

KIC 005551625

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})
005551625-01	OBS	No	1.087129	132.531972	74.7	10.969	11.0	18.3	2.55	7655	2.23	30315.71

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005551625-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_FEW_DIFFS

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

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

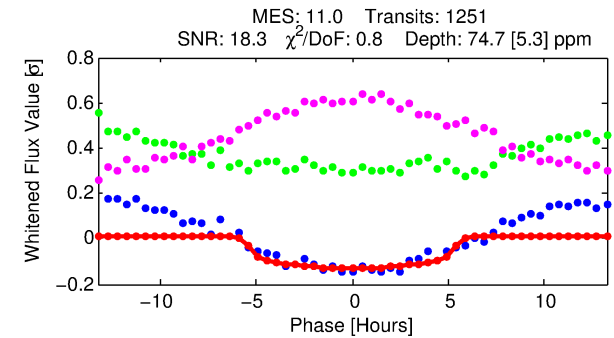
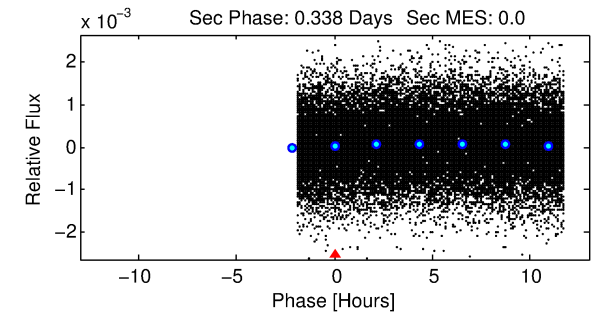
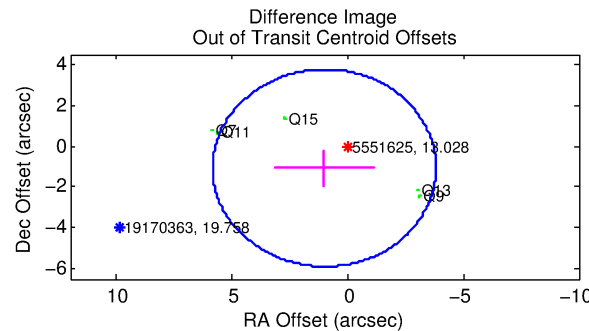
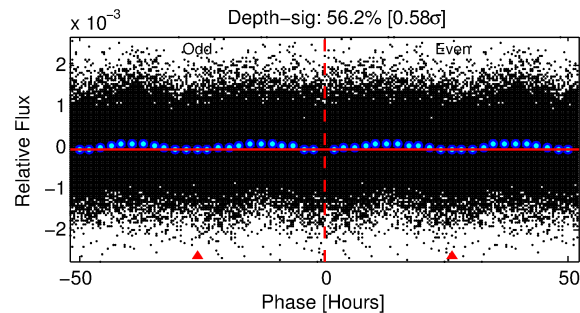
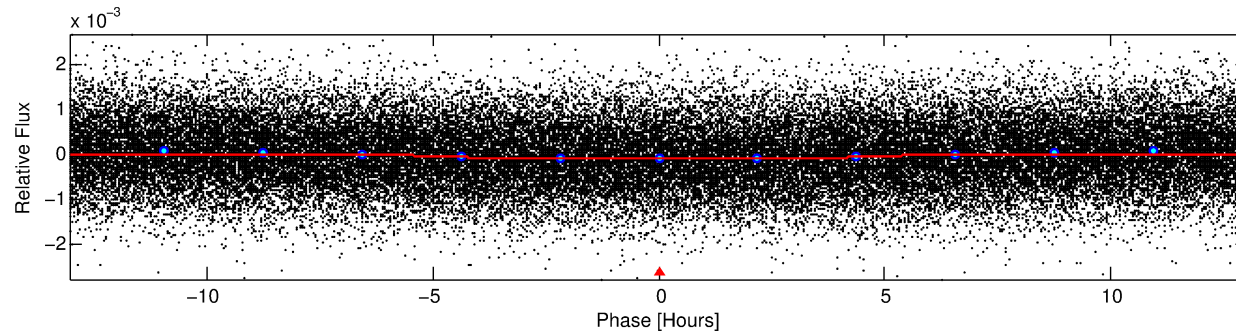
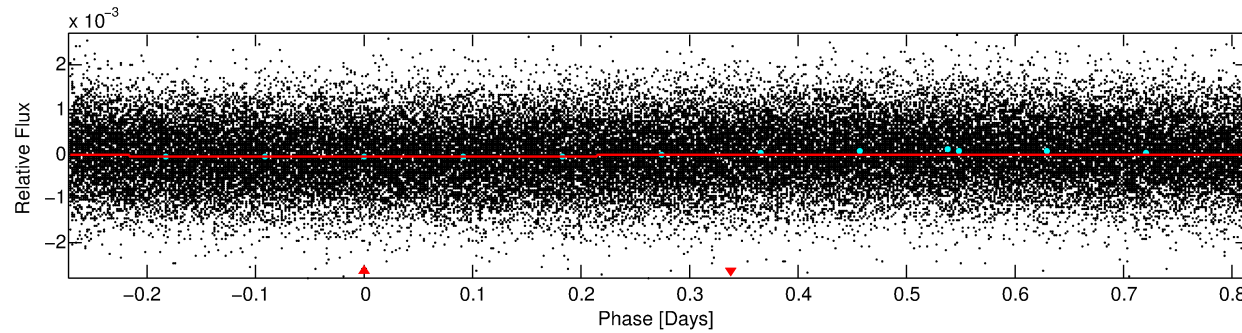
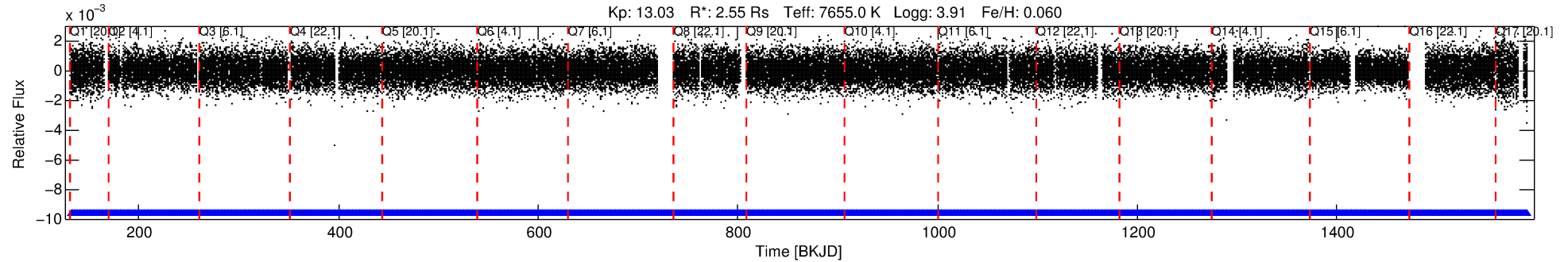
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005551625-01

No Significant Match Found

DV One-Page Summary

KIC: 5551625 Candidate: 1 of 1 Period: 1.087 d



DV Fit Results:

Period = 1.08713 [0.00001] d
Epoch = 132.5320 [0.0068] BKJD
Rp/R* = 0.0080 [0.0049]
a/R* = 1.04 [0.28]
b = 0.03 [119.73]
Seff = 30315.71 [8241.75]
Teq = 3365 [229] K
Rp = 2.23 [1.44] Re
a = 0.0257 [0.0046] AU
Ag = N/A
Teffp = N/A

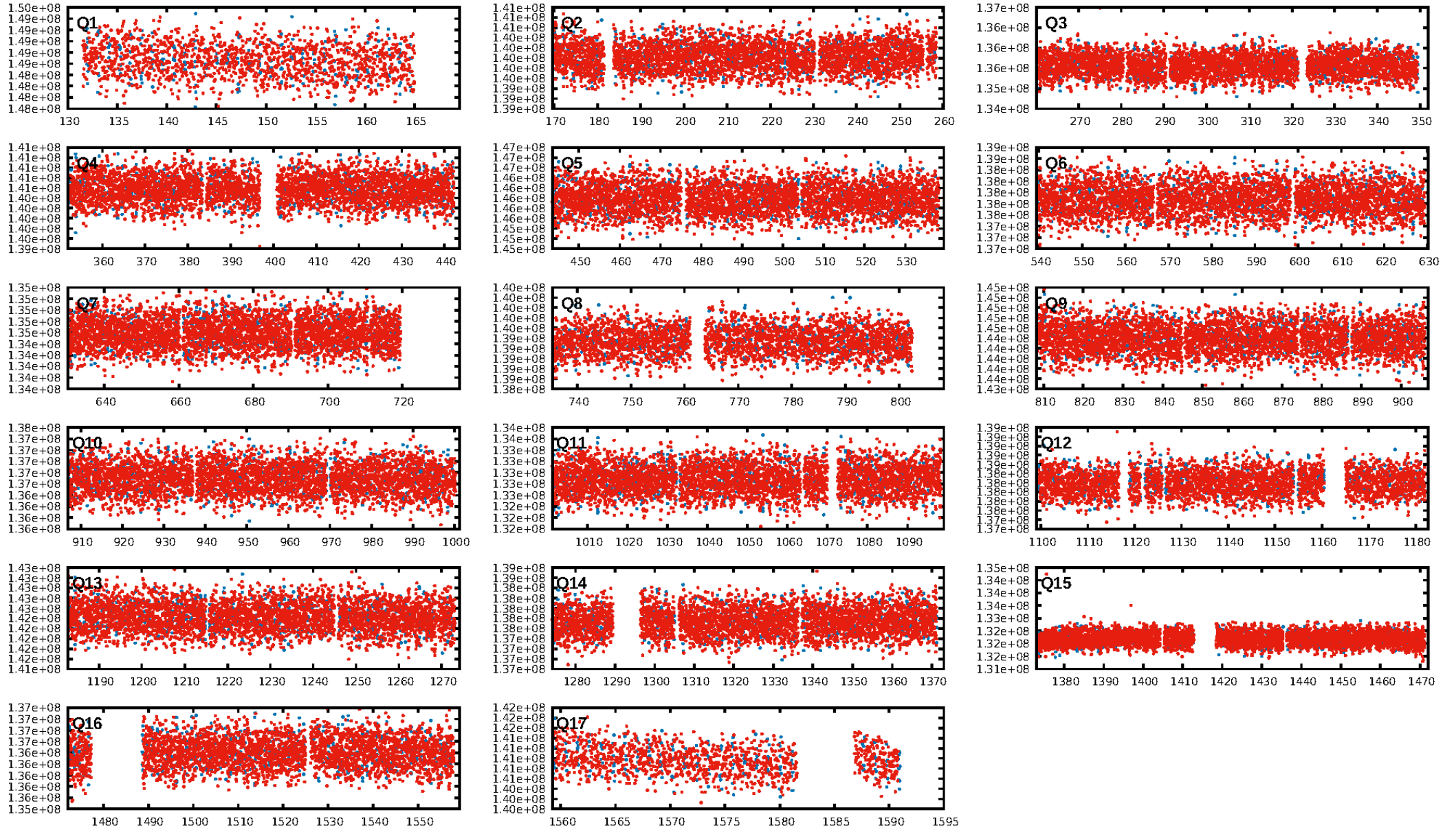
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1194/1194]
GhostDiagnostic-chr: 1.535
Centroid-sig: 30.5%
Centroid-so: 0.117 arcsec [0.68 σ]
OotOffset-rm: 1.468 arcsec [0.91 σ]
KicOffset-rm: 1.397 arcsec [0.88 σ]
OotOffset-st: 0/3/0/2 [5]
KicOffset-st: 0/3/0/2 [5]
DiffImageQuality-fgm: 0.00 [0/5]
DiffImageOverlap-fno: 1.00 [17/17]

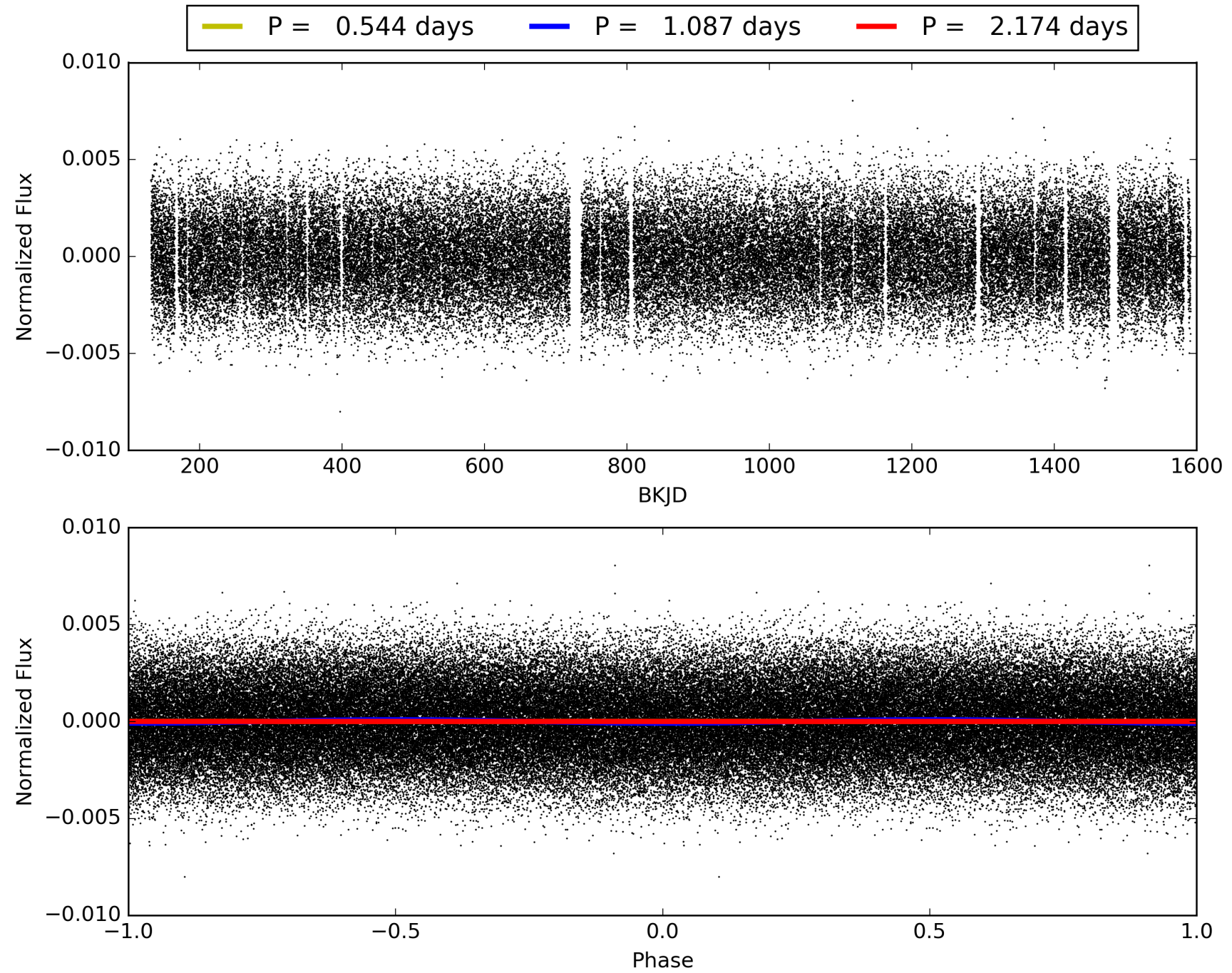
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:39:09 Z

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

TCE 005551625-01, PDC Light Curves

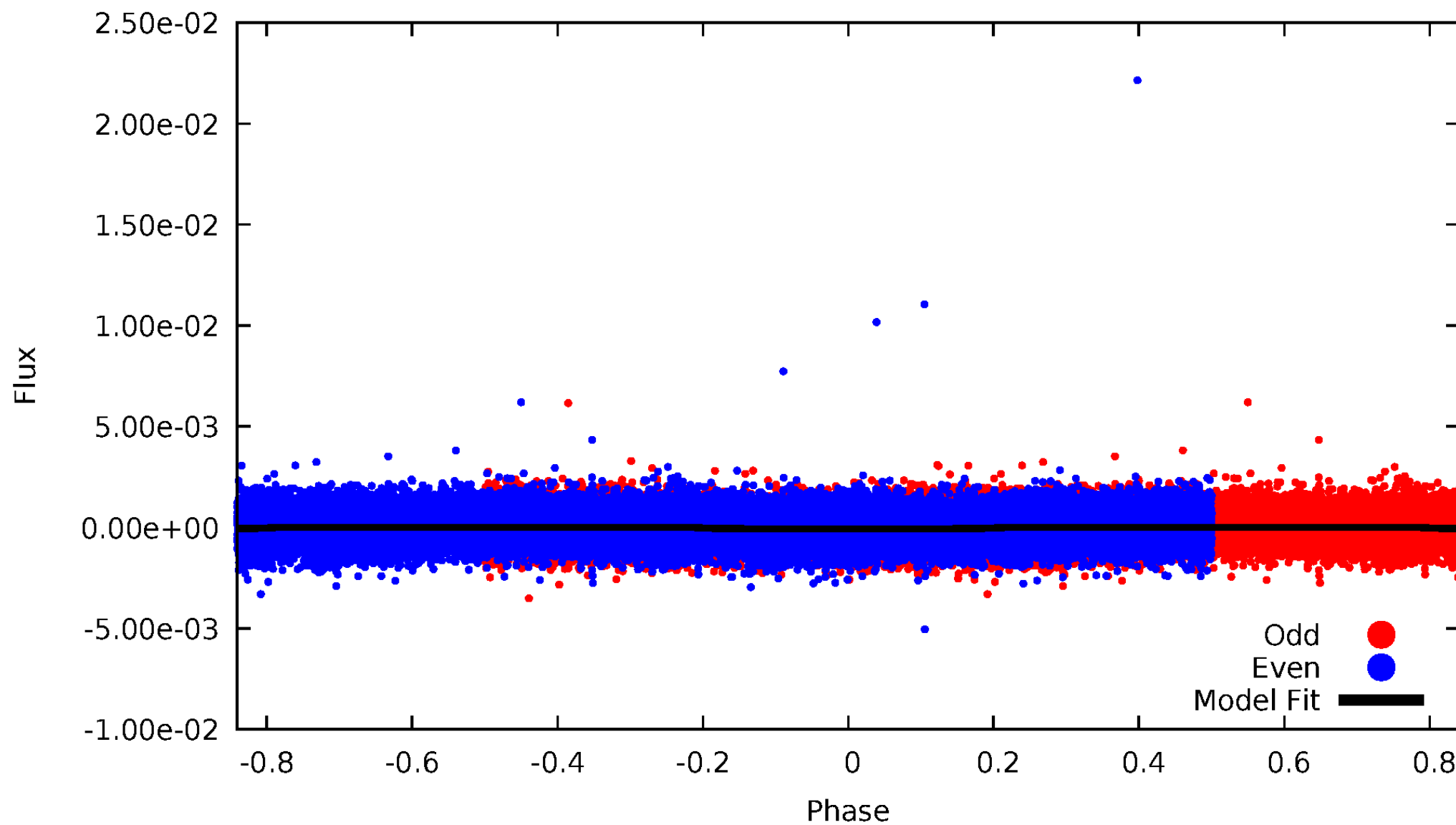


TCE 005551625-01



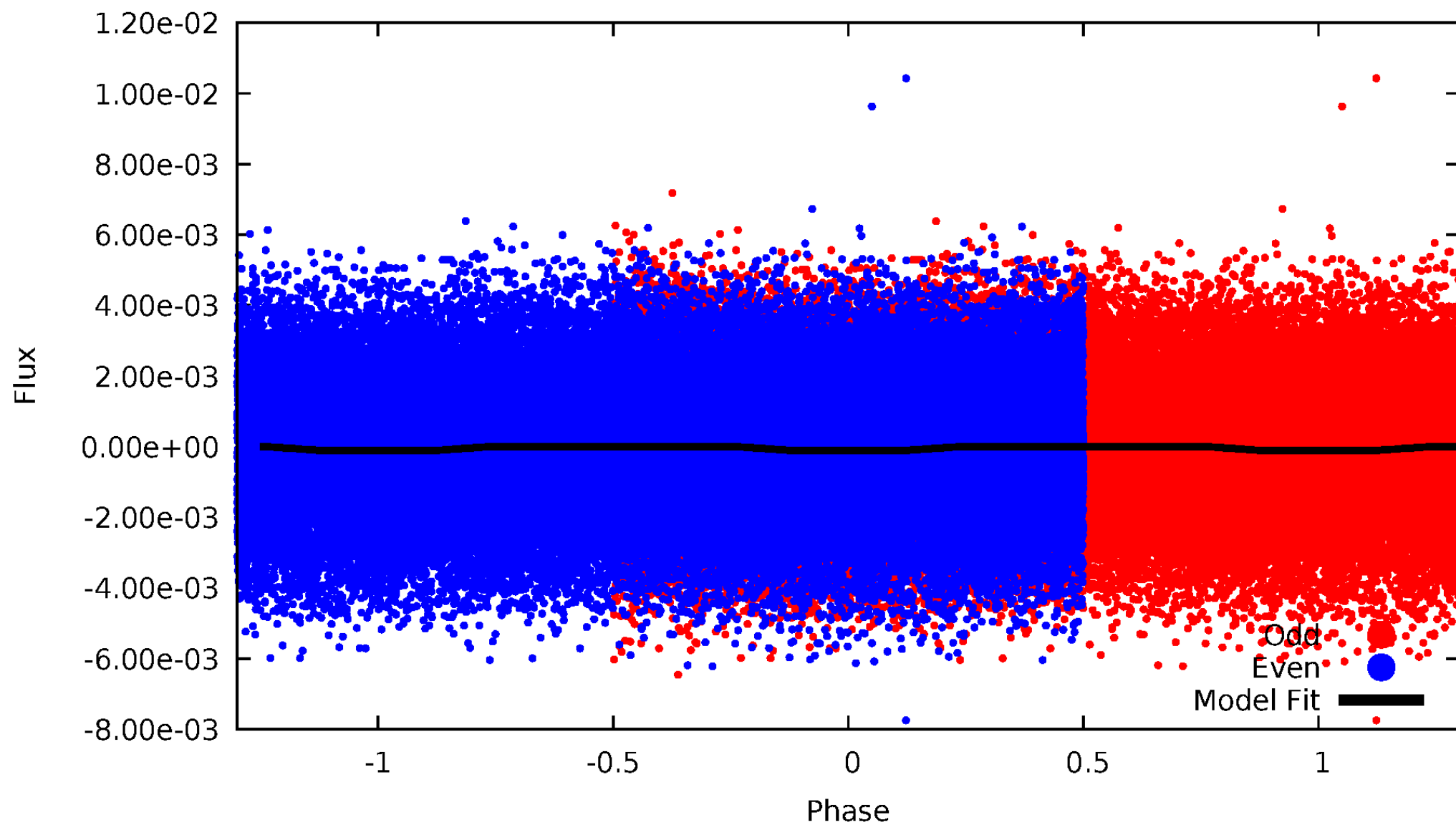
DV Odd/Even

TCE 005551625-01



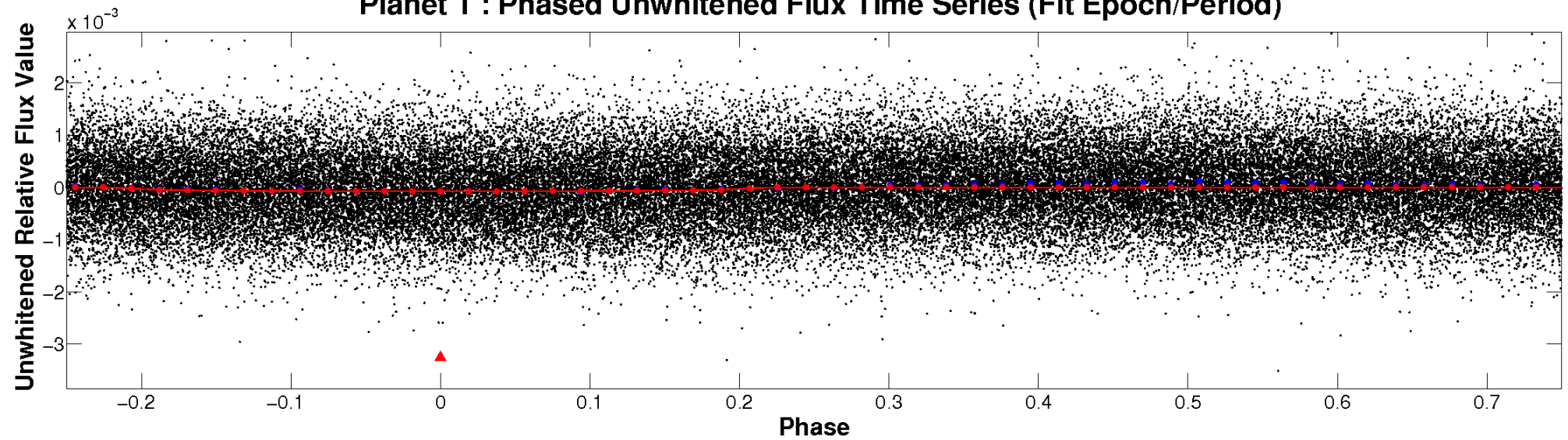
ALT Odd/Even

TCE 005551625-01

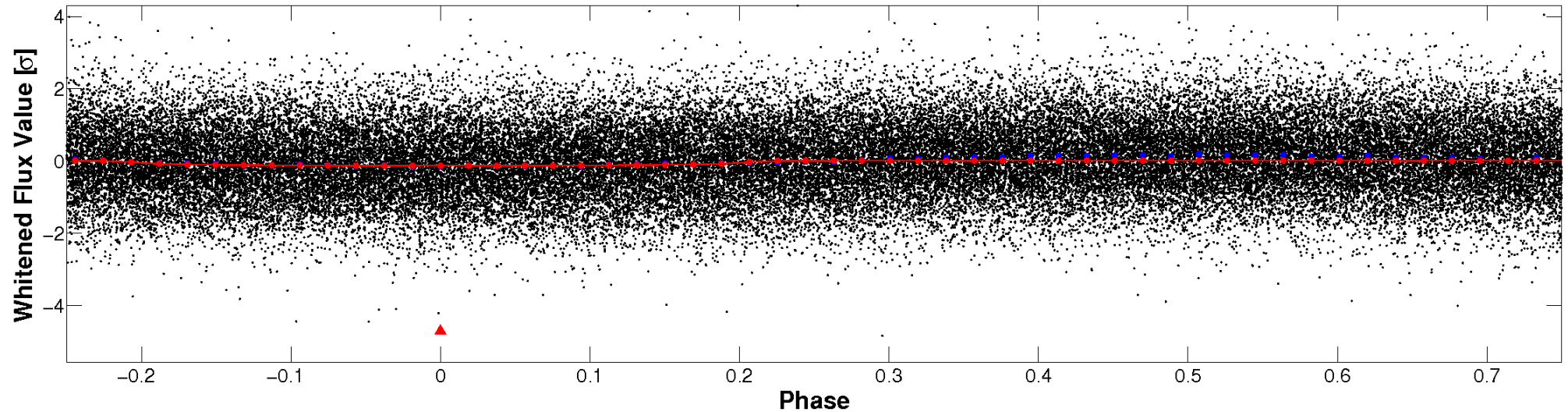


Non-Whitened Vs. Whitened Light Curve

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

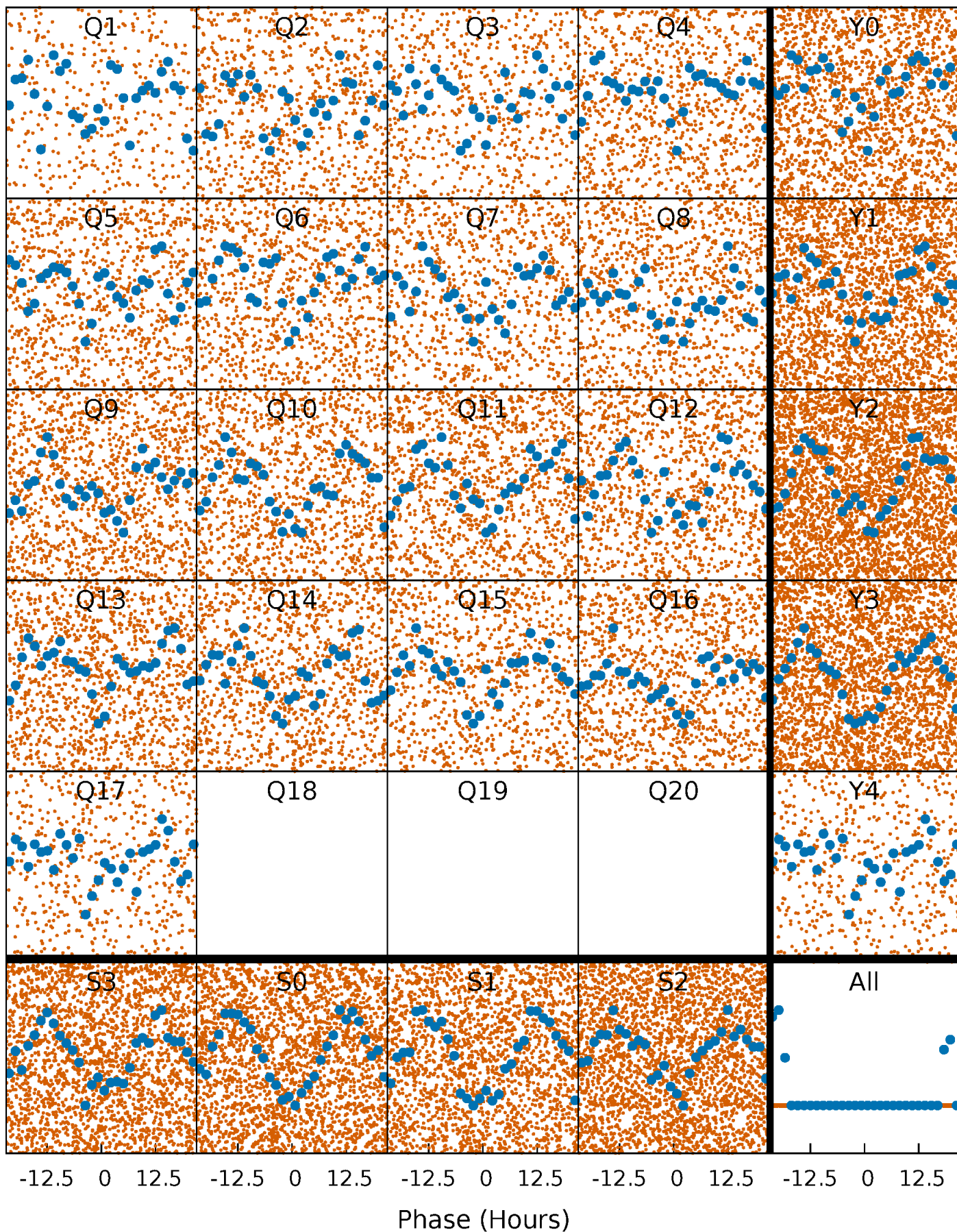


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



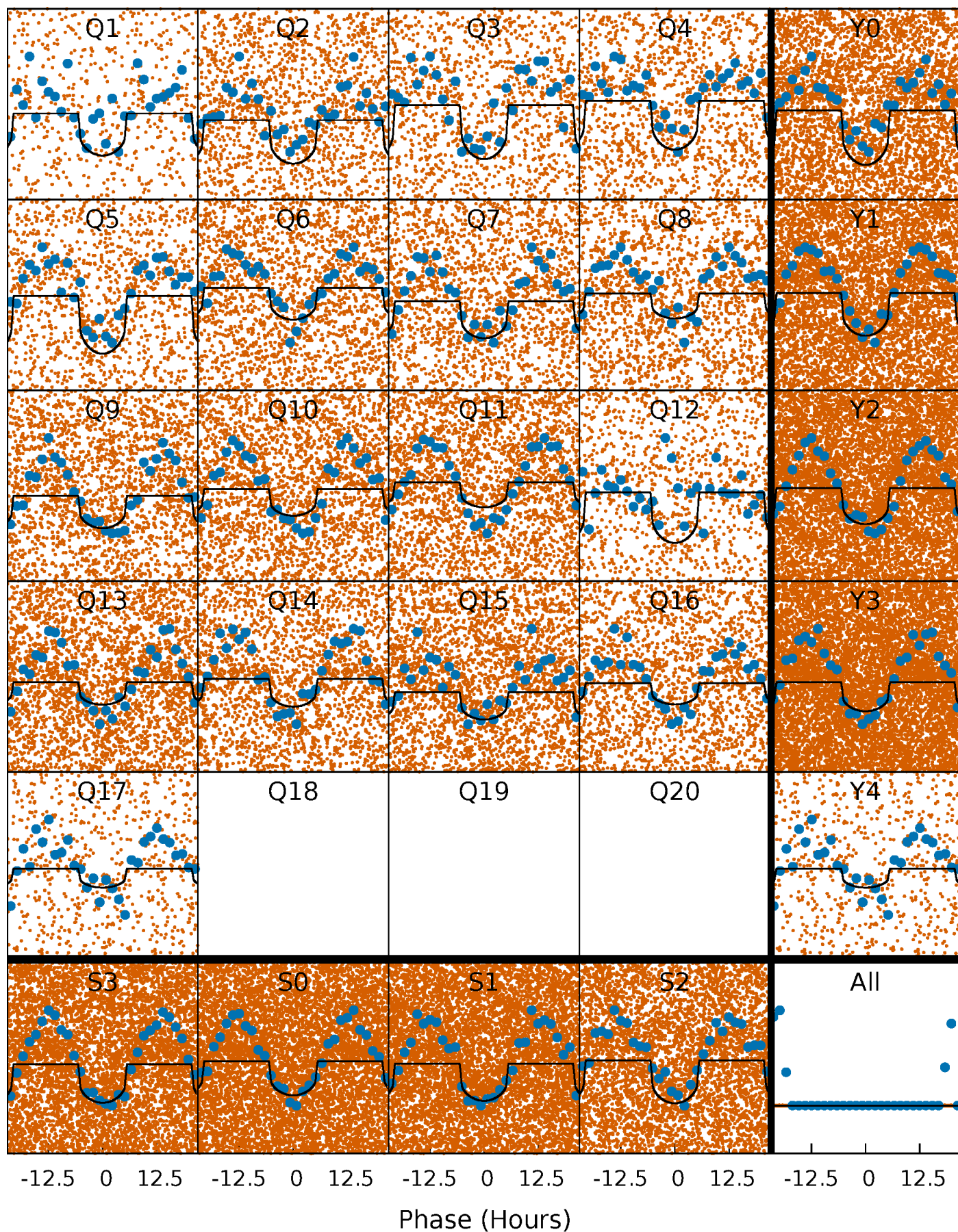
PDC Quarter-Phased Transit Curves

TCE 005551625-01 P= 1.087129 Days $T_0=132.531972$ (BKJD)



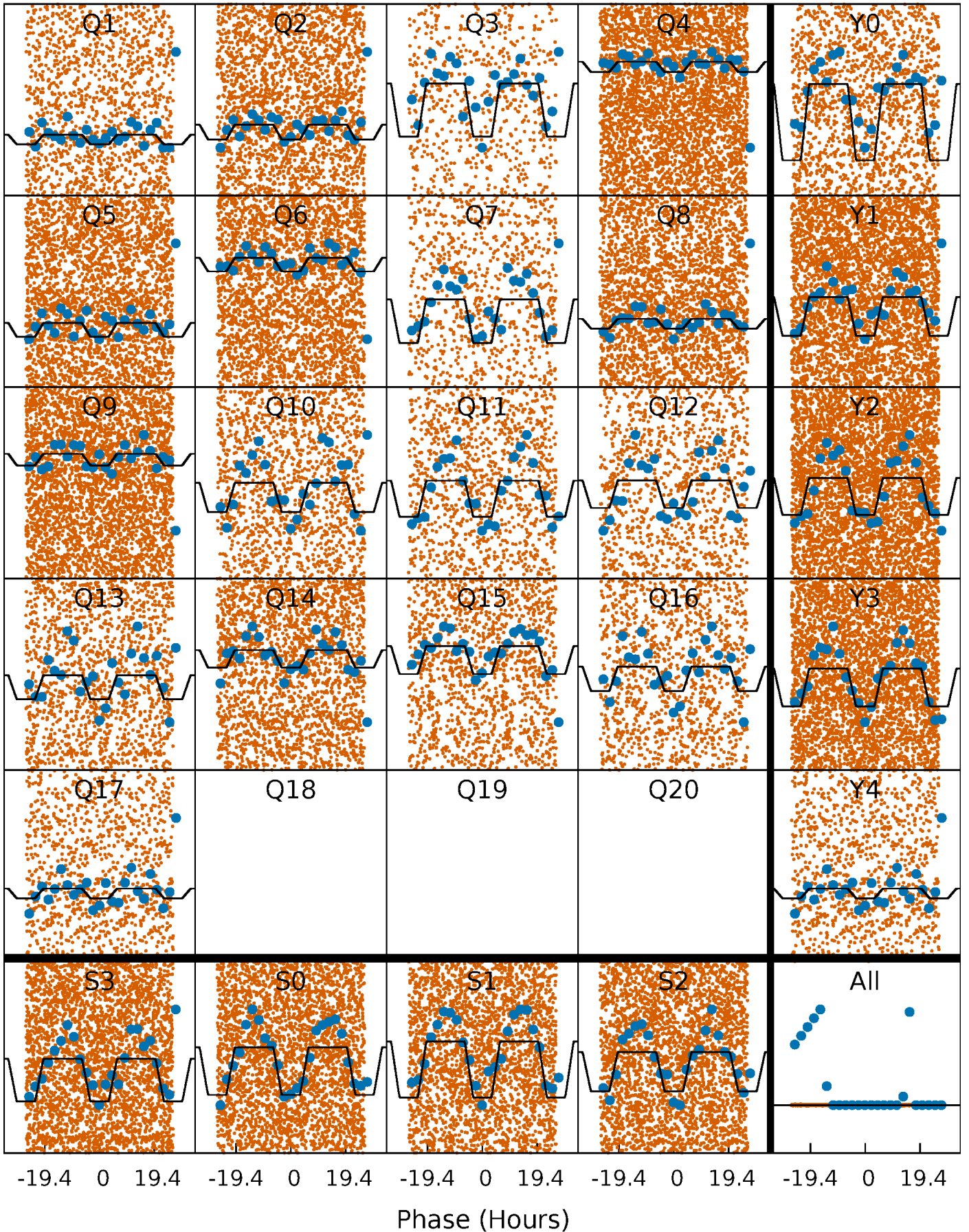
DV Quarter-Phased Transit Curves

TCE 005551625-01 P= 1.087129 Days $T_0=132.531972$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

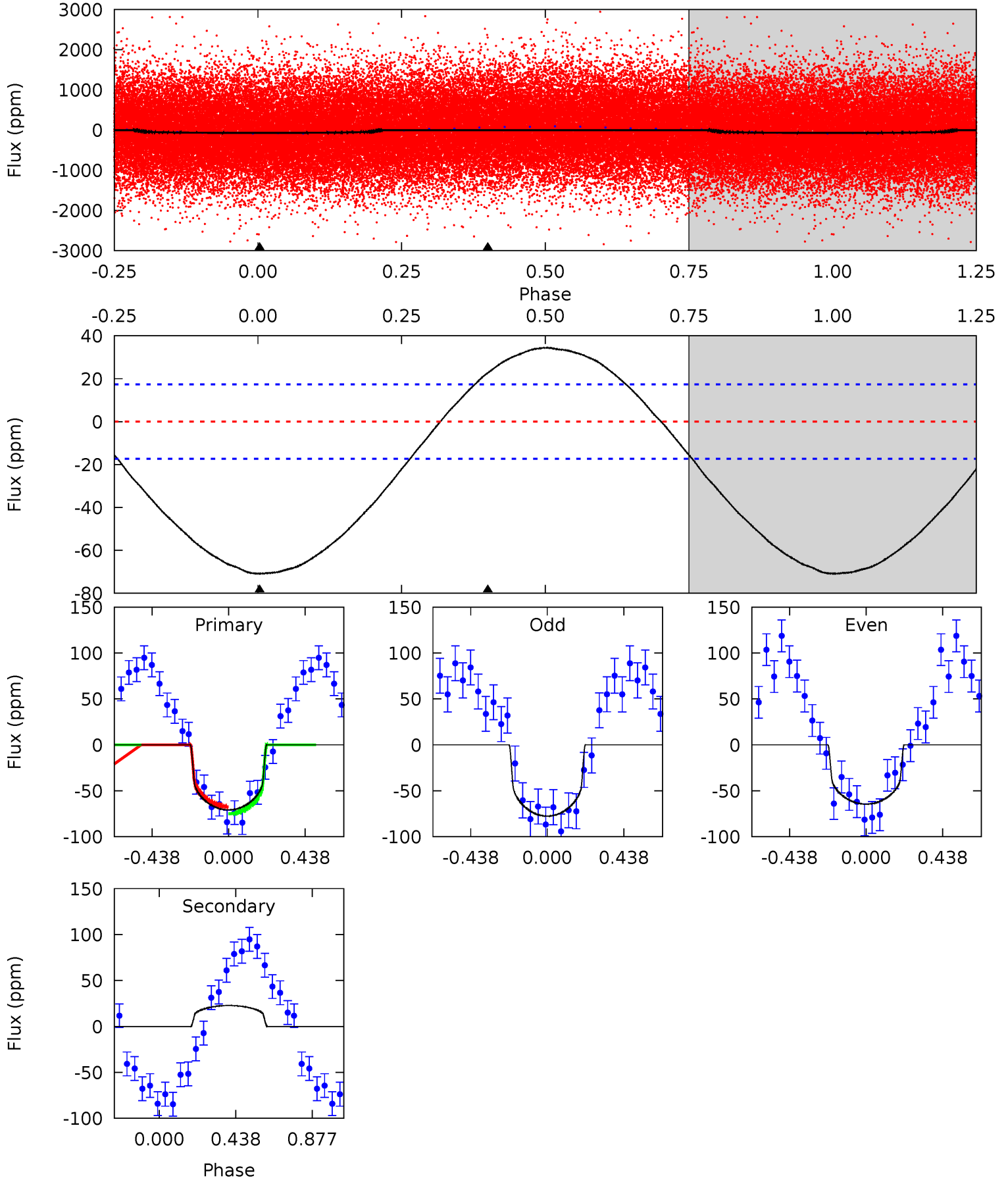
TCE 005551625-01 P= 1.087136 Days $T_0=132.511256$ (BKJD)



DV Model-Shift Uniqueness Test

005551625-01, P = 1.087129 Days, E = 131.444843 Days

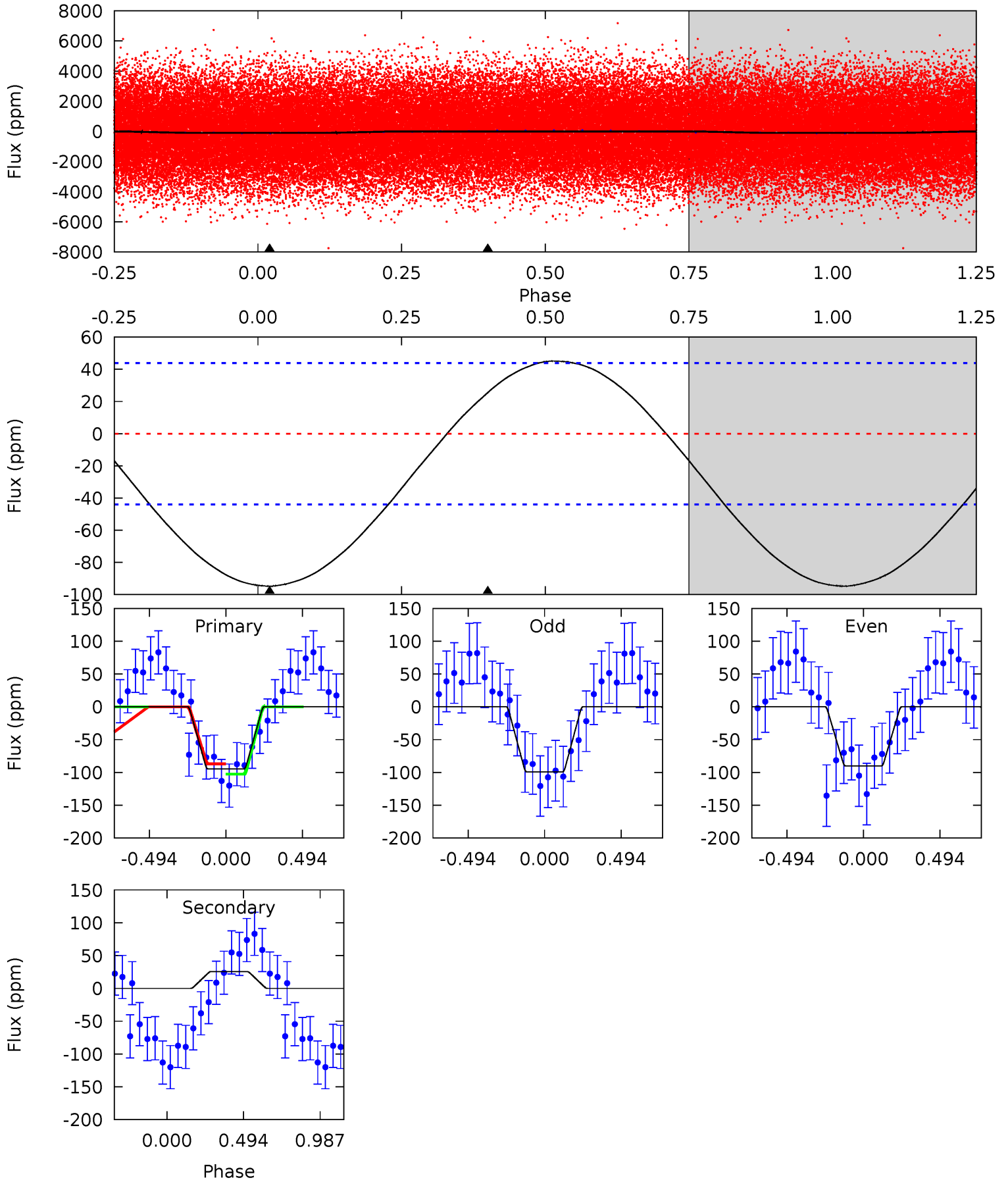
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.4	-5.58	0	0	4.24	0.78	2.24	17.4	17.4	-5.58	-5.58	1.59	0.97	0.33	0.92



Alt Model-Shift Uniqueness Test

005551625-01, P = 1.087136 Days, E = 131.424120 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.10	-2.45	0	0	4.22	0.68	1.16	9.10	9.10	-2.45	-2.45	0.43	0.95	0.32	0.75



Stellar Parameters For KIC 005551625

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7655^{+68}_{-83}	$3.907^{+0.150}_{-0.081}$	$0.060^{+0.100}_{-0.150}$	$2.553^{+0.284}_{-0.528}$	$1.916^{+0.053}_{-0.210}$	$0.162^{+0.127}_{-0.044}$
	+1%/-1%	+4%/-2%	+167%/-250%	+11%/-21%	+3%/-11%	+78%/-27%
Source	SPE68	SPE68	SPE68	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 005551625-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	23 ± 4	$2.22^{+1.28}_{-1.12}$	4691^{+171}_{-217}	-5996^{+916}_{-2767}	$-1.653^{+1.018}_{-5.362}$
Alt.	26 ± 10	$2.65^{+1.44}_{-1.14}$	4682^{+165}_{-227}	-5638^{+837}_{-1780}	$-1.232^{+0.785}_{-2.778}$

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

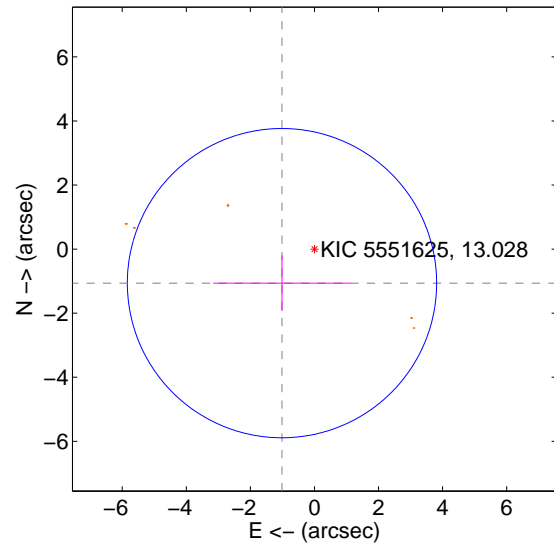
Supplemental centroid analysis for 005551625-01. Kepler magnitude: 13.03. Transit SNR 18.31

There are 0 quarters with good PRF difference image offsets

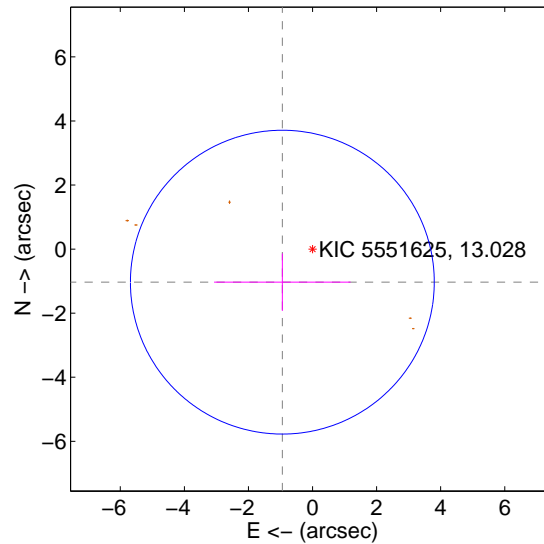
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.468 ± 1.609	0.91	1.013 ± 2.147	-1.063 ± 0.868
PRF-fit source offset from KIC position	1.397 ± 1.581	0.88	0.942 ± 2.130	-1.032 ± 0.896
photometric centroid source offset	0.12 ± 0.17	0.68	-0.10 ± 0.18	-0.06 ± 0.17

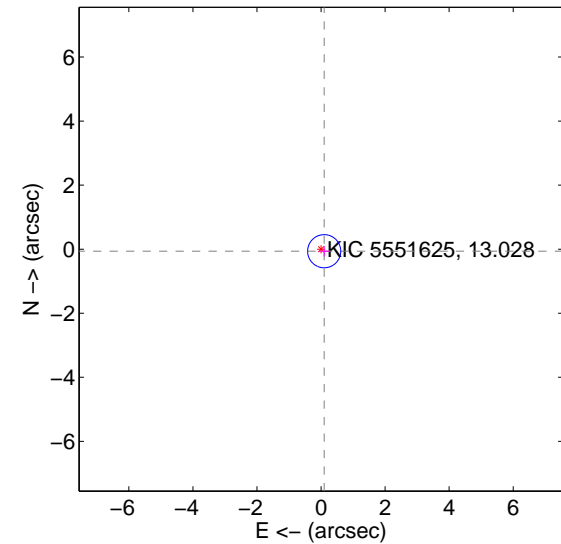
offset from difference PRF-fit to OOT PRF-fit



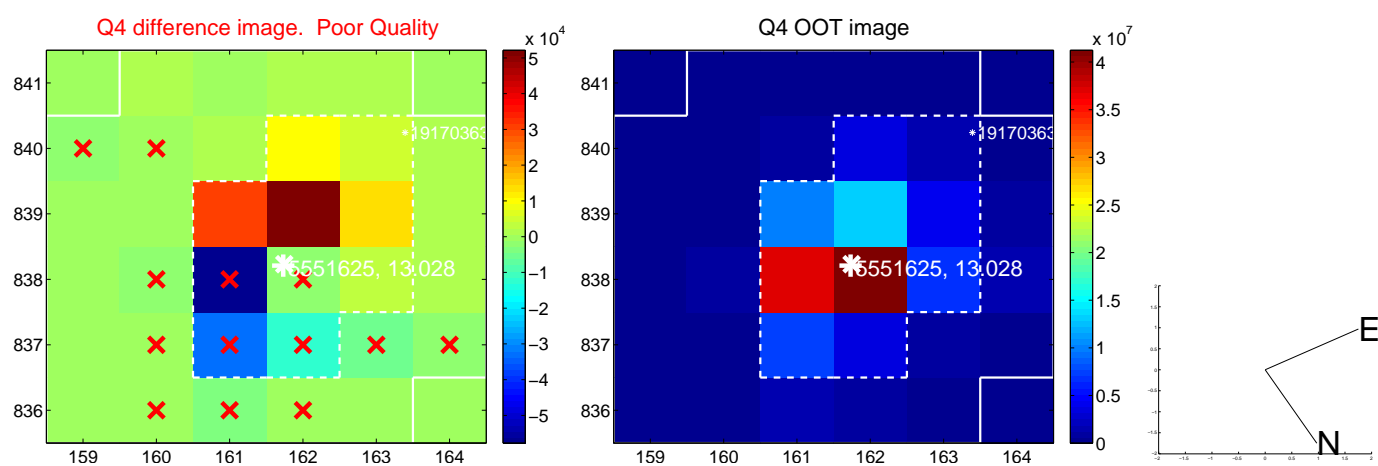
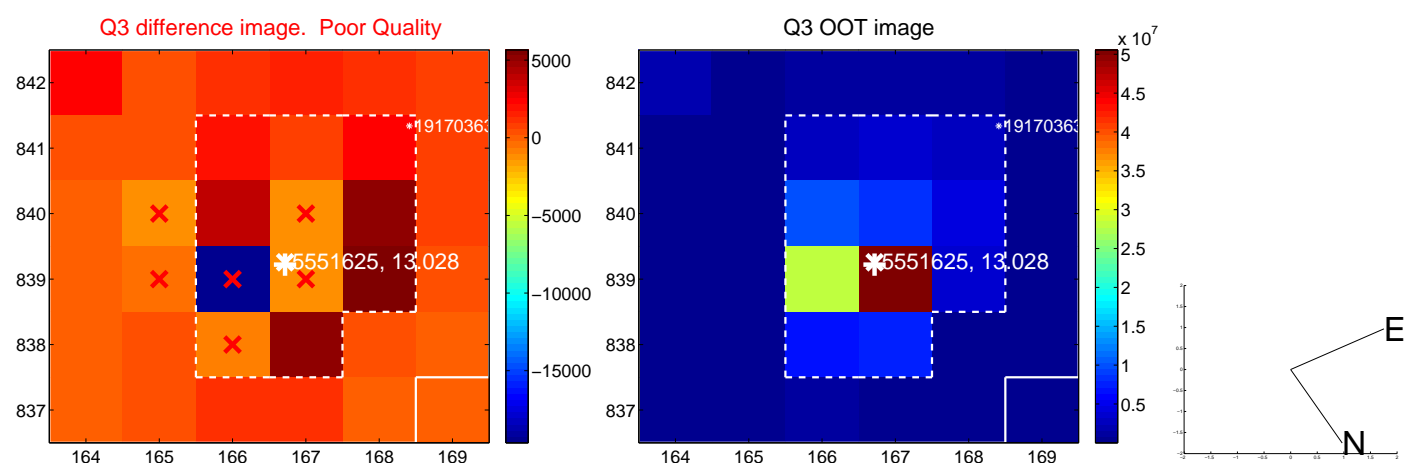
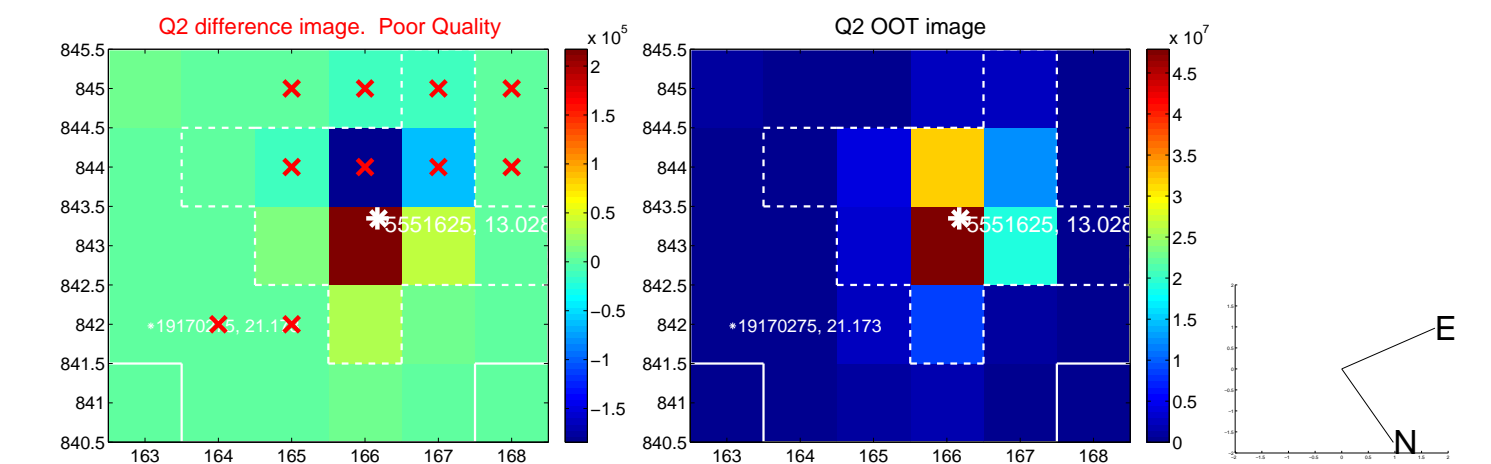
offset from difference PRF-fit to KIC position



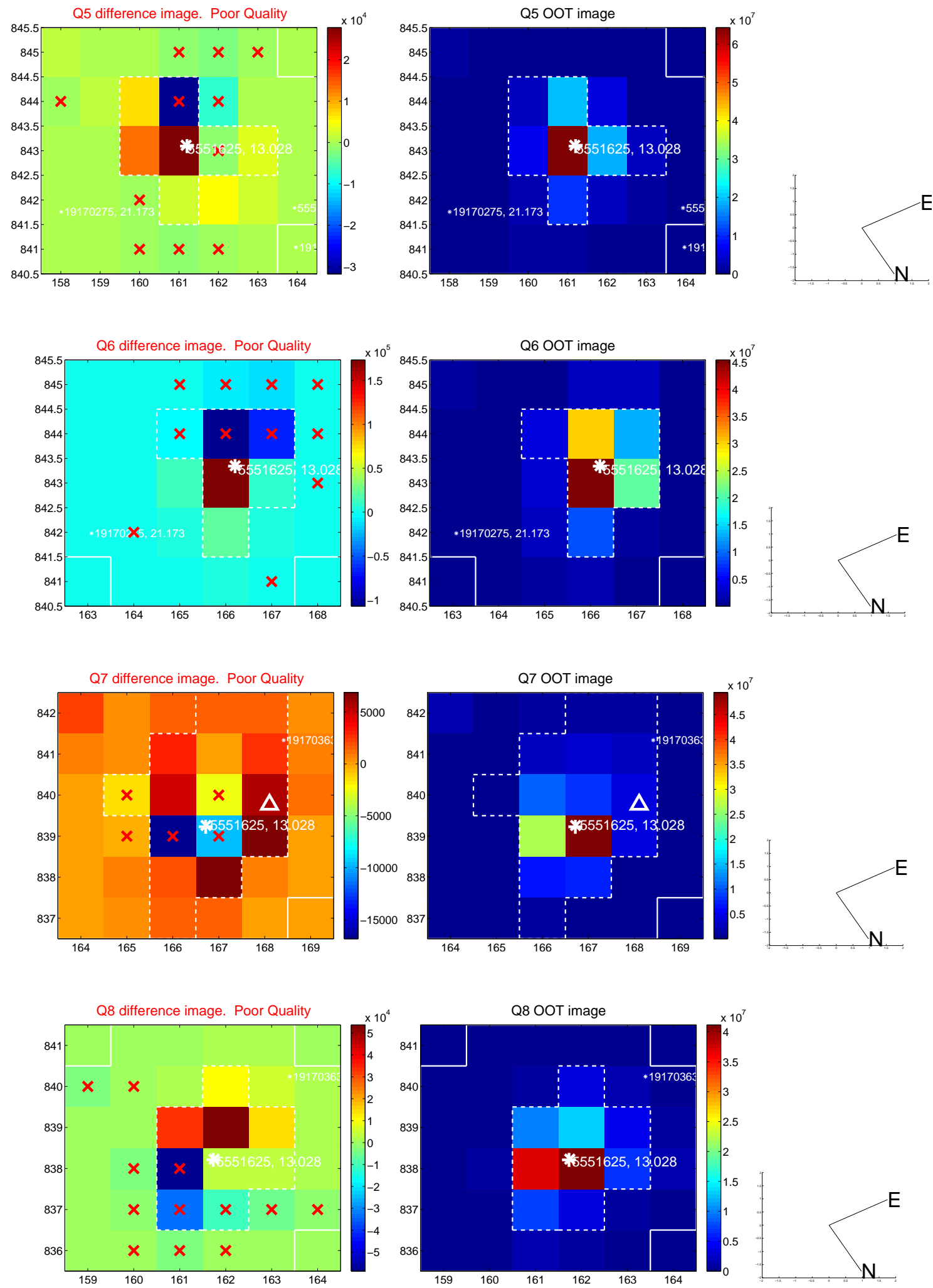
offset from photometric centroids



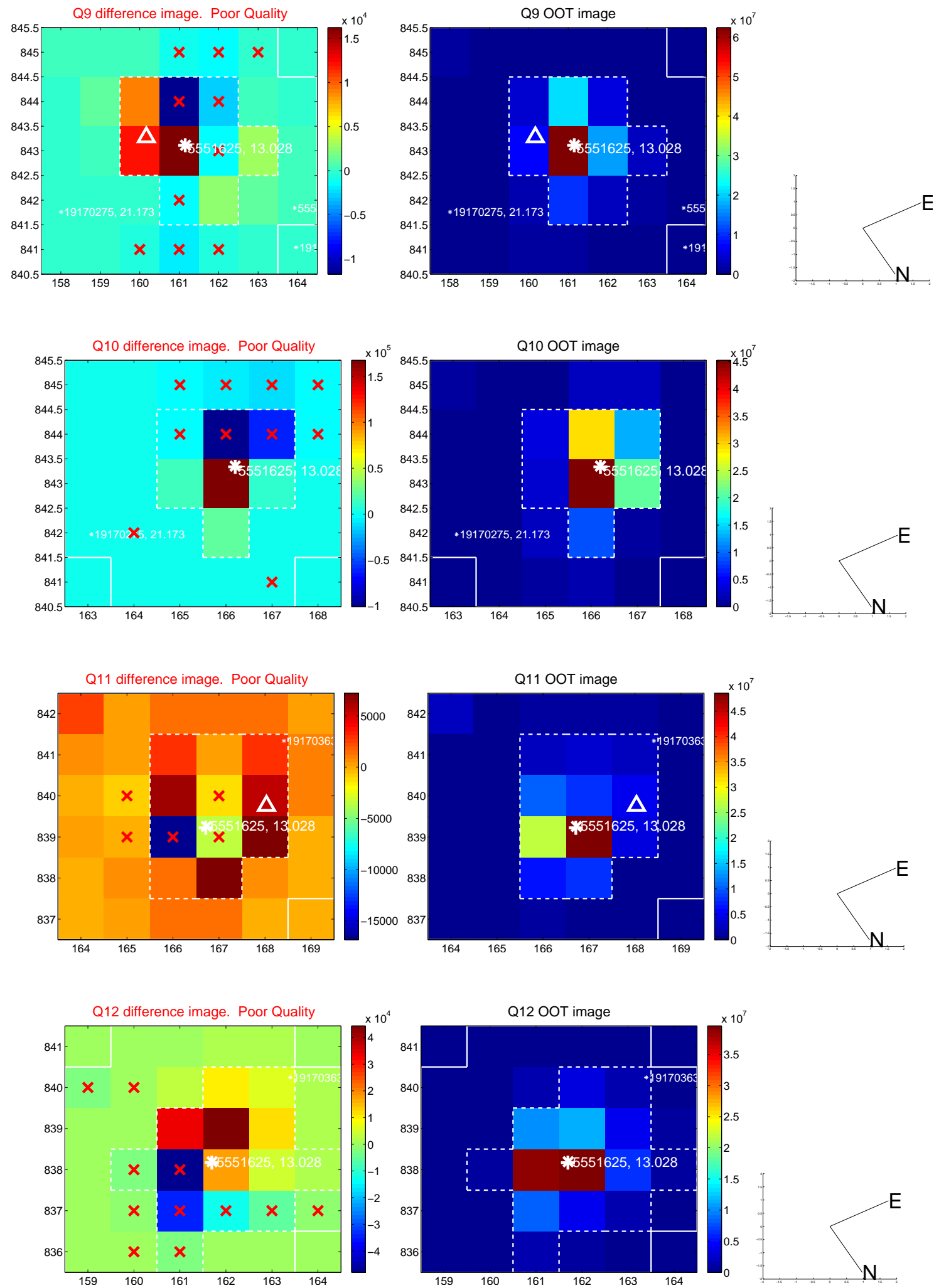
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



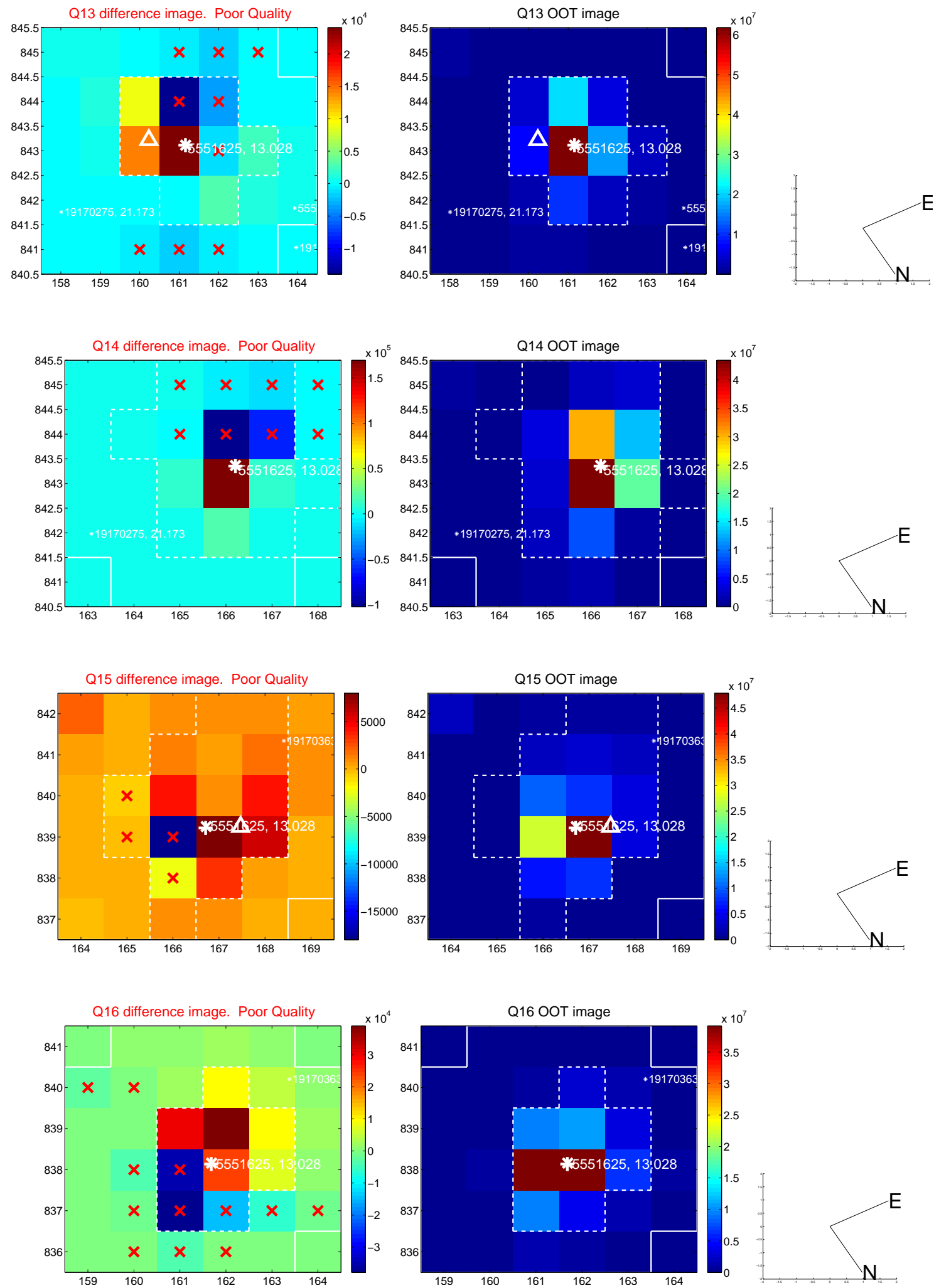
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

