

KIC 008559146

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})
008559146-01	OBS	No	1.356913	132.103335	15.6	6.440	8.9	8.3	2.94	5242	1.16	9491.61

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008559146-01	OBS	FP	0.00	1	0	0	0	LPP_DV

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

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

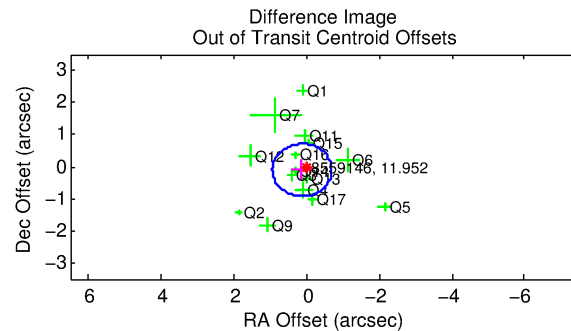
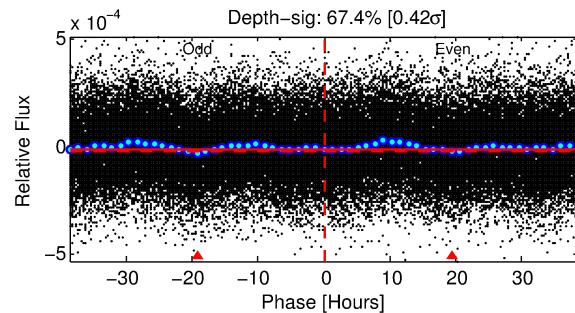
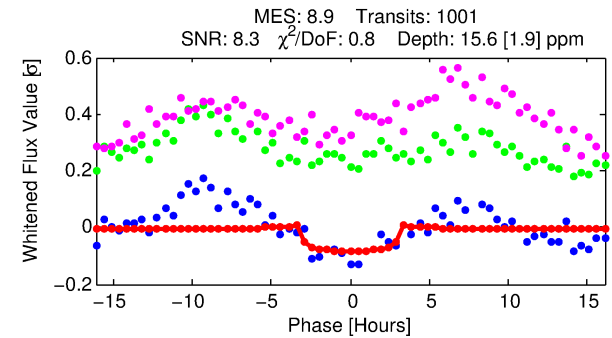
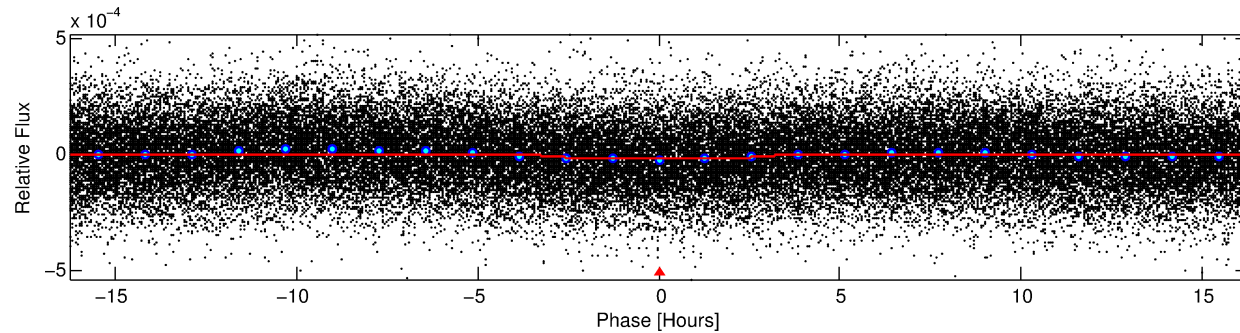
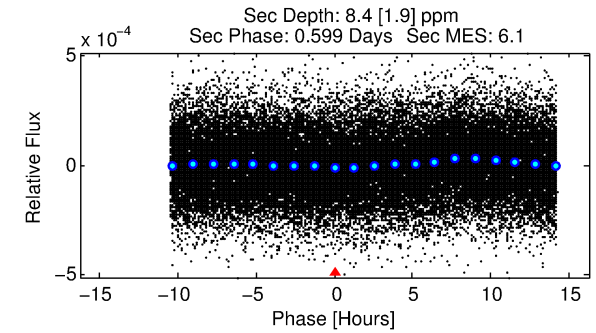
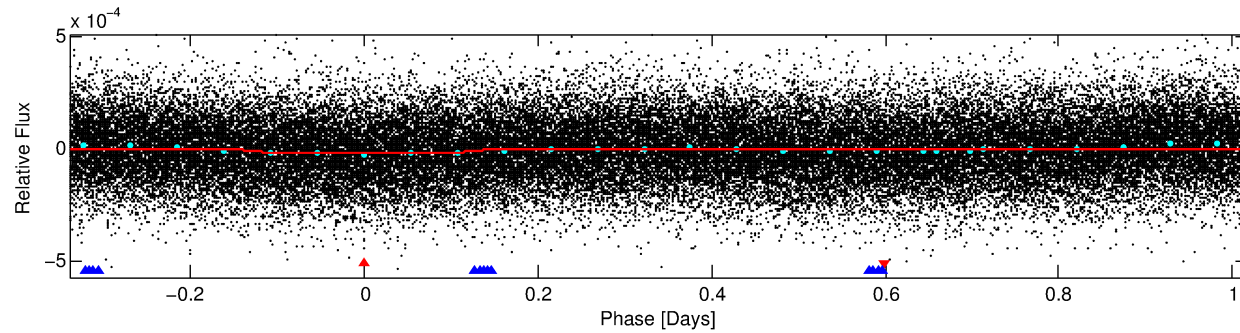
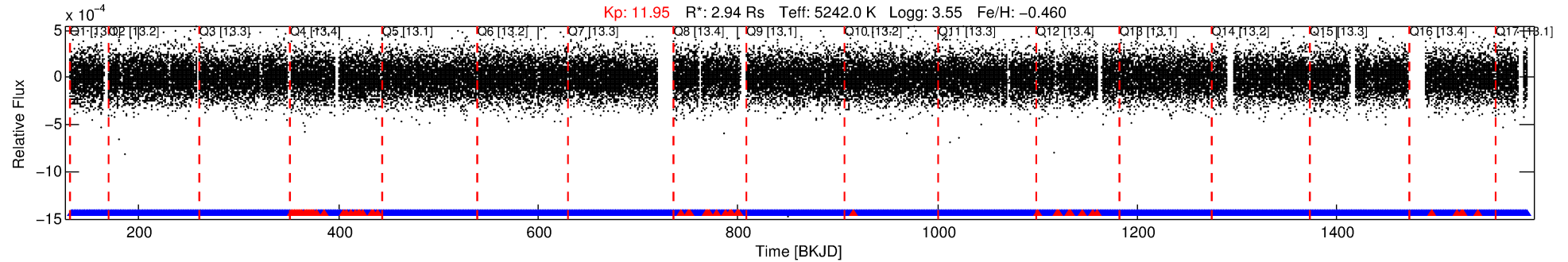
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008559146-01

No Significant Match Found

DV One-Page Summary

KIC: 8559146 Candidate: 1 of 2 Period: 1.357 d



DV Fit Results:

Period = 1.35691 [0.00002] d
Epoch = 132.1033 [0.0066] BKJD
 $R_p/R^* = 0.0036$ [0.0028]
 $a/R^* = 1.66$ [3.35]
 $b = 0.32$ [8.83]
 $S_{\text{eff}} = 9491.61$ [3105.55]
 $T_{\text{eq}} = 2517$ [206] K
 $R_p = 1.16$ [0.95] R_e
 $a = 0.0248$ [0.0053] AU
 $A_g = 2.13$ [3.42] [0.33σ]
 $T_{\text{eff}} = 4699$ [1857] K [1.17σ]

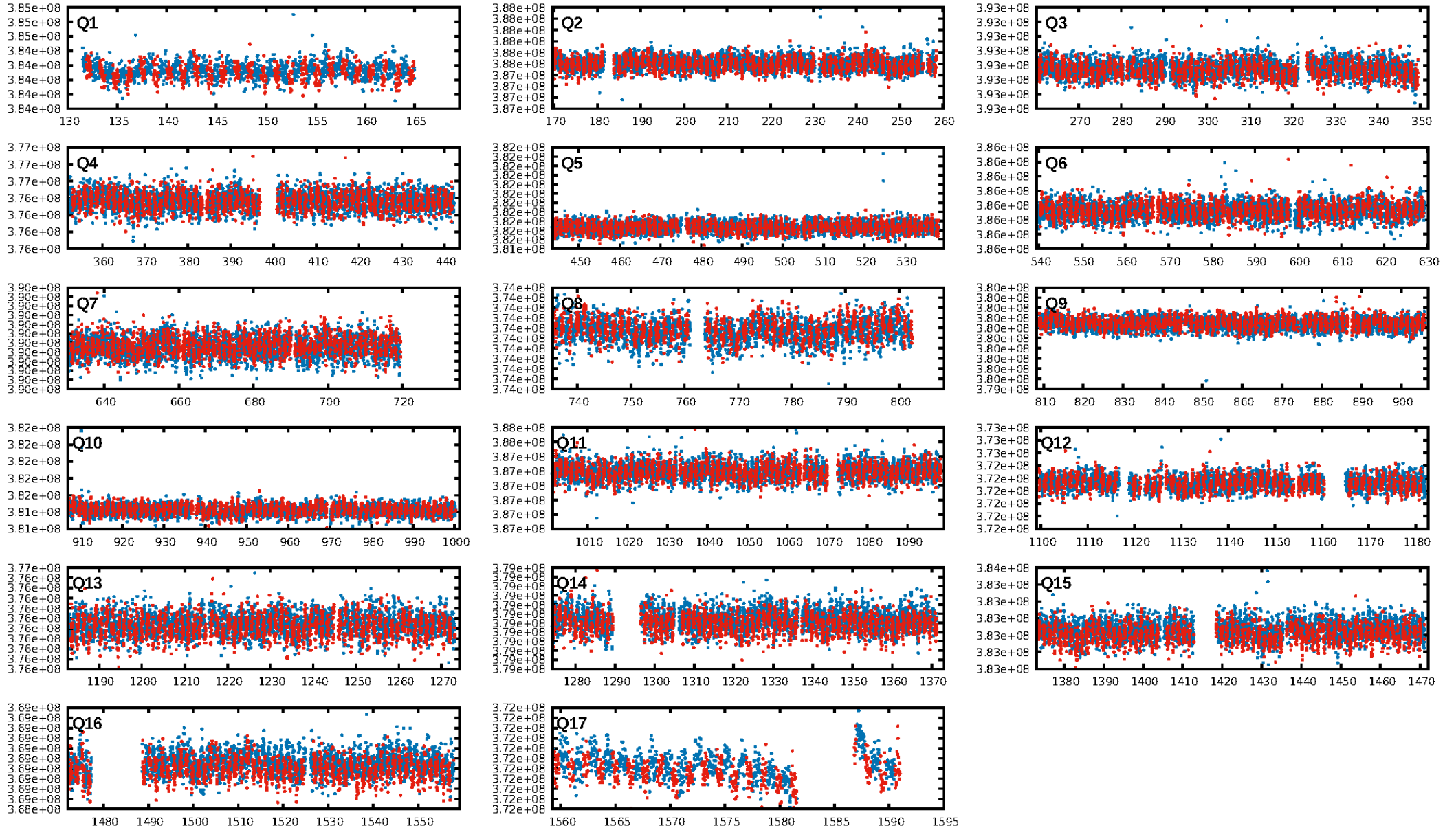
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [320.17σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 9.33e-11
RollingBand-fgt: 0.94 [902/955]
GhostDiagnostic-chr: 4.114
Centroid-sig: 62.9%
Centroid-so: 0.687 arcsec [0.99σ]
OotOffset-rm: 0.165 arcsec [0.61σ]
OotOffset-st: 3/4/3/5 [15]
KicOffset-rm: 0.203 arcsec [0.73σ]
KicOffset-st: 3/4/3/5 [15]
DiffImageQuality-fgm: 0.93 [14/15]
DiffImageOverlap-fno: 1.00 [17/17]

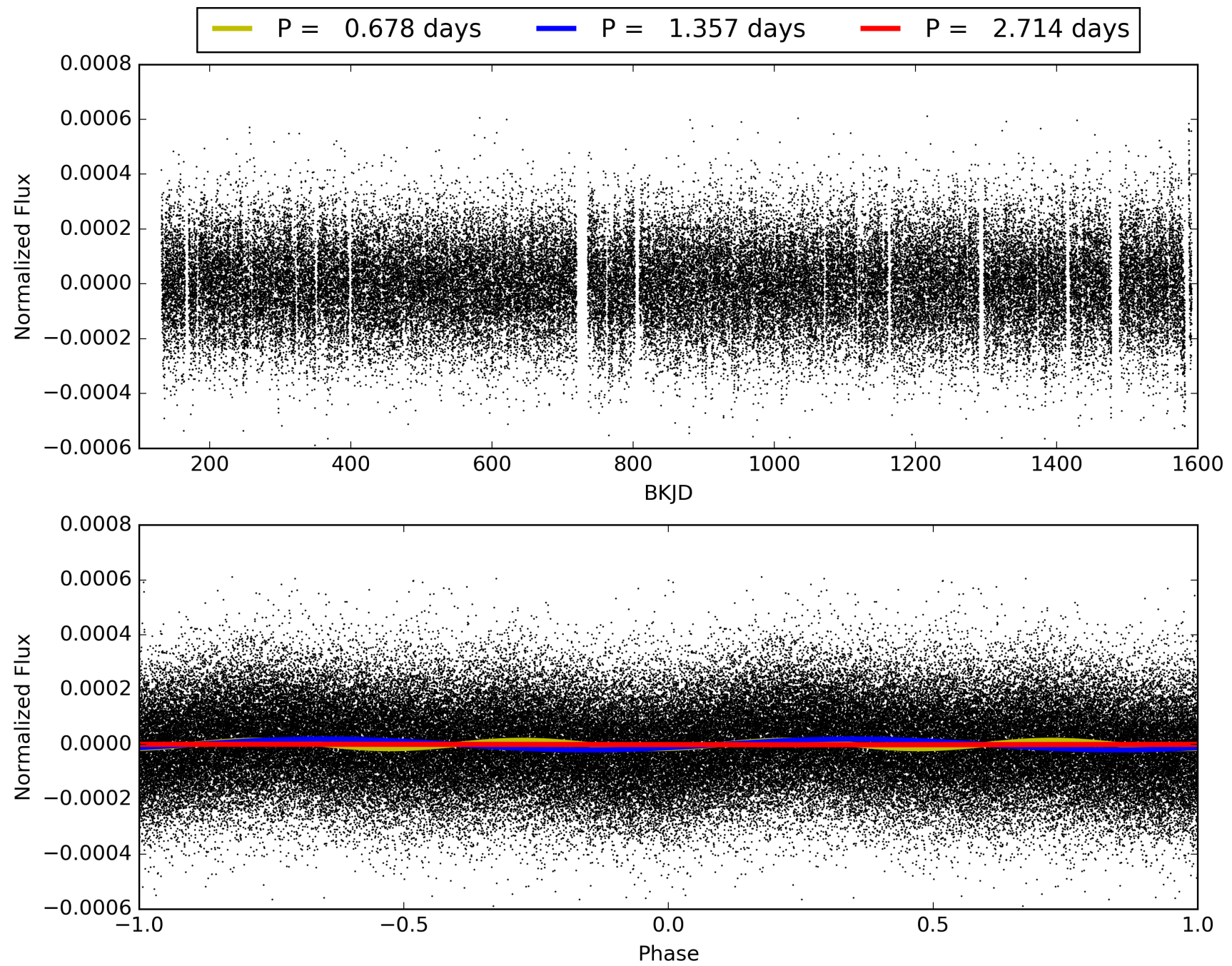
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 14:40:30 Z

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

TCE 008559146-01, PDC Light Curves

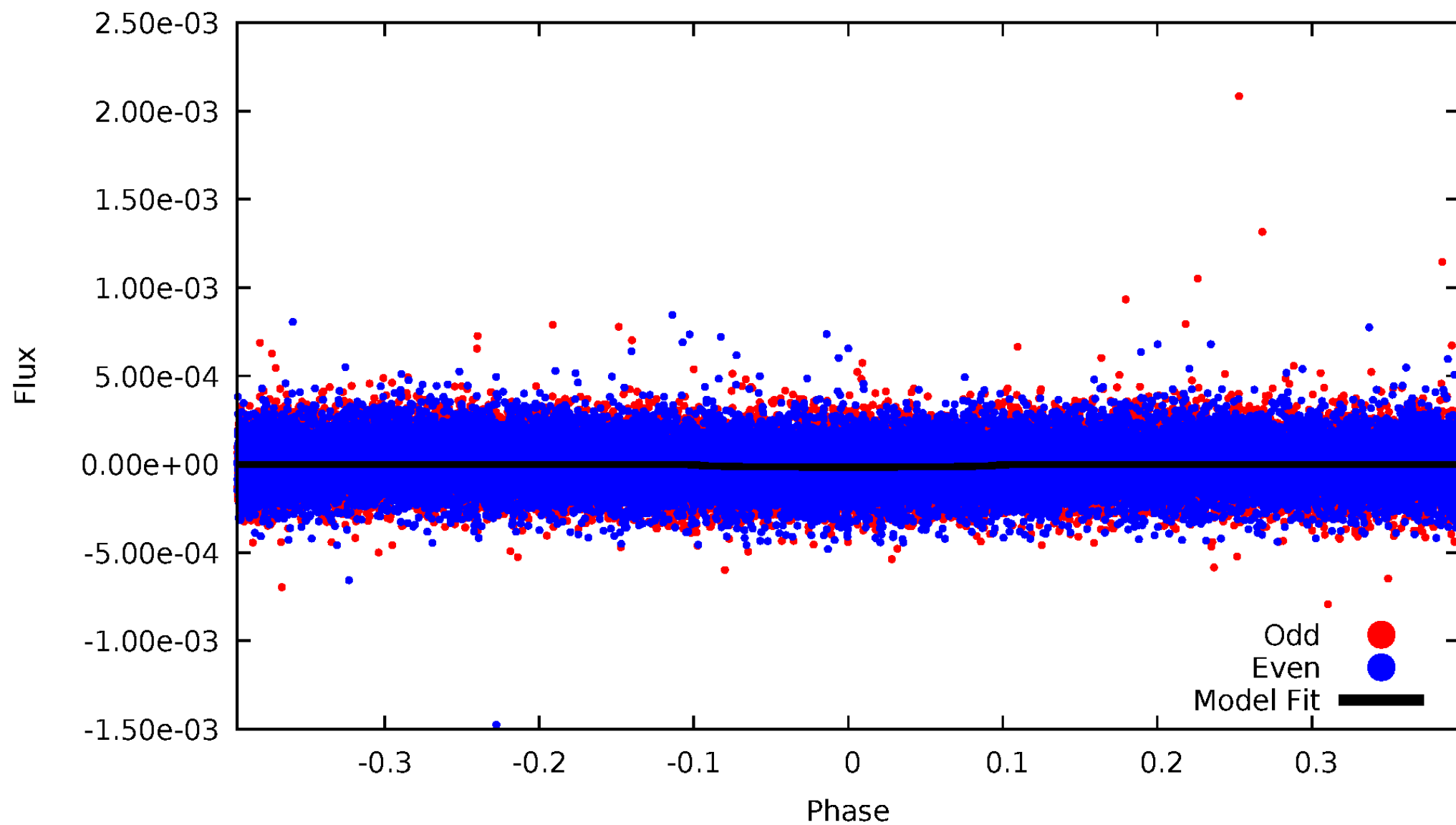


TCE 008559146-01



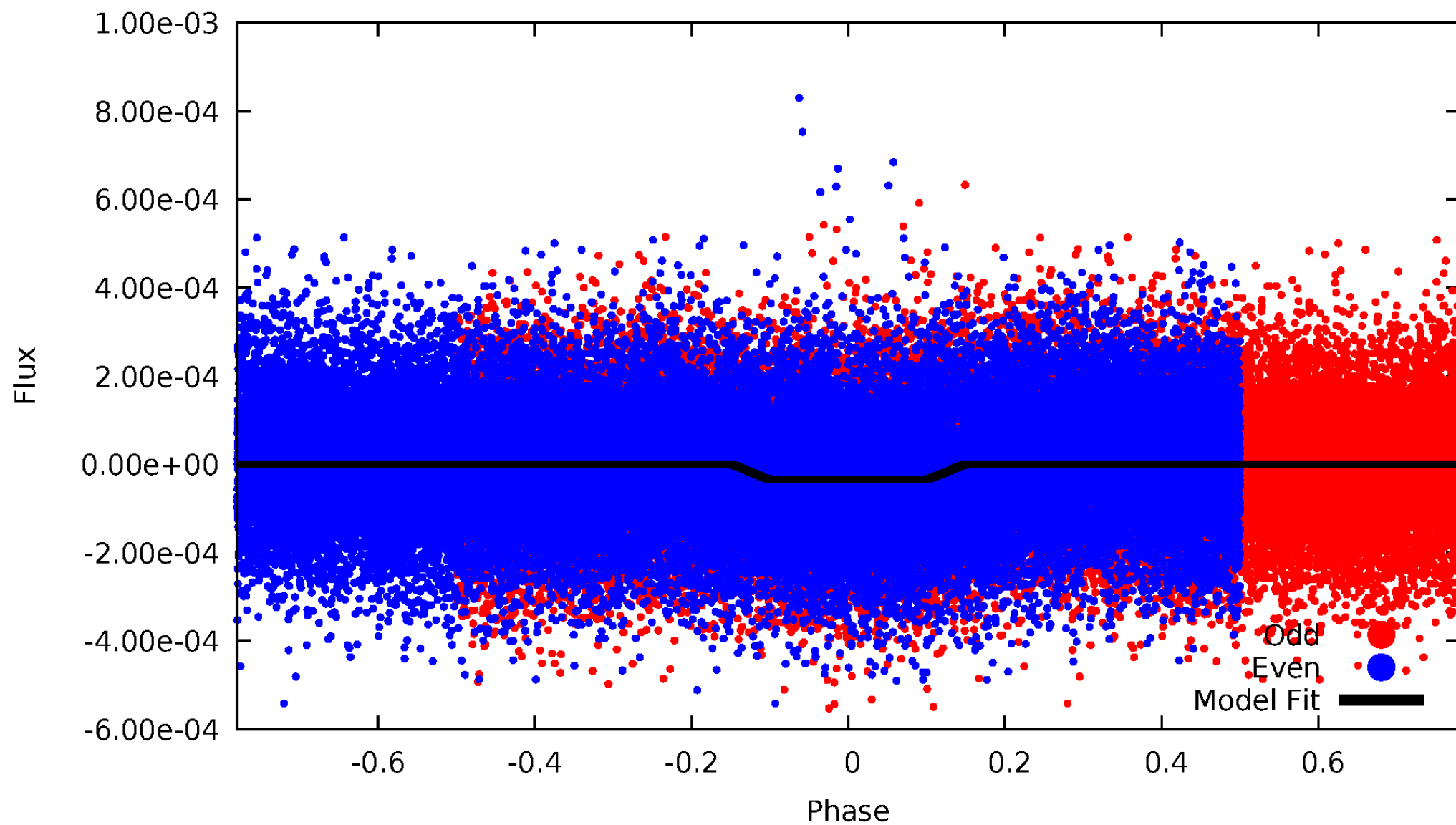
DV Odd/Even

TCE 008559146-01

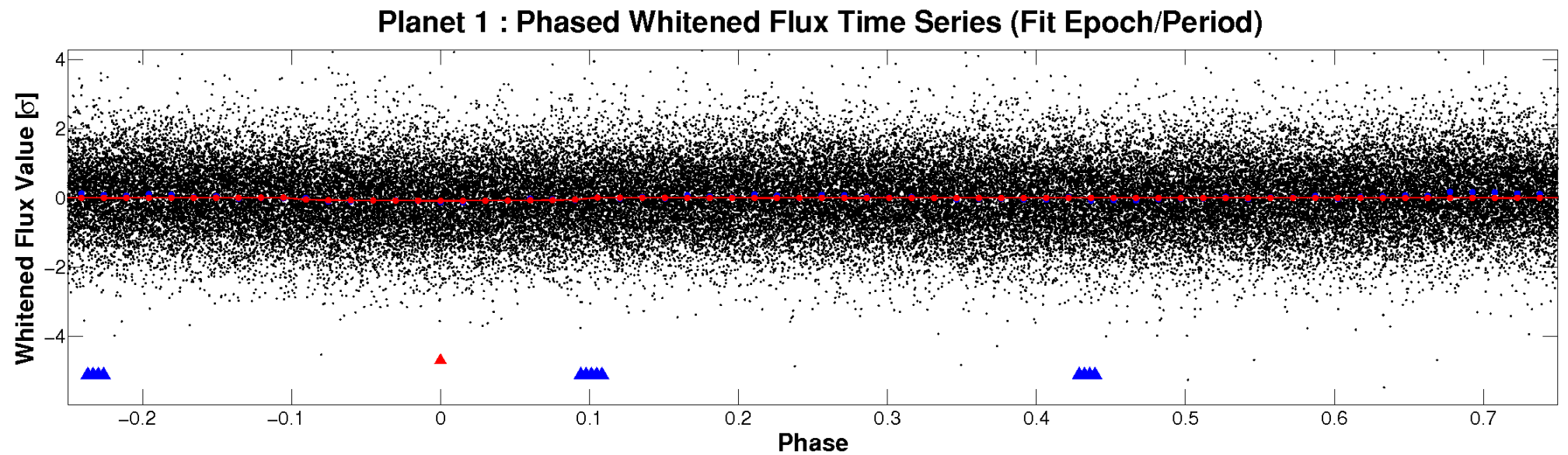
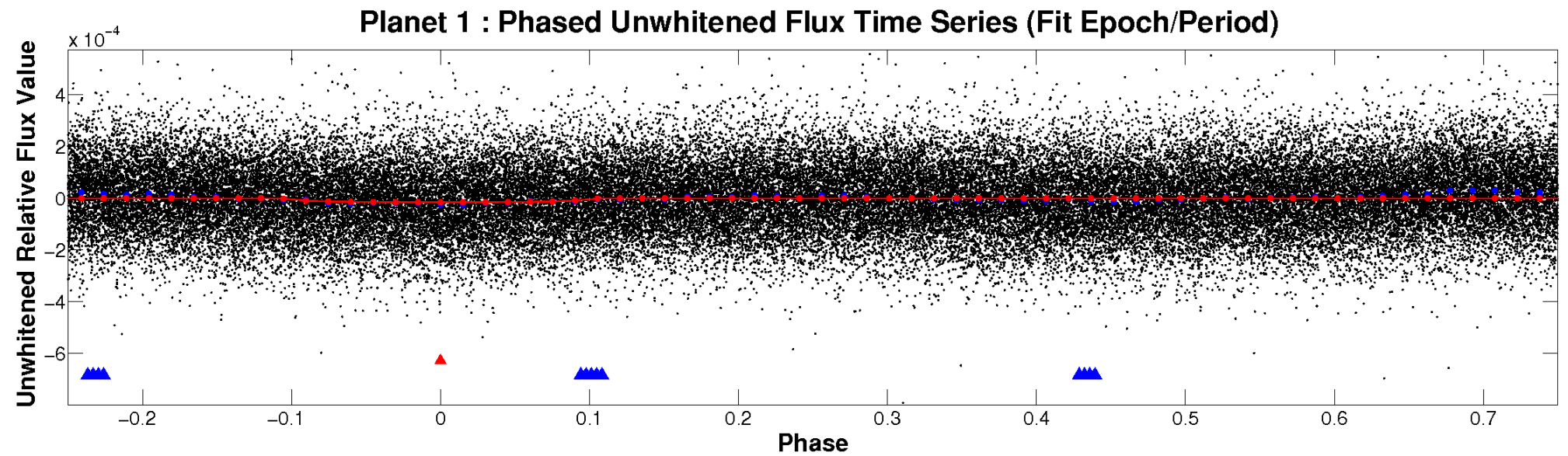


ALT Odd/Even

TCE 008559146-01

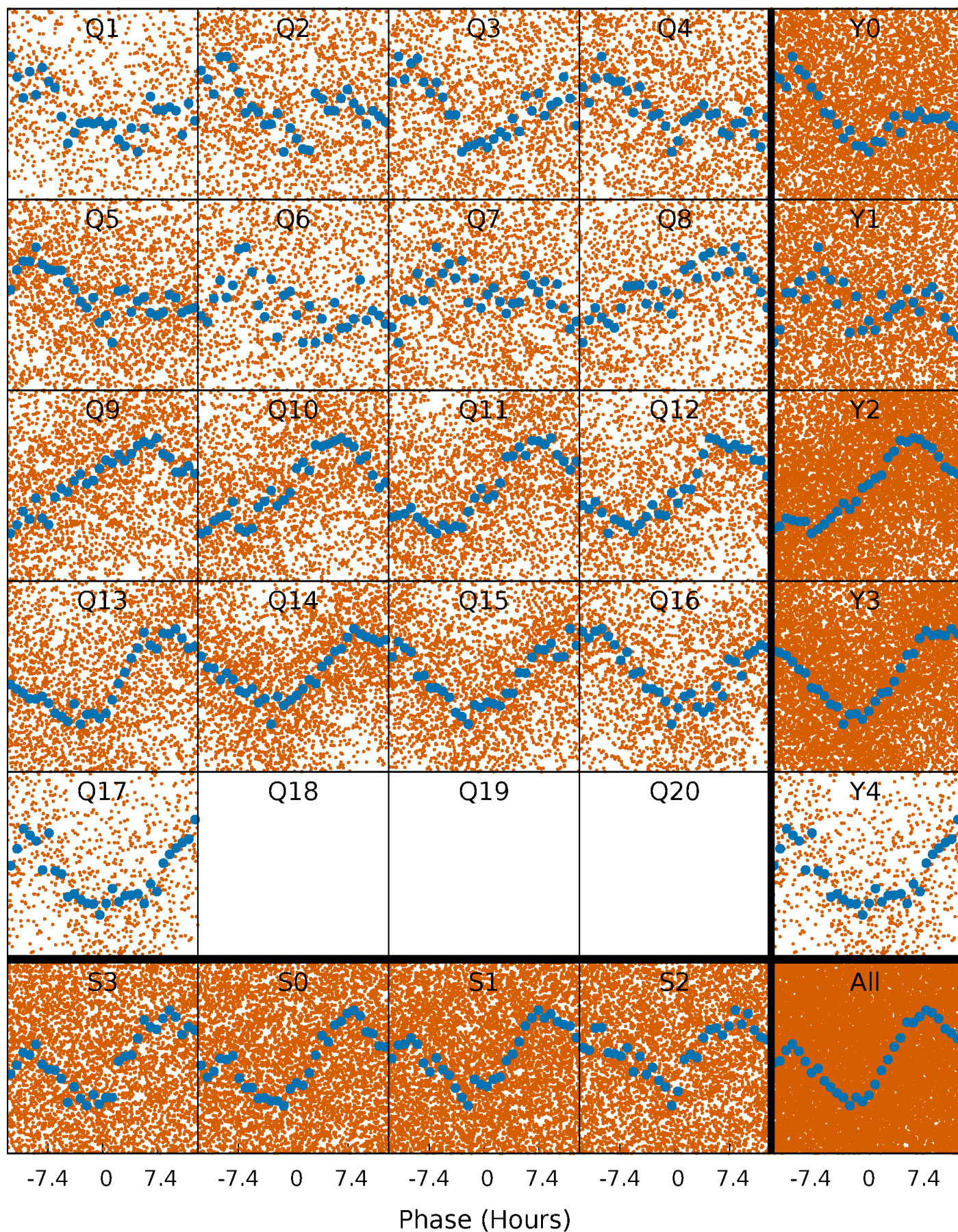


Non-Whitened Vs. Whitened Light Curve



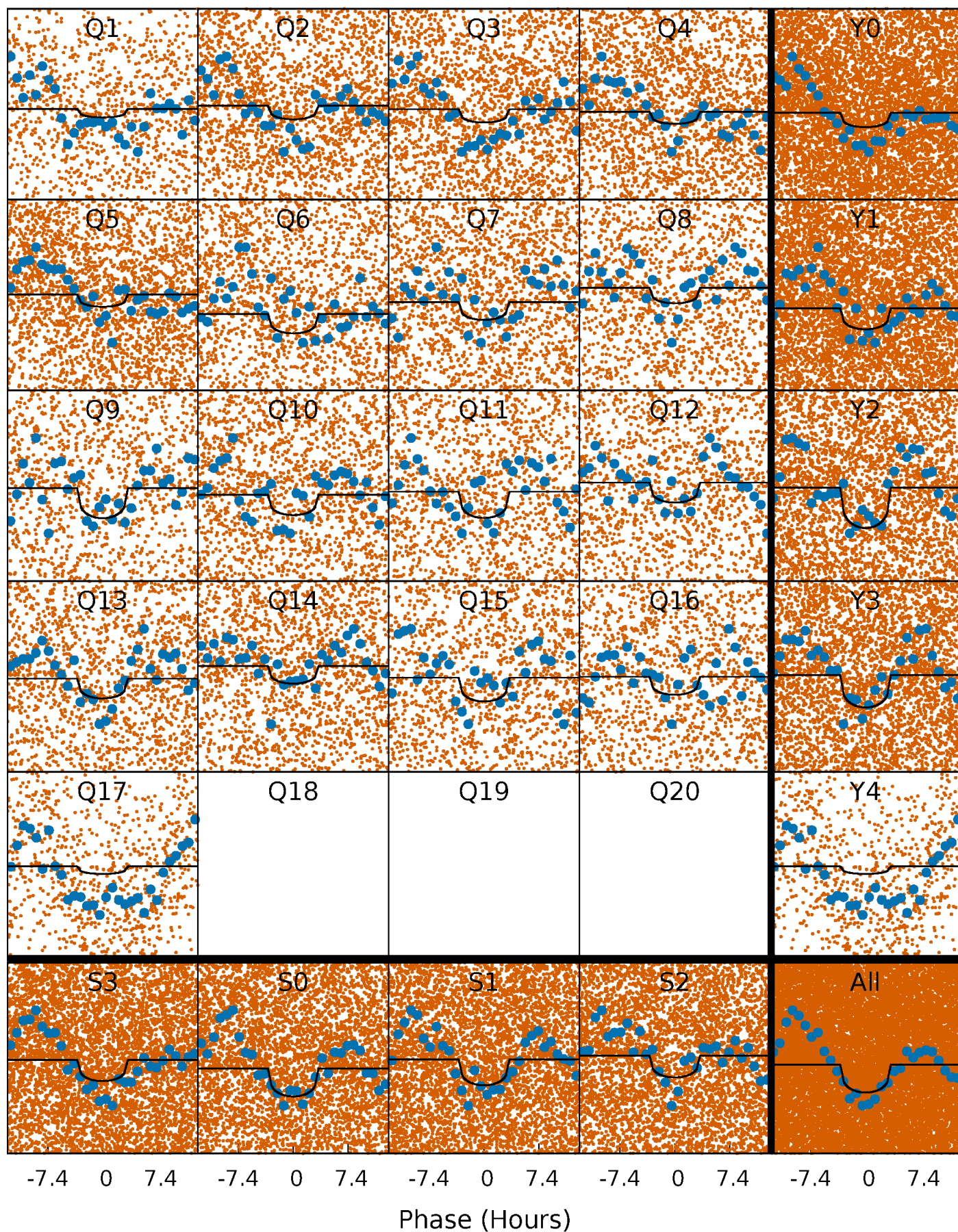
PDC Quarter-Phased Transit Curves

TCE 008559146-01 P= 1.356913 Days $T_0=132.103335$ (BKJD)



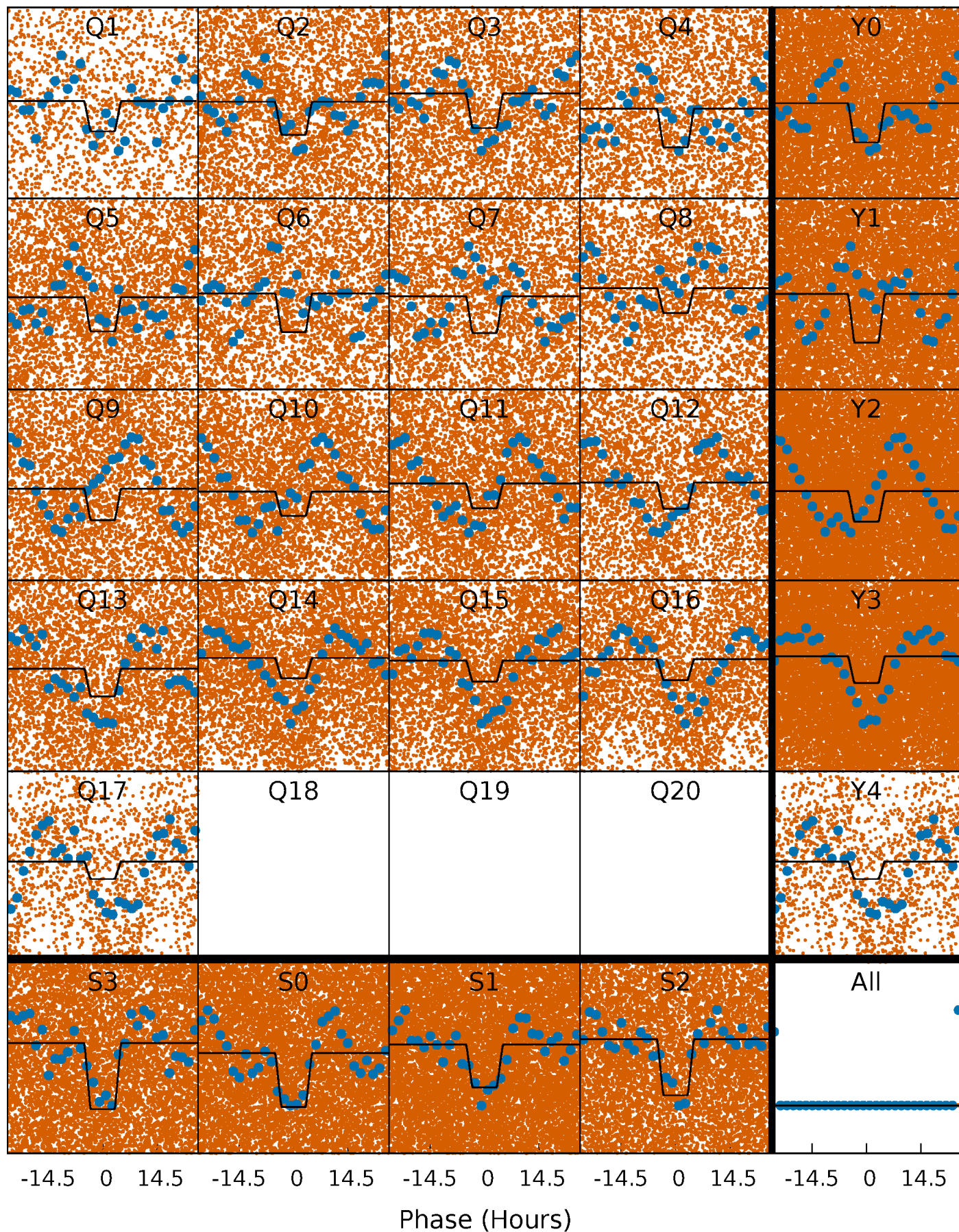
DV Quarter-Phased Transit Curves

TCE 008559146-01 P= 1.356913 Days $T_0=132.103335$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

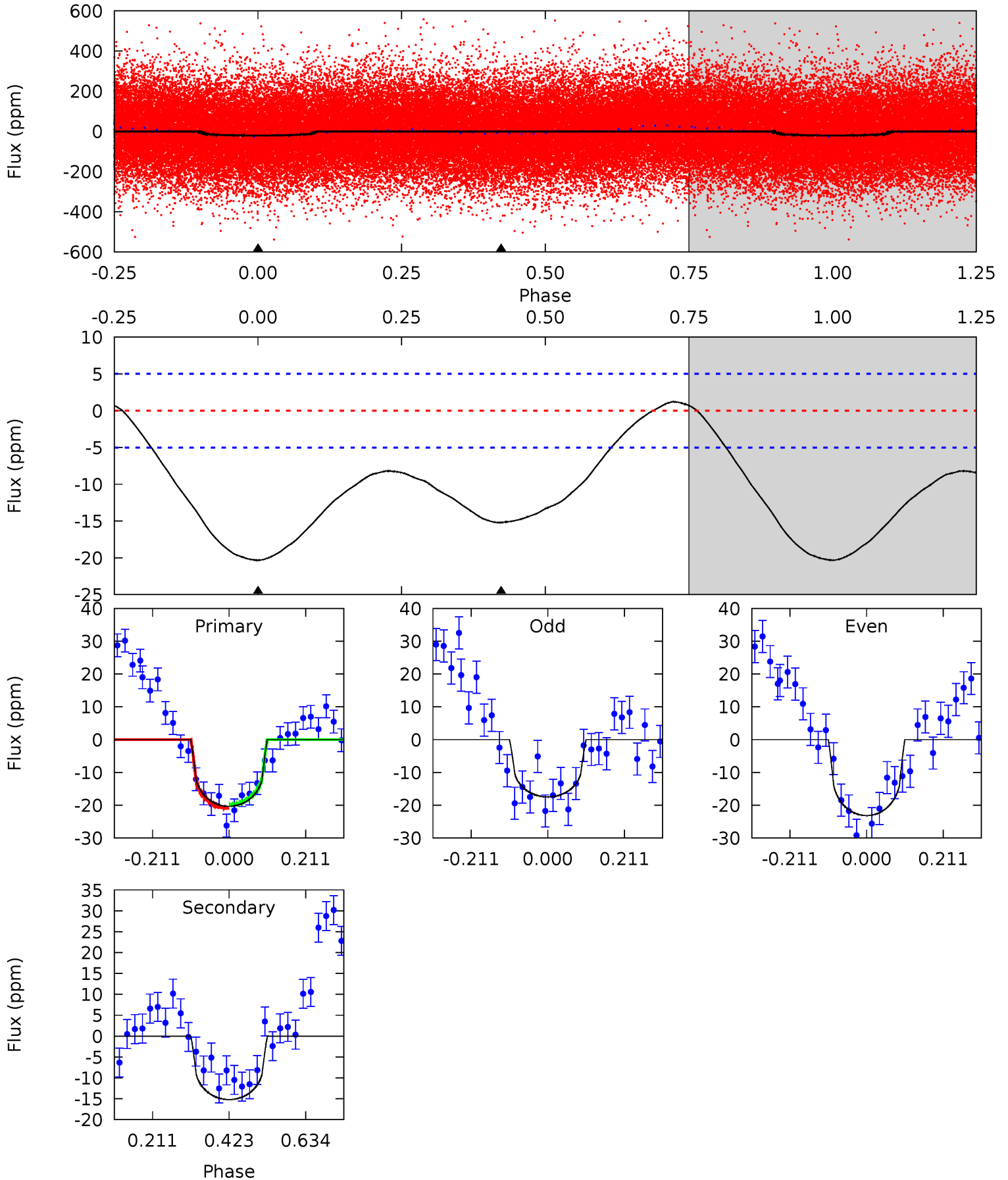
TCE 008559146-01 P= 1.356856 Days $T_0=132.054359$ (BKJD)



DV Model-Shift Uniqueness Test

008559146-01, P = 1.356913 Days, E = 130.746422 Days

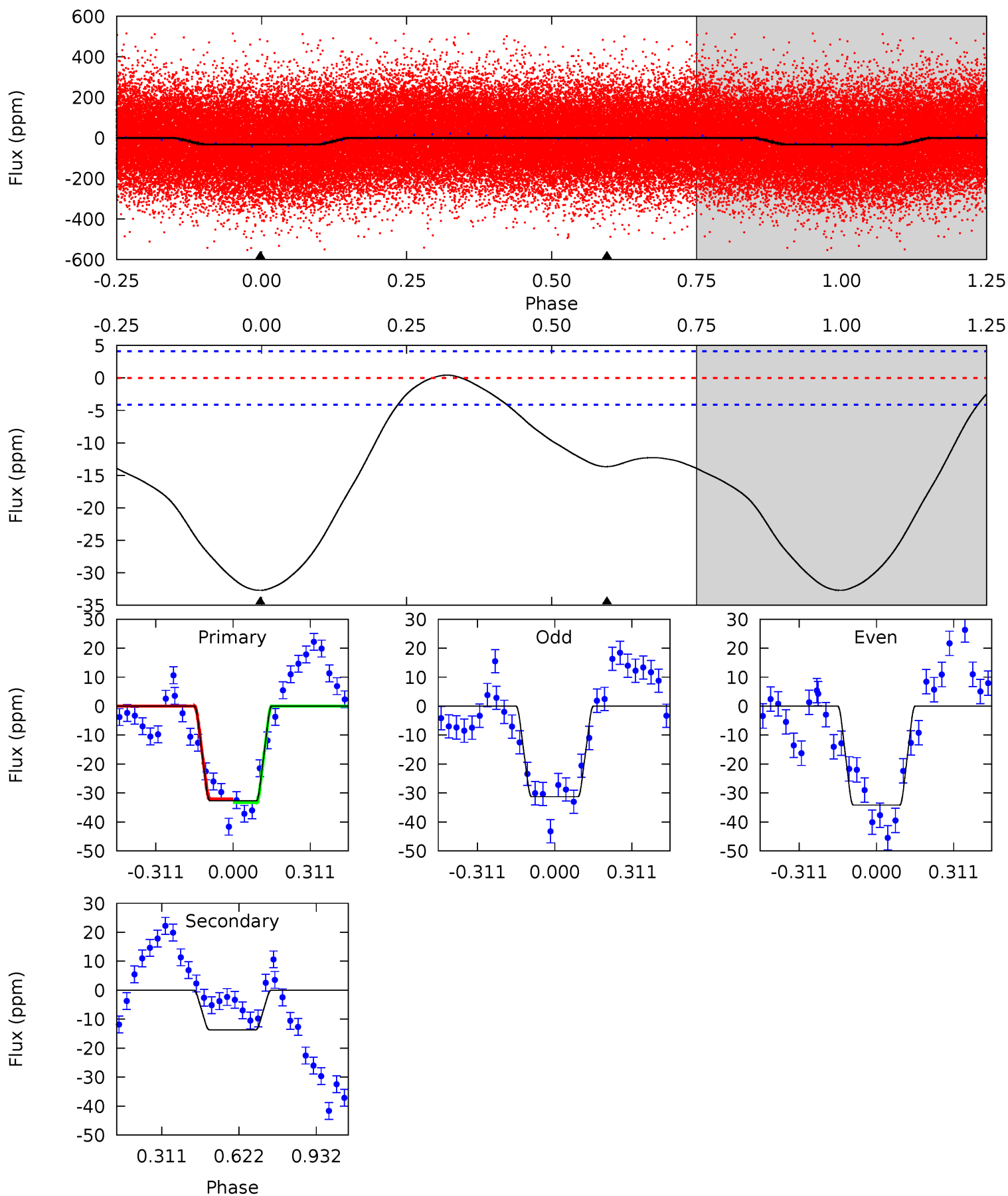
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.8	13.3	0	0	4.41	1.25	1.11	17.8	17.8	13.3	13.3	2.49	1.01	0.06	0



Alt Model-Shift Uniqueness Test

008559146-01, P = 1.356856 Days, E = 130.697503 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
34.4	14.4	0	0	4.32	1.01	0.97	34.4	34.4	14.4	14.4	1.52	1.01	0.01	0.72



Stellar Parameters For KIC 008559146

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5242^{+116}_{-137}	$3.546^{+0.170}_{-0.170}$	$-0.460^{+0.250}_{-0.250}$	$2.943^{+0.739}_{-0.605}$	$1.109^{+0.192}_{-0.211}$	$0.061^{+0.050}_{-0.027}$
	+2%/-3%	+5%/-5%	+54%/-54%	+25%/-21%	+17%/-19%	+82%/-44%
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 008559146-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-15 ± 1	$1.25^{+0.84}_{-0.73}$	3507^{+225}_{-222}	5103^{+2873}_{-1091}	$3.233^{+14.349}_{-2.094}$
Alt.	-14 ± 1	$1.90^{+0.96}_{-0.91}$	3523^{+247}_{-216}	4095^{+1448}_{-786}	$1.291^{+3.243}_{-0.734}$

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

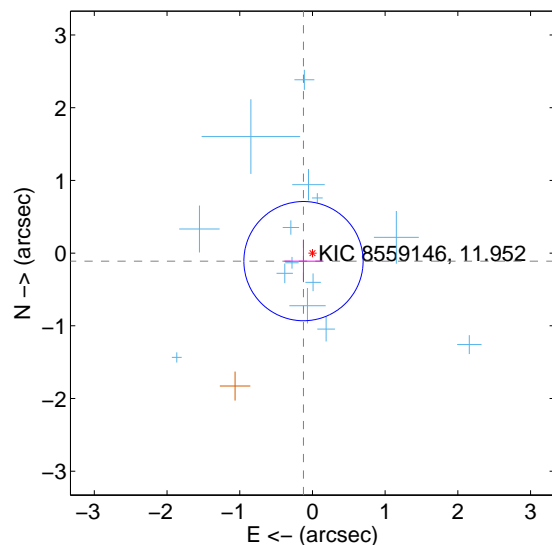
Supplemental centroid analysis for 008559146-01. **Kepler magnitude: 11.95.** Transit SNR 8.26

There are 14 quarters with good PRF difference image offsets

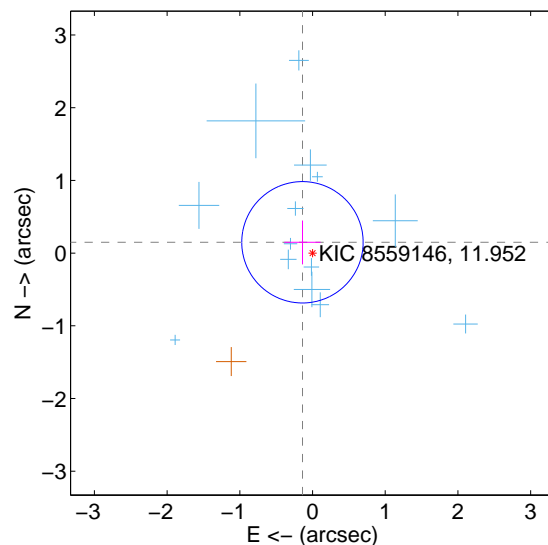
The direct PRF centroid is offset from the target star catalog position by about 0.35 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.165 ± 0.273	0.61	0.123 ± 0.262	-0.110 ± 0.289
PRF-fit source offset from KIC position	0.203 ± 0.278	0.73	0.139 ± 0.250	0.149 ± 0.300
photometric centroid source offset	0.69 ± 0.70	0.99	-0.22 ± 0.72	0.65 ± 0.69

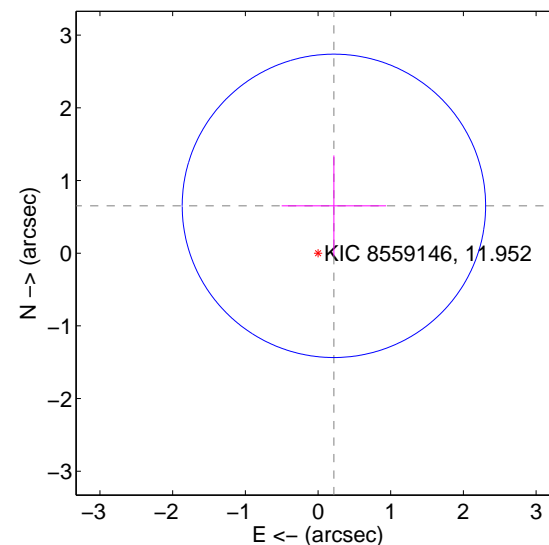
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

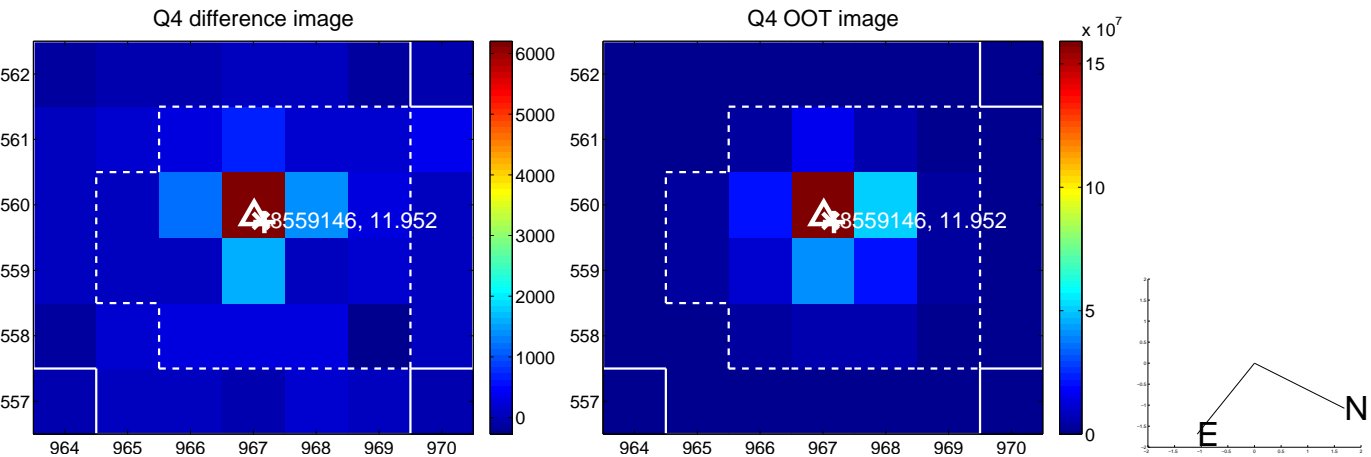
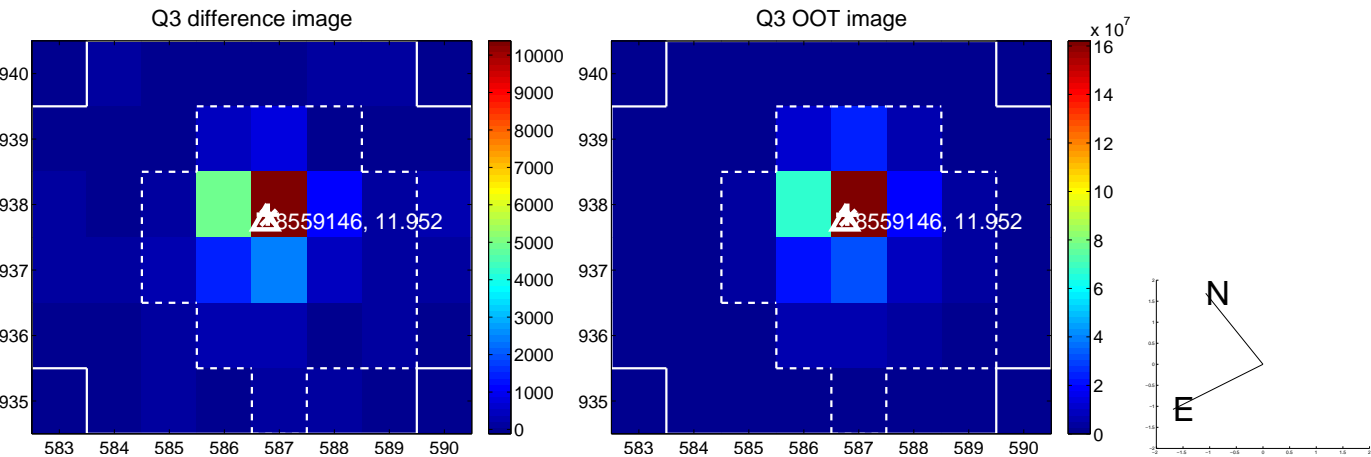
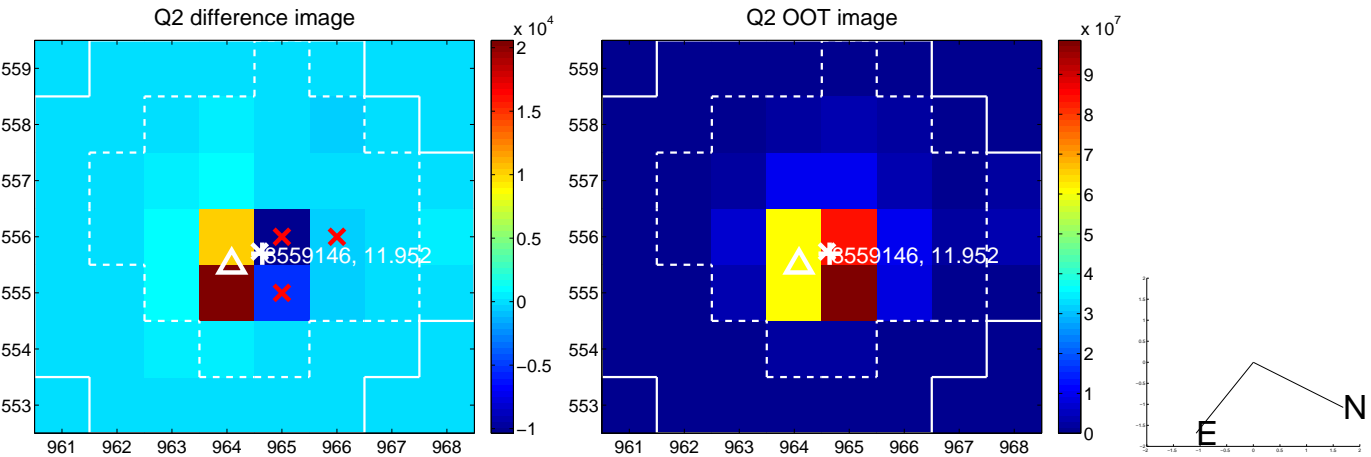
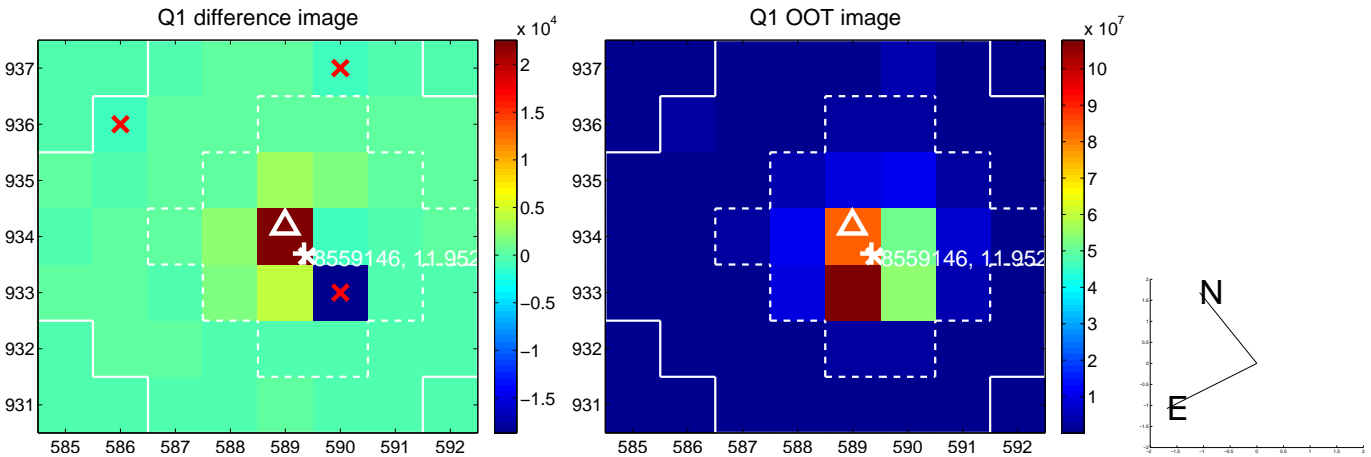


offset from photometric centroids

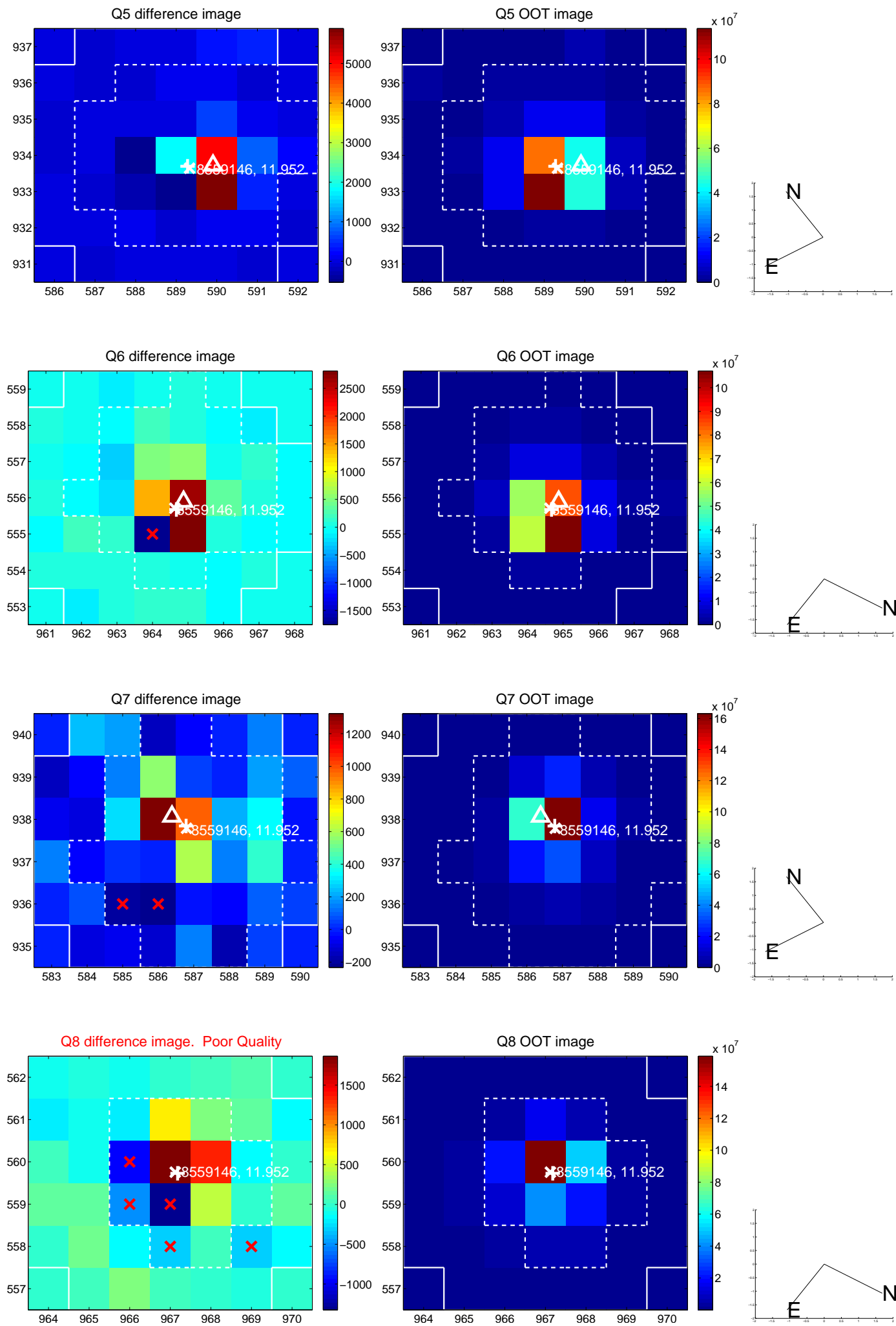


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

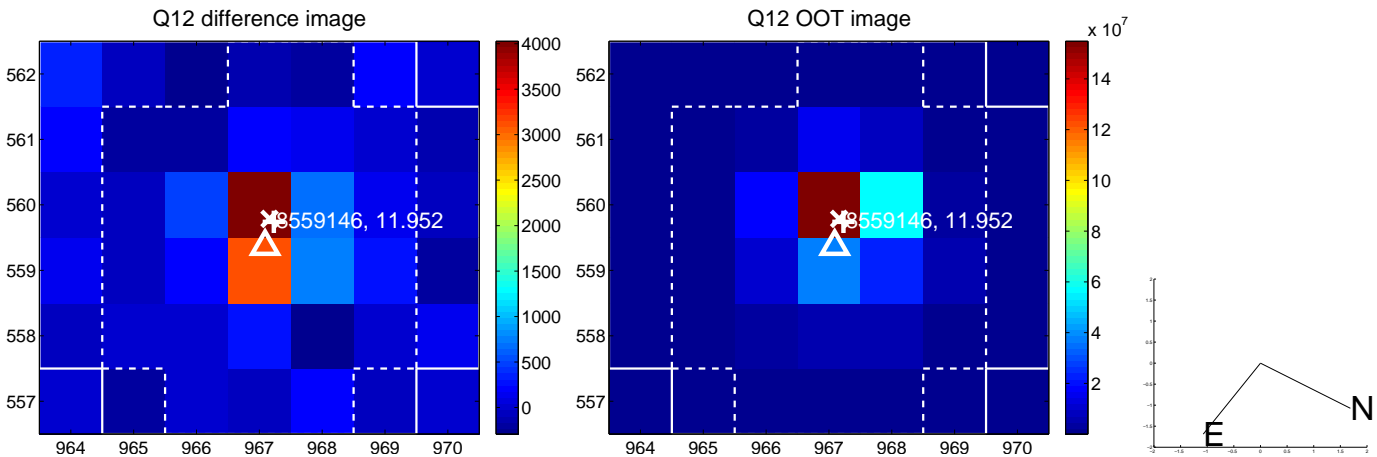
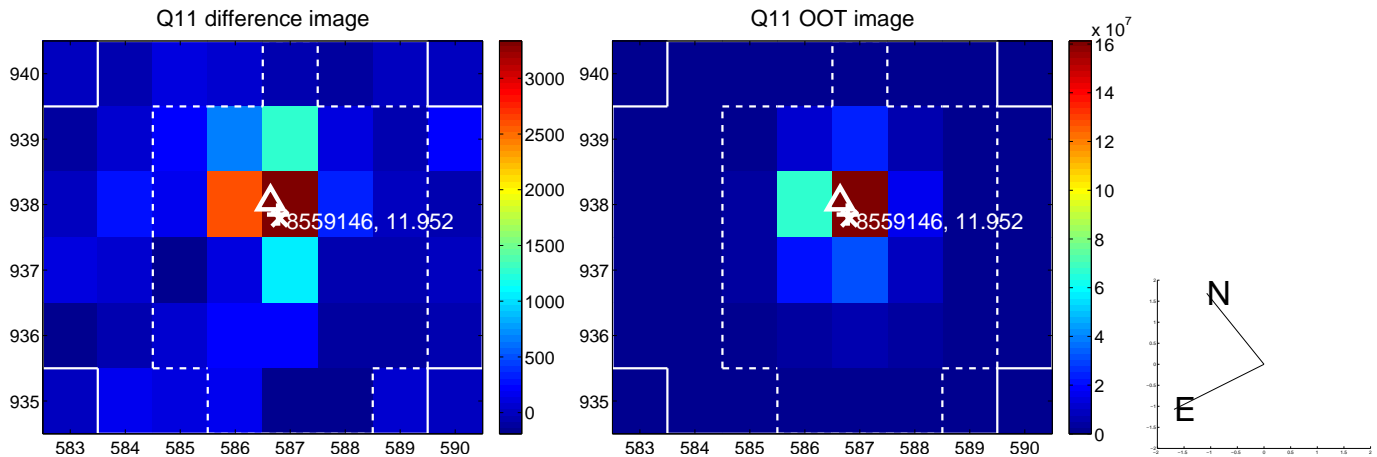
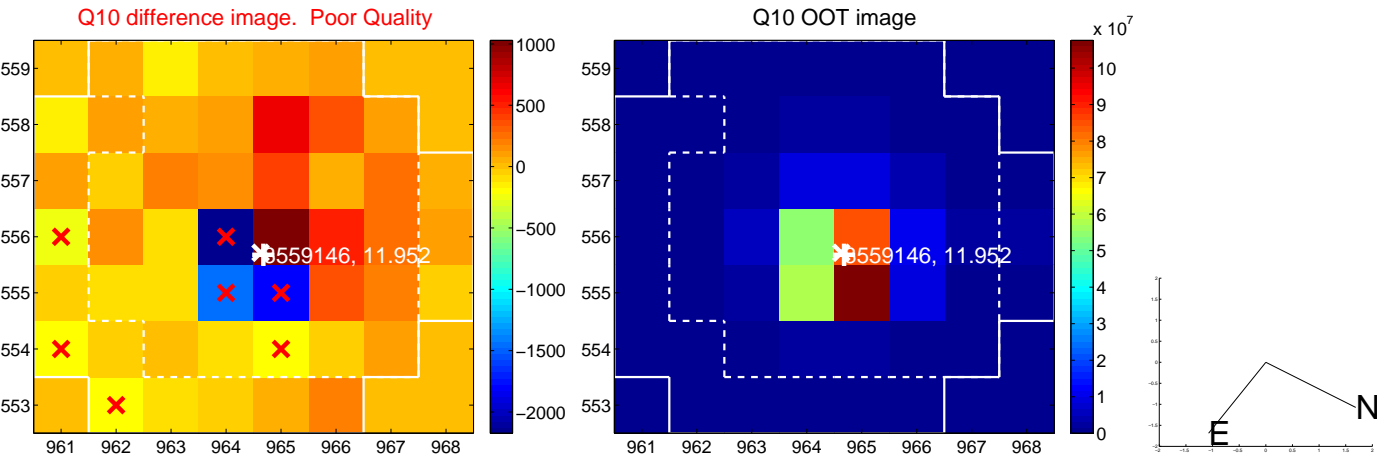
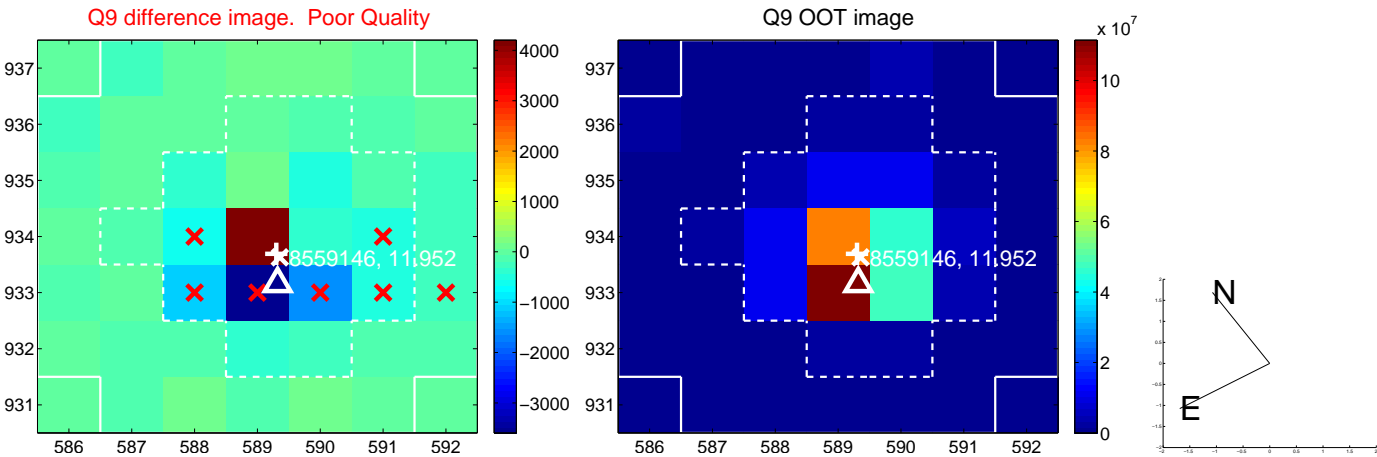
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



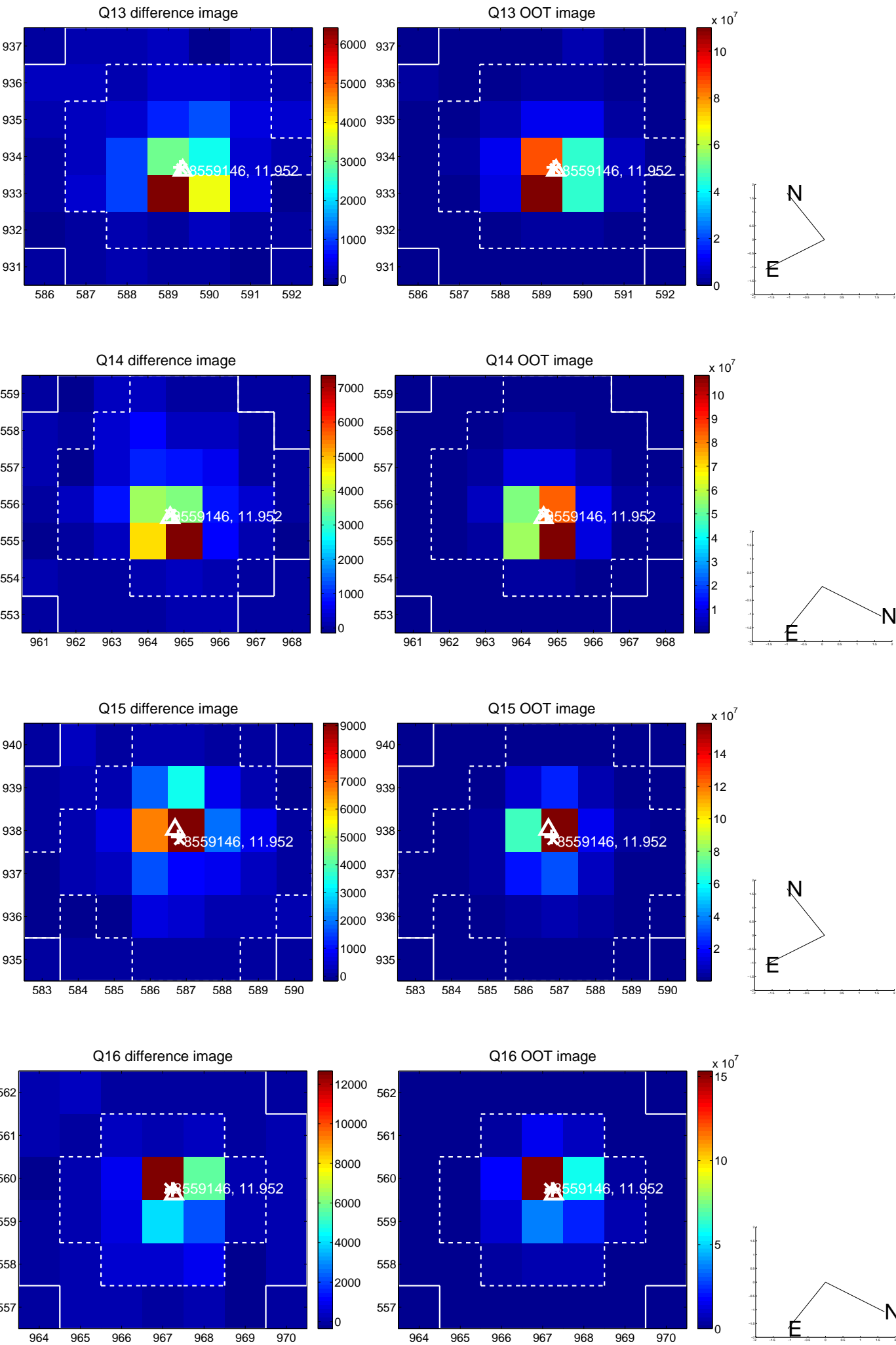
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



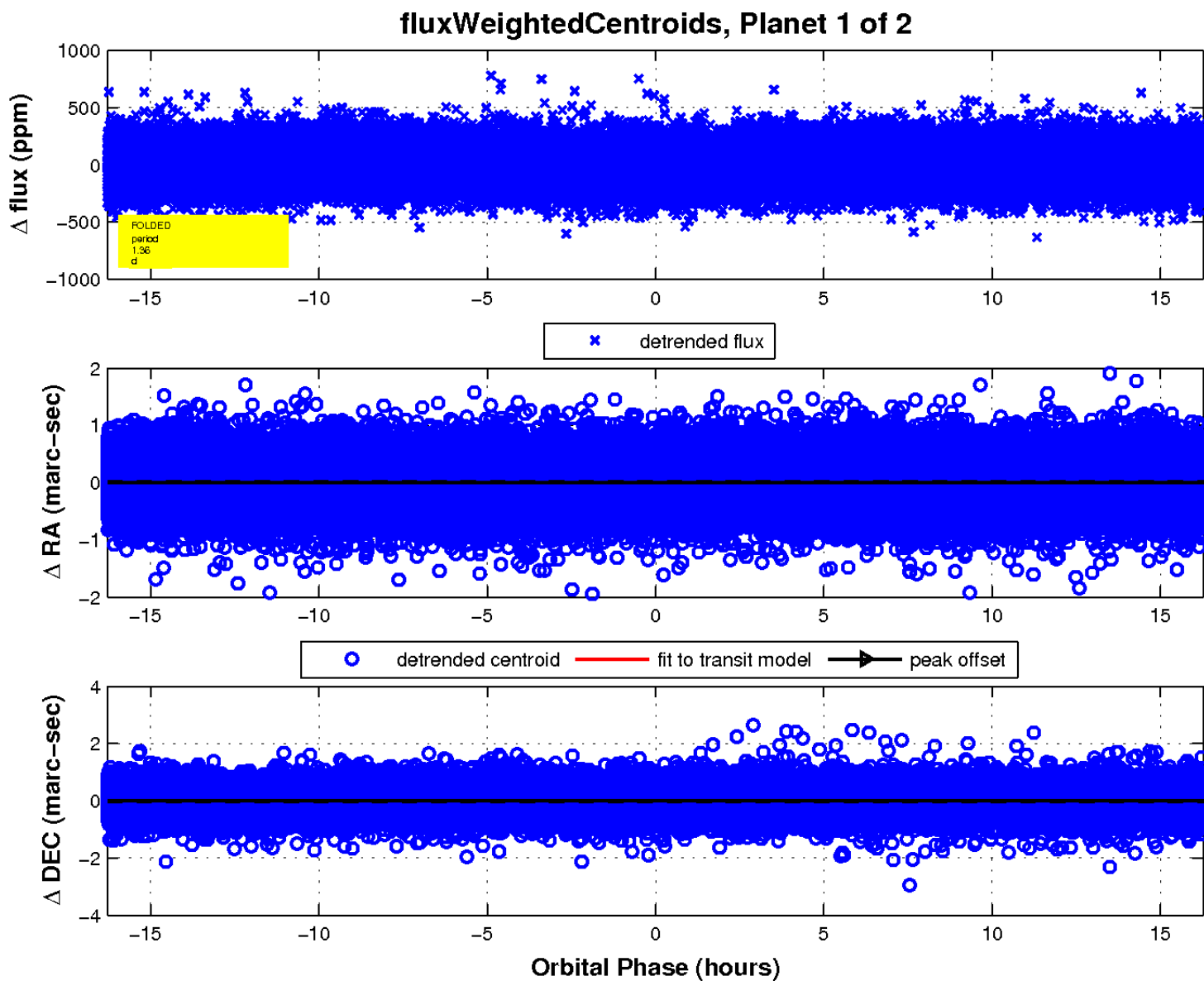
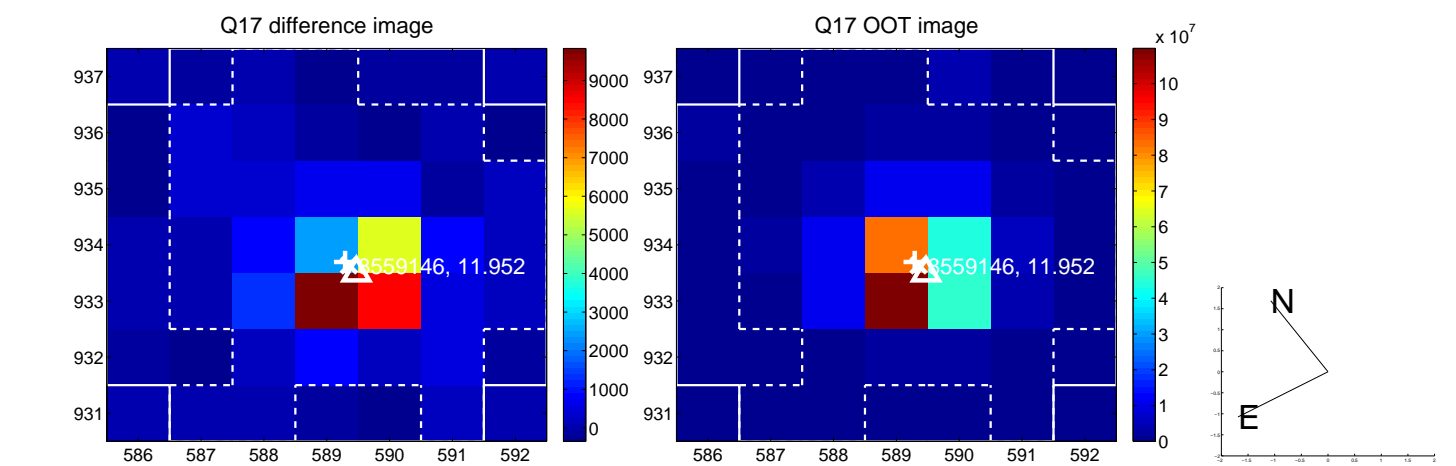
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

