

KIC 003973549

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})
003973549-01	OBS	5032.01	1.389947	132.266090	592.9	0.957	27.2	59.8	0.95	5999	2.74	1821.21

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003973549-01	OBS	FP	0.00	0	1	1	0	MOD_SEC_ALT—CENT_UNRESOLVED_OFFSET

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.

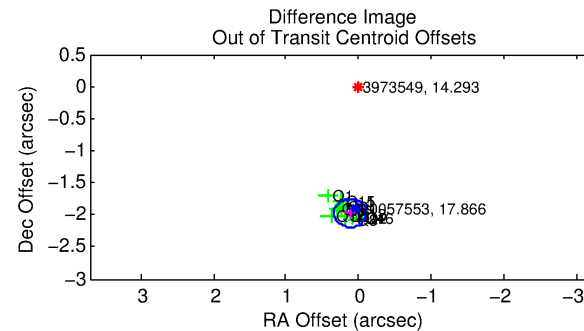
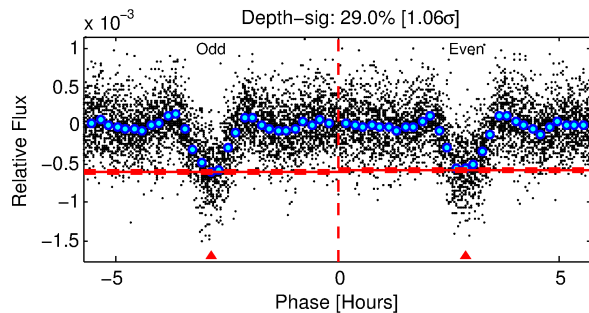
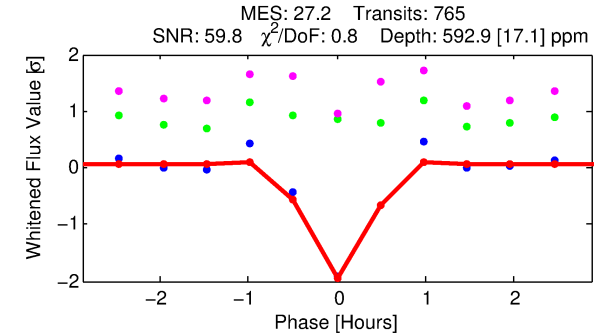
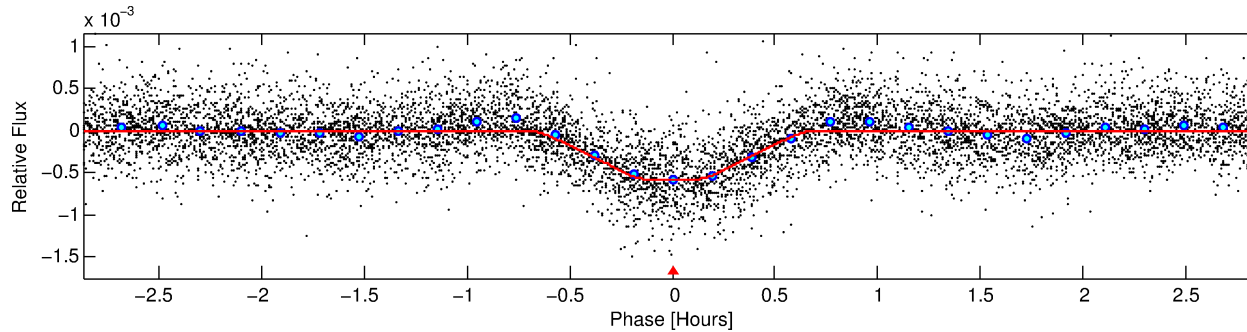
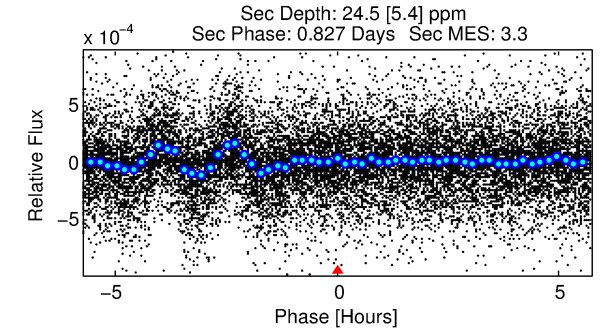
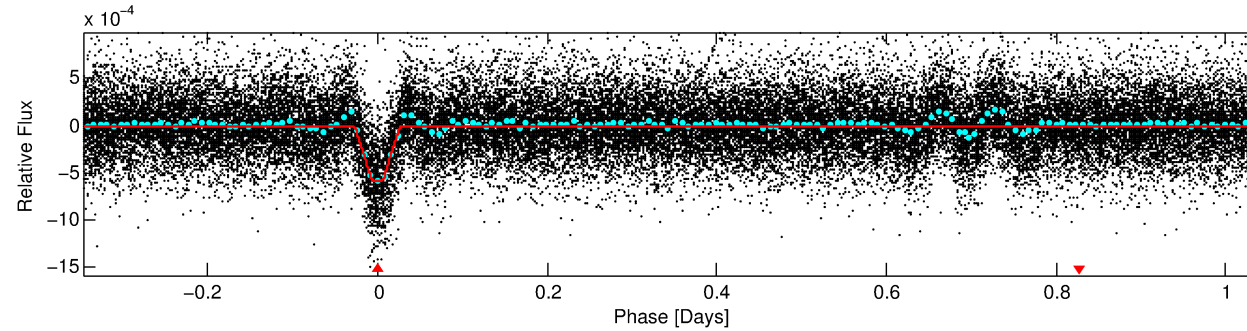
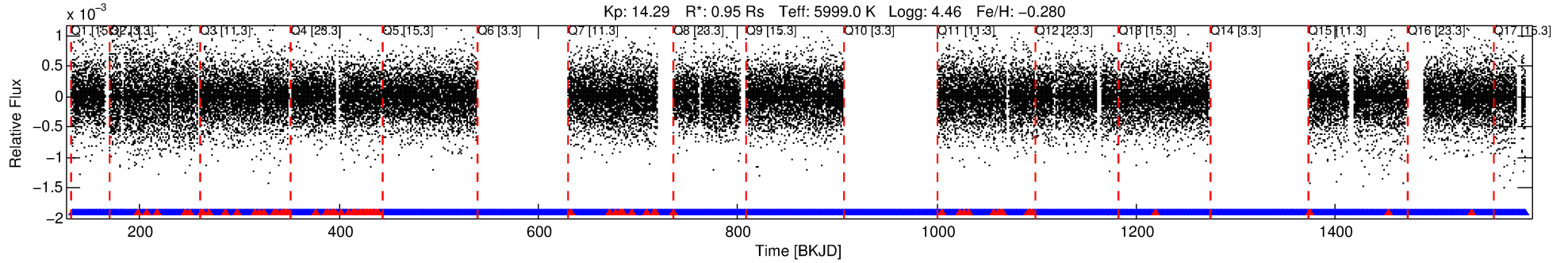
Ephemeris Match Information For 003973549-01

No Significant Match Found

DV One-Page Summary

KIC: 3973549 Candidate: 1 of 1 Period: 1.390 d
KOI: K05032.01 Corr: 0.752

Kp: 14.29 R*: 0.95 Rs Teff: 5999.0 K Logg: 4.46 Fe/H: -0.280



DV Fit Results:

Period = 1.38995 [0.00000] d
Epoch = 132.2661 [0.0003] BKJD
Rp/R* = 0.0264 [0.0033]
a/R* = 5.70 [3.39]
b = 0.89 [0.14]
Seff = 1821.22 [705.44]
Teq = 1666 [161] K
Rp = 2.74 [0.89] Re
a = 0.0240 [0.0060] AU
Ag = 1.03 [0.51] [0.07σ]
Teffp = 2596 [233] K [3.29σ]

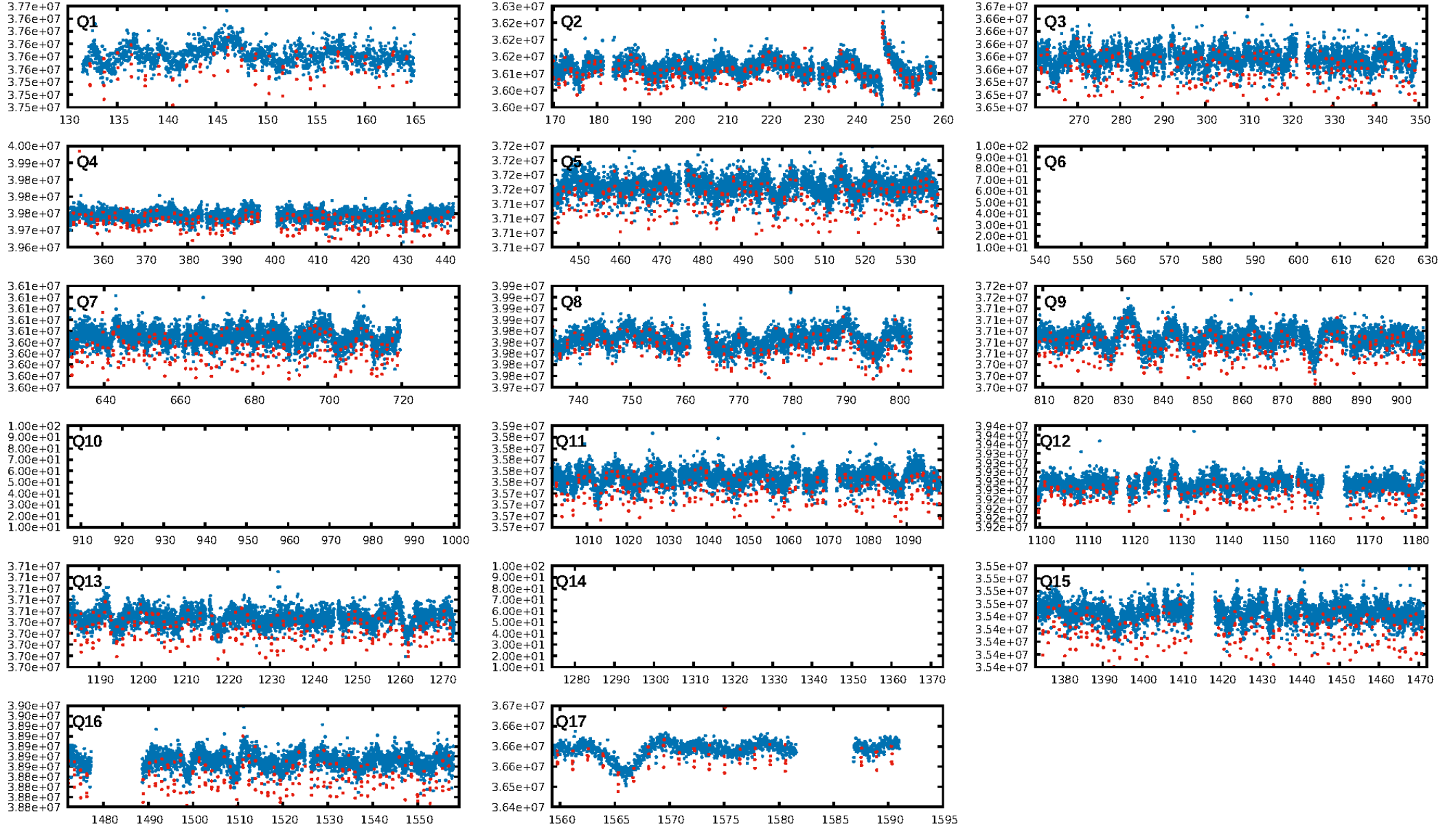
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.35e-158
RollingBand-fgt: 0.91 [655/722]
GhostDiagnostic-chr: 1.058
Centroid-sig: 0.0%
Centroid-so: 3.227 arcsec [15.91σ]
OotOffset-rm: 1.977 arcsec [26.93σ]
KicOffset-rm: 2.084 arcsec [26.88σ]
OotOffset-st: 1/4/4/5 [14]
KicOffset-st: 1/4/4/5 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

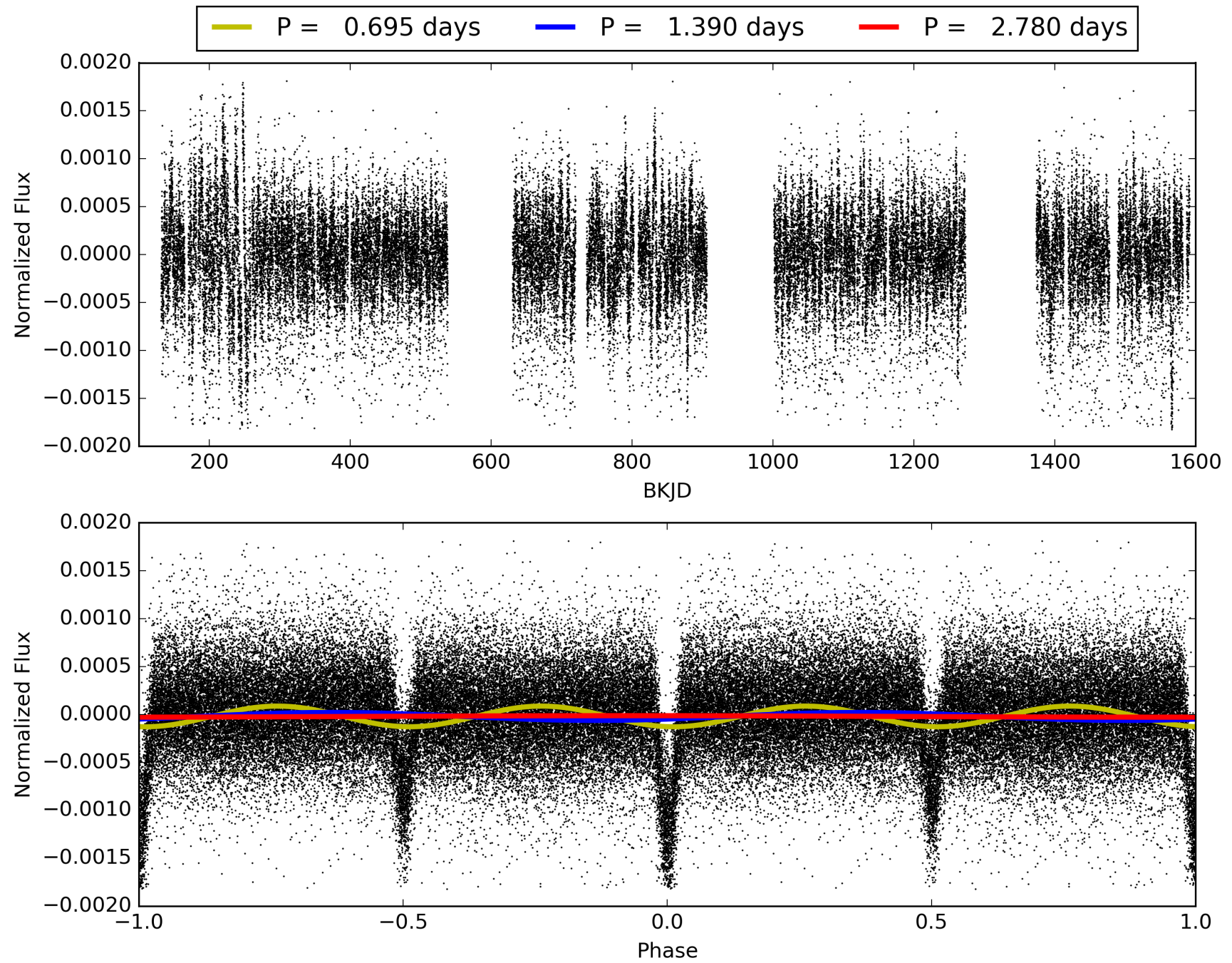
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 01:36:25 Z

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

TCE 003973549-01, PDC Light Curves

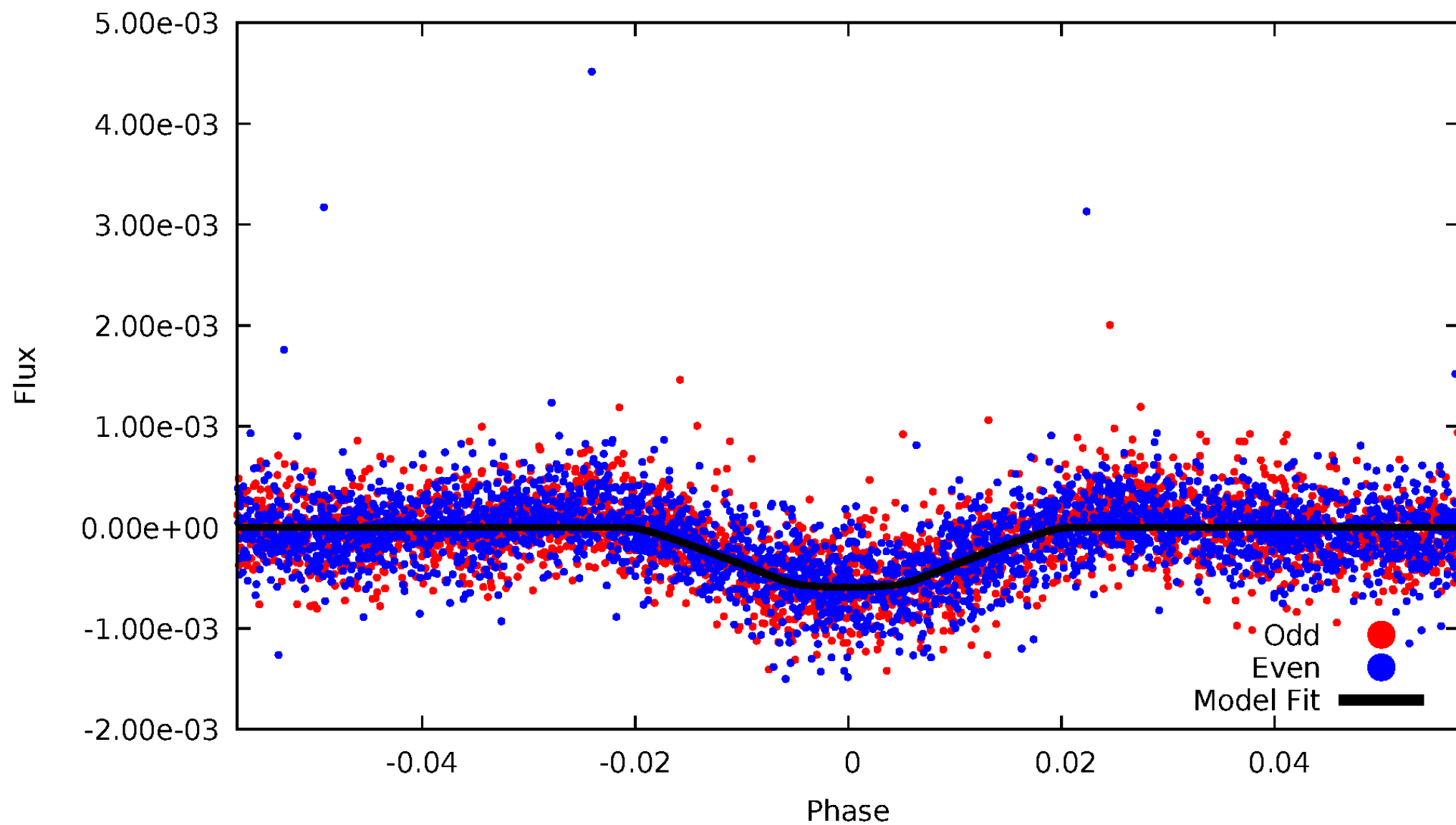


TCE 003973549-01



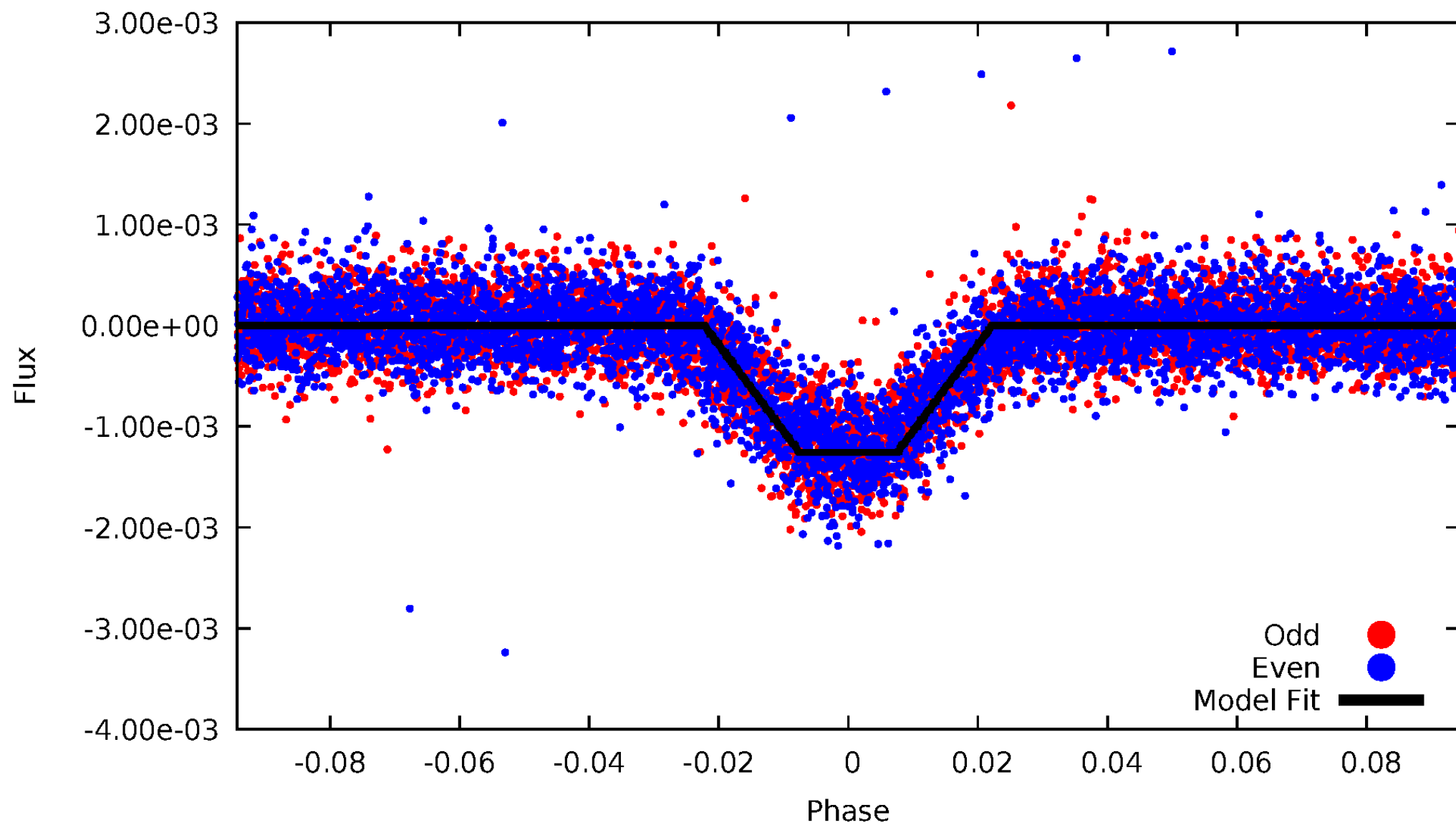
DV Odd/Even

TCE 003973549-01



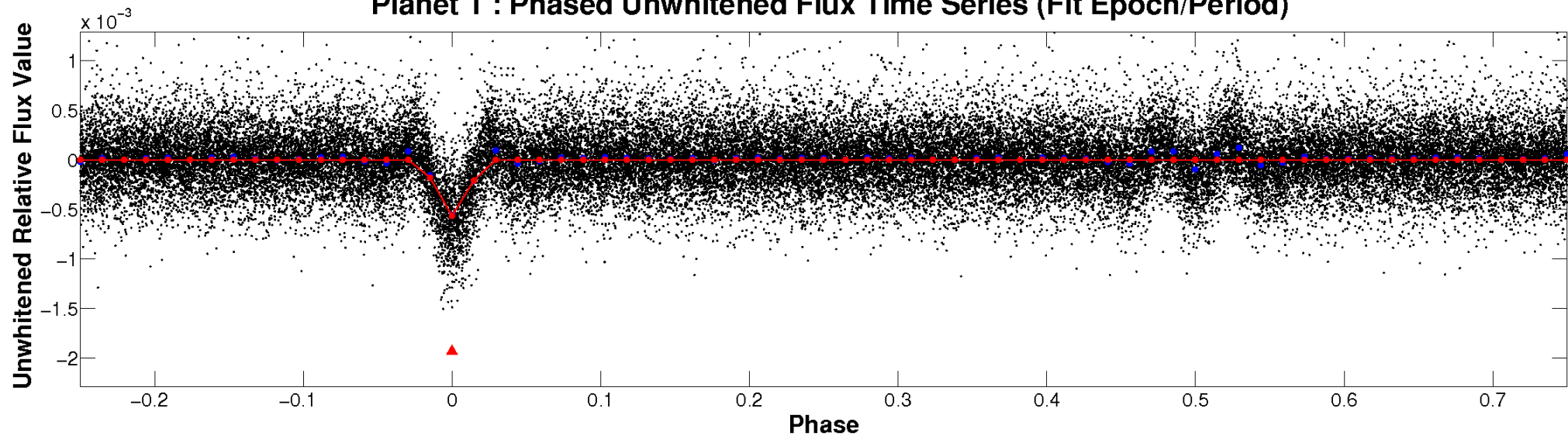
ALT Odd/Even

TCE 003973549-01

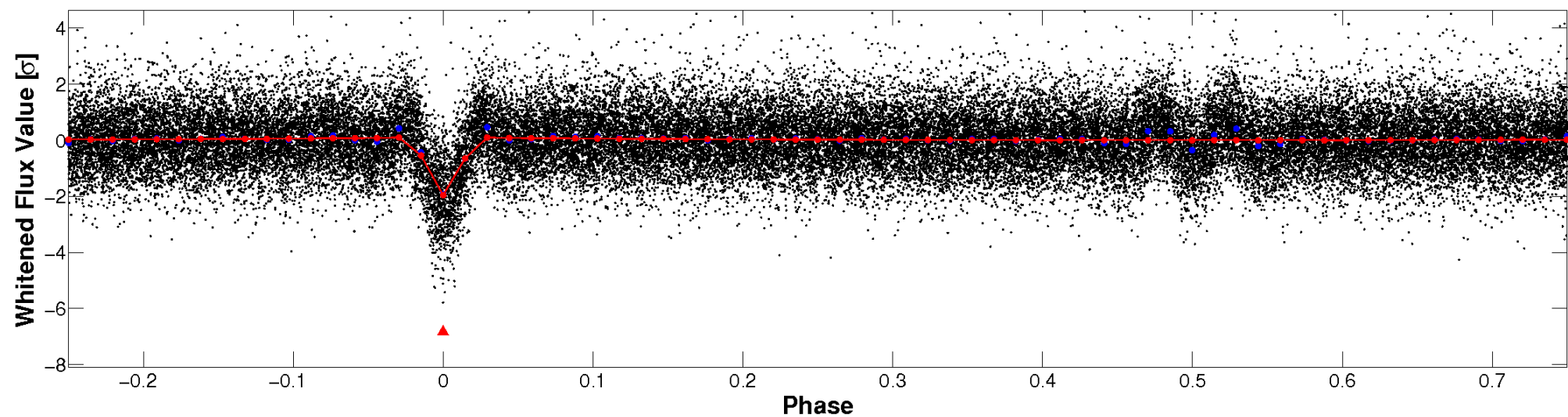


Non-Whitened Vs. Whitened Light Curve

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

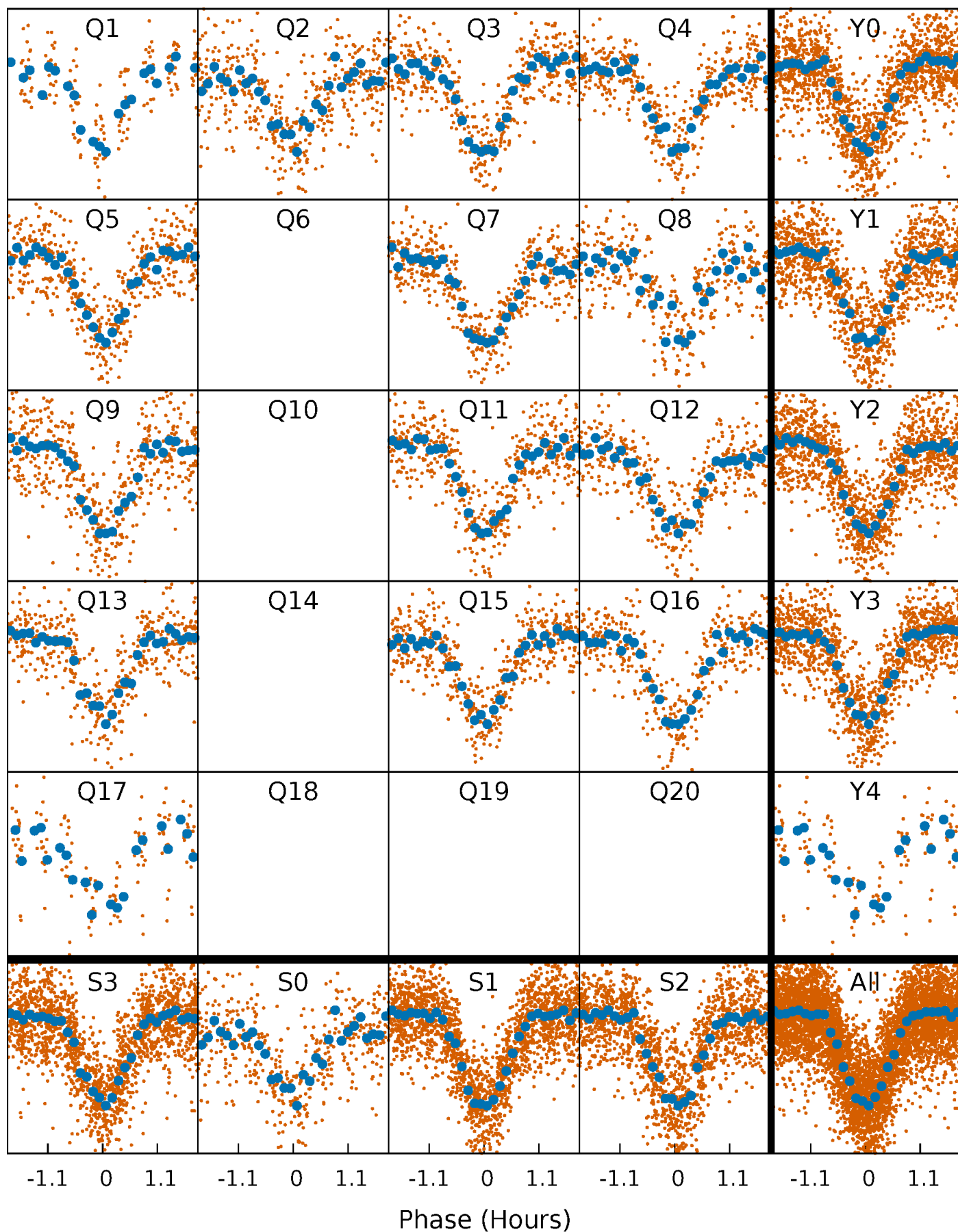


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



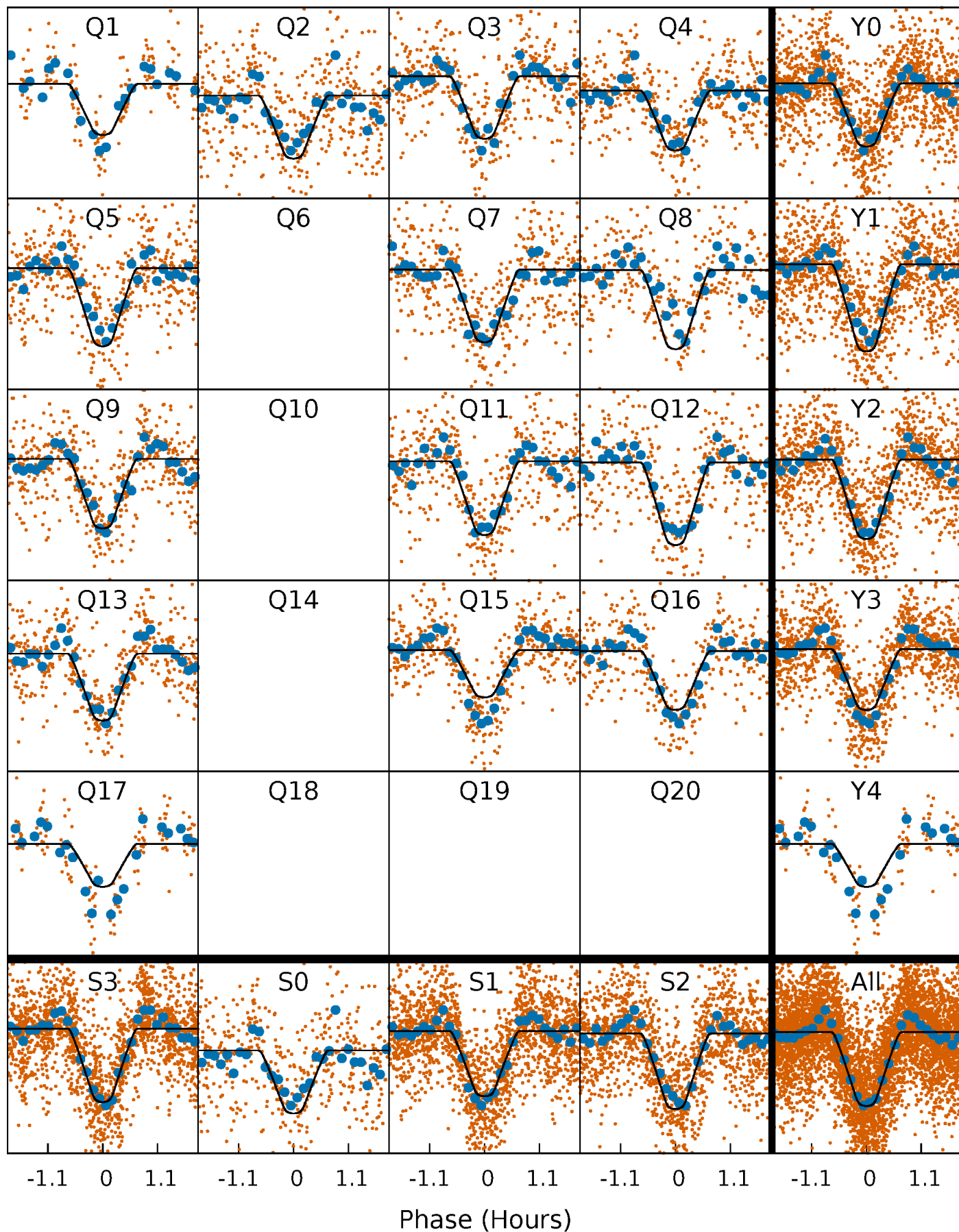
PDC Quarter-Phased Transit Curves

TCE 003973549-01 P= 1.389947 Days $T_0=132.266090$ (BKJD)



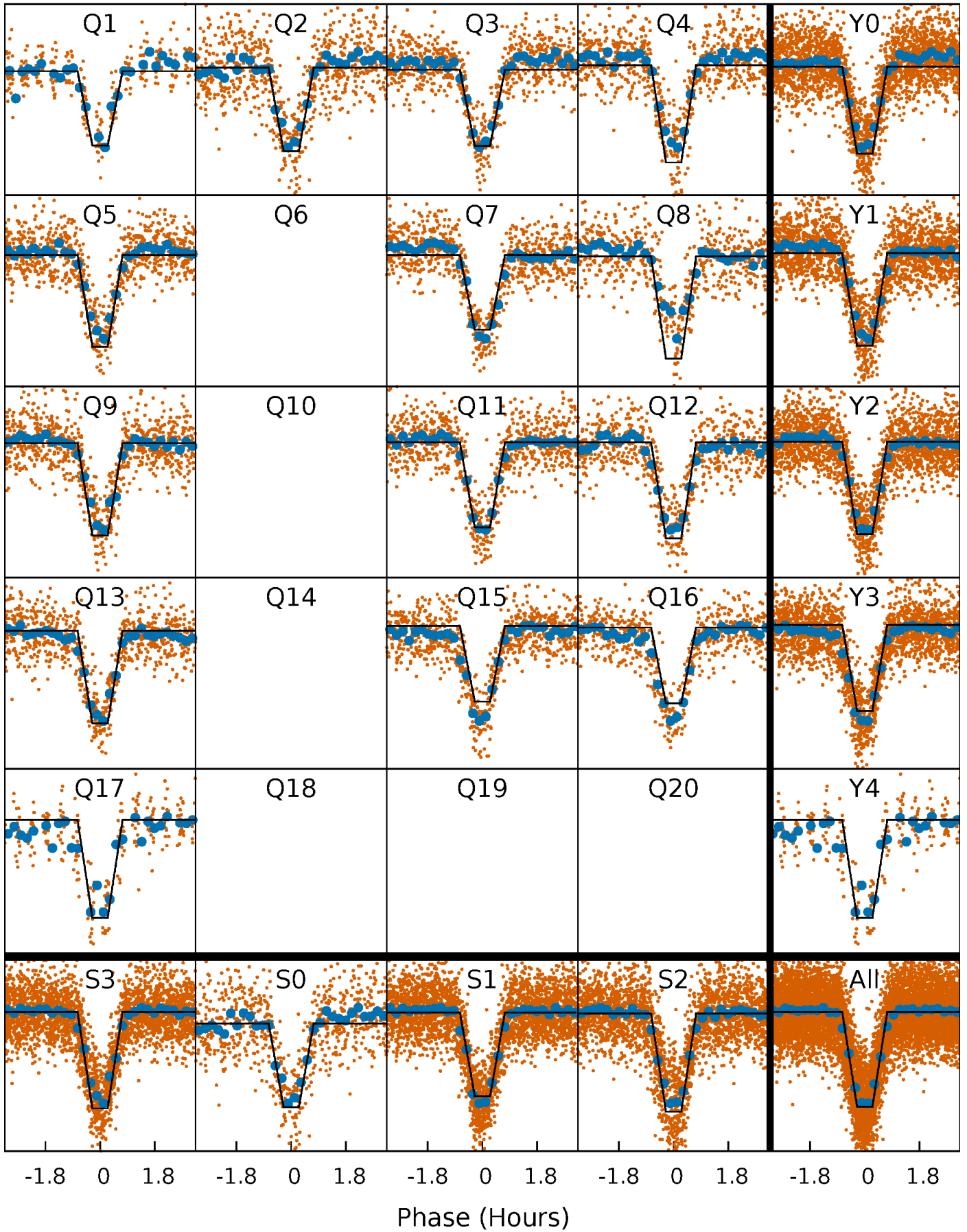
DV Quarter-Phased Transit Curves

TCE 003973549-01 P= 1.389947 Days $T_0=132.266090$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

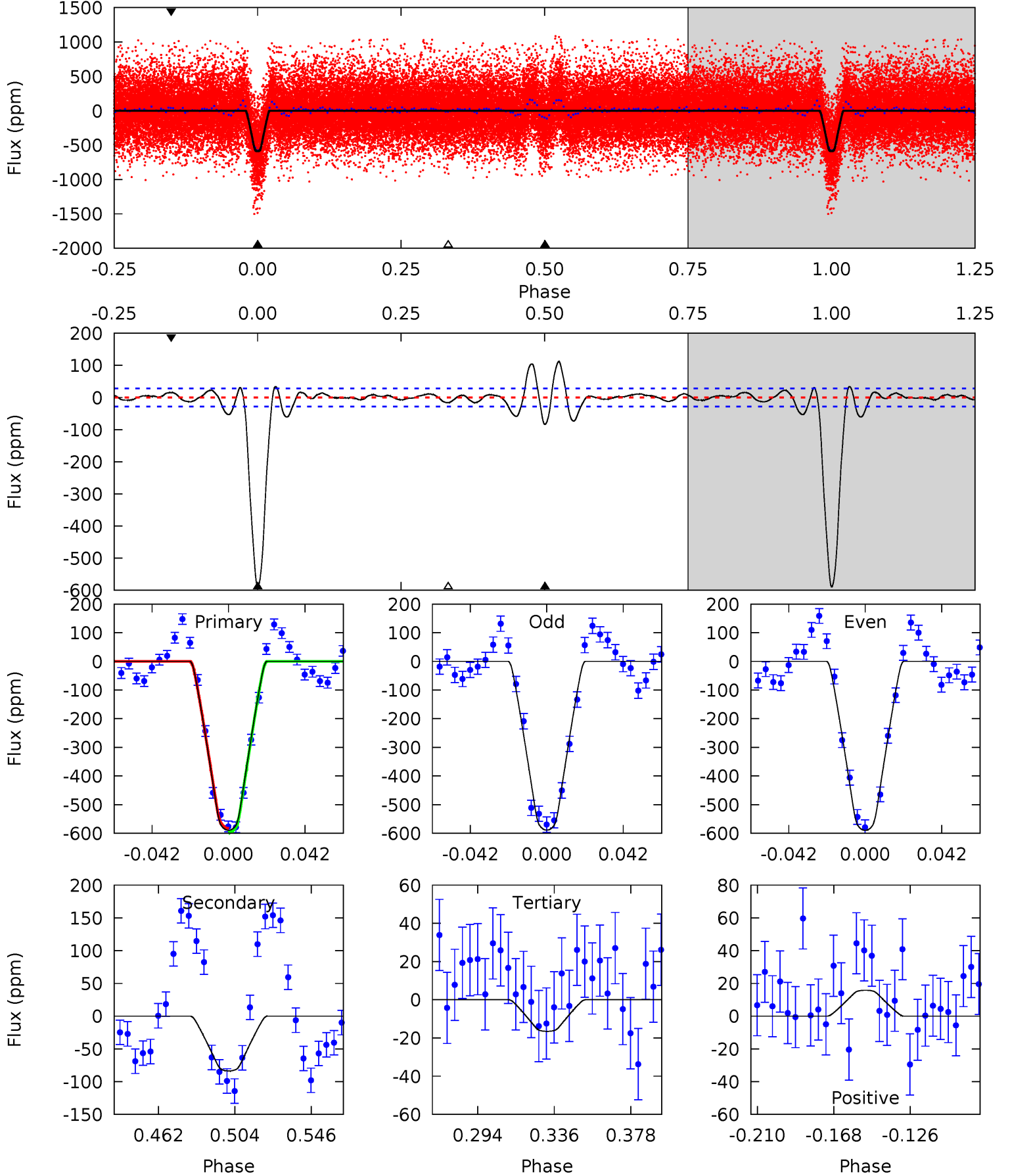
TCE 003973549-01 P= 1.389950 Days $T_0=132.265072$ (BKJD)



DV Model-Shift Uniqueness Test

003973549-01, P = 1.389947 Days, E = 130.876143 Days

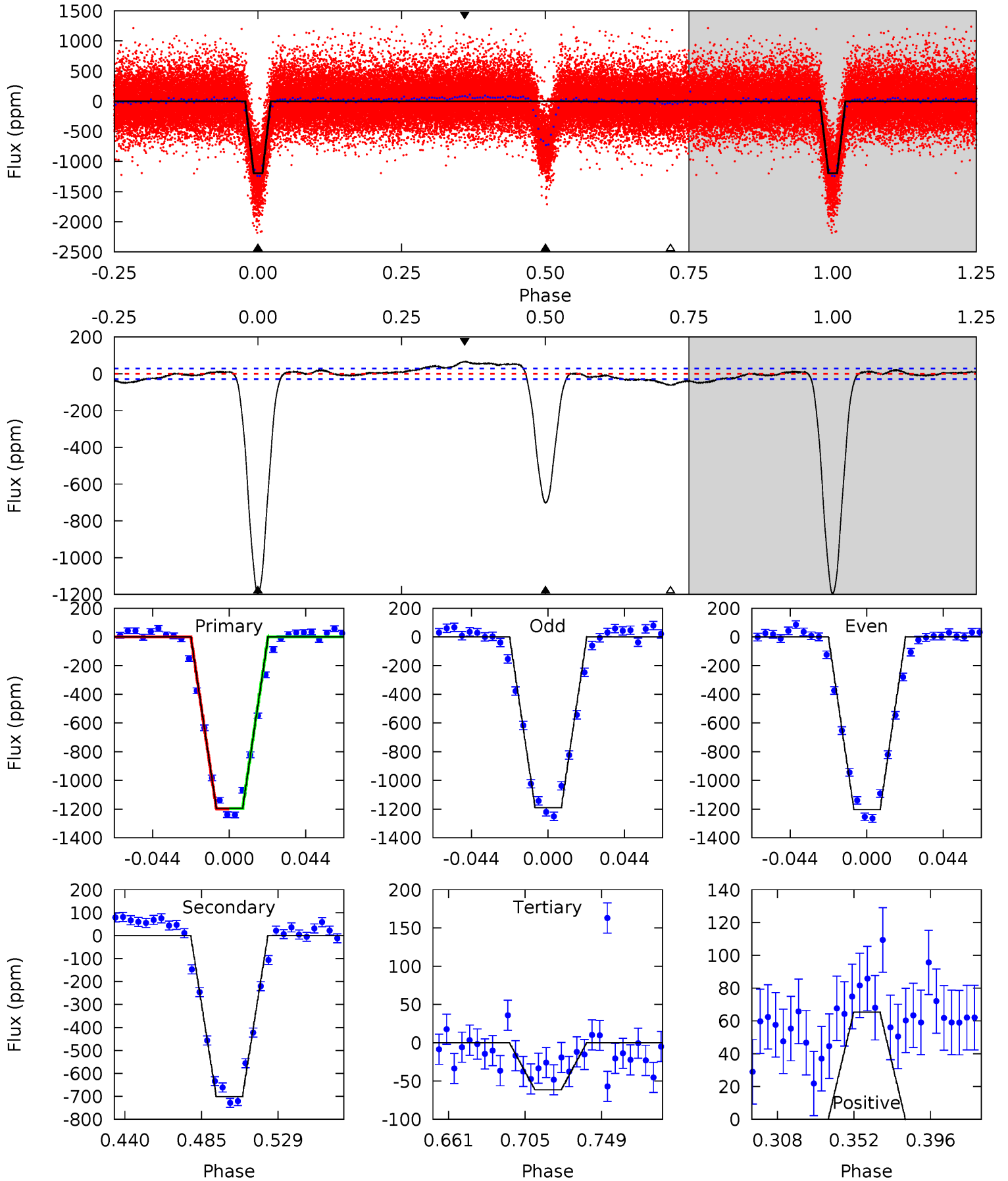
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
99.7	14.2	2.80	2.67	4.74	2.03	2.95	96.9	97.1	11.4	11.5	0.08	1.01	0.16	1.12



Alt Model-Shift Uniqueness Test

003973549-01, P = 1.389950 Days, E = 130.875122 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
194.0	113.8	9.99	10.6	4.73	2.01	5.06	184.0	183.4	103.8	103.2	1.07	0.99	0.05	0.34



Stellar Parameters For KIC 003973549

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5999^{+190}_{-211}	$4.461^{+0.084}_{-0.196}$	$-0.280^{+0.300}_{-0.300}$	$0.950^{+0.284}_{-0.122}$	$0.952^{+0.132}_{-0.108}$	$1.564^{+0.559}_{-0.791}$
	+3%/-4%	+2%/-4%	+107%/-107%	+30%/-13%	+14%/-11%	+36%/-51%
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 003973549-01 / KOI 5032.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-84 ± 6	$2.84^{+0.53}_{-0.43}$	2360^{+181}_{-128}	3803^{+224}_{-198}	$3.226^{+1.249}_{-0.903}$
Alt.	-701 ± 6	$3.78^{+0.64}_{-0.45}$	2362^{+179}_{-127}	5203^{+276}_{-247}	15^{+5}_{-4}

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

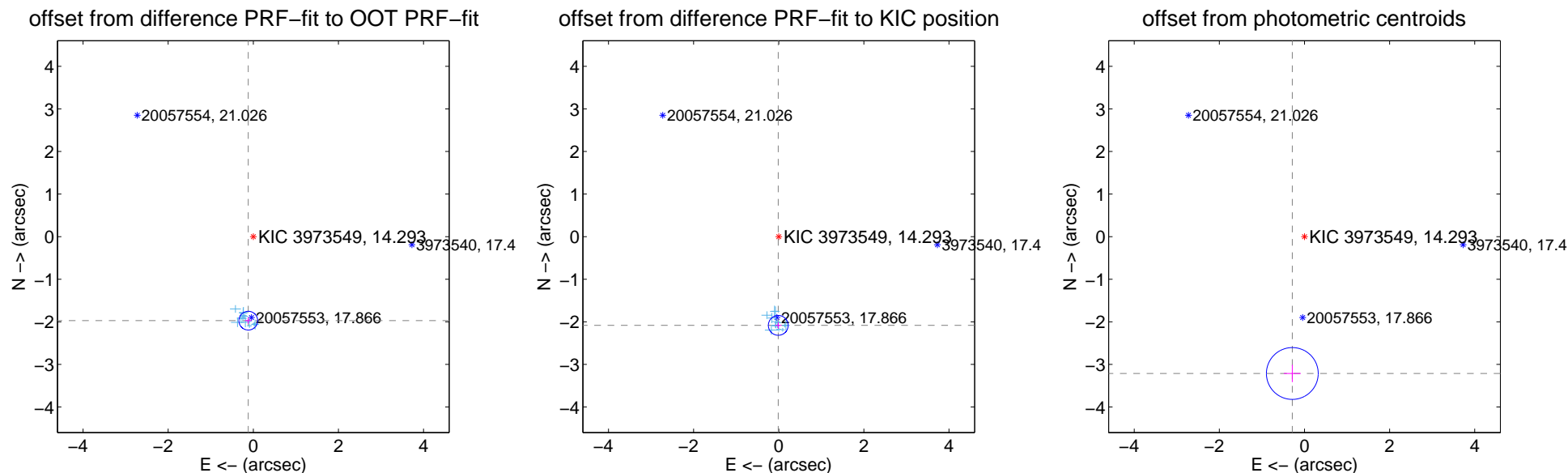
DV Centroid Data

Supplemental centroid analysis for 003973549-01. Kepler magnitude: 14.29. Transit SNR 59.84

There are 14 quarters with good PRF difference image offsets

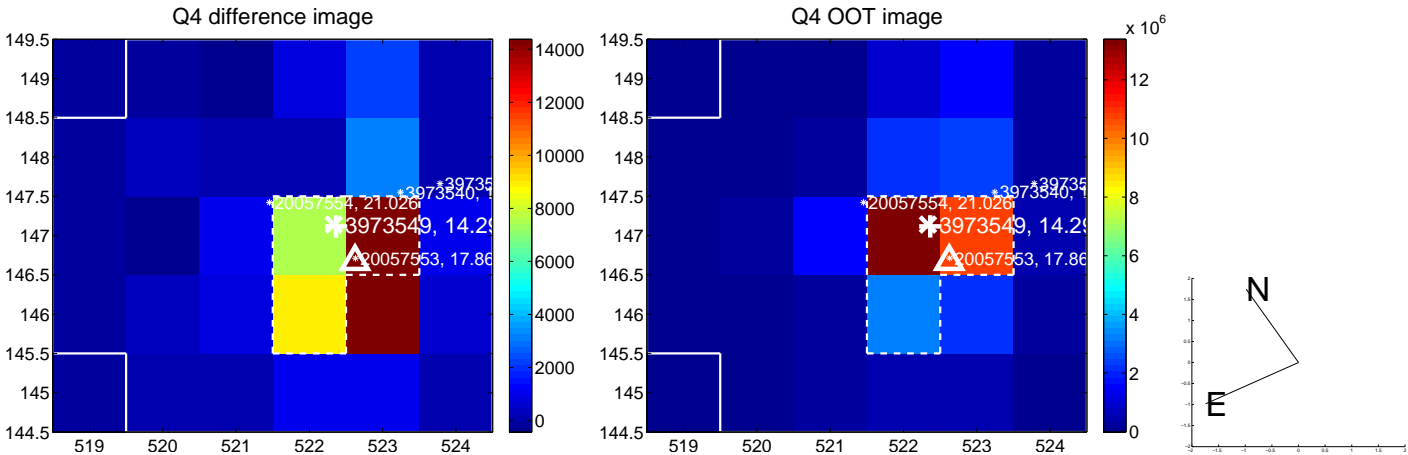
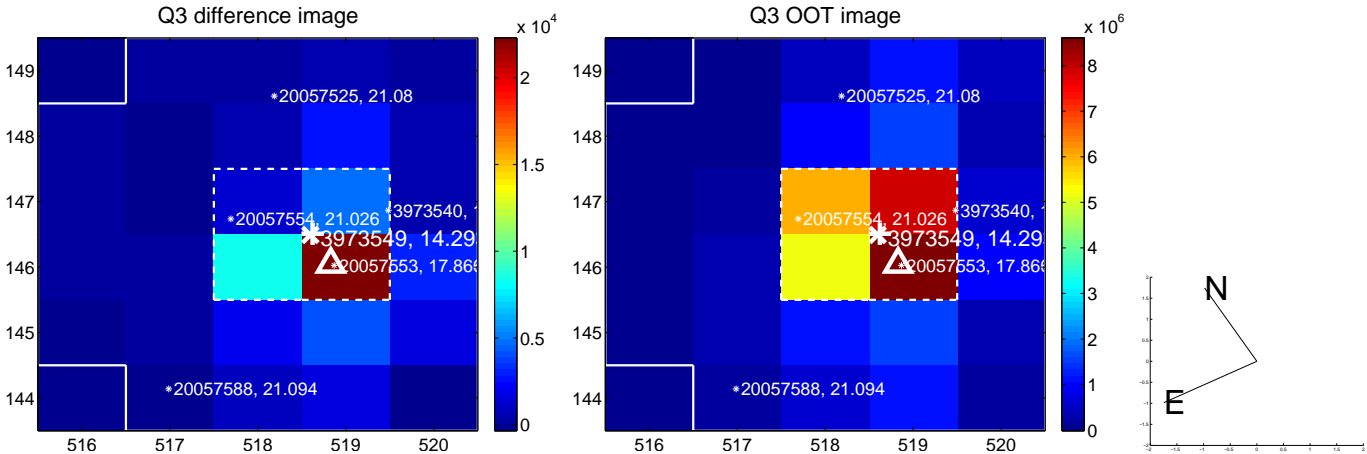
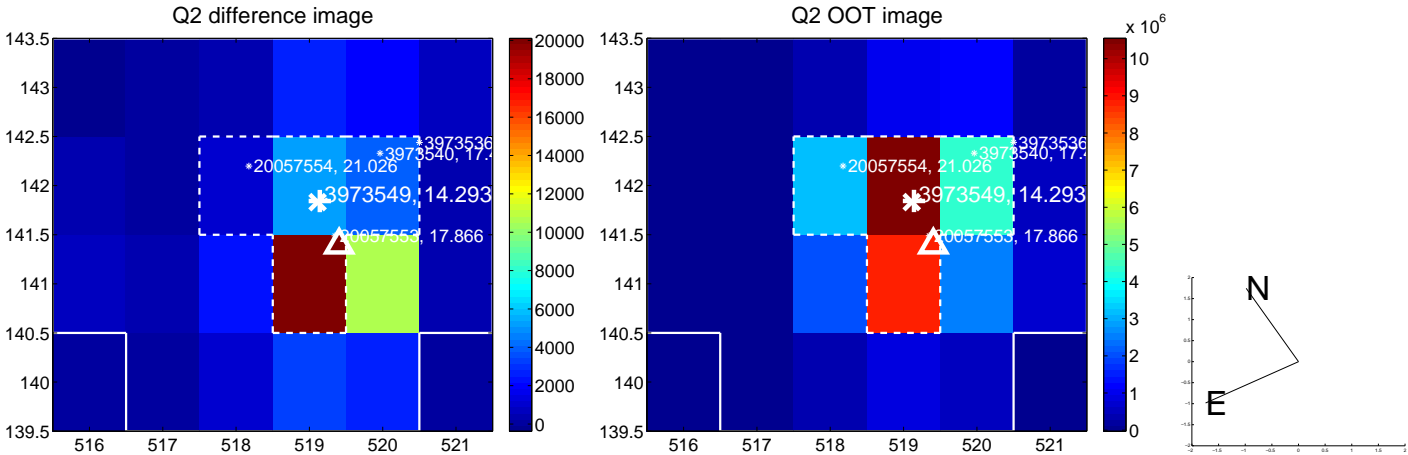
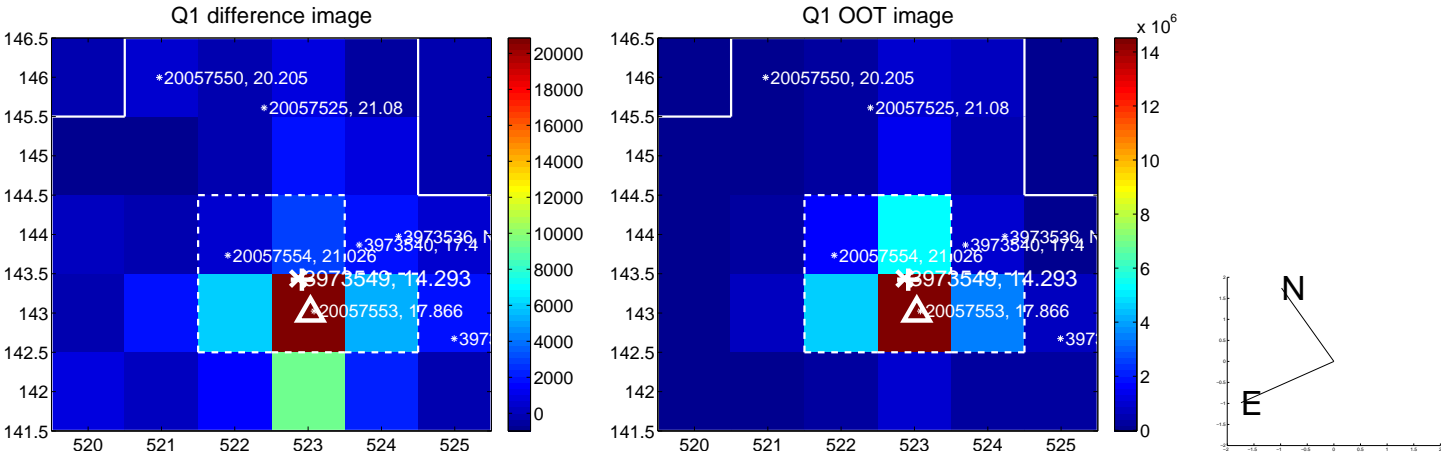
The direct PRF centroid is offset from the target star catalog position by about 0.27 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.977 ± 0.073	26.93	0.118 ± 0.077	-1.974 ± 0.073
PRF-fit source offset from KIC position	2.084 ± 0.078	26.88	0.011 ± 0.073	-2.084 ± 0.078
photometric centroid source offset	3.23 ± 0.20	15.91	0.29 ± 0.20	-3.21 ± 0.20

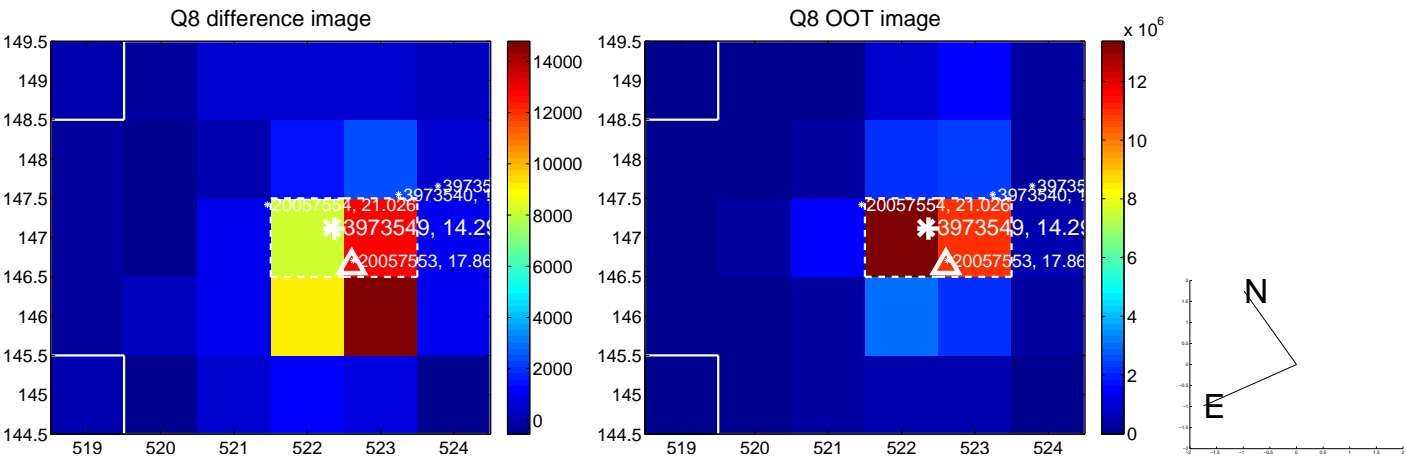
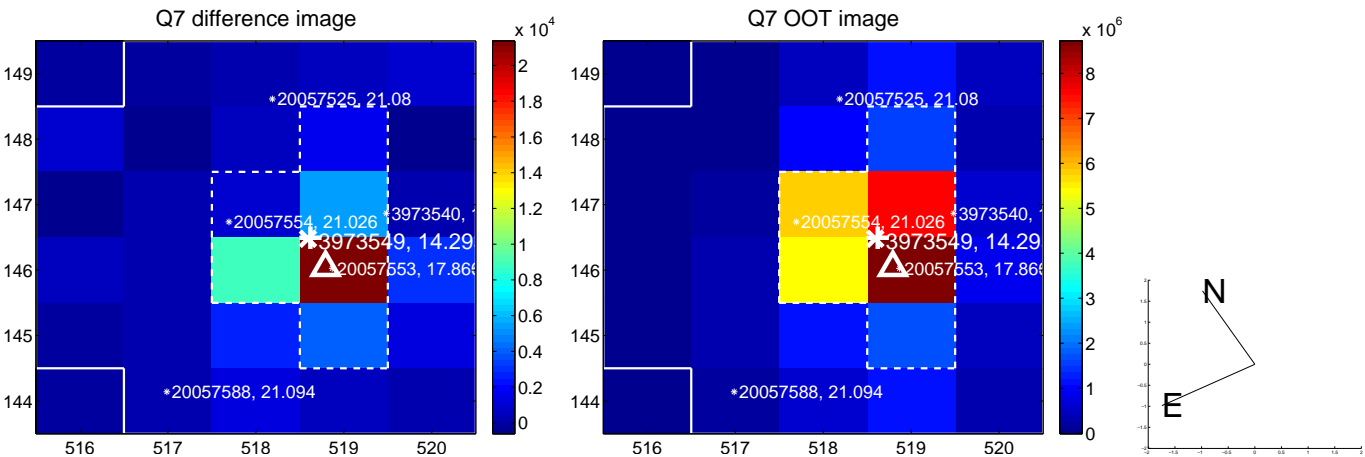
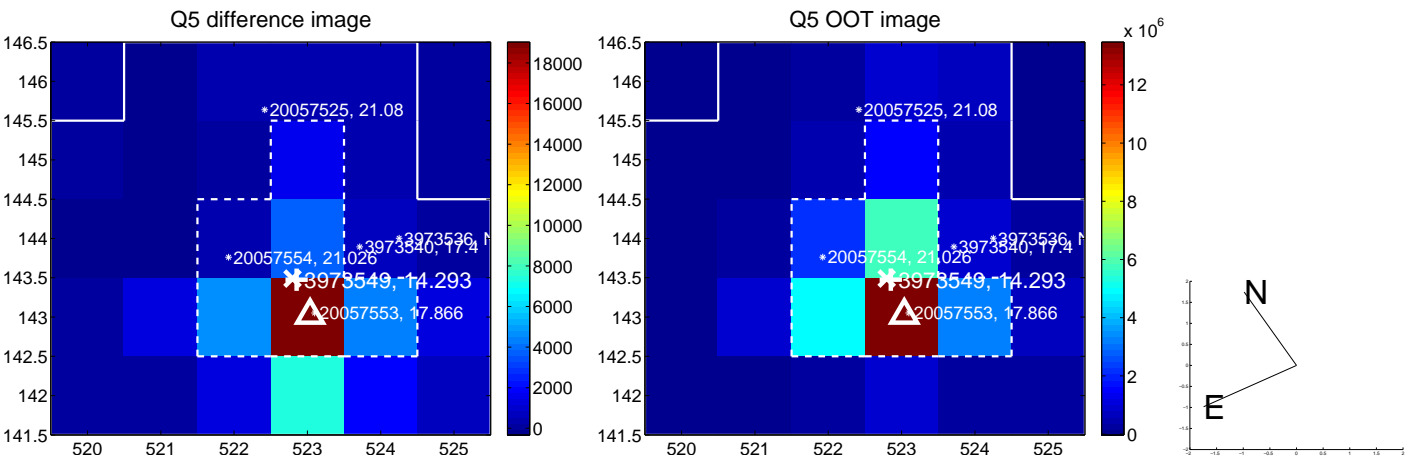


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

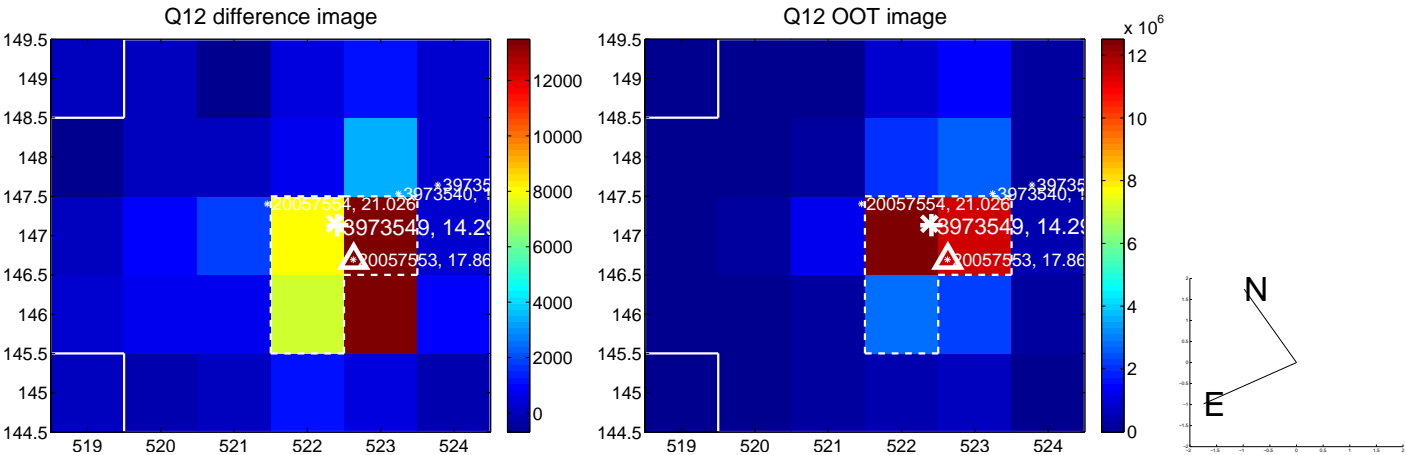
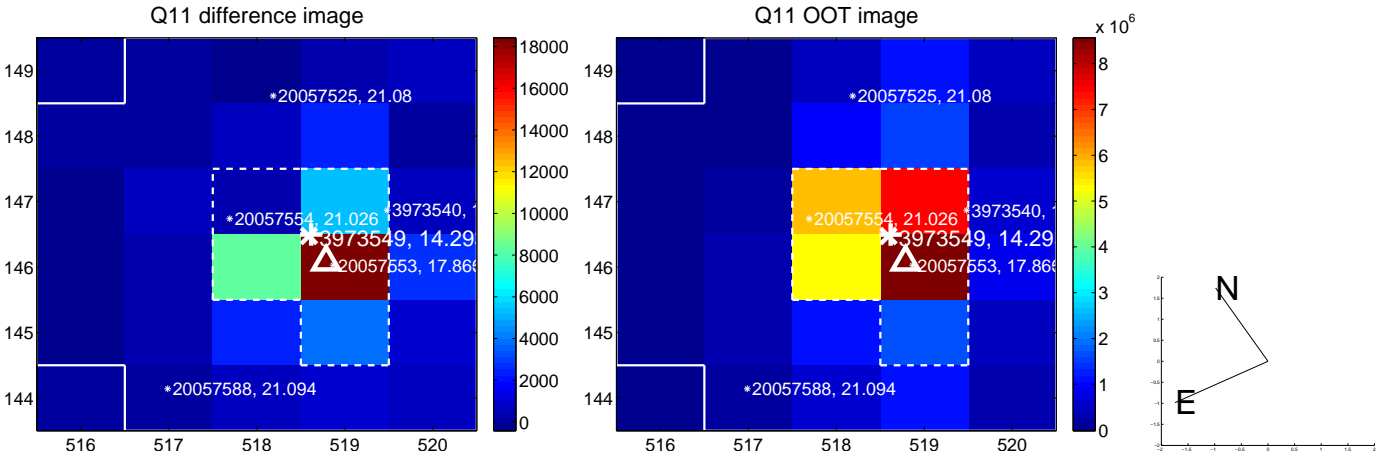
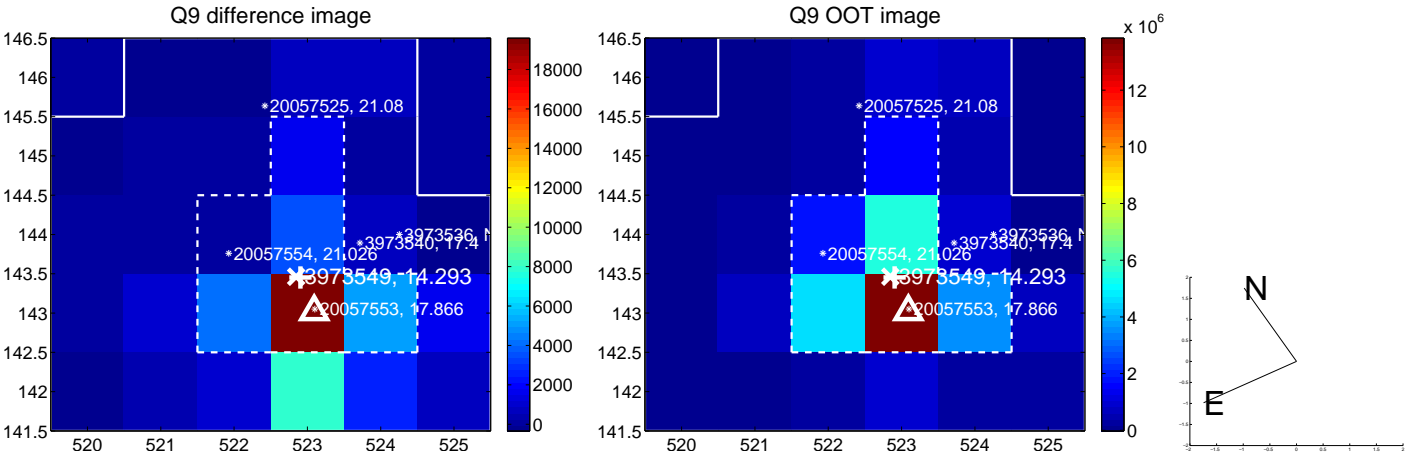
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



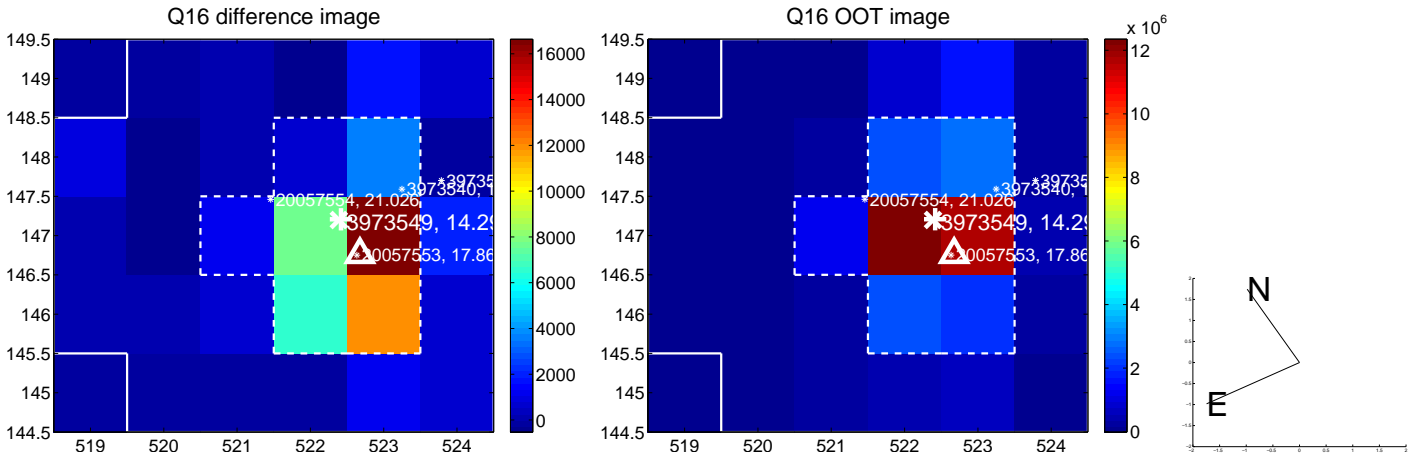
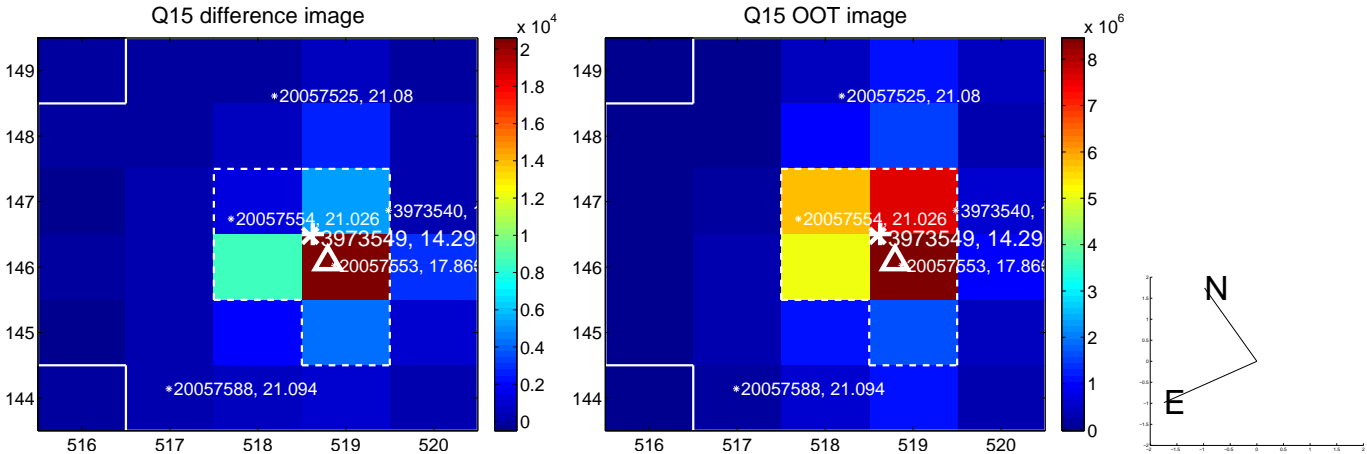
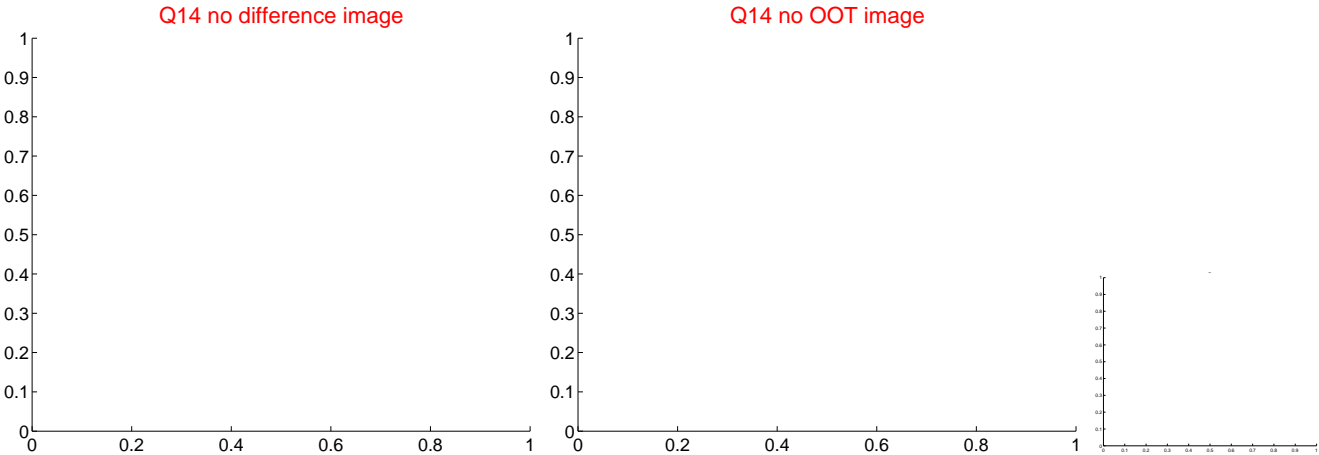
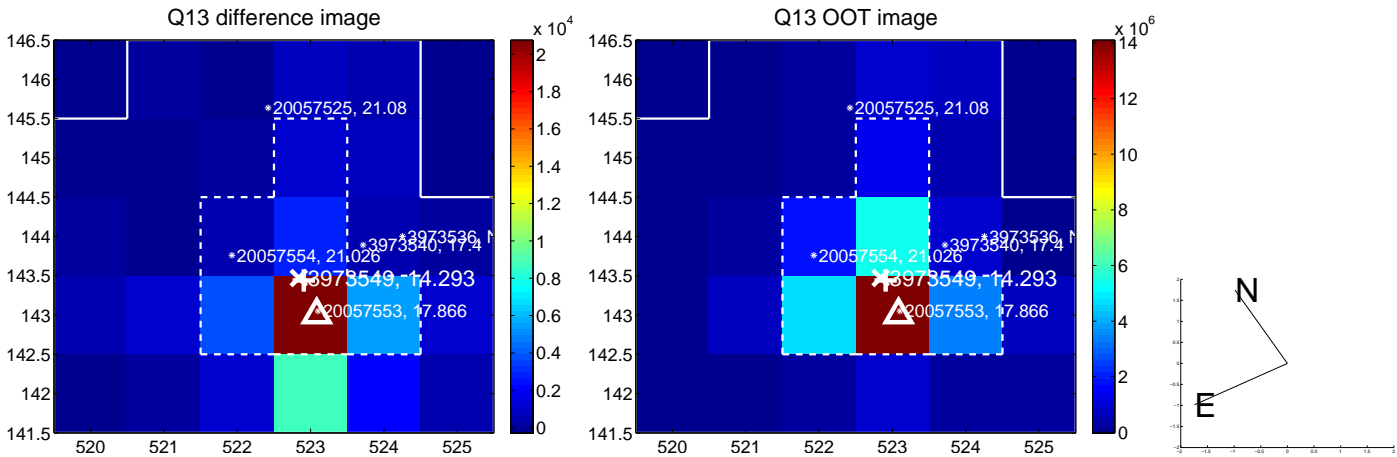
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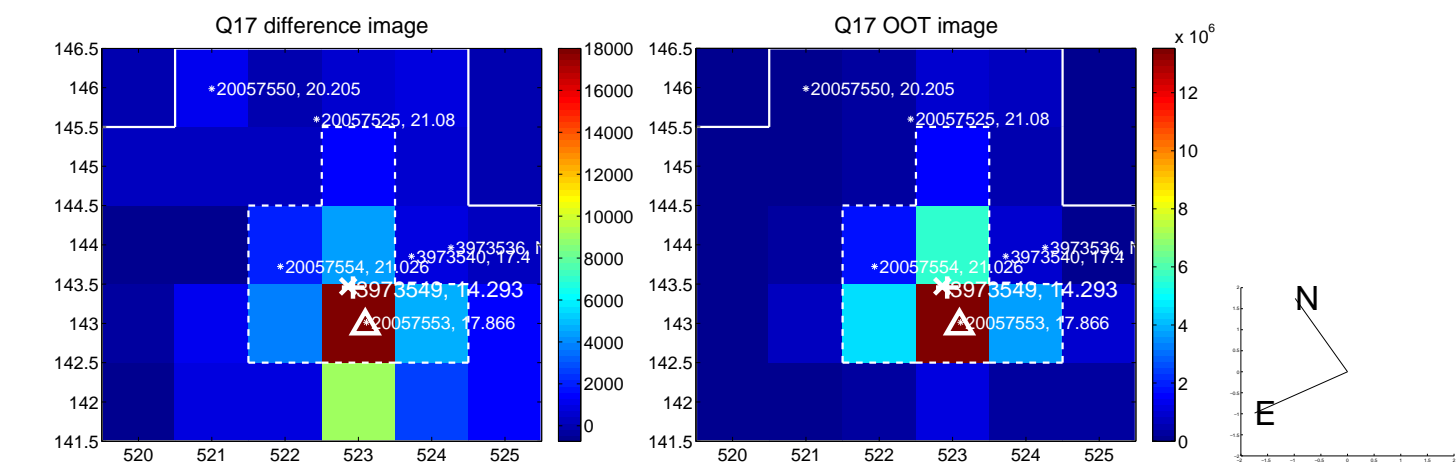
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



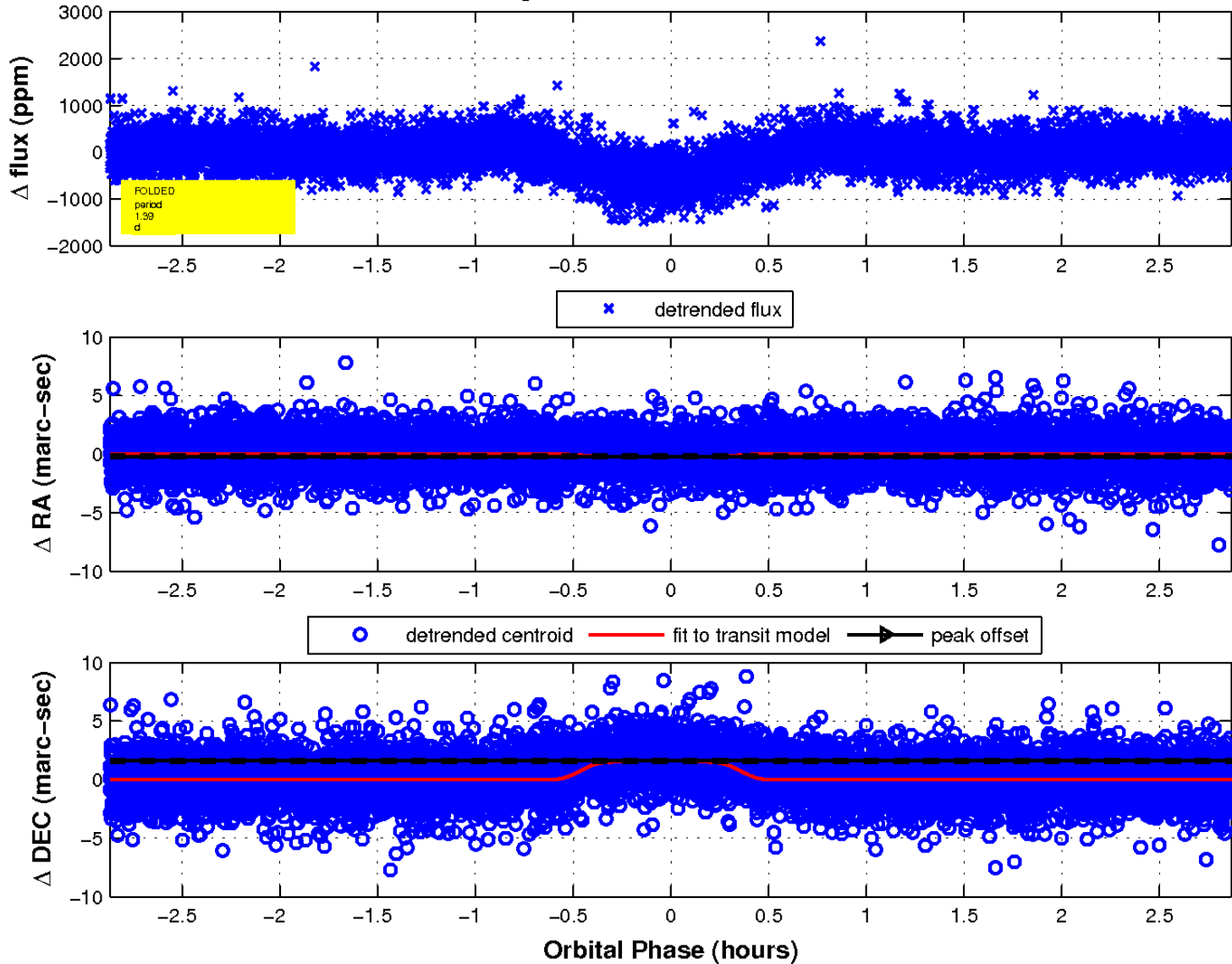
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

