

KIC 005201115

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R _★ (R _☉)	T _★ (K)	R _p (R _⊕)	S _p (S _⊕)
005201115-01	OBS	4044.01	1.728485	131.828610	54.0	3.221	21.0	21.1	1.16	5872	1.02	1876.61

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005201115-01	OBS	FP	0.00	0	1	0	1	MOD_ODDEVEN_DV—CENT_KIC_POS—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.

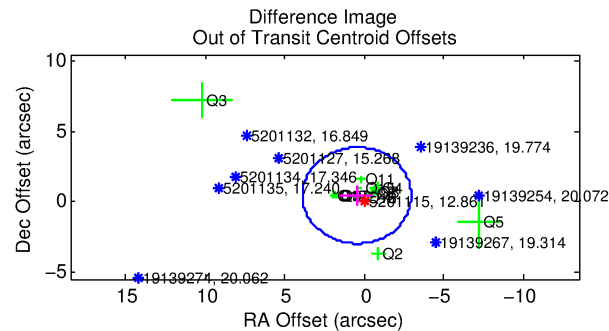
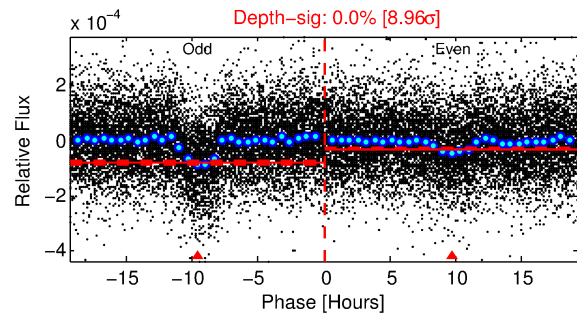
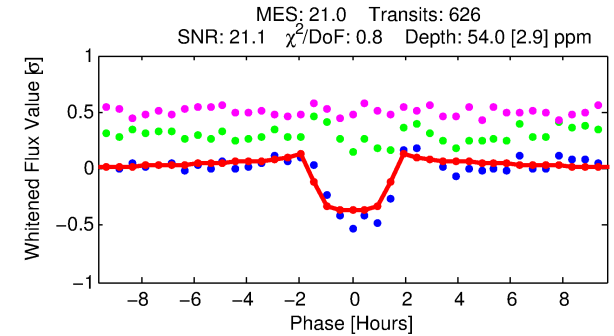
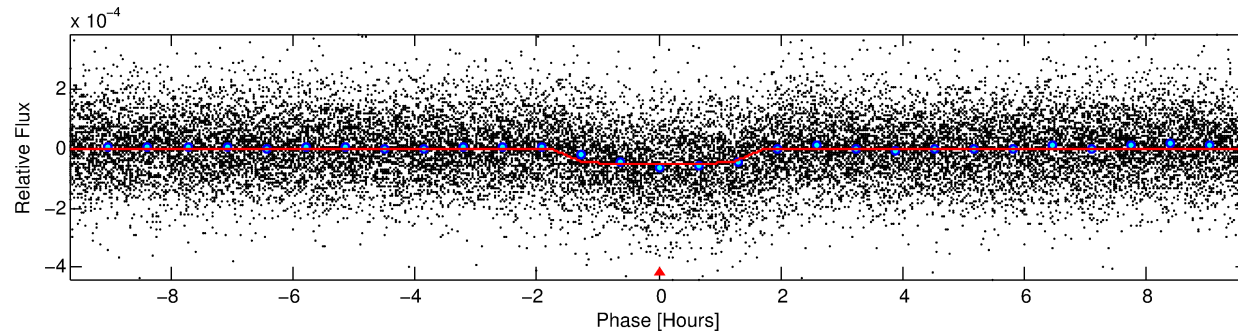
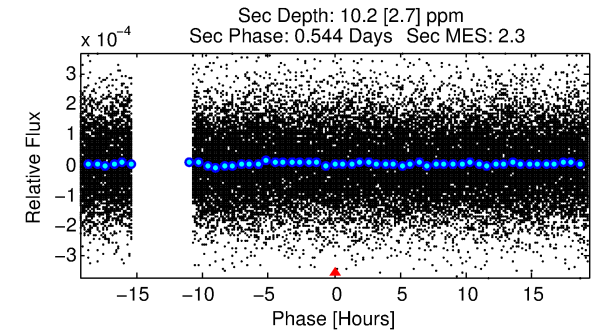
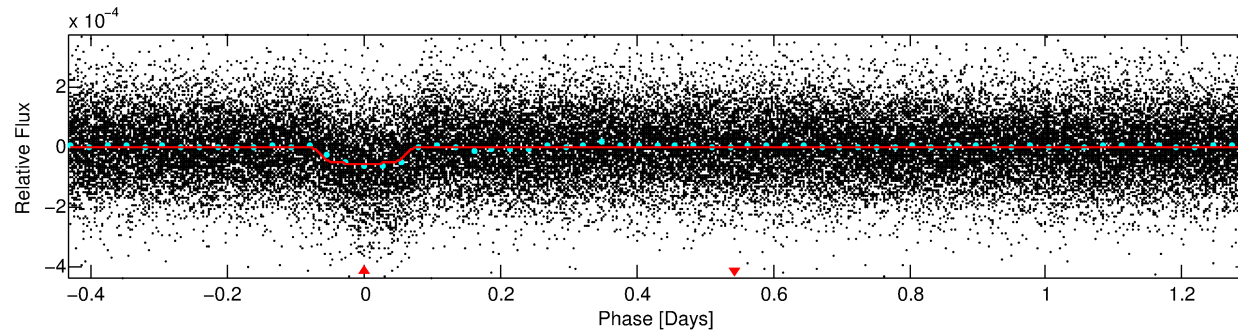
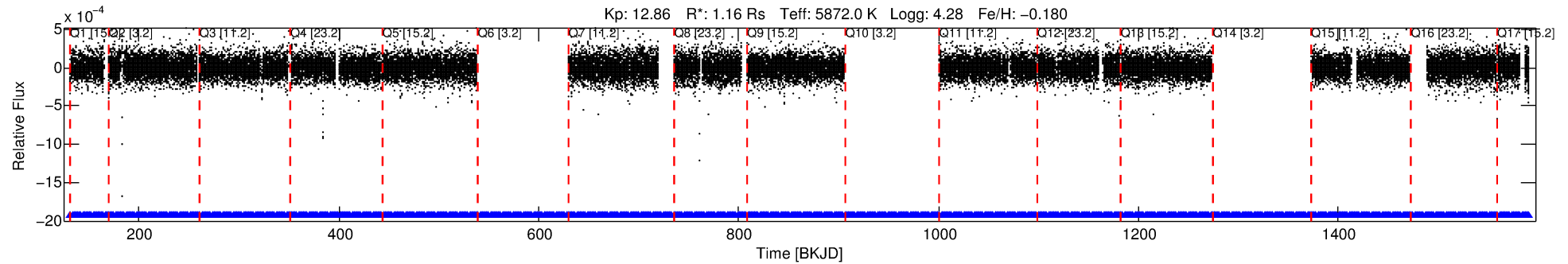
Ephemeris Match Information For 005201115-01

TCE (1)	KIC	Parent (2)	Parent KIC	P ₁ :P ₂	Dist (″)	ΔRow	ΔCol	m ₂	m ₁	D ₂ /D ₁	Mechanism	Flag	σ _P	σ _T
005201115-01	5201115	005288543-01	5288543	1:1	351.4	88	0	13.59	12.87	5792.70	Col-Anomaly	0	2.21	1.30

Notes: P₁:P₂ is the period ratio. Dist is the distance in arcseconds. ΔRow and ΔCol are the number of pixels apart in row and column. m₂ and m₁ are the magnitudes of the parent and child. D₂/D₁ 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 σ_P < 5.0 and σ_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: 5201115 Candidate: 1 of 1 Period: 1.728 d
KOI: K04044.01 Corr: 0.930



DV Fit Results:

Period = 1.72849 [0.00001] d
Epoch = 131.8286 [0.0016] BKJD
Rp/R* = 0.0081 [0.0017]
a/R* = 1.96 [1.53]
b = 0.92 [0.19]
Seff = 1876.61 [755.26]
Teq = 1678 [169] K
Rp = 1.02 [0.36] Re
a = 0.0276 [0.0070] AU
Ag = 4.07 [2.52] [1.22σ]
Teffp = 3686 [467] K [4.04σ]

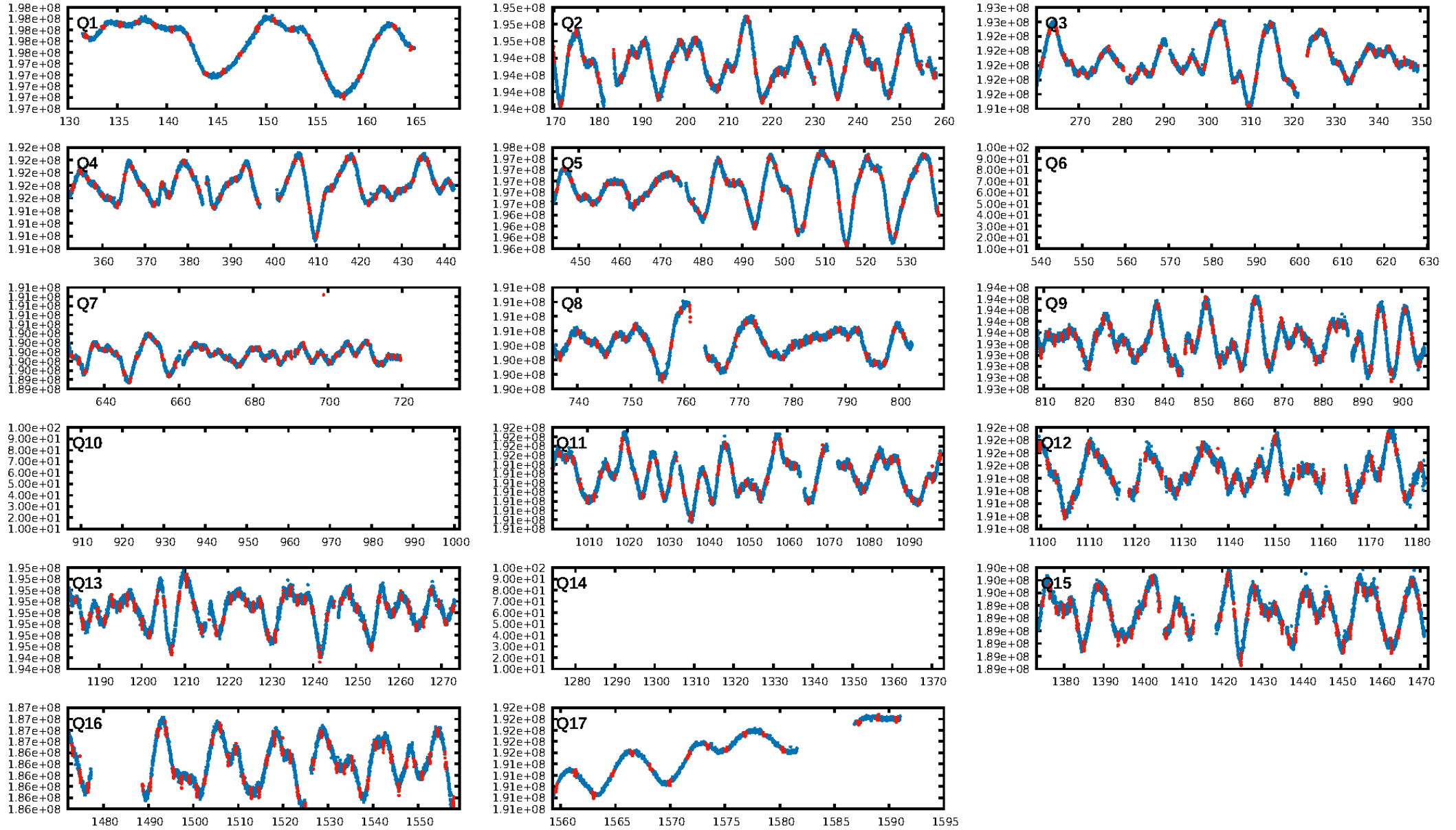
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.05e-87
RollingBand-fgt: 1.00 [590/590]
GhostDiagnostic-chr: 9.457
Centroid-sig: 0.0%
Centroid-so: 1.200 arcsec [2.48σ]
OotOffset-rm: 0.653 arcsec [0.57σ]
KicOffset-rm: 0.285 arcsec [0.27σ]
OotOffset-st: 1/4/4/4 [13]
KicOffset-st: 1/4/4/4 [13]
DiffImageQuality-fgm: 0.77 [10/13]
DiffImageOverlap-fno: 1.00 [14/14]

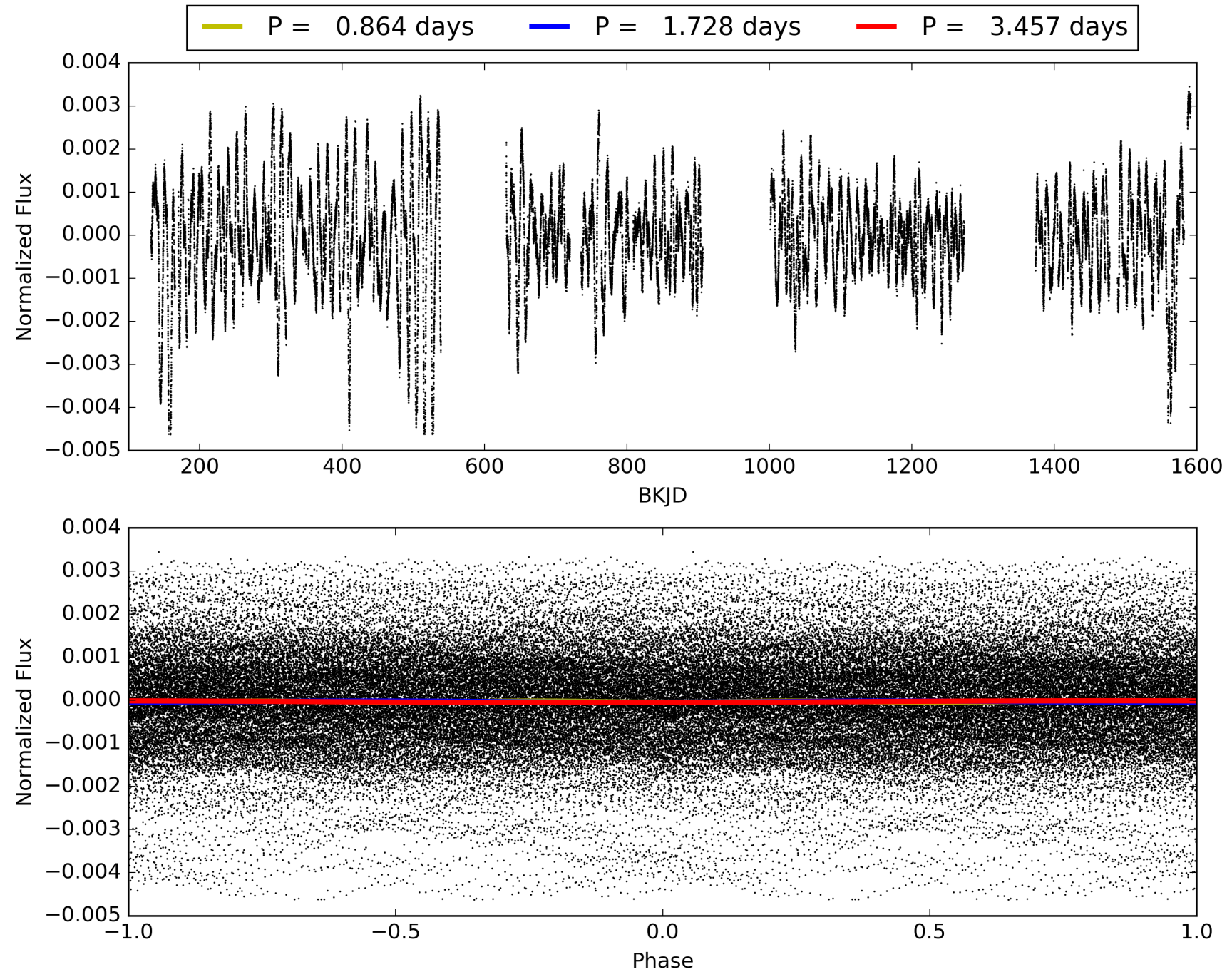
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 02:32:23 Z

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

TCE 005201115-01, PDC Light Curves

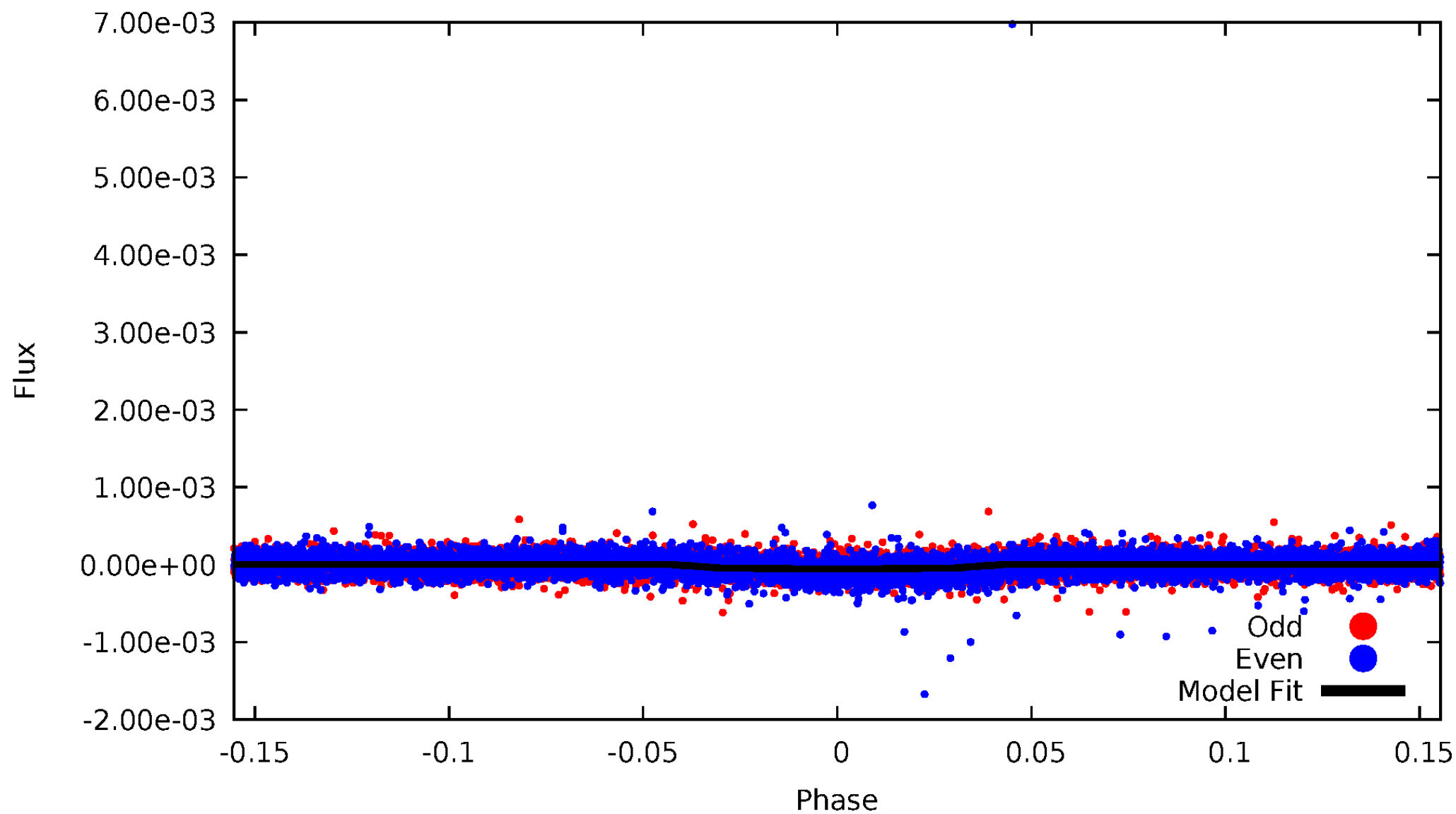


TCE 005201115-01



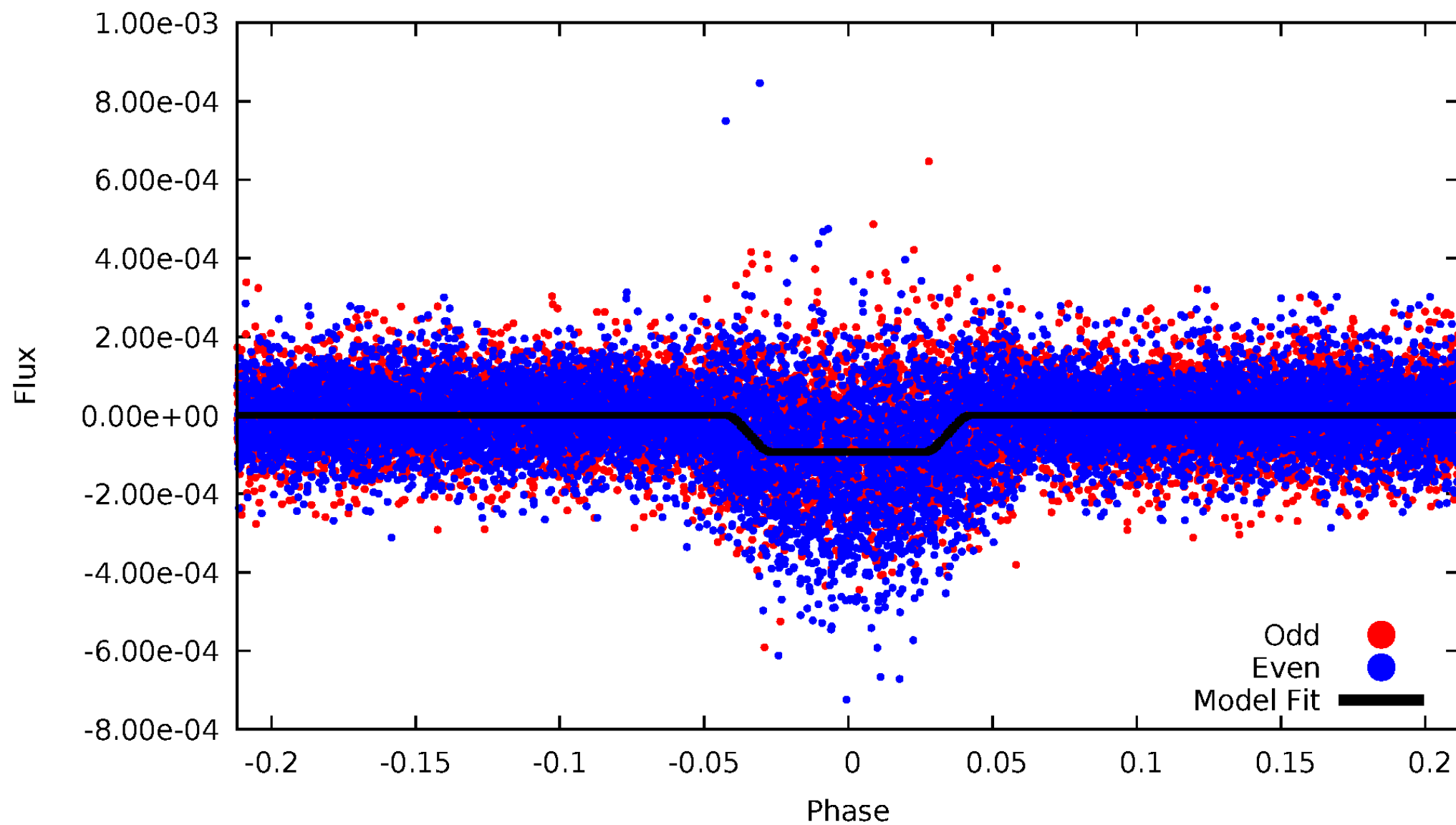
DV Odd/Even

TCE 005201115-01



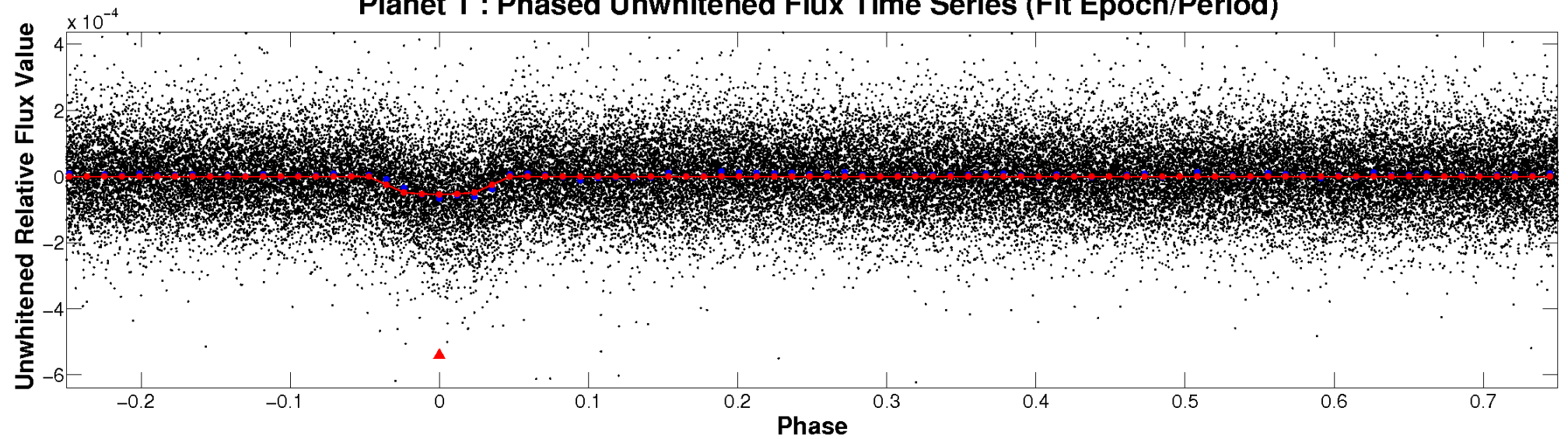
ALT Odd/Even

TCE 005201115-01

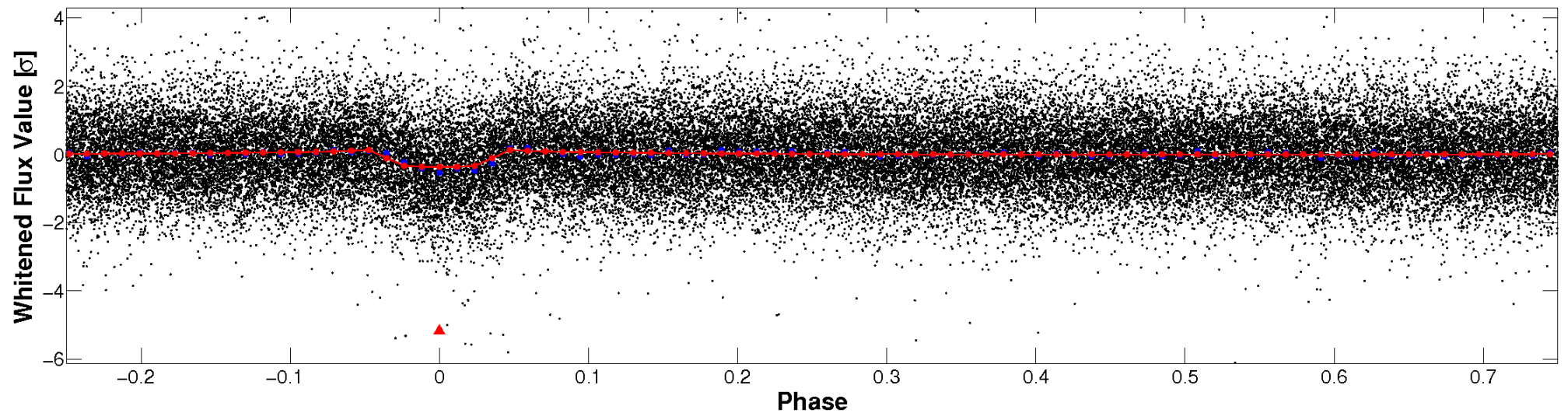


Non-Whitened Vs. Whitened Light Curve

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

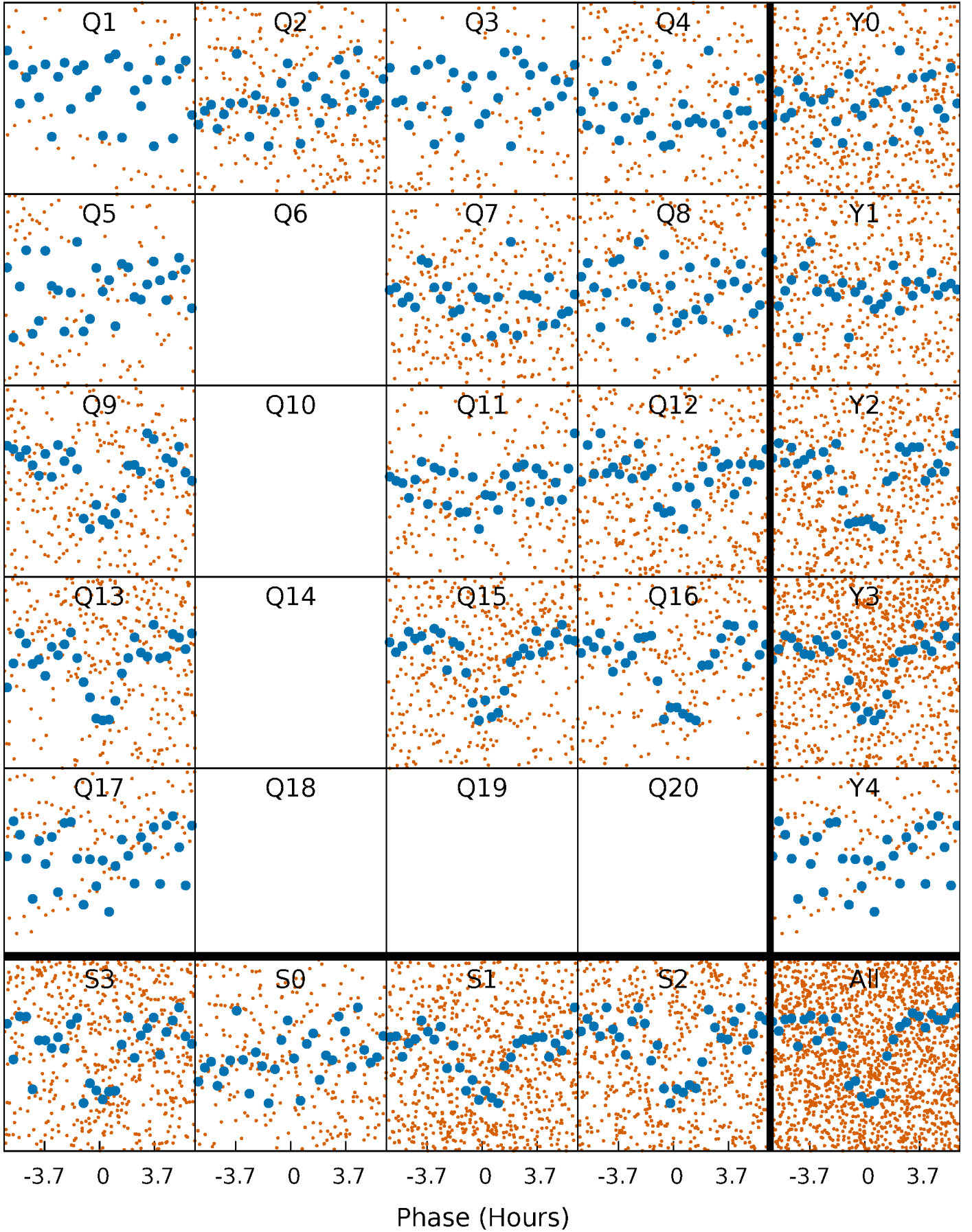


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



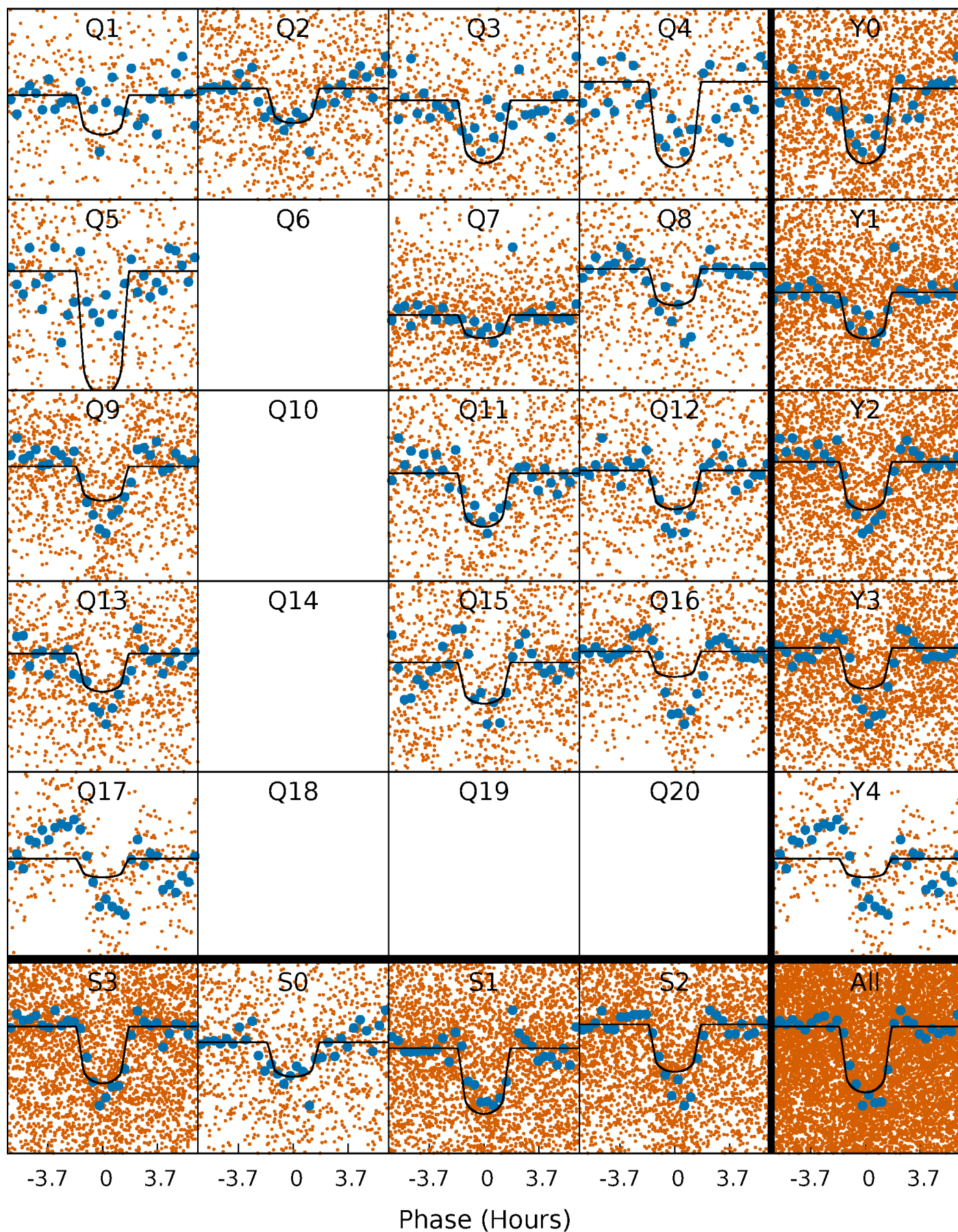
PDC Quarter-Phased Transit Curves

TCE 005201115-01 P= 1.728485 Days $T_0=131.828610$ (BKJD)



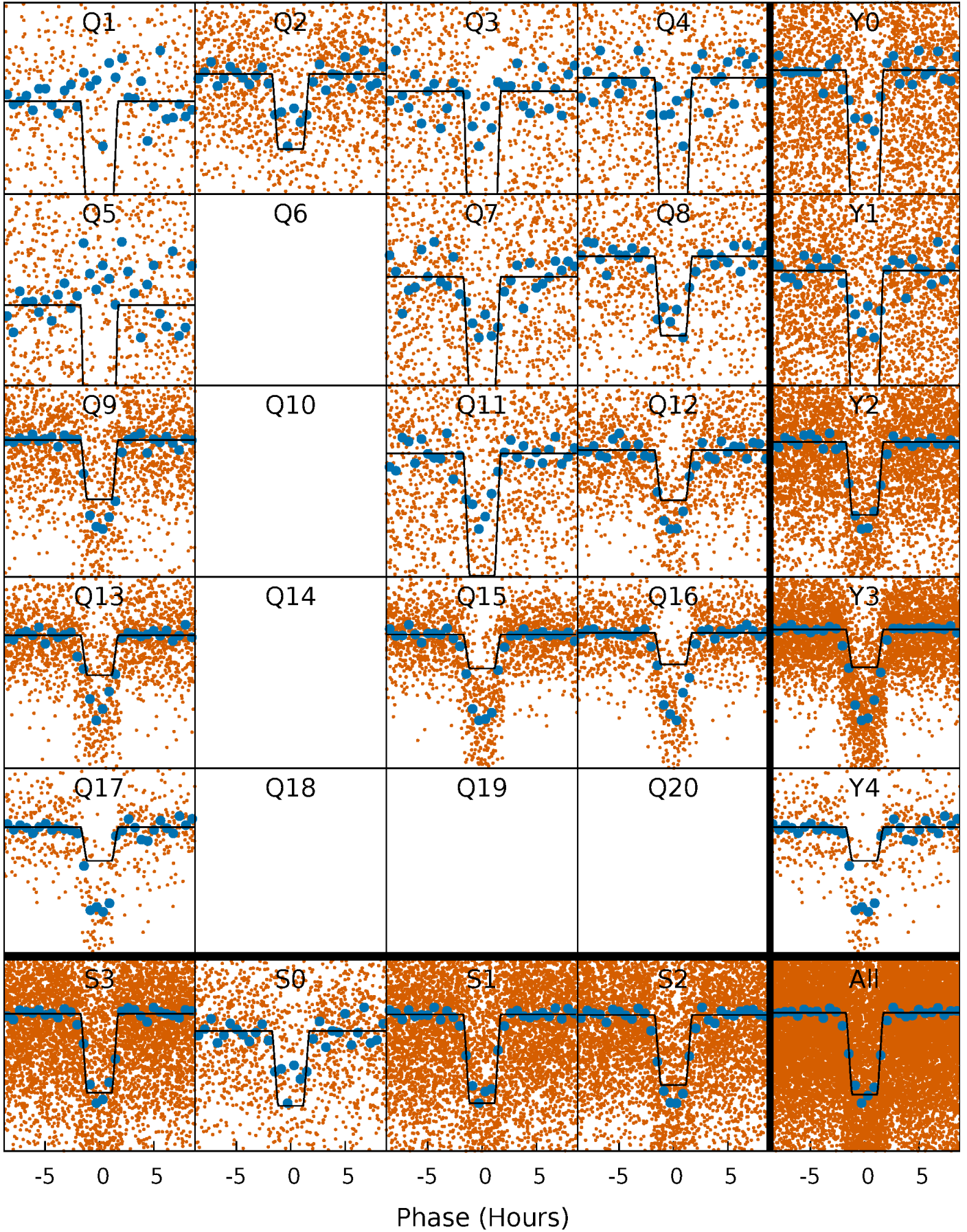
DV Quarter-Phased Transit Curves

TCE 005201115-01 P= 1.728485 Days $T_0=131.828610$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

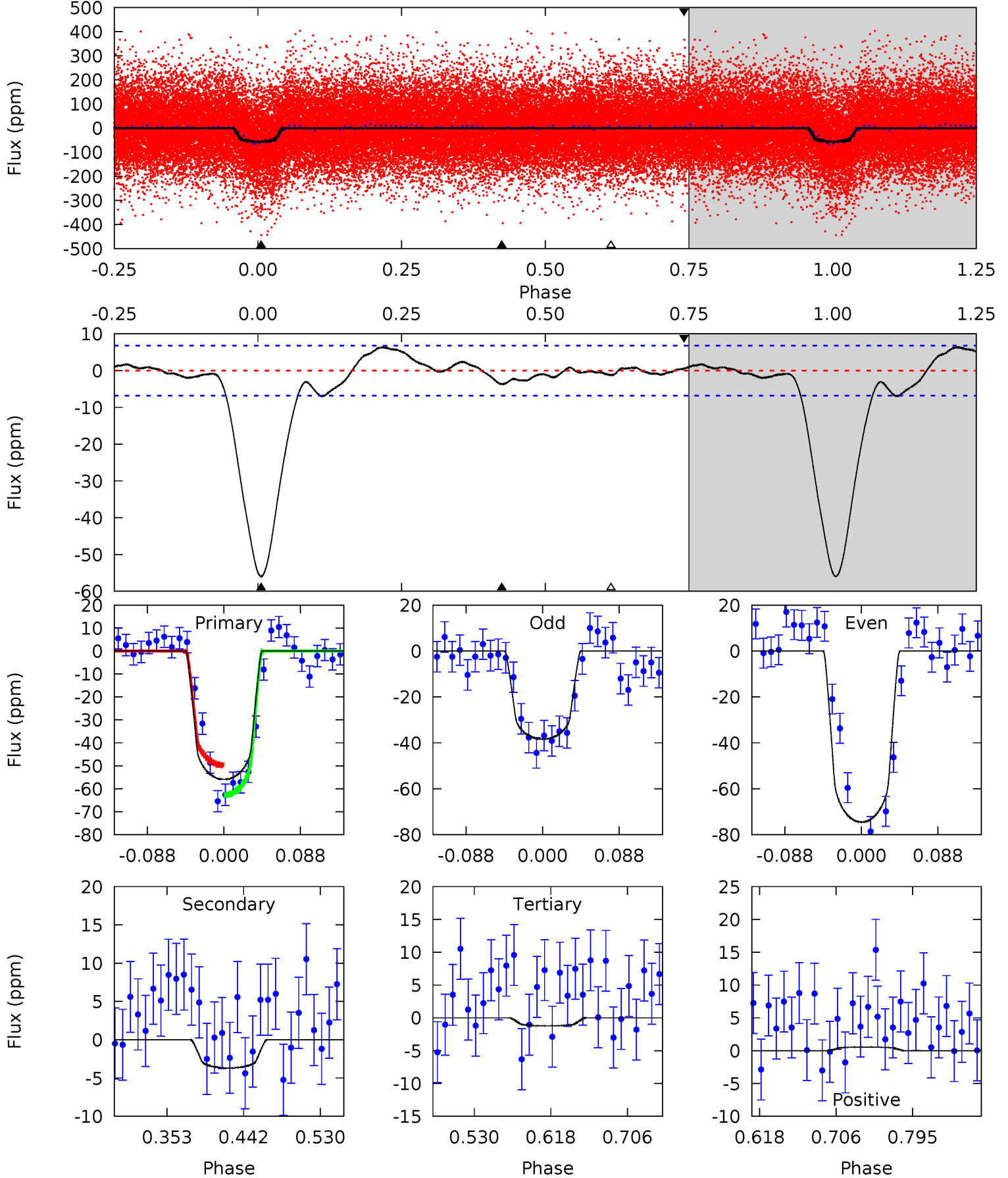
TCE 005201115-01 P= 1.728531 Days $T_0=131.811283$ (BKJD)



DV Model-Shift Uniqueness Test

005201115-01, P = 1.728485 Days, E = 130.100125 Days

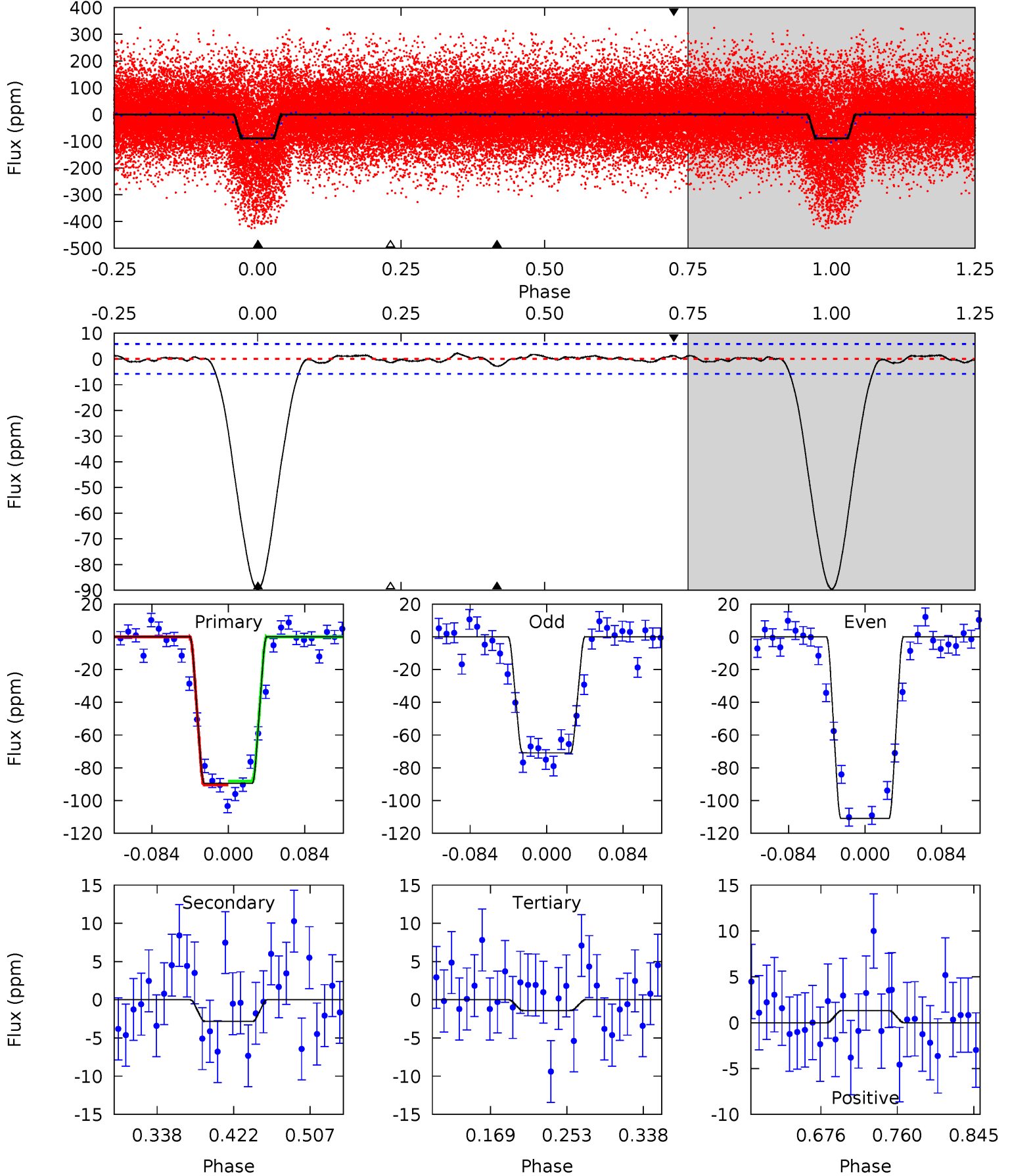
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
37.7	2.49	0.83	0.37	4.59	1.70	1.81	36.9	37.4	1.67	2.13	12.2	1.14	0.10	4.36



Alt Model-Shift Uniqueness Test

005201115-01, P = 1.728531 Days, E = 130.082752 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
71.2	2.25	1.12	1.04	4.60	1.73	0.61	70.1	70.2	1.13	1.21	15.9	0.99	0.02	0.93



Stellar Parameters For KIC 005201115

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5872^{+176}_{-194}	$4.282^{+0.214}_{-0.175}$	$-0.180^{+0.300}_{-0.300}$	$1.157^{+0.332}_{-0.241}$	$0.934^{+0.144}_{-0.096}$	$0.849^{+0.874}_{-0.438}$
	+3%/-3%	+5%/-4%	+167%/-167%	+29%/-21%	+15%/-10%	+103%/-52%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 005201115-01 / KOI 4044.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-4 ± 1	$1.01^{+0.26}_{-0.23}$	2336^{+174}_{-160}	3252^{+370}_{-398}	$1.425^{+1.322}_{-0.690}$
Alt.	-3 ± 1	$1.20^{+0.30}_{-0.25}$	2329^{+170}_{-160}	2874^{+355}_{-581}	$0.780^{+0.682}_{-0.404}$

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

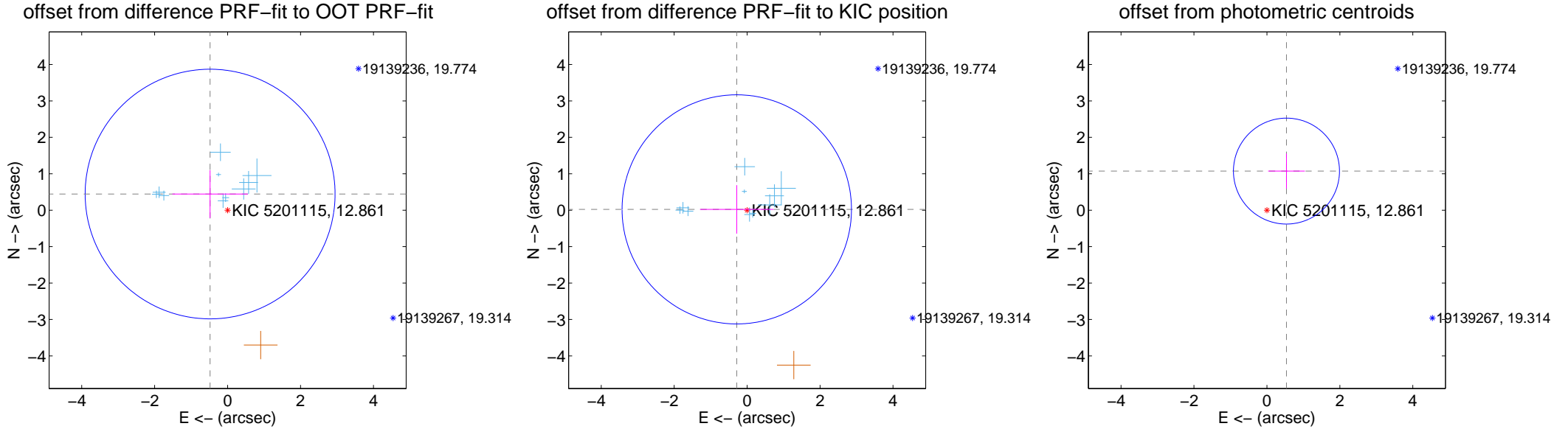
DV Centroid Data

Supplemental centroid analysis for 005201115-01. Kepler magnitude: 12.86. Transit SNR 21.05

There are 10 quarters with good PRF difference image offsets

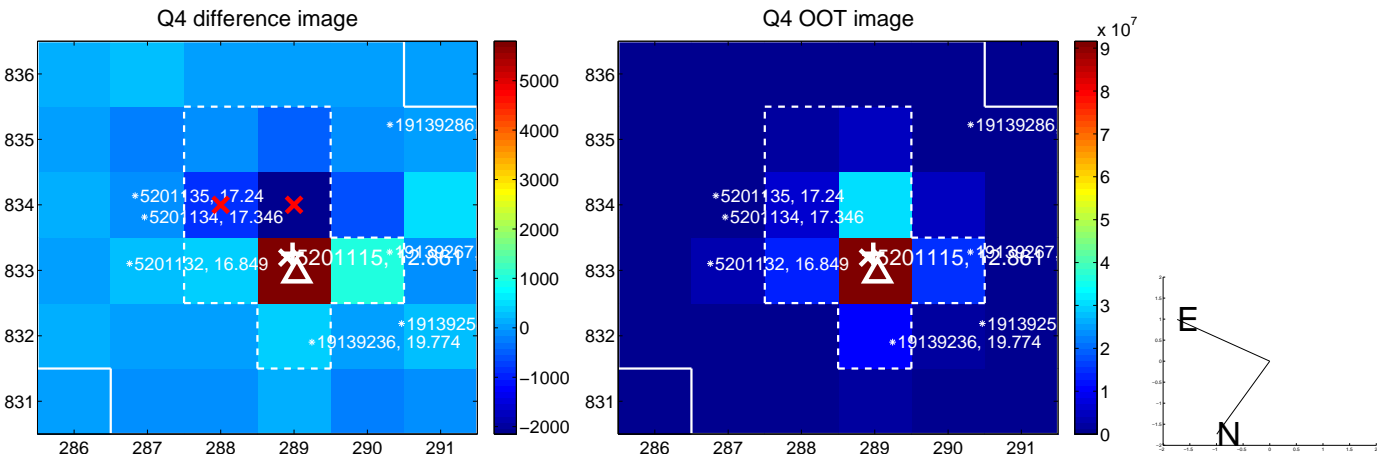
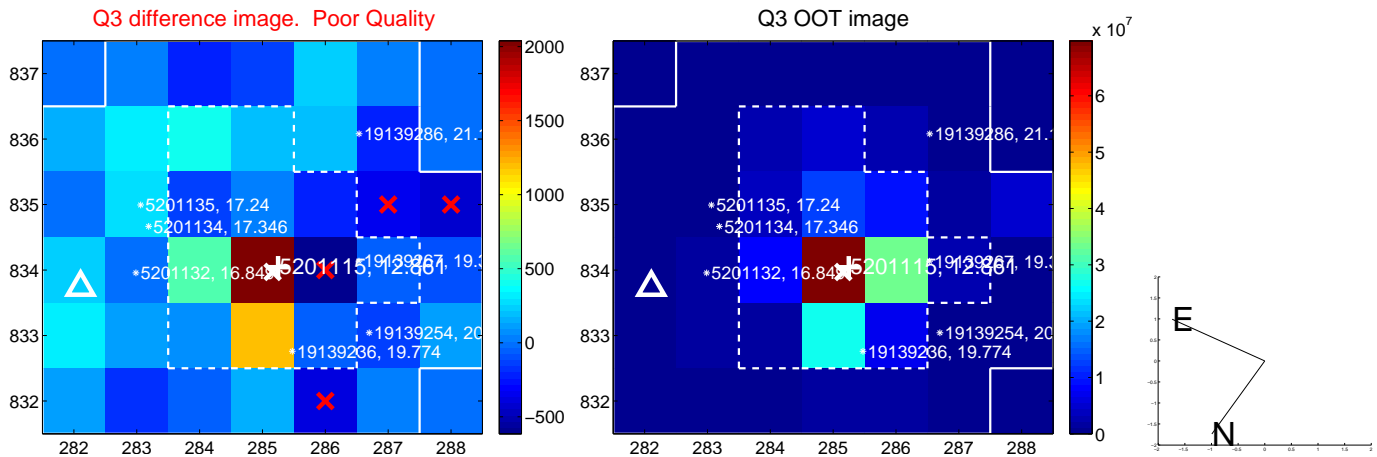
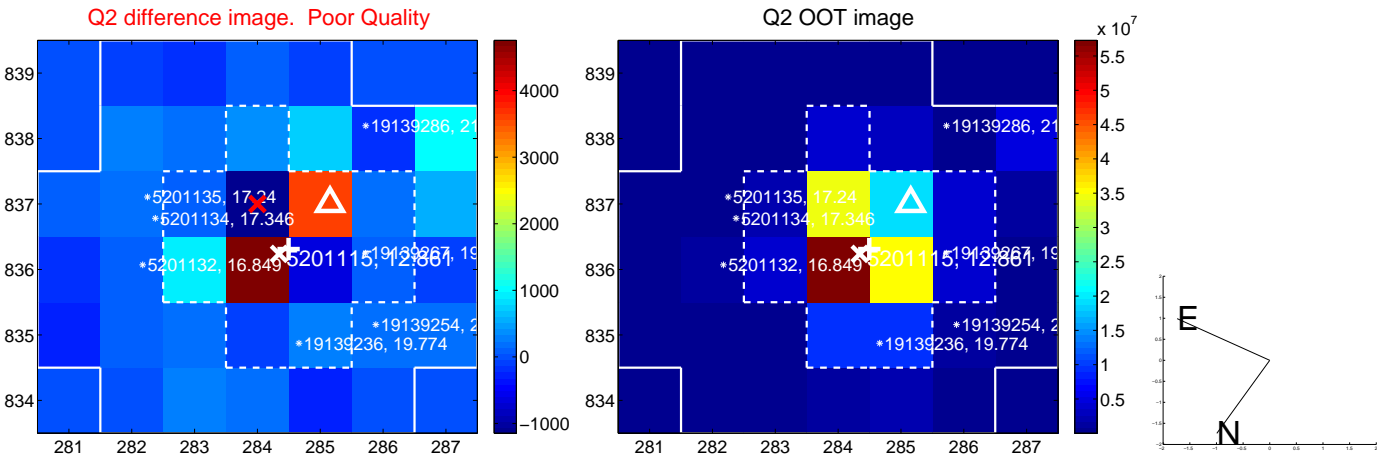
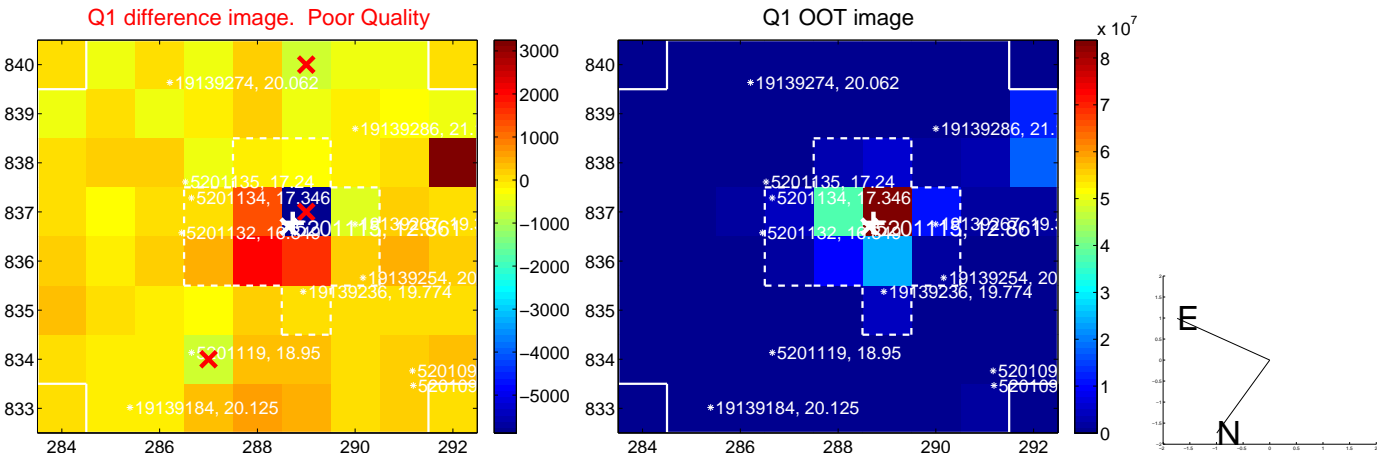
The direct PRF centroid is offset from the target star catalog position by about 0.44 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.653 ± 1.142	0.57	0.480 ± 1.034	0.444 ± 0.655
PRF-fit source offset from KIC position	0.285 ± 1.048	0.27	0.284 ± 1.009	0.023 ± 0.665
photometric centroid source offset	1.20 ± 0.48	2.48	-0.54 ± 0.50	1.07 ± 0.48

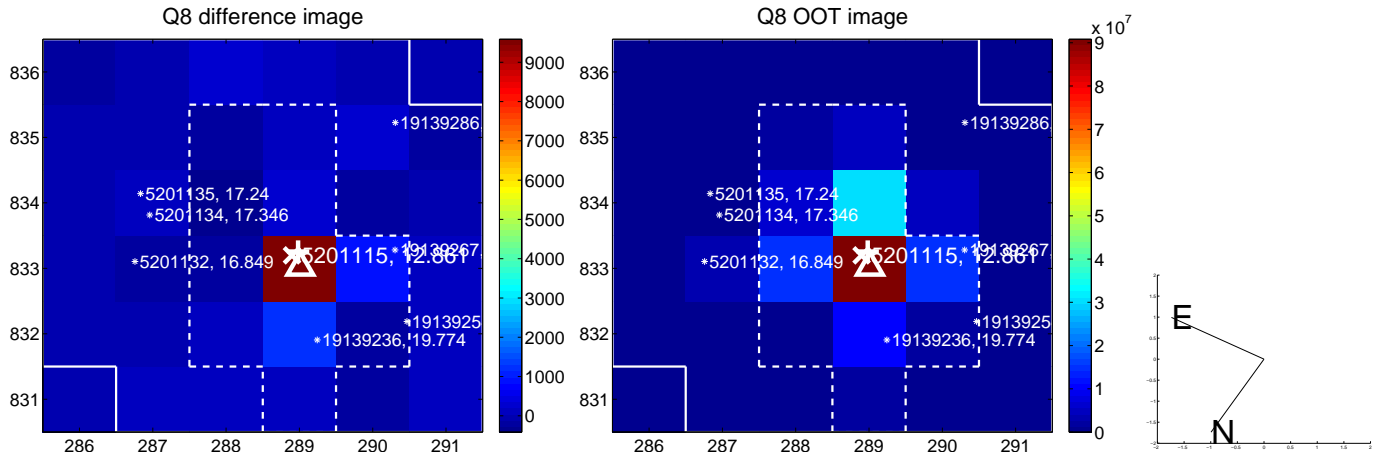
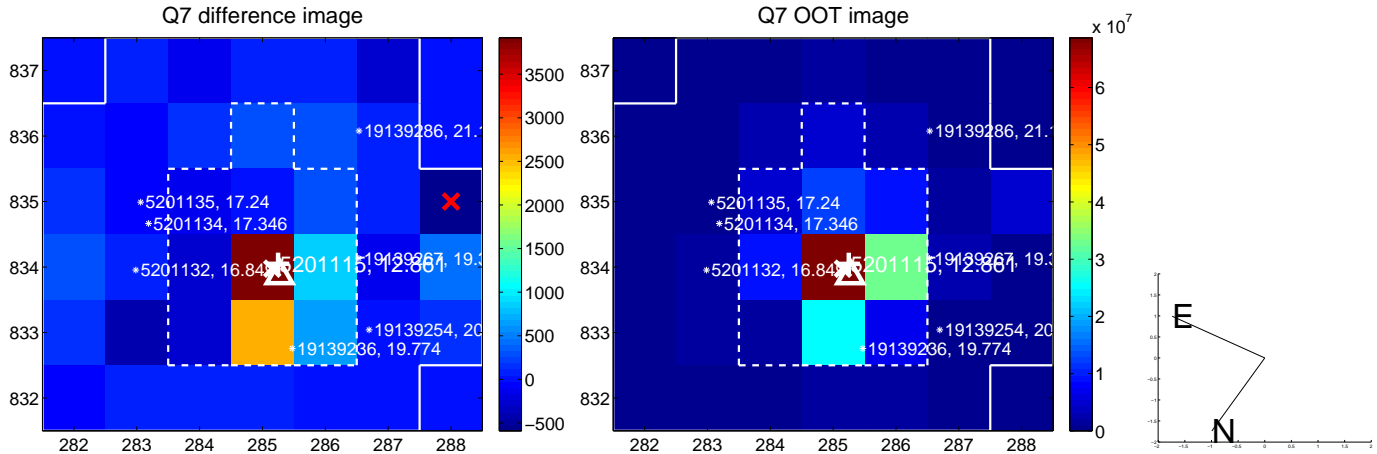
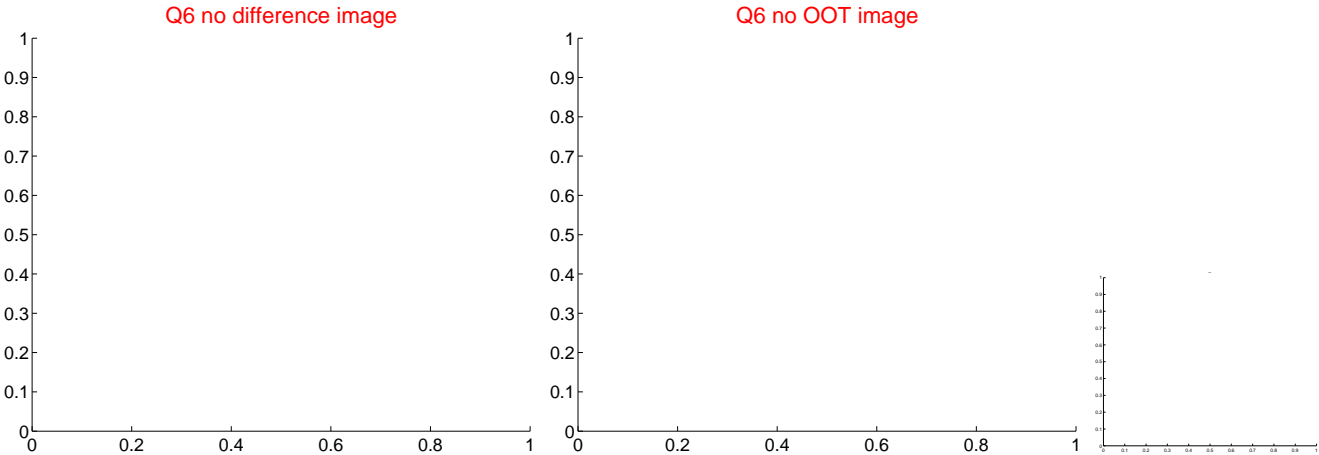
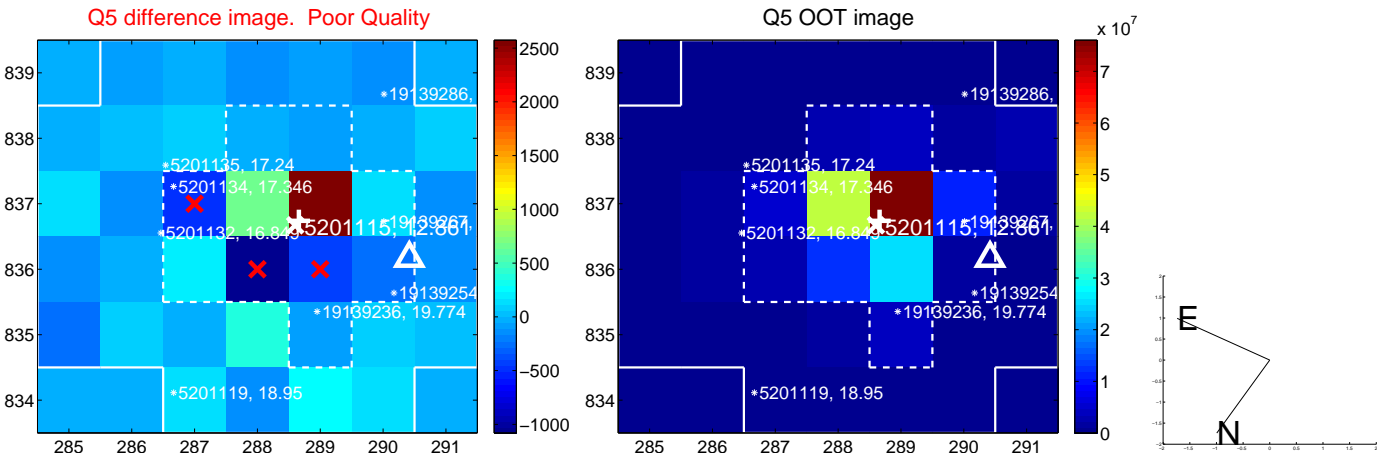


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

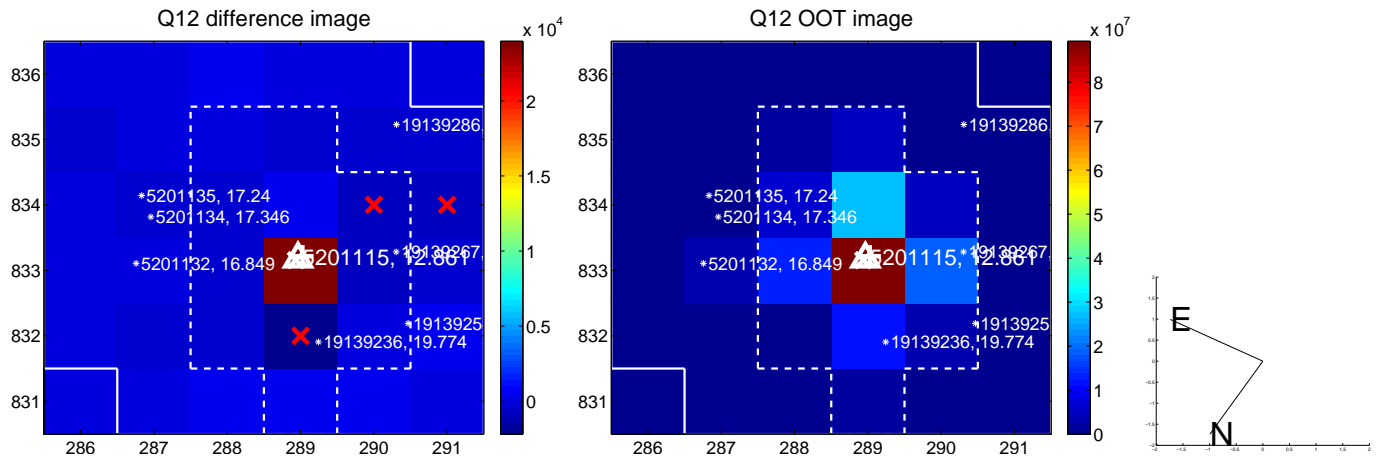
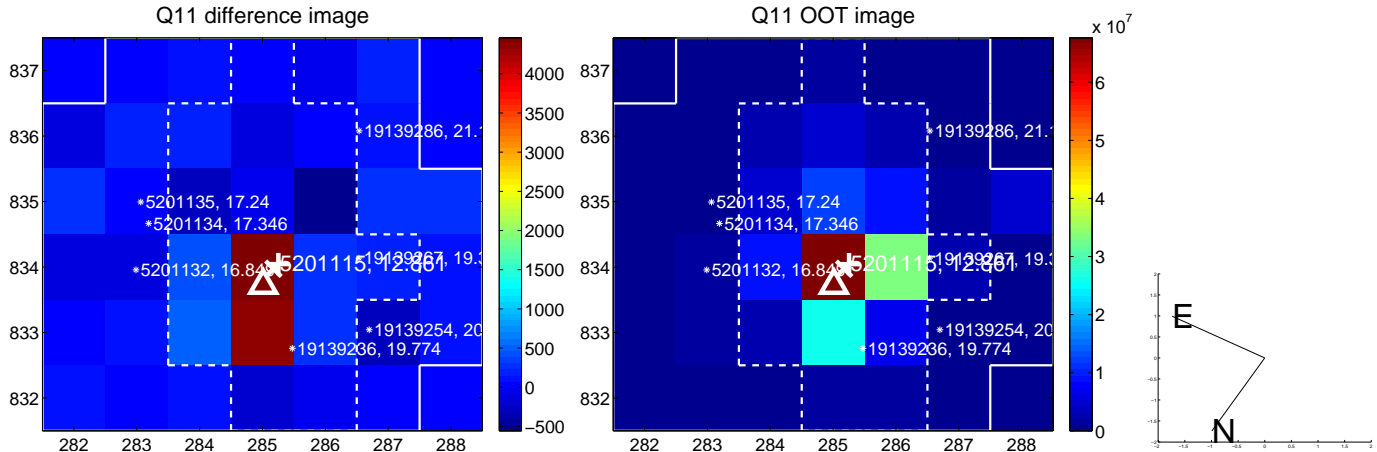
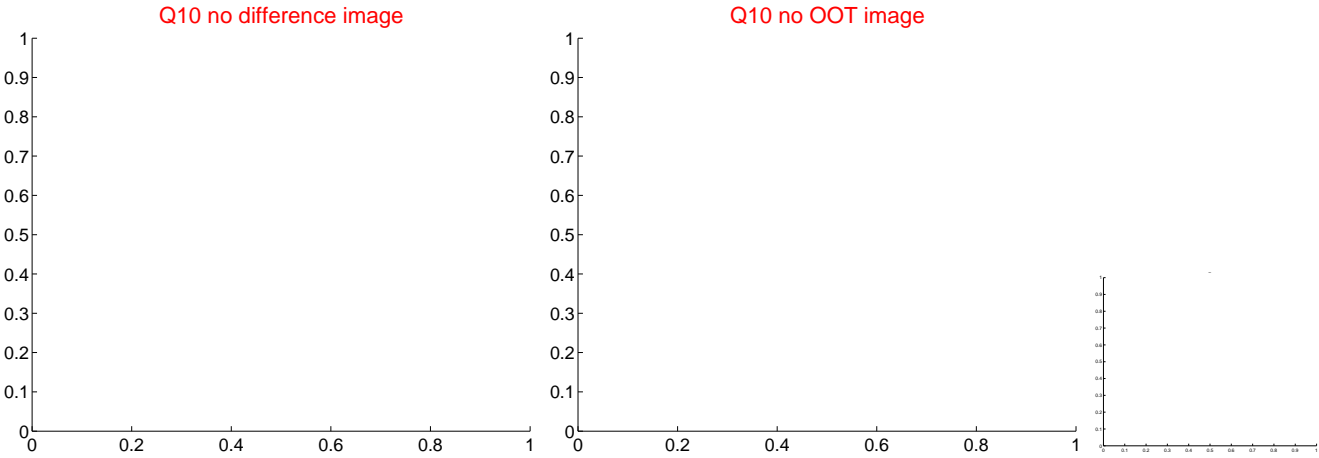
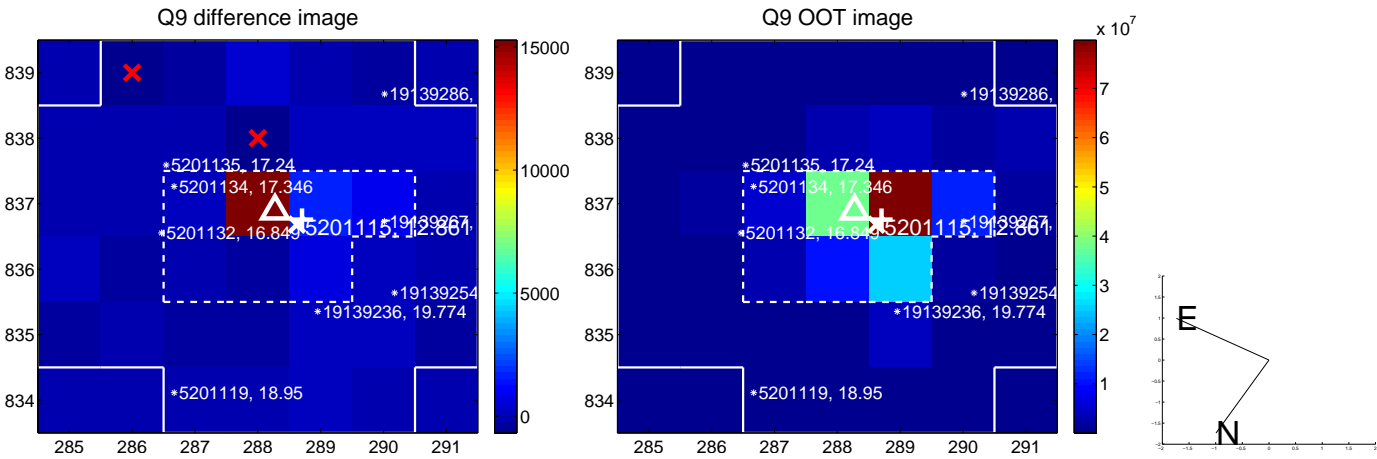
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



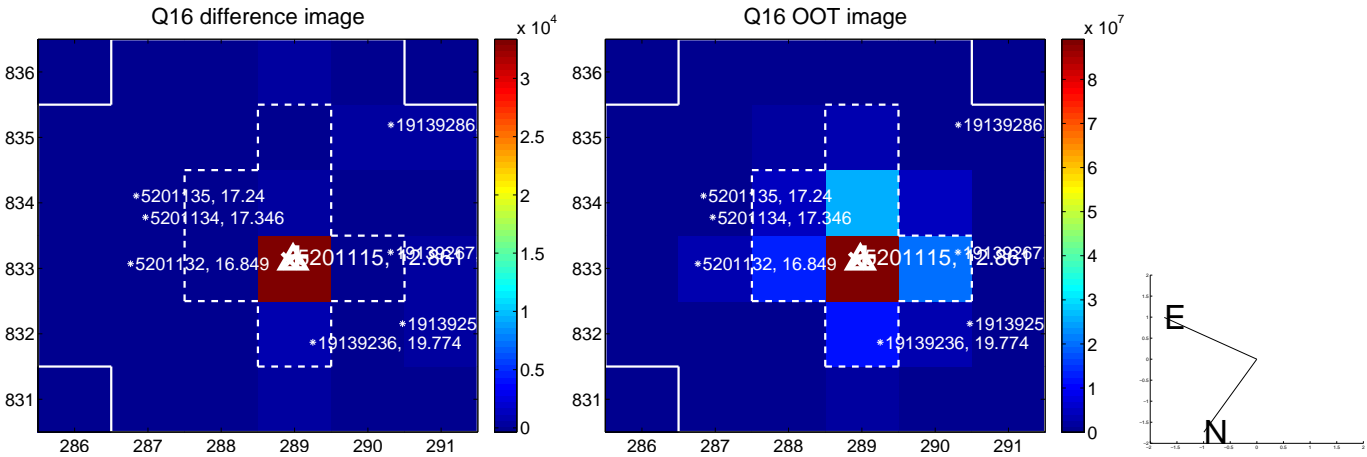
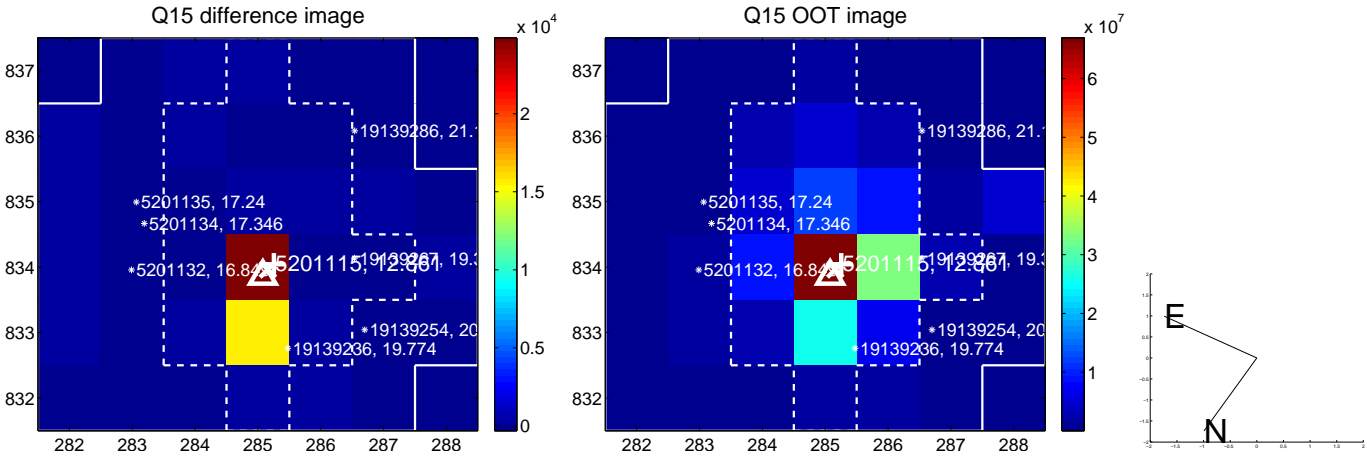
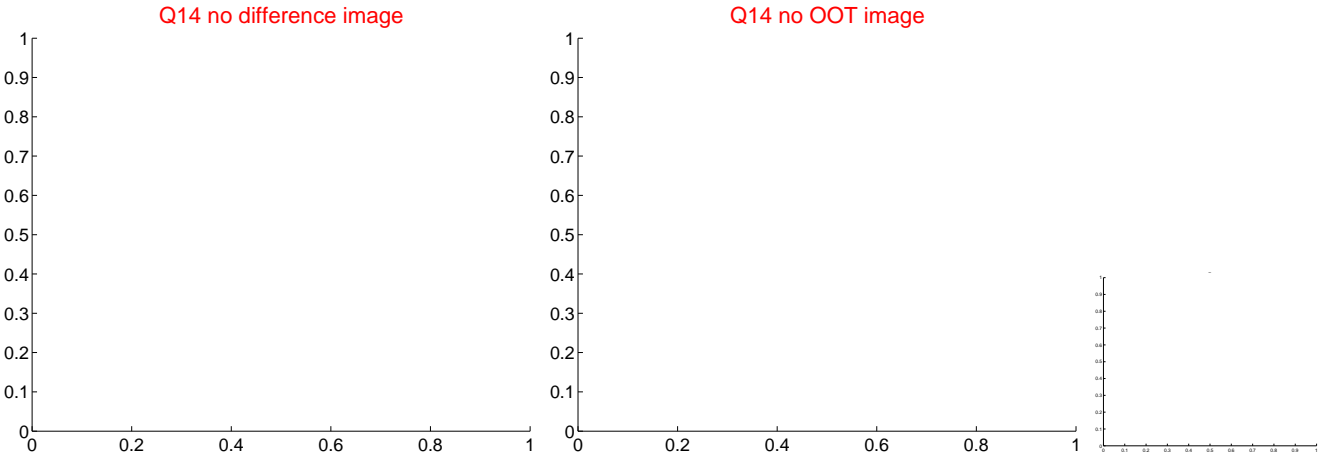
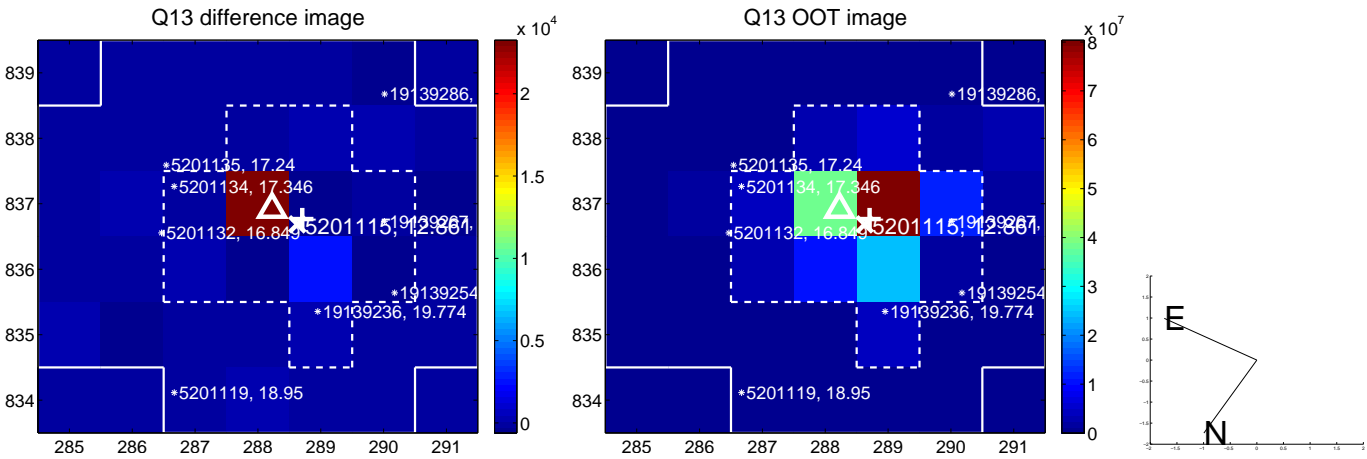
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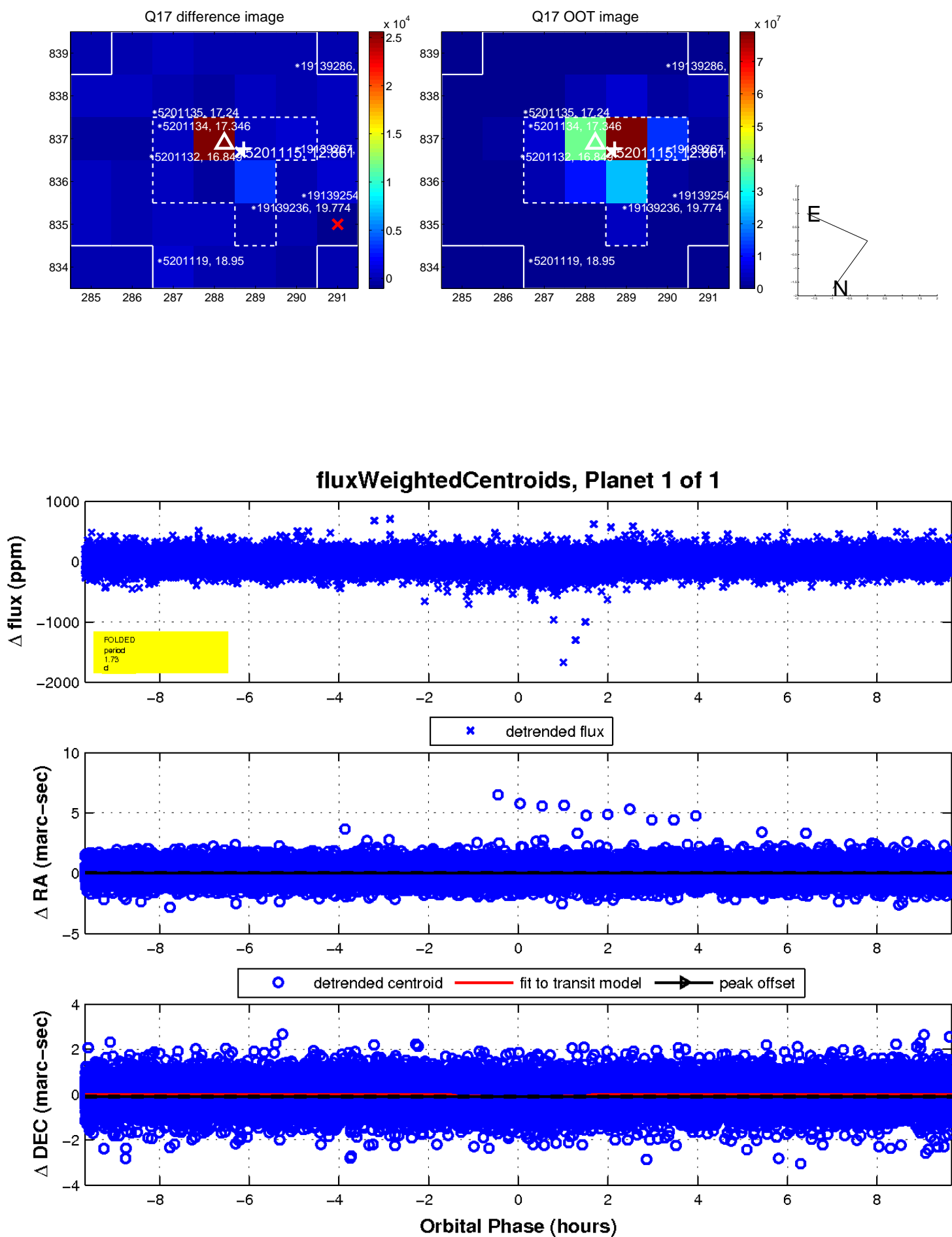
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UKIRT Image

Declination

