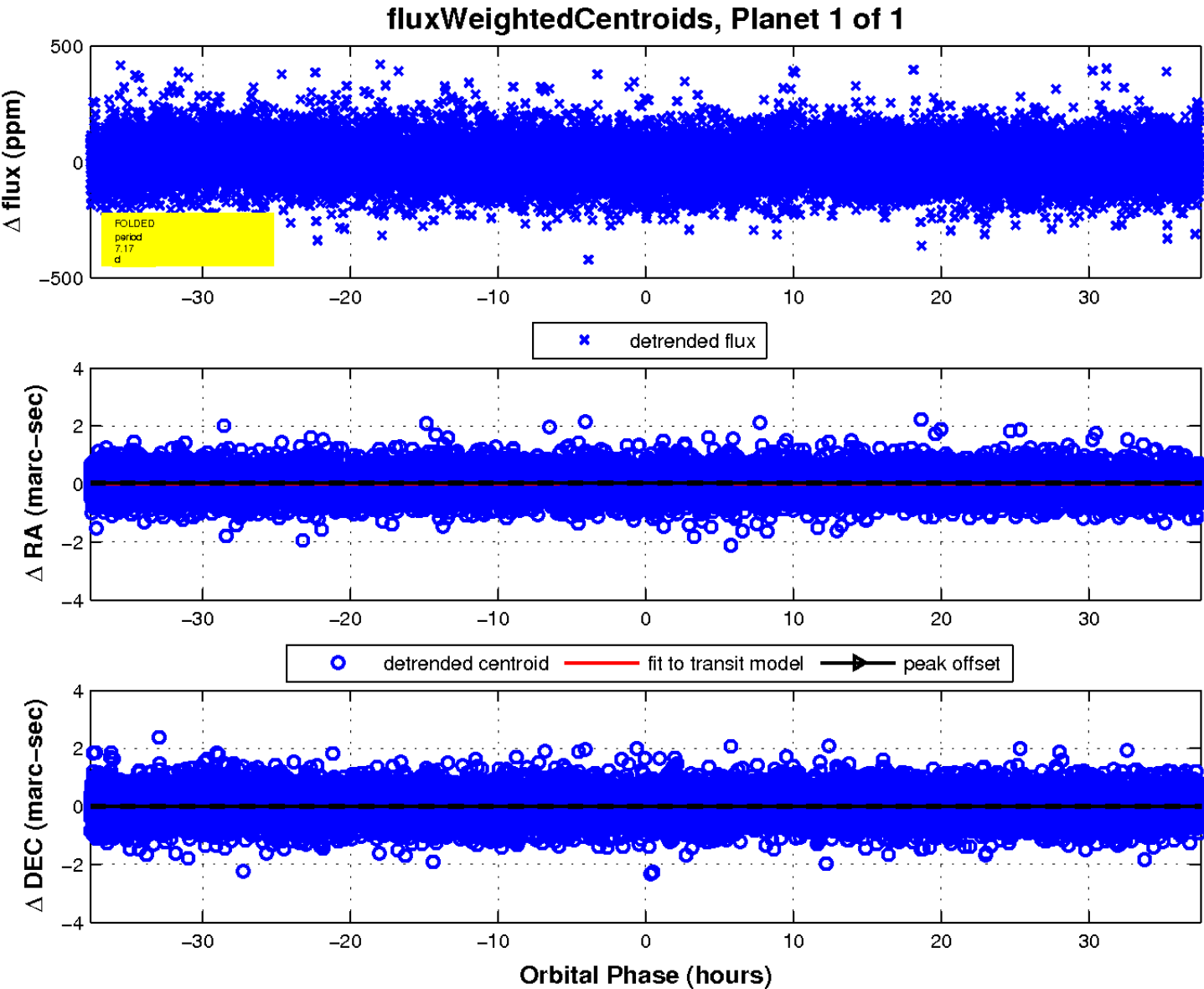
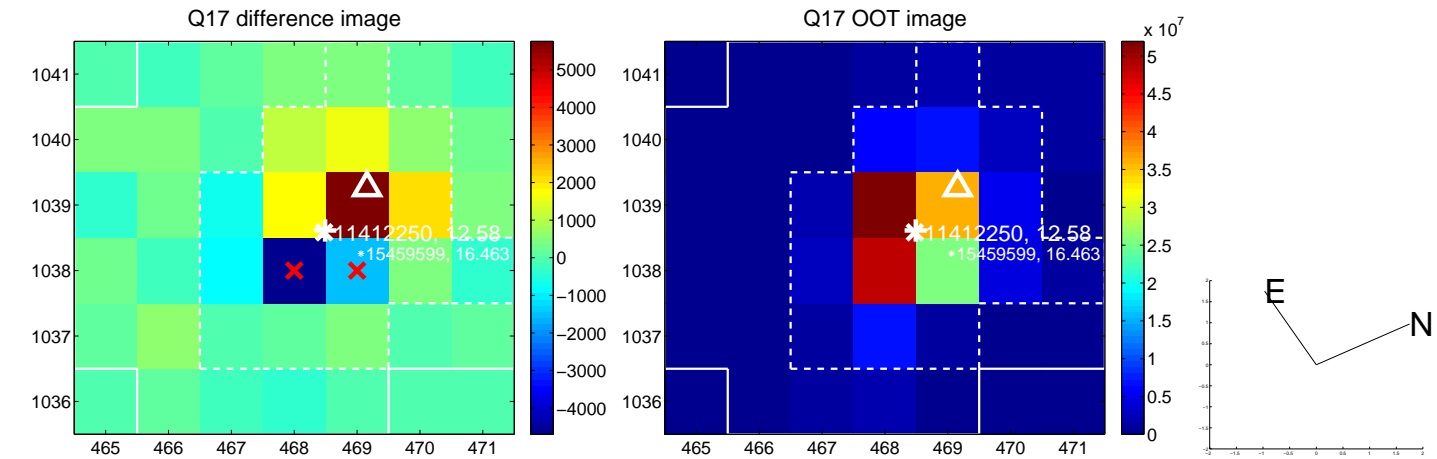
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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.



UKIRT Image

Declination

