

KIC 004552395

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})
004552395-01	OBS	No	4.429083	135.630240	9.2	23.722	7.6	6.0	1.71	6068	0.52	1263.22

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004552395-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—CENT_FEW_MEAS

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

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

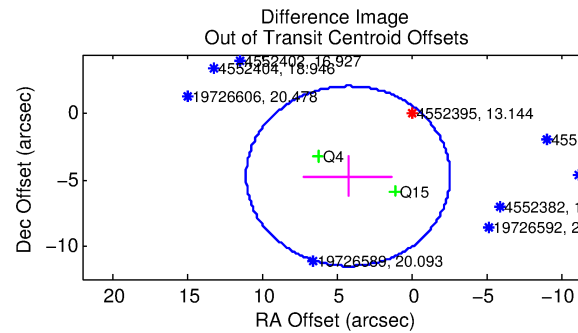
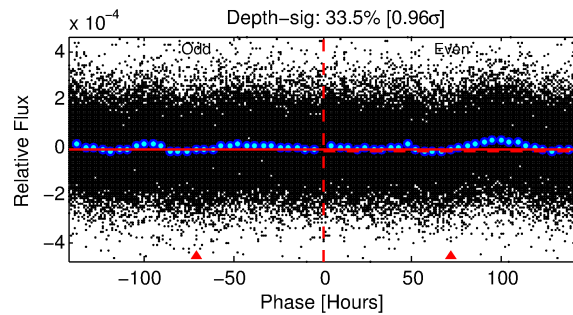
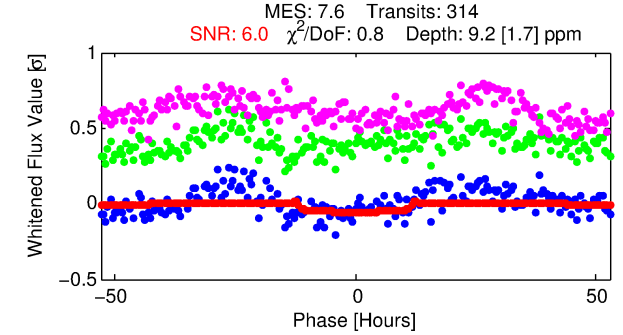
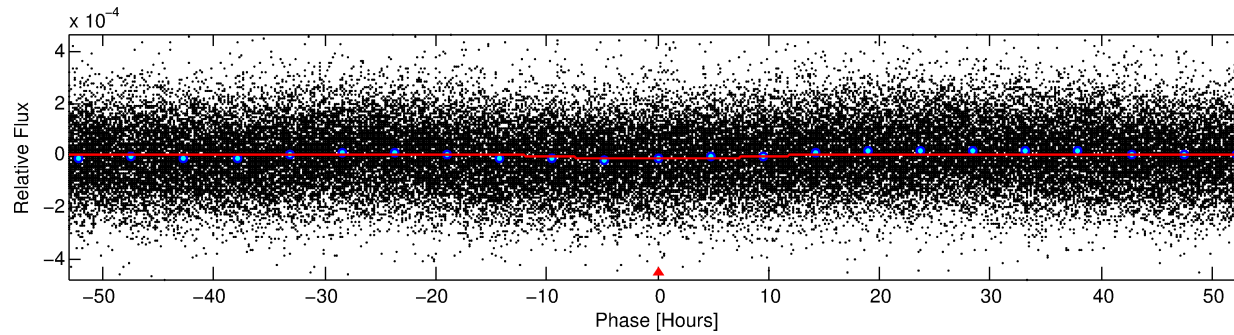
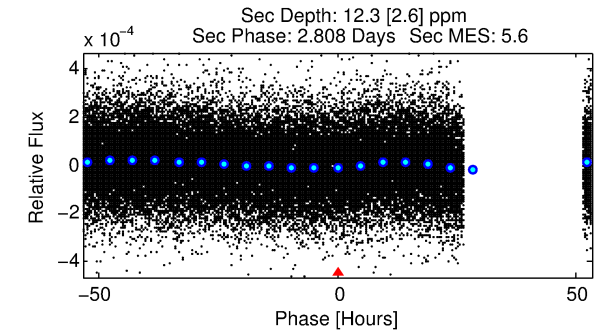
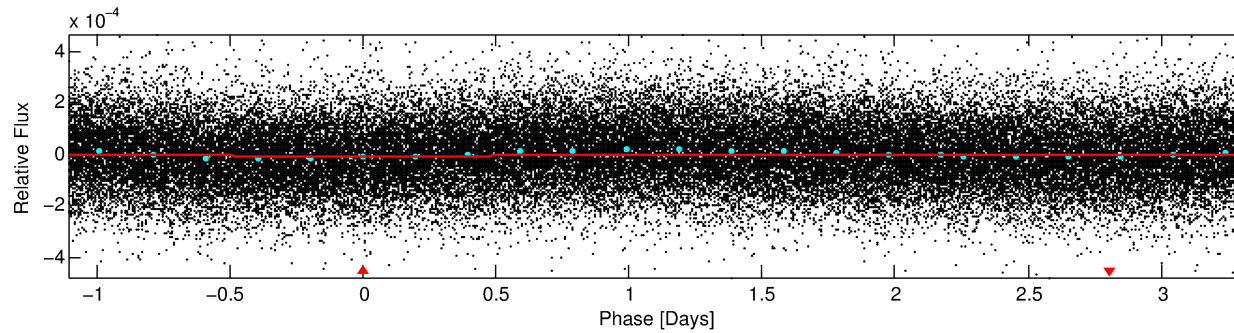
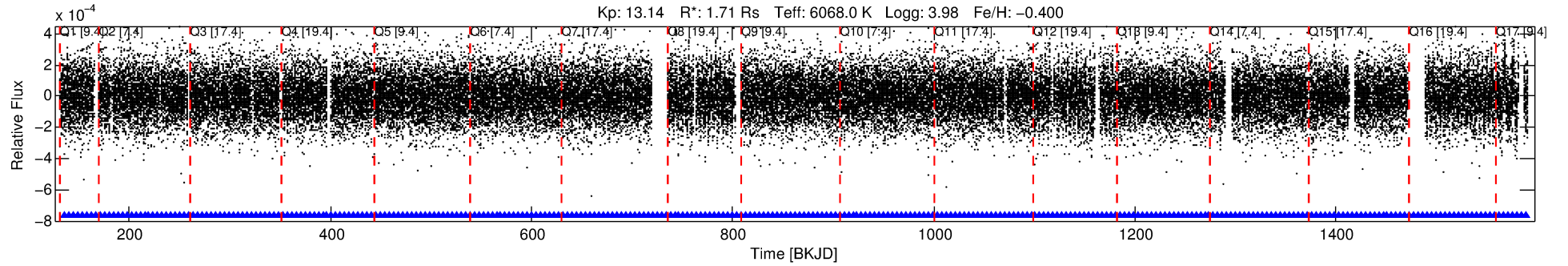
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004552395-01

No Significant Match Found

DV One-Page Summary

KIC: 4552395 Candidate: 1 of 1 Period: 4.429 d



DV Fit Results:

Period = 4.42908 [0.00018] d
Epoch = 135.6302 [0.0280] BKJD
Rp/R* = 0.0028 [0.0043]
a/R* = 1.53 [6.81]
b = 0.22 [34.34]
Seff = 1263.22 [607.69]
Teq = 1520 [183] K
Rp = 0.52 [0.81] Re
a = 0.0529 [0.0155] AU
Ag = 70.13 [218.51] [0.32σ]
Teffp = 6802 [5242] K [1.01σ]

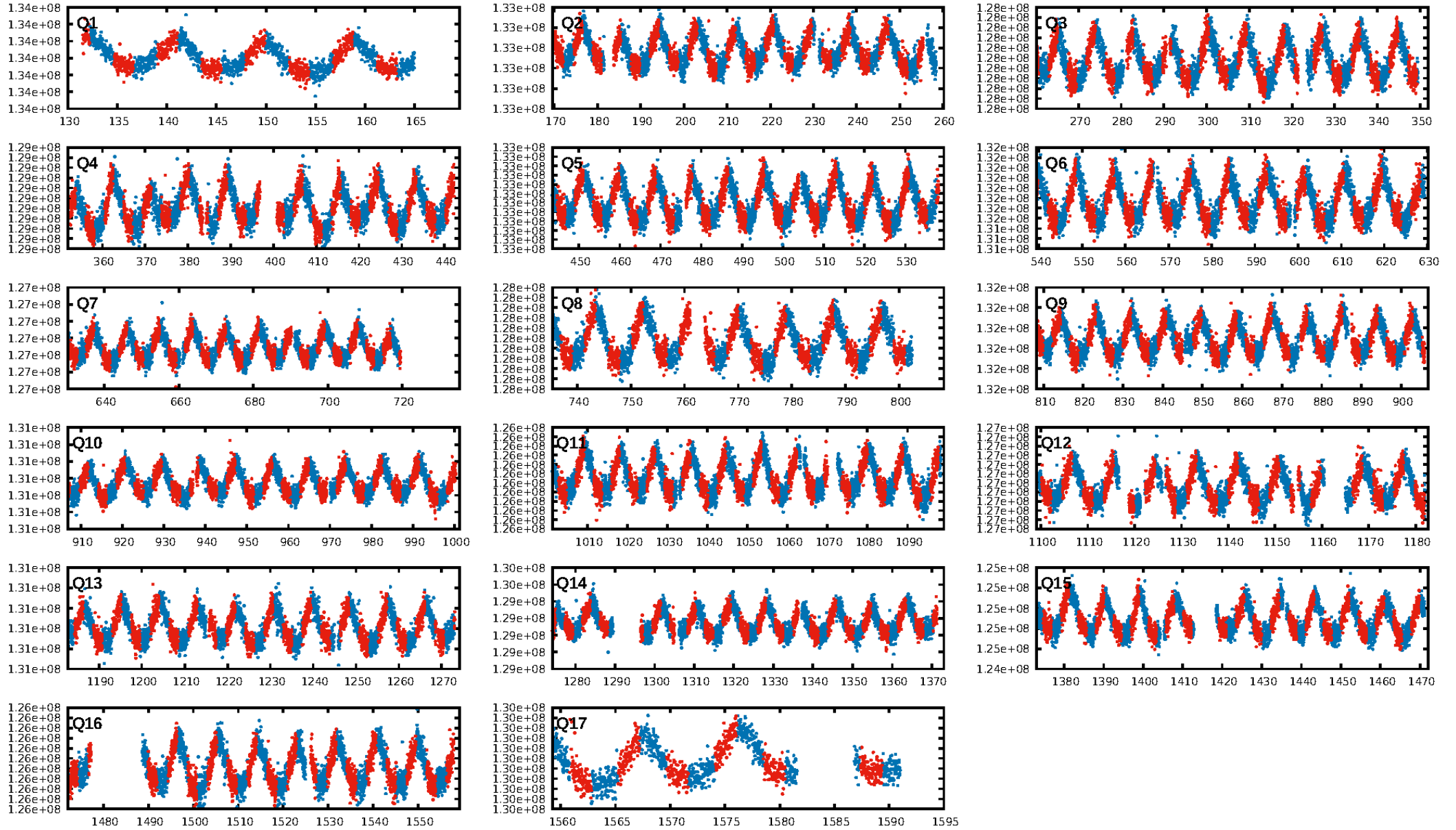
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.88e-14
RollingBand-fgt: 1.00 [300/300]
GhostDiagnostic-chr: -1.038
Centroid-sig: 3.9%
Centroid-so: 2.806 arcsec [1.42σ]
OotOffset-rm: 6.328 arcsec [2.79σ]
KicOffset-rm: 6.356 arcsec [2.85σ]
OotOffset-st: 0/1/1/0 [2]
KicOffset-st: 0/1/1/0 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [17/17]

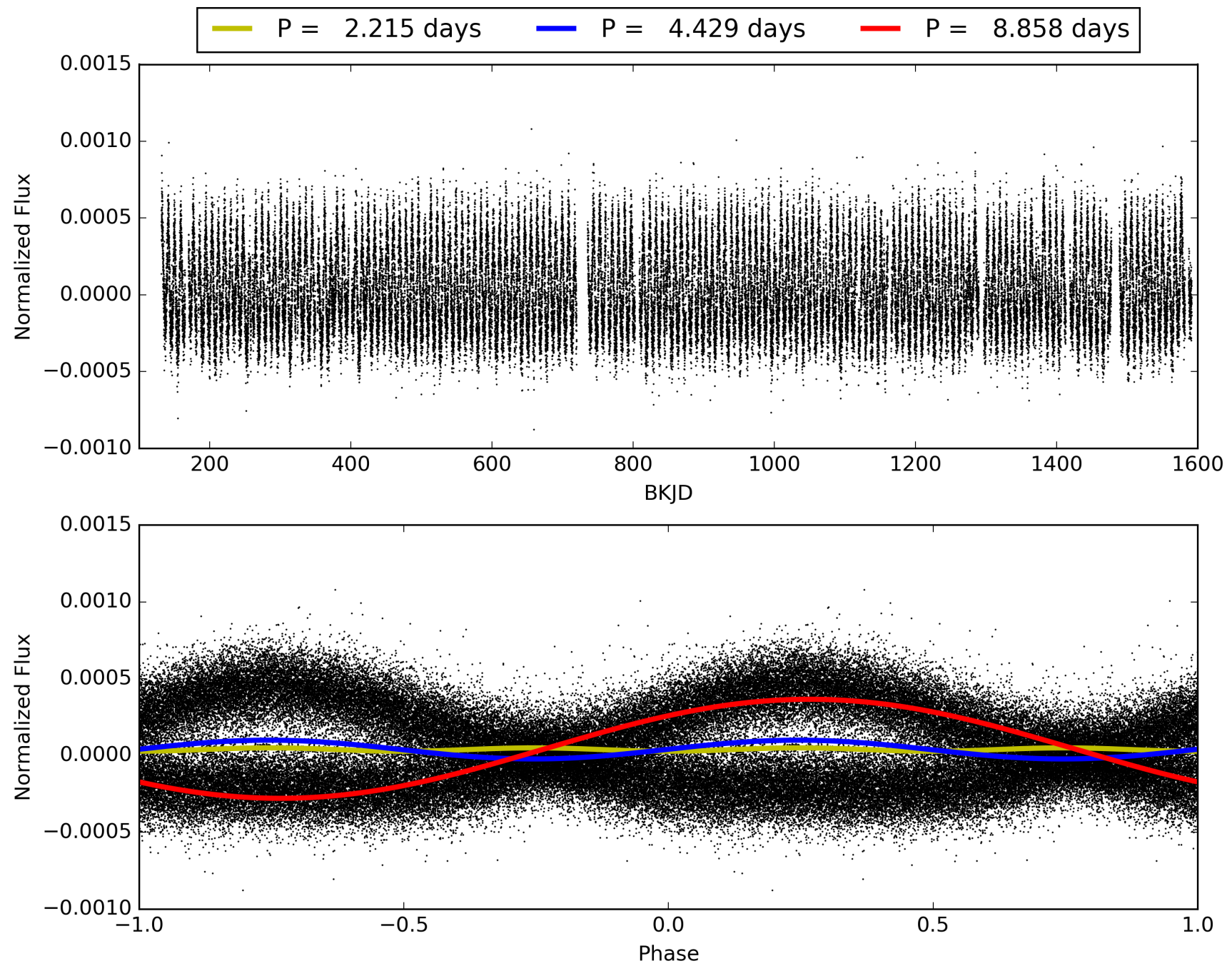
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 15:03:02 Z

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

TCE 004552395-01, PDC Light Curves

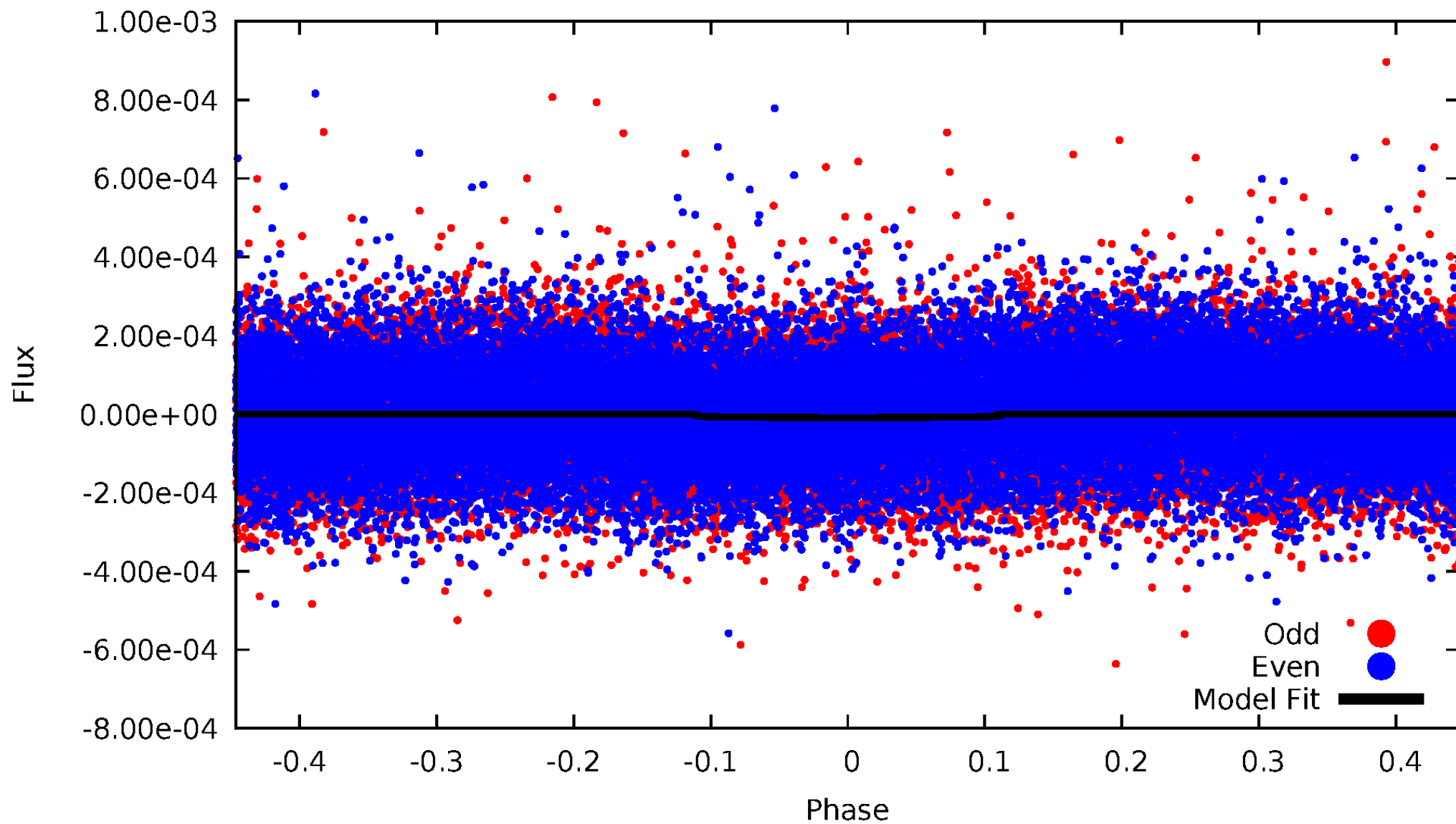


TCE 004552395-01



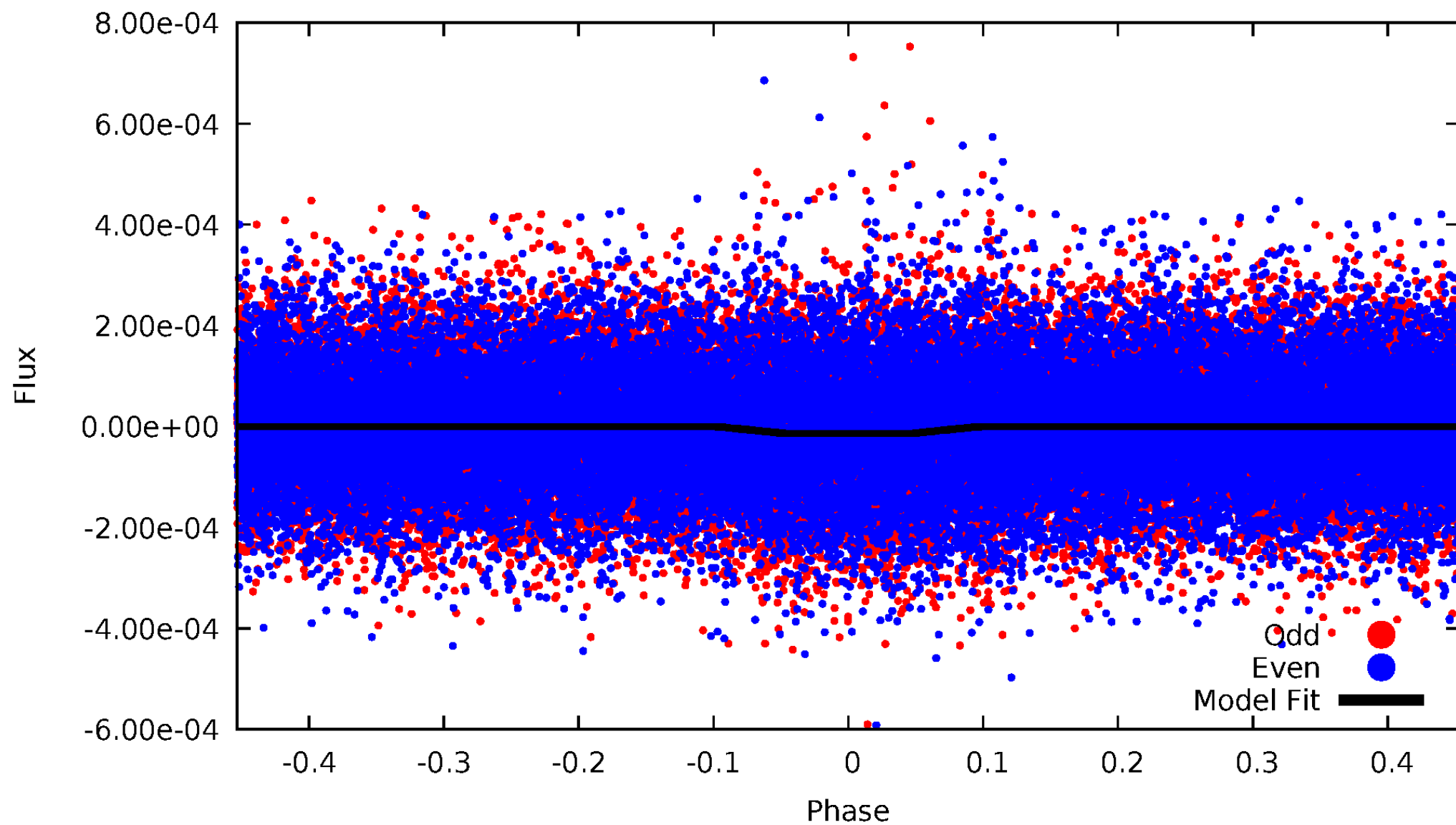
DV Odd/Even

TCE 004552395-01



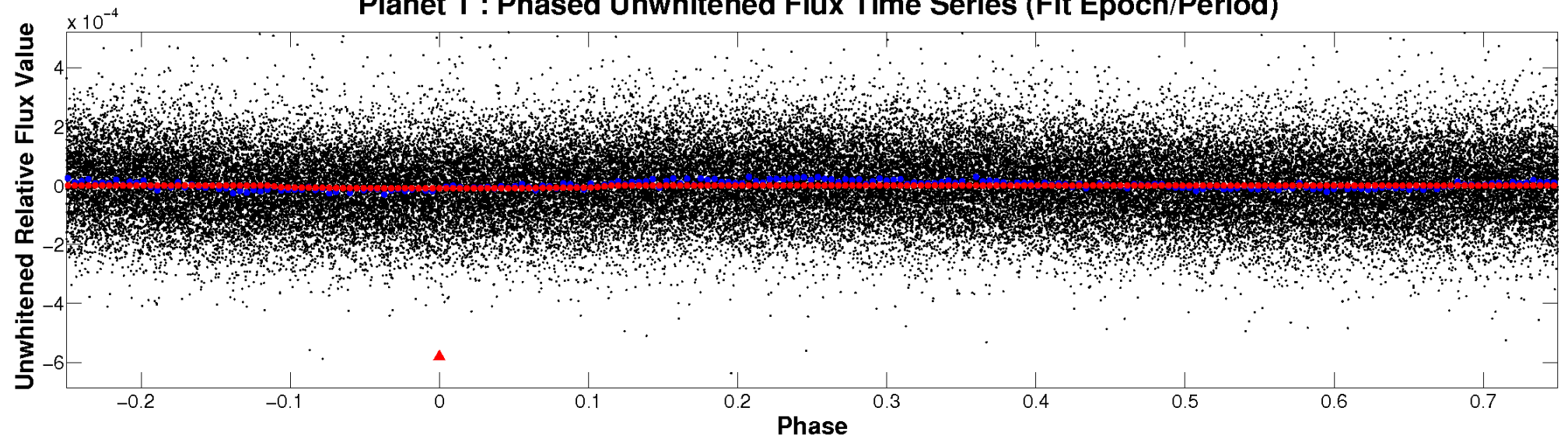
ALT Odd/Even

TCE 004552395-01

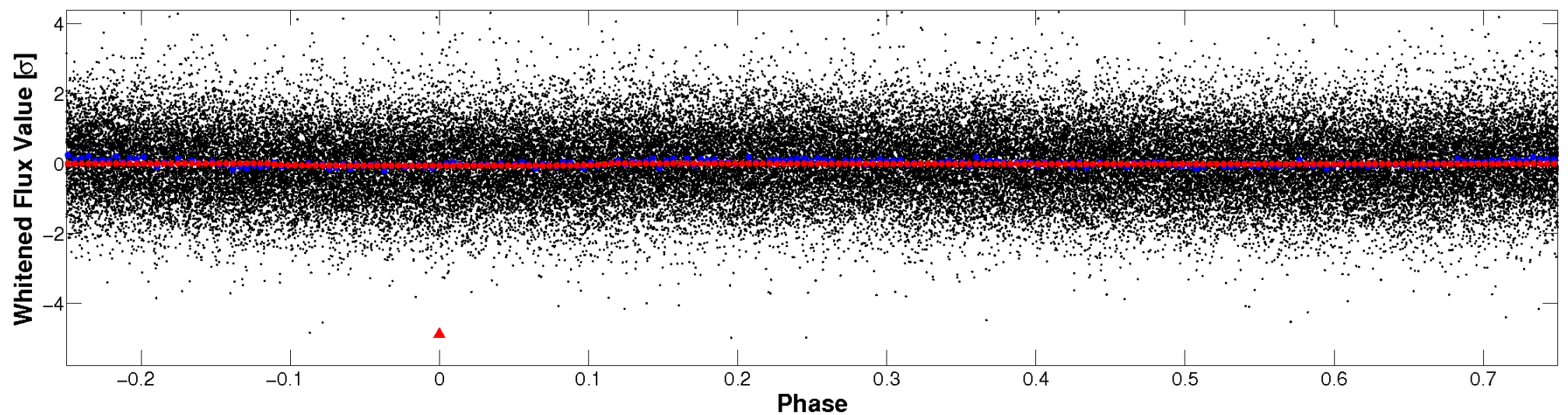


Non-Whitened Vs. Whitened Light Curve

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

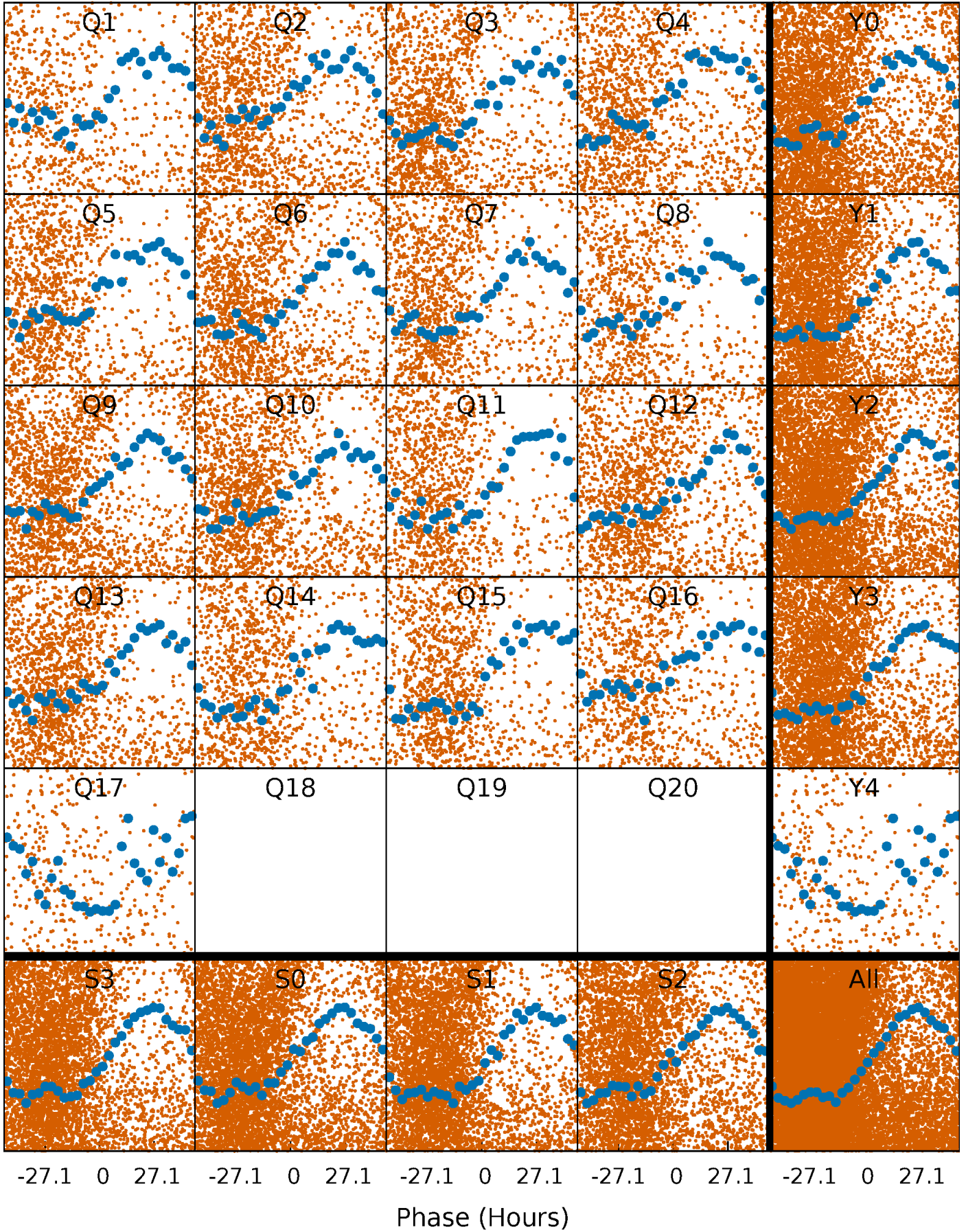


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



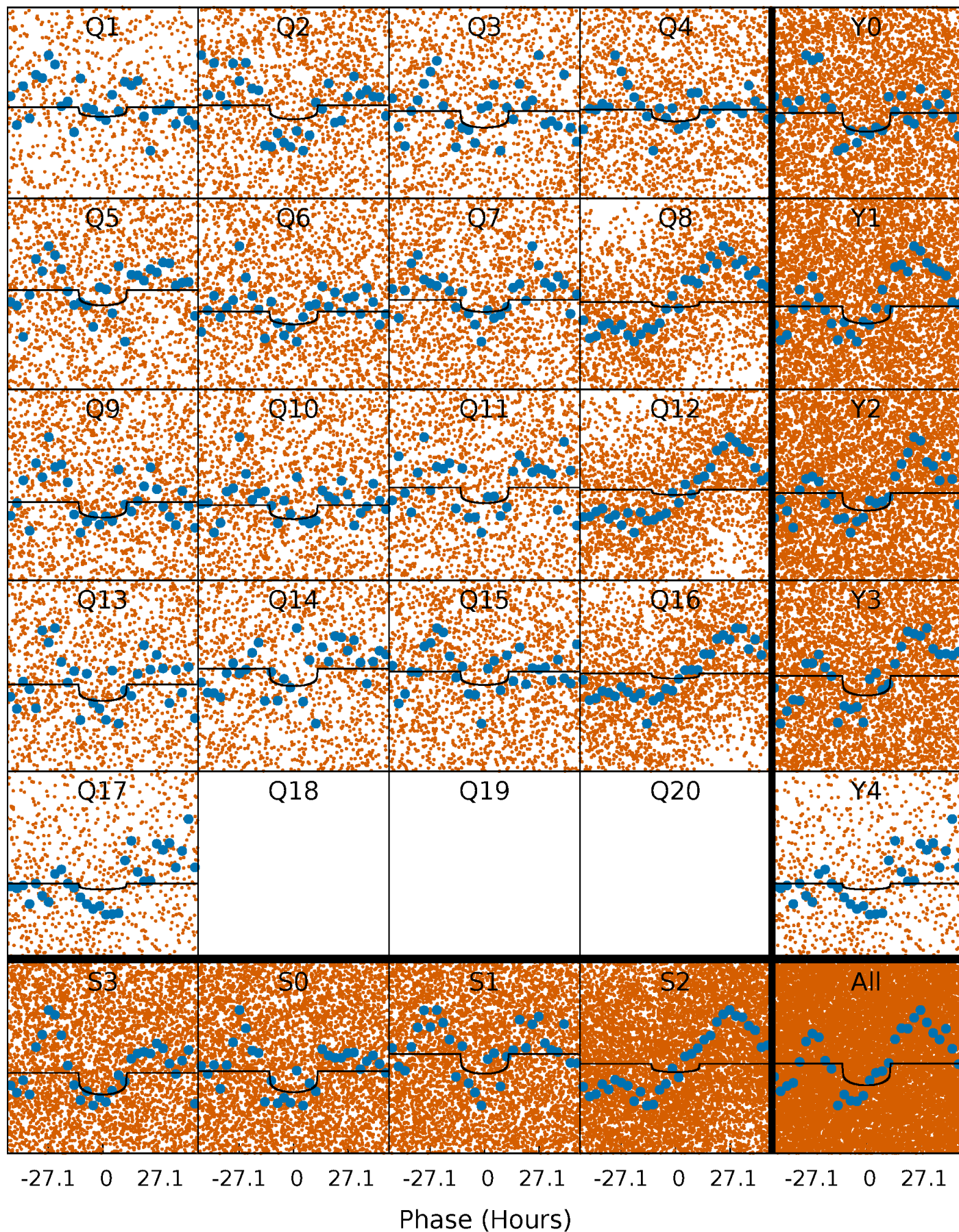
PDC Quarter-Phased Transit Curves

TCE 004552395-01 P= 4.429083 Days $T_0=135.630240$ (BKJD)



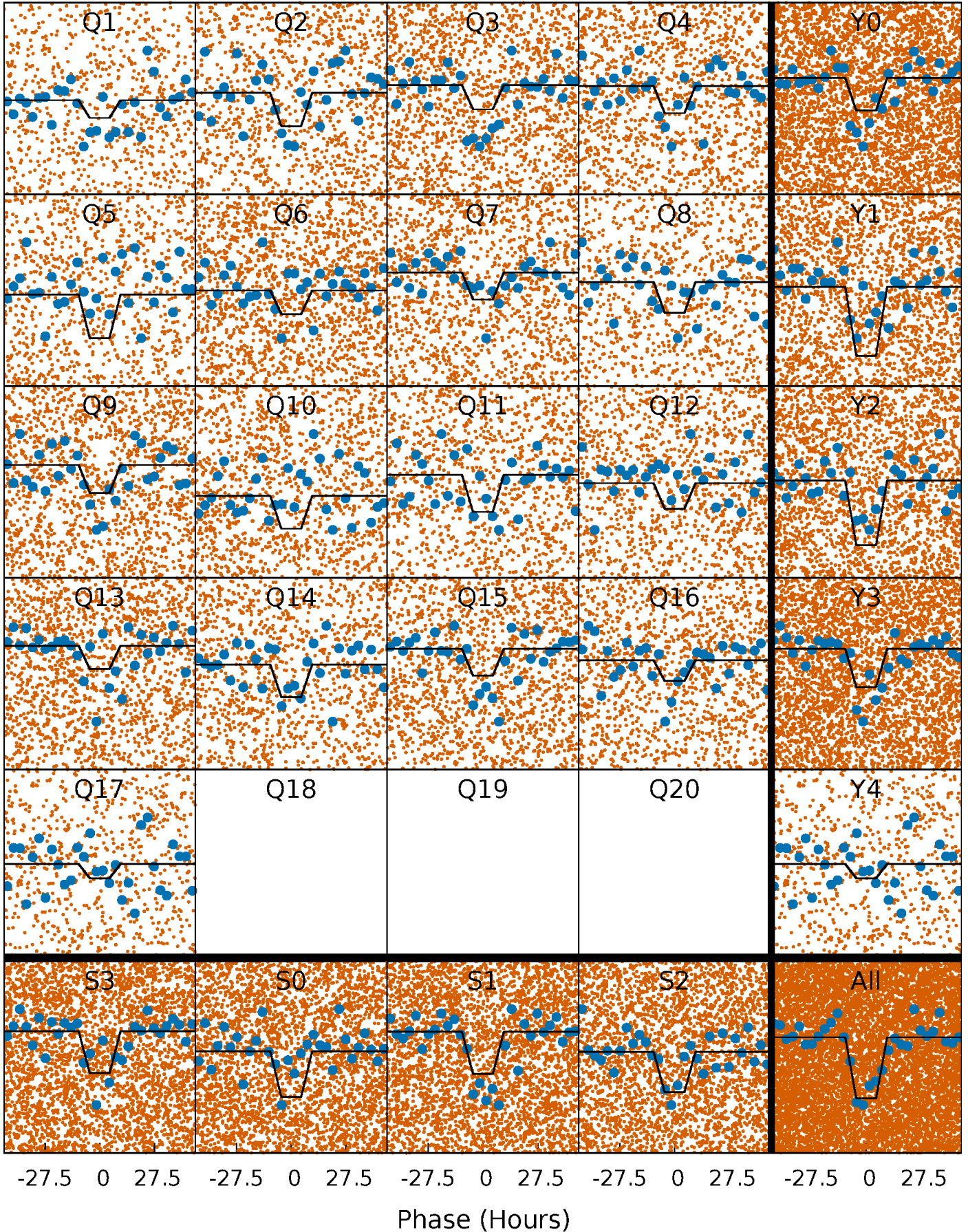
DV Quarter-Phased Transit Curves

TCE 004552395-01 P= 4.429083 Days $T_0=135.630240$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

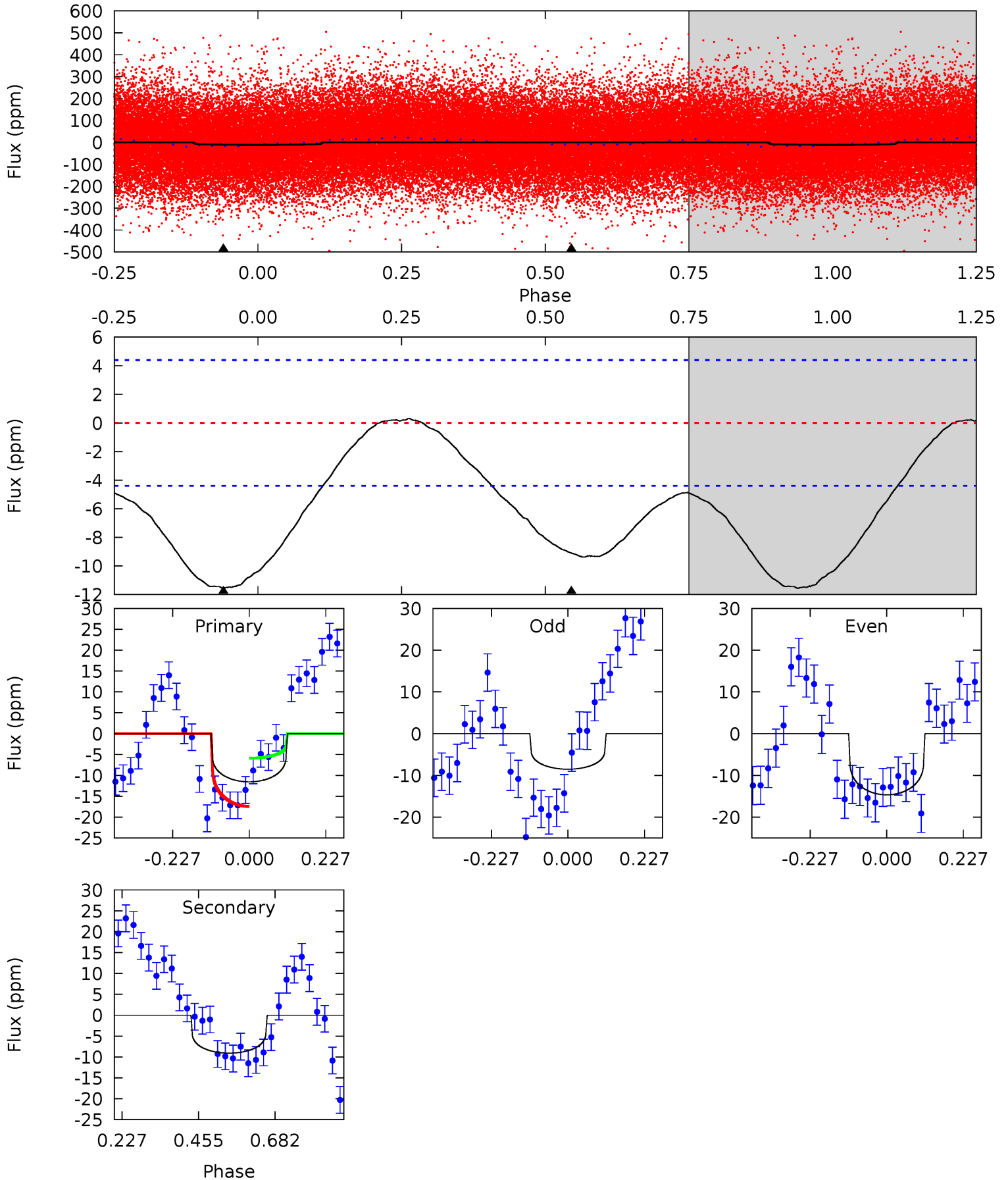
TCE 004552395-01 P= 4.429141 Days $T_0=135.180623$ (BKJD)



DV Model-Shift Uniqueness Test

004552395-01, P = 4.429083 Days, E = 131.201157 Days

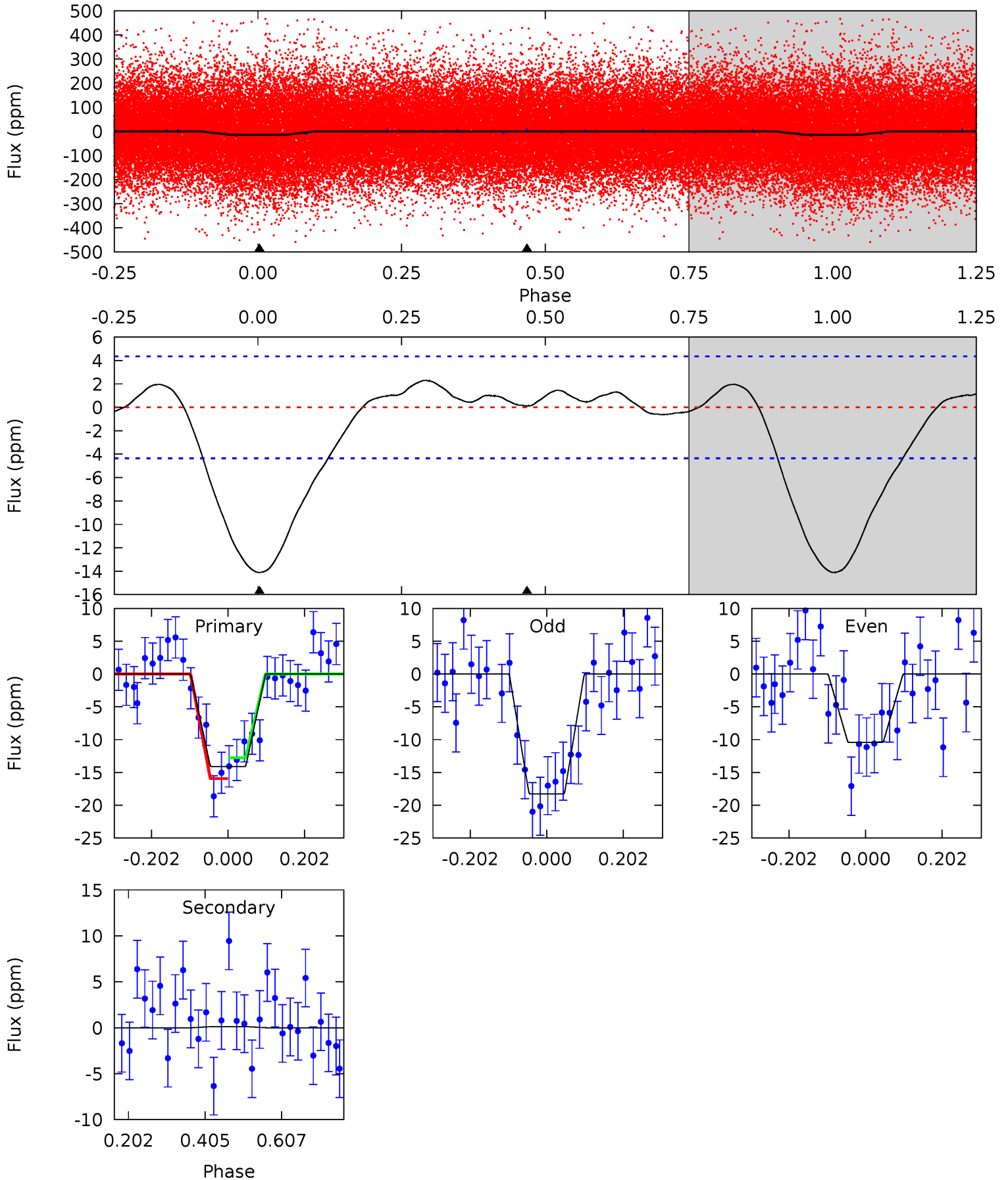
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.5	9.08	0	0	4.39	1.21	0.46	11.5	11.5	9.08	9.08	3.06	1.22	0.03	5.78



Alt Model-Shift Uniqueness Test

004552395-01, P = 4.429141 Days, E = 130.751482 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.3	-0.12	0	0	4.41	1.28	0.76	14.3	14.3	-0.12	-0.12	3.97	0.48	0.14	1.62



Stellar Parameters For KIC 004552395

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	ρ_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6068^{+181}_{-163}	$3.977^{+0.273}_{-0.117}$	$-0.400^{+0.350}_{-0.250}$	$1.707^{+0.348}_{-0.522}$	$1.008^{+0.169}_{-0.138}$	$0.285^{+0.504}_{-0.101}$
	+3%/-3%	+7%/-3%	+87%/-62%	+20%/-31%	+17%/-14%	+177%/-35%
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 004552395-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-9 ± 1	$0.75^{+0.66}_{-0.51}$	2100^{+146}_{-179}	5196^{+4467}_{-1101}	26^{+213}_{-19}
Alt.	0 ± 1	$0.87^{+0.72}_{-0.53}$	2091^{+139}_{-178}	-2711^{+5979}_{-953}	$-0.180^{+2.527}_{-3.387}$

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

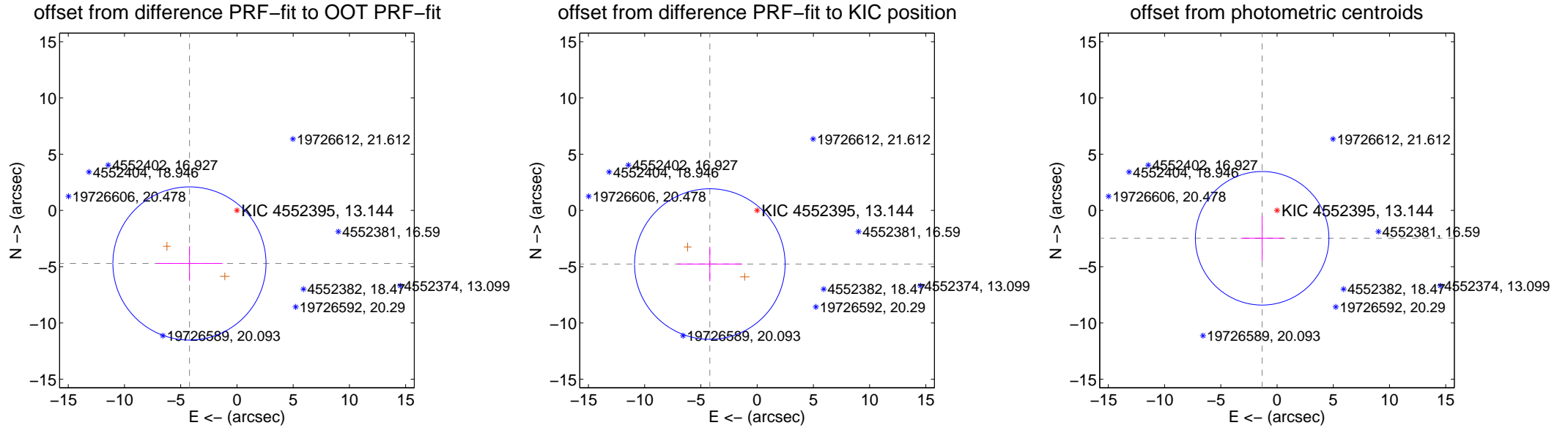
DV Centroid Data

Supplemental centroid analysis for 004552395-01. Kepler magnitude: 13.14. Transit SNR 6.01

There are 0 quarters with good PRF difference image offsets

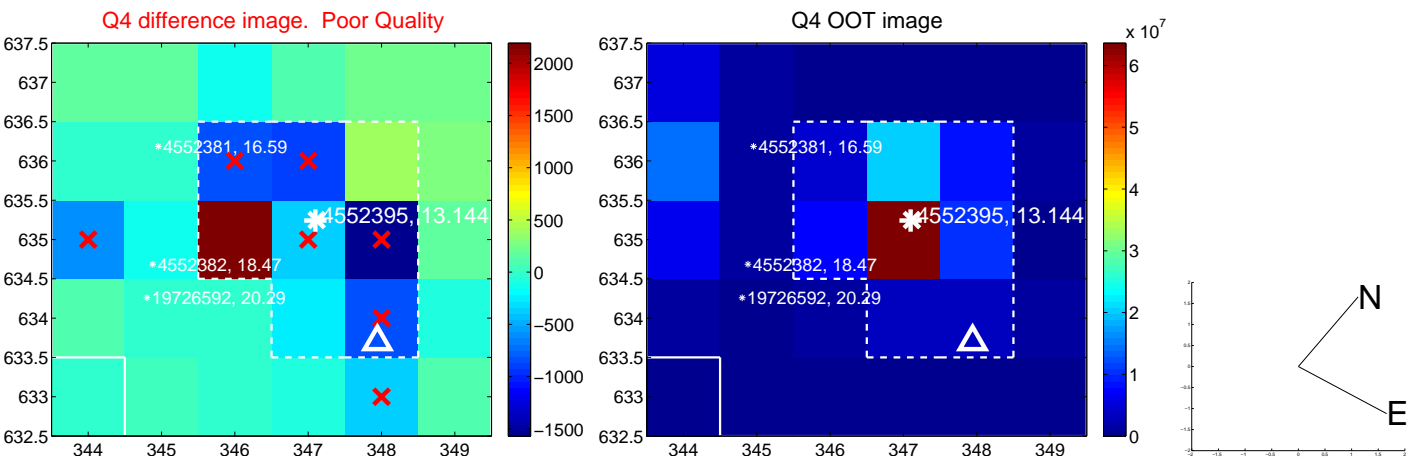
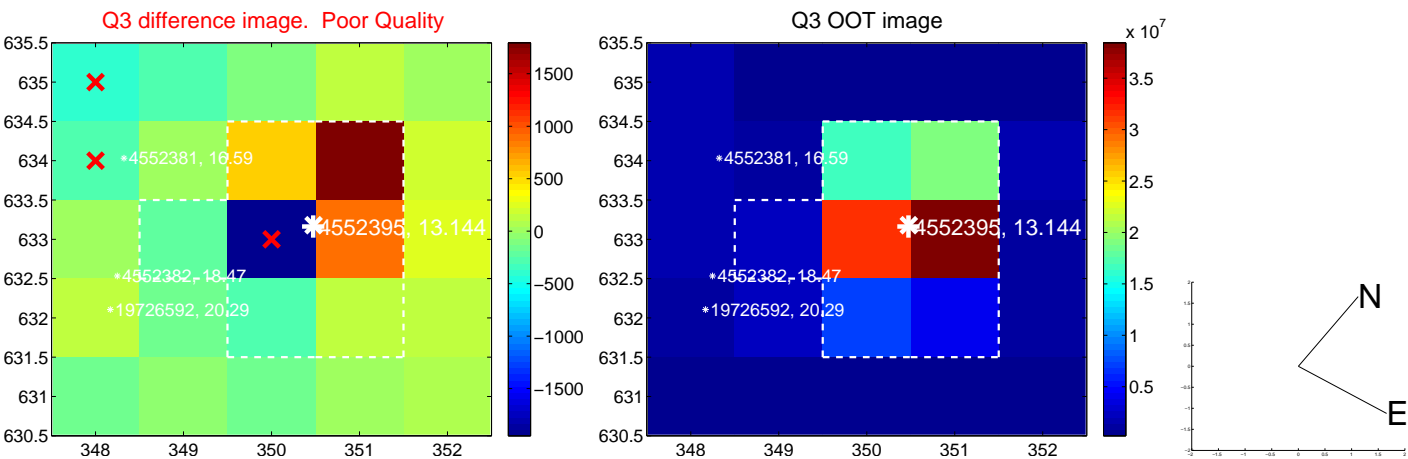
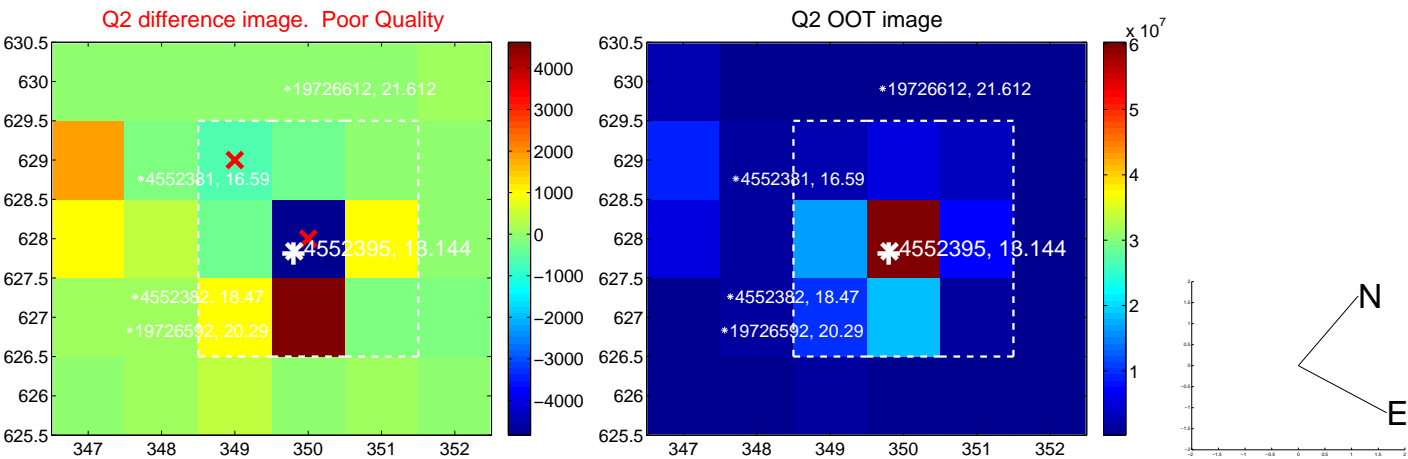
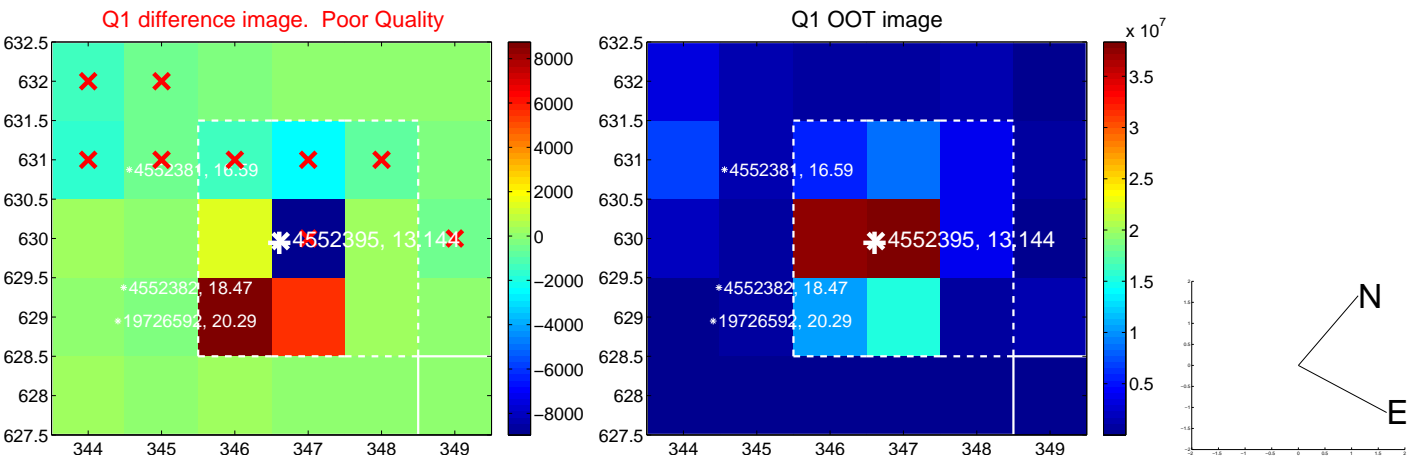
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	6.328 ± 2.269	2.79	4.222 ± 2.932	-4.713 ± 1.544
PRF-fit source offset from KIC position	6.356 ± 2.231	2.85	4.206 ± 2.889	-4.765 ± 1.534
photometric centroid source offset	2.81 ± 1.98	1.42	1.32 ± 1.90	-2.47 ± 2.00

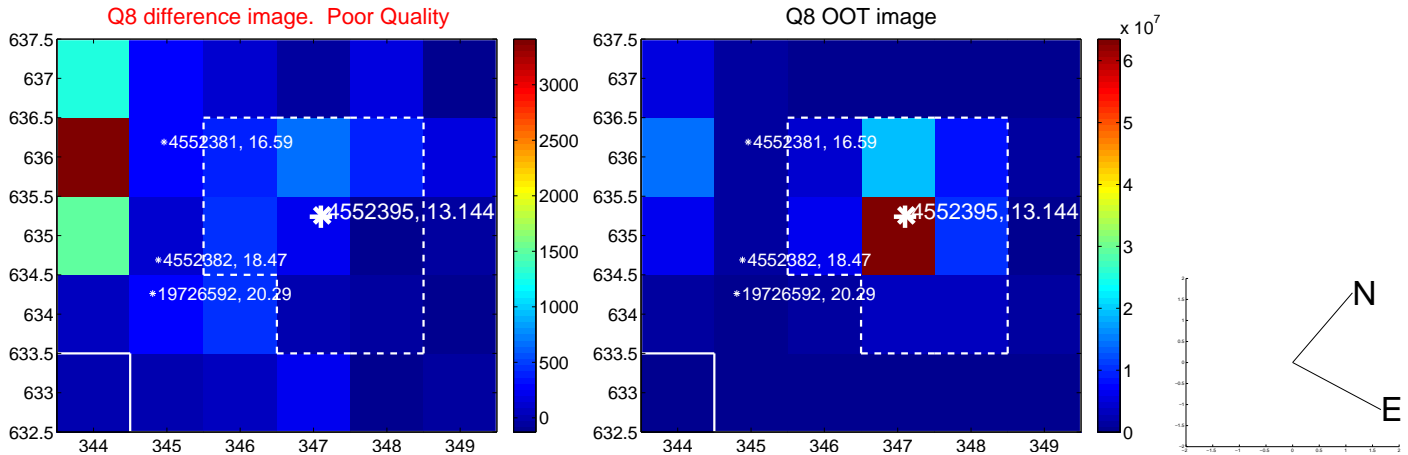
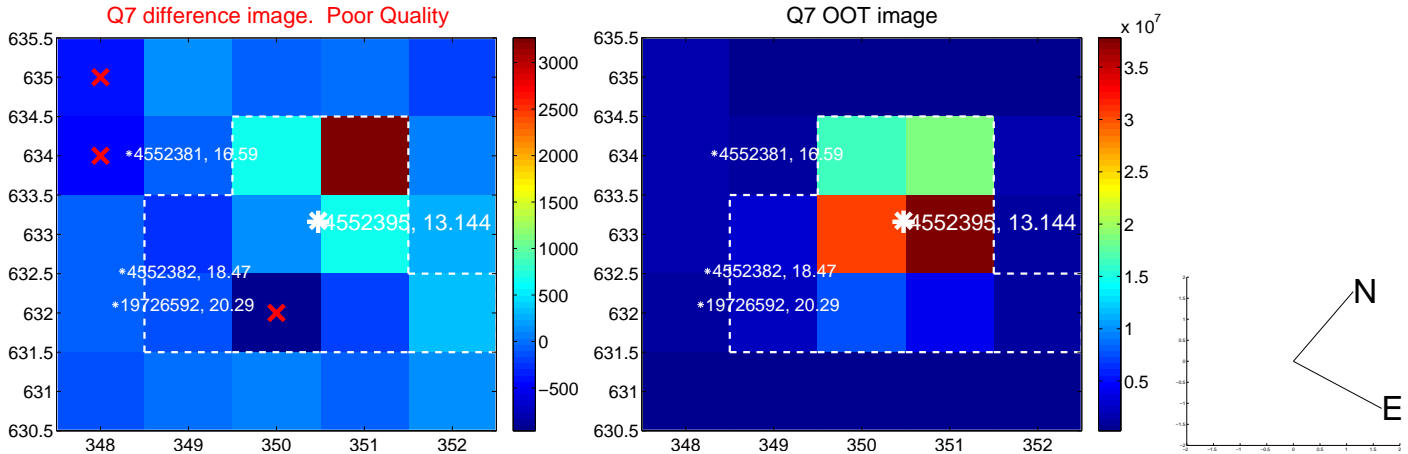
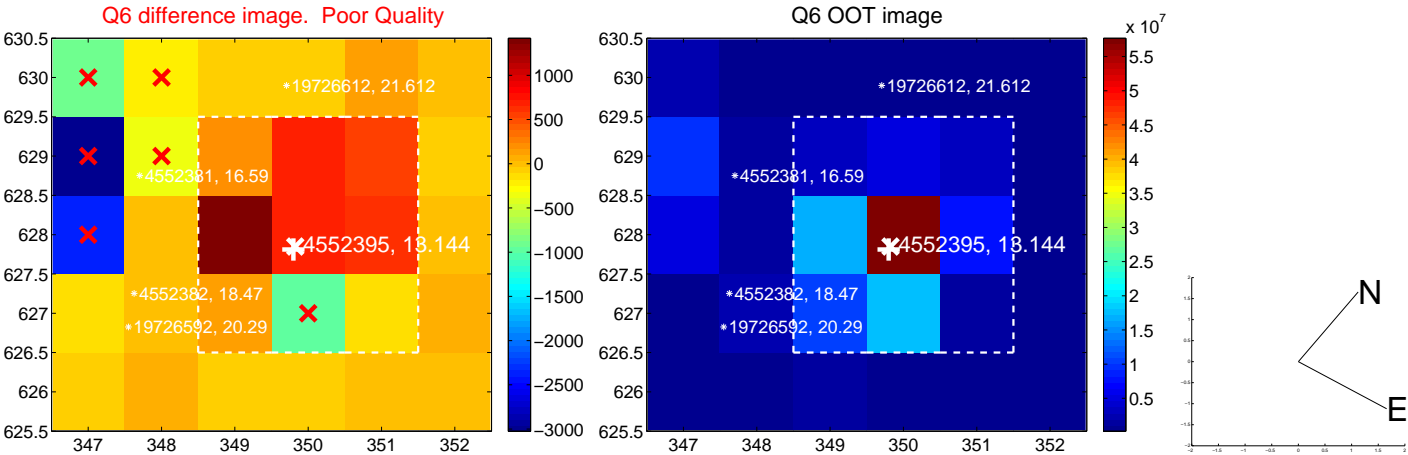
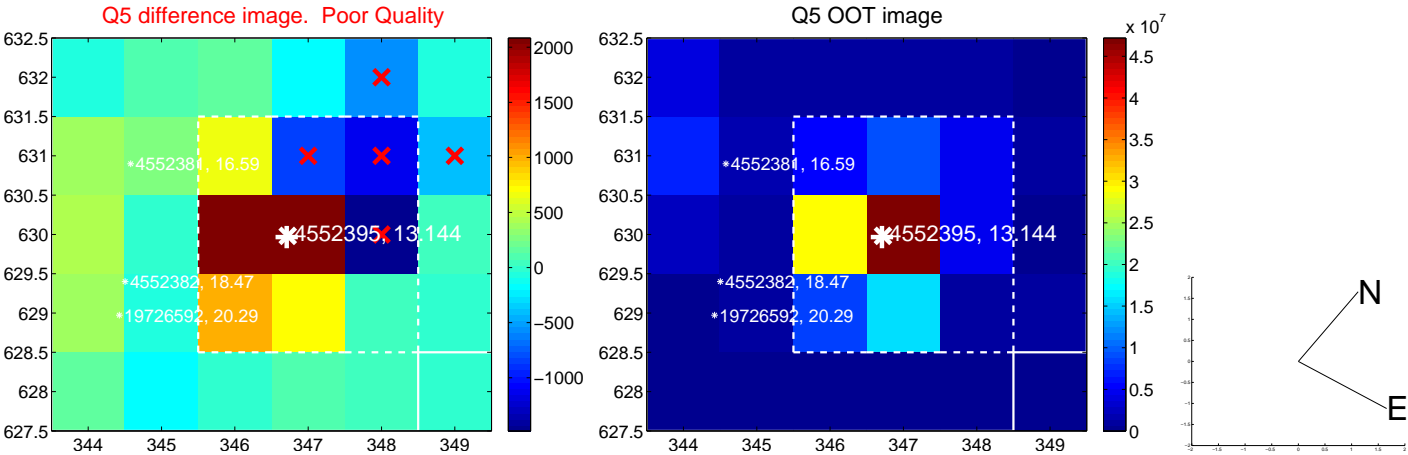


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

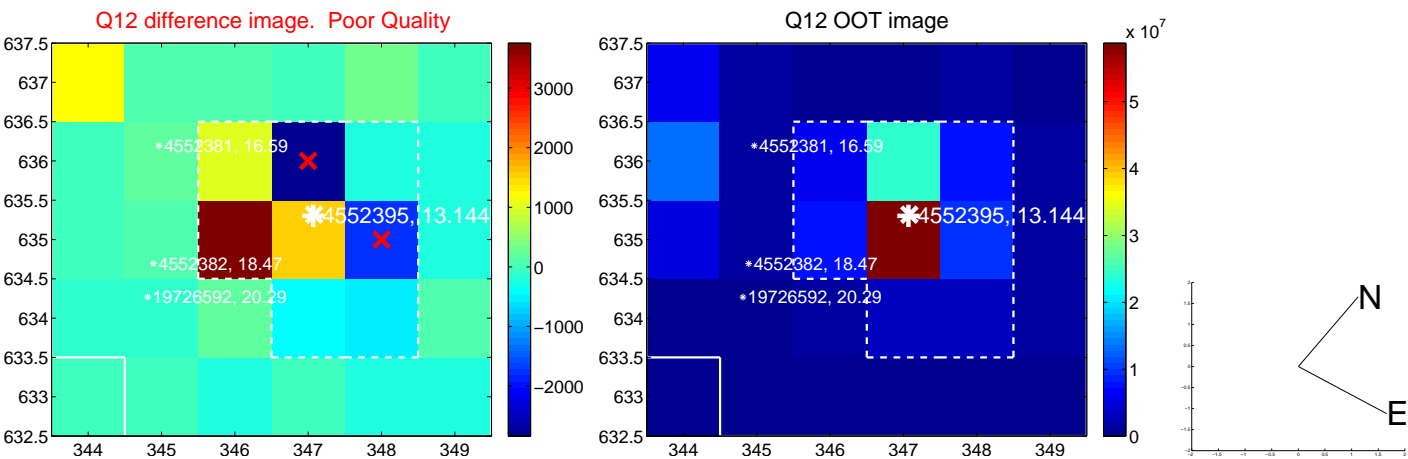
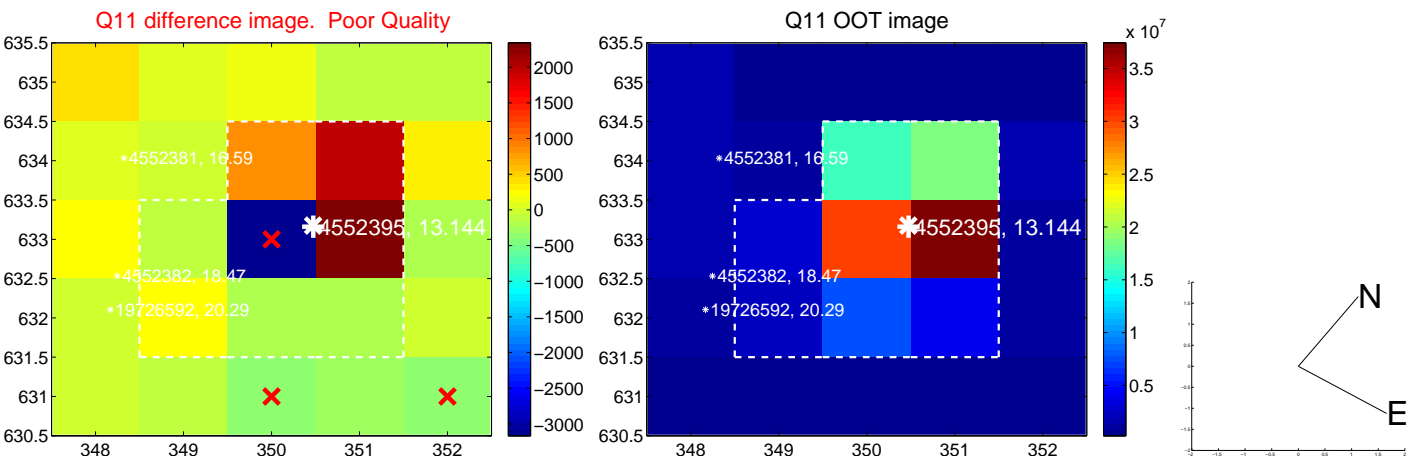
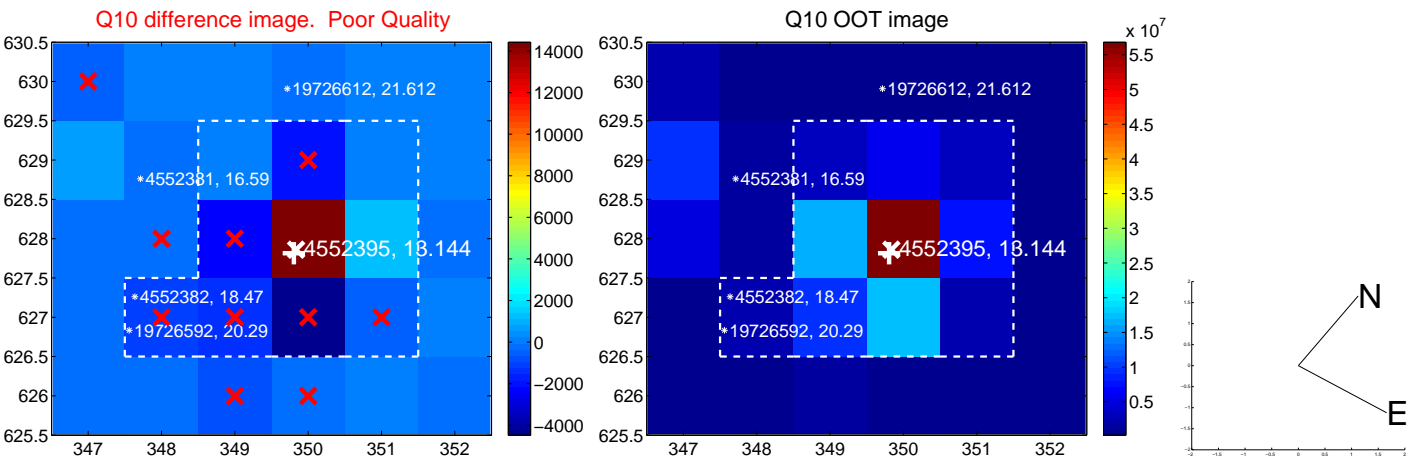
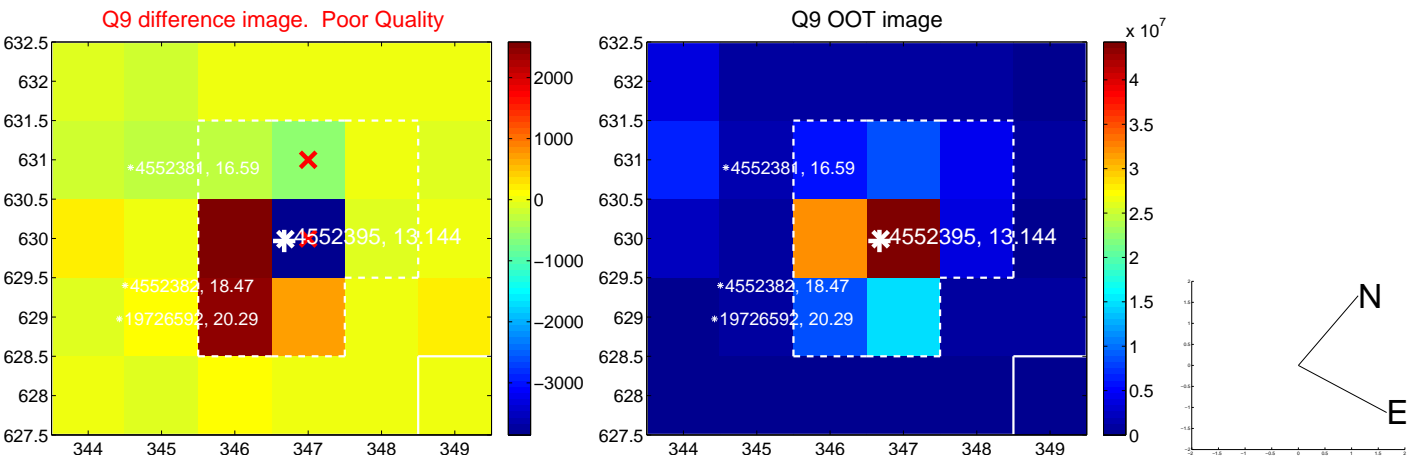
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



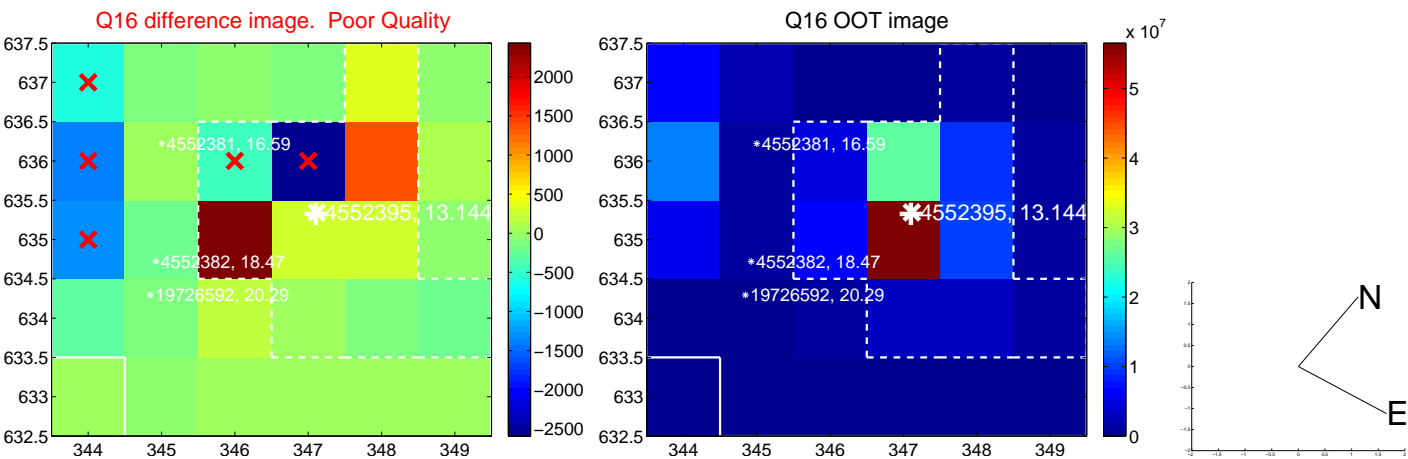
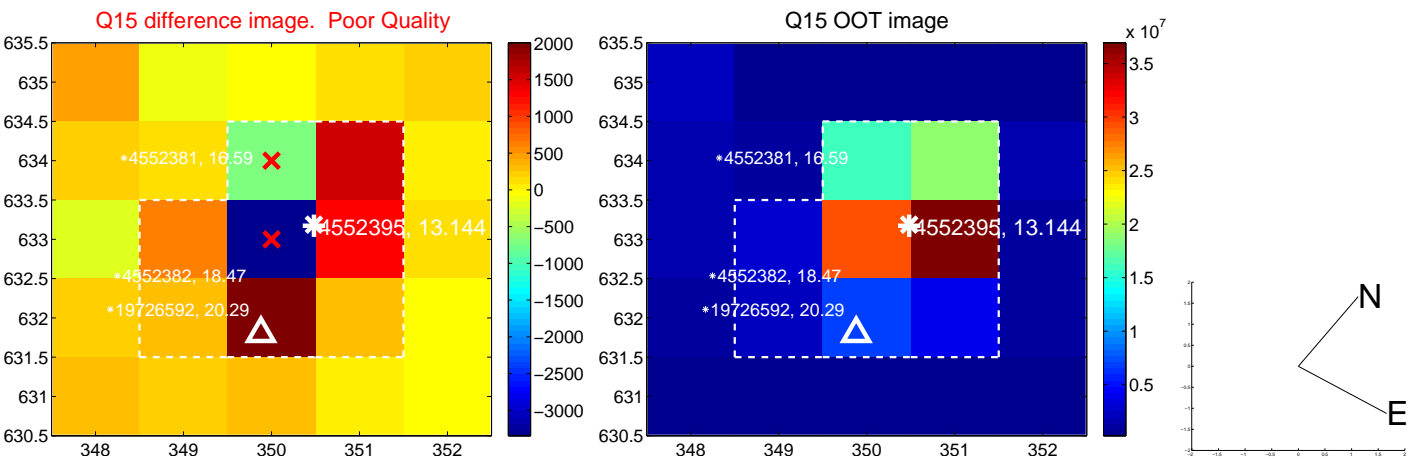
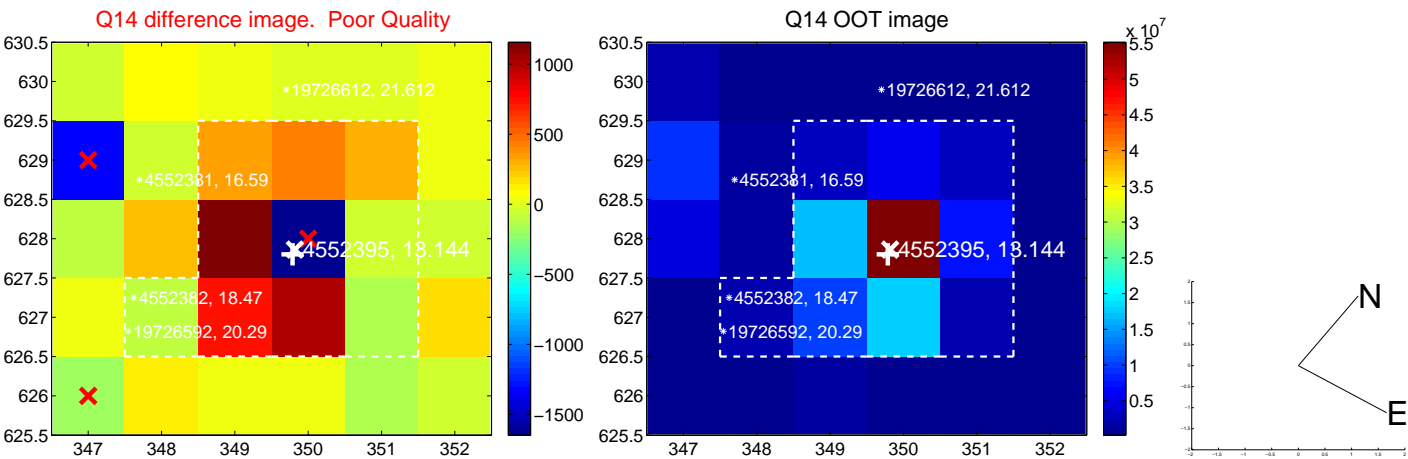
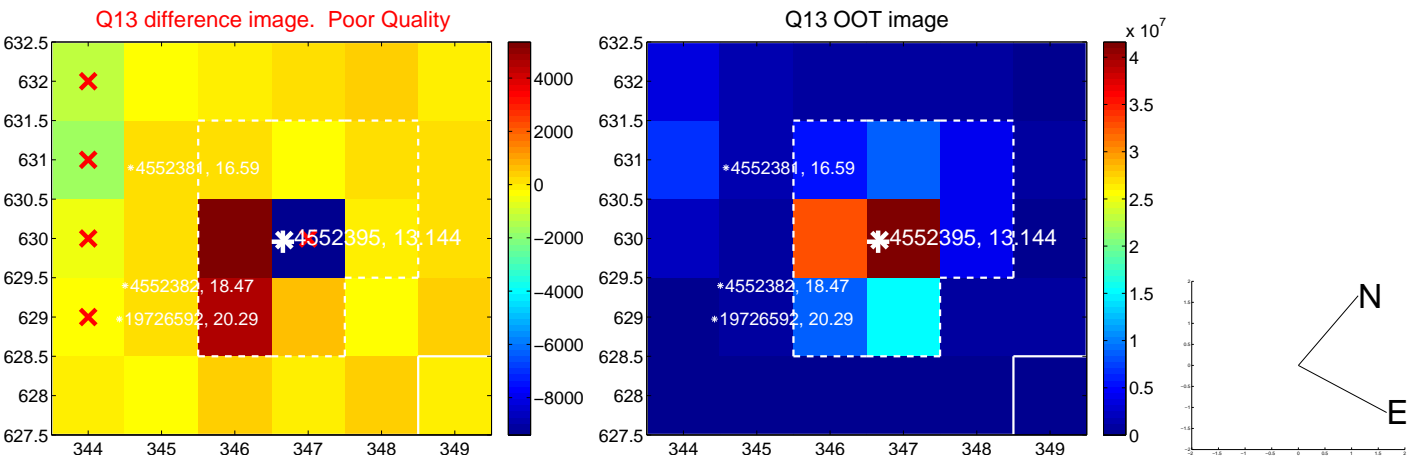
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



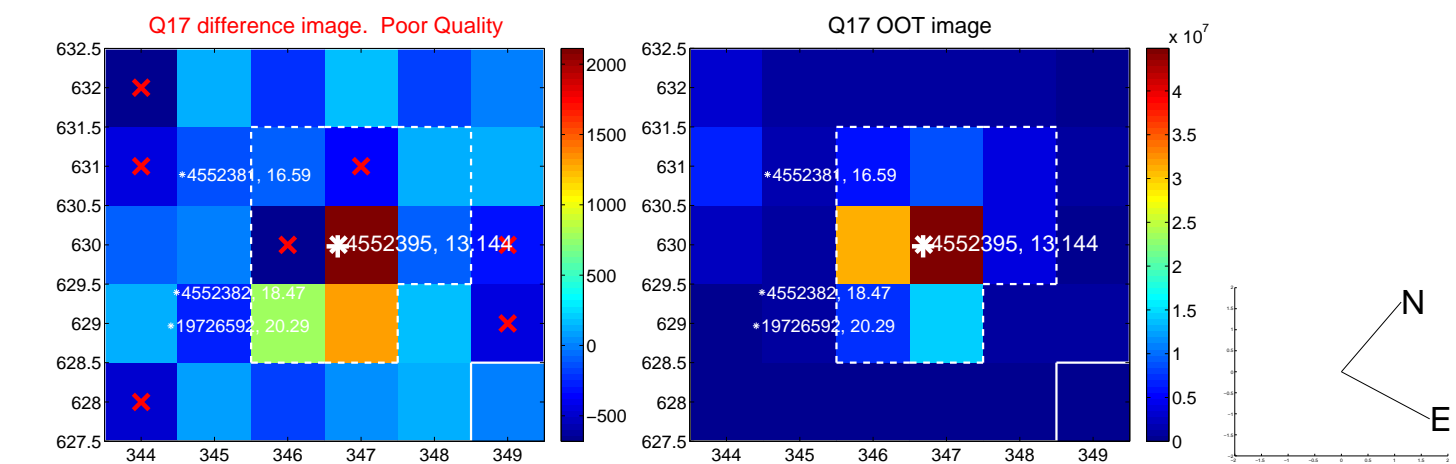
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



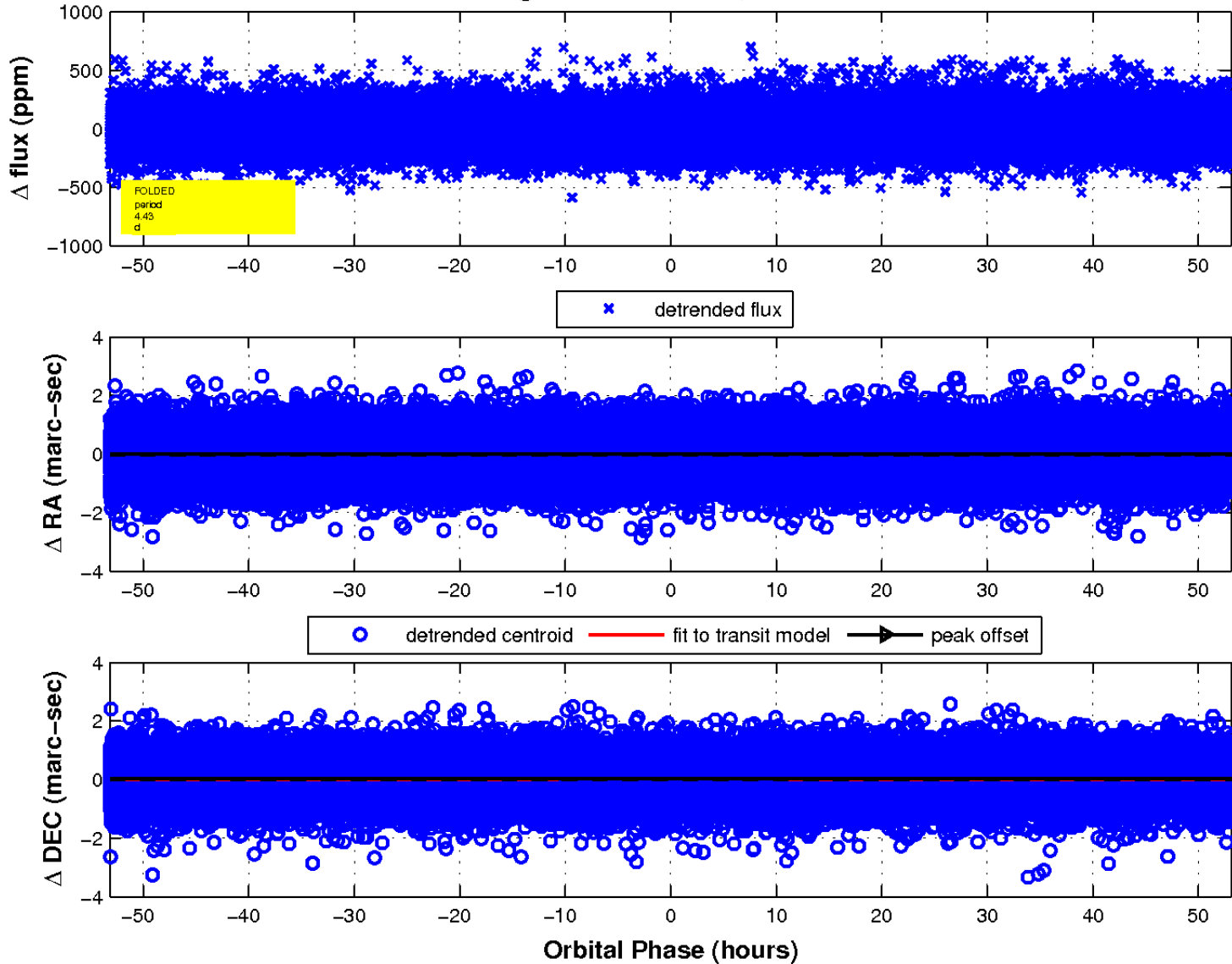
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

