

KIC 005650420

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})
005650420-01	OBS	5187.01	1.049386	131.818215	144.5	2.773	27.4	25.4	13.42	4745	19.81	0.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005650420-01	OBS	FP	0.00	0	1	1	0	PLANET_IN_STAR—MOD_ODDEVEN_DV—MOD_ODDEVEN_ALT—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.

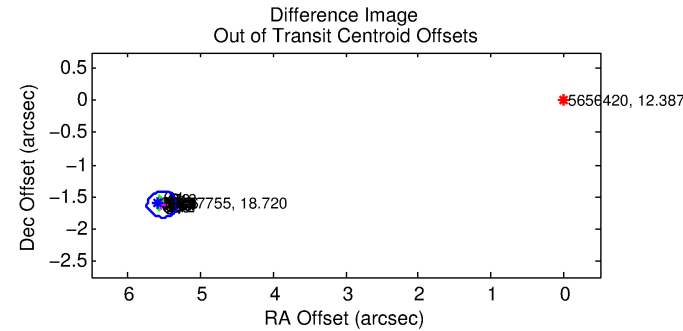
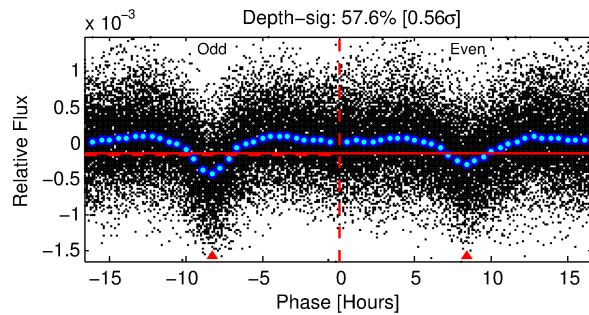
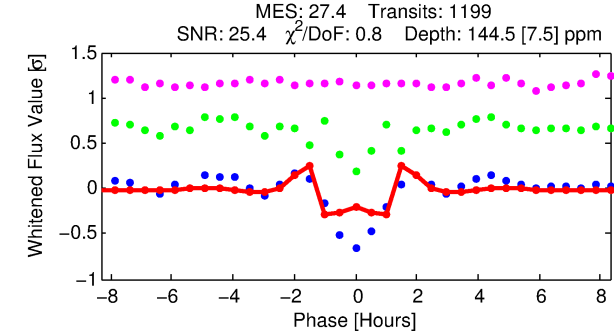
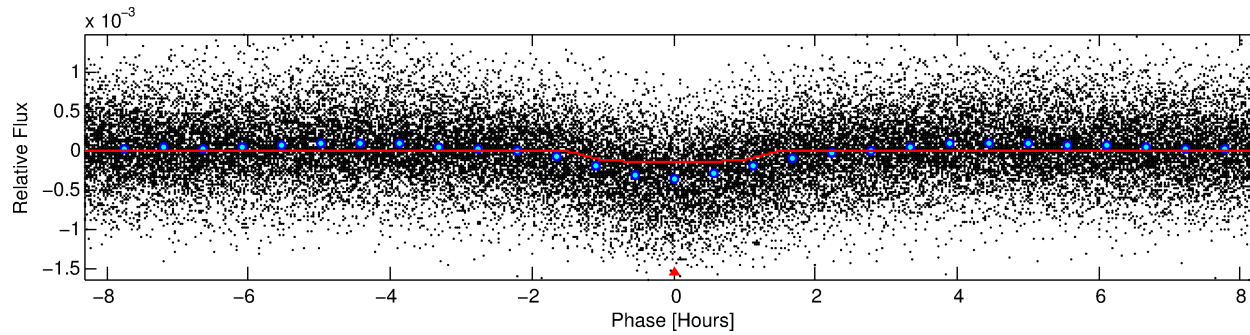
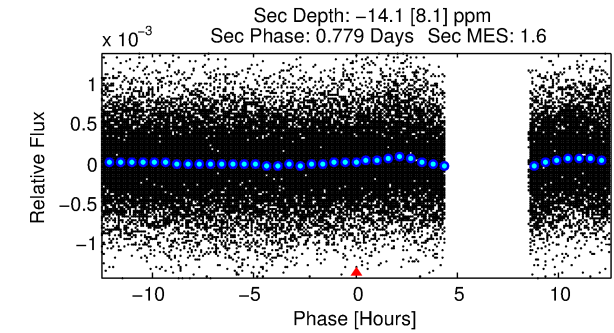
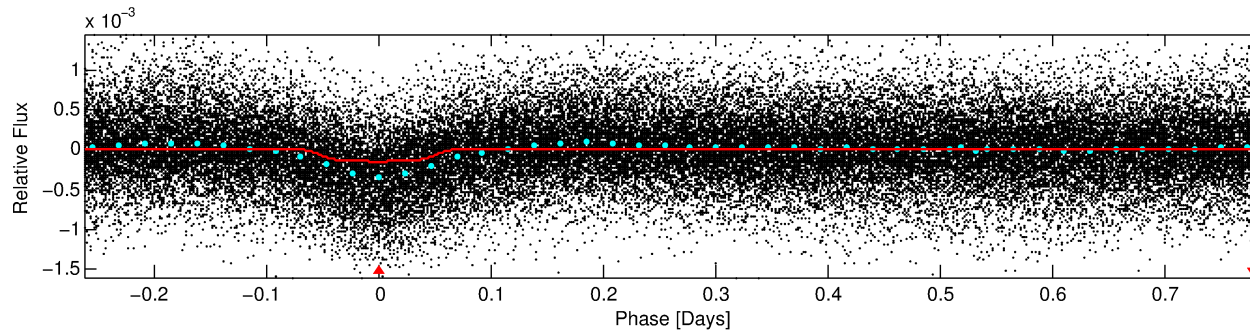
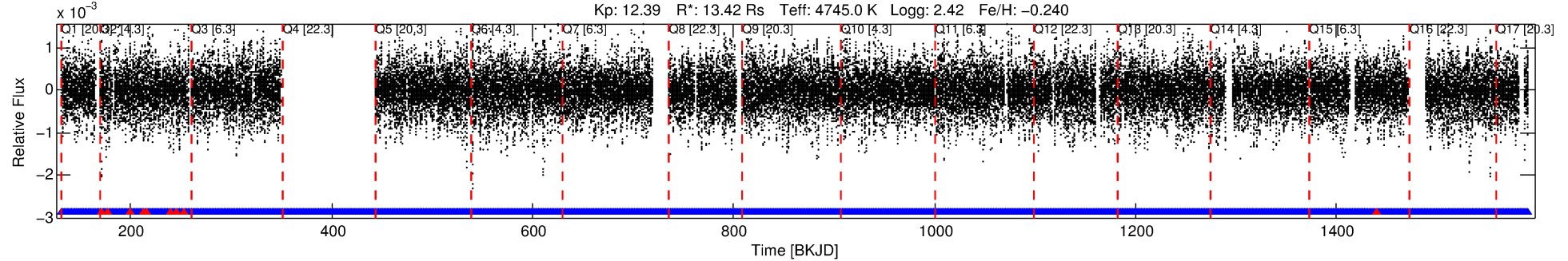
Ephemeris Match Information For 005650420-01

No Significant Match Found

DV One-Page Summary

KIC: 5650420 Candidate: 1 of 1 Period: 1.049 d
KOI: K05187.01 Corr: 0.936

Kp: 12.39 R*: 13.42 Rs Teff: 4745.0 K Logg: 2.42 Fe/H: -0.240



DV Fit Results:

Period = 1.04939 [0.00000] d
Epoch = 131.8182 [0.0005] BKJD
Rp/R* = 0.0135 [0.0014]
a/R* = 1.63 [0.38]
b = 0.90 [0.08]
Seff = N/A
Teff = N/A
Rp = 19.81 [4.38] Re
a = N/A
Ag = N/A
Teffp = N/A

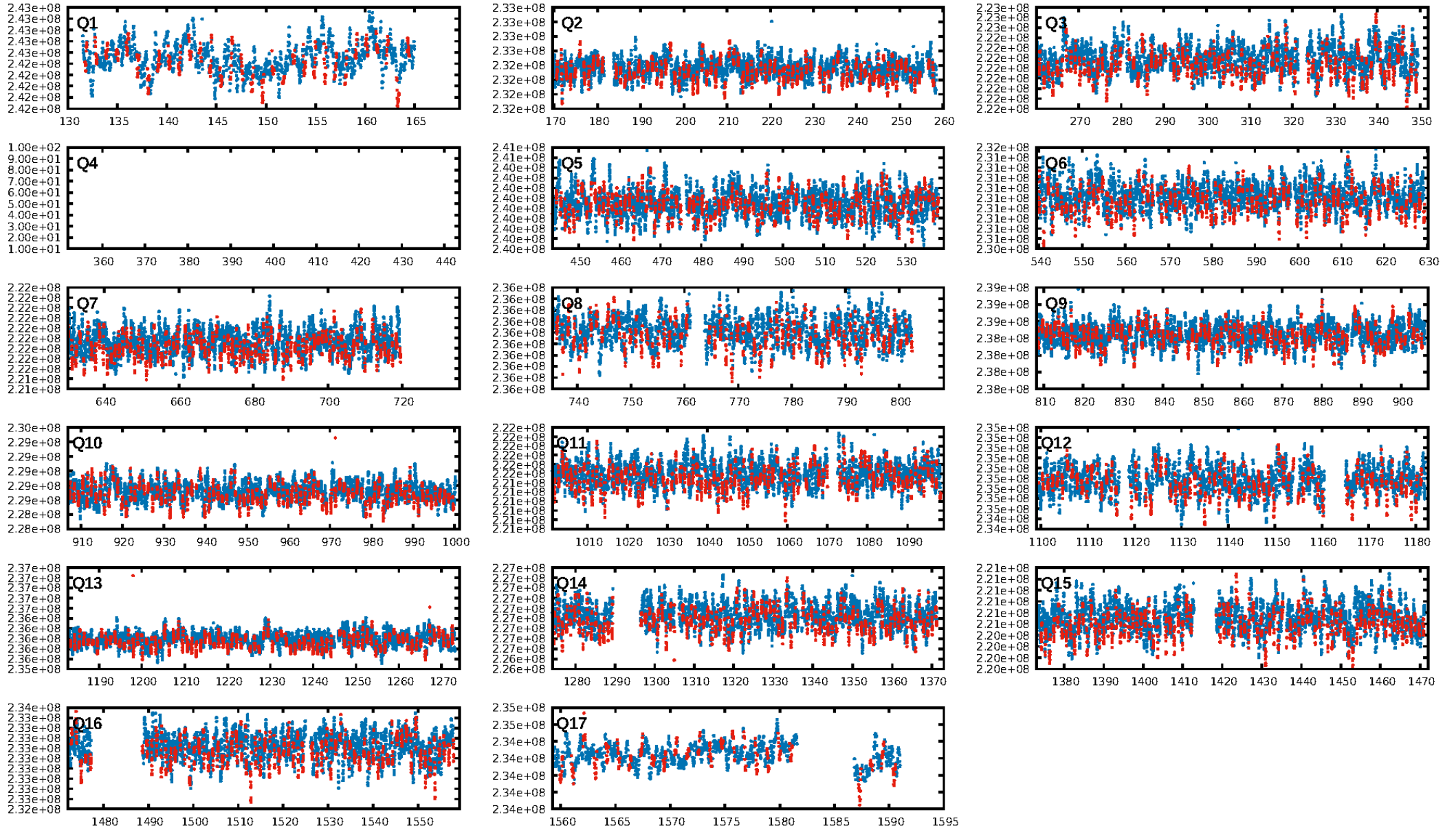
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.21e-149
RollingBand-fgm: 0.99 [1133/1142]
GhostDiagnostic-chr: 0.5059
Centroid-sig: 0.0%
Centroid-so: 21.313 arcsec [104.65σ]
OotOffset-rm: 5.758 arcsec [84.95σ]
KicOffset-rm: 5.787 arcsec [83.59σ]
OotOffset-st: 4/4/3/5 [16]
KicOffset-st: 4/4/3/5 [16]
DiffImageQuality-fgm: 1.00 [16/16]
DiffImageOverlap-fno: 1.00 [16/16]

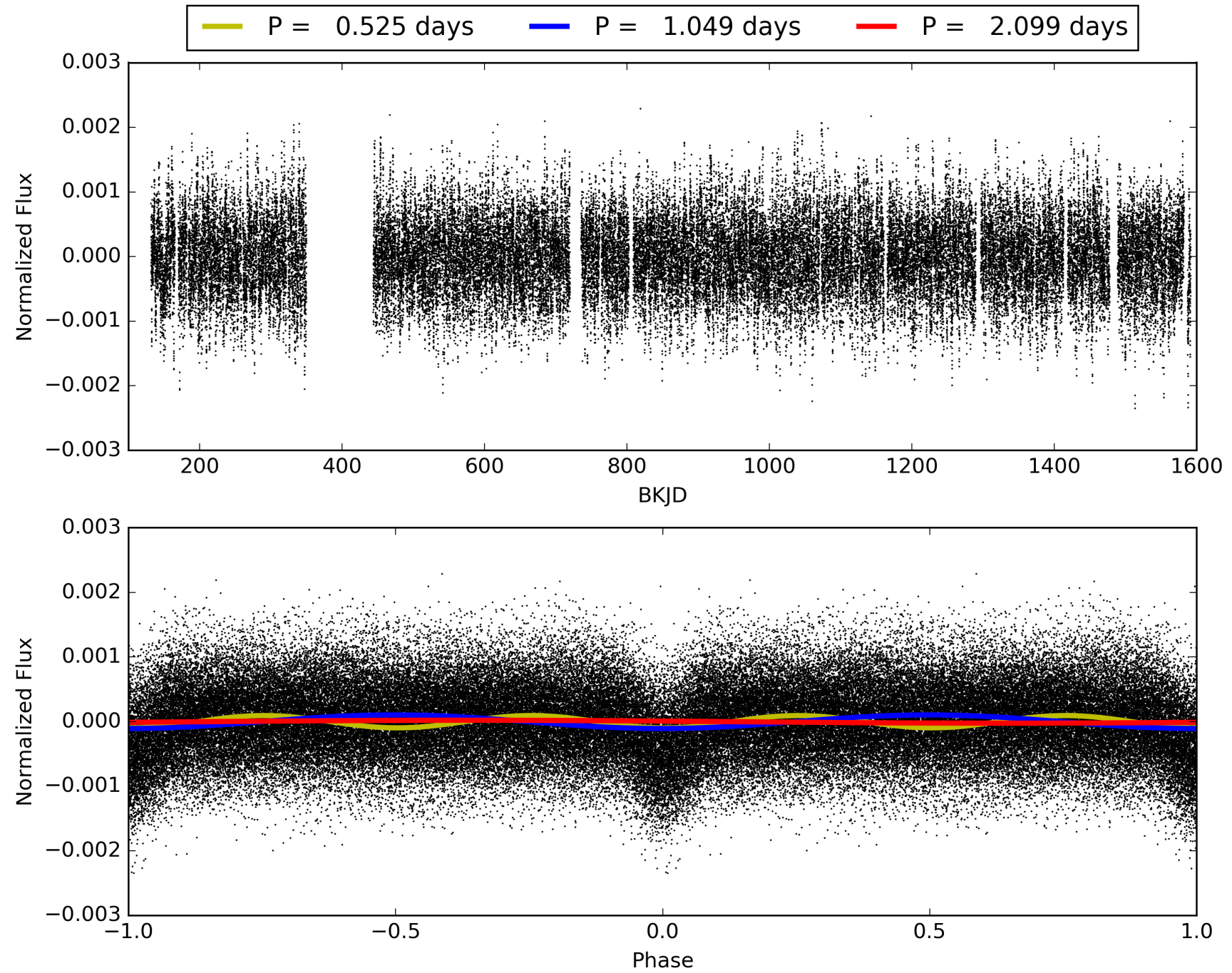
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 10:54:24 Z

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

TCE 005650420-01, PDC Light Curves

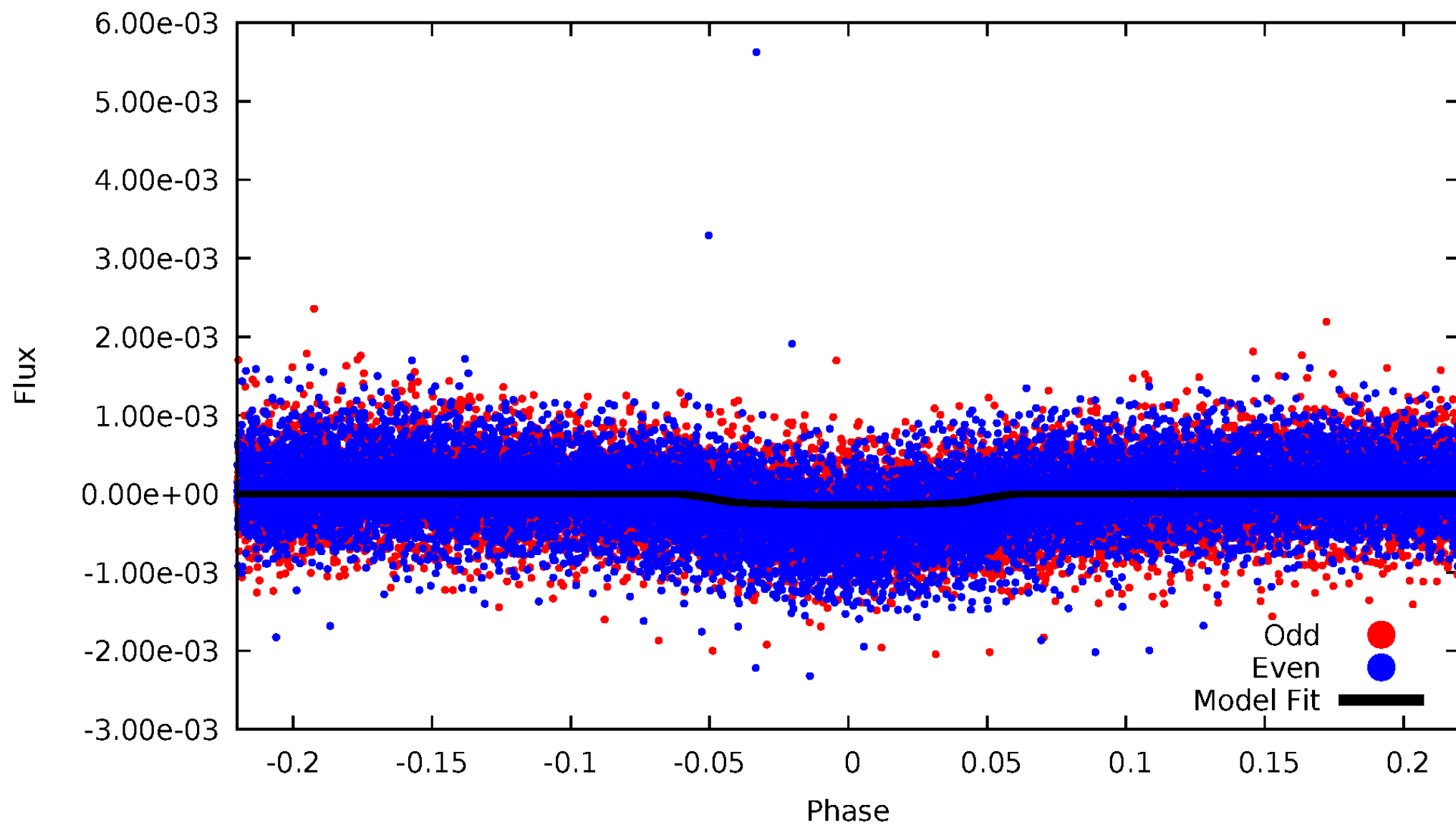


TCE 005650420-01



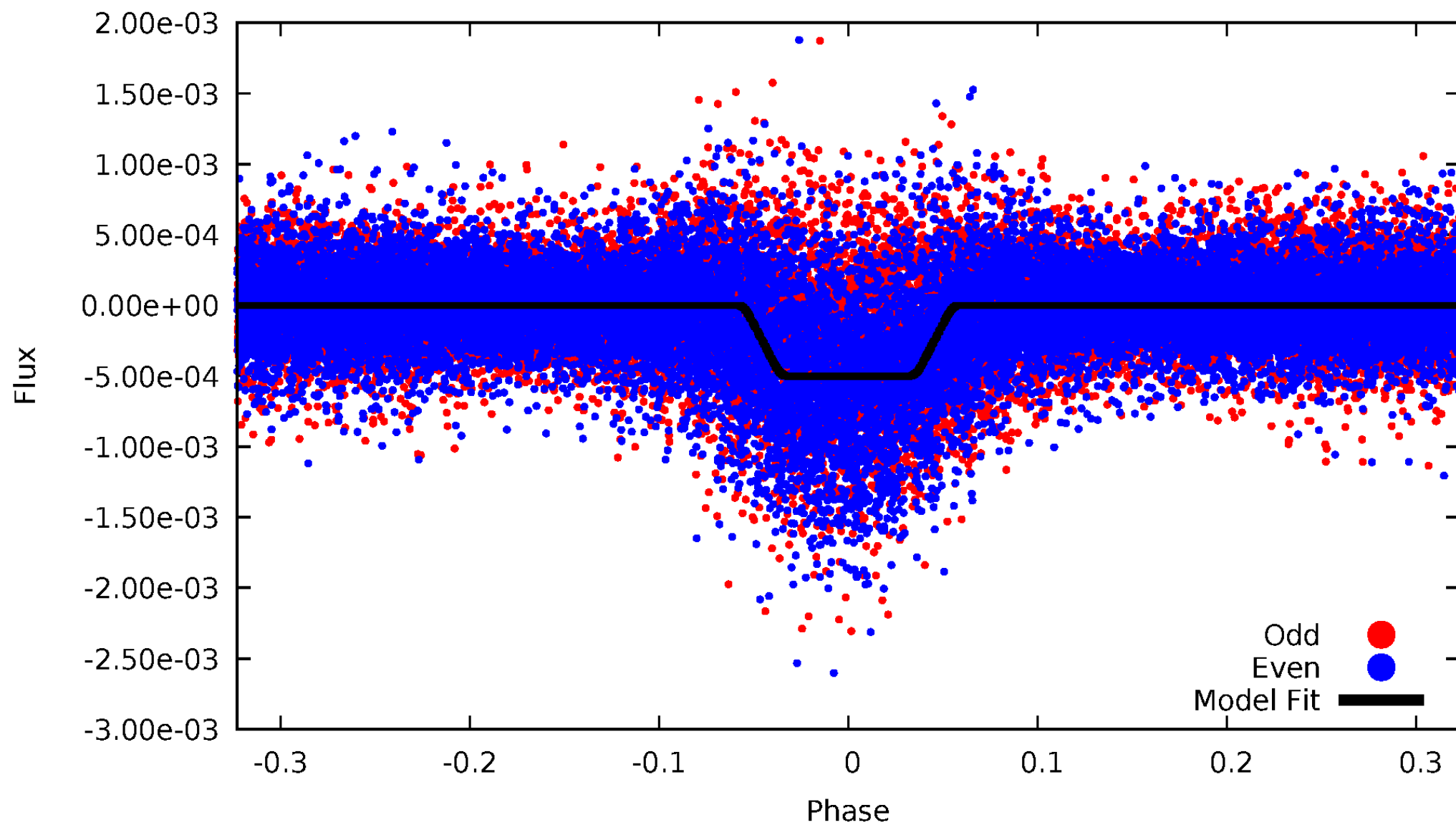
DV Odd/Even

TCE 005650420-01



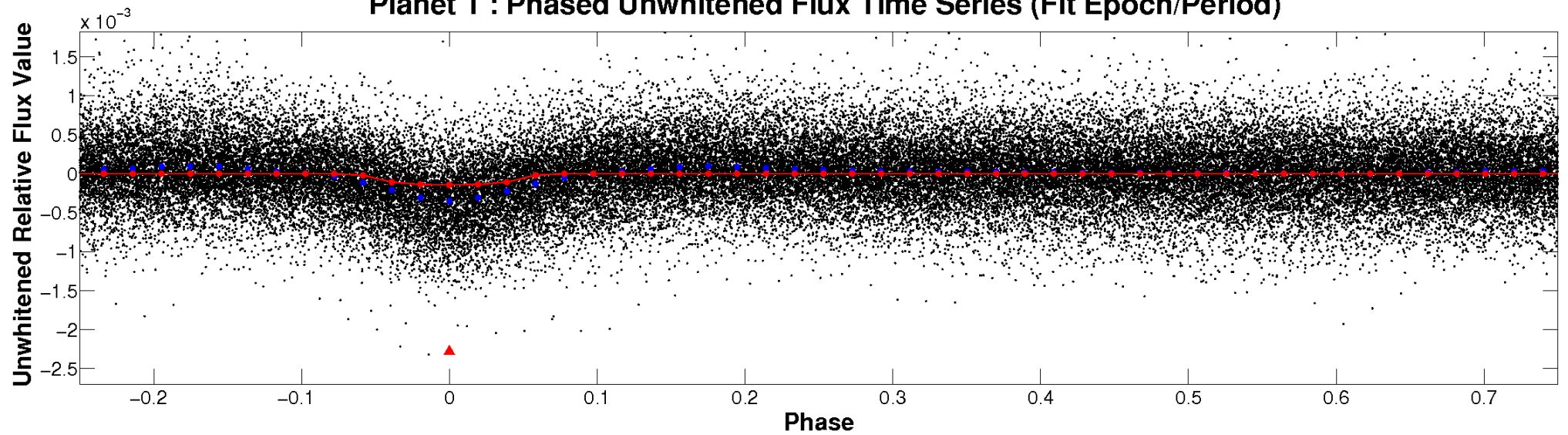
ALT Odd/Even

TCE 005650420-01

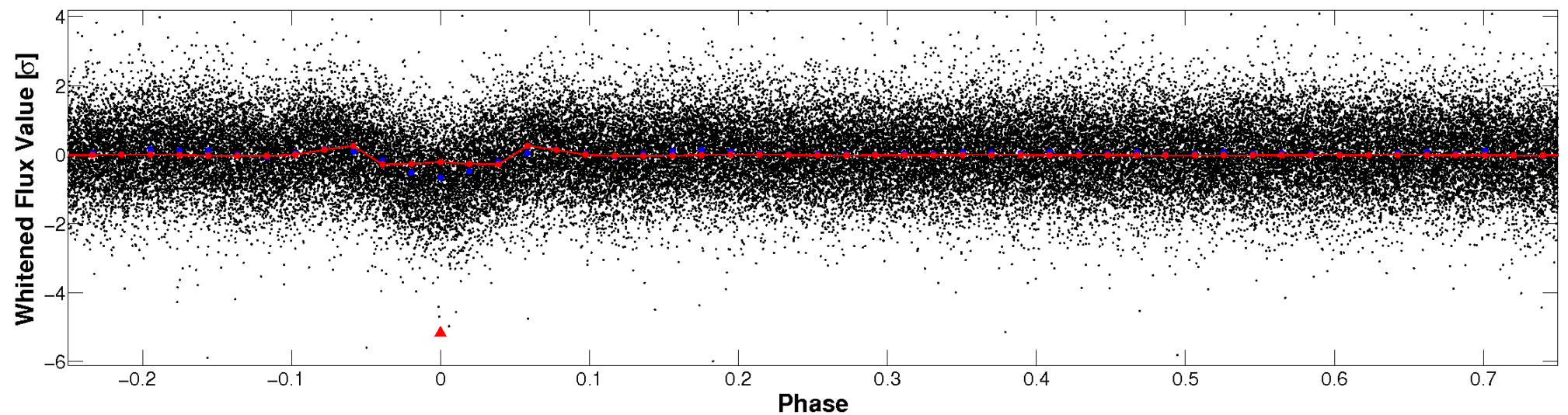


Non-Whitened Vs. Whitened Light Curve

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

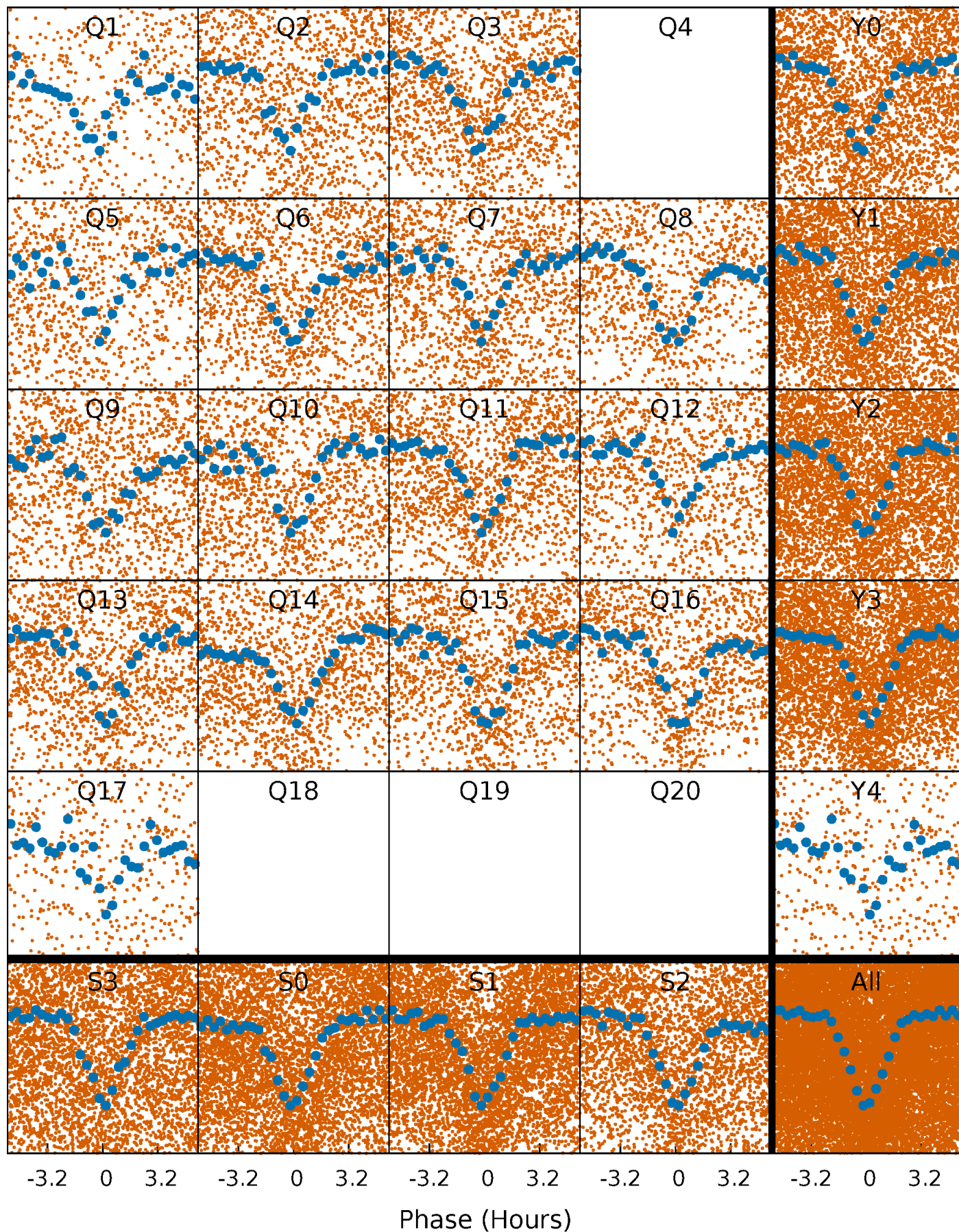


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



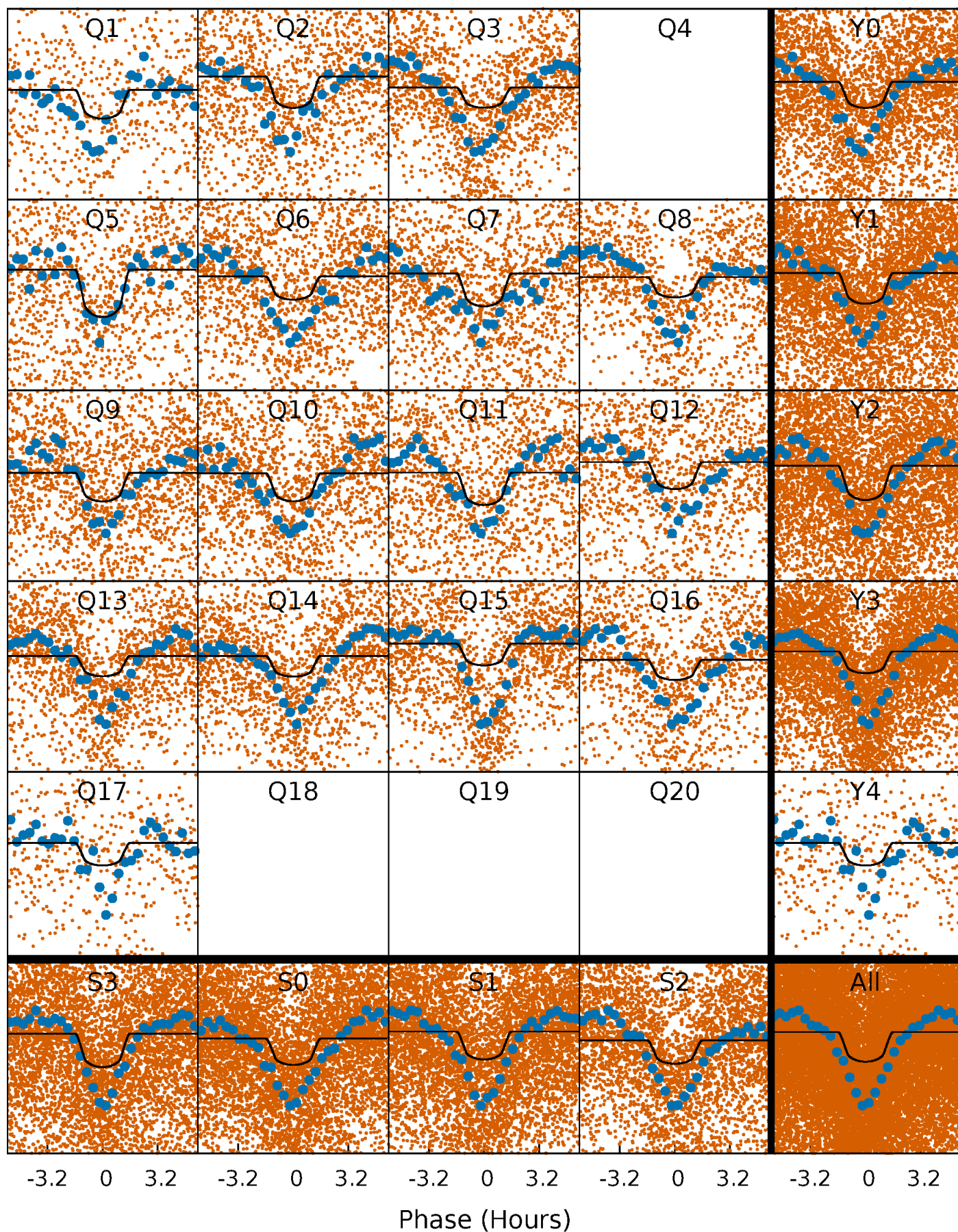
PDC Quarter-Phased Transit Curves

TCE 005650420-01 P= 1.049386 Days $T_0=131.818215$ (BKJD)



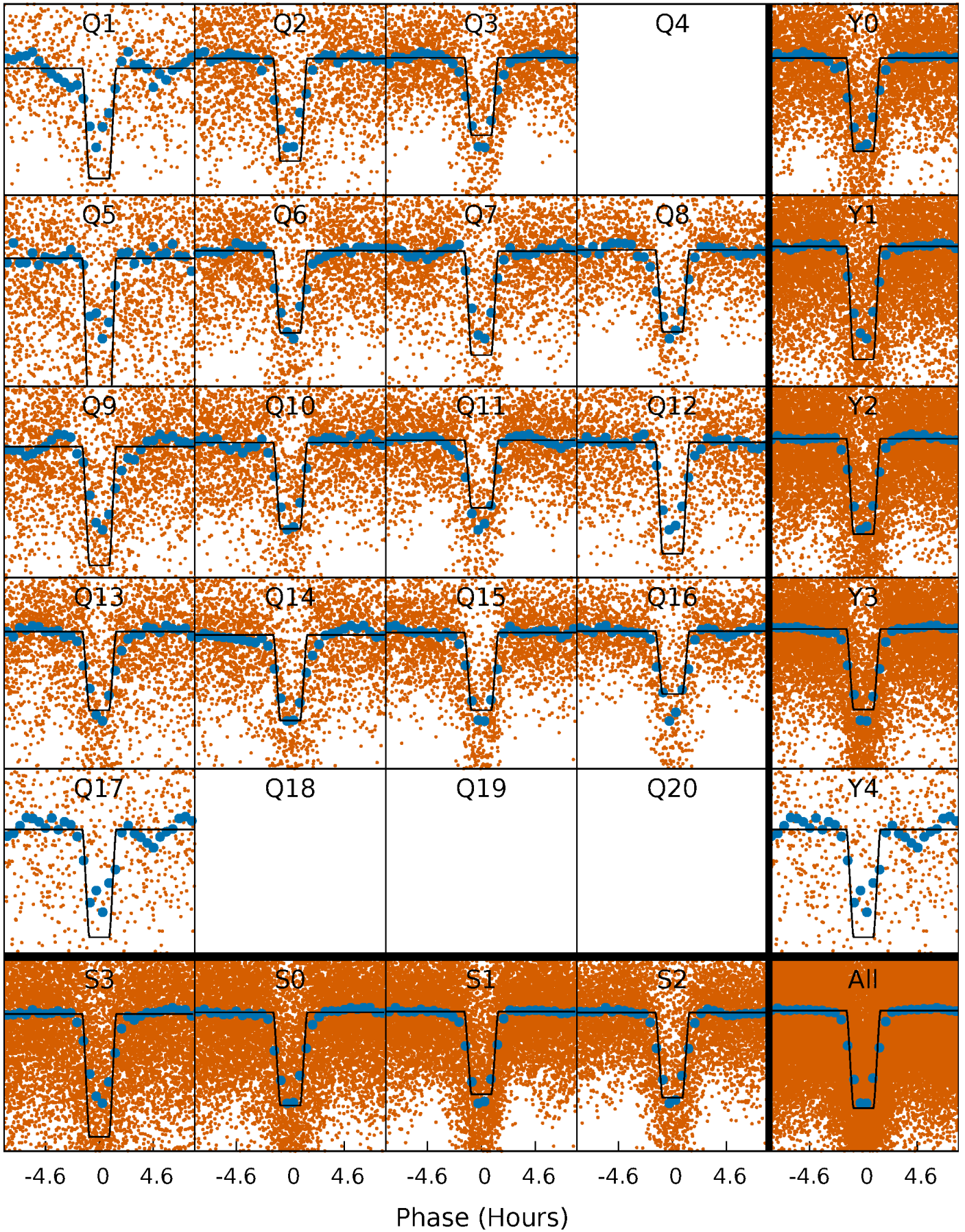
DV Quarter-Phased Transit Curves

TCE 005650420-01 P= 1.049386 Days $T_0=131.818215$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

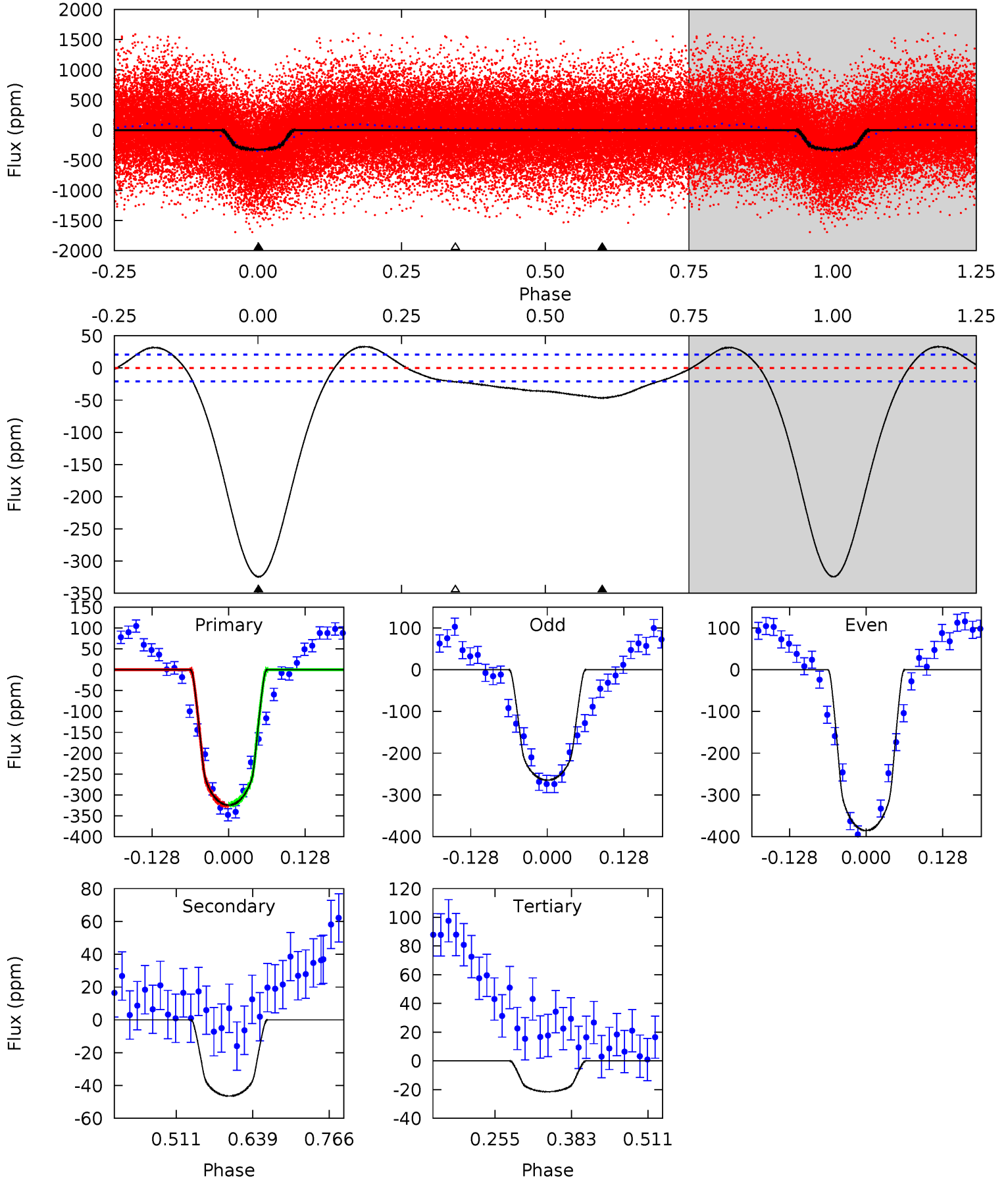
TCE 005650420-01 P= 1.049404 Days $T_0=131.804706$ (BKJD)



DV Model-Shift Uniqueness Test

005650420-01, P = 1.049386 Days, E = 130.768829 Days

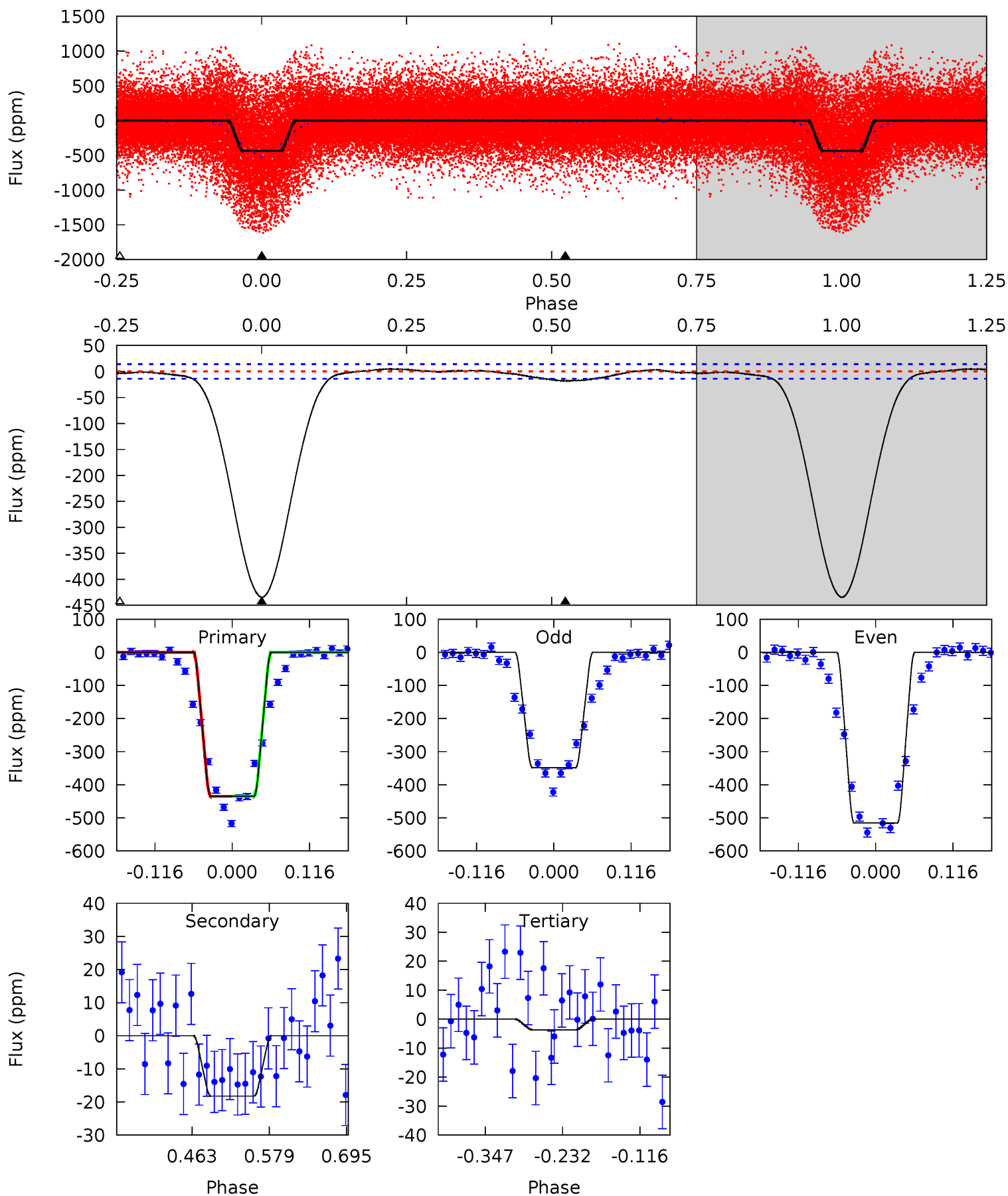
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
70.3	10.1	4.65	0	4.51	1.52	4.88	65.6	70.3	5.41	10.1	13.2	1.13	0.09	0.22



Alt Model-Shift Uniqueness Test

005650420-01, P = 1.049404 Days, E = 130.755302 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
139.4	5.85	1.17	0	4.53	1.57	1.24	138.2	139.4	4.68	5.85	26.7	0.97	0.01	0.06



Stellar Parameters For KIC 005650420

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4745^{+42}_{-70}	$2.425^{+0.035}_{-0.031}$	$-0.240^{+0.100}_{-0.150}$	$13.417^{+0.466}_{-2.642}$	$1.747^{+0.185}_{-0.554}$	$0.001^{+0.000}_{-0.000}$
	+1%/-1%	+1%/-1%	+42%/-62%	+3%/-20%	+11%/-32%	+30%/-10%
Source	SPE74	AST9	SPE74	DSEP		

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

Secondary Eclipse Parameters for KIC 005650420-01 / KOI 5187.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-46 ± 5	$19.84^{+2.29}_{-2.53}$	6856^{+109}_{-136}	-5307^{+121}_{-103}	$0.039^{+0.011}_{-0.008}$
Alt.	-18 ± 3	$33.13^{+2.51}_{-3.08}$	6855^{+112}_{-144}	-5456^{+113}_{-96}	$0.006^{+0.001}_{-0.001}$

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 $A_{obs} \gg 1.0$

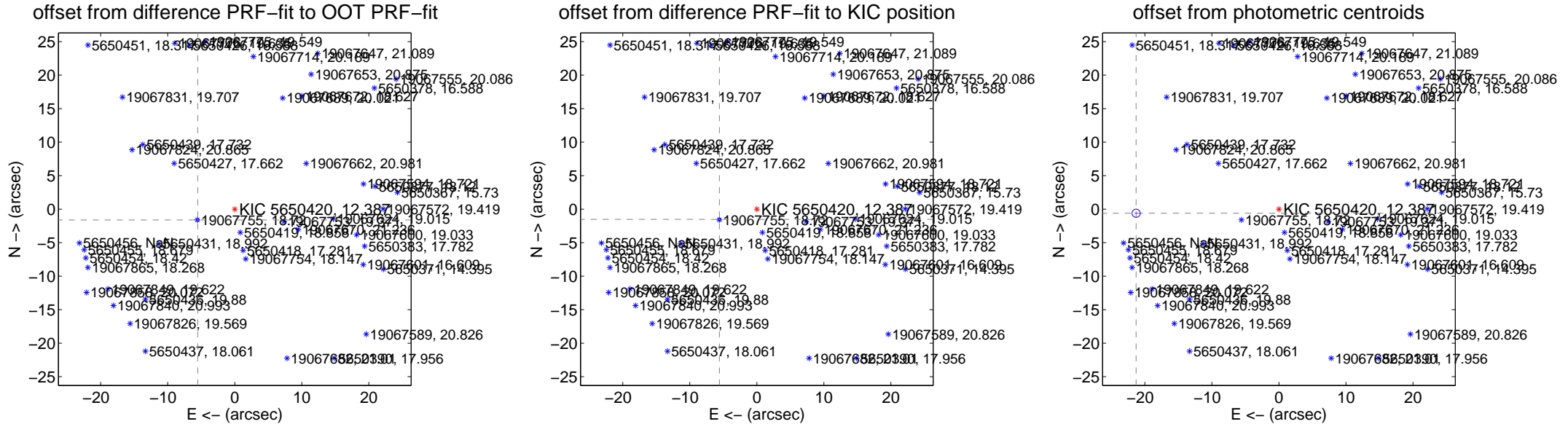
DV Centroid Data

Supplemental centroid analysis for 005650420-01. Kepler magnitude: 12.39. Transit SNR 25.44

There are 16 quarters with good PRF difference image offsets

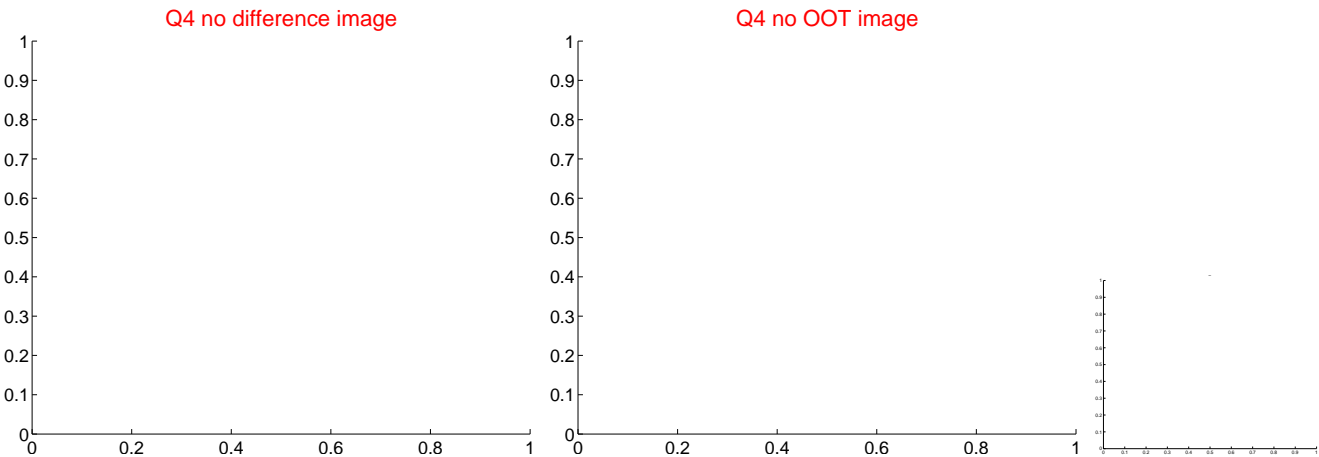
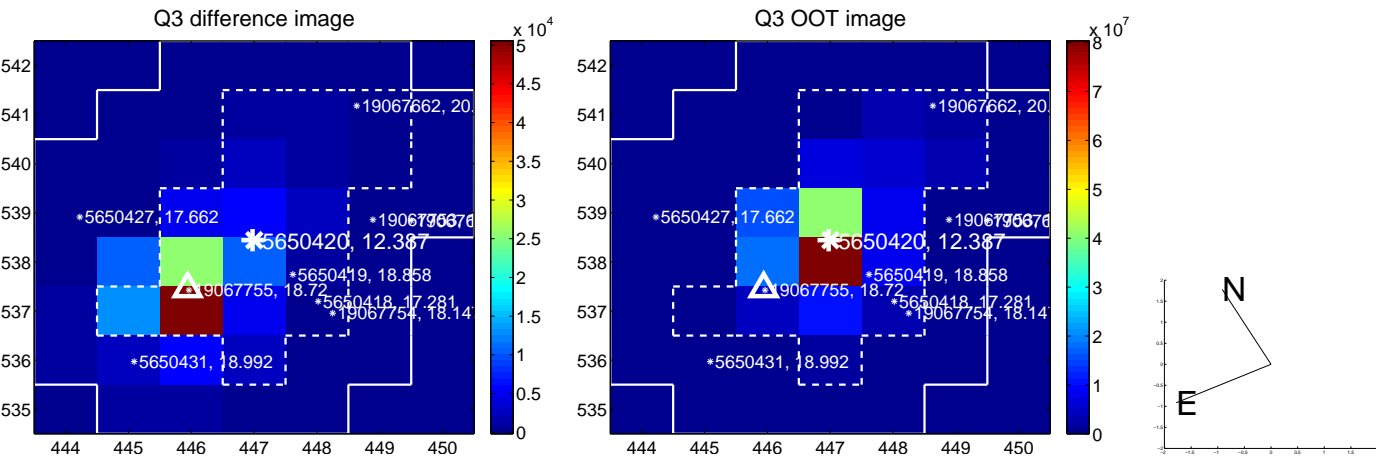
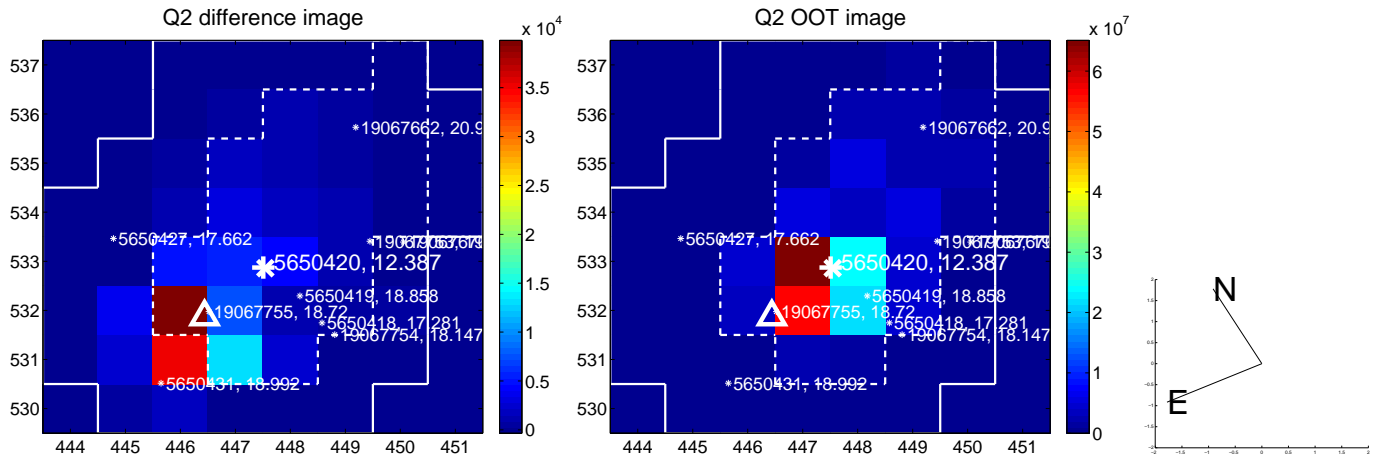
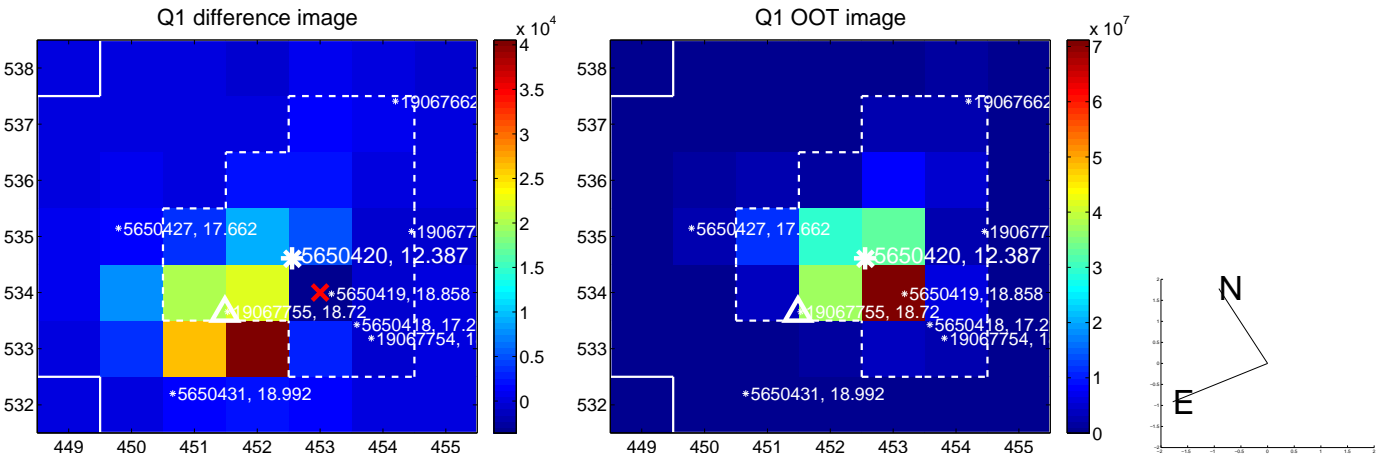
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.758 \pm 0.068	84.95	5.527 \pm 0.068	-1.617 \pm 0.068
PRF-fit source offset from KIC position	5.787 \pm 0.069	83.59	5.582 \pm 0.069	-1.524 \pm 0.068
photometric centroid source offset	21.31 \pm 0.20	104.65	21.30 \pm 0.20	-0.61 \pm 0.16

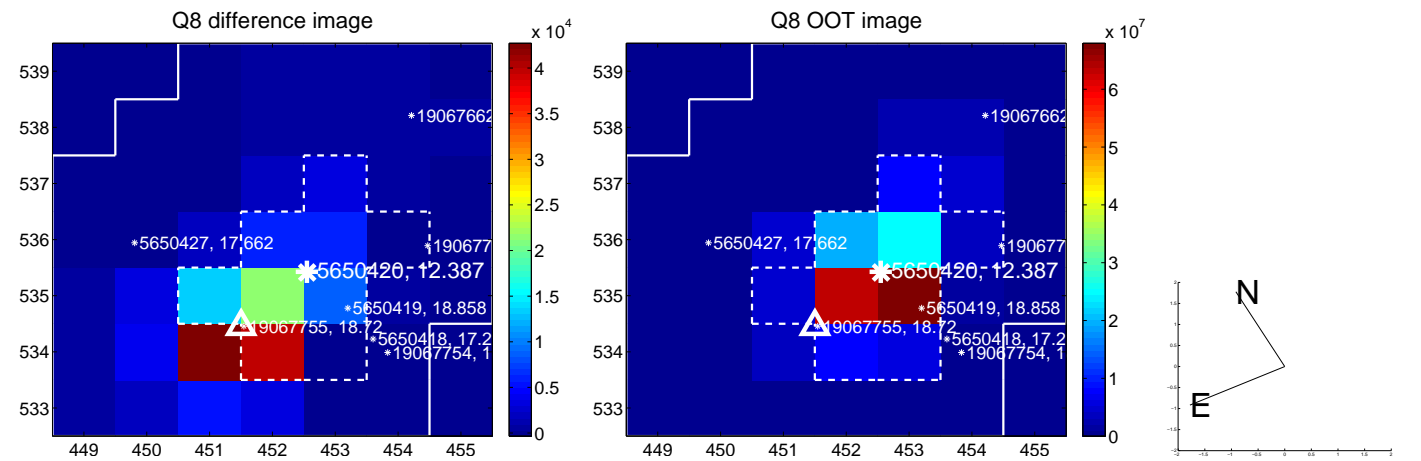
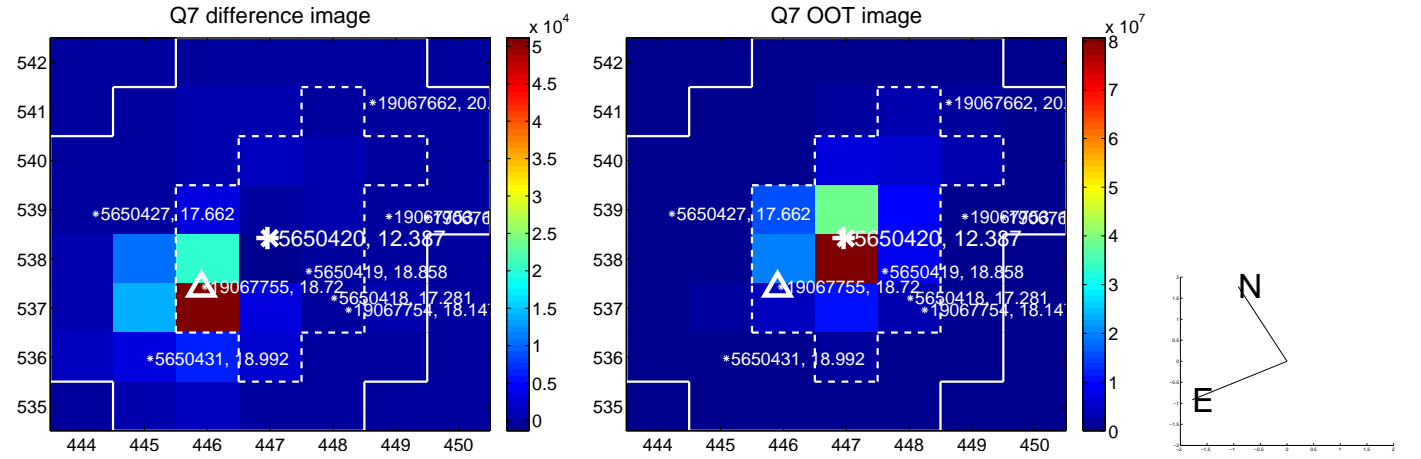
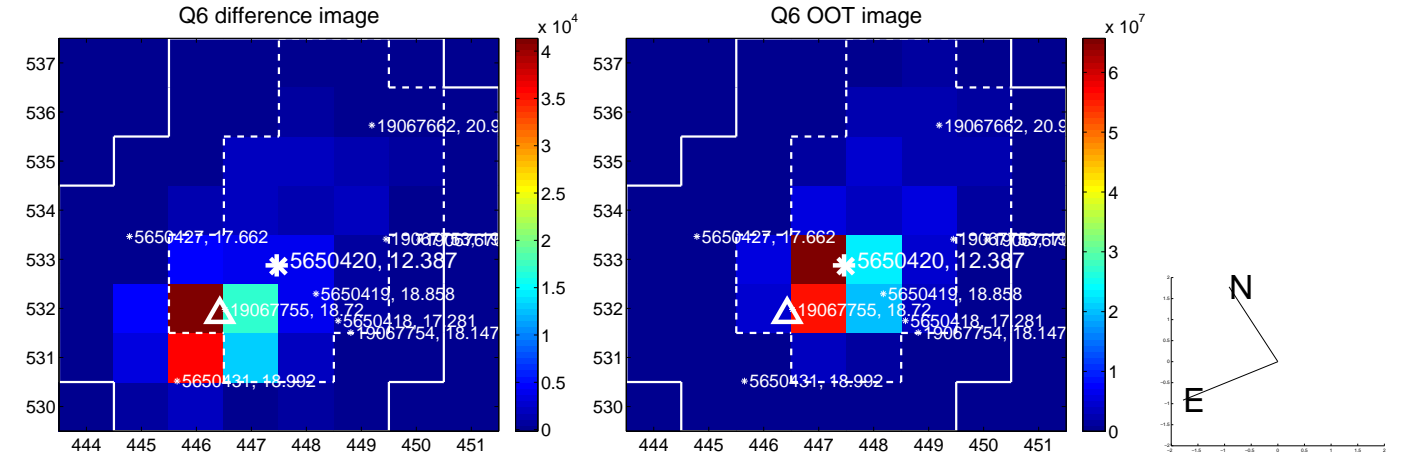
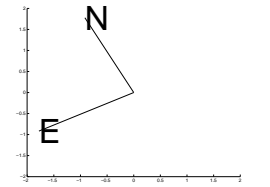
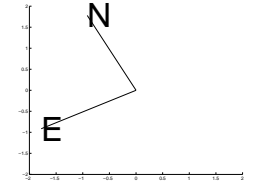
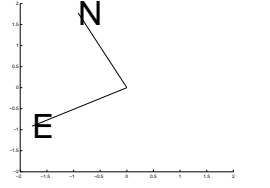
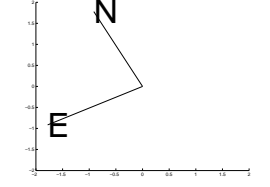
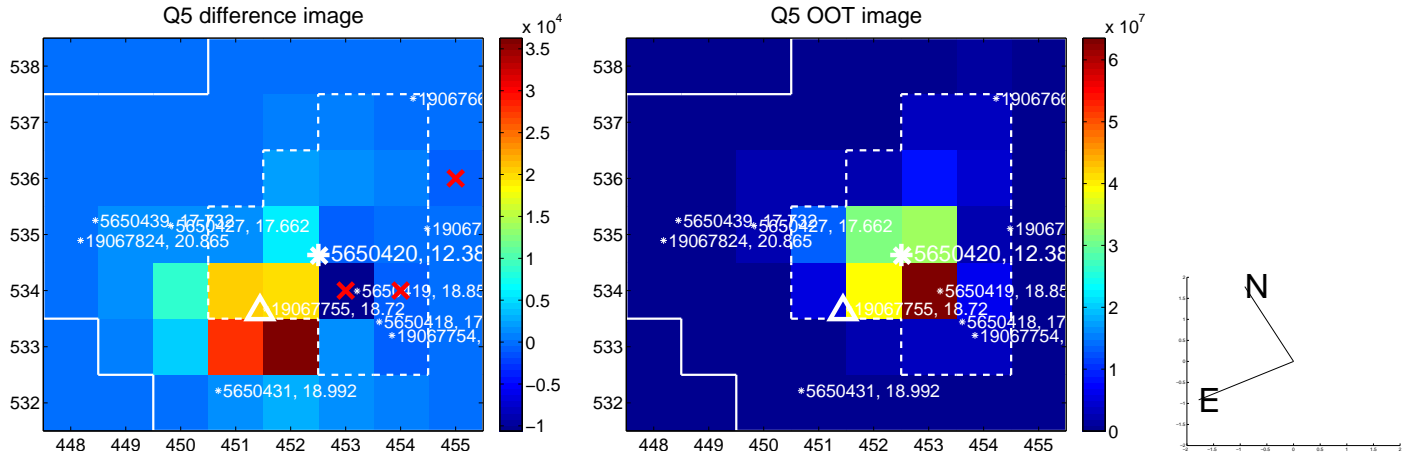


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

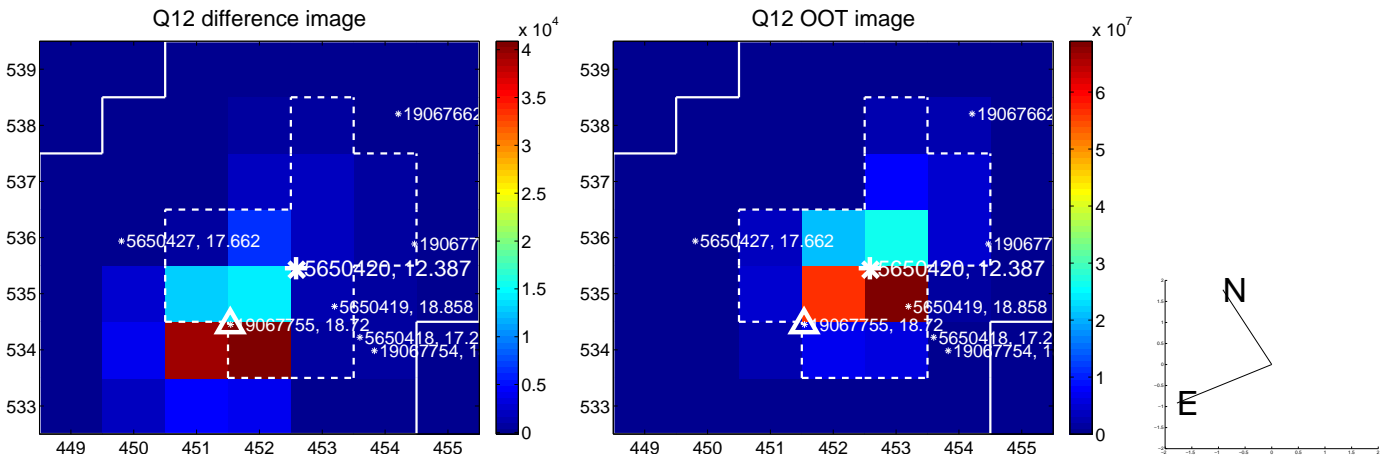
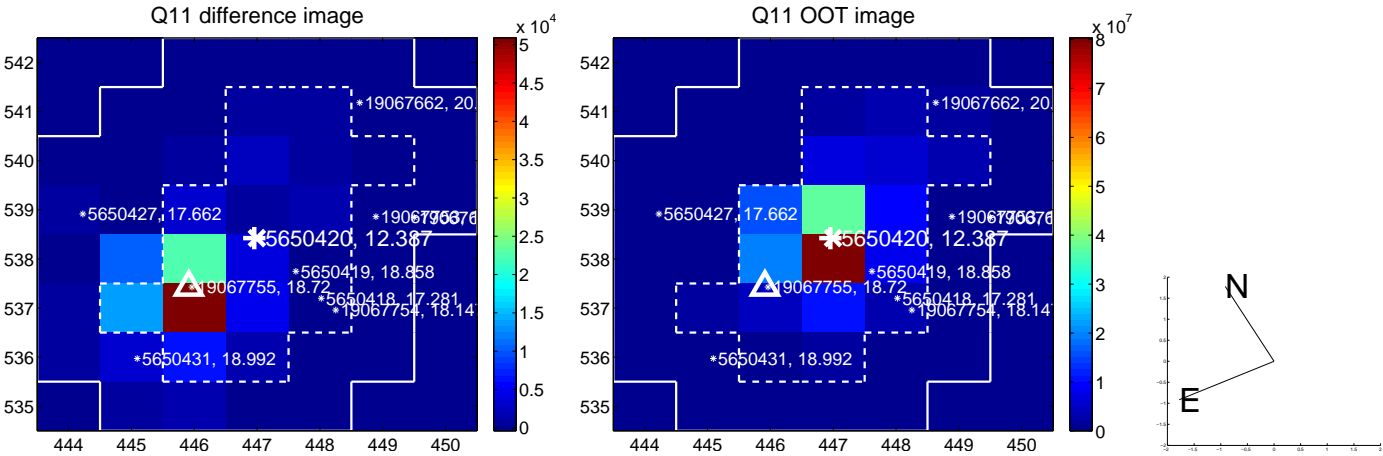
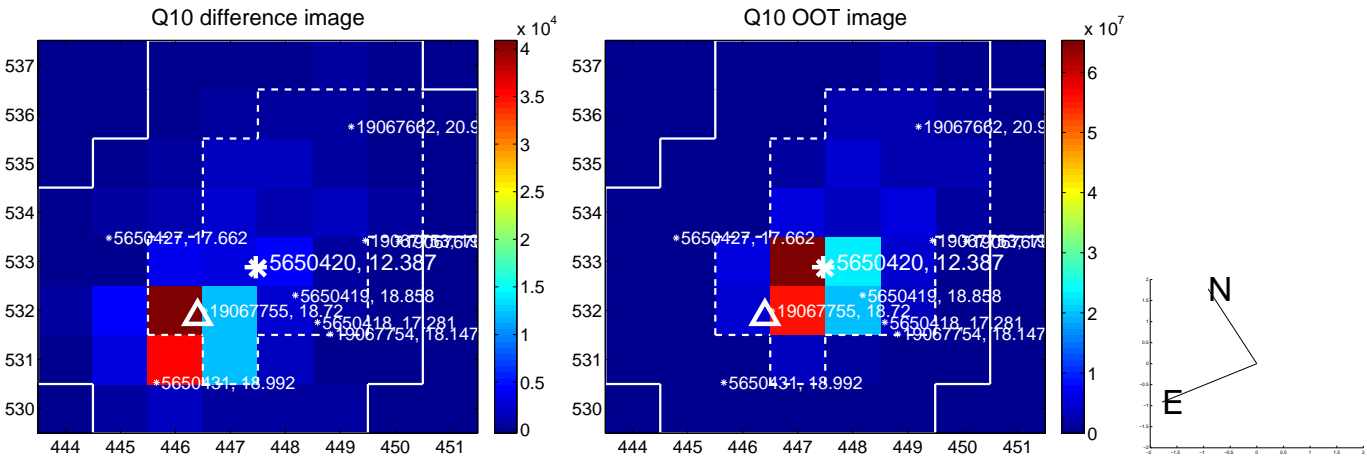
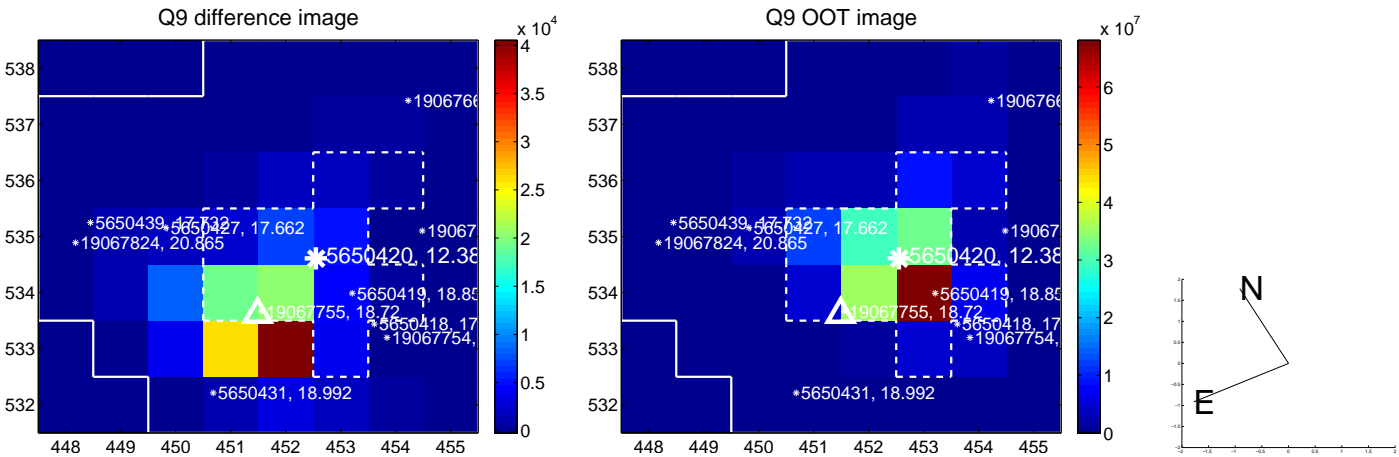
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



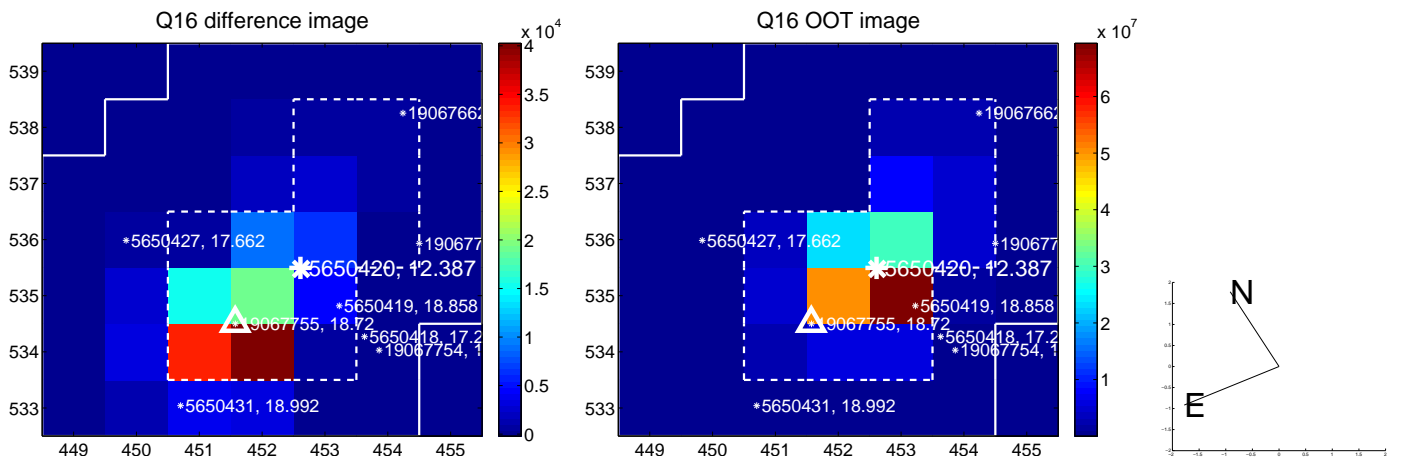
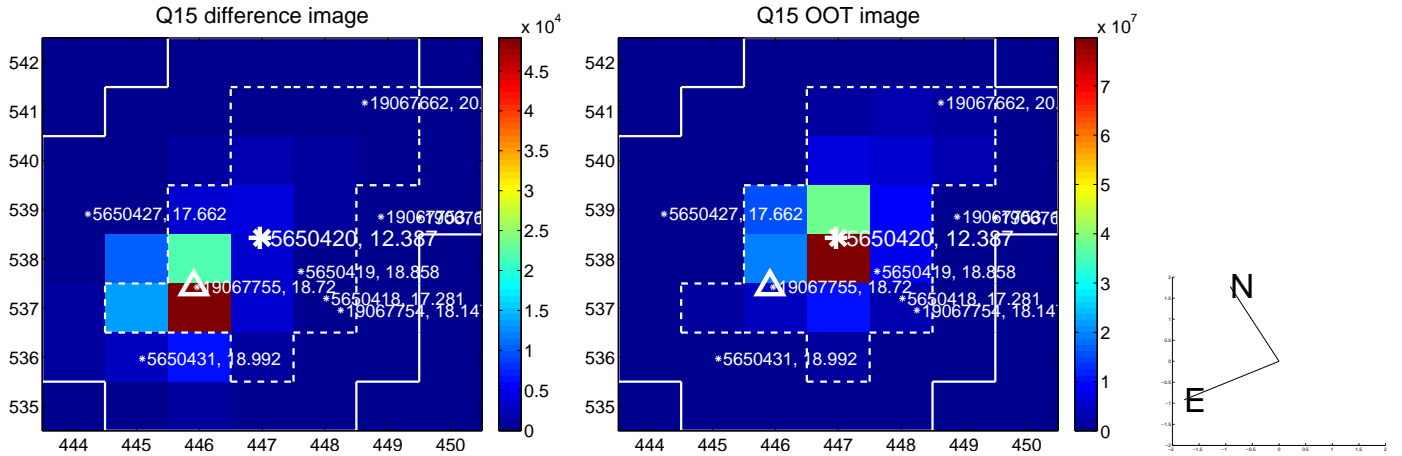
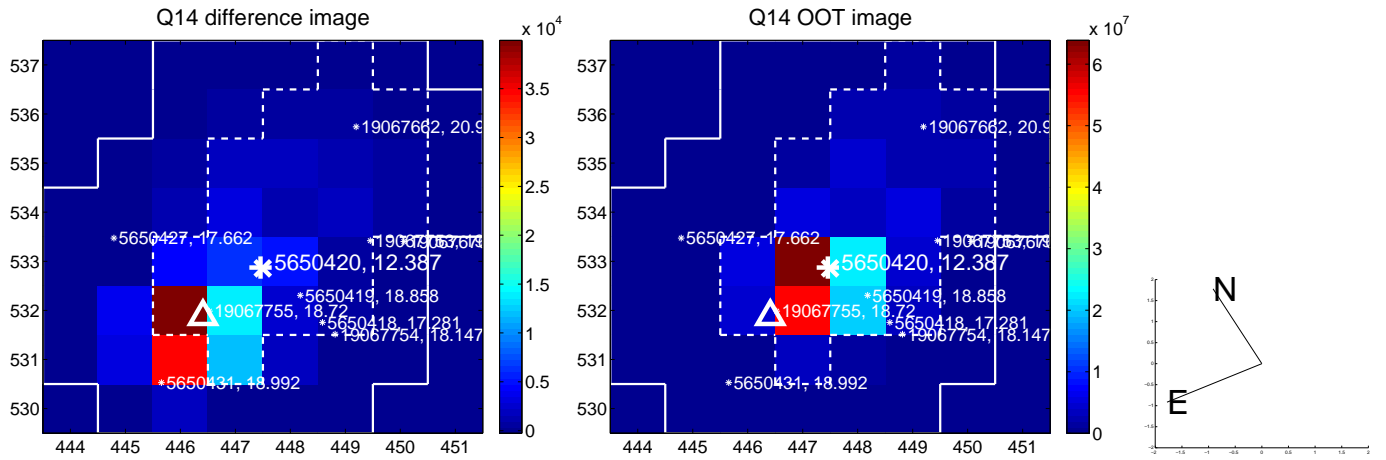
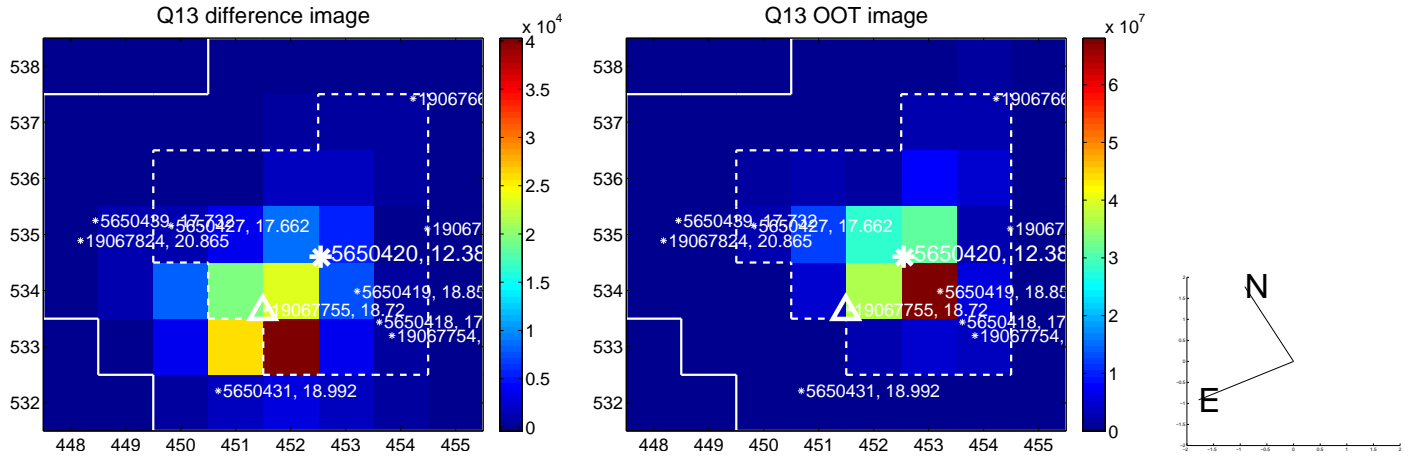
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



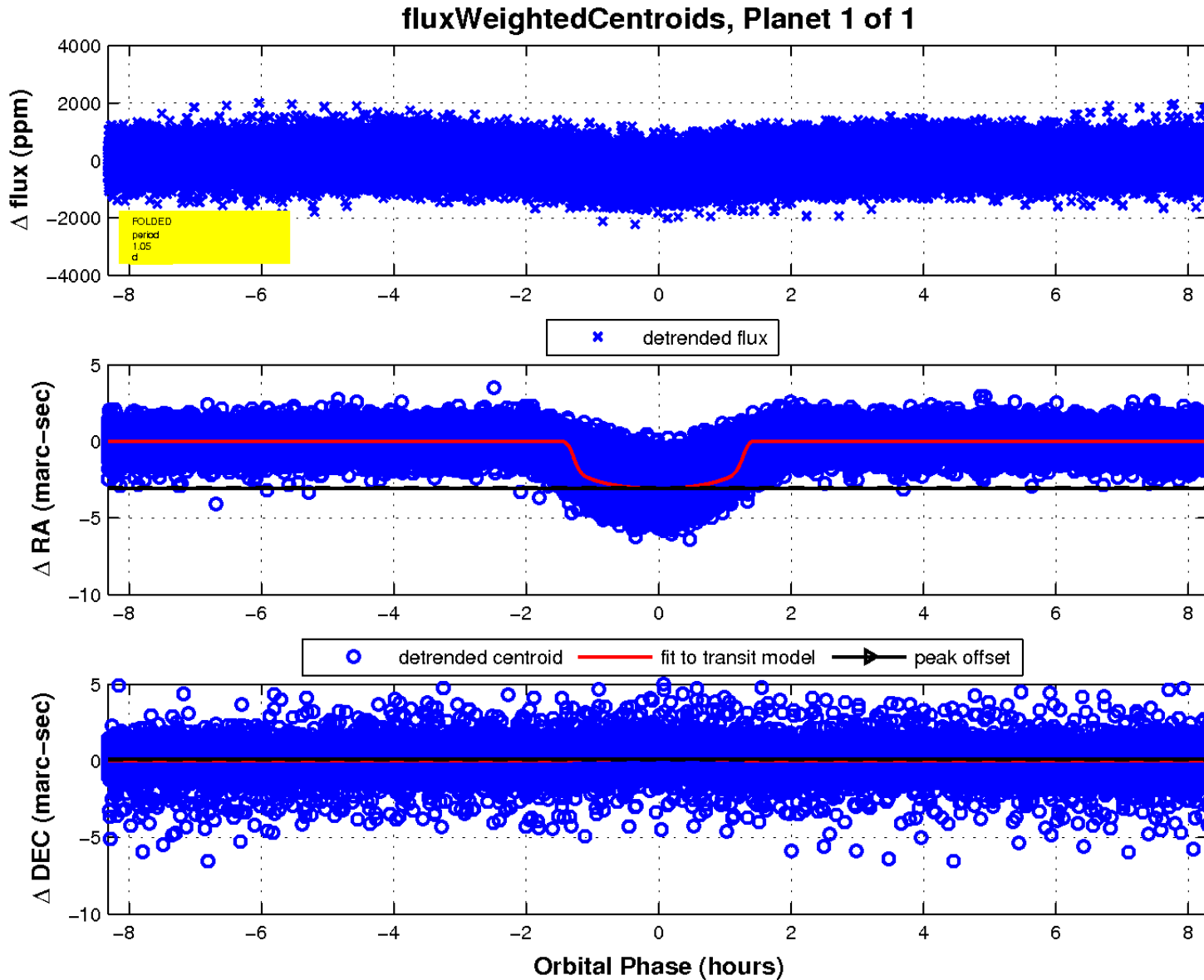
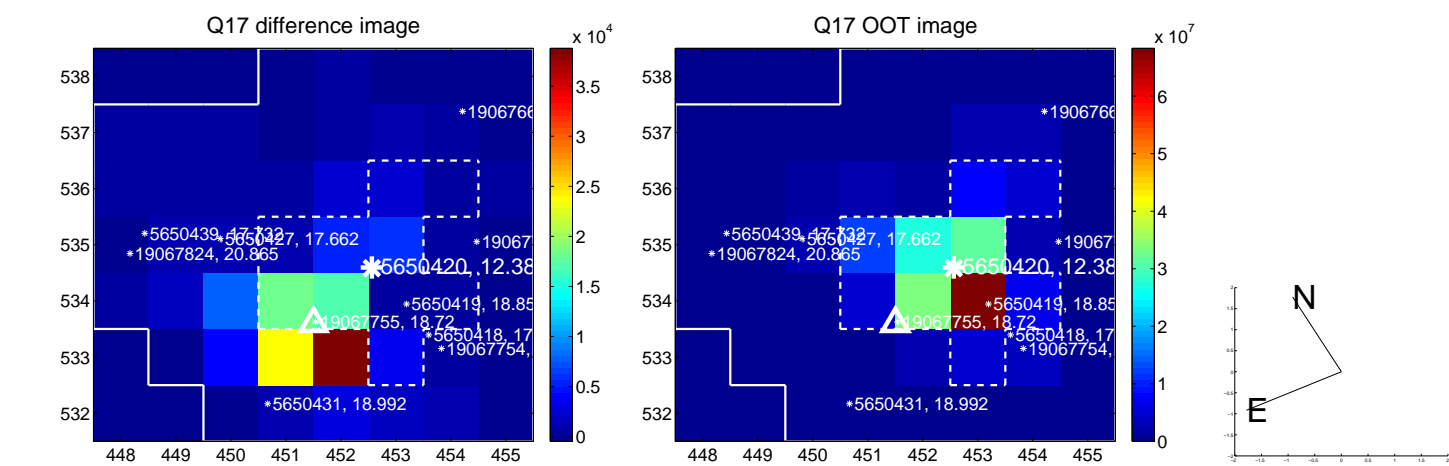
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UKIRT Image

