

KIC 005730394

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})
005730394-01	OBS	3603.01	2.759597	131.708336	170475.7	7.207	5827.0	3451.8	0.90	5324	37.64	450.73

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005730394-01	OBS	FP	0.00	0	1	0	0	DEPTH_ODDEVEN_DV—DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_DV—MOD_ODDEVEN_ALT

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.

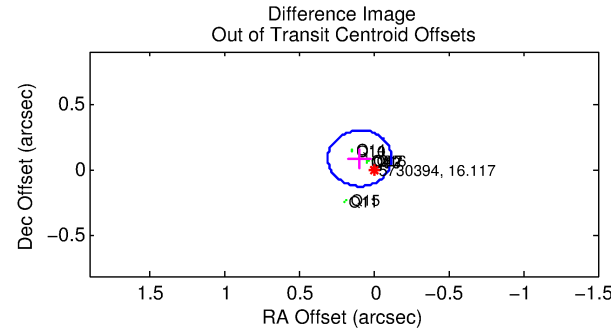
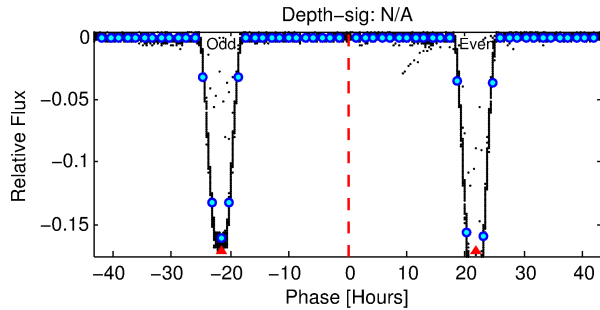
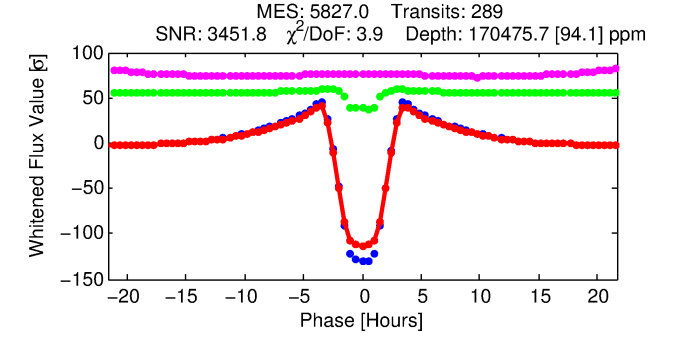
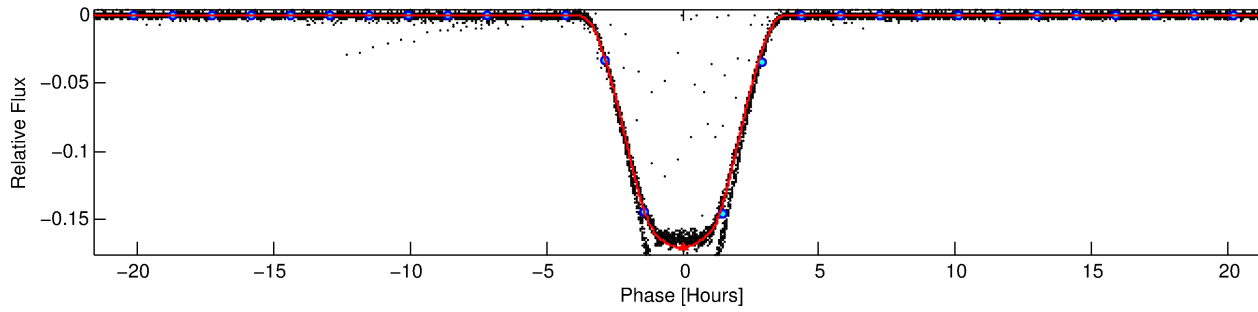
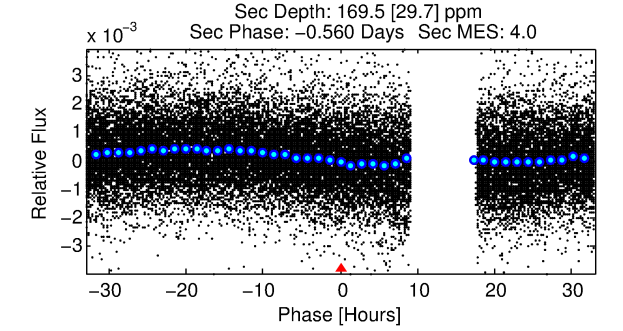
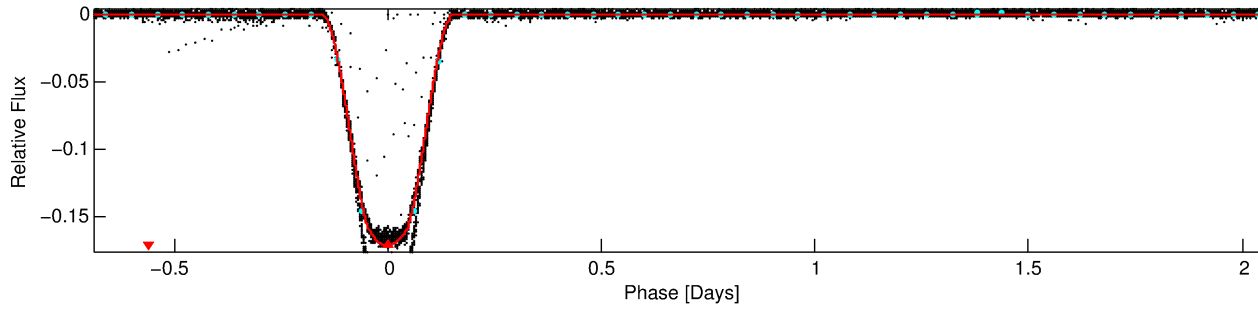
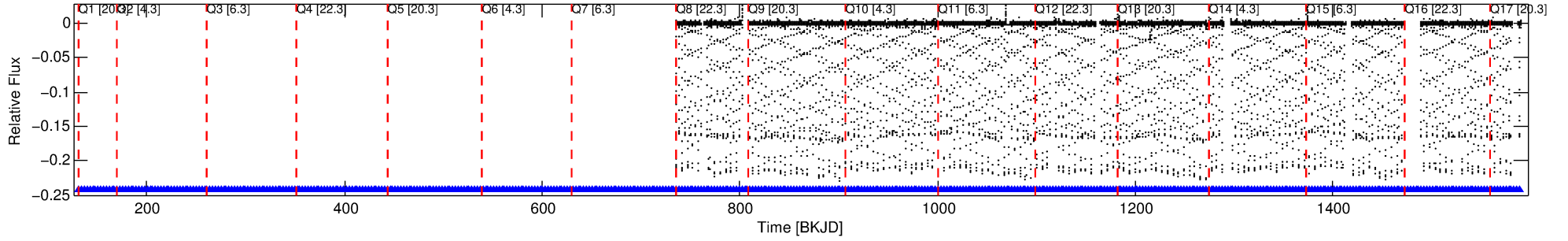
Ephemeris Match Information For 005730394-01

No Significant Match Found

DV One-Page Summary

KIC: 5730394 Candidate: 1 of 1 Period: 2.760 d
KOI: K03603 Corr: No Ephemeris Match

Kp: 16.12 R*: 0.90 Rs Teff: 5324.0 K Logg: 4.44 Fe/H: -0.060



DV Fit Results:

Period = 2.75960 [0.00000] d
Epoch = 131.7083 [0.0001] BKJD
Rp/R* = 0.3846 [0.0002]
a/R* = 3.96 [0.00]
b = 0.41 [0.00]
Seff = 450.73 [172.61]
Teq = 1175 [112] K
Rp = 37.64 [9.44] Re
a = 0.0358 [0.0082] AU
Ag = 0.08 [0.03] [-27.60σ]
Teffp = 980 [57] K [-1.55σ]

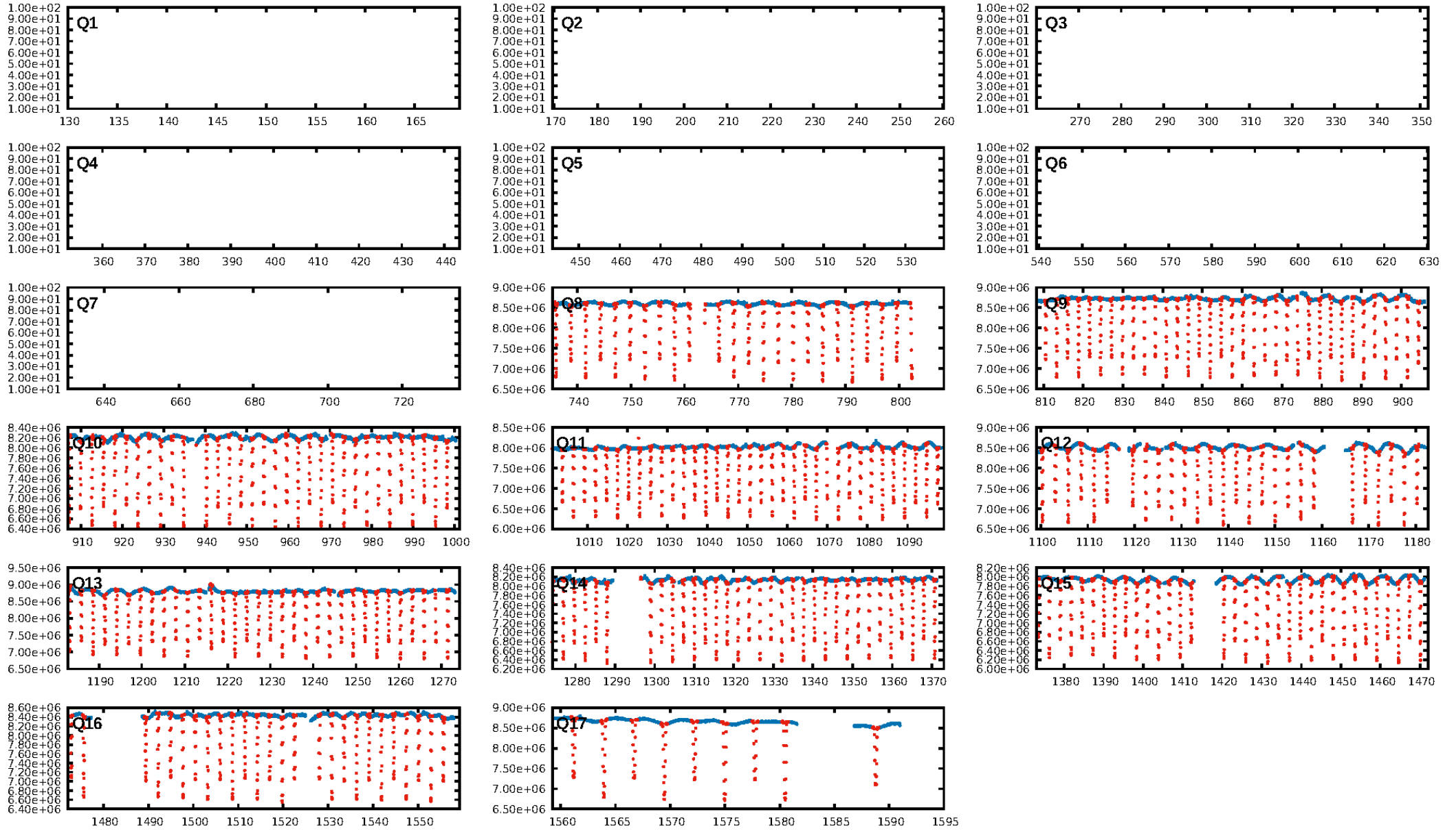
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [280/280]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: 0.120 arcsec [63.05σ]
OotOffset-rm: 0.130 arcsec [1.84σ]
KicOffset-rm: 0.099 arcsec [1.20σ]
OotOffset-st: 2/2/3/3 [10]
KicOffset-st: 2/2/3/3 [10]
DiffImageQuality-fgm: 1.00 [10/10]
DiffImageOverlap-fno: 1.00 [10/10]

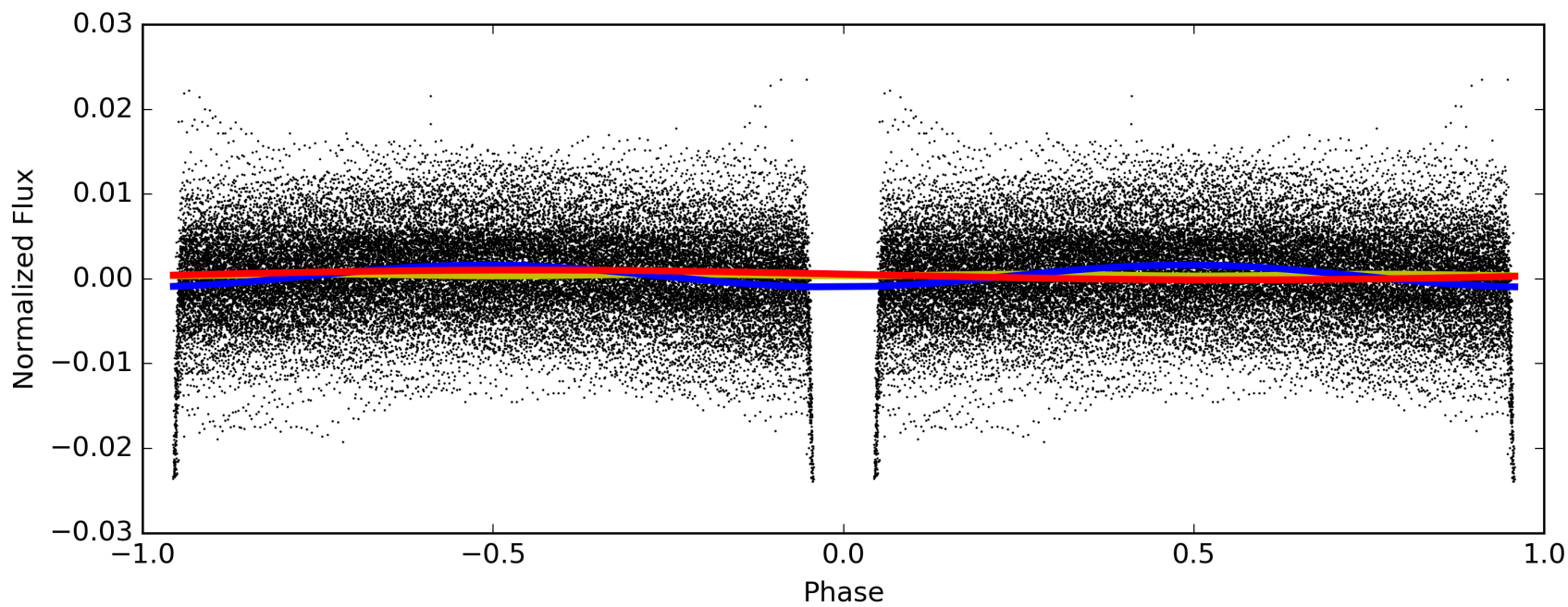
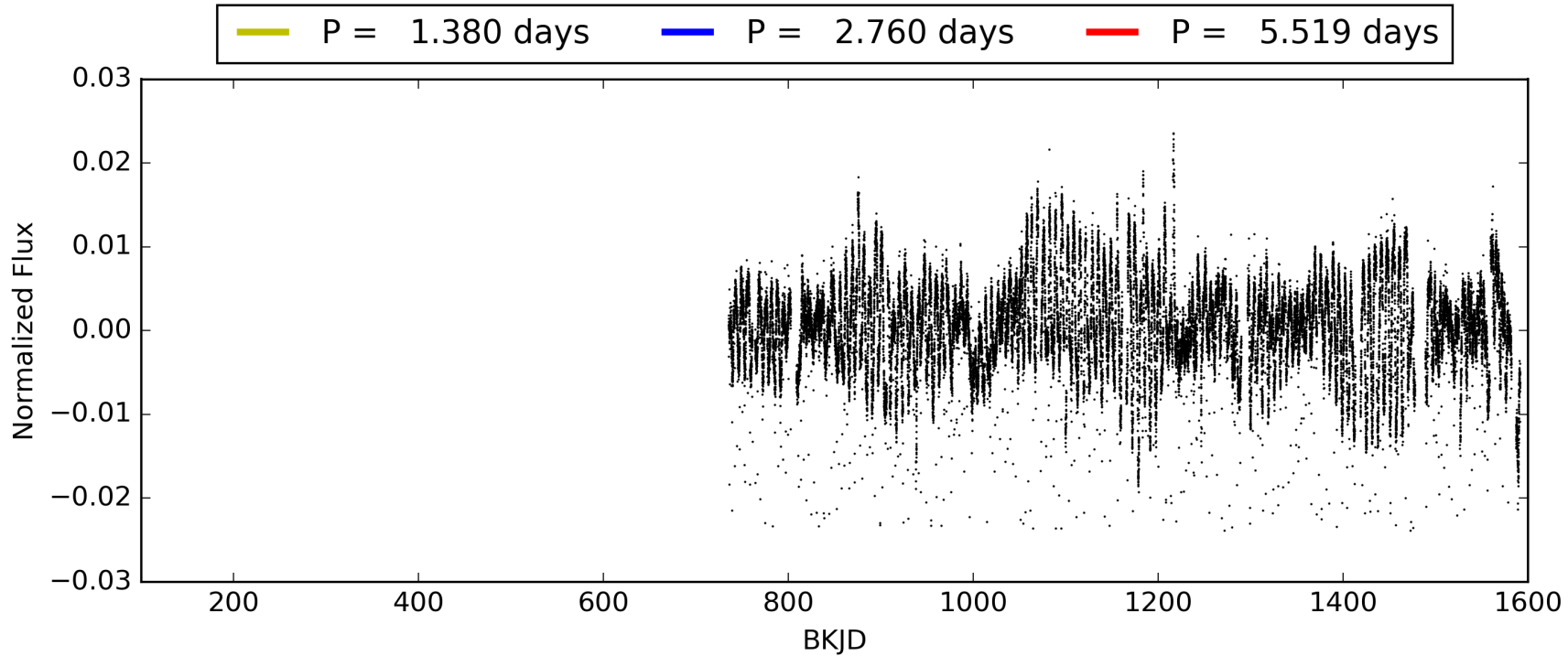
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 18:23:46 Z

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

TCE 005730394-01, PDC Light Curves

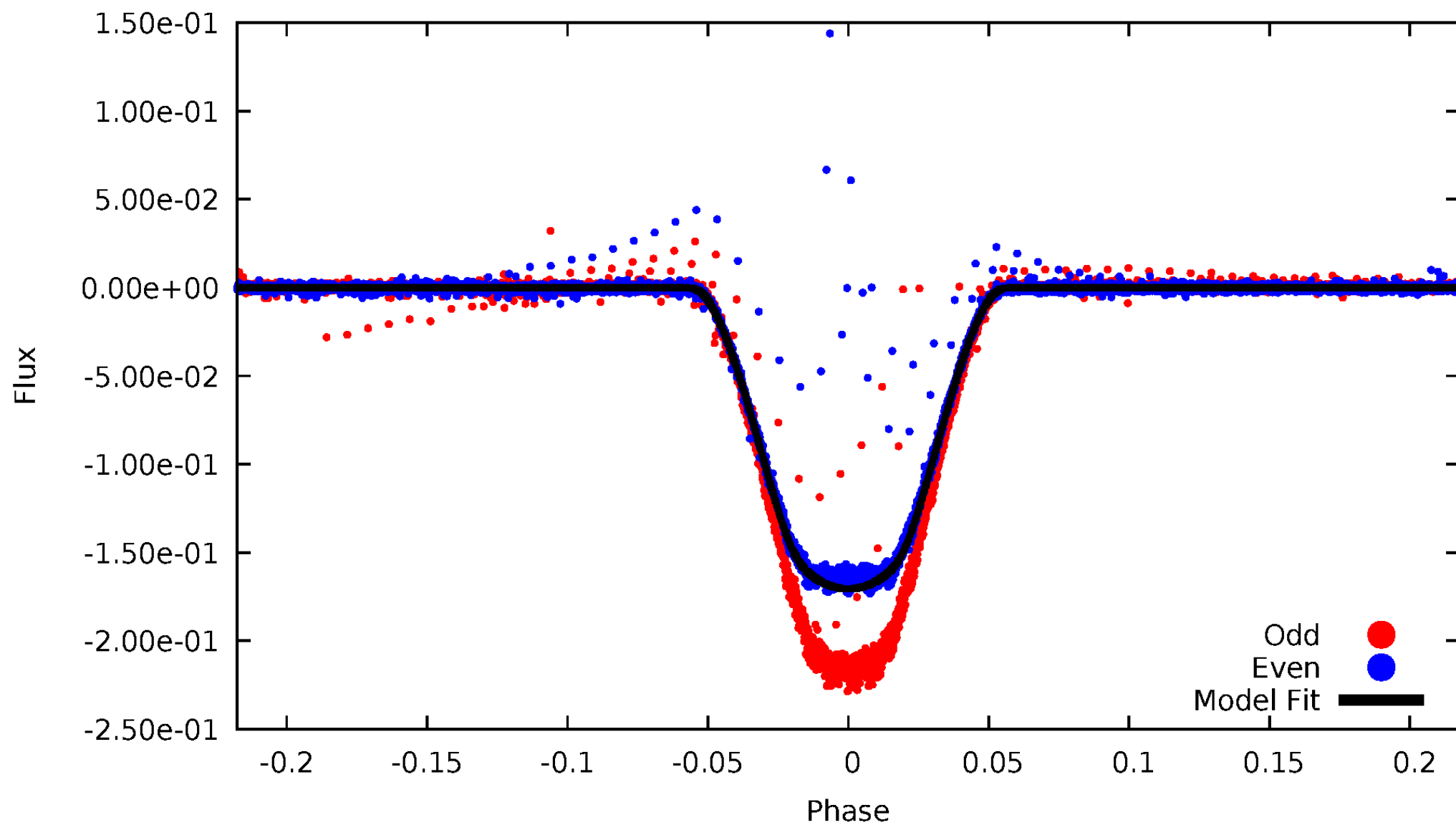


TCE 005730394-01



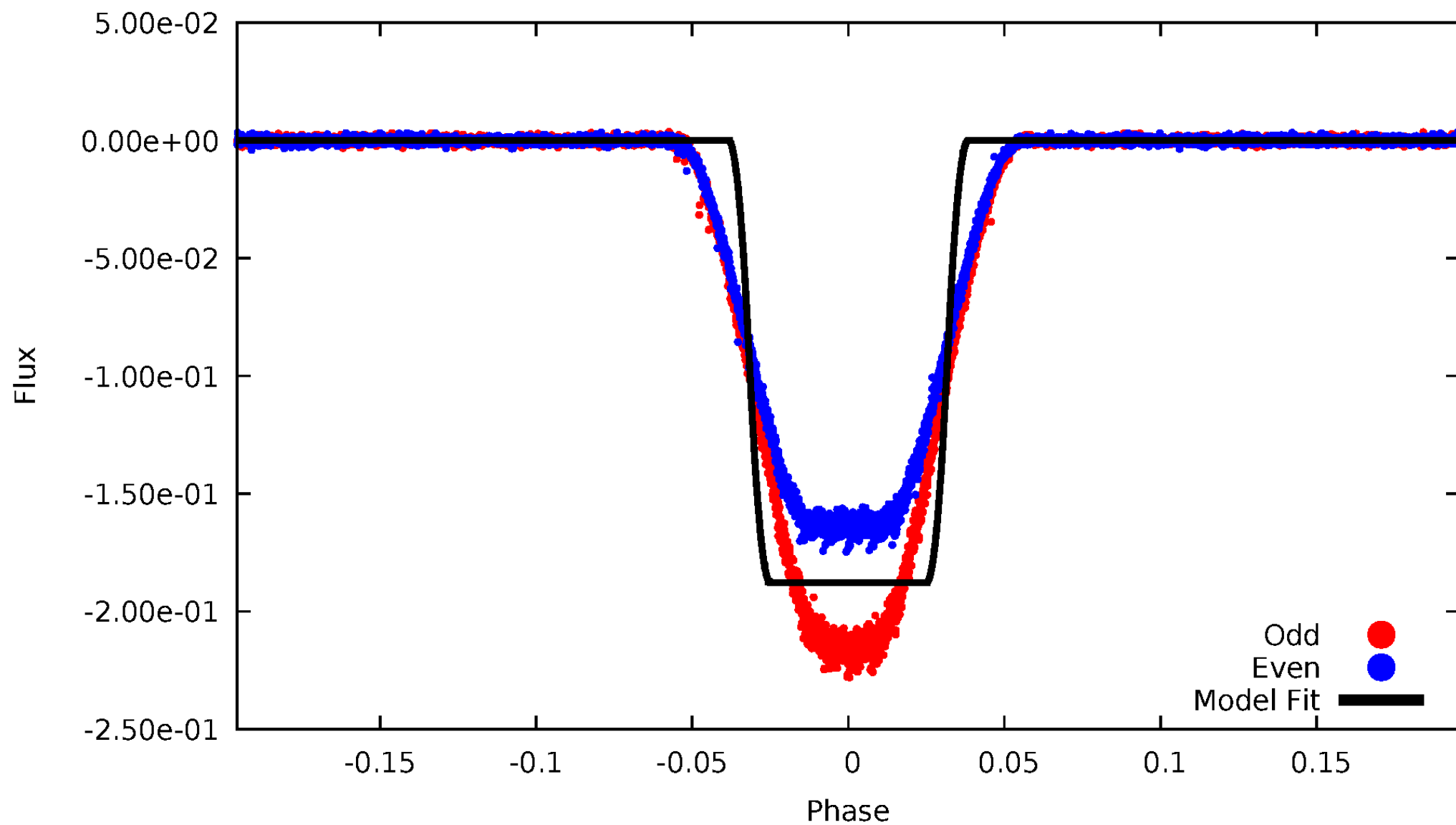
DV Odd/Even

TCE 005730394-01



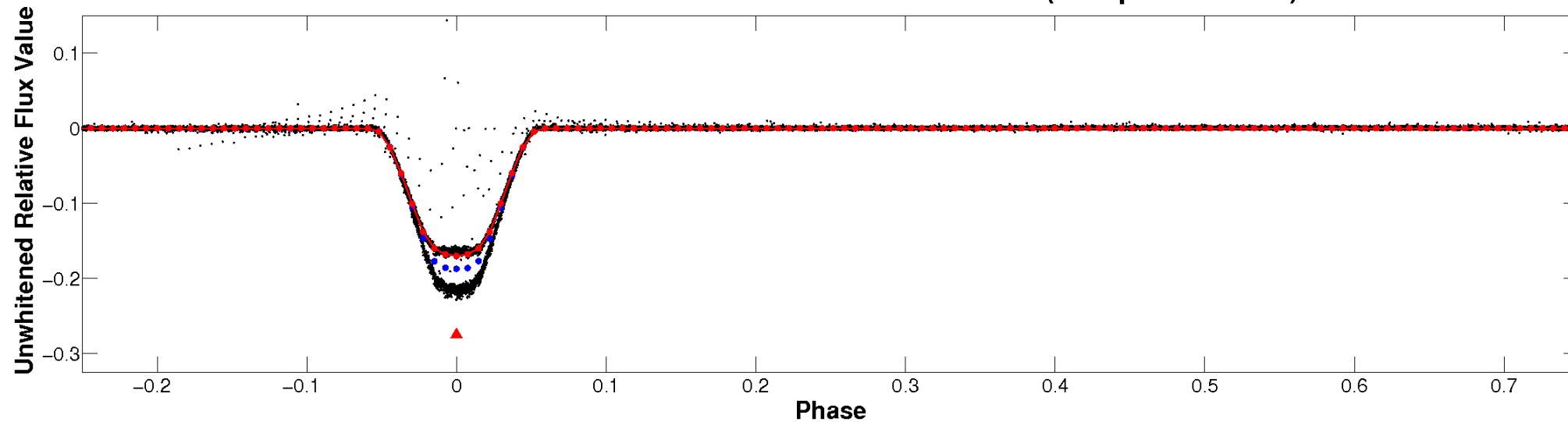
ALT Odd/Even

TCE 005730394-01

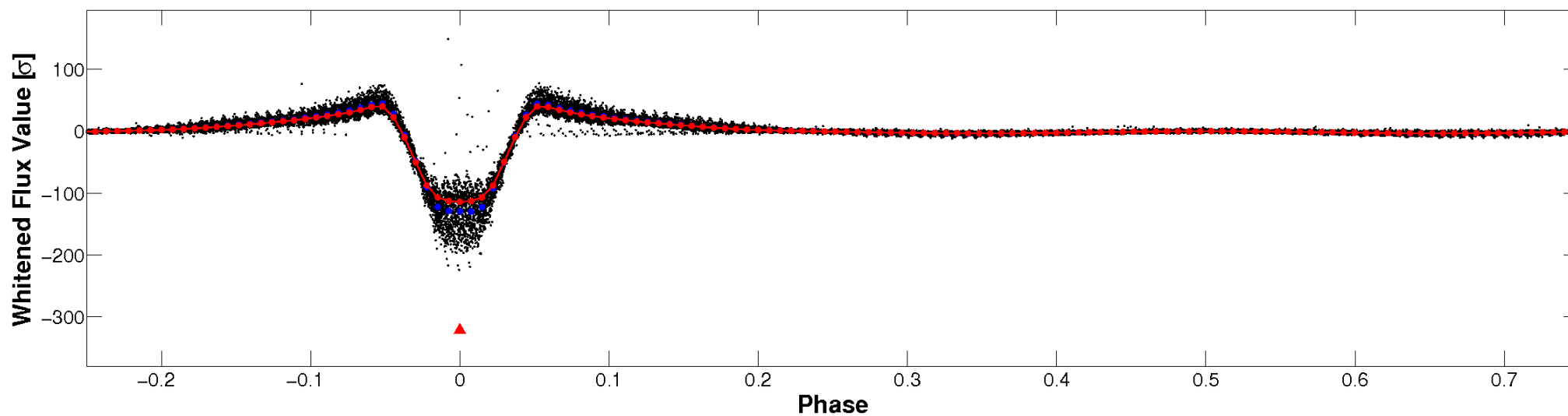


Non-Whitened Vs. Whitened Light Curve

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

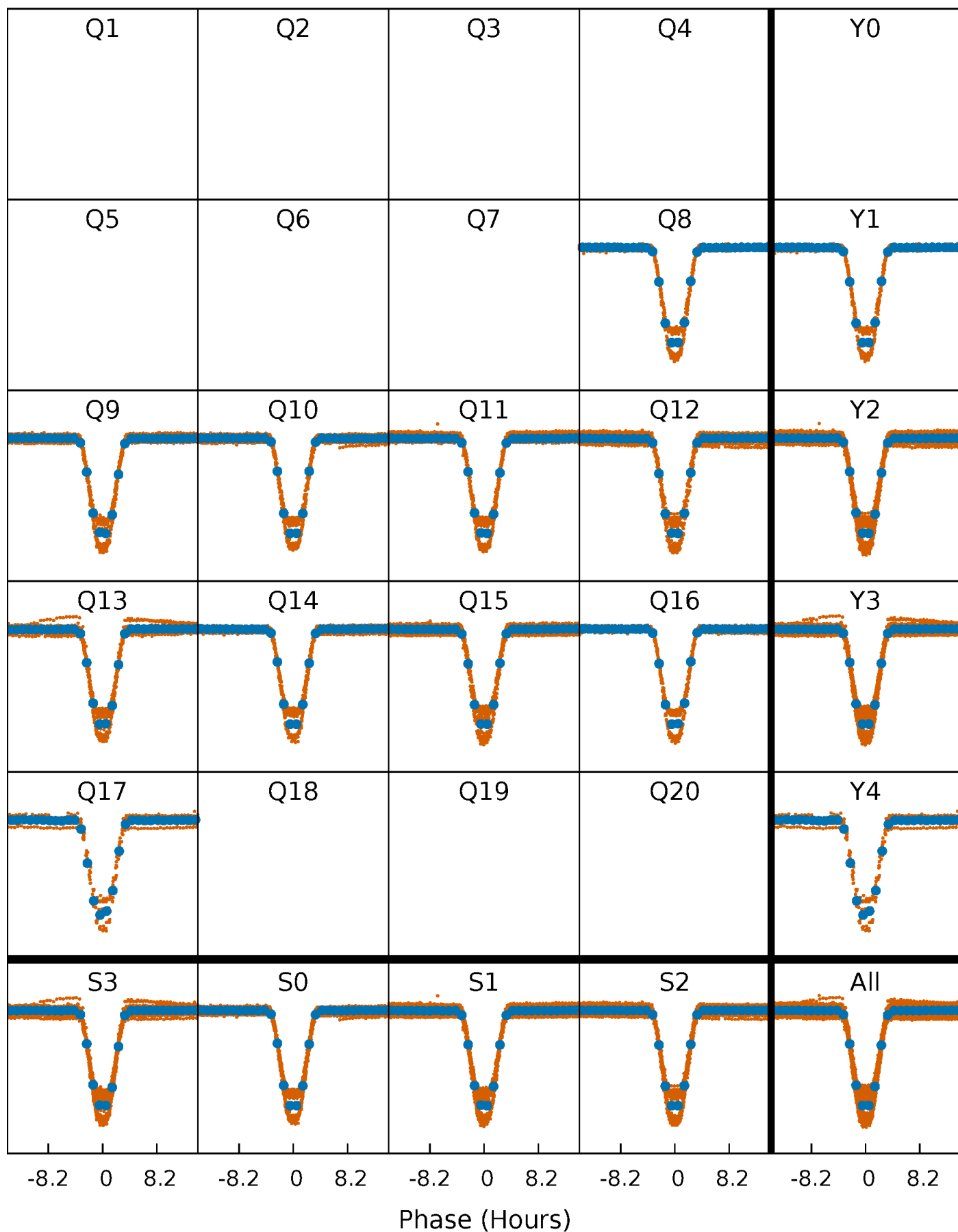


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



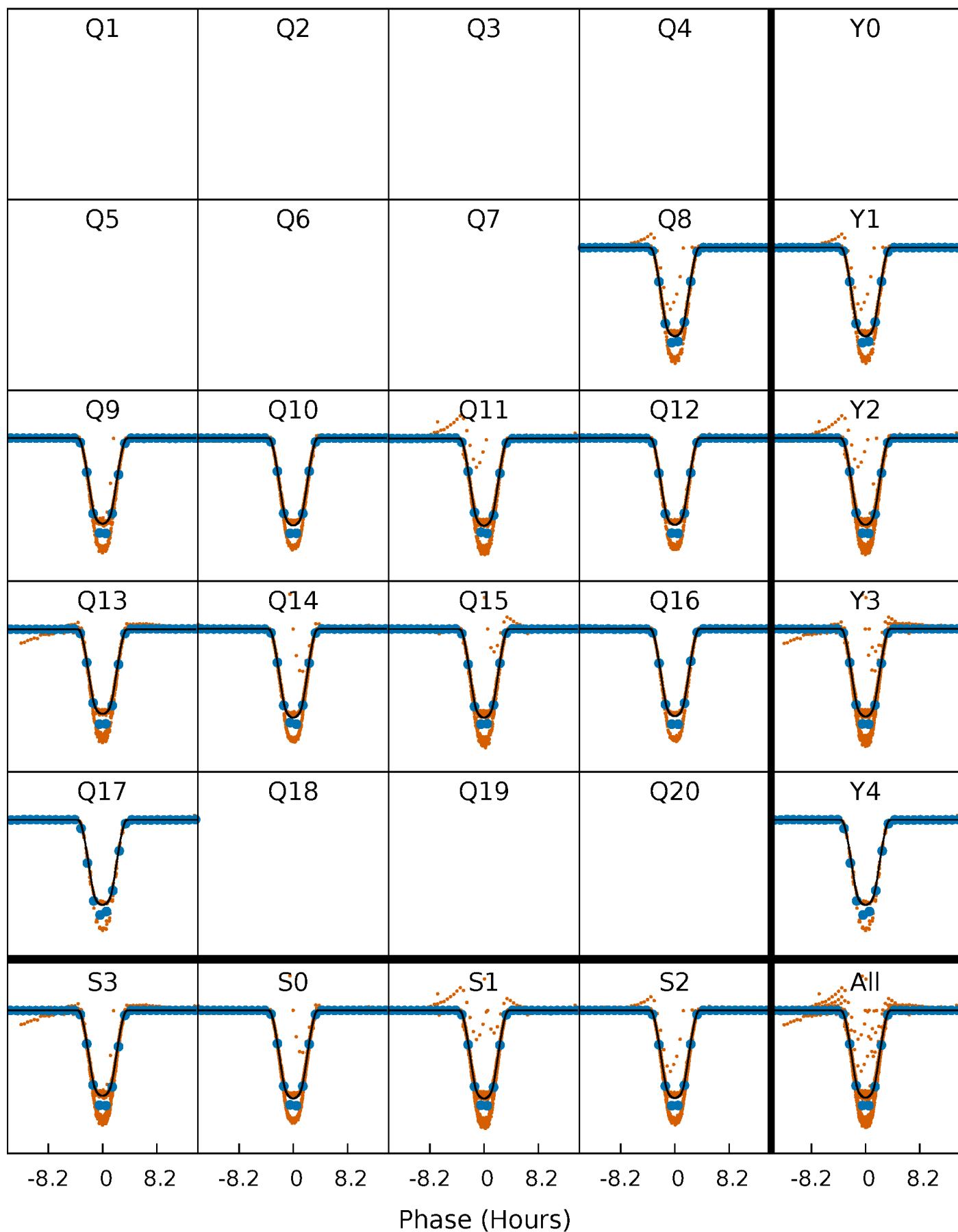
PDC Quarter-Phased Transit Curves

TCE 005730394-01 P= 2.759597 Days $T_0=131.708336$ (BKJD)



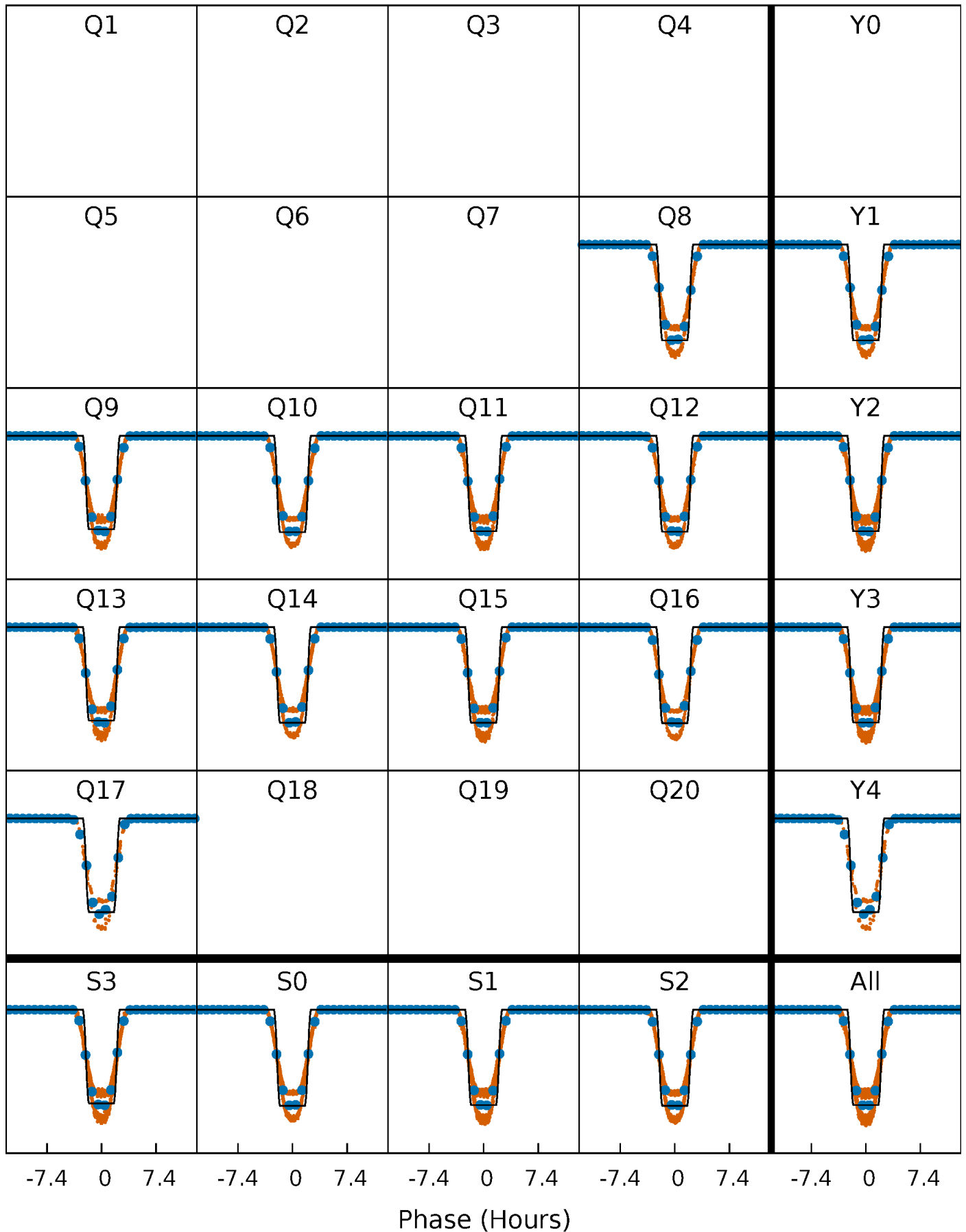
DV Quarter-Phased Transit Curves

TCE 005730394-01 P= 2.759597 Days $T_0=131.708336$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

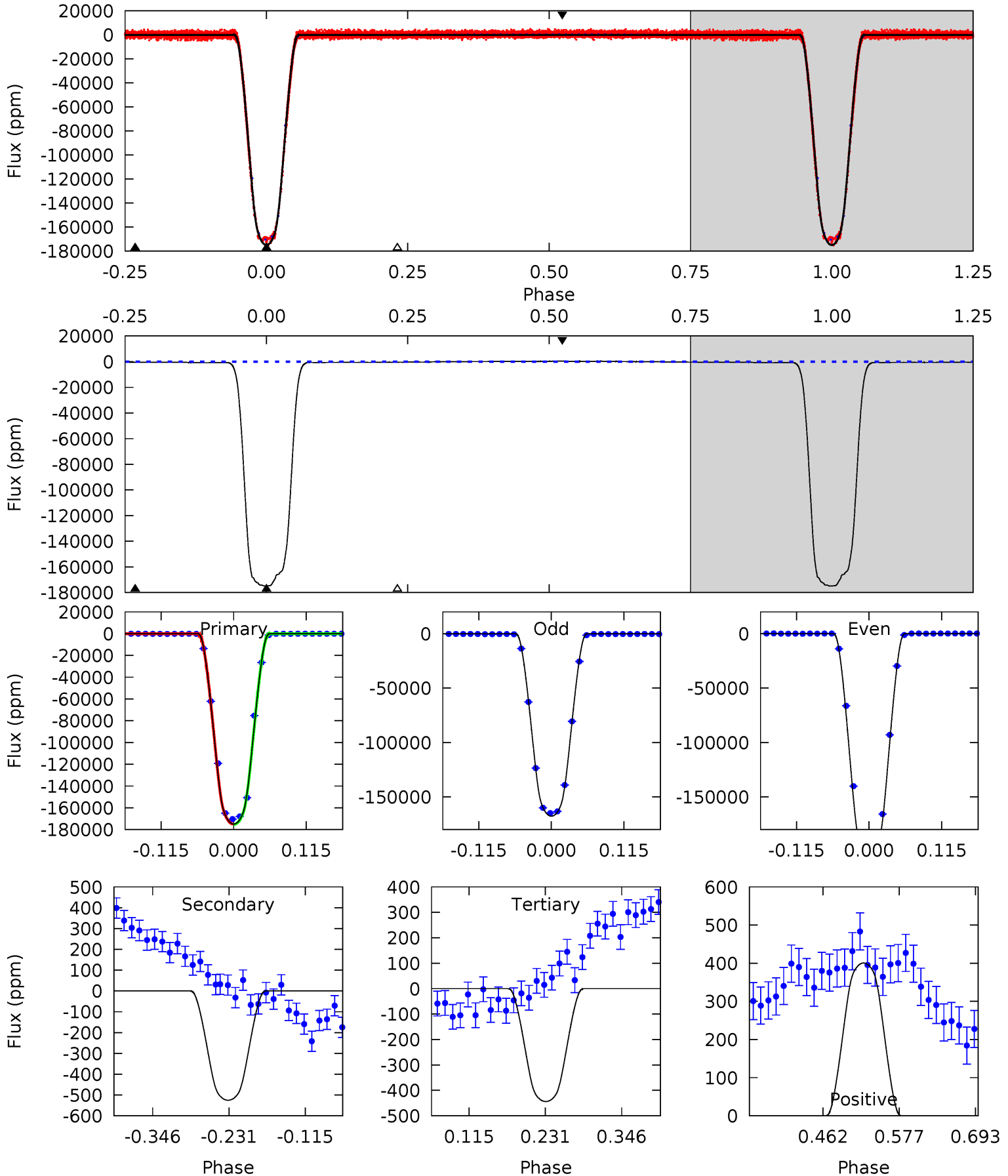
TCE 005730394-01 P= 2.759601 Days $T_0=131.707584$ (BKJD)



DV Model-Shift Uniqueness Test

005730394-01, P = 2.759597 Days, E = 131.708336 Days

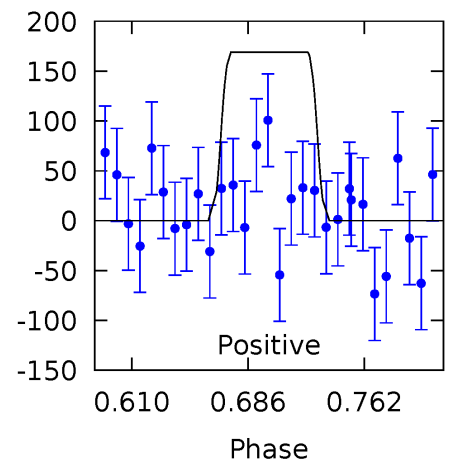
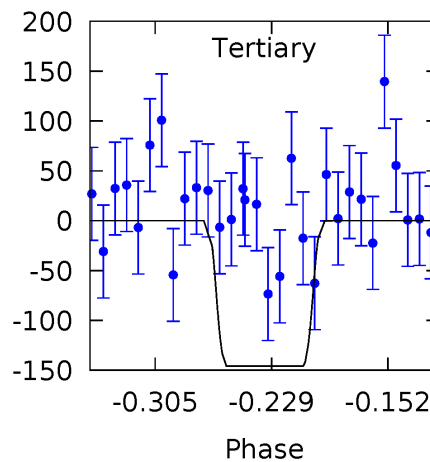
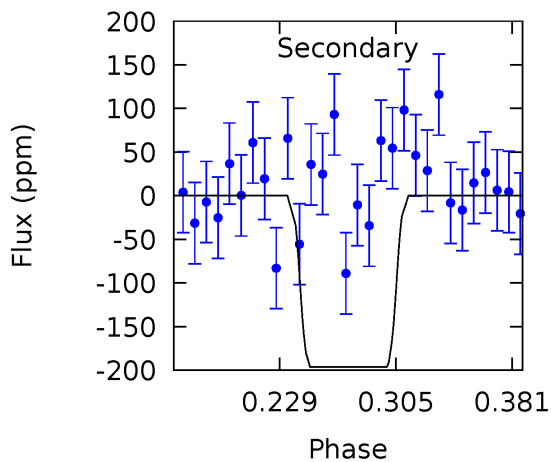
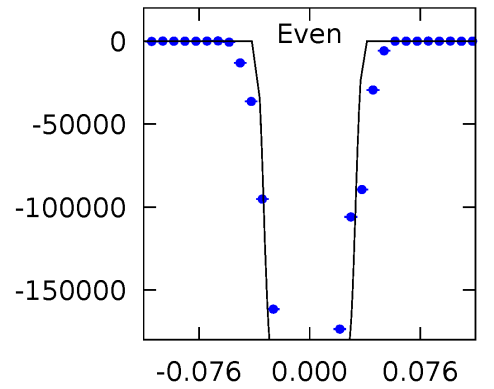
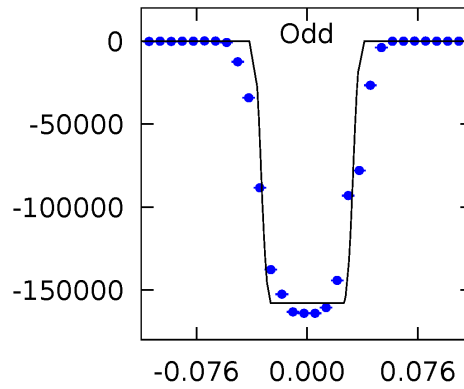
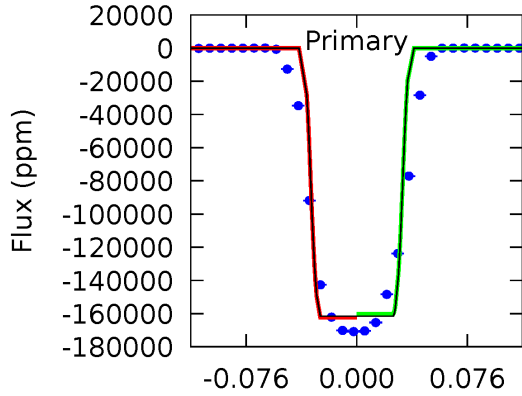
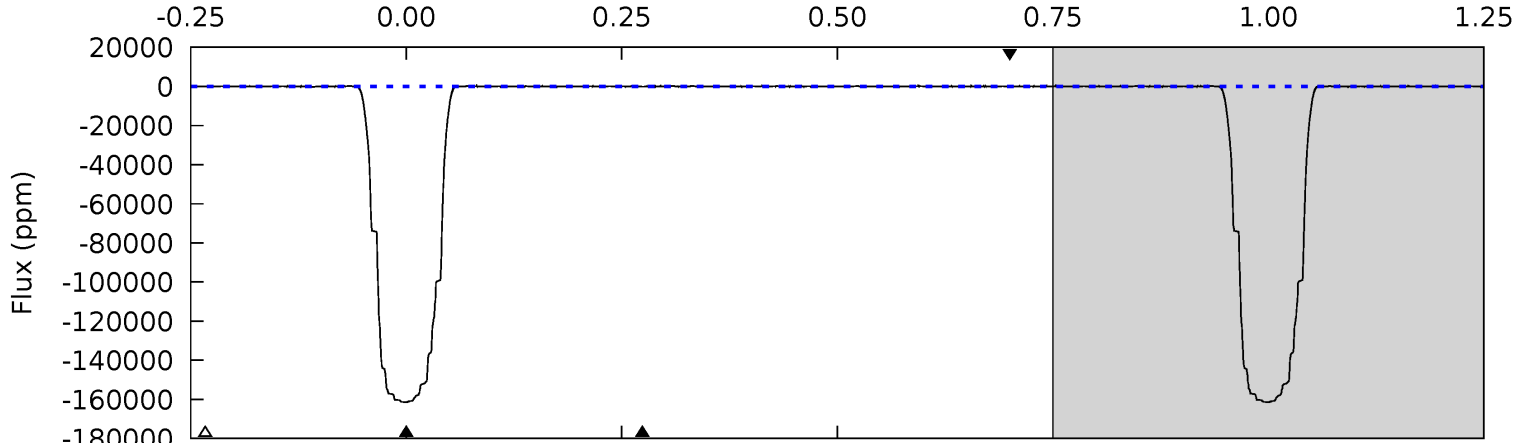
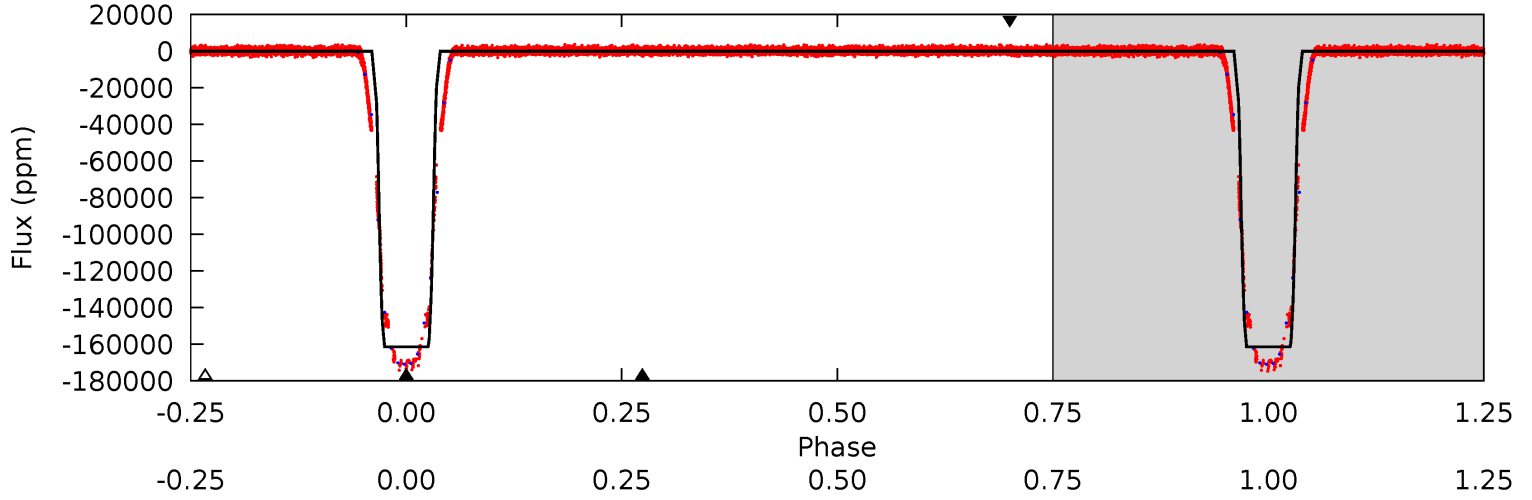
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7376	22.1	18.7	16.9	4.53	1.57	13.1	7357	7359	3.43	5.26	1087	1.05	0.00	0



Alt Model-Shift Uniqueness Test

005730394-01, P = 2.759601 Days, E = 131.707584 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3139	3.81	2.83	3.28	4.62	1.77	1.22	3136	3135	0.98	0.53	895.6	1.06	0.00	20.3



Stellar Parameters For KIC 005730394

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5324^{+204}_{-167}	$4.439^{+0.124}_{-0.201}$	$-0.060^{+0.300}_{-0.300}$	$0.897^{+0.225}_{-0.138}$	$0.805^{+0.115}_{-0.067}$	$1.572^{+0.880}_{-0.768}$
	+4%/-3%	+3%/-5%	+500%/-500%	+25%/-15%	+14%/-8%	+56%/-49%
Source	KIC0	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 005730394-01 / KOI 3603.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-525 ± 24	$38.87^{+5.66}_{-4.07}$	1669^{+122}_{-106}	-1894^{+3488}_{-197}	$0.250^{+0.061}_{-0.058}$
Alt.	-196 ± 51	$42.66^{+6.69}_{-3.82}$	1660^{+121}_{-101}	-2208^{+83}_{-86}	$0.072^{+0.028}_{-0.023}$

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 $A_{obs} \gg 1.0$

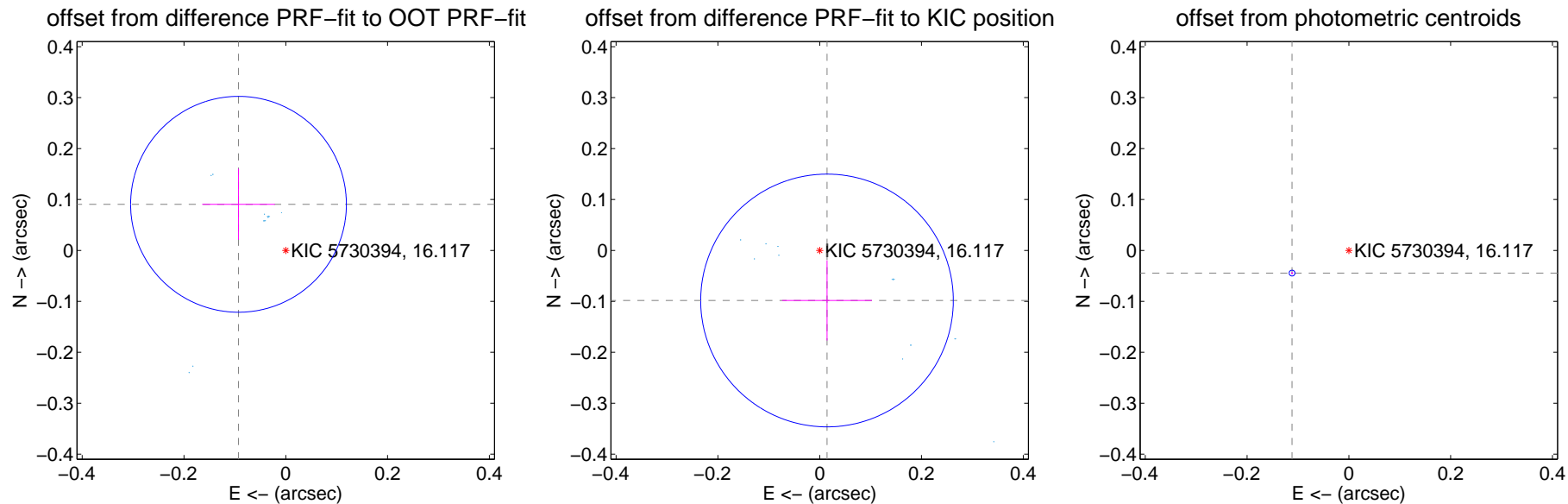
DV Centroid Data

Supplemental centroid analysis for 005730394-01. Kepler magnitude: 16.12. Transit SNR 3451.77

There are 10 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.22 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.130 ± 0.071	1.84	0.093 ± 0.071	0.091 ± 0.070
PRF-fit source offset from KIC position	0.099 ± 0.083	1.20	-0.014 ± 0.088	-0.098 ± 0.079
photometric centroid source offset	0.12 ± 0.00	63.05	0.11 ± 0.00	-0.04 ± 0.00

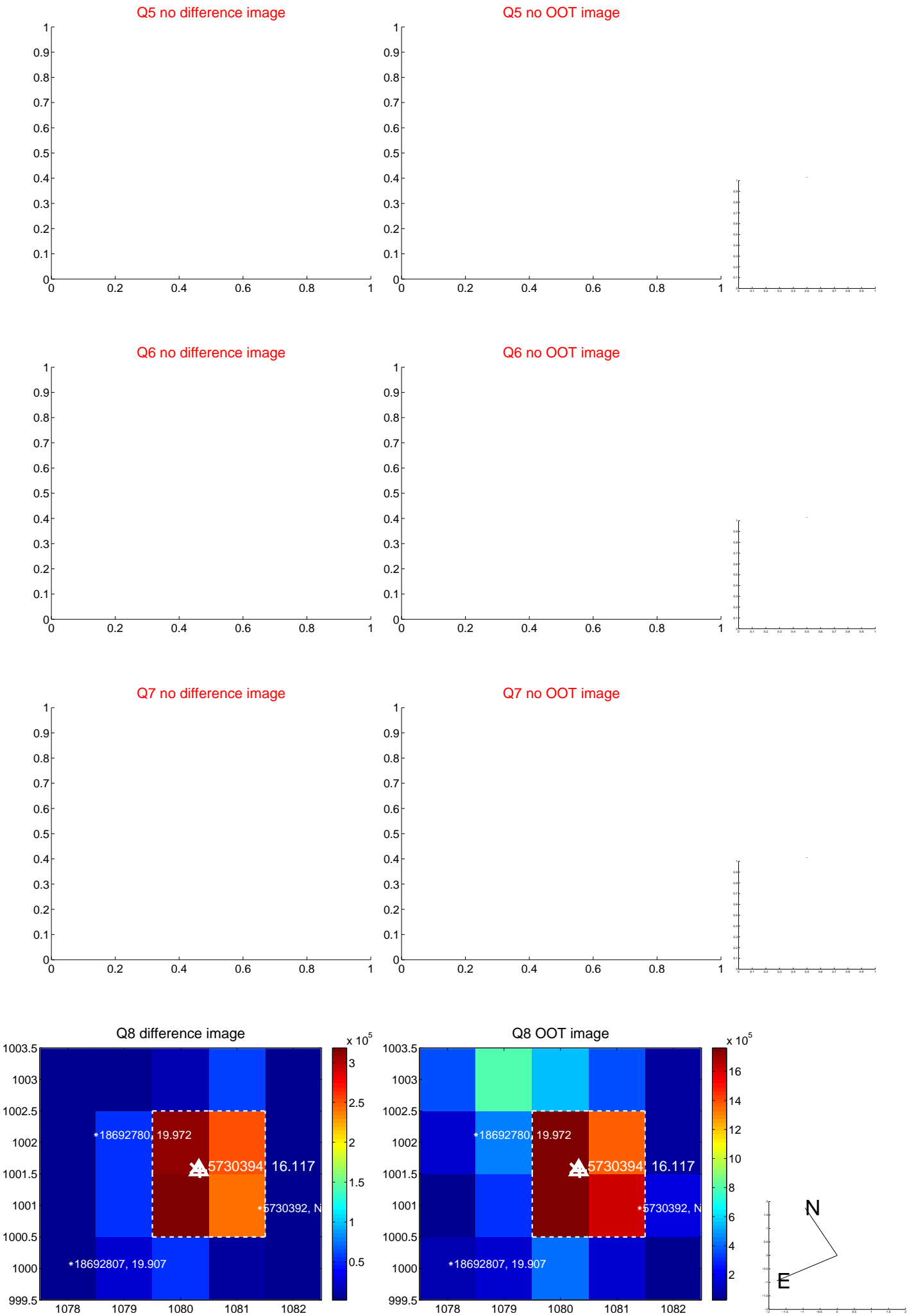


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

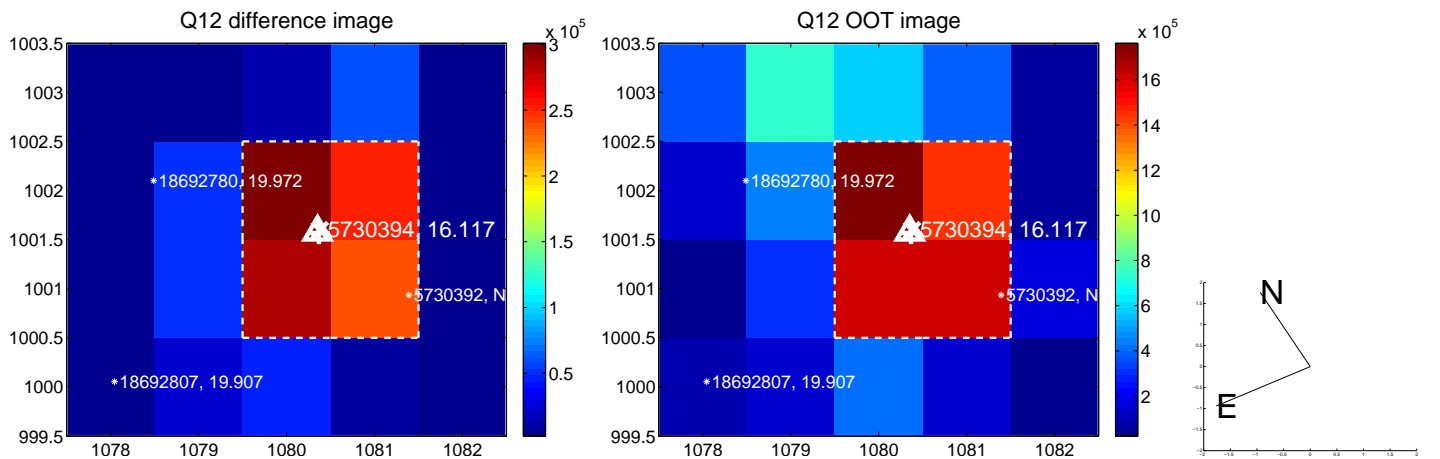
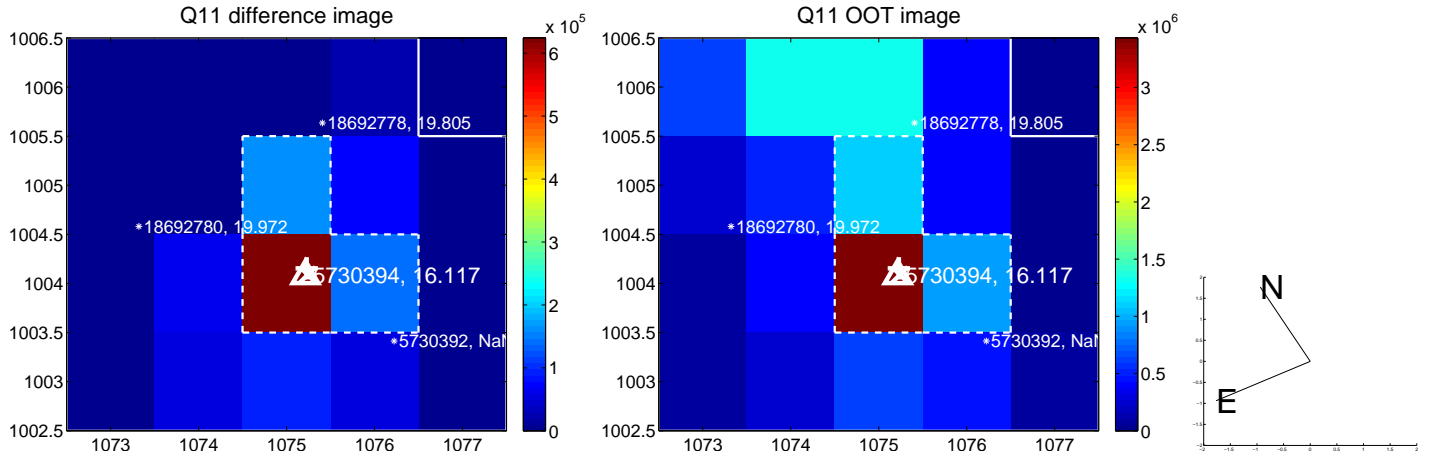
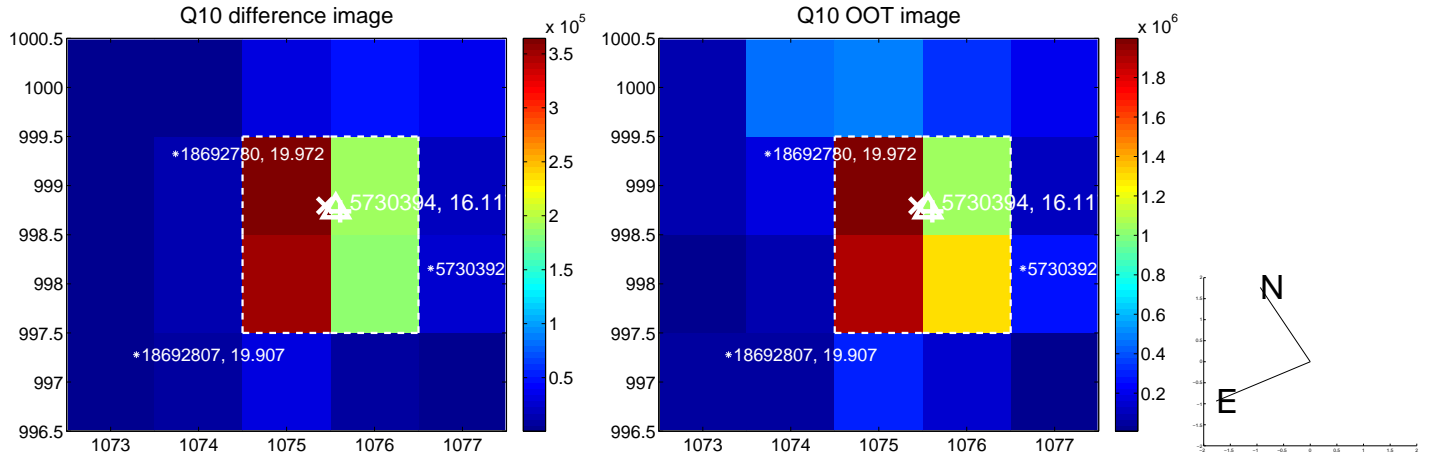
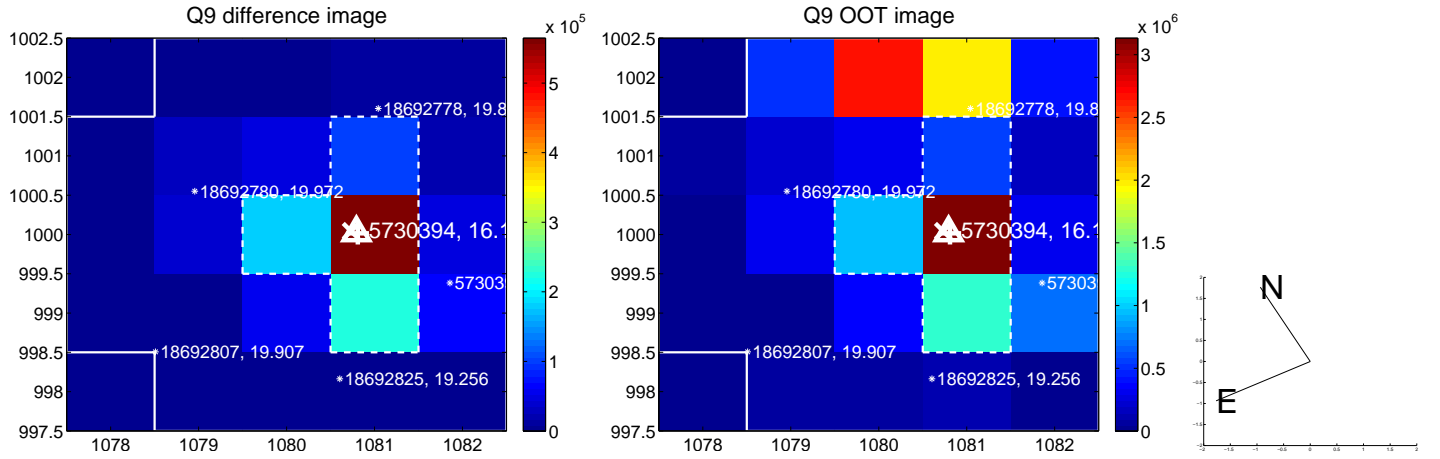
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



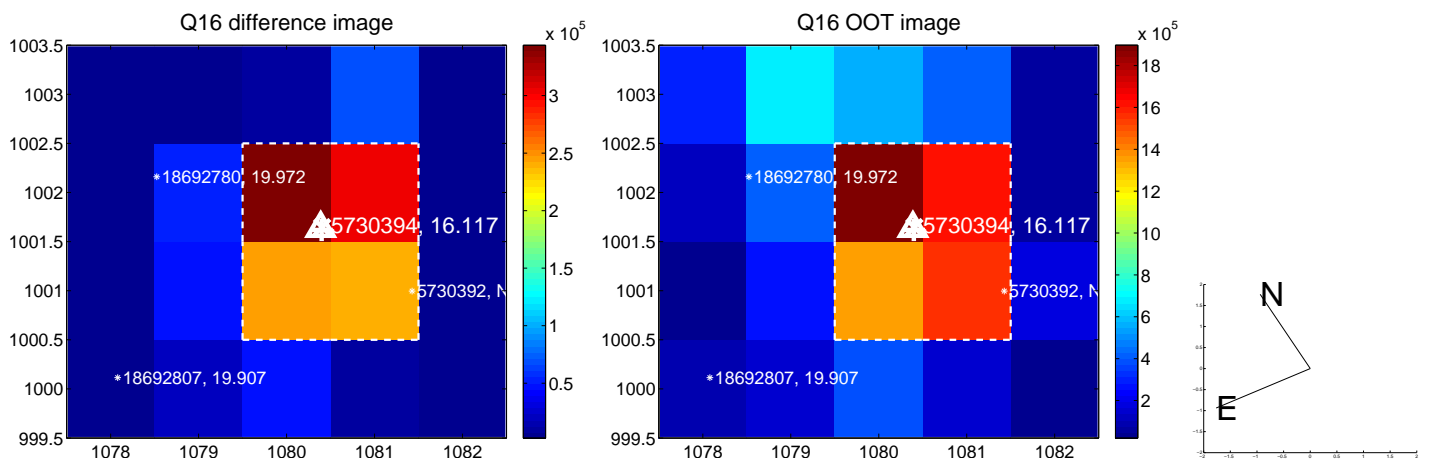
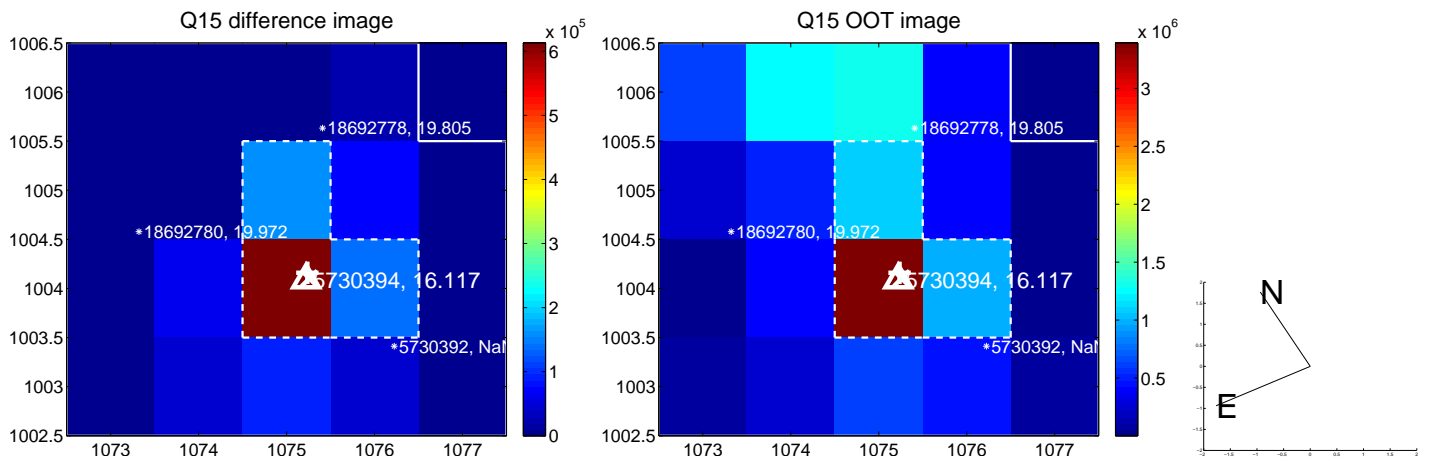
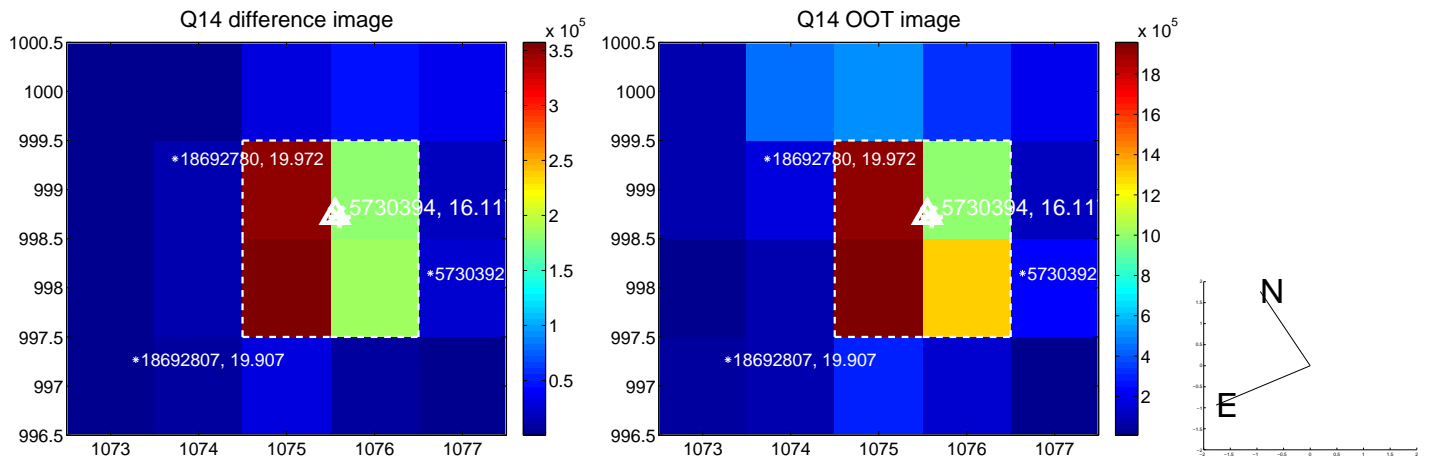
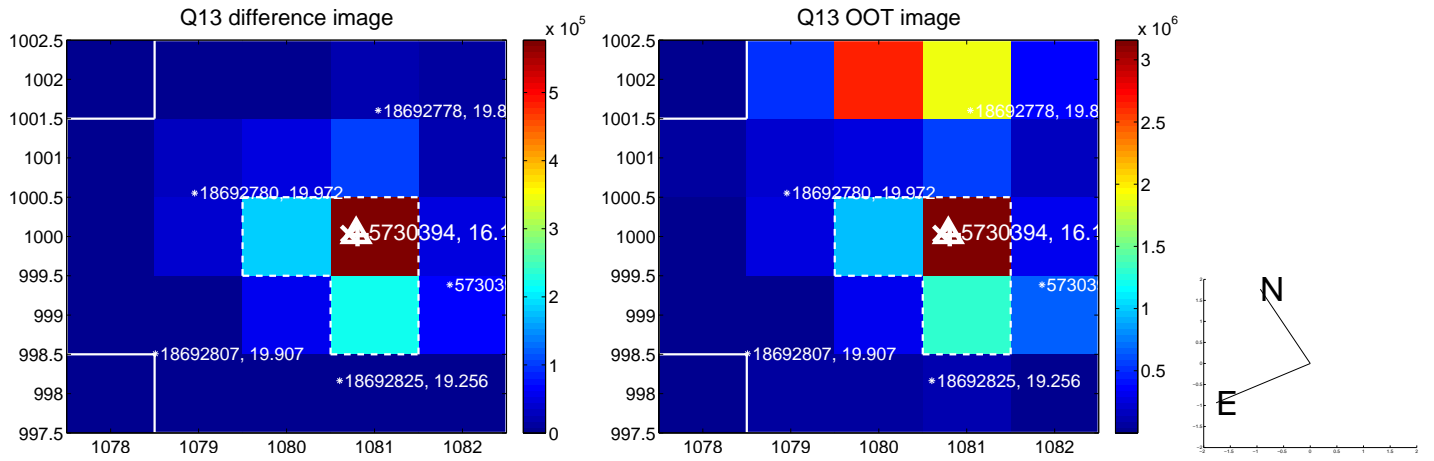
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



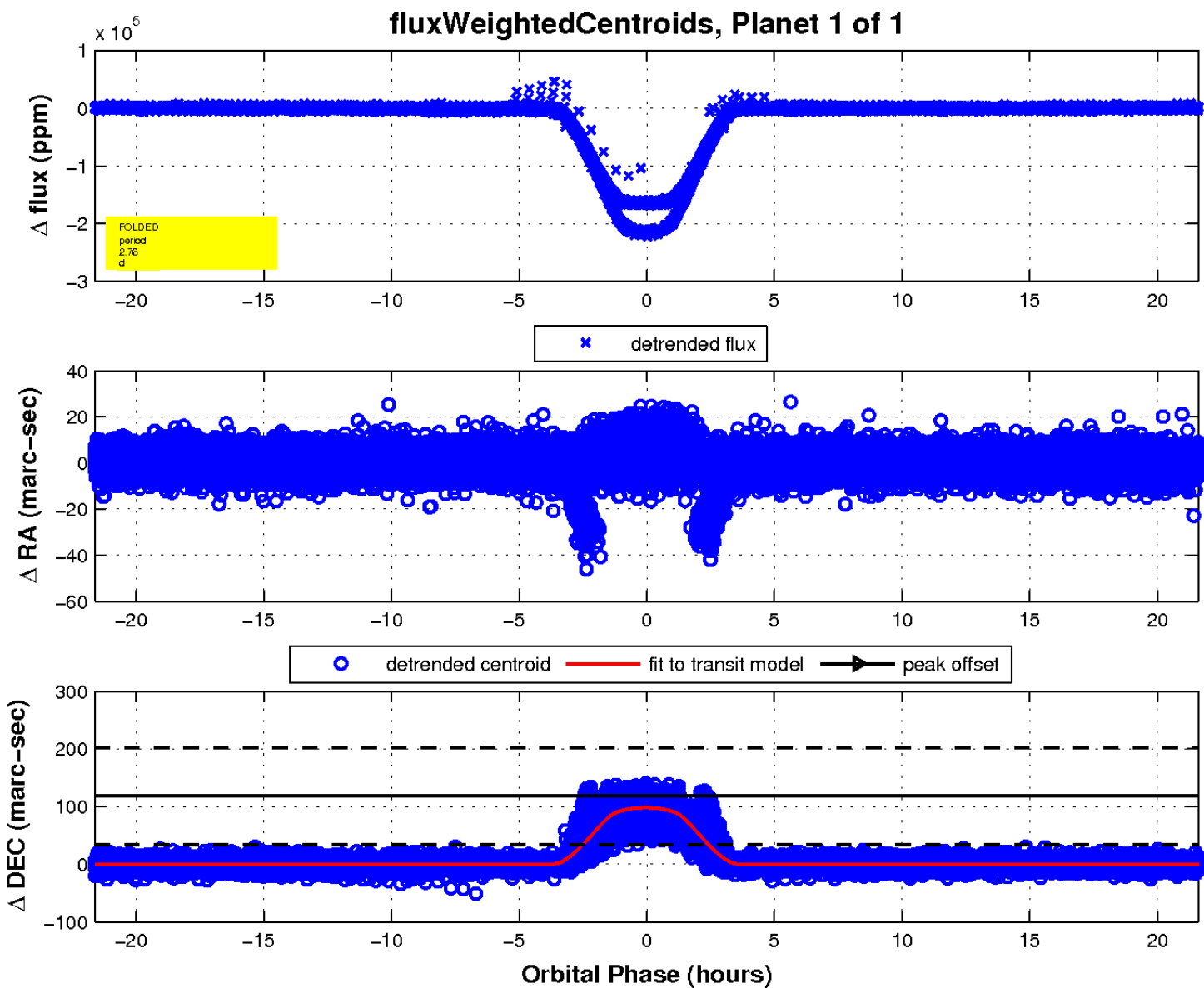
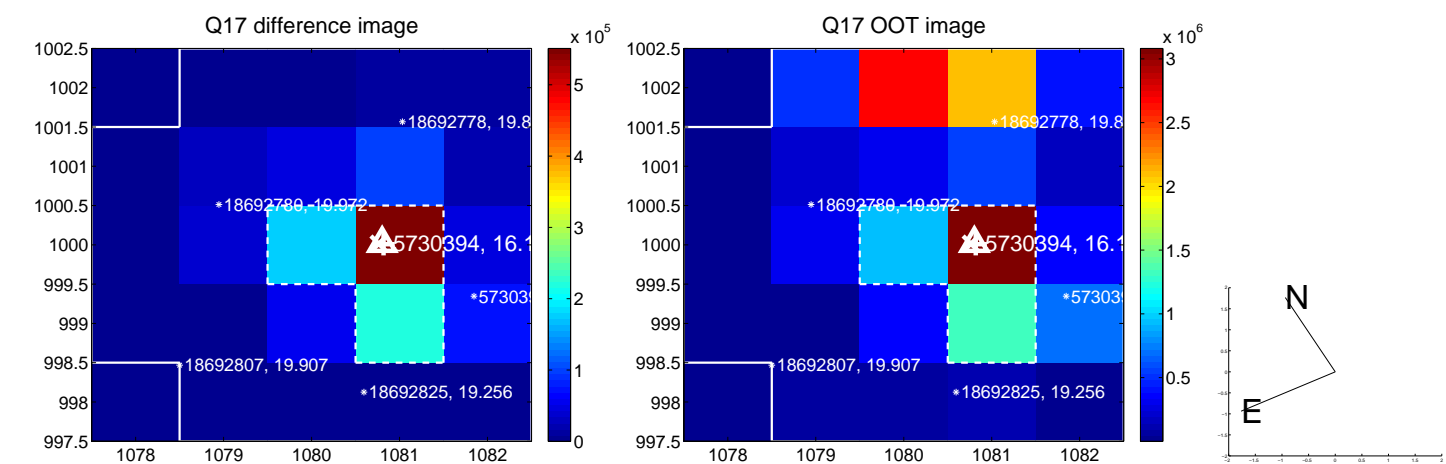
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

