

KIC 007377033

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})
007377033-01	OBS	0882.01	1.956813	131.557796	22353.3	1.727	1443.3	1019.1	0.60	5209	9.02	358.69

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007377033-01	OBS	FP	0.00	0	1	0	0	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.

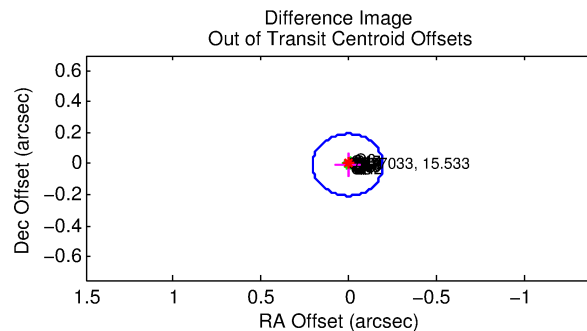
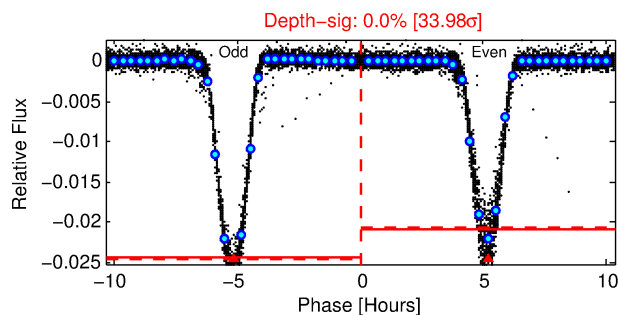
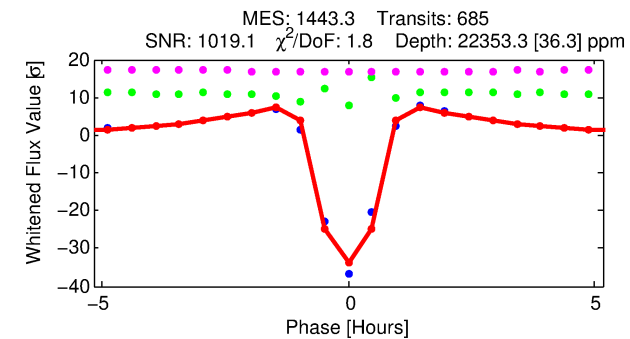
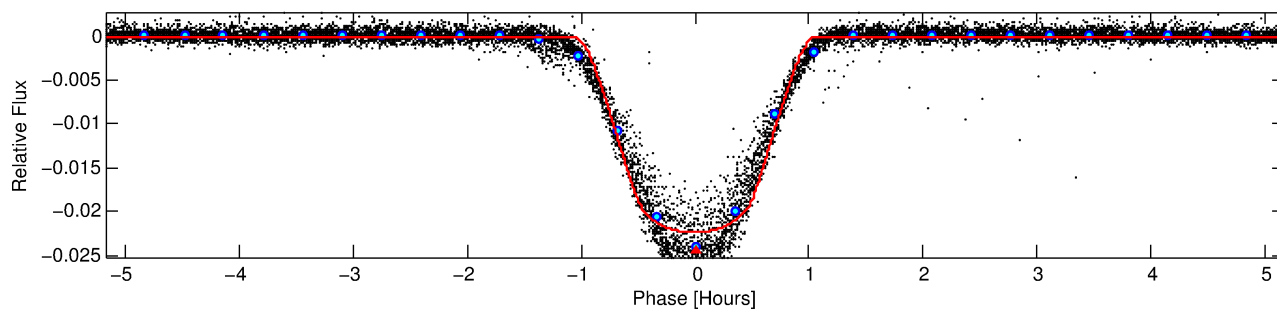
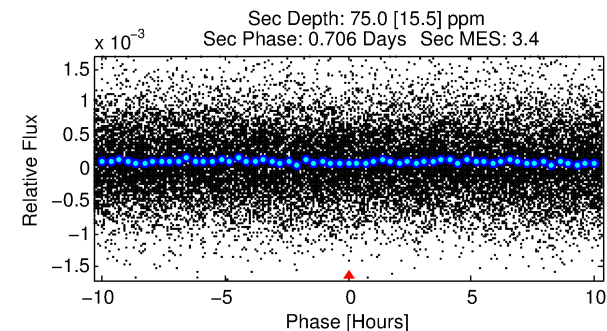
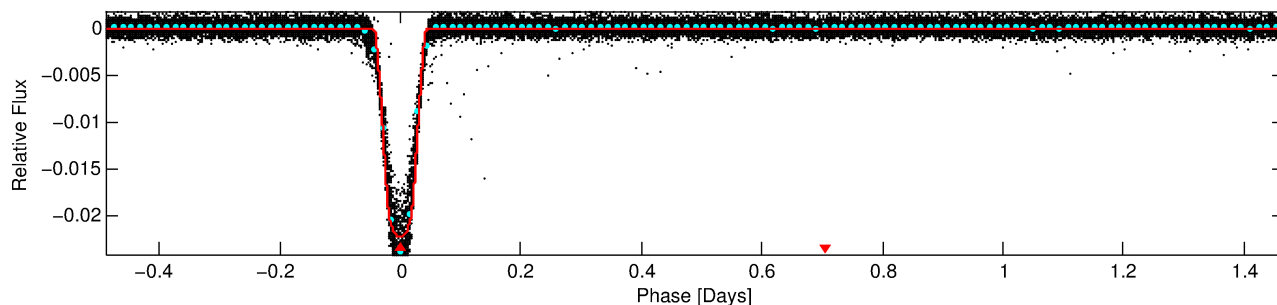
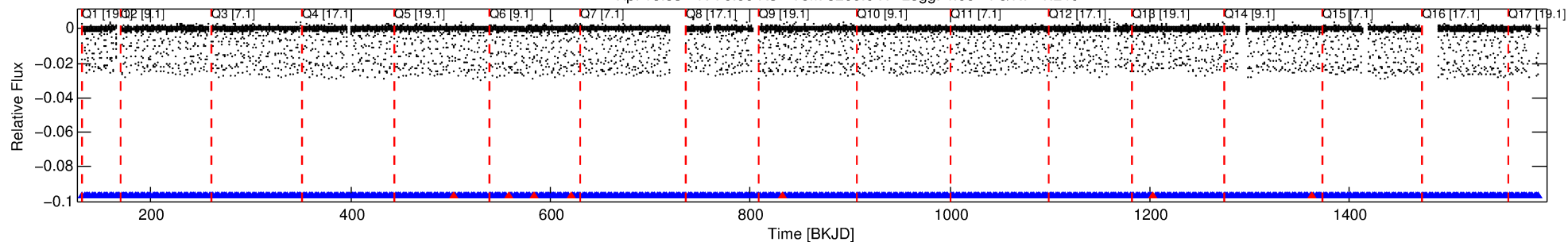
Ephemeris Match Information For 007377033-01

No Significant Match Found

DV One-Page Summary

KIC: 7377033 Candidate: 1 of 1 Period: 1.957 d
KOI: K00882.01 Corr: 0.893

Kp: 15.53 R*: 0.60 Rs Teff: 5209.0 K Logg: 4.66 Fe/H: -1.240



DV Fit Results:

Period = 1.95681 [0.00000] d
Epoch = 131.5578 [0.0000] BKJD
Rp/R* = 0.1371 [0.0008]
a/R* = 9.77 [0.24]
b = 0.16 [0.15]
Seff = 358.69 [60.71]
Teq = 1110 [47] K
Rp = 9.02 [0.62] Re
a = 0.0259 [0.0017] AU
Ag = 0.34 [0.08] [-8.37σ]
Teff = 1309 [80] K [2.15σ]

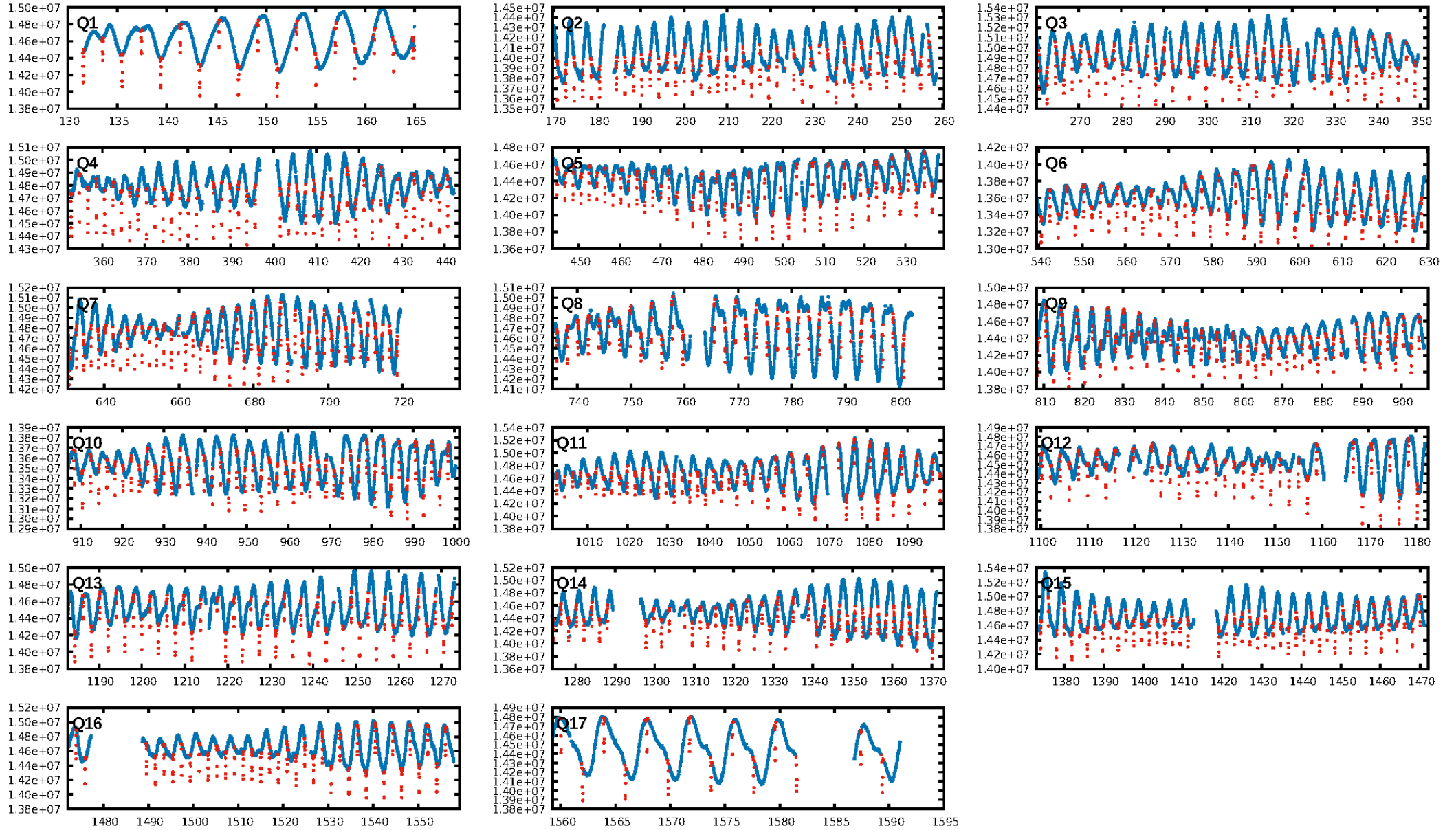
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.99 [646/653]
GhostDiagnostic-chr: 2.263
Centroid-sig: 0.0%
Centroid-so: 0.103 arcsec [13.54σ]
OotOffset-rm: 0.010 arcsec [0.15σ]
KicOffset-rm: 0.063 arcsec [0.92σ]
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]

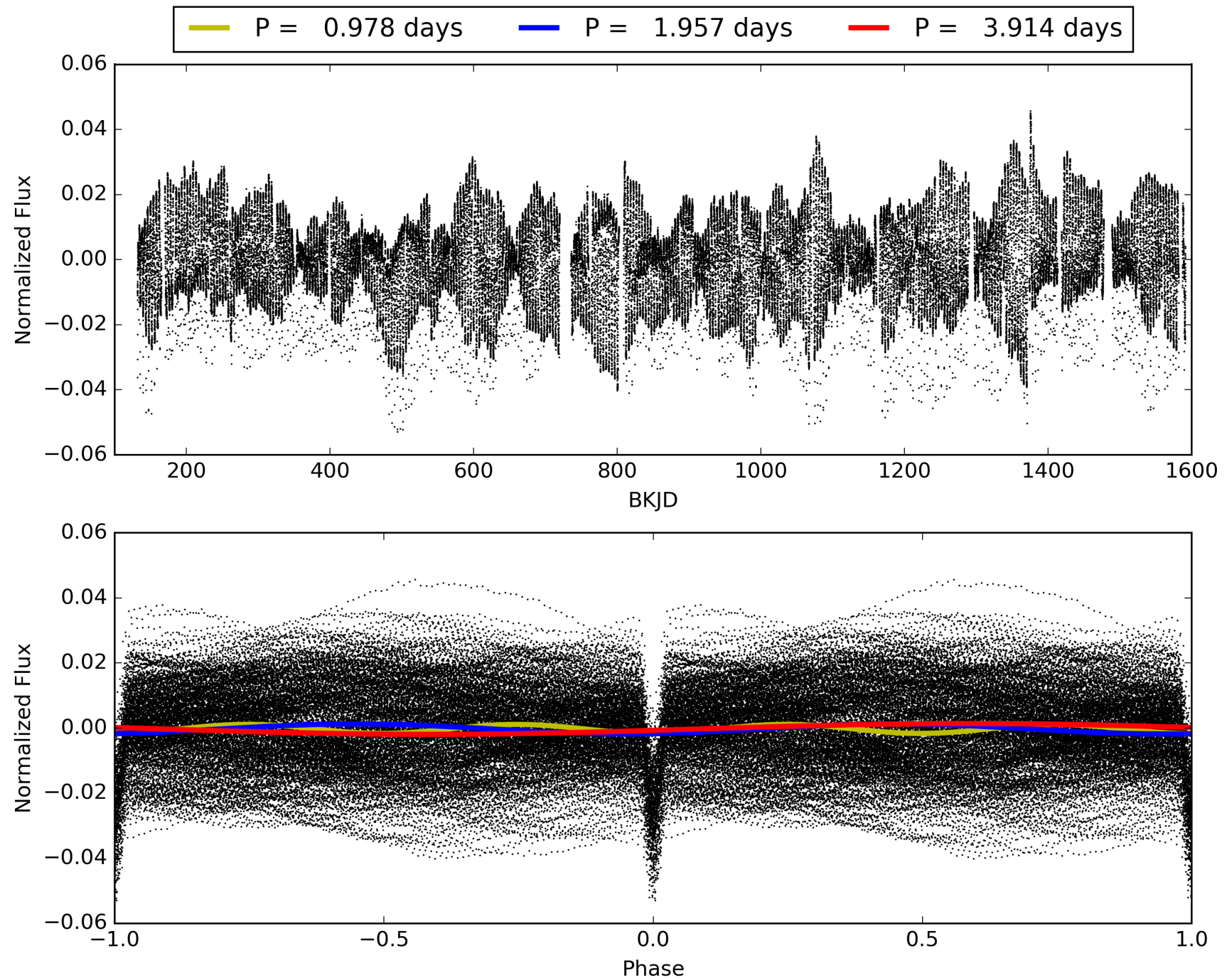
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 19:26:10 Z

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

TCE 007377033-01, PDC Light Curves

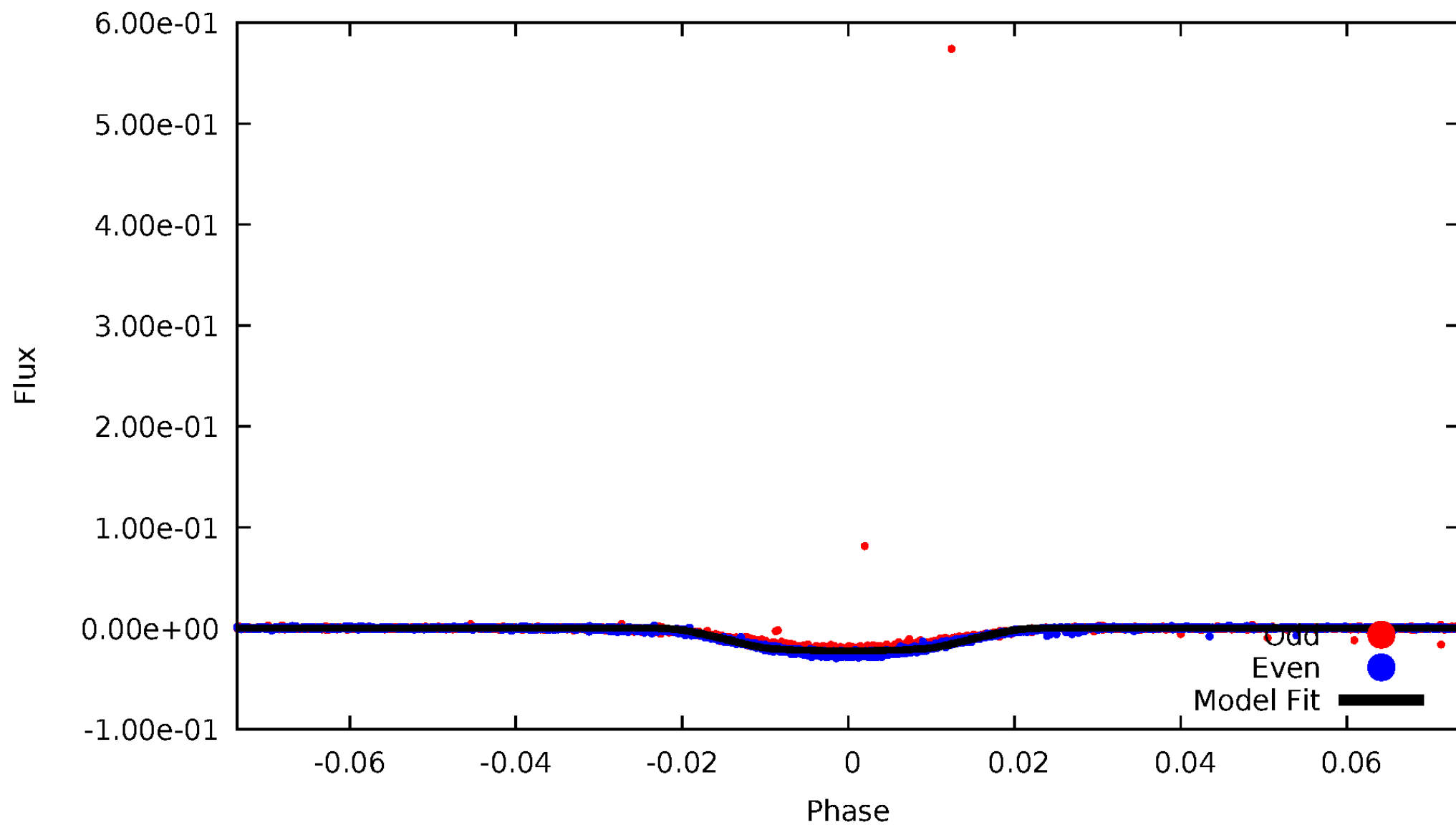


TCE 007377033-01



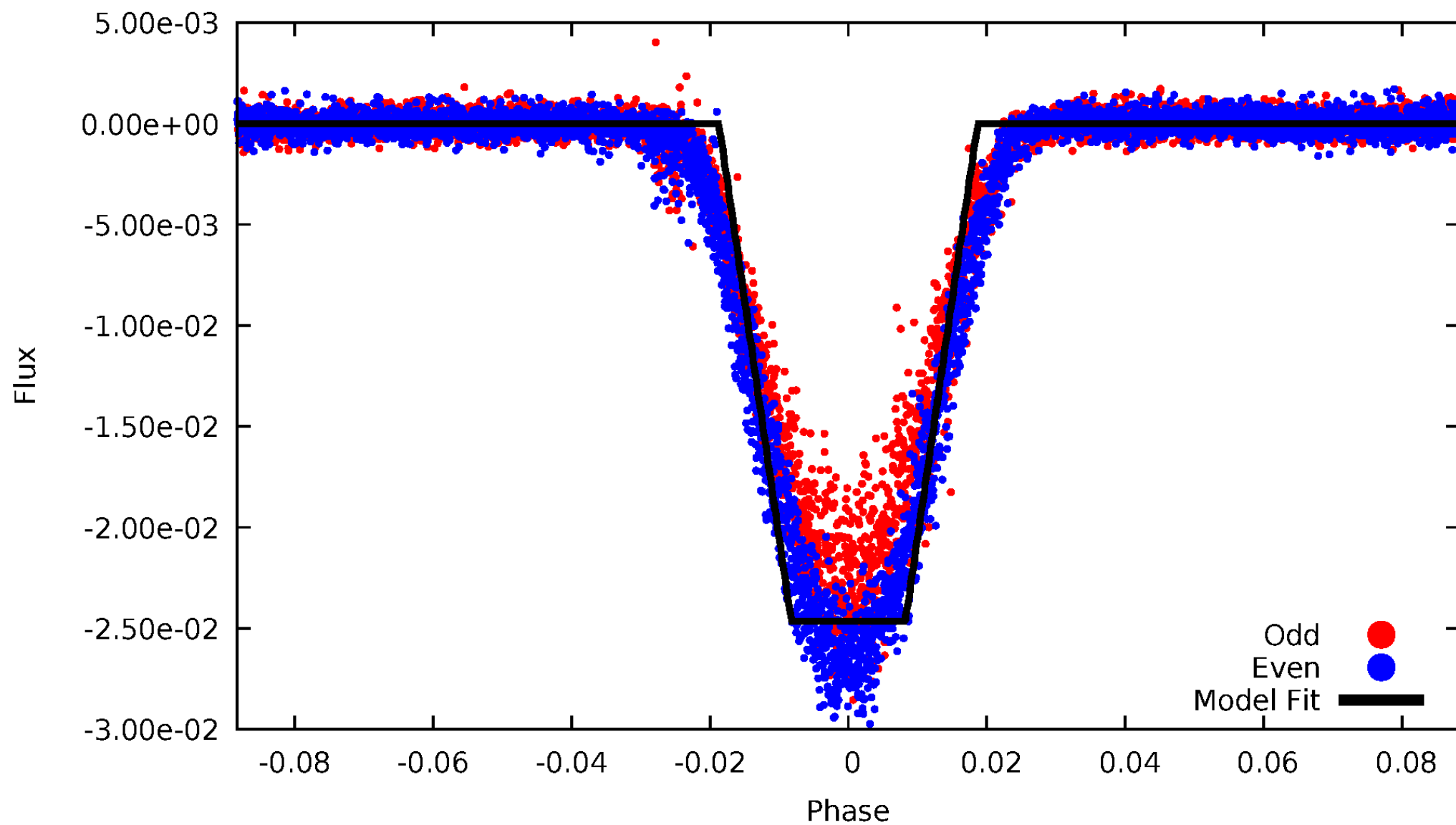
DV Odd/Even

TCE 007377033-01



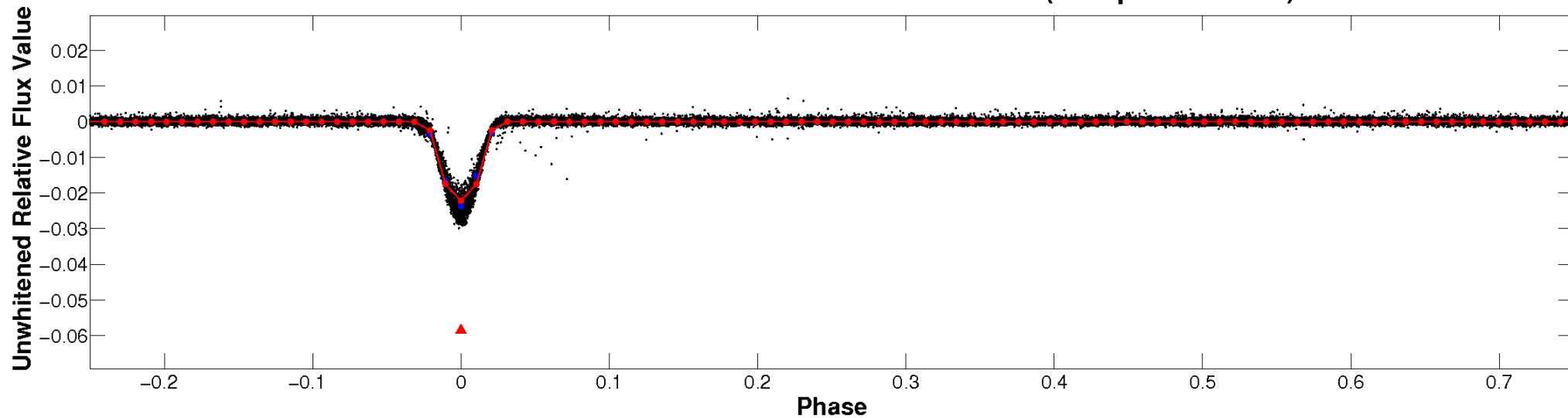
ALT Odd/Even

TCE 007377033-01

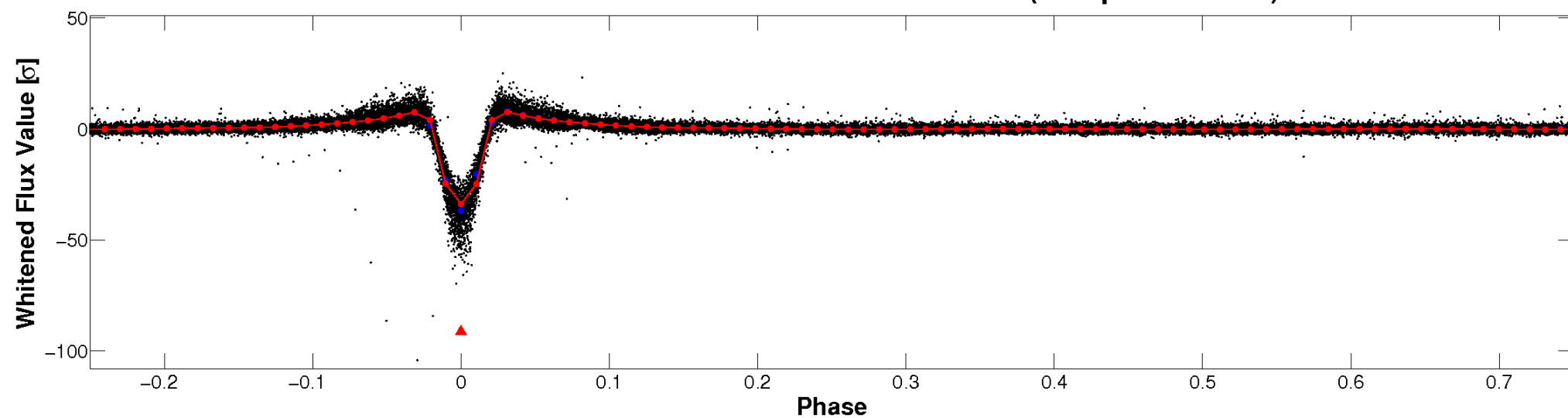


Non-Whitened Vs. Whitened Light Curve

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

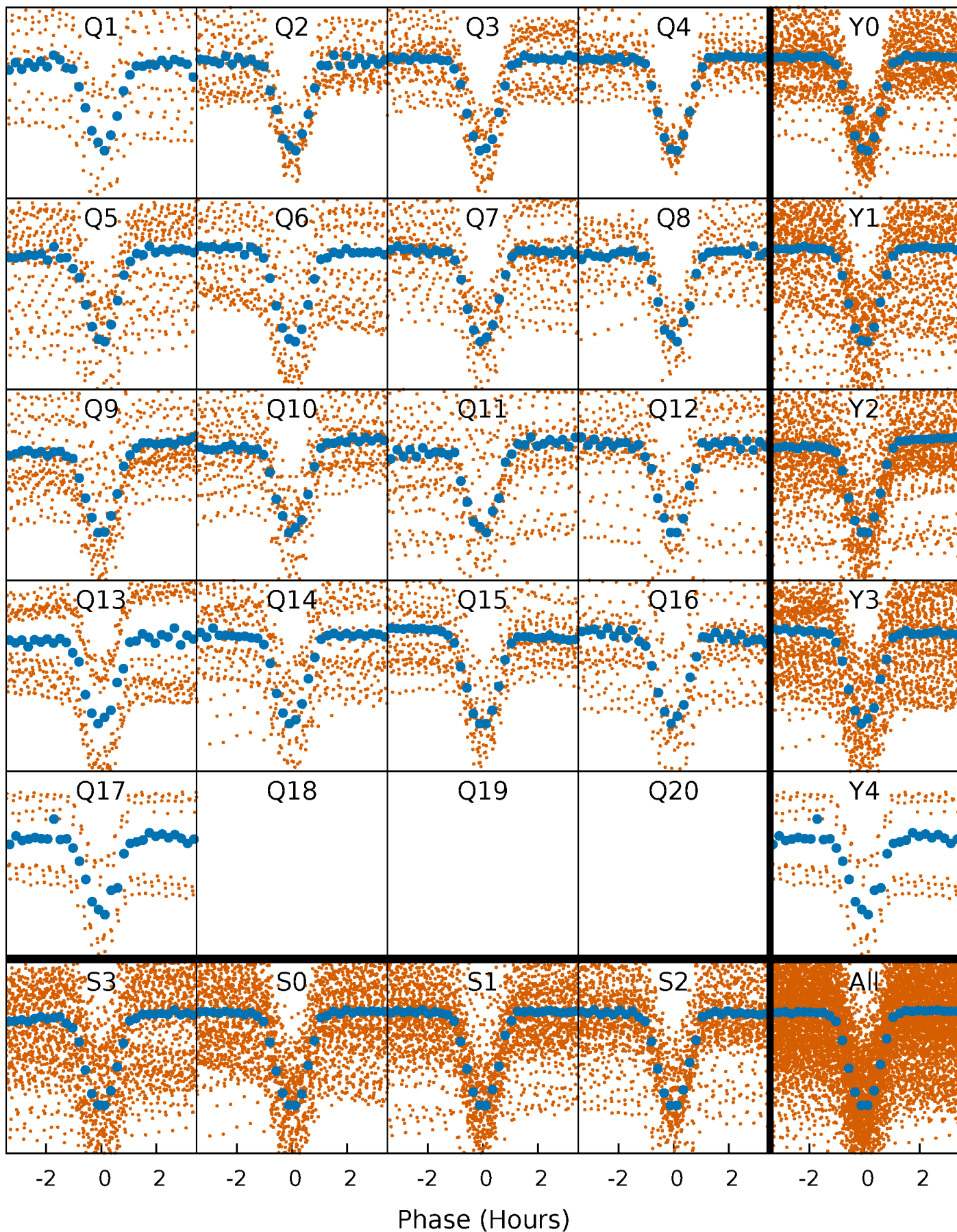


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



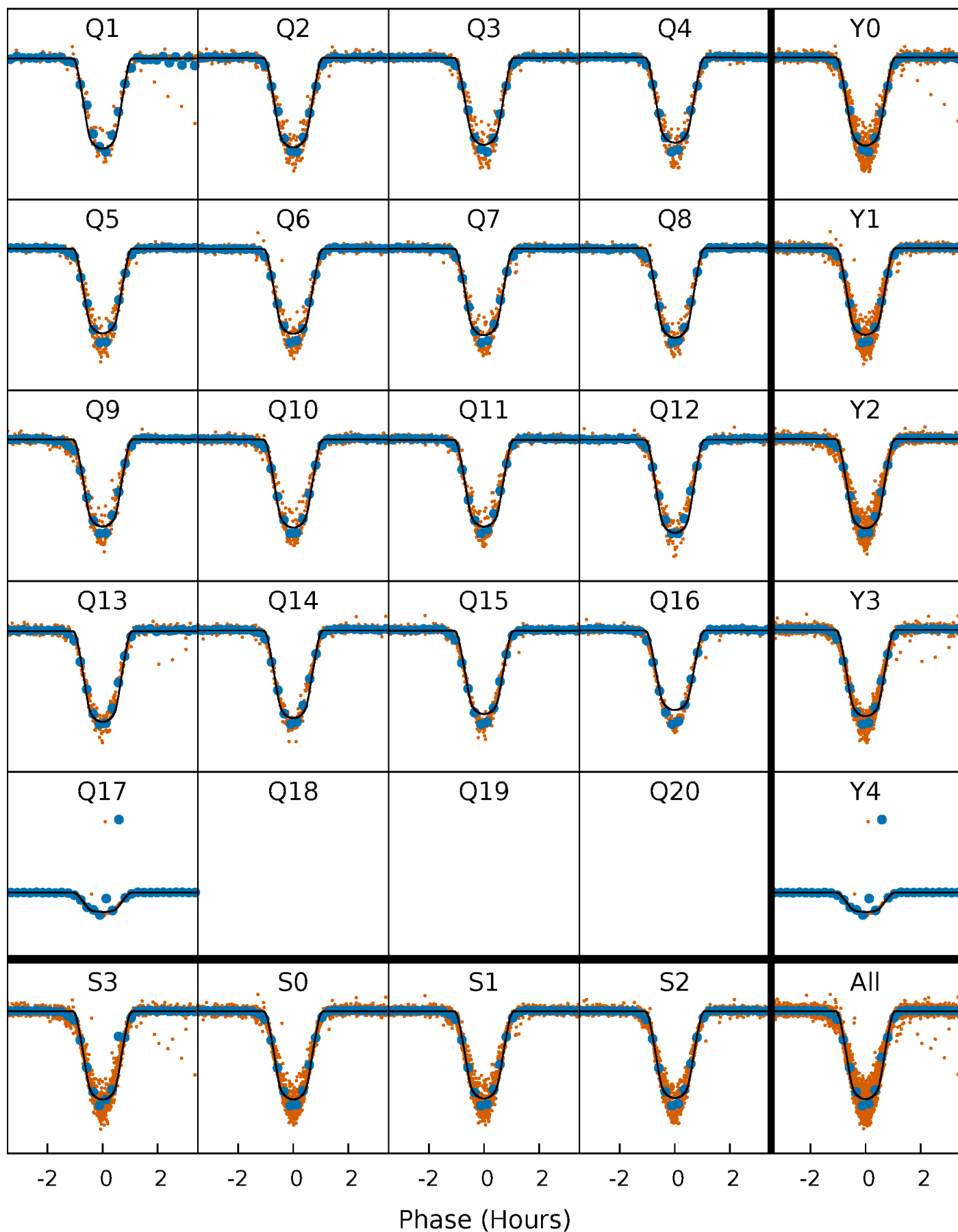
PDC Quarter-Phased Transit Curves

TCE 007377033-01 P= 1.956813 Days $T_0=131.557796$ (BKJD)



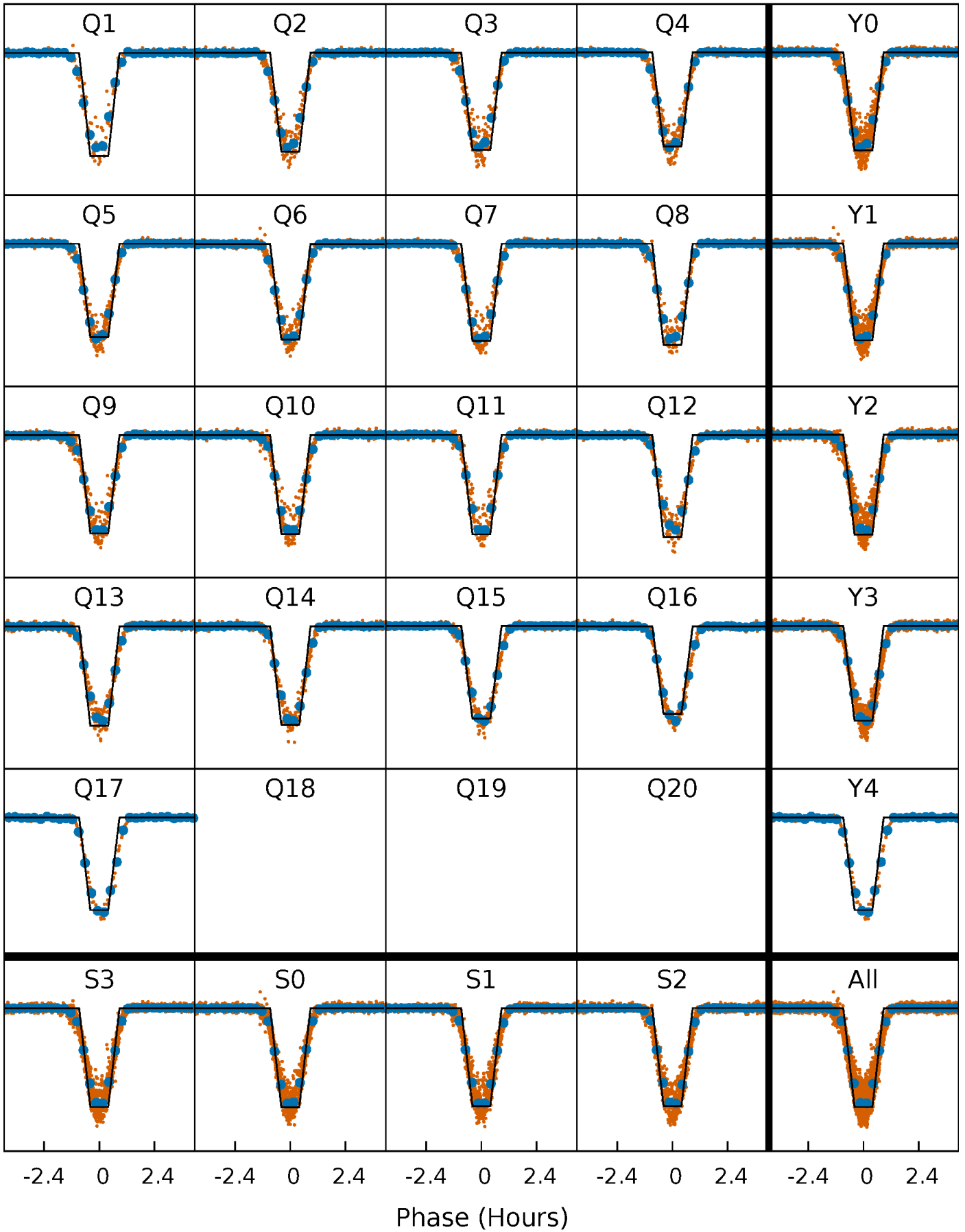
DV Quarter-Phased Transit Curves

TCE 007377033-01 P= 1.956813 Days $T_0=131.557796$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

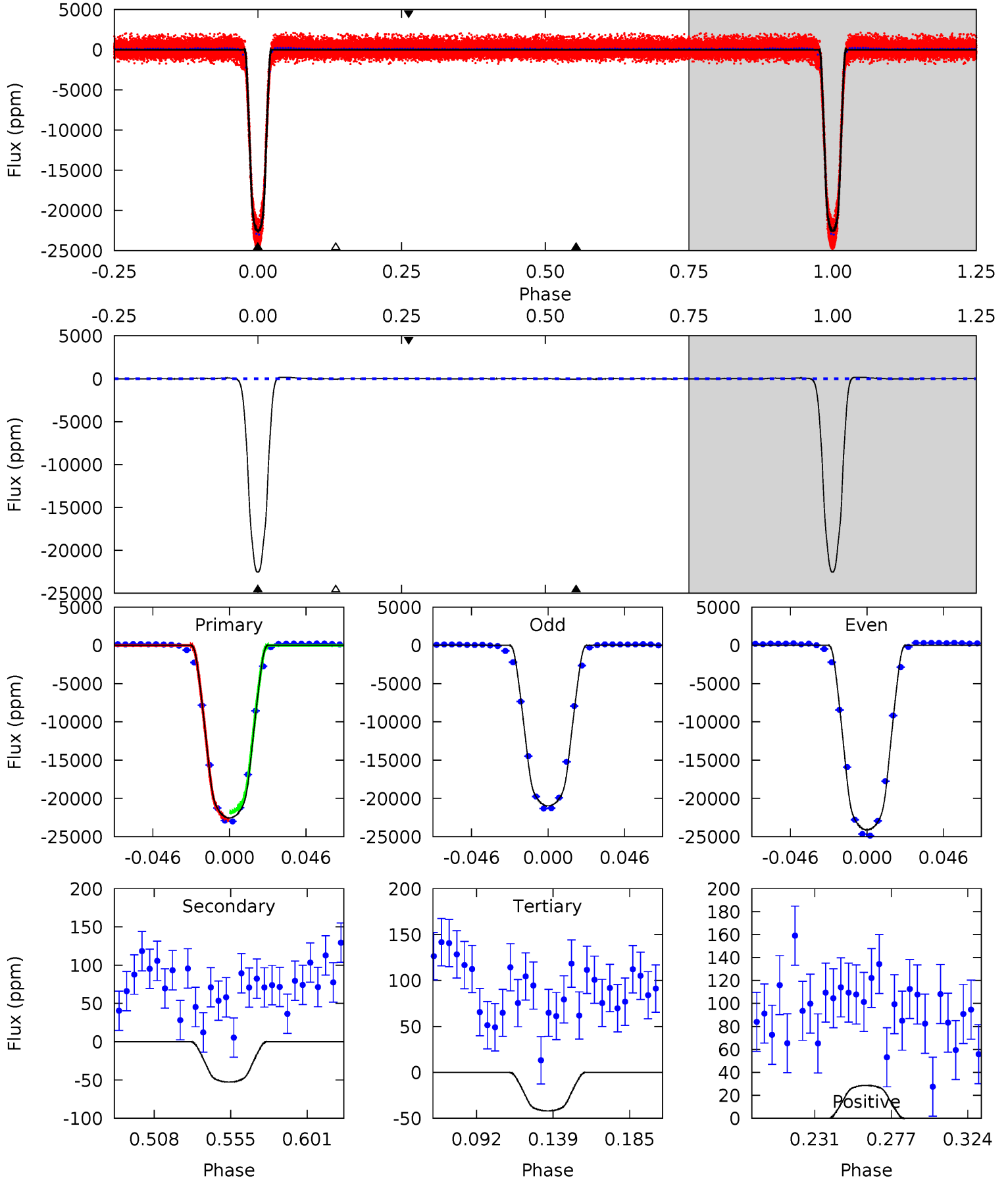
TCE 007377033-01 P= 1.956802 Days $T_0=131.561338$ (BKJD)



DV Model-Shift Uniqueness Test

007377033-01, P = 1.956813 Days, E = 129.600983 Days

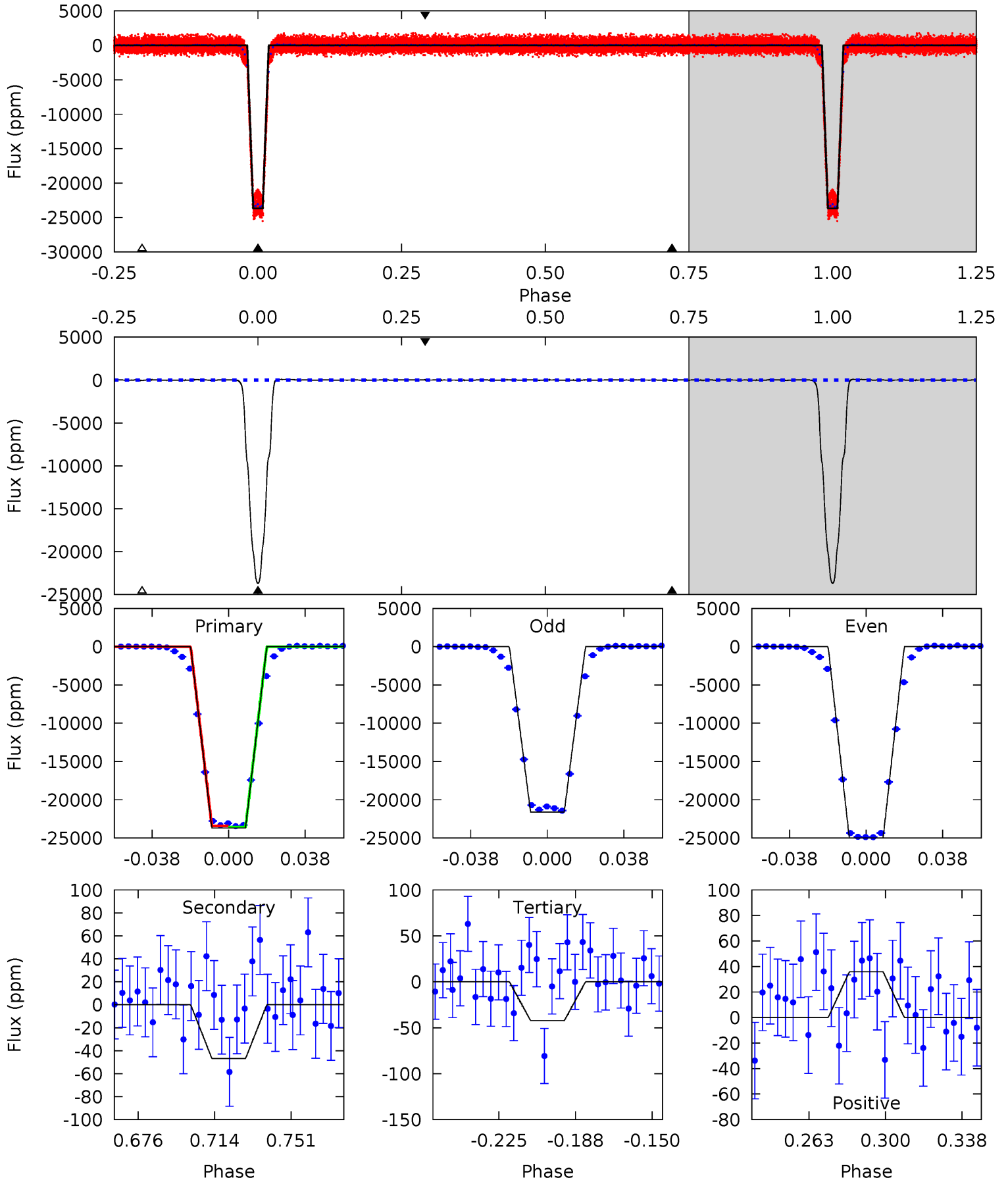
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2024	4.73	3.77	2.57	4.72	1.99	2.84	2021	2022	0.96	2.15	143.4	0.96	0.01	35.6



Alt Model-Shift Uniqueness Test

007377033-01, P = 1.956802 Days, E = 129.604536 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1779	3.51	3.17	2.69	4.77	2.08	1.49	1776	1776	0.34	0.82	130.9	0.98	0.00	6.50



Stellar Parameters For KIC 007377033

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5209^{+171}_{-155}	$4.657^{+0.063}_{-0.032}$	$-1.240^{+0.300}_{-0.300}$	$0.603^{+0.037}_{-0.041}$	$0.602^{+0.048}_{-0.018}$	$3.857^{+0.894}_{-0.501}$
	+3%/-3%	+1%/-1%	+24%/-24%	+6%/-7%	+8%/-3%	+23%/-13%
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 007377033-01 / KOI 0882.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-53 ± 11	$9.02^{+0.32}_{-0.38}$	1544^{+52}_{-56}	-1854^{+406}_{-131}	$0.244^{+0.053}_{-0.056}$
Alt.	-47 ± 13	$10.30^{+0.41}_{-0.40}$	1542^{+57}_{-54}	-2022^{+103}_{-84}	$0.164^{+0.053}_{-0.047}$

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 $A_{obs} \gg 1.0$

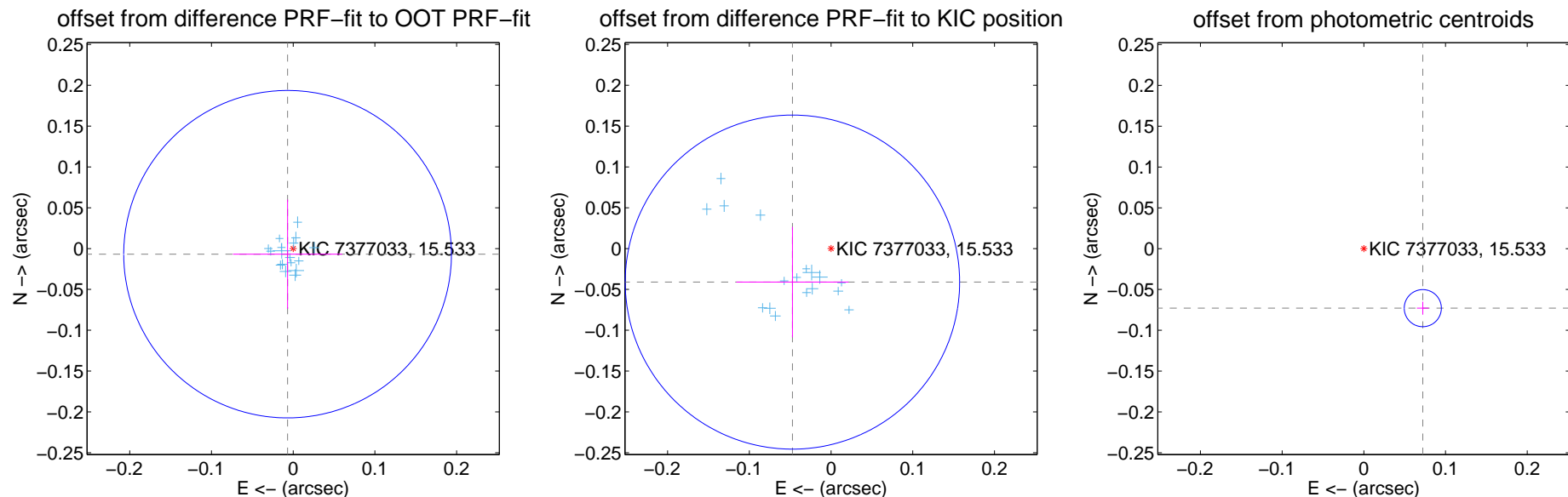
DV Centroid Data

Supplemental centroid analysis for 007377033-01. Kepler magnitude: 15.53. Transit SNR 1019.12

There are 17 quarters with good PRF difference image offsets

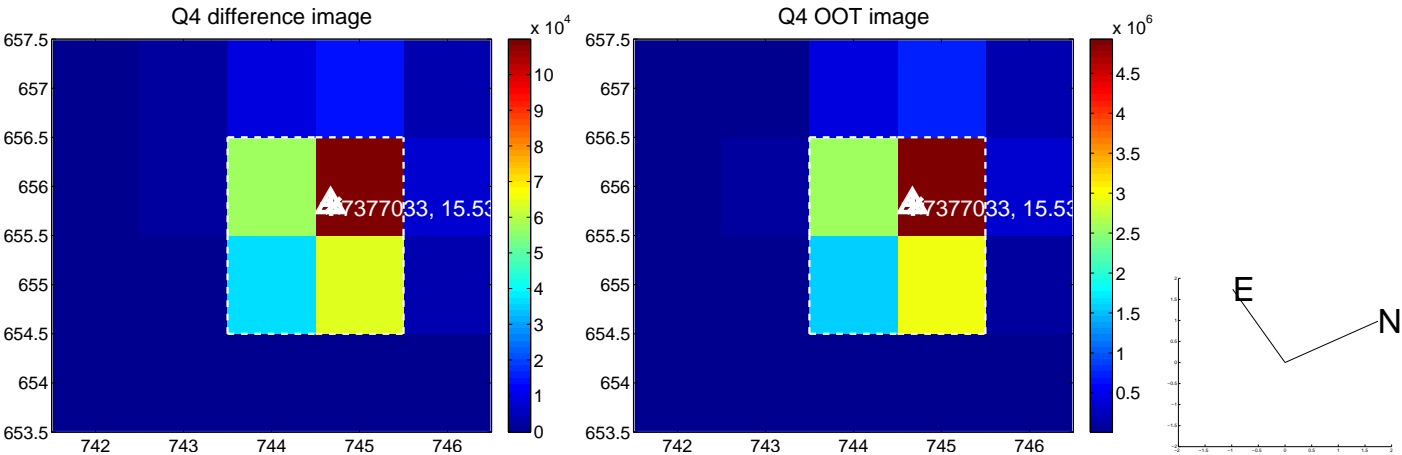
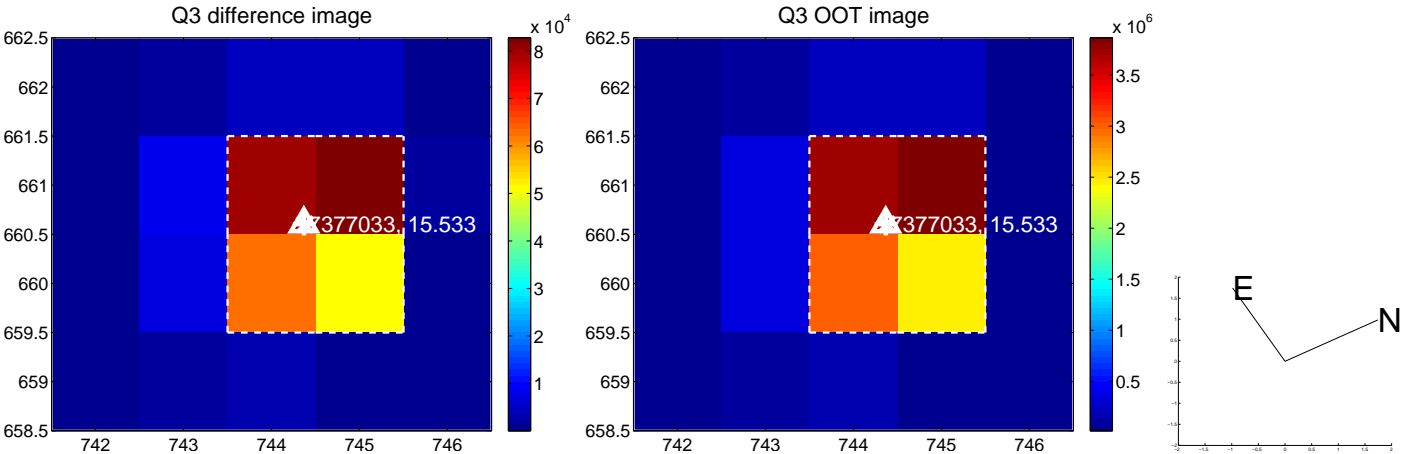
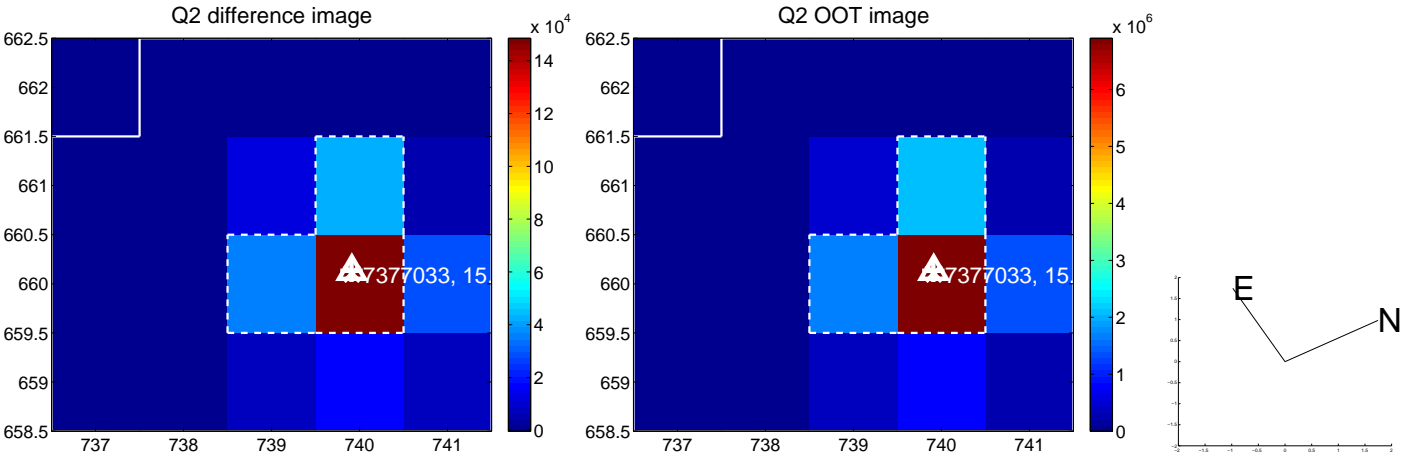
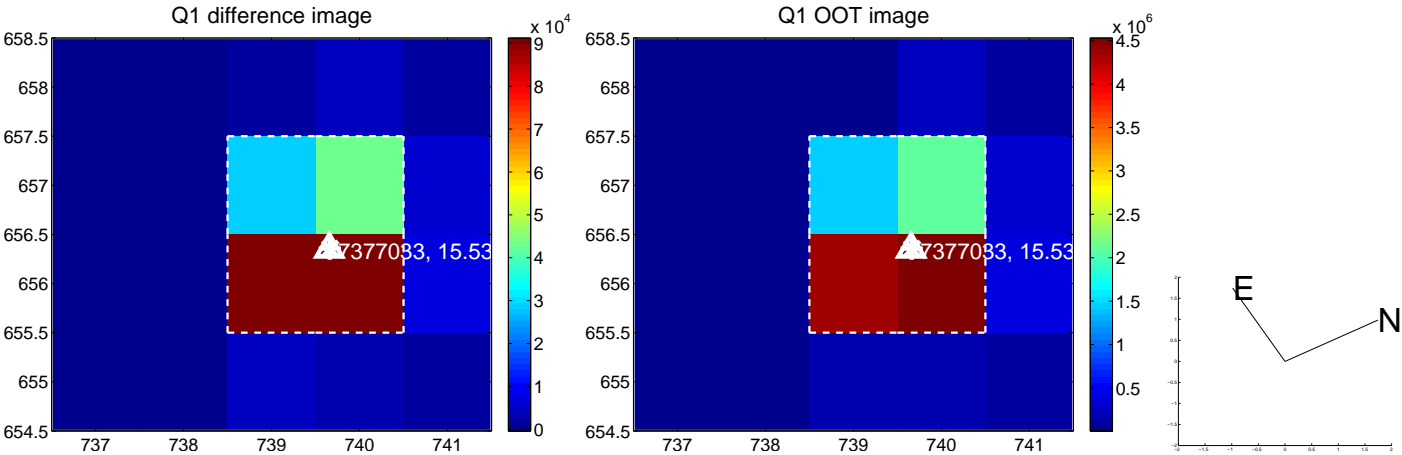
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.010 ± 0.067	0.15	0.007 ± 0.067	-0.007 ± 0.067
PRF-fit source offset from KIC position	0.063 ± 0.068	0.92	0.047 ± 0.069	-0.041 ± 0.068
photometric centroid source offset	0.10 ± 0.01	13.54	-0.07 ± 0.01	-0.07 ± 0.01

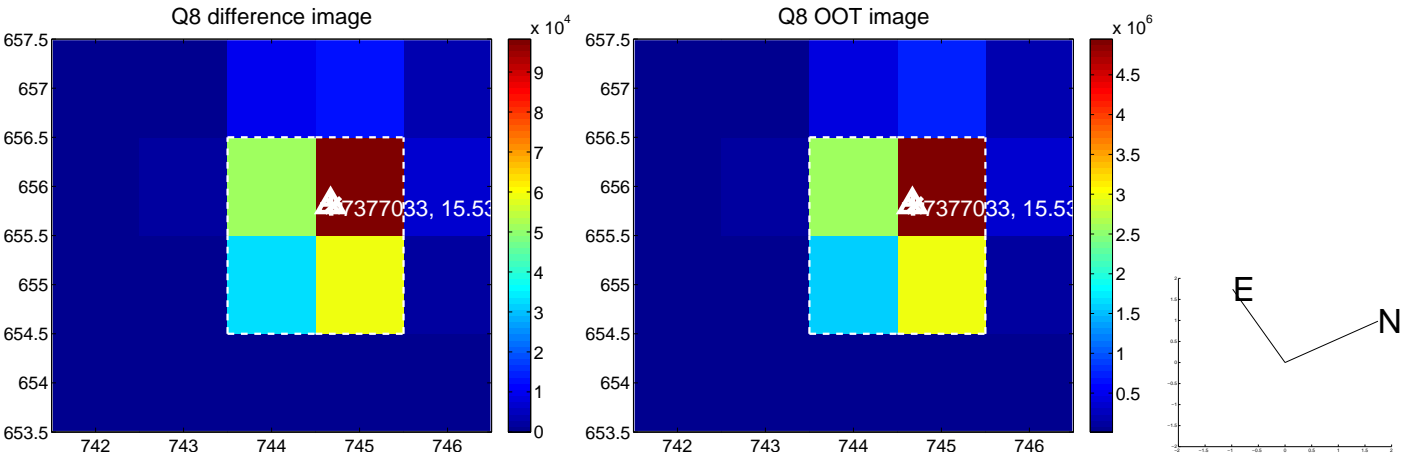
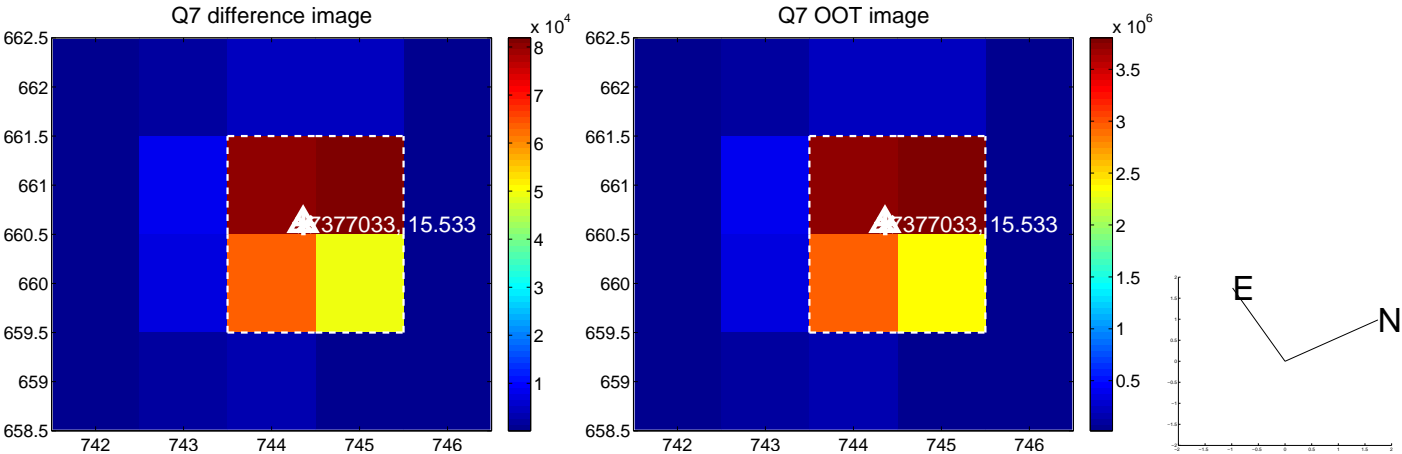
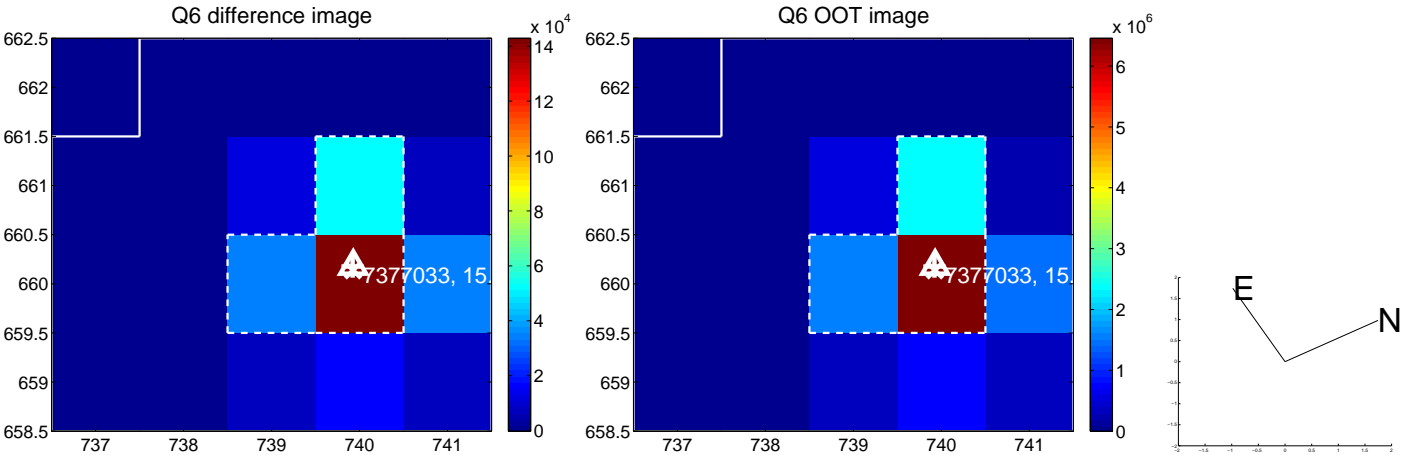
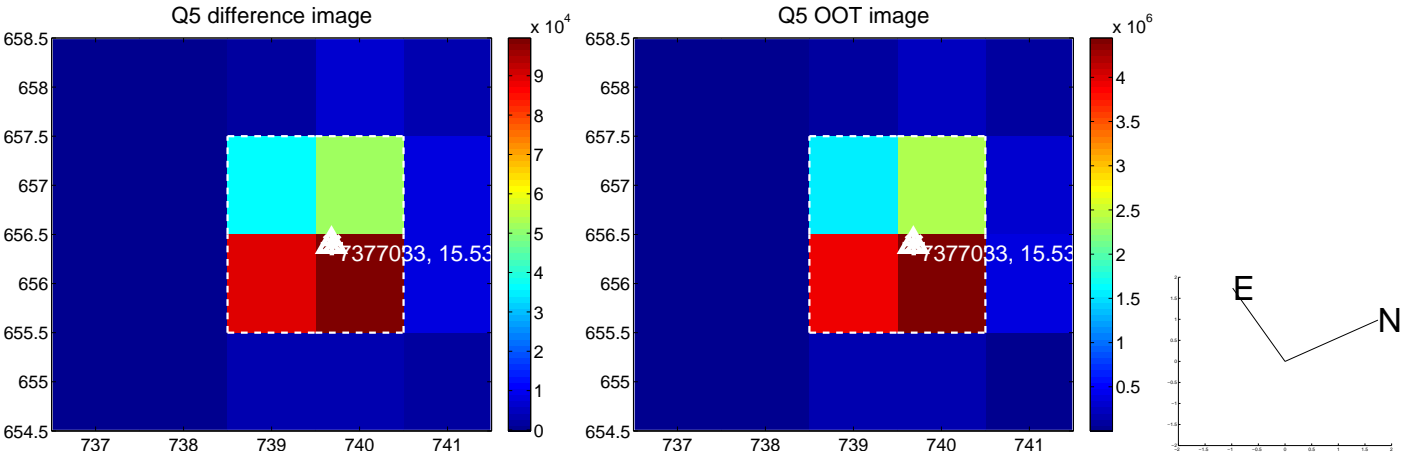


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

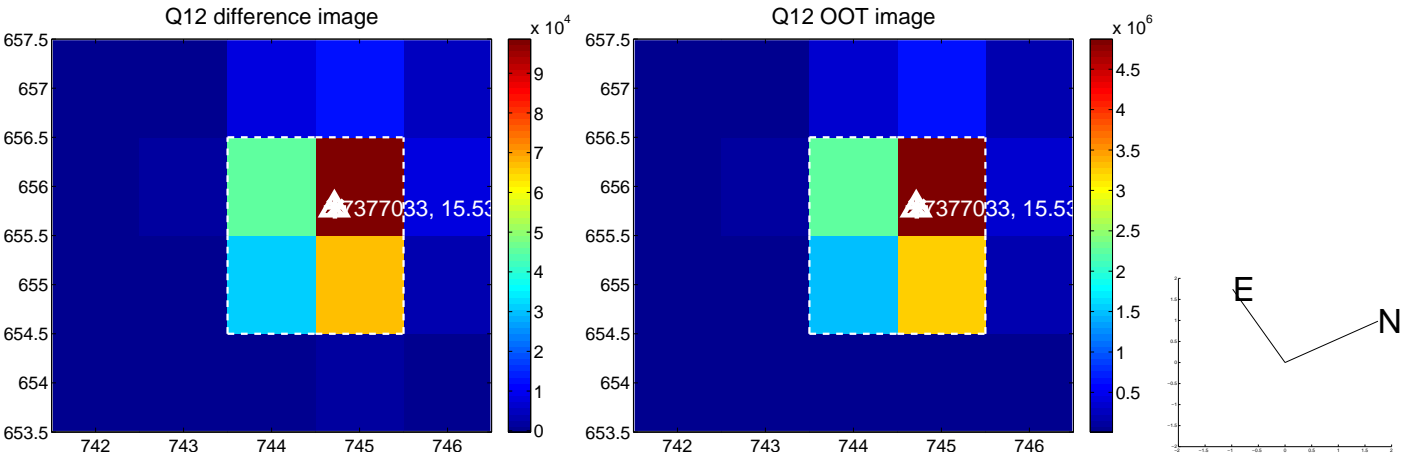
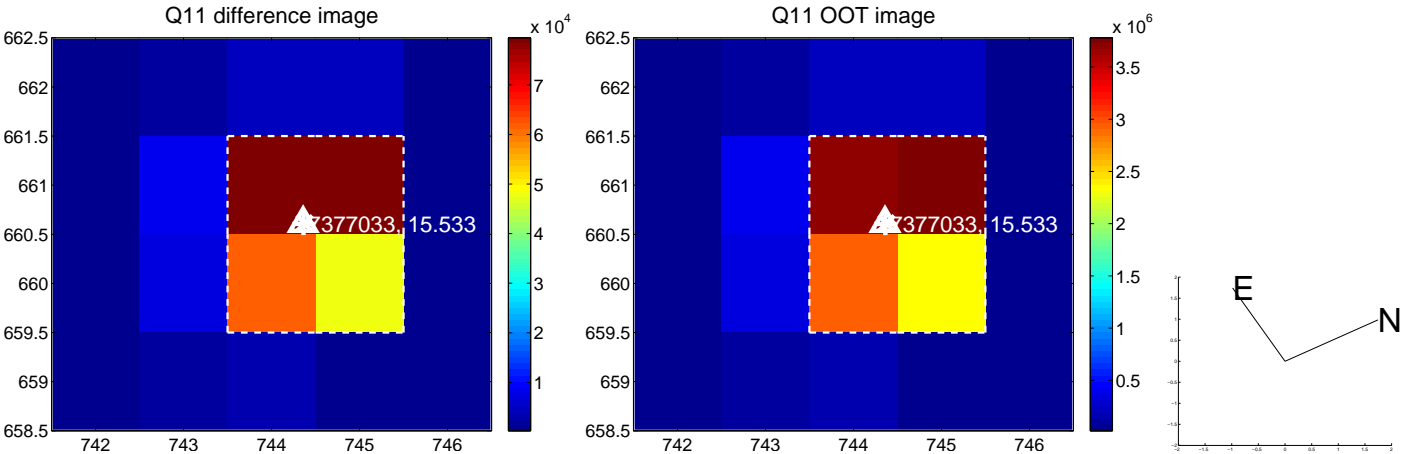
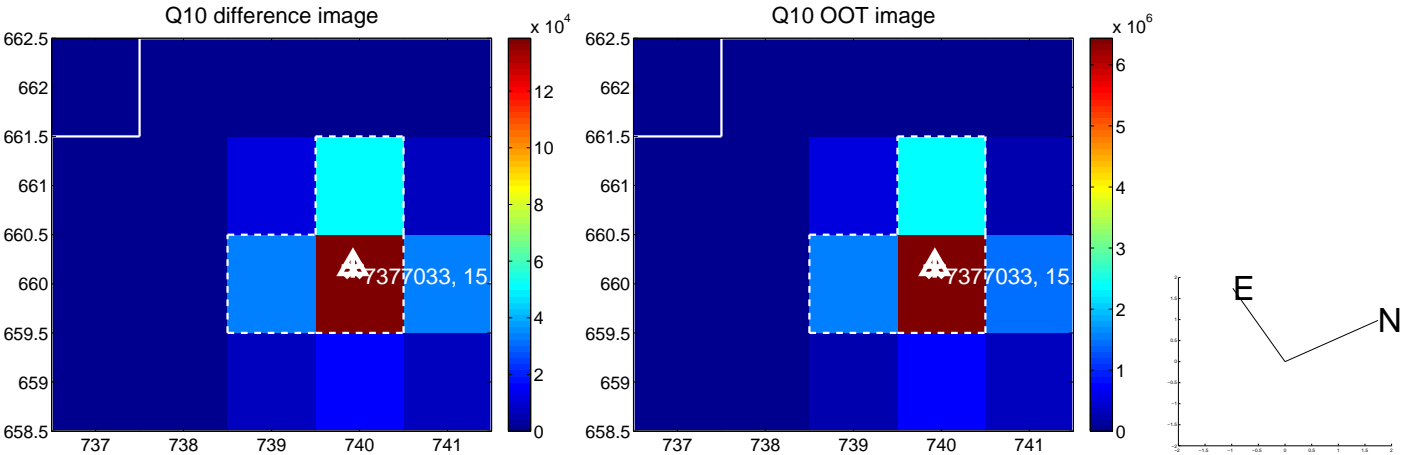
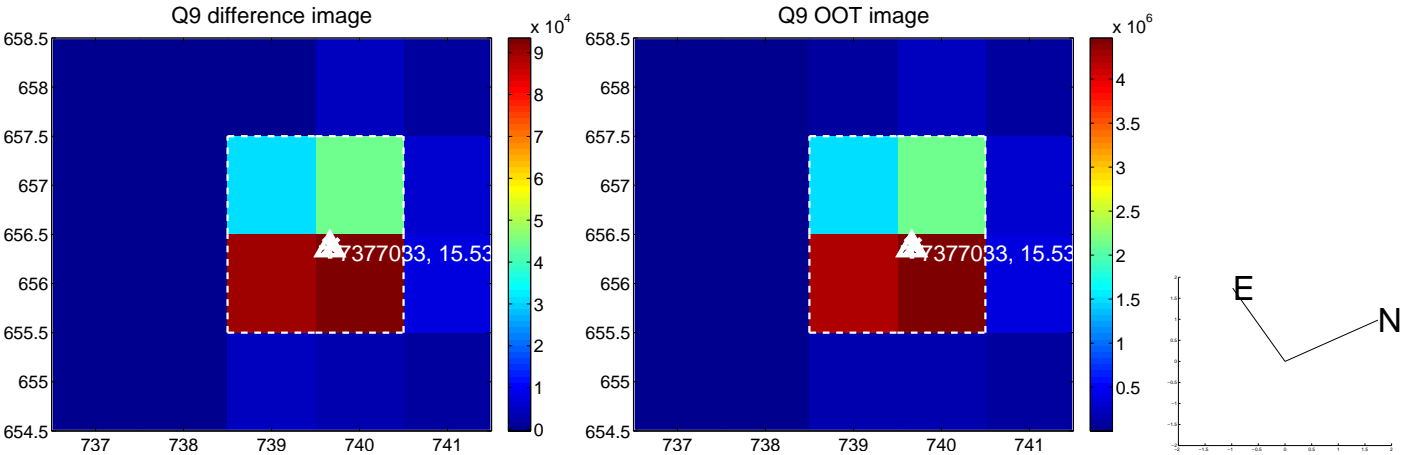
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



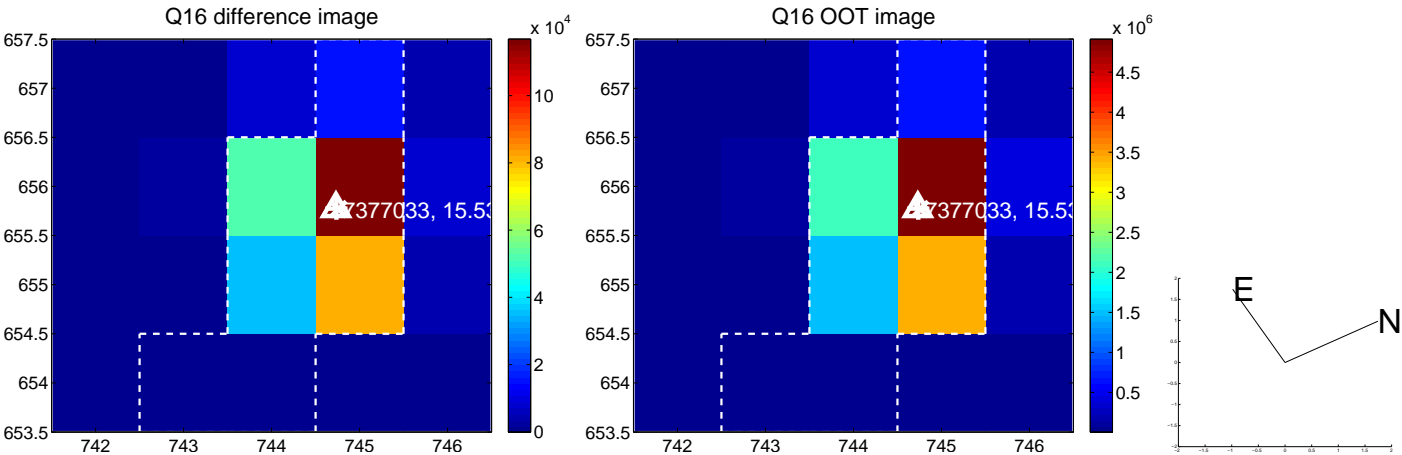
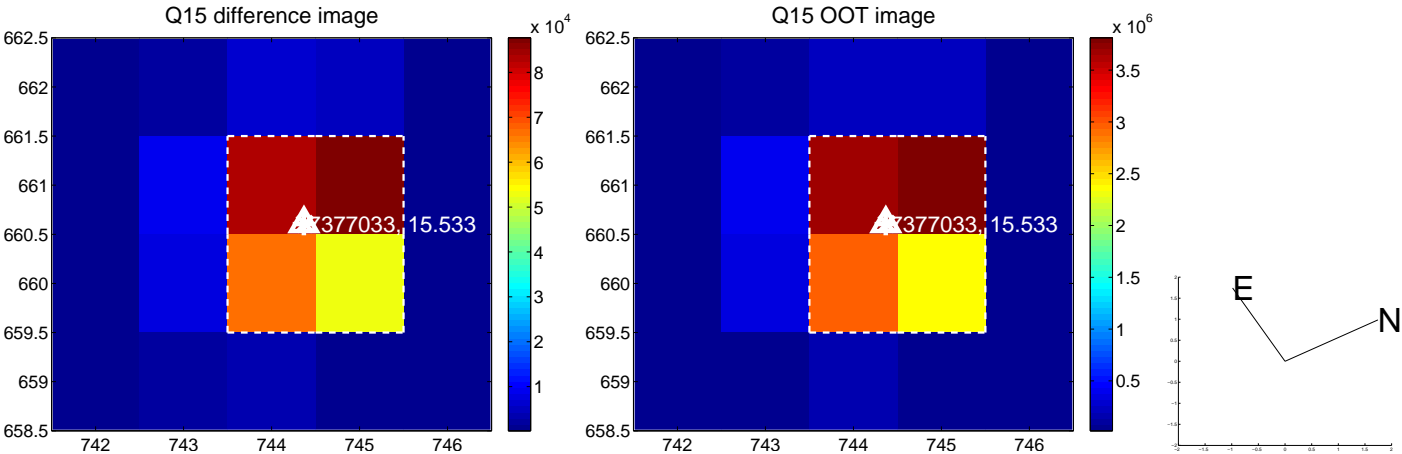
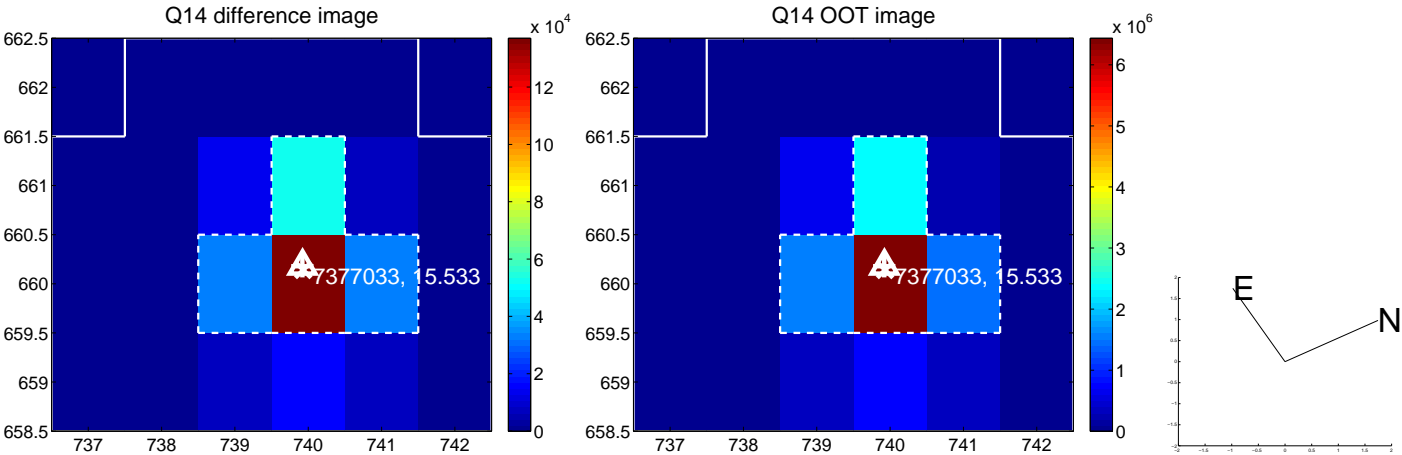
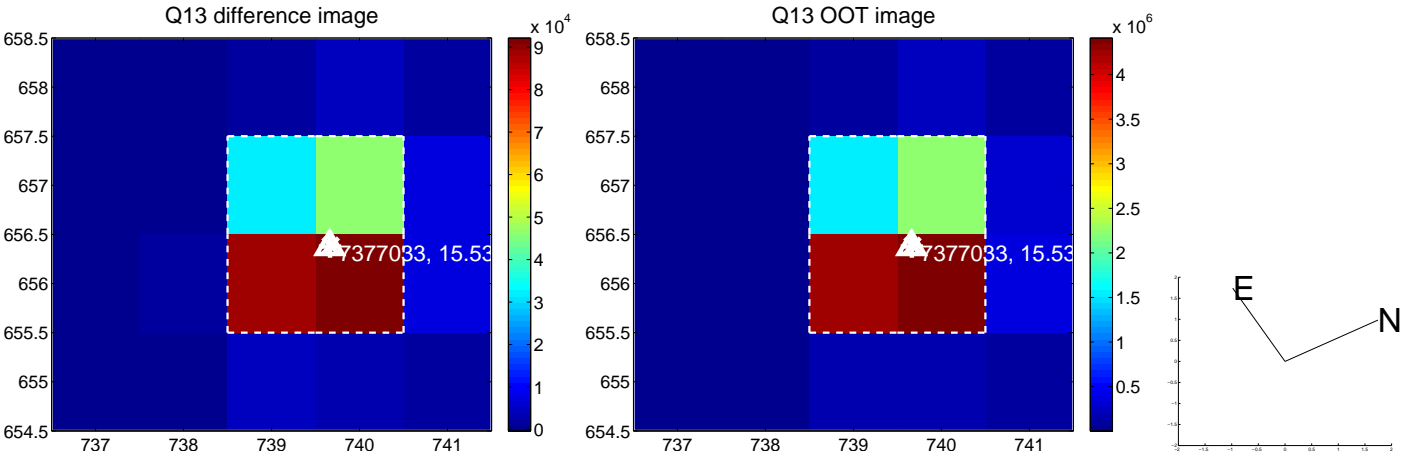
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



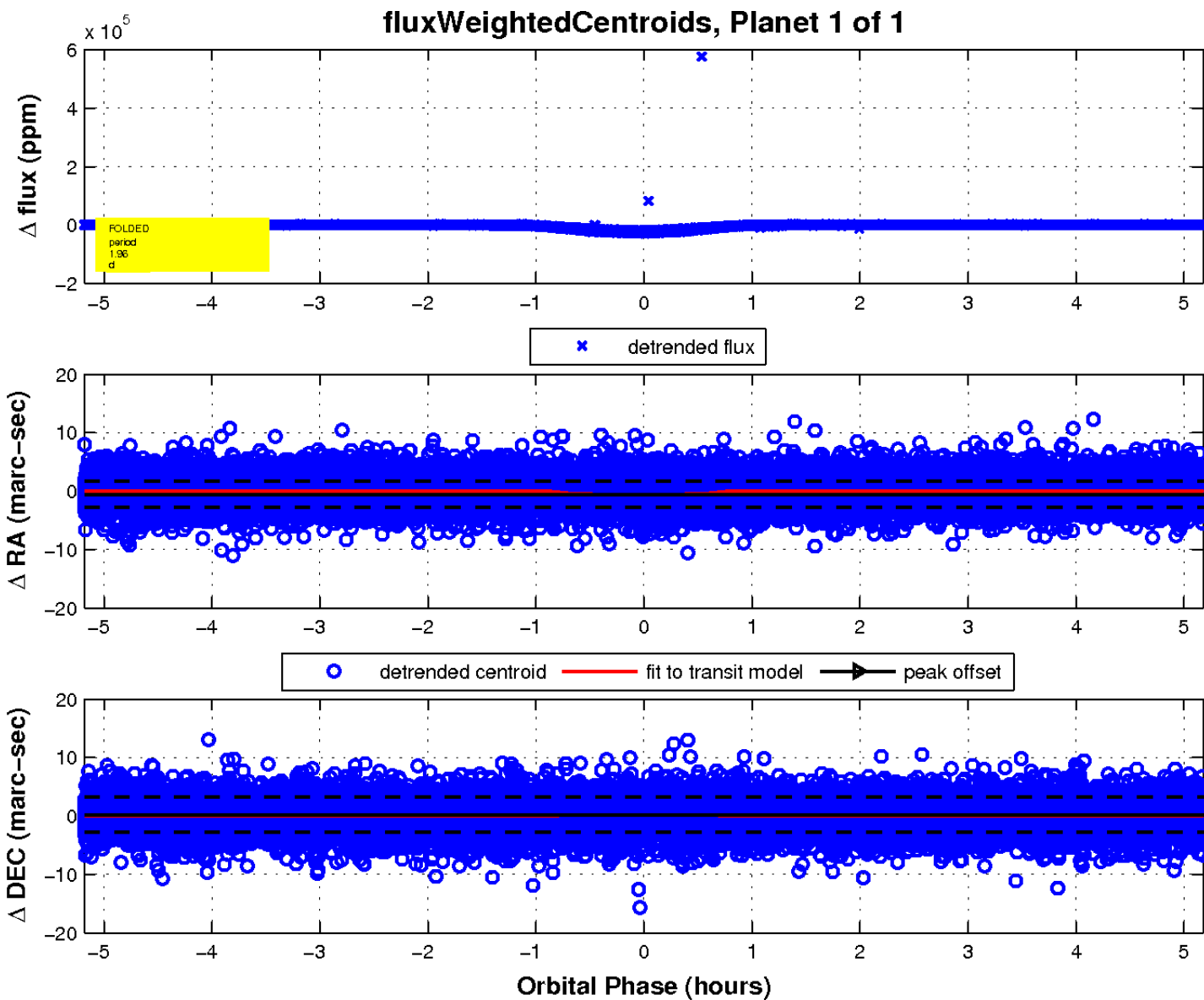
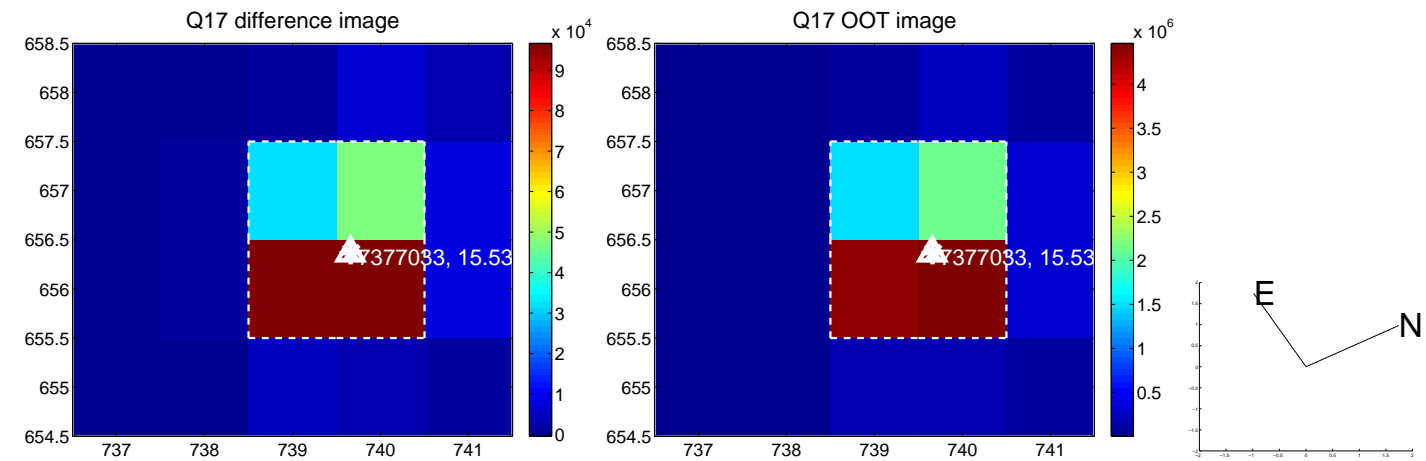
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UKIRT Image

Declination

