

KIC 005300878

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})
005300878-01	OBS	6559.01	0.639719	131.854744	261922.0	1.500	13127.4	-1.0	0.62	4794	32.04	1214.19

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005300878-01	OBS	FP	0.00	0	1	0	0	SWEET_EB—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 005300878-01

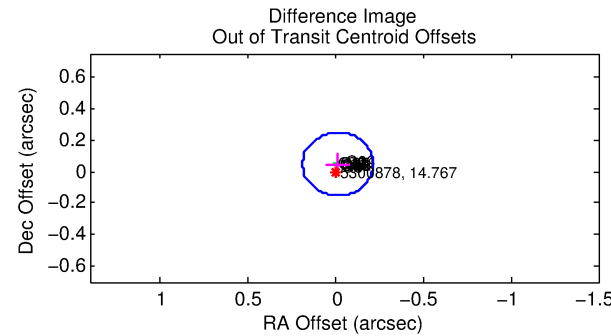
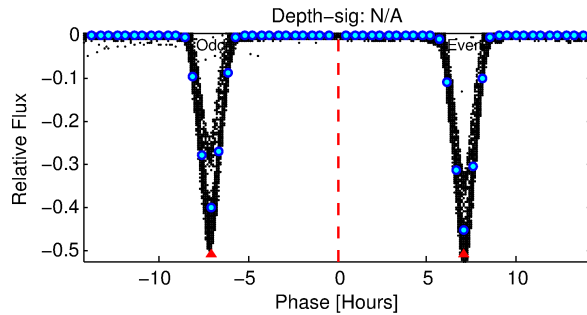
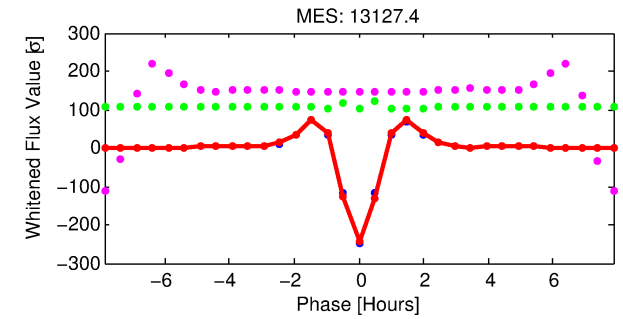
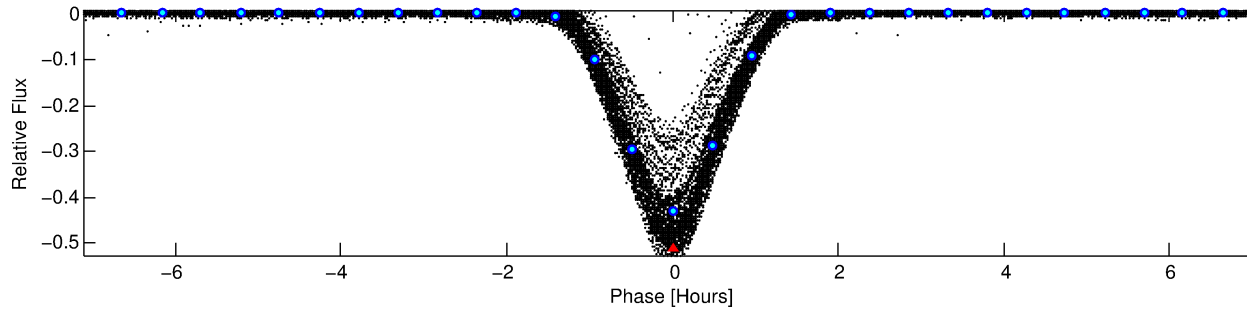
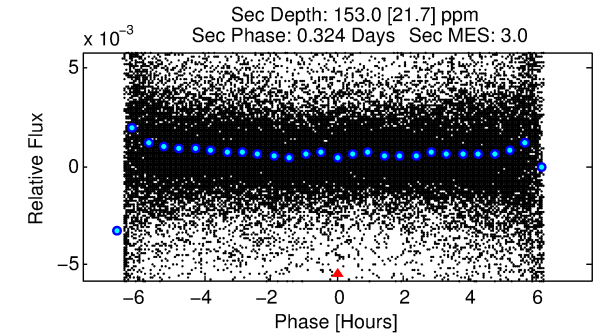
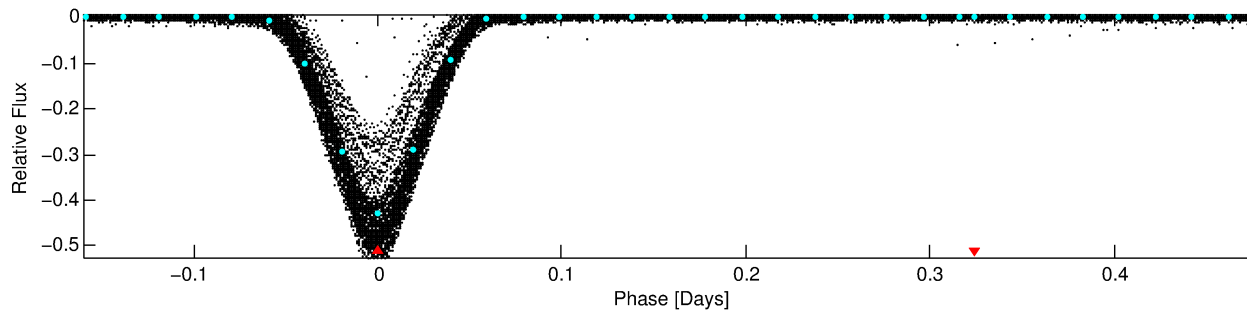
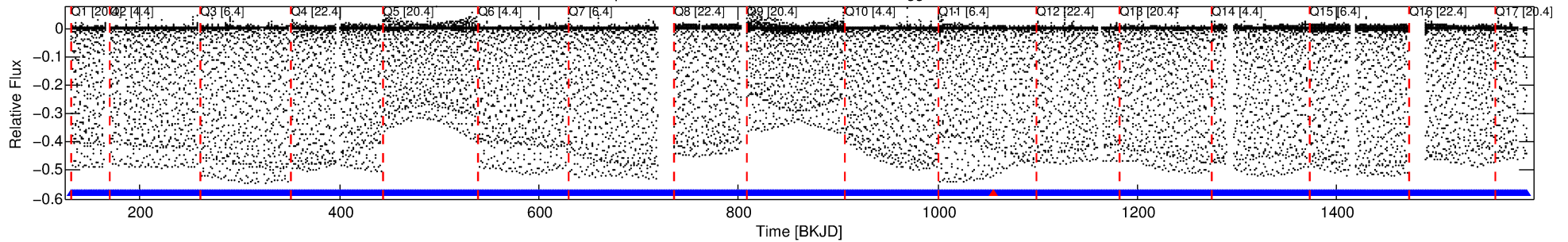
No Significant Match Found

DV One-Page Summary

KIC: 5300878 Candidate: 1 of 1 Period: 0.640 d

KOI: K06559 Corr: No Ephemeris Match

Kp: 14.77 R*: 0.62 Rs Teff: 4794.0 K Logg: 4.63 Fe/H: -0.620



TPS TCE Results:

Period = 0.63972 d
Epoch = 131.8547 BKJD

DV fit results are unavailable

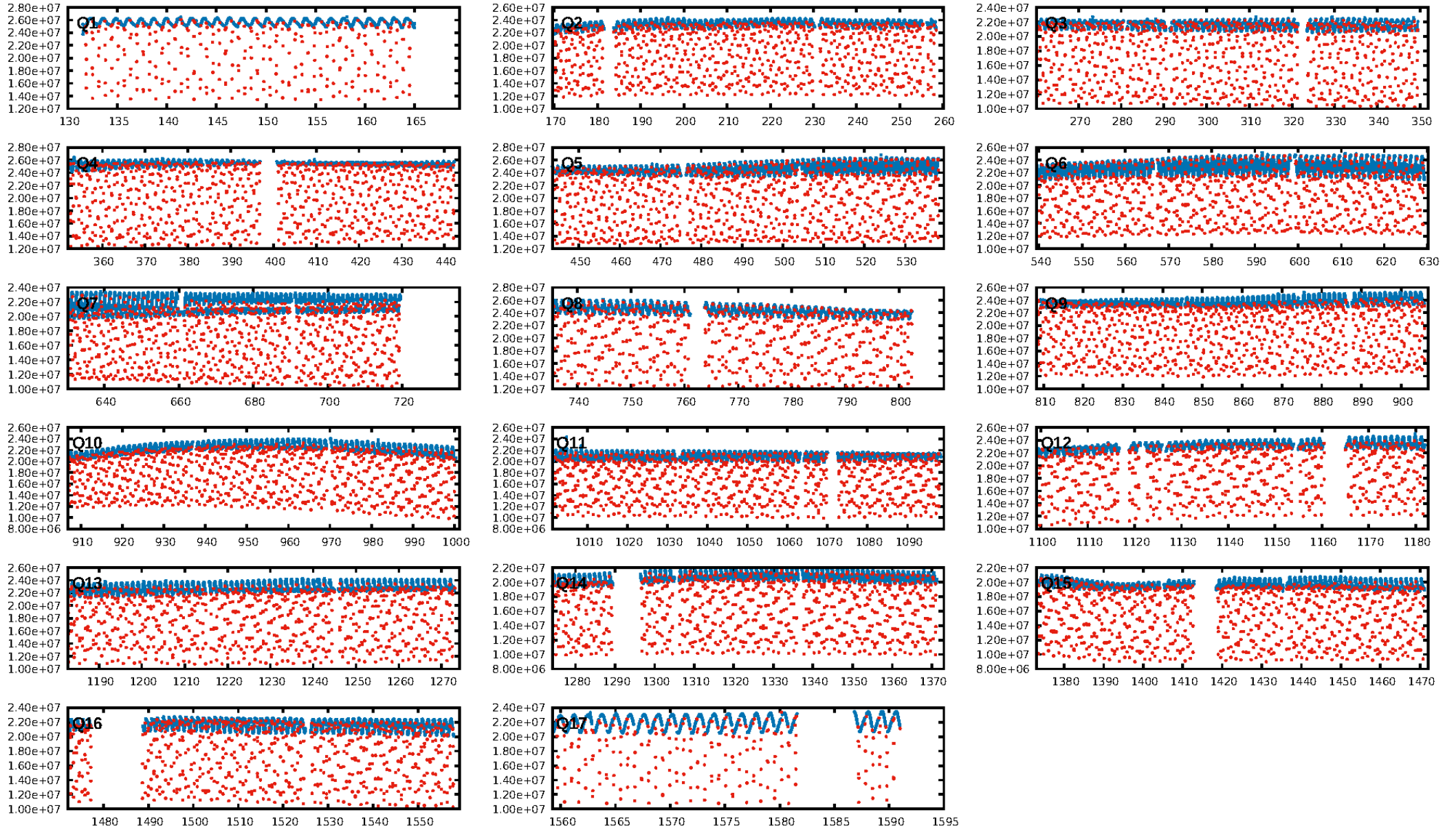
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1997/1998]
GhostDiagnostic-chr: 1.074
Centroid-sig: 0.0%
Centroid-so: 0.431 arcsec [996.74σ]
OotOffset-rm: 0.050 arcsec [0.75σ]
KicOffset-rm: 0.137 arcsec [2.02σ]
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]

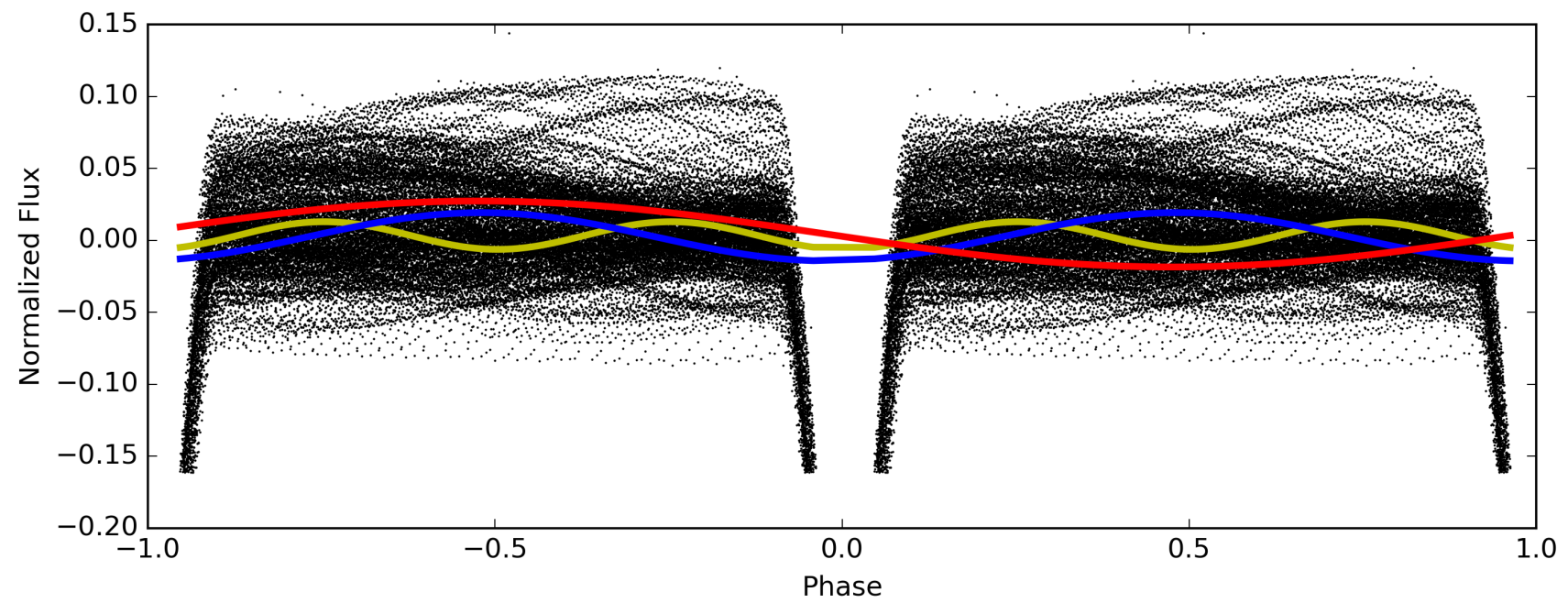
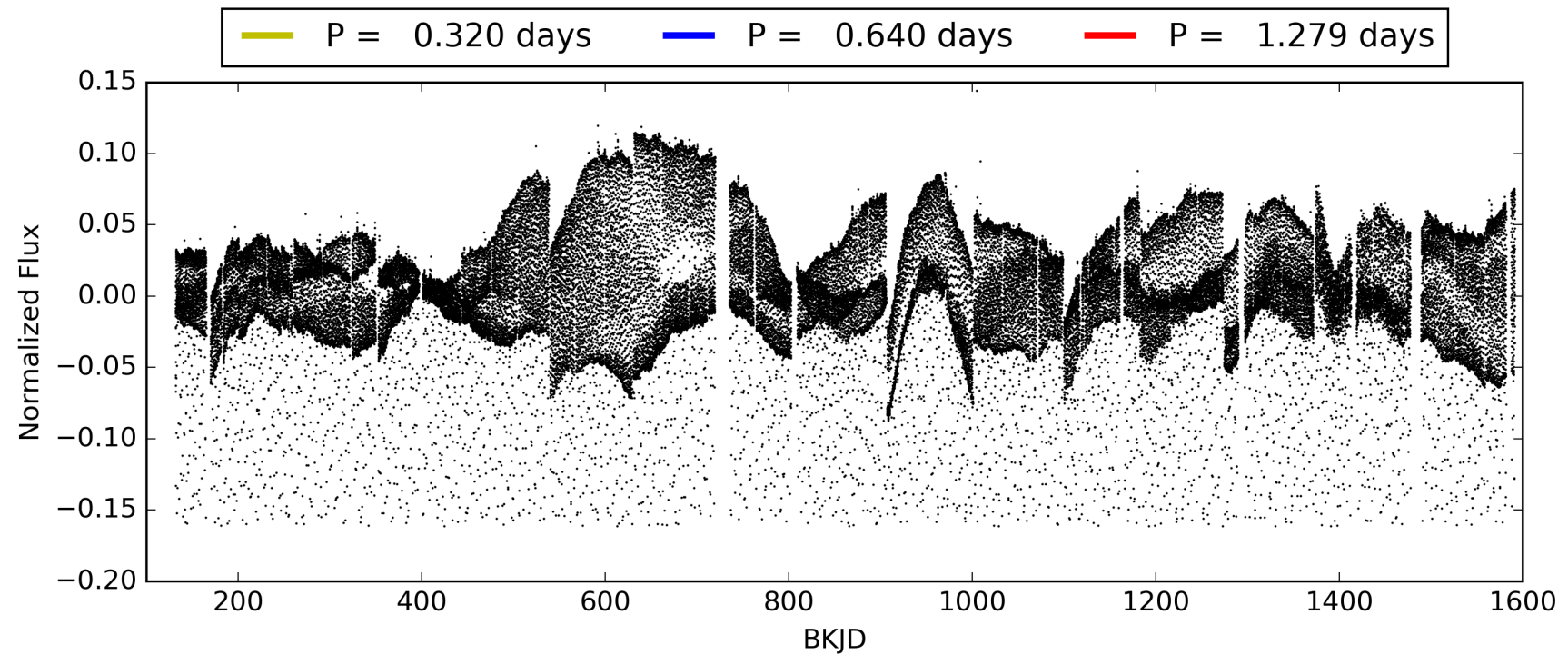
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 17:11:57 Z

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

TCE 005300878-01, PDC Light Curves

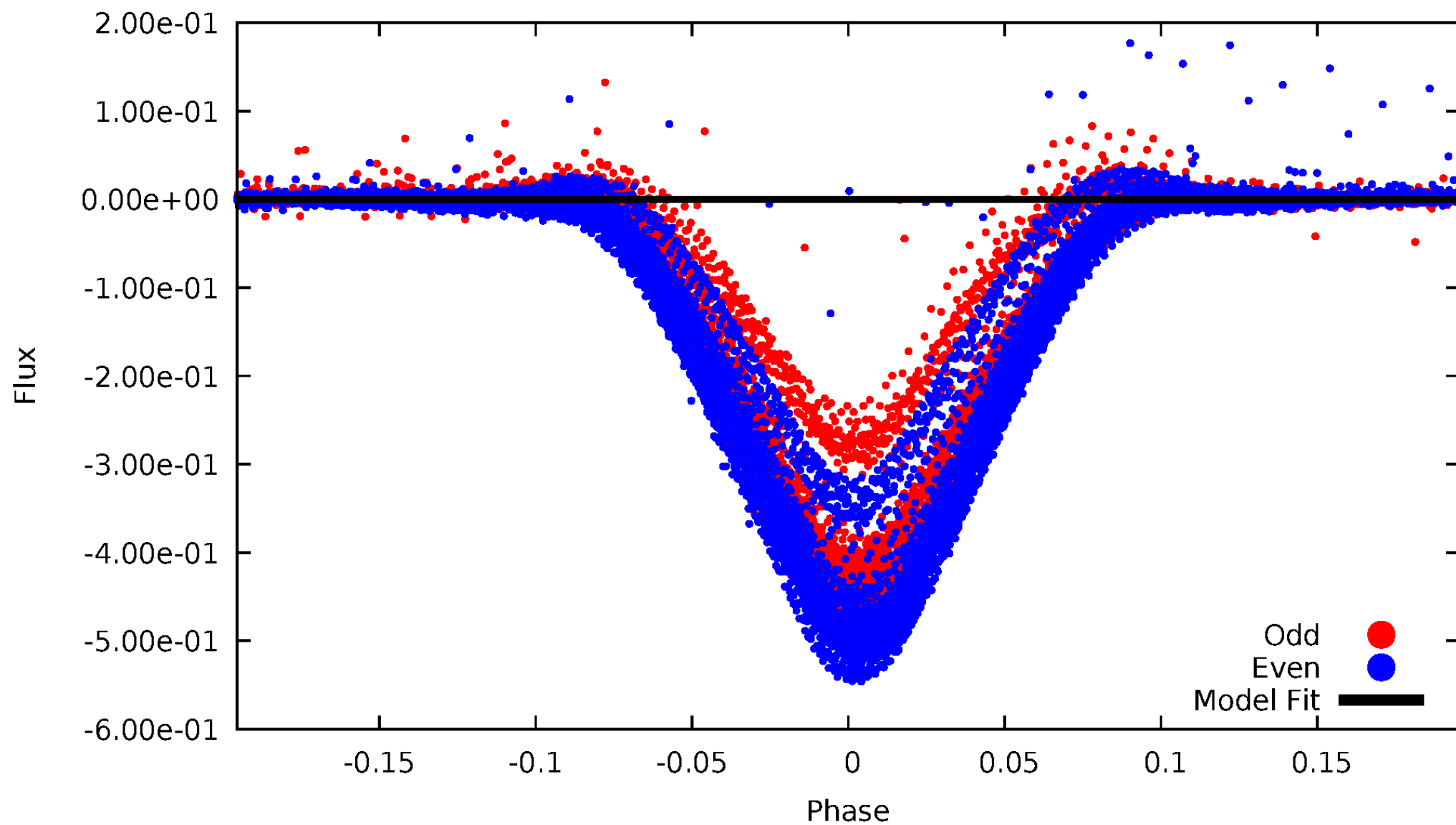


TCE 005300878-01



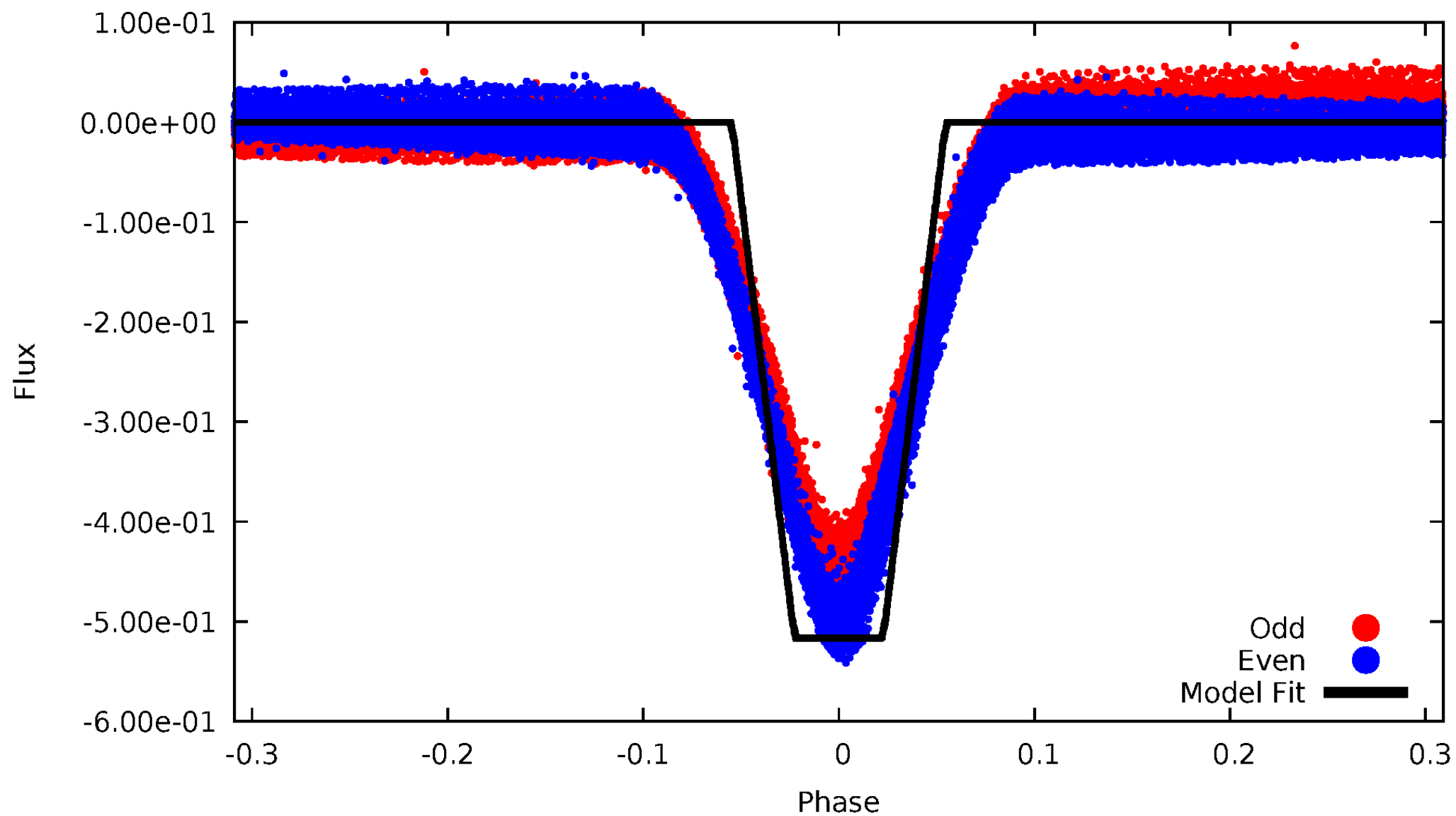
DV Odd/Even

TCE 005300878-01



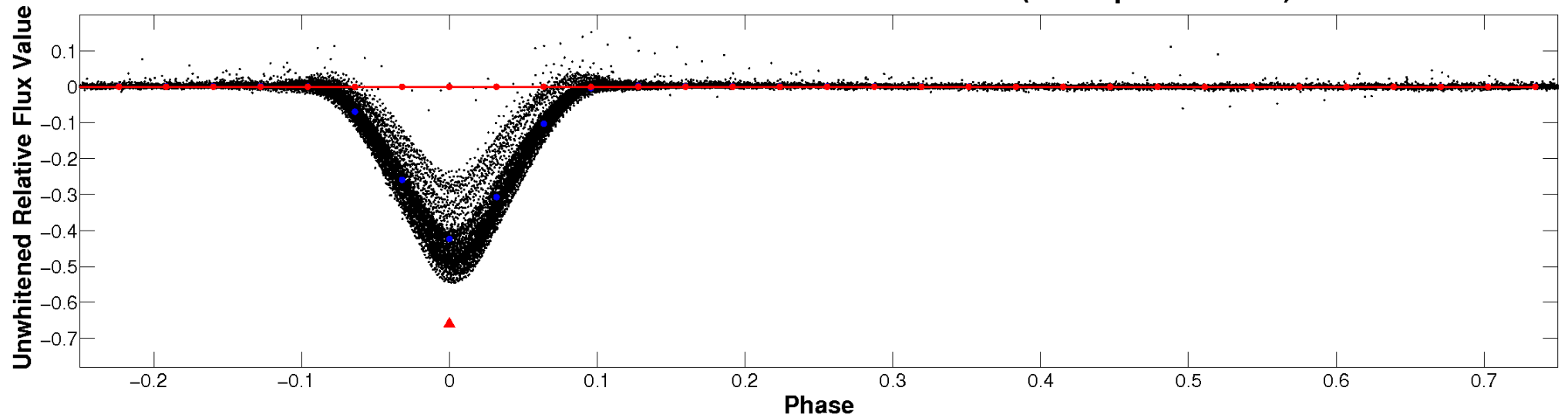
ALT Odd/Even

TCE 005300878-01



Non-Whitened Vs. Whitened Light Curve

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

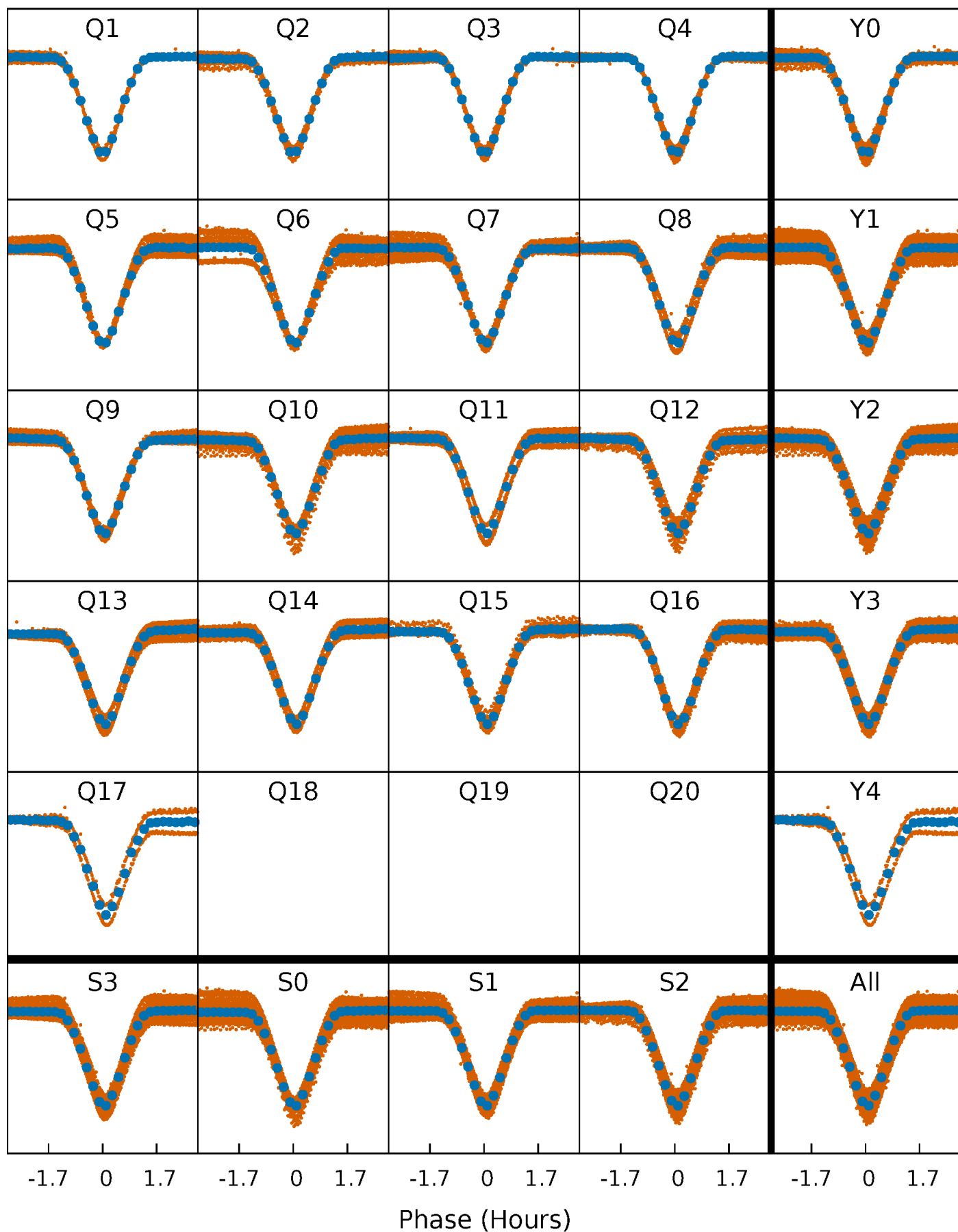


Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)



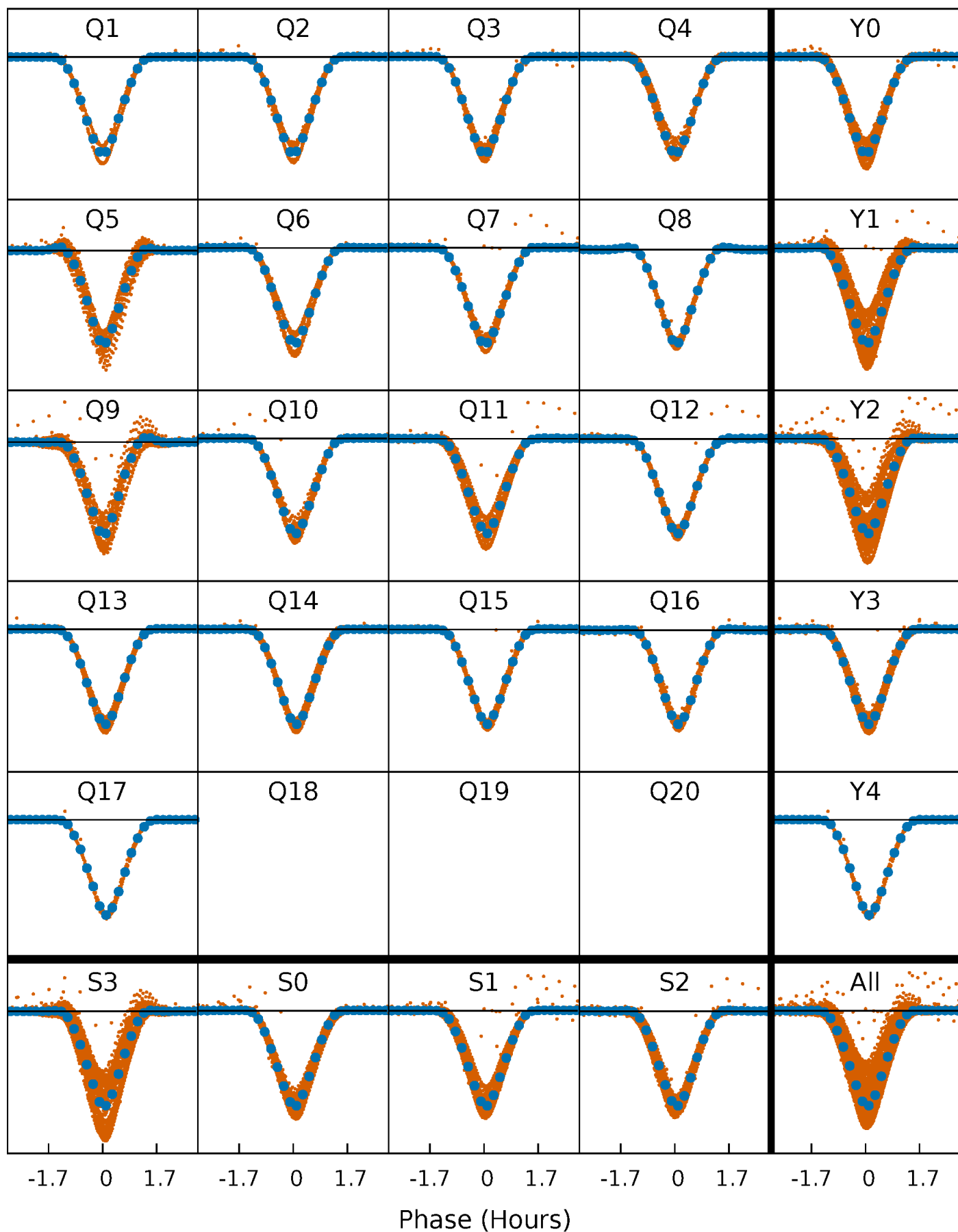
PDC Quarter-Phased Transit Curves

TCE 005300878-01 P= 0.639719 Days $T_0=131.854744$ (BKJD)



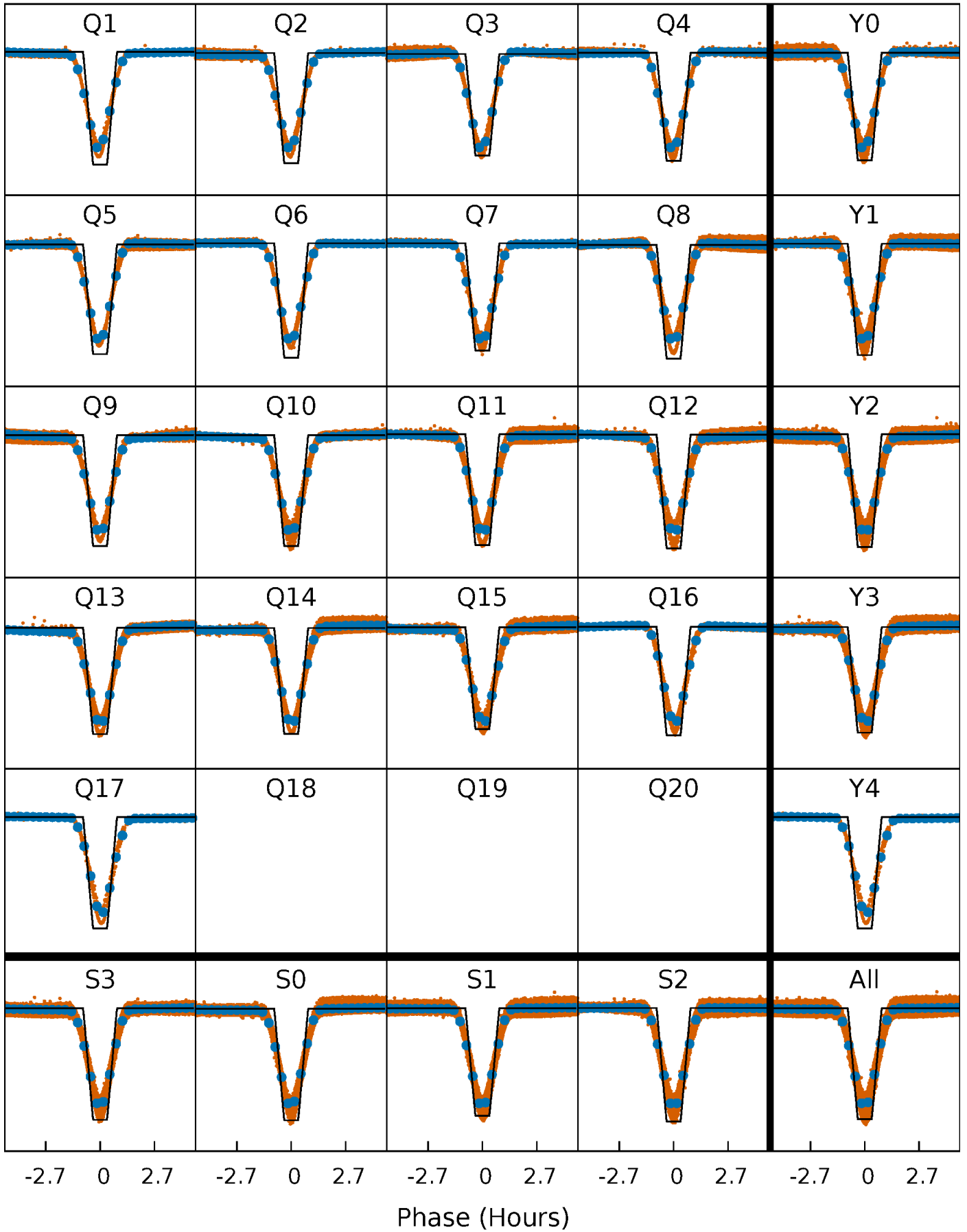
DV Quarter-Phased Transit Curves

TCE 005300878-01 P= 0.639719 Days $T_0=131.854744$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

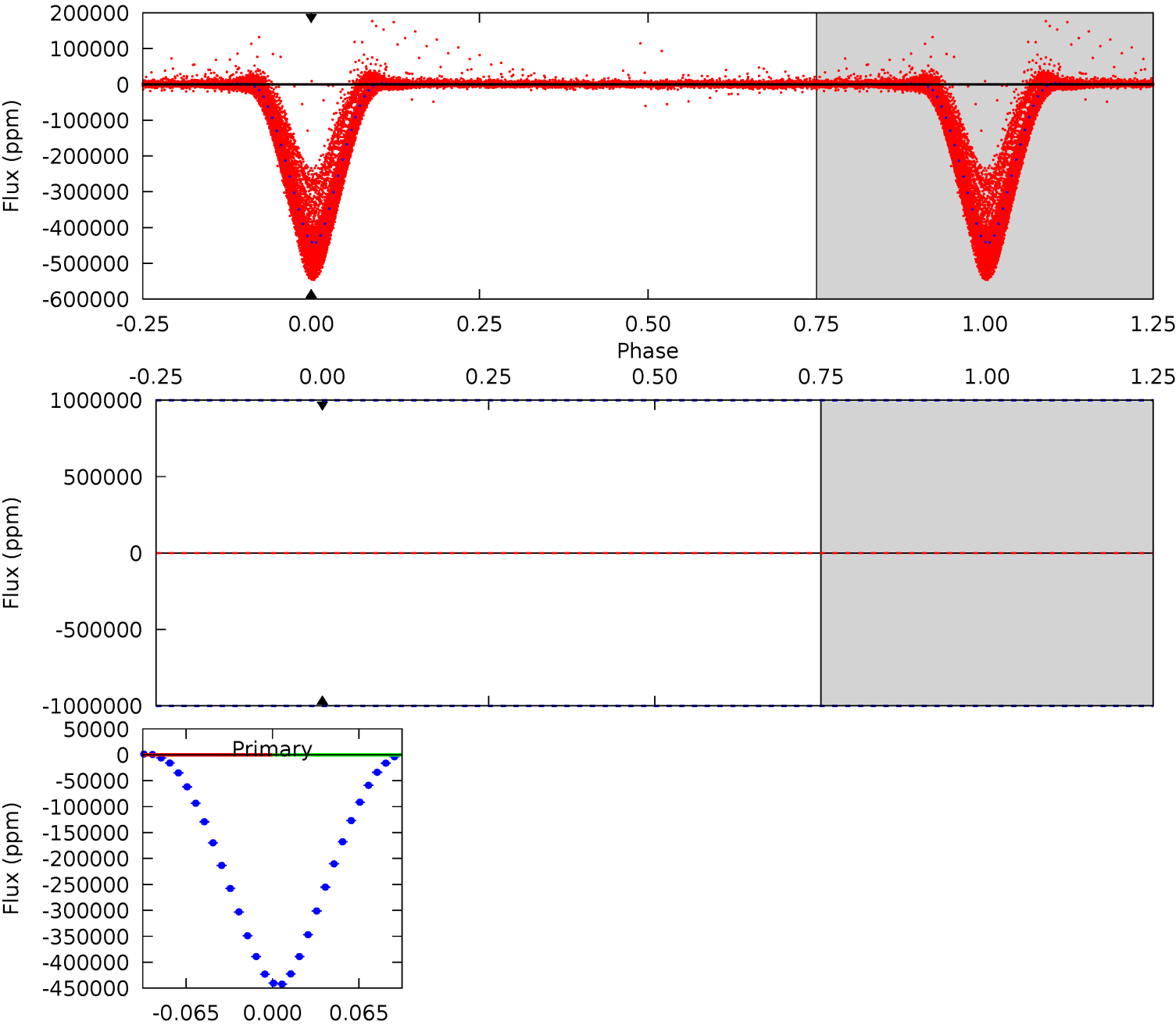
TCE 005300878-01 P= 0.639719 Days $T_0=131.857413$ (BKJD)



DV Model-Shift Uniqueness Test

005300878-01, P = 0.639719 Days, E = 131.215025 Days

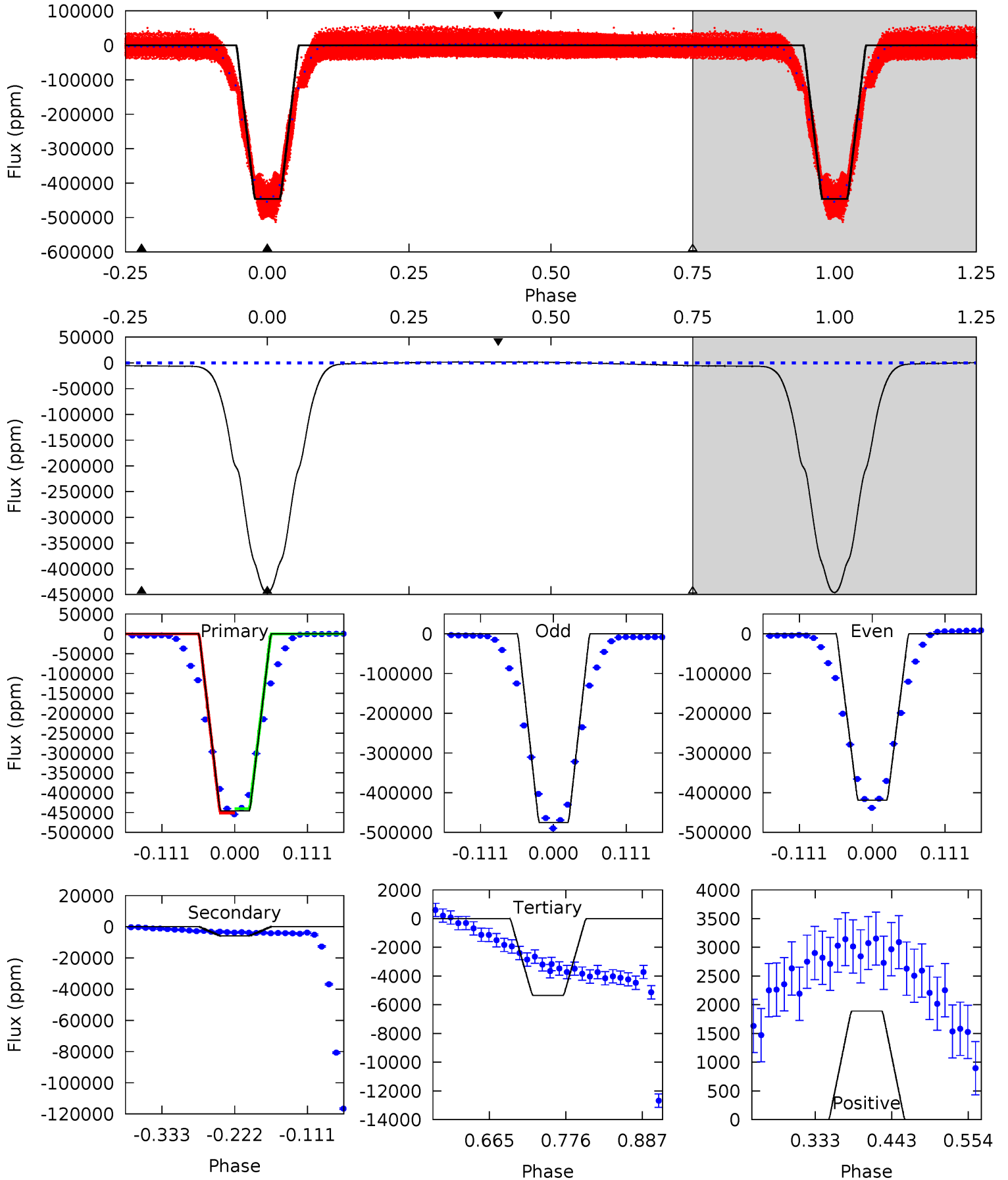
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

005300878-01, P = 0.639719 Days, E = 131.217694 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2209	28.7	26.5	9.36	4.54	1.59	10.7	2183	2200	2.26	19.4	142.1	1.00	0.00	27.0



Stellar Parameters For KIC 005300878

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4794^{+144}_{-144}	$4.633^{+0.060}_{-0.035}$	$-0.620^{+0.350}_{-0.300}$	$0.625^{+0.060}_{-0.054}$	$0.612^{+0.072}_{-0.033}$	$3.531^{+0.881}_{-0.544}$
	+3%/-3%	+1%/-1%	+56%/-48%	+10%/-9%	+12%/-5%	+25%/-15%
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 005300878-01 / KOI 6559.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$32.29^{+6.66}_{-7.15}$	2097^{+70}_{-76}	-1806^{+5934}_{-2377}	$0.285^{+8.496}_{-9.225}$
Alt.	-5802 ± 202	$48.94^{+7.24}_{-6.99}$	2093^{+75}_{-76}	-2187^{+330}_{-133}	$0.208^{+0.075}_{-0.050}$

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 $A_{obs} \gg 1.0$

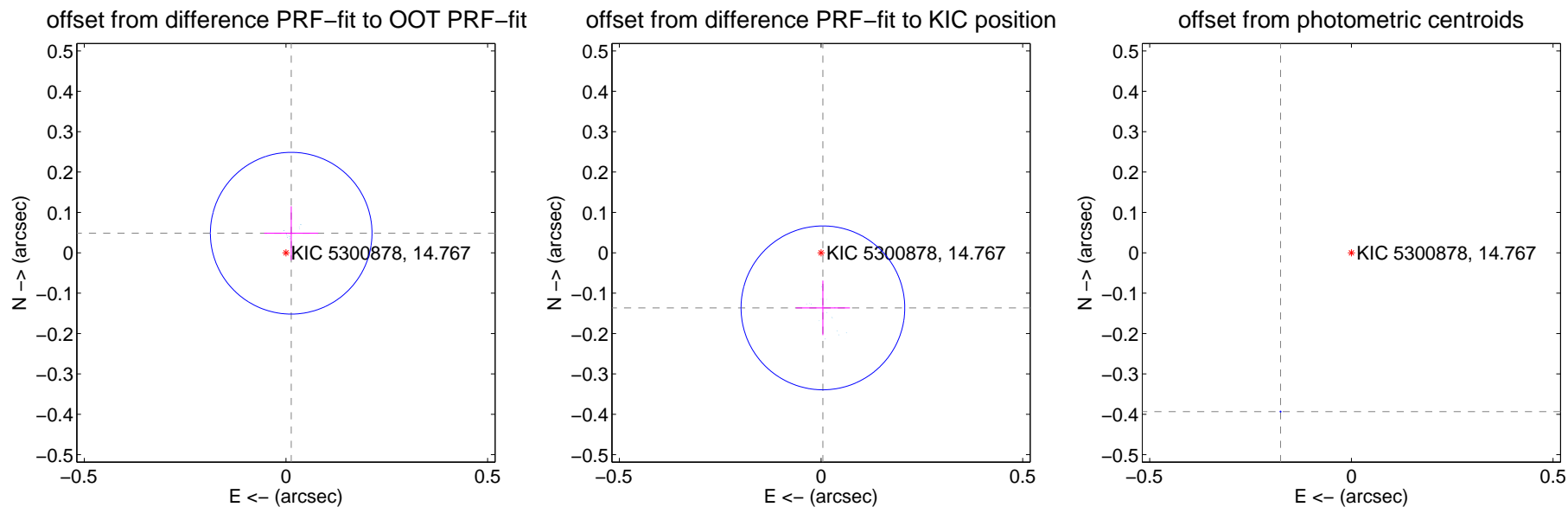
DV Centroid Data

Supplemental centroid analysis for 005300878-01. Kepler magnitude: 14.77. Transit SNR -1.00

There are 17 quarters with good PRF difference image offsets

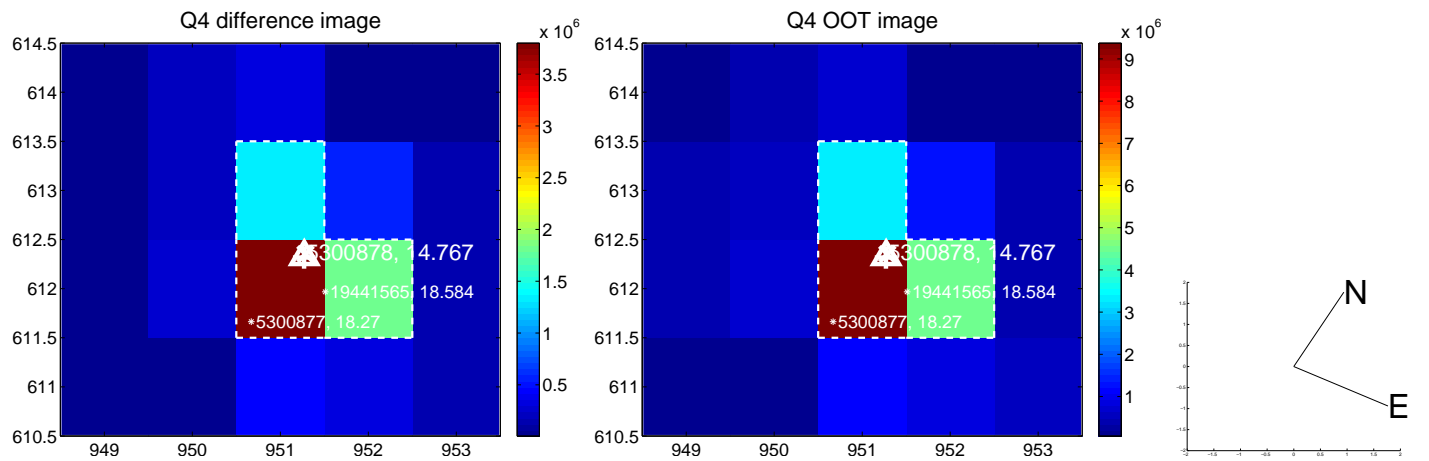
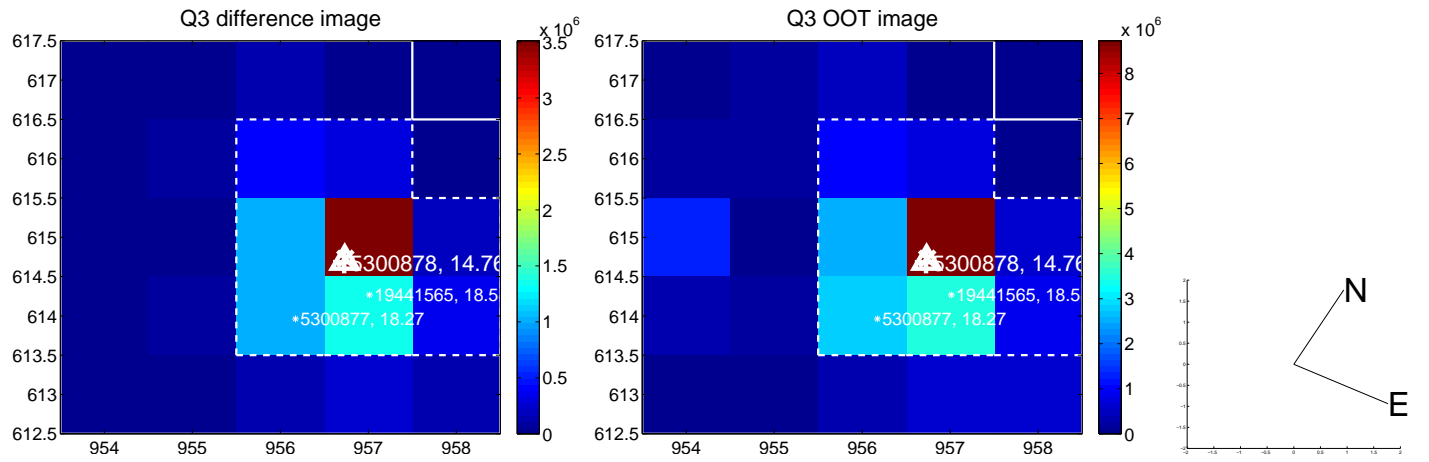
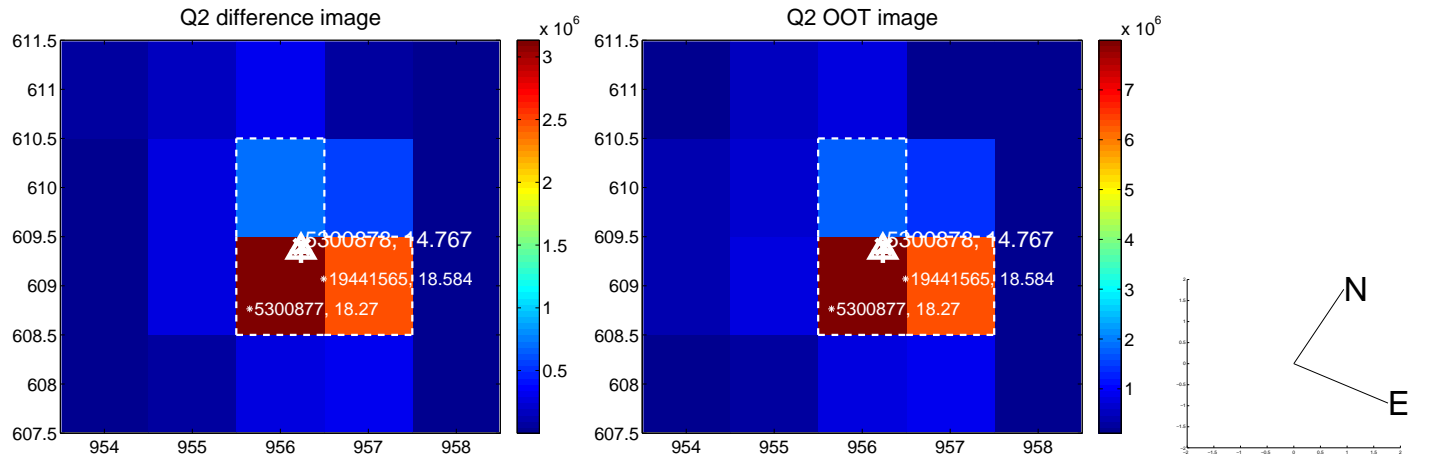
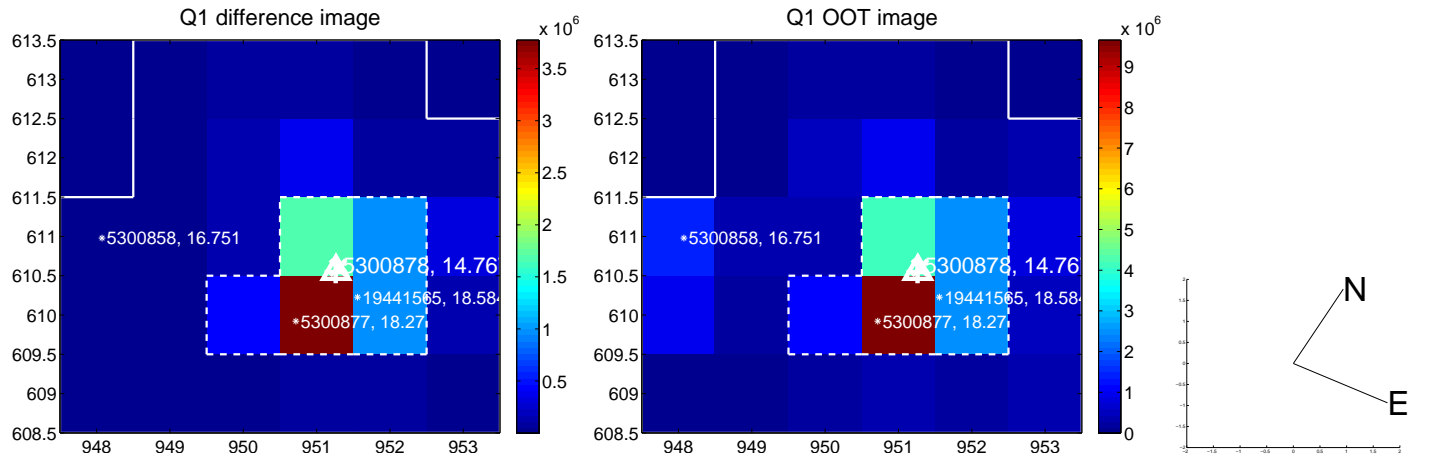
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.050 ± 0.067	0.75	-0.013 ± 0.067	0.048 ± 0.067
PRF-fit source offset from KIC position	0.137 ± 0.068	2.02	-0.005 ± 0.067	-0.136 ± 0.068
photometric centroid source offset	0.43 ± 0.00	996.74	0.18 ± 0.00	-0.39 ± 0.00

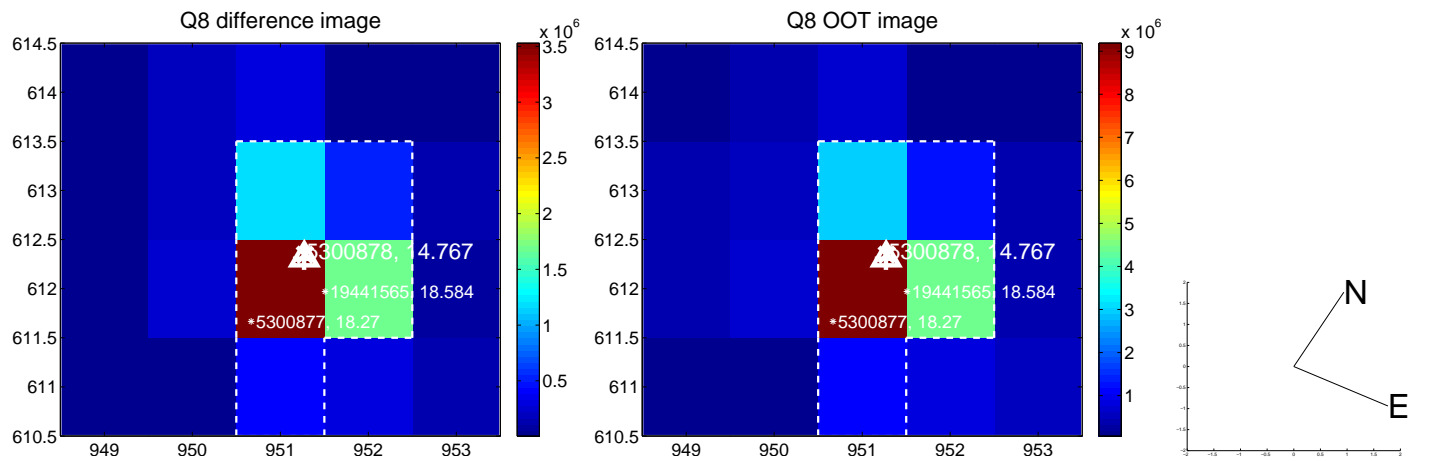
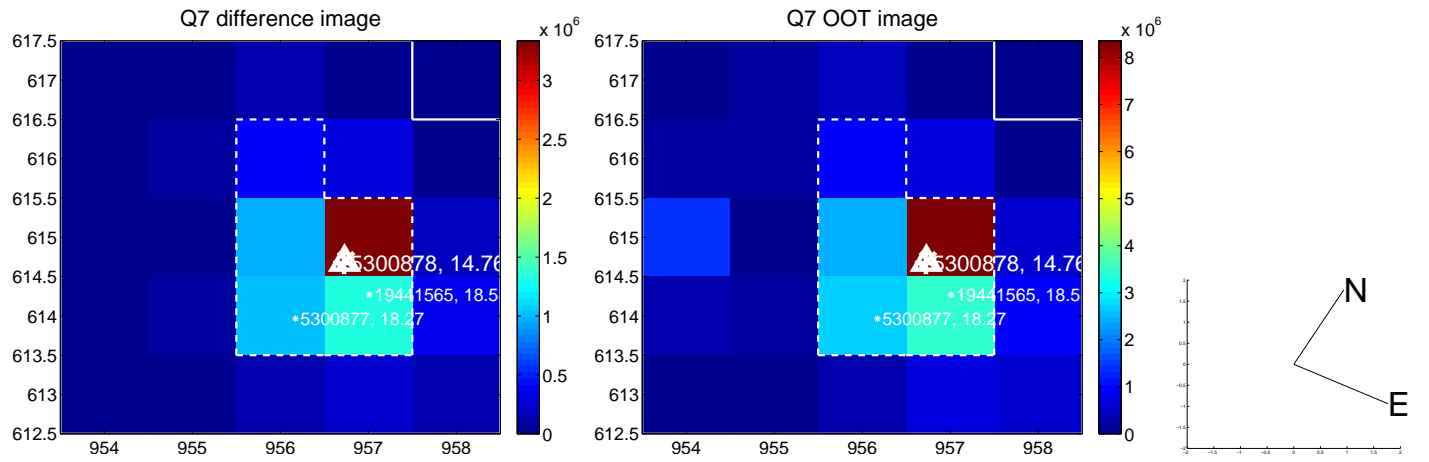
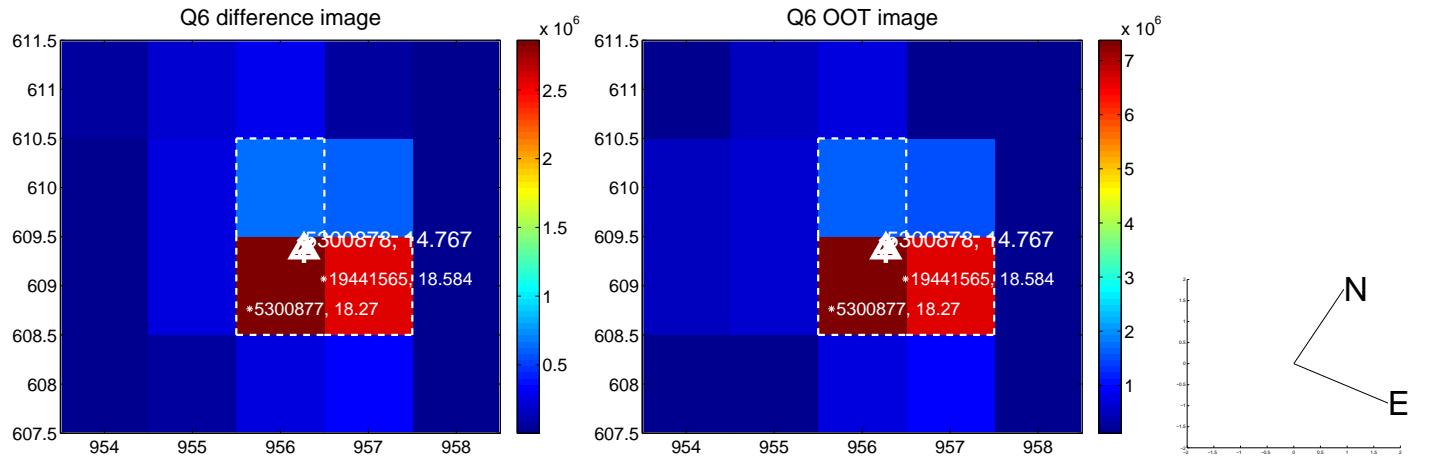
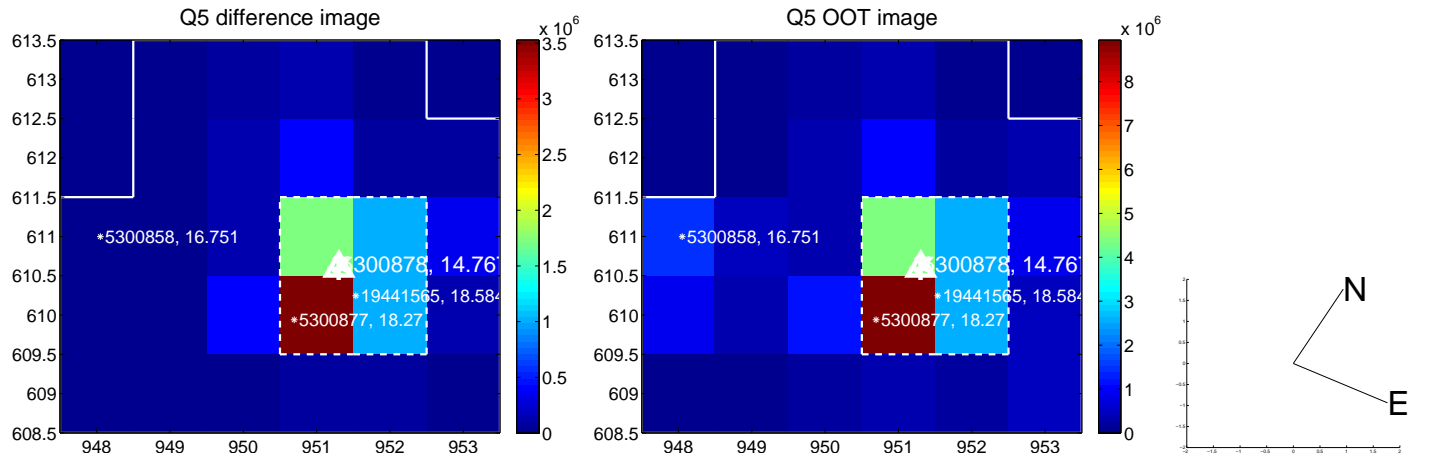


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

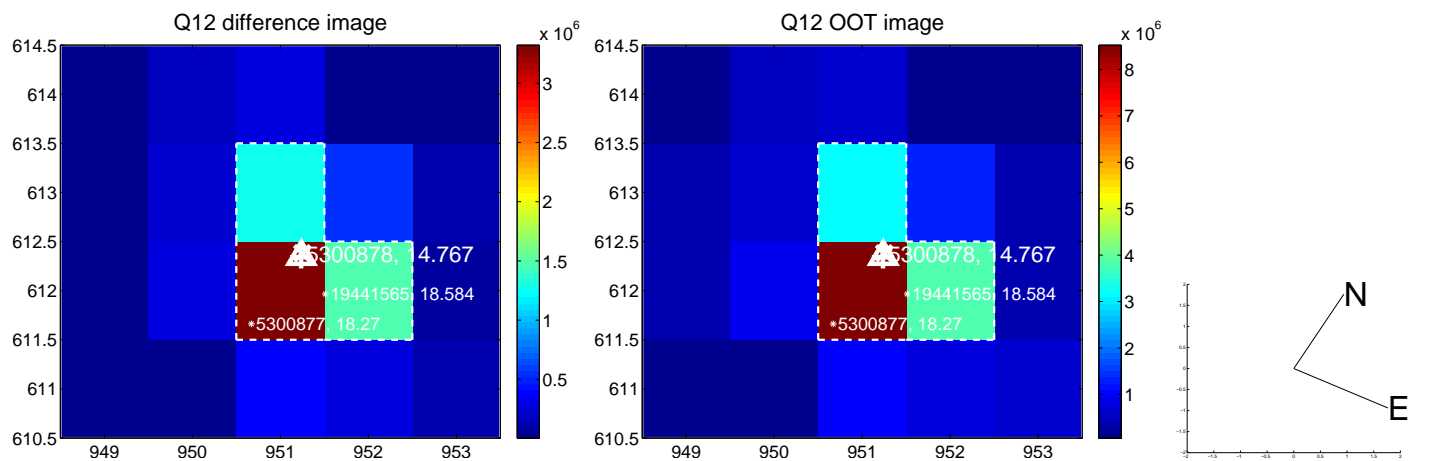
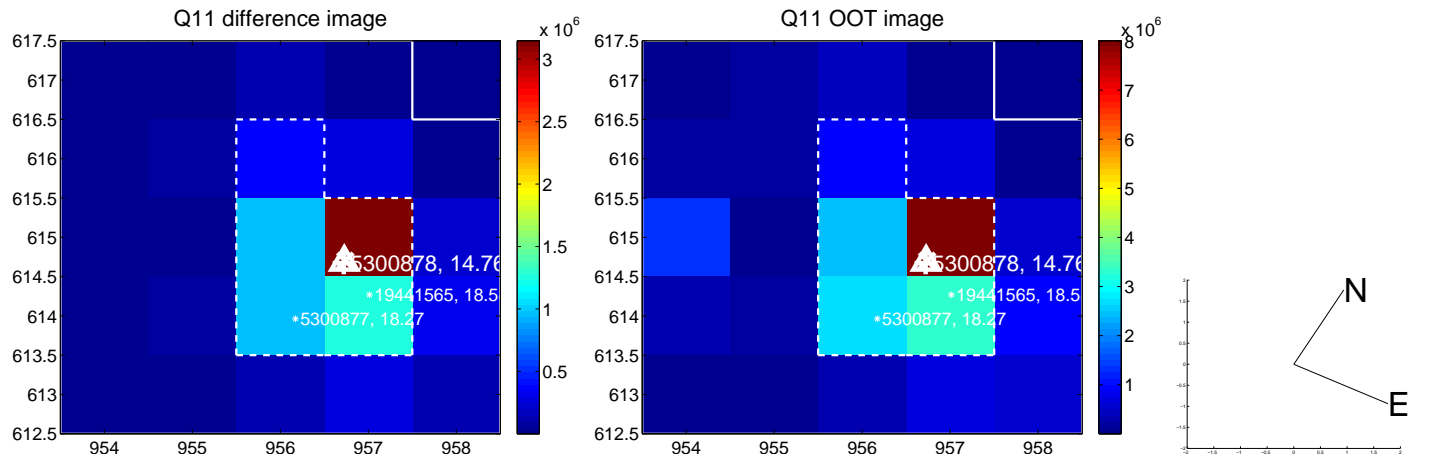
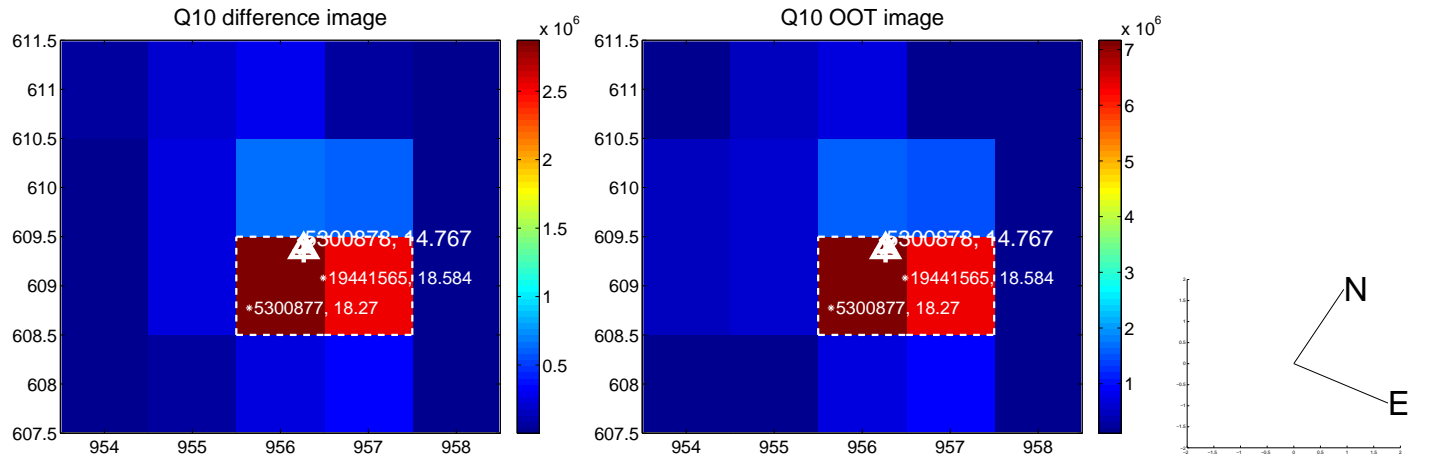
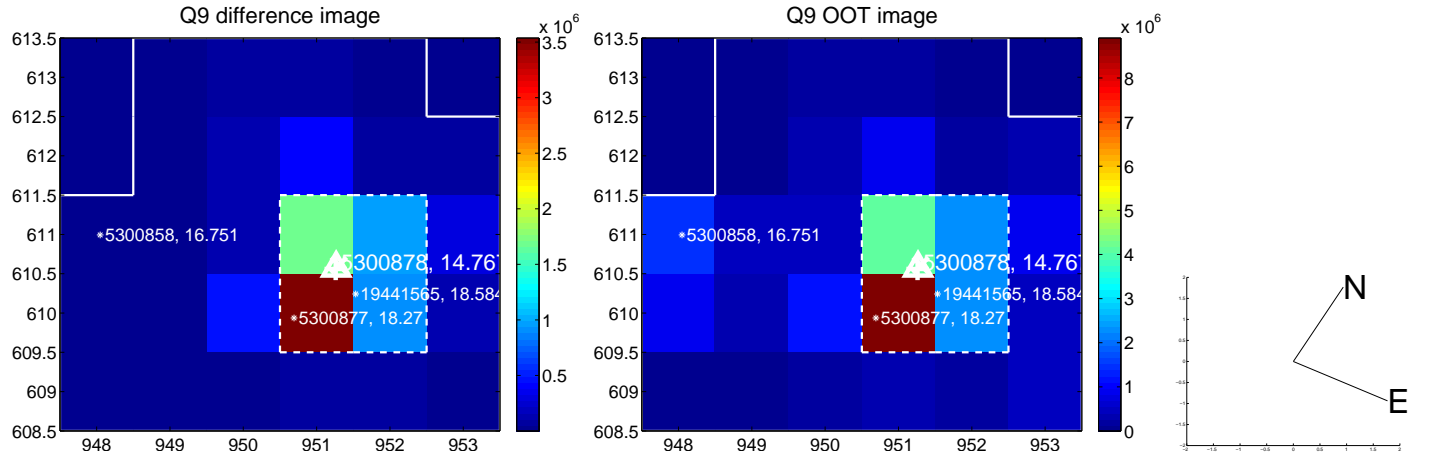
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



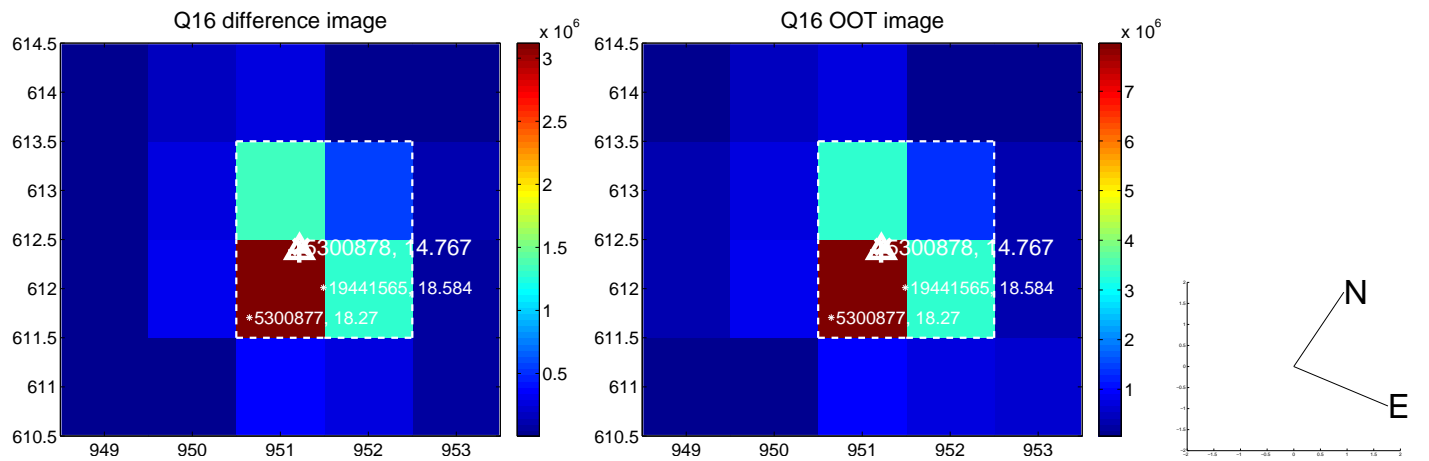
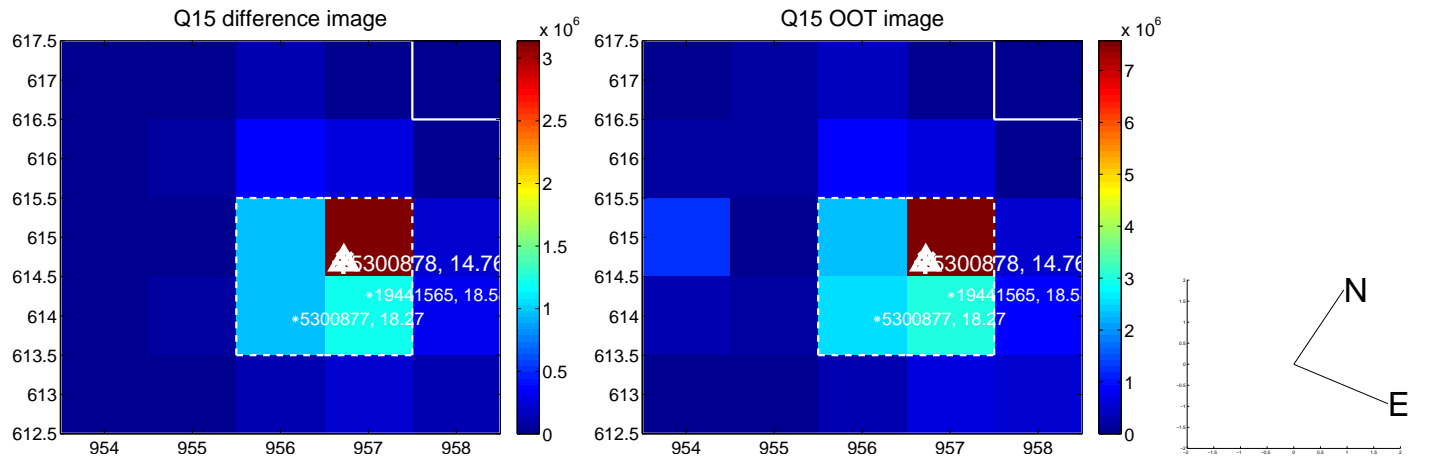
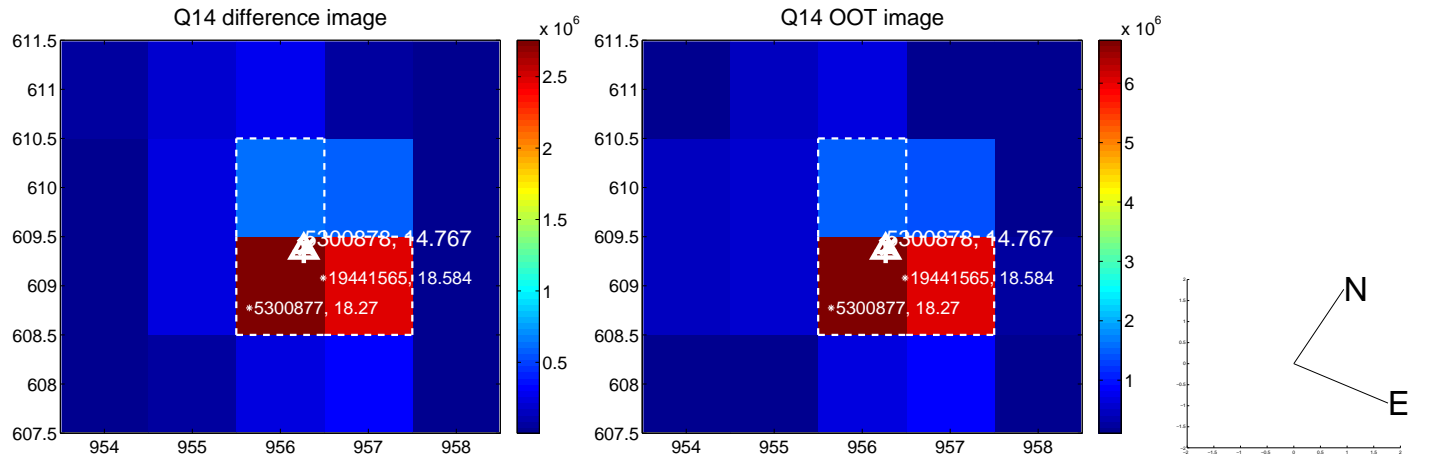
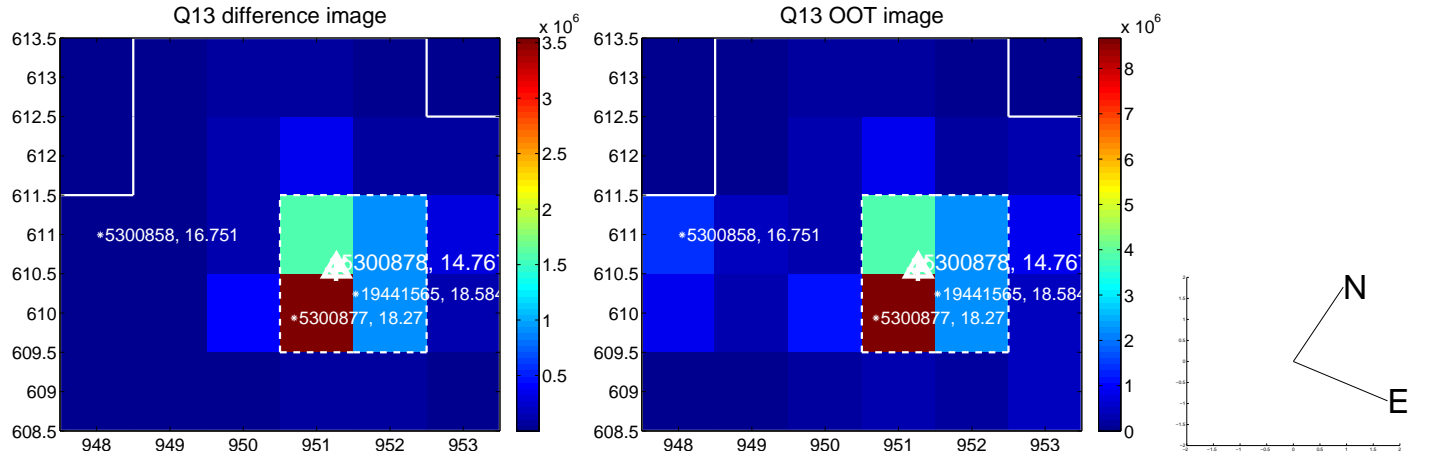
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



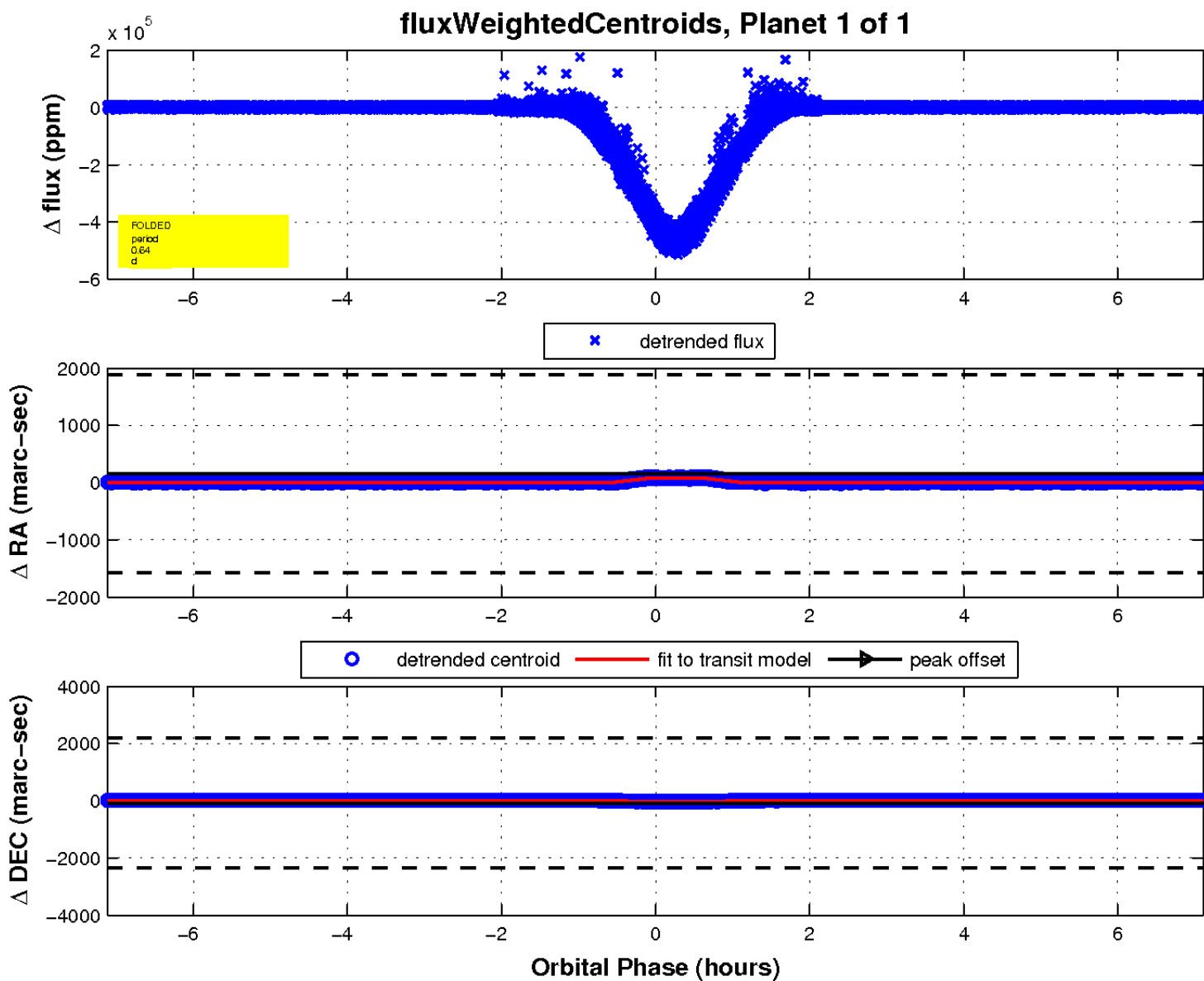
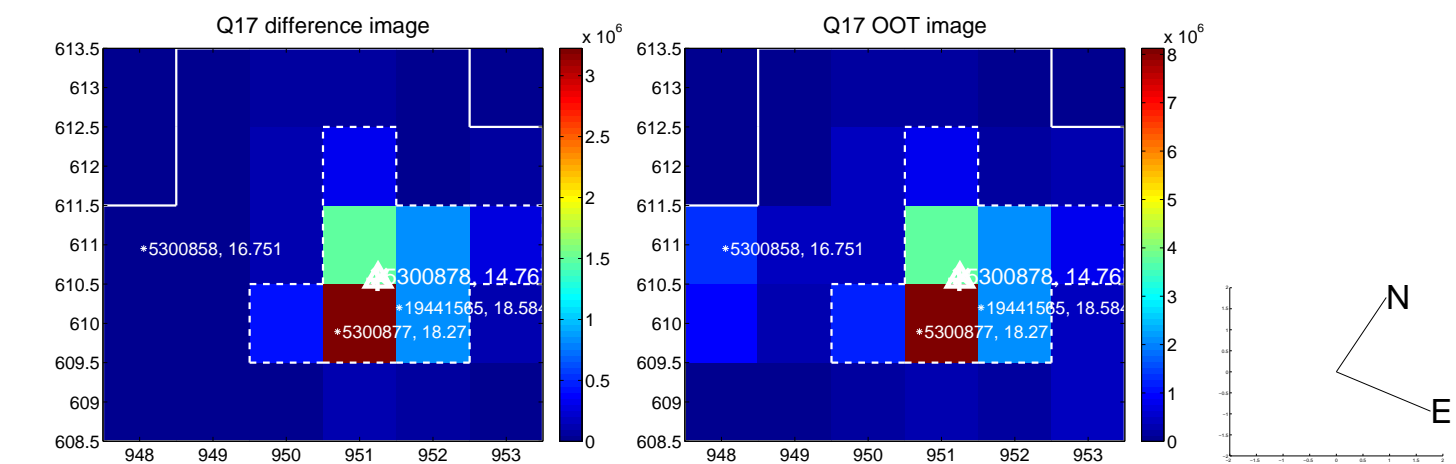
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

