

KIC 005271608

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})
005271608-01	OBS	1673.01	2.490450	133.448214	177.9	2.235	15.4	16.1	1.00	6067	1.56	943.81

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005271608-01	OBS	FP	0.01	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.

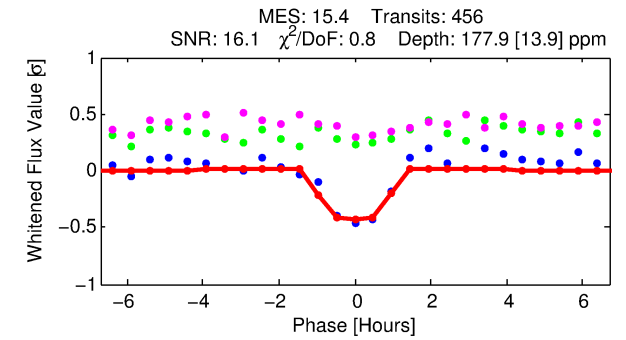
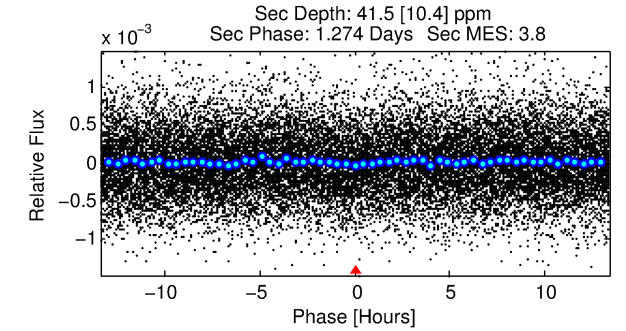
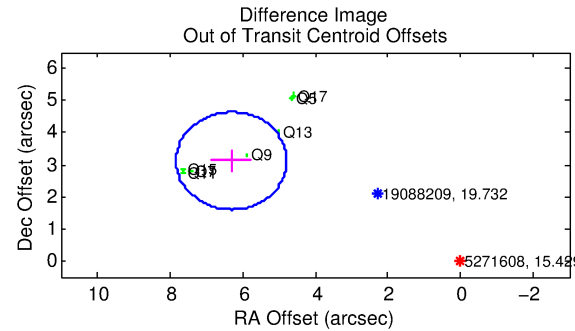
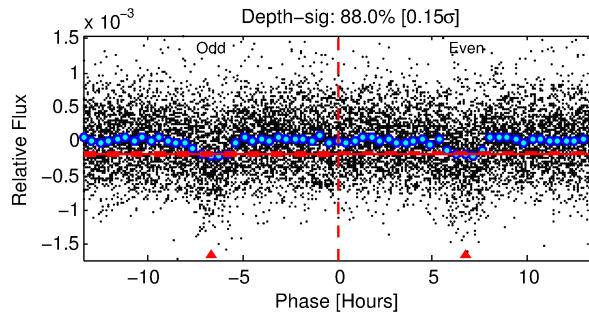
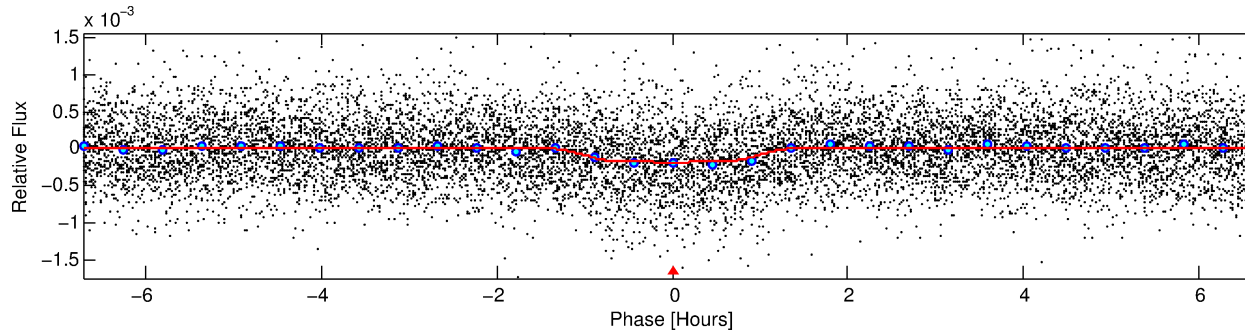
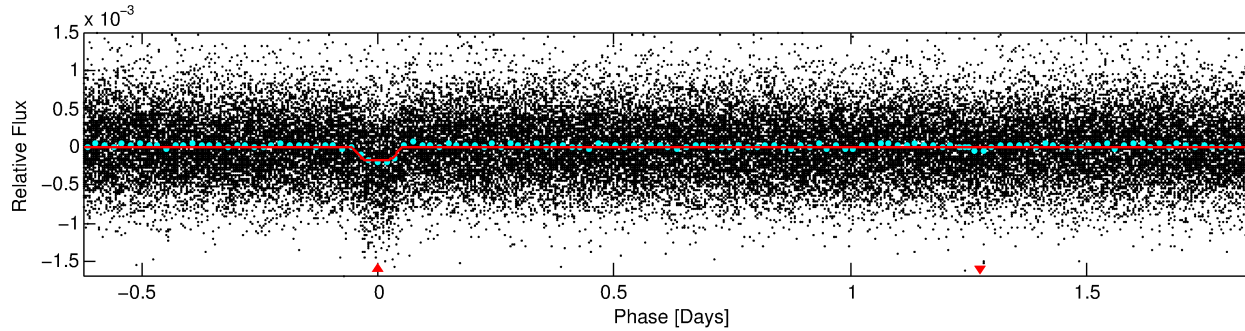
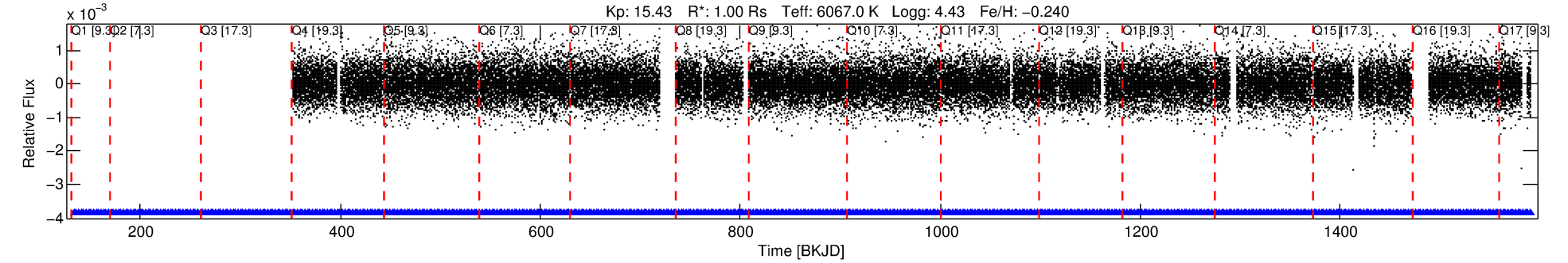
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005271608-01

No Significant Match Found

DV One-Page Summary

KIC: 5271608 Candidate: 1 of 1 Period: 2.490 d
KOI: K01673.01 Corr: 0.955



DV Fit Results:

Period = 2.49045 [0.00001] d
Epoch = 133.4482 [0.0023] BKJD
Rp/R* = 0.0144 [0.0061]
a/R* = 4.15 [8.69]
b = 0.90 [0.50]
Seff = 943.81 [381.27]
Teq = 1413 [143] K
Rp = 1.56 [0.82] Re
a = 0.0358 [0.0093] AU
Ag = 11.96 [11.44] [0.96 σ]
Teffp = 4064 [908] K [2.88 σ]

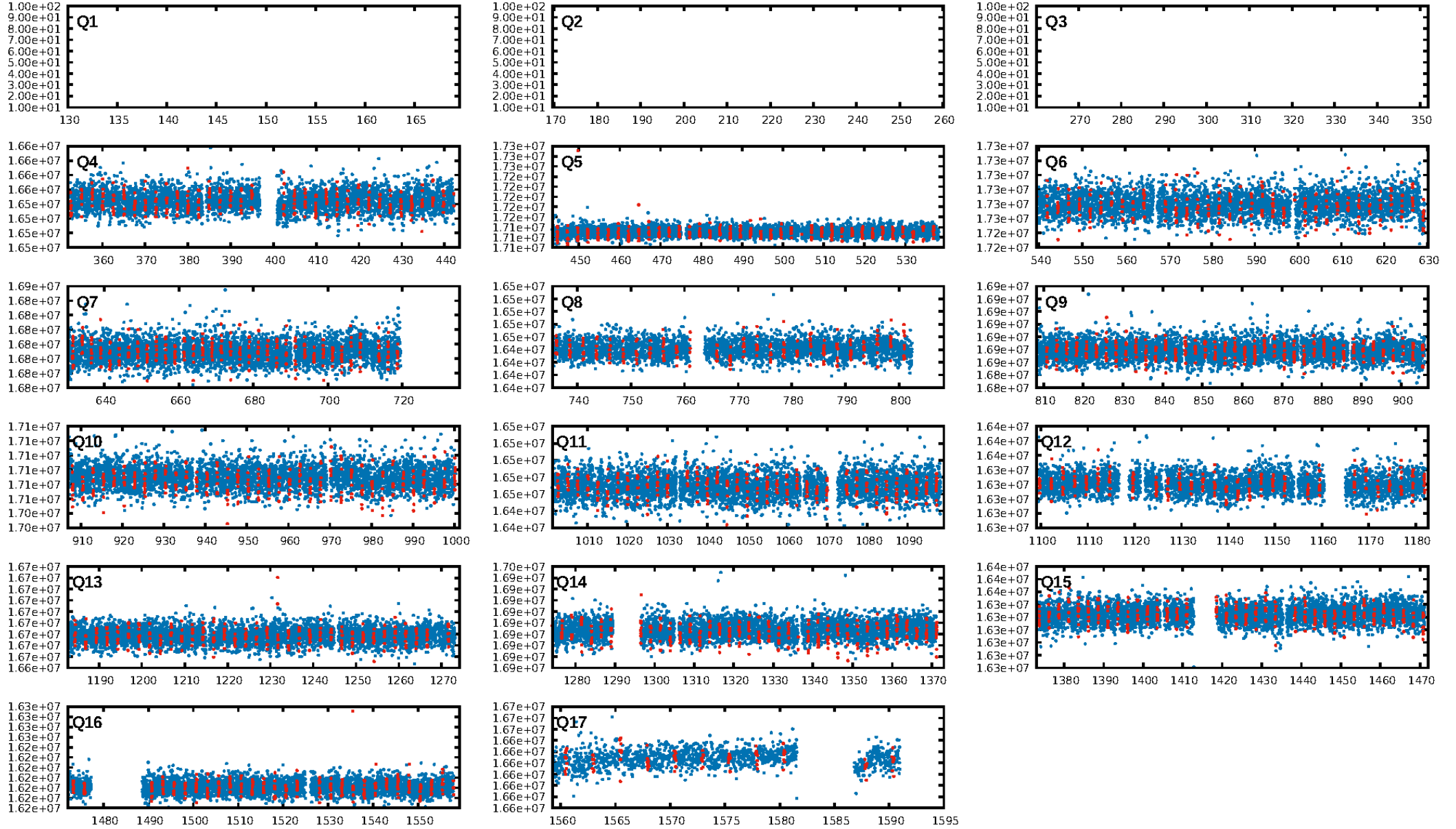
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.01e-53
RollingBand-fgt: 1.00 [445/445]
GhostDiagnostic-chr: -0.2671
Centroid-sig: 0.0%
Centroid-so: 24.820 arcsec [27.46 σ]
OotOffset-rm: 7.036 arcsec [13.89 σ]
KicOffset-rm: 6.999 arcsec [14.42 σ]
OotOffset-st: 0/3/0/4 [7]
KicOffset-st: 0/3/0/4 [7]
DiffImageQuality-fgm: 1.00 [7/7]
DiffImageOverlap-fno: 1.00 [14/14]

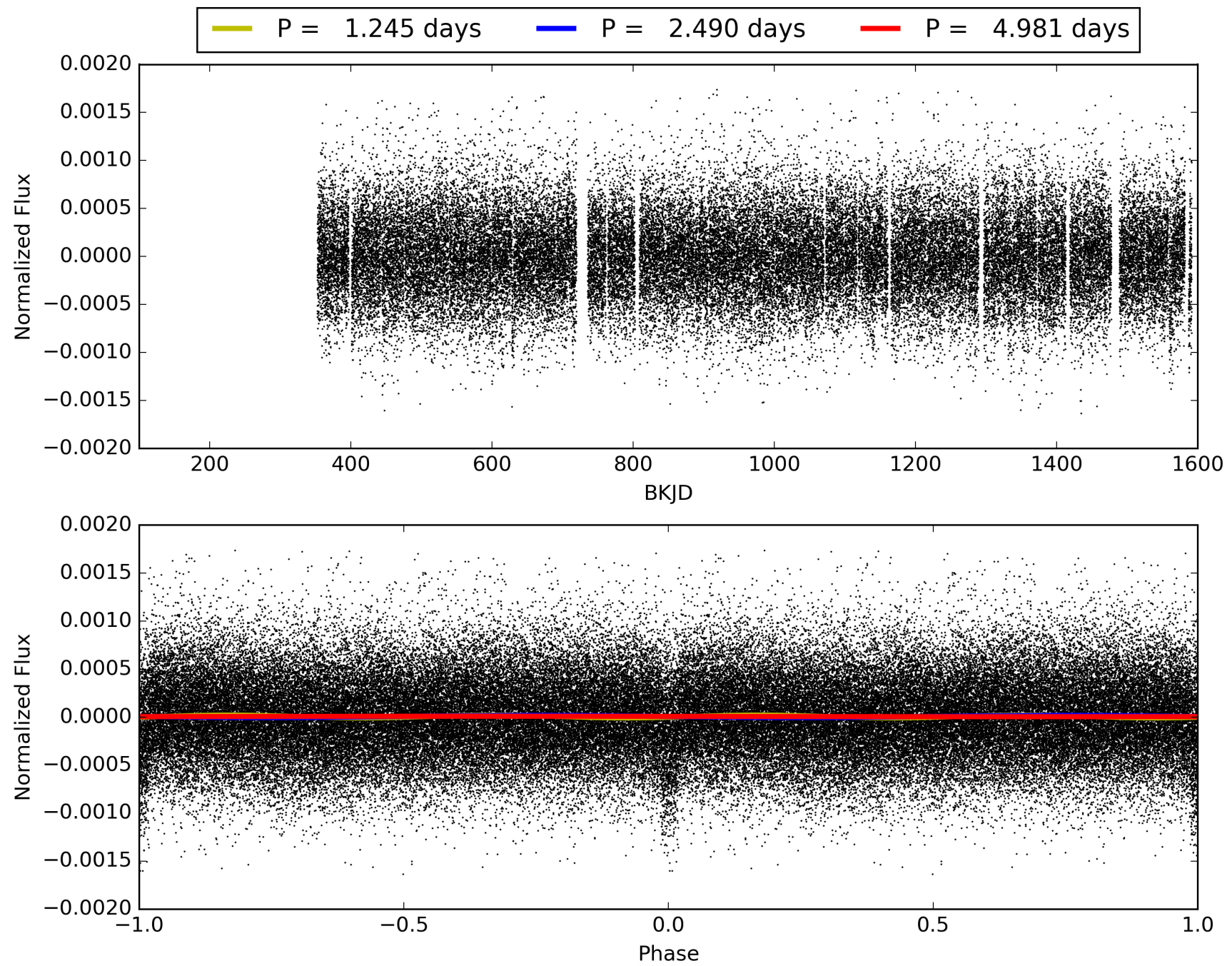
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:47:33 Z

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

TCE 005271608-01, PDC Light Curves

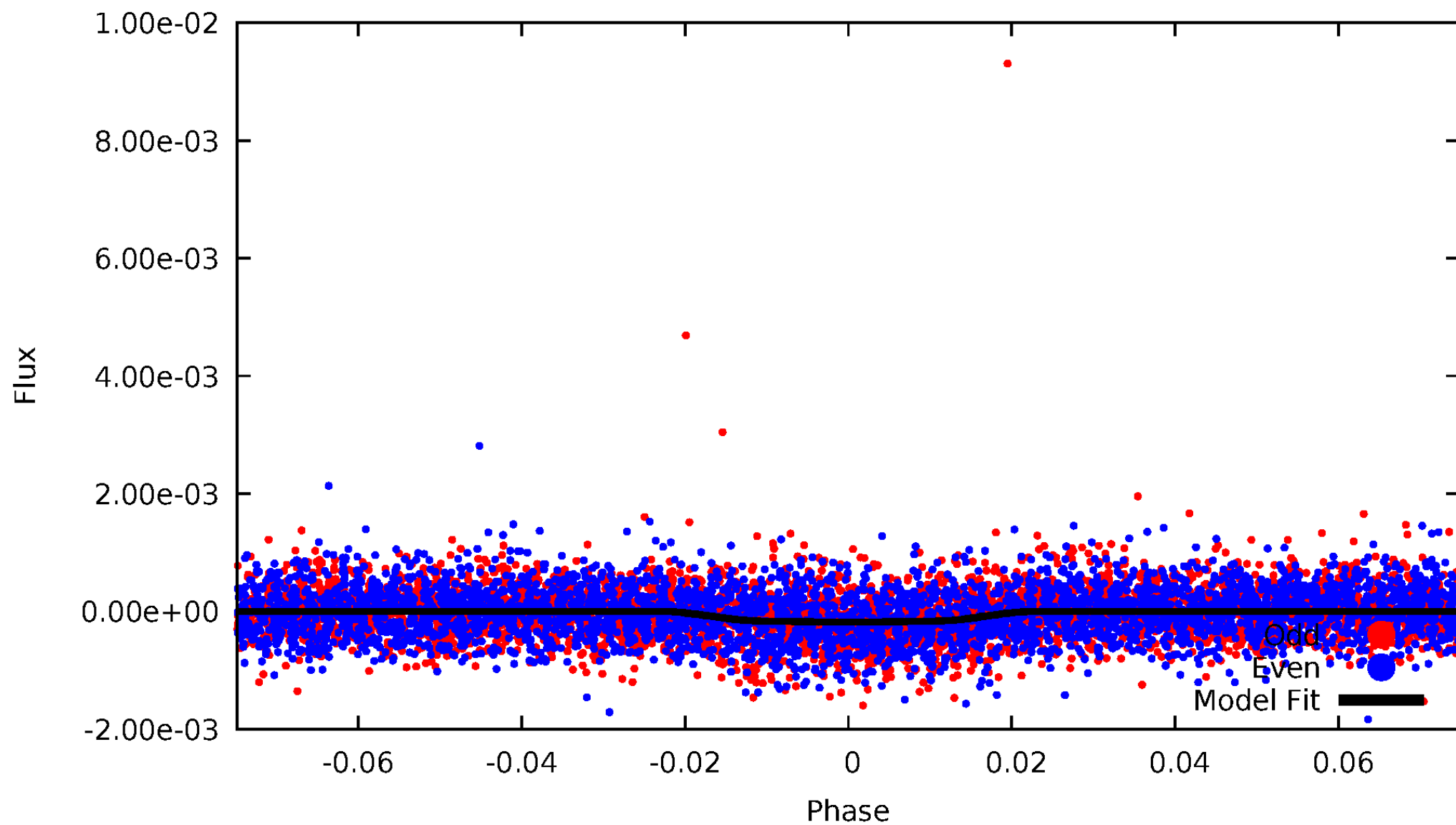


TCE 005271608-01



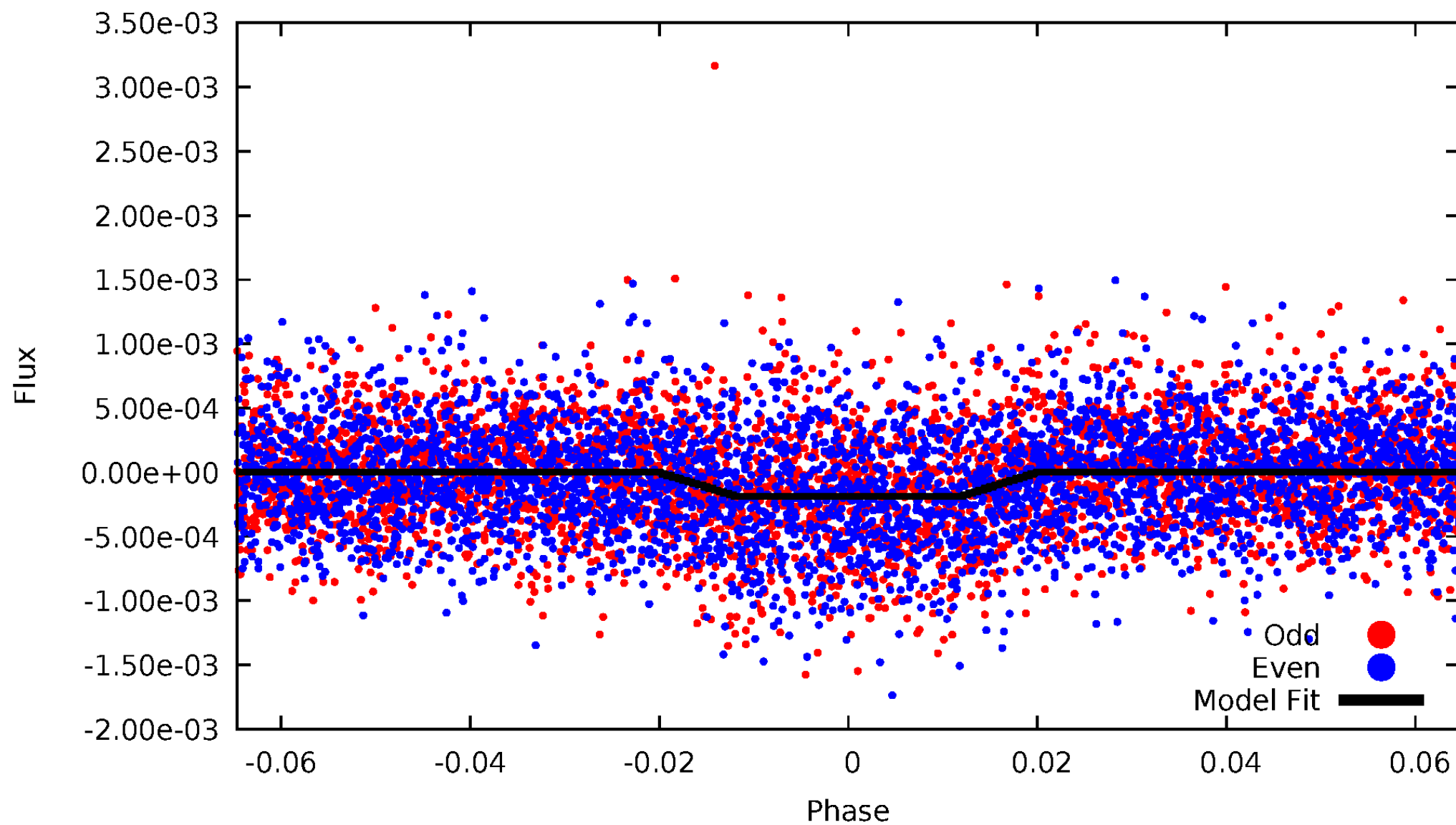
DV Odd/Even

TCE 005271608-01



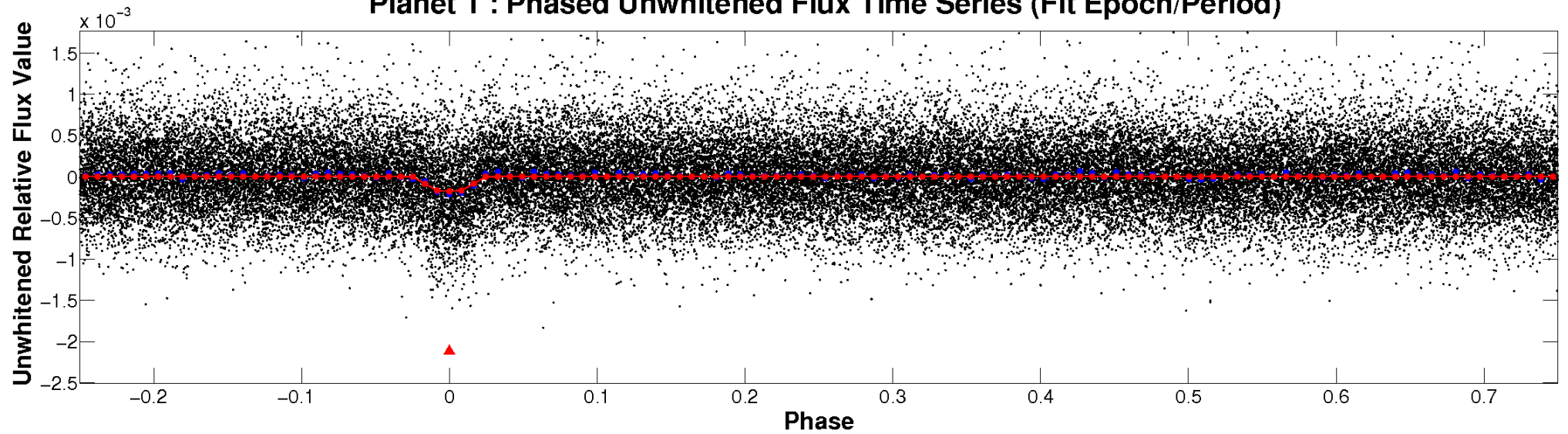
ALT Odd/Even

TCE 005271608-01

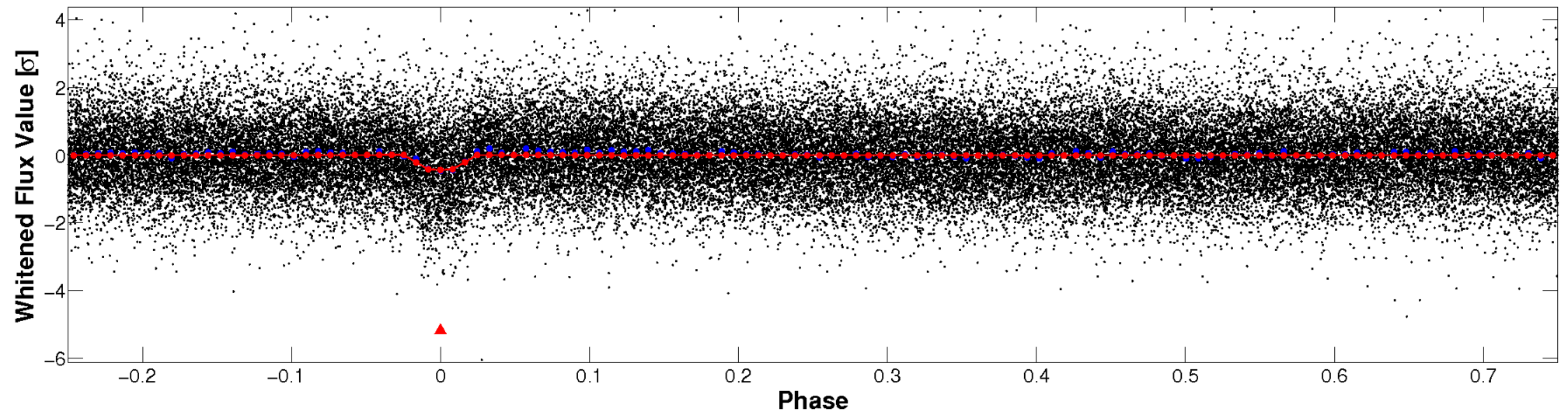


Non-Whitened Vs. Whitened Light Curve

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

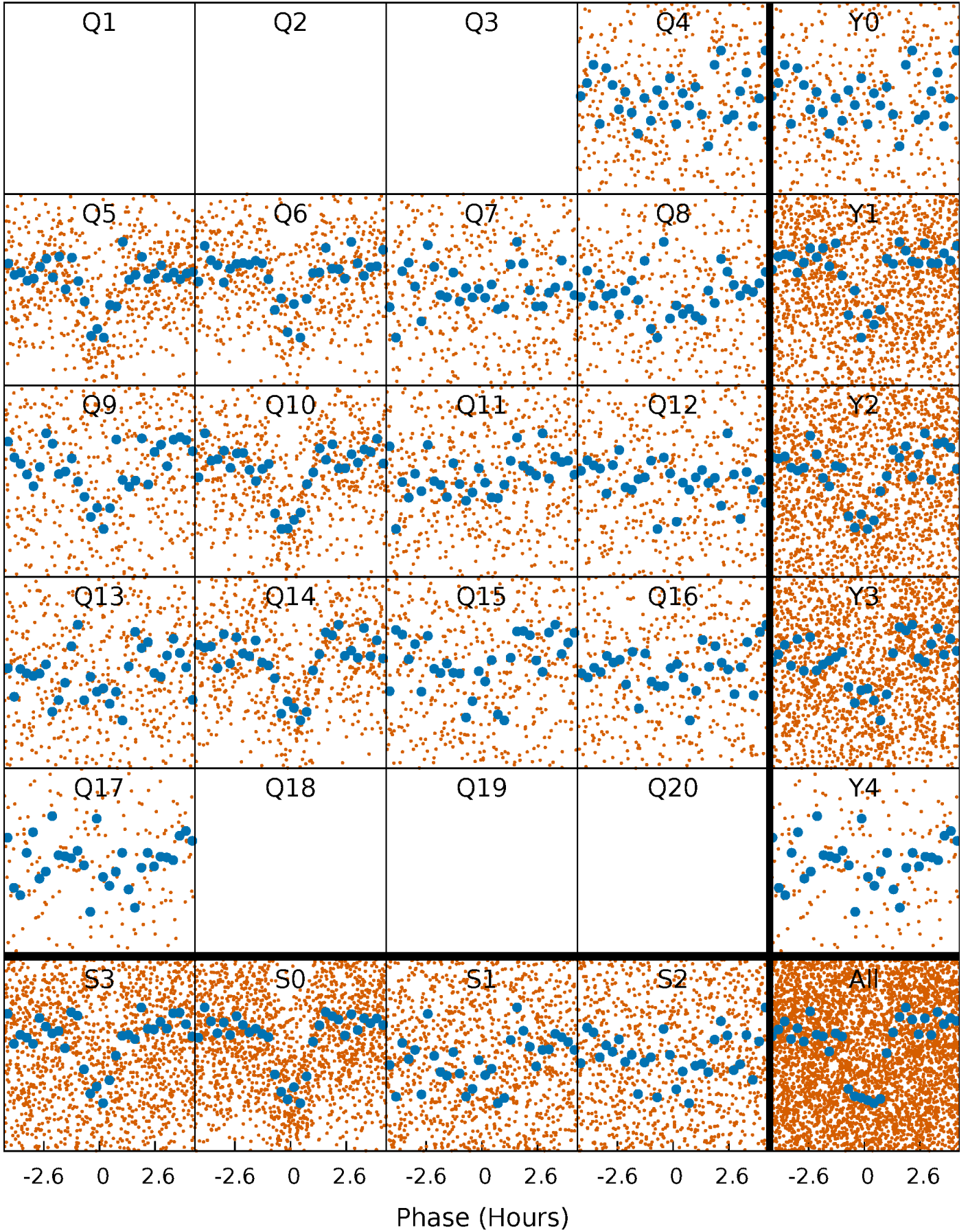


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



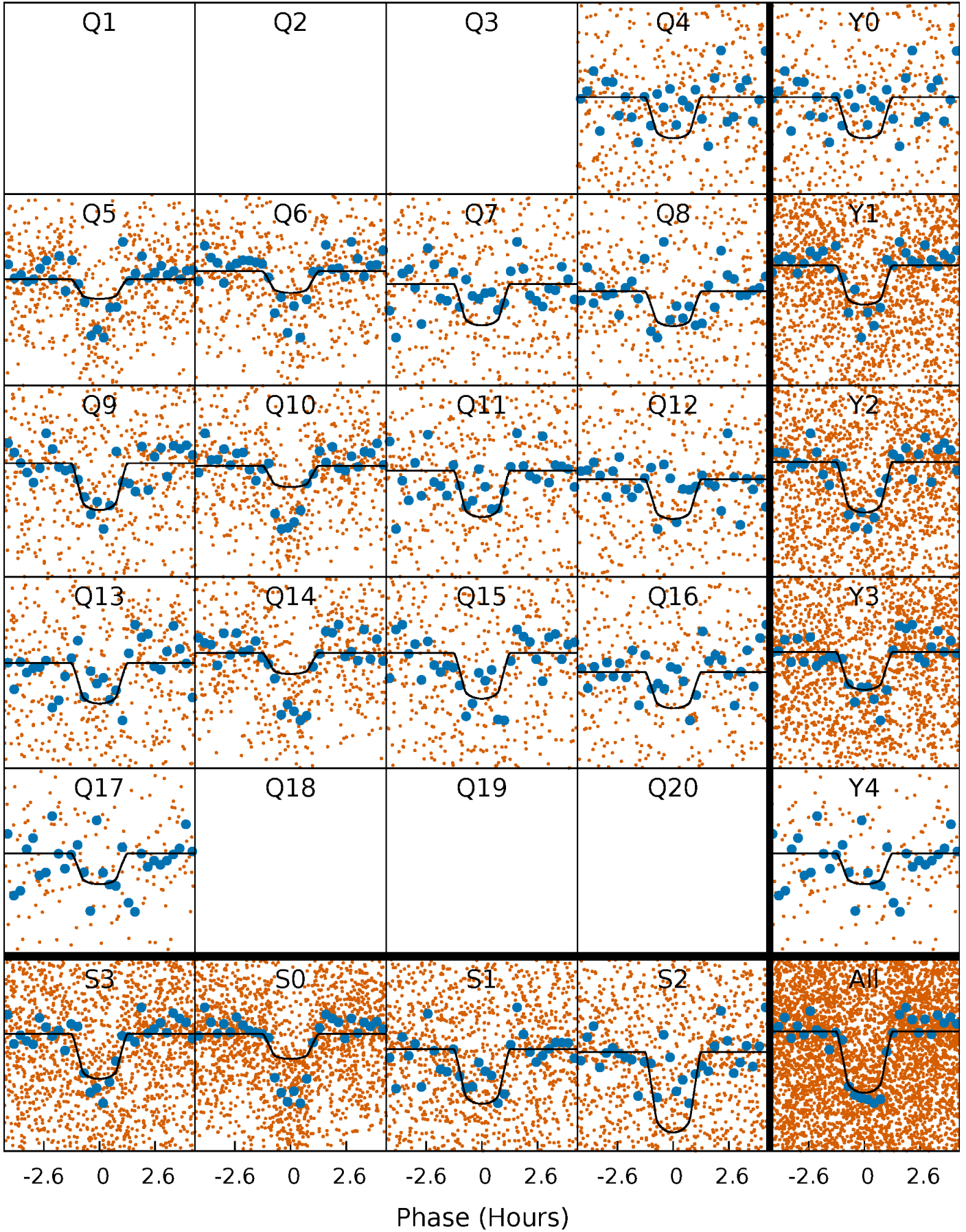
PDC Quarter-Phased Transit Curves

TCE 005271608-01 P= 2.490450 Days $T_0=133.448214$ (BKJD)



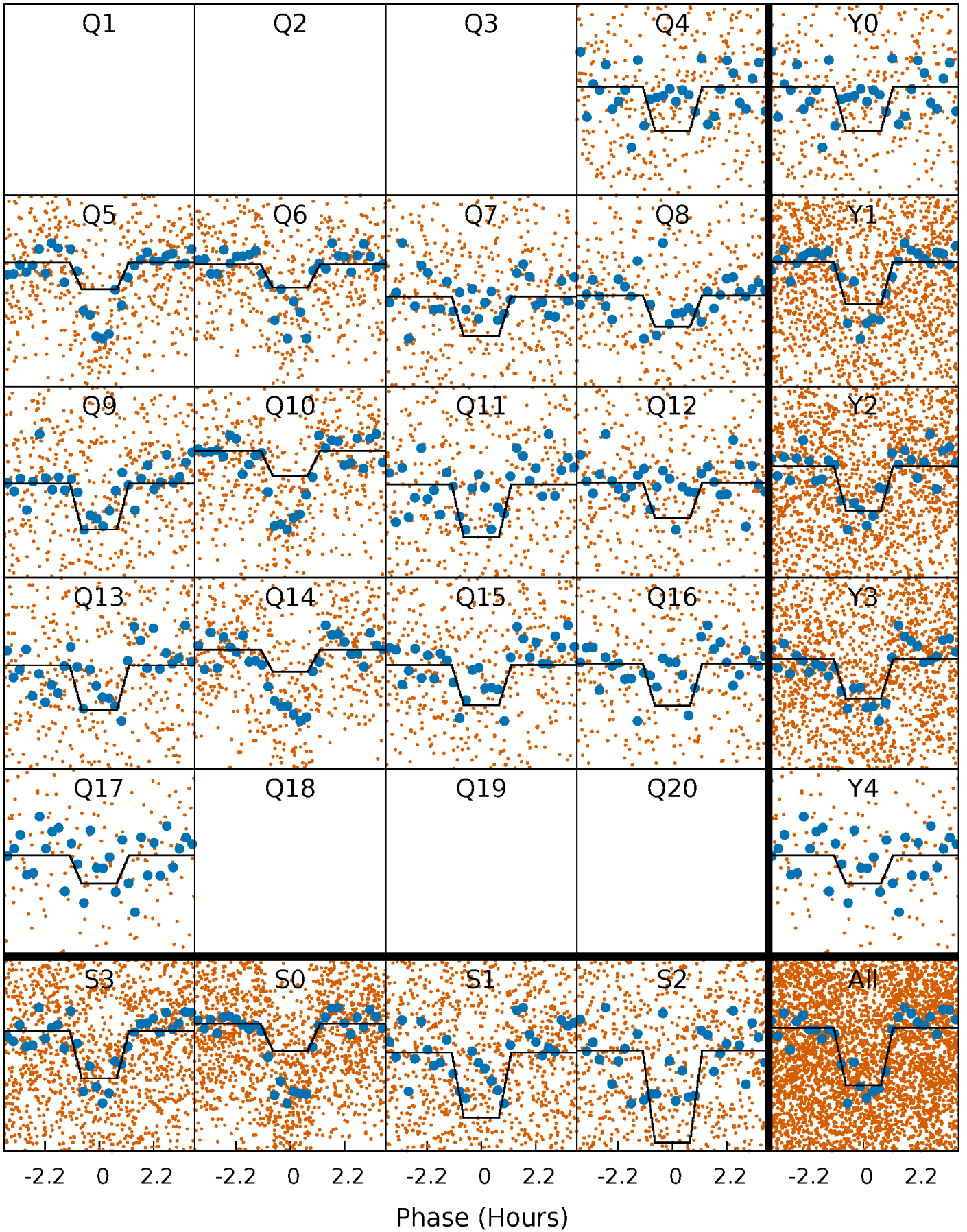
DV Quarter-Phased Transit Curves

TCE 005271608-01 P= 2.490450 Days $T_0=133.448214$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

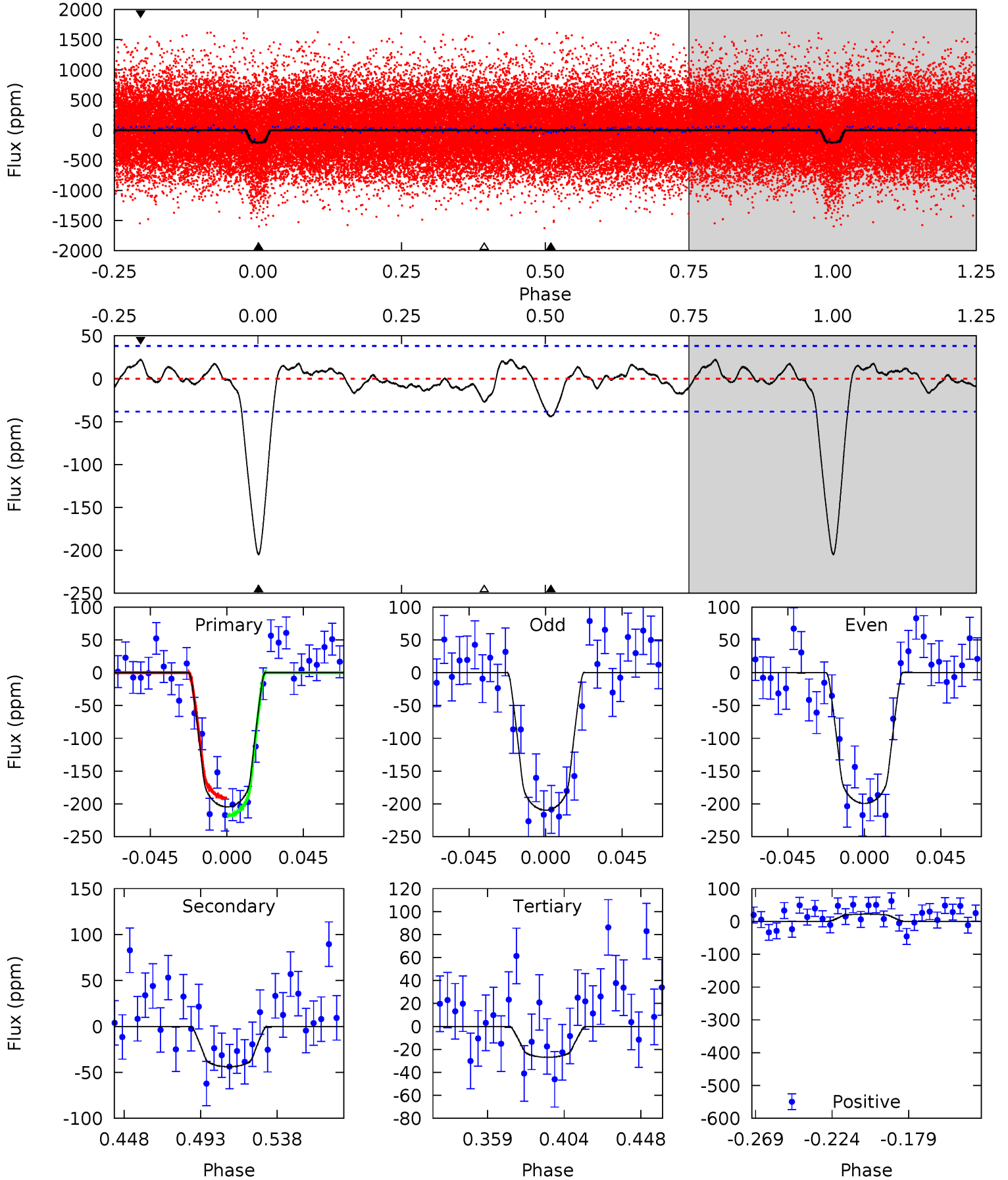
TCE 005271608-01 P= 2.490475 Days $T_0=133.441865$ (BKJD)



DV Model-Shift Uniqueness Test

005271608-01, P = 2.490450 Days, E = 133.448214 Days

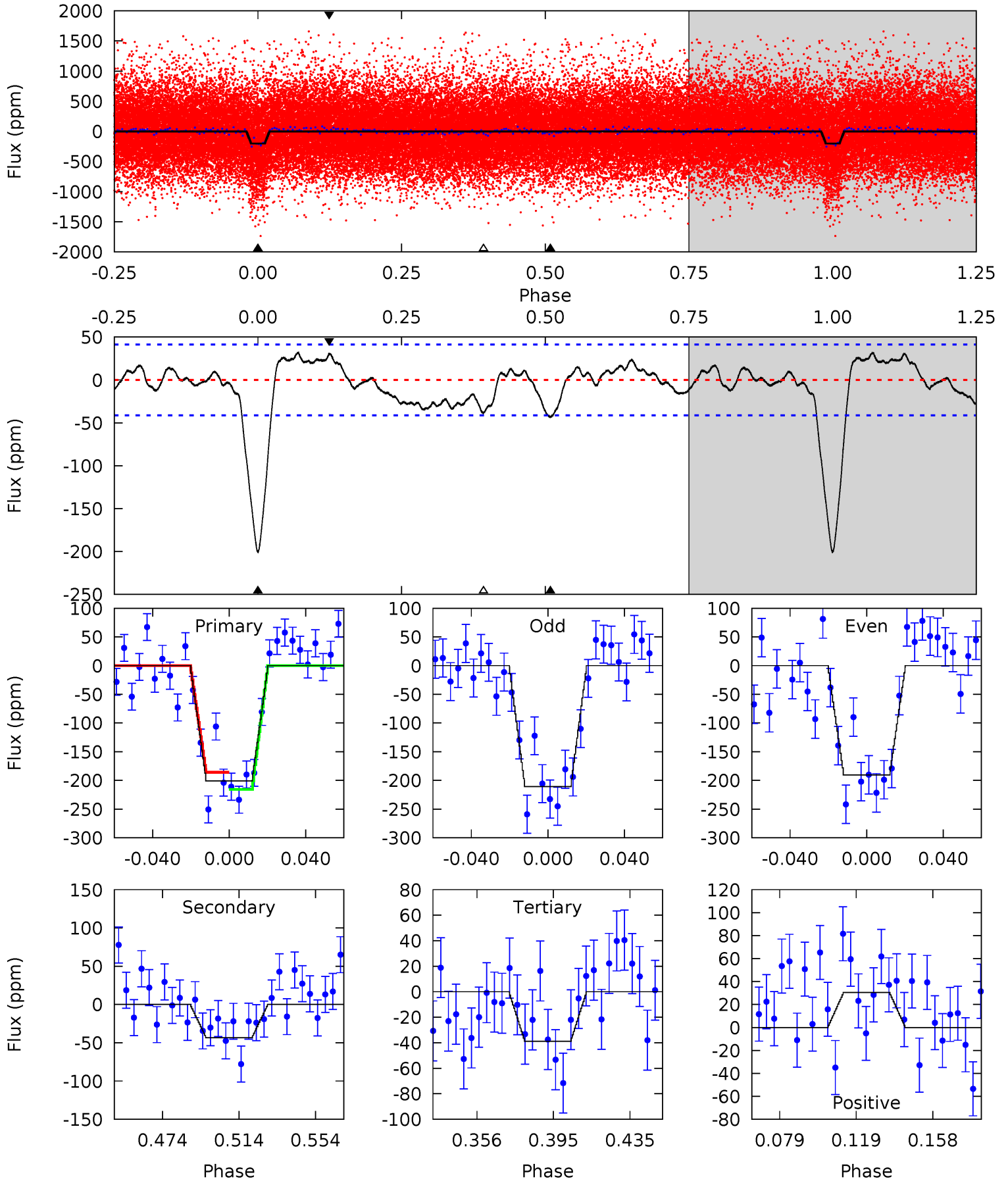
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.3	5.44	3.33	2.73	4.73	2.01	1.28	22.0	22.6	2.11	2.70	0.64	0.95	0.10	1.66



Alt Model-Shift Uniqueness Test

005271608-01, P = 2.490475 Days, E = 133.441865 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.1	4.99	4.47	3.50	4.76	2.06	1.98	18.6	19.6	0.52	1.48	1.14	1.03	0.14	1.70



Stellar Parameters For KIC 005271608

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6067^{+190}_{-232}	$4.433^{+0.087}_{-0.203}$	$-0.240^{+0.300}_{-0.300}$	$0.997^{+0.309}_{-0.133}$	$0.981^{+0.143}_{-0.117}$	$1.396^{+0.530}_{-0.699}$
	+3%/-4%	+2%/-5%	+125%/-125%	+31%/-13%	+15%/-12%	+38%/-50%
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 005271608-01 / KOI 1673.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-44 ± 8	$1.65^{+0.72}_{-0.75}$	1996^{+163}_{-109}	4327^{+1117}_{-575}	11^{+26}_{-6}
Alt.	-43 ± 9	$1.59^{+0.74}_{-0.65}$	2003^{+144}_{-114}	4310^{+1075}_{-543}	11^{+23}_{-6}

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

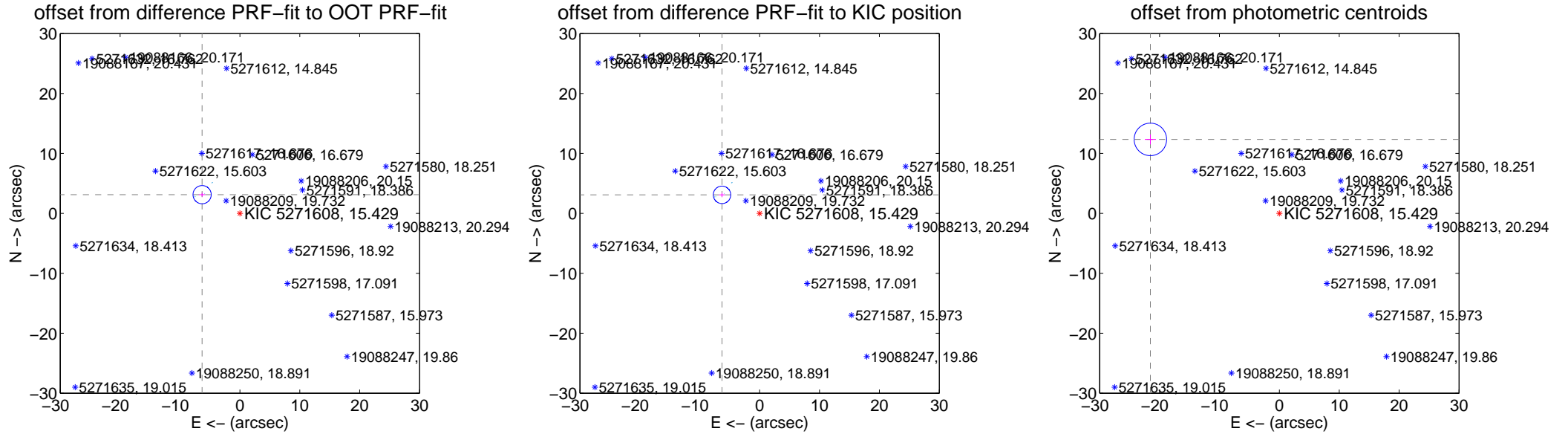
DV Centroid Data

Supplemental centroid analysis for 005271608-01. Kepler magnitude: 15.43. Transit SNR 16.10

There are 7 quarters with good PRF difference image offsets

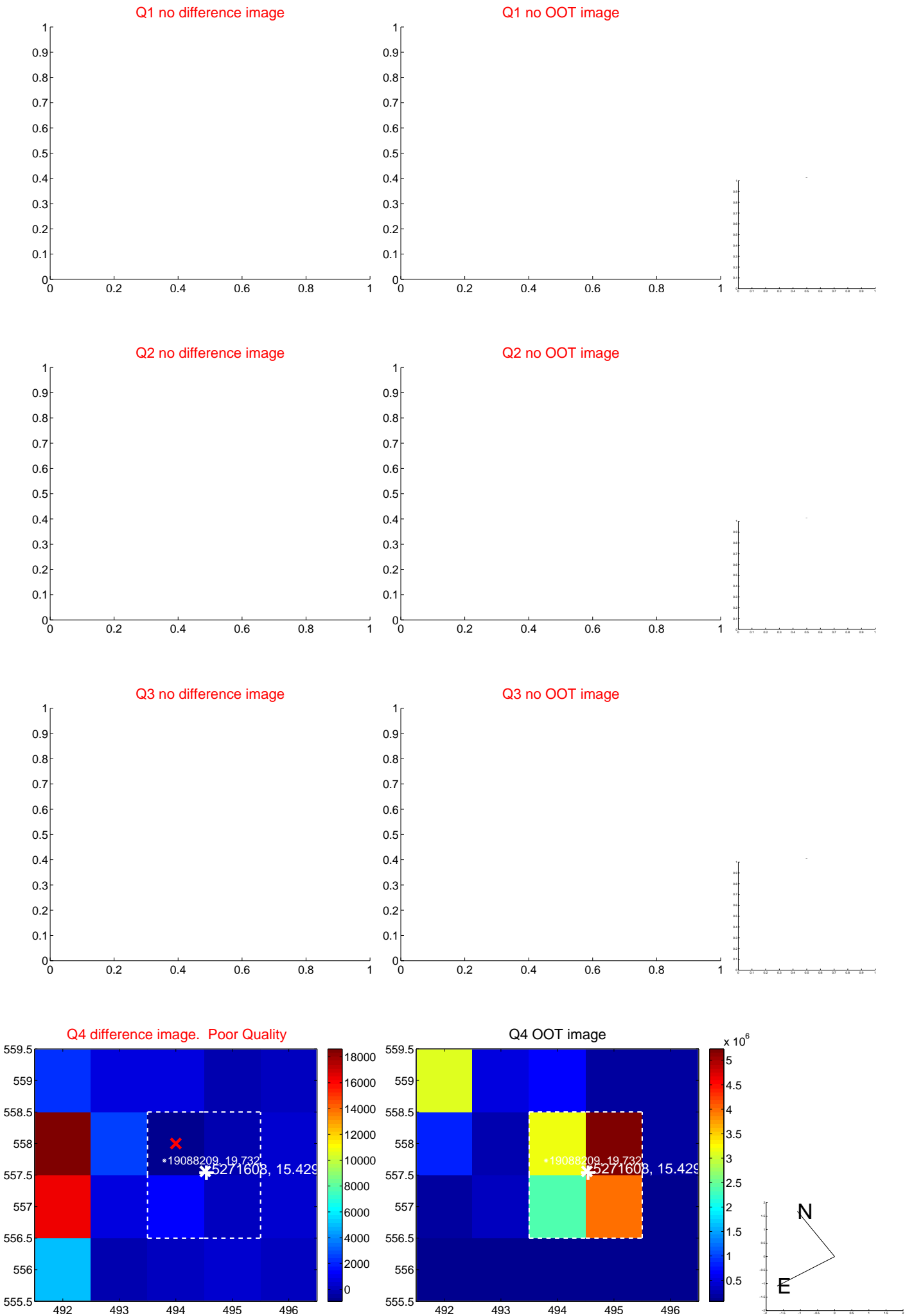
The direct PRF centroid is offset from the target star catalog position by about 0.01 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	7.036 \pm 0.507	13.89	6.306 \pm 0.540	3.120 \pm 0.340
PRF-fit source offset from KIC position	6.999 \pm 0.486	14.42	6.280 \pm 0.512	3.089 \pm 0.355
photometric centroid source offset	24.82 \pm 0.90	27.47	21.54 \pm 0.93	12.34 \pm 0.83

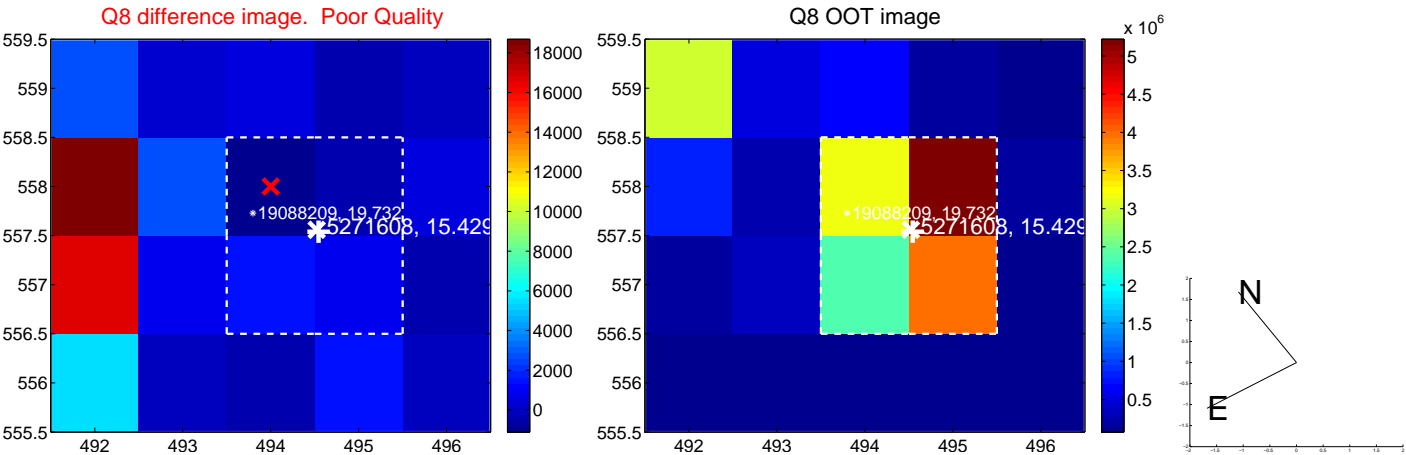
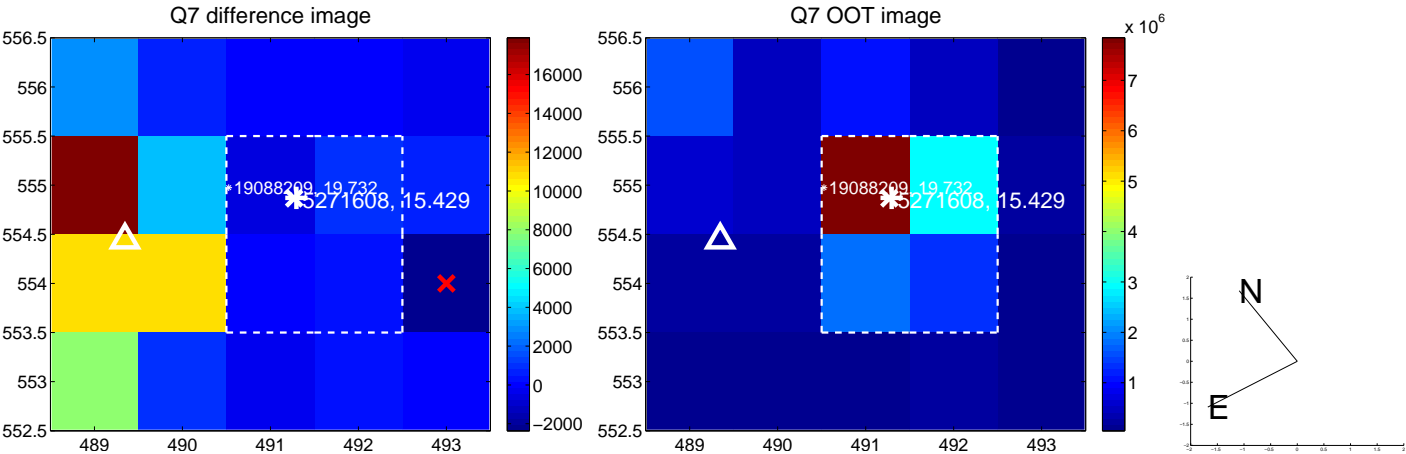
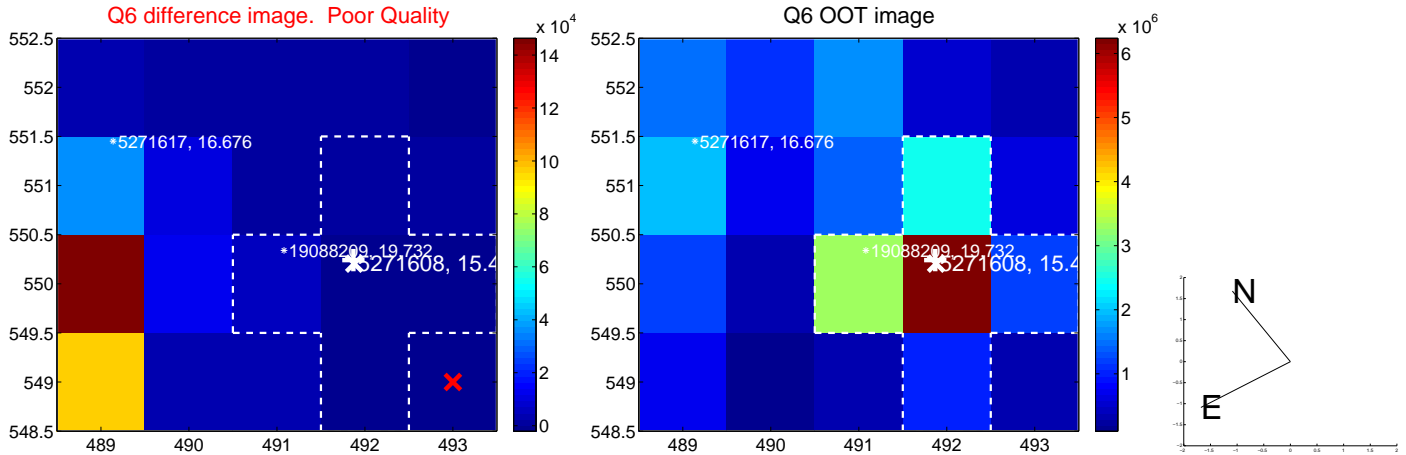
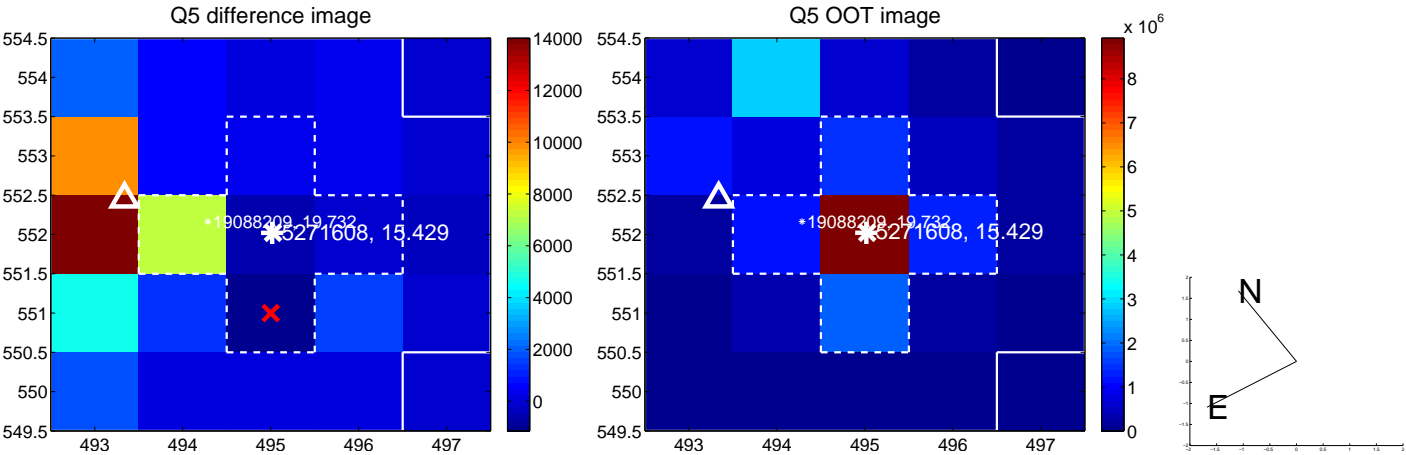


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

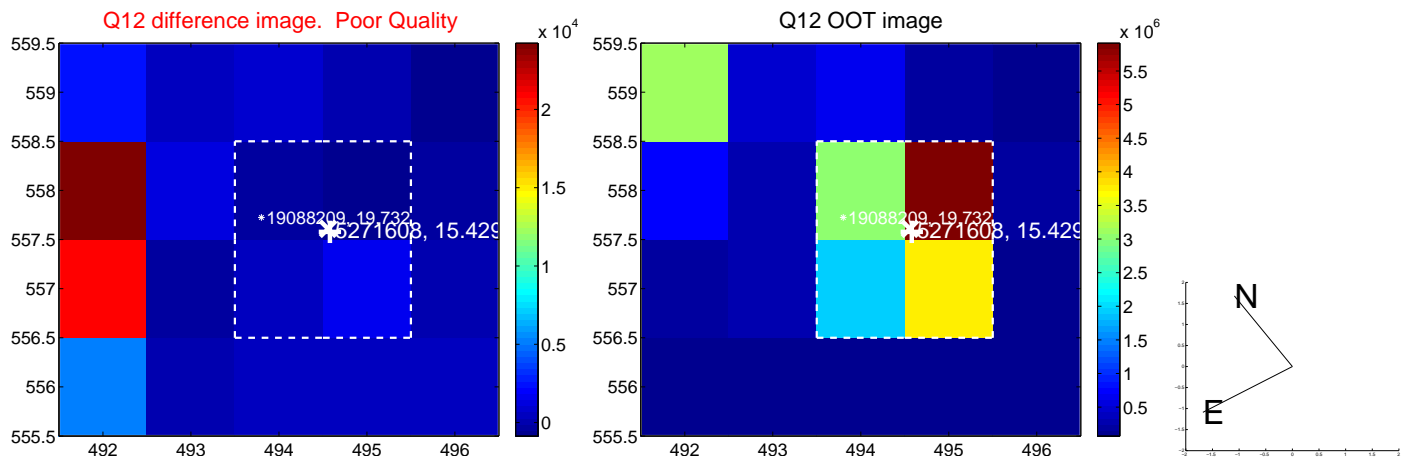
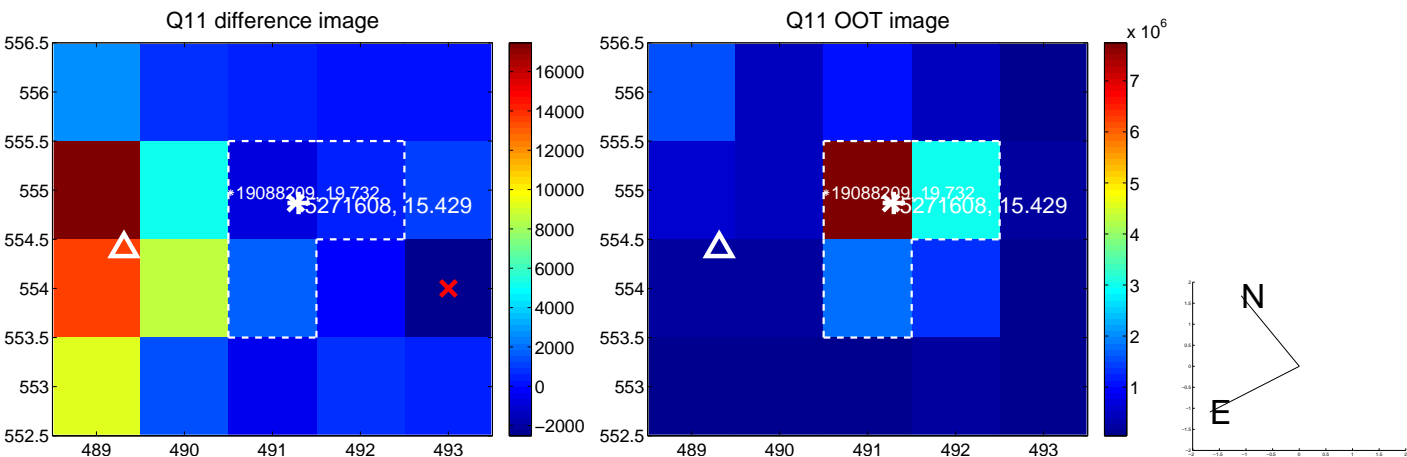
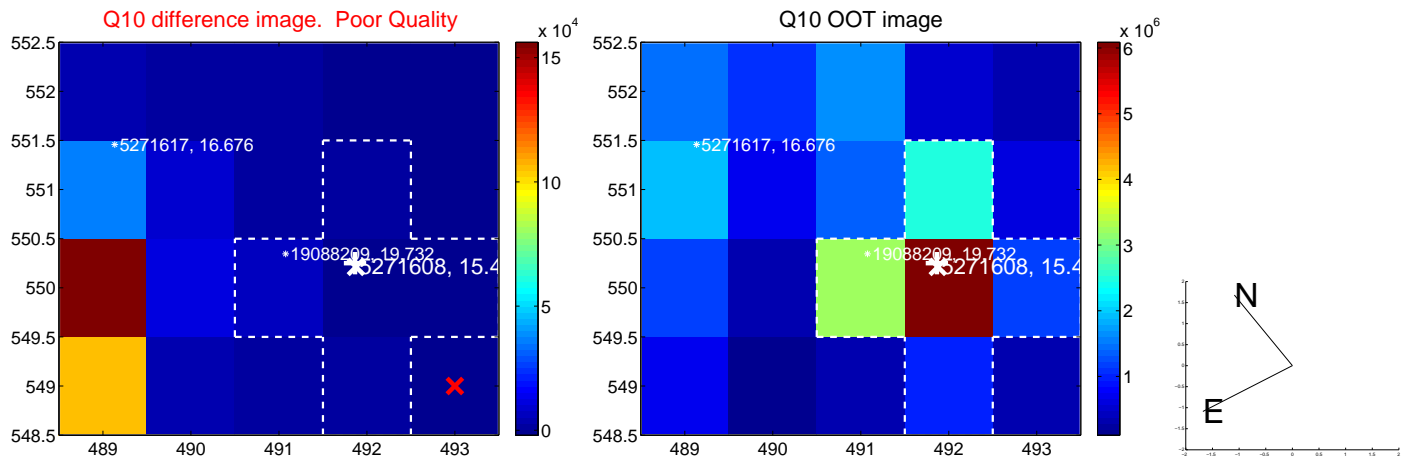
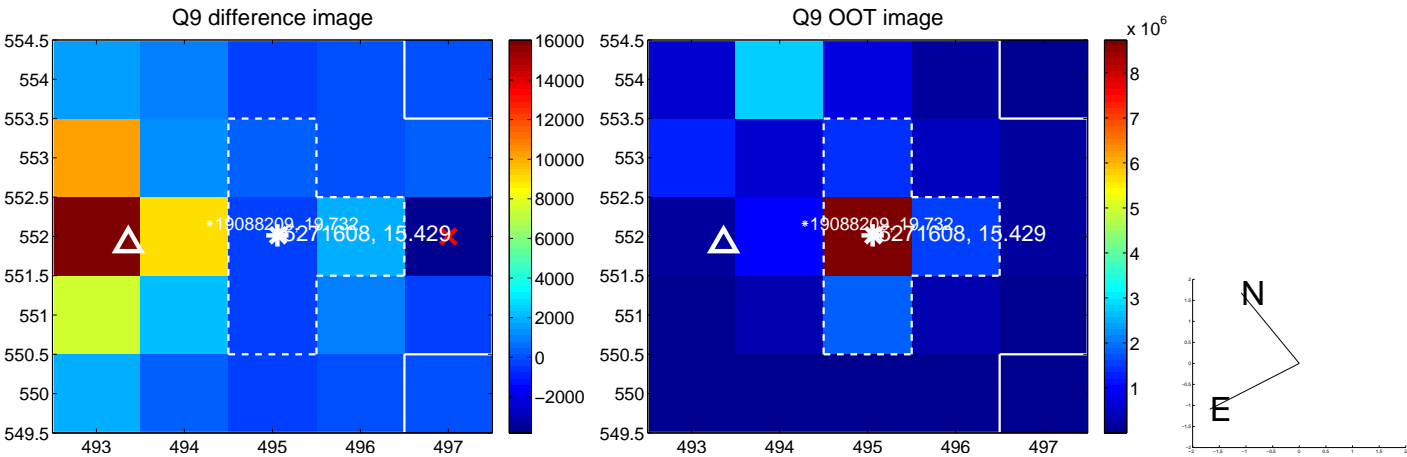
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



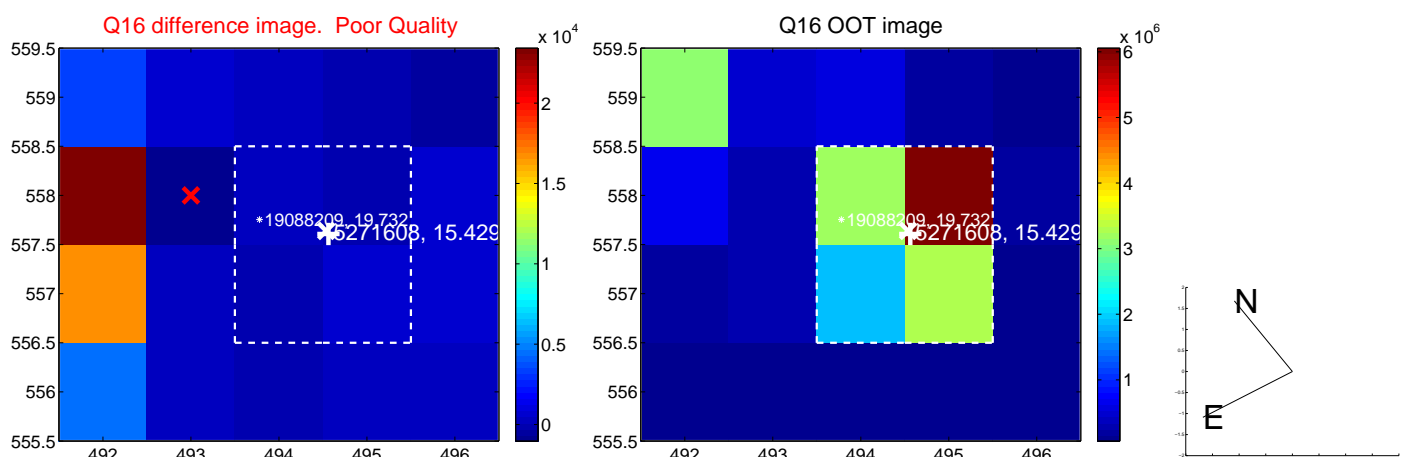
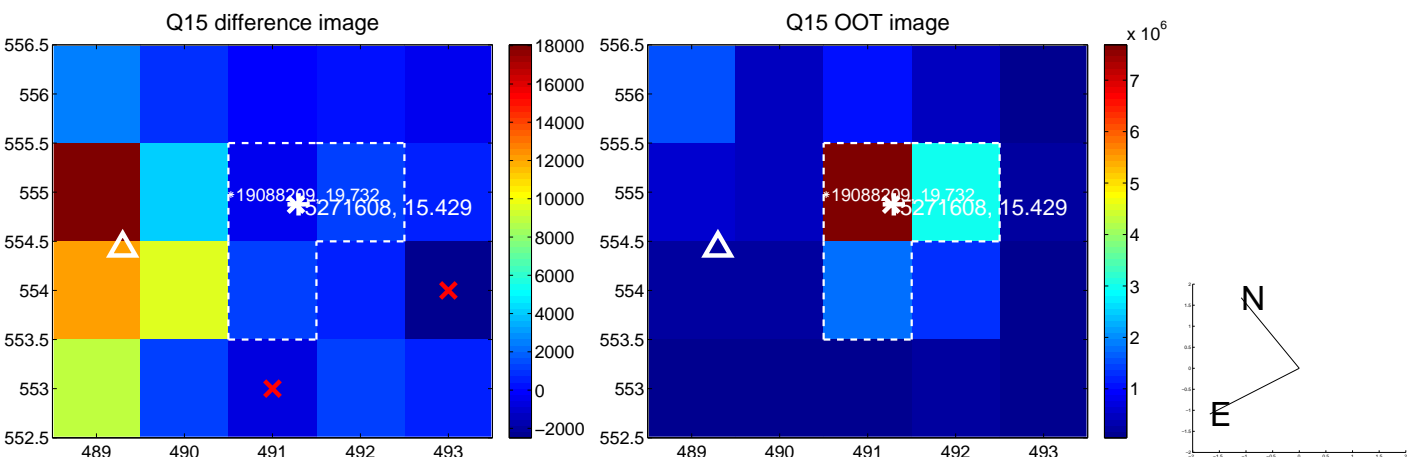
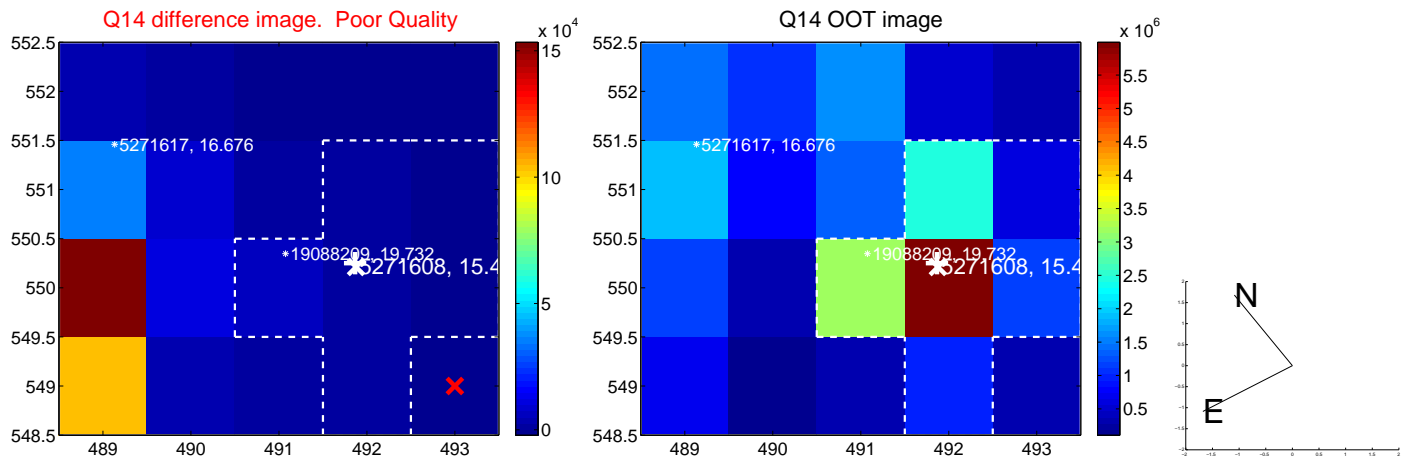
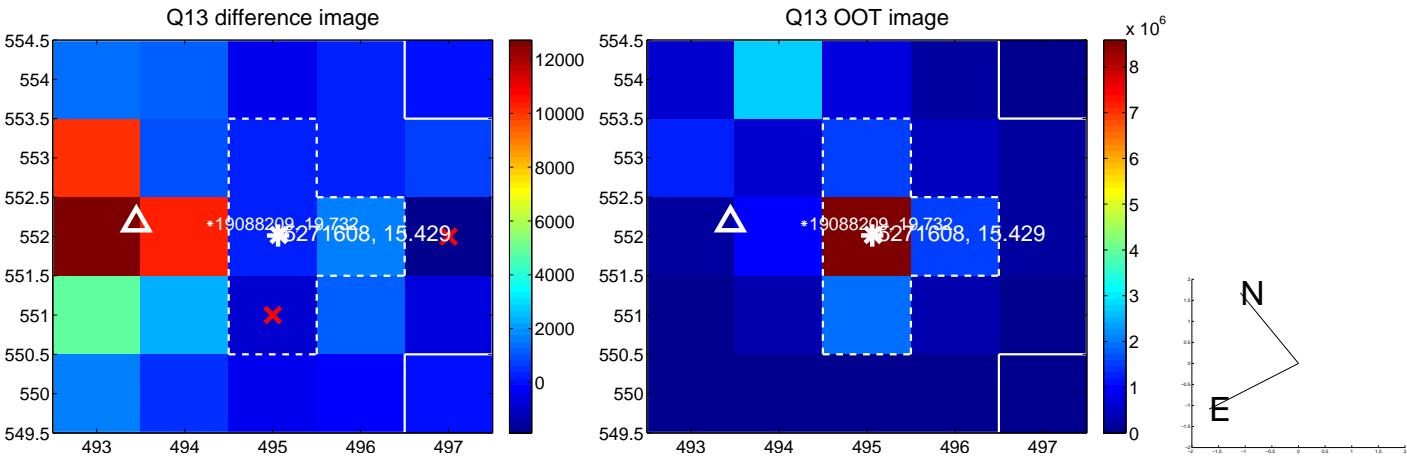
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



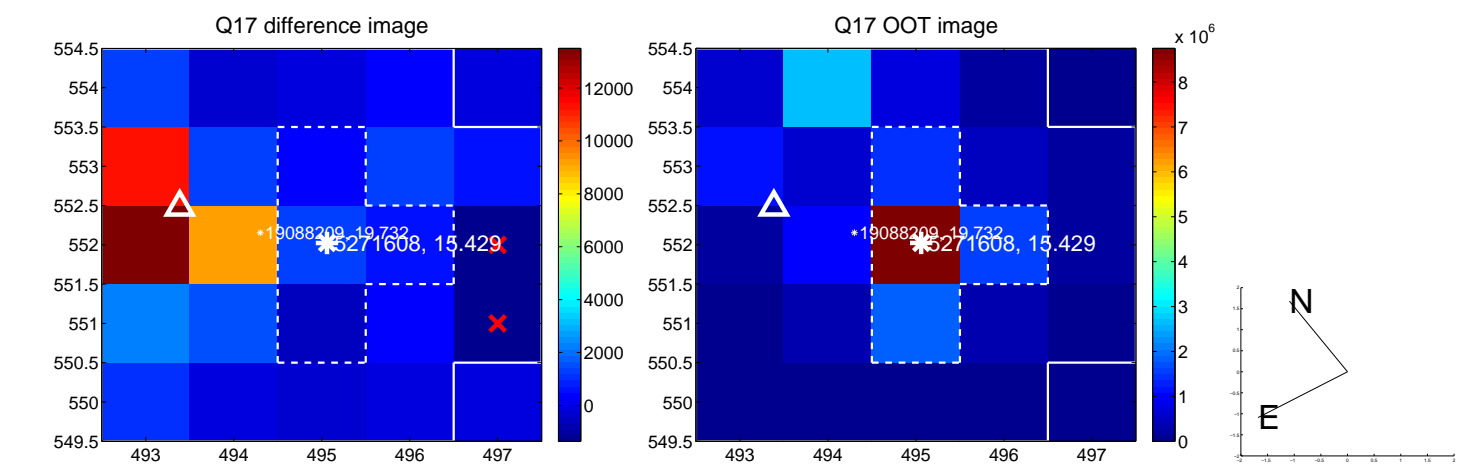
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



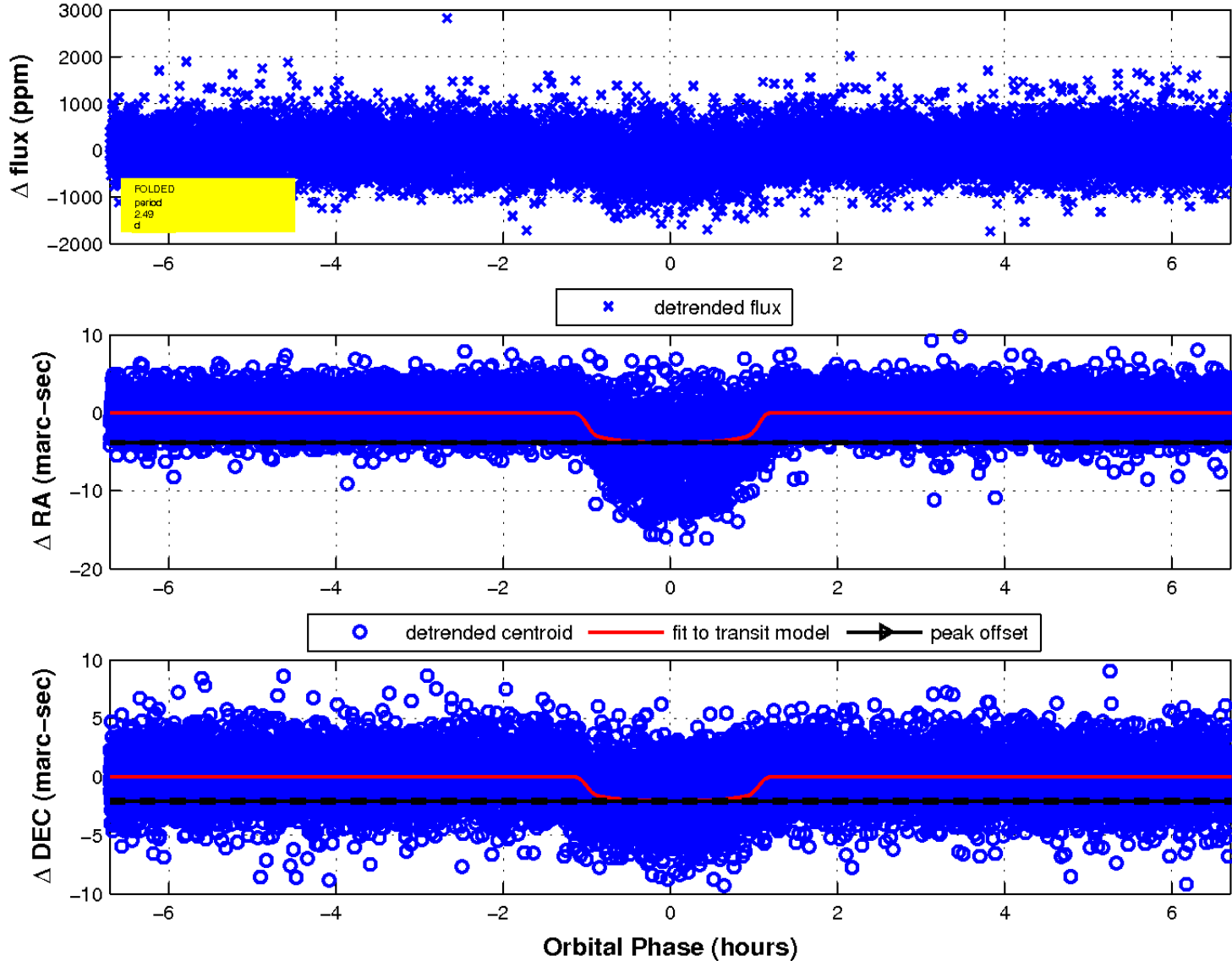
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

