

KIC 007538622

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})
007538622-01	OBS	No	11.901741	140.804799	54.8	26.534	9.1	7.8	2.77	6240	2.40	772.71

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007538622-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV

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

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

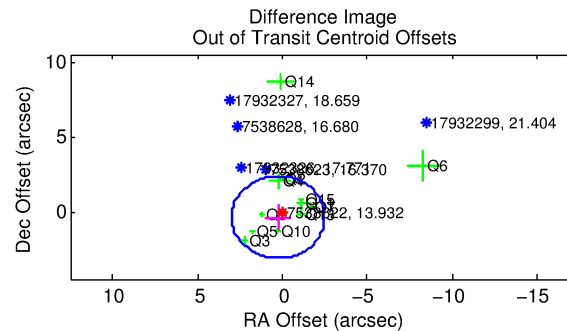
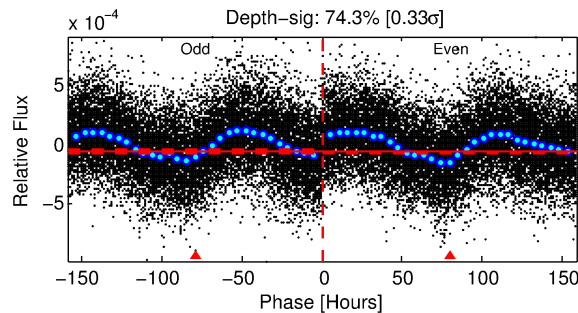
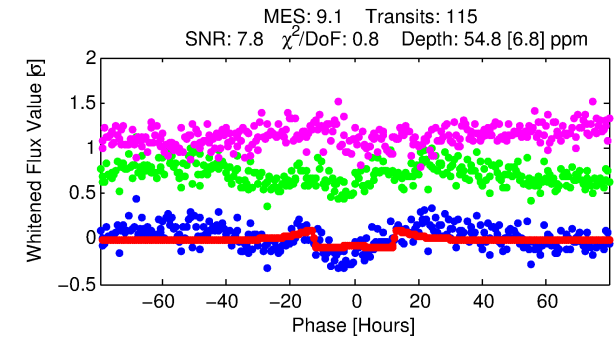
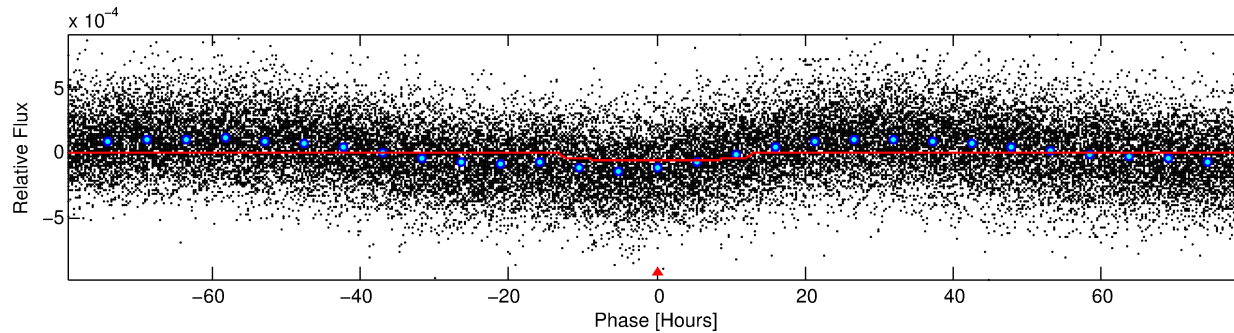
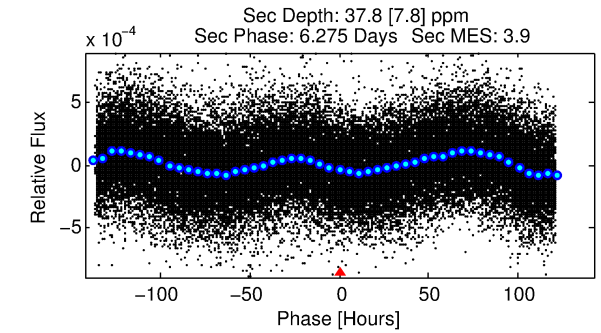
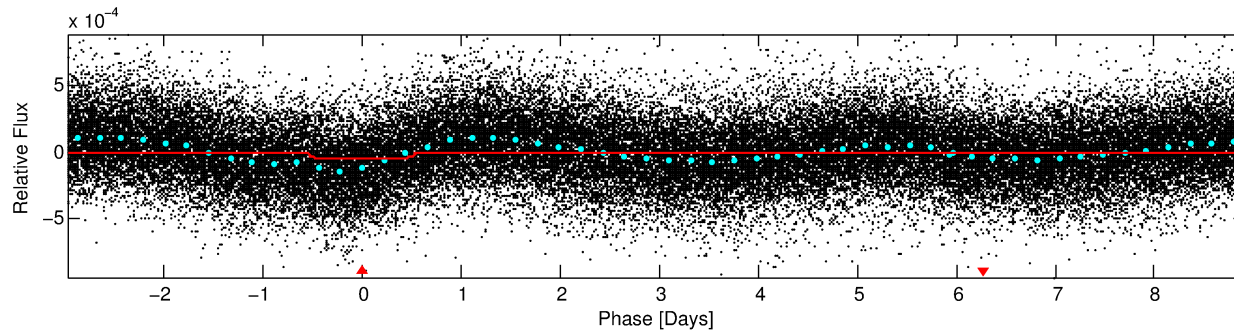
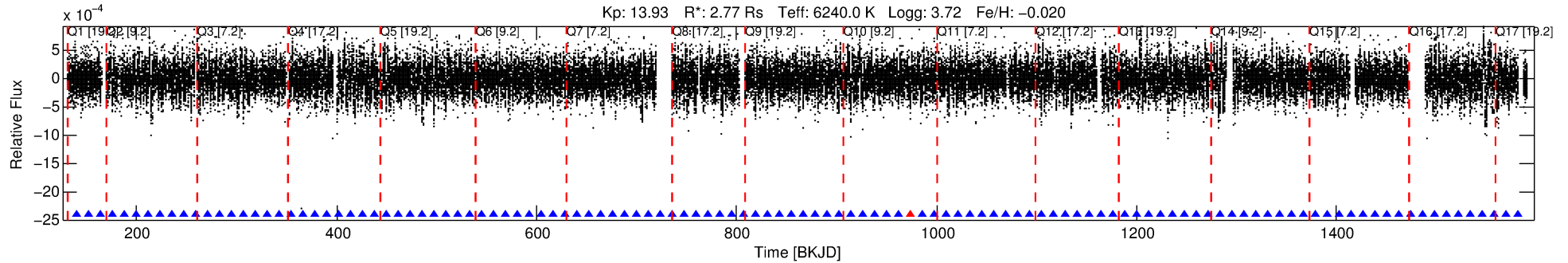
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007538622-01

No Significant Match Found

DV One-Page Summary

KIC: 7538622 Candidate: 1 of 1 Period: 11.902 d



DV Fit Results:

Period = 11.90174 [0.00031] d
Epoch = 140.8048 [0.0210] BKJD
Rp/R* = 0.0079 [0.0008]
a/R* = 1.85 [0.51]
b = 0.89 [0.09]
Seff = 772.71 [709.42]
Teq = 1344 [309] K
Rp = 2.40 [1.30] Re
a = 0.1162 [0.0637] AU
Ag = 48.97 [46.59] [1.03σ]
Teffp = 5499 [439] K [7.75σ]

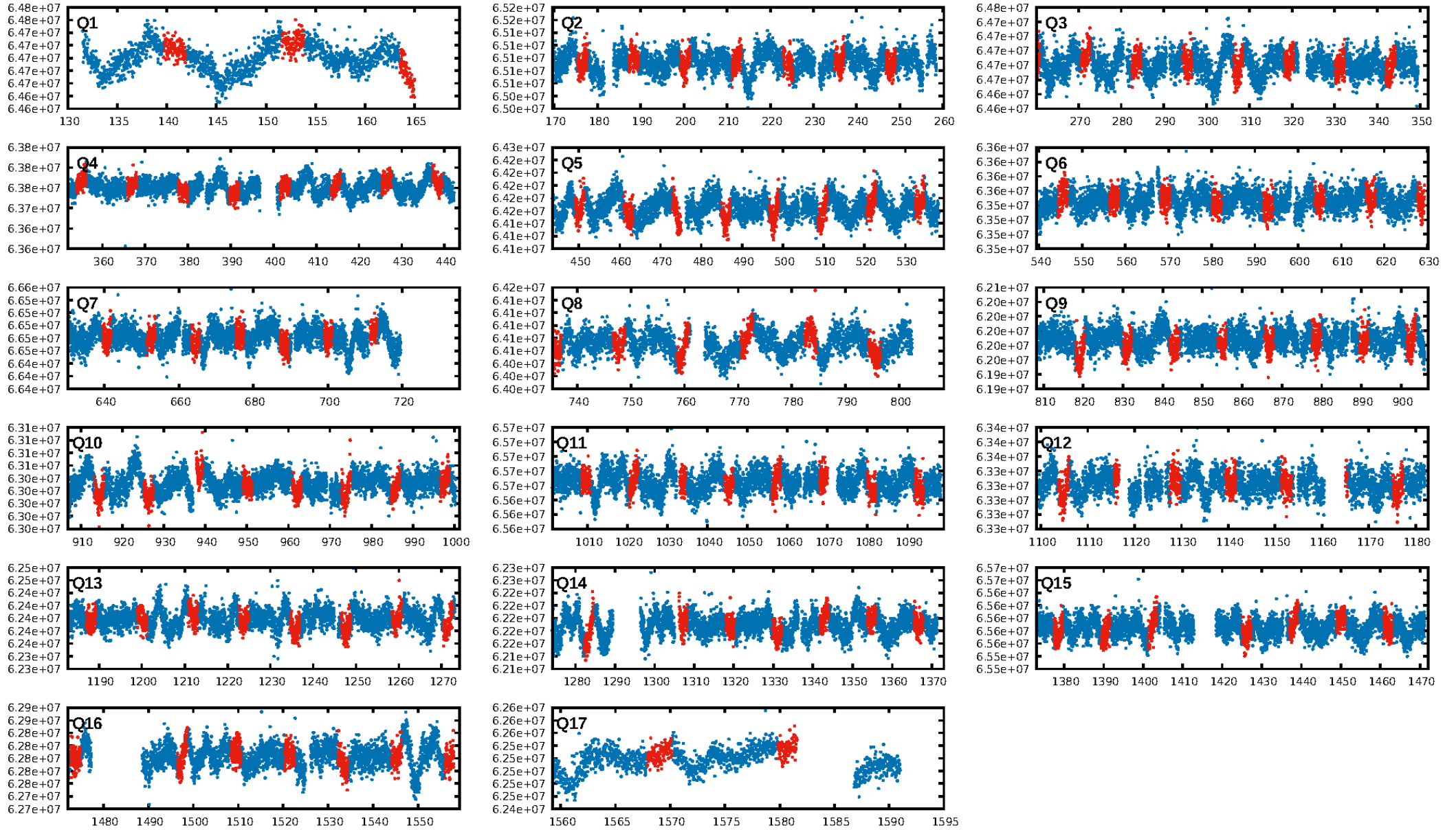
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.06e-21
RollingBand-fgt: 0.99 [109/110]
GhostDiagnostic-chr: 0.8602
Centroid-sig: 0.6%
Centroid-so: 1.674 arcsec [1.93σ]
OotOffset-rm: 0.448 arcsec [0.49σ]
KicOffset-rm: 0.495 arcsec [0.52σ]
OotOffset-st: 4/4/1/3 [12]
KicOffset-st: 4/4/1/3 [12]
DiffImageQuality-fgm: 0.75 [9/12]
DiffImageOverlap-fno: 1.00 [17/17]

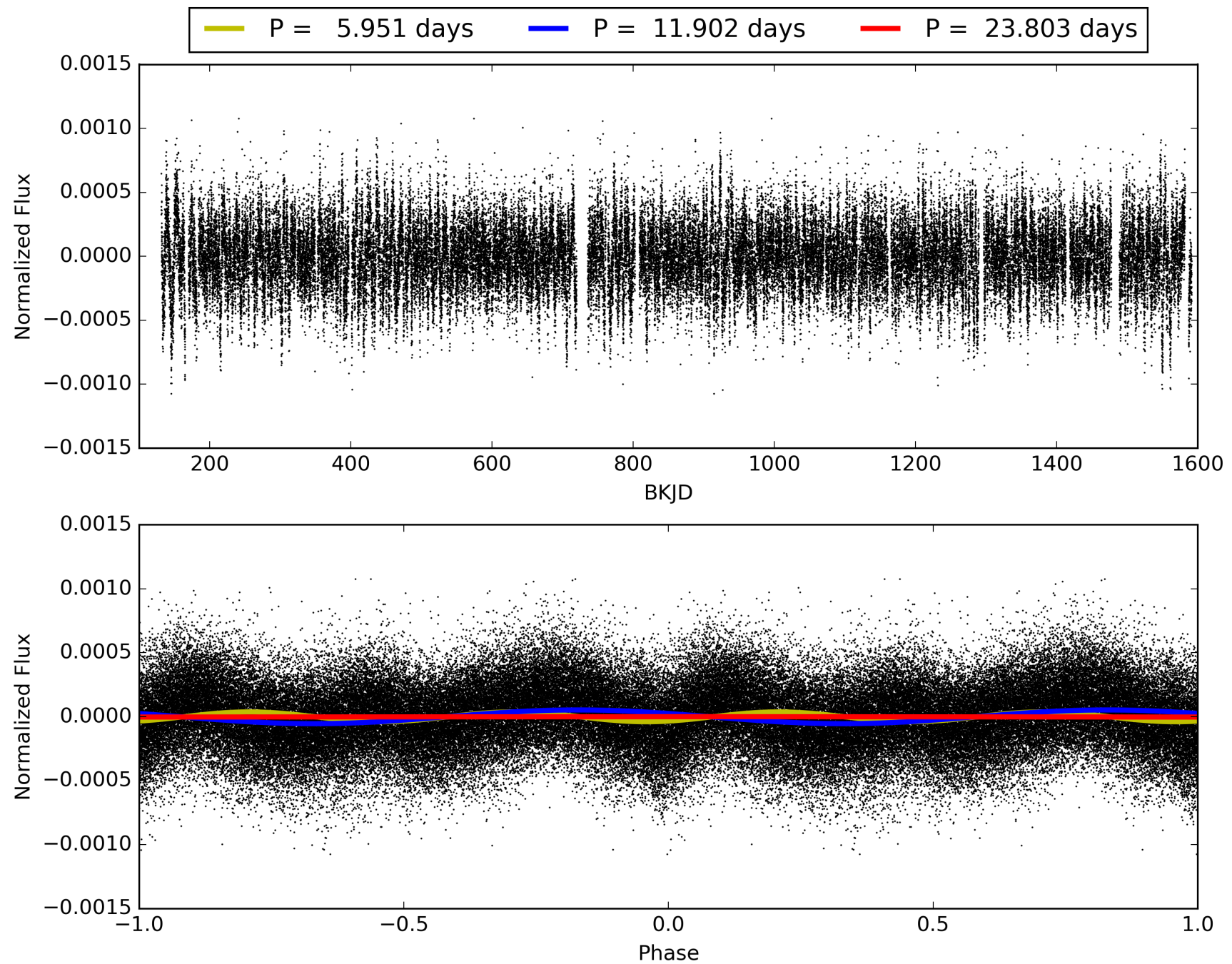
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 00:41:41 Z

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

TCE 007538622-01, PDC Light Curves

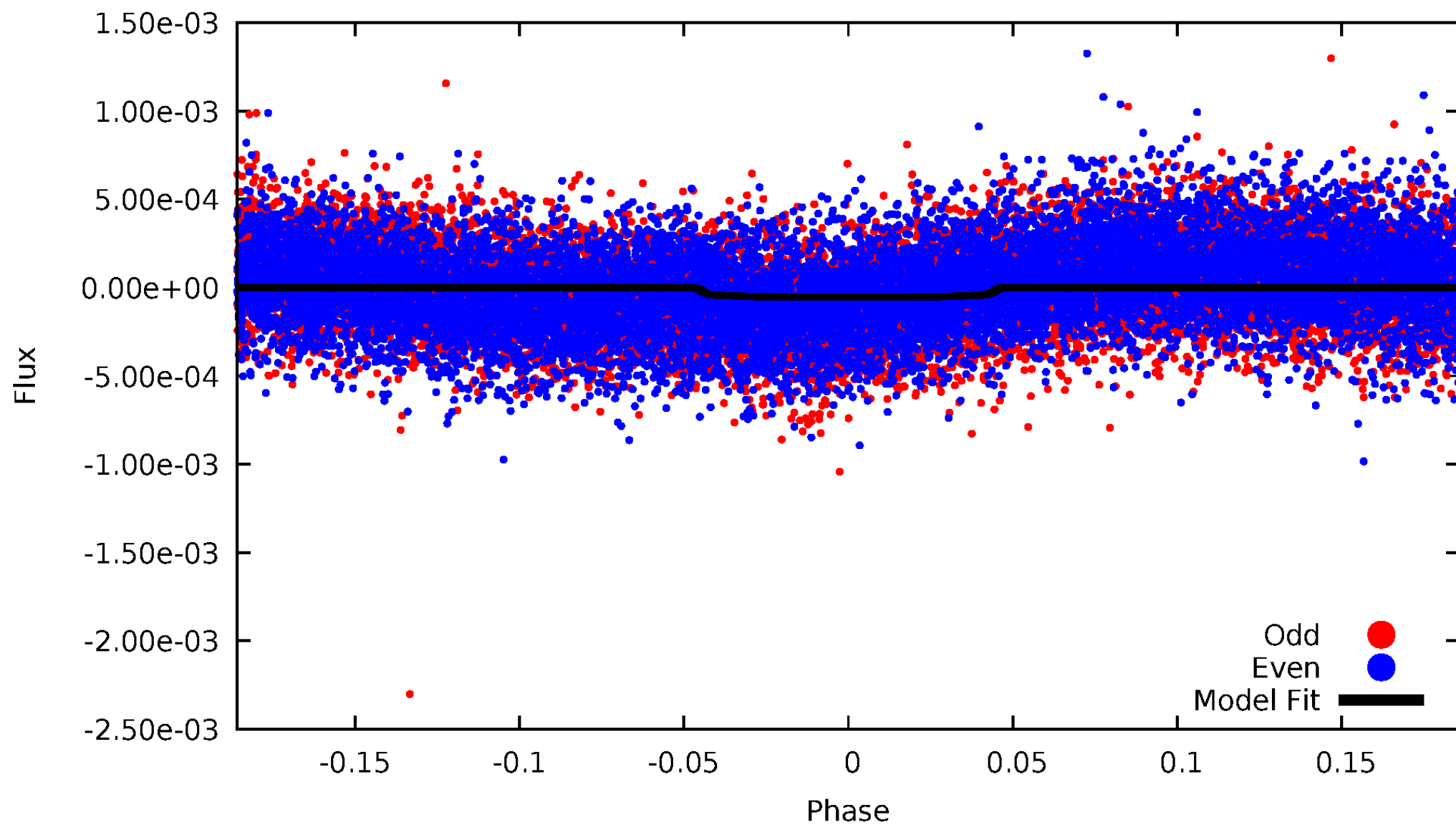


TCE 007538622-01



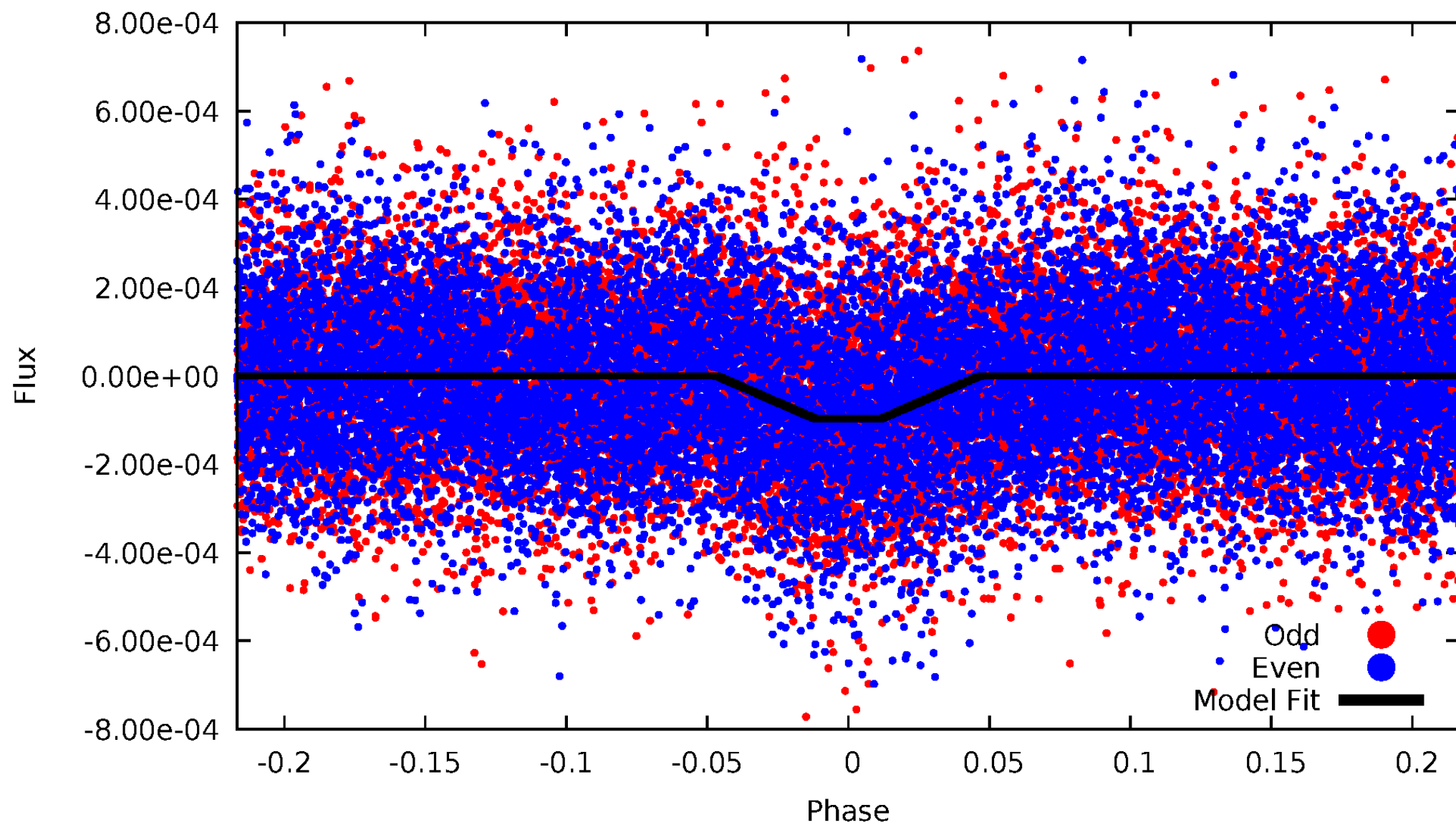
DV Odd/Even

TCE 007538622-01



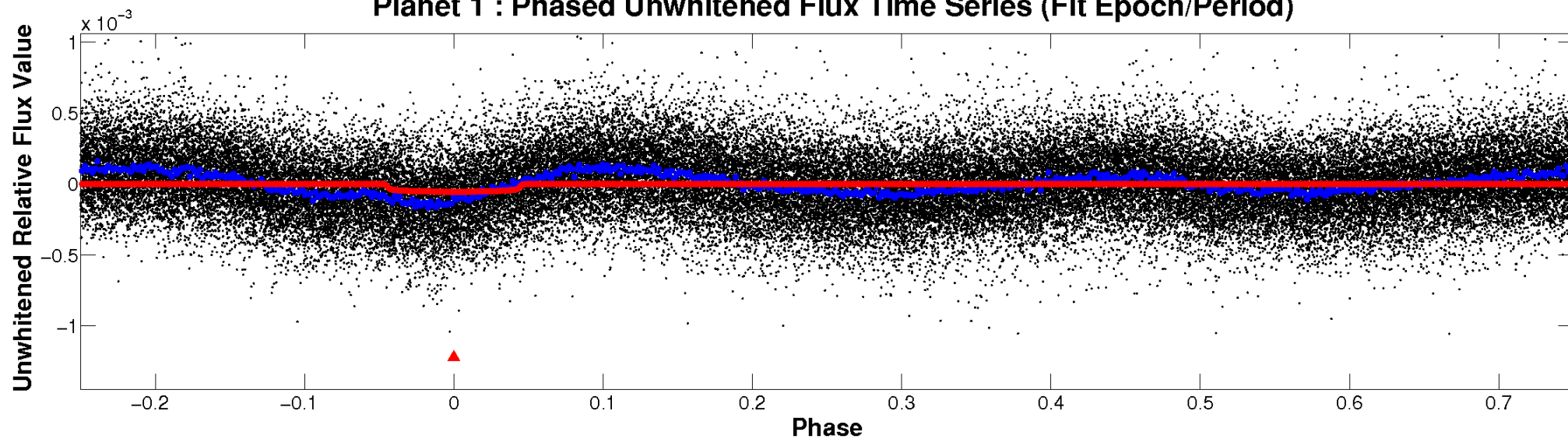
ALT Odd/Even

TCE 007538622-01

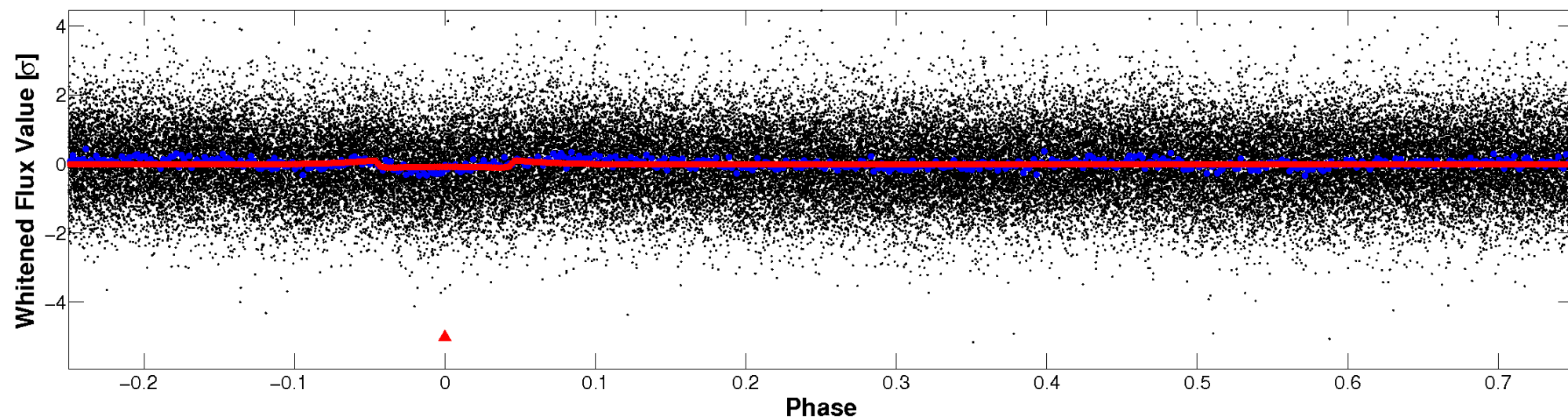


Non-Whitened Vs. Whitened Light Curve

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

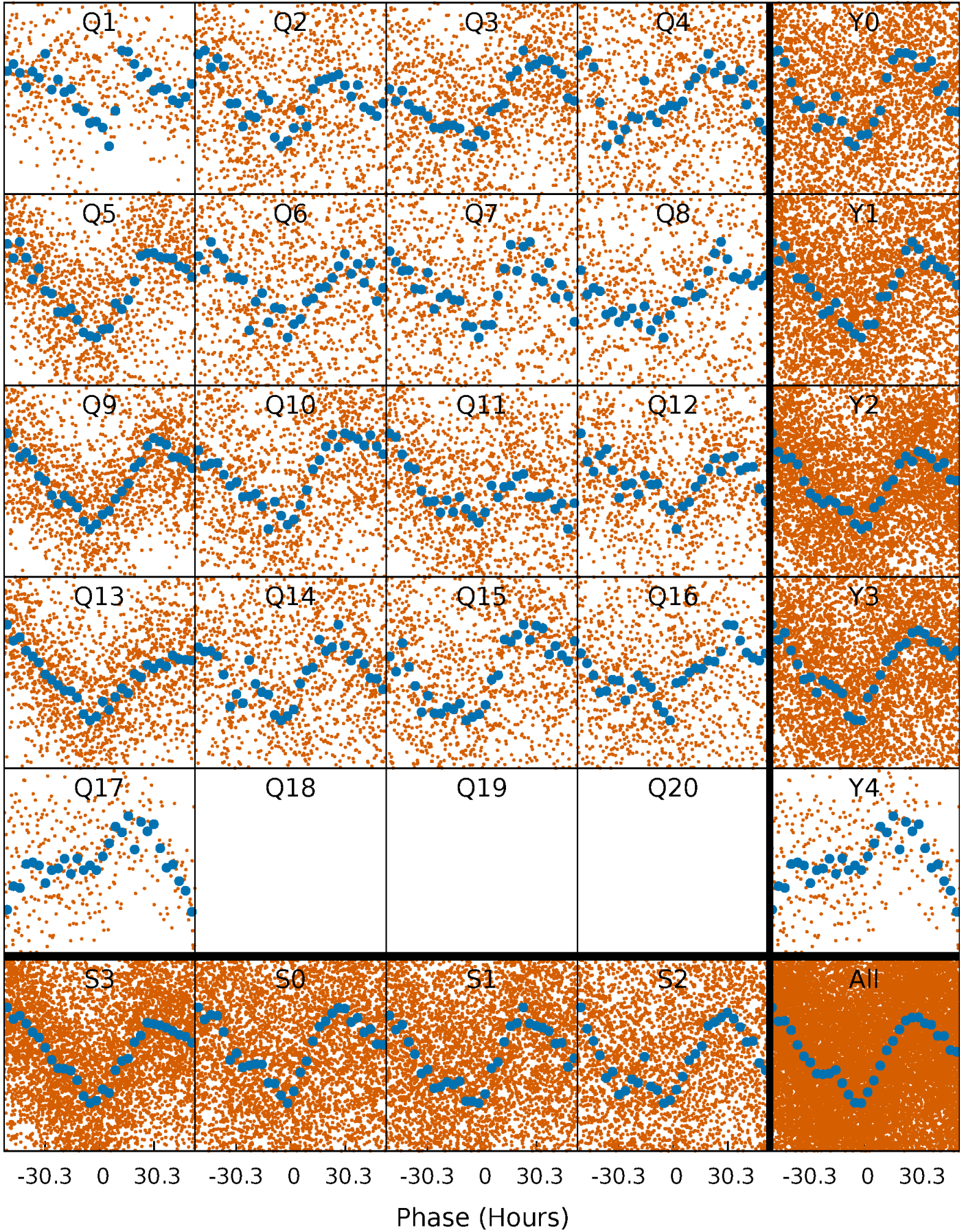


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



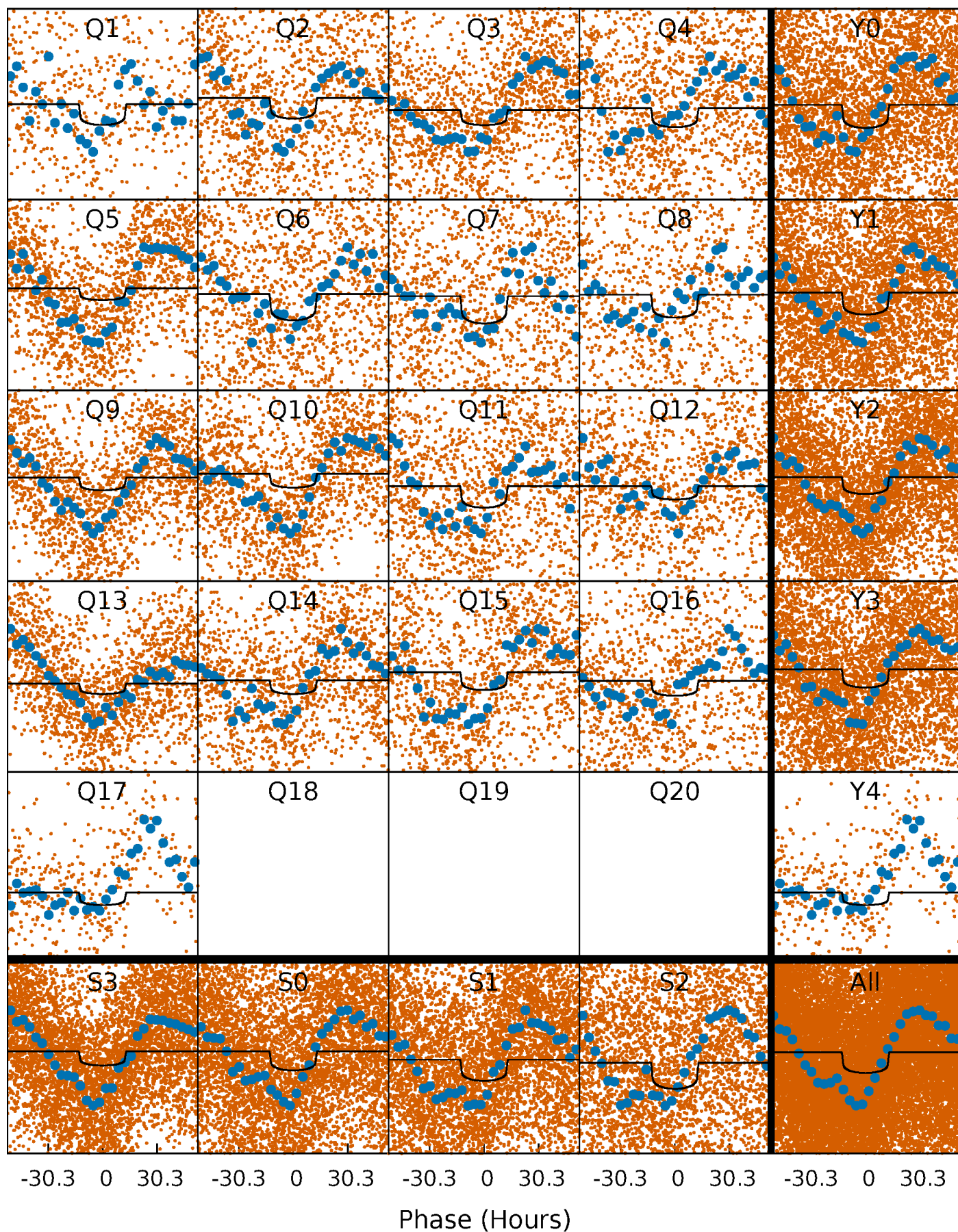
PDC Quarter-Phased Transit Curves

TCE 007538622-01 P= 11.901741 Days $T_0=140.804799$ (BKJD)



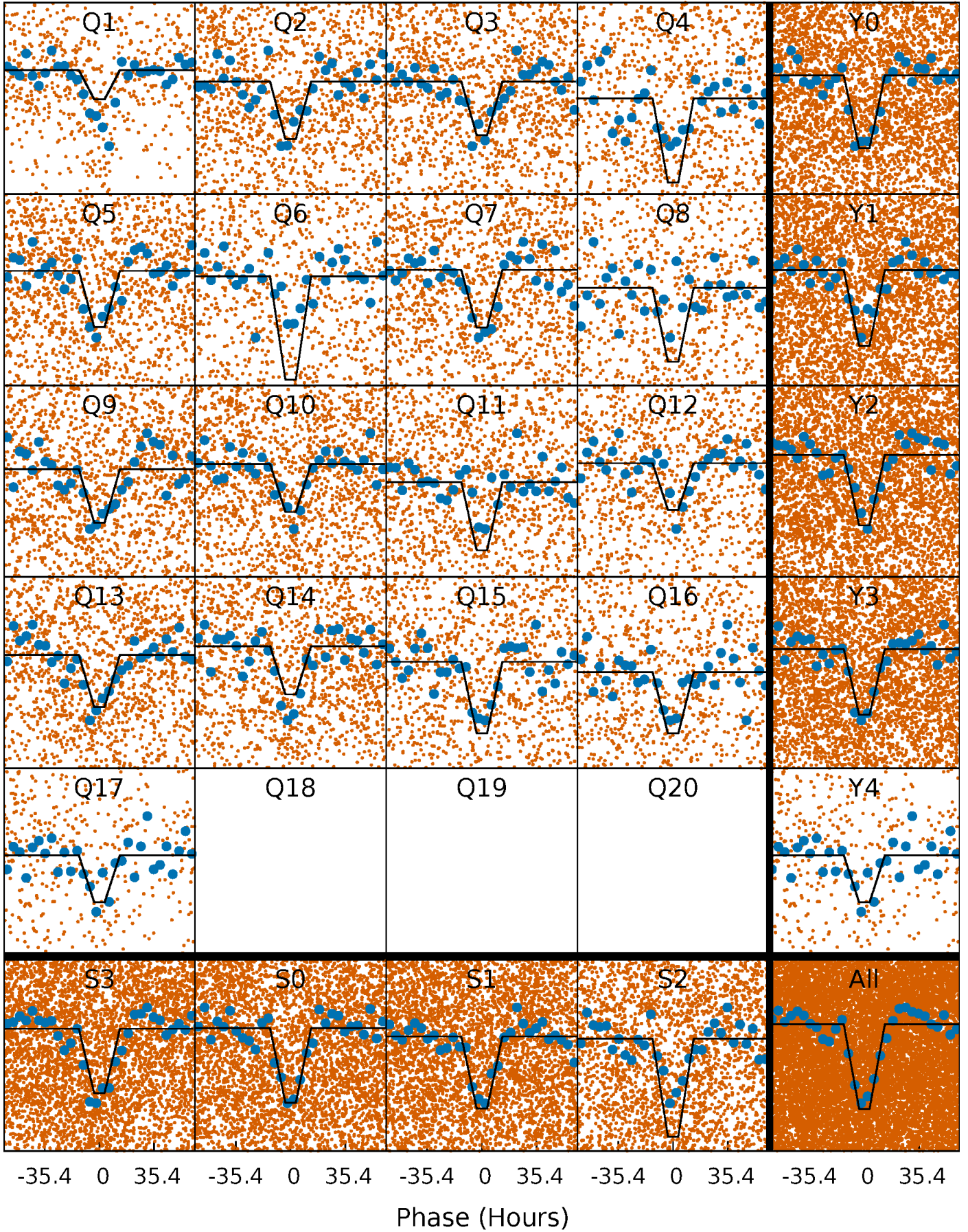
DV Quarter-Phased Transit Curves

TCE 007538622-01 P= 11.901741 Days $T_0=140.804799$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

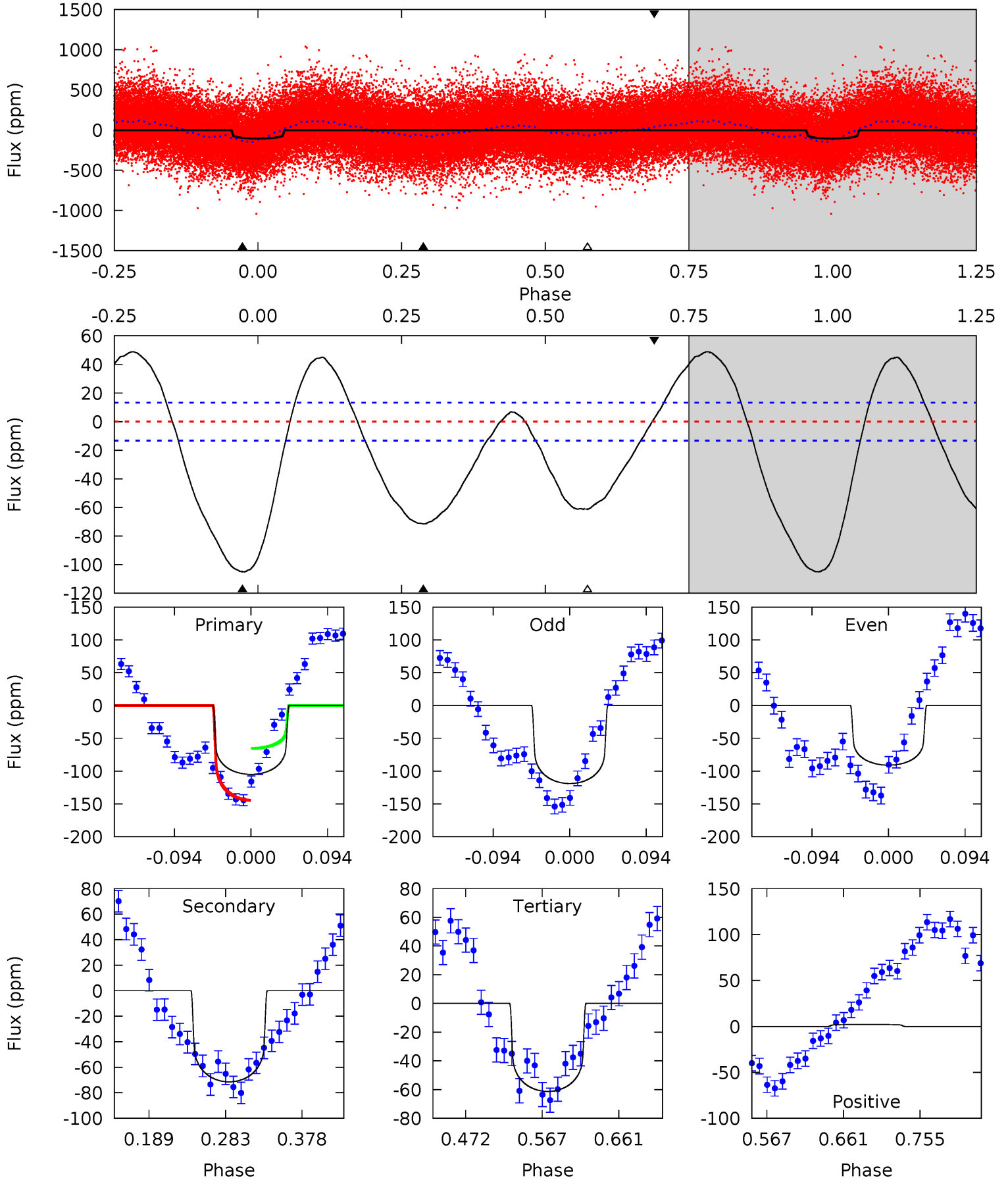
TCE 007538622-01 P= 11.900845 Days $T_0=140.796334$ (BKJD)



DV Model-Shift Uniqueness Test

007538622-01, P = 11.901741 Days, E = 128.903058 Days

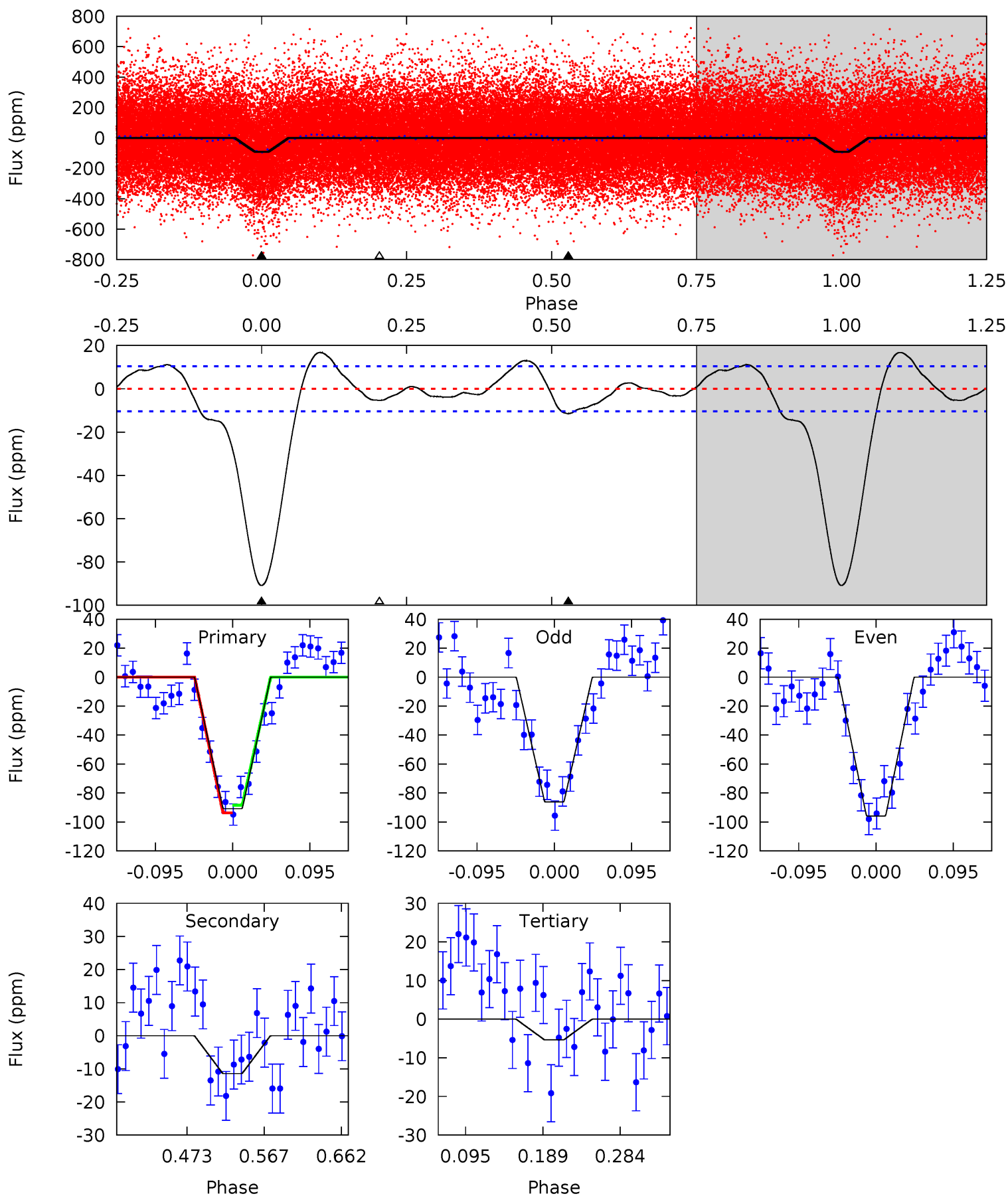
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
36.1	24.6	21.1	0.75	4.58	1.67	11.7	15.0	35.3	3.50	23.8	4.78	0.98	0.32	13.5



Alt Model-Shift Uniqueness Test

007538622-01, P = 11.900845 Days, E = 128.895489 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
40.0	5.03	2.36	0	4.58	1.67	2.61	37.6	40.0	2.68	5.03	2.12	0.94	0.16	1.15



Stellar Parameters For KIC 007538622

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6240^{+198}_{-220}	$3.722^{+0.544}_{-0.096}$	$-0.020^{+0.250}_{-0.300}$	$2.772^{+0.491}_{-1.474}$	$1.478^{+0.214}_{-0.397}$	$0.098^{+0.594}_{-0.031}$
	+3%/-4%	+15%/-3%	+1250%/-1500%	+18%/-53%	+14%/-27%	+607%/-32%
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 007538622-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-71 ± 3	$2.23^{+0.47}_{-0.62}$	1814^{+135}_{-232}	6439^{+400}_{-379}	108^{+84}_{-32}
Alt.	-11 ± 2	$2.76^{+0.53}_{-0.70}$	1804^{+152}_{-239}	3966^{+198}_{-207}	11^{+8}_{-4}

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

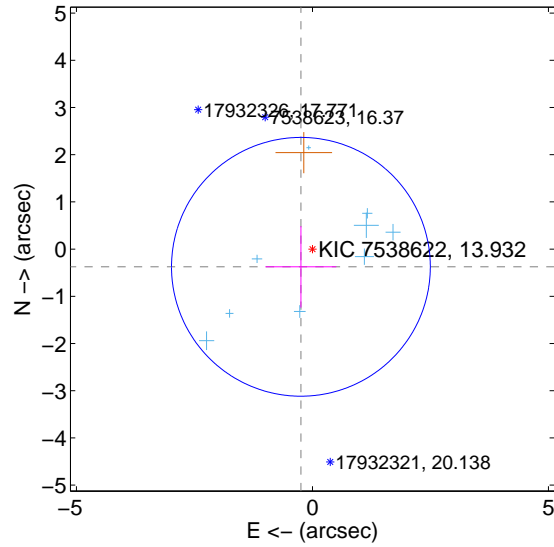
Supplemental centroid analysis for 007538622-01. Kepler magnitude: 13.93. Transit SNR 7.82

There are 9 quarters with good PRF difference image offsets

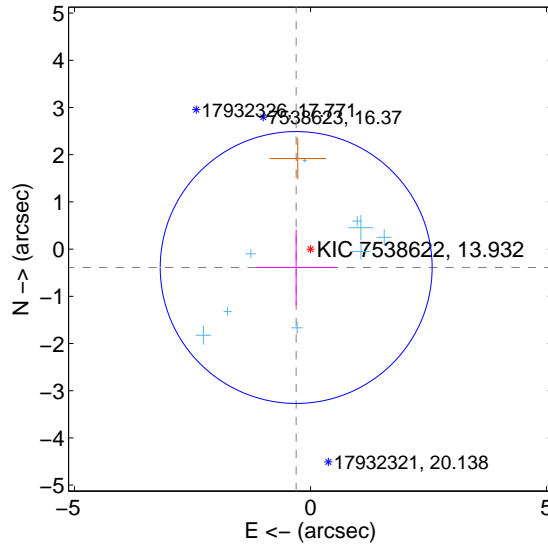
The direct PRF centroid is offset from the target star catalog position by about 0.24 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.448 ± 0.914	0.49	0.244 ± 0.751	-0.375 ± 0.863
PRF-fit source offset from KIC position	0.495 ± 0.960	0.52	0.304 ± 0.858	-0.390 ± 0.800
photometric centroid source offset	1.67 ± 0.87	1.93	0.61 ± 0.87	1.56 ± 0.87

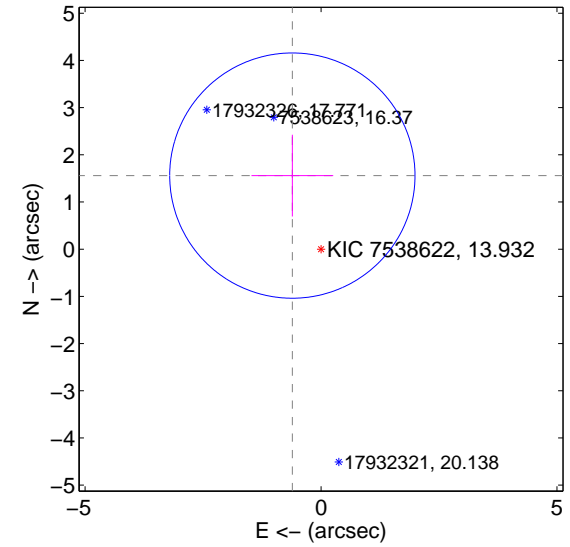
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

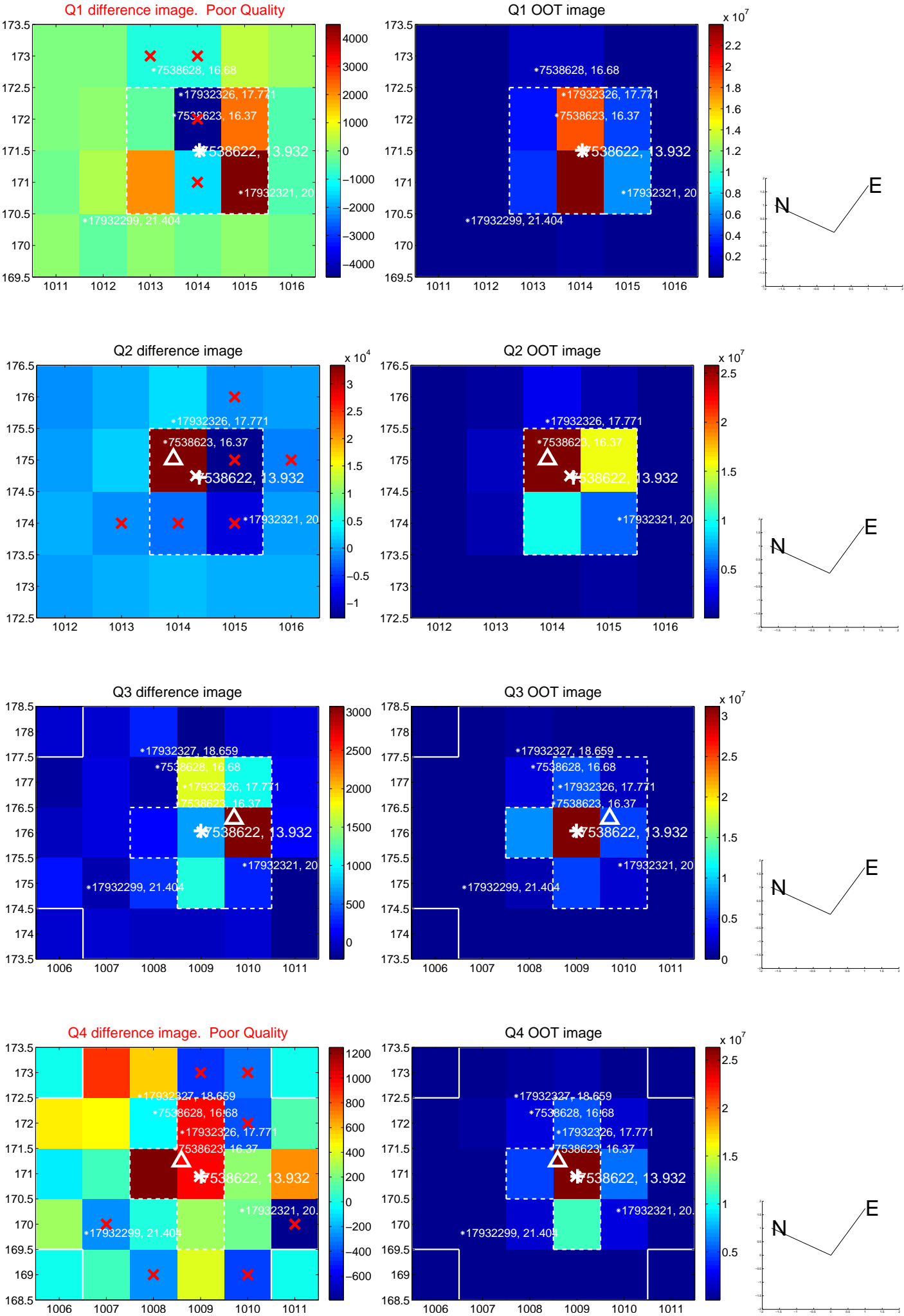


offset from photometric centroids

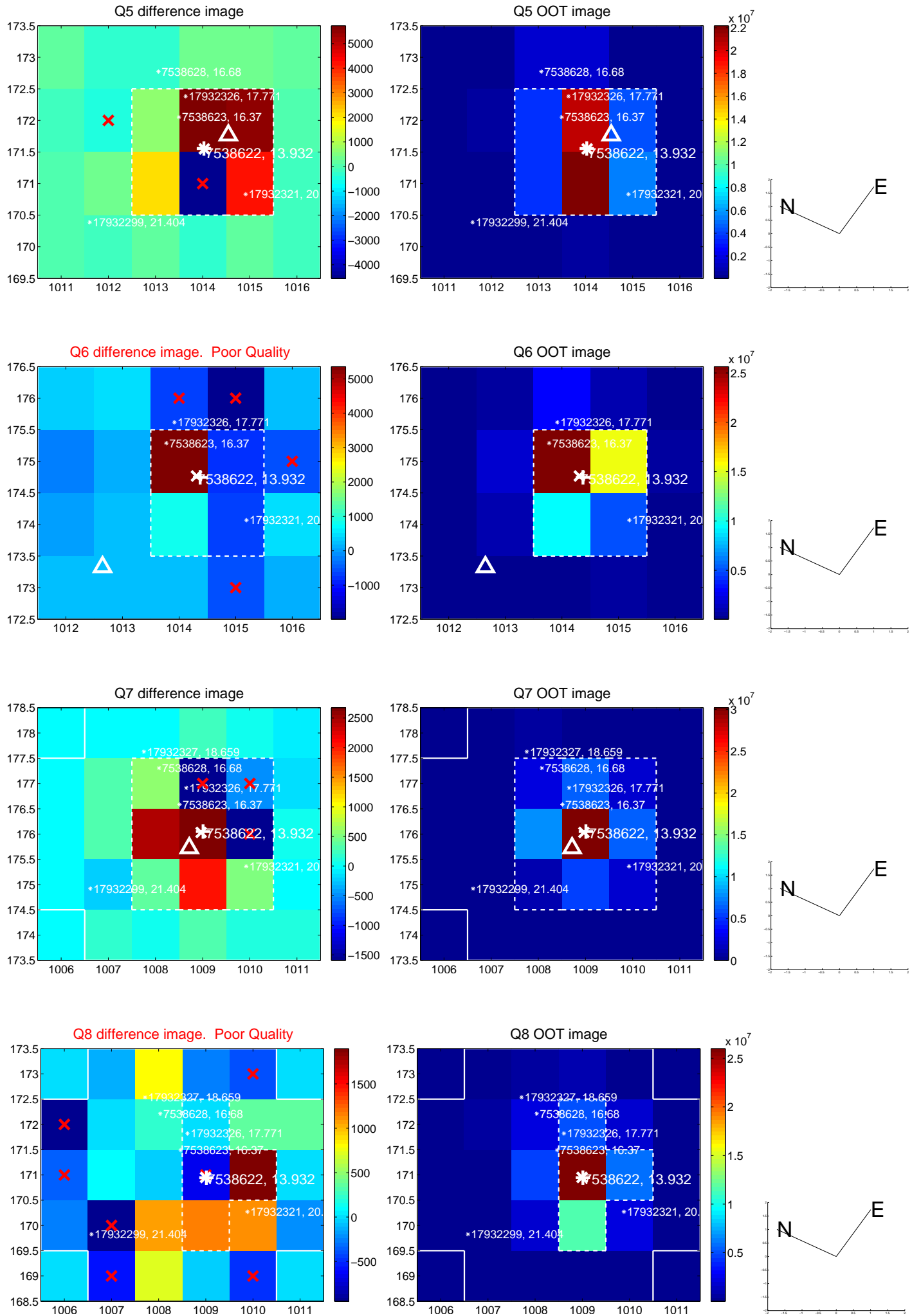


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

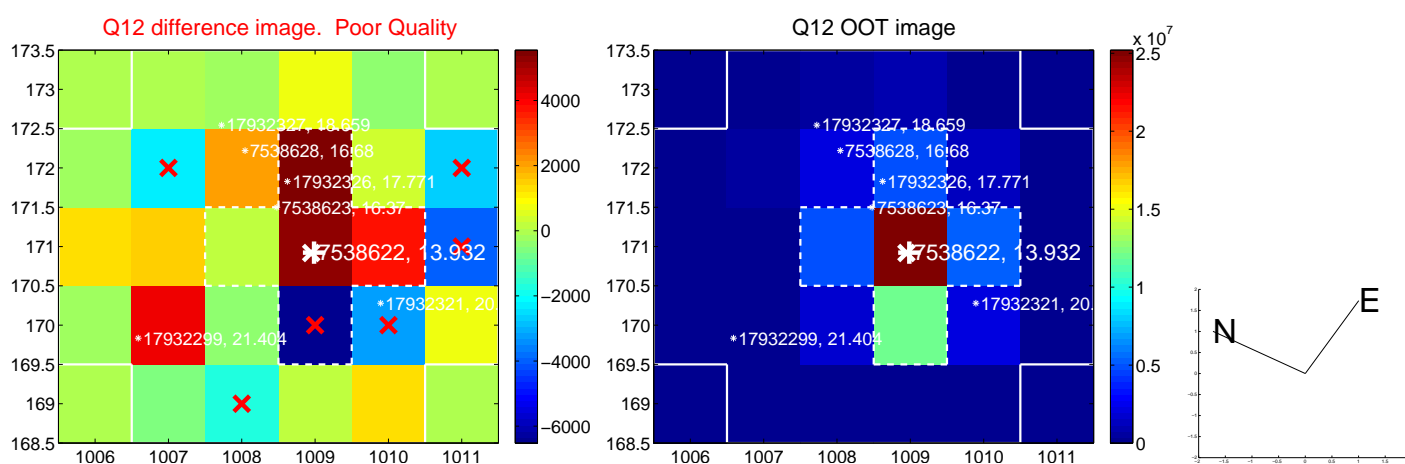
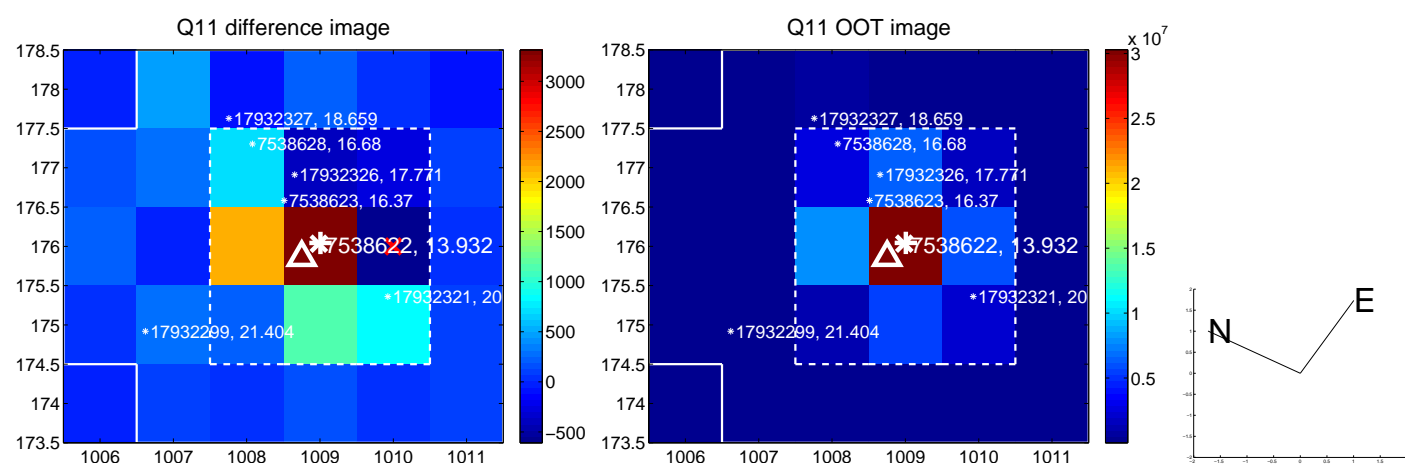
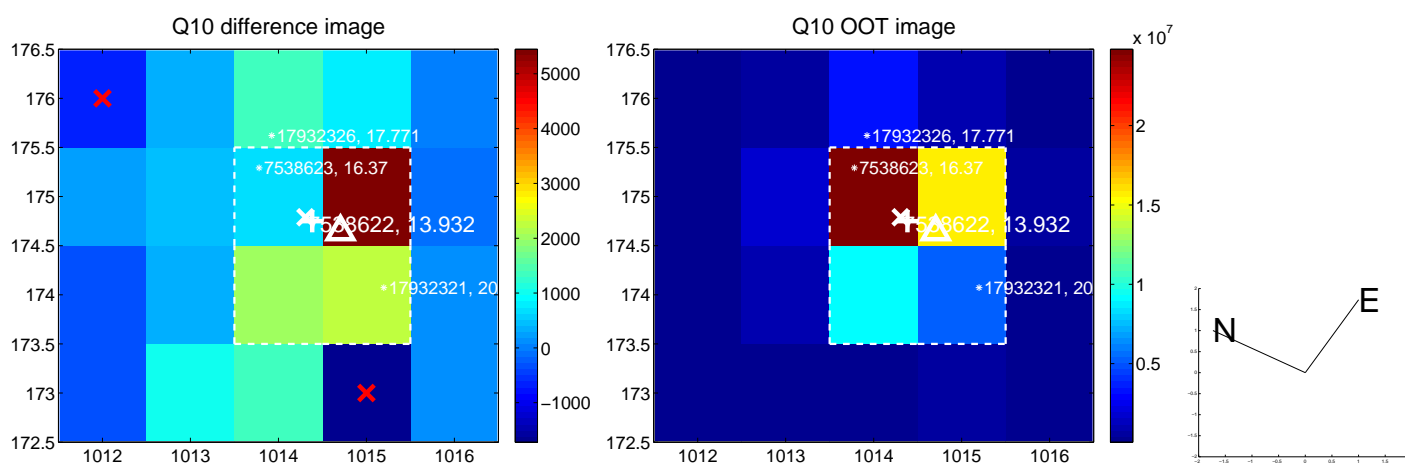
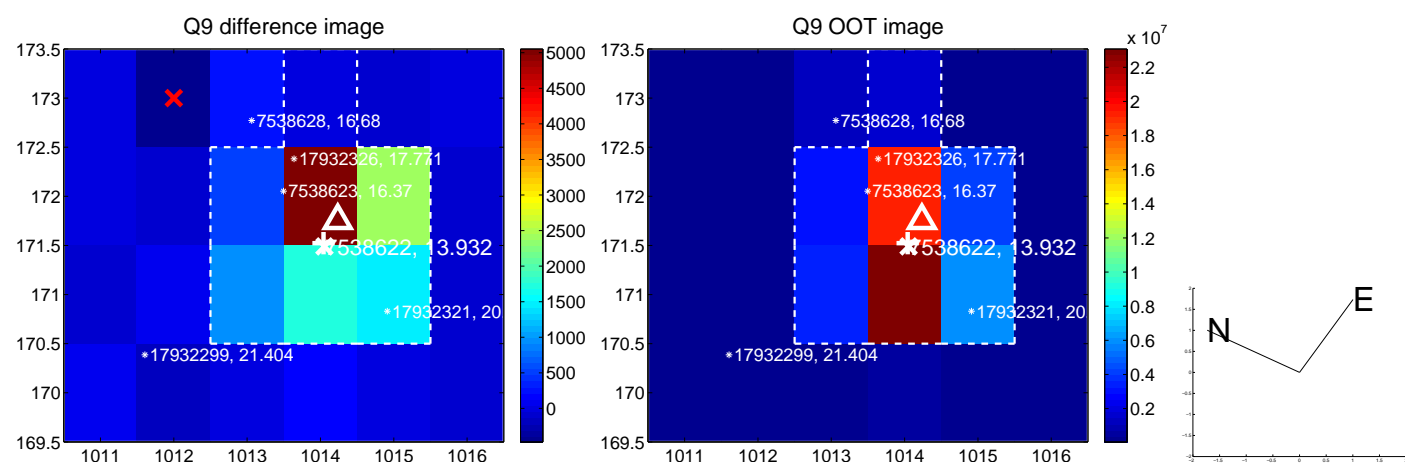
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



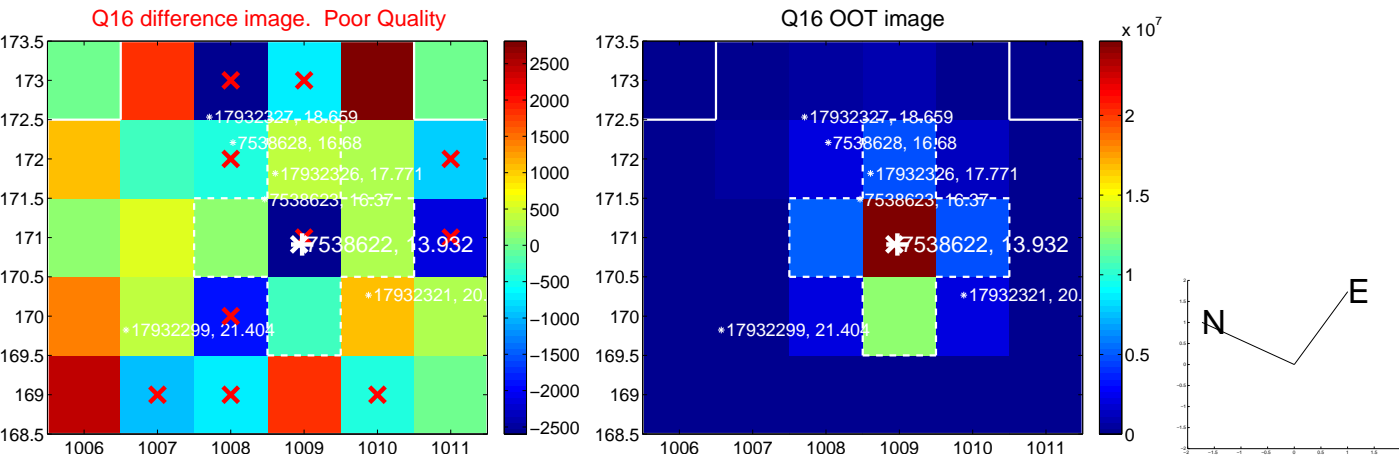
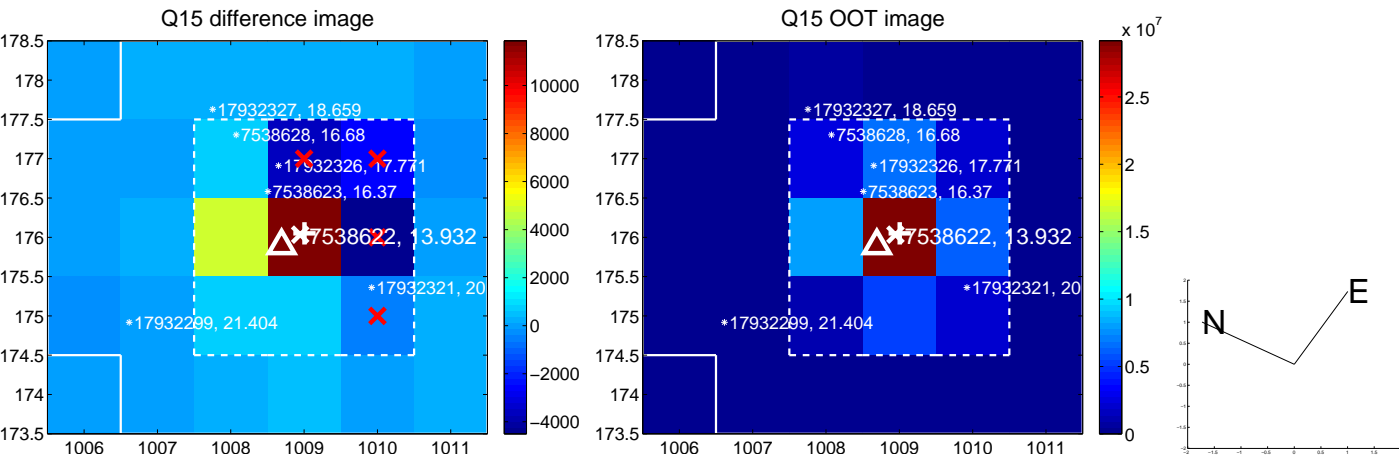
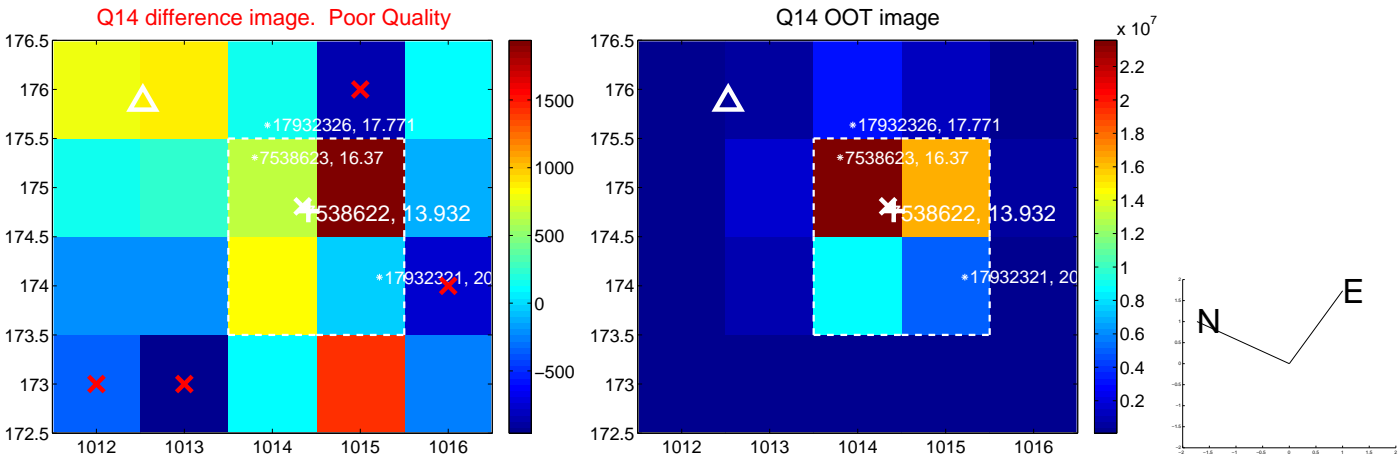
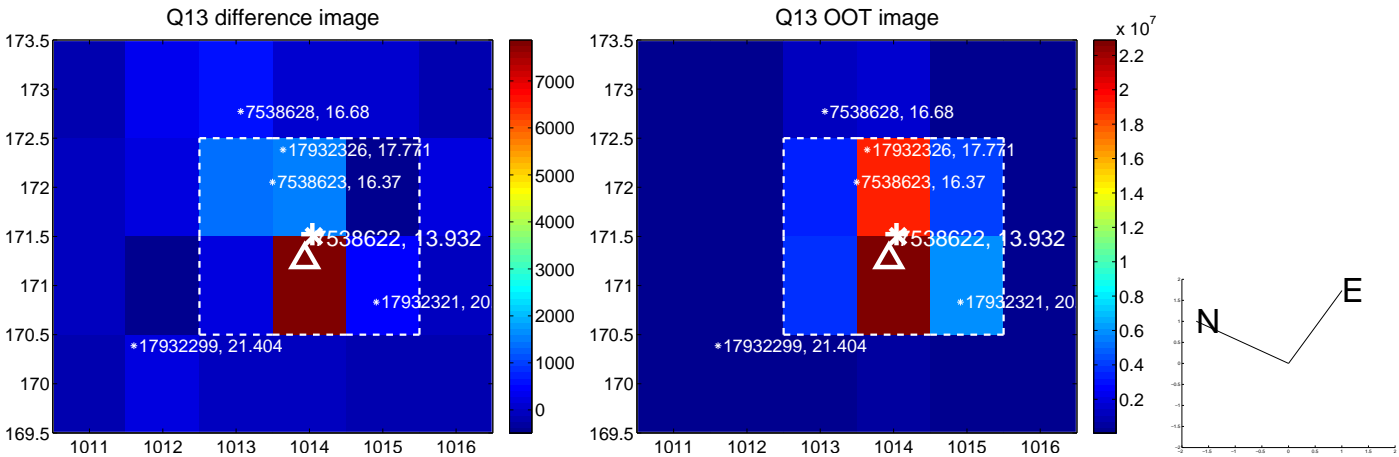
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



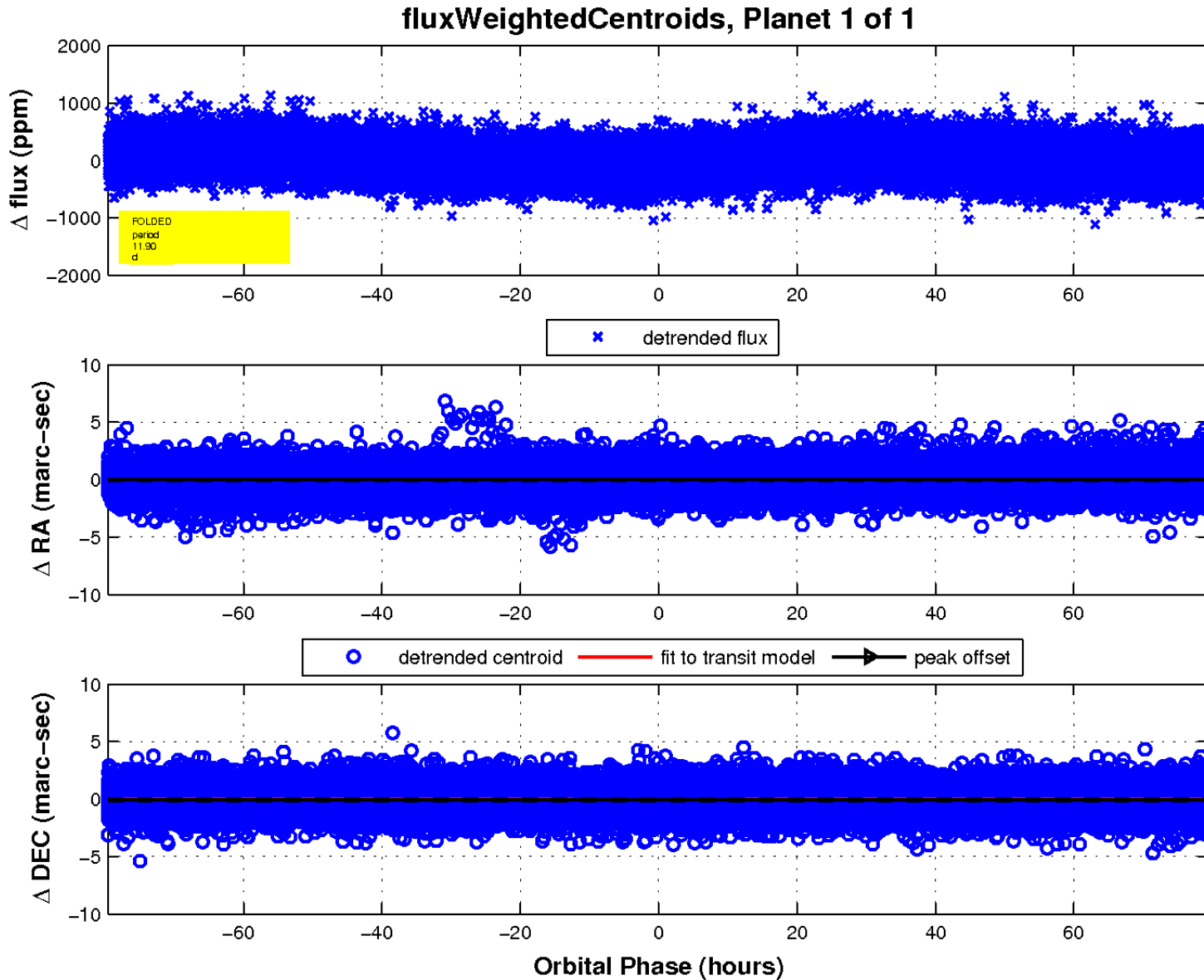
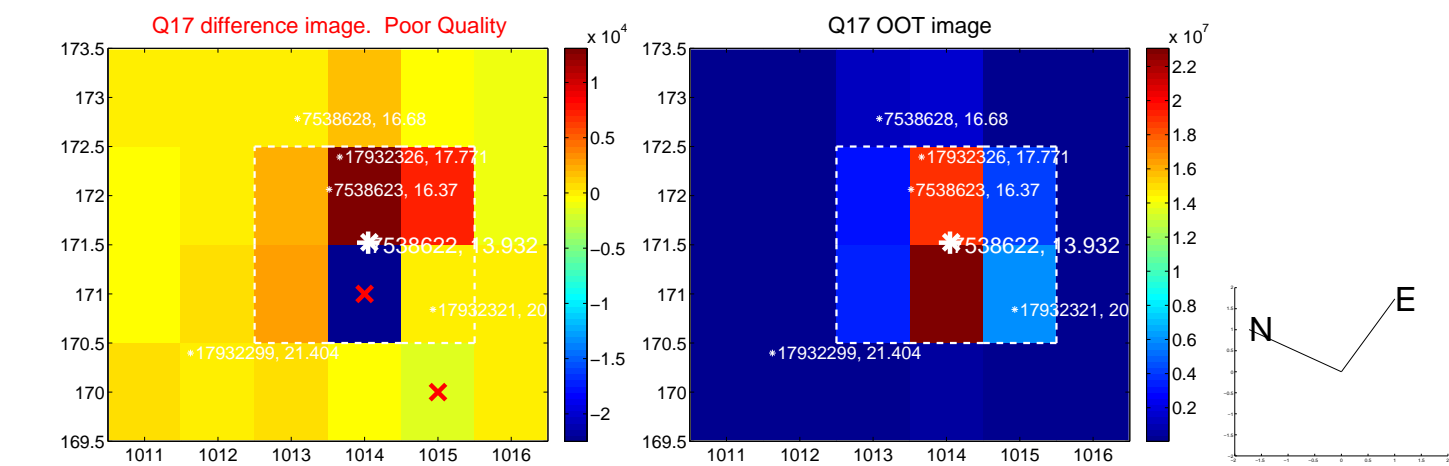
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

