

KIC 003859079

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})
003859079-01	OBS	1199.01	53.529452	147.861985	1096.3	5.838	26.8	28.8	0.71	4736	2.61	3.48

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003859079-01	OBS	PC	1.00	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.

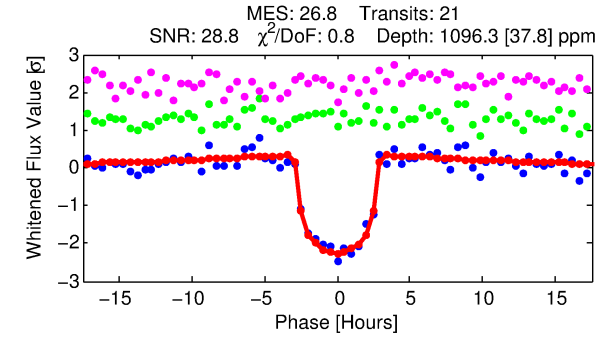
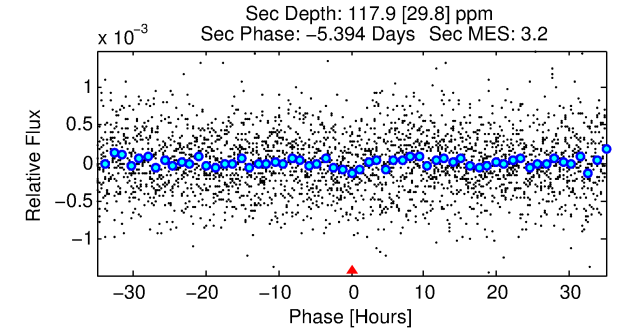
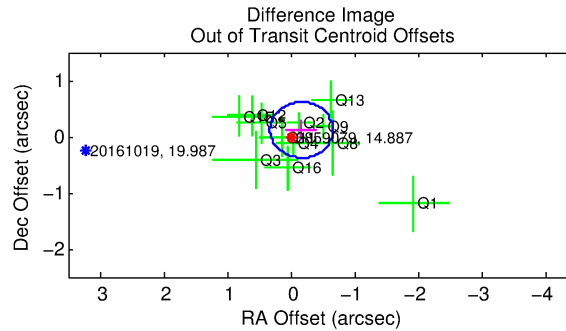
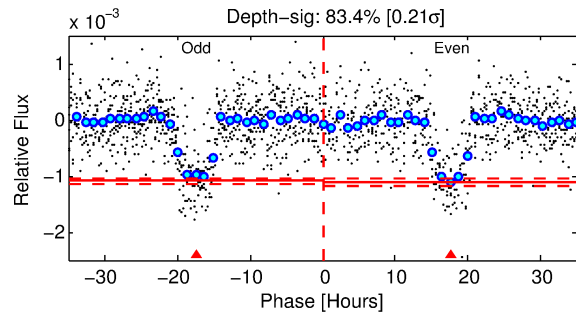
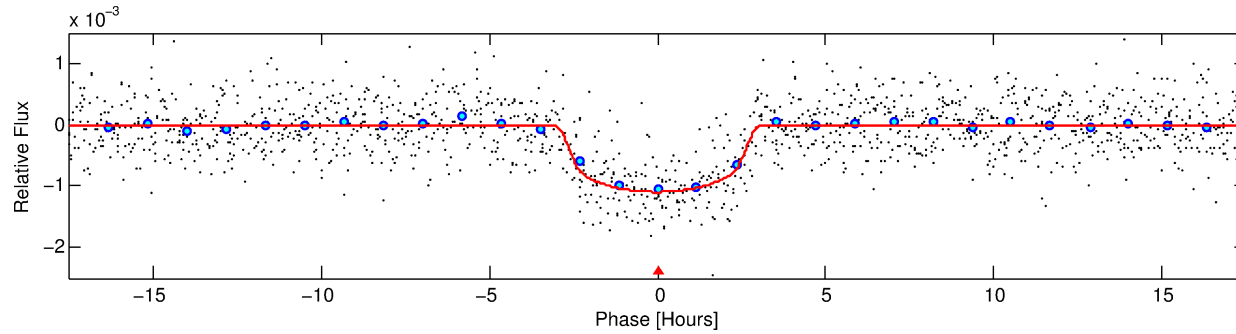
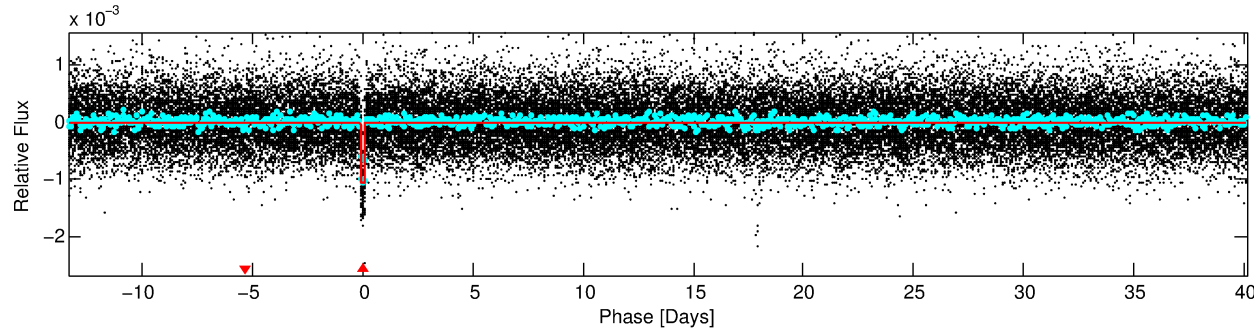
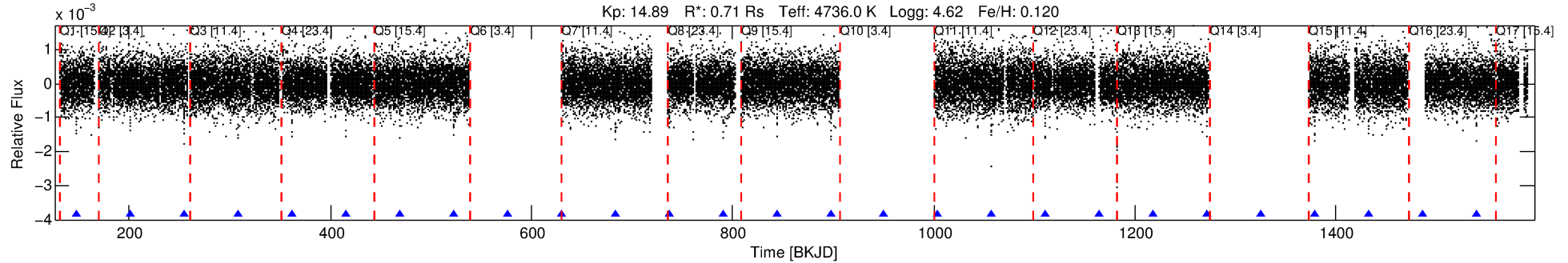
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003859079-01

No Significant Match Found

DV One-Page Summary

KIC: 3859079 Candidate: 1 of 1 Period: 53.529 d
KOI: K01199.01 Corr: 0.975



DV Fit Results:

Period = 53.52945 [0.00025] d
Epoch = 147.8620 [0.0037] BKJD
Rp/R* = 0.0338 [0.0053]
a/R* = 47.31 [24.34]
b = 0.78 [0.26]
Seff = 3.48 [0.41]
Teq = 348 [10] K
Rp = 2.61 [0.44] Re
a = 0.2548 [0.0145] AU
Ag = 618.69 [254.46] [2.43 σ]
Teffp = 2686 [275] K [8.48 σ]

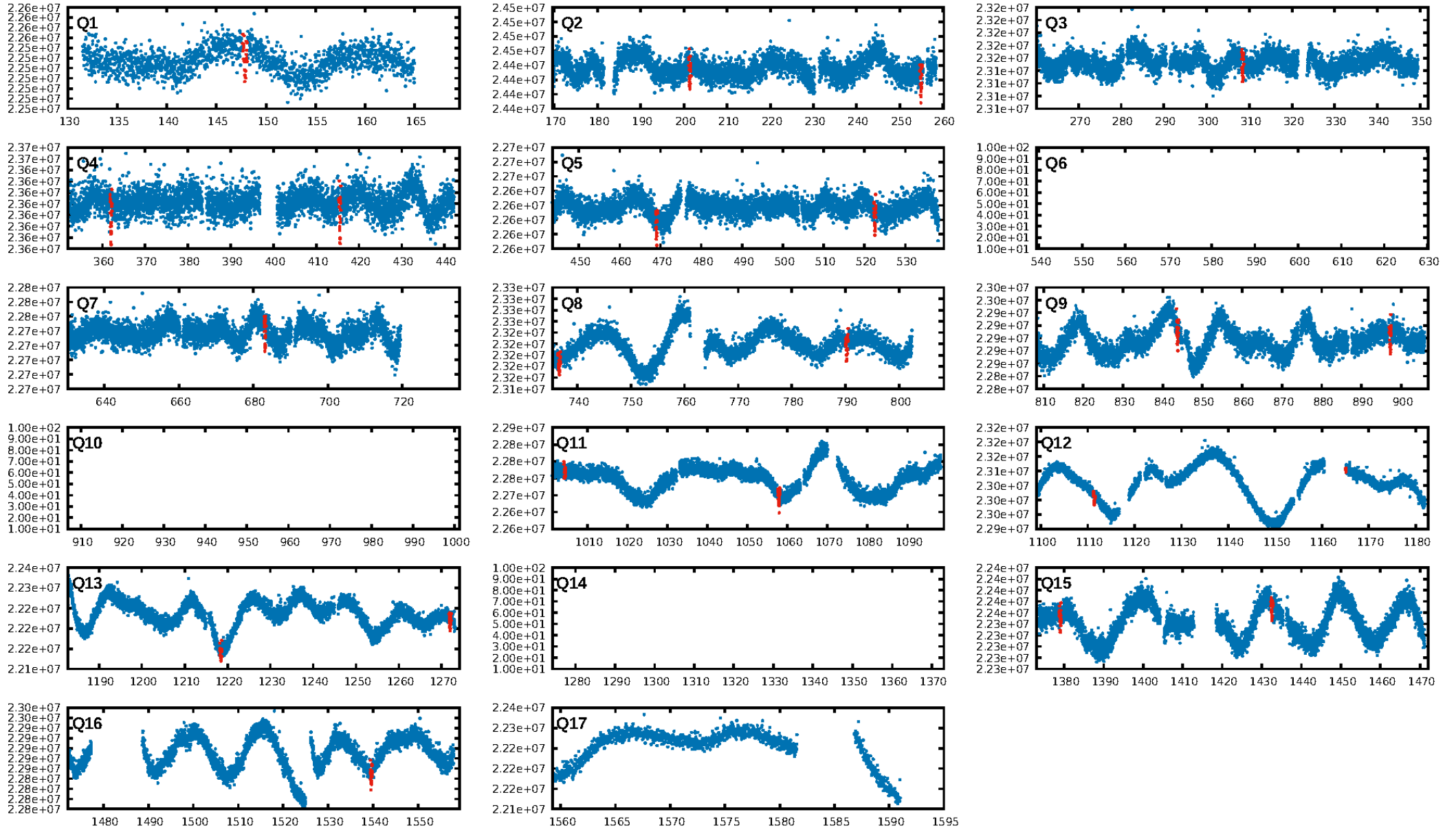
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 7.87e-148
RollingBand-fgt: 1.00 [20/20]
GhostDiagnostic-chr: 4.611
Centroid-sig: N/A
Centroid-so: 0.542 arcsec [1.06 σ]
OotOffset-rm: 0.204 arcsec [1.24 σ]
KicOffset-rm: 0.124 arcsec [0.55 σ]
OotOffset-st: 1/3/4/4 [12]
KicOffset-st: 1/3/4/4 [12]
DiffImageQuality-fgm: 1.00 [12/12]
DiffImageOverlap-fno: 1.00 [13/13]

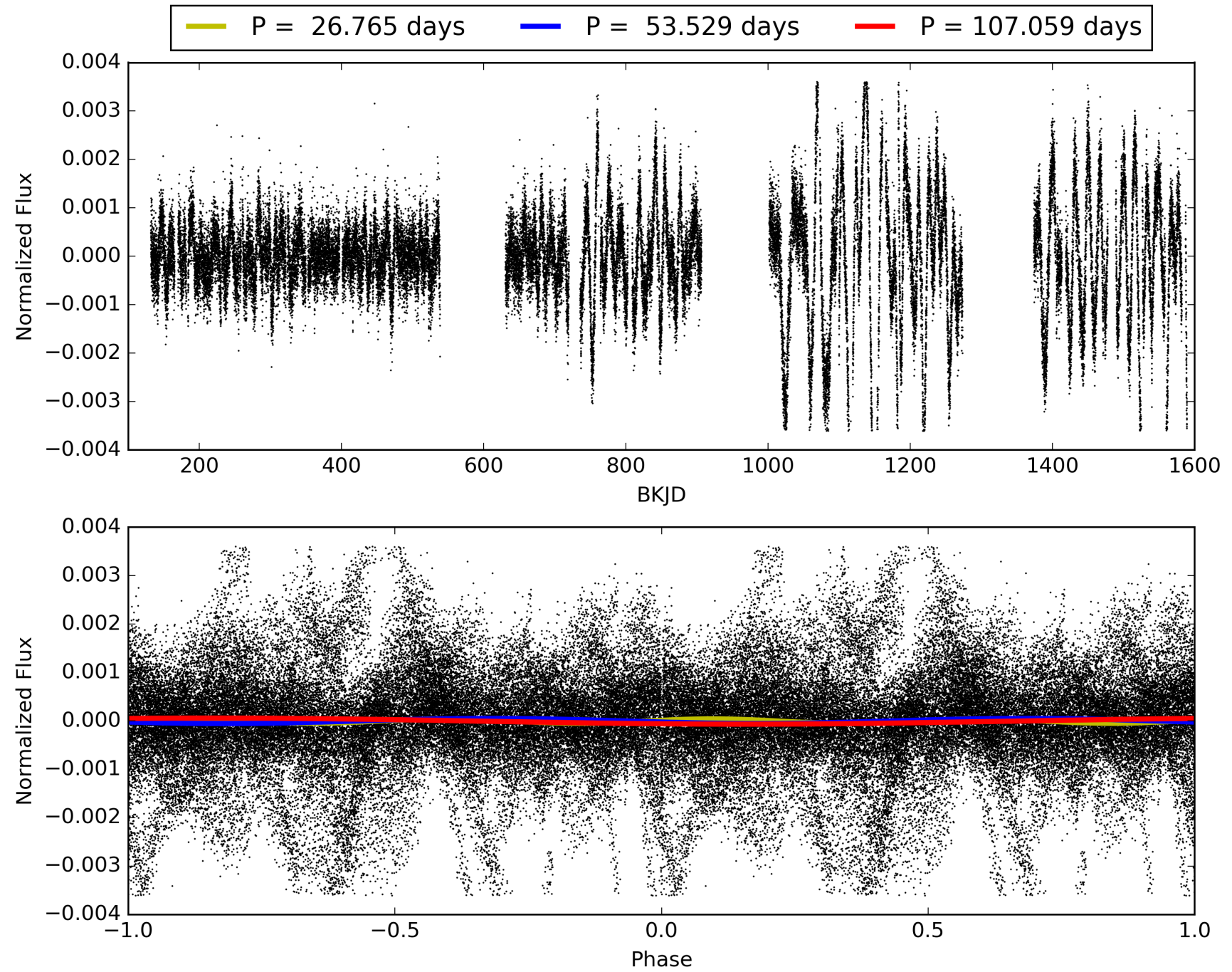
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 11:06:49 Z

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

TCE 003859079-01, PDC Light Curves

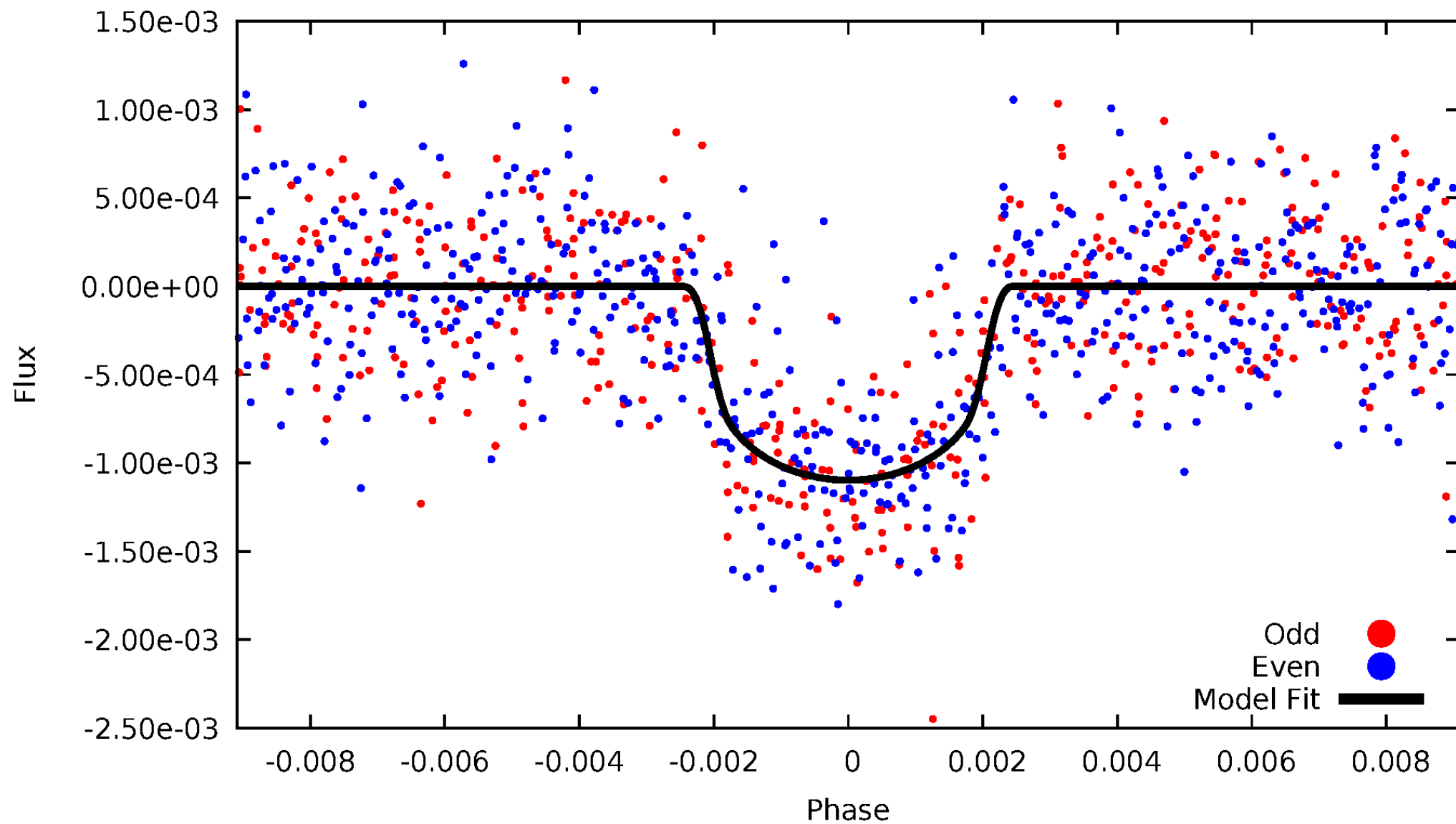


TCE 003859079-01



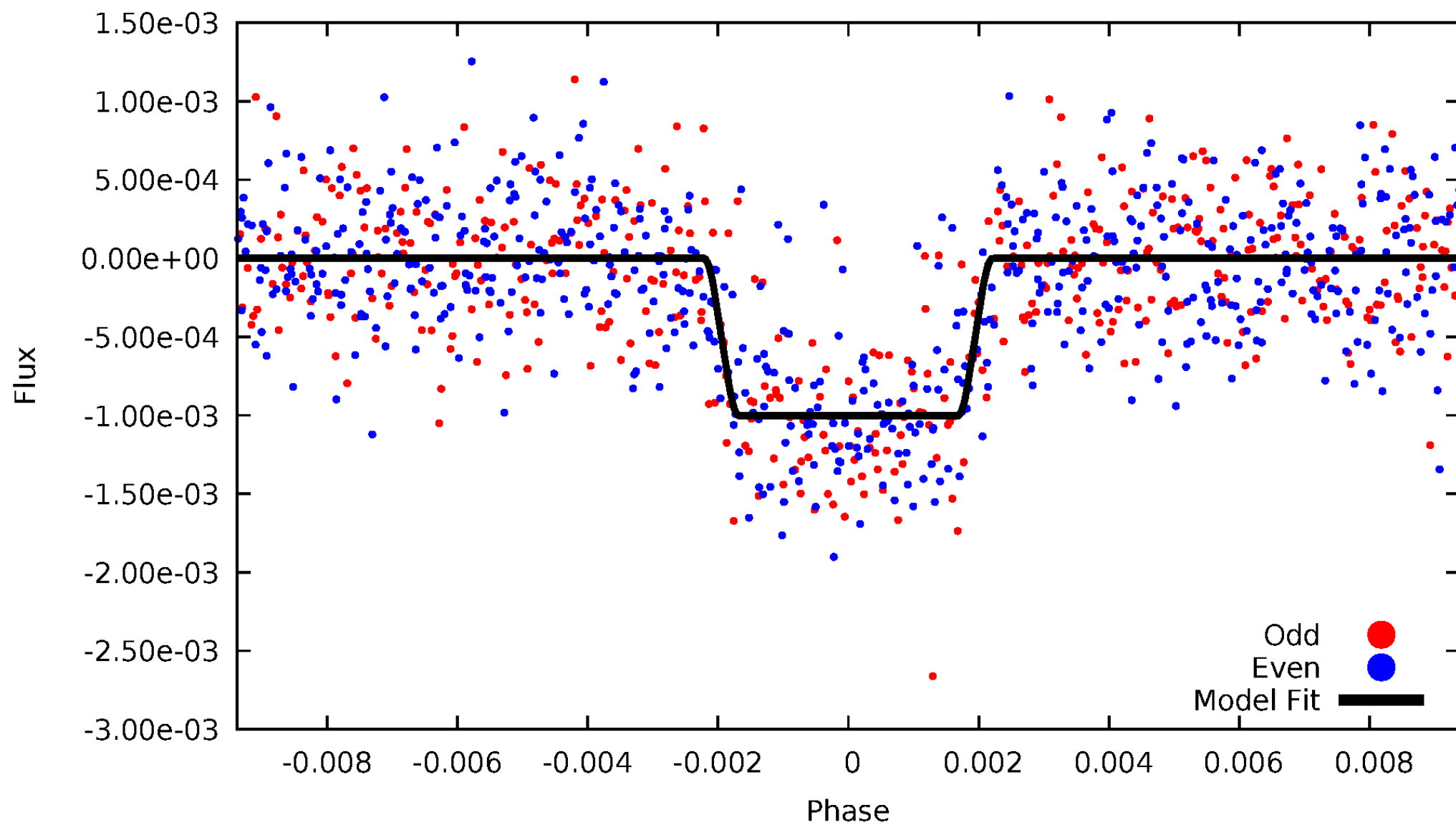
DV Odd/Even

TCE 003859079-01

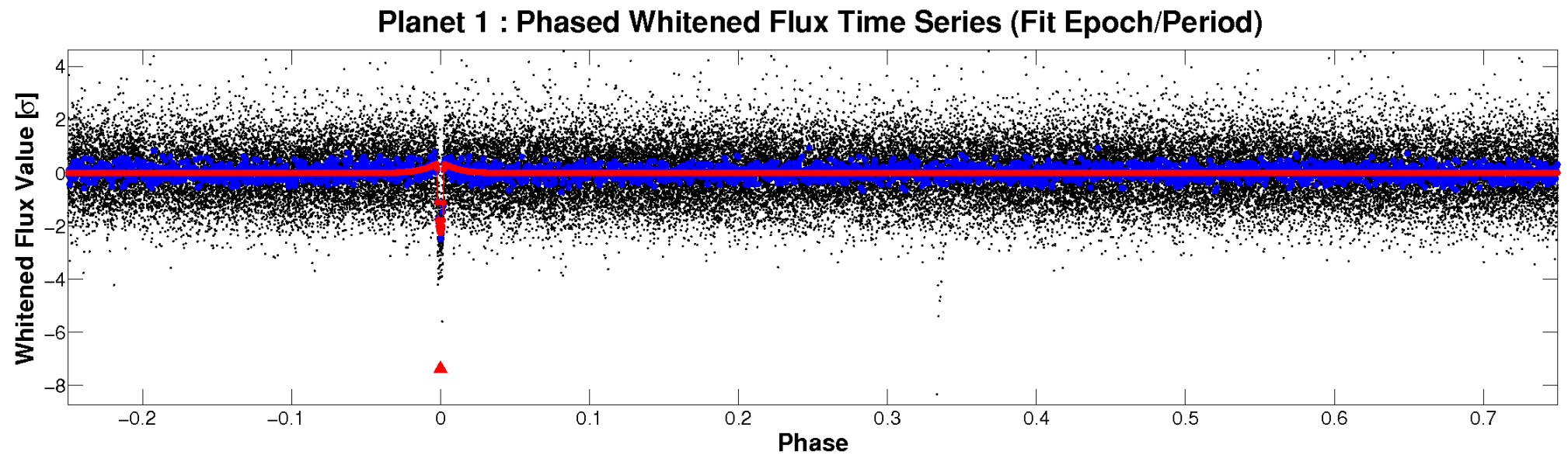
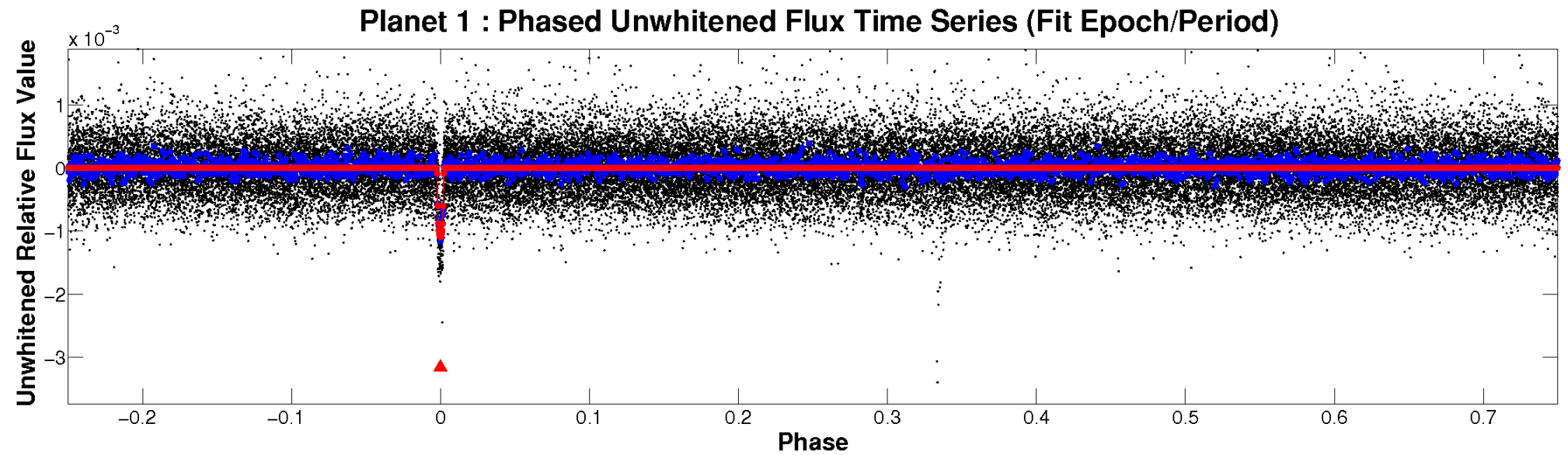


ALT Odd/Even

TCE 003859079-01

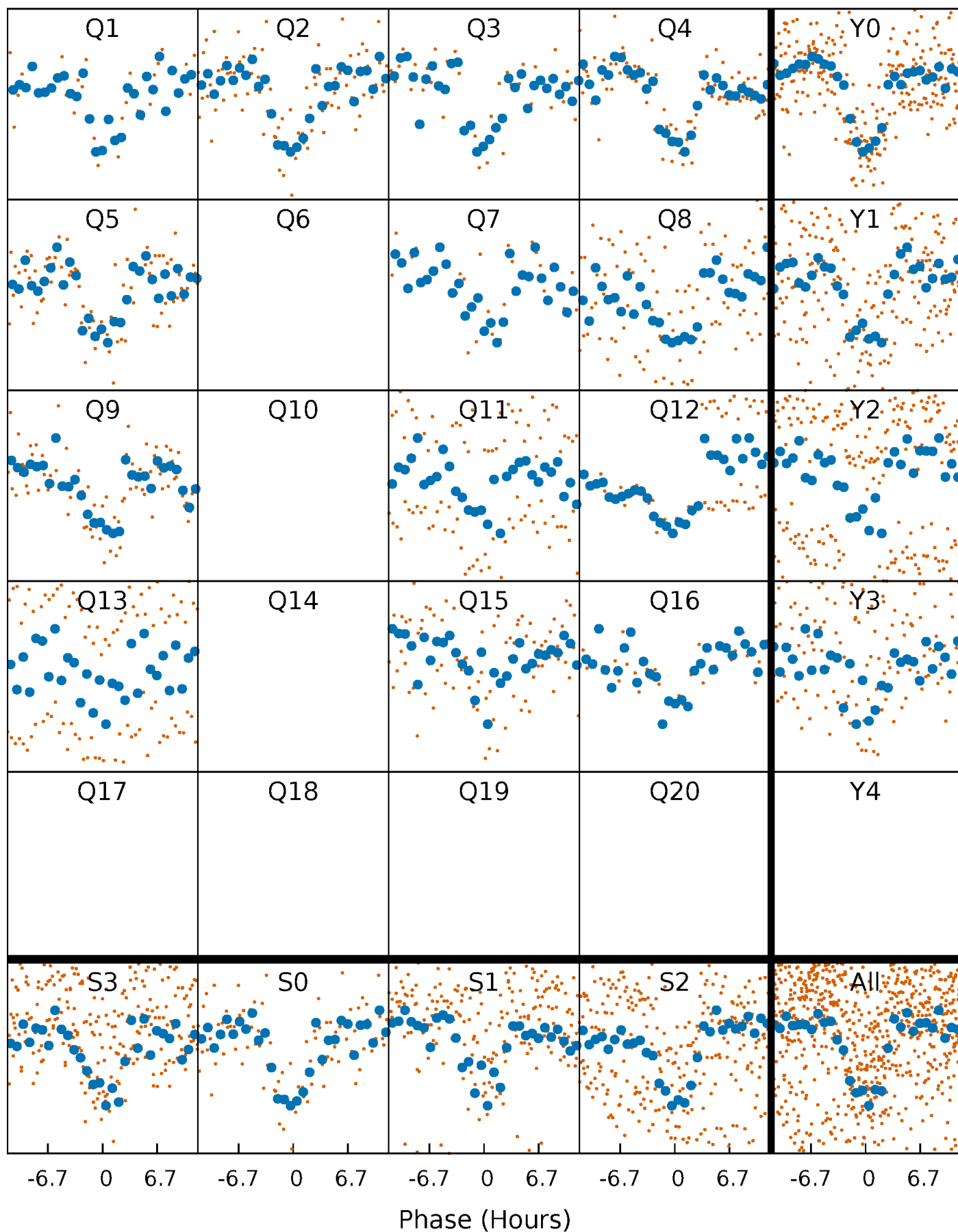


Non-Whitened Vs. Whitened Light Curve



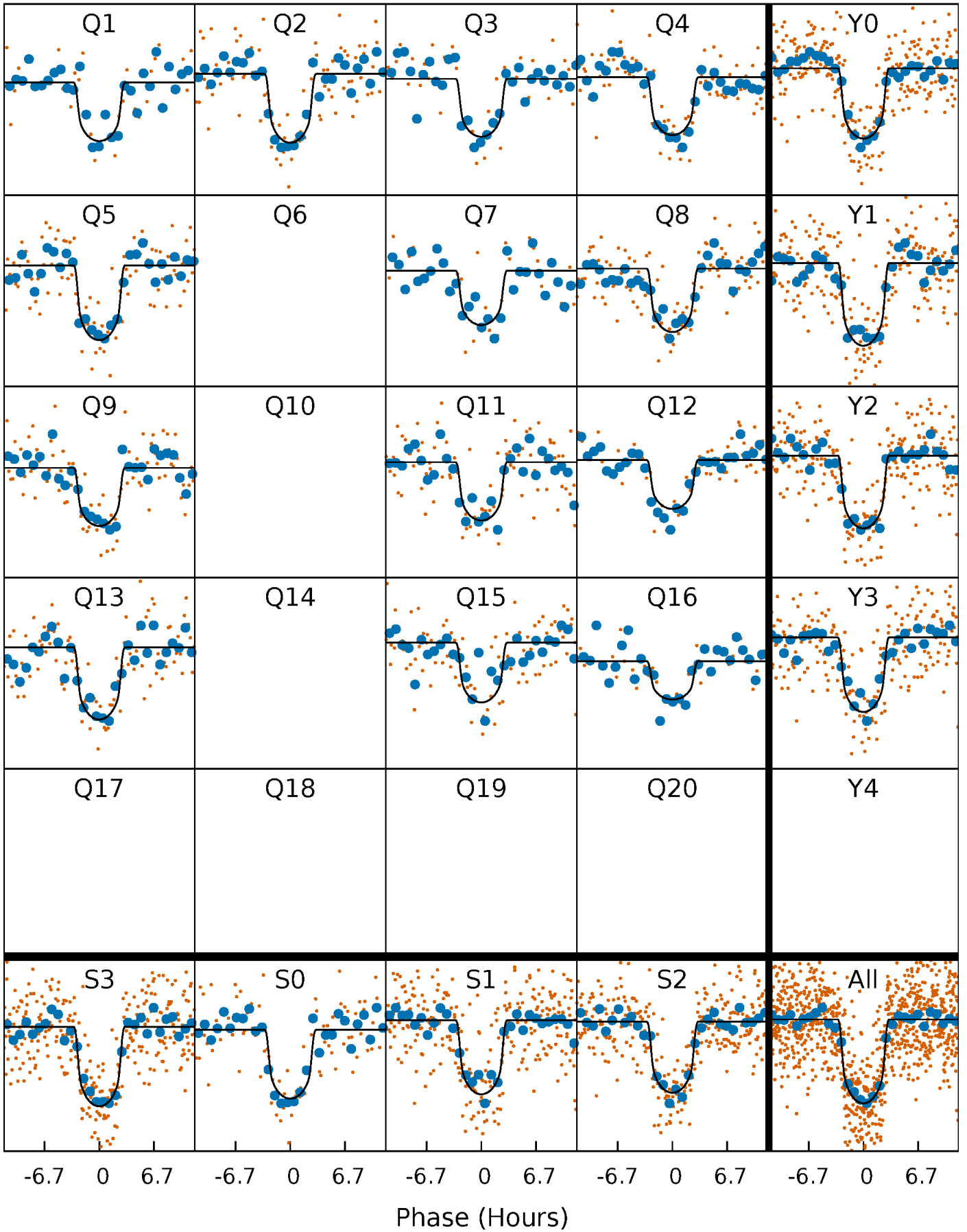
PDC Quarter-Phased Transit Curves

TCE 003859079-01 P= 53.529452 Days $T_0=147.861985$ (BKJD)



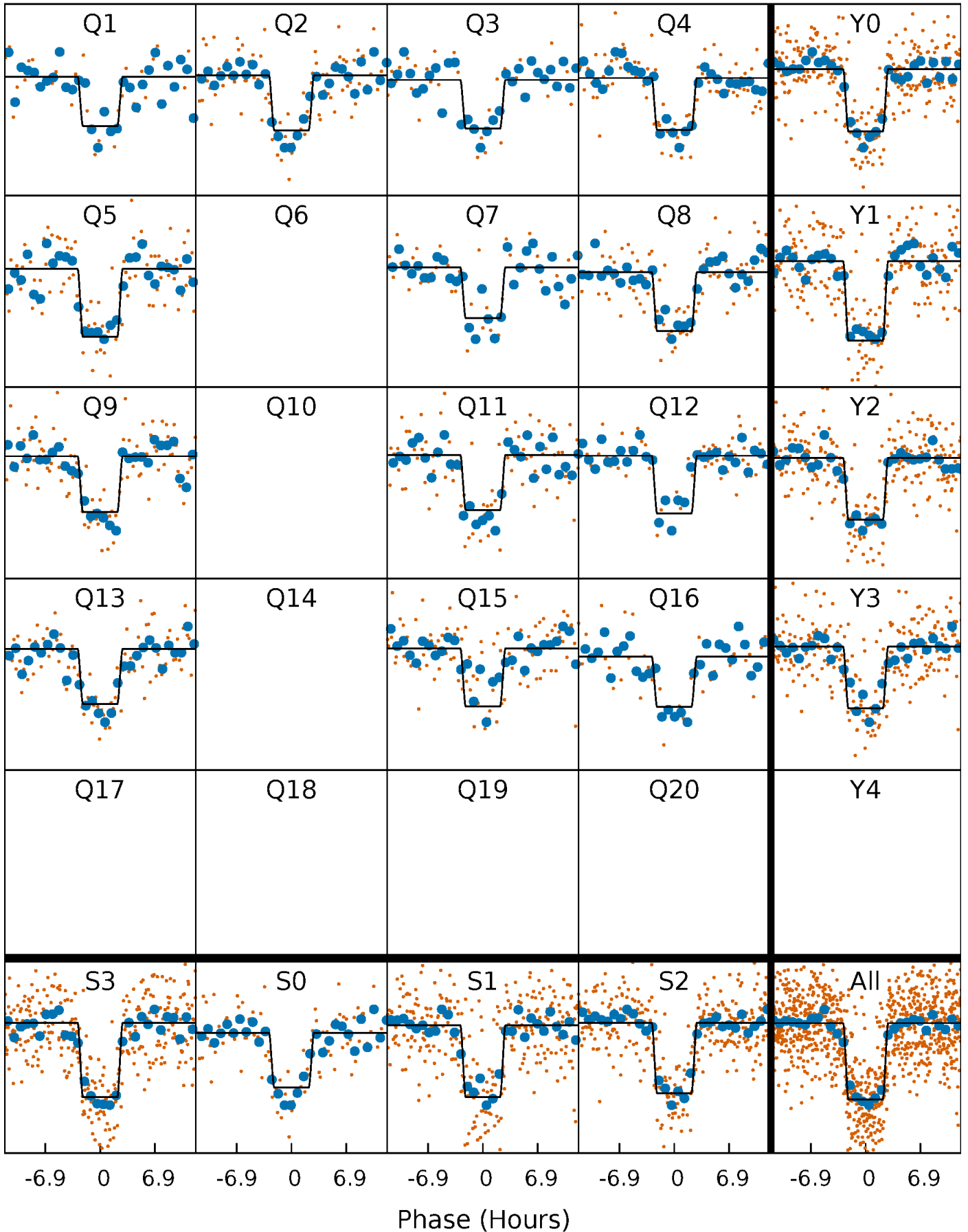
DV Quarter-Phased Transit Curves

TCE 003859079-01 P= 53.529452 Days $T_0=147.861985$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

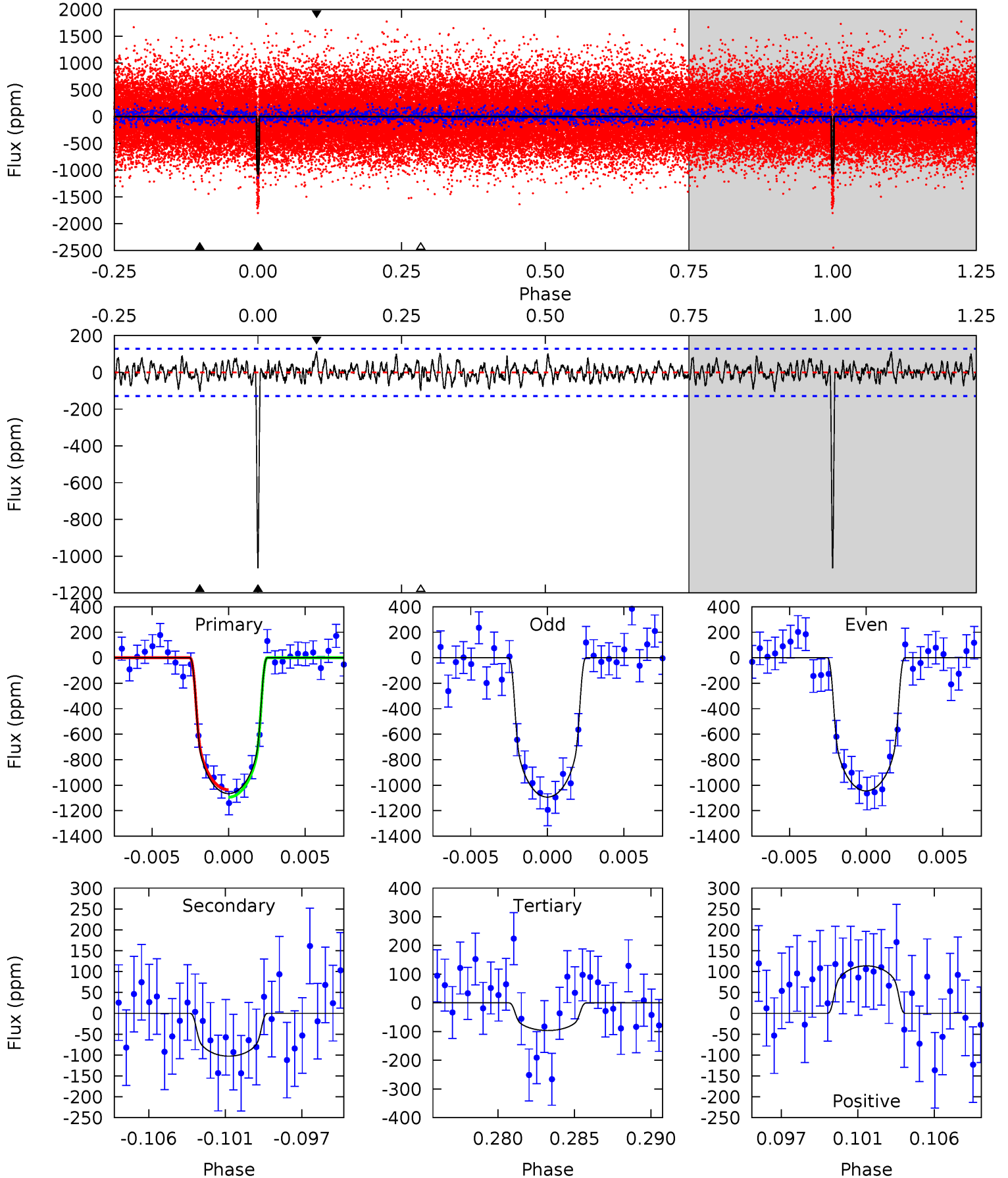
TCE 003859079-01 P= 53.529070 Days $T_0=147.866440$ (BKJD)



DV Model-Shift Uniqueness Test

003859079-01, P = 53.529452 Days, E = 94.332533 Days

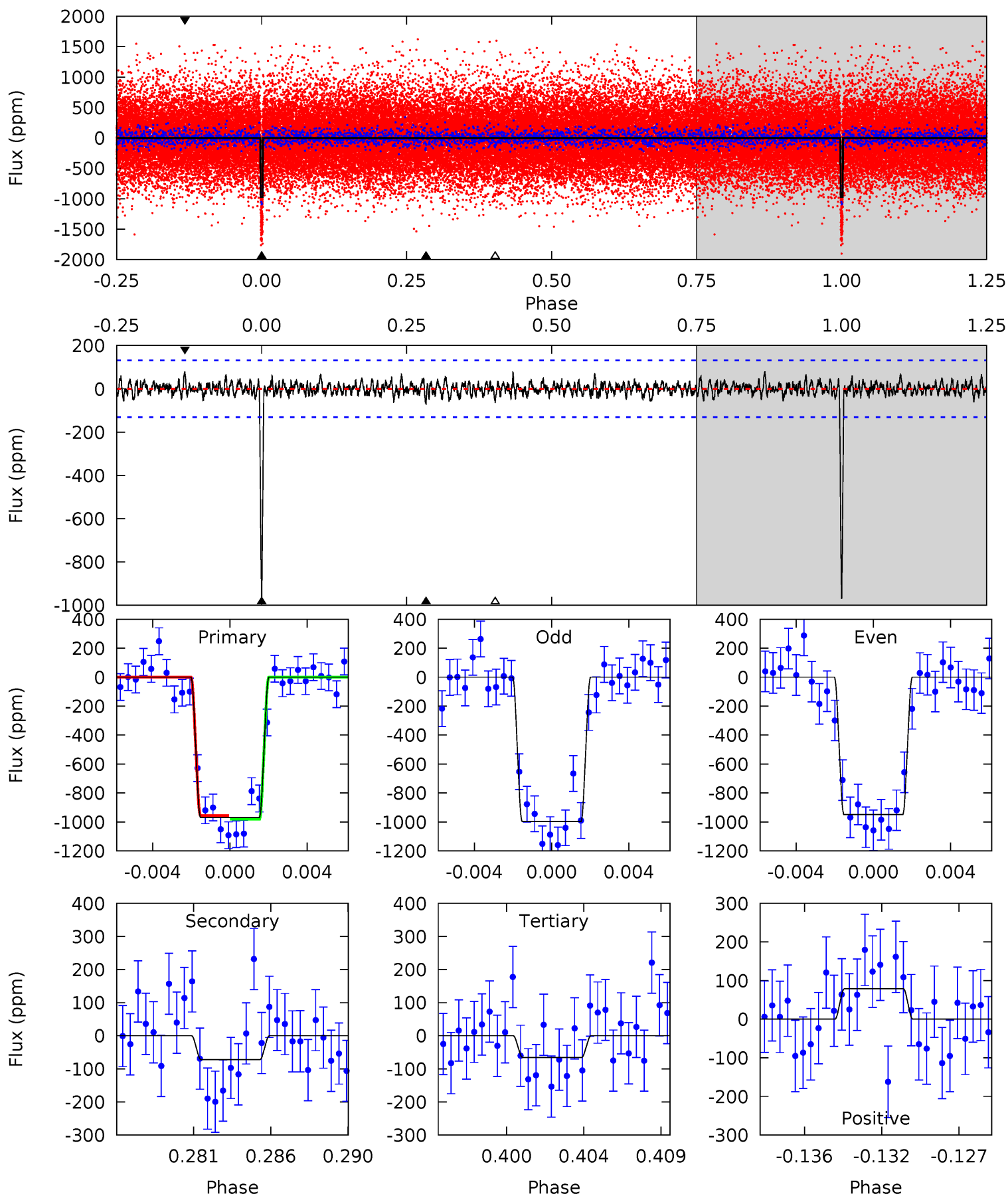
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
42.7	4.12	3.86	4.56	5.16	2.82	1.36	38.9	38.2	0.26	-0.44	0.97	1.02	0.10	1.17



Alt Model-Shift Uniqueness Test

003859079-01, P = 53.529070 Days, E = 94.337370 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
38.3	2.85	2.60	3.12	5.18	2.85	0.87	35.7	35.2	0.26	-0.26	0.93	0.97	0.08	0.49



Stellar Parameters For KIC 003859079

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4736^{+94}_{-94}	$4.624^{+0.012}_{-0.048}$	$0.120^{+0.150}_{-0.150}$	$0.708^{+0.046}_{-0.025}$	$0.791^{+0.028}_{-0.052}$	$3.134^{+0.179}_{-0.554}$
	+2%/-2%	+0%/-1%	+125%/-125%	+6%/-4%	+4%/-7%	+6%/-18%
Source	SPE18	SPE18	SPE18	DSEP		

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

Secondary Eclipse Parameters for KIC 003859079-01 / KOI 1199.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-103 ± 25	$2.63^{+0.40}_{-0.37}$	491^{+13}_{-11}	3142^{+199}_{-190}	523^{+240}_{-171}
Alt.	-72 ± 25	$2.50^{+0.43}_{-0.40}$	490^{+13}_{-11}	3028^{+224}_{-212}	406^{+250}_{-168}

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 $A_{obs} \gg 1.0$

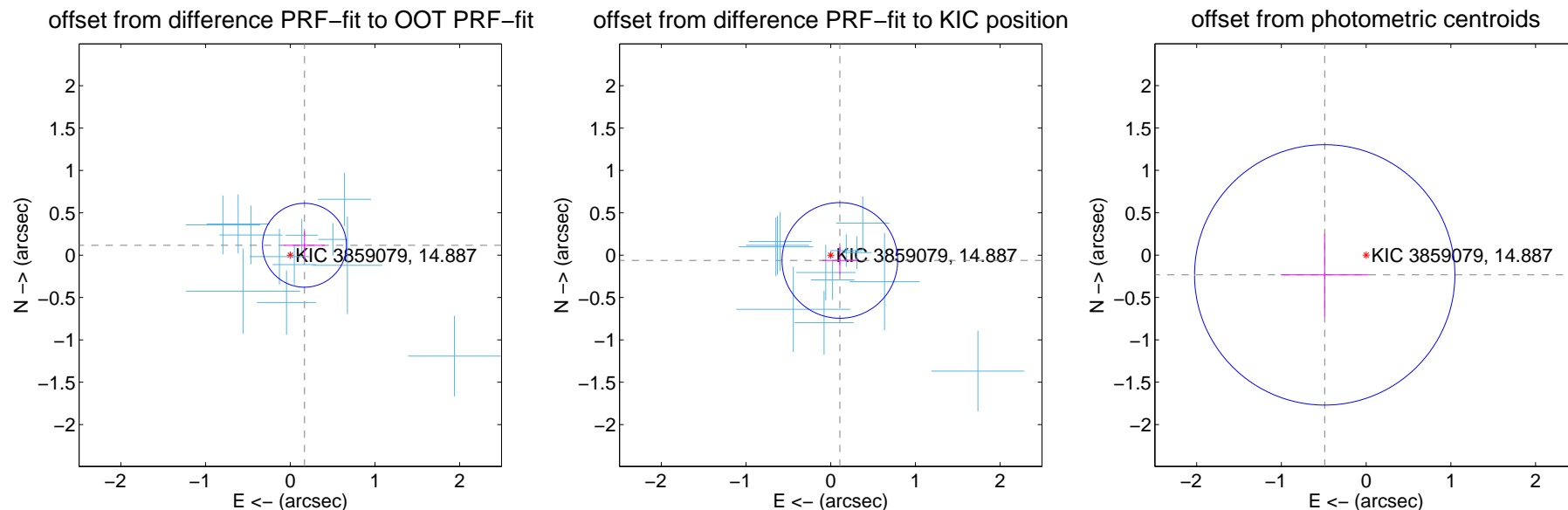
DV Centroid Data

Supplemental centroid analysis for 003859079-01. Kepler magnitude: 14.89. Transit SNR 28.82

There are 12 quarters with good PRF difference image offsets

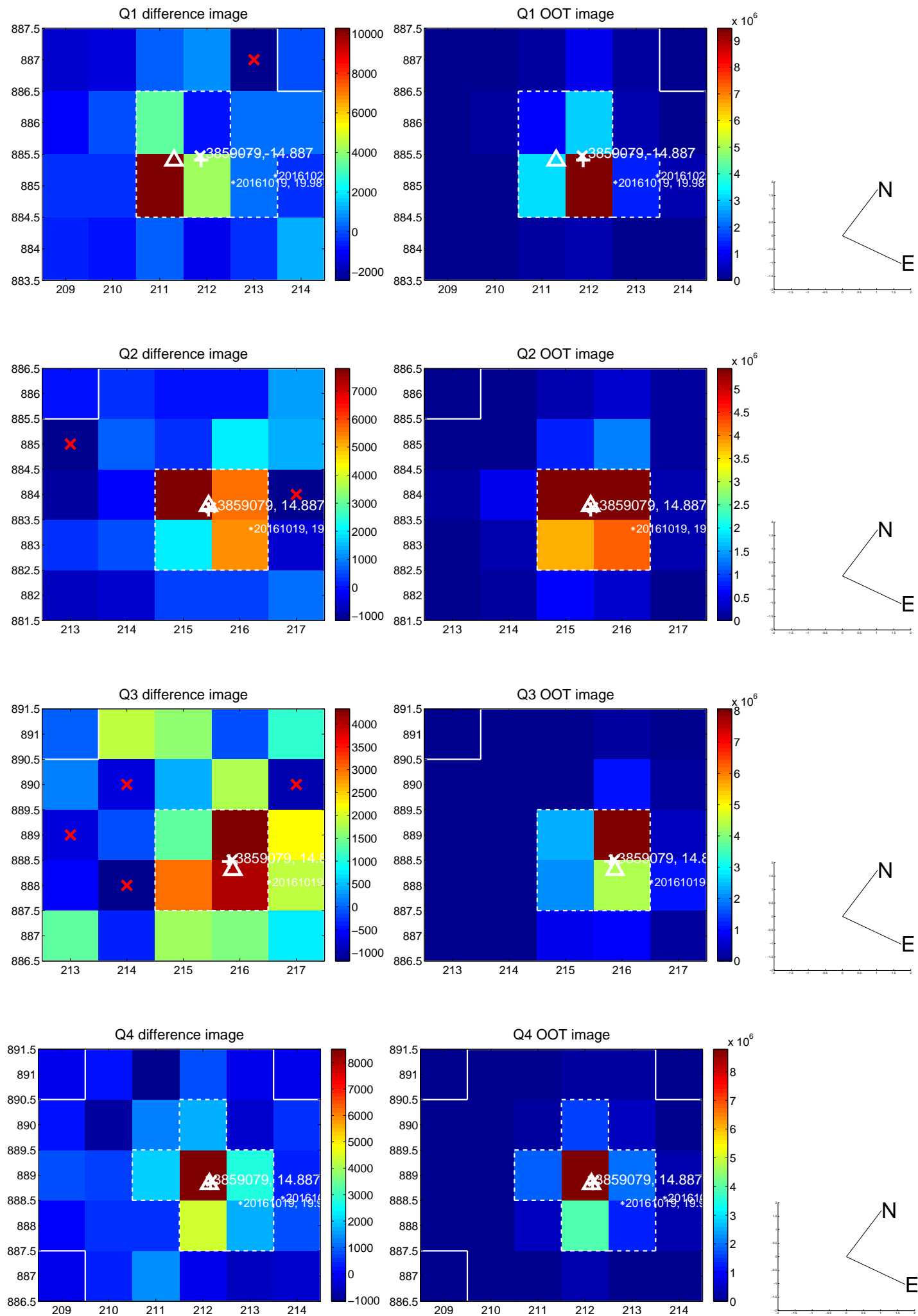
The direct PRF centroid is offset from the target star catalog position by about 0.24 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.204 ± 0.165	1.24	-0.168 ± 0.240	0.117 ± 0.163
PRF-fit source offset from KIC position	0.124 ± 0.228	0.55	-0.108 ± 0.208	-0.062 ± 0.158
photometric centroid source offset	0.54 ± 0.51	1.06	0.49 ± 0.52	-0.23 ± 0.49

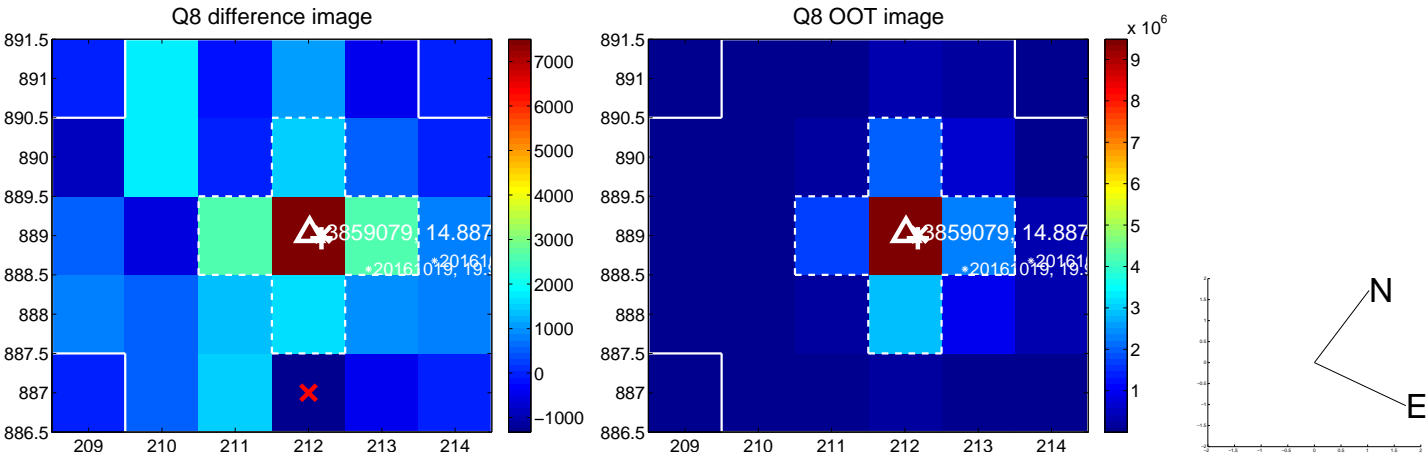
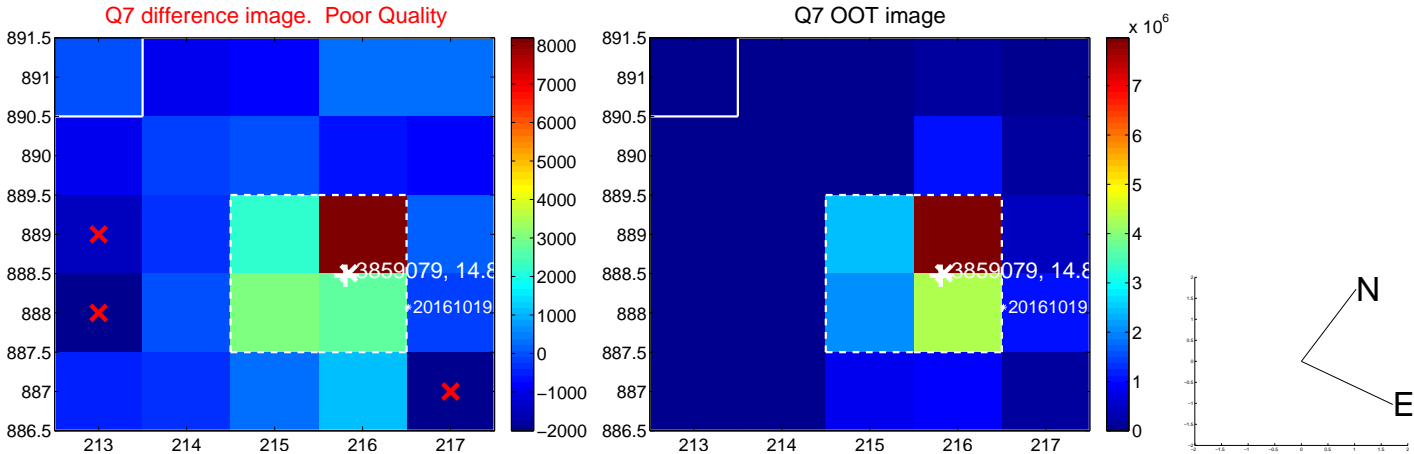
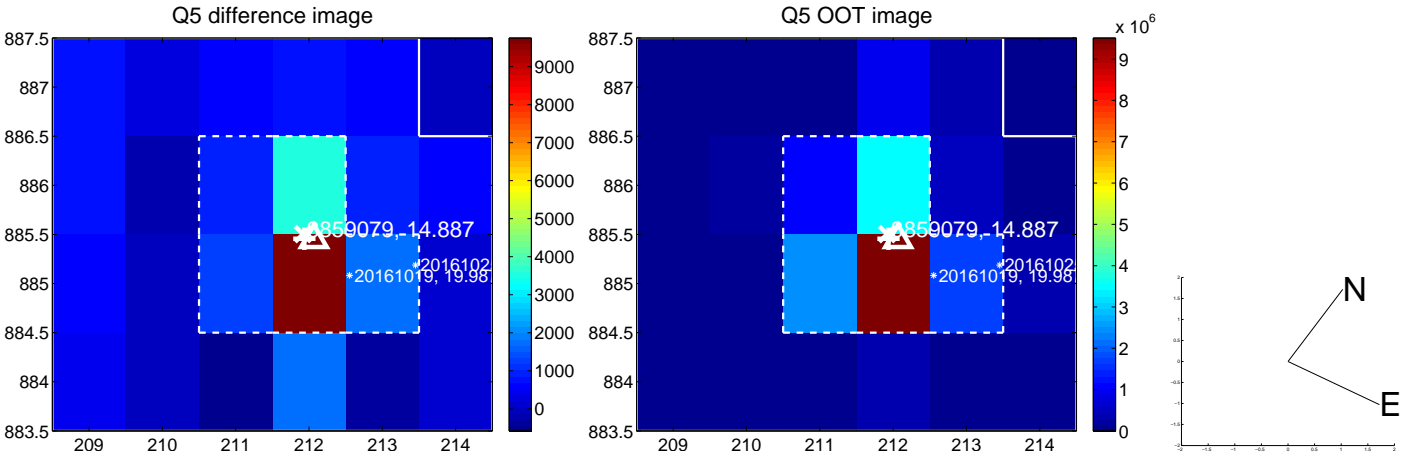


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

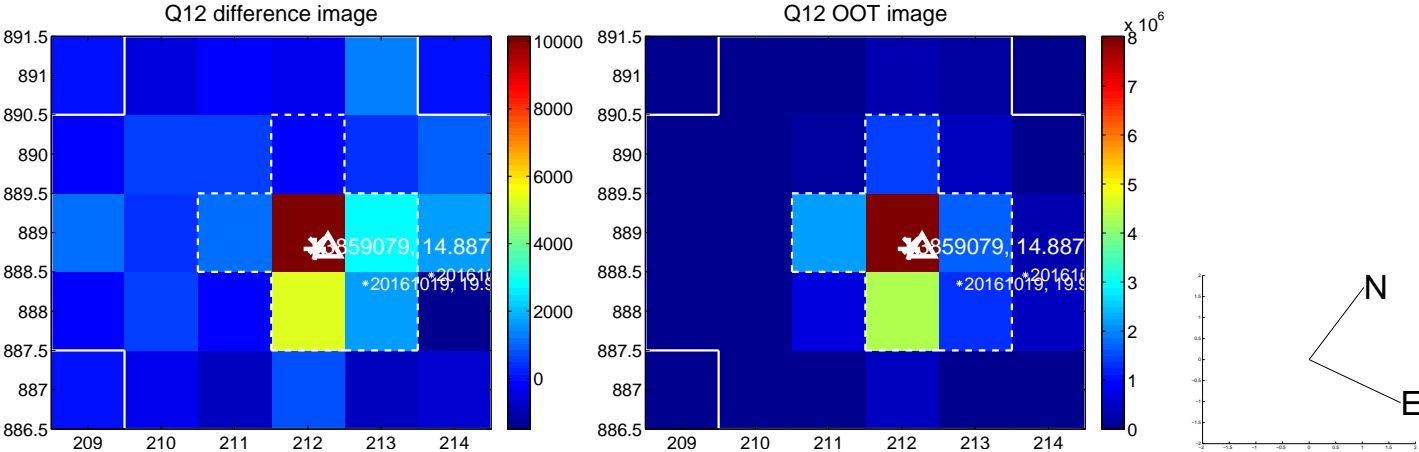
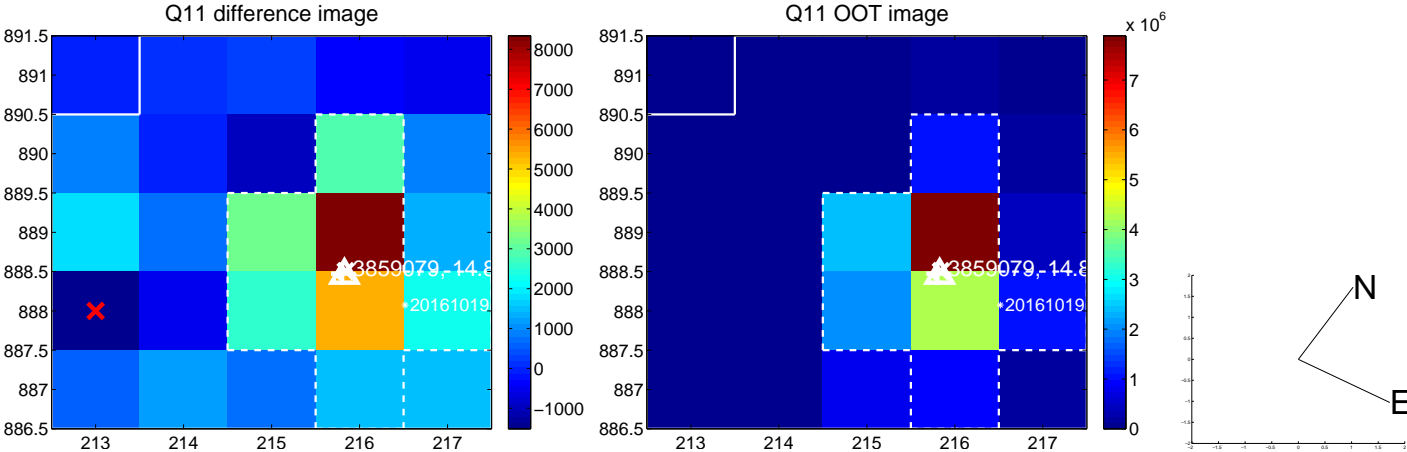
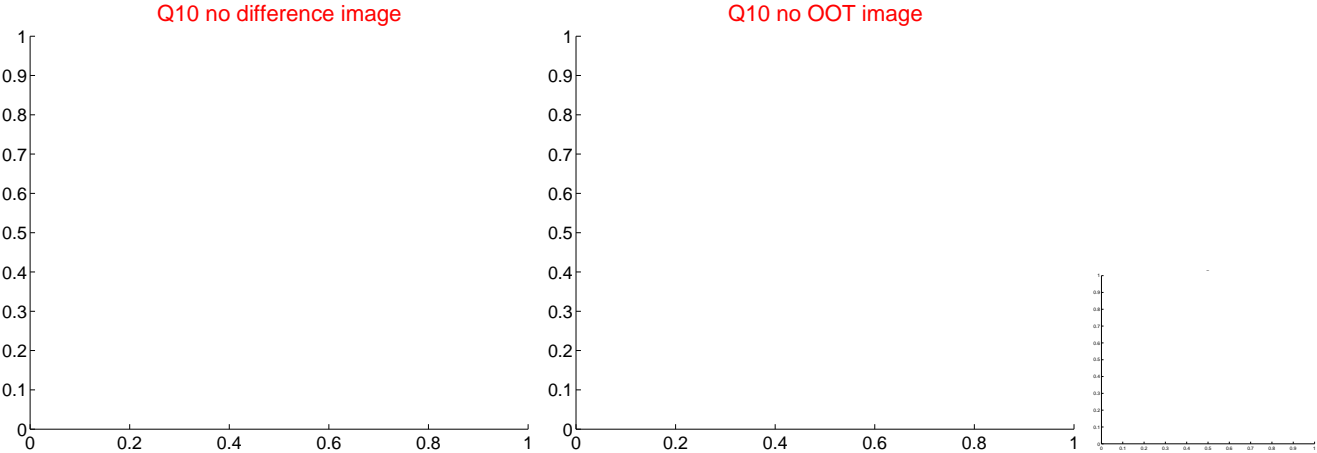
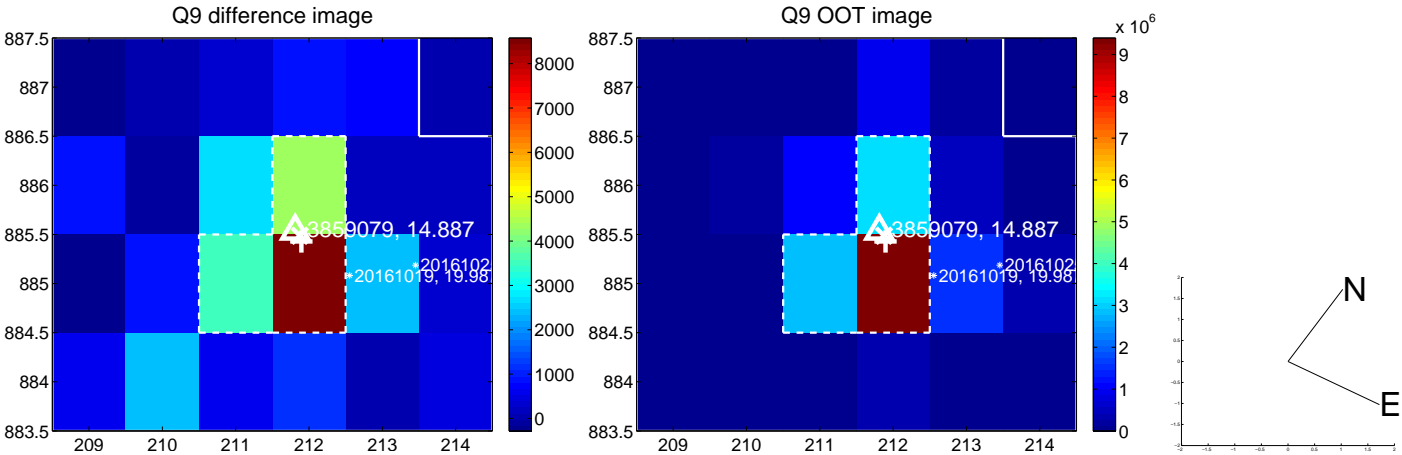
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



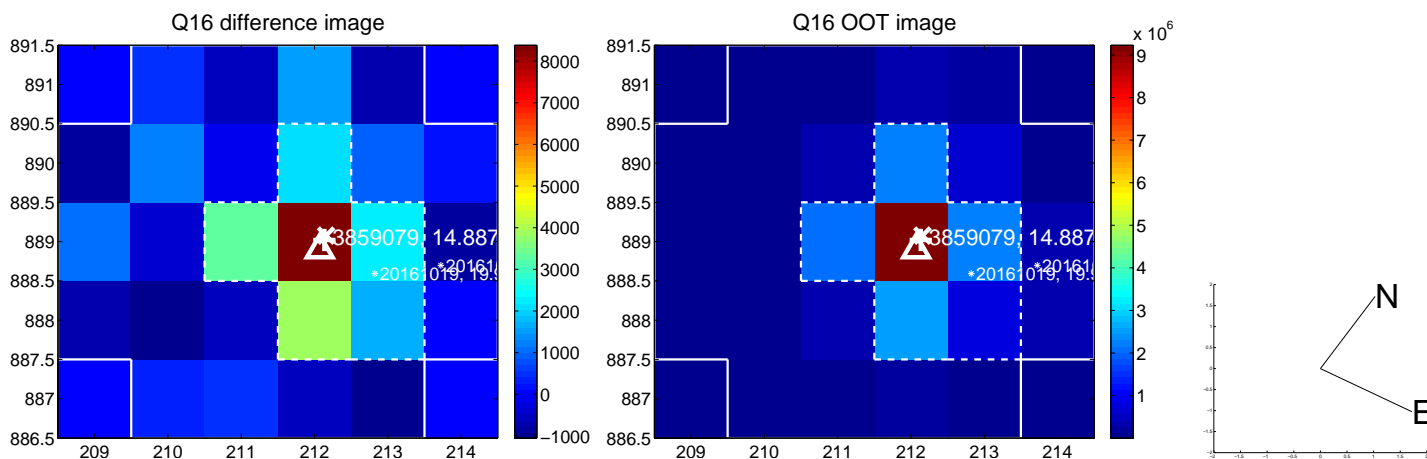
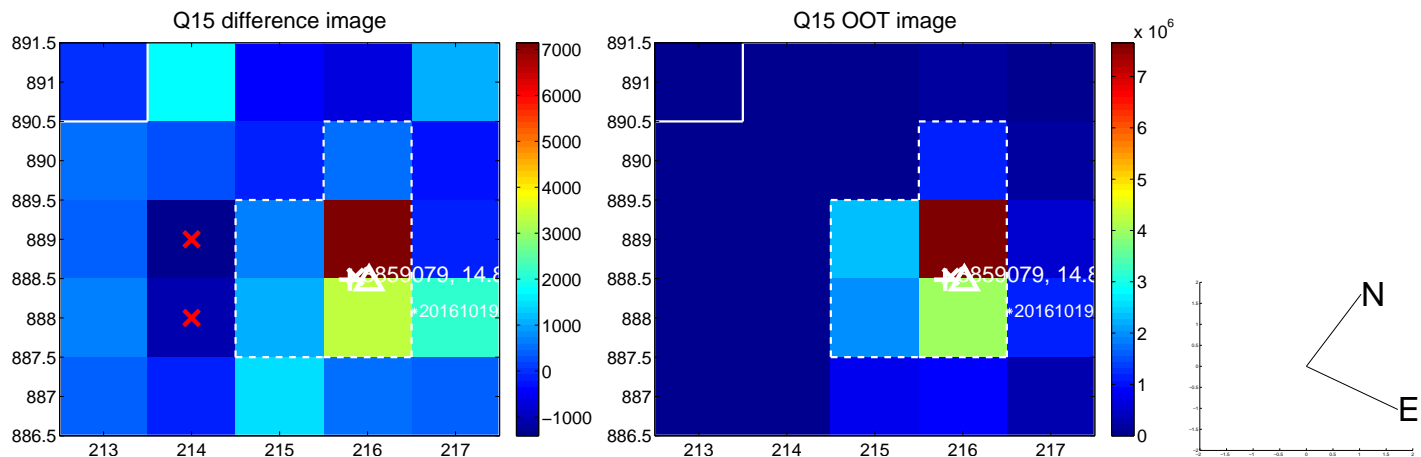
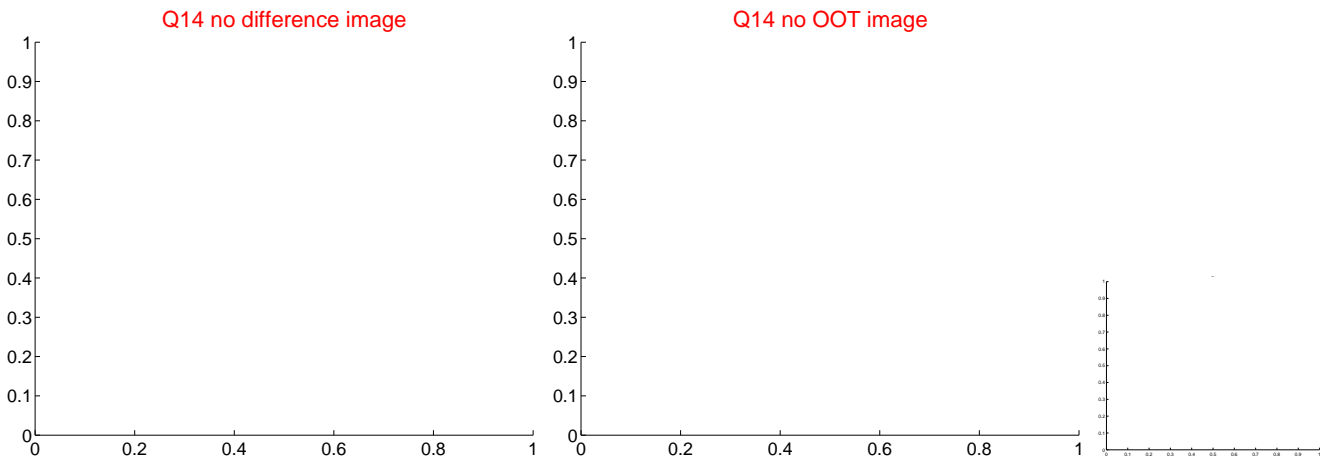
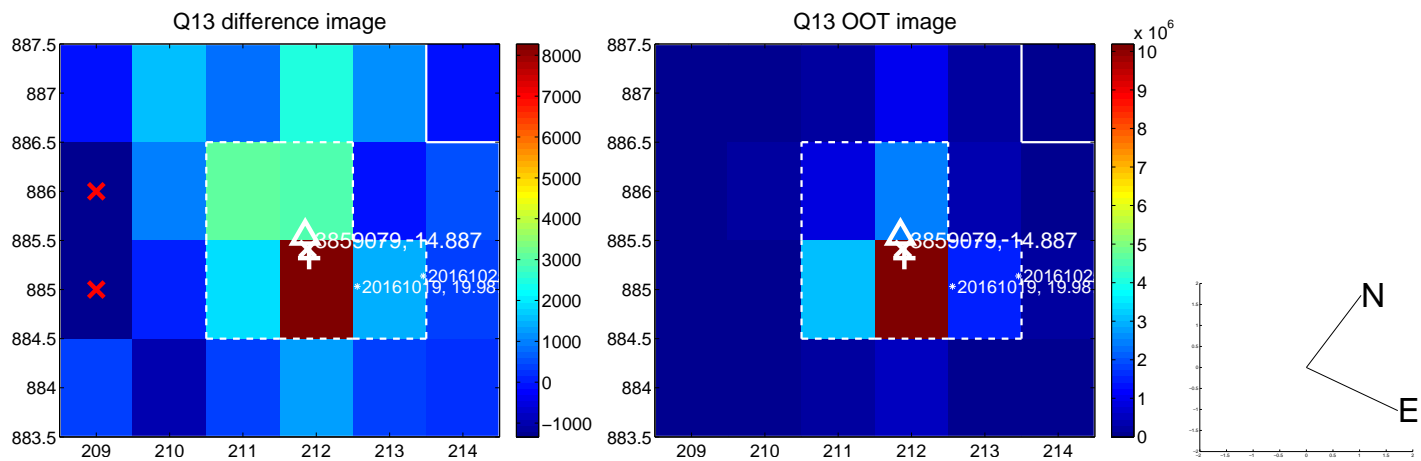
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



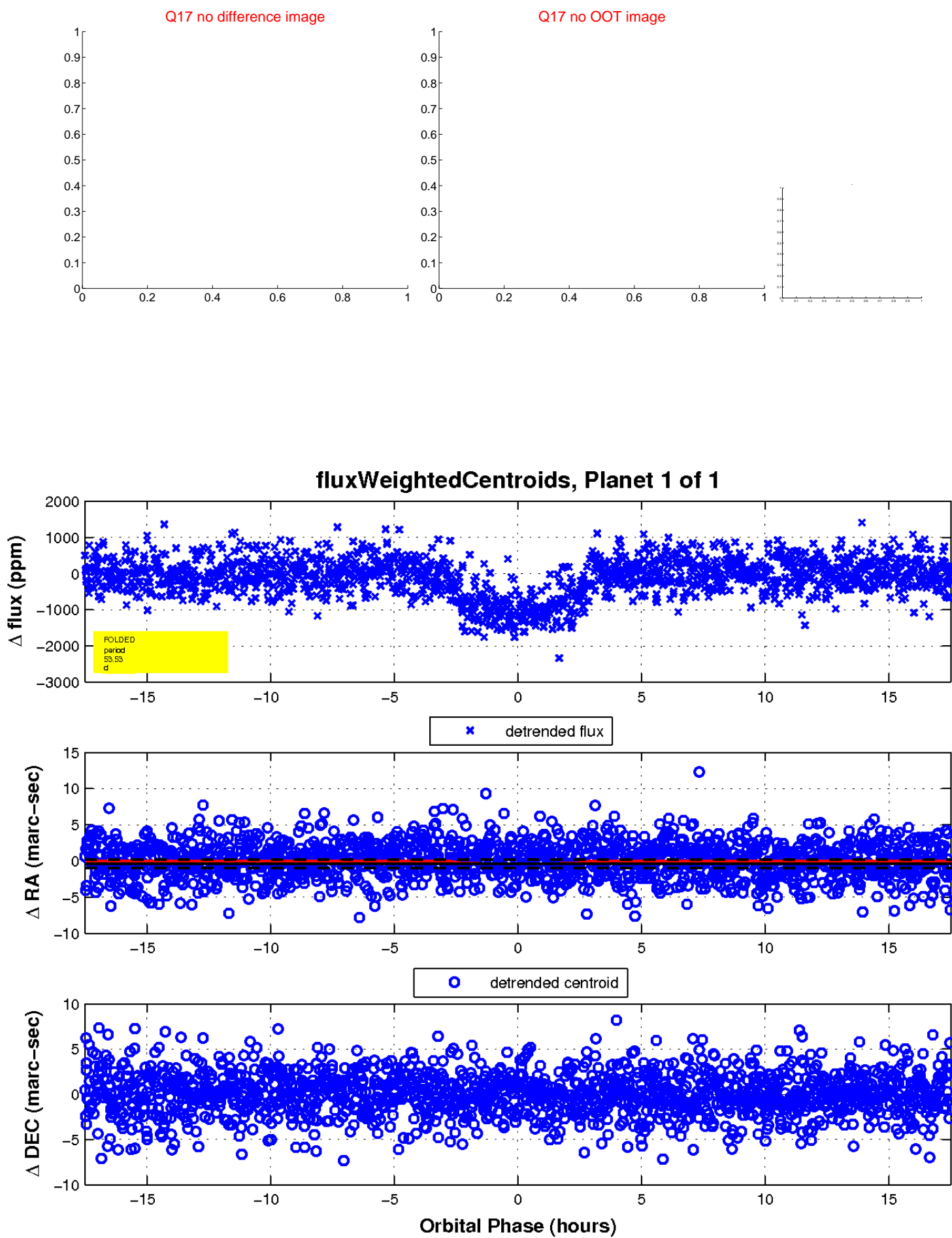
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

