

KIC 008491152

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})
008491152-01	OBS	No	1.605400	132.996282	90.5	14.200	7.6	7.9	0.70	5126	0.65	544.05

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008491152-01	OBS	FP	0.00	1	0	0	0	LPP_DV

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

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

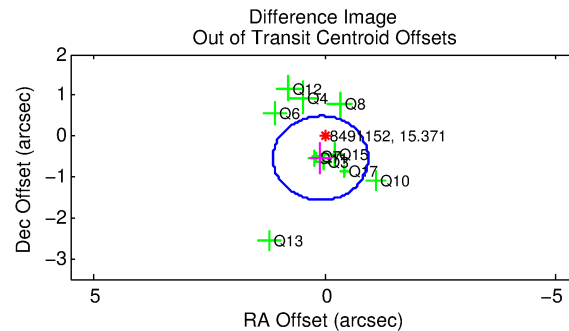
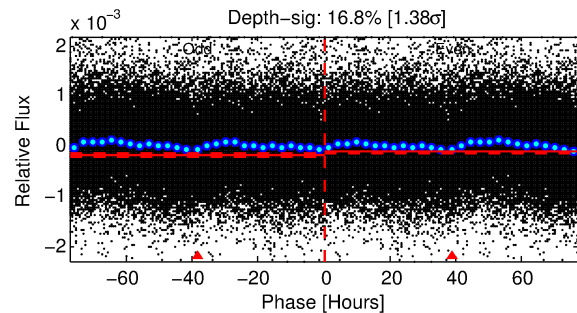
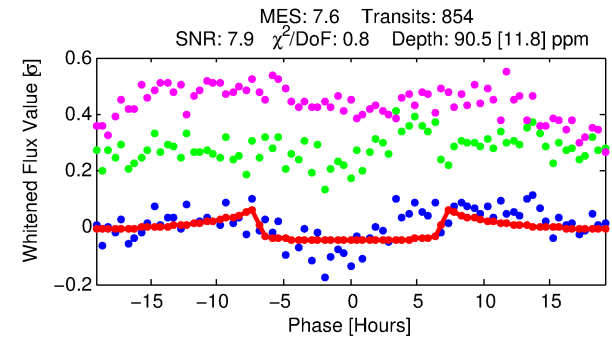
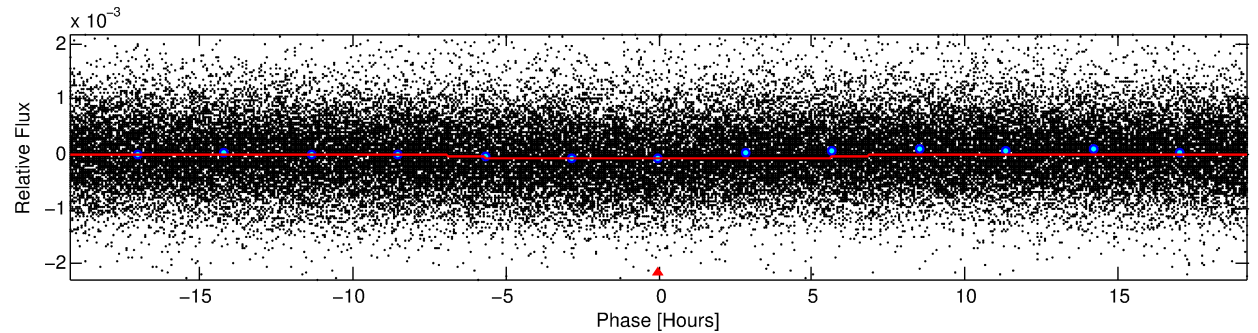
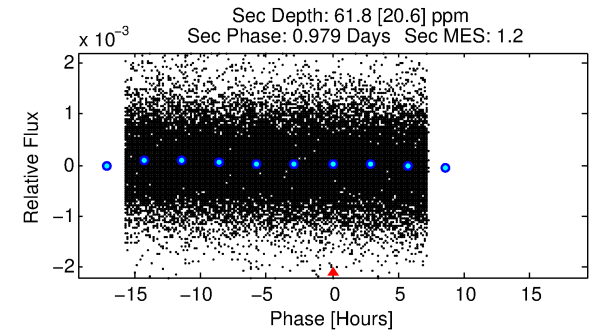
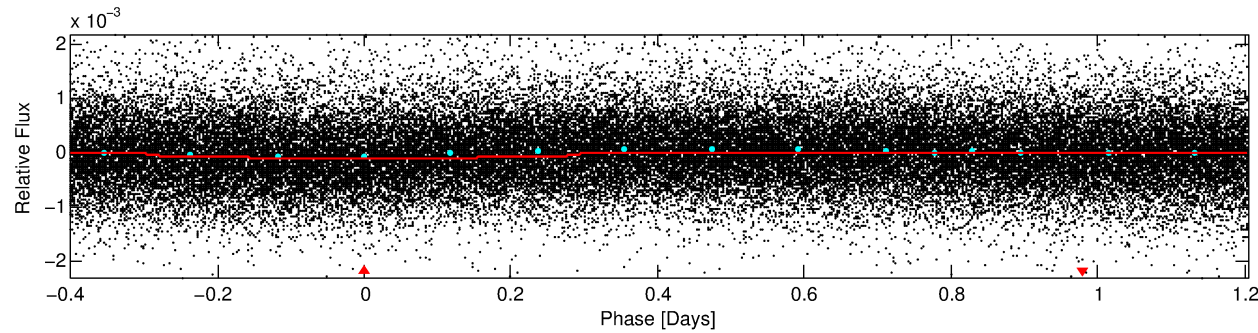
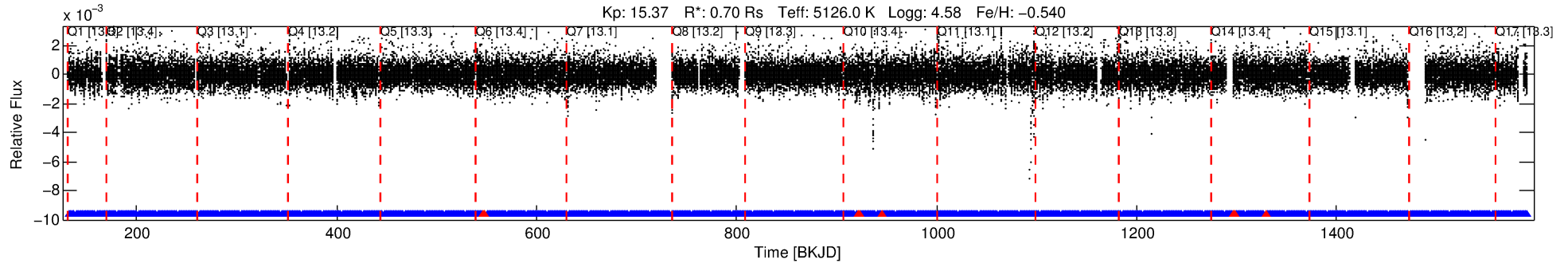
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008491152-01

No Significant Match Found

DV One-Page Summary

KIC: 8491152 Candidate: 1 of 1 Period: 1.605 d



DV Fit Results:

Period = 1.60540 [0.00003] d
Epoch = 132.9963 [0.0071] BKJD
Rp/R* = 0.0085 [0.0056]
a/R* = 1.10 [0.48]
b = 0.02 [141.99]
Seff = 544.05 [99.82]
Teff = 1232 [56] K
Rp = 0.65 [0.43] Re
a = 0.0235 [0.0022] AU
Ag = 44.65 [60.97] [0.72σ]
Teffp = 4922 [1678] K [2.20σ]

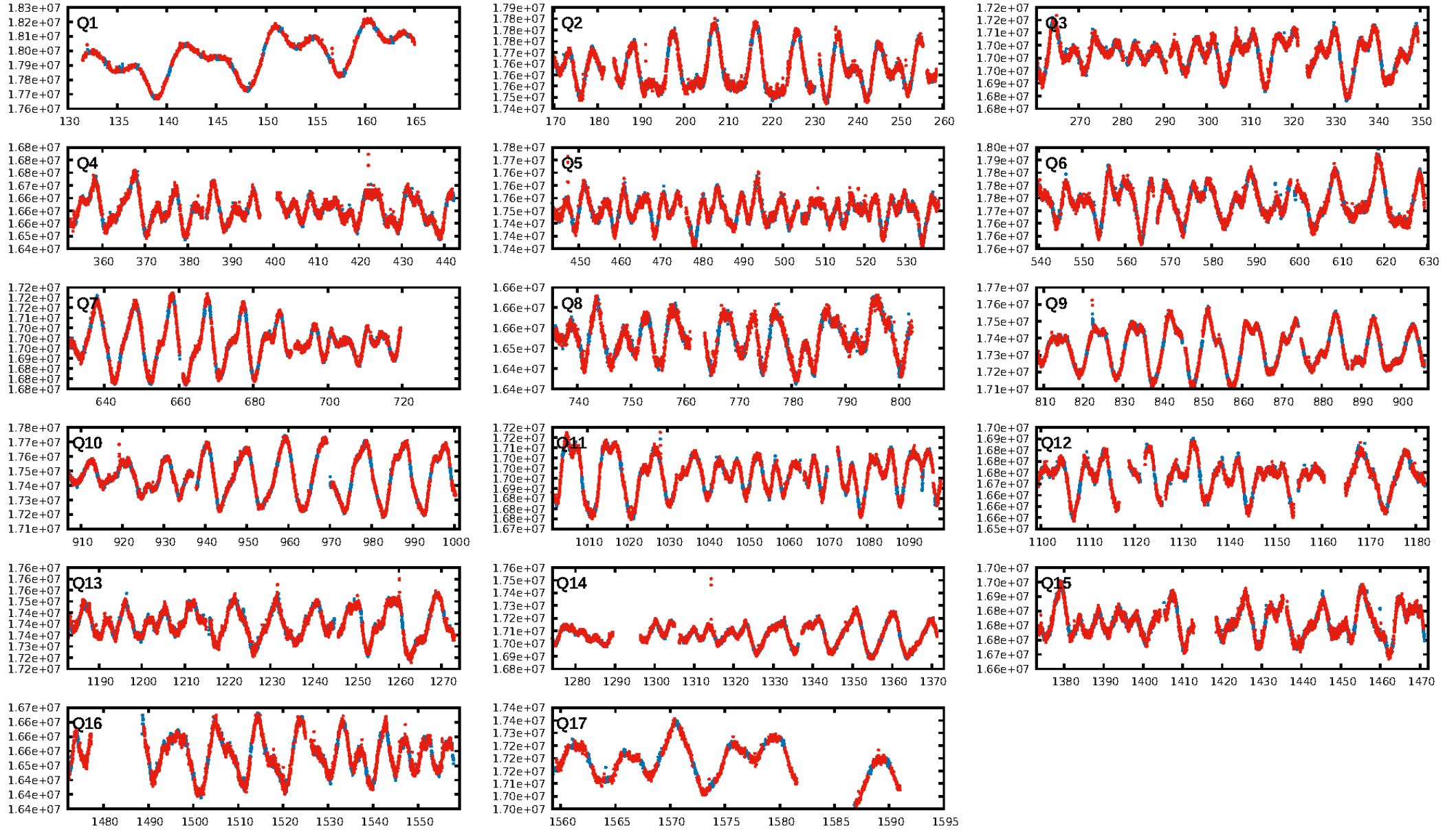
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.99 [807/815]
GhostDiagnostic-chr: 0.8341
Centroid-sig: 81.7%
Centroid-so: 0.332 arcsec [0.50σ]
OotOffset-rm: 0.547 arcsec [1.60σ]
OotOffset-st: 2/4/3/2 [11]
KicOffset-rm: 0.456 arcsec [1.55σ]
KicOffset-st: 2/4/3/2 [11]
DiffImageQuality-fgm: 0.82 [9/11]
DiffImageOverlap-fno: 1.00 [17/17]

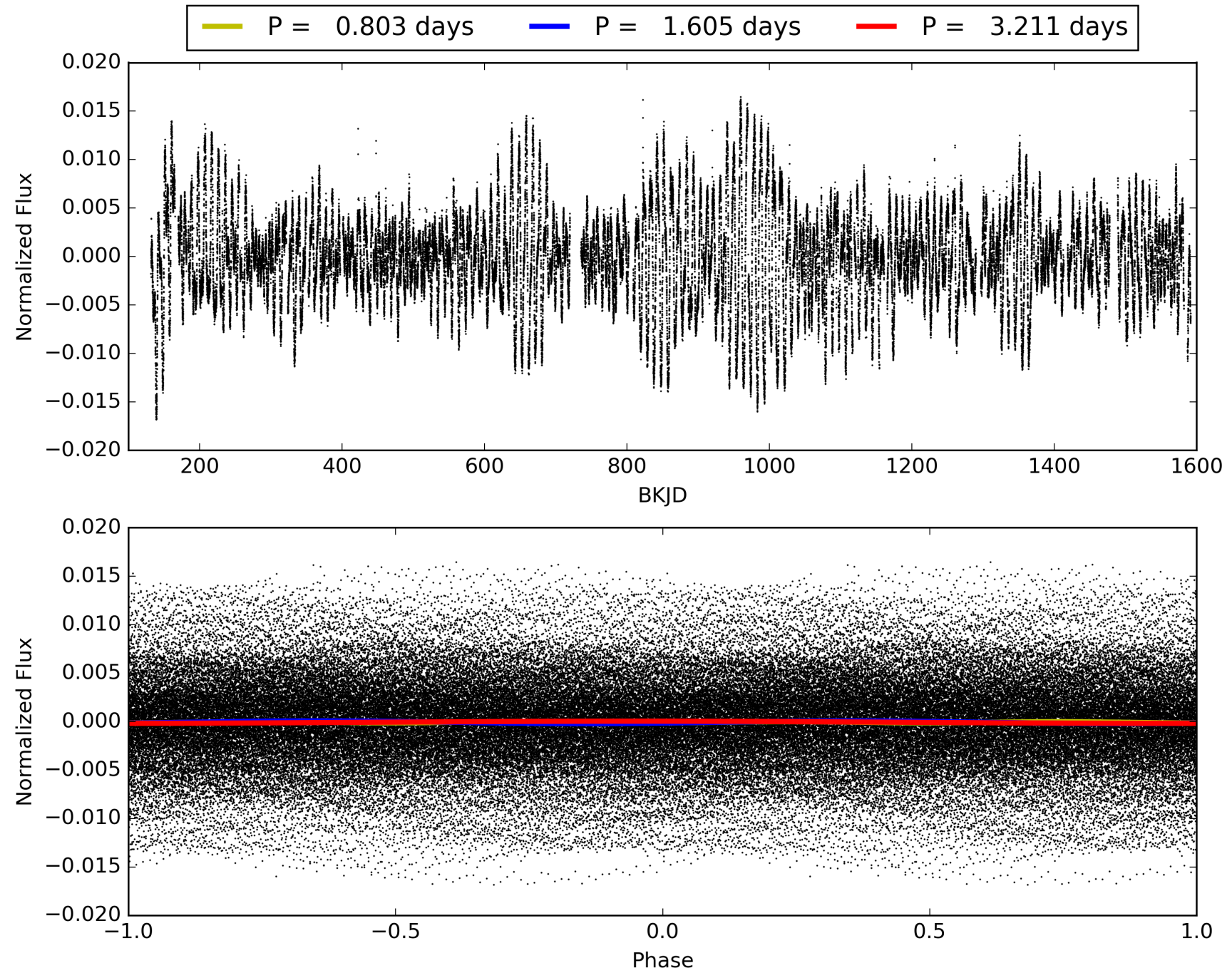
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 19:59:59 Z

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

TCE 008491152-01, PDC Light Curves

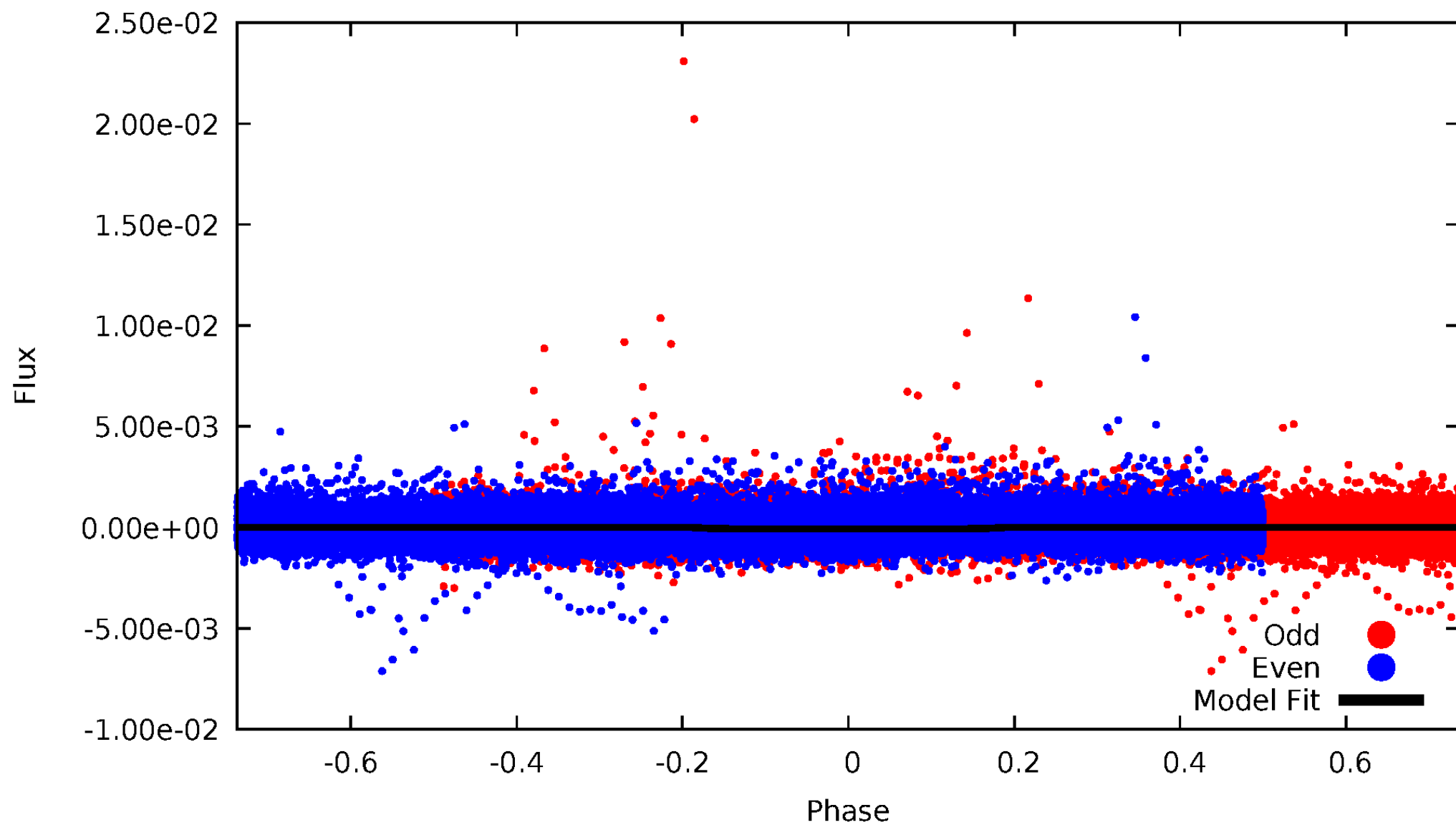


TCE 008491152-01



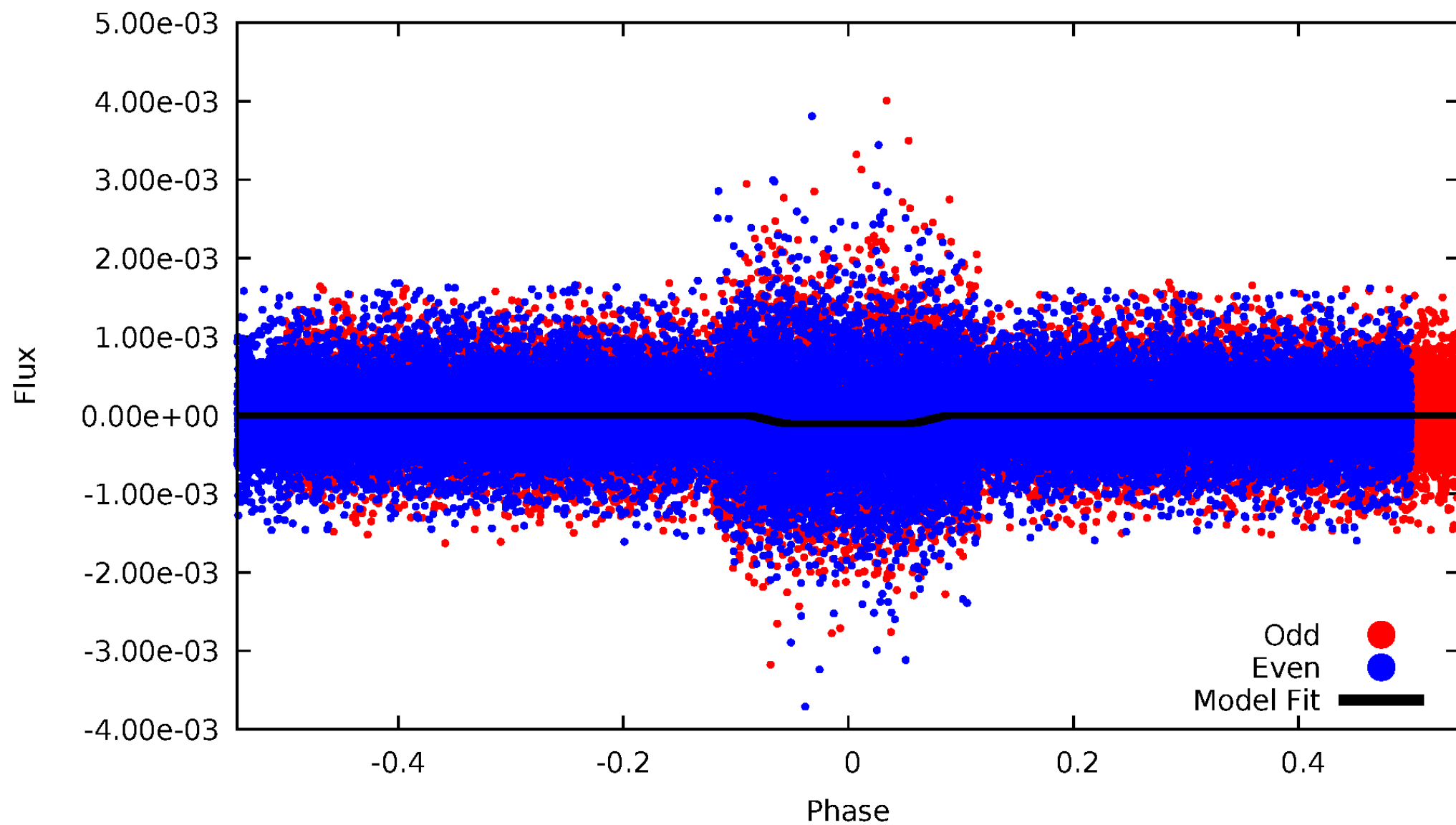
DV Odd/Even

TCE 008491152-01



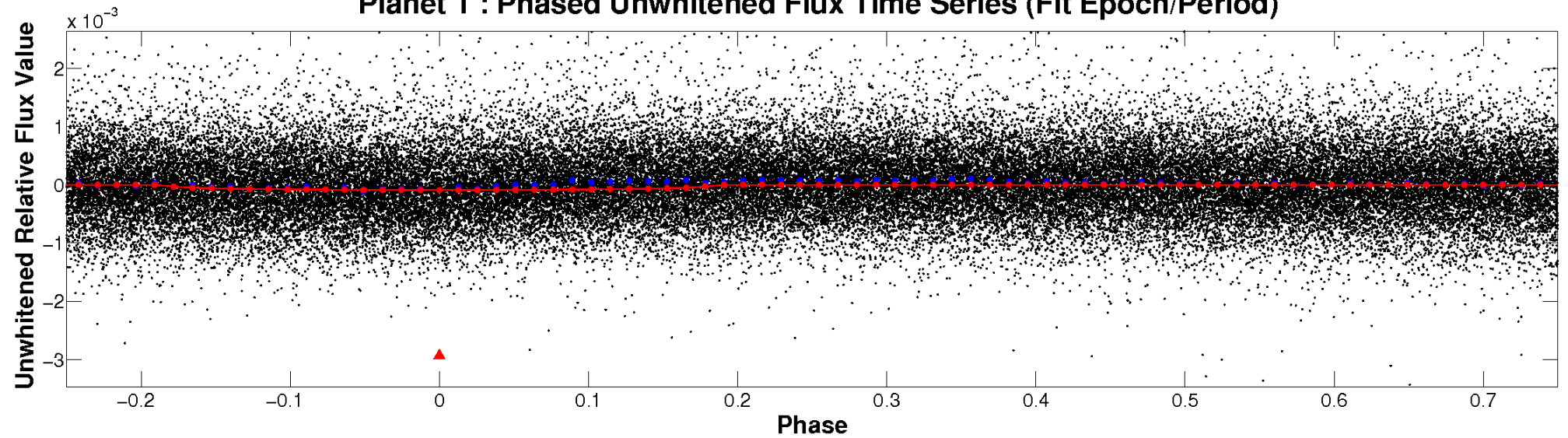
ALT Odd/Even

TCE 008491152-01

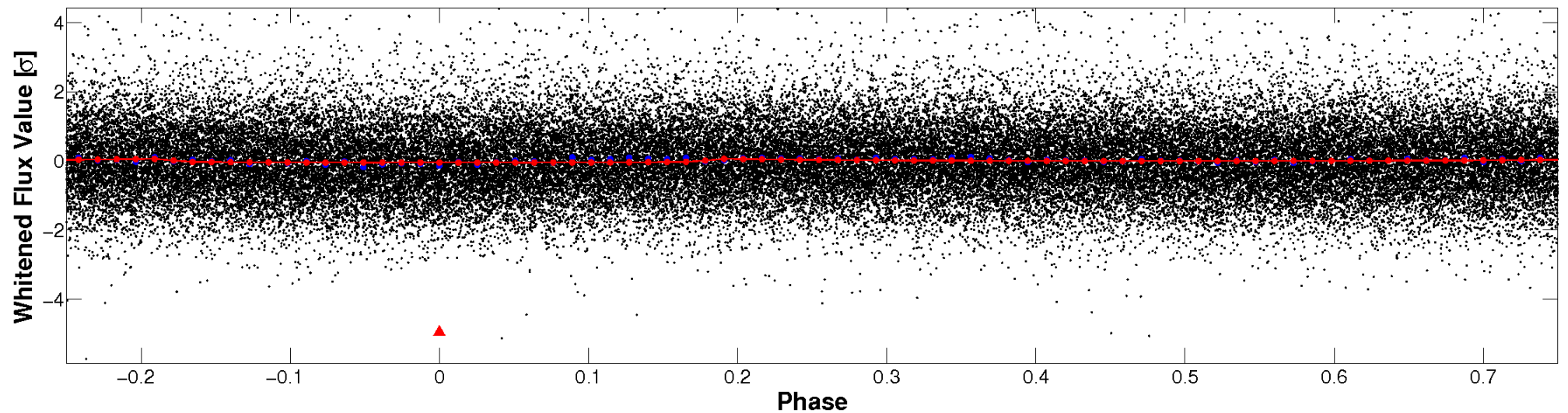


Non-Whitened Vs. Whitened Light Curve

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

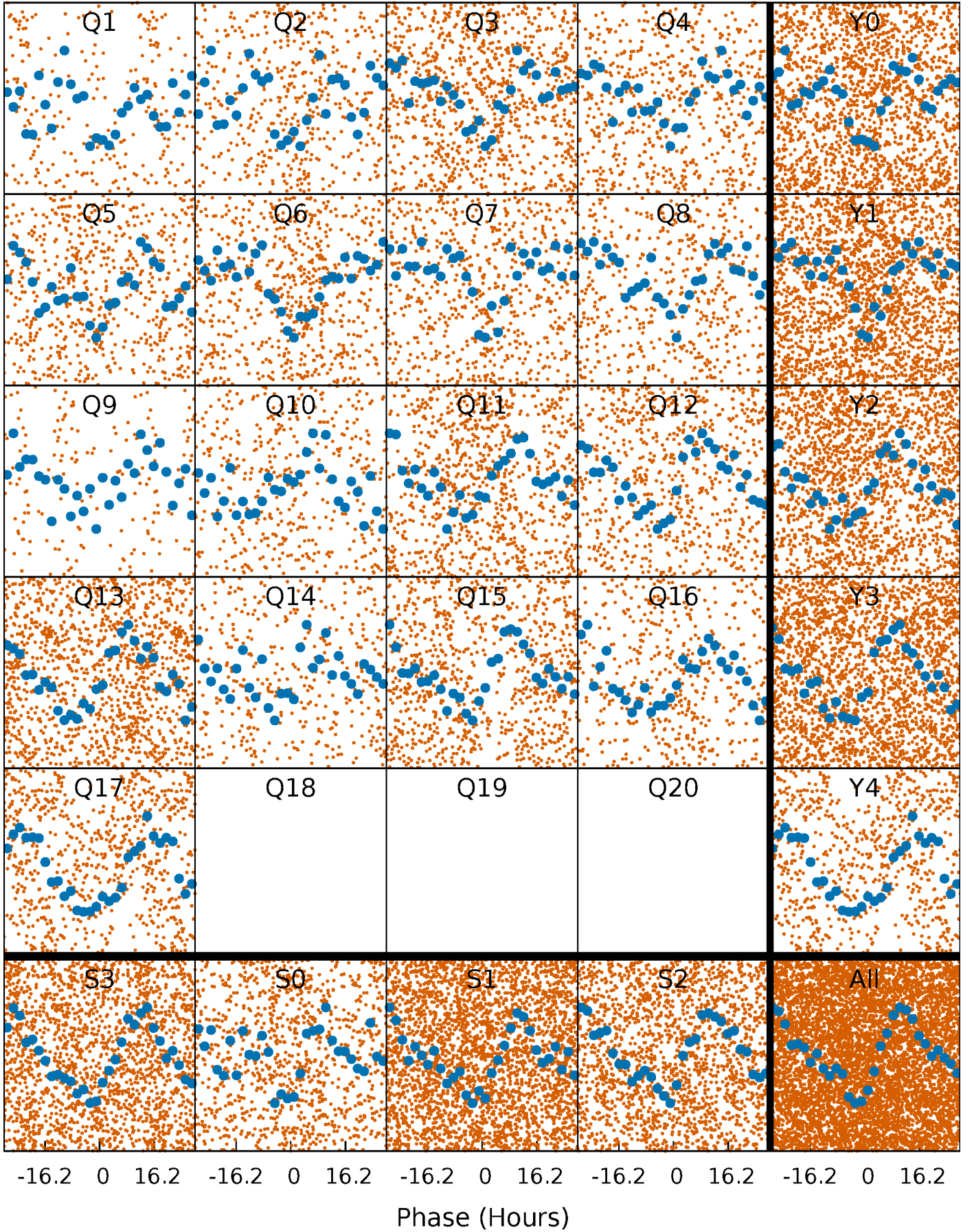


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



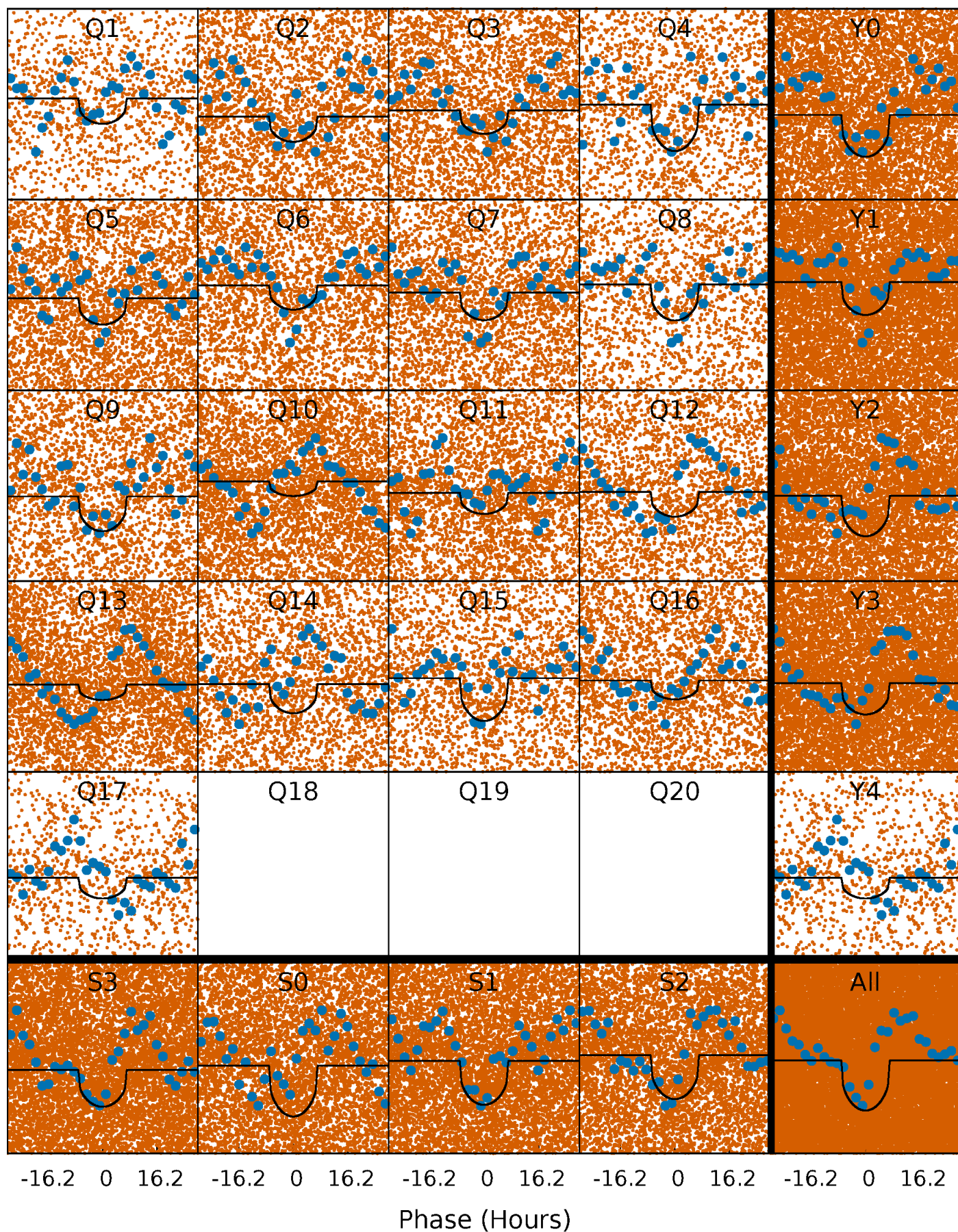
PDC Quarter-Phased Transit Curves

TCE 008491152-01 P= 1.605400 Days $T_0=132.996282$ (BKJD)



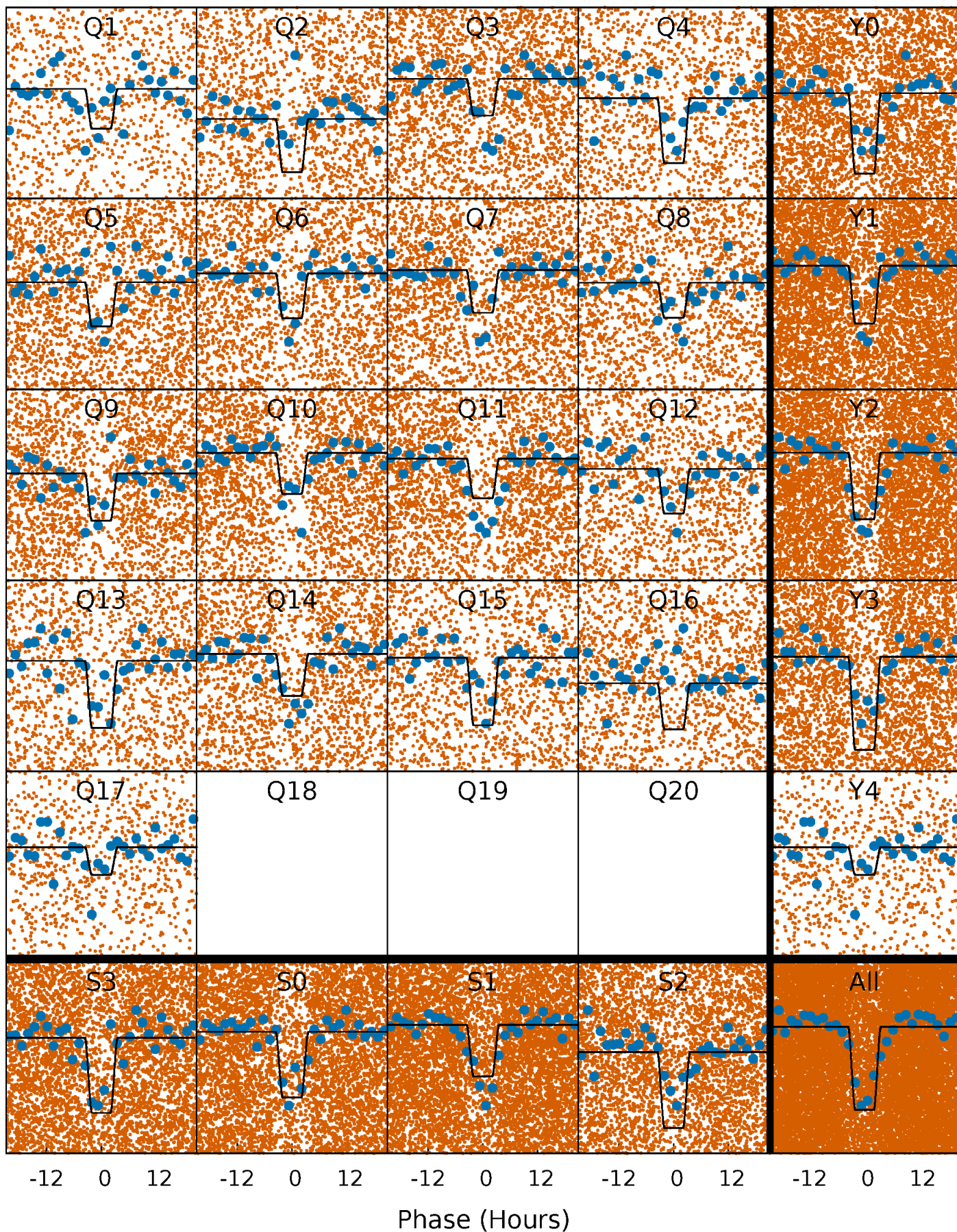
DV Quarter-Phased Transit Curves

TCE 008491152-01 P= 1.605400 Days $T_0=132.996282$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

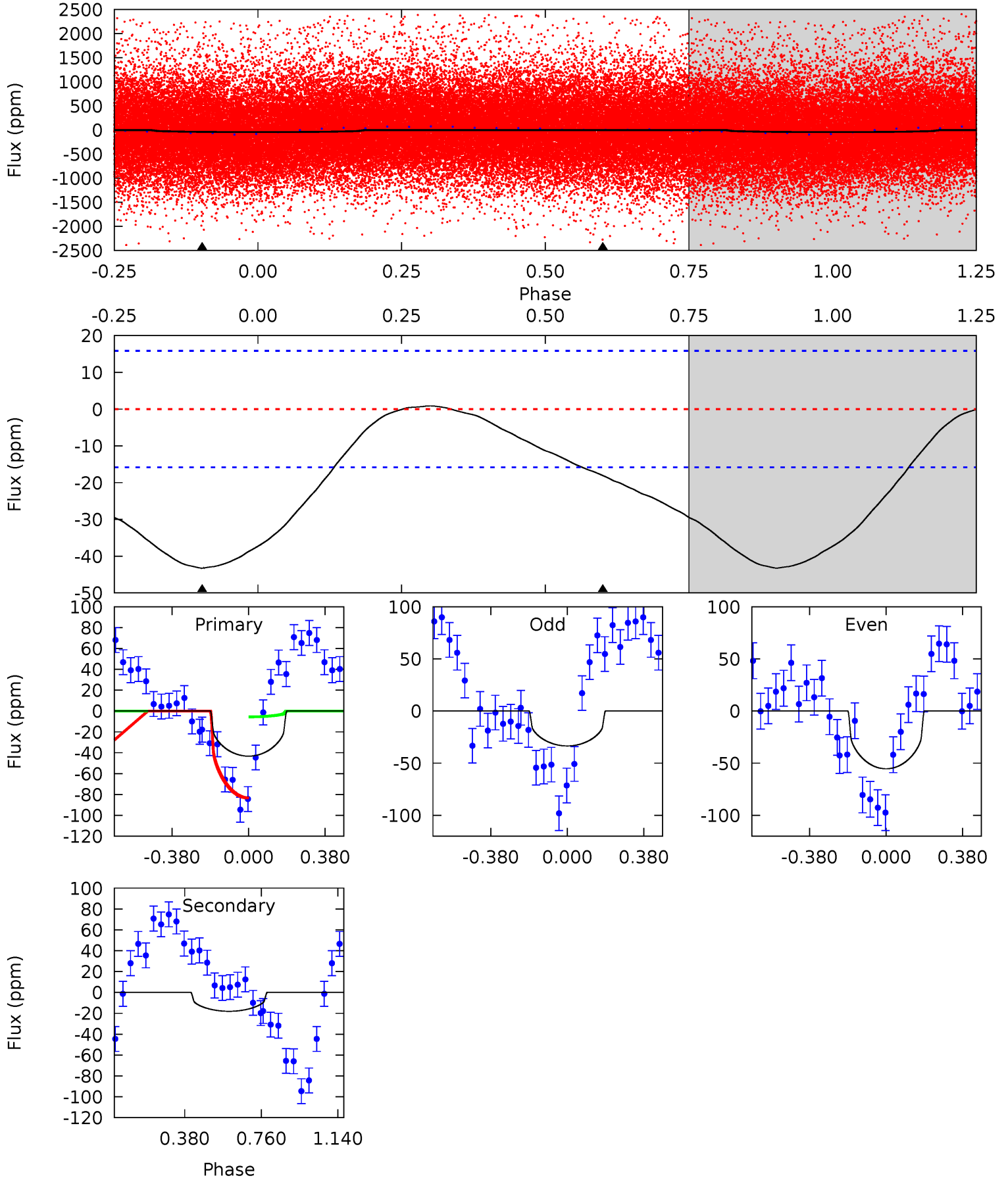
TCE 008491152-01 P= 1.605286 Days $T_0=133.005977$ (BKJD)



DV Model-Shift Uniqueness Test

008491152-01, P = 1.605400 Days, E = 131.390882 Days

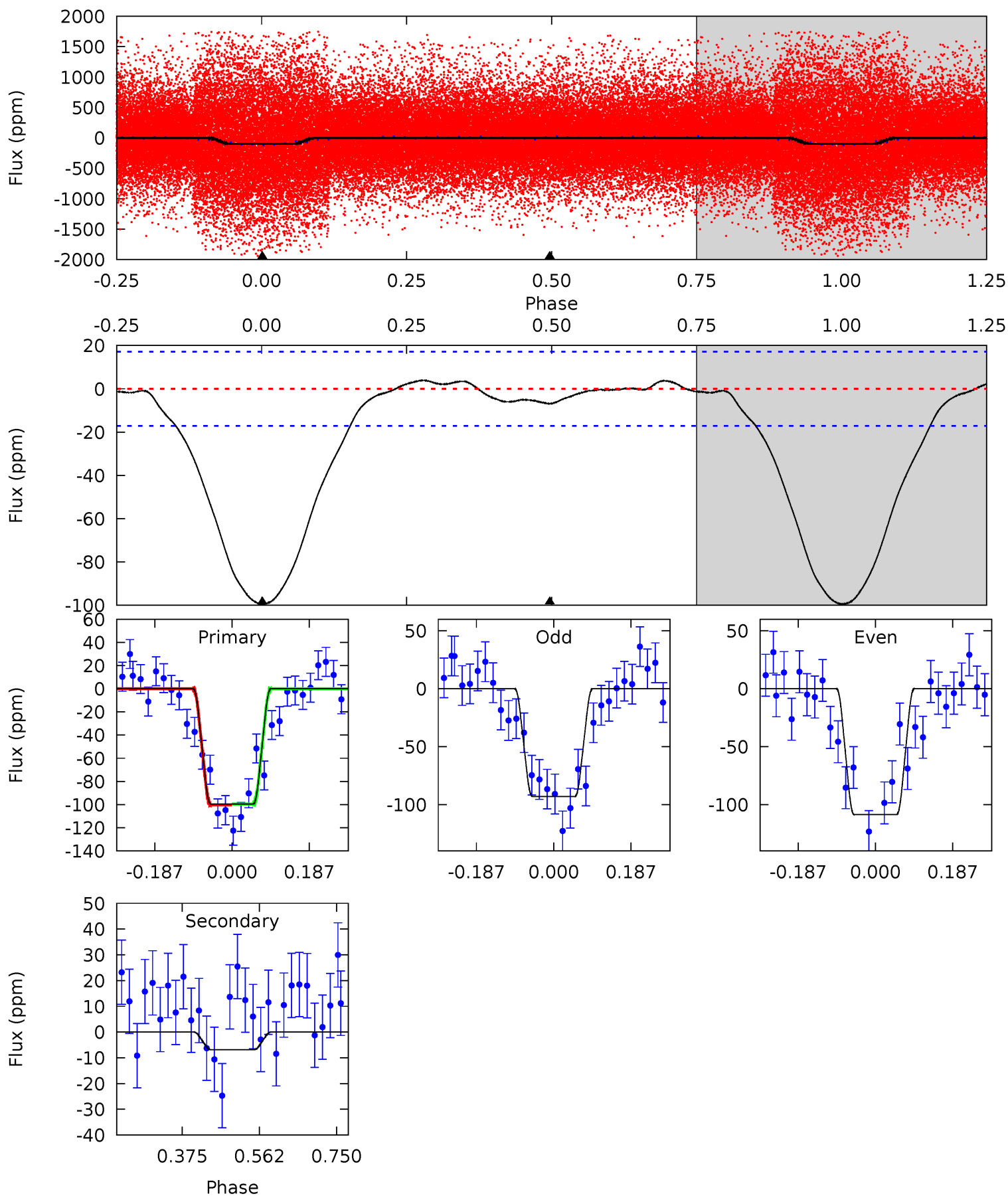
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.7	4.88	0	0	4.28	0.88	0.35	11.7	11.7	4.88	4.88	2.98	0.69	0.02	10.3



Alt Model-Shift Uniqueness Test

008491152-01, P = 1.605286 Days, E = 131.400691 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.7	1.78	0	0	4.43	1.32	0.61	25.7	25.7	1.78	1.78	2.02	1.09	0.04	0.10



Stellar Parameters For KIC 008491152

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5126^{+154}_{-154}	$4.578^{+0.078}_{-0.052}$	$-0.540^{+0.350}_{-0.300}$	$0.696^{+0.073}_{-0.066}$	$0.668^{+0.087}_{-0.037}$	$2.792^{+0.856}_{-0.549}$
	+3%/-3%	+2%/-1%	+65%/-56%	+10%/-9%	+13%/-6%	+31%/-20%
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 008491152-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-18 ± 4	$0.67^{+0.40}_{-0.37}$	1708^{+68}_{-64}	3843^{+1338}_{-586}	12^{+44}_{-8}
Alt.	-7 ± 4	$0.79^{+0.41}_{-0.40}$	1710^{+74}_{-70}	3069^{+824}_{-560}	$3.188^{+10.330}_{-2.251}$

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

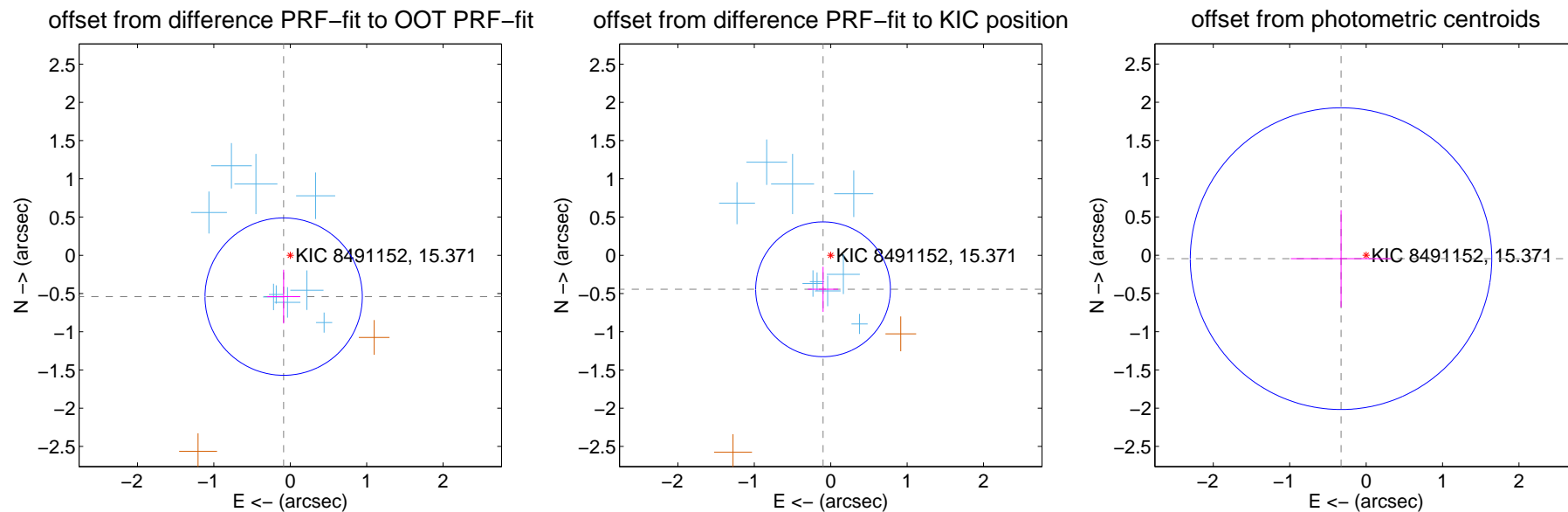
DV Centroid Data

Supplemental centroid analysis for 008491152-01. Kepler magnitude: 15.37. Transit SNR 7.86

There are 9 quarters with good PRF difference image offsets

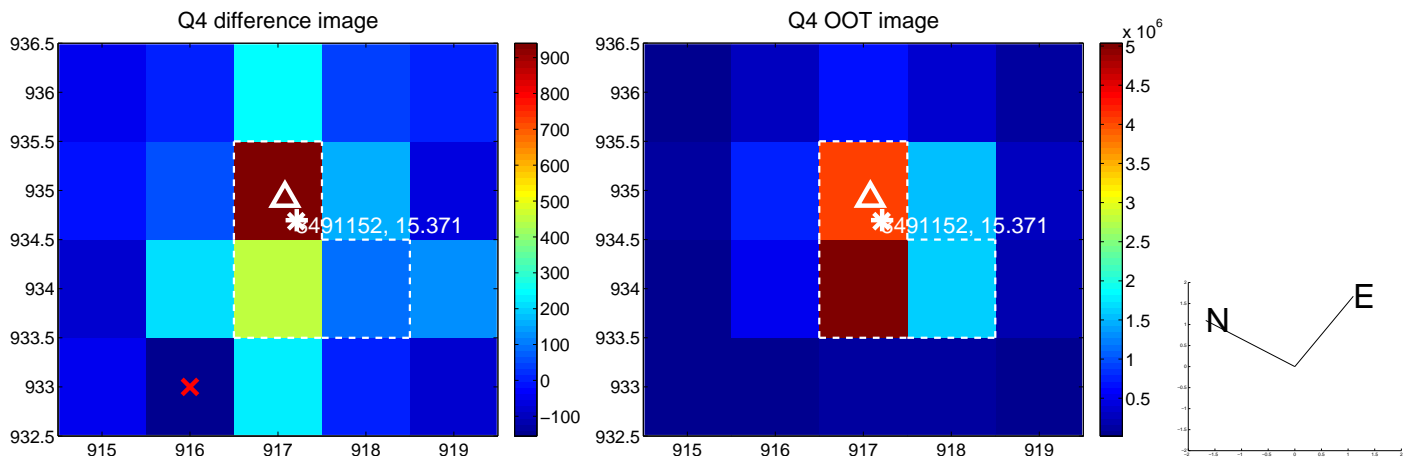
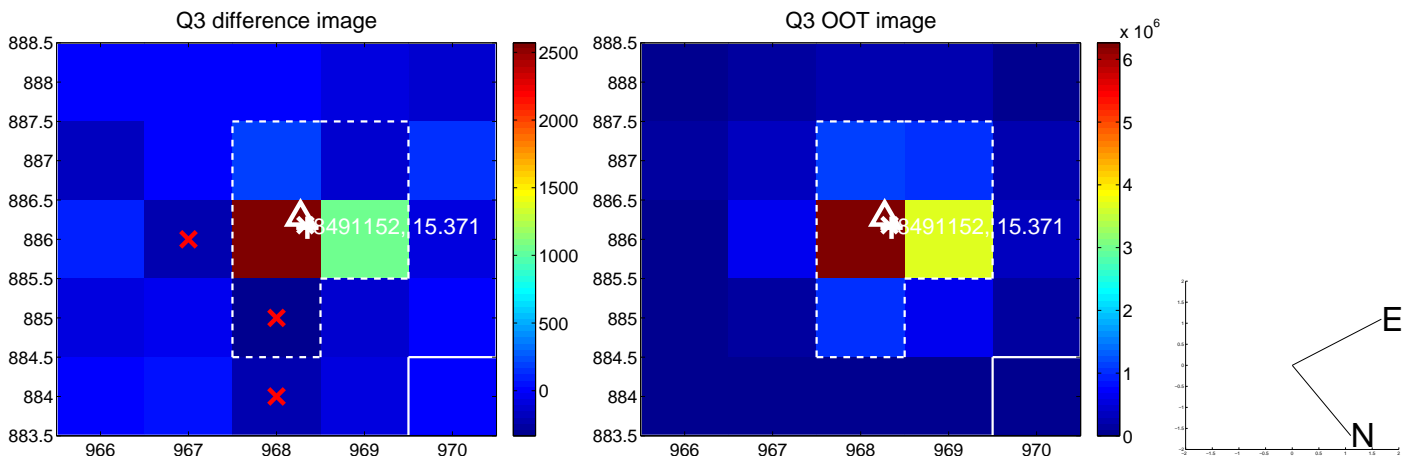
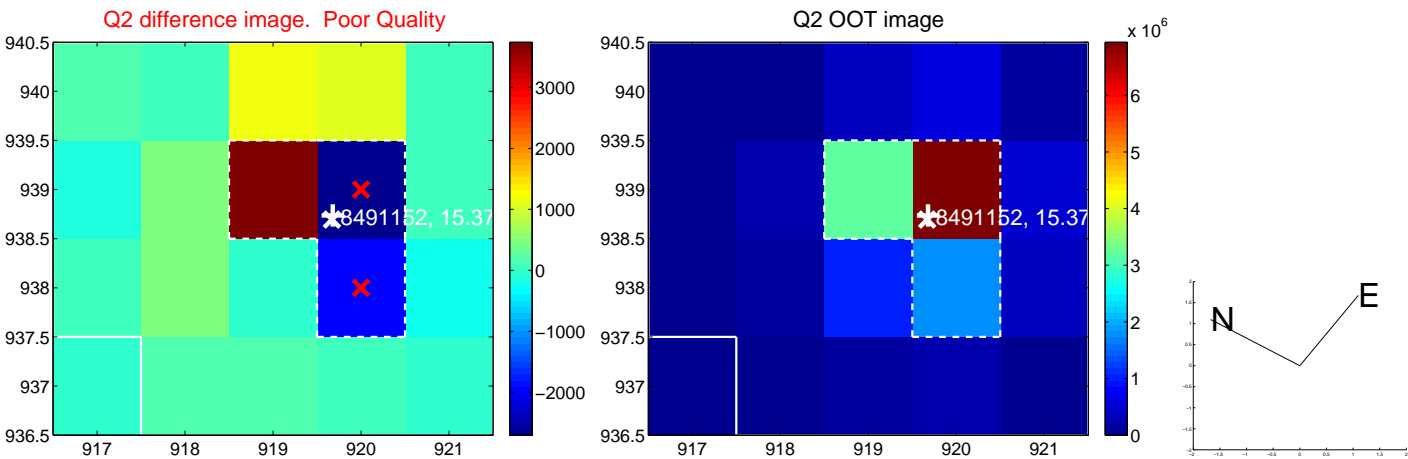
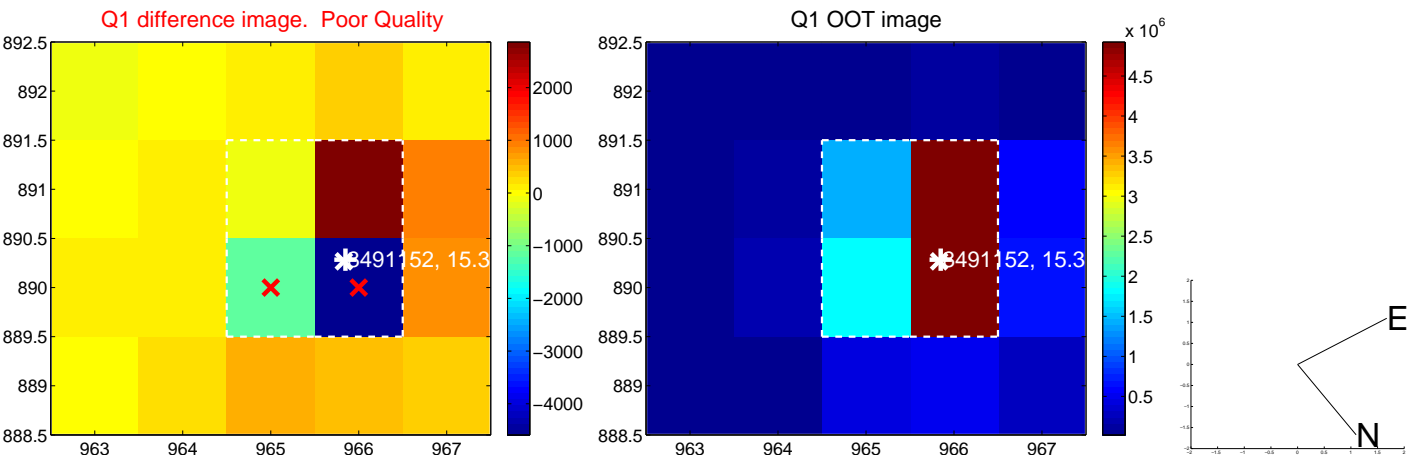
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.547 ± 0.343	1.60	0.087 ± 0.216	-0.541 ± 0.351
PRF-fit source offset from KIC position	0.456 ± 0.294	1.55	0.100 ± 0.198	-0.445 ± 0.295
photometric centroid source offset	0.33 ± 0.66	0.50	0.33 ± 0.66	-0.05 ± 0.63

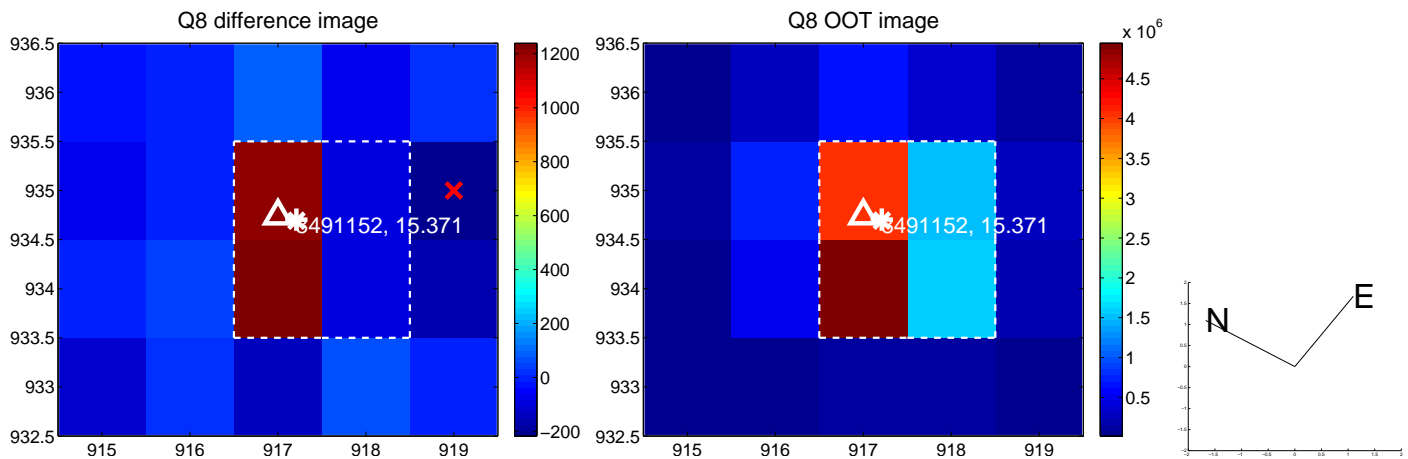
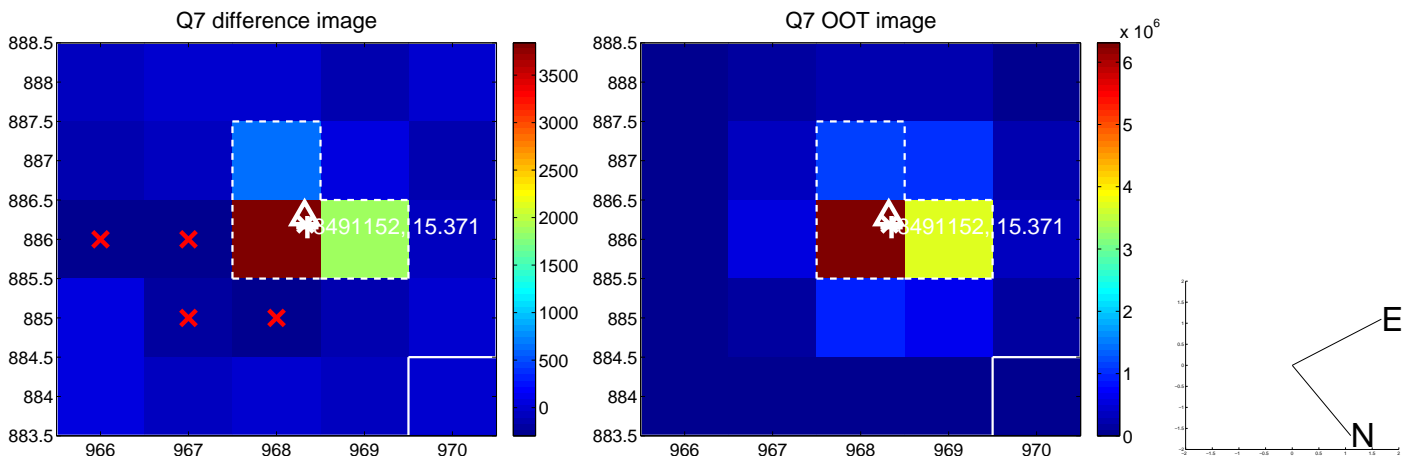
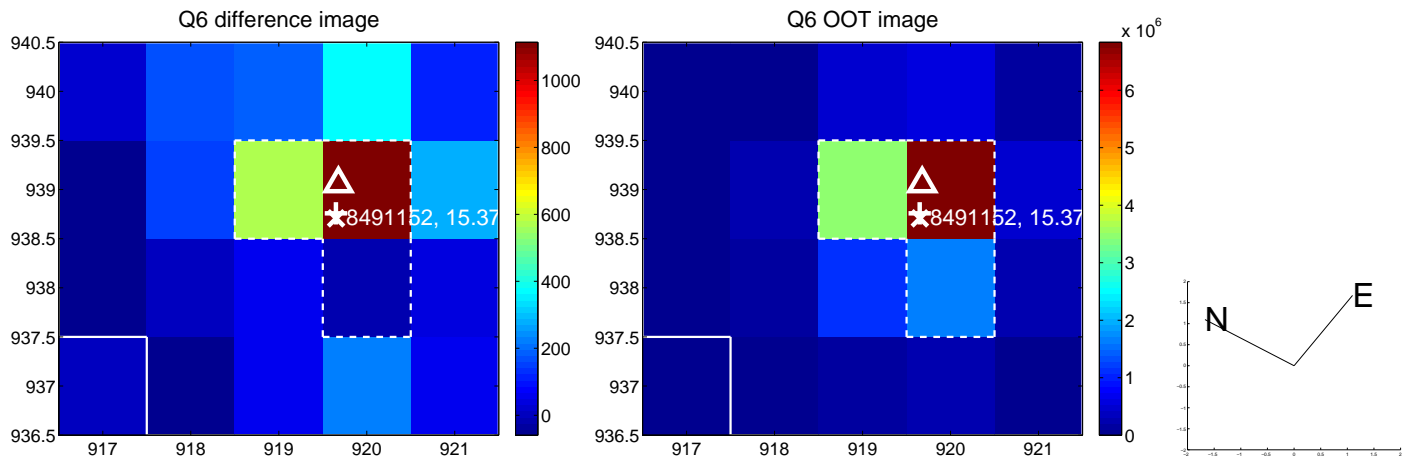
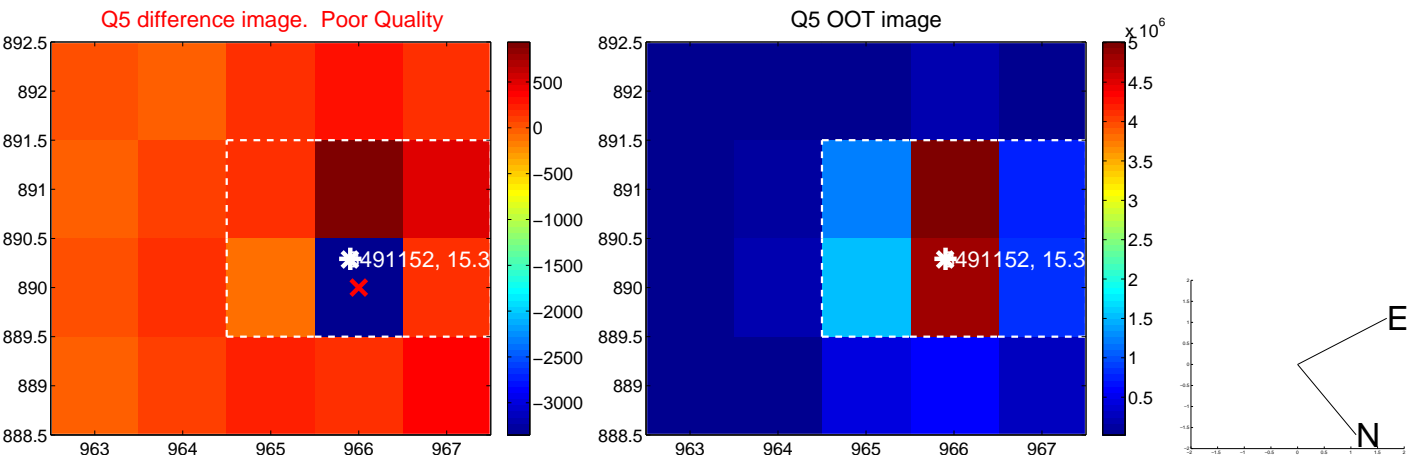


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

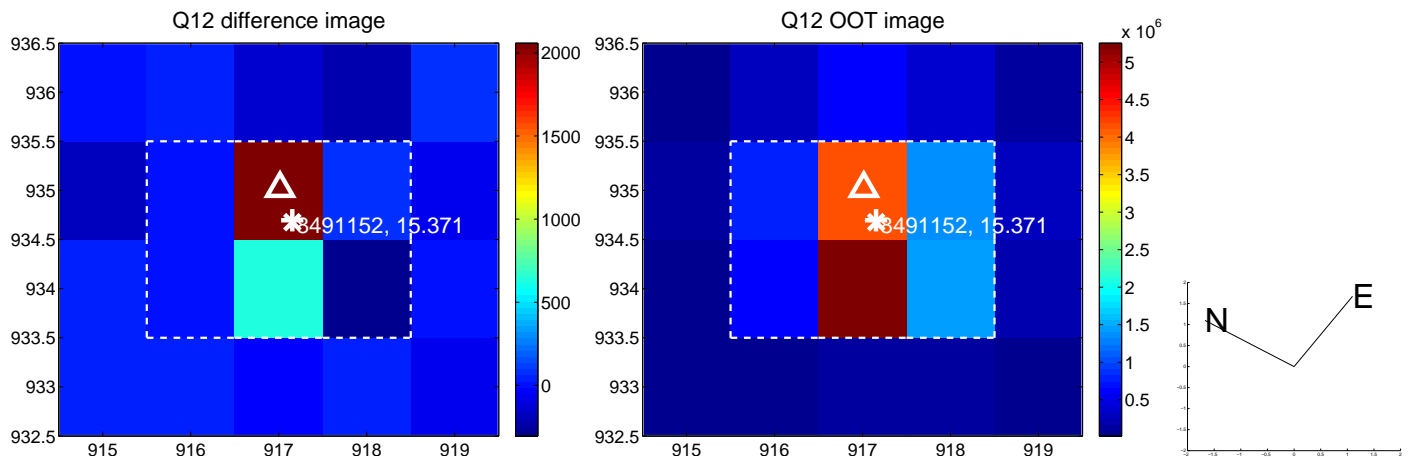
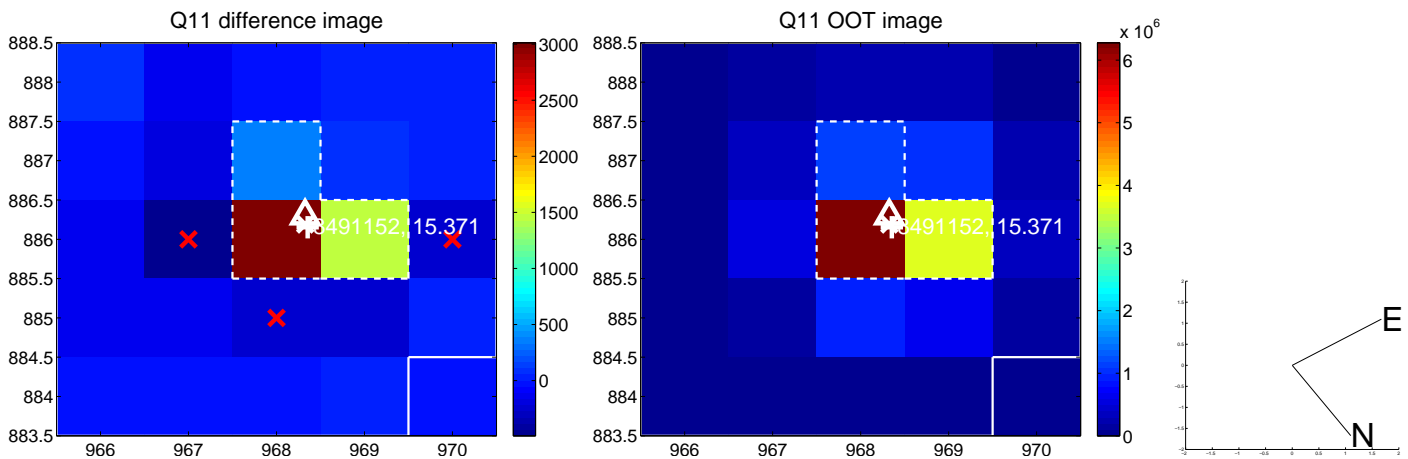
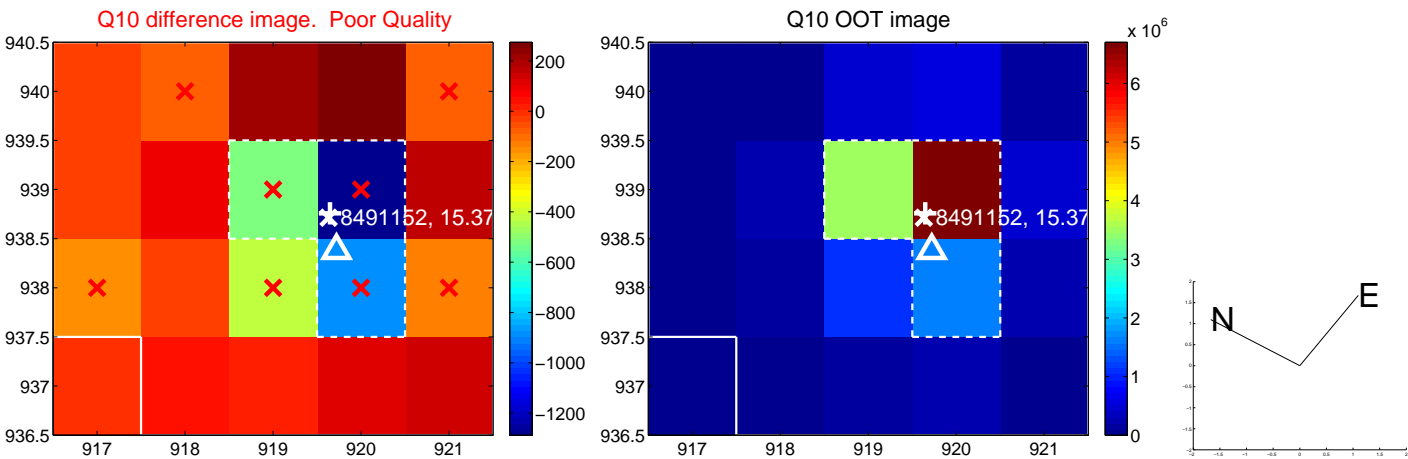
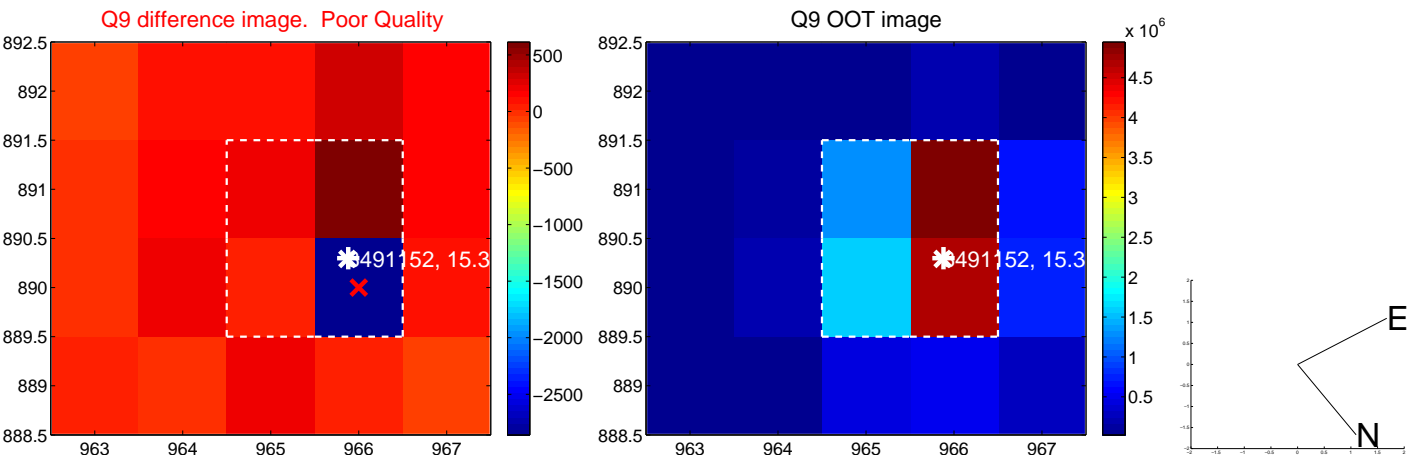
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



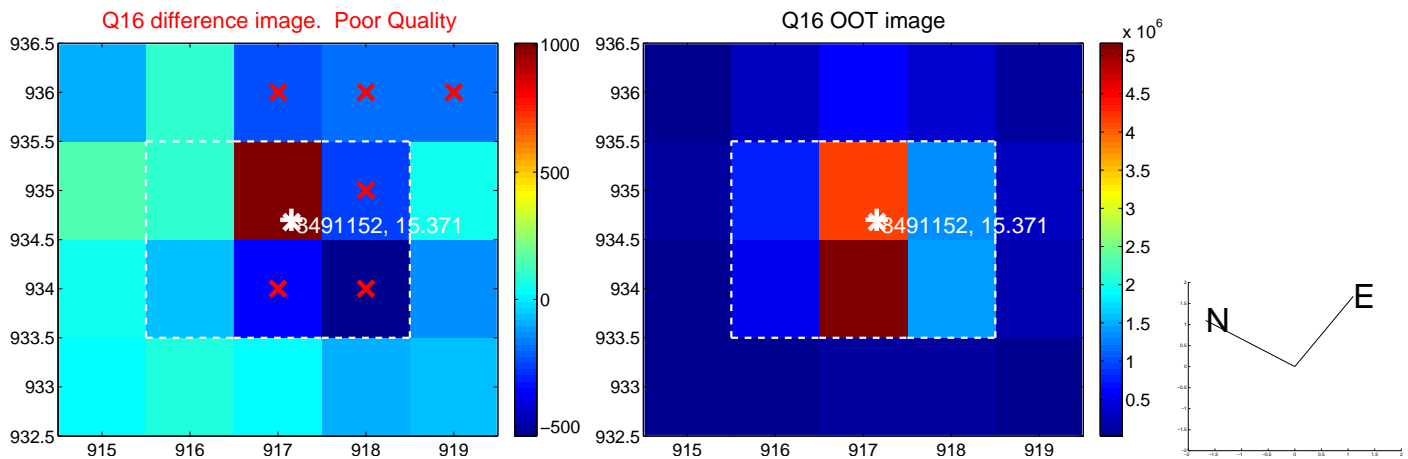
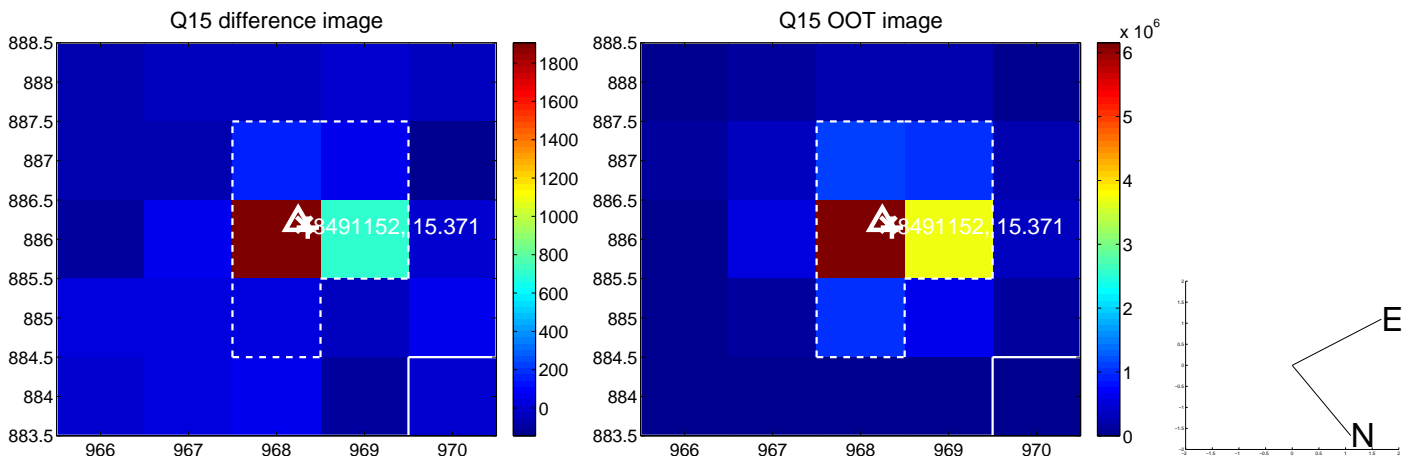
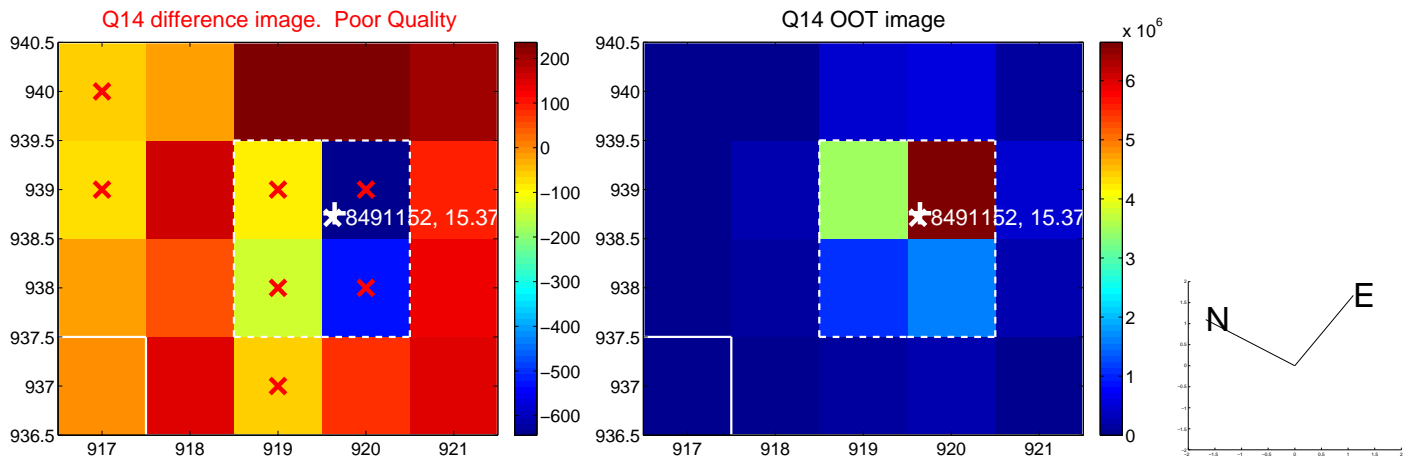
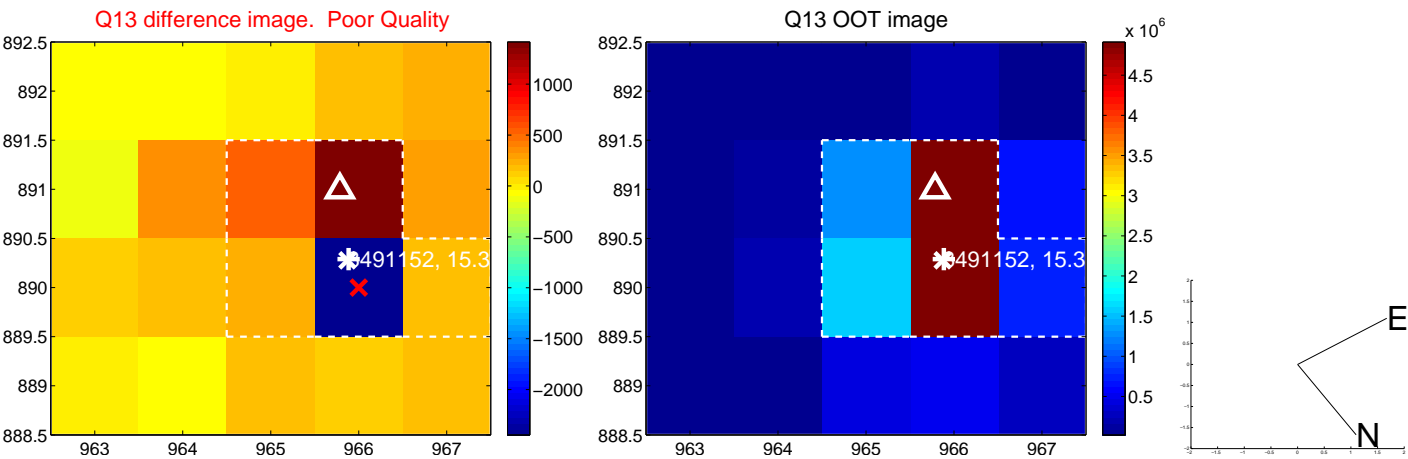
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



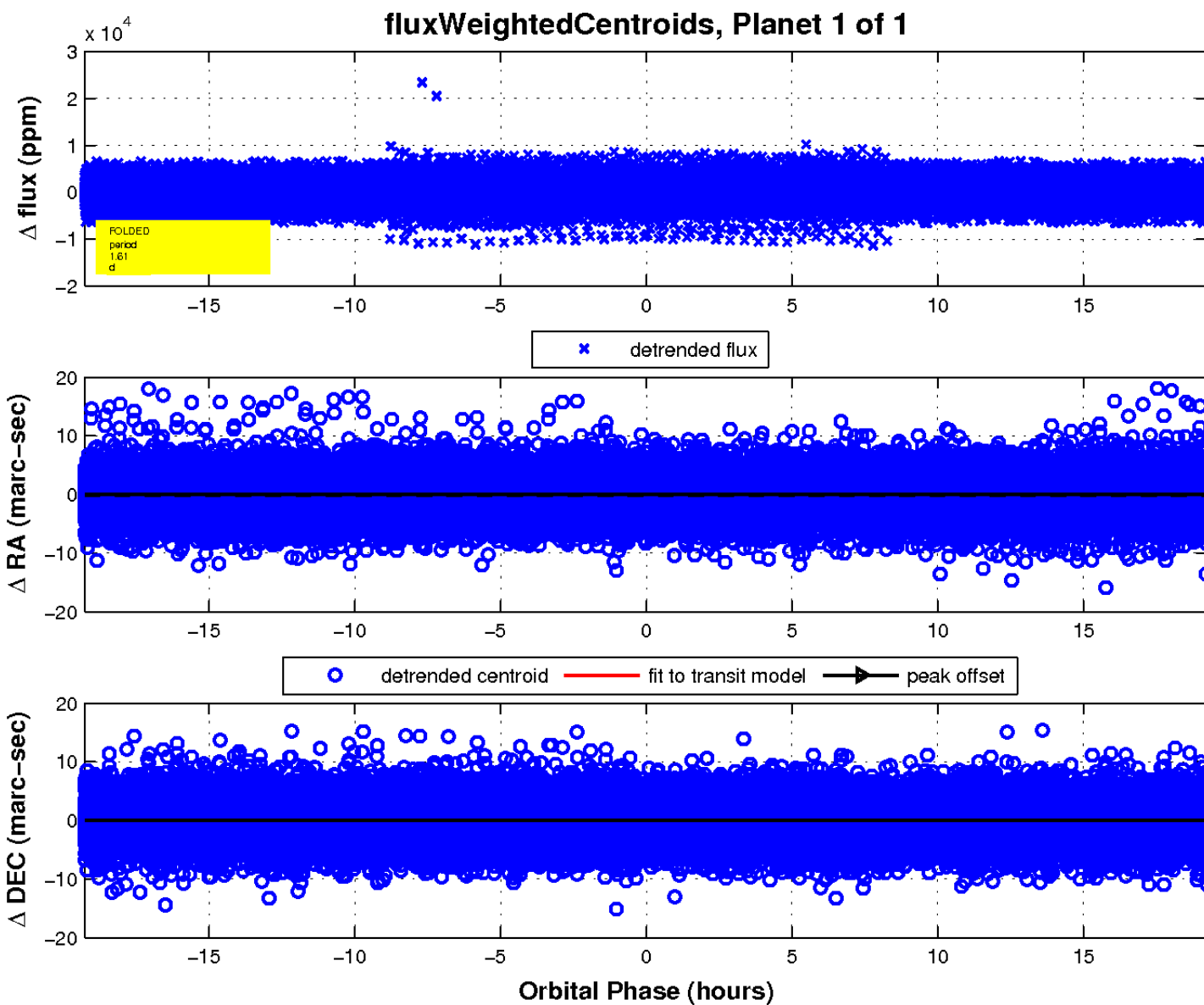
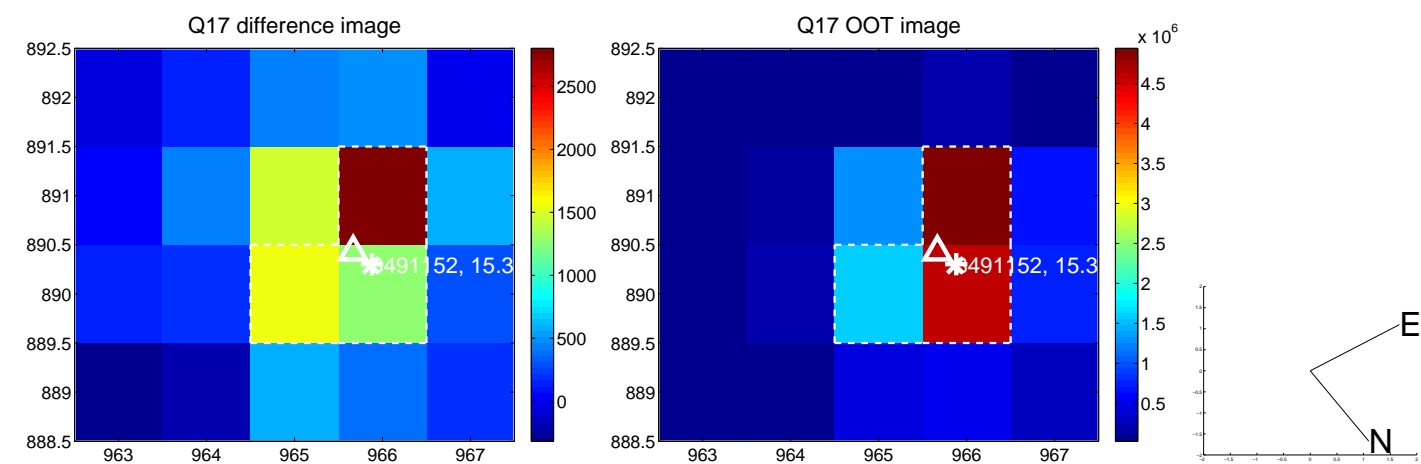
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

