

KIC 007031732

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 _⊕)
007031732-01	OBS	6805.01	0.566739	131.876483	14.5	3.052	10.8	7.8	0.89	5548	0.35	4138.70

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007031732-01	OBS	FP	0.00	0	1	1	1	MOD_SEC_DV—MOD_SEC_ALT—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.

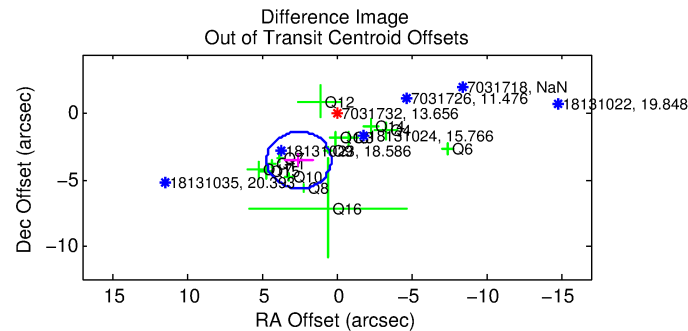
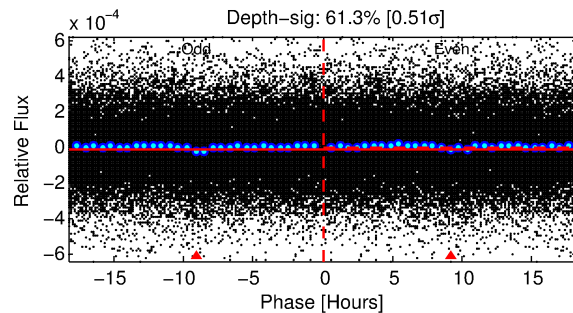
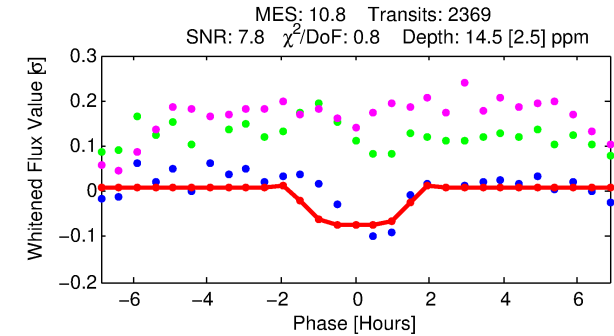
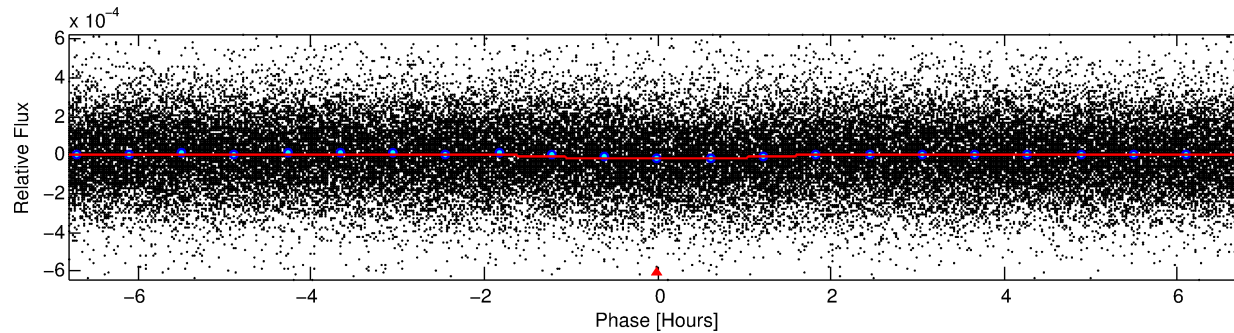
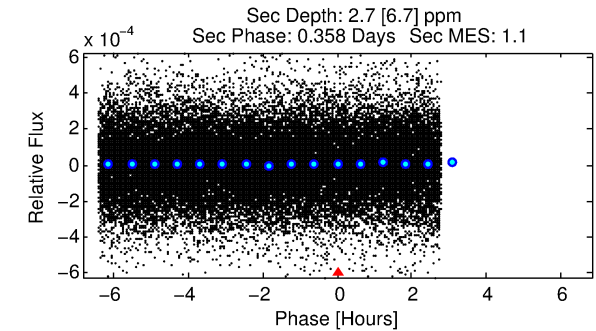
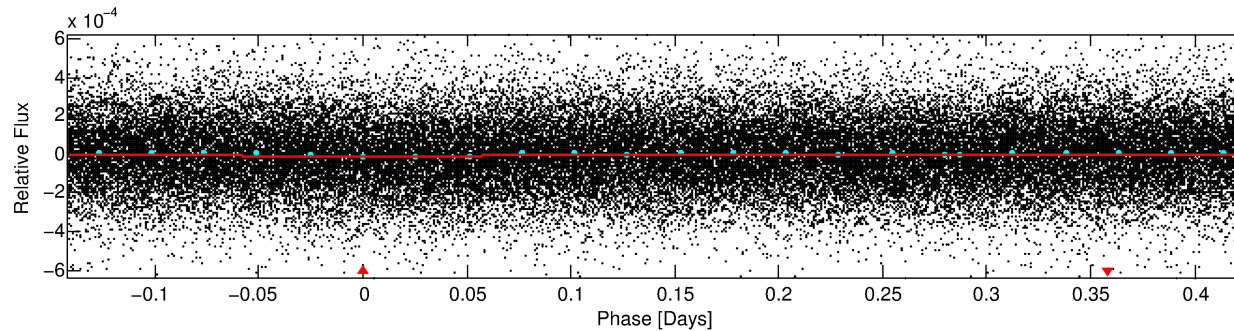
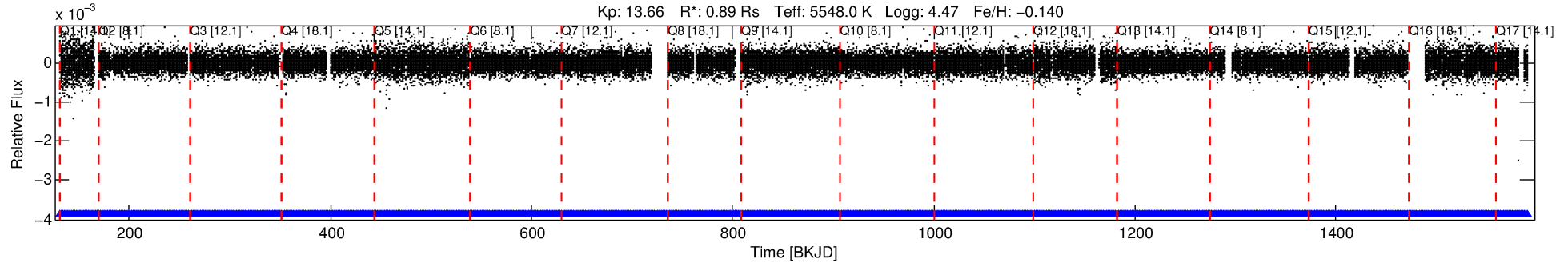
Ephemeris Match Information For 007031732-01

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
007031732-01	7031732	RR-Lyr-pri	7198959	1:1	840.9	84	-194	7.86	13.65	41553.00	Direct-PRF	0	1.77	20.81

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: 7031732 Candidate: 1 of 1 Period: 0.567 d
KOI: K06805.01 Corr: 0.829



DV Fit Results:

Period = 0.56674 [0.00001] d
Epoch = 131.8765 [0.0045] BKJD
Rp/R* = 0.0036 [0.0021]
a/R* = 1.37 [1.53]
b = 0.61 [2.47]
Seff = 4138.70 [1349.41]
Teq = 2045 [167] K
Rp = 0.35 [0.22] Re
a = 0.0127 [0.0026] AU
Ag = 1.91 [5.31] [0.17σ]
Teffp = 3718 [2571] K [0.65σ]

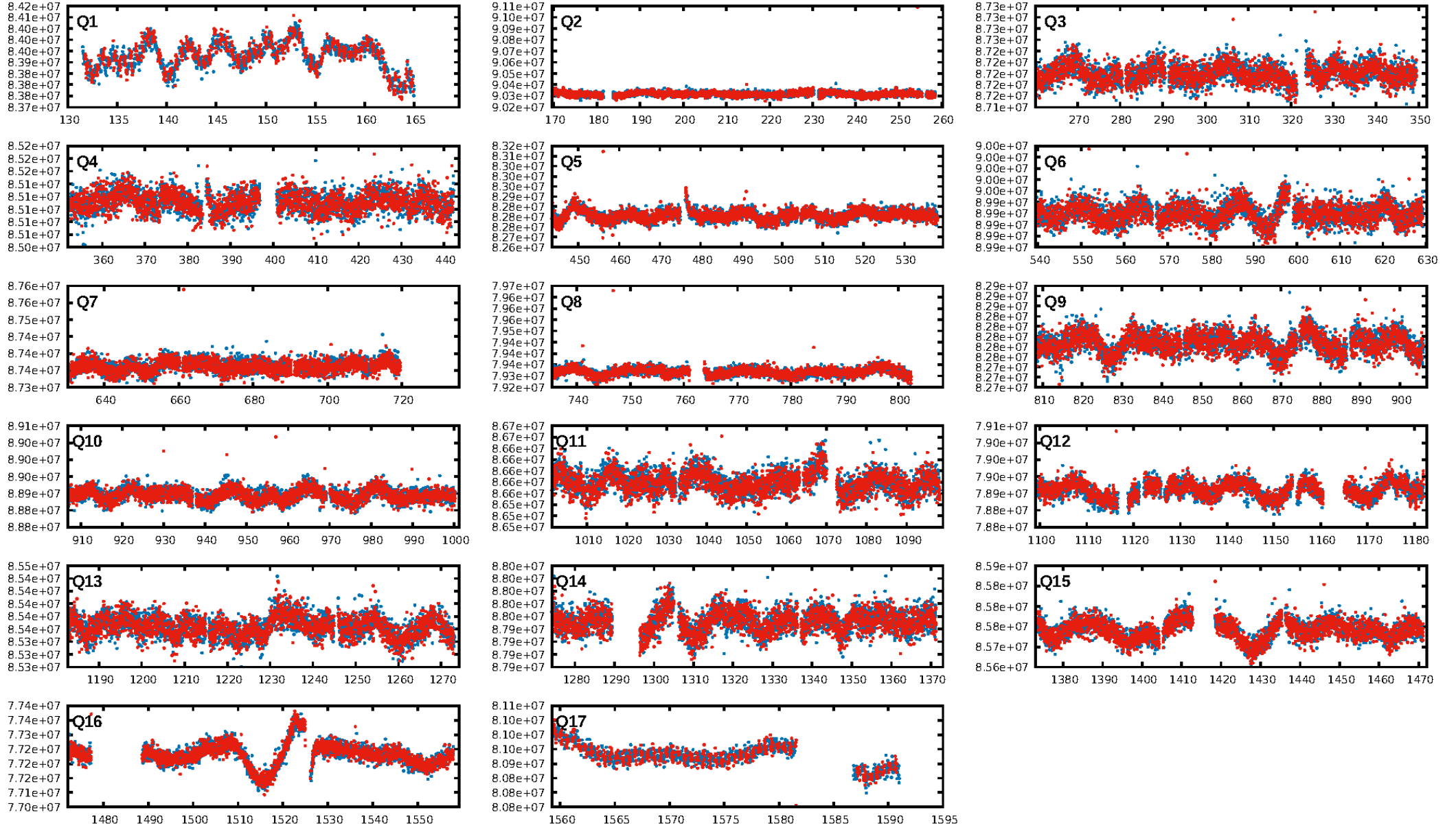
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.46e-19
RollingBand-fgt: 1.00 [2263/2263]
GhostDiagnostic-chr: 0.966
Centroid-sig: 0.0%
Centroid-so: 3.820 arcsec [3.37σ]
OotOffset-rm: 4.311 arcsec [6.01σ]
KicOffset-rm: 4.245 arcsec [6.10σ]
OotOffset-st: 3/4/4/3 [14]
KicOffset-st: 3/4/4/3 [14]
DiffImageQuality-fgm: 0.21 [3/14]
DiffImageOverlap-fno: 1.00 [17/17]

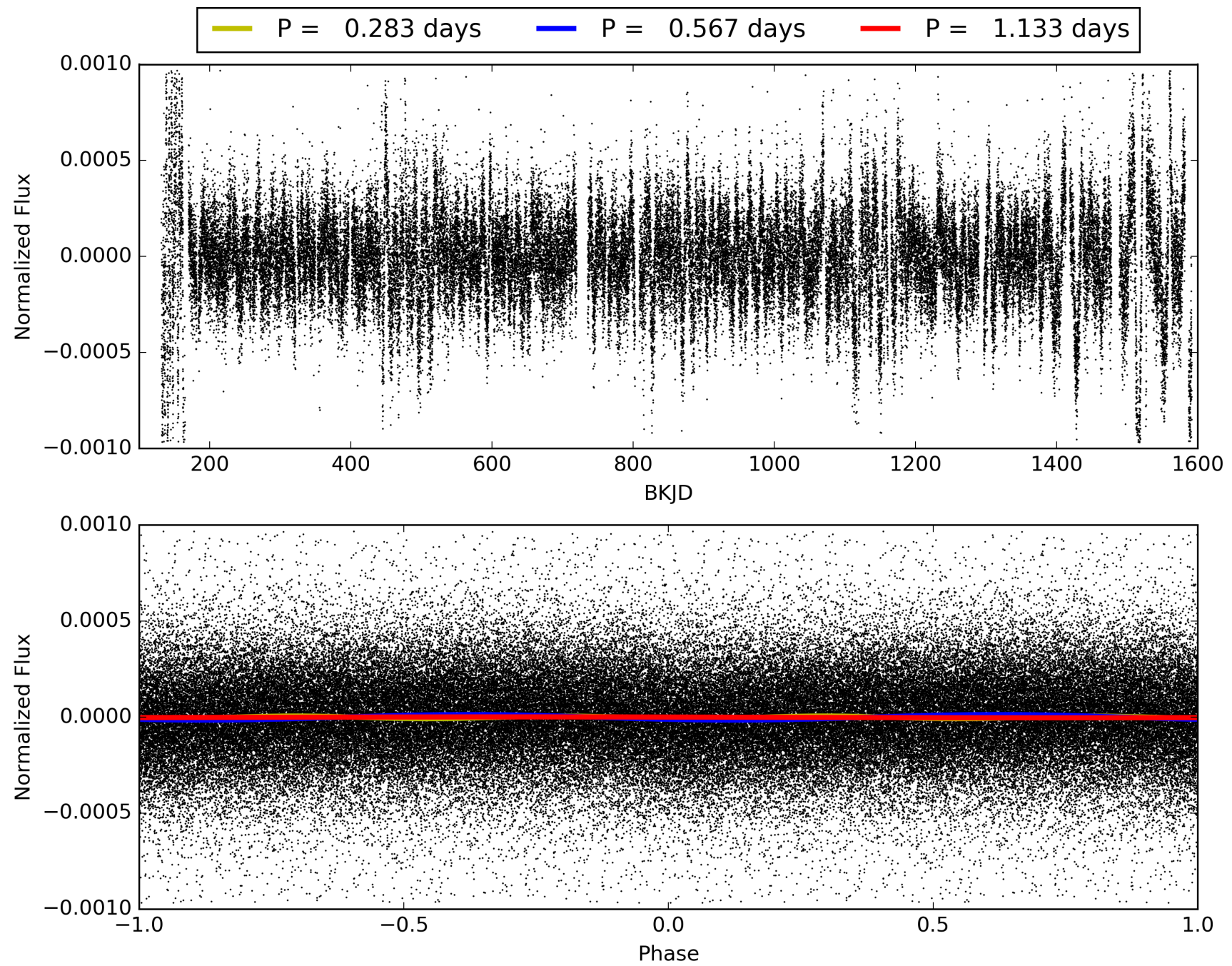
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 11:34:42 Z

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

TCE 007031732-01, PDC Light Curves

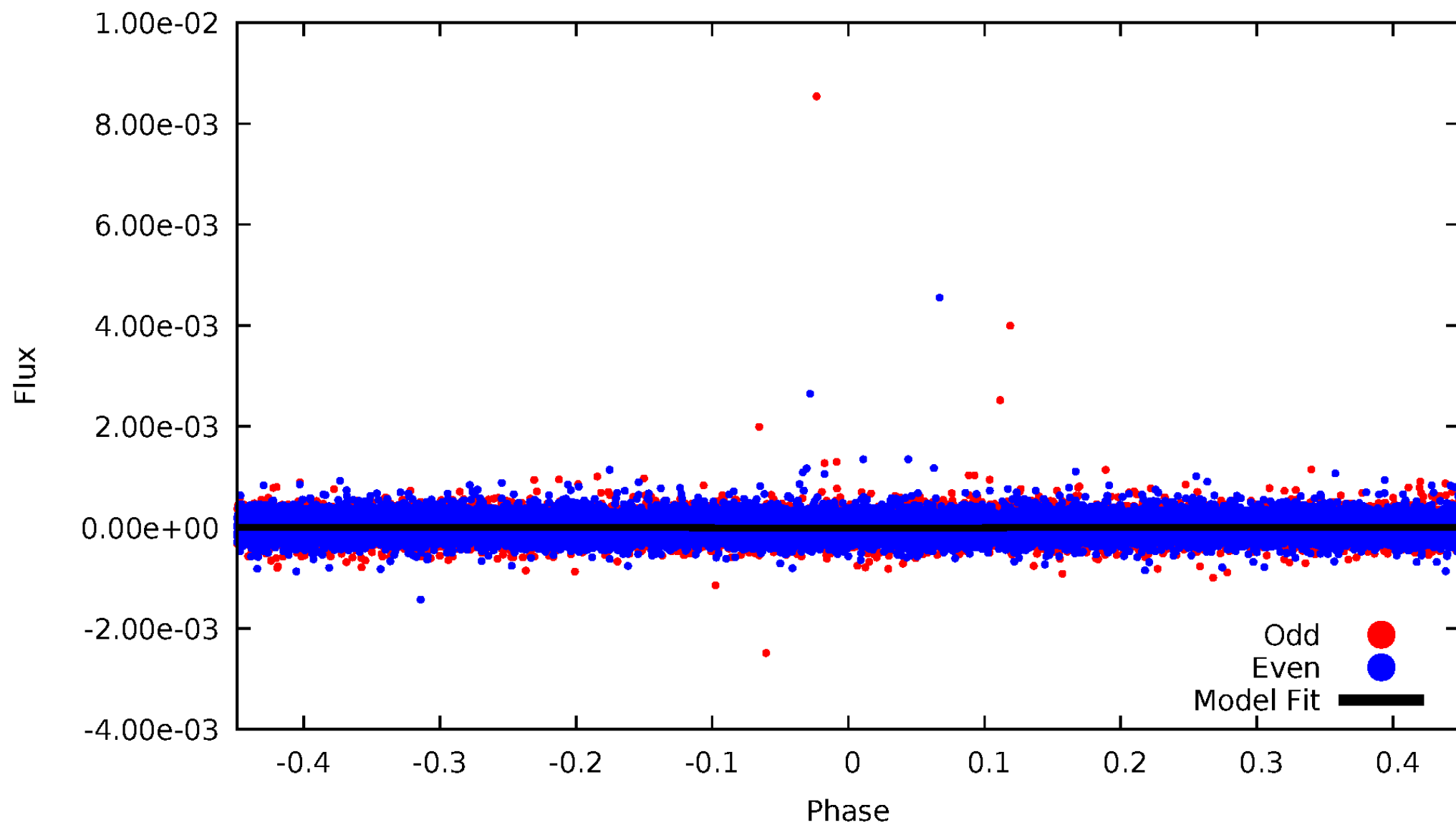


TCE 007031732-01



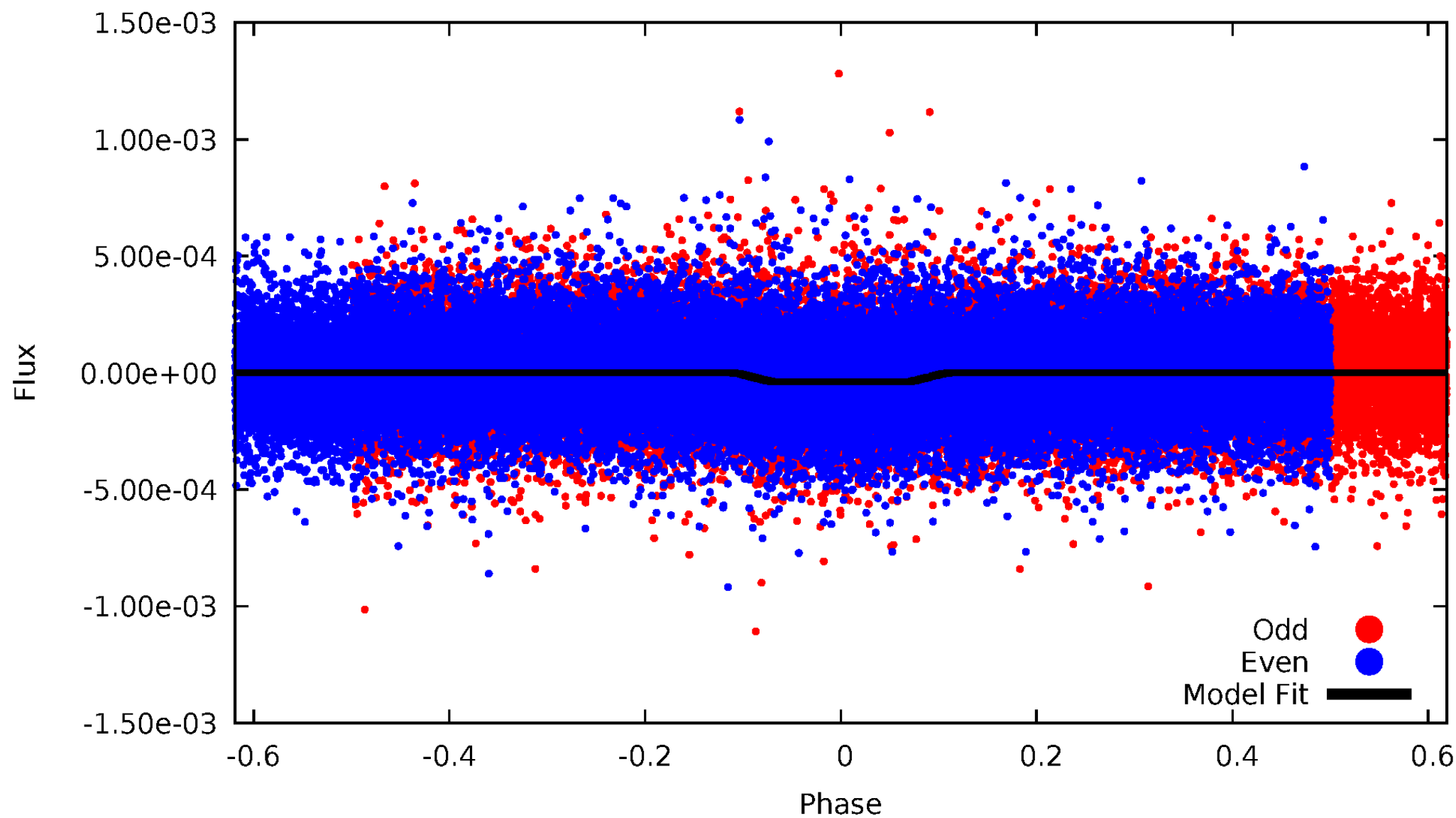
DV Odd/Even

TCE 007031732-01



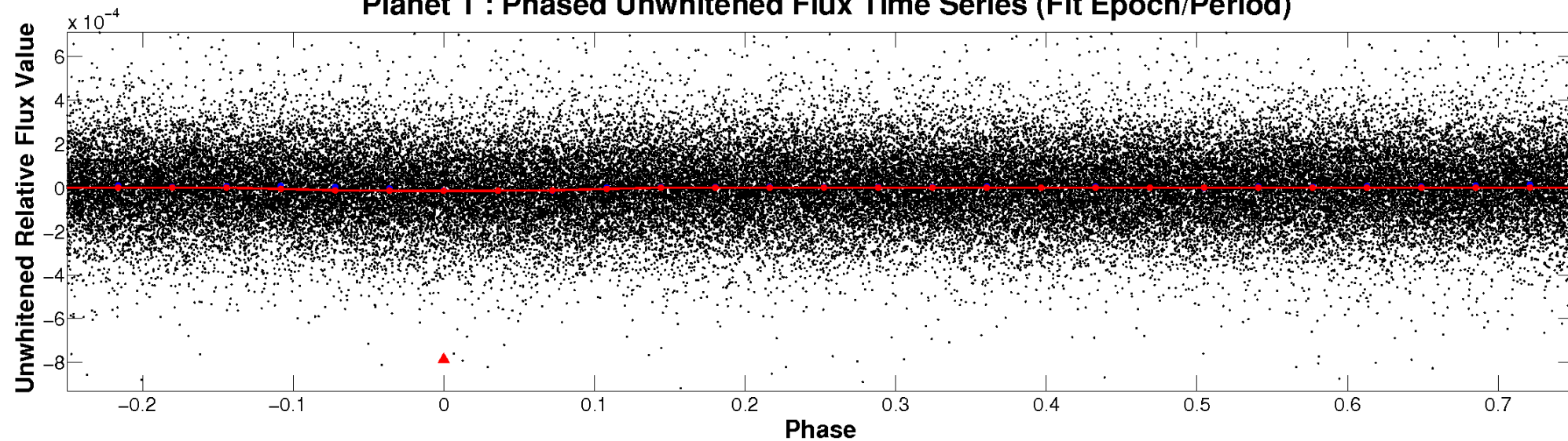
ALT Odd/Even

TCE 007031732-01

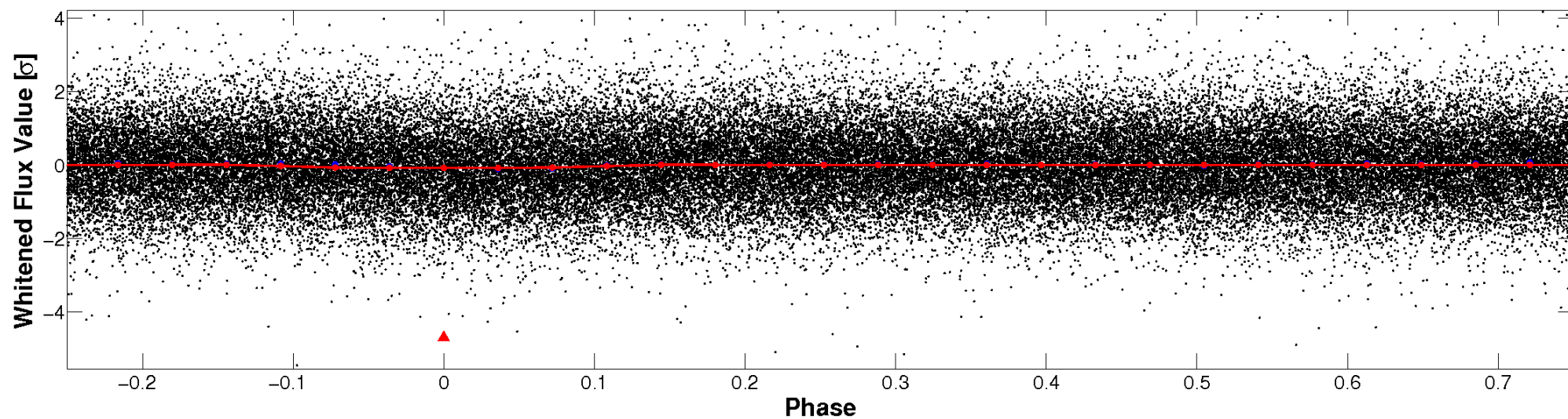


Non-Whitened Vs. Whitened Light Curve

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

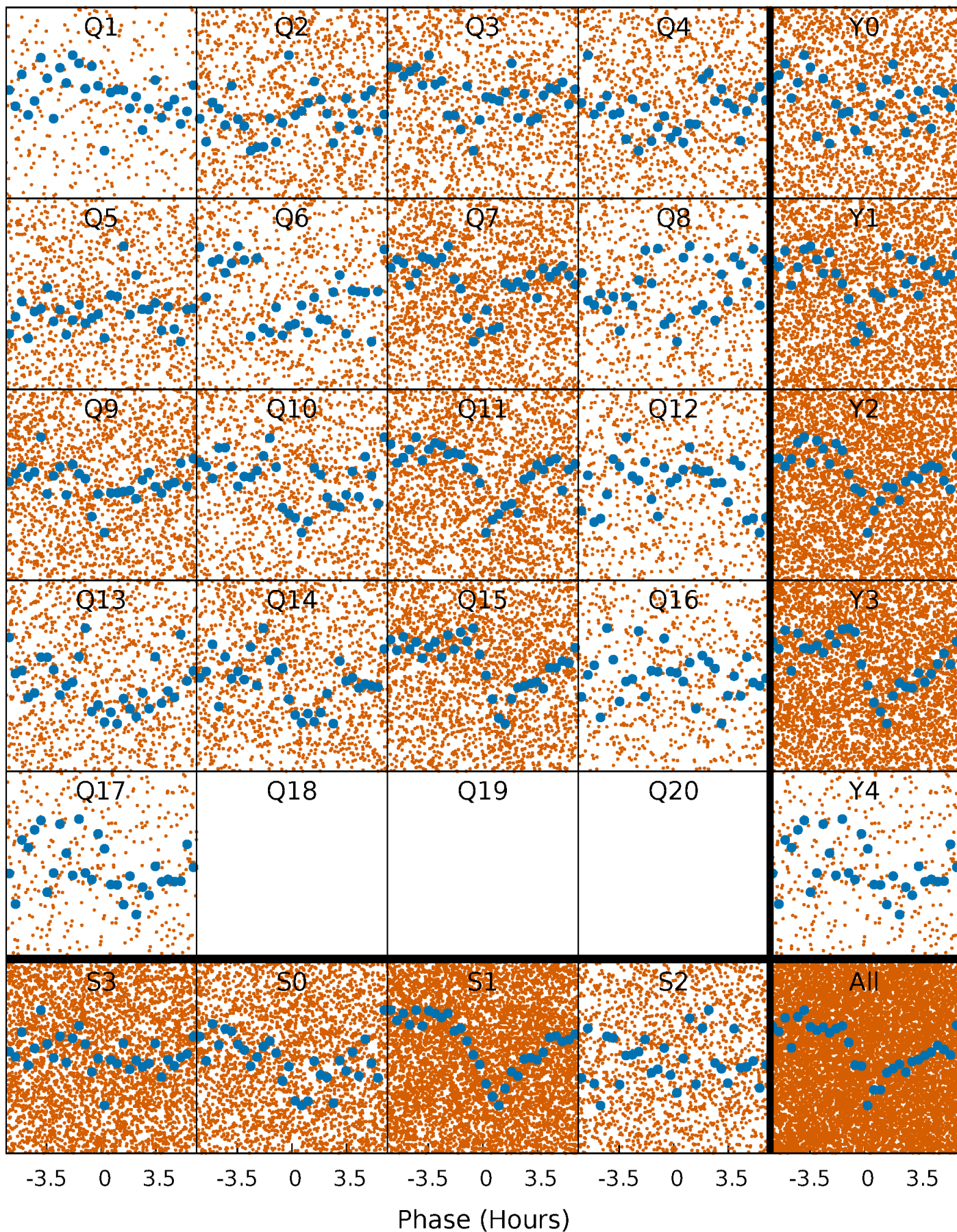


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



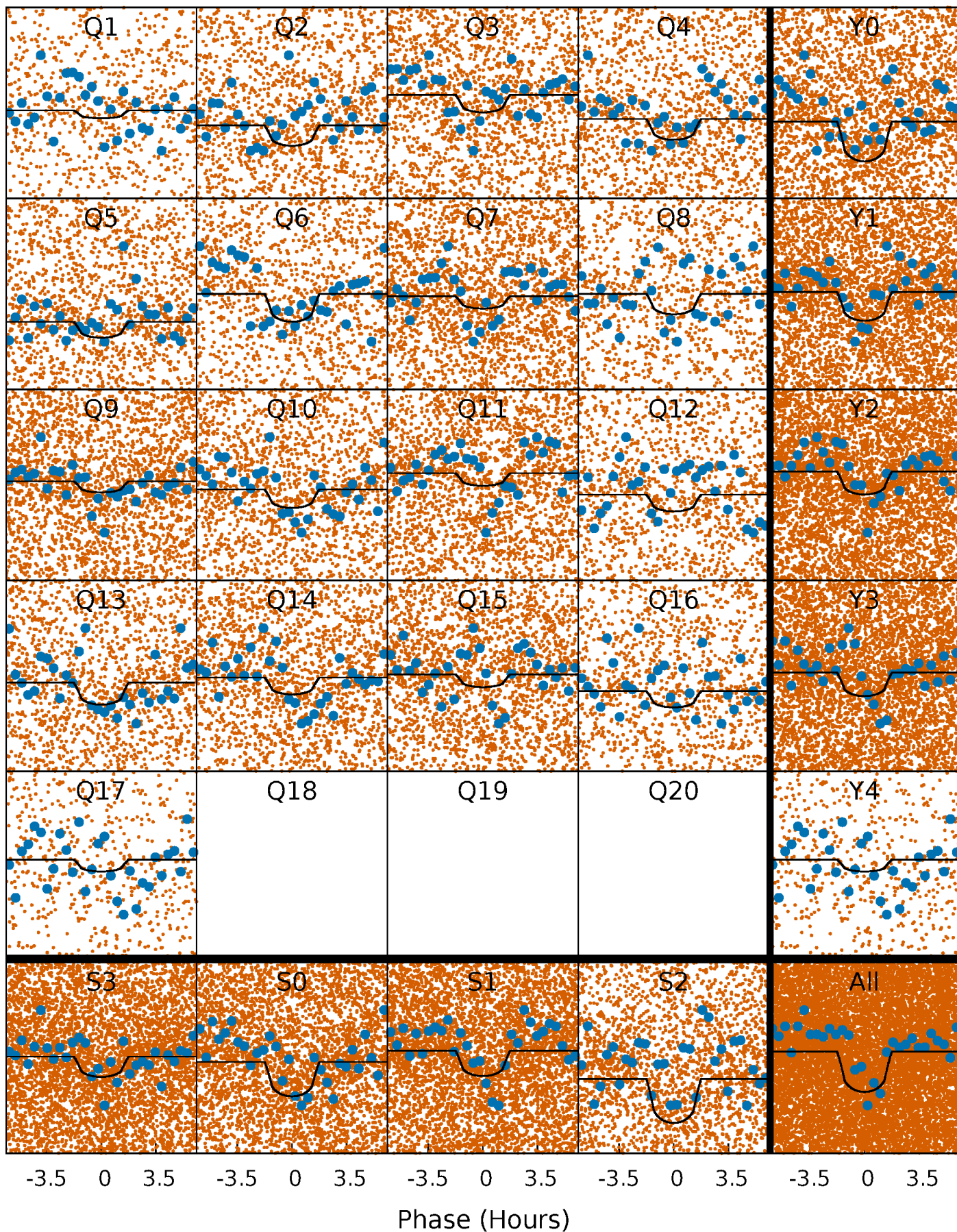
PDC Quarter-Phased Transit Curves

TCE 007031732-01 P= 0.566739 Days $T_0=131.876483$ (BKJD)



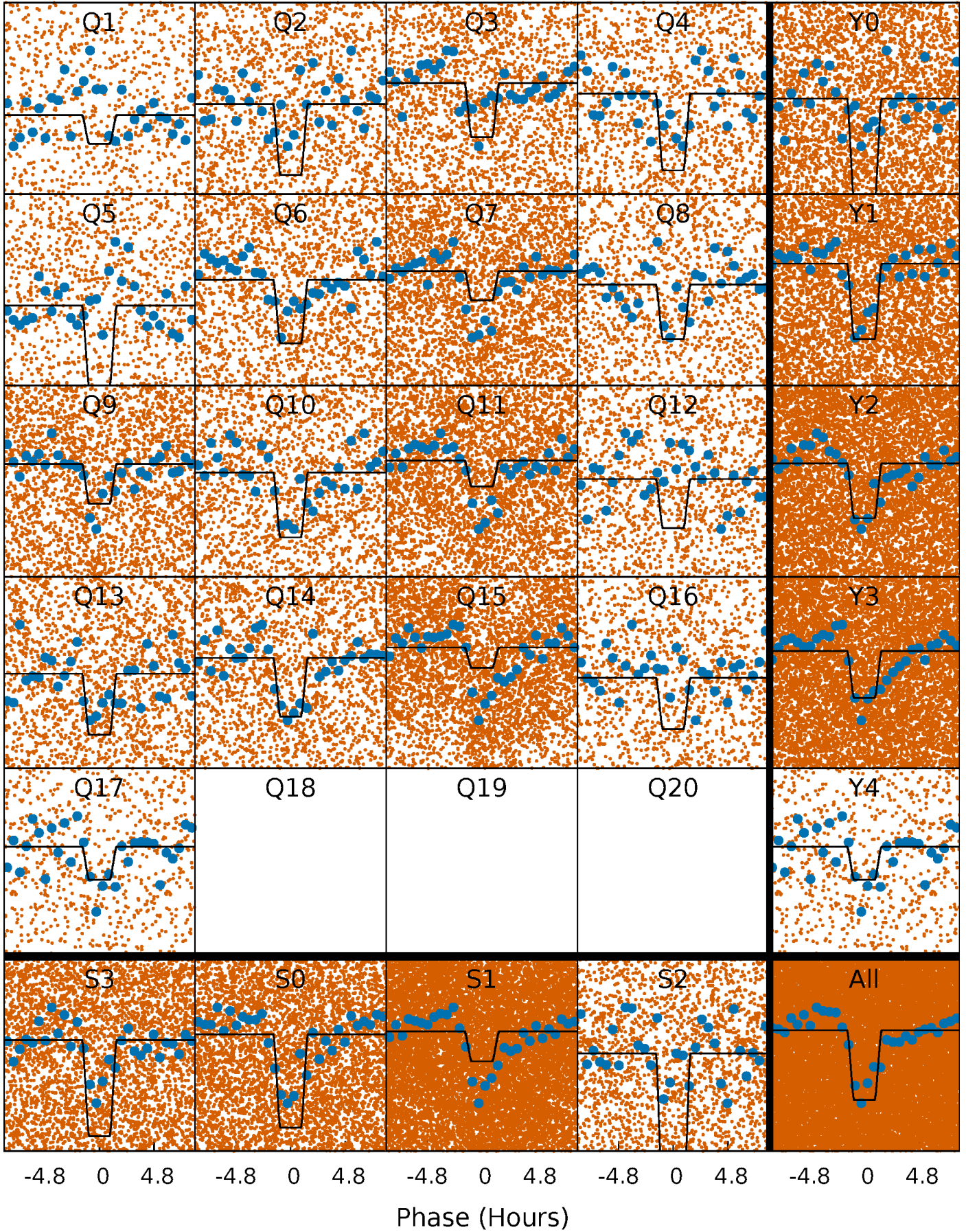
DV Quarter-Phased Transit Curves

TCE 007031732-01 P= 0.566739 Days $T_0=131.876483$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

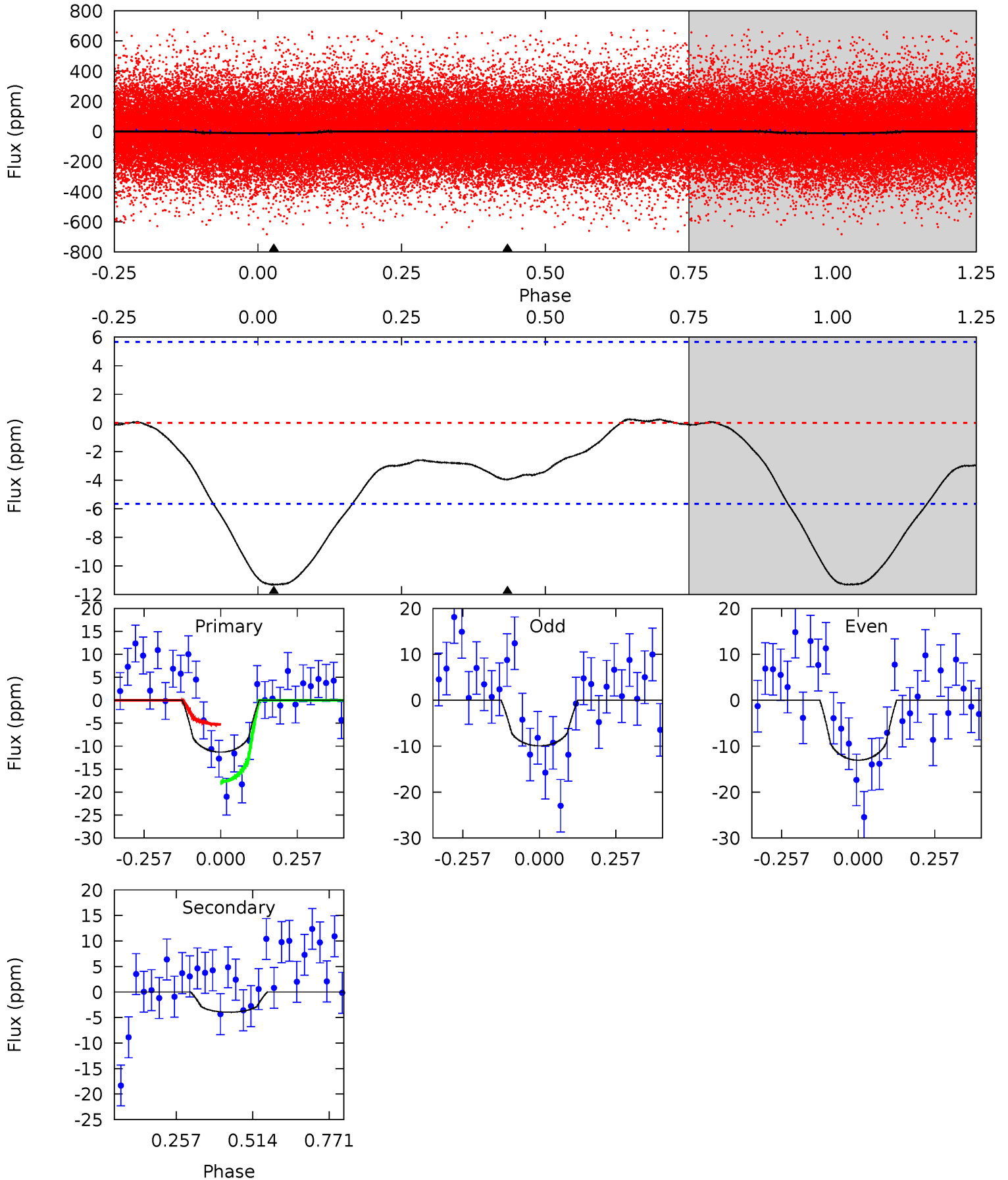
TCE 007031732-01 P= 0.566775 Days $T_0=131.849832$ (BKJD)



DV Model-Shift Uniqueness Test

007031732-01, P = 0.566739 Days, E = 131.309744 Days

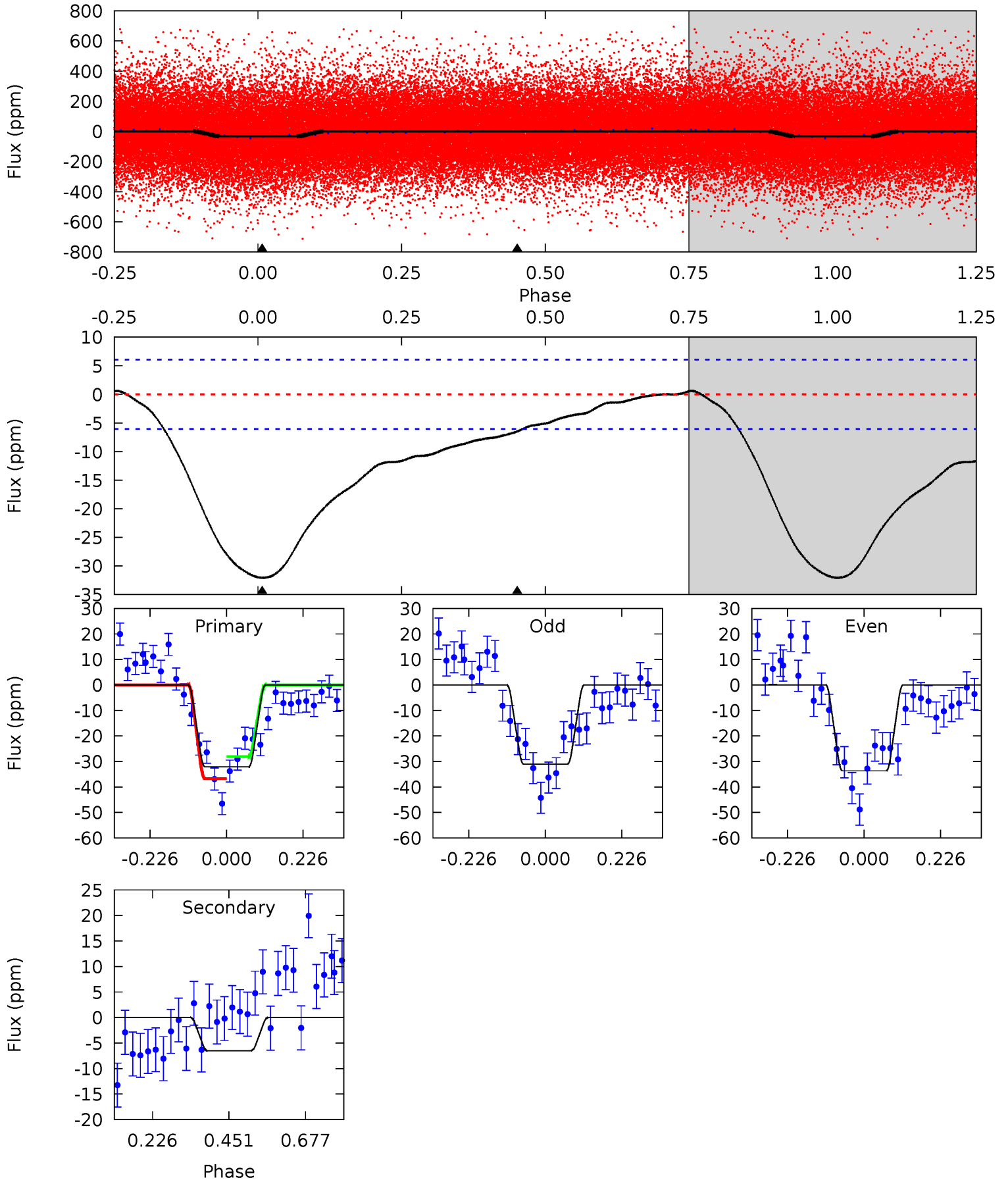
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.71	3.05	0	0	4.36	1.13	0.09	8.71	8.71	3.05	3.05	1.21	0.74	0.02	4.78



Alt Model-Shift Uniqueness Test

007031732-01, P = 0.566775 Days, E = 131.283057 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.3	4.71	0	0	4.39	1.21	0.20	23.3	23.3	4.71	4.71	0.96	0.96	0.02	3.16



Stellar Parameters For KIC 007031732

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5548^{+182}_{-182}	$4.473^{+0.087}_{-0.163}$	$-0.140^{+0.300}_{-0.300}$	$0.889^{+0.217}_{-0.117}$	$0.856^{+0.111}_{-0.083}$	$1.718^{+0.662}_{-0.775}$
	+3%/-3%	+2%/-4%	+214%/-214%	+24%/-13%	+13%/-10%	+39%/-45%
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 007031732-01 / KOI 6805.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-4 ± 1	$0.37^{+0.20}_{-0.19}$	2874^{+184}_{-132}	4211^{+1614}_{-794}	$2.654^{+8.978}_{-1.672}$
Alt.	-6 ± 1	$0.60^{+0.22}_{-0.21}$	2883^{+200}_{-133}	3776^{+796}_{-495}	$1.611^{+2.145}_{-0.802}$

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 $A_{obs} \gg 1.0$

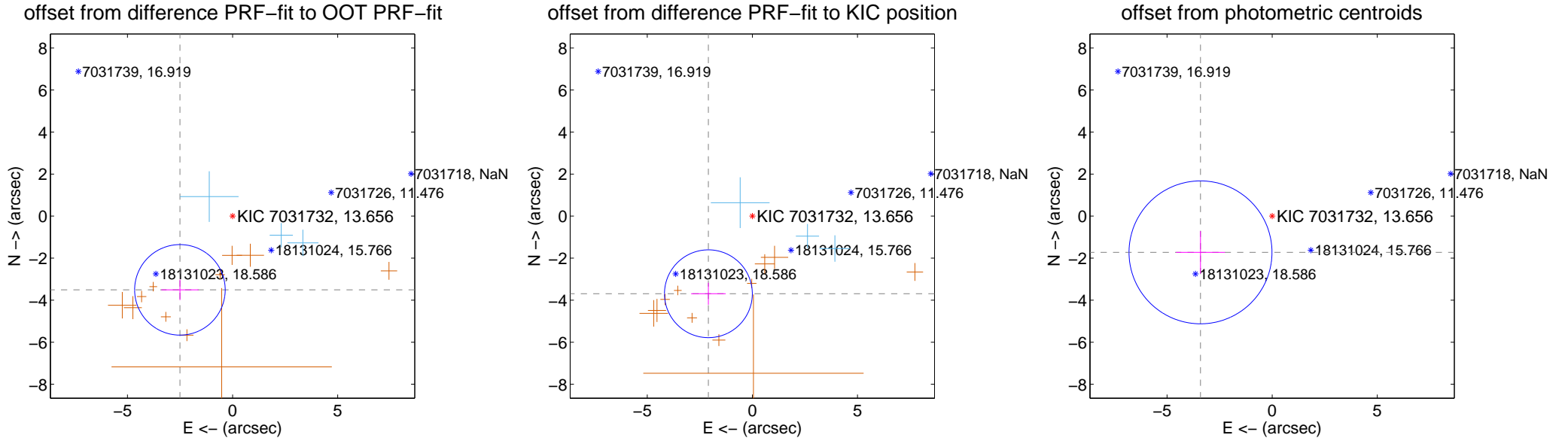
DV Centroid Data

Supplemental centroid analysis for 007031732-01. Kepler magnitude: 13.66. Transit SNR 7.79

There are 3 quarters with good PRF difference image offsets

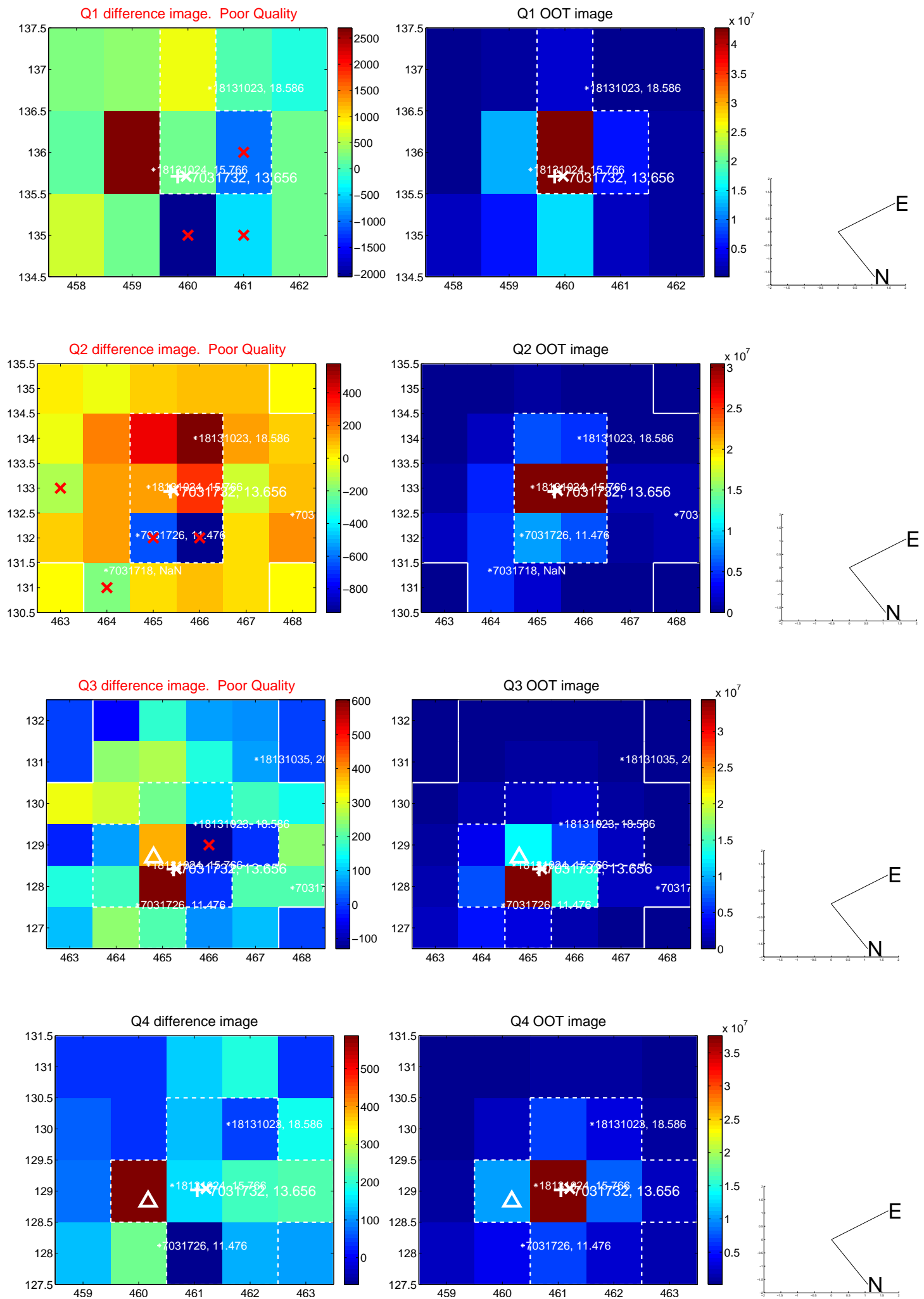
The direct PRF centroid is offset from the target star catalog position by about 0.68 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.311 ± 0.718	6.01	2.505 ± 0.886	-3.509 ± 0.487
PRF-fit source offset from KIC position	4.245 ± 0.696	6.10	2.092 ± 0.823	-3.694 ± 0.522
photometric centroid source offset	3.82 ± 1.13	3.37	3.41 ± 1.16	-1.72 ± 1.01

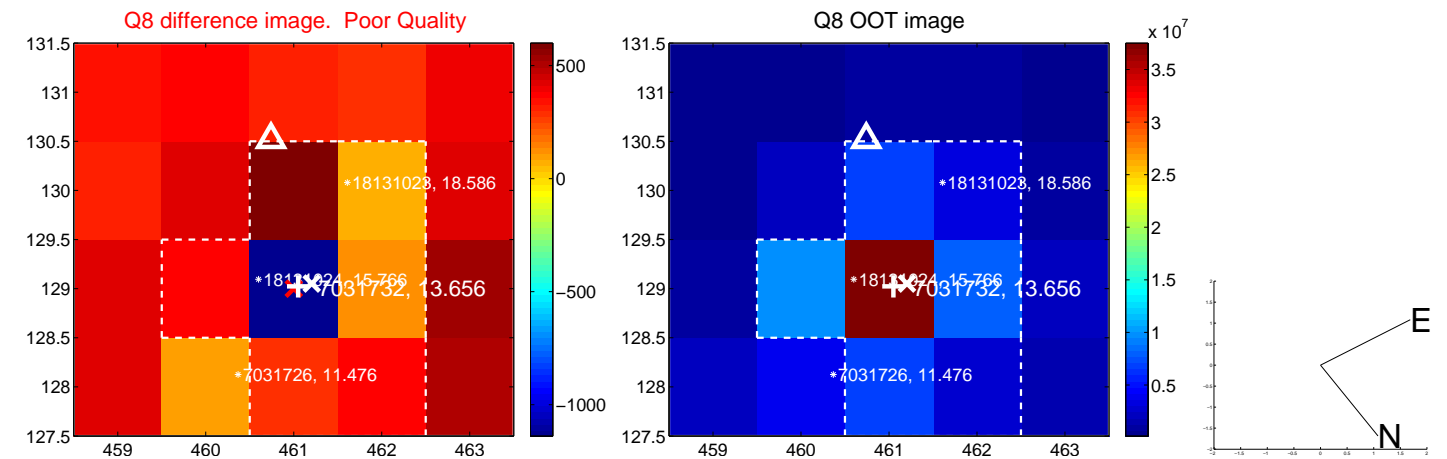
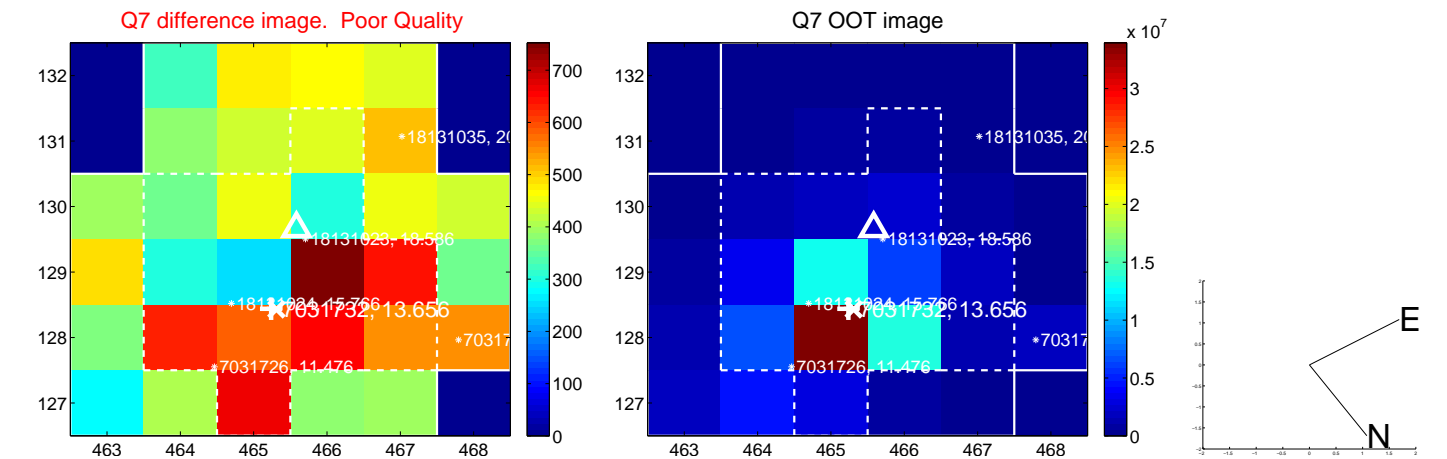
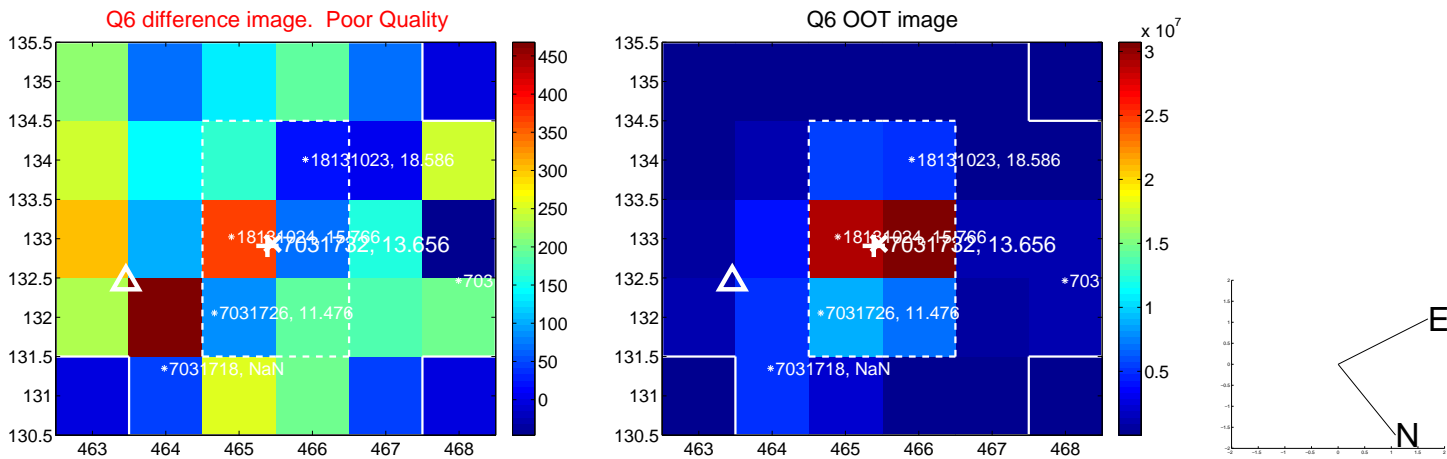
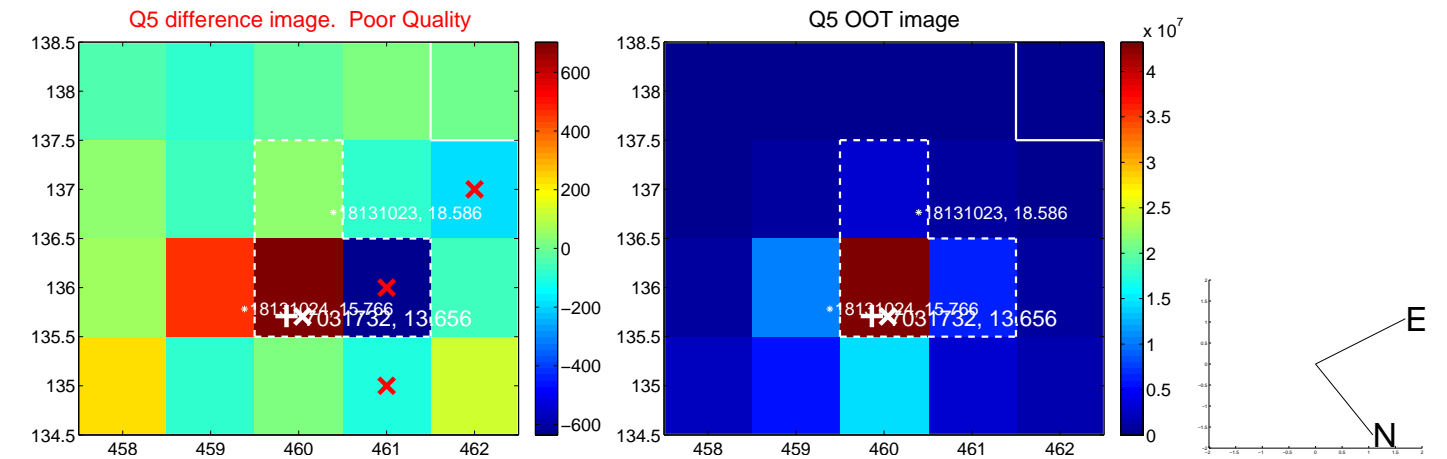


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

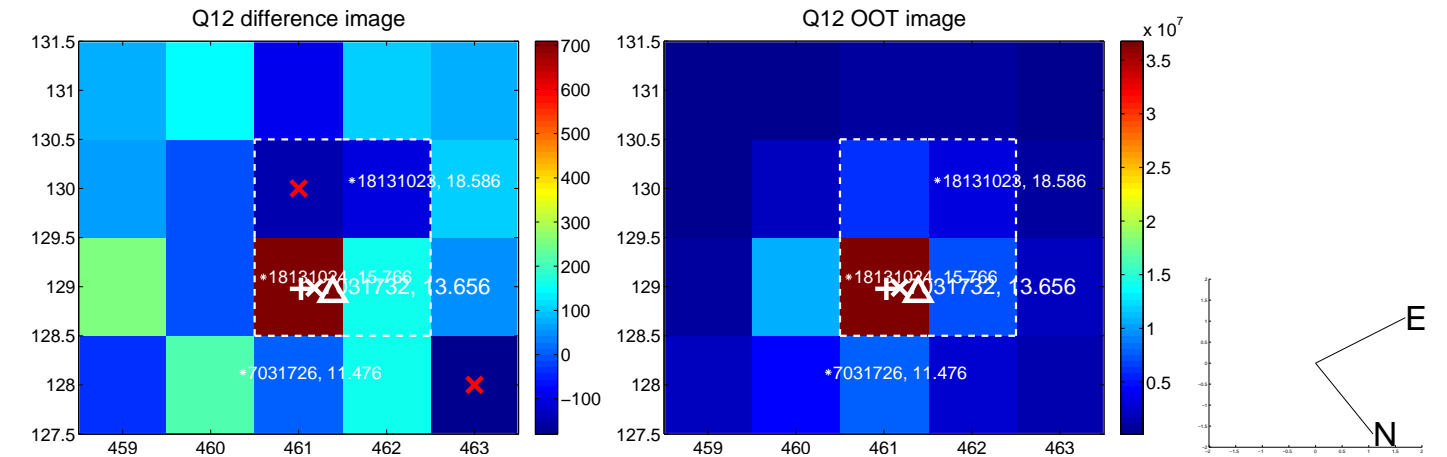
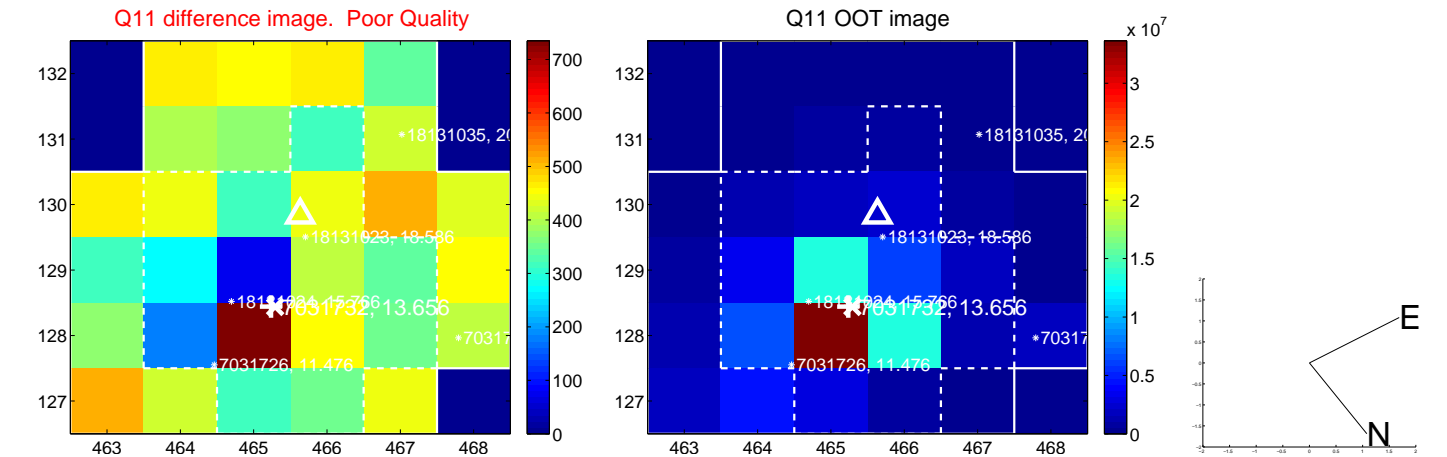
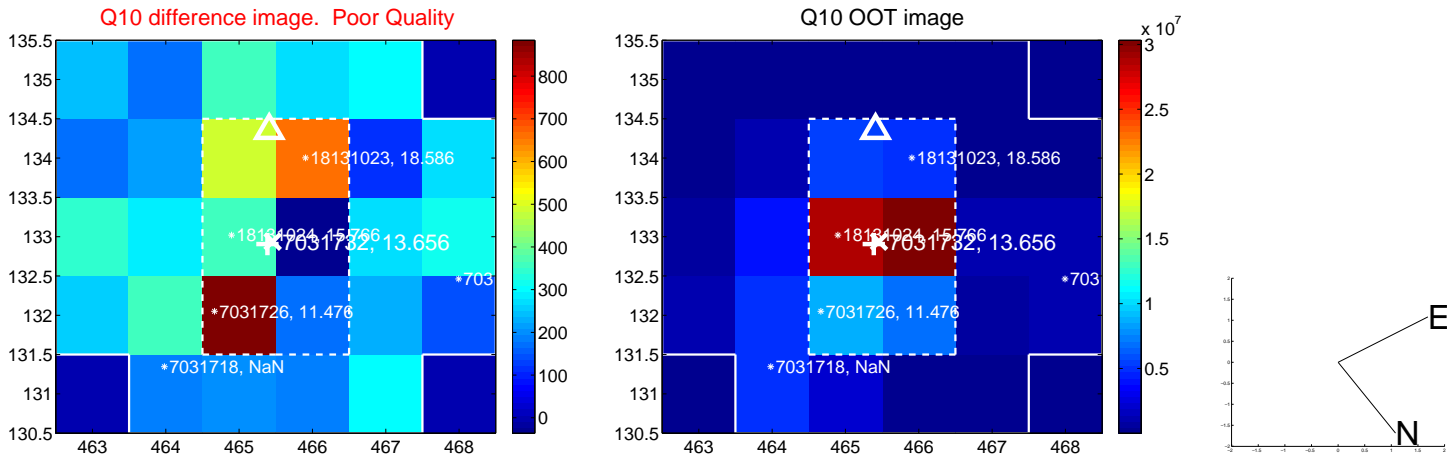
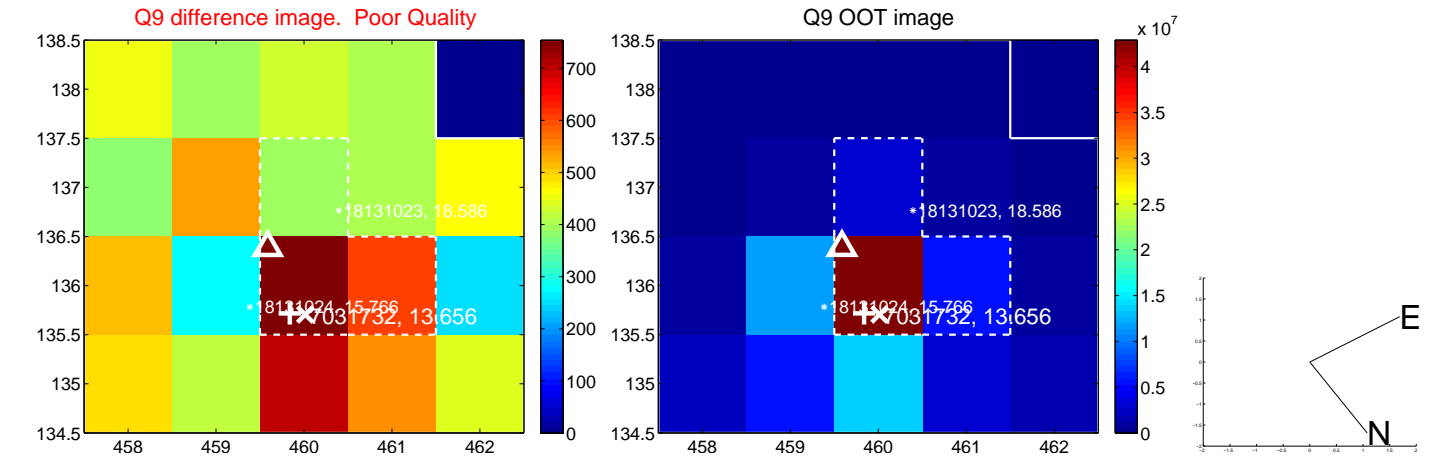
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



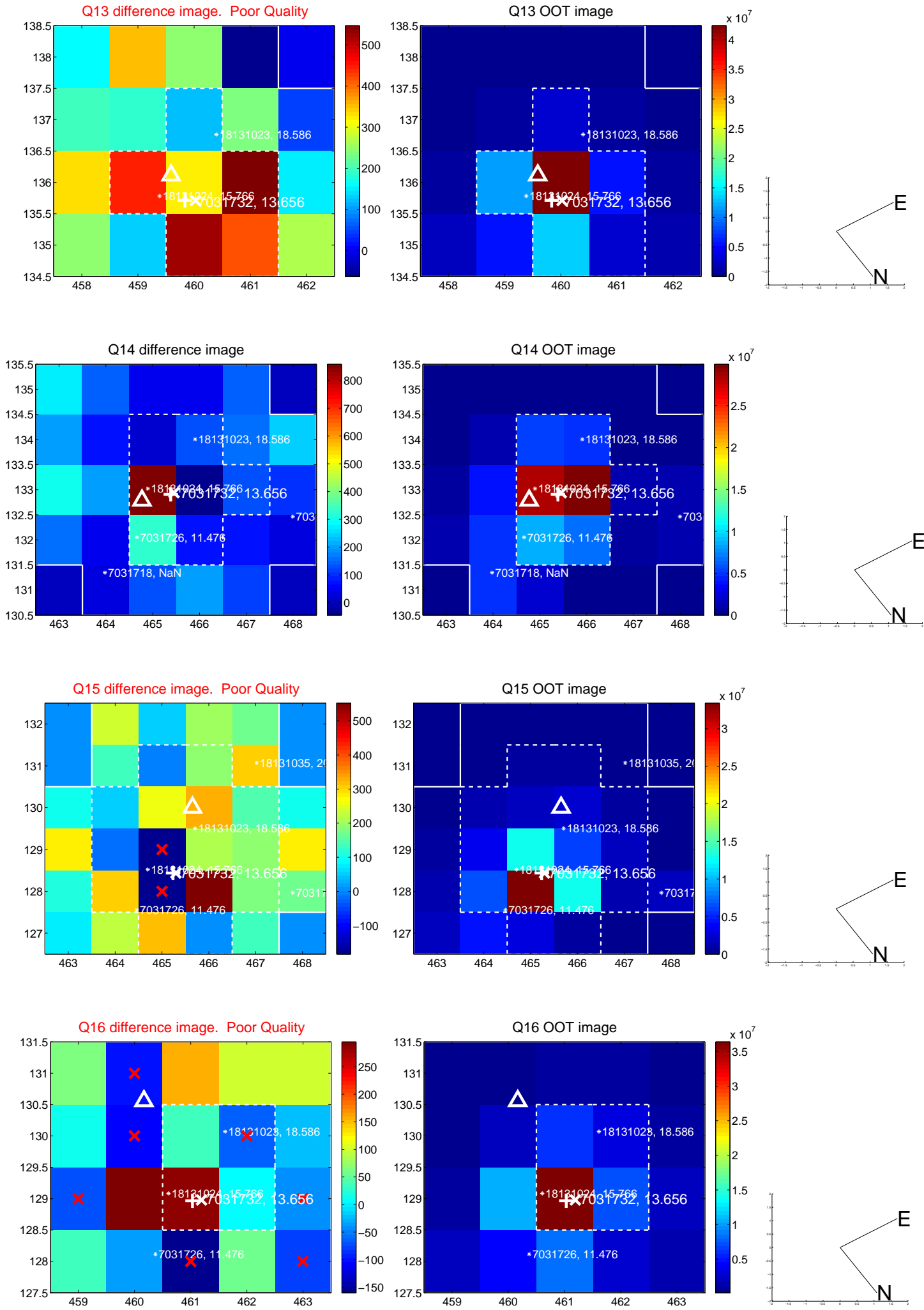
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



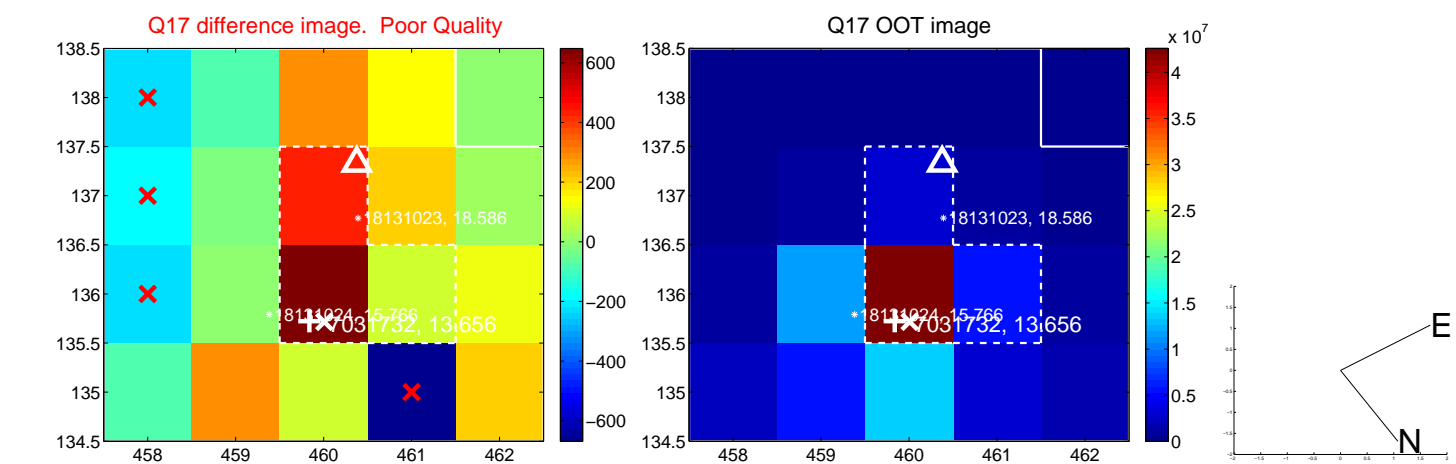
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



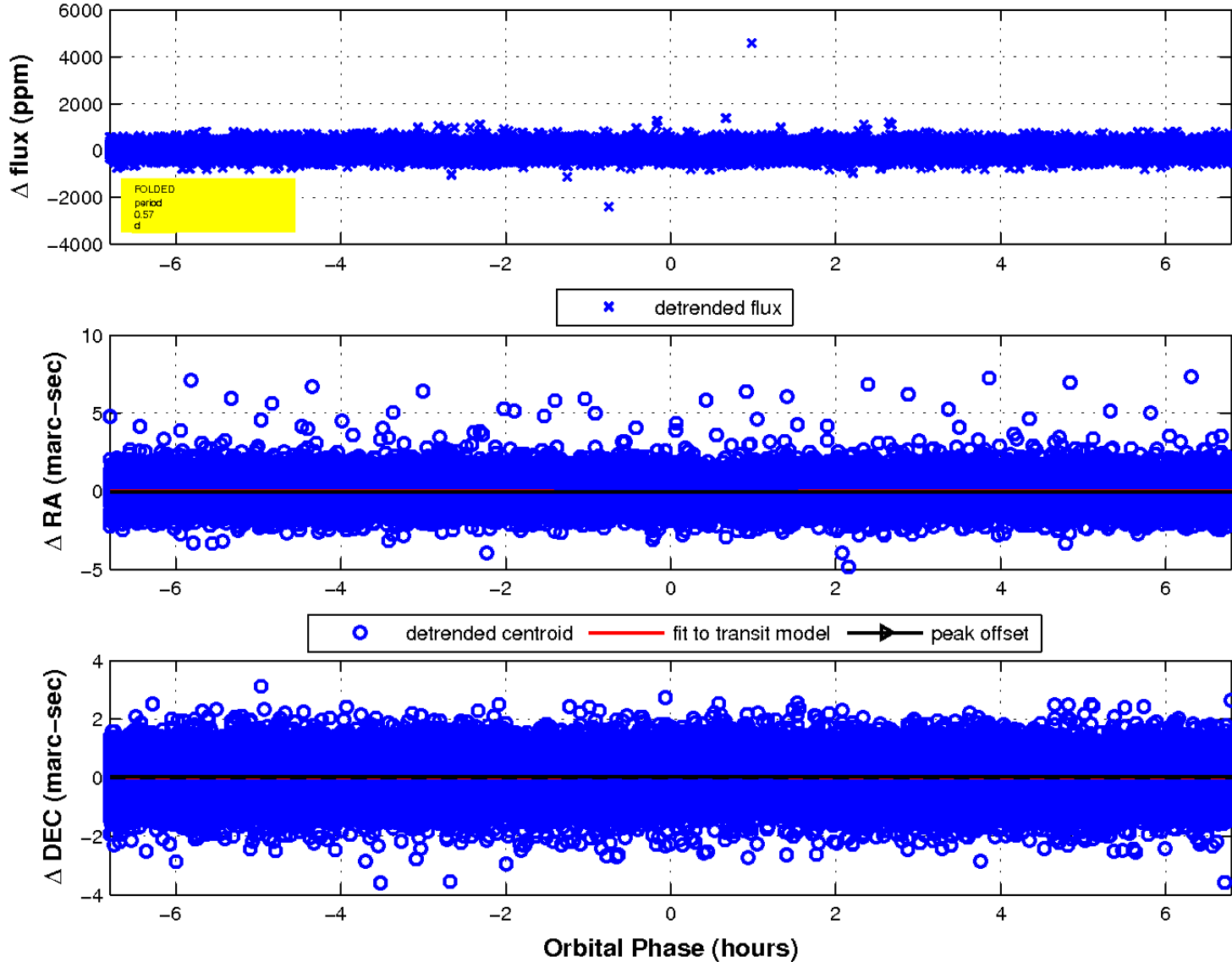
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

