

KIC 009881258

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})
009881258-01	OBS	7242.01	2.028497	132.839175	61881.2	3.500	15223.0	-1.0	1.02	6105	25.59	1338.30

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009881258-01	OBS	FP	0.00	0	1	0	0	DEPTH_ODDEVEN_DV—DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_ALT—CENT_NOFITS

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.

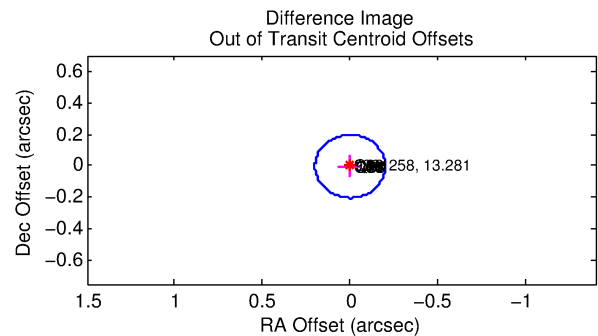
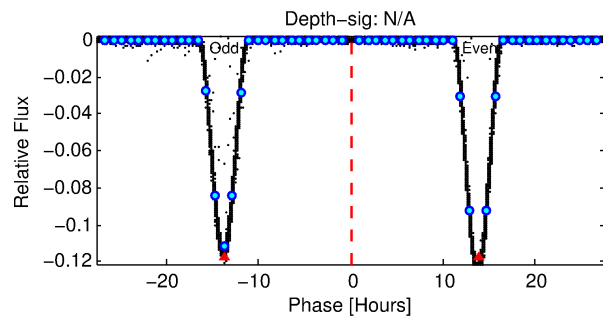
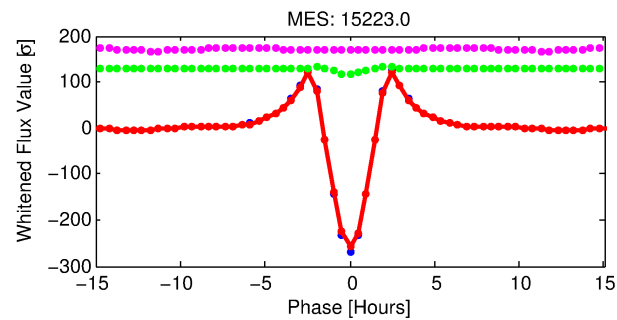
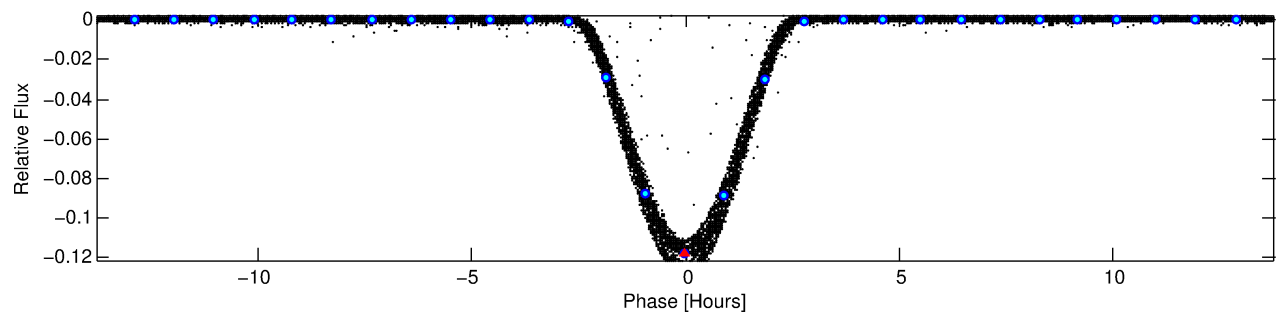
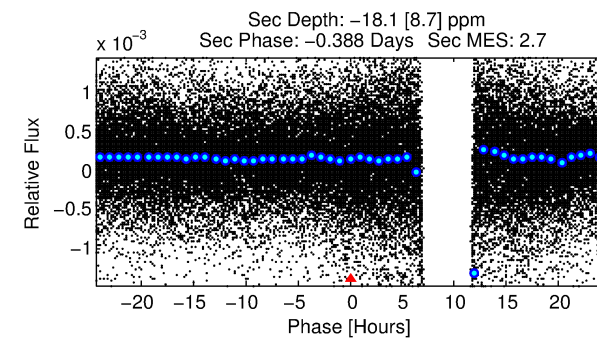
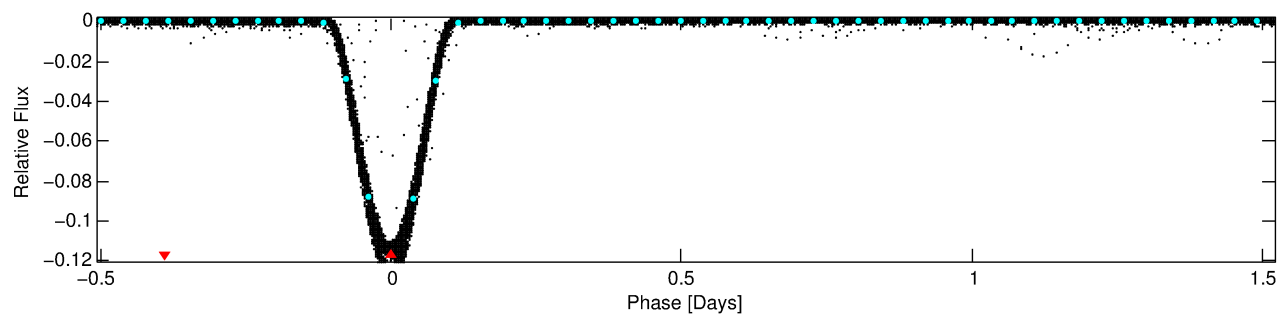
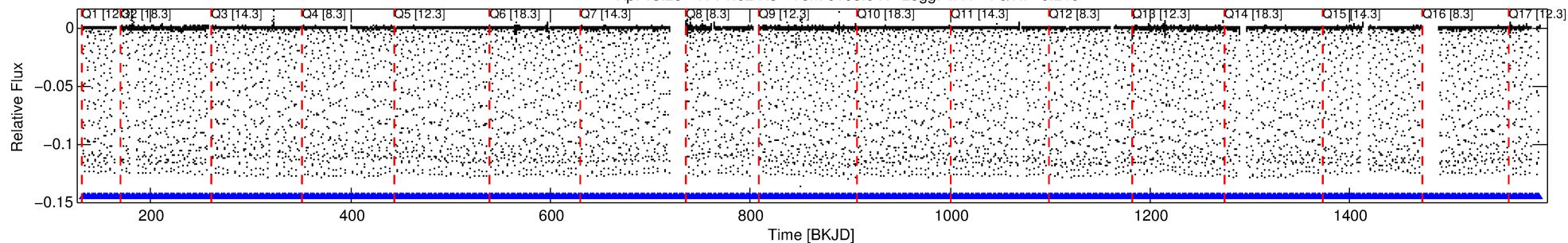
Ephemeris Match Information For 009881258-01

No Significant Match Found

DV One-Page Summary

KIC: 9881258 Candidate: 1 of 1 Period: 2.028 d
KOI: K07242.01 Corr: 0.838

Kp: 13.28 R*: 1.02 Rs Teff: 6105.0 K Logg: 4.41 Fe/H: -0.240



TPS TCE Results:

Period = 2.02850 d
Epoch = 132.8392 BKJD

DV fit results are unavailable

DV Diagnostic Results:

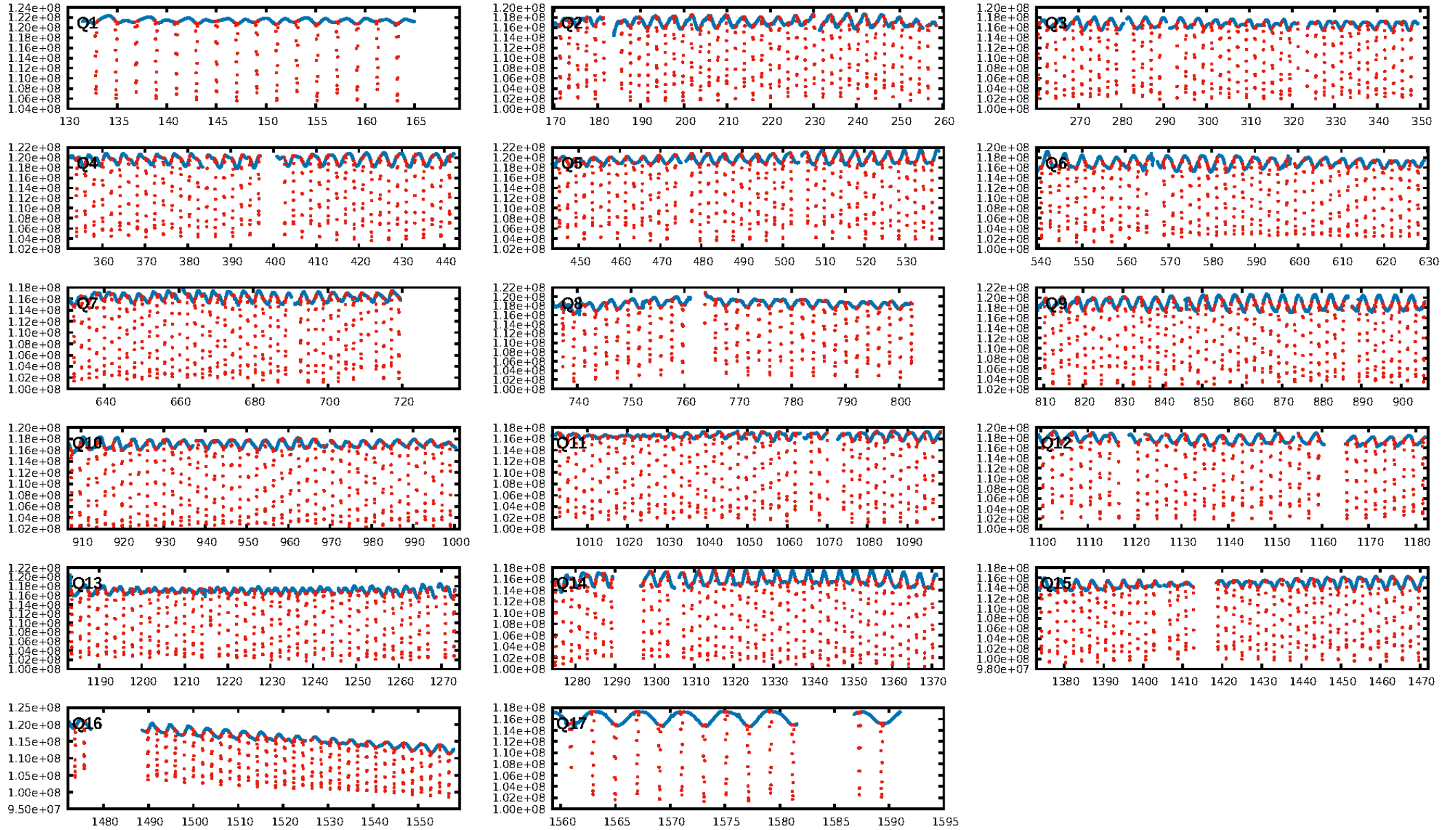
ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [633/633]
GhostDiagnostic-chr: 1.063

Centroid-sig: 0.0%
Centroid-so: 0.133 arcsec [474.98σ]
OotOffset-rm: 0.003 arcsec [0.05σ]
KicOffset-rm: 0.207 arcsec [3.08σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

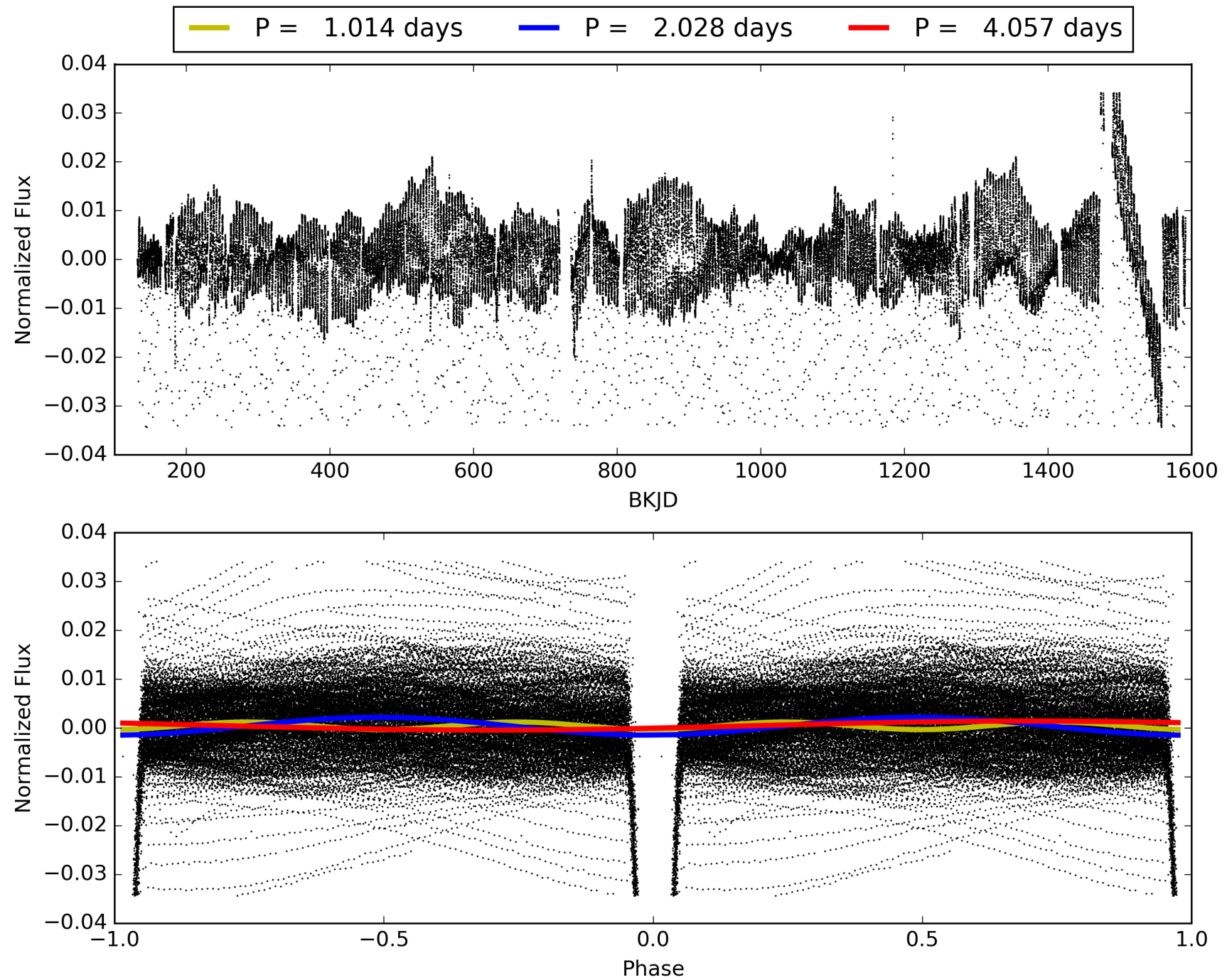
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:54:08 Z

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

TCE 009881258-01, PDC Light Curves

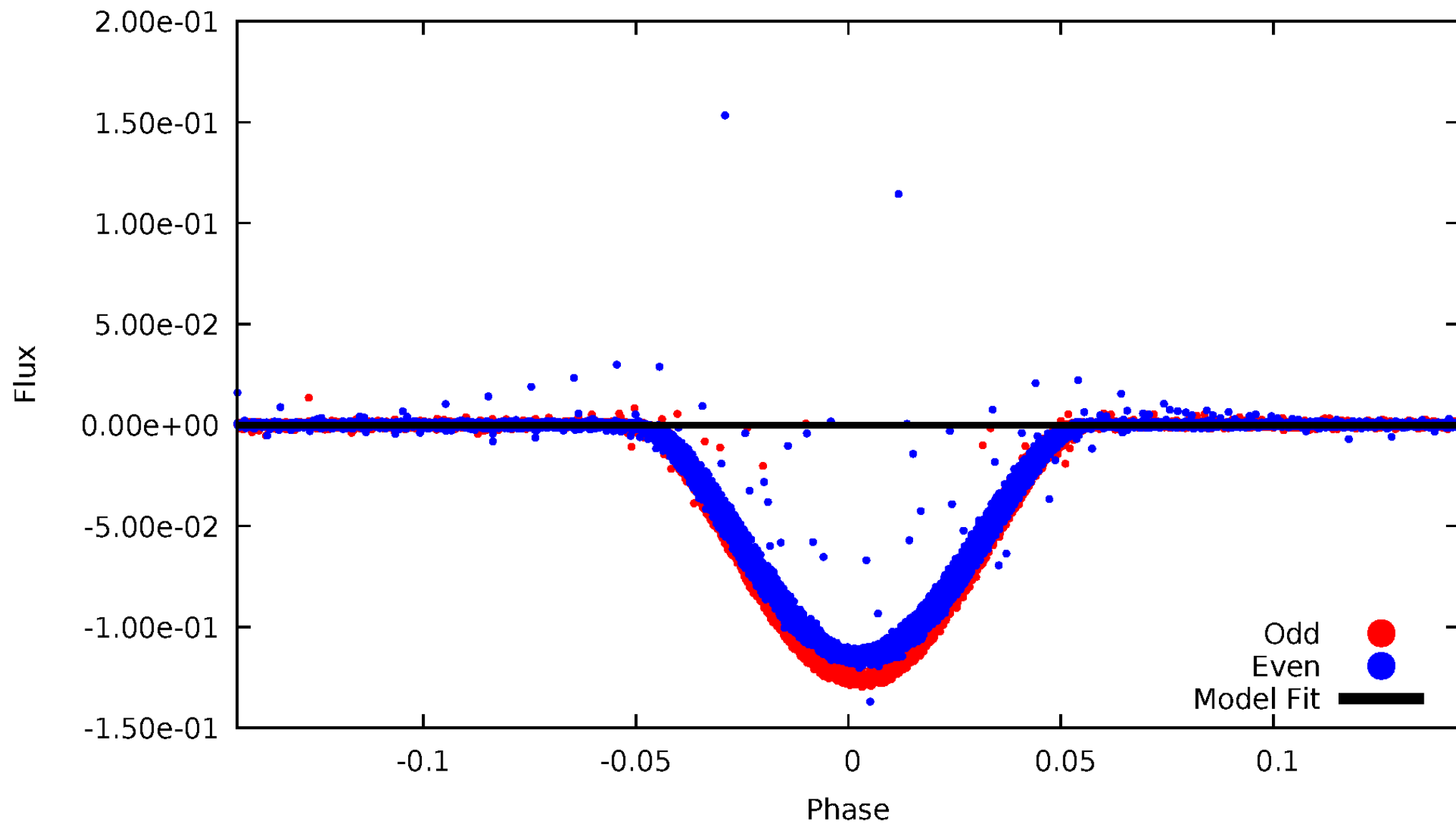


TCE 009881258-01



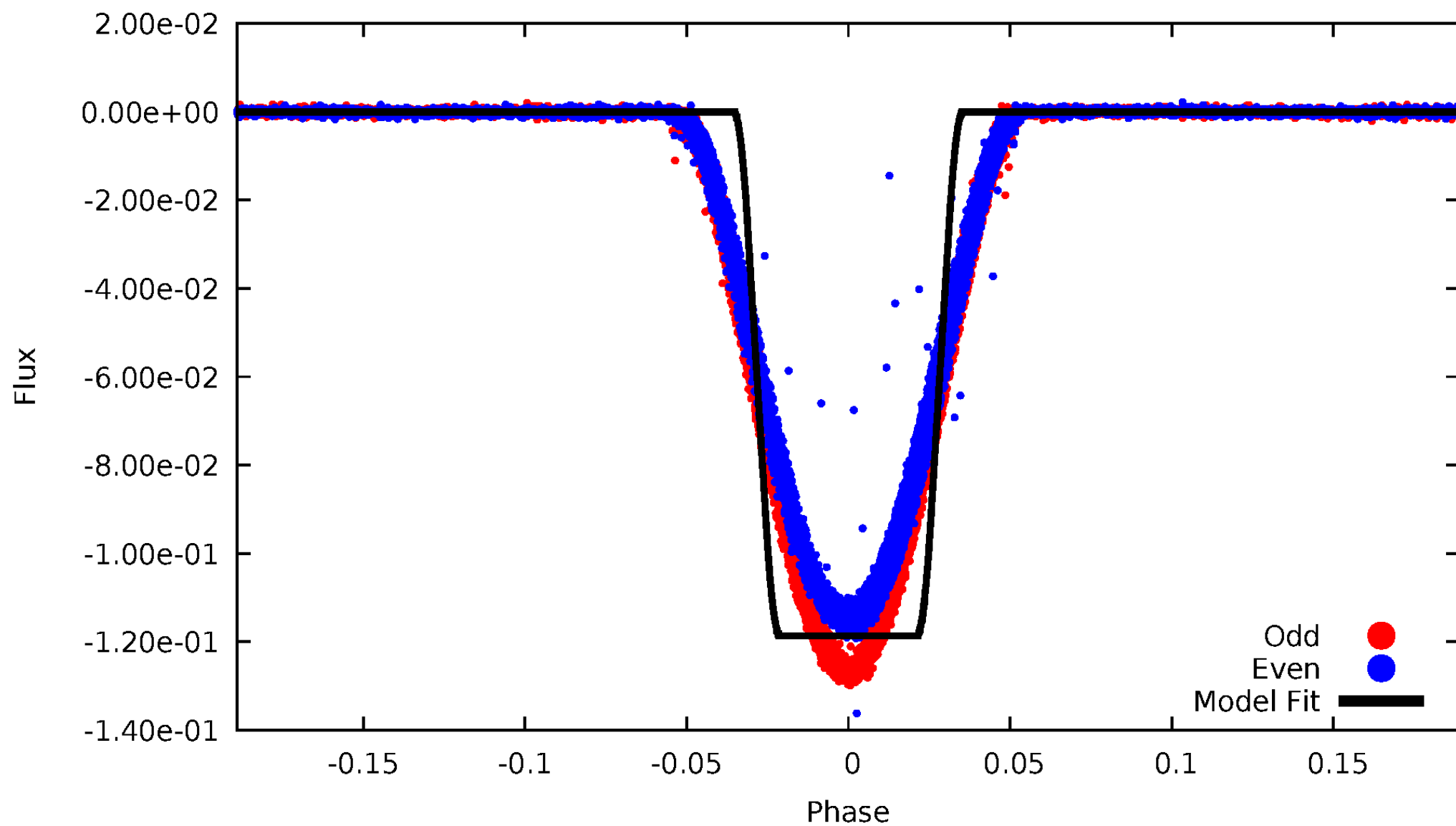
DV Odd/Even

TCE 009881258-01



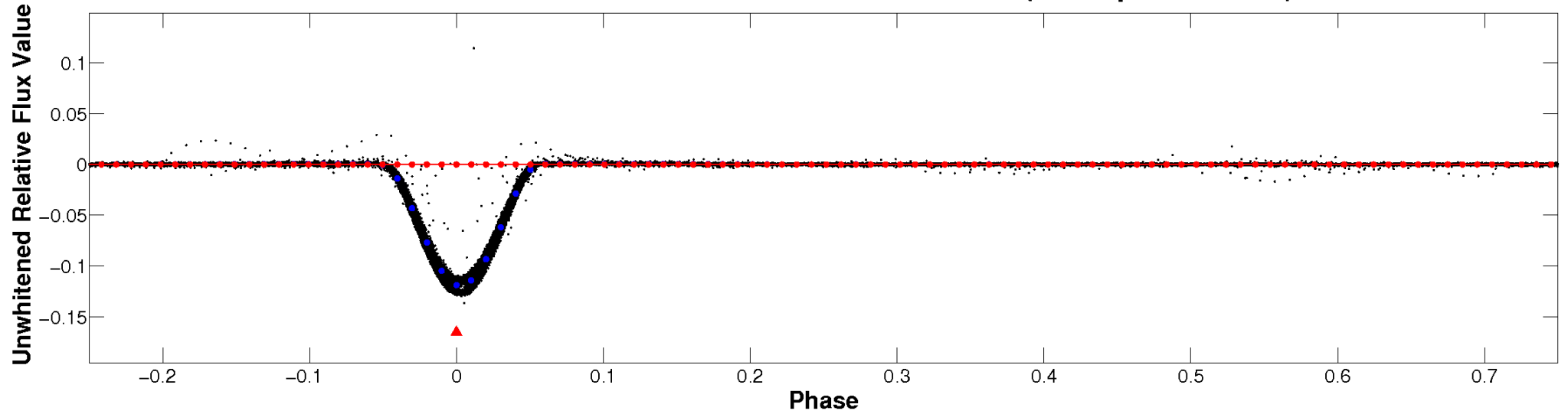
ALT Odd/Even

TCE 009881258-01



Non-Whitened Vs. Whitened Light Curve

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

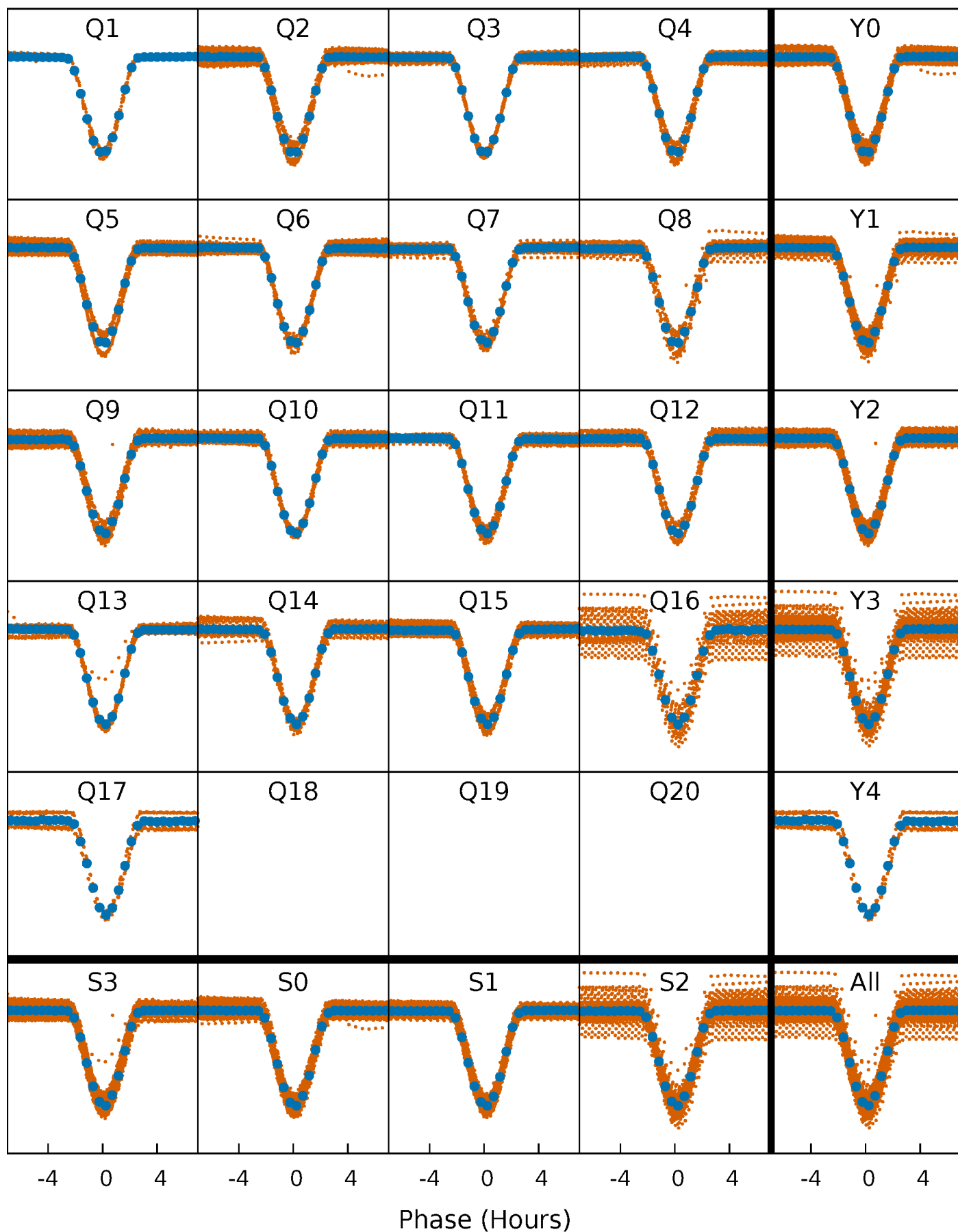


Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)



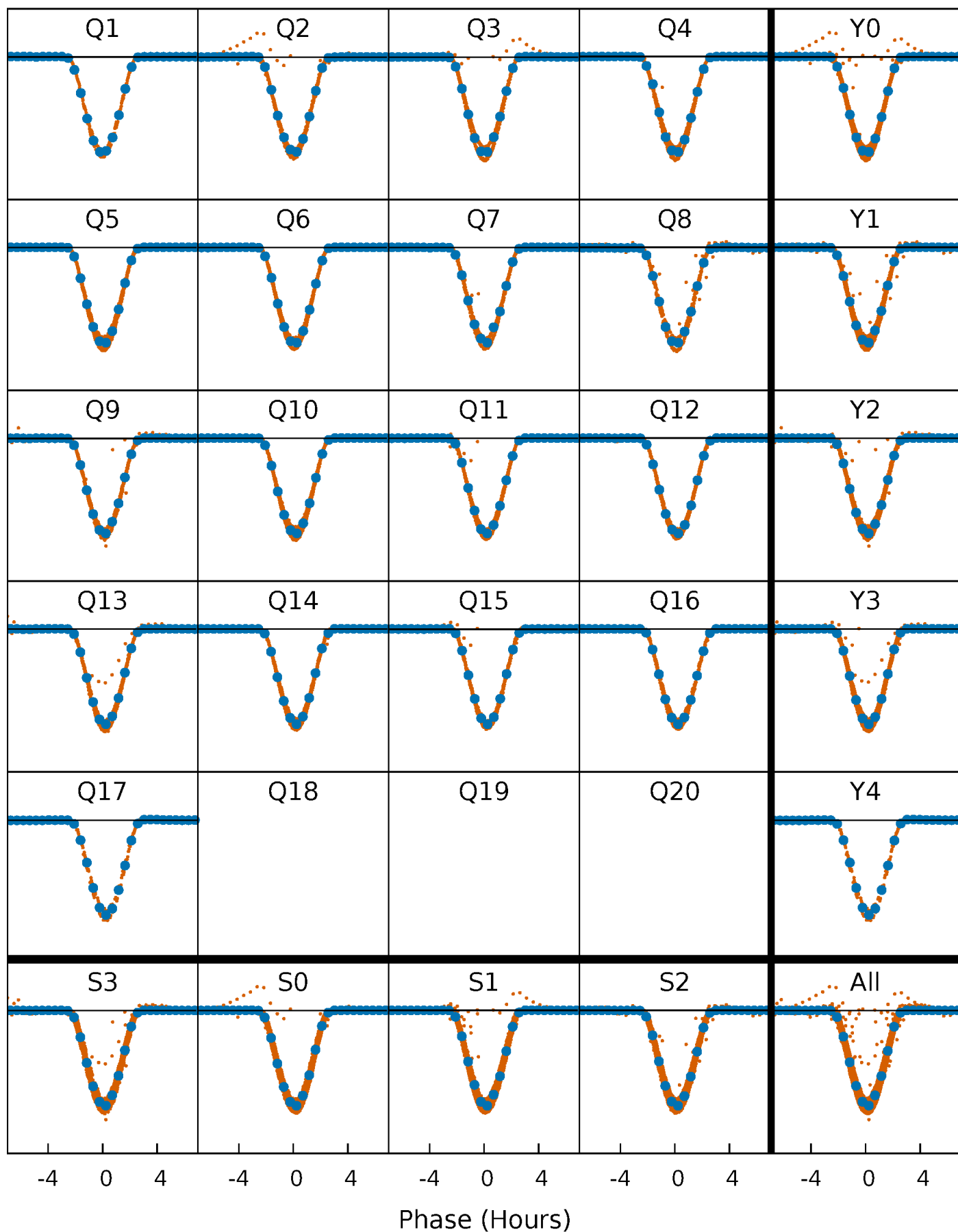
PDC Quarter-Phased Transit Curves

TCE 009881258-01 P= 2.028497 Days $T_0=132.839175$ (BKJD)



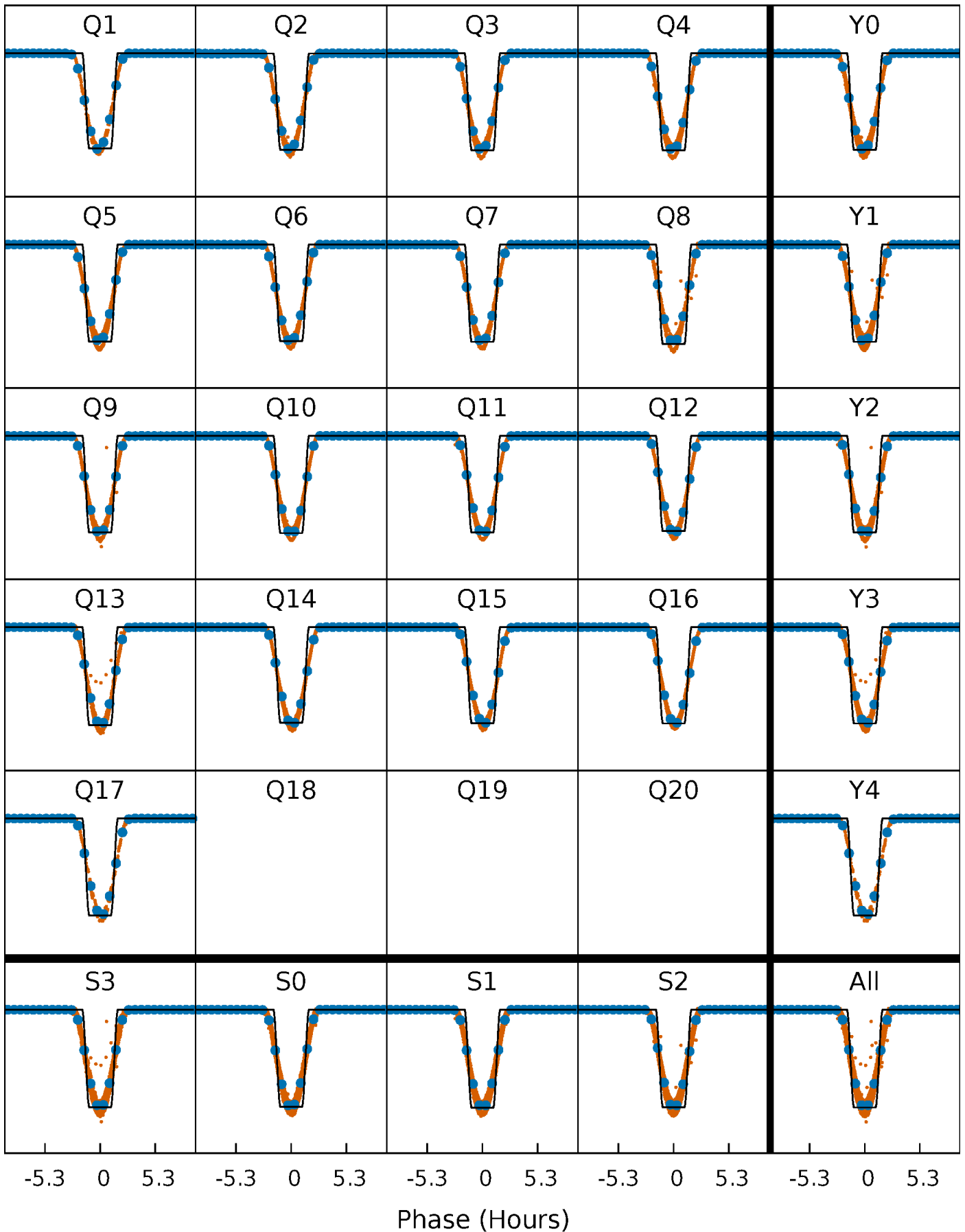
DV Quarter-Phased Transit Curves

TCE 009881258-01 P= 2.028497 Days $T_0=132.839175$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

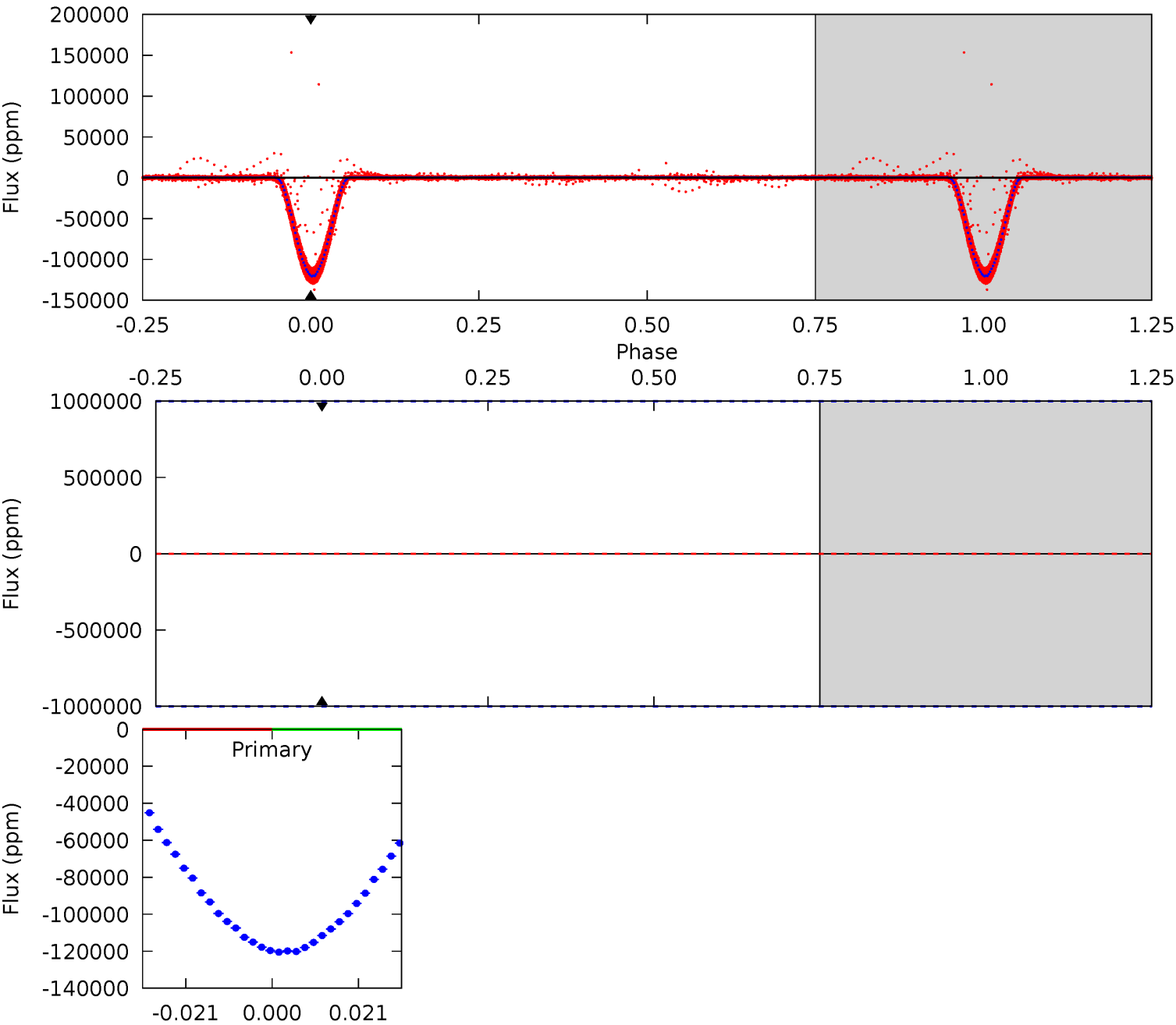
TCE 009881258-01 P= 2.028497 Days $T_0=132.844352$ (BKJD)



DV Model-Shift Uniqueness Test

009881258-01, P = 2.028497 Days, E = 130.810678 Days

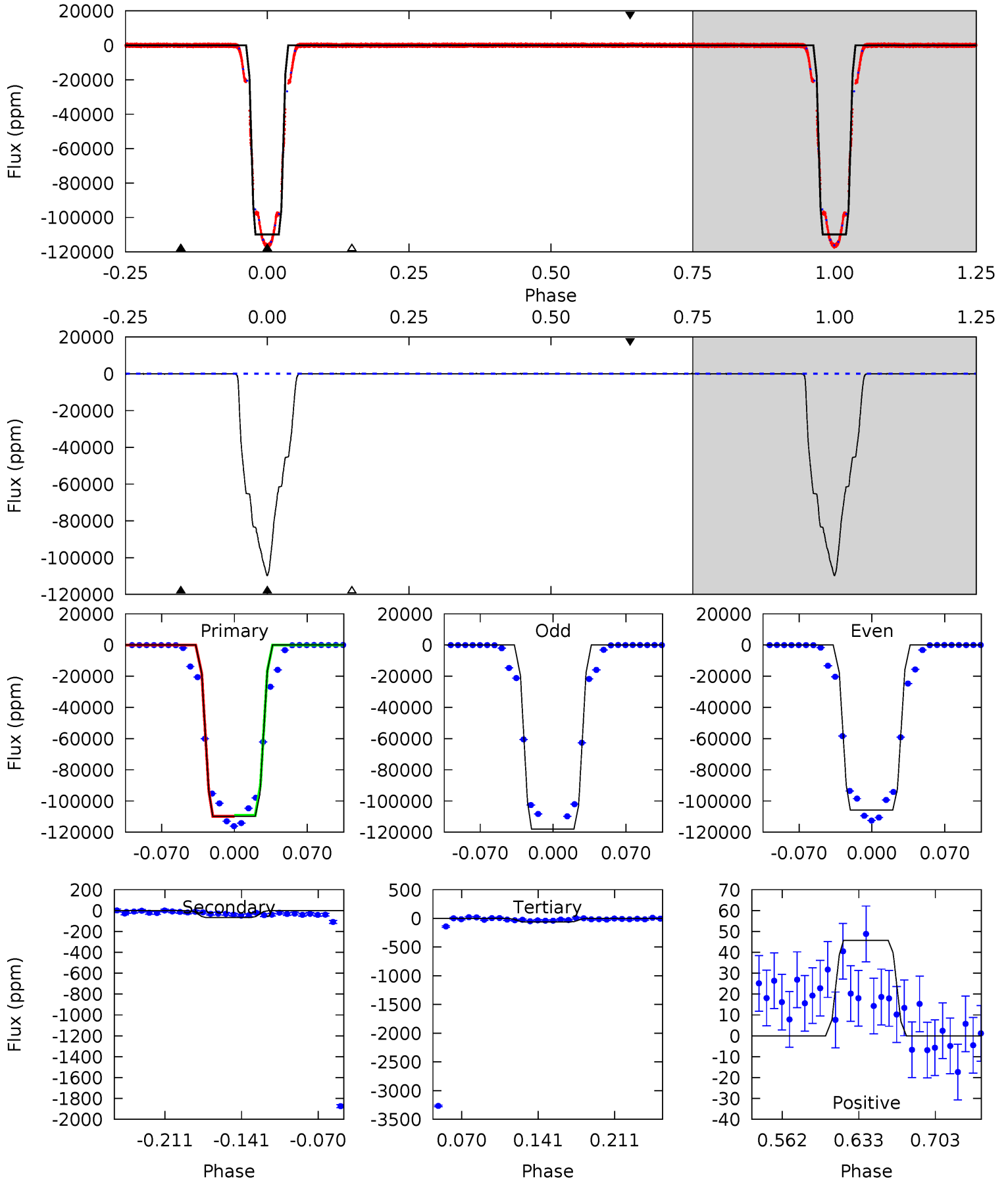
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

009881258-01, P = 2.028497 Days, E = 130.815855 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8351	5.08	4.84	3.48	4.64	1.81	1.76	8347	8348	0.24	1.61	553.0	1.01	0.00	22.1



Stellar Parameters For KIC 009881258

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6105^{+164}_{-182}	$4.412^{+0.087}_{-0.203}$	$-0.240^{+0.300}_{-0.300}$	$1.025^{+0.308}_{-0.132}$	$0.990^{+0.142}_{-0.116}$	$1.293^{+0.498}_{-0.656}$
	+3%/-3%	+2%/-5%	+125%/-125%	+30%/-13%	+14%/-12%	+39%/-51%
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 009881258-01 / KOI 7242.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$27.20^{+11.59}_{-11.80}$	2175^{+169}_{-101}	2959^{+4880}_{-10420}	$1.073^{+102.847}_{-81.162}$
Alt.	-67 ± 13	$39.68^{+12.99}_{-11.89}$	2177^{+143}_{-110}	-2570^{+84}_{-93}	$0.023^{+0.023}_{-0.011}$

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

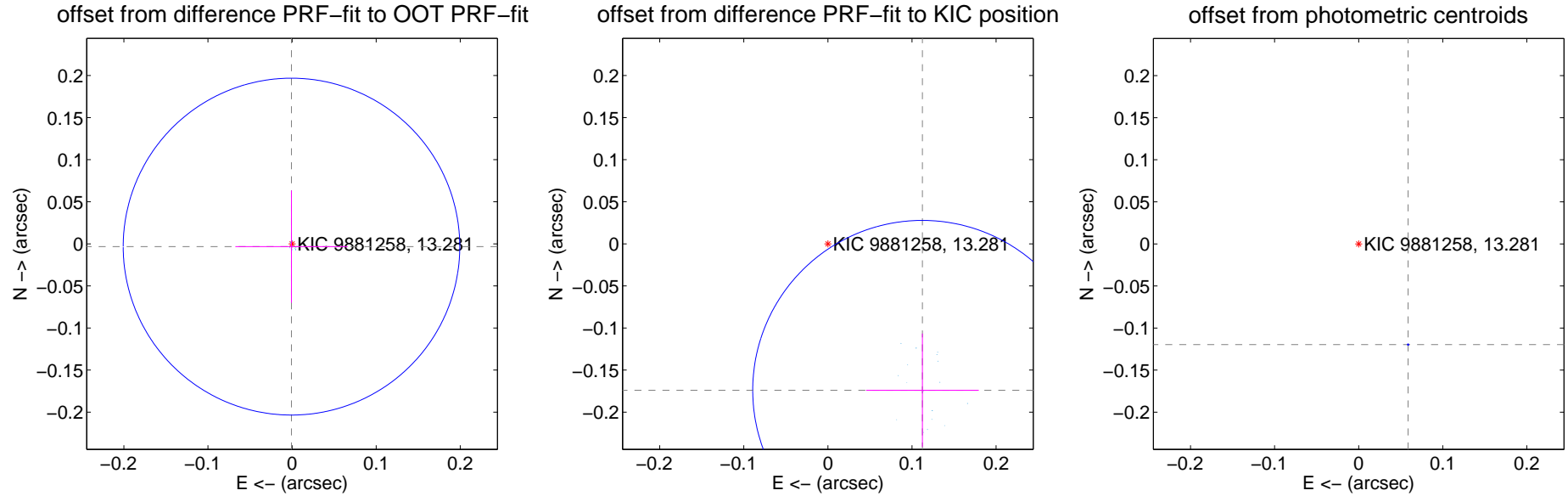
DV Centroid Data

Supplemental centroid analysis for 009881258-01. Kepler magnitude: 13.28. Transit SNR -1.00

There are 17 quarters with good PRF difference image offsets

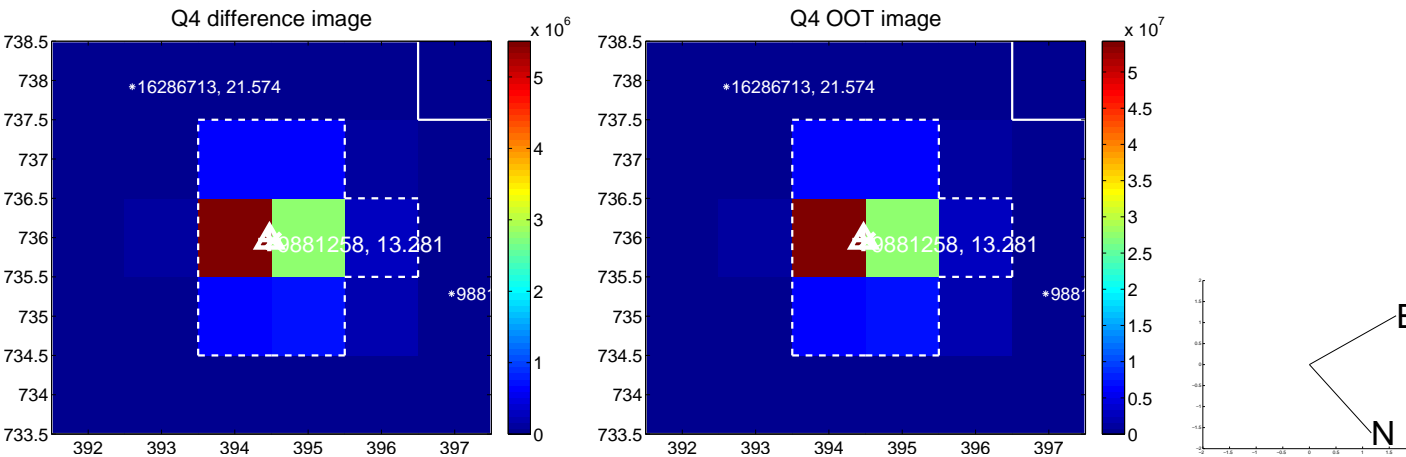
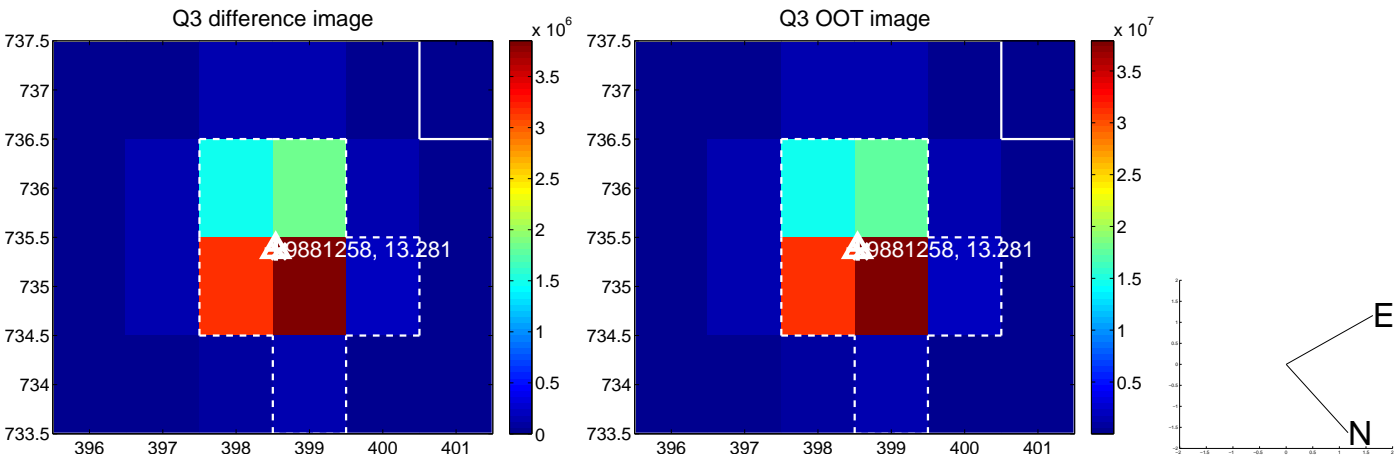
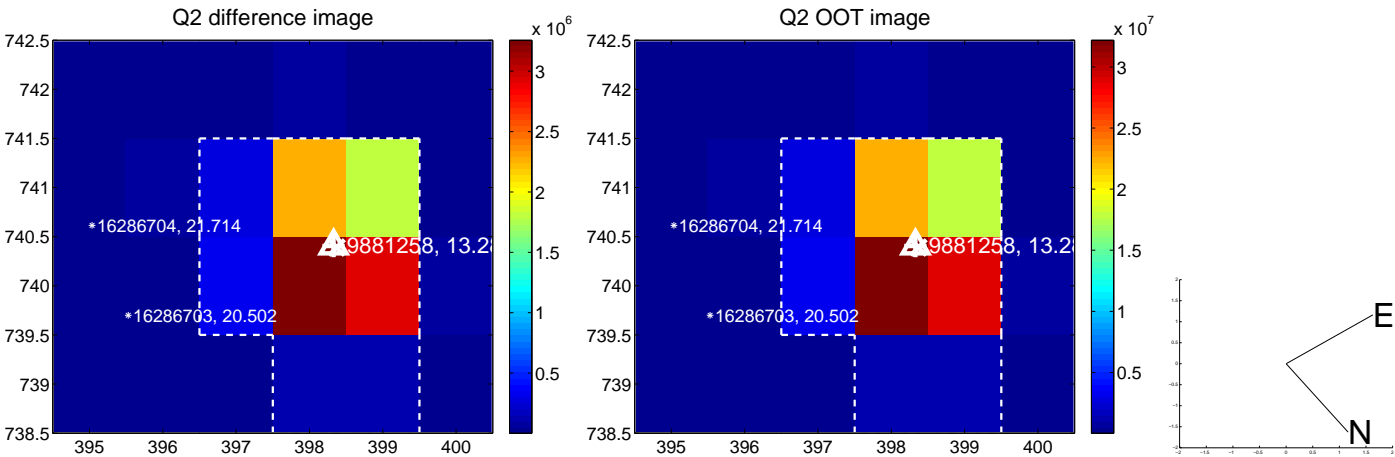
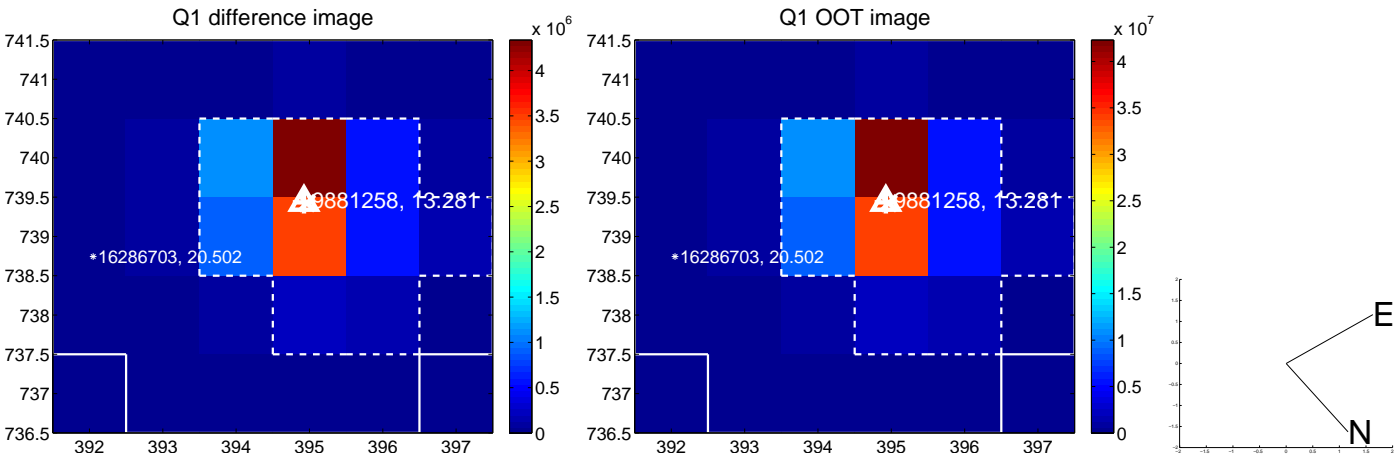
The direct PRF centroid is offset from the target star catalog position by about 0.23 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.003 ± 0.067	0.05	0.001 ± 0.067	-0.003 ± 0.067
PRF-fit source offset from KIC position	0.207 ± 0.067	3.08	-0.112 ± 0.067	-0.174 ± 0.067
photometric centroid source offset	0.13 ± 0.00	474.98	-0.06 ± 0.00	-0.12 ± 0.00

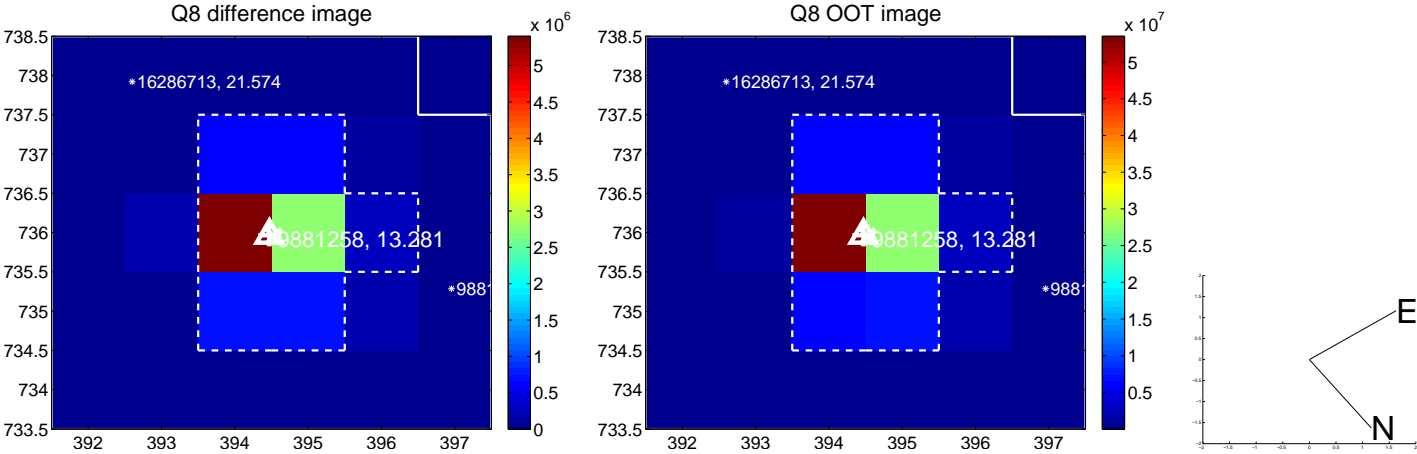
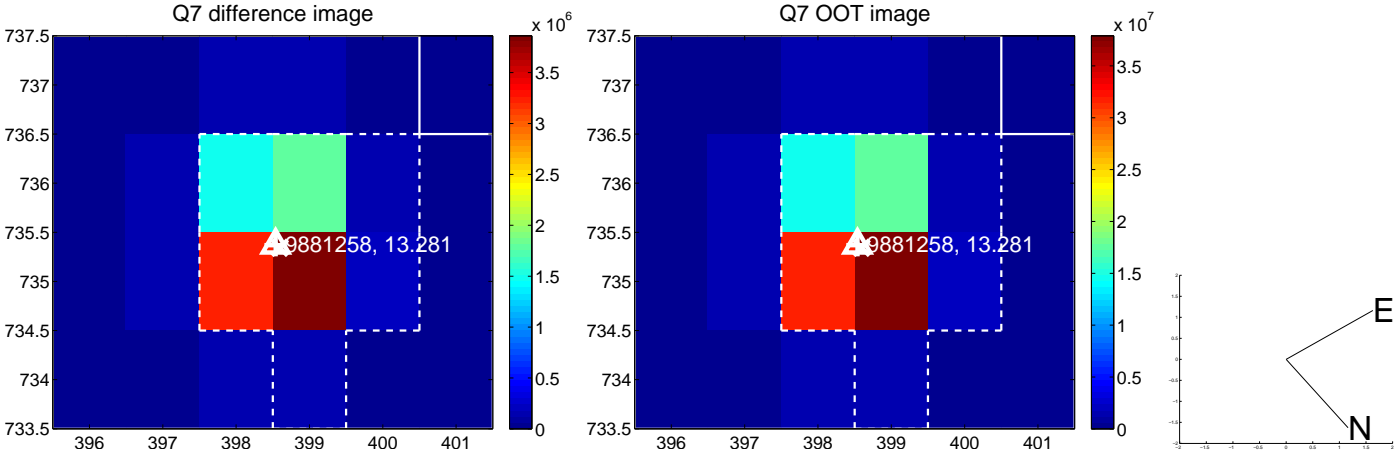
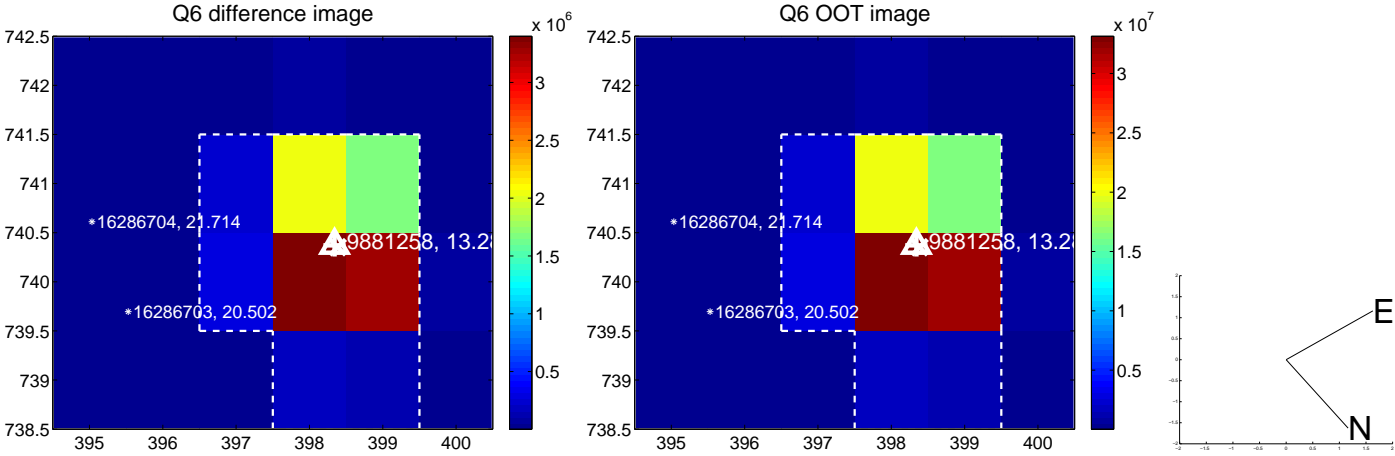
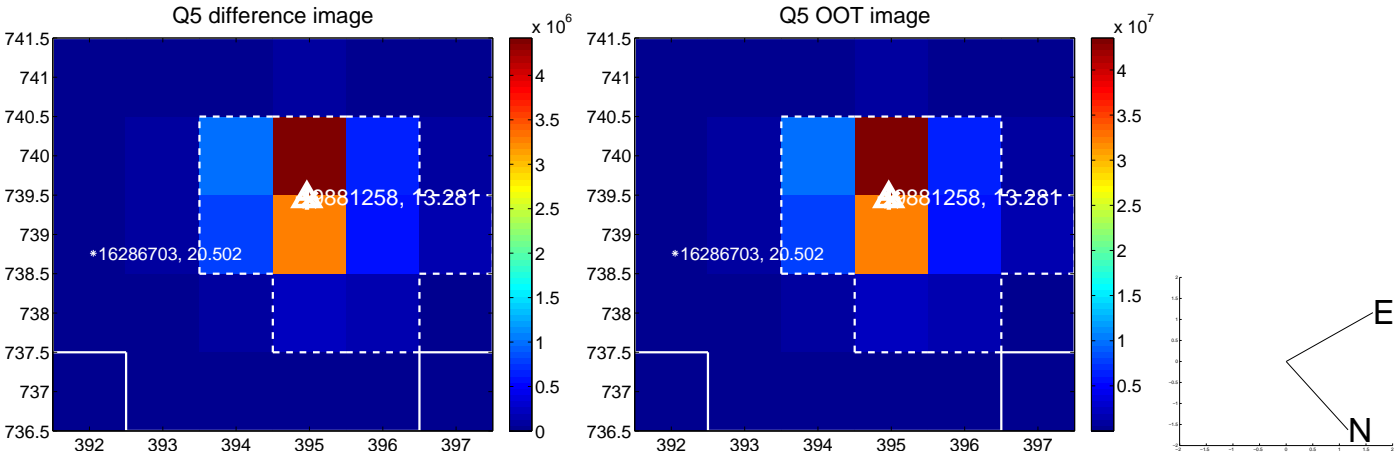


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

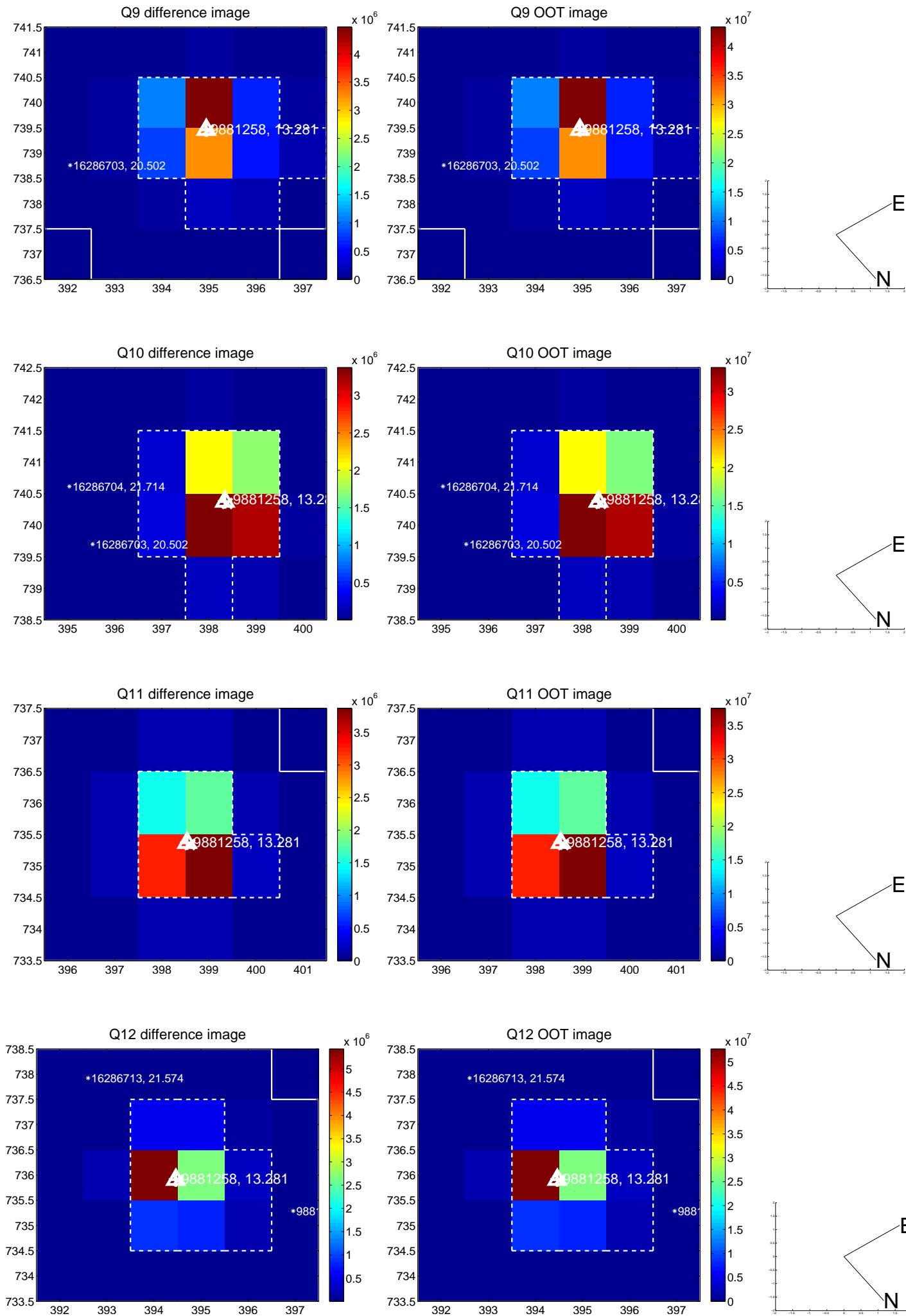
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



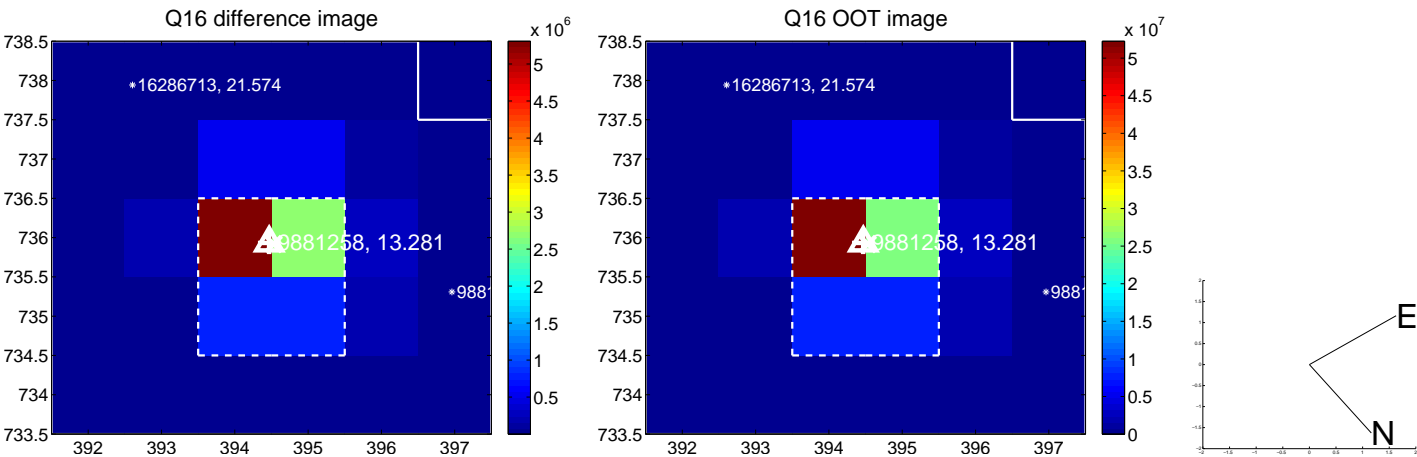
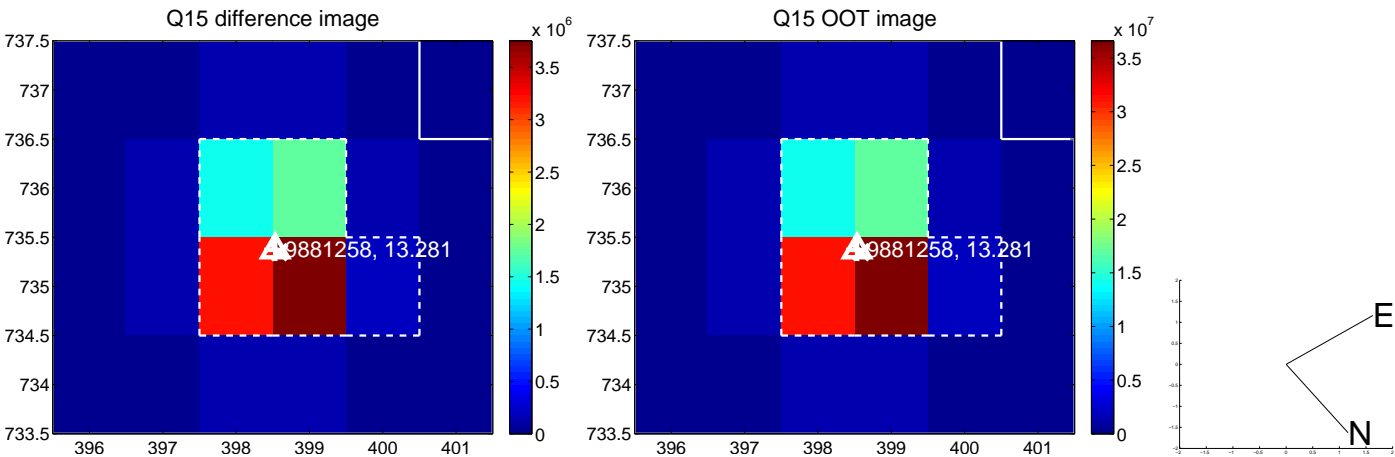
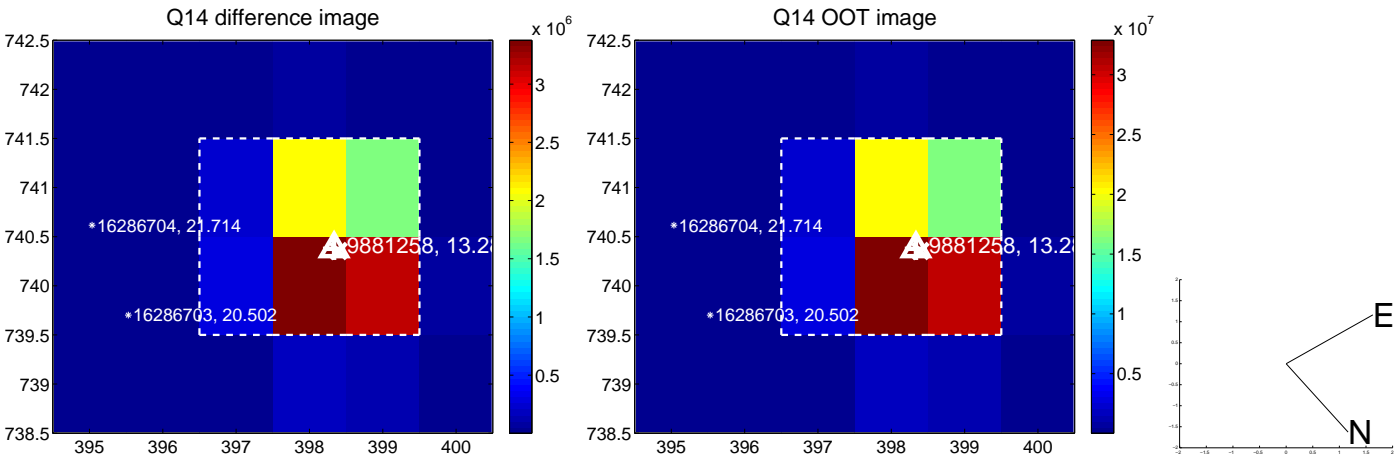
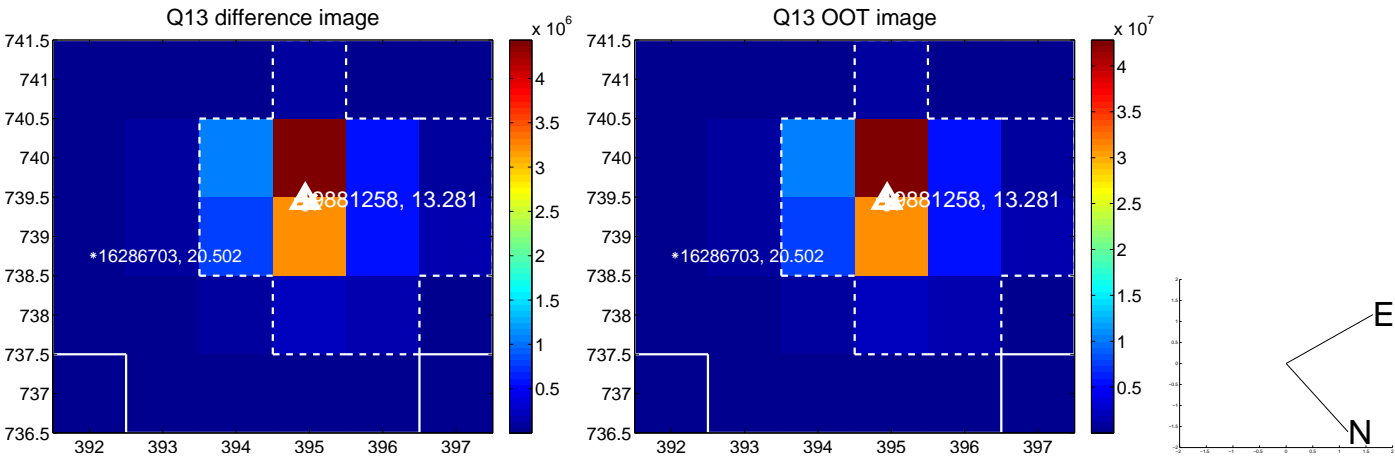
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

