

KIC 004454752

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})
004454752-01	OBS	0496.01	1.616896	132.611035	428.0	1.666	40.9	64.1	1.82	4868	4.63	2344.94

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004454752-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT

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

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

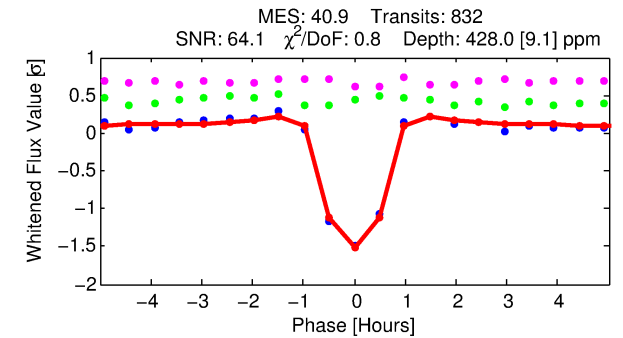
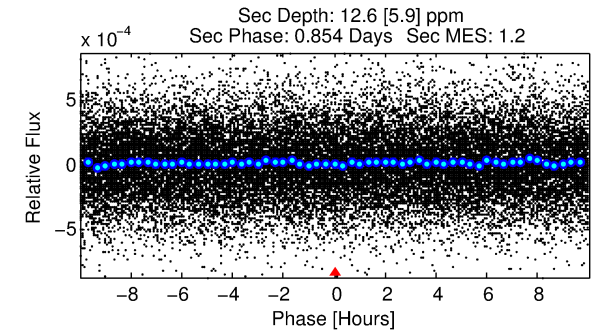
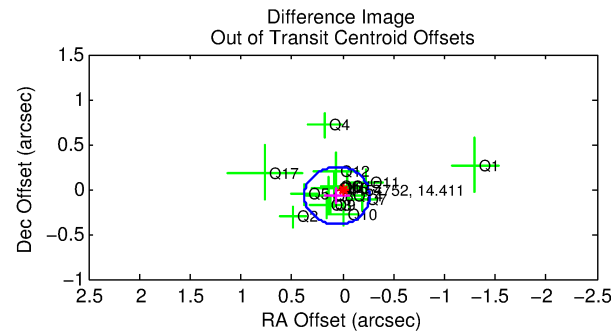
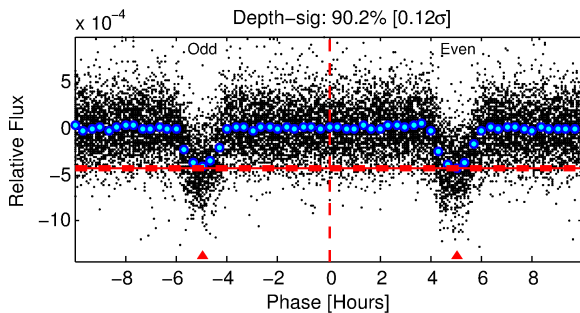
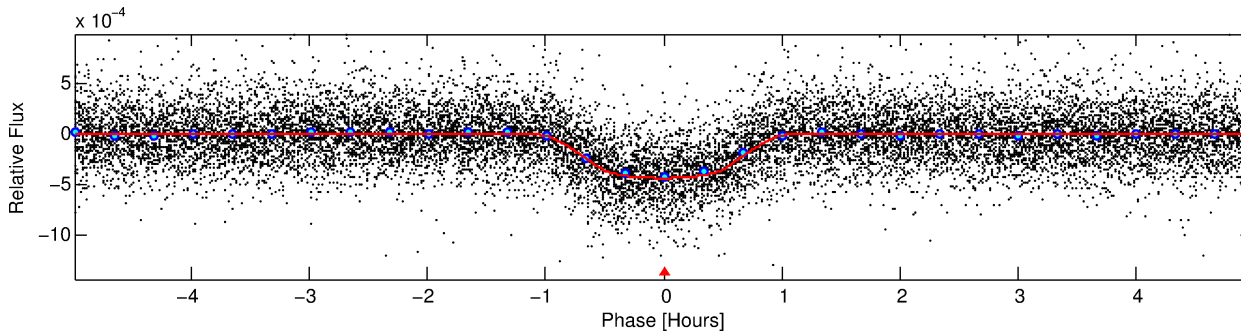
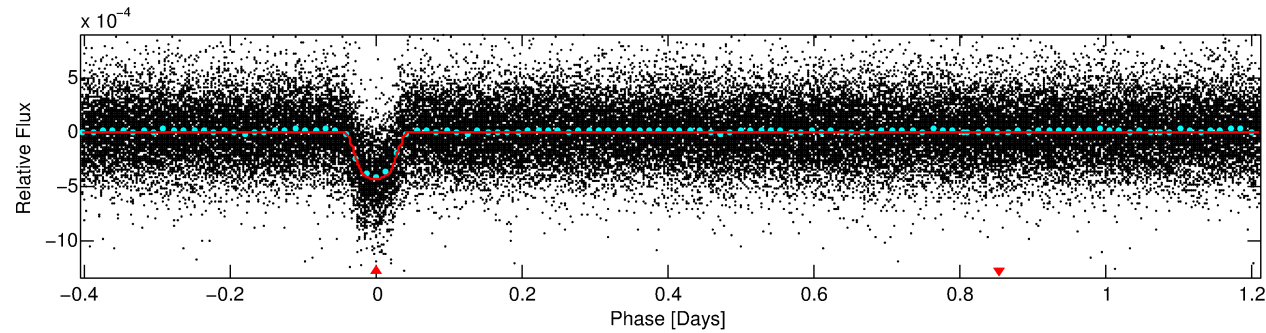
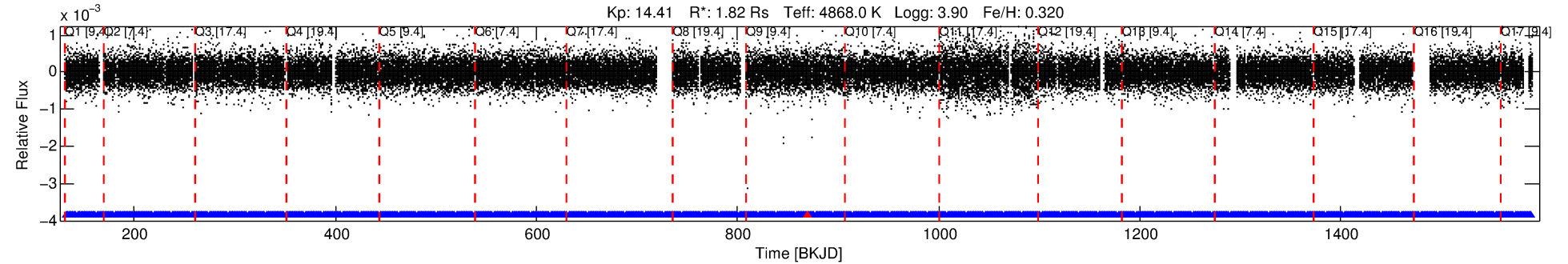
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004454752-01

No Significant Match Found

DV One-Page Summary

KIC: 4454752 Candidate: 1 of 1 Period: 1.617 d
KOI: K00496.01 Corr: 0.952



DV Fit Results:

Period = 1.61690 [0.00000] d
Epoch = 132.6110 [0.0004] BKJD
Rp/R* = 0.0234 [0.0027]
a/R* = 3.73 [1.49]
b = 0.90 [0.09]
Seff = 2344.94 [920.30]
Teq = 1774 [174] K
Rp = 4.63 [2.32] Re
a = 0.0266 [0.0091] AU
Ag = 0.23 [0.15] [-5.16 σ]
Teffp = 1898 [250] K [0.41 σ]

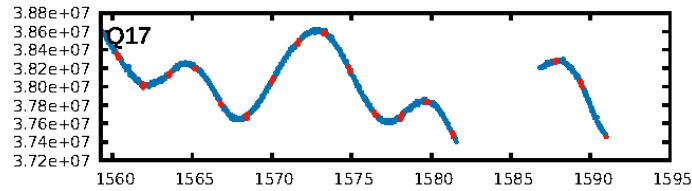
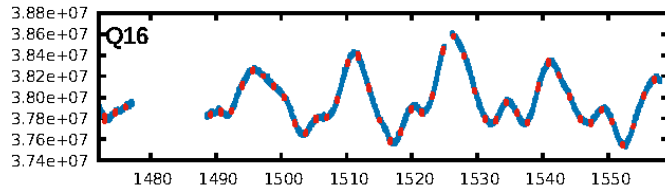
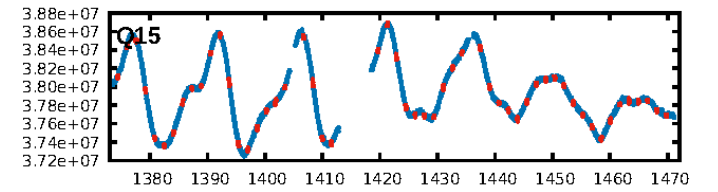
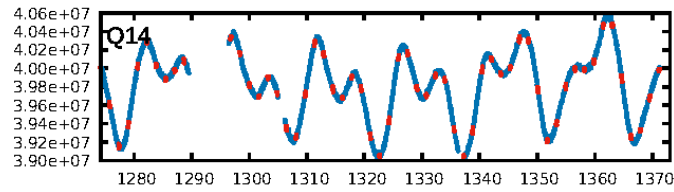
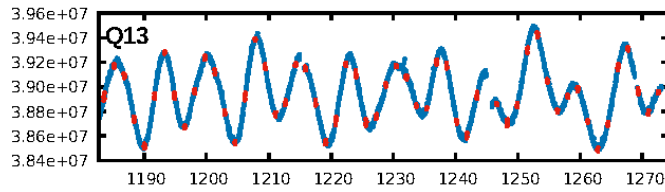
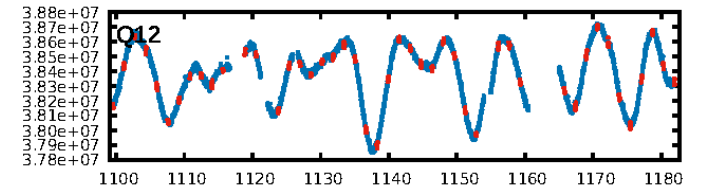
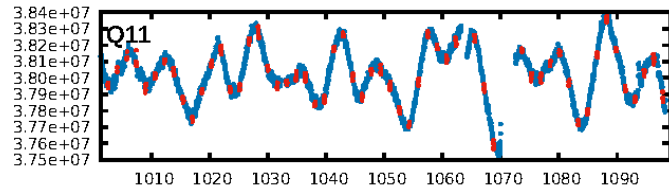
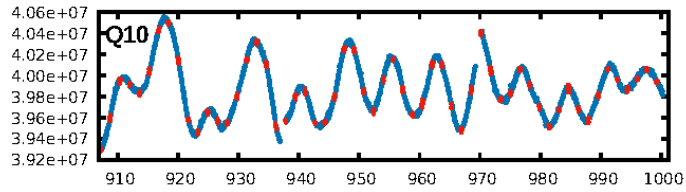
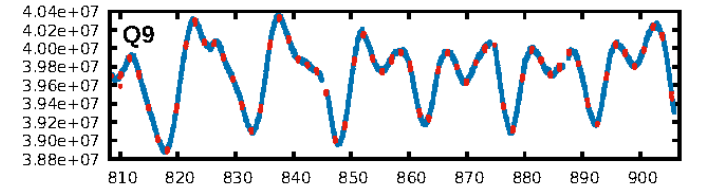
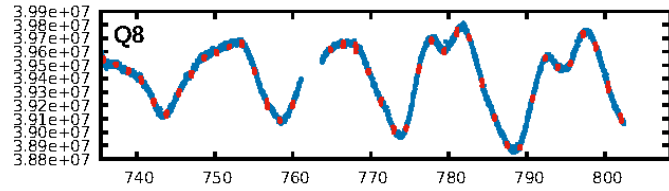
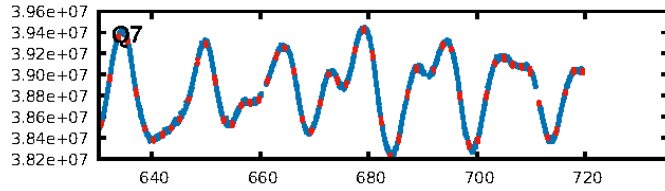
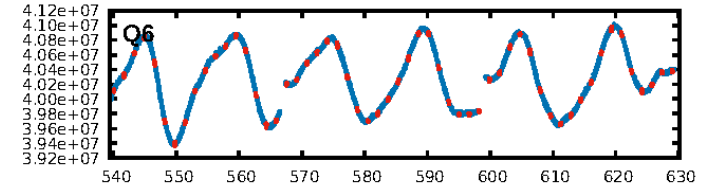
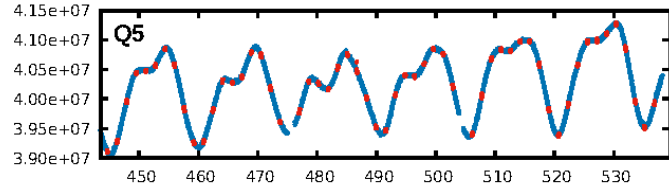
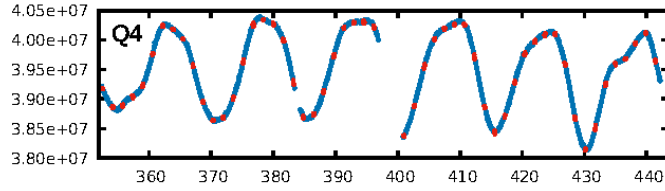
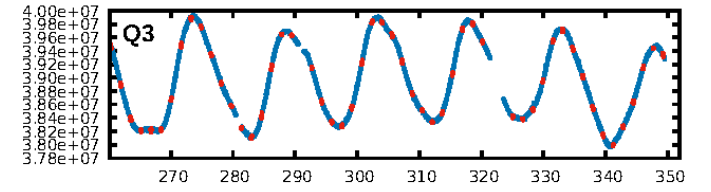
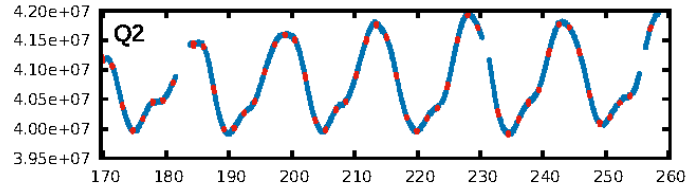
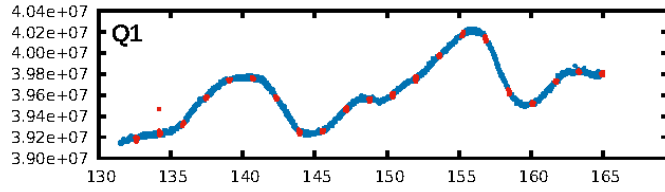
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [794/795]
GhostDiagnostic-chr: 4.603
Centroid-sig: 76.7%
Centroid-so: 0.120 arcsec [0.64 σ]
OotOffset-rm: 0.094 arcsec [0.88 σ]
KicOffset-rm: 0.125 arcsec [1.06 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

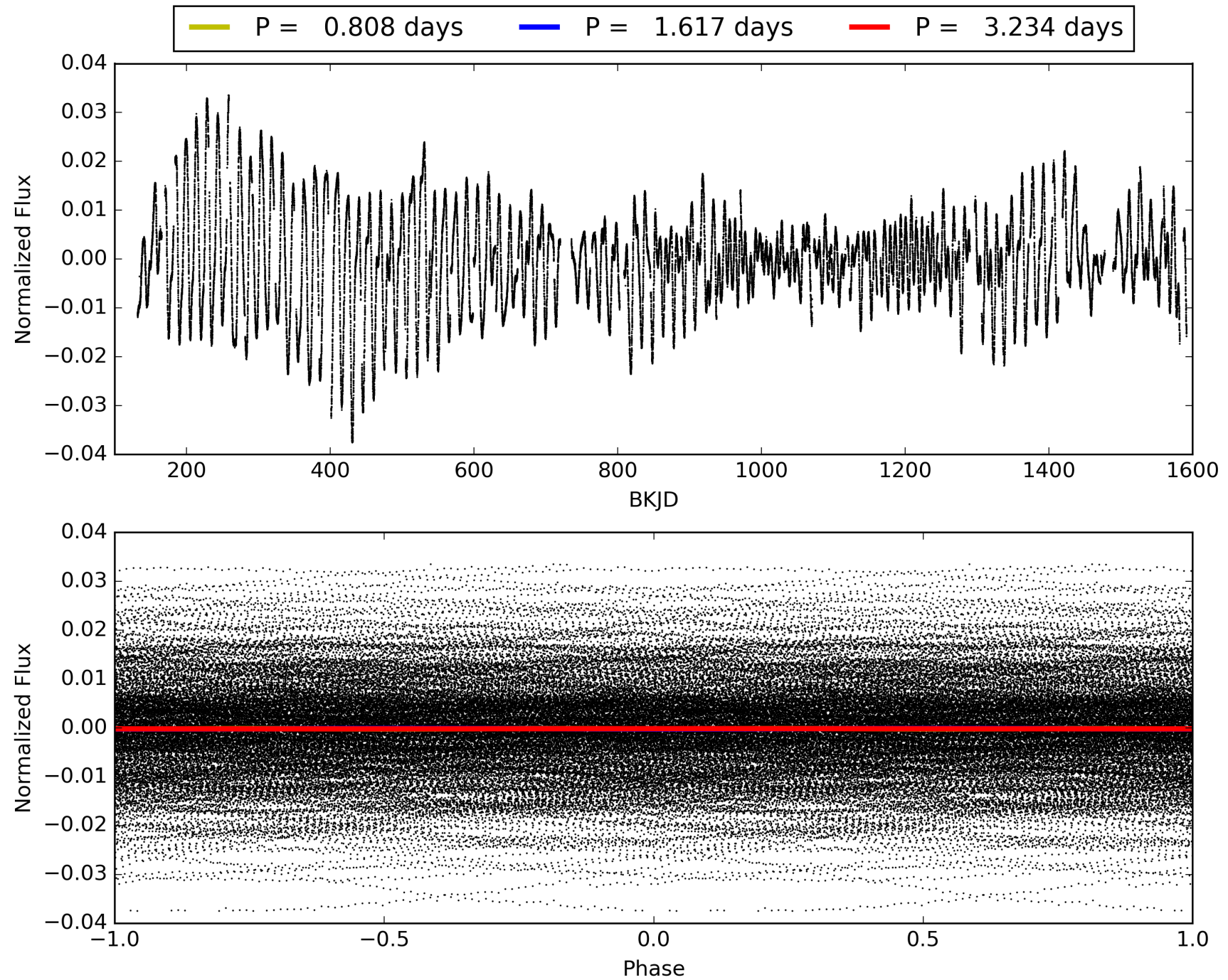
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 16:38:10 Z

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

TCE 004454752-01, PDC Light Curves

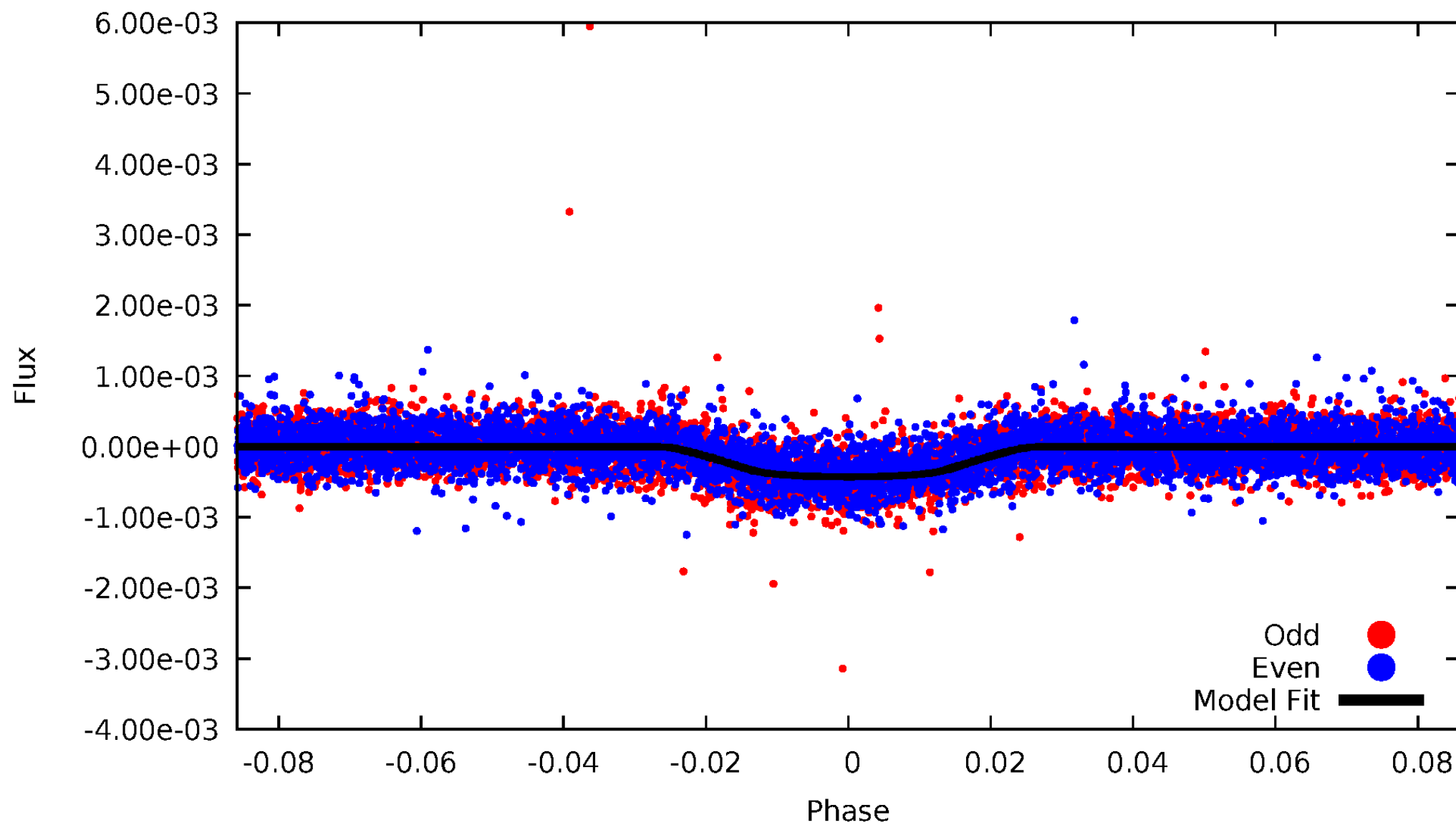


TCE 004454752-01



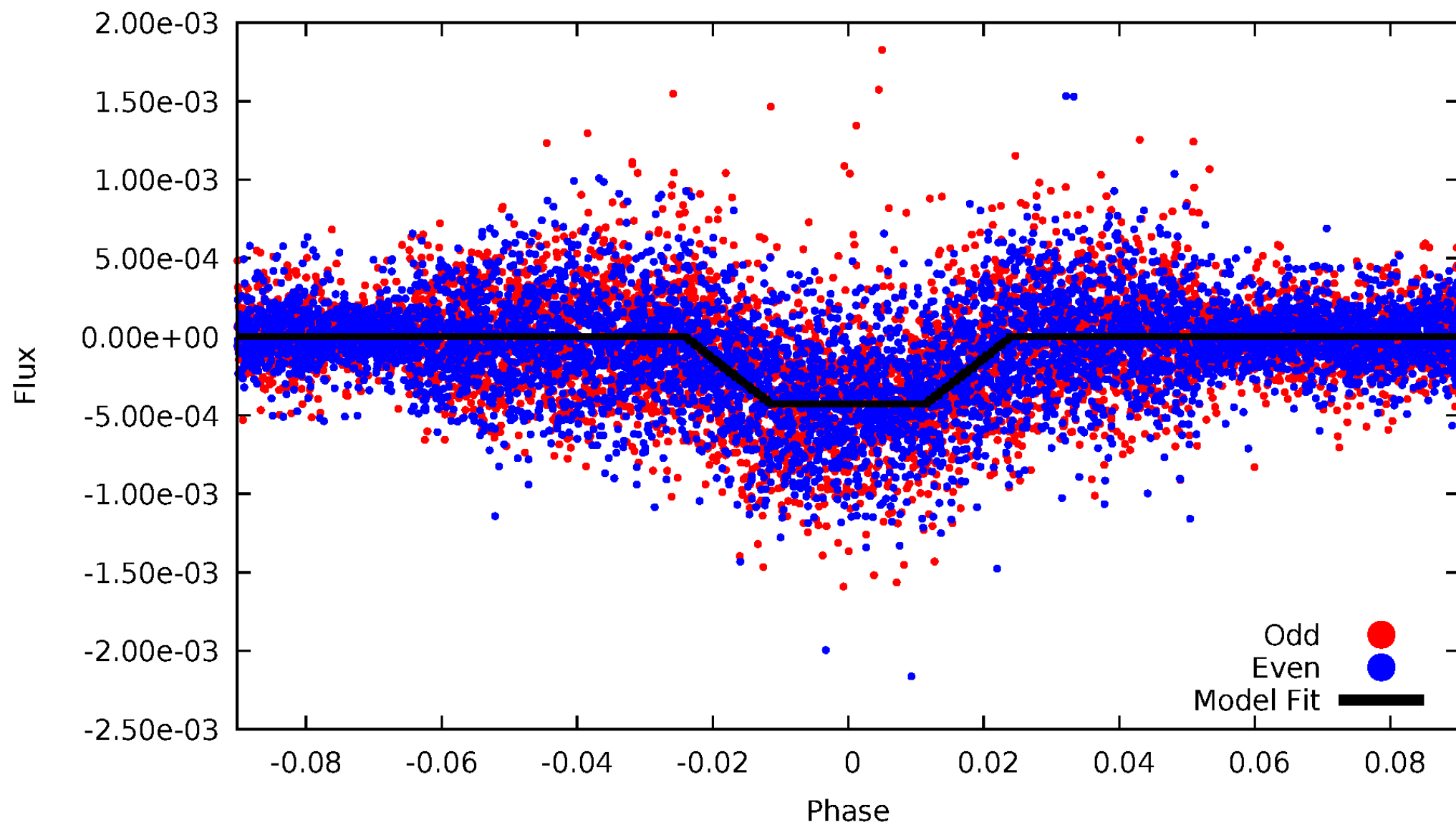
DV Odd/Even

TCE 004454752-01

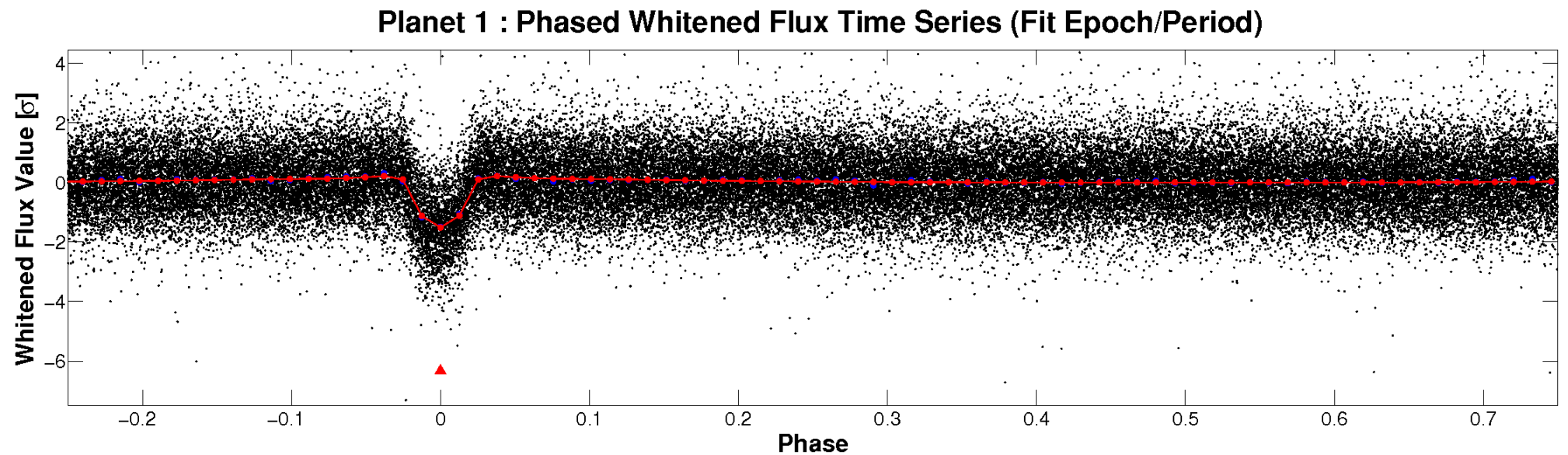
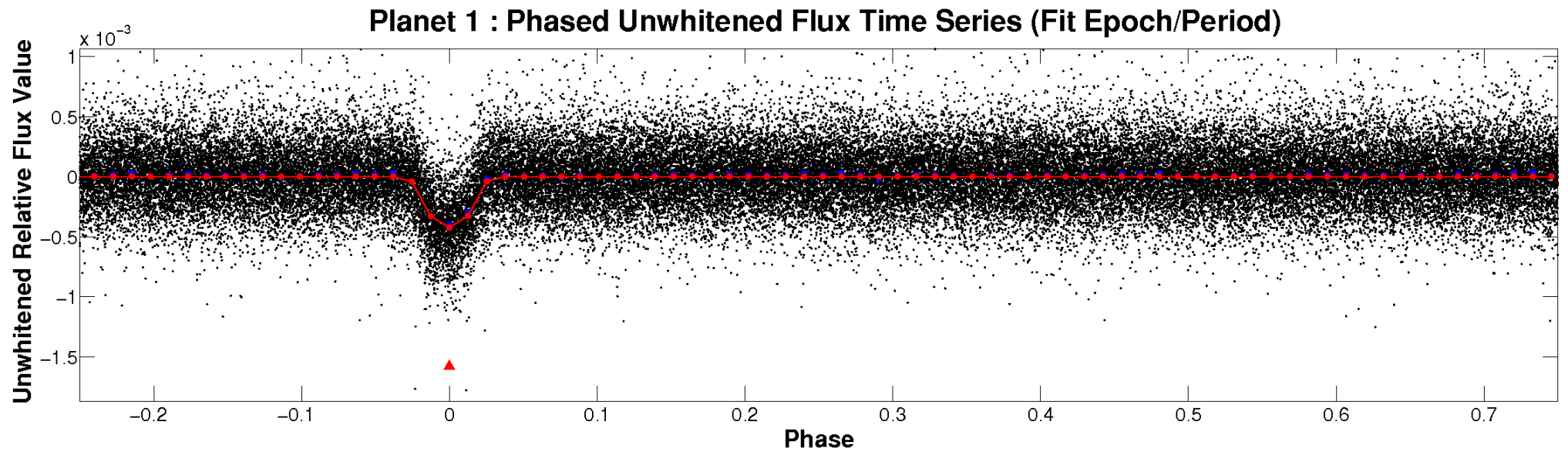


ALT Odd/Even

TCE 004454752-01

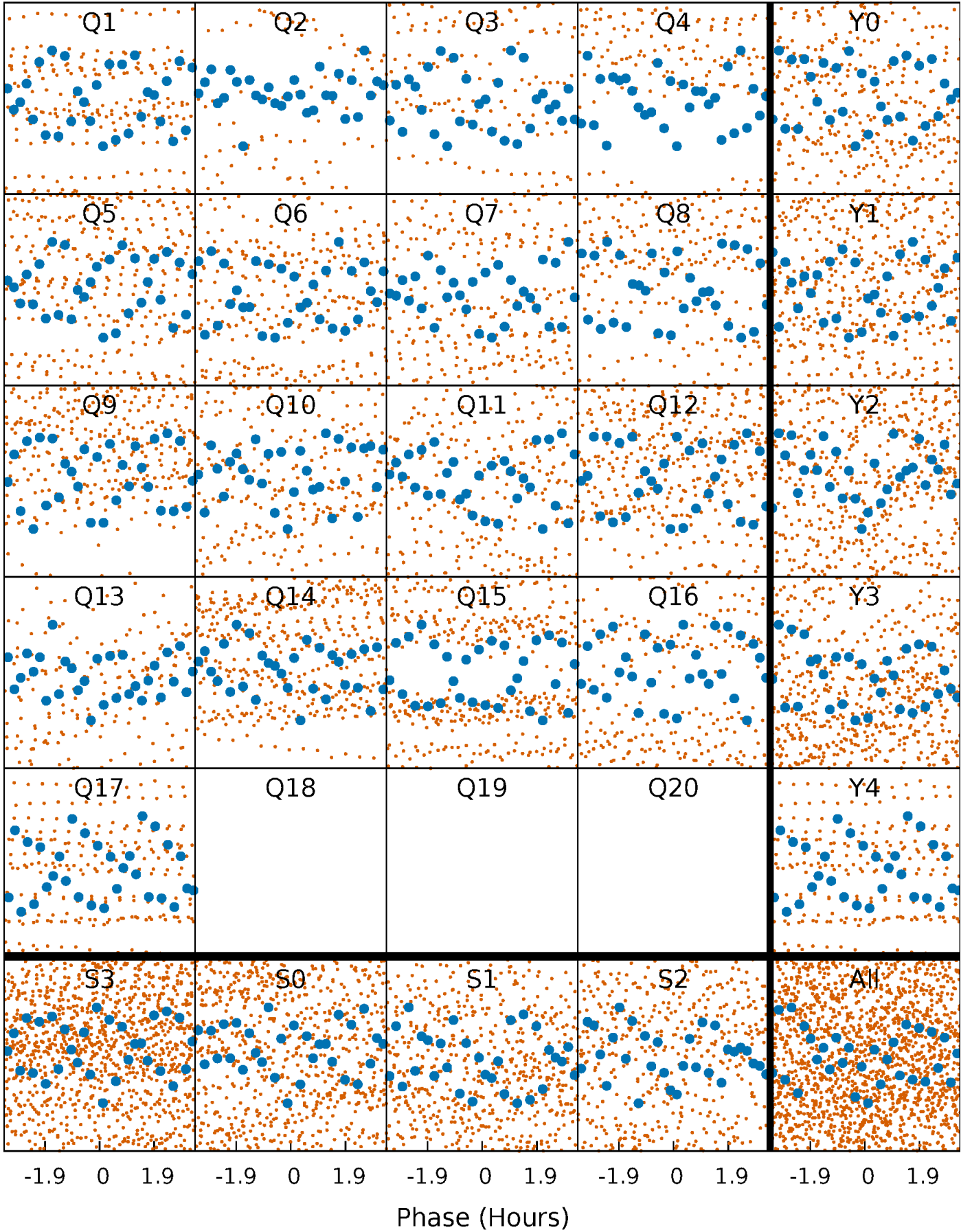


Non-Whitened Vs. Whitened Light Curve



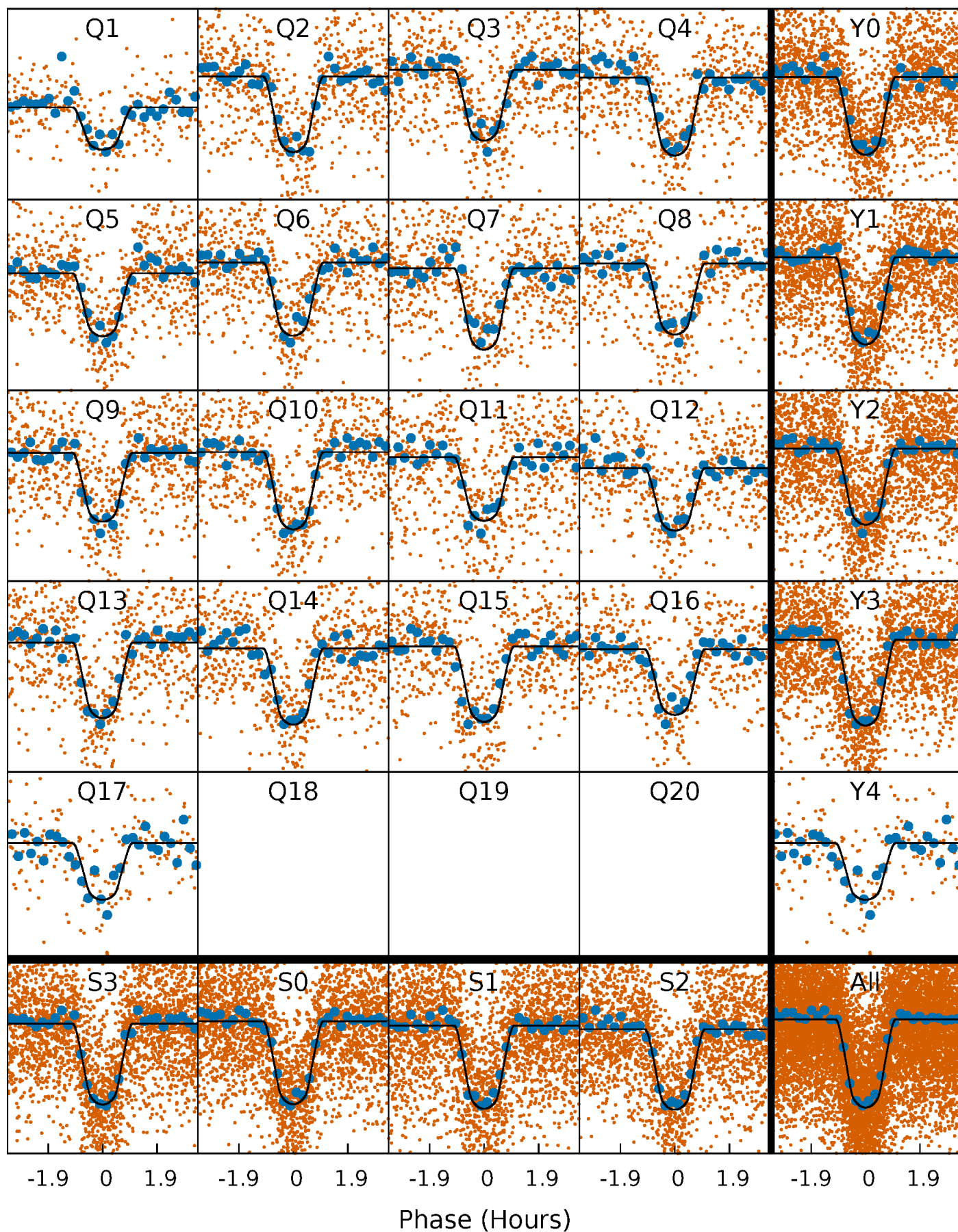
PDC Quarter-Phased Transit Curves

TCE 004454752-01 P= 1.616896 Days $T_0=132.611035$ (BKJD)



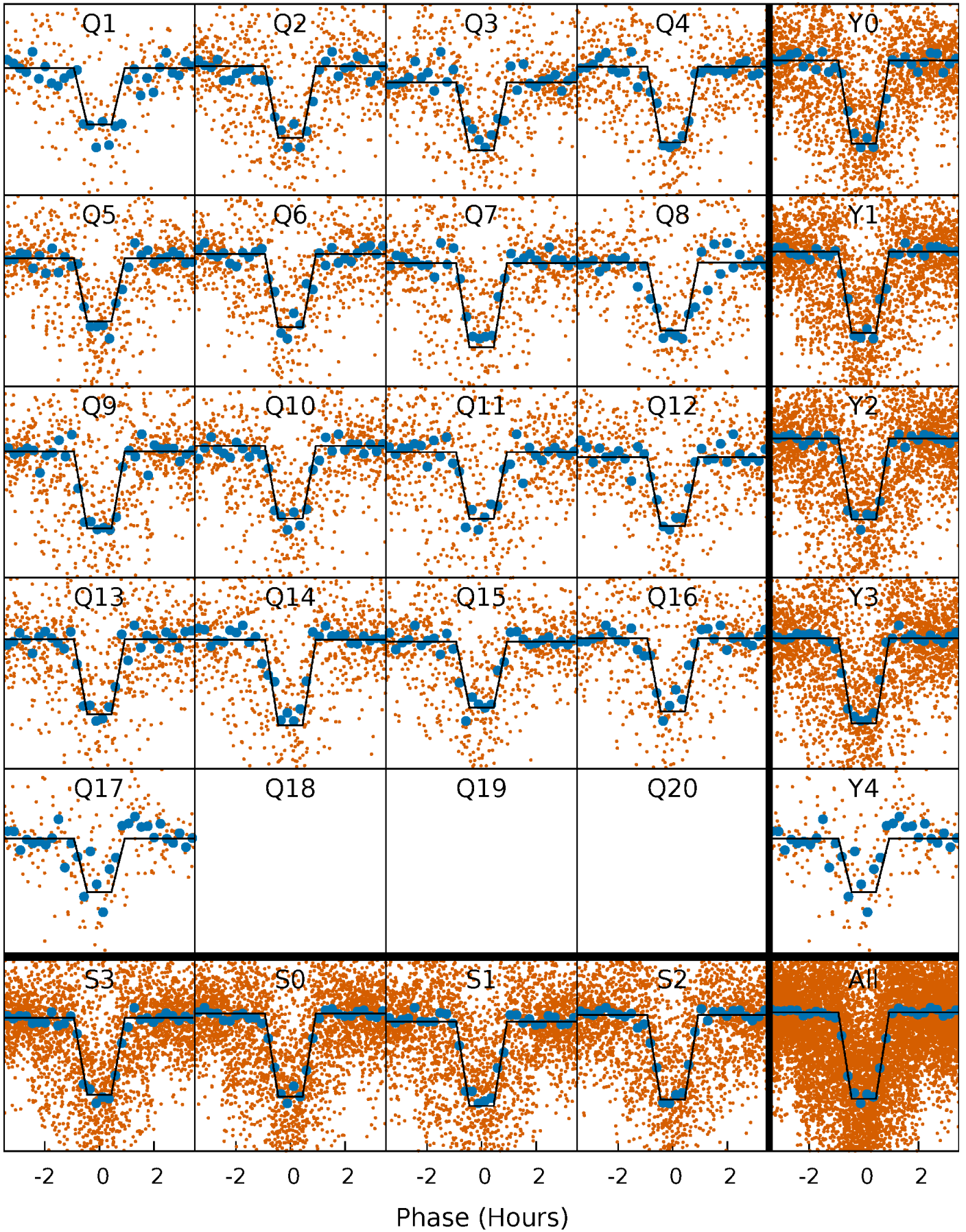
DV Quarter-Phased Transit Curves

TCE 004454752-01 P= 1.616896 Days $T_0=132.611035$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

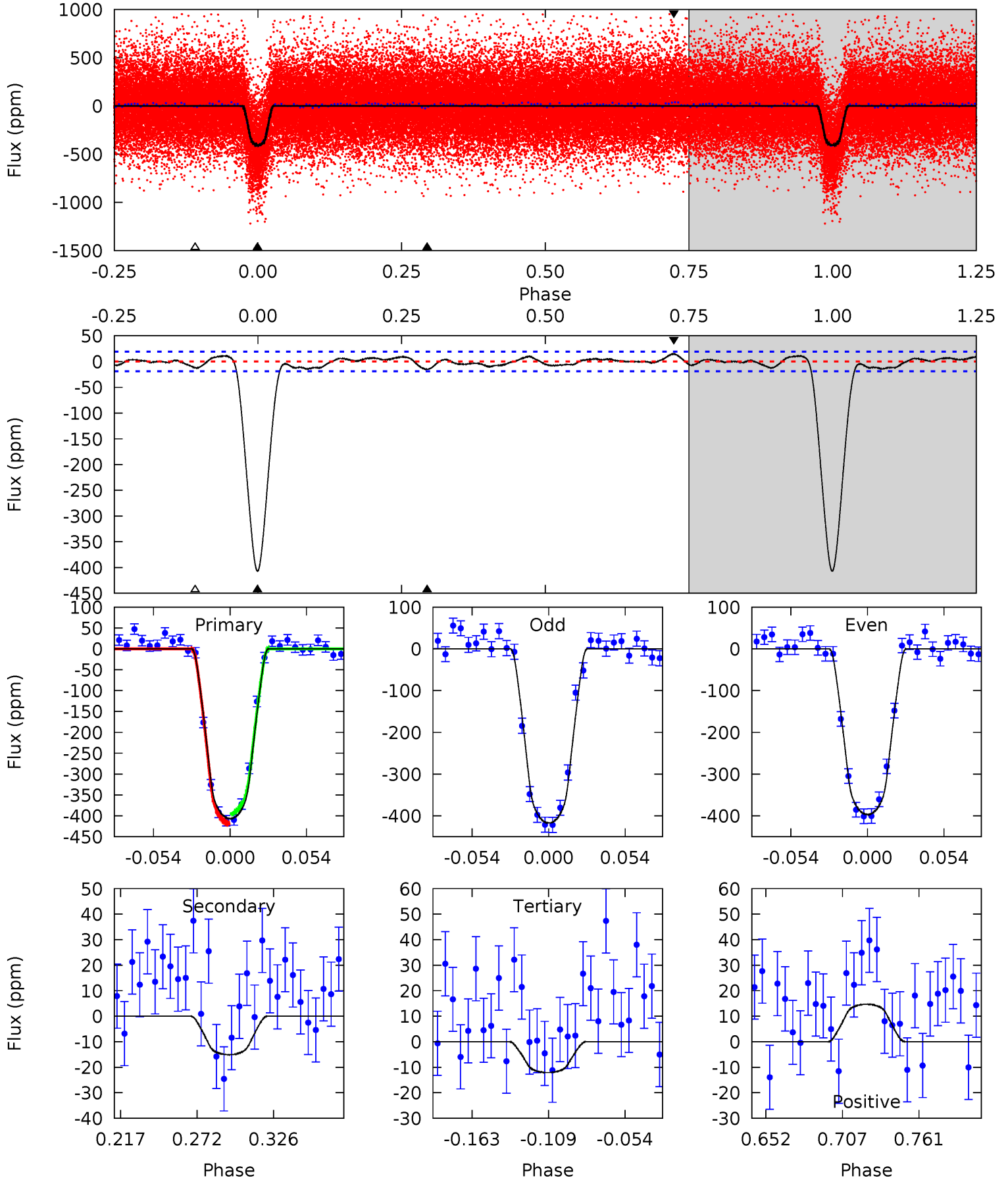
TCE 004454752-01 P= 1.616894 Days $T_0=132.610848$ (BKJD)



DV Model-Shift Uniqueness Test

004454752-01, P = 1.616896 Days, E = 130.994139 Days

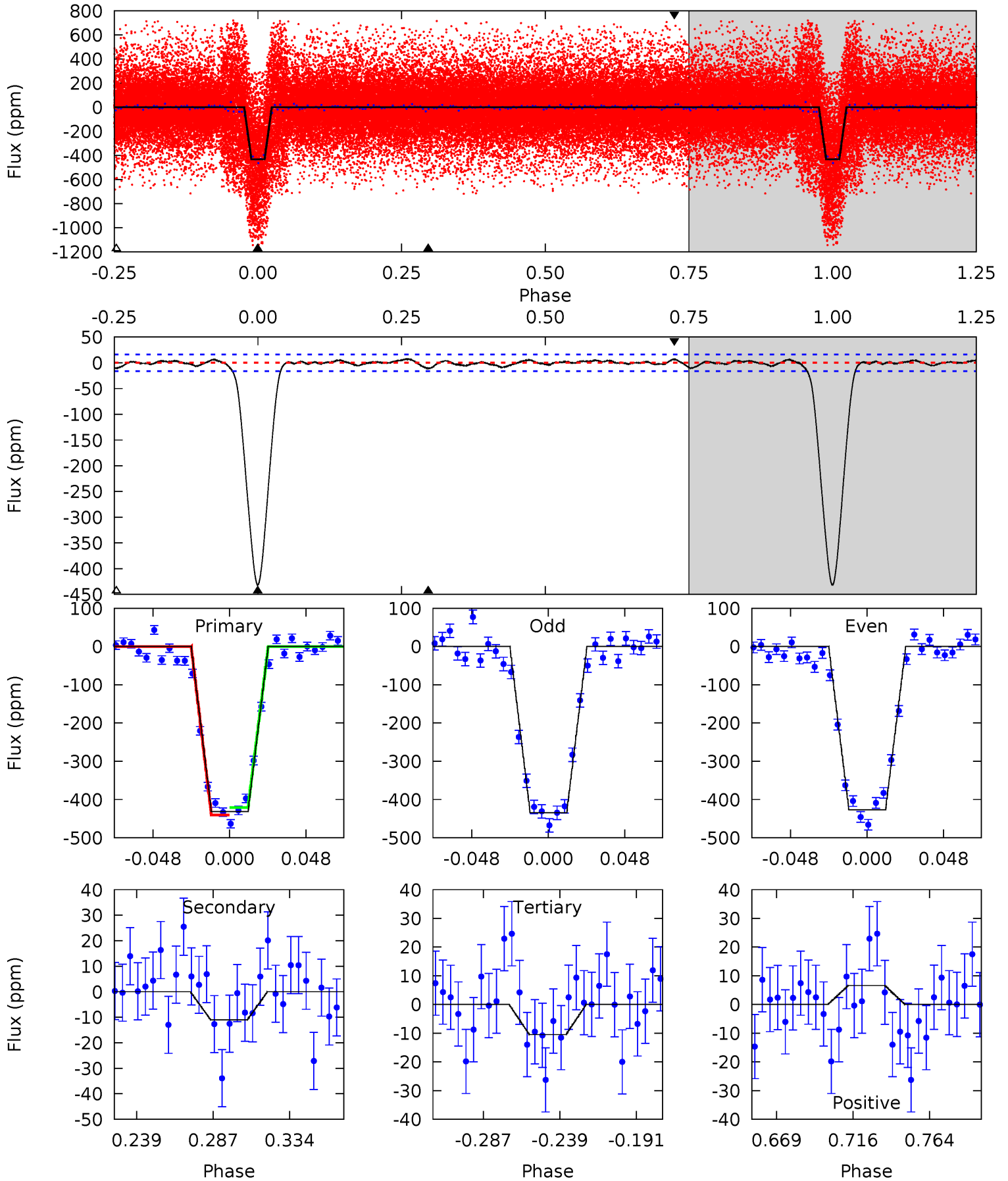
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
99.9	3.71	2.97	3.61	4.69	1.92	1.53	97.0	96.3	0.74	0.10	2.51	1.01	0.03	2.96



Alt Model-Shift Uniqueness Test

004454752-01, P = 1.616894 Days, E = 130.993954 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
126.3	3.22	3.07	1.94	4.72	1.98	0.96	123.2	124.4	0.15	1.28	1.05	1.00	0.02	2.86



Stellar Parameters For KIC 004454752

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4868^{+73}_{-65}	$3.902^{+0.069}_{-0.138}$	$0.320^{+0.150}_{-0.100}$	$1.816^{+0.409}_{-0.885}$	$0.959^{+0.116}_{-0.139}$	$0.226^{+1.706}_{-0.097}$
	+1%/-1%	+2%/-4%	+47%/-31%	+23%/-49%	+12%/-14%	+757%/-43%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 004454752-01 / KOI 0496.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-15 ± 4	$4.87^{+0.73}_{-0.70}$	2539^{+131}_{-96}	-2271^{+4523}_{-282}	$0.244^{+0.111}_{-0.083}$
Alt.	-11 ± 3	$4.37^{+0.73}_{-0.73}$	2548^{+118}_{-98}	-2377^{+4622}_{-241}	$0.217^{+0.137}_{-0.079}$

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 $A_{obs} \gg 1.0$

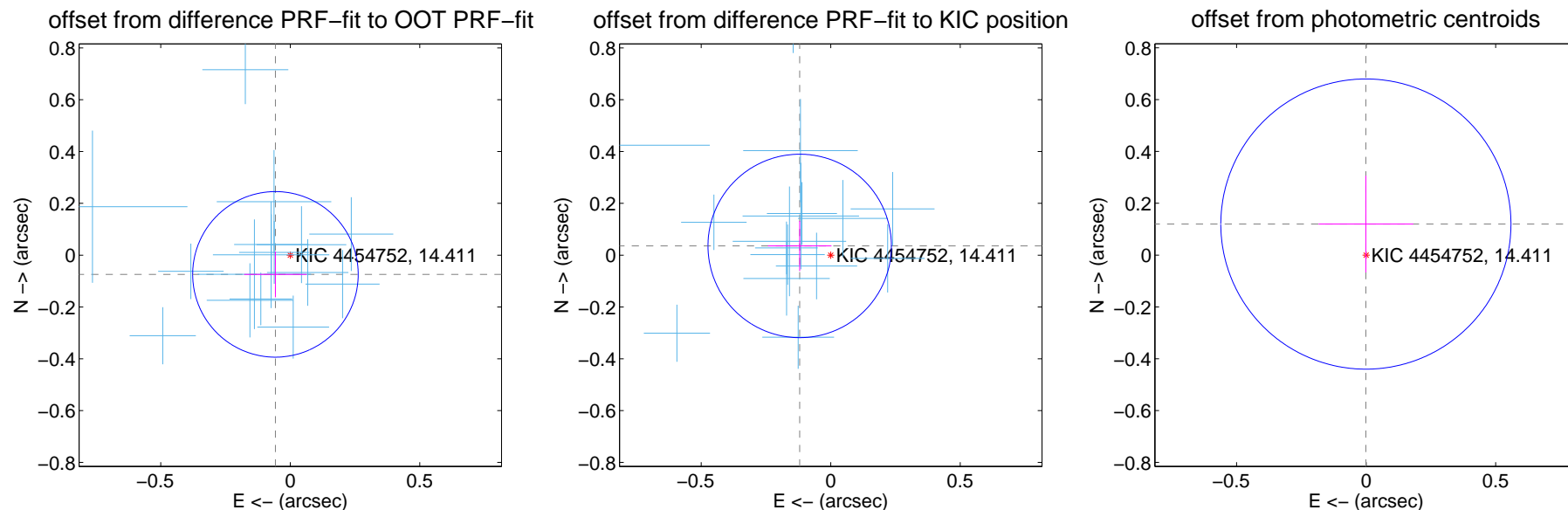
DV Centroid Data

Supplemental centroid analysis for 004454752-01. Kepler magnitude: 14.41. Transit SNR 64.05

There are 17 quarters with good PRF difference image offsets

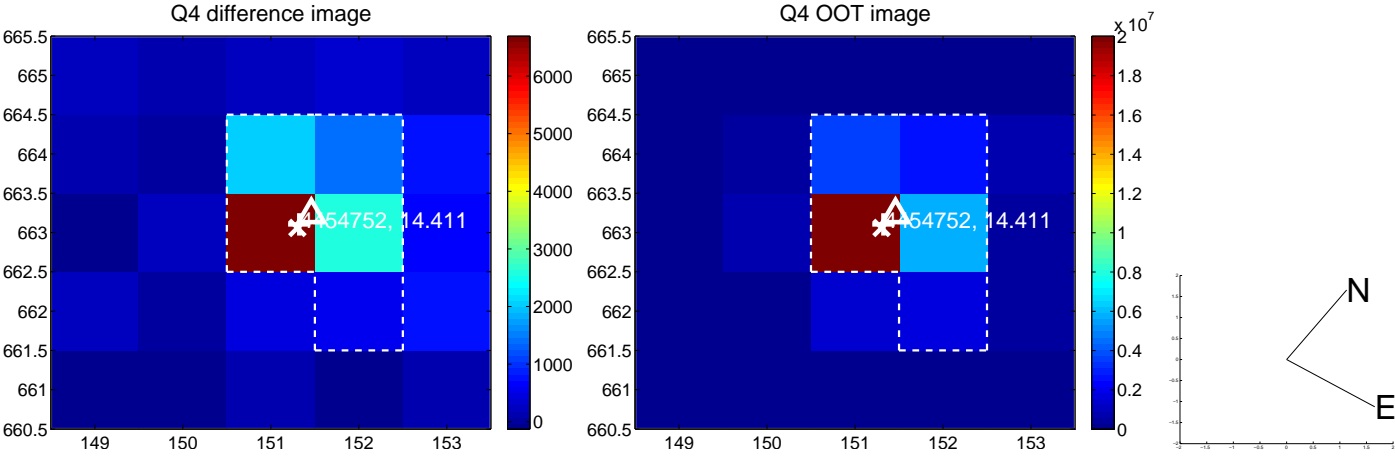
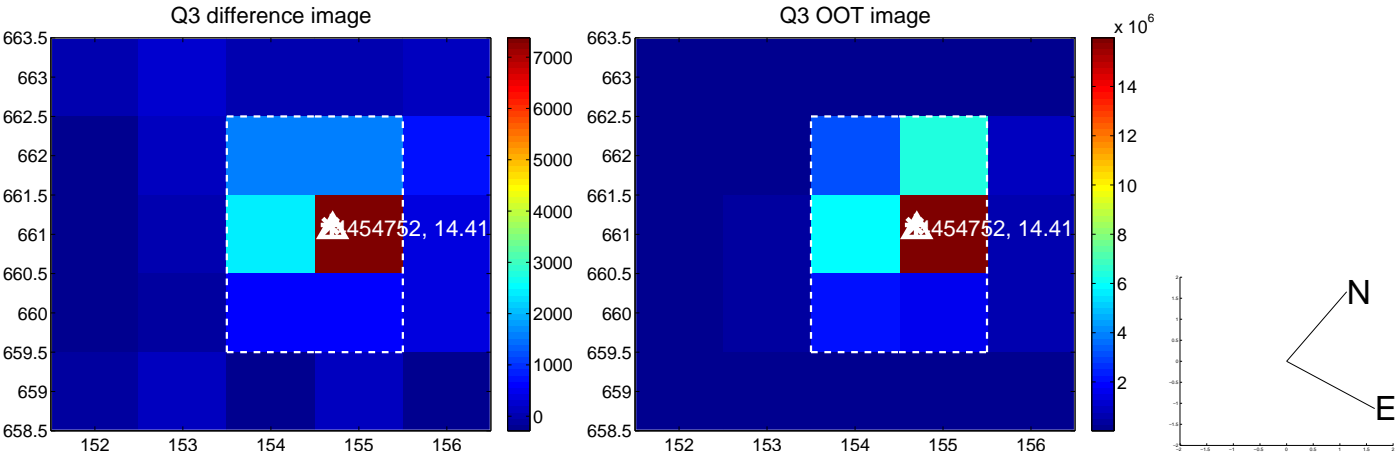
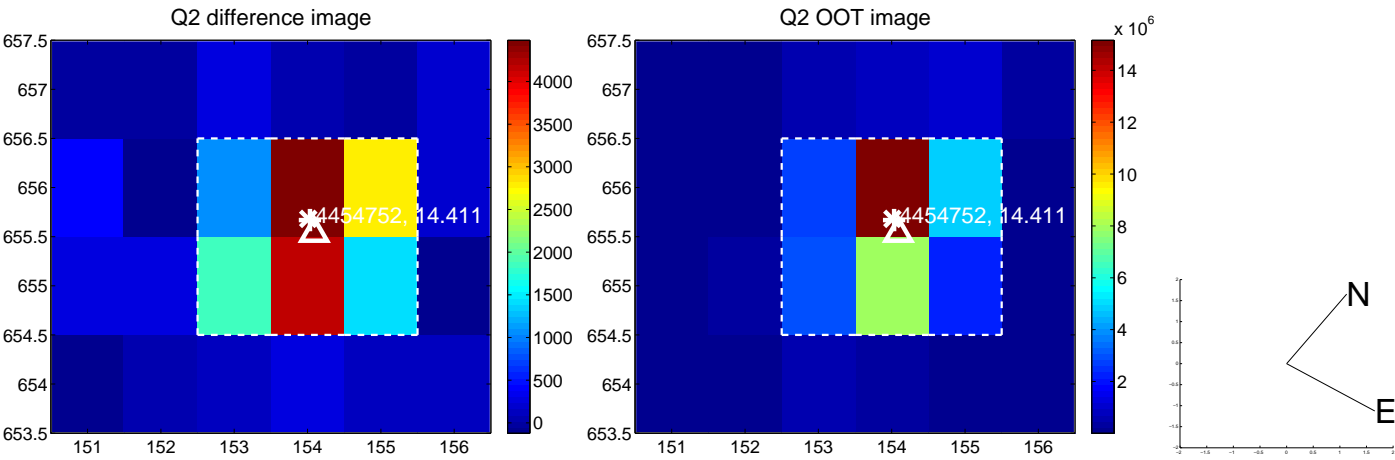
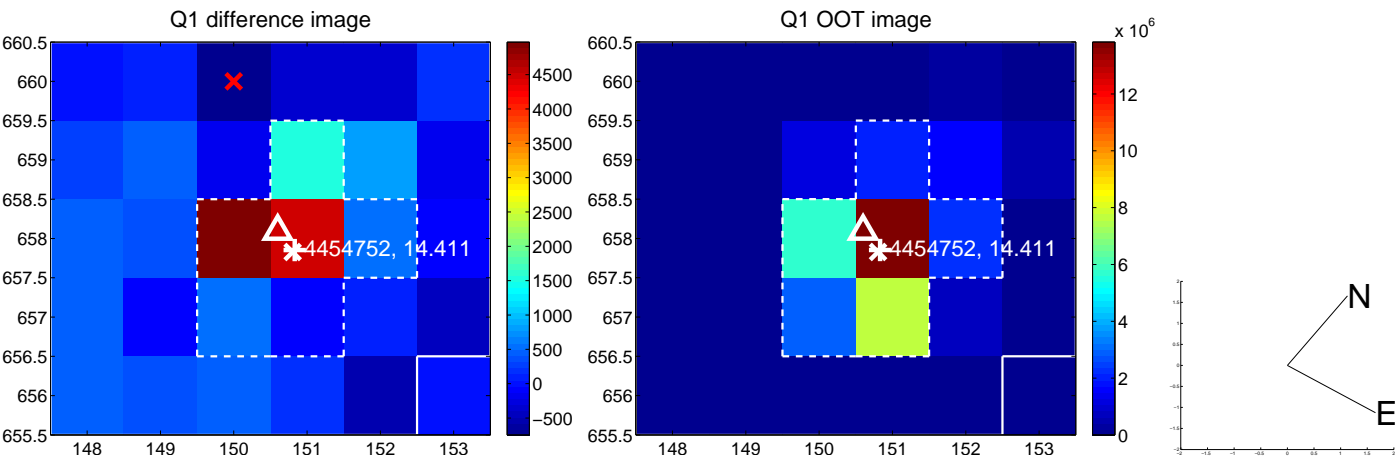
The direct PRF centroid is offset from the target star catalog position by about 0.25 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.094 ± 0.107	0.88	0.057 ± 0.121	-0.074 ± 0.088
PRF-fit source offset from KIC position	0.125 ± 0.118	1.06	0.120 ± 0.123	0.036 ± 0.097
photometric centroid source offset	0.12 ± 0.19	0.64	0.00 ± 0.18	0.12 ± 0.19

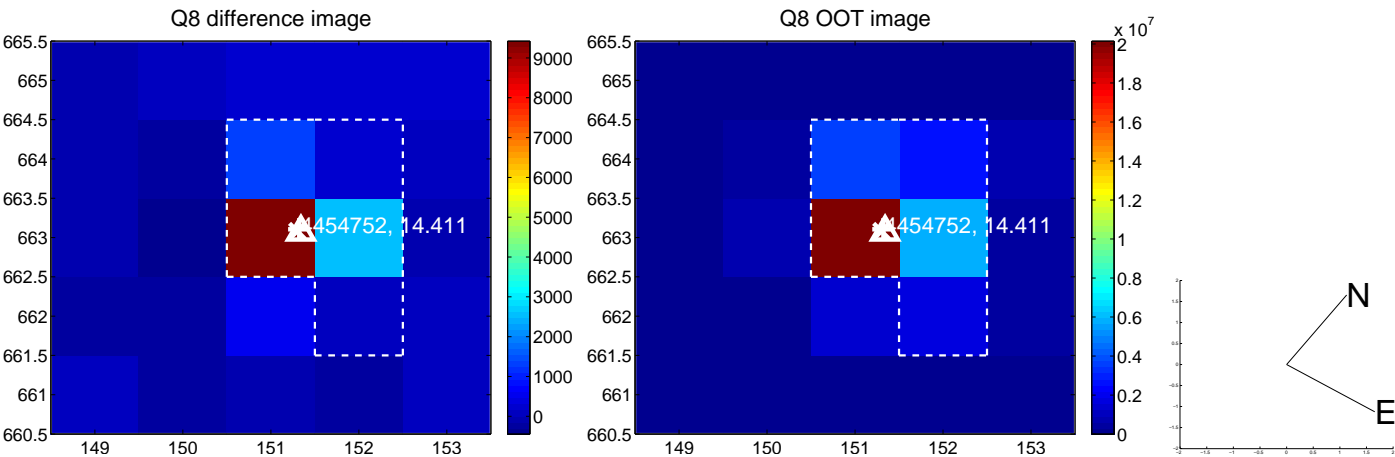
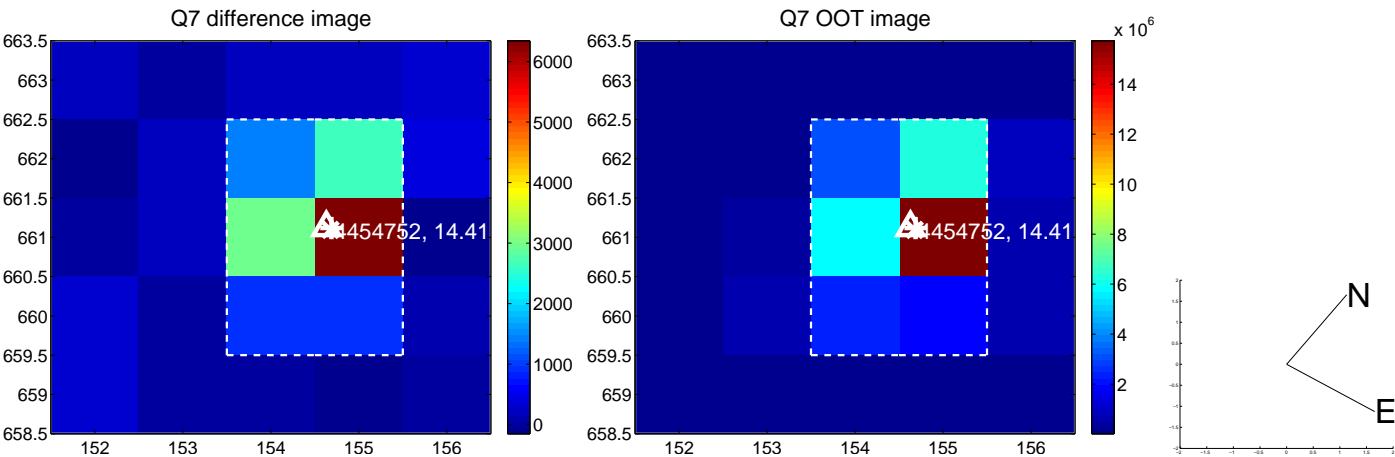
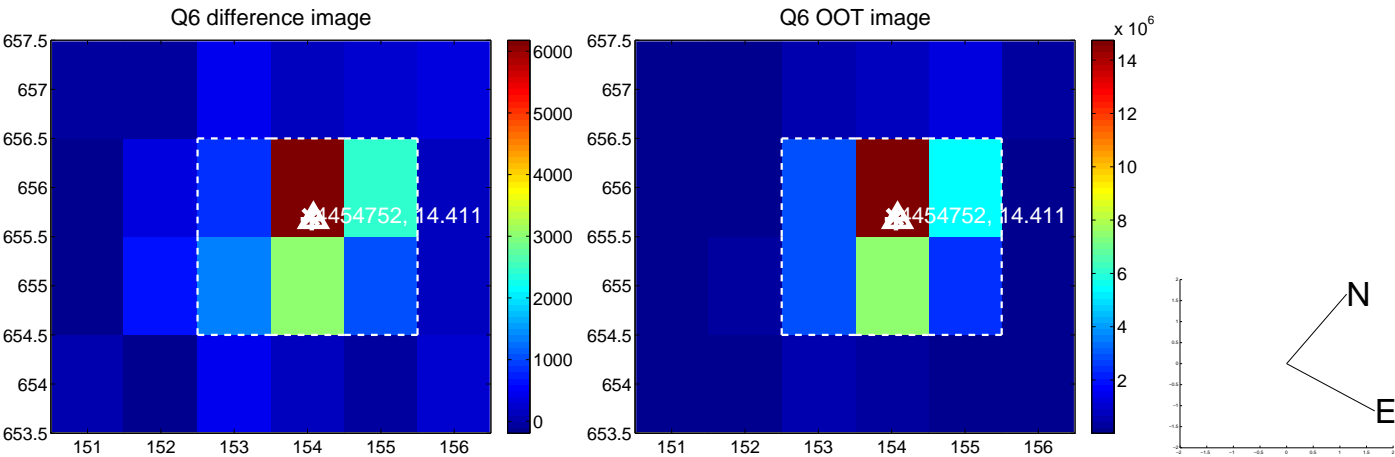
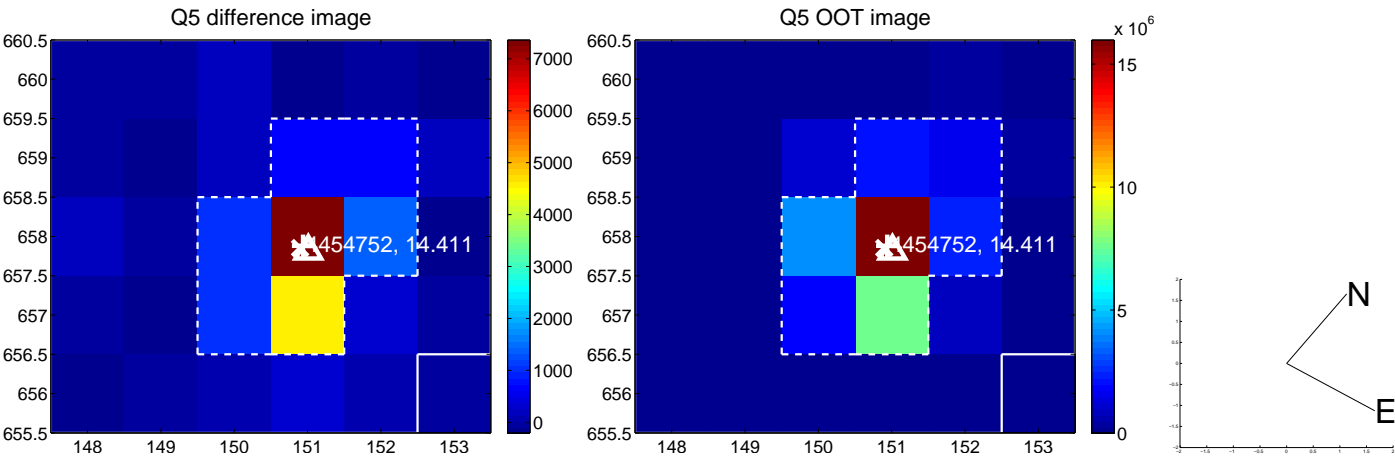


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

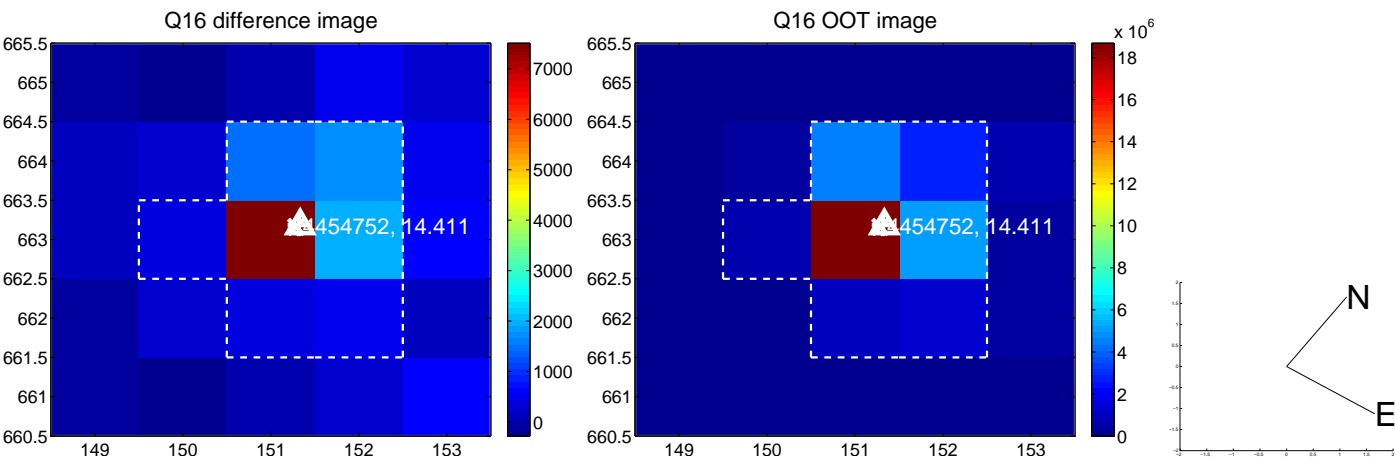
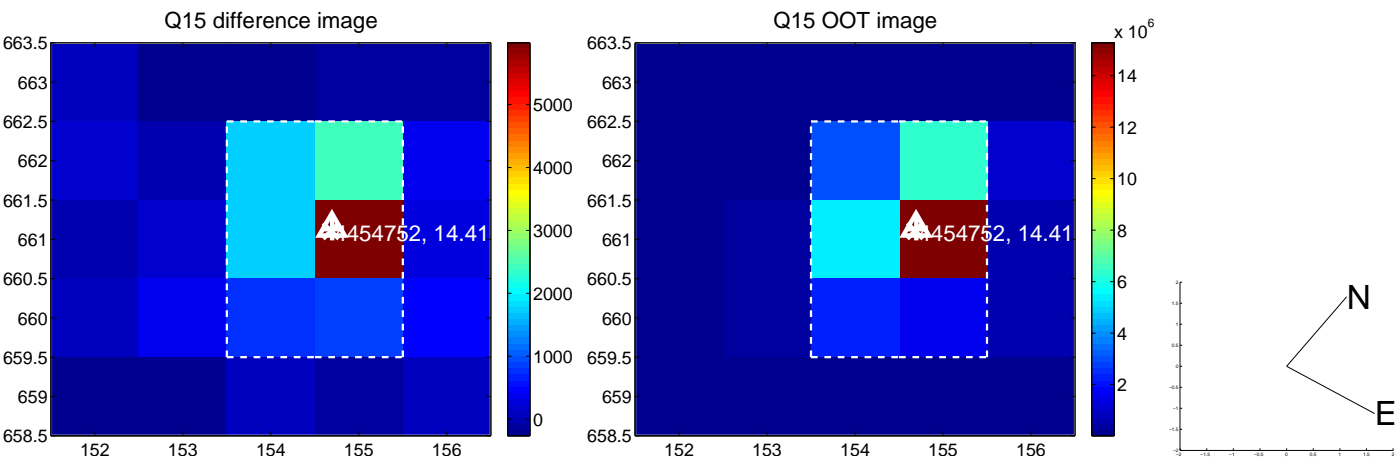
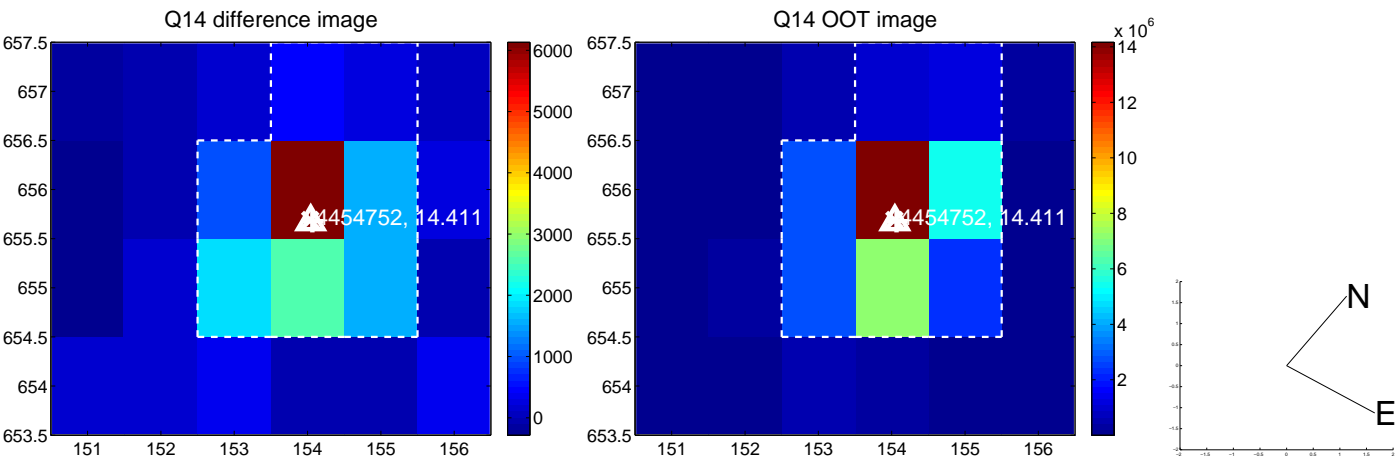
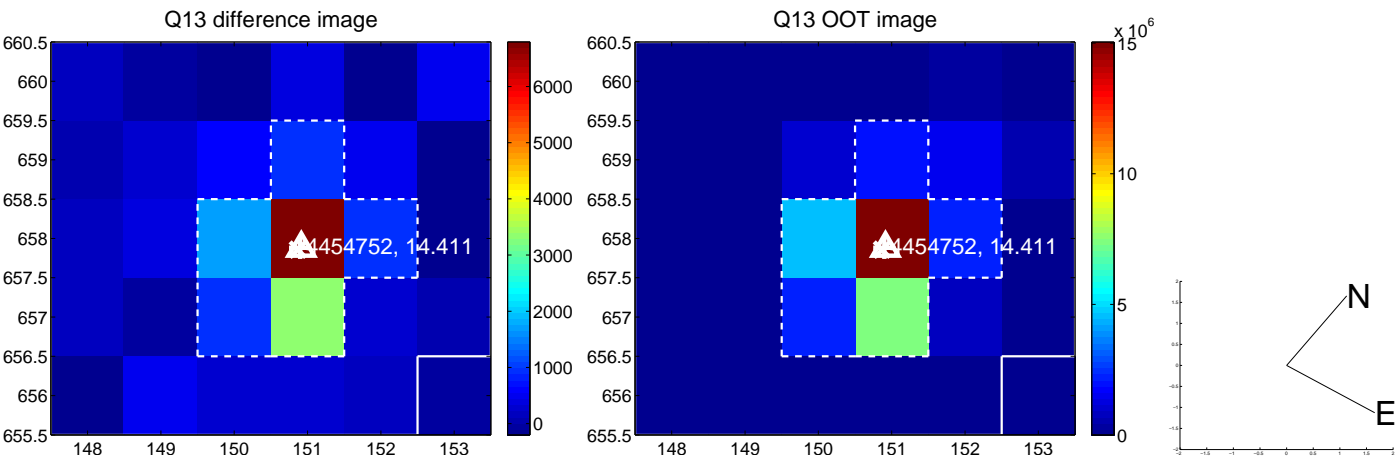
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



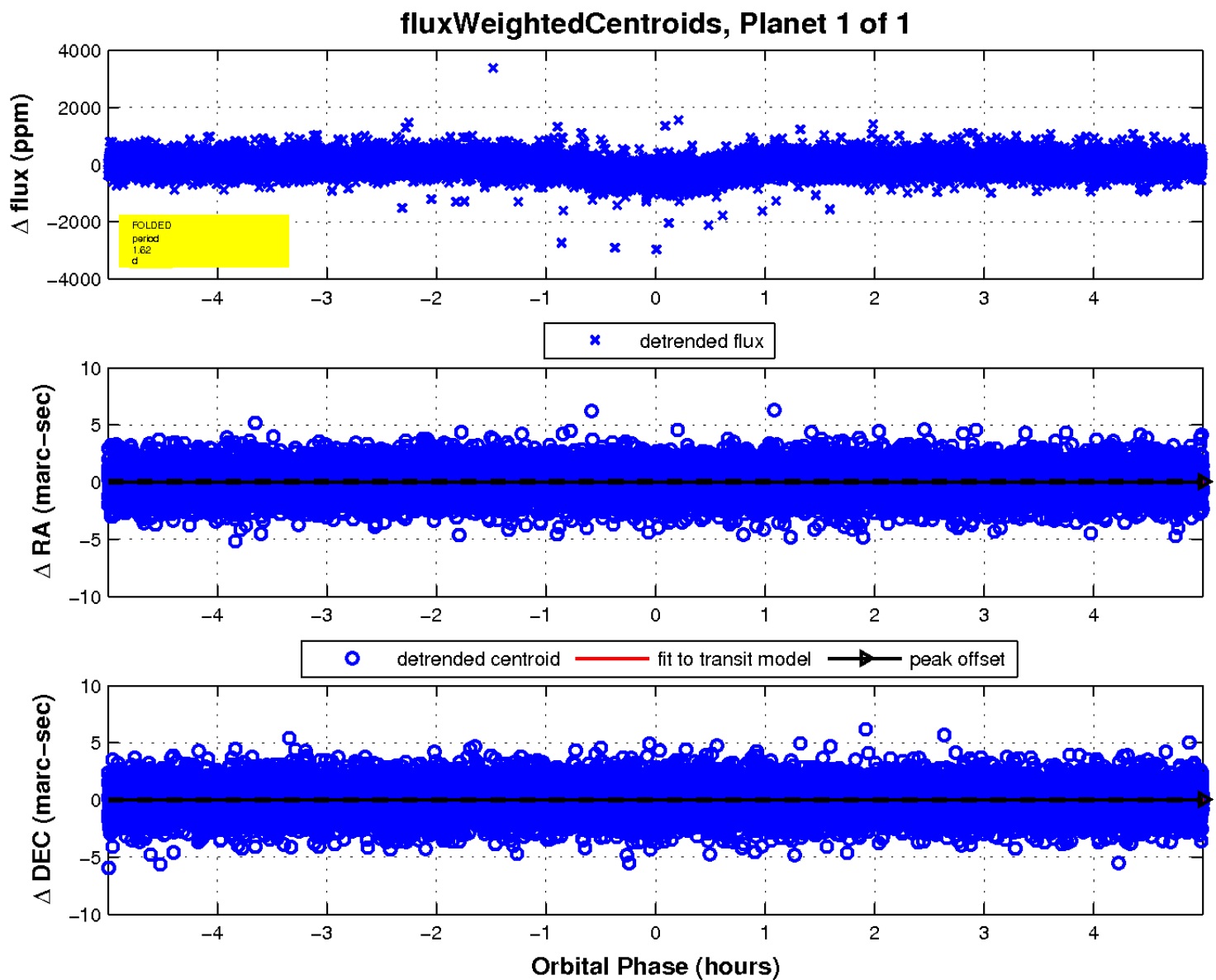
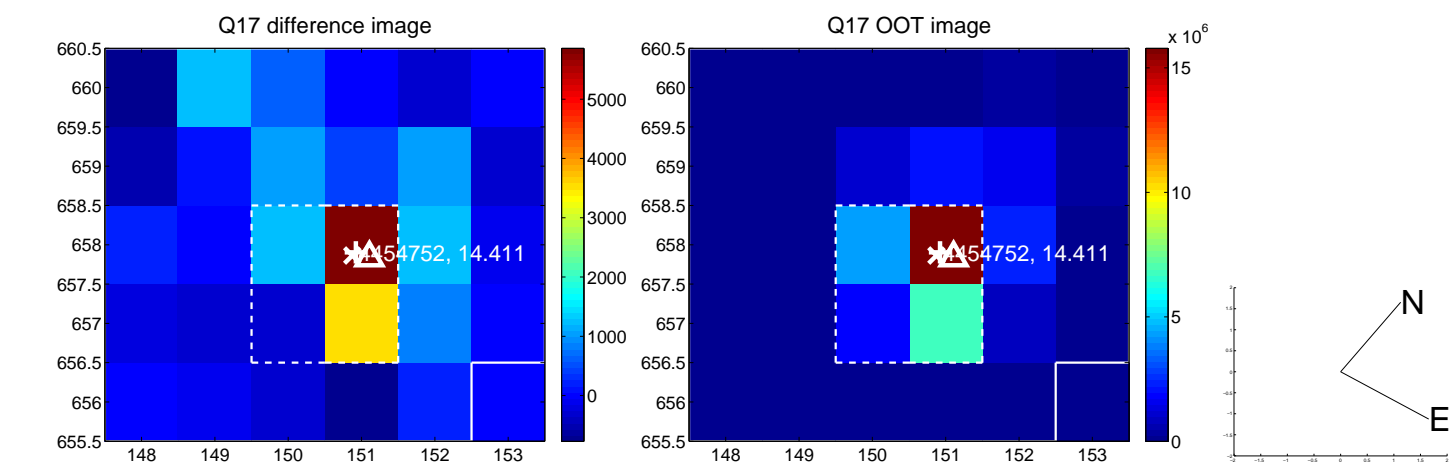
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

