

KIC 005458795

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})
005458795-01	OBS	No	3.511763	132.556993	39.4	24.913	7.8	9.6	0.75	5712	0.47	298.88

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005458795-01	OBS	FP	0.00	1	0	1	1	LPP_DV—CENT_UNRESOLVED_OFFSET—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.

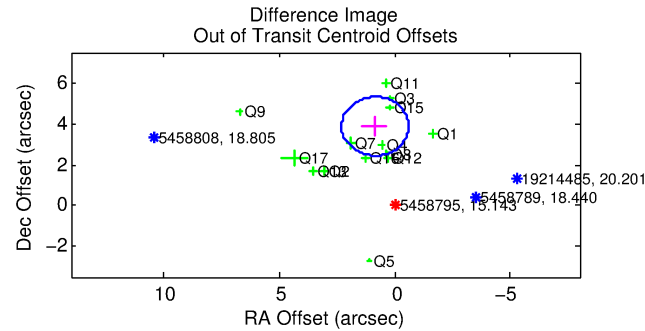
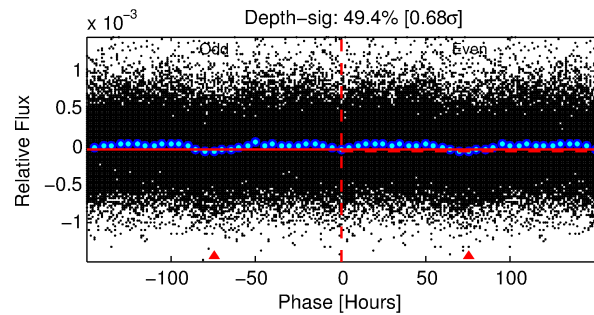
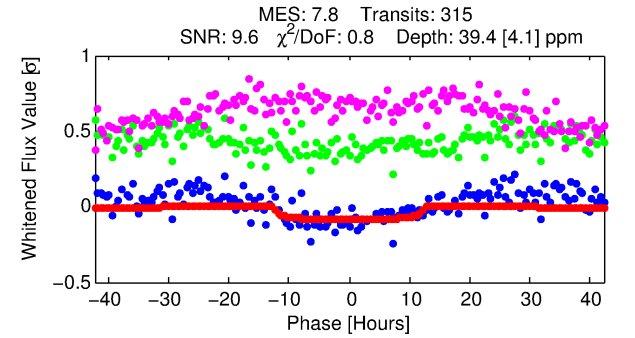
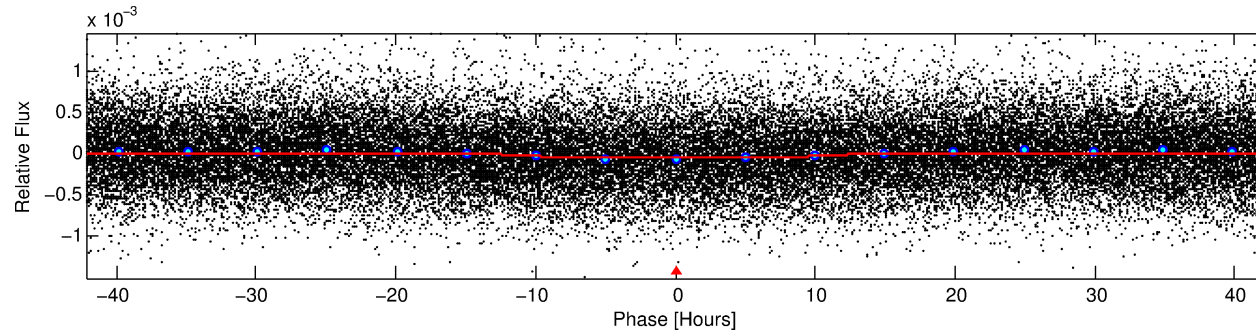
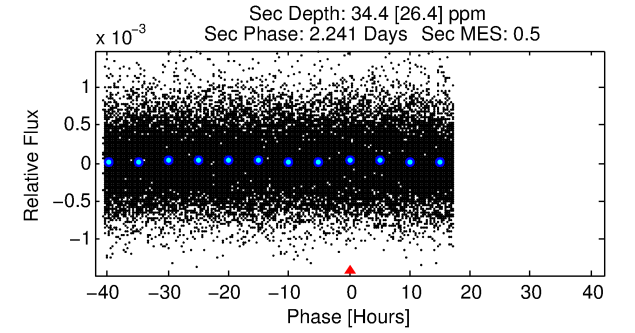
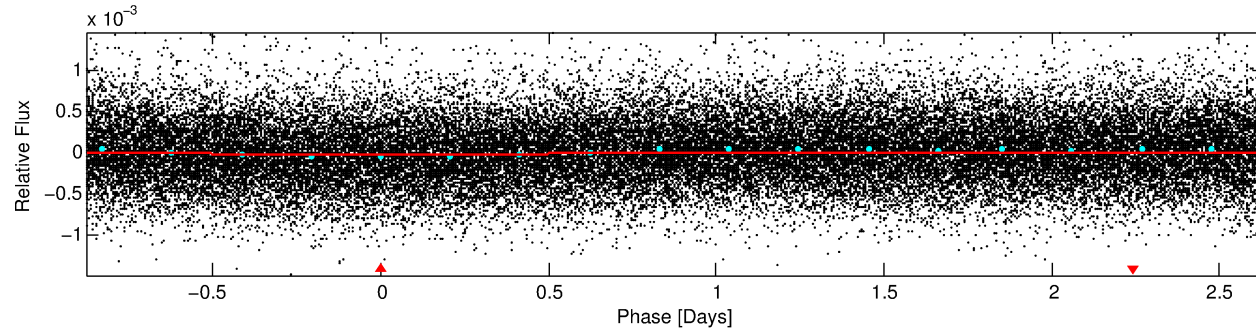
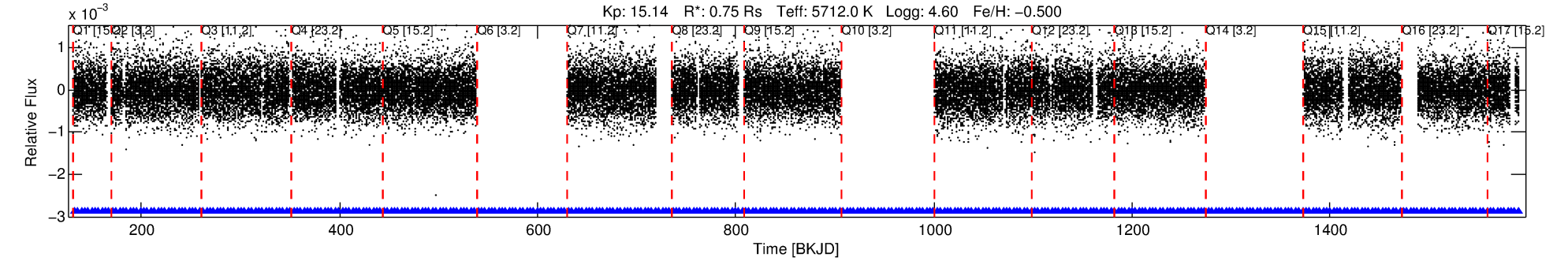
Ephemeris Match Information For 005458795-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
005458795-01	5458795	005458880-pri	5458880	1:1	87.2	1	22	7.82	15.14	310.26	Direct-PRF	0	1.22	1.49

Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 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 $\sigma_P < 5.0$ and $\sigma_T < 5.0$. 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: 5458795 Candidate: 1 of 1 Period: 3.512 d



DV Fit Results:

Period = 3.51176 [0.00011] d
Epoch = 132.5570 [0.0213] BKJD
Rp/R* = 0.0057 [0.0082]
a/R* = 1.26 [3.08]
b = 0.05 [130.40]
Seff = 298.88 [81.57]
Teff = 1060 [72] K
Rp = 0.47 [0.68] Re
a = 0.0425 [0.0074] AU
Ag = 154.86 [460.32] [0.33σ]
Teffp = 5783 [4285] K [1.10σ]

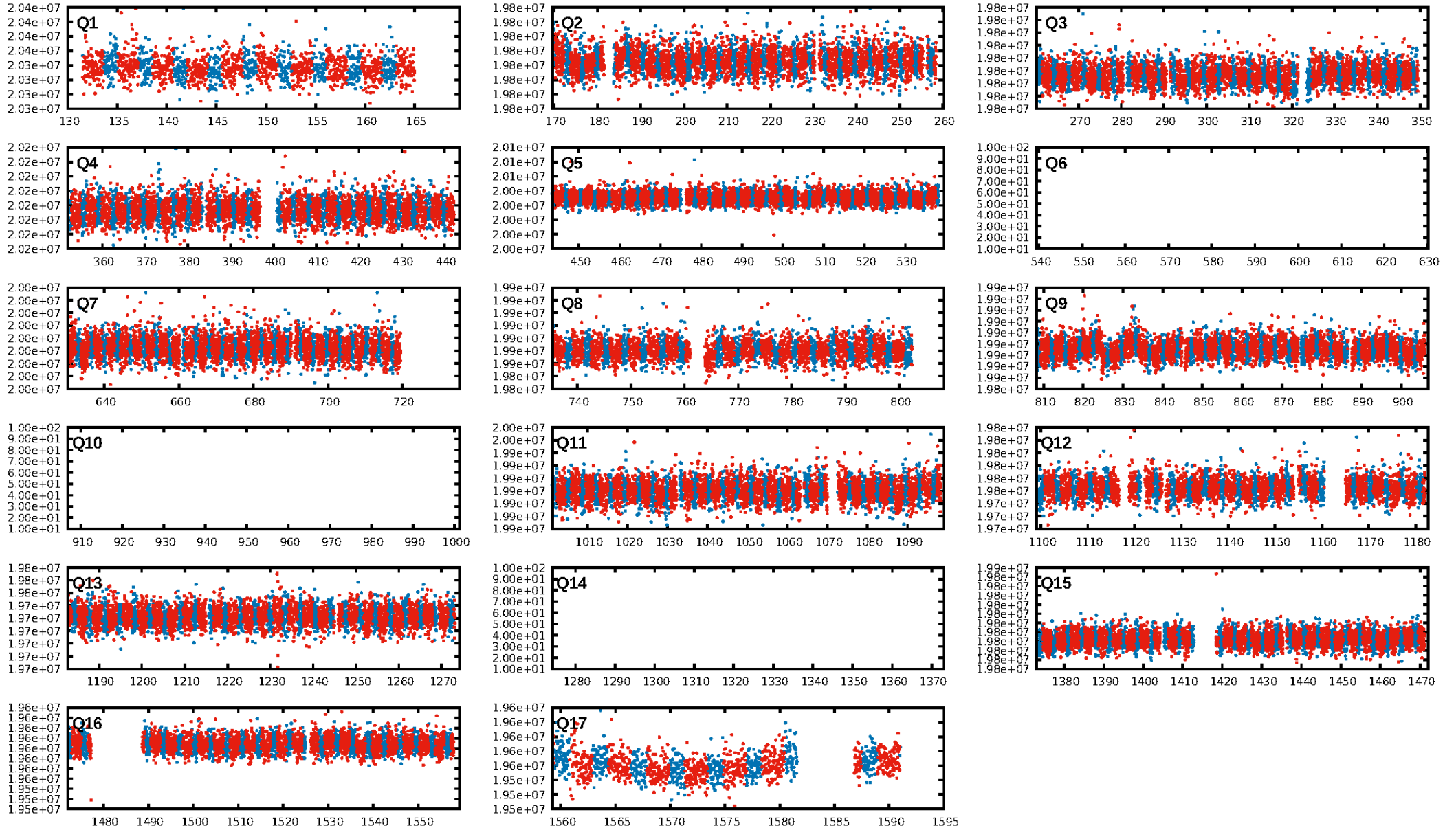
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [297/297]
GhostDiagnostic-chr: -0.2814
Centroid-sig: 0.0%
Centroid-so: 10.958 arcsec [8.13σ]
OotOffset-rm: 3.972 arcsec [8.26σ]
KicOffset-rm: 4.063 arcsec [7.34σ]
OotOffset-st: 1/4/4/5 [14]
KicOffset-st: 1/4/4/5 [14]
DiffImageQuality-fgm: 0.07 [1/14]
DiffImageOverlap-fno: 1.00 [14/14]

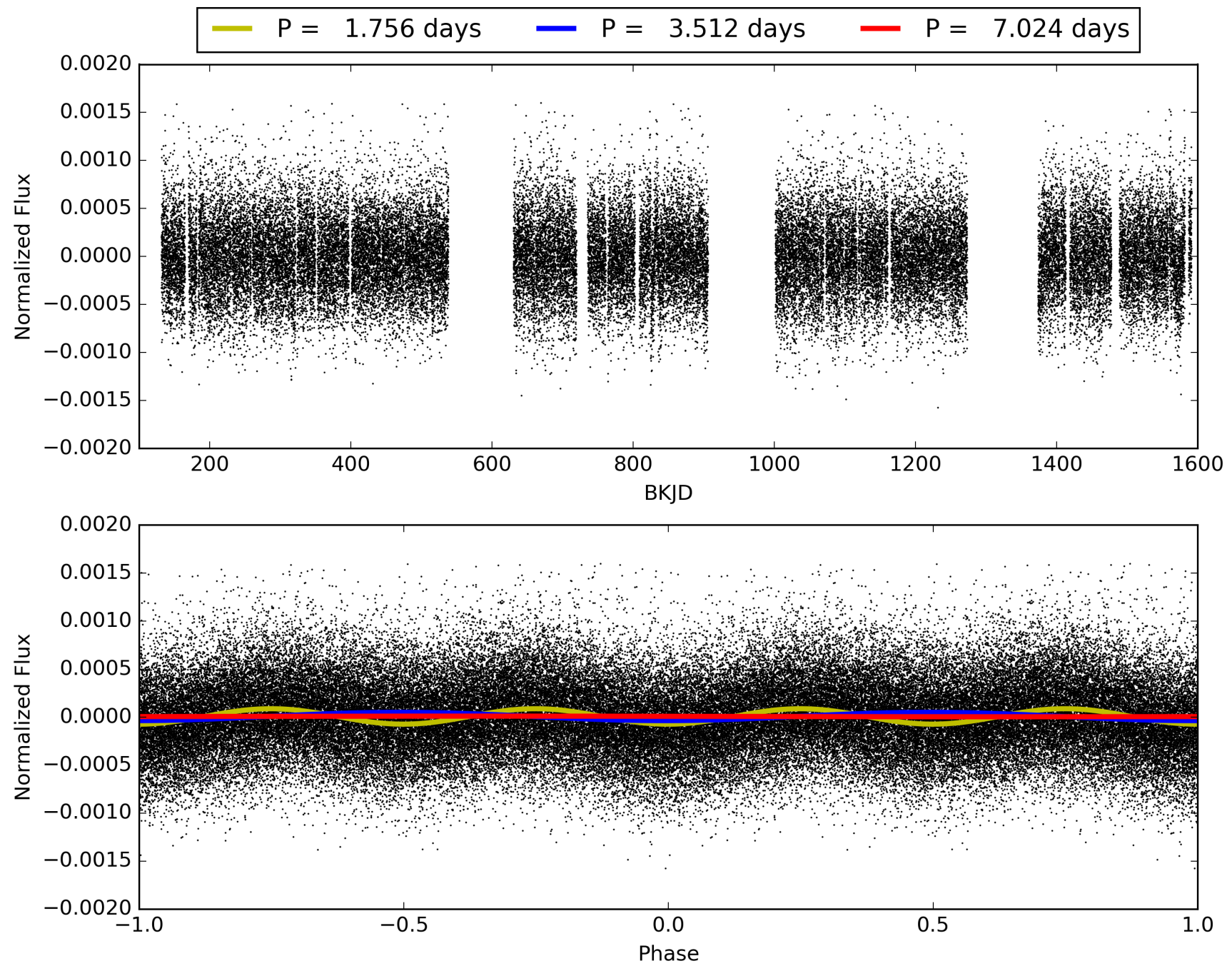
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 20:24:22 Z

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

TCE 005458795-01, PDC Light Curves

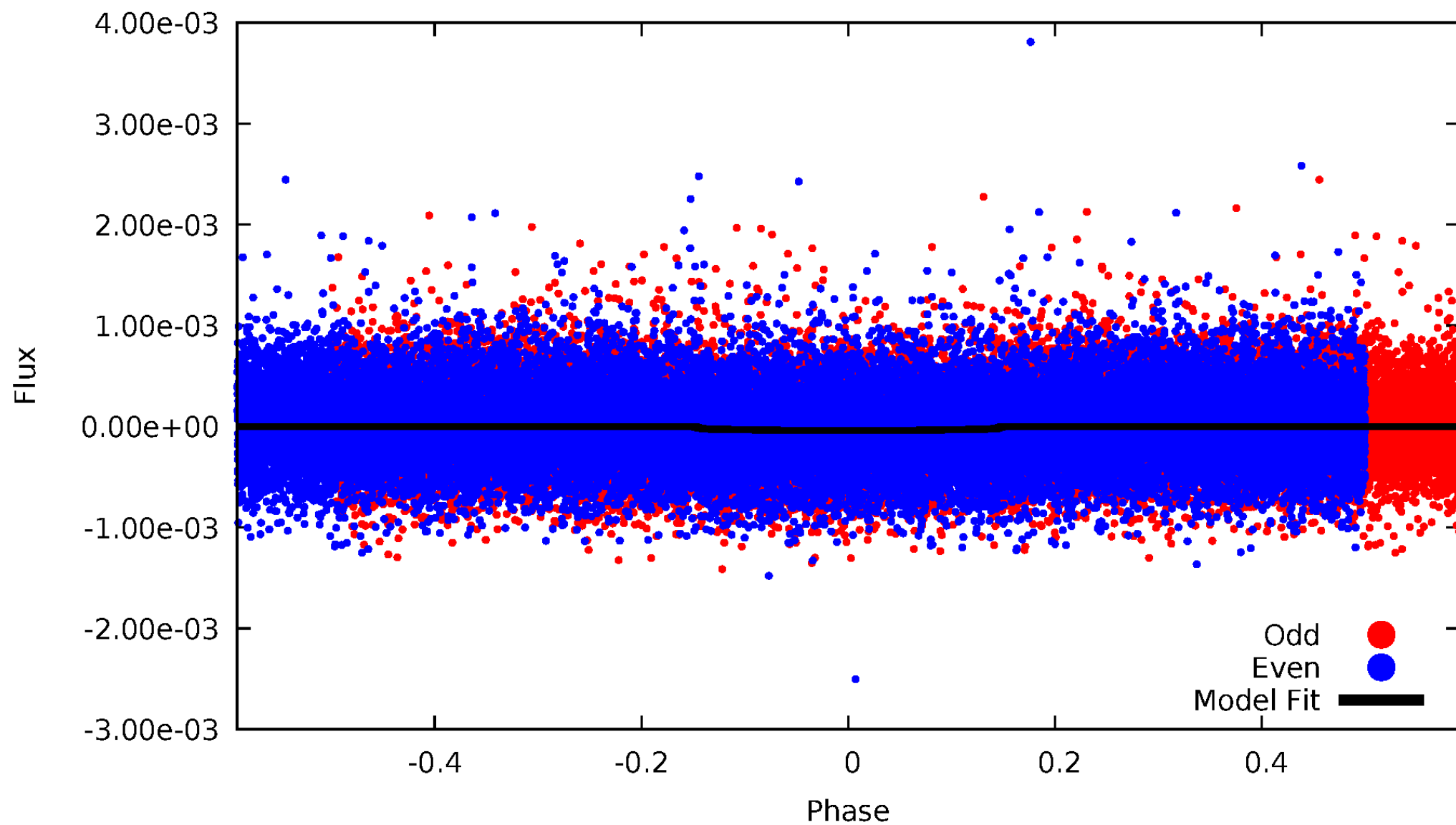


TCE 005458795-01



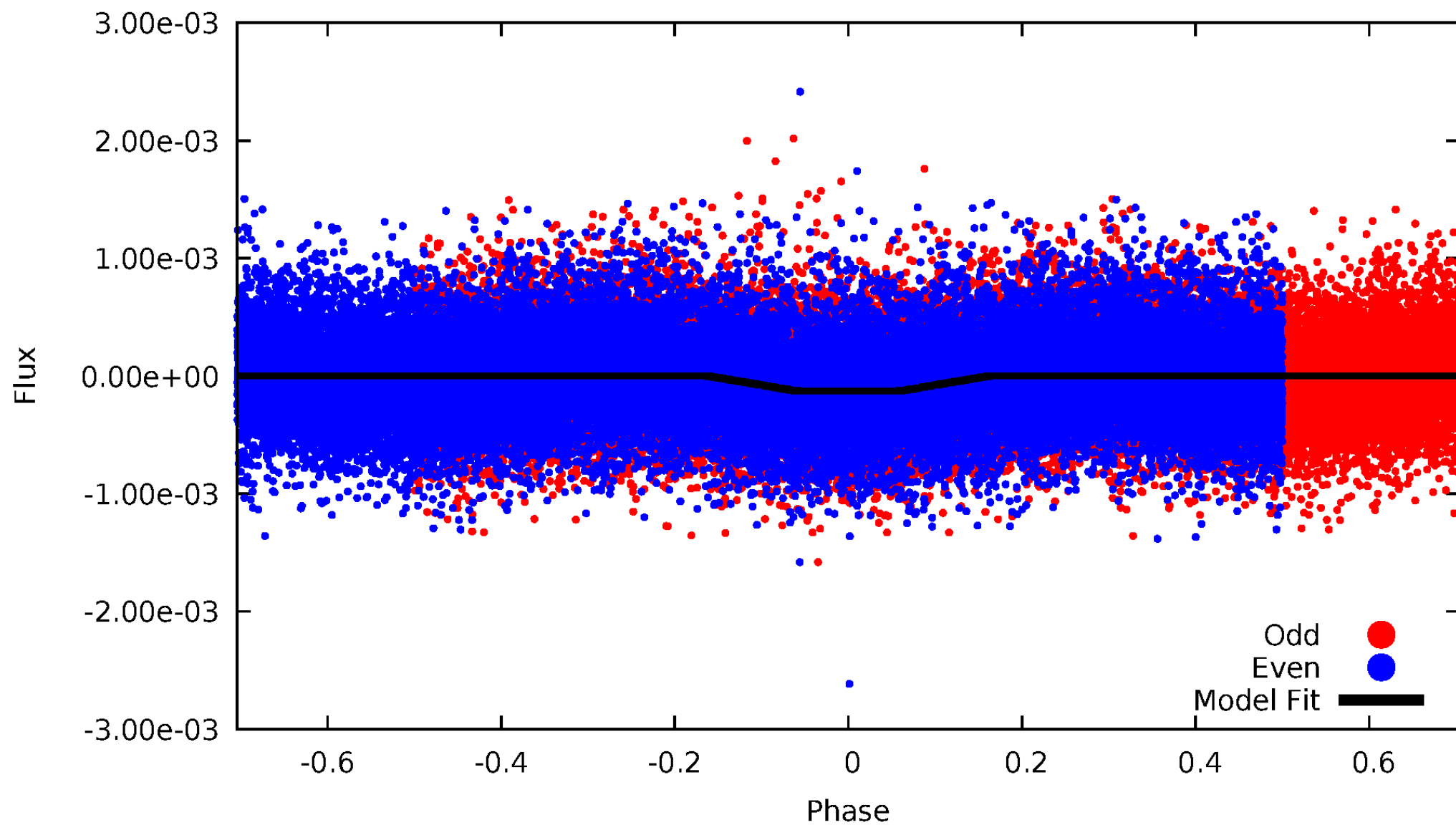
DV Odd/Even

TCE 005458795-01



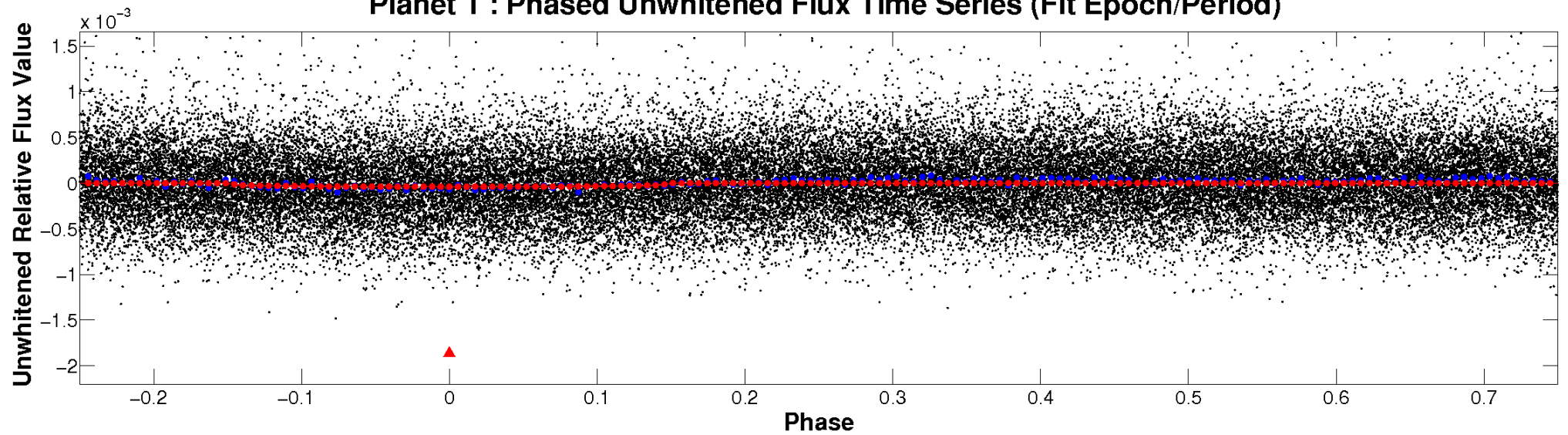
ALT Odd/Even

TCE 005458795-01

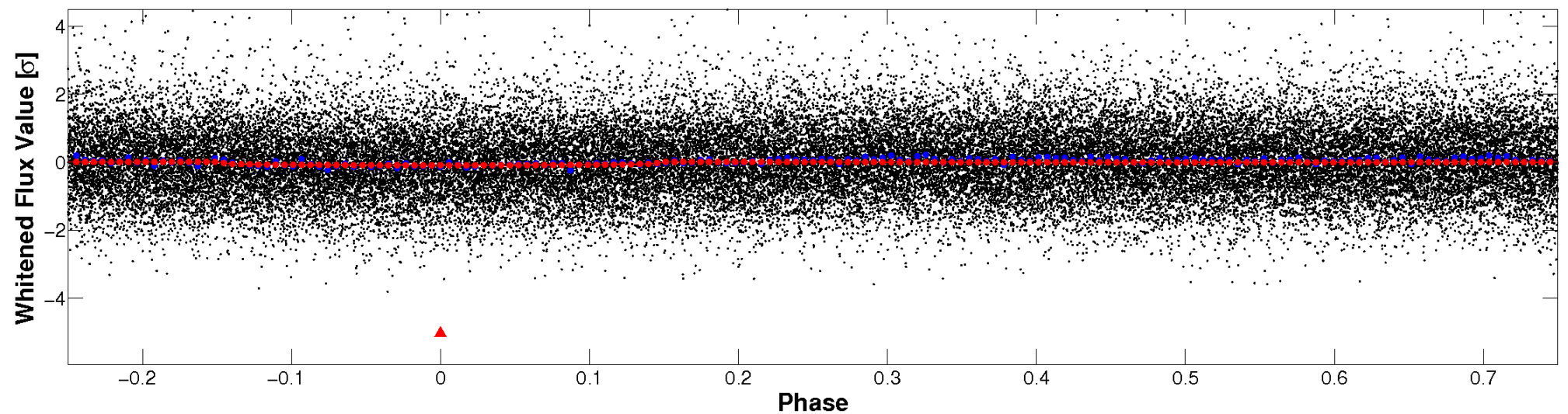


Non-Whitened Vs. Whitened Light Curve

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

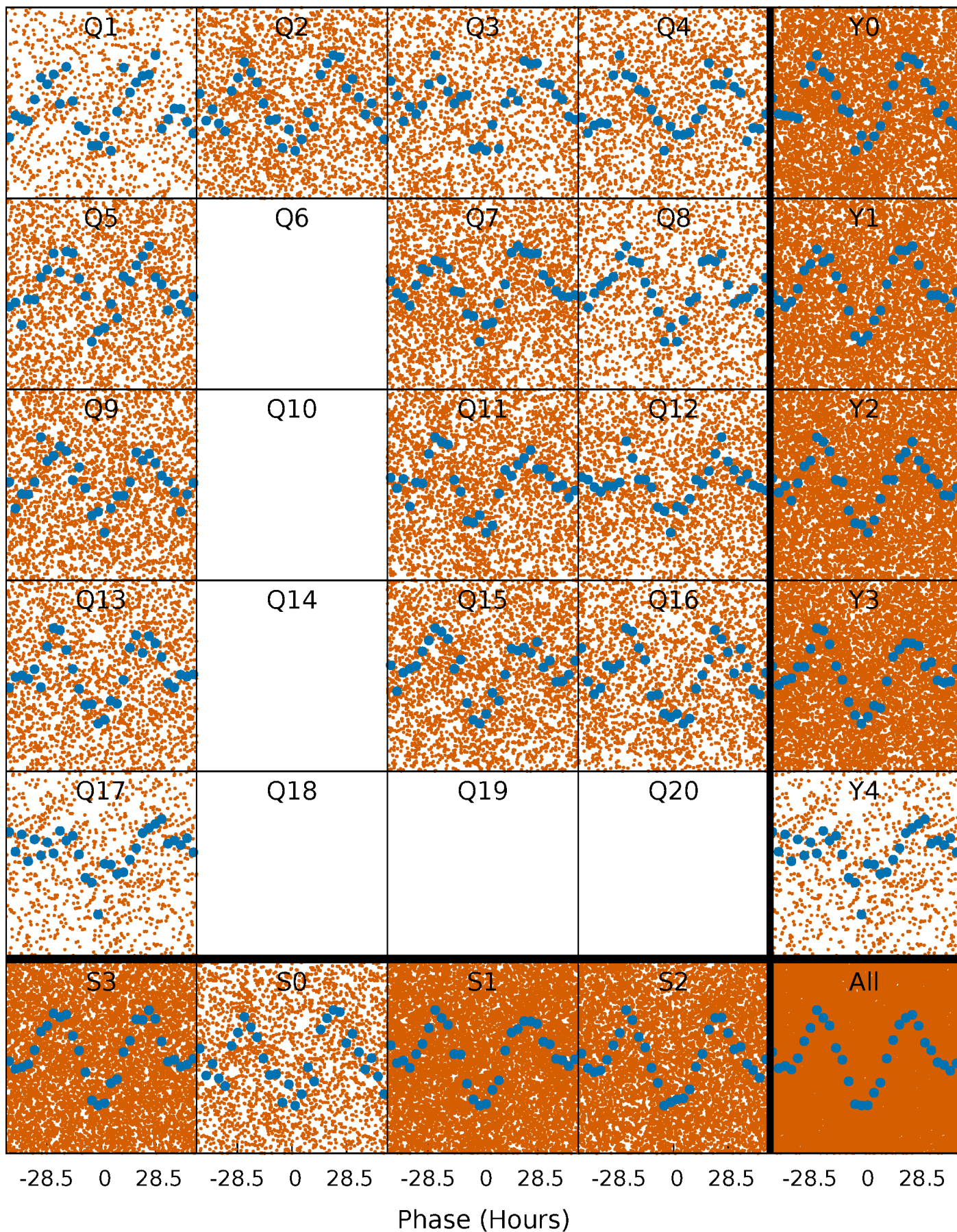


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



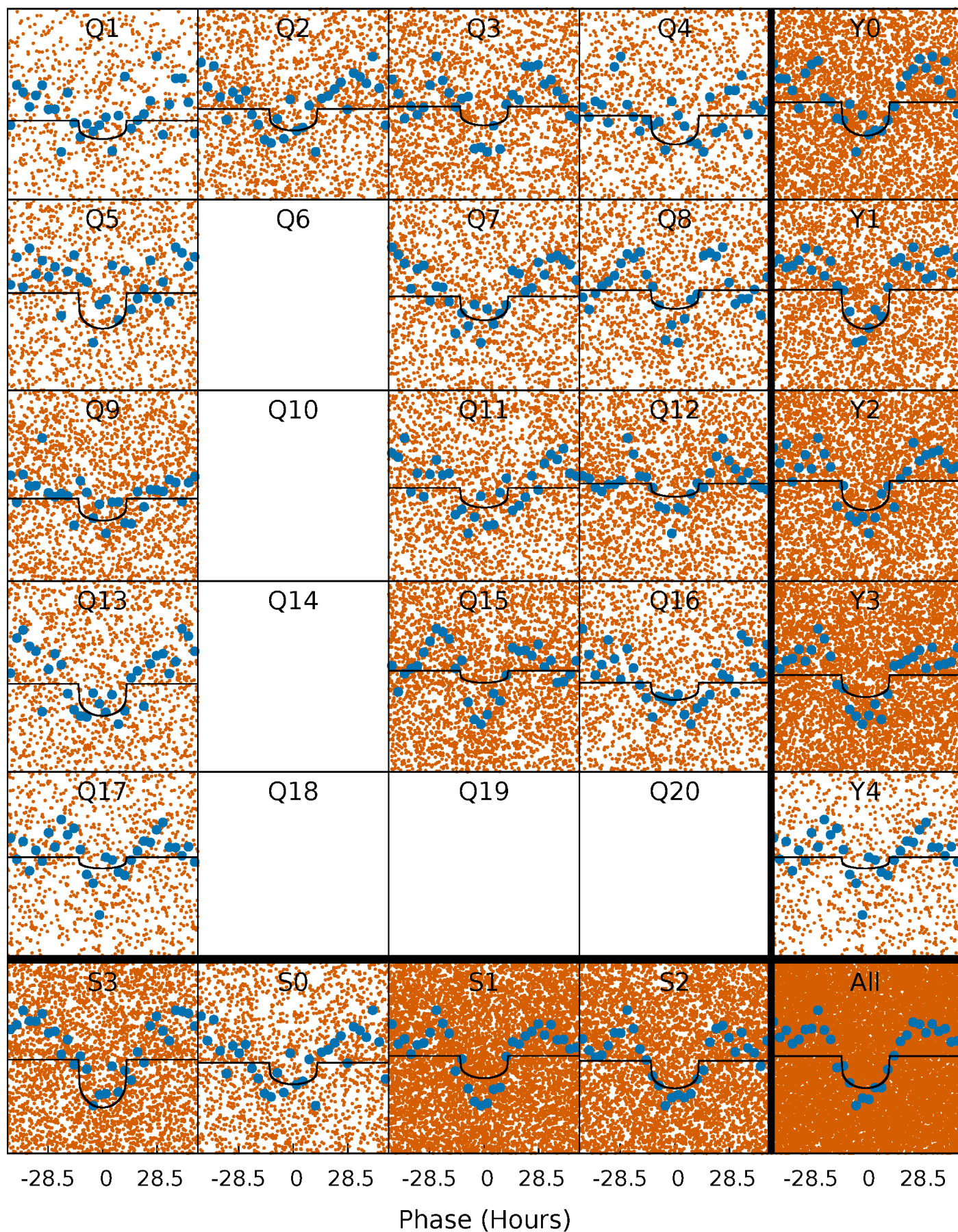
PDC Quarter-Phased Transit Curves

TCE 005458795-01 P= 3.511763 Days $T_0=132.556993$ (BKJD)



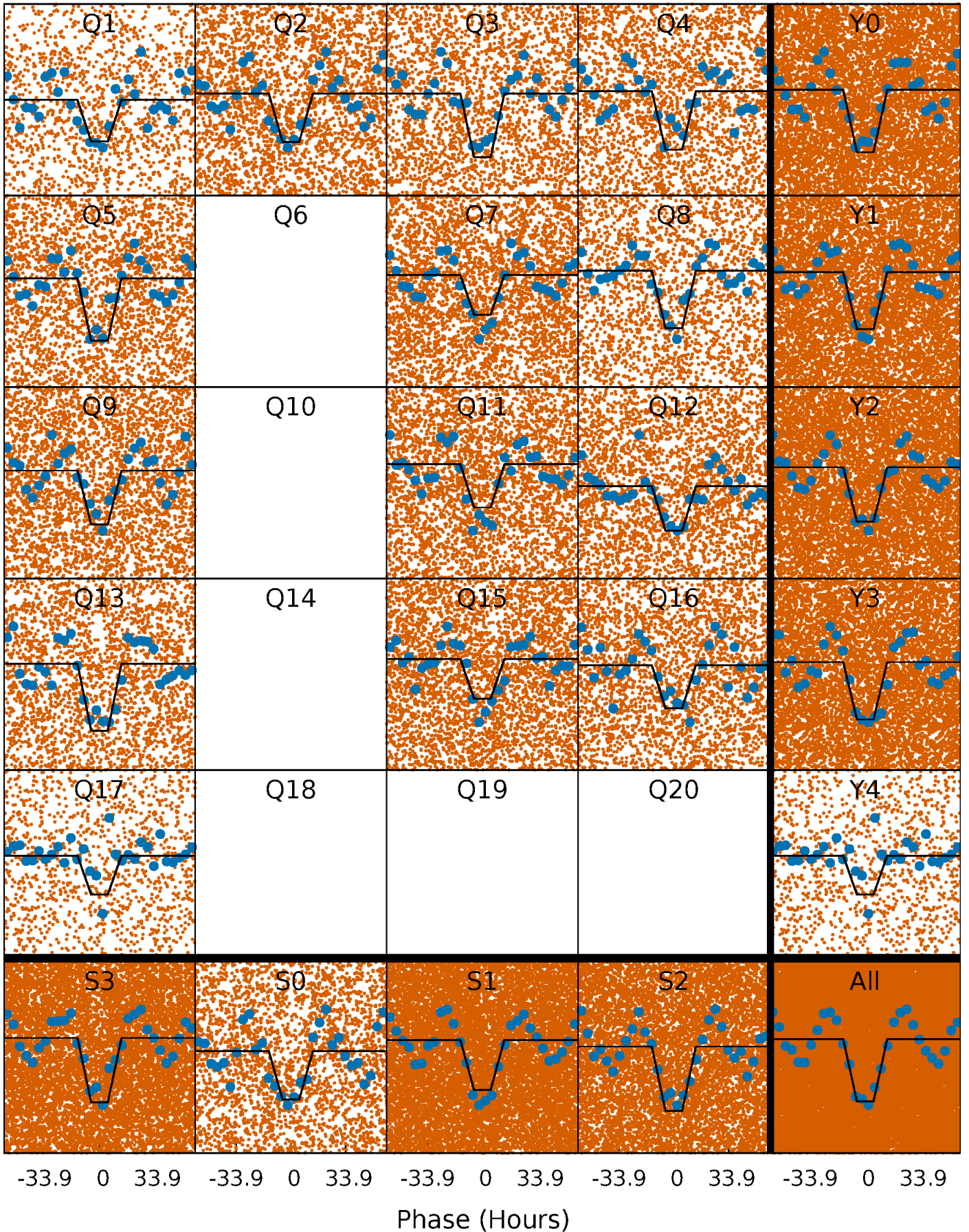
DV Quarter-Phased Transit Curves

TCE 005458795-01 P= 3.511763 Days $T_0=132.556993$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

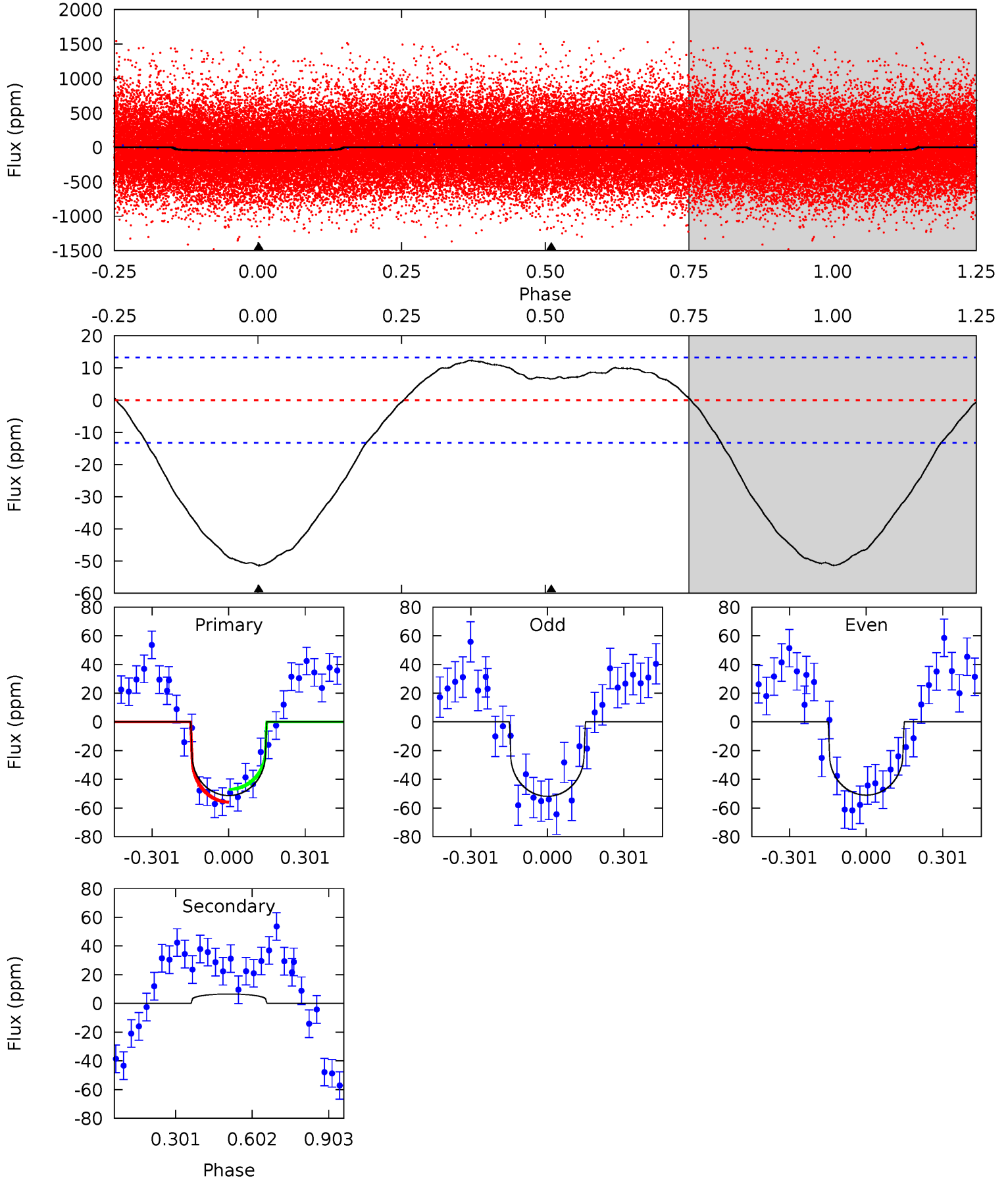
TCE 005458795-01 P= 3.511215 Days $T_0=132.634512$ (BKJD)



DV Model-Shift Uniqueness Test

005458795-01, P = 3.511763 Days, E = 129.045230 Days

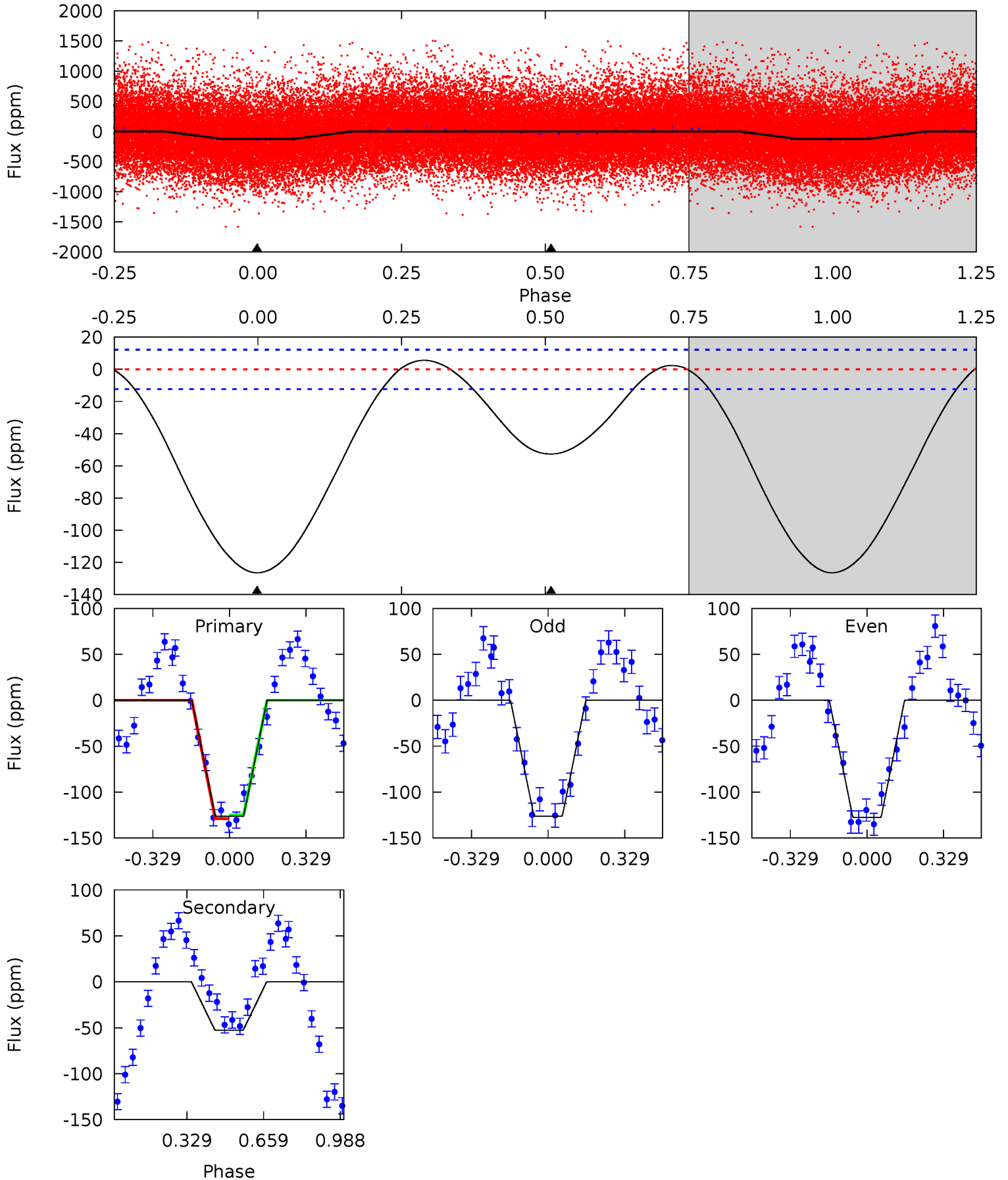
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.7	-2.15	0	0	4.33	1.03	0.96	16.7	16.7	-2.15	-2.15	0.13	0.94	0.19	1.47



Alt Model-Shift Uniqueness Test

005458795-01, P = 3.511215 Days, E = 129.123297 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
44.5	18.5	0	0	4.31	0.98	1.42	44.5	44.5	18.5	18.5	0.23	1.21	0.04	0.67



Stellar Parameters For KIC 005458795

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5712^{+155}_{-155}	$4.604^{+0.034}_{-0.136}$	$-0.500^{+0.300}_{-0.300}$	$0.752^{+0.156}_{-0.063}$	$0.855^{+0.079}_{-0.105}$	$2.832^{+0.408}_{-1.183}$
	+3%/-3%	+1%/-3%	+60%/-60%	+21%/-8%	+9%/-12%	+14%/-42%
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 005458795-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	7 ± 3	$0.70^{+0.70}_{-0.46}$	1509^{+81}_{-59}	-3573^{+677}_{-1929}	$-11.571^{+9.083}_{-110.984}$
Alt.	-53 ± 3	$1.02^{+0.70}_{-0.60}$	1509^{+73}_{-58}	4610^{+2306}_{-825}	50^{+249}_{-32}

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

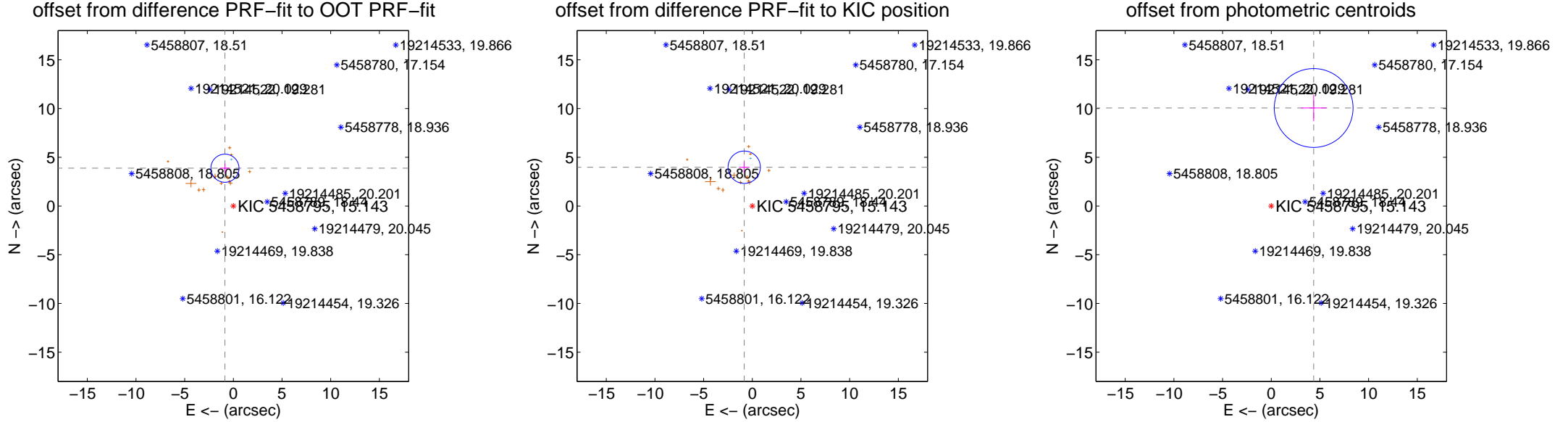
DV Centroid Data

Supplemental centroid analysis for 005458795-01. Kepler magnitude: 15.14. Transit SNR 9.56

There are 1 quarters with good PRF difference image offsets

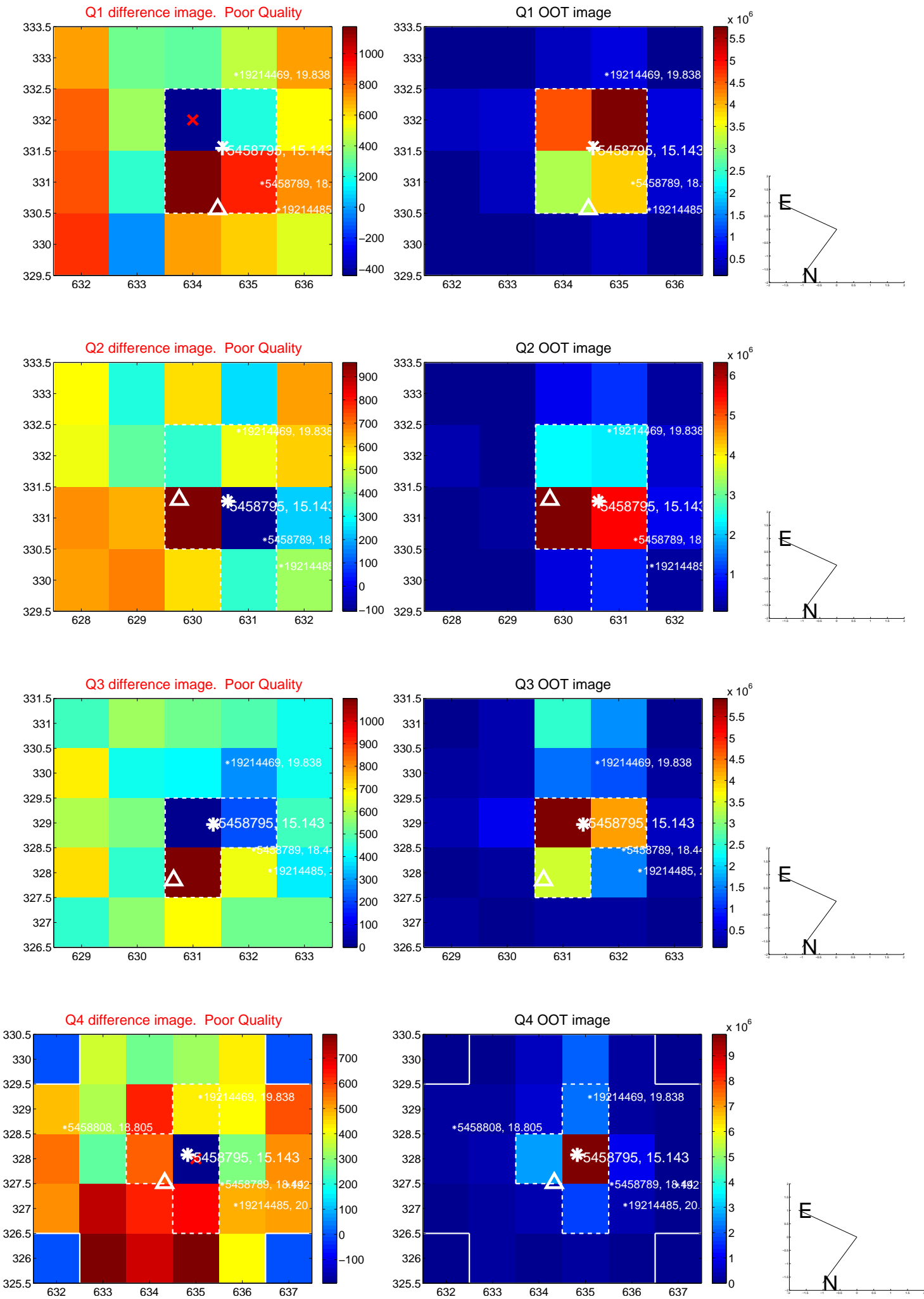
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.972 ± 0.481	8.26	0.863 ± 0.524	3.877 ± 0.490
PRF-fit source offset from KIC position	4.063 ± 0.553	7.34	0.829 ± 0.550	3.977 ± 0.550
photometric centroid source offset	10.96 ± 1.35	8.13	-4.36 ± 1.31	10.05 ± 1.35

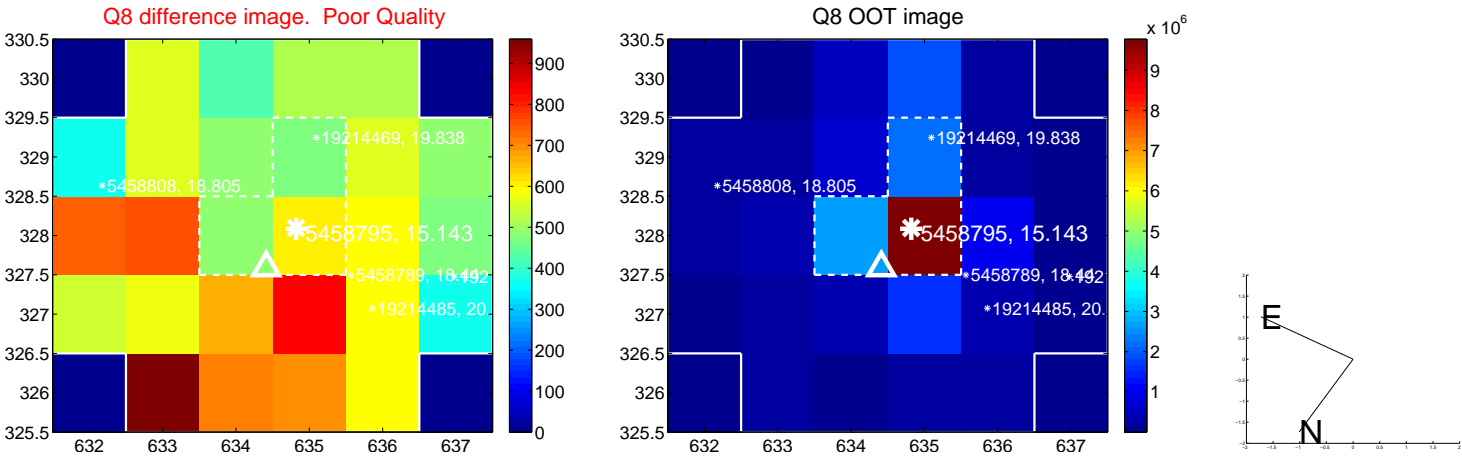
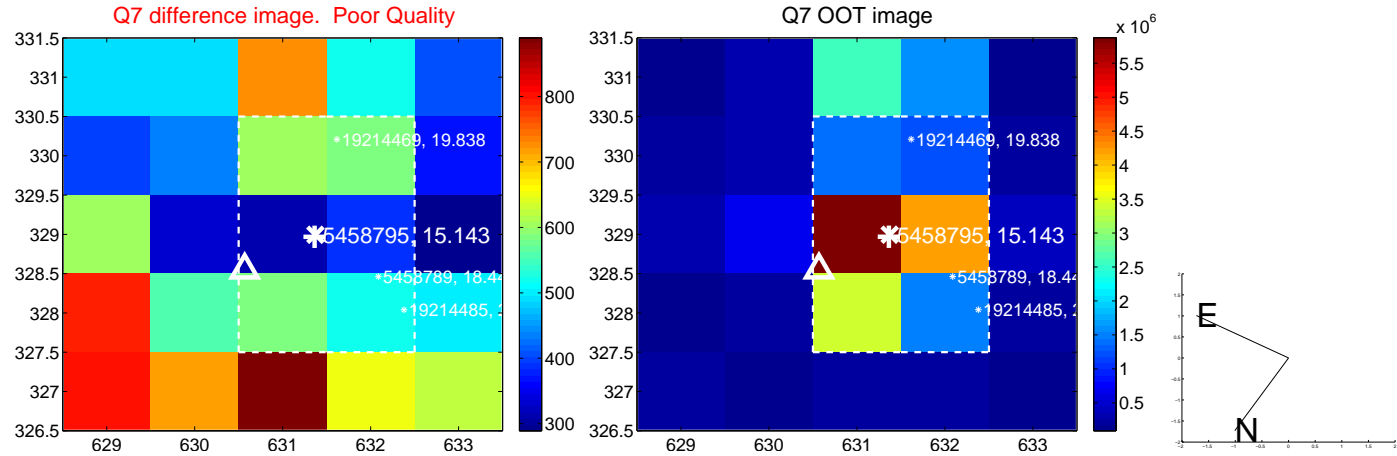
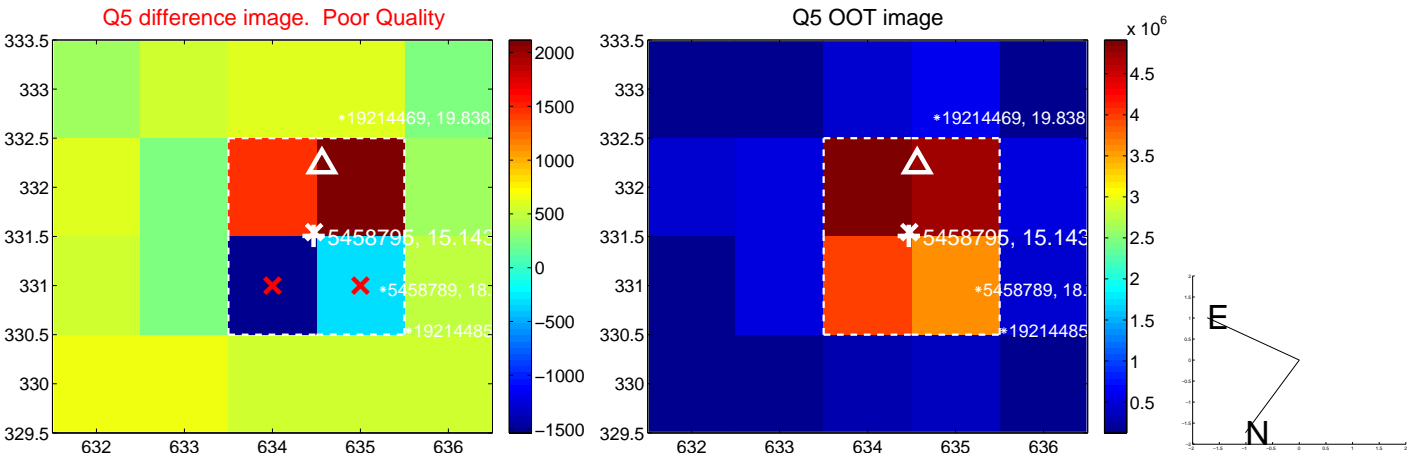


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

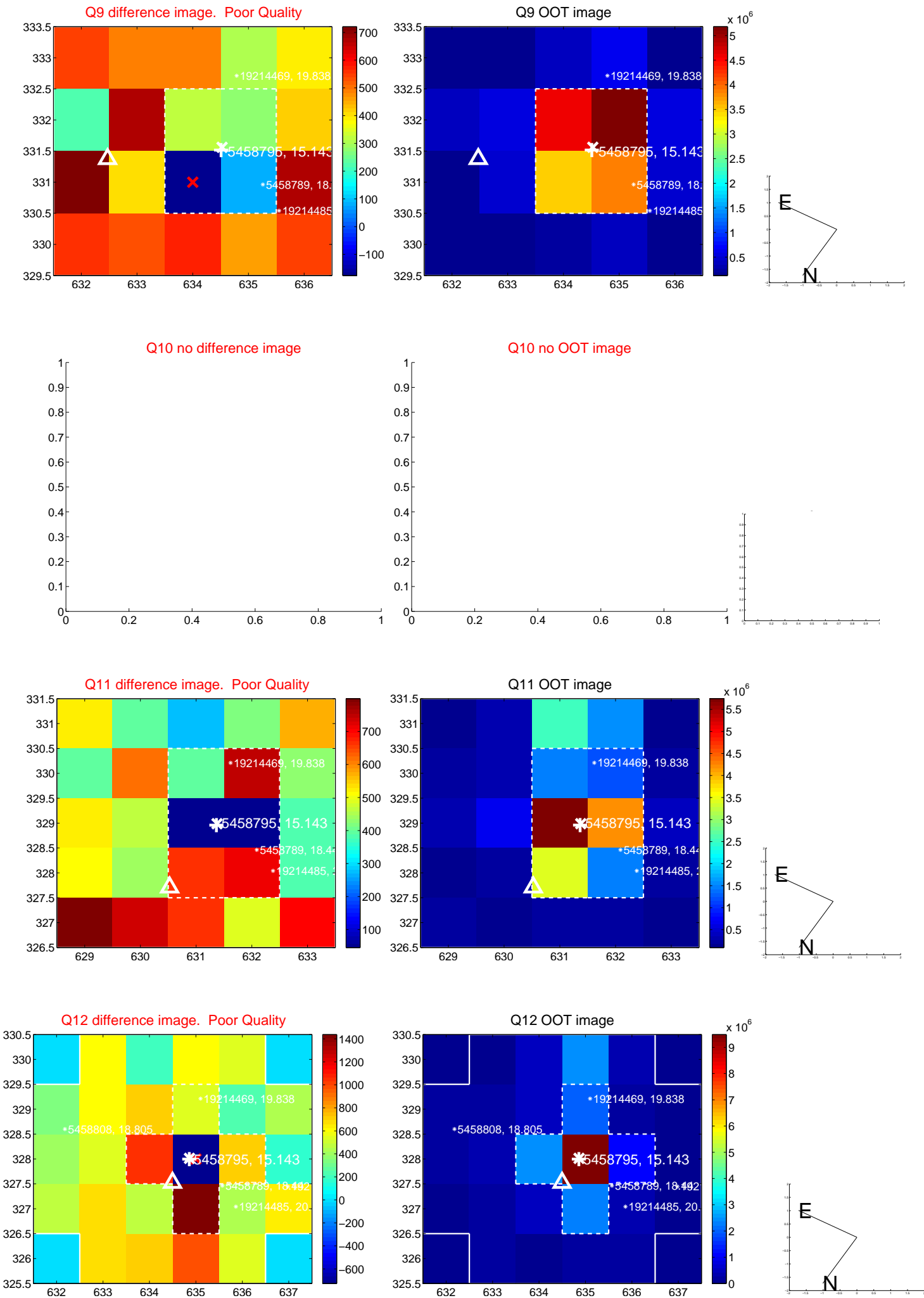
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



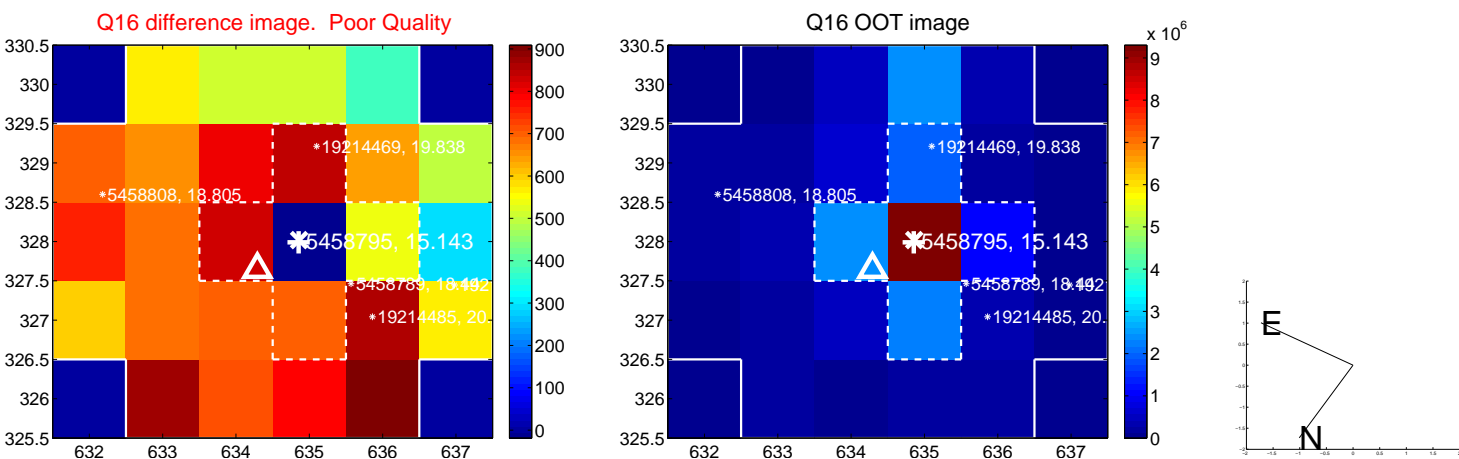
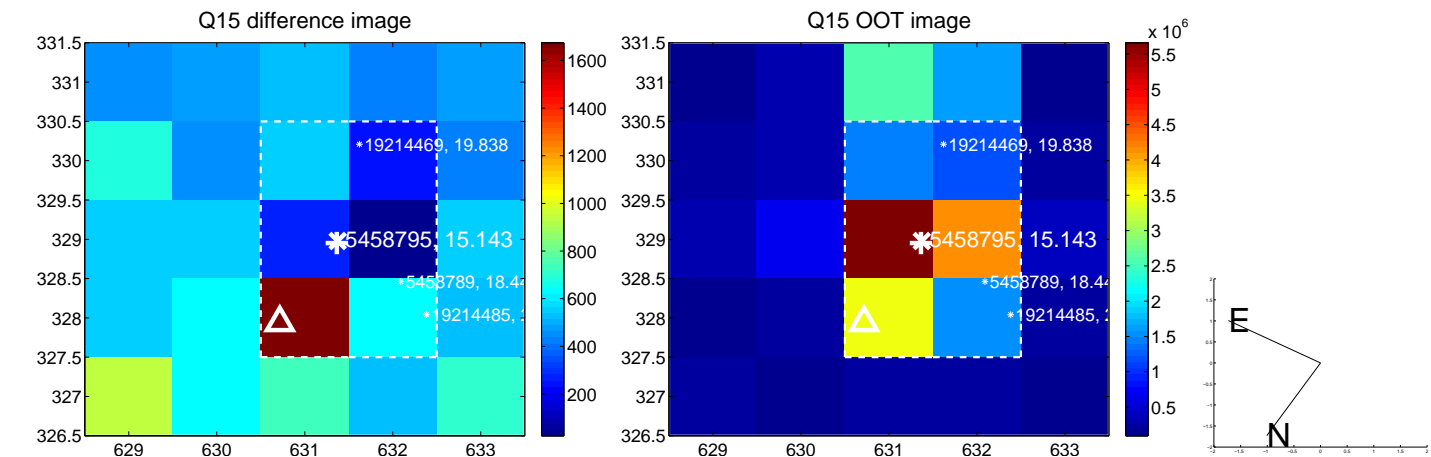
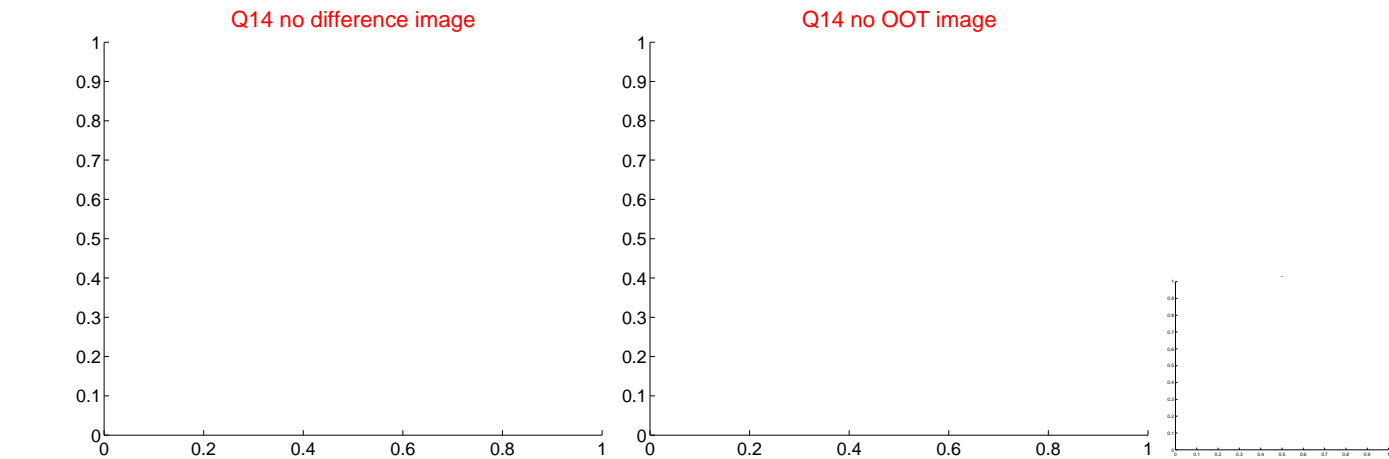
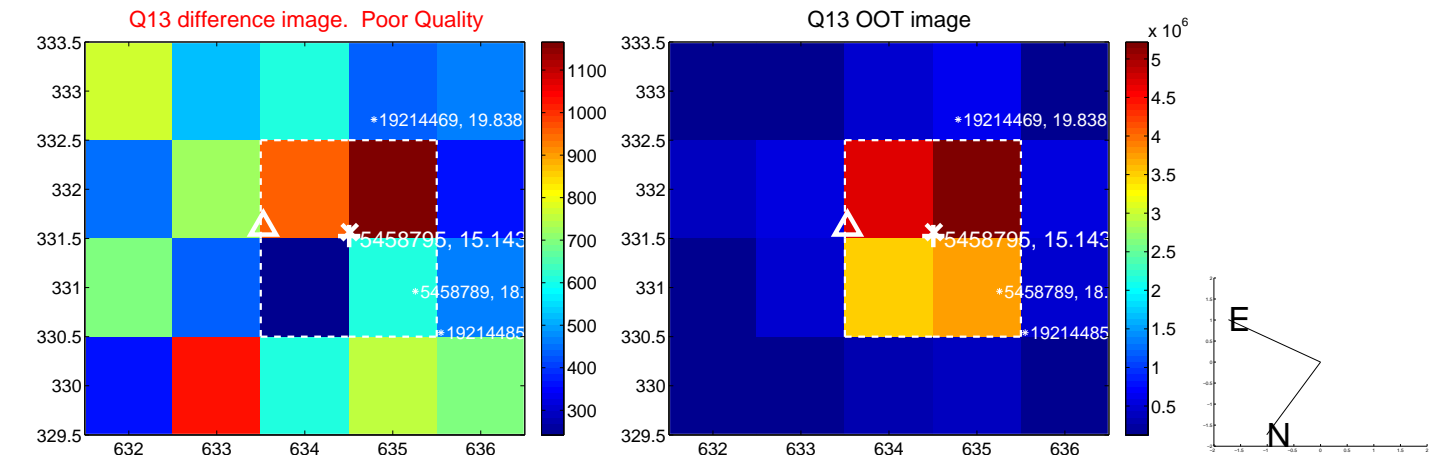
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



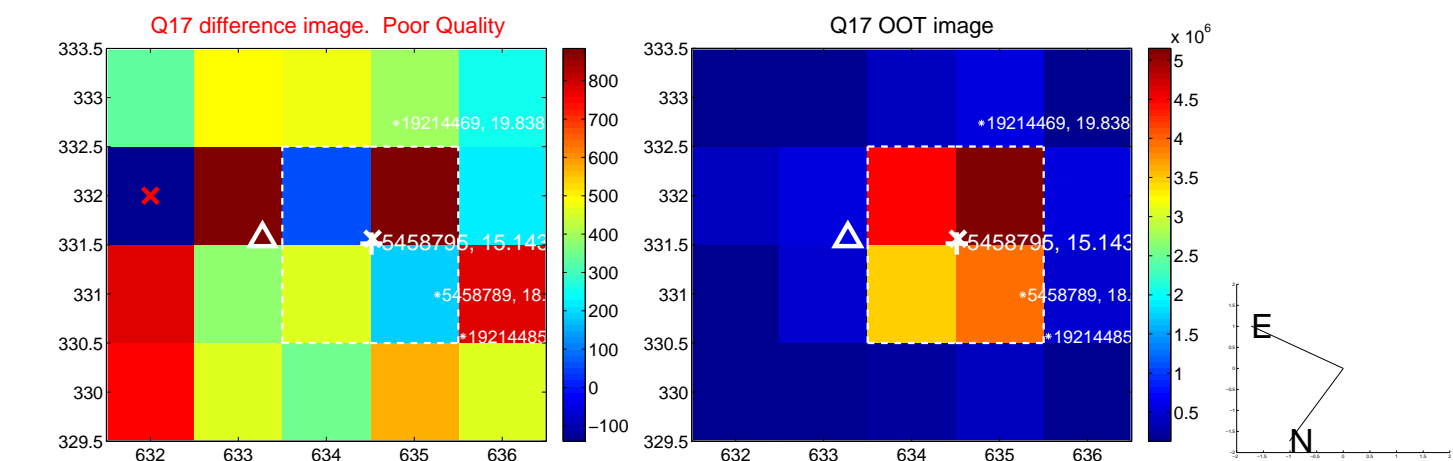
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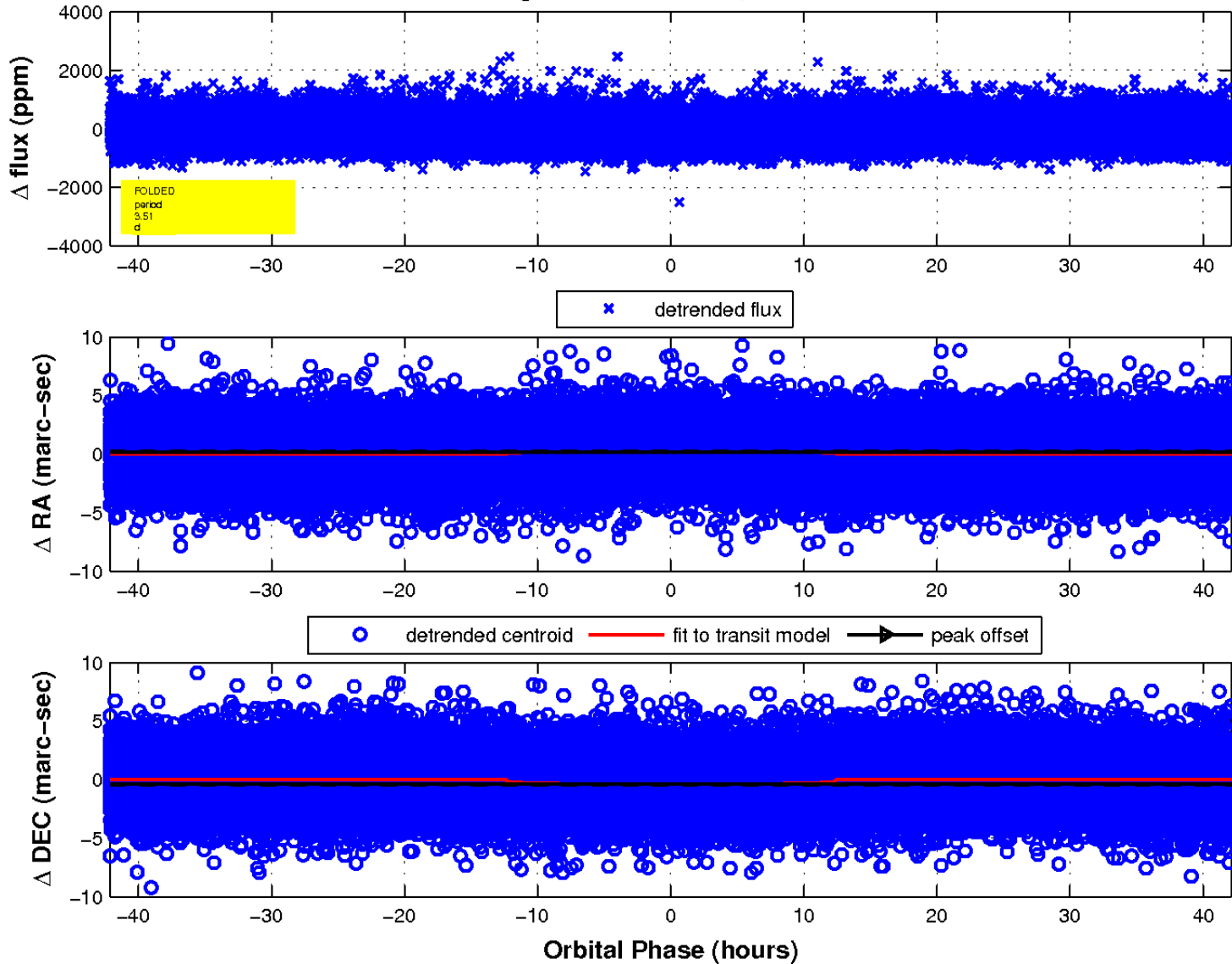
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

