

KIC 002555349

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})
002555349-01	OBS	No	569.051161	394.725349	501.7	15.680	7.1	7.1	0.90	5733	2.15	0.48

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002555349-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—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.

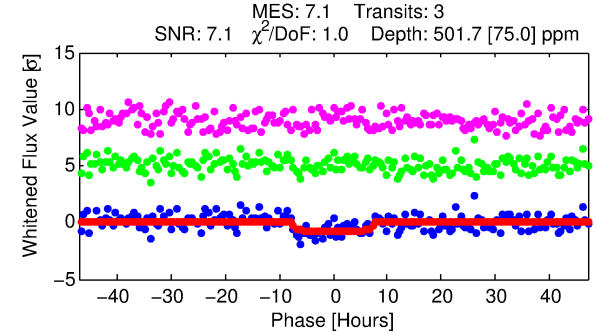
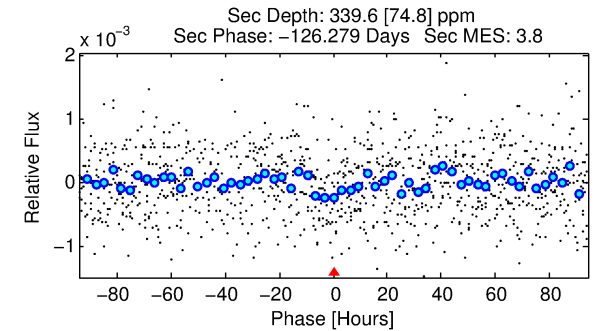
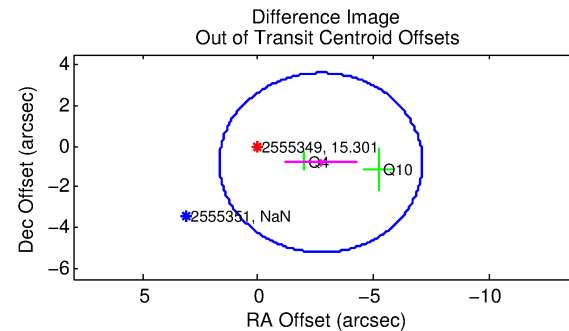
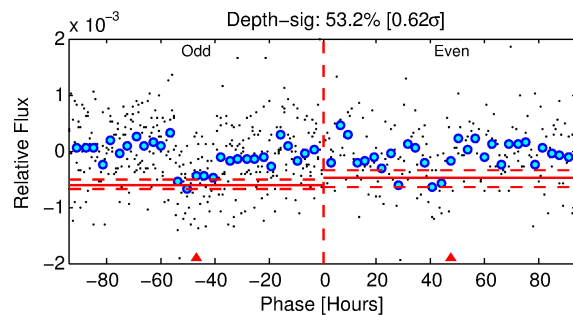
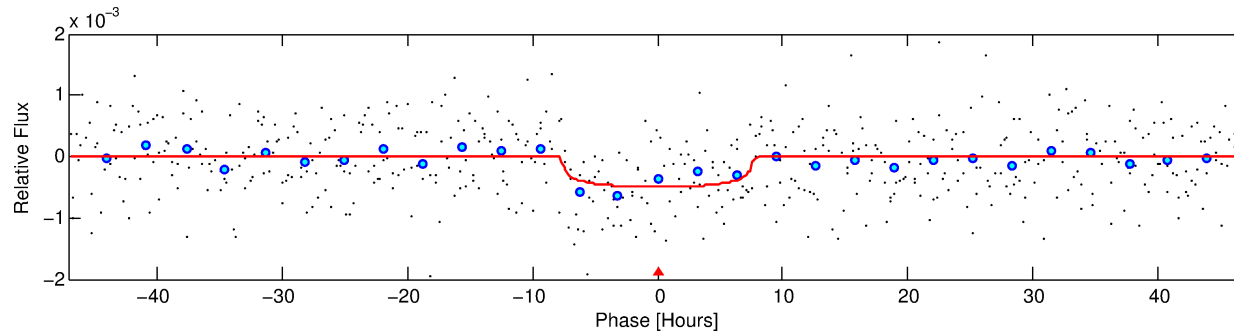
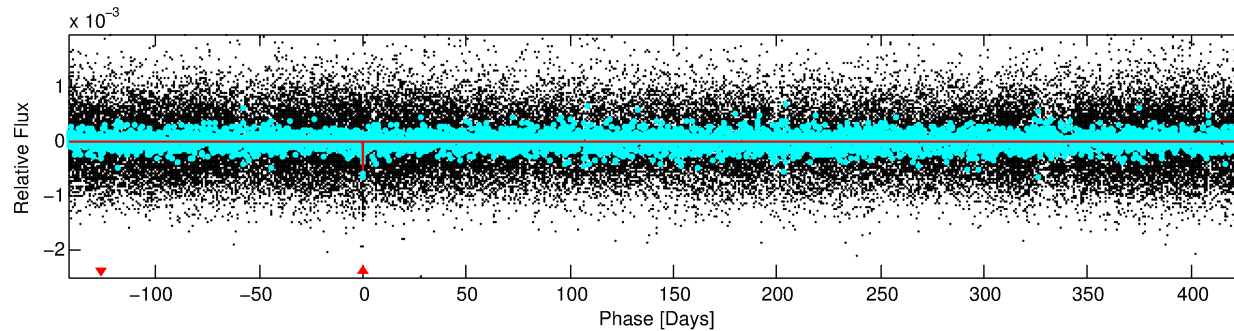
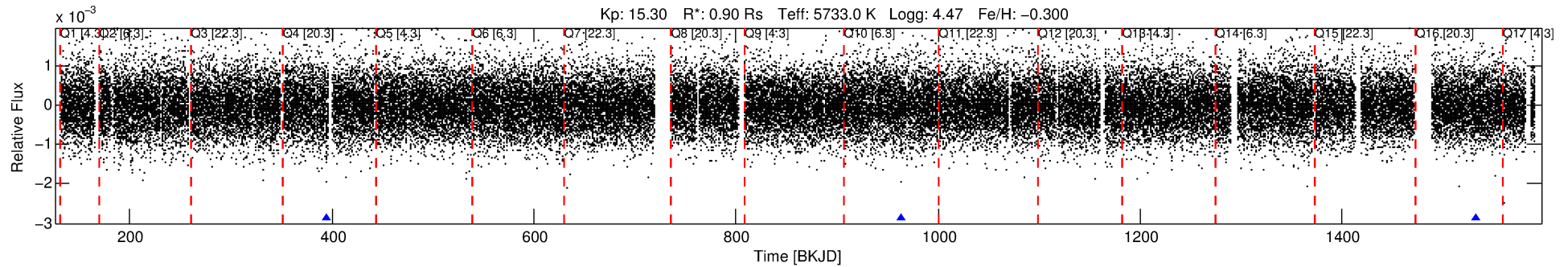
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 002555349-01

No Significant Match Found

DV One-Page Summary

KIC: 2555349 Candidate: 1 of 1 Period: 569.051 d



DV Fit Results:

Period = 569.05116 [0.02200] d
Epoch = 394.7253 [0.0291] BKJD
Rp/R* = 0.0220 [0.0099]
a/R* = 204.11 [417.30]
b = 0.71 [1.44]
Seff = 0.48 [0.16]
Teq = 212 [18] K
Rp = 2.15 [1.13] Re
a = 1.2765 [0.2885] AU
Ag = 66093.25 [65012.84] [1.02 σ]
Teffp = 5250 [1227] K [4.11 σ]

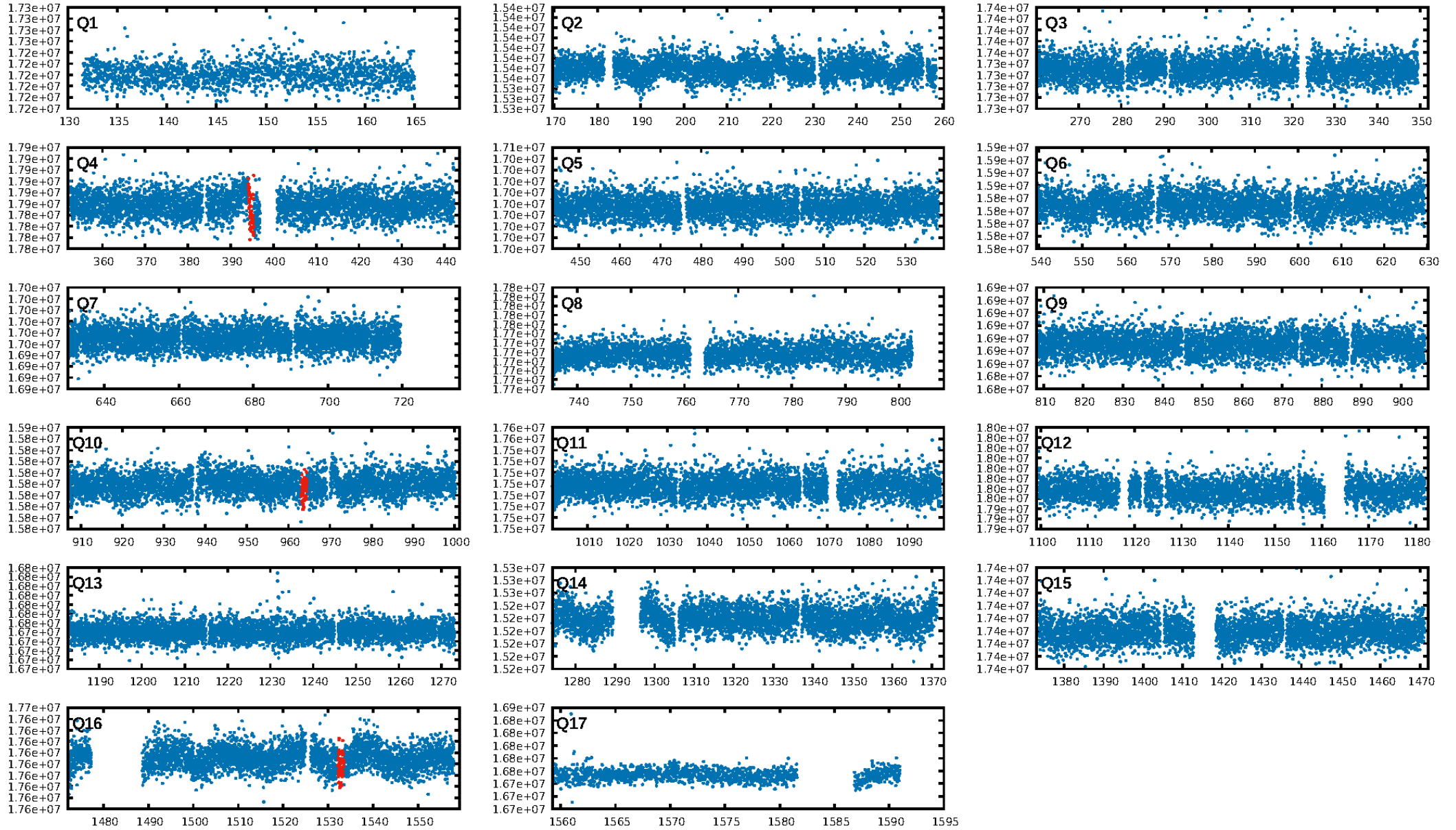
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 3.6%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 2.20e-12
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -2.087
Centroid-sig: 19.1%
Centroid-so: 2.842 arcsec [1.49 σ]
OotOffset-rm: 2.831 arcsec [1.93 σ]
KicOffset-rm: 2.604 arcsec [1.74 σ]
OotOffset-st: 1/0/1/0 [2]
KicOffset-st: 1/0/1/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [2/2]

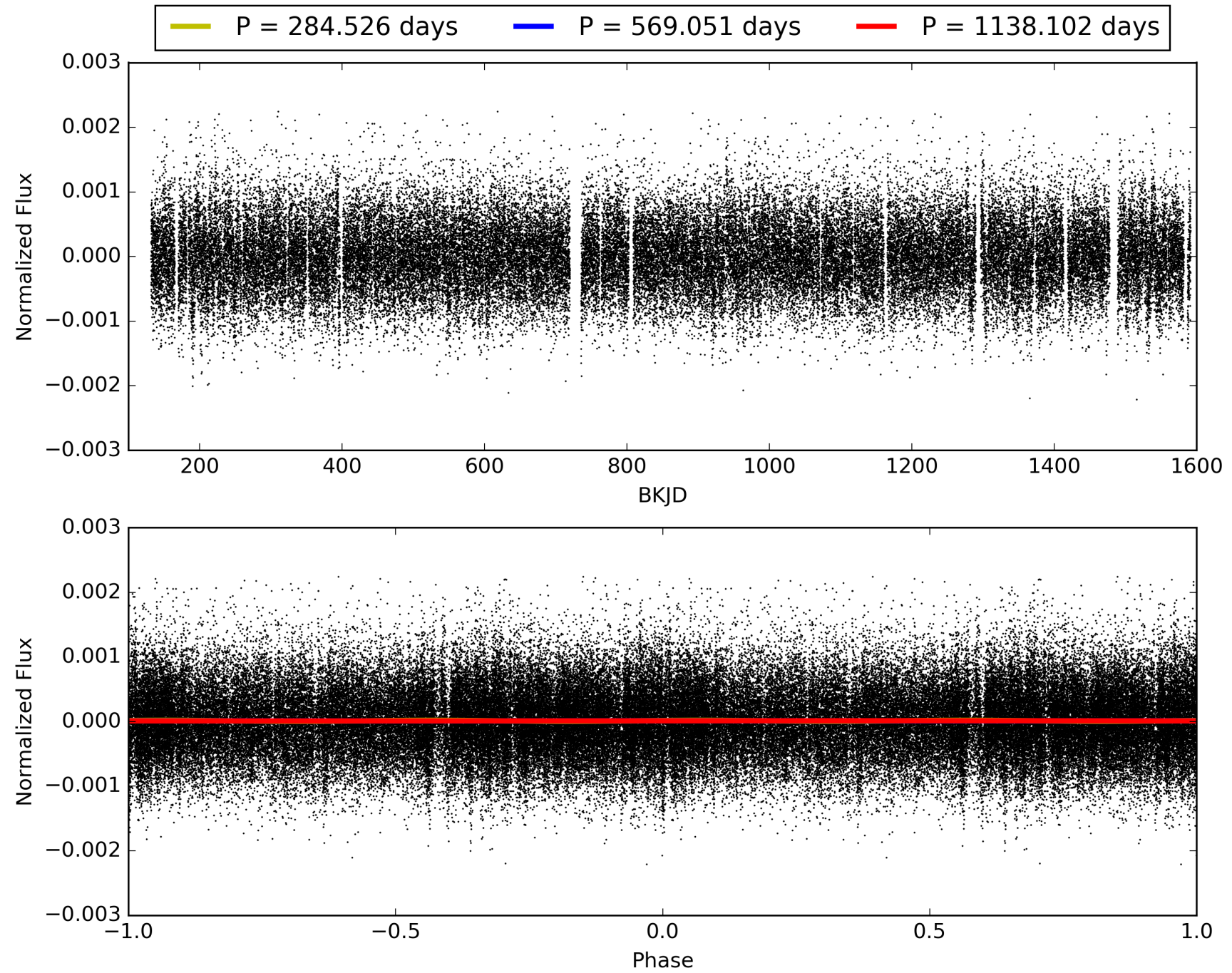
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 15:34:57 Z

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

TCE 002555349-01, PDC Light Curves

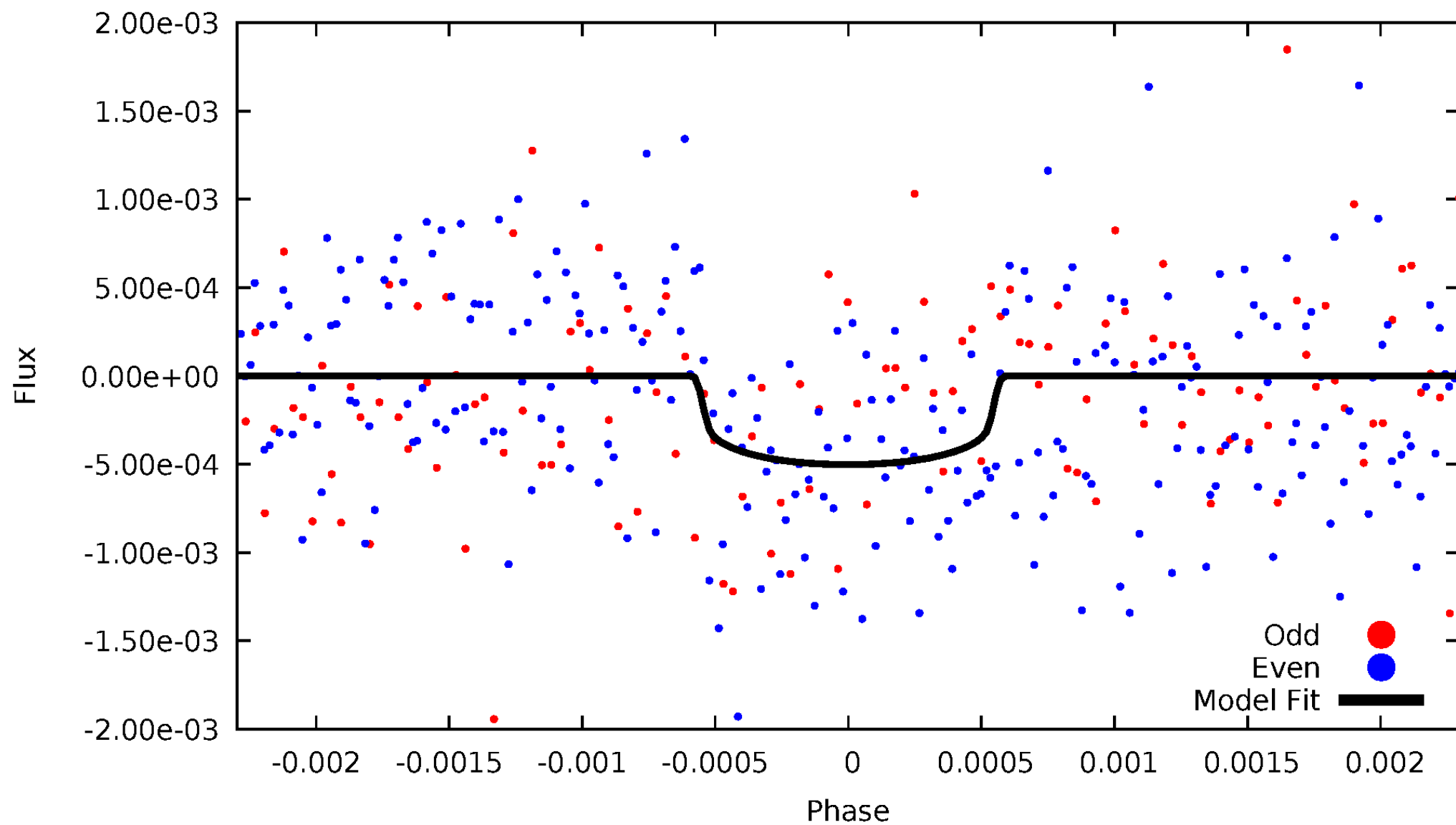


TCE 002555349-01



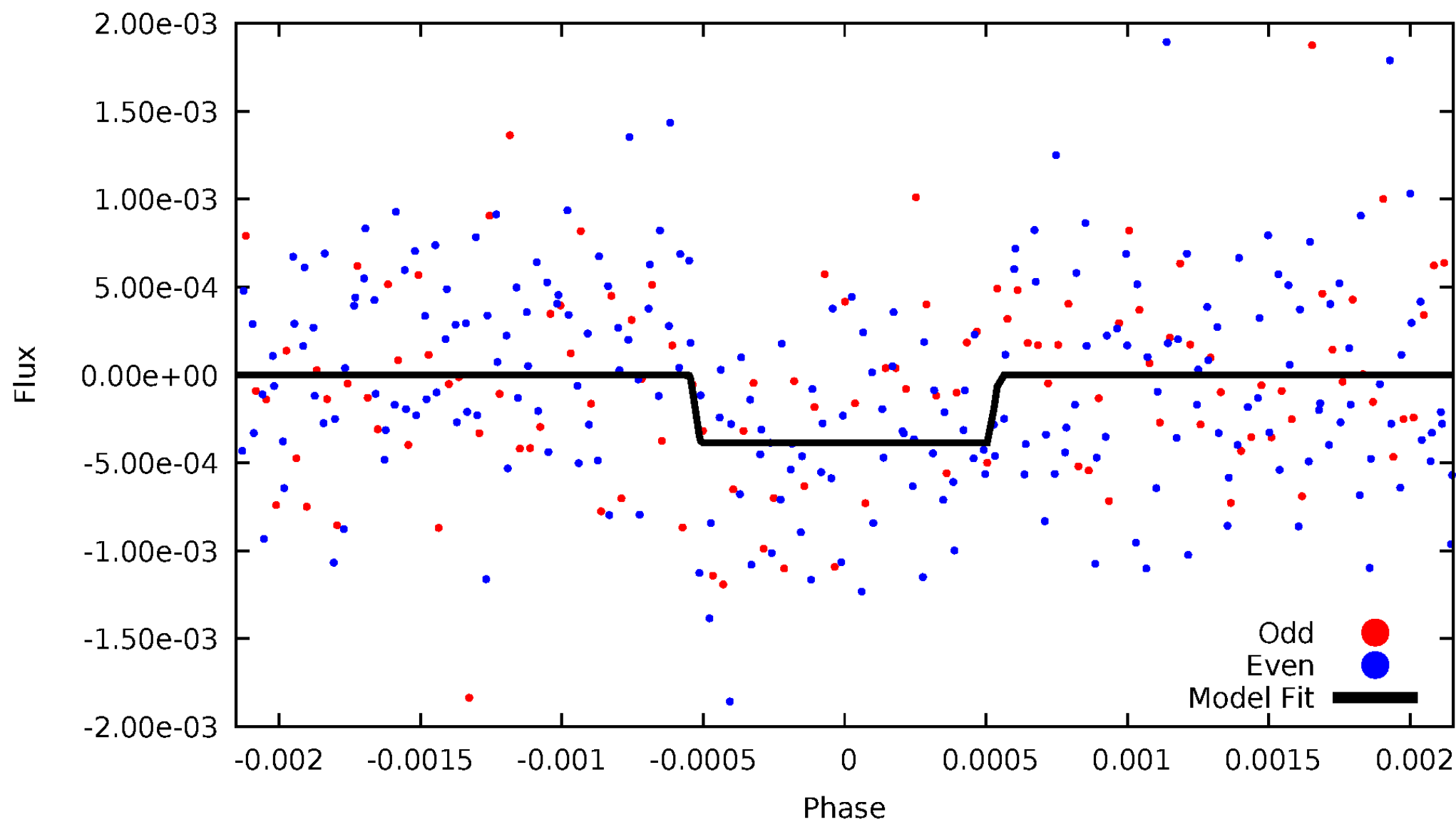
DV Odd/Even

TCE 002555349-01



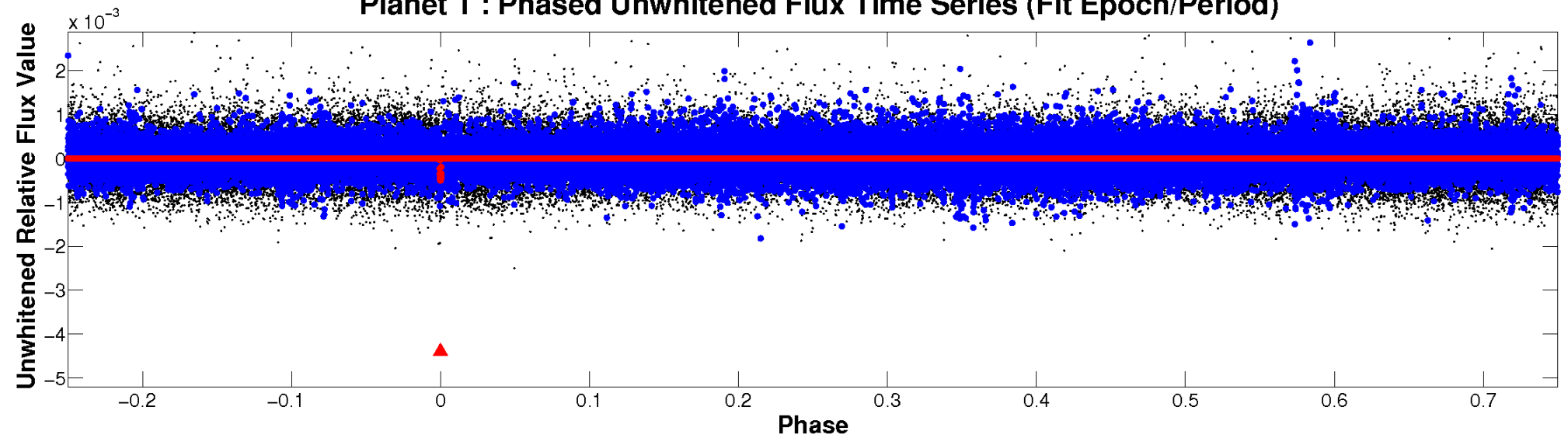
ALT Odd/Even

TCE 002555349-01

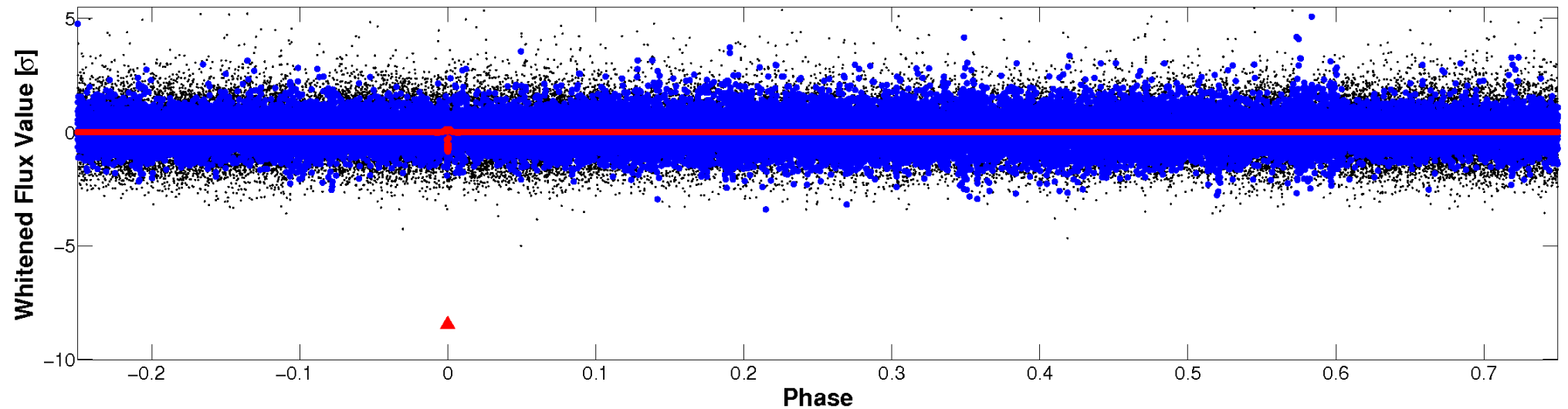


Non-Whitened Vs. Whitened Light Curve

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



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



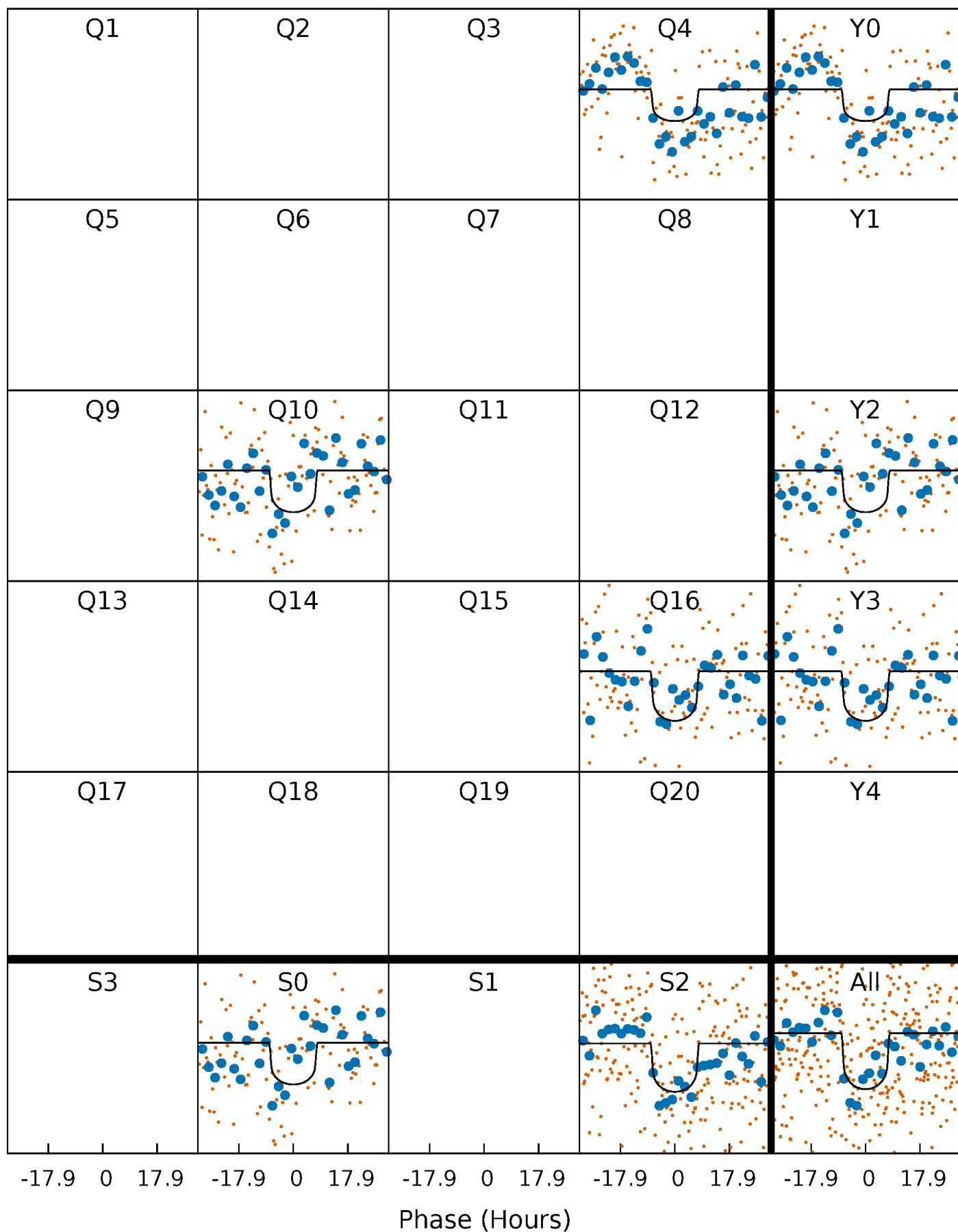
PDC Quarter-Phased Transit Curves

TCE 002555349-01 P=569.051161 Days $T_0=394.725349$ (BKJD)



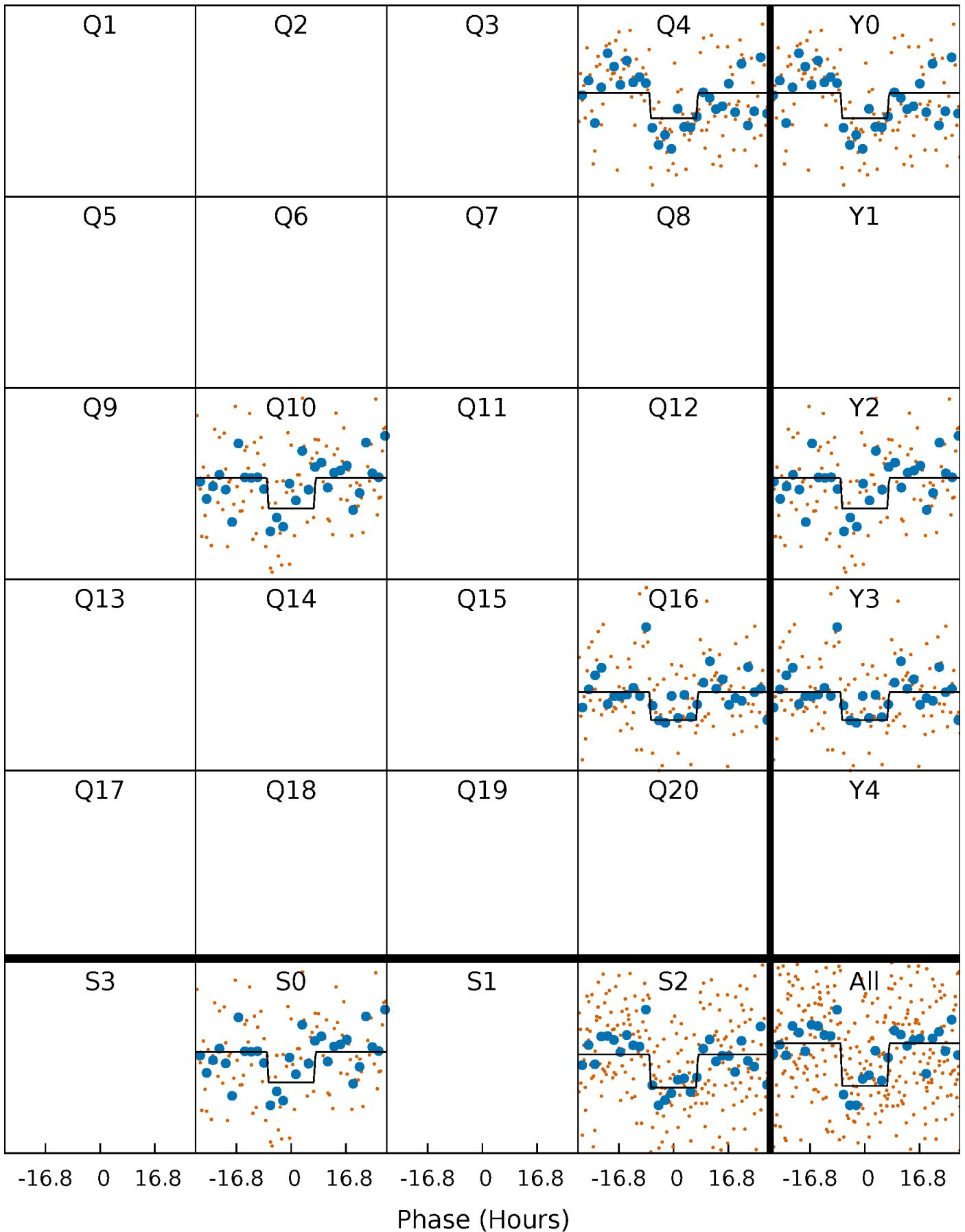
DV Quarter-Phased Transit Curves

TCE 002555349-01 P=569.051161 Days $T_0=394.725349$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

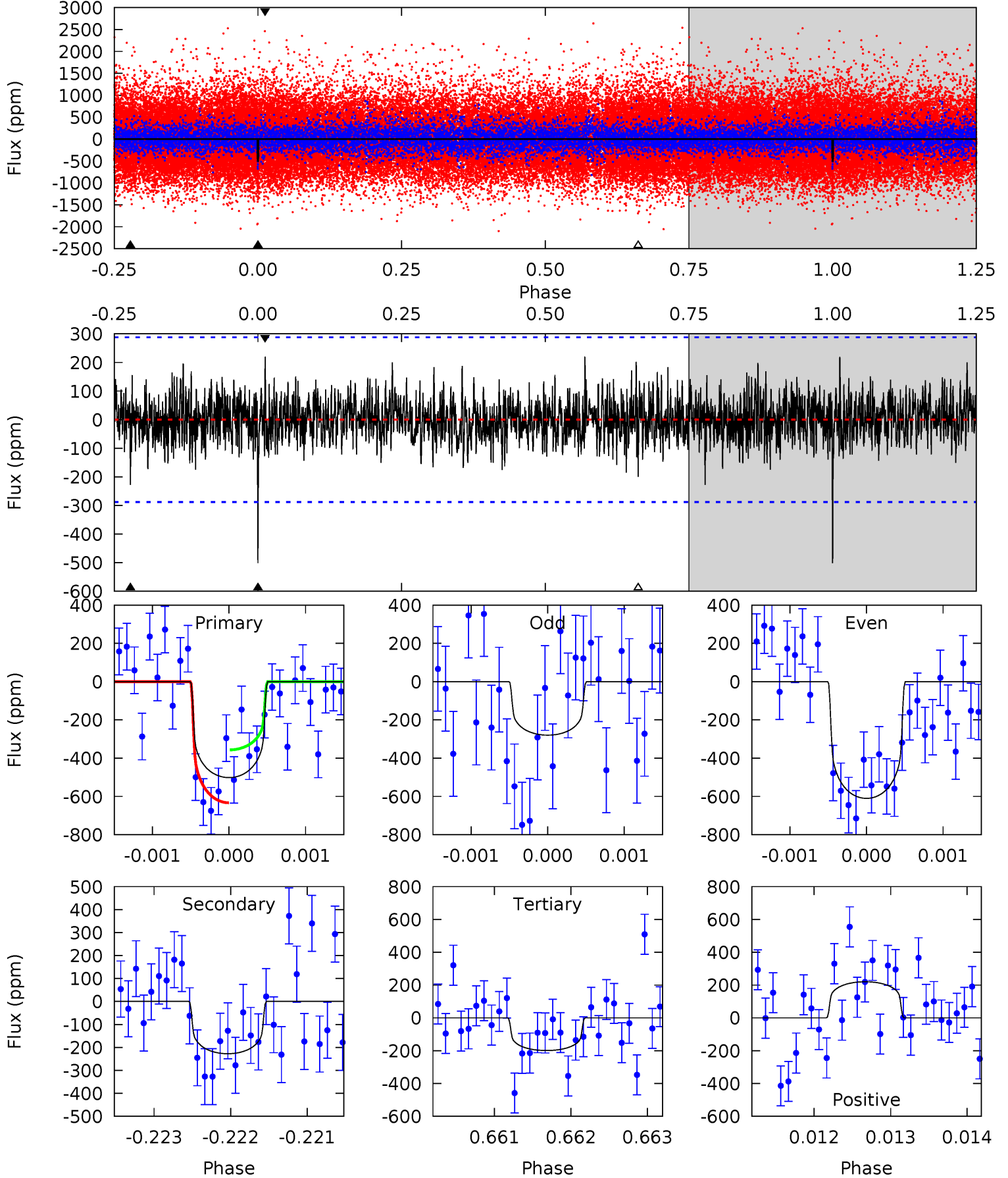
TCE 002555349-01 P=569.054212 Days $T_0=394.720190$ (BKJD)



DV Model-Shift Uniqueness Test

002555349-01, P = 569.051161 Days, E = 394.725349 Days

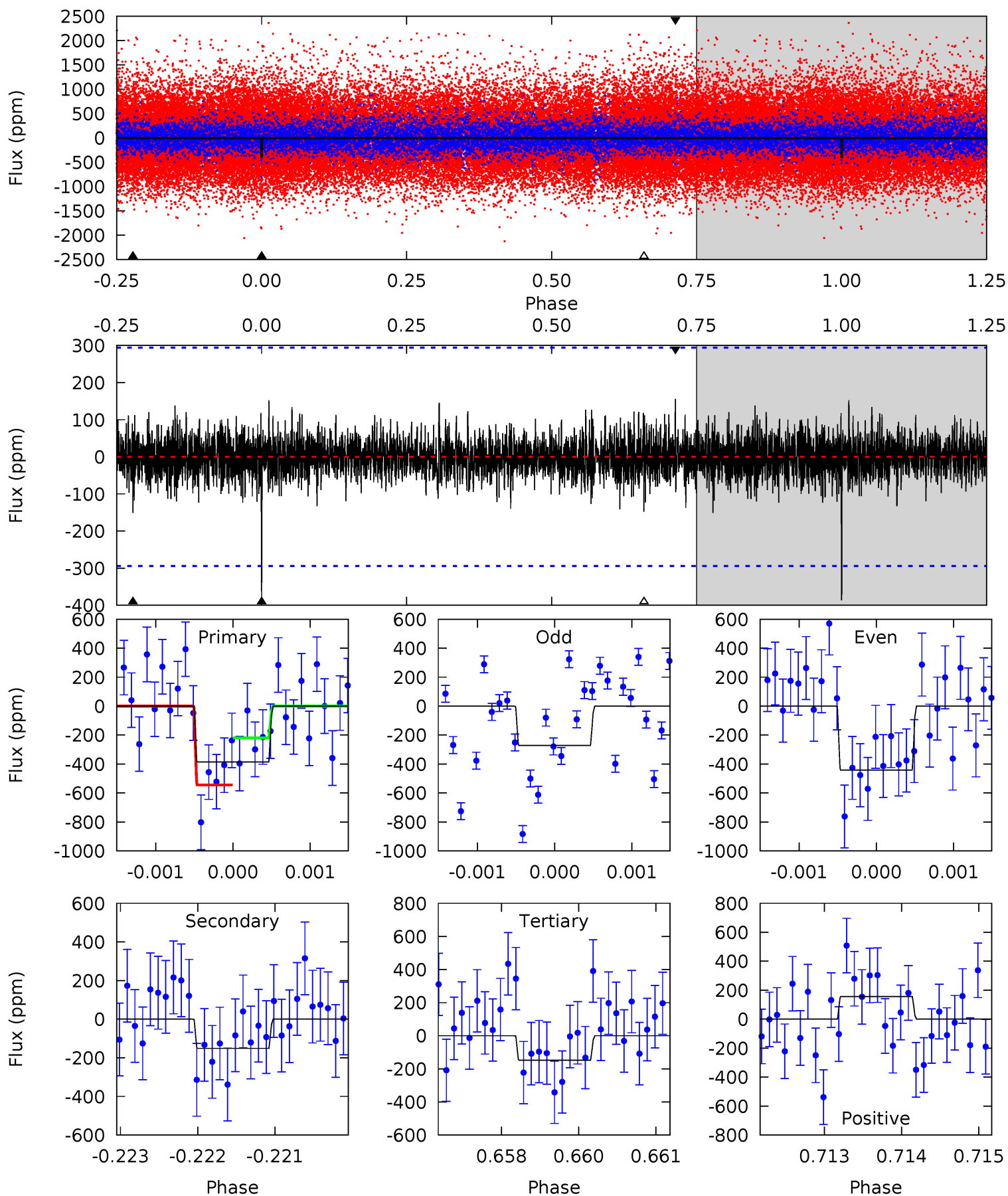
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.45	4.29	3.75	4.15	5.42	3.25	1.11	5.70	5.31	0.53	0.14	2.95	1.23	0.30	2.61



Alt Model-Shift Uniqueness Test

002555349-01, P = 569.054212 Days, E = 394.720190 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.14	2.79	2.74	2.87	5.44	3.27	0.72	4.40	4.27	0.06	-0.08	1.49	1.41	0.29	3.01



Stellar Parameters For KIC 002555349

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5733^{+155}_{-155}	$4.467^{+0.094}_{-0.175}$	$-0.300^{+0.300}_{-0.300}$	$0.895^{+0.244}_{-0.122}$	$0.856^{+0.109}_{-0.082}$	$1.681^{+0.668}_{-0.774}$
	+3%/-3%	+2%/-4%	+100%/-100%	+27%/-14%	+13%/-10%	+40%/-46%
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 002555349-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-228 ± 53	$2.23^{+0.98}_{-0.97}$	299^{+19}_{-15}	4830^{+1450}_{-680}	40936^{+90510}_{-22369}
Alt.	-151 ± 54	$2.01^{+0.92}_{-0.89}$	299^{+19}_{-15}	4603^{+1443}_{-700}	31642^{+85837}_{-18182}

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 $A_{obs} \gg 1.0$

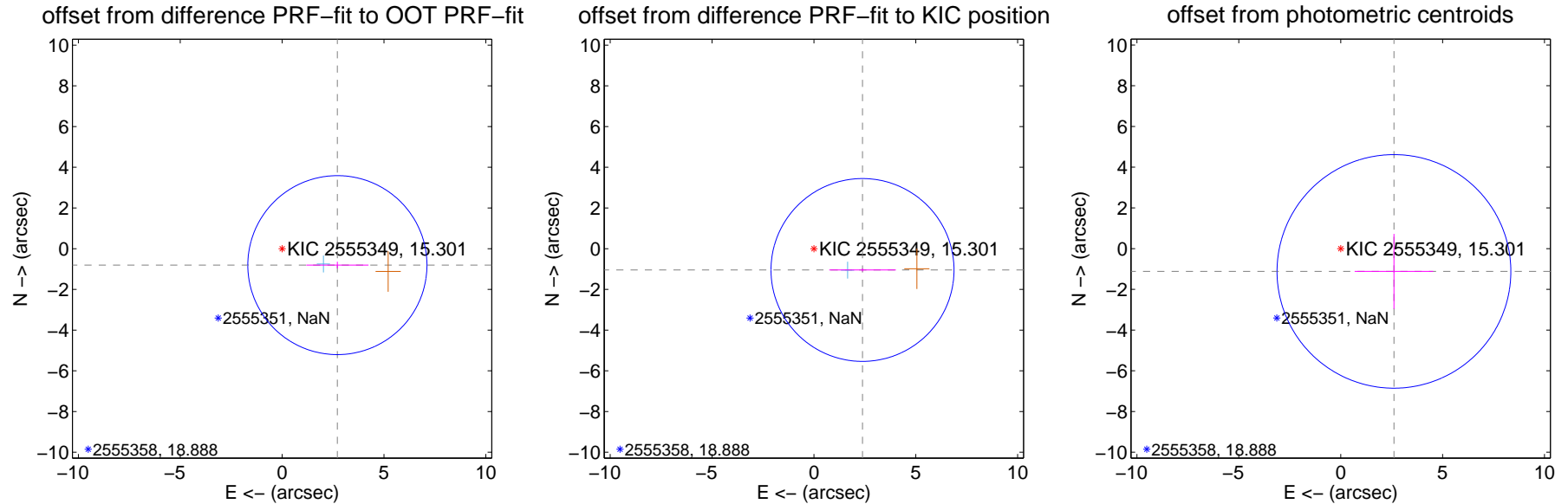
DV Centroid Data

Supplemental centroid analysis for 002555349-01. Kepler magnitude: 15.30. Transit SNR 7.15

There are 1 quarters with good PRF difference image offsets

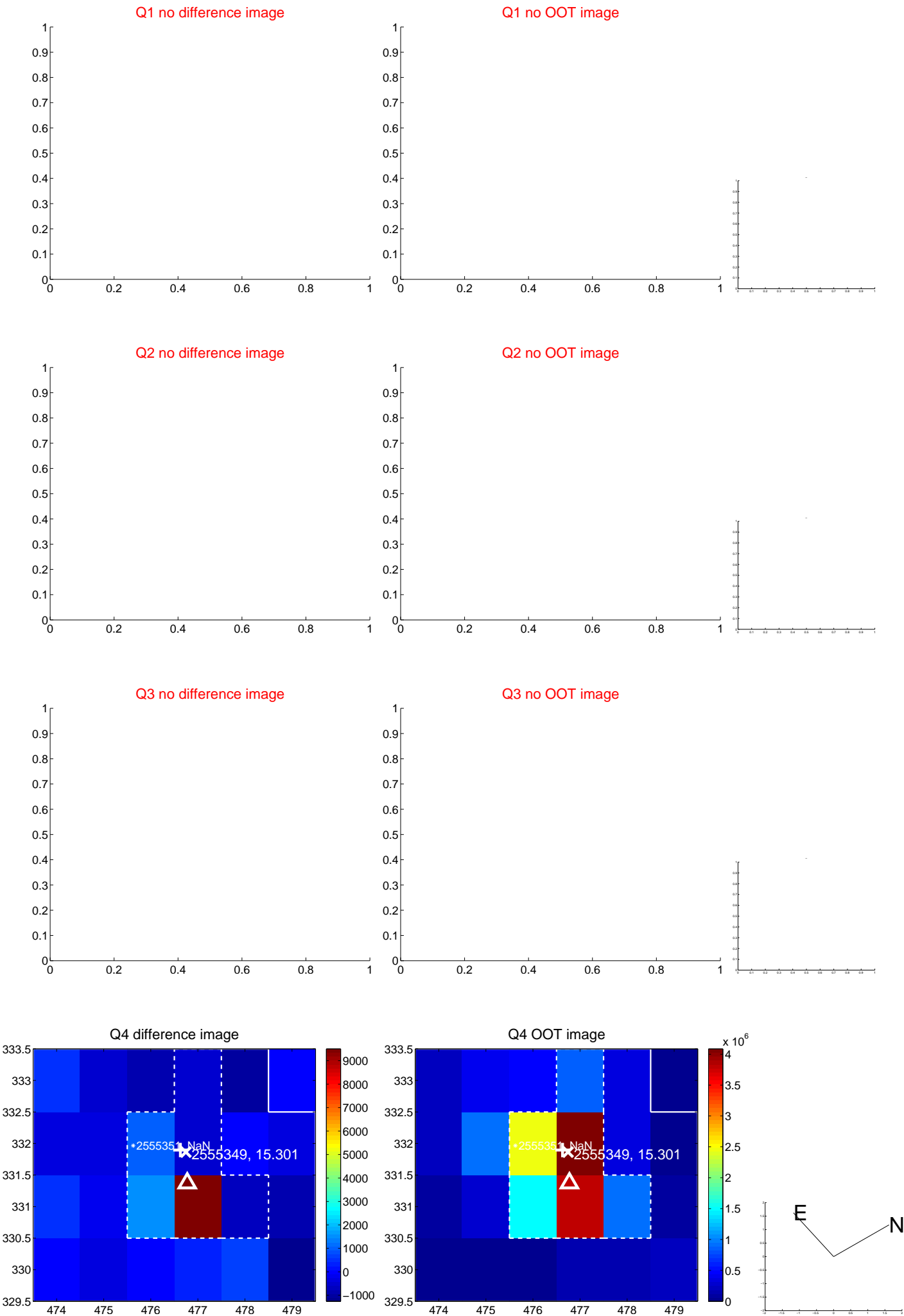
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.831 ± 1.466	1.93	-2.713 ± 1.528	-0.808 ± 0.166
PRF-fit source offset from KIC position	2.604 ± 1.497	1.74	-2.385 ± 1.635	-1.046 ± 0.072
photometric centroid source offset	2.84 ± 1.91	1.49	-2.61 ± 1.93	-1.12 ± 1.84



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.

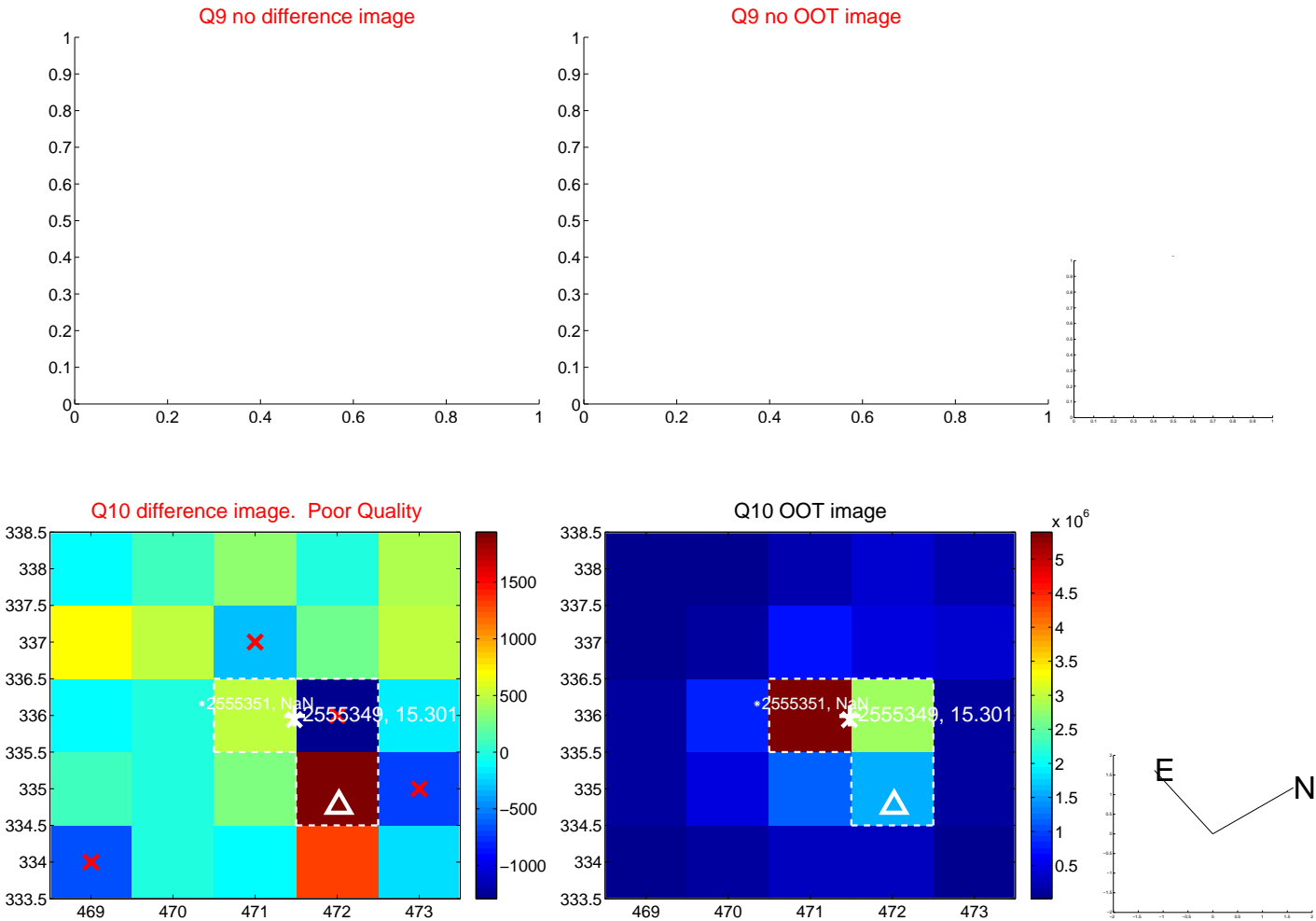
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



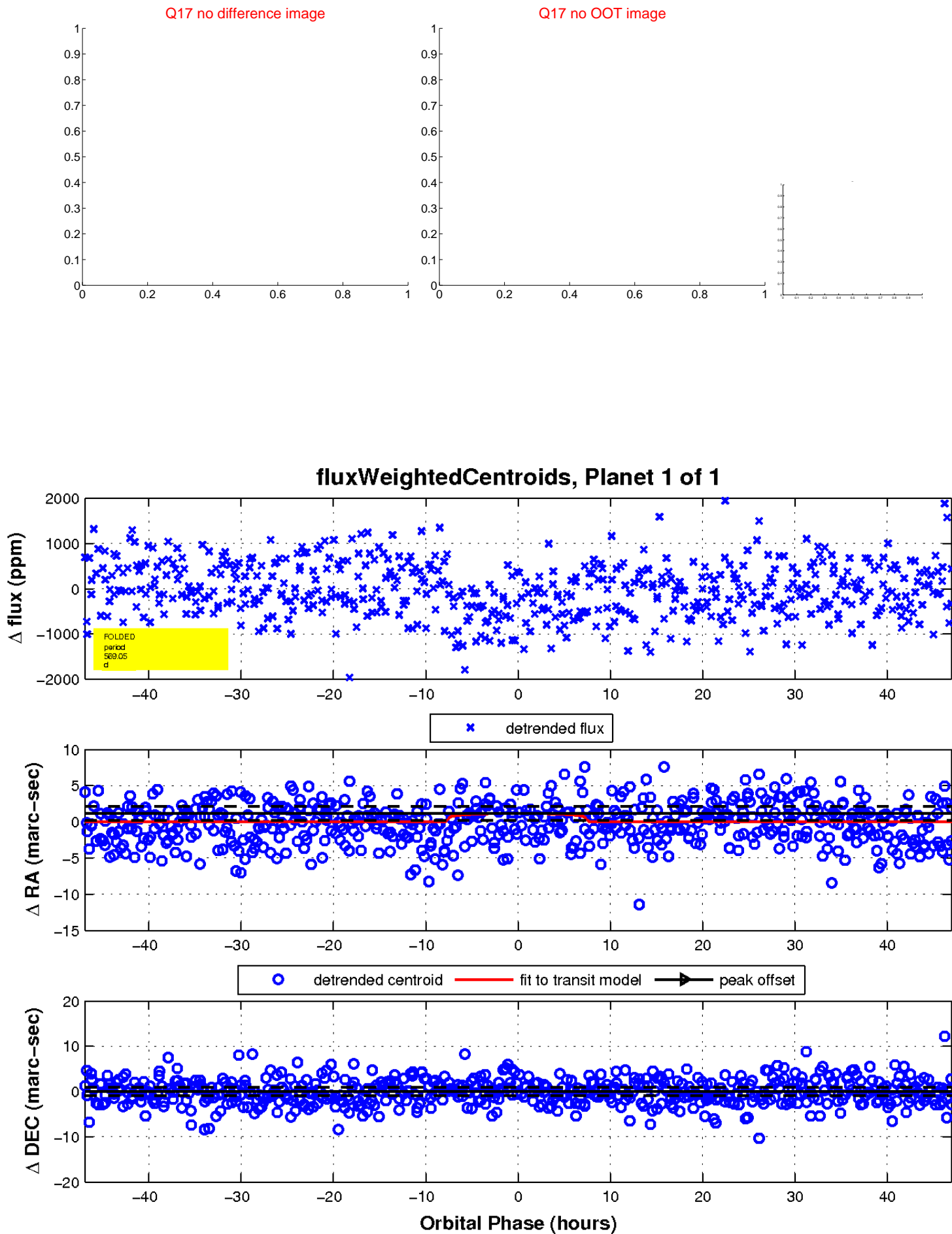
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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.



UKIRT Image

Declination

