

KIC 010153555

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})
010153555-01	OBS	No	3.542501	134.390847	13.0	25.824	9.1	9.3	2.11	7868	0.79	5019.67

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010153555-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_UNRESOLVED_OFFSET

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

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

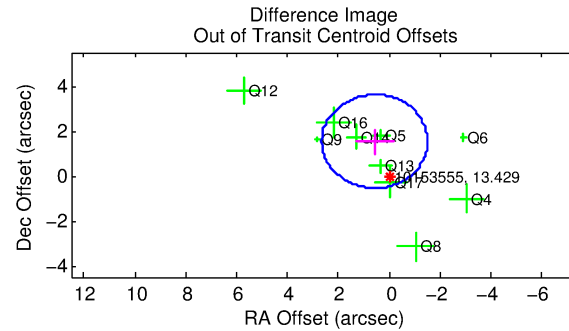
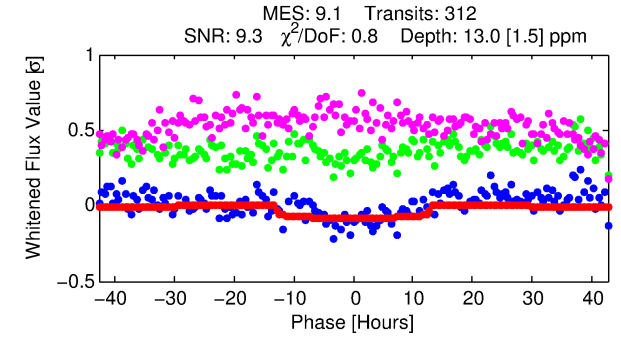
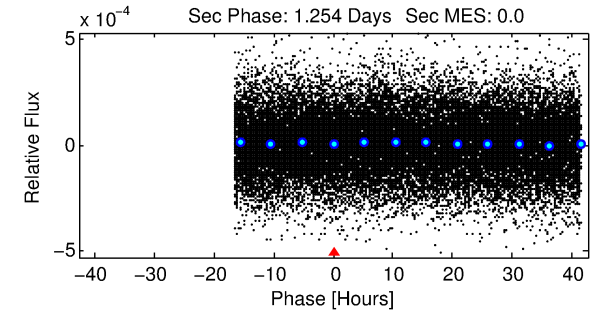
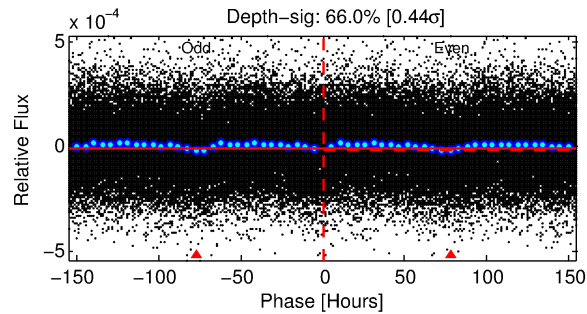
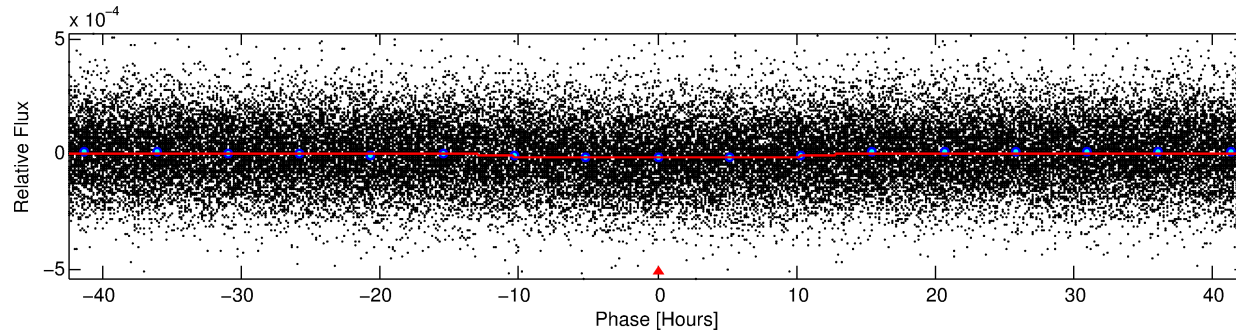
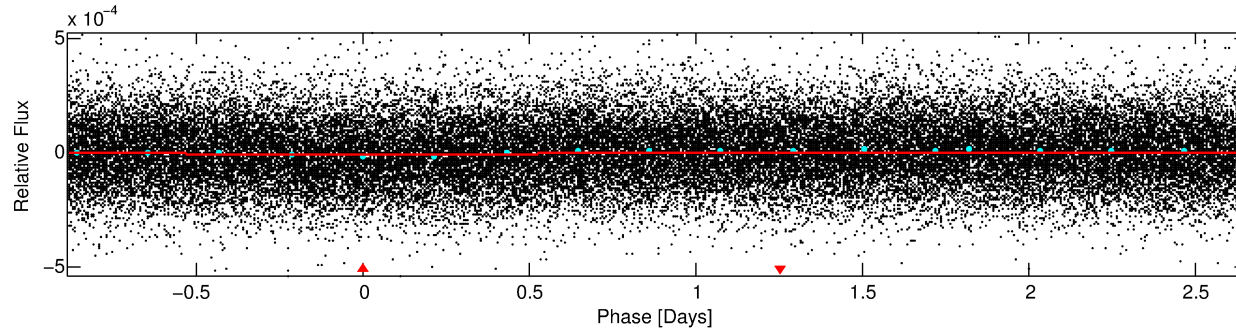
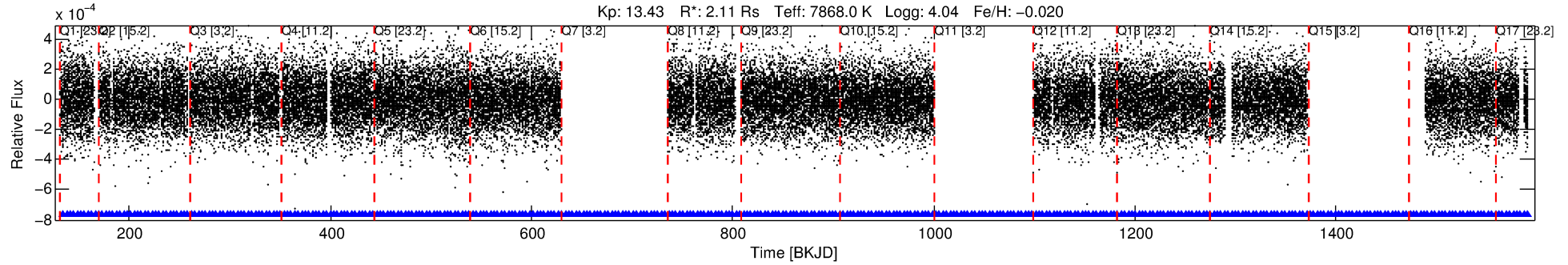
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010153555-01

No Significant Match Found

DV One-Page Summary

KIC: 10153555 Candidate: 1 of 1 Period: 3.543 d



DV Fit Results:

Period = 3.54250 [0.00011] d
Epoch = 134.3908 [0.0203] BKJD
Rp/R* = 0.0034 [0.0031]
a/R* = 1.19 [1.90]
b = 0.46 [9.68]
Seff = 5019.67 [1783.18]
Teq = 2146 [191] K
Rp = 0.79 [0.74] Re
a = 0.0553 [0.0116] AU
Ag = N/A
Teffp = N/A

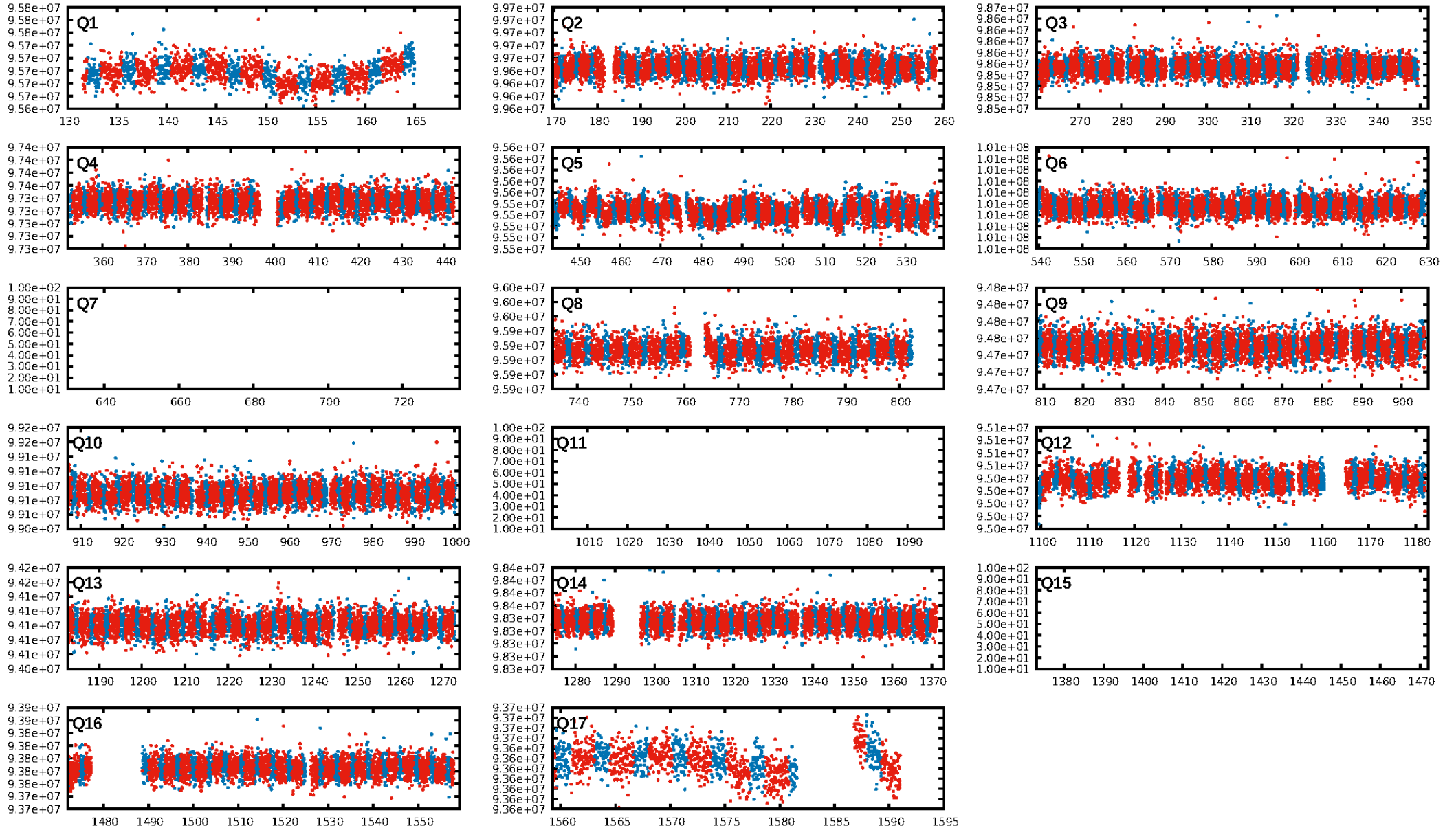
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [295/295]
GhostDiagnostic-chr: 1.38
Centroid-sig: 97.9%
Centroid-so: 0.064 arcsec [0.05 σ]
OotOffset-rm: 1.638 arcsec [2.36 σ]
KicOffset-rm: 1.618 arcsec [2.17 σ]
OotOffset-st: 2/0/4/4 [10]
KicOffset-st: 2/0/4/4 [10]
DiffImageQuality-fgm: 0.40 [4/10]
DiffImageOverlap-fno: 1.00 [14/14]

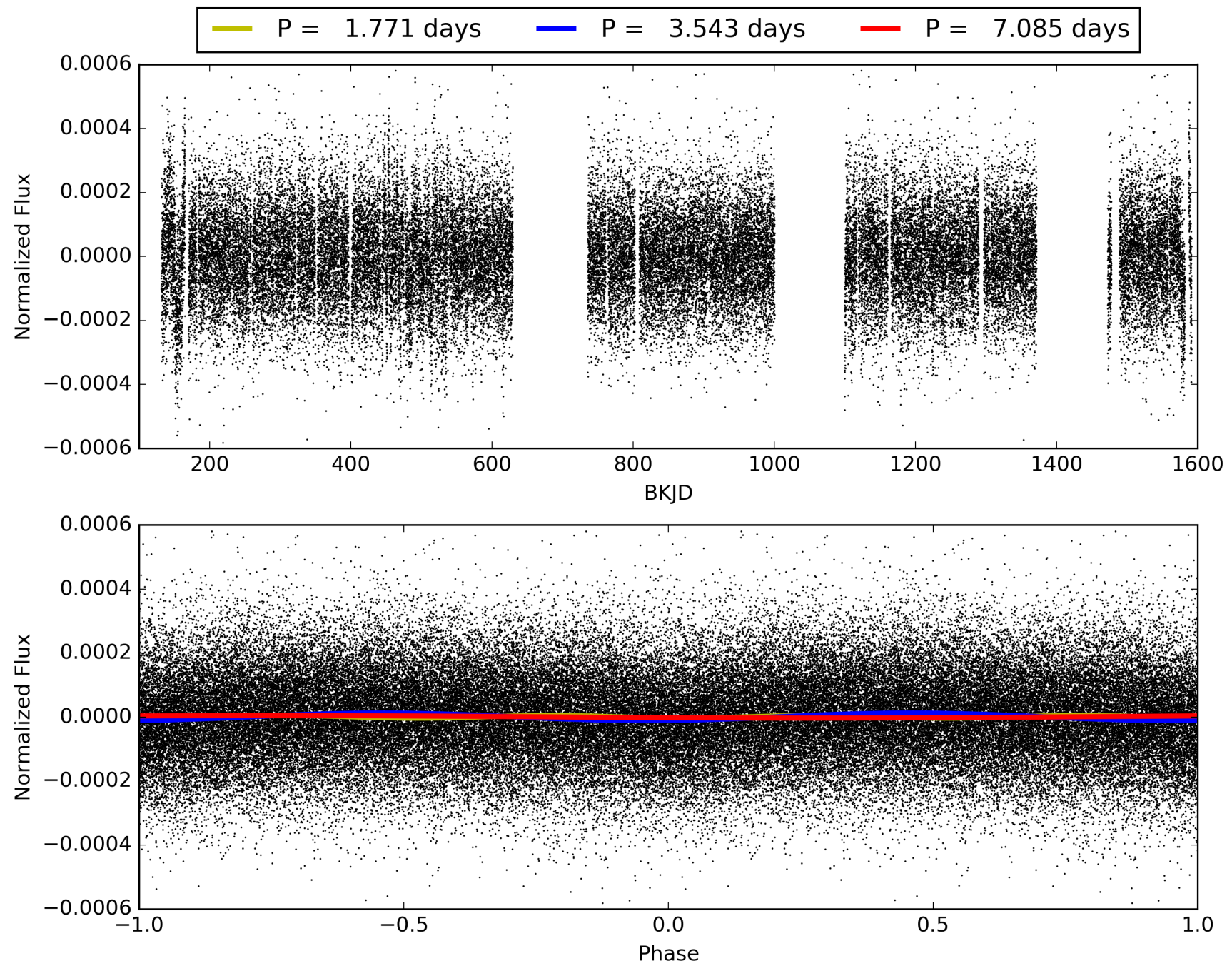
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 21:10:12 Z

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

TCE 010153555-01, PDC Light Curves

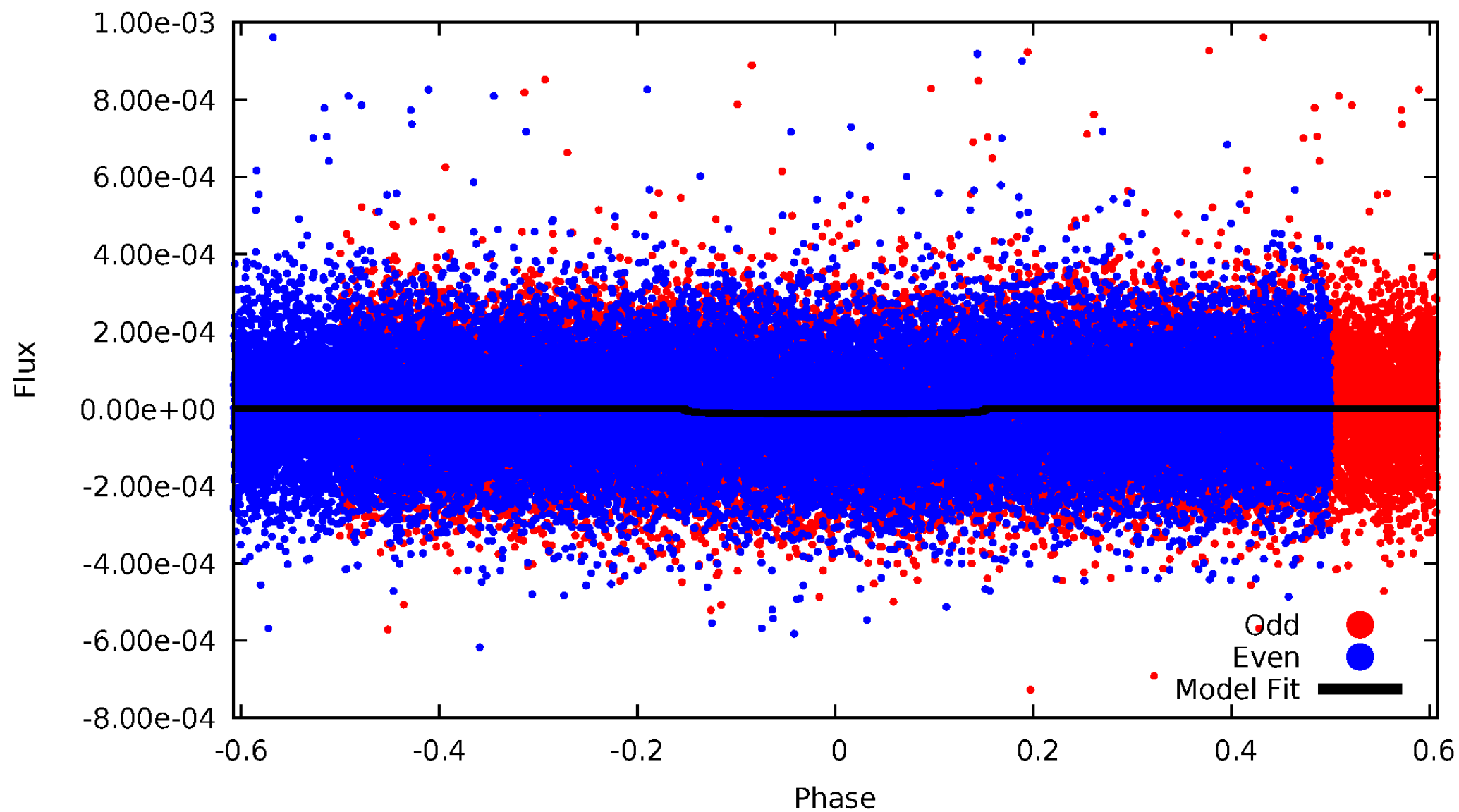


TCE 010153555-01



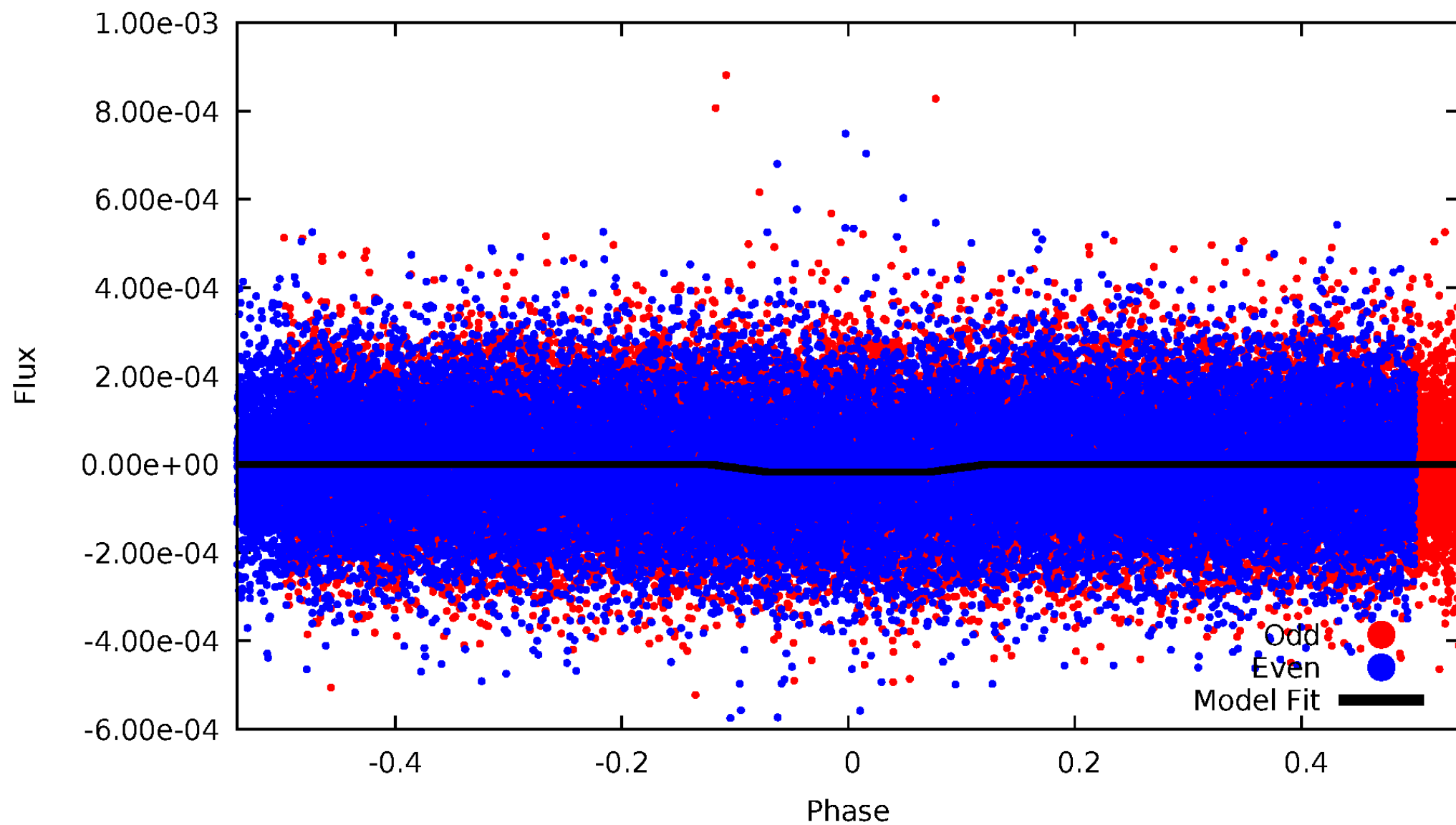
DV Odd/Even

TCE 010153555-01



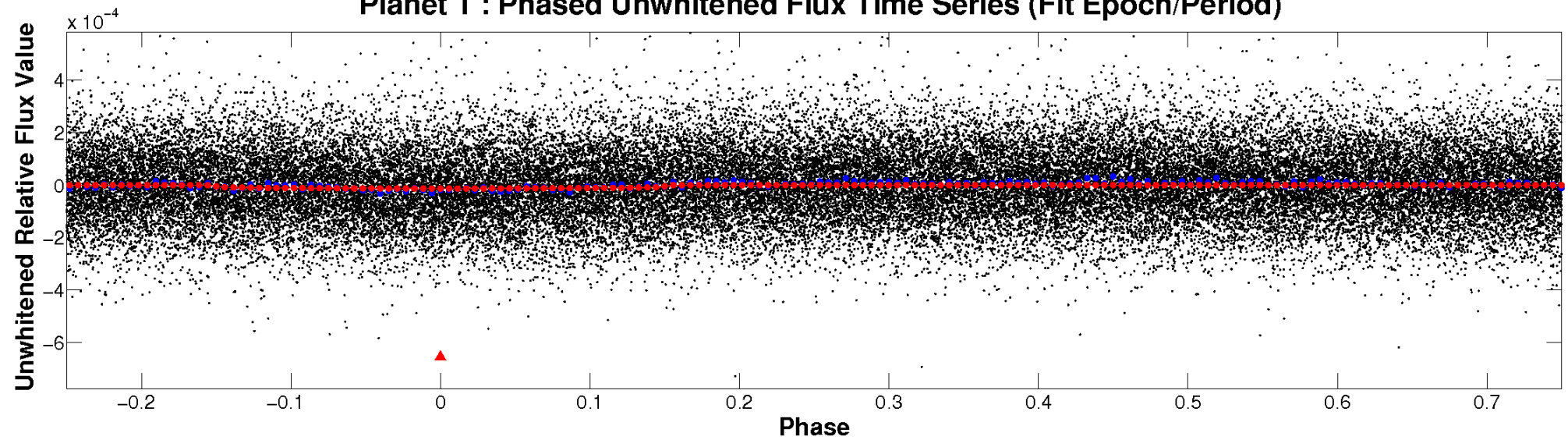
ALT Odd/Even

TCE 010153555-01

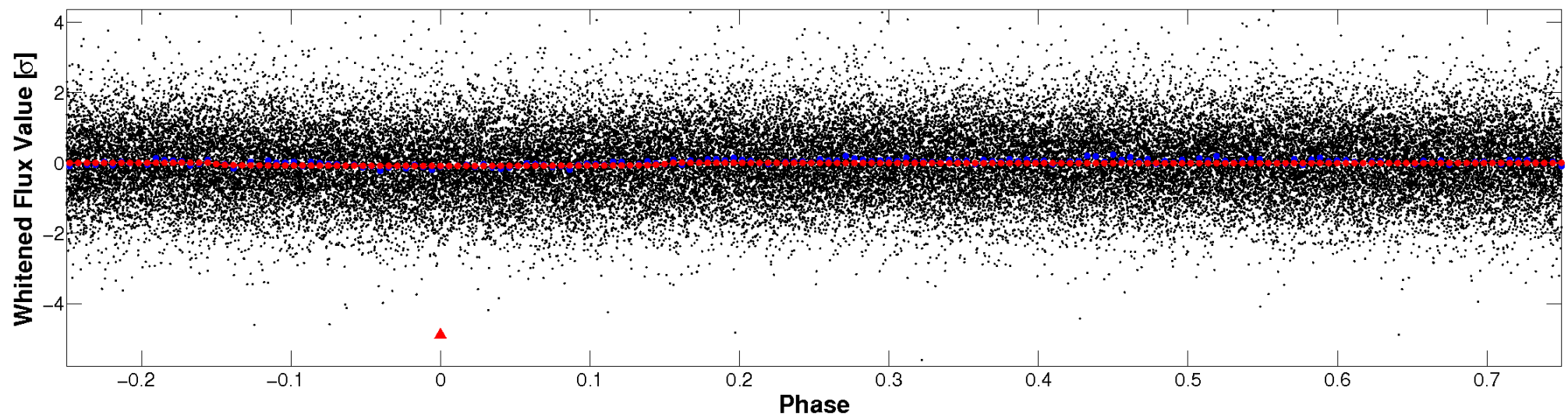


Non-Whitened Vs. Whitened Light Curve

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

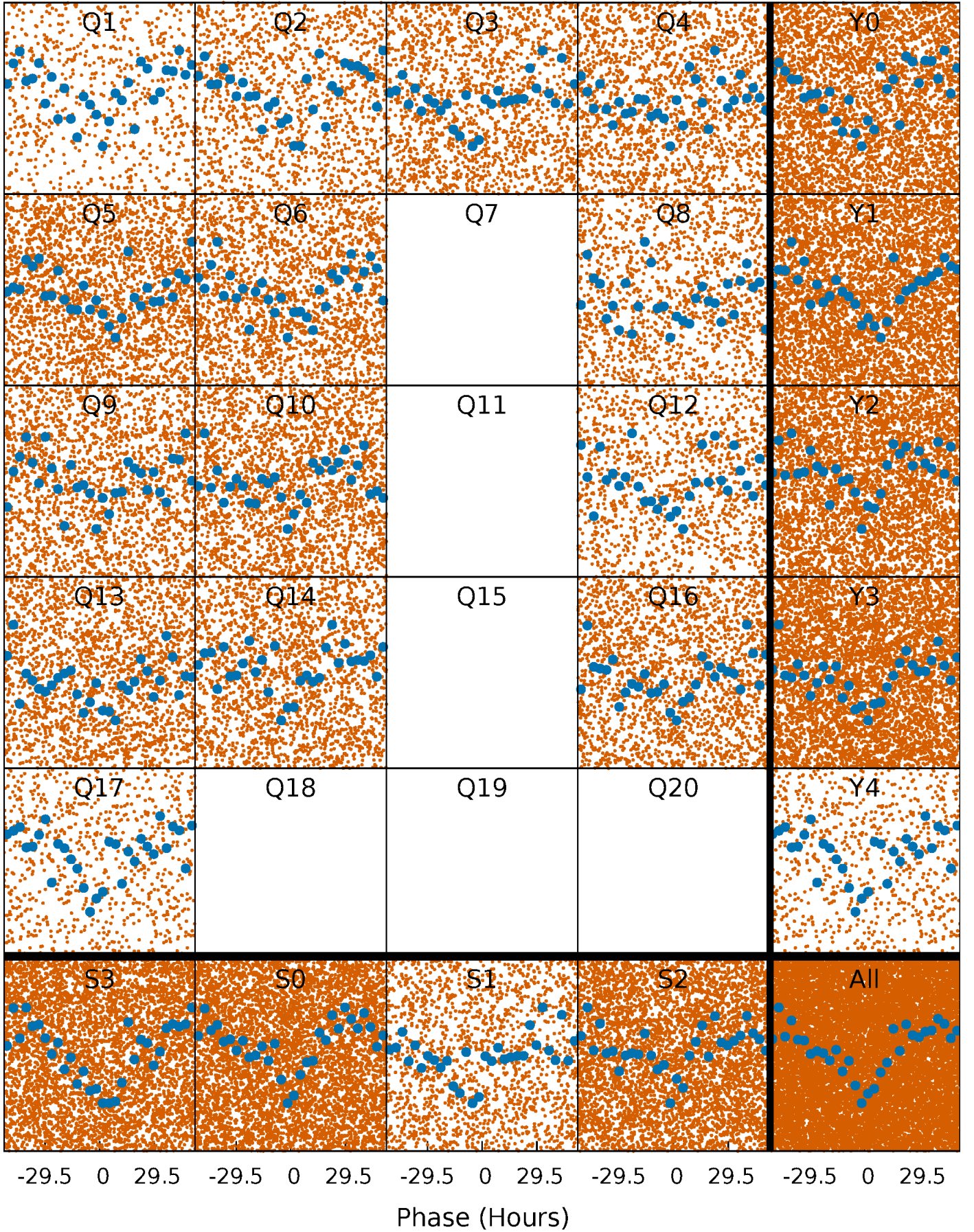


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



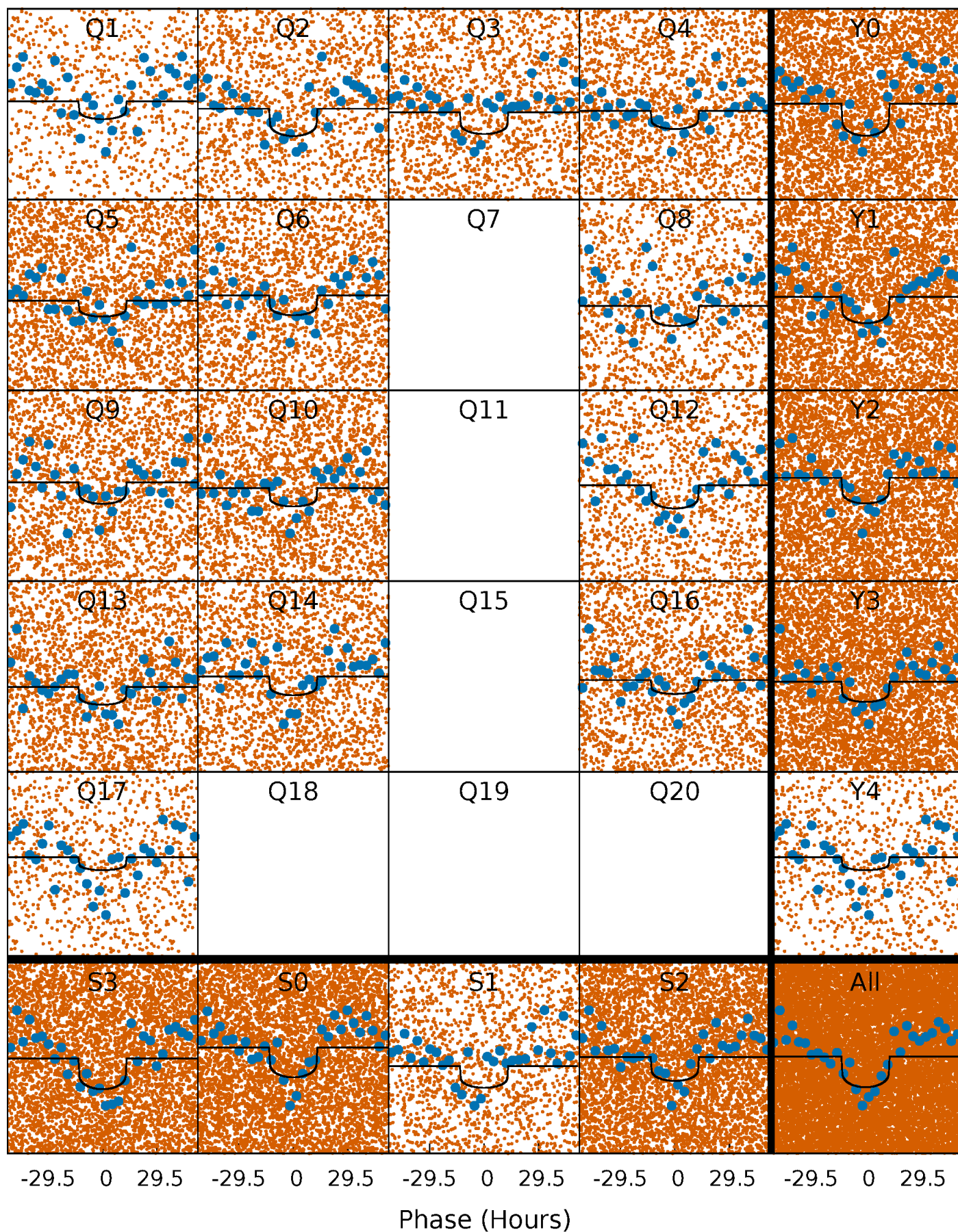
PDC Quarter-Phased Transit Curves

TCE 010153555-01 P= 3.542501 Days $T_0=134.390848$ (BKJD)



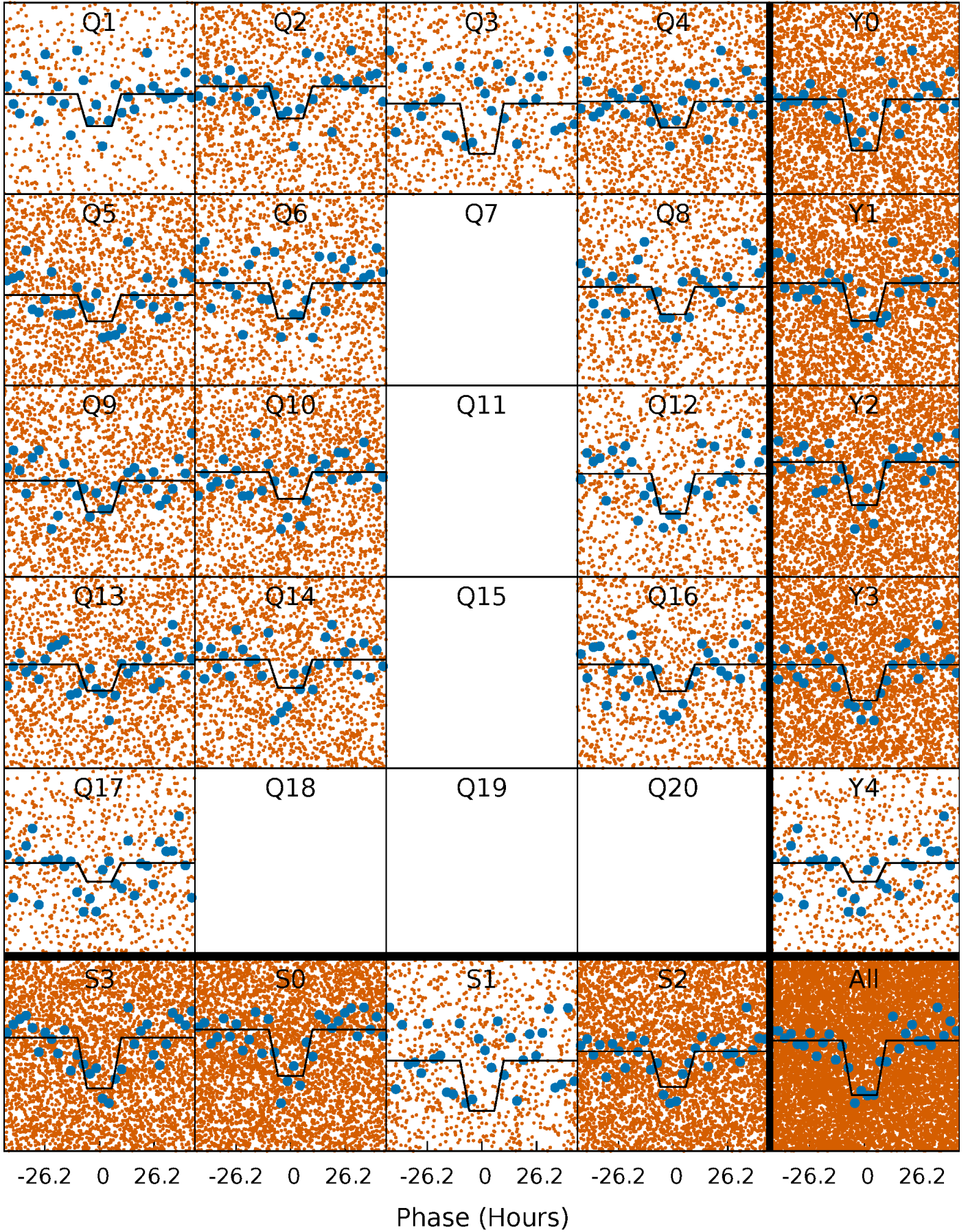
DV Quarter-Phased Transit Curves

TCE 010153555-01 P= 3.542501 Days $T_0=134.390848$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

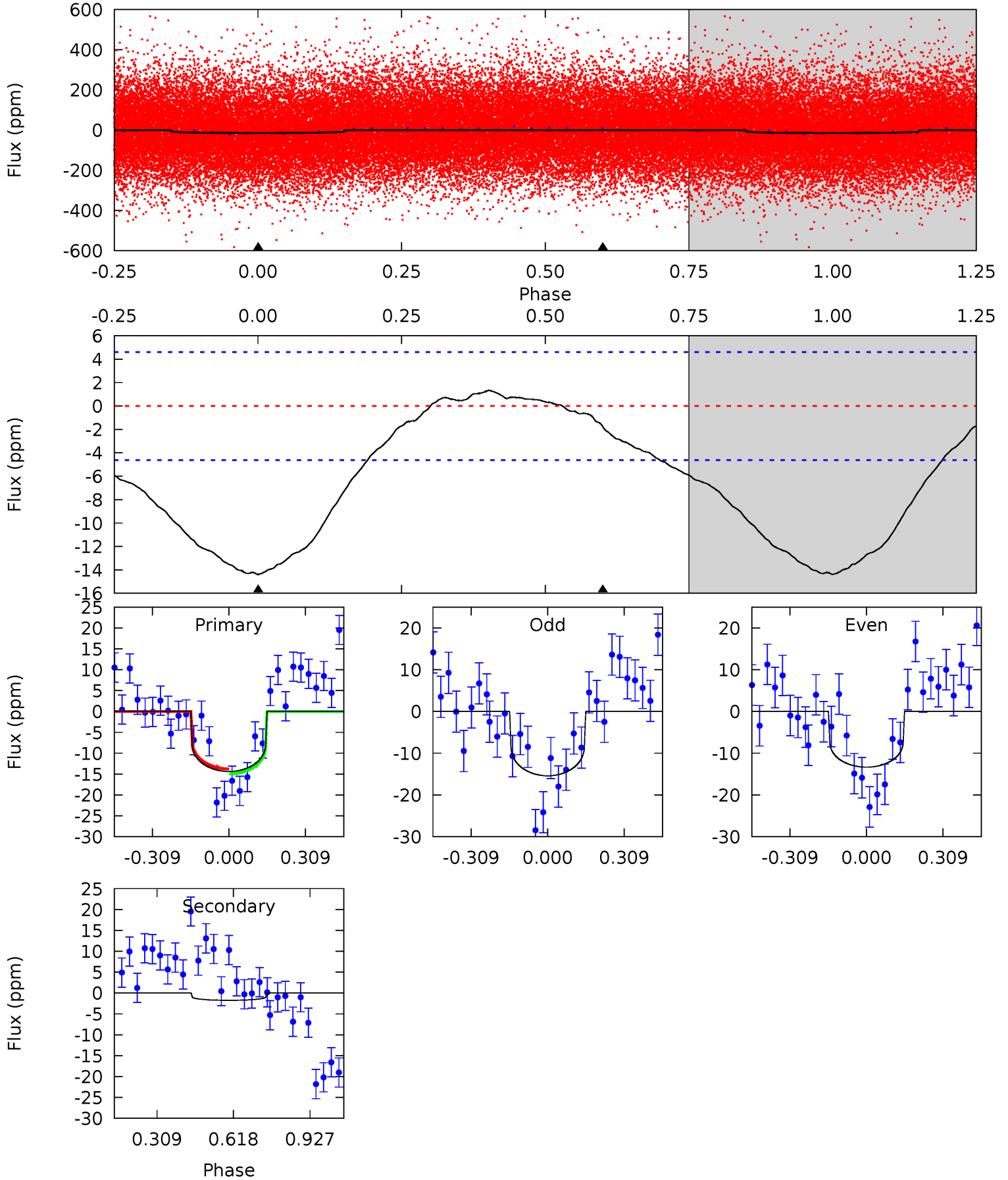
TCE 010153555-01 P= 3.542638 Days $T_0=134.449945$ (BKJD)



DV Model-Shift Uniqueness Test

010153555-01, P = 3.542501 Days, E = 130.848347 Days

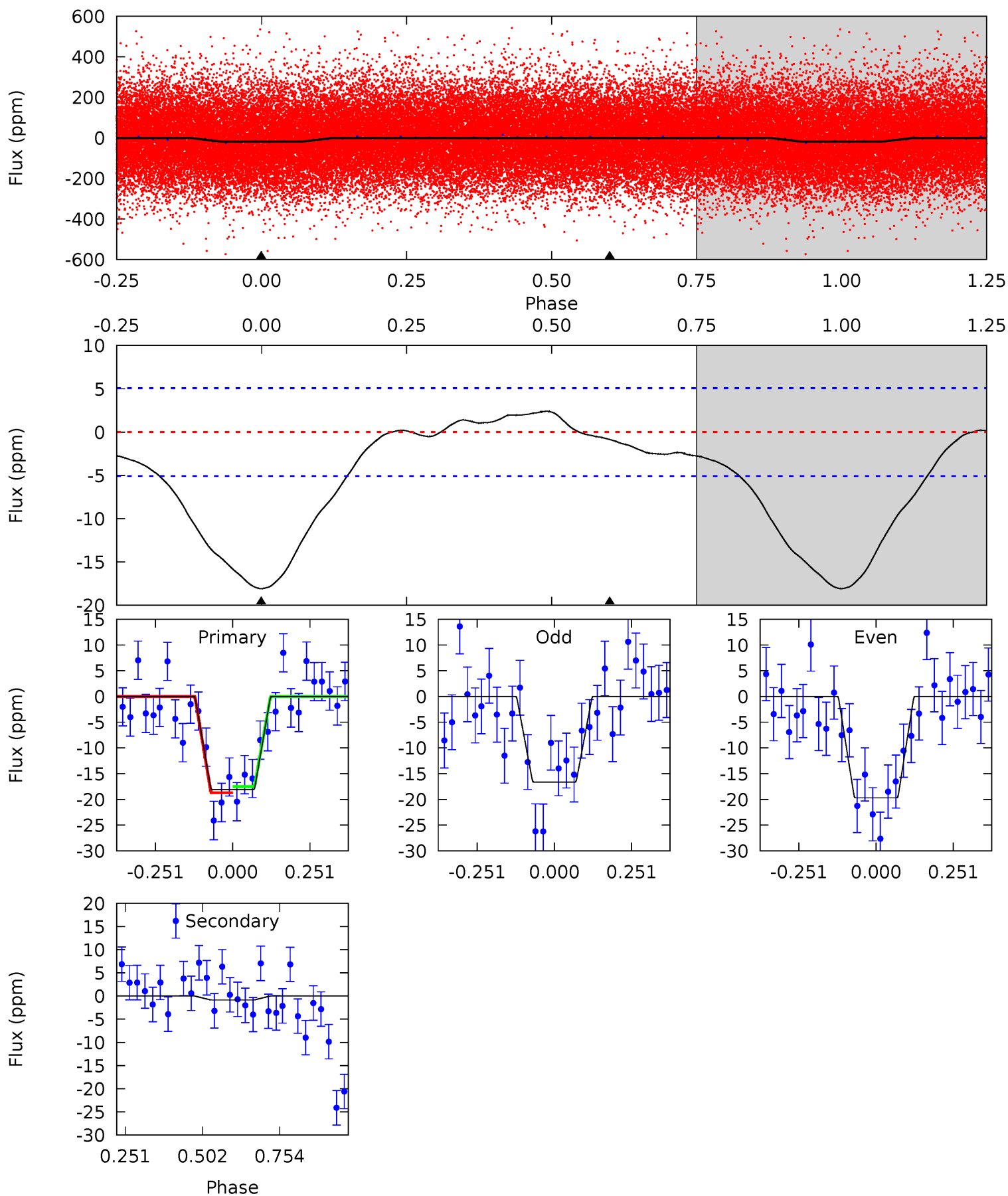
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.5	1.65	0	0	4.32	1.02	0.79	13.5	13.5	1.65	1.65	0.97	1.09	0.09	0.56



Alt Model-Shift Uniqueness Test

010153555-01, P = 3.542638 Days, E = 130.907307 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.6	0.73	0	0	4.37	1.15	0.55	15.6	15.6	0.73	0.73	1.32	0.91	0.12	0.52



Stellar Parameters For KIC 010153555

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7868^{+216}_{-324}	$4.042^{+0.176}_{-0.144}$	$-0.020^{+0.200}_{-0.350}$	$2.114^{+0.461}_{-0.512}$	$1.794^{+0.160}_{-0.321}$	$0.268^{+0.260}_{-0.115}$
	+3%/-4%	+4%/-4%	+1000%/-1750%	+22%/-24%	+9%/-18%	+97%/-43%
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 010153555-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-2 ± 1	$0.90^{+0.66}_{-0.55}$	2976^{+210}_{-195}	4367^{+2466}_{-1216}	$3.042^{+18.551}_{-2.403}$
Alt.	-1 ± 1	$1.05^{+0.66}_{-0.61}$	2984^{+185}_{-207}	3471^{+1549}_{-7057}	$1.036^{+4.740}_{-1.561}$

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

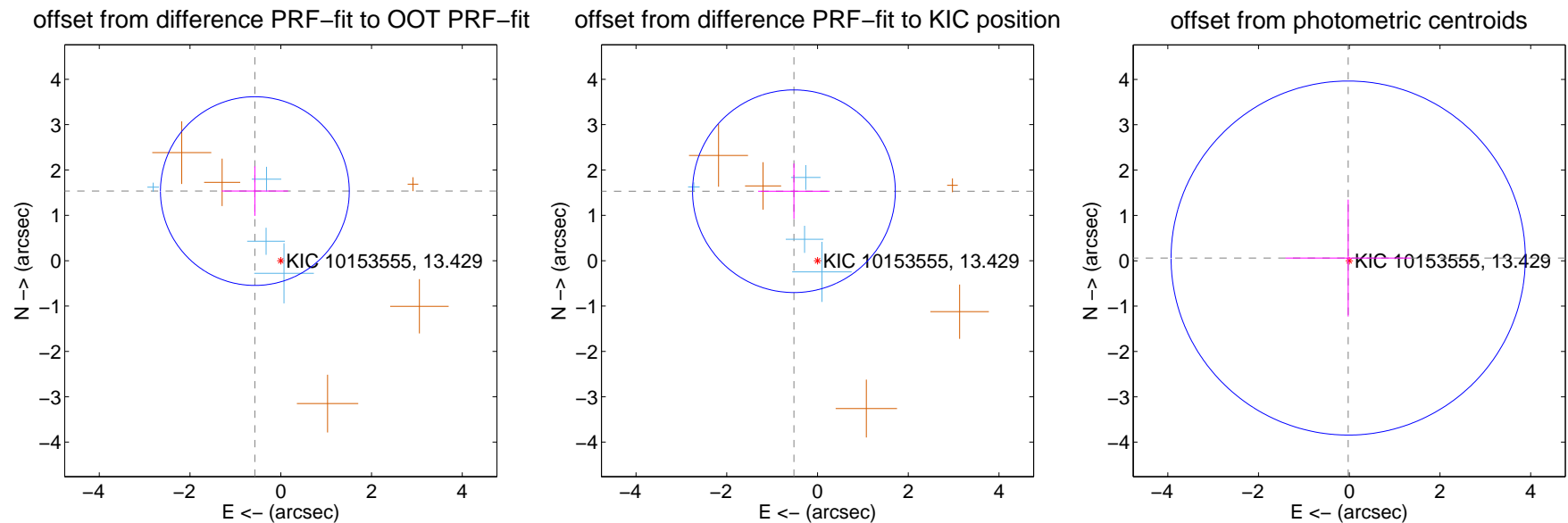
DV Centroid Data

Supplemental centroid analysis for 010153555-01. Kepler magnitude: 13.43. Transit SNR 9.33

There are 4 quarters with good PRF difference image offsets

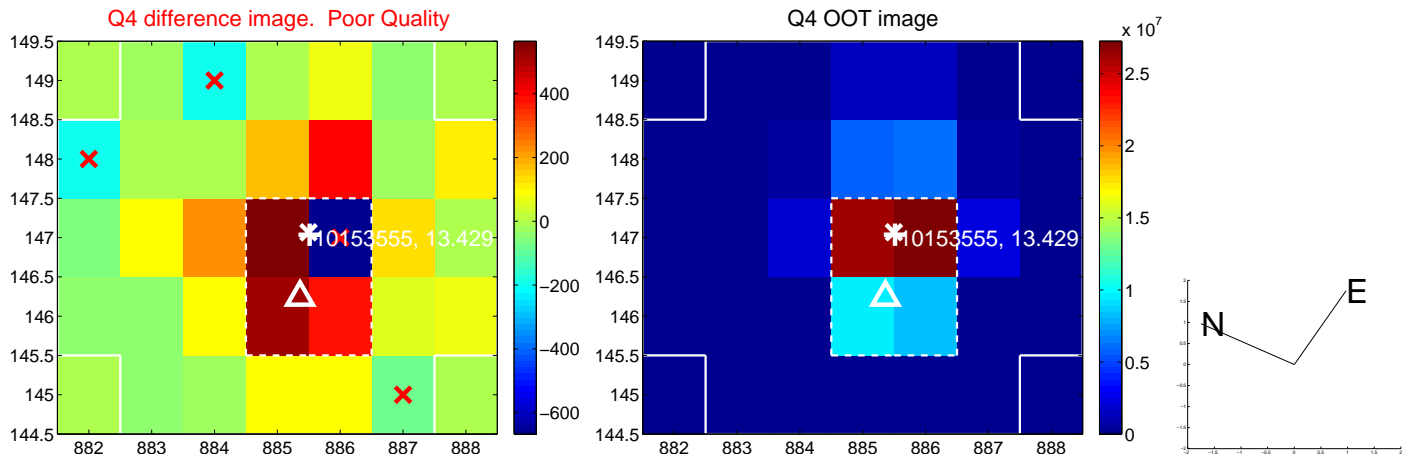
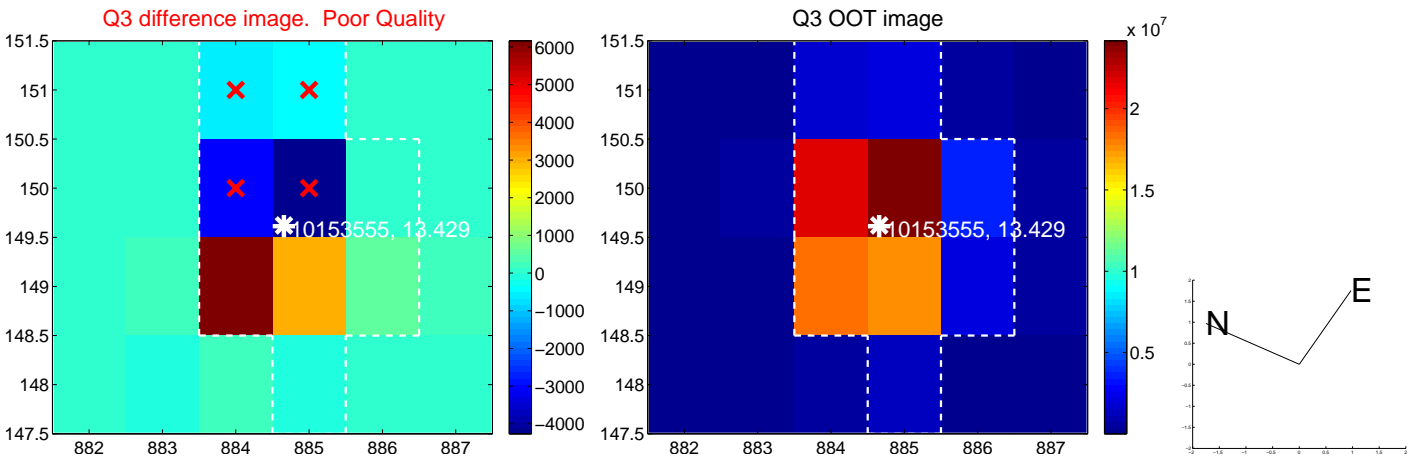
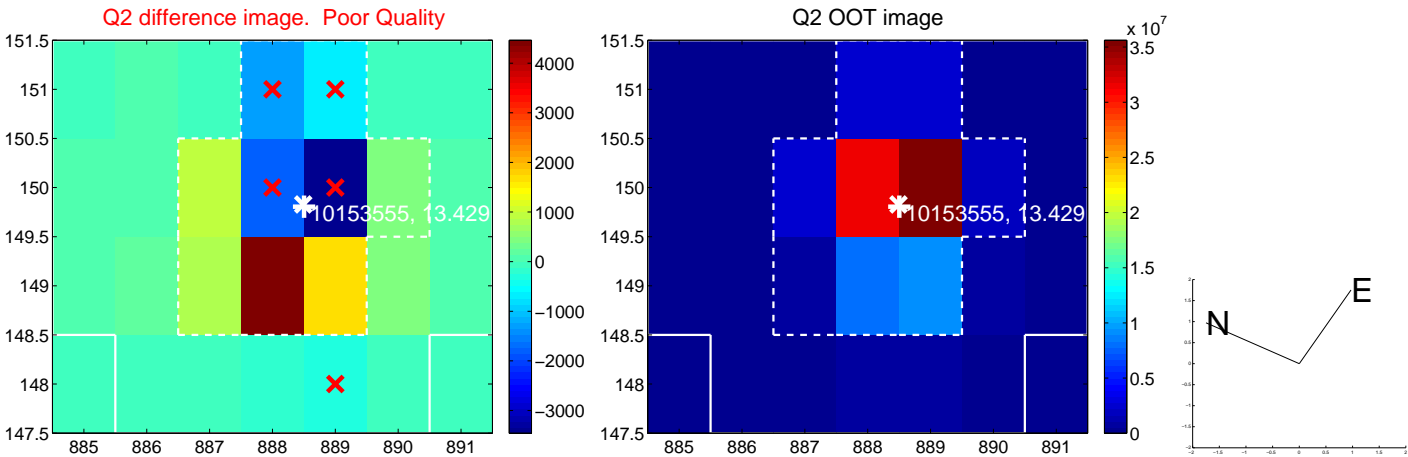
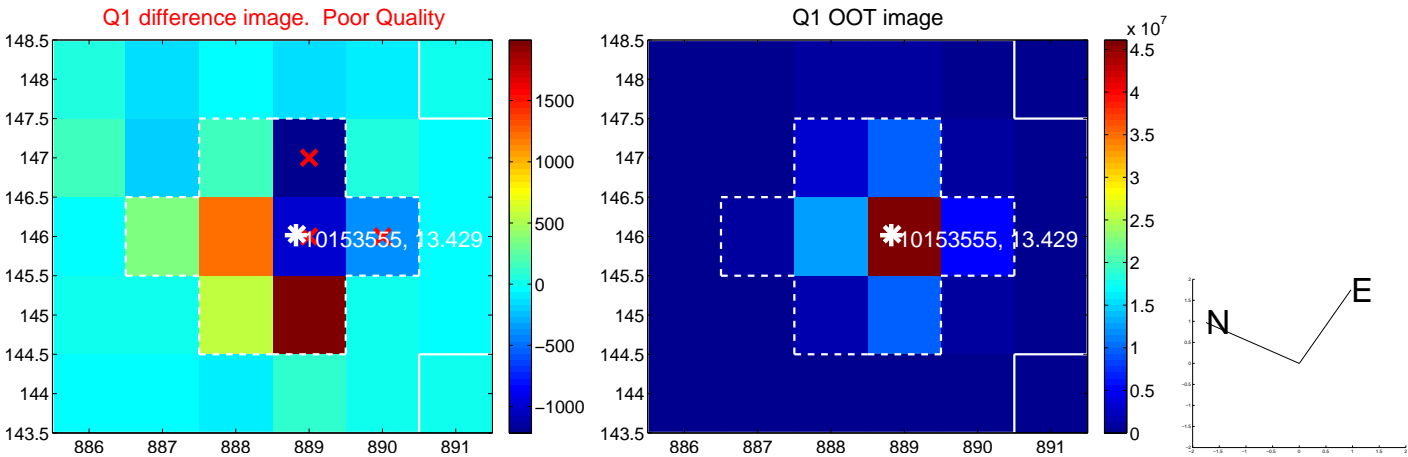
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.638 ± 0.693	2.36	0.571 ± 0.732	1.535 ± 0.546
PRF-fit source offset from KIC position	1.618 ± 0.745	2.17	0.520 ± 0.788	1.532 ± 0.612
photometric centroid source offset	0.06 ± 1.30	0.05	0.02 ± 1.38	0.06 ± 1.29

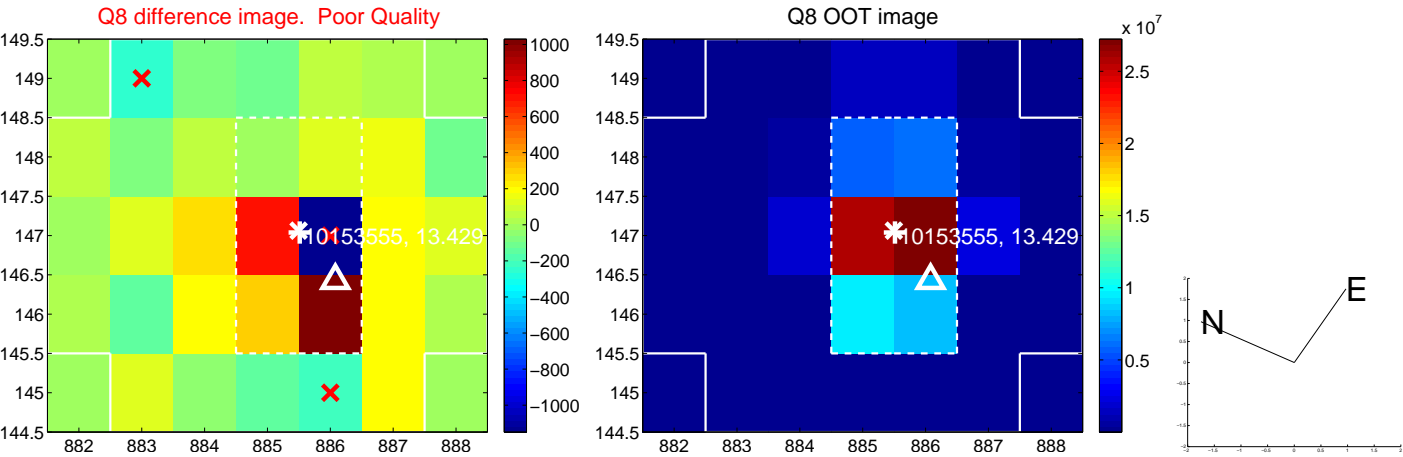
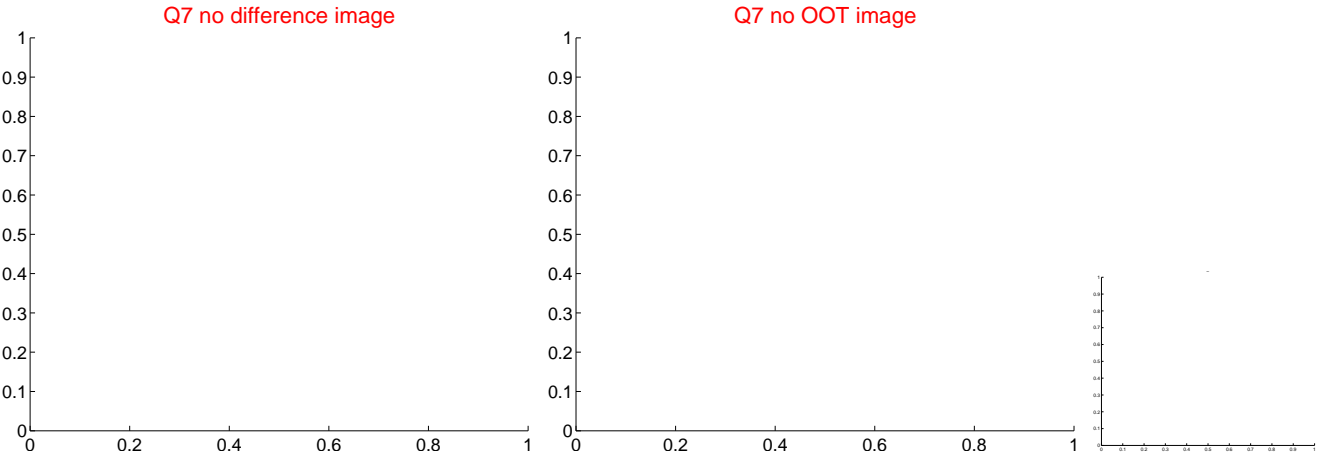
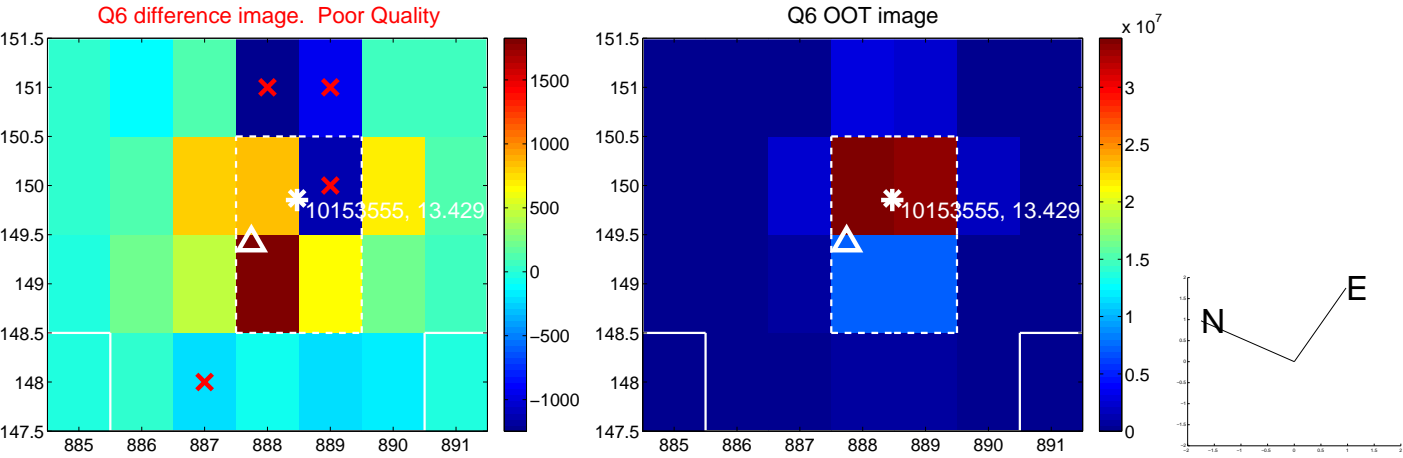
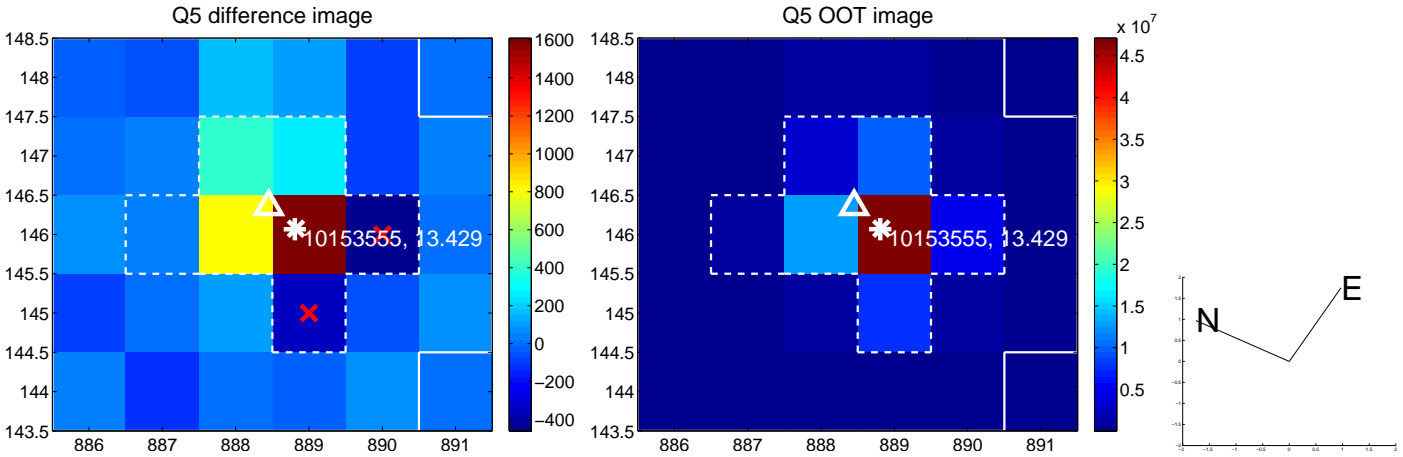


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

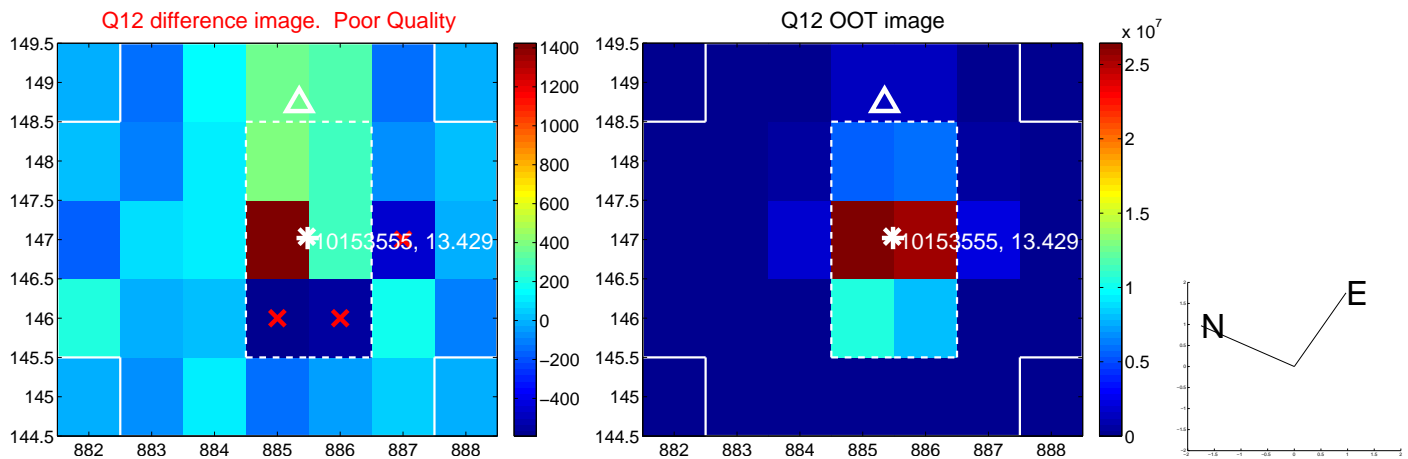
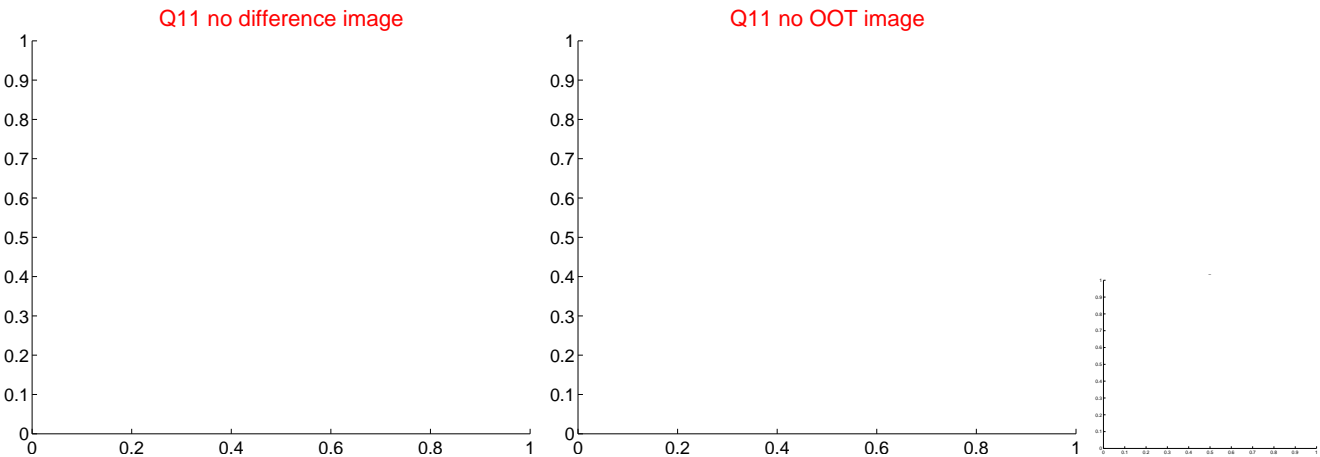
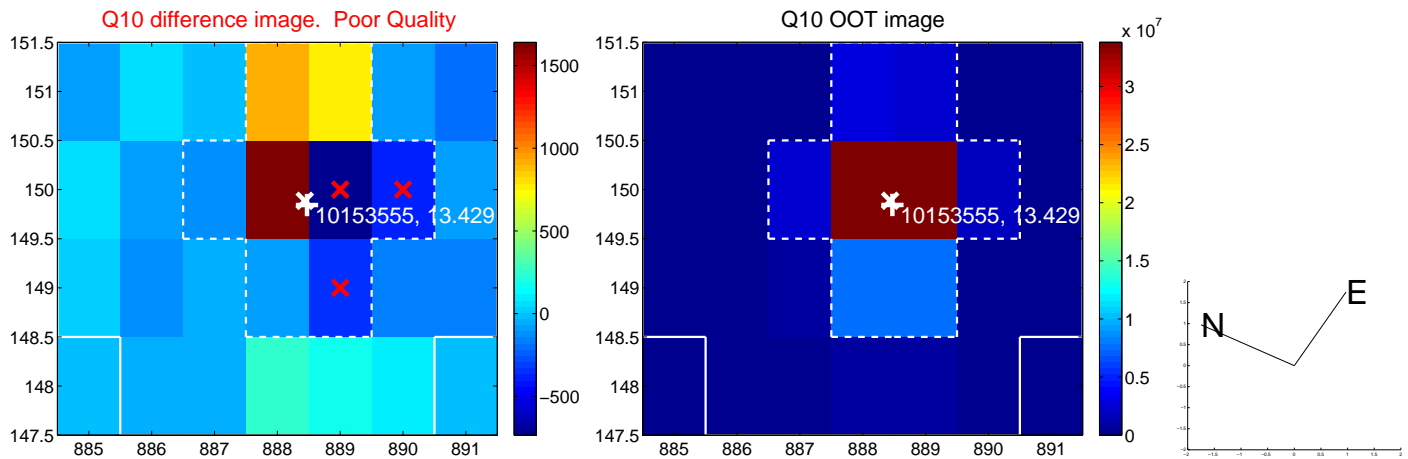
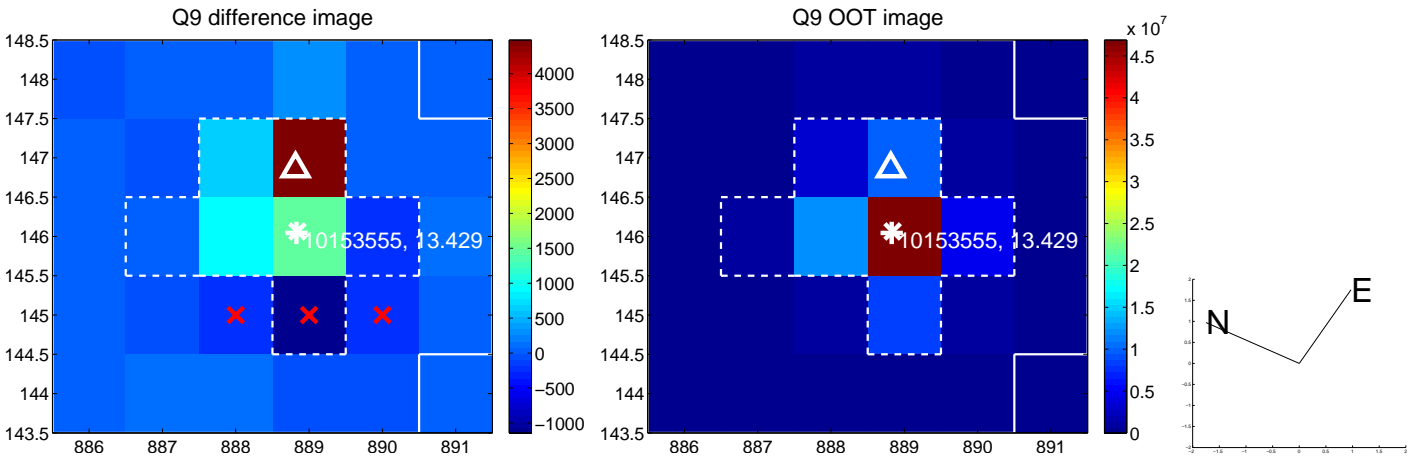
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



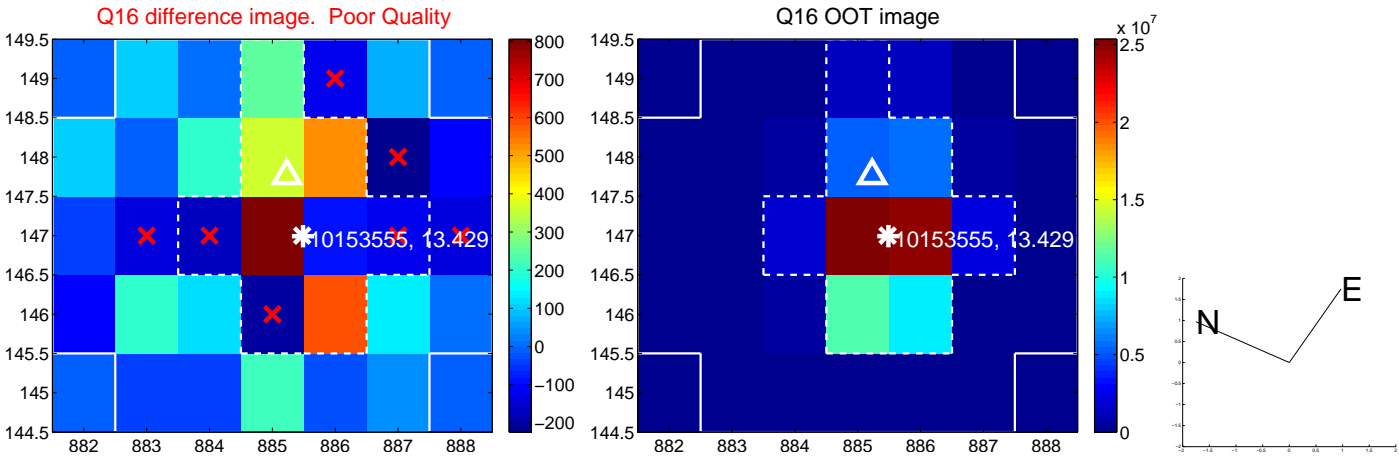
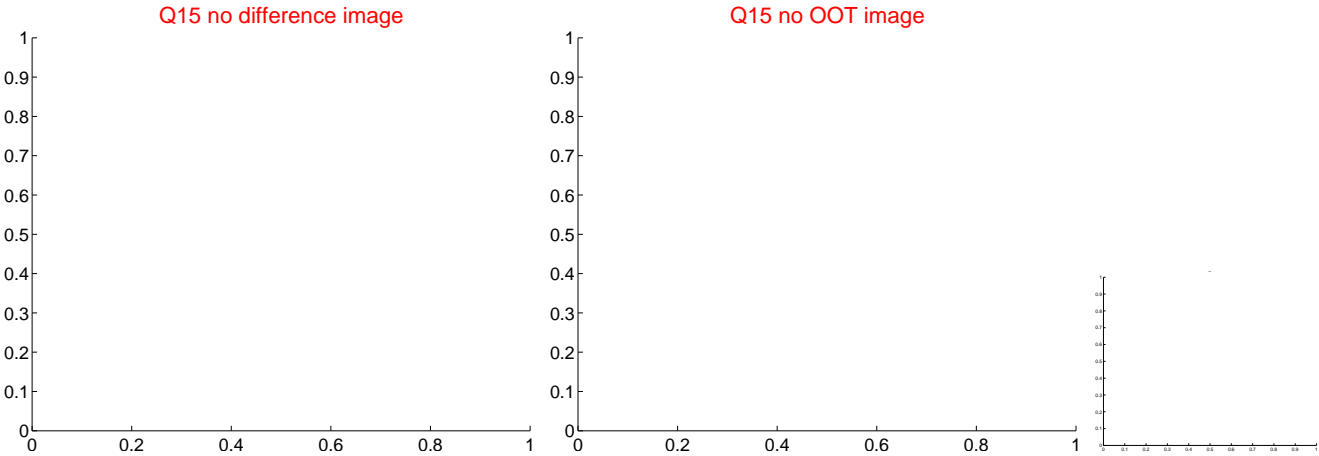
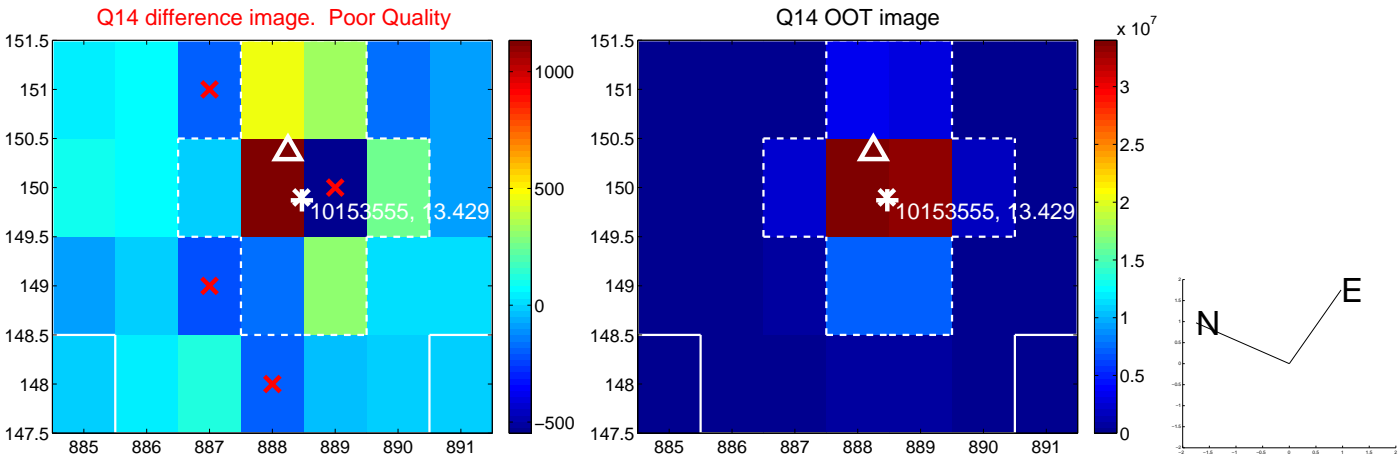
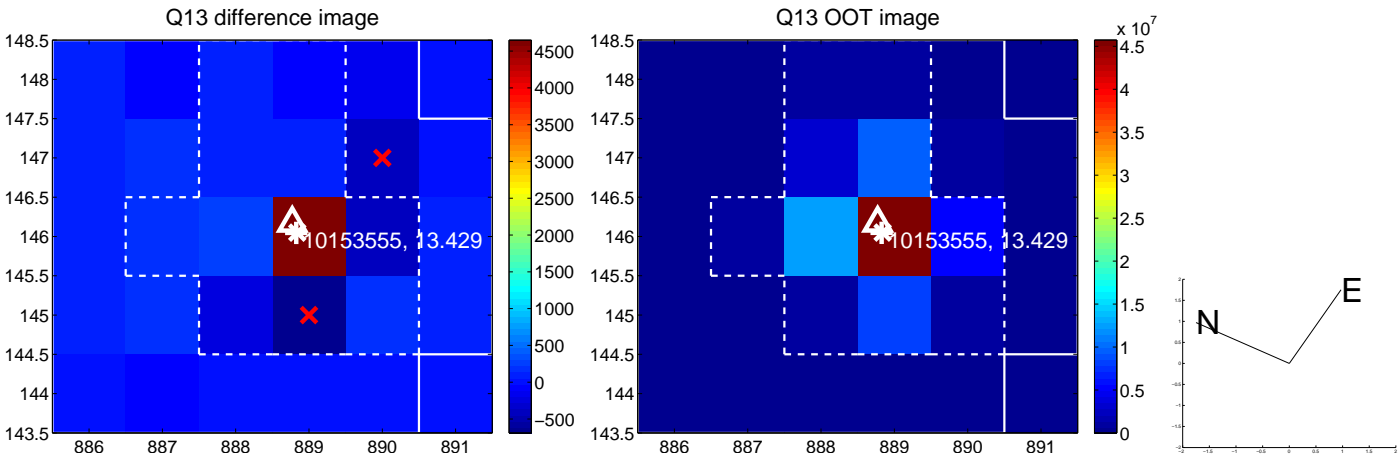
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



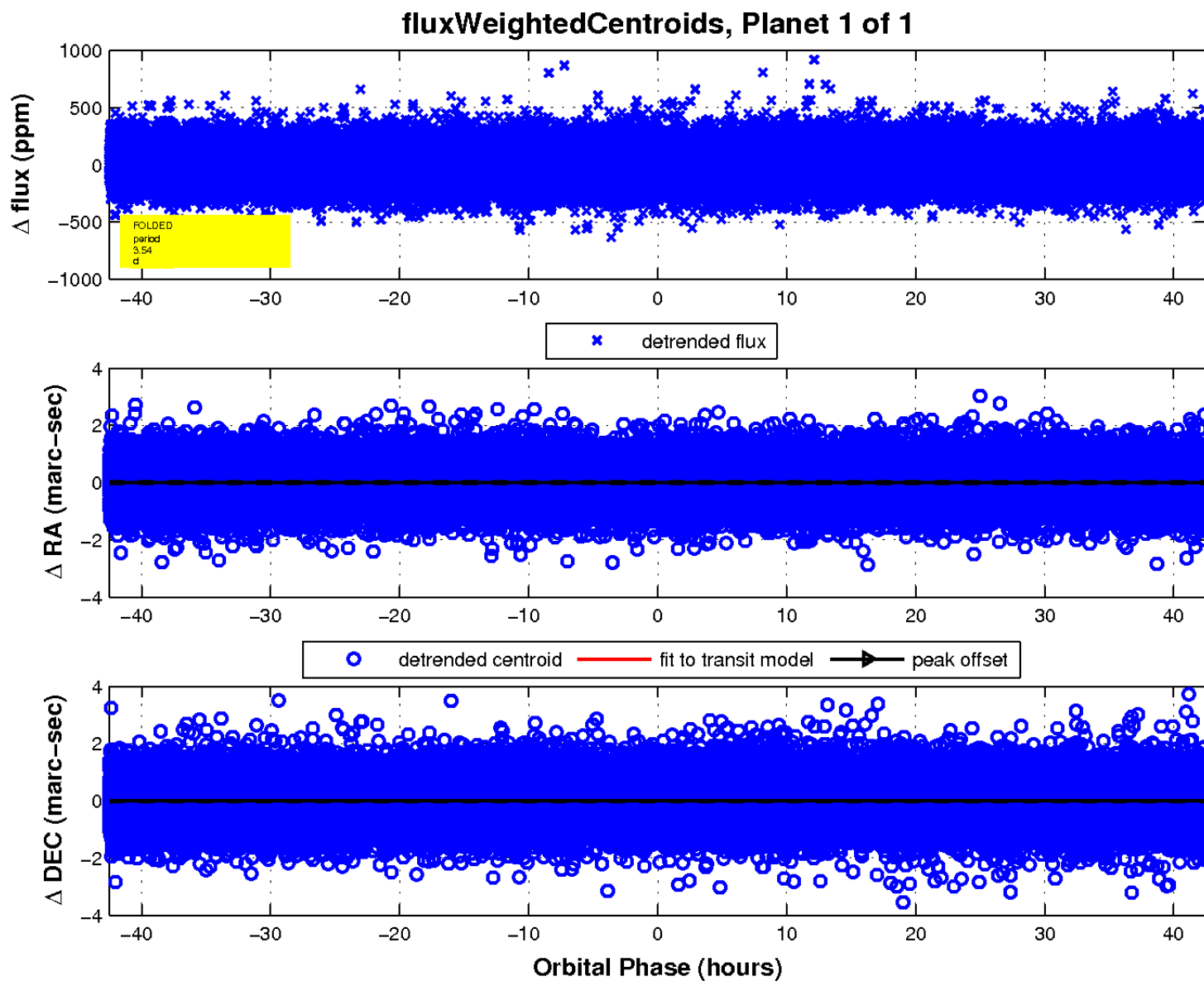
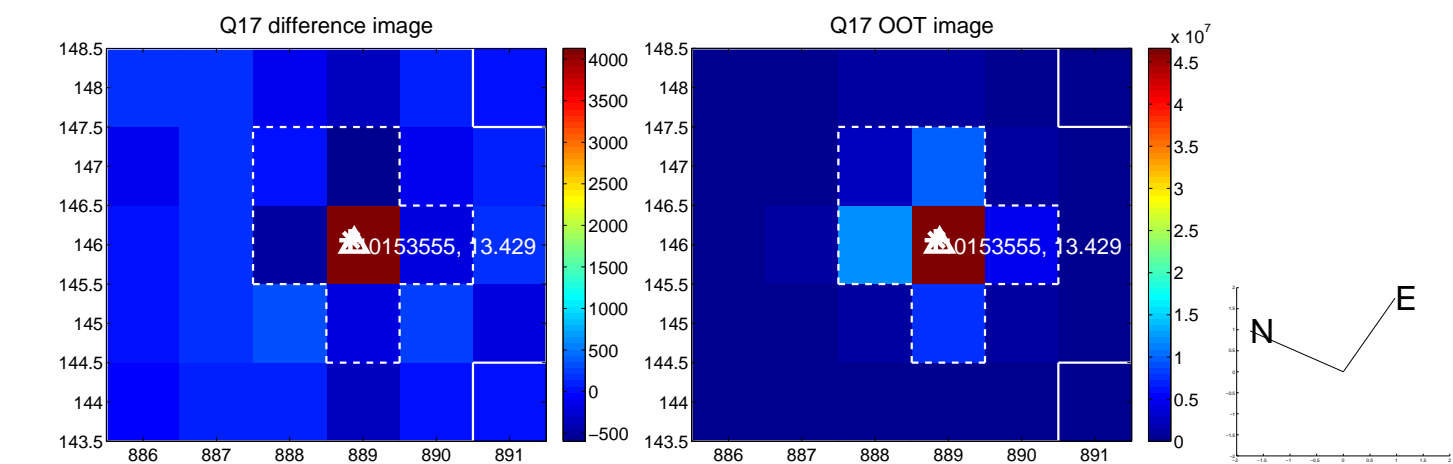
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UKIRT Image

Declination

