

KIC 006525106

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 _⊕)
006525106-01	OBS	4483.01	1.710268	131.623846	92.9	2.972	12.1	12.0	0.85	5910	0.97	1057.96

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006525106-01	OBS	FP	0.00	0	0	1	1	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.

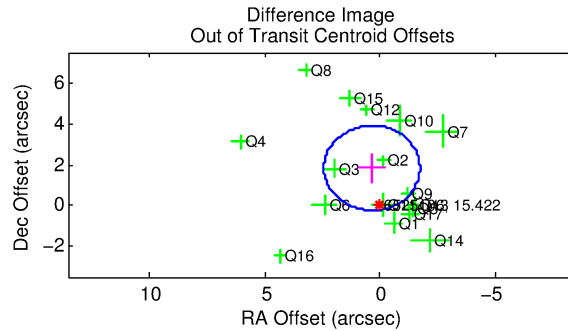
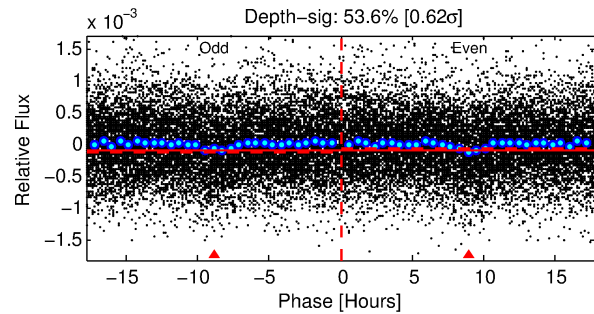
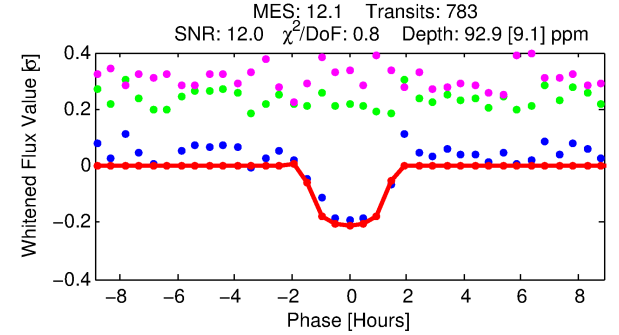
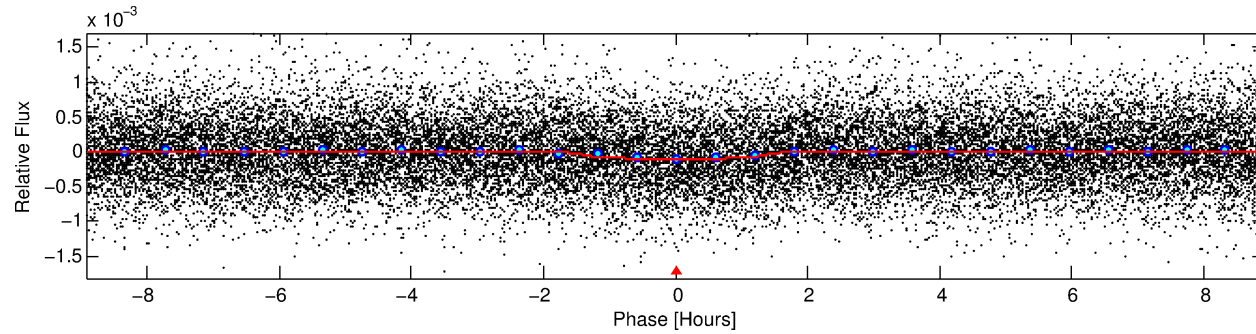
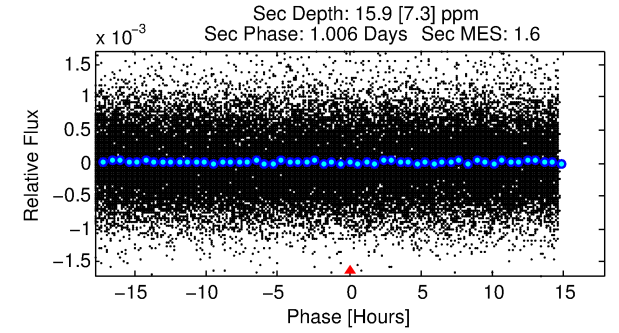
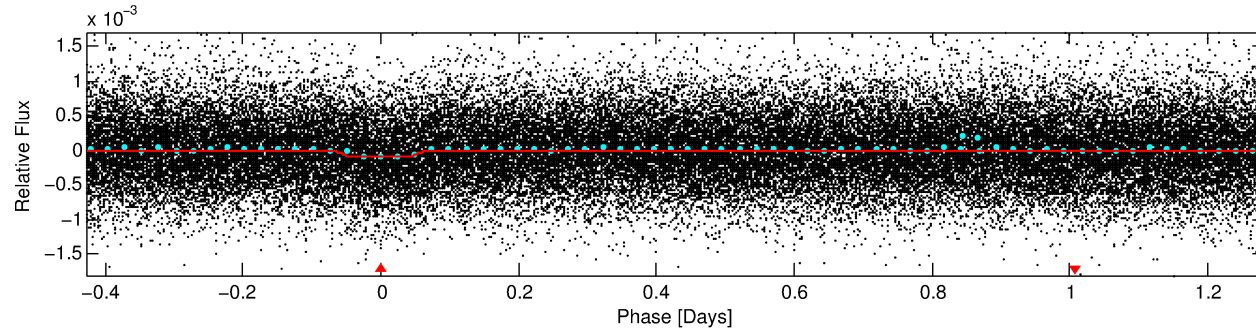
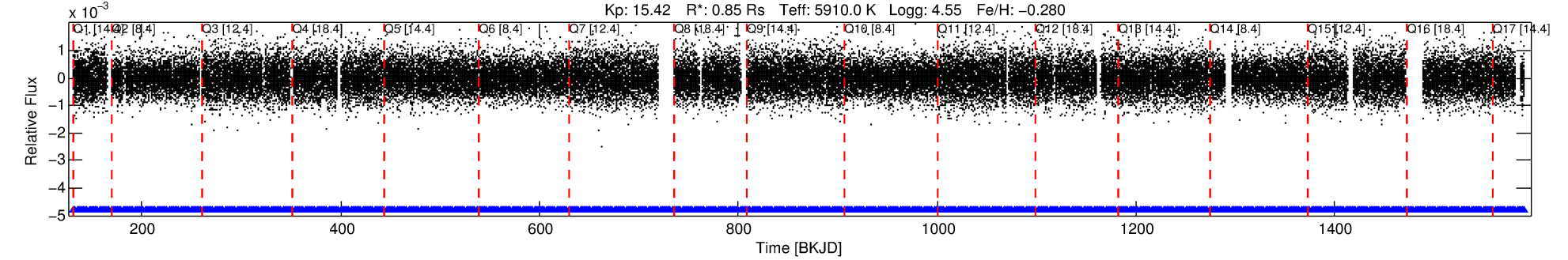
Ephemeris Match Information For 006525106-01

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
006525106-01	6525106	5293.01	6525196	1:1	106.3	-1	-27	10.15	15.42	1694.00	Direct-PRF	0	1.36	0.50

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: 6525106 Candidate: 1 of 1 Period: 1.710 d
KOI: K04483.01 Corr: 0.913



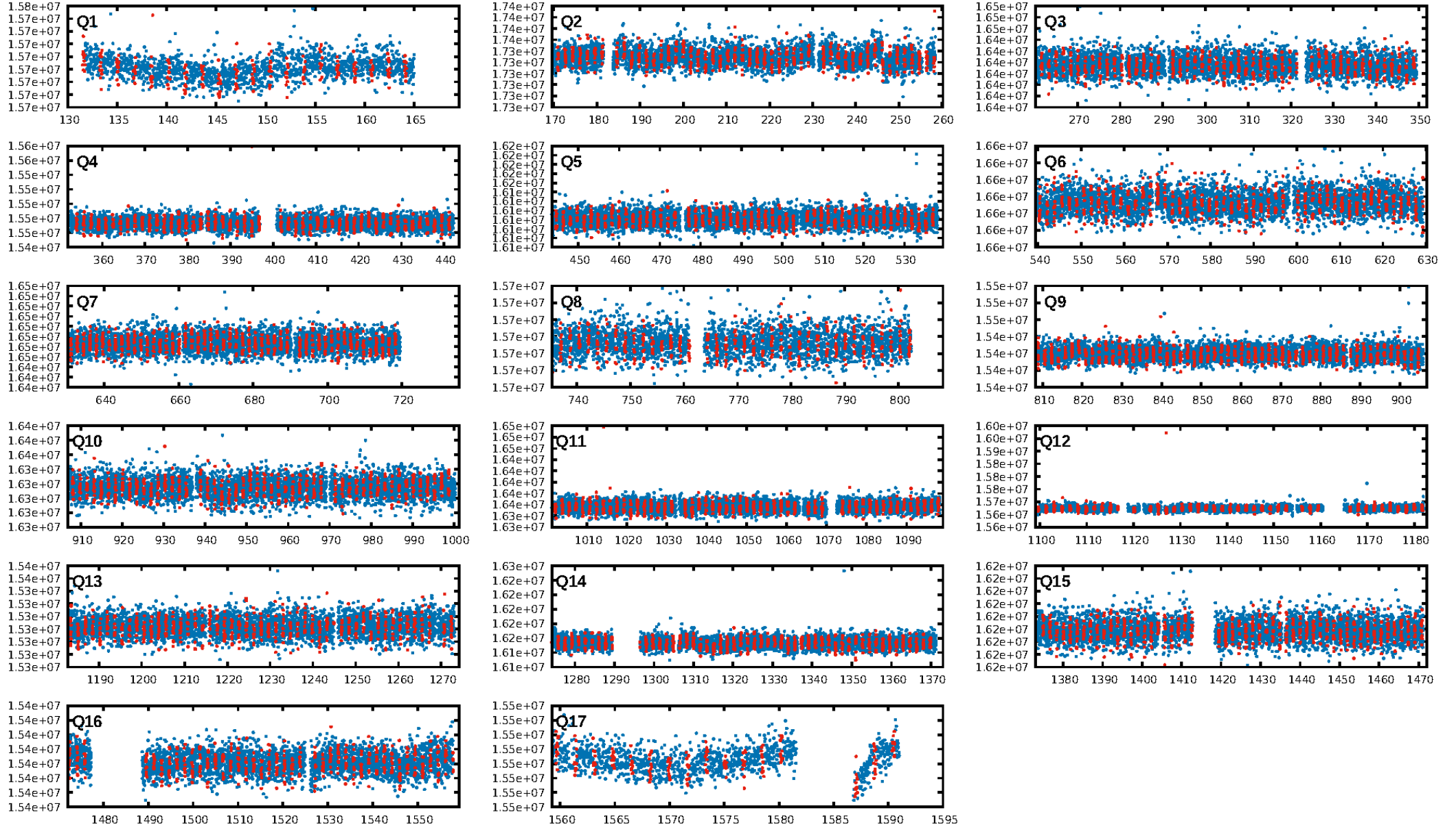
DV Fit Results:

Period = 1.71027 [0.00001] d
Epoch = 131.6238 [0.0036] BKJD
Rp/R* = 0.0104 [0.0061]
a/R* = 2.24 [5.41]
b = 0.90 [0.66]
Seff = 1057.96 [414.76]
Teq = 1454 [143] K
Rp = 0.97 [0.64] Re
a = 0.0275 [0.0071] AU
Ag = 7.00 [9.13] [0.66 σ]
Teffp = 3657 [1151] K [1.90 σ]

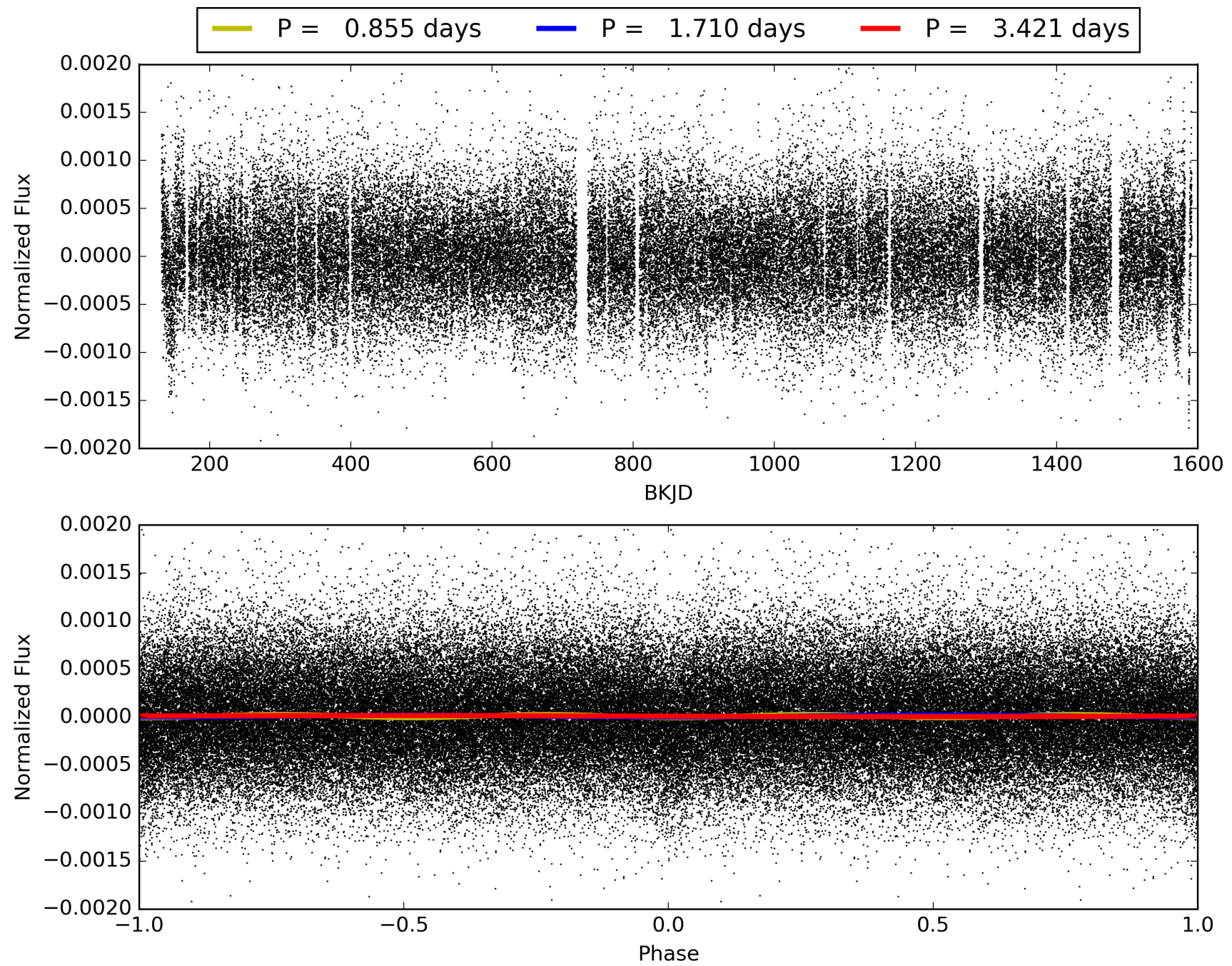
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.44e-34
RollingBand-fgt: 1.00 [747/747]
GhostDiagnostic-chr: -0.08395
Centroid-sig: 1.8%
Centroid-so: 2.122 arcsec [1.77 σ]
OotOffset-rm: 1.872 arcsec [2.70 σ]
KicOffset-rm: 2.081 arcsec [2.97 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.12 [2/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 006525106-01, PDC Light Curves

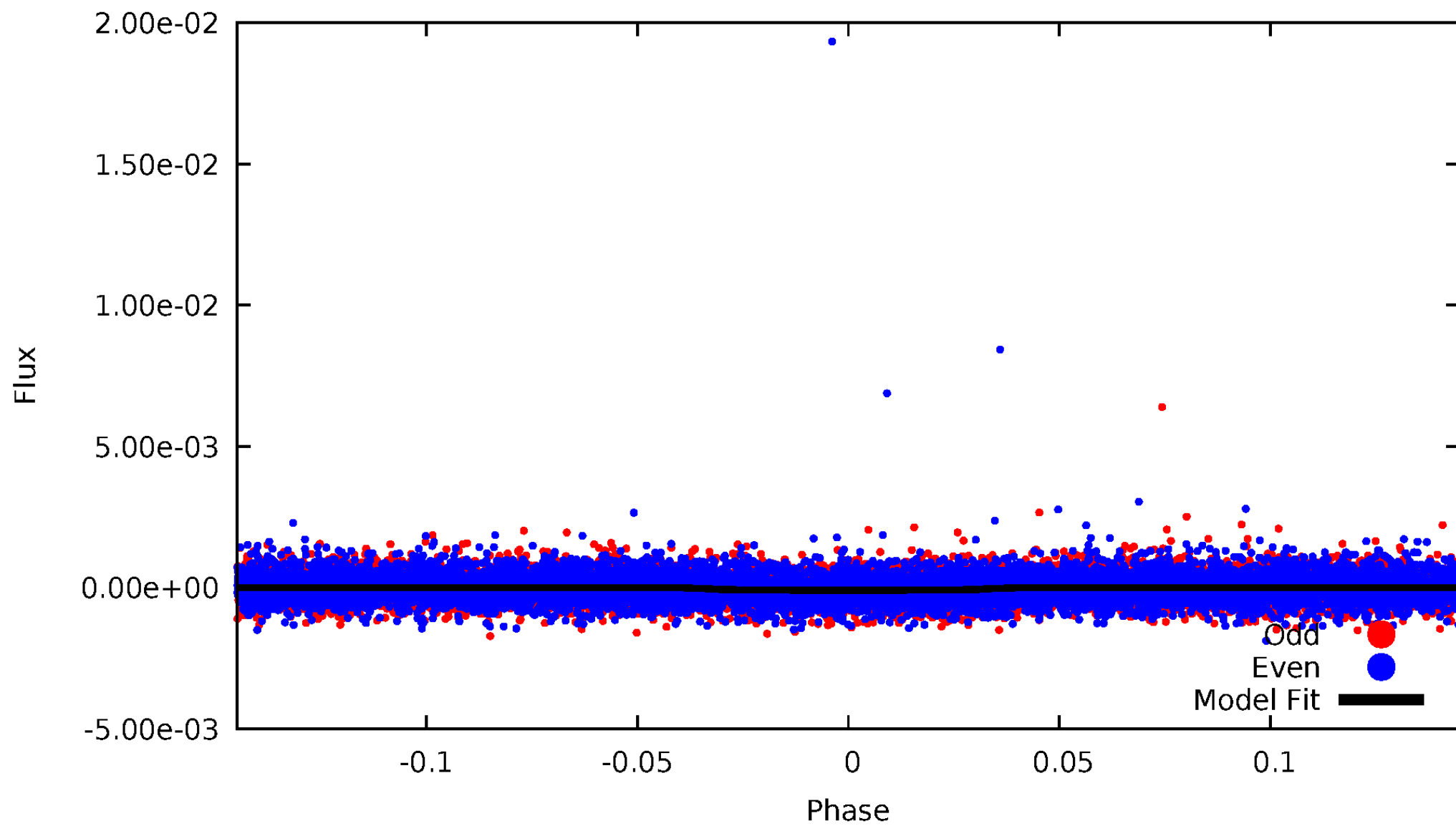


TCE 006525106-01



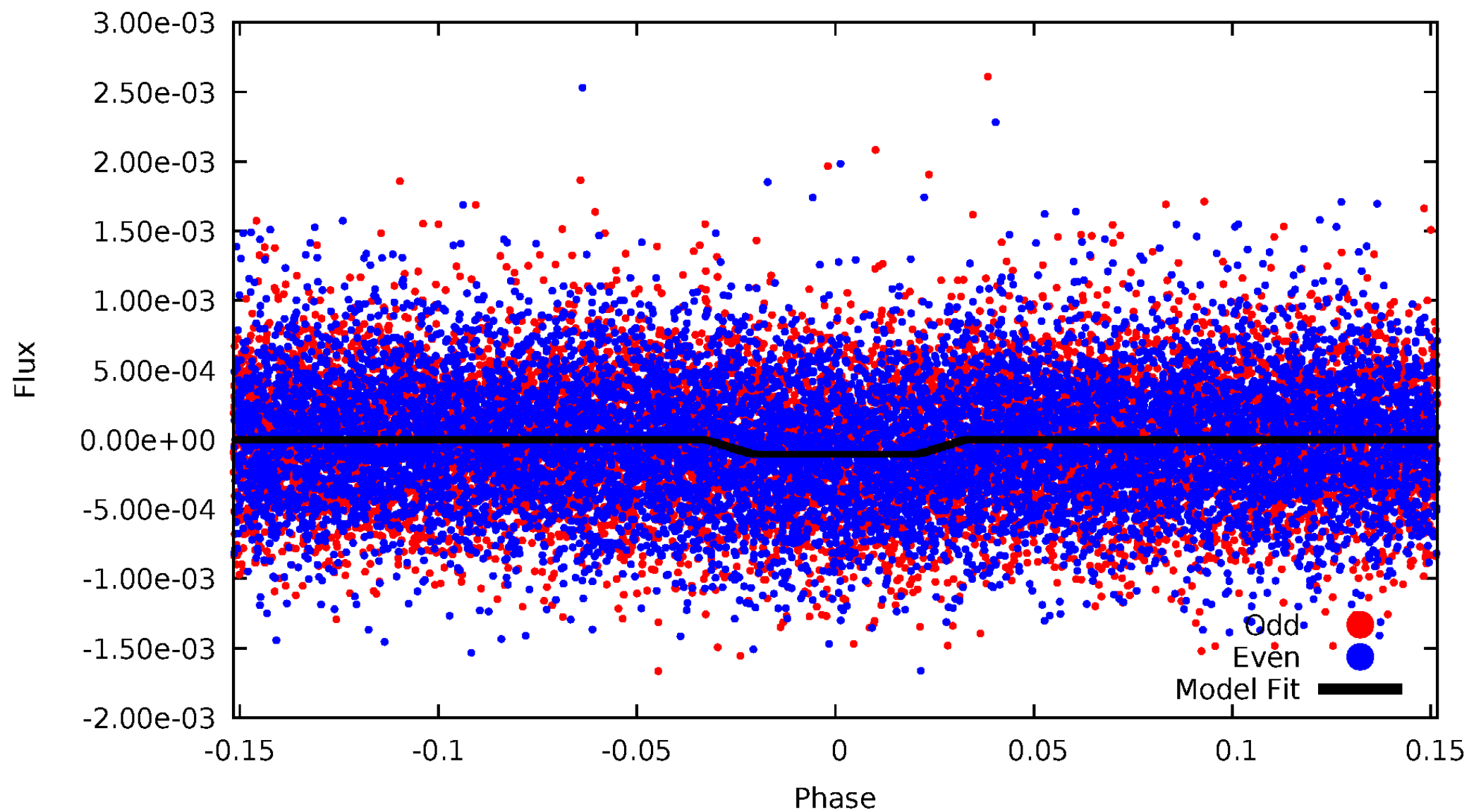
DV Odd/Even

TCE 006525106-01



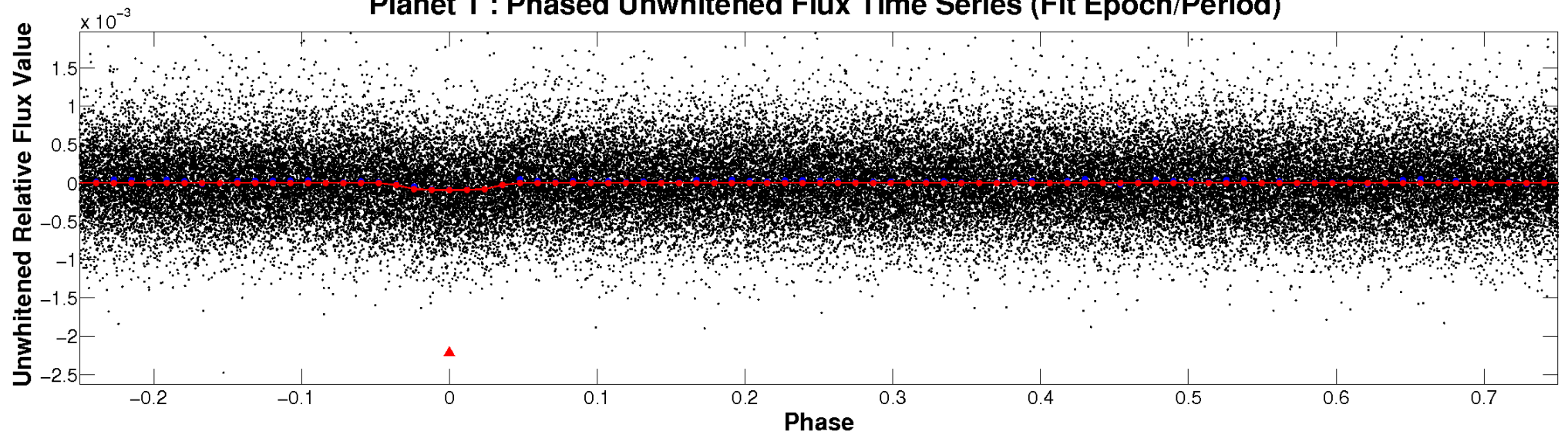
ALT Odd/Even

TCE 006525106-01

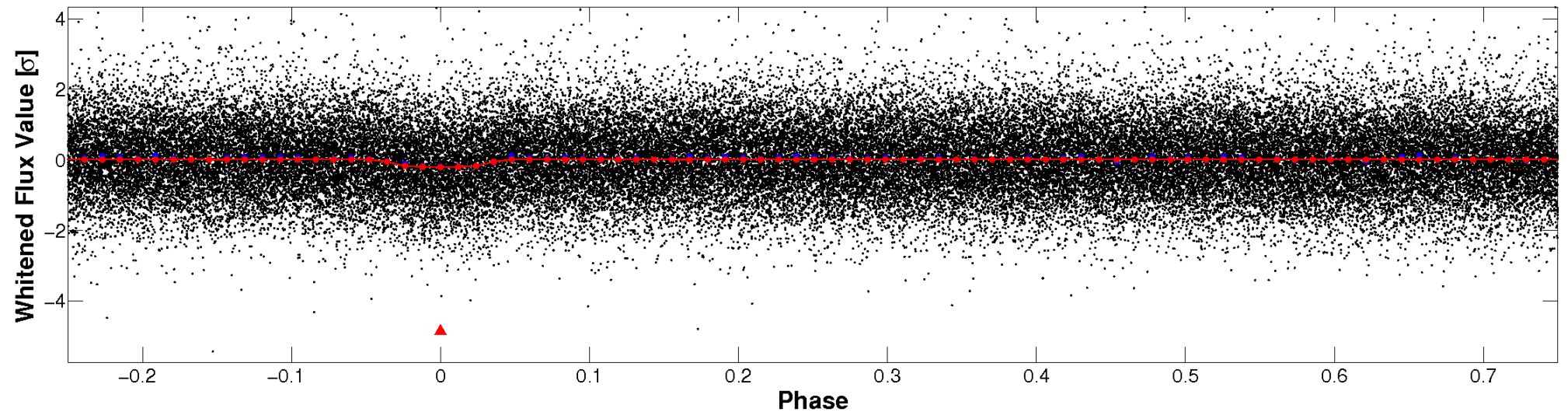


Non-Whitened Vs. Whitened Light Curve

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

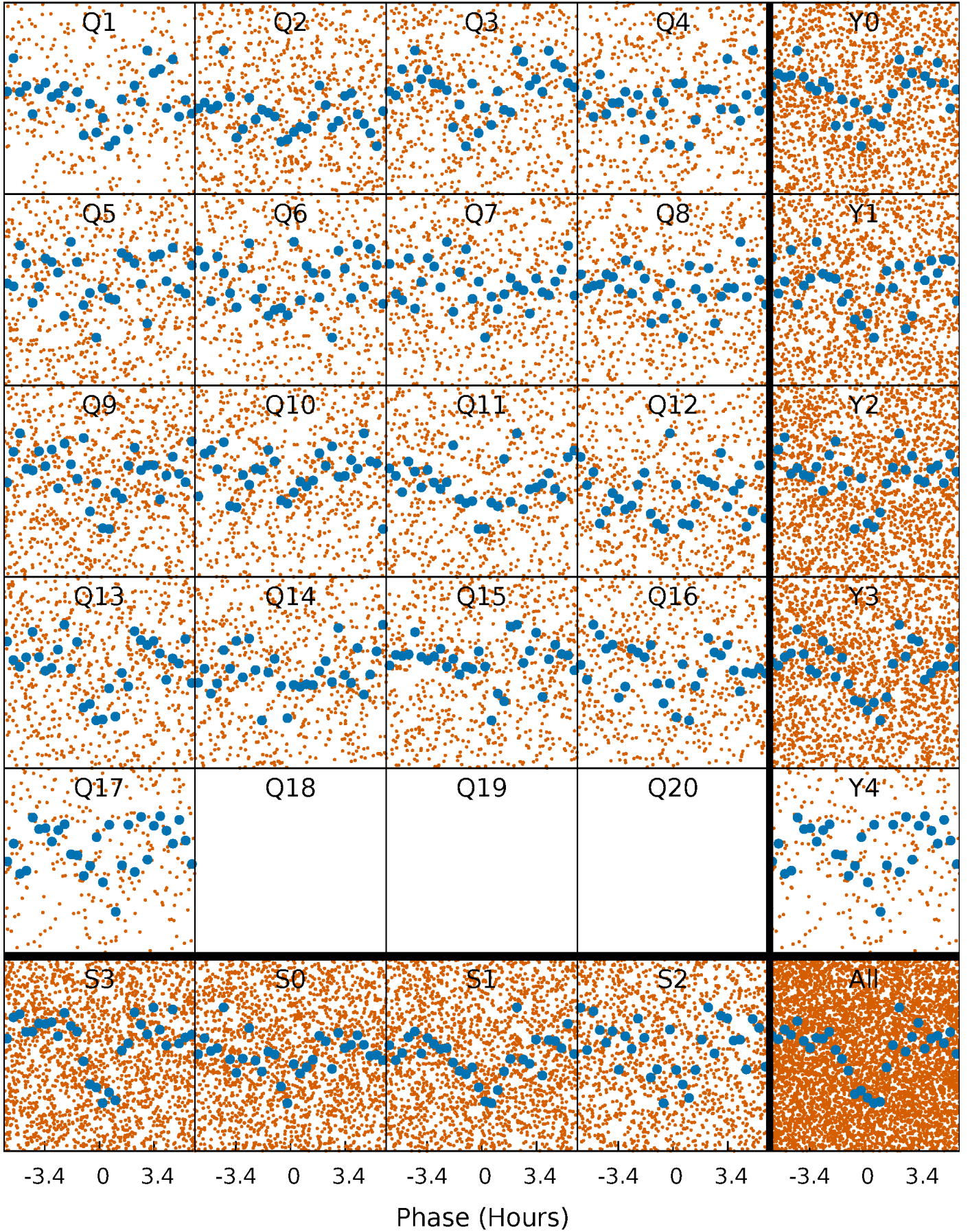


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



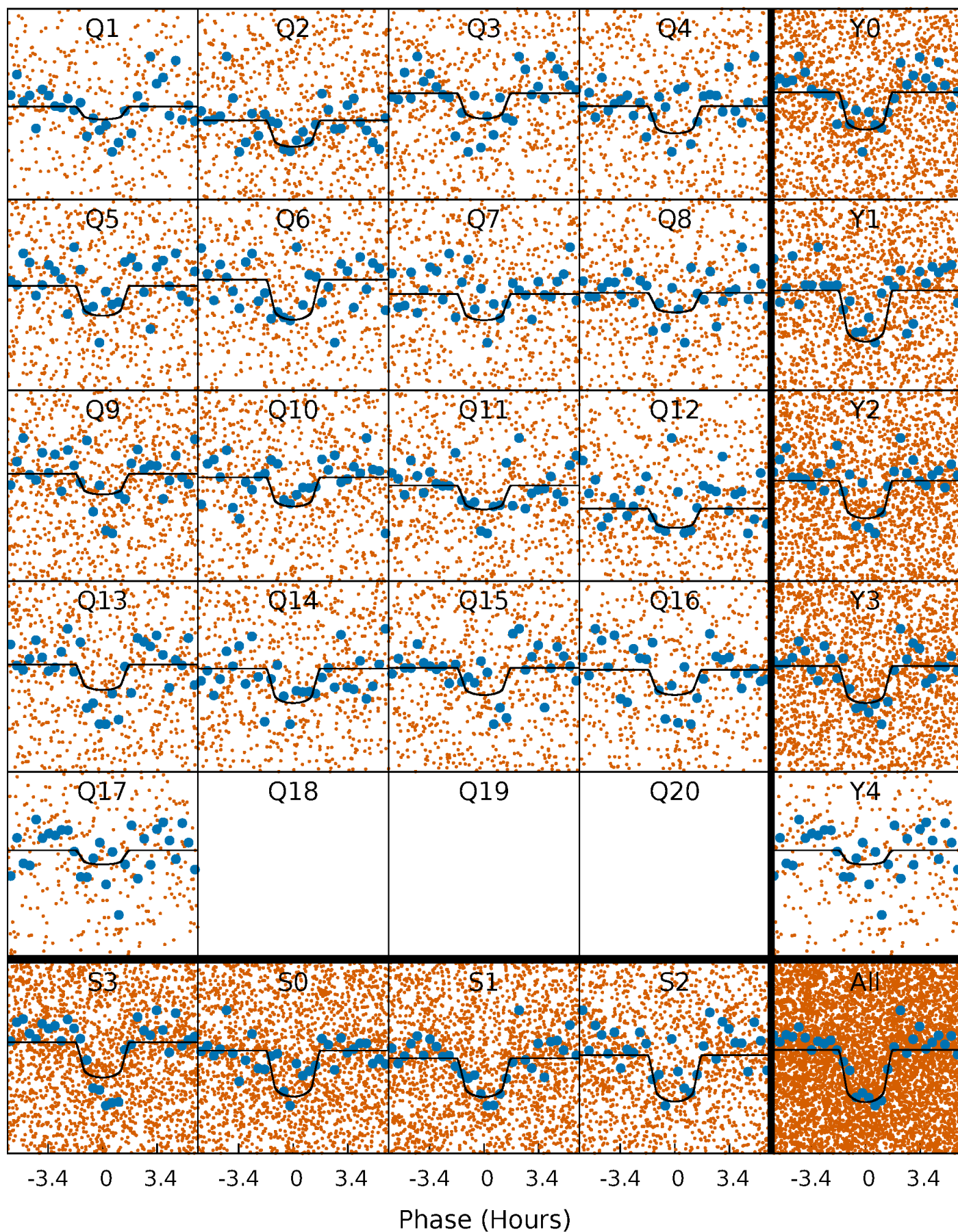
PDC Quarter-Phased Transit Curves

TCE 006525106-01 P= 1.710268 Days $T_0=131.623846$ (BKJD)



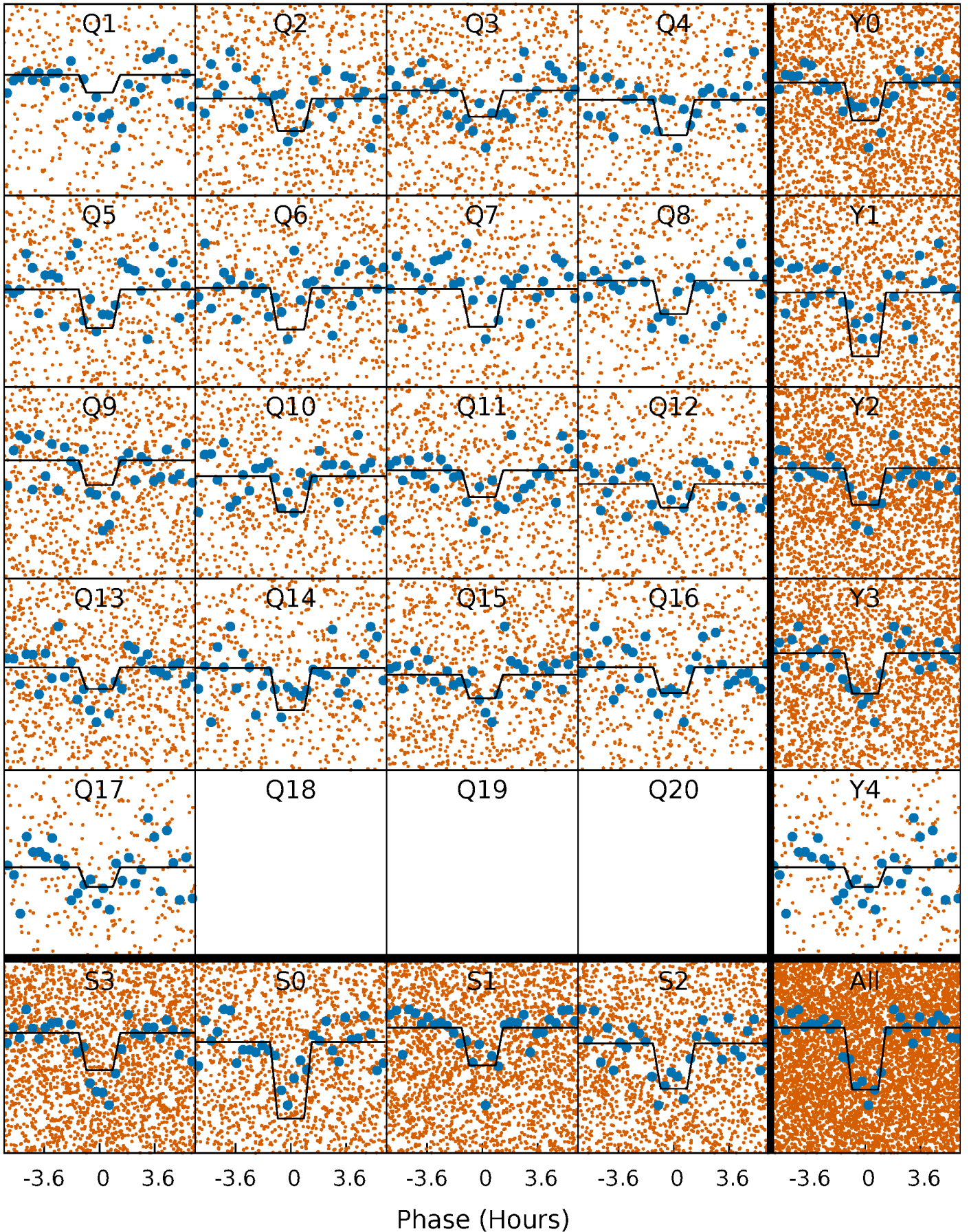
DV Quarter-Phased Transit Curves

TCE 006525106-01 P= 1.710268 Days $T_0=131.623846$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

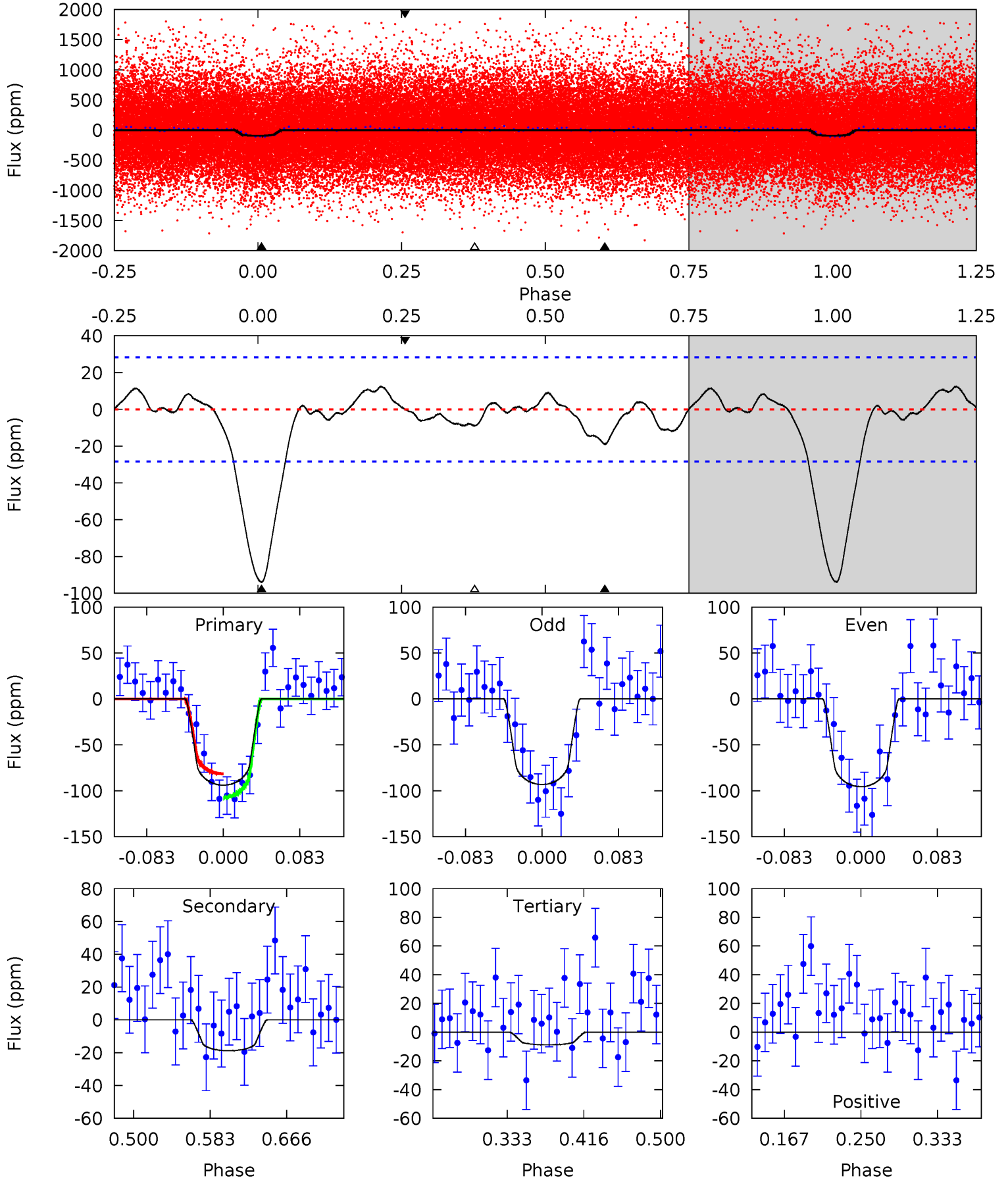
TCE 006525106-01 P= 1.710311 Days $T_0=131.610976$ (BKJD)



DV Model-Shift Uniqueness Test

006525106-01, P = 1.710268 Days, E = 129.913578 Days

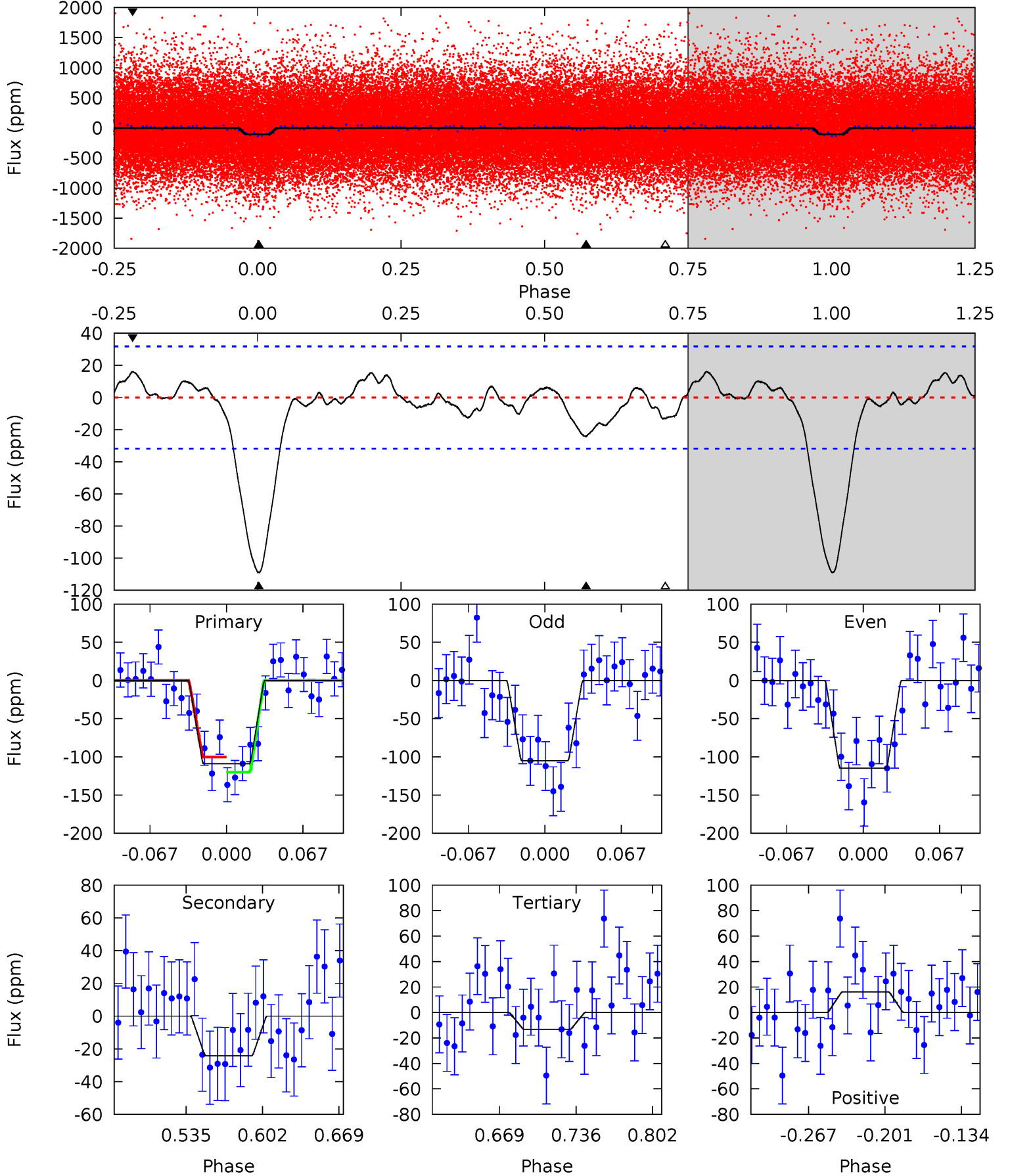
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.2	3.06	1.44	0	4.60	1.73	0.97	13.8	15.2	1.62	3.06	0.19	1.00	0.12	2.08



Alt Model-Shift Uniqueness Test

006525106-01, P = 1.710311 Days, E = 129.900665 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.9	3.53	1.92	2.35	4.65	1.83	1.01	14.0	13.5	1.60	1.18	0.72	1.06	0.13	1.45



Stellar Parameters For KIC 006525106

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5910^{+158}_{-193}	$4.550^{+0.037}_{-0.200}$	$-0.280^{+0.300}_{-0.300}$	$0.855^{+0.264}_{-0.066}$	$0.945^{+0.108}_{-0.119}$	$2.129^{+0.434}_{-1.119}$
	+3%/-3%	+1%/-4%	+107%/-107%	+31%/-8%	+11%/-13%	+20%/-53%
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 006525106-01 / KOI 4483.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-19 ± 6	$1.06^{+0.58}_{-0.56}$	2075^{+144}_{-95}	3991^{+1291}_{-613}	$6.590^{+21.050}_{-4.026}$
Alt.	-24 ± 7	$1.07^{+0.60}_{-0.58}$	2072^{+145}_{-93}	4193^{+1529}_{-658}	$8.421^{+31.106}_{-5.115}$

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 $A_{obs} \gg 1.0$

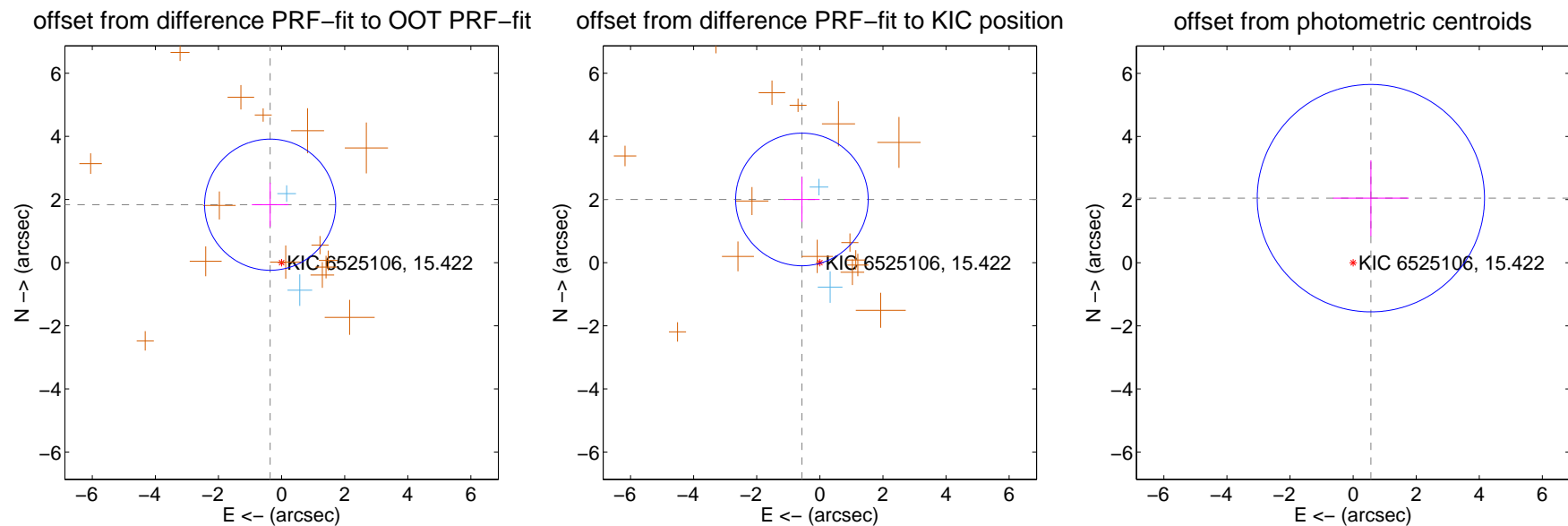
DV Centroid Data

Supplemental centroid analysis for 006525106-01. Kepler magnitude: 15.42. Transit SNR 11.99

There are 2 quarters with good PRF difference image offsets

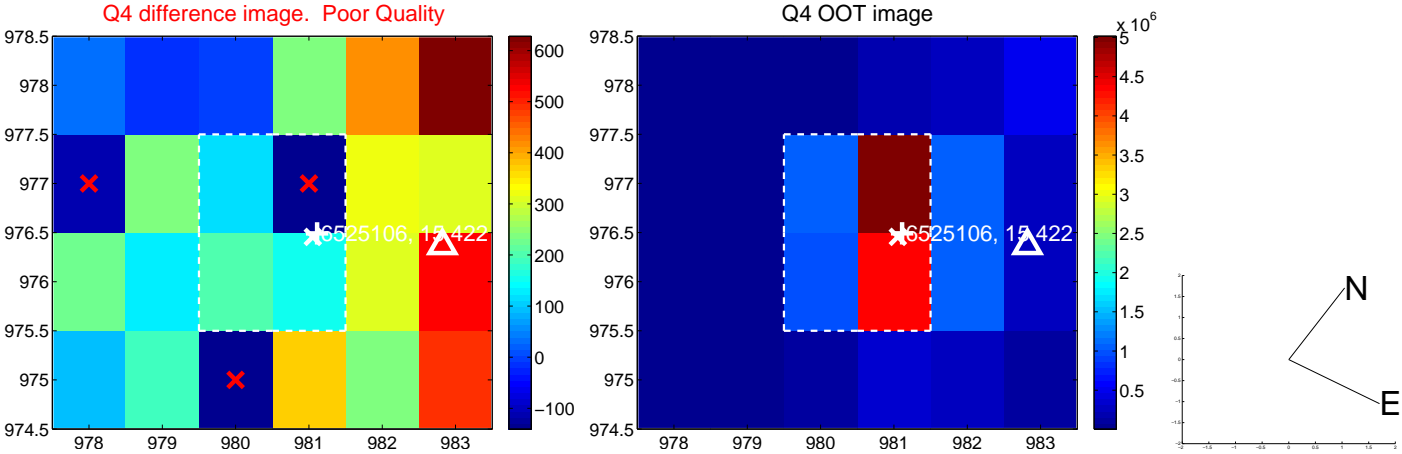
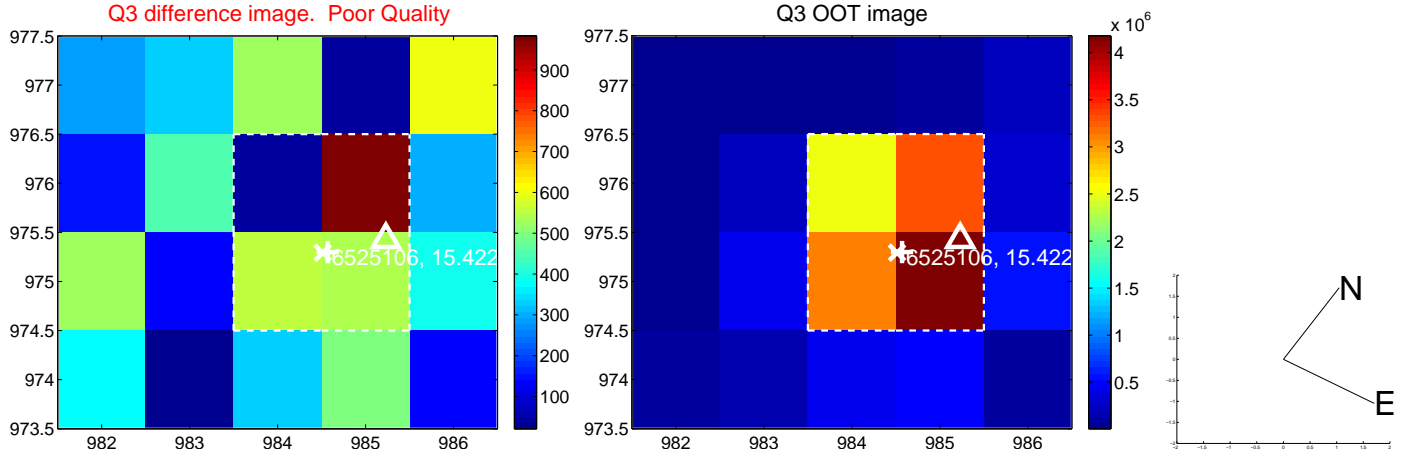
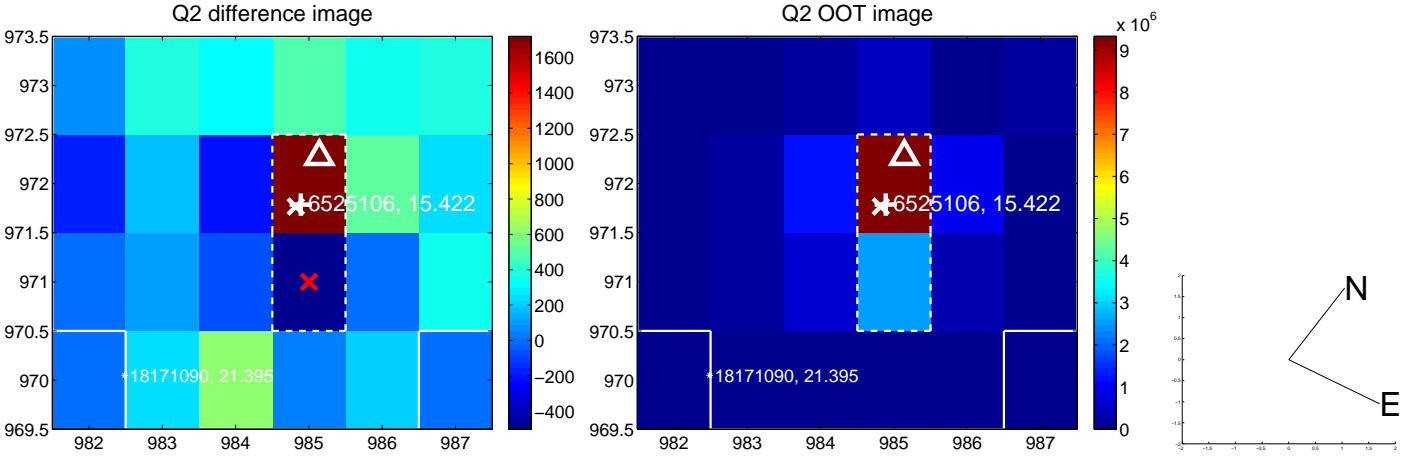
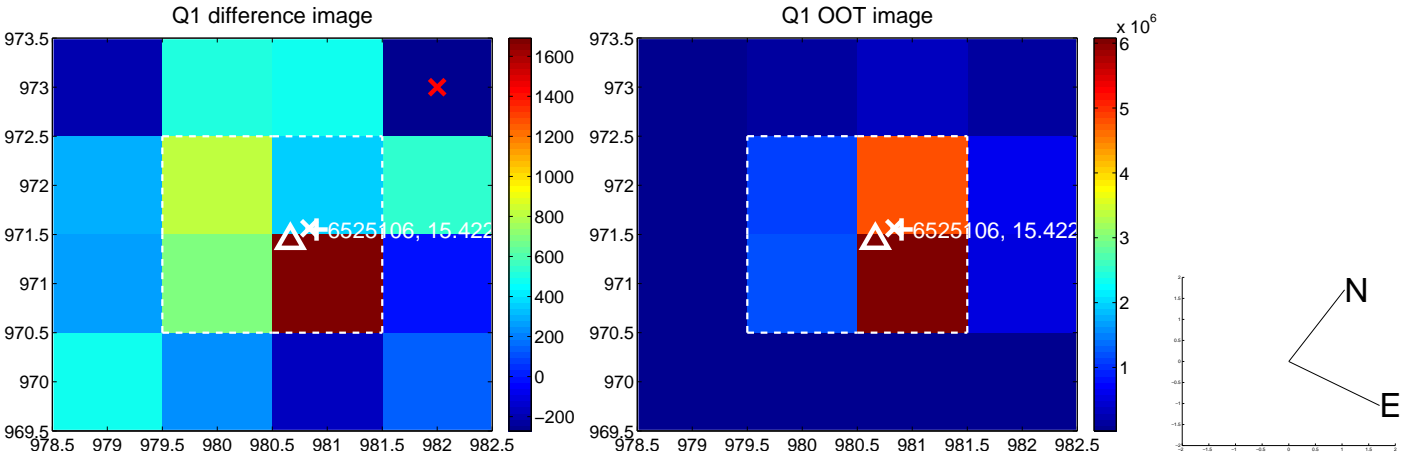
The direct PRF centroid is offset from the target star catalog position by about 0.27 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.872 ± 0.693	2.70	0.363 ± 0.579	1.836 ± 0.697
PRF-fit source offset from KIC position	2.081 ± 0.700	2.97	0.568 ± 0.564	2.002 ± 0.710
photometric centroid source offset	2.12 ± 1.20	1.77	-0.56 ± 1.20	2.05 ± 1.20

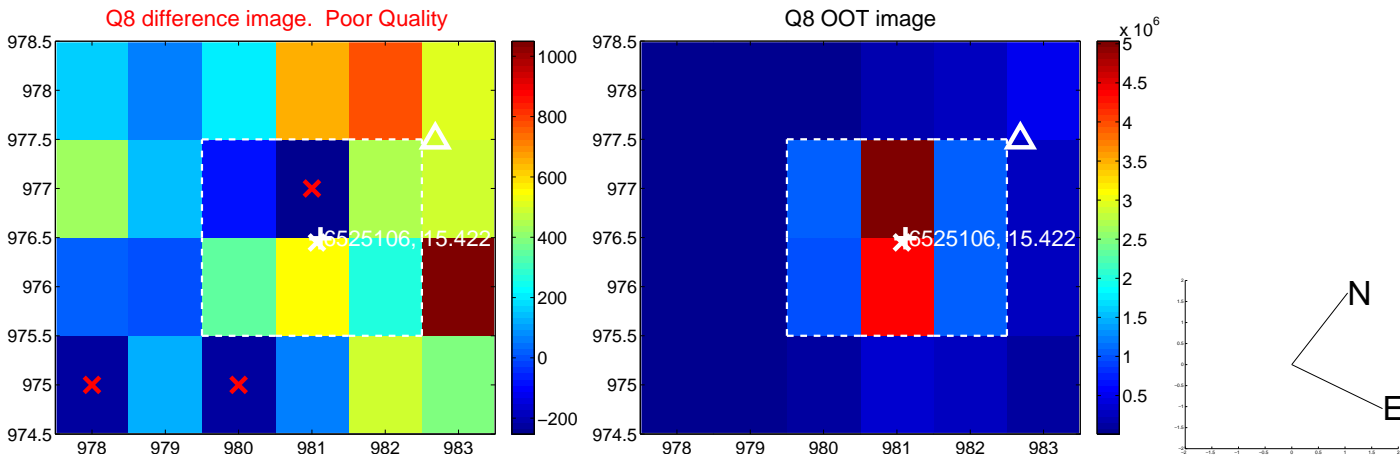
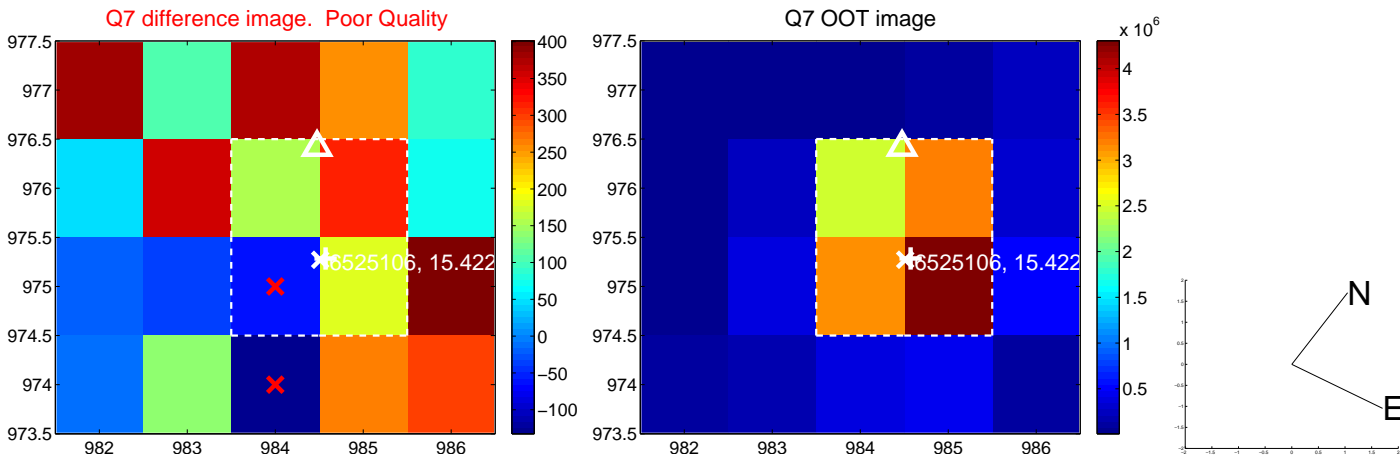
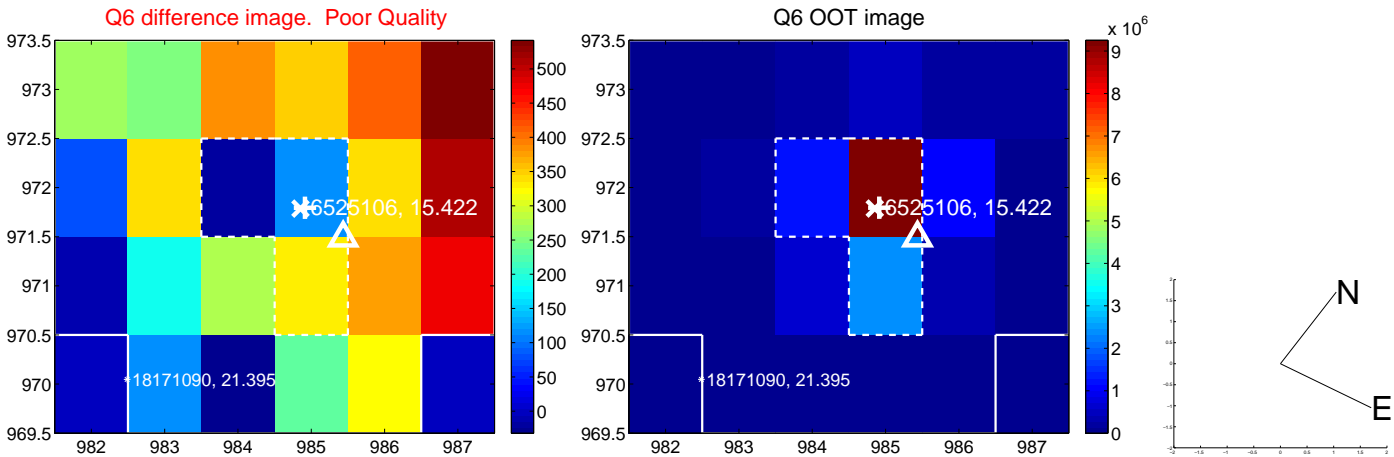
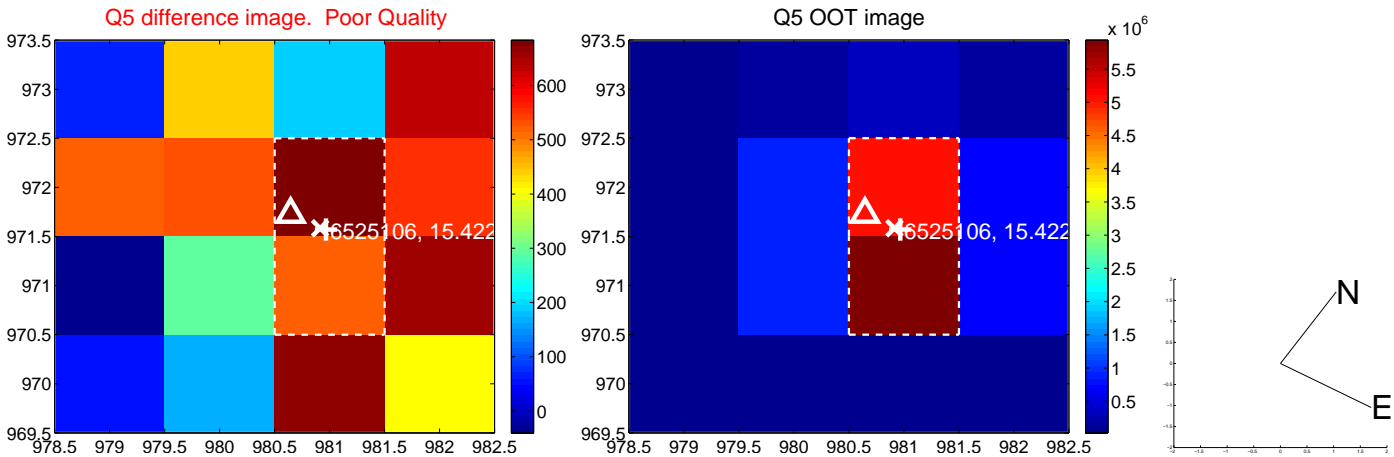


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

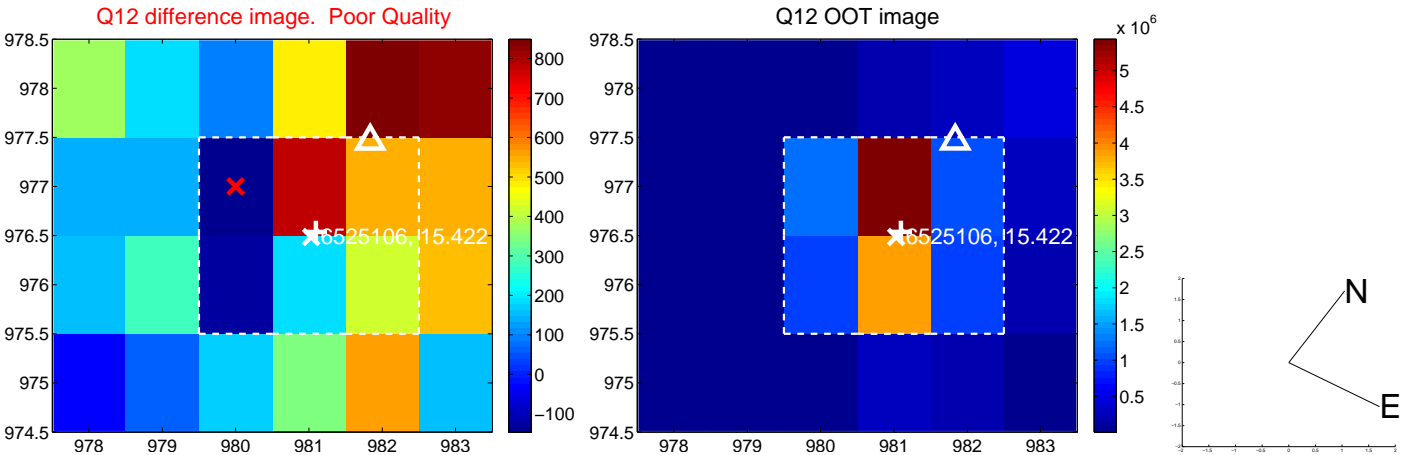
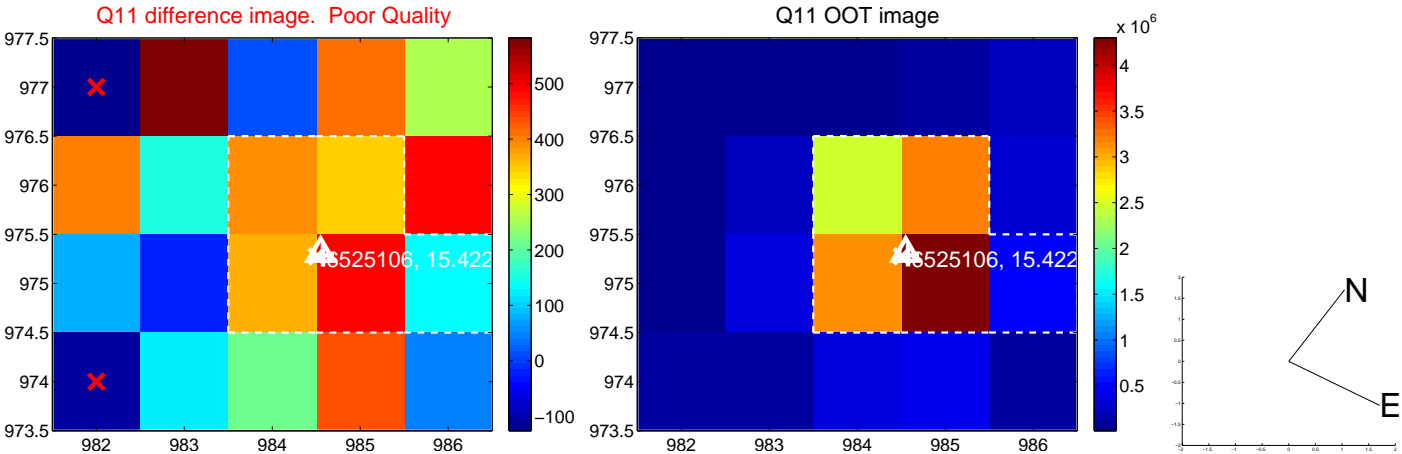
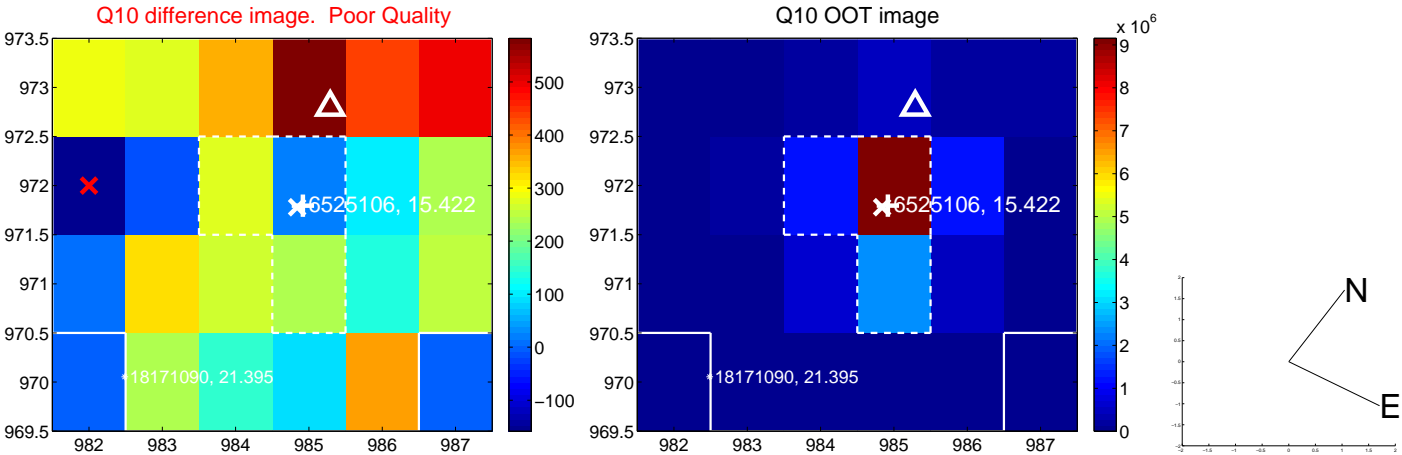
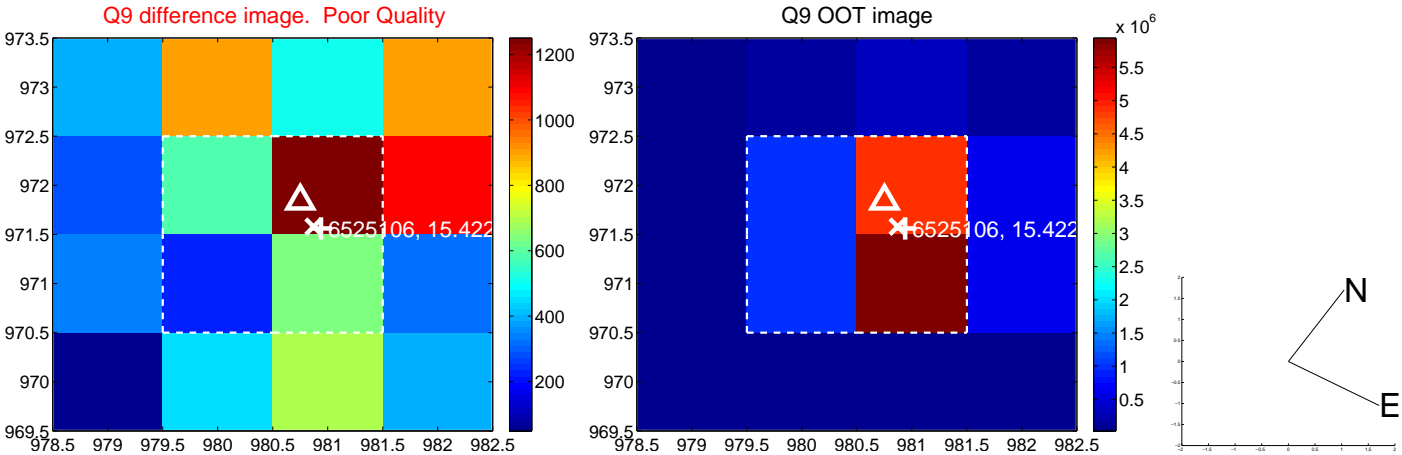
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



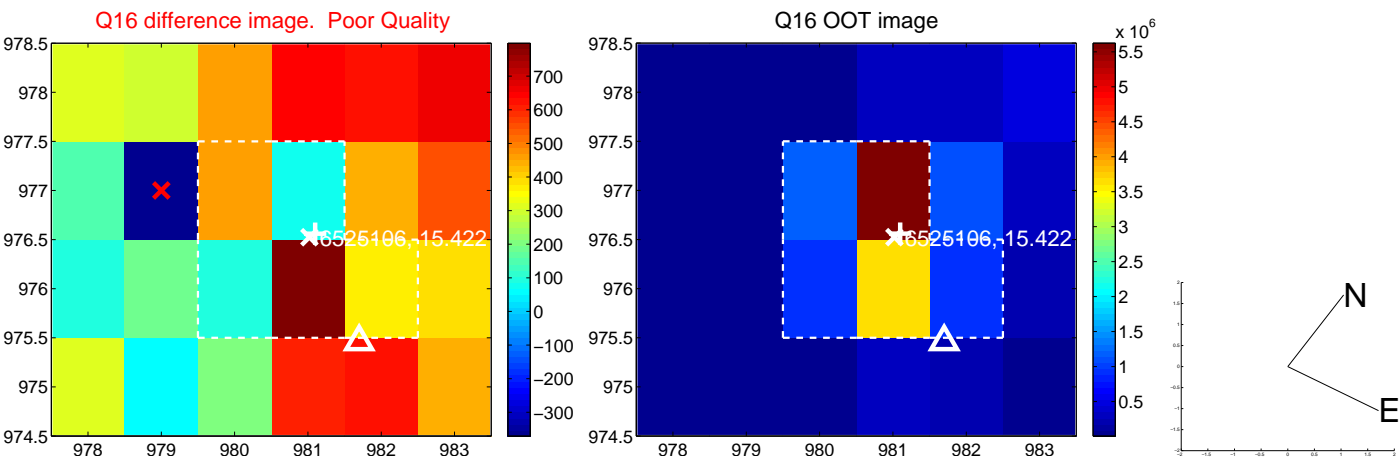
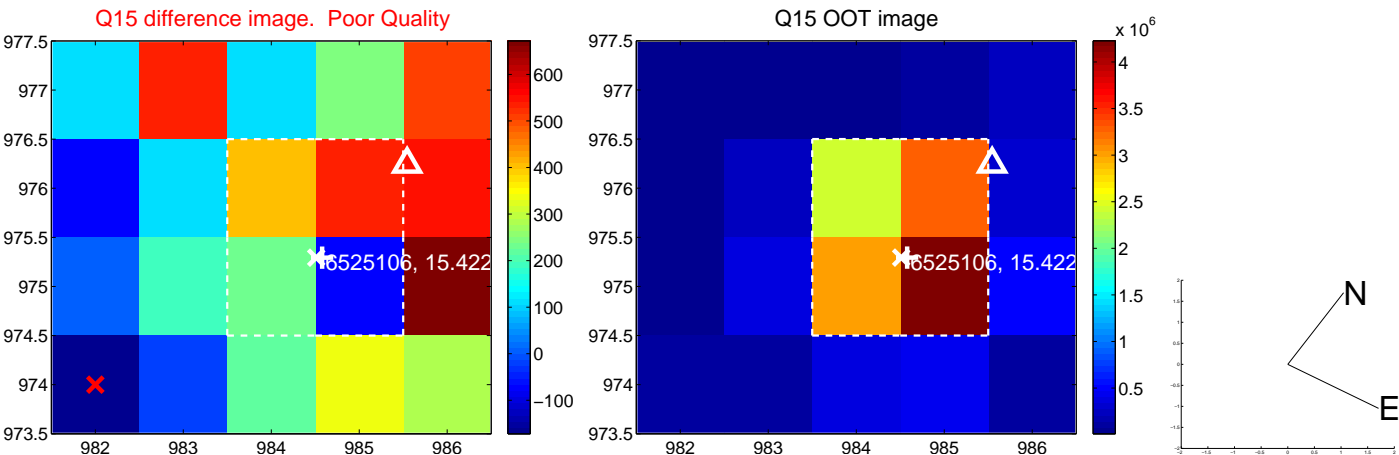
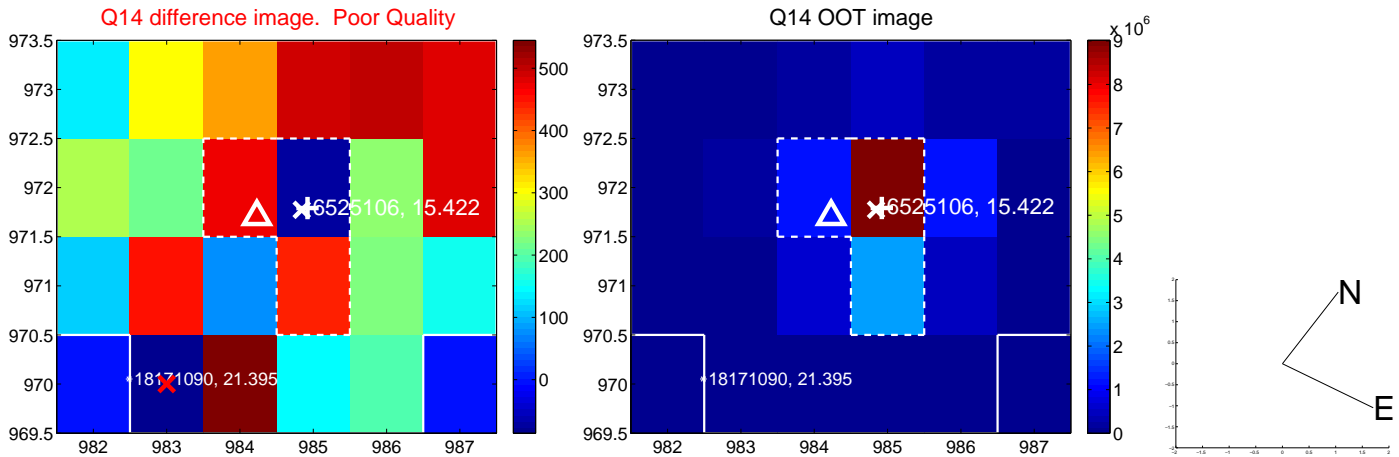
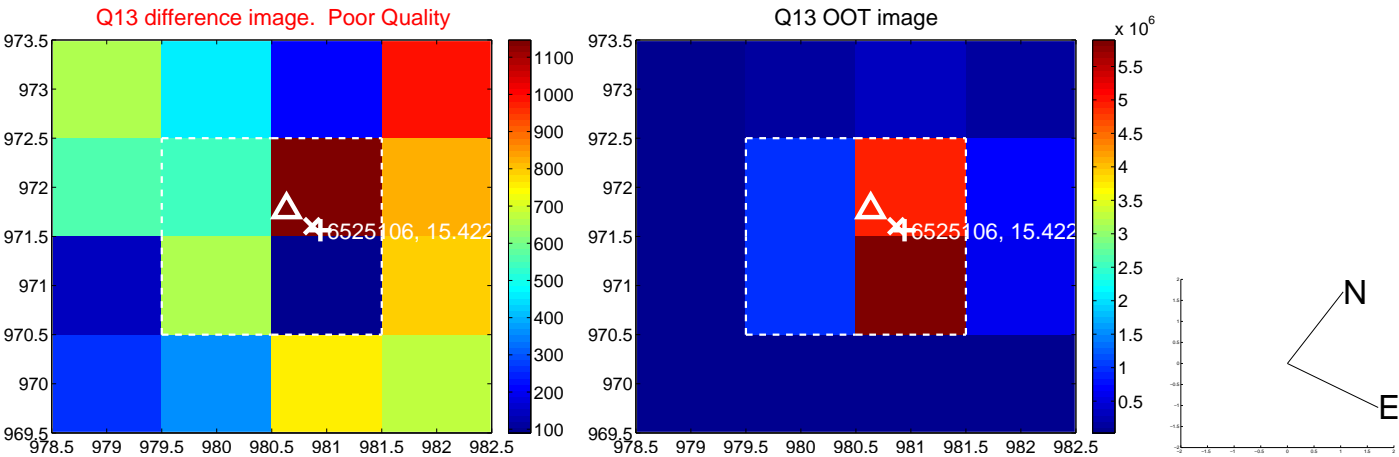
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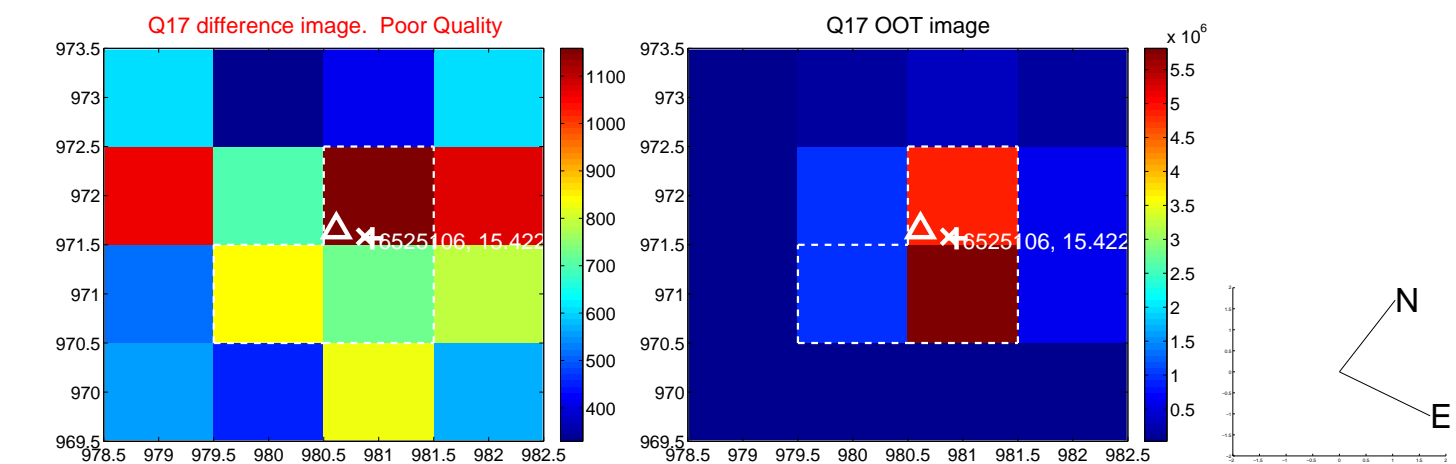
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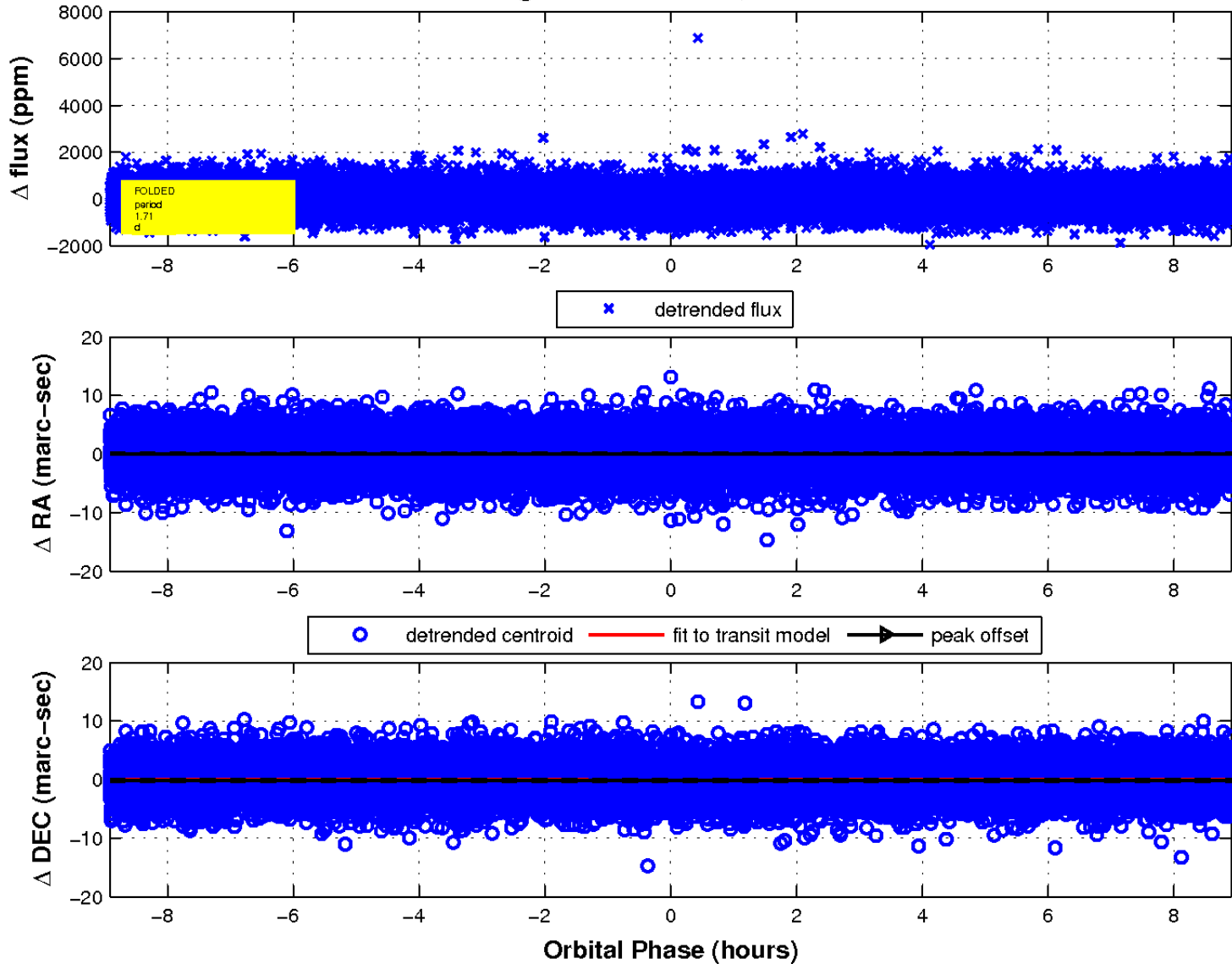
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

