

KIC 003458990

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})
003458990-01	OBS	No	17.134910	141.254173	235.2	37.341	27.4	38.9	2.63	6593	7.90	526.71

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003458990-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

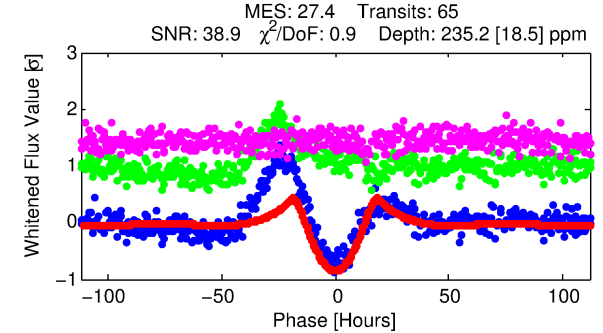
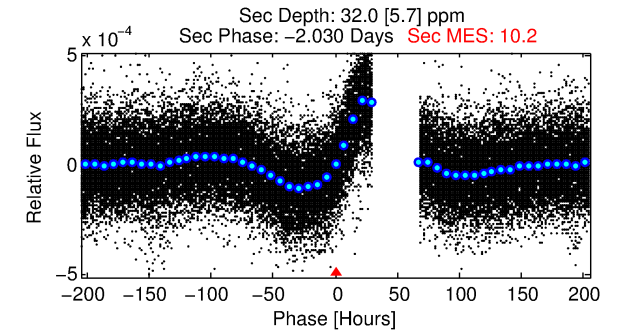
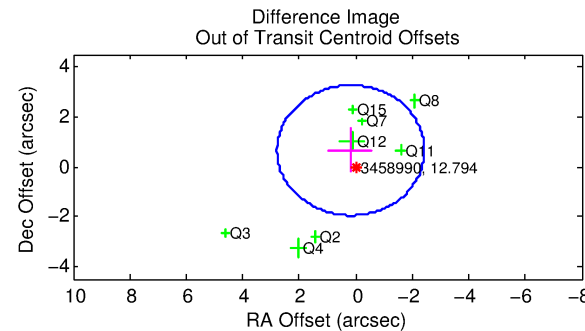
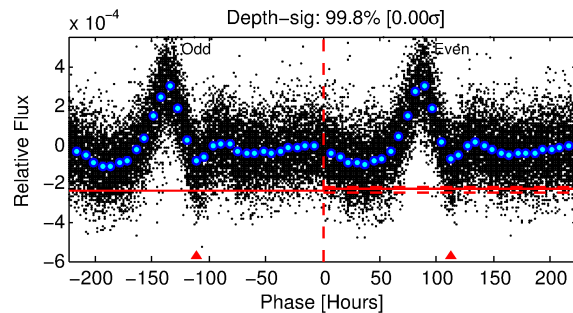
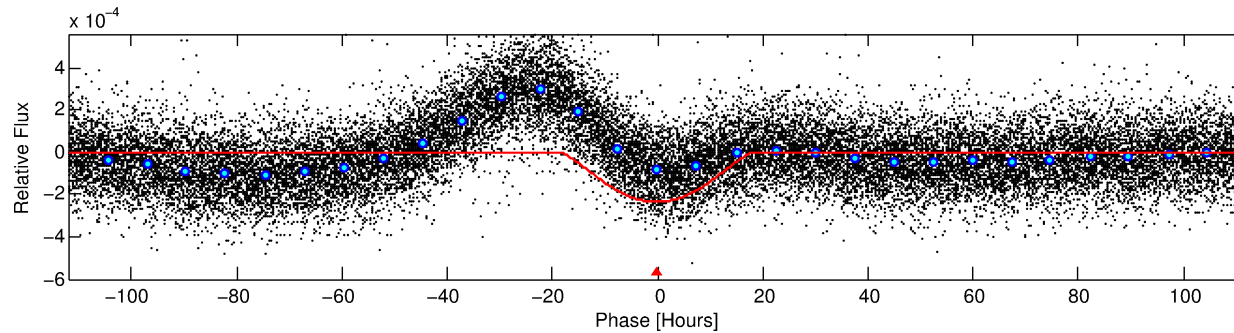
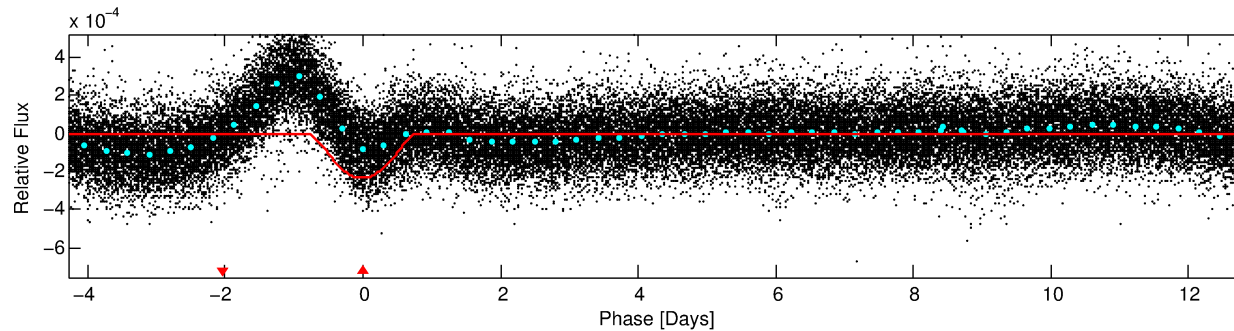
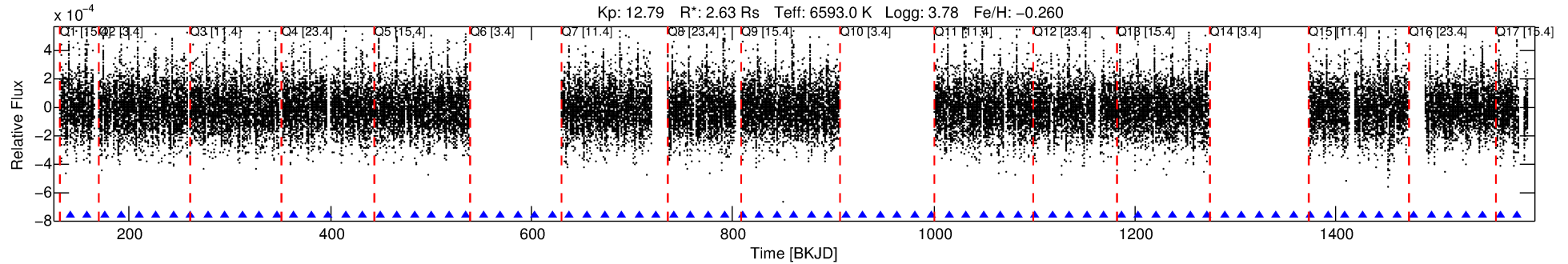
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003458990-01

No Significant Match Found

DV One-Page Summary

KIC: 3458990 Candidate: 1 of 1 Period: 17.135 d



DV Fit Results:

Period = 17.13491 [0.00029] d
Epoch = 141.2542 [0.0143] BKJD
Rp/R* = 0.0275 [0.0125]
a/R* = 1.31 [0.05]
b = 1.00 [0.02]
Seff = 526.71 [291.70]
Teq = 1222 [169] K
Rp = 7.90 [4.67] Re
a = 0.1492 [0.0517] AU
Ag = 6.27 [6.73] [0.78σ]
Teffp = 2988 [699] K [2.46σ]

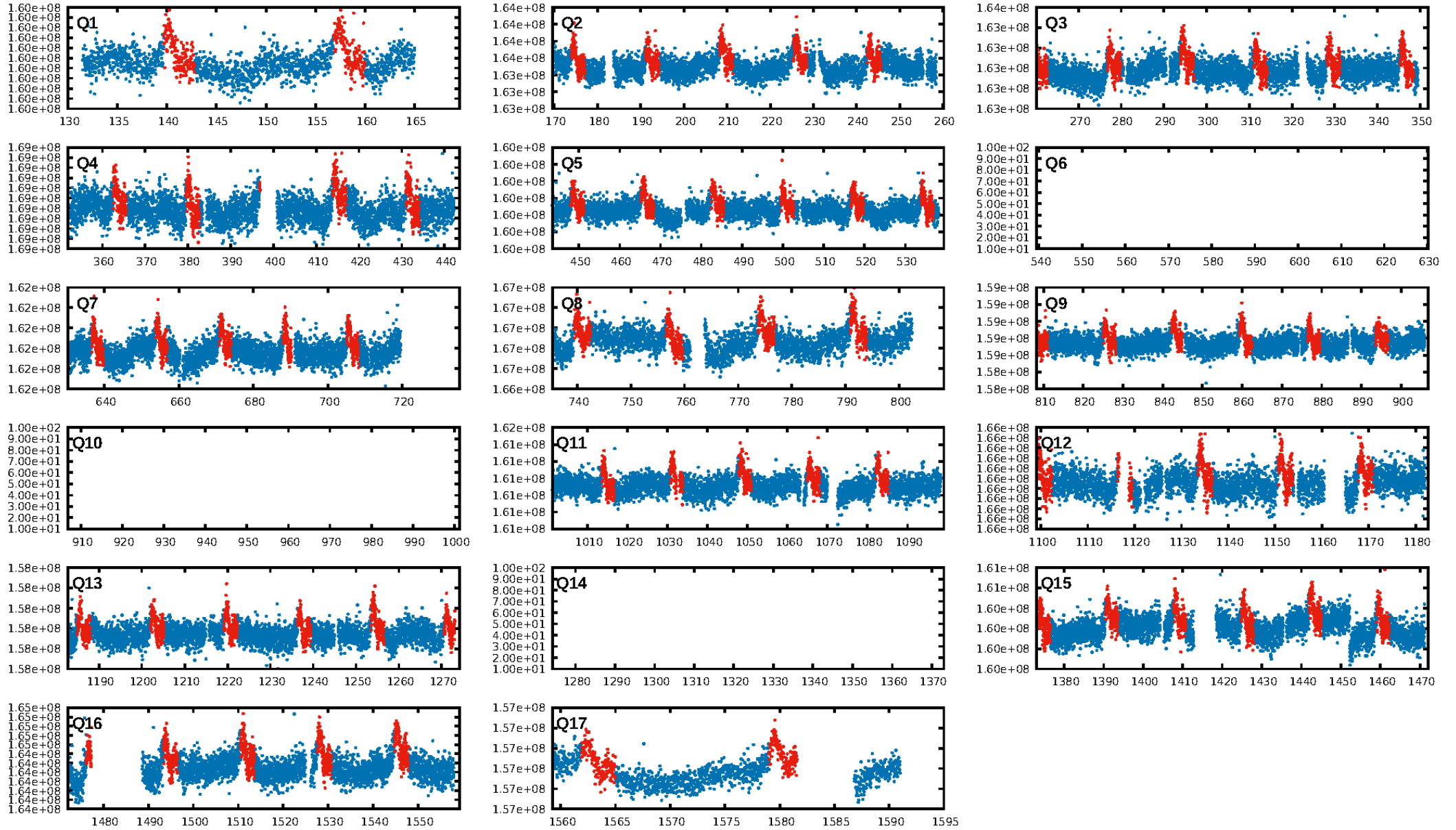
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.42e-170
RollingBand-fgt: 1.00 [61/61]
GhostDiagnostic-chr: -21.56
Centroid-sig: 12.8%
Centroid-so: 0.441 arcsec [1.51σ]
OotOffset-rm: 0.678 arcsec [0.78σ]
KicOffset-rm: 0.622 arcsec [0.71σ]
OotOffset-st: 1/4/3/0 [8]
KicOffset-st: 1/4/3/0 [8]
DiffImageQuality-fgm: 0.75 [6/8]
DiffImageOverlap-fno: 1.00 [14/14]

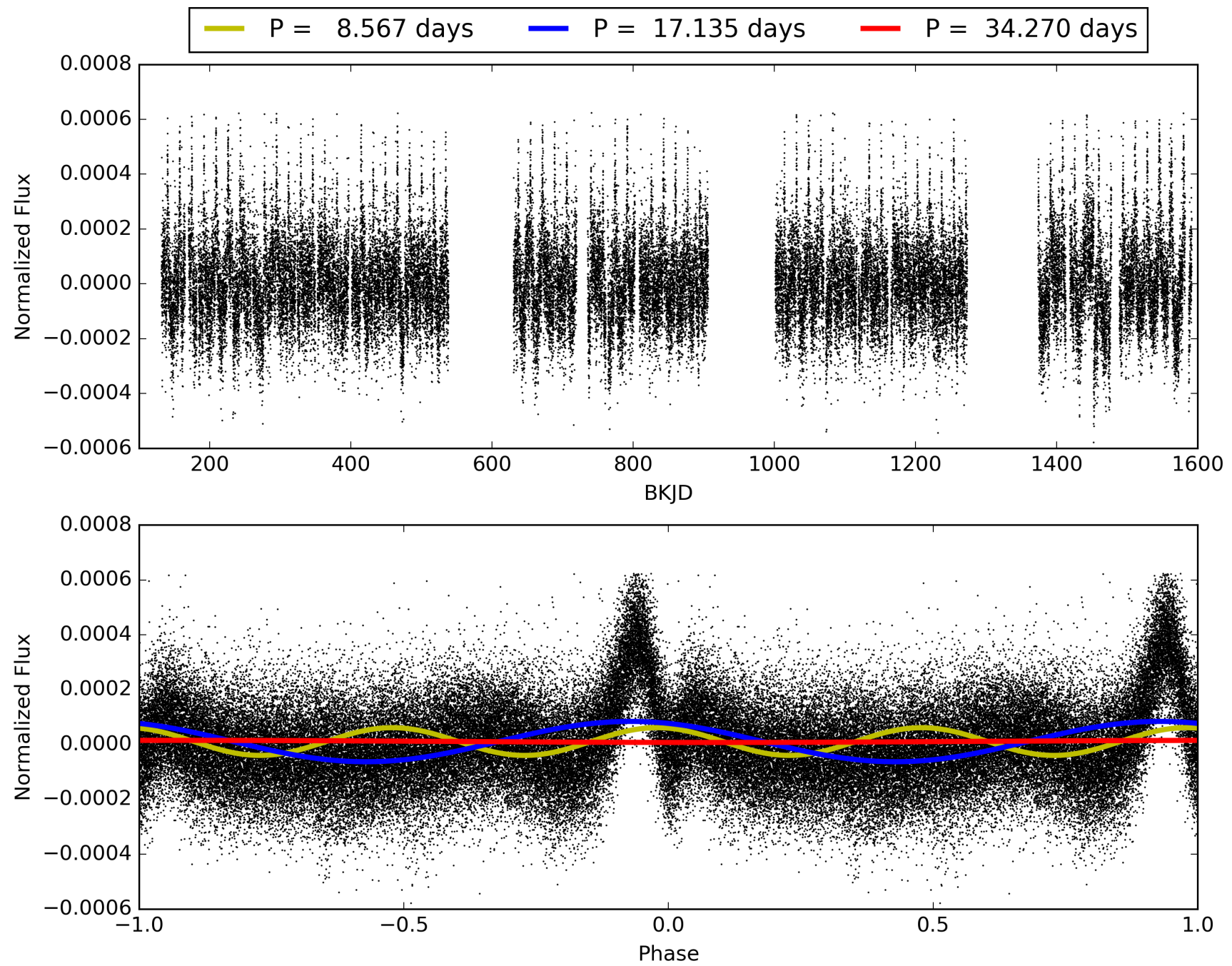
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 15:44:25 Z

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

TCE 003458990-01, PDC Light Curves

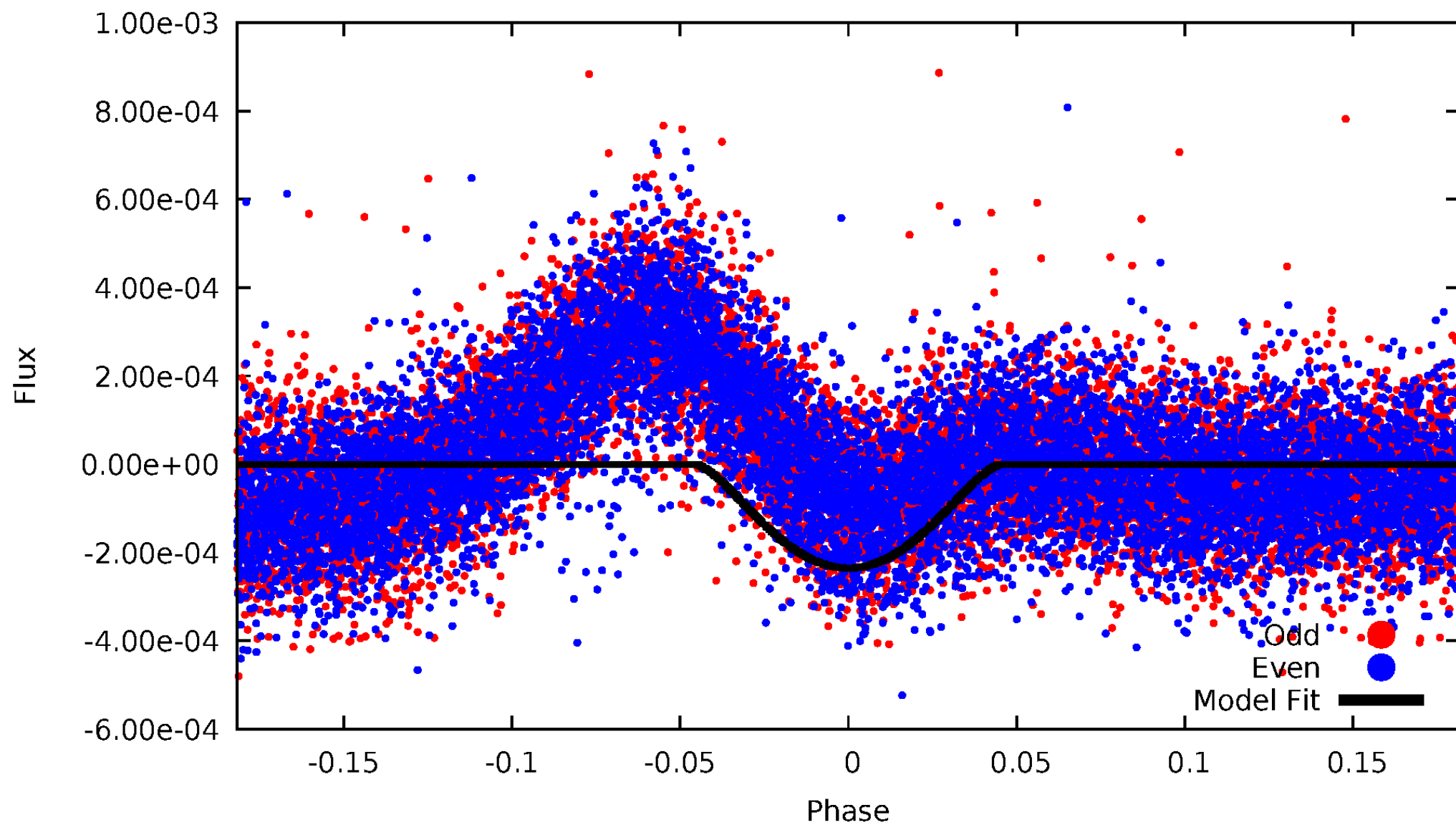


TCE 003458990-01



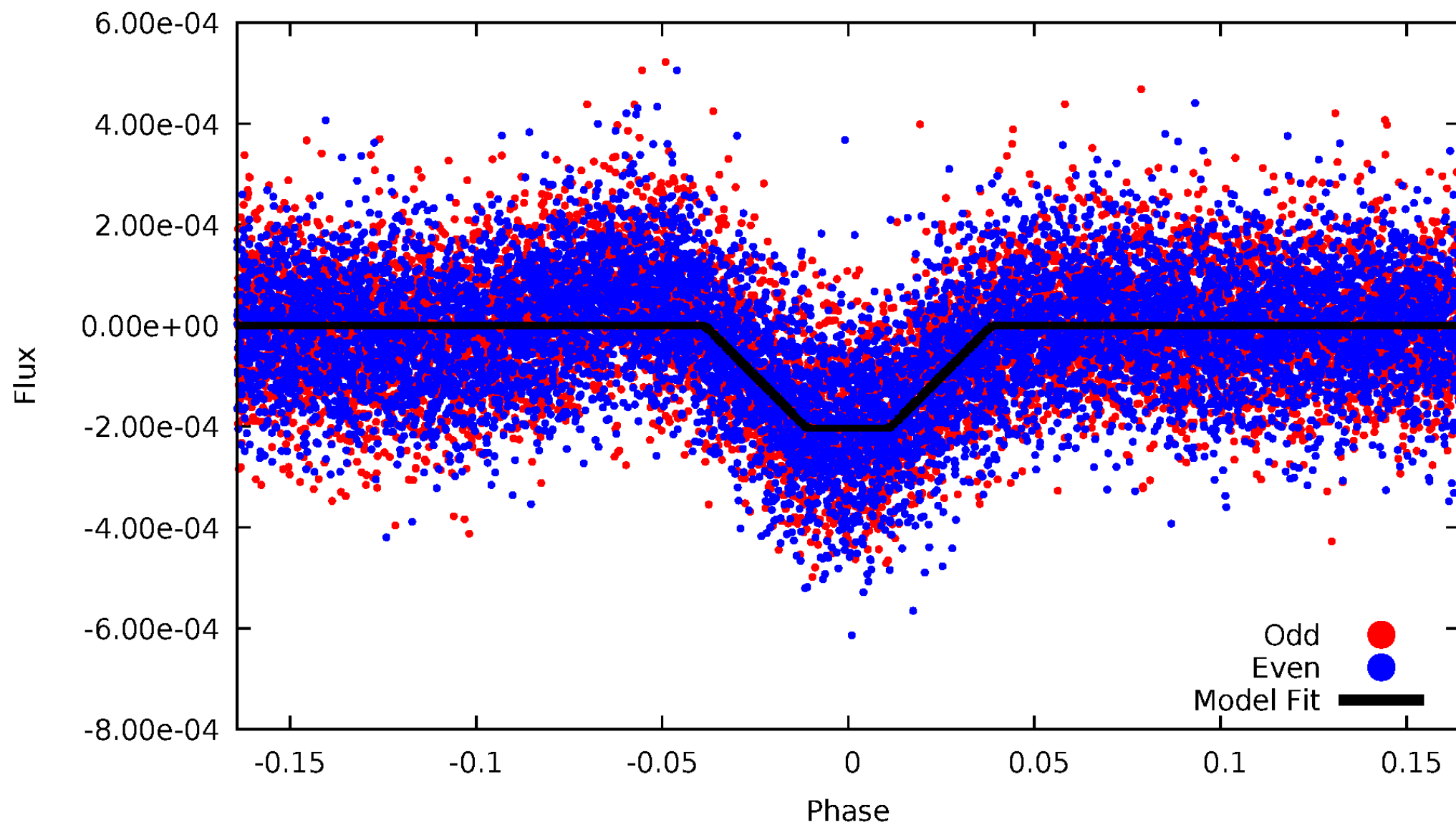
DV Odd/Even

TCE 003458990-01



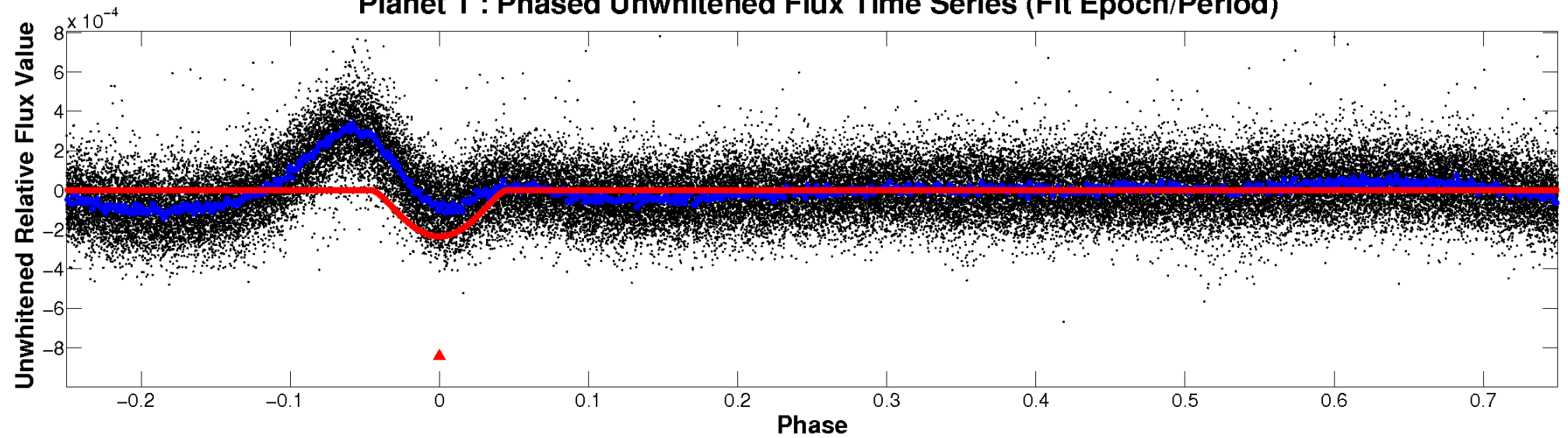
ALT Odd/Even

TCE 003458990-01

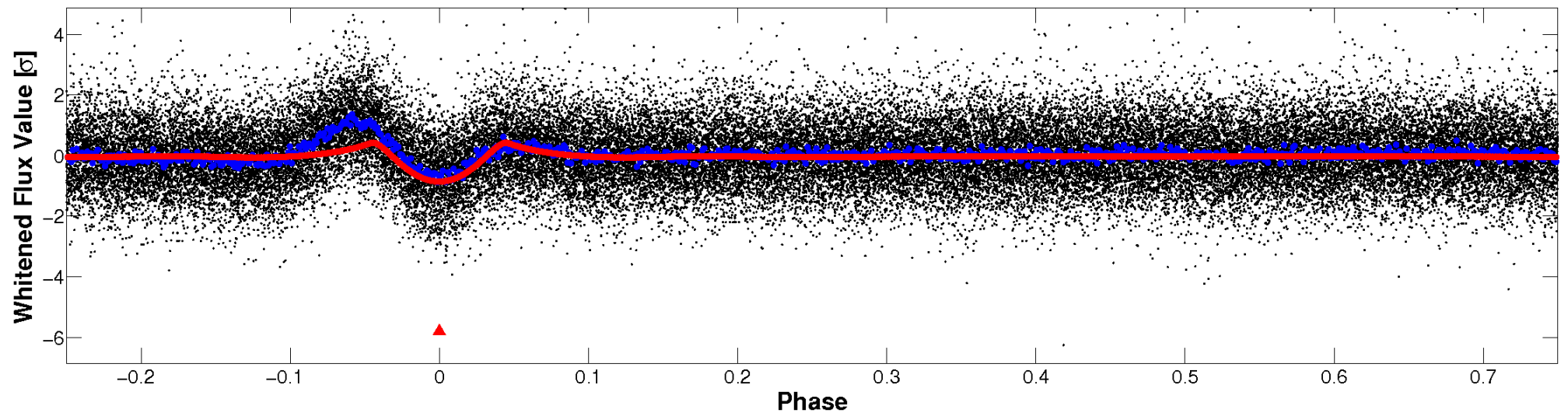


Non-Whitened Vs. Whitened Light Curve

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

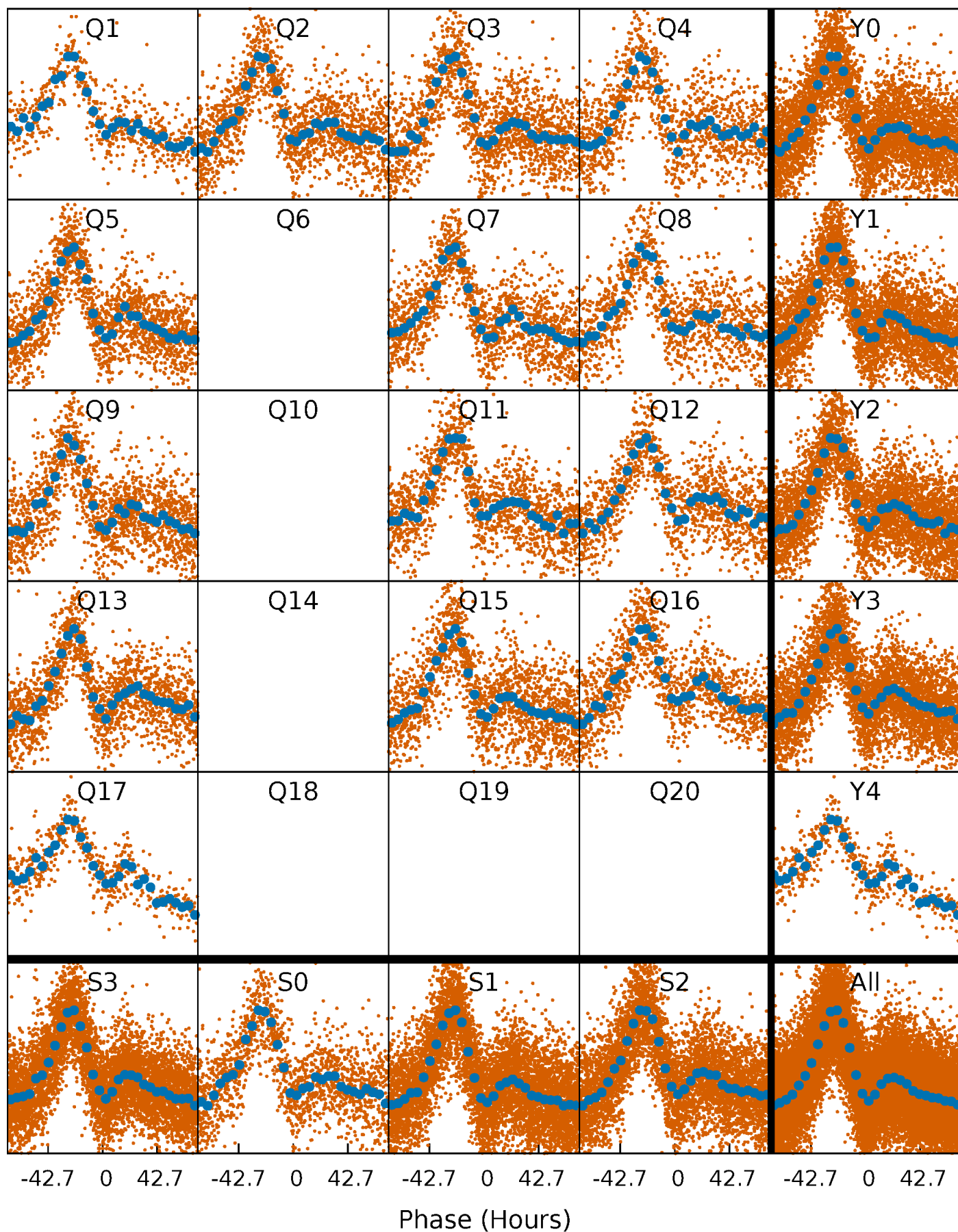


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



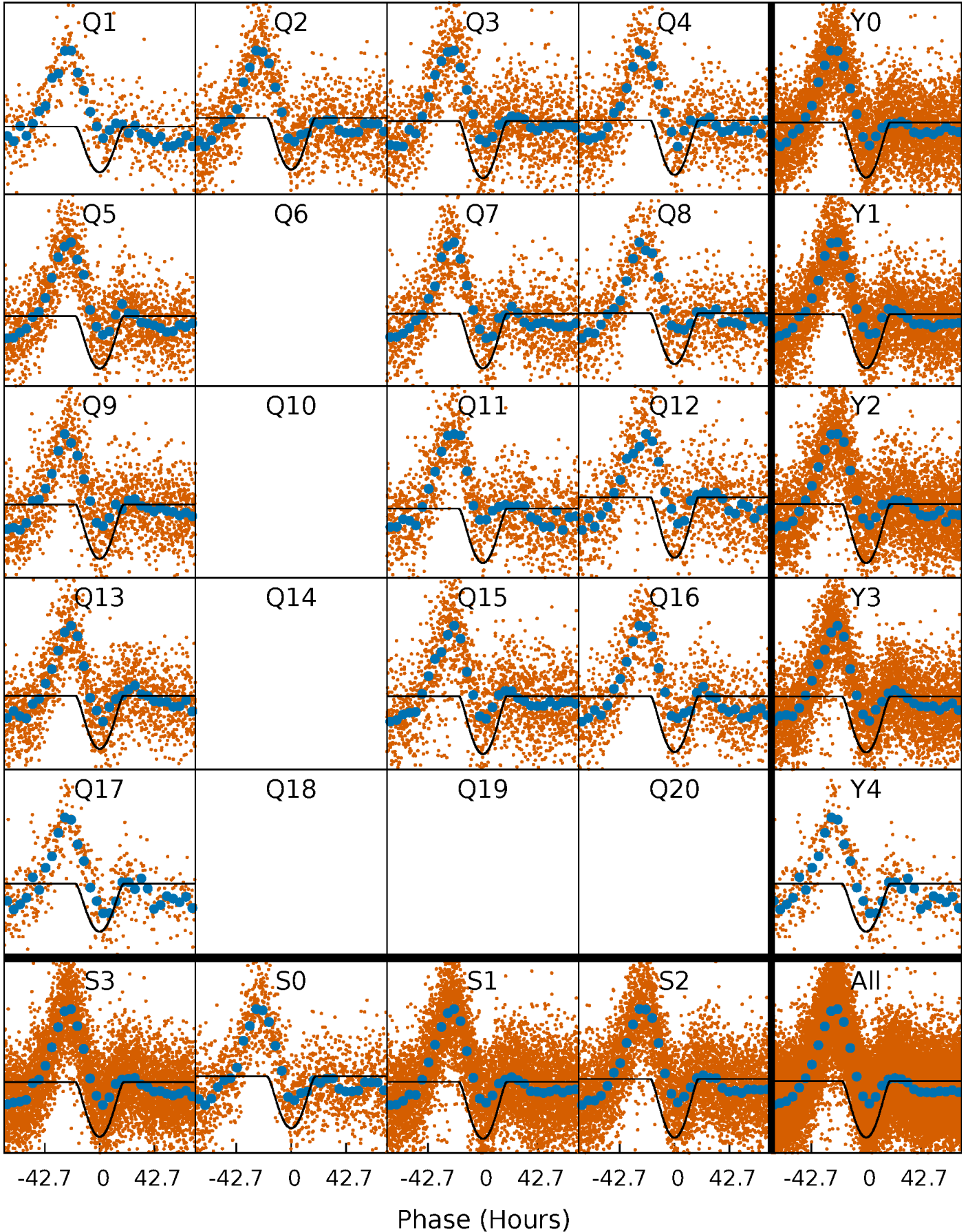
PDC Quarter-Phased Transit Curves

TCE 003458990-01 P= 17.134910 Days $T_0=141.254173$ (BKJD)



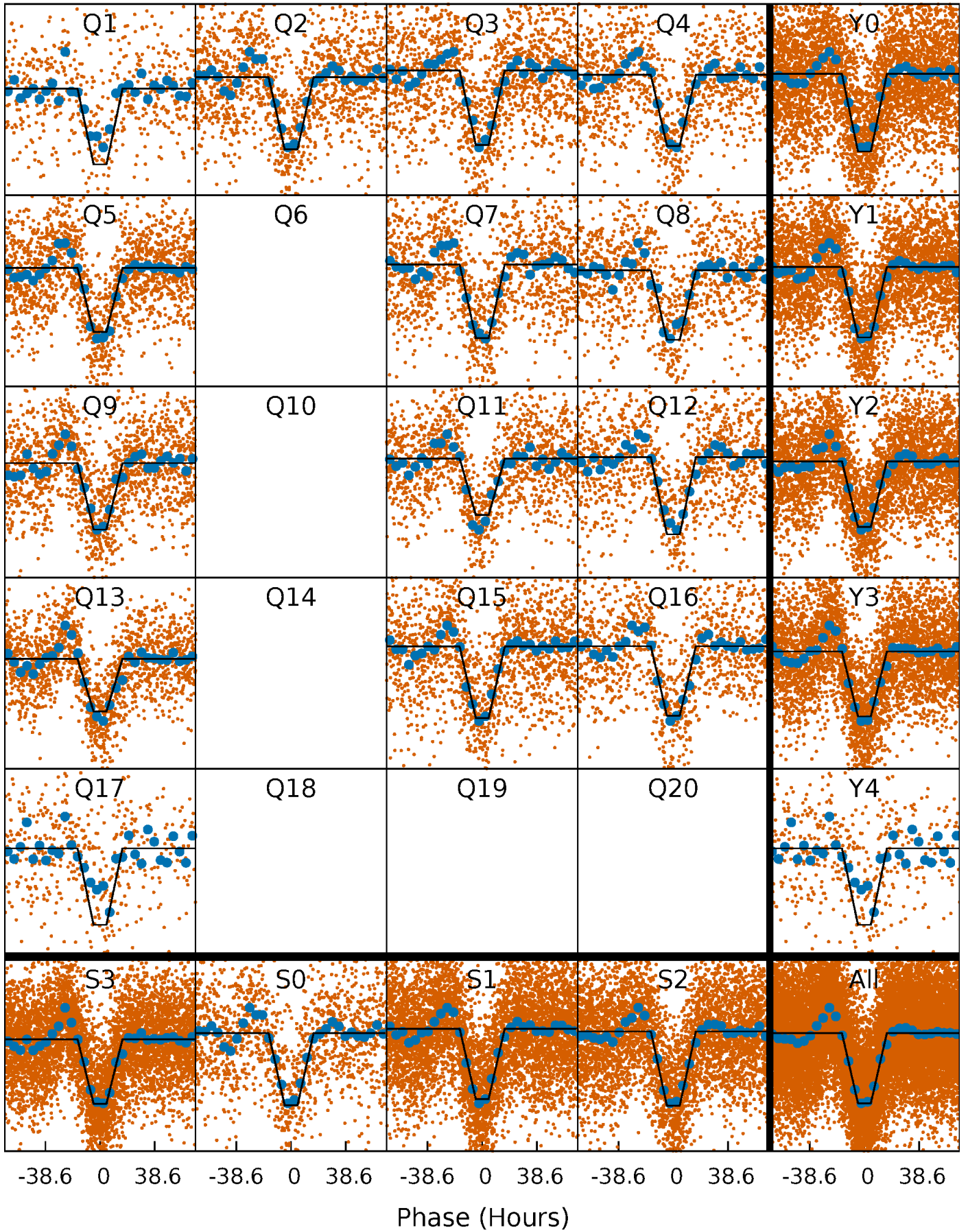
DV Quarter-Phased Transit Curves

TCE 003458990-01 P= 17.134910 Days $T_0=141.254173$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

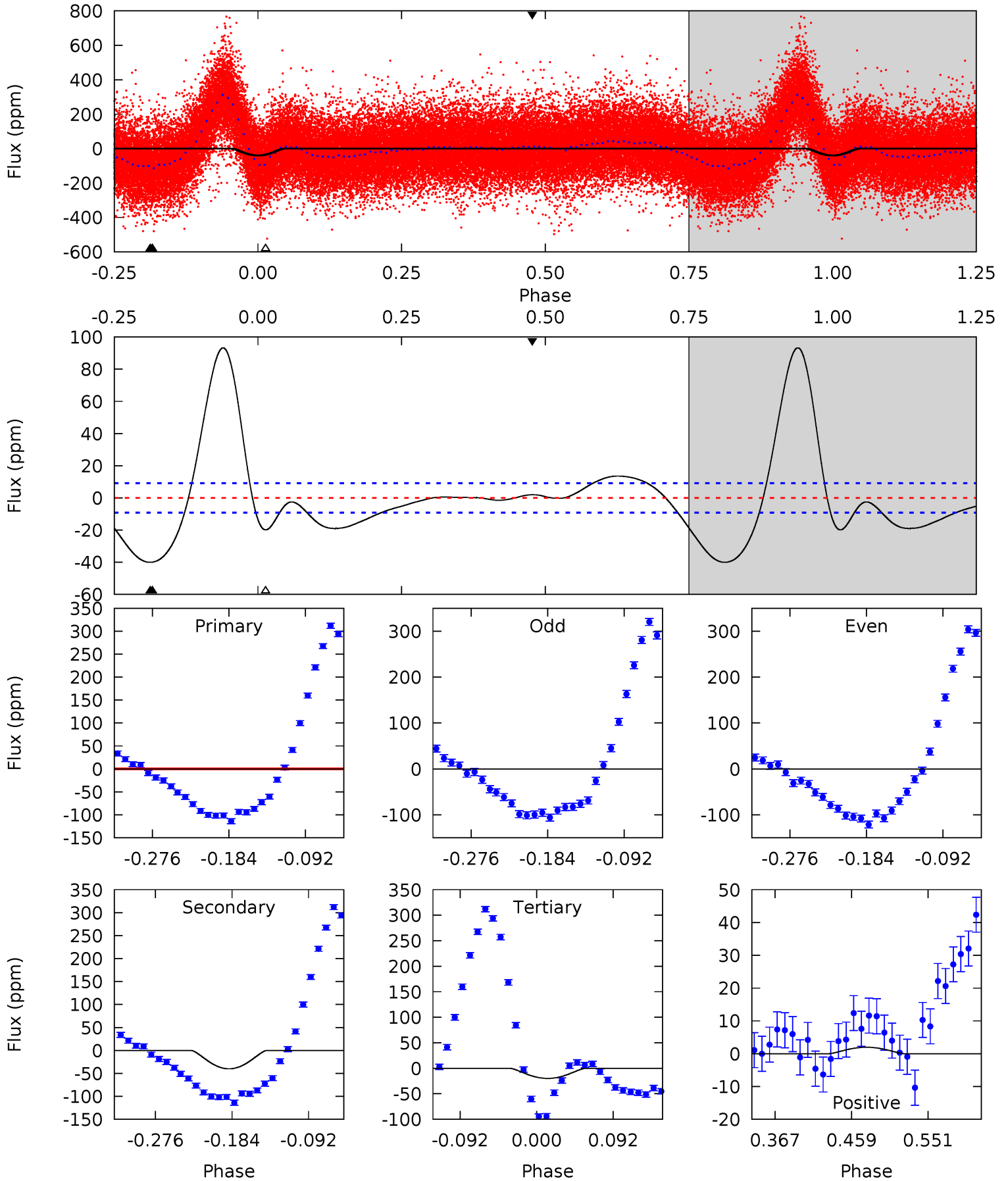
TCE 003458990-01 P= 17.134664 Days $T_0=141.248811$ (BKJD)



DV Model-Shift Uniqueness Test

003458990-01, P = 17.134910 Days, E = 124.119263 Days

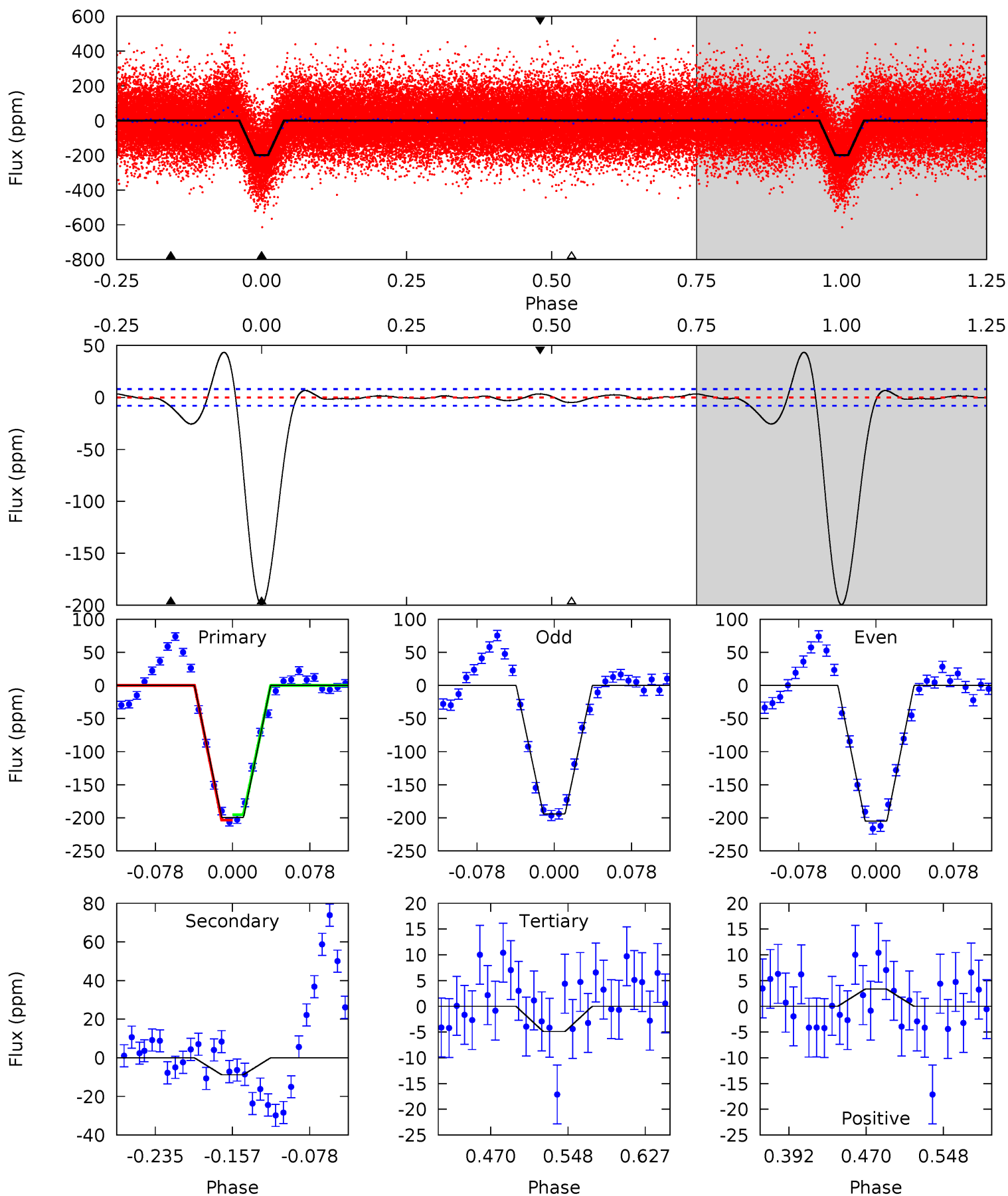
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.9	20.0	9.92	0.98	4.58	1.69	11.9	10.0	18.9	10.1	19.0	0.77	1.32	0.70	21.6



Alt Model-Shift Uniqueness Test

003458990-01, P = 17.134664 Days, E = 124.114147 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
115.2	5.07	2.83	1.92	4.62	1.76	1.11	112.3	113.2	2.24	3.14	3.14	0.98	0.18	2.27



Stellar Parameters For KIC 003458990

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6593^{+166}_{-199}	$3.776^{+0.312}_{-0.078}$	$-0.260^{+0.300}_{-0.250}$	$2.632^{+0.424}_{-0.989}$	$1.508^{+0.213}_{-0.319}$	$0.117^{+0.240}_{-0.036}$
	+3%/-3%	+8%/-2%	+115%/-96%	+16%/-38%	+14%/-21%	+206%/-31%
Source	PHO1	FLK73	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 003458990-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-40 ± 2	$7.31^{+3.82}_{-3.21}$	1675^{+93}_{-159}	3602^{+755}_{-436}	$9.323^{+19.255}_{-5.320}$
Alt.	-9 ± 2	$4.25^{+3.27}_{-2.43}$	1663^{+100}_{-149}	3276^{+1170}_{-493}	$5.915^{+25.774}_{-4.108}$

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 $A_{obs} \gg 1.0$

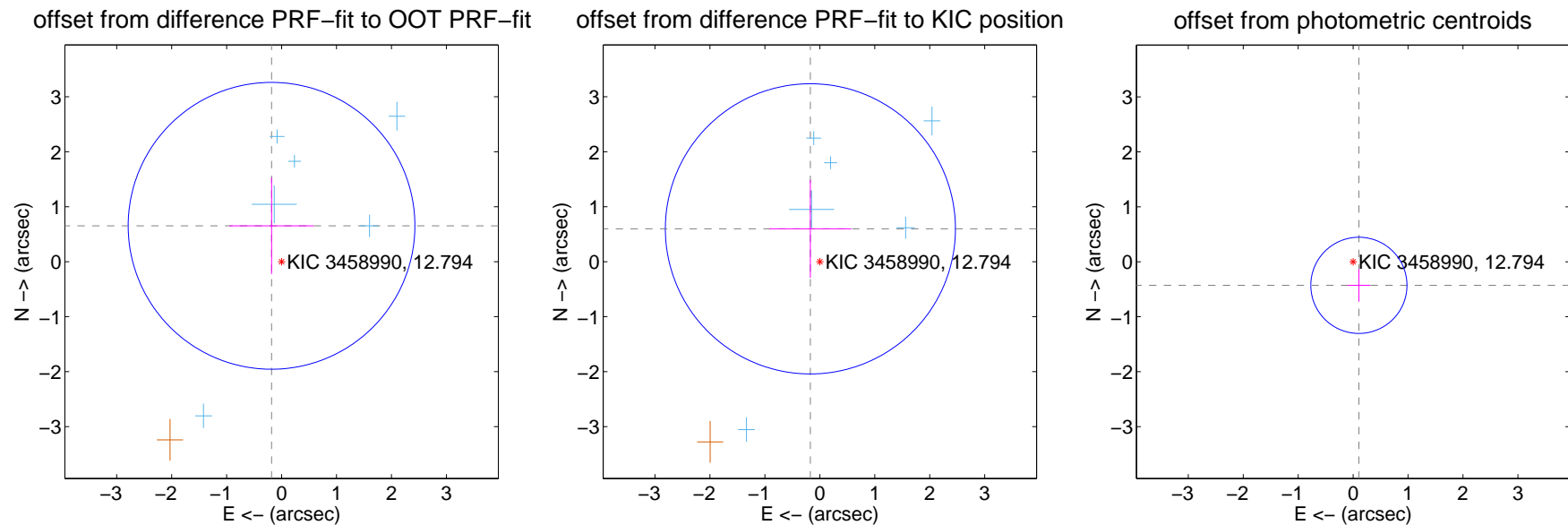
DV Centroid Data

Supplemental centroid analysis for 003458990-01. Kepler magnitude: 12.79. Transit SNR 38.87

There are 6 quarters with good PRF difference image offsets

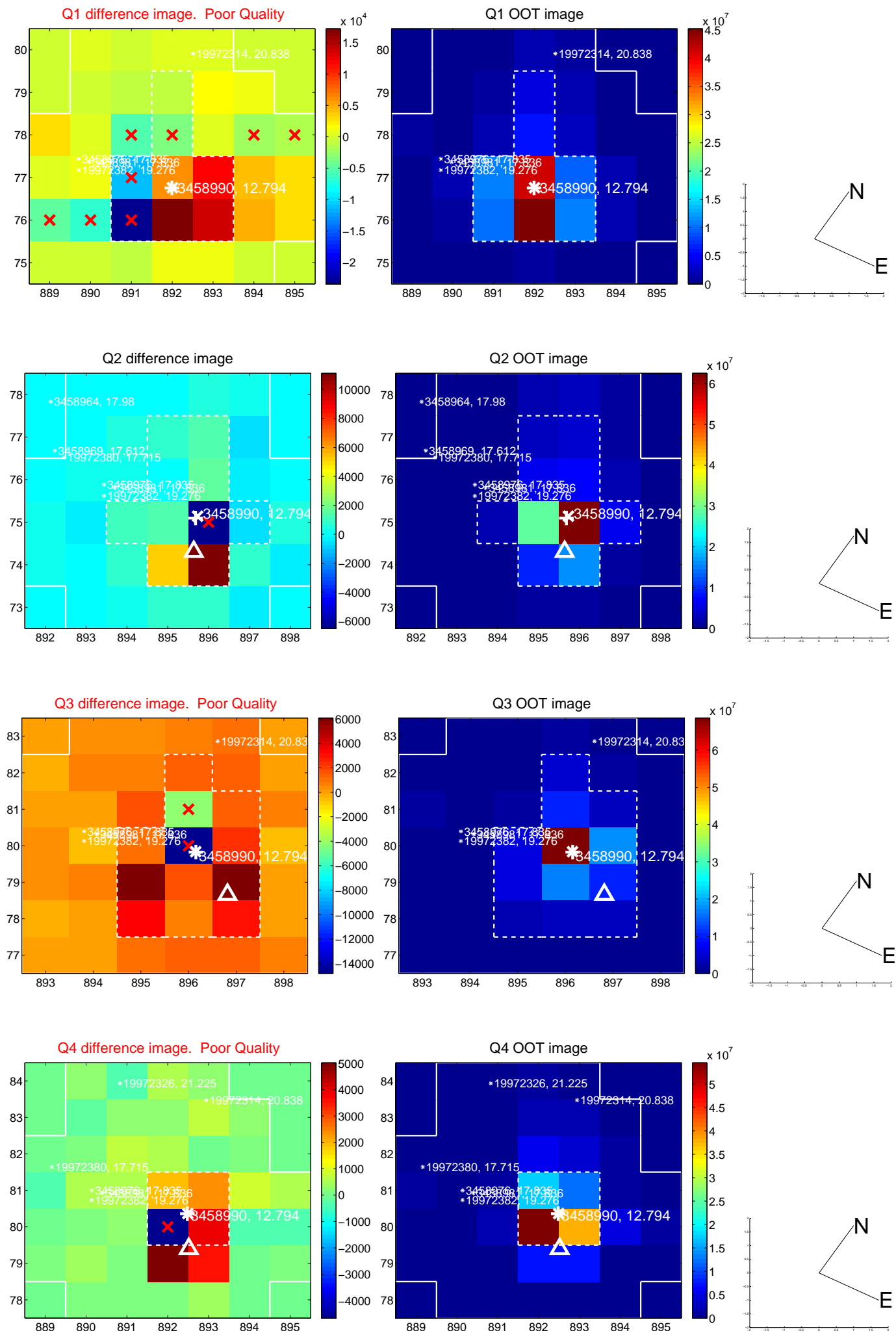
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.678 ± 0.869	0.78	0.183 ± 0.766	0.653 ± 0.877
PRF-fit source offset from KIC position	0.622 ± 0.880	0.71	0.172 ± 0.745	0.598 ± 0.890
photometric centroid source offset	0.44 ± 0.29	1.51	-0.11 ± 0.21	-0.43 ± 0.30

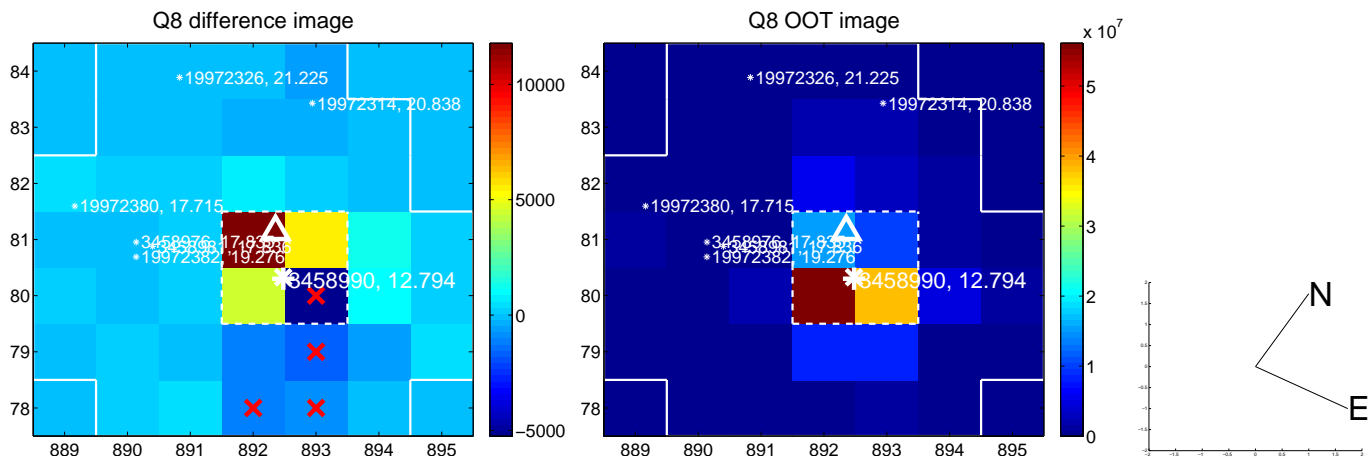
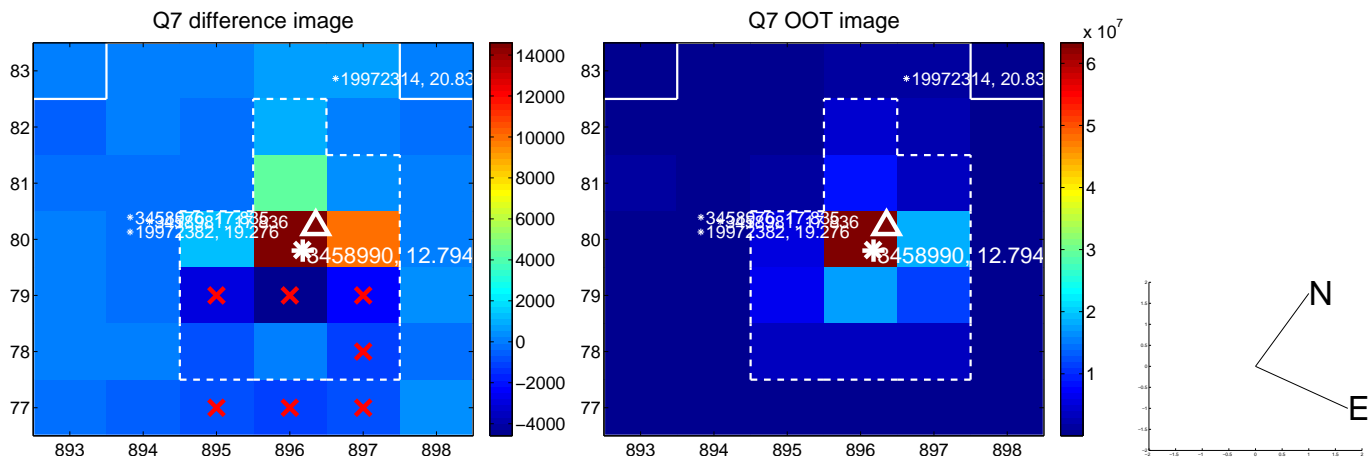
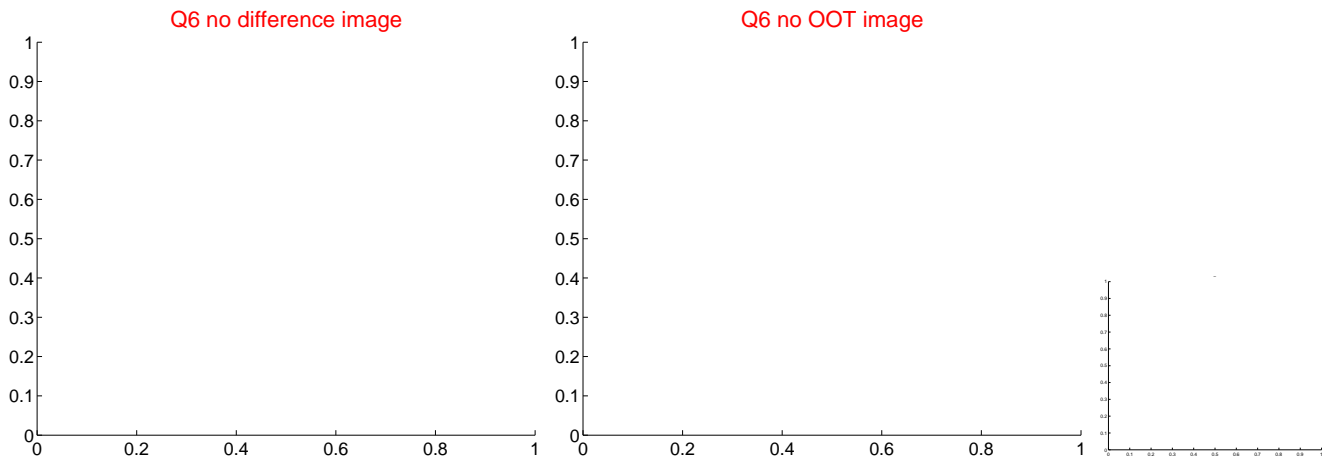
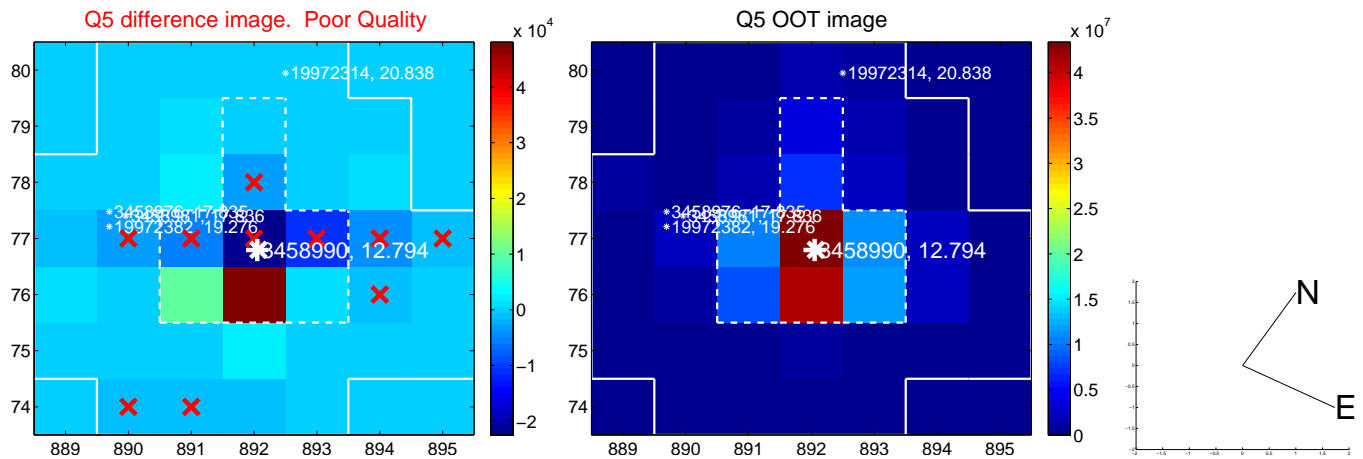


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

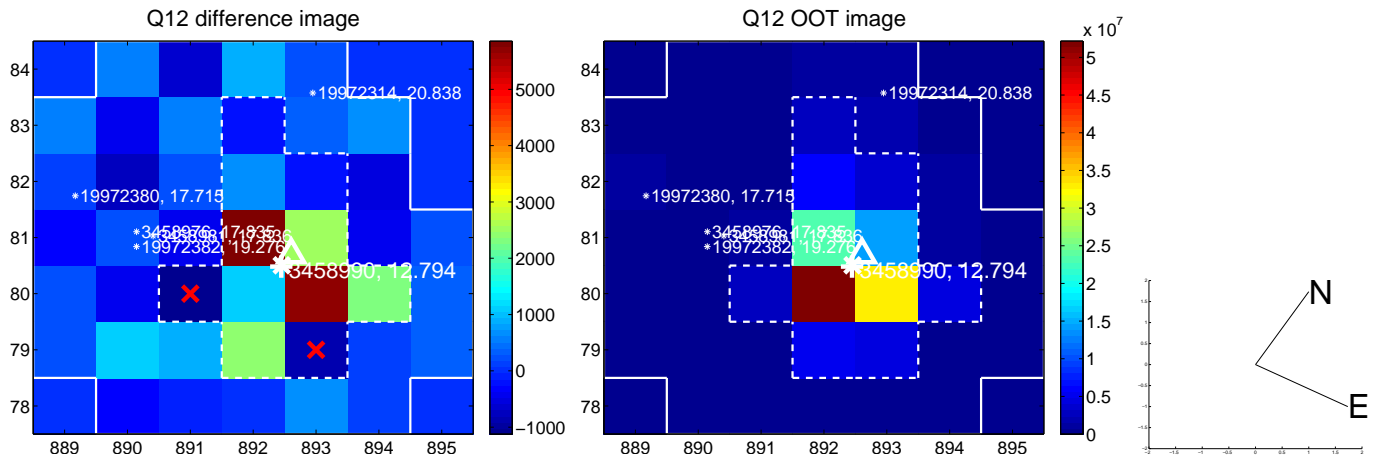
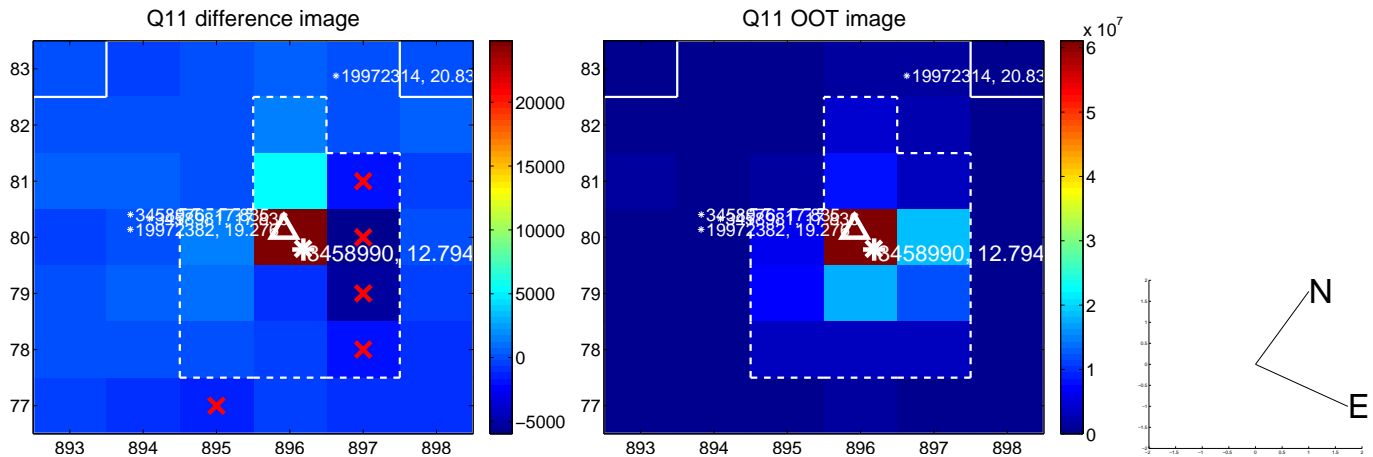
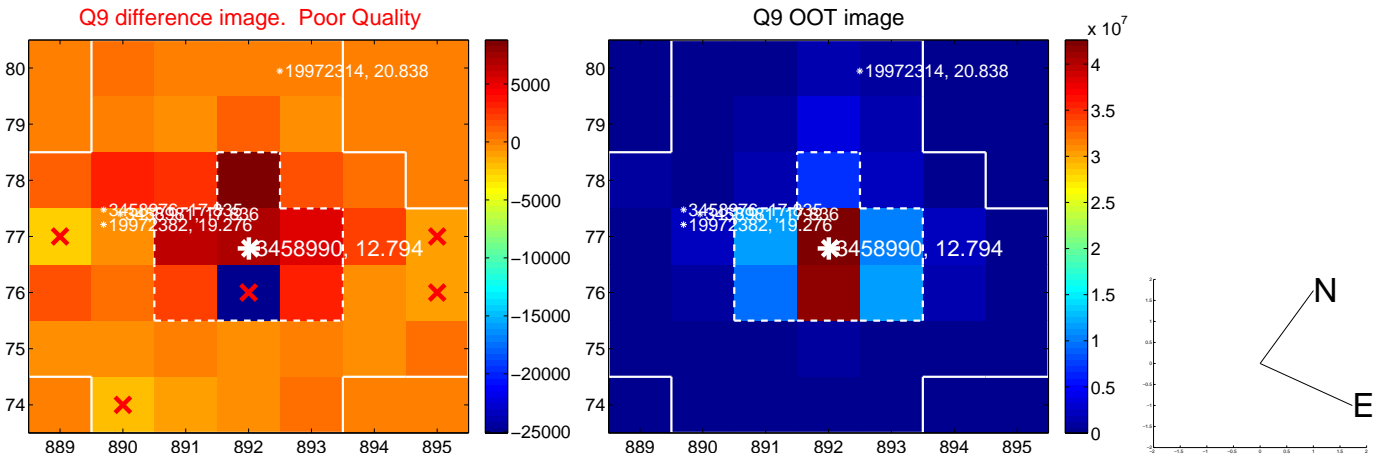
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



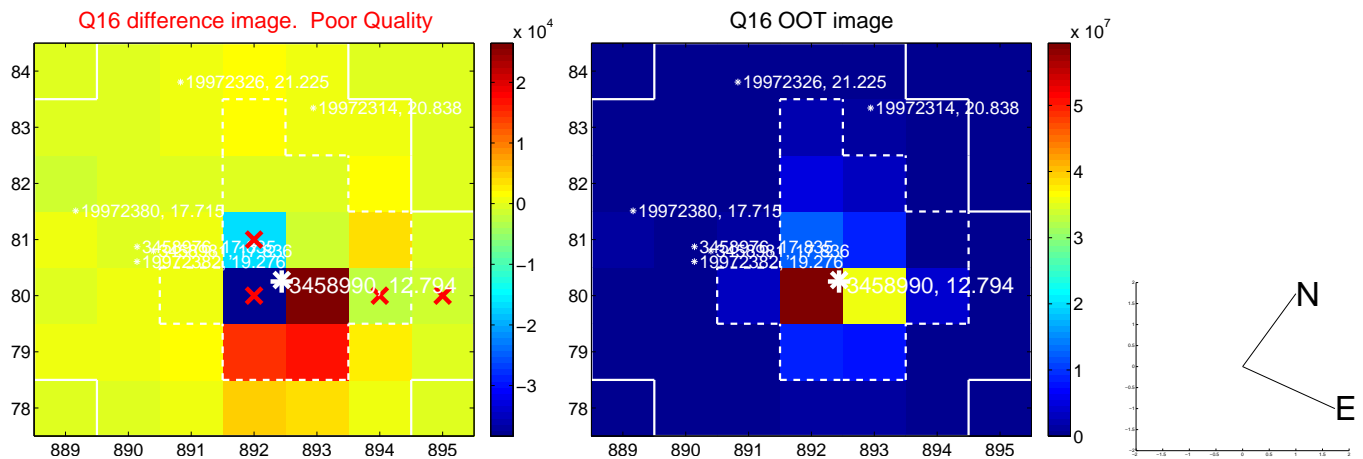
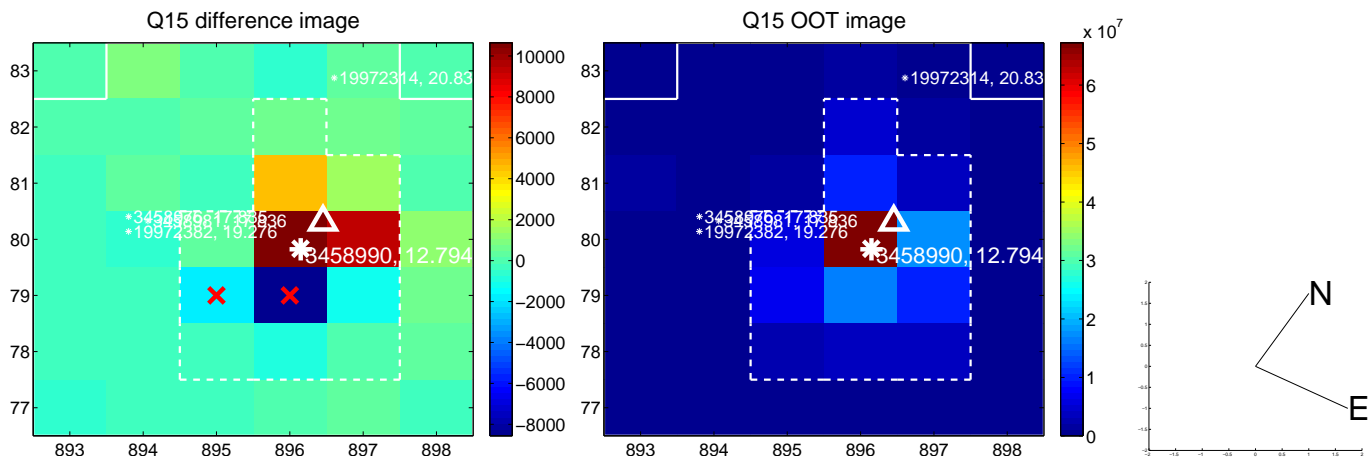
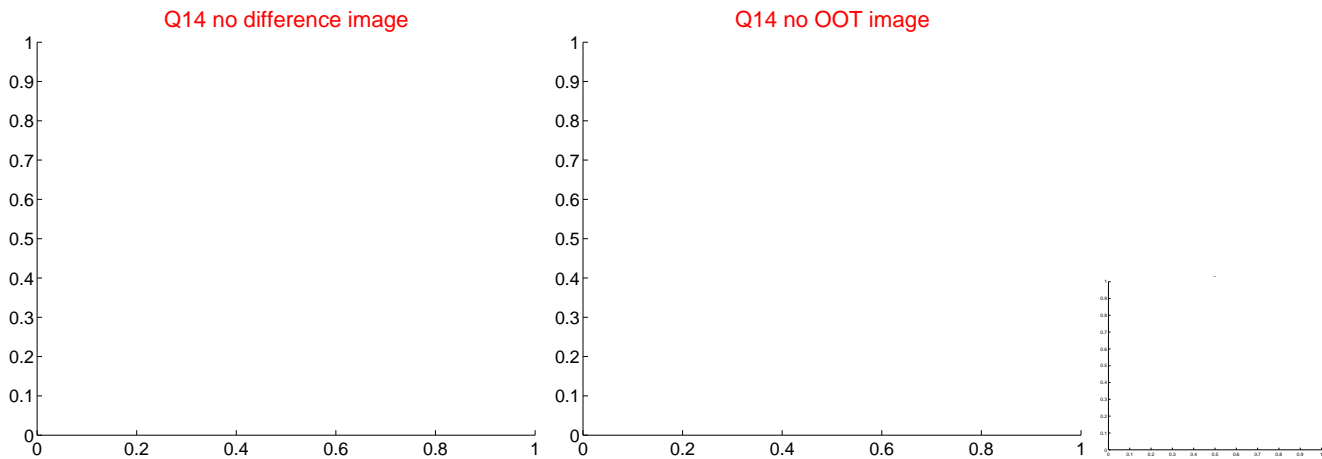
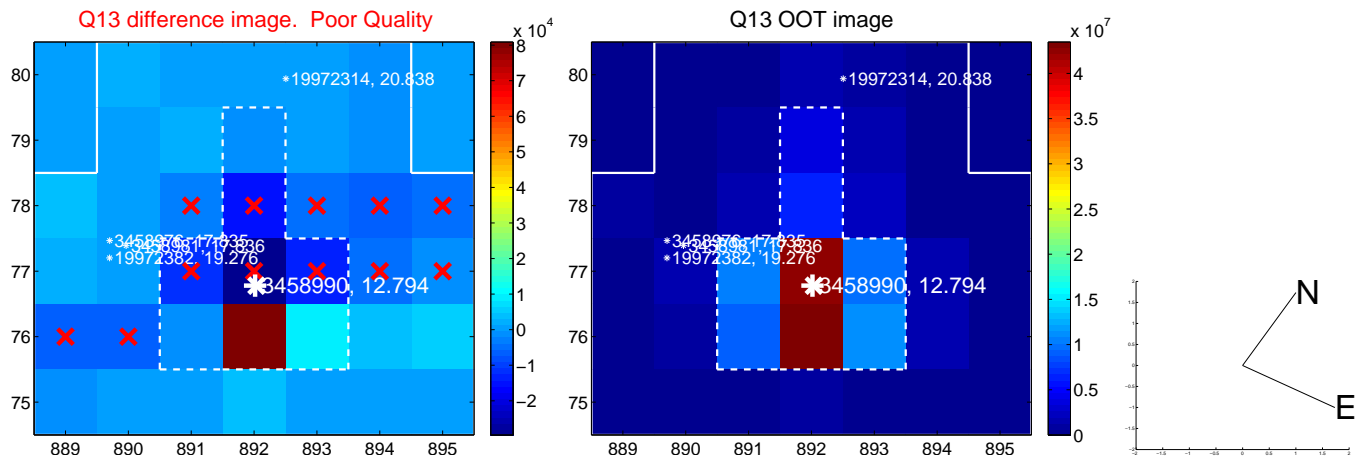
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



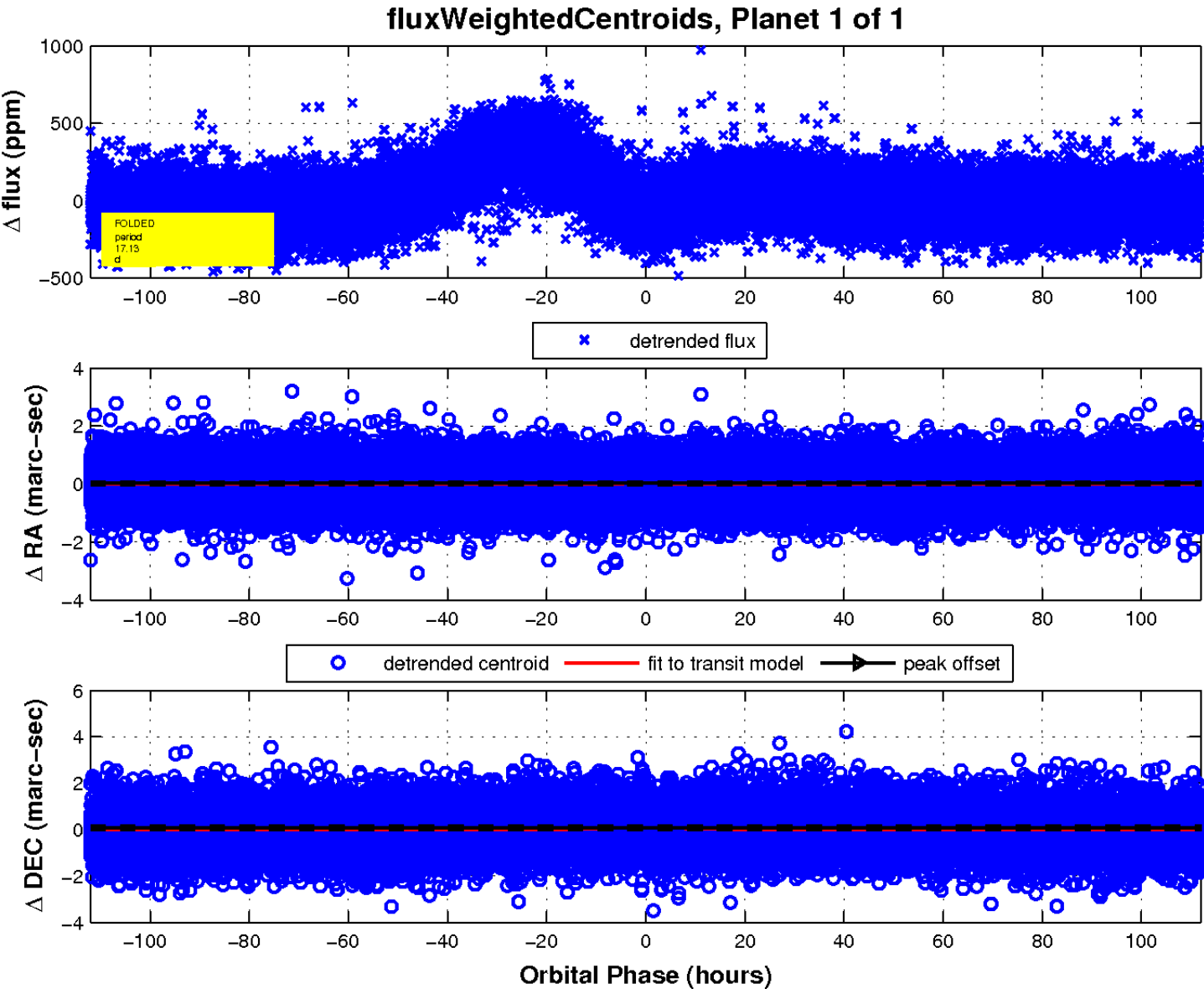
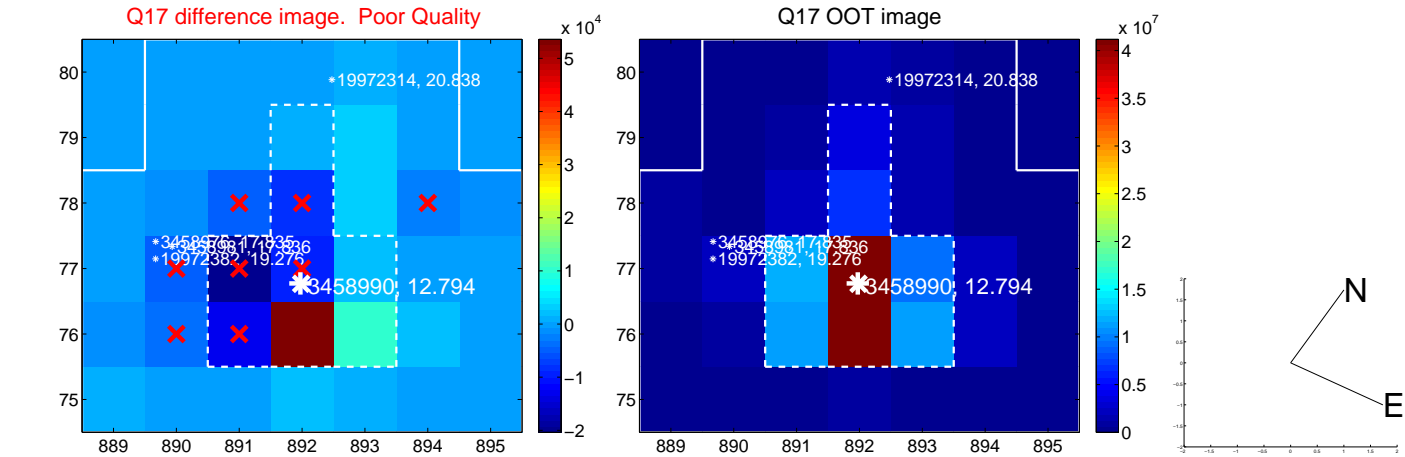
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

