

KIC 009579789

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R _★ (R _☉)	T _★ (K)	R _p (R _⊕)	S _p (S _⊕)
009579789-01	OBS	7193.01	1.089055	132.036189	70.1	2.500	10.4	9.4	0.84	5101	0.86	1133.19

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009579789-01	OBS	FP	0.00	0	0	1	1	HALO_GHOST—EPHEM_MATCH

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 009579789-01

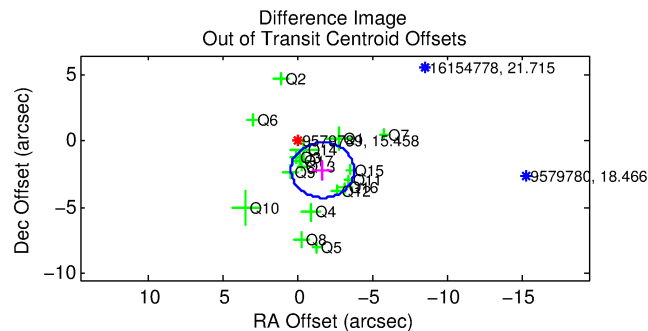
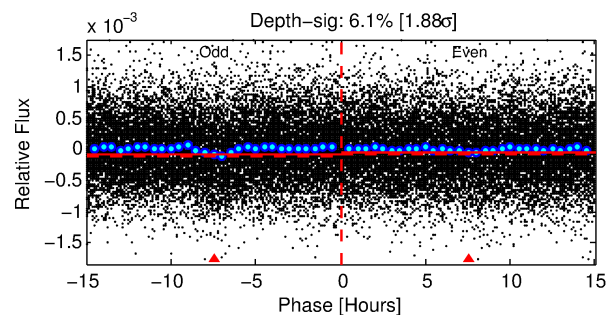
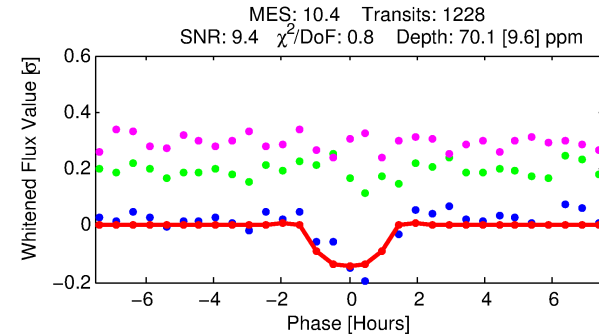
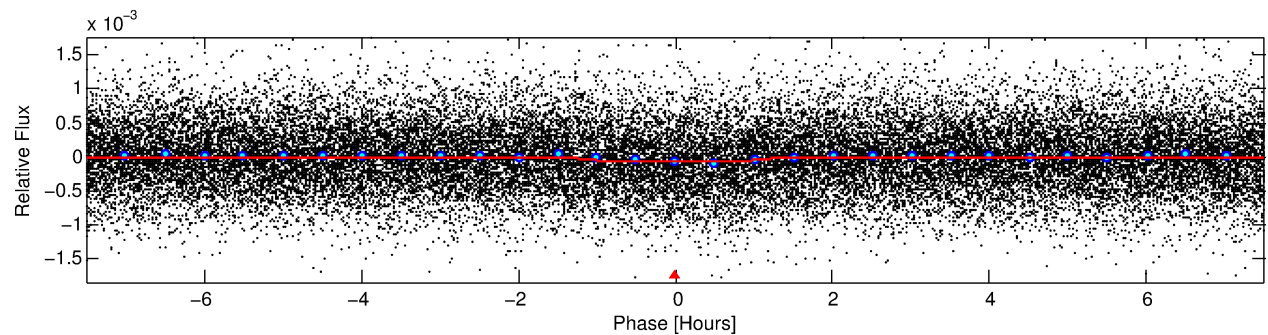
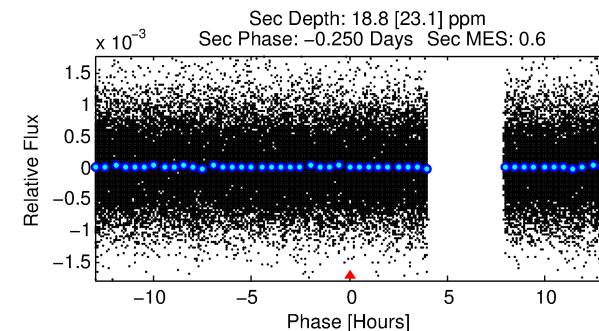
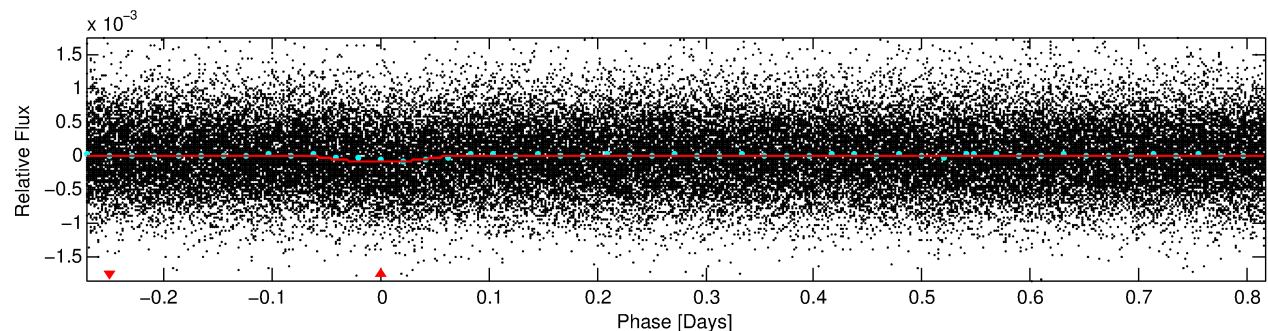
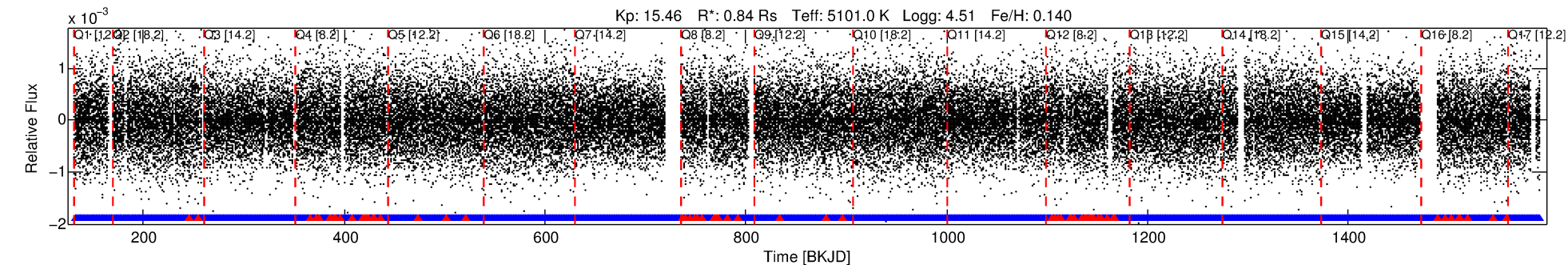
TCE (1)	KIC	Parent (2)	Parent KIC	P ₁ :P ₂	Dist (″)	ΔRow	ΔCol	m ₂	m ₁	D ₂ /D ₁	Mechanism	Flag	σ _P	σ _T
009579789-01	9579789	FL-Lyr-pri	9641031	1:2	166.9	-9	-41	9.18	15.46	6215.20	Direct-PRF	0	3.68	1.03

Notes: P₁:P₂ is the period ratio. Dist is the distance in arcseconds. ΔRow and ΔCol are the number of pixels apart in row and column. m₂ and m₁ are the magnitudes of the parent and child. D₂/D₁ is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant σ_P < 5.0 and σ_T < 5.0. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 9579789 Candidate: 1 of 1 Period: 1.089 d

KOI: K07193 Corr: No Ephemeris Match



DV Fit Results:

Period = 1.08905 [0.00001] d
Epoch = 132.0362 [0.0036] BKJD
Rp/R* = 0.0094 [0.0079]
a/R* = 1.76 [4.14]
b = 0.91 [0.71]
Seff = 1133.19 [197.13]
Teff = 1479 [64] K
Rp = 0.86 [0.73] Re
a = 0.0194 [0.0016] AU
Ag = 5.27 [11.01] [0.39 σ]
Teffp = 3465 [1810] K [1.10 σ]

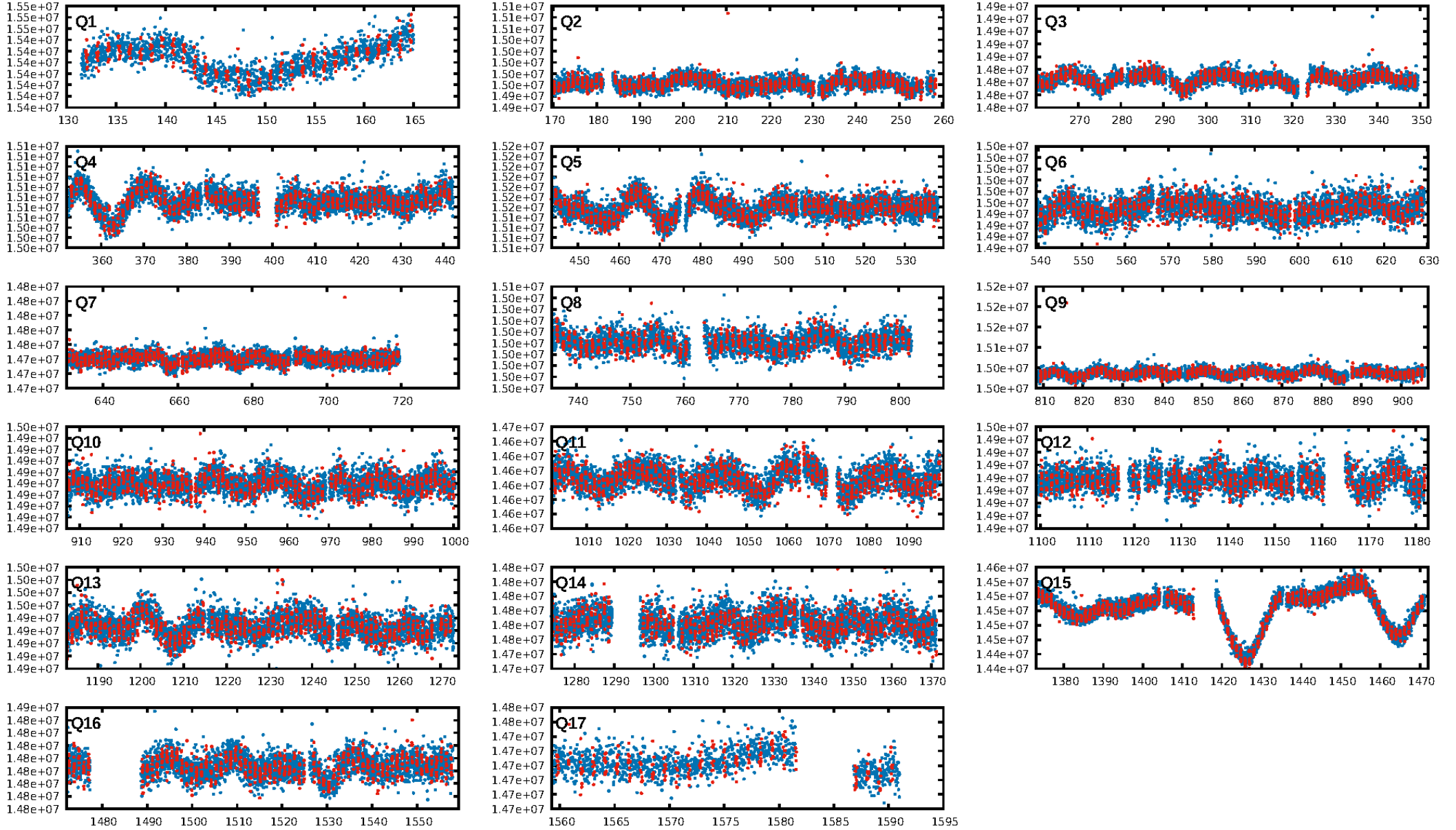
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.79e-26
RollingBand-fgt: 0.94 [1104/1172]
GhostDiagnostic-chr: -0.01711
Centroid-sig: 0.0%
Centroid-so: 4.755 arcsec [3.07 σ]
OotOffset-rm: 2.768 arcsec [3.96 σ]
KicOffset-rm: 2.935 arcsec [4.06 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.06 [1/17]
DiffImageOverlap-fno: 1.00 [17/17]

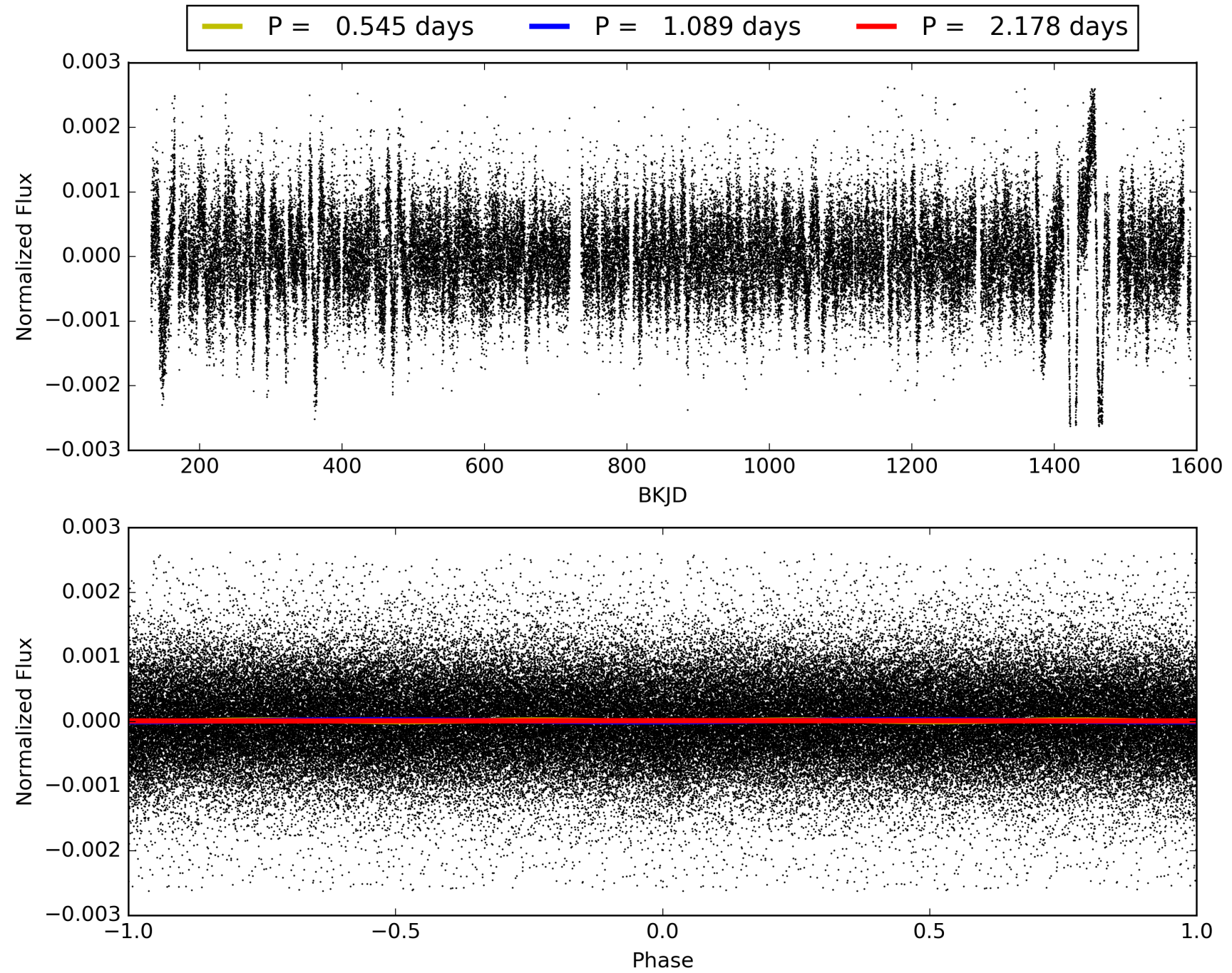
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 02:34:15 Z

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

TCE 009579789-01, PDC Light Curves

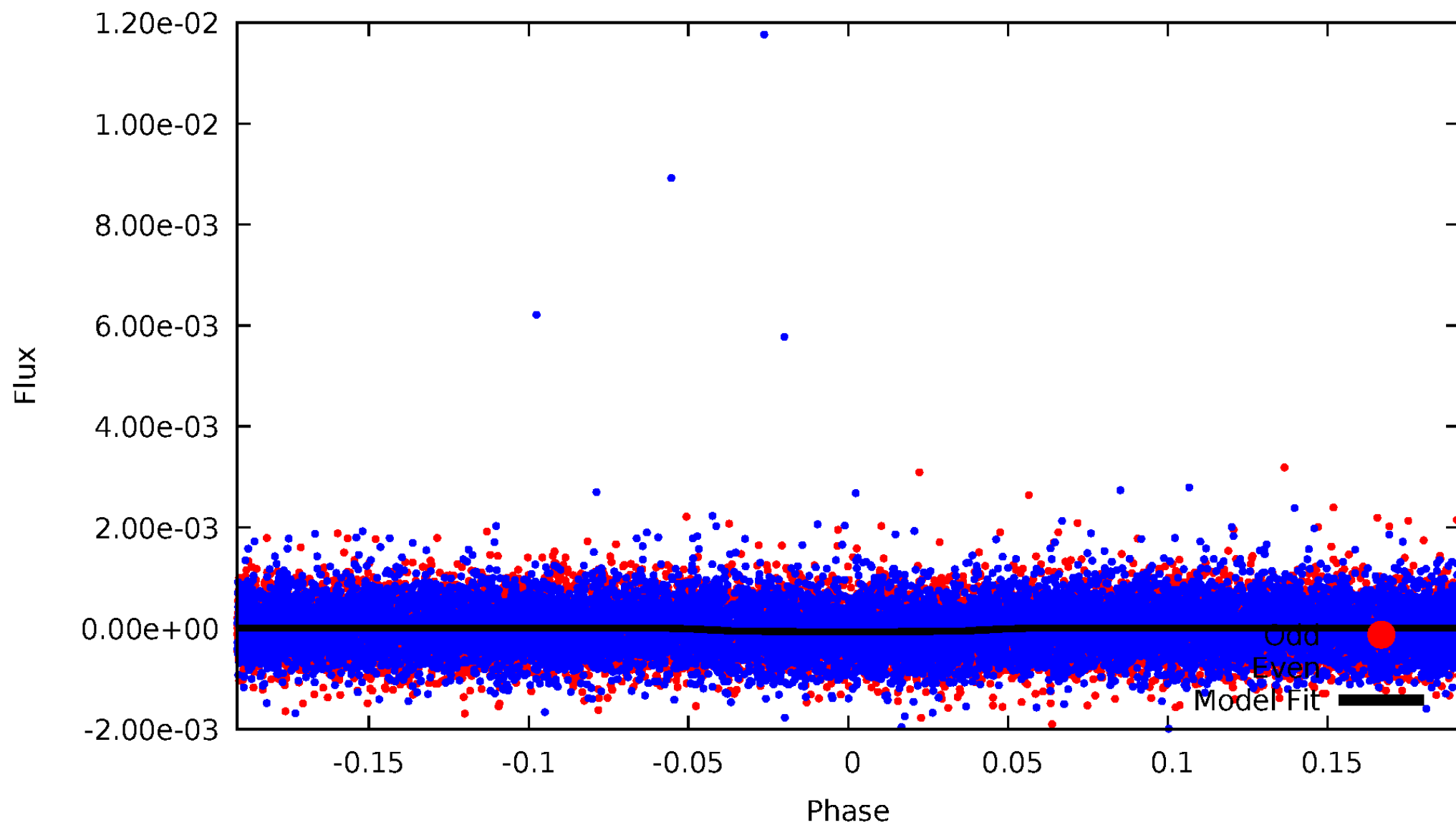


TCE 009579789-01



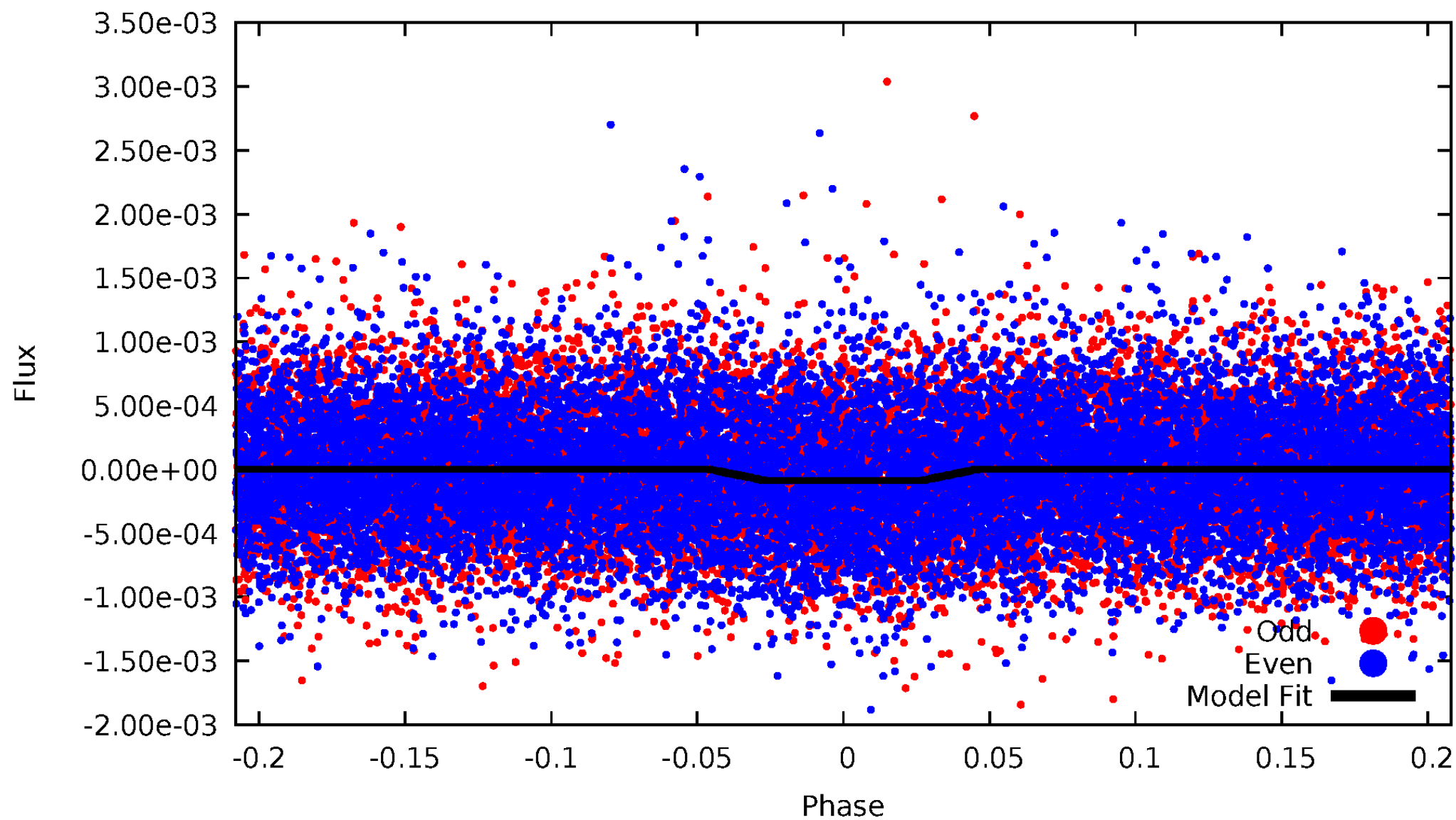
DV Odd/Even

TCE 009579789-01



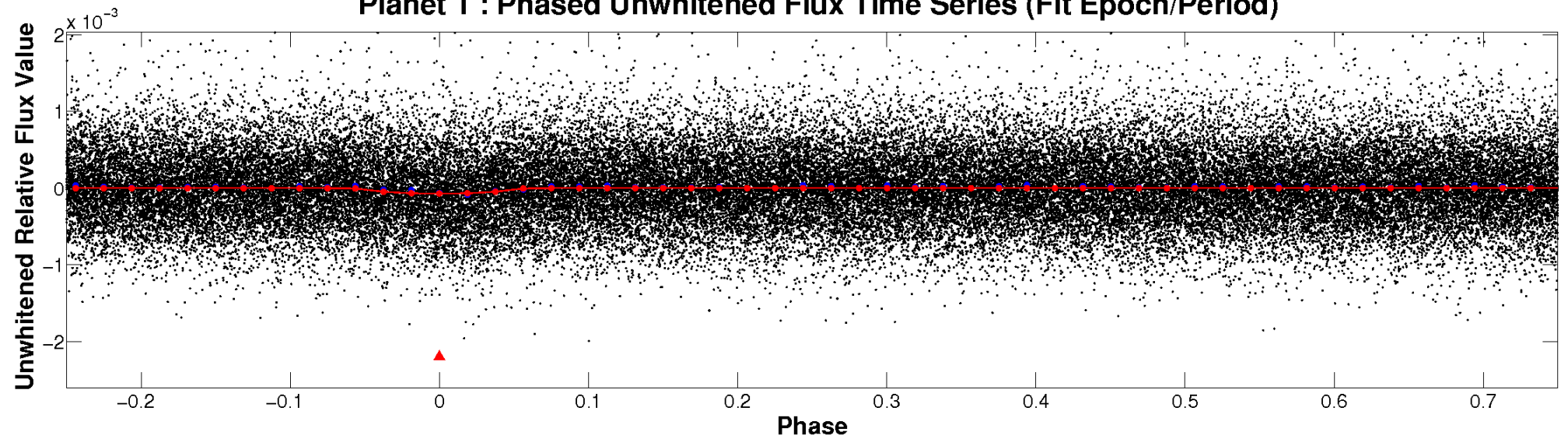
ALT Odd/Even

TCE 009579789-01

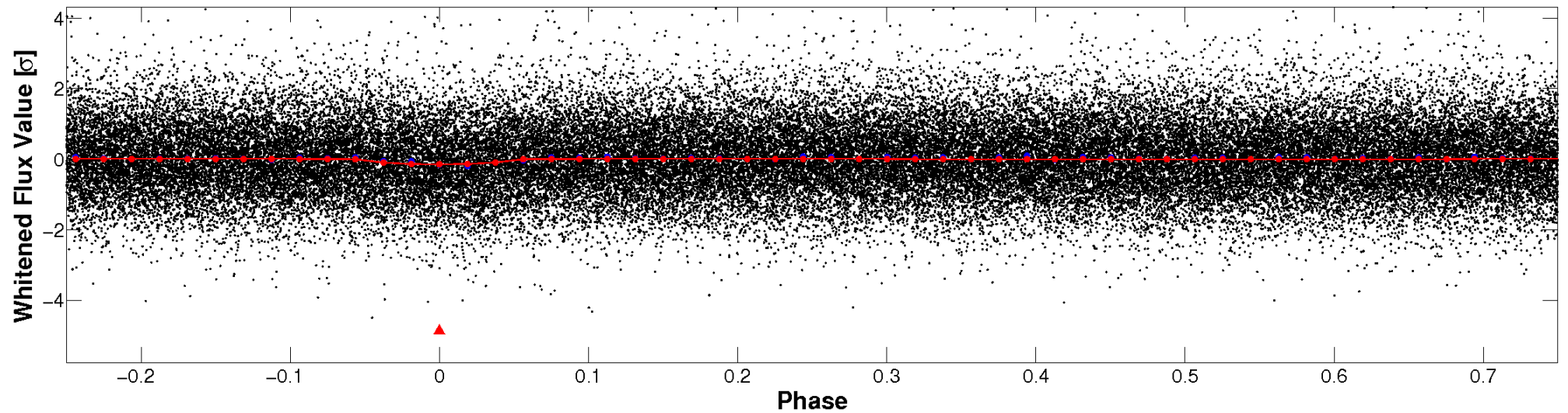


Non-Whitened Vs. Whitened Light Curve

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

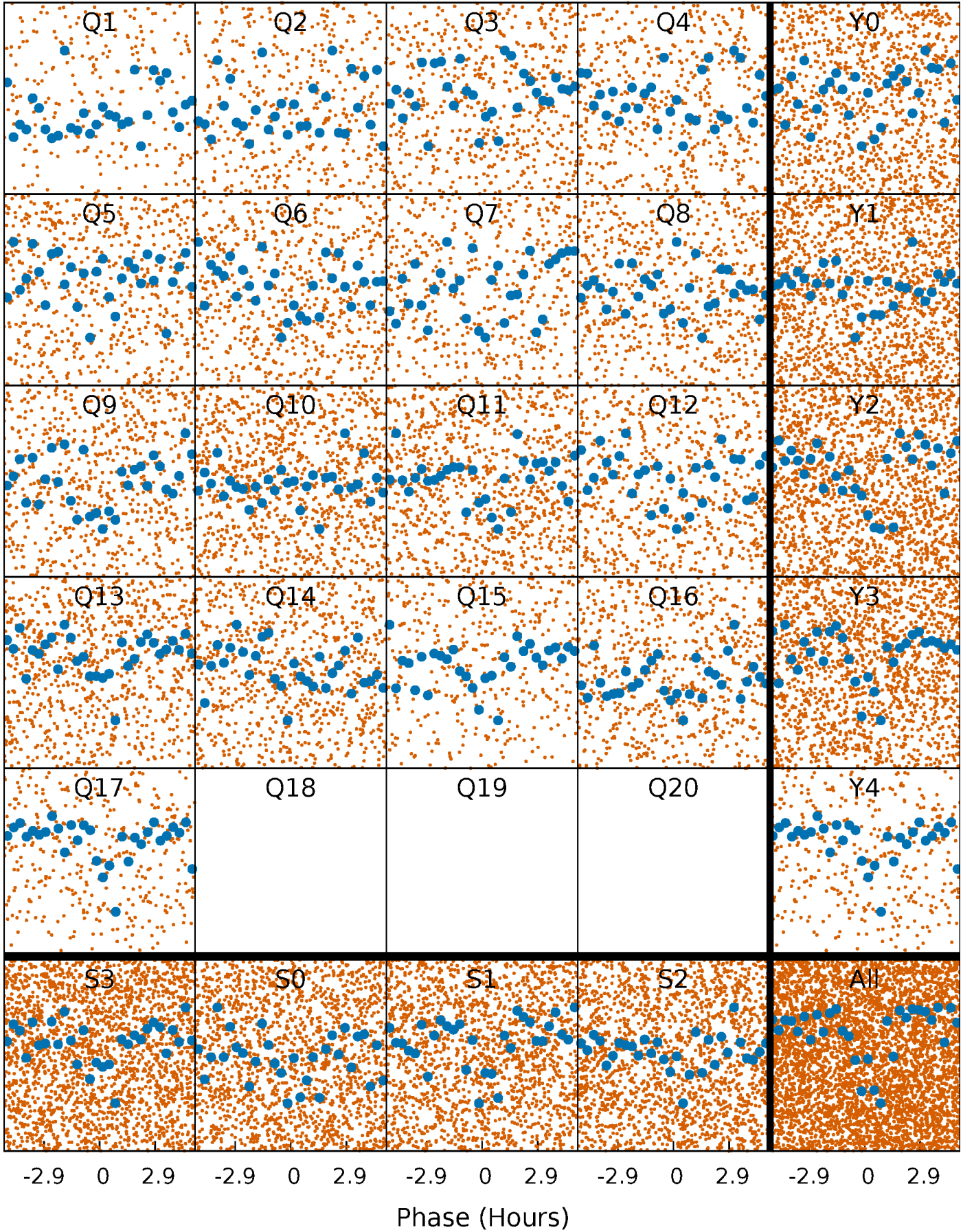


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



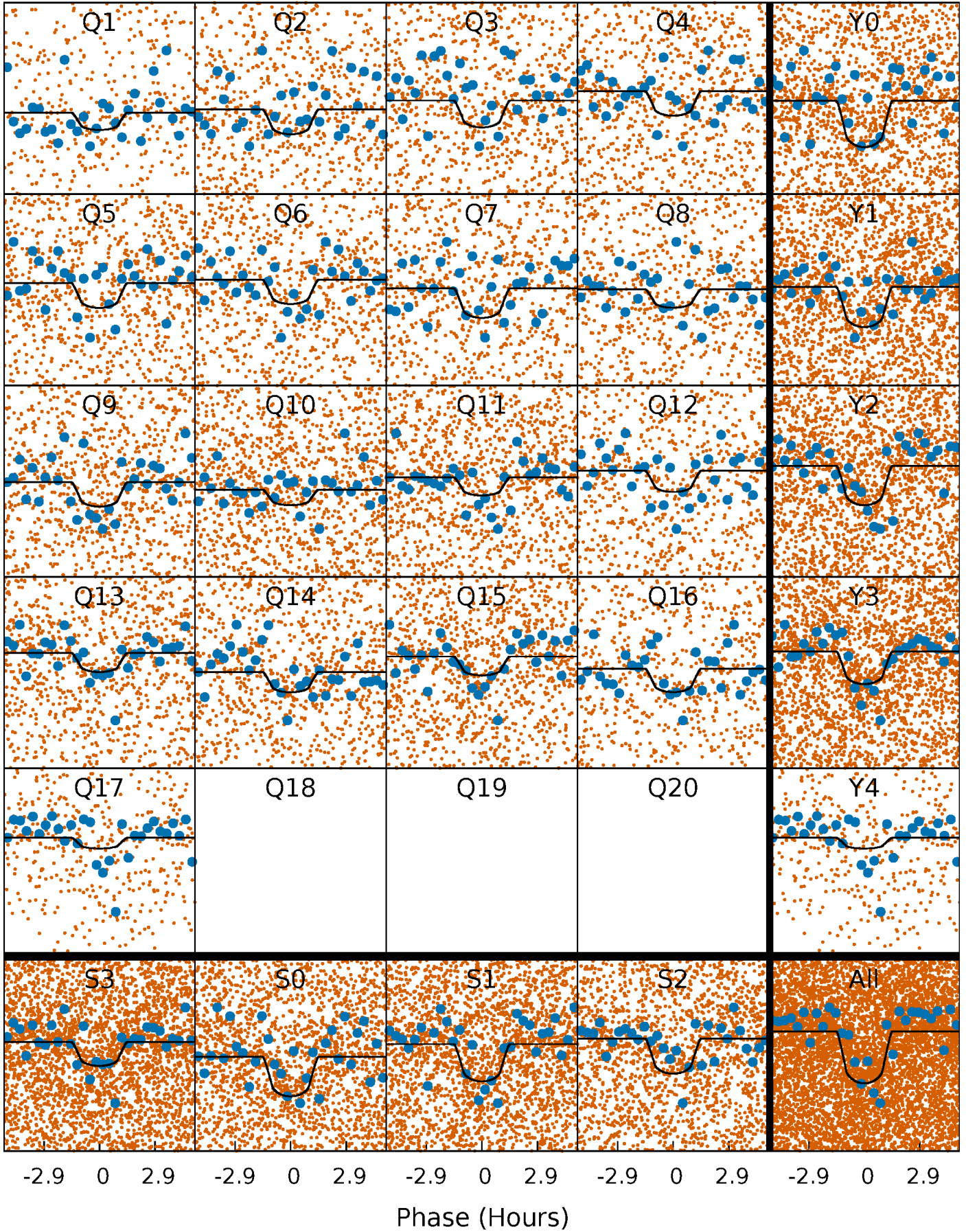
PDC Quarter-Phased Transit Curves

TCE 009579789-01 P= 1.089055 Days $T_0=132.036189$ (BKJD)



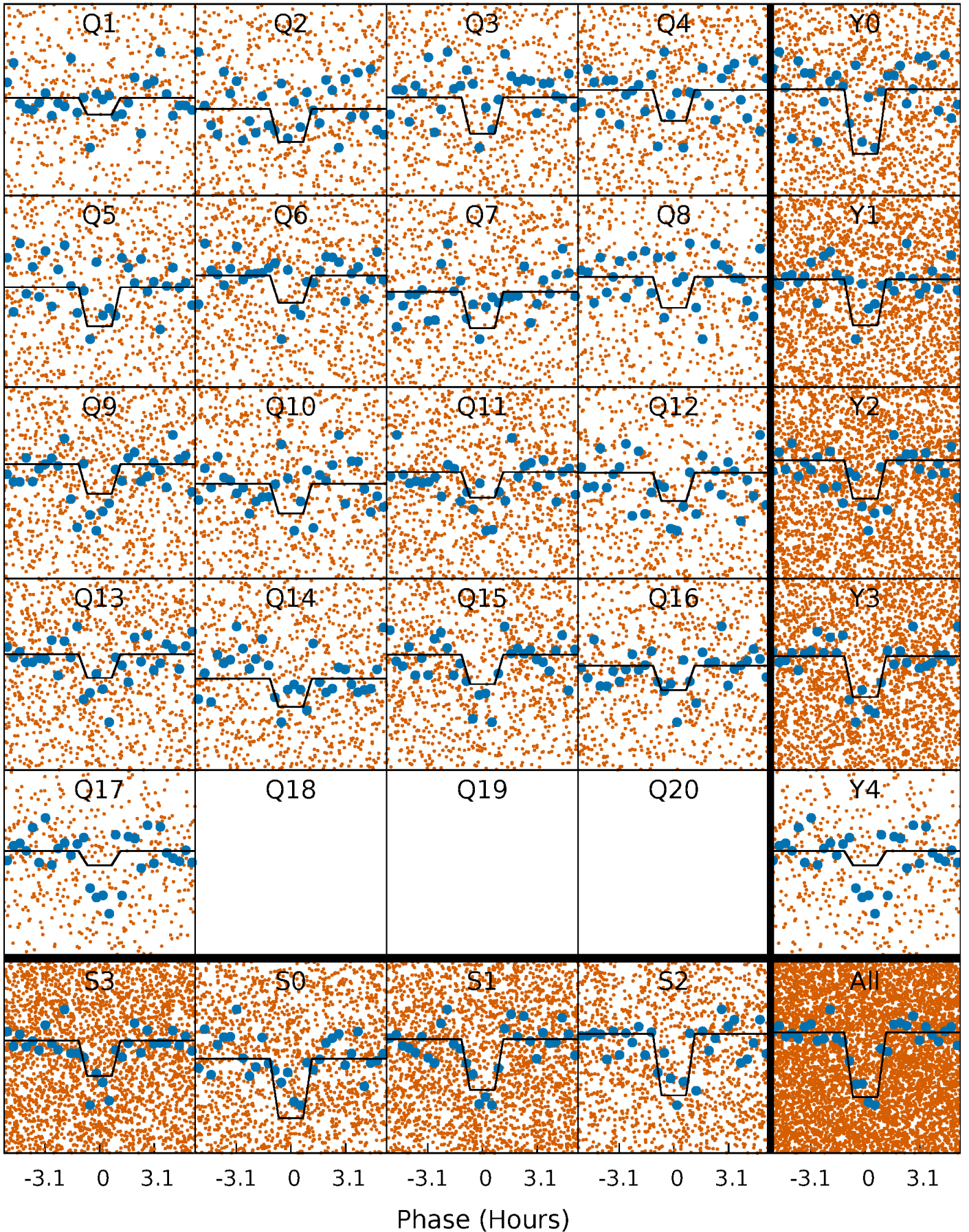
DV Quarter-Phased Transit Curves

TCE 009579789-01 P= 1.089055 Days $T_0=132.036189$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

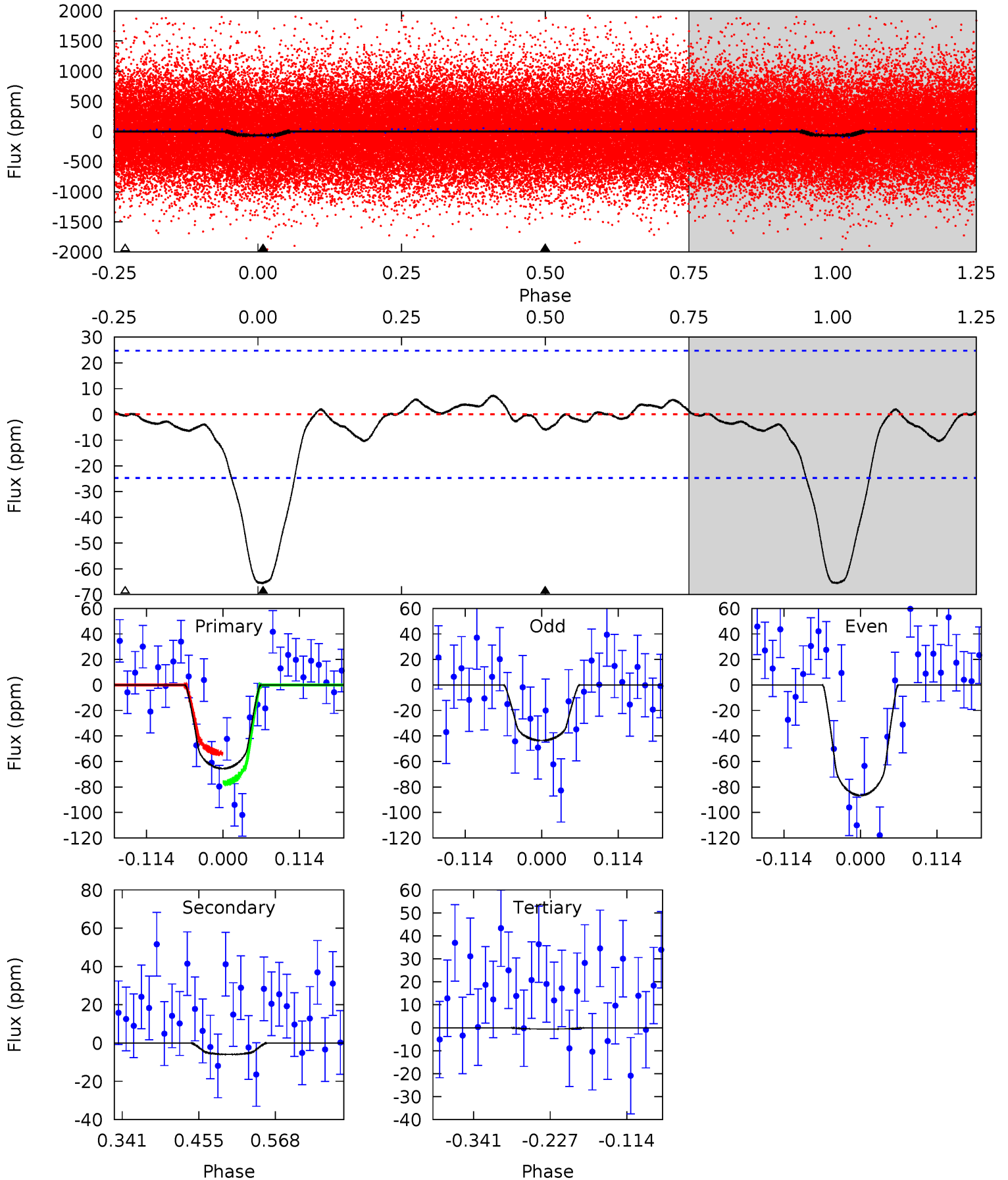
TCE 009579789-01 P= 1.089067 Days $T_0=132.034563$ (BKJD)



DV Model-Shift Uniqueness Test

009579789-01, P = 1.089055 Days, E = 130.947134 Days

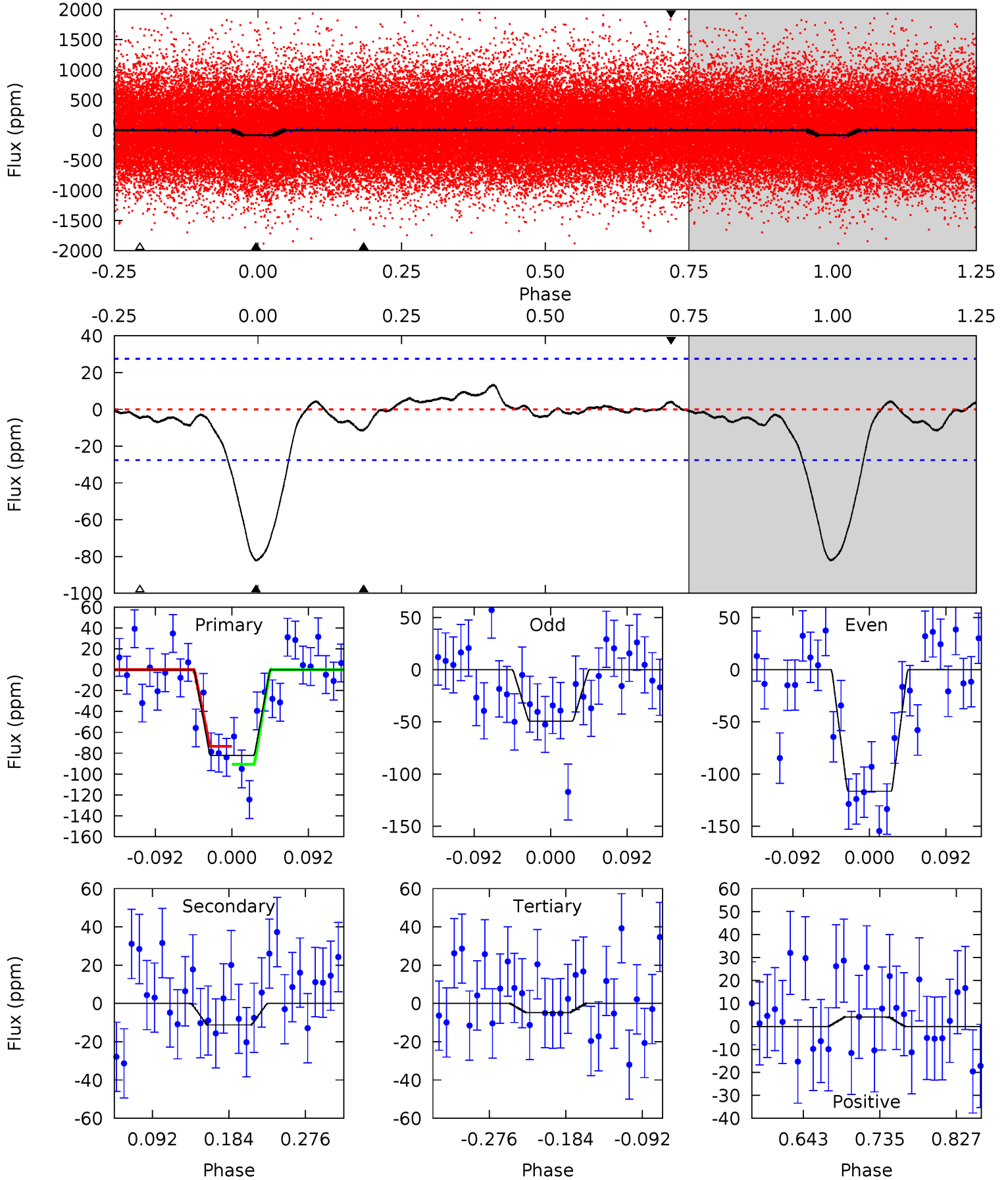
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.0	1.09	0.10	0	4.54	1.58	0.73	11.9	12.0	0.99	1.09	3.93	0.88	0.10	2.17



Alt Model-Shift Uniqueness Test

009579789-01, P = 1.089067 Days, E = 130.945496 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.7	1.87	0.79	0.68	4.58	1.69	0.78	12.9	13.0	1.08	1.19	5.58	0.93	0.14	1.43



Stellar Parameters For KIC 009579789

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5101^{+154}_{-138}	$4.506^{+0.070}_{-0.070}$	$0.140^{+0.250}_{-0.300}$	$0.840^{+0.081}_{-0.081}$	$0.824^{+0.073}_{-0.065}$	$1.961^{+0.596}_{-0.457}$
	+3%/-3%	+2%/-2%	+179%/-214%	+10%/-10%	+9%/-8%	+30%/-23%
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 009579789-01 / KOI 7193.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-6 ± 5	$0.94^{+0.67}_{-0.54}$	2072^{+77}_{-69}	2895^{+1147}_{-5378}	$1.187^{+6.613}_{-1.137}$
Alt.	-11 ± 6	$0.97^{+0.70}_{-0.64}$	2070^{+80}_{-77}	3271^{+1514}_{-712}	$2.337^{+16.644}_{-1.705}$

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

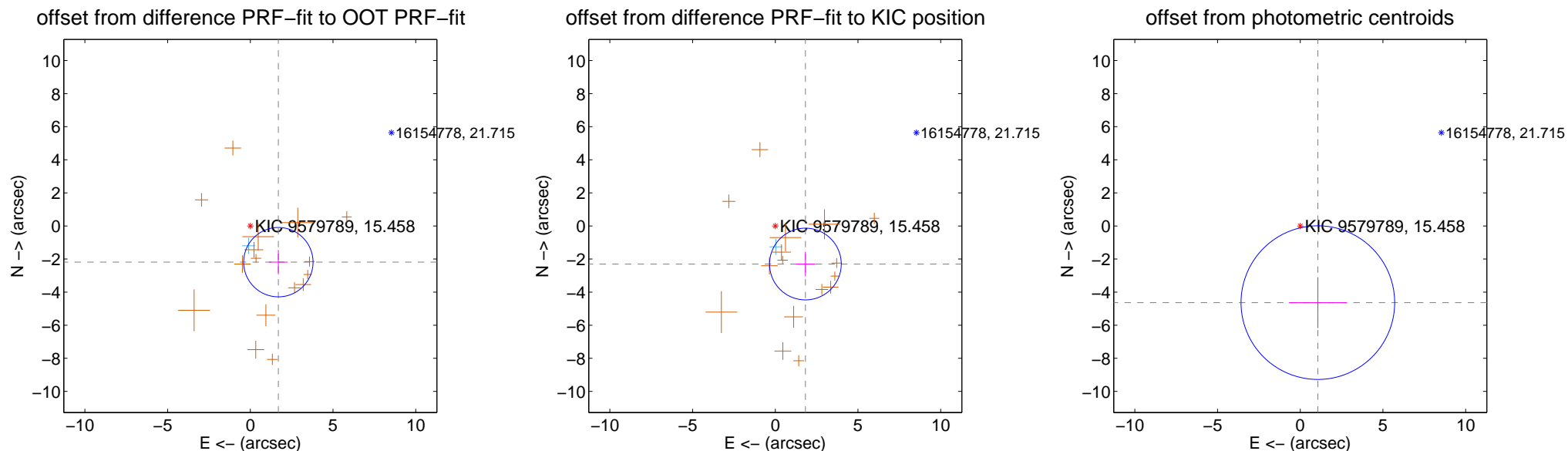
DV Centroid Data

Supplemental centroid analysis for 009579789-01. Kepler magnitude: 15.46. Transit SNR 9.35

There are 1 quarters with good PRF difference image offsets

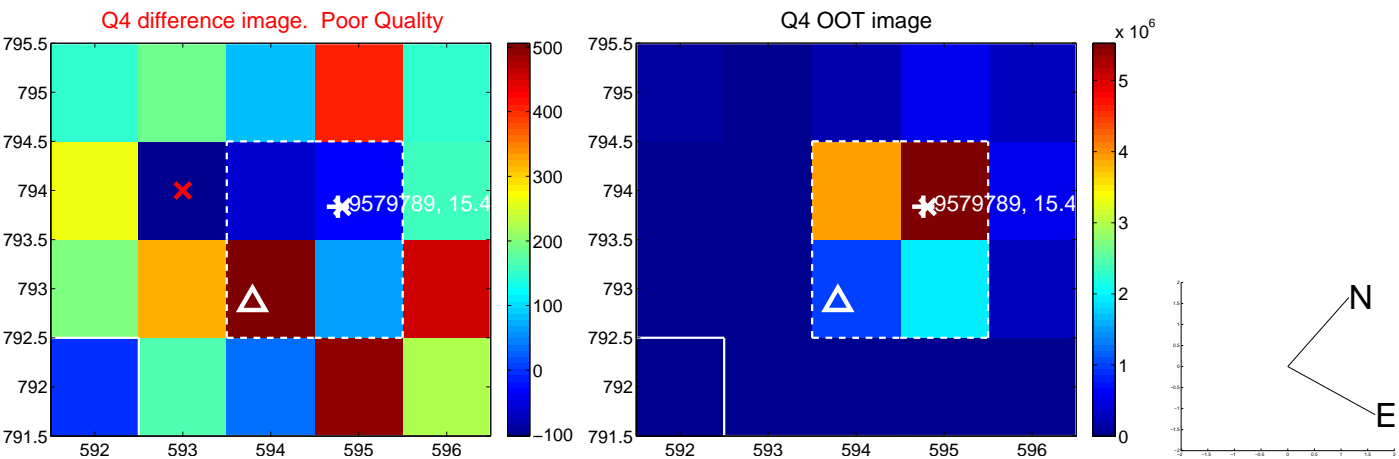
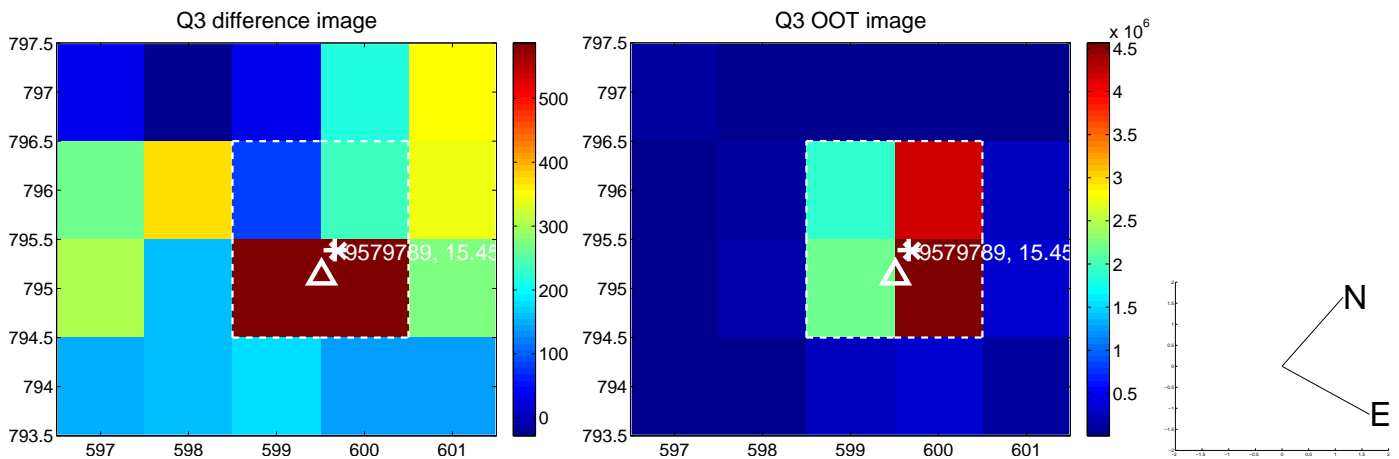
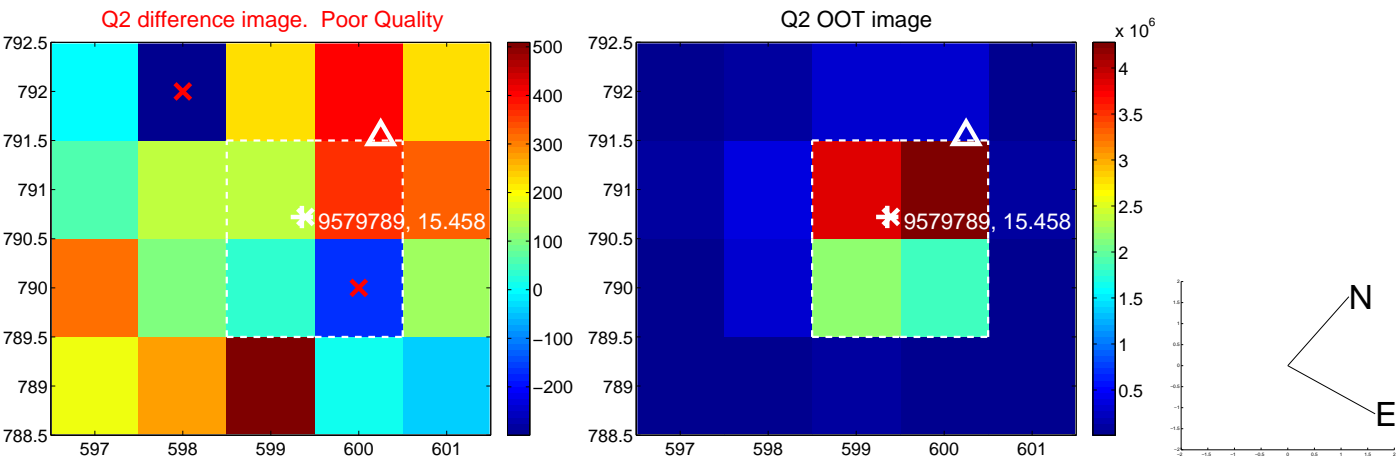
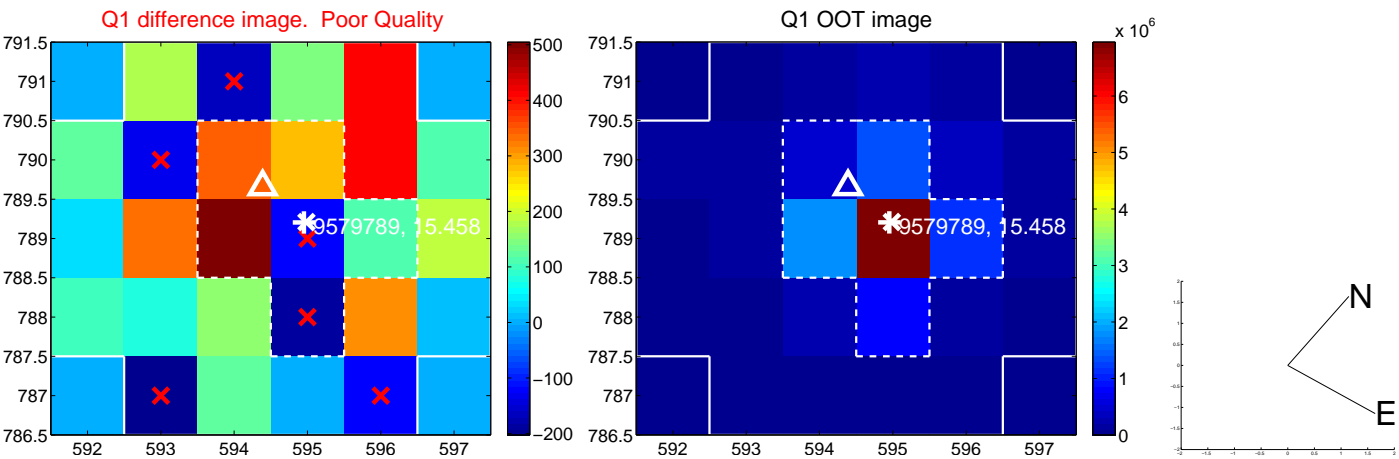
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.768 ± 0.699	3.96	-1.695 ± 0.570	-2.188 ± 0.735
PRF-fit source offset from KIC position	2.935 ± 0.722	4.06	-1.821 ± 0.588	-2.302 ± 0.745
photometric centroid source offset	4.75 ± 1.55	3.07	-1.06 ± 1.75	-4.63 ± 1.54

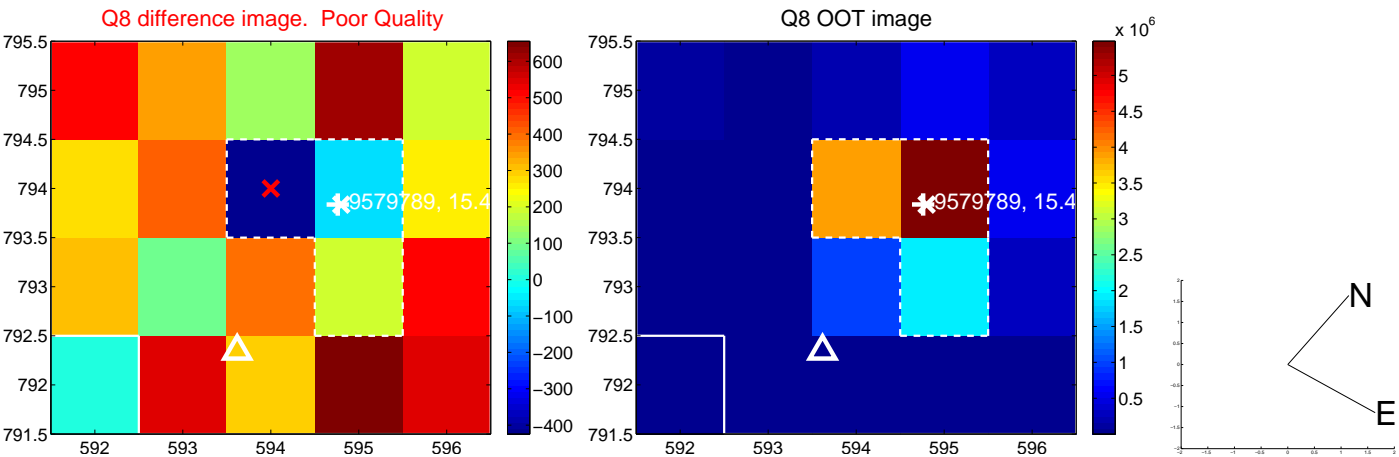
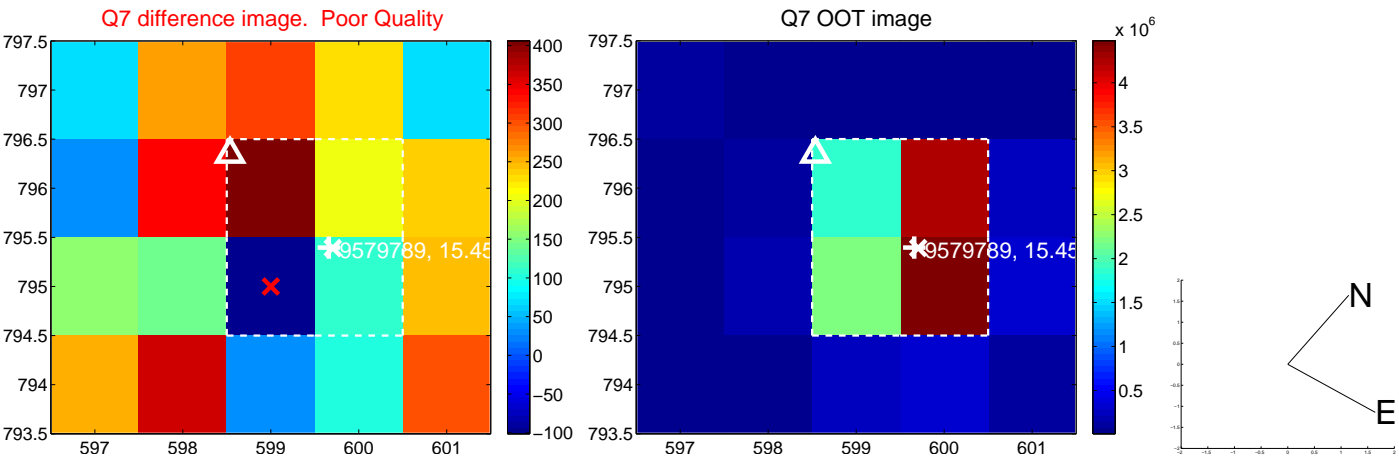
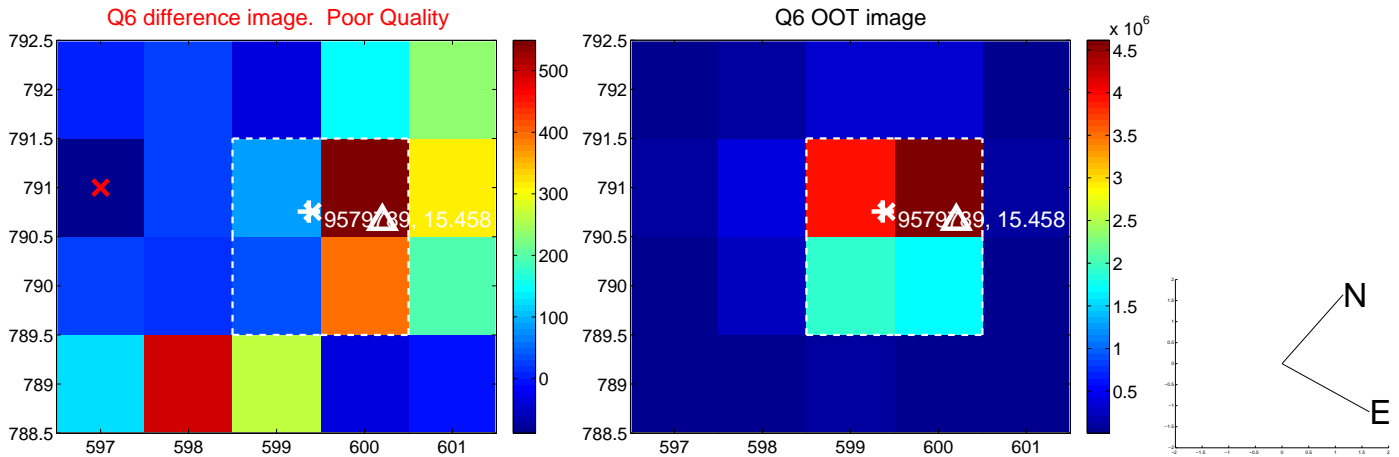
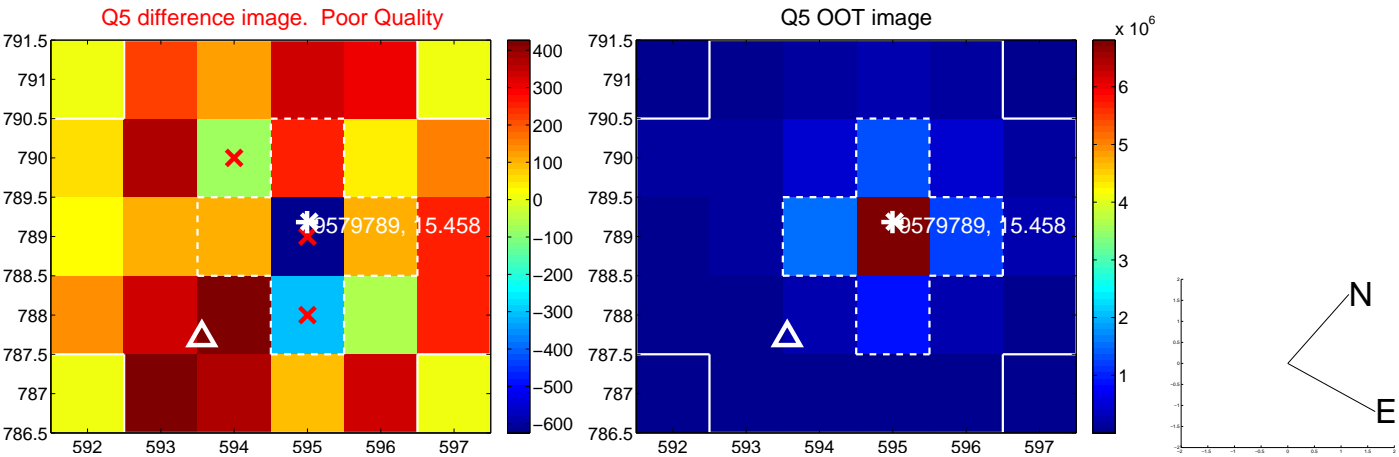


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

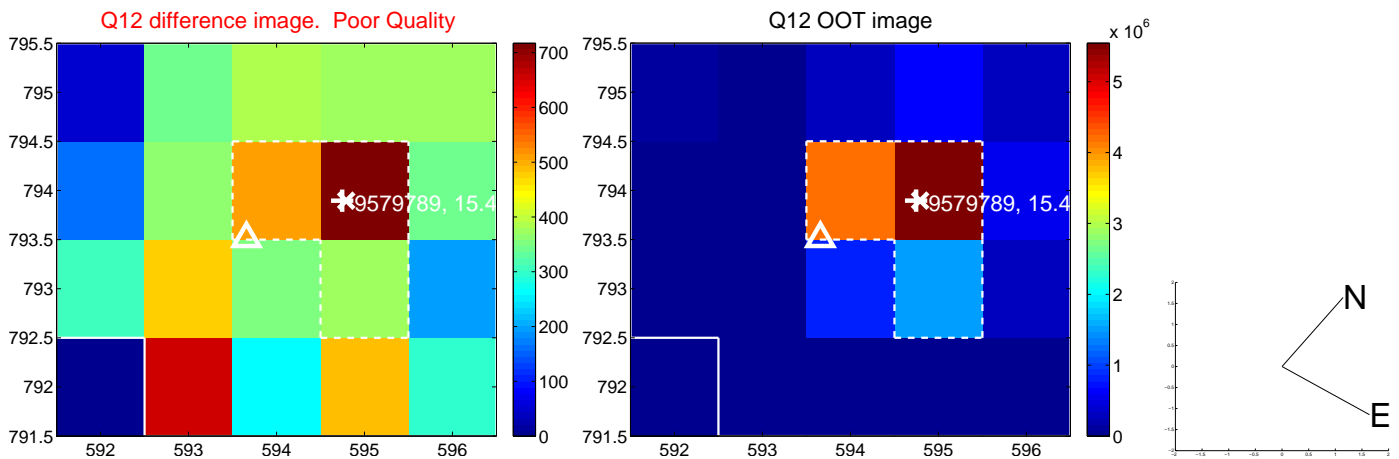
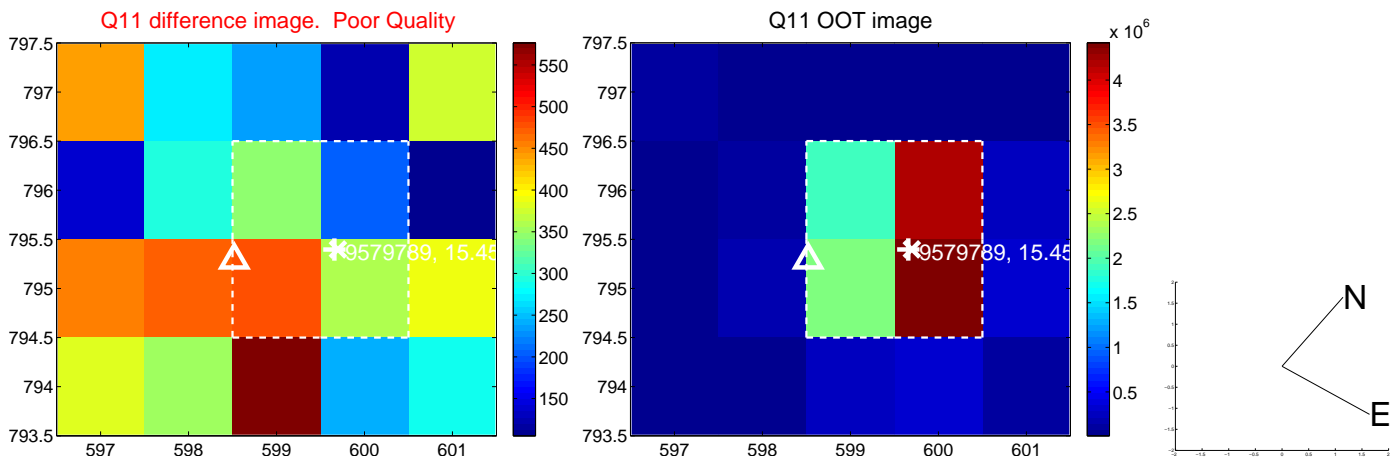
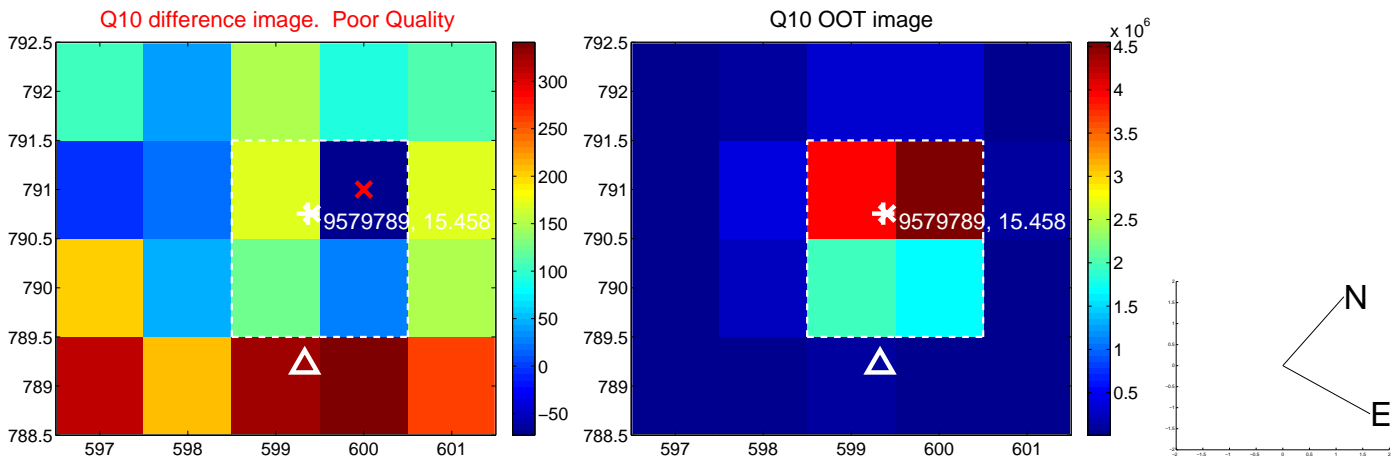
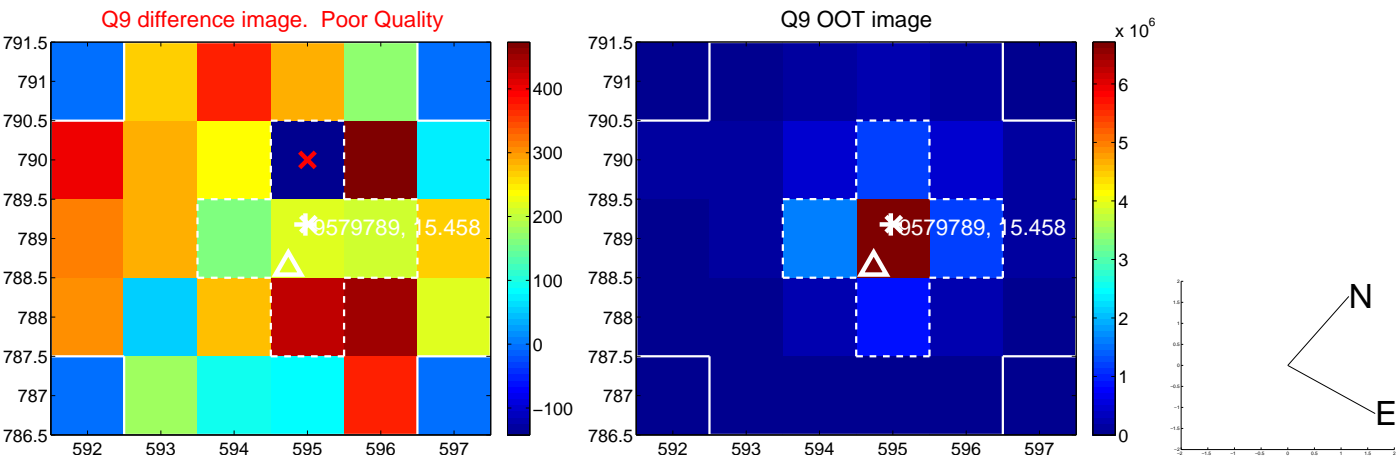
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



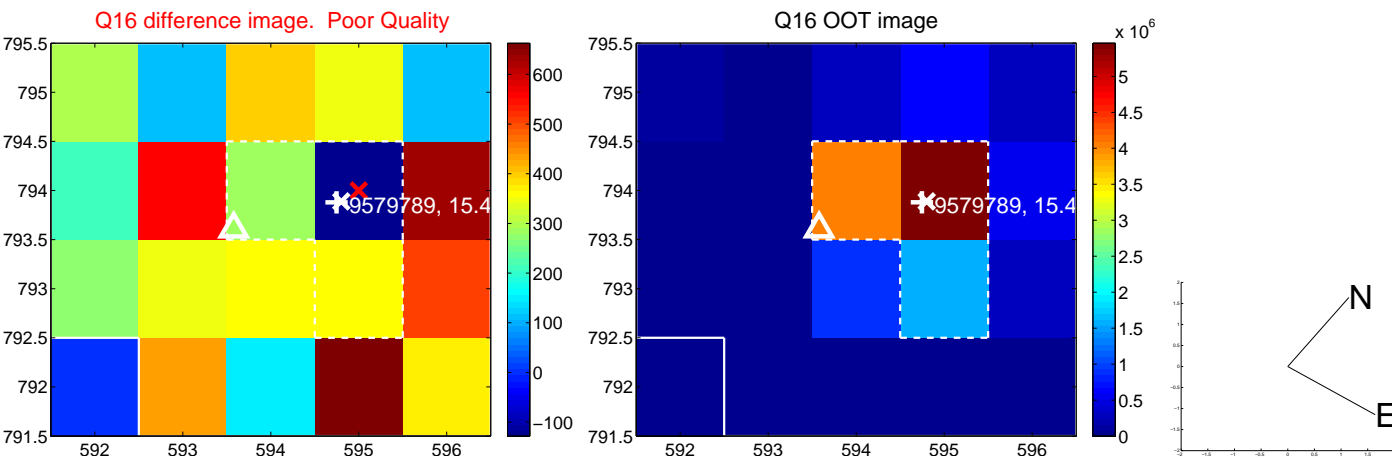
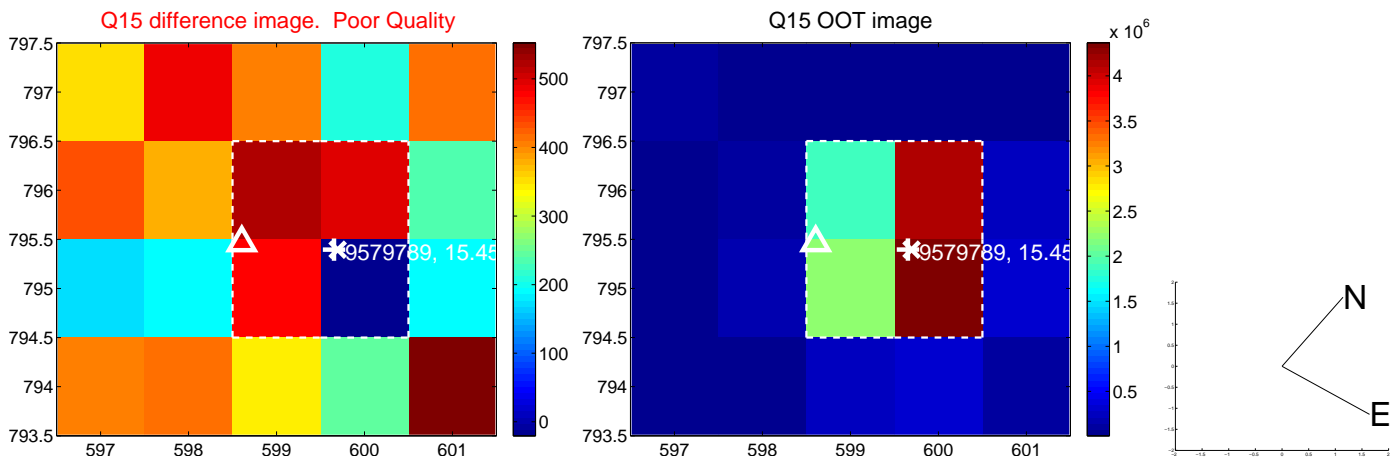
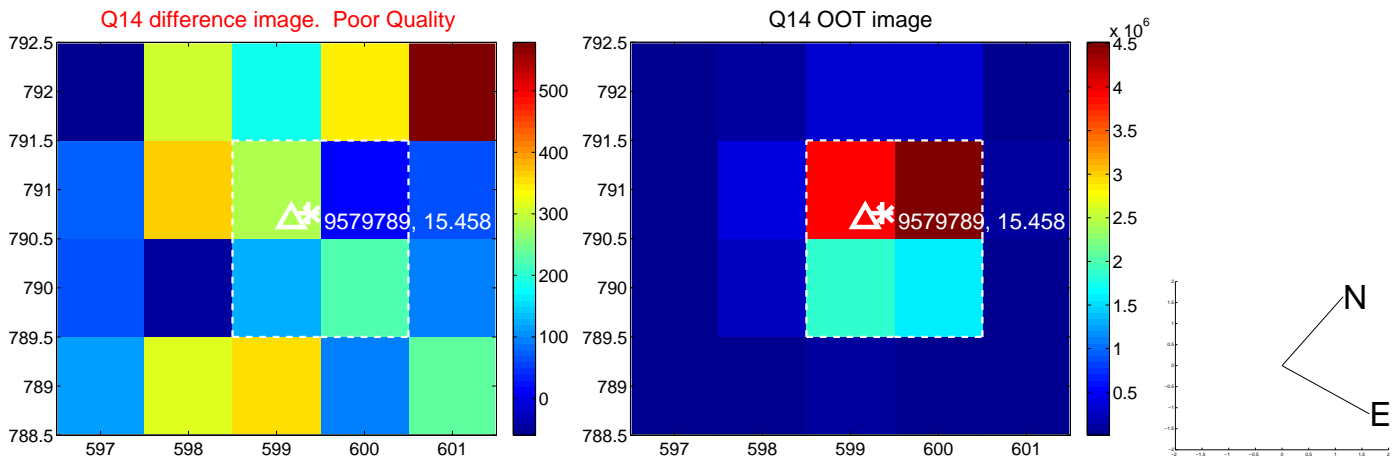
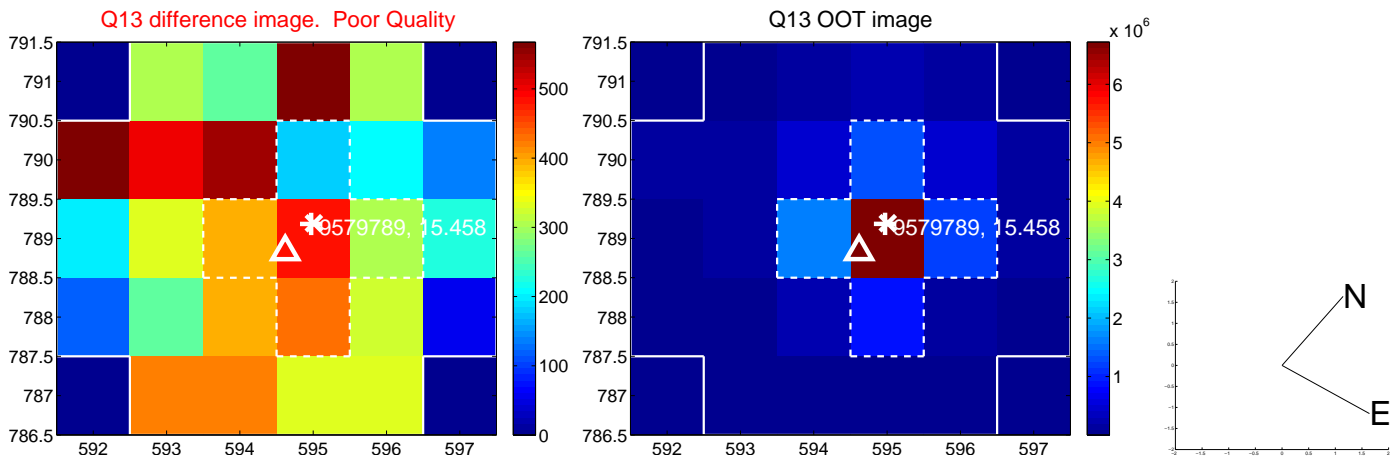
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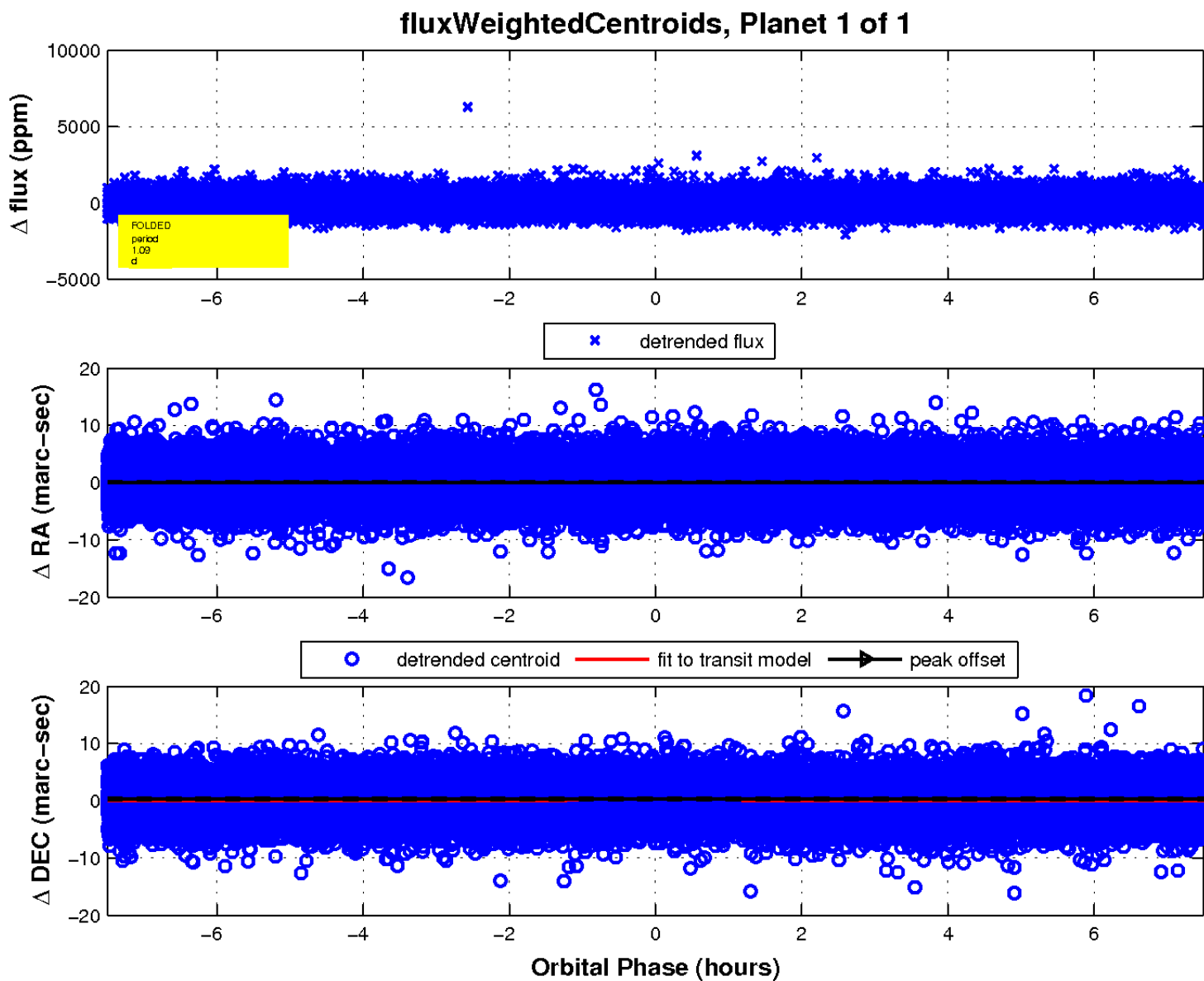
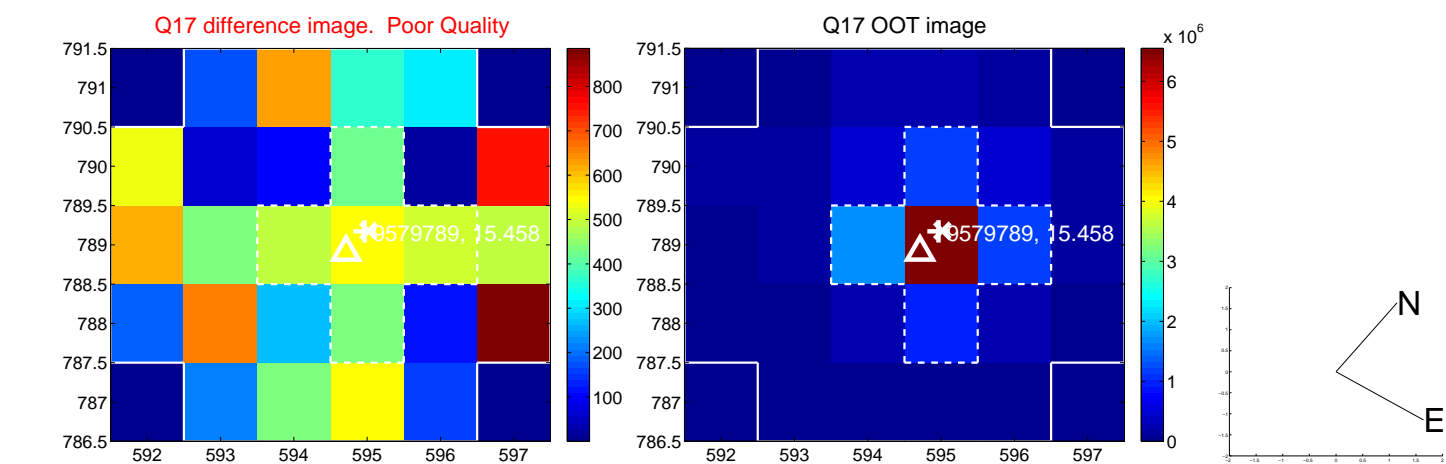
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

