

KIC 008145789

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})
008145789-01	OBS	6977.01	0.835312	131.959103	15287.6	2.440	1543.4	1103.4	0.69	5009	11.58	1167.70

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008145789-01	OBS	FP	0.00	0	1	0	0	DEPTH_ODDEVEN_DV—DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_DV—MOD_ODDEVEN_ALT—DEEP_V_SHAPED

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

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

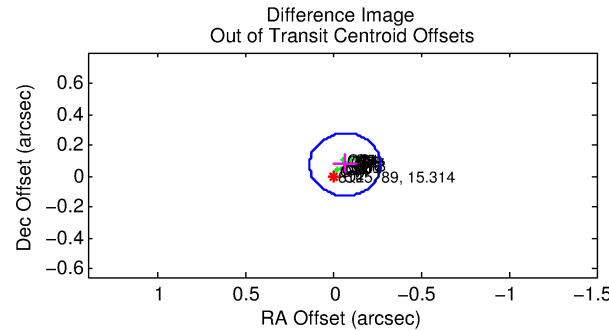
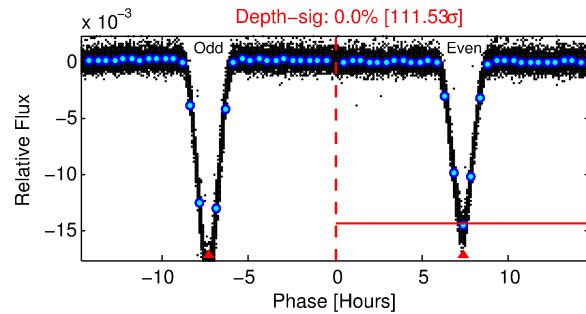
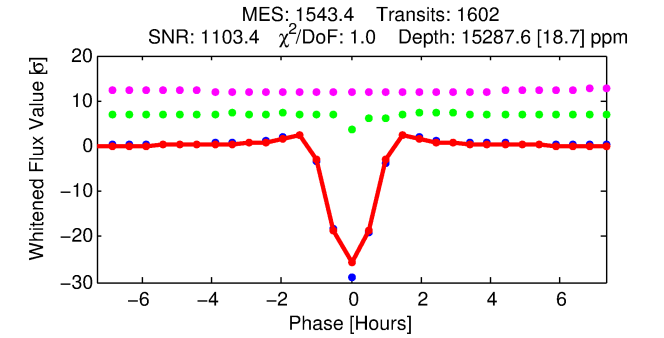
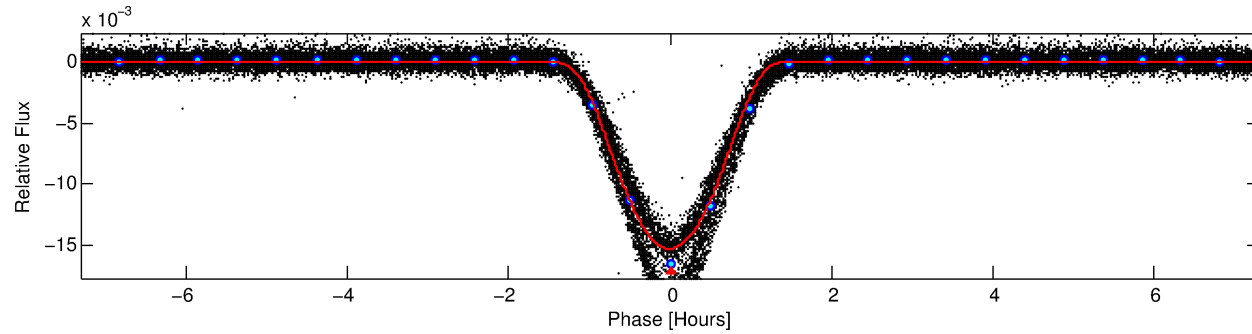
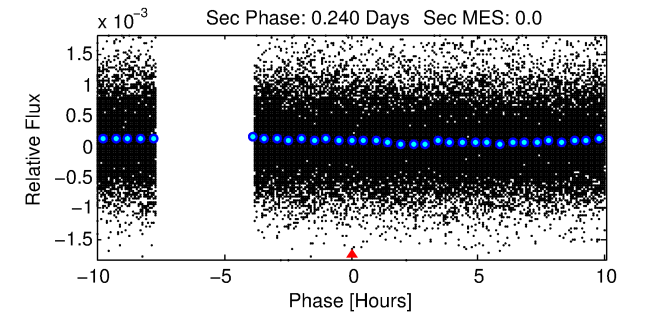
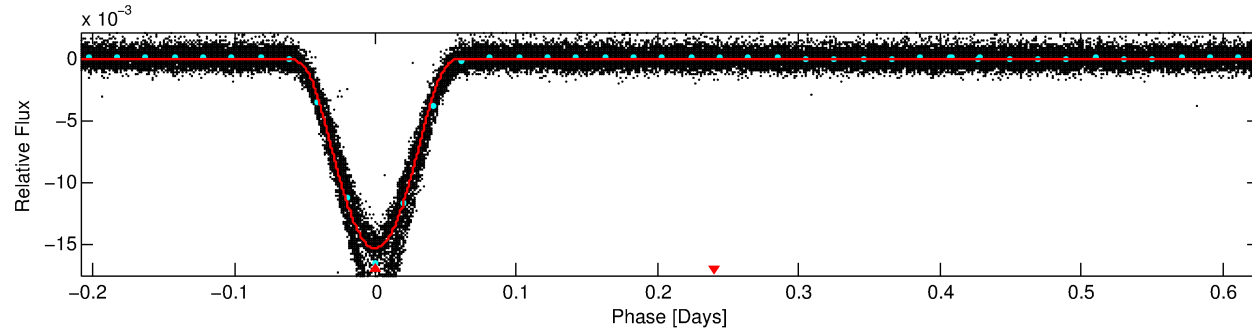
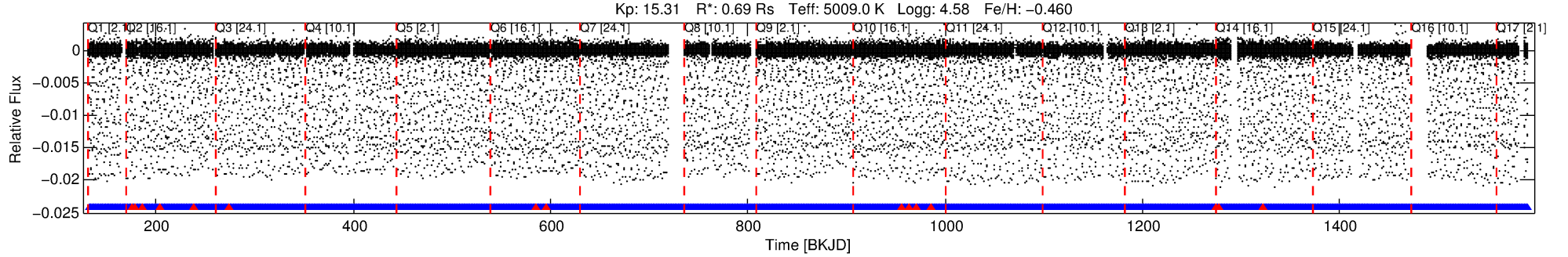
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008145789-01

No Significant Match Found

DV One-Page Summary

KIC: 8145789 Candidate: 1 of 1 Period: 0.835 d
KOI: K06977.01 Corr: 0.987



DV Fit Results:

Period = 0.83531 [0.00000] d
Epoch = 131.9591 [0.0000] BKJD
Rp/R* = 0.1538 [0.0019]
a/R* = 2.10 [0.00]
b = 0.91 [0.00]
Seff = 1167.70 [207.82]
Teff = 1491 [66] K
Rp = 11.58 [1.25] Re
a = 0.0152 [0.0014] AU
Ag = N/A
Teffp = N/A

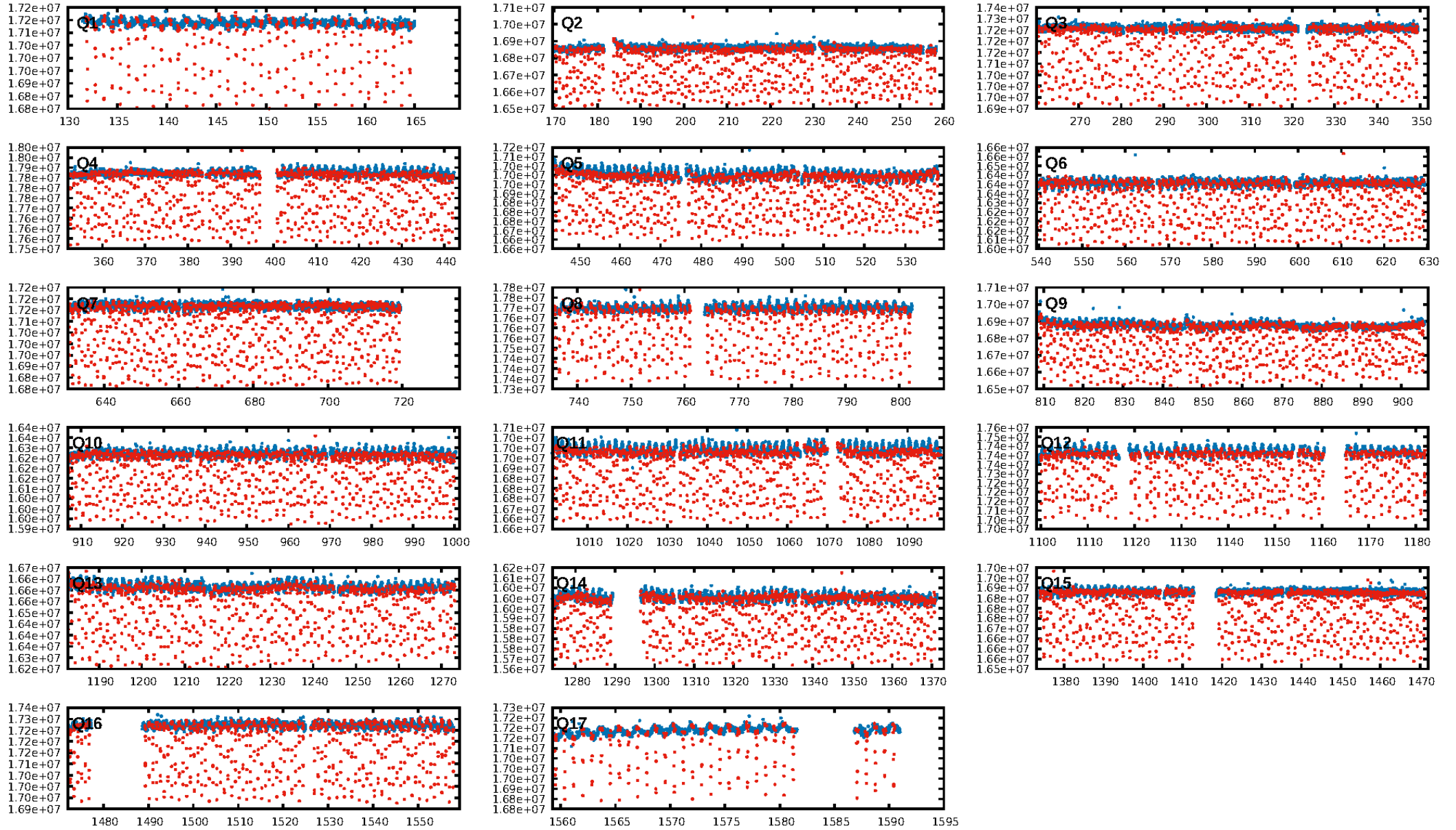
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.99 [1514/1530]
GhostDiagnostic-chr: 3.125
Centroid-sig: 0.0%
Centroid-so: 0.221 arcsec [27.56σ]
OotOffset-rm: 0.100 arcsec [1.48σ]
KicOffset-rm: 0.150 arcsec [2.22σ]
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]

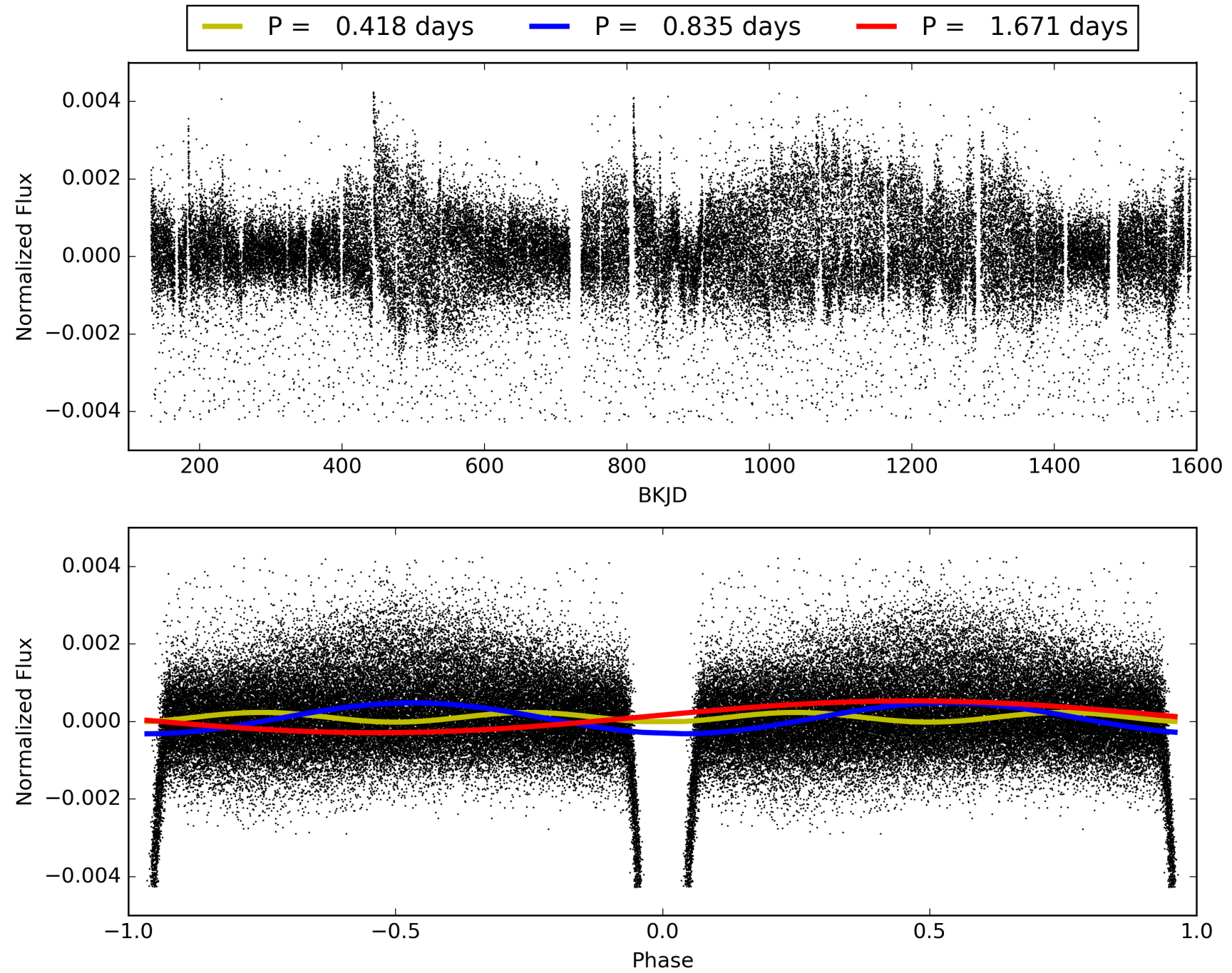
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 10:28:47 Z

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

TCE 008145789-01, PDC Light Curves

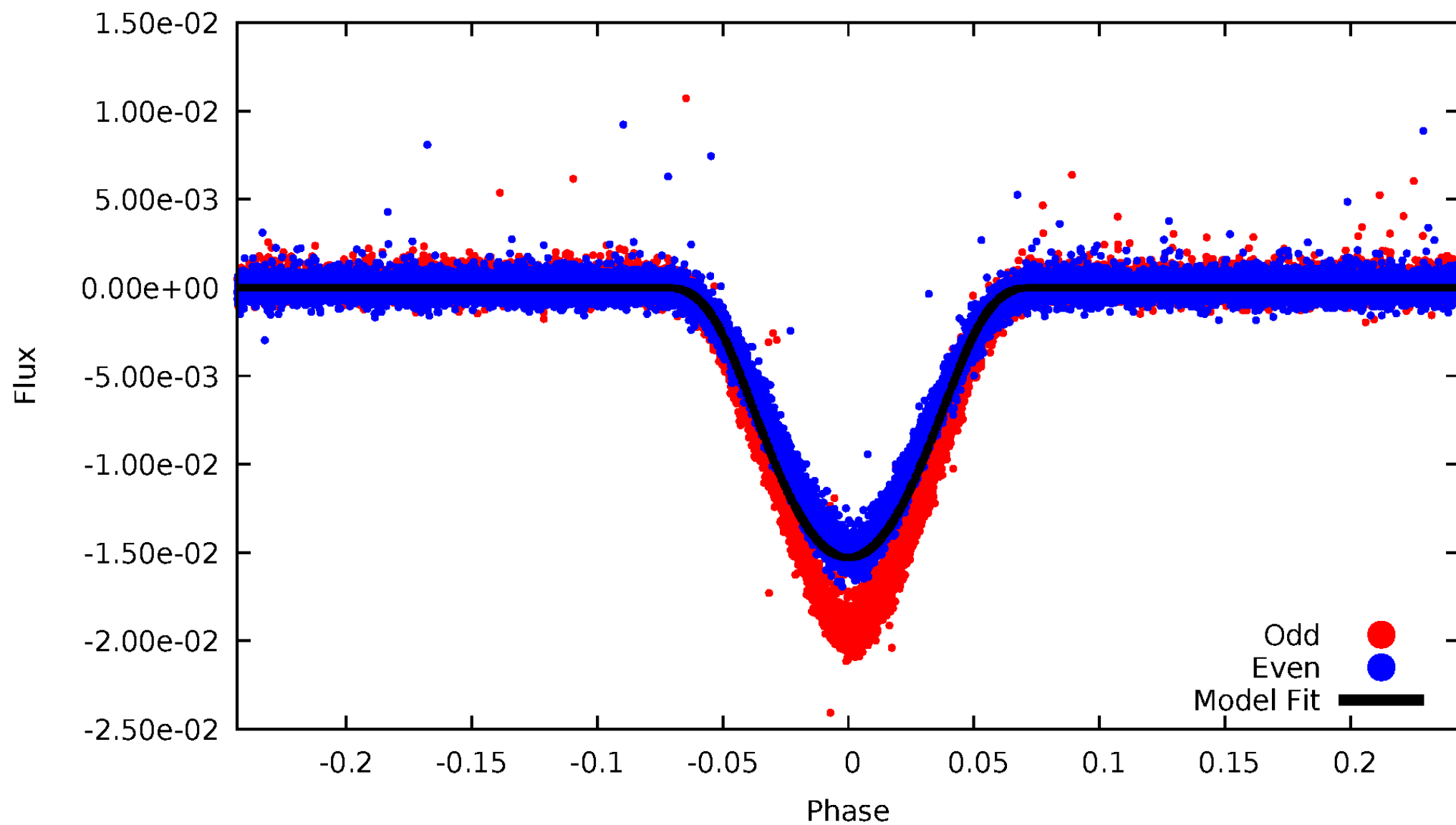


TCE 008145789-01



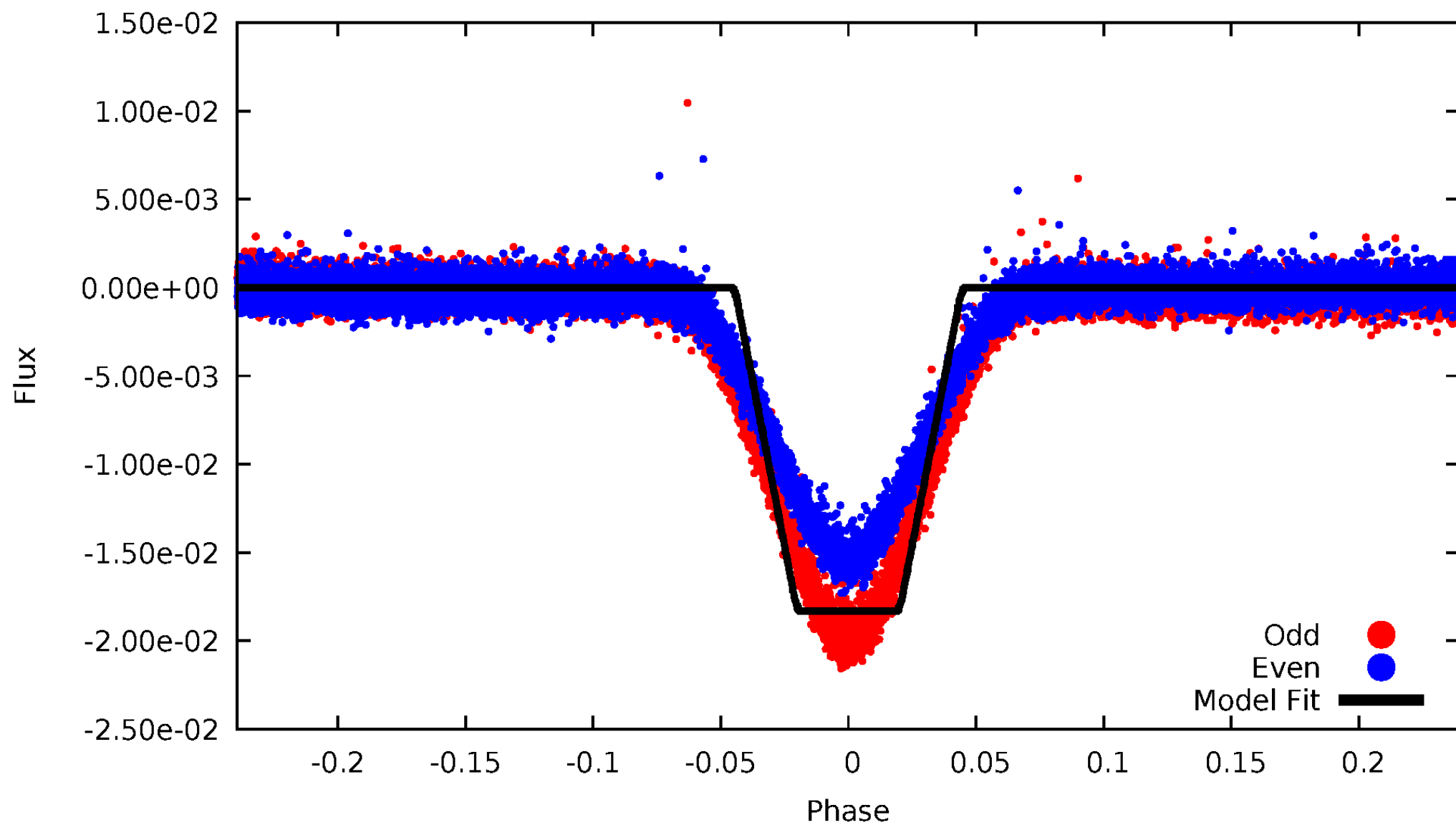
DV Odd/Even

TCE 008145789-01



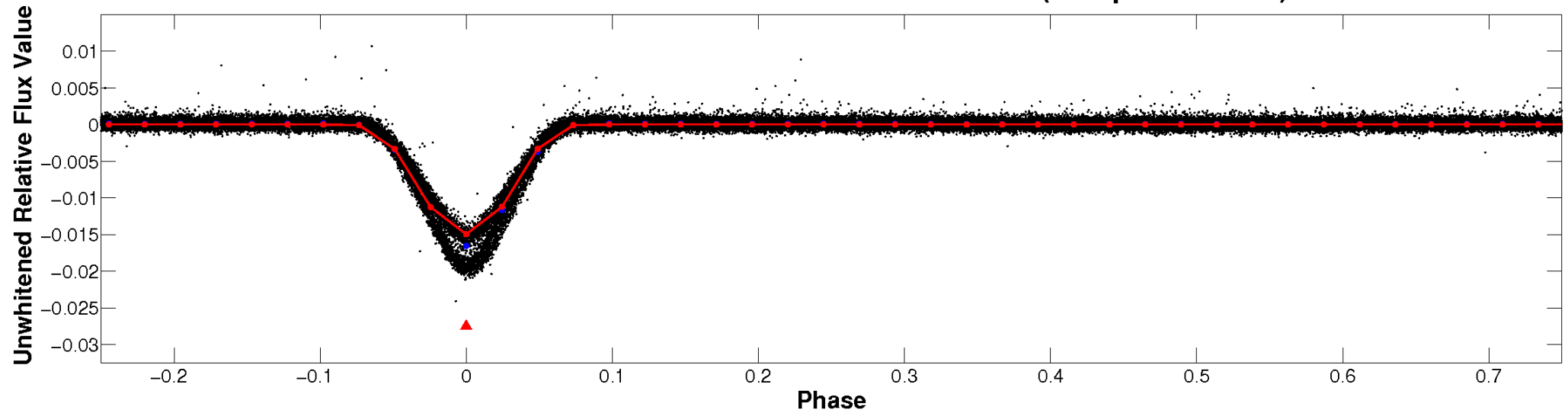
ALT Odd/Even

TCE 008145789-01

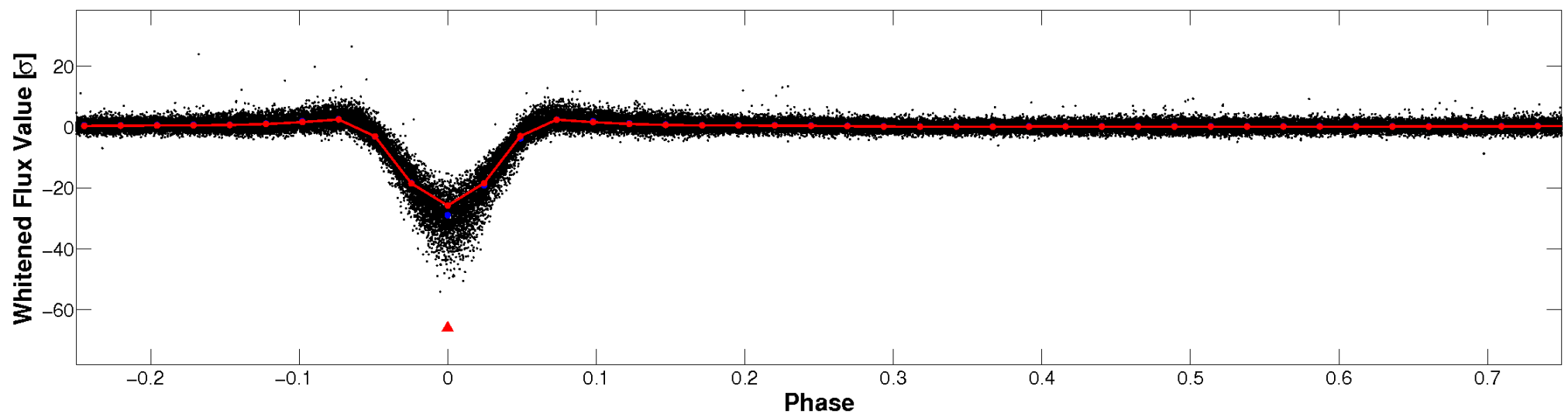


Non-Whitened Vs. Whitened Light Curve

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

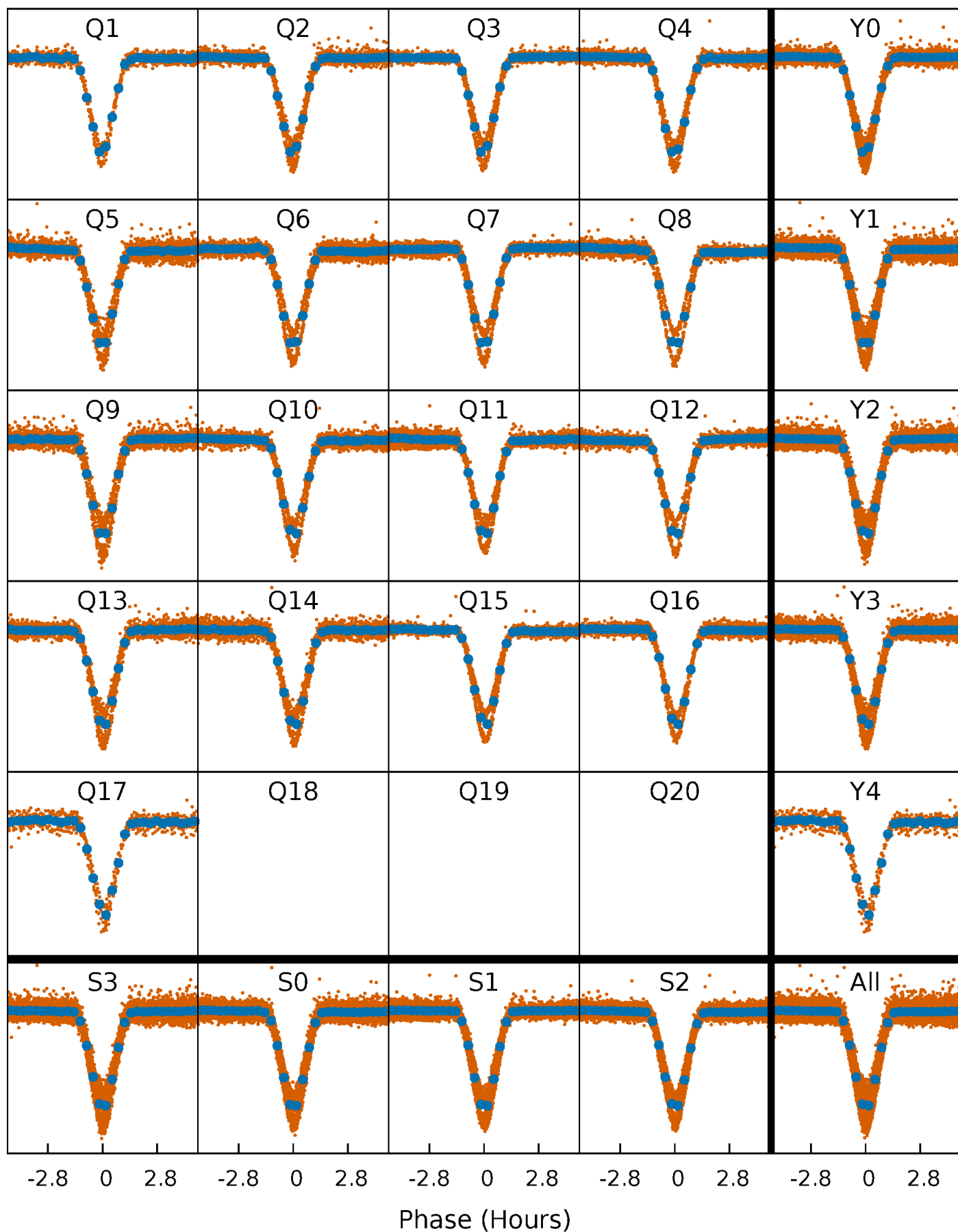


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



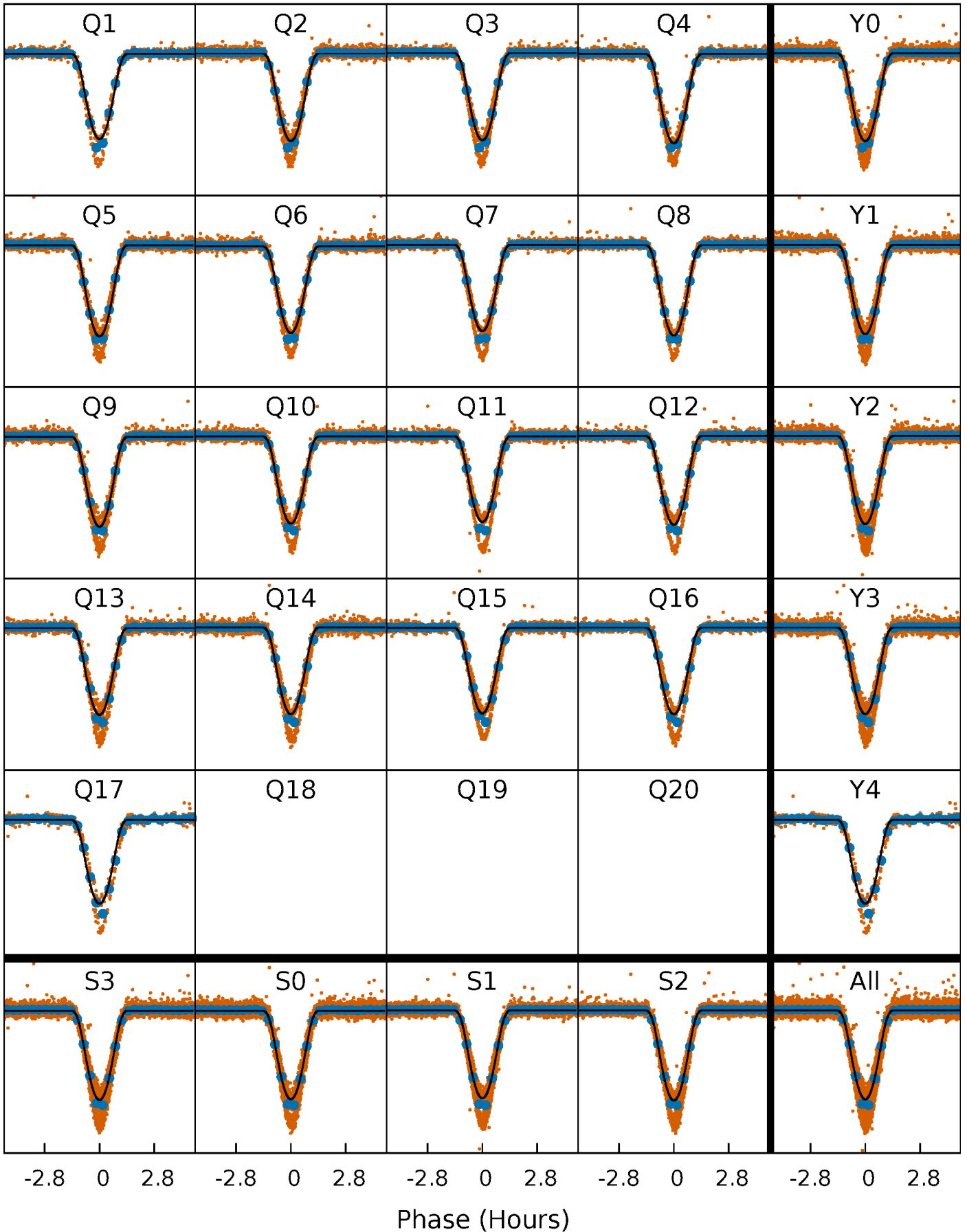
PDC Quarter-Phased Transit Curves

TCE 008145789-01 P= 0.835312 Days $T_0=131.959103$ (BKJD)



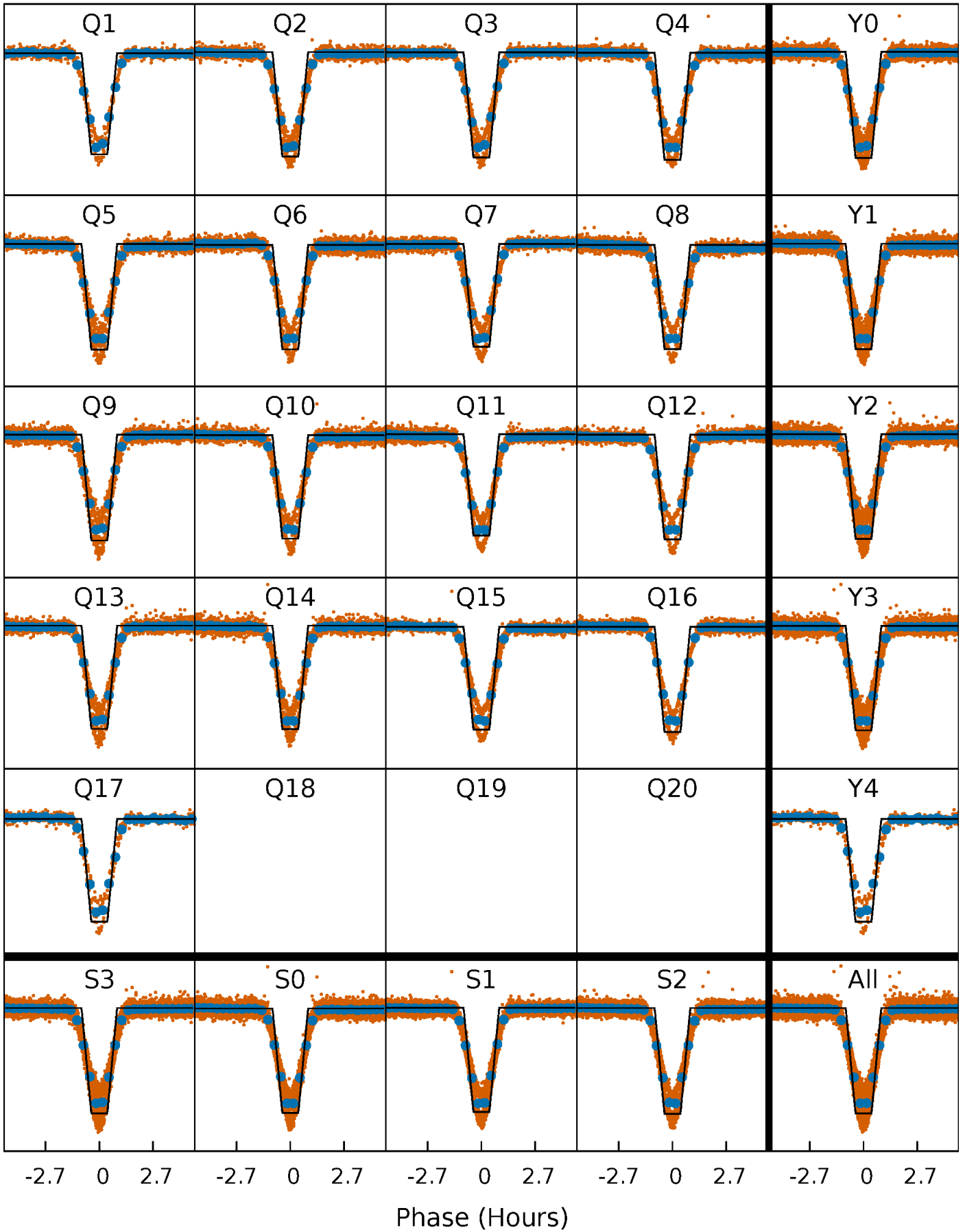
DV Quarter-Phased Transit Curves

TCE 008145789-01 P= 0.835312 Days $T_0=131.959103$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

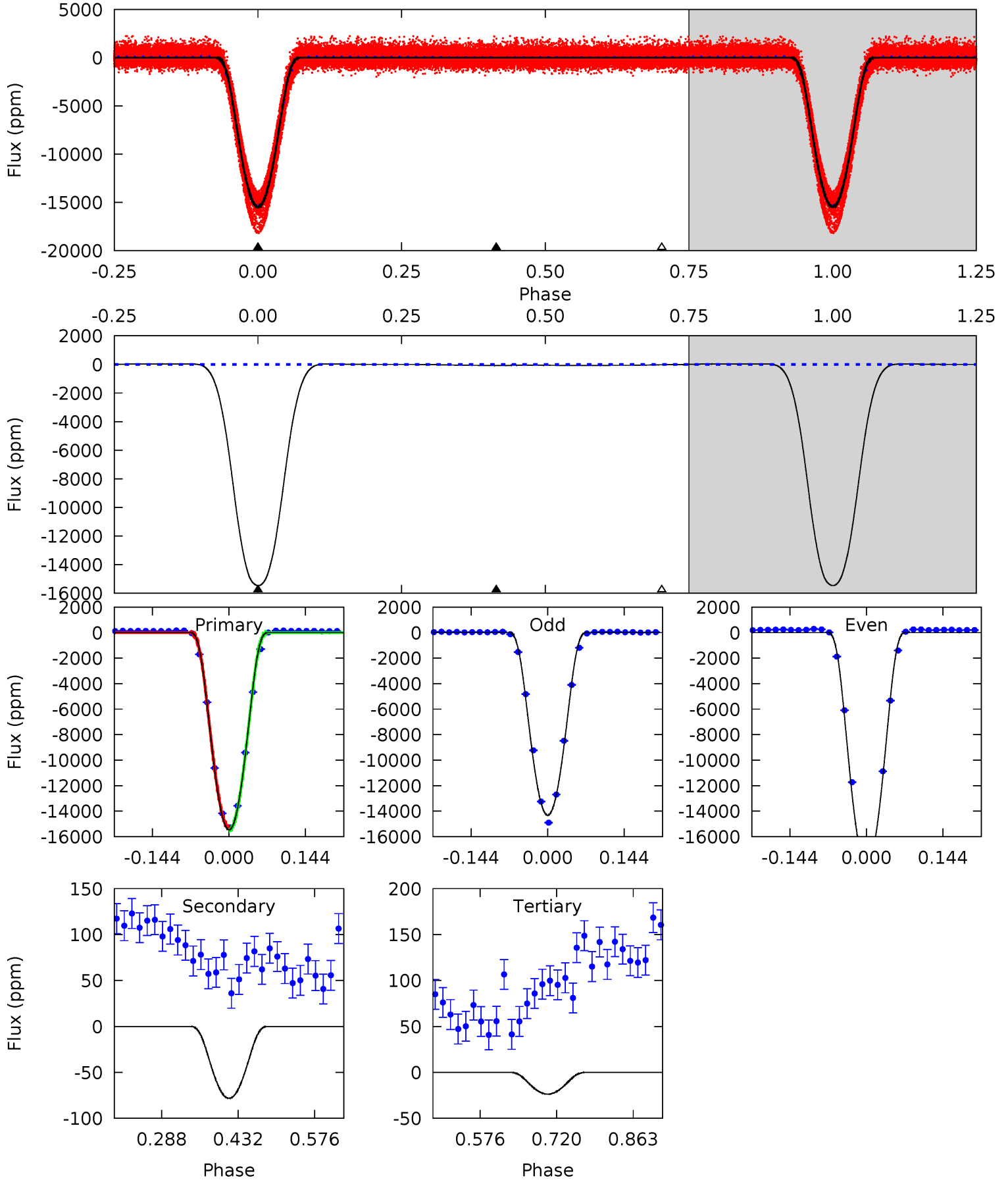
TCE 008145789-01 P= 0.835314 Days $T_0=131.957616$ (BKJD)



DV Model-Shift Uniqueness Test

008145789-01, P = 0.835312 Days, E = 131.123791 Days

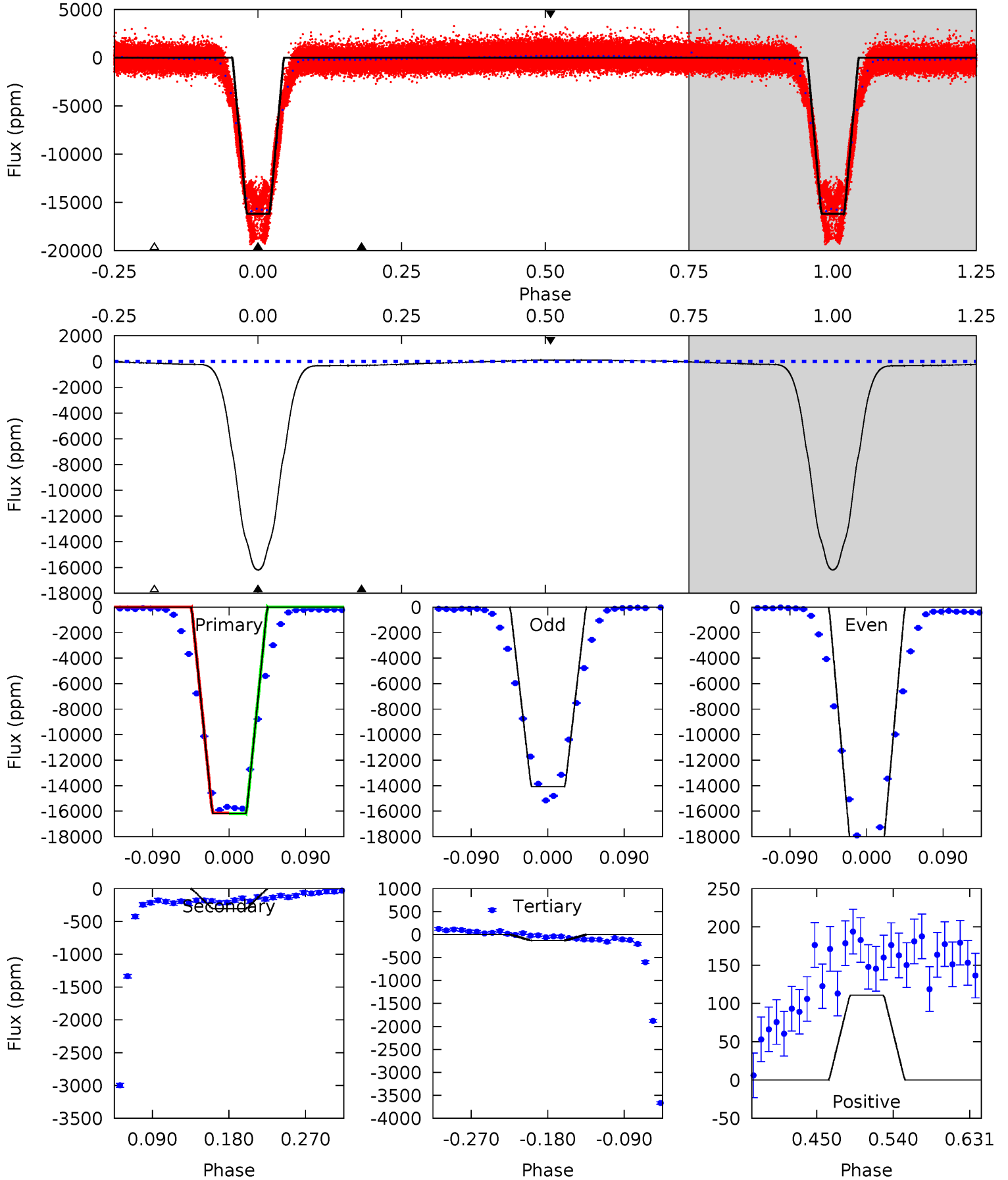
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2735	13.8	4.19	0	4.49	1.46	6.25	2731	2735	9.66	13.8	371.2	1.05	0.00	19.8



Alt Model-Shift Uniqueness Test

008145789-01, P = 0.835314 Days, E = 131.122302 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1538	29.1	12.4	10.5	4.59	1.69	10.3	1526	1528	16.7	18.6	225.8	1.03	0.01	2.28



Stellar Parameters For KIC 008145789

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5009^{+135}_{-150}	$4.584^{+0.072}_{-0.054}$	$-0.460^{+0.300}_{-0.300}$	$0.690^{+0.074}_{-0.067}$	$0.666^{+0.088}_{-0.044}$	$2.852^{+0.874}_{-0.561}$
	+3%/-3%	+2%/-1%	+65%/-65%	+11%/-10%	+13%/-7%	+31%/-20%
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 008145789-01 / KOI 6977.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-78 ± 6	$11.56^{+0.77}_{-0.67}$	2078^{+75}_{-76}	-2435^{+56}_{-52}	$0.075^{+0.010}_{-0.009}$
Alt.	-306 ± 11	$10.22^{+0.68}_{-0.60}$	2075^{+78}_{-79}	2151^{+95}_{-149}	$0.375^{+0.042}_{-0.038}$

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 $A_{obs} \gg 1.0$

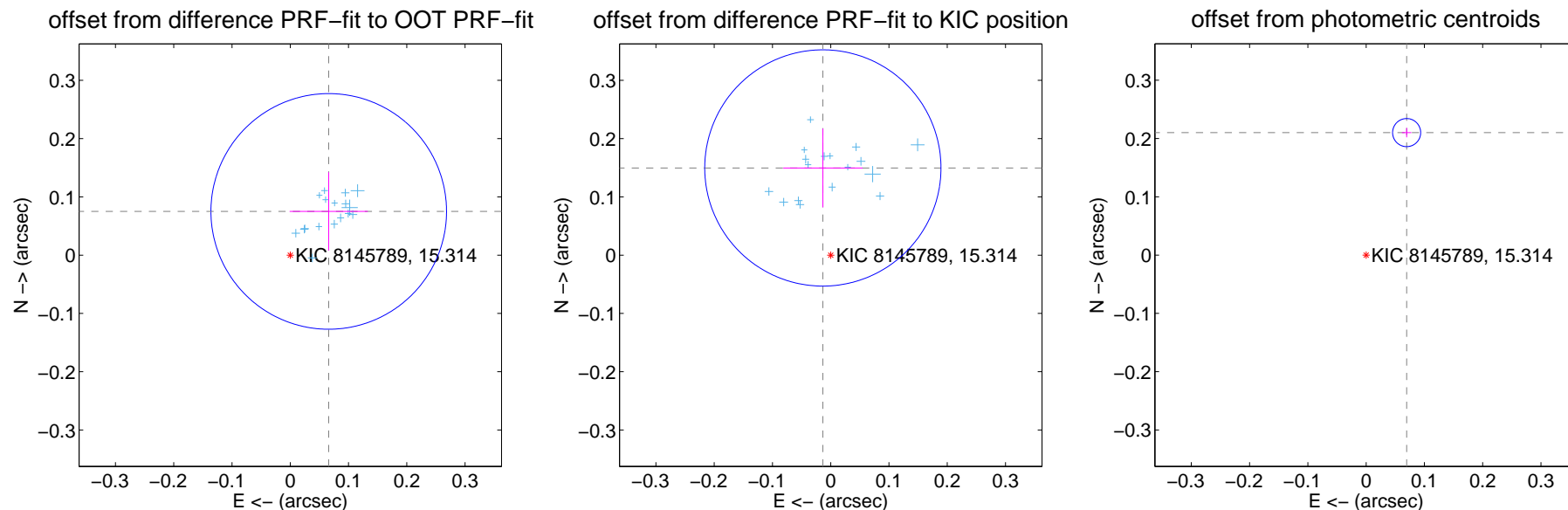
DV Centroid Data

Supplemental centroid analysis for 008145789-01. Kepler magnitude: 15.31. Transit SNR 1103.40

There are 17 quarters with good PRF difference image offsets

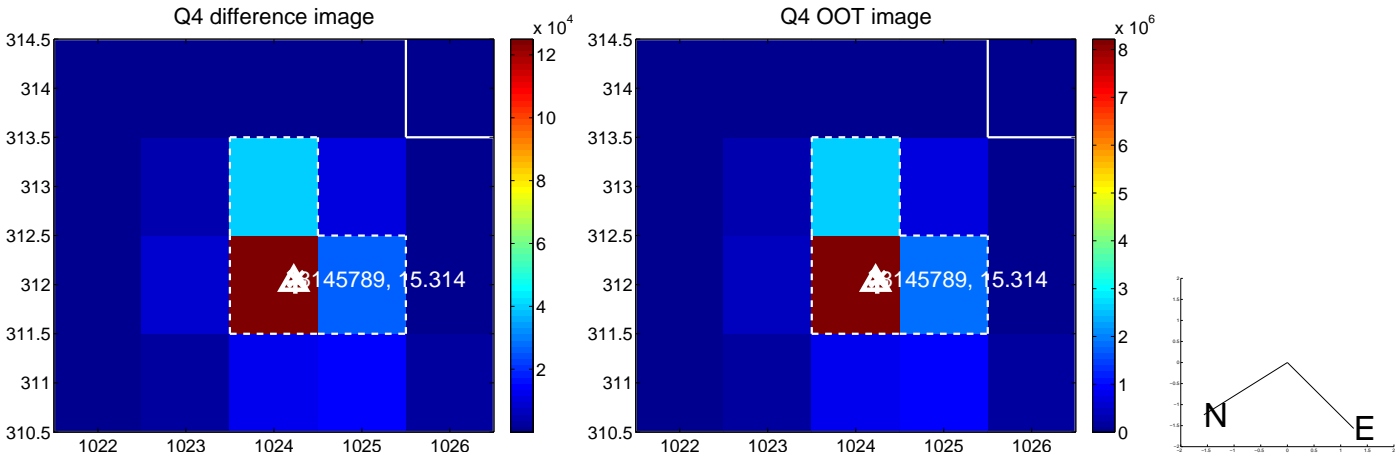
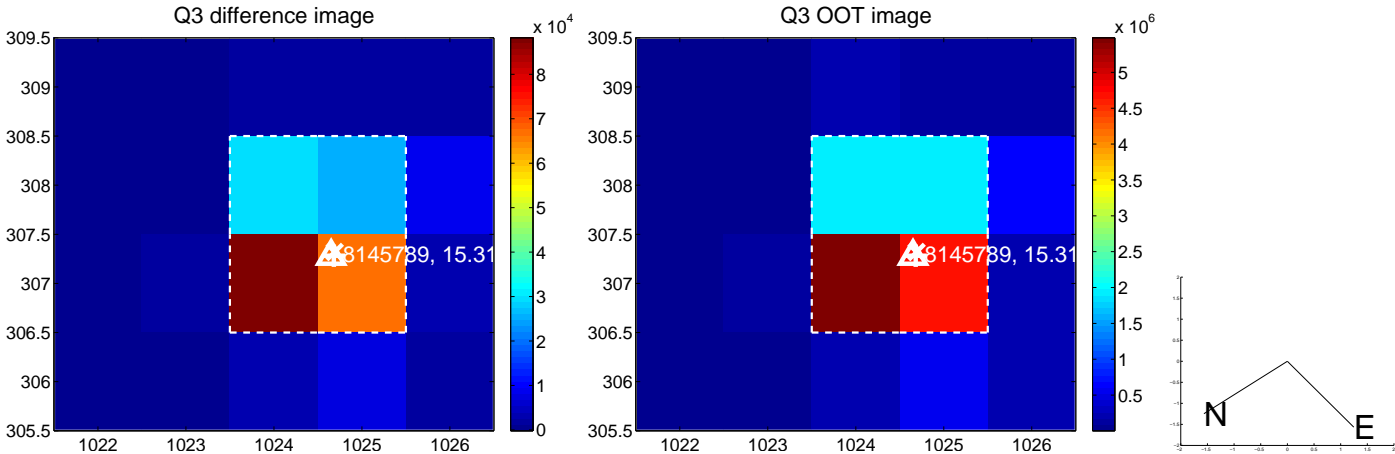
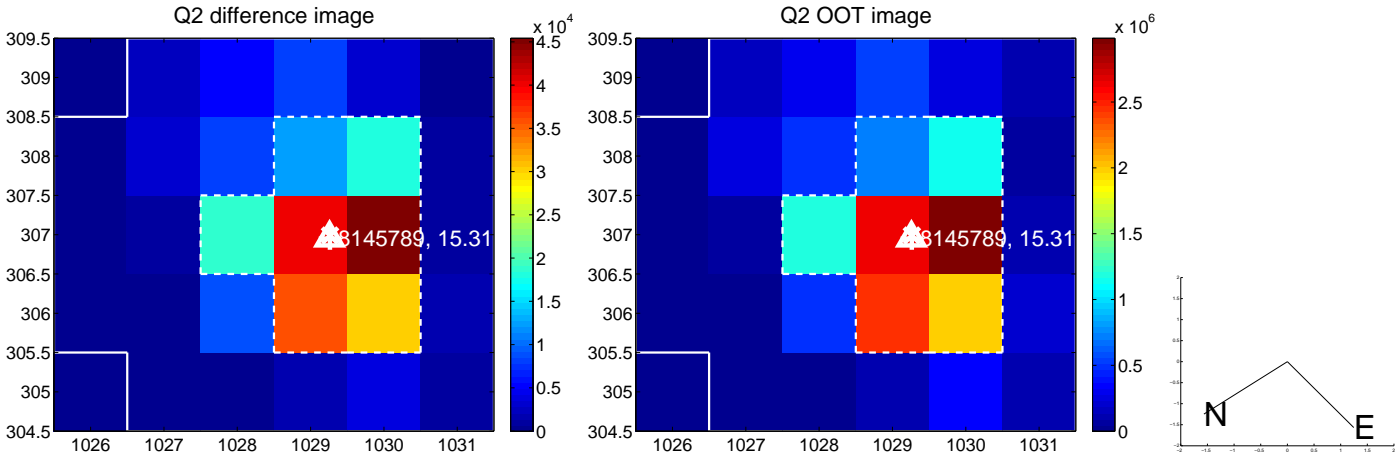
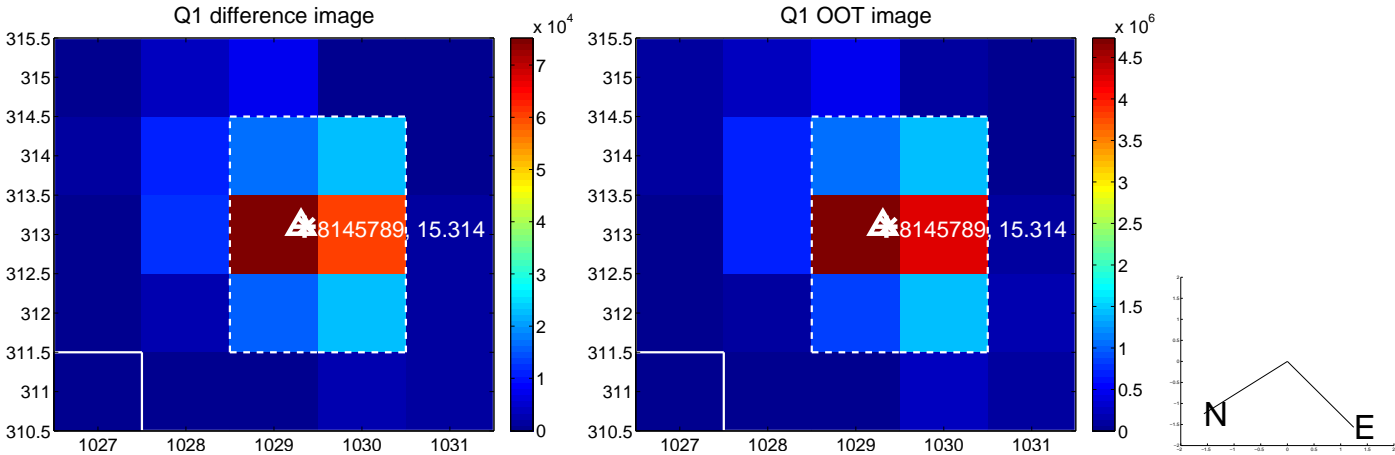
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.100 ± 0.067	1.48	-0.066 ± 0.067	0.075 ± 0.067
PRF-fit source offset from KIC position	0.150 ± 0.068	2.22	0.013 ± 0.068	0.150 ± 0.068
photometric centroid source offset	0.22 ± 0.01	27.56	-0.07 ± 0.01	0.21 ± 0.01

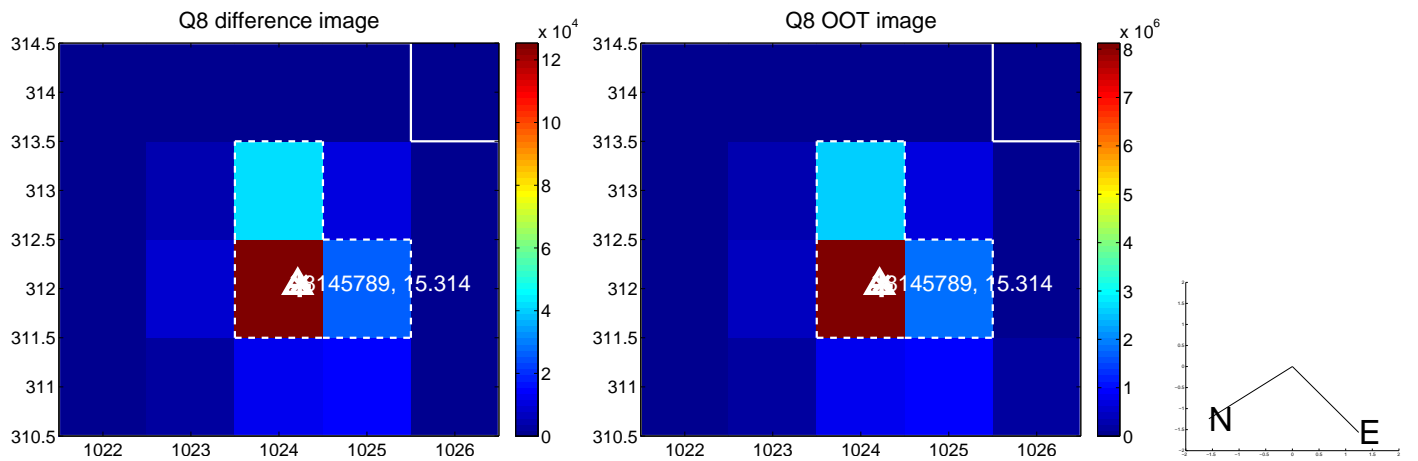
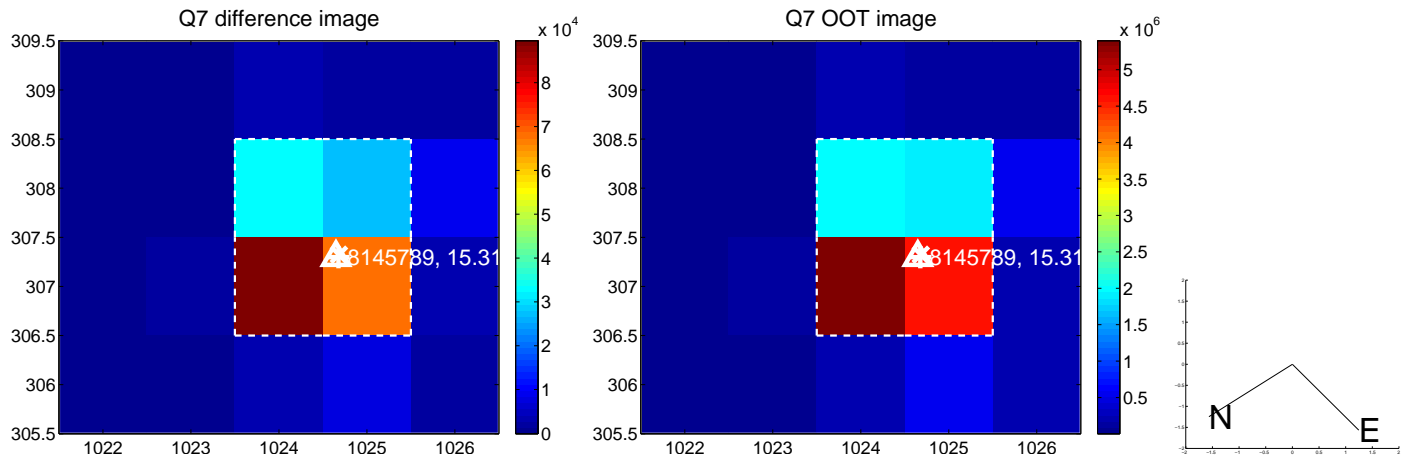
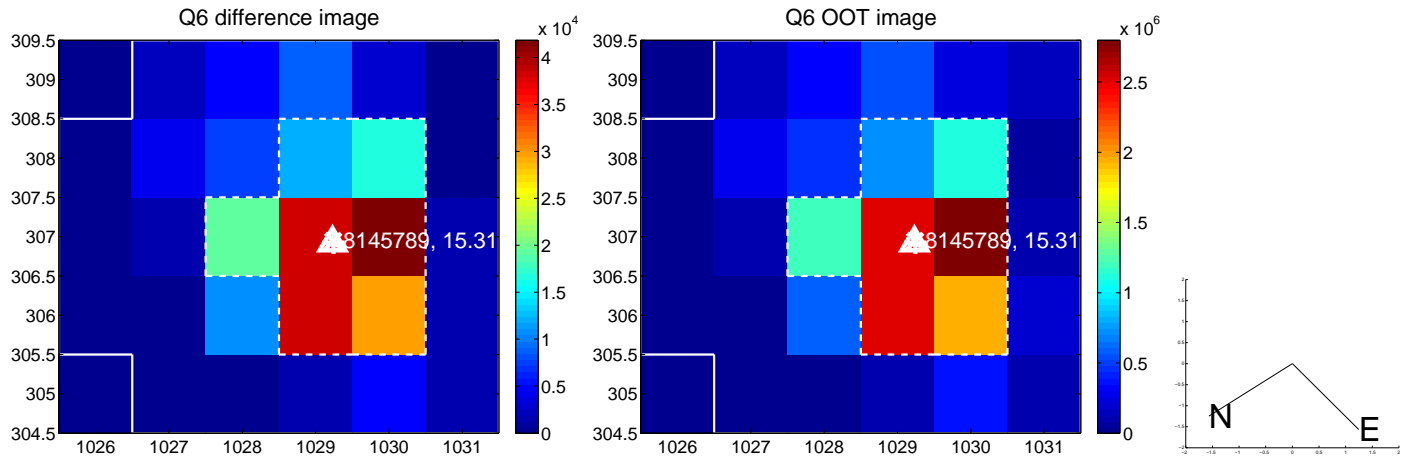
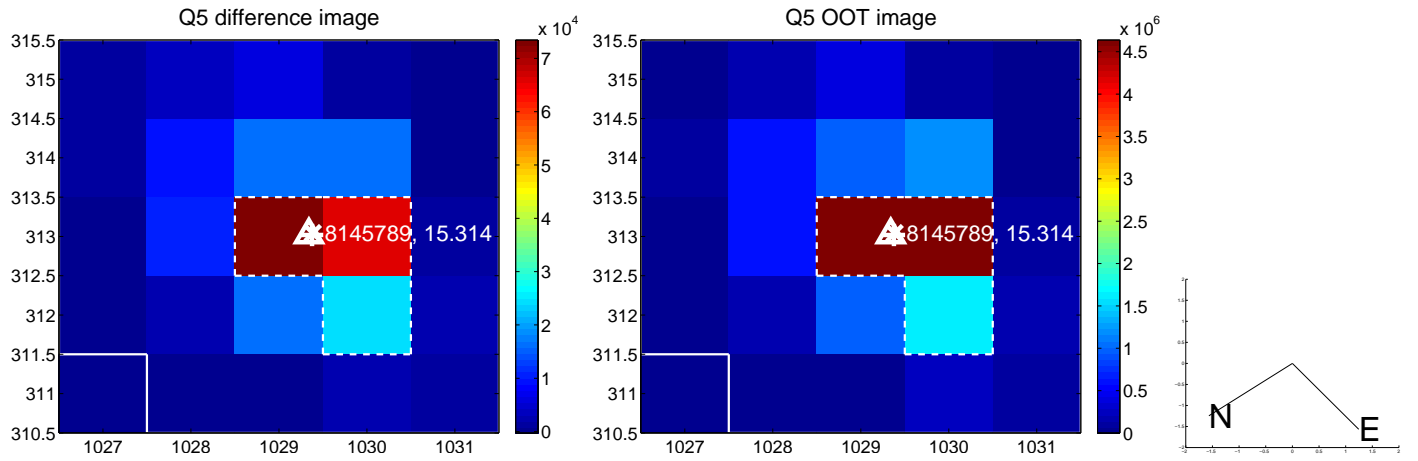


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

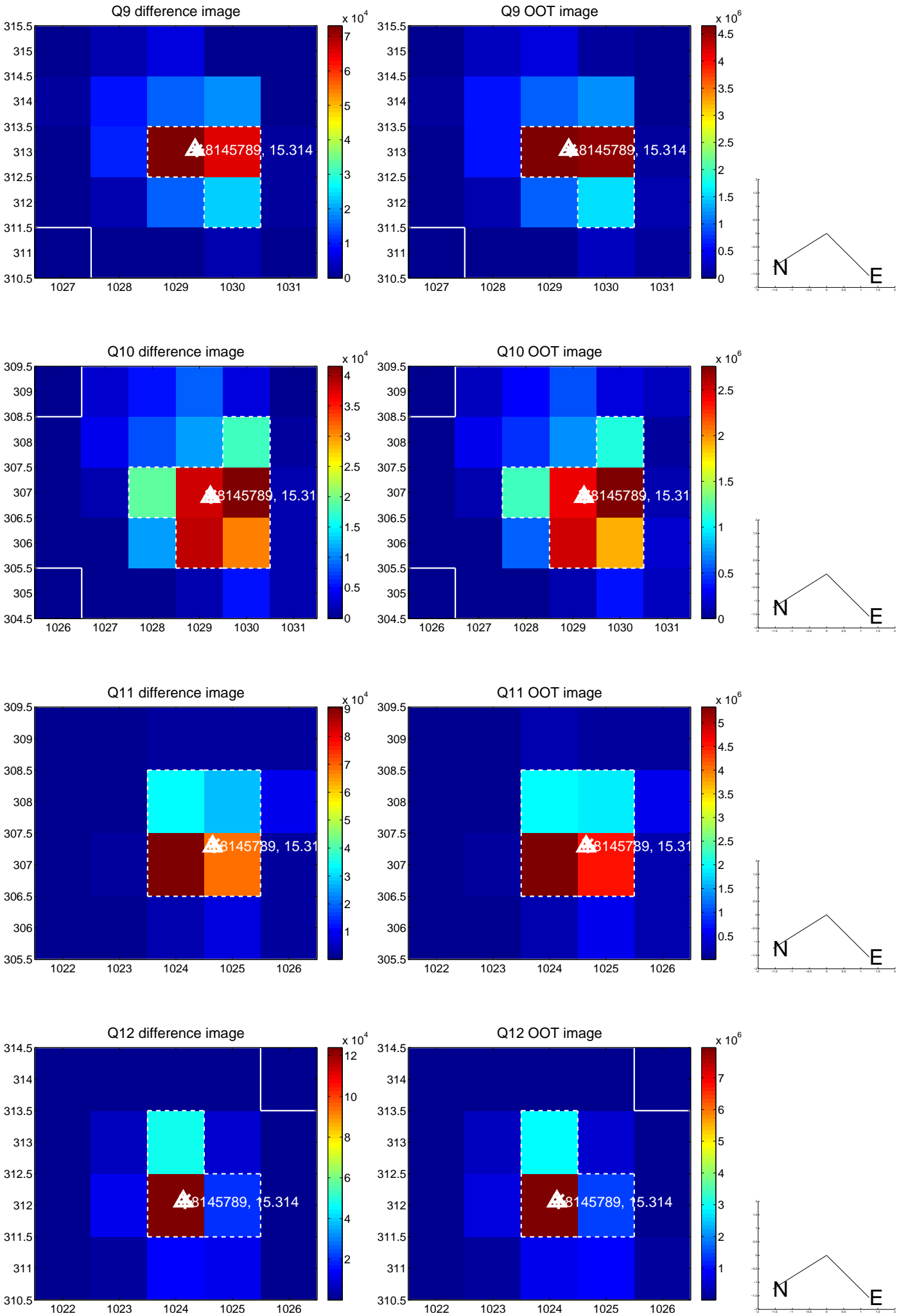
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



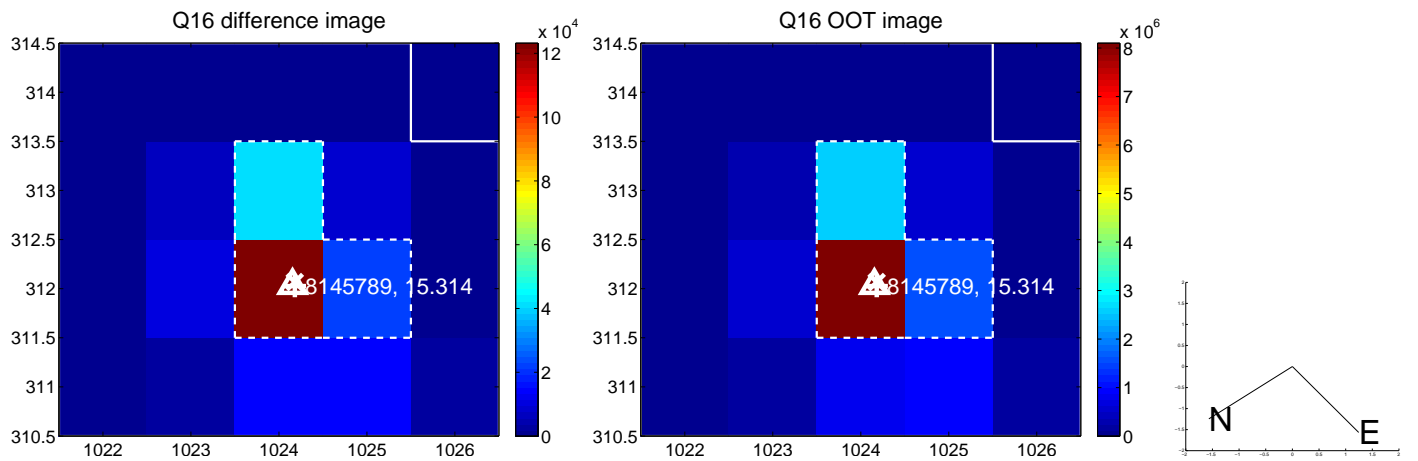
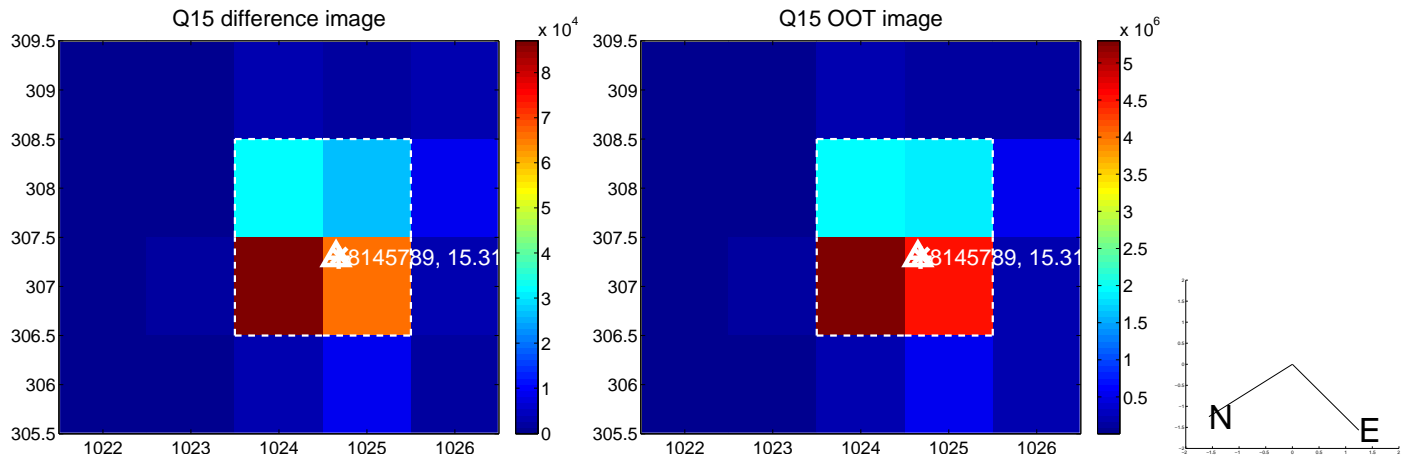
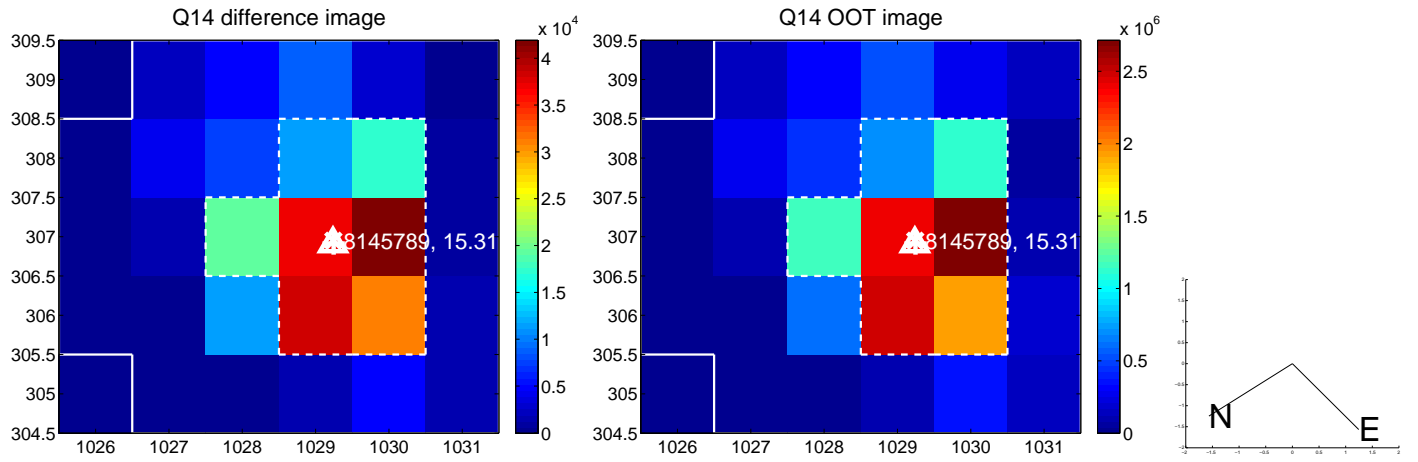
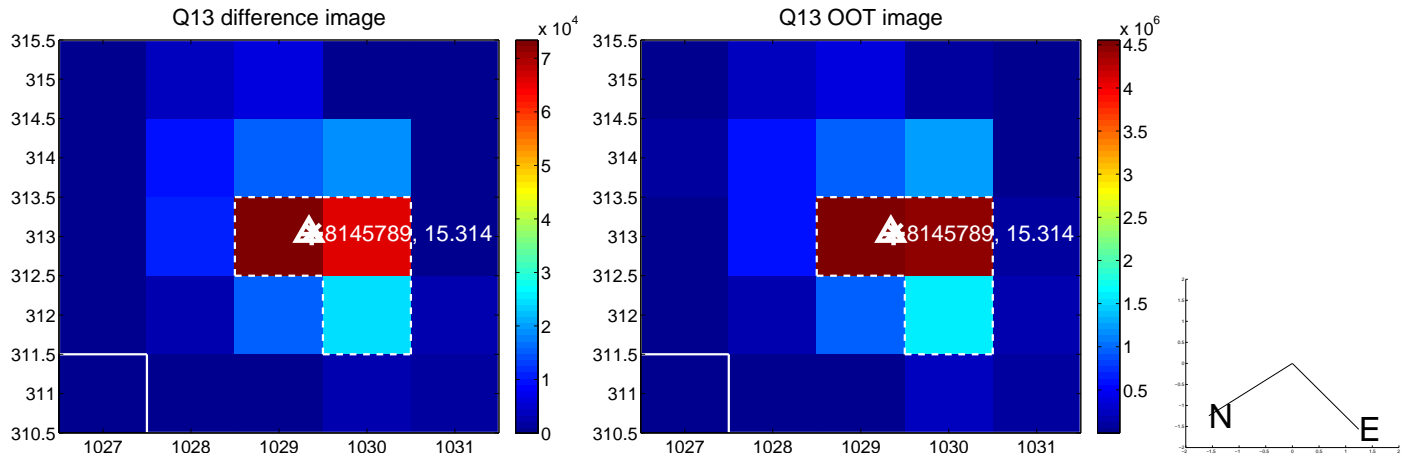
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



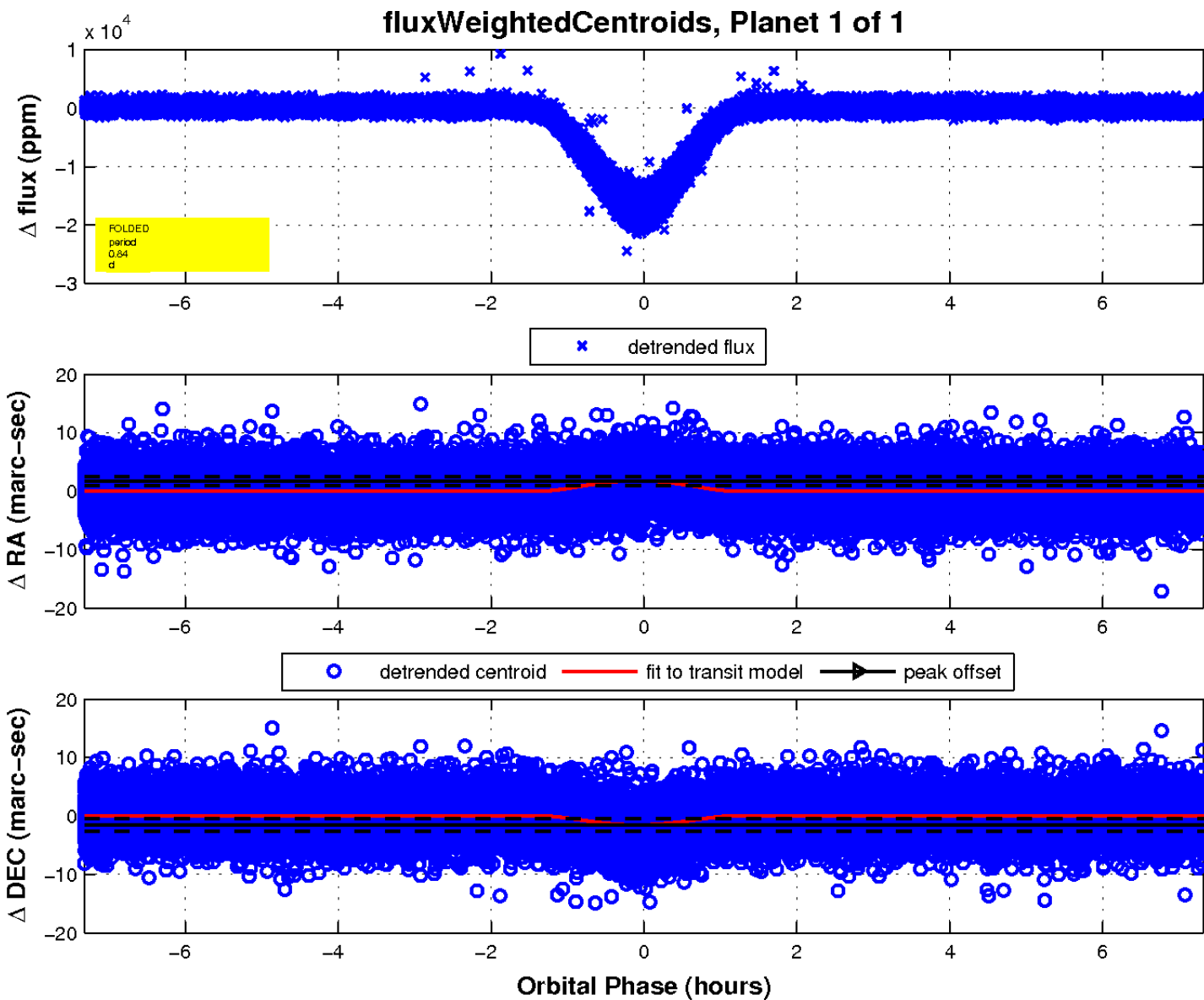
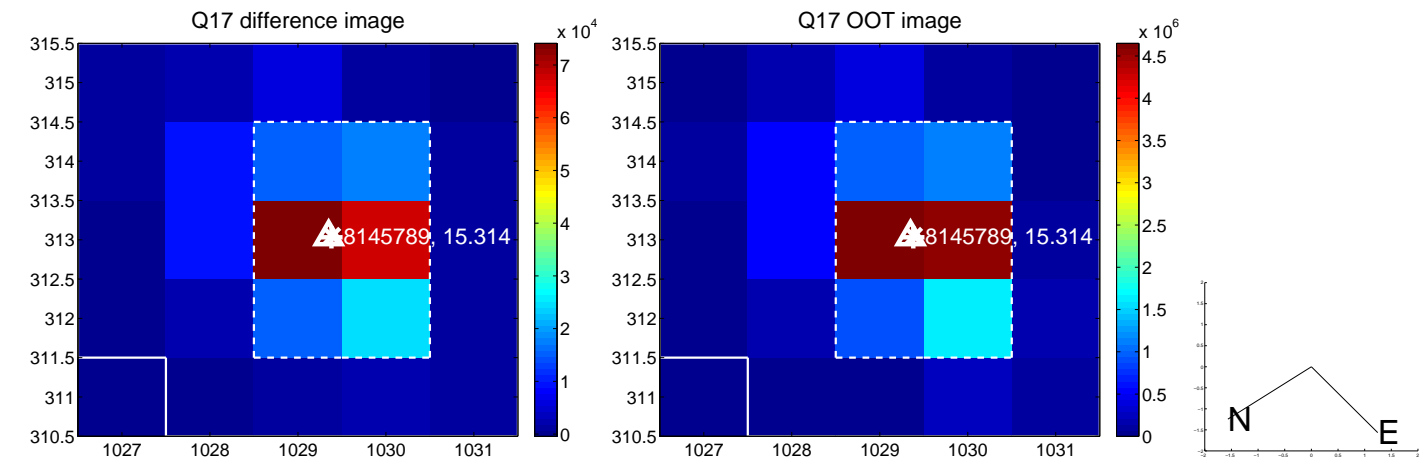
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

