

KIC 007117506

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})
007117506-01	OBS	No	0.566789	131.816413	42.8	2.564	7.7	8.3	0.49	3801	0.37	400.47

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007117506-01	OBS	FP	0.00	1	0	1	1	LPP_DV—CENT_FEW_DIFFS—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.

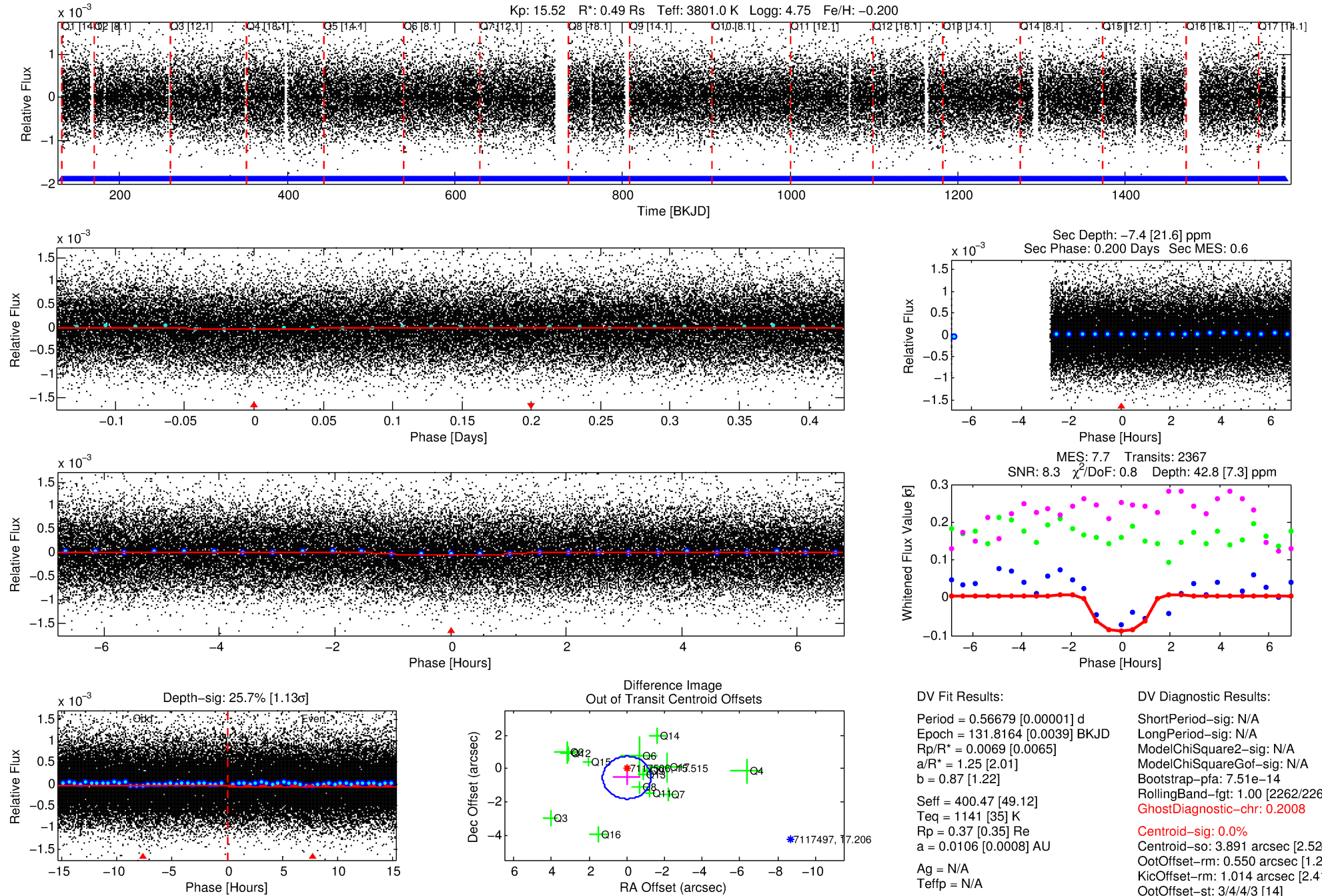
Ephemeris Match Information For 007117506-01

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
007117506-01	7117506	RR-Lyr-pri	7198959	1:1	1007.0	211	139	7.86	15.51	14495.00	Direct-PRF	0	1.77	19.81

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: 7117506 Candidate: 1 of 1 Period: 0.567 d



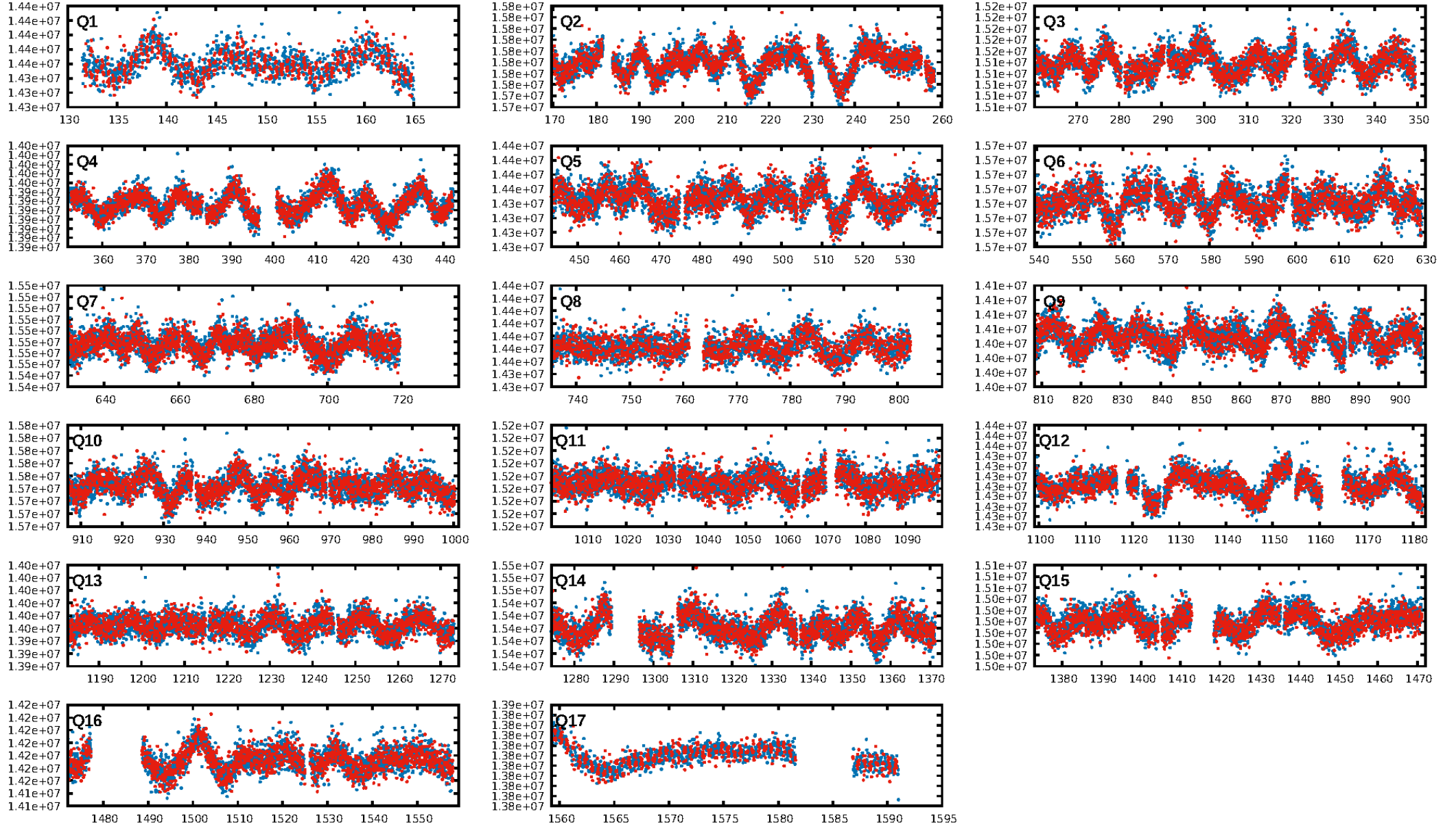
DV Fit Results:

Period = 0.56679 [0.00001] d
Epoch = 131.8164 [0.0039] BKJD
Rp/R* = 0.0069 [0.0065]
a/R* = 1.25 [2.01]
b = 0.87 [1.22]
Seff = 400.47 [49.12]
Teff = 1141 [35] K
Rp = 0.37 [0.35] Re
a = 0.0106 [0.0008] AU
Ag = N/A
Teffp = N/A

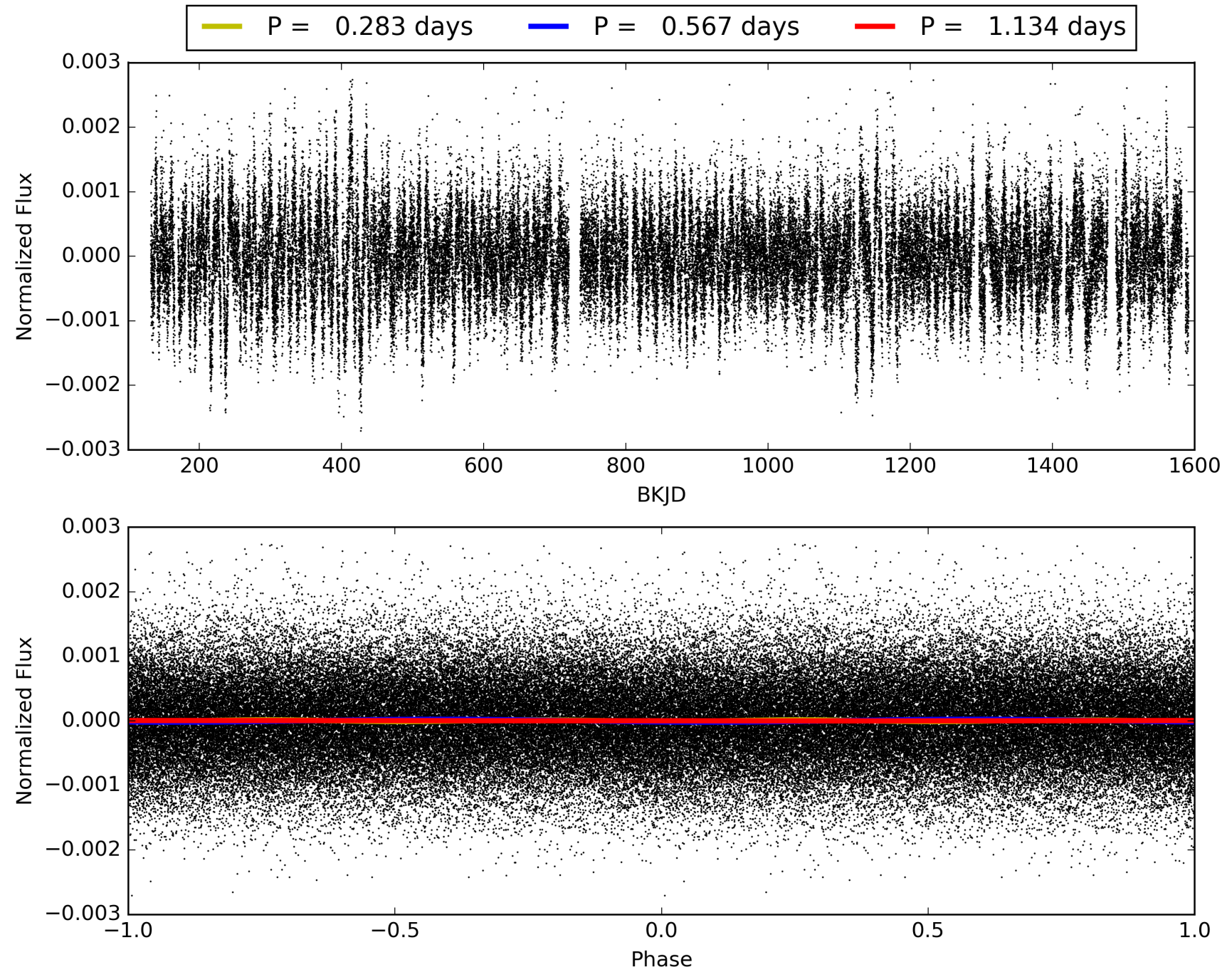
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 7.51e-14
RollingBand-fgt: 1.00 [2262/2262]
GhostDiagnostic-chr: 0.2008
Centroid-sig: 0.0%
Centroid-so: 3.891 arcsec [2.52σ]
OotOffset-rm: 0.550 arcsec [1.29σ]
KicOffset-rm: 1.014 arcsec [2.41σ]
OotOffset-st: 3/4/4/3 [14]
KicOffset-st: 3/4/4/3 [14]
DiffImageQuality-fgm: 0.00 [0/14]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 007117506-01, PDC Light Curves

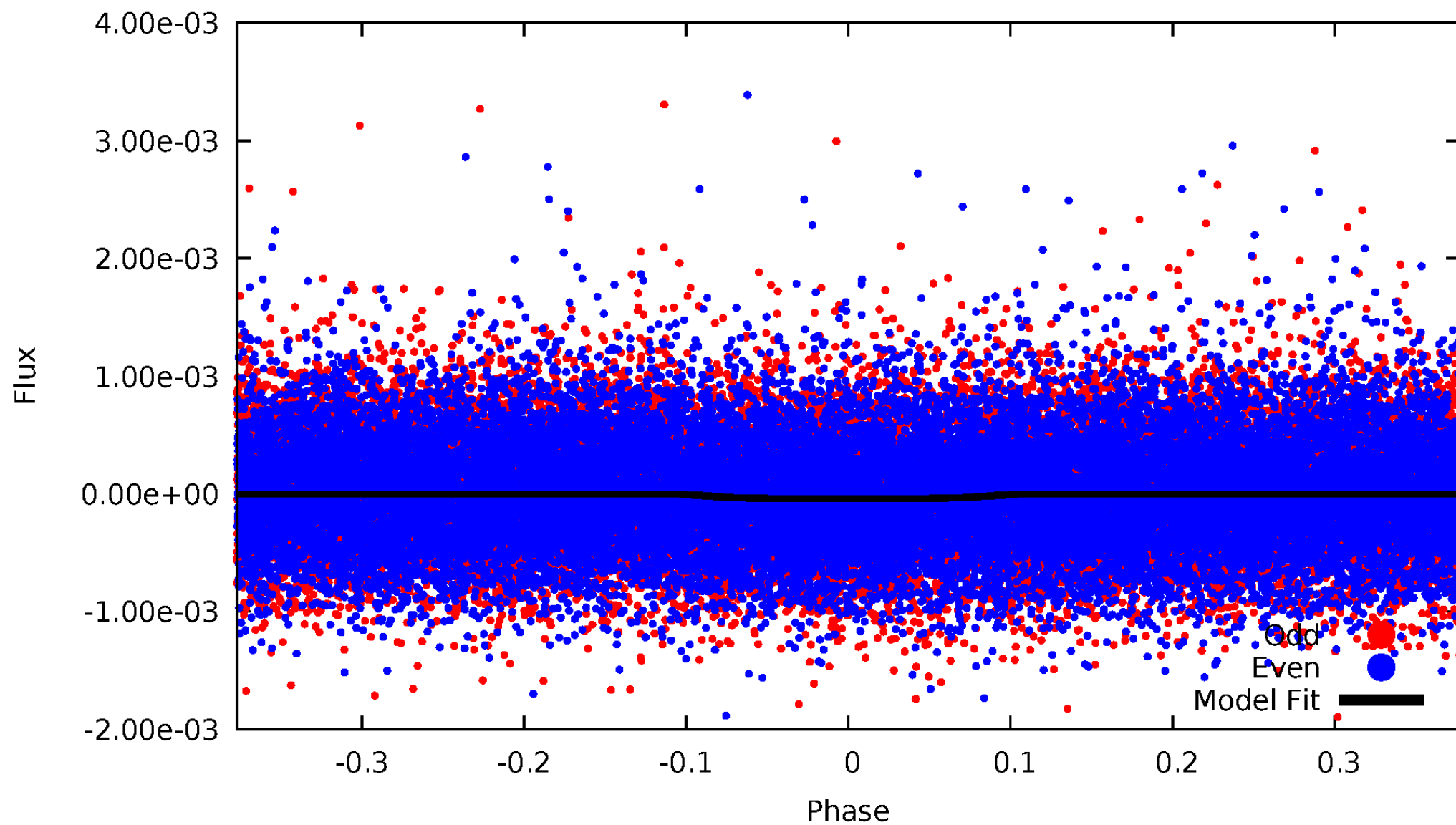


TCE 007117506-01



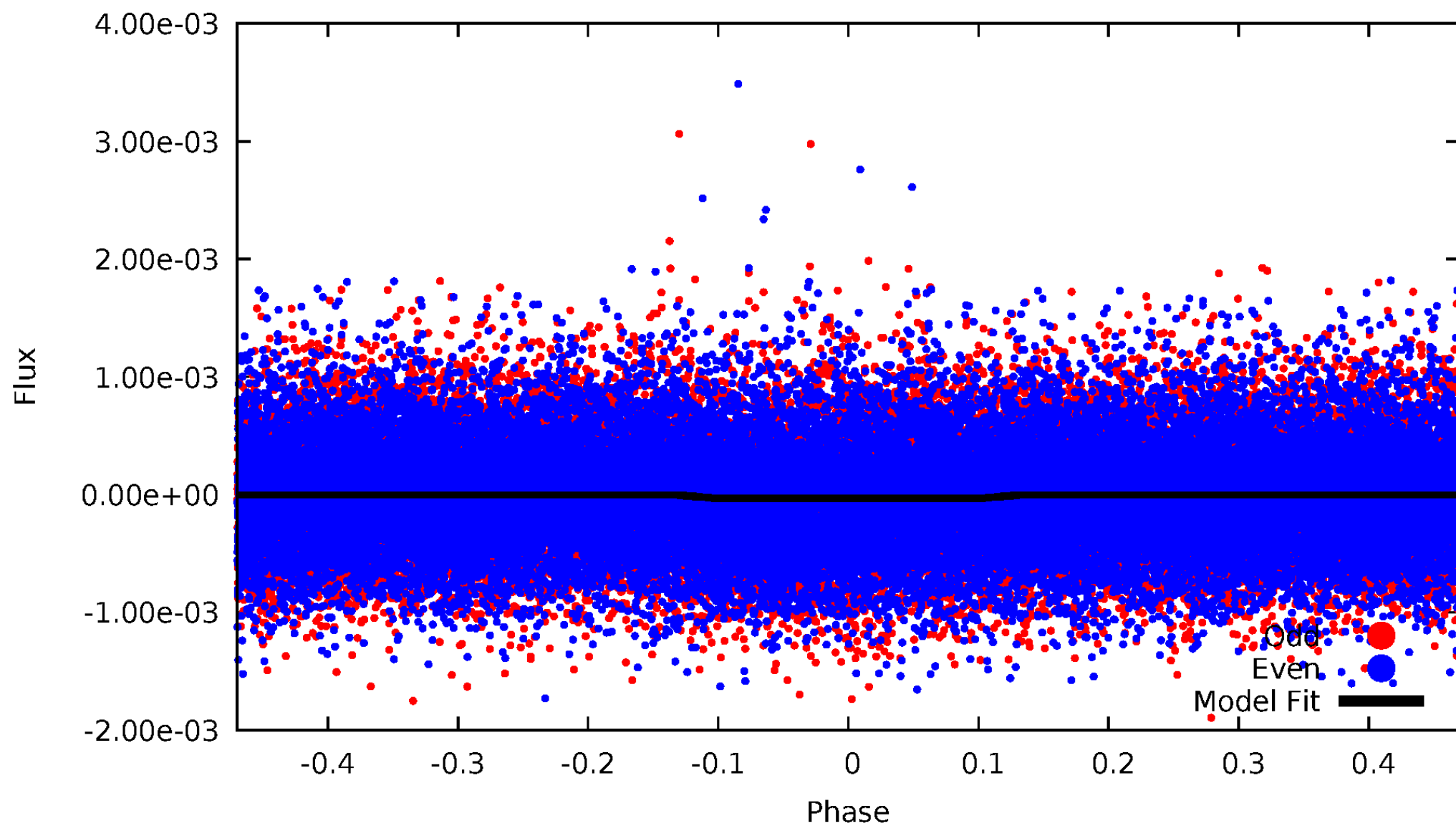
DV Odd/Even

TCE 007117506-01

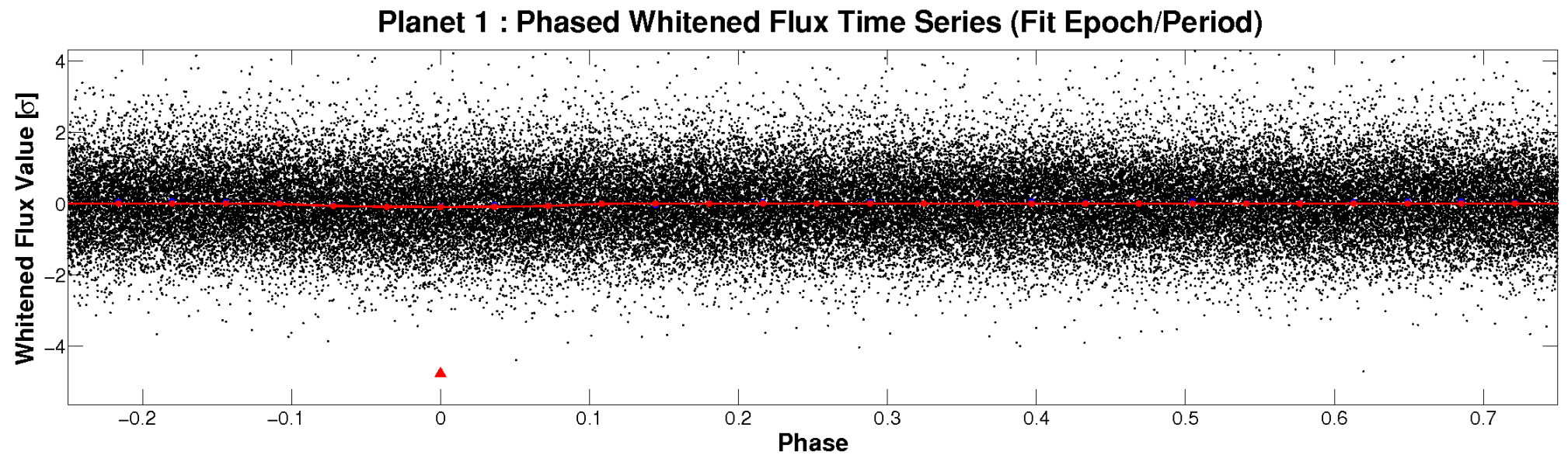
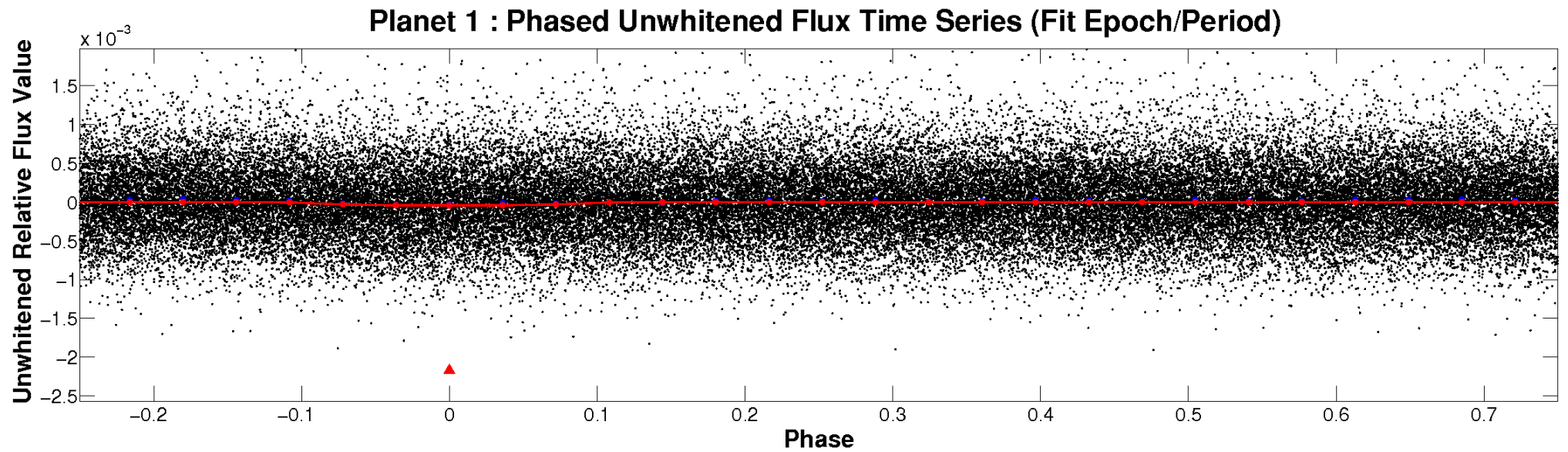


ALT Odd/Even

TCE 007117506-01

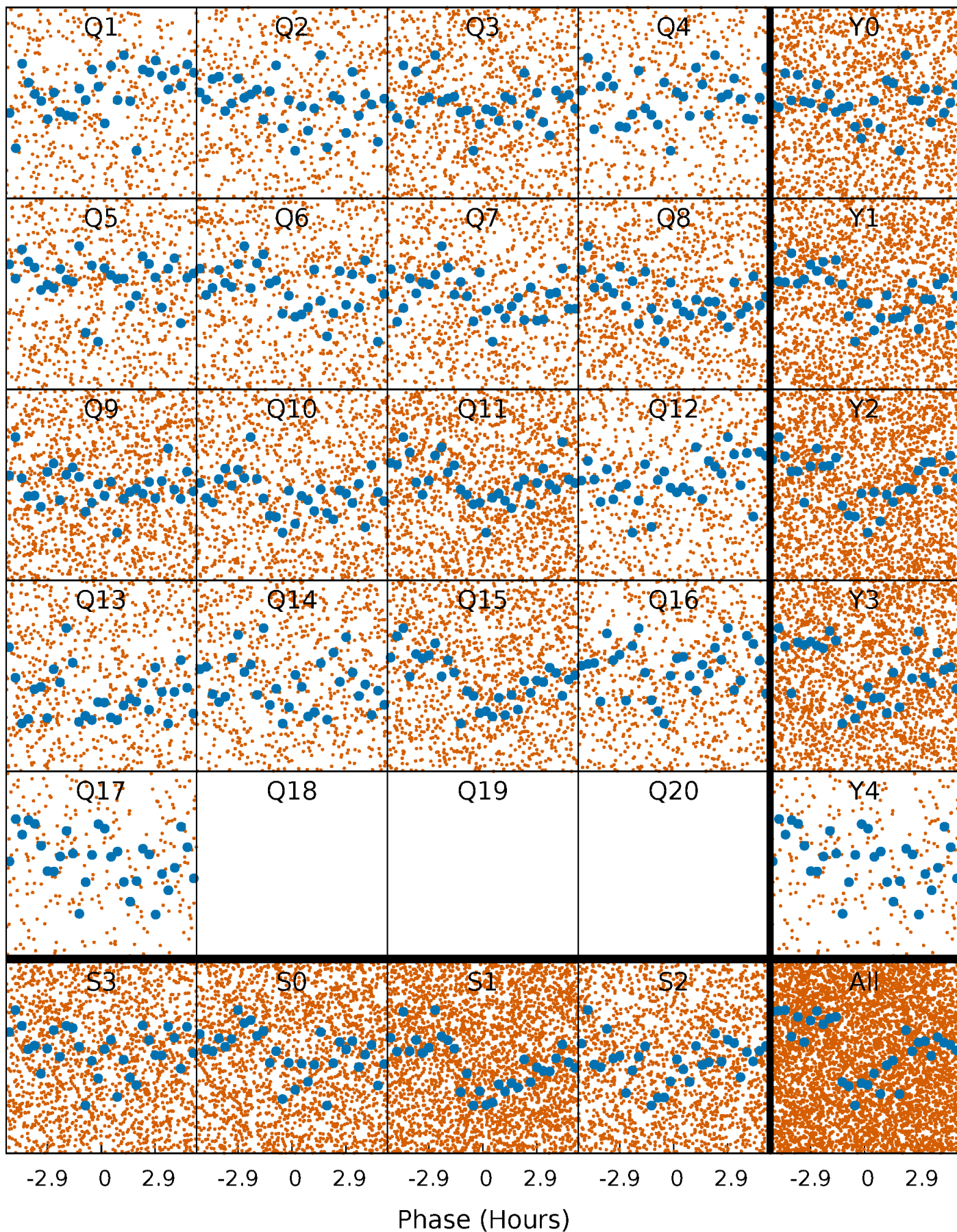


Non-Whitened Vs. Whitened Light Curve



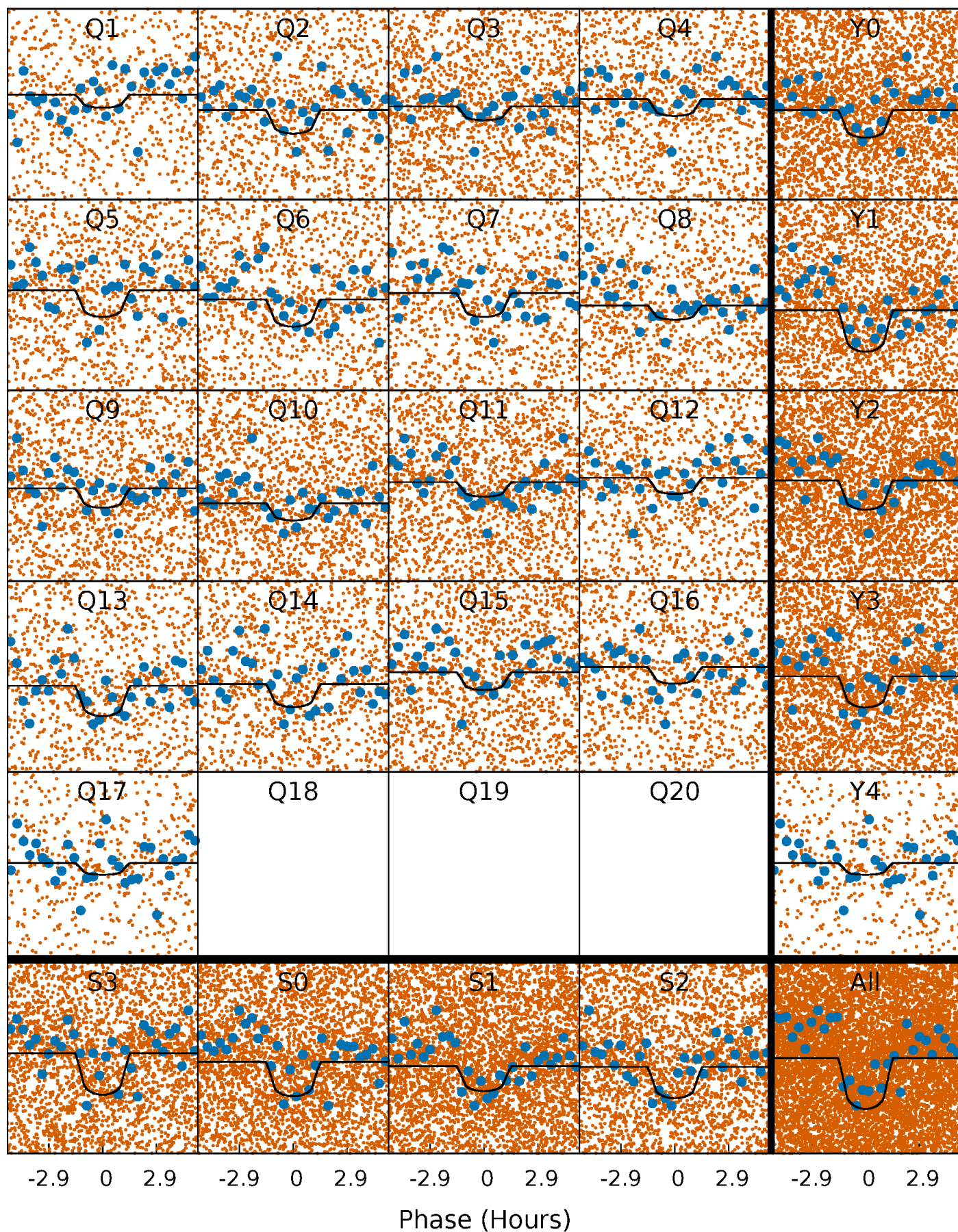
PDC Quarter-Phased Transit Curves

TCE 007117506-01 P= 0.566789 Days $T_0=131.816413$ (BKJD)



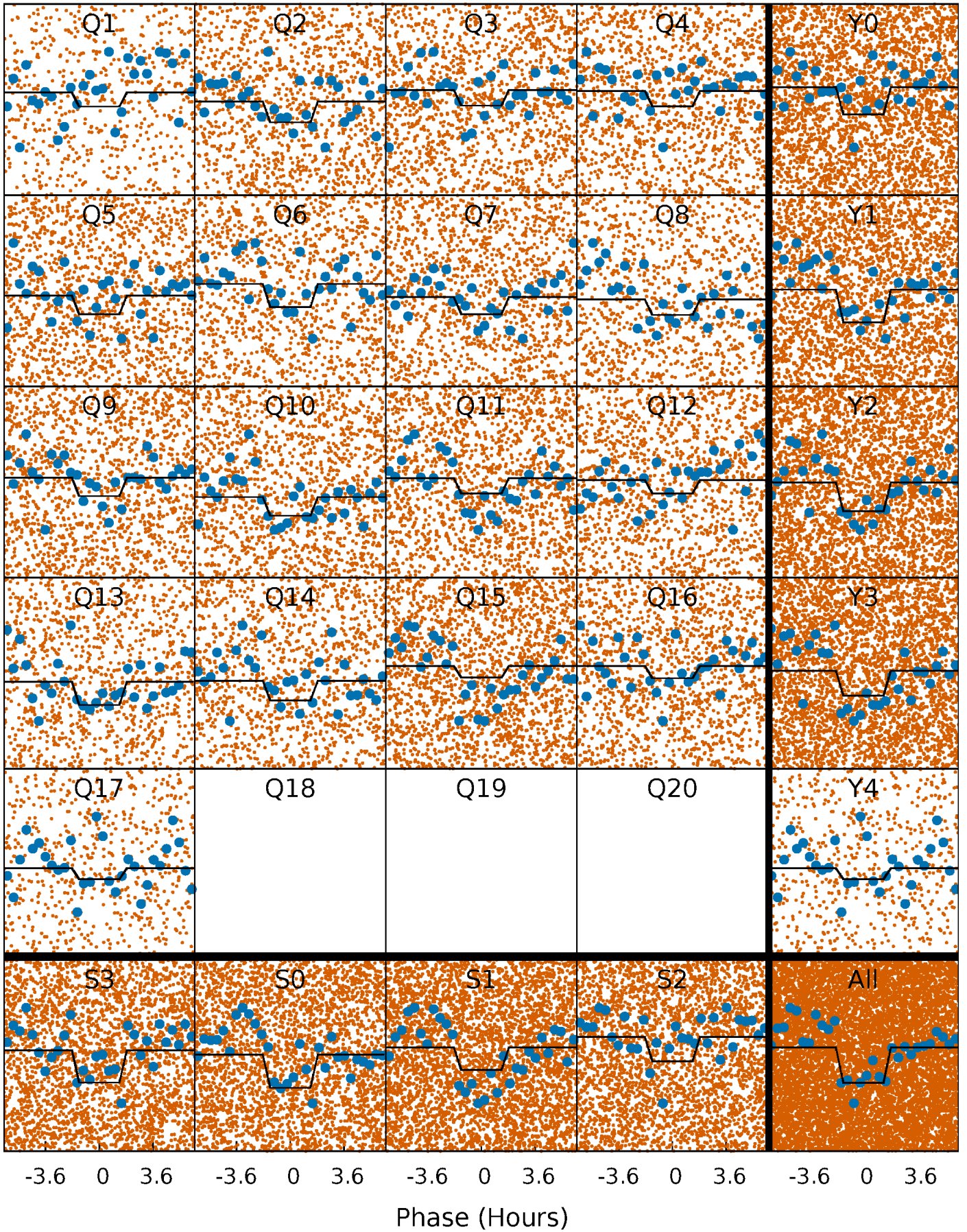
DV Quarter-Phased Transit Curves

TCE 007117506-01 P= 0.566789 Days $T_0=131.816413$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

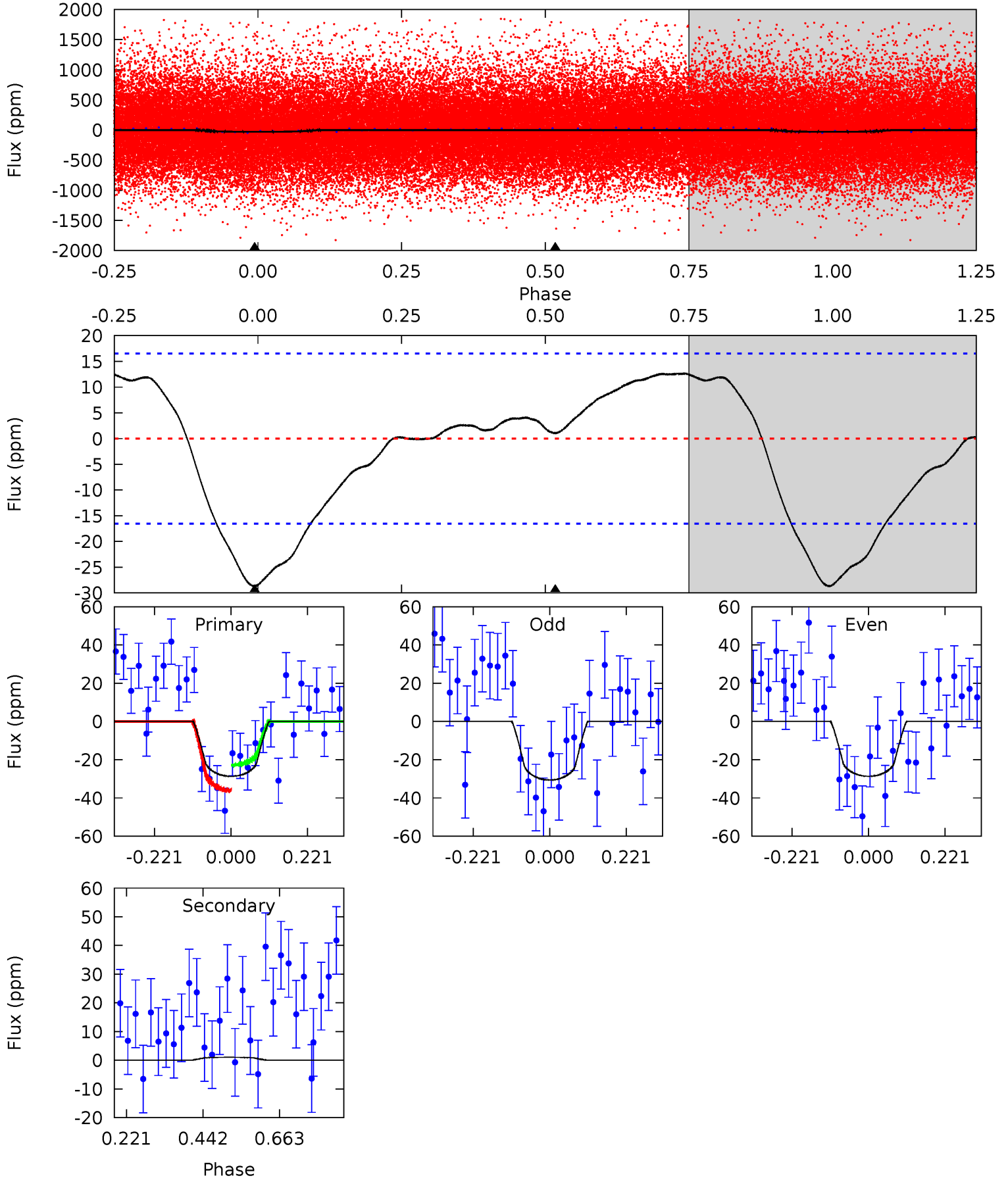
TCE 007117506-01 P= 0.566782 Days $T_0=131.841968$ (BKJD)



DV Model-Shift Uniqueness Test

007117506-01, P = 0.566789 Days, E = 131.249624 Days

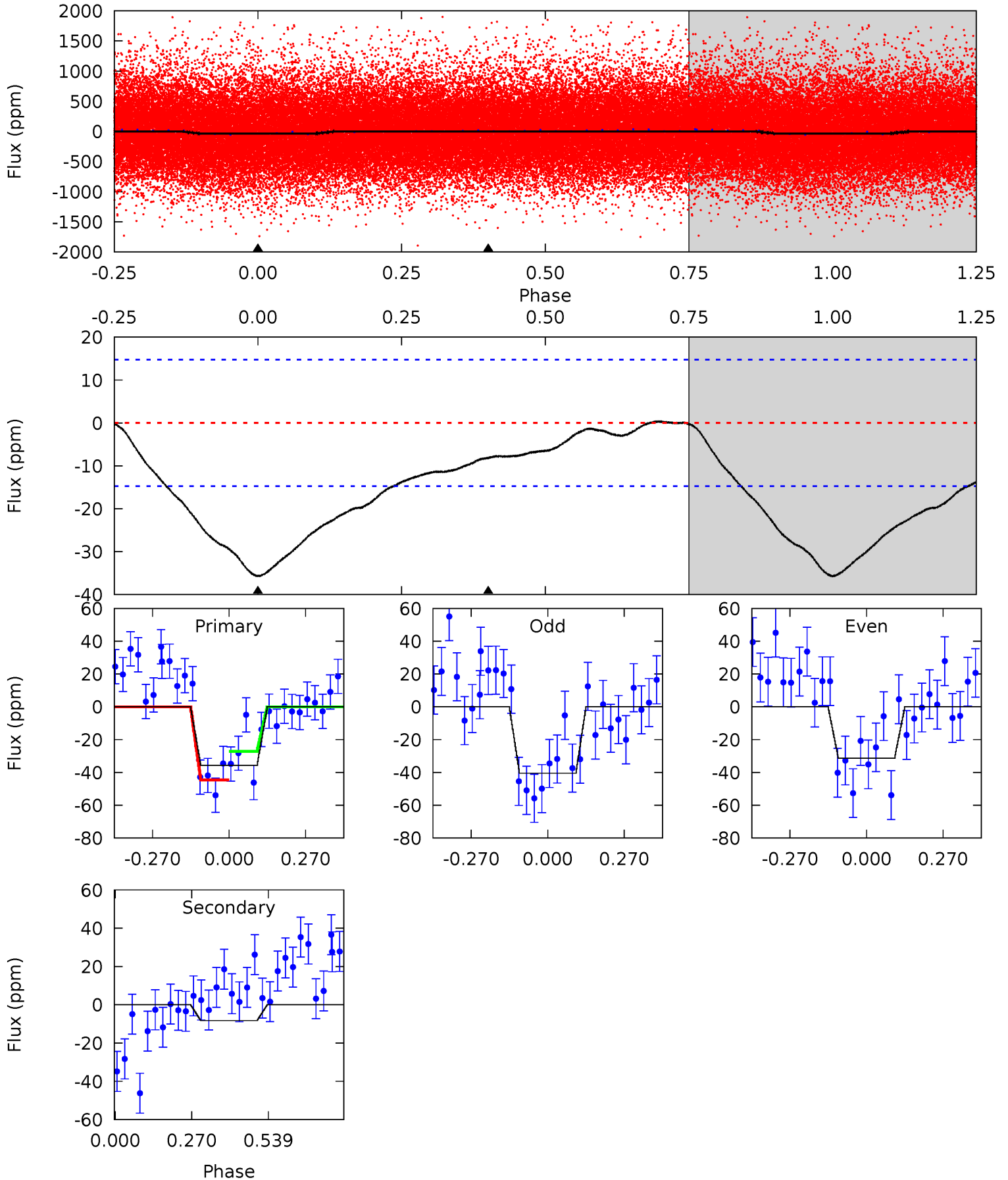
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.63	-0.28	0	0	4.40	1.22	1.52	7.63	7.63	-0.28	-0.28	0.26	0.88	0.31	1.76



Alt Model-Shift Uniqueness Test

007117506-01, P = 0.566782 Days, E = 131.275186 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.6	2.44	0	0	4.35	1.10	0.19	10.6	10.6	2.44	2.44	1.37	0.83	0.01	2.52



Stellar Parameters For KIC 007117506

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3801^{+60}_{-68}	$4.752^{+0.052}_{-0.028}$	$-0.200^{+0.200}_{-0.200}$	$0.492^{+0.035}_{-0.044}$	$0.499^{+0.041}_{-0.041}$	$5.898^{+1.466}_{-0.812}$
	+2%/-2%	+1%/-1%	+100%/-100%	+7%/-9%	+8%/-8%	+25%/-14%
Source	PHO2	PHO2	PHO2	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 007117506-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	1 ± 4	$0.43^{+0.31}_{-0.26}$	1586^{+36}_{-39}	-2278^{+4707}_{-523}	$-0.238^{+1.462}_{-2.366}$
Alt.	-8 ± 3	$0.39^{+0.31}_{-0.25}$	1585^{+38}_{-36}	2785^{+1127}_{-481}	$3.122^{+23.317}_{-2.229}$

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 $A_{obs} \gg 1.0$

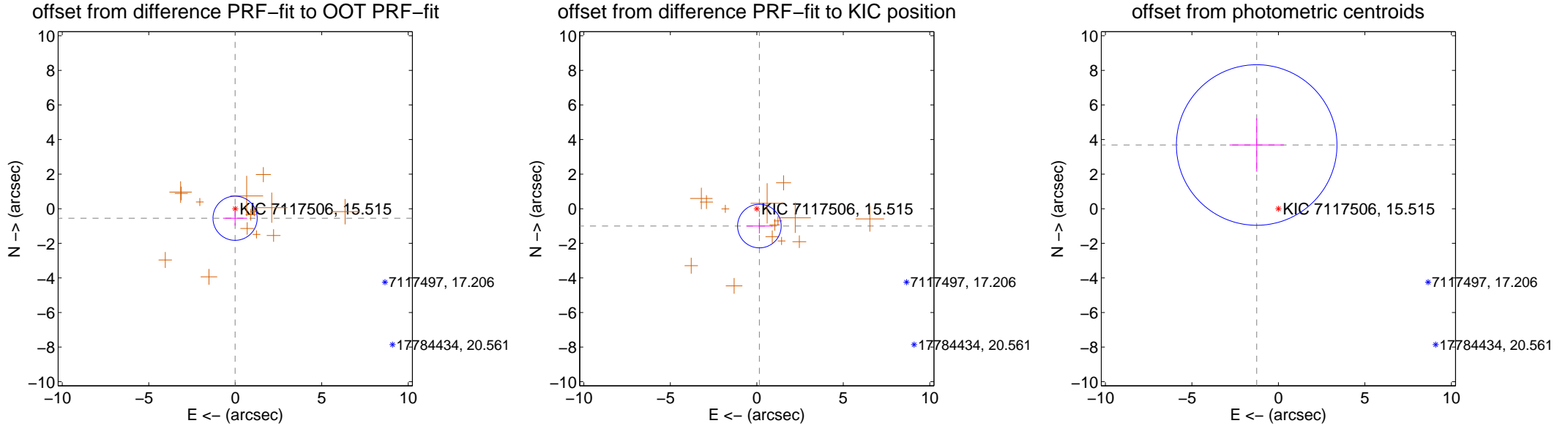
DV Centroid Data

Supplemental centroid analysis for 007117506-01. Kepler magnitude: 15.52. Transit SNR 8.35

There are 0 quarters with good PRF difference image offsets

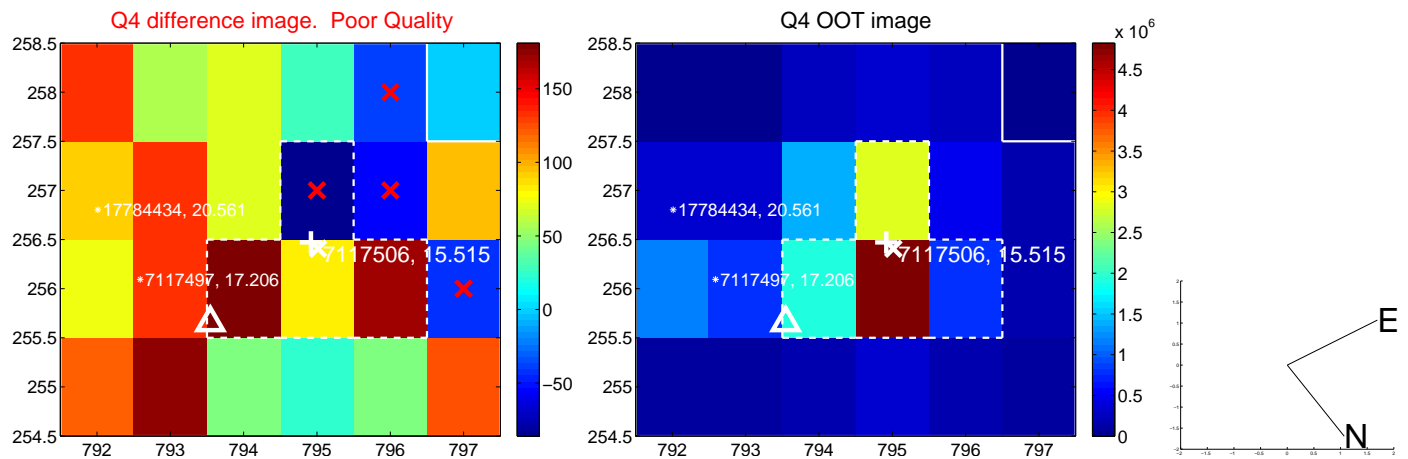
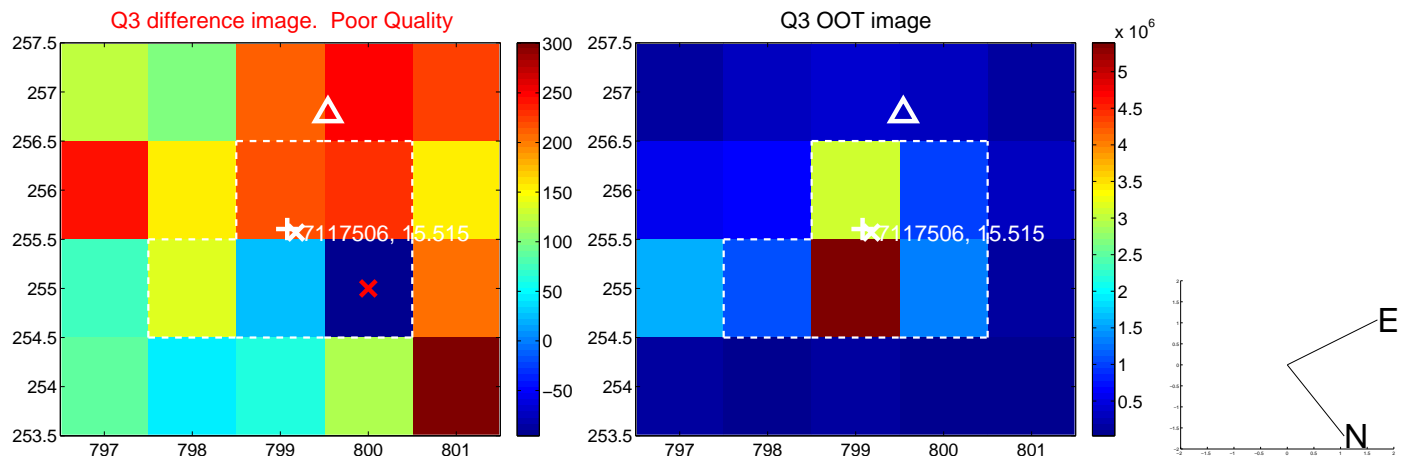
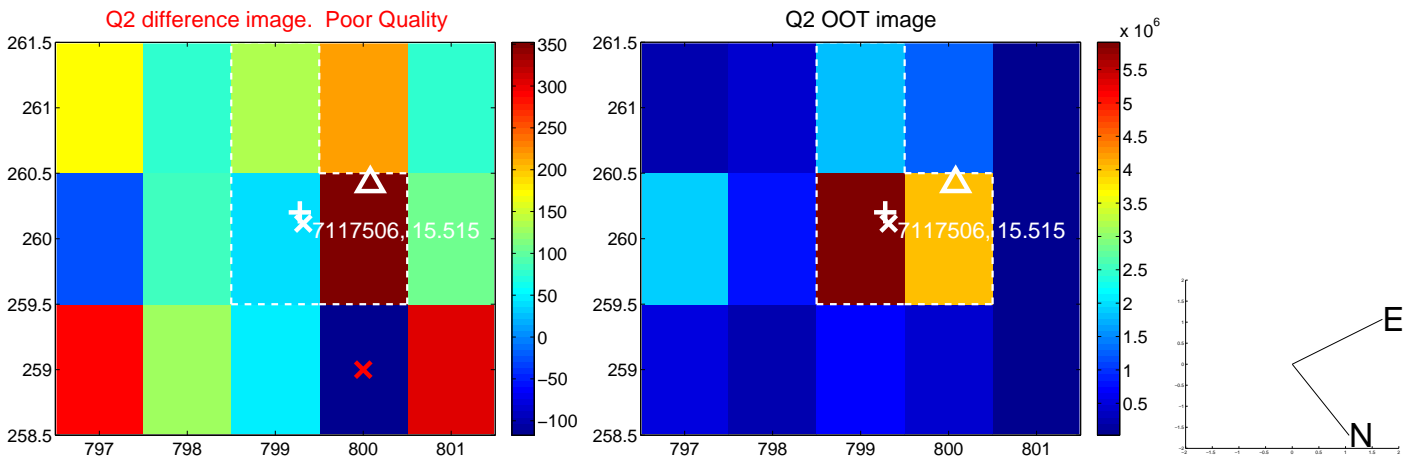
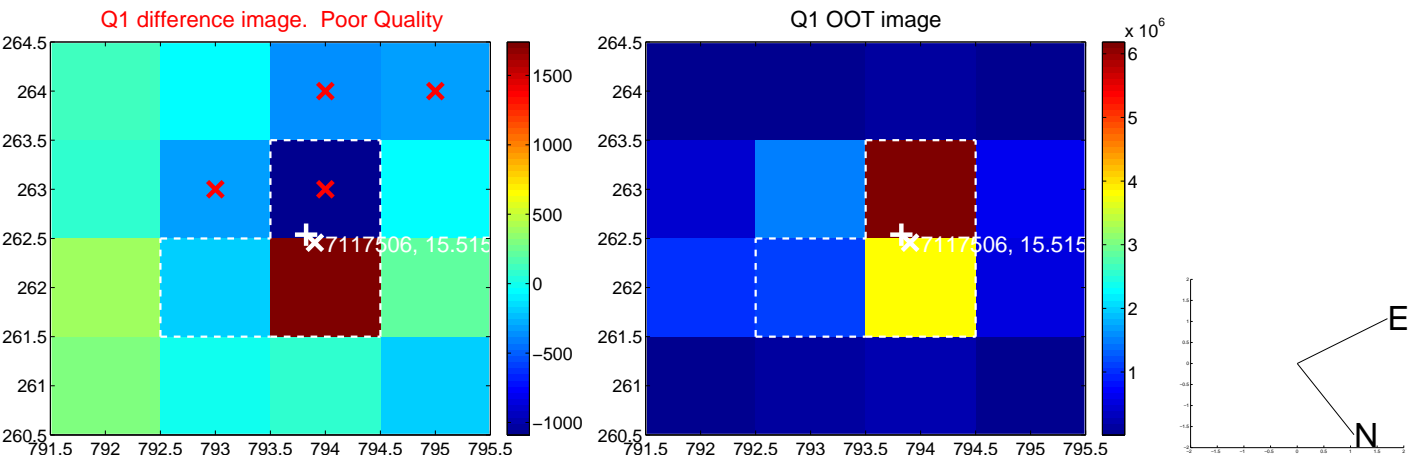
The direct PRF centroid is offset from the target star catalog position by about 0.59 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.550 ± 0.426	1.29	0.009 ± 0.698	-0.550 ± 0.425
PRF-fit source offset from KIC position	1.014 ± 0.420	2.41	-0.150 ± 0.760	-1.003 ± 0.422
photometric centroid source offset	3.89 ± 1.55	2.52	1.25 ± 1.57	3.68 ± 1.54

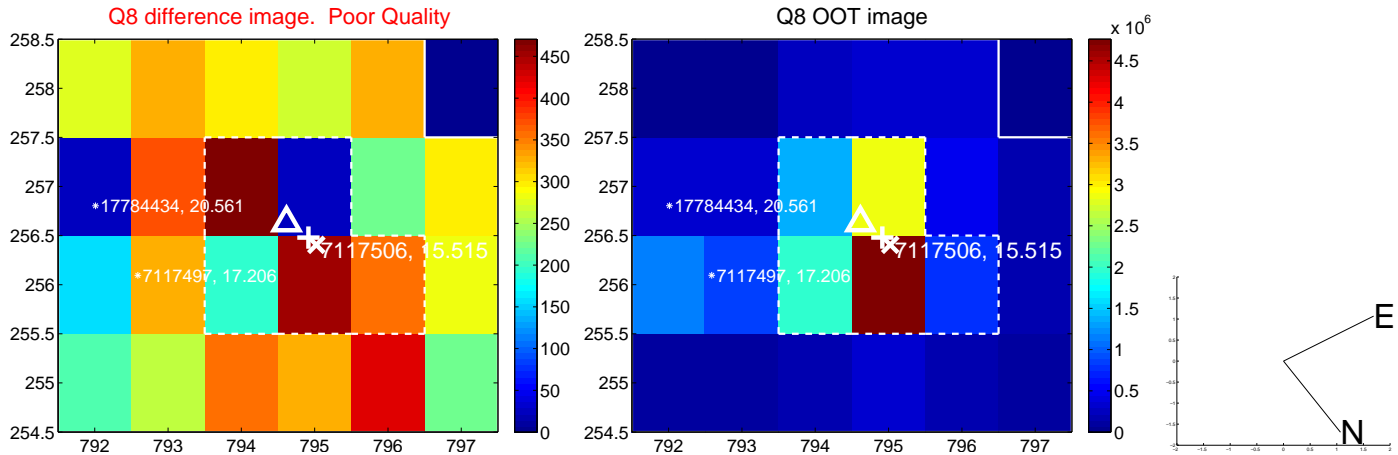
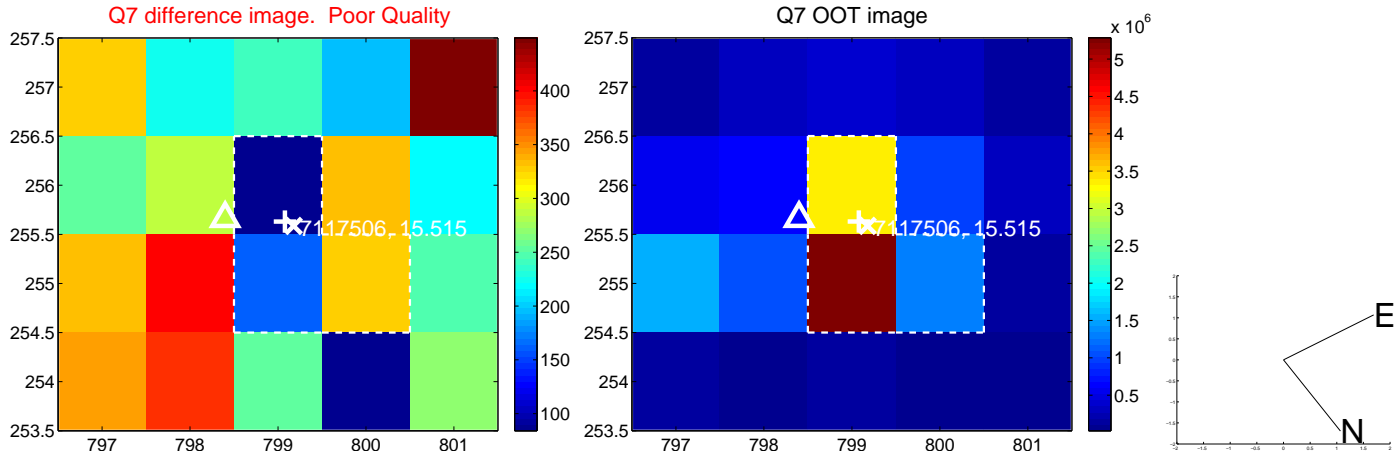
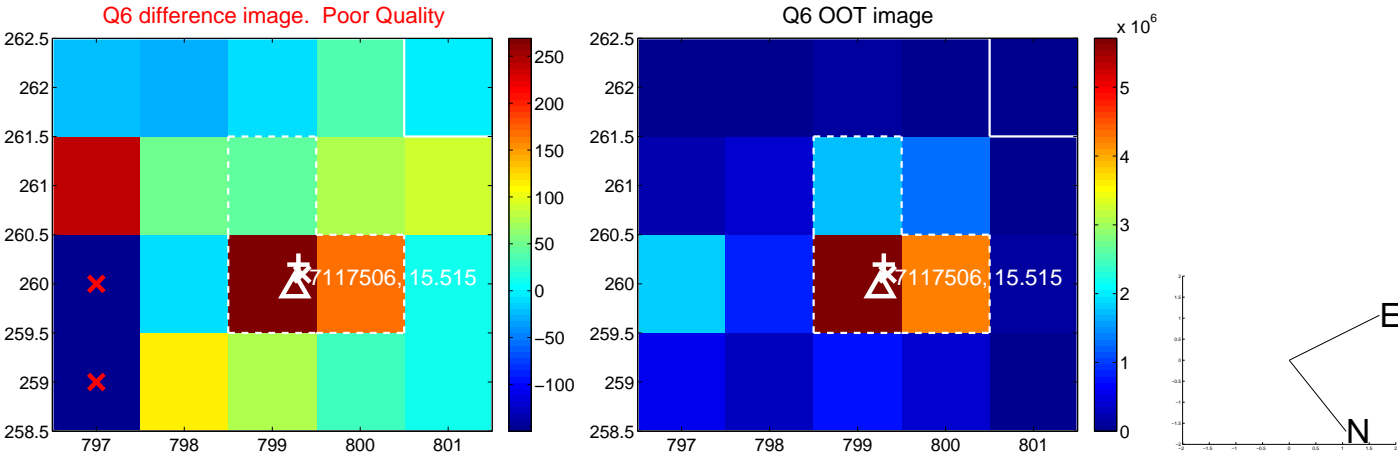
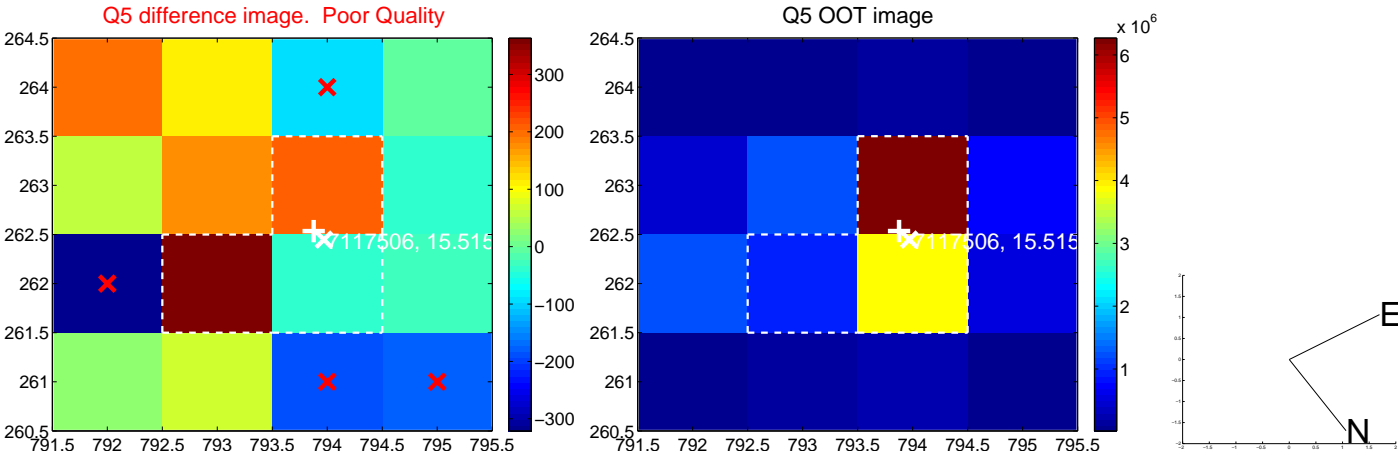


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

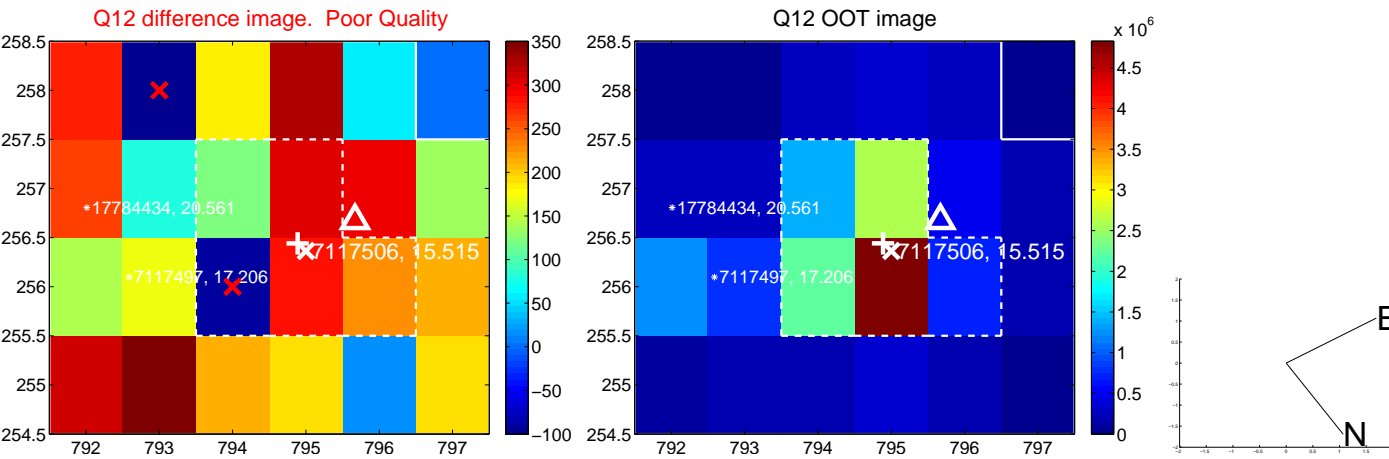
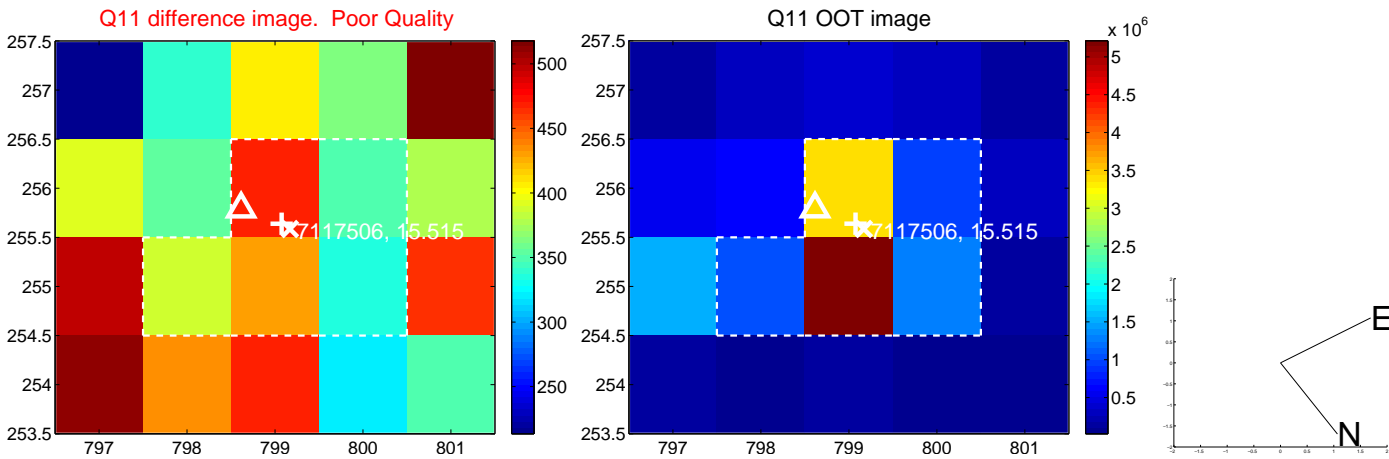
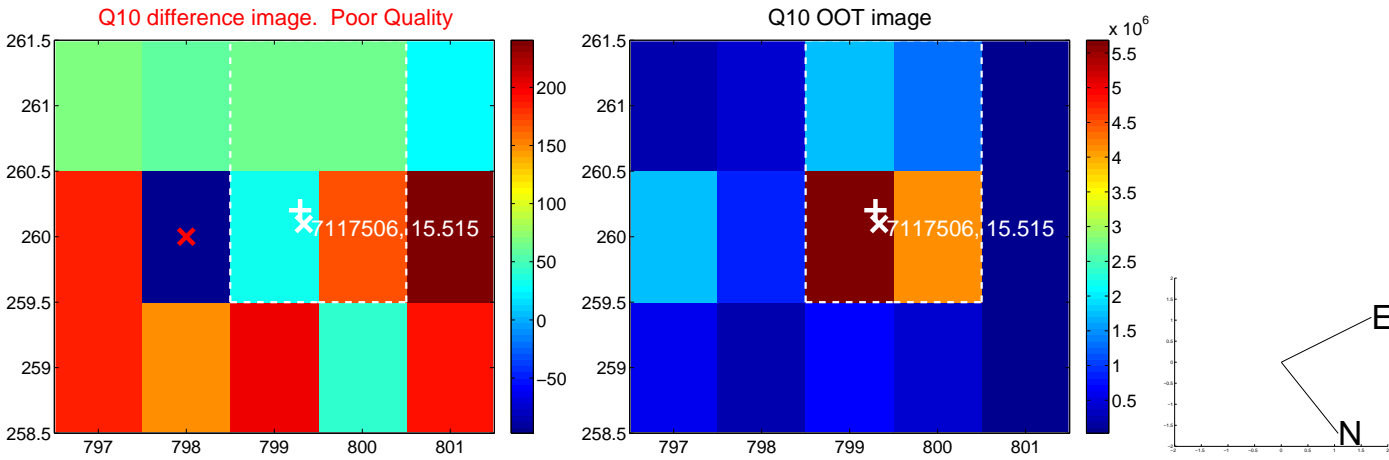
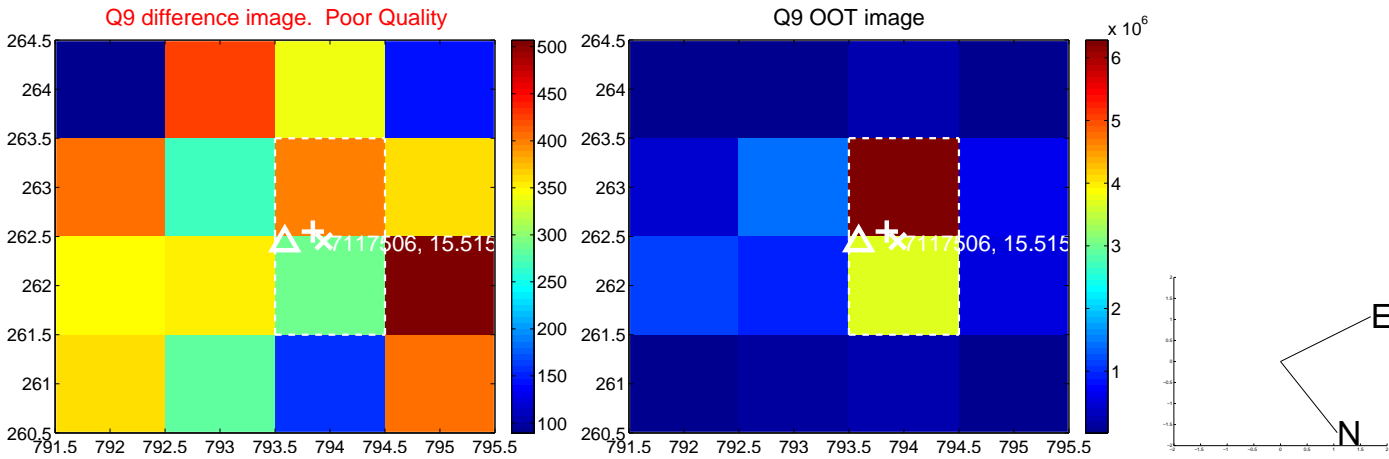
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



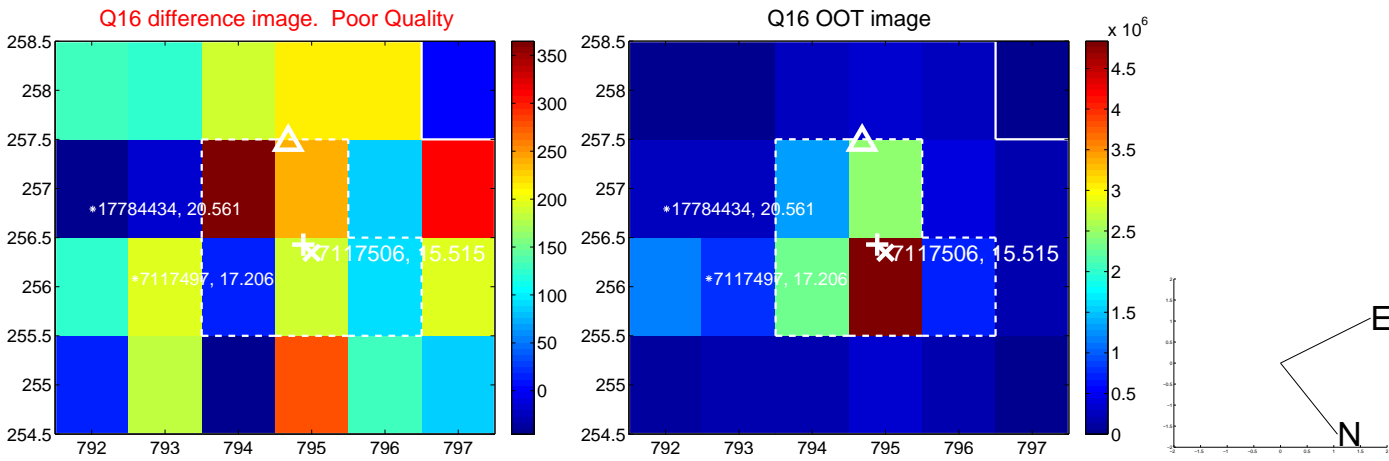
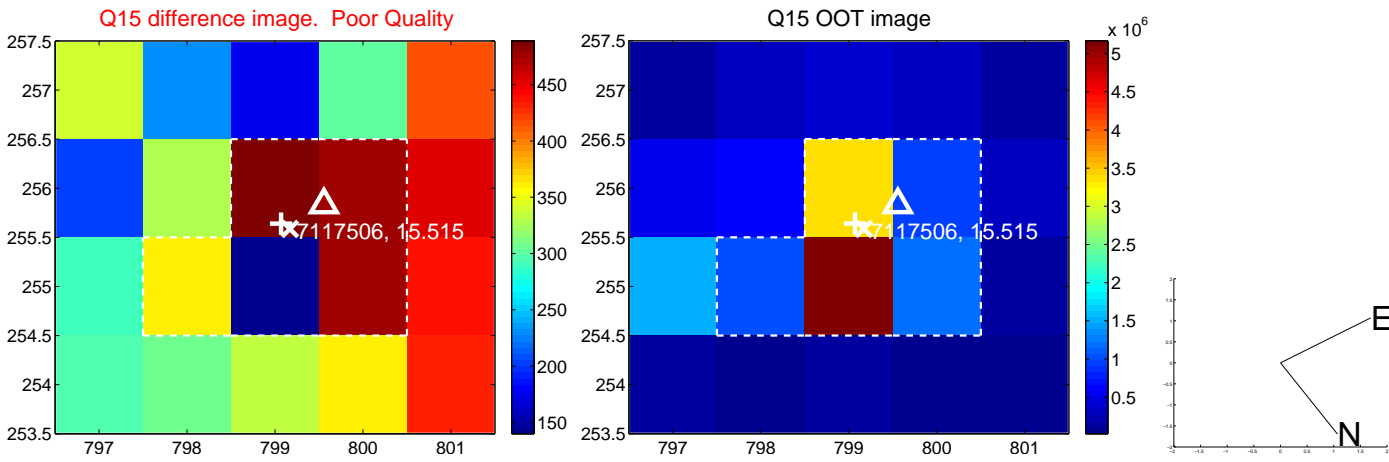
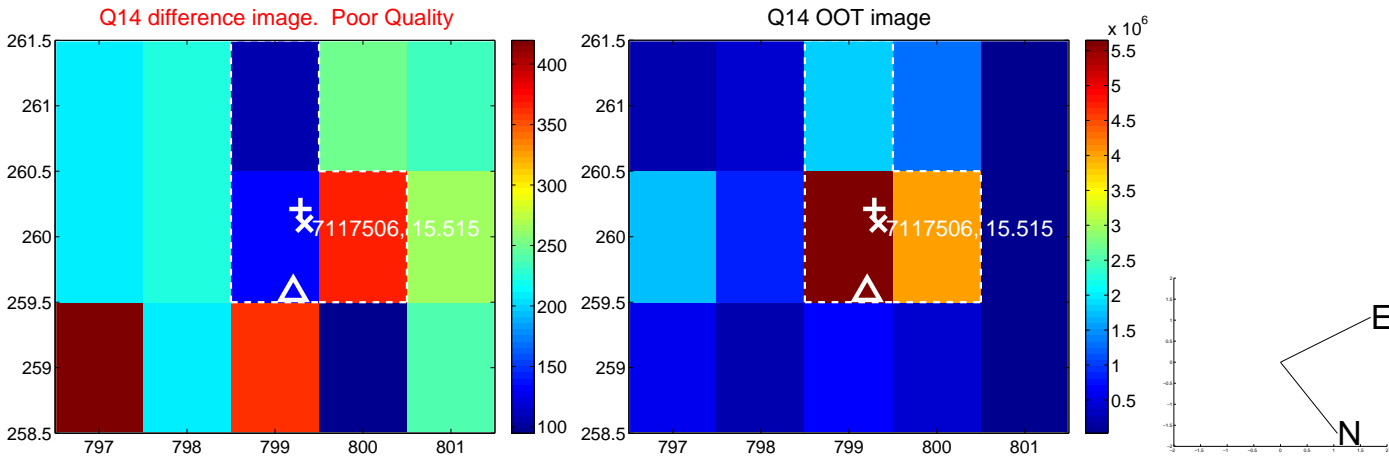
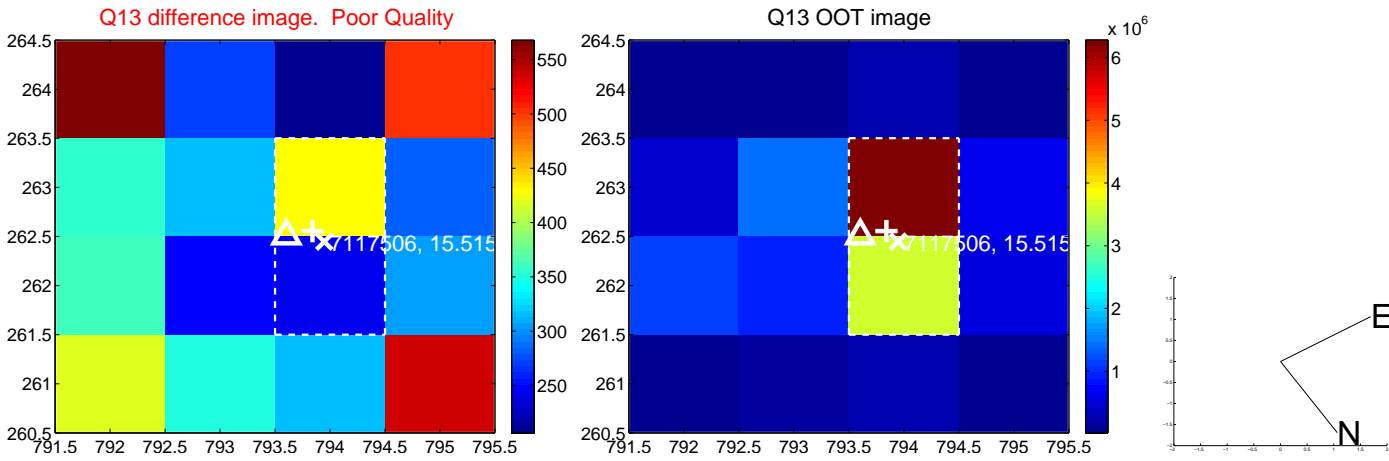
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



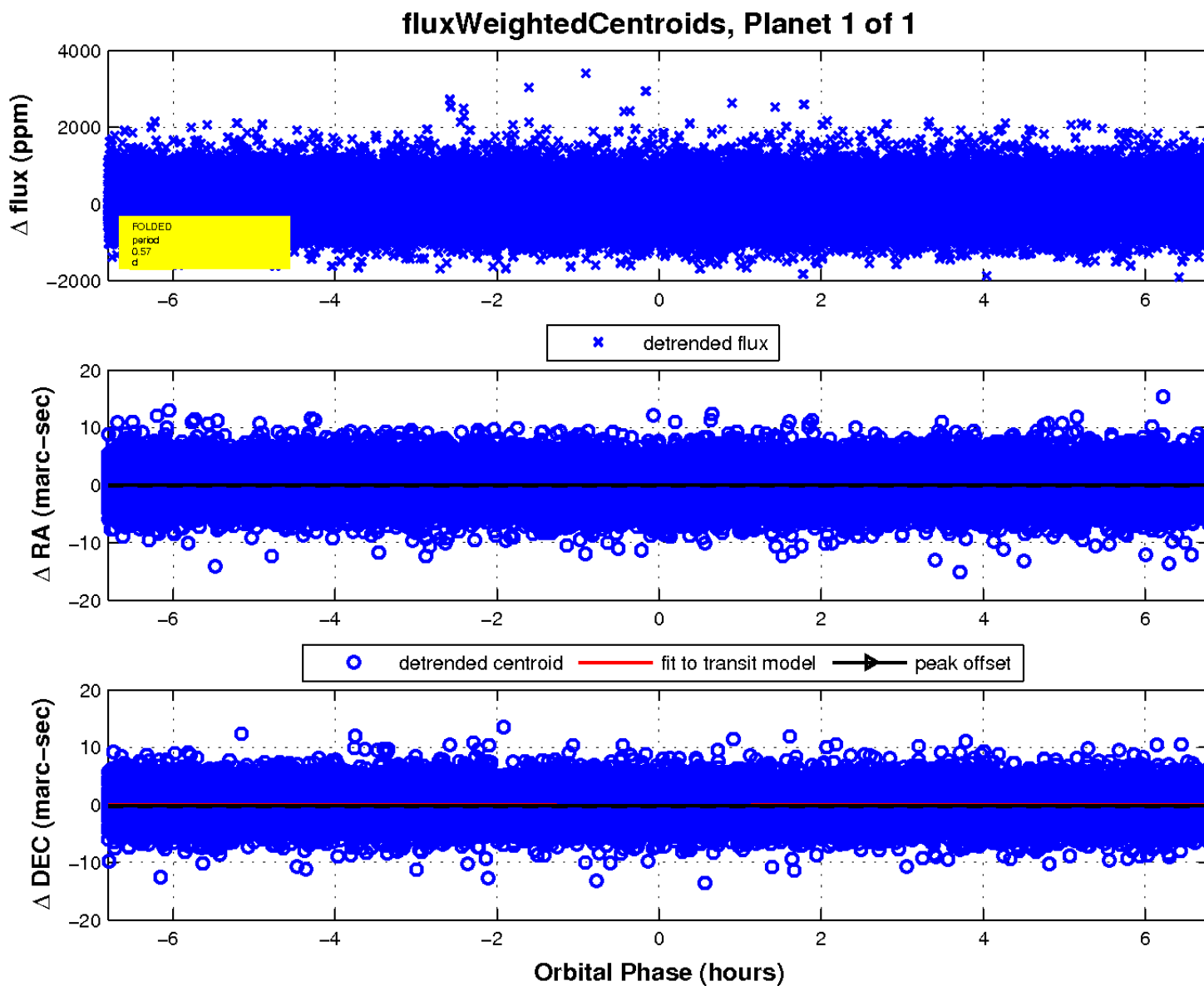
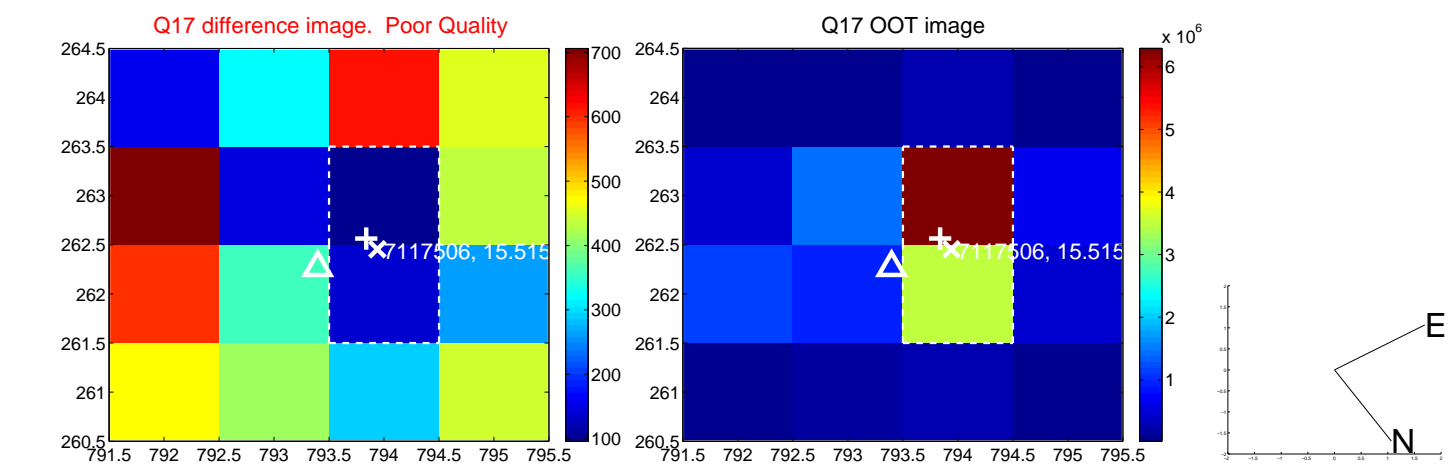
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UKIRT Image

