

KIC 007455553

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})
007455553-01	OBS	6879.01	3.258253	134.595837	1426.2	2.640	353.0	235.3	2.36	6712	12.56	4236.95

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007455553-01	OBS	FP	0.00	0	1	0	0	DEPTH_ODDEVEN_DV—DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_DV—MOD_ODDEVEN_ALT

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.

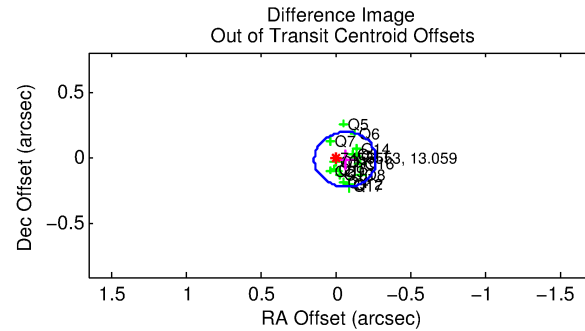
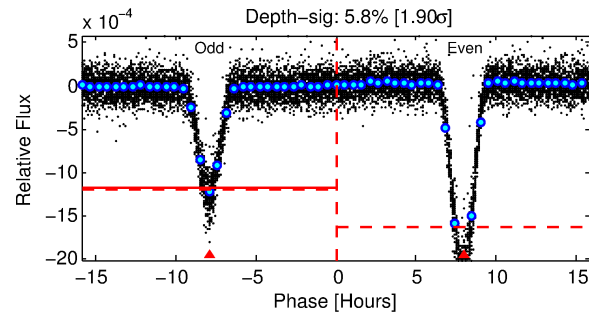
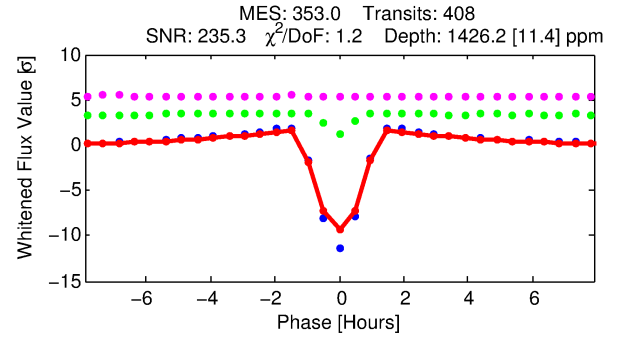
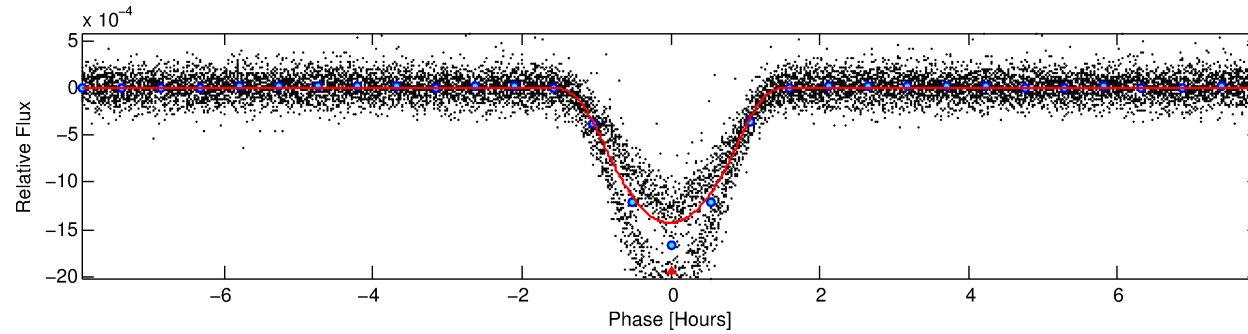
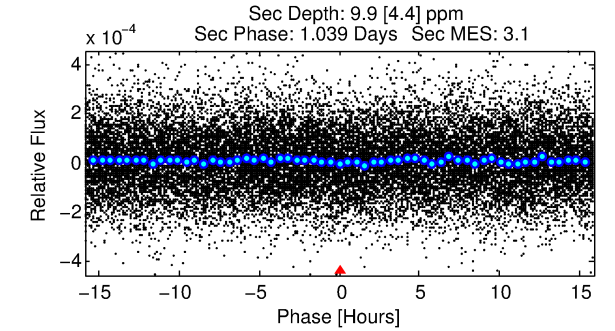
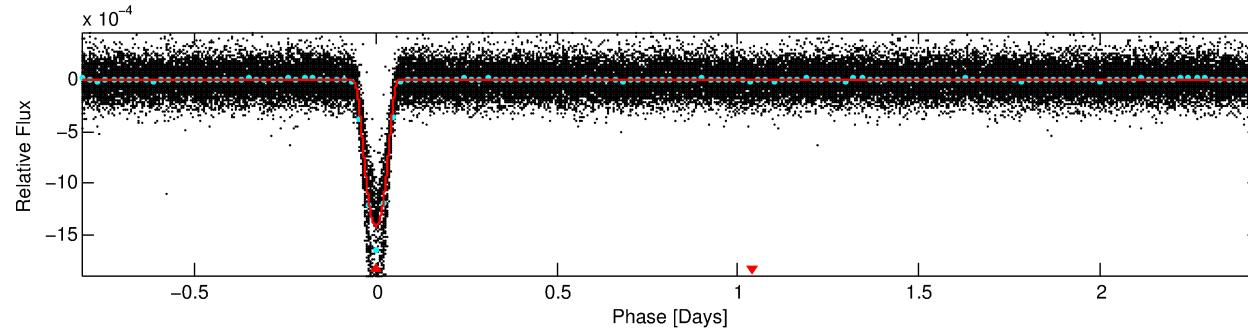
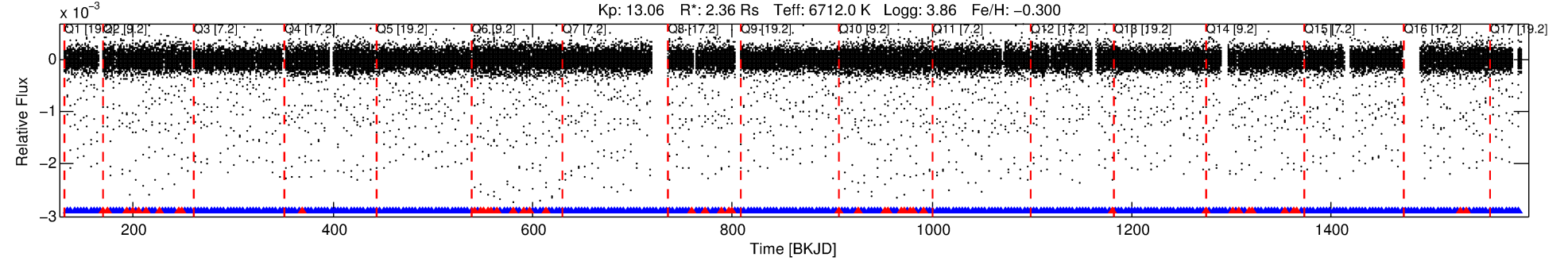
Ephemeris Match Information For 007455553-01

No Significant Match Found

DV One-Page Summary

KIC: 7455553 Candidate: 1 of 1 Period: 3.258 d

KOI: K06879.01 Corr: 0.997



DV Fit Results:

Period = 3.25825 [0.00000] d
Epoch = 134.5958 [0.0002] BKJD
Rp/R* = 0.0487 [0.0021]
a/R* = 3.84 [0.07]
b = 0.97 [0.00]
Seff = 4236.95 [2211.97]
Teq = 2057 [269] K
Rp = 12.56 [4.41] Re
a = 0.0489 [0.0158] AU
Ag = 0.08 [0.06] [-16.43 σ]
Teffp = 1705 [200] K [-1.05 σ]

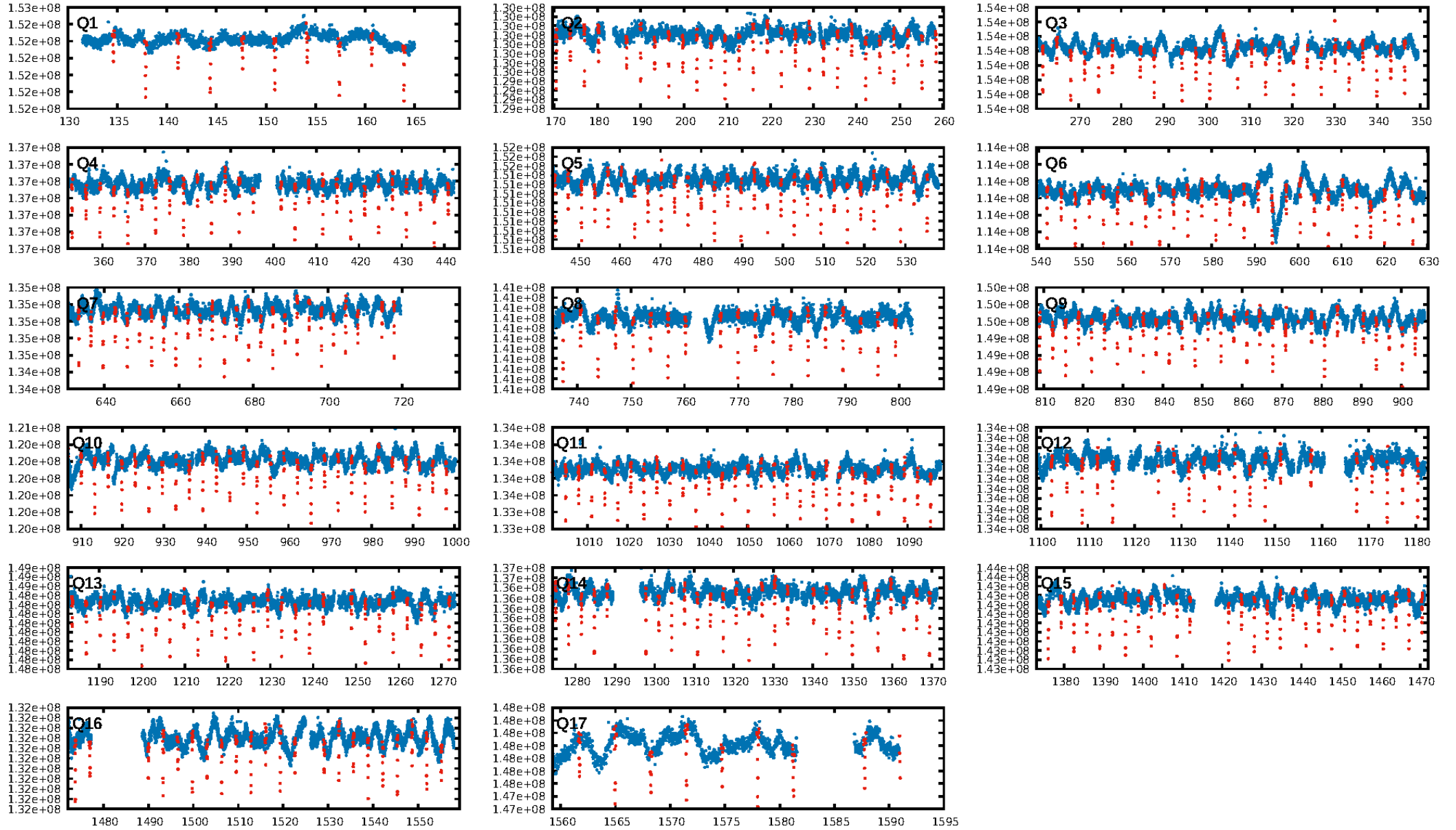
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.88 [344/389]
GhostDiagnostic-chr: 5.145
Centroid-sig: 0.0%
Centroid-so: 0.102 arcsec [3.23 σ]
OotOffset-rm: 0.069 arcsec [0.99 σ]
KicOffset-rm: 0.157 arcsec [1.68 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]

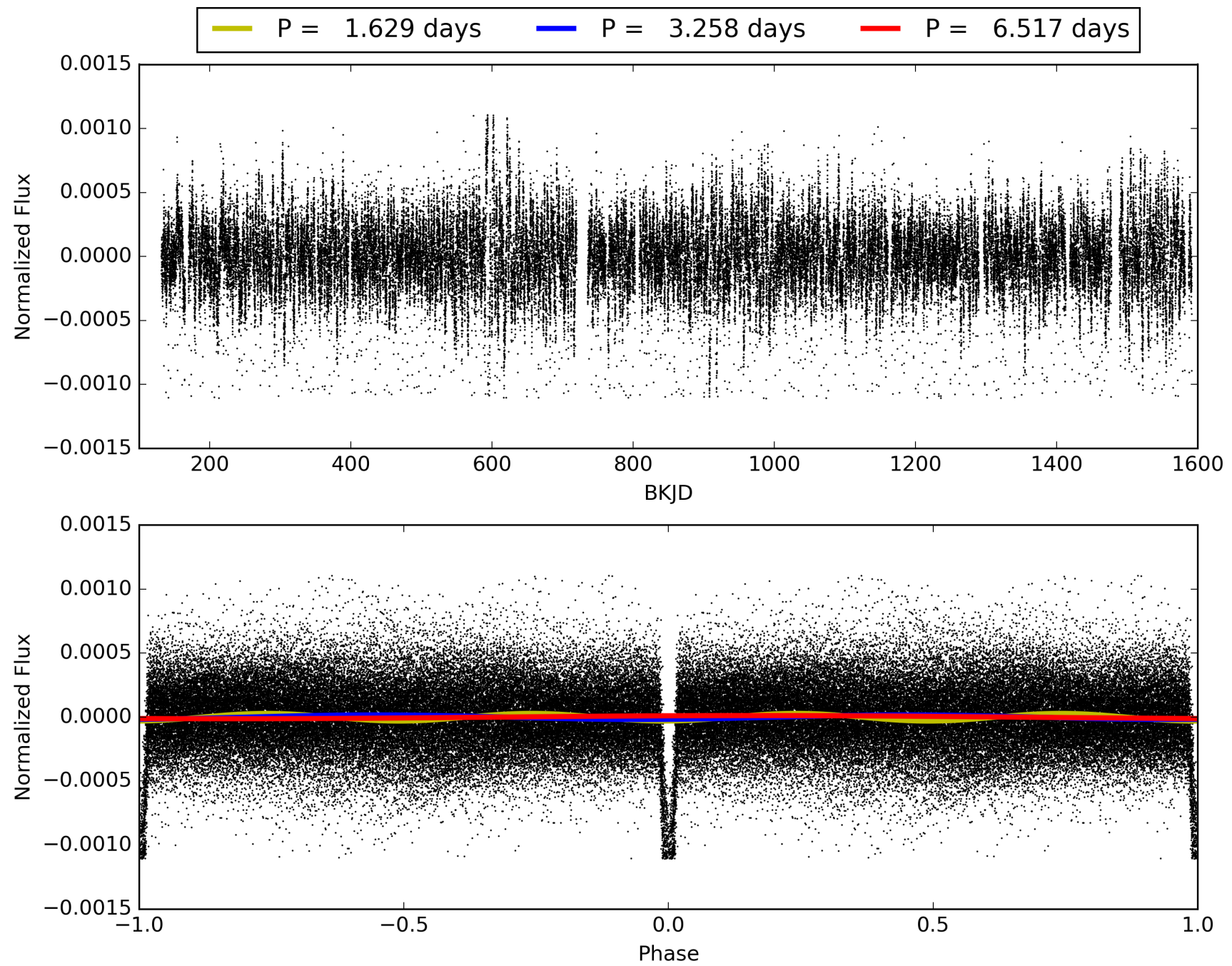
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 08:42:39 Z

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

TCE 007455553-01, PDC Light Curves

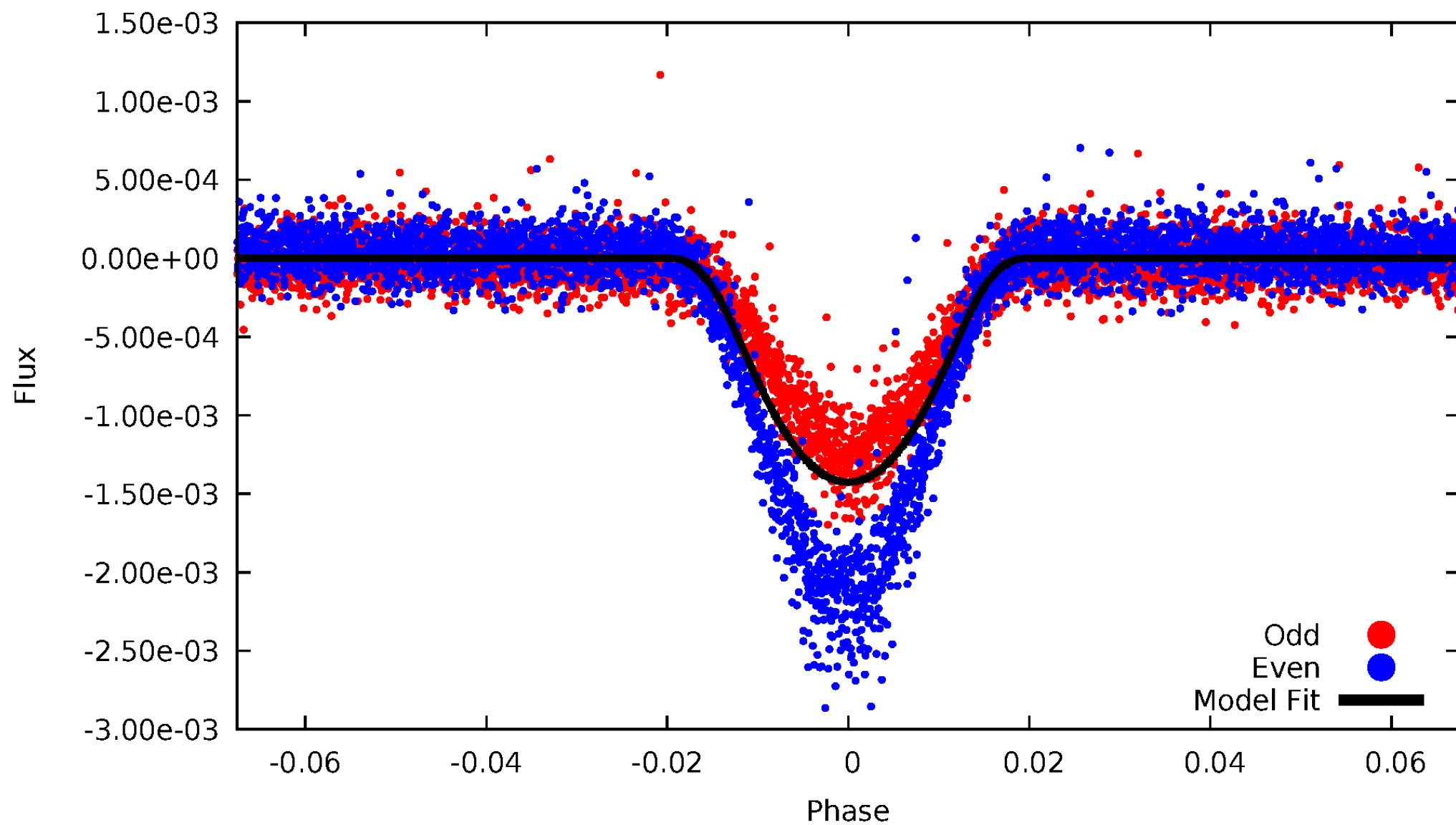


TCE 007455553-01



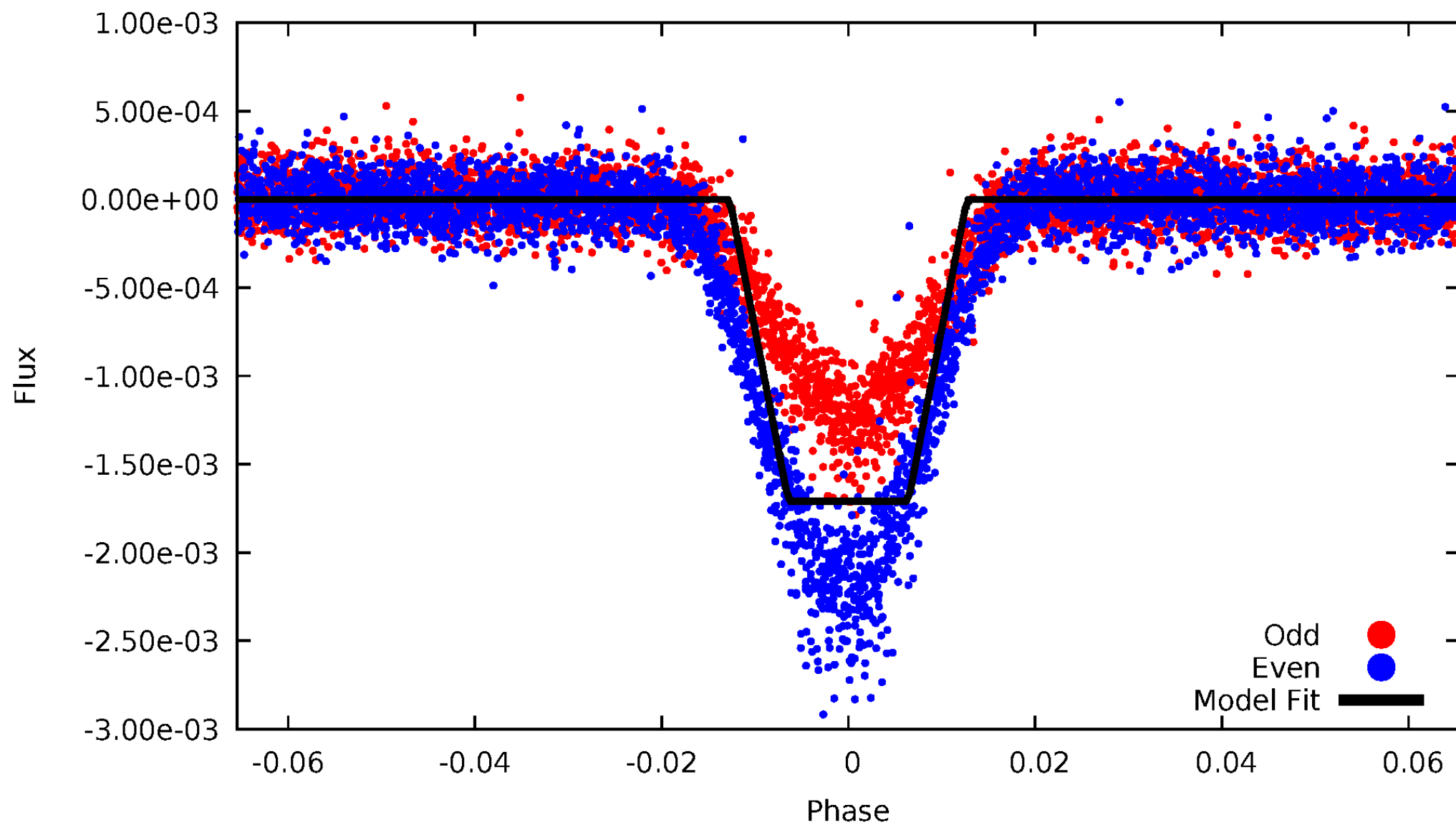
DV Odd/Even

TCE 00745553-01



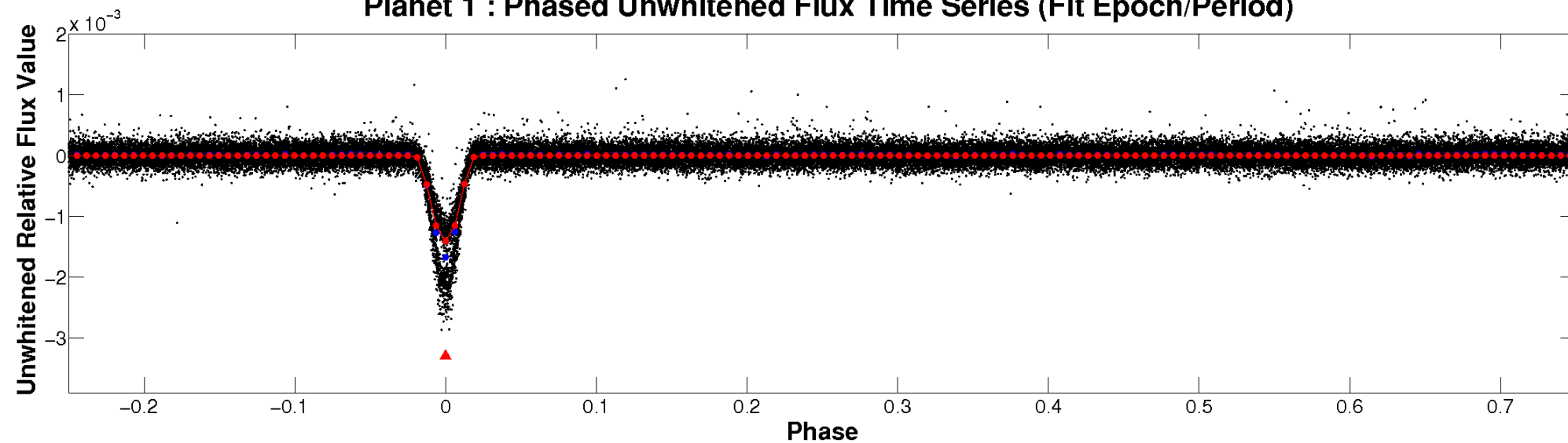
ALT Odd/Even

TCE 00745553-01

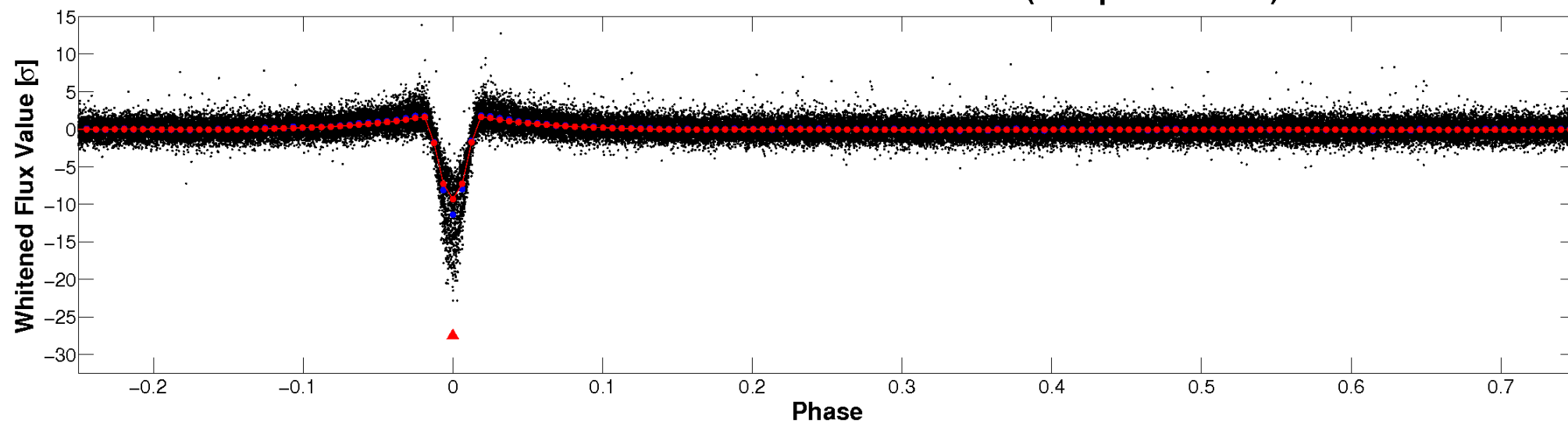


Non-Whitened Vs. Whitened Light Curve

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

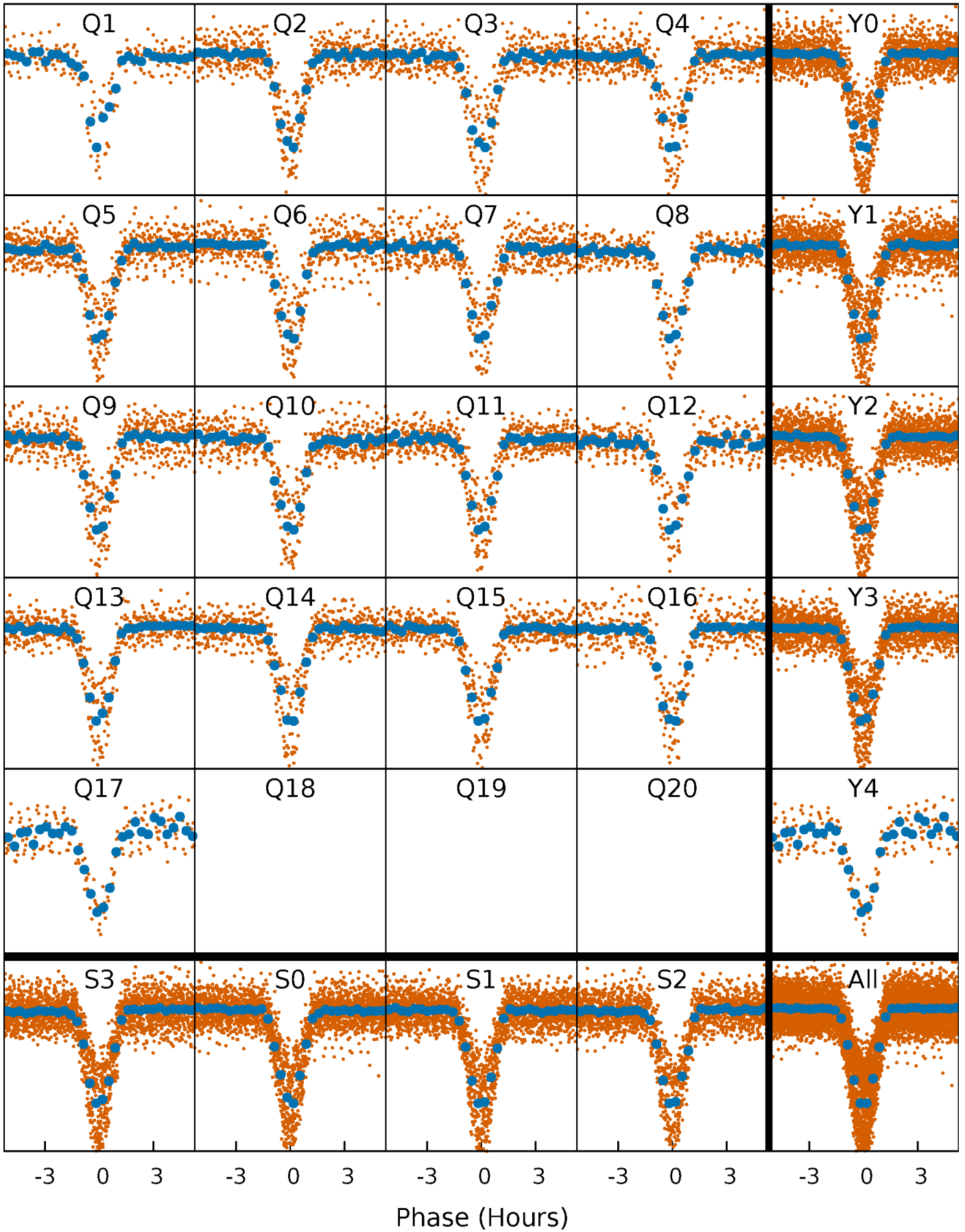


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



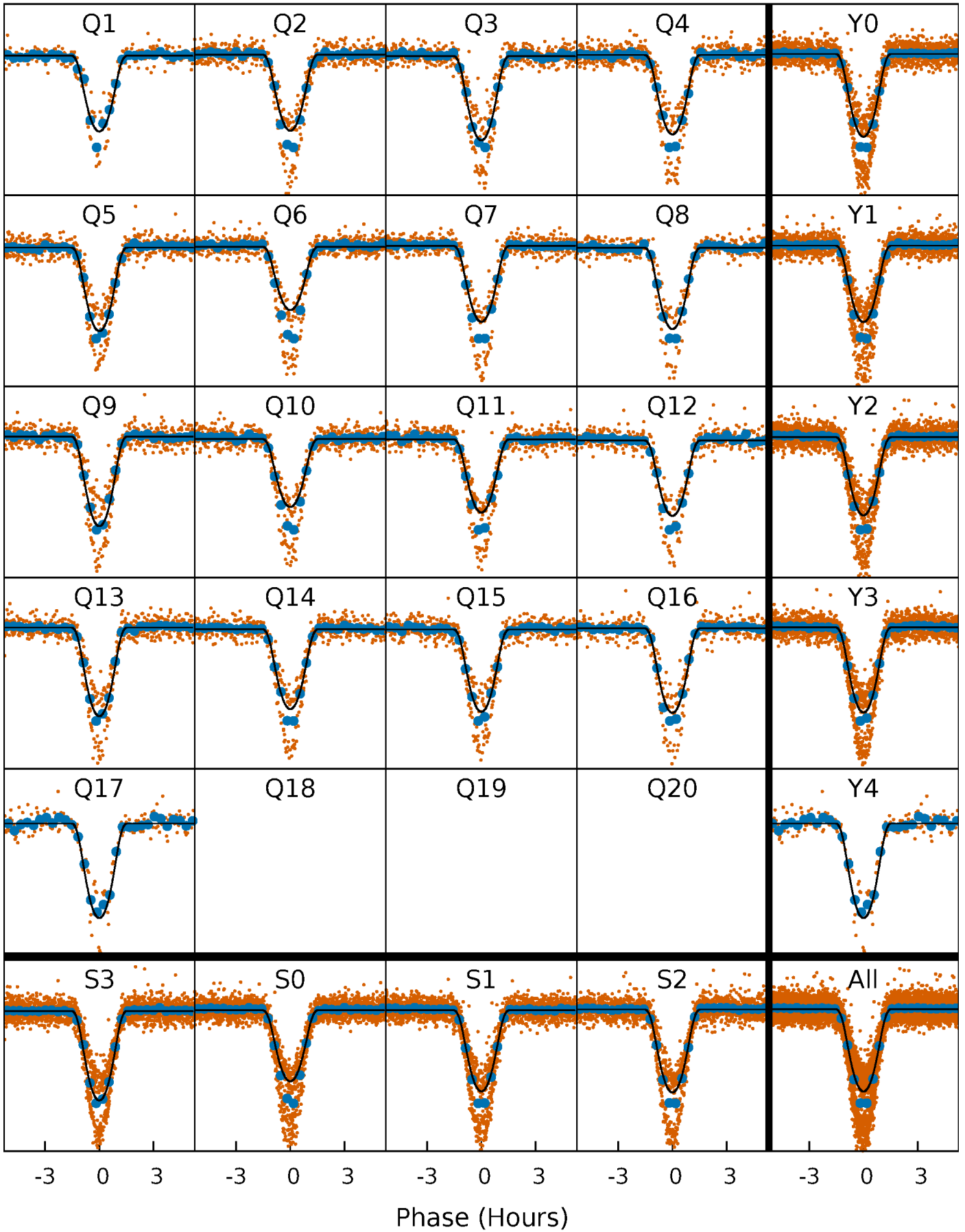
PDC Quarter-Phased Transit Curves

TCE 007455553-01 P= 3.258253 Days $T_0=134.595837$ (BKJD)



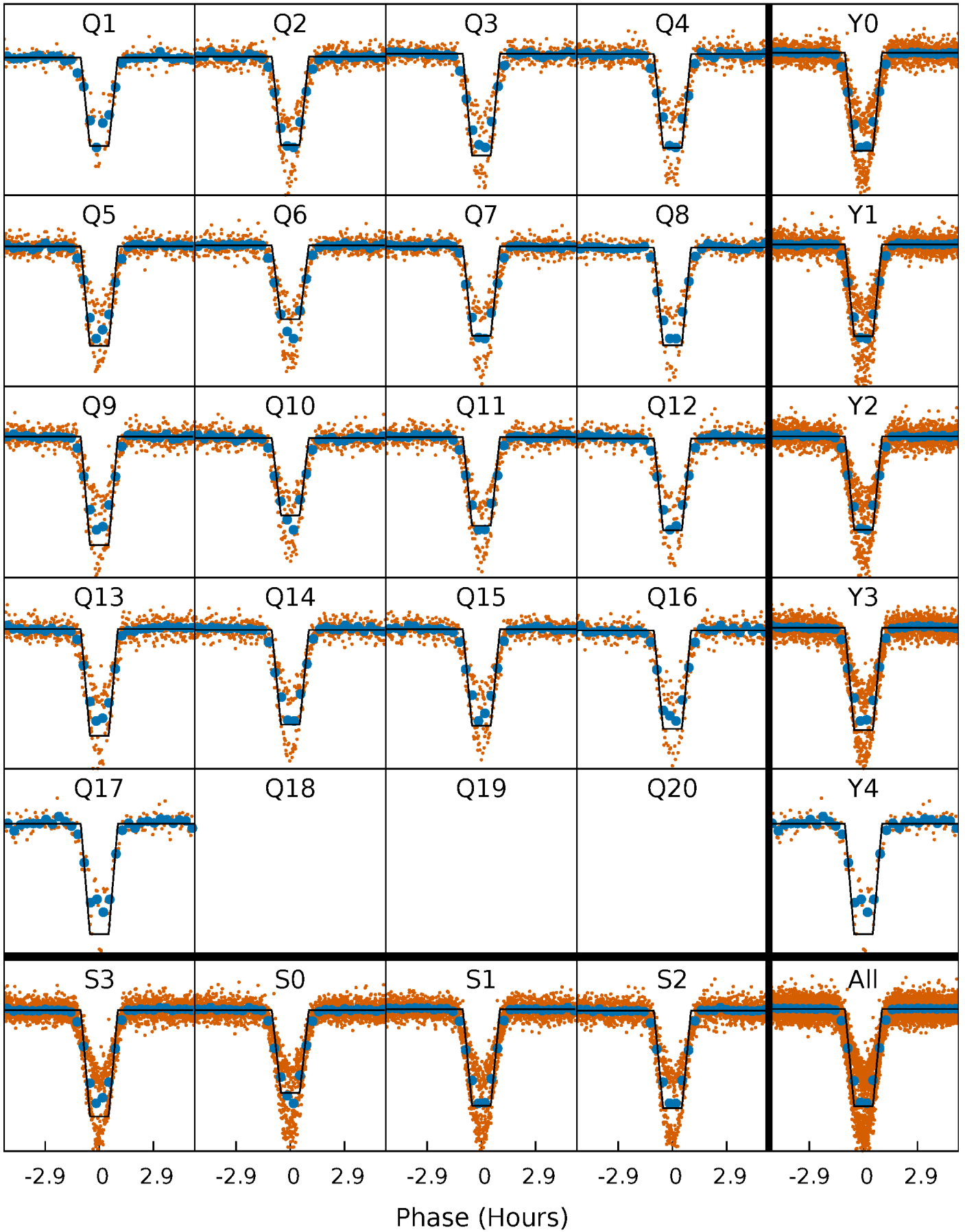
DV Quarter-Phased Transit Curves

TCE 007455553-01 P= 3.258253 Days $T_0=134.595837$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

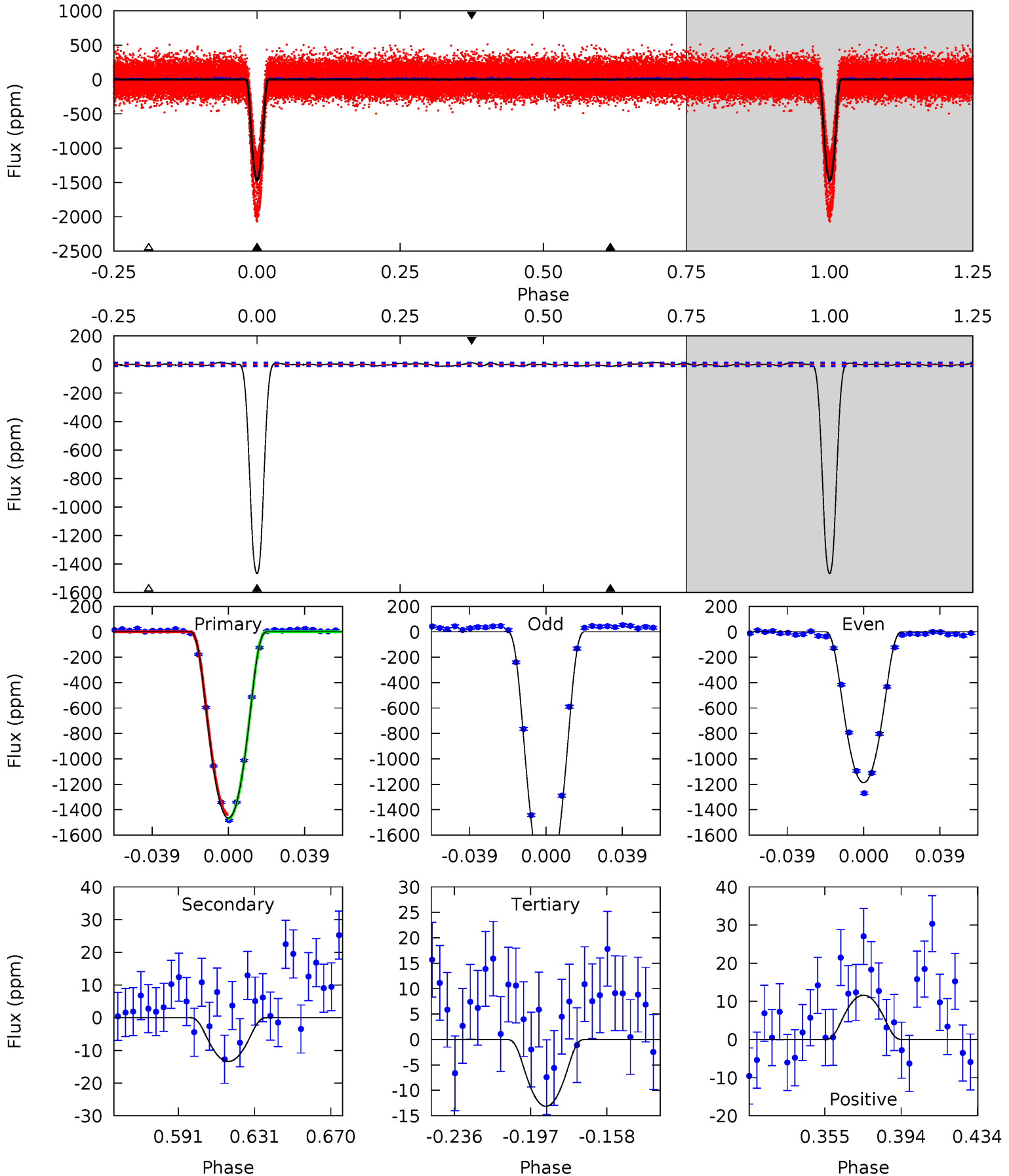
TCE 00745553-01 P= 3.258248 Days $T_0=134.596811$ (BKJD)



DV Model-Shift Uniqueness Test

007455553-01, P = 3.258253 Days, E = 131.337584 Days

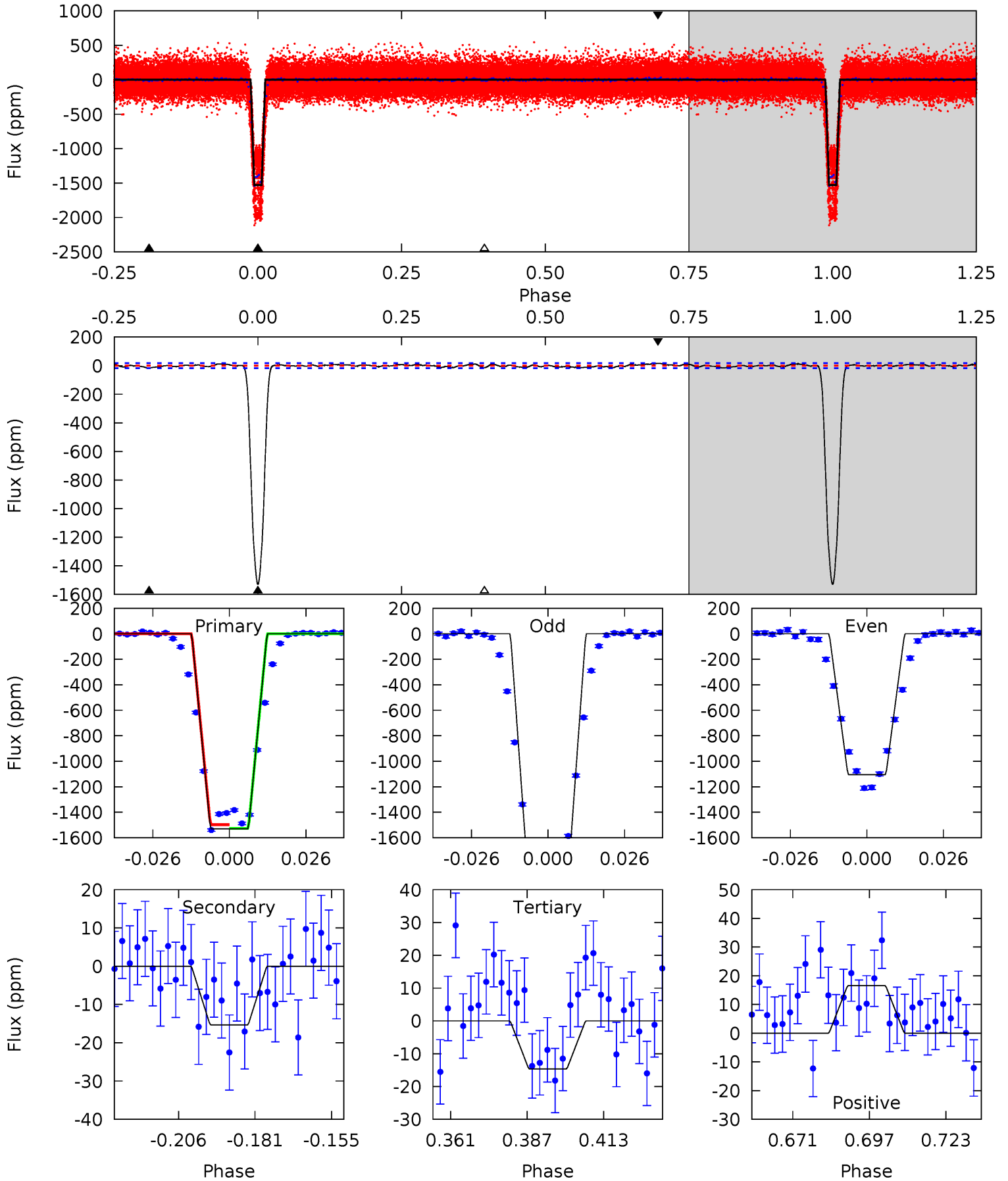
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
571.7	5.21	5.12	4.53	4.76	2.06	2.34	566.6	567.2	0.09	0.69	172.5	1.09	0.01	5.82



Alt Model-Shift Uniqueness Test

007455553-01, P = 3.258248 Days, E = 131.338563 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
426.2	4.27	4.09	4.62	4.84	2.23	1.84	422.1	421.6	0.19	-0.35	146.9	1.10	0.01	3.95



Stellar Parameters For KIC 007455553

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6712^{+182}_{-222}	$3.859^{+0.292}_{-0.097}$	$-0.300^{+0.300}_{-0.250}$	$2.361^{+0.444}_{-0.824}$	$1.467^{+0.208}_{-0.312}$	$0.157^{+0.309}_{-0.047}$
	+3%/-3%	+8%/-3%	+100%/-83%	+19%/-35%	+14%/-21%	+196%/-30%
Source	PHO1	FLK73	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 007455553-01 / KOI 6879.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-13 ± 3	$12.14^{+1.69}_{-2.56}$	2815^{+176}_{-248}	-2775^{+230}_{-148}	$0.120^{+0.054}_{-0.031}$
Alt.	-15 ± 4	$10.37^{+1.34}_{-1.82}$	2823^{+181}_{-232}	-2612^{+417}_{-200}	$0.191^{+0.077}_{-0.058}$

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

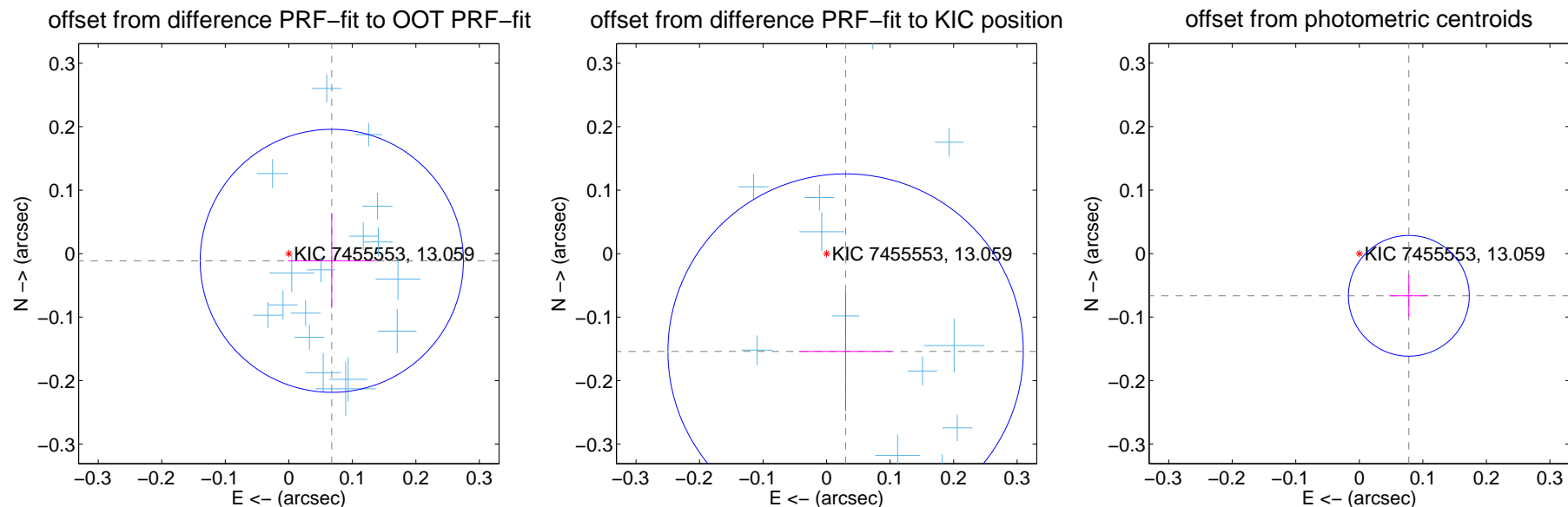
DV Centroid Data

Supplemental centroid analysis for 007455553-01. Kepler magnitude: 13.06. Transit SNR 235.27

There are 17 quarters with good PRF difference image offsets

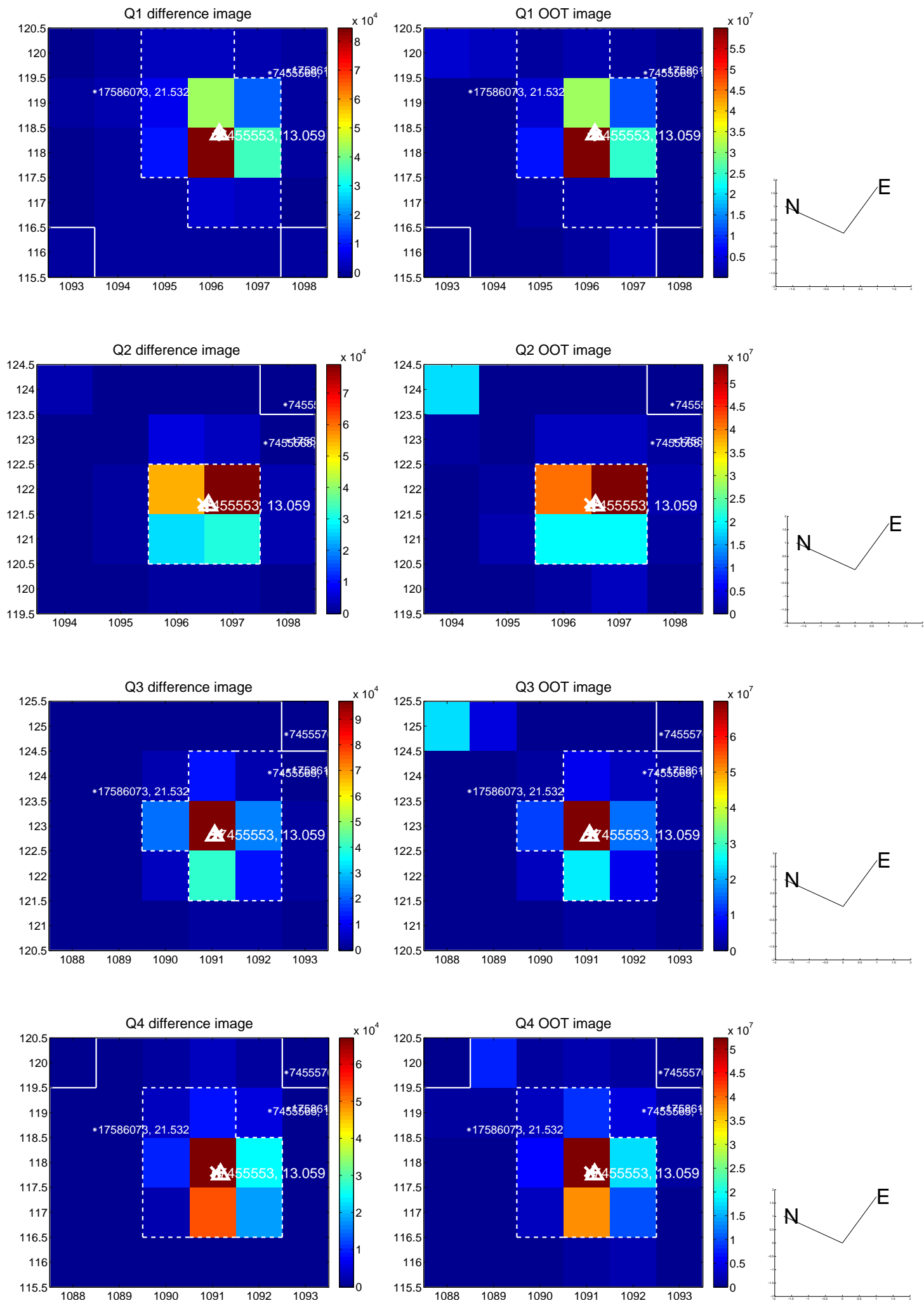
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.069 ± 0.069	0.99	-0.068 ± 0.069	-0.011 ± 0.074
PRF-fit source offset from KIC position	0.157 ± 0.093	1.68	-0.030 ± 0.074	-0.154 ± 0.094
photometric centroid source offset	0.10 ± 0.03	3.23	-0.08 ± 0.03	-0.07 ± 0.03

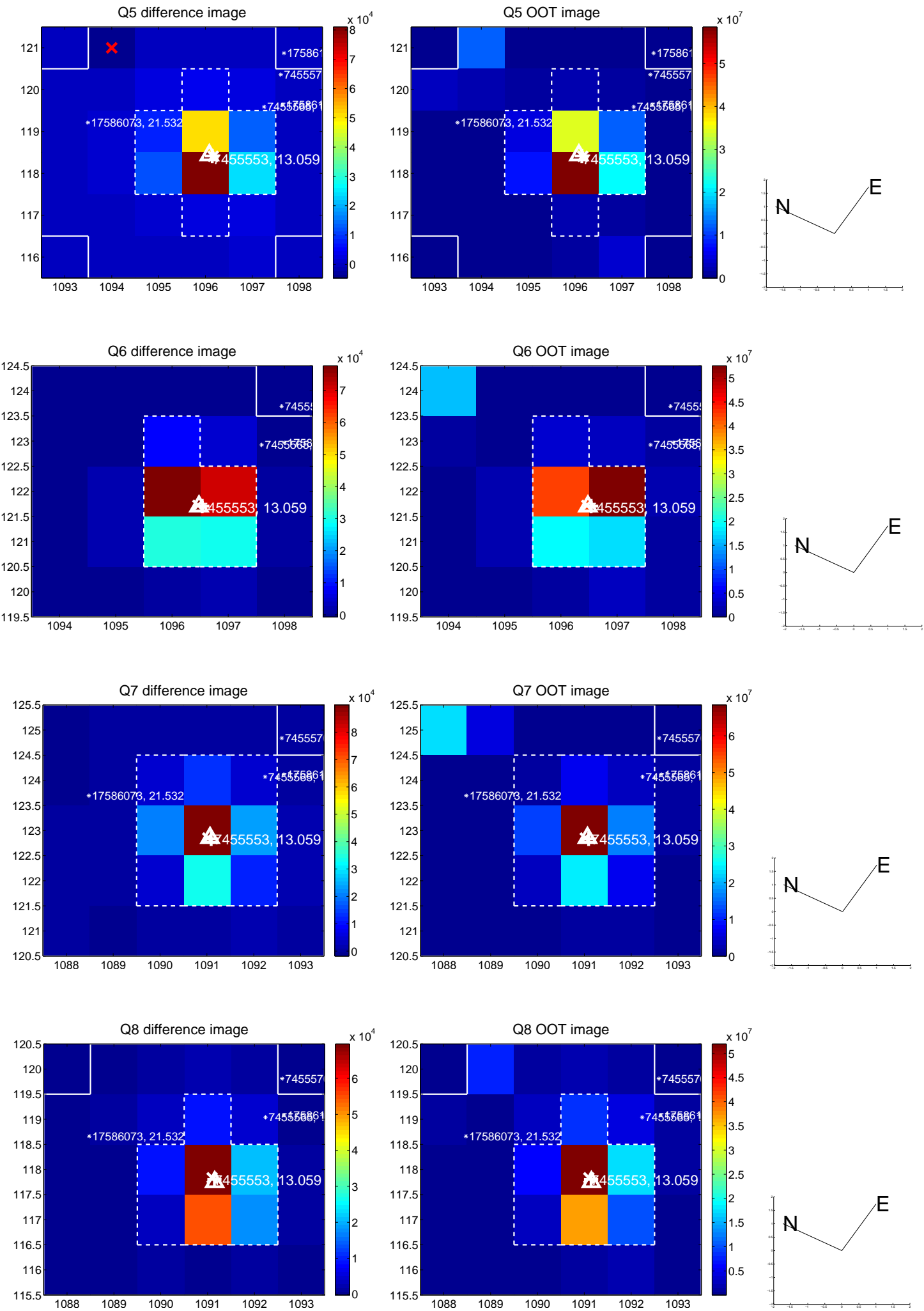


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

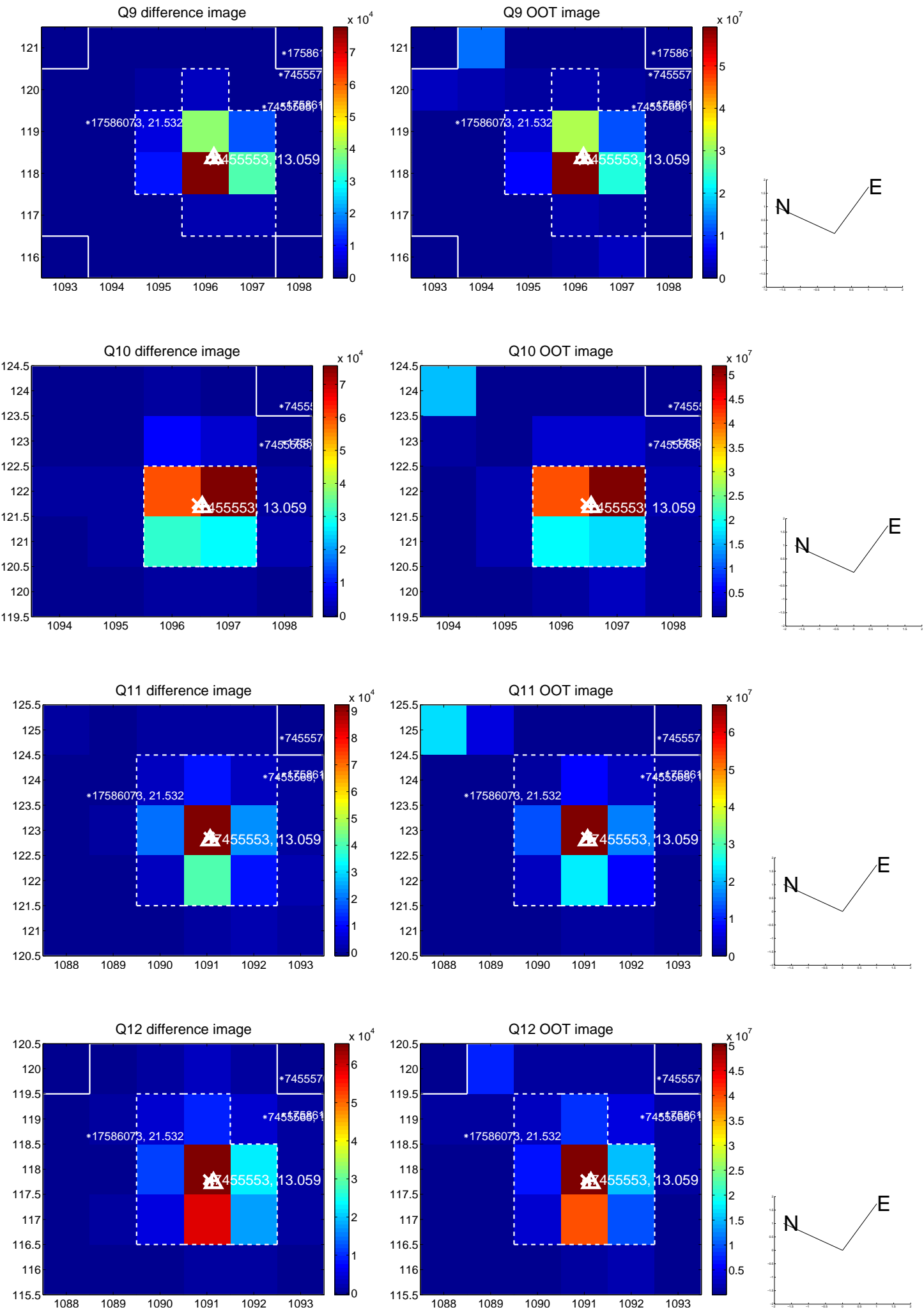
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



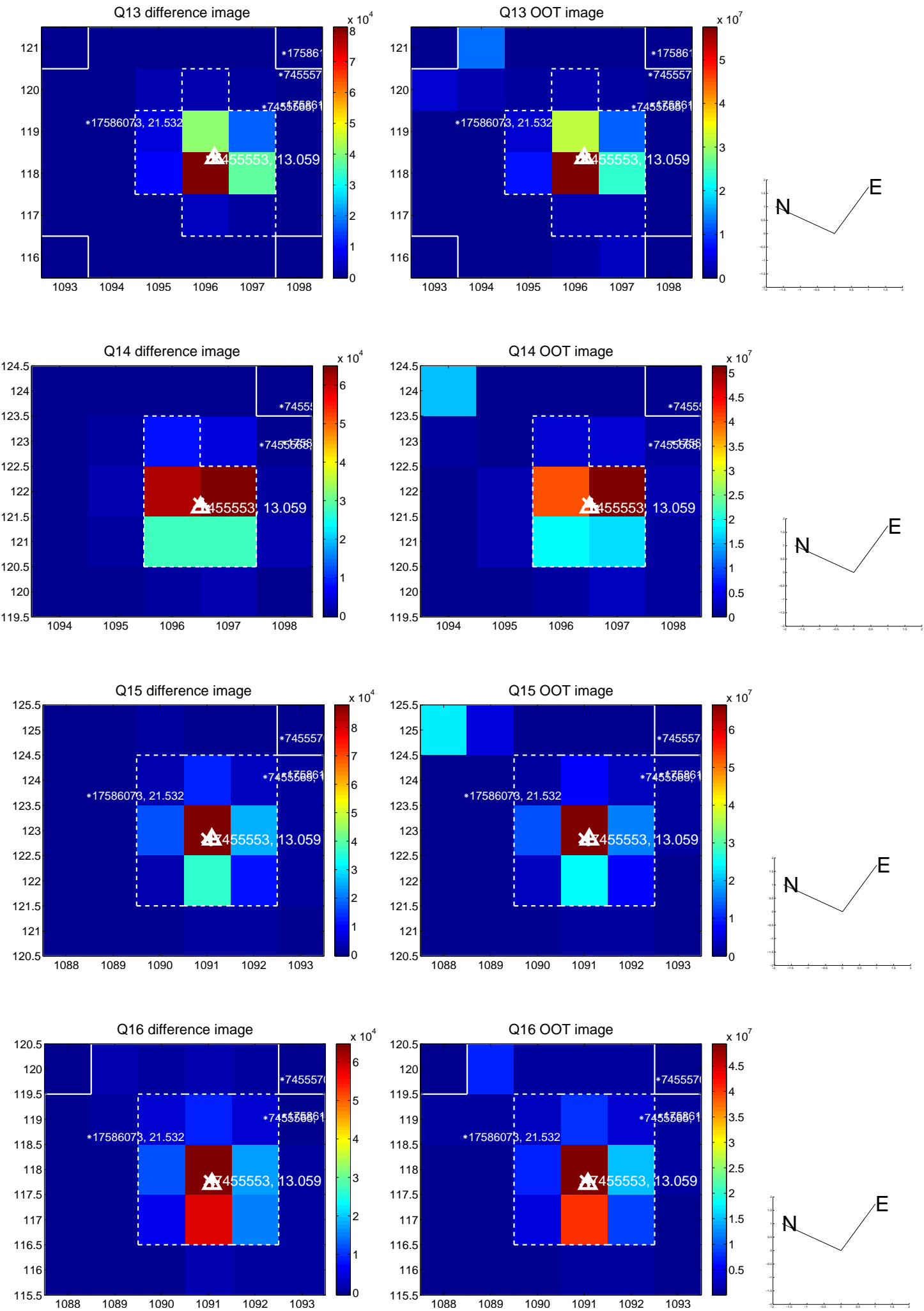
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

