

KIC 005562090

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})
005562090-01	OBS	2664.01	28.842922	143.829464	807.4	2.893	13.1	15.3	0.79	5151	2.56	13.79

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005562090-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT

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 005562090-01

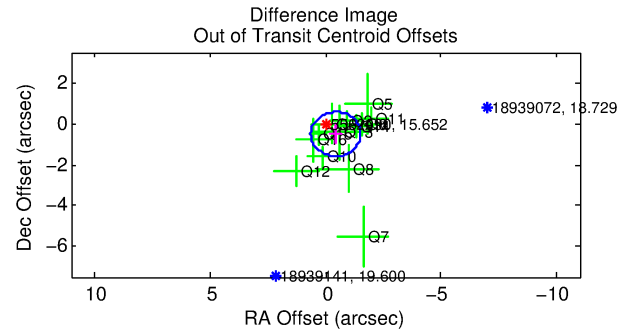
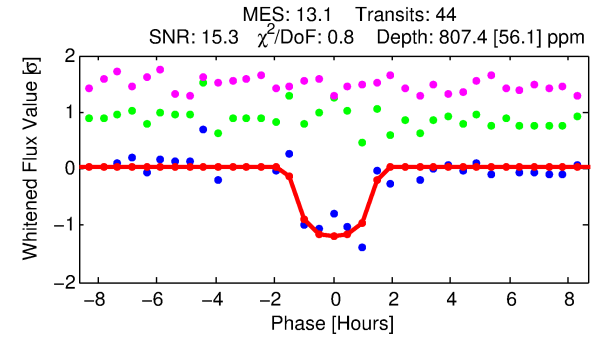
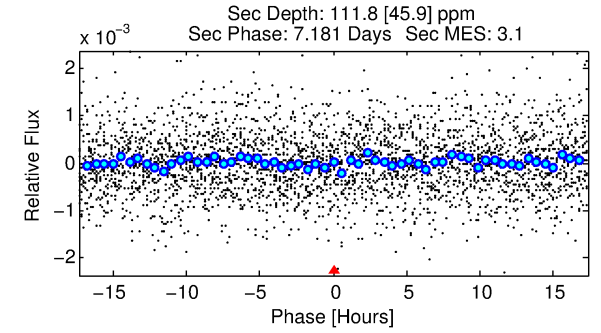
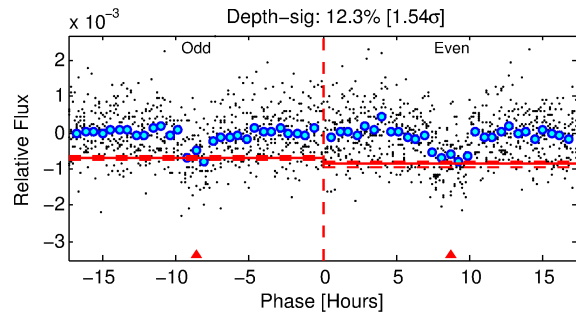
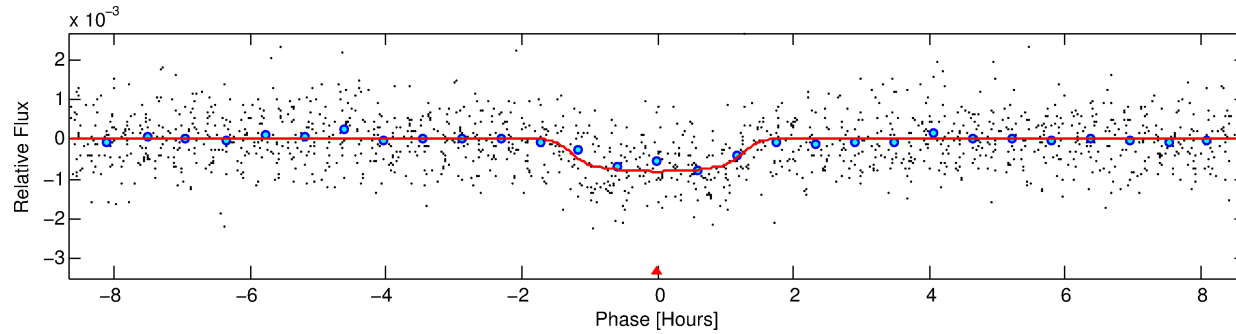
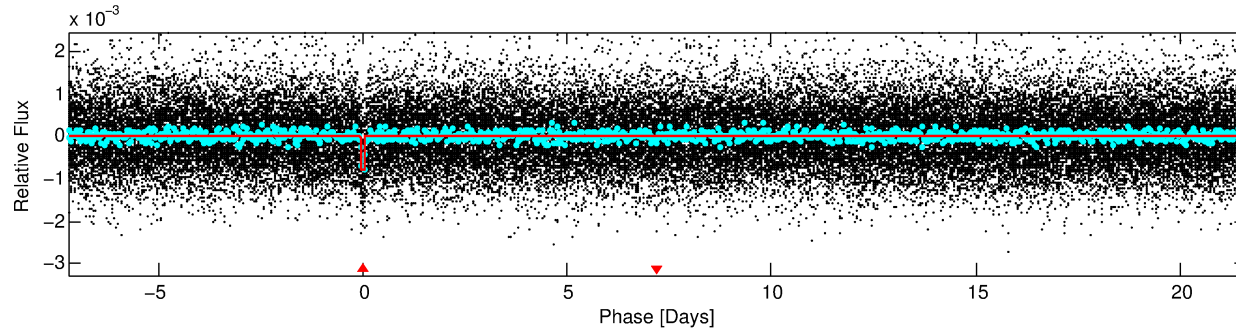
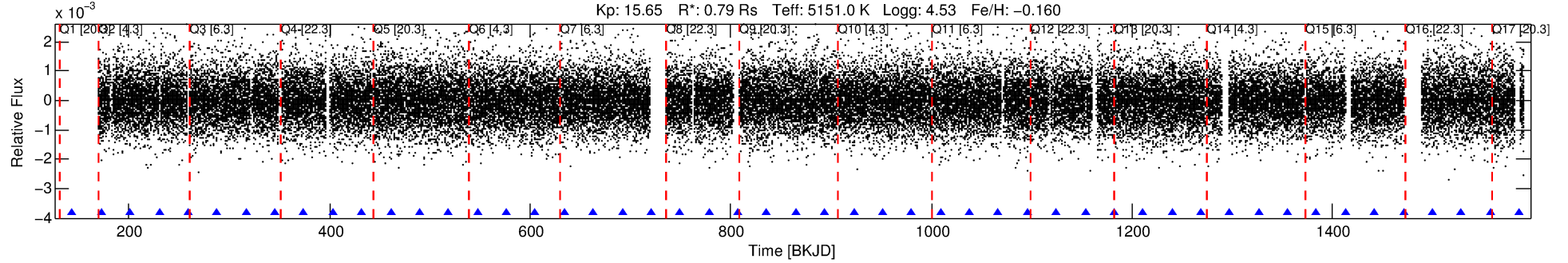
No Significant Match Found

DV One-Page Summary

KIC: 5562090 Candidate: 1 of 1 Period: 28.843 d

KOI: K02664.01 Corr: 0.956

Kp: 15.65 R*: 0.79 Rs Teff: 5151.0 K Logg: 4.53 Fe/H: -0.160



DV Fit Results:

Period = 28.84292 [0.00017] d
Epoch = 143.8295 [0.0049] BKJD
Rp/R* = 0.0299 [0.0139]
a/R* = 45.25 [80.36]
b = 0.84 [0.64]
Seff = 13.79 [2.70]
Teq = 491 [24] K
Rp = 2.56 [1.23] Re
a = 0.1679 [0.0164] AU
Ag = 263.97 [271.28] [0.97σ]
Teffp = 3062 [785] K [3.27σ]

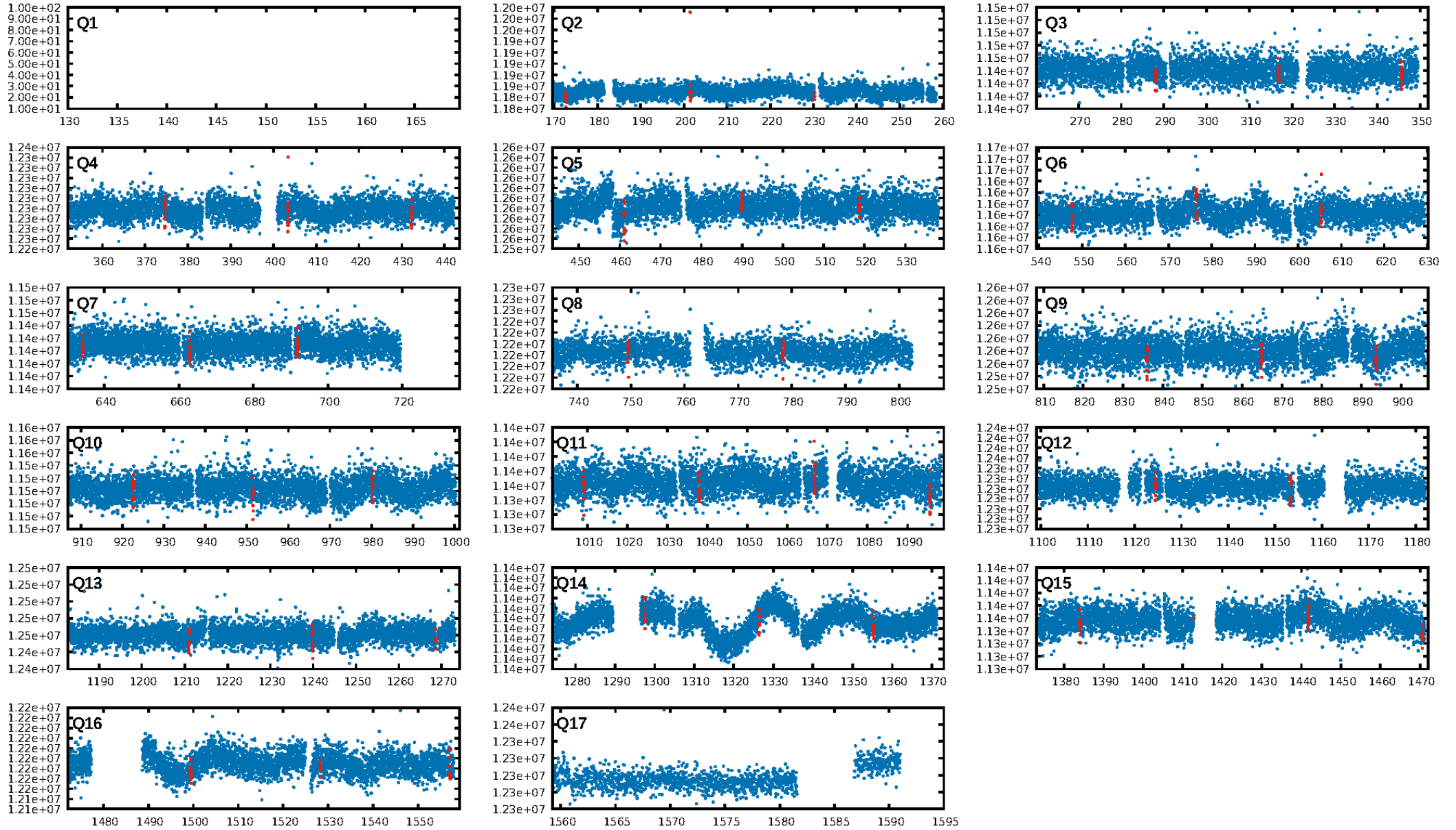
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 43.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 4.36e-39
RollingBand-fgt: 1.00 [44/44]
GhostDiagnostic-chr: 14.47
Centroid-sig: 44.6%
Centroid-so: 1.556 arcsec [1.53σ]
OotOffset-rm: 0.663 arcsec [1.84σ]
KicOffset-rm: 0.606 arcsec [1.54σ]
OotOffset-st: 4/3/3/3 [13]
KicOffset-st: 4/3/3/3 [13]
DiffImageQuality-fgm: 0.54 [7/13]
DiffImageOverlap-fno: 1.00 [15/15]

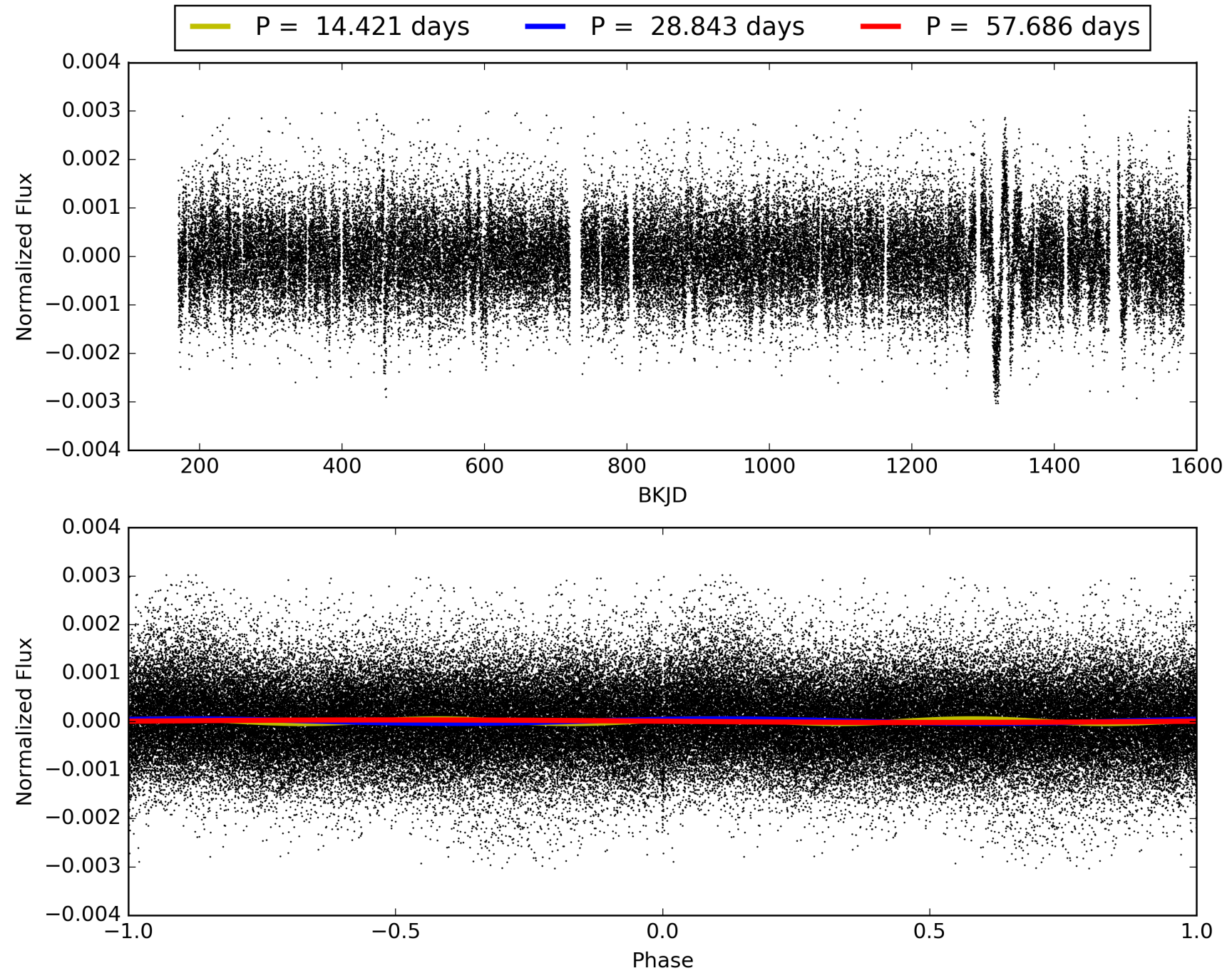
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 06:22:51 Z

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

TCE 005562090-01, PDC Light Curves

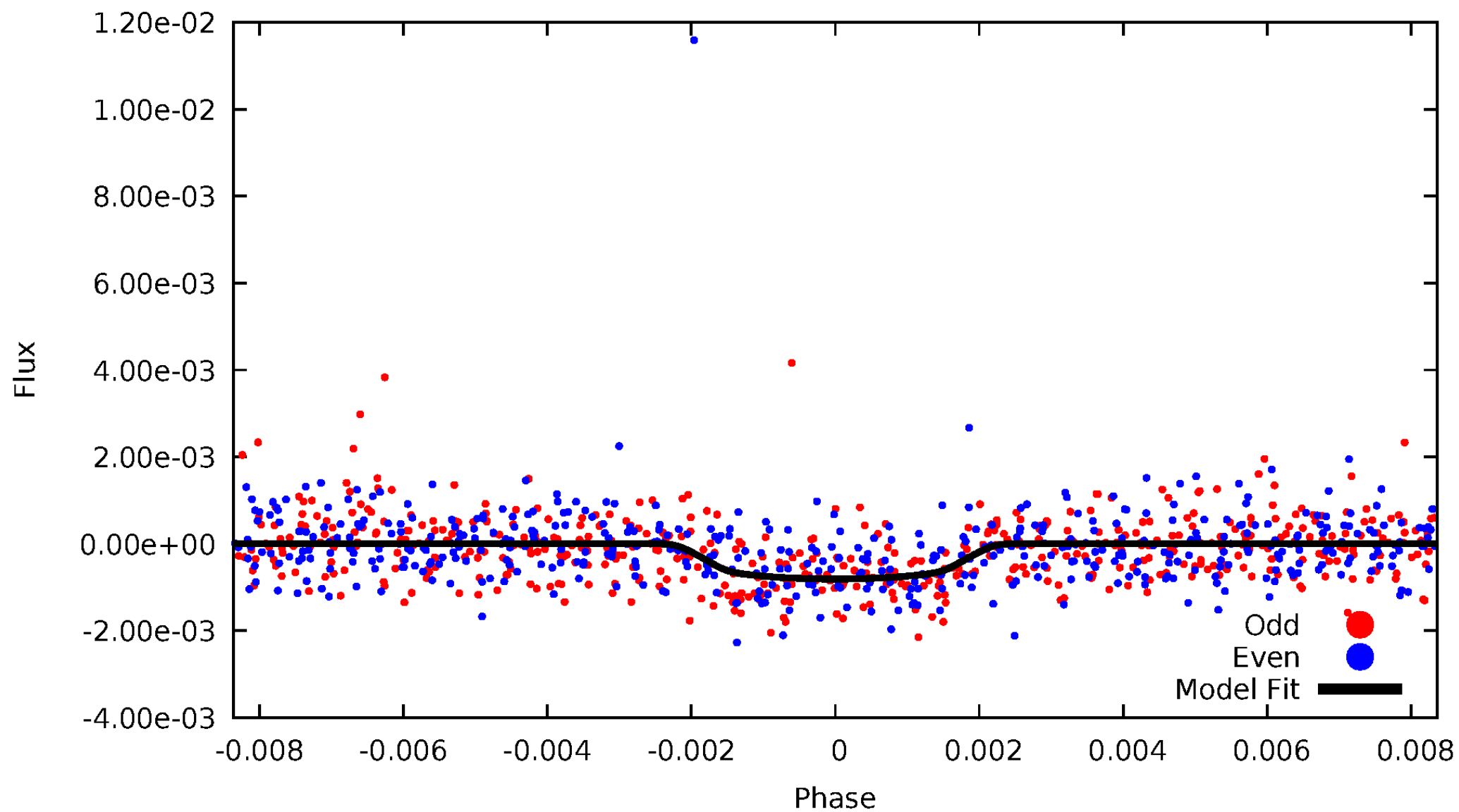


TCE 005562090-01



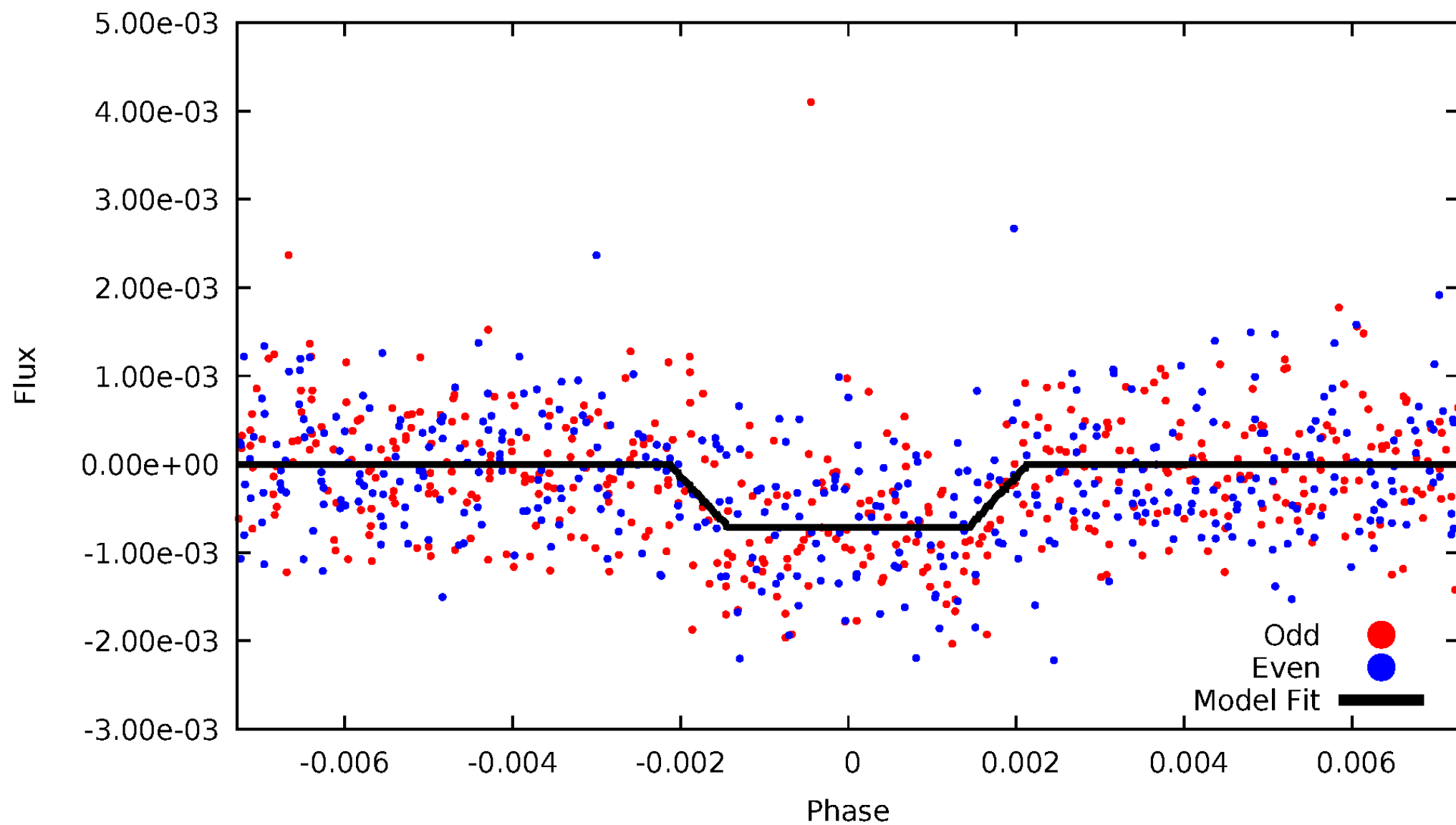
DV Odd/Even

TCE 005562090-01

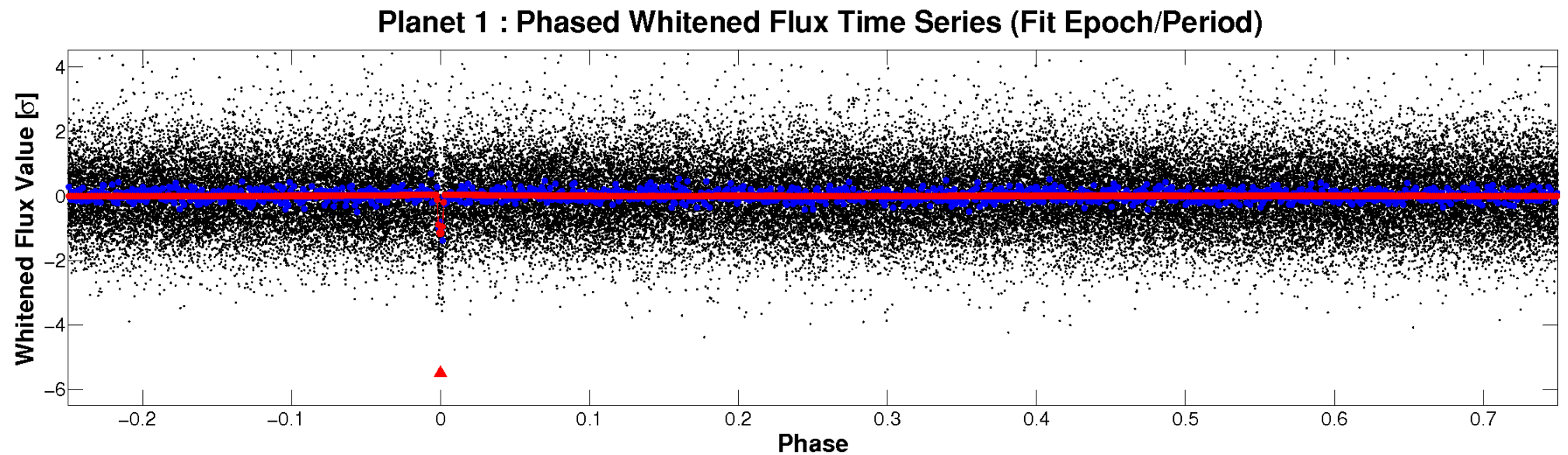
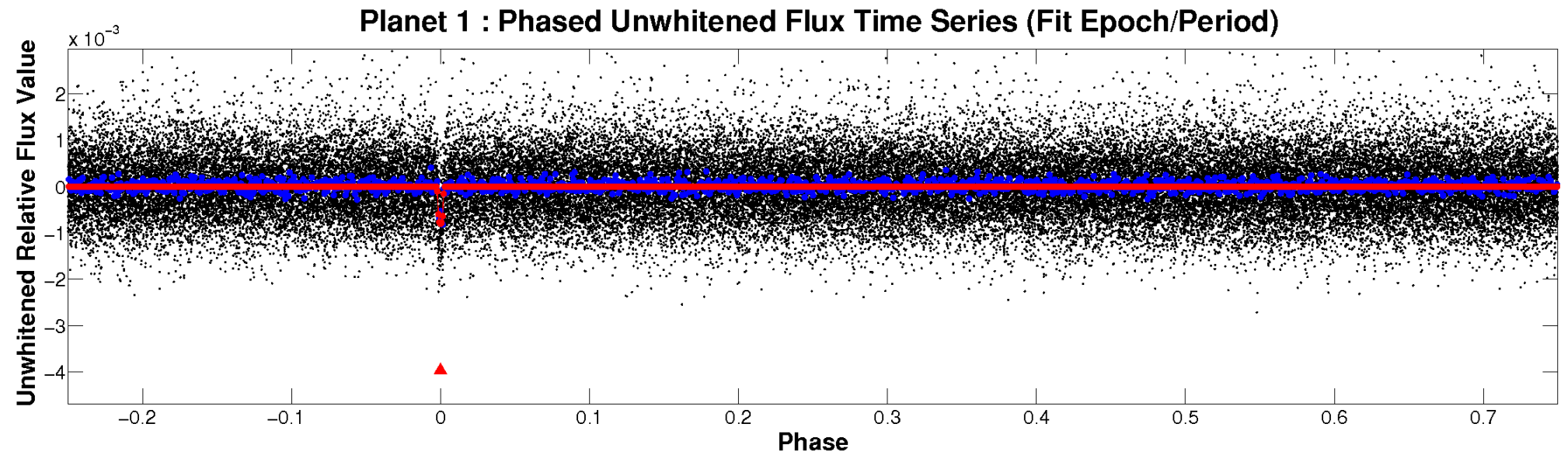


ALT Odd/Even

TCE 005562090-01

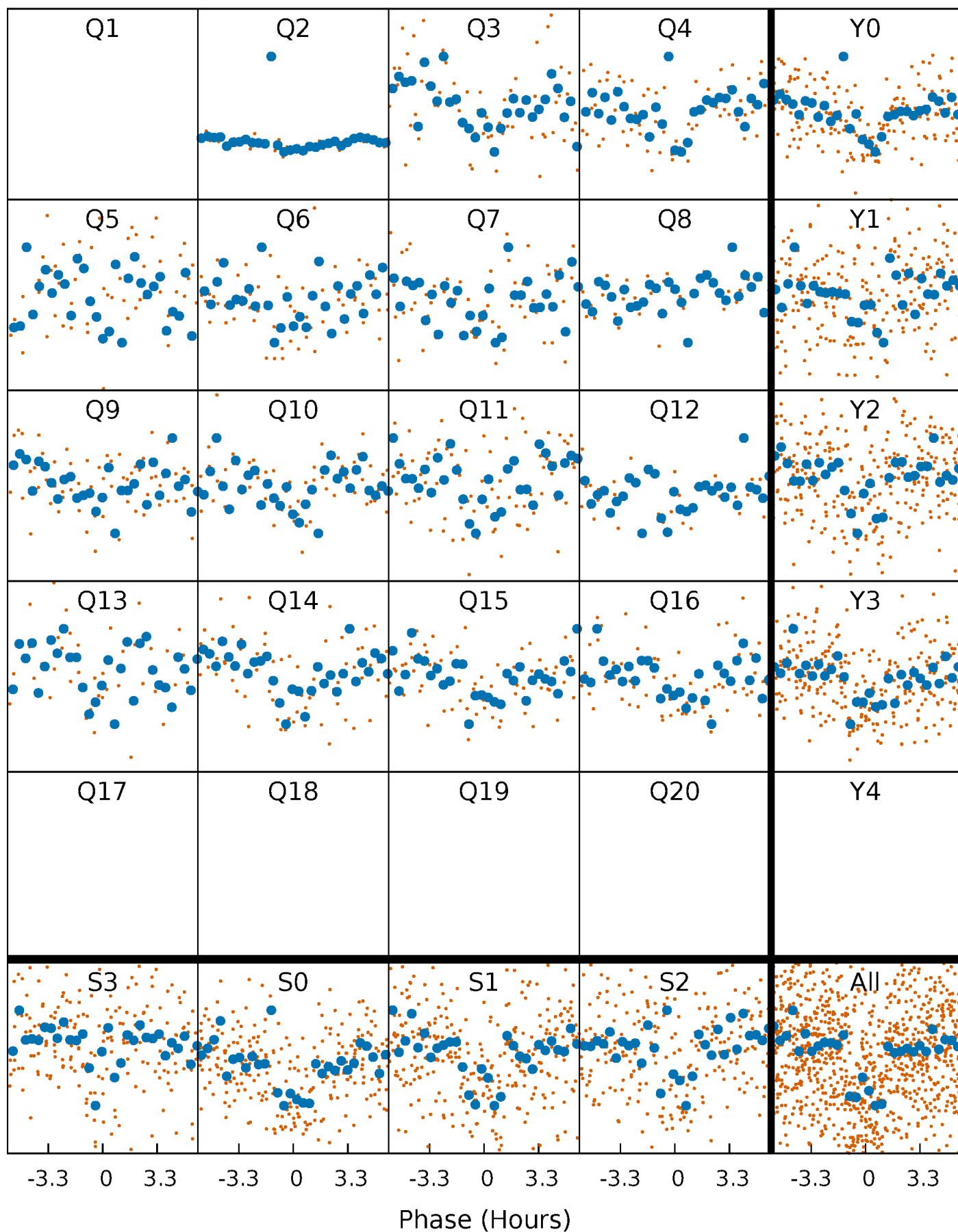


Non-Whitened Vs. Whitened Light Curve



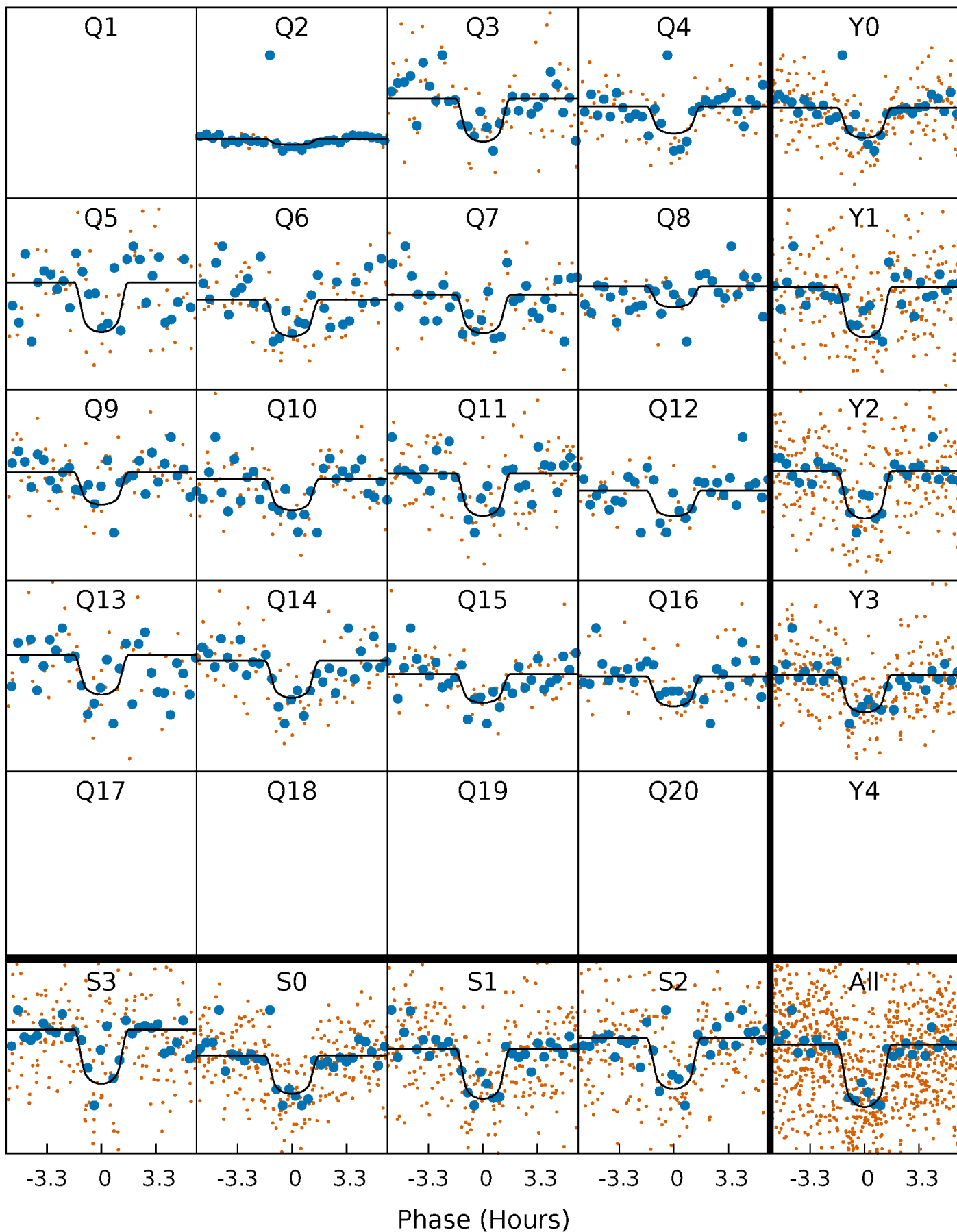
PDC Quarter-Phased Transit Curves

TCE 005562090-01 P= 28.842922 Days $T_0=143.829464$ (BKJD)



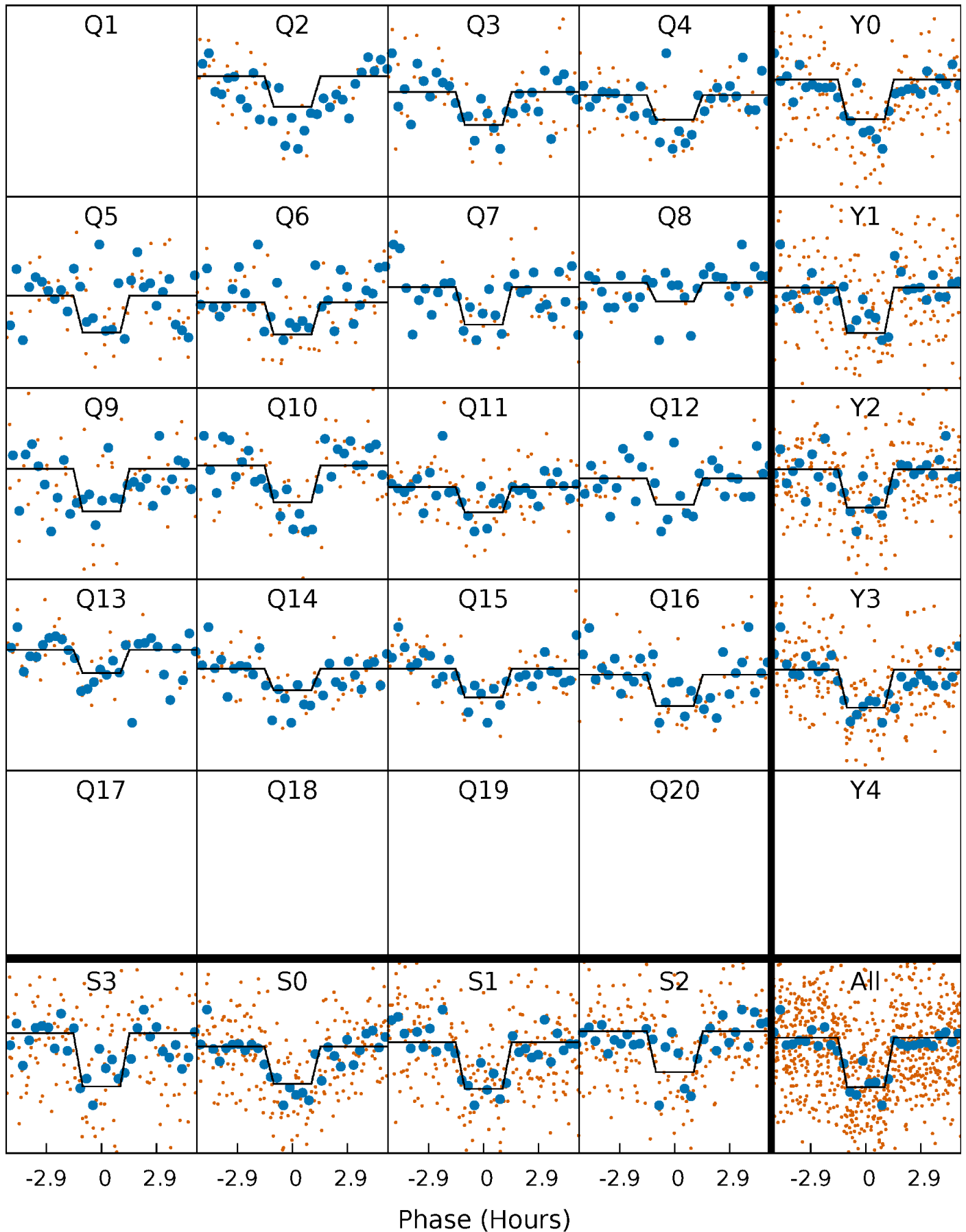
DV Quarter-Phased Transit Curves

TCE 005562090-01 P= 28.842922 Days $T_0=143.829464$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

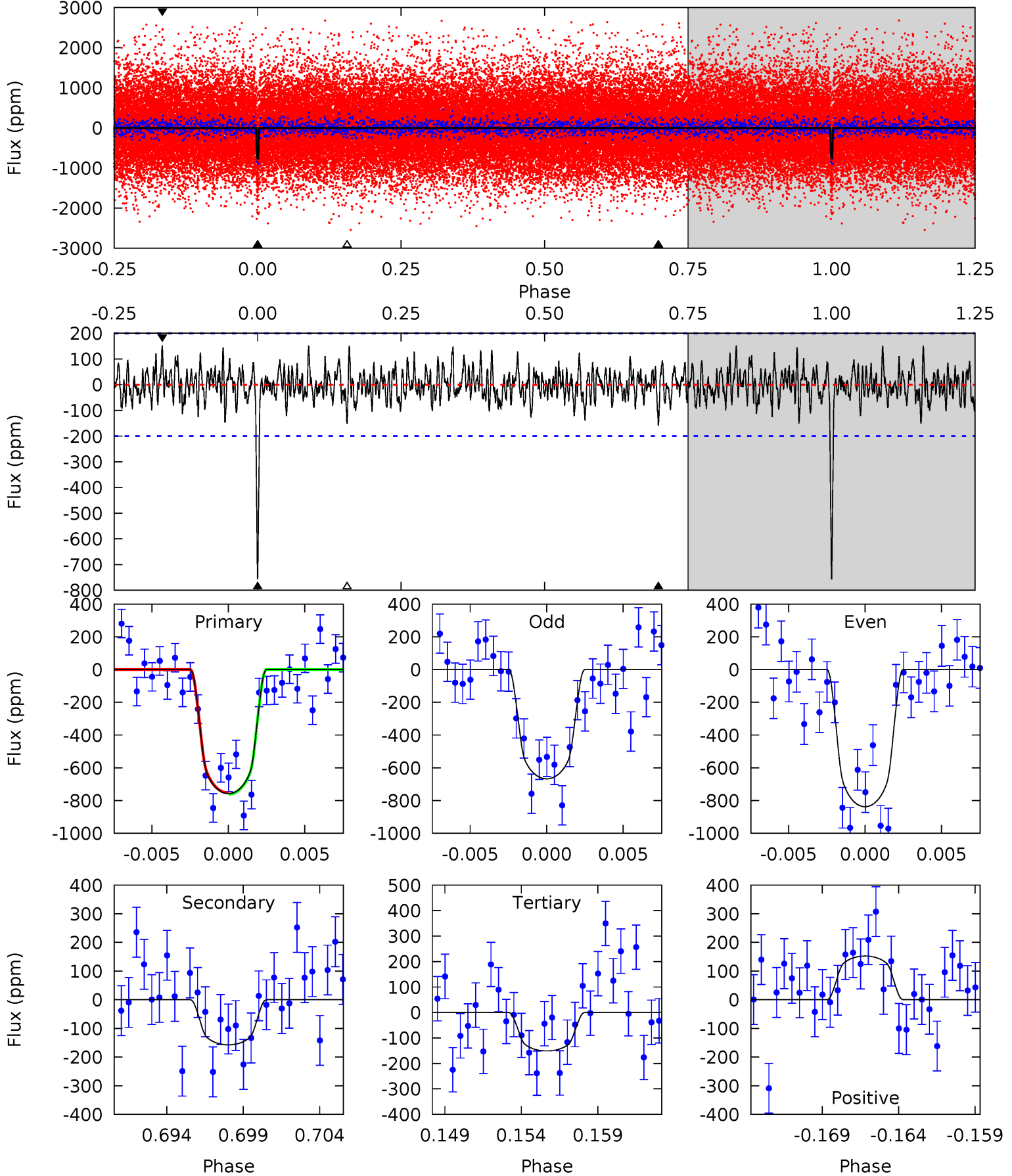
TCE 005562090-01 P= 28.843124 Days $T_0=143.822932$ (BKJD)



DV Model-Shift Uniqueness Test

005562090-01, P = 28.842922 Days, E = 143.829464 Days

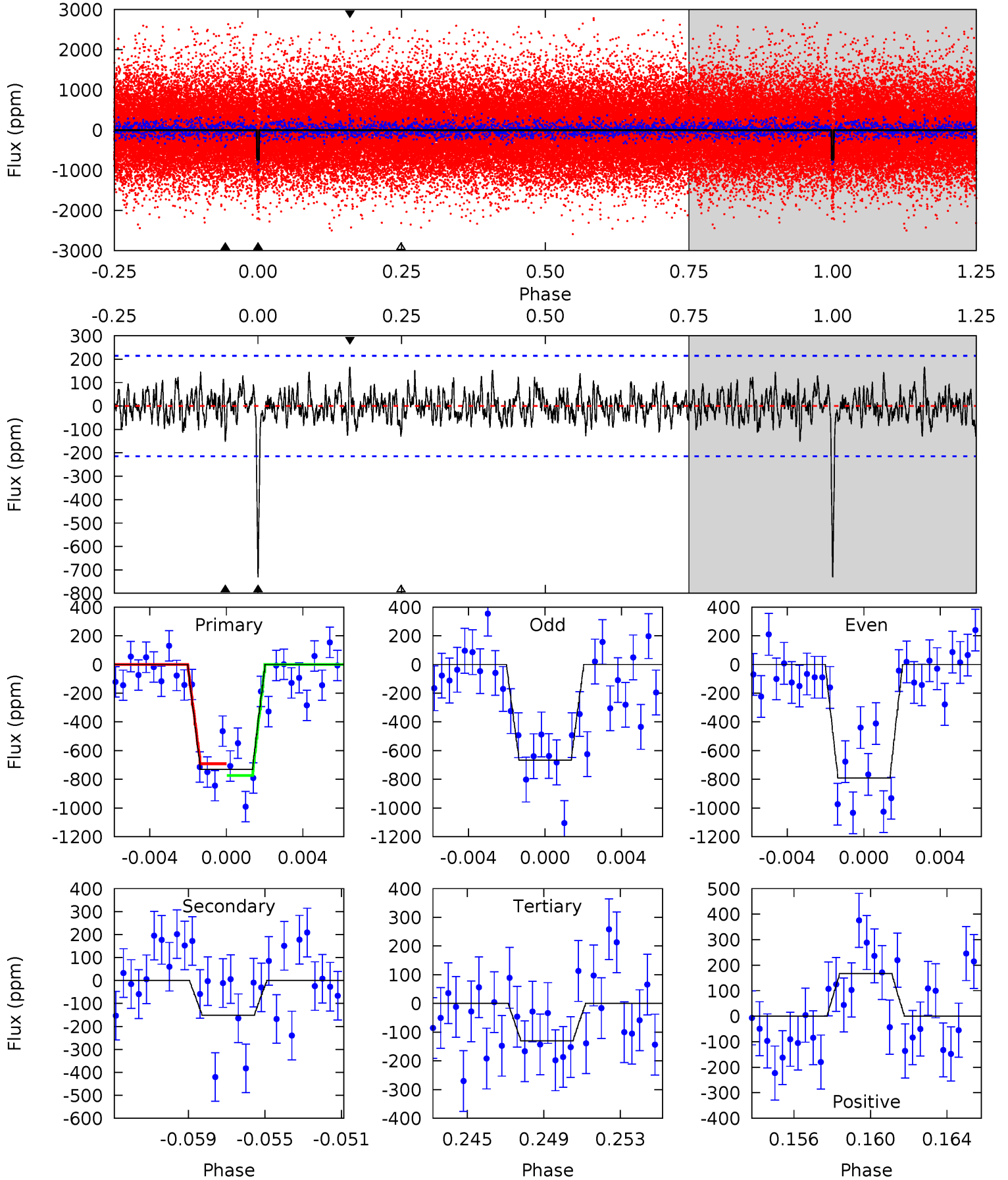
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.6	4.07	3.90	3.95	5.16	2.82	1.28	15.7	15.6	0.17	0.12	2.21	0.94	0.17	0.11



Alt Model-Shift Uniqueness Test

005562090-01, P = 28.843124 Days, E = 143.822932 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.7	3.66	3.14	4.05	5.19	2.86	1.16	14.6	13.7	0.52	-0.38	1.49	1.02	0.19	1.00



Stellar Parameters For KIC 005562090

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5151^{+168}_{-153}	$4.528^{+0.082}_{-0.067}$	$-0.160^{+0.300}_{-0.300}$	$0.785^{+0.088}_{-0.088}$	$0.758^{+0.098}_{-0.057}$	$2.209^{+0.747}_{-0.468}$
	+3%/-3%	+2%/-1%	+188%/-188%	+11%/-11%	+13%/-8%	+34%/-21%
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 005562090-01 / KOI 2664.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-157 ± 39	$2.56^{+1.20}_{-1.14}$	685^{+28}_{-28}	3706^{+889}_{-474}	383^{+900}_{-222}
Alt.	-151 ± 41	$2.30^{+1.21}_{-1.14}$	687^{+30}_{-30}	3809^{+1084}_{-509}	438^{+1286}_{-268}

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

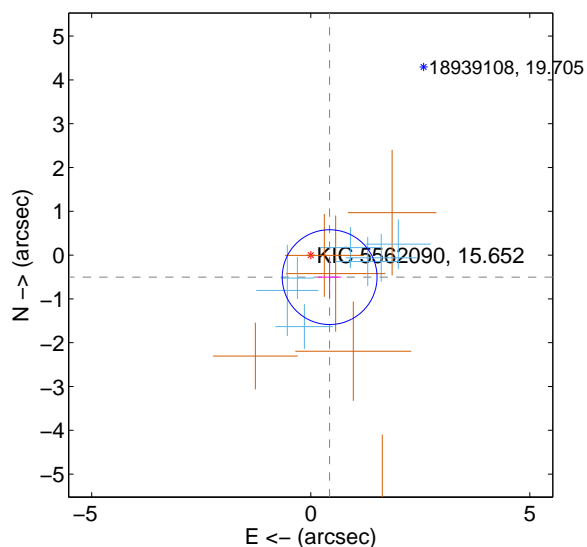
Supplemental centroid analysis for 005562090-01. Kepler magnitude: 15.65. Transit SNR 15.31

There are 7 quarters with good PRF difference image offsets

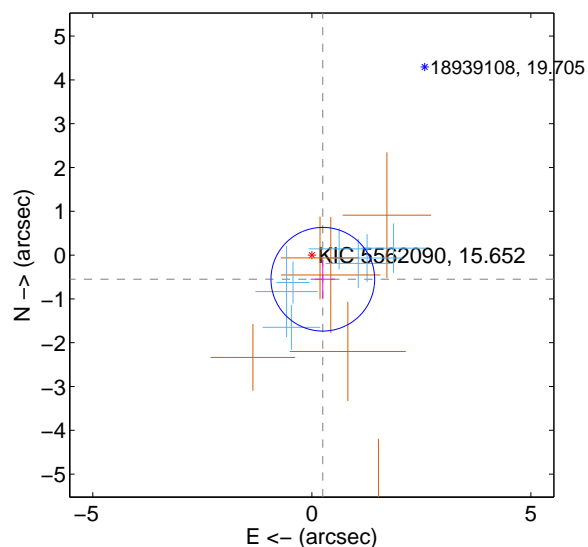
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.663 ± 0.361	1.84	-0.431 ± 0.267	-0.503 ± 0.469
PRF-fit source offset from KIC position	0.606 ± 0.394	1.54	-0.251 ± 0.277	-0.551 ± 0.436
photometric centroid source offset	1.56 ± 1.02	1.53	1.28 ± 1.02	-0.89 ± 1.02

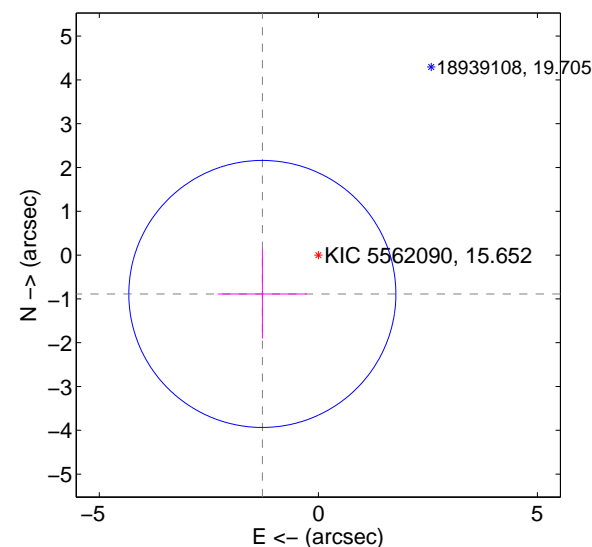
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

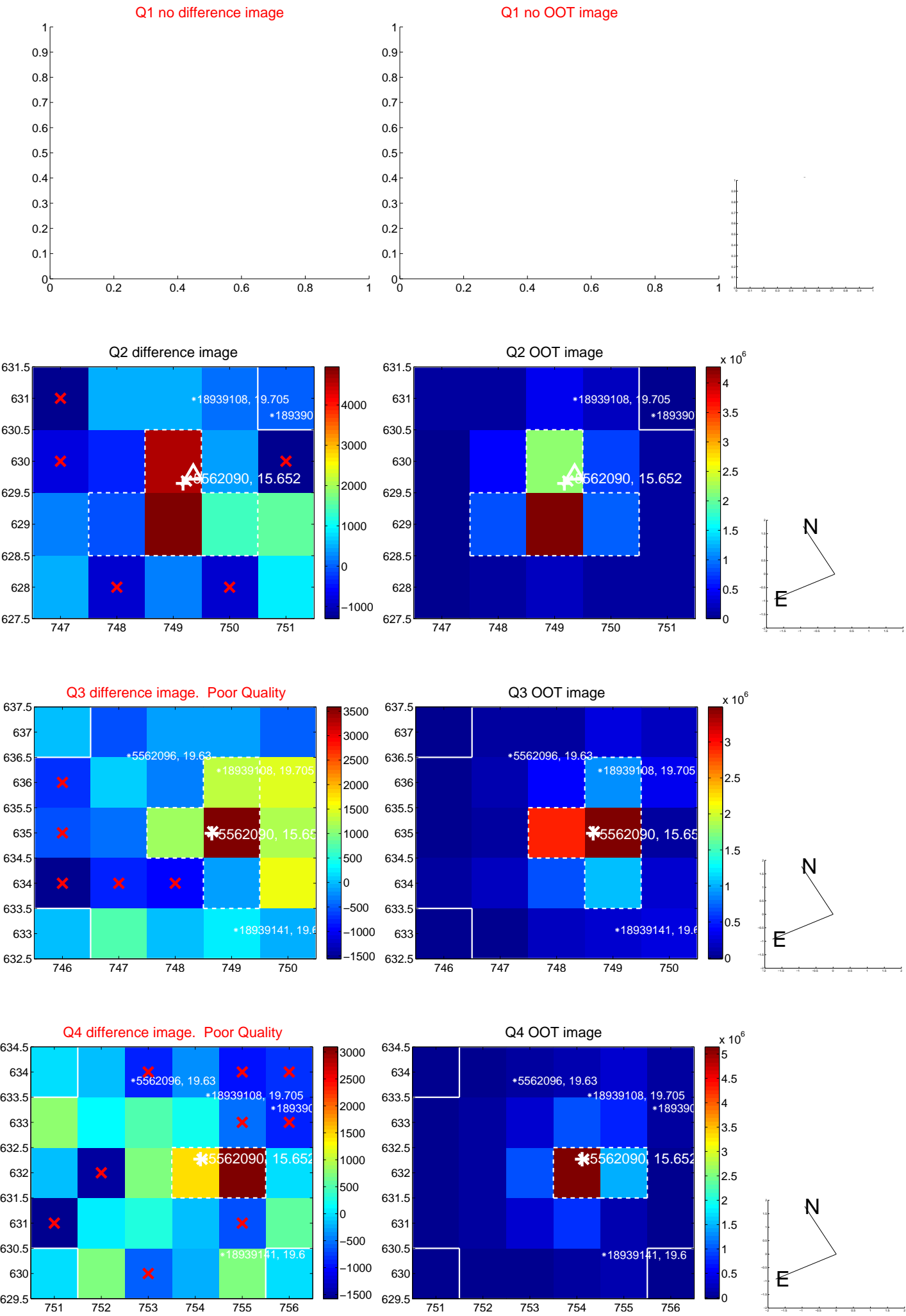


offset from photometric centroids

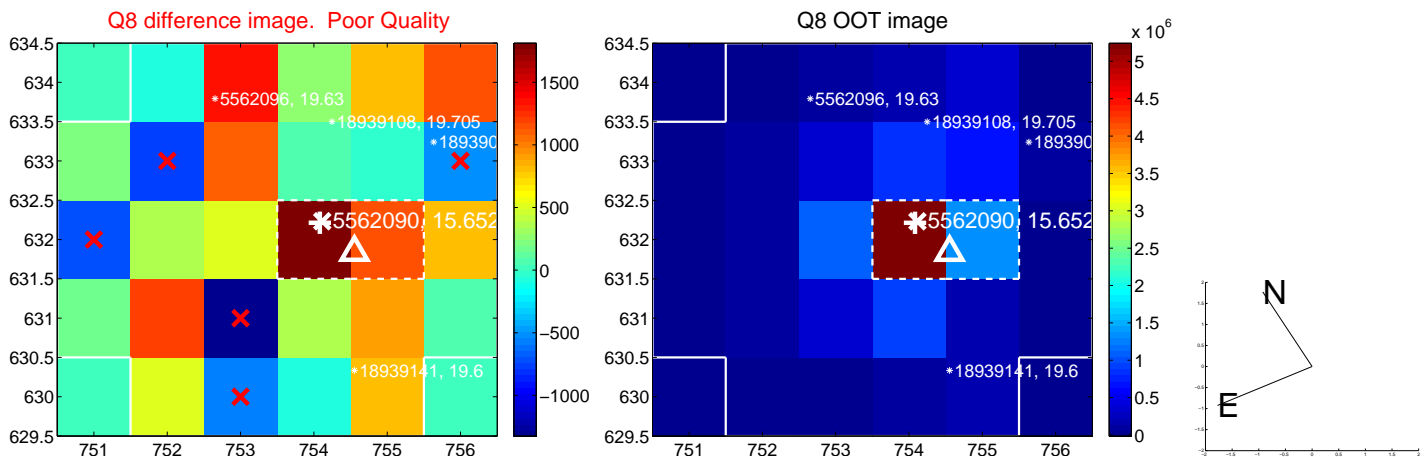
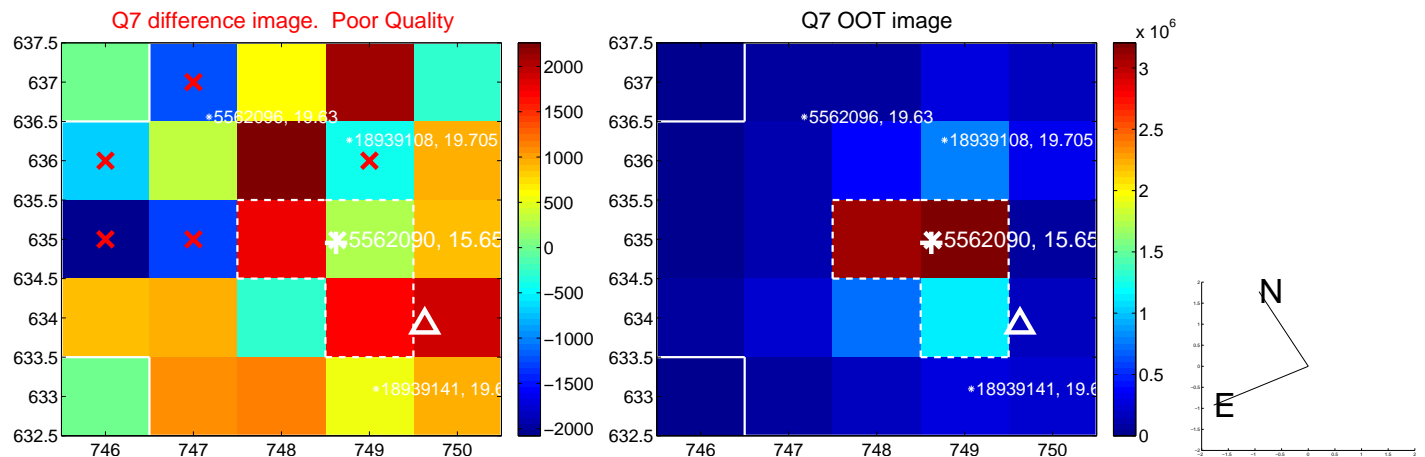
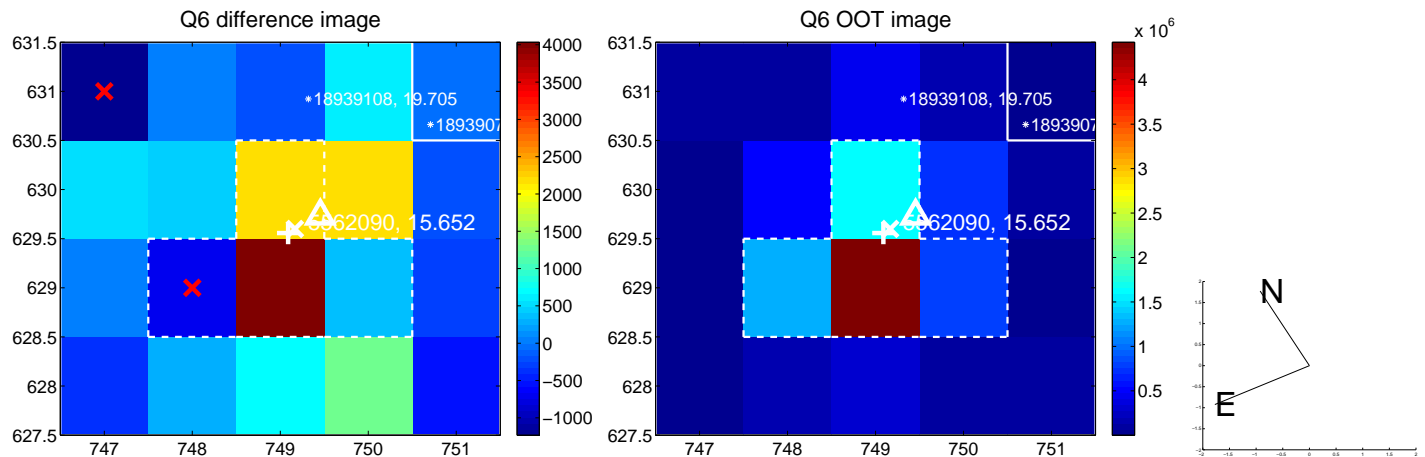
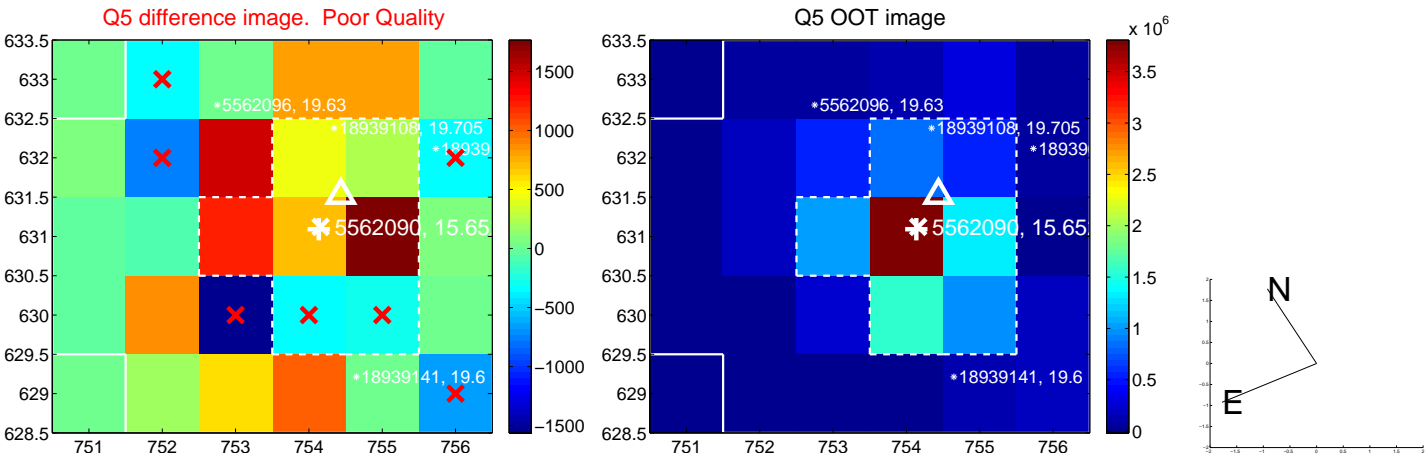


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

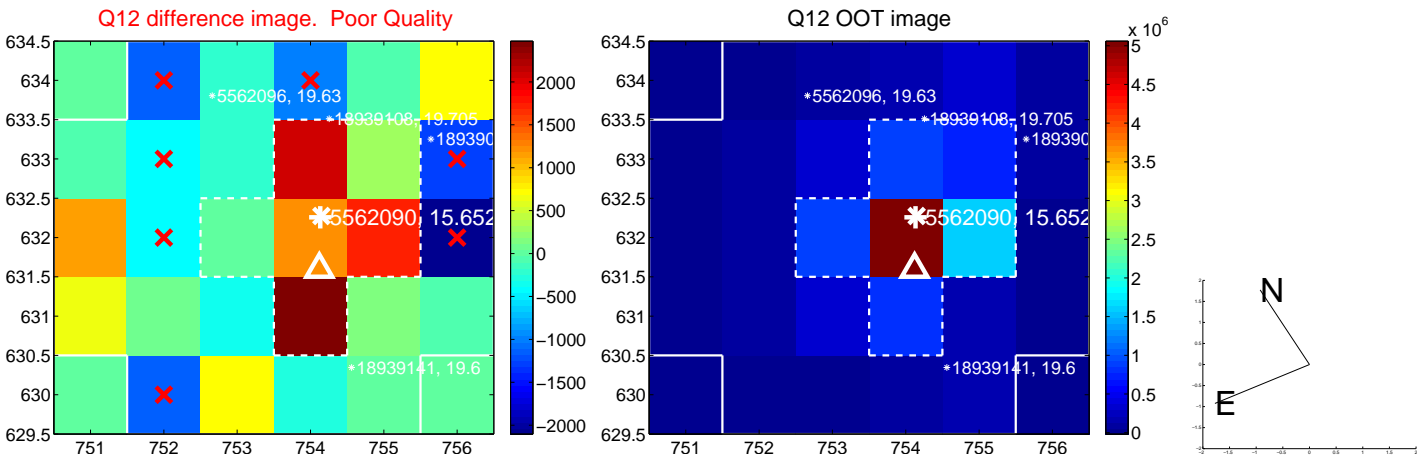
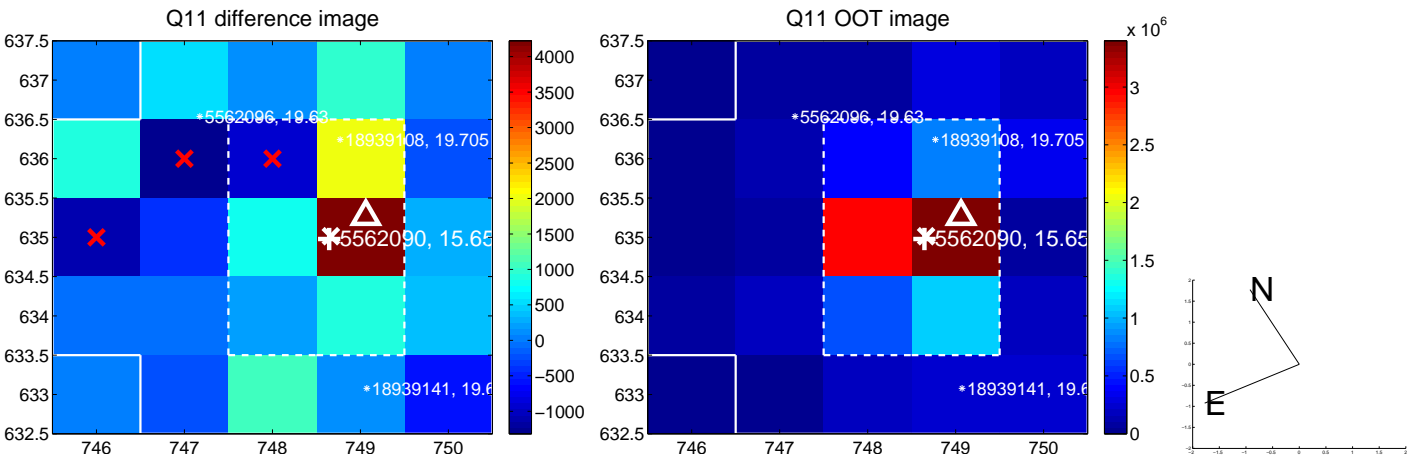
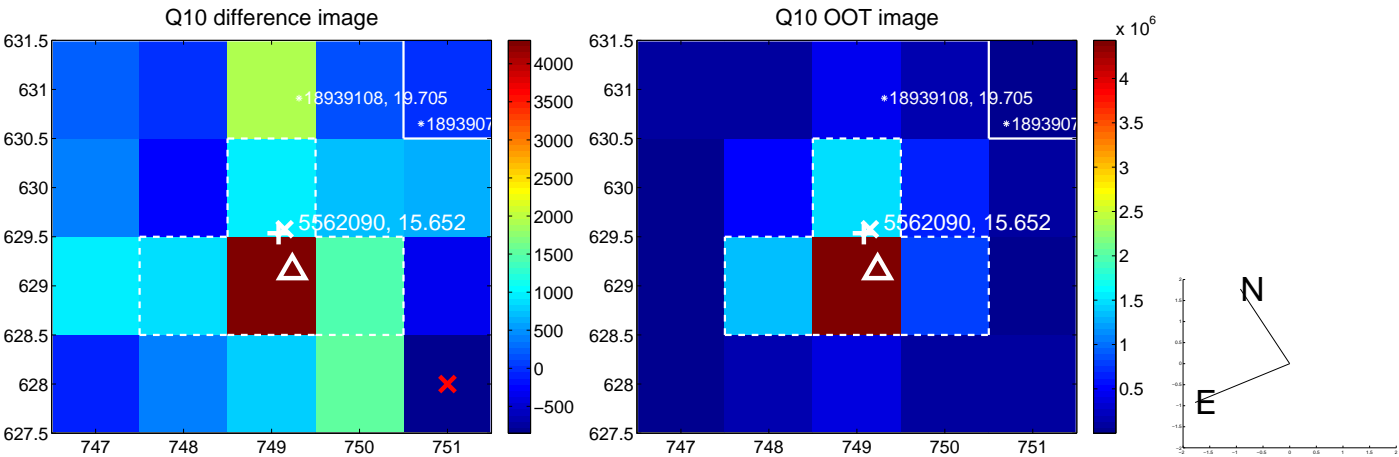
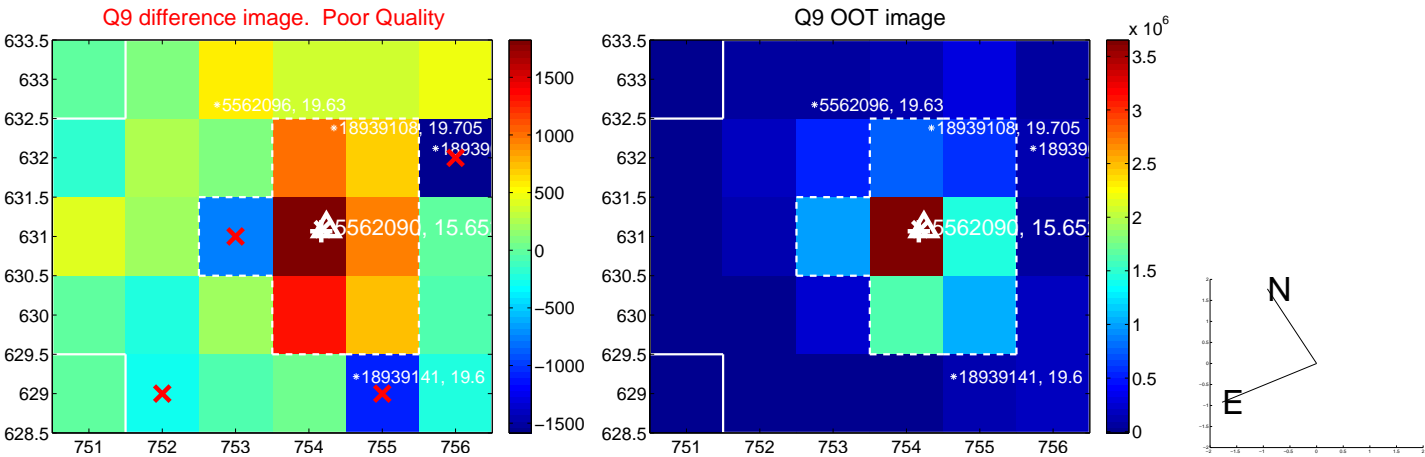
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



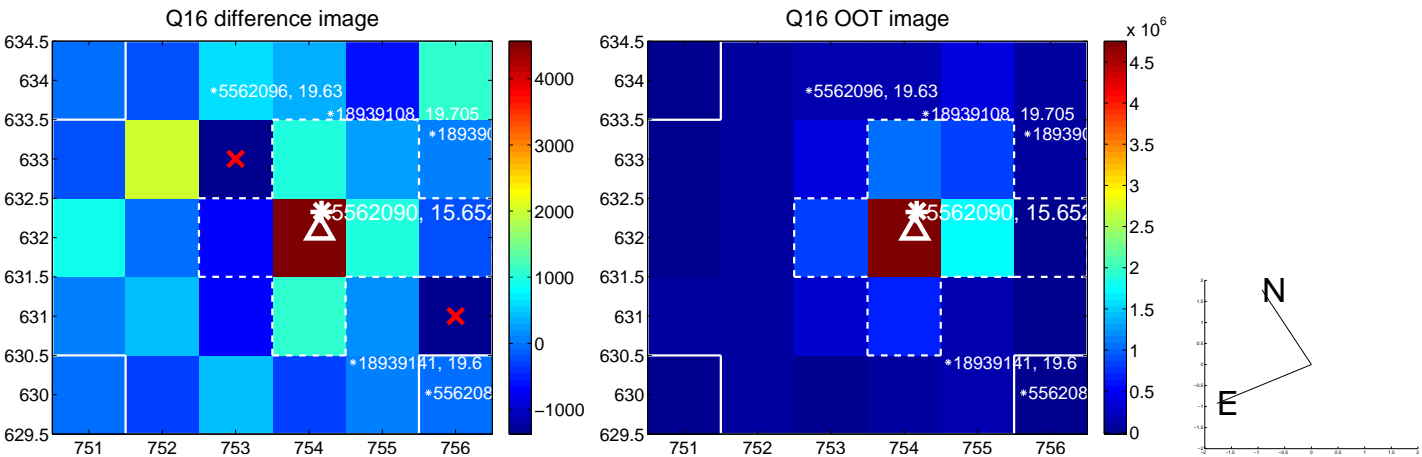
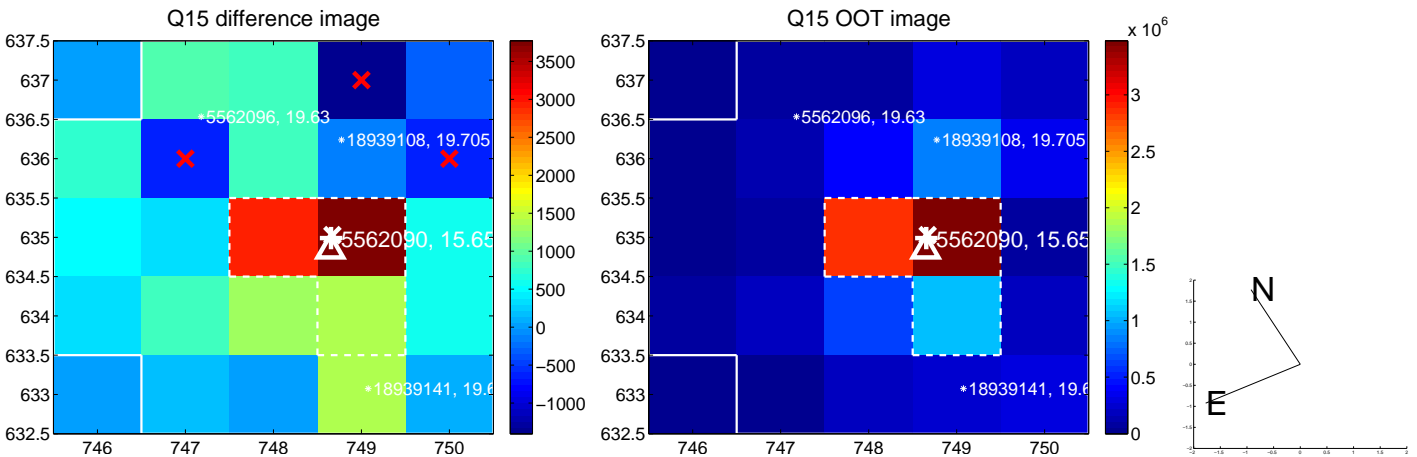
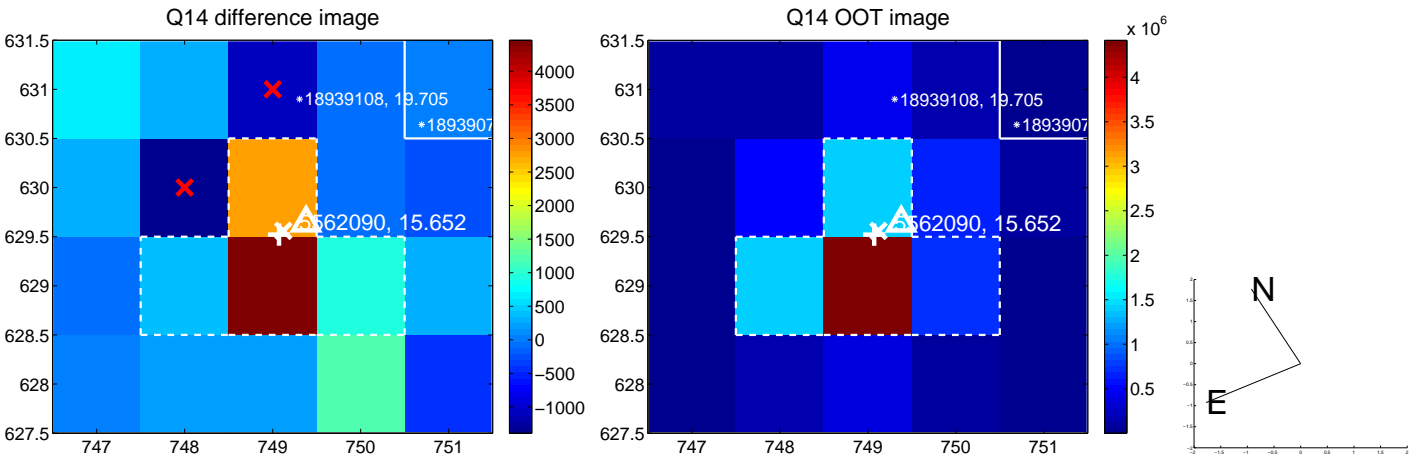
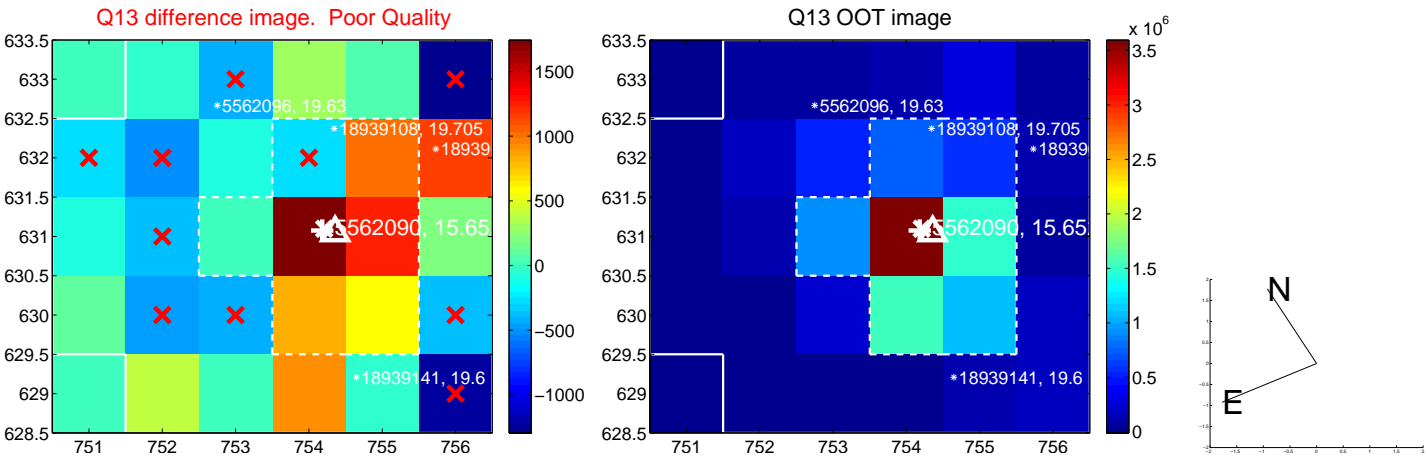
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



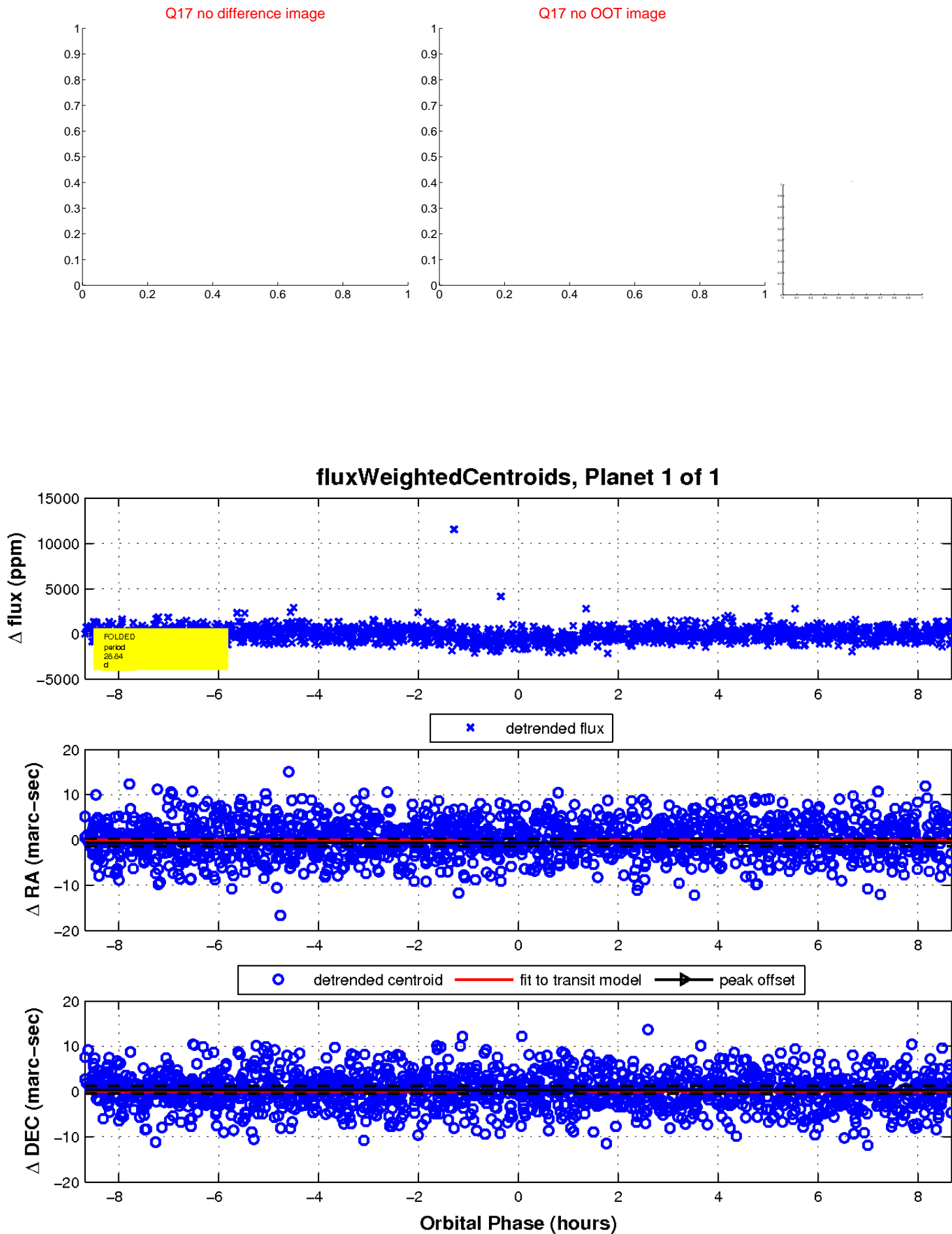
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

