

KIC 006615600

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})
006615600-01	OBS	5307.01	2.195059	132.763320	207.3	1.848	12.7	13.1	0.88	5799	1.49	727.85

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006615600-01	OBS	FP	0.00	0	0	1	0	CENT_RESOLVED_OFFSET—HALO_GHOST

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 006615600-01

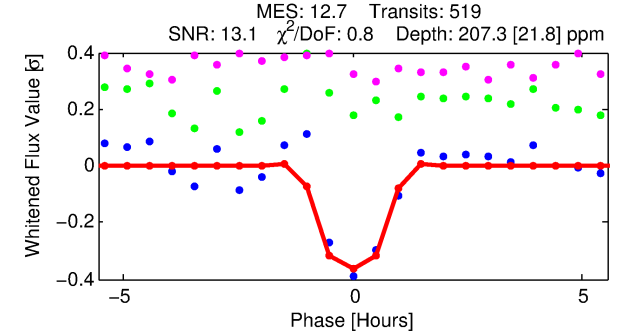
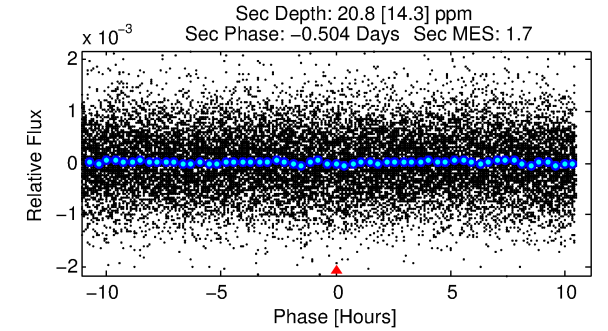
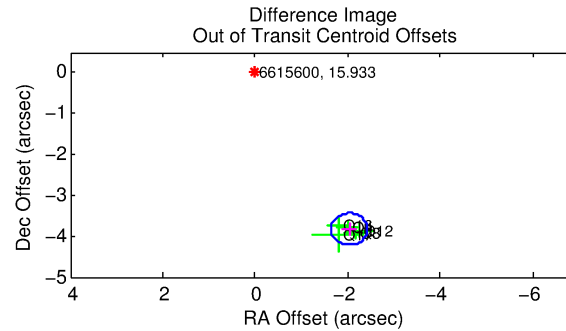
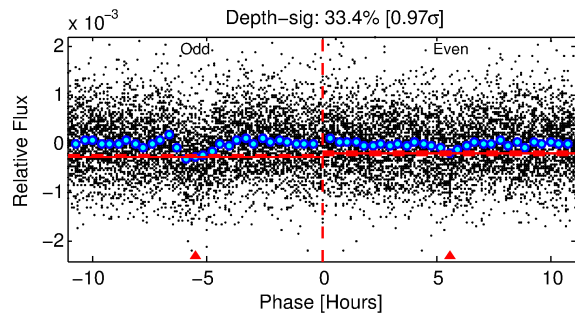
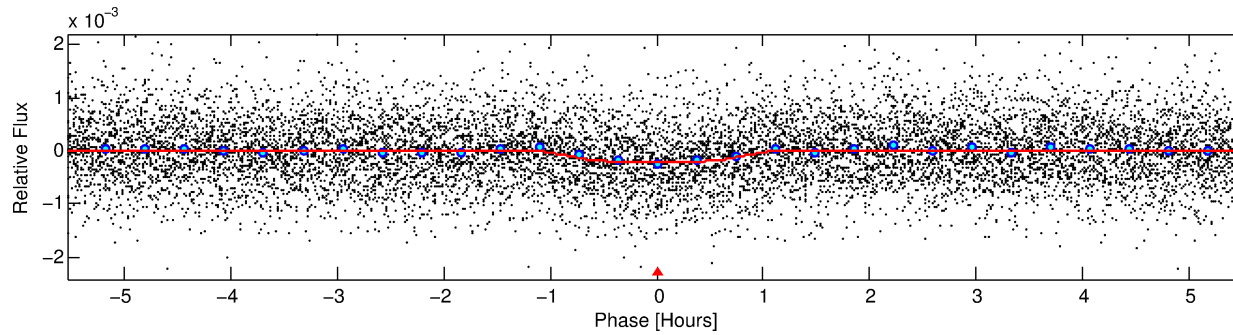
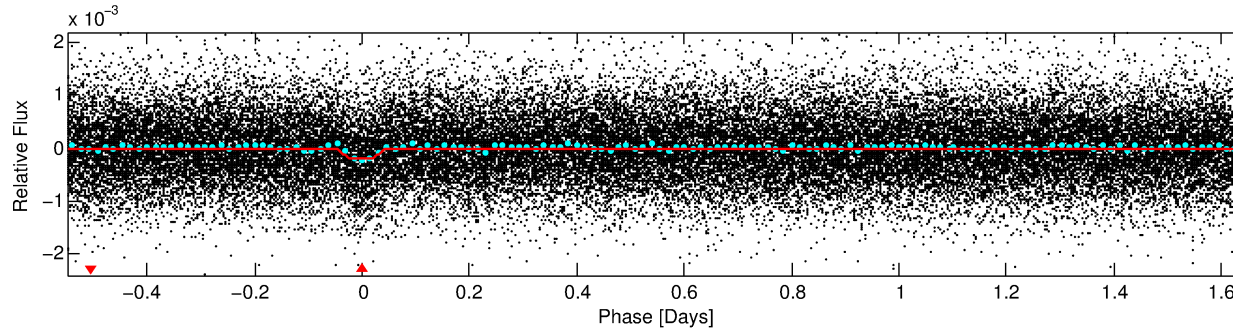
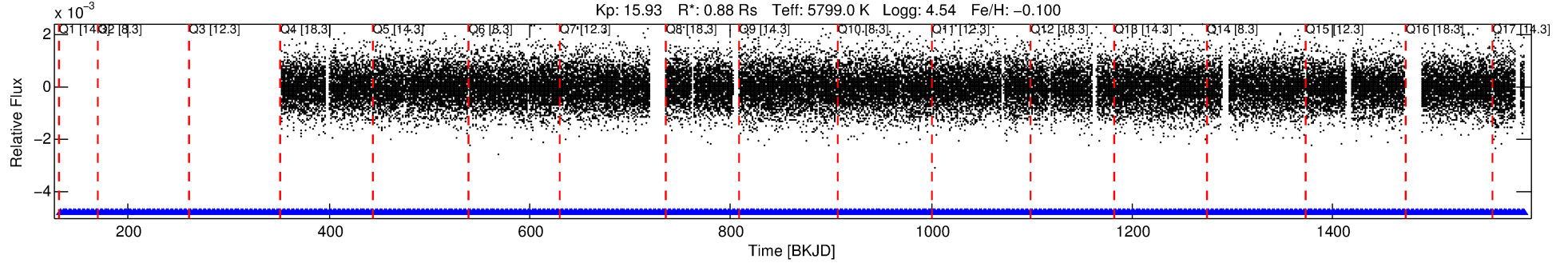
No Significant Match Found

DV One-Page Summary

KIC: 6615600 Candidate: 1 of 1 Period: 2.195 d

KOI: K05307.01 Corr: 0.909

Kp: 15.93 R*: 0.88 Rs Teff: 5799.0 K Logg: 4.54 Fe/H: -0.100



DV Fit Results:

Period = 2.19506 [0.00001] d
Epoch = 132.7633 [0.0025] BKJD
Rp/R* = 0.0156 [0.0094]
a/R* = 4.52 [12.53]
b = 0.89 [0.69]
Seff = 727.85 [255.84]
Teq = 1324 [116] K
Rp = 1.49 [0.98] Re
a = 0.0328 [0.0073] AU
Ag = 5.53 [7.91] [0.57σ]
Teffp = 3141 [1099] K [1.64σ]

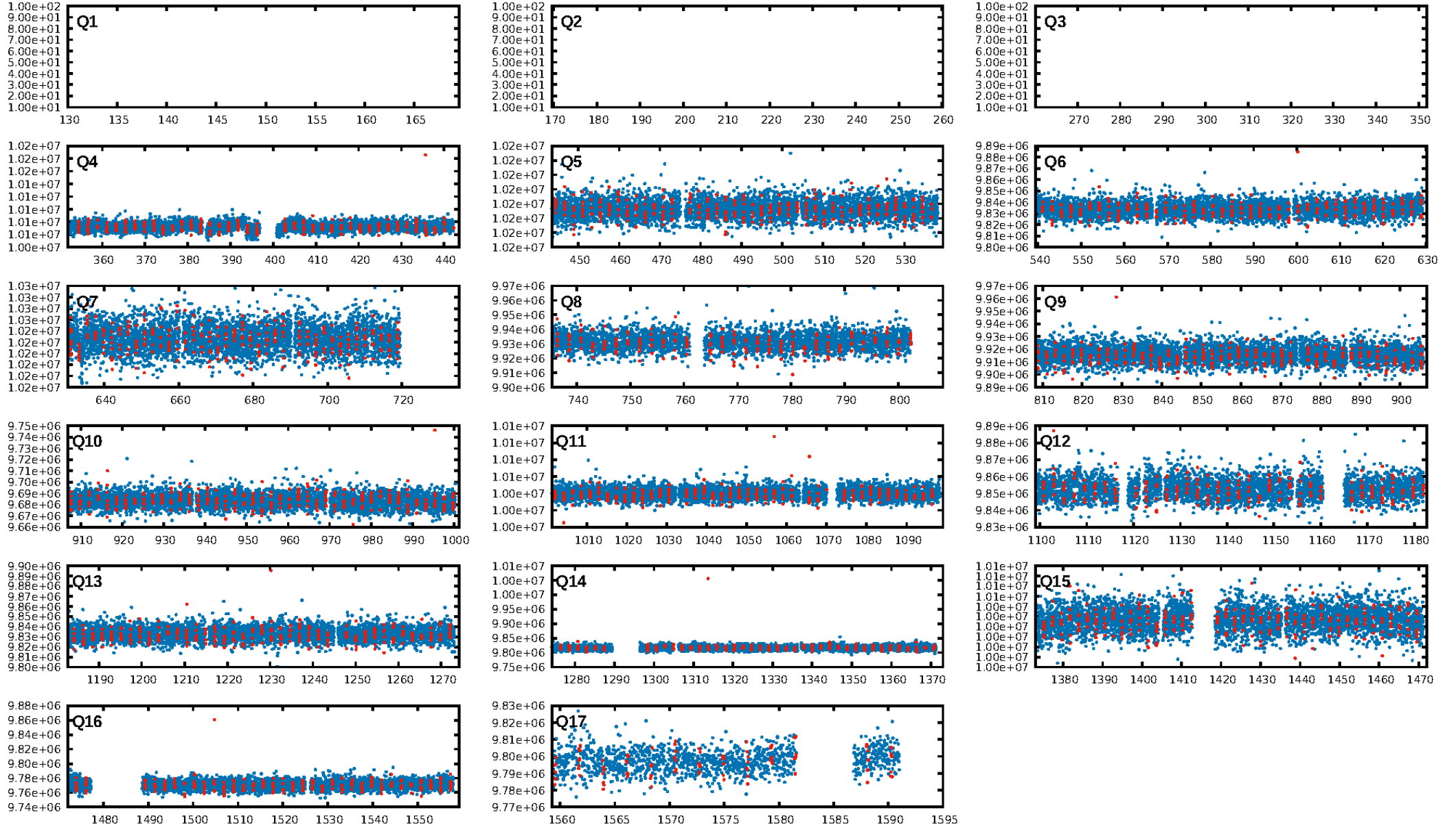
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGoF-sig: N/A
Bootstrap-pfa: 1.11e-36
RollingBand-fgt: 1.00 [506/506]
GhostDiagnostic-chr: -0.165
Centroid-sig: 0.0%
Centroid-so: 30.855 arcsec [27.96σ]
OotOffset-rm: 4.333 arcsec [33.17σ]
KicOffset-rm: 4.390 arcsec [33.34σ]
OotOffset-st: 0/0/4/1 [5]
KicOffset-st: 0/0/4/1 [5]
DiffImageQuality-fgm: 1.00 [5/5]
DiffImageOverlap-fno: 1.00 [14/14]

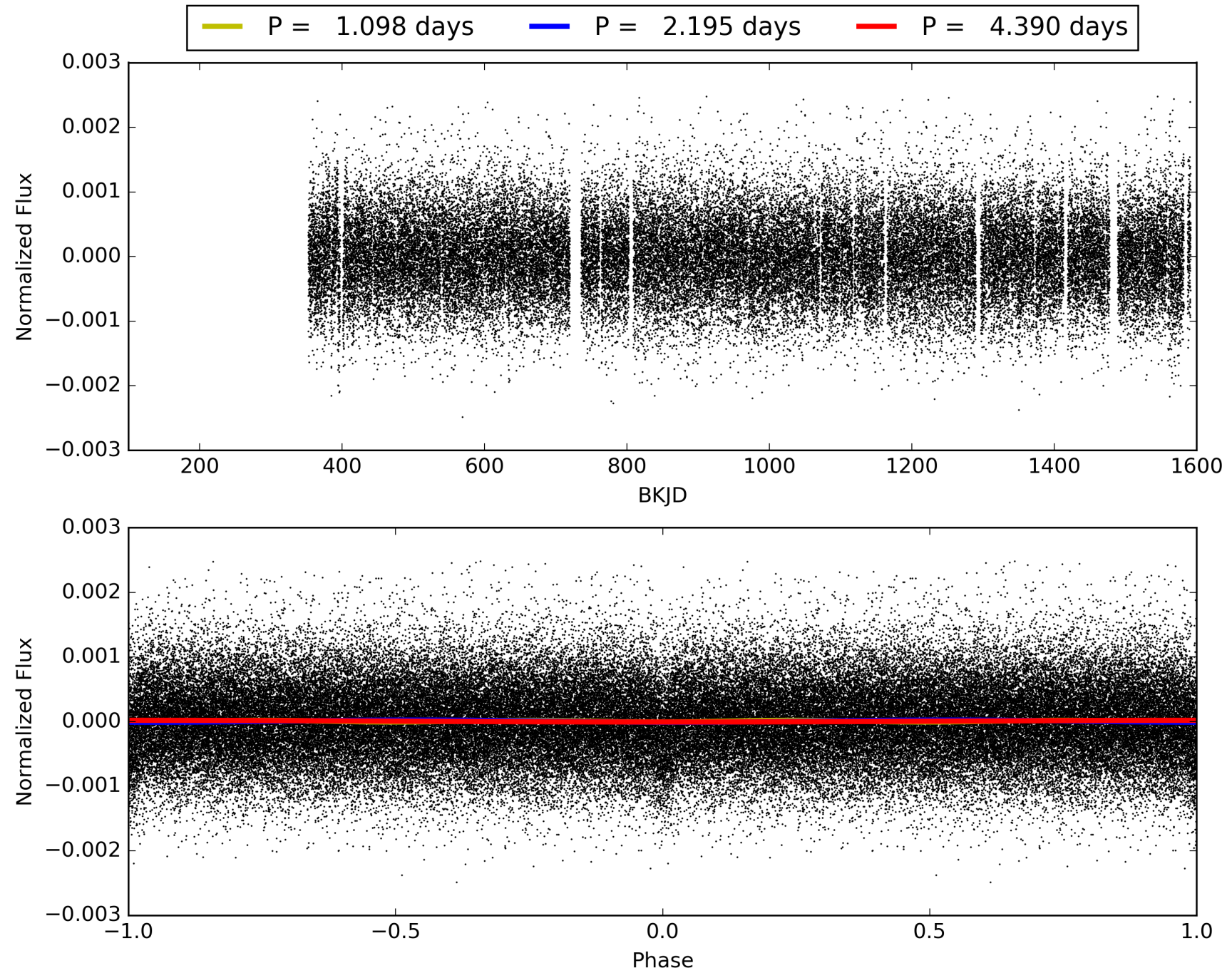
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 18:45:17 Z

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

TCE 006615600-01, PDC Light Curves

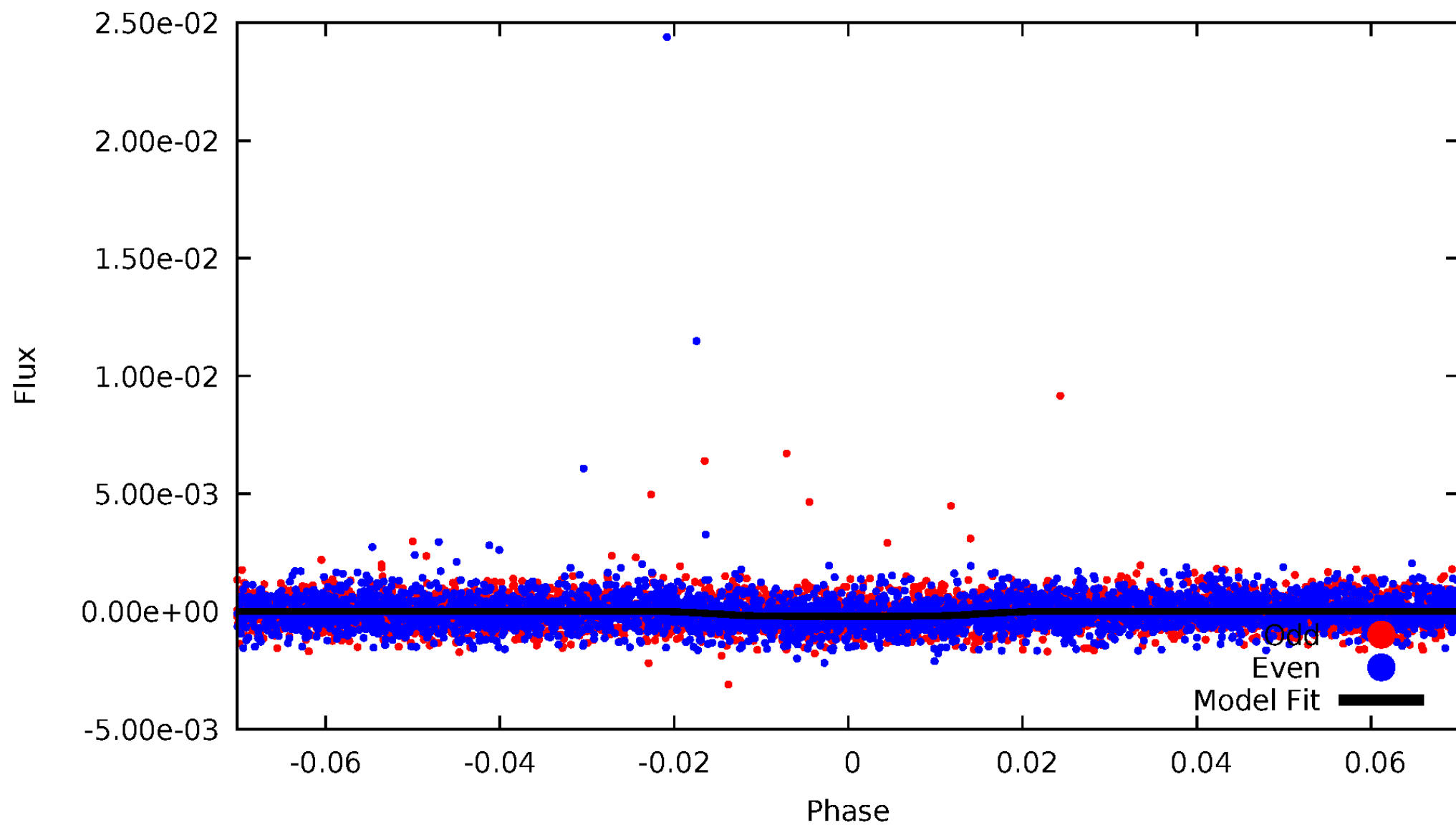


TCE 006615600-01



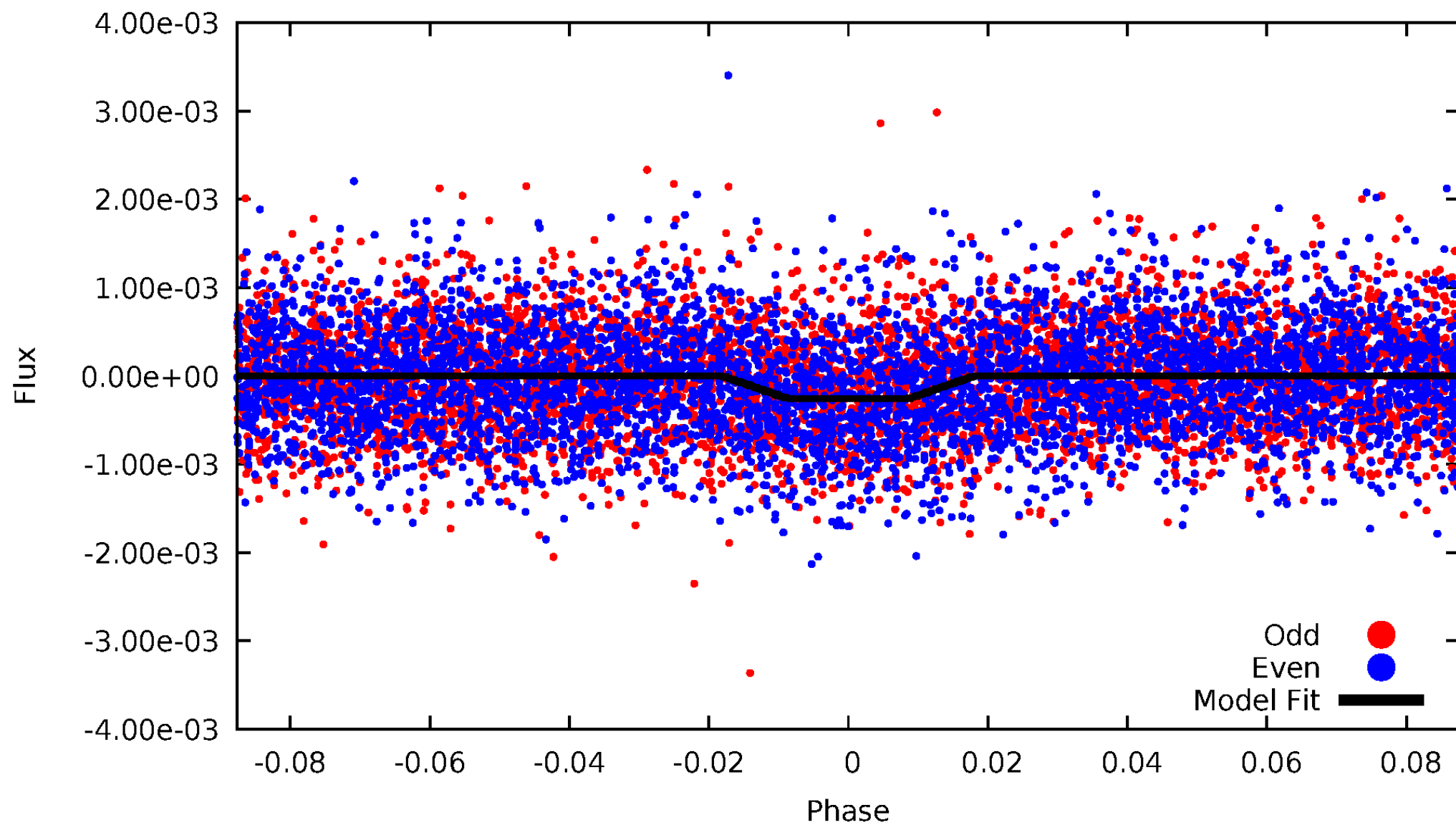
DV Odd/Even

TCE 006615600-01



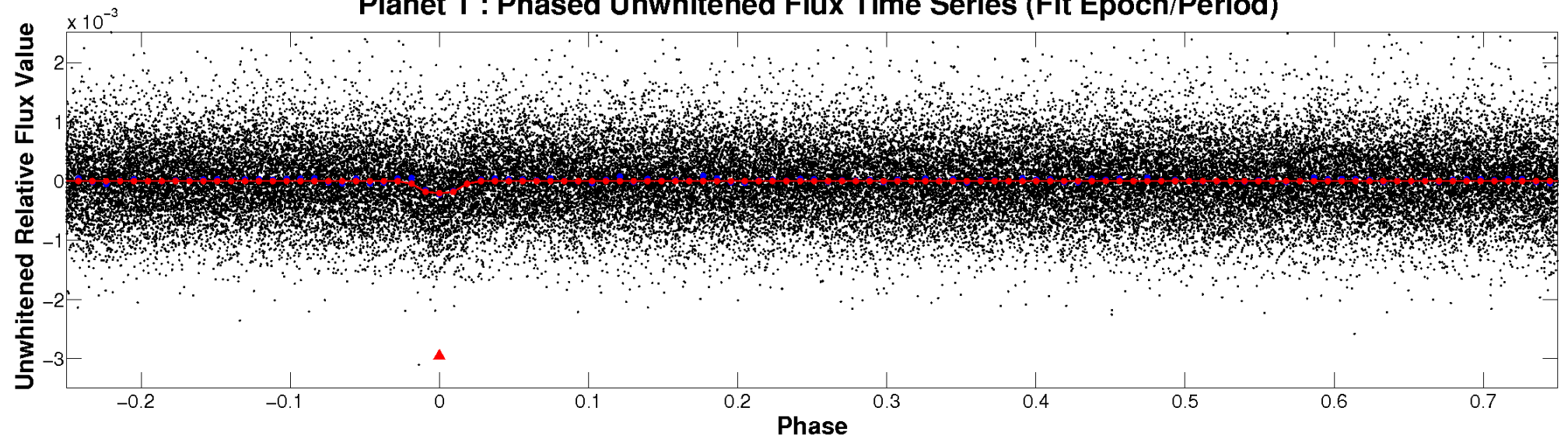
ALT Odd/Even

TCE 006615600-01

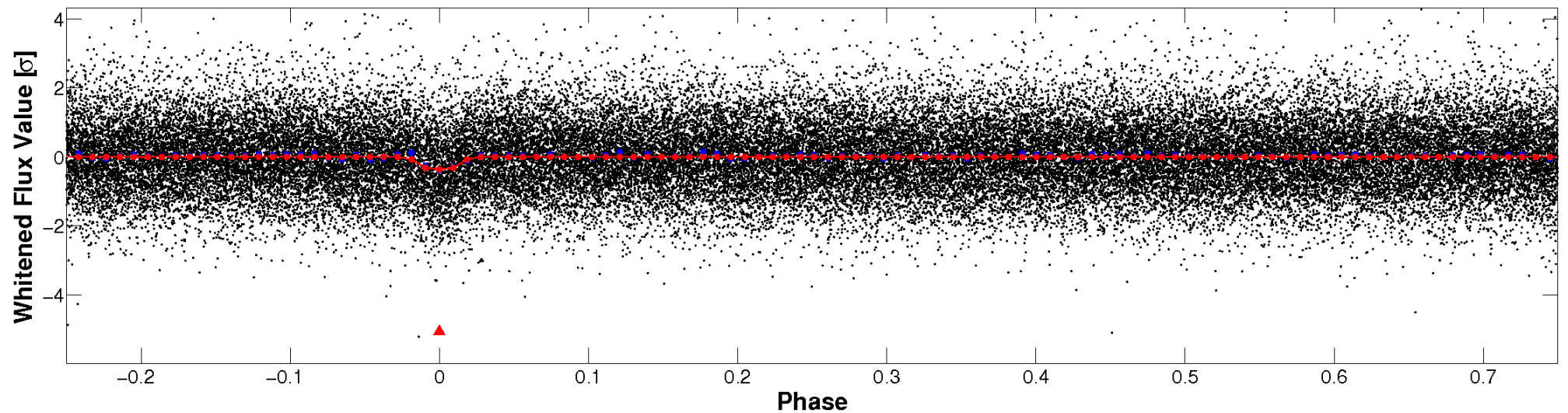


Non-Whitened Vs. Whitened Light Curve

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

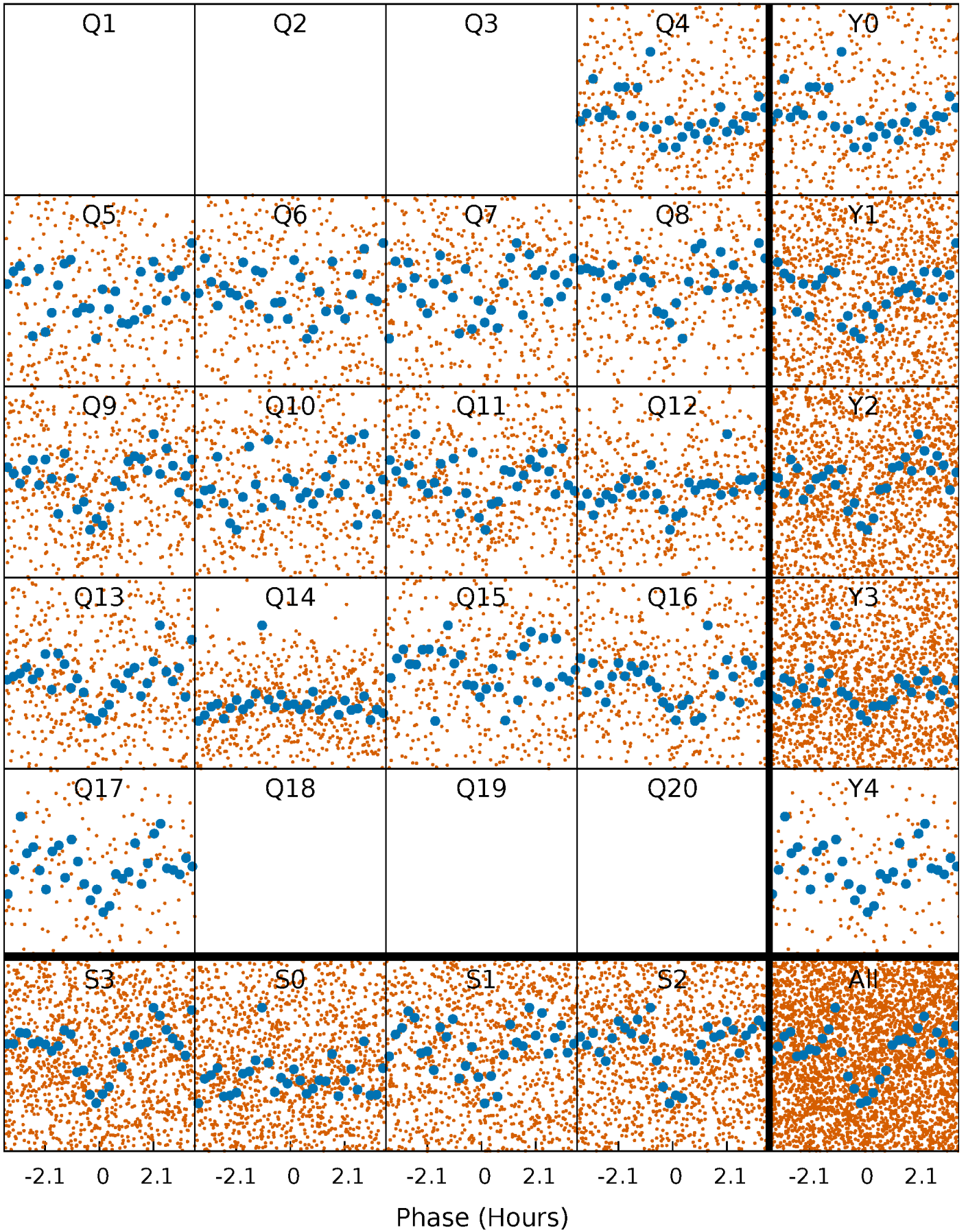


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



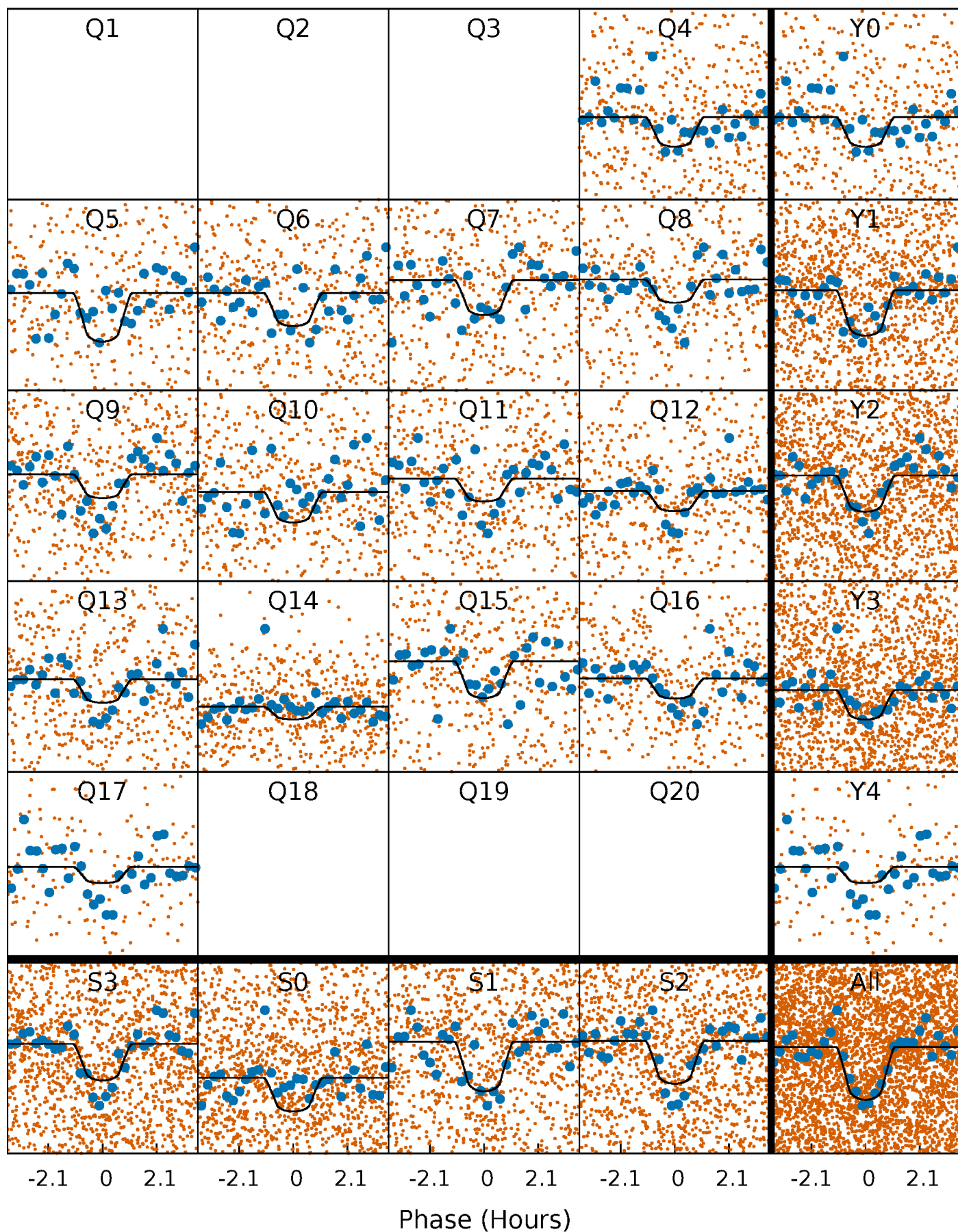
PDC Quarter-Phased Transit Curves

TCE 006615600-01 P= 2.195059 Days $T_0=132.763319$ (BKJD)



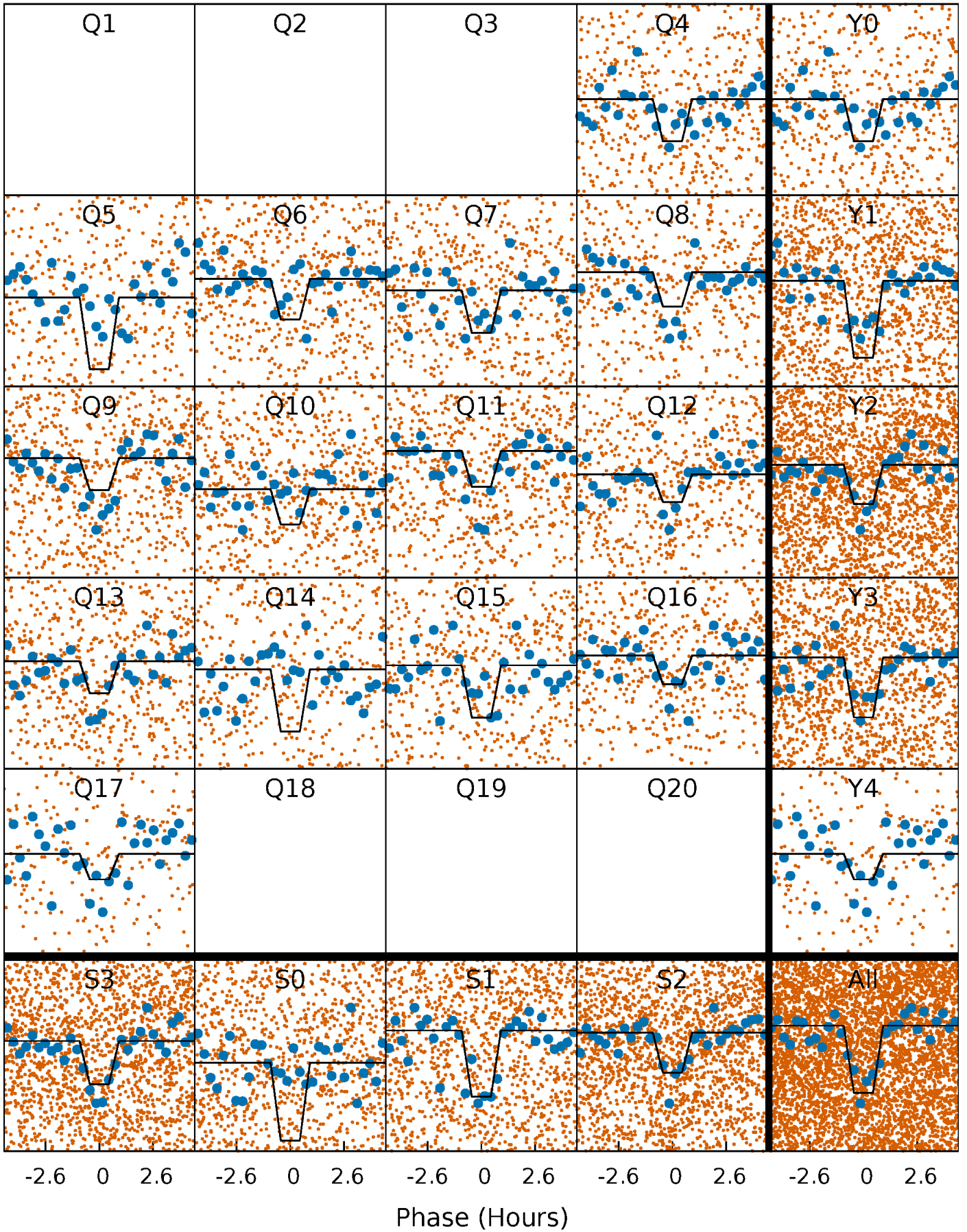
DV Quarter-Phased Transit Curves

TCE 006615600-01 P= 2.195059 Days $T_0=132.763319$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

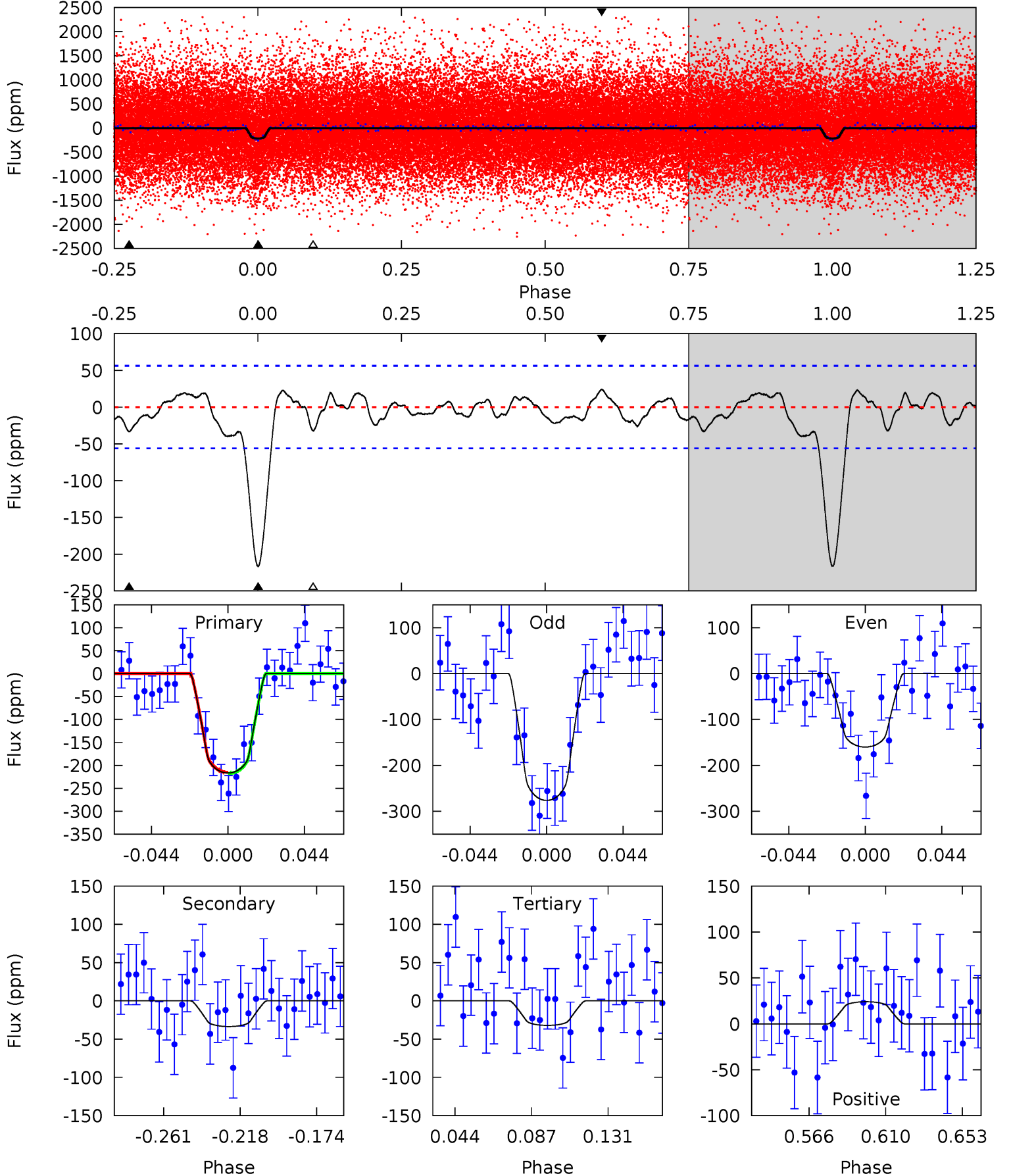
TCE 006615600-01 P= 2.195083 Days $T_0=132.754290$ (BKJD)



DV Model-Shift Uniqueness Test

006615600-01, P = 2.195059 Days, E = 132.763319 Days

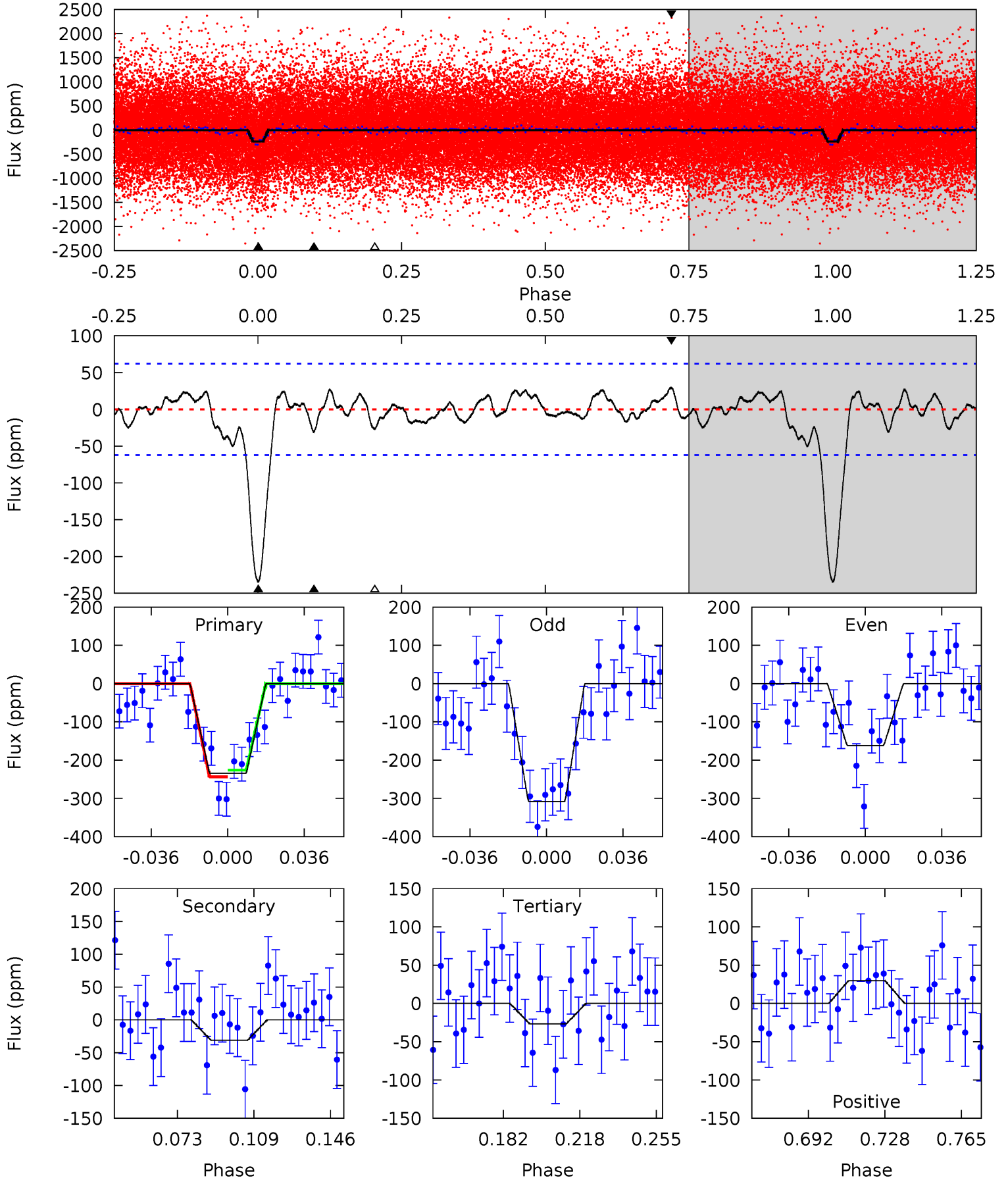
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.3	2.83	2.71	2.03	4.74	2.02	1.17	15.6	16.2	0.12	0.80	4.90	1.00	0.10	0.12



Alt Model-Shift Uniqueness Test

006615600-01, P = 2.195083 Days, E = 132.754290 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.0	2.38	2.04	2.27	4.77	2.09	1.17	16.0	15.7	0.34	0.11	5.62	0.97	0.11	0.69



Stellar Parameters For KIC 006615600

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5799^{+163}_{-204}	$4.539^{+0.044}_{-0.176}$	$-0.100^{+0.300}_{-0.300}$	$0.878^{+0.231}_{-0.077}$	$0.975^{+0.104}_{-0.116}$	$2.026^{+0.467}_{-0.938}$
	+3%/-4%	+1%/-4%	+300%/-300%	+26%/-9%	+11%/-12%	+23%/-46%
Source	KIC0	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 006615600-01 / KOI 5307.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-34 ± 12	$1.60^{+0.94}_{-0.82}$	1886^{+112}_{-88}	3790^{+1220}_{-596}	$7.079^{+23.781}_{-4.434}$
Alt.	-31 ± 13	$1.65^{+0.93}_{-0.84}$	1879^{+103}_{-81}	3670^{+1279}_{-564}	$6.369^{+22.384}_{-4.199}$

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming A=0.3)

A_{obs} = Observed Albedo (Assuming T=0)

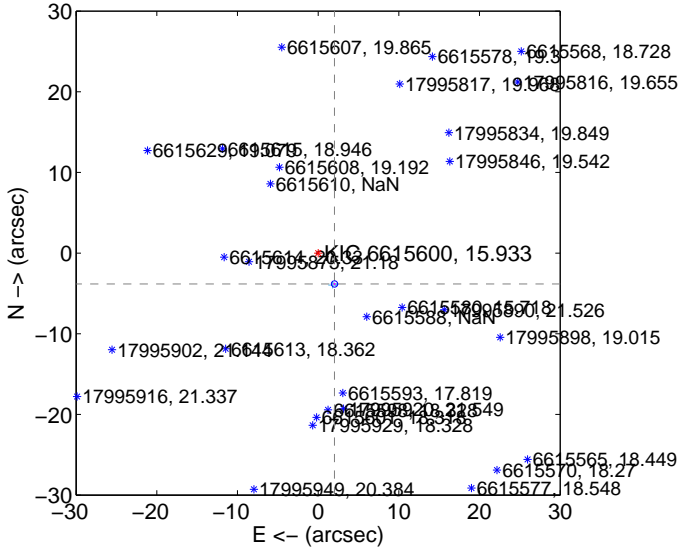
If a secondary eclipse is present, the system is likely an EB if $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

DV Centroid Data

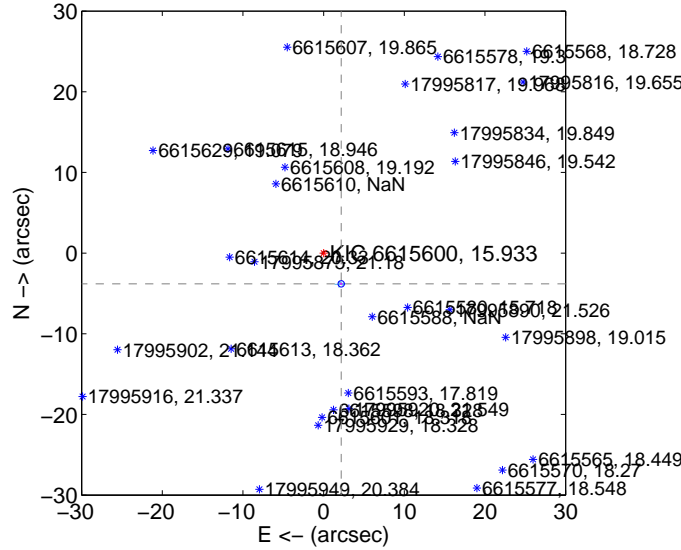
Supplemental centroid analysis for 006615600-01. Kepler magnitude: 15.93. Transit SNR 13.09
 There are 5 quarters with good PRF difference image offsets
 The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.333 \pm 0.131	33.17	-2.029 \pm 0.158	-3.828 \pm 0.122
PRF-fit source offset from KIC position	4.390 \pm 0.132	33.34	-2.179 \pm 0.158	-3.811 \pm 0.122
photometric centroid source offset	30.86 \pm 1.10	27.96	-10.82 \pm 1.08	-28.90 \pm 1.11

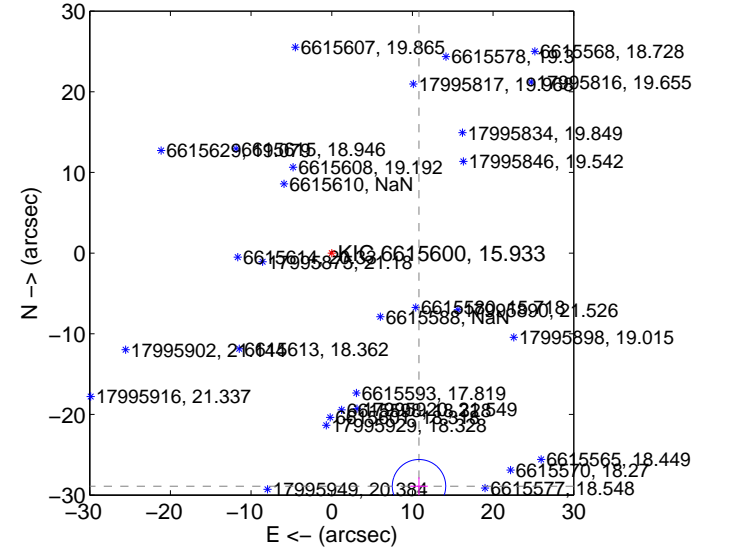
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

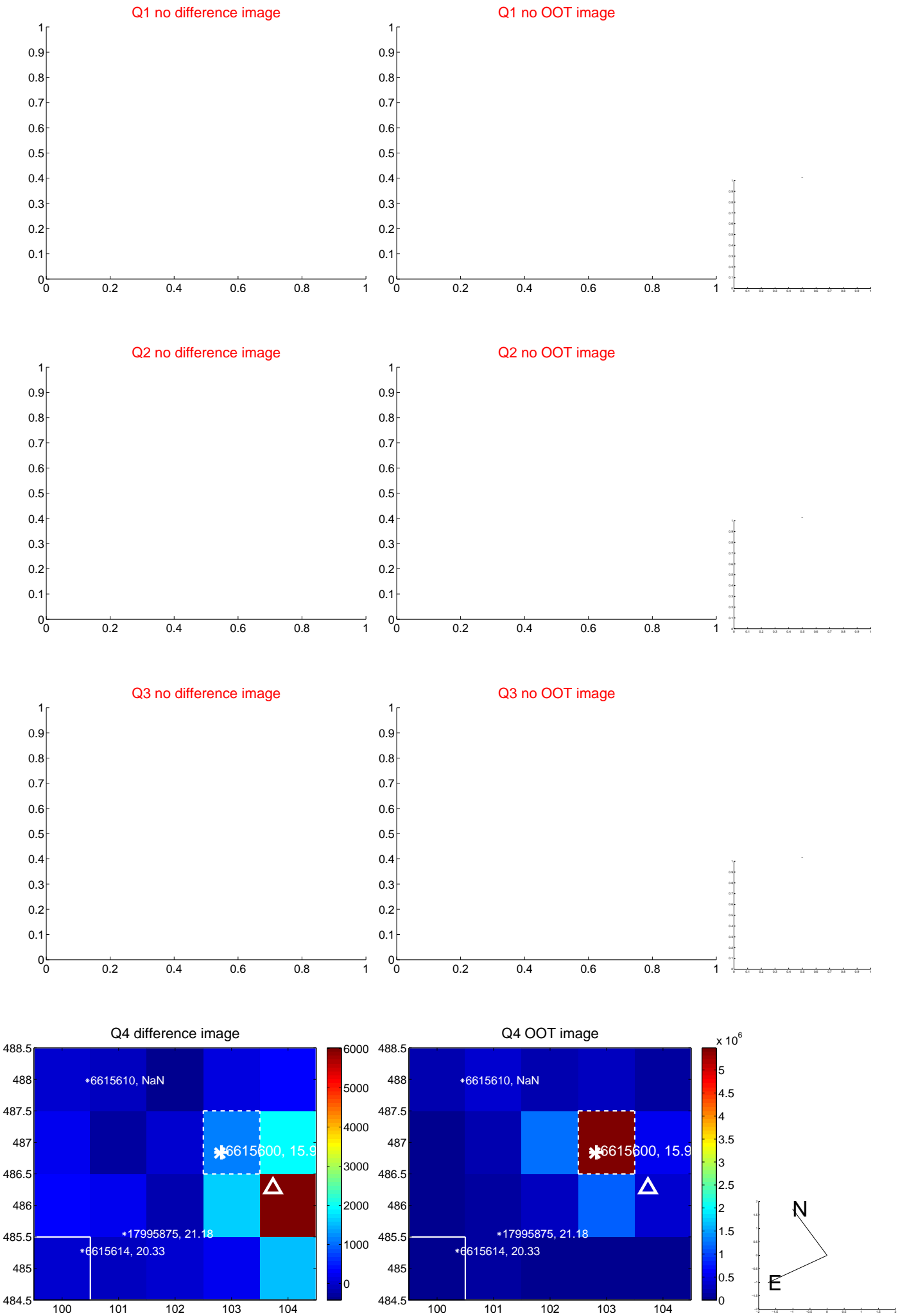


offset from photometric centroids

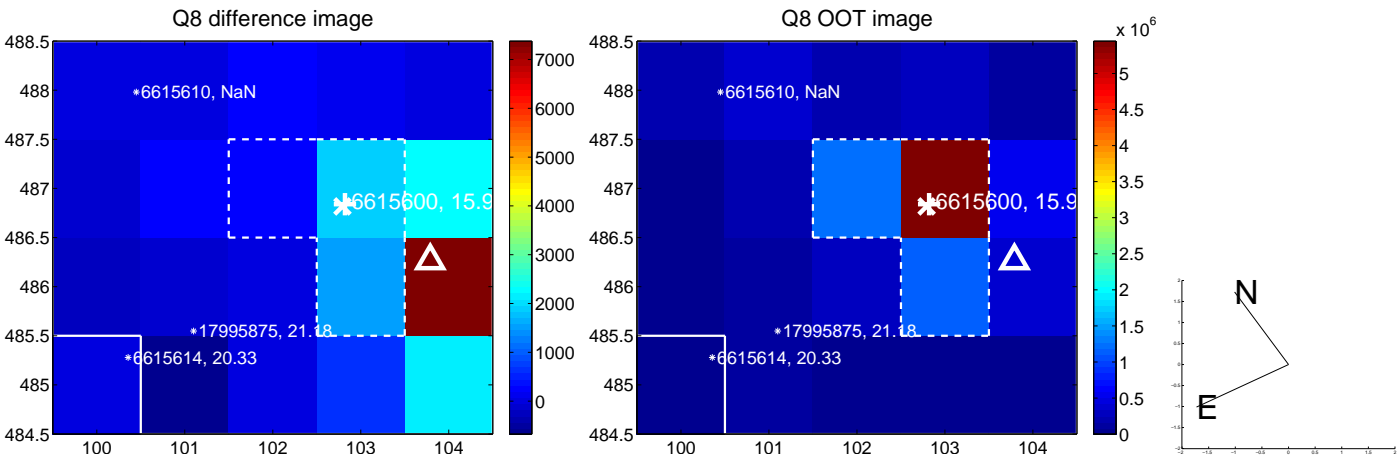
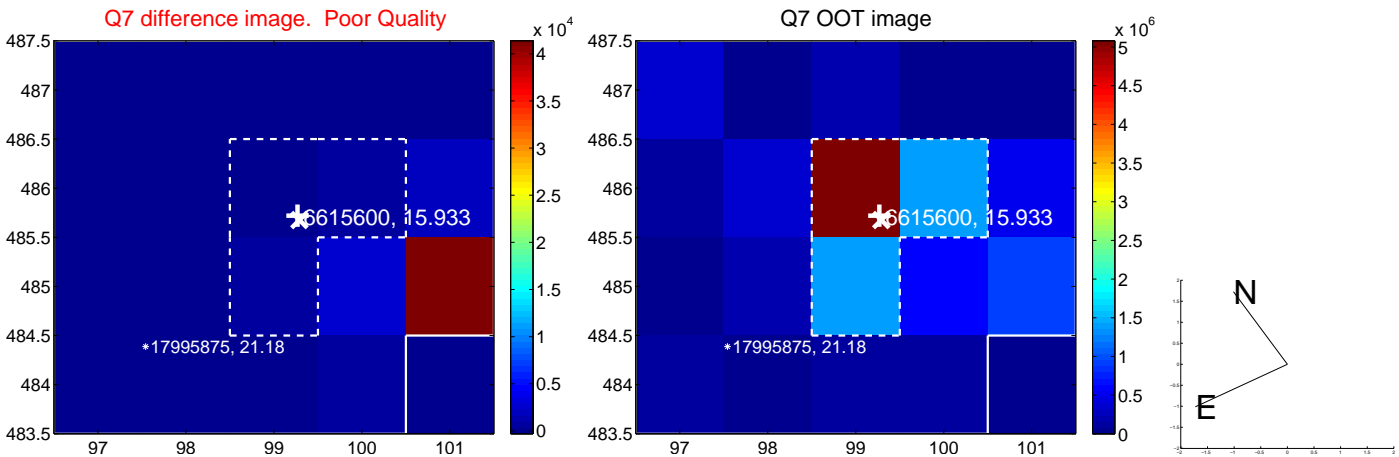
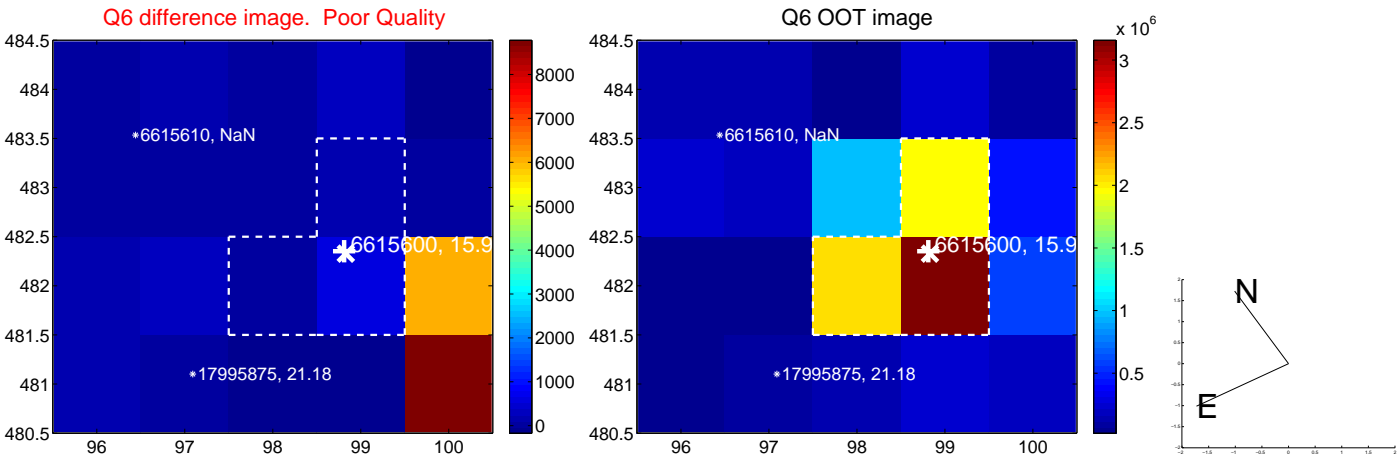
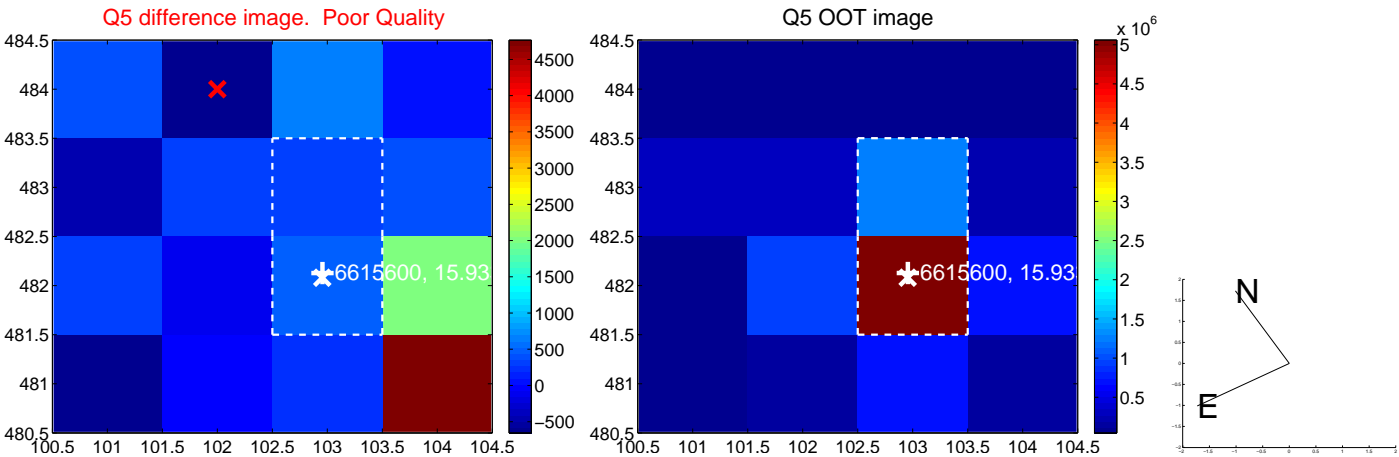


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

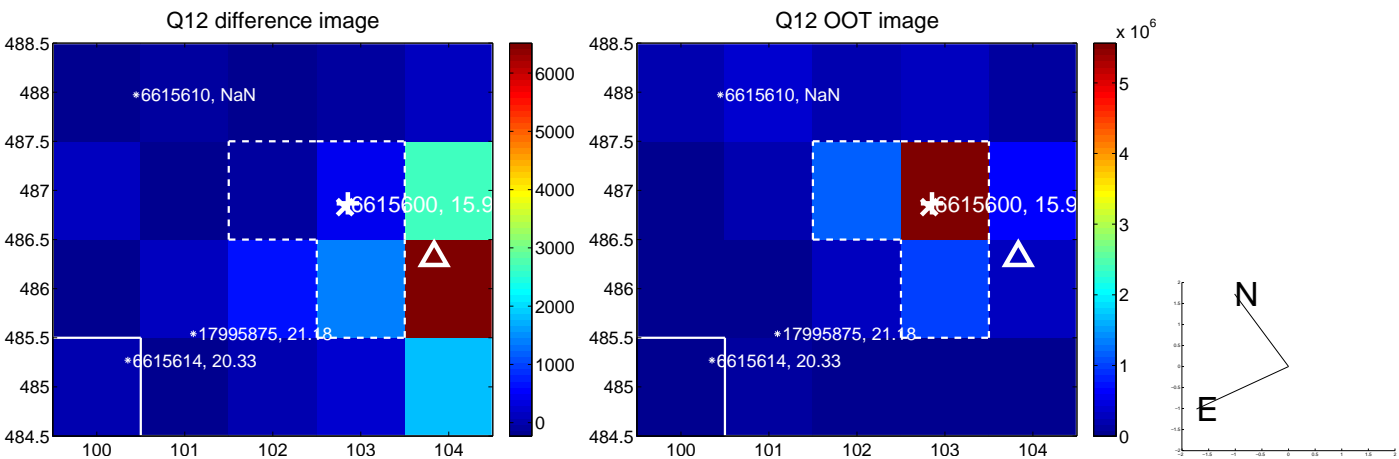
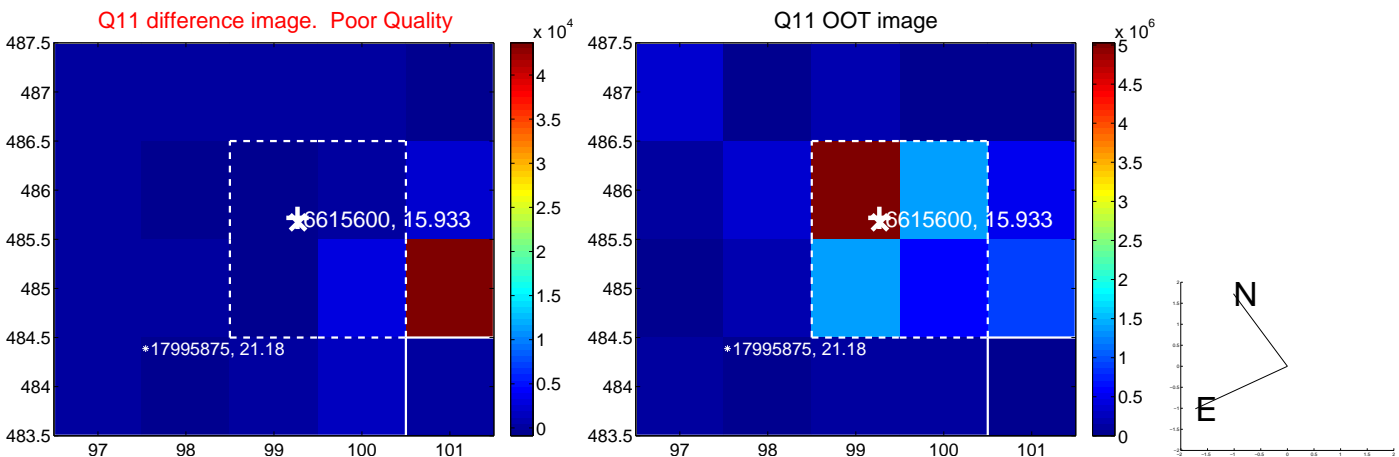
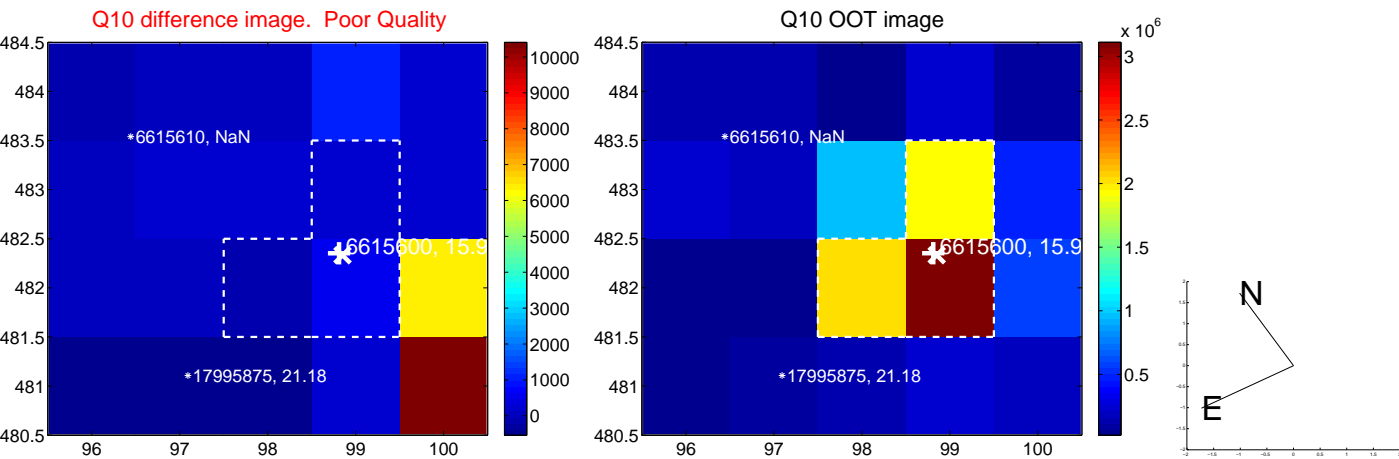
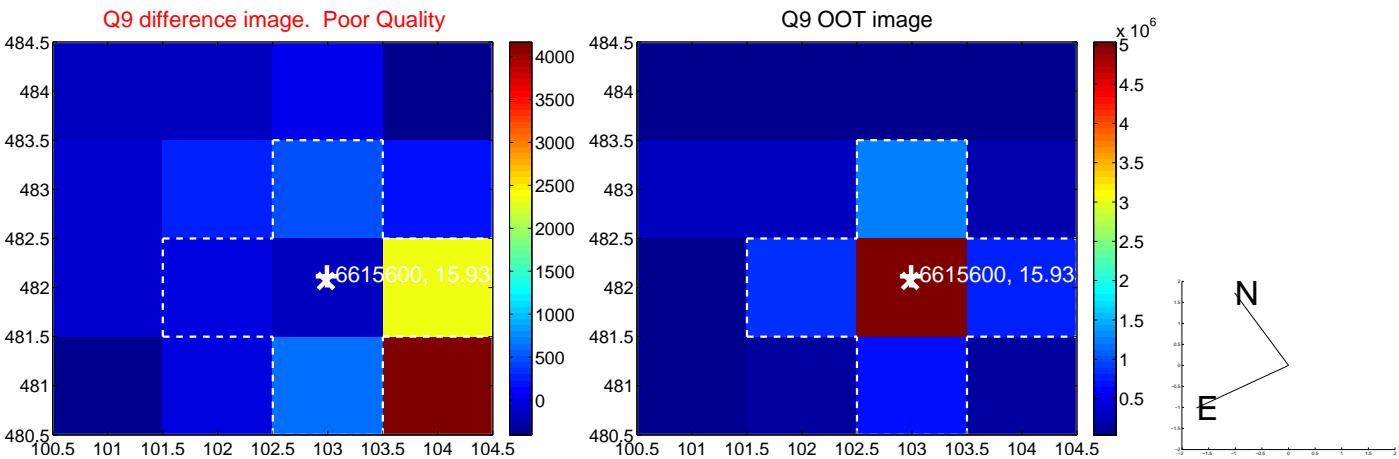
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



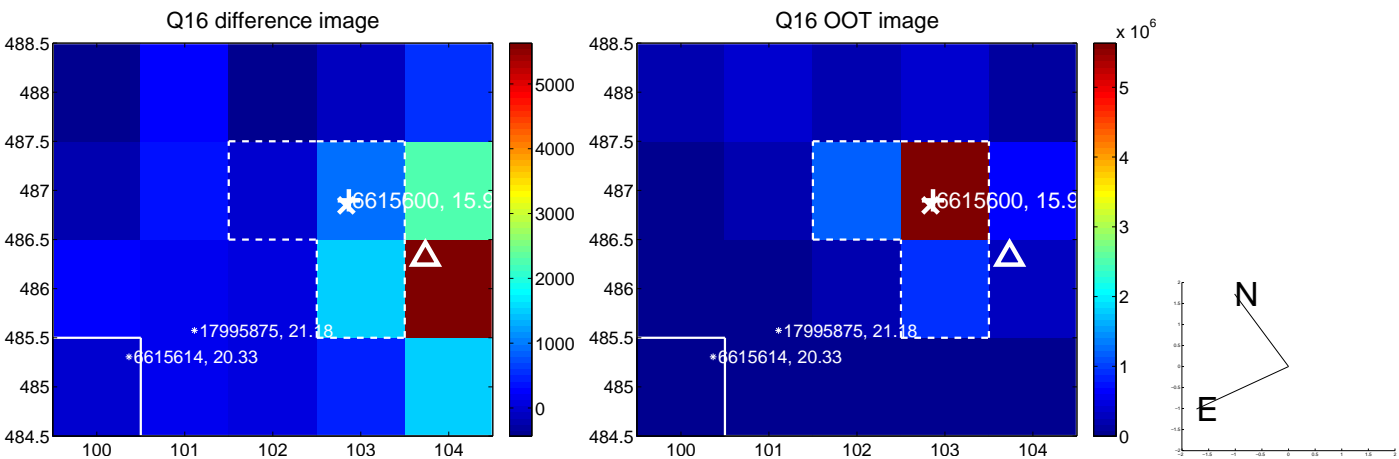
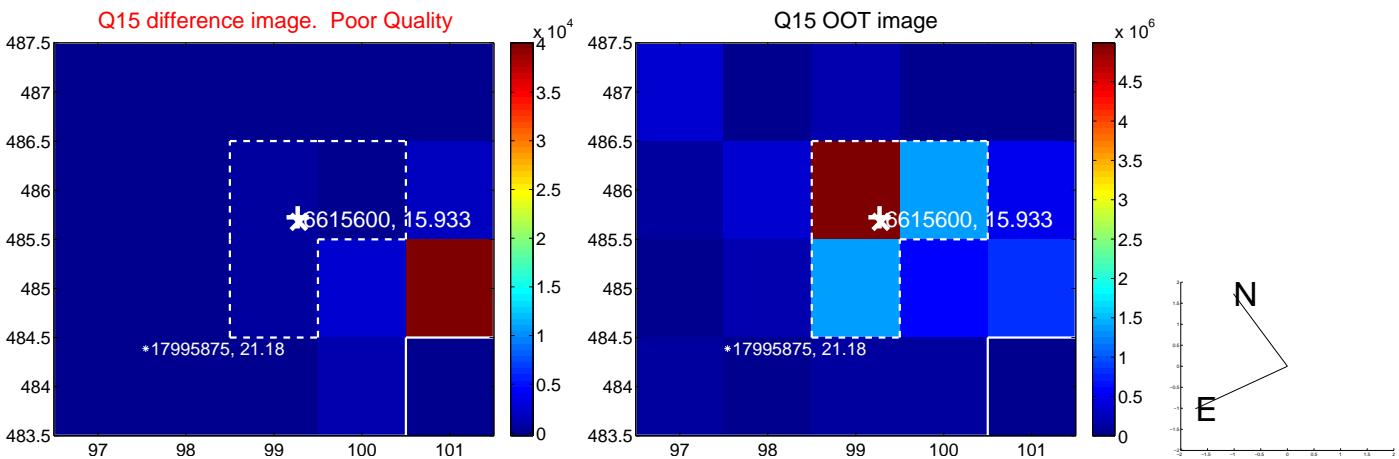
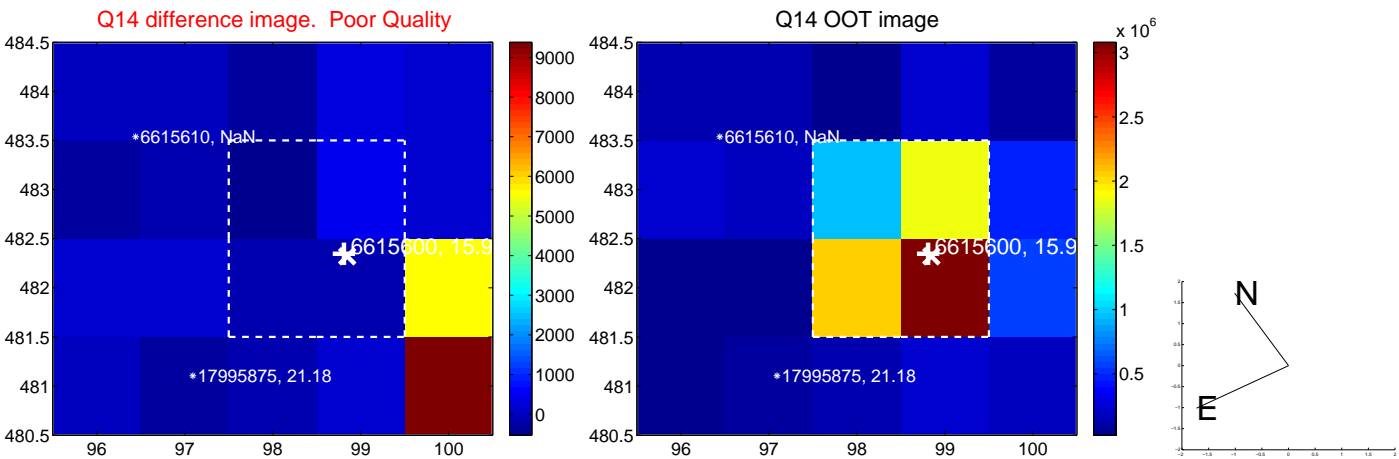
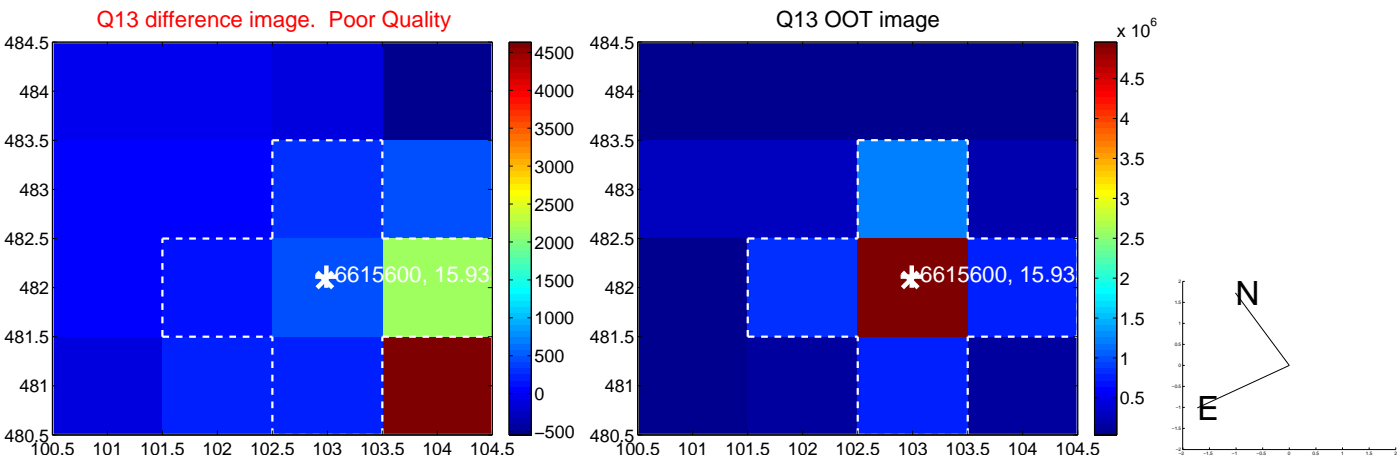
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



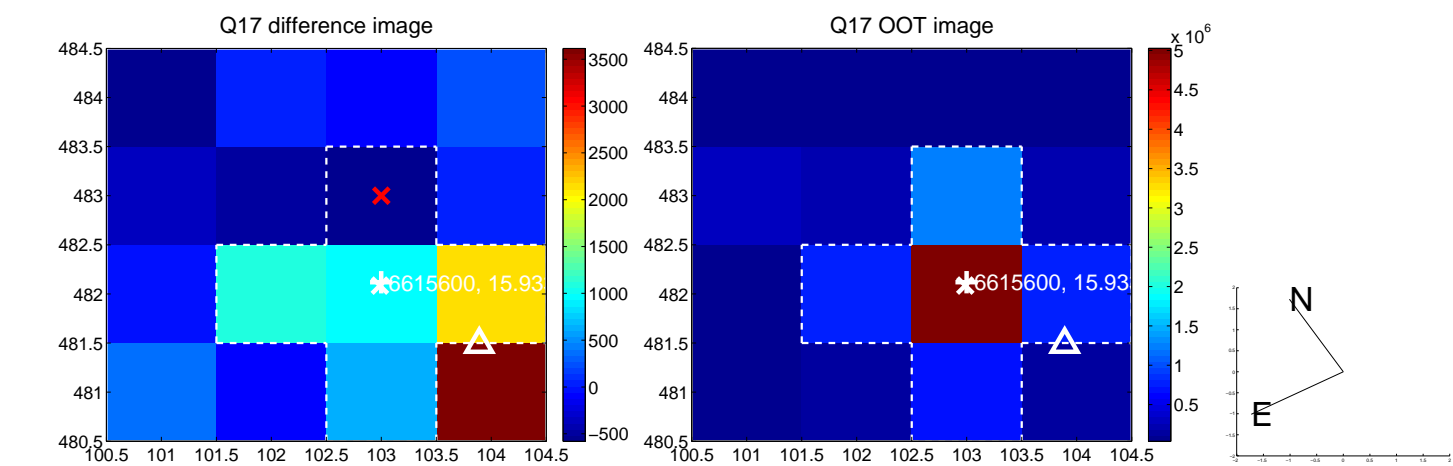
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



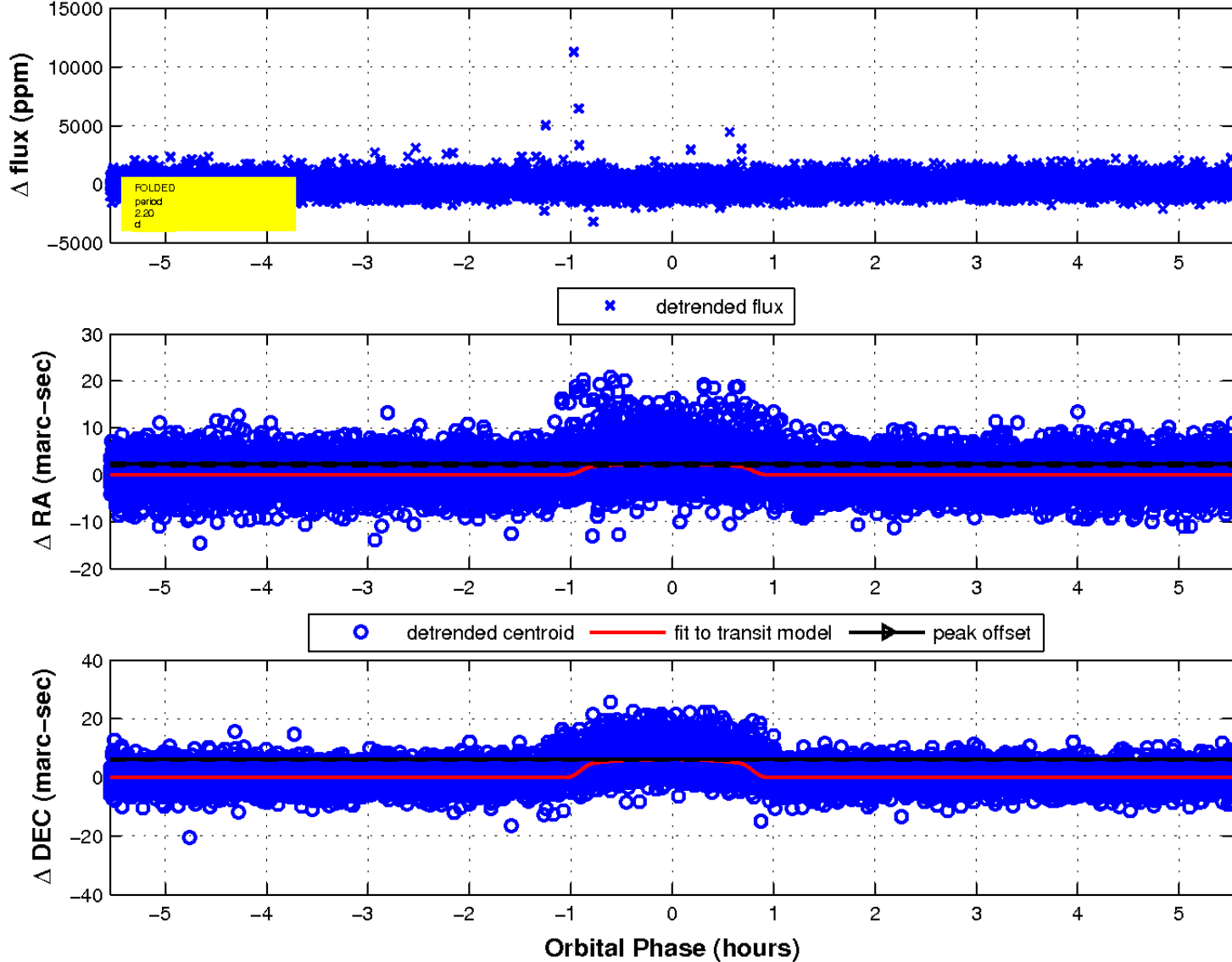
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

