

KIC 006516529

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})
006516529-01	OBS	8123.01	379.426238	358.990608	475.7	11.435	8.1	8.2	0.94	5947	2.14	0.95

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006516529-01	OBS	FP	0.00	1	0	0	0	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.

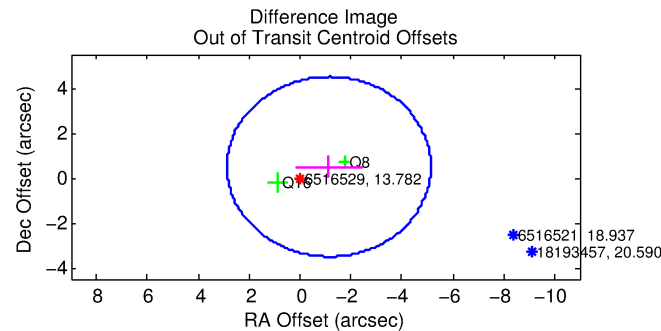
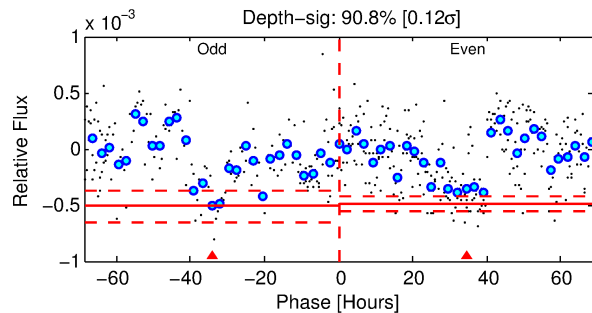
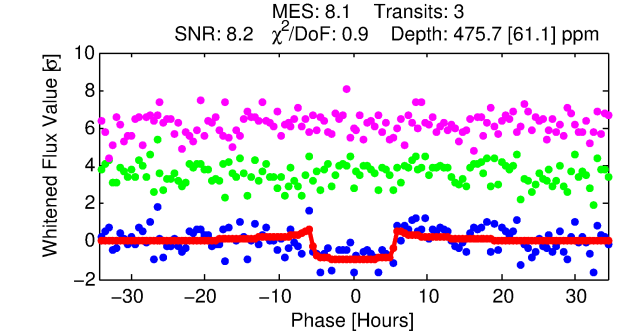
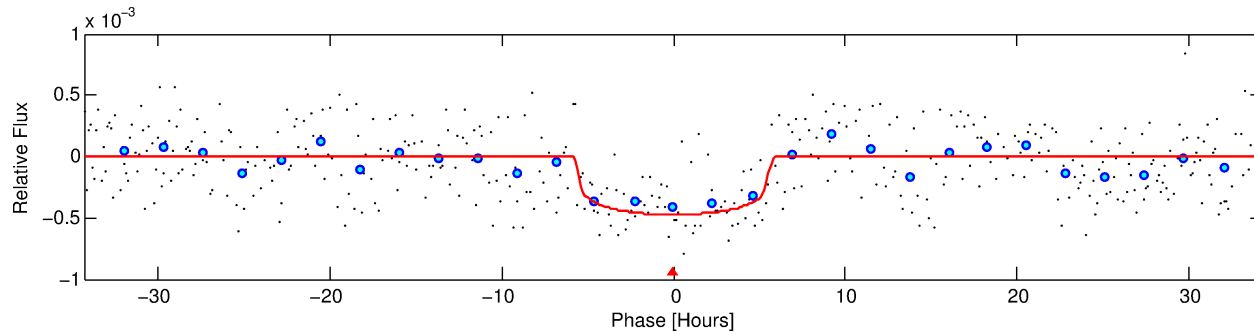
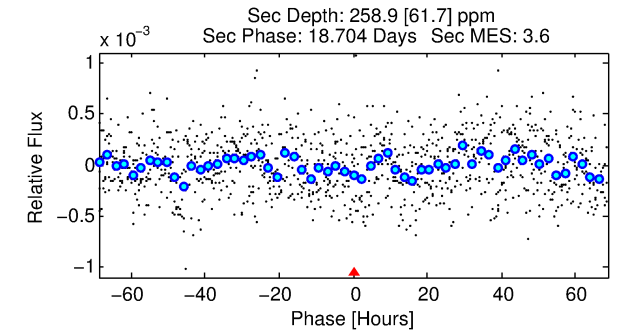
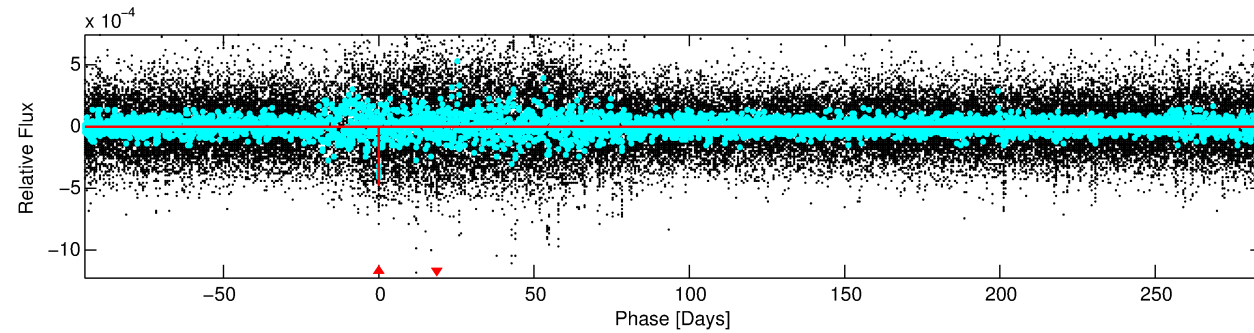
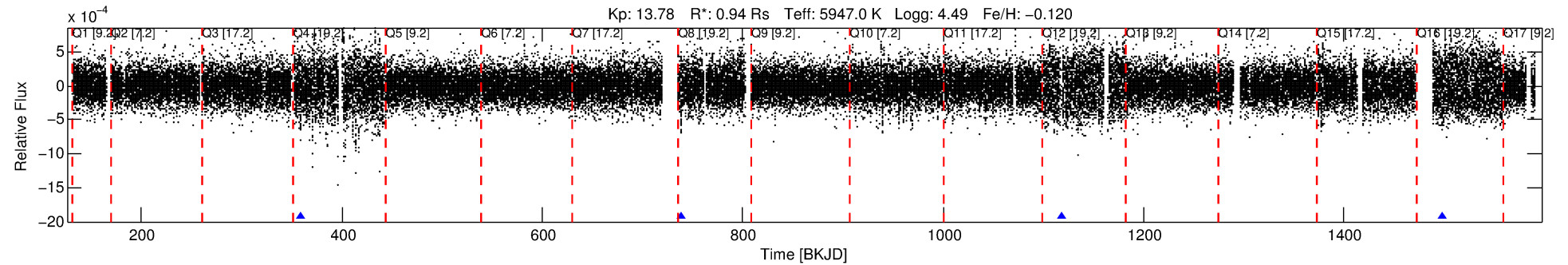
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006516529-01

No Significant Match Found

DV One-Page Summary

KIC: 6516529 Candidate: 1 of 1 Period: 379.426 d



DV Fit Results:

Period = 379.42624 [0.00602] d
Epoch = 358.9906 [0.0099] BKJD
Rp/R* = 0.0208 [0.0107]
a/R* = 212.63 [508.17]
b = 0.58 [2.74]
Seff = 0.95 [0.39]
Teff = 252 [26] K
Rp = 2.14 [1.29] Re
a = 1.0258 [0.2724] AU
Ag = 32681.72 [36905.82] [0.89 σ]
Teffp = 5235 [1395] K [3.57 σ]

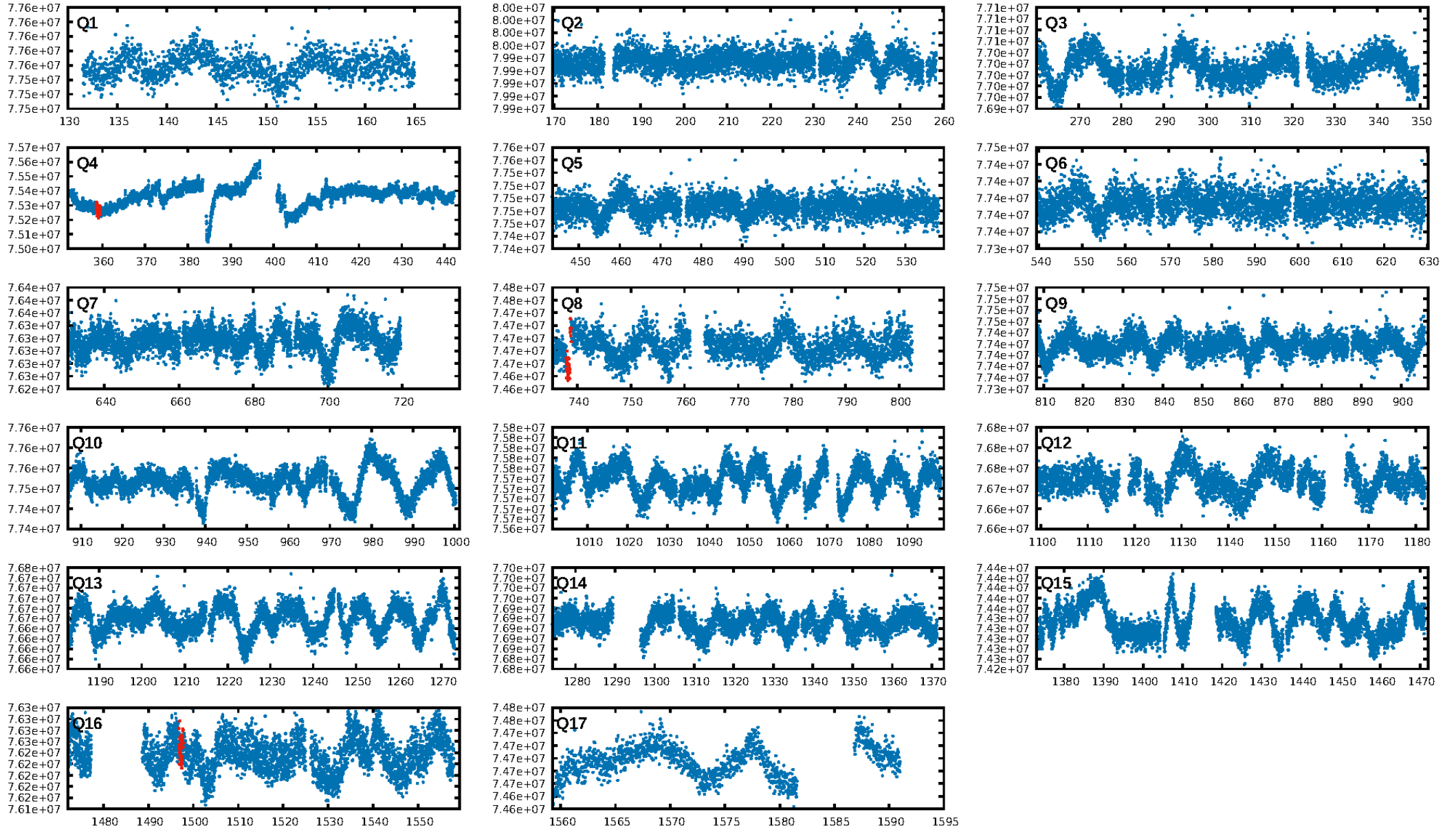
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 12.7%
ModelChiSquareGof-sig: 99.5%
Bootstrap-pfa: 4.39e-11
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -10.97
Centroid-sig: 0.5%
Centroid-so: 1.557 arcsec [2.03 σ]
OotOffset-rm: 1.240 arcsec [0.93 σ]
KicOffset-rm: 1.242 arcsec [1.14 σ]
OotOffset-st: 0/0/2/0 [2]
KicOffset-st: 0/0/2/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [3/3]

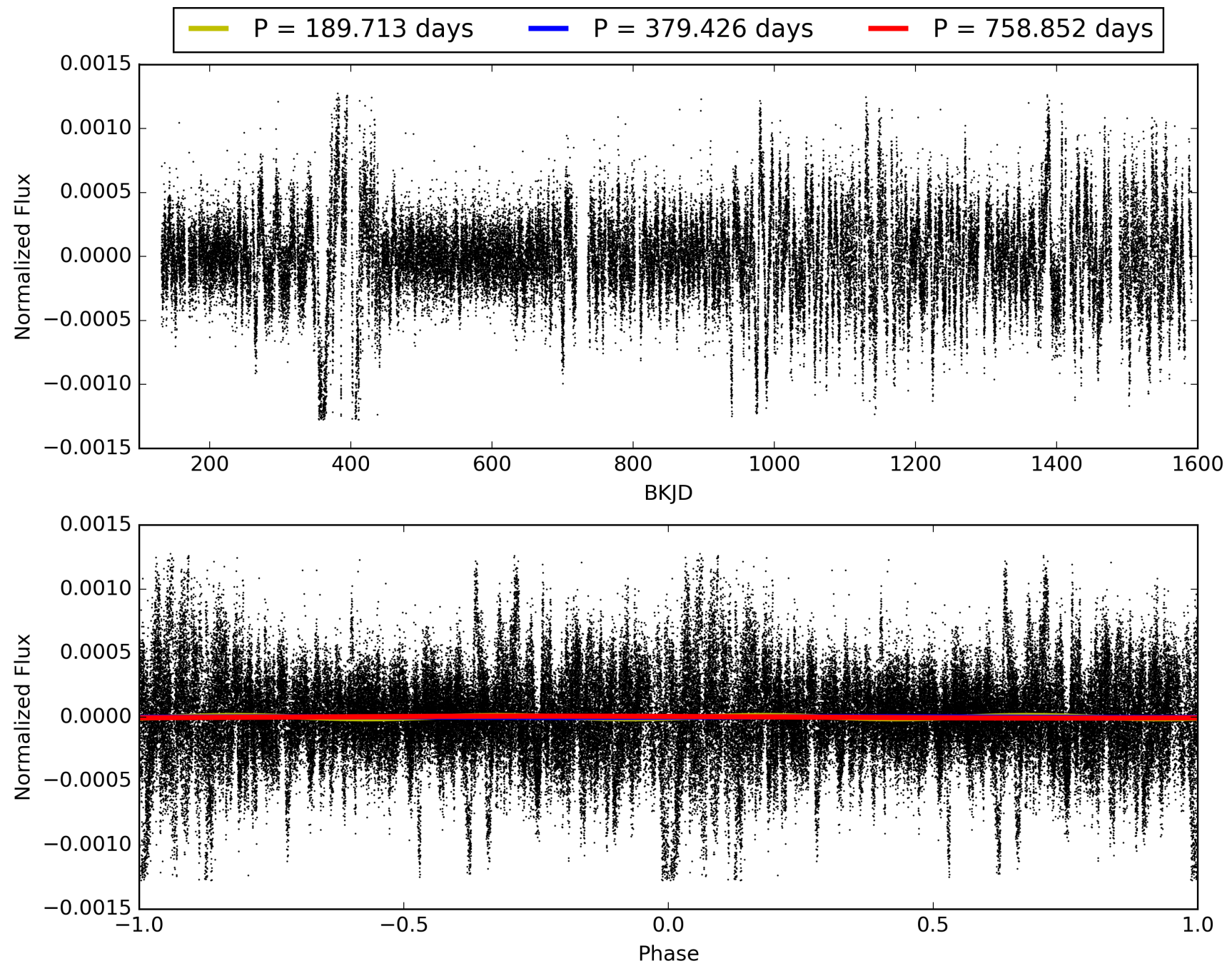
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 15:50:12 Z

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

TCE 006516529-01, PDC Light Curves

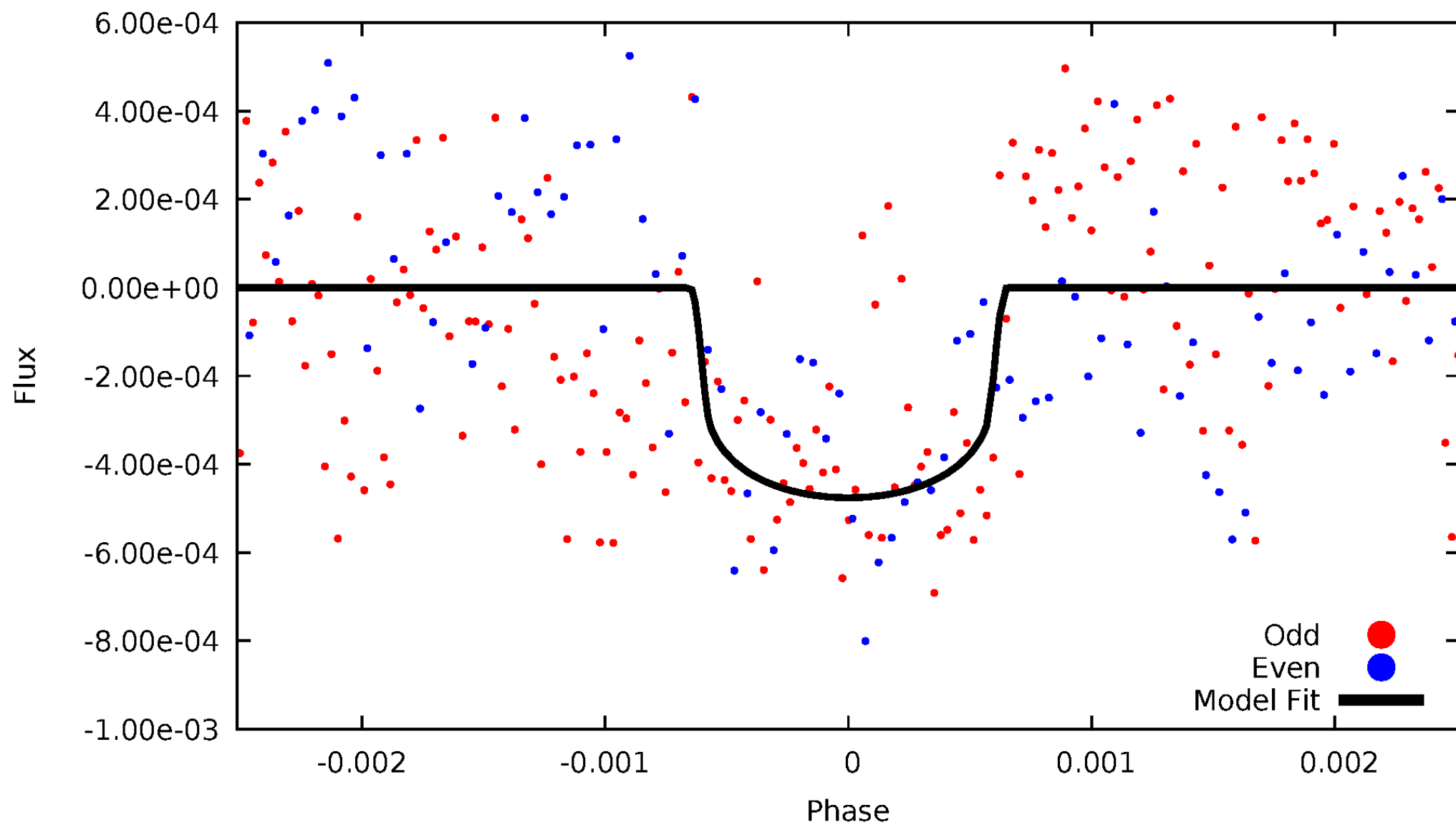


TCE 006516529-01



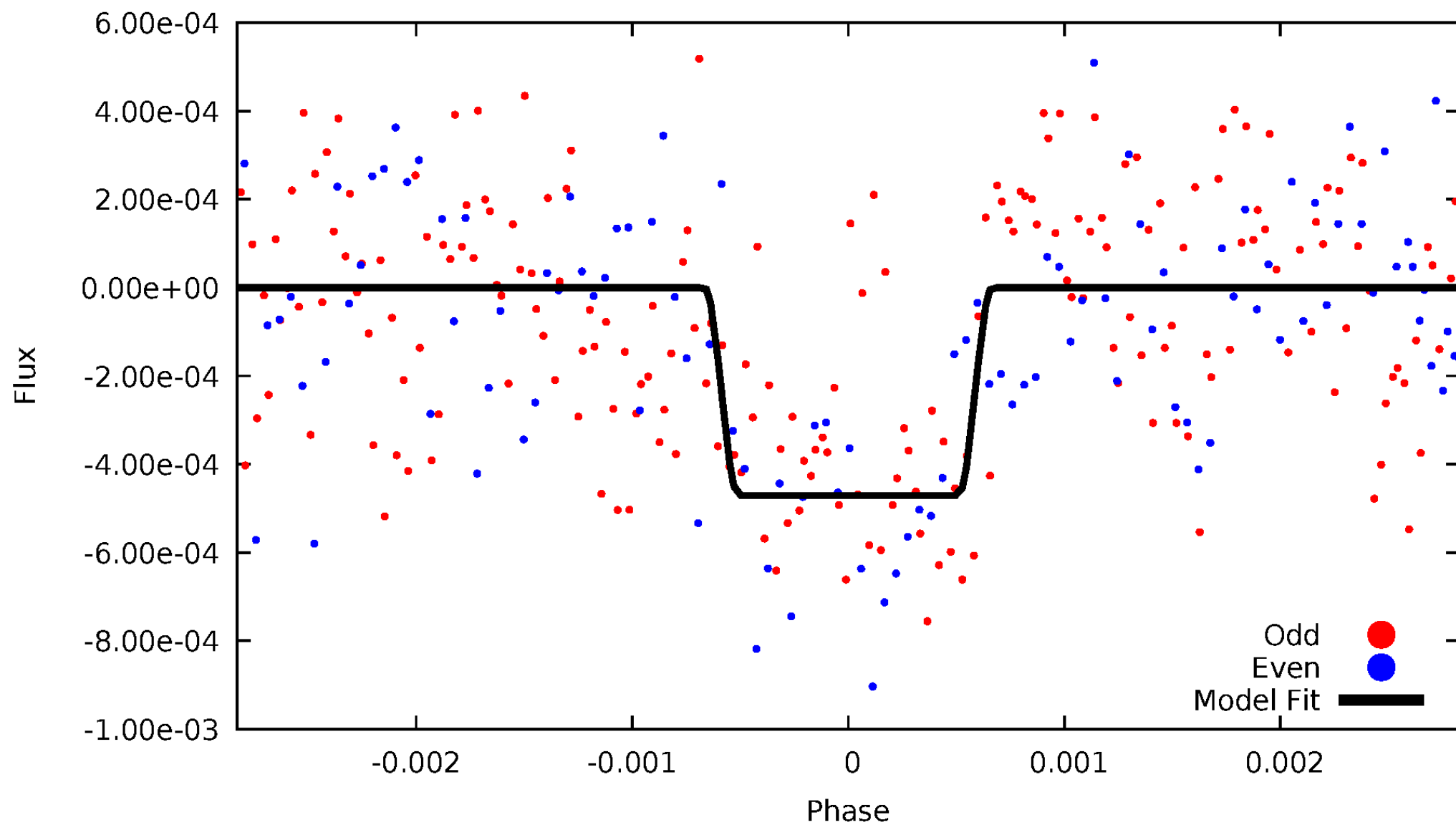
DV Odd/Even

TCE 006516529-01



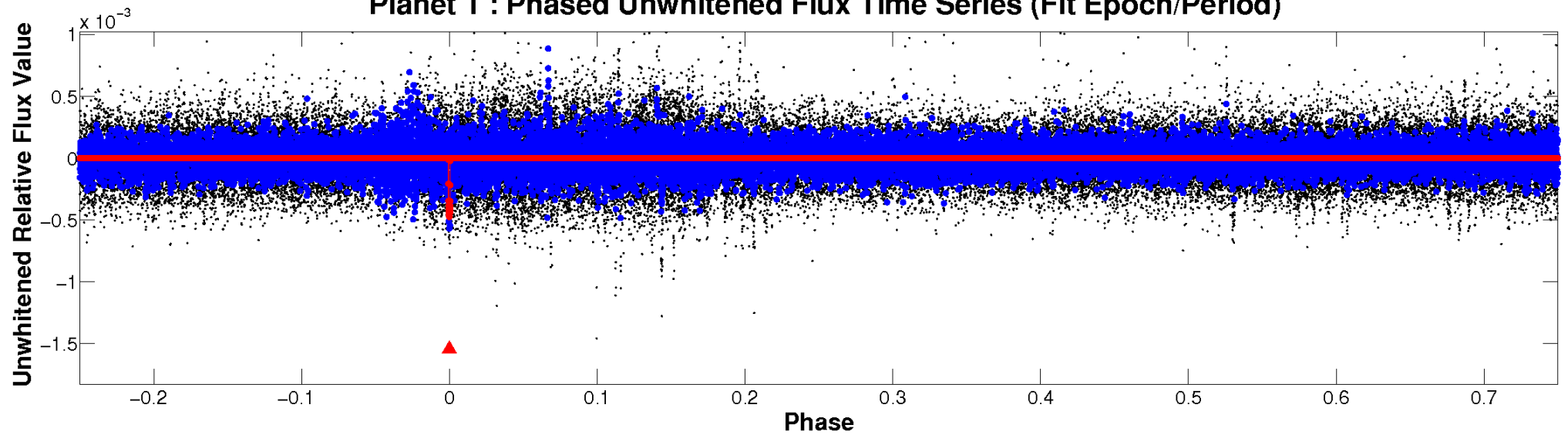
ALT Odd/Even

TCE 006516529-01

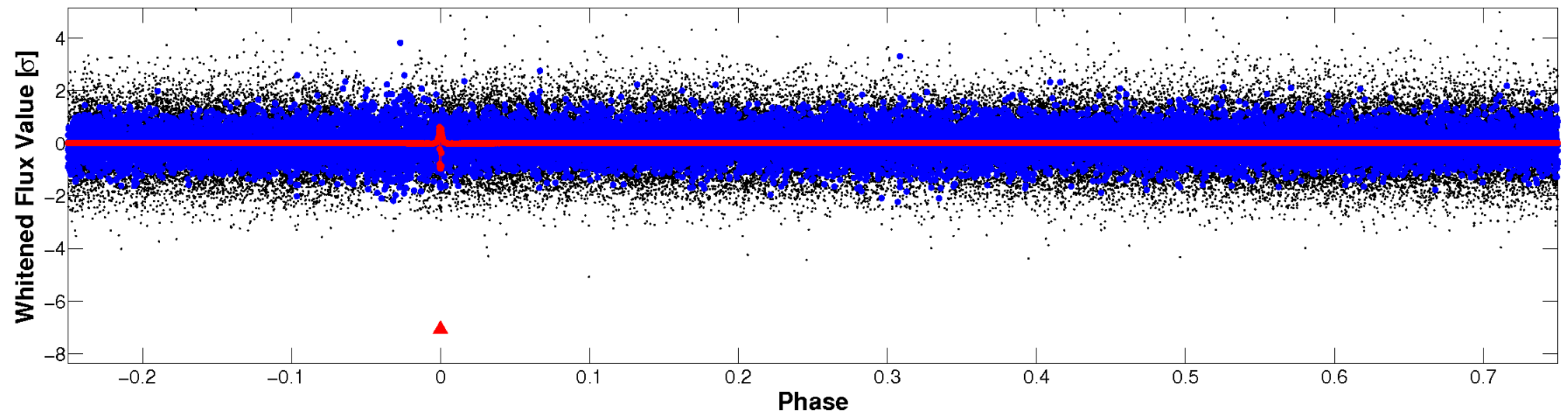


Non-Whitened Vs. Whitened Light Curve

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

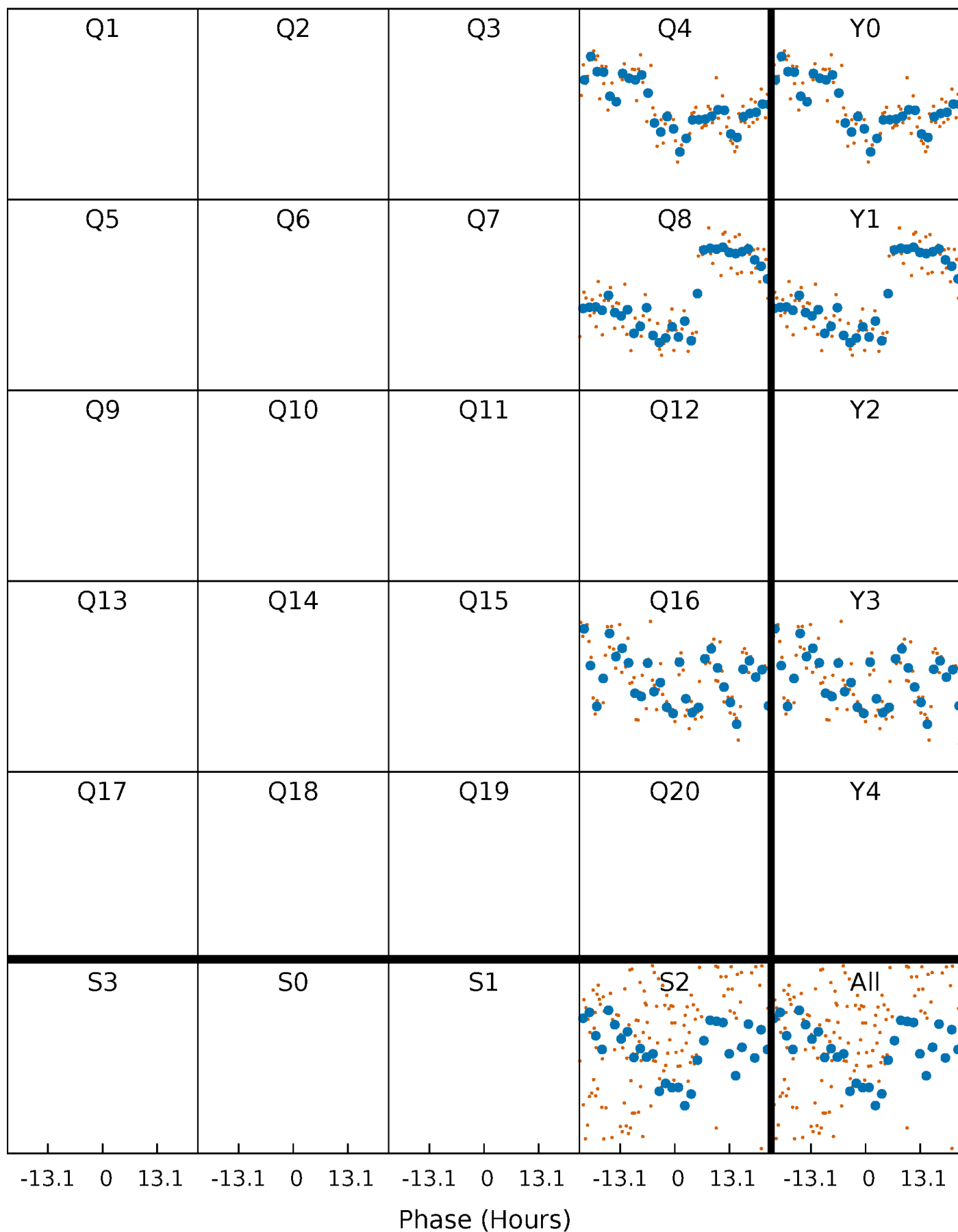


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



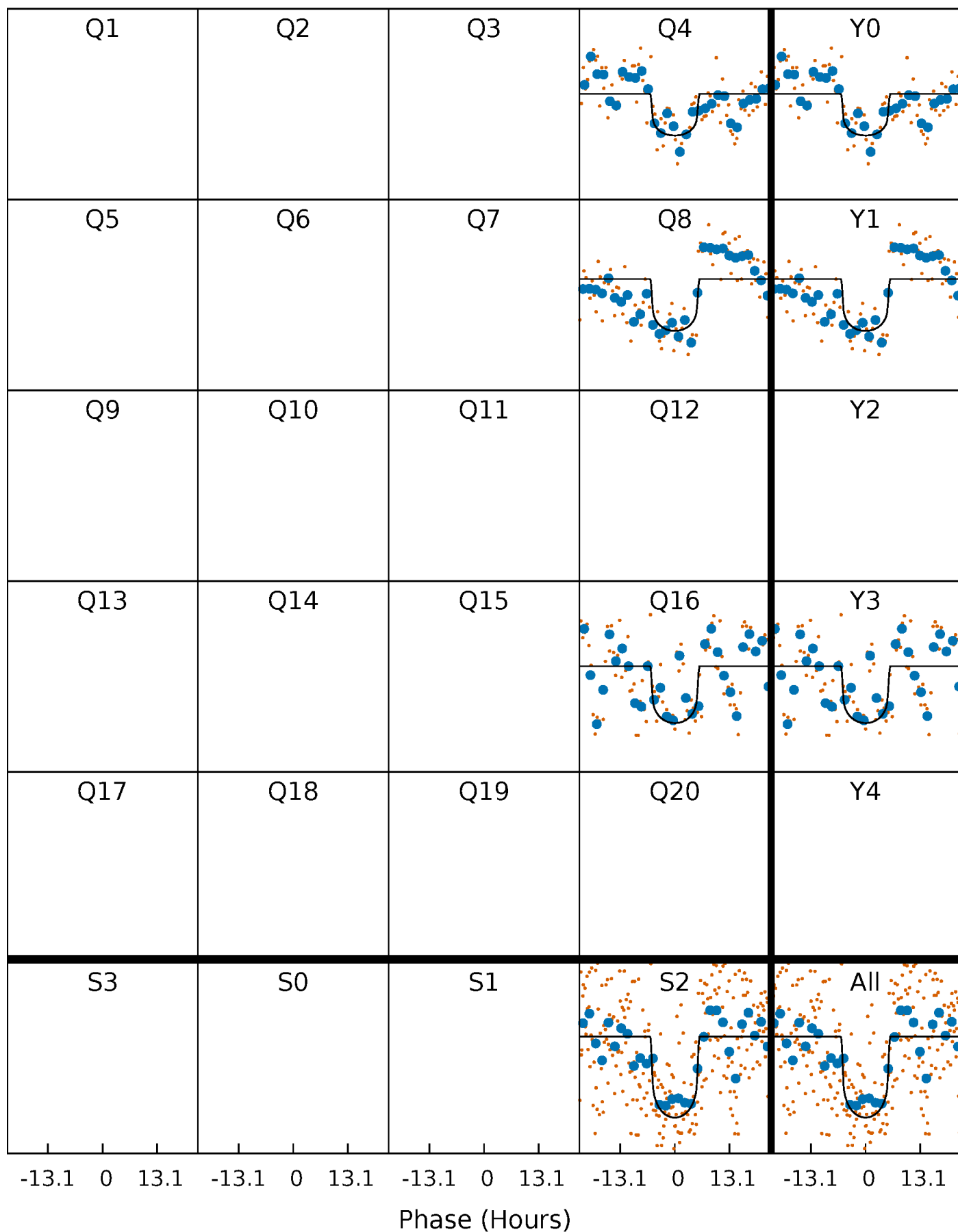
PDC Quarter-Phased Transit Curves

TCE 006516529-01 P=379.426238 Days $T_0=358.990608$ (BKJD)



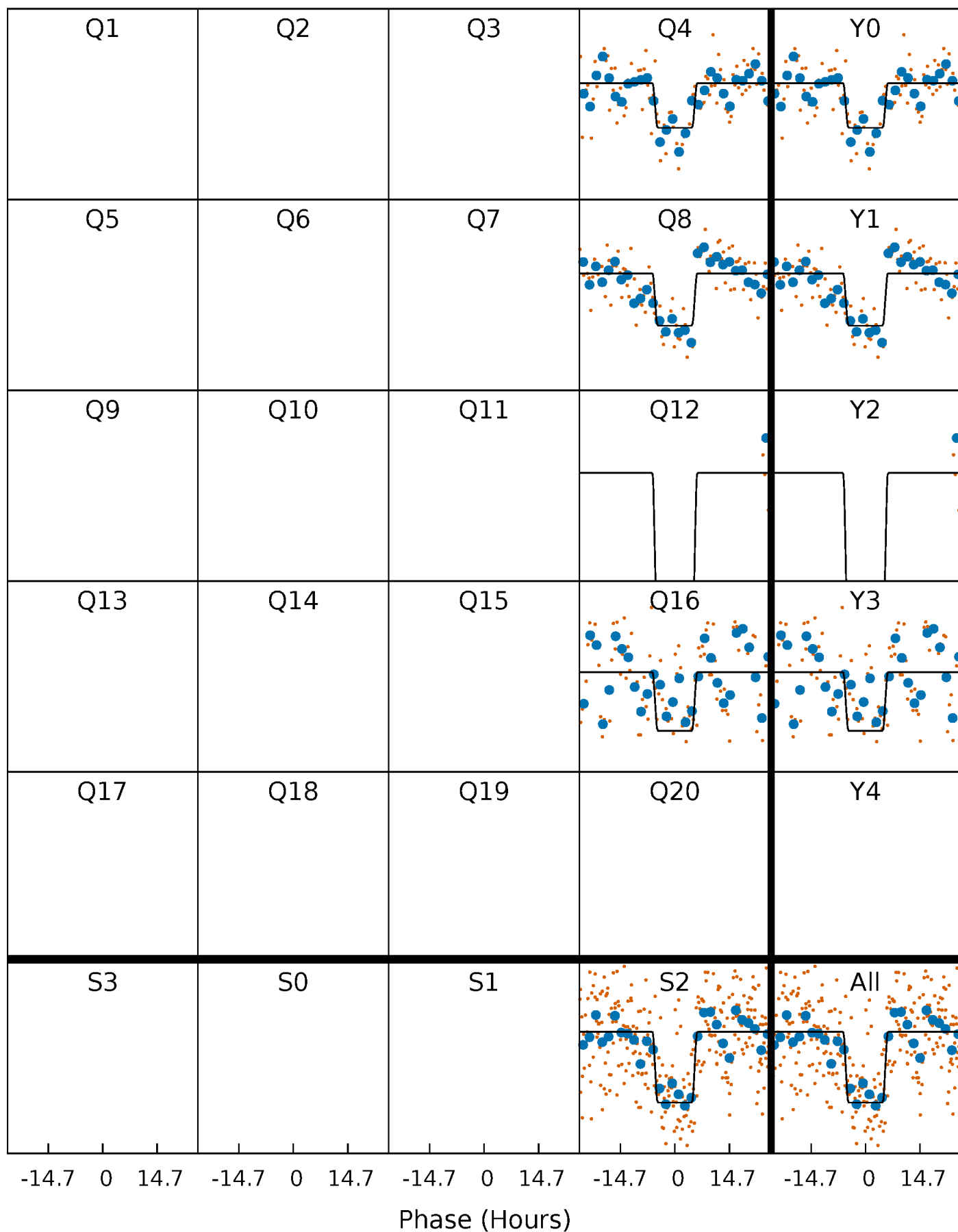
DV Quarter-Phased Transit Curves

TCE 006516529-01 P=379.426238 Days $T_0=358.990608$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

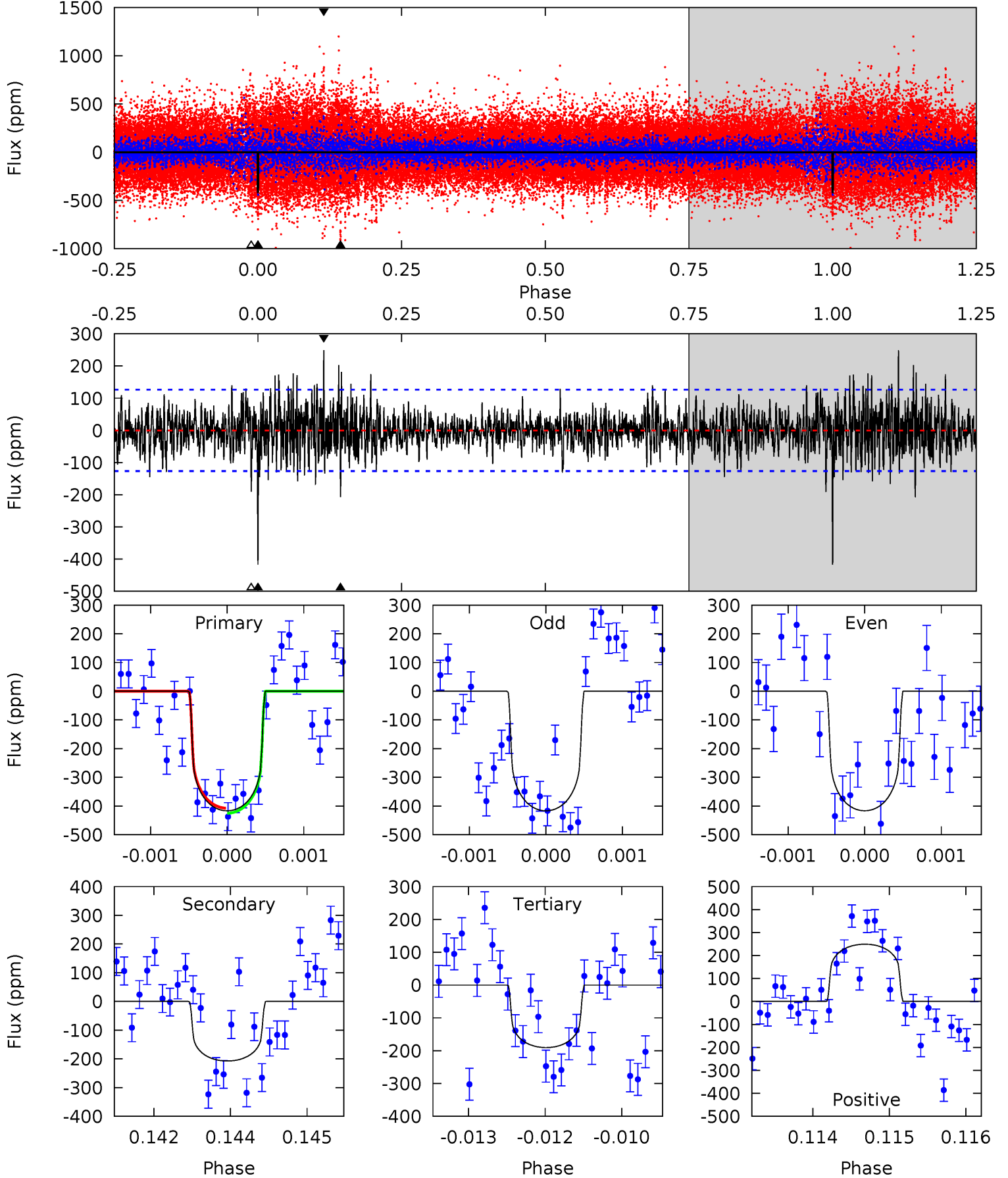
TCE 006516529-01 P=379.437587 Days $T_0=358.974329$ (BKJD)



DV Model-Shift Uniqueness Test

006516529-01, P = 379.426238 Days, E = 358.990608 Days

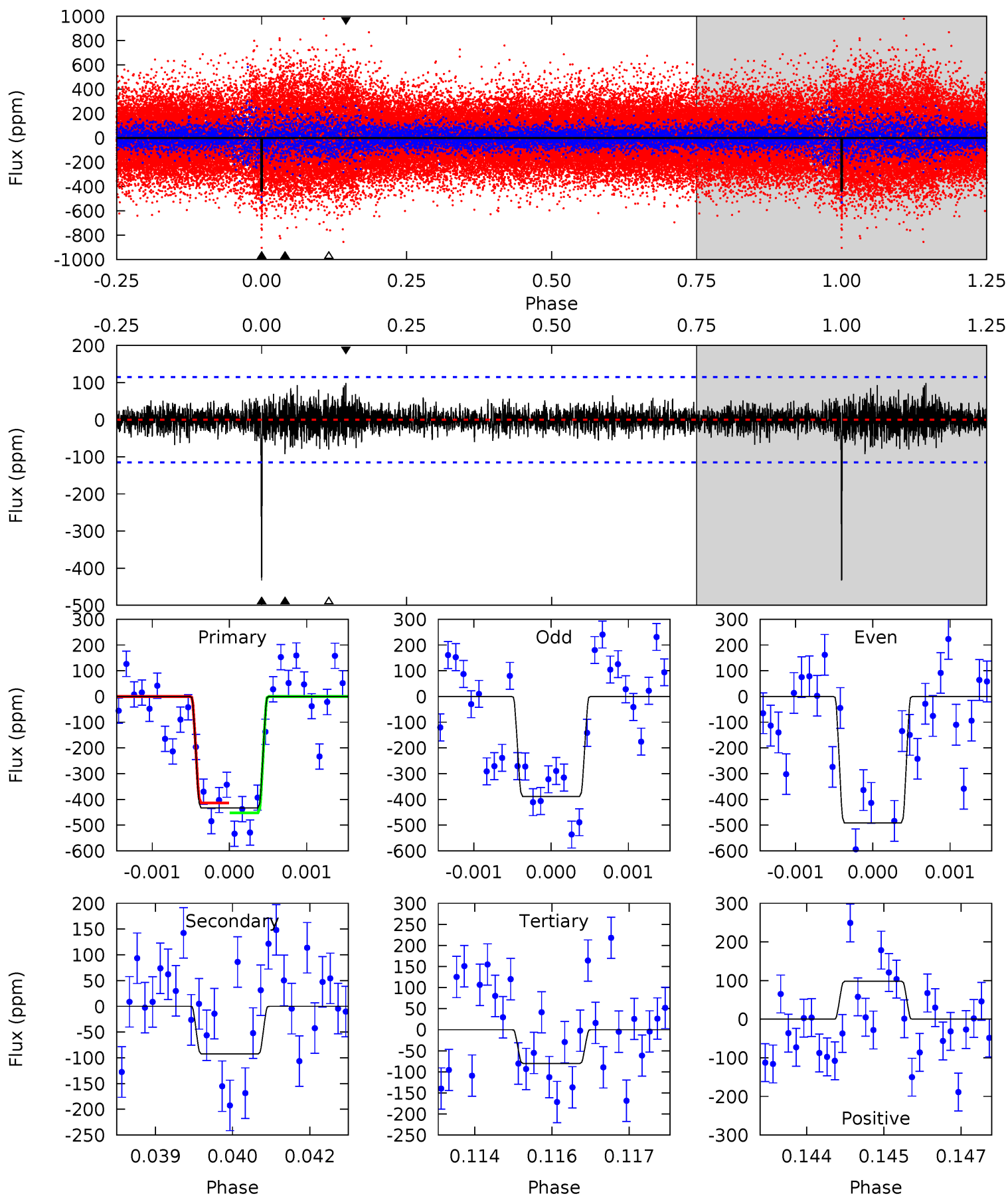
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.8	8.87	8.15	10.7	5.40	3.21	1.93	9.67	7.16	0.72	-1.79	0.00	1.00	0.37	0.37



Alt Model-Shift Uniqueness Test

006516529-01, P = 379.437587 Days, E = 358.974329 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.3	4.34	3.77	4.62	5.40	3.21	0.97	16.6	15.7	0.58	-0.27	2.29	0.86	0.19	0.90



Stellar Parameters For KIC 006516529

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5947^{+160}_{-178}	$4.487^{+0.054}_{-0.216}$	$-0.120^{+0.300}_{-0.300}$	$0.945^{+0.294}_{-0.098}$	$1.000^{+0.134}_{-0.122}$	$1.668^{+0.466}_{-0.869}$
	+3%/-3%	+1%/-5%	+250%/-250%	+31%/-10%	+13%/-12%	+28%/-52%
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 006516529-01 / KOI 8123.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-207 ± 23	$2.31^{+1.19}_{-1.12}$	361^{+27}_{-17}	5012^{+1842}_{-755}	22252^{+61135}_{-12640}
Alt.	-93 ± 21	$2.37^{+1.18}_{-1.04}$	360^{+26}_{-18}	4205^{+1114}_{-583}	9228^{+20951}_{-5367}

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

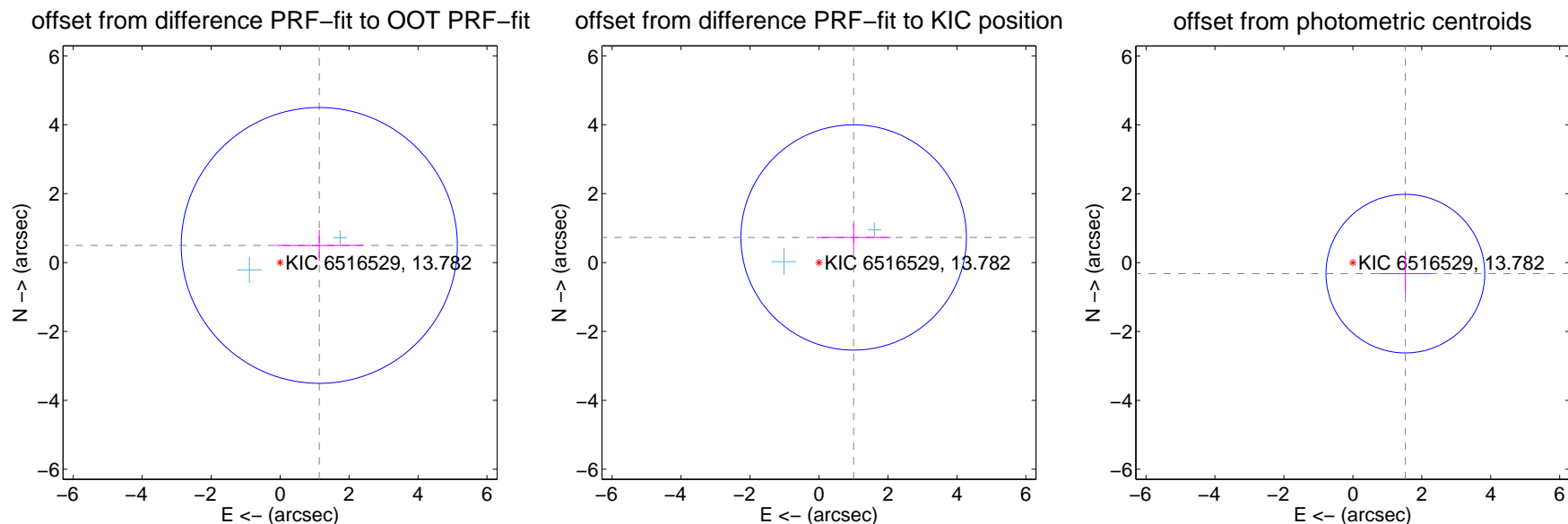
DV Centroid Data

Supplemental centroid analysis for 006516529-01. Kepler magnitude: 13.78. Transit SNR 8.15

There are 2 quarters with good PRF difference image offsets

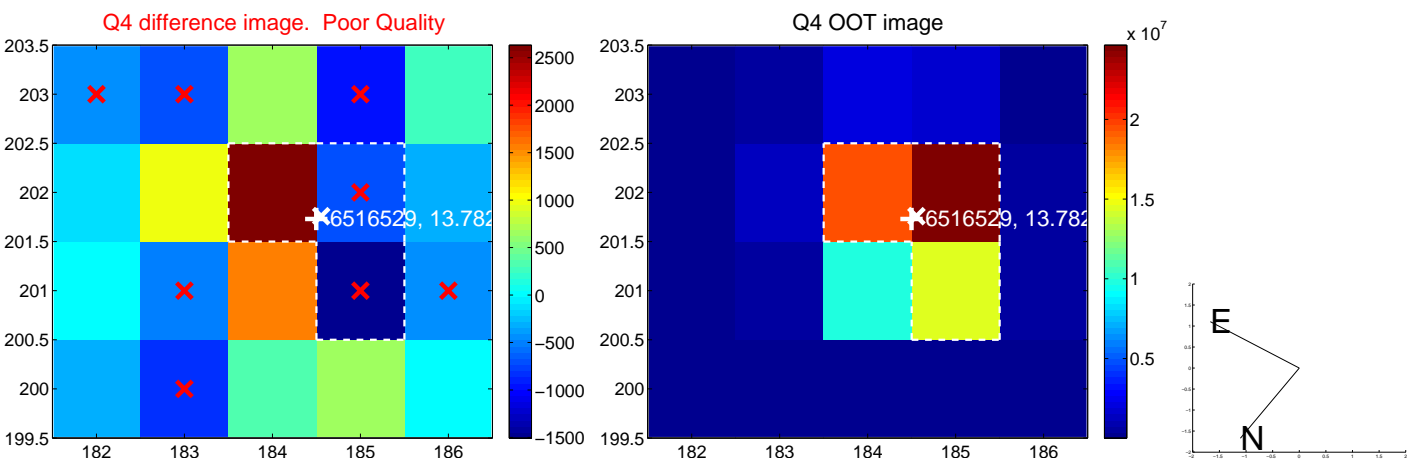
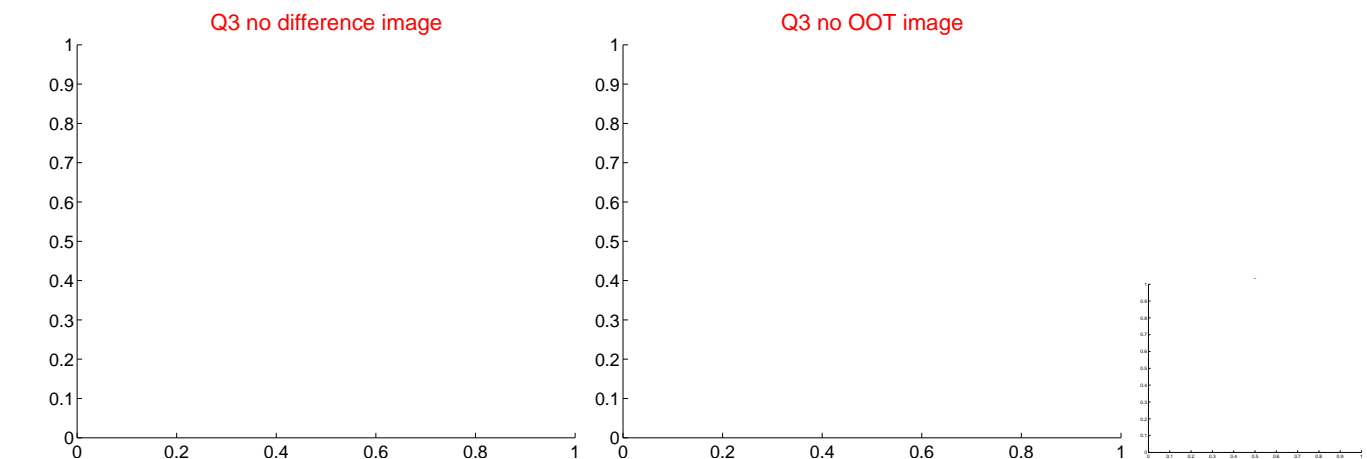
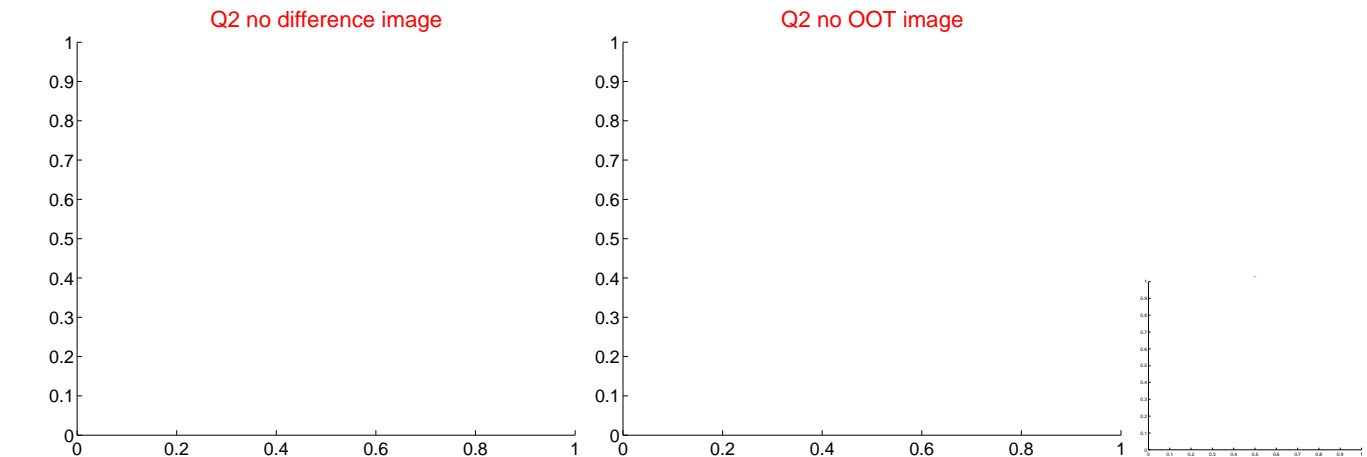
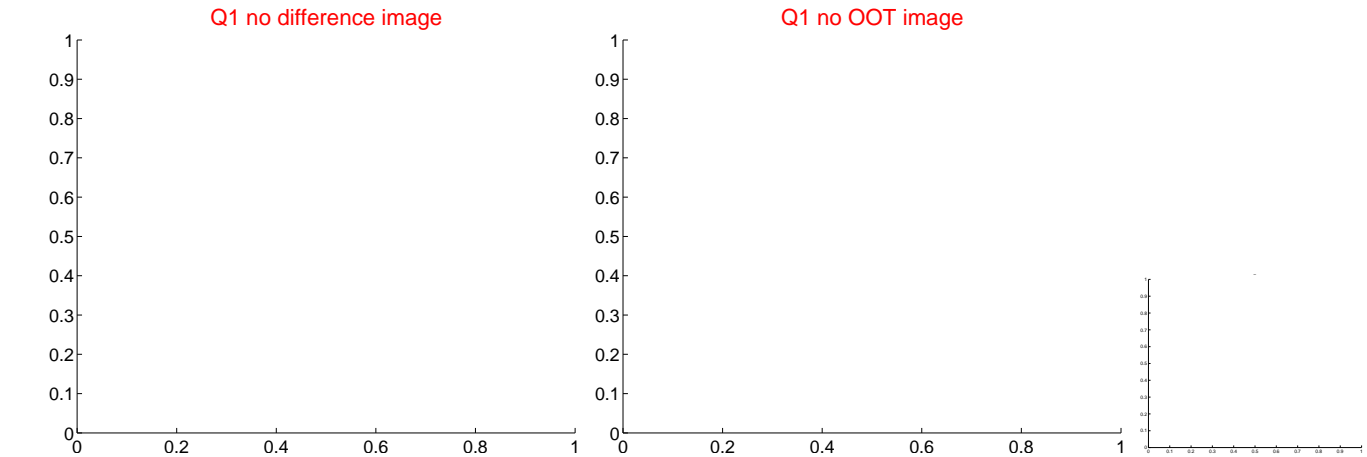
The direct PRF centroid is offset from the target star catalog position by about 0.27 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.240 ± 1.335	0.93	-1.136 ± 1.261	0.497 ± 0.451
PRF-fit source offset from KIC position	1.242 ± 1.090	1.14	-1.006 ± 1.073	0.728 ± 0.382
photometric centroid source offset	1.56 ± 0.77	2.03	-1.52 ± 0.77	-0.32 ± 0.61

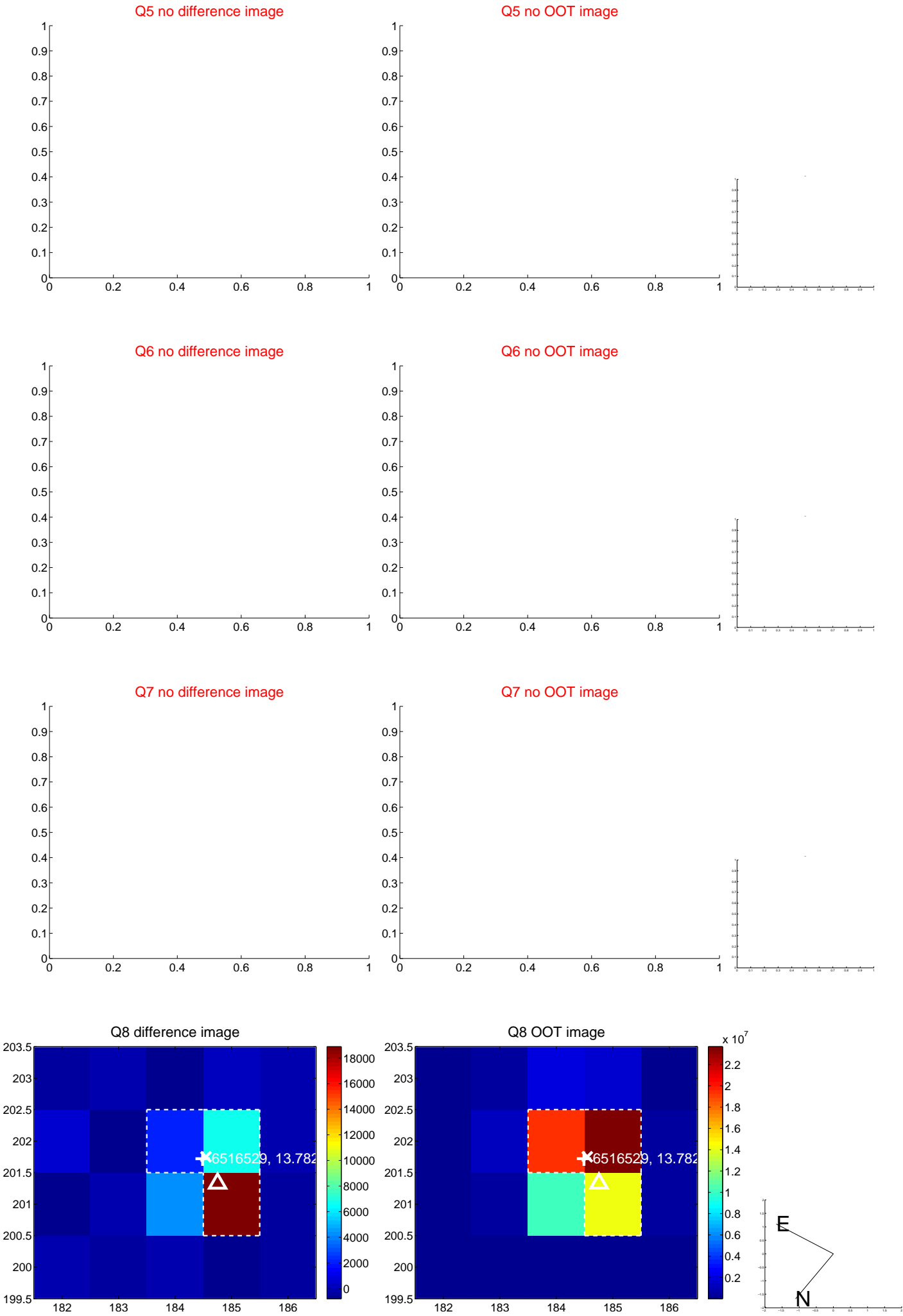


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . 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 ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



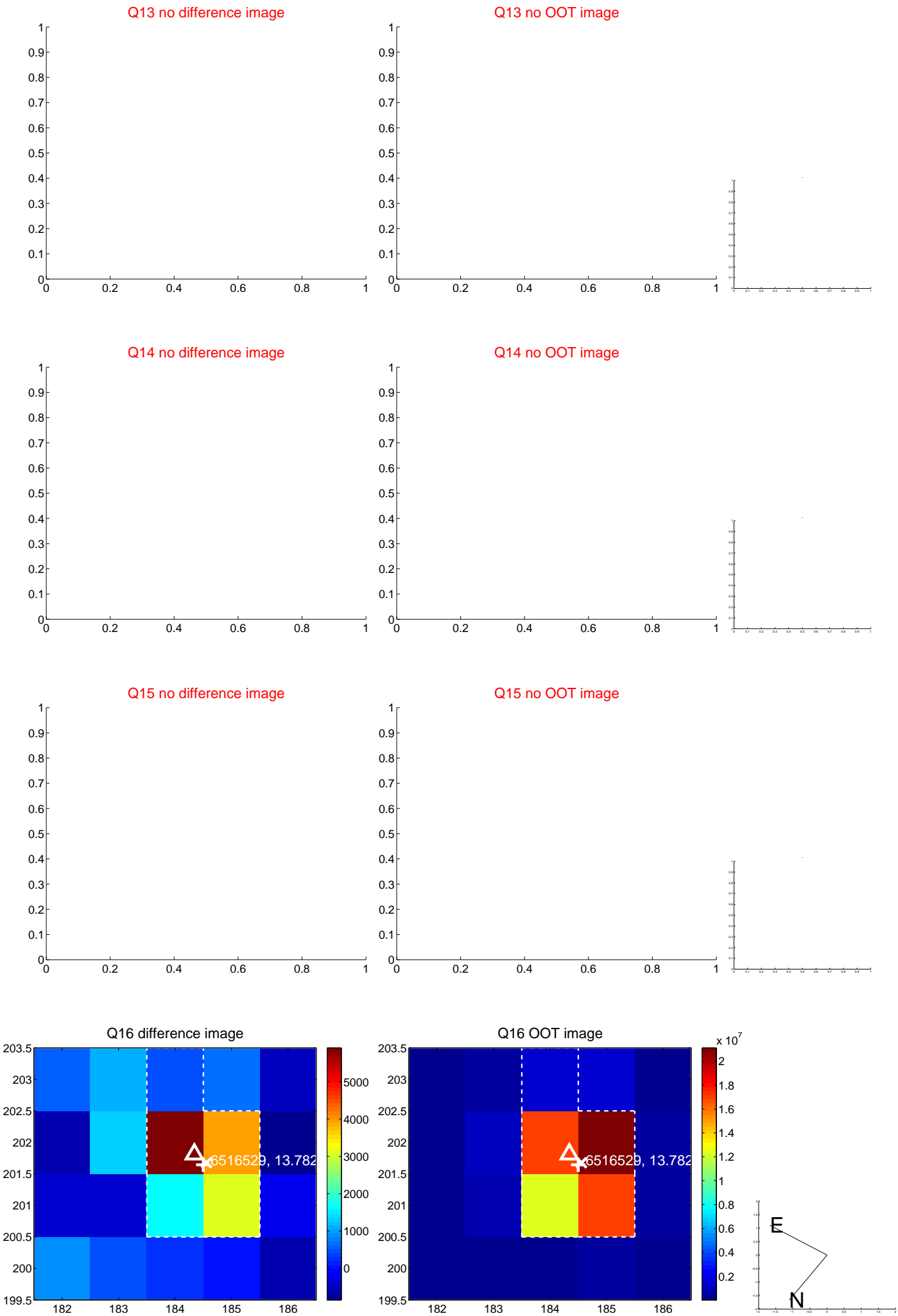
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



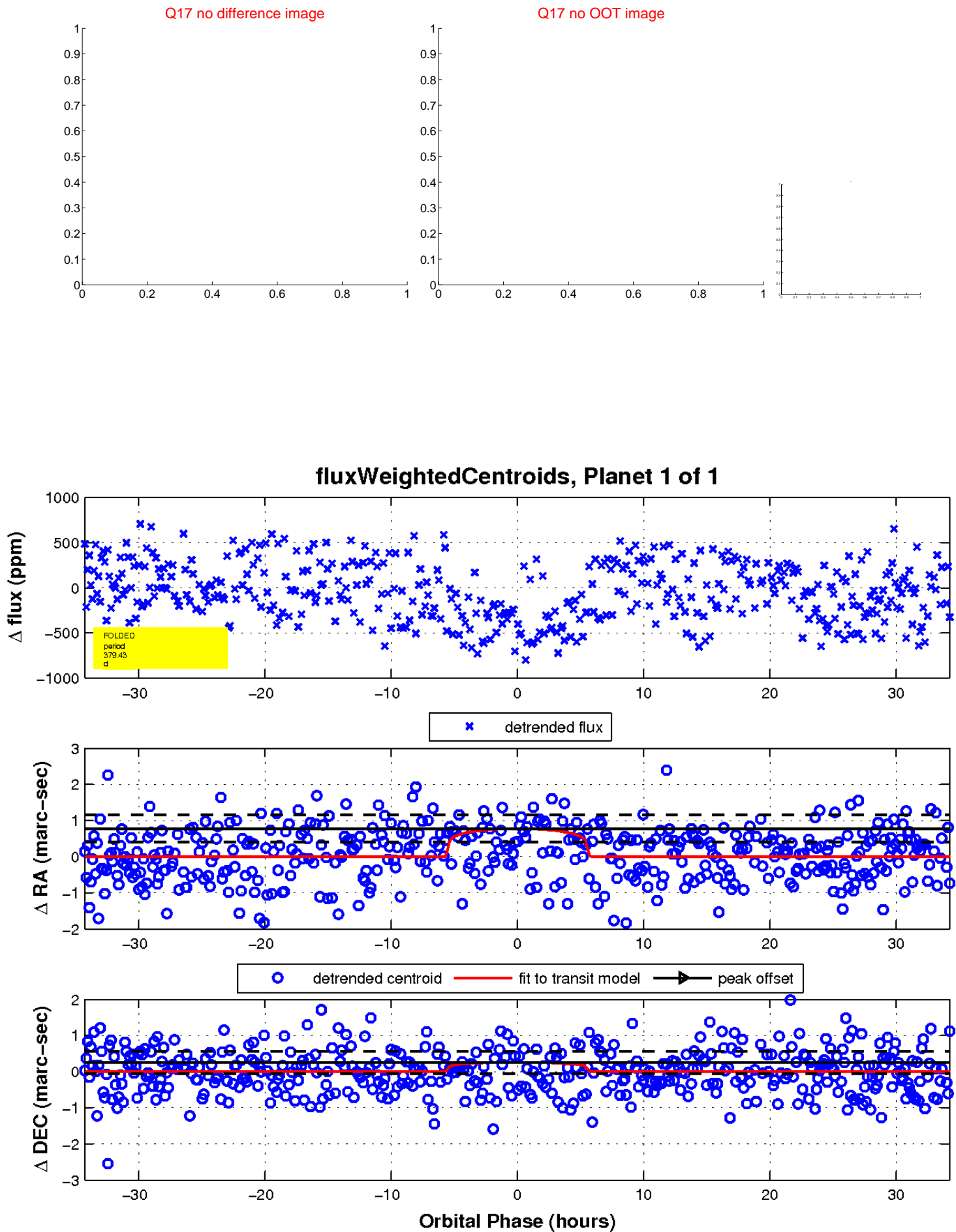
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

