

KIC 007551637

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})
007551637-01	OBS	No	0.529215	131.763540	15.2	1.853	7.9	8.5	3.71	7535	1.74	0.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007551637-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT

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

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

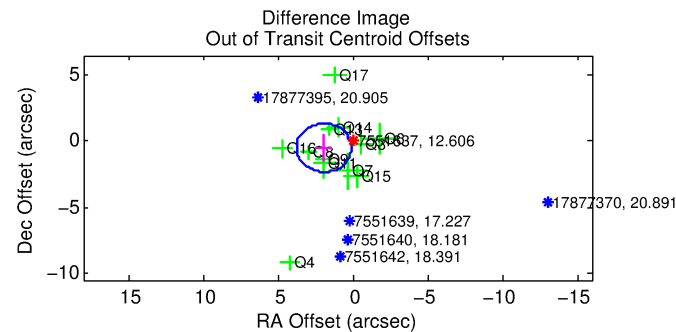
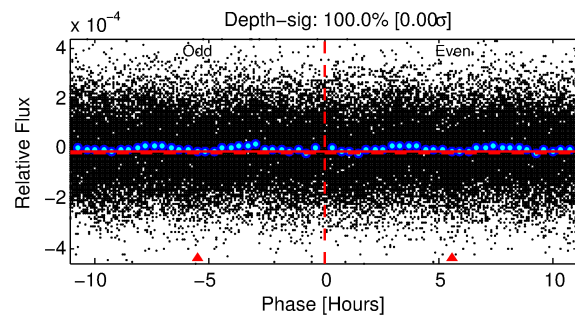
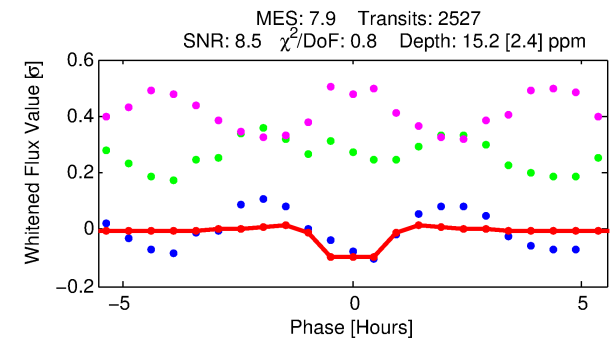
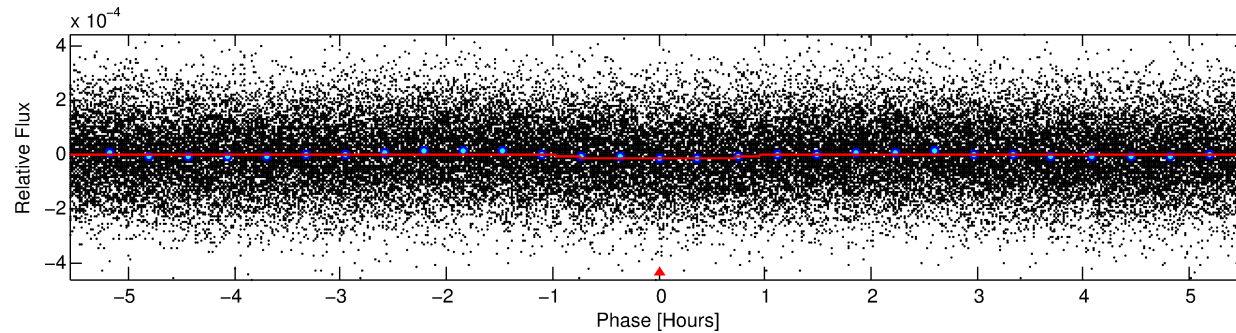
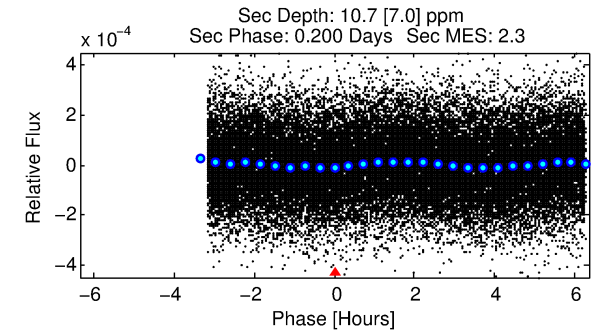
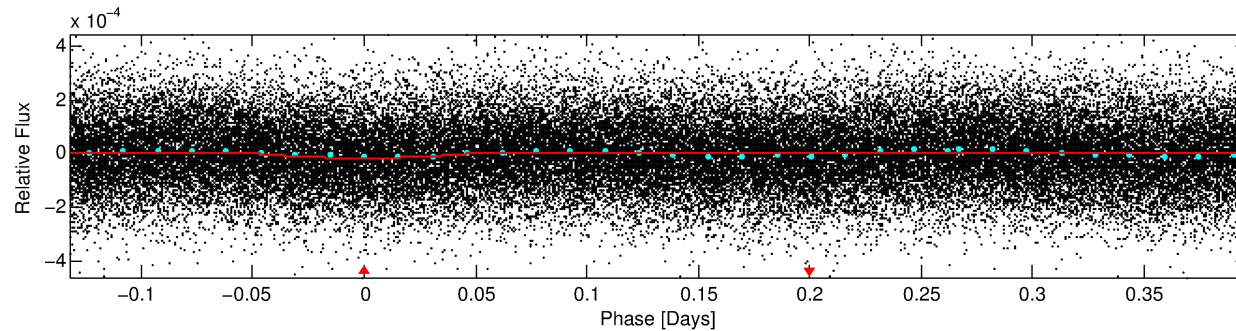
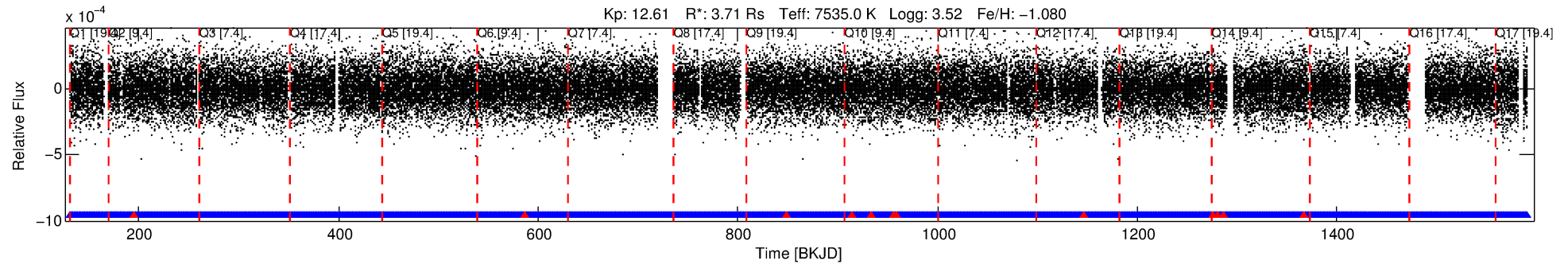
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007551637-01

No Significant Match Found

DV One-Page Summary

KIC: 7551637 Candidate: 1 of 1 Period: 0.529 d



DV Fit Results:

Period = 0.52922 [0.00001] d
Epoch = 131.7635 [0.0024] BKJD
Rp/R* = 0.0043 [0.0014]
a/R* = 1.29 [0.98]
b = 0.92 [0.32]
Seff = N/A
Teq = N/A
Rp = 1.74 [1.27] Re
a = N/A
Ag = N/A
Teffp = N/A

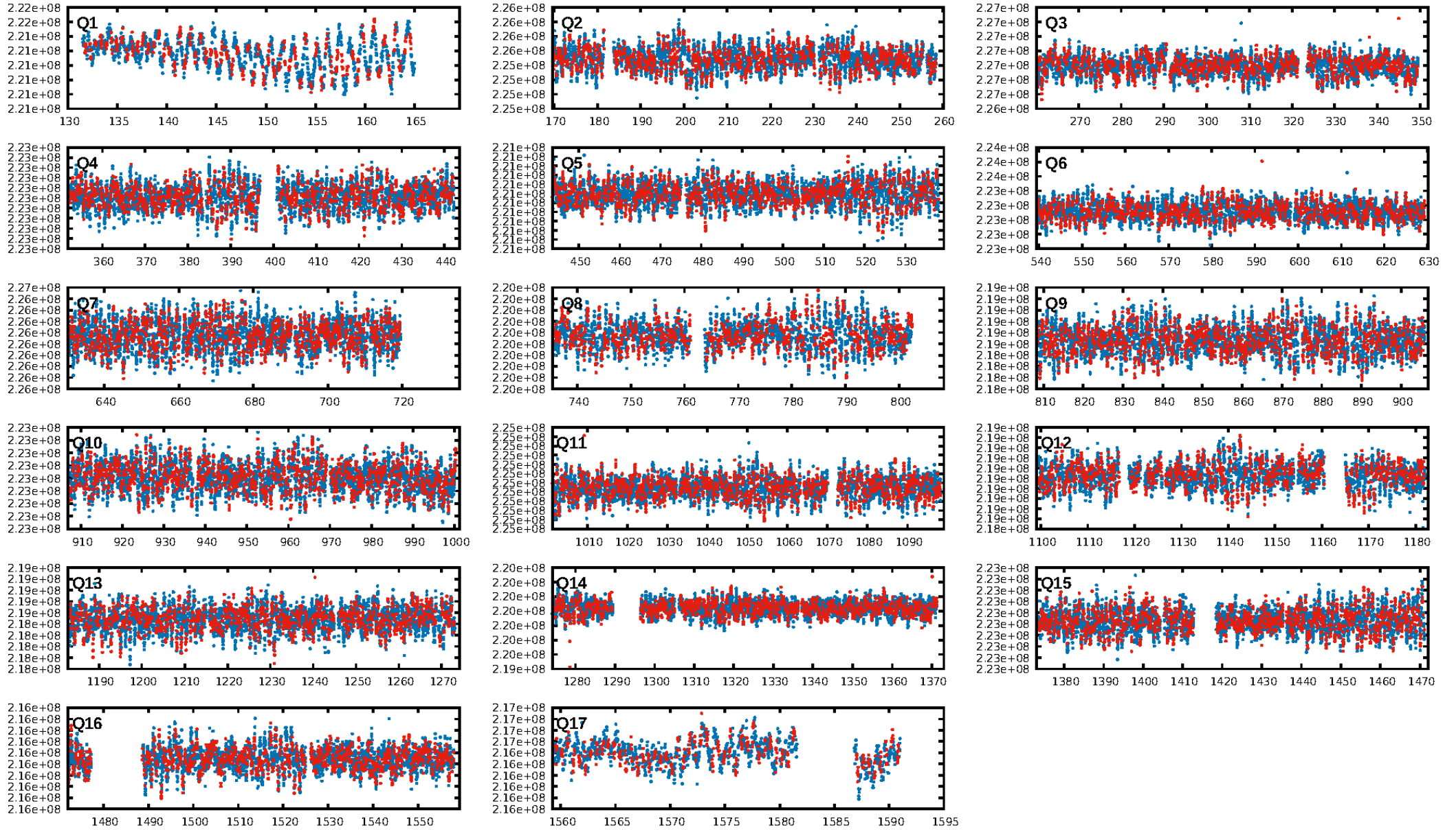
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 7.78e-13
RollingBand-fgt: 1.00 [2402/2414]
GhostDiagnostic-chr: -18.72
Centroid-sig: 0.7%
Centroid-so: 1.447 arcsec [1.75σ]
OotOffset-rm: 1.982 arcsec [3.25σ]
KicOffset-rm: 1.937 arcsec [2.88σ]
OotOffset-st: 2/4/3/3 [12]
KicOffset-st: 2/4/3/3 [12]
DiffImageQuality-fgm: 0.42 [5/12]
DiffImageOverlap-fno: 1.00 [17/17]

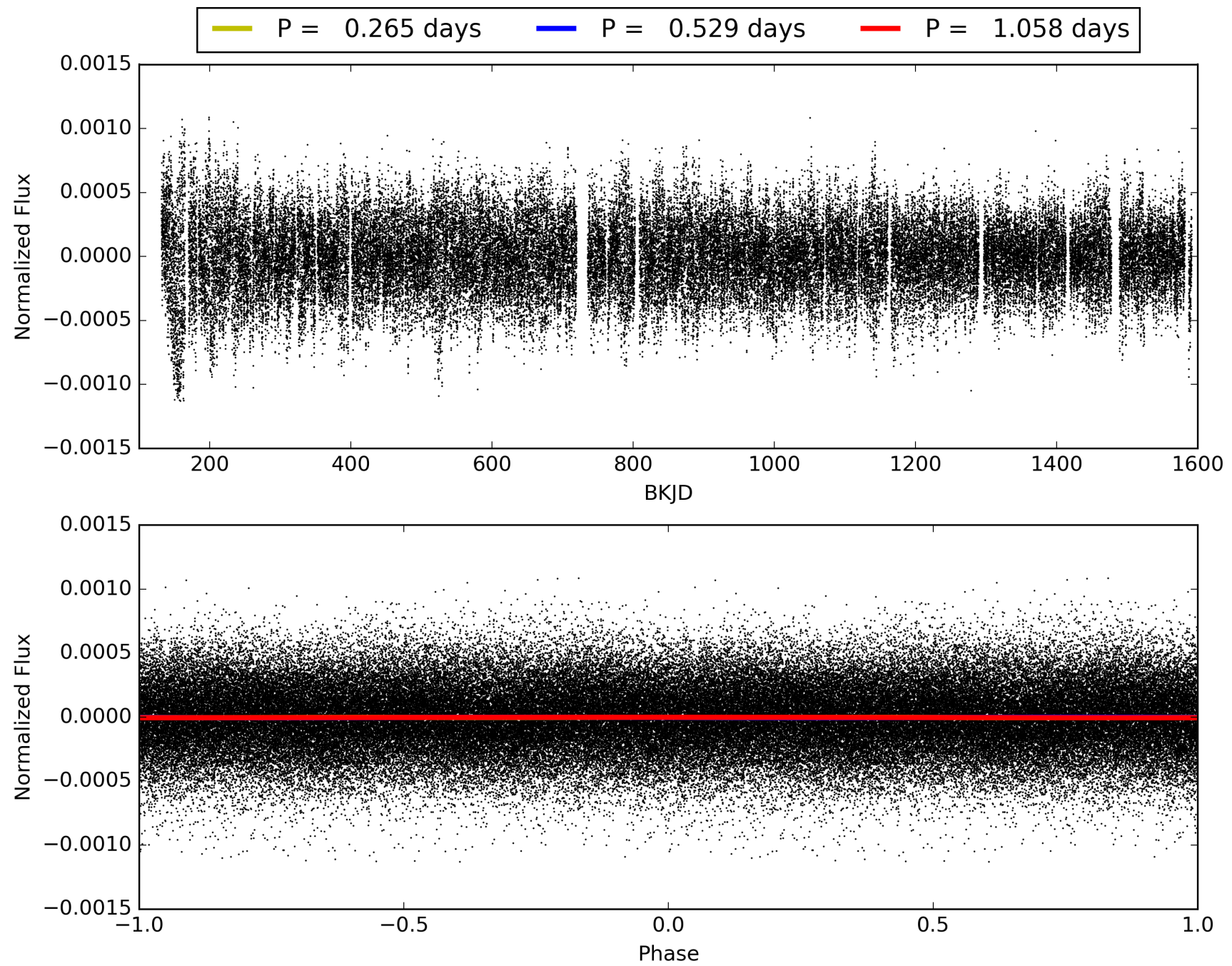
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 02:08:35 Z

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

TCE 007551637-01, PDC Light Curves

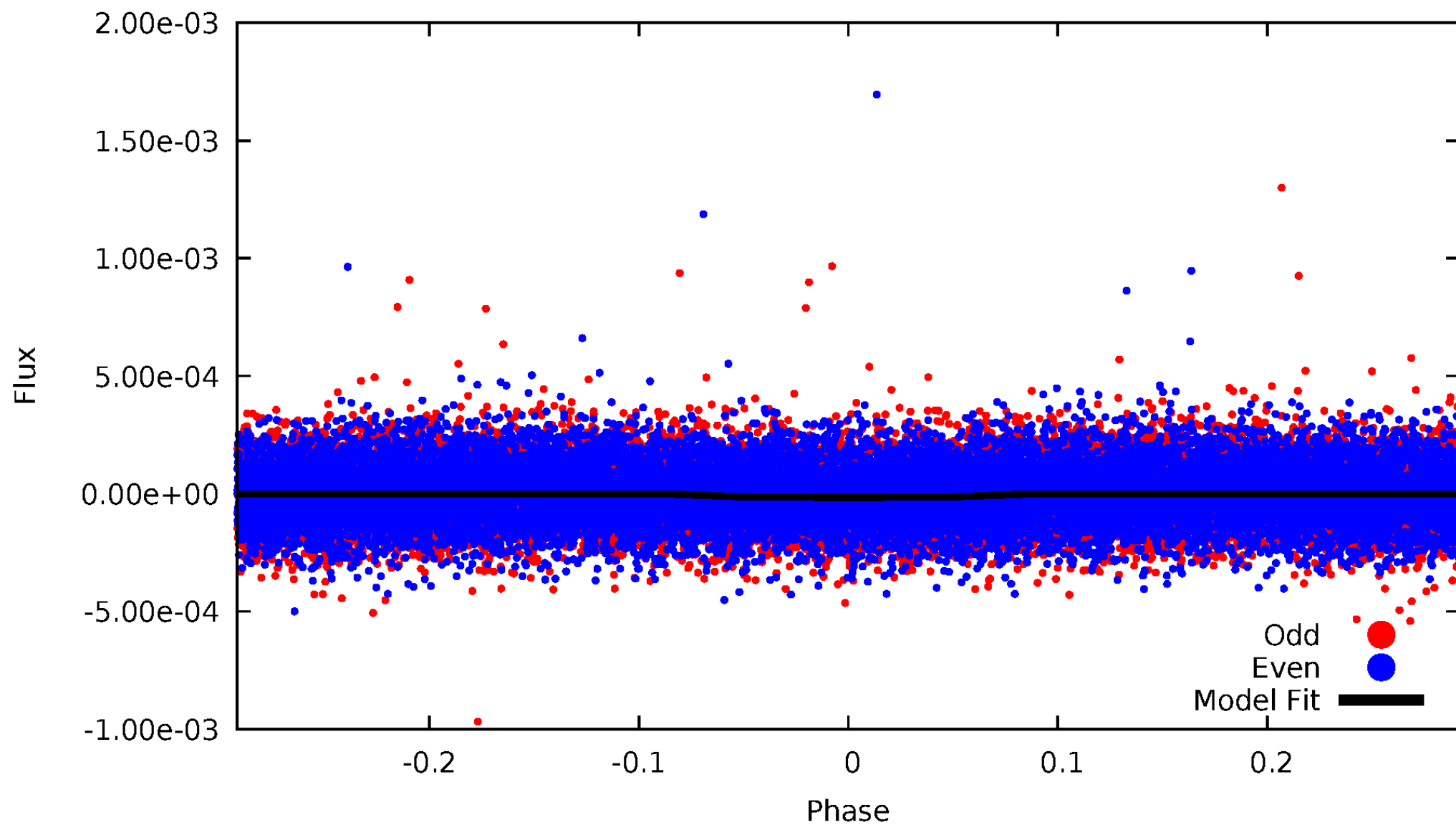


TCE 007551637-01



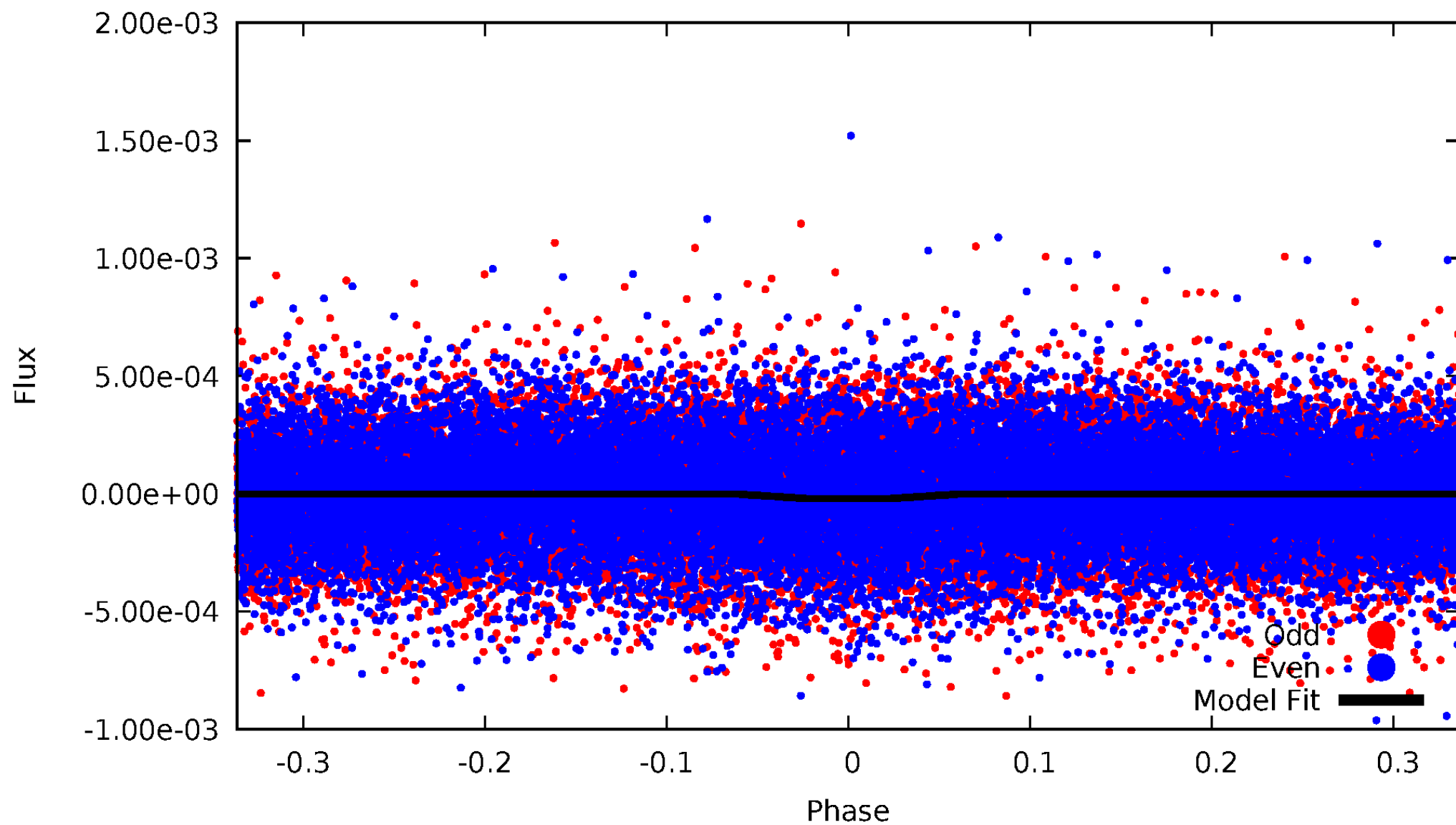
DV Odd/Even

TCE 007551637-01



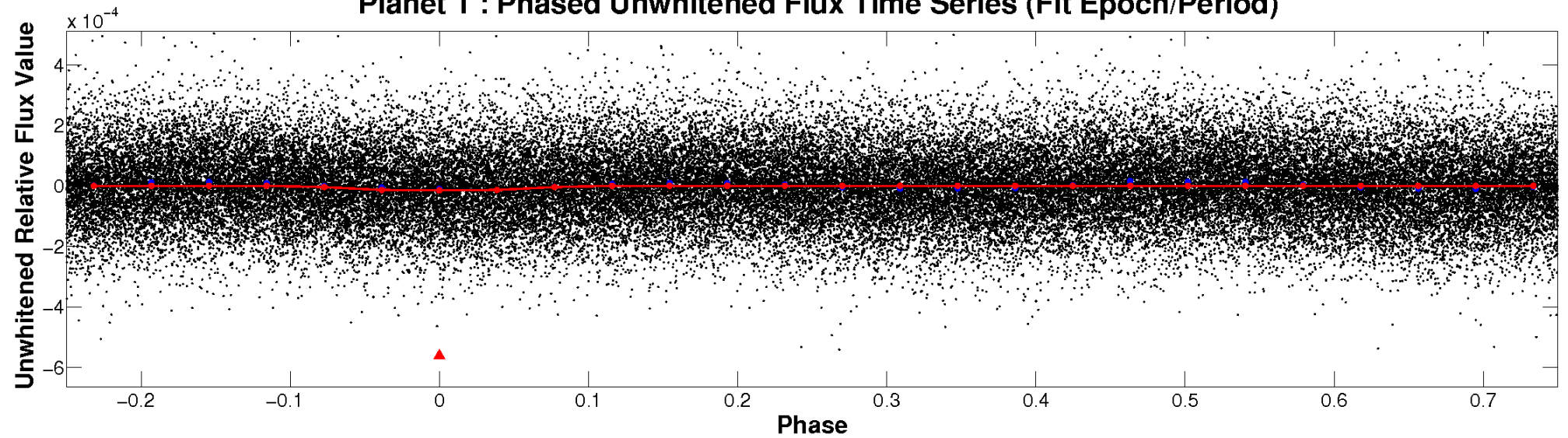
ALT Odd/Even

TCE 007551637-01

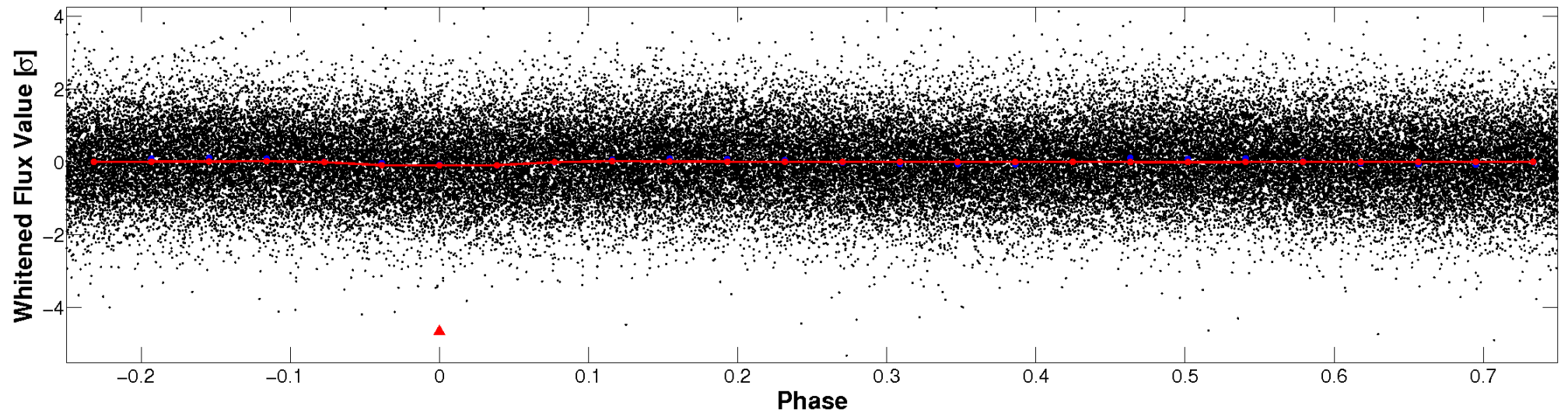


Non-Whitened Vs. Whitened Light Curve

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

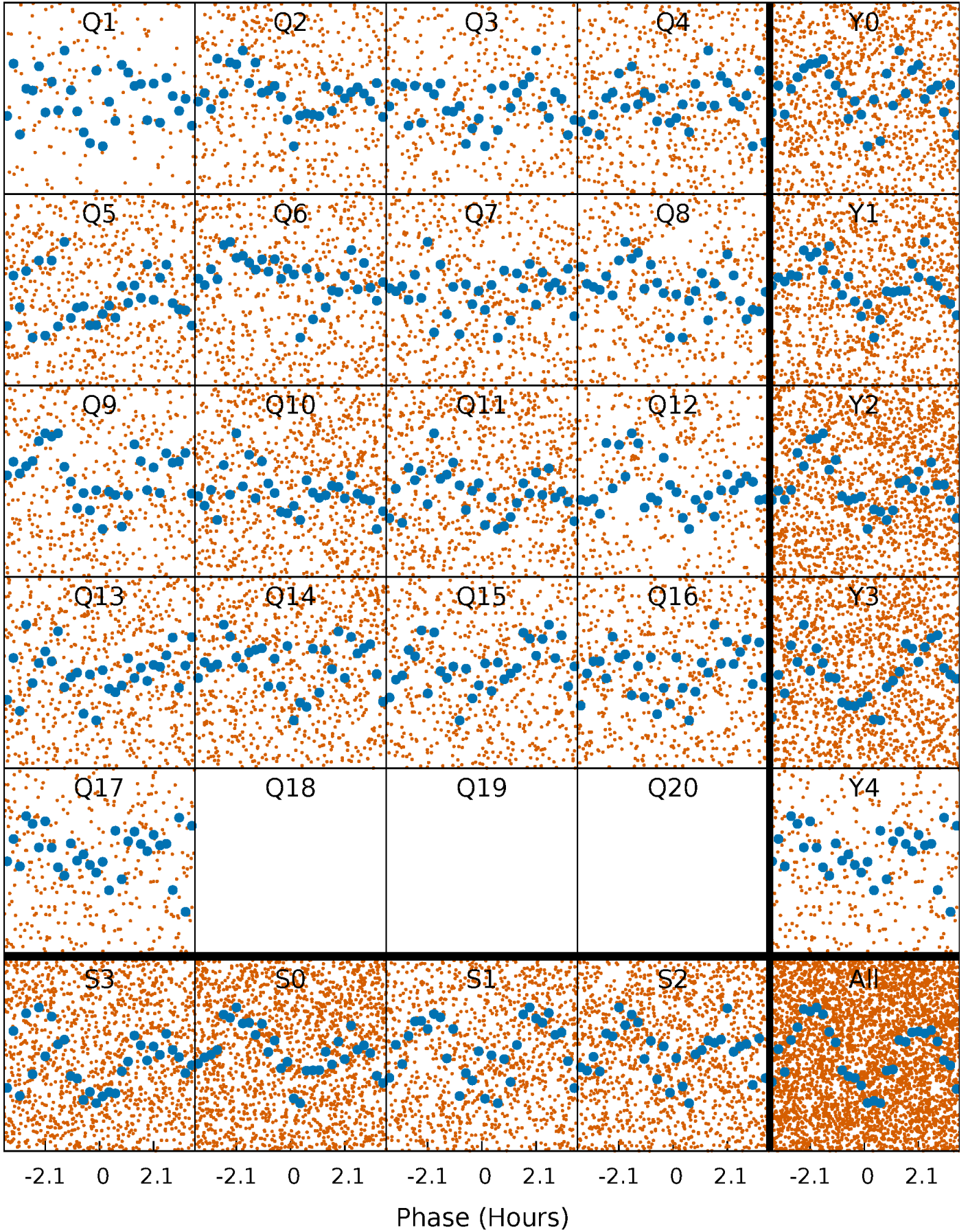


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



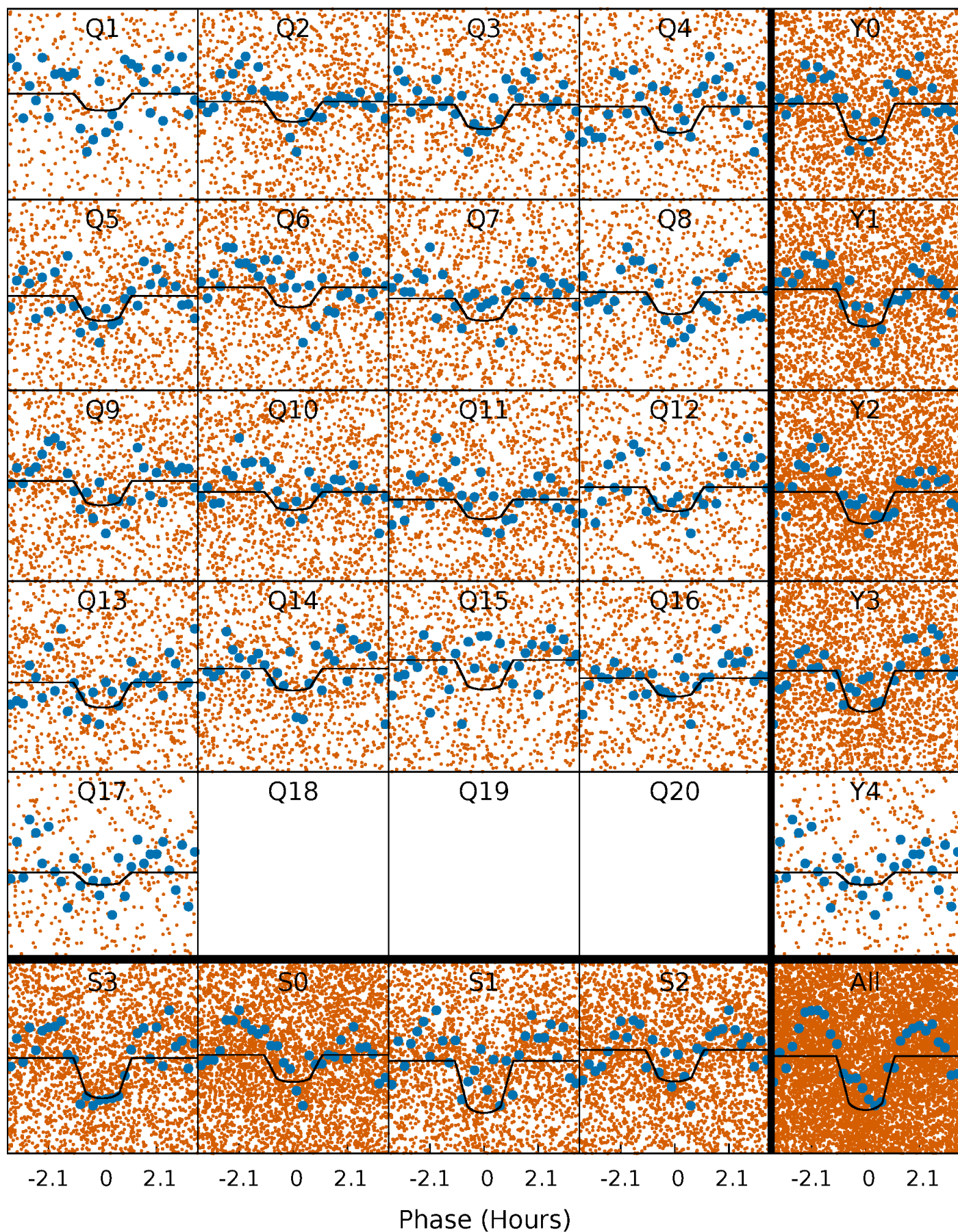
PDC Quarter-Phased Transit Curves

TCE 007551637-01 P= 0.529215 Days $T_0=131.763540$ (BKJD)



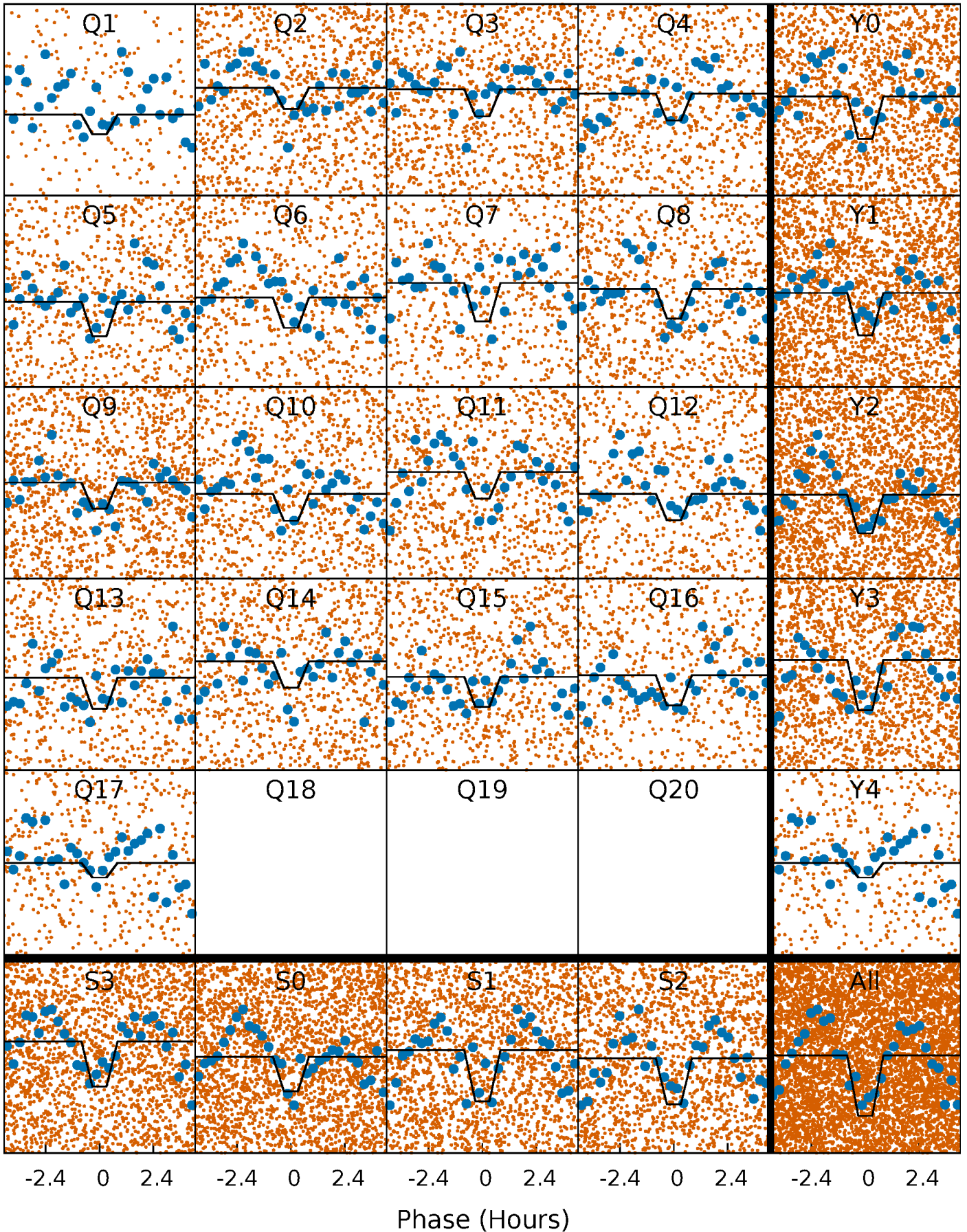
DV Quarter-Phased Transit Curves

TCE 007551637-01 P= 0.529215 Days $T_0=131.763540$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

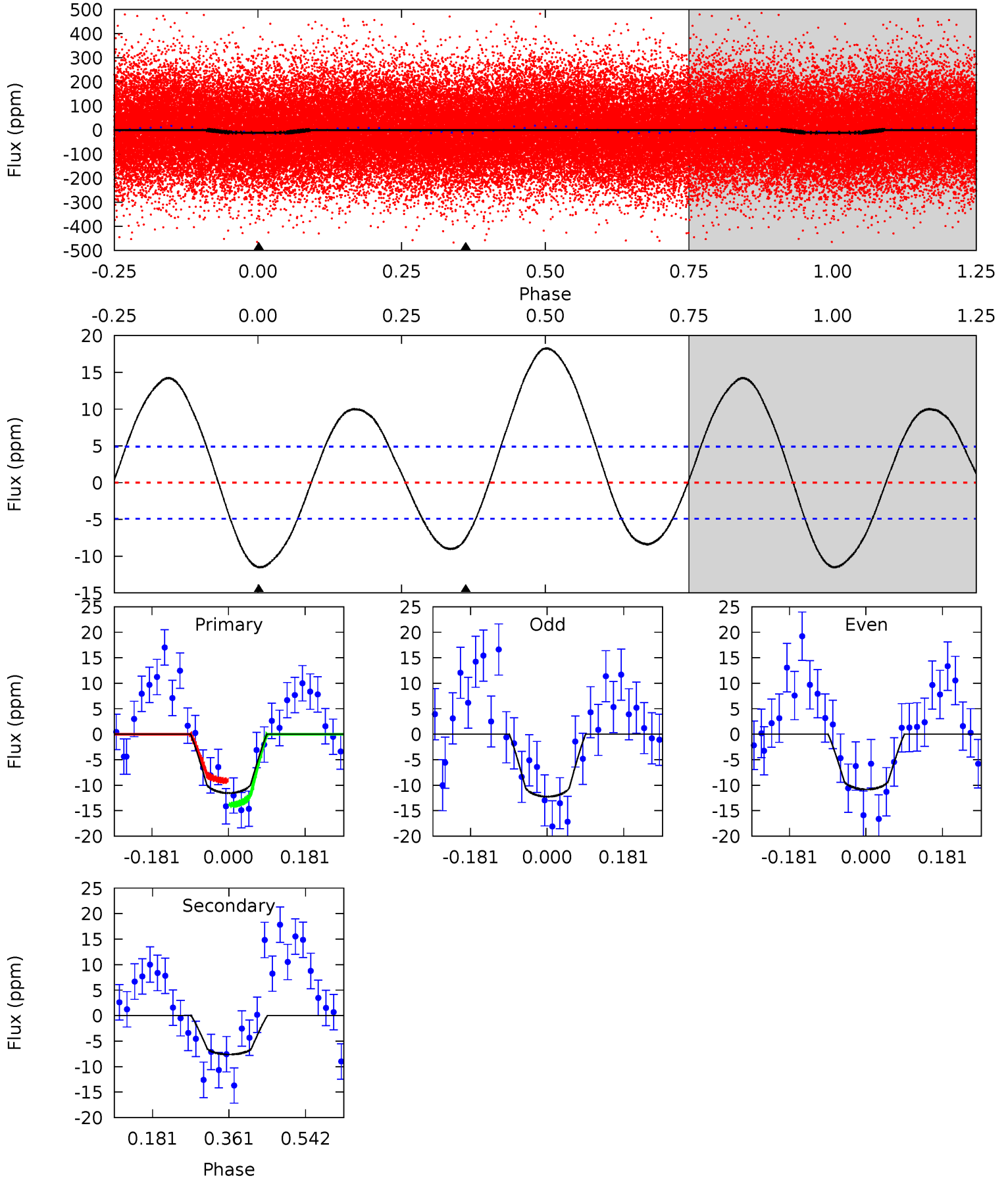
TCE 007551637-01 P= 0.529219 Days $T_0=131.766422$ (BKJD)



DV Model-Shift Uniqueness Test

007551637-01, P = 0.529215 Days, E = 131.234325 Days

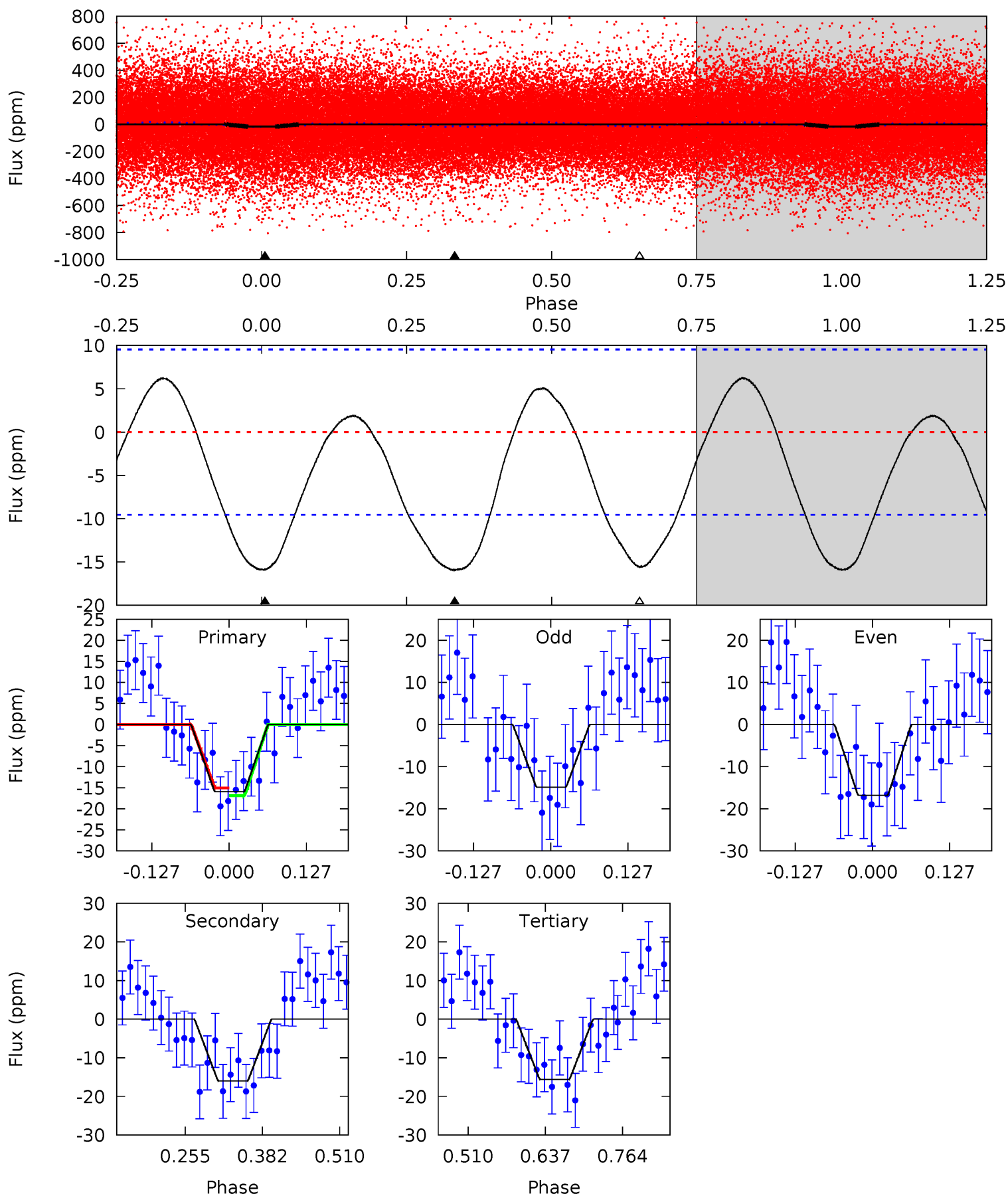
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.4	6.89	0	0	4.44	1.34	6.68	10.4	10.4	6.89	6.89	0.65	0.89	0.61	2.21



Alt Model-Shift Uniqueness Test

007551637-01, P = 0.529219 Days, E = 131.237203 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.54	7.57	7.38	0	4.51	1.52	3.39	0.16	7.54	0.19	7.57	0.47	1.71	0.28	0.44



Stellar Parameters For KIC 007551637

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7535^{+235}_{-313}	$3.517^{+0.783}_{-0.087}$	$-1.080^{+0.300}_{-0.300}$	$3.711^{+0.604}_{-2.415}$	$1.650^{+0.145}_{-0.579}$	$0.045^{+0.756}_{-0.014}$
	+3%/-4%	+22%/-2%	+28%/-28%	+16%/-65%	+9%/-35%	+1661%/-30%
Source	KIC0	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 007551637-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-8 ± 1	$1.43^{+0.78}_{-0.61}$	6857^{+650}_{-1147}	4665^{+1901}_{-9275}	$0.463^{+0.830}_{-0.271}$
Alt.	-16 ± 2	$1.53^{+0.66}_{-0.66}$	6923^{+593}_{-1141}	6194^{+2179}_{-1526}	$0.832^{+1.522}_{-0.420}$

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 $A_{obs} \gg 1.0$

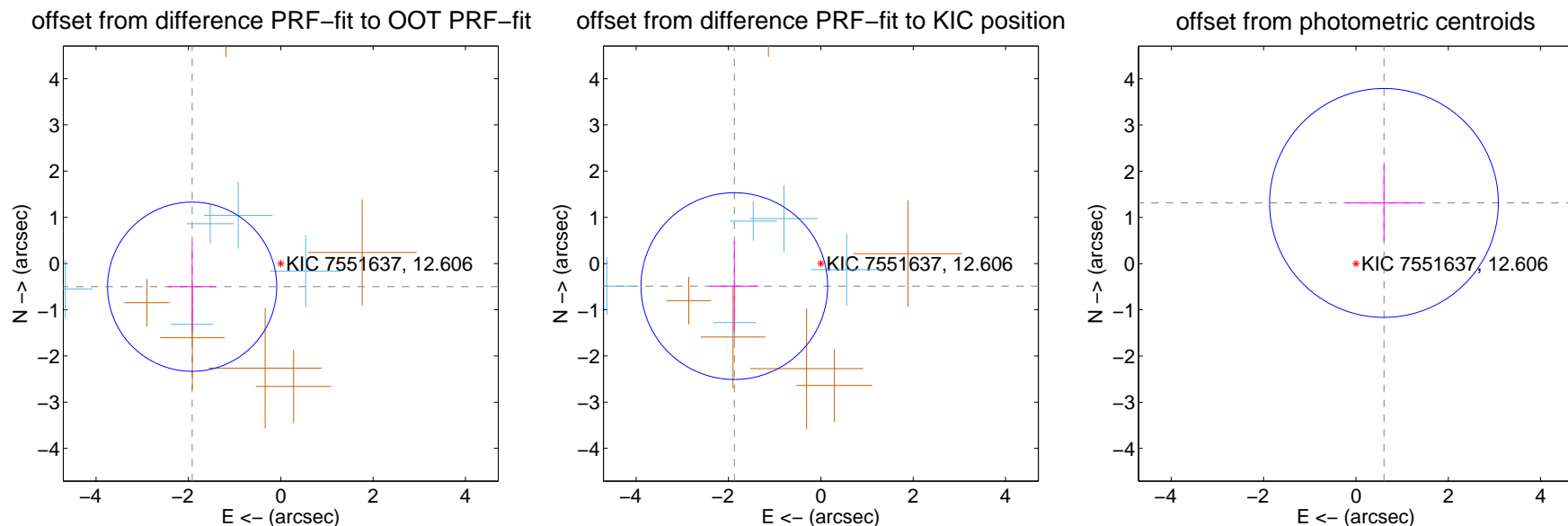
DV Centroid Data

Supplemental centroid analysis for 007551637-01. Kepler magnitude: 12.61. Transit SNR 8.50

There are 5 quarters with good PRF difference image offsets

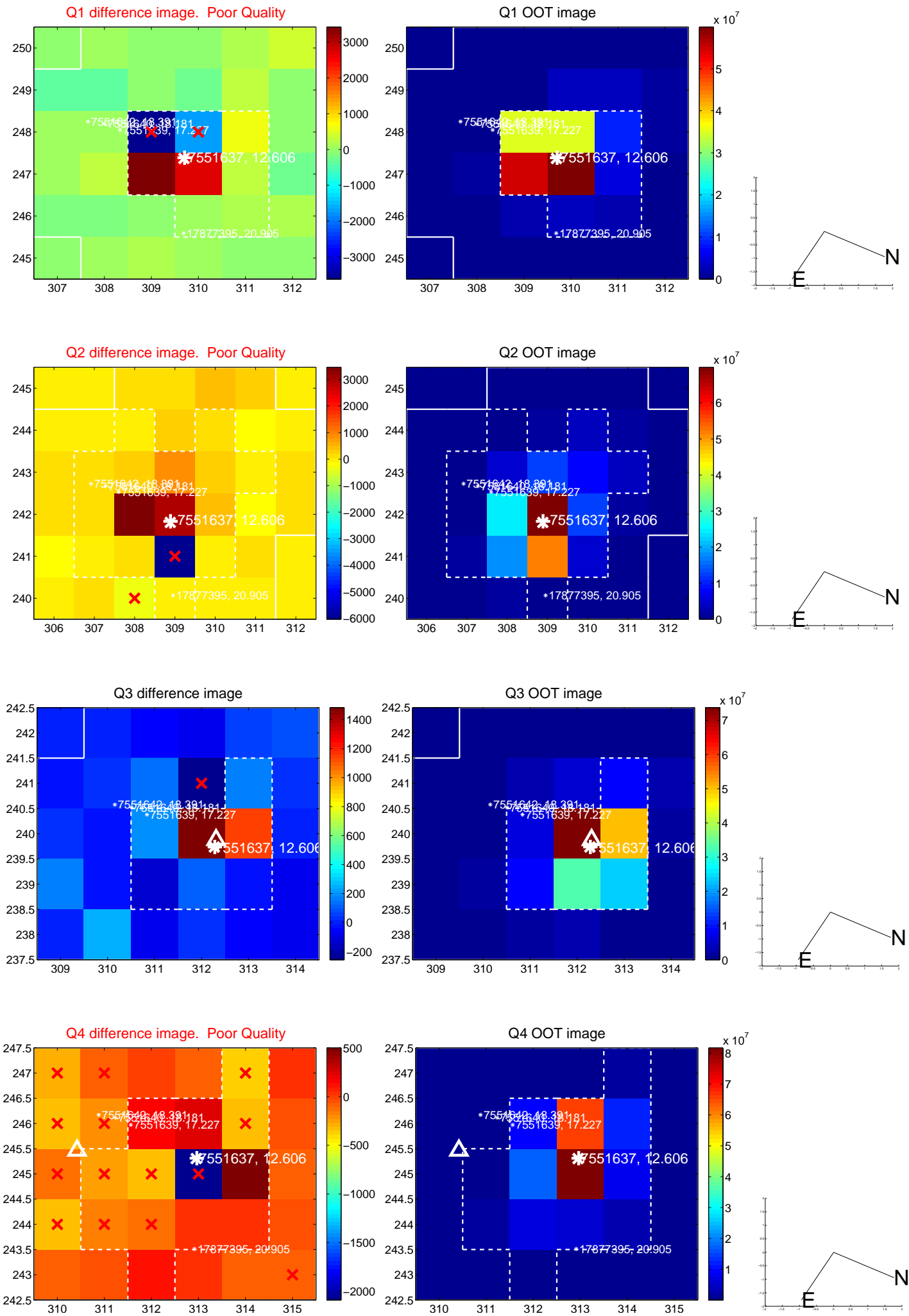
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.982 ± 0.610	3.25	1.918 ± 0.523	-0.501 ± 0.951
PRF-fit source offset from KIC position	1.937 ± 0.673	2.88	1.874 ± 0.531	-0.488 ± 0.976
photometric centroid source offset	1.45 ± 0.83	1.75	-0.61 ± 0.83	1.31 ± 0.82

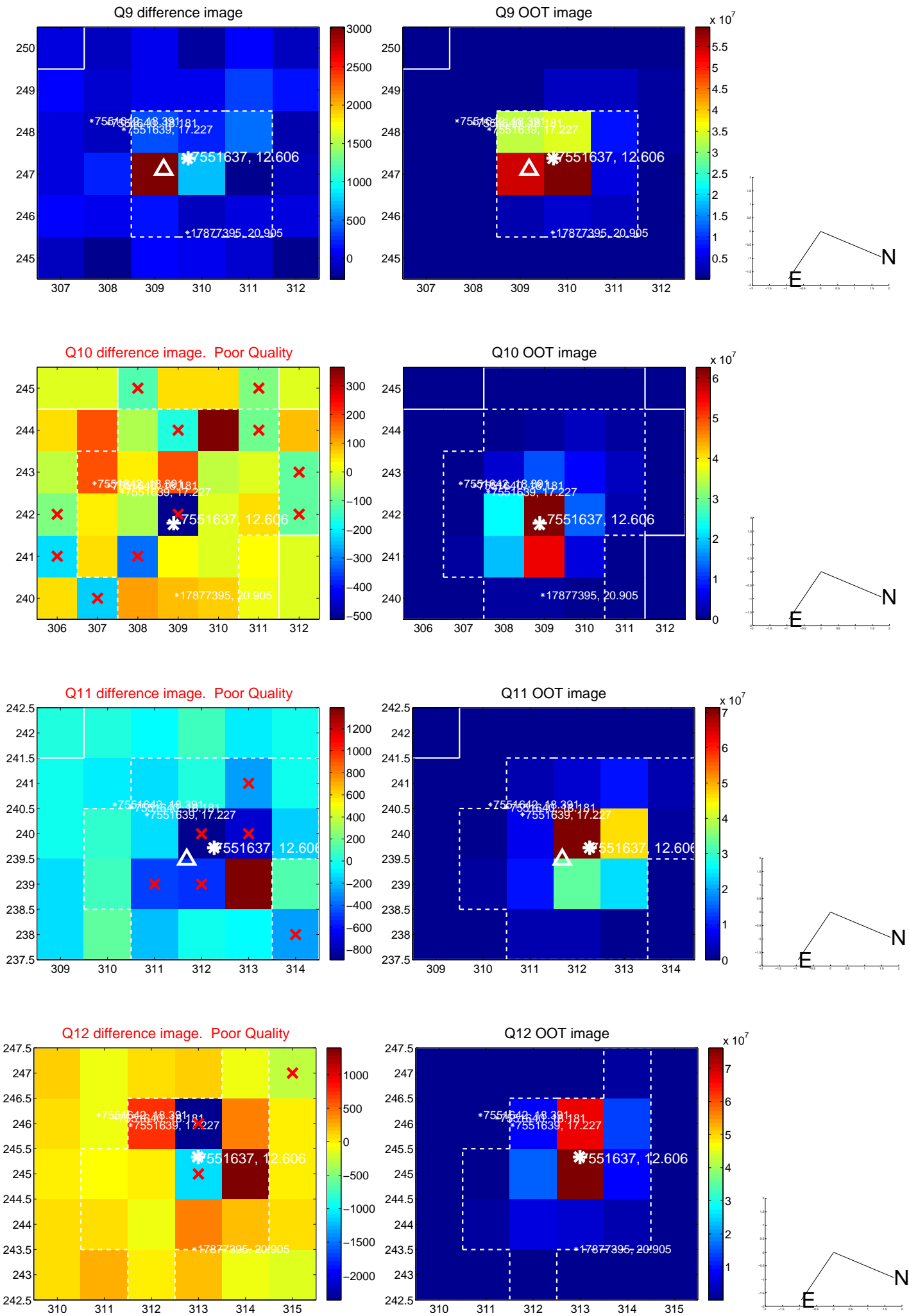


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

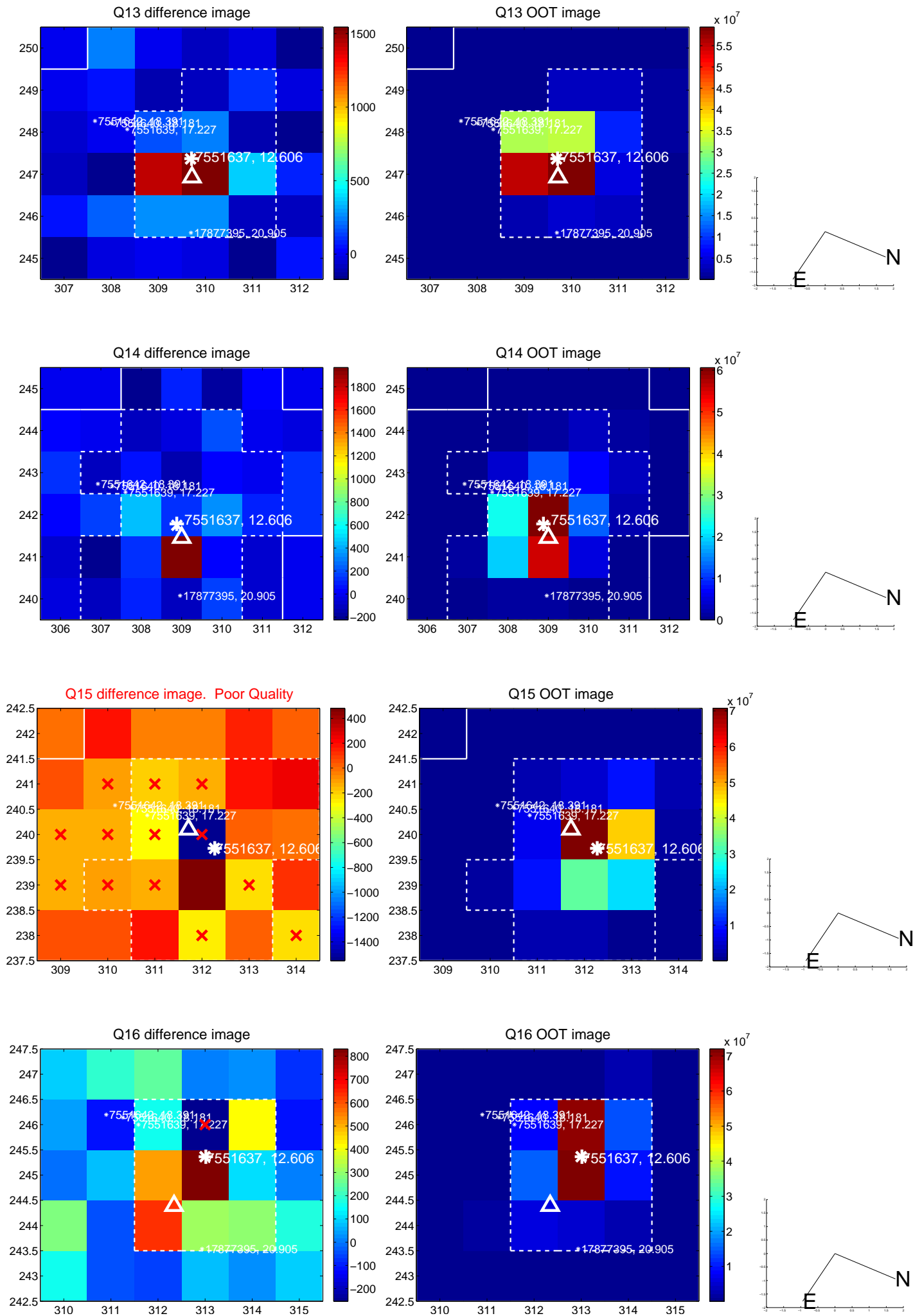
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



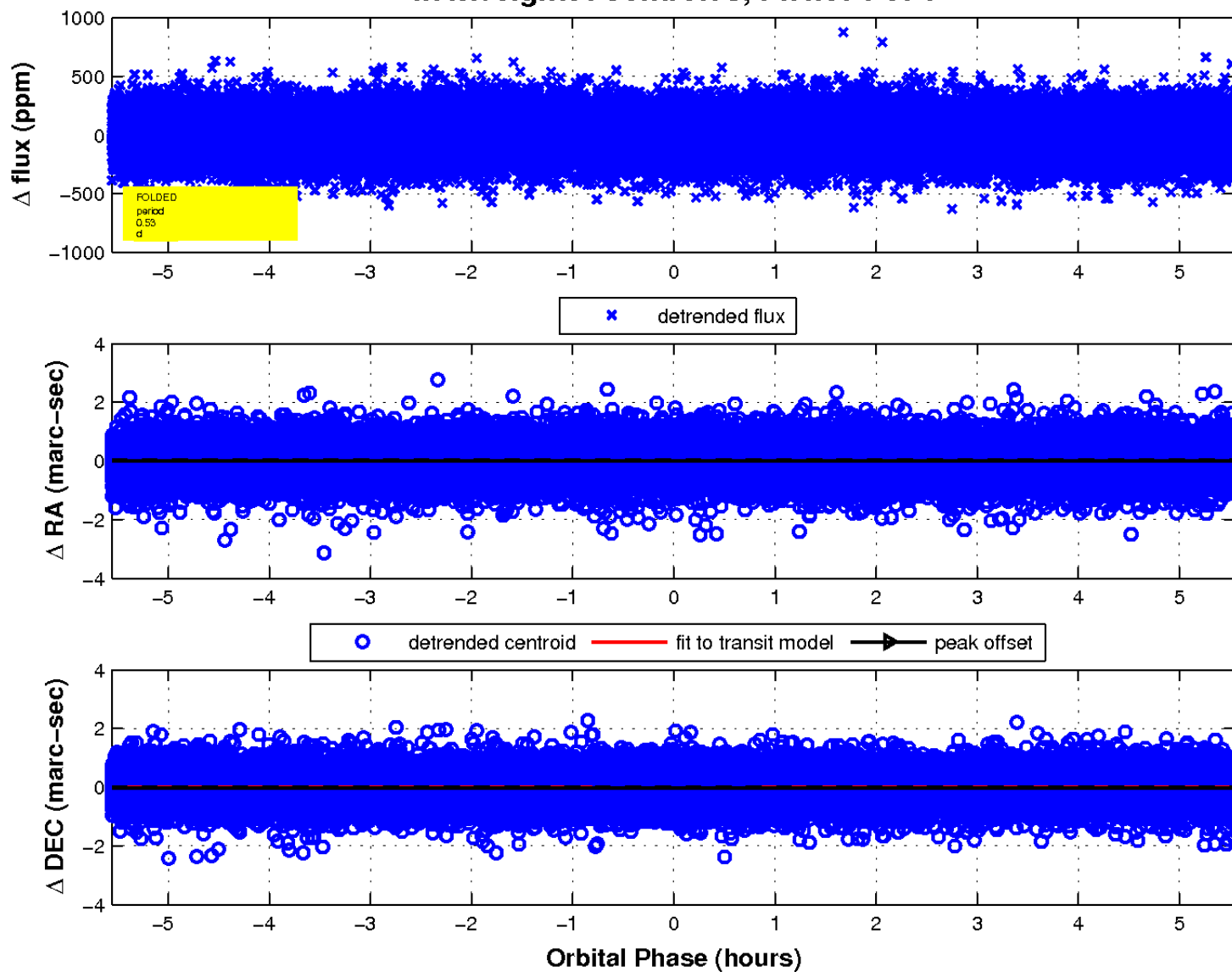
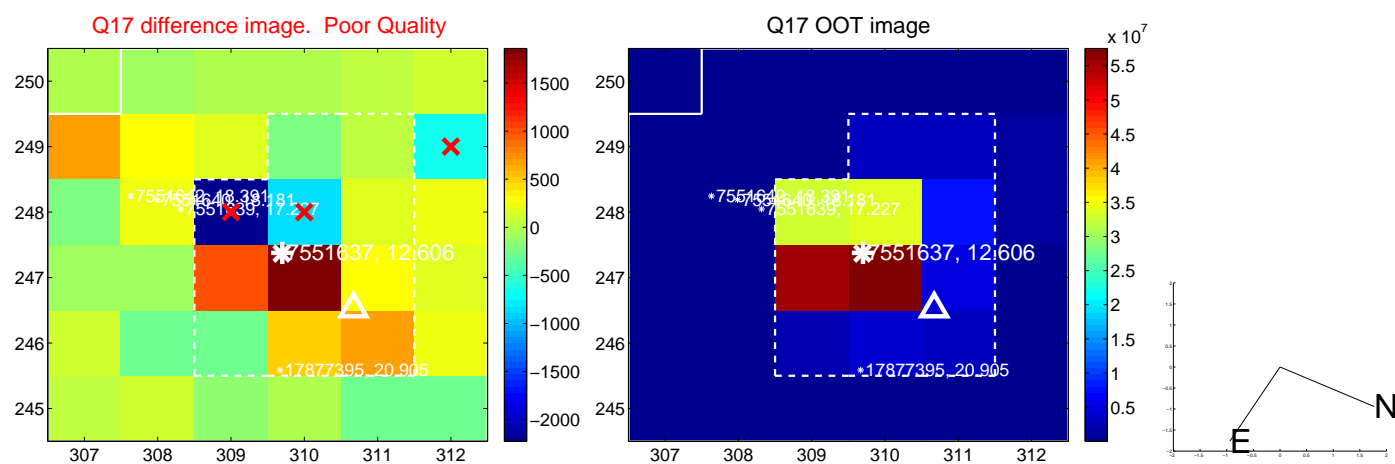
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

