

KIC 010357764

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})
010357764-01	OBS	No	262.251483	159.910992	752.8	5.756	11.8	4.6	16.04	4848	57.73	93.25

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010357764-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_SATURATED

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

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

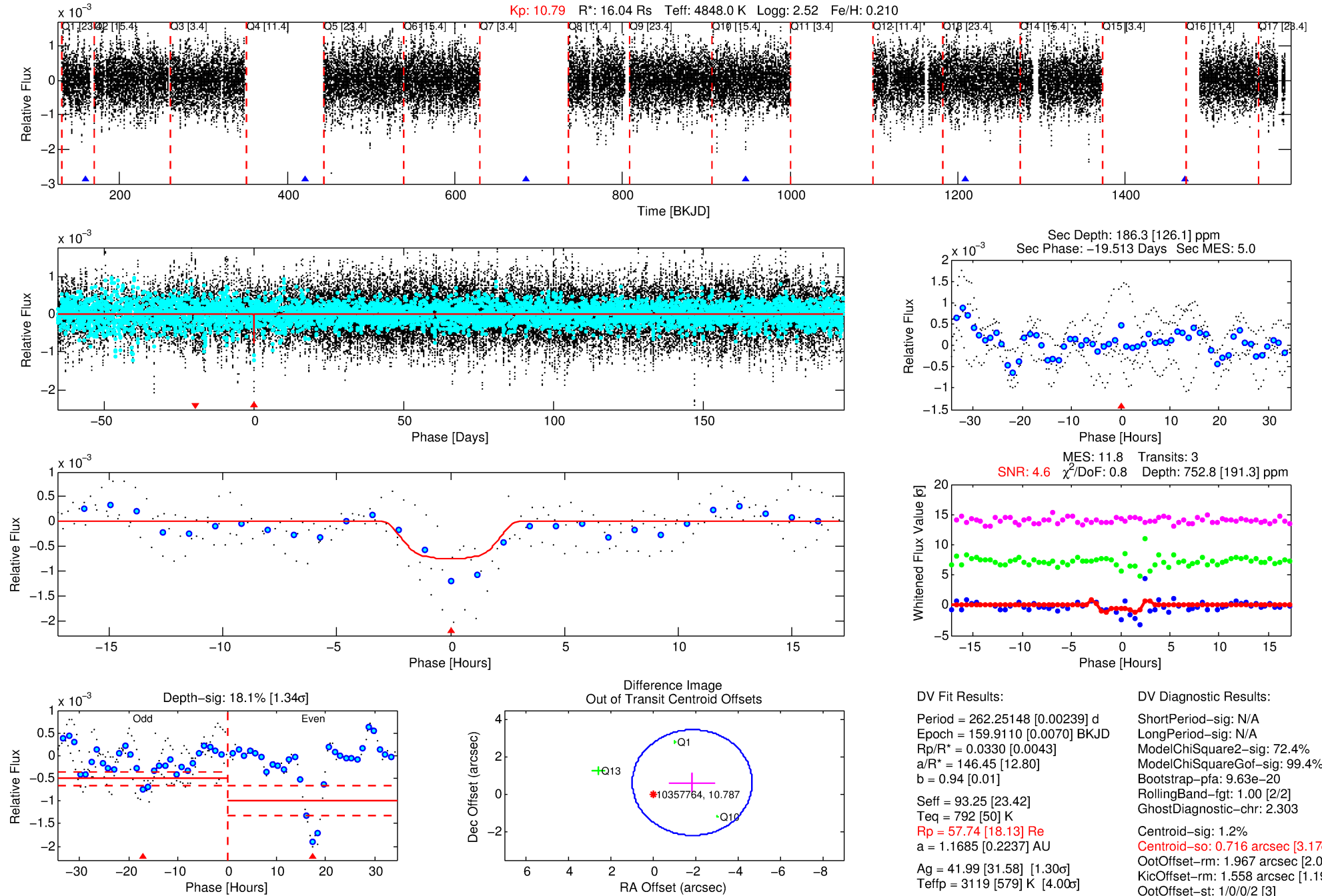
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010357764-01

No Significant Match Found

DV One-Page Summary

KIC: 10357764 Candidate: 1 of 1 Period: 262.251 d



DV Fit Results:

Period = 262.25148 [0.00239] d
Epoch = 159.9110 [0.0070] BKJD
Rp/R* = 0.0330 [0.0043]
a/R* = 146.45 [12.80]
b = 0.94 [0.01]
Seff = 93.25 [23.42]
Teff = 792 [50] K
Rp = 57.74 [18.13] Re
a = 1.1685 [0.2237] AU
Ag = 41.99 [31.58] [1.30 σ]
Teffp = 3119 [579] K [4.00 σ]

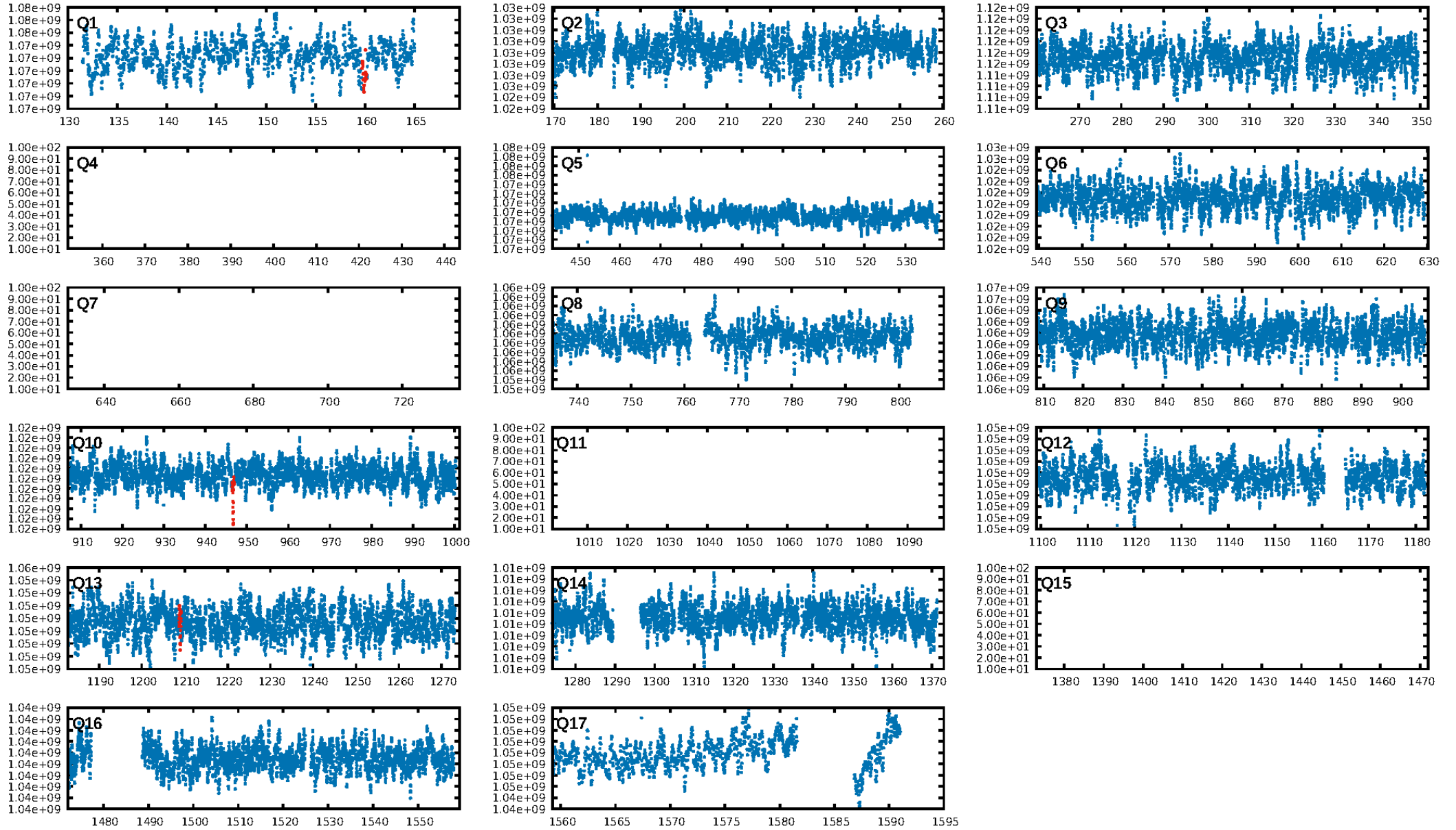
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 72.4%
ModelChiSquareGoF-sig: 99.4%
Bootstrap-pfa: 9.63e-20
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: 2.303
Centroid-sig: 1.2%
Centroid-so: 0.716 arcsec [3.17 σ]
OotOffset-rm: 1.967 arcsec [2.09 σ]
KicOffset-rm: 1.558 arcsec [1.19 σ]
OotOffset-st: 1/0/0/2 [3]
KicOffset-st: 1/0/0/2 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

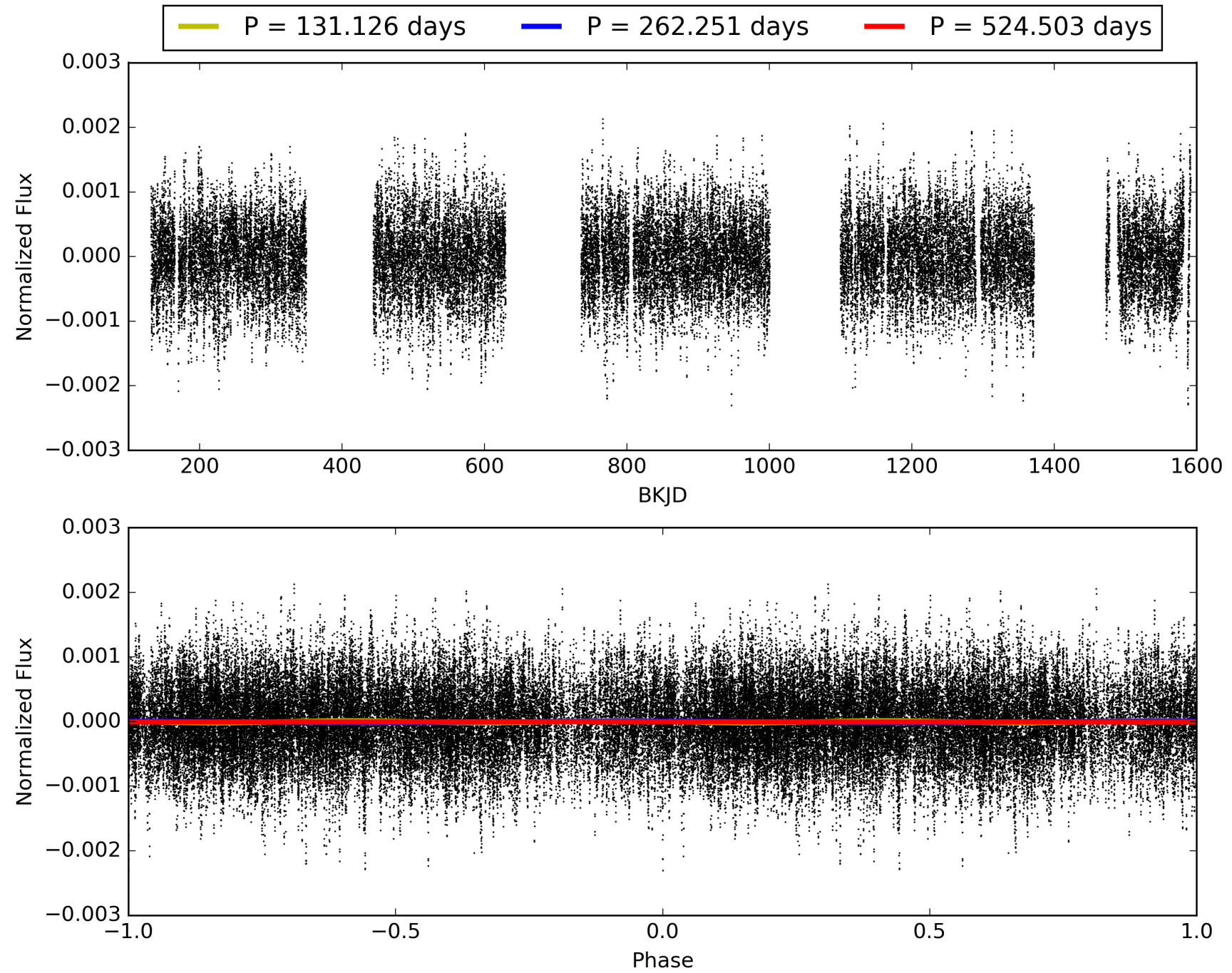
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 10:09:41 Z

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

TCE 010357764-01, PDC Light Curves

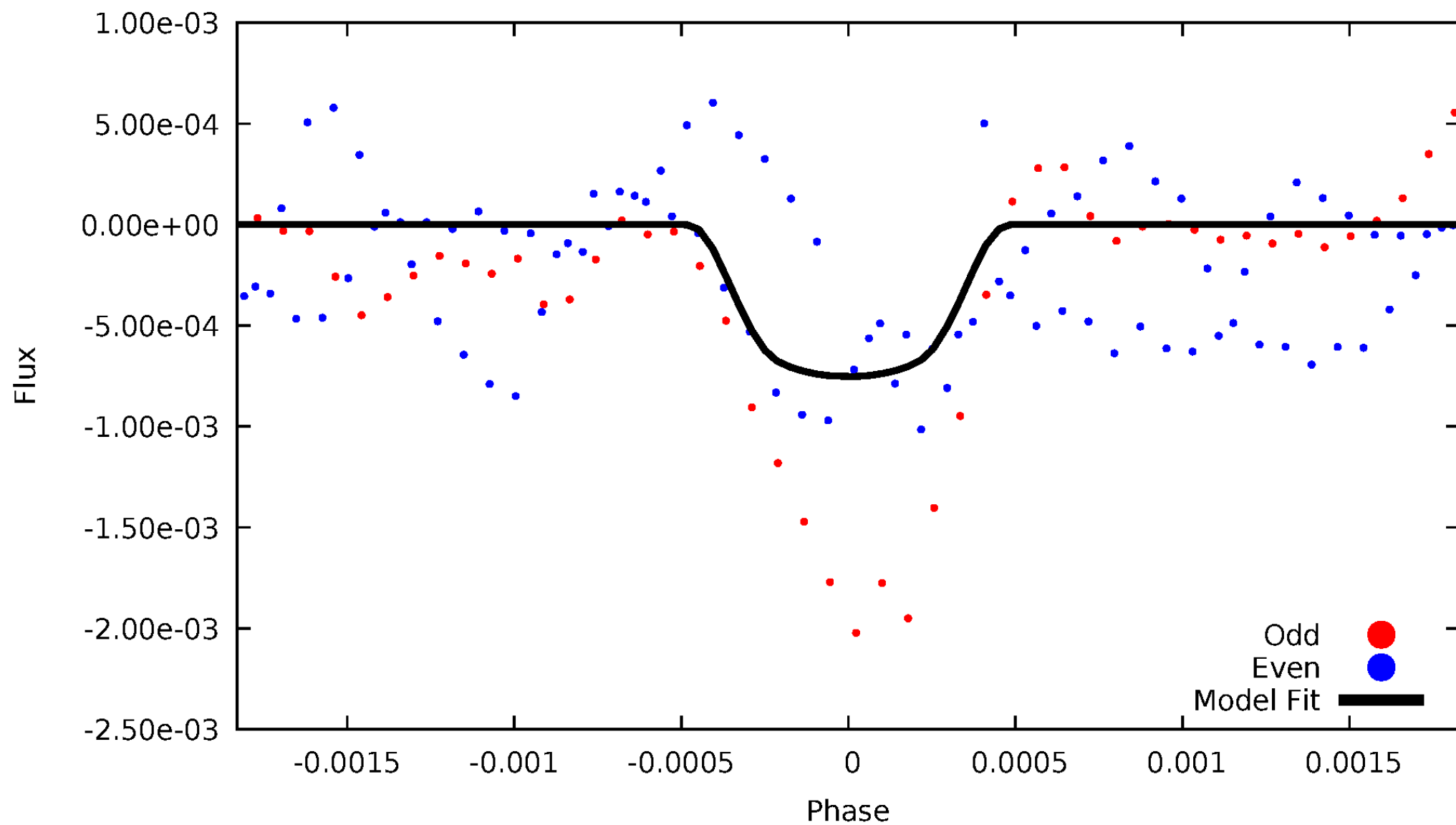


TCE 010357764-01



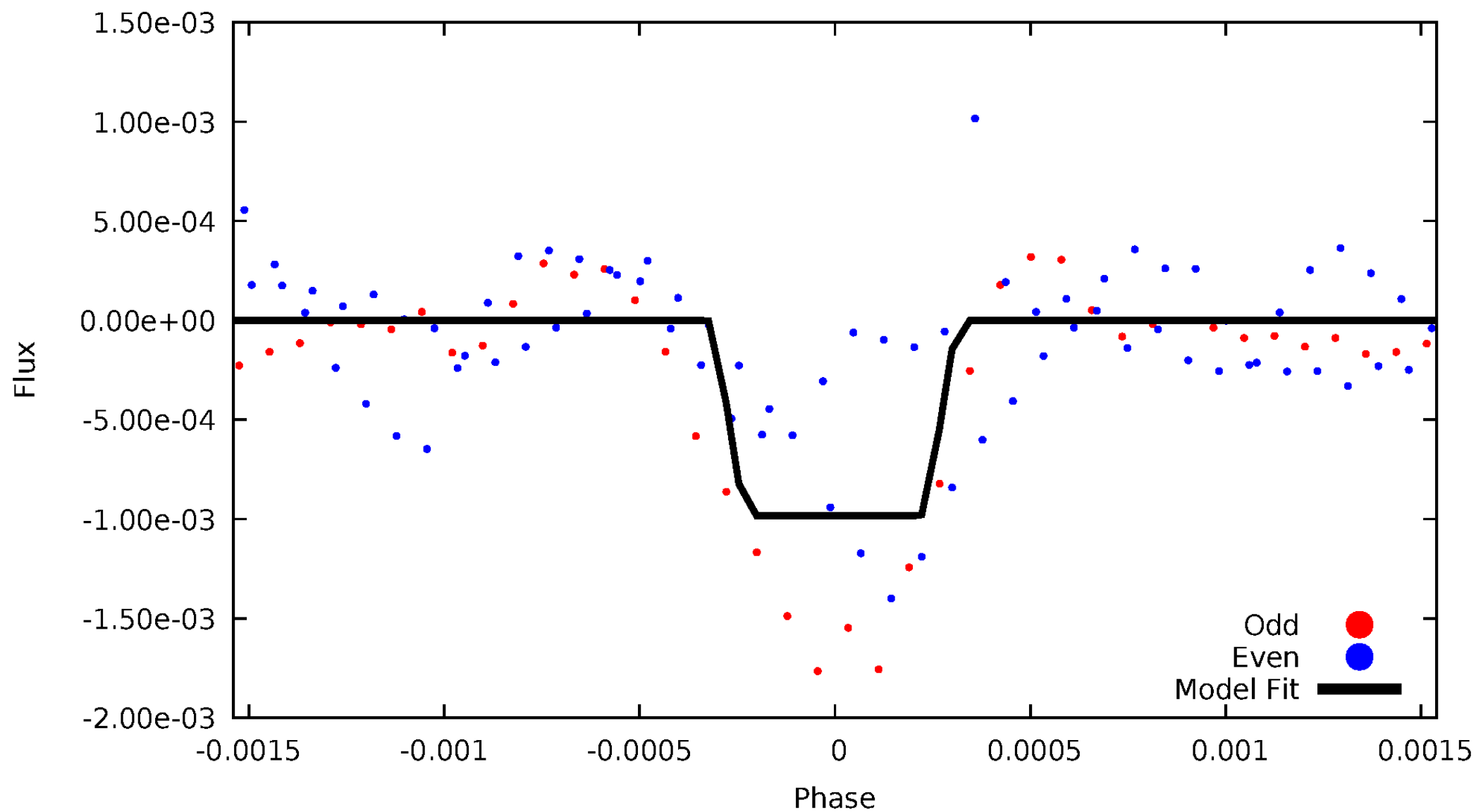
DV Odd/Even

TCE 010357764-01



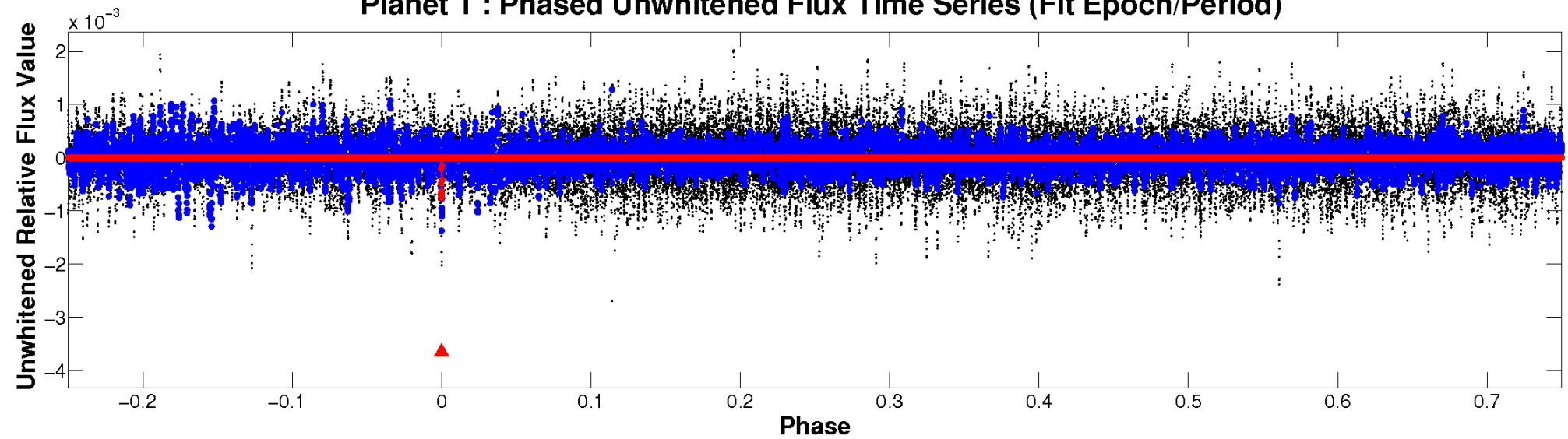
ALT Odd/Even

TCE 010357764-01

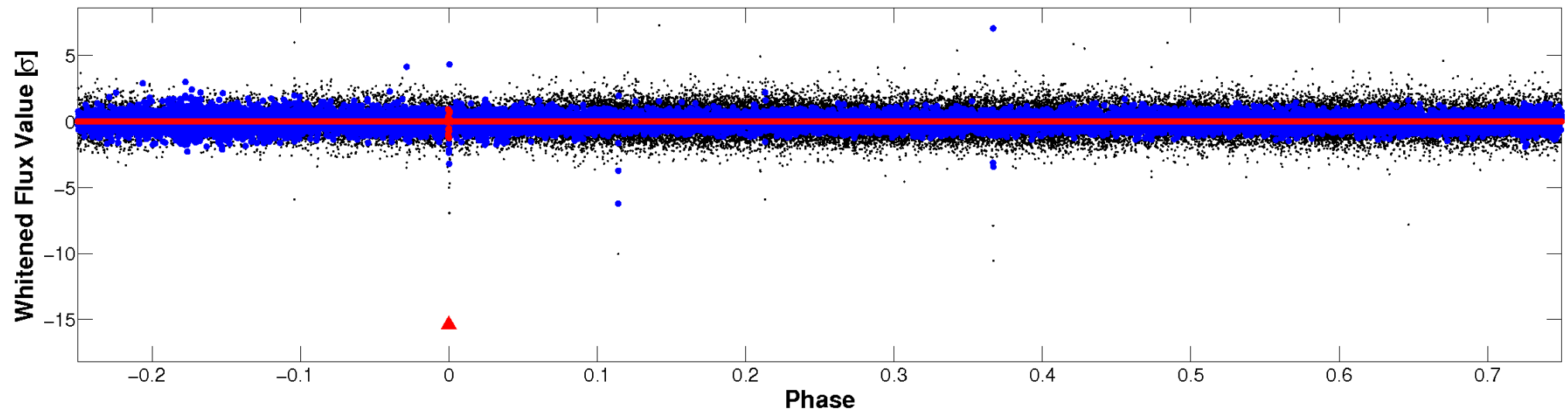


Non-Whitened Vs. Whitened Light Curve

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

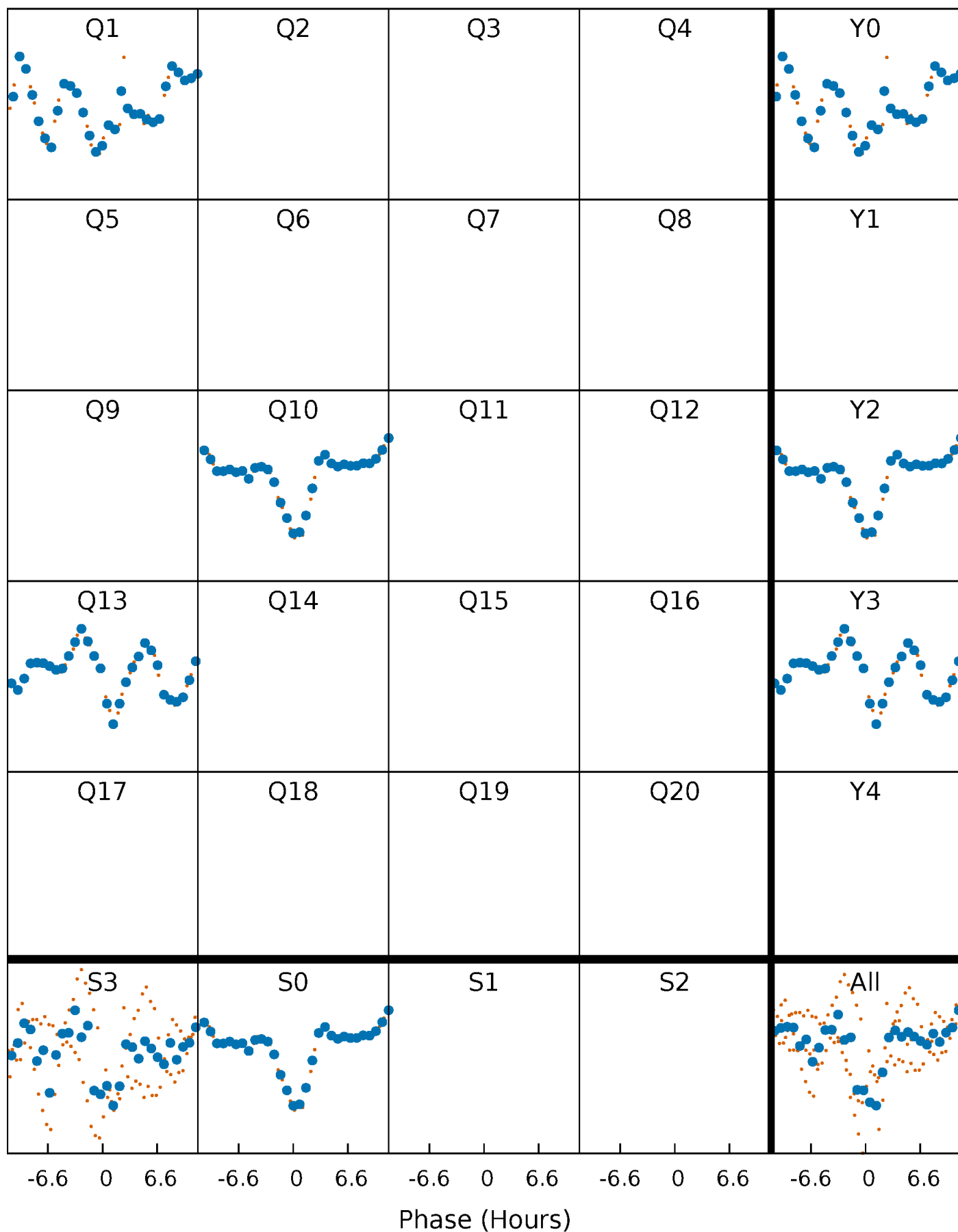


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



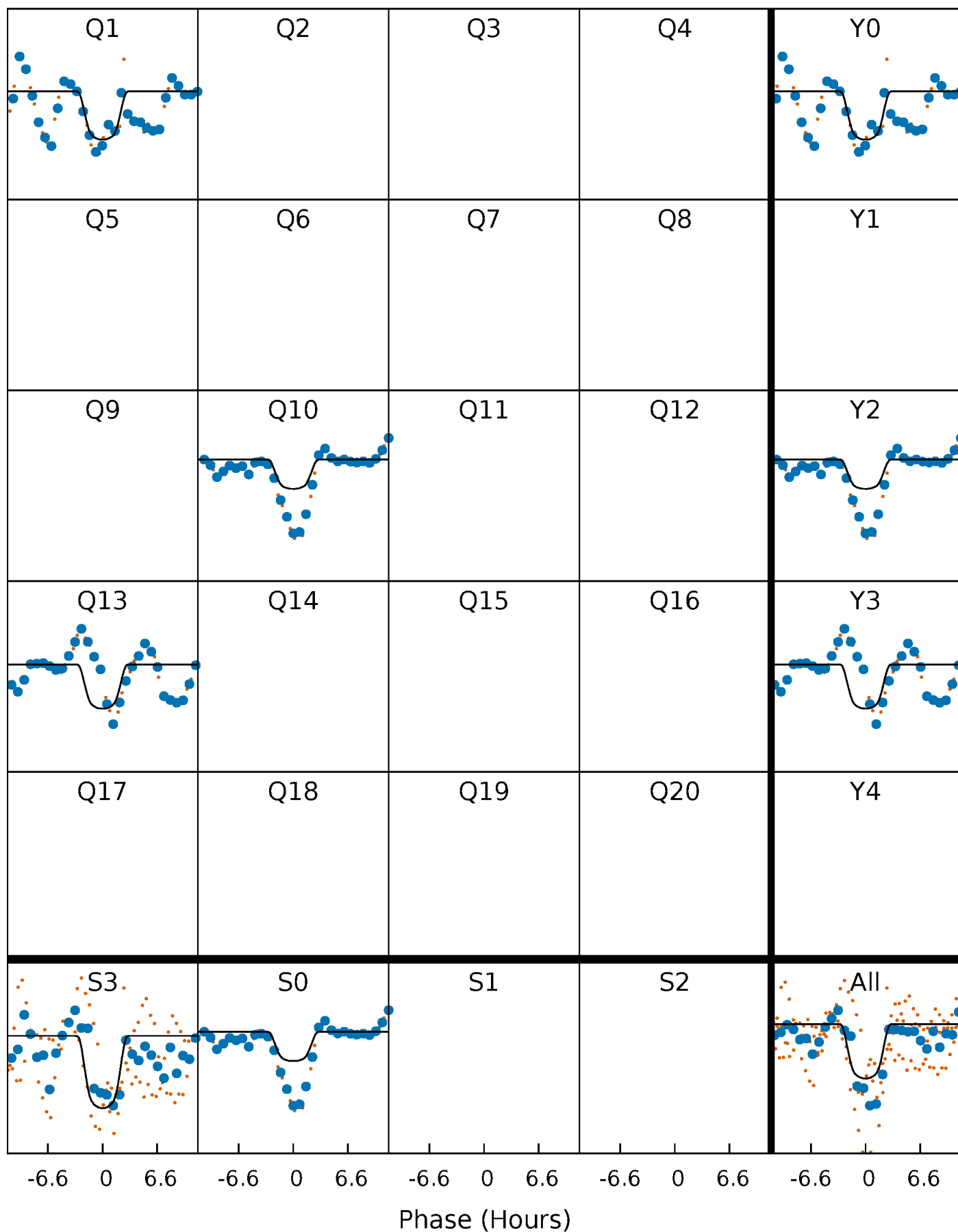
PDC Quarter-Phased Transit Curves

TCE 010357764-01 P=262.251483 Days $T_0=159.910992$ (BKJD)



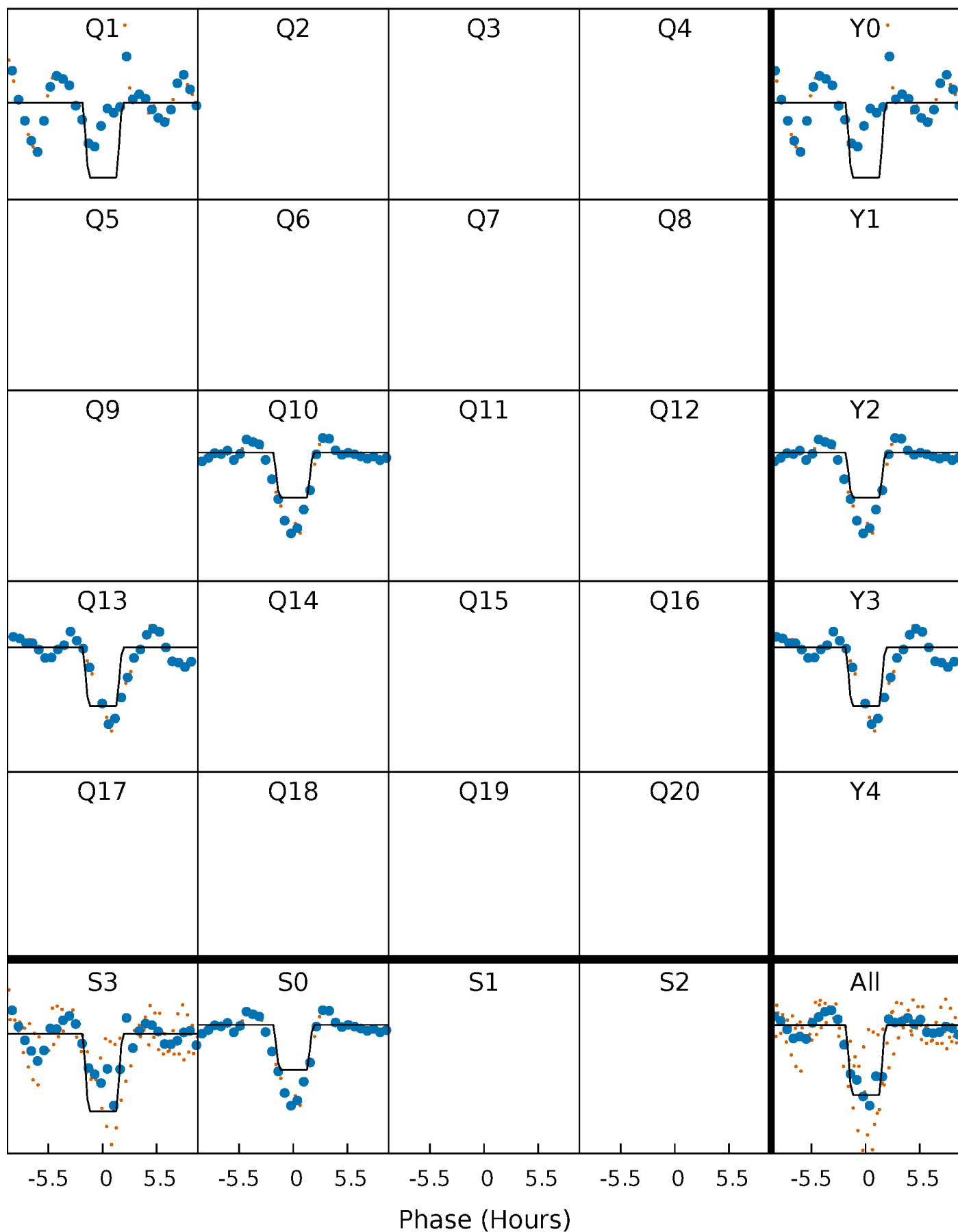
DV Quarter-Phased Transit Curves

TCE 010357764-01 P=262.251483 Days $T_0=159.910992$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

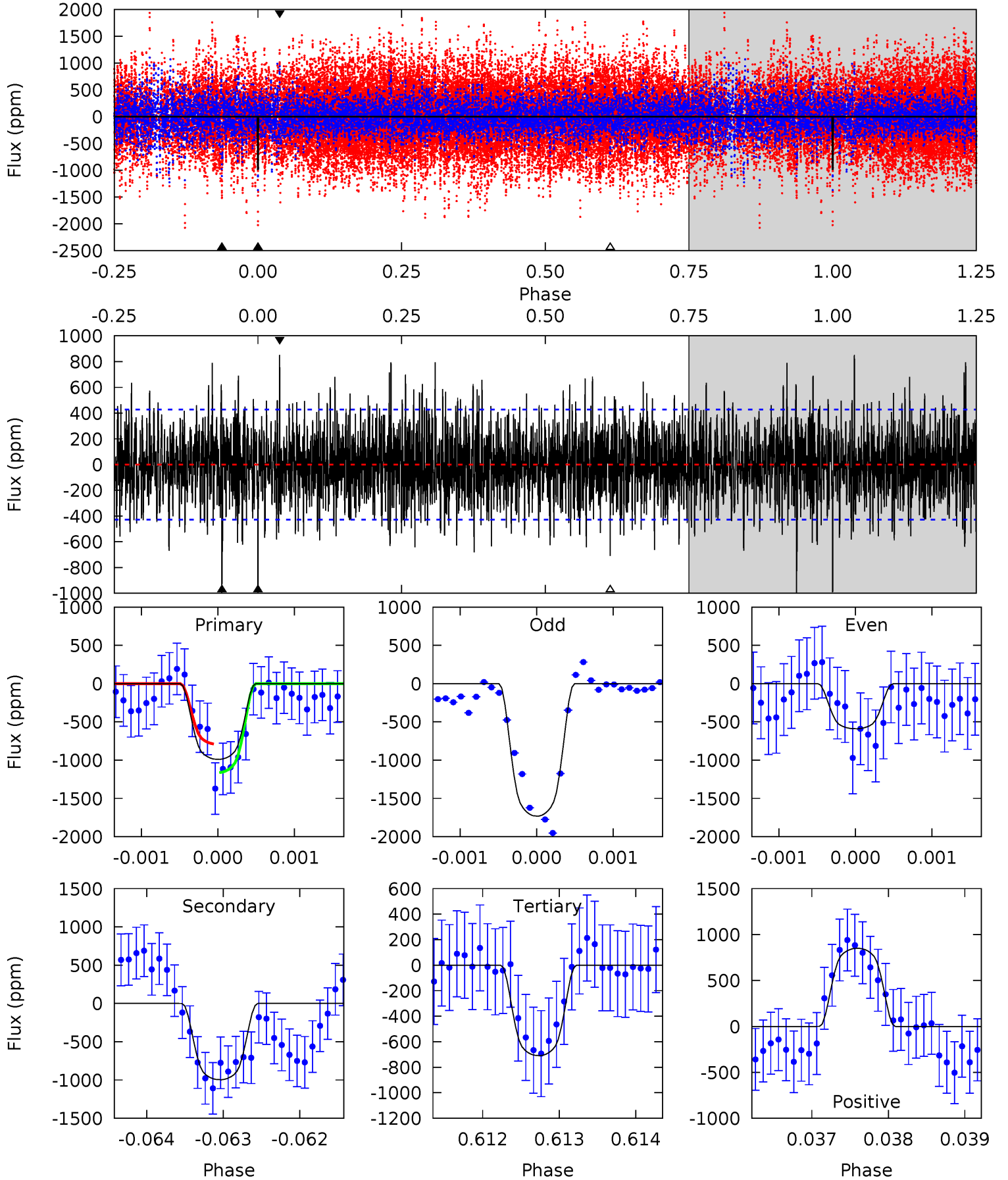
TCE 010357764-01 P=262.253162 Days $T_0=159.923605$ (BKJD)



DV Model-Shift Uniqueness Test

010357764-01, P = 262.251483 Days, E = 159.910992 Days

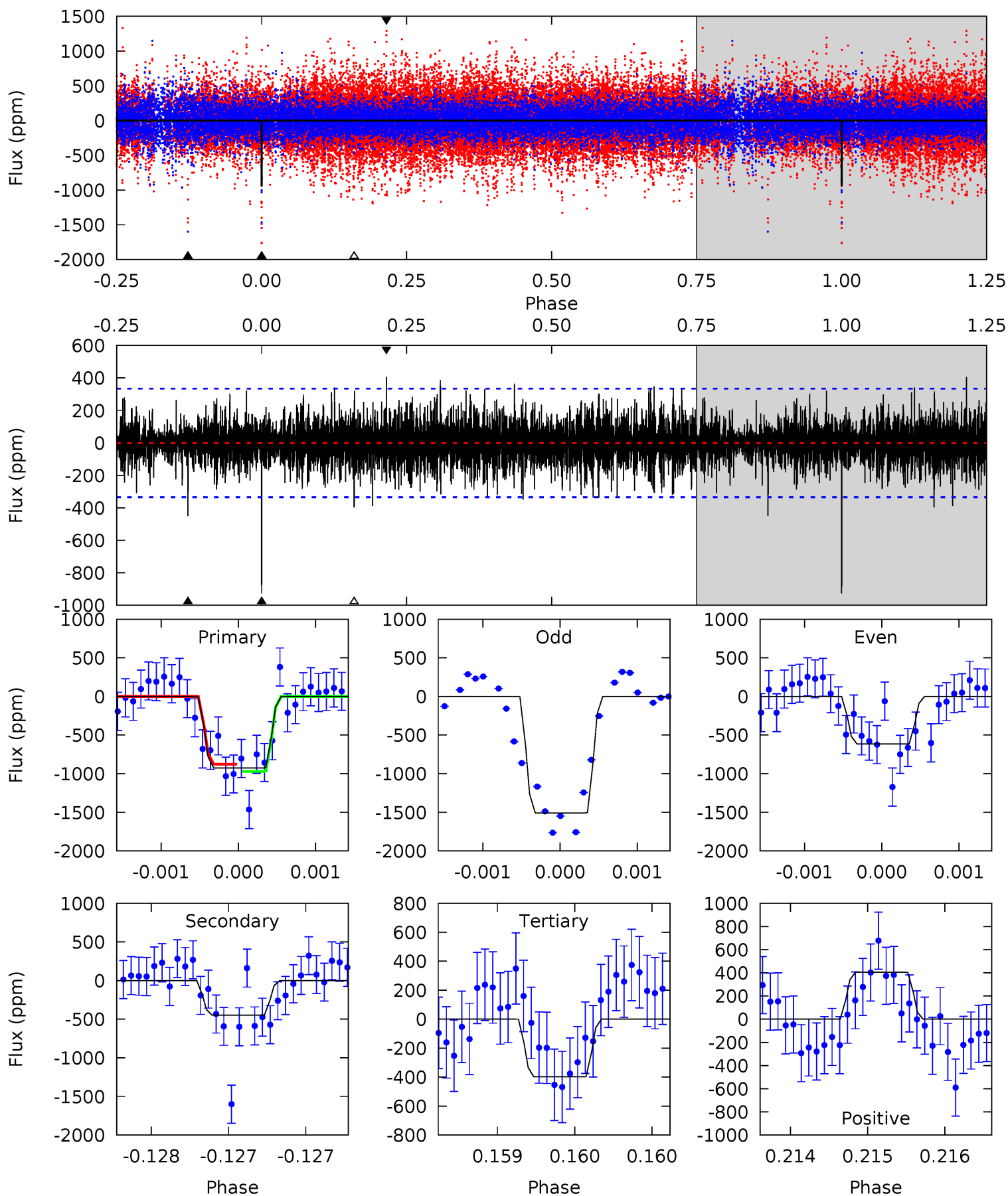
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.6	12.7	9.04	10.8	5.45	3.30	2.83	3.58	1.78	3.66	1.86	7.07	1.24	0.46	2.37



Alt Model-Shift Uniqueness Test

010357764-01, P = 262.253162 Days, E = 159.923605 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.3	7.44	6.59	6.71	5.53	3.42	1.73	8.74	8.62	0.85	0.73	7.05	0.97	0.30	0.77



Stellar Parameters For KIC 010357764

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	4848^{+73}_{-191}	$2.518^{+0.030}_{-0.027}$	$0.210^{+0.150}_{-0.250}$	$16.040^{+1.143}_{-4.572}$	$3.095^{+0.173}_{-1.561}$	$0.001^{+0.000}_{-0.000}$
	+2%/-4%	+1%/-1%	+71%/-119%	+7%/-29%	+6%/-50%	+43%/-11%
Source	PHO55	AST55	SPE55	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 010357764-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-997 ± 78	$57.66^{+8.76}_{-9.38}$	1104^{+27}_{-45}	4730^{+298}_{-288}	227^{+85}_{-55}
Alt.	-449 ± 60	$54.83^{+8.38}_{-8.93}$	1102^{+30}_{-43}	4133^{+272}_{-243}	113^{+47}_{-30}

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 $A_{obs} \gg 1.0$

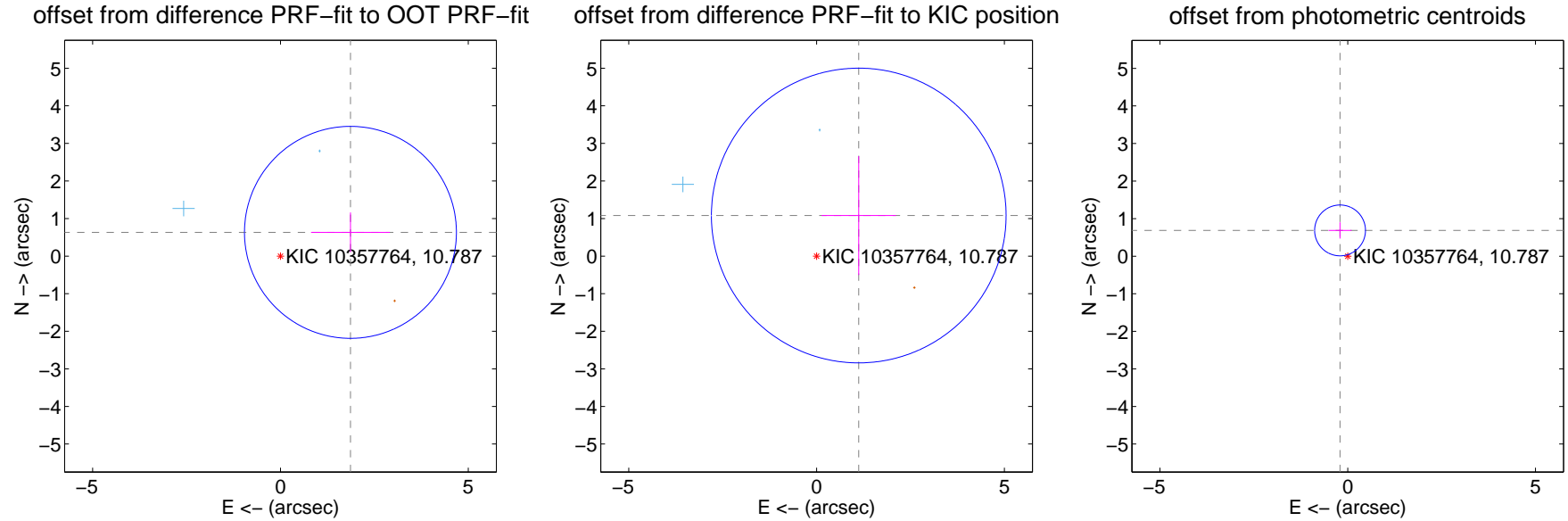
DV Centroid Data

Supplemental centroid analysis for 010357764-01. **Kepler magnitude: 10.79.** Transit SNR 4.58

There are 2 quarters with good PRF difference image offsets

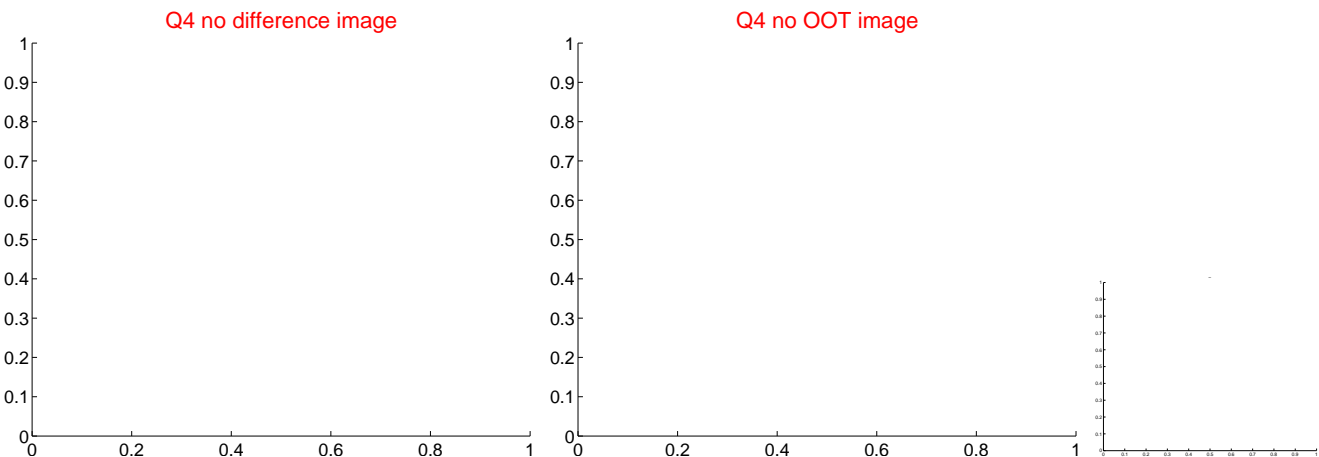
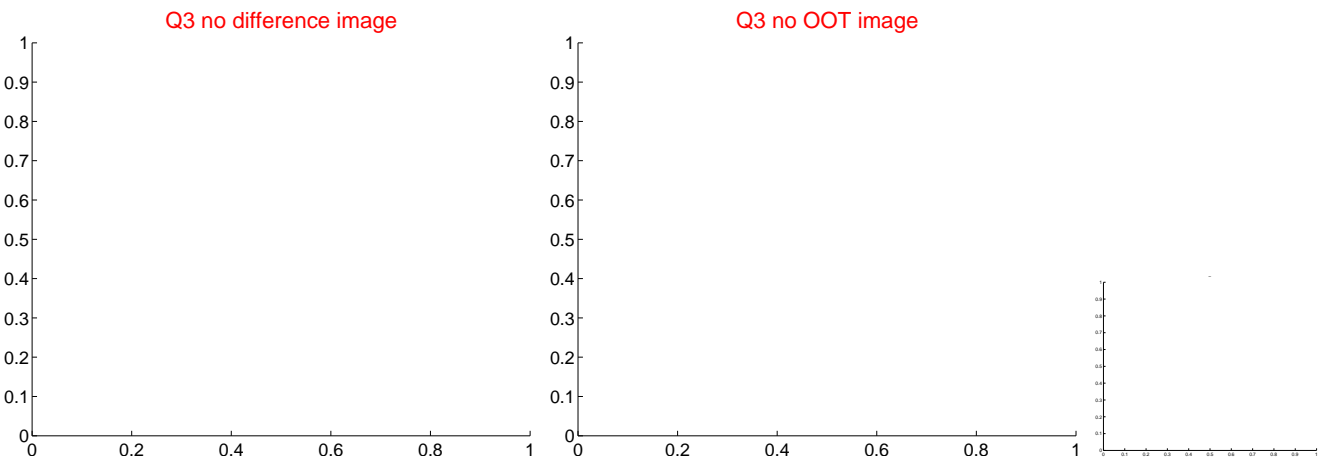
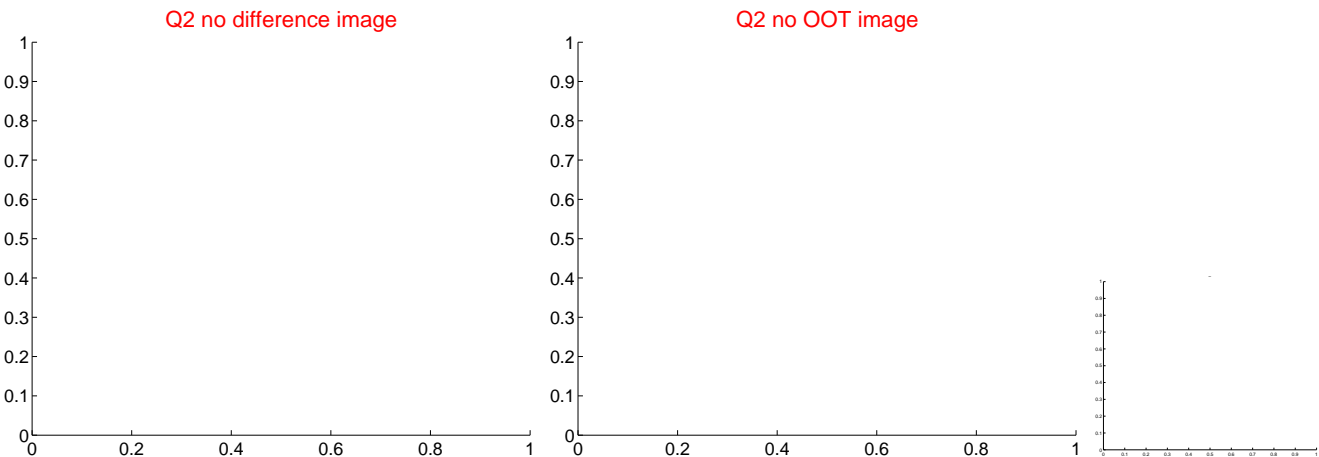
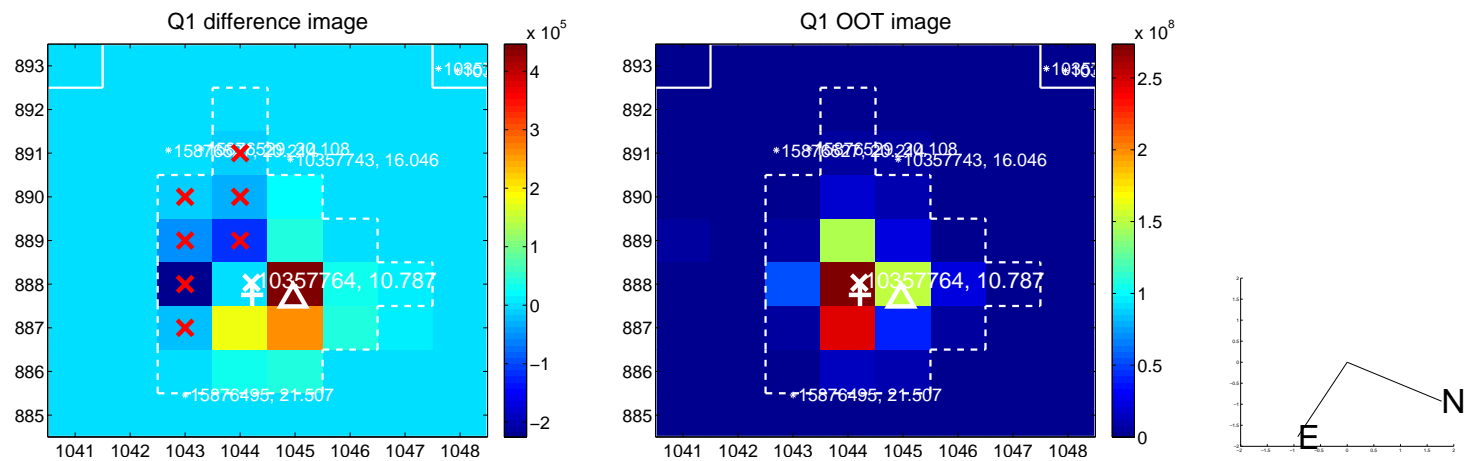
The direct PRF centroid is offset from the target star catalog position by about 1.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.967 ± 0.940	2.09	-1.863 ± 1.047	0.633 ± 0.528
PRF-fit source offset from KIC position	1.558 ± 1.307	1.19	-1.122 ± 0.988	1.081 ± 1.581
photometric centroid source offset	0.72 ± 0.23	3.17	0.20 ± 0.31	0.69 ± 0.22



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.

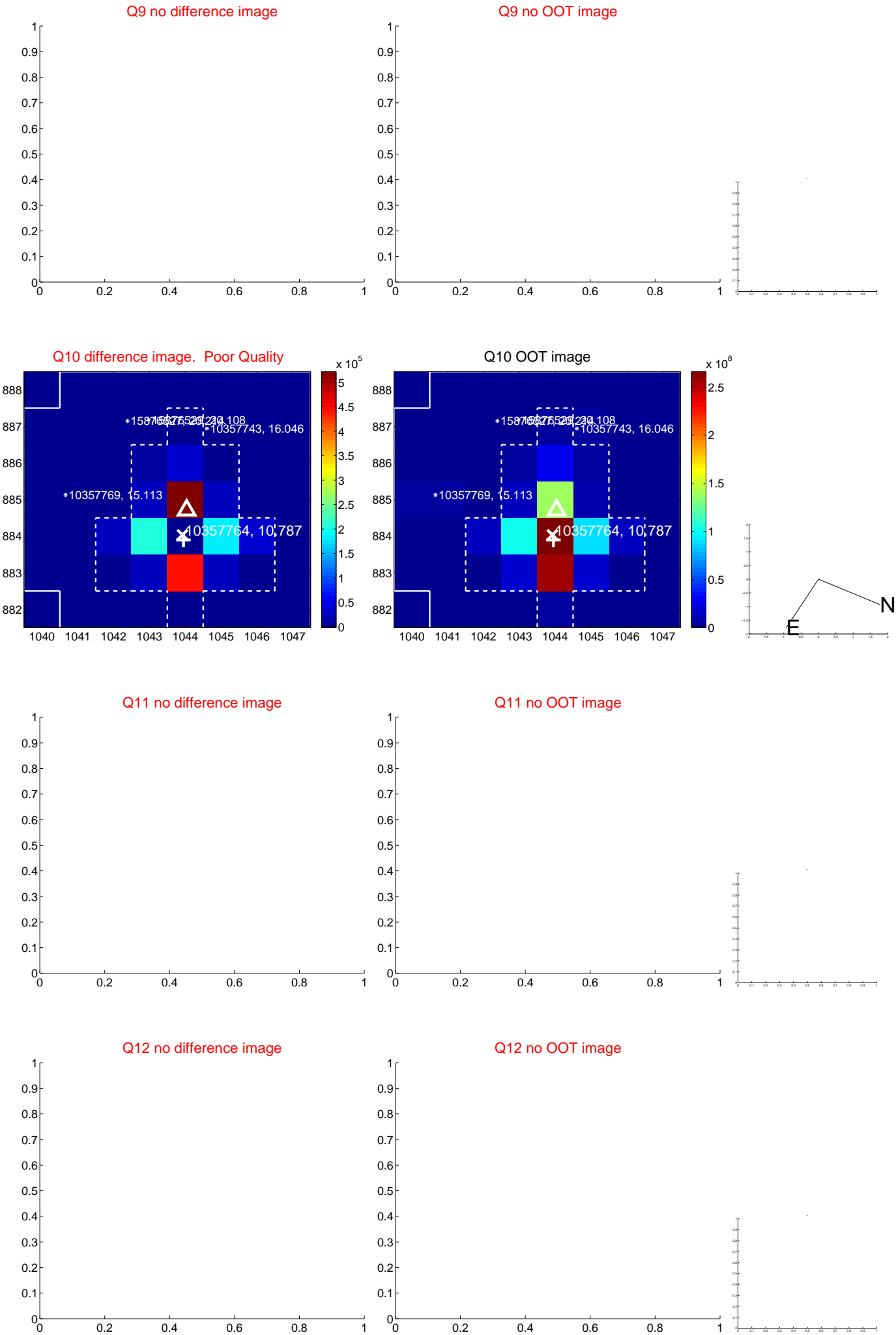
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



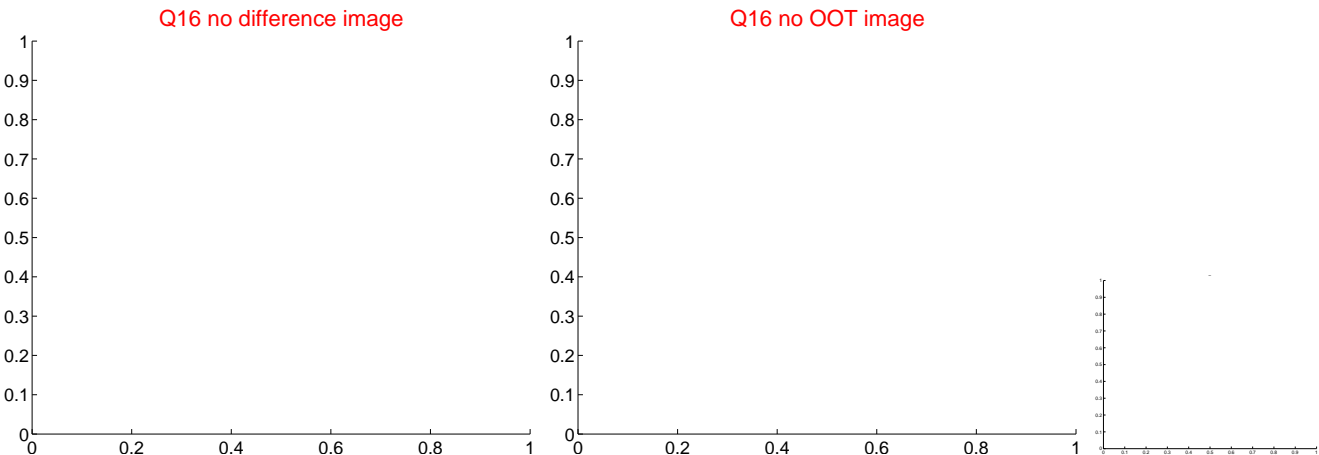
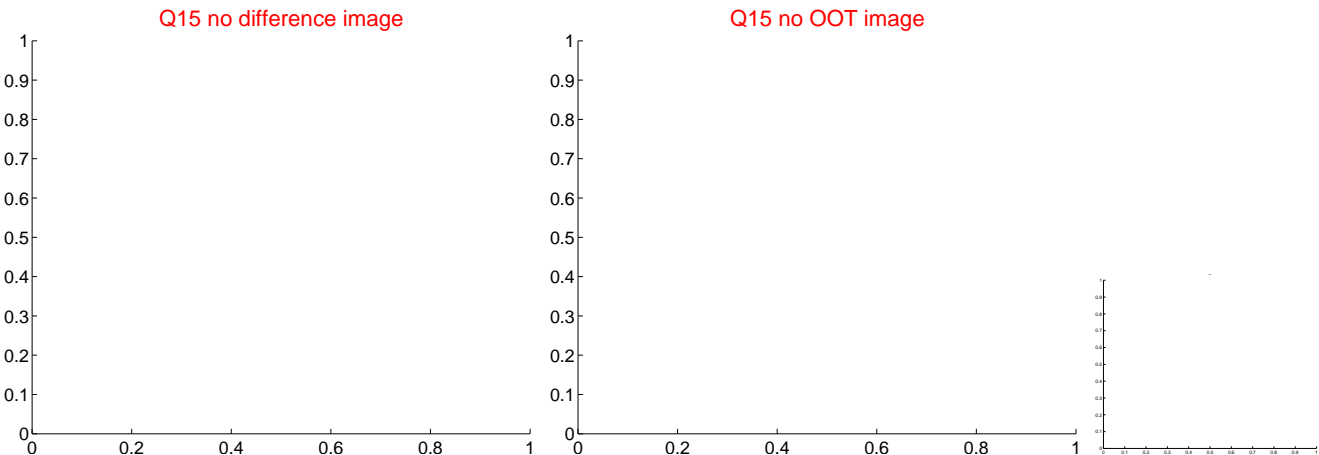
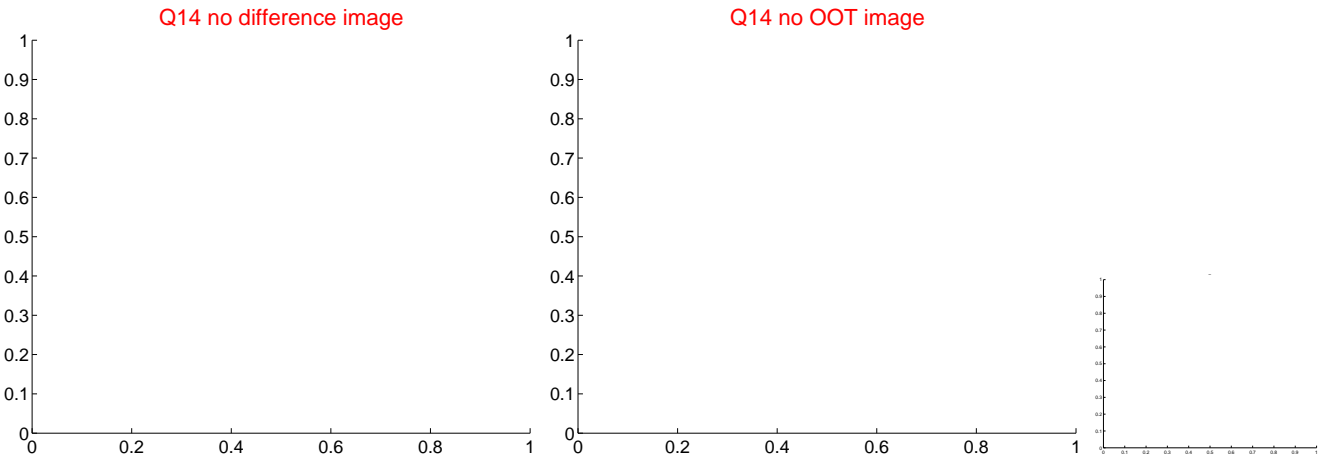
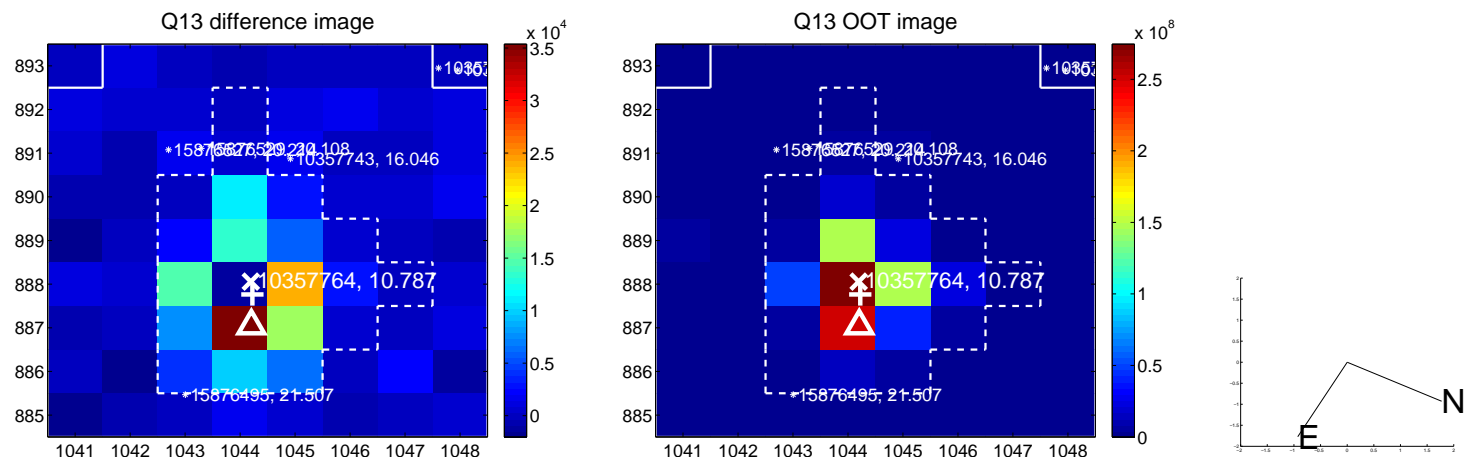
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



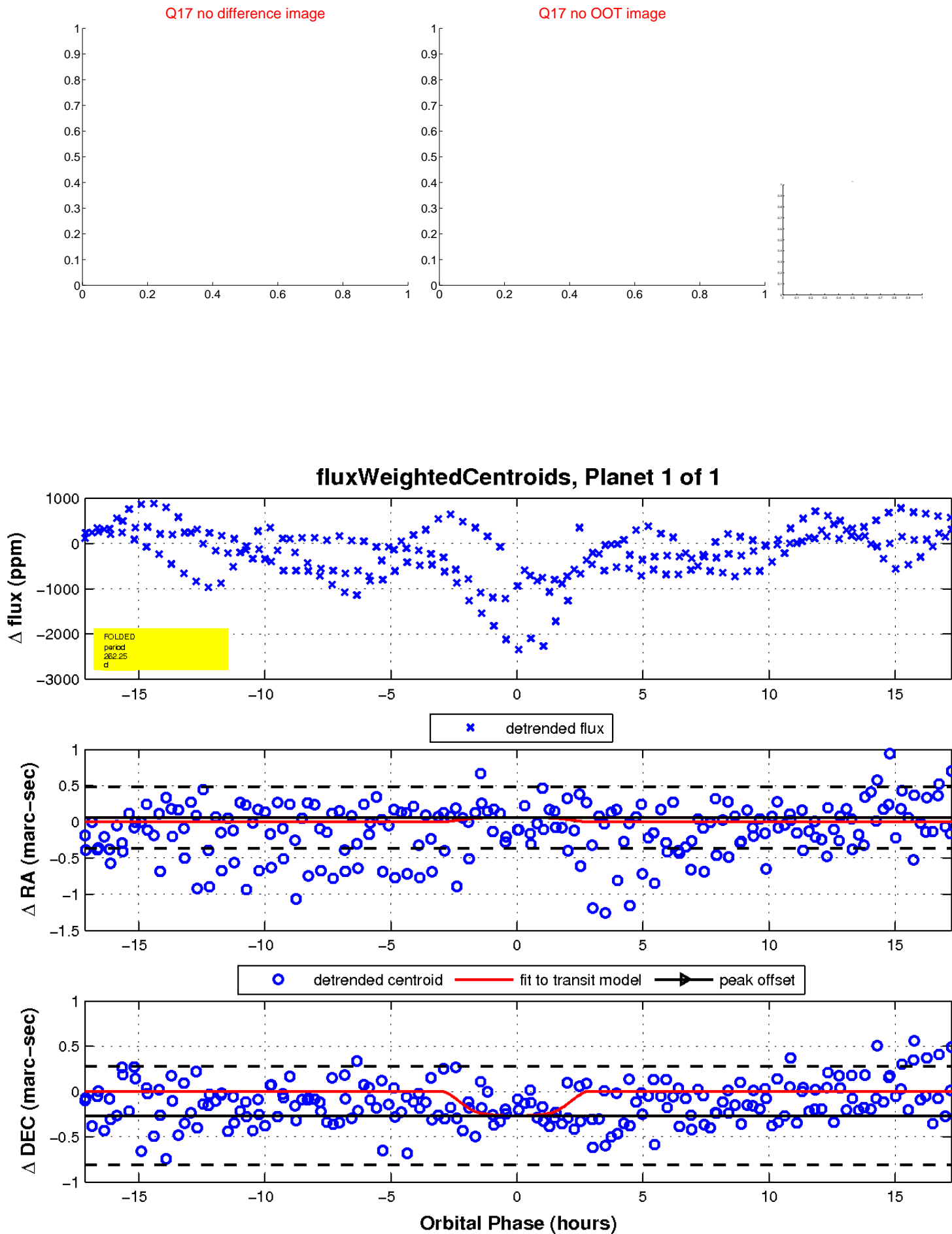
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UKIRT Image

Declination

