

KIC 008556077

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})
008556077-01	OBS	2027.01	3.635733	134.607928	77.3	2.224	37.1	40.0	1.29	6422	1.35	1129.71

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008556077-01	OBS	FP	0.00	0	0	1	0	CENT_RESOLVED_OFFSET

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 008556077-01

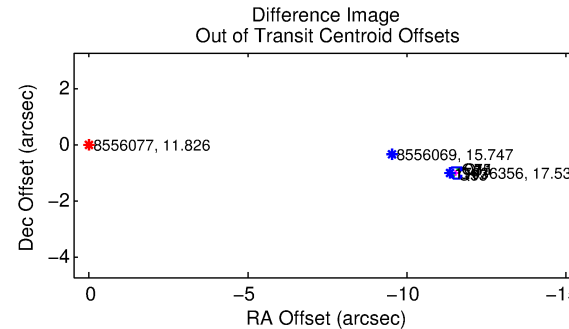
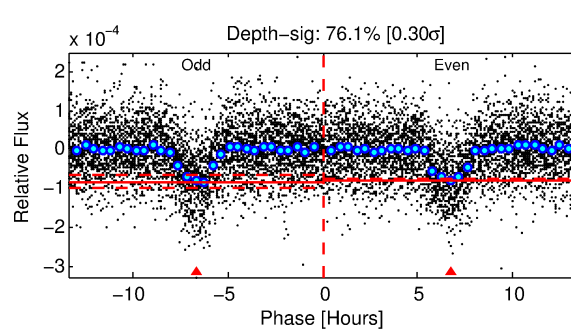
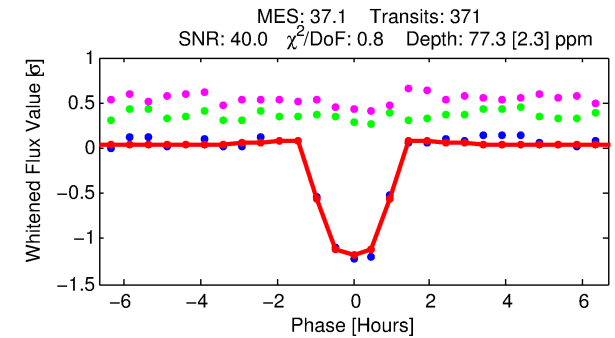
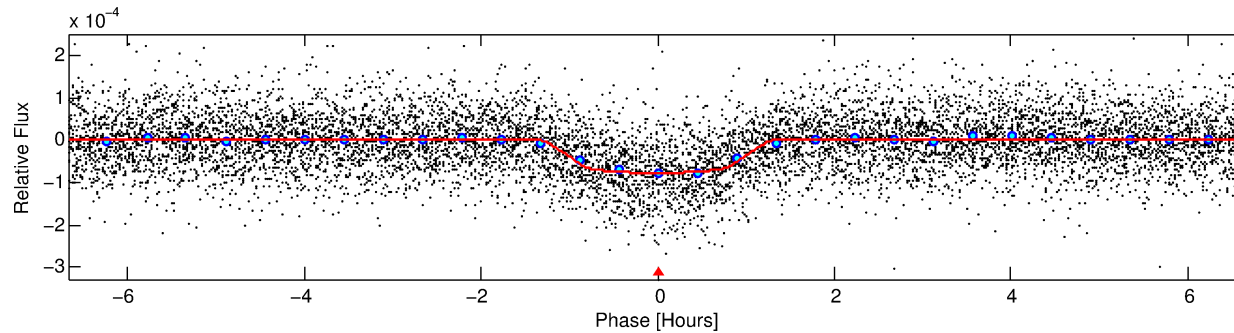
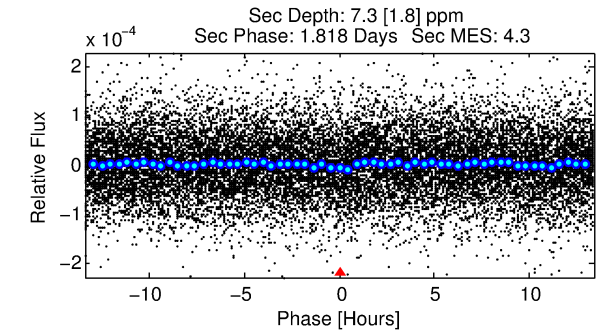
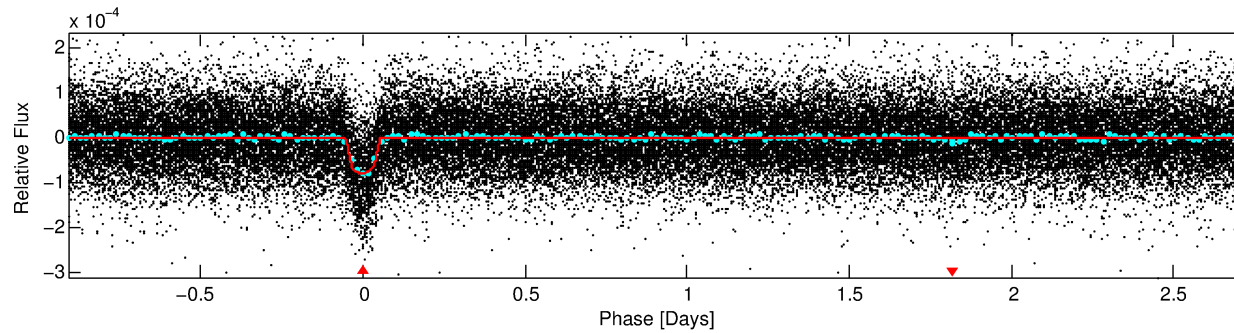
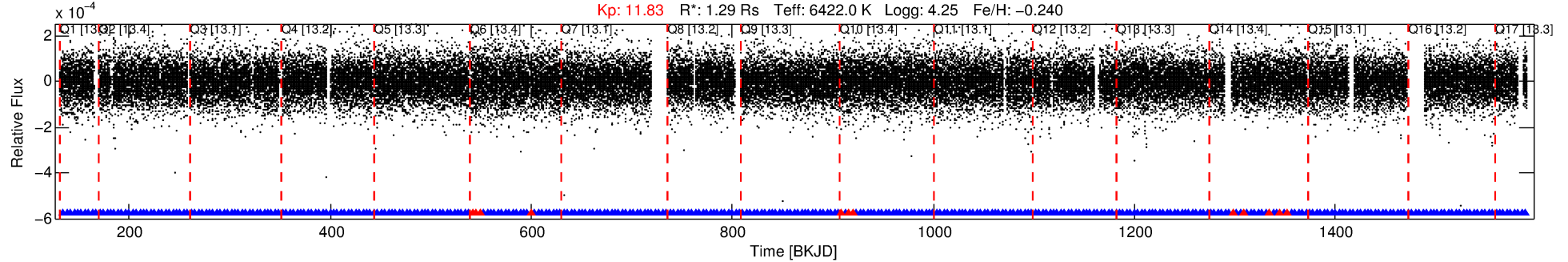
No Significant Match Found

DV One-Page Summary

KIC: 8556077 Candidate: 1 of 1 Period: 3.636 d

KOI: K02027.01 Corr: 0.970

Kp: 11.83 R*: 1.29 Rs Teff: 6422.0 K Logg: 4.25 Fe/H: -0.240



DV Fit Results:

Period = 3.63573 [0.00001] d
Epoch = 134.6079 [0.0009] BKJD
Rp/R* = 0.0095 [0.0013]
a/R* = 5.49 [4.29]
b = 0.91 [0.15]
Seff = 1129.71 [257.80]
Teff = 1478 [84] K
Rp = 1.35 [0.29] Re
a = 0.0476 [0.0070] AU
Ag = 4.99 [2.19] [1.82σ]
Teffp = 3416 [325] K [5.78σ]

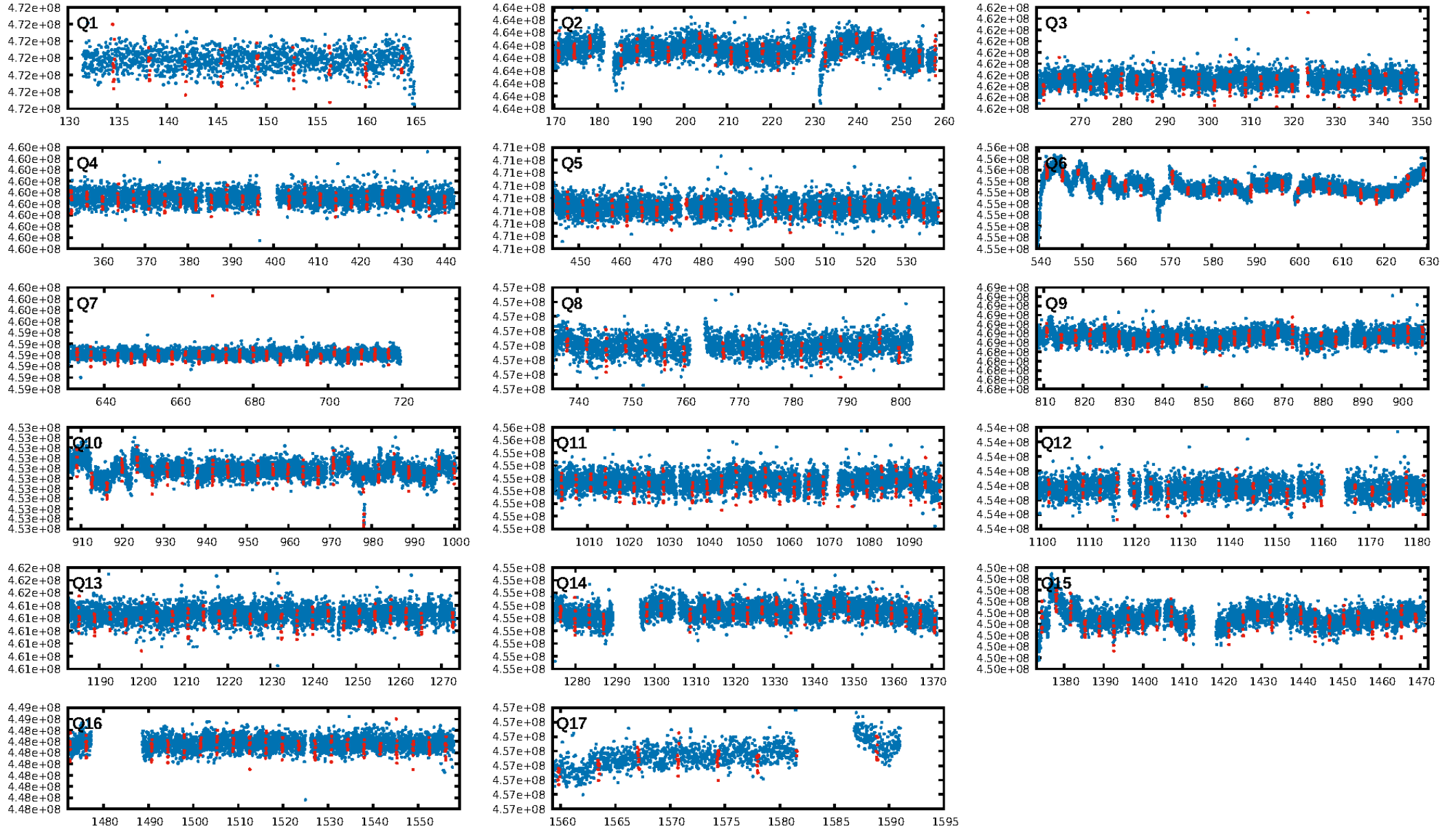
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.68e-281
RollingBand-fgt: 0.97 [342/354]
GhostDiagnostic-chr: -0.5742
Centroid-sig: 0.0%
Centroid-so: 79.510 arcsec [199.66σ]
OotOffset-rm: 11.578 arcsec [160.84σ]
KicOffset-rm: 11.508 arcsec [163.25σ]
OotOffset-st: 0/4/0/5 [9]
KicOffset-st: 0/4/0/5 [9]
DiffImageQuality-fgm: 1.00 [9/9]
DiffImageOverlap-fno: 1.00 [17/17]

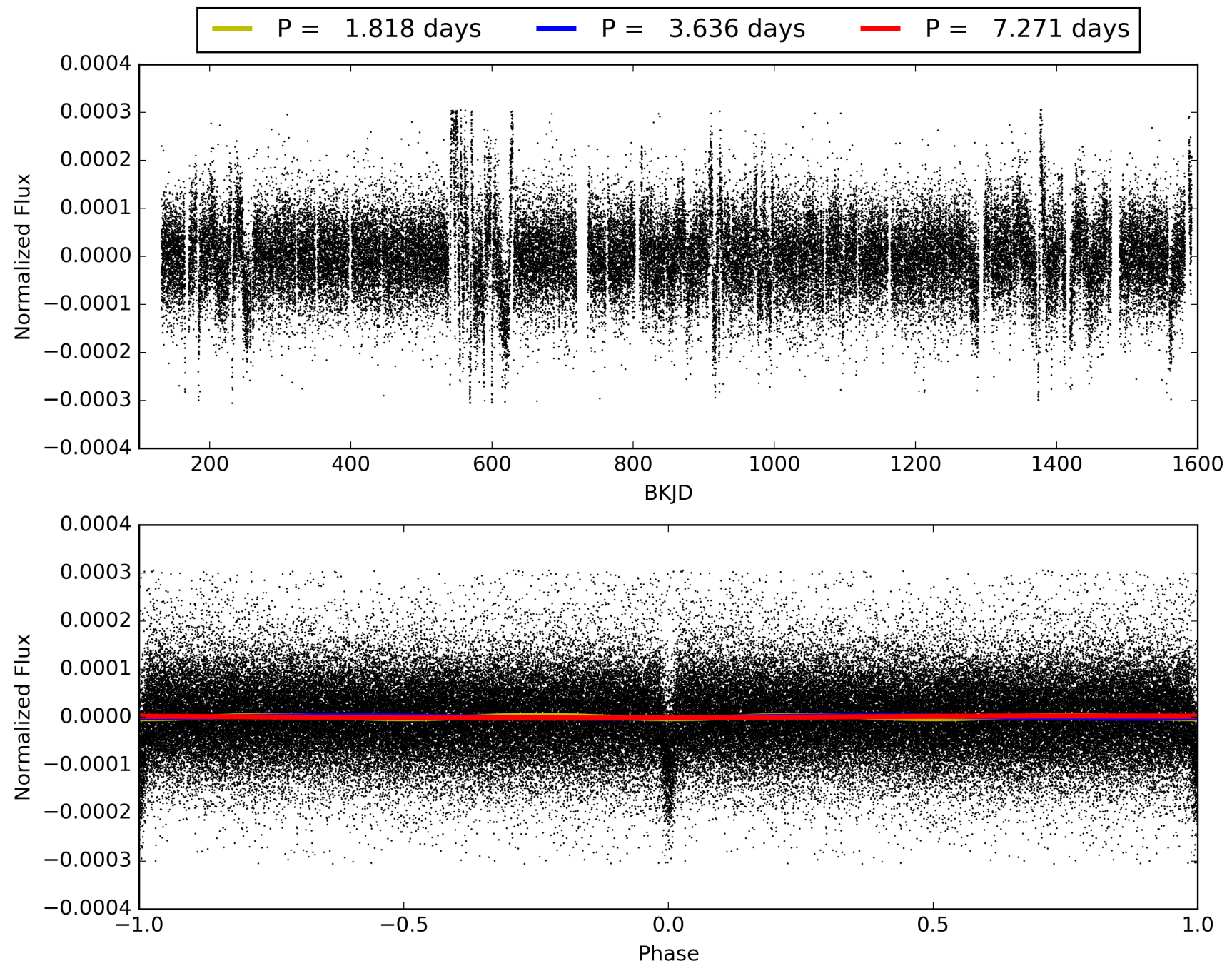
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 20:05:16 Z

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

TCE 008556077-01, PDC Light Curves

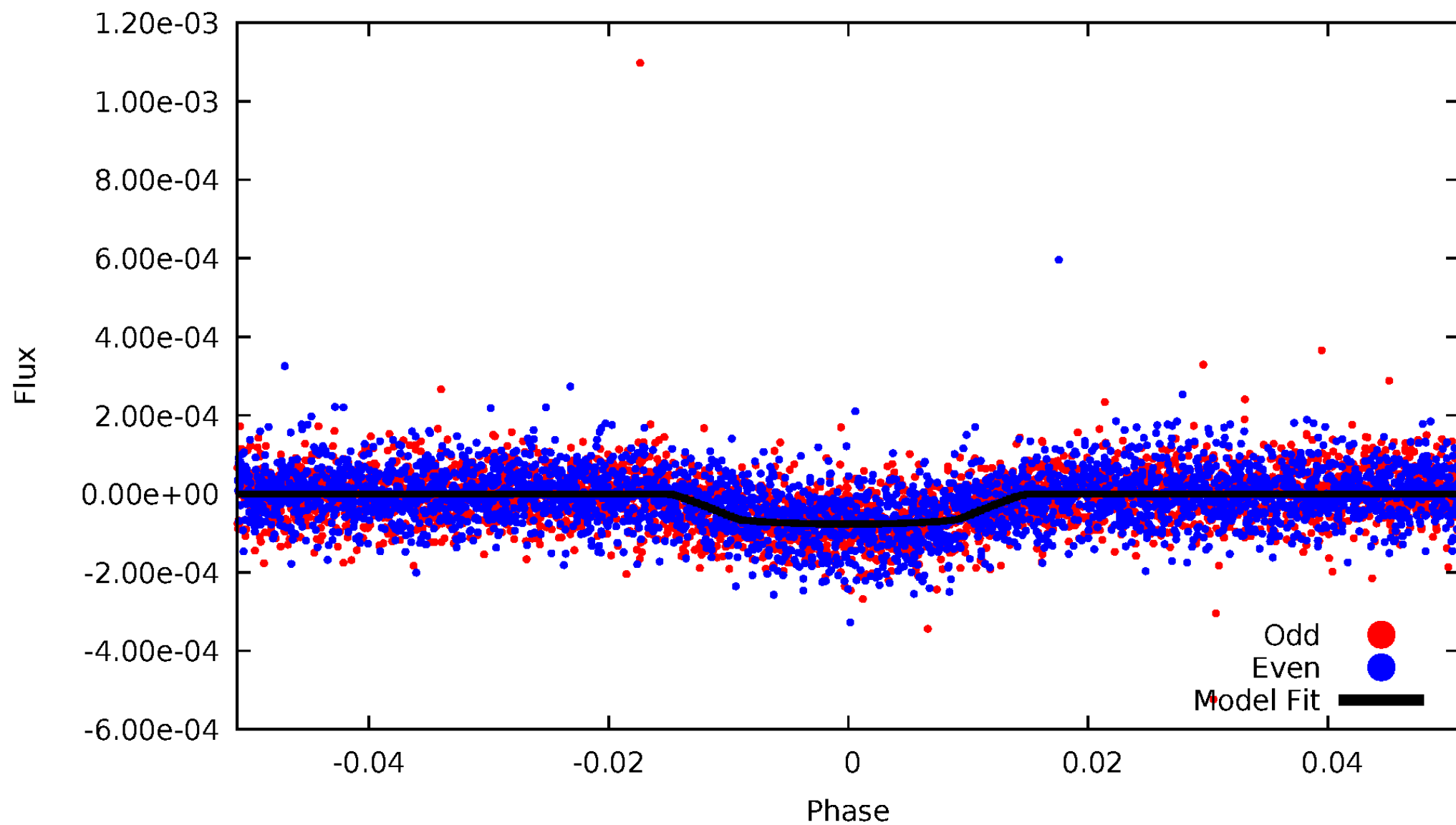


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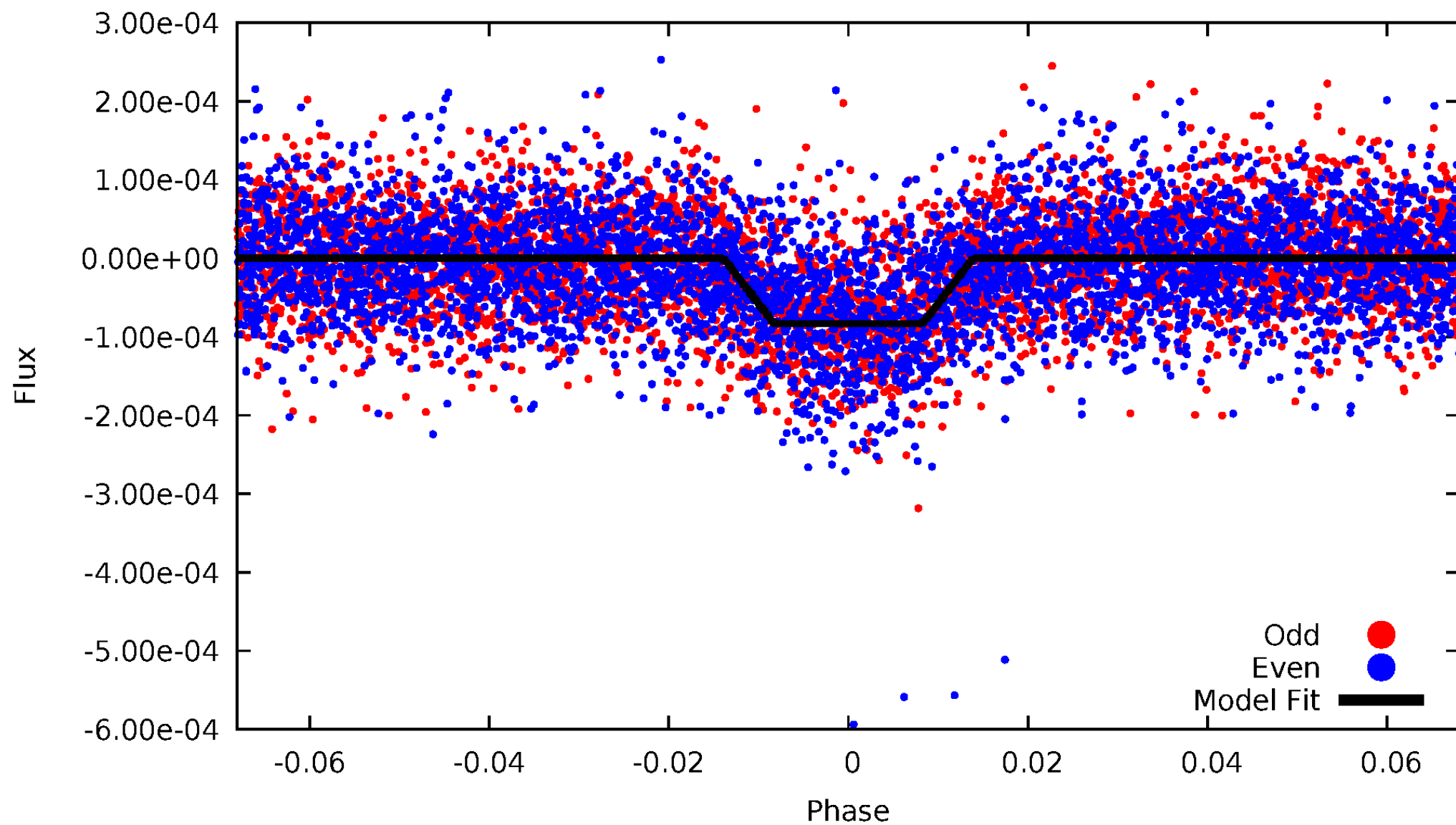
DV Odd/Even

TCE 008556077-01

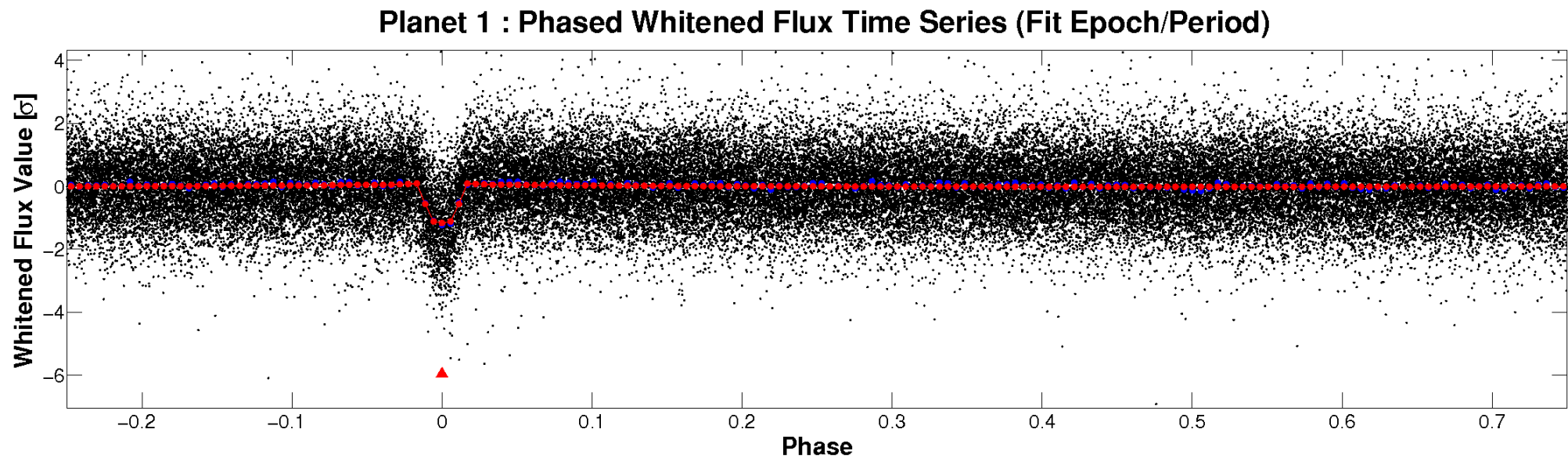
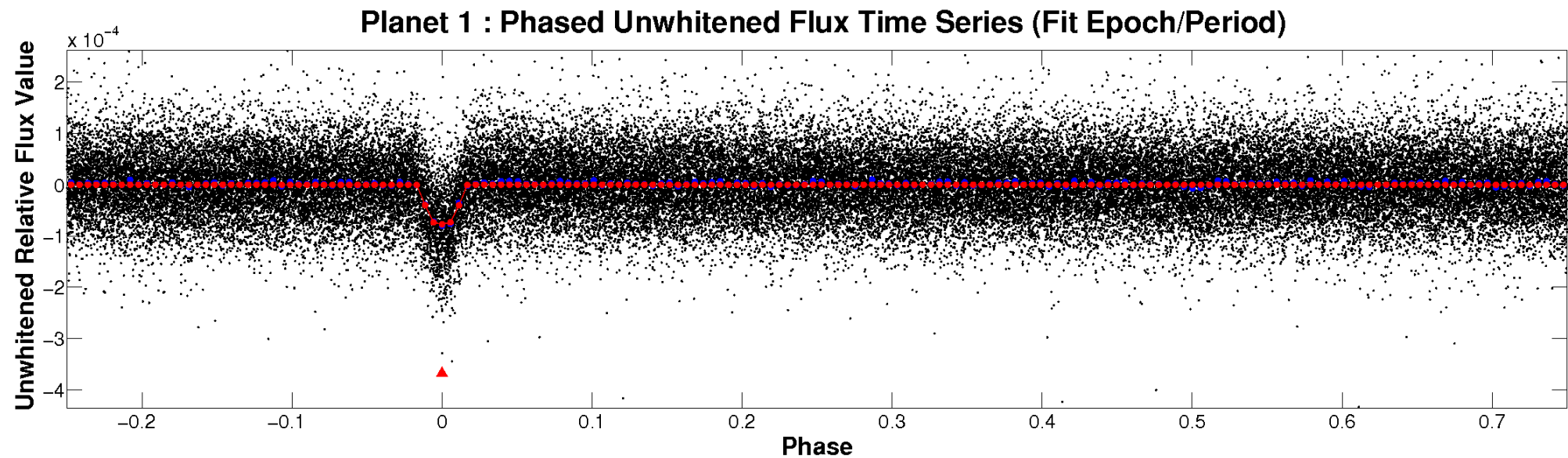


ALT Odd/Even

TCE 008556077-01

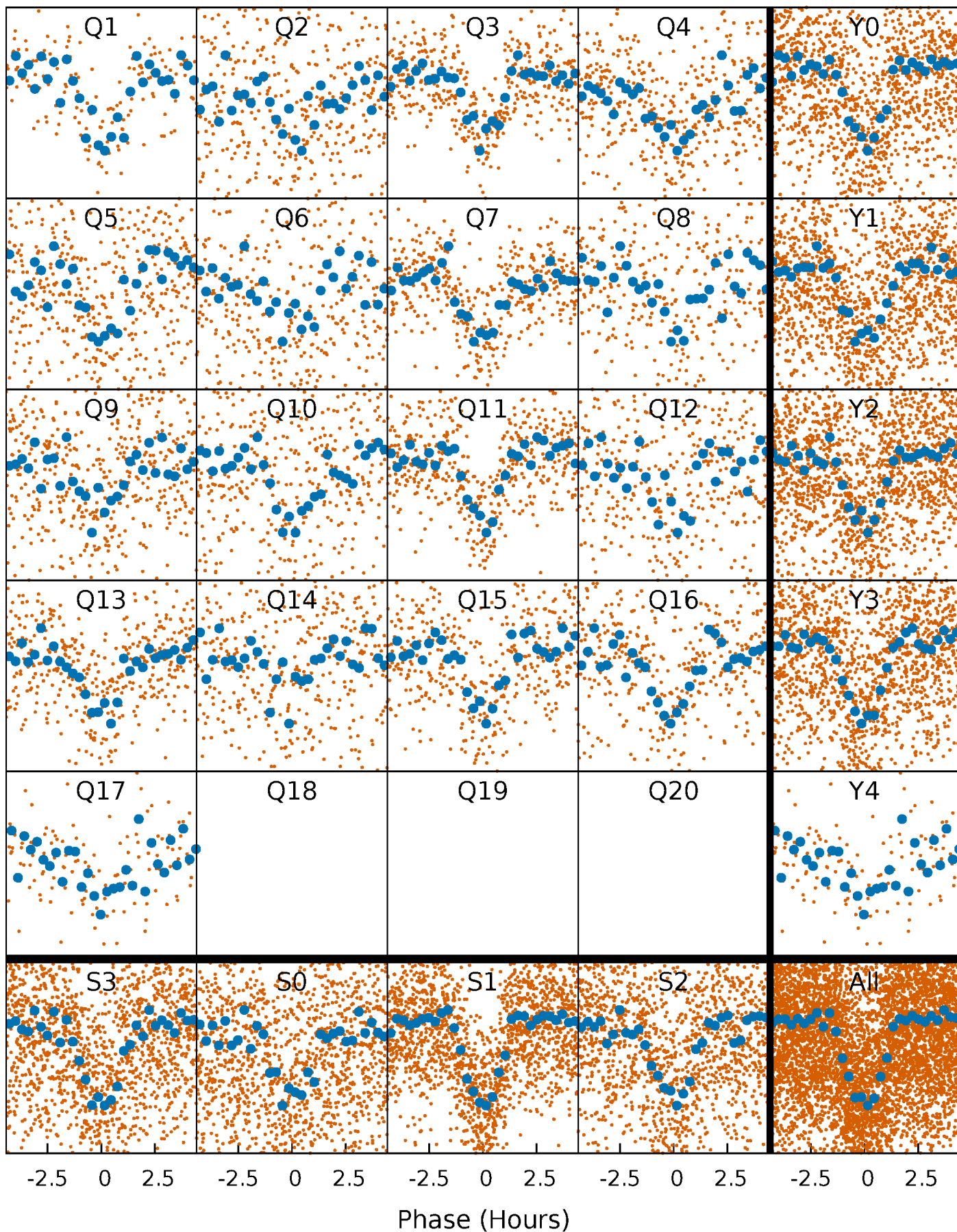


Non-Whitened Vs. Whitened Light Curve



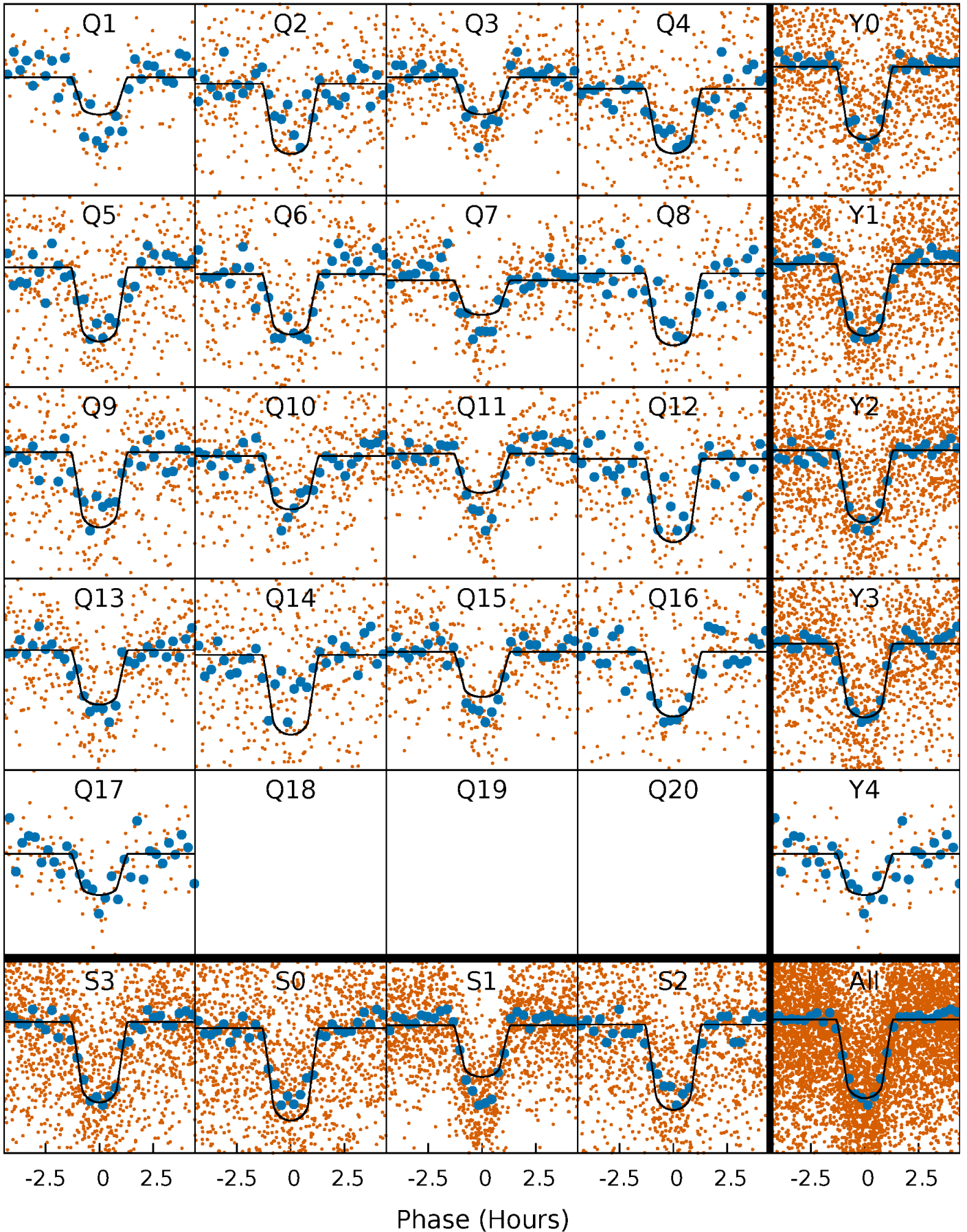
PDC Quarter-Phased Transit Curves

TCE 008556077-01 P= 3.635733 Days $T_0=134.607928$ (BKJD)



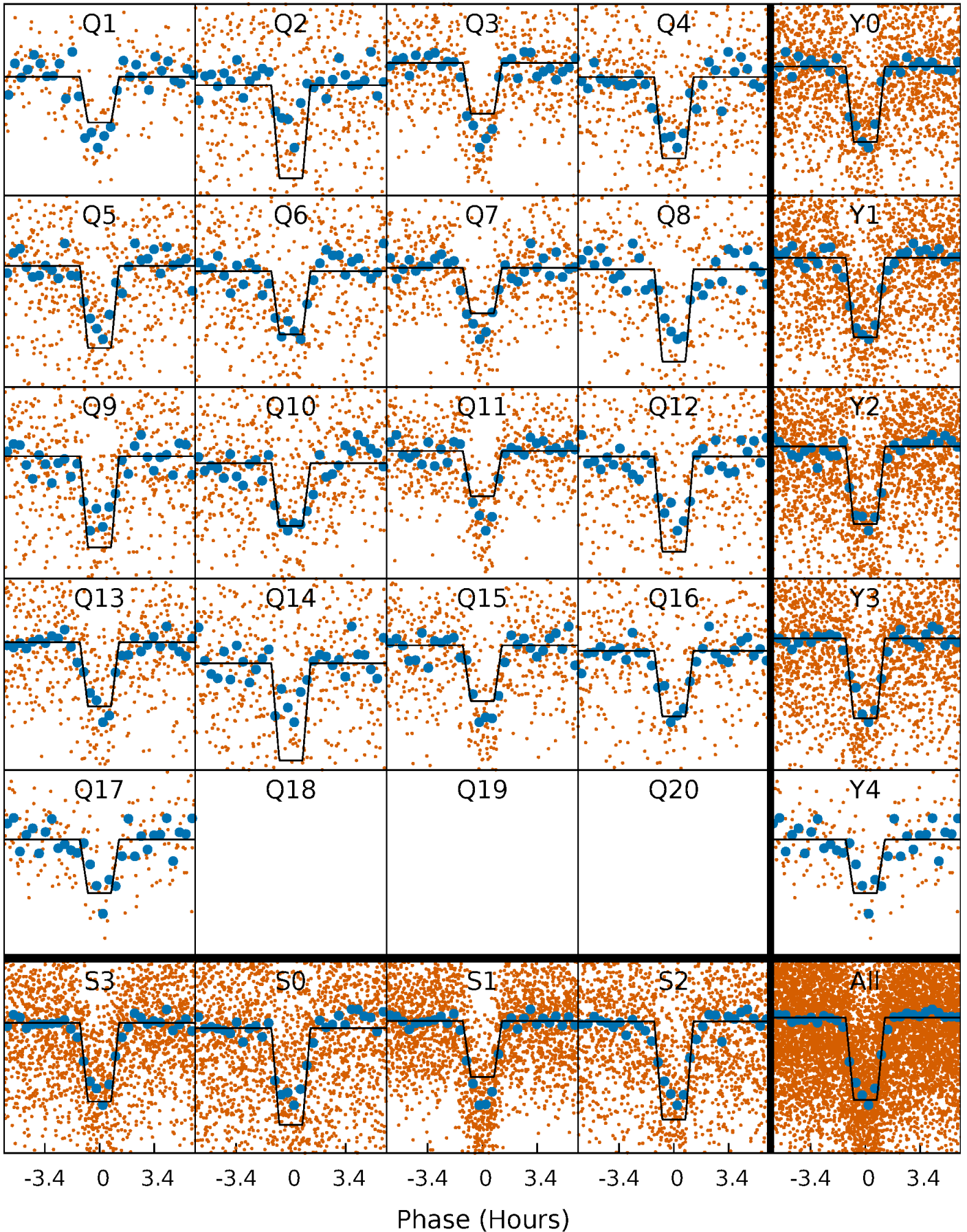
DV Quarter-Phased Transit Curves

TCE 008556077-01 P= 3.635733 Days $T_0=134.607928$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

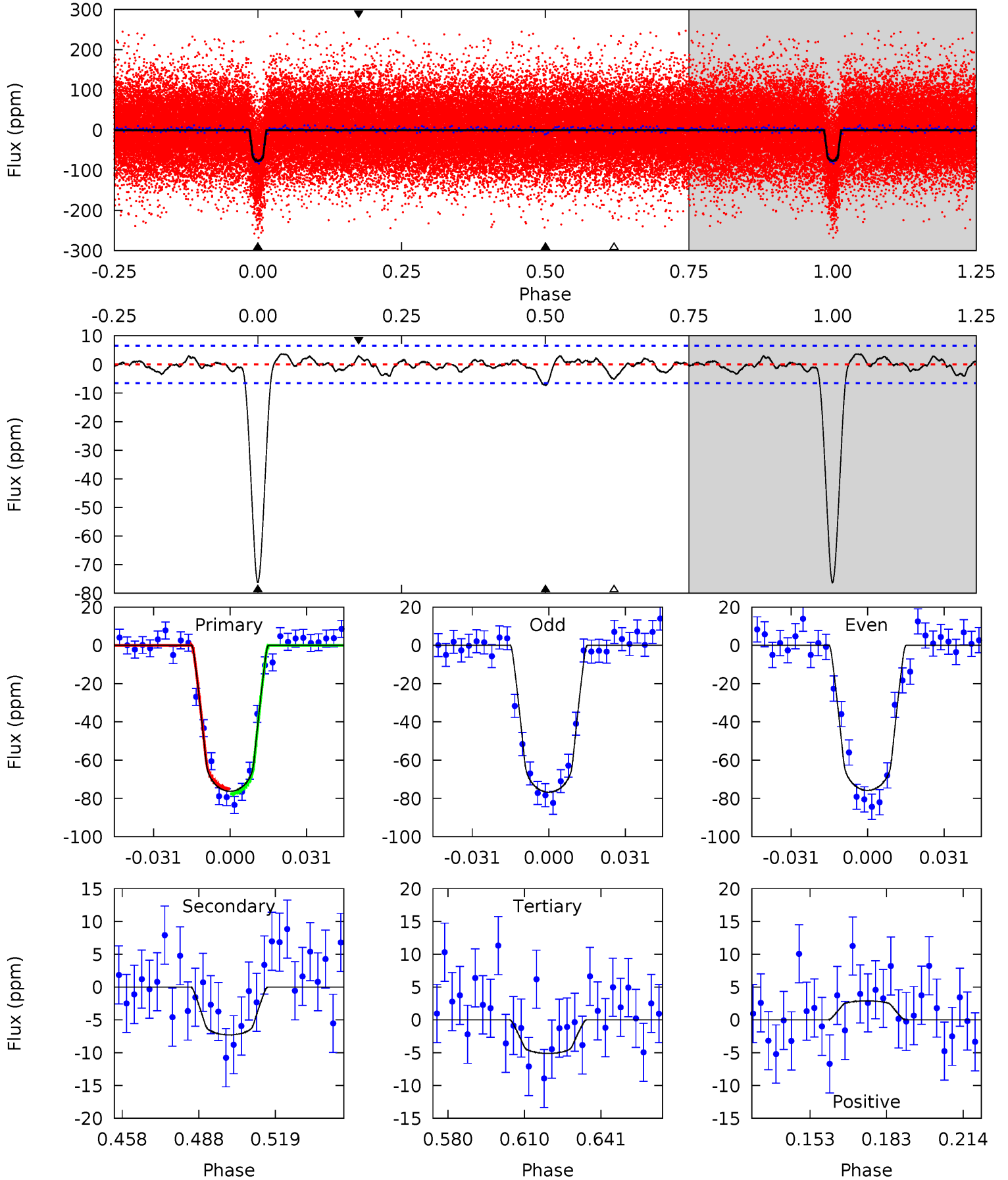
TCE 008556077-01 P= 3.635688 Days $T_0=134.616718$ (BKJD)



DV Model-Shift Uniqueness Test

008556077-01, P = 3.635733 Days, E = 130.972195 Days

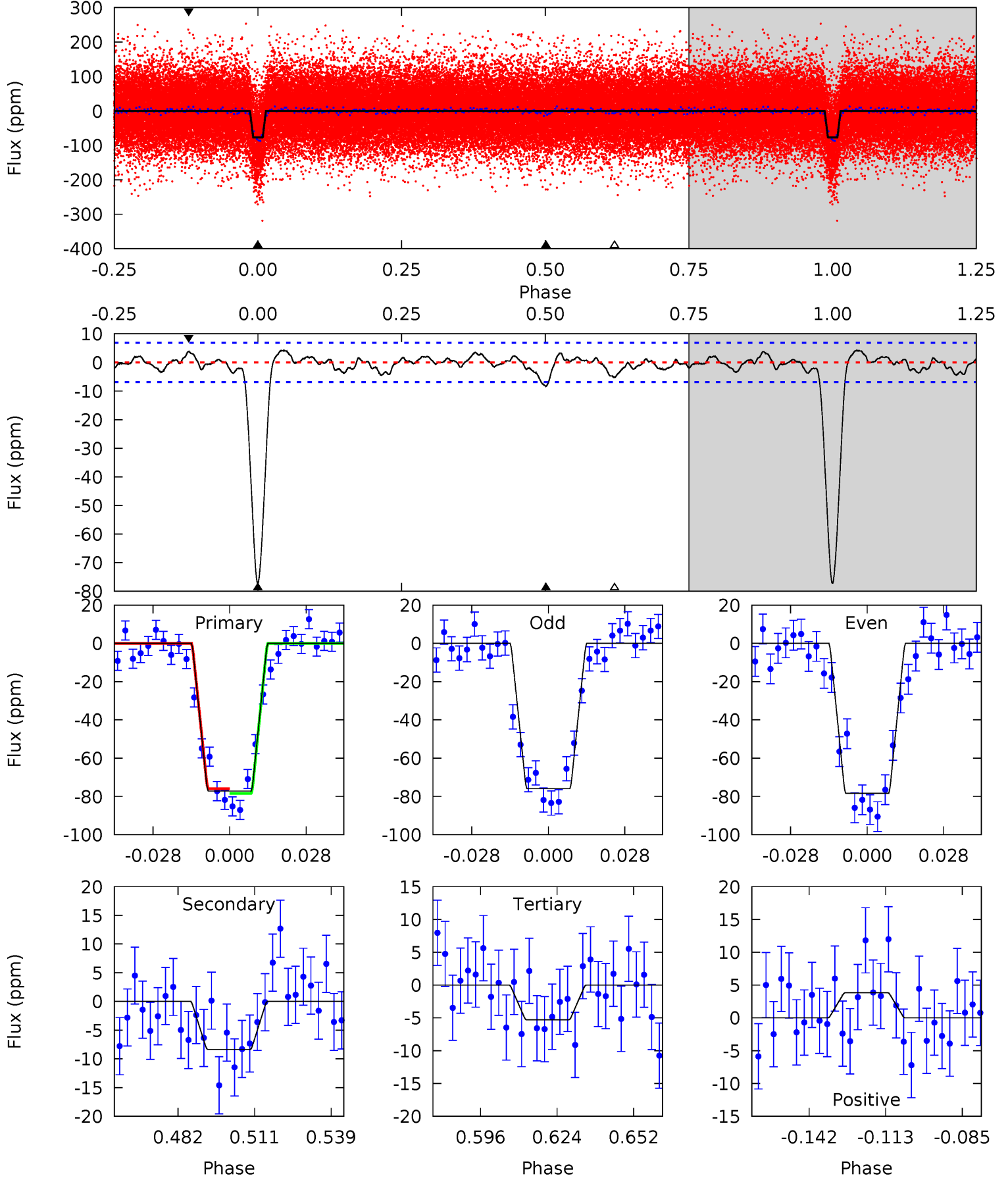
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
56.1	5.36	3.76	2.12	4.81	2.16	1.16	52.3	53.9	1.60	3.24	0.34	1.00	0.05	0.97



Alt Model-Shift Uniqueness Test

008556077-01, P = 3.635688 Days, E = 130.981030 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
54.0	5.85	3.69	2.68	4.82	2.19	1.28	50.3	51.4	2.16	3.17	0.86	1.00	0.05	0.85



Stellar Parameters For KIC 008556077

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6422^{+77}_{-77}	$4.249^{+0.126}_{-0.115}$	$-0.240^{+0.150}_{-0.150}$	$1.295^{+0.216}_{-0.177}$	$1.082^{+0.097}_{-0.057}$	$0.702^{+0.358}_{-0.237}$
	+1%/-1%	+3%/-3%	+62%/-62%	+17%/-14%	+9%/-5%	+51%/-34%
Source	SPE68	SPE68	SPE68	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 008556077-01 / KOI 2027.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-7 ± 1	$1.35^{+0.25}_{-0.22}$	2060^{+93}_{-84}	3749^{+240}_{-210}	$4.971^{+2.408}_{-1.580}$
Alt.	-8 ± 1	$1.30^{+0.24}_{-0.24}$	2066^{+92}_{-84}	3912^{+287}_{-231}	$6.292^{+3.345}_{-2.095}$

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

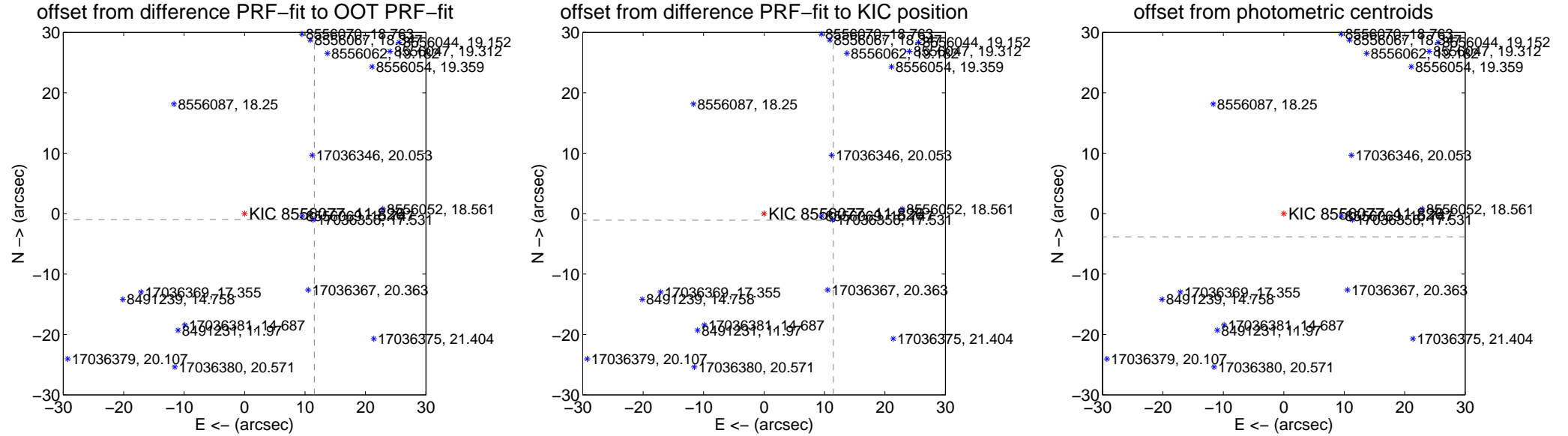
DV Centroid Data

Supplemental centroid analysis for 008556077-01. **Kepler magnitude: 11.83.** Transit SNR 40.05

There are 9 quarters with good PRF difference image offsets

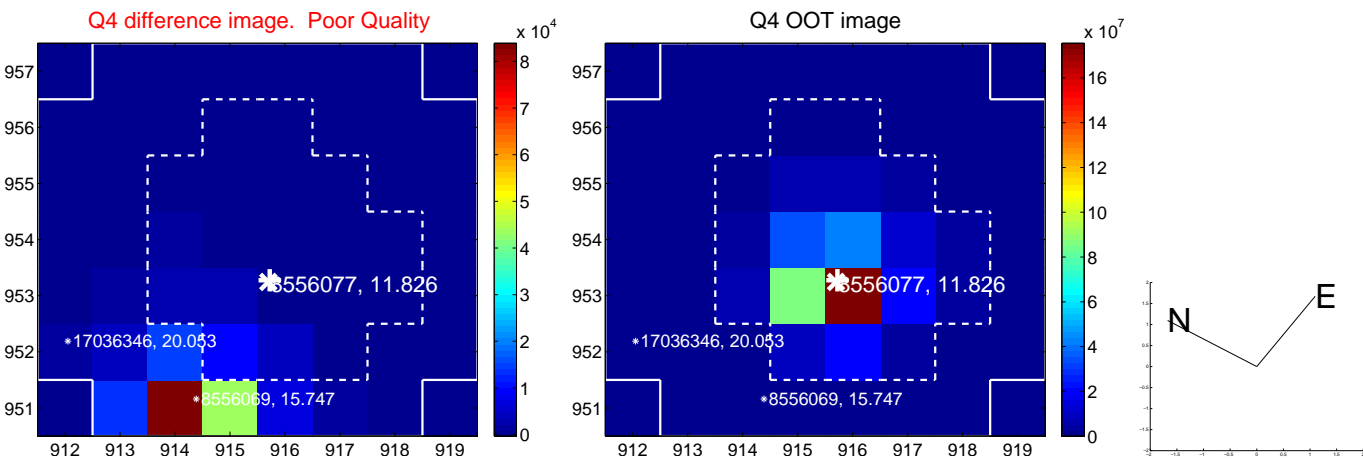
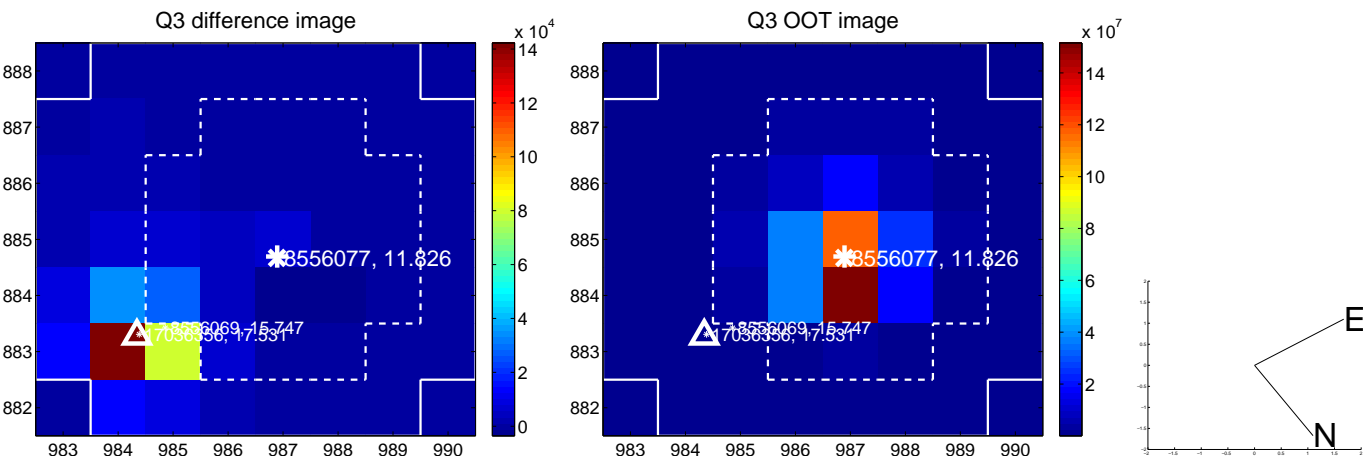
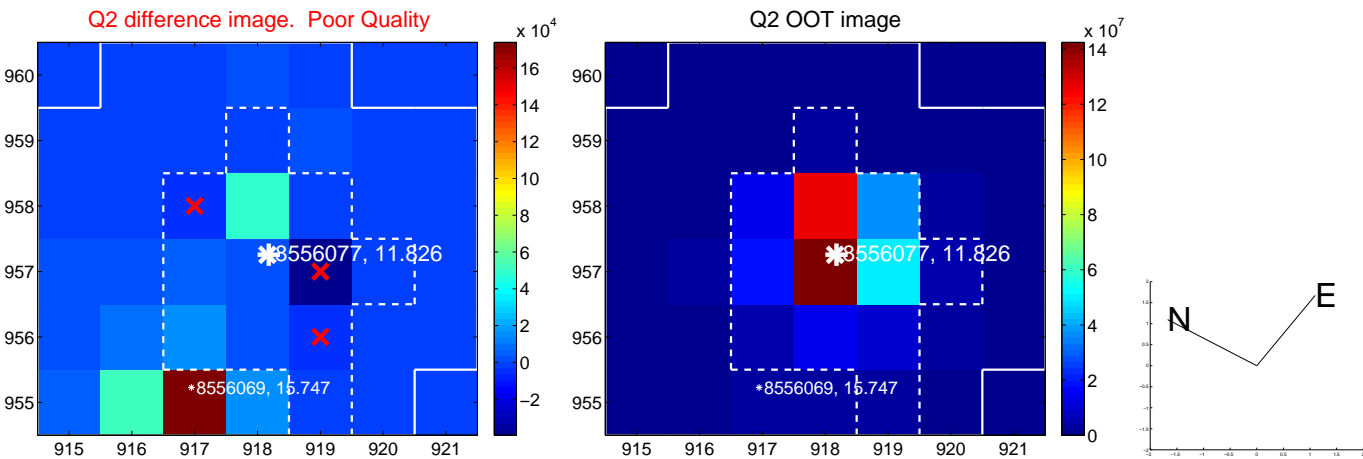
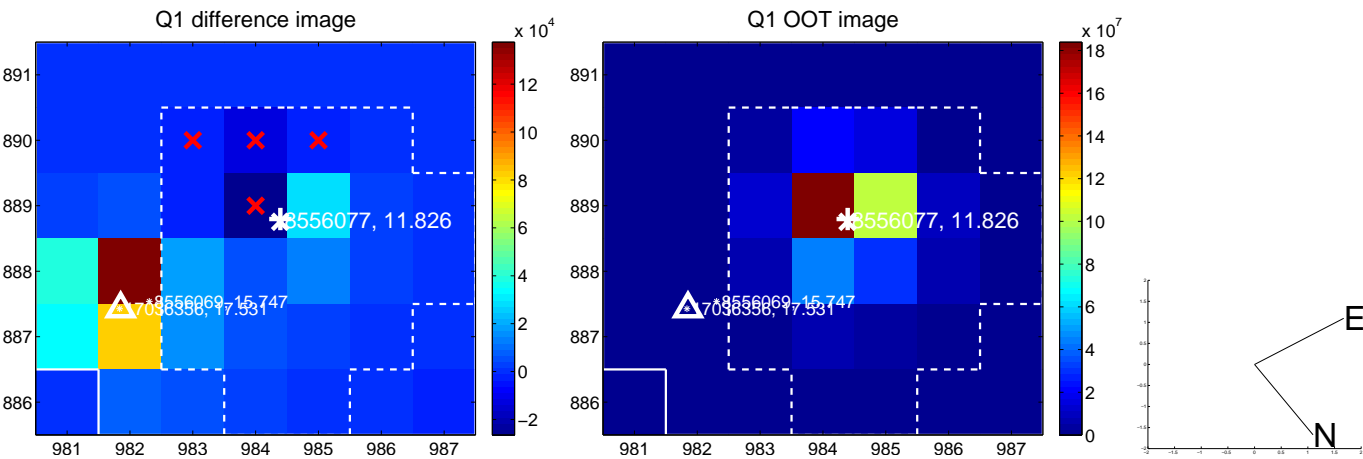
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	11.578 ± 0.072	160.84	-11.536 ± 0.072	-0.984 ± 0.074
PRF-fit source offset from KIC position	11.508 ± 0.070	163.25	-11.457 ± 0.070	-1.084 ± 0.078
photometric centroid source offset	79.51 ± 0.40	199.66	-79.42 ± 0.40	-3.84 ± 0.33

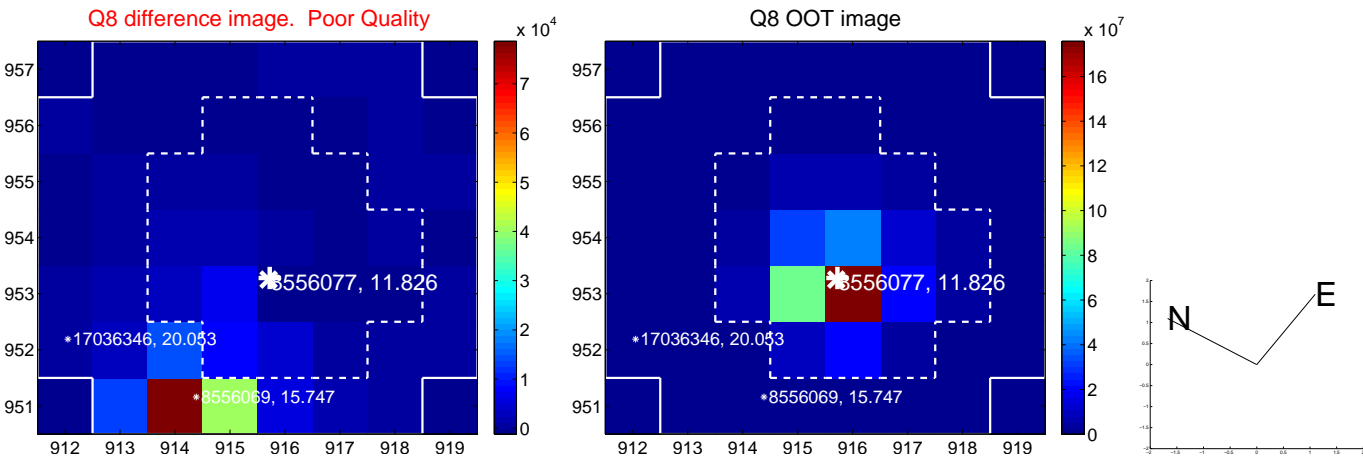
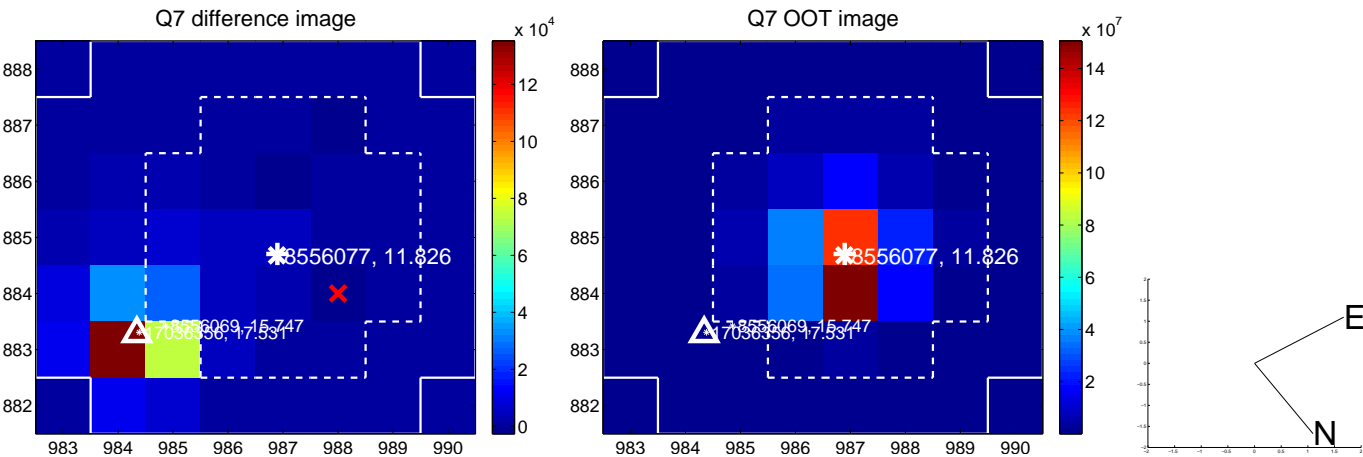
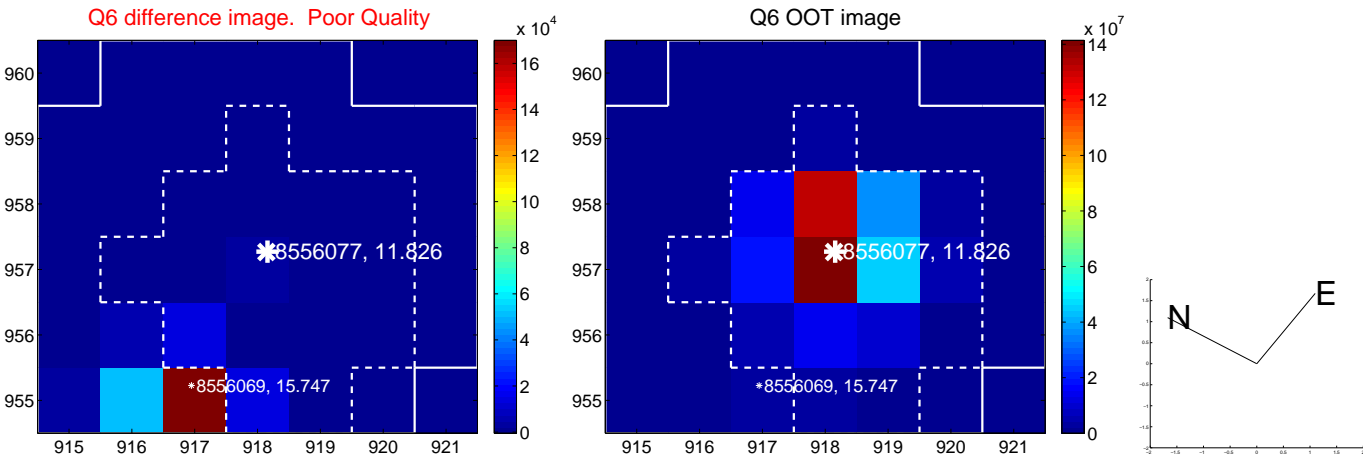
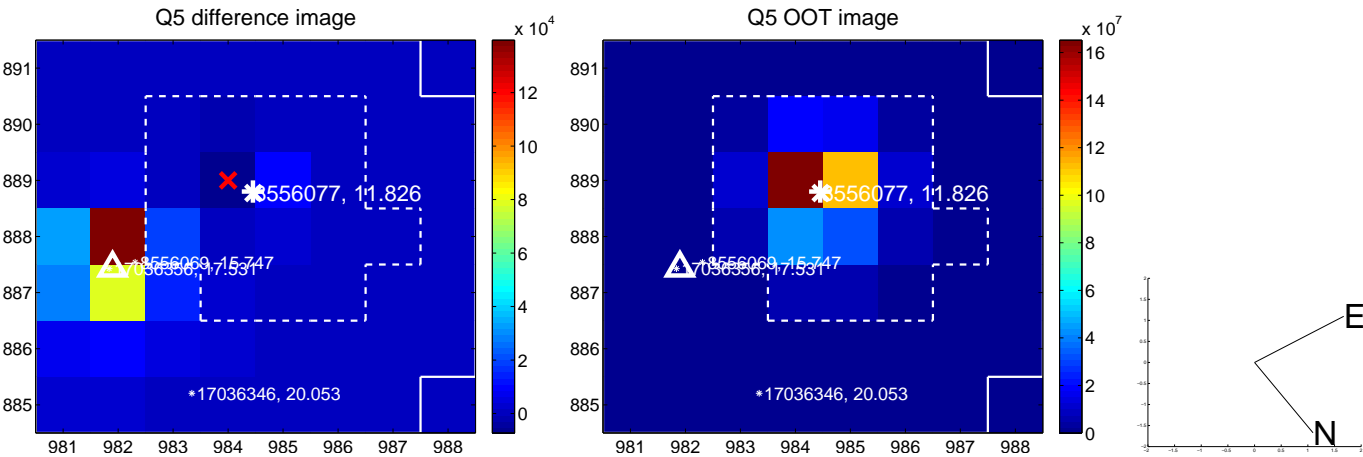


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

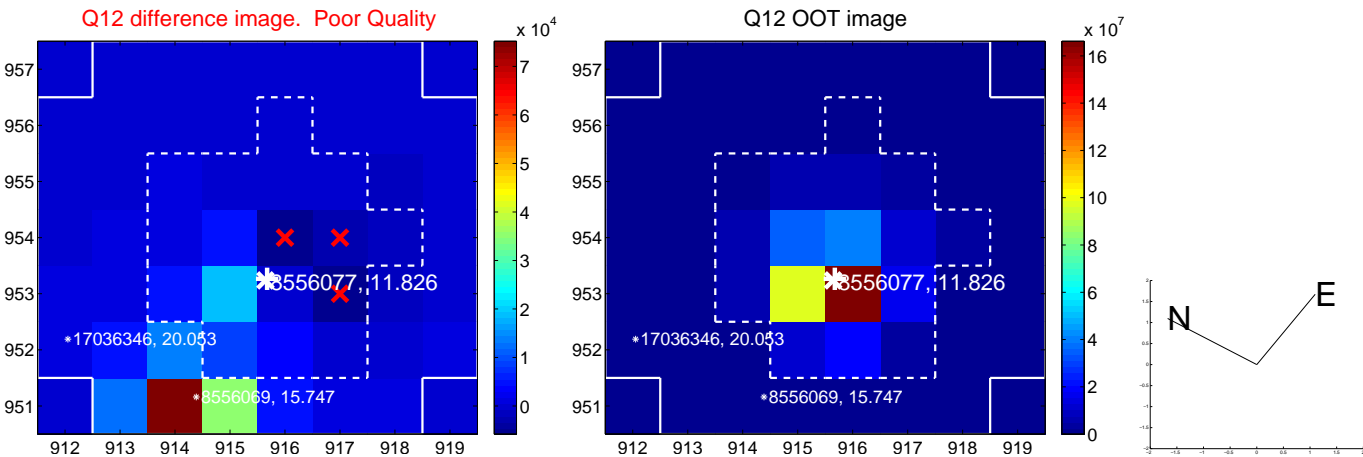
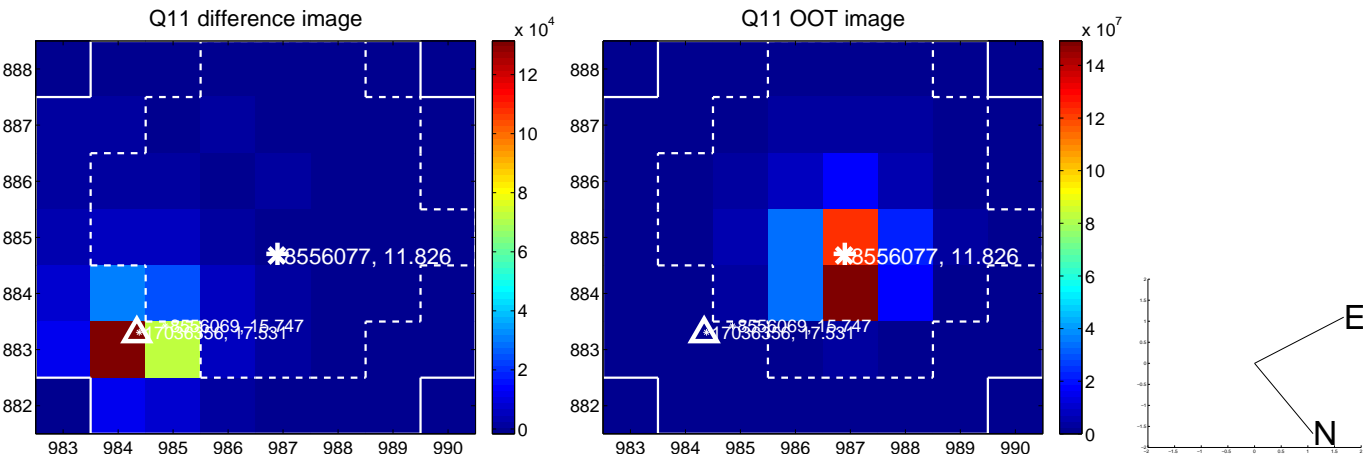
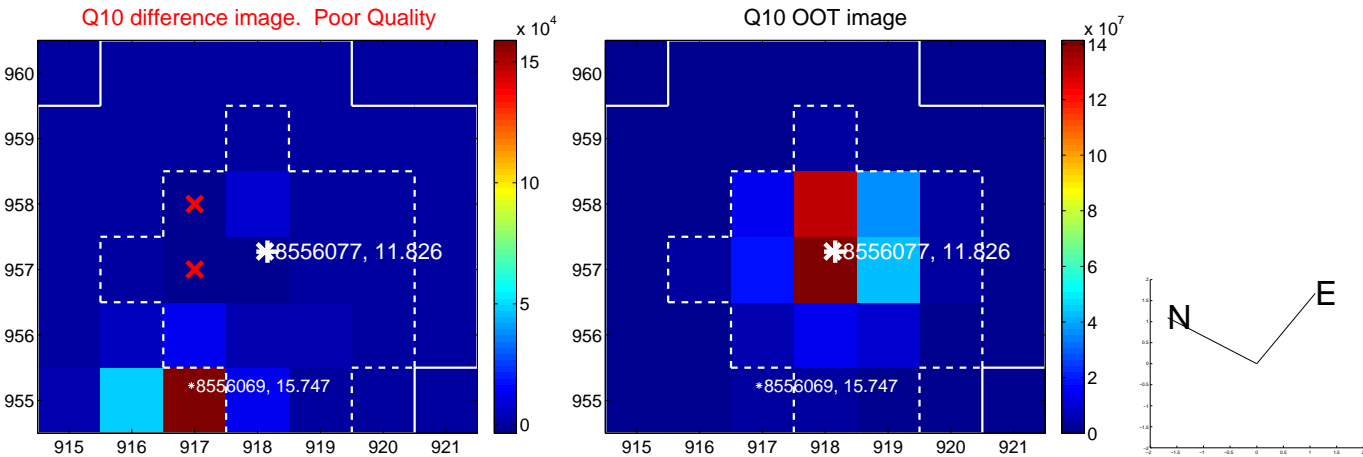
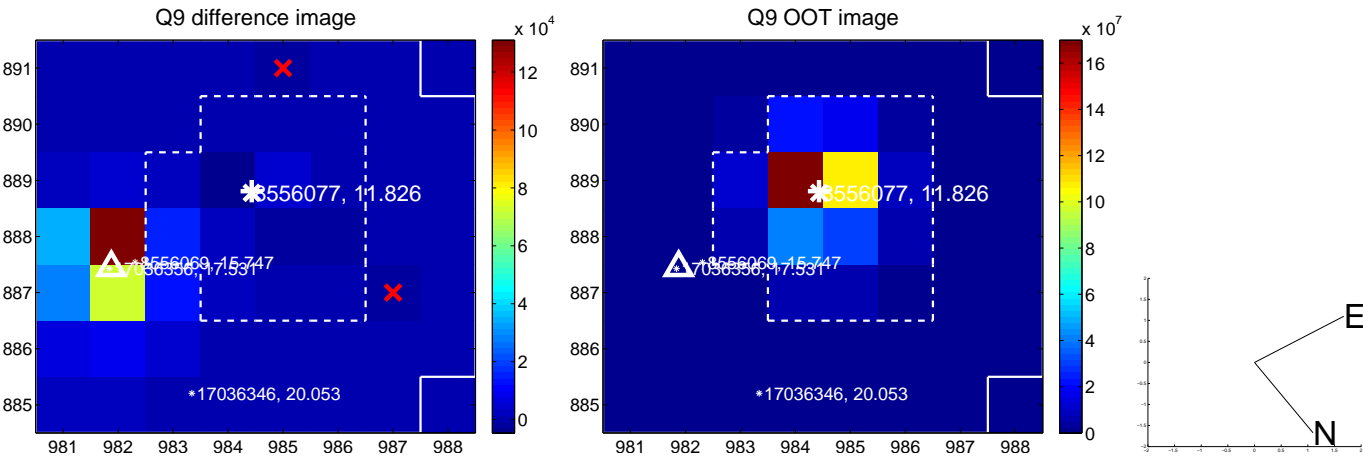
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



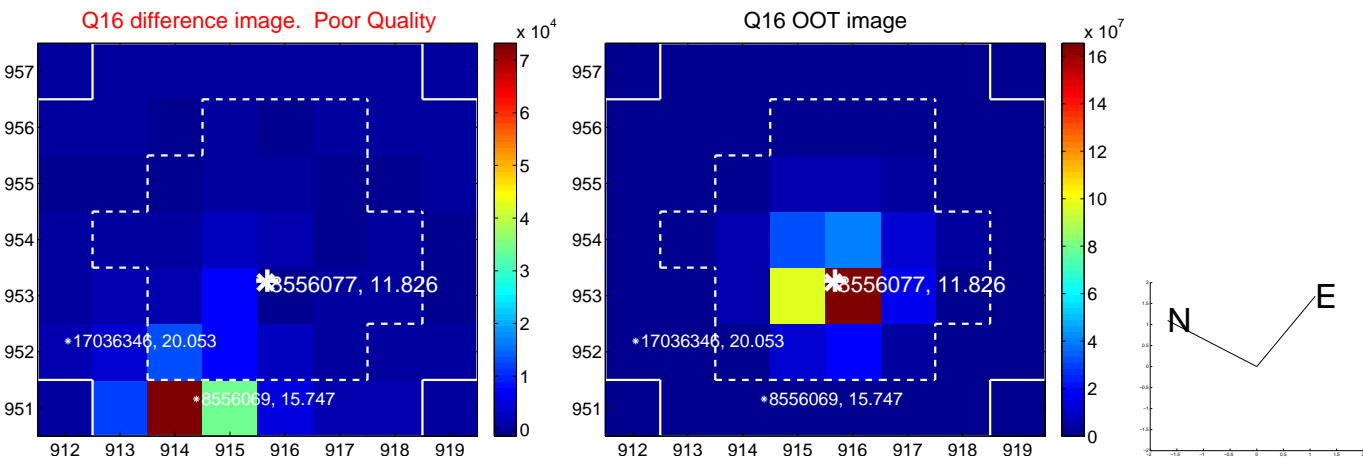
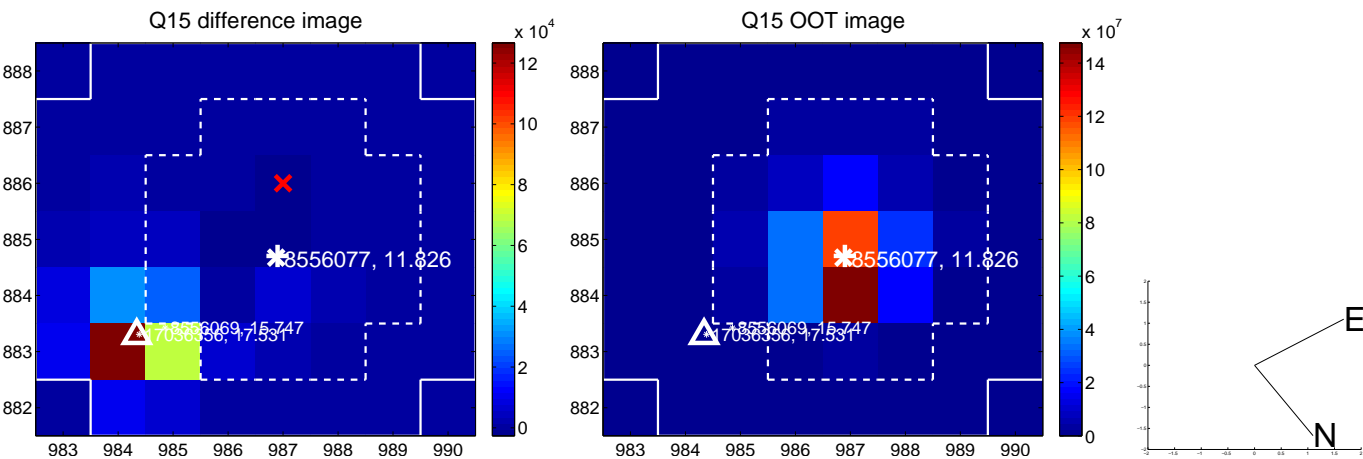
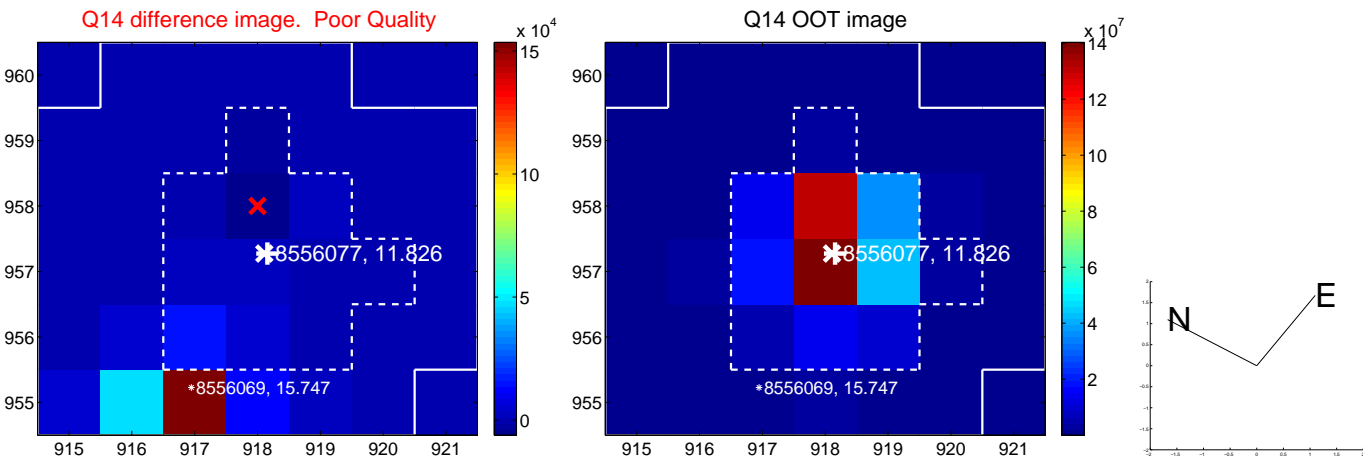
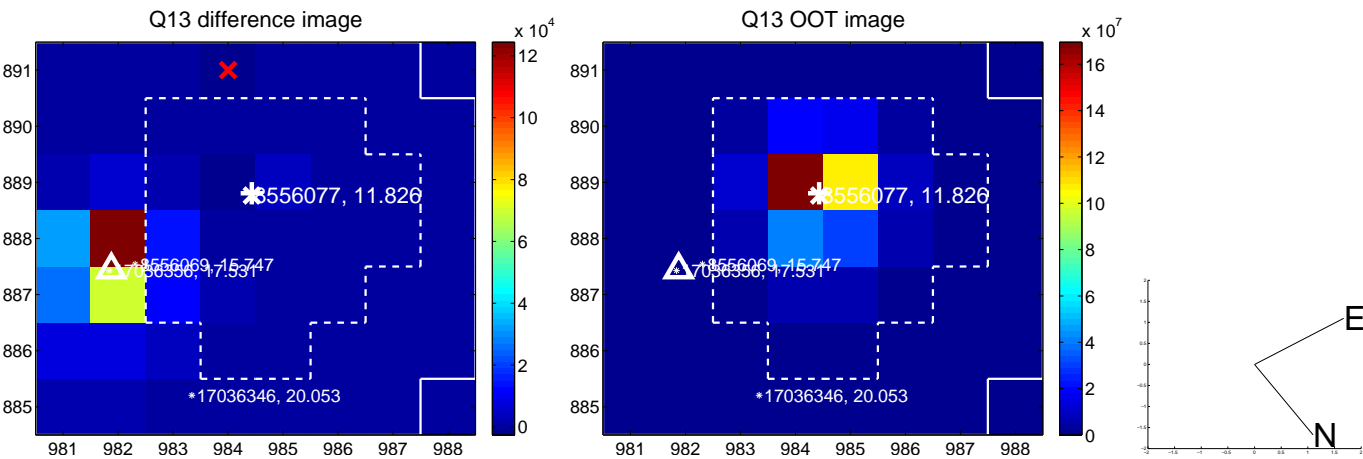
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



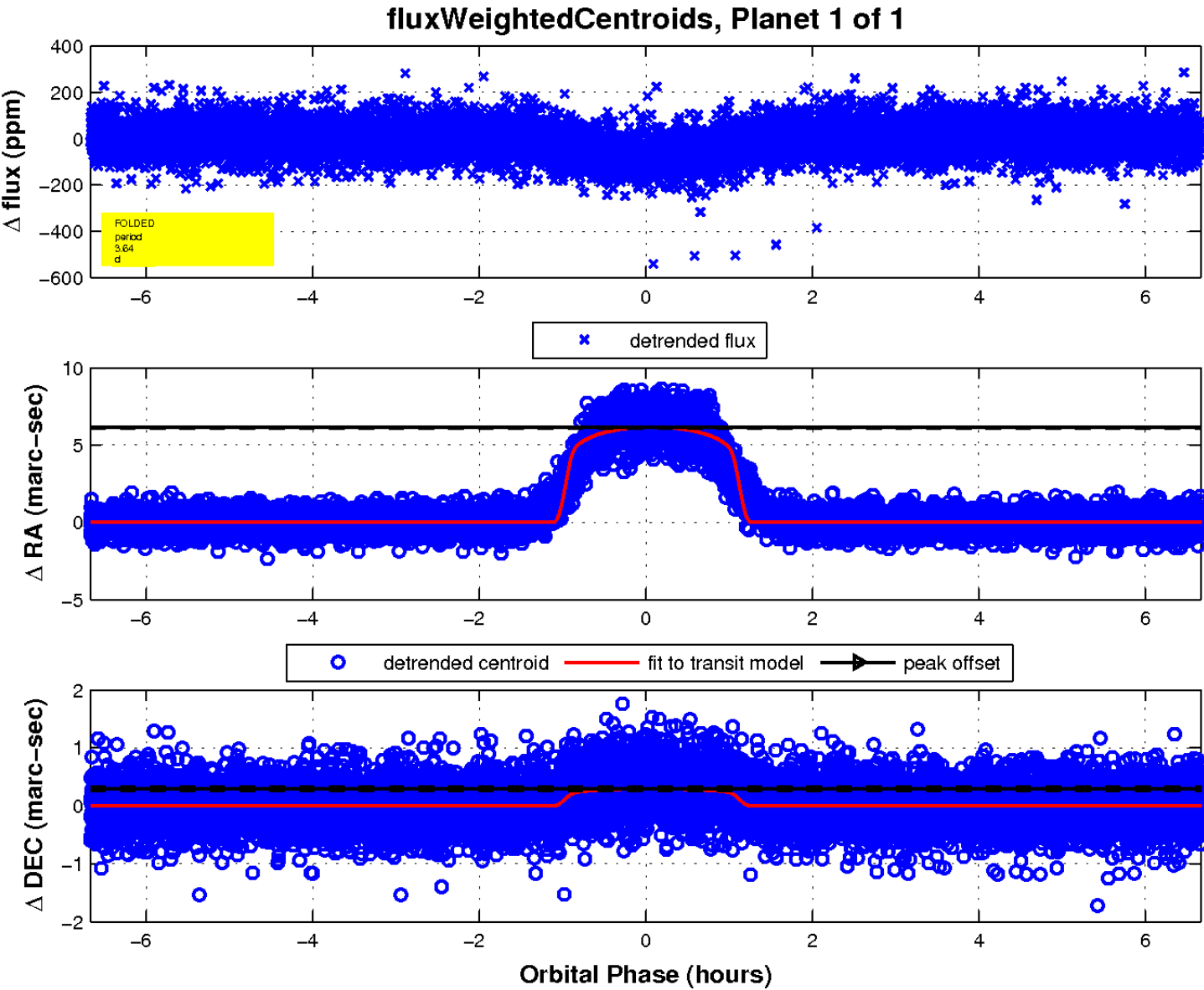
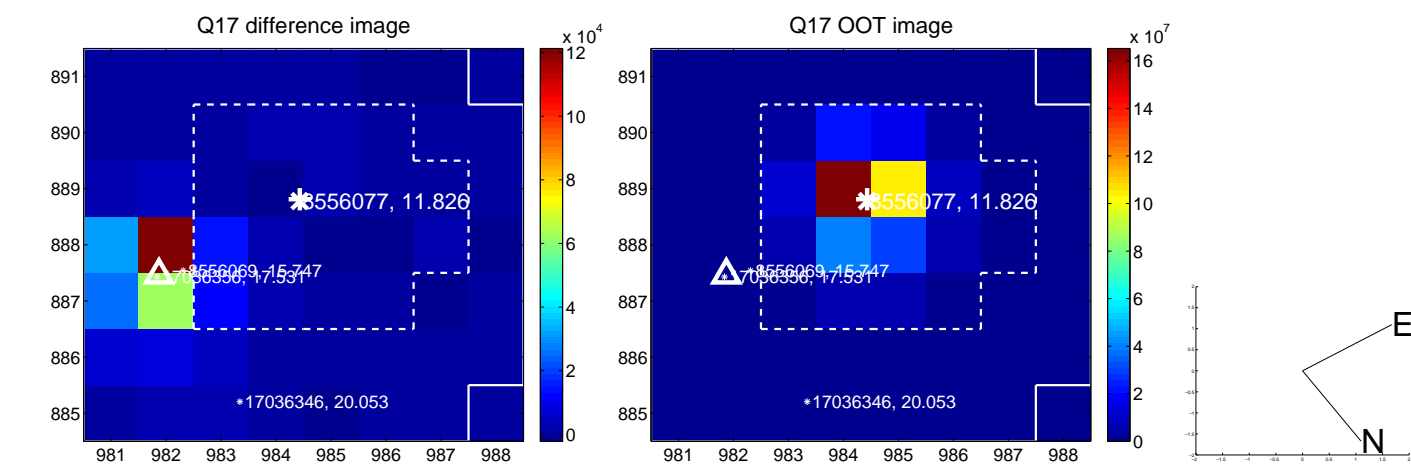
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UKIRT Image

Declination

