

KIC 008693536

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})
008693536-01	OBS	7076.01	16.234767	139.969892	110.9	4.811	8.2	8.5	1.19	6478	1.61	124.53

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008693536-01	OBS	PC	0.99	0	0	0	0	NO_COMMENT

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

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

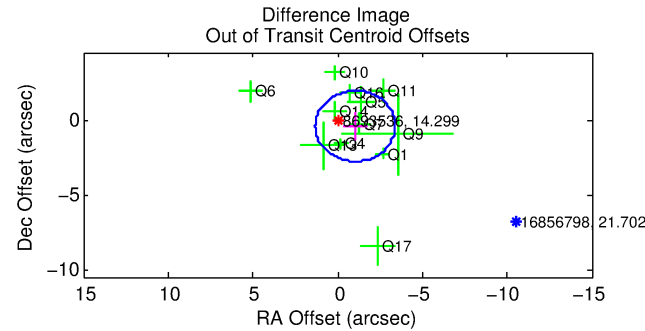
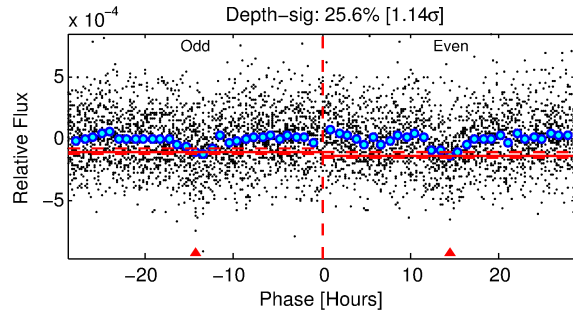
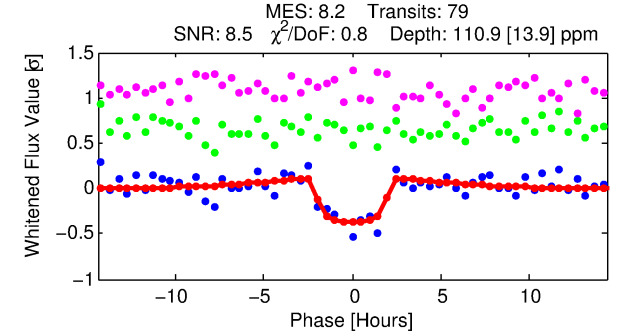
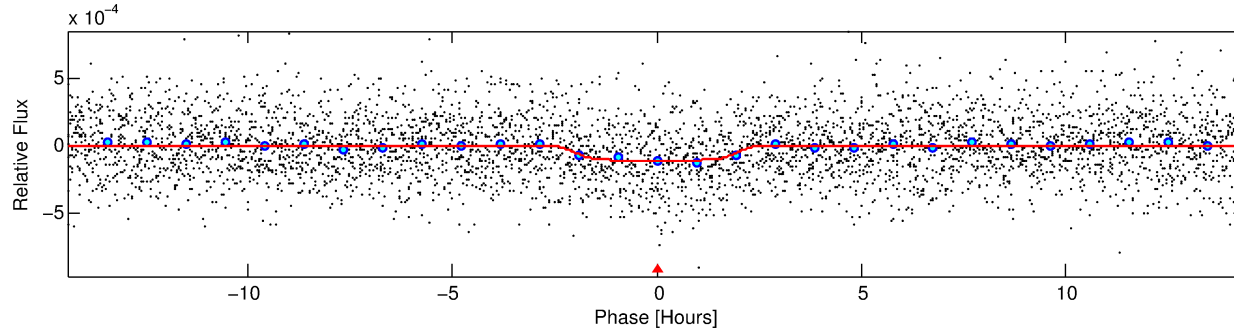
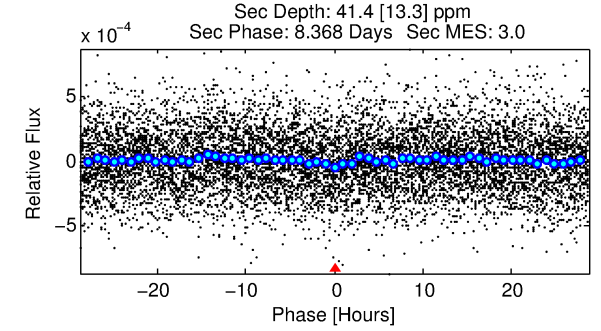
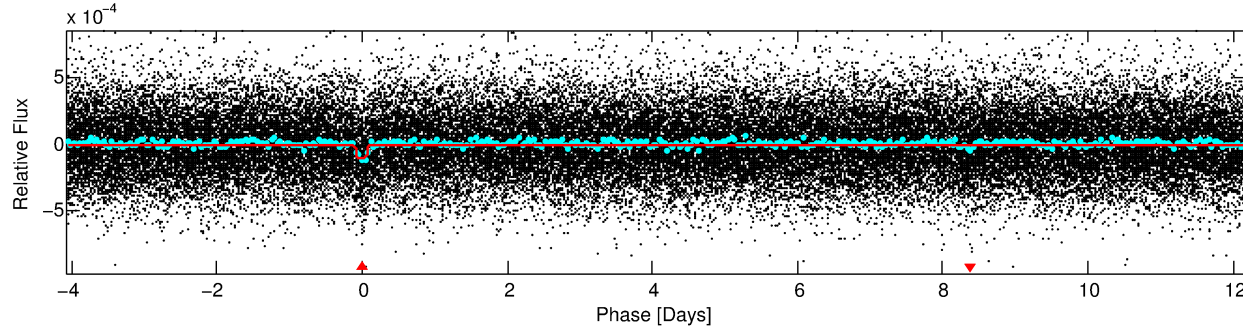
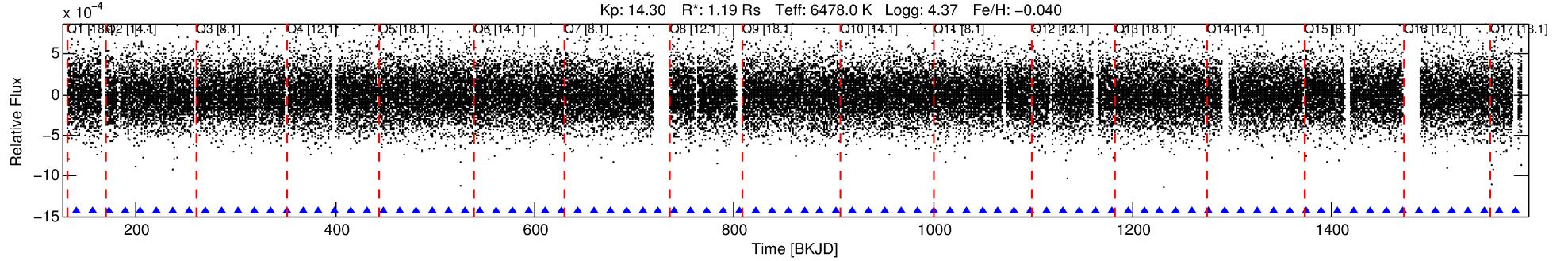
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008693536-01

No Significant Match Found

DV One-Page Summary

KIC: 8693536 Candidate: 1 of 1 Period: 16.235 d
KOI: K07076.01 Corr: 0.925



DV Fit Results:

Period = 16.23477 [0.00020] d
Epoch = 139.9699 [0.0101] BKJD
Rp/R* = 0.0124 [0.0013]
a/R* = 7.63 [3.27]
b = 0.97 [0.03]
Seff = 124.53 [48.10]
Teq = 852 [82] K
Rp = 1.61 [0.53] Re
a = 0.1337 [0.0342] AU
Ag = 157.82 [83.41] [1.88σ]
Teffp = 4668 [471] K [7.98σ]

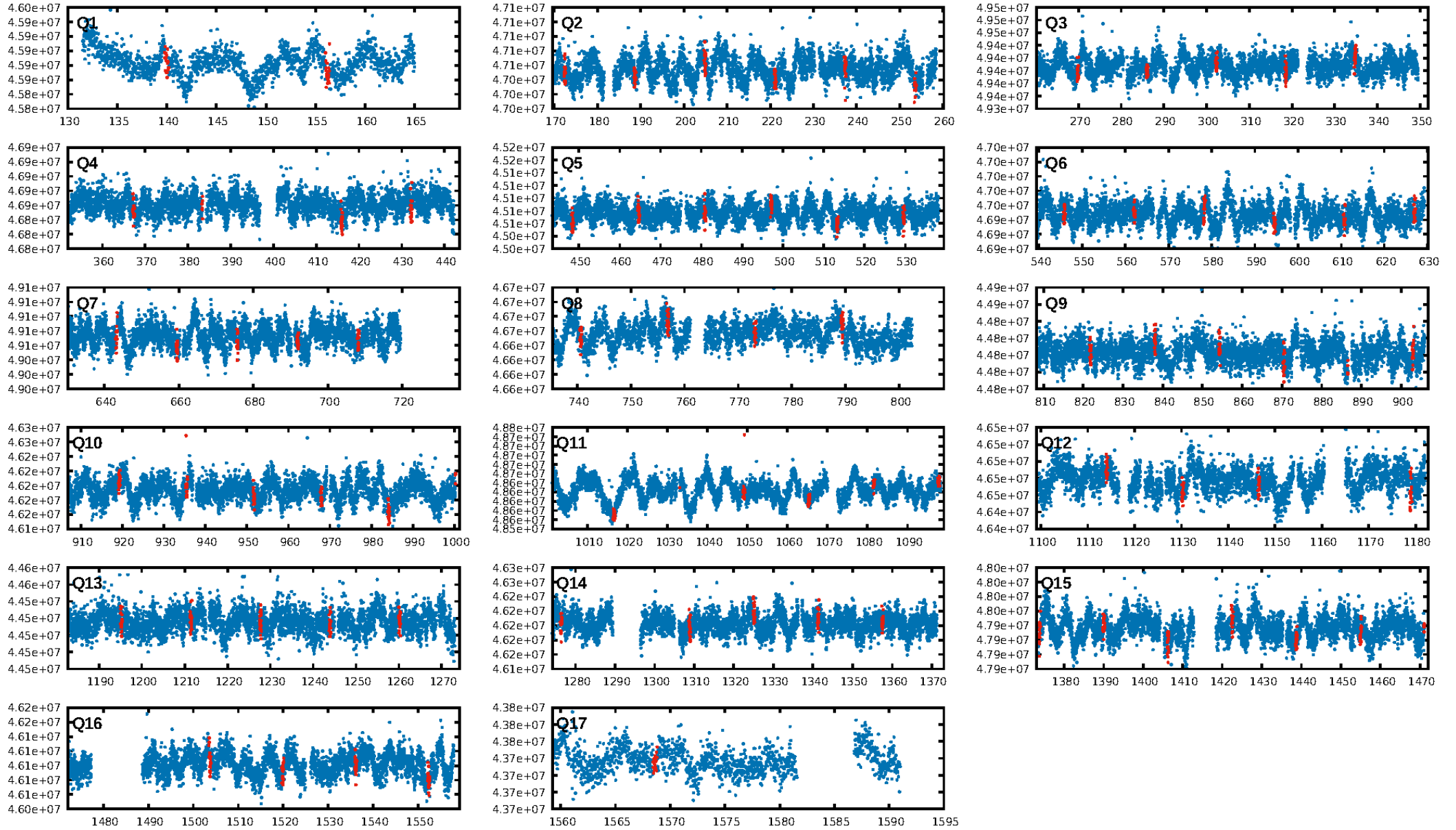
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 93.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.10e-16
RollingBand-fgt: 1.00 [76/76]
GhostDiagnostic-chr: 0.6483
Centroid-sig: 6.8%
Centroid-so: 1.789 arcsec [1.47σ]
OotOffset-rm: 1.115 arcsec [1.42σ]
KicOffset-rm: 1.139 arcsec [1.53σ]
OotOffset-st: 3/2/2/5 [12]
KicOffset-st: 3/2/2/5 [12]
DiffImageQuality-fgm: 0.42 [5/12]
DiffImageOverlap-fno: 1.00 [17/17]

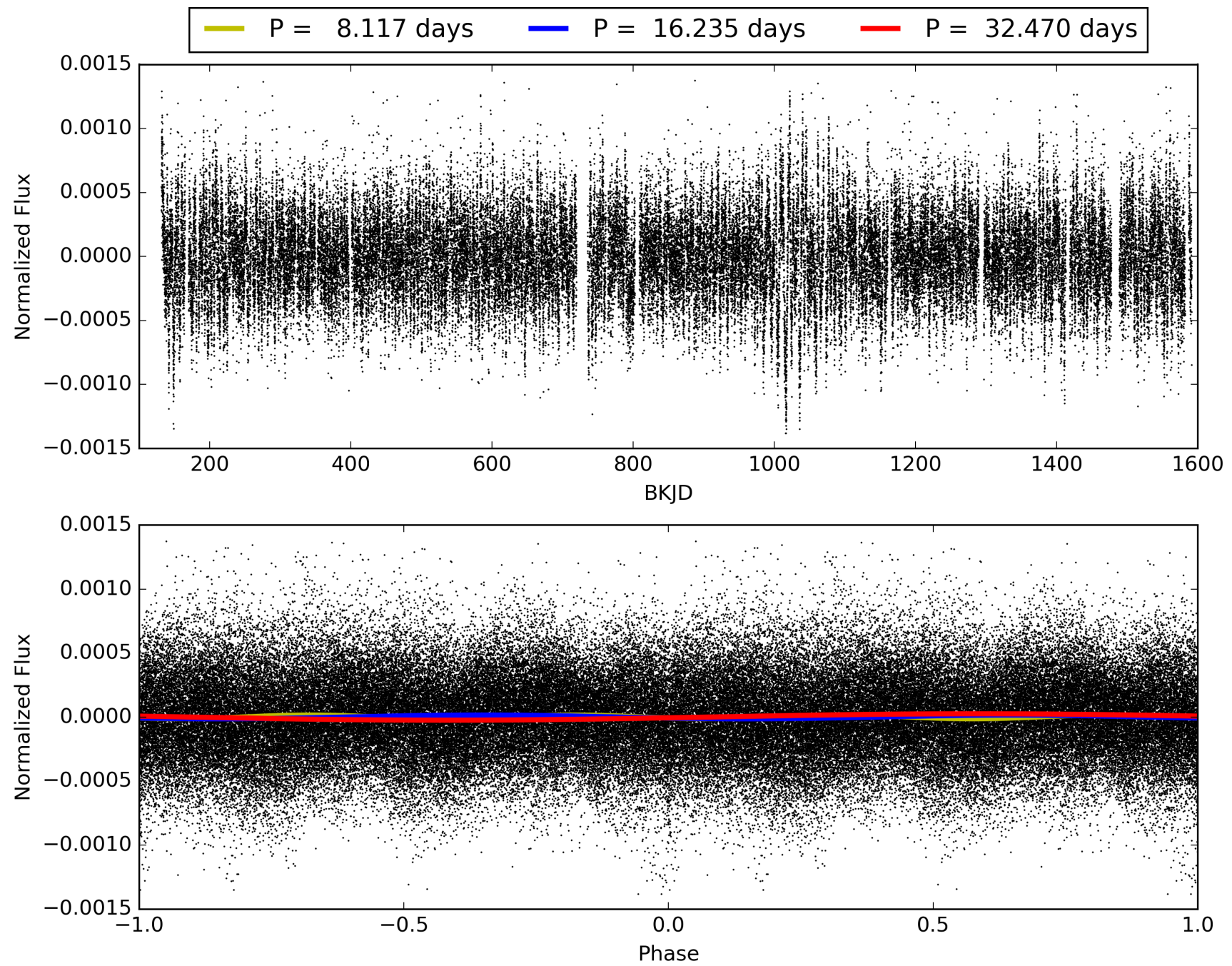
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 14:20:34 Z

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

TCE 008693536-01, PDC Light Curves

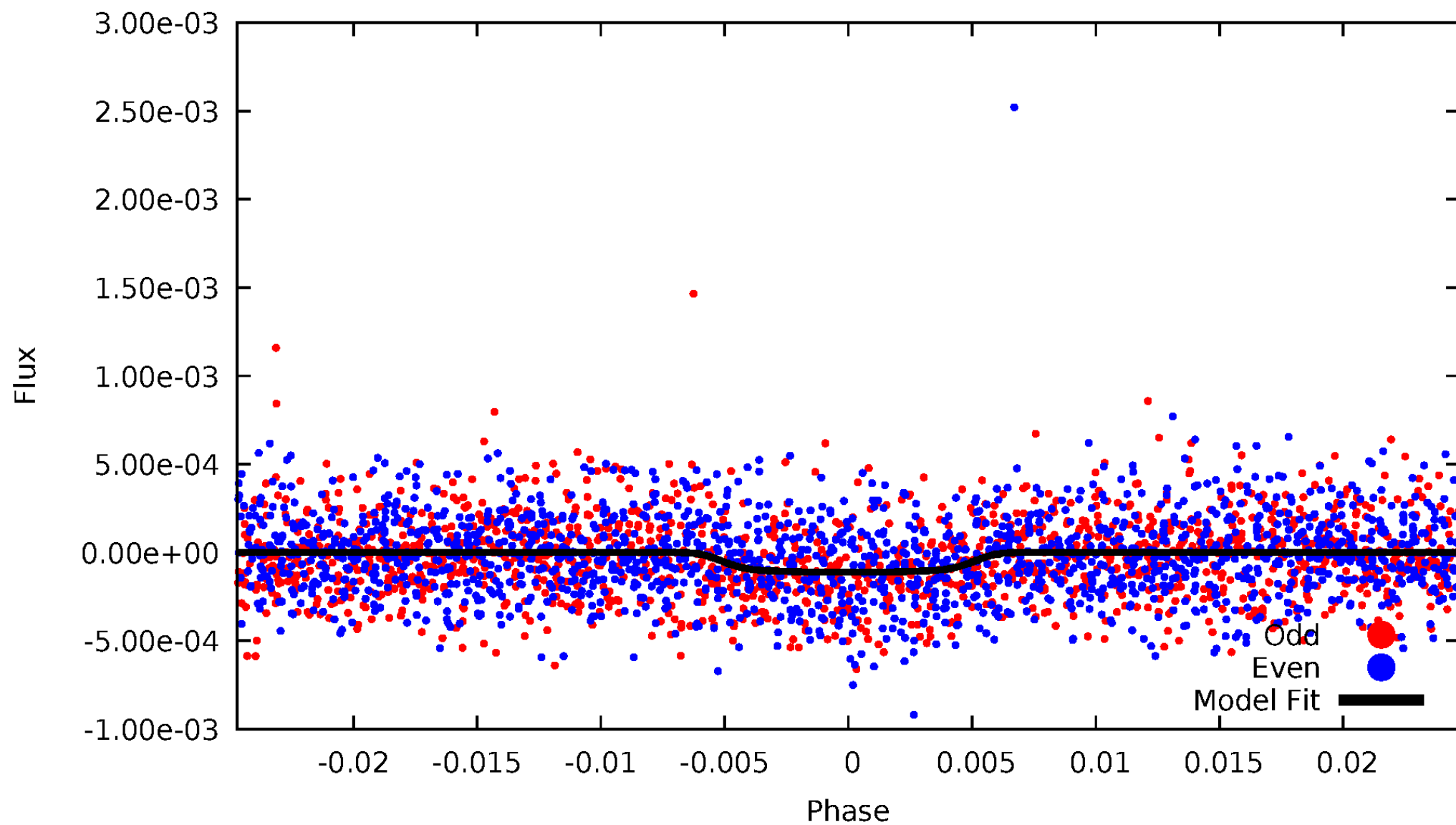


TCE 008693536-01



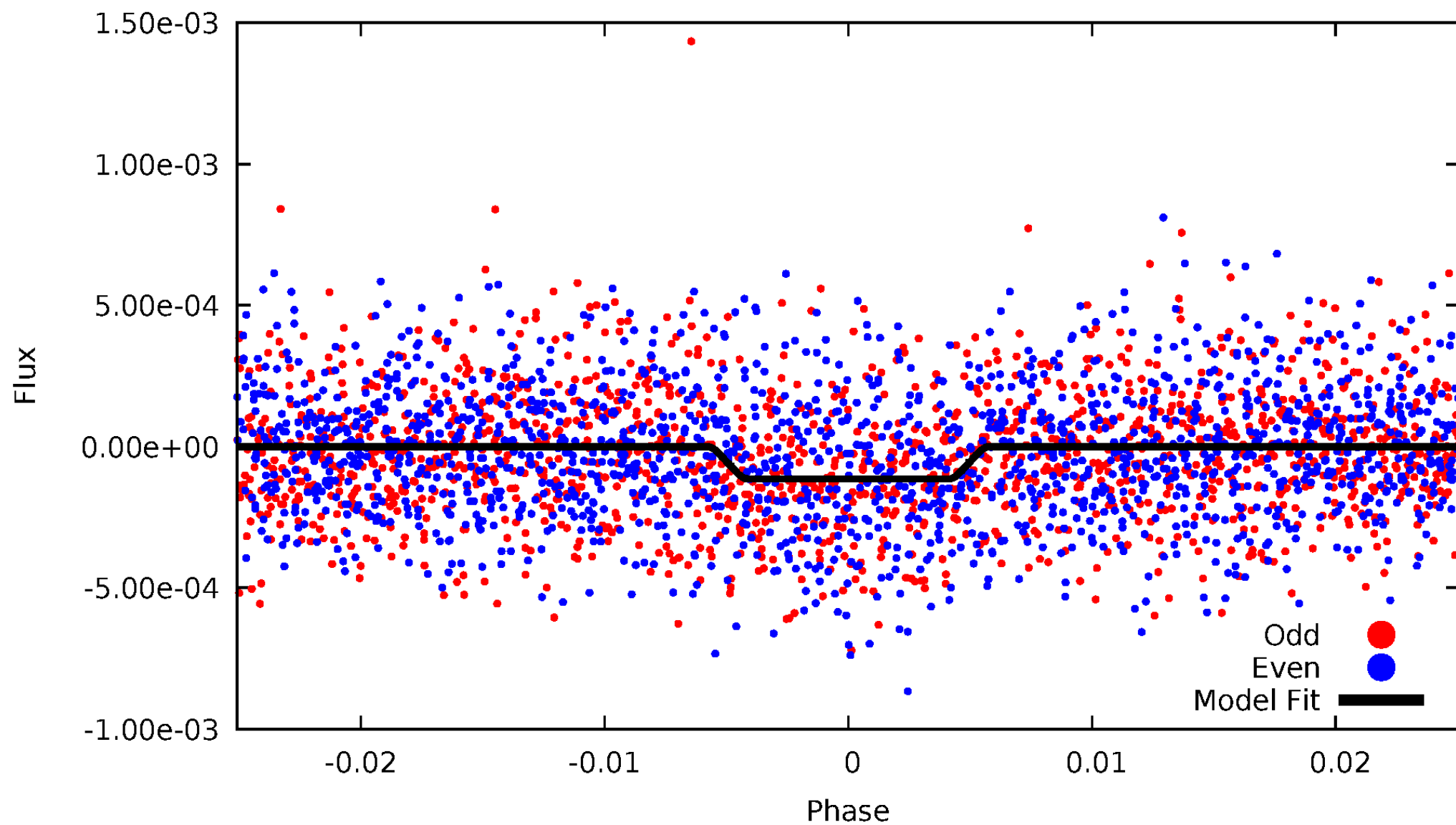
DV Odd/Even

TCE 008693536-01

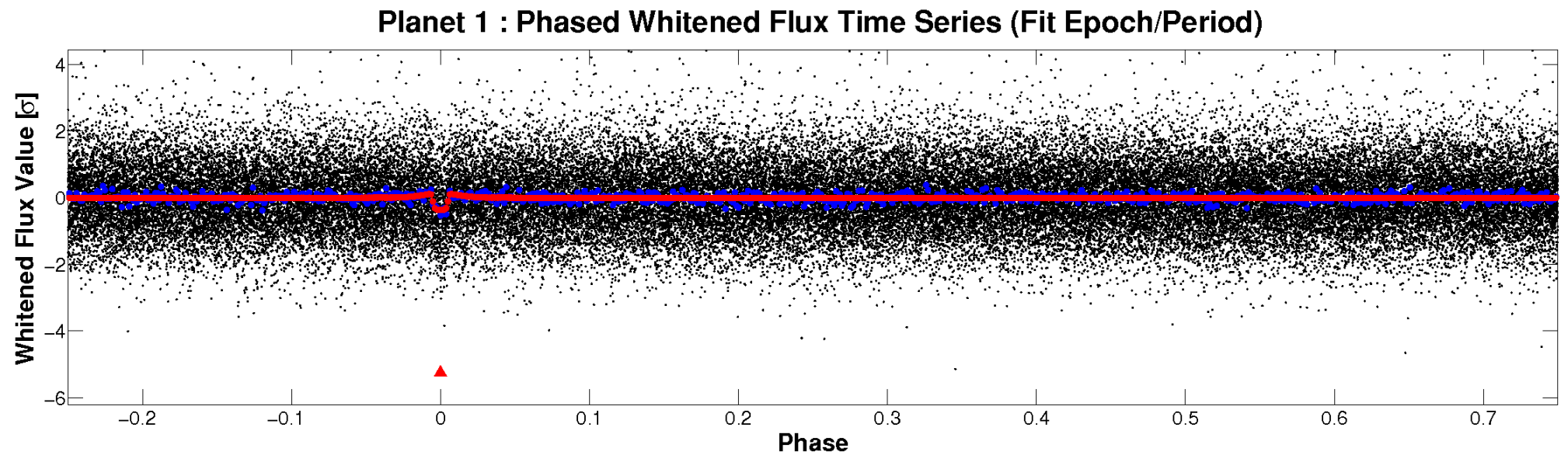
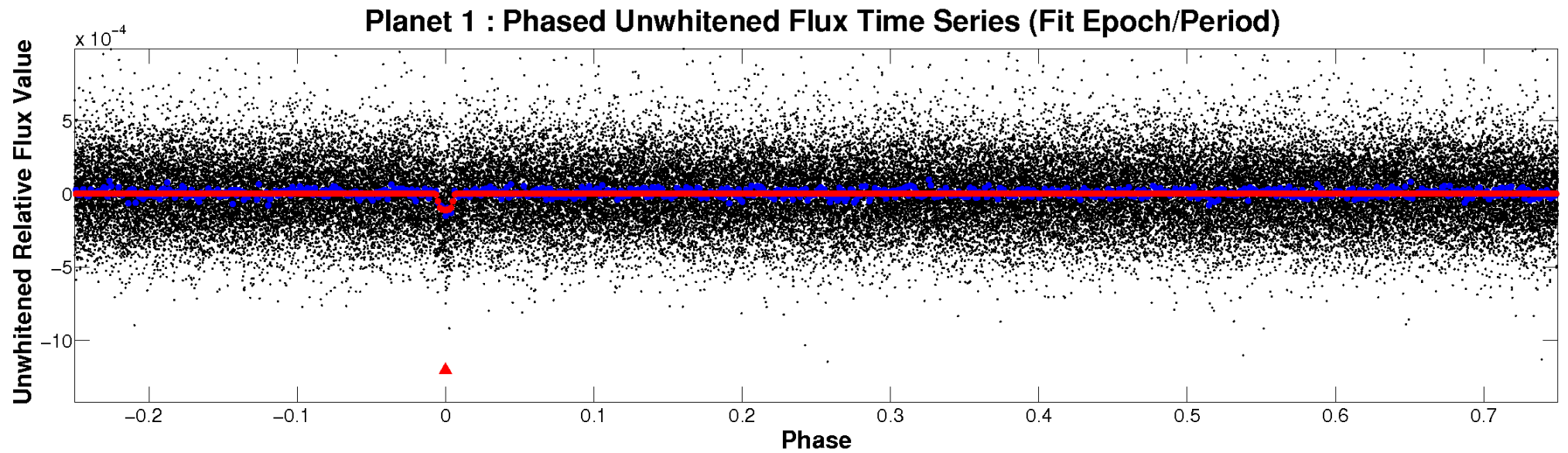


ALT Odd/Even

TCE 008693536-01

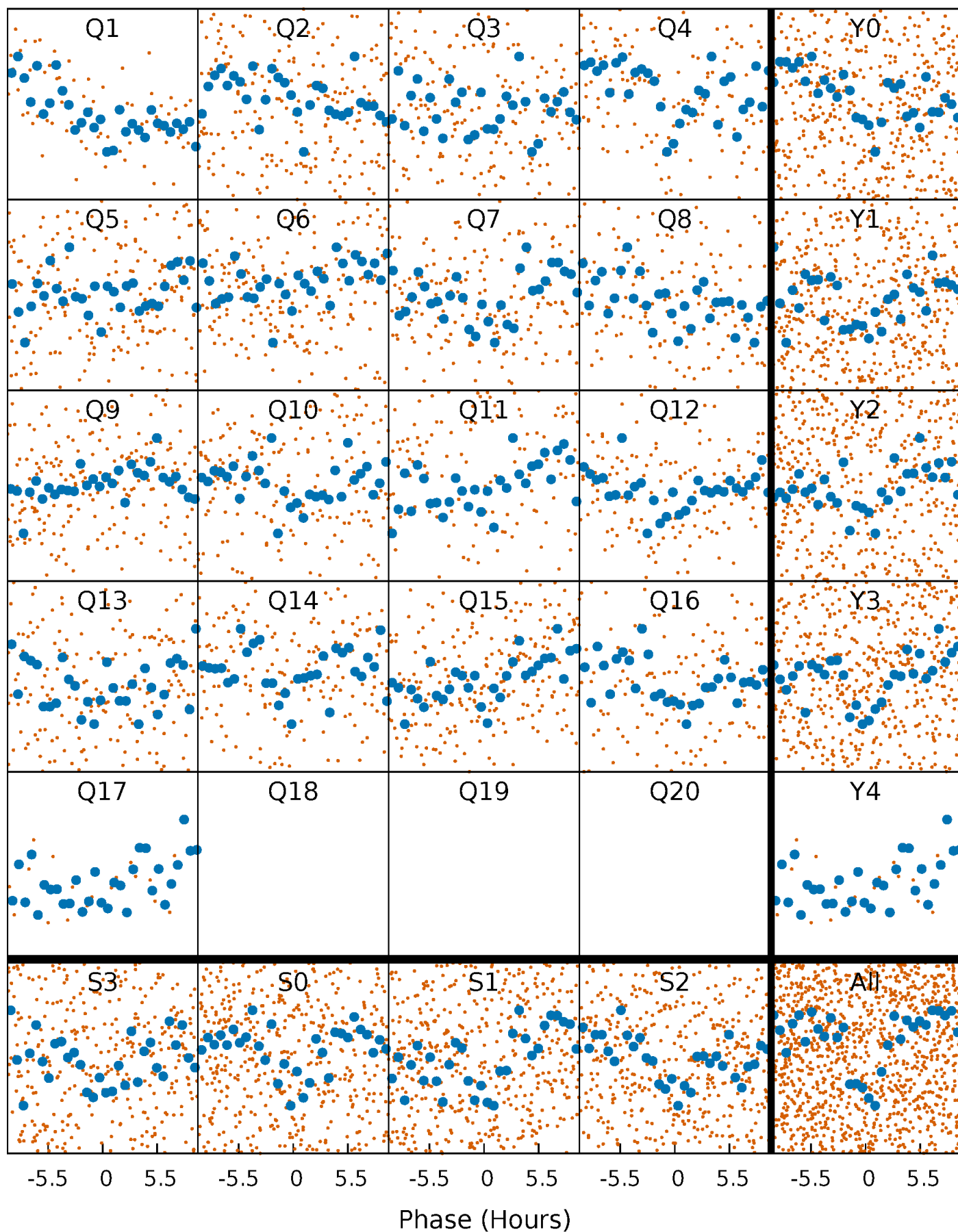


Non-Whitened Vs. Whitened Light Curve



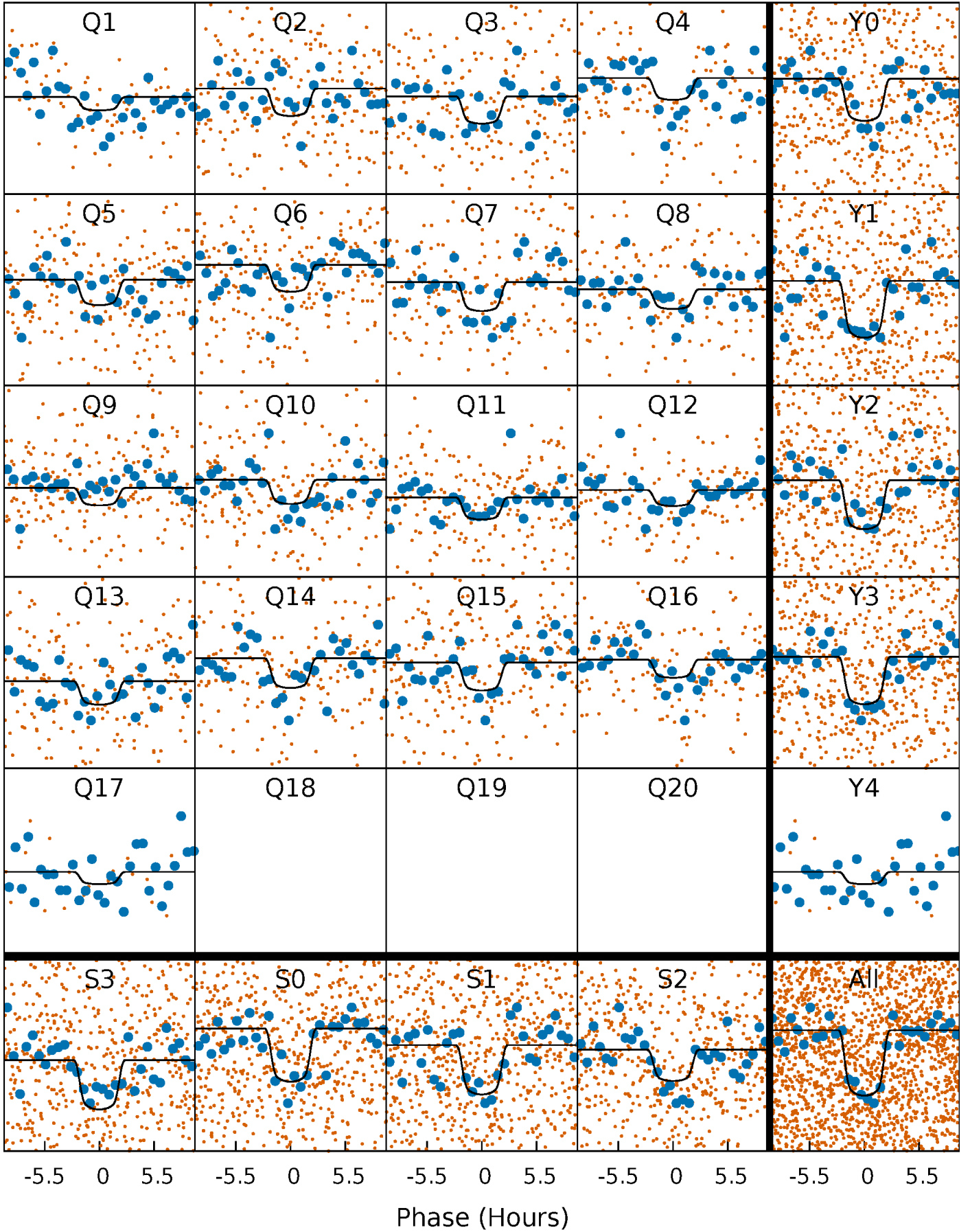
PDC Quarter-Phased Transit Curves

TCE 008693536-01 P= 16.234767 Days $T_0=139.969892$ (BKJD)



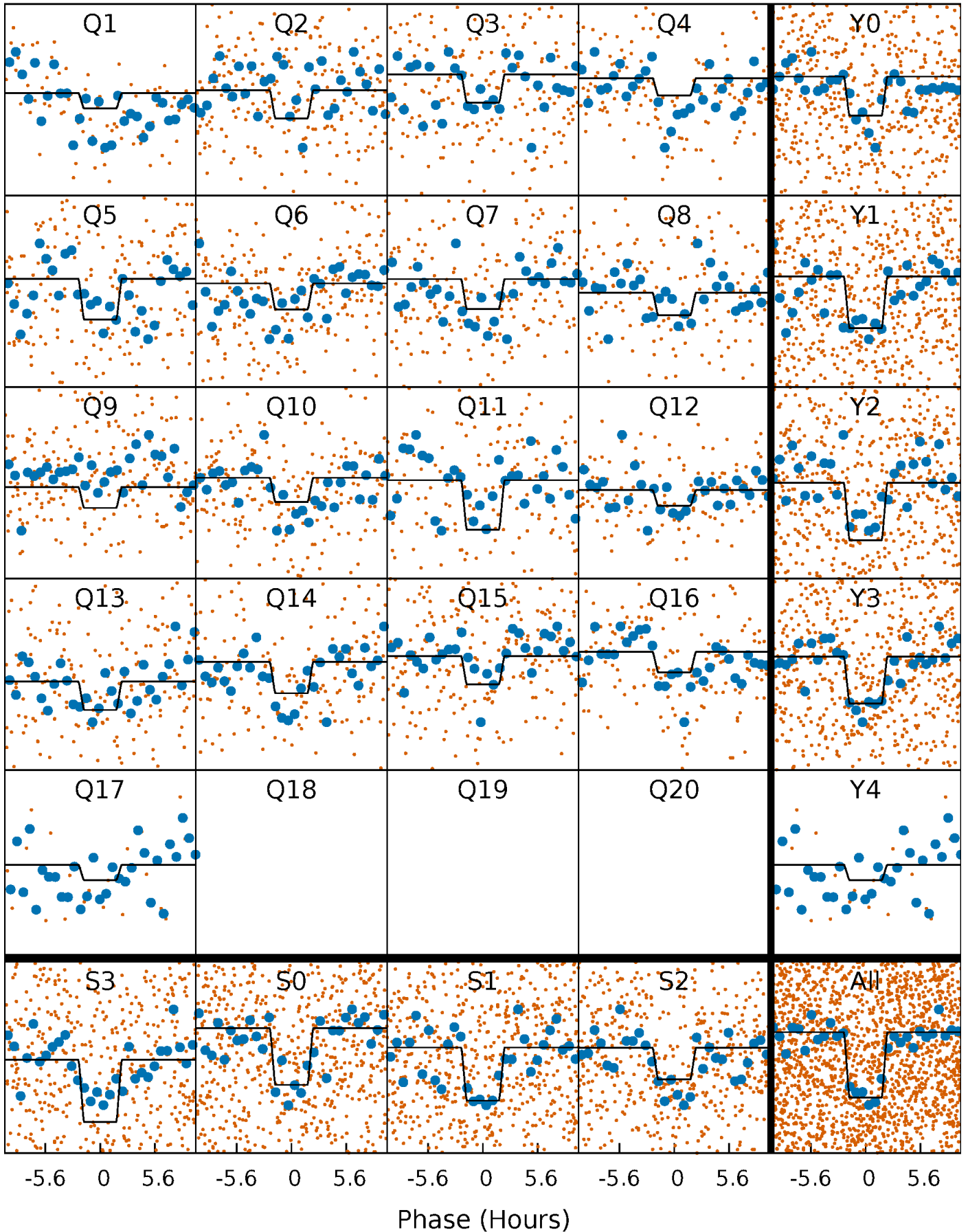
DV Quarter-Phased Transit Curves

TCE 008693536-01 P= 16.234767 Days $T_0=139.969892$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

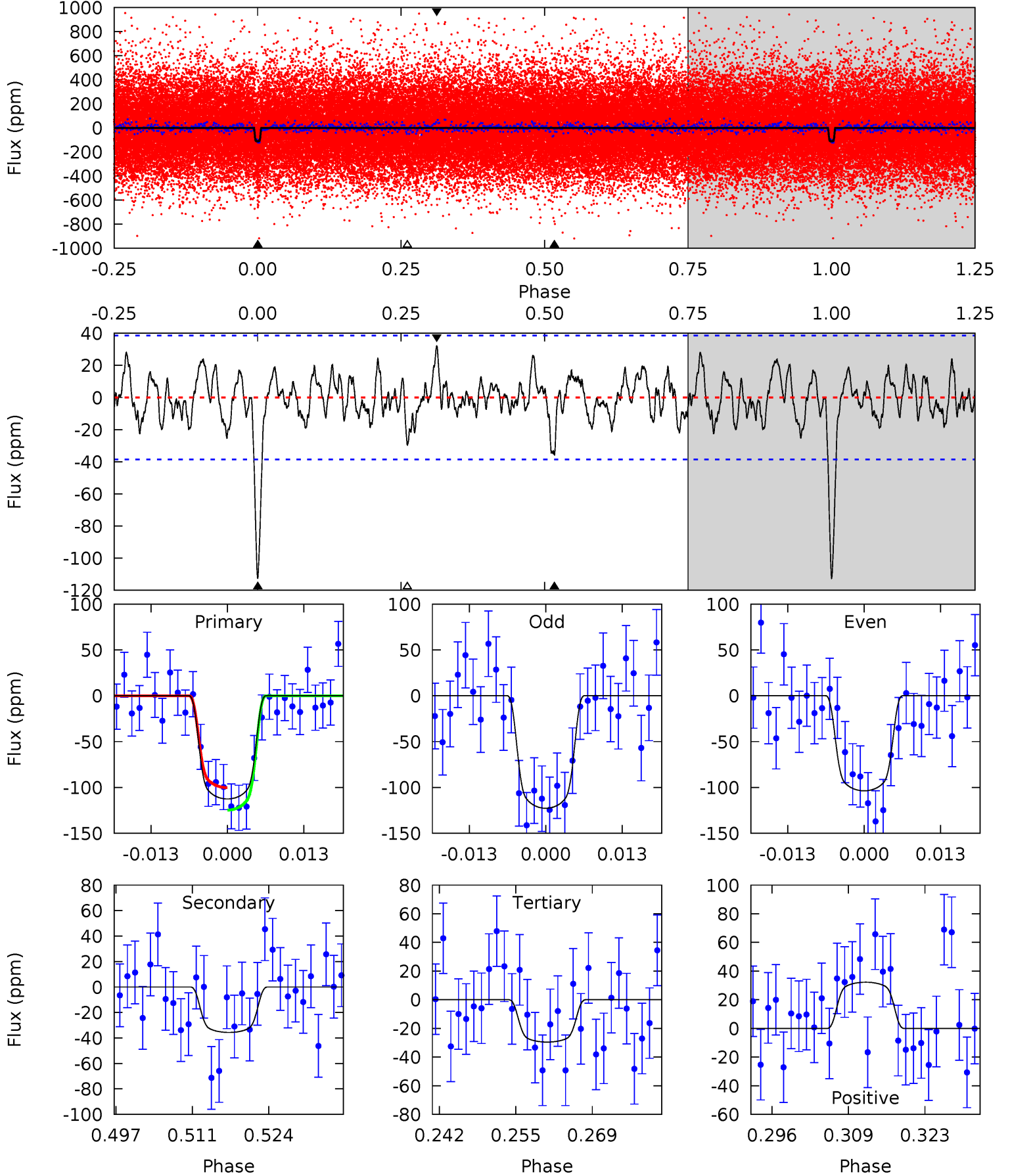
TCE 008693536-01 P= 16.234759 Days $T_0=139.973290$ (BKJD)



DV Model-Shift Uniqueness Test

008693536-01, P = 16.234767 Days, E = 123.735125 Days

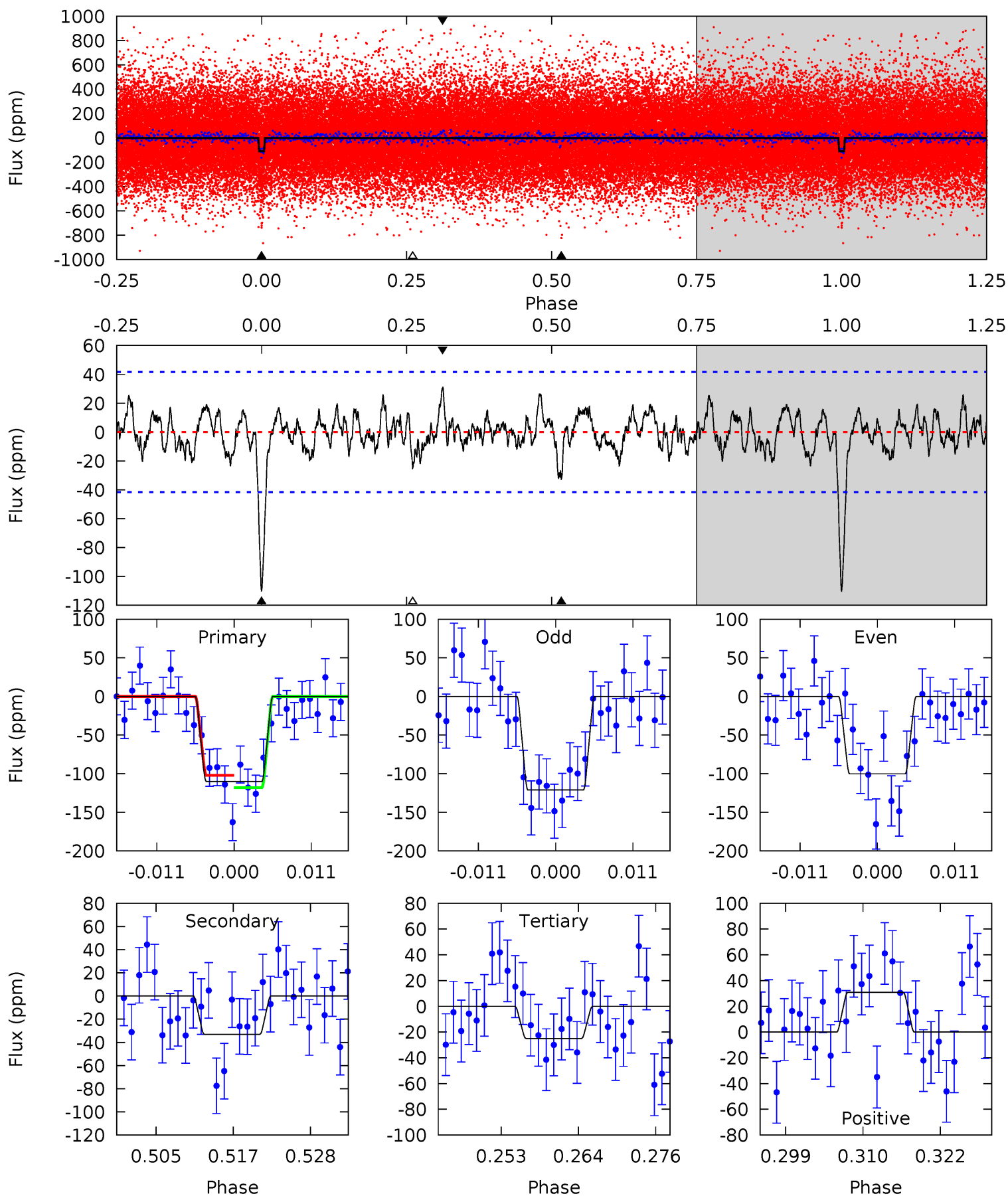
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.5	4.59	3.80	4.15	4.97	2.47	1.39	10.7	10.3	0.79	0.44	1.23	0.81	0.22	1.58



Alt Model-Shift Uniqueness Test

008693536-01, P = 16.234759 Days, E = 123.738531 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.2	3.97	3.01	3.70	5.00	2.53	1.19	10.2	9.52	0.96	0.27	1.26	1.10	0.22	0.96



Stellar Parameters For KIC 008693536

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6478^{+160}_{-208}	$4.371^{+0.065}_{-0.195}$	$-0.040^{+0.250}_{-0.300}$	$1.188^{+0.370}_{-0.148}$	$1.209^{+0.169}_{-0.169}$	$1.016^{+0.288}_{-0.538}$
	+2%/-3%	+1%/-4%	+625%/-750%	+31%/-12%	+14%/-14%	+28%/-53%
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 008693536-01 / KOI 7076.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-36 ± 8	$1.65^{+0.31}_{-0.22}$	1210^{+74}_{-56}	4633^{+311}_{-282}	123^{+53}_{-41}
Alt.	-33 ± 8	$1.45^{+0.26}_{-0.23}$	1210^{+86}_{-63}	4808^{+375}_{-355}	145^{+81}_{-50}

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

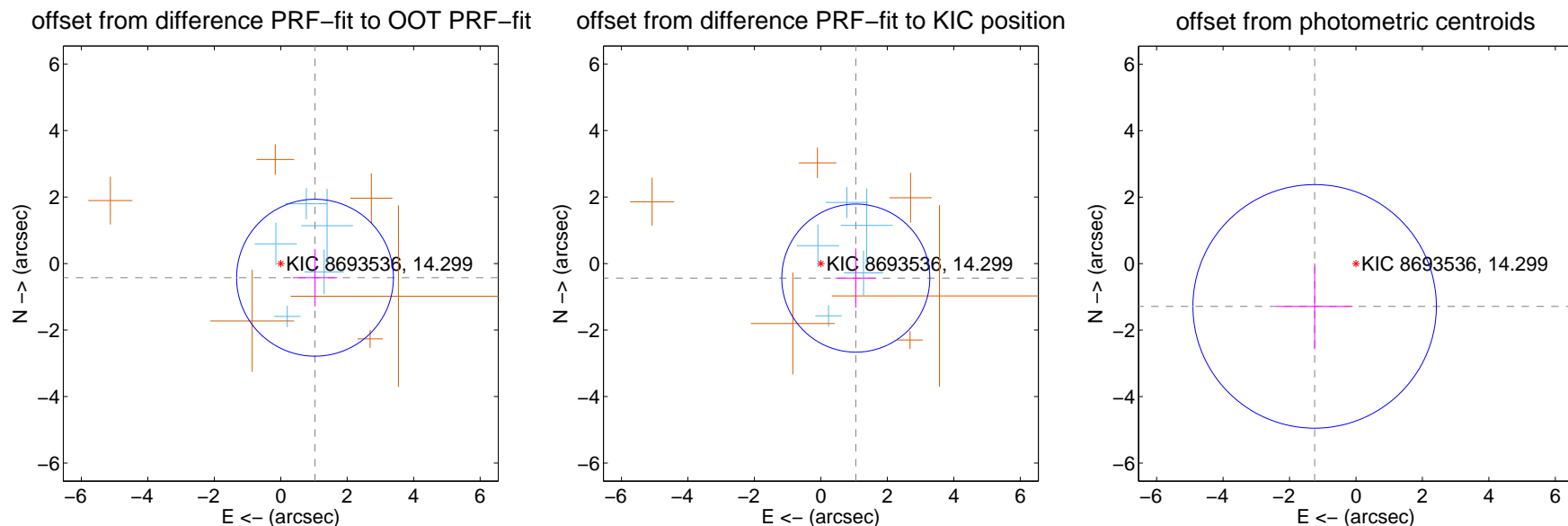
DV Centroid Data

Supplemental centroid analysis for 008693536-01. Kepler magnitude: 14.30. Transit SNR 8.48

There are 5 quarters with good PRF difference image offsets

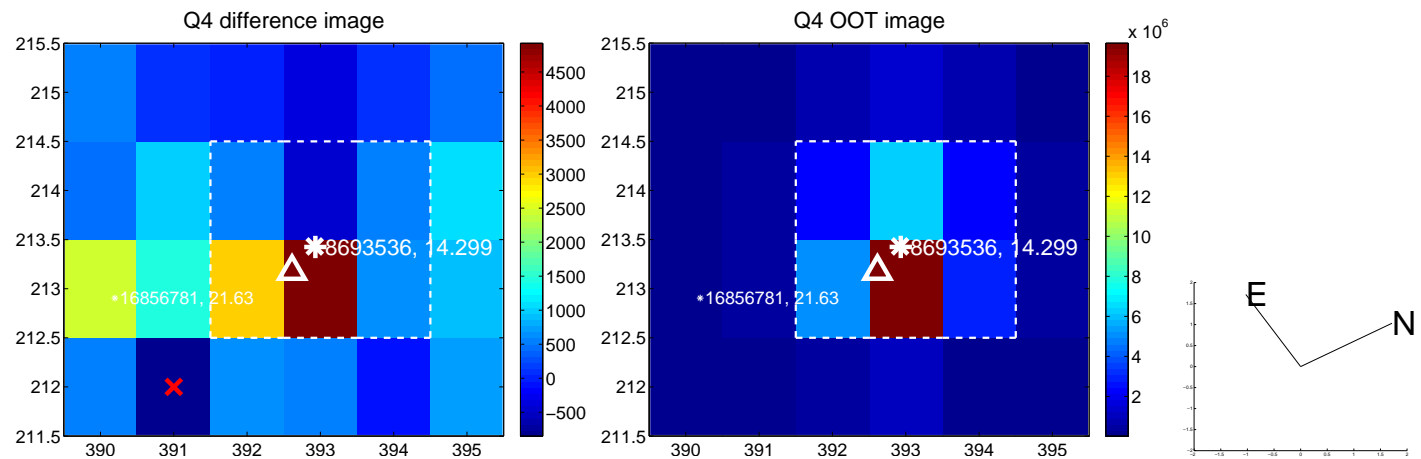
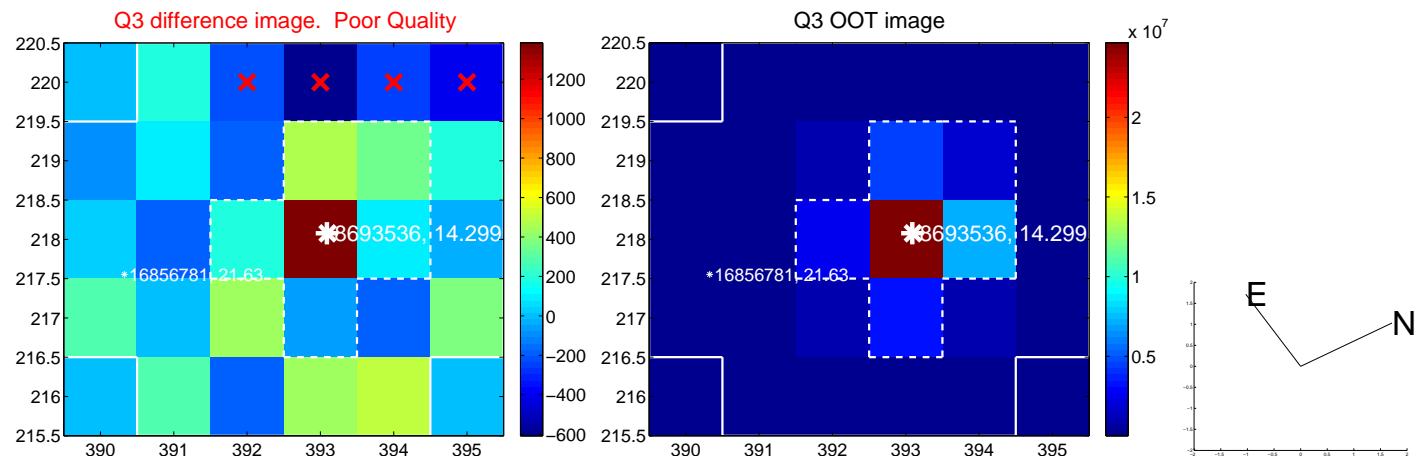
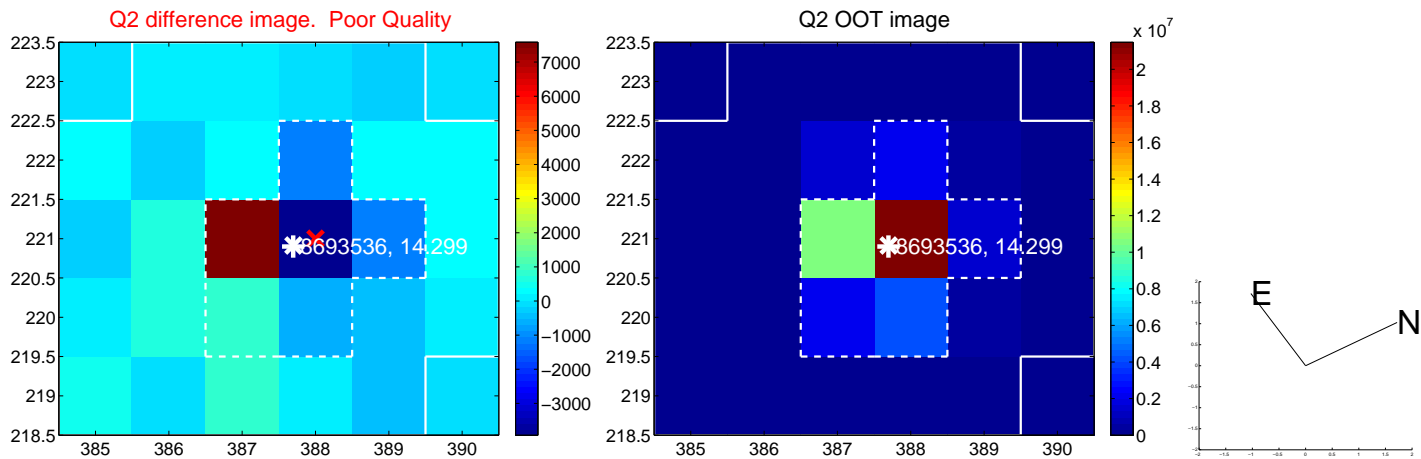
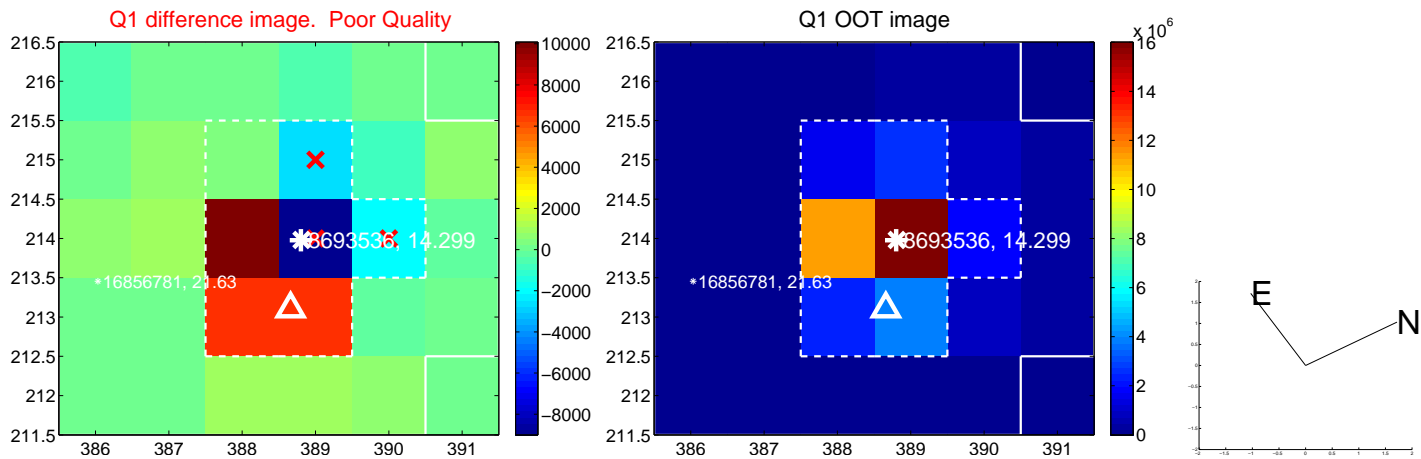
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.115 ± 0.786	1.42	-1.031 ± 0.668	-0.426 ± 0.863
PRF-fit source offset from KIC position	1.139 ± 0.742	1.53	-1.051 ± 0.613	-0.438 ± 0.891
photometric centroid source offset	1.79 ± 1.22	1.47	1.24 ± 1.14	-1.29 ± 1.29

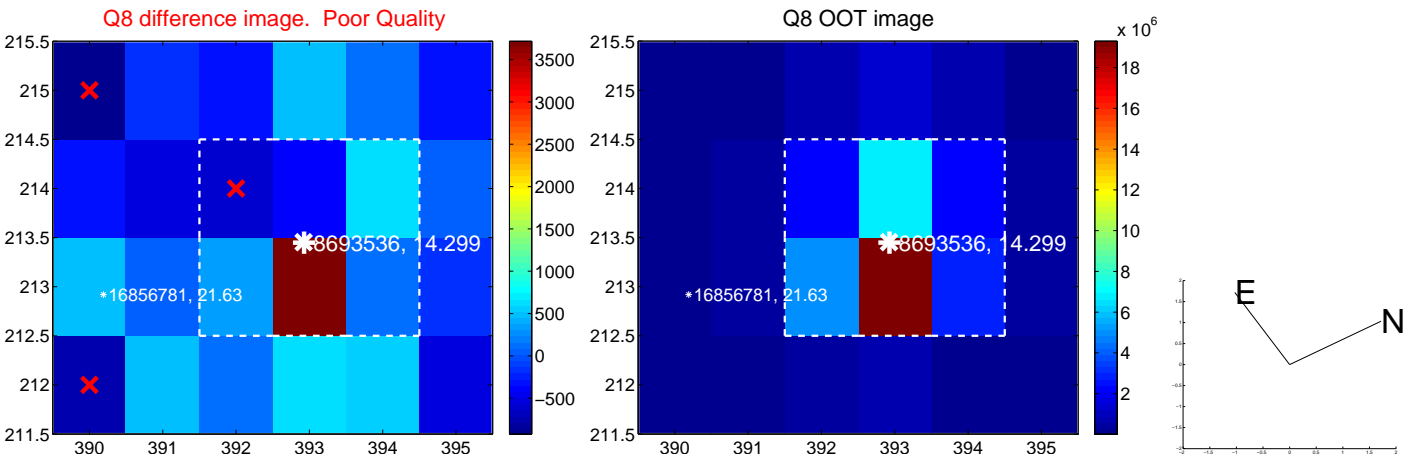
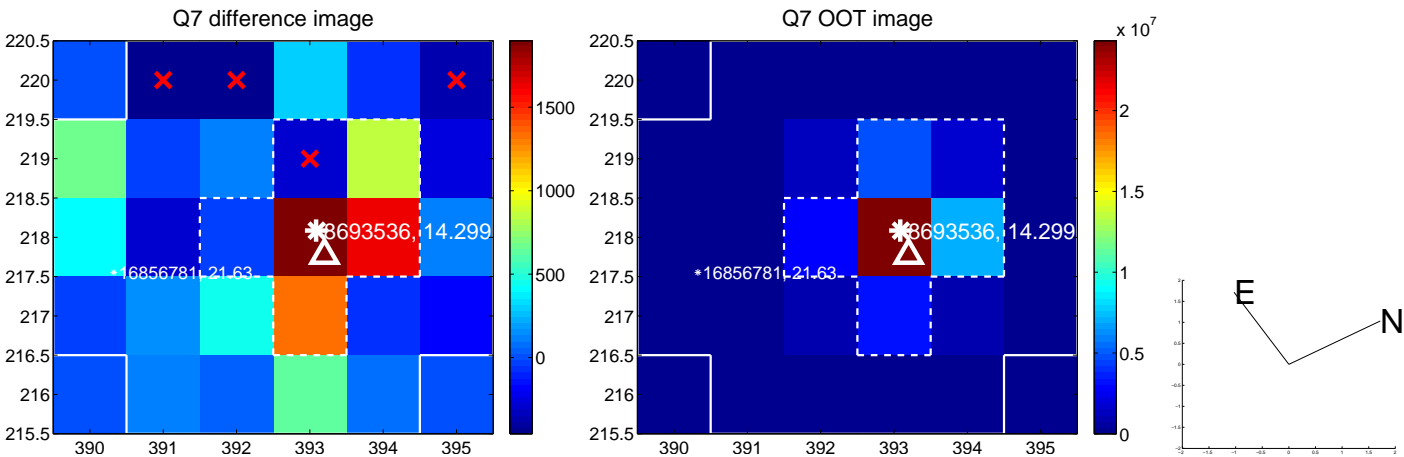
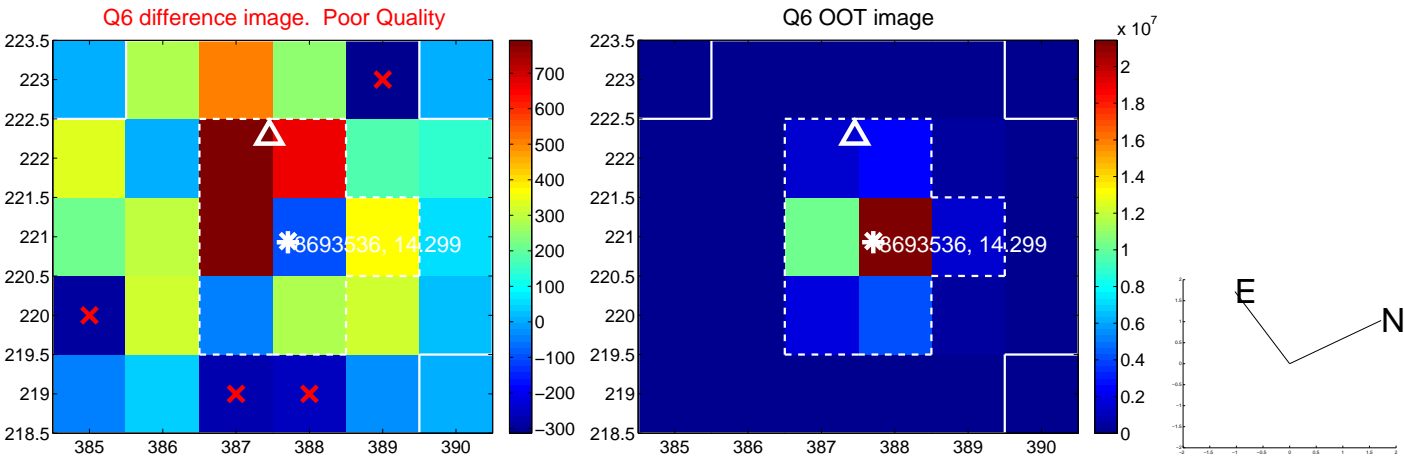
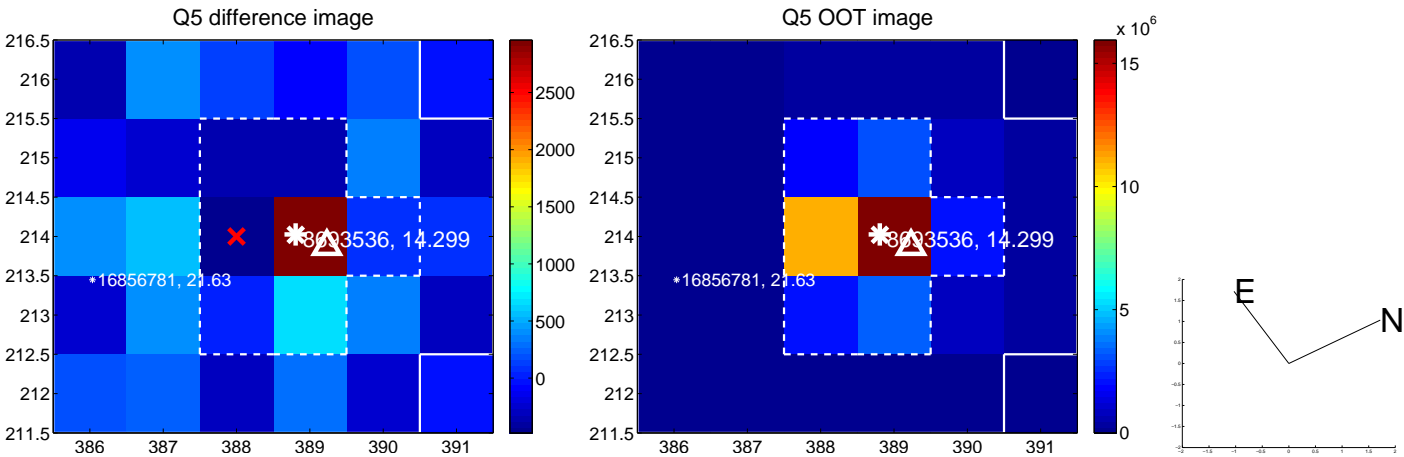


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

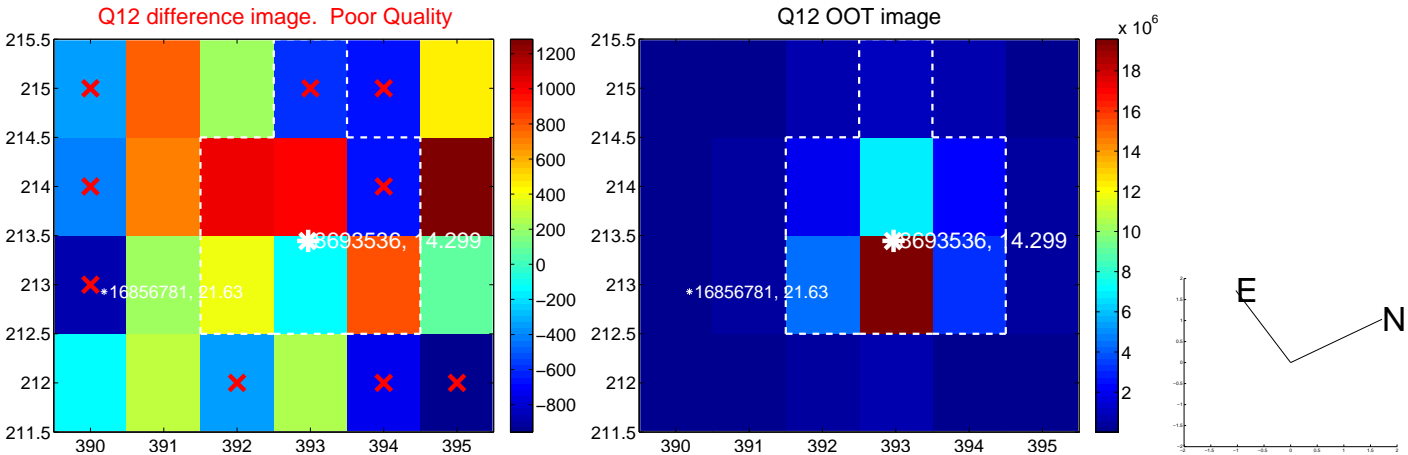
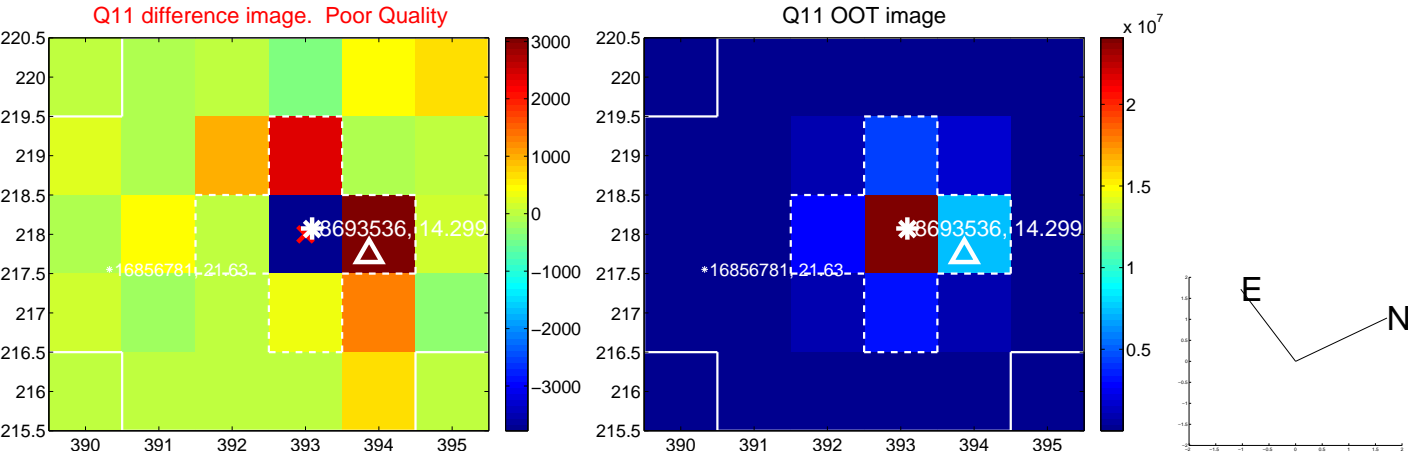
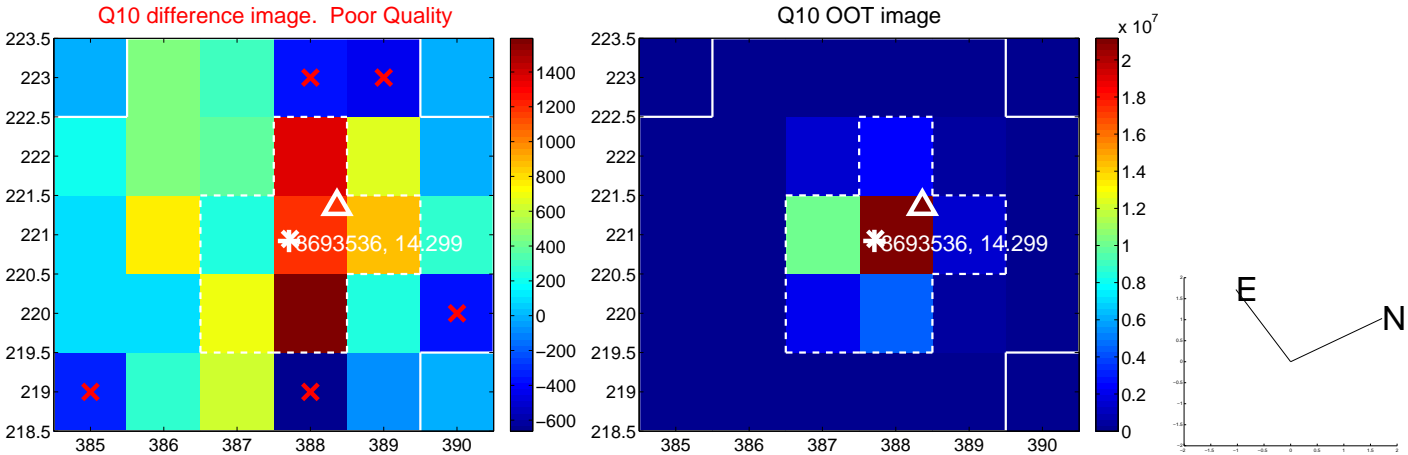
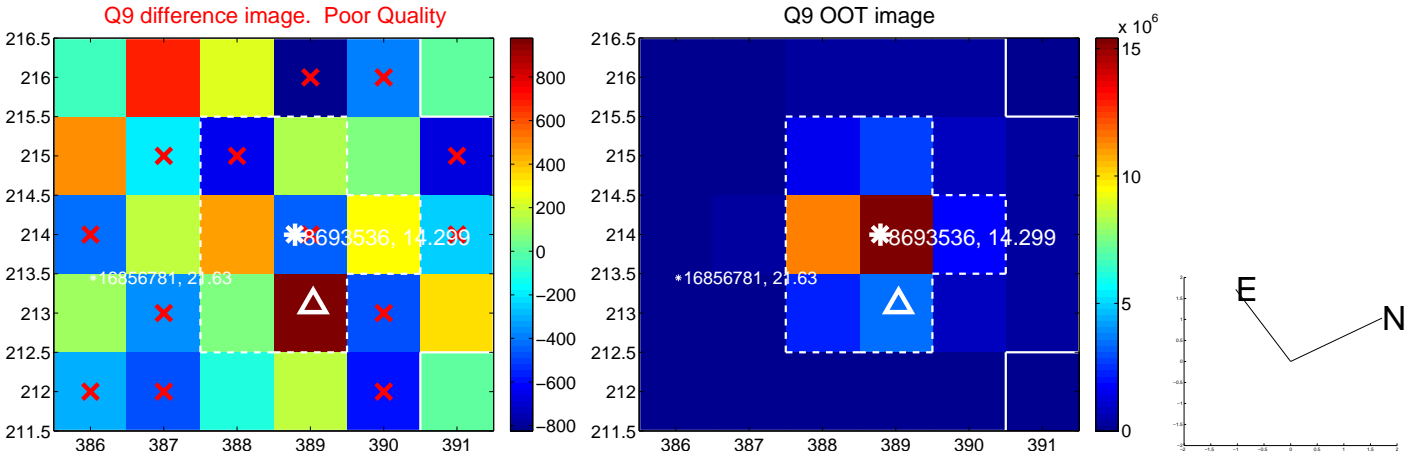
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



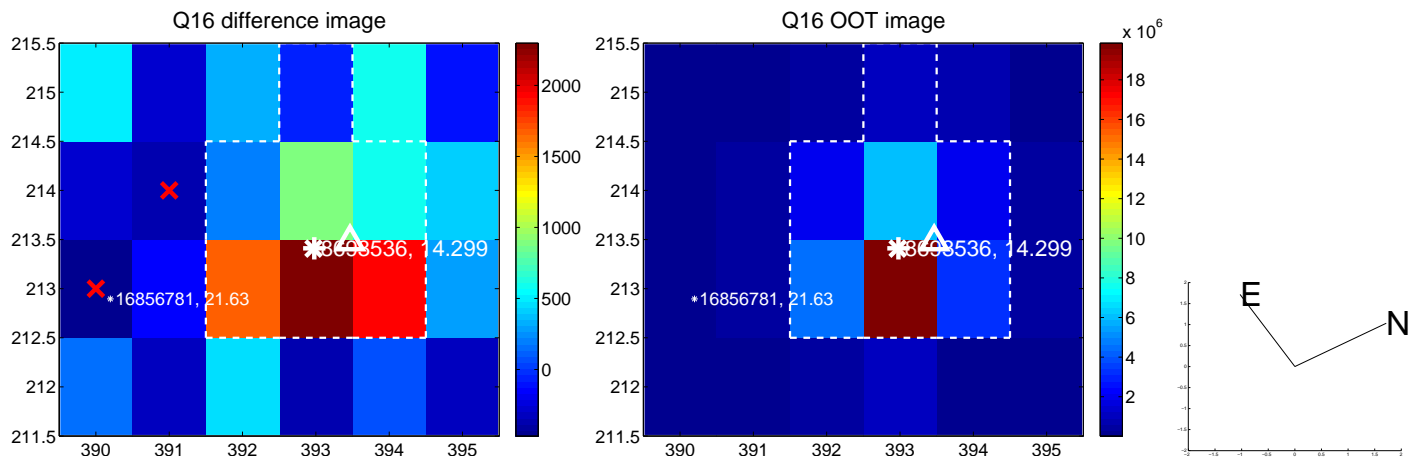
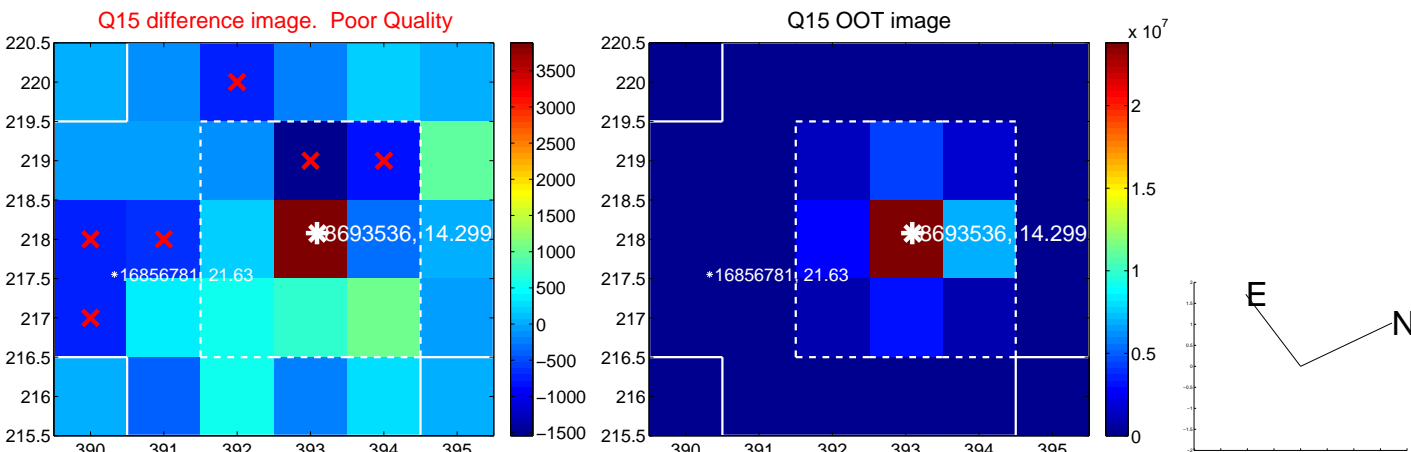
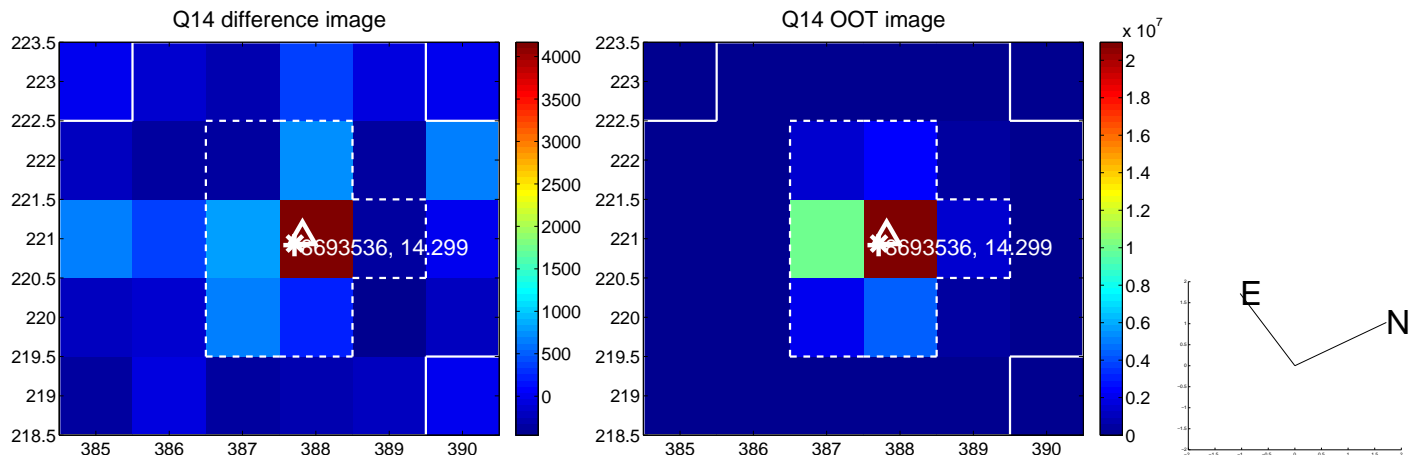
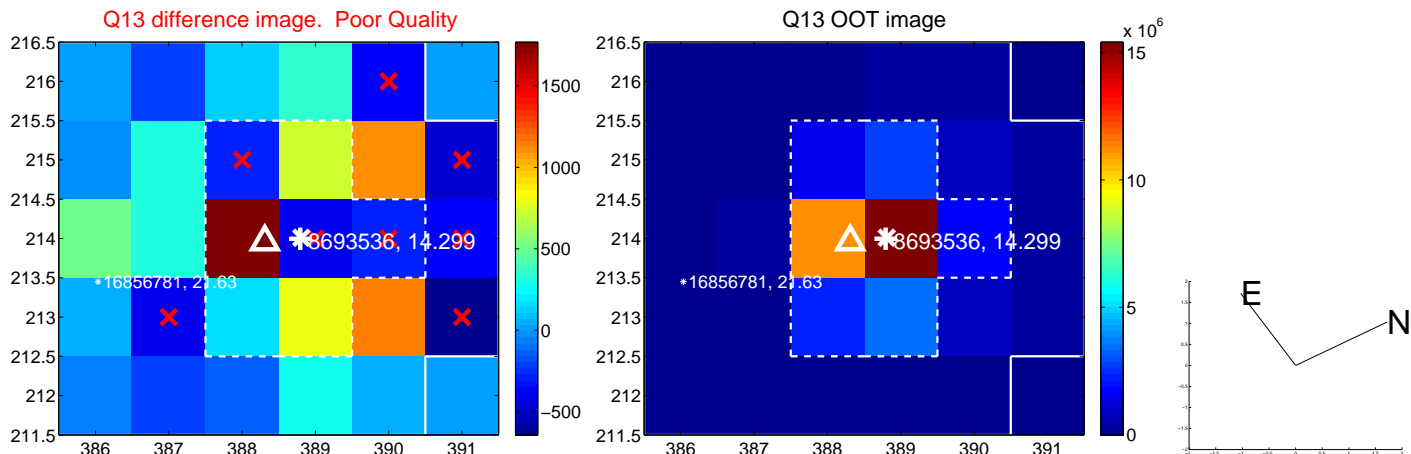
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



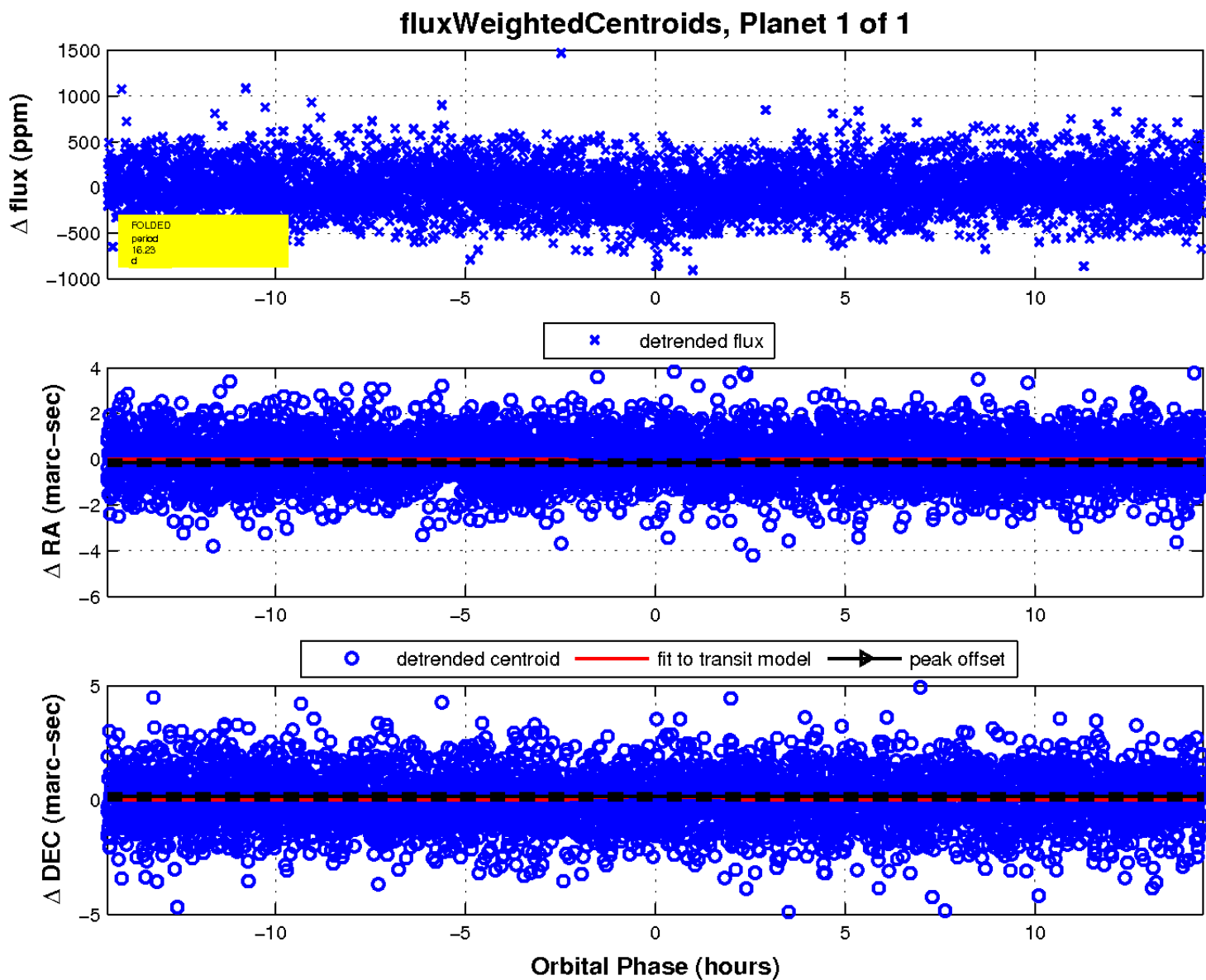
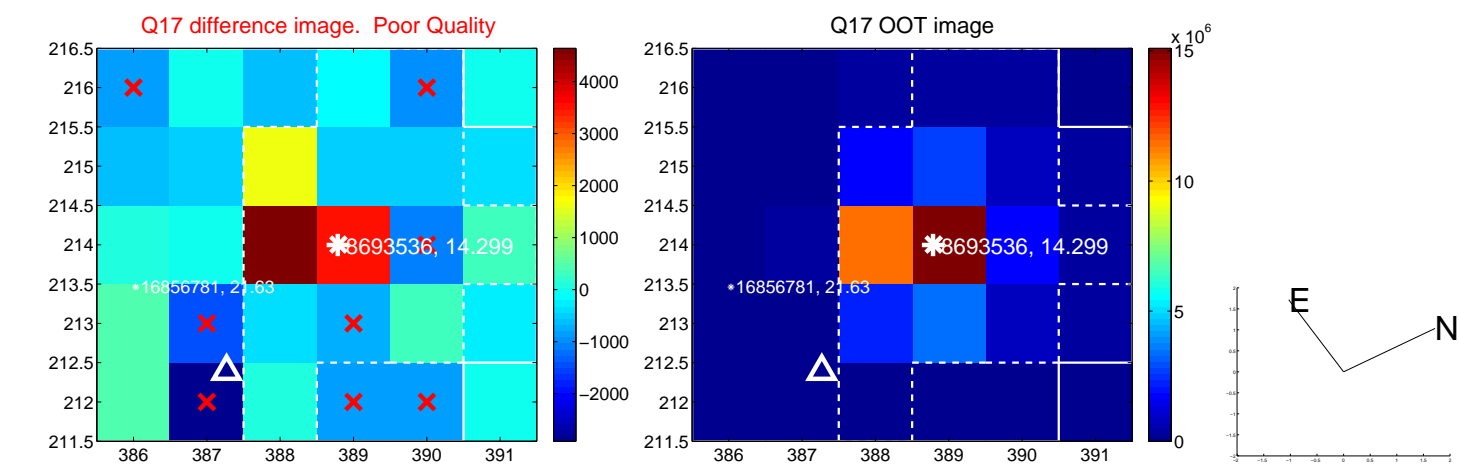
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

