

KIC 006956136

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})
006956136-01	OBS	3221.01	53.907142	132.218048	248.8	50.721	10.1	15.3	2.02	6085	6.34	55.97

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006956136-01	OBS	FP	0.00	1	0	0	0	LPP_DV

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.

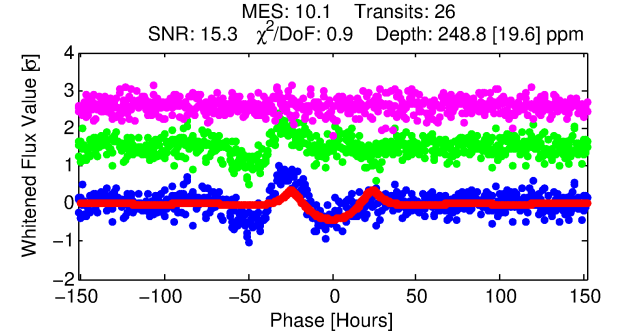
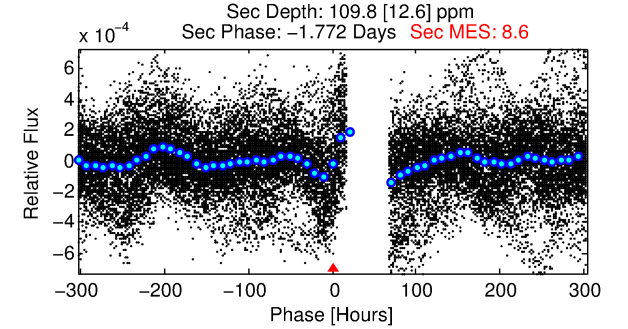
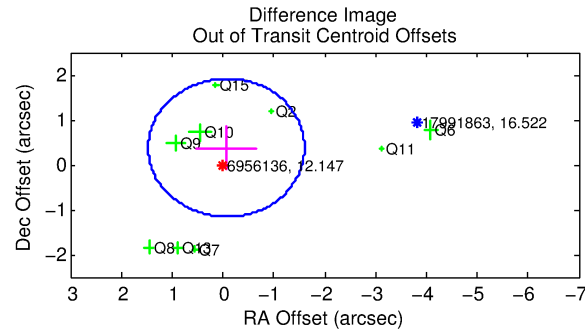
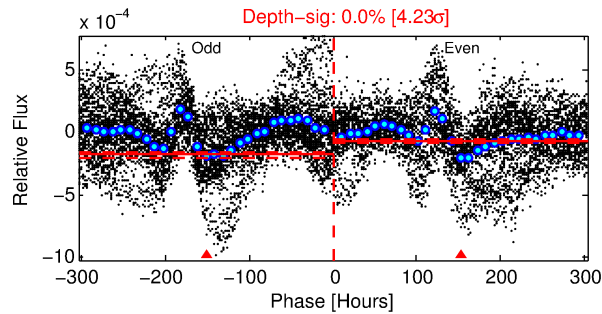
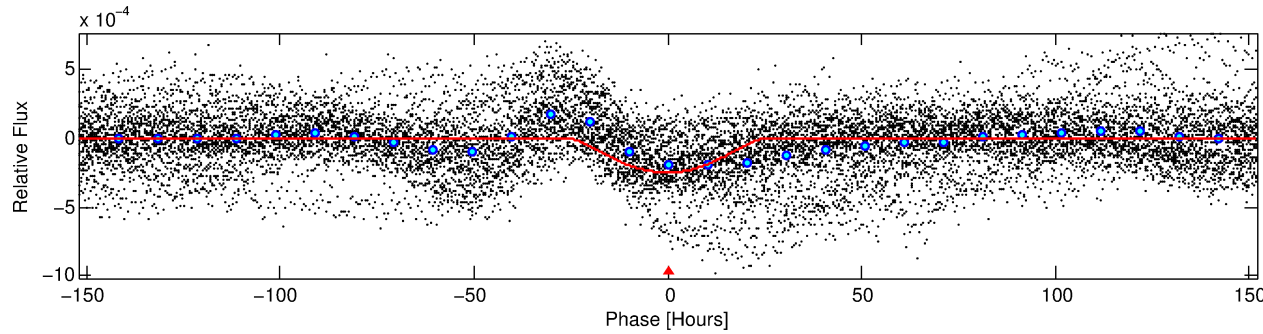
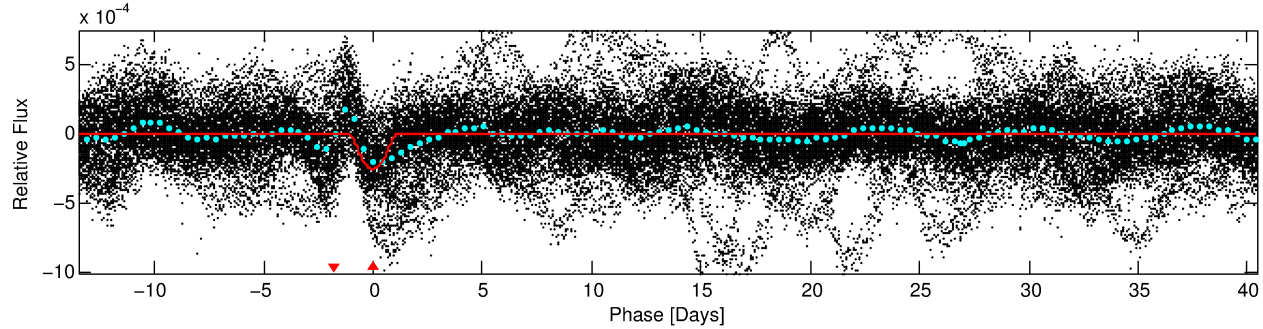
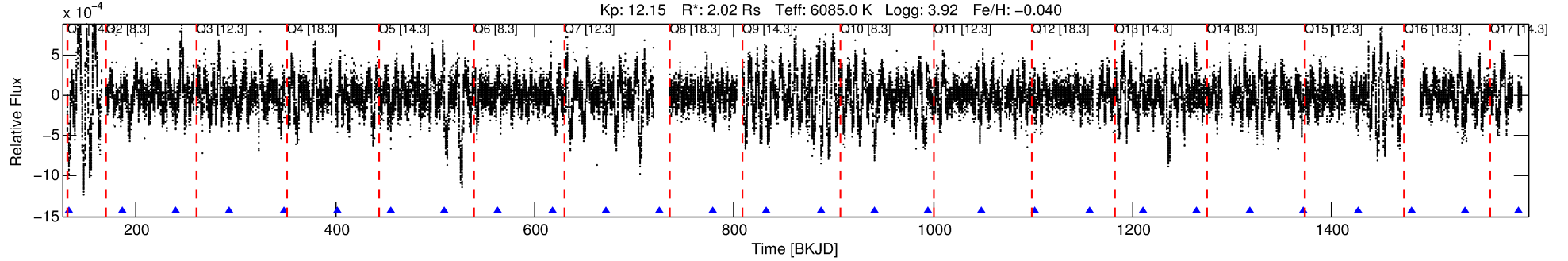
Ephemeris Match Information For 006956136-01

No Significant Match Found

DV One-Page Summary

KIC: 6956136 Candidate: 1 of 1 Period: 53.907 d

KOI: K03221 Corr: No Ephemeris Match



DV Fit Results:

Period = 53.90714 [0.00254] d
Epoch = 132.2180 [0.0414] BKJD
Rp/R* = 0.0288 [0.0176]
a/R* = 2.21 [0.27]
b = 1.00 [0.02]
Seff = 55.97 [40.58]
Teff = 697 [126] K
Rp = 6.34 [4.78] Re
a = 0.2992 [0.1305] AU
Ag = 134.70 [190.98] [0.70σ]
Teffp = 3674 [1137] K [2.60σ]

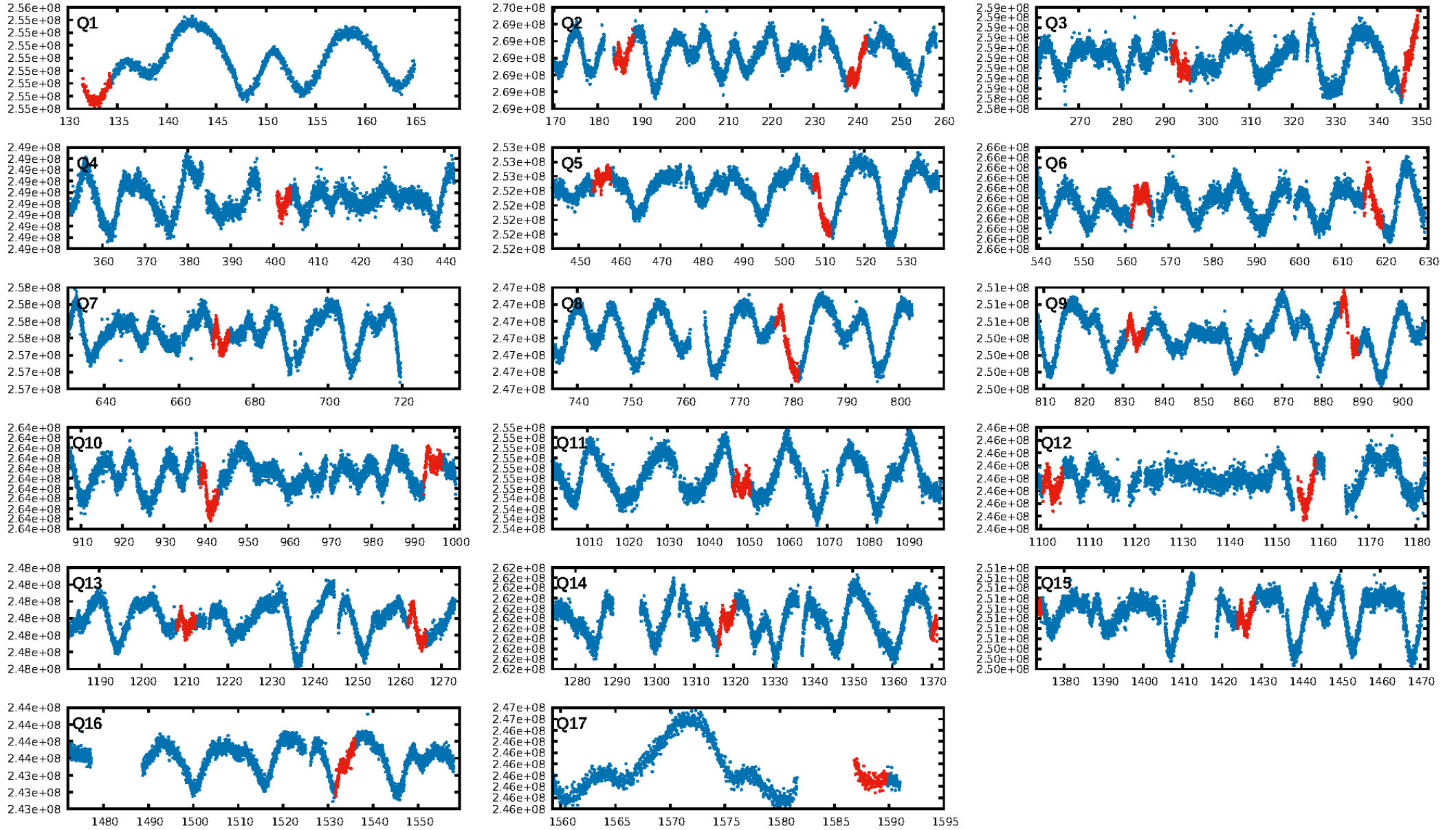
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 17.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.86e-22
RollingBand-fgt: 1.00 [24/24]
GhostDiagnostic-chr: 0.3301
Centroid-sig: 15.4%
Centroid-so: 0.127 arcsec [0.69σ]
OotOffset-rm: 0.381 arcsec [0.74σ]
KicOffset-rm: 0.364 arcsec [0.65σ]
OotOffset-st: 3/3/1/2 [9]
KicOffset-st: 3/3/1/2 [9]
DiffImageQuality-fgm: 0.67 [6/9]
DiffImageOverlap-fno: 1.00 [11/11]

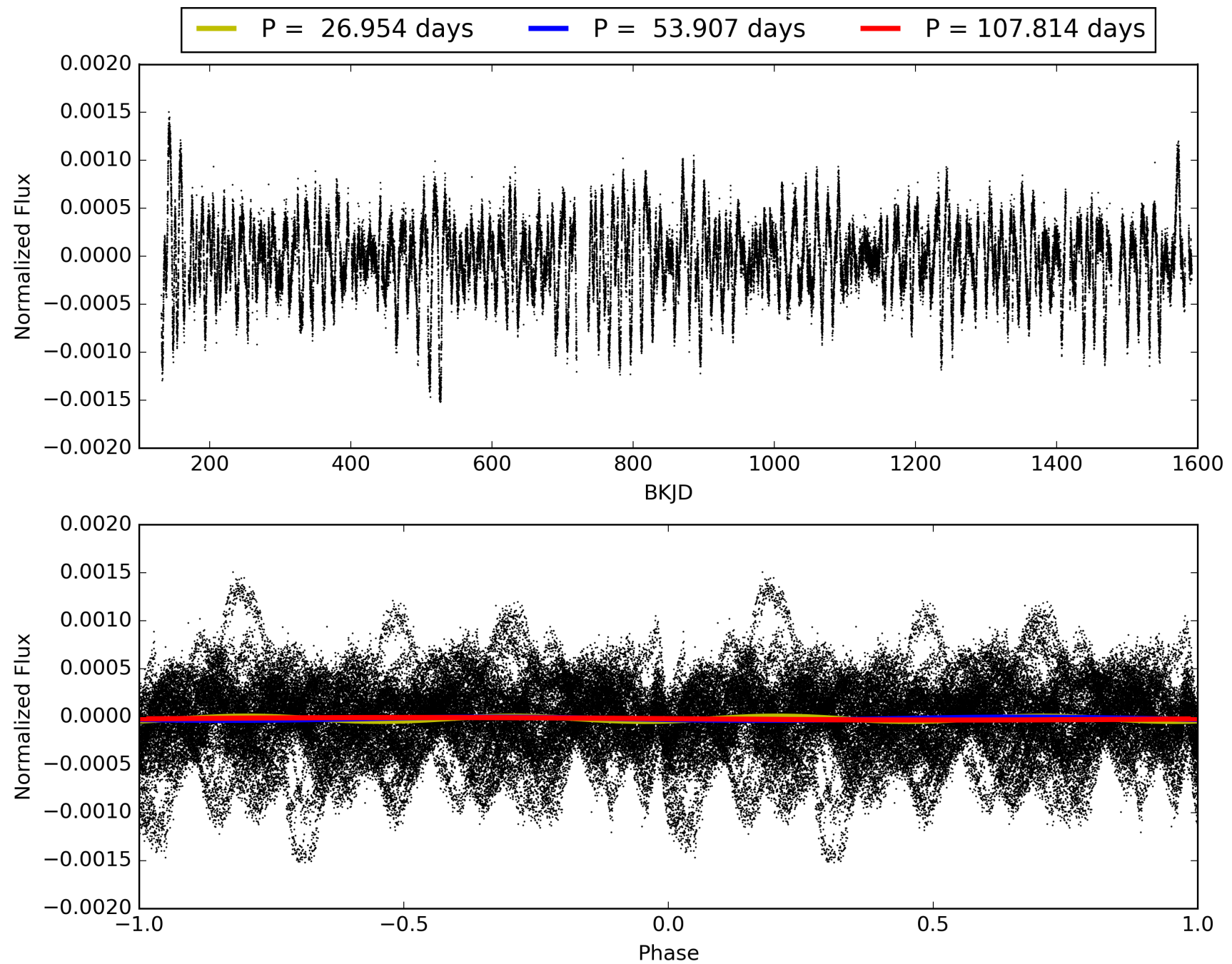
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:08:29 Z

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

TCE 006956136-01, PDC Light Curves

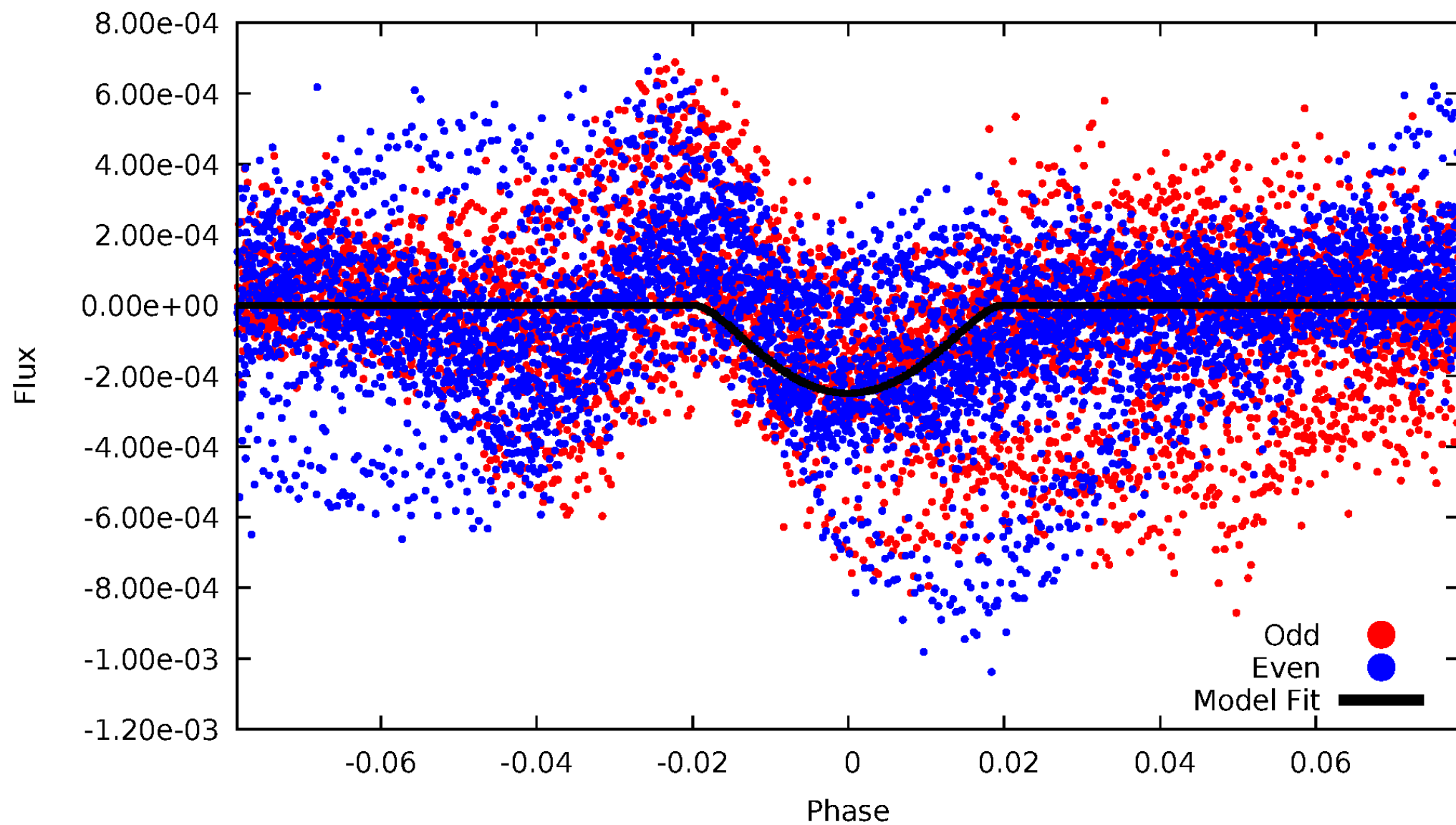


TCE 006956136-01



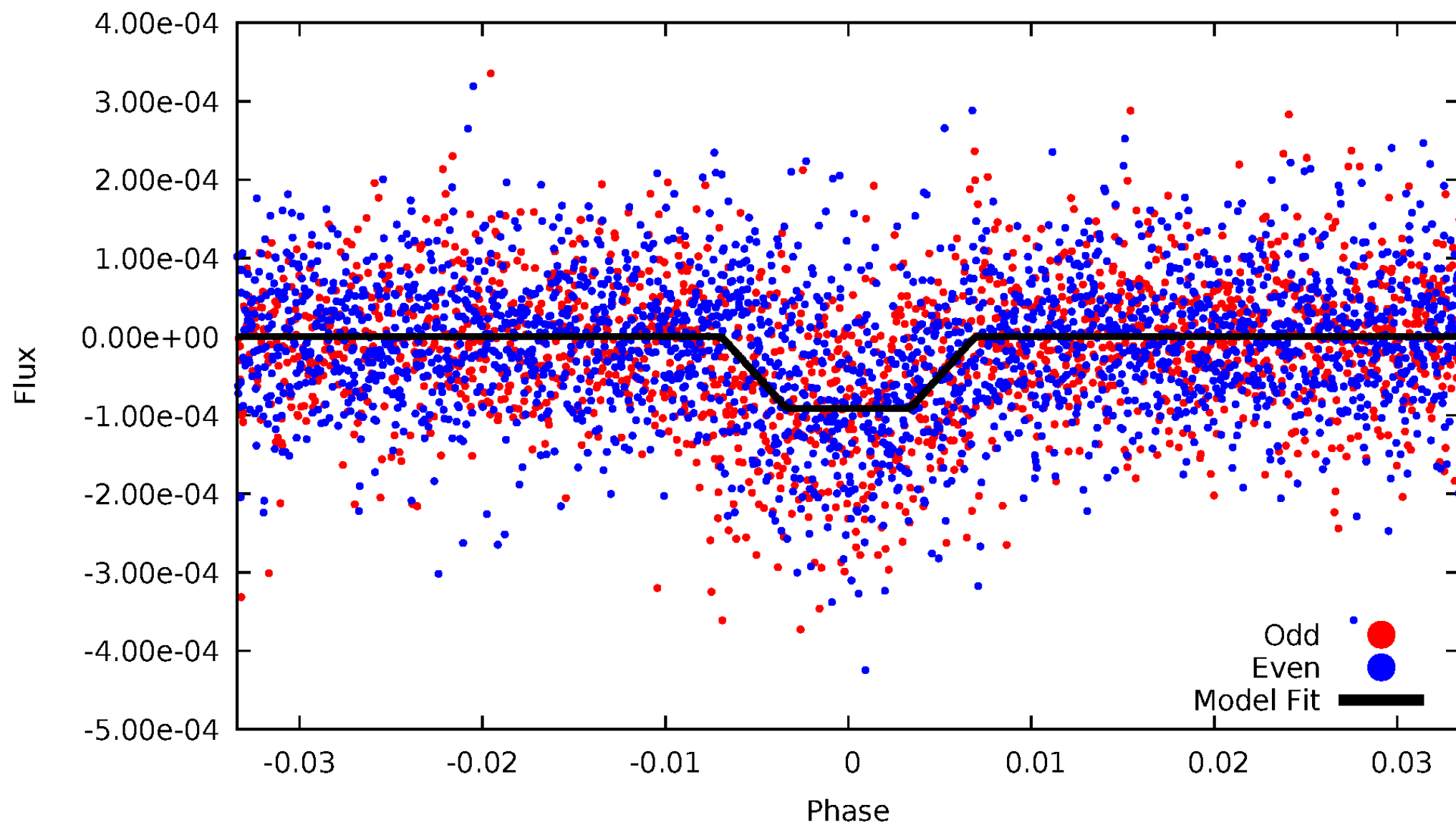
DV Odd/Even

TCE 006956136-01

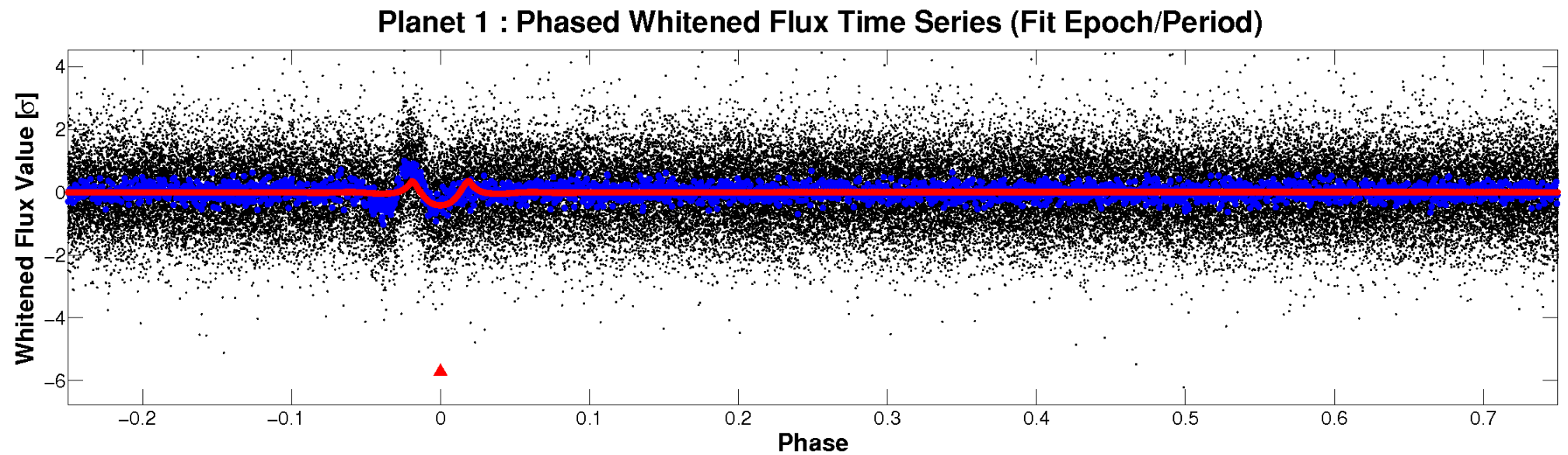
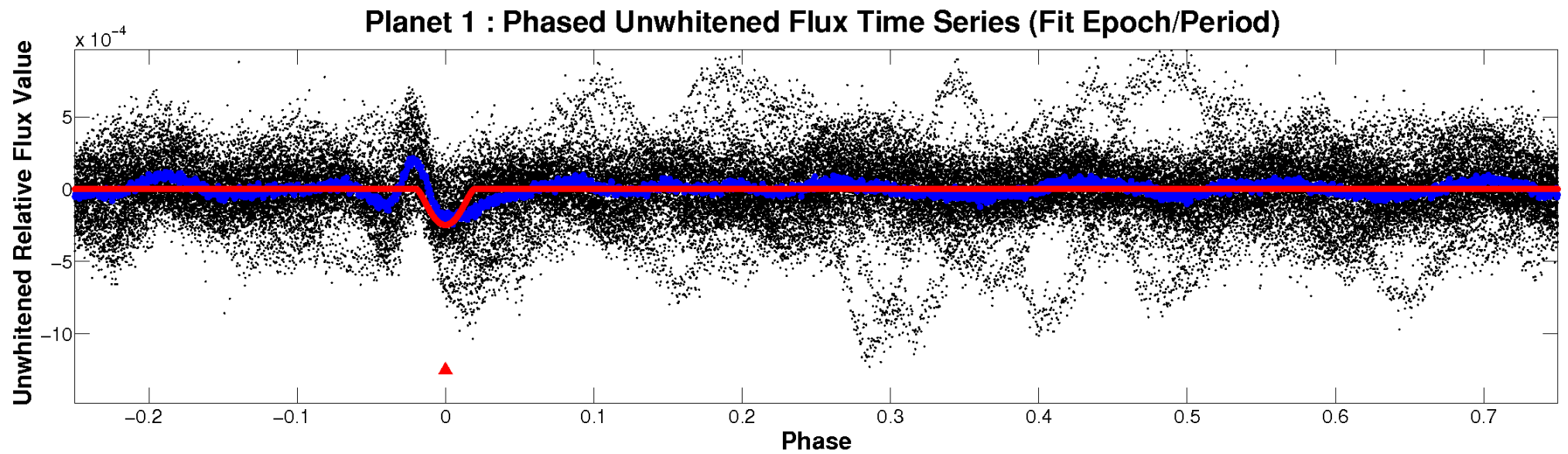


ALT Odd/Even

TCE 006956136-01

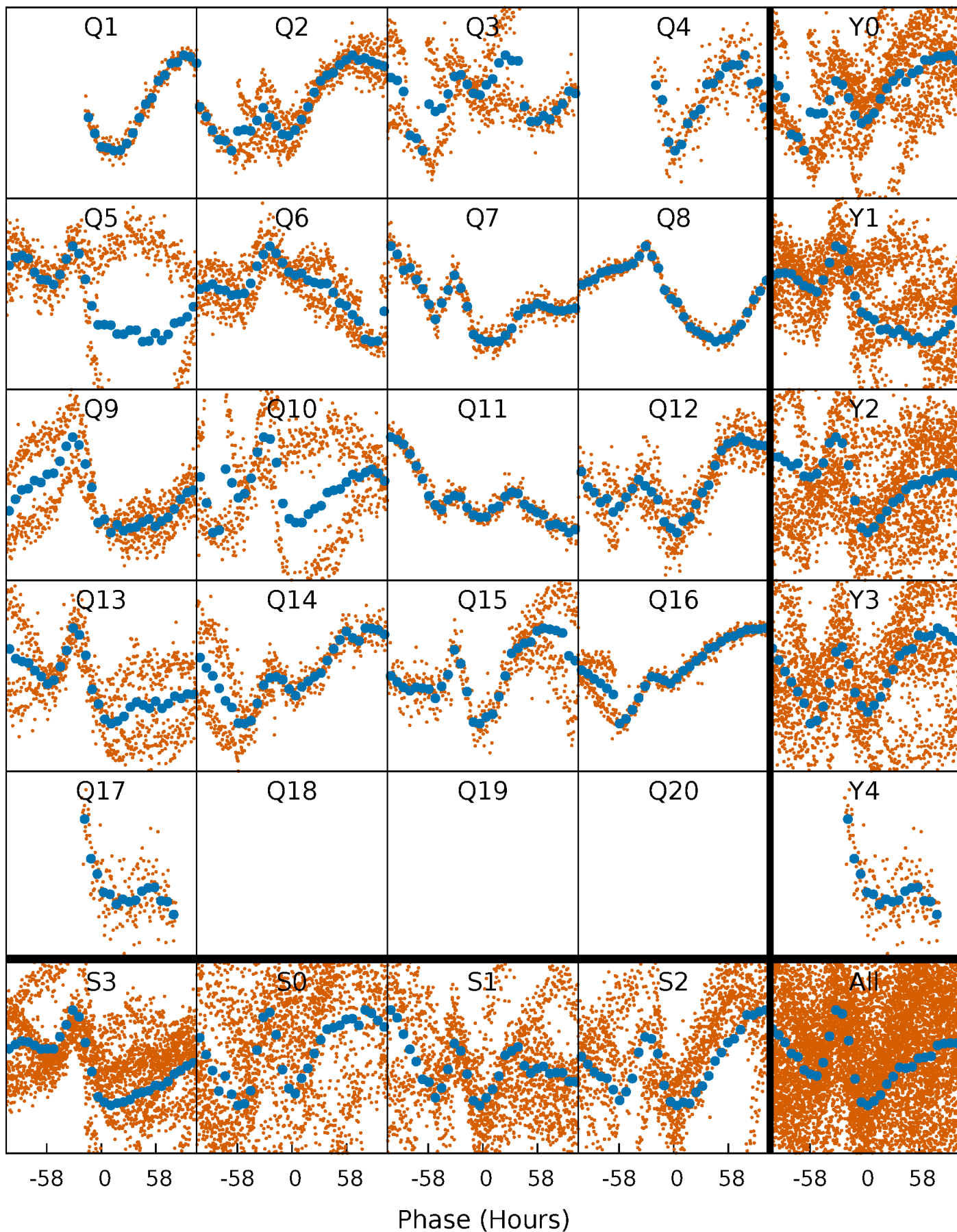


Non-Whitened Vs. Whitened Light Curve



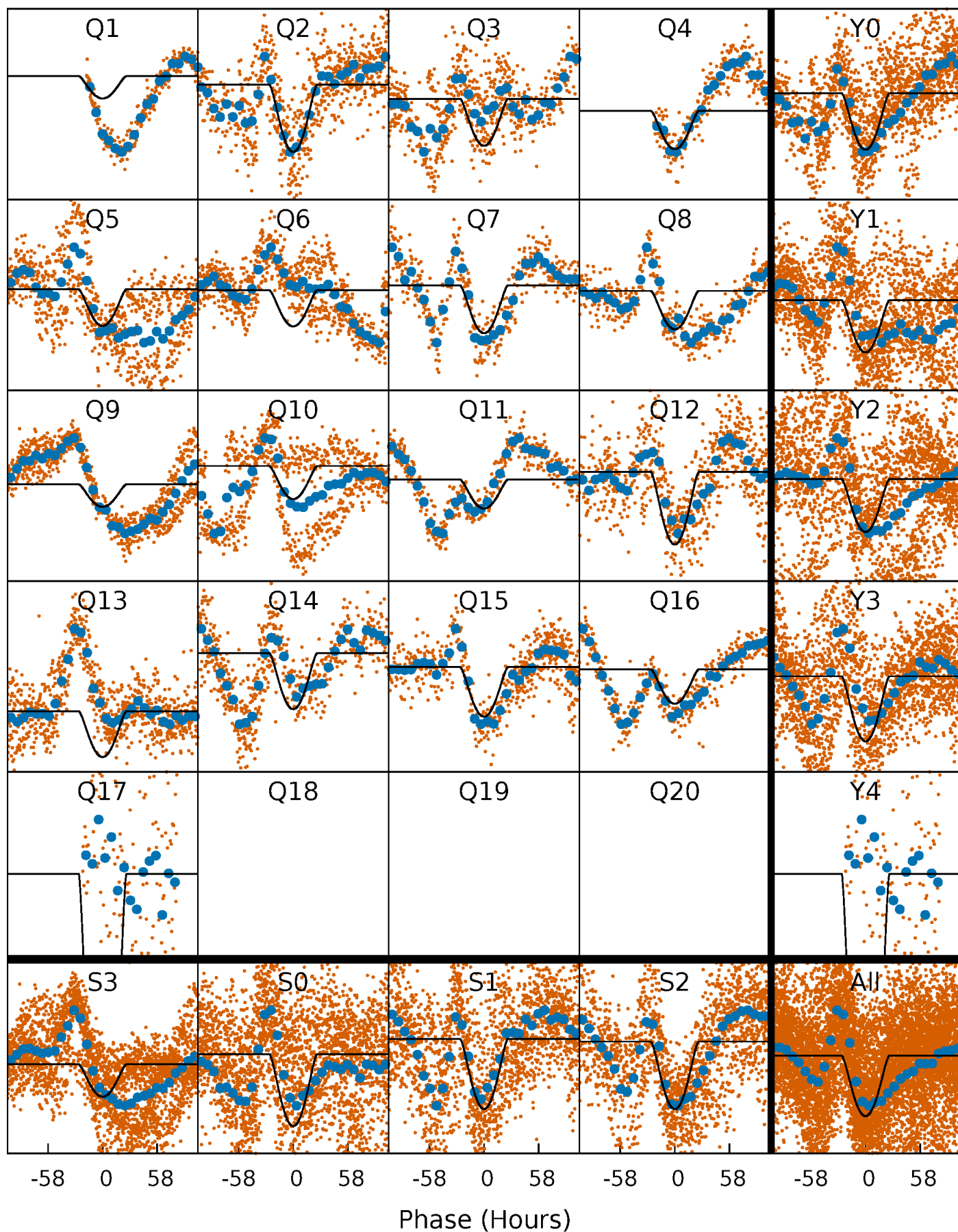
PDC Quarter-Phased Transit Curves

TCE 006956136-01 P= 53.907142 Days $T_0=132.218048$ (BKJD)



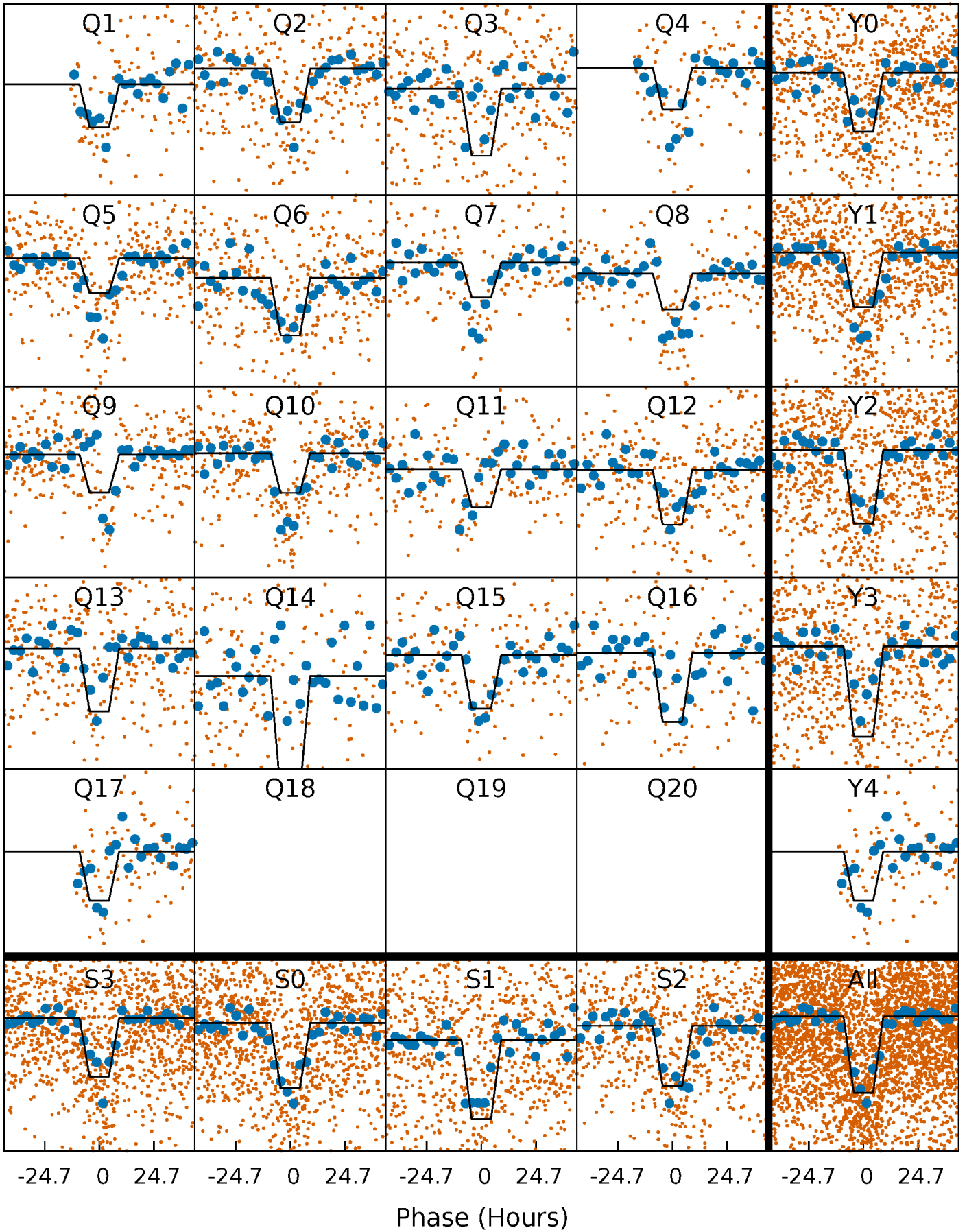
DV Quarter-Phased Transit Curves

TCE 006956136-01 P= 53.907142 Days $T_0=132.218048$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

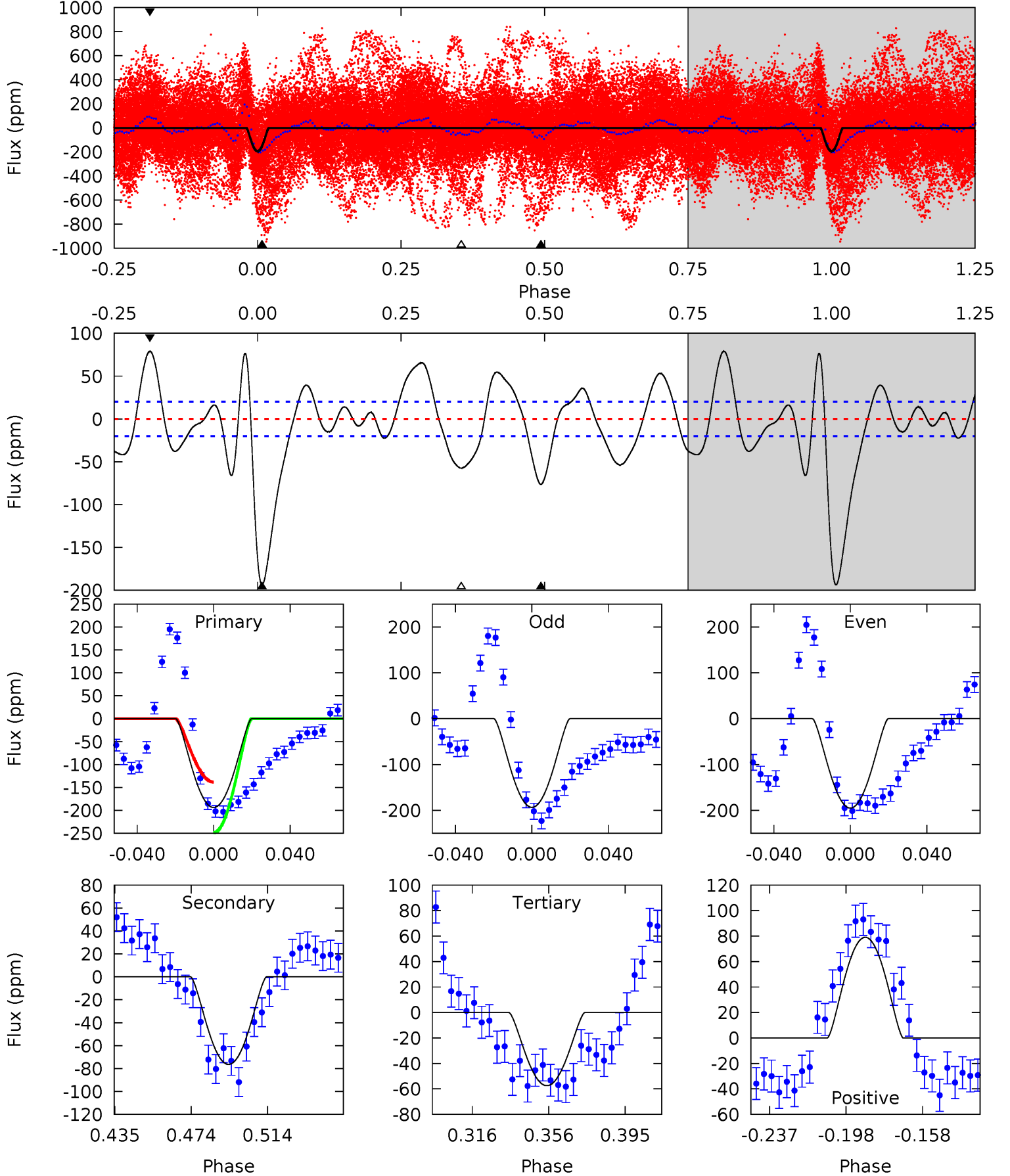
TCE 006956136-01 P= 53.898251 Days $T_0=132.045475$ (BKJD)



DV Model-Shift Uniqueness Test

006956136-01, P = 53.907142 Days, E = 78.310906 Days

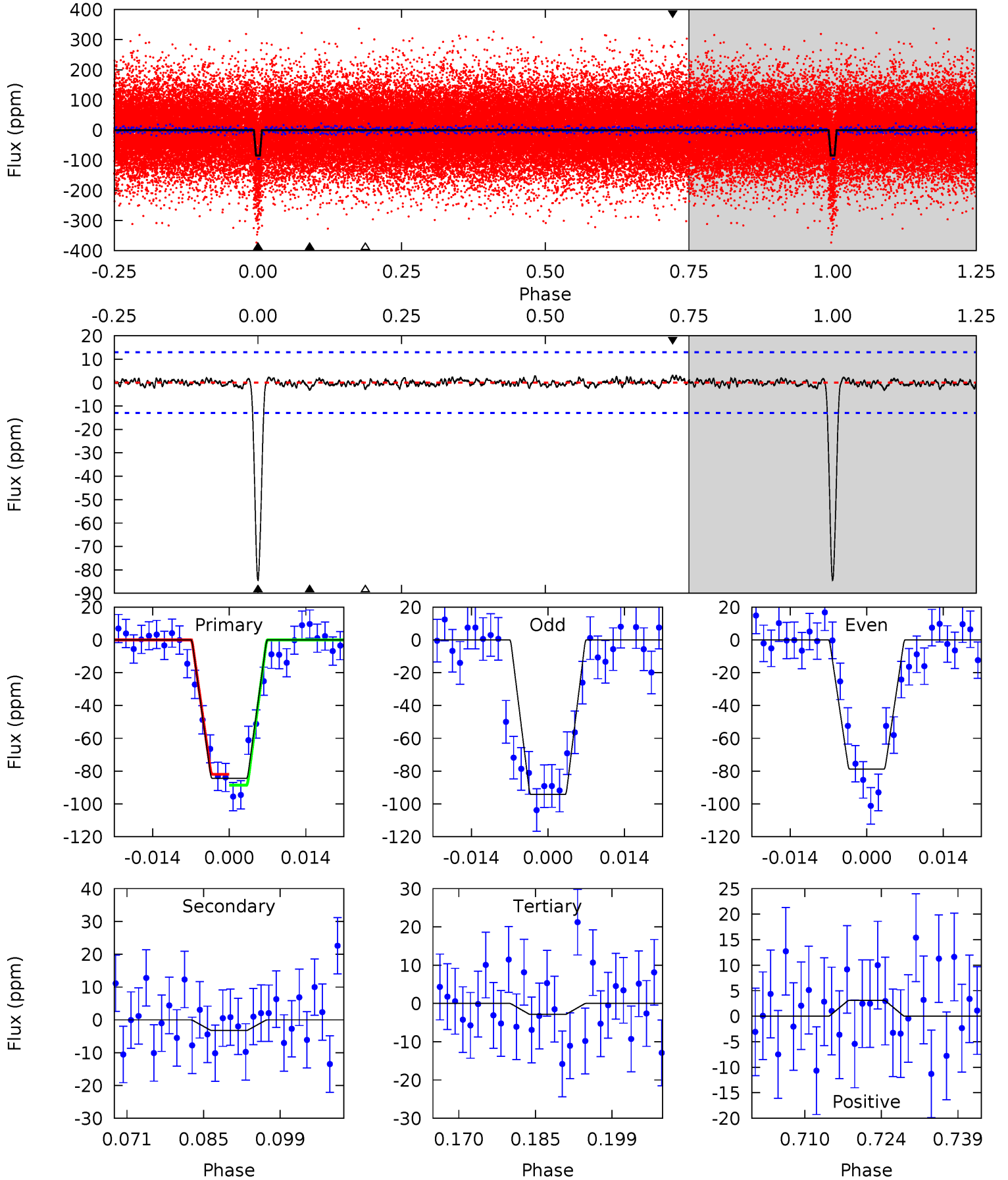
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
45.7	18.0	13.5	18.6	4.76	2.06	8.10	32.1	27.0	4.47	-0.62	0.18	0.89	0.29	13.1



Alt Model-Shift Uniqueness Test

006956136-01, P = 53.898251 Days, E = 78.147224 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
32.3	1.23	1.10	1.19	4.96	2.45	0.40	31.2	31.1	0.13	0.04	2.94	0.89	0.04	1.26



Stellar Parameters For KIC 006956136

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6085^{+192}_{-234}	$3.917^{+0.420}_{-0.140}$	$-0.040^{+0.250}_{-0.300}$	$2.020^{+0.479}_{-0.890}$	$1.228^{+0.180}_{-0.247}$	$0.210^{+0.823}_{-0.089}$
	+3%/-4%	+11%/-4%	+625%/-750%	+24%/-44%	+15%/-20%	+392%/-42%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 006956136-01 / KOI 3221.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-76 ± 4	$5.90^{+4.17}_{-3.23}$	947^{+81}_{-110}	3720^{+1233}_{-500}	111^{+423}_{-73}
Alt.	-3 ± 3	$3.27^{+3.19}_{-2.12}$	950^{+79}_{-121}	2687^{+987}_{-594}	12^{+84}_{-11}

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

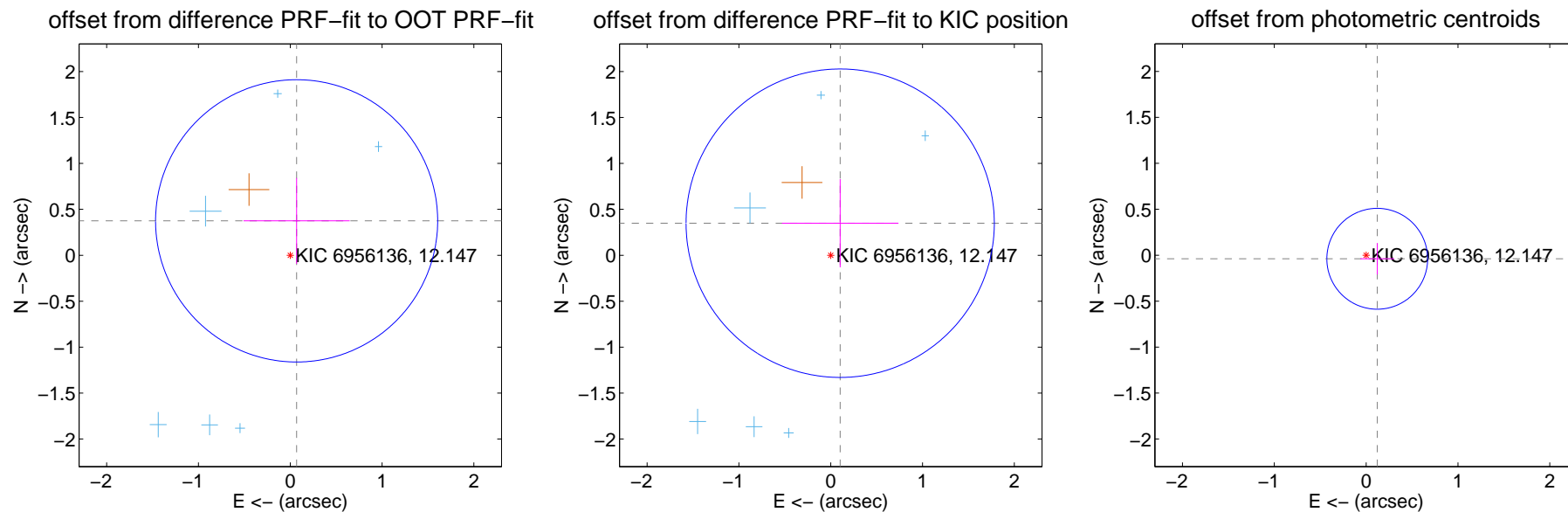
DV Centroid Data

Supplemental centroid analysis for 006956136-01. Kepler magnitude: 12.15. Transit SNR 15.30

There are 6 quarters with good PRF difference image offsets

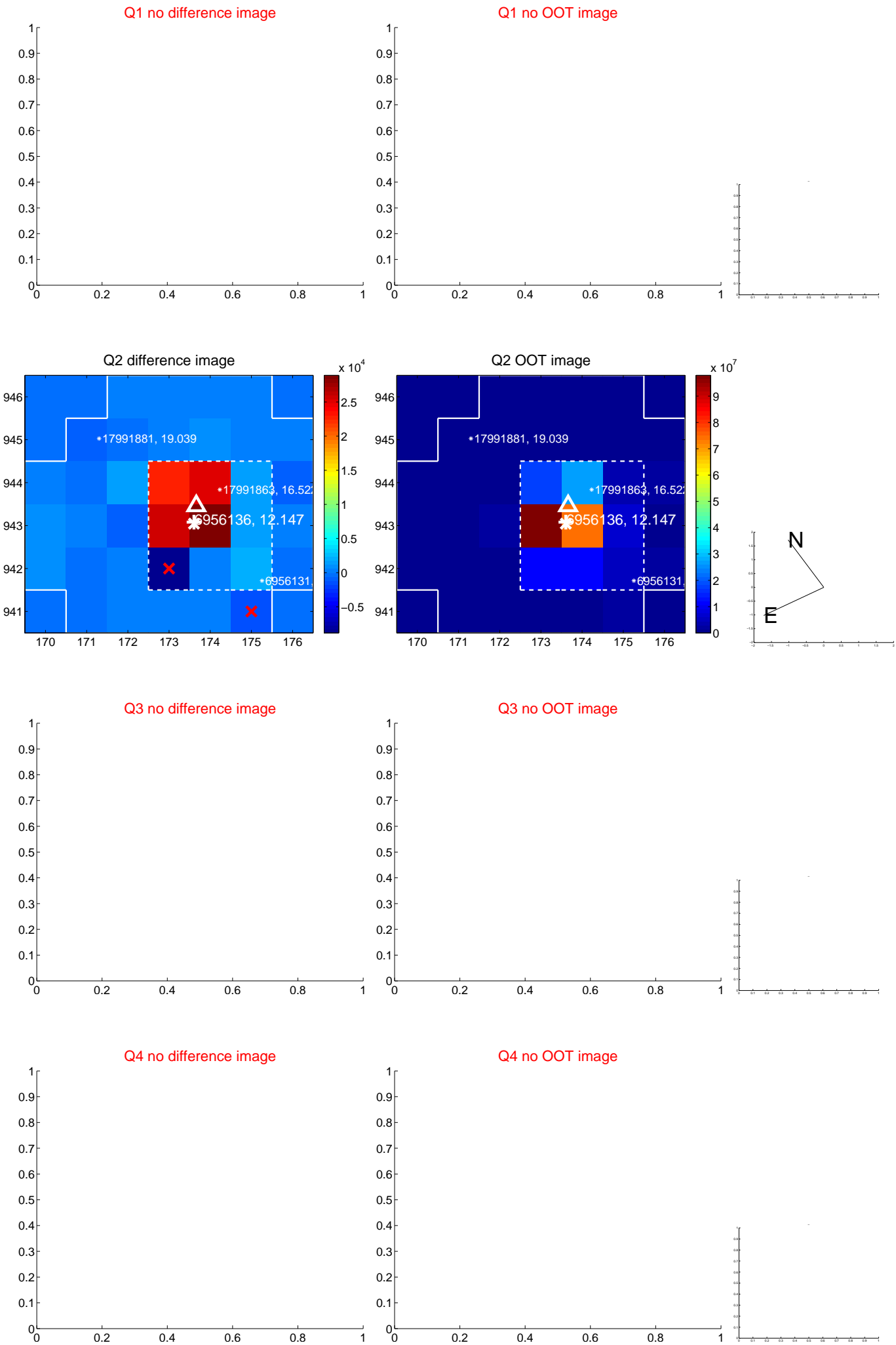
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.381 ± 0.512	0.74	-0.069 ± 0.578	0.375 ± 0.467
PRF-fit source offset from KIC position	0.364 ± 0.560	0.65	-0.103 ± 0.634	0.349 ± 0.480
photometric centroid source offset	0.13 ± 0.18	0.69	-0.12 ± 0.18	-0.04 ± 0.17

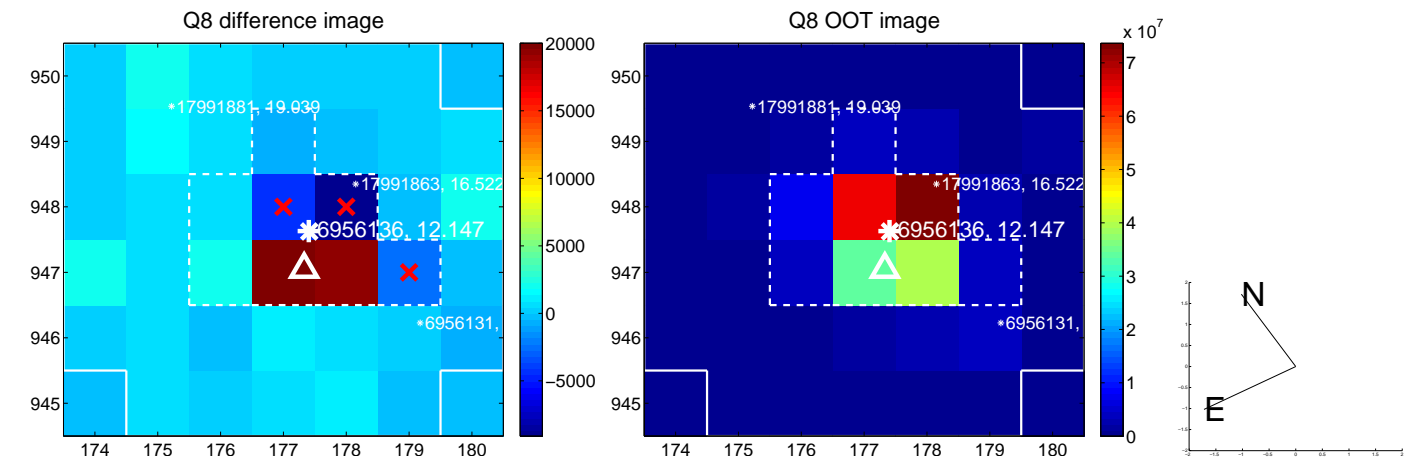
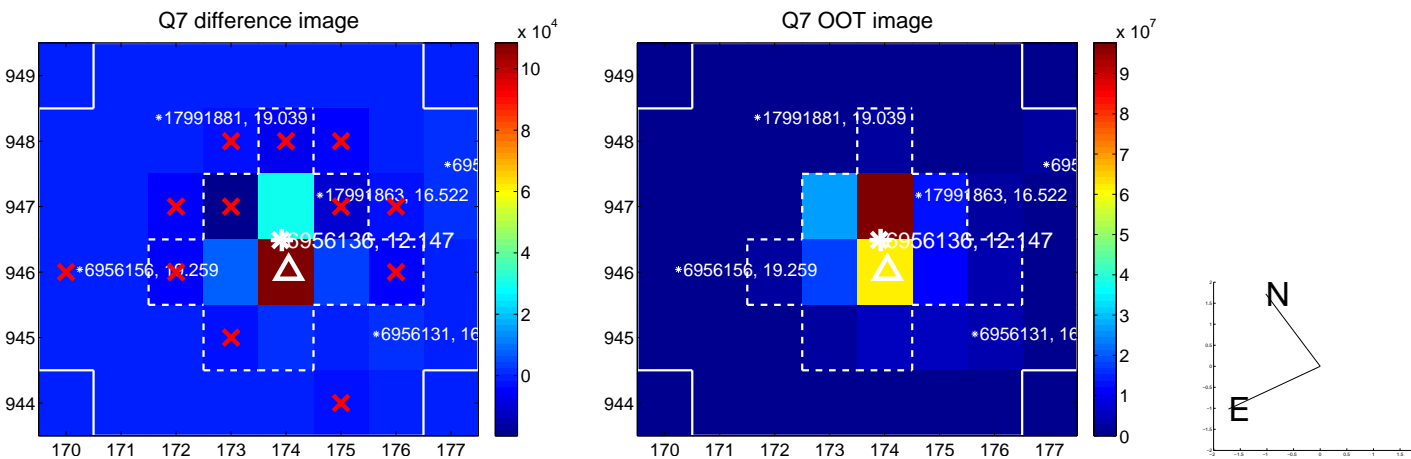
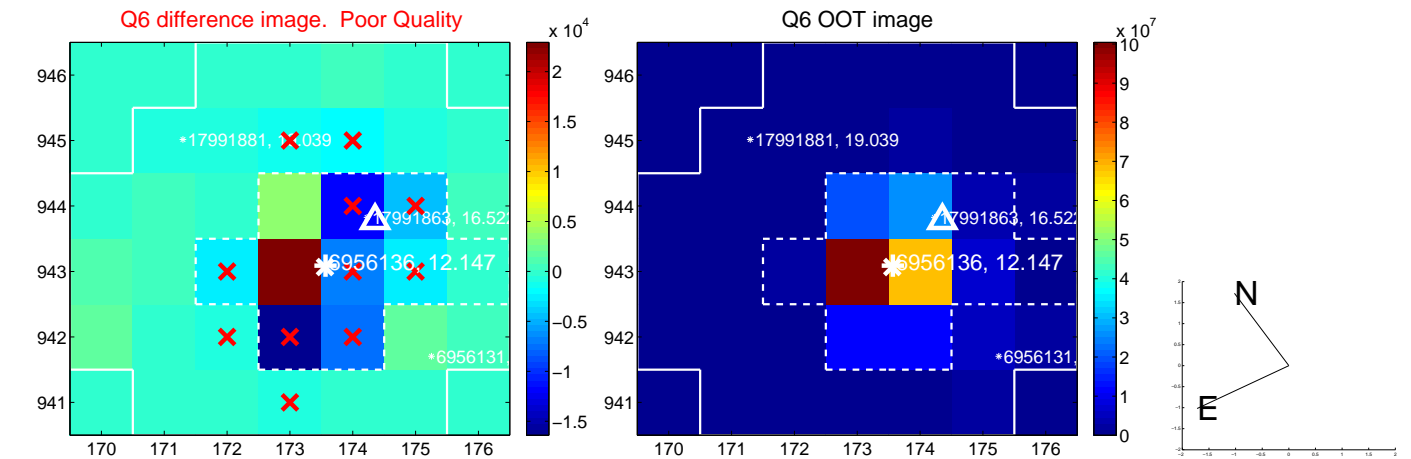
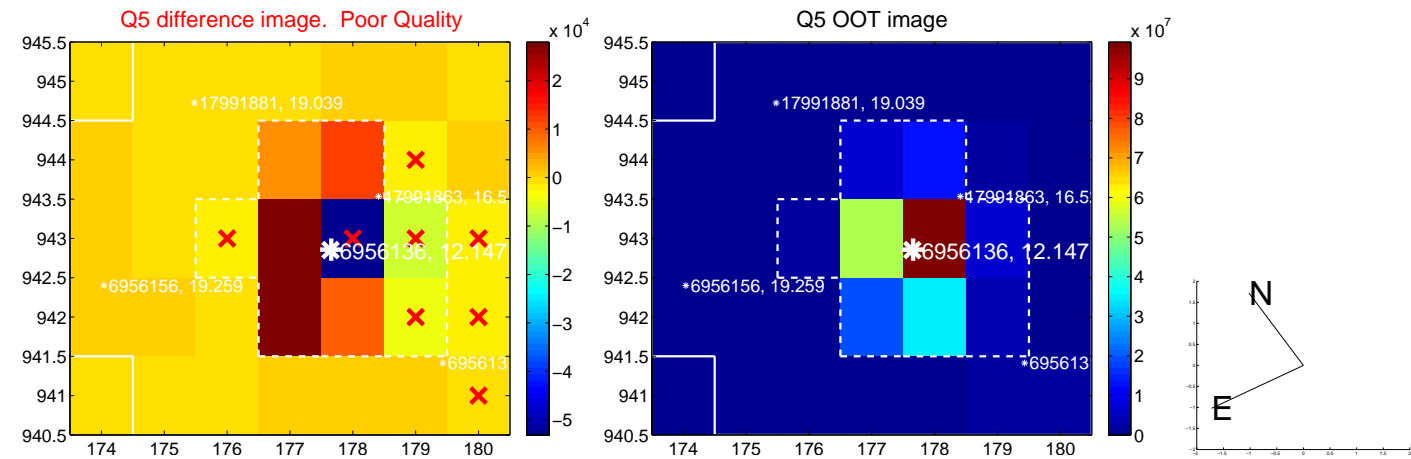


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

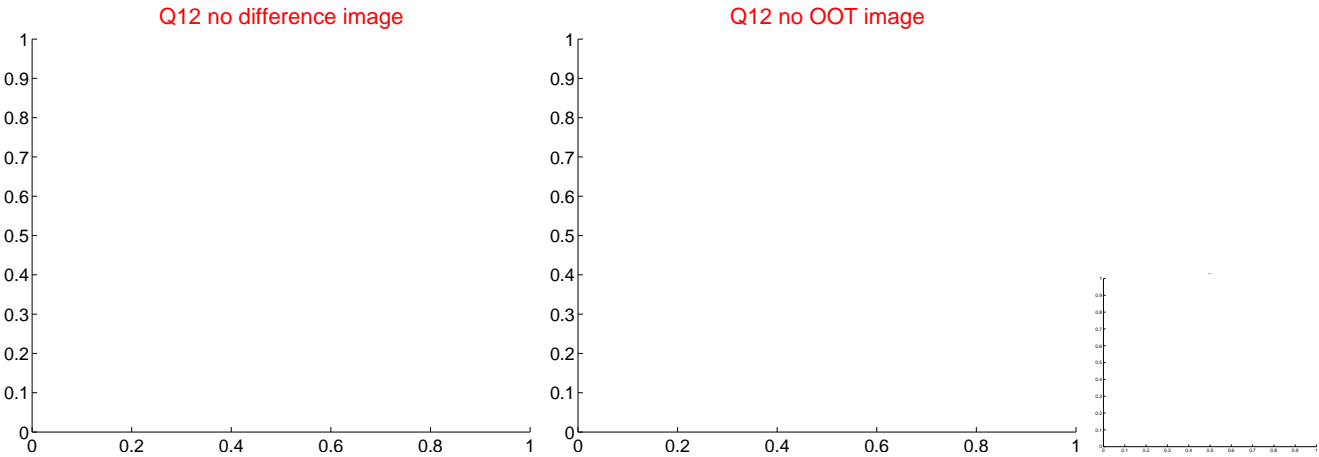
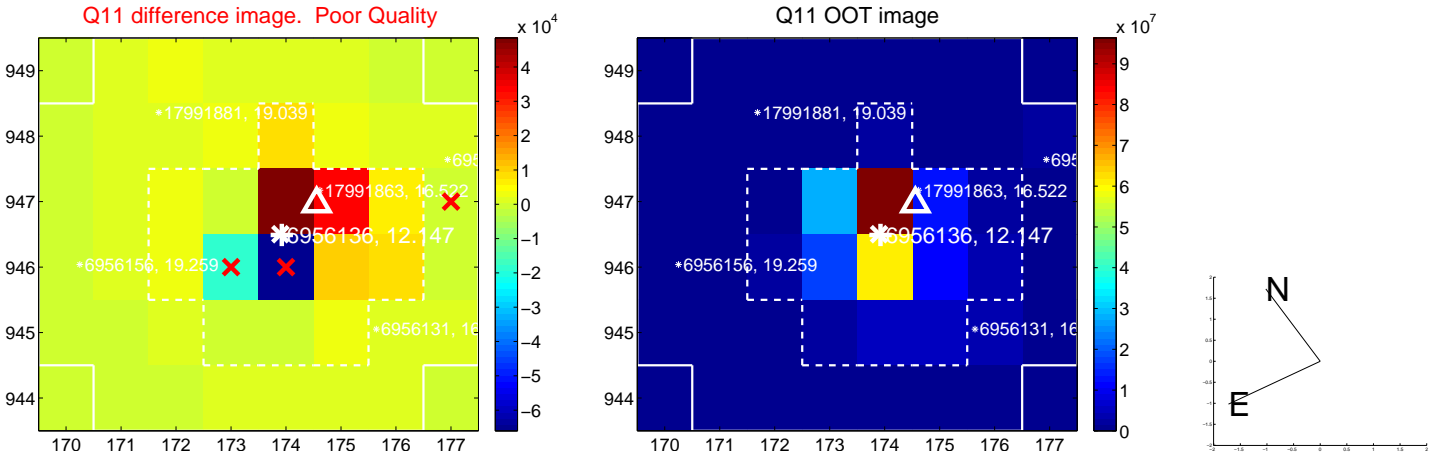
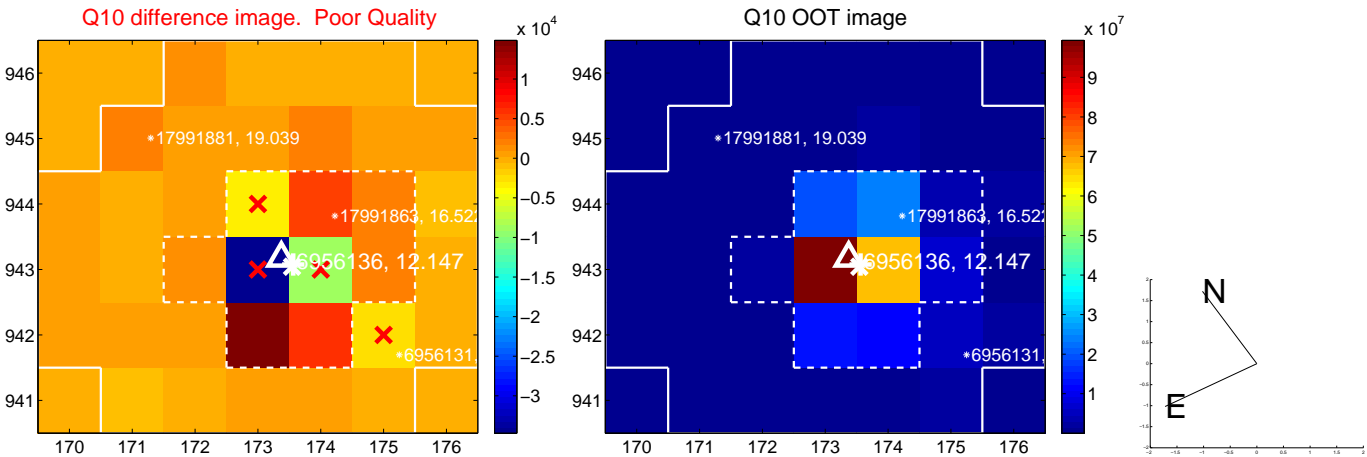
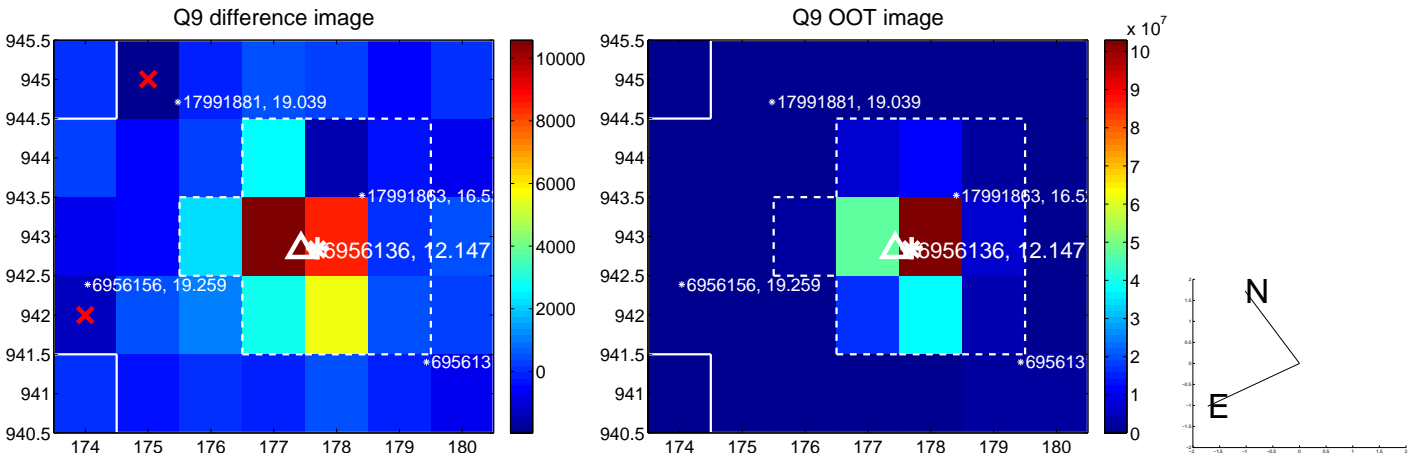
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



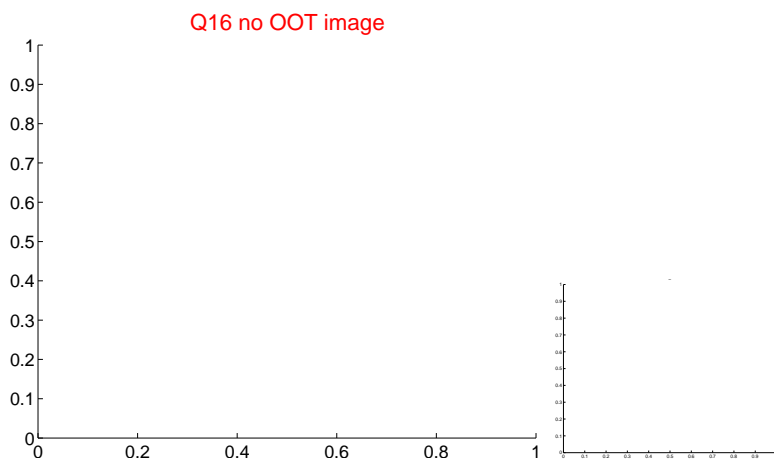
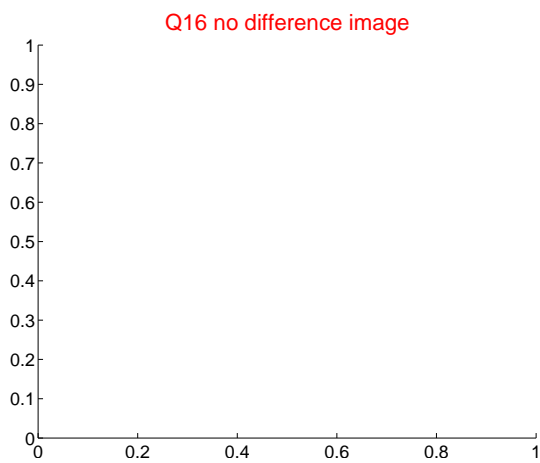
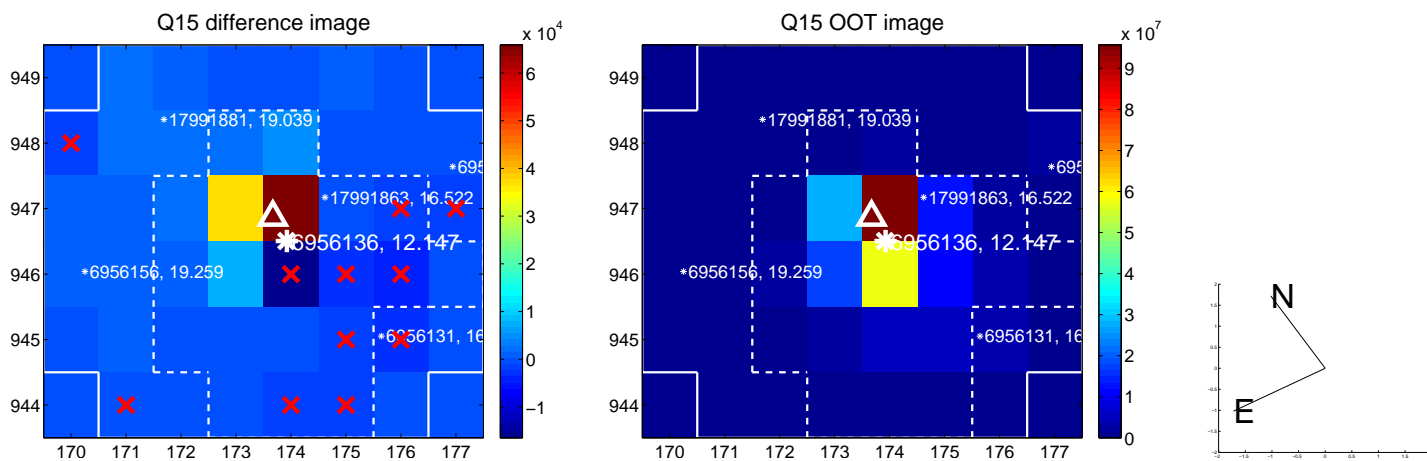
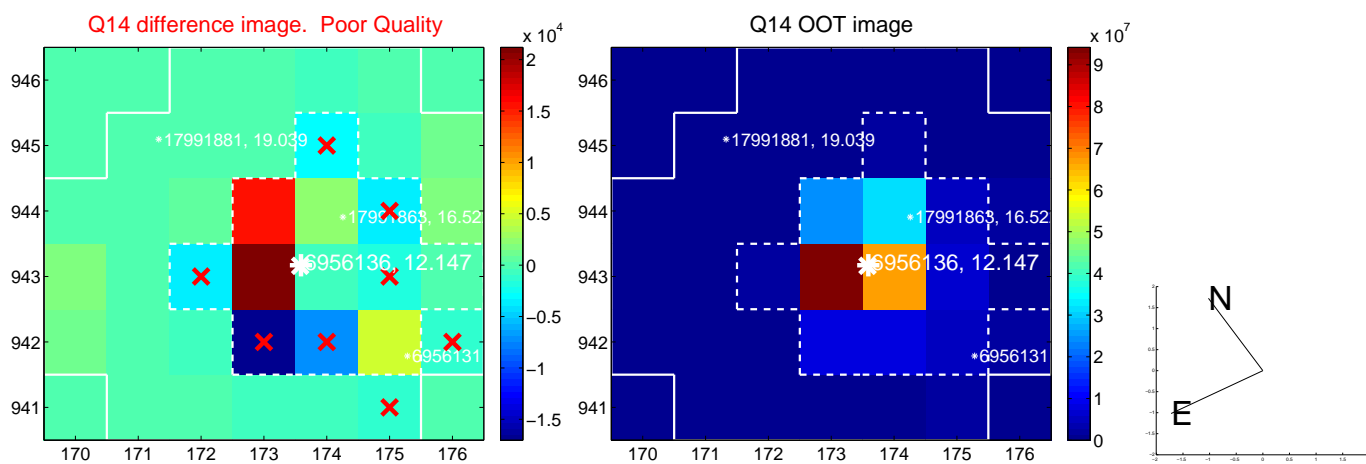
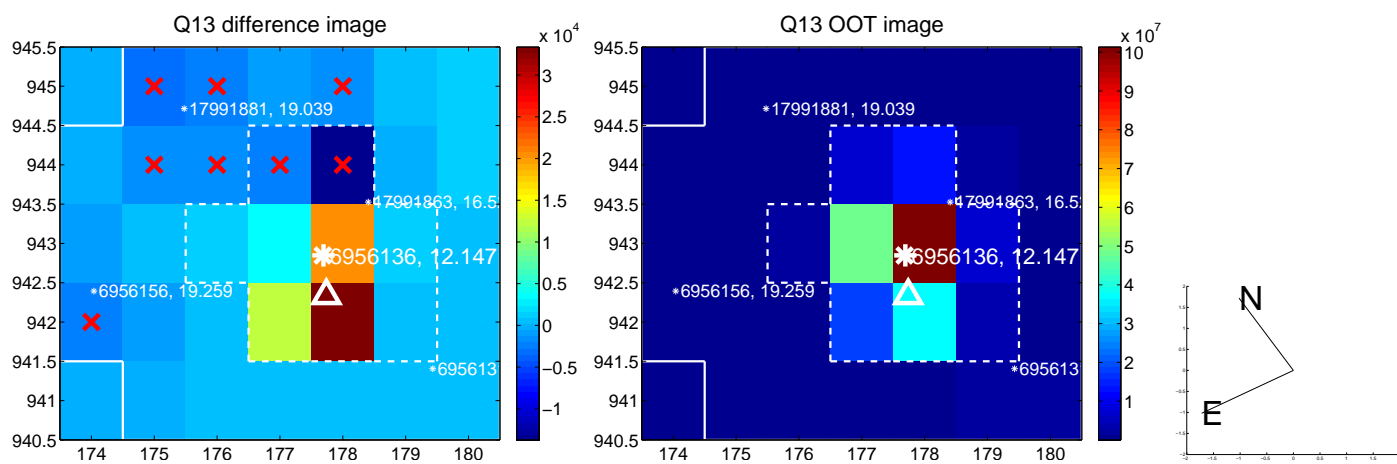
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



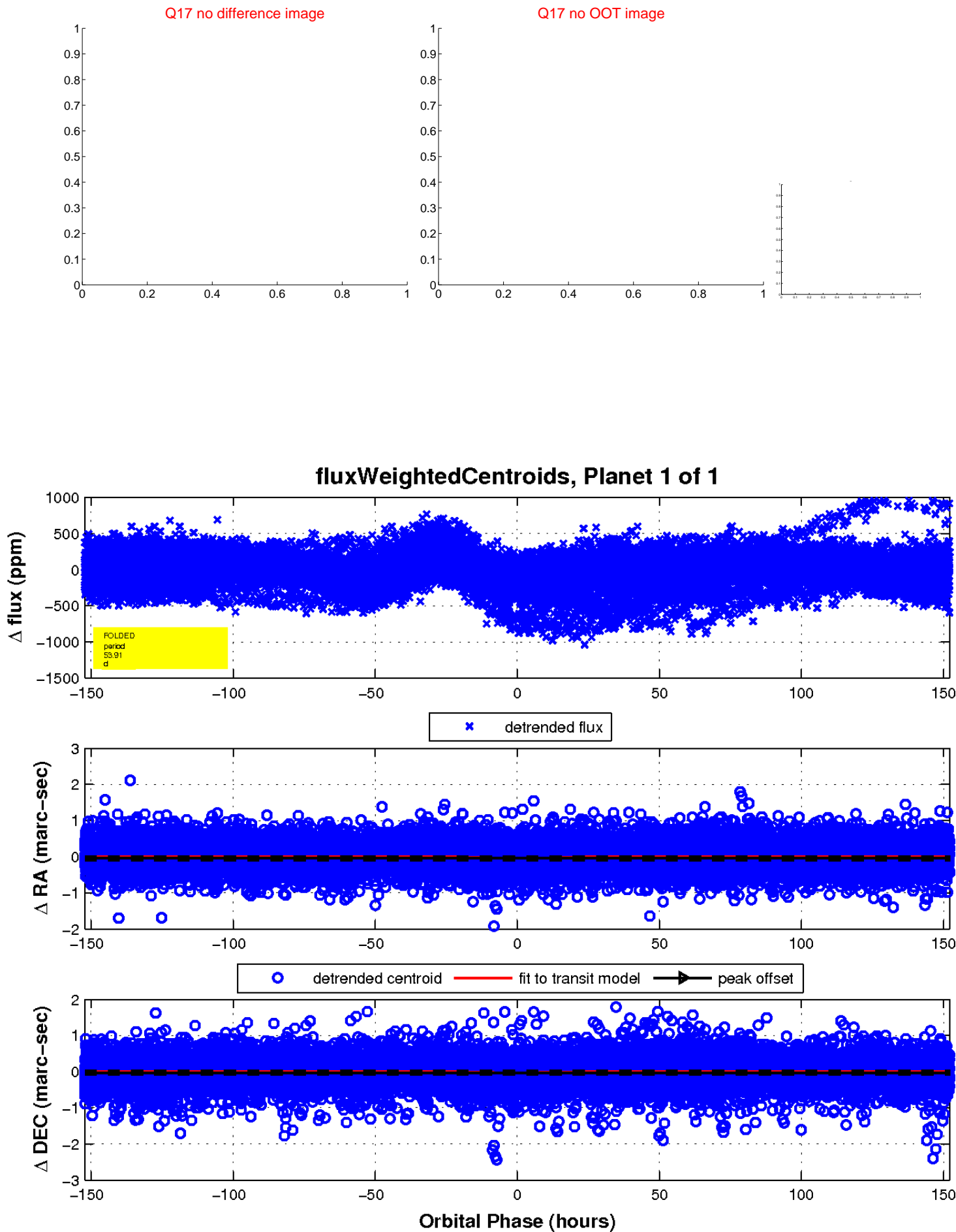
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UKIRT Image

Declination

