

KIC 010485840

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})
010485840-01	OBS	No	568.624050	374.663954	204.8	6.453	7.9	7.4	0.78	5332	1.33	0.30

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010485840-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

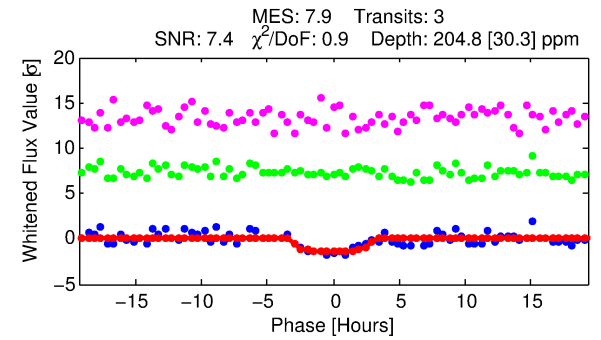
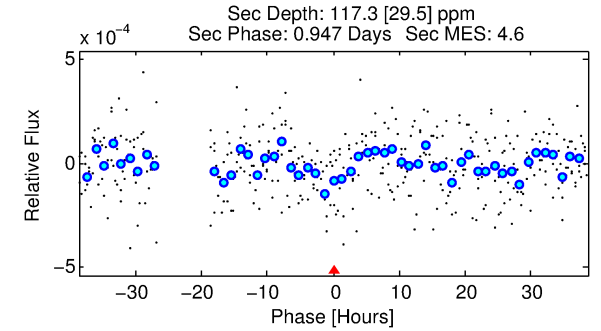
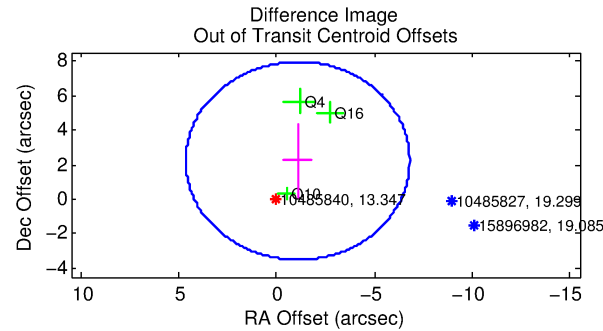
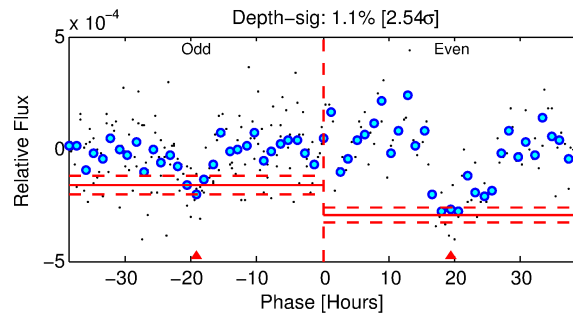
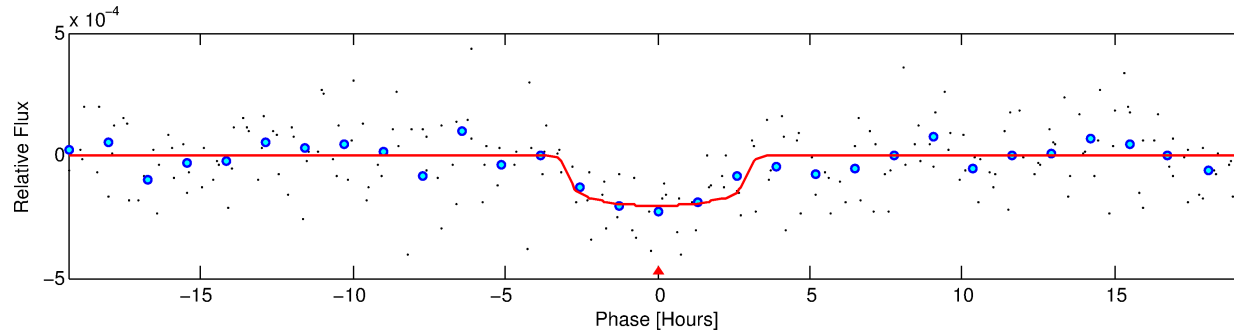
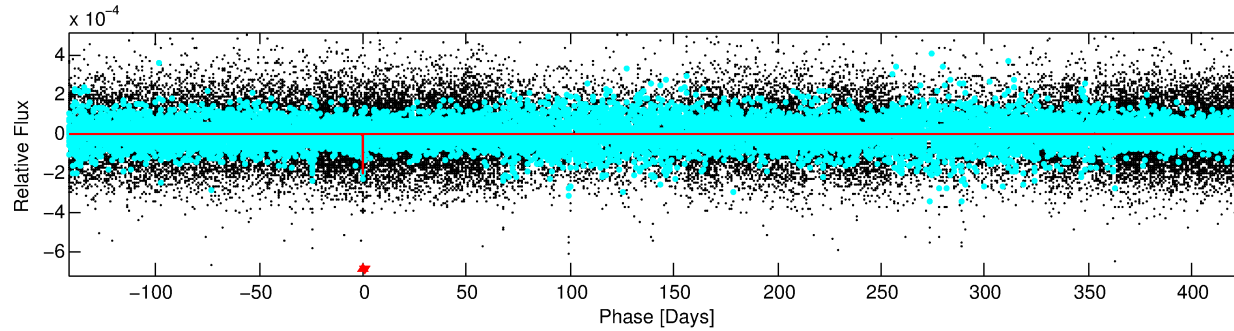
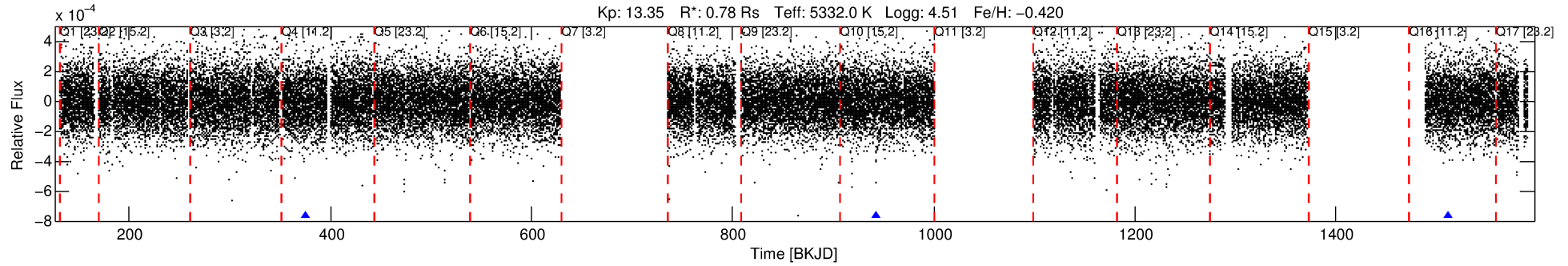
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010485840-01

No Significant Match Found

DV One-Page Summary

KIC: 10485840 Candidate: 1 of 1 Period: 568.624 d



DV Fit Results:

Period = 568.62405 [0.01205] d
Epoch = 374.6640 [0.0150] BKJD
Rp/R* = 0.0157 [0.0054]
a/R* = 316.41 [469.53]
b = 0.90 [0.32]
Seff = 0.30 [0.07]
Teq = 189 [10] K
Rp = 1.34 [0.49] Re
a = 1.2049 [0.1431] AU
Ag = 52549.67 [39866.97] [1.32 σ]
Teffp = 4428 [826] K [5.13 σ]

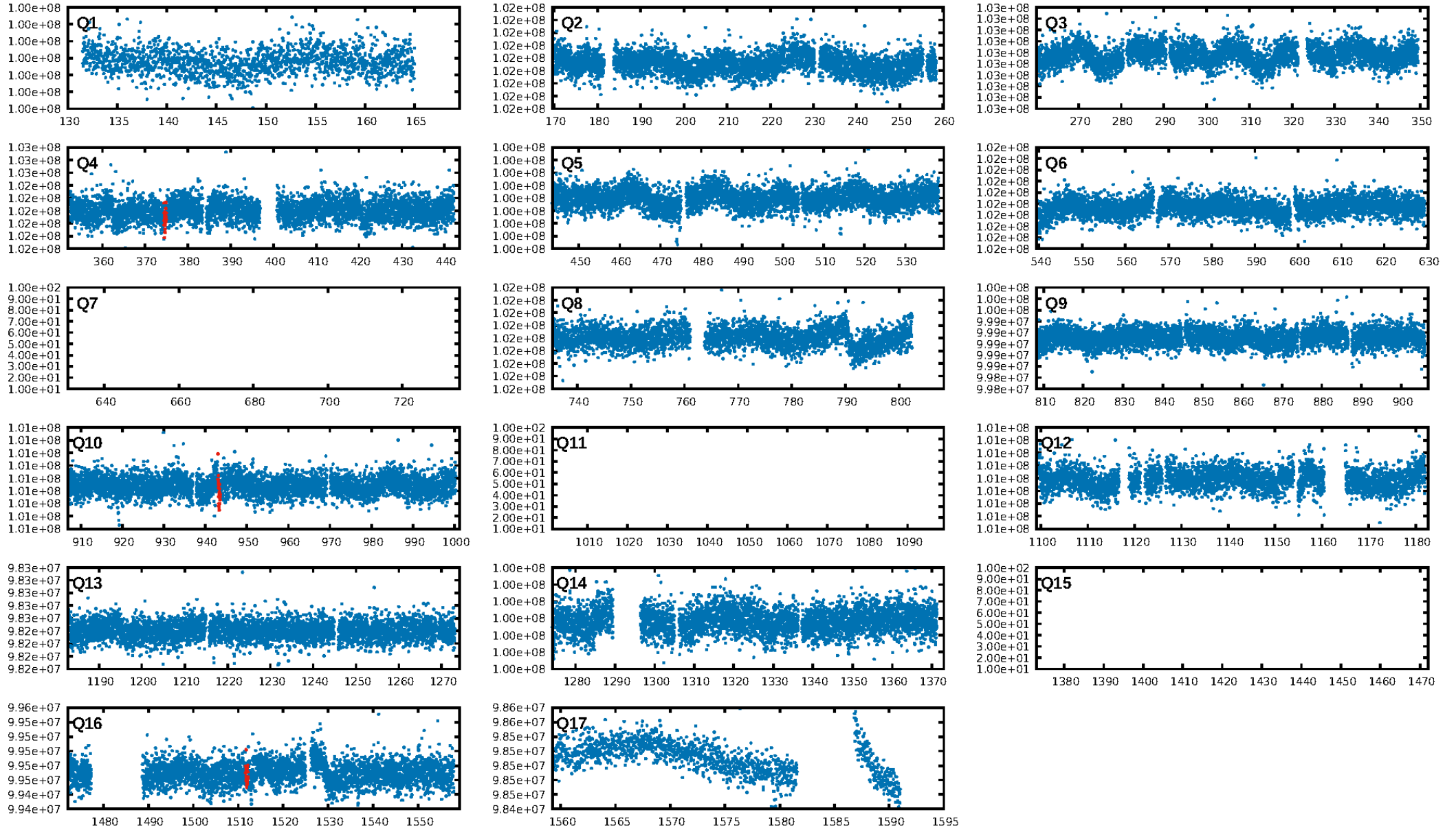
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 6.1%
ModelChiSquareGof-sig: 99.8%
Bootstrap-pfa: 3.51e-12
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -4.845
Centroid-sig: 45.5%
Centroid-so: 1.918 arcsec [0.93 σ]
OotOffset-rm: 2.468 arcsec [1.29 σ]
OotOffset-st: 1/0/2/0 [3]
KicOffset-rm: 2.437 arcsec [1.28 σ]
KicOffset-st: 1/0/2/0 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [3/3]

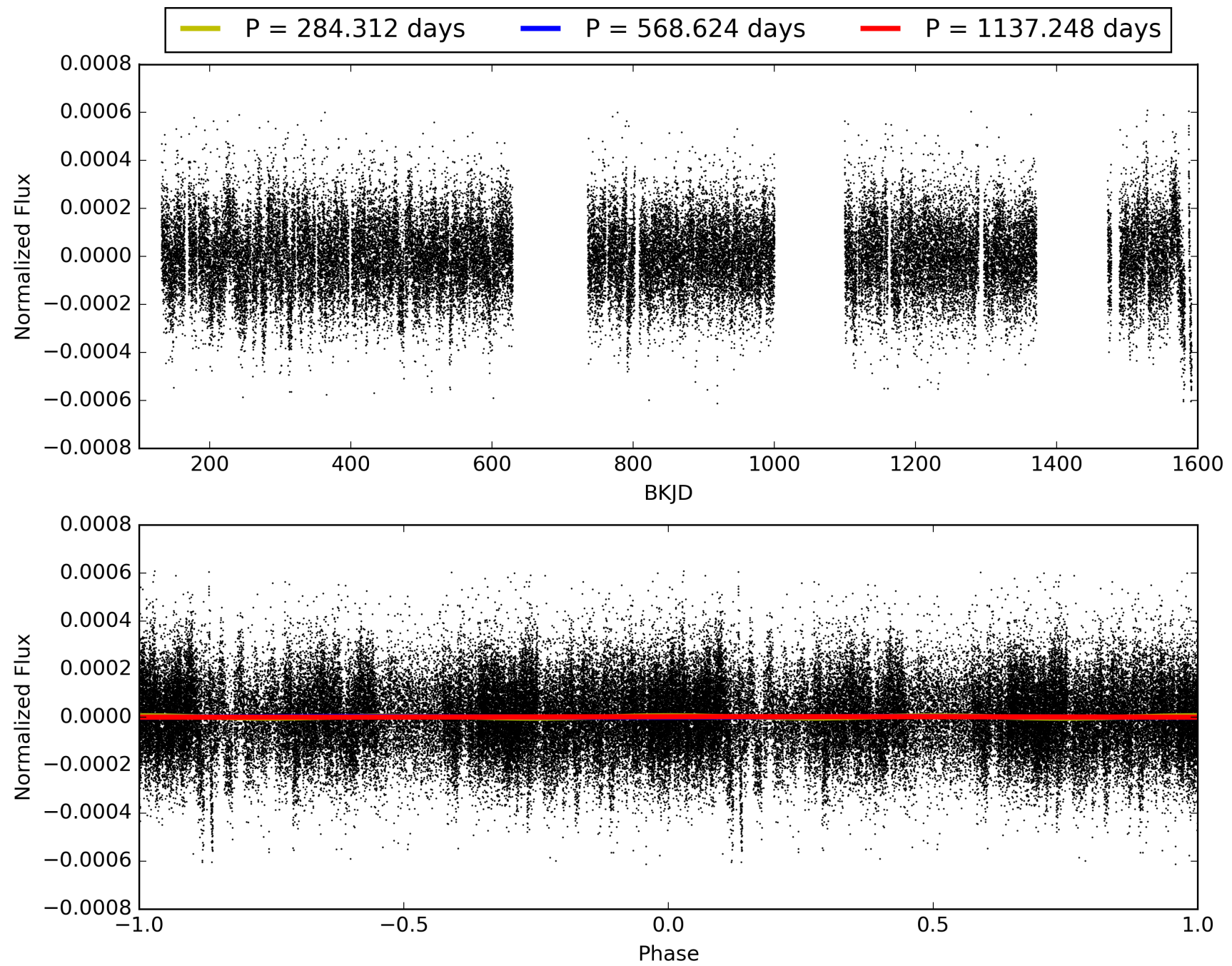
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 20:03:45 Z

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

TCE 010485840-01, PDC Light Curves

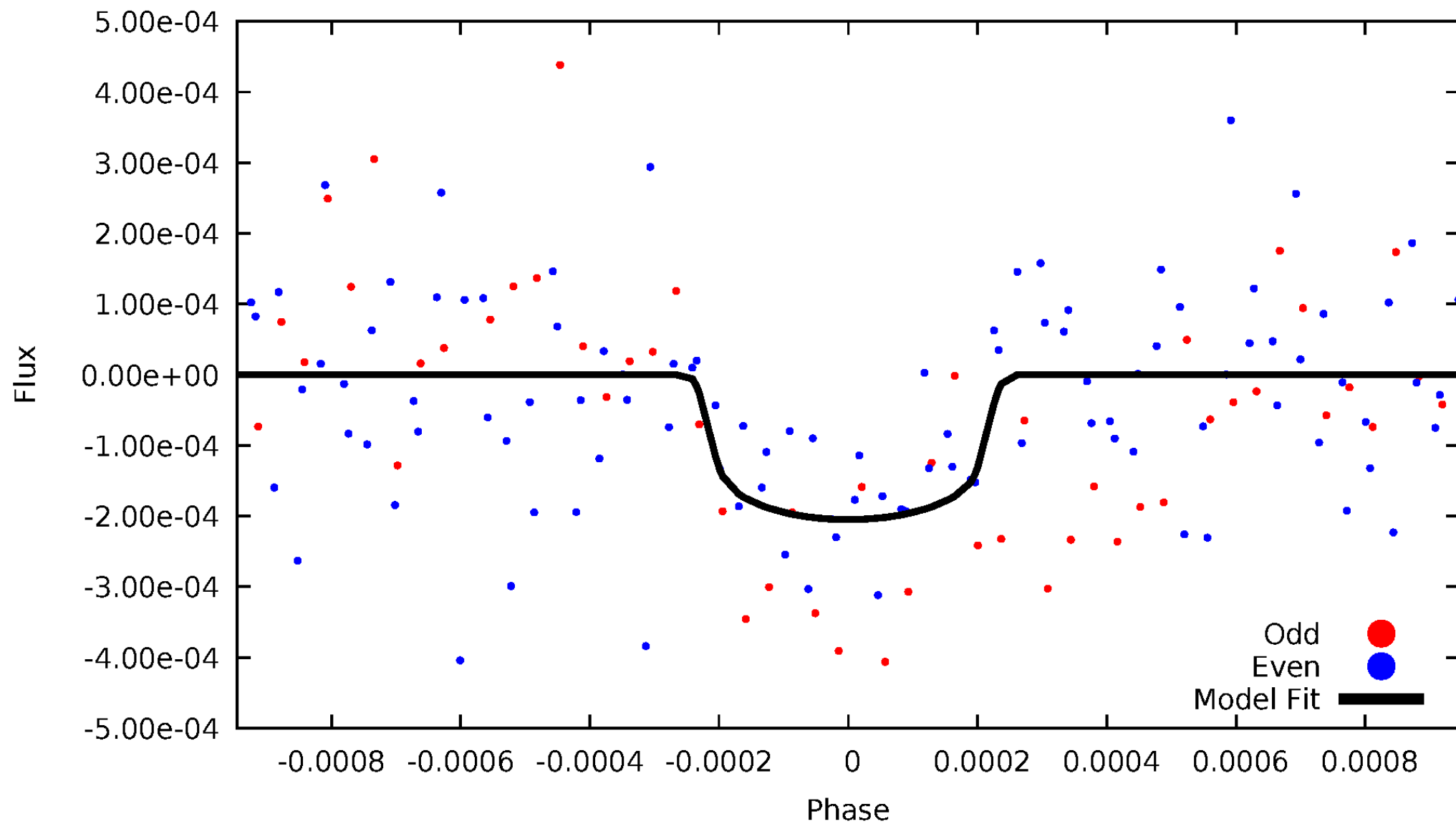


TCE 010485840-01



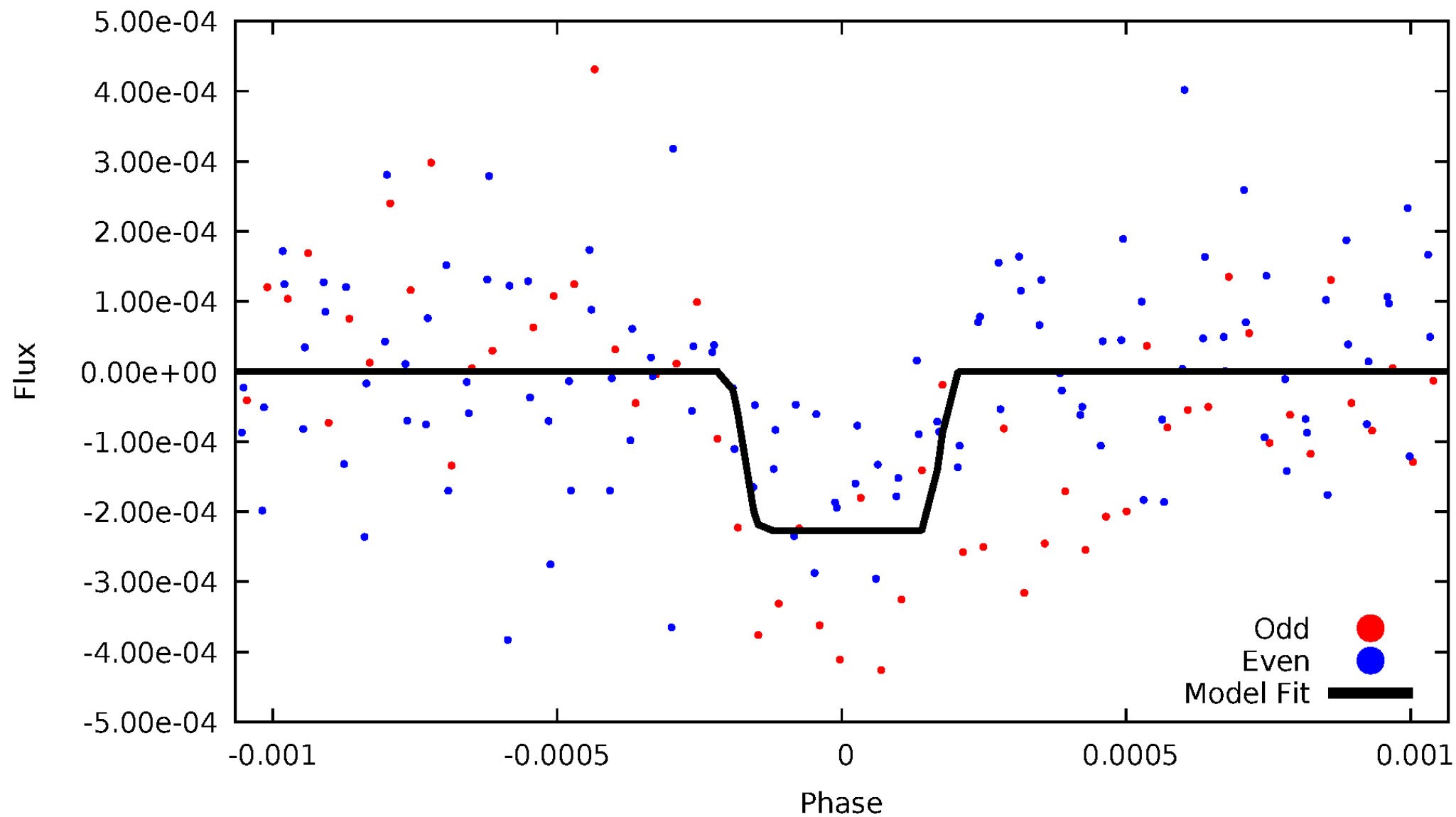
DV Odd/Even

TCE 010485840-01



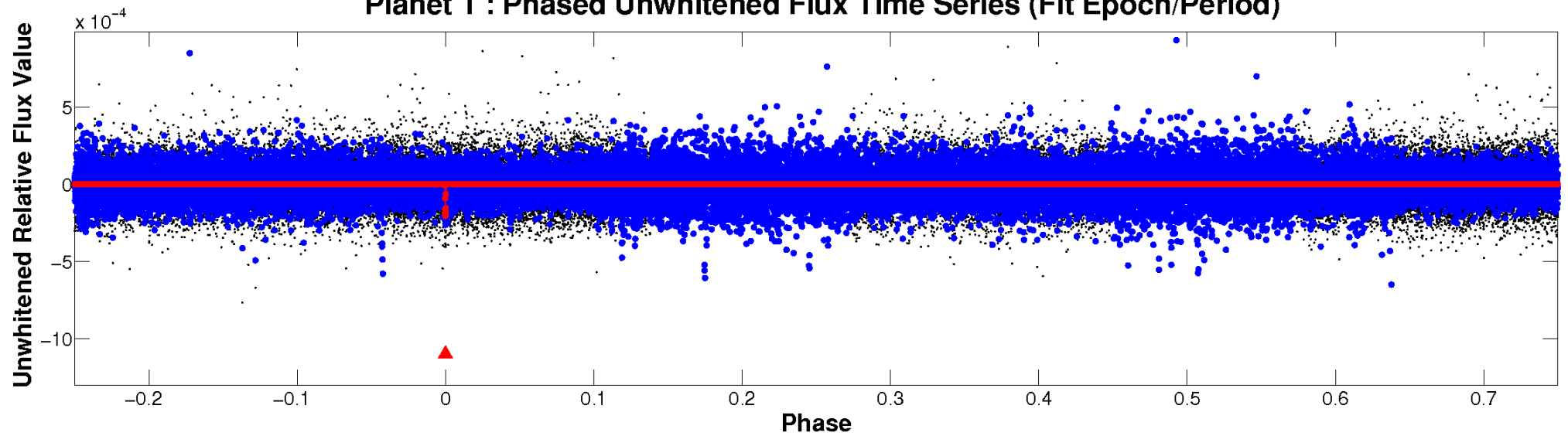
ALT Odd/Even

TCE 010485840-01

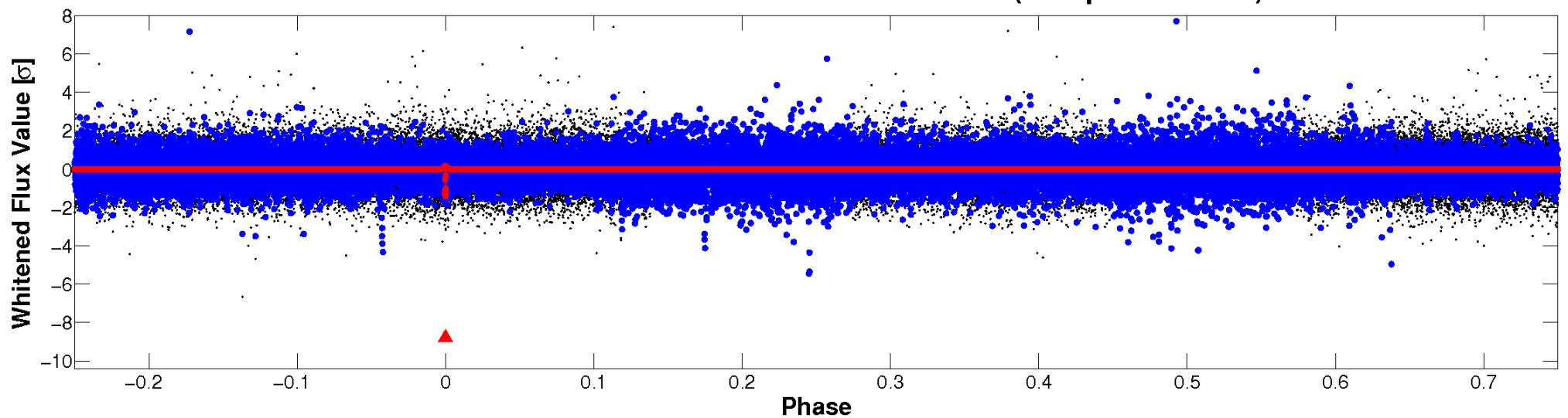


Non-Whitened Vs. Whitened Light Curve

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



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



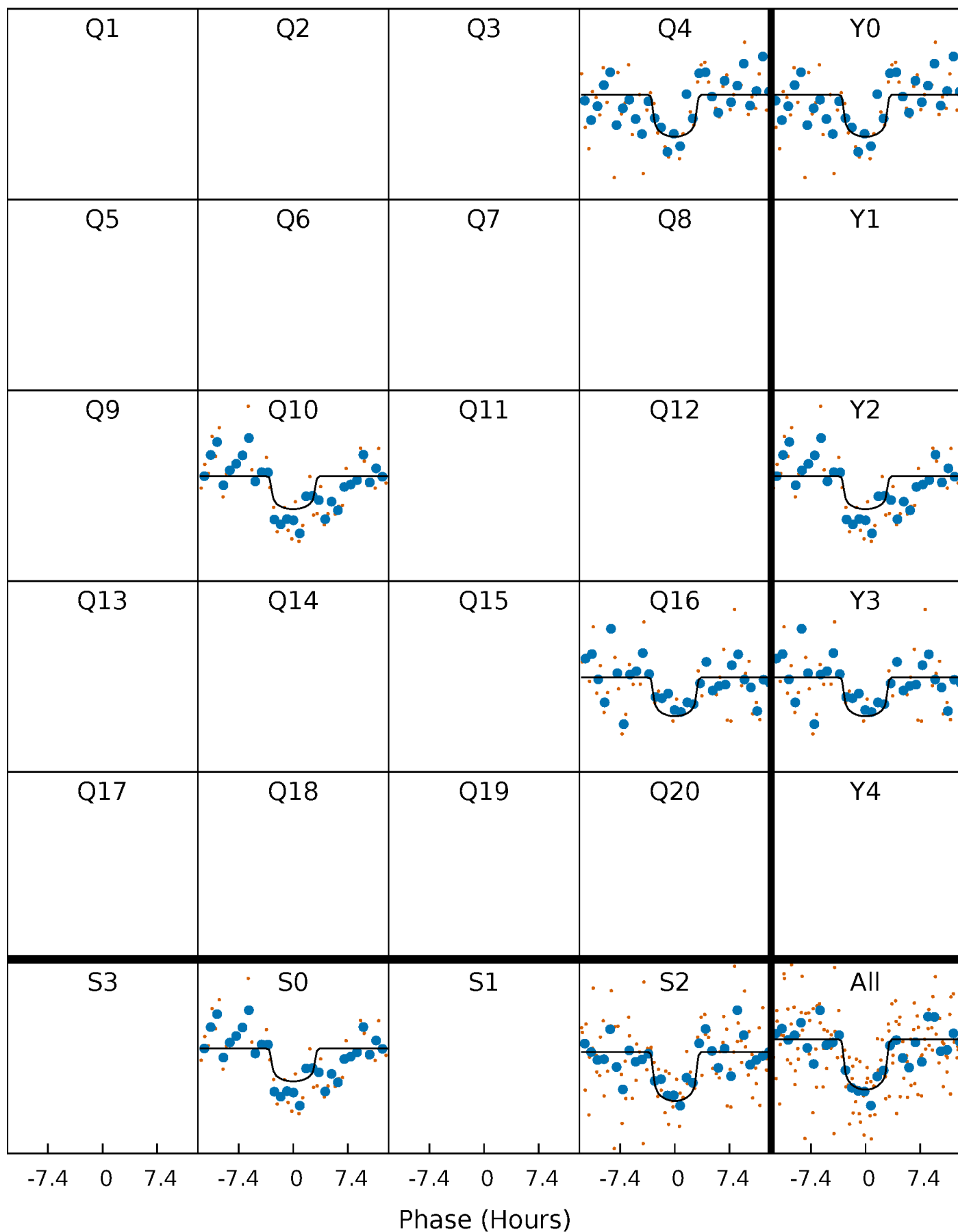
PDC Quarter-Phased Transit Curves

TCE 010485840-01 P=568.624050 Days $T_0=374.663954$ (BKJD)



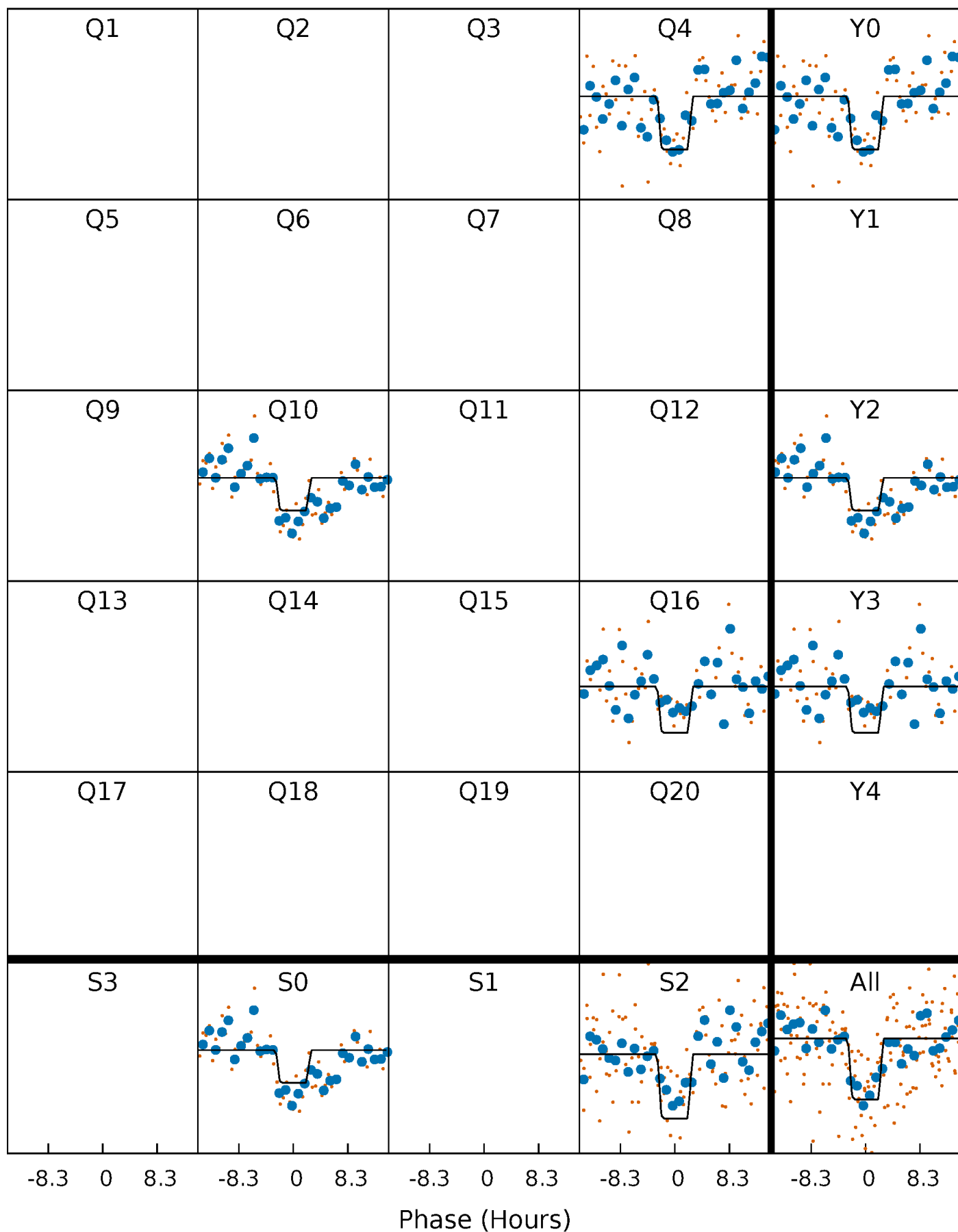
DV Quarter-Phased Transit Curves

TCE 010485840-01 P=568.624050 Days $T_0=374.663954$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

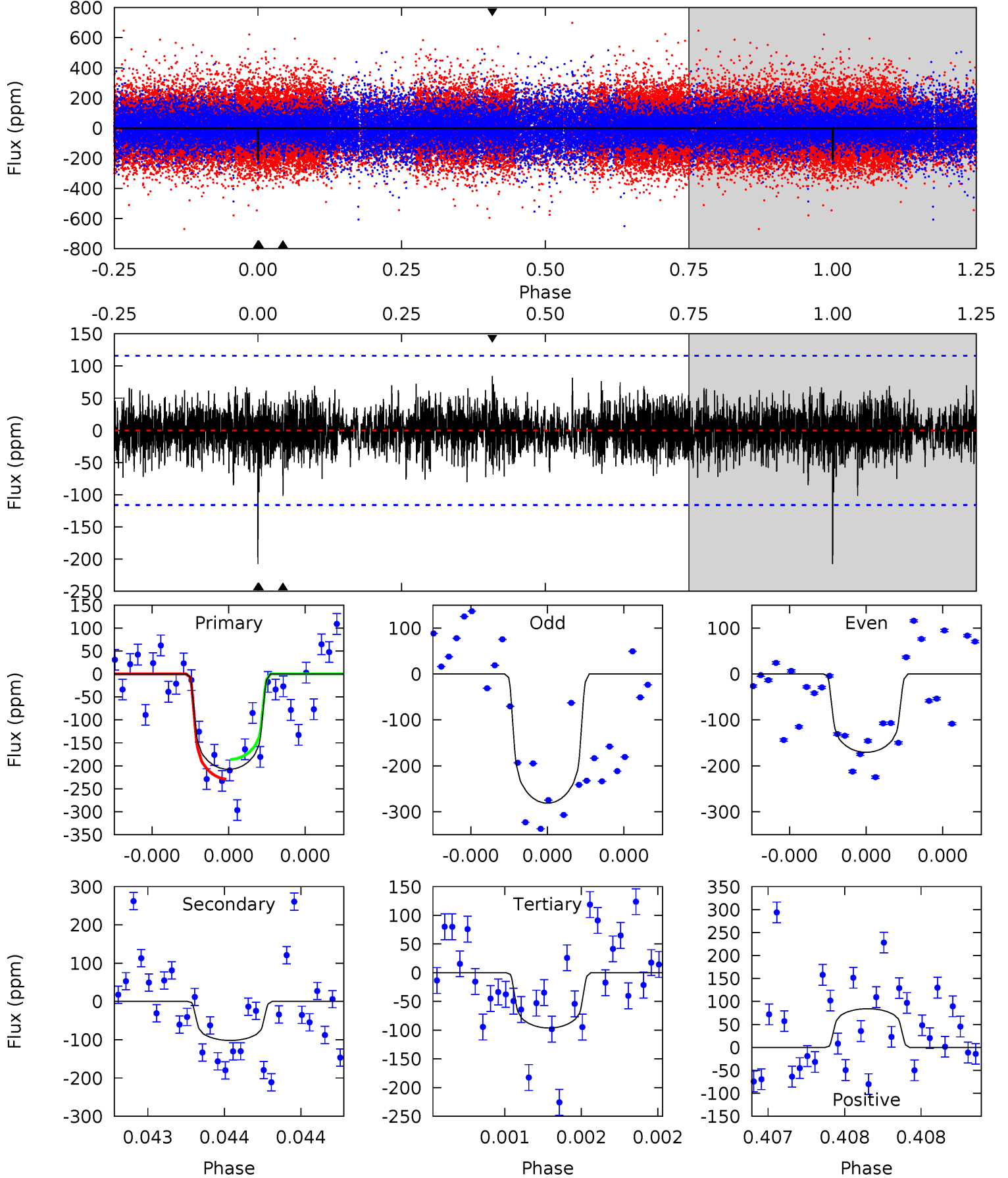
TCE 010485840-01 P=568.625108 Days $T_0=374.655924$ (BKJD)



DV Model-Shift Uniqueness Test

010485840-01, P = 568.624050 Days, E = 374.663954 Days

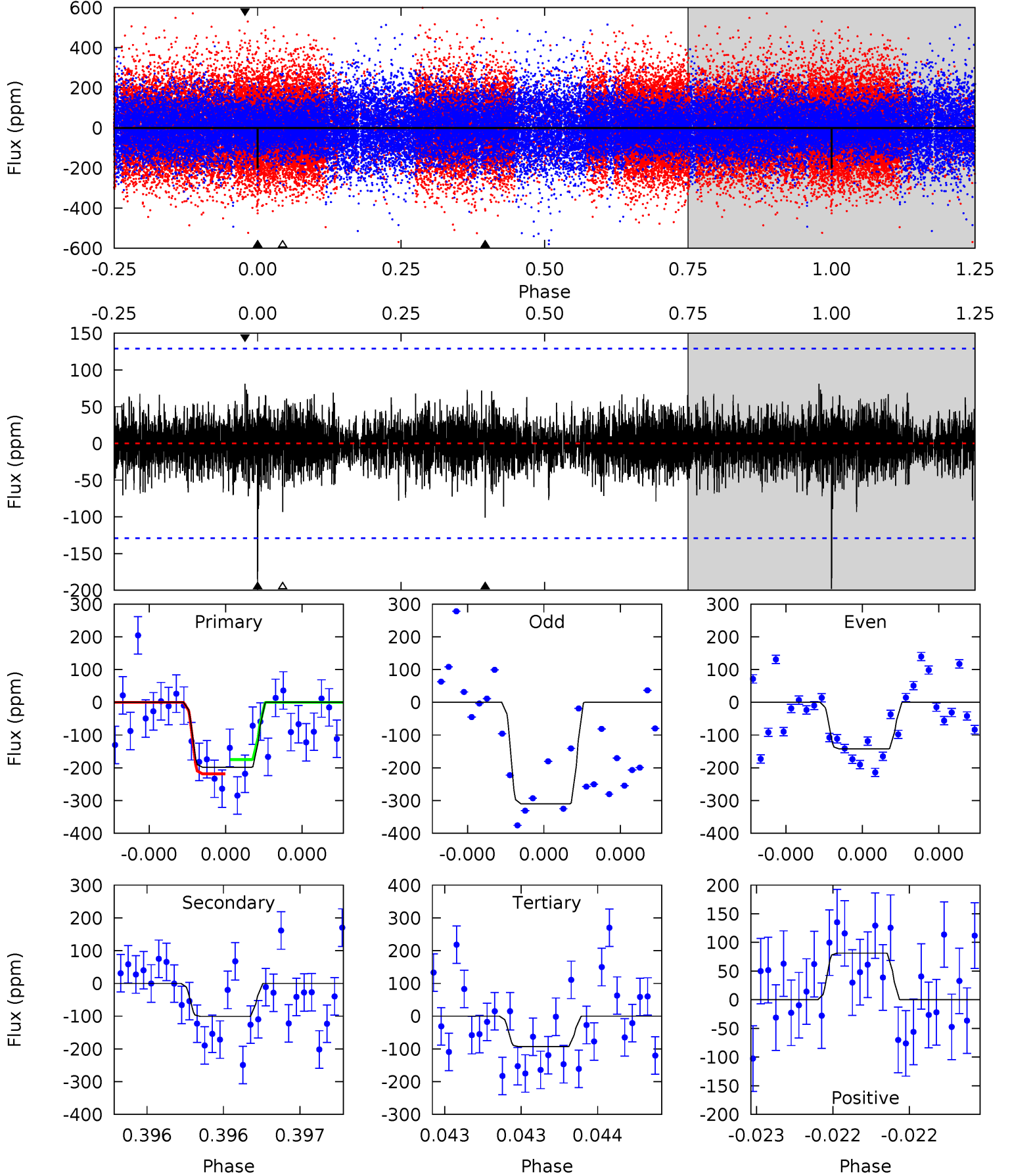
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.98	4.90	4.63	4.05	5.58	3.49	1.10	5.36	5.93	0.27	0.85	2.52	1.07	0.29	1.03



Alt Model-Shift Uniqueness Test

010485840-01, P = 568.625108 Days, E = 374.655924 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.62	4.39	4.05	3.54	5.61	3.54	0.95	4.57	5.08	0.33	0.85	3.48	1.09	0.29	0.95



Stellar Parameters For KIC 010485840

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5332^{+160}_{-144}	$4.513^{+0.105}_{-0.086}$	$-0.420^{+0.350}_{-0.300}$	$0.779^{+0.102}_{-0.102}$	$0.721^{+0.107}_{-0.046}$	$2.151^{+0.921}_{-0.545}$
	+3%/-3%	+2%/-2%	+83%/-71%	+13%/-13%	+15%/-6%	+43%/-25%
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 010485840-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-102 ± 21	$1.35^{+0.49}_{-0.49}$	264^{+12}_{-12}	4402^{+893}_{-470}	44857^{+62109}_{-21976}
Alt.	-101 ± 23	$1.29^{+0.49}_{-0.45}$	264^{+11}_{-12}	4484^{+854}_{-509}	47702^{+64296}_{-23178}

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

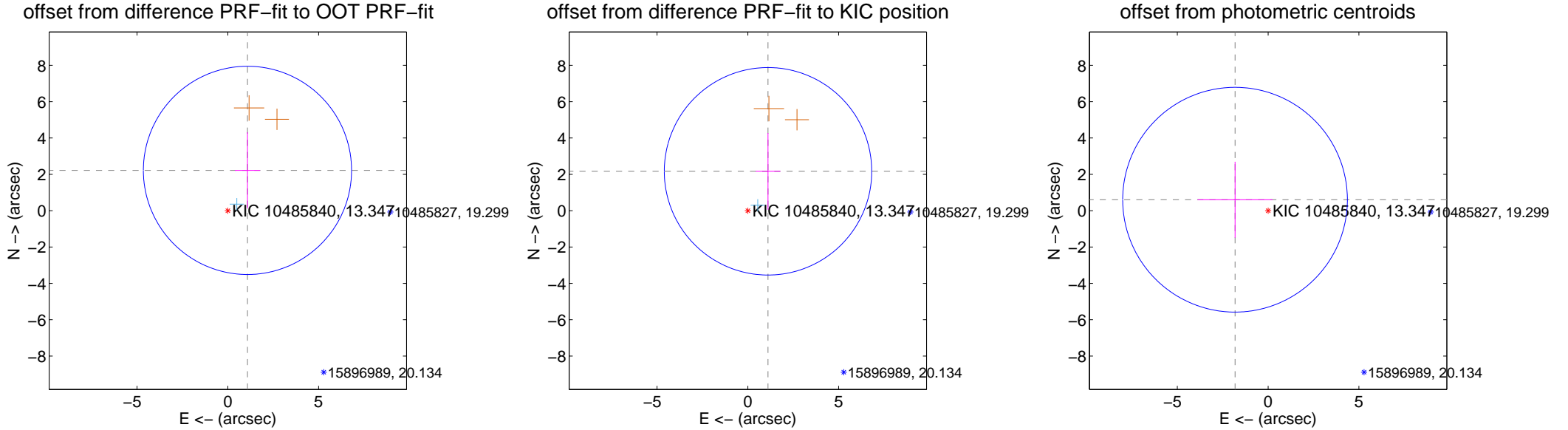
DV Centroid Data

Supplemental centroid analysis for 010485840-01. Kepler magnitude: 13.35. Transit SNR 7.43

There are 1 quarters with good PRF difference image offsets

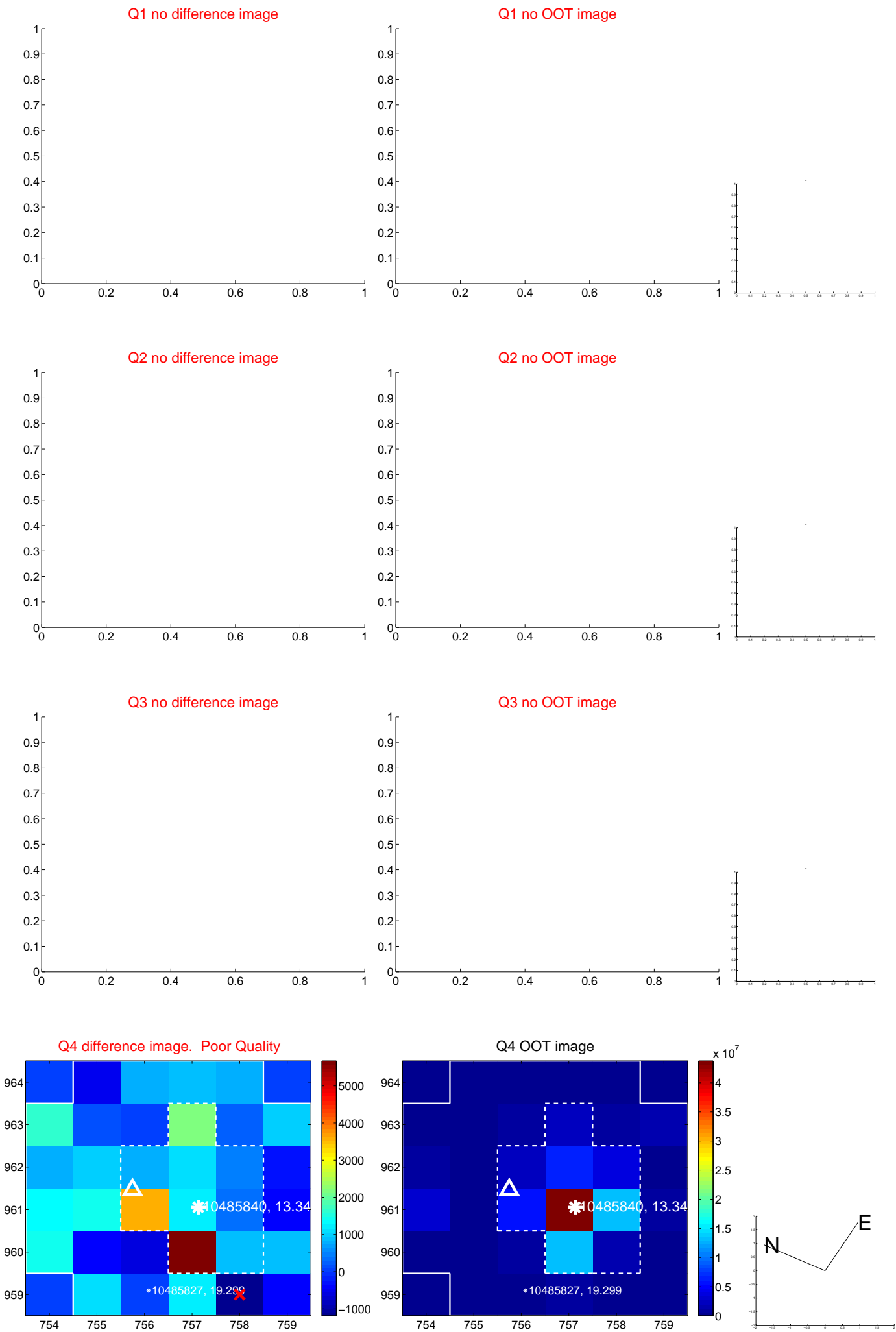
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.468 ± 1.910	1.29	-1.082 ± 0.693	2.219 ± 2.098
PRF-fit source offset from KIC position	2.437 ± 1.903	1.28	-1.111 ± 0.677	2.168 ± 2.110
photometric centroid source offset	1.92 ± 2.06	0.93	1.82 ± 2.06	0.60 ± 2.09



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.

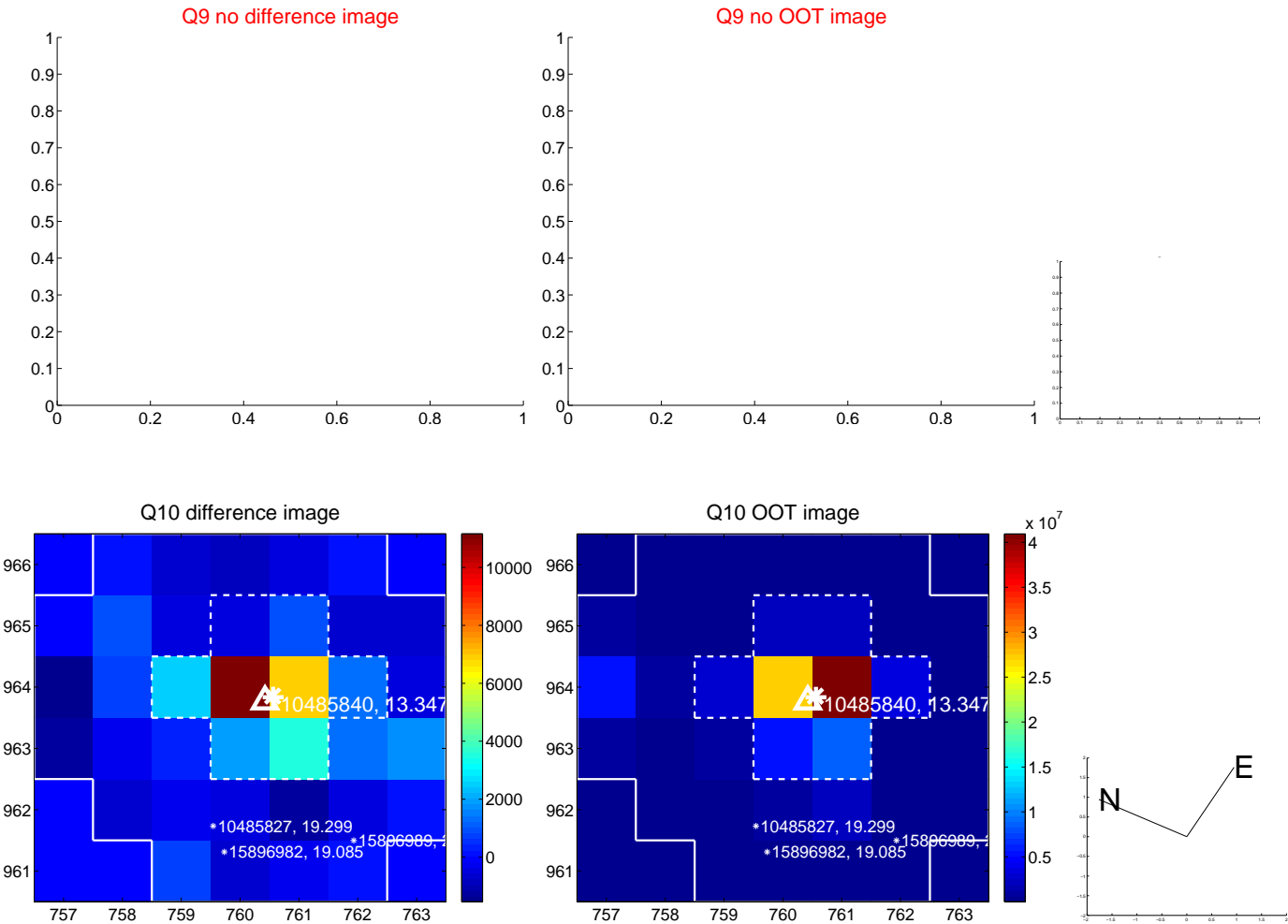
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



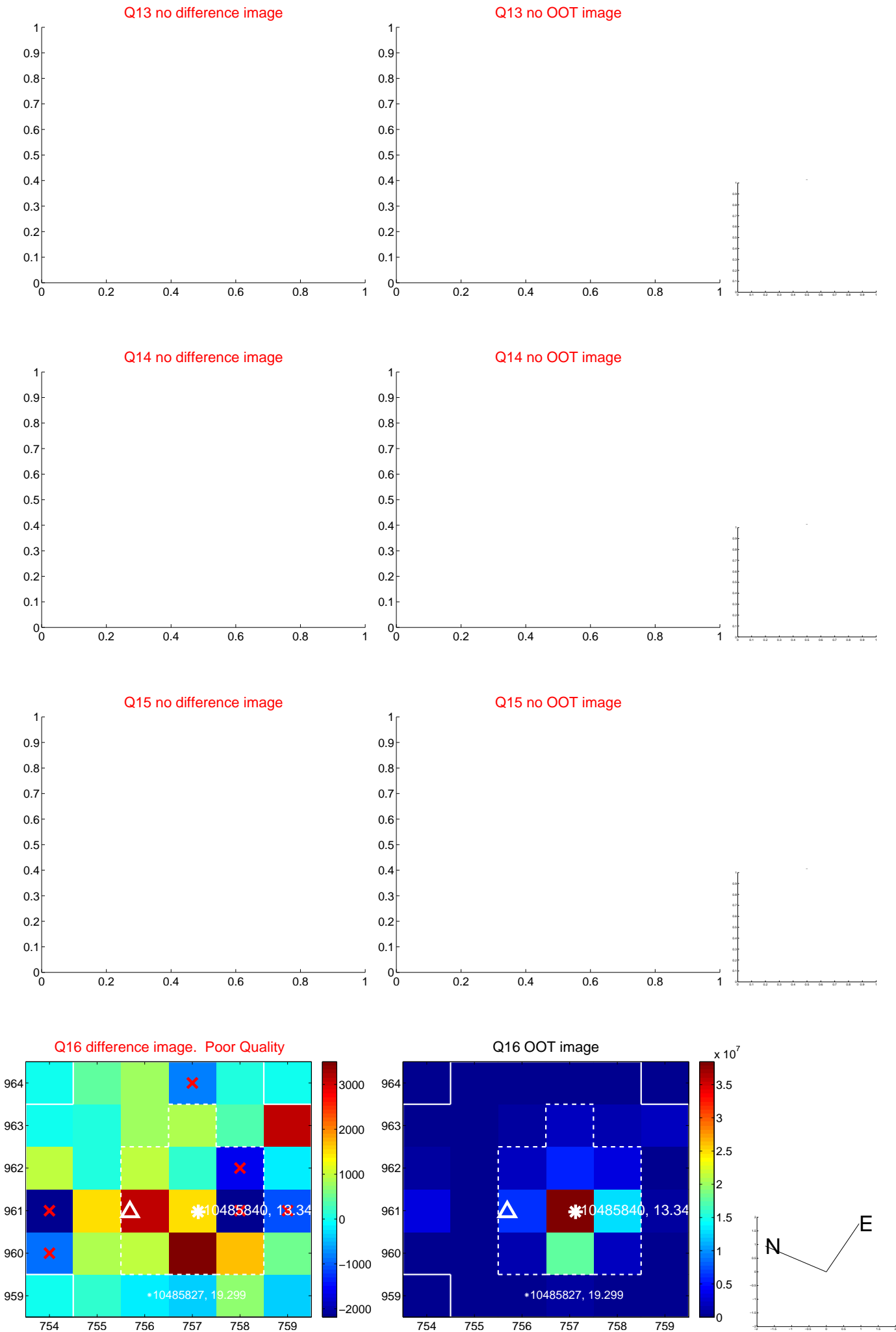
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



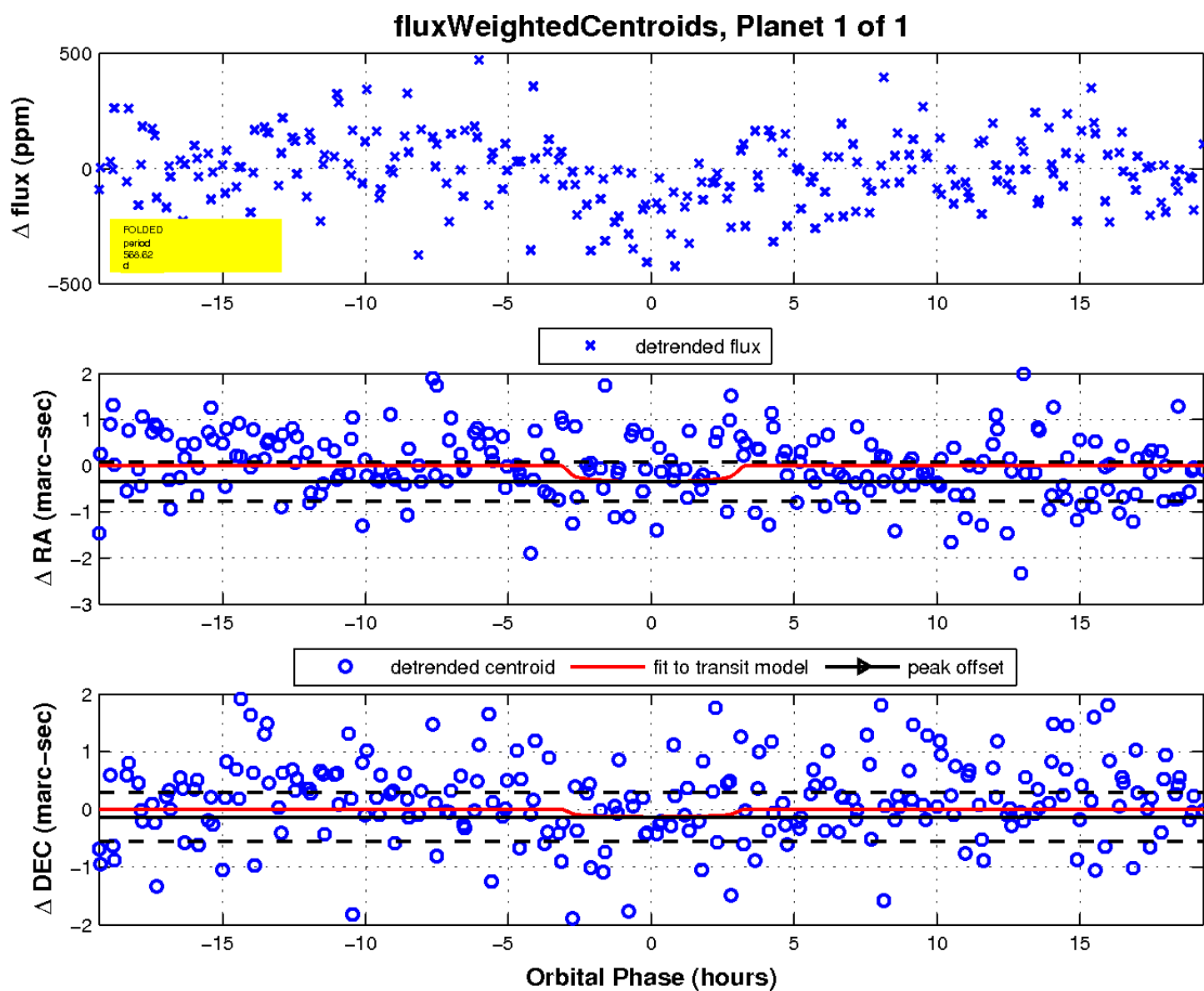
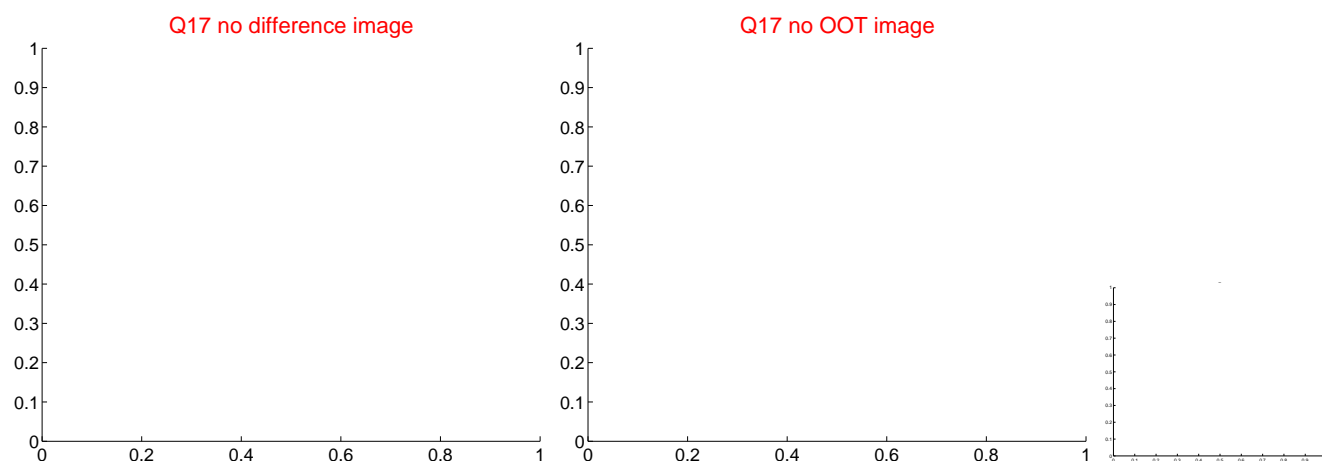
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

