

KIC 005301955

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})
005301955-01	OBS	No	0.683878	132.170230	84.1	2.748	53.5	5.3	0.46	4393	0.52	506.97

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005301955-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_KIC_POS

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.

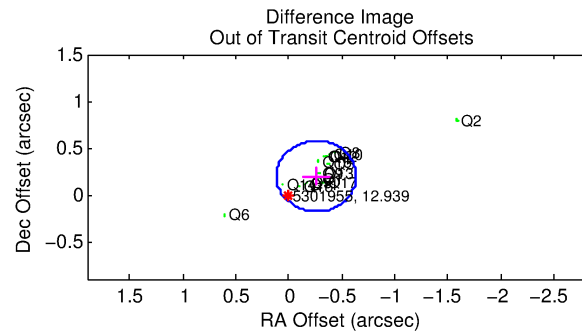
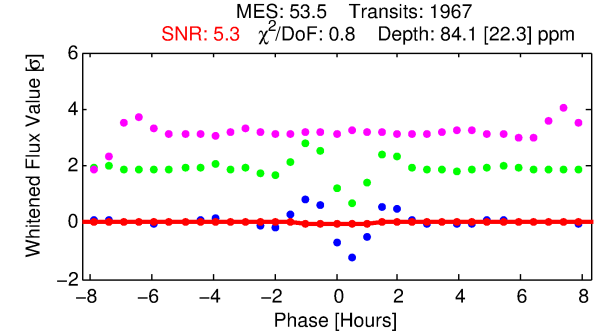
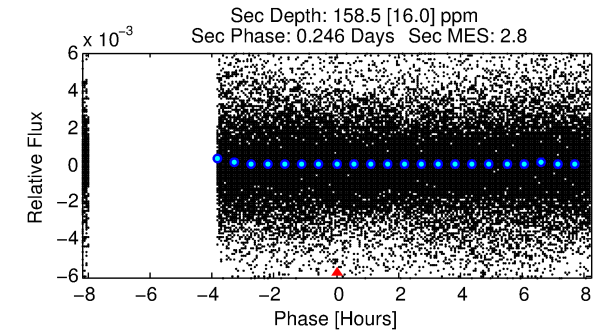
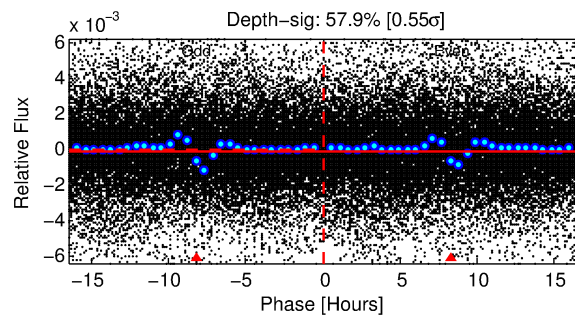
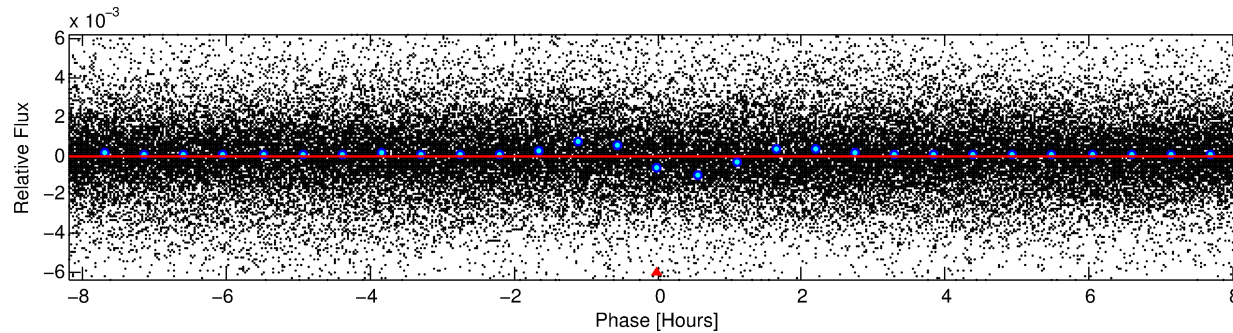
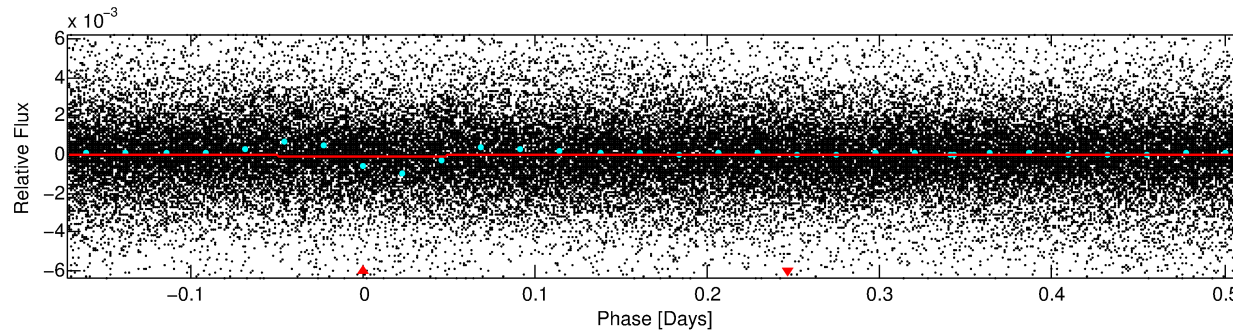
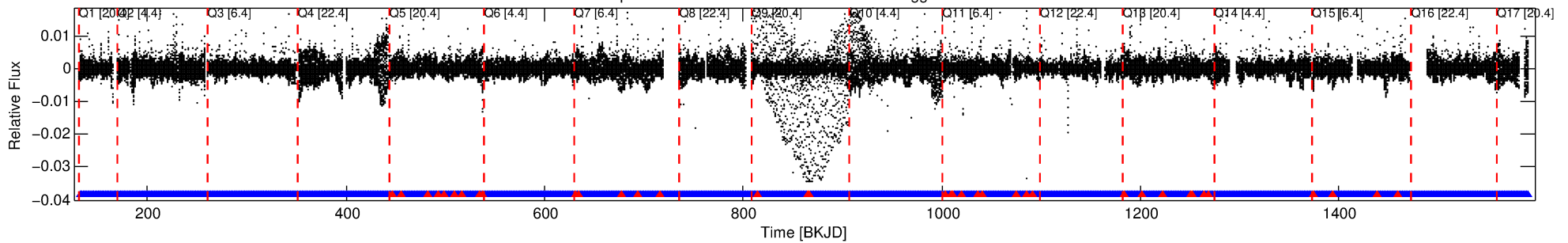
Ephemeris Match Information For 005301955-01

No Significant Match Found

DV One-Page Summary

KIC: 5301955 Candidate: 1 of 1 Period: 0.684 d
KOI: K06560 Corr: No Ephemeris Match

Kp: 12.94 R*: 0.46 Rs Teff: 4393.0 K Logg: 4.79 Fe/H: -1.540



DV Fit Results:

Period = 0.68388 [0.00002] d
Epoch = 132.1702 [0.0022] BKJD
Rp/R* = 0.0103 [0.0031]
a/R* = 1.20 [0.46]
b = 0.94 [0.17]
Seff = 506.97 [92.14]
Teq = 1210 [55] K
Rp = 0.52 [0.17] Re
a = 0.0119 [0.0010] AU
Ag = 45.36 [27.93] [1.59σ]
Teffp = 4855 [750] K [4.85σ]

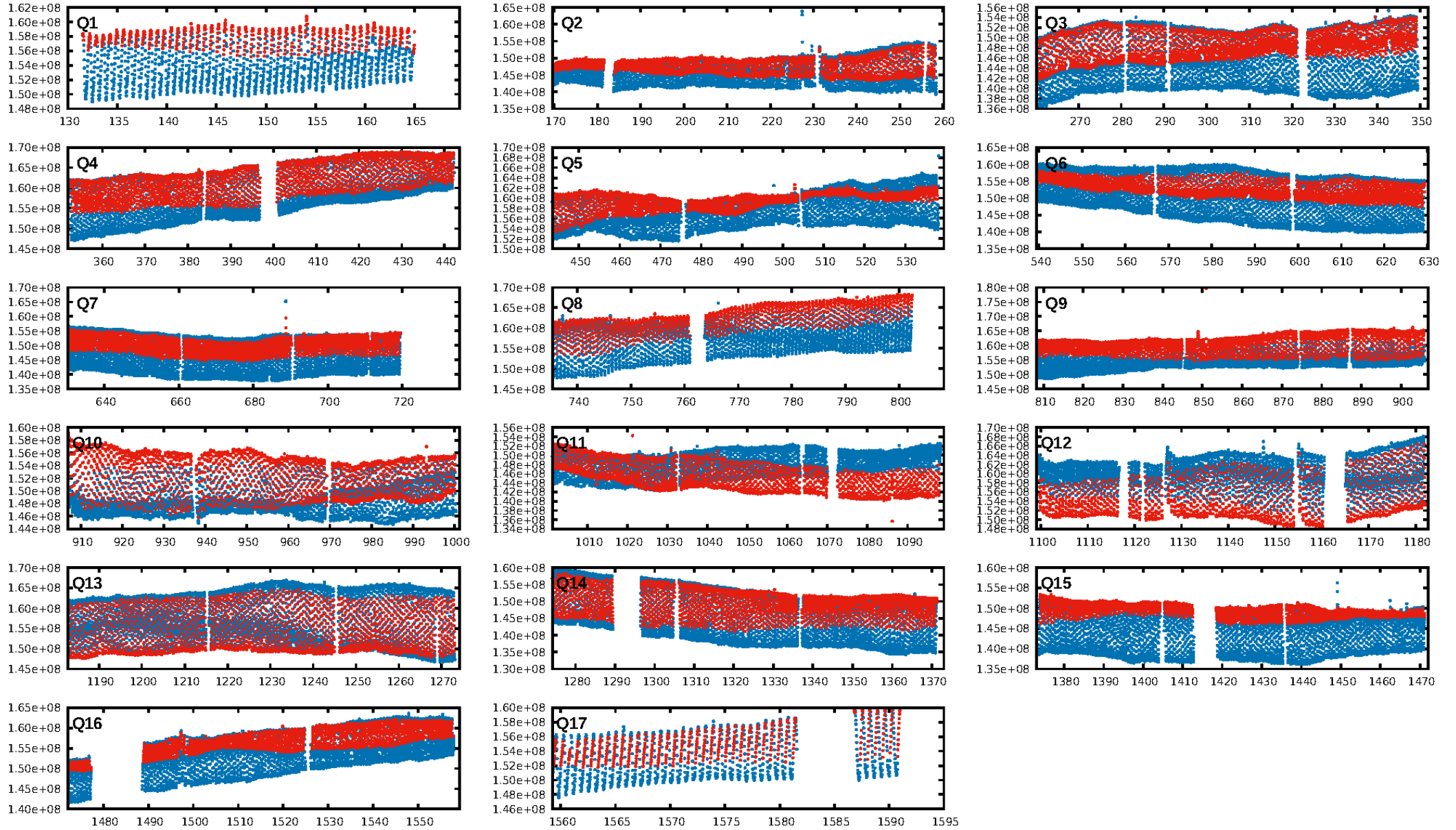
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.98 [1839/1877]
GhostDiagnostic-chr: 2.354
Centroid-sig: 0.0%
Centroid-so: 6.003 arcsec [4.45σ]
OotOffset-rm: 0.328 arcsec [2.60σ]
KicOffset-rm: 0.175 arcsec [1.39σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.18 [3/17]
DiffImageOverlap-fno: 1.00 [17/17]

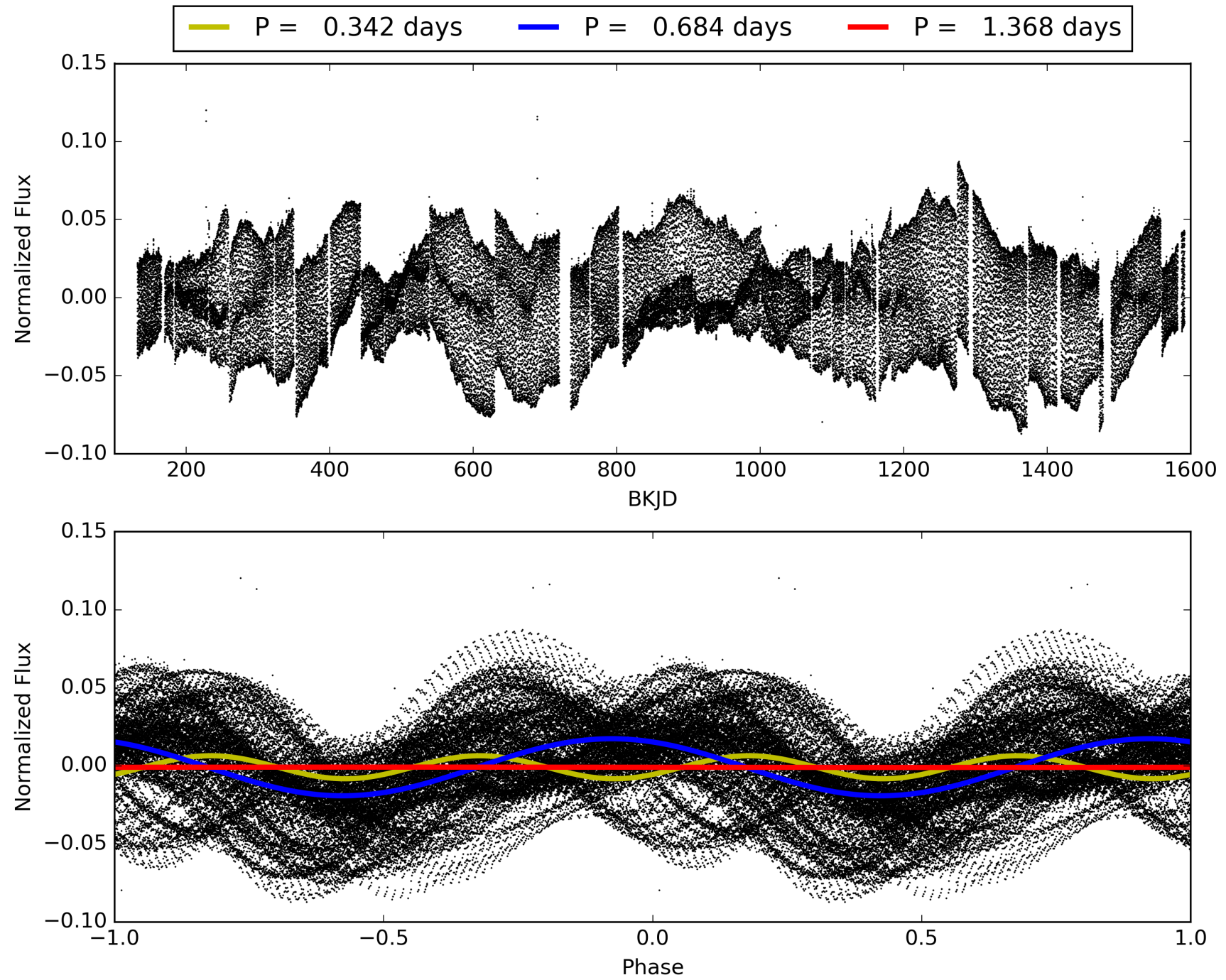
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:24:09 Z

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

TCE 005301955-01, PDC Light Curves

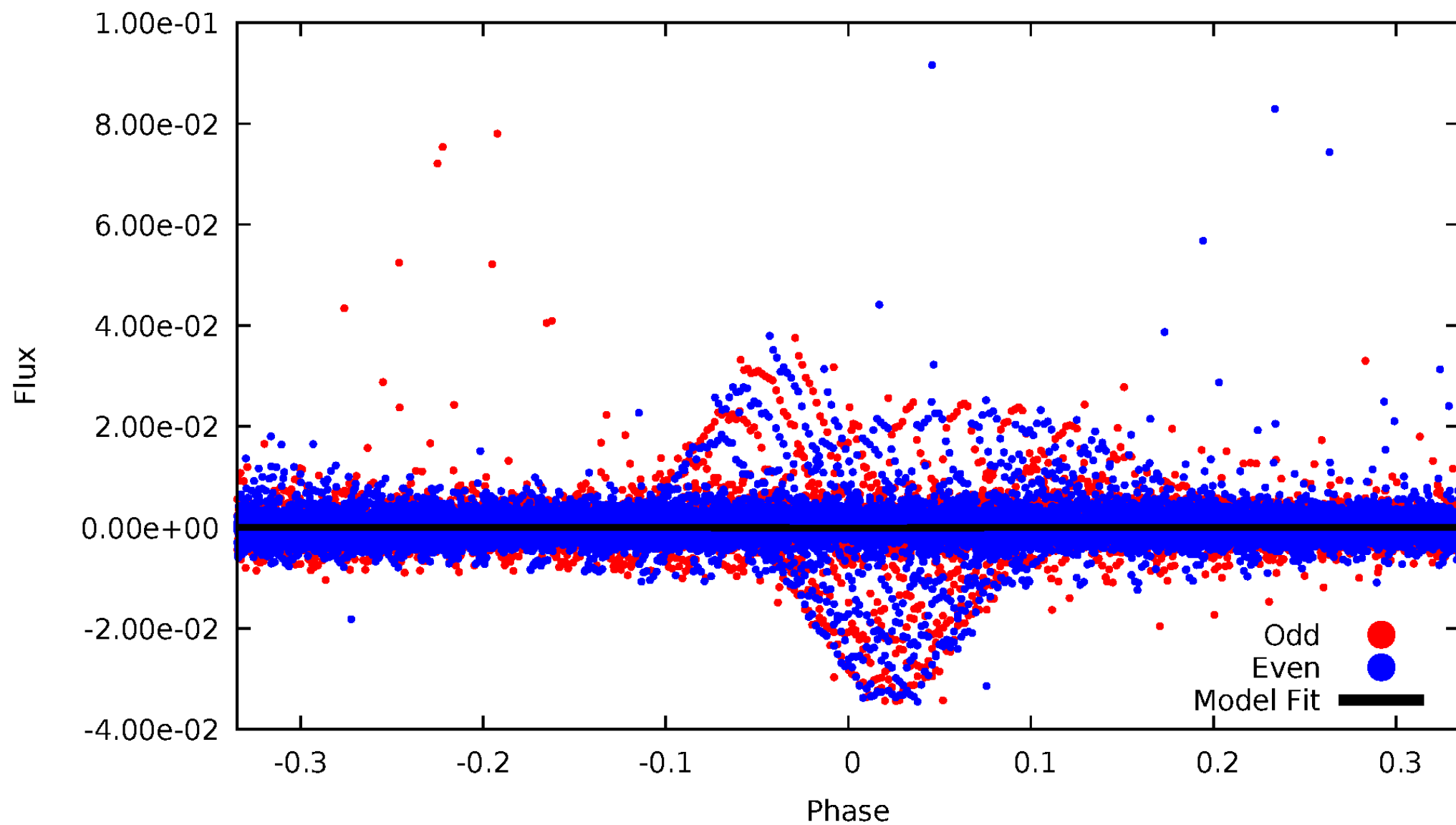


TCE 005301955-01



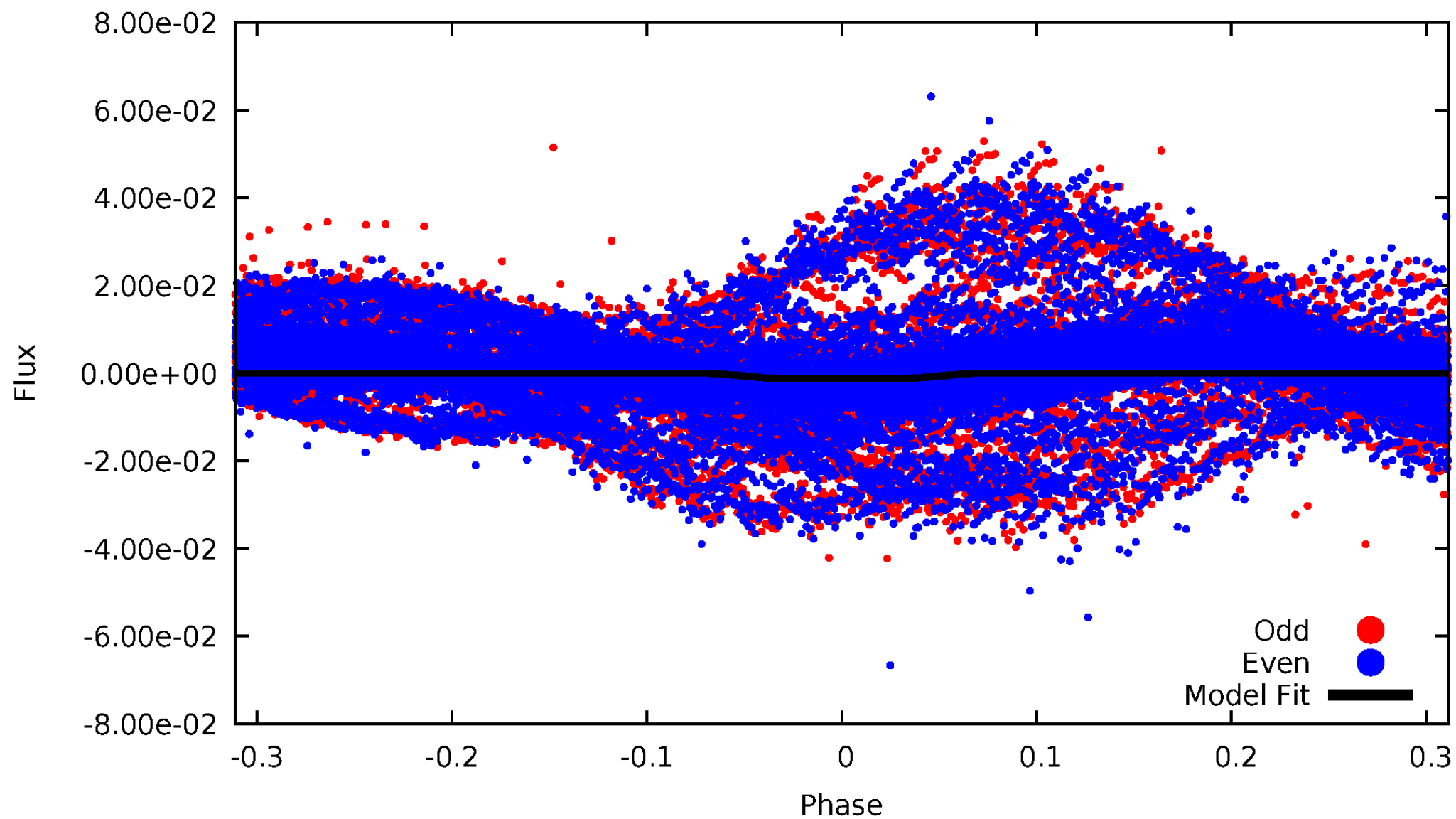
DV Odd/Even

TCE 005301955-01



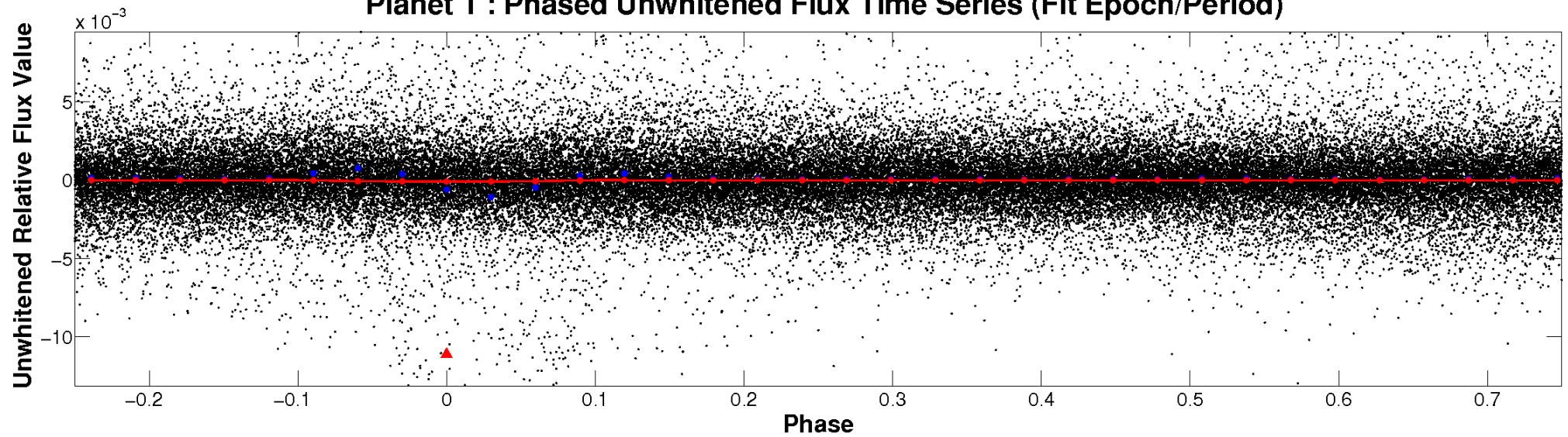
ALT Odd/Even

TCE 005301955-01

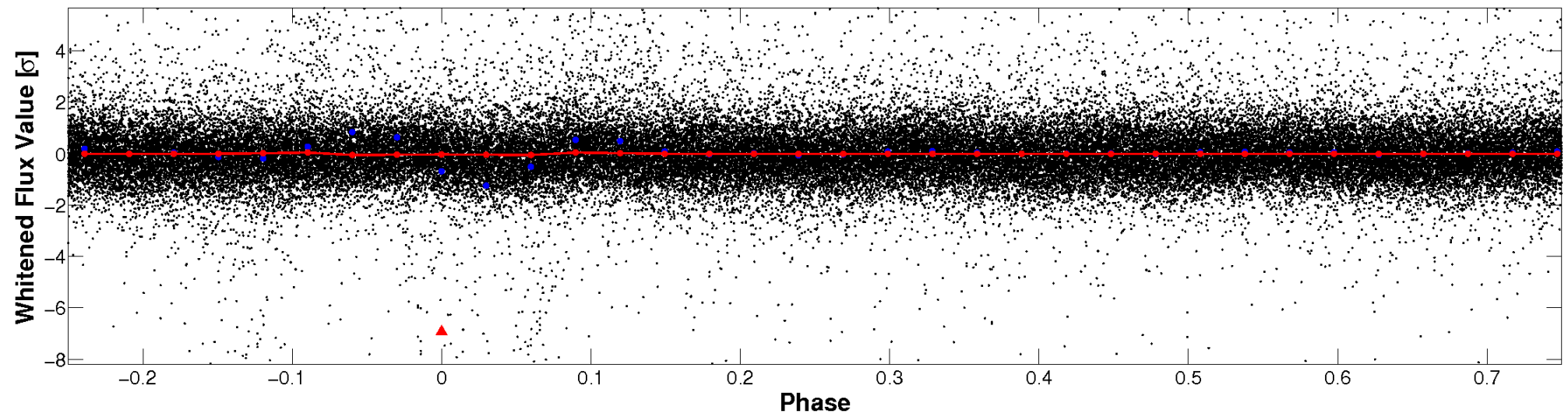


Non-Whitened Vs. Whitened Light Curve

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

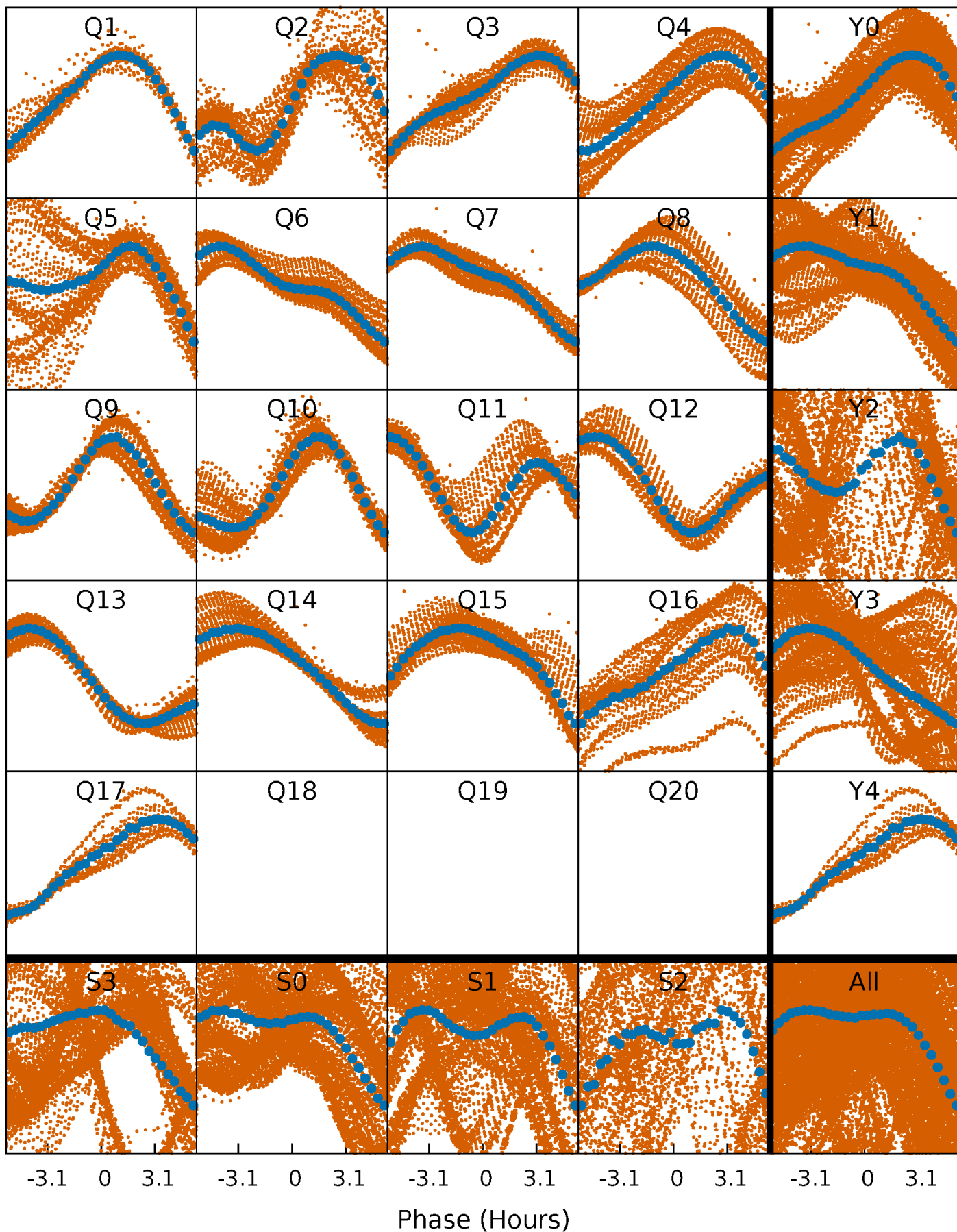


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



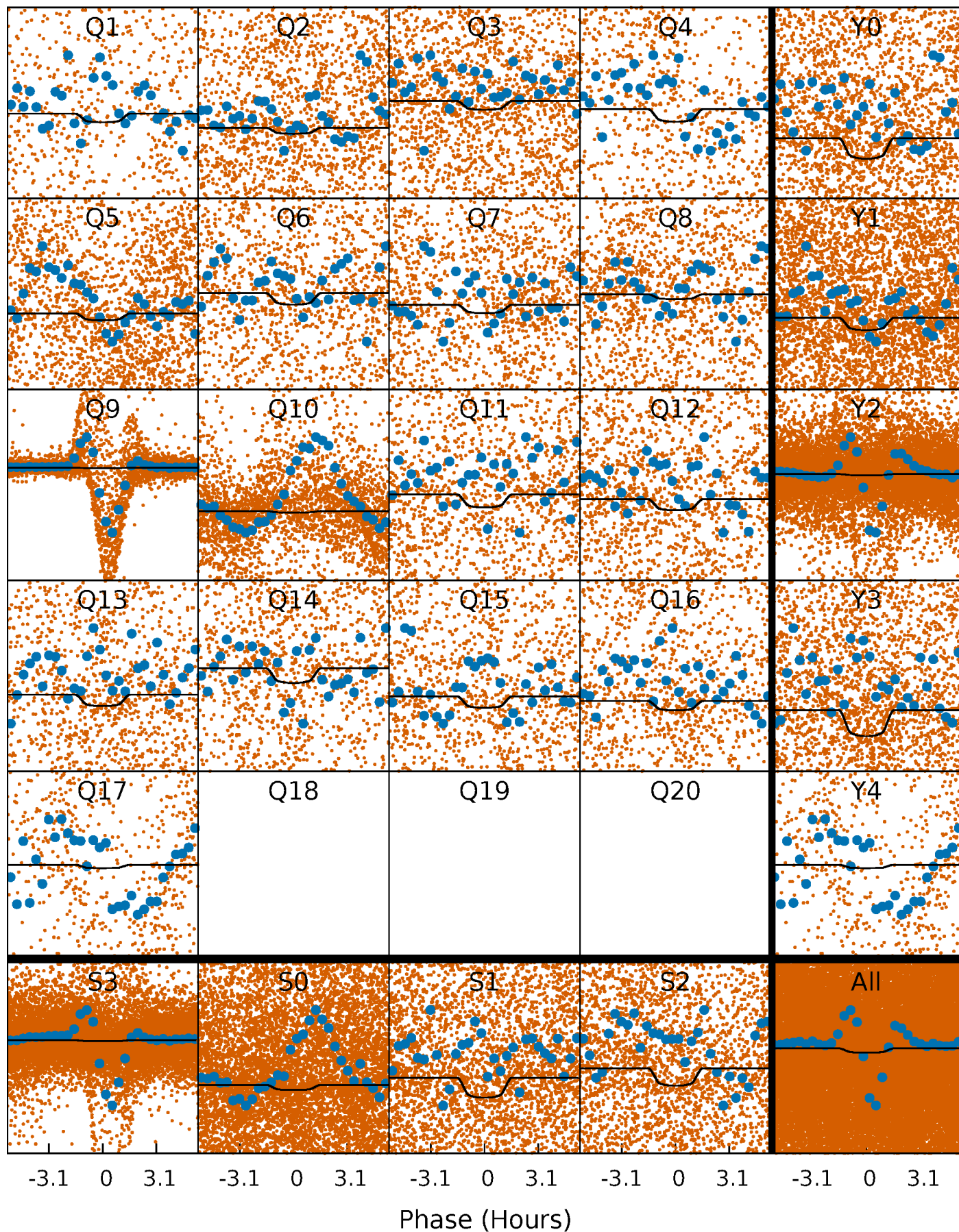
PDC Quarter-Phased Transit Curves

TCE 005301955-01 P= 0.683878 Days $T_0=132.170230$ (BKJD)



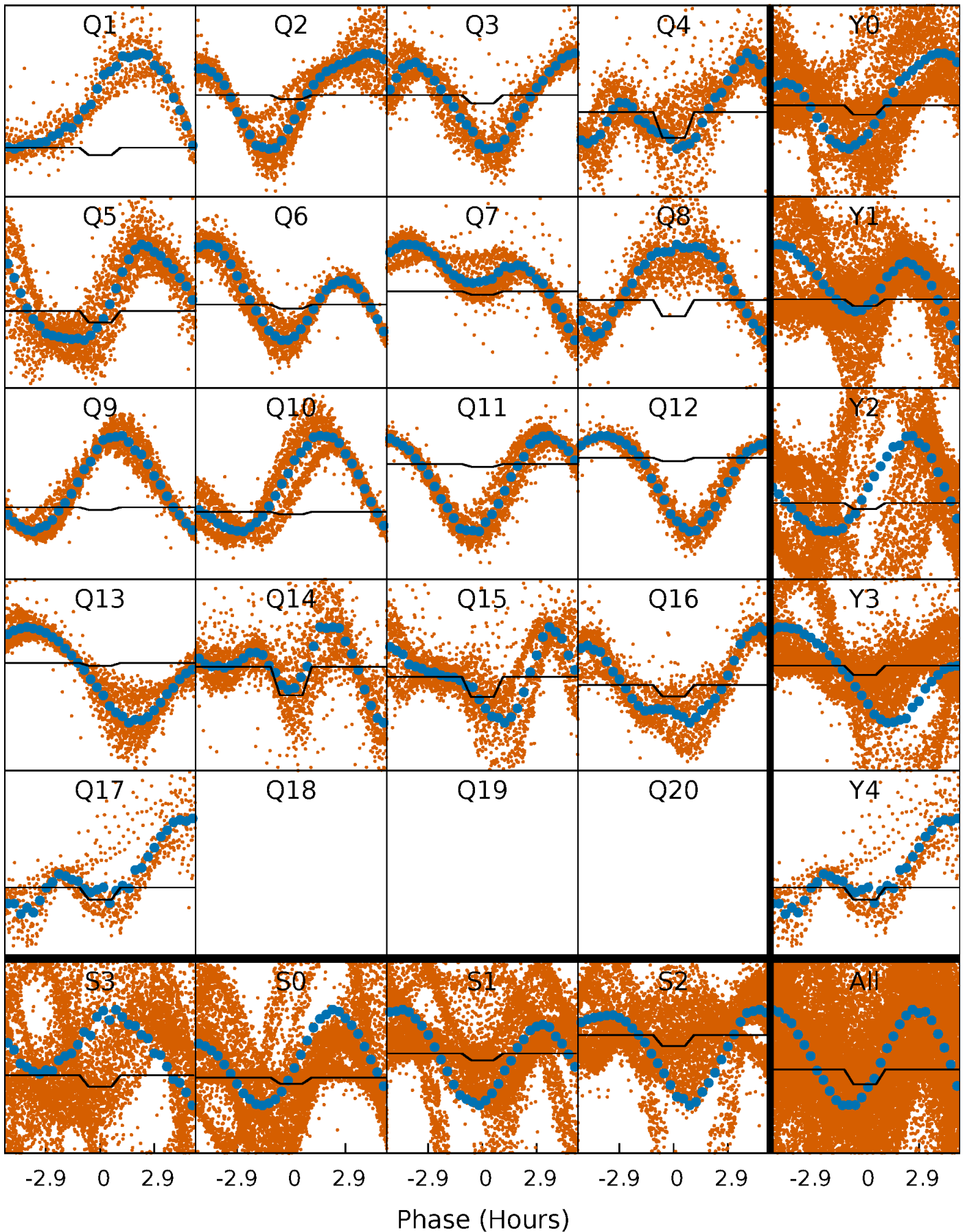
DV Quarter-Phased Transit Curves

TCE 005301955-01 P= 0.683878 Days $T_0=132.170230$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

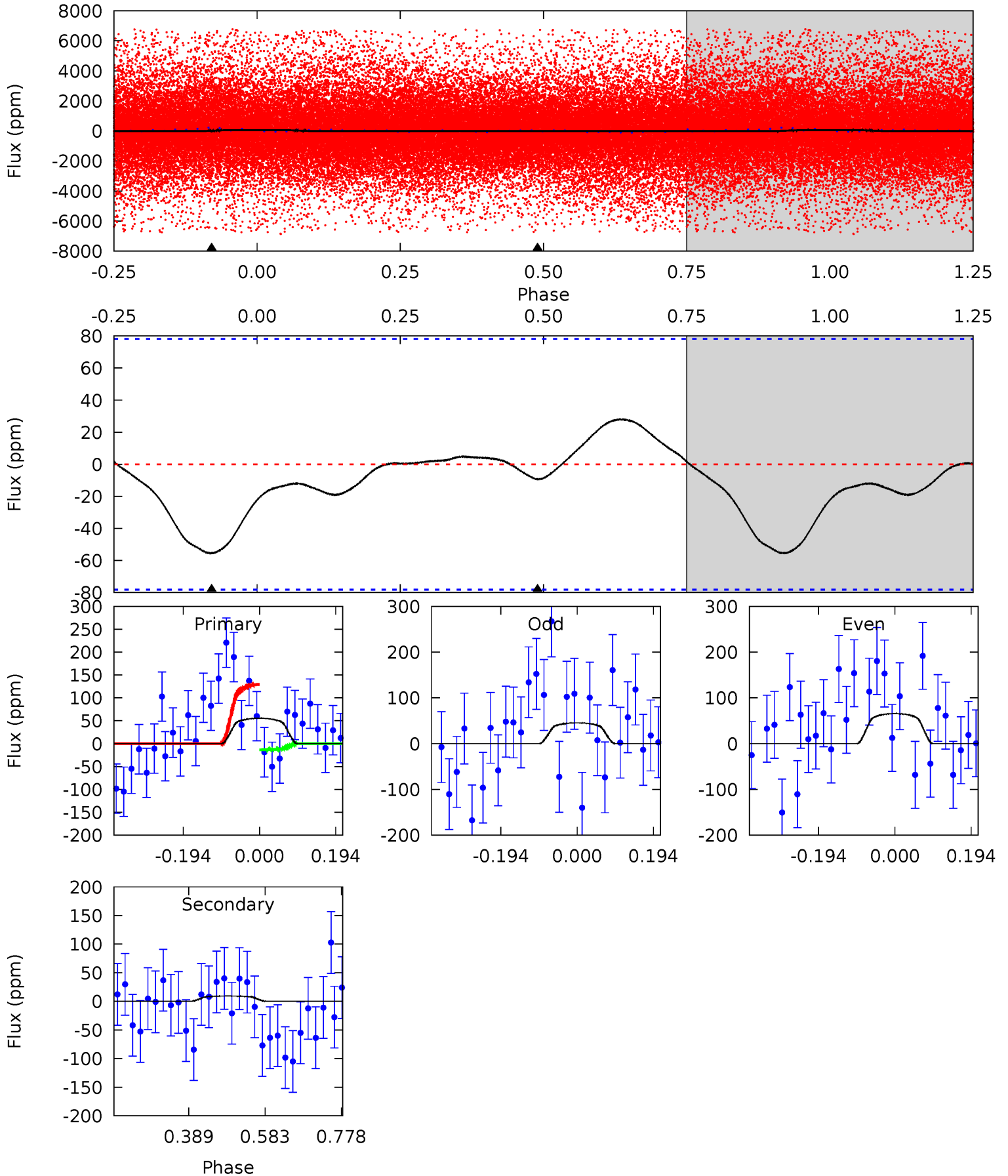
TCE 005301955-01 P= 0.683880 Days $T_0=132.158451$ (BKJD)



DV Model-Shift Uniqueness Test

005301955-01, P = 0.683878 Days, E = 131.486352 Days

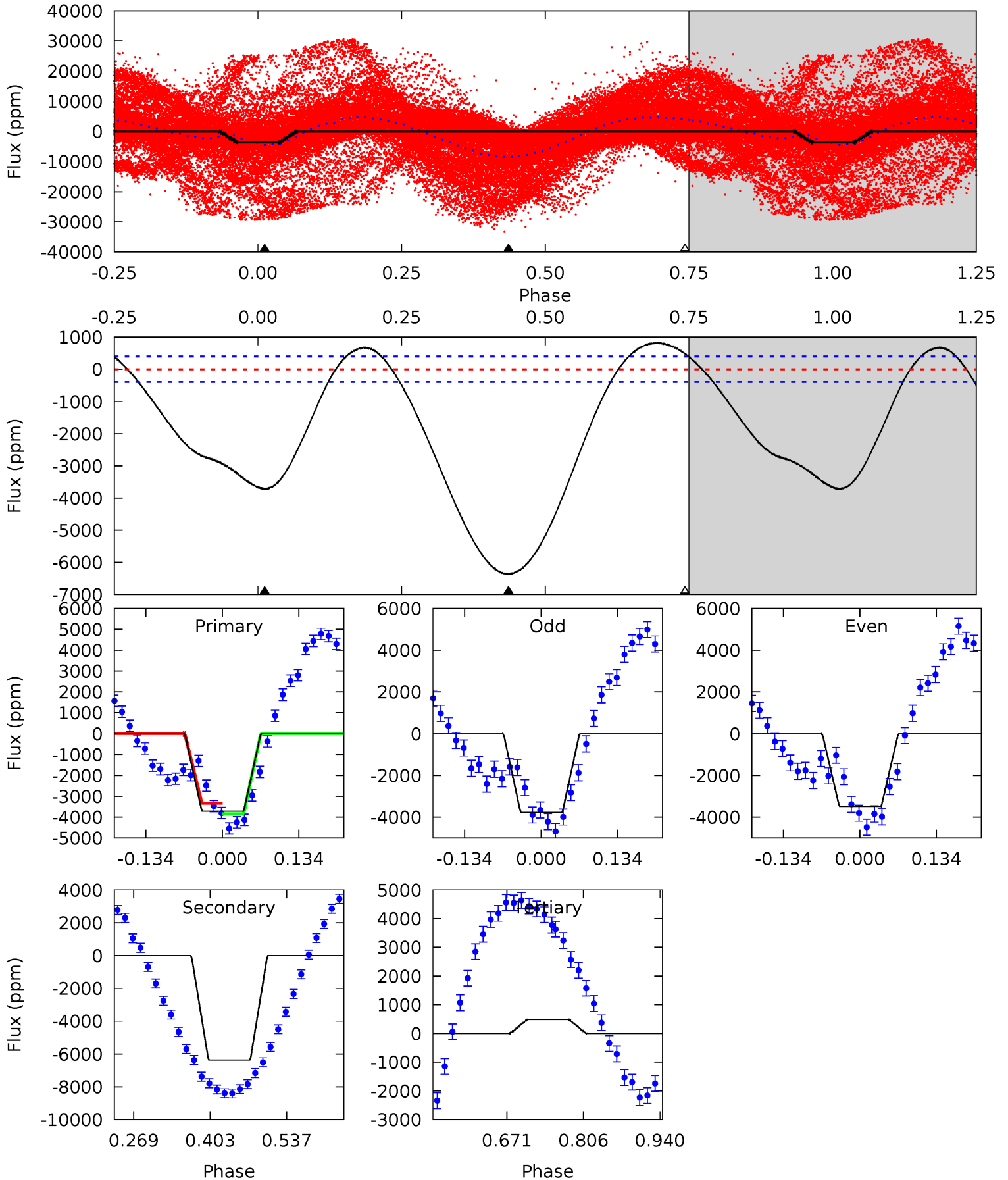
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.14	0.53	0	0	4.42	1.30	0.62	3.14	3.14	0.53	0.53	0.58	15.6	0.34	3.25



Alt Model-Shift Uniqueness Test

005301955-01, P = 0.683880 Days, E = 131.474571 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
42.2	72.3	-5.52	0	4.50	1.50	11.0	47.7	42.2	77.8	72.3	1.56	0.88	0.11	2.55



Stellar Parameters For KIC 005301955

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4393^{+120}_{-147}	$4.787^{+0.065}_{-0.035}$	$-1.540^{+0.300}_{-0.300}$	$0.464^{+0.034}_{-0.050}$	$0.480^{+0.034}_{-0.041}$	$6.779^{+2.109}_{-0.921}$
	+3%/-3%	+1%/-1%	+19%/-19%	+7%/-11%	+7%/-9%	+31%/-14%
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 005301955-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-9 ± 18	$0.52^{+0.14}_{-0.15}$	1680^{+60}_{-65}	2847^{+693}_{-5802}	$2.515^{+7.172}_{-4.981}$
Alt.	-6360 ± 88	$1.69^{+0.17}_{-0.19}$	1681^{+55}_{-67}	6435^{+443}_{-378}	176^{+43}_{-31}

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

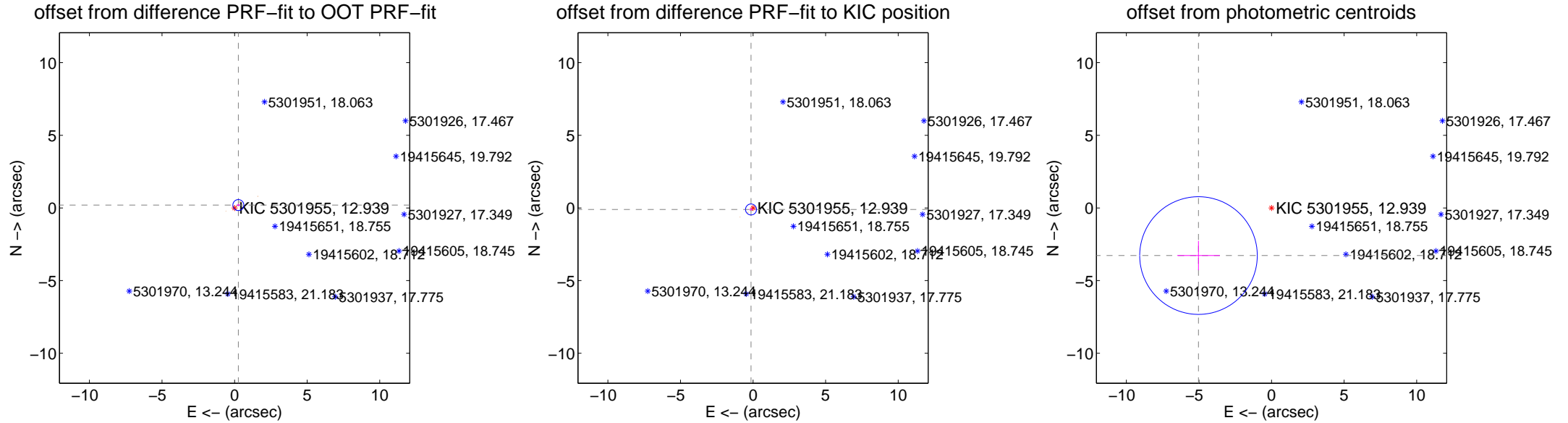
DV Centroid Data

Supplemental centroid analysis for 005301955-01. Kepler magnitude: 12.94. Transit SNR 5.31

There are 3 quarters with good PRF difference image offsets

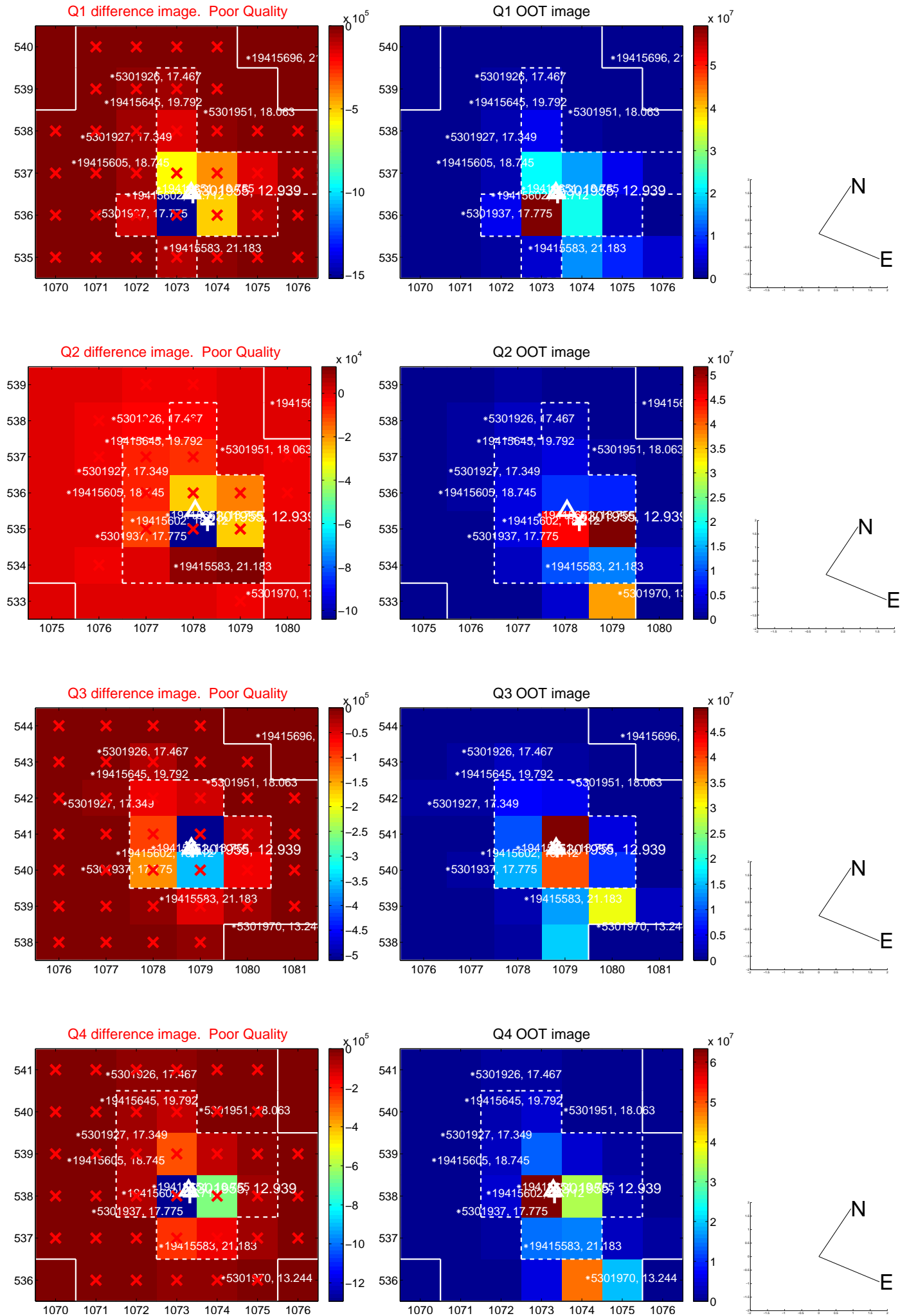
The direct PRF centroid is offset from the target star catalog position by about 0.48 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.328 ± 0.126	2.60	-0.261 ± 0.119	0.199 ± 0.084
PRF-fit source offset from KIC position	0.175 ± 0.126	1.39	0.140 ± 0.119	-0.104 ± 0.083
photometric centroid source offset	6.00 ± 1.35	4.45	5.03 ± 1.47	-3.28 ± 1.01

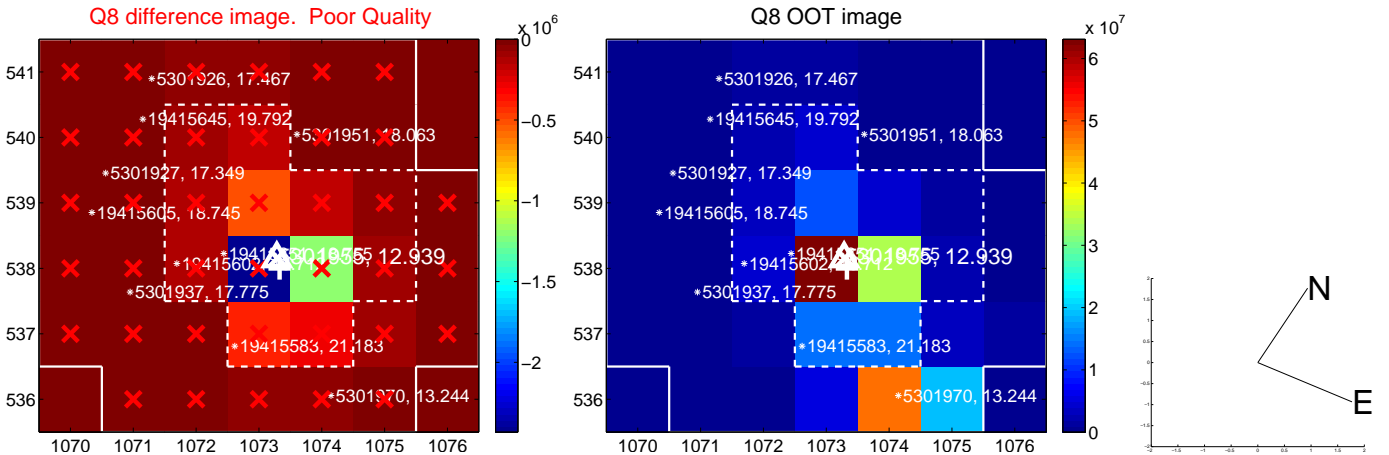
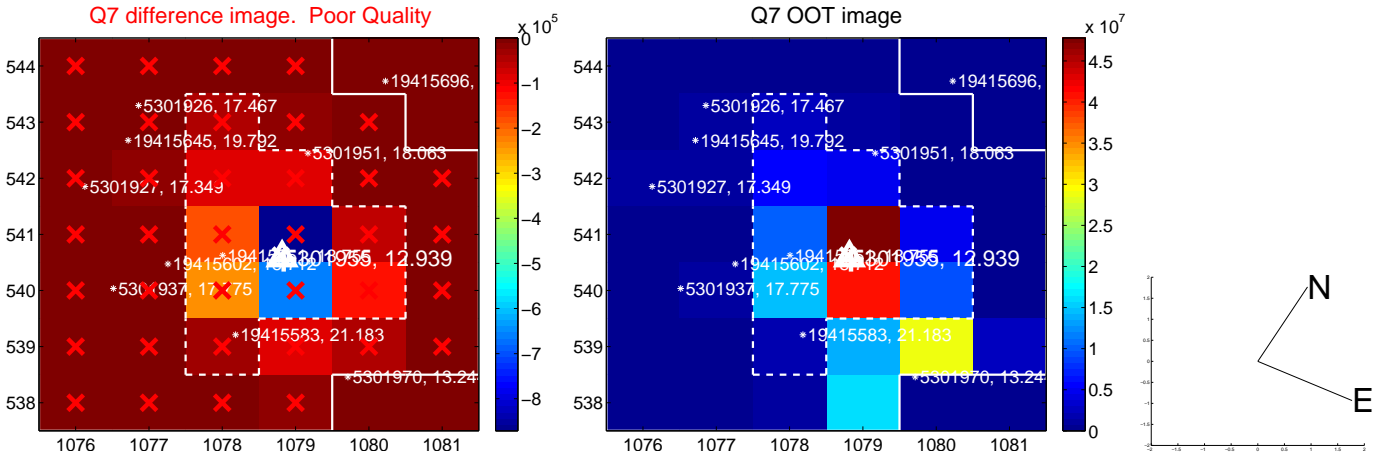
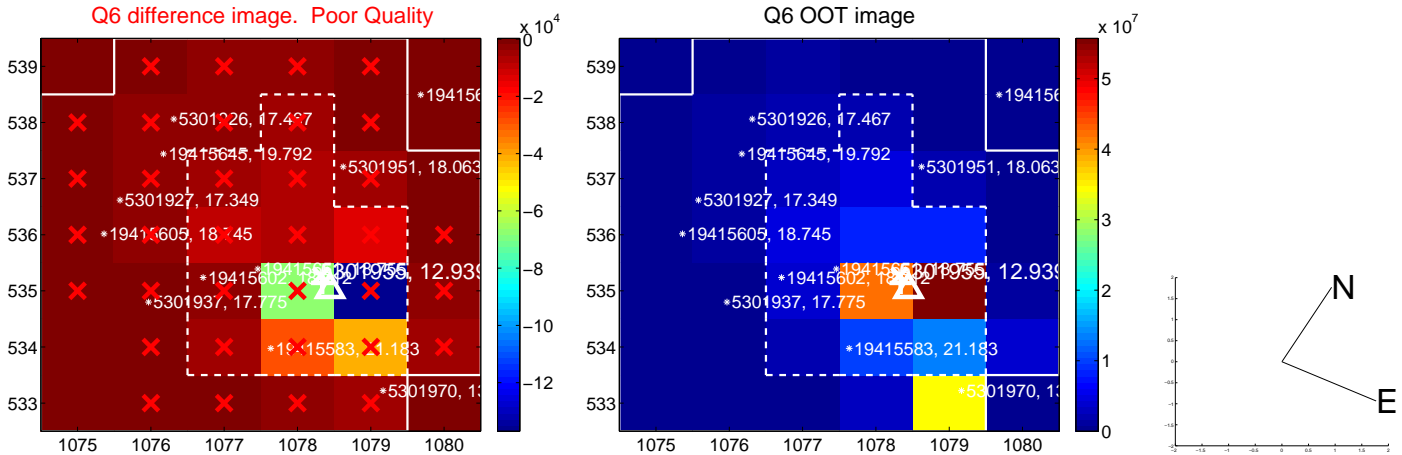
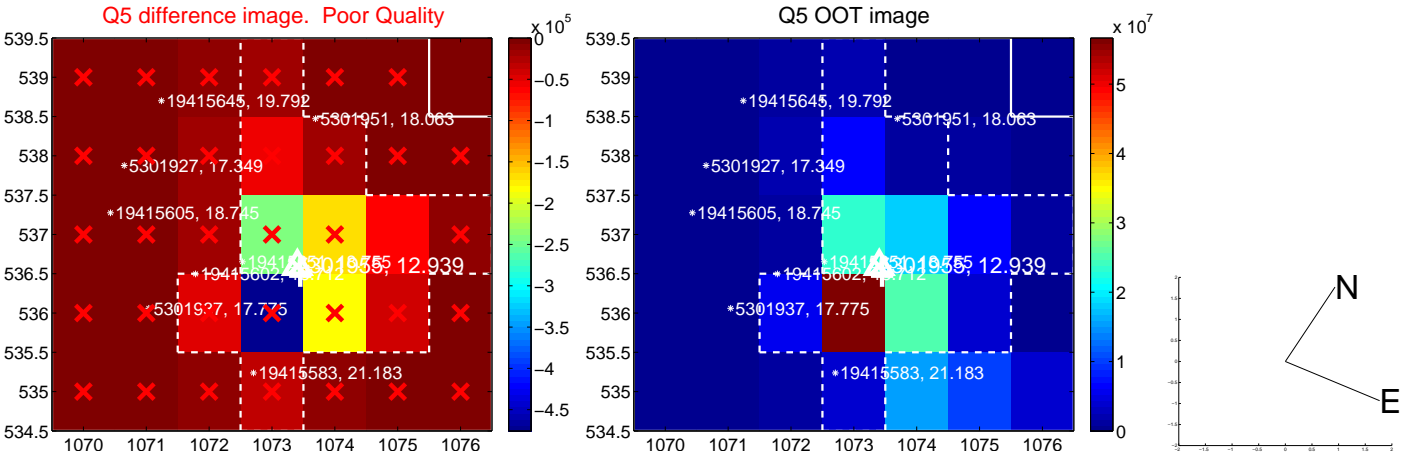


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

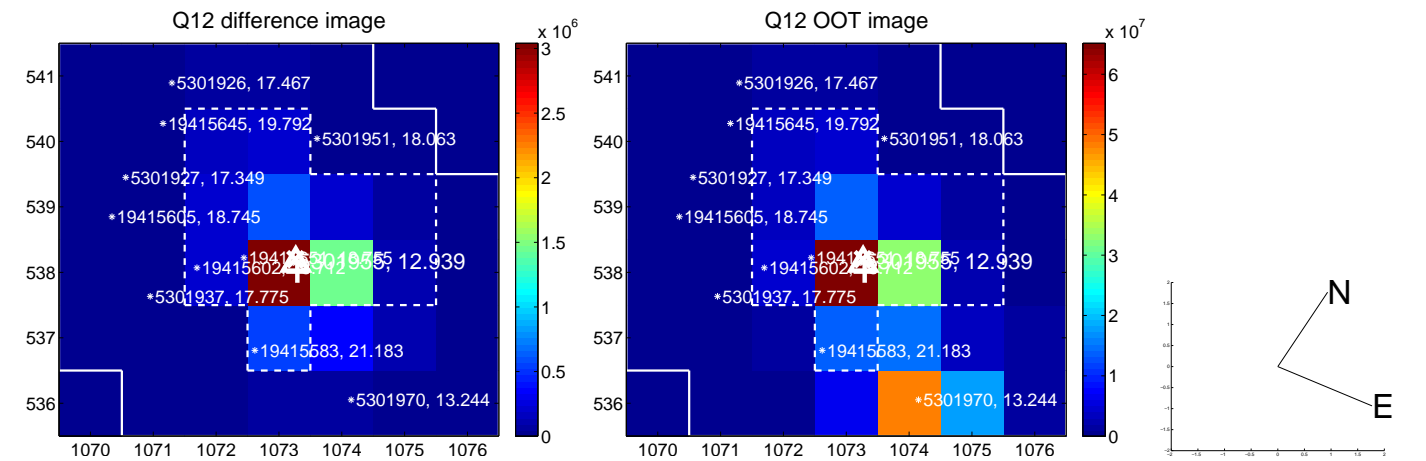
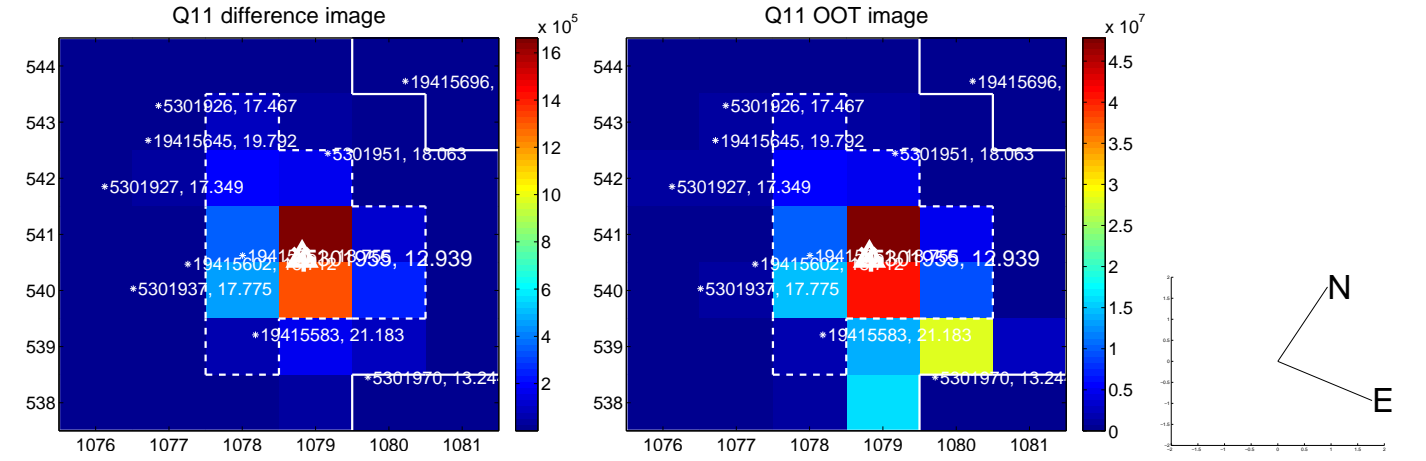
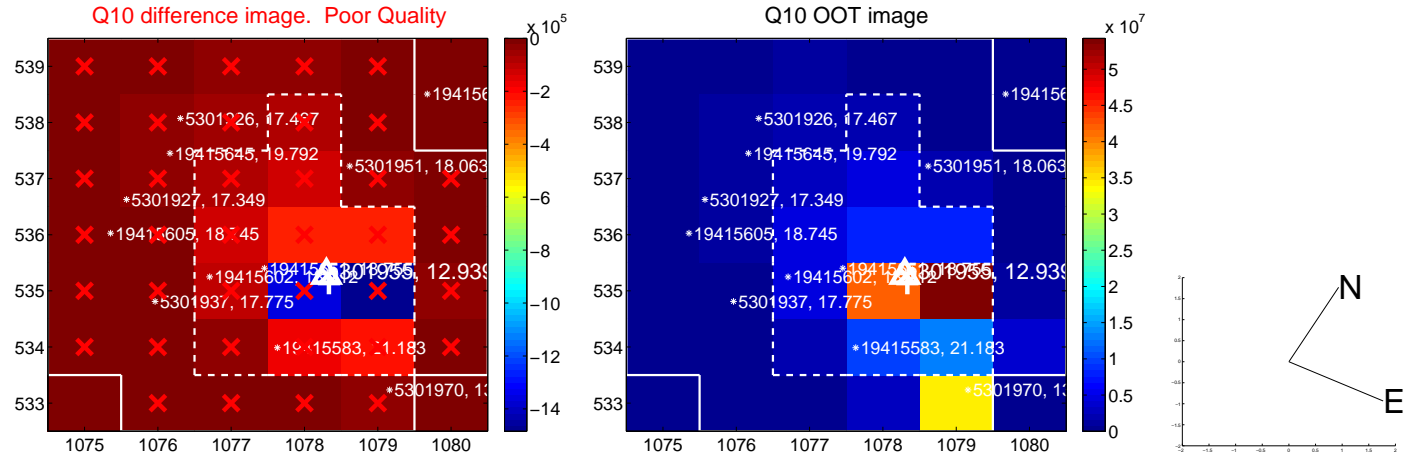
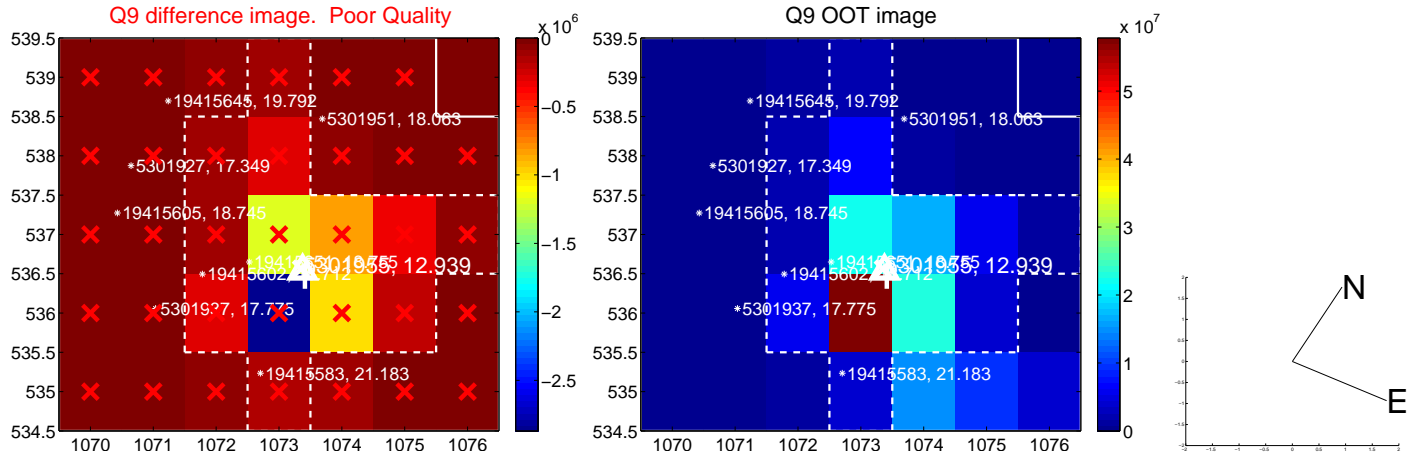
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



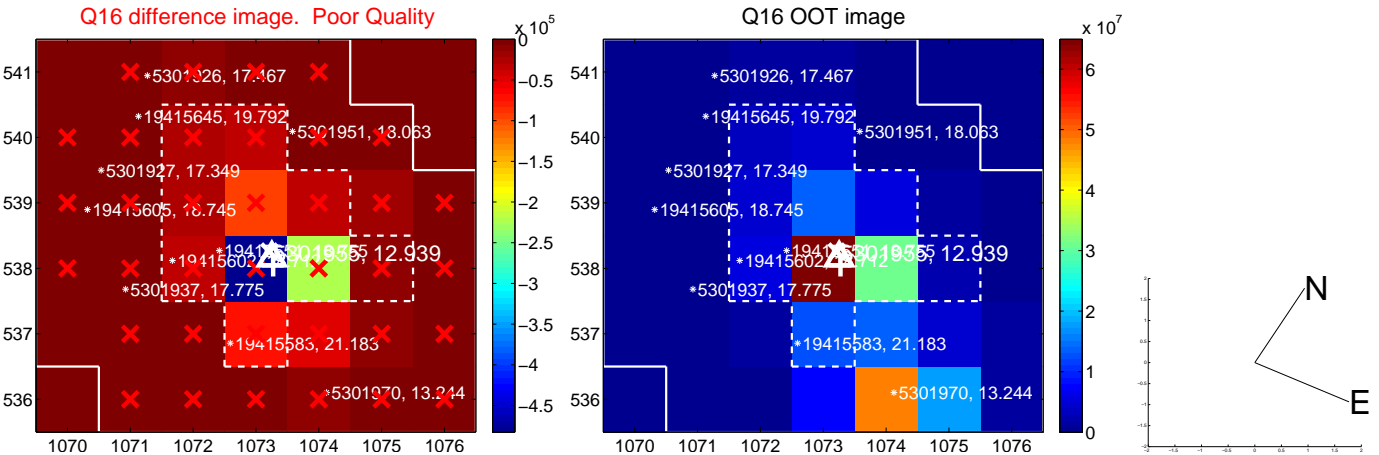
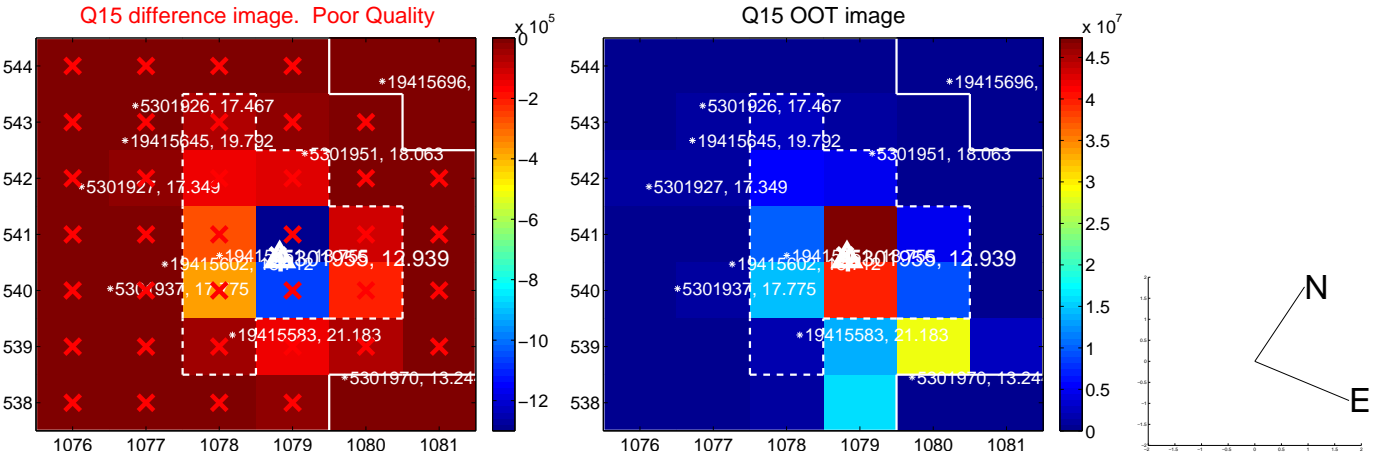
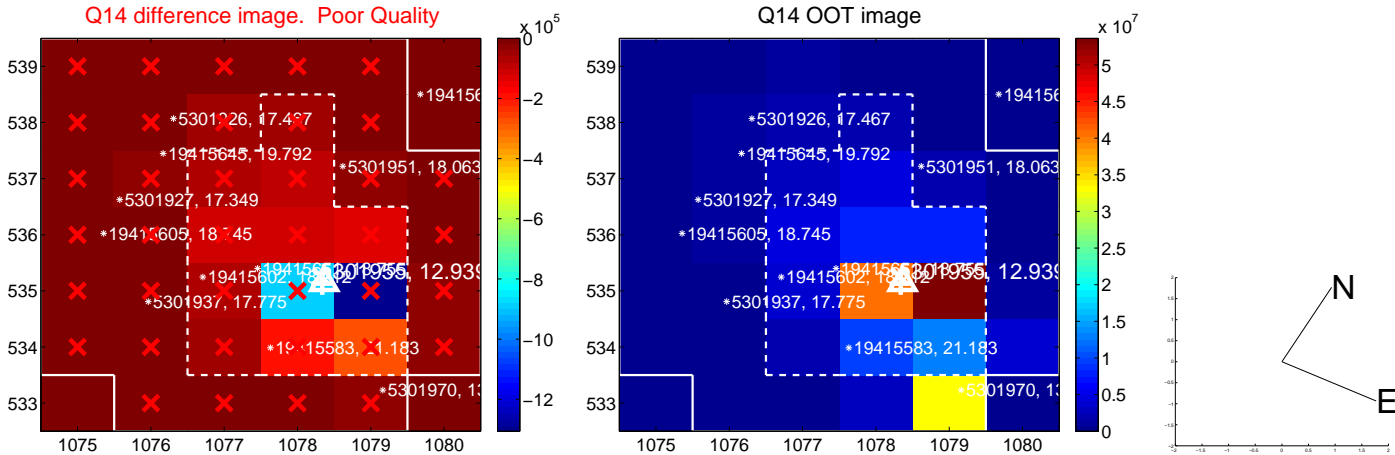
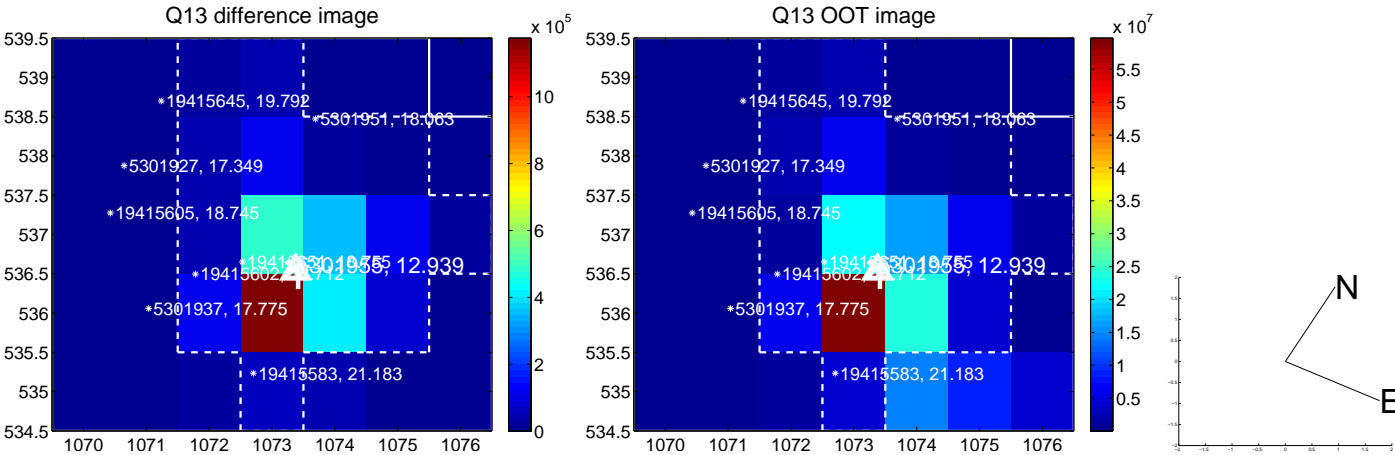
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



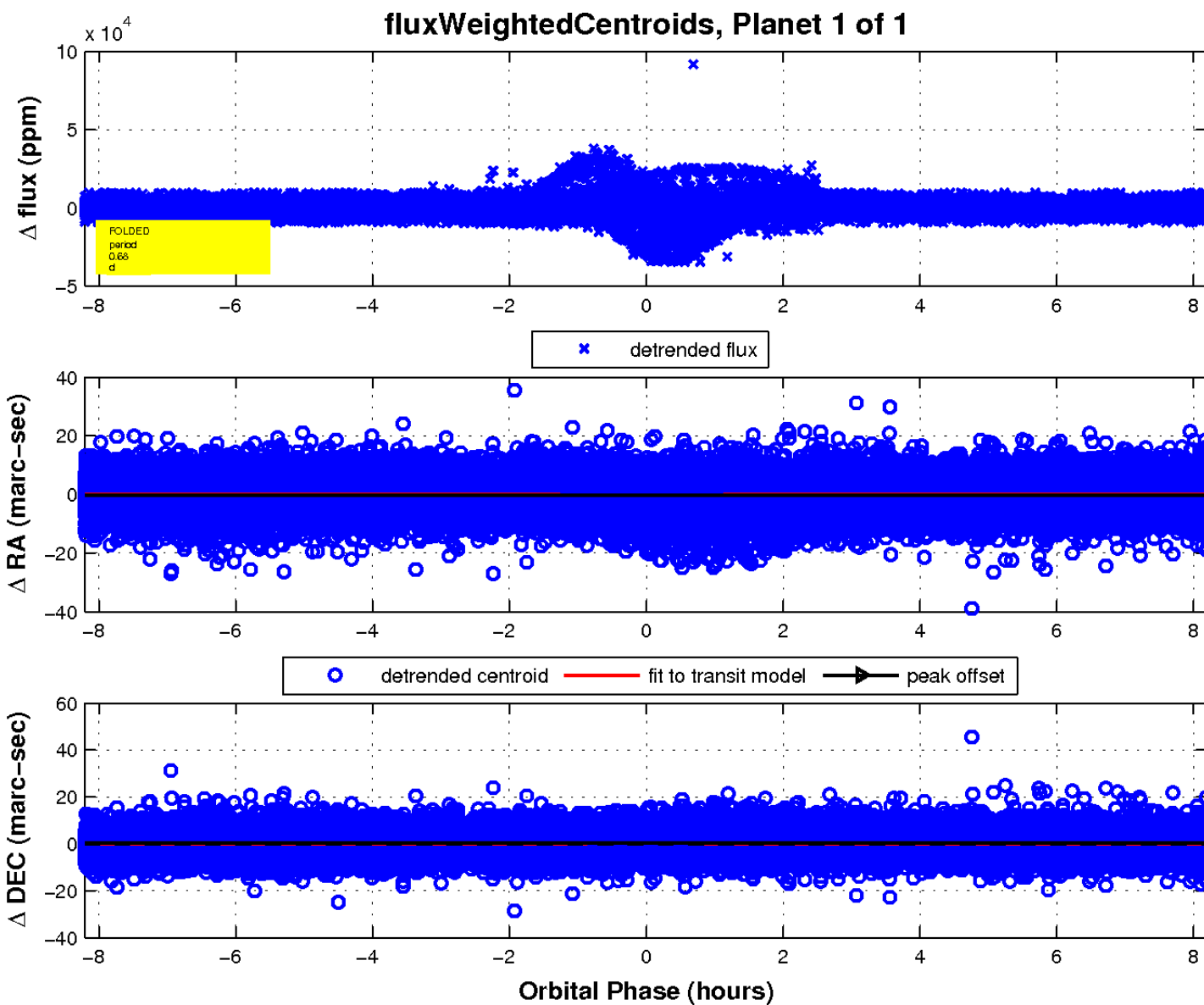
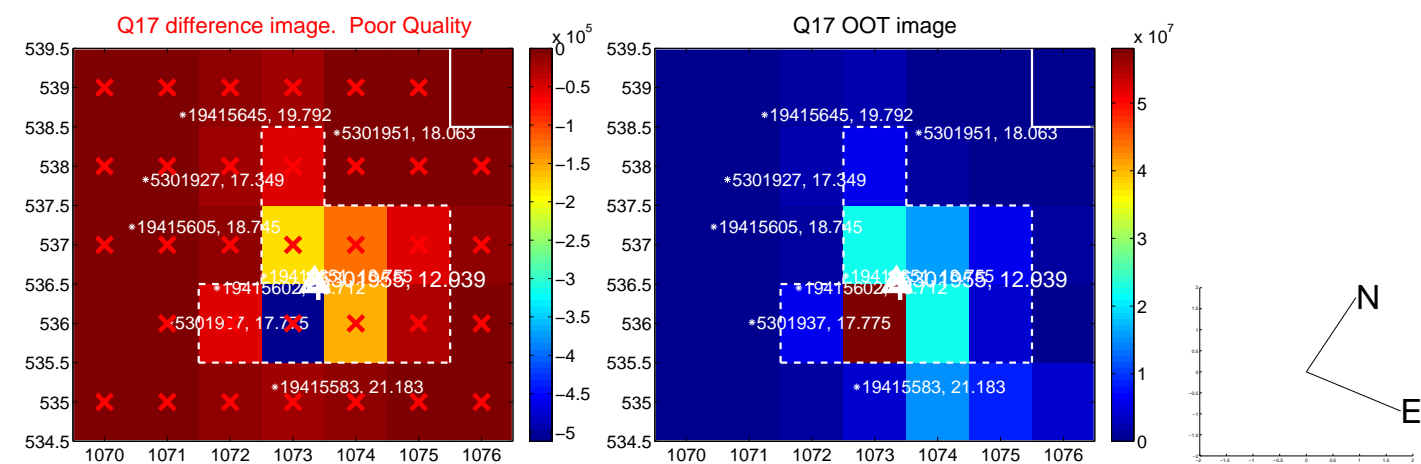
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UKIRT Image

