

KIC 007130418

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})
007130418-01	OBS	3317.01	15.528618	145.700482	491.4	2.435	15.8	17.6	0.88	5750	2.37	52.04

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007130418-01	OBS	FP	0.00	0	0	1	0	CENT_RESOLVED_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.

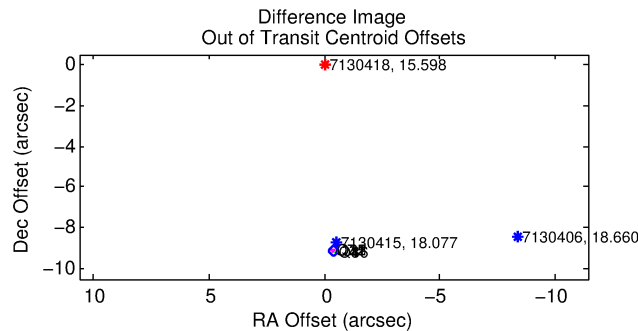
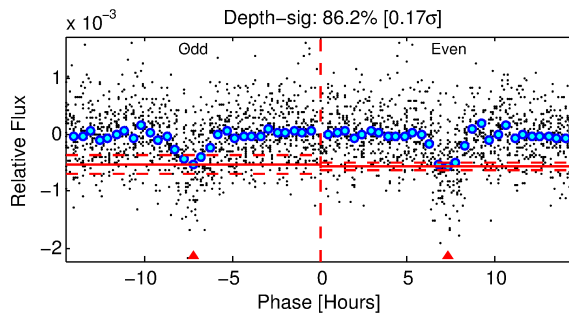
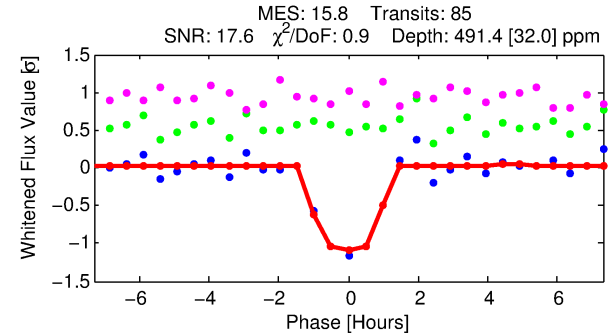
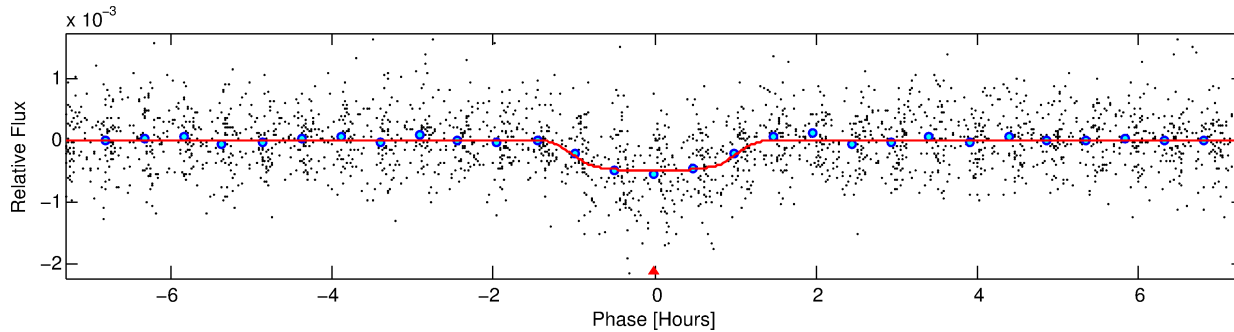
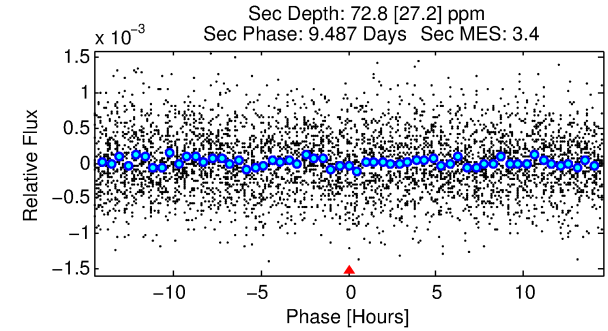
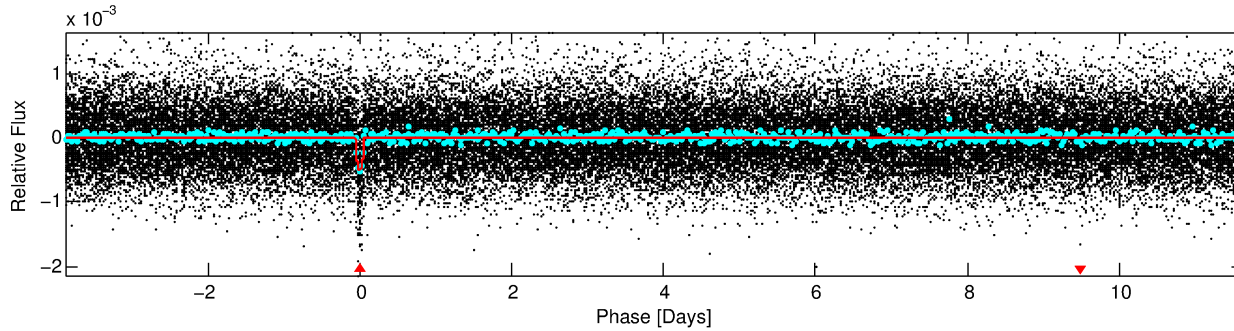
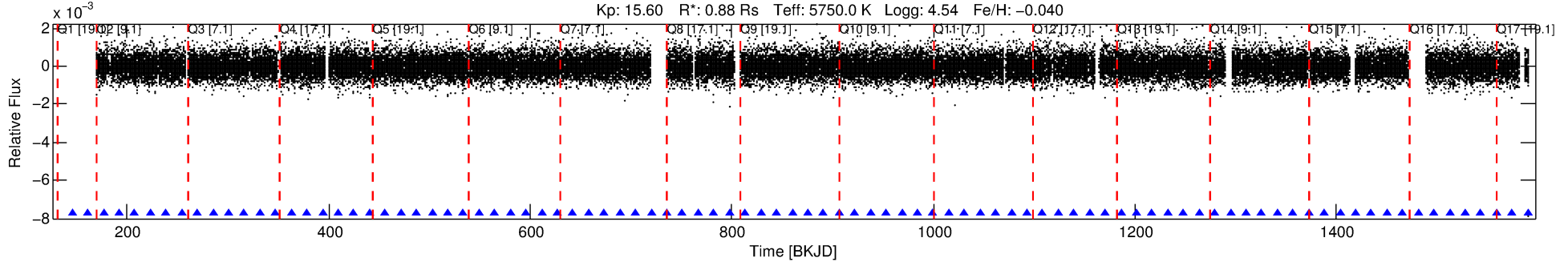
Ephemeris Match Information For 007130418-01

No Significant Match Found

DV One-Page Summary

KIC: 7130418 Candidate: 1 of 1 Period: 15.529 d
KOI: K03317.01 Corr: 0.926

Kp: 15.60 R*: 0.88 Rs Teff: 5750.0 K Logg: 4.54 Fe/H: -0.040



DV Fit Results:

Period = 15.52862 [0.00007] d
Epoch = 145.7005 [0.0034] BKJD
Rp/R* = 0.0246 [0.0049]
a/R* = 22.51 [20.76]
b = 0.91 [0.17]
Seff = 52.04 [19.94]
Teq = 685 [66] K
Rp = 2.37 [0.84] Re
a = 0.1210 [0.0300] AU
Ag = 104.76 [68.91] [1.51σ]
Teffp = 3388 [475] K [5.63σ]

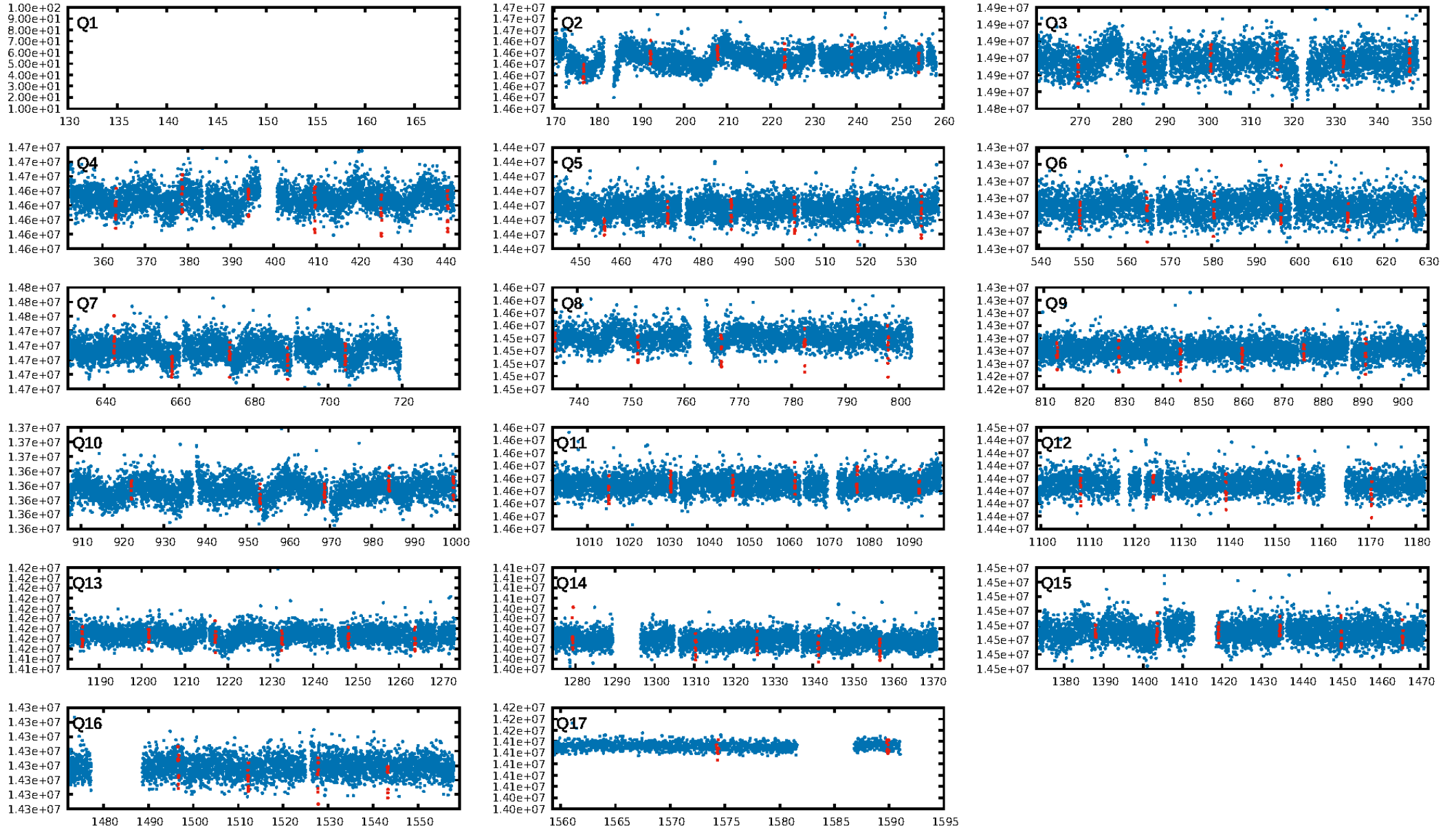
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.96e-55
RollingBand-fgt: 1.00 [83/83]
GhostDiagnostic-chr: -0.5606
Centroid-sig: 0.0%
Centroid-so: 174.894 arcsec [205.41σ]
OotOffset-rm: 9.129 arcsec [136.27σ]
KicOffset-rm: 9.163 arcsec [131.50σ]
OotOffset-st: 0/4/4/0 [8]
KicOffset-st: 0/4/4/0 [8]
DiffImageQuality-fgm: 1.00 [8/8]
DiffImageOverlap-fno: 1.00 [16/16]

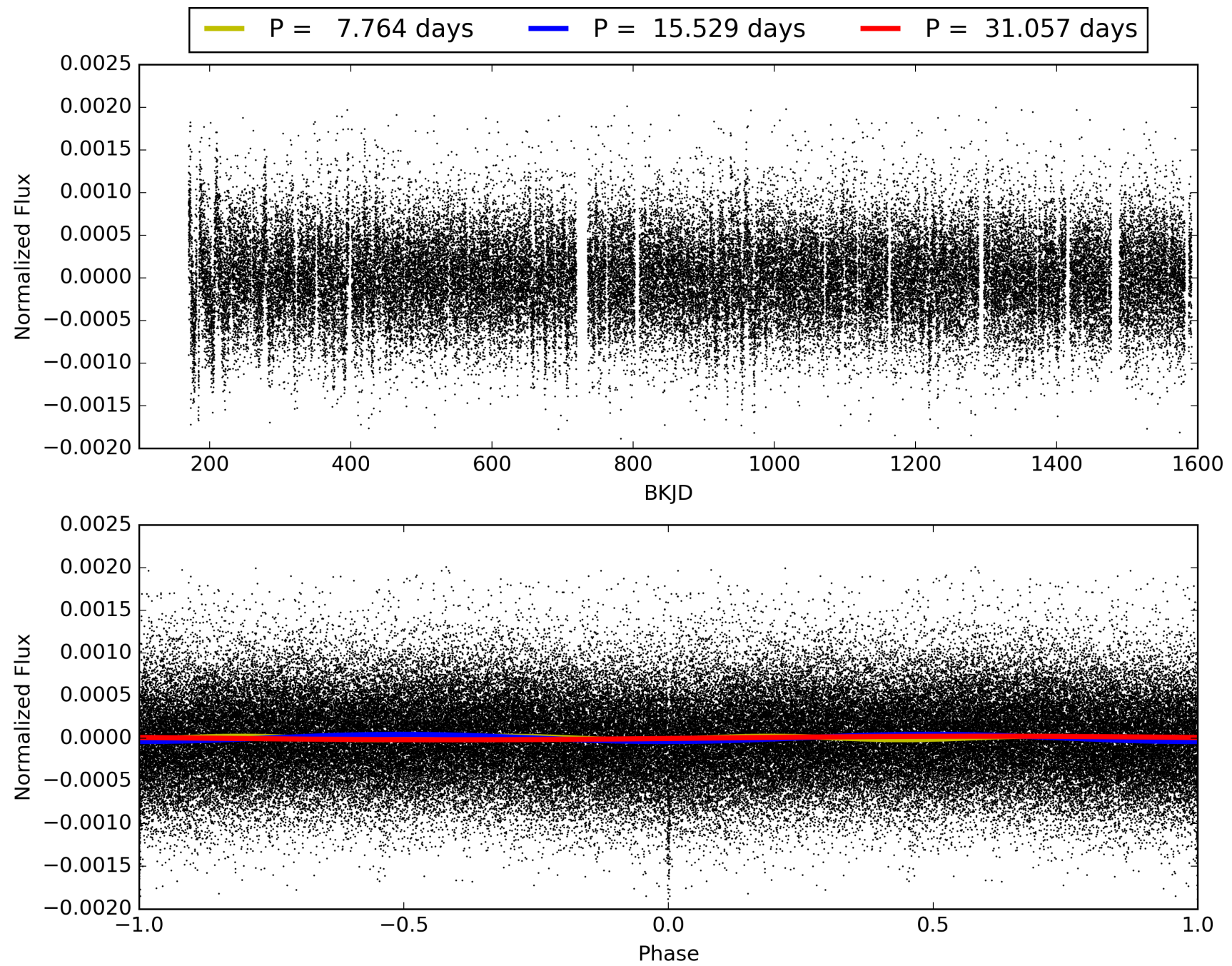
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 15:46:43 Z

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

TCE 007130418-01, PDC Light Curves

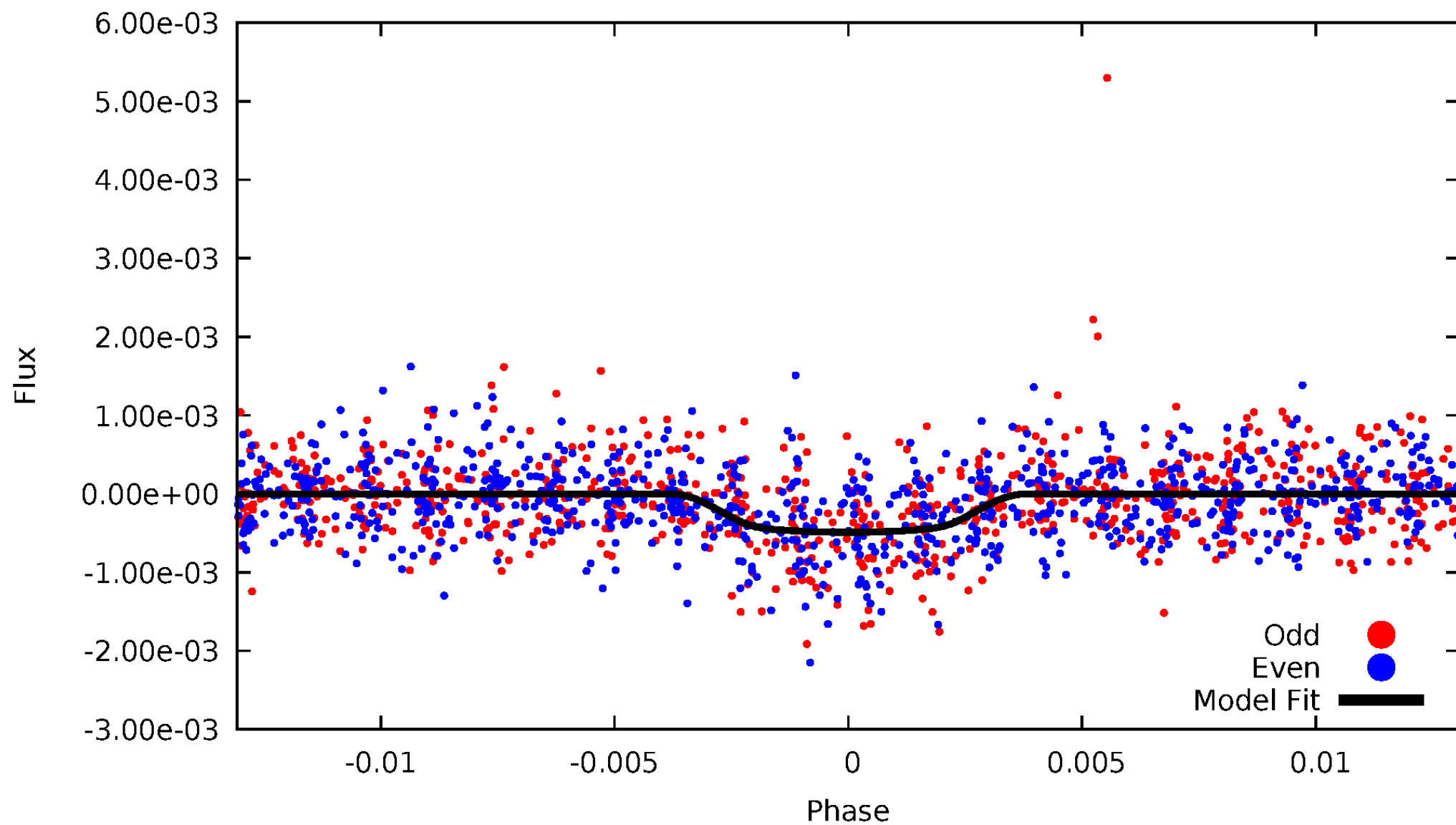


TCE 007130418-01



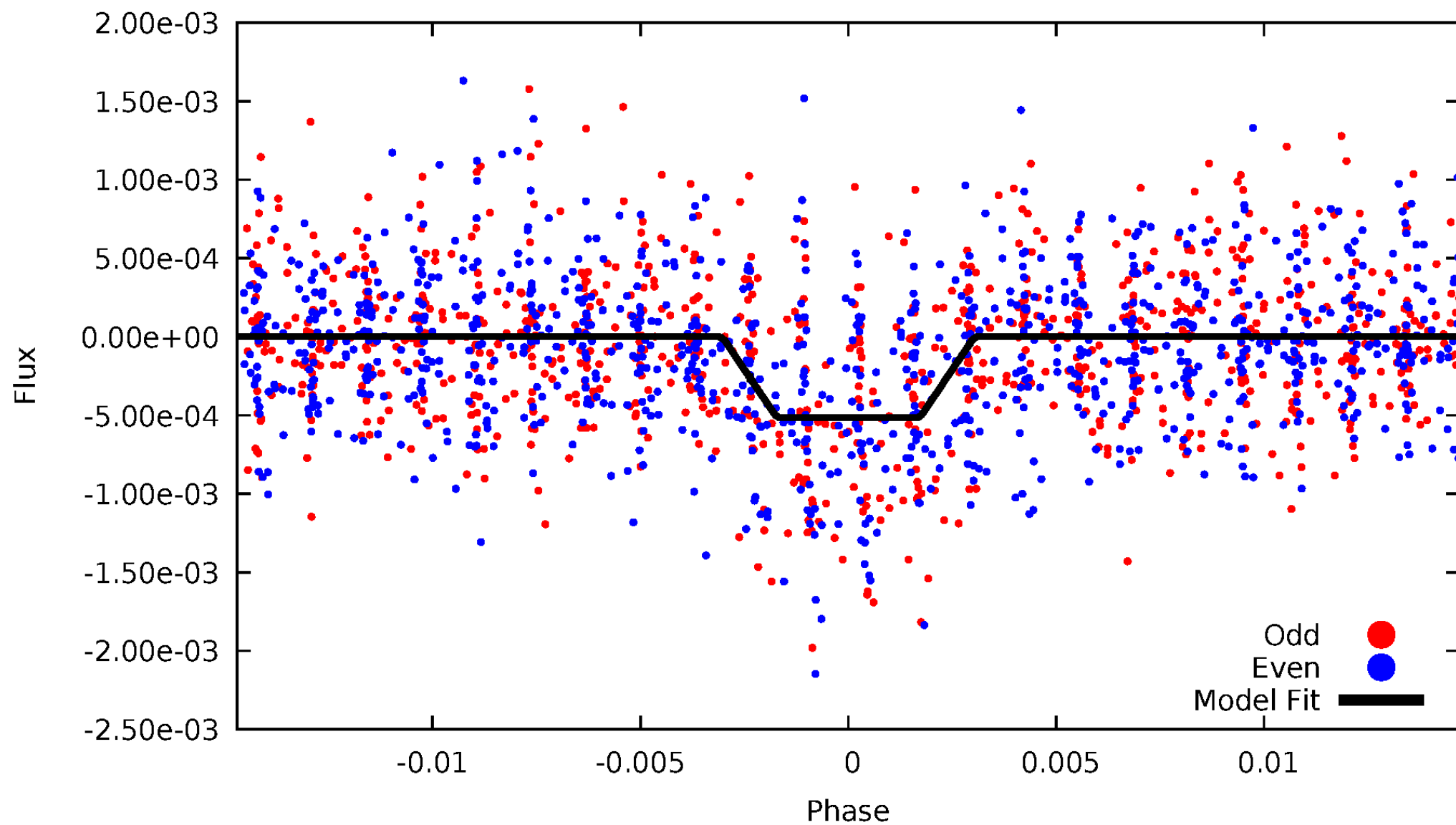
DV Odd/Even

TCE 007130418-01

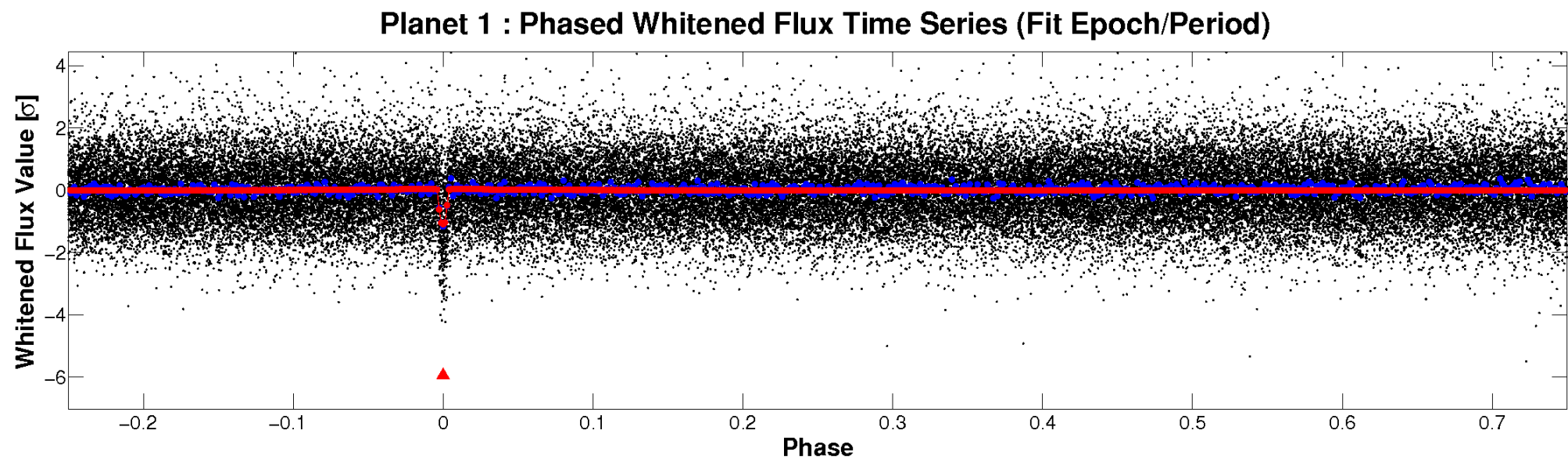
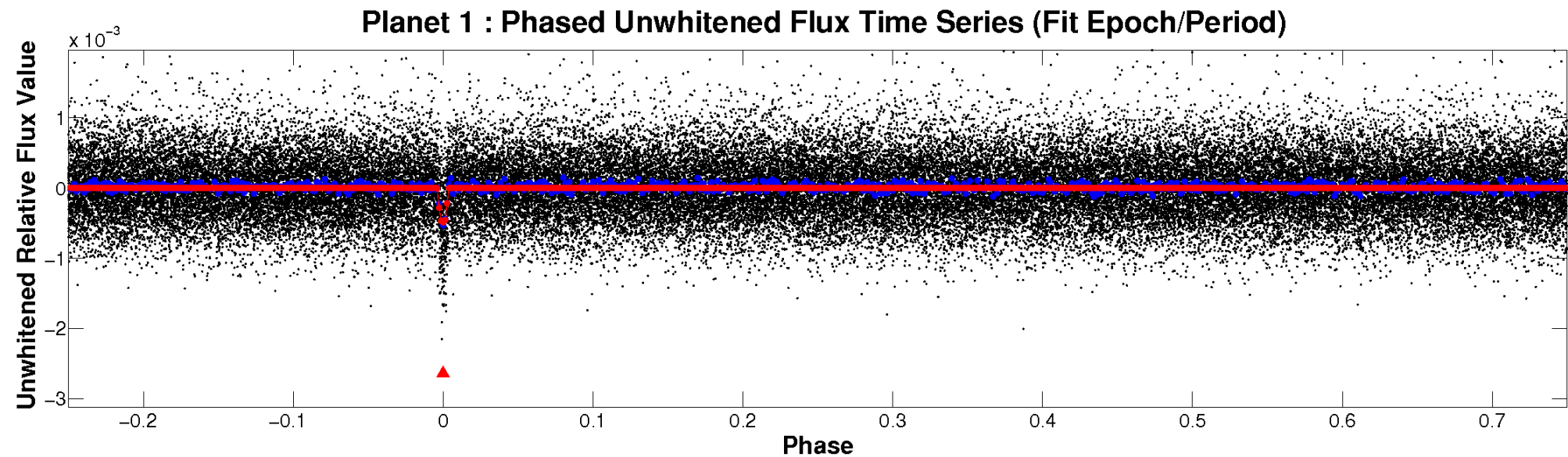


ALT Odd/Even

TCE 007130418-01

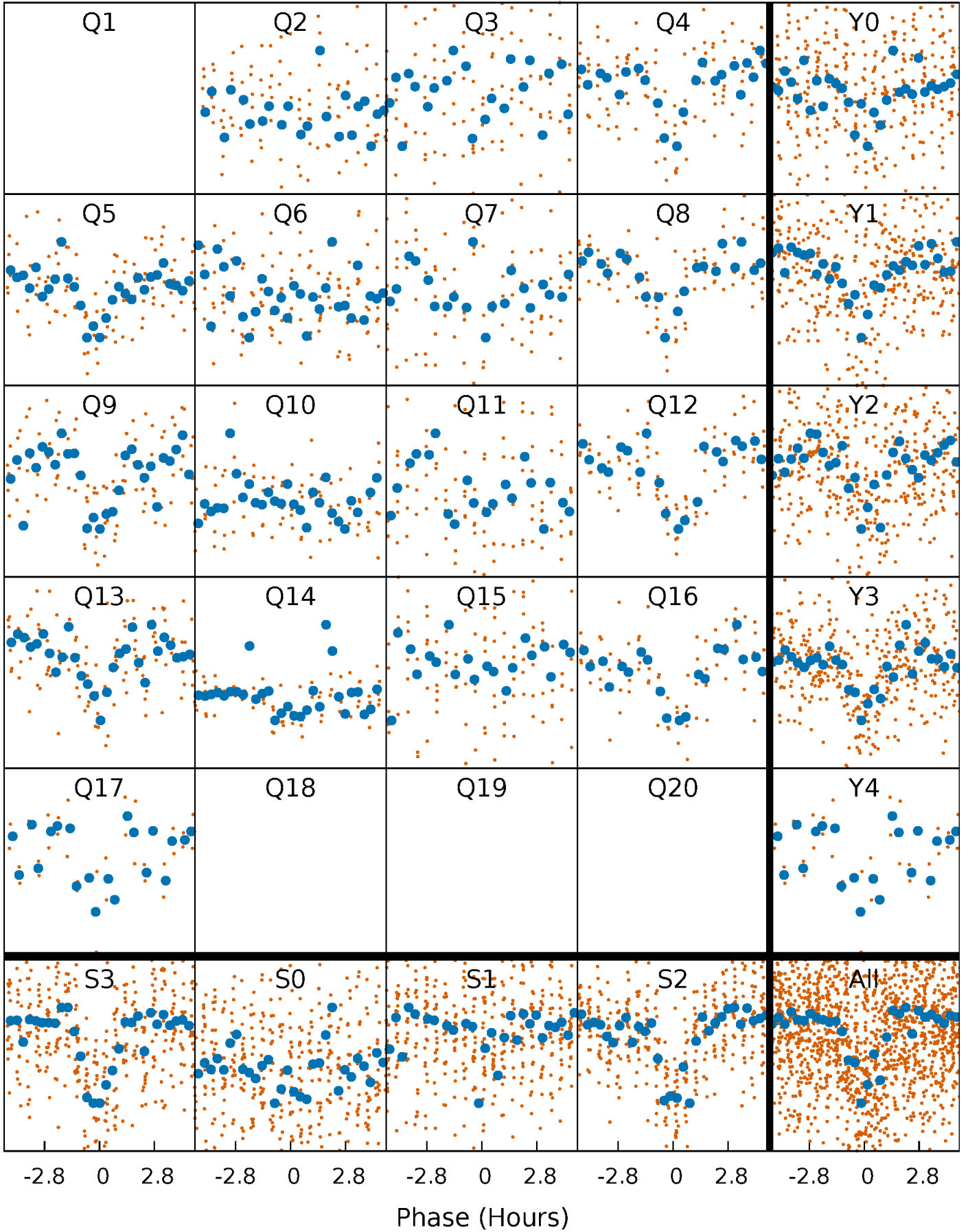


Non-Whitened Vs. Whitened Light Curve



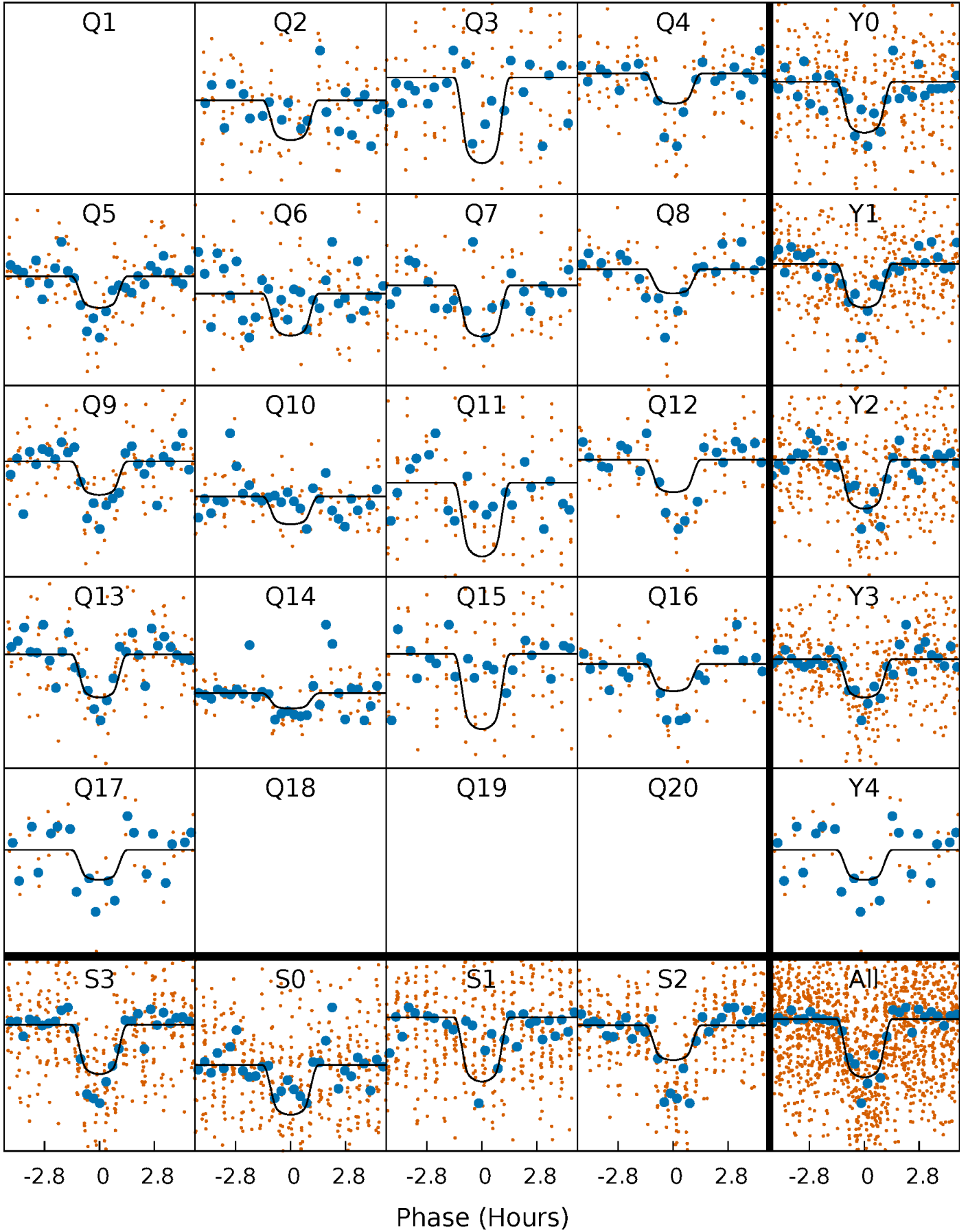
PDC Quarter-Phased Transit Curves

TCE 007130418-01 P= 15.528618 Days $T_0=145.700482$ (BKJD)



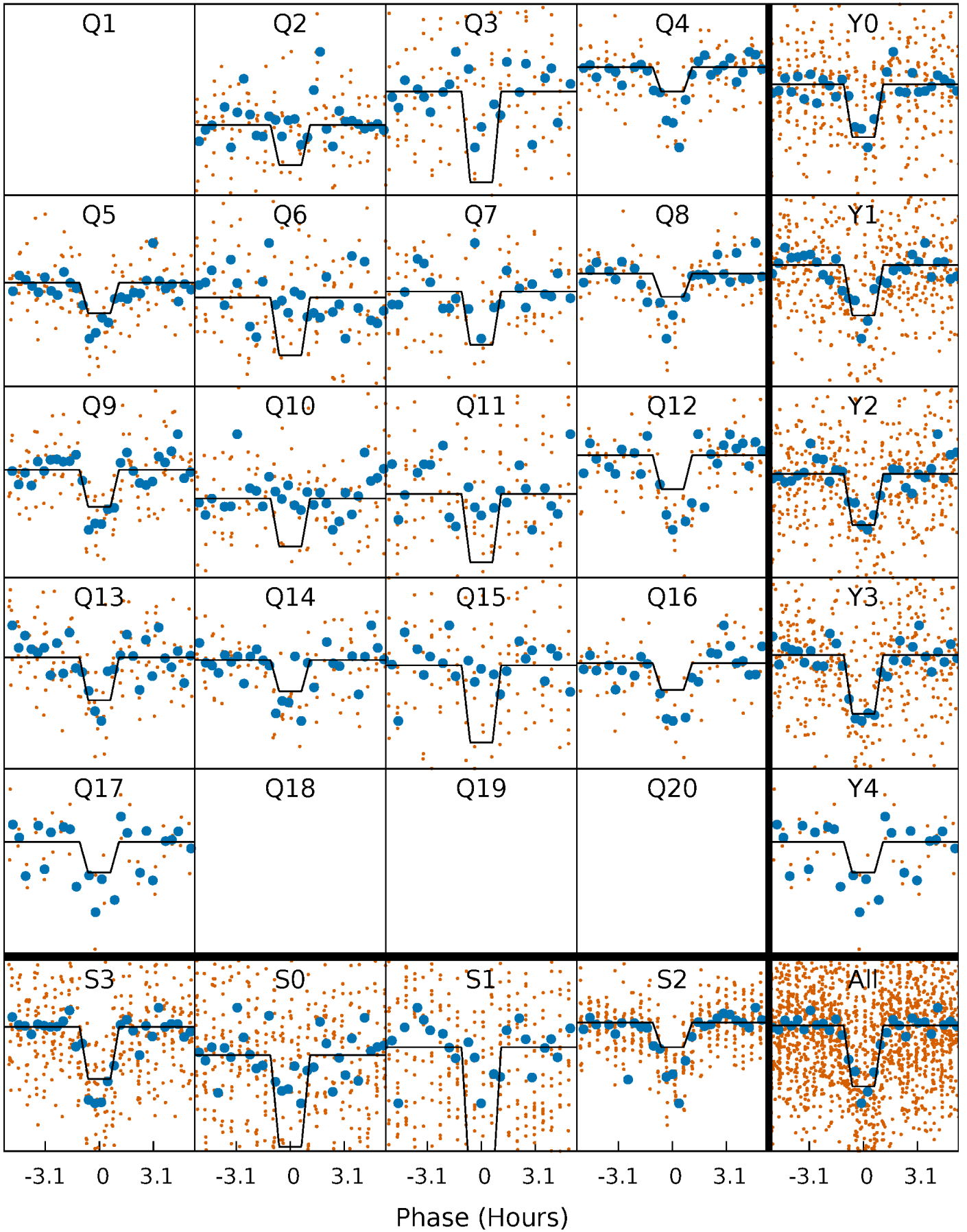
DV Quarter-Phased Transit Curves

TCE 007130418-01 P= 15.528618 Days $T_0=145.700482$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

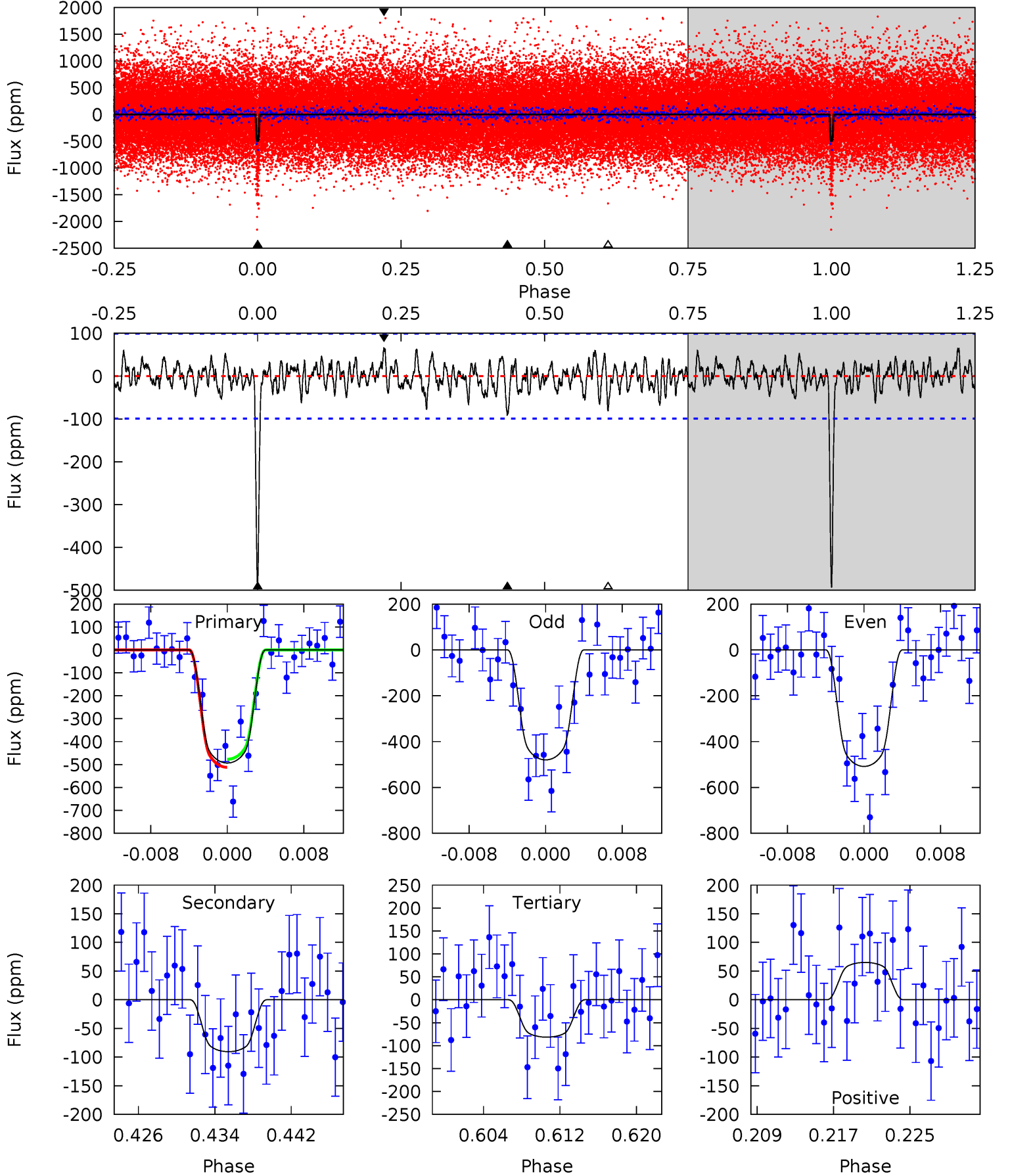
TCE 007130418-01 P= 15.528690 Days $T_0=145.697166$ (BKJD)



DV Model-Shift Uniqueness Test

007130418-01, P = 15.528618 Days, E = 145.700482 Days

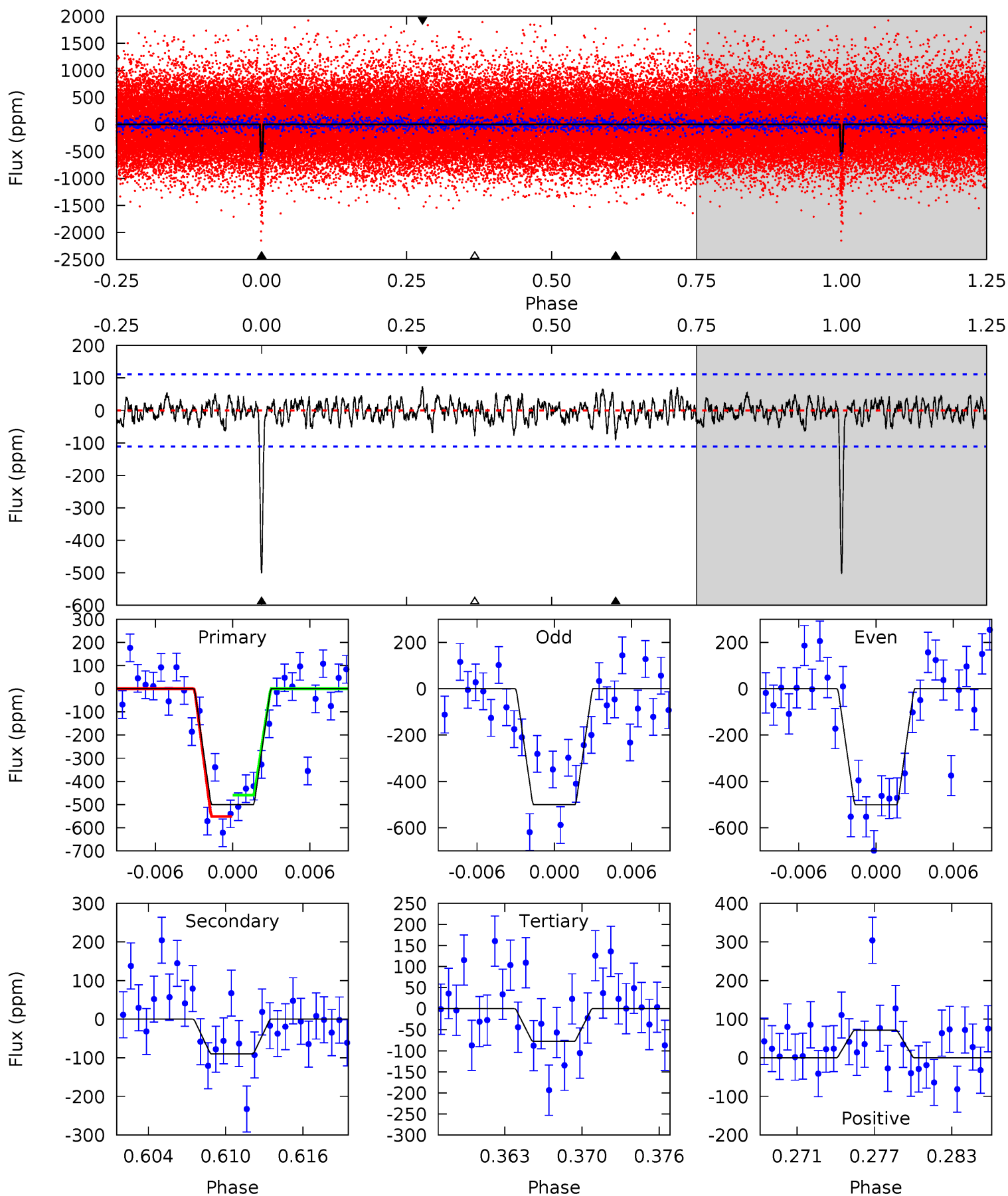
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.3	4.64	4.18	3.34	5.08	2.66	1.25	21.1	21.9	0.46	1.30	0.73	1.04	0.12	0.91



Alt Model-Shift Uniqueness Test

007130418-01, $P = 15.528690$ Days, $E = 145.697166$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.0	4.12	3.57	3.30	5.12	2.74	1.15	19.5	19.7	0.55	0.82	0.03	1.15	0.13	2.10



Stellar Parameters For KIC 007130418

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5750^{+156}_{-173}	$4.538^{+0.038}_{-0.200}$	$-0.040^{+0.250}_{-0.300}$	$0.882^{+0.258}_{-0.086}$	$0.980^{+0.102}_{-0.125}$	$2.011^{+0.398}_{-1.027}$
	+3%/-3%	+1%/-4%	+625%/-750%	+29%/-10%	+10%/-13%	+20%/-51%
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 007130418-01 / KOI 3317.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-91 ± 20	$2.47^{+0.59}_{-0.51}$	978^{+71}_{-40}	3906^{+361}_{-270}	115^{+78}_{-42}
Alt.	-90 ± 22	$2.31^{+0.55}_{-0.53}$	982^{+63}_{-48}	4015^{+393}_{-319}	131^{+94}_{-53}

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

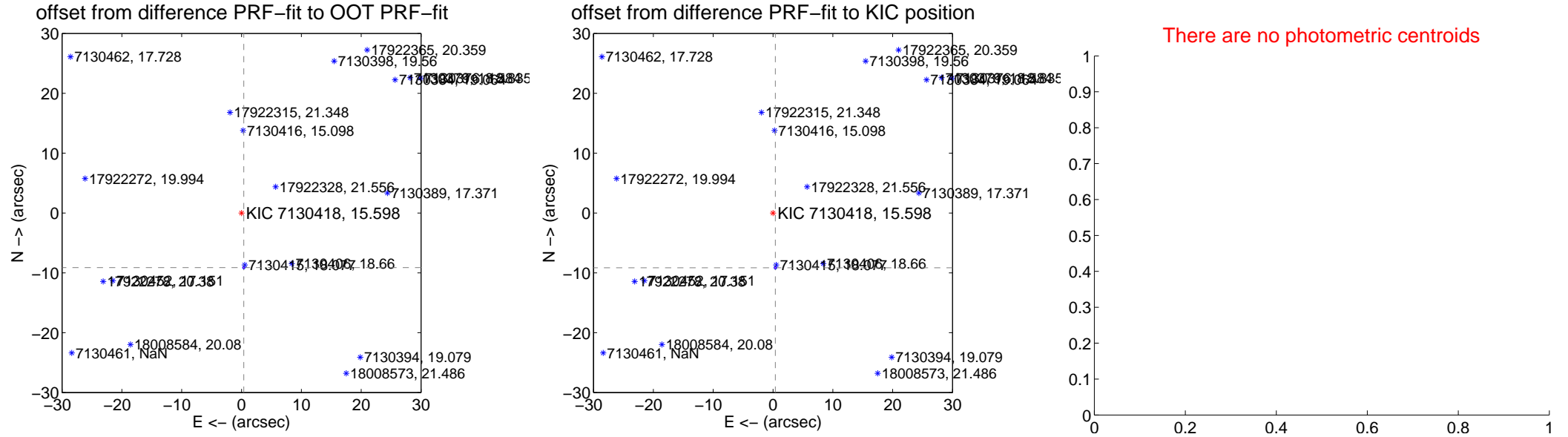
DV Centroid Data

Supplemental centroid analysis for 007130418-01. Kepler magnitude: 15.60. Transit SNR 17.58

There are 8 quarters with good PRF difference image offsets

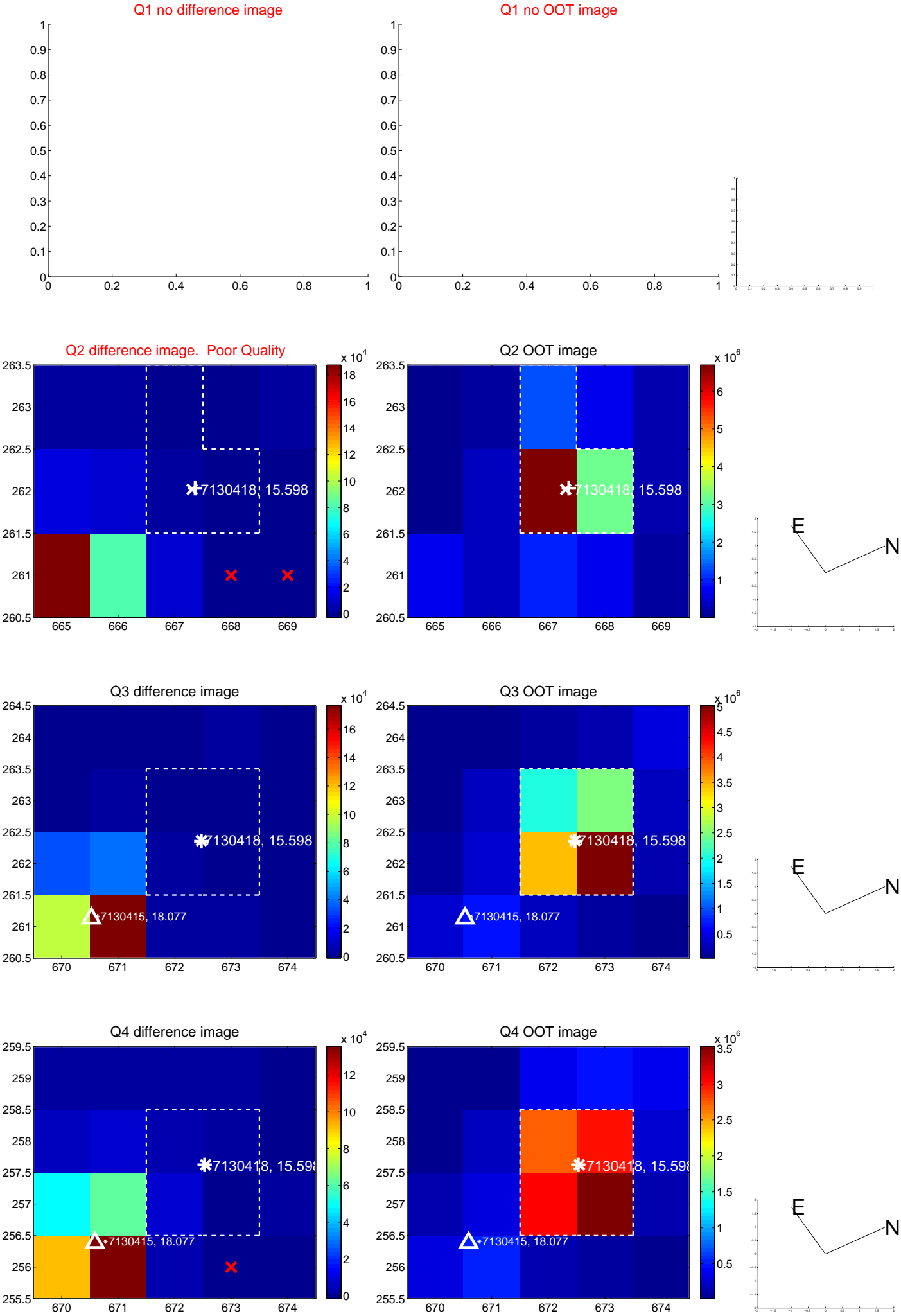
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	9.129 ± 0.067	136.27	-0.374 ± 0.069	-9.121 ± 0.067
PRF-fit source offset from KIC position	9.163 ± 0.070	131.50	-0.391 ± 0.069	-9.155 ± 0.070
photometric centroid source offset	—	—	—	—

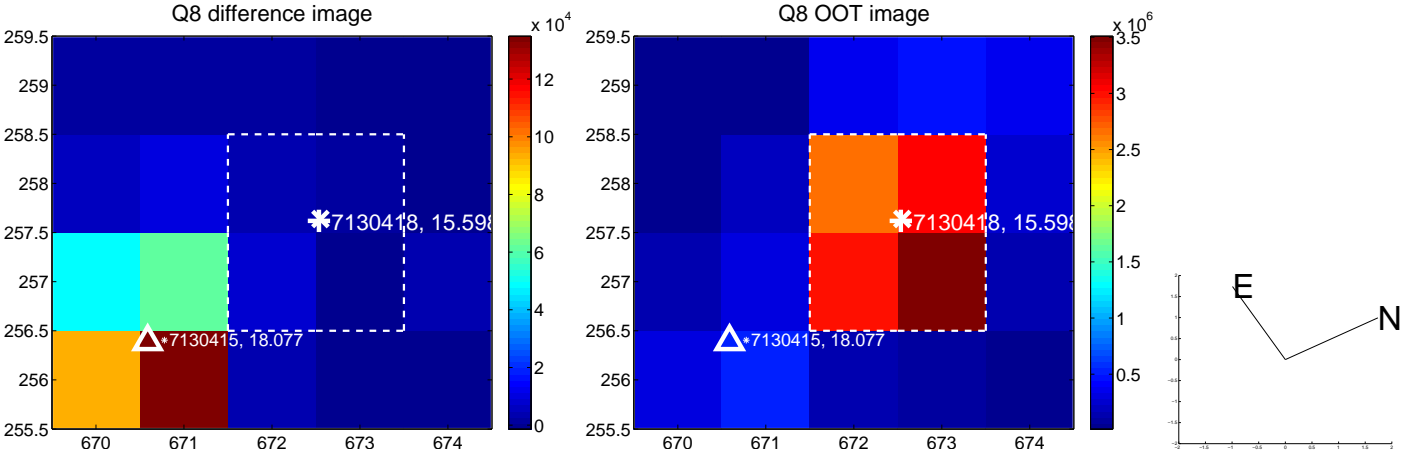
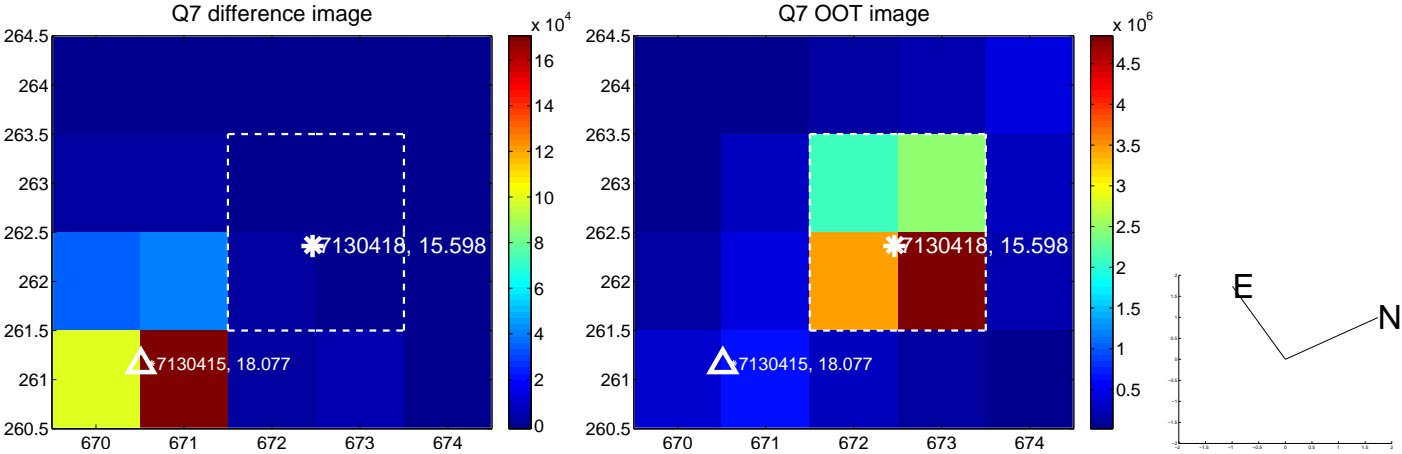
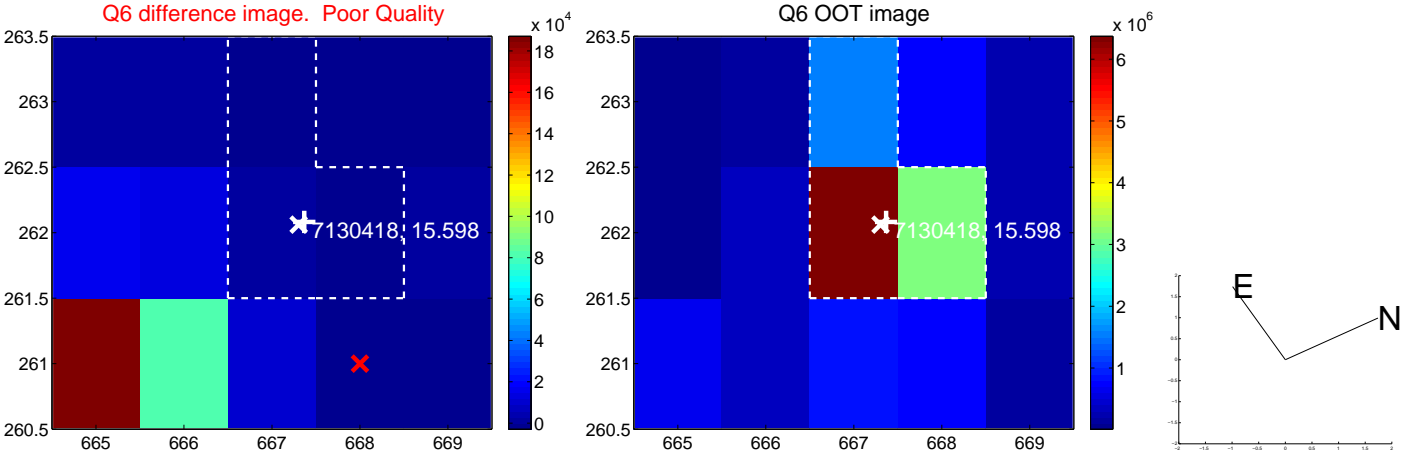
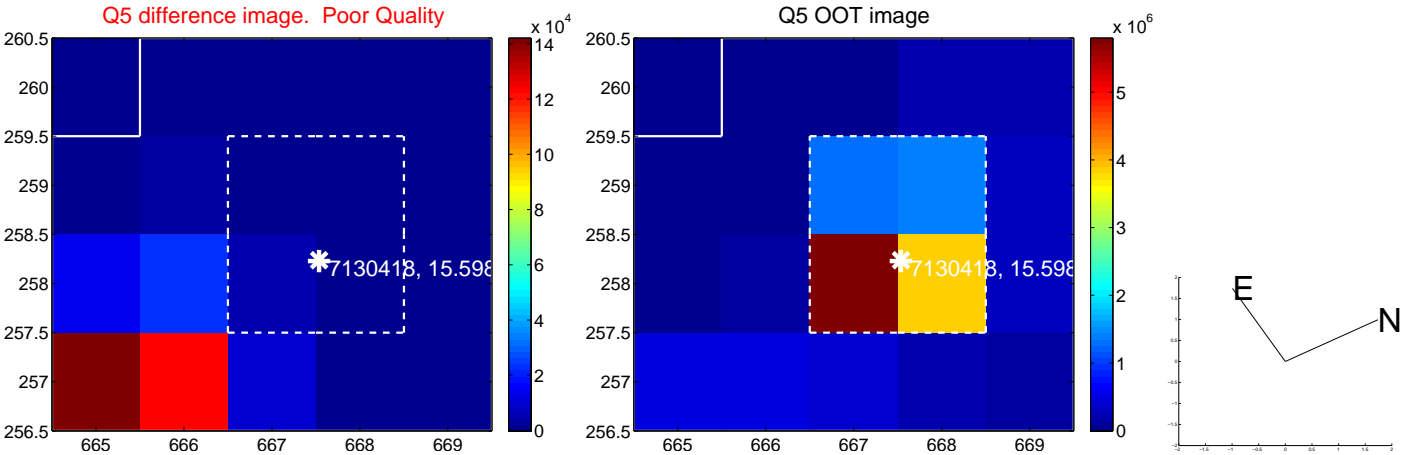


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000 are from the UKIRT catalog.

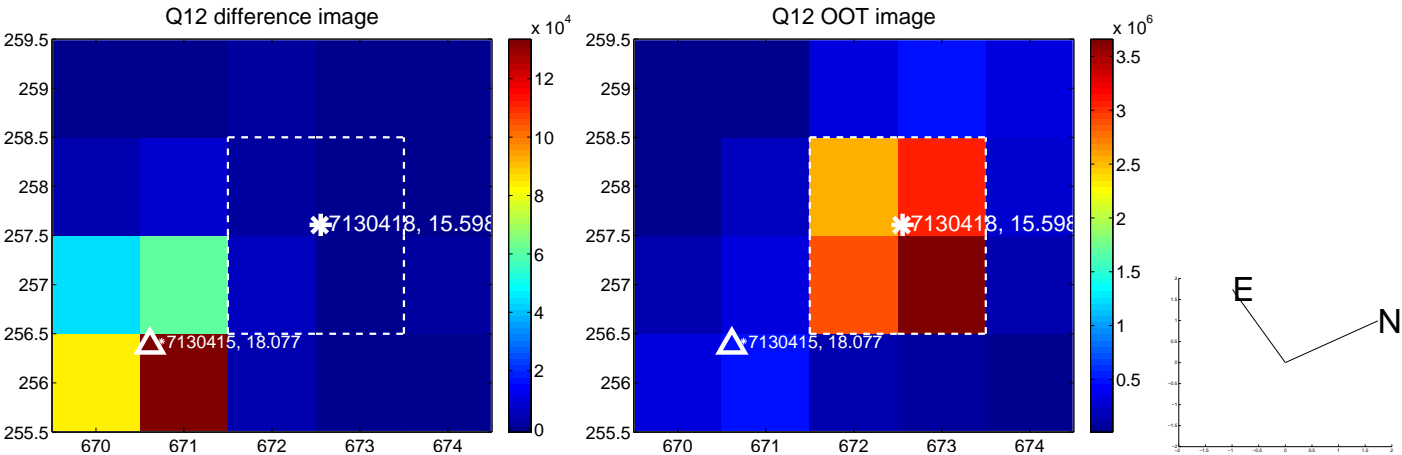
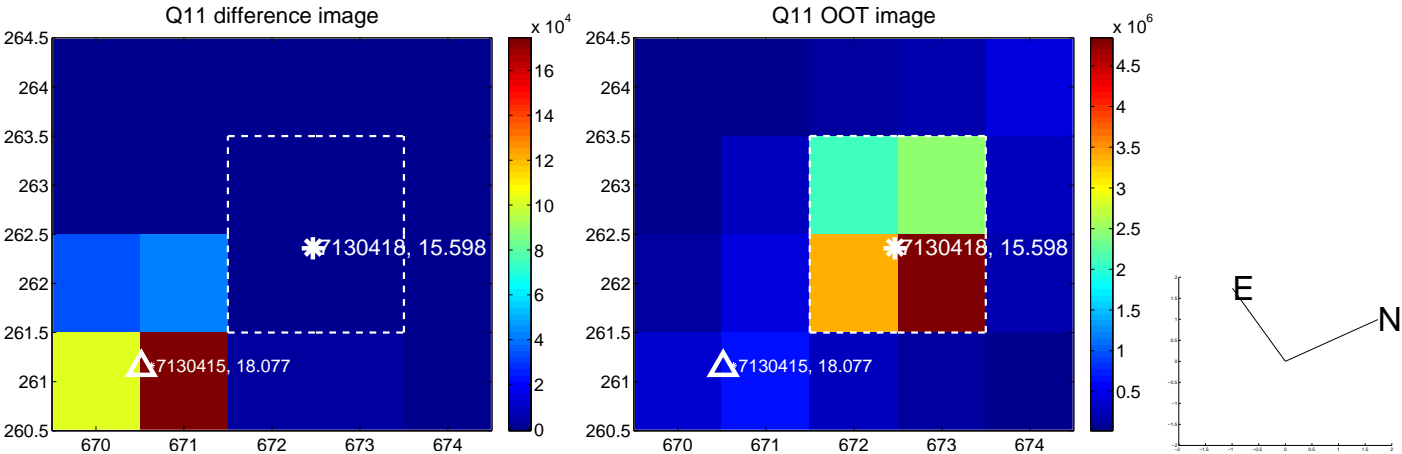
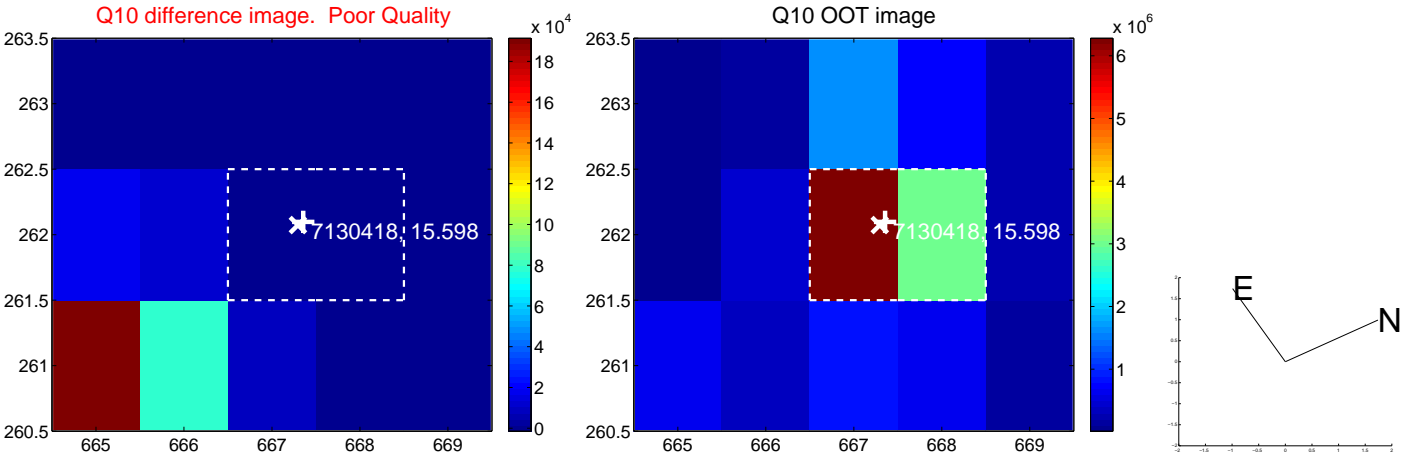
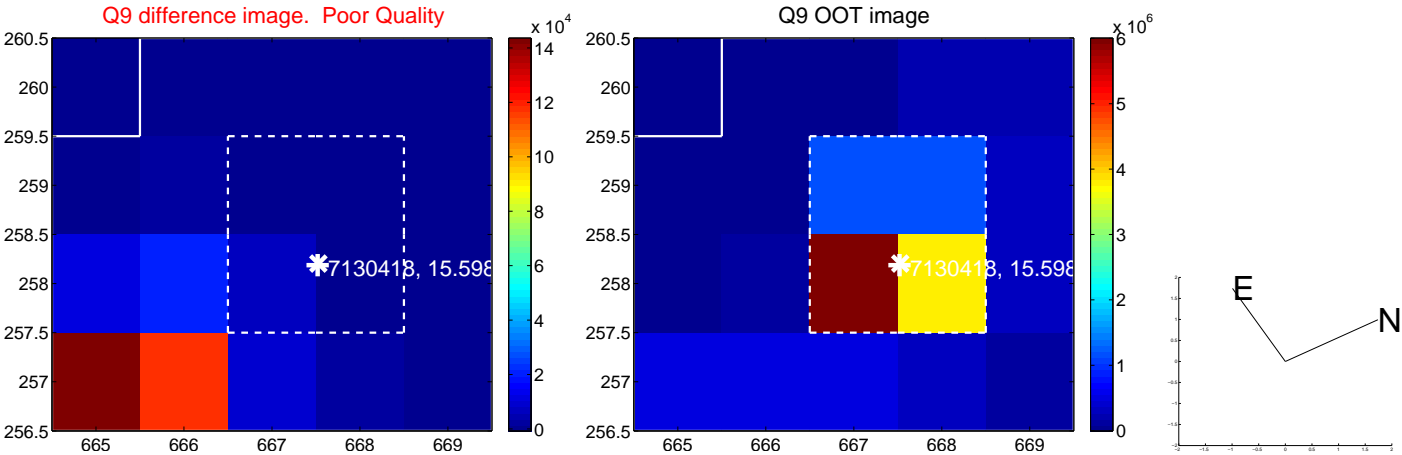
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



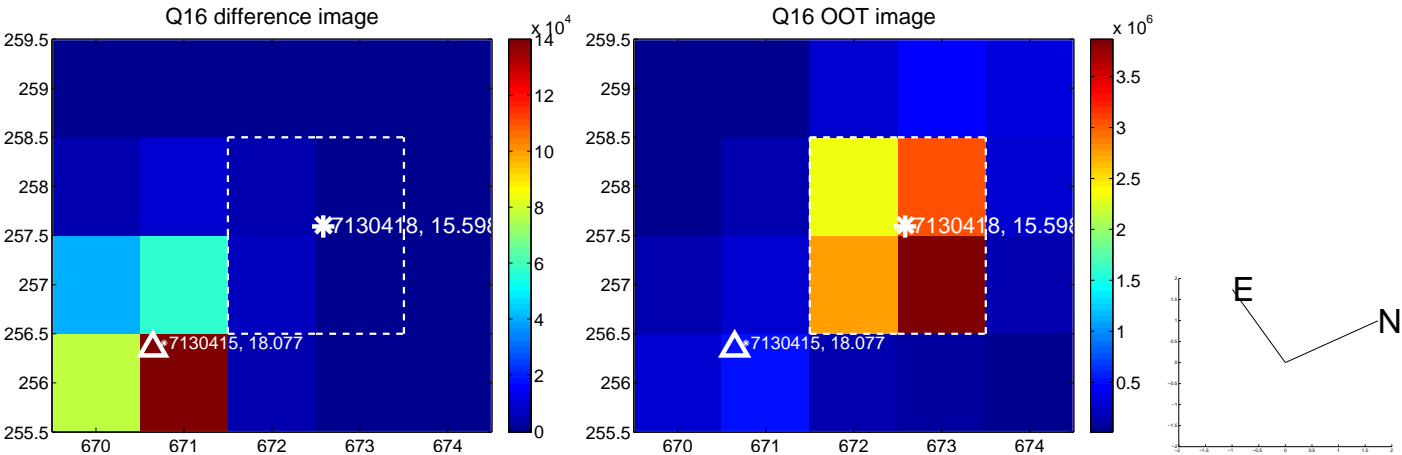
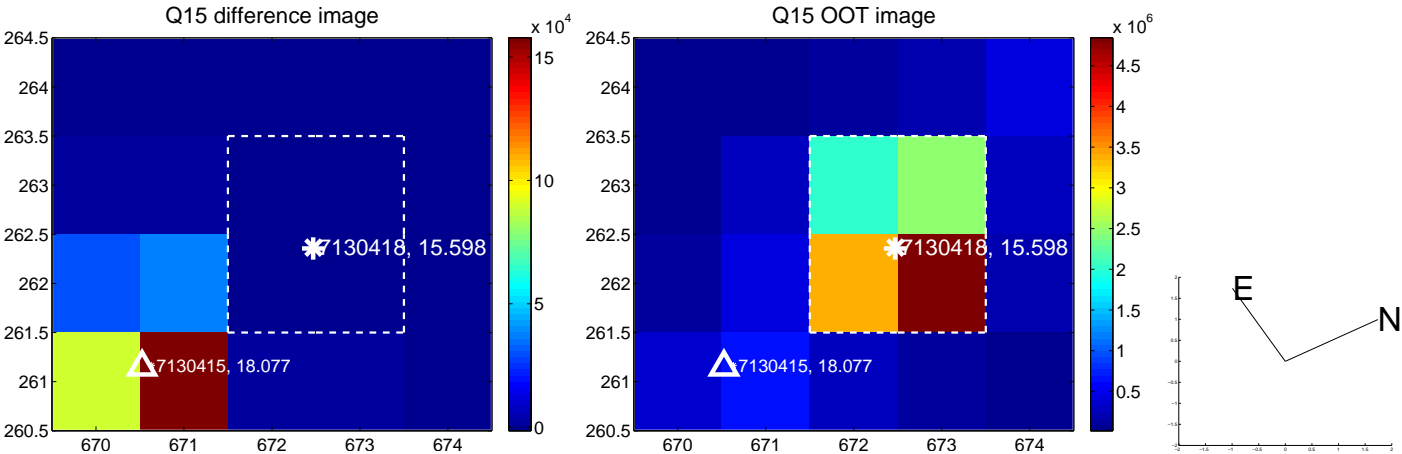
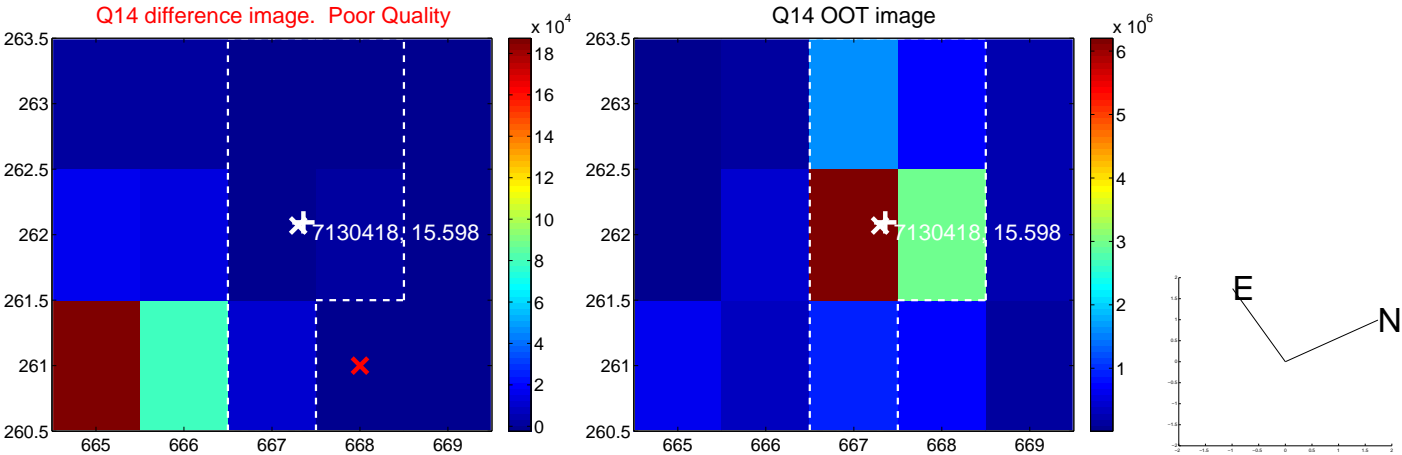
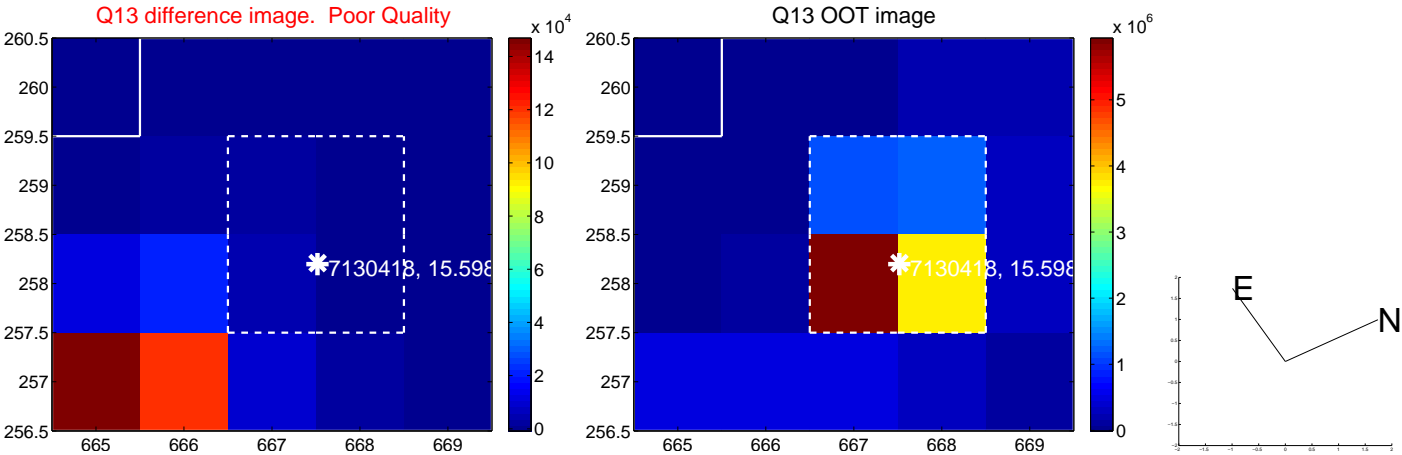
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



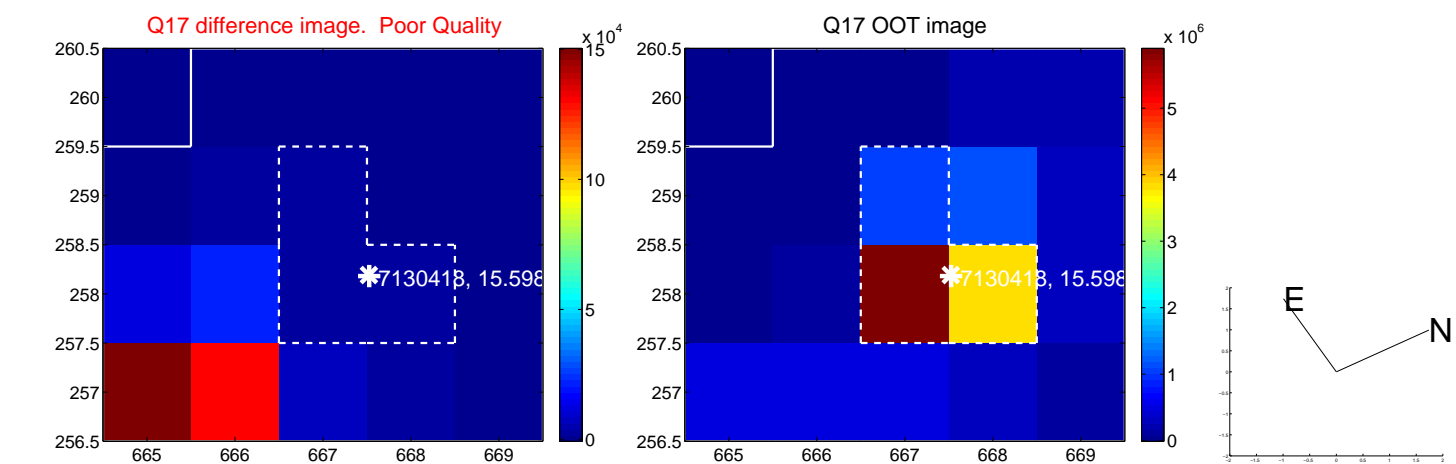
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



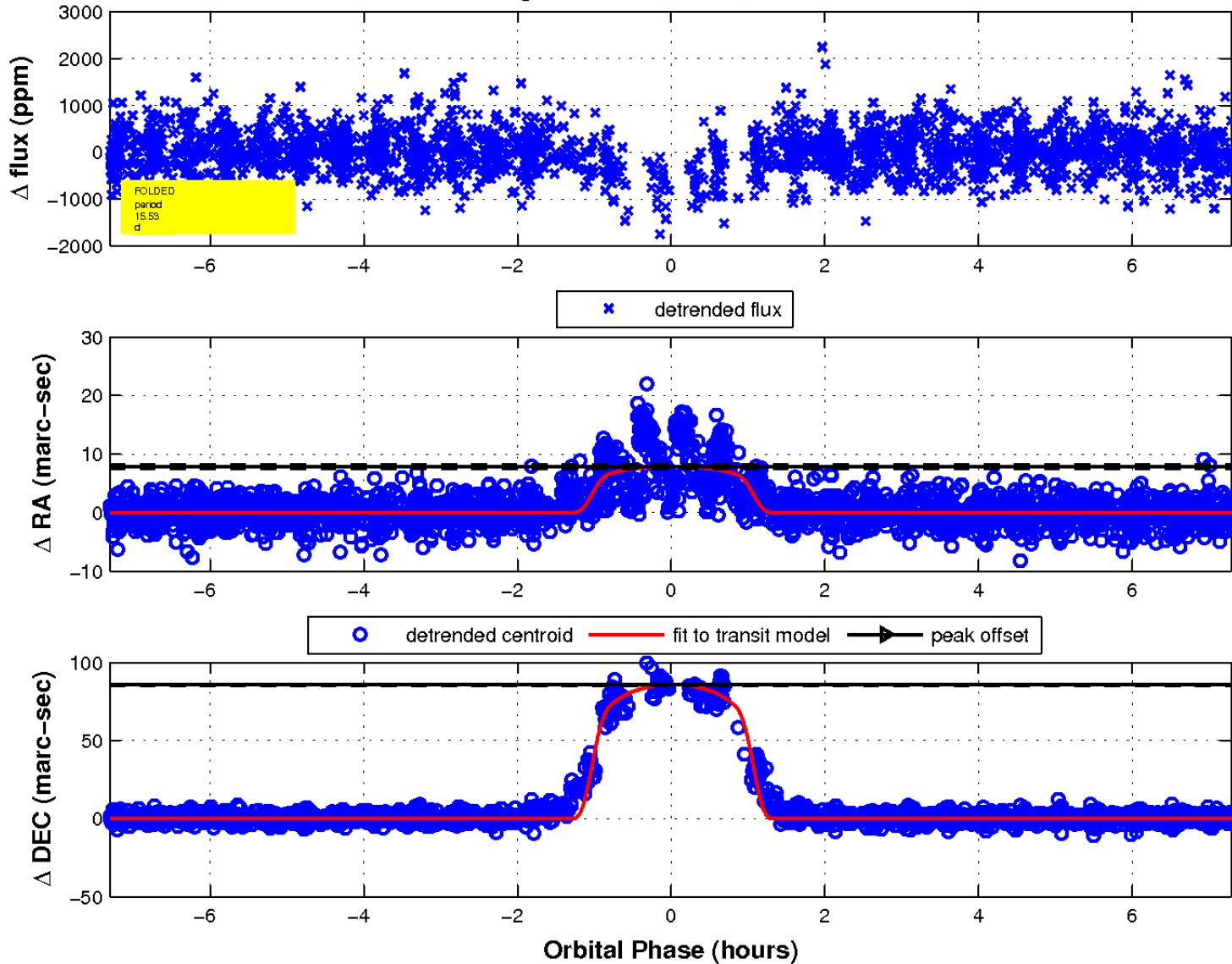
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

