

KIC 007906882

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})
007906882-01	OBS	0686.01	52.513548	171.674544	14229.8	3.316	766.7	799.6	0.98	5589	12.57	11.75

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007906882-01	OBS	PC	0.95	0	0	0	0	CENT_KIC_POS

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

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

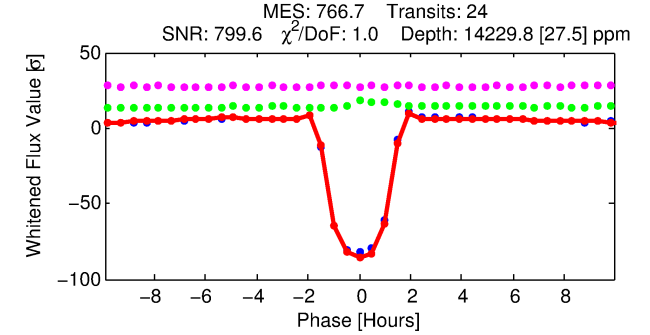
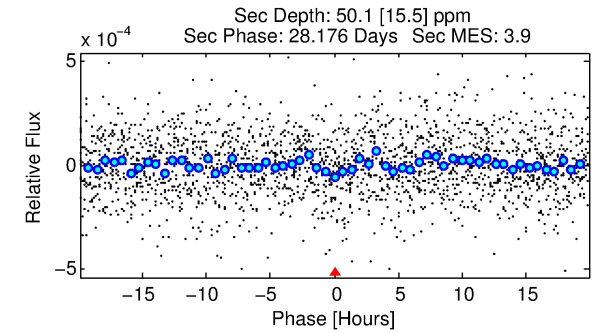
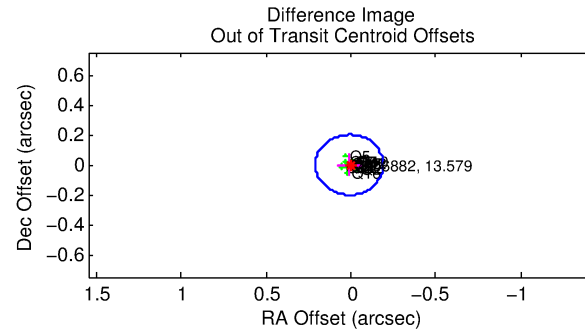
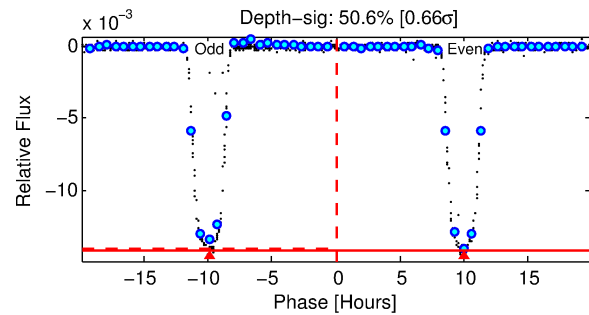
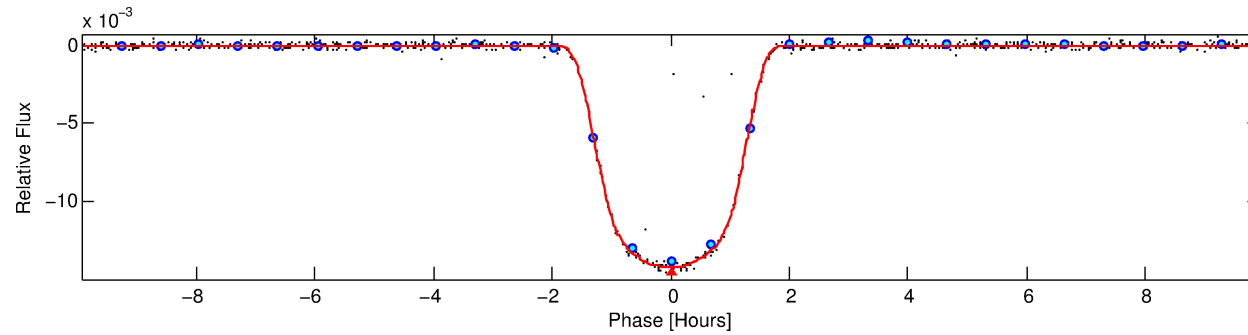
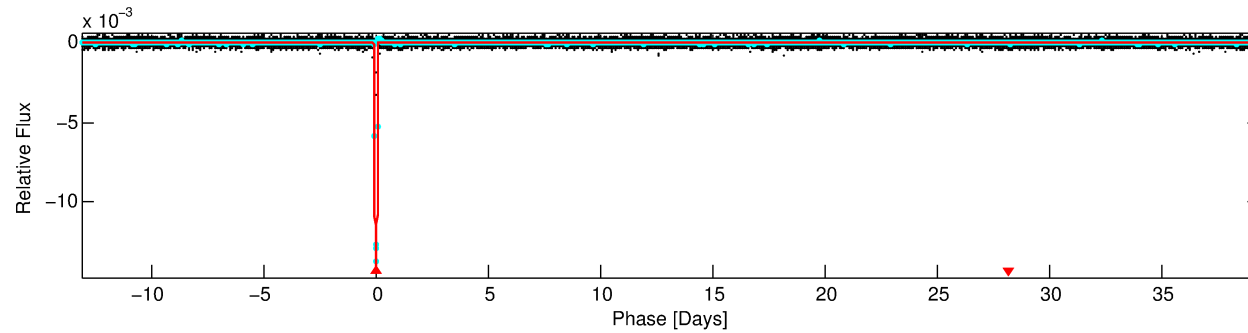
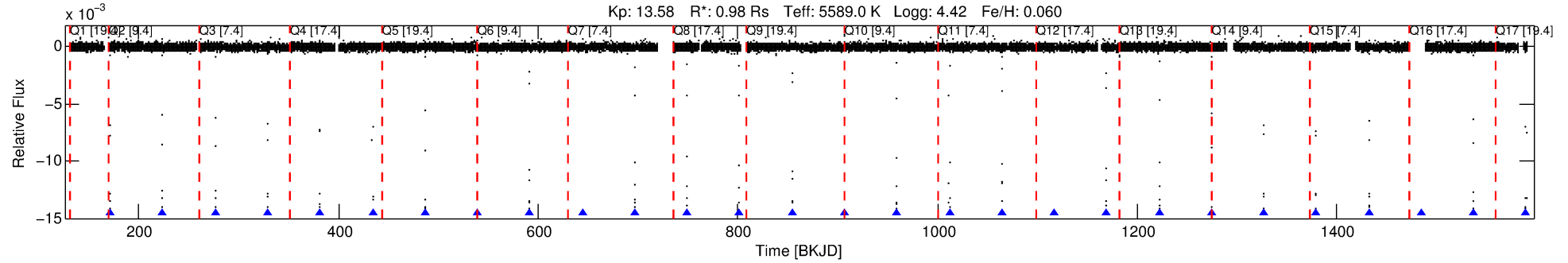
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007906882-01

No Significant Match Found

DV One-Page Summary

KIC: 7906882 Candidate: 1 of 1 Period: 52.514 d
KOI: K00686.01 Corr: 0.993



DV Fit Results:

Period = 52.51355 [0.00001] d
Epoch = 171.6745 [0.0001] BKJD
Rp/R* = 0.1176 [0.0003]
a/R* = 104.26 [0.99]
b = 0.71 [0.01]
Seff = 11.75 [2.36]
Teff = 472 [24] K
Rp = 12.57 [1.69] Re
a = 0.2673 [0.0323] AU
Ag = 12.45 [4.49] [2.55σ]
Teffp = 1371 [110] K [8.00σ]

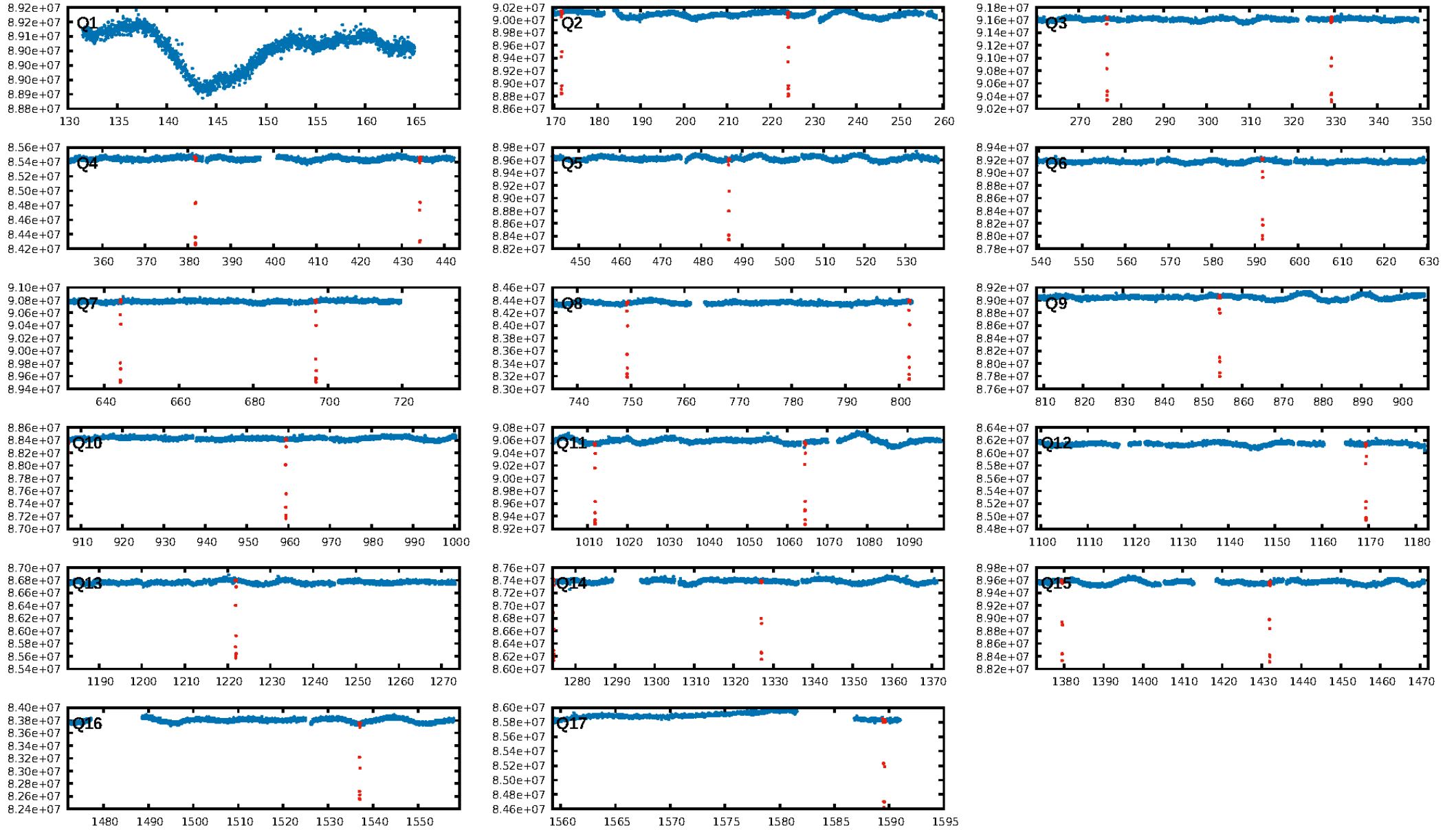
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.9%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [23/23]
GhostDiagnostic-chr: 7.836
Centroid-sig: 0.0%
Centroid-so: 0.576 arcsec [43.10σ]
OotOffset-rm: 0.011 arcsec [0.17σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-rm: 0.487 arcsec [7.05σ]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 1.00 [16/16]
DiffImageOverlap-fno: 1.00 [16/16]

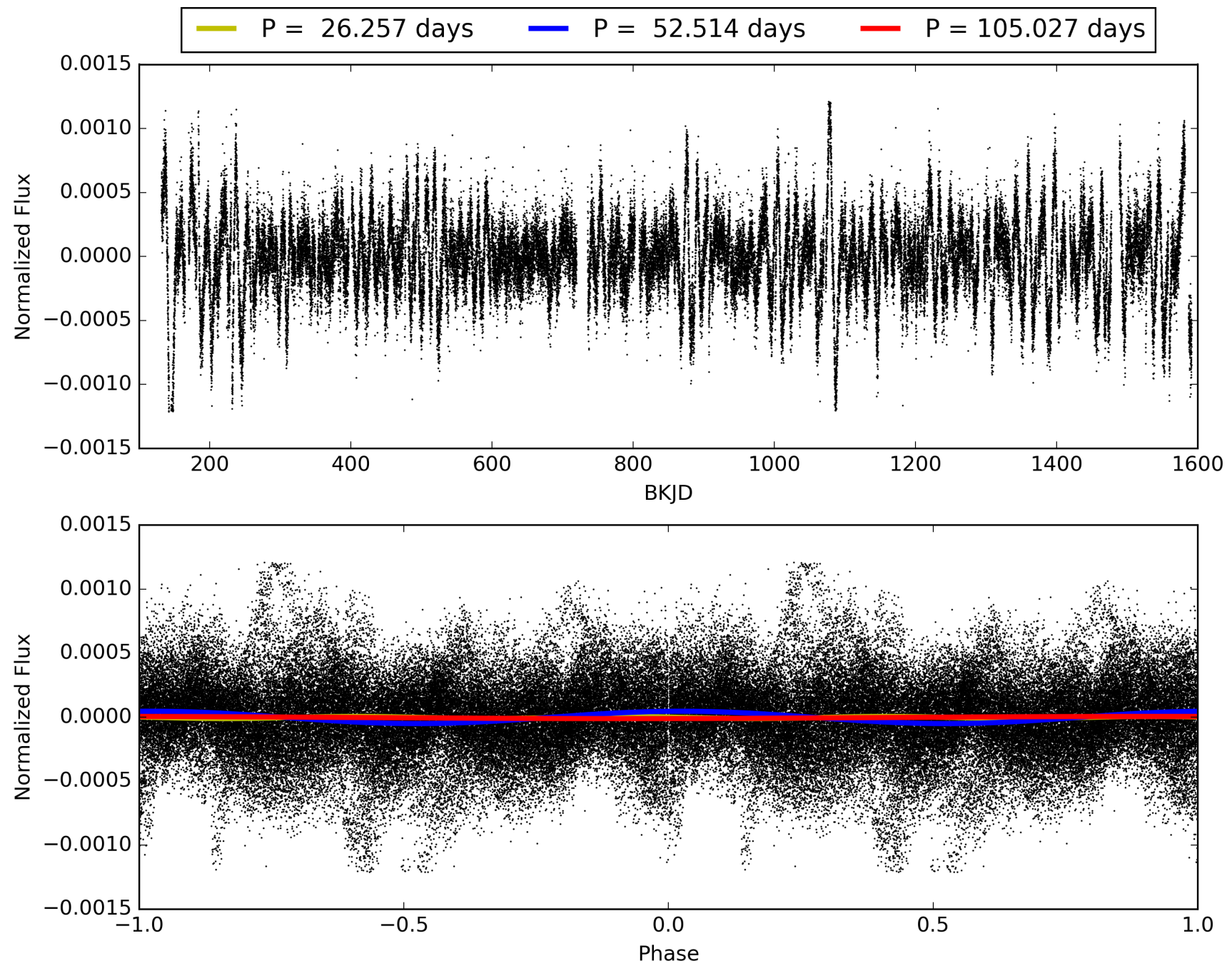
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 02:20:14 Z

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

TCE 007906882-01, PDC Light Curves

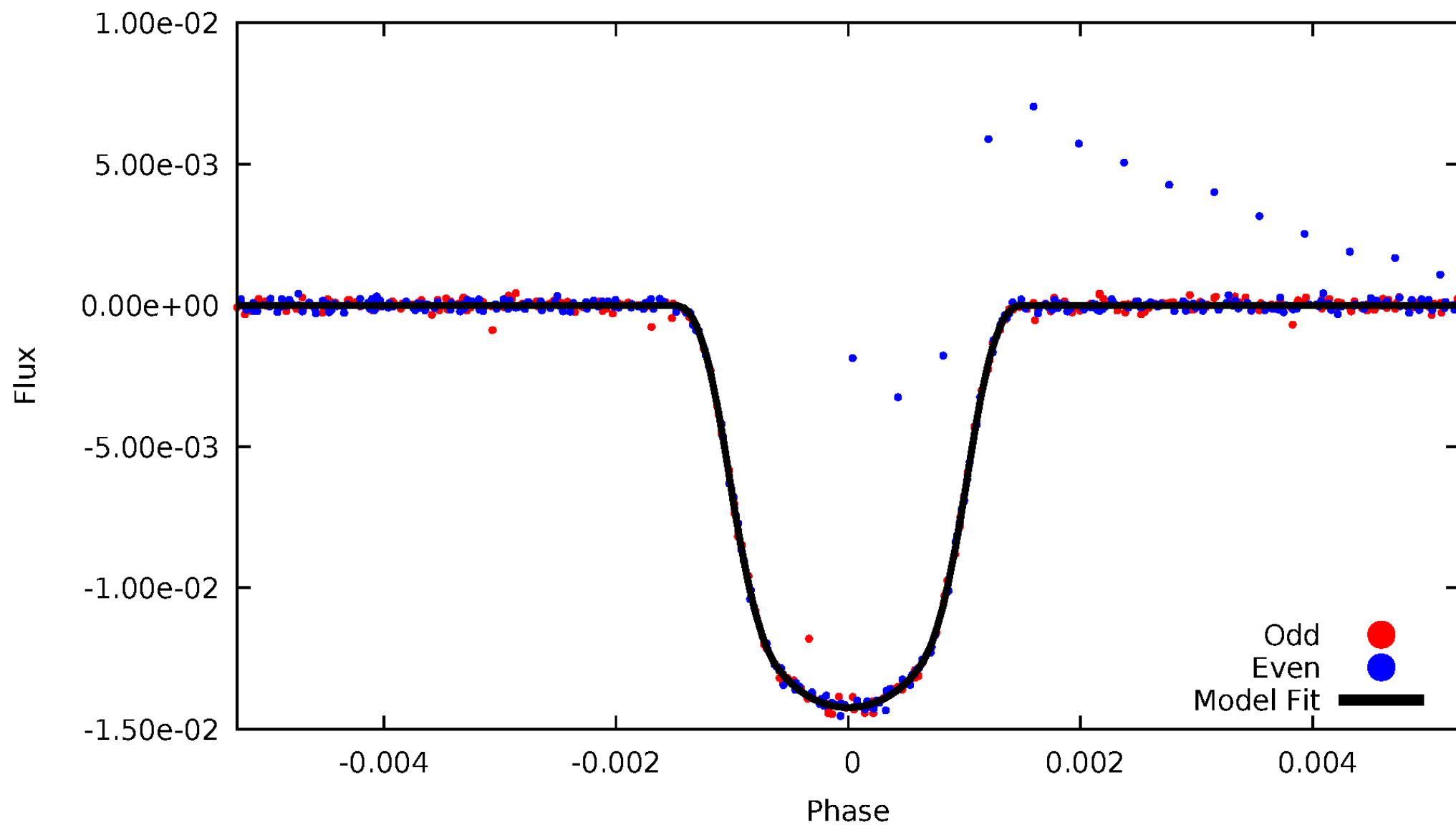


TCE 007906882-01



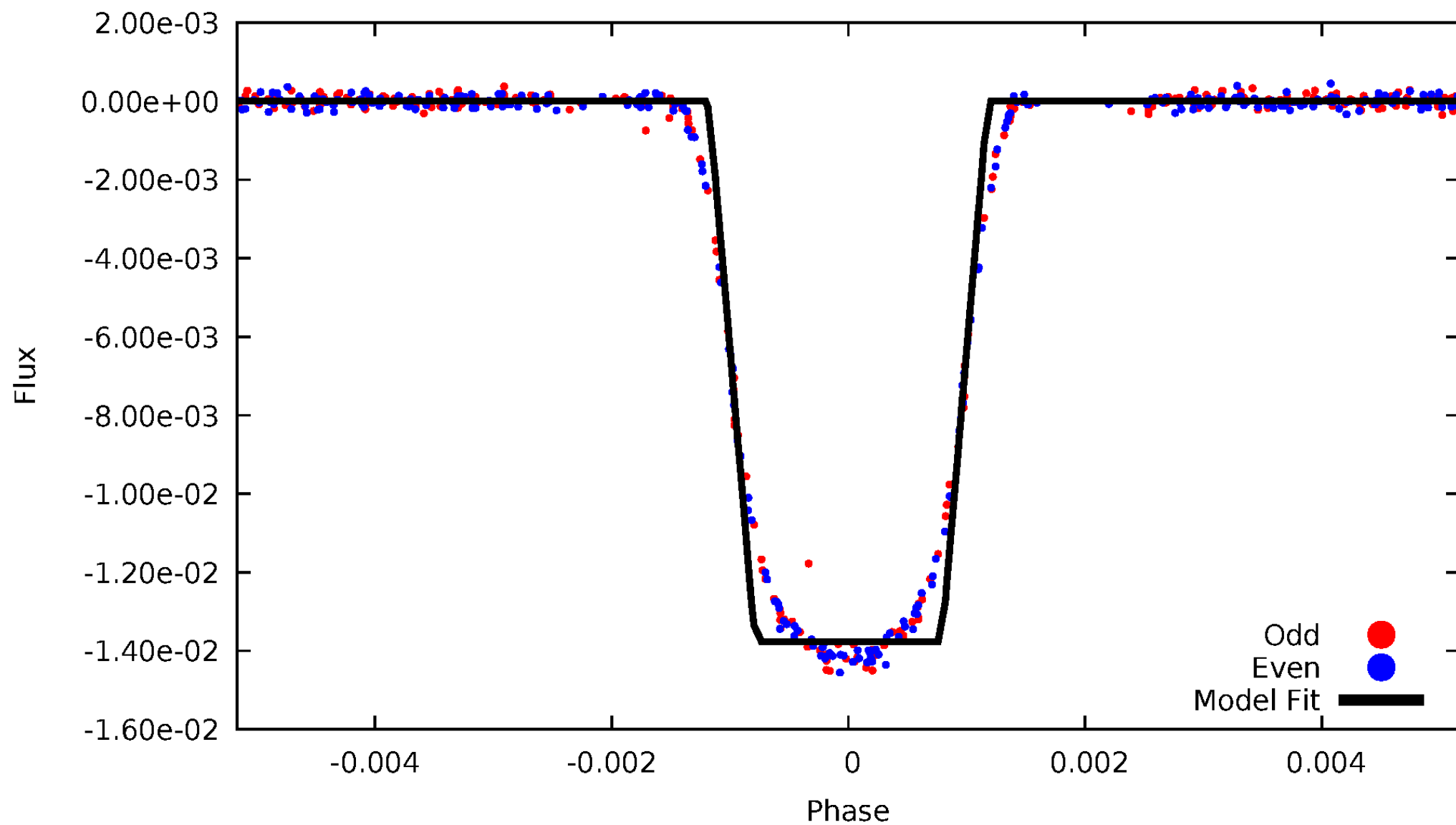
DV Odd/Even

TCE 007906882-01



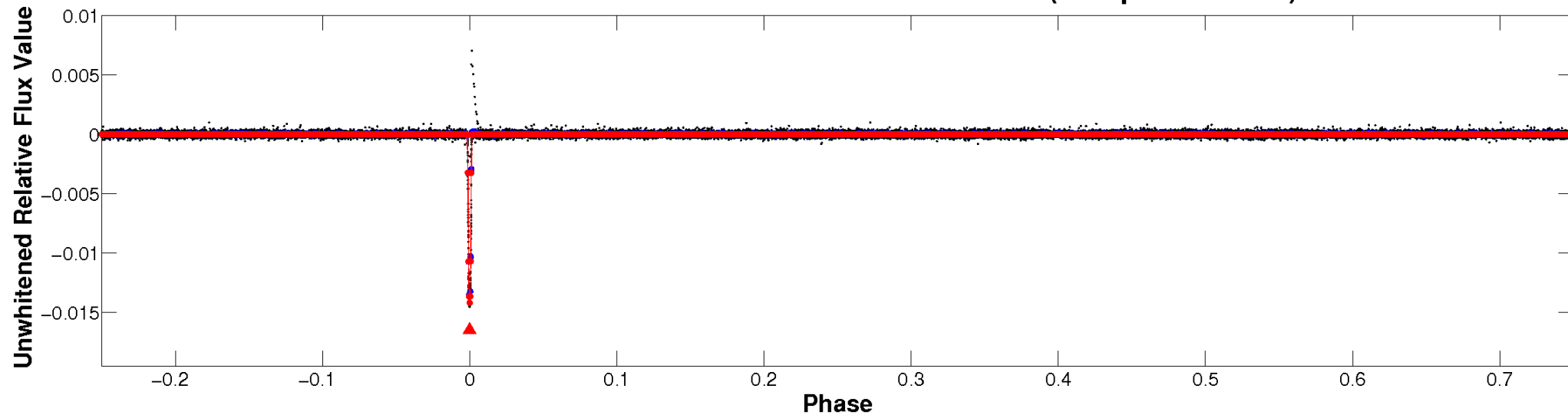
ALT Odd/Even

TCE 007906882-01

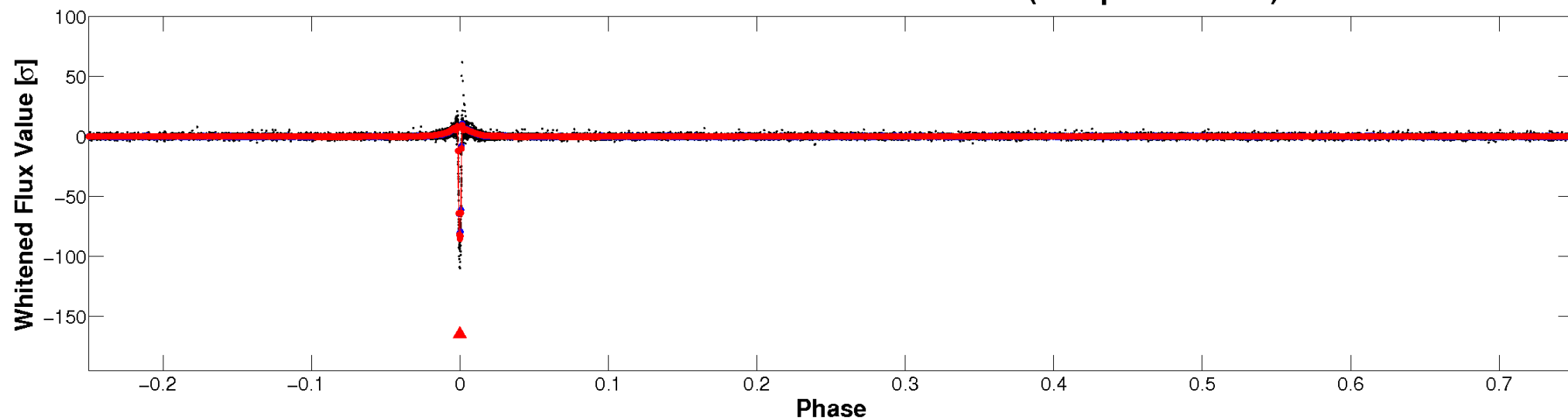


Non-Whitened Vs. Whitened Light Curve

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

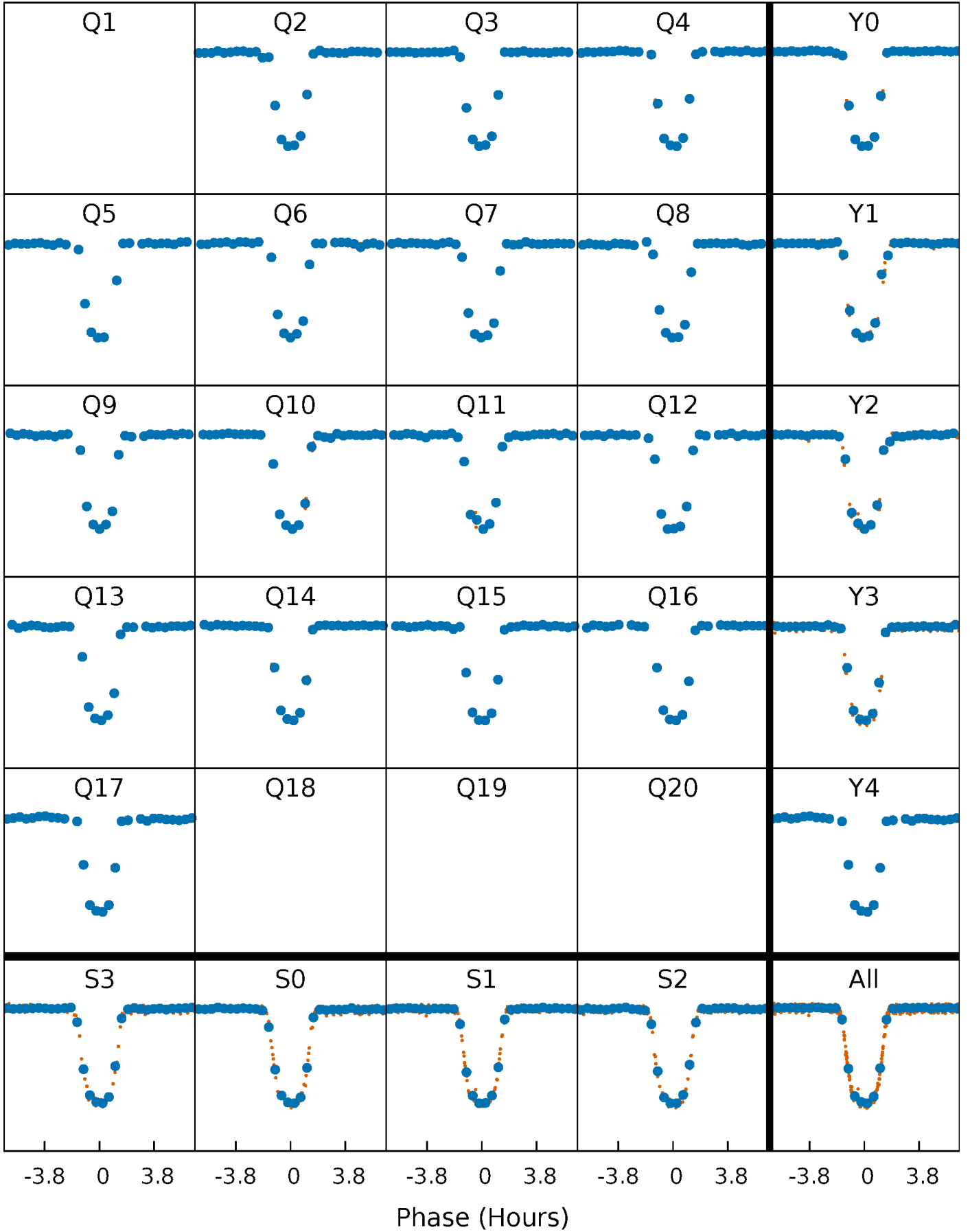


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



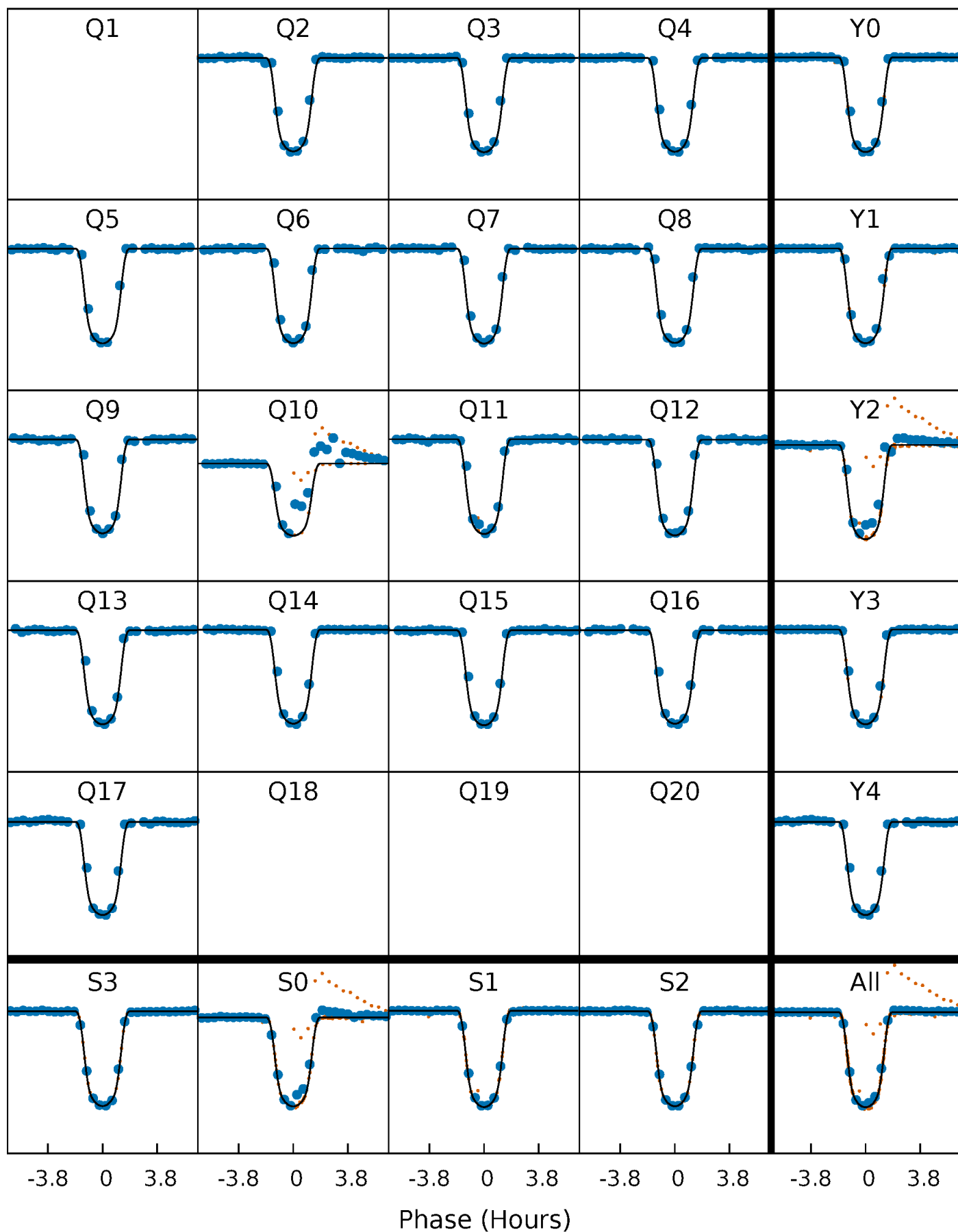
PDC Quarter-Phased Transit Curves

TCE 007906882-01 P= 52.513548 Days $T_0=171.674544$ (BKJD)



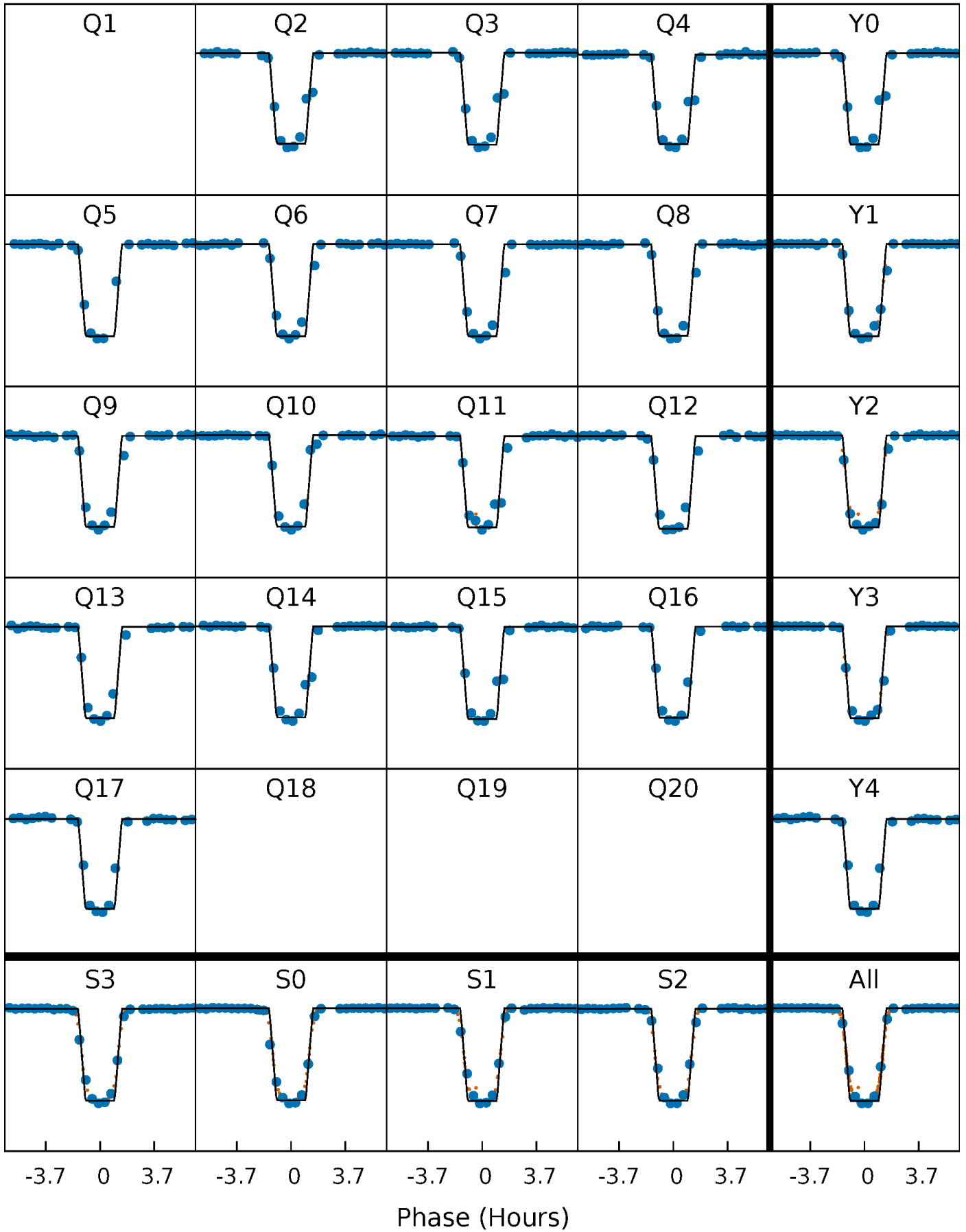
DV Quarter-Phased Transit Curves

TCE 007906882-01 P= 52.513548 Days $T_0=171.674544$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

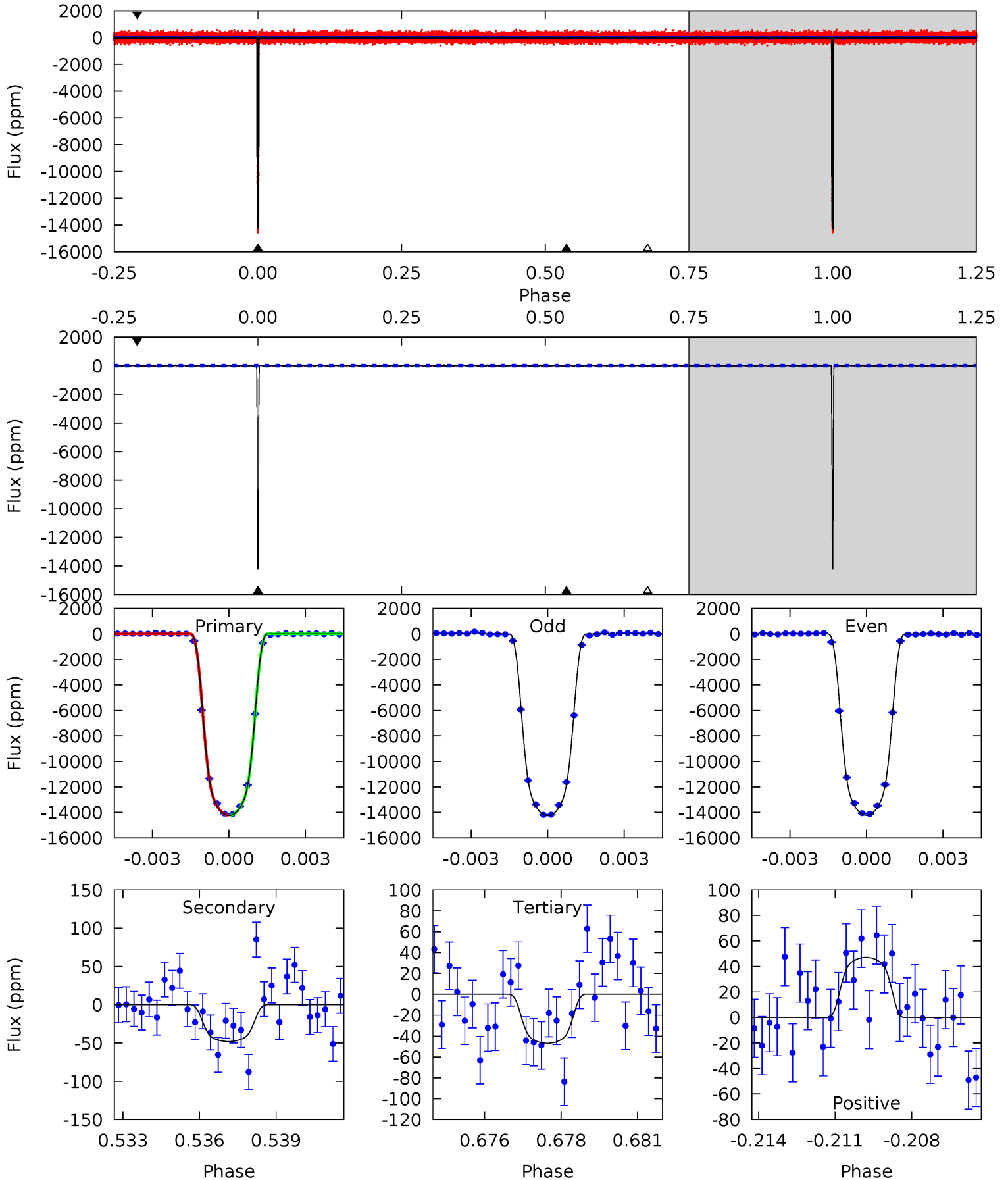
TCE 007906882-01 P= 52.513482 Days $T_0=171.675468$ (BKJD)



DV Model-Shift Uniqueness Test

007906882-01, P = 52.513548 Days, E = 119.160996 Days

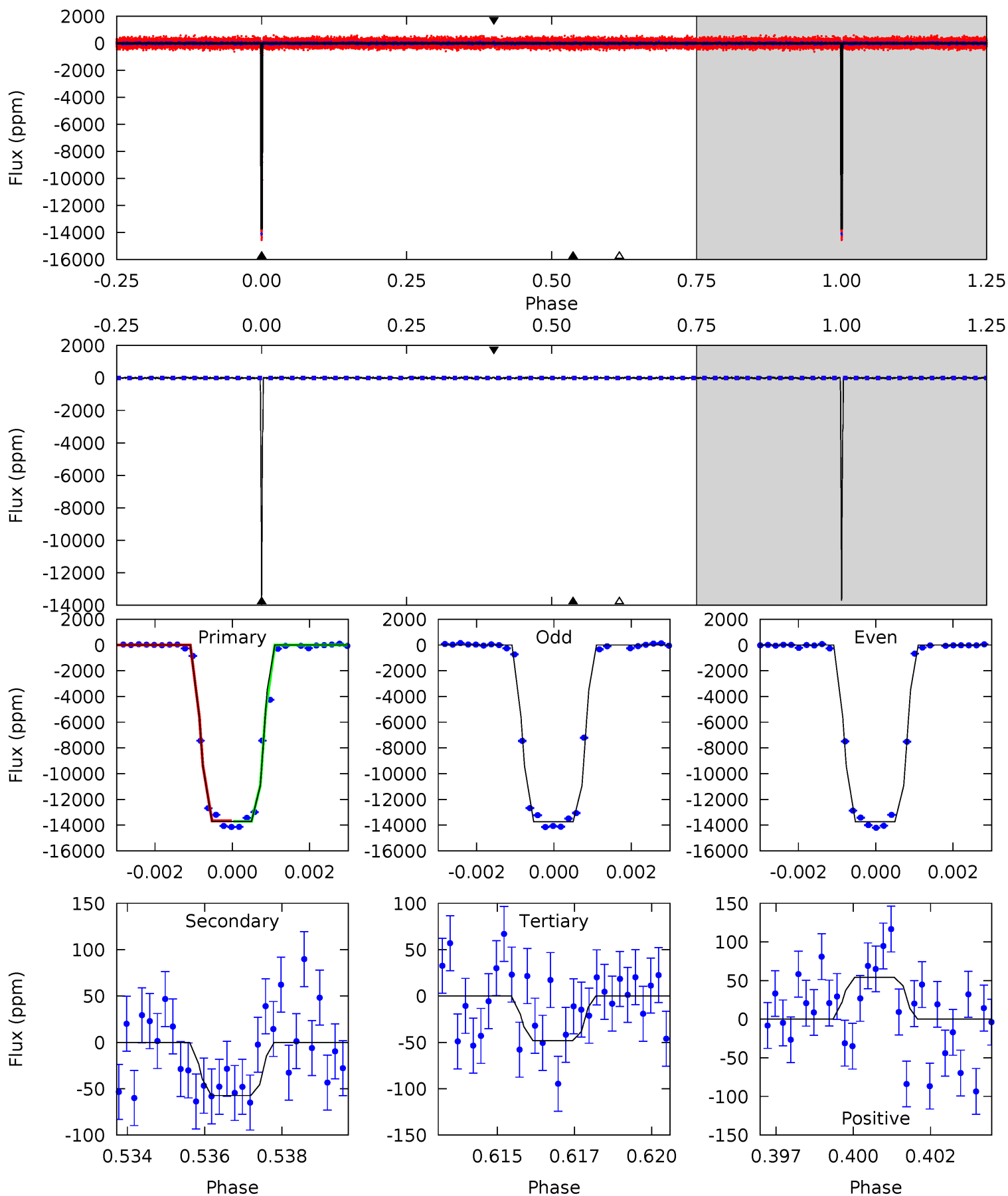
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1338	4.50	4.40	4.43	5.25	2.97	1.34	1333	1333	0.10	0.07	1.45	0.96	0.00	0.50



Alt Model-Shift Uniqueness Test

007906882-01, P = 52.513482 Days, E = 119.161986 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1016	4.25	3.58	4.02	5.29	3.04	2.56	1013	1012	0.67	0.23	0.07	0.99	0.00	1.44



Stellar Parameters For KIC 007906882

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5589^{+111}_{-111}	$4.421^{+0.086}_{-0.105}$	$0.060^{+0.150}_{-0.150}$	$0.980^{+0.132}_{-0.096}$	$0.925^{+0.069}_{-0.051}$	$1.382^{+0.491}_{-0.431}$
	+2%/-2%	+2%/-2%	+250%/-250%	+13%/-10%	+7%/-6%	+36%/-31%
Source	SPE59	SPE59	SPE59	DSEP		

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

Secondary Eclipse Parameters for KIC 007906882-01 / KOI 0686.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-48 ± 11	$12.61^{+0.98}_{-0.72}$	660^{+28}_{-23}	2274^{+57}_{-65}	12^{+3}_{-3}
Alt.	-57 ± 13	$12.63^{+1.05}_{-0.77}$	661^{+28}_{-25}	2323^{+61}_{-79}	14^{+4}_{-4}

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

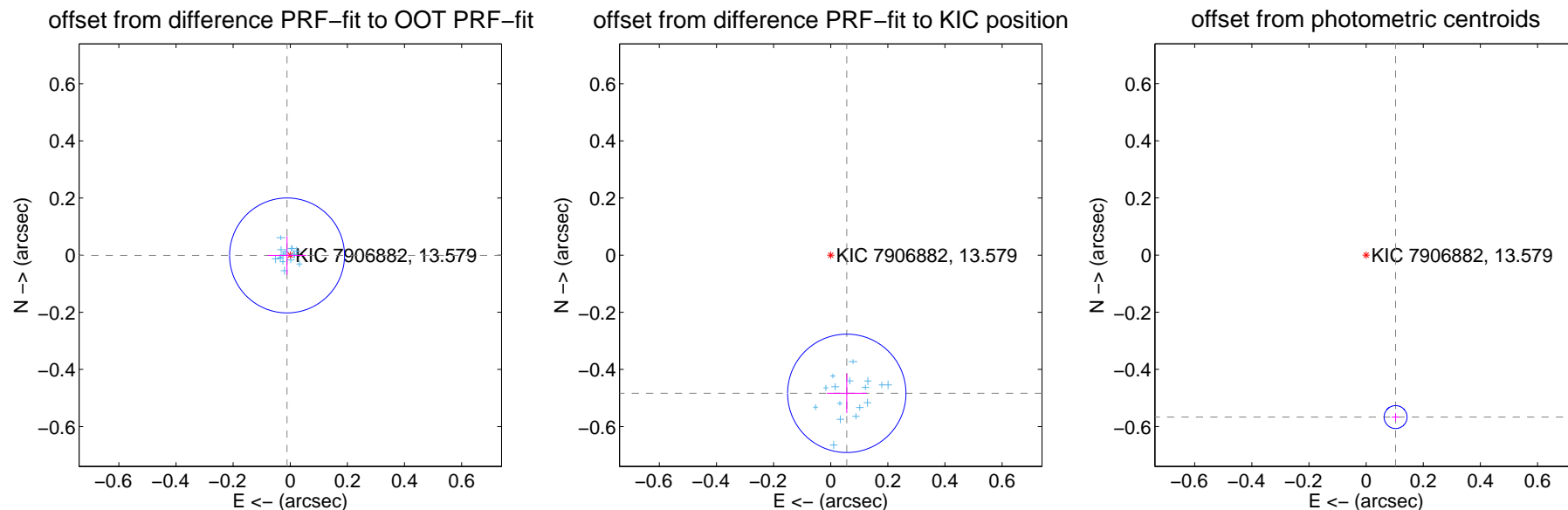
DV Centroid Data

Supplemental centroid analysis for 007906882-01. Kepler magnitude: 13.58. Transit SNR 799.55

There are 16 quarters with good PRF difference image offsets

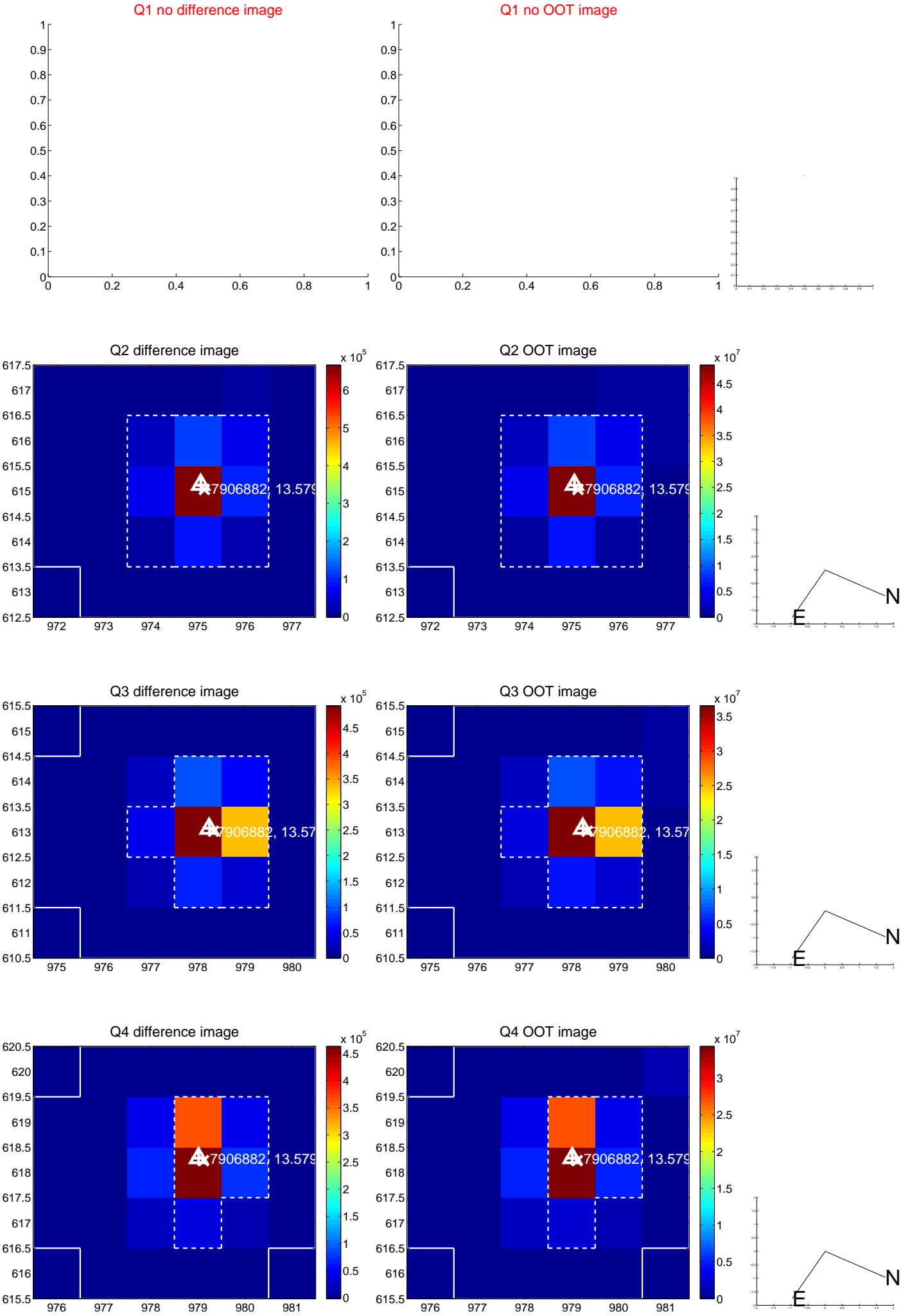
The direct PRF centroid is offset from the target star catalog position by about 0.59 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.011 ± 0.067	0.17	0.011 ± 0.067	-0.001 ± 0.067
PRF-fit source offset from KIC position	0.487 ± 0.069	7.05	-0.056 ± 0.070	-0.484 ± 0.069
photometric centroid source offset	0.58 ± 0.01	43.10	-0.10 ± 0.01	-0.57 ± 0.01

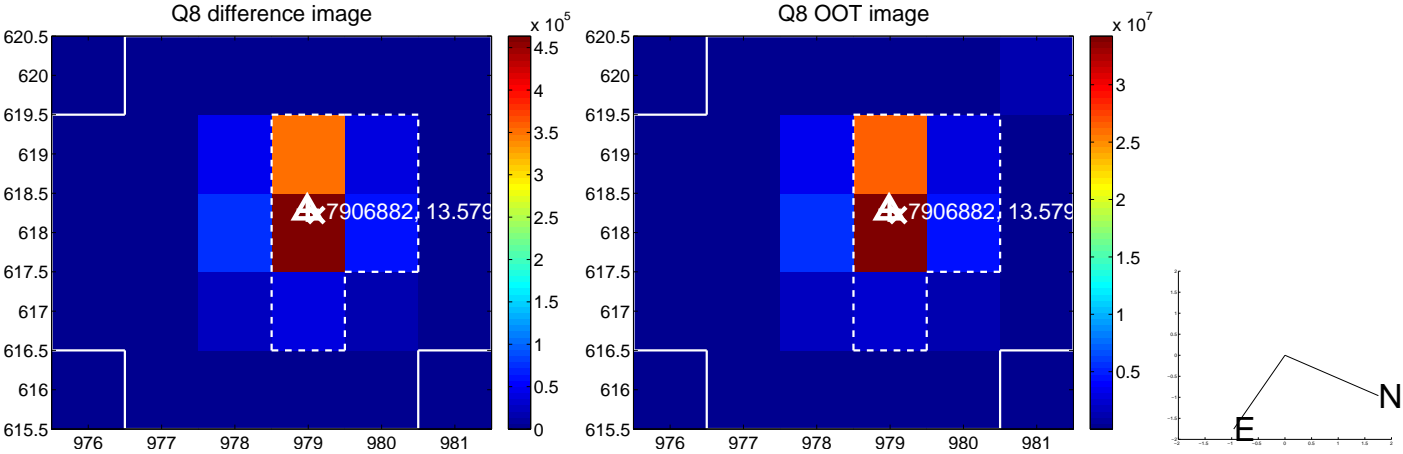
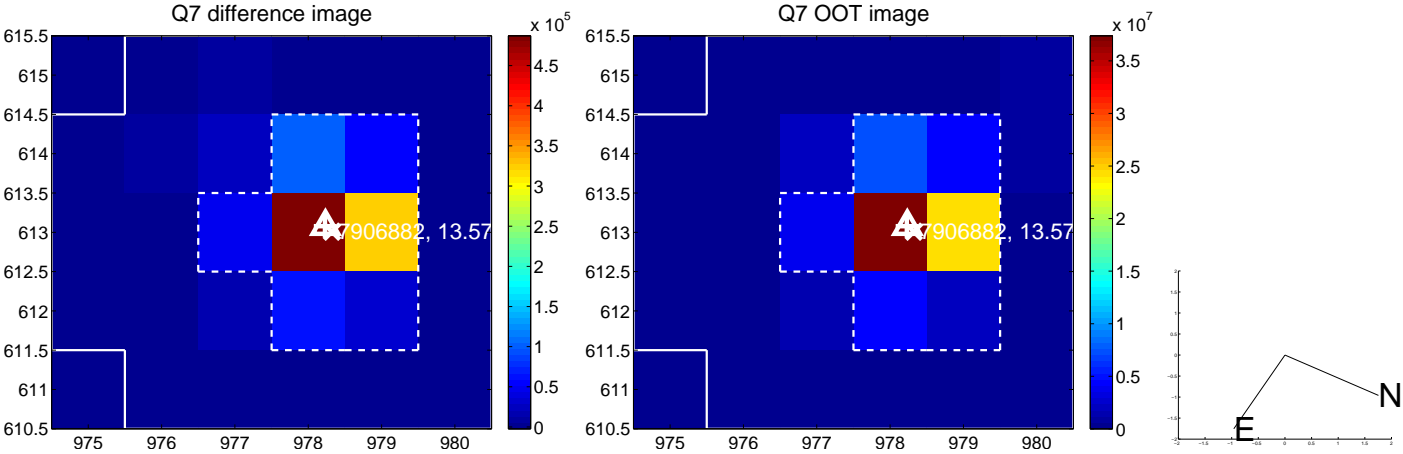
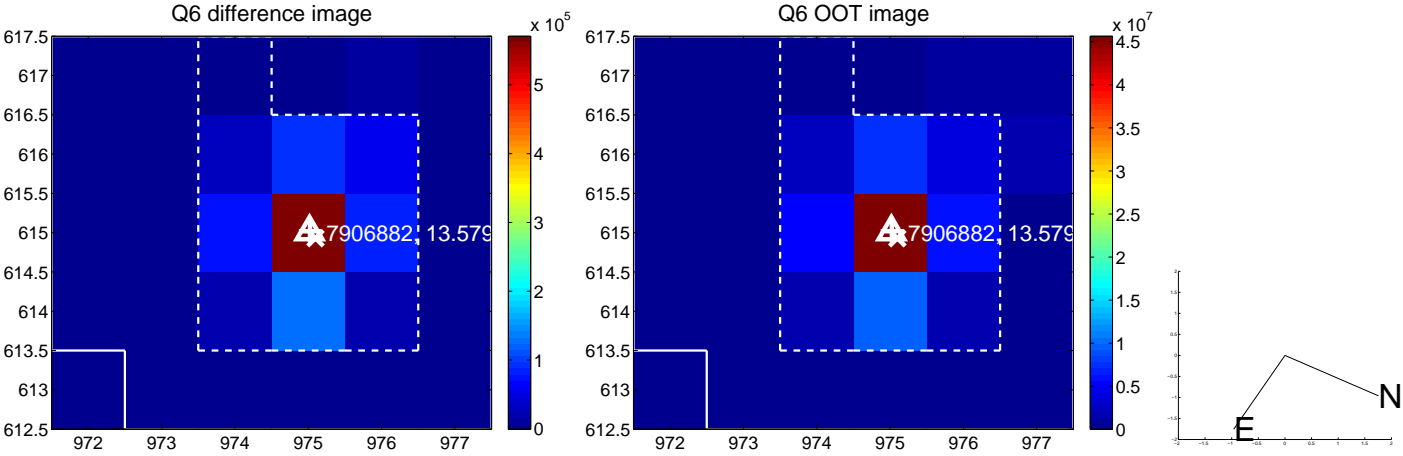
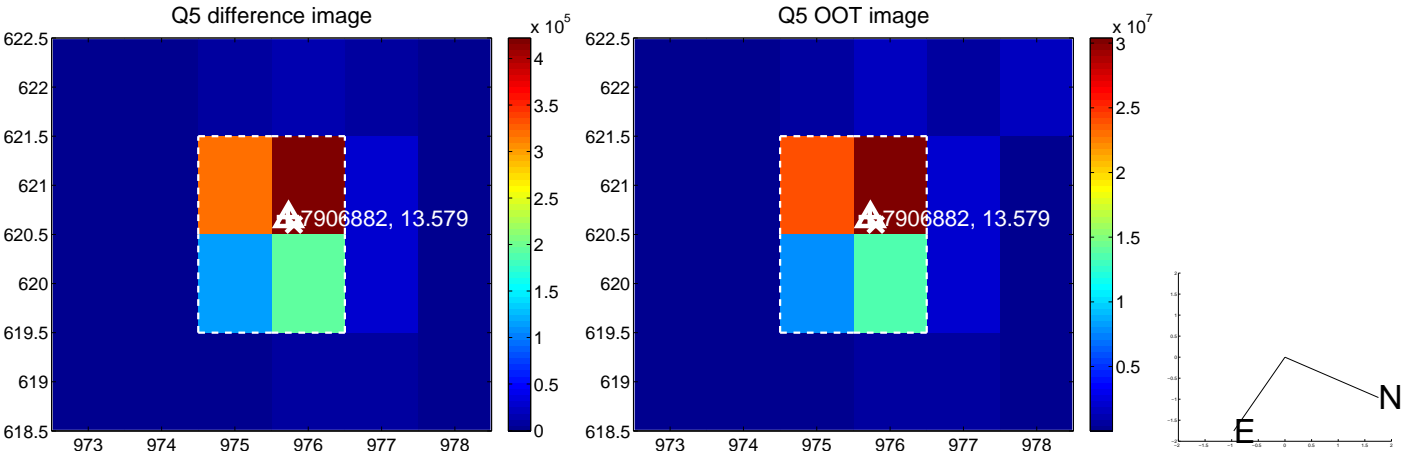


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

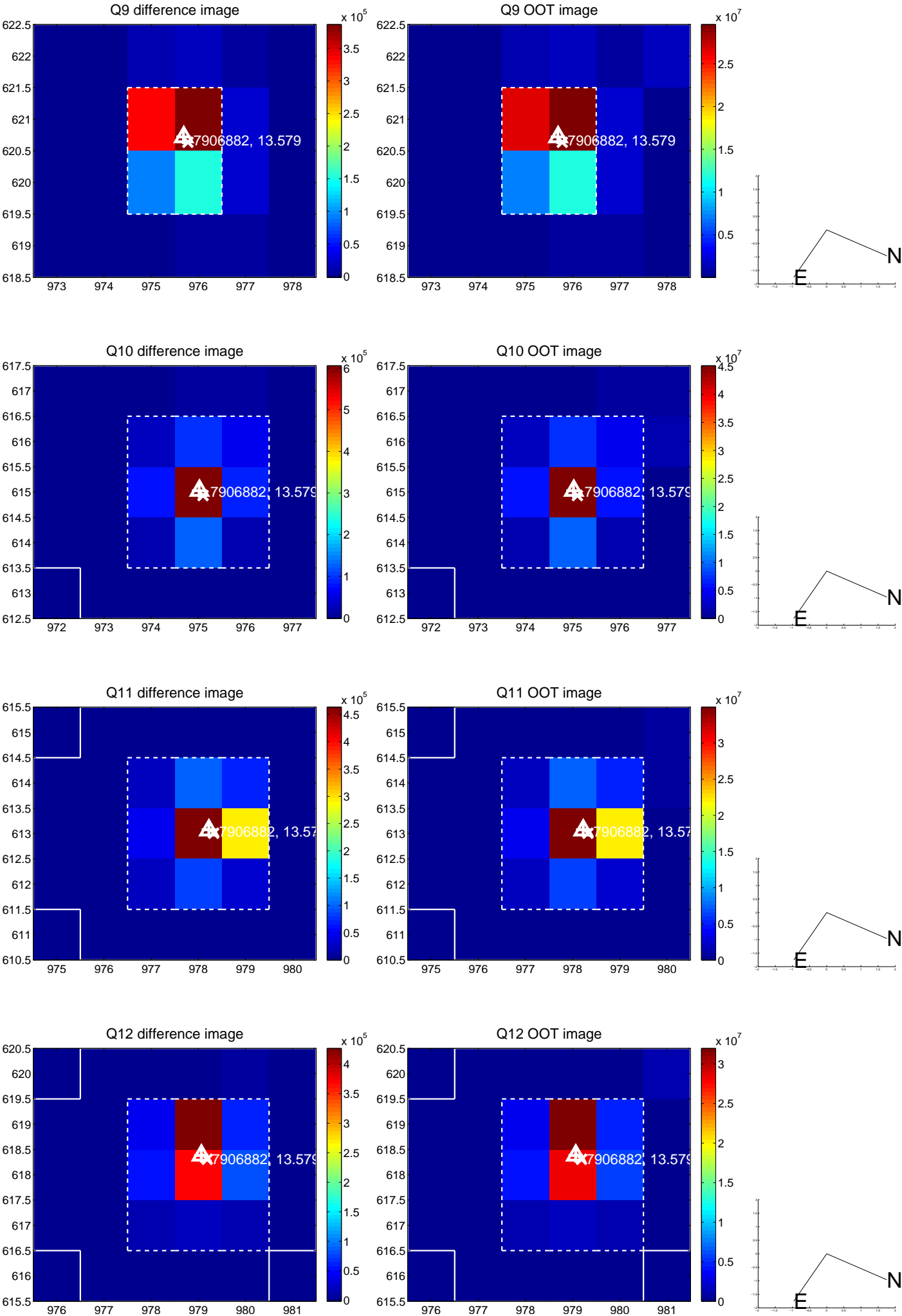
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



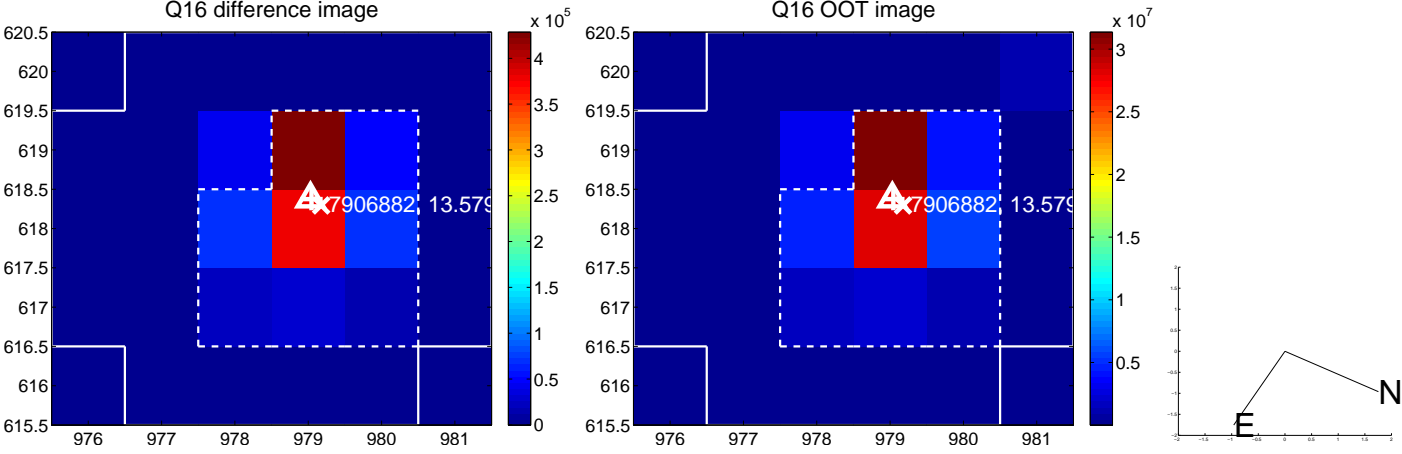
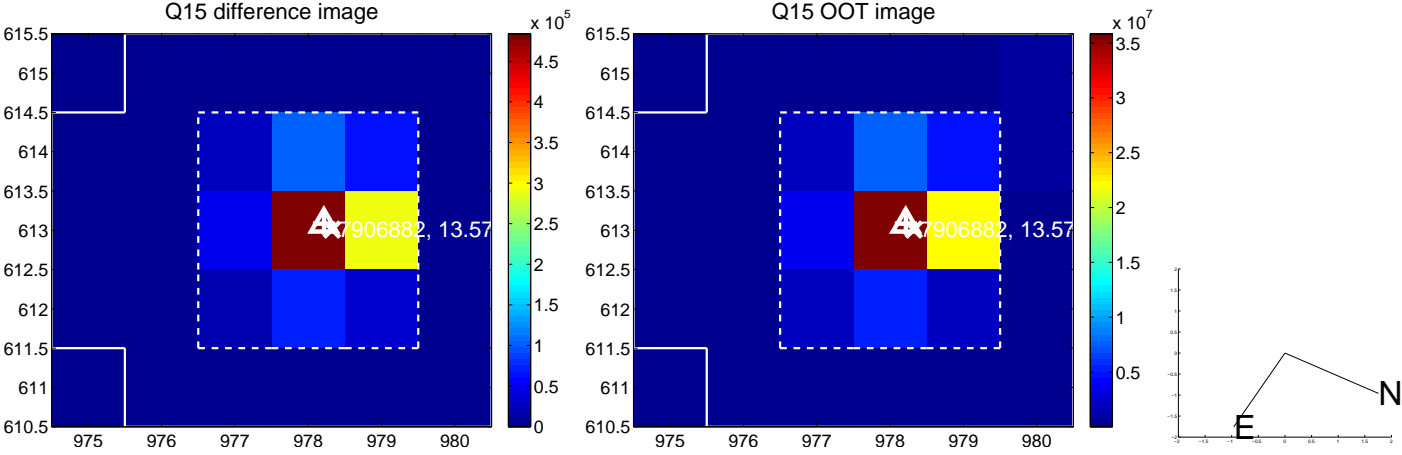
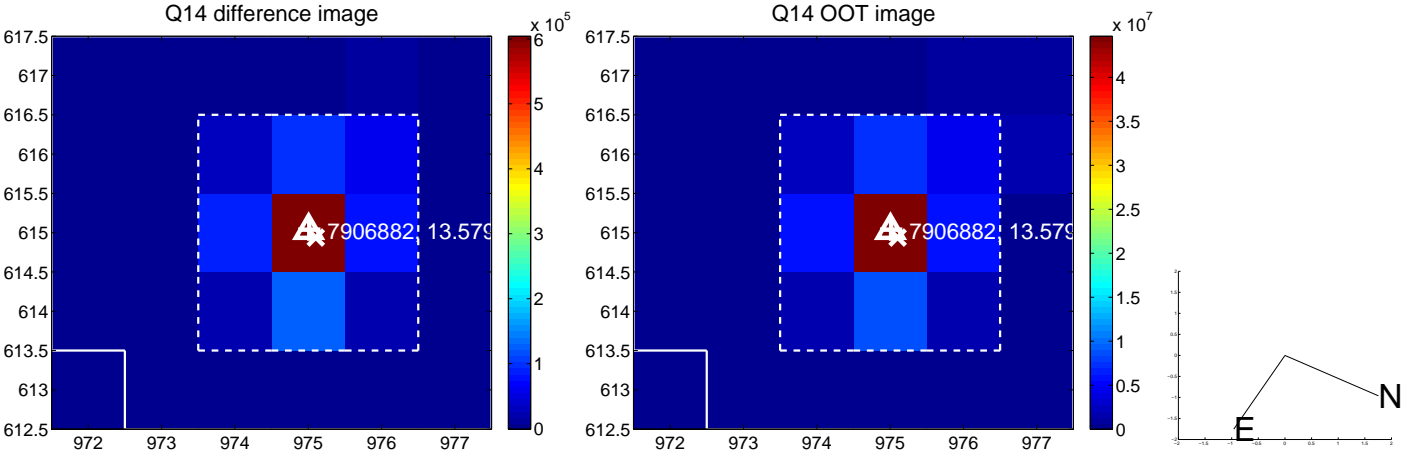
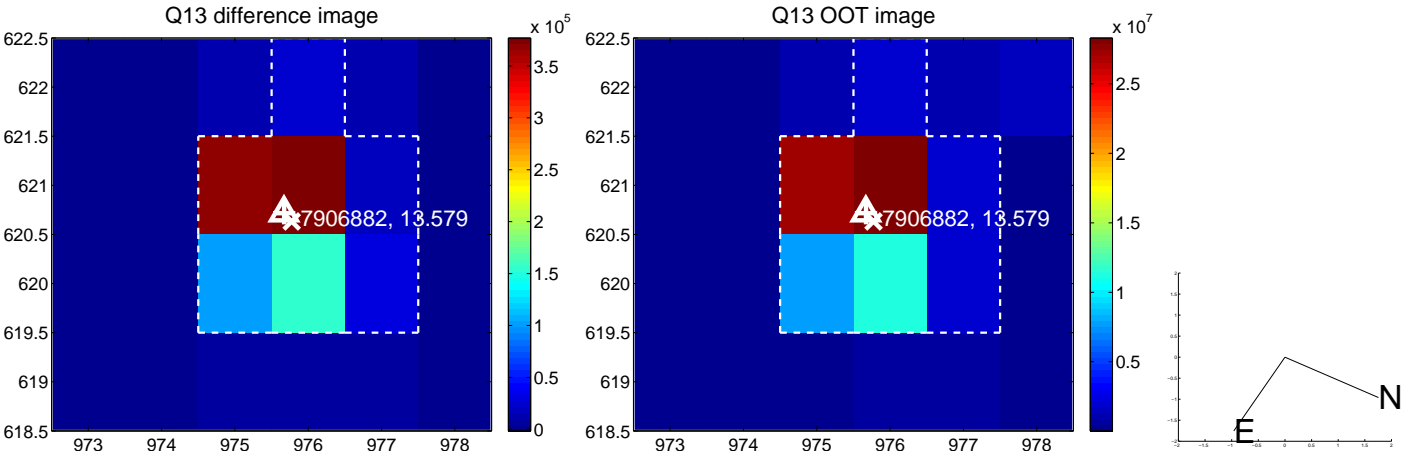
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



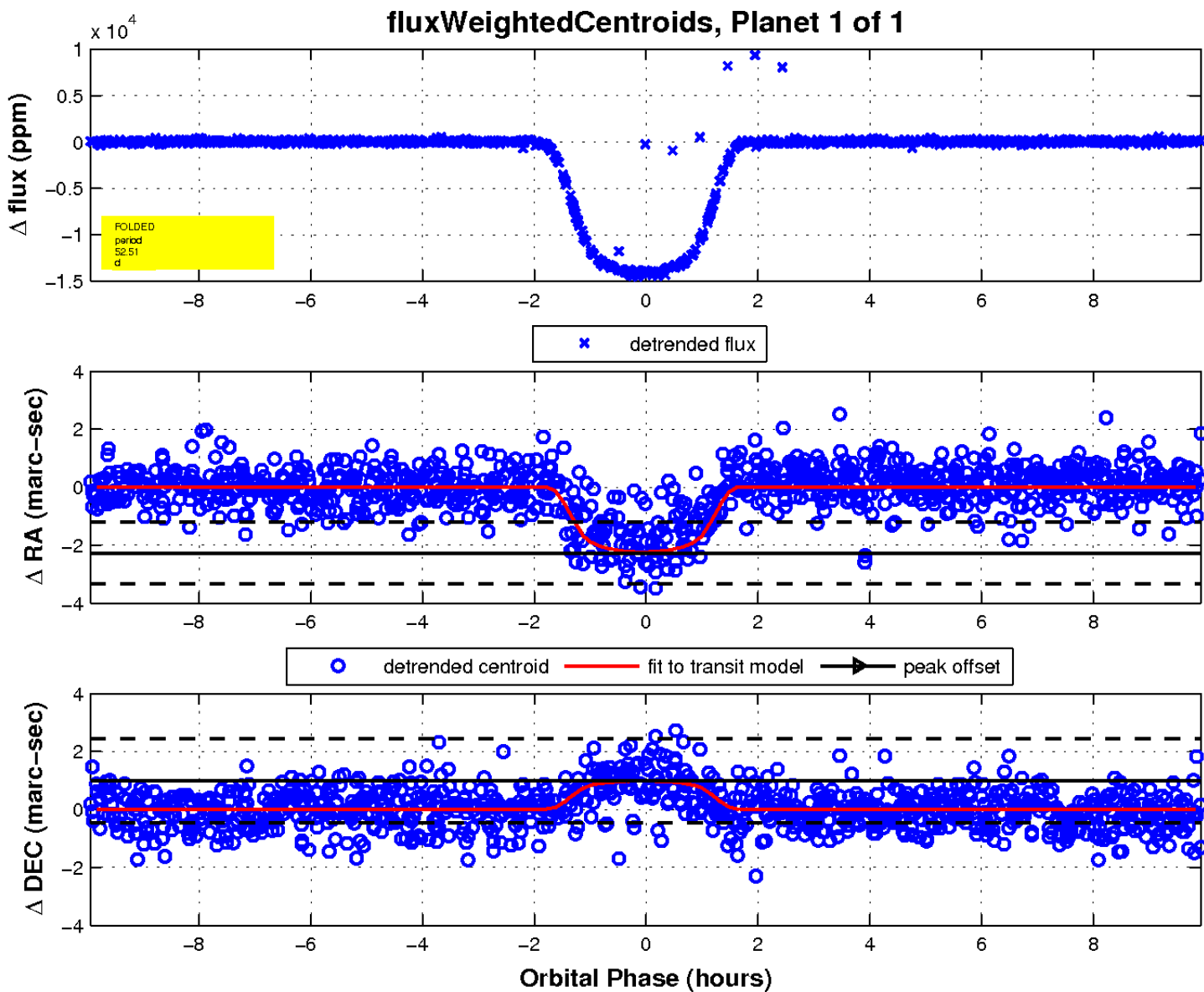
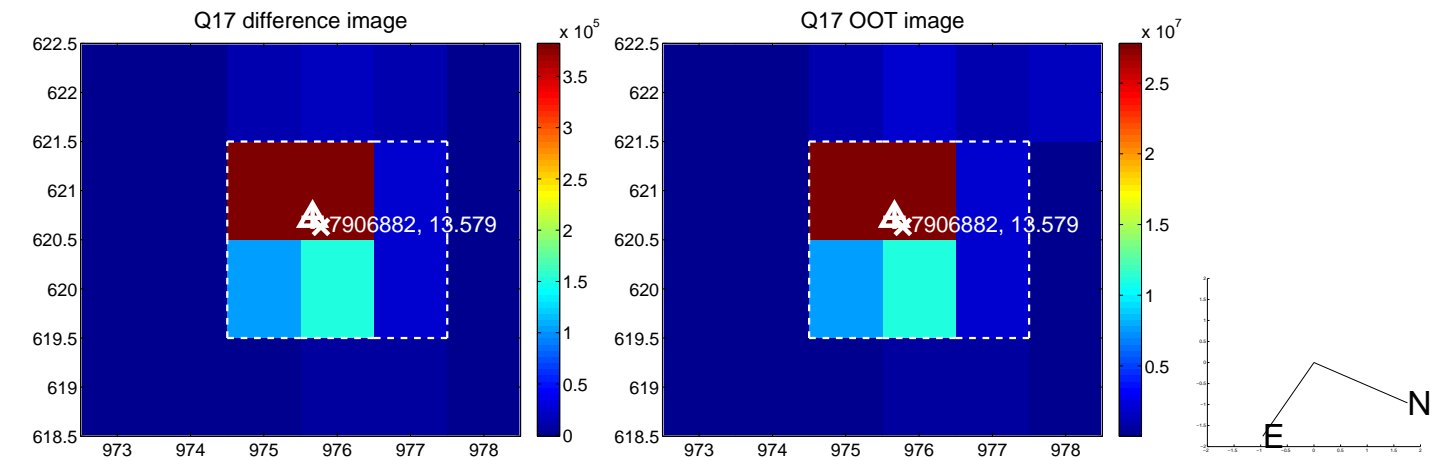
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UKIRT Image

Declination

