

KIC 011179076

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})
011179076-01	OBS	2497.01	48.431851	141.448505	870.0	4.728	13.4	15.1	0.81	4891	3.06	5.82

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011179076-01	OBS	PC	0.98	0	0	0	0	NO_COMMENT

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 011179076-01

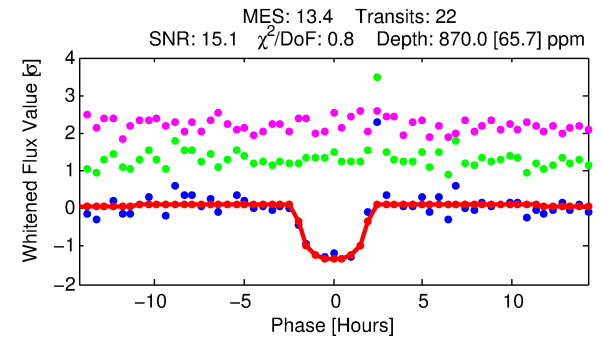
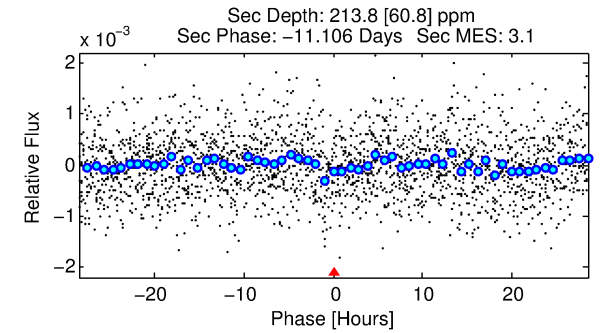
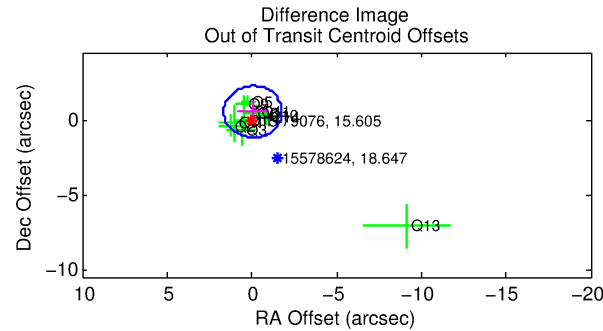
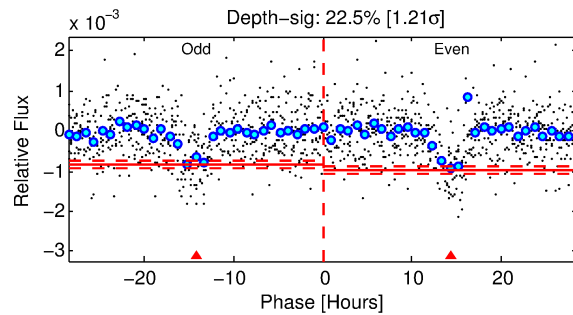
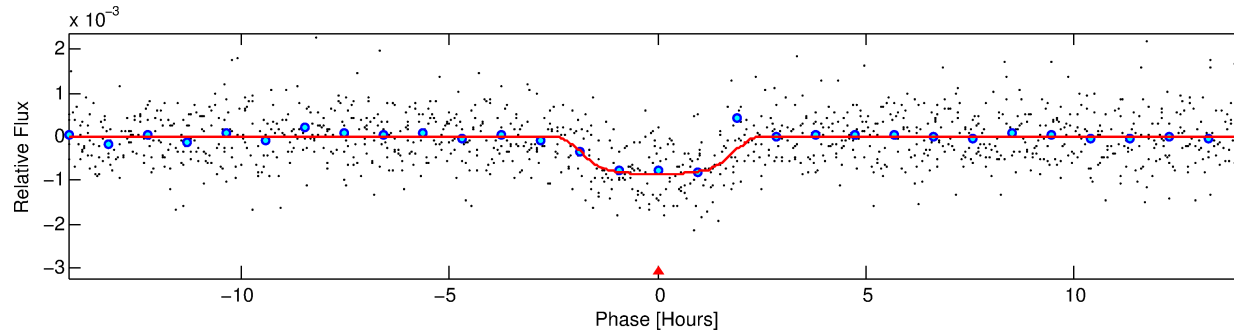
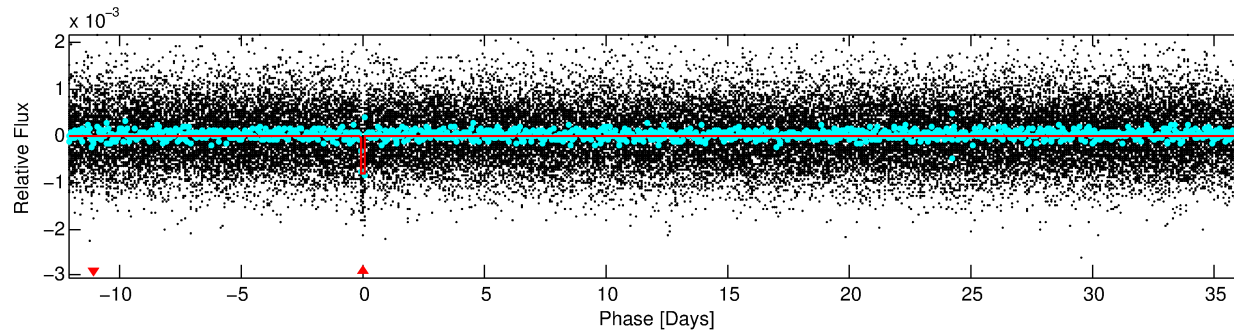
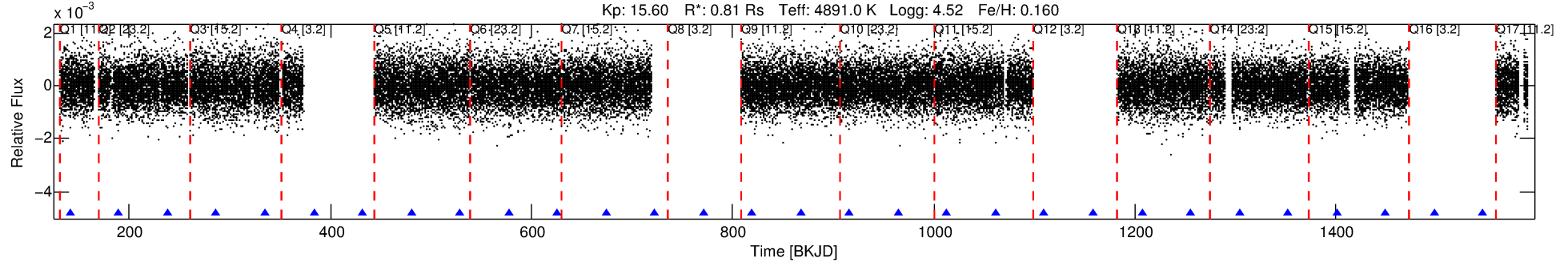
No Significant Match Found

DV One-Page Summary

KIC: 11179076 Candidate: 1 of 1 Period: 48.432 d

KOI: K02497.01 Corr: 0.891

Kp: 15.60 R*: 0.81 Rs Teff: 4891.0 K Logg: 4.52 Fe/H: 0.160



DV Fit Results:

Period = 48.43185 [0.00042] d
Epoch = 141.4485 [0.0069] BKJD
Rp/R* = 0.0348 [0.0028]
a/R* = 34.84 [8.47]
b = 0.93 [0.04]
Seff = 5.82 [0.78]
Teq = 396 [13] K
Rp = 3.06 [0.33] Re
a = 0.2390 [0.0165] AU
Ag = 717.76 [248.74] [2.88σ]
Teffp = 3169 [266] K [10.43σ]

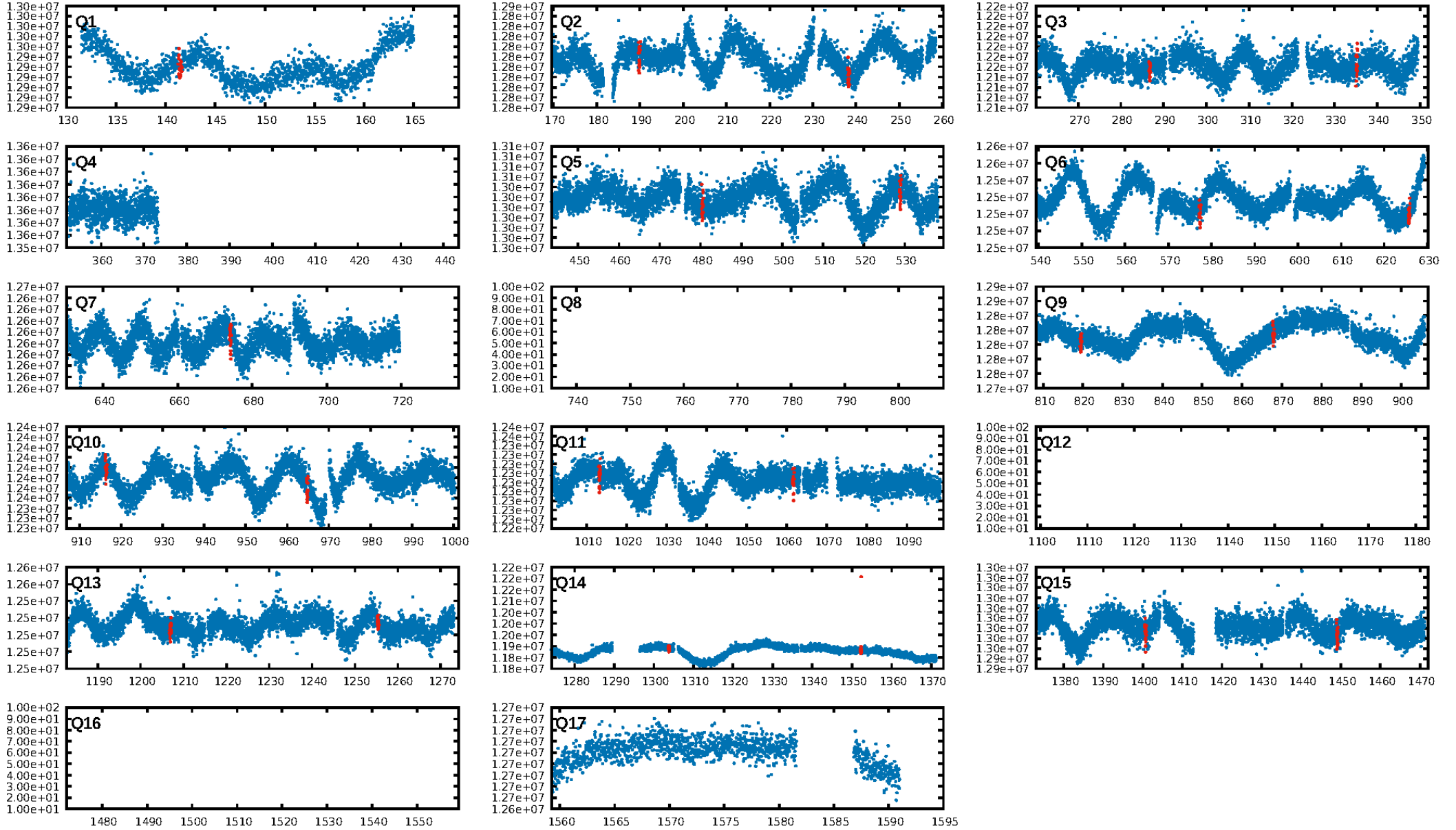
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 72.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.04e-40
RollingBand-fgt: 1.00 [21/21]
GhostDiagnostic-chr: 5.2
Centroid-sig: 35.7%
Centroid-so: 1.029 arcsec [1.21σ]
OotOffset-rm: 0.541 arcsec [0.94σ]
KicOffset-rm: 0.374 arcsec [0.61σ]
OotOffset-st: 4/4/0/3 [11]
KicOffset-st: 4/4/0/3 [11]
DiffImageQuality-fgm: 0.91 [10/11]
DiffImageOverlap-fno: 1.00 [12/12]

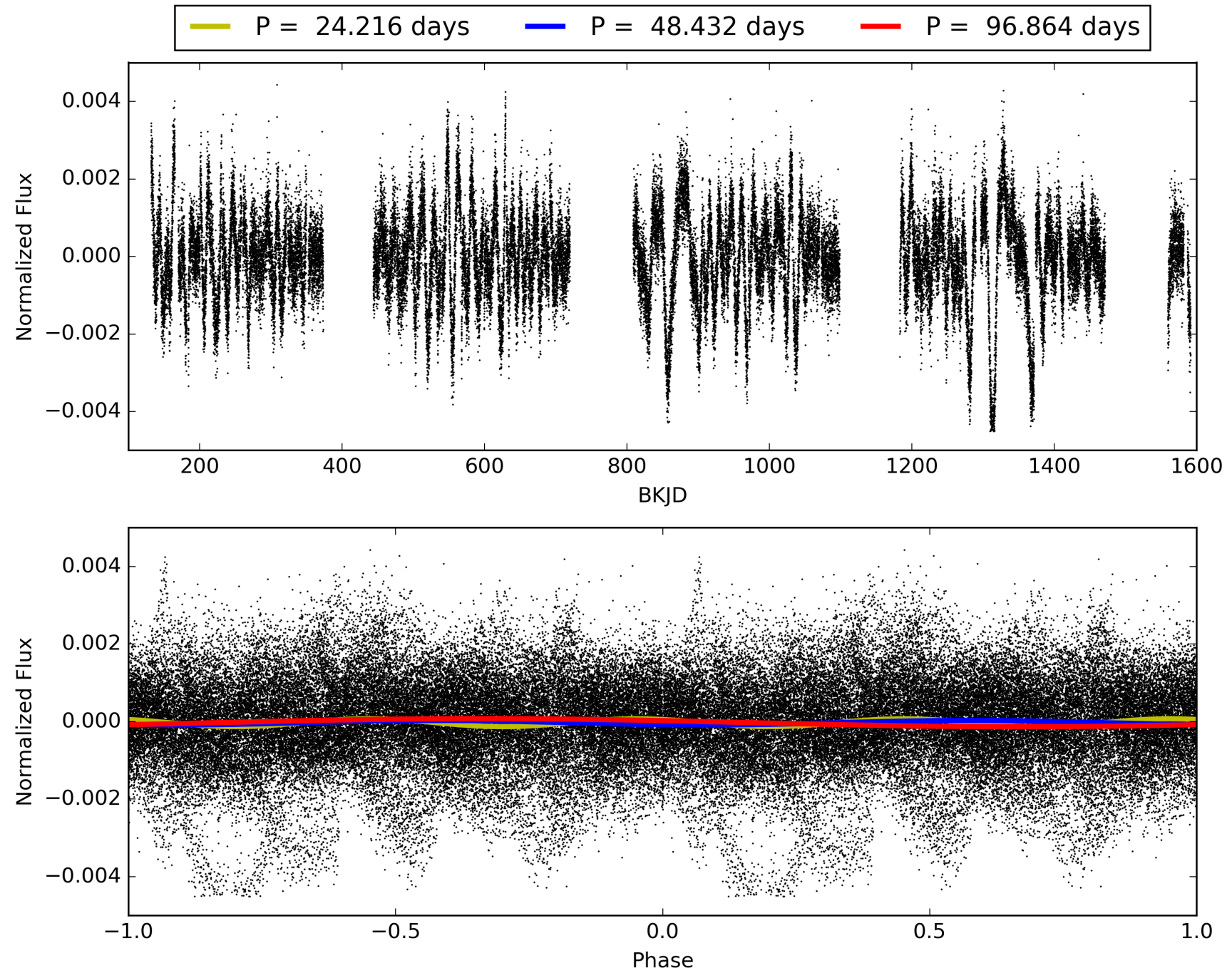
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 19:35:20 Z

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

TCE 011179076-01, PDC Light Curves

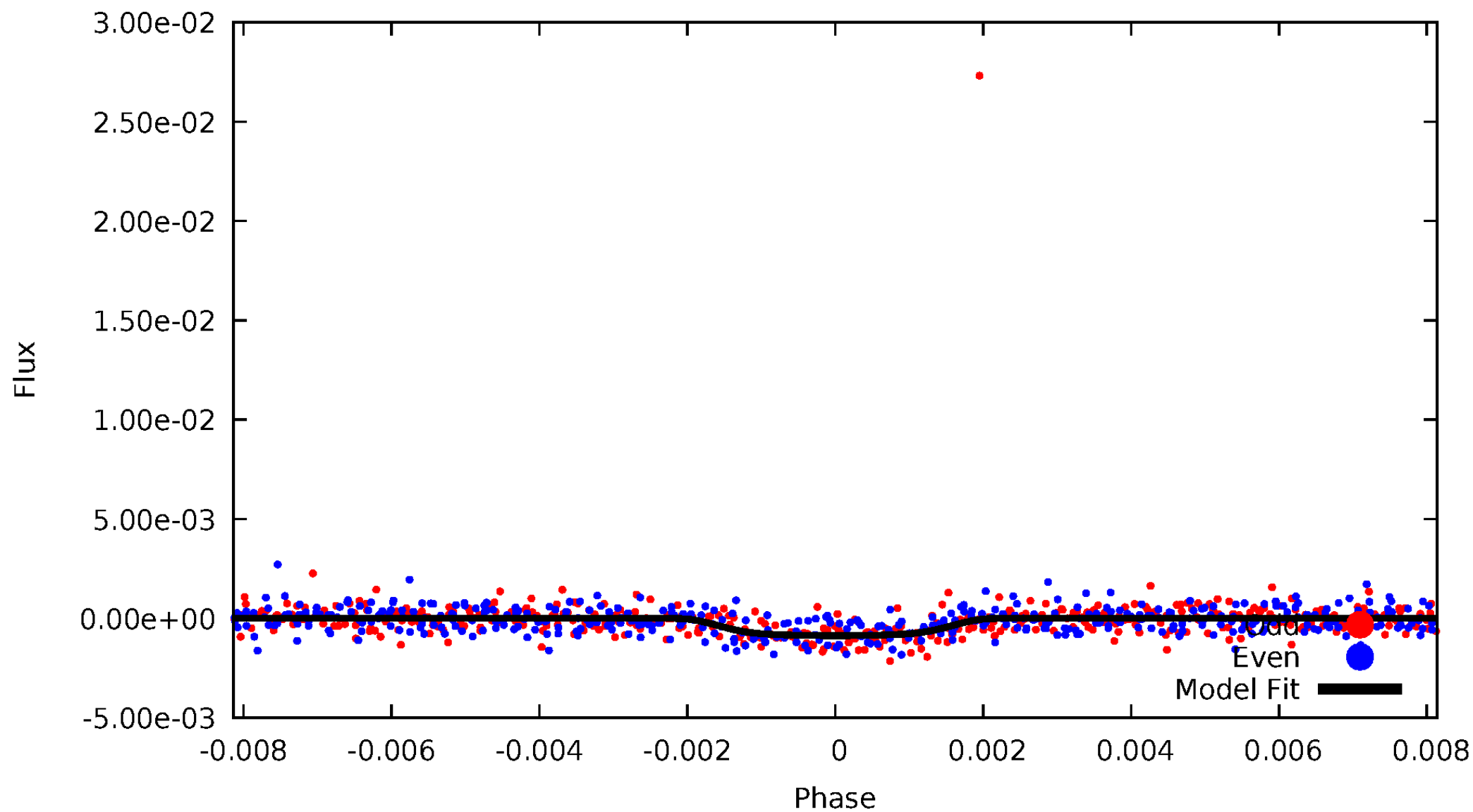


TCE 011179076-01



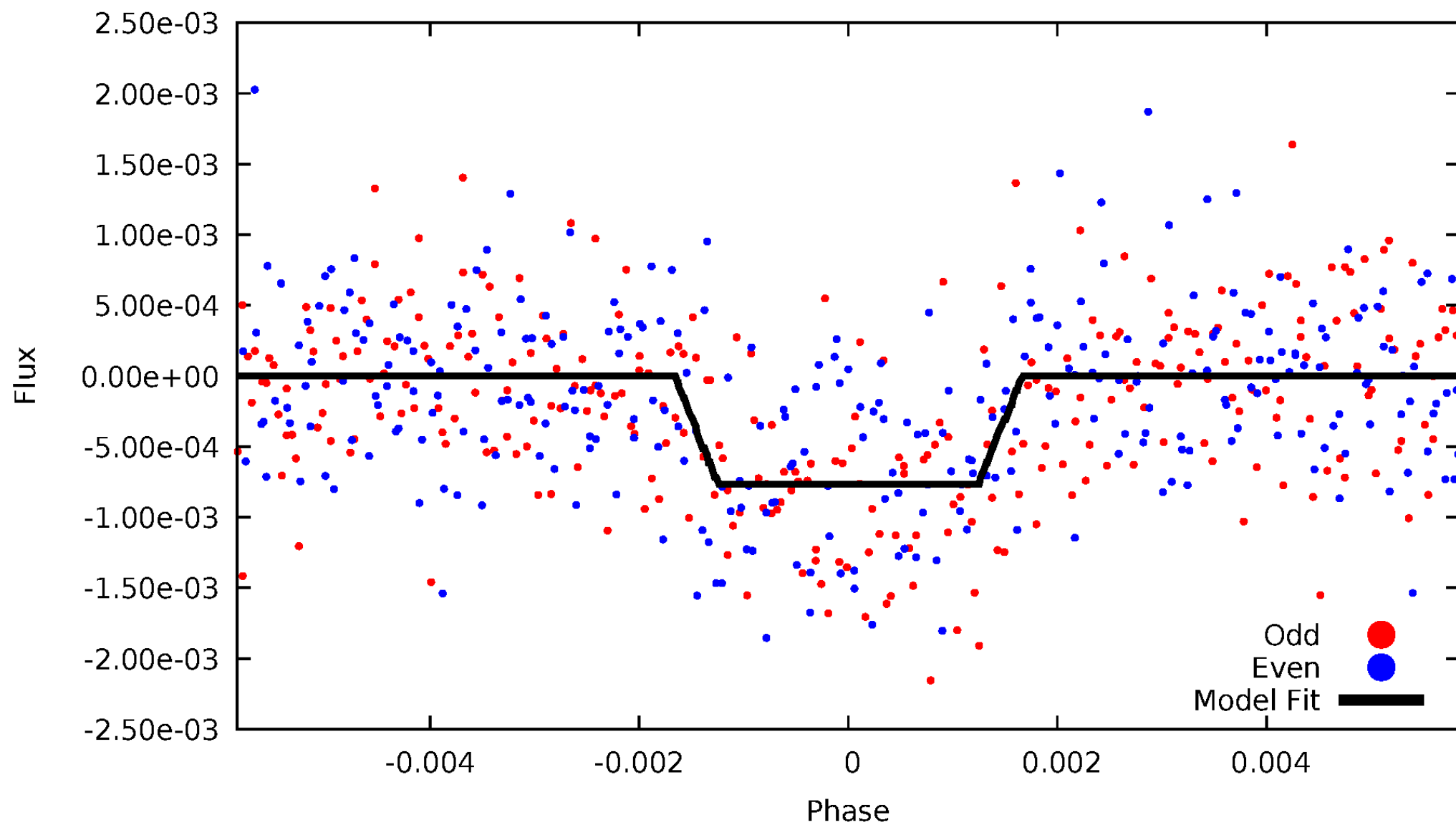
DV Odd/Even

TCE 011179076-01



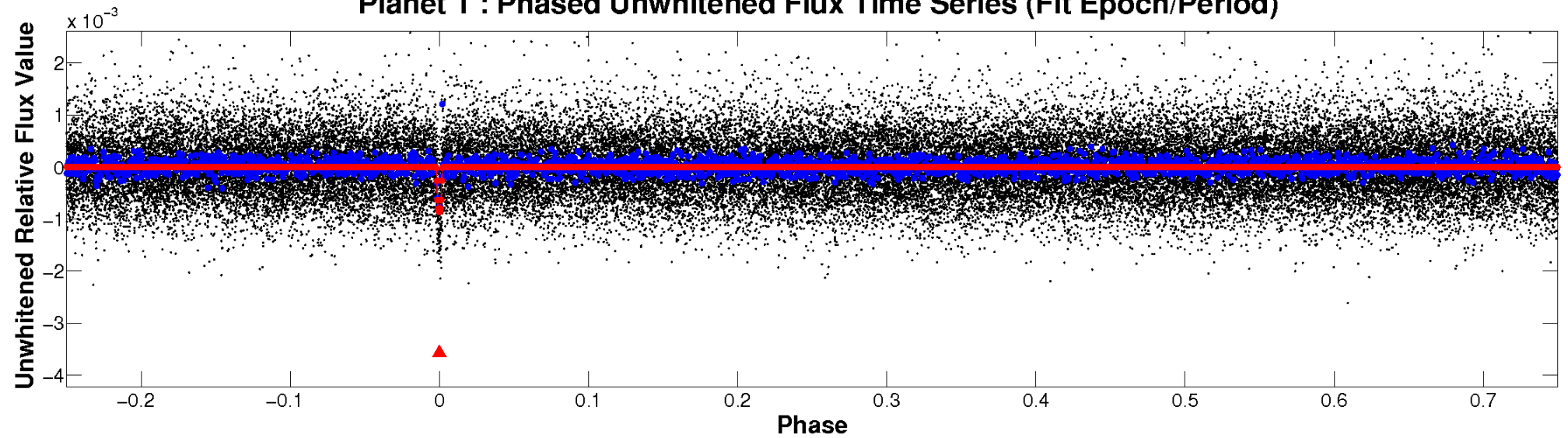
ALT Odd/Even

TCE 011179076-01

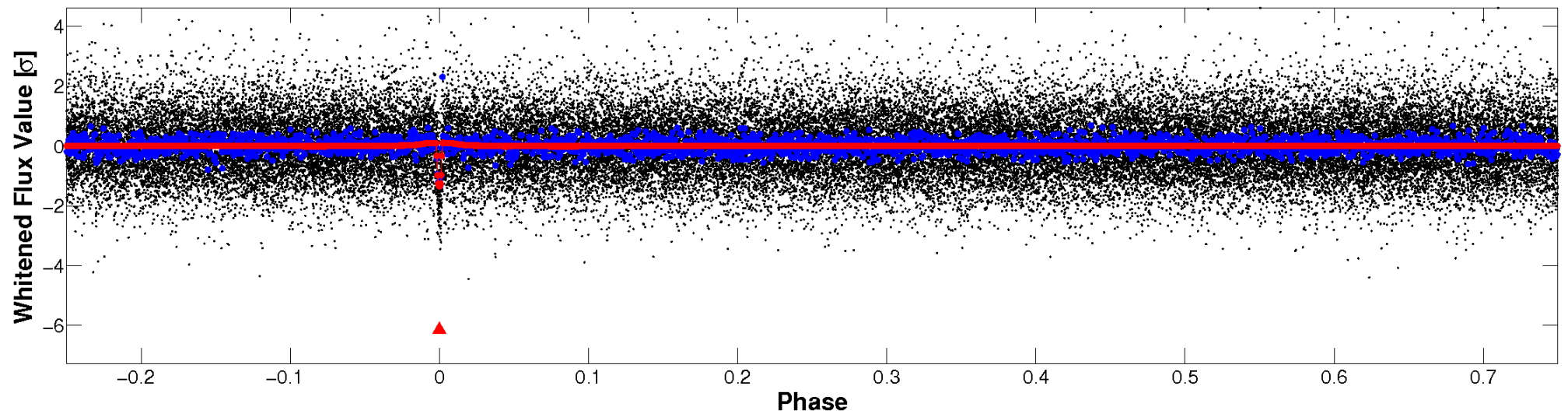


Non-Whitened Vs. Whitened Light Curve

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

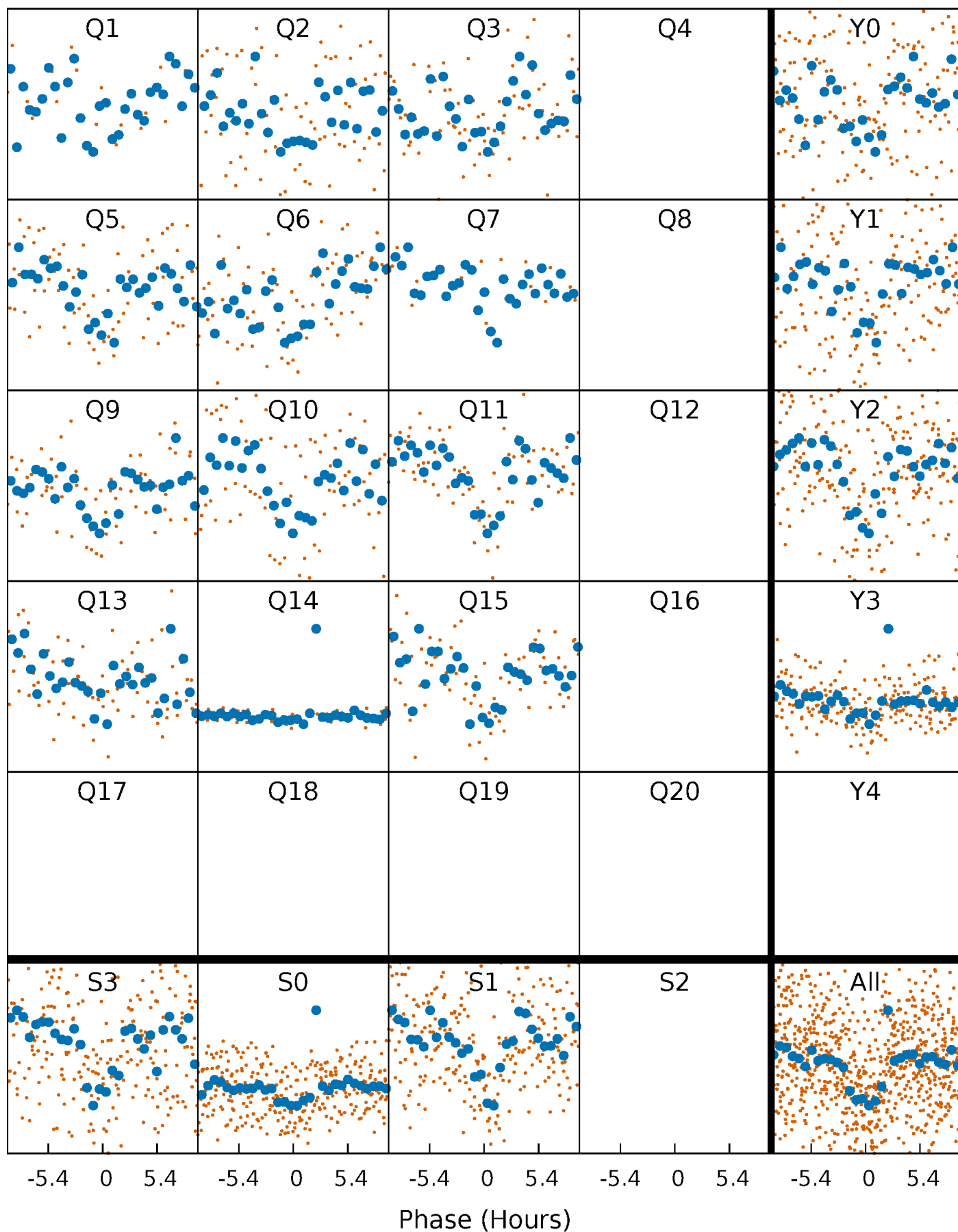


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



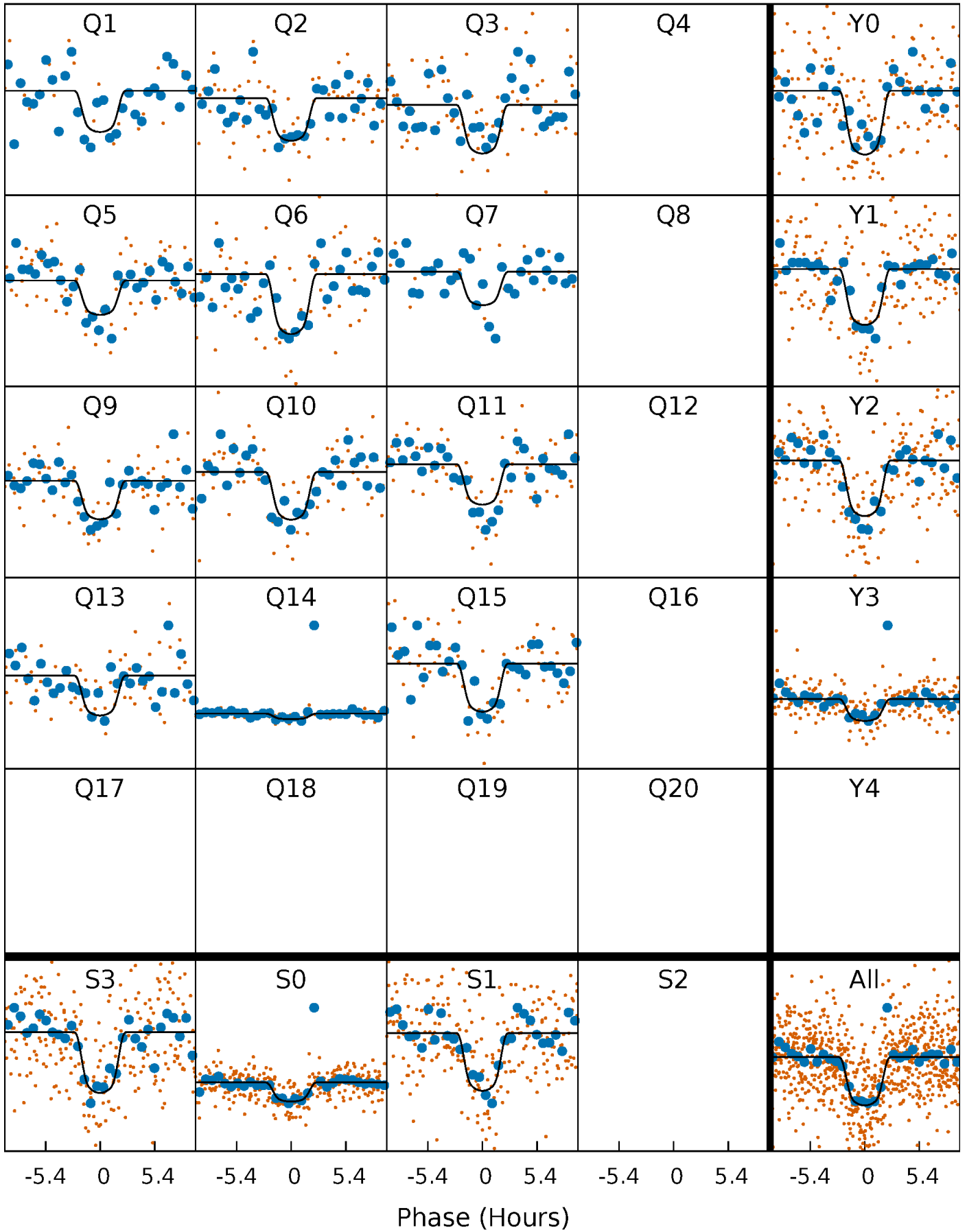
PDC Quarter-Phased Transit Curves

TCE 011179076-01 P= 48.431851 Days $T_0=141.448505$ (BKJD)



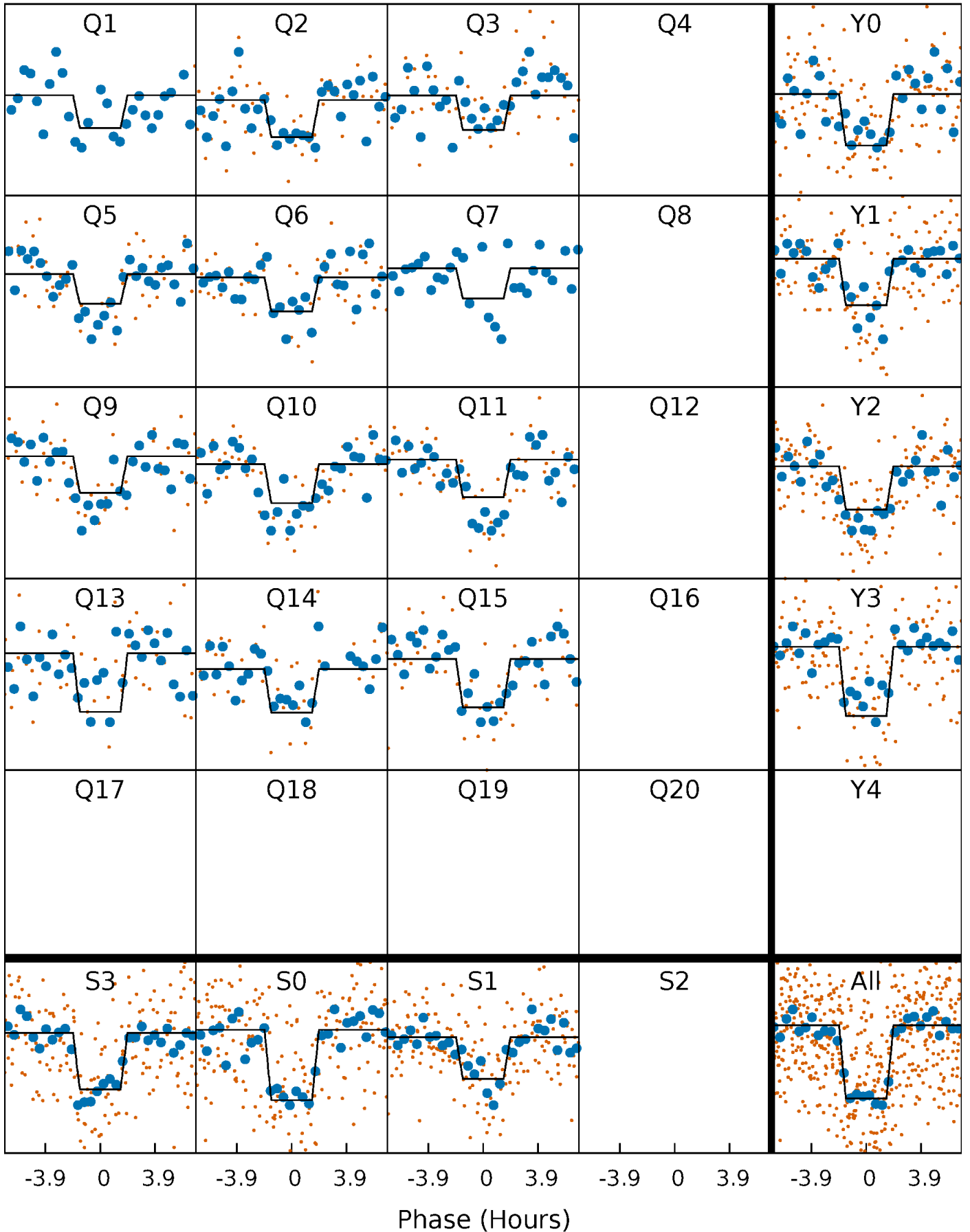
DV Quarter-Phased Transit Curves

TCE 011179076-01 P= 48.431851 Days $T_0=141.448505$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

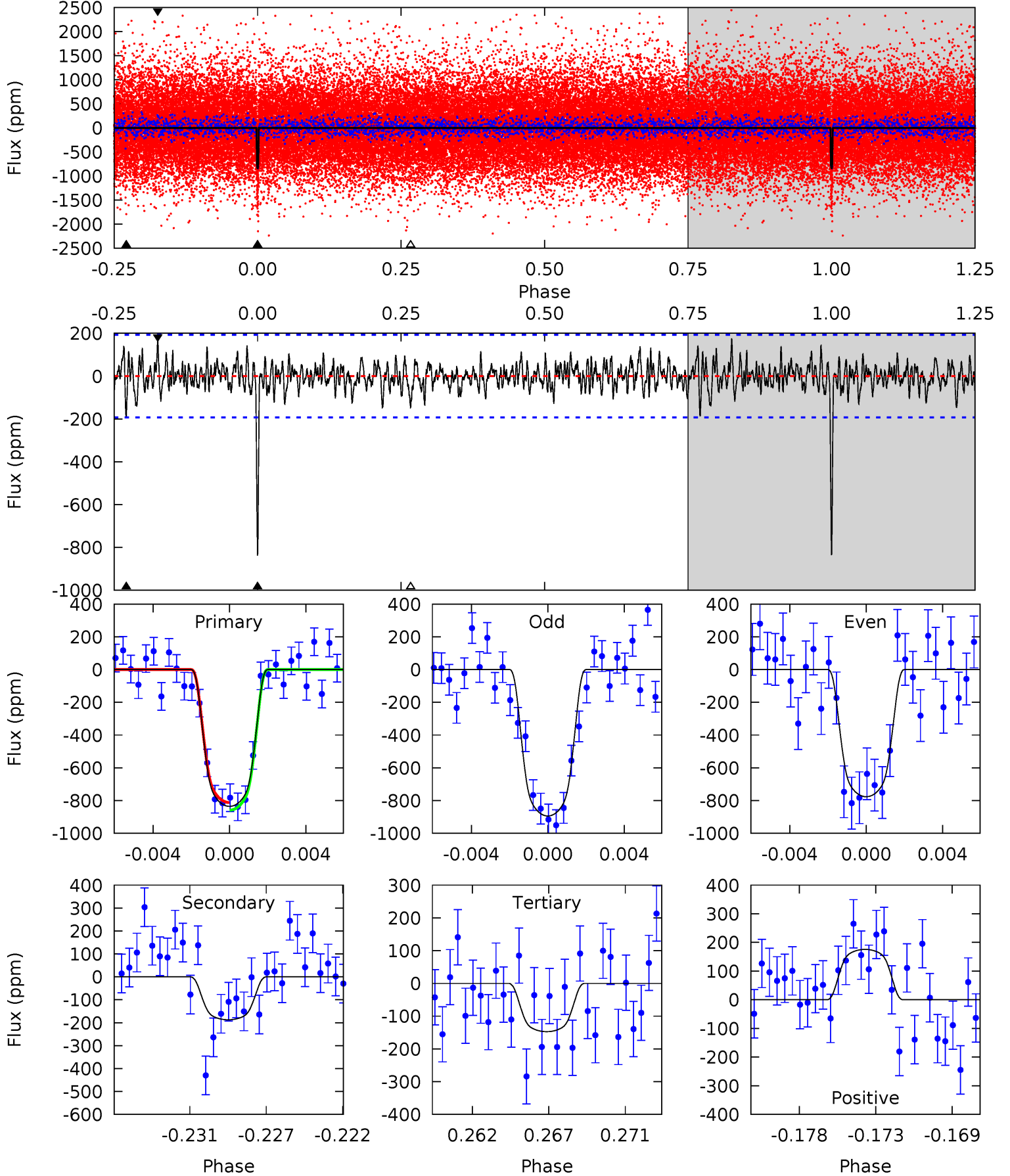
TCE 011179076-01 P= 48.431661 Days $T_0=141.449759$ (BKJD)



DV Model-Shift Uniqueness Test

011179076-01, P = 48.431851 Days, E = 93.016654 Days

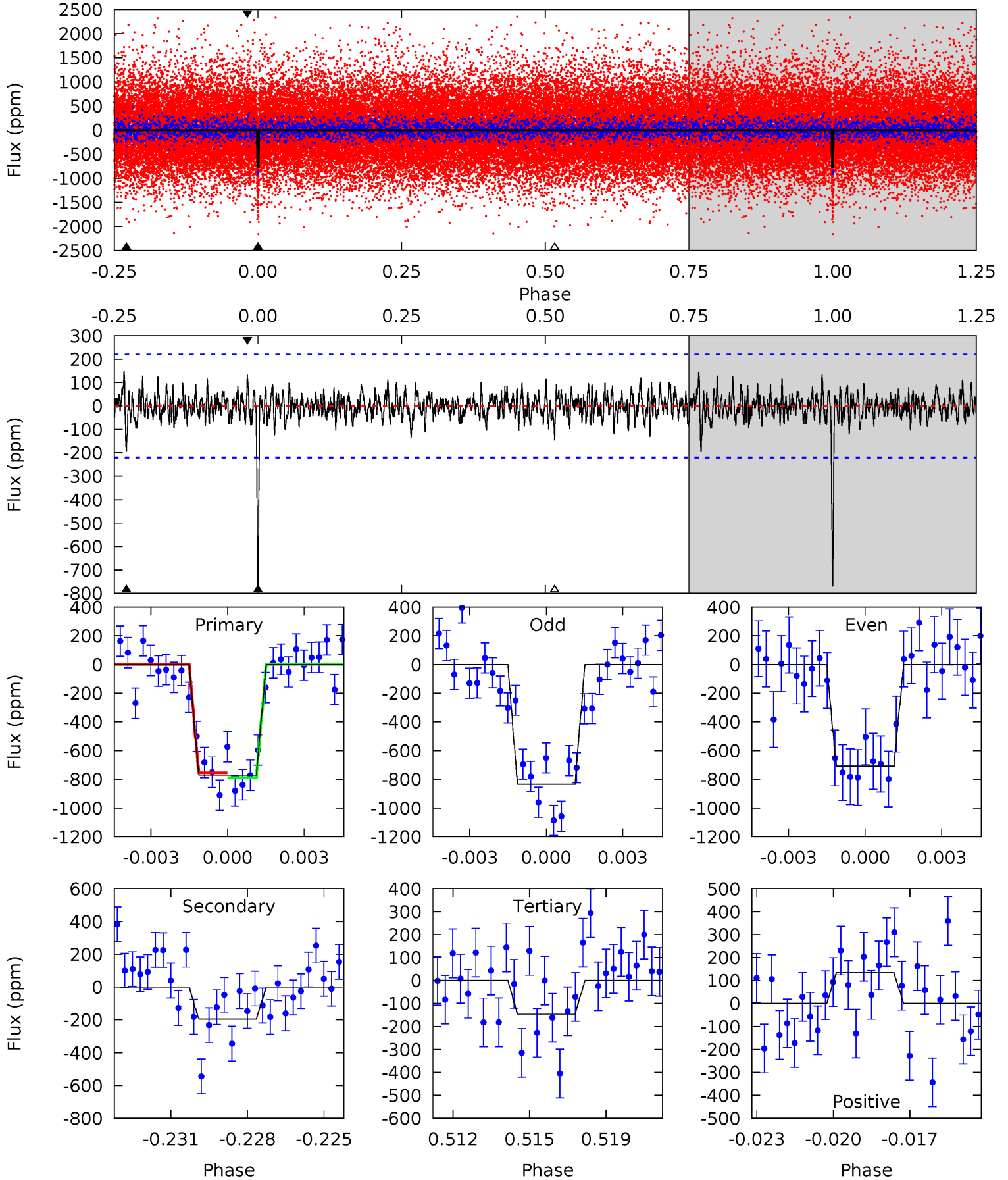
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.4	5.03	3.96	4.72	5.18	2.84	1.30	18.5	17.7	1.07	0.31	1.58	0.99	0.17	0.62



Alt Model-Shift Uniqueness Test

011179076-01, P = 48.431661 Days, E = 93.018098 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.4	4.65	3.49	3.18	5.23	2.94	1.01	14.9	15.2	1.16	1.47	1.49	1.05	0.16	0.39



Stellar Parameters For KIC 011179076

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4891^{+78}_{-87}	$4.516^{+0.067}_{-0.018}$	$0.160^{+0.150}_{-0.150}$	$0.805^{+0.028}_{-0.056}$	$0.776^{+0.048}_{-0.028}$	$2.095^{+0.531}_{-0.163}$
	+2%/-2%	+1%/-0%	+94%/-94%	+3%/-7%	+6%/-4%	+25%/-8%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 011179076-01 / KOI 2497.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-187 ± 37	$3.02^{+0.29}_{-0.27}$	549^{+11}_{-13}	3488^{+156}_{-144}	655^{+192}_{-153}
Alt.	-195 ± 42	$2.42^{+0.26}_{-0.27}$	549^{+11}_{-14}	3783^{+191}_{-190}	1069^{+392}_{-278}

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 $A_{obs} \gg 1.0$

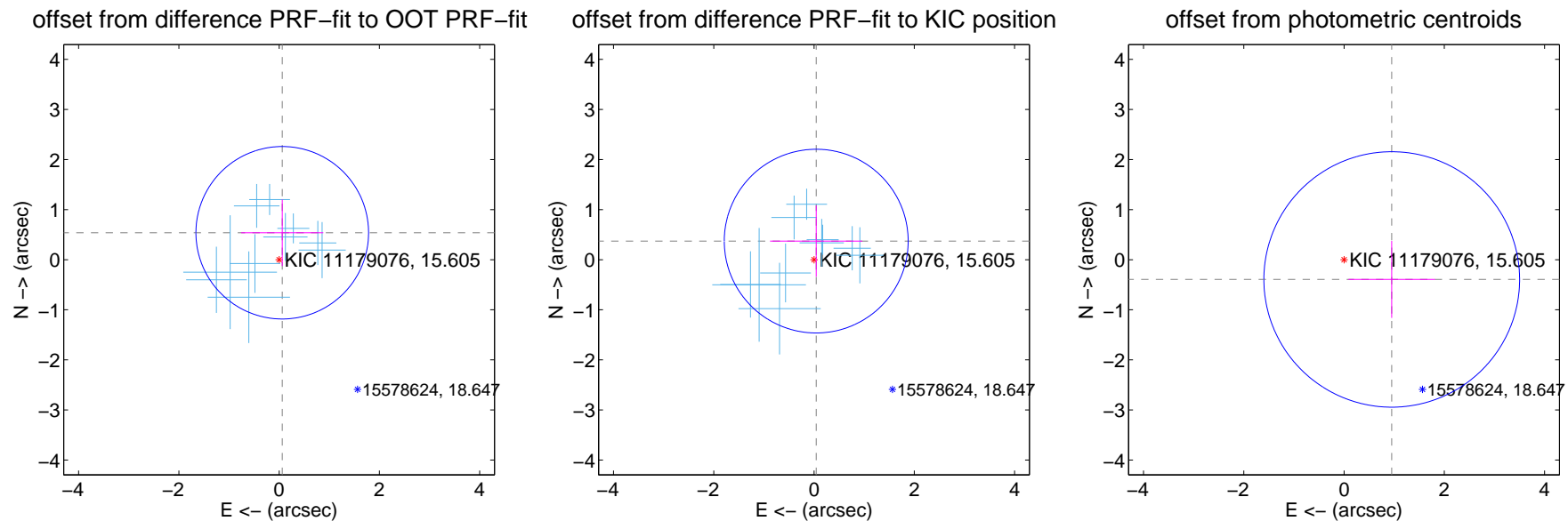
DV Centroid Data

Supplemental centroid analysis for 011179076-01. Kepler magnitude: 15.61. Transit SNR 15.05

There are 10 quarters with good PRF difference image offsets

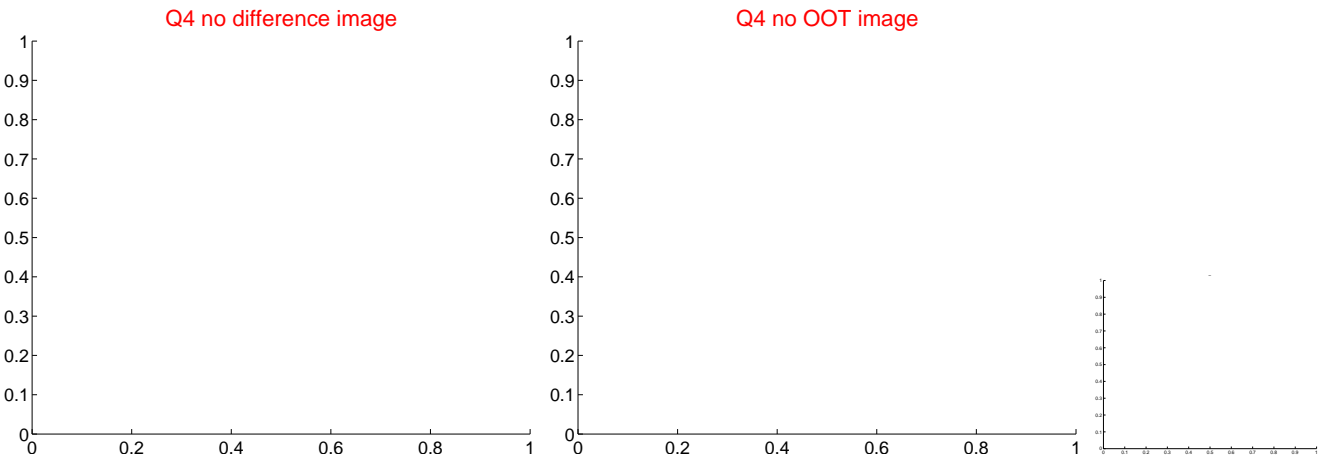
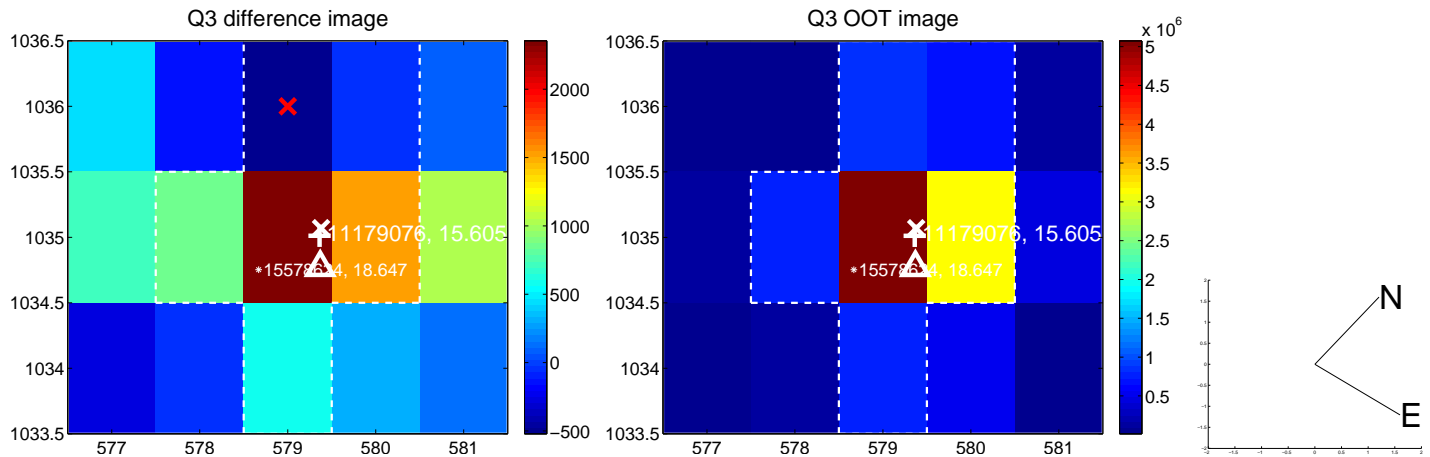
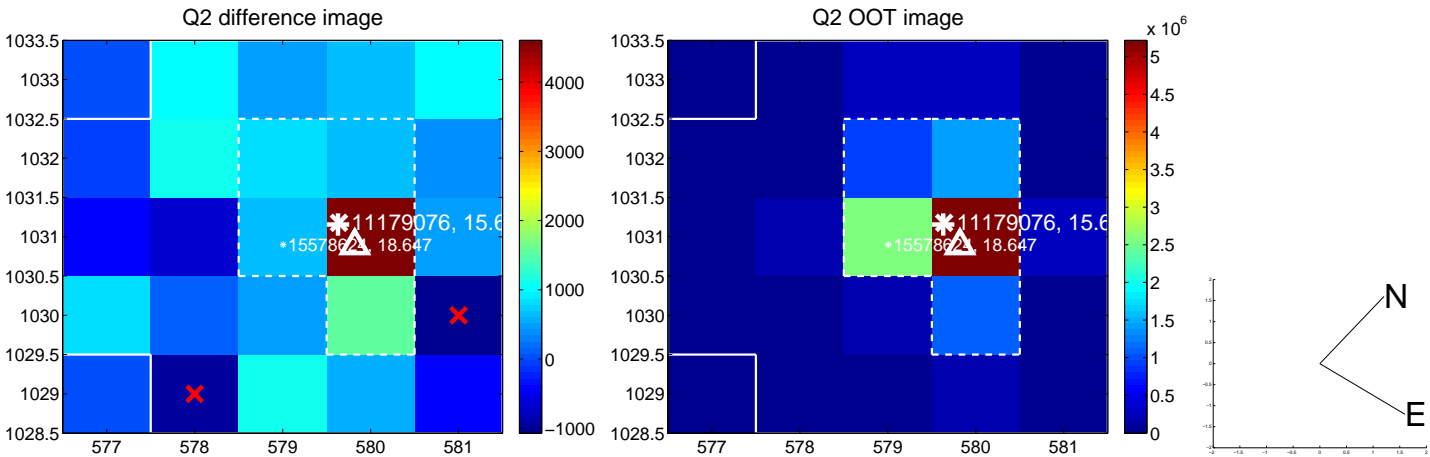
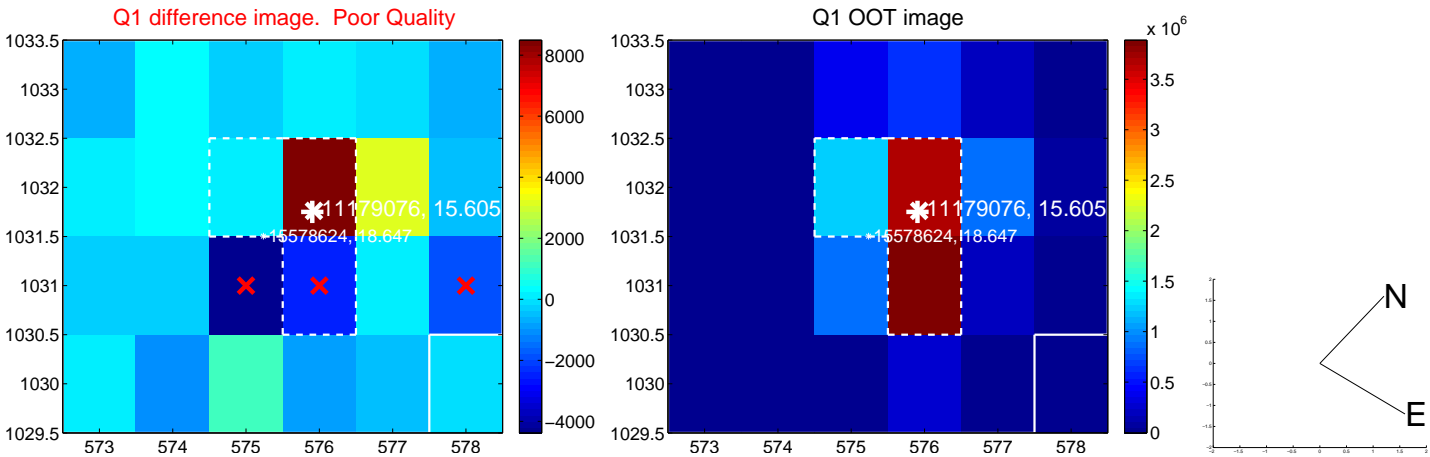
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.541 ± 0.574	0.94	-0.062 ± 0.818	0.538 ± 0.664
PRF-fit source offset from KIC position	0.374 ± 0.611	0.61	-0.043 ± 0.920	0.371 ± 0.712
photometric centroid source offset	1.03 ± 0.85	1.21	-0.95 ± 0.86	-0.39 ± 0.77

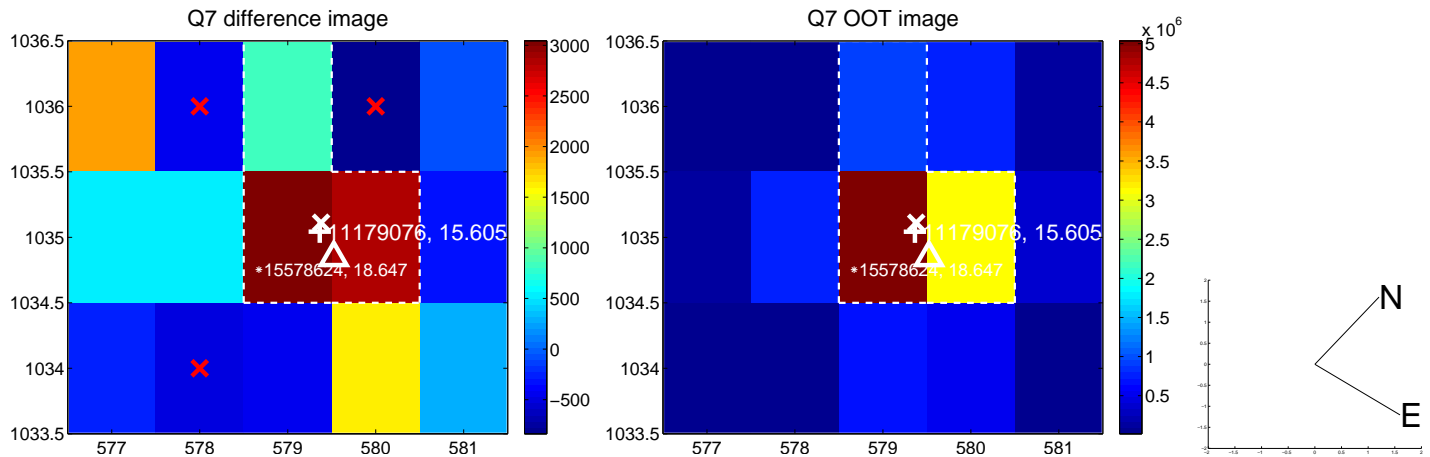
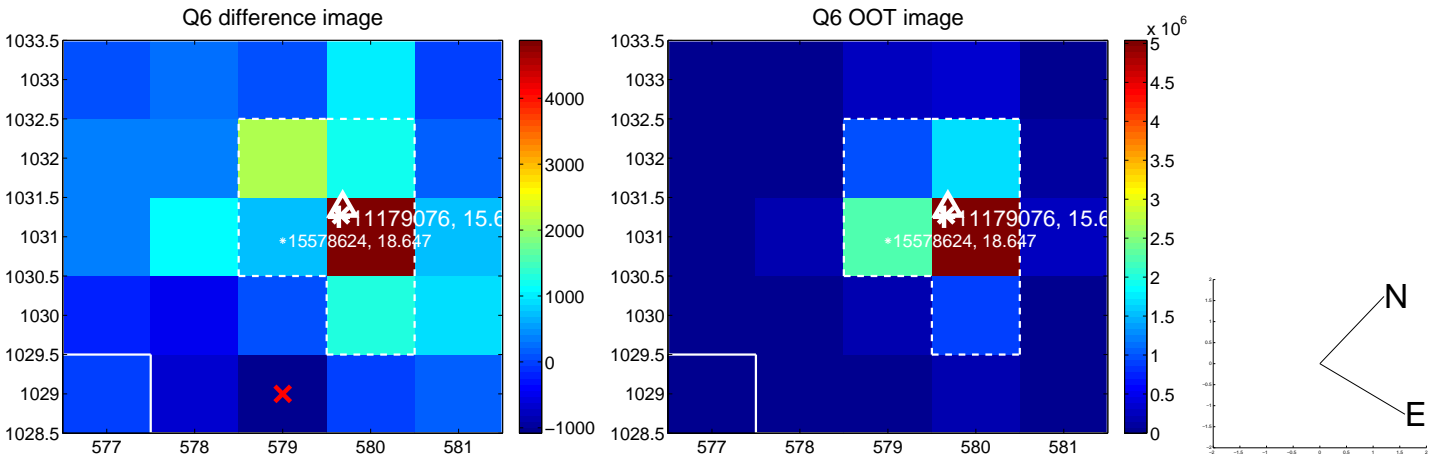
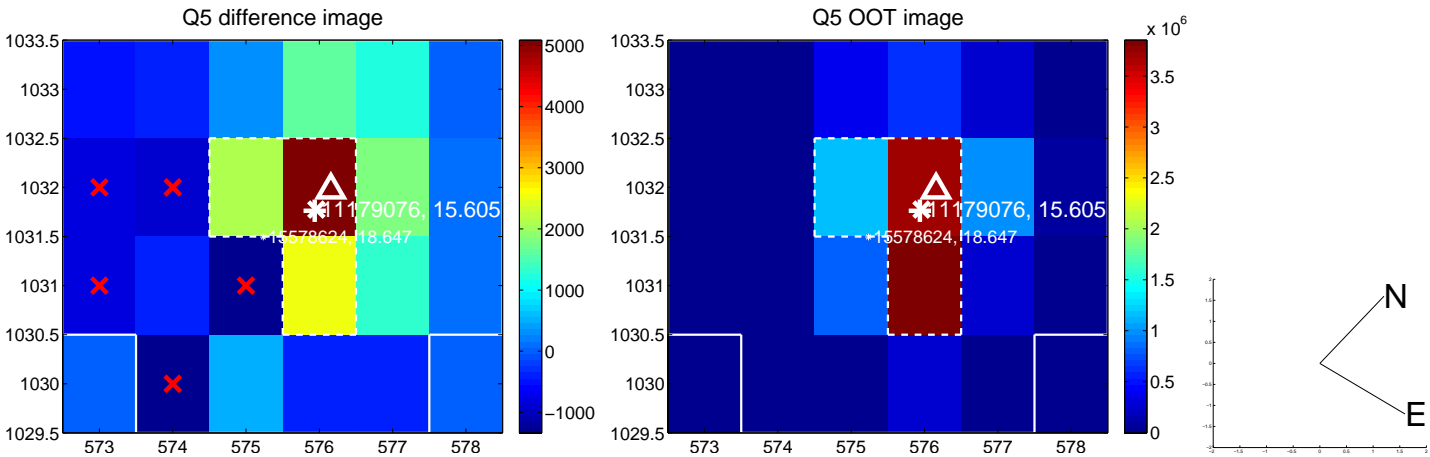


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

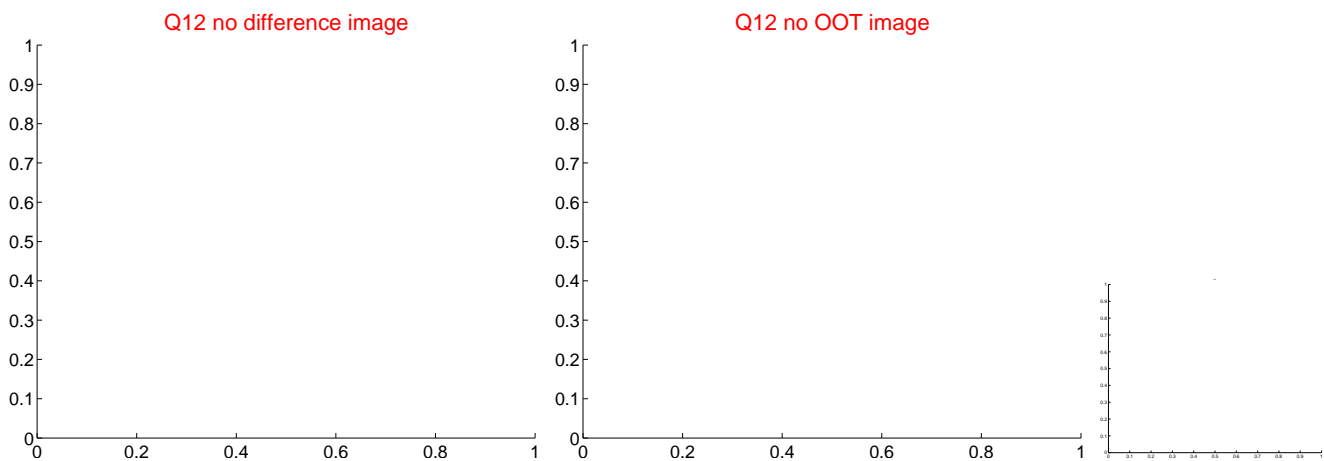
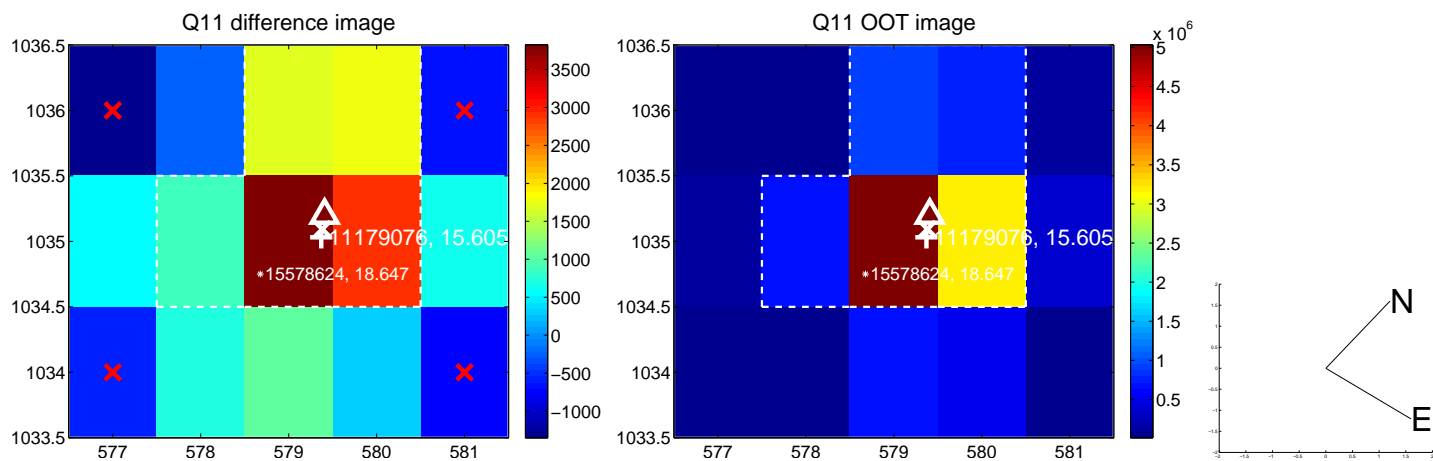
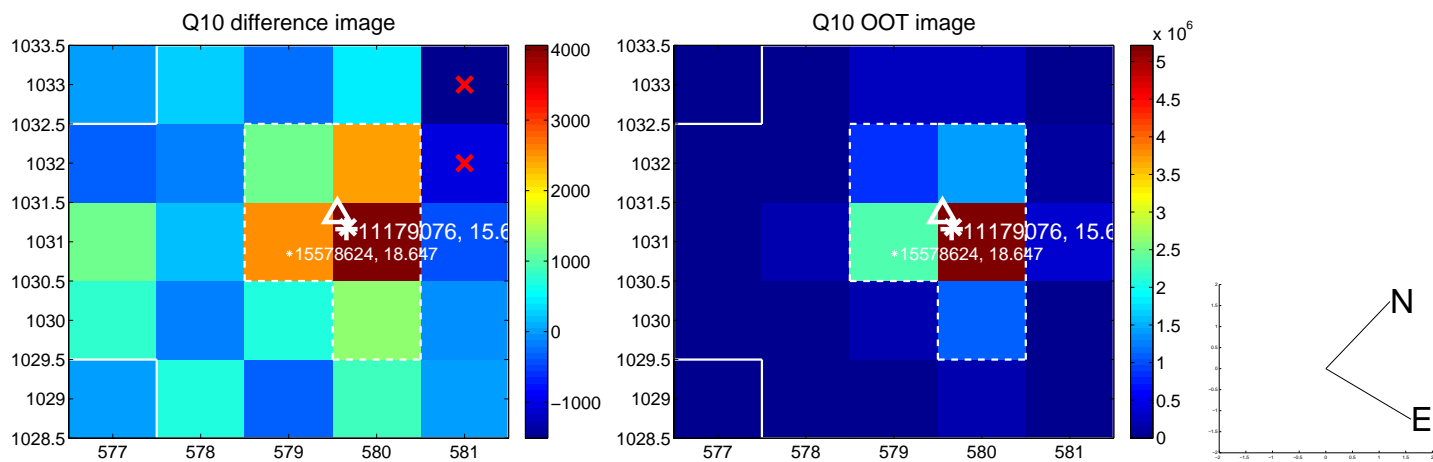
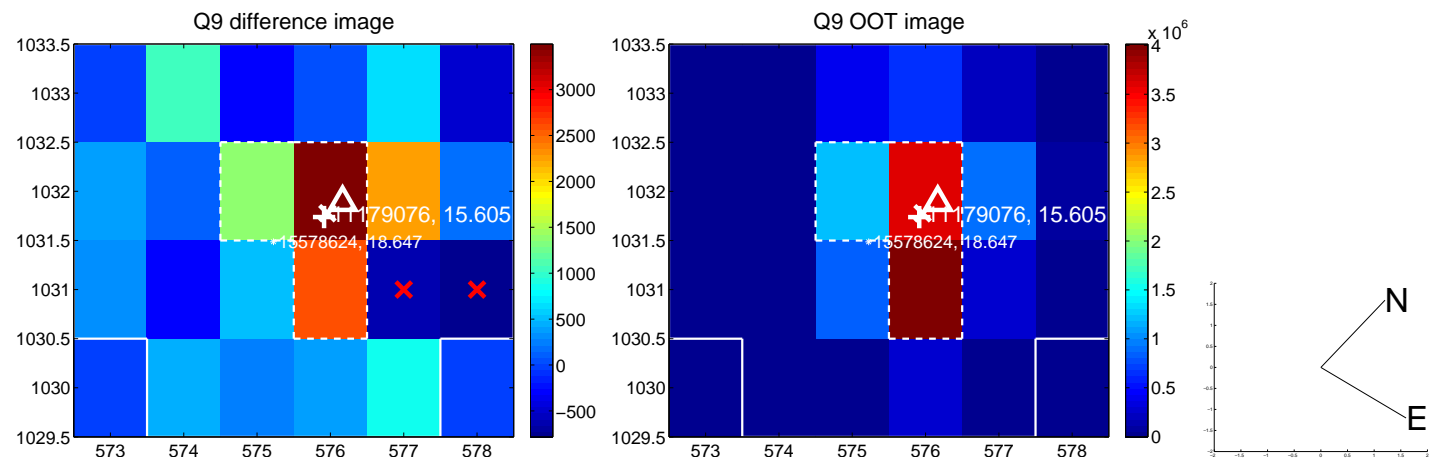
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



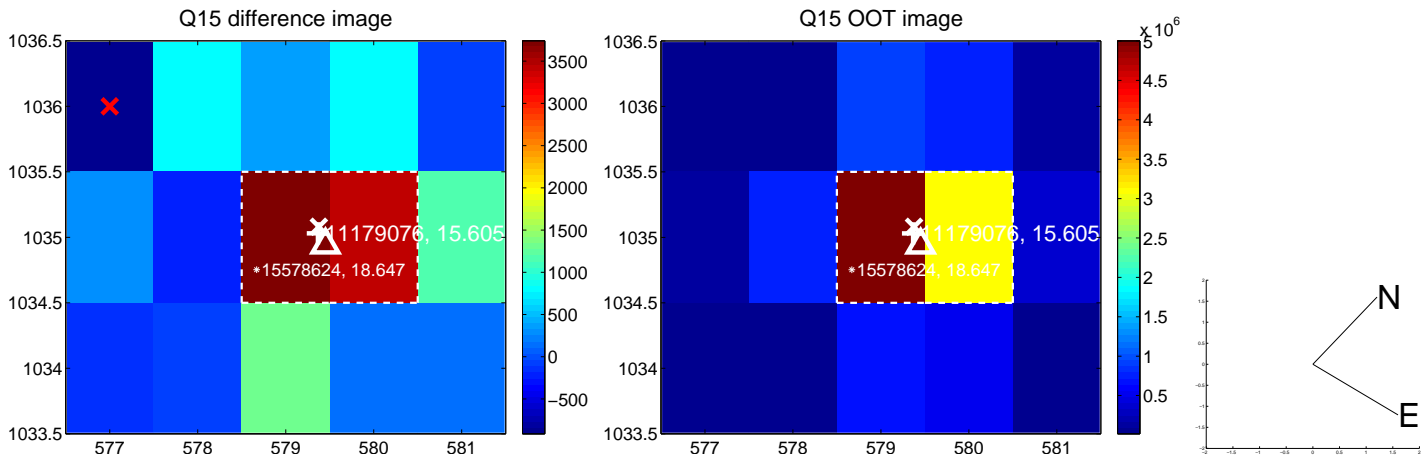
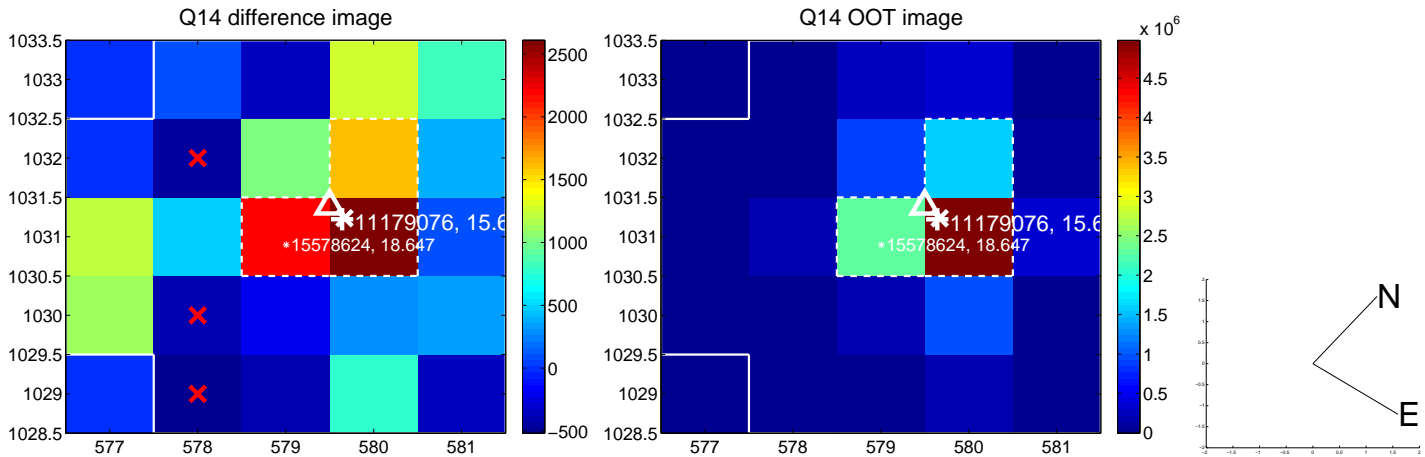
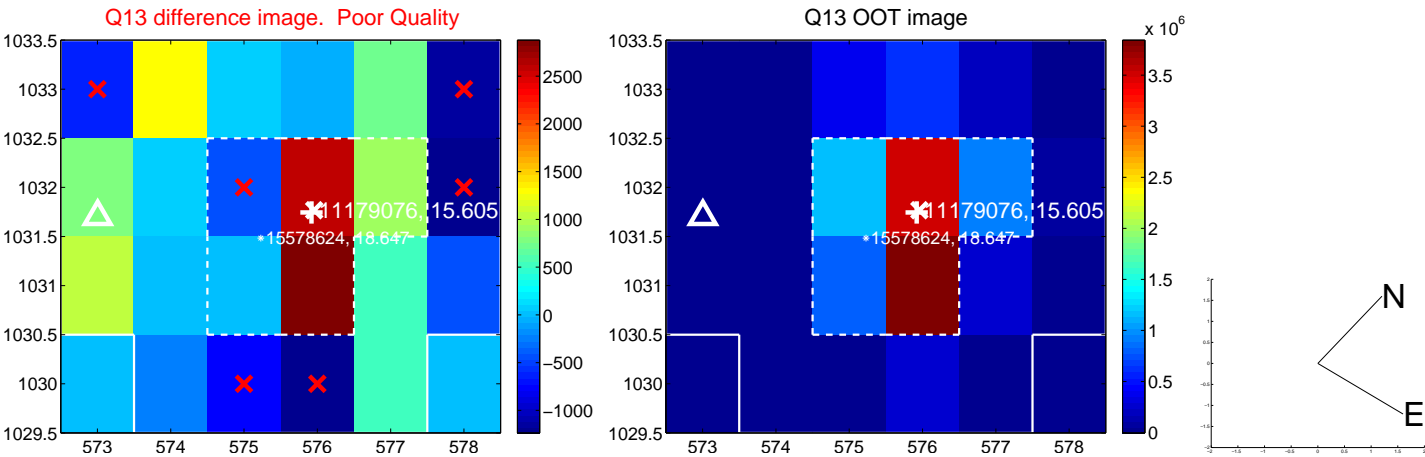
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



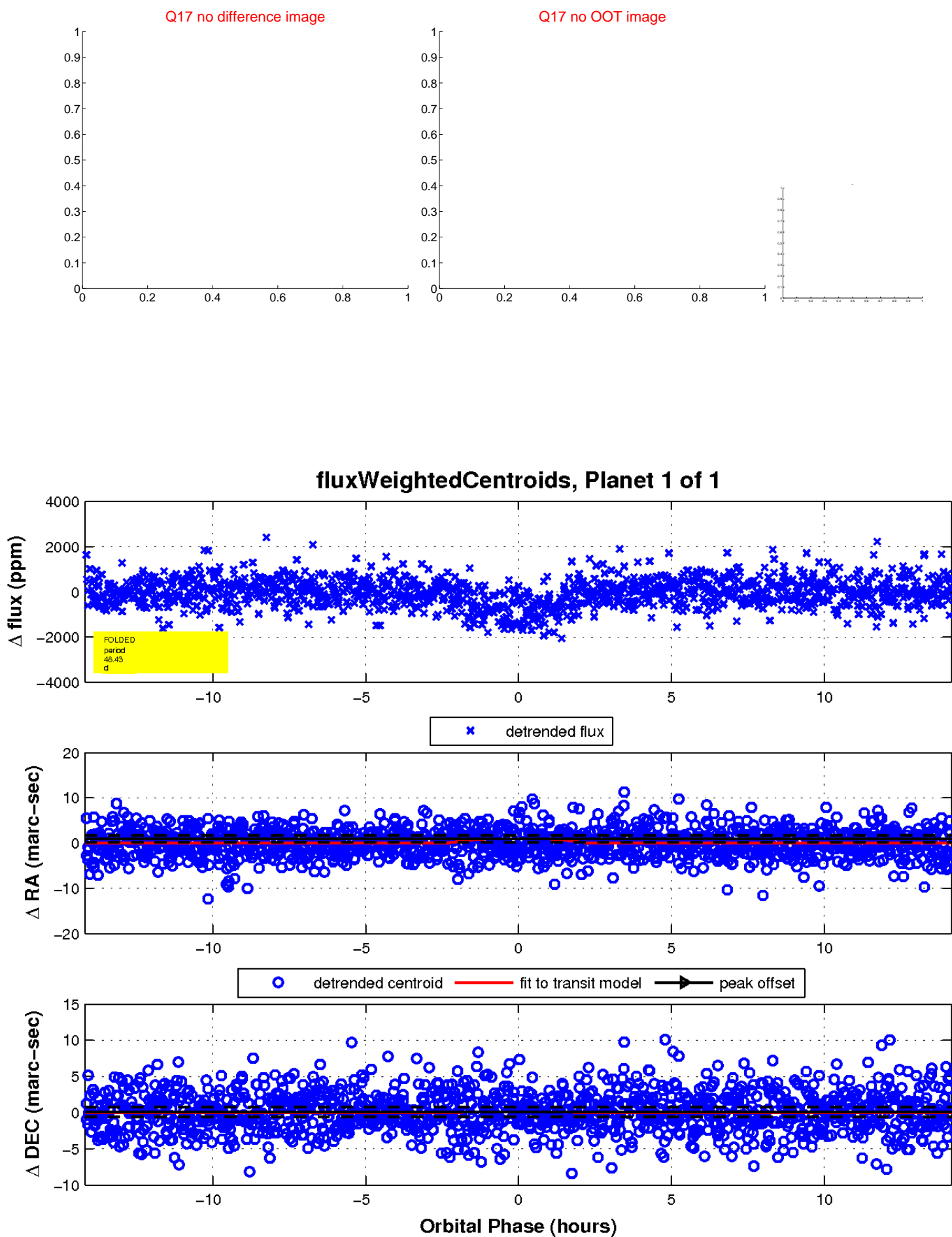
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

