

KIC 007103919

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})
007103919-01	OBS	4310.01	10.776851	140.304022	181.9	2.830	11.7	12.6	0.85	5455	1.34	75.92

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007103919-01	OBS	PC	0.99	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.

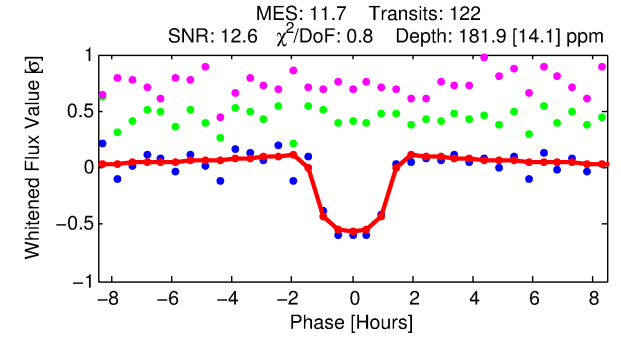
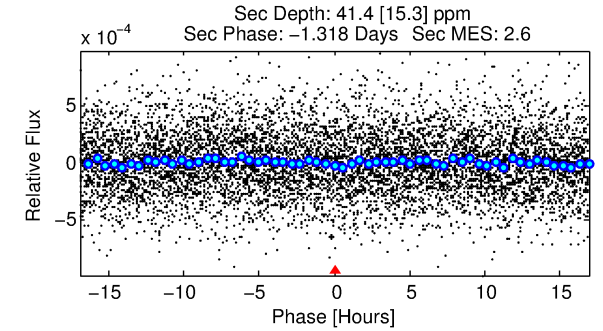
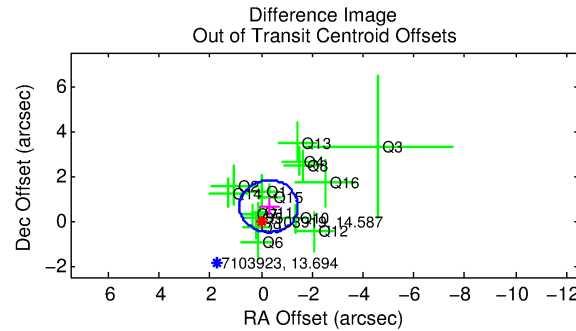
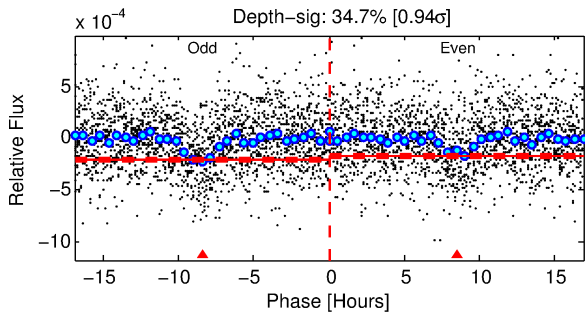
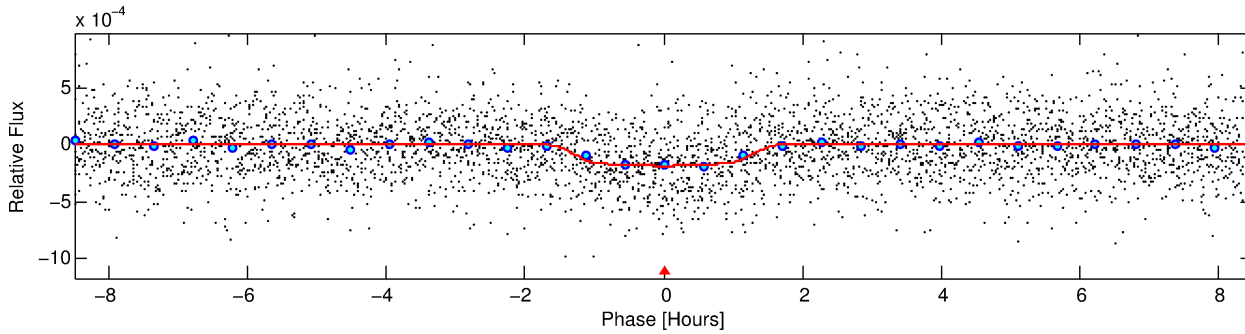
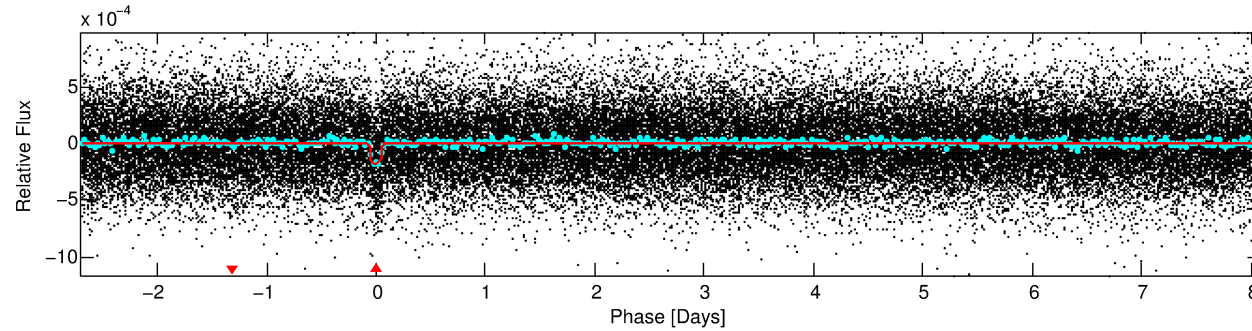
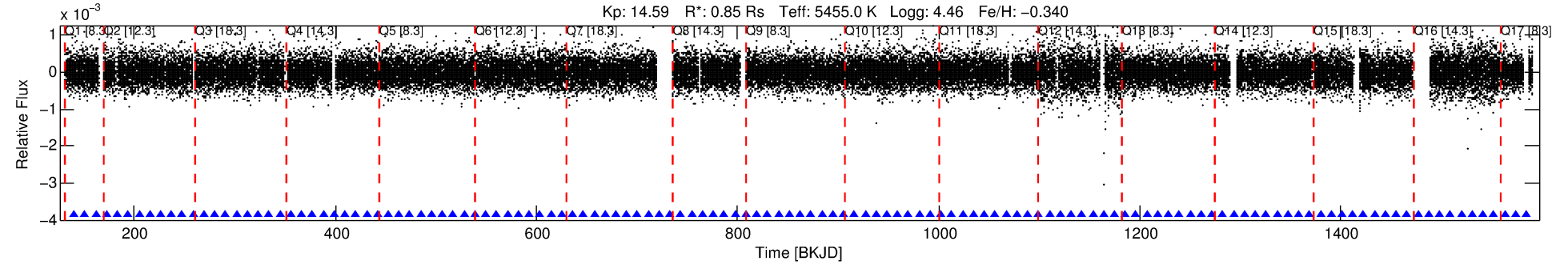
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007103919-01

No Significant Match Found

DV One-Page Summary

KIC: 7103919 Candidate: 1 of 1 Period: 10.777 d
KOI: K04310.01 Corr: 0.931



DV Fit Results:

Period = 10.77685 [0.00006] d
Epoch = 140.3040 [0.0044] BKJD
Rp/R* = 0.0144 [0.0084]
a/R* = 15.08 [39.02]
b = 0.87 [0.73]
Seff = 75.92 [24.52]
Teff = 753 [61] K
Rp = 1.34 [0.83] Re
a = 0.0871 [0.0172] AU
Ag = 96.25 [121.09] [0.79 σ]
Teffp = 3645 [1119] K [2.58 σ]

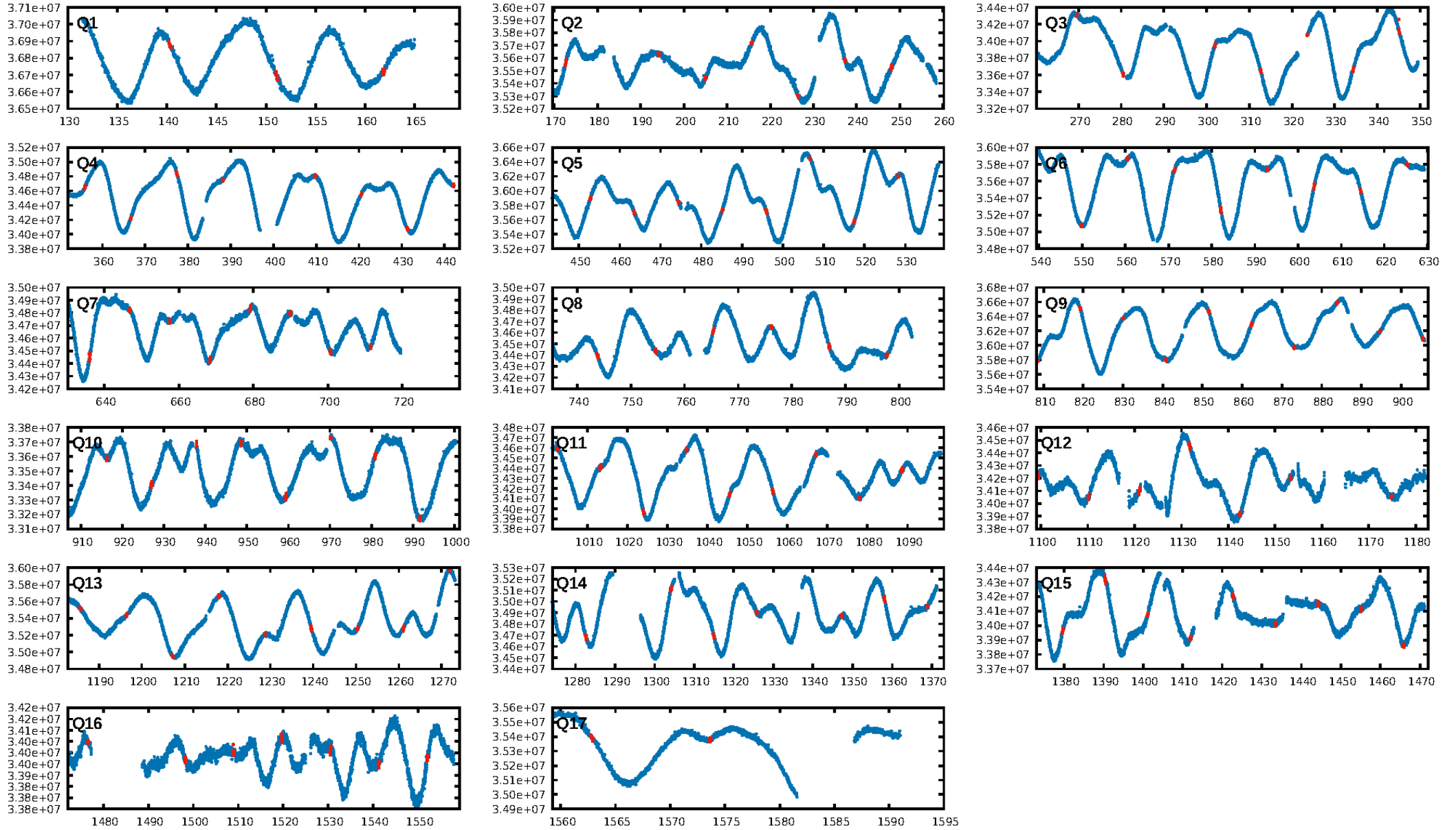
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 98.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.42e-30
RollingBand-fgt: 1.00 [117/117]
GhostDiagnostic-chr: 6.301
Centroid-sig: 56.7%
Centroid-so: 0.879 arcsec [0.98 σ]
OotOffset-rm: 0.710 arcsec [1.85 σ]
KicOffset-rm: 0.125 arcsec [0.43 σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.81 [13/16]
DiffImageOverlap-fno: 1.00 [17/17]

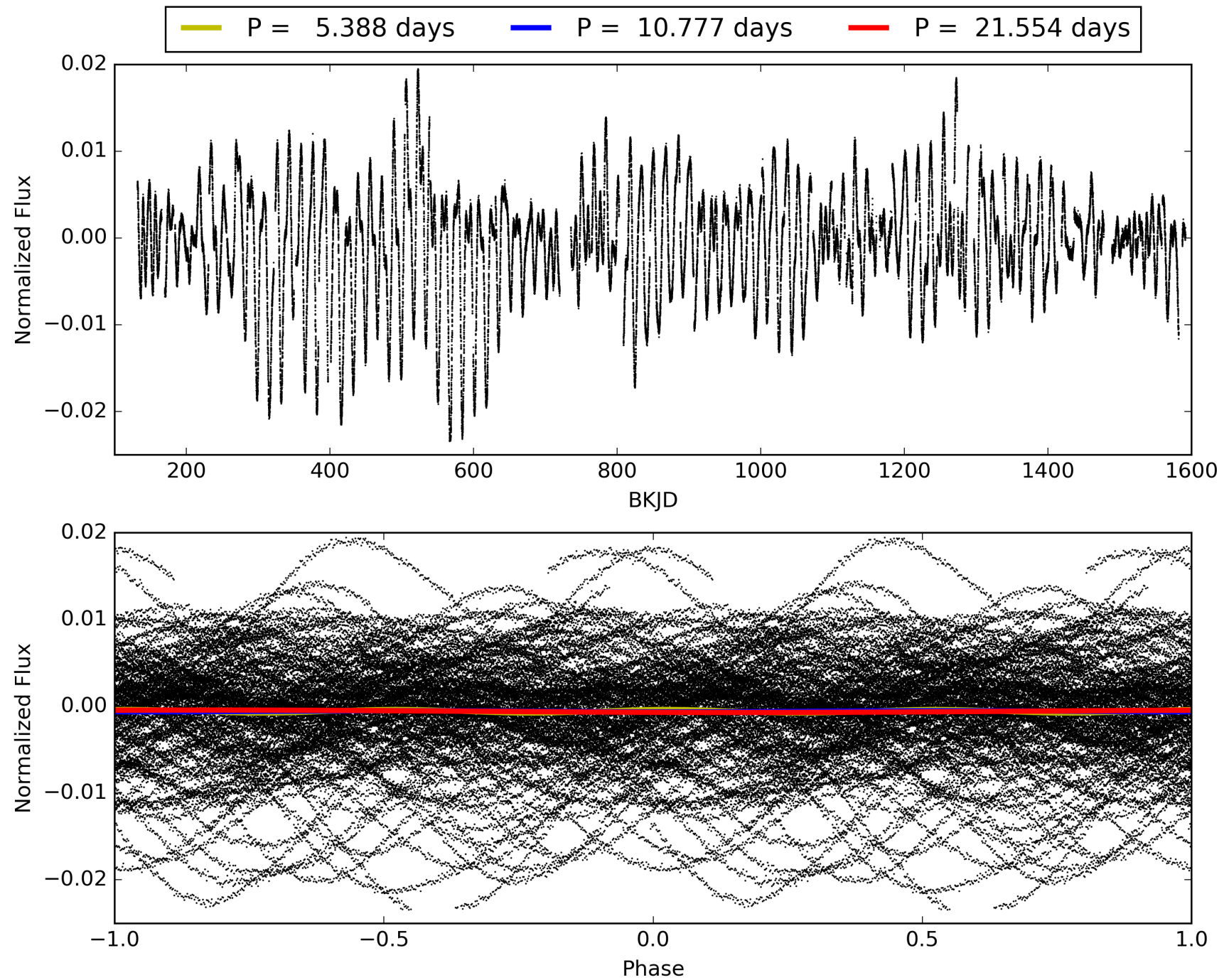
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 18:09:35 Z

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

TCE 007103919-01, PDC Light Curves

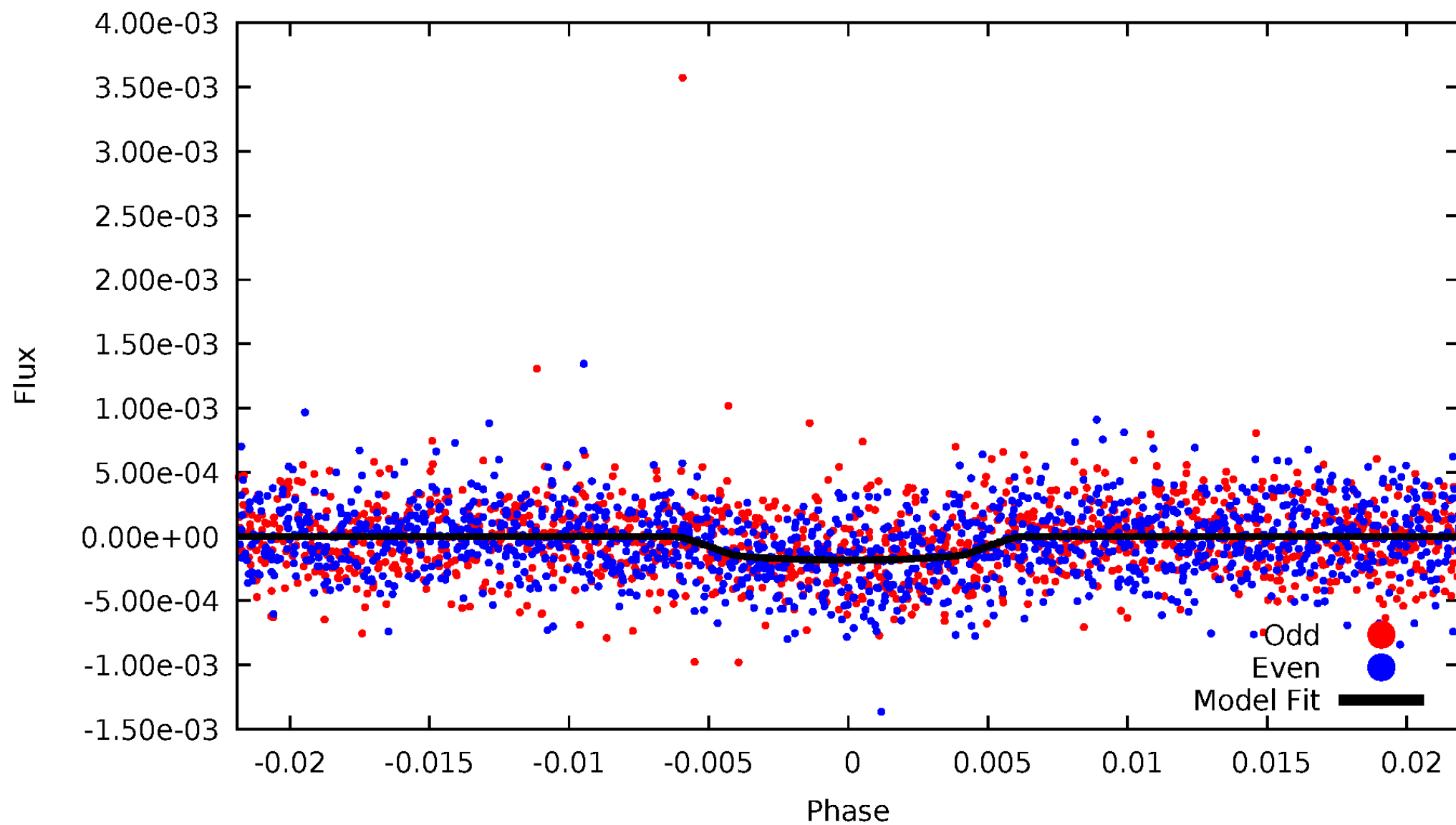


TCE 007103919-01



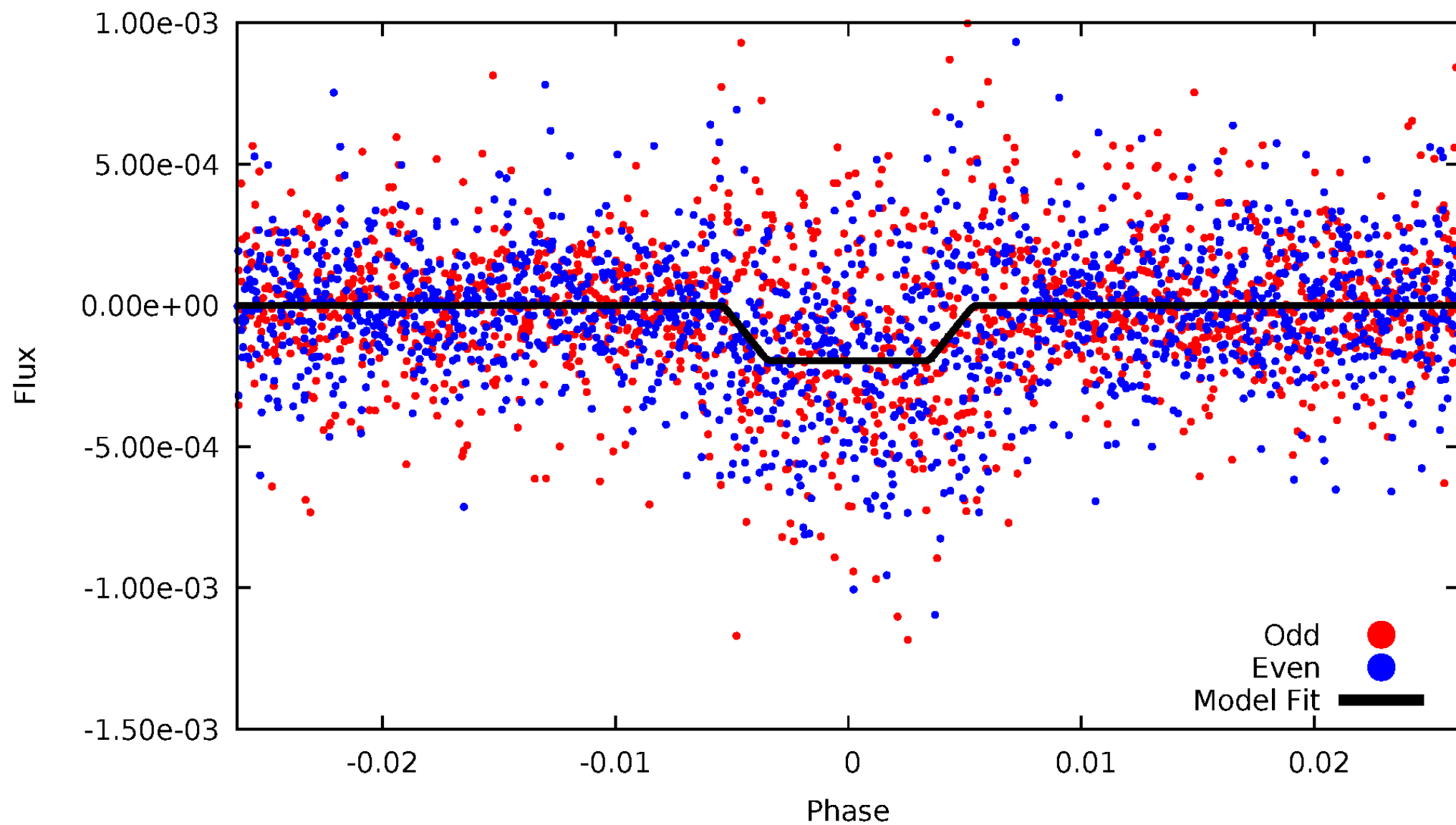
DV Odd/Even

TCE 007103919-01

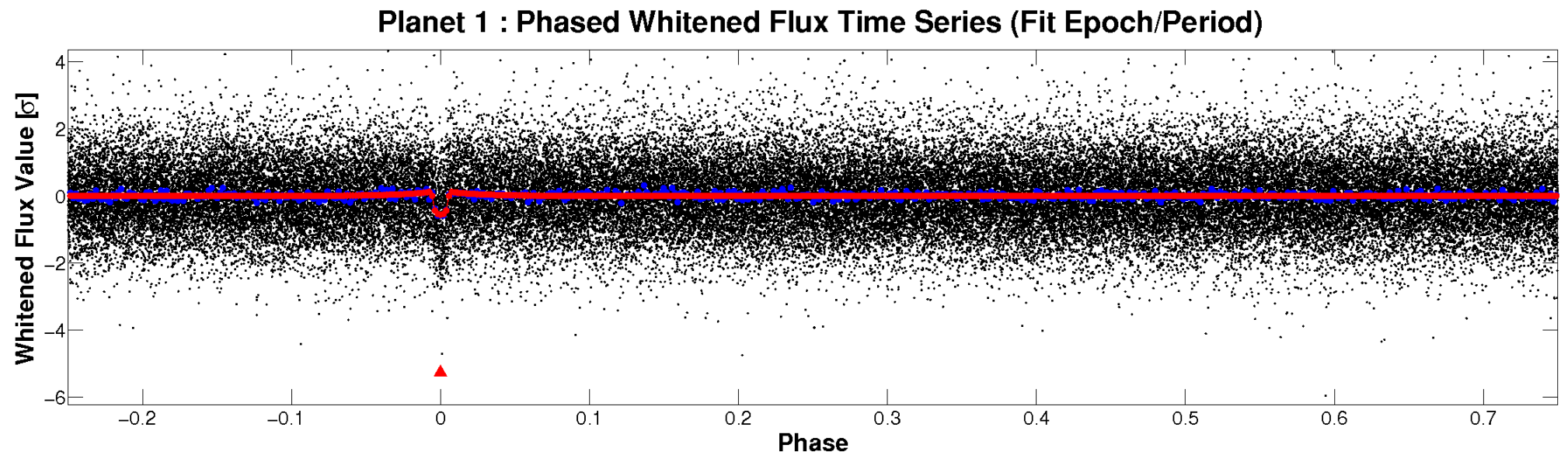
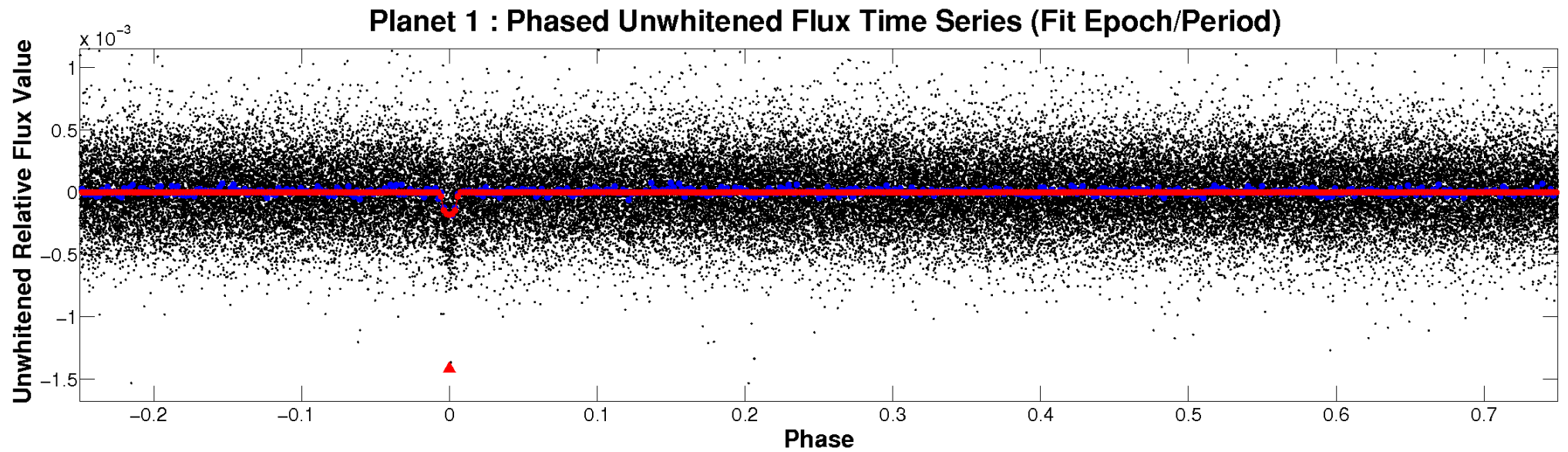


ALT Odd/Even

TCE 007103919-01

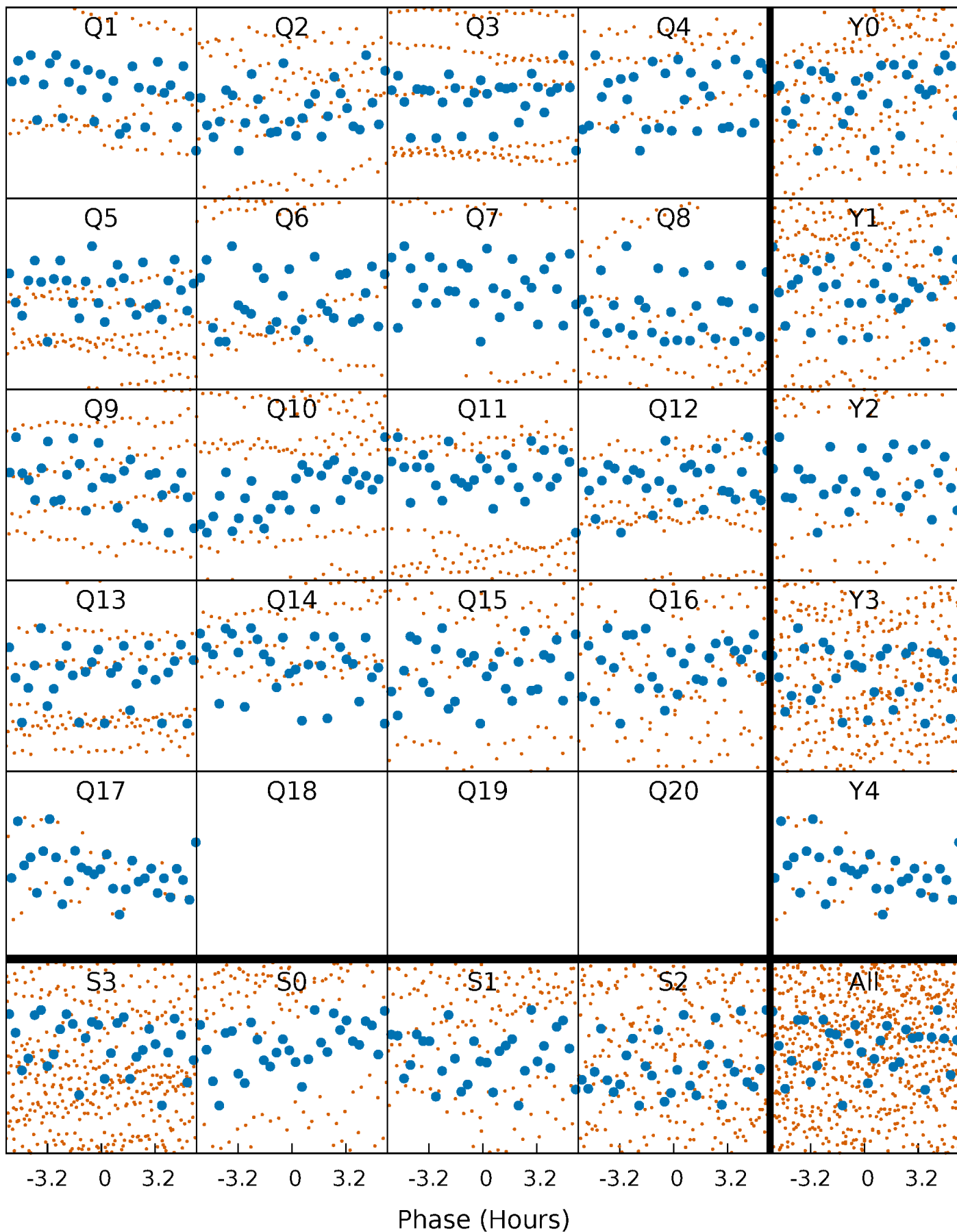


Non-Whitened Vs. Whitened Light Curve



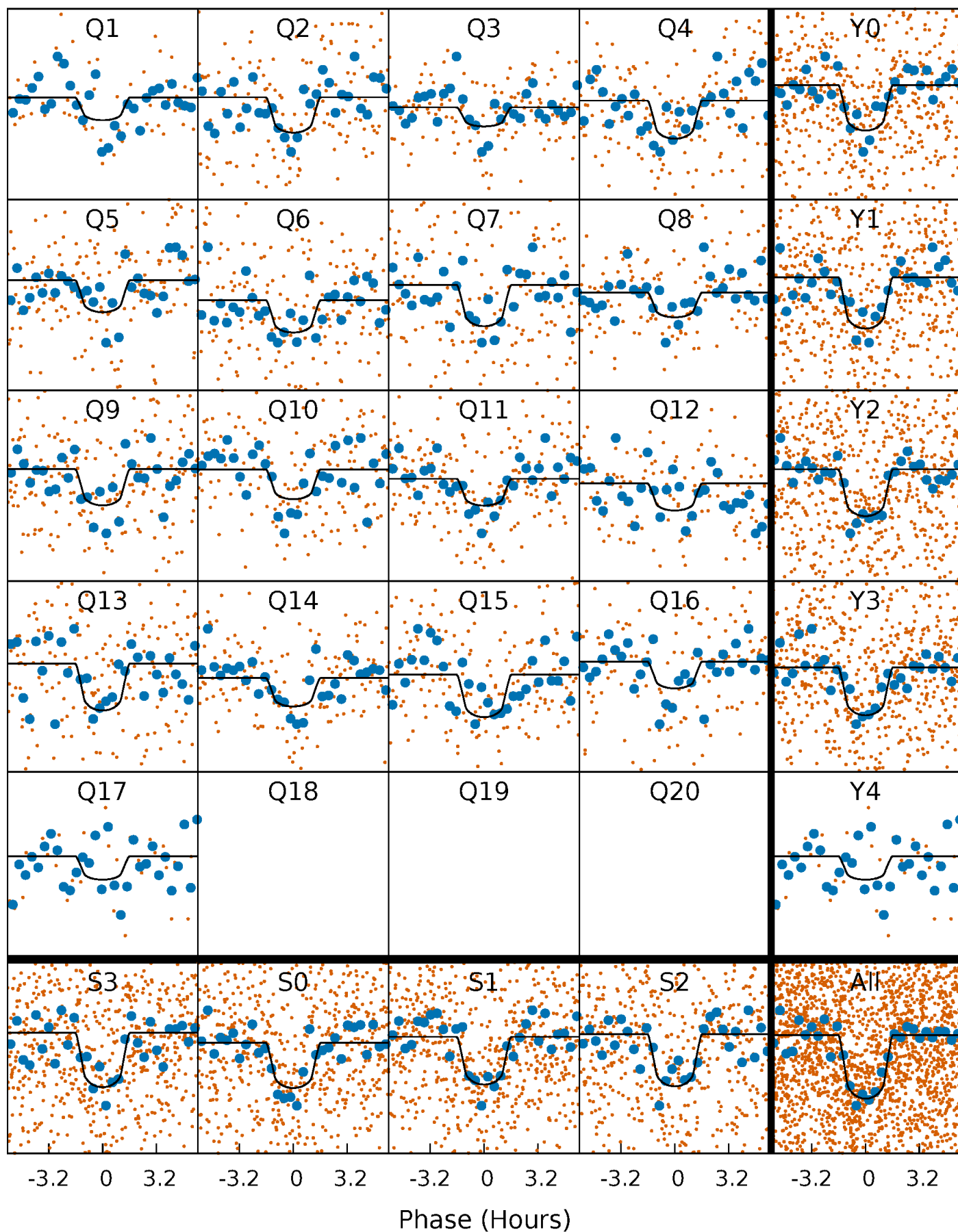
PDC Quarter-Phased Transit Curves

TCE 007103919-01 P= 10.776851 Days $T_0=140.304022$ (BKJD)



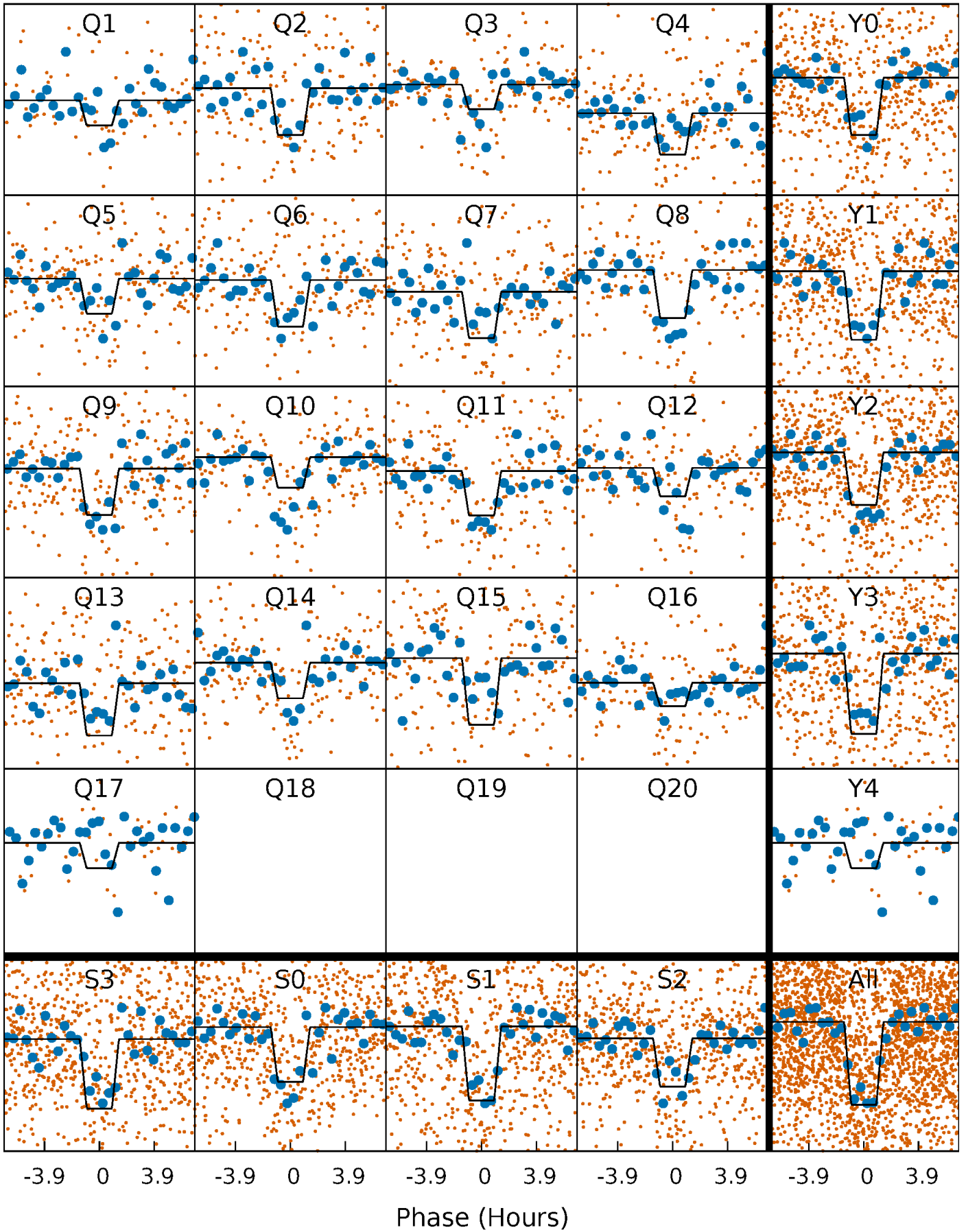
DV Quarter-Phased Transit Curves

TCE 007103919-01 P= 10.776851 Days $T_0=140.304022$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

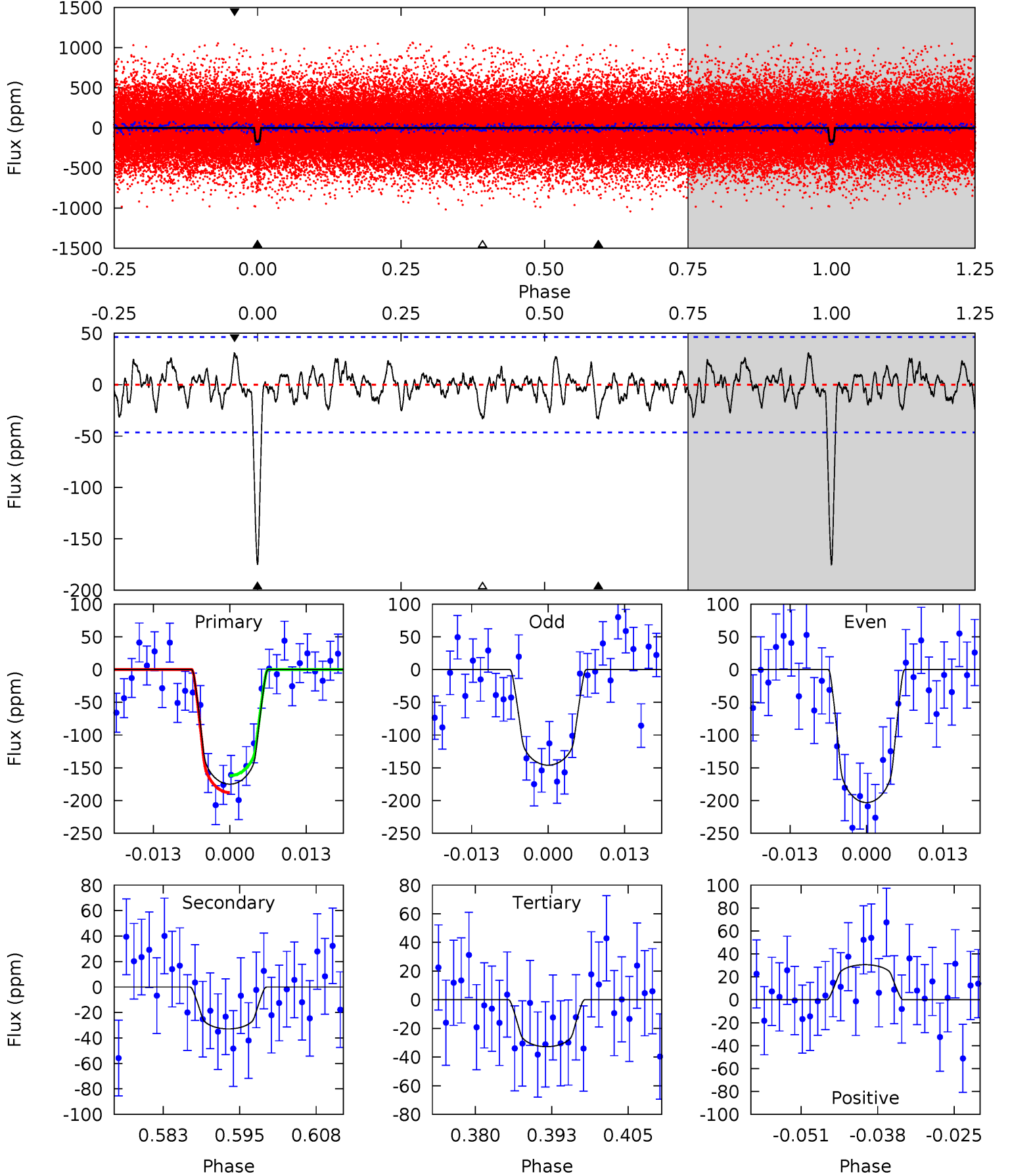
TCE 007103919-01 P= 10.776976 Days $T_0=140.291299$ (BKJD)



DV Model-Shift Uniqueness Test

007103919-01, P = 10.776851 Days, E = 129.527171 Days

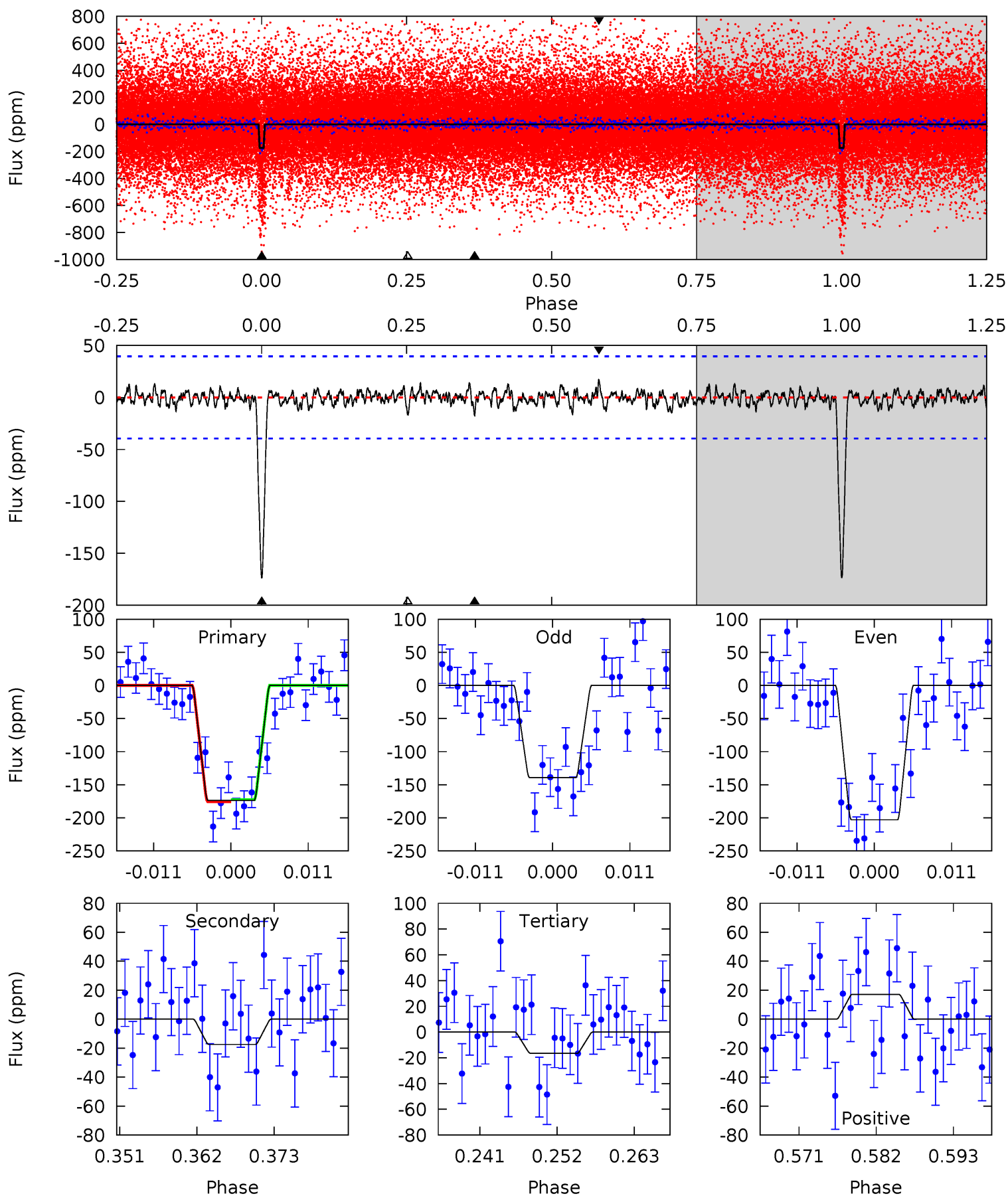
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.8	3.53	3.52	3.28	4.98	2.49	1.18	15.3	15.5	0.01	0.25	3.08	0.95	0.15	1.39



Alt Model-Shift Uniqueness Test

007103919-01, $P = 10.776976$ Days, $E = 129.514323$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.0	2.21	2.10	2.18	5.01	2.54	0.66	19.9	19.8	0.11	0.04	4.05	0.96	0.09	0.21



Stellar Parameters For KIC 007103919

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5455^{+162}_{-162}	$4.457^{+0.124}_{-0.170}$	$-0.340^{+0.350}_{-0.300}$	$0.852^{+0.190}_{-0.127}$	$0.759^{+0.122}_{-0.052}$	$1.727^{+0.929}_{-0.769}$
	+3%/-3%	+3%/-4%	+103%/-88%	+22%/-15%	+16%/-7%	+54%/-45%
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 007103919-01 / KOI 4310.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-33 ± 9	$1.38^{+0.81}_{-0.71}$	1057^{+68}_{-60}	3762^{+1184}_{-525}	71^{+248}_{-44}
Alt.	-17 ± 8	$1.40^{+0.77}_{-0.72}$	1053^{+65}_{-55}	3380^{+958}_{-498}	37^{+123}_{-25}

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

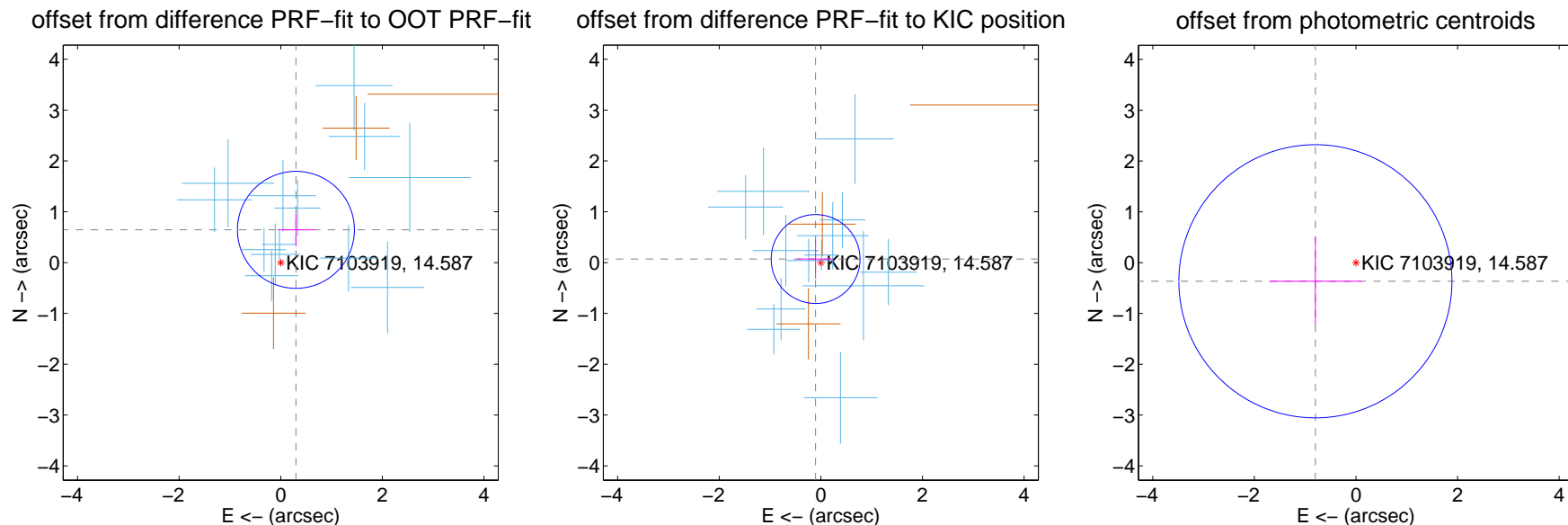
DV Centroid Data

Supplemental centroid analysis for 007103919-01. Kepler magnitude: 14.59. Transit SNR 12.65

There are 13 quarters with good PRF difference image offsets

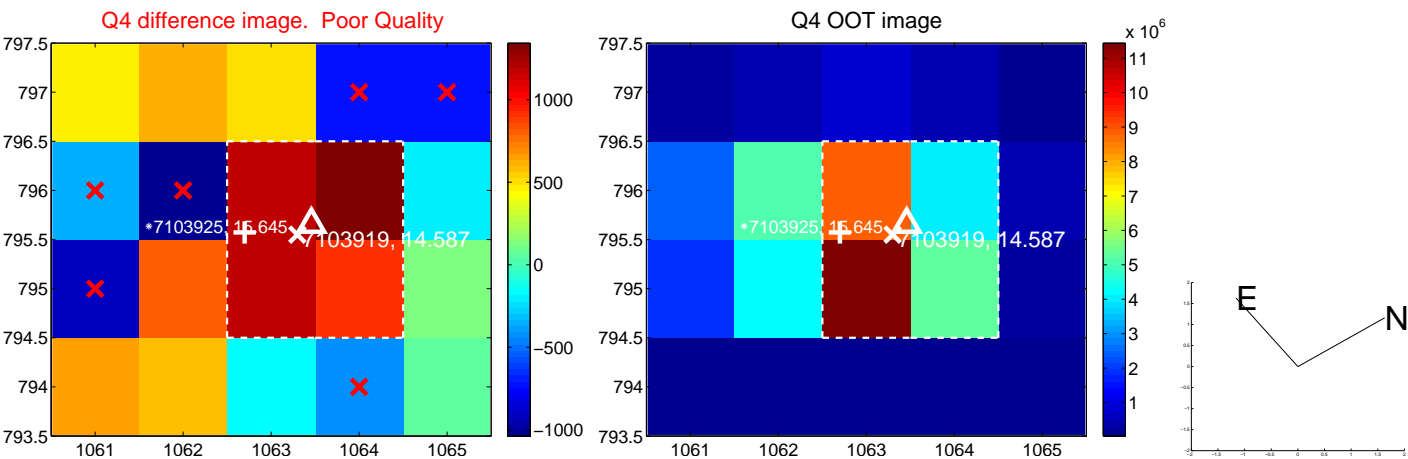
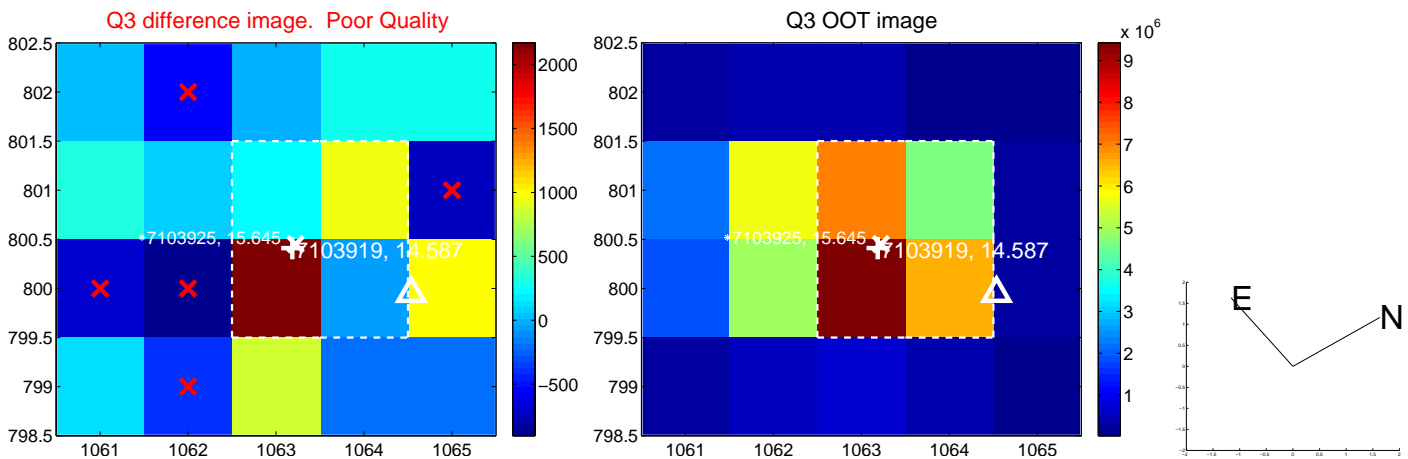
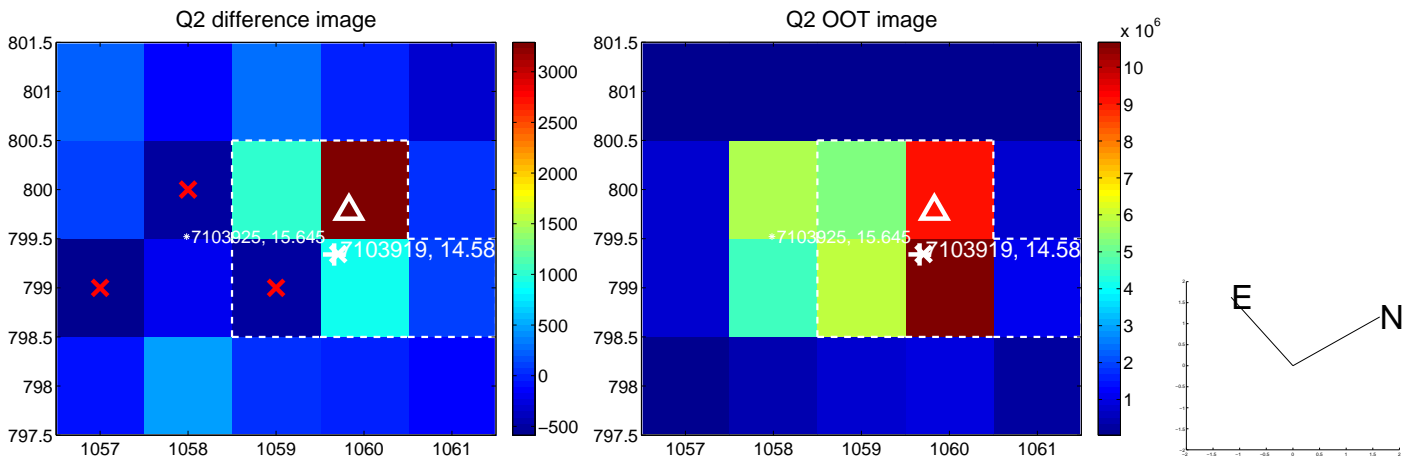
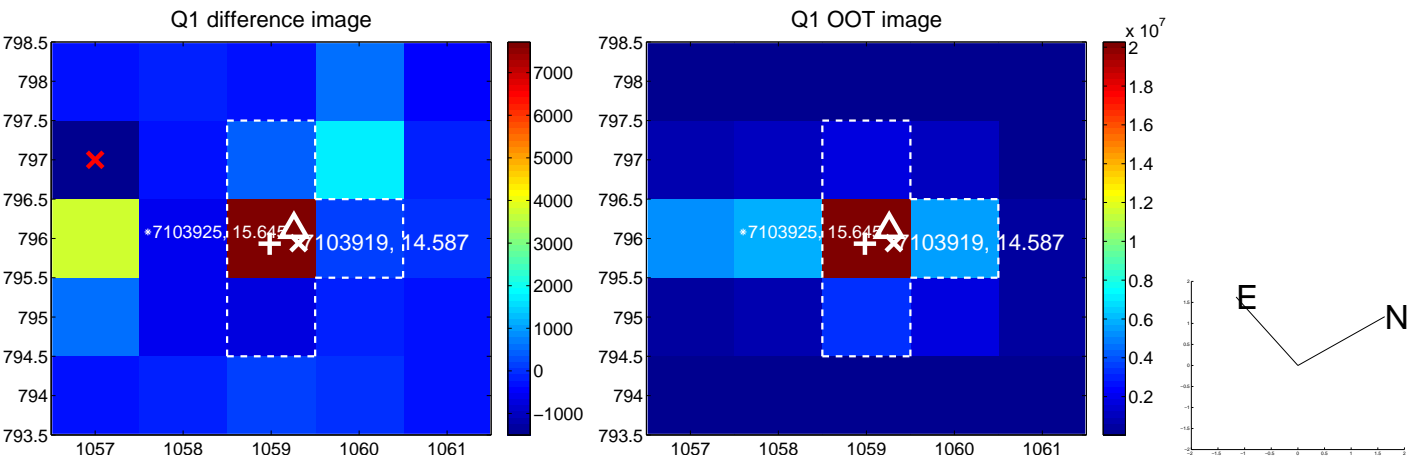
The OOT PRF centroid is offset from the target star catalog position by about 2.72 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.710 ± 0.384	1.85	-0.299 ± 0.364	0.644 ± 0.321
PRF-fit source offset from KIC position	0.125 ± 0.292	0.43	0.104 ± 0.360	0.070 ± 0.384
photometric centroid source offset	0.88 ± 0.90	0.98	0.80 ± 0.90	-0.37 ± 0.86

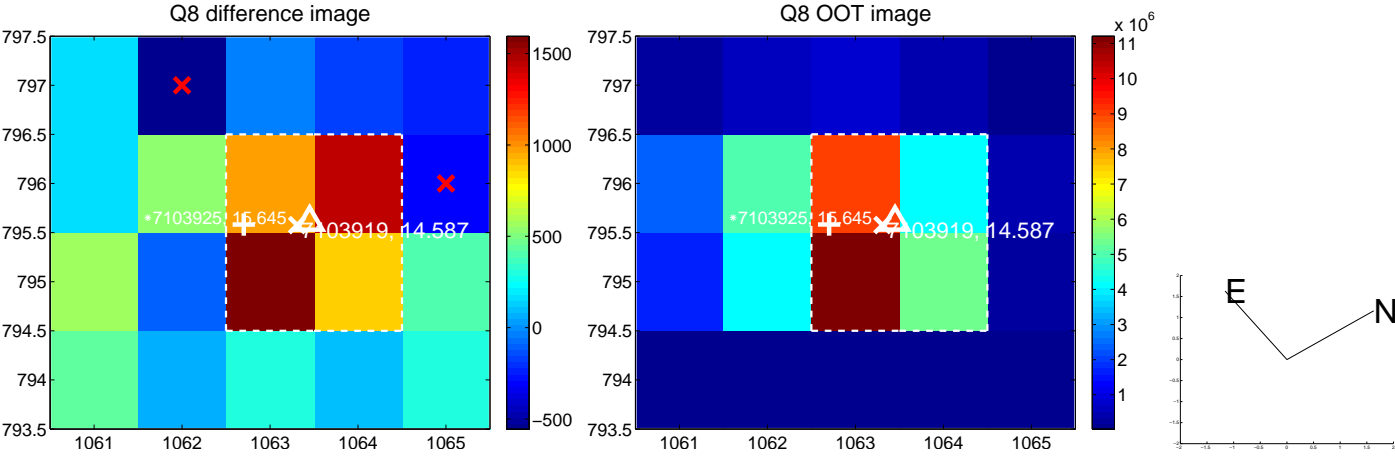
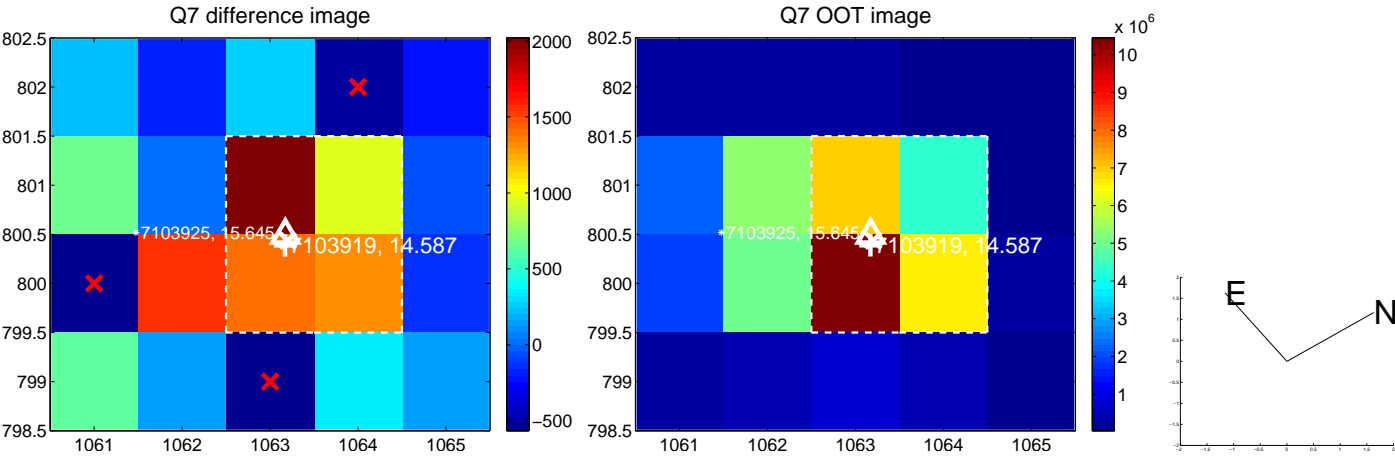
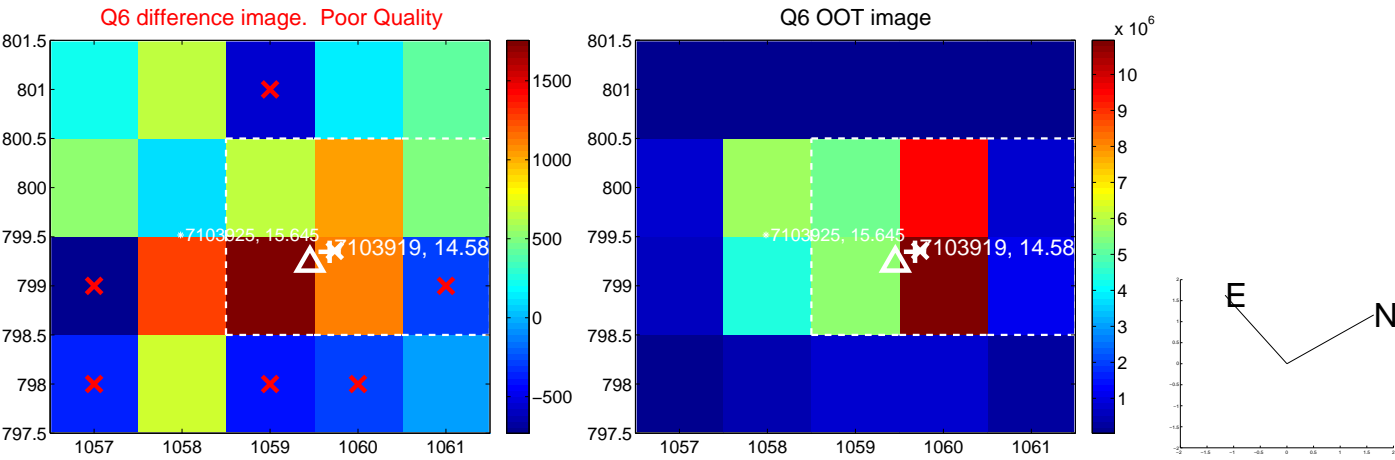
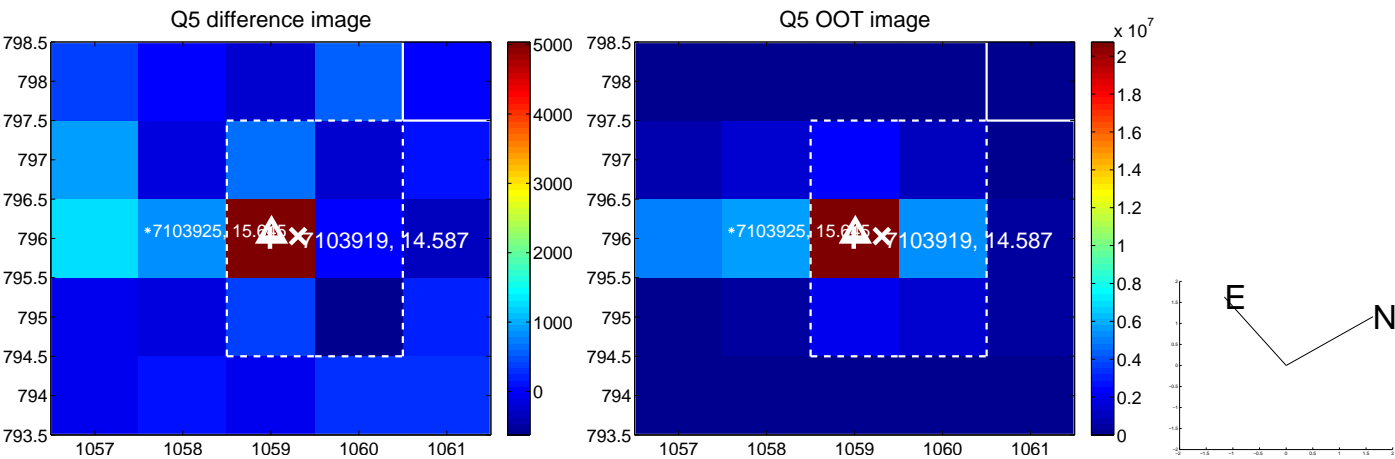


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

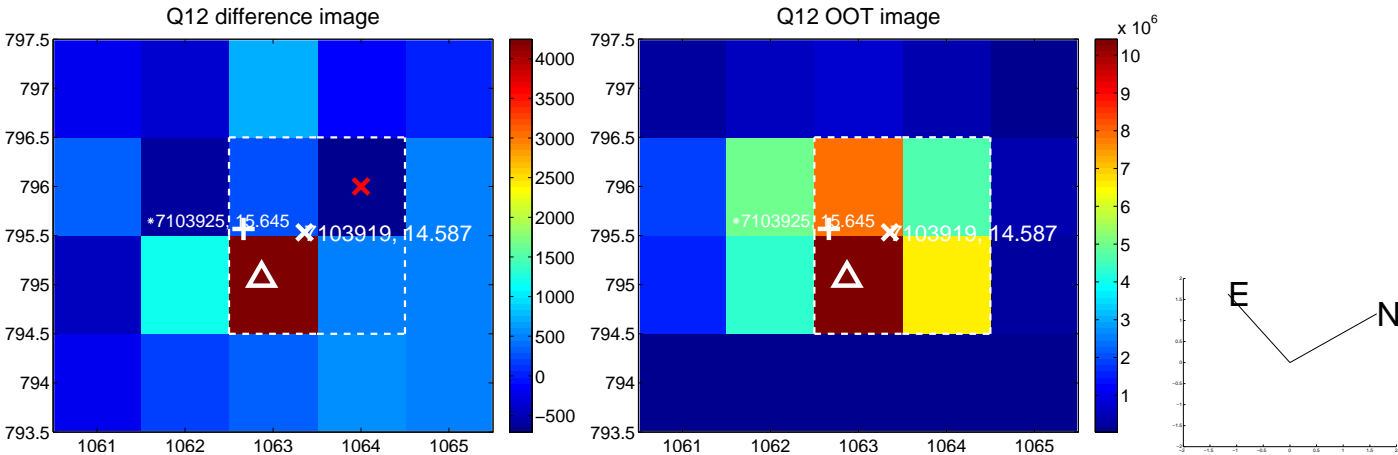
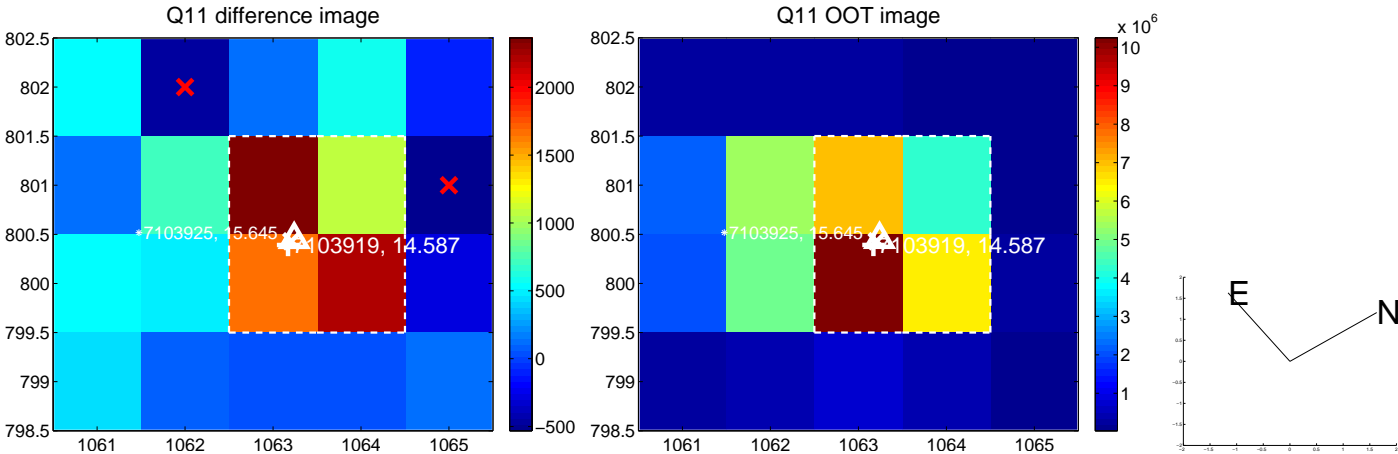
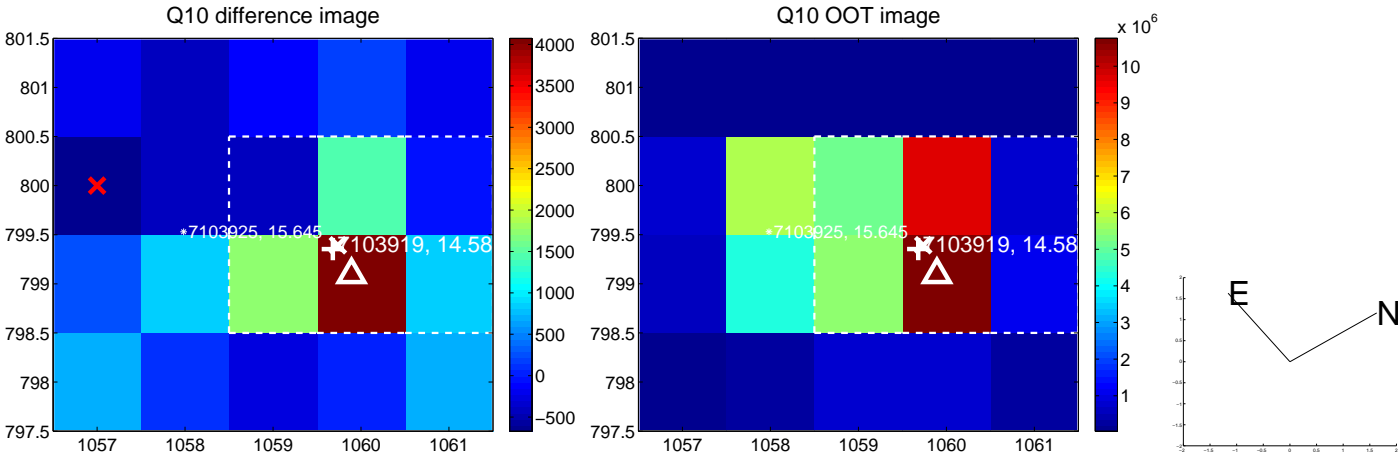
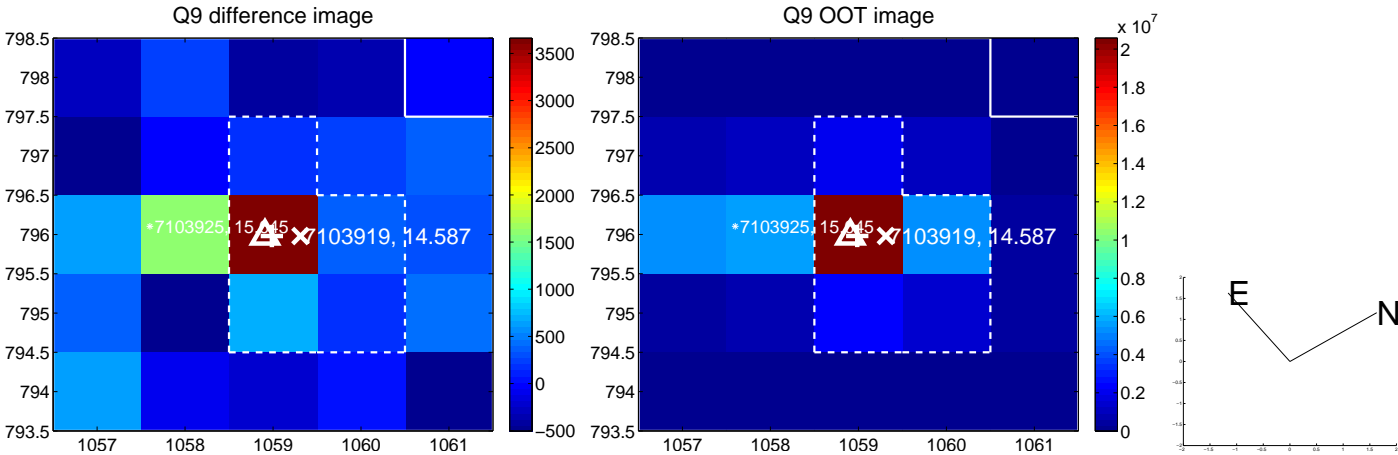
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



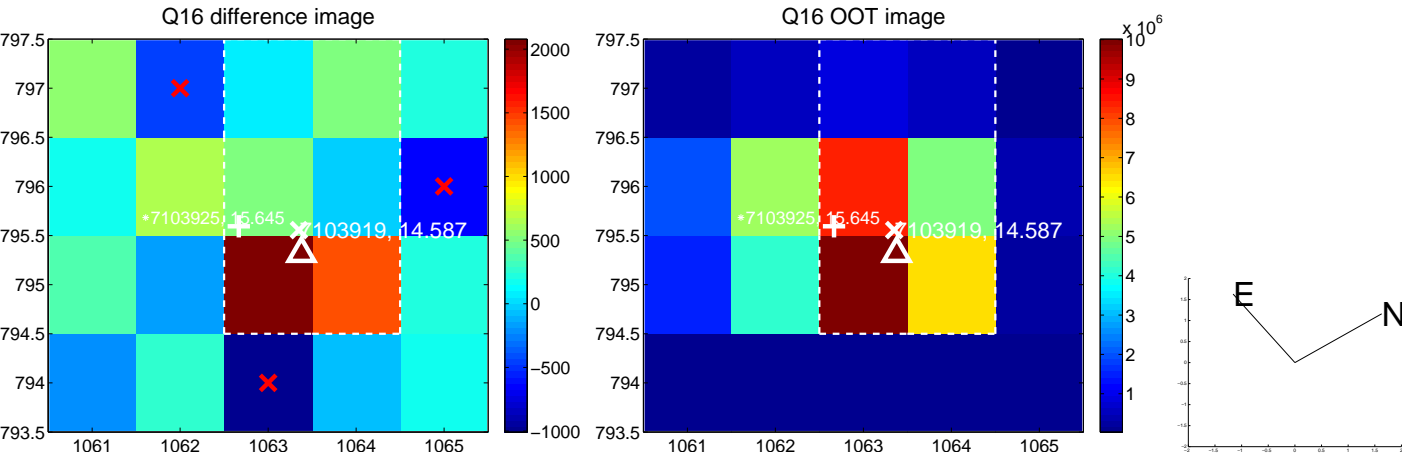
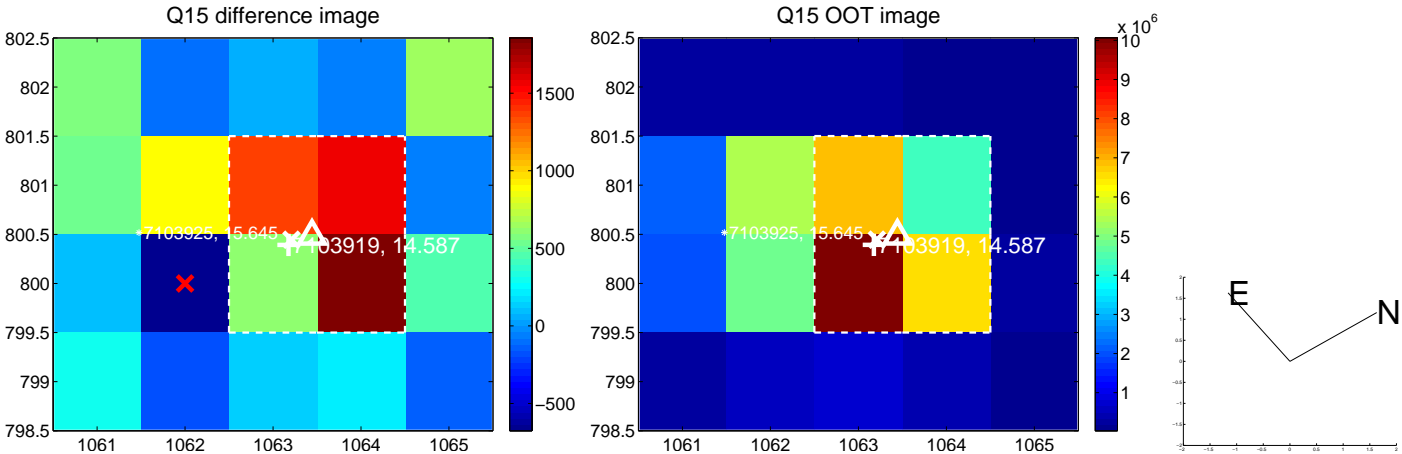
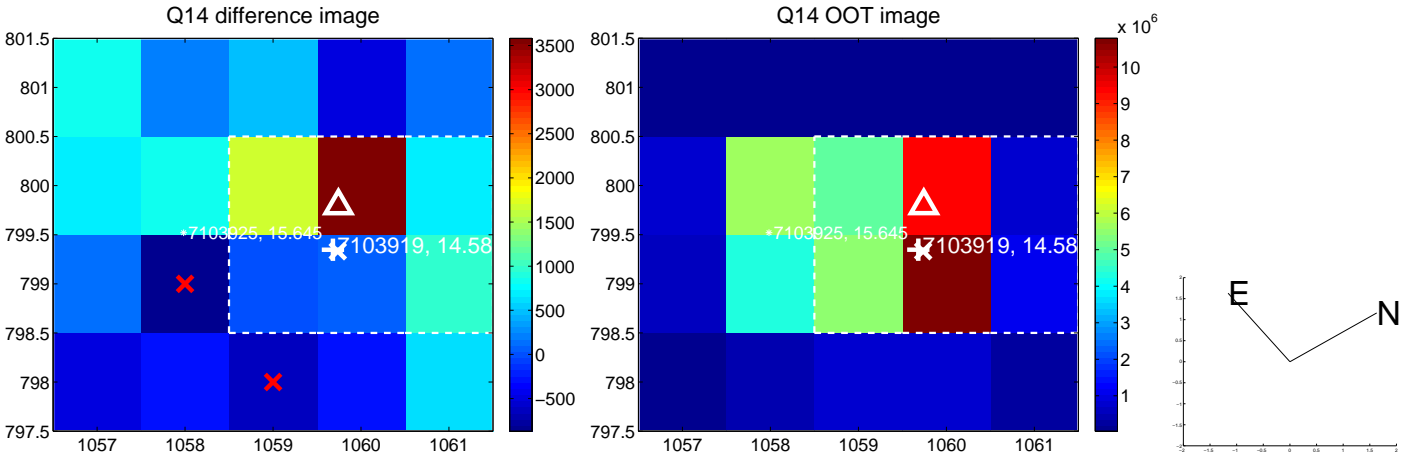
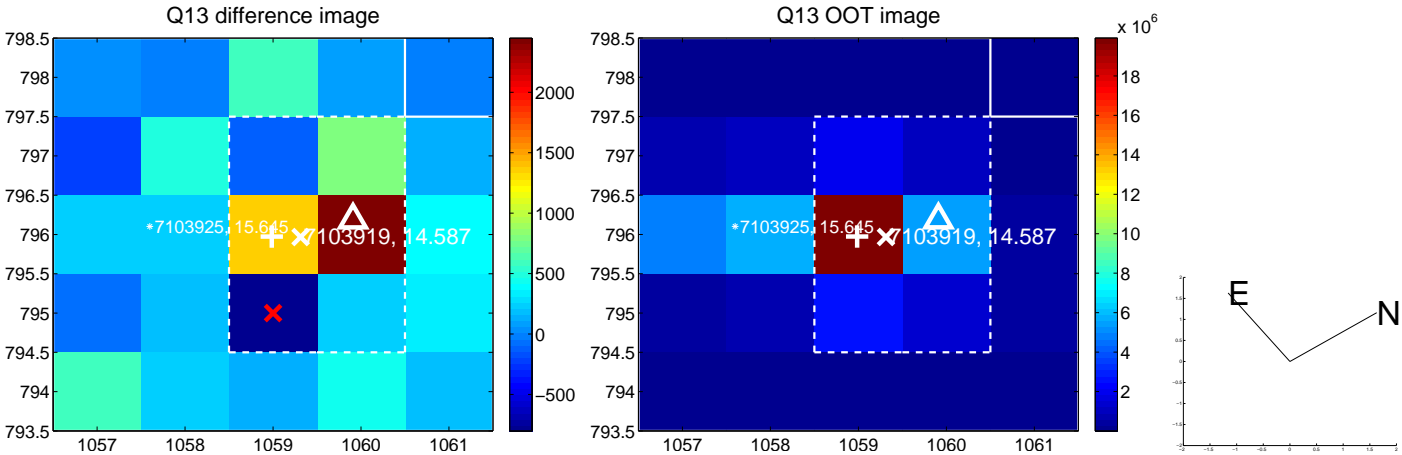
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



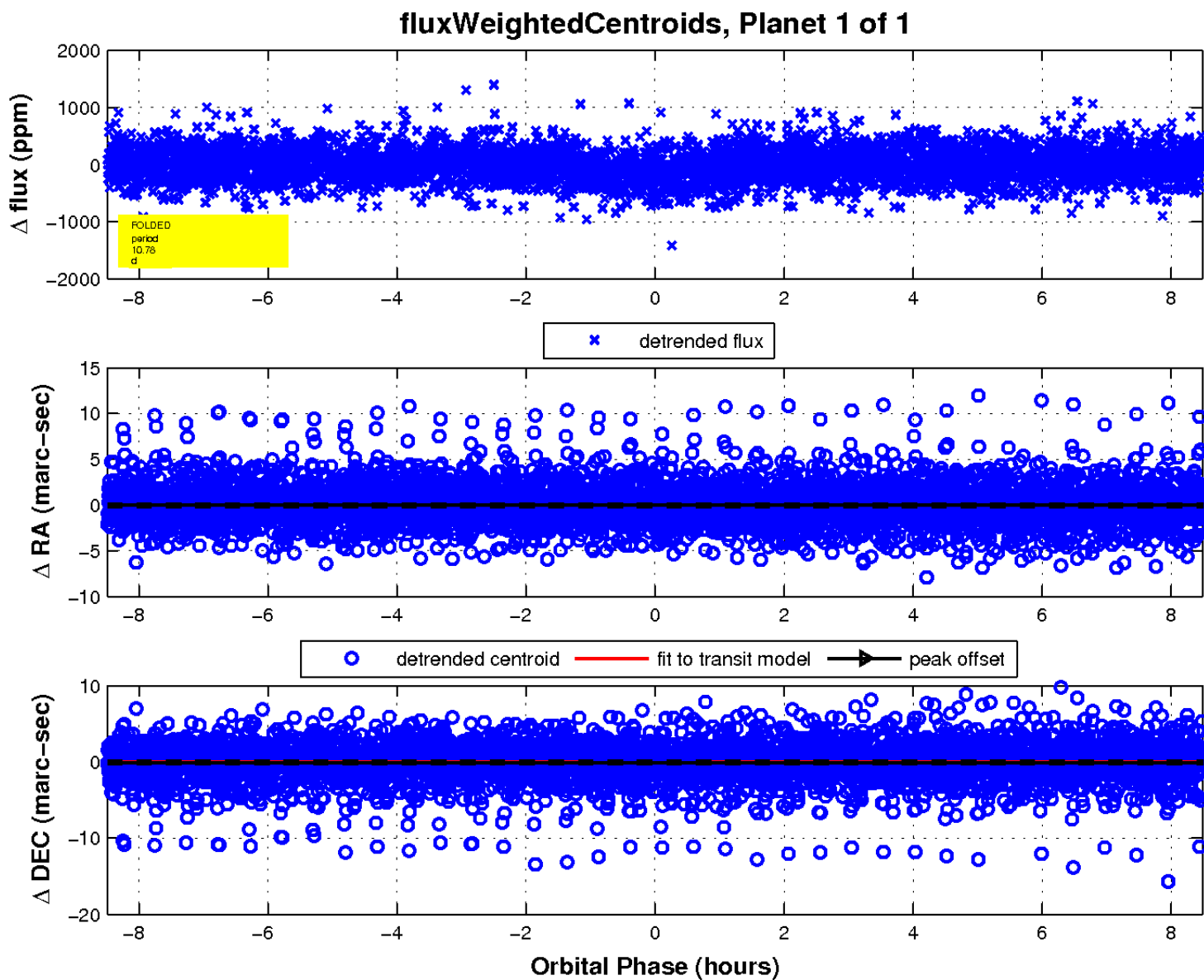
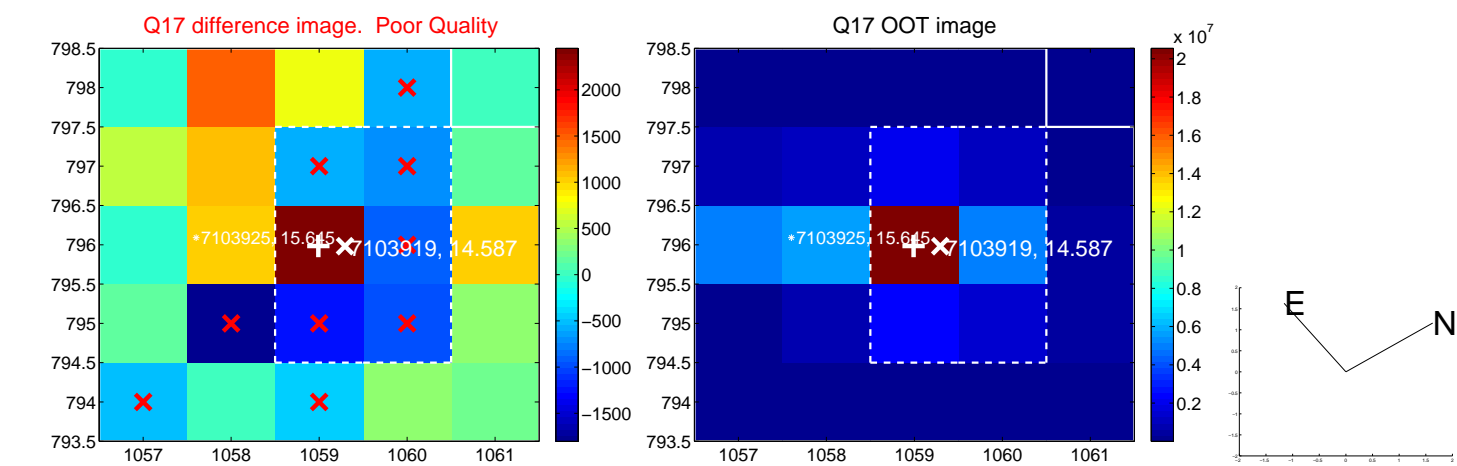
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UKIRT Image

Declination

