

KIC 008676148

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})
008676148-01	OBS	2544.01	28.625445	158.116766	655.9	4.838	14.6	15.2	0.94	5774	2.72	25.60

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008676148-01	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 008676148-01

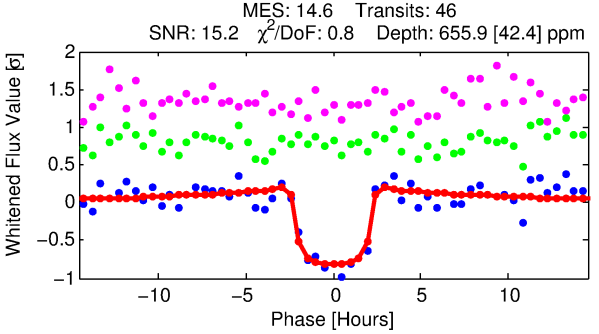
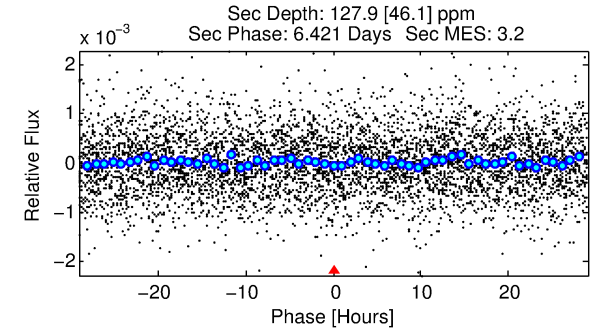
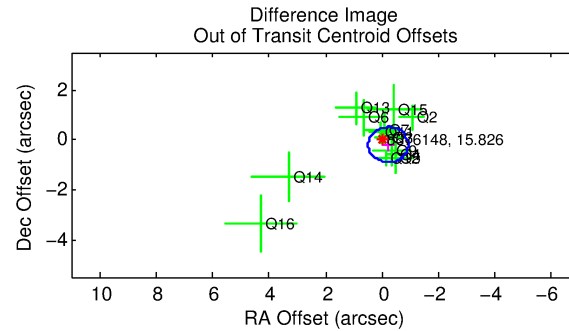
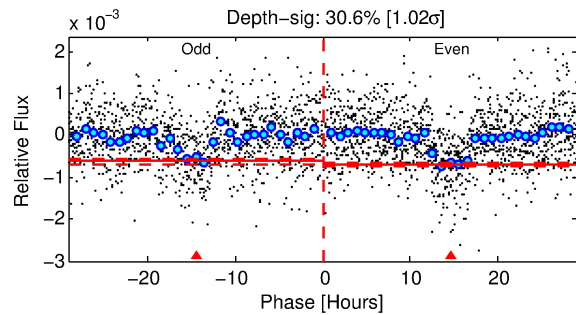
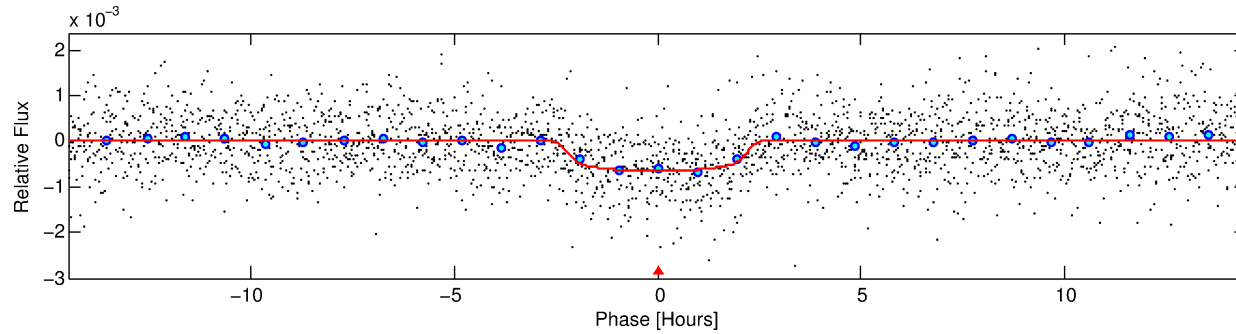
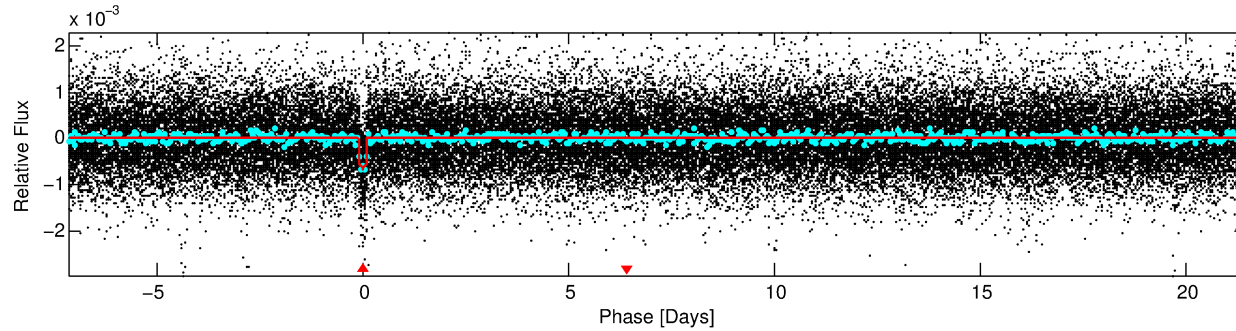
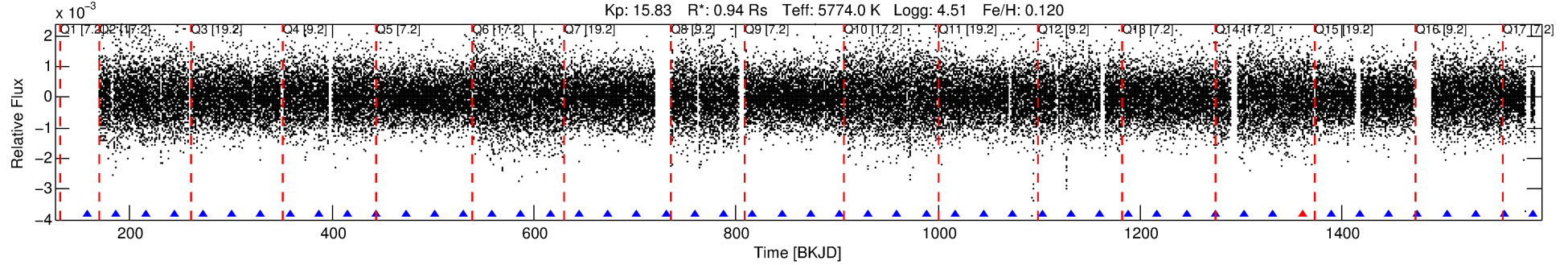
No Significant Match Found

DV One-Page Summary

KIC: 8676148 Candidate: 1 of 1 Period: 28.625 d

KOI: K02544.01 Corr: 0.974

Kp: 15.83 R*: 0.94 Rs Teff: 5774.0 K Logg: 4.51 Fe/H: 0.120



DV Fit Results:

Period = 28.62545 [0.00019] d
Epoch = 158.1168 [0.0054] BKJD
Rp/R* = 0.0264 [0.0060]
a/R* = 27.53 [26.99]
b = 0.83 [0.38]
Seff = 25.60 [10.07]
Teq = 574 [56] K
Rp = 2.72 [1.02] Re
a = 0.1856 [0.0470] AU
Ag = 328.69 [225.80] [1.45σ]
Teffp = 3776 [559] K [5.70σ]

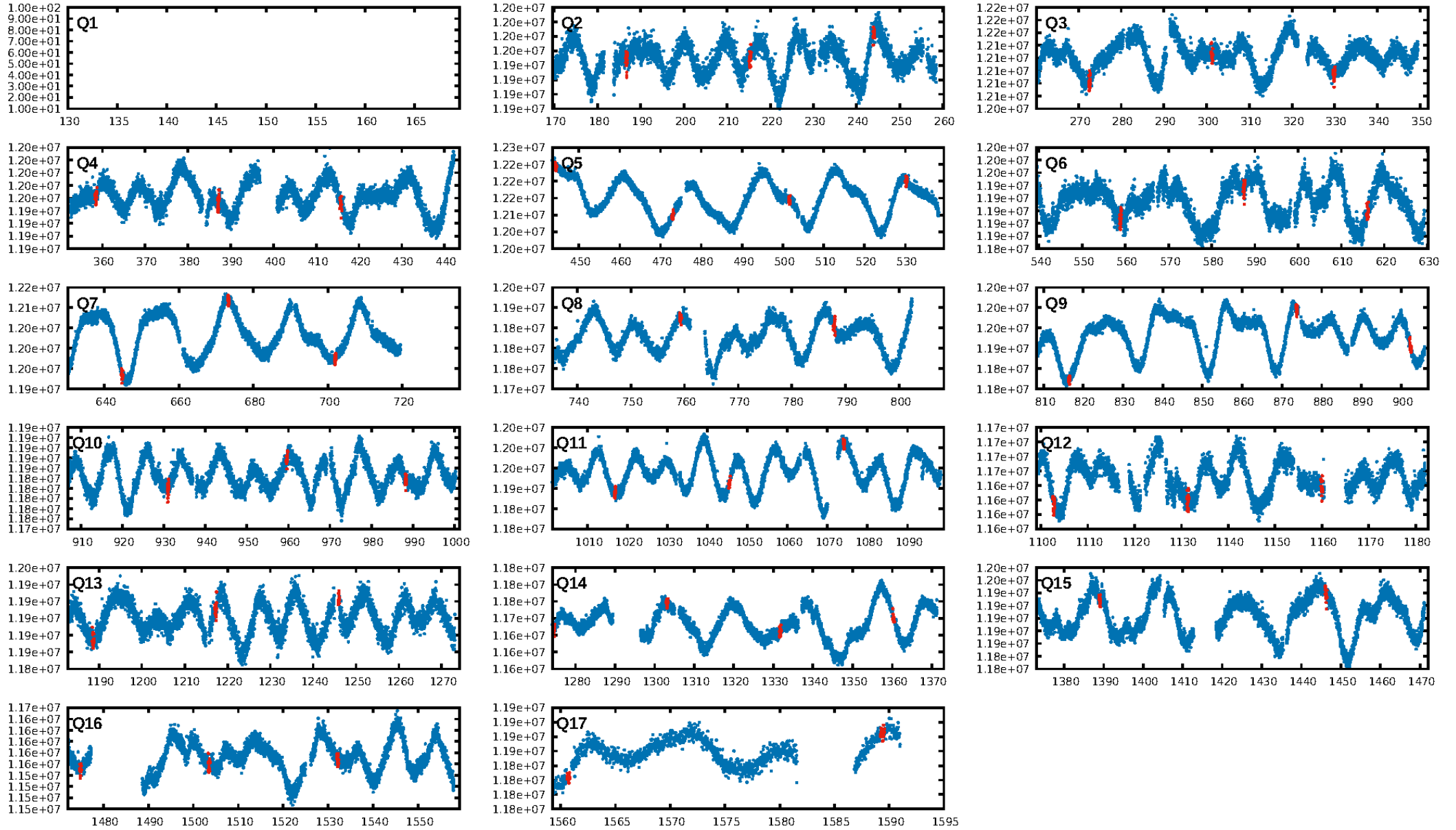
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 59.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 4.21e-44
RollingBand-fgt: 0.98 [43/44]
GhostDiagnostic-chr: 1.815
Centroid-sig: 31.9%
Centroid-so: 0.746 arcsec [0.79σ]
OotOffset-rm: 0.295 arcsec [1.26σ]
KicOffset-rm: 0.343 arcsec [1.36σ]
OotOffset-st: 3/4/3/3 [13]
KicOffset-st: 3/4/3/3 [13]
DiffImageQuality-fgm: 0.62 [8/13]
DiffImageOverlap-fno: 1.00 [16/16]

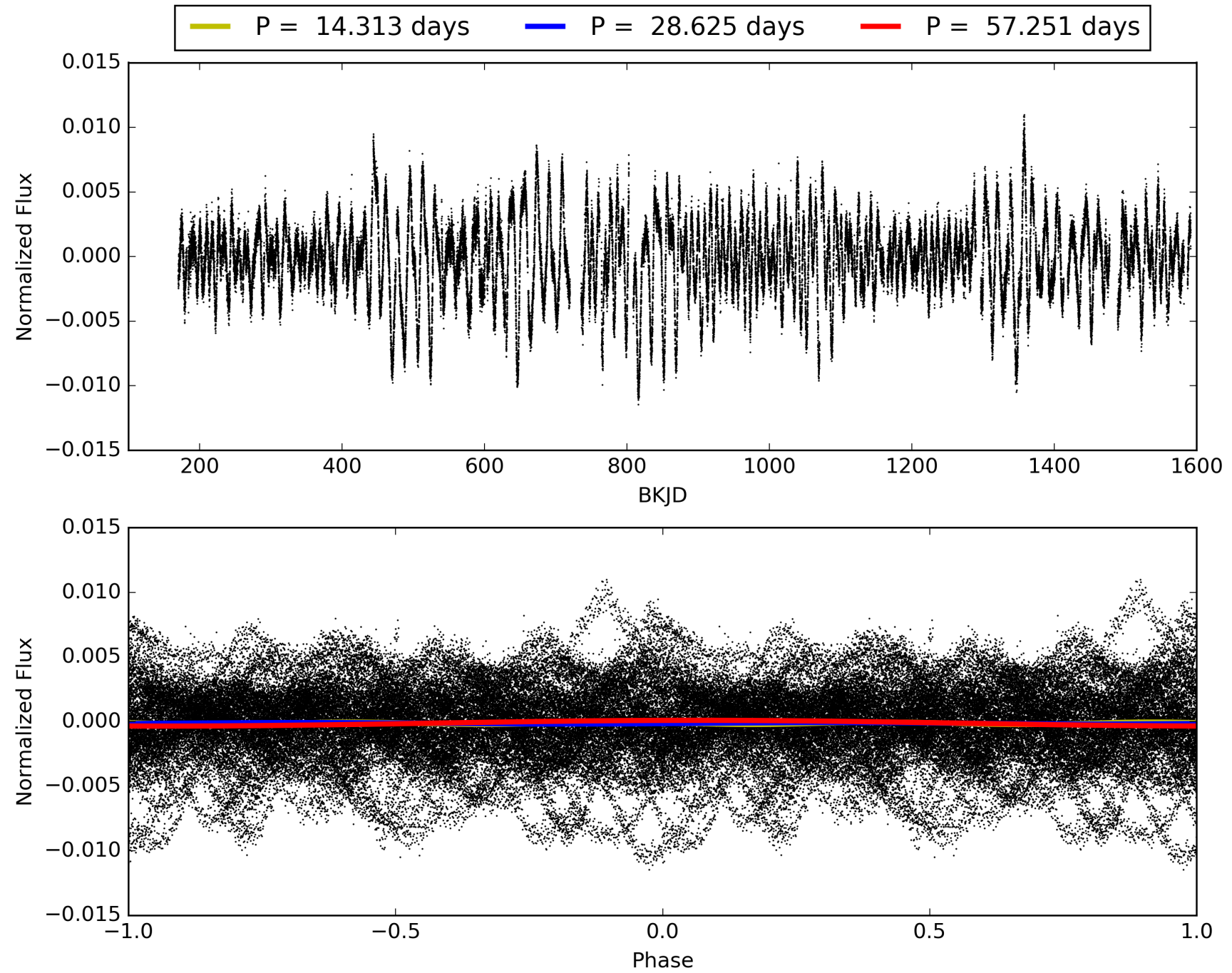
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 21:01:17 Z

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

TCE 008676148-01, PDC Light Curves

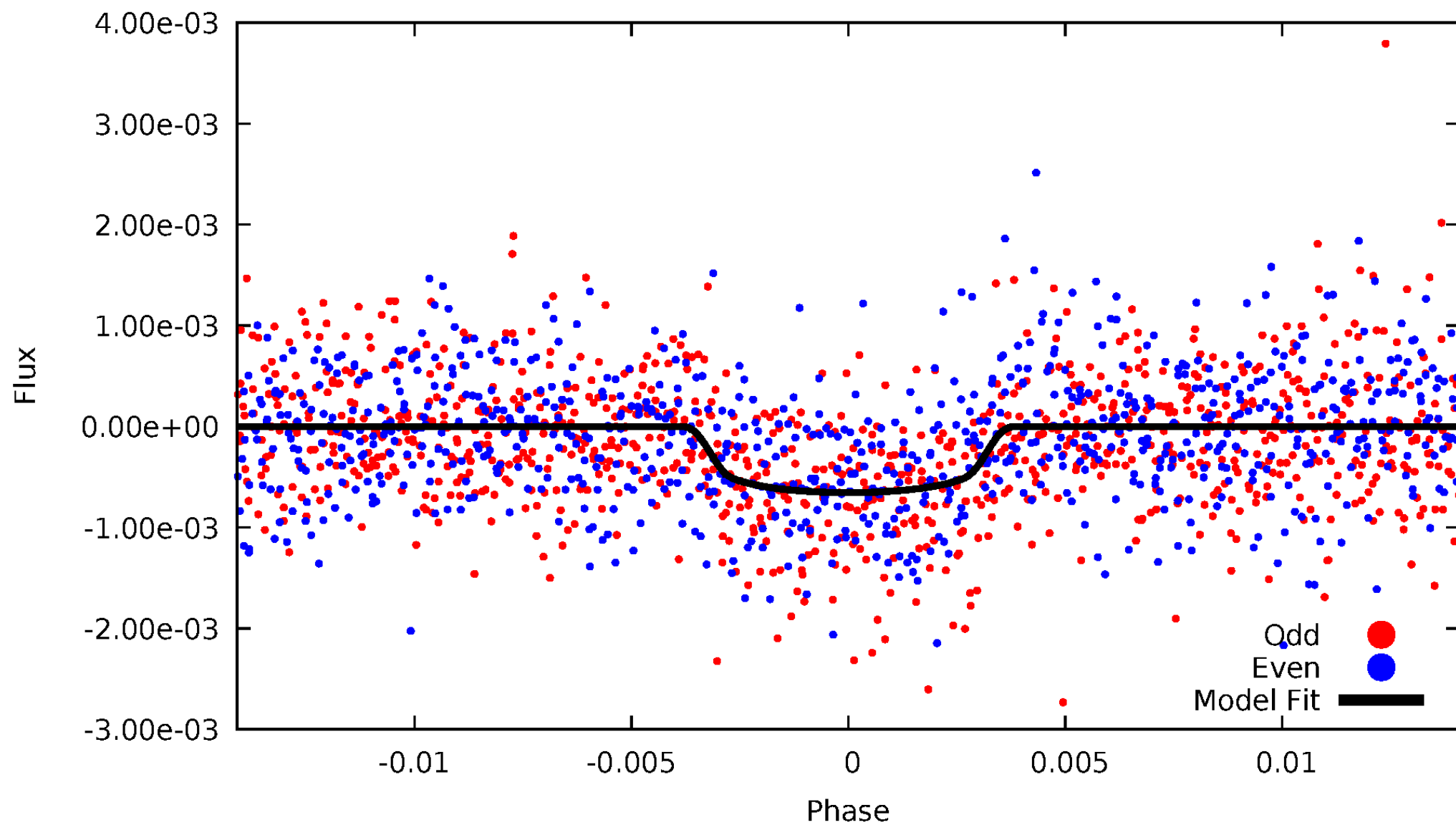


TCE 008676148-01



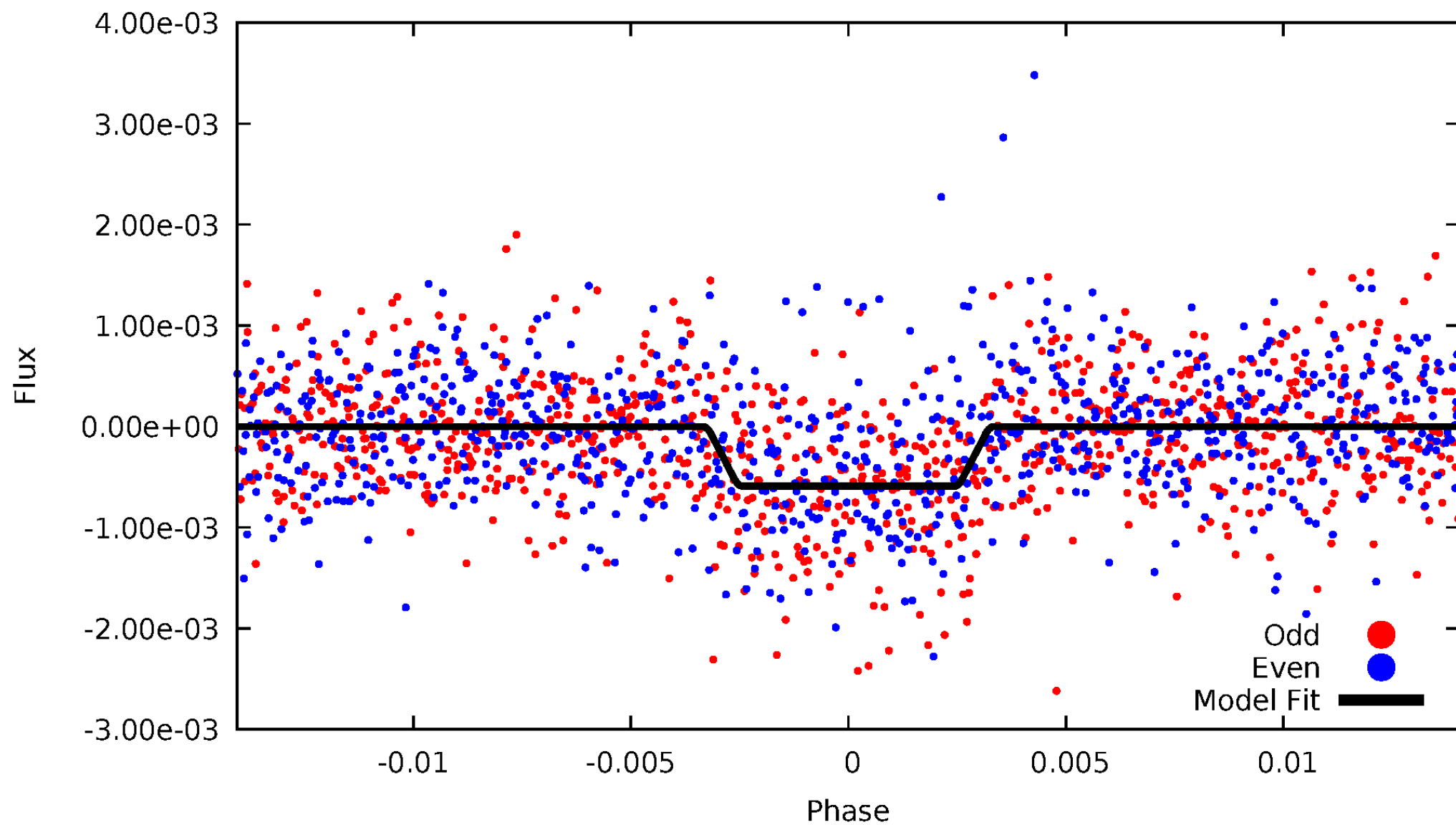
DV Odd/Even

TCE 008676148-01



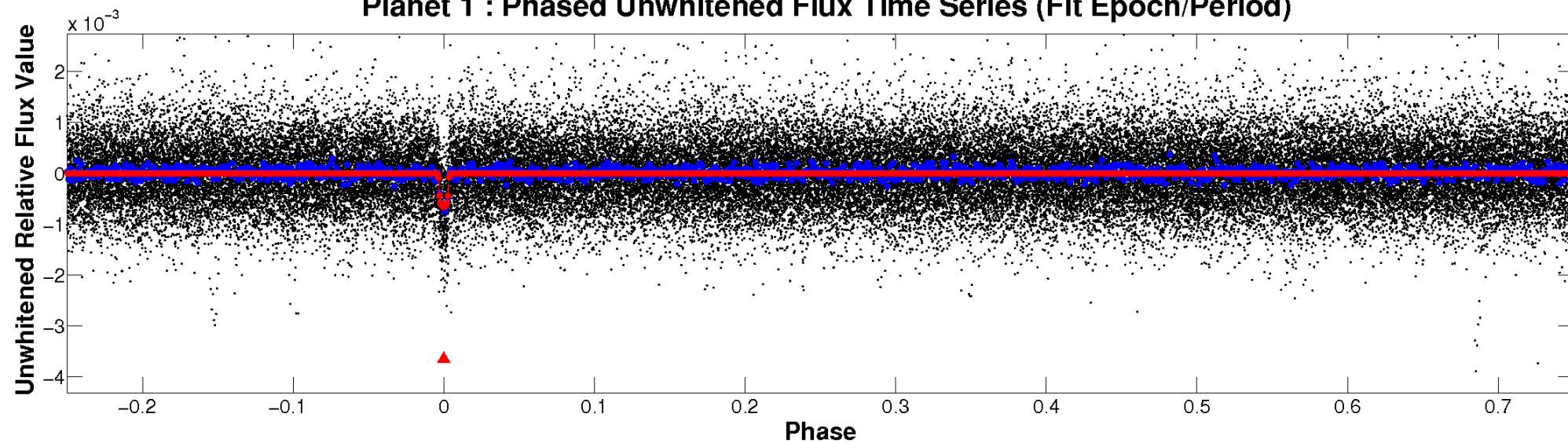
ALT Odd/Even

TCE 008676148-01

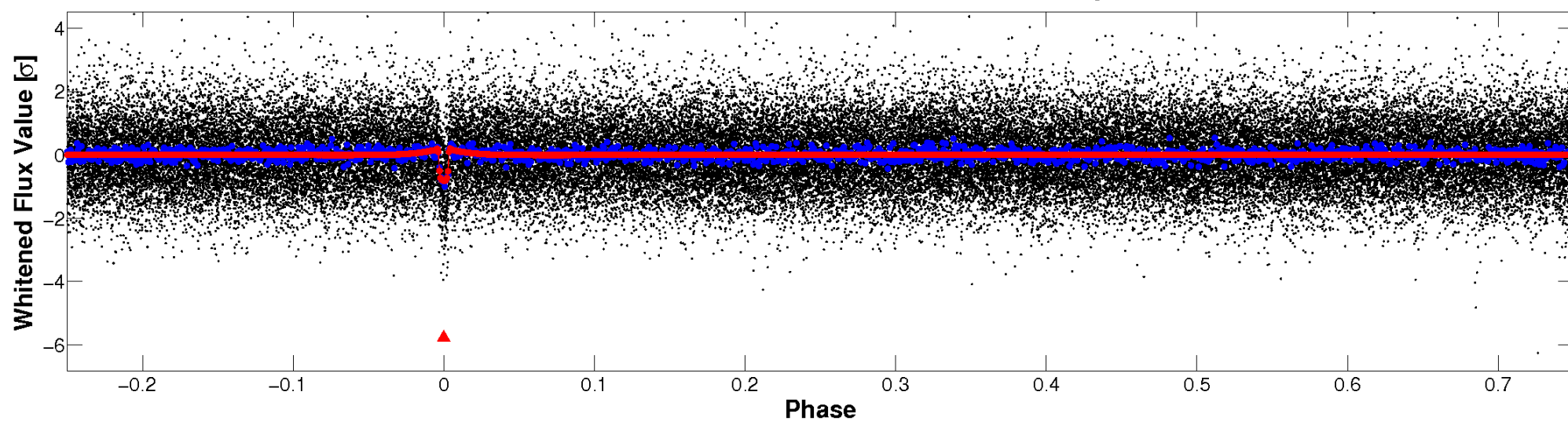


Non-Whitened Vs. Whitened Light Curve

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

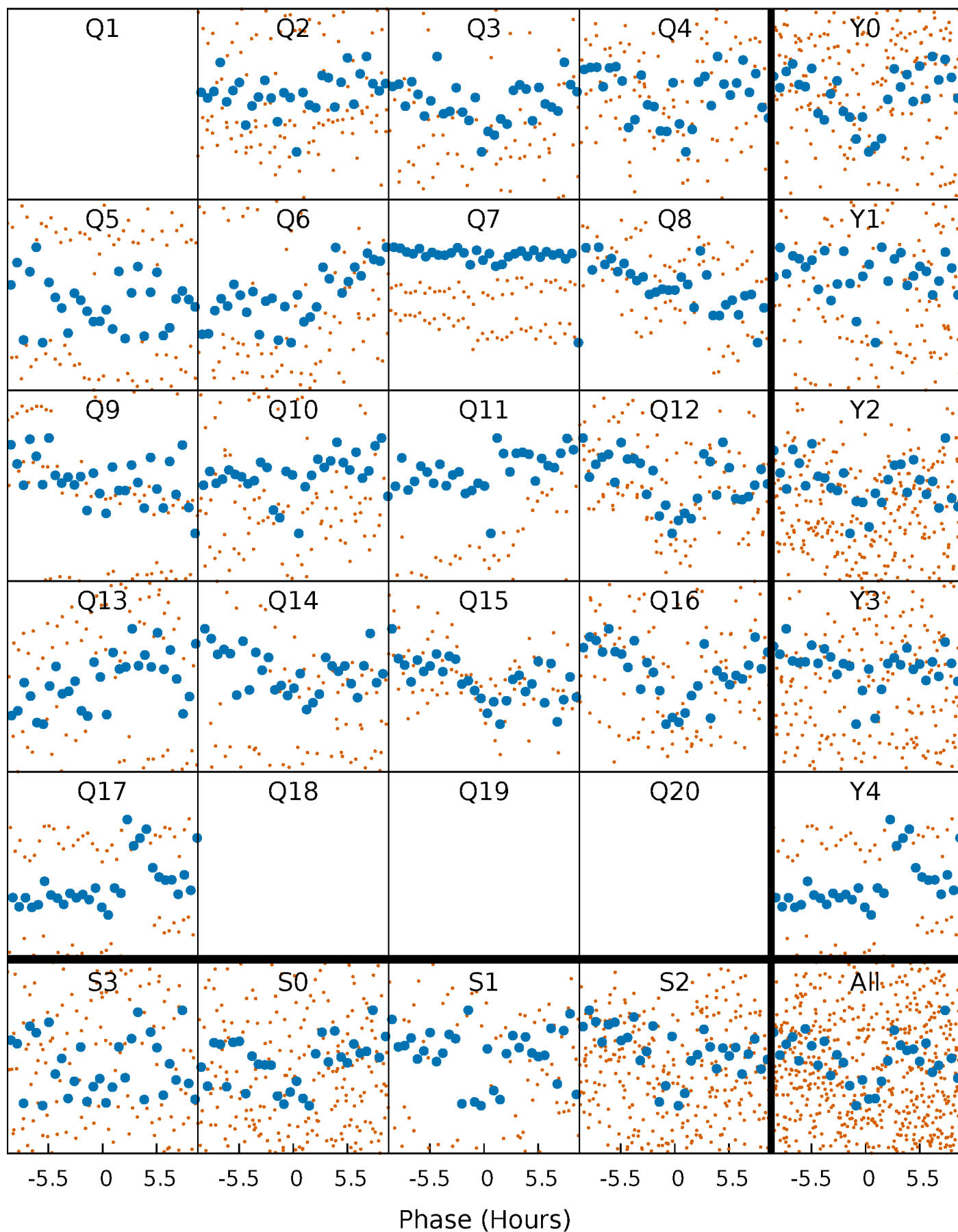


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



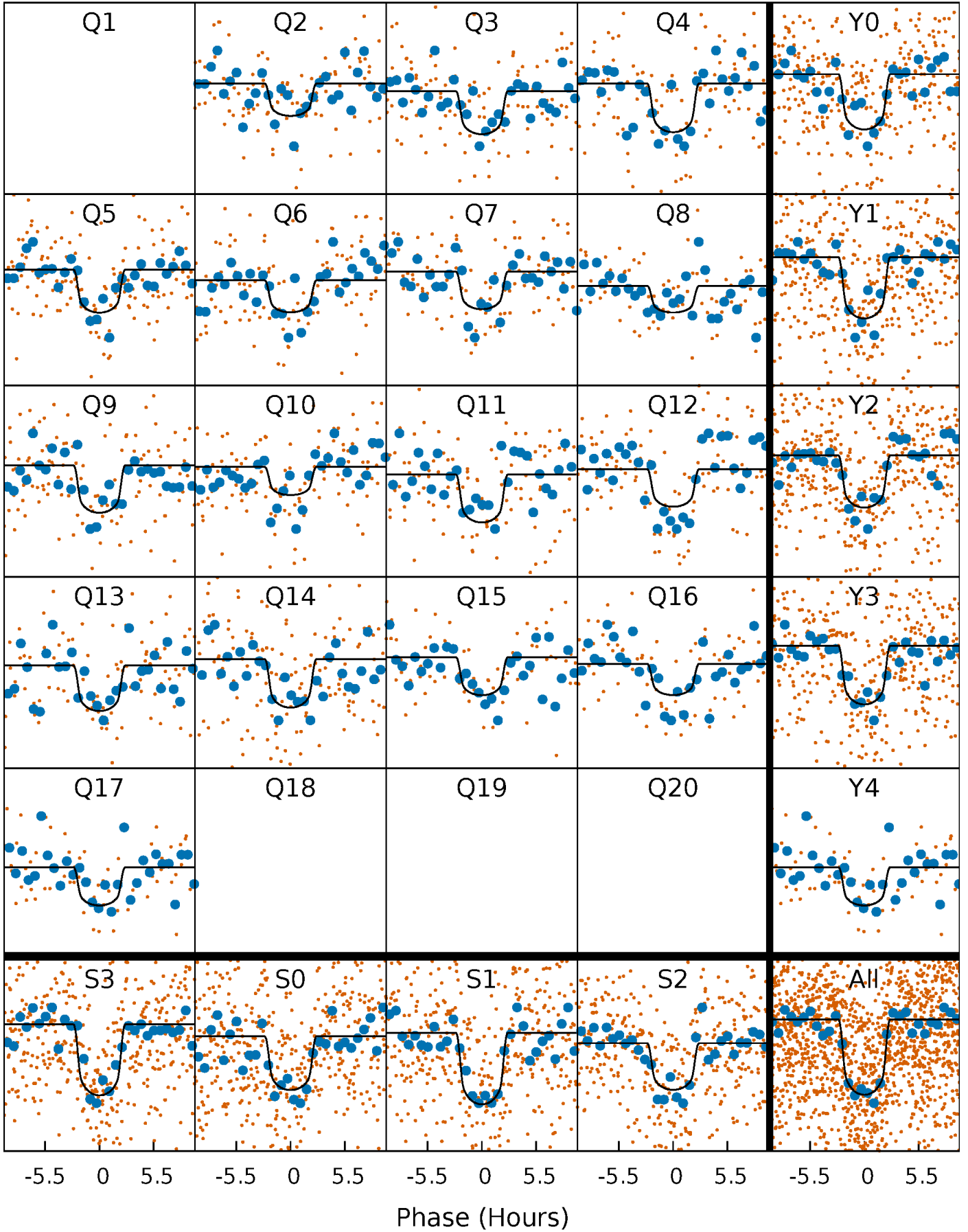
PDC Quarter-Phased Transit Curves

TCE 008676148-01 P= 28.625445 Days $T_0=158.116766$ (BKJD)



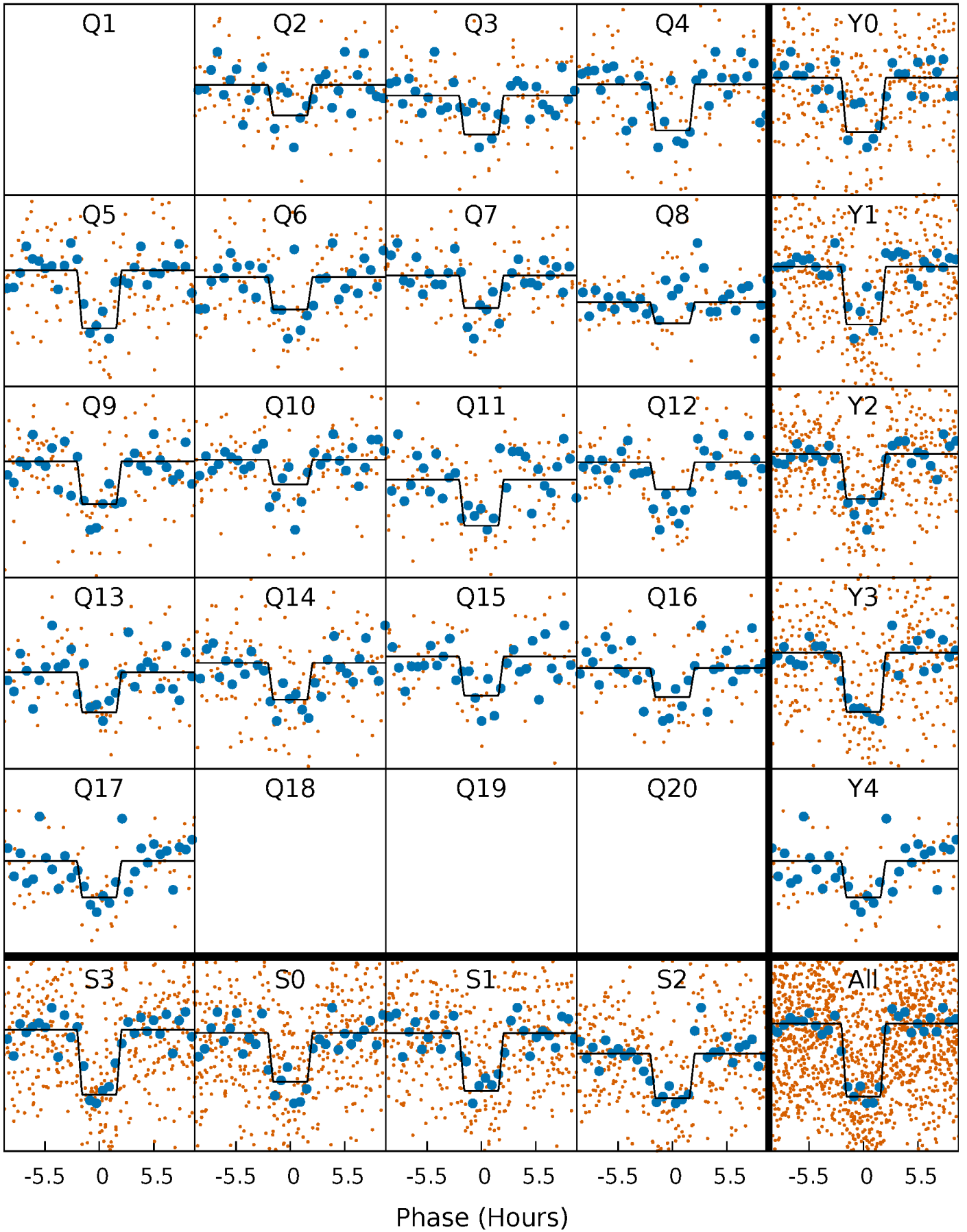
DV Quarter-Phased Transit Curves

TCE 008676148-01 P= 28.625445 Days $T_0=158.116766$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

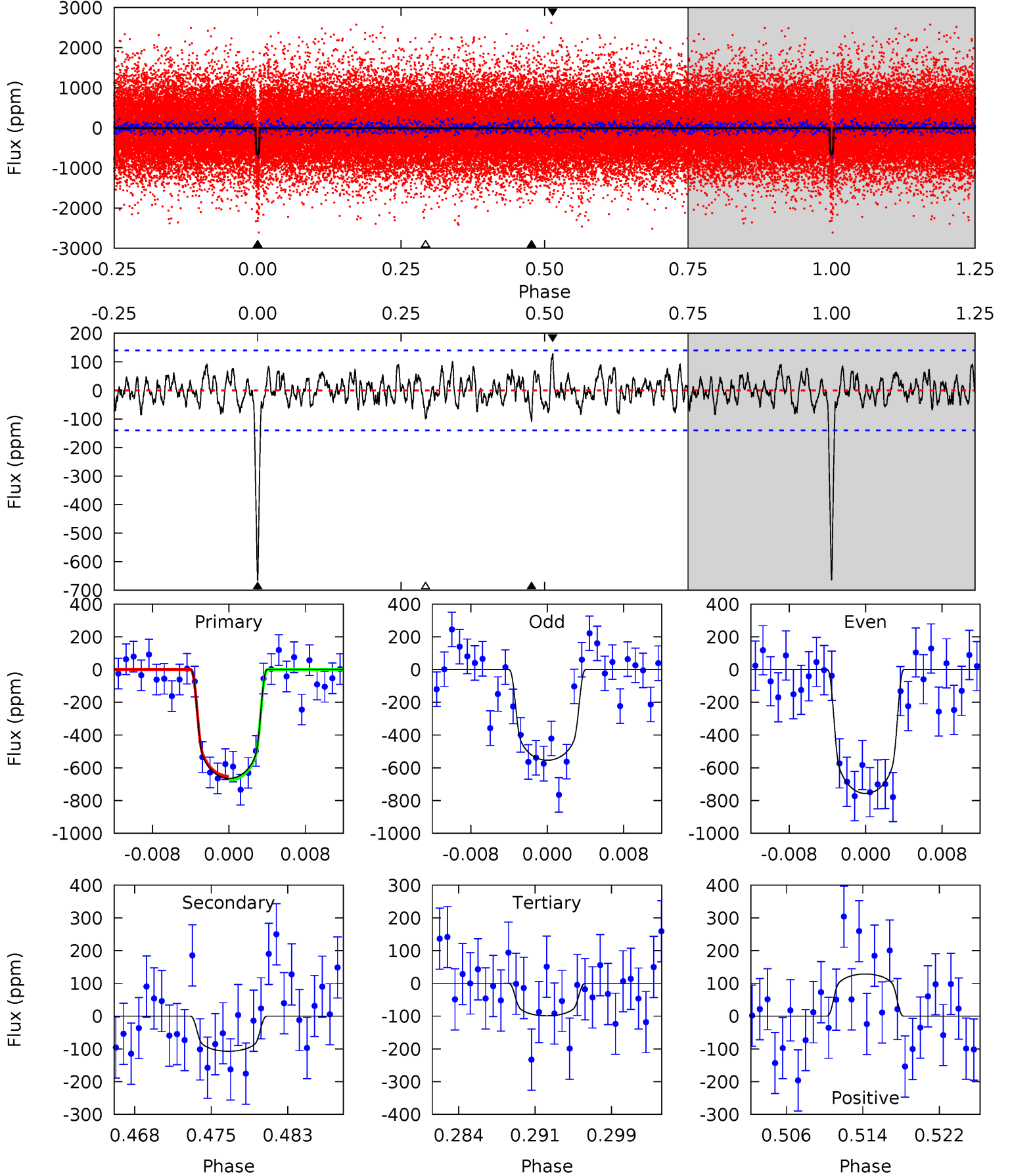
TCE 008676148-01 P= 28.625632 Days $T_0=158.114052$ (BKJD)



DV Model-Shift Uniqueness Test

008676148-01, $P = 28.625445$ Days, $E = 158.116766$ Days

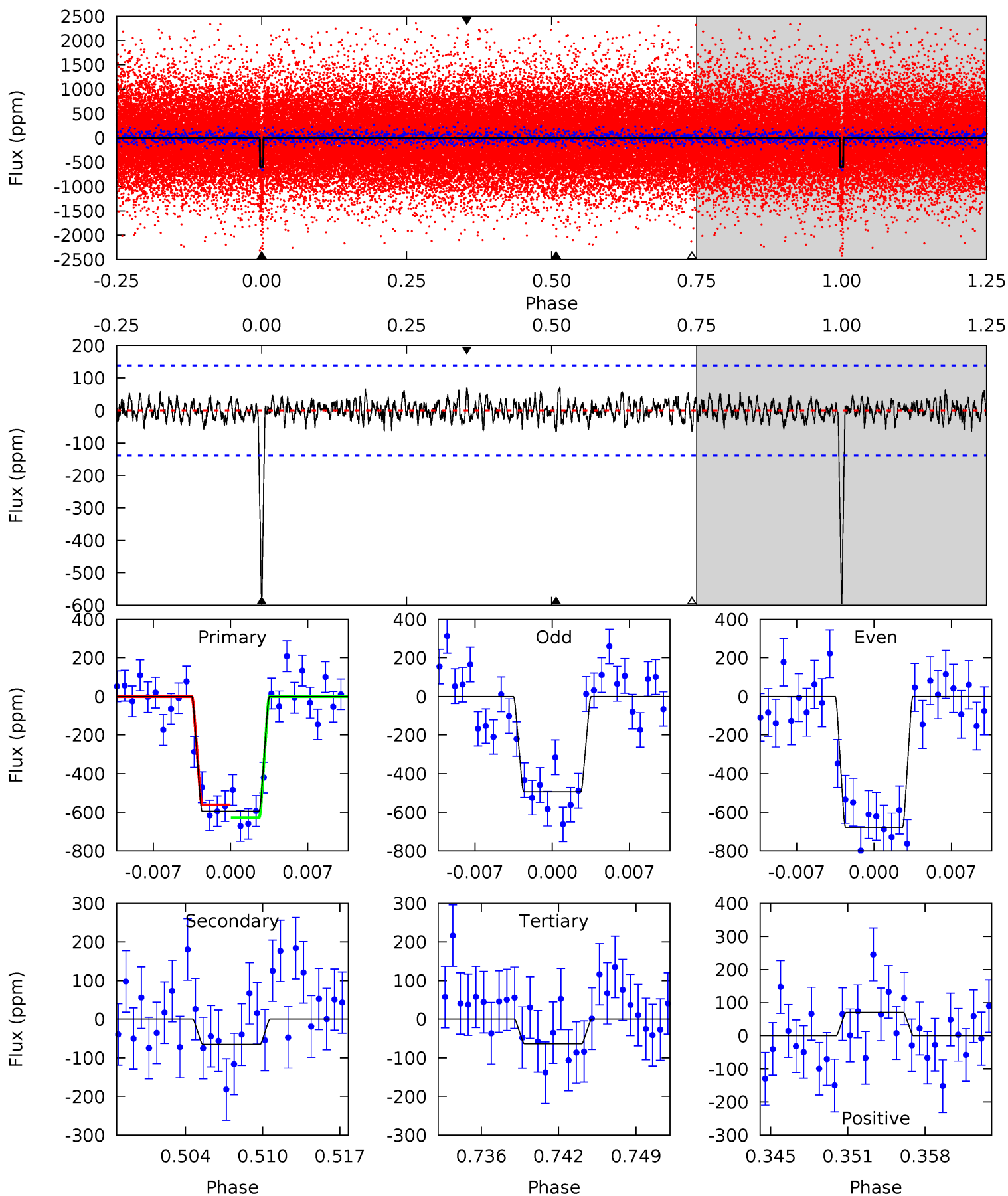
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.1	3.89	3.60	4.67	5.08	2.67	1.36	20.5	19.4	0.30	-0.78	3.67	1.10	0.16	0.44



Alt Model-Shift Uniqueness Test

008676148-01, P = 28.625632 Days, E = 158.114052 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.8	2.39	2.33	2.57	5.10	2.72	0.84	19.5	19.3	0.06	-0.19	3.40	0.91	0.11	1.24



Stellar Parameters For KIC 008676148

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5774^{+154}_{-188}	$4.508^{+0.036}_{-0.204}$	$0.120^{+0.200}_{-0.300}$	$0.941^{+0.281}_{-0.088}$	$1.038^{+0.110}_{-0.122}$	$1.755^{+0.349}_{-0.900}$
	+3%/-3%	+1%/-5%	+167%/-250%	+30%/-9%	+11%/-12%	+20%/-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 008676148-01 / KOI 2544.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-107 ± 28	$2.85^{+0.74}_{-0.71}$	820^{+57}_{-35}	3925^{+427}_{-308}	242^{+171}_{-101}
Alt.	-65 ± 27	$2.67^{+0.74}_{-0.69}$	820^{+63}_{-35}	3699^{+468}_{-387}	167^{+165}_{-85}

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

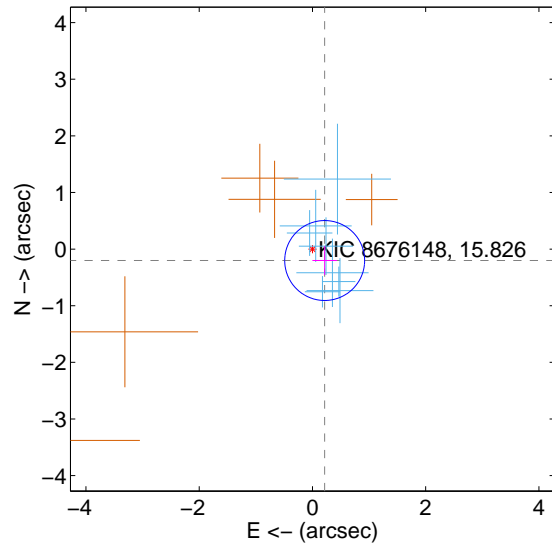
Supplemental centroid analysis for 008676148-01. Kepler magnitude: 15.83. Transit SNR 15.15

There are 8 quarters with good PRF difference image offsets

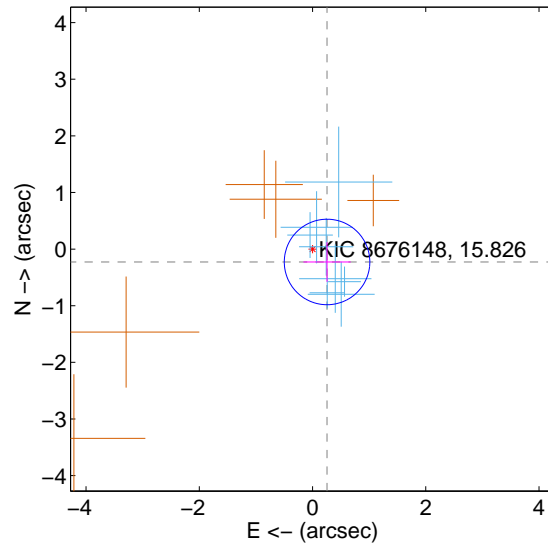
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.295 ± 0.235	1.26	-0.216 ± 0.216	-0.202 ± 0.255
PRF-fit source offset from KIC position	0.343 ± 0.252	1.36	-0.257 ± 0.418	-0.227 ± 0.350
photometric centroid source offset	0.75 ± 0.94	0.79	-0.45 ± 0.88	0.59 ± 0.97

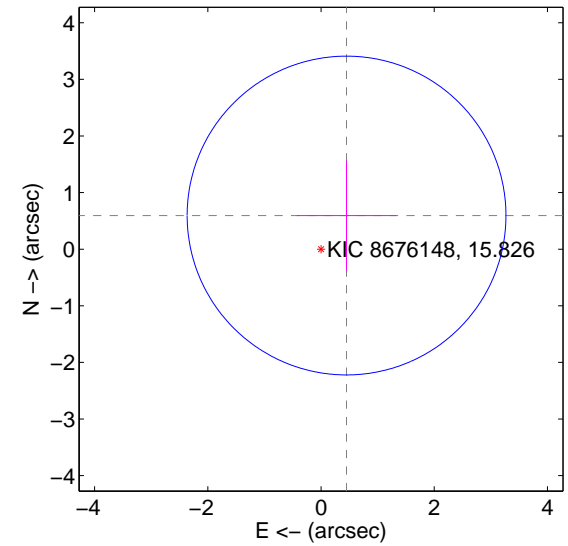
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

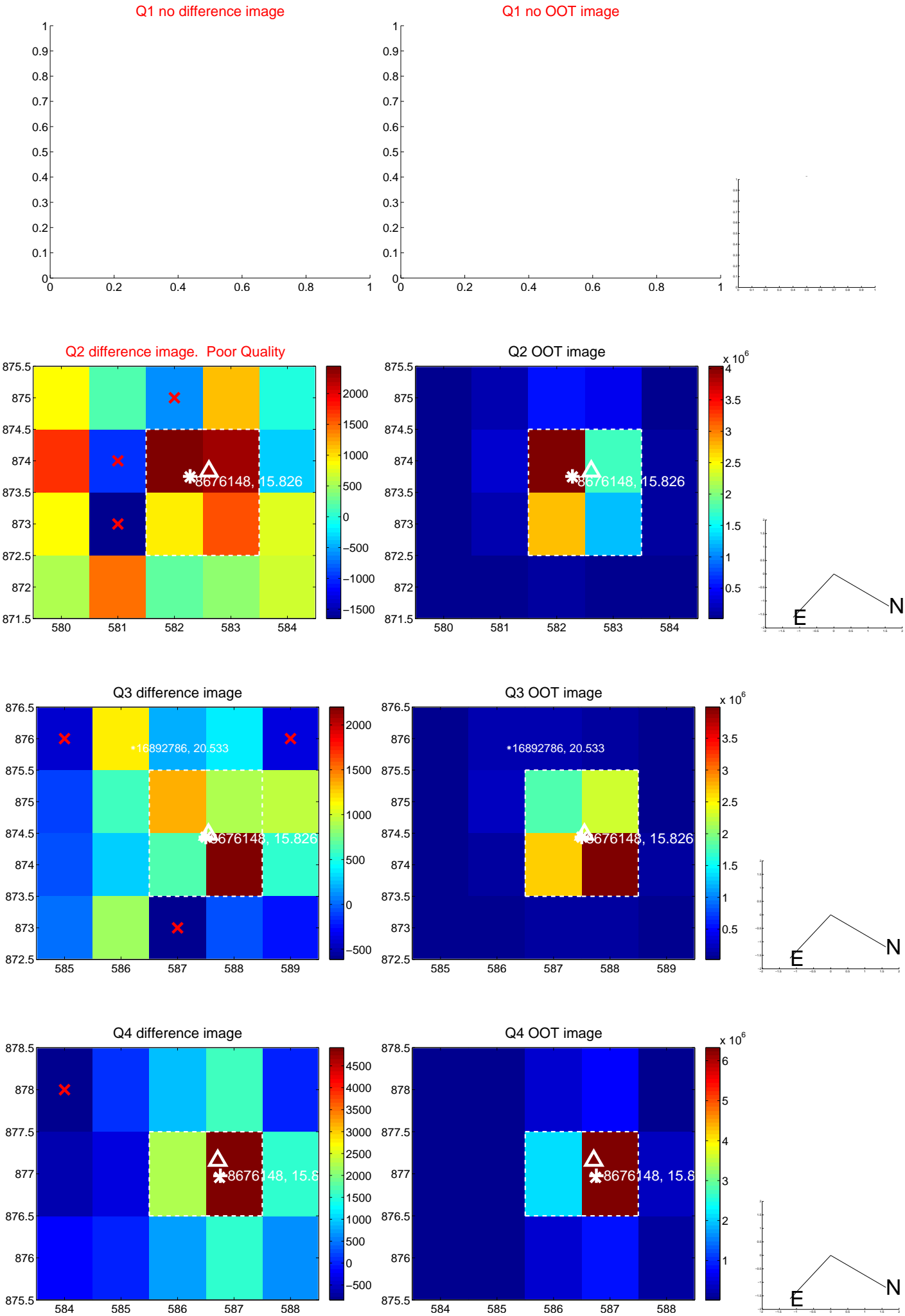


offset from photometric centroids

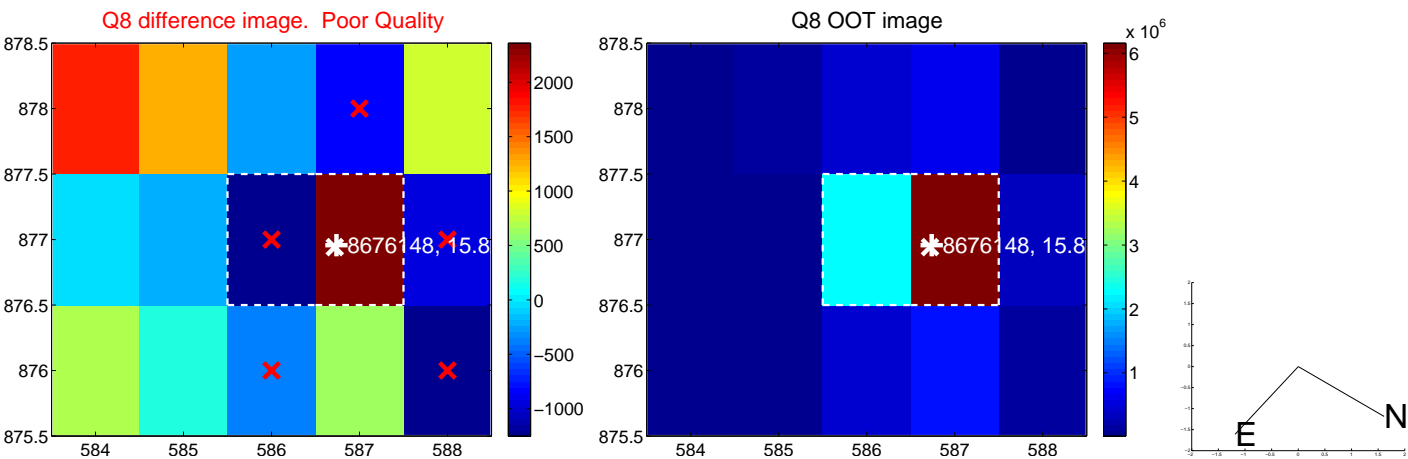
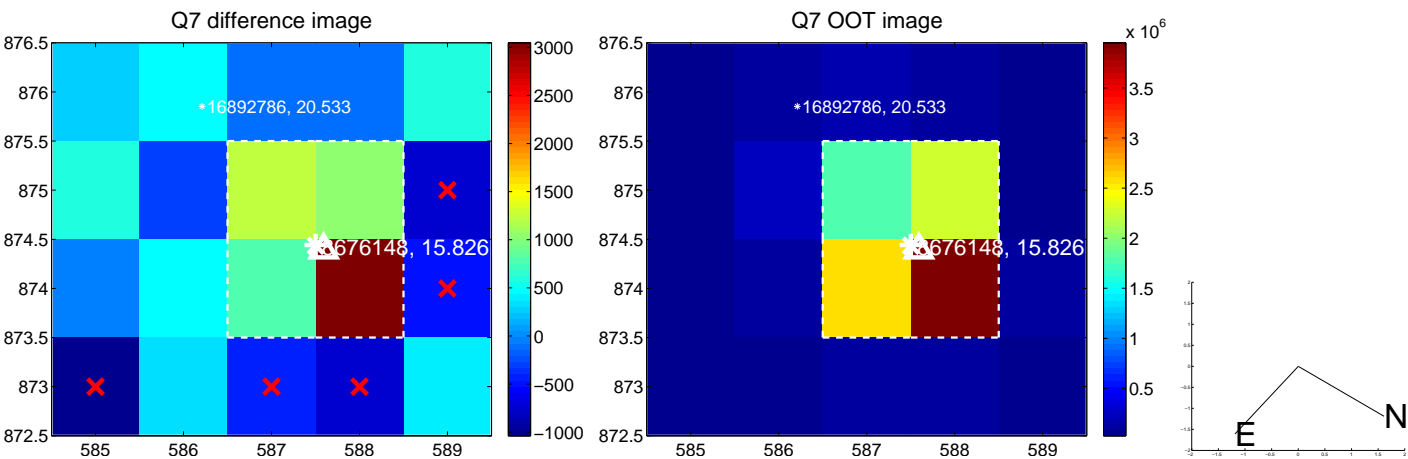
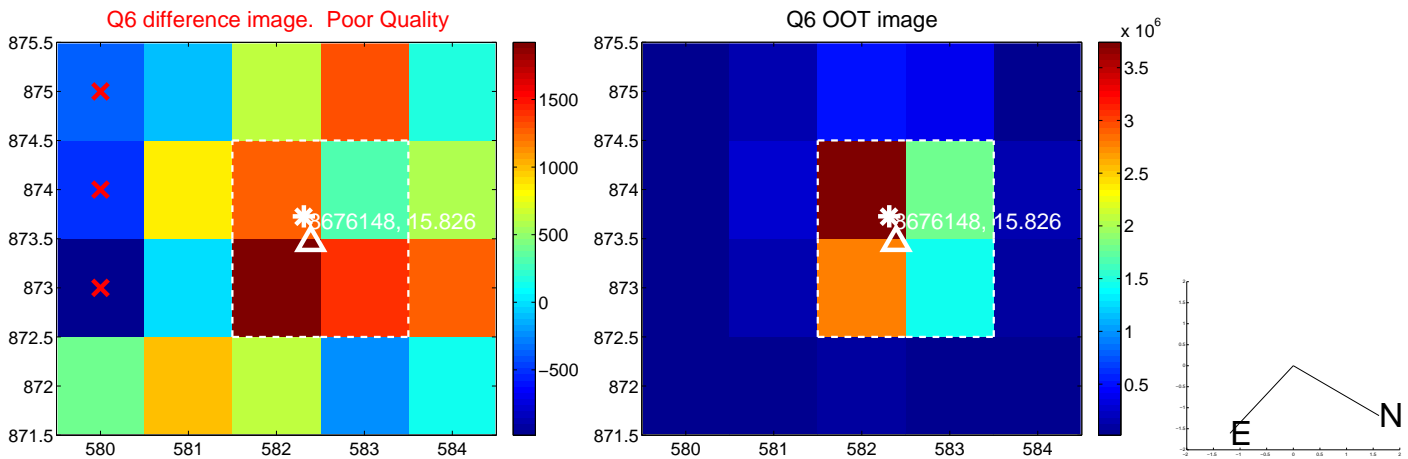
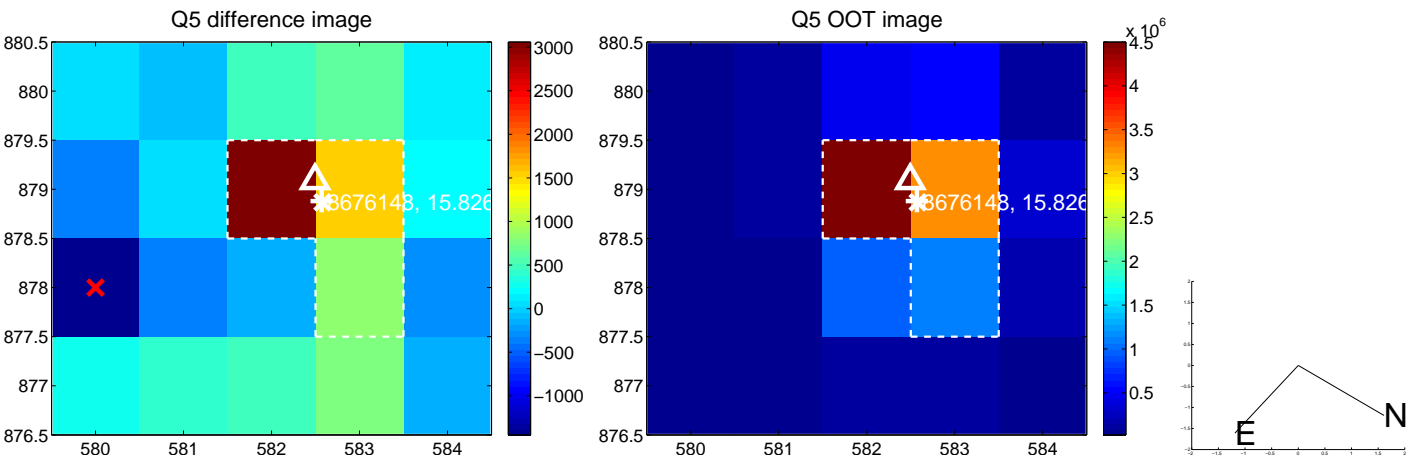


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

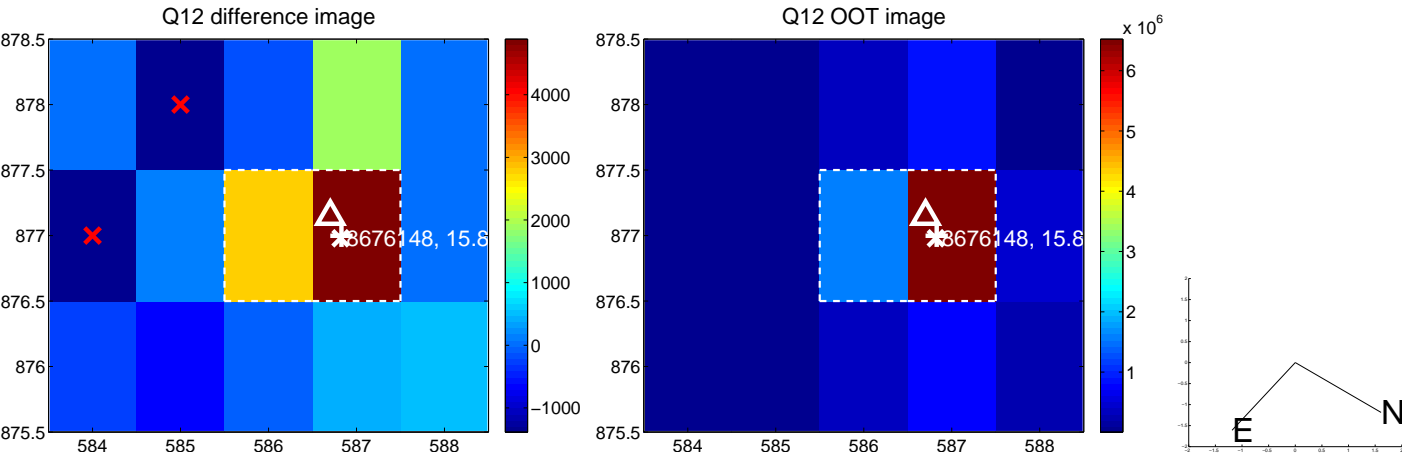
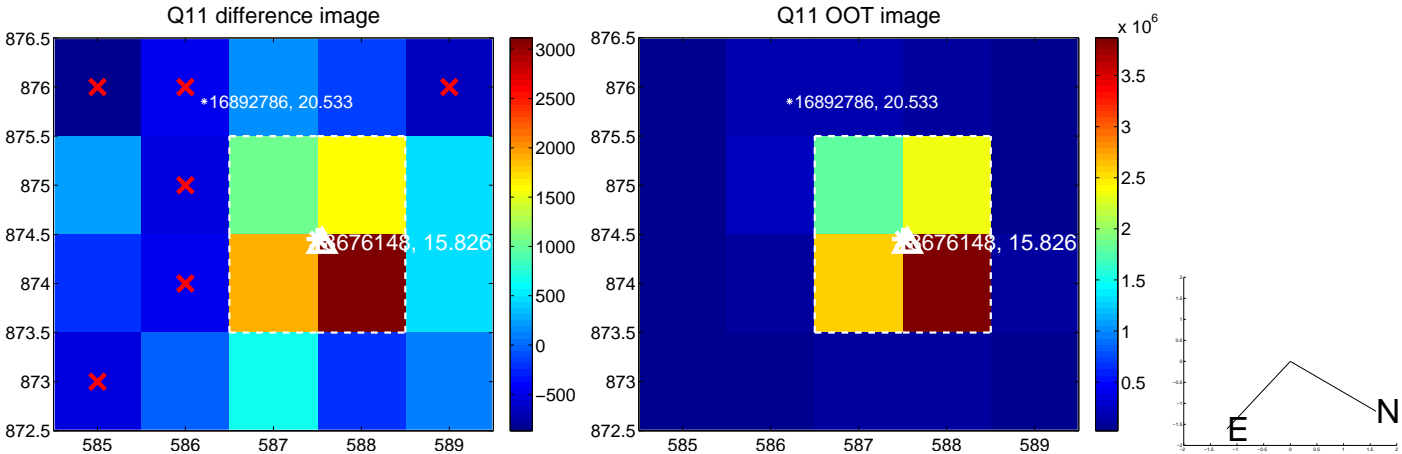
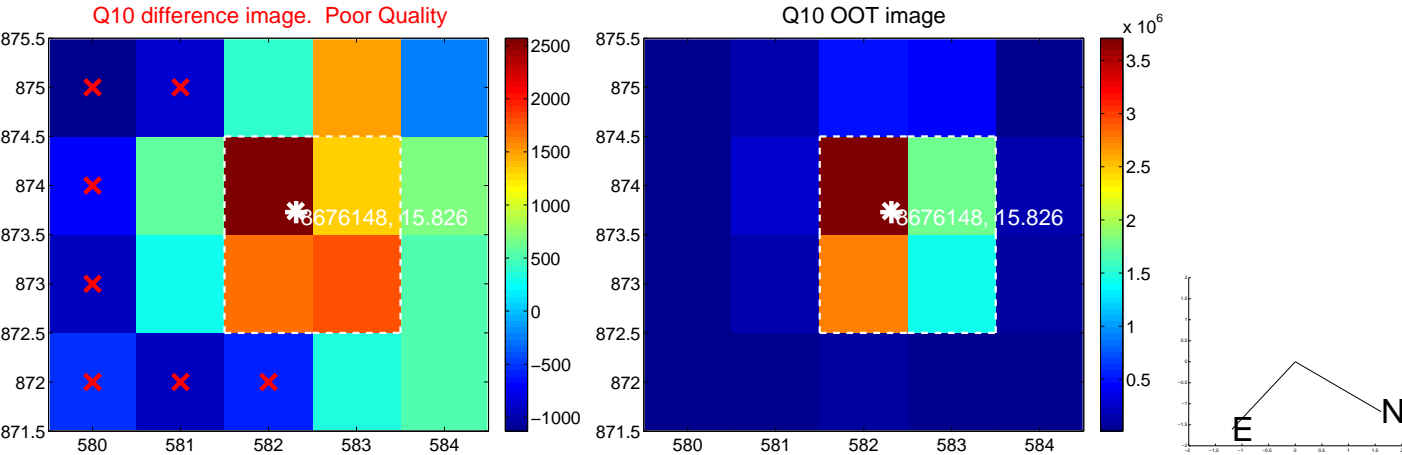
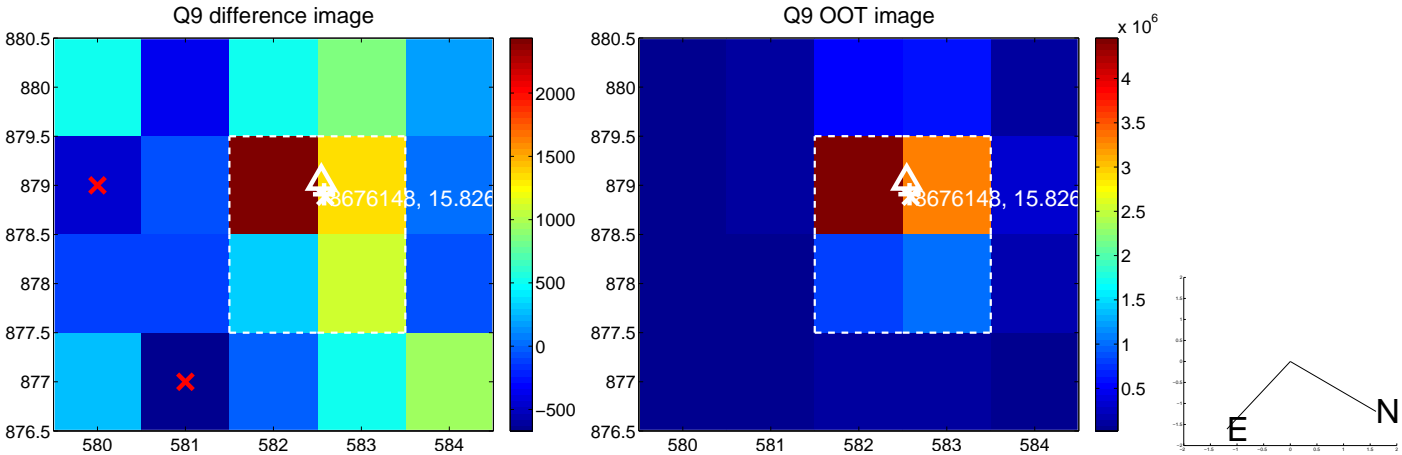
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



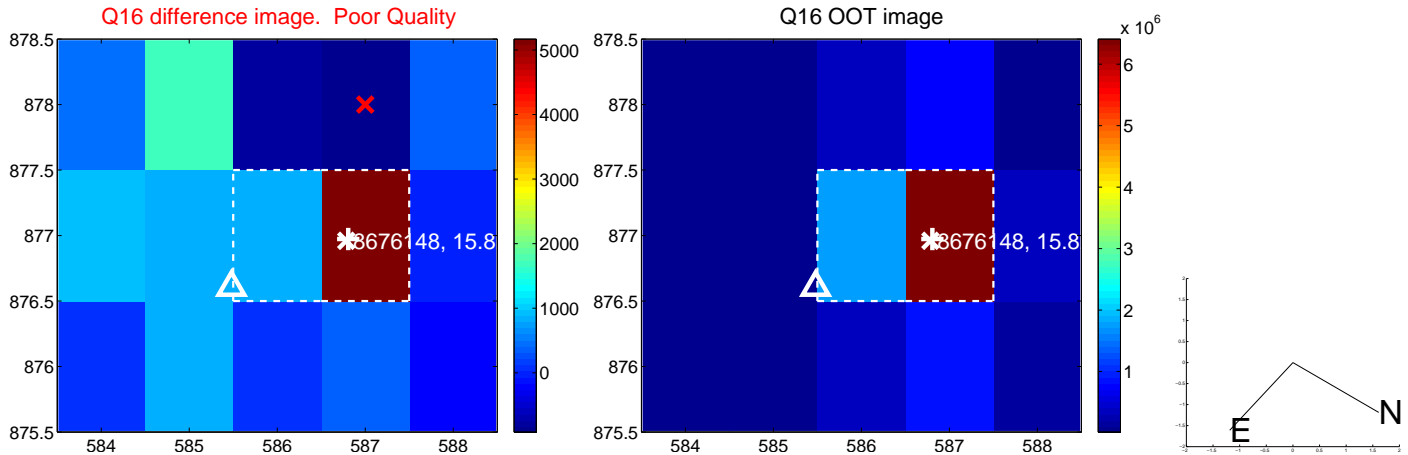
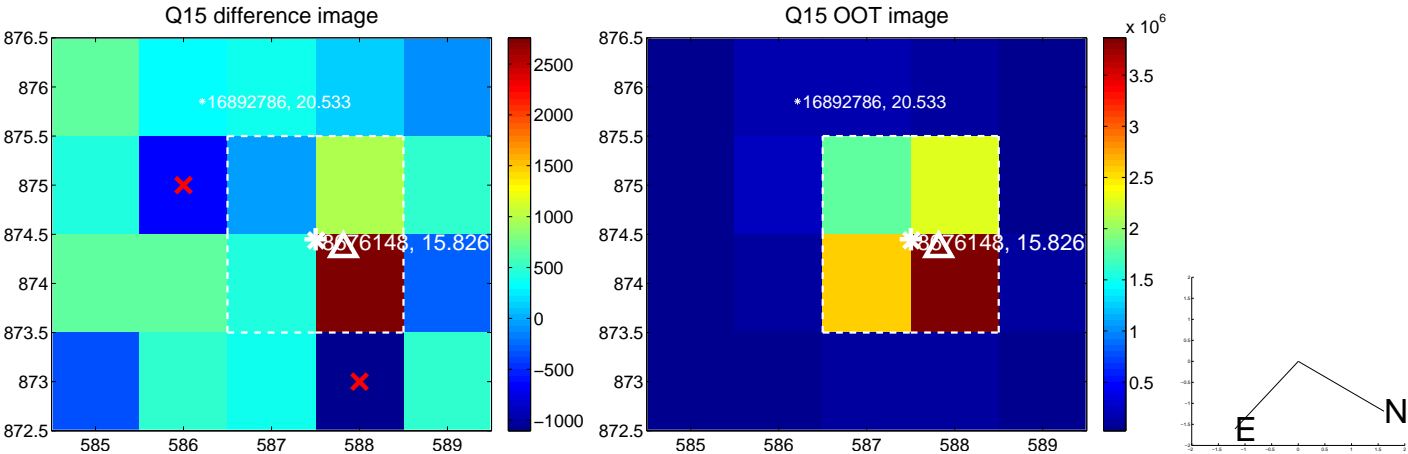
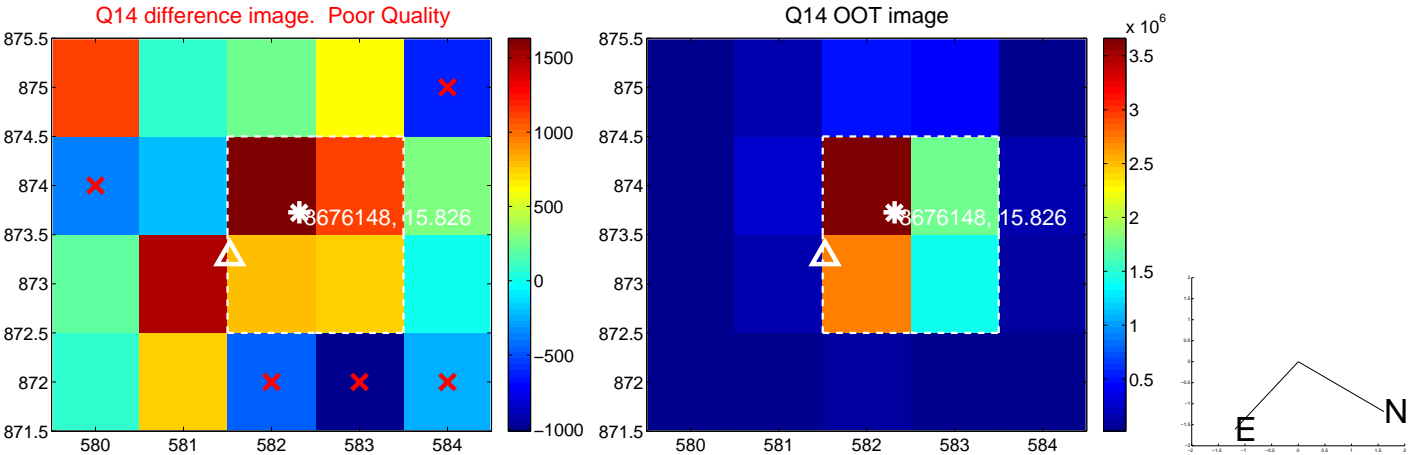
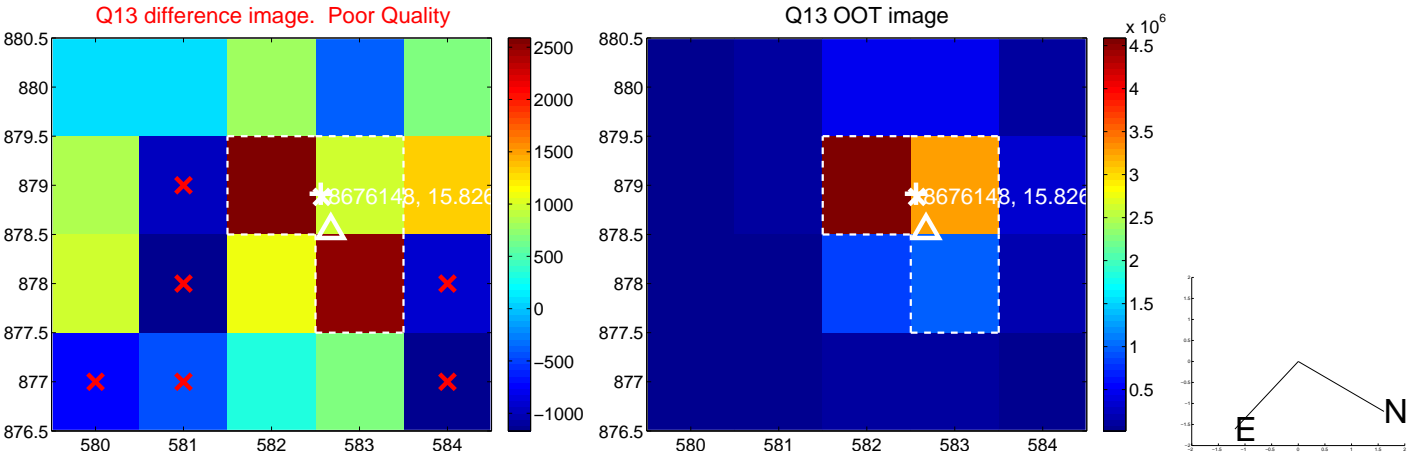
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



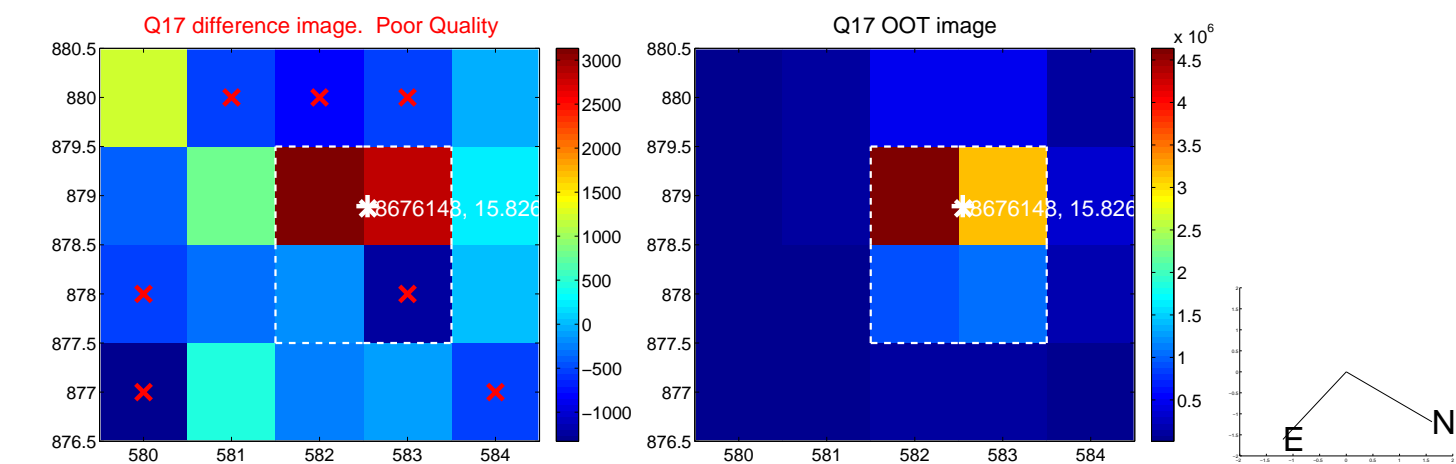
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



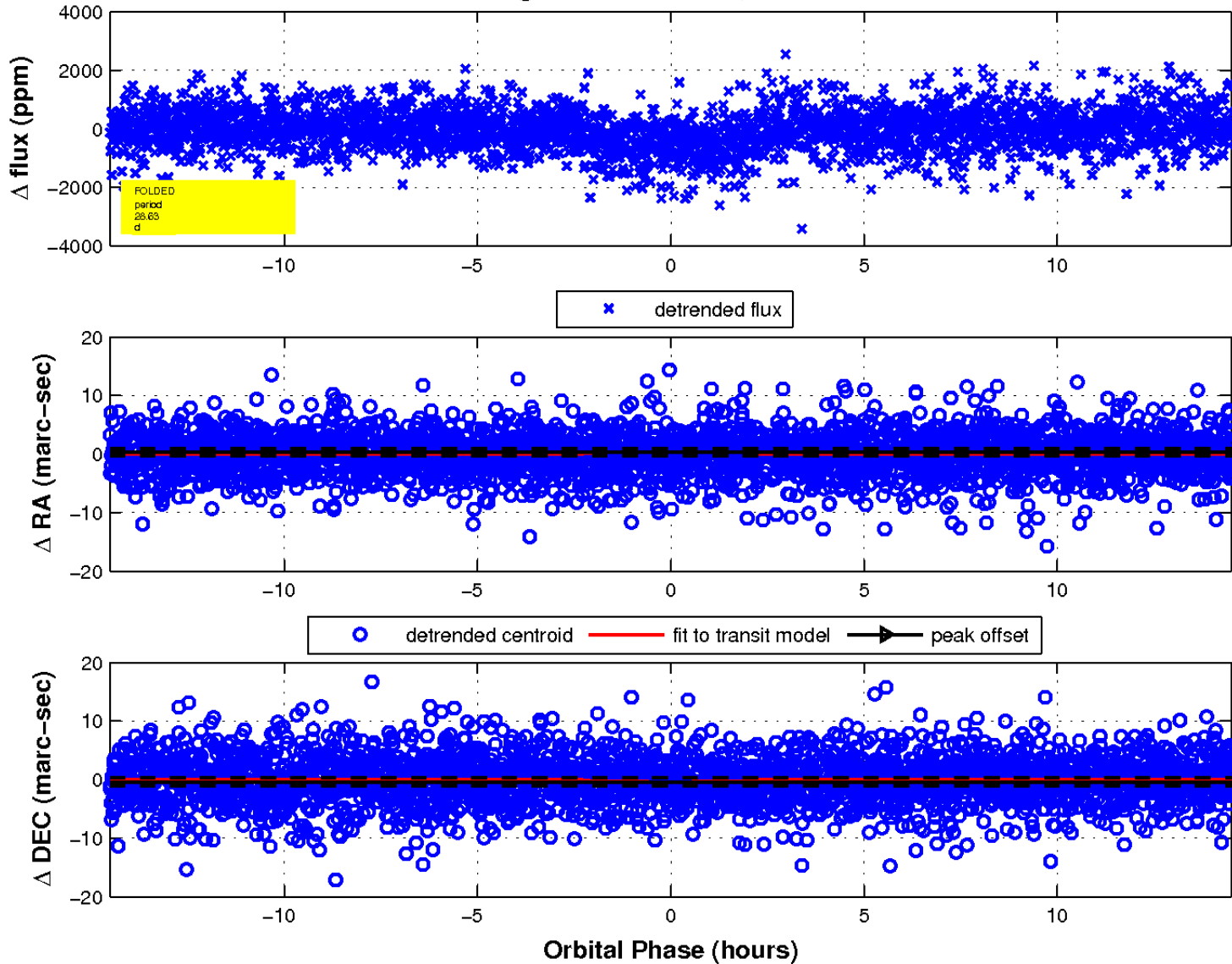
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

