

KIC 002711131

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})
002711131-01	OBS	7637.01	2.858908	134.165285	65.2	1.326	8.6	10.2	0.75	4973	0.62	226.65

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002711131-01	OBS	FP	0.00	0	0	1	1	CENT_RESOLVED_OFFSET—EPHEM_MATCH

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.

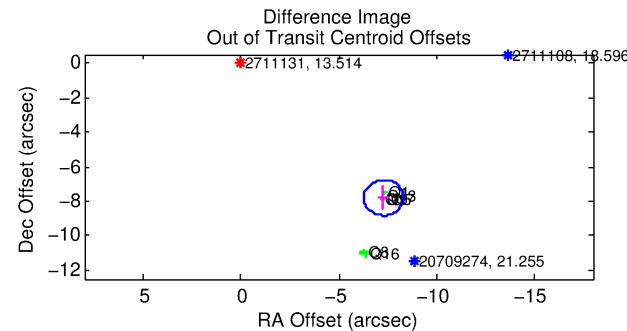
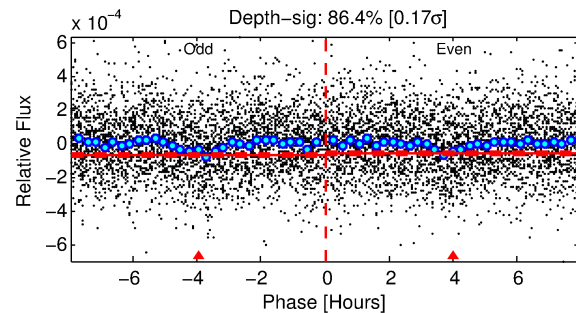
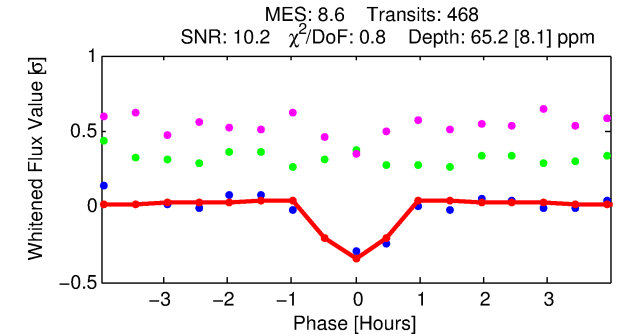
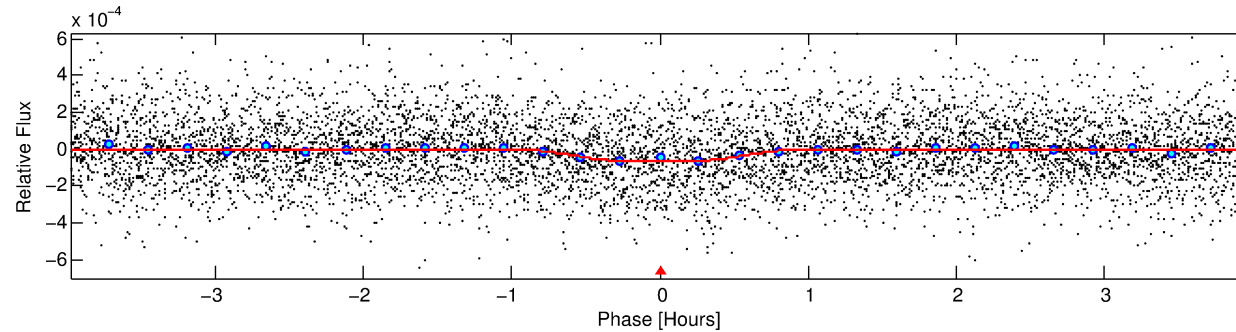
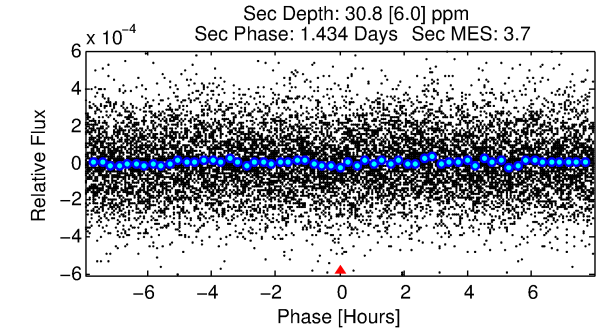
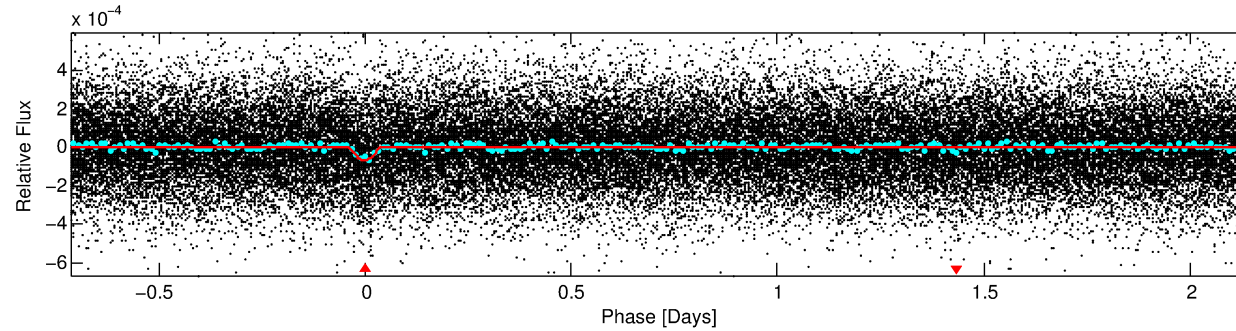
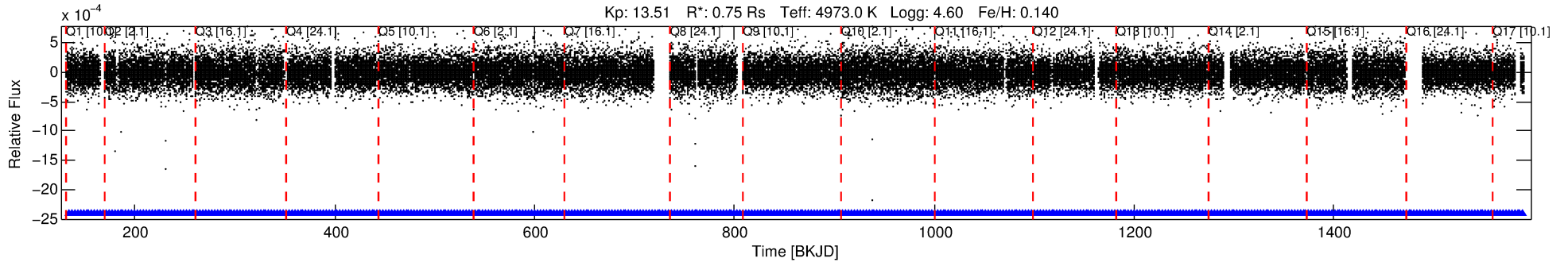
Ephemeris Match Information For 002711131-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
002711131-01	2711131	6290.01	2711114	2:1	22.1	-3	5	12.34	13.52	54.81	Direct-PRF	0	1.66	0.69

Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 2711131 Candidate: 1 of 1 Period: 2.859 d



DV Fit Results:

Period = 2.85891 [0.00001] d
Epoch = 134.1653 [0.0023] BKJD
Rp/R* = 0.0075 [0.0055]
a/R* = 14.41 [35.10]
b = 0.50 [3.72]
Seff = 226.65 [27.39]
Teq = 989 [30] K
Rp = 0.62 [0.46] Re
a = 0.0371 [0.0025] AU
Ag = 61.13 [91.15] [0.66σ]
Teff = 4277 [1592] K [2.06σ]

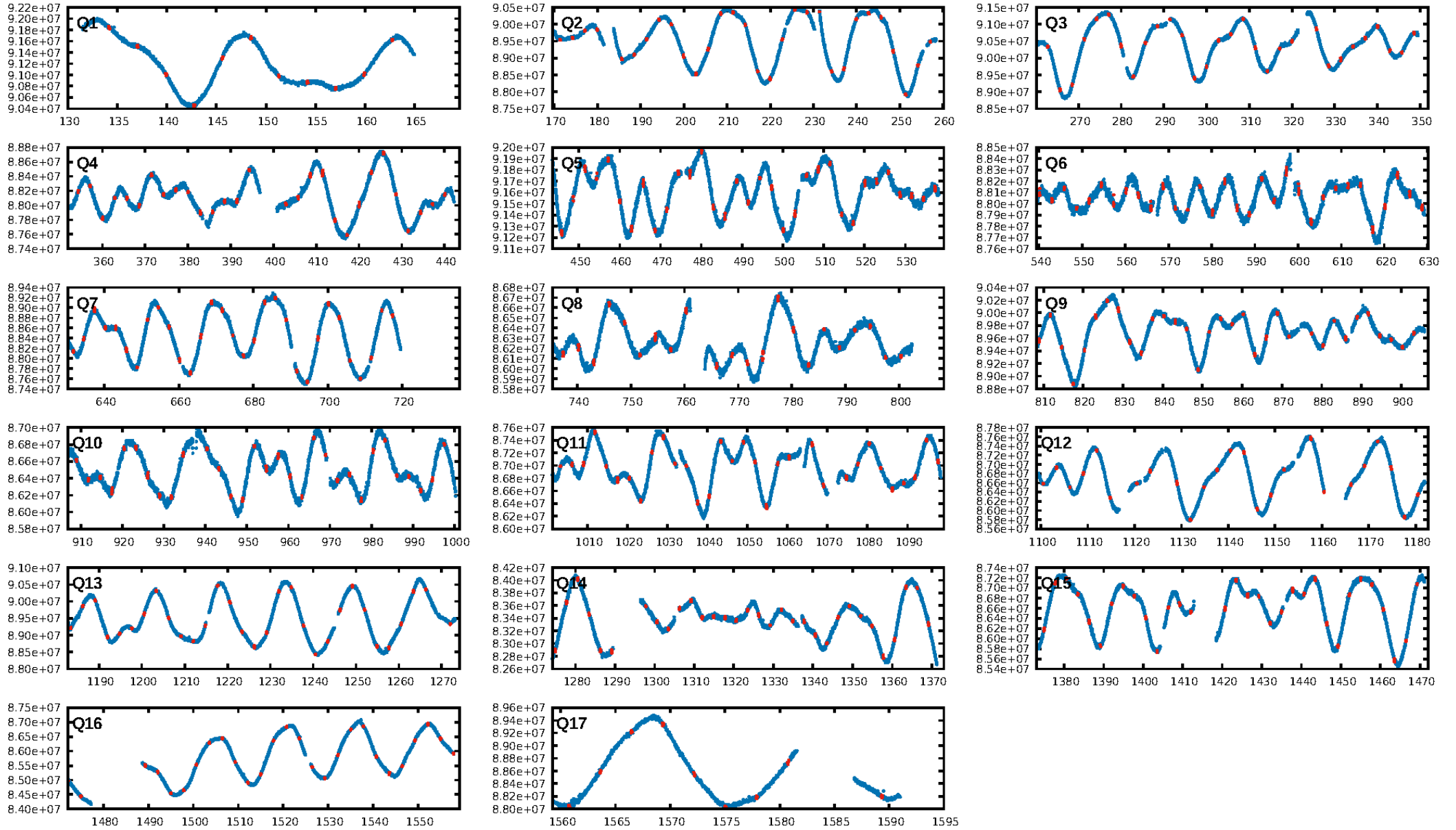
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGoF-sig: N/A
Bootstrap-pfa: 6.83e-17
RollingBand-fgt: 1.00 [448/448]
GhostDiagnostic-chr: -0.5122
Centroid-sig: 0.0%
Centroid-so: 26.822 arcsec [19.73σ]
OotOffset-rm: 10.669 arcsec [31.36σ]
KicOffset-rm: 11.015 arcsec [39.10σ]
OotOffset-st: 0/0/2/5 [7]
KicOffset-st: 0/0/2/5 [7]
DiffImageQuality-fgm: 1.00 [7/7]
DiffImageOverlap-fno: 1.00 [17/17]

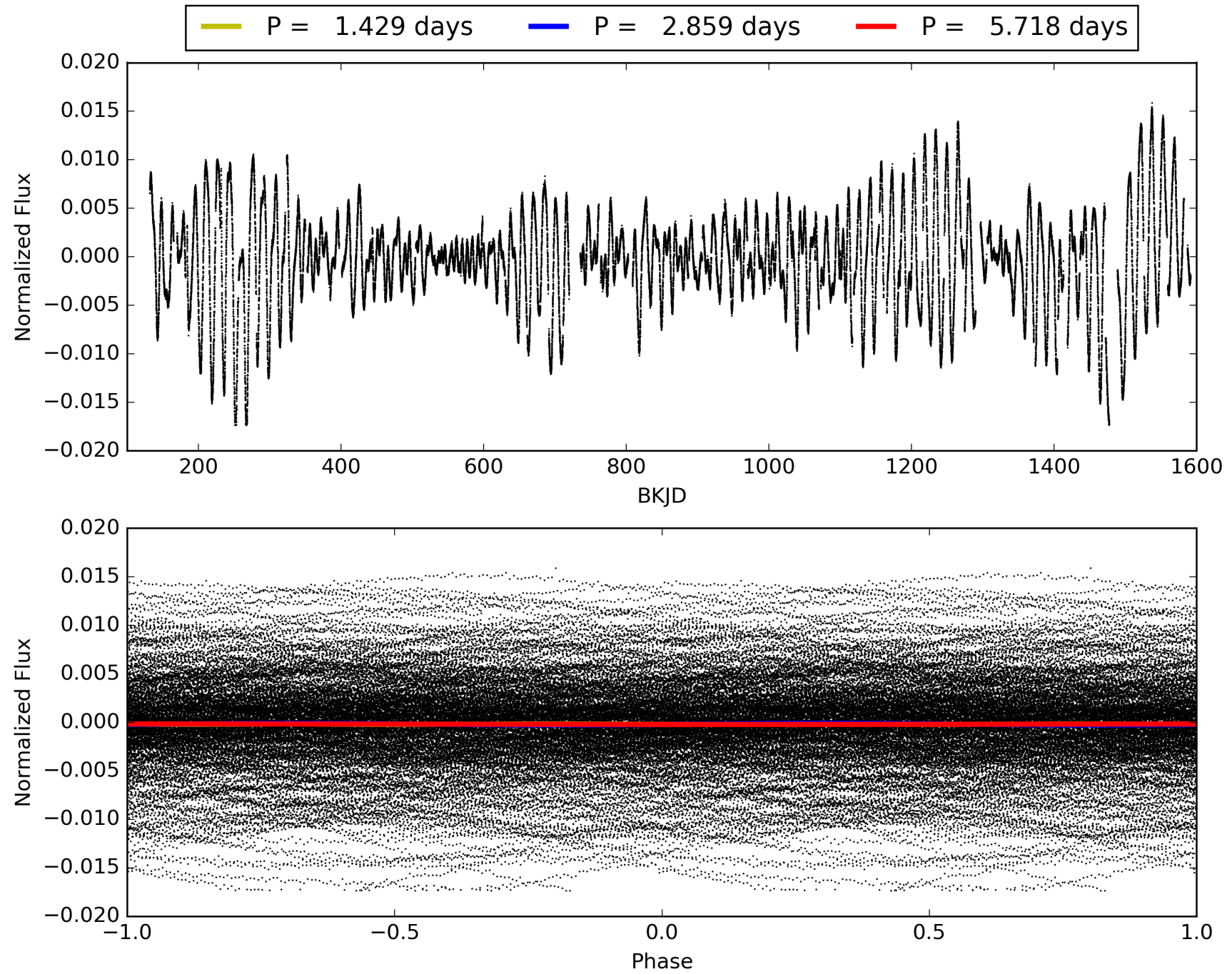
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:04:17 Z

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

TCE 002711131-01, PDC Light Curves

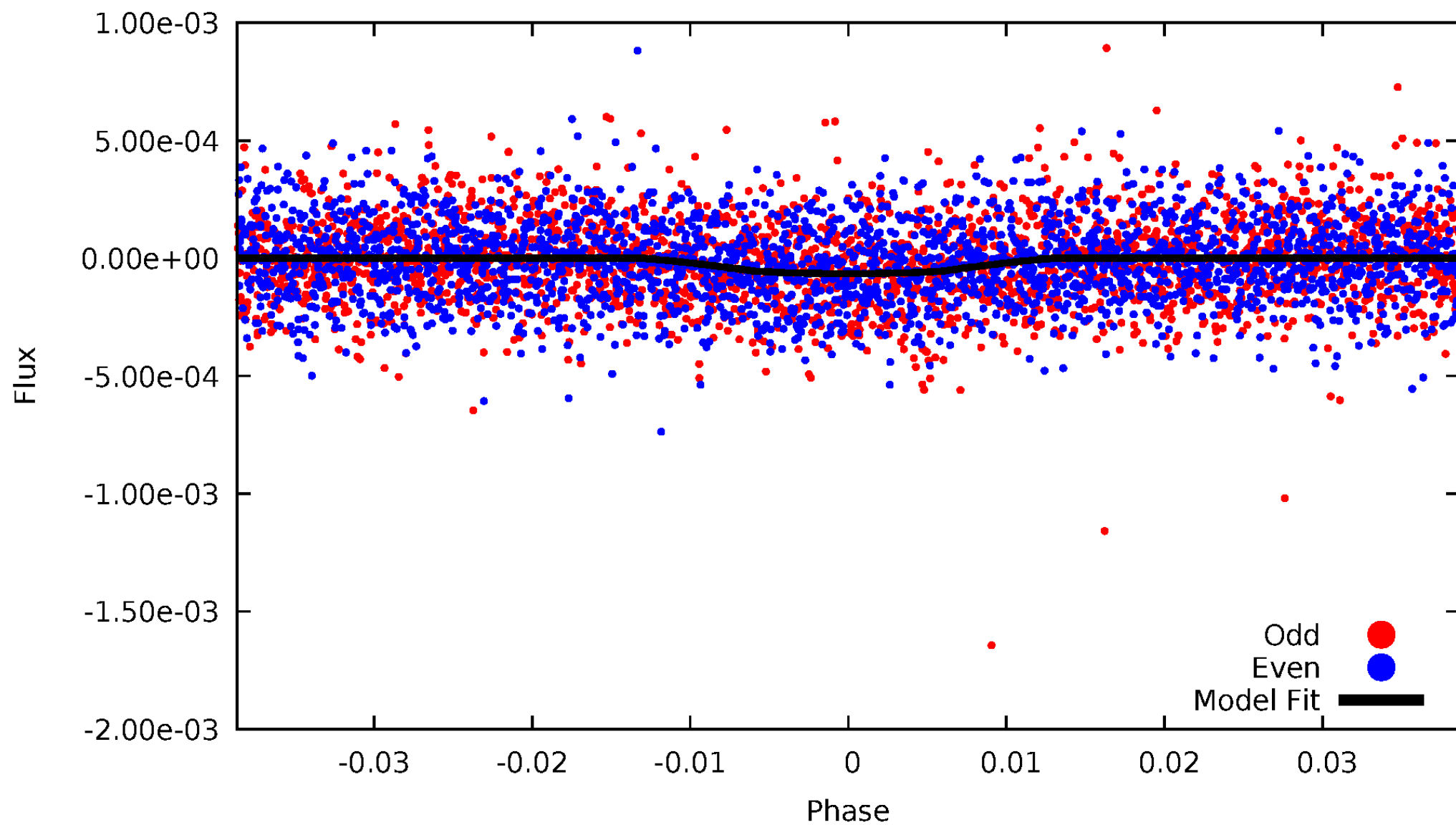


TCE 002711131-01



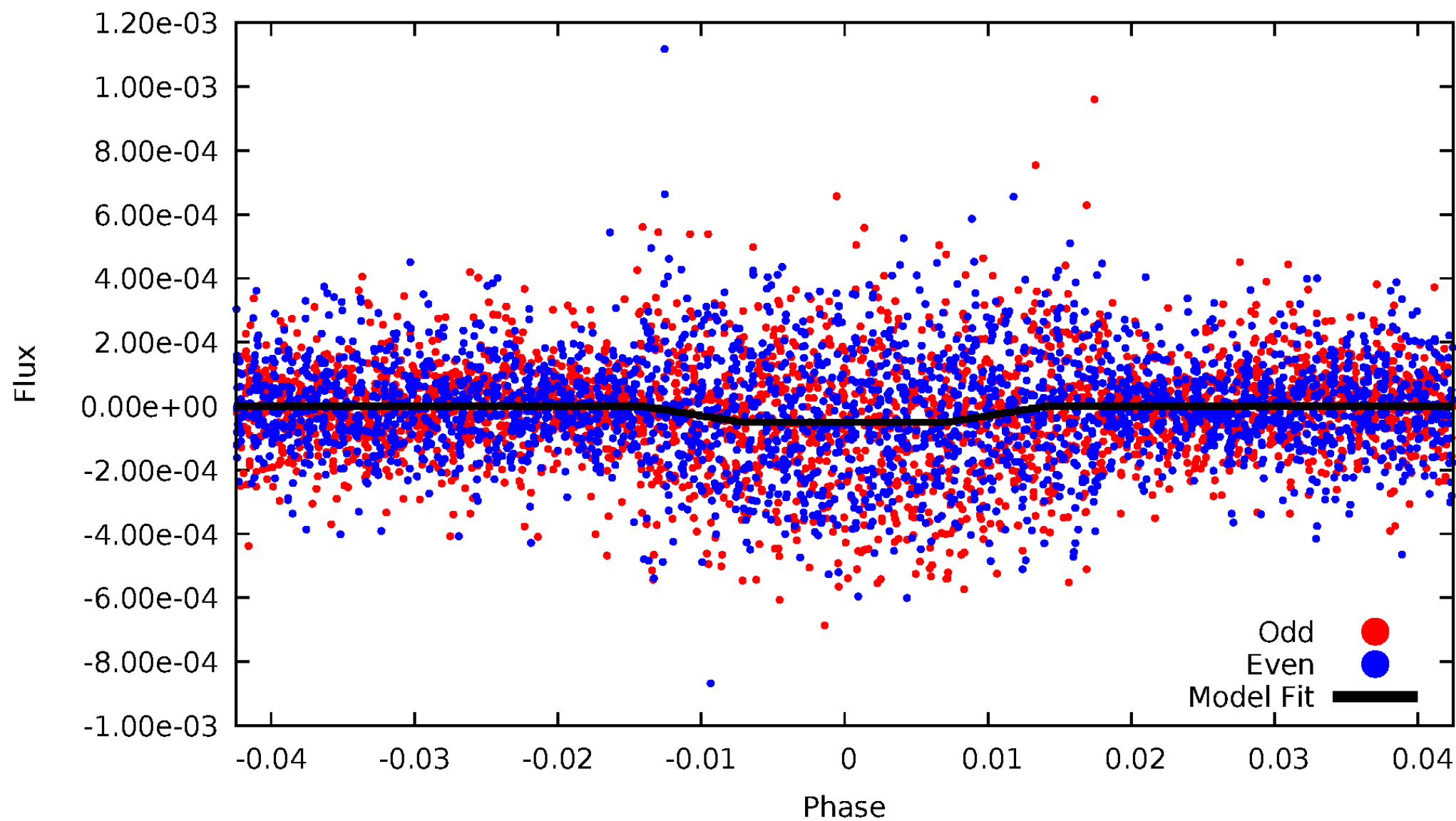
DV Odd/Even

TCE 002711131-01



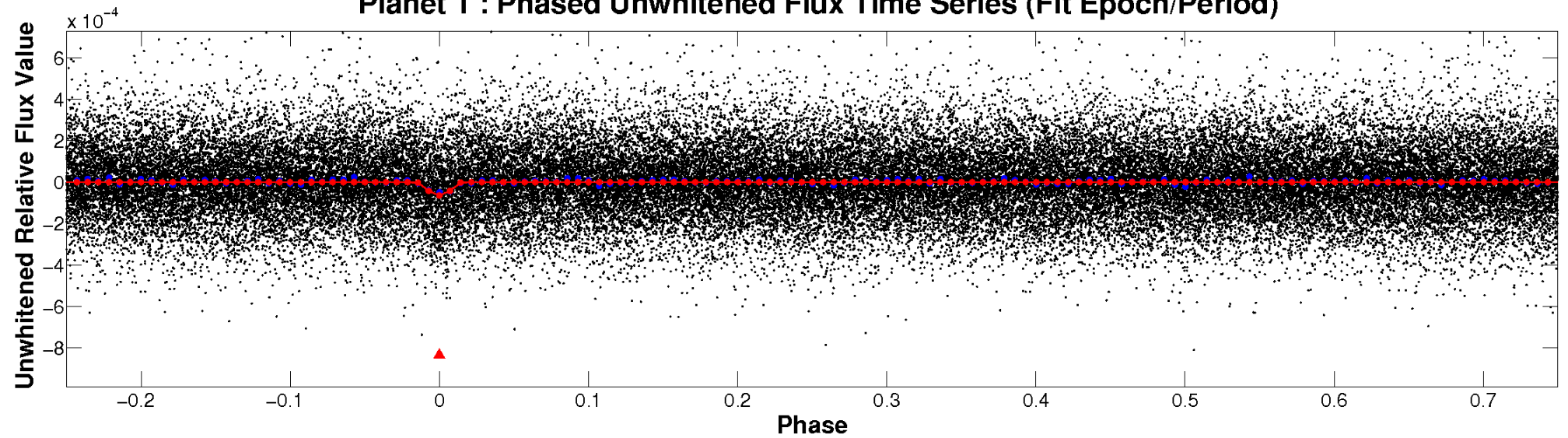
ALT Odd/Even

TCE 002711131-01

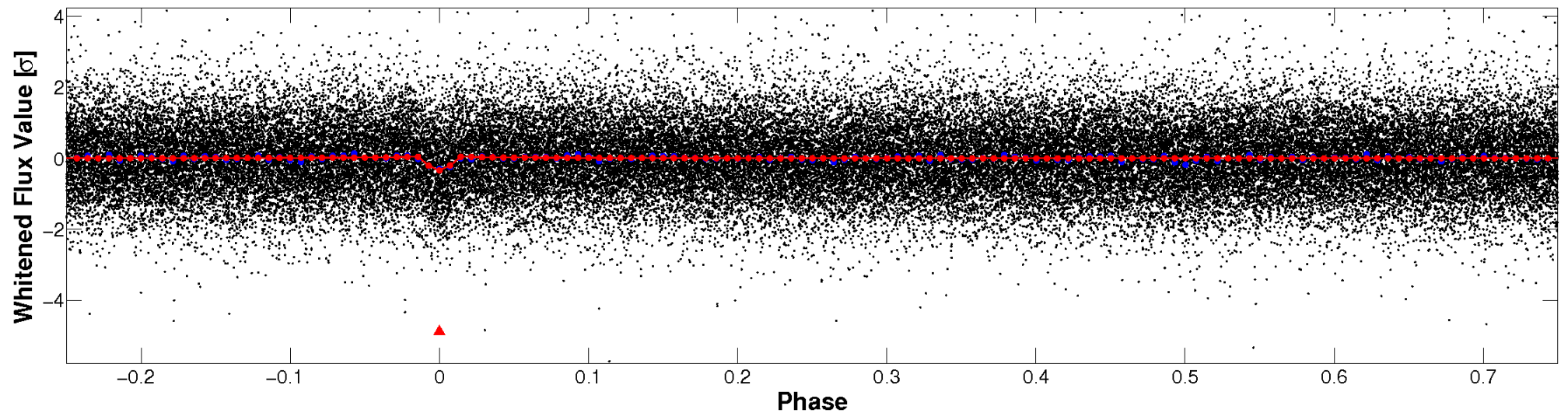


Non-Whitened Vs. Whitened Light Curve

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

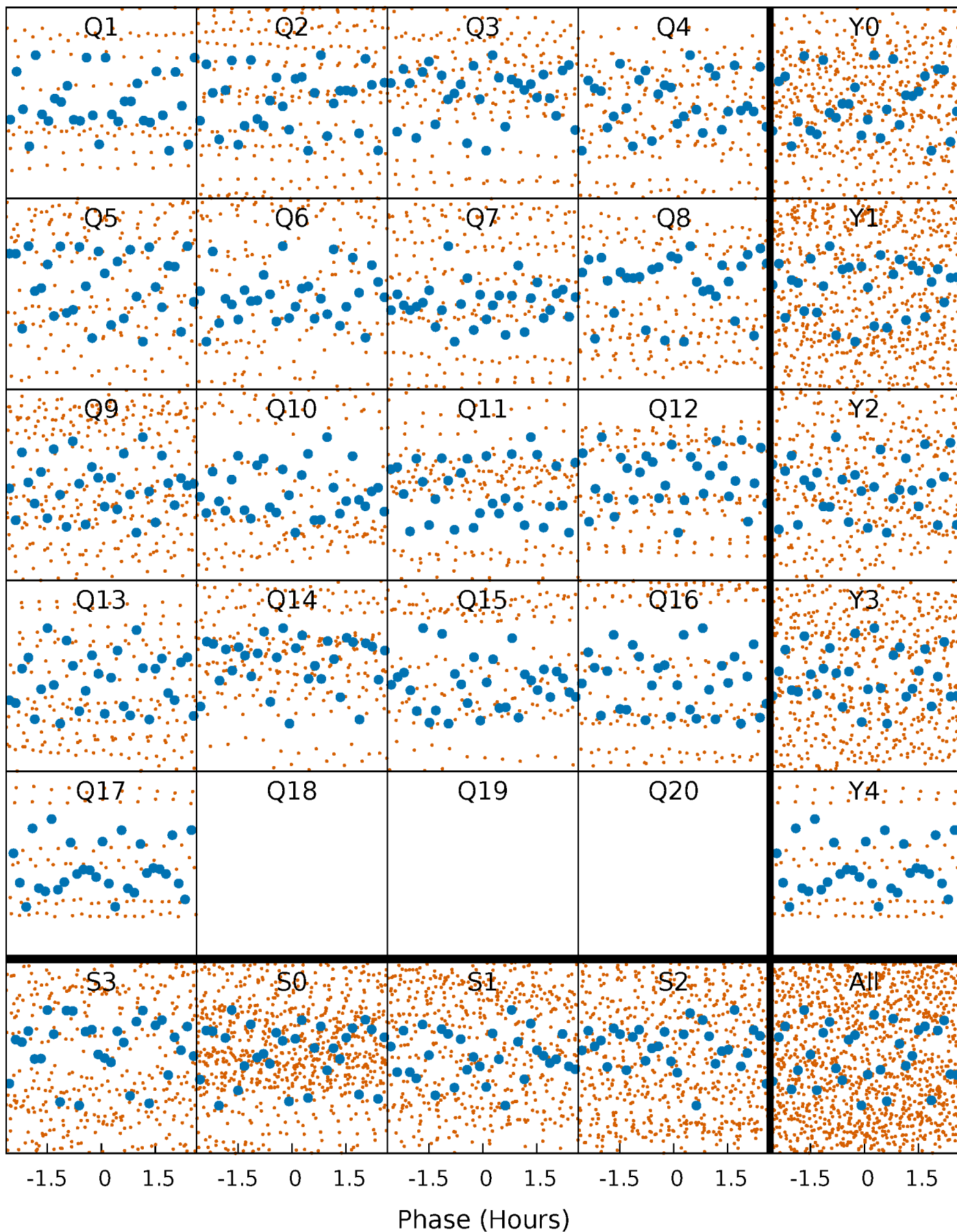


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



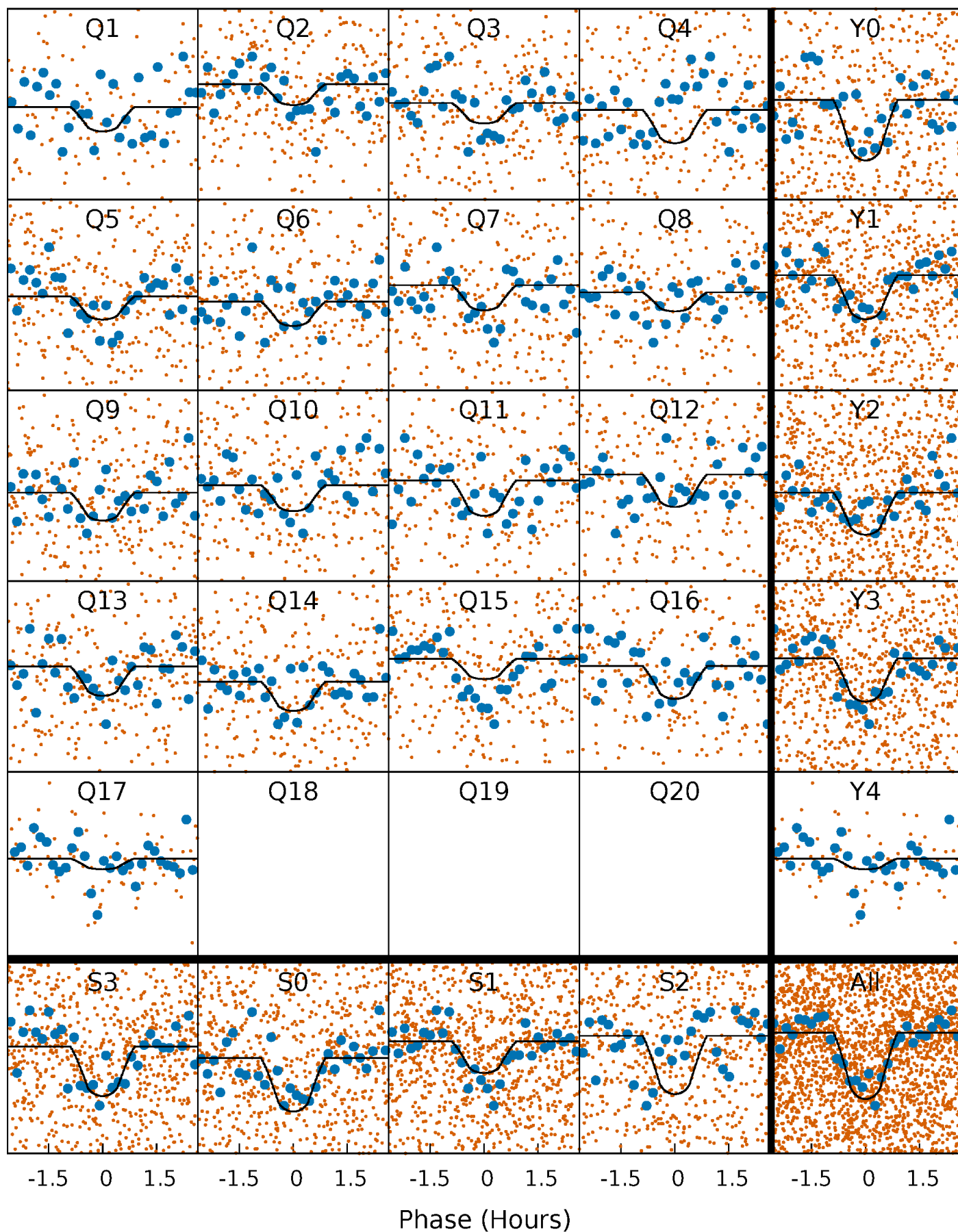
PDC Quarter-Phased Transit Curves

TCE 002711131-01 P= 2.858908 Days $T_0=134.165285$ (BKJD)



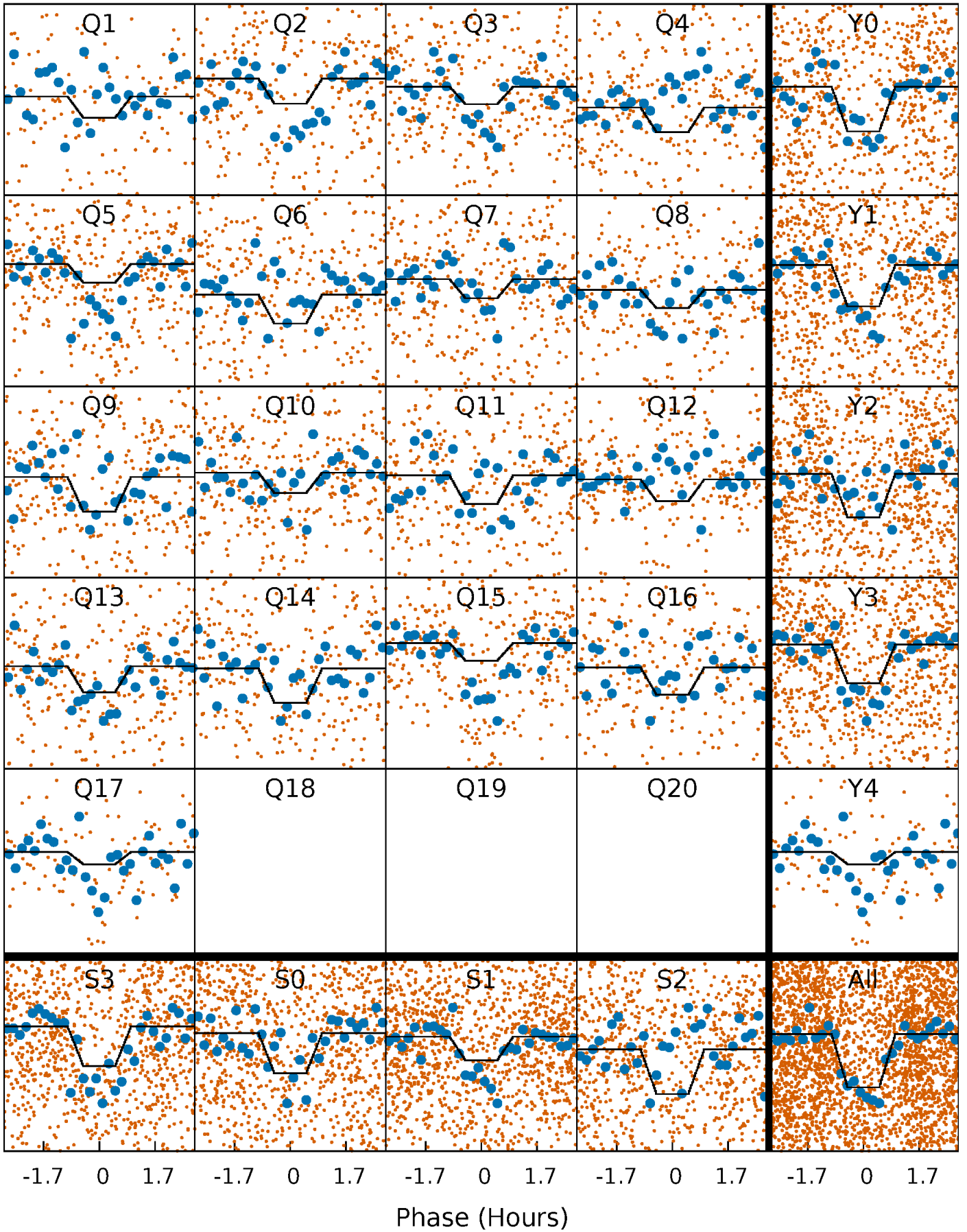
DV Quarter-Phased Transit Curves

TCE 002711131-01 P= 2.858908 Days $T_0=134.165285$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

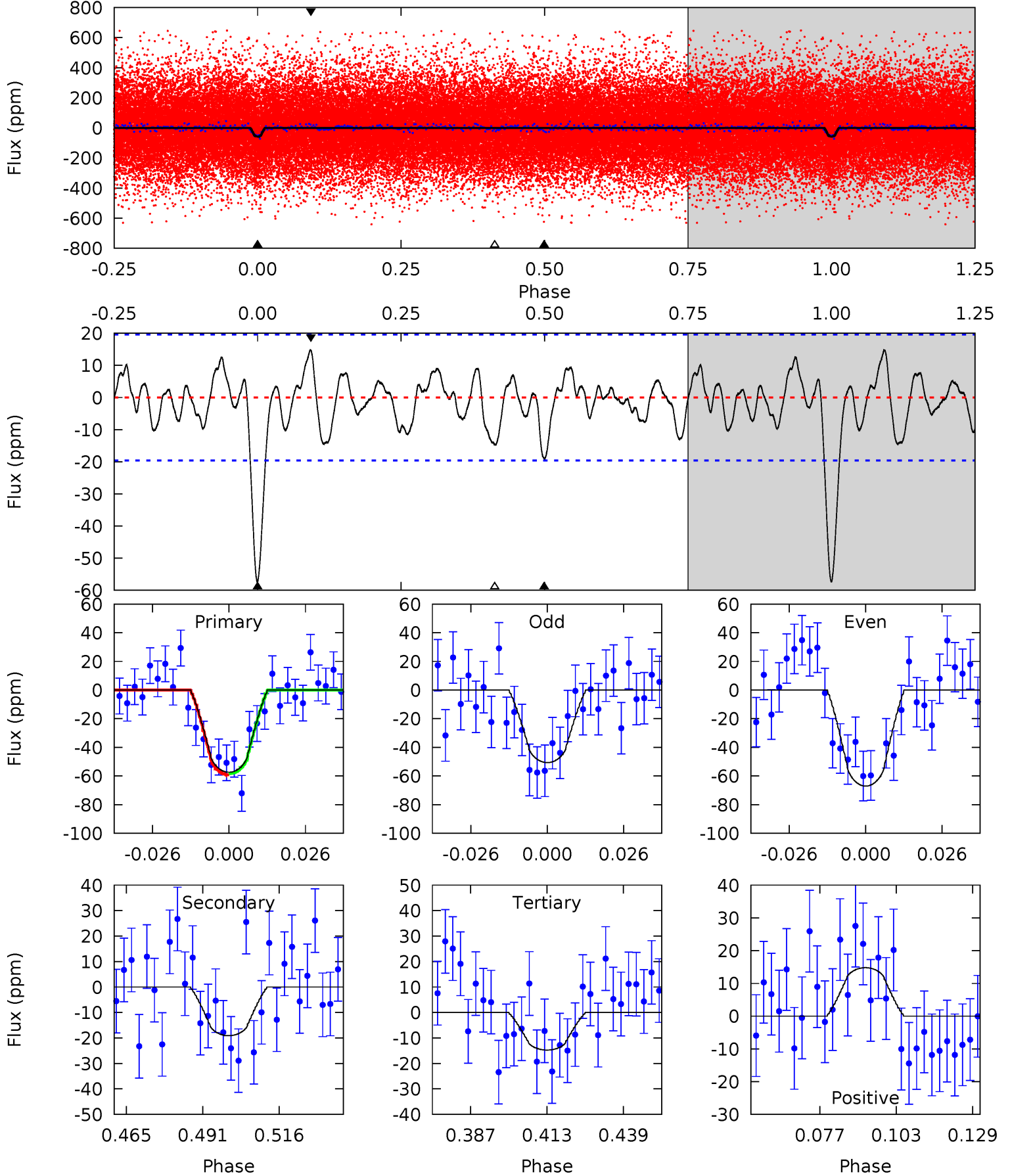
TCE 002711131-01 P= 2.858897 Days $T_0=134.163875$ (BKJD)



DV Model-Shift Uniqueness Test

002711131-01, P = 2.858908 Days, E = 131.306377 Days

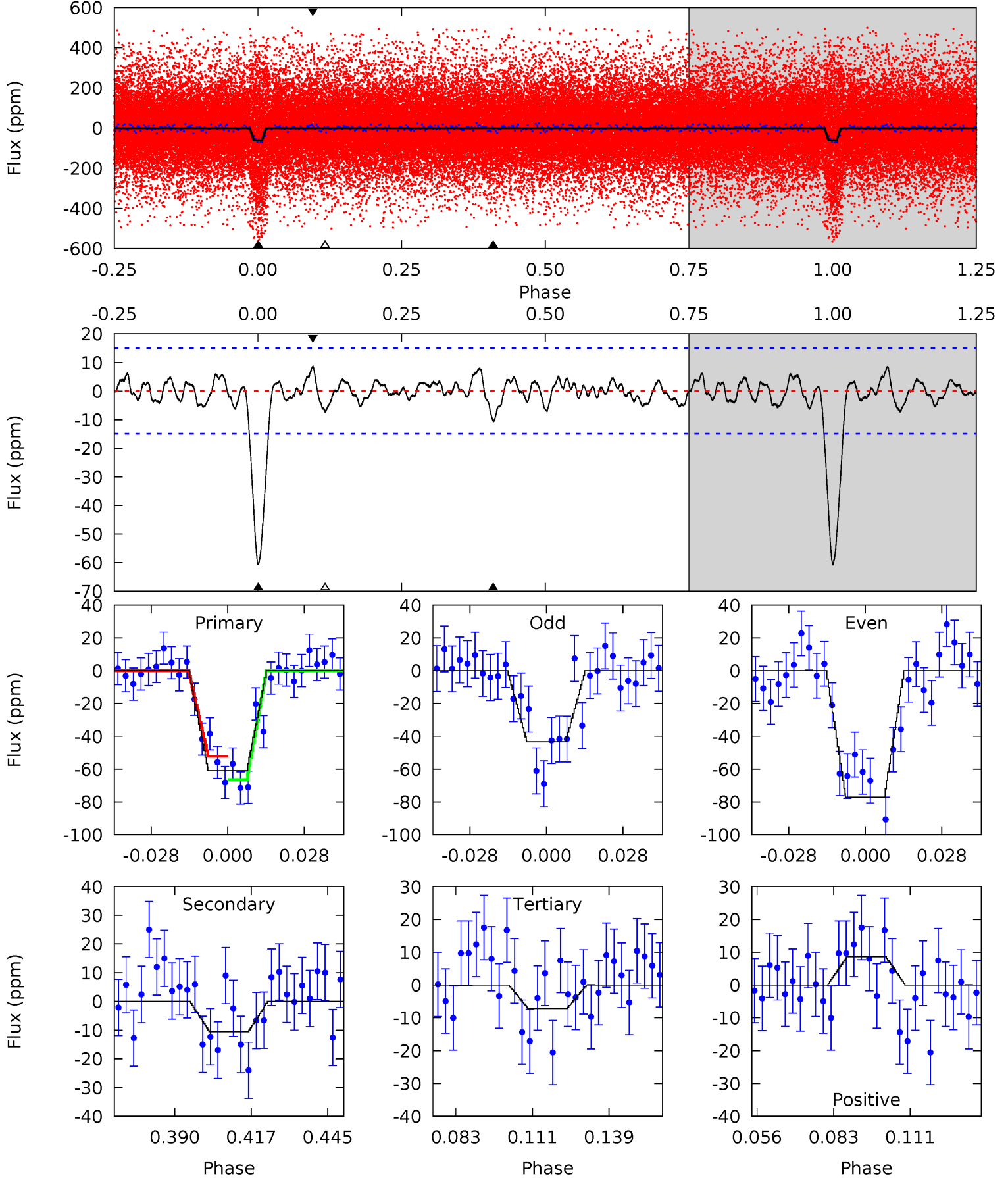
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.2	4.71	3.64	3.65	4.84	2.23	1.51	10.5	10.5	1.07	1.06	2.03	0.97	0.20	0.12



Alt Model-Shift Uniqueness Test

002711131-01, P = 2.858897 Days, E = 131.304978 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.7	3.42	2.33	2.79	4.83	2.20	0.98	17.4	16.9	1.10	0.63	5.48	1.06	0.12	2.30



Stellar Parameters For KIC 002711131

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4973^{+79}_{-79}	$4.603^{+0.010}_{-0.059}$	$0.140^{+0.150}_{-0.150}$	$0.754^{+0.055}_{-0.023}$	$0.848^{+0.025}_{-0.059}$	$2.789^{+0.172}_{-0.560}$
	+2%/-2%	+0%/-1%	+107%/-107%	+7%/-3%	+3%/-7%	+6%/-20%
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 002711131-01 / KOI 7637.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-19 ± 4	$0.68^{+0.41}_{-0.41}$	1395^{+32}_{-24}	3924^{+1752}_{-589}	31^{+163}_{-19}
Alt.	-11 ± 3	$0.68^{+0.47}_{-0.40}$	1397^{+31}_{-26}	3548^{+1320}_{-559}	17^{+79}_{-11}

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

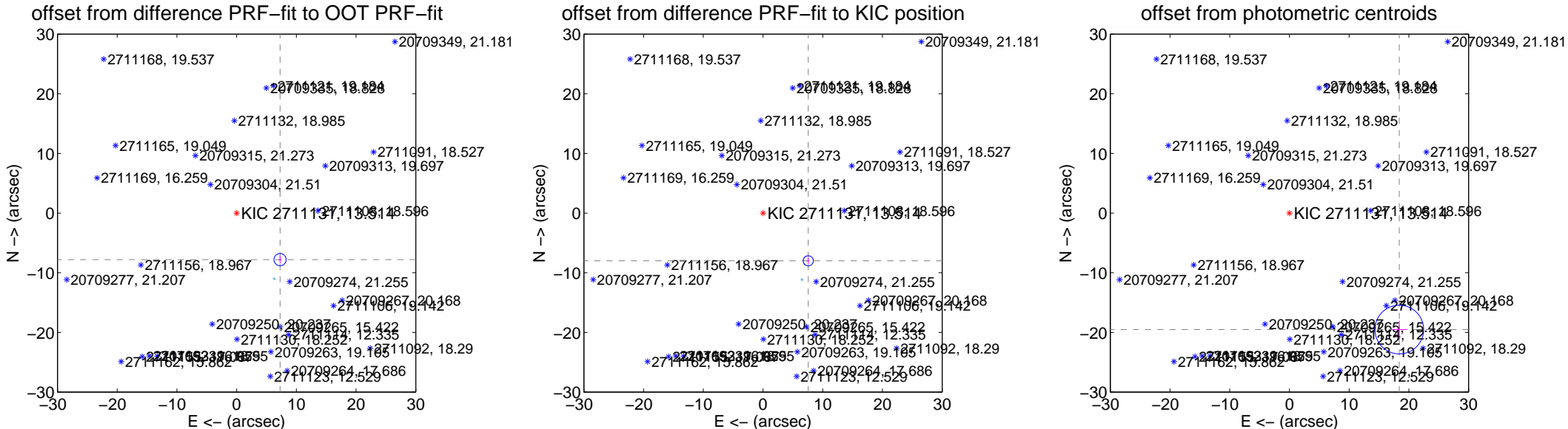
DV Centroid Data

Supplemental centroid analysis for 002711131-01. Kepler magnitude: 13.51. Transit SNR 10.17

There are 7 quarters with good PRF difference image offsets

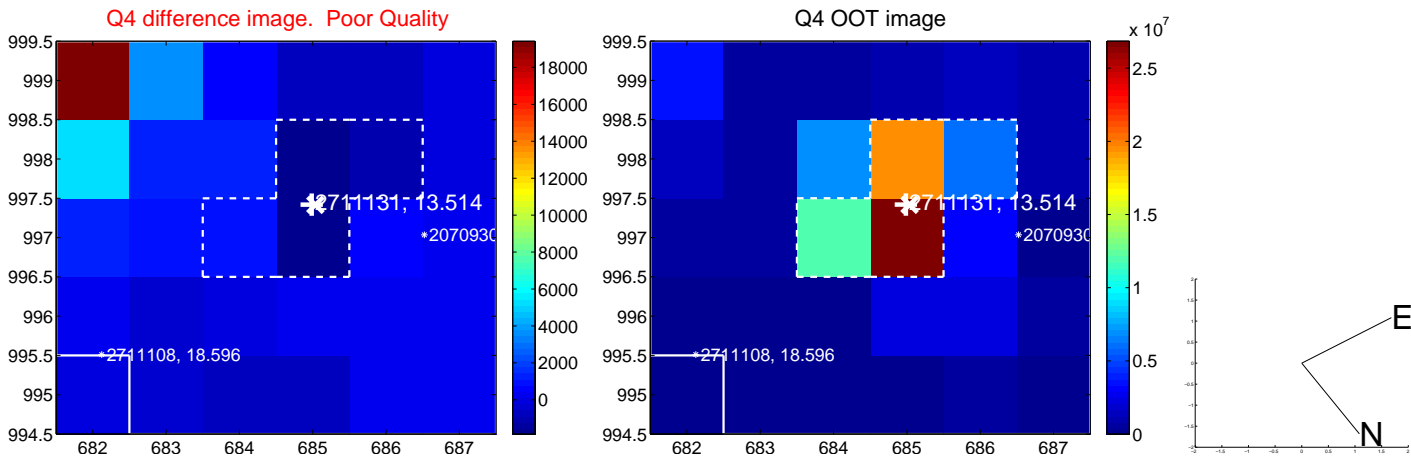
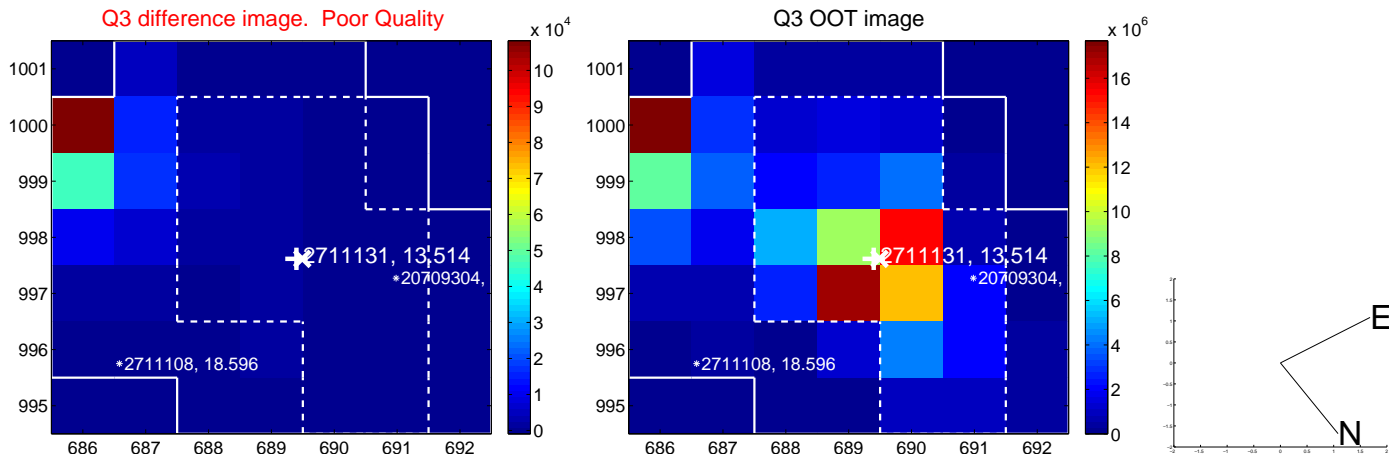
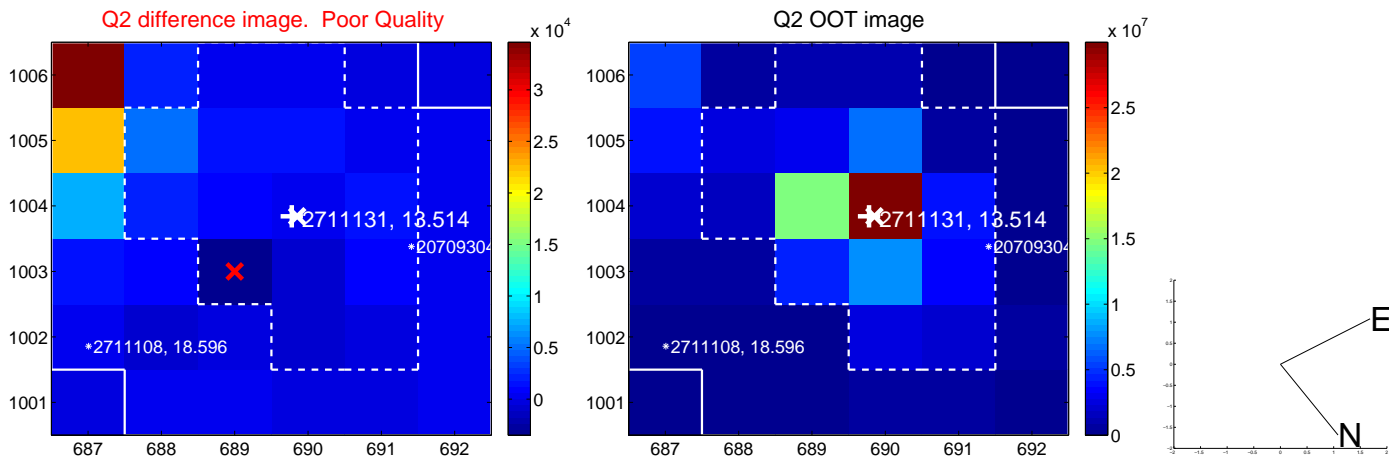
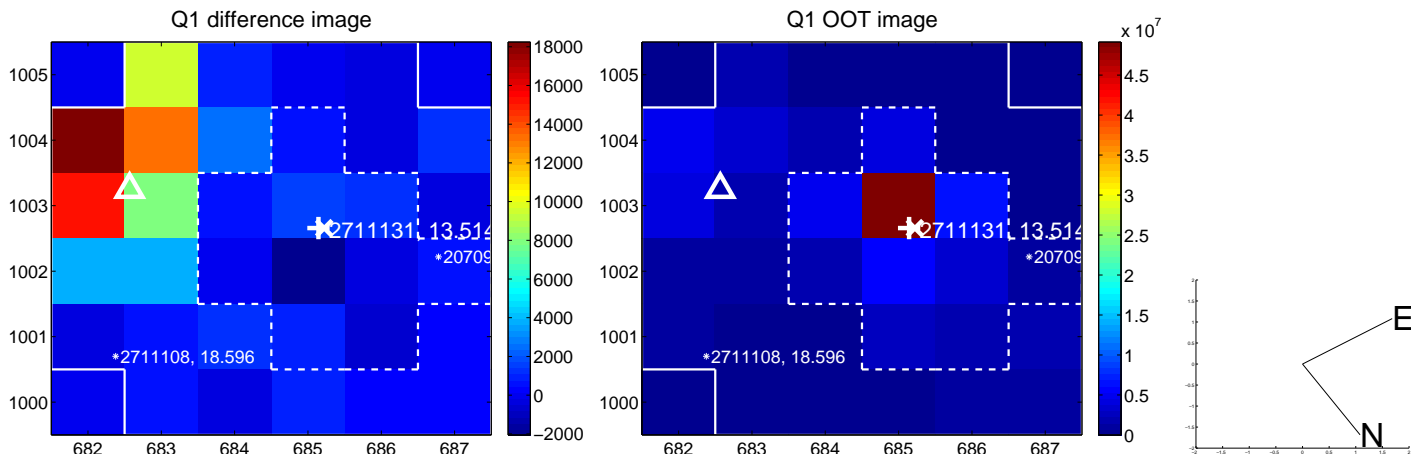
The direct PRF centroid is offset from the target star catalog position by about 0.35 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	10.669 \pm 0.340	31.36	-7.276 \pm 0.213	-7.803 \pm 0.645
PRF-fit source offset from KIC position	11.015 \pm 0.282	39.10	-7.575 \pm 0.185	-7.997 \pm 0.542
photometric centroid source offset	26.82 \pm 1.36	19.73	-18.40 \pm 1.21	-19.52 \pm 1.48

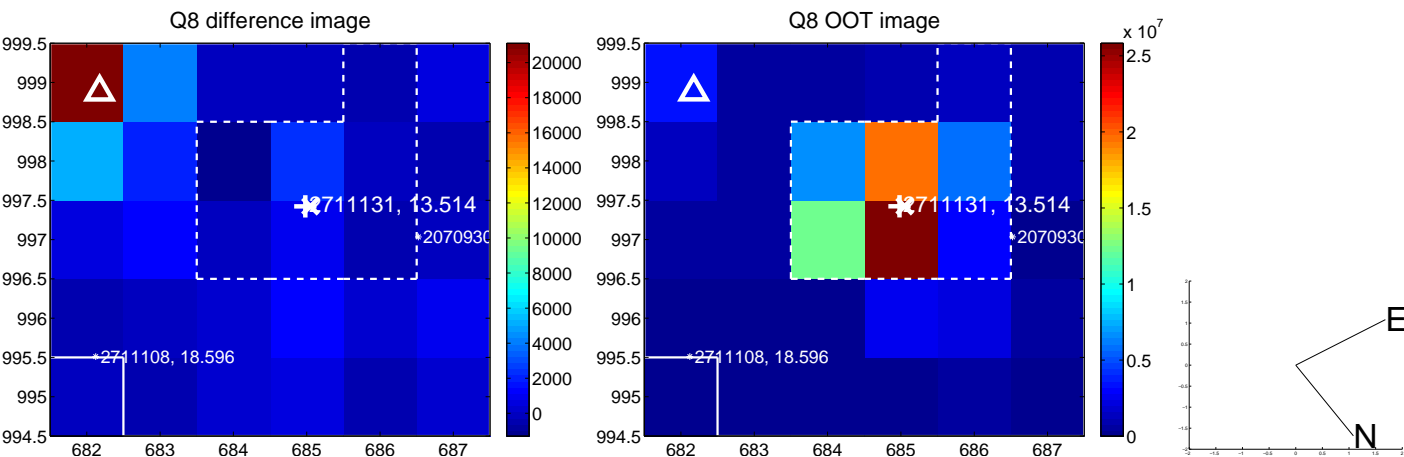
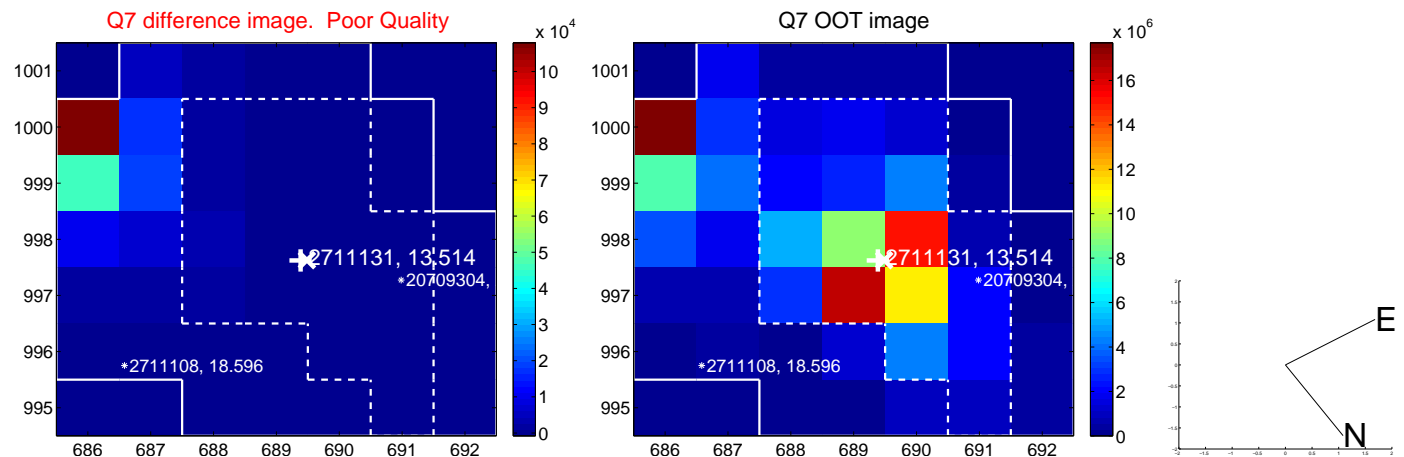
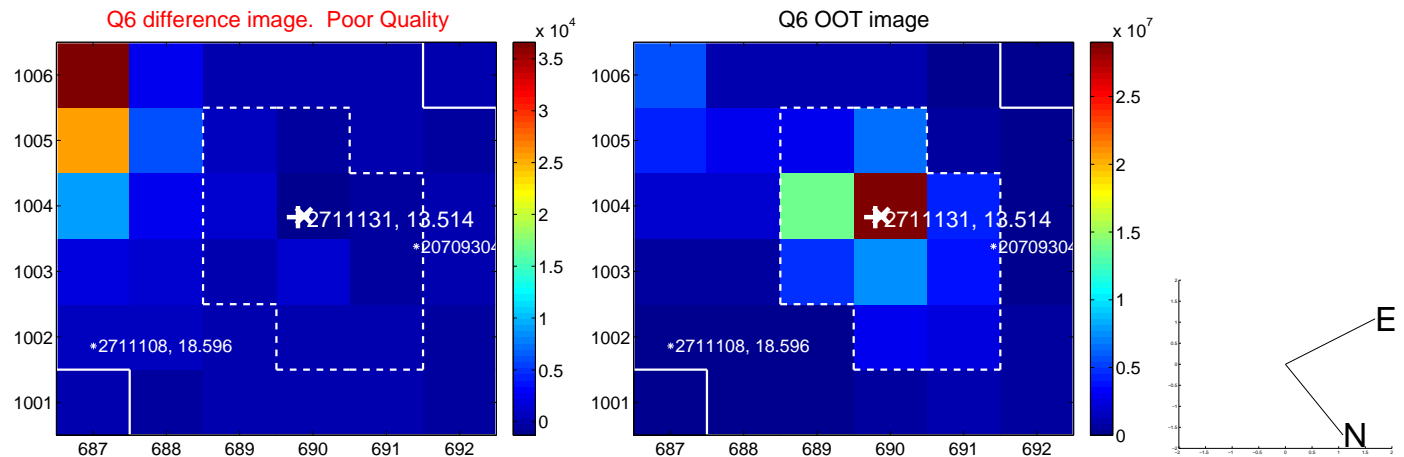
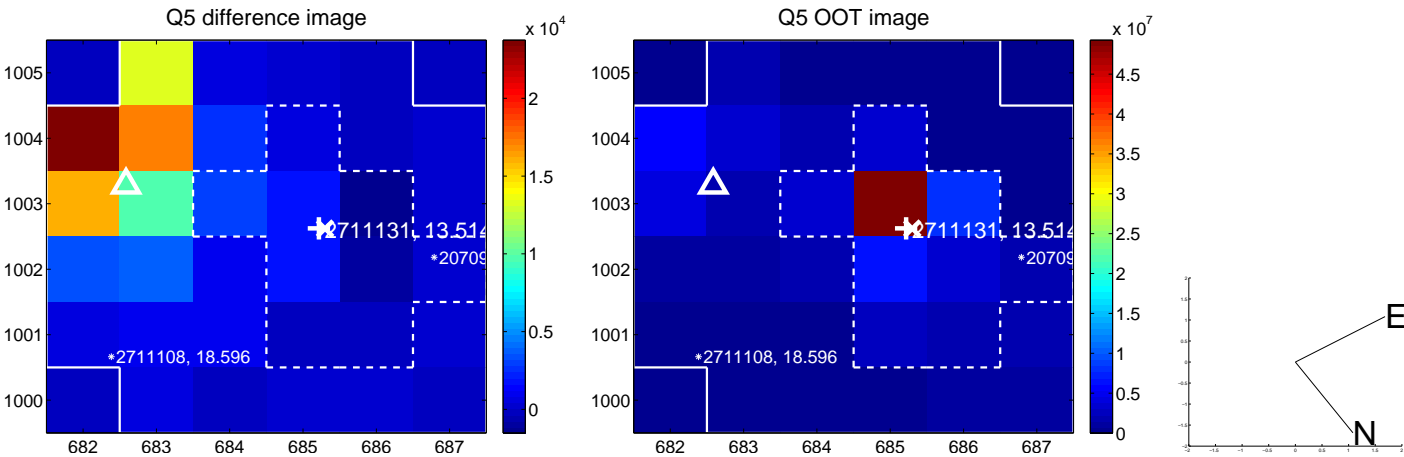


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

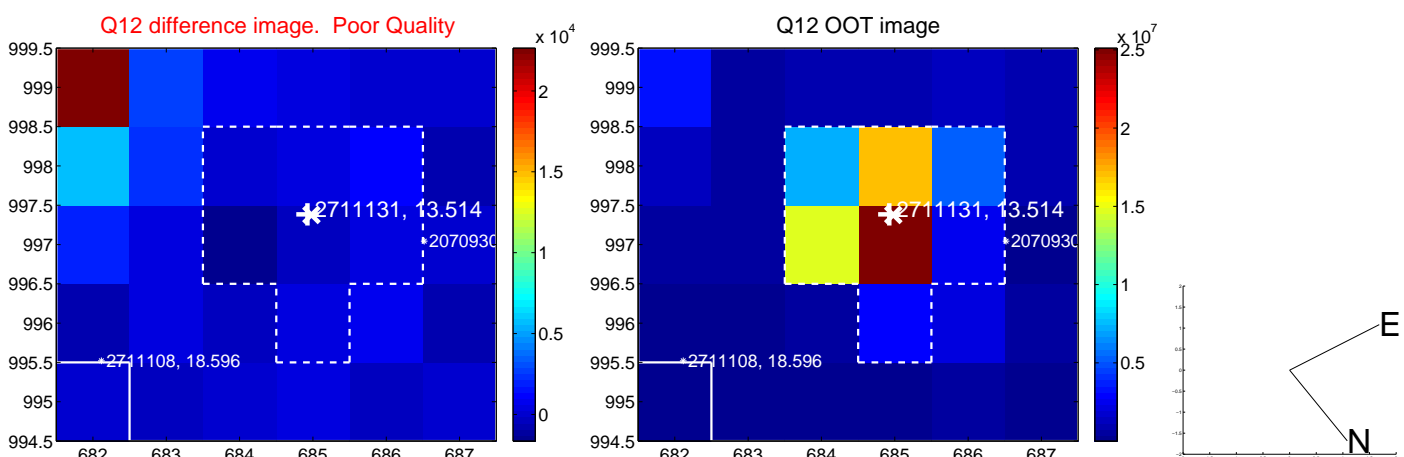
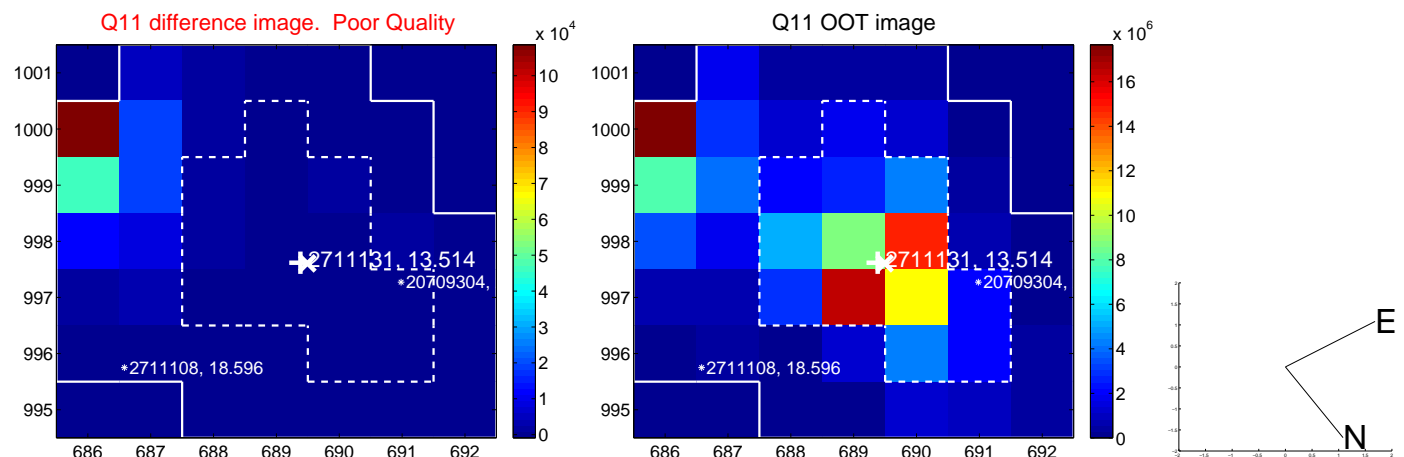
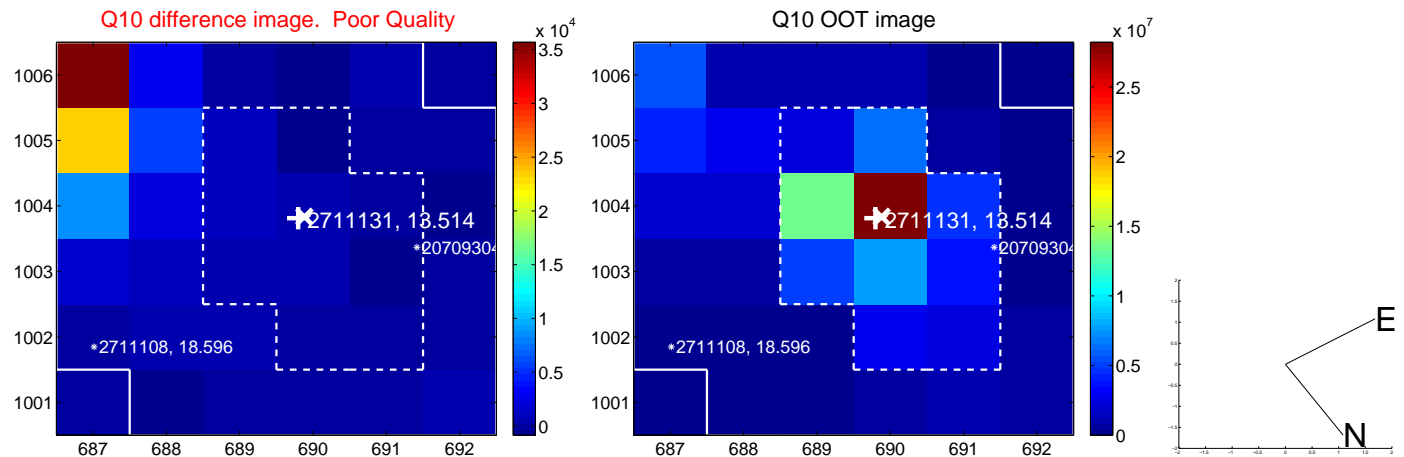
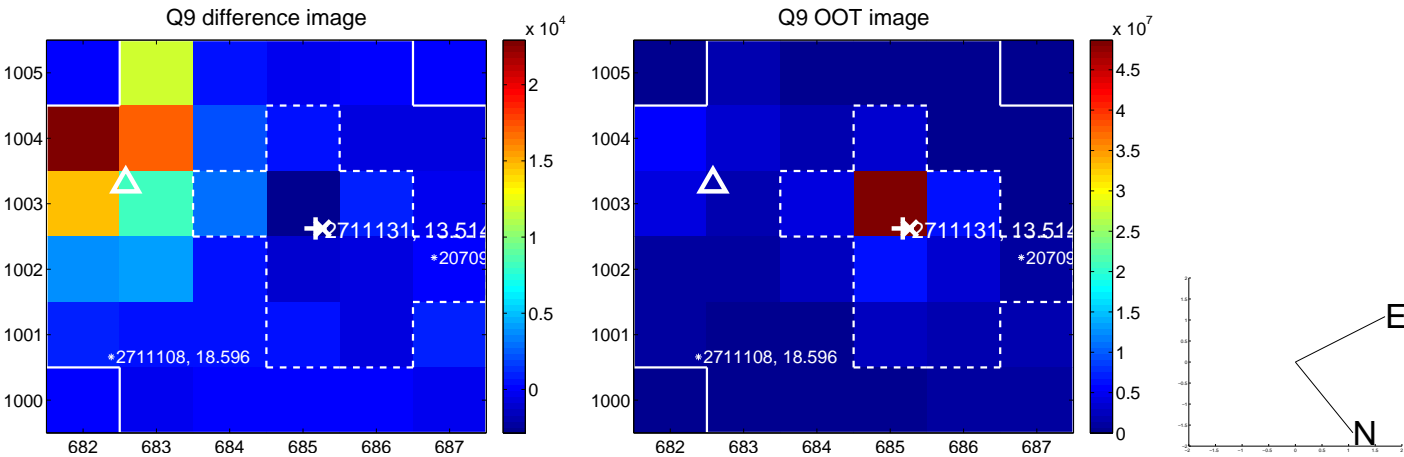
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



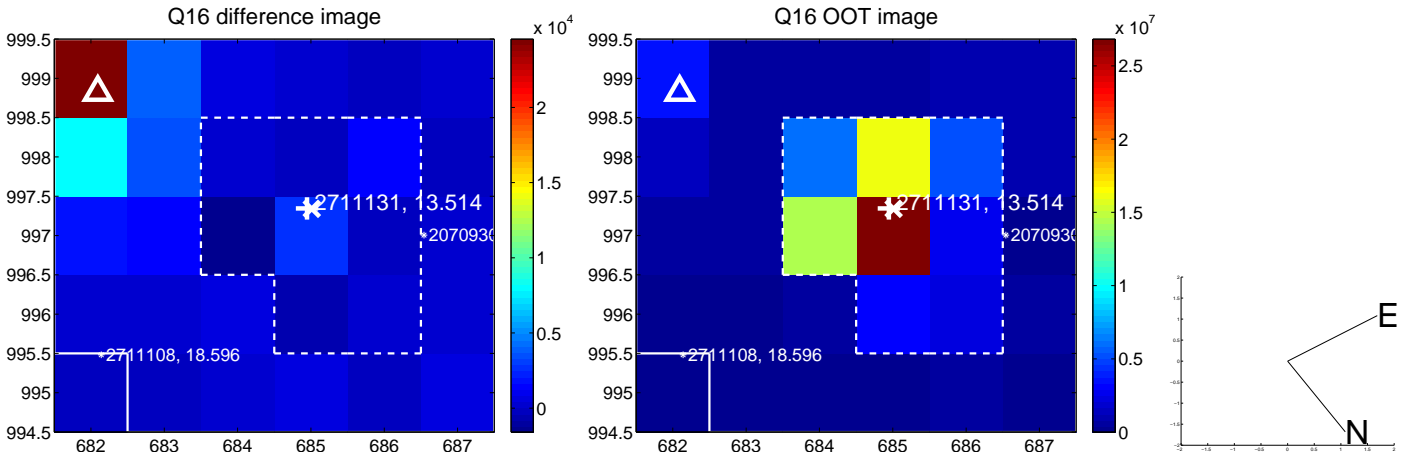
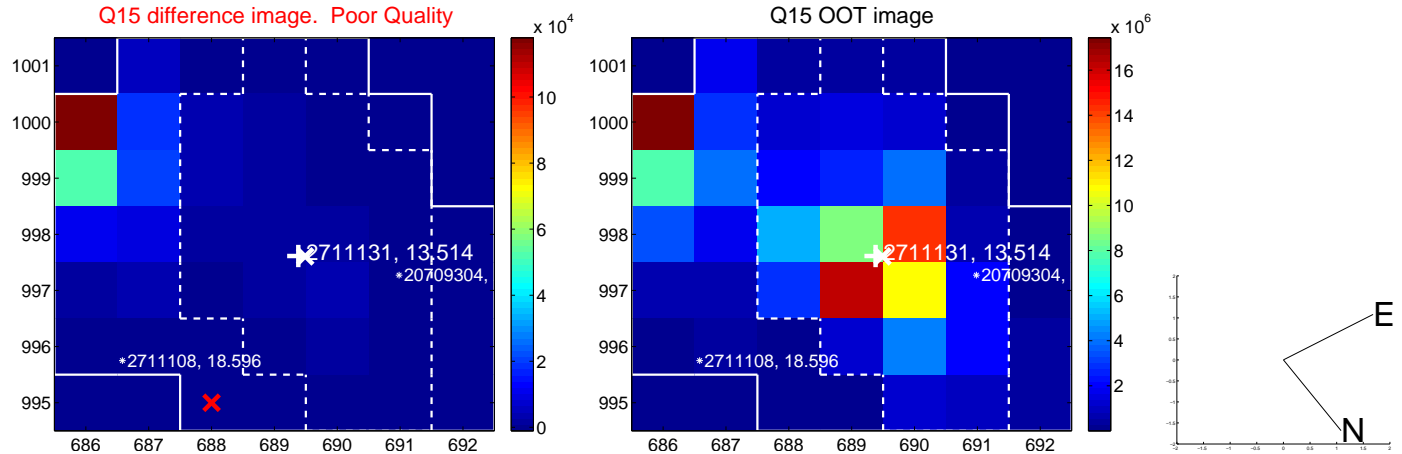
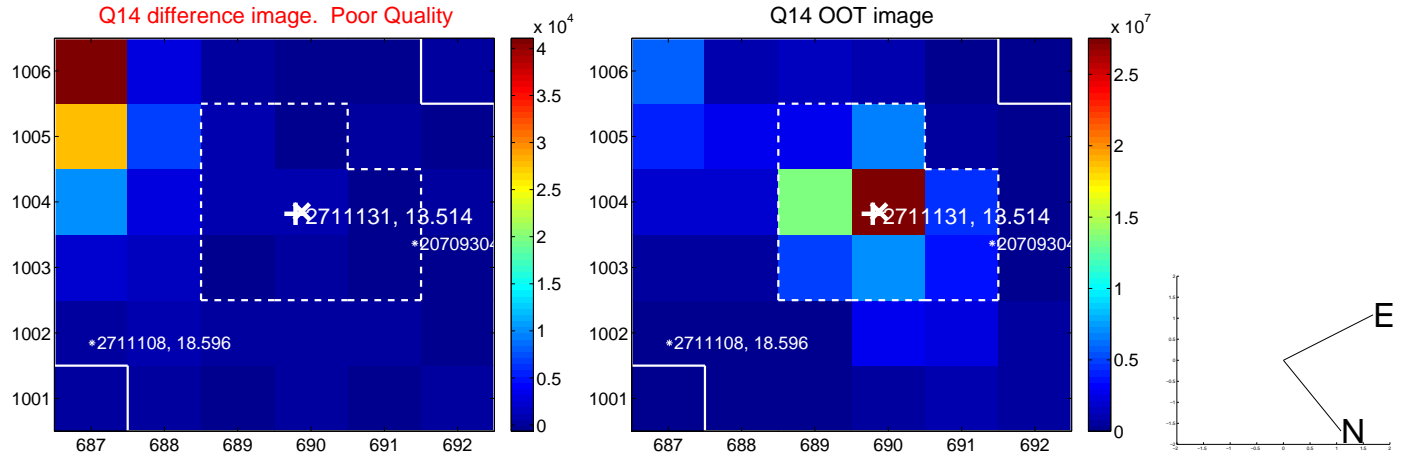
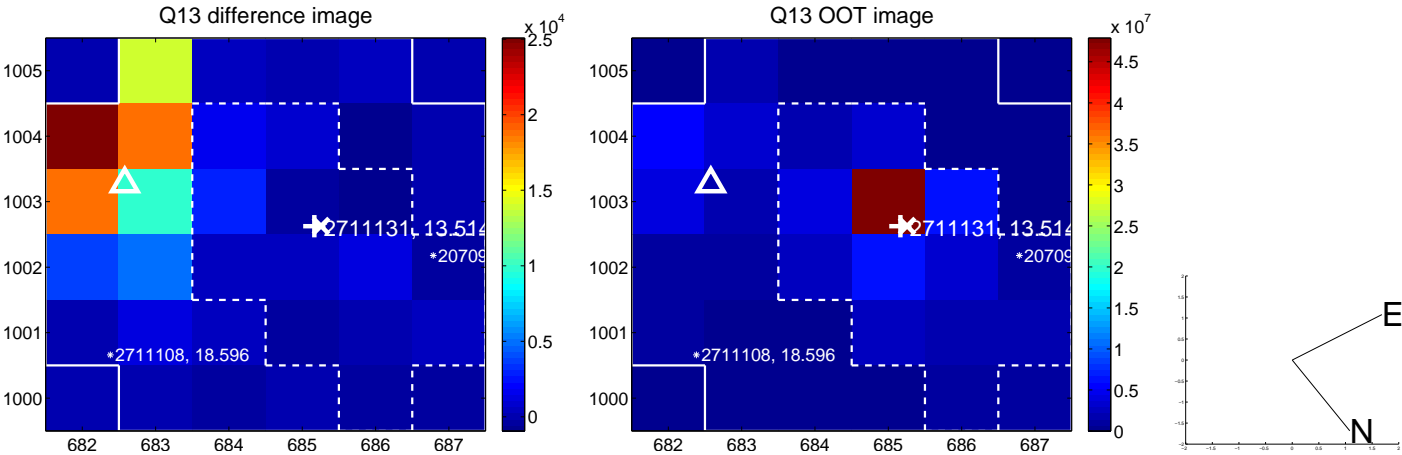
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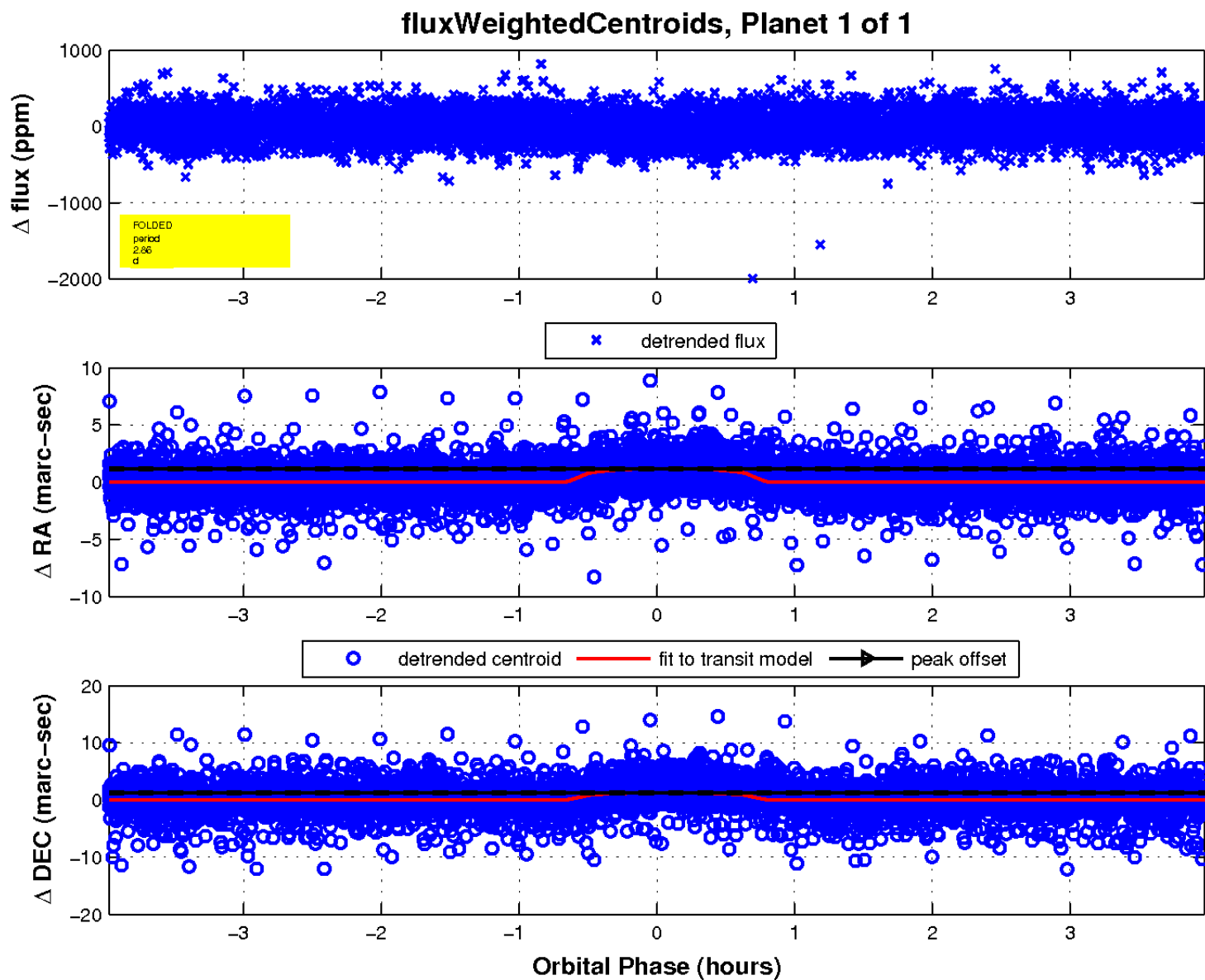
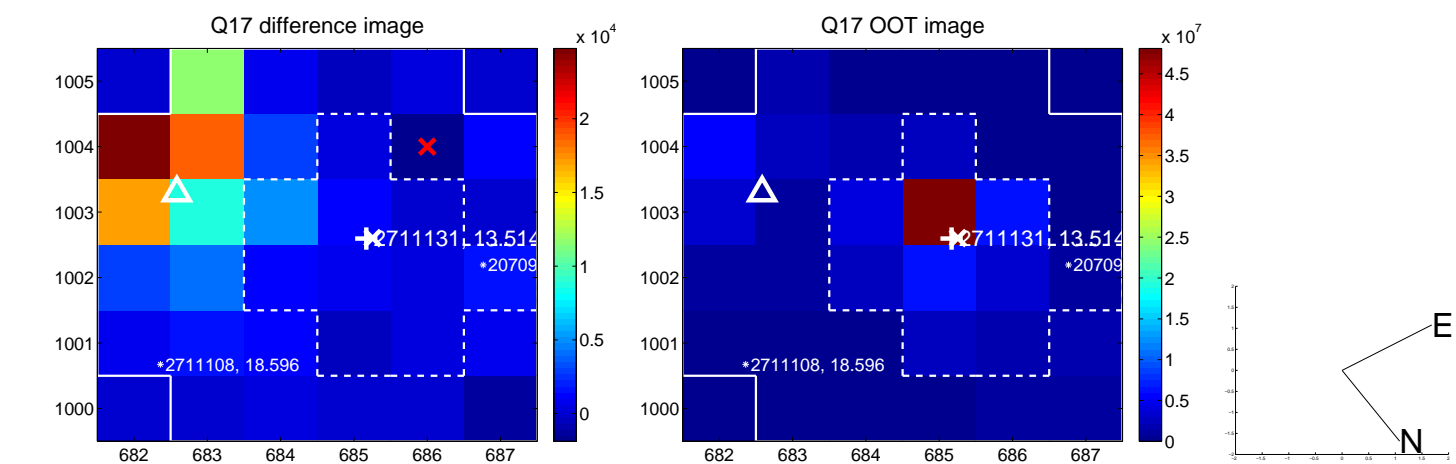
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UKIRT Image

Declination

