

KIC 007522572

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})
007522572-01	OBS	No	1.541647	131.907922	40.2	15.676	8.9	14.8	3.57	8853	2.31	54834.67

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007522572-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_SATURATED

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

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

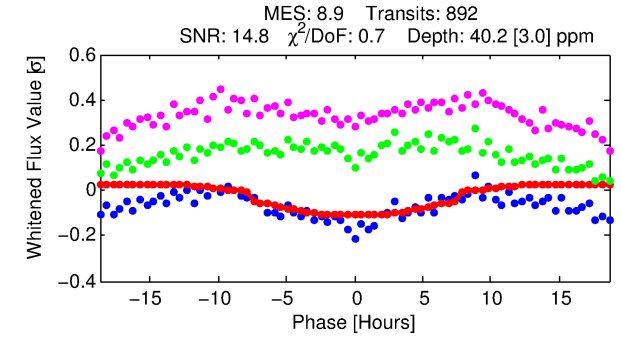
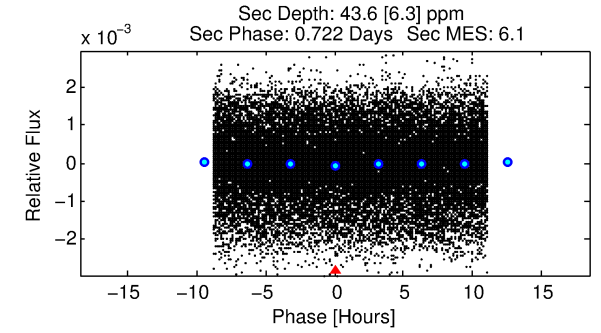
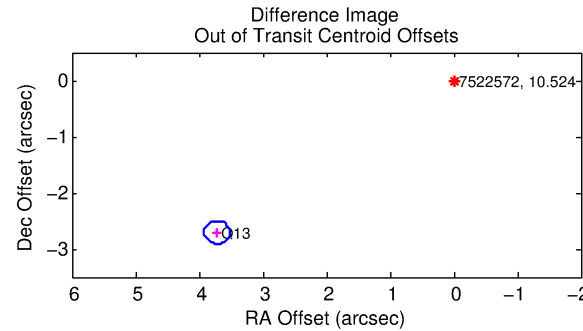
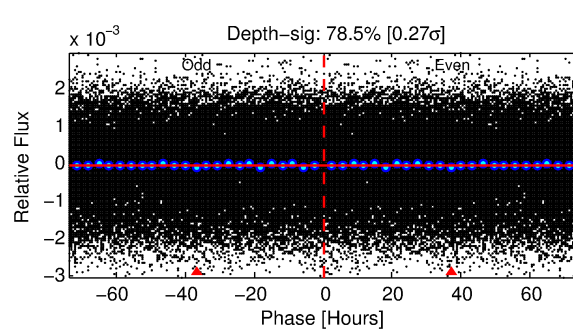
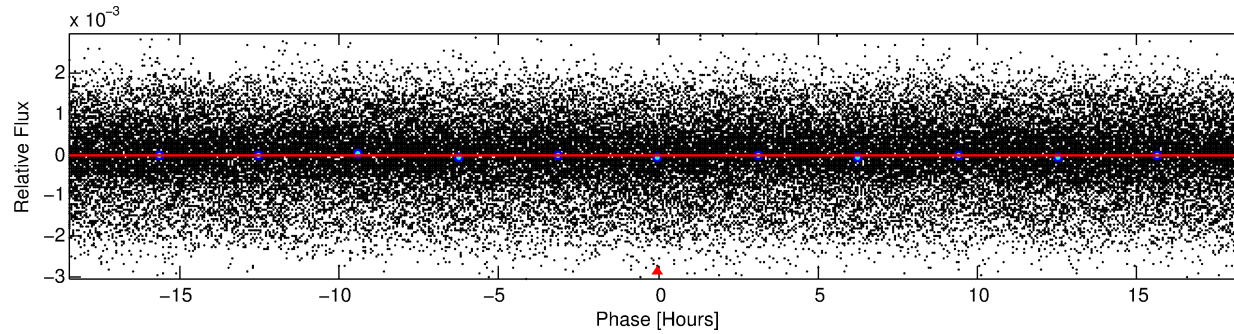
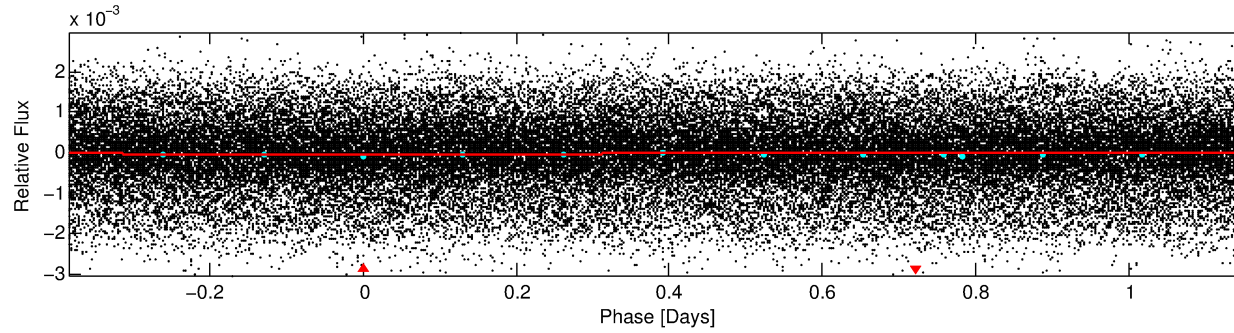
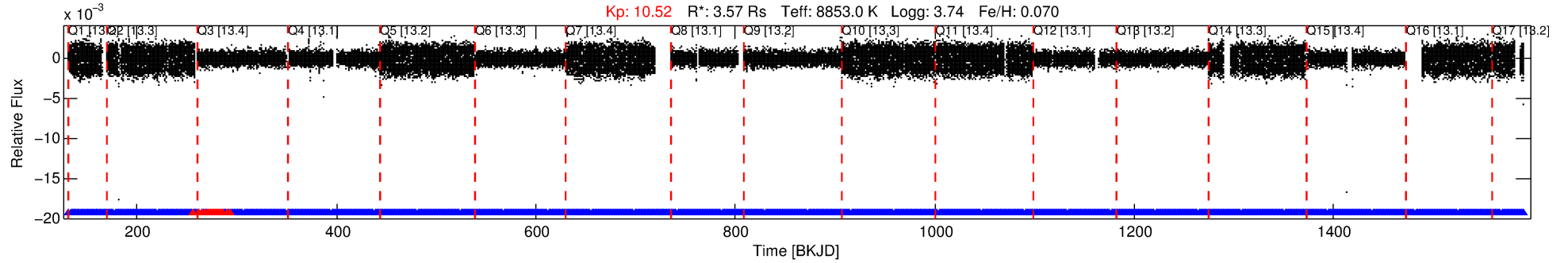
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007522572-01

No Significant Match Found

DV One-Page Summary

KIC: 7522572 Candidate: 1 of 1 Period: 1.542 d



DV Fit Results:

Period = 1.54165 [0.00003] d
Epoch = 131.9079 [0.0111] BKJD
Rp/R* = 0.0059 [0.0039]
a/R* = 1.03 [0.28]
b = 0.22 [18.27]
Seff = 54834.67 [43156.61]
Teq = 3902 [768] K
Rp = 2.31 [1.93] Re
a = 0.0358 [0.0172] AU
Ag = 5.74 [8.82] [0.54 σ]
Teffp = 9338 [3153] K [1.68 σ]

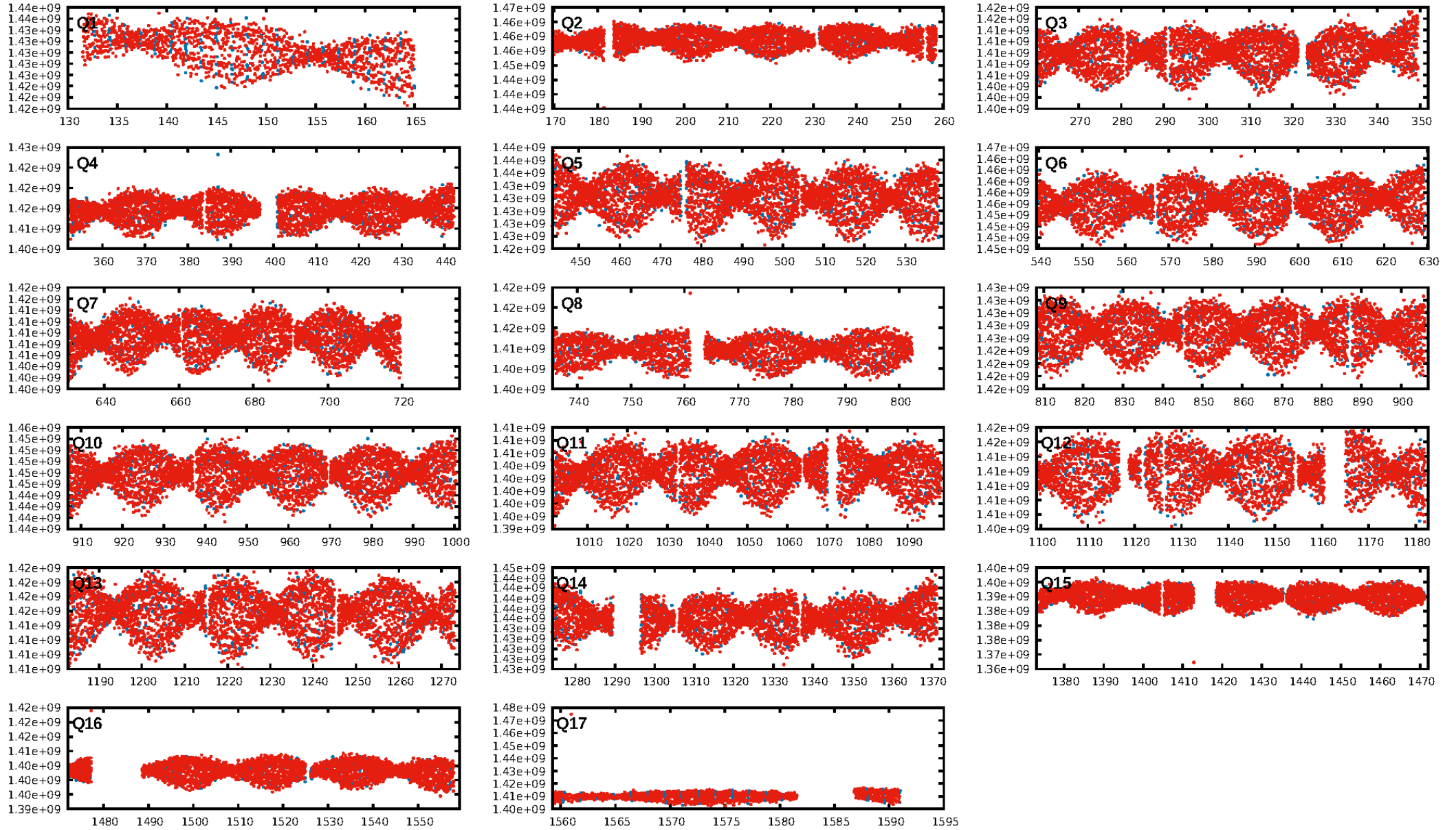
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.98 [835/852]
GhostDiagnostic-chr: 2.885
Centroid-sig: 0.0%
Centroid-so: 1.013 arcsec [4.12 σ]
OotOffset-rm: 4.599 arcsec [67.80 σ]
KicOffset-rm: 4.851 arcsec [71.44 σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [17/17]

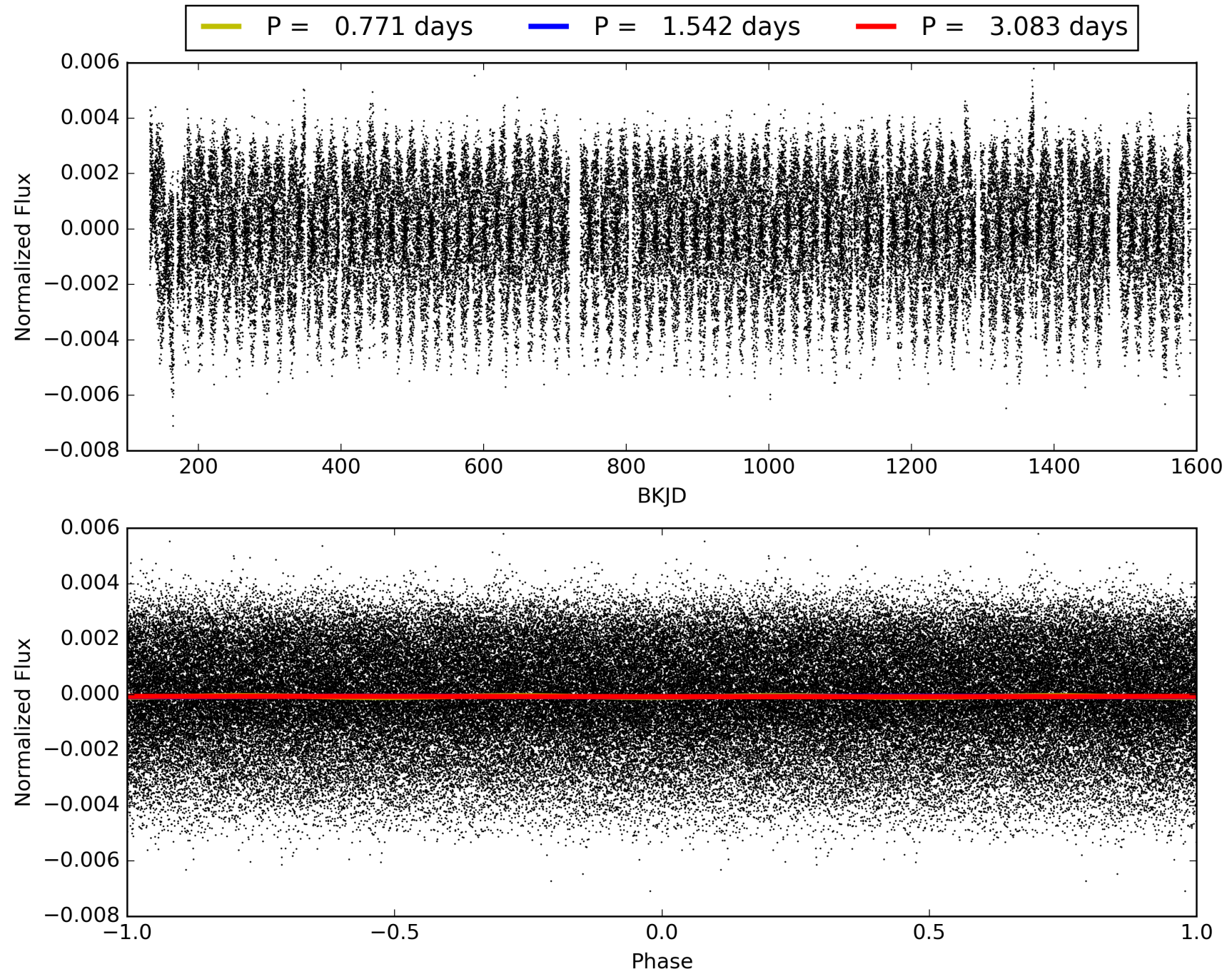
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 15:25:39 Z

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

TCE 007522572-01, PDC Light Curves

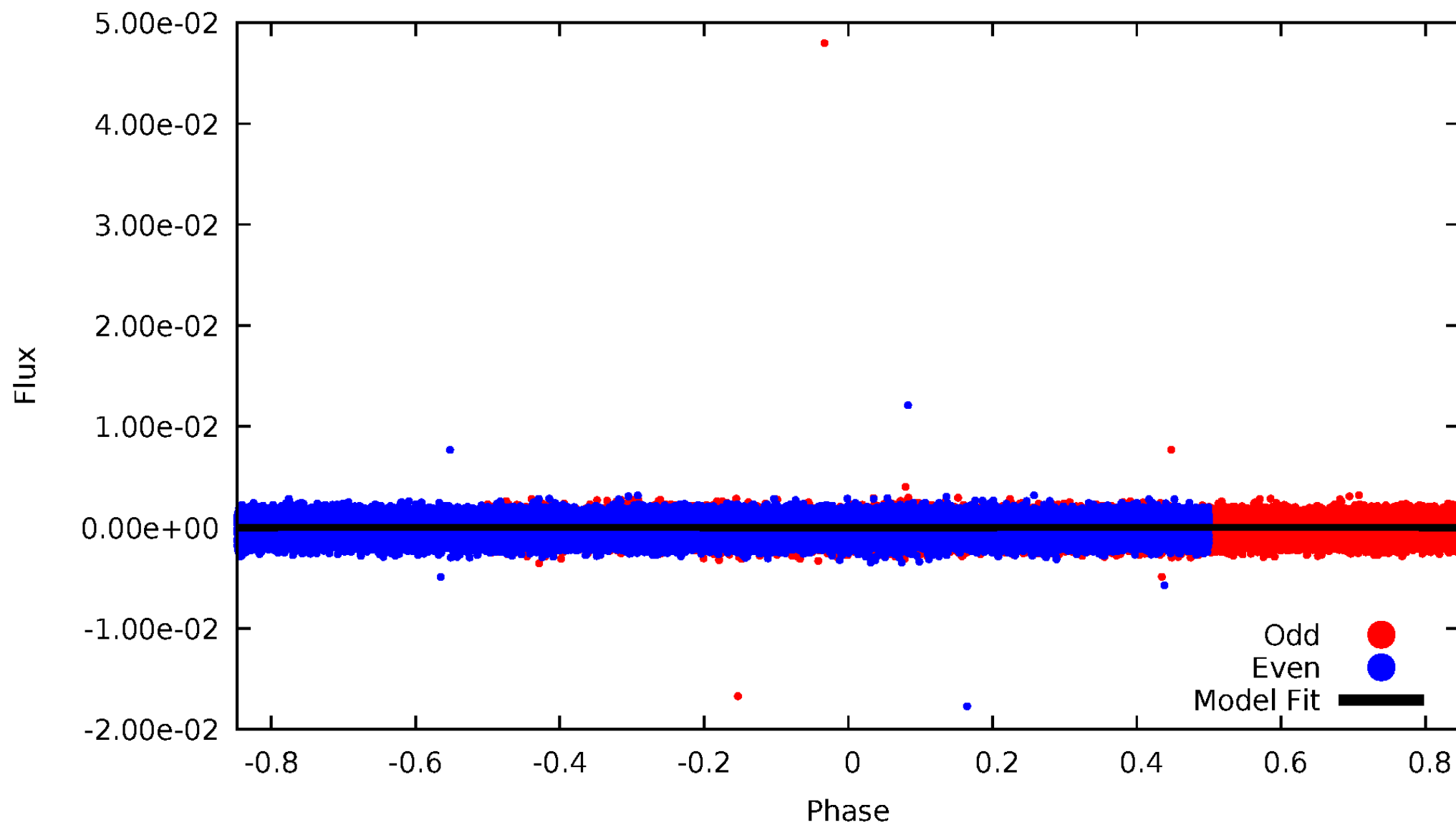


TCE 007522572-01



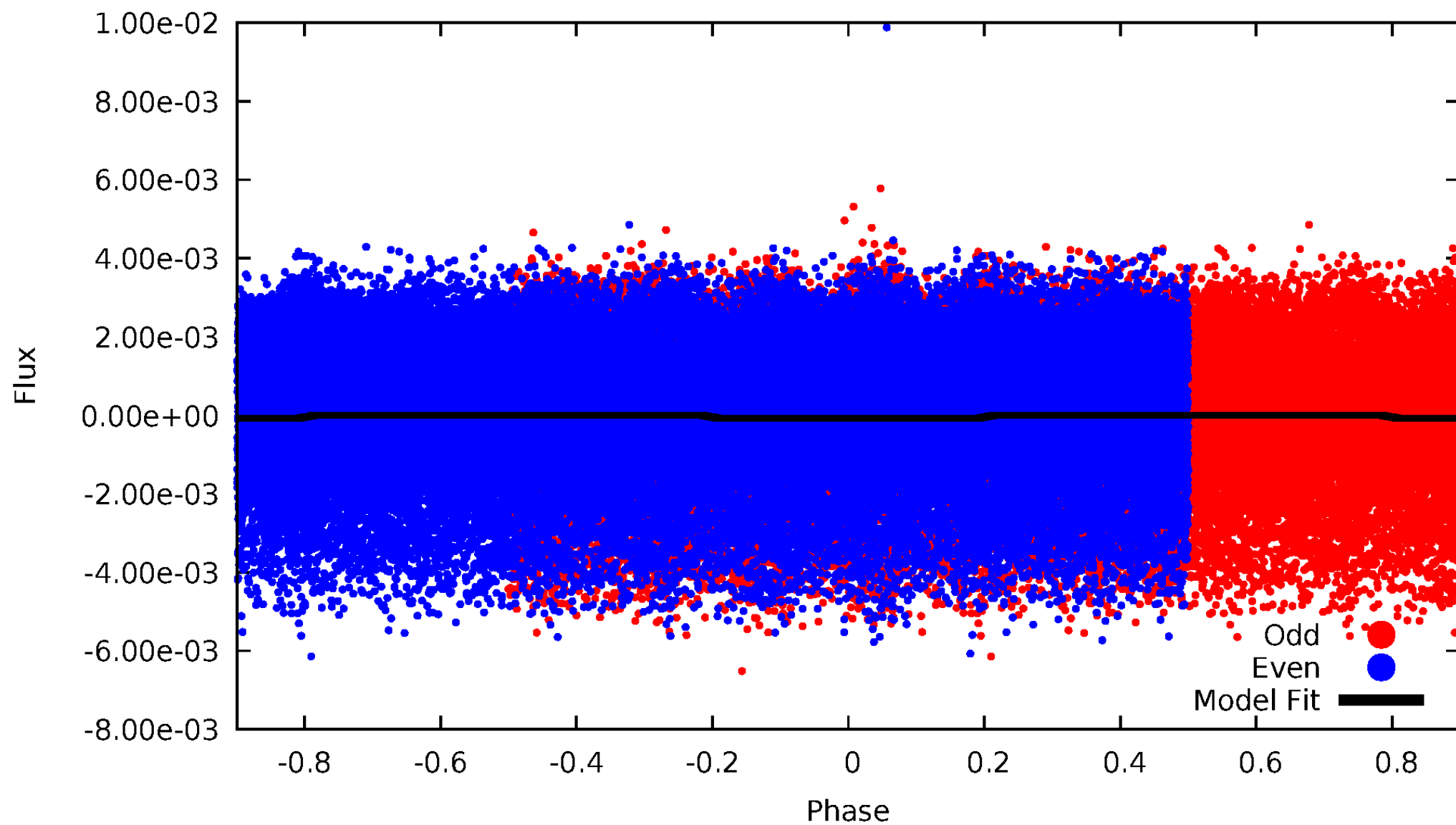
DV Odd/Even

TCE 007522572-01

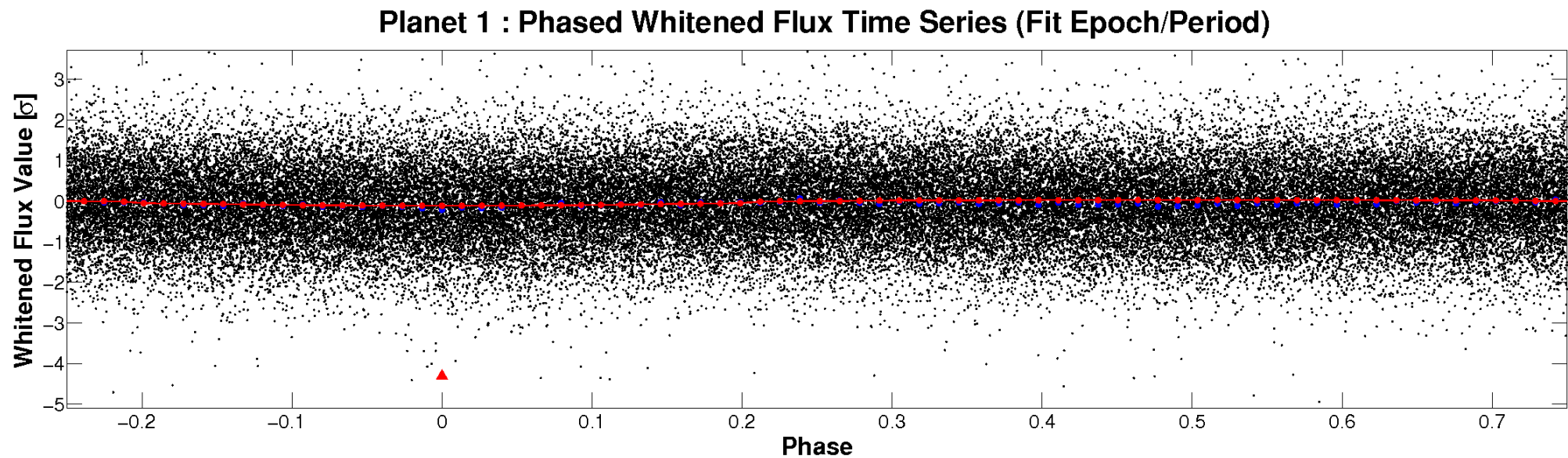
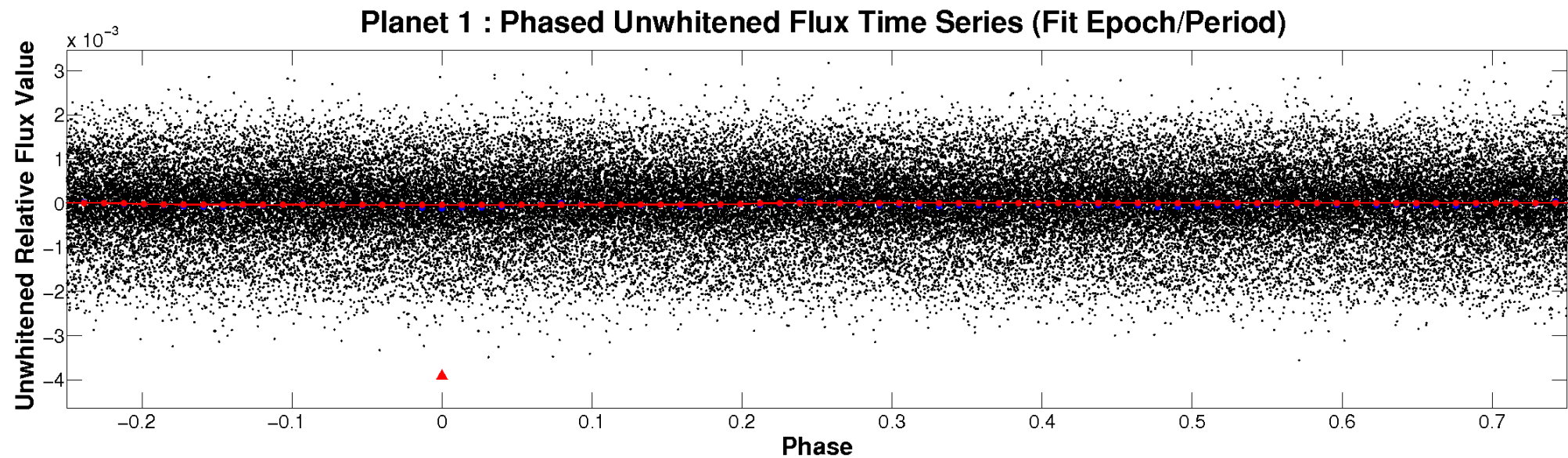


ALT Odd/Even

TCE 007522572-01

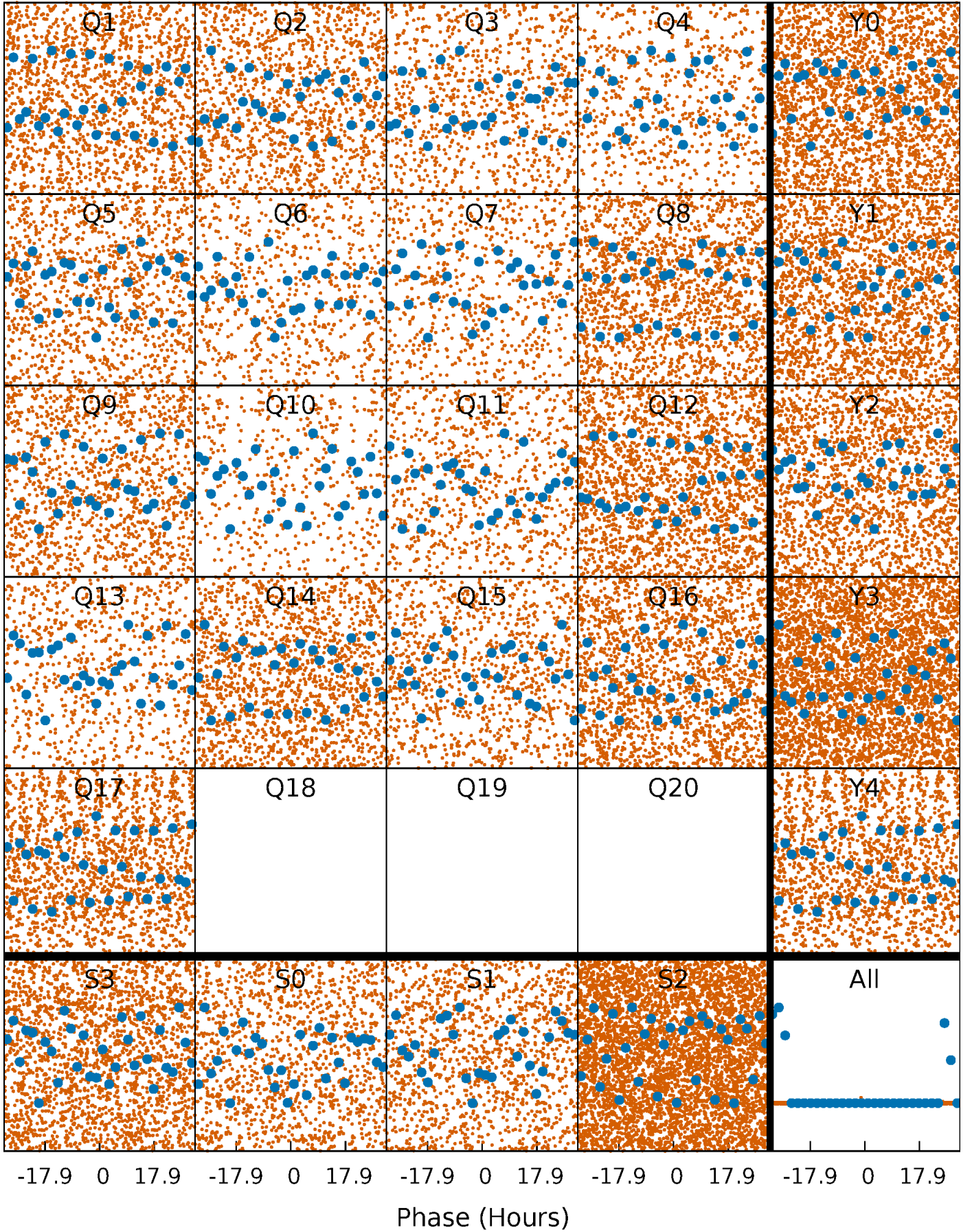


Non-Whitened Vs. Whitened Light Curve



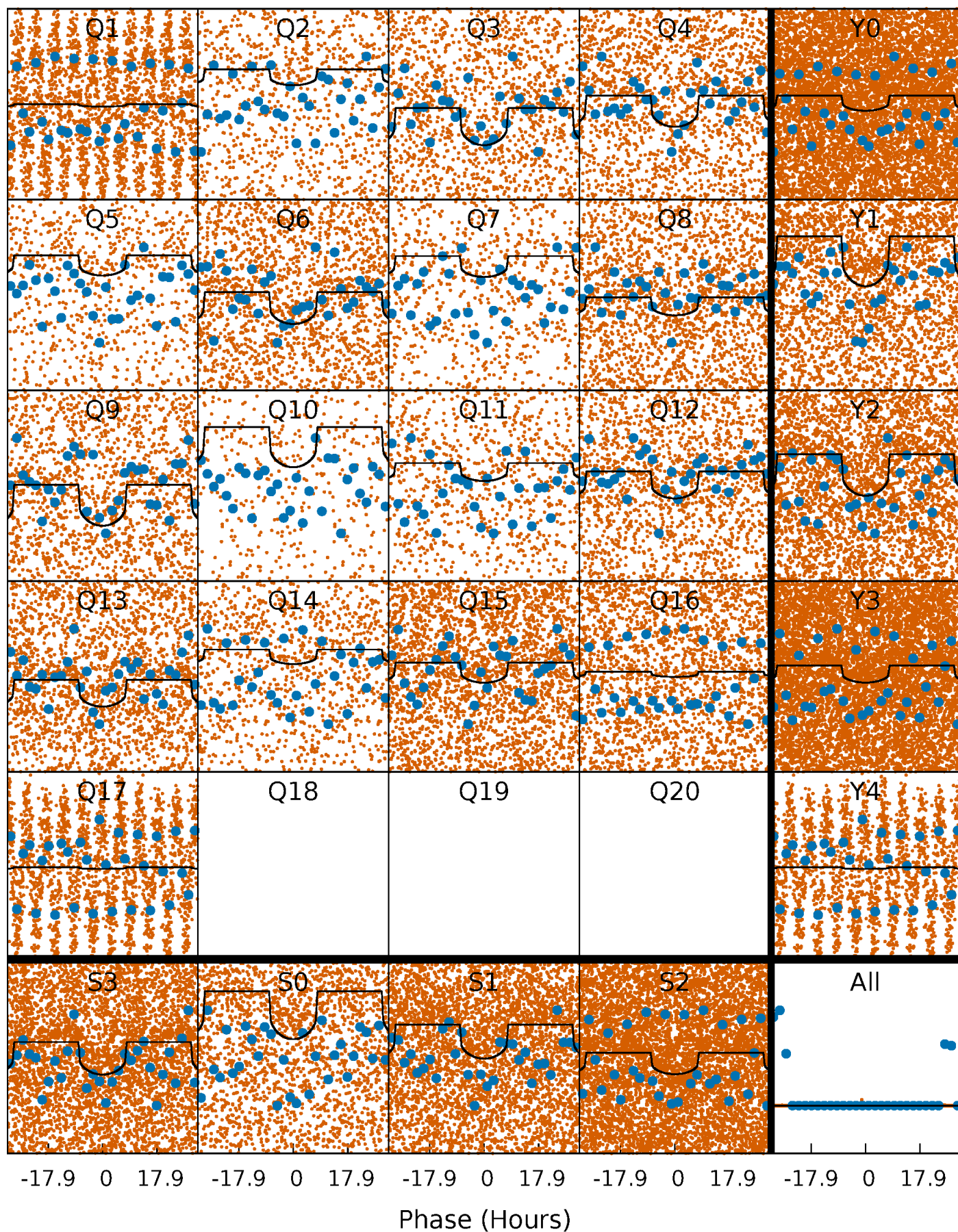
PDC Quarter-Phased Transit Curves

TCE 007522572-01 P= 1.541647 Days $T_0=131.907922$ (BKJD)



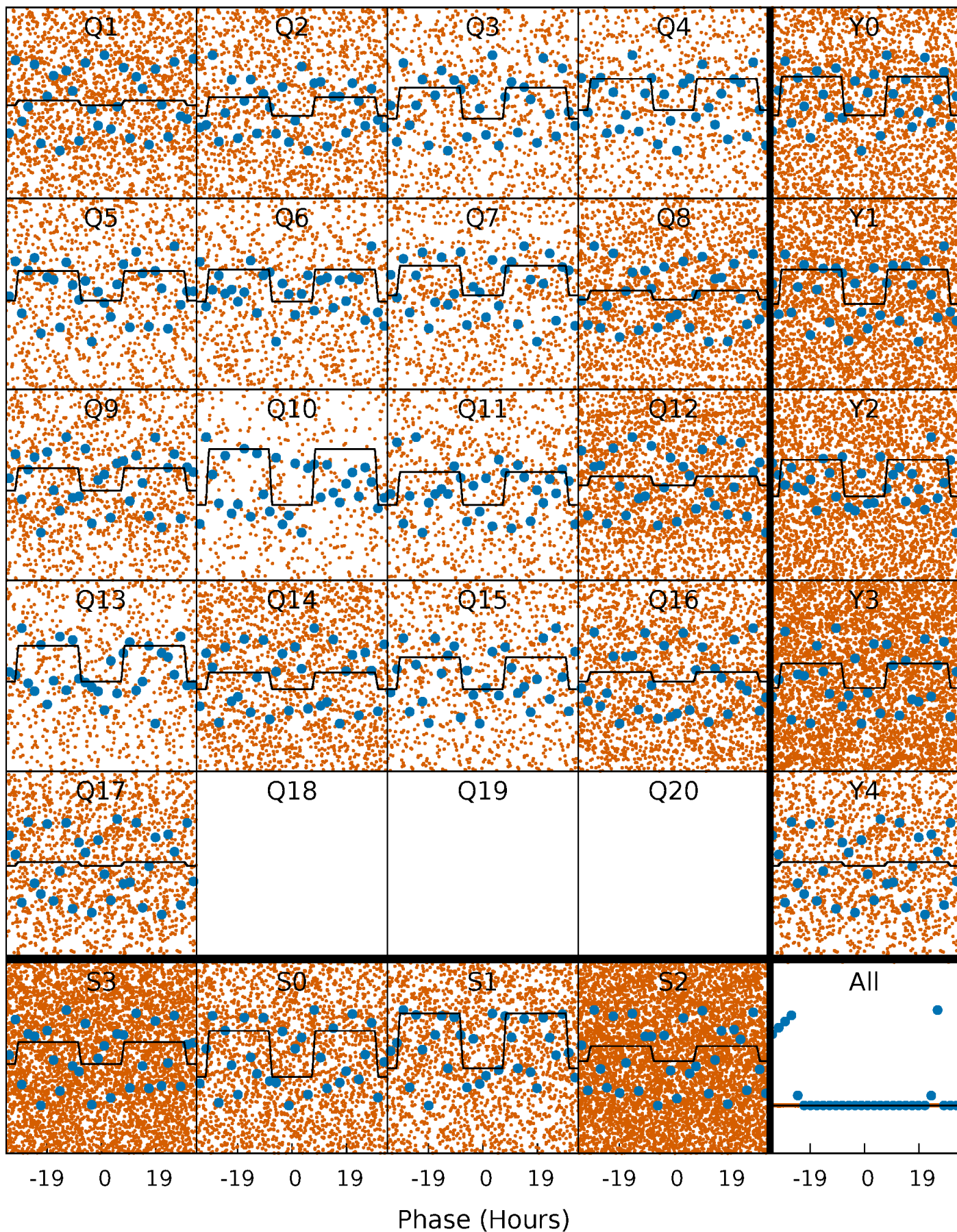
DV Quarter-Phased Transit Curves

TCE 007522572-01 P= 1.541647 Days $T_0=131.907922$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

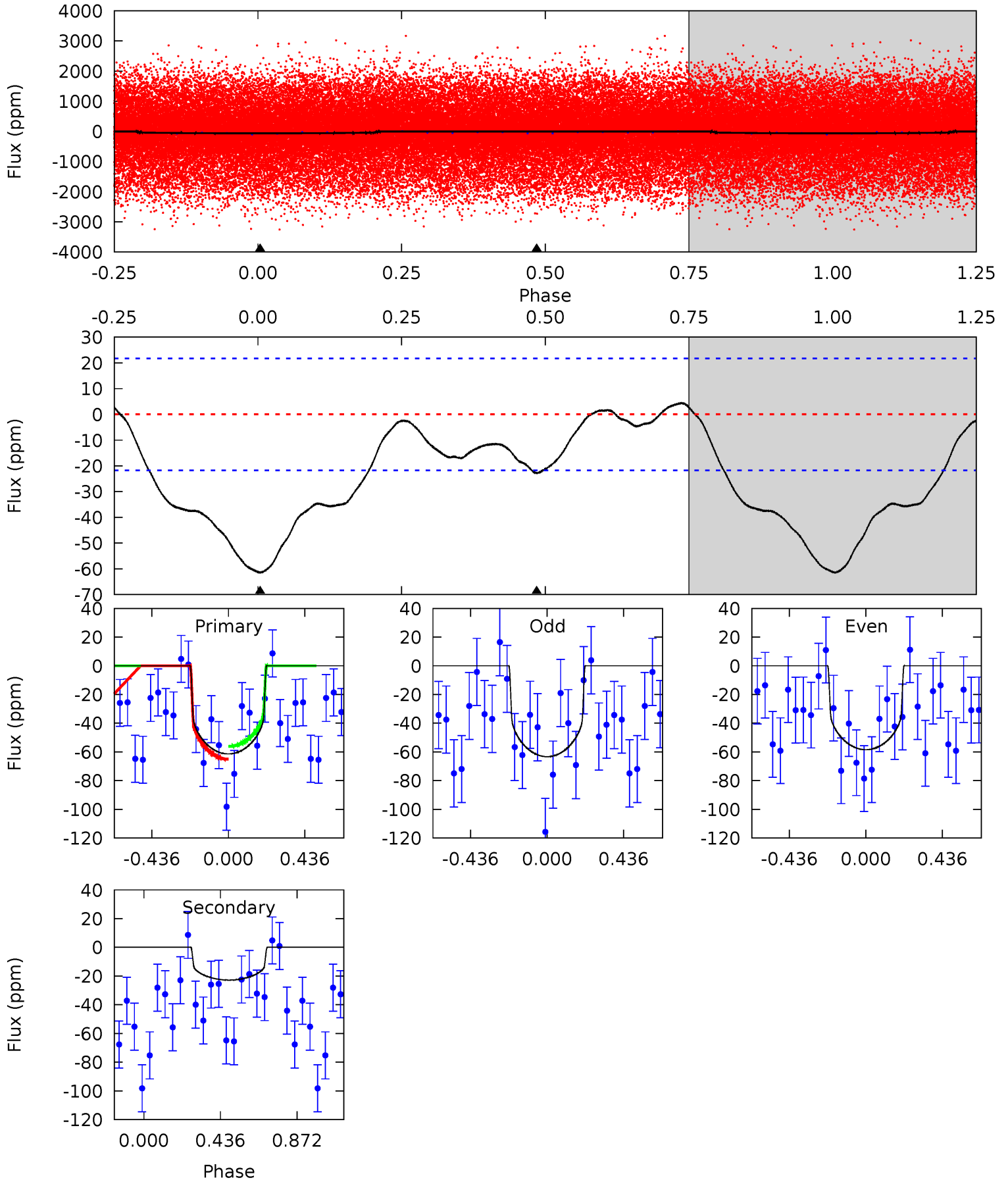
TCE 007522572-01 P= 1.541571 Days $T_0=131.978966$ (BKJD)



DV Model-Shift Uniqueness Test

007522572-01, P = 1.541647 Days, E = 130.366275 Days

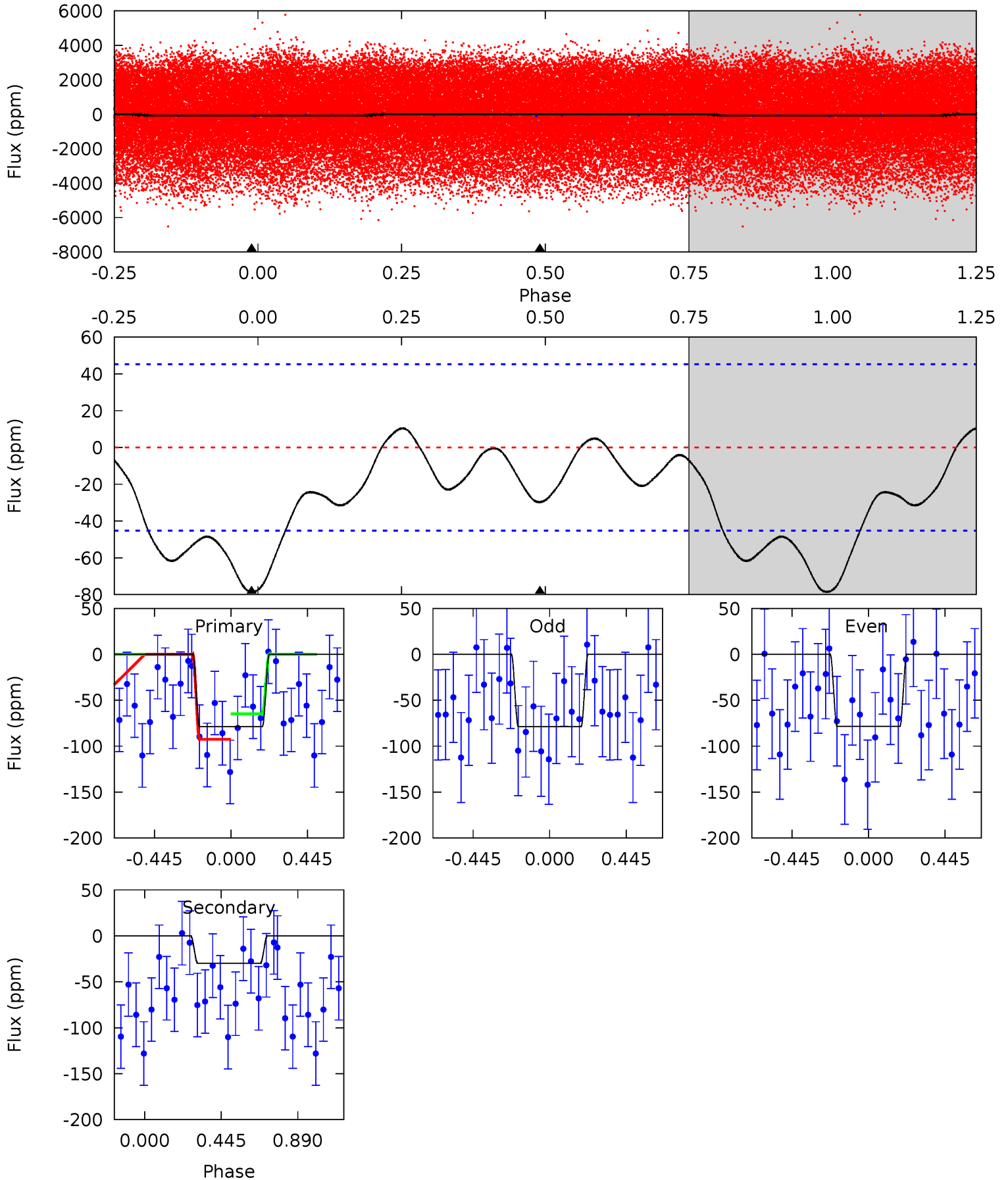
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.0	4.46	0	0	4.25	0.78	0.68	12.0	12.0	4.46	4.46	0.48	1.41	0.07	0.87



Alt Model-Shift Uniqueness Test

007522572-01, P = 1.541571 Days, E = 130.437395 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.37	2.79	0	0	4.24	0.76	0.70	7.37	7.37	2.79	2.79	0.02	1.46	0.12	1.32



Stellar Parameters For KIC 007522572

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8853^{+242}_{-450}	$3.742^{+0.443}_{-0.148}$	$0.070^{+0.250}_{-0.650}$	$3.570^{+0.980}_{-1.821}$	$2.564^{+0.309}_{-0.990}$	$0.079^{+0.342}_{-0.037}$
	+3%/-5%	+12%/-4%	+357%/-929%	+27%/-51%	+12%/-39%	+431%/-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 007522572-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-23 ± 5	$2.18^{+1.65}_{-1.29}$	5265^{+473}_{-660}	7143^{+6441}_{-1904}	$3.267^{+14.564}_{-2.259}$
Alt.	-30 ± 11	$3.21^{+1.79}_{-1.49}$	5305^{+501}_{-648}	6144^{+2718}_{-1446}	$1.886^{+4.653}_{-1.174}$

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

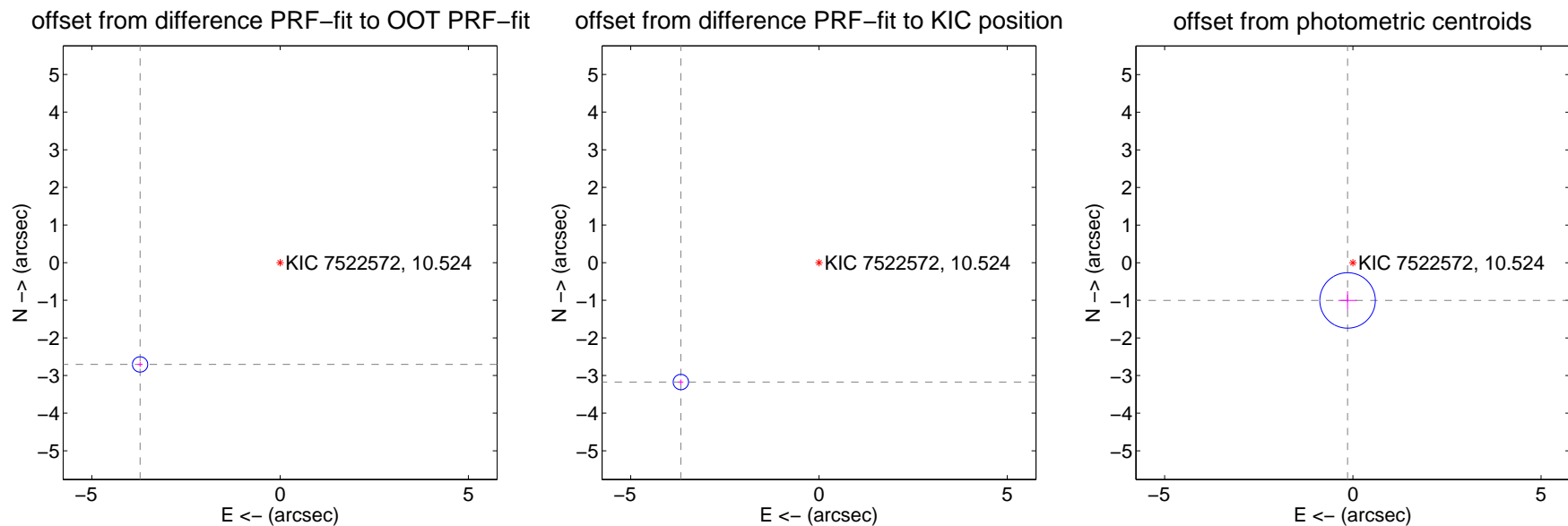
DV Centroid Data

Supplemental centroid analysis for 007522572-01. **Kepler magnitude: 10.52.** Transit SNR 14.79

There are 0 quarters with good PRF difference image offsets

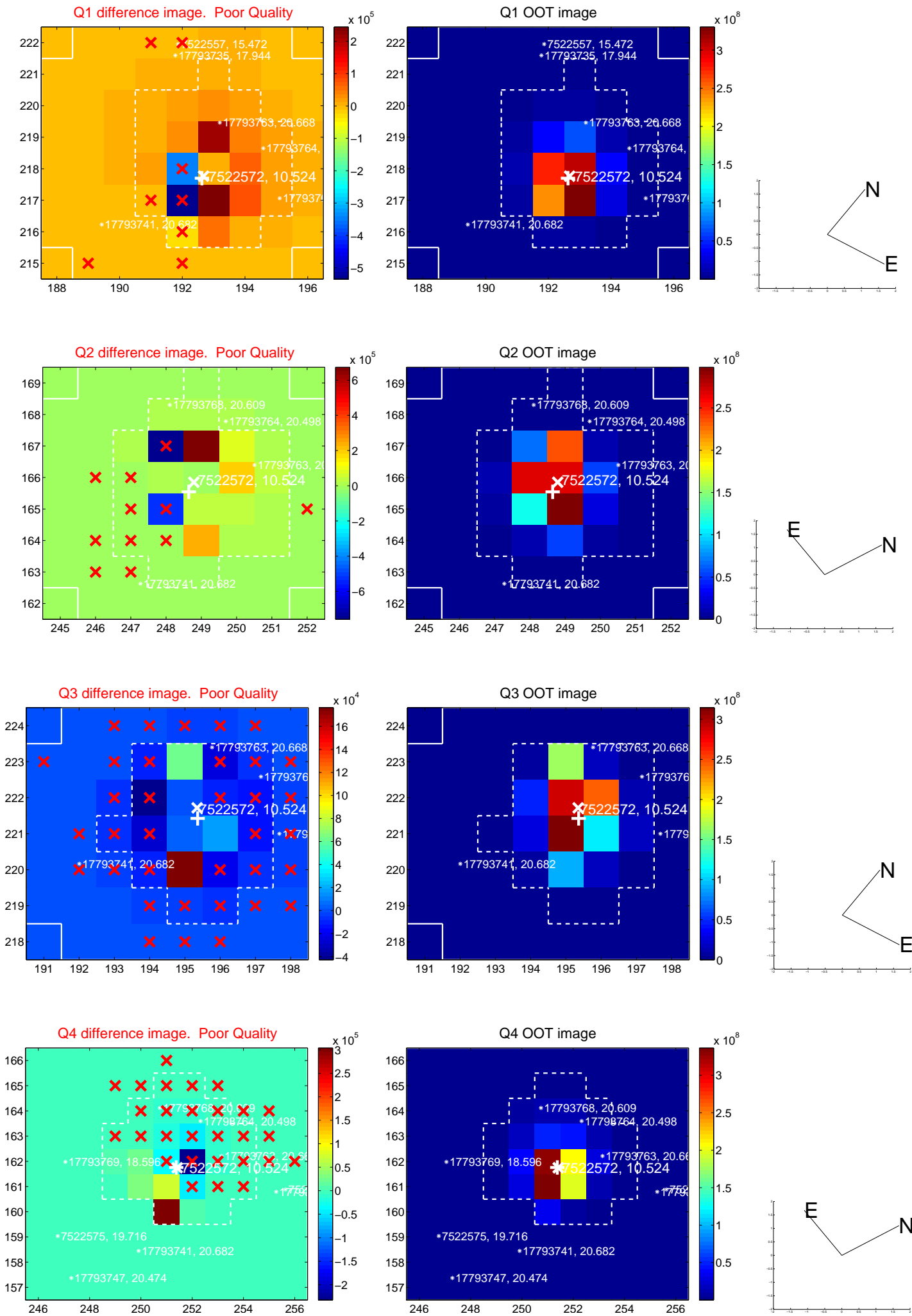
The direct PRF centroid is offset from the target star catalog position by about 0.47 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.599 ± 0.068	67.80	3.720 ± 0.068	-2.705 ± 0.068
PRF-fit source offset from KIC position	4.851 ± 0.068	71.44	3.670 ± 0.068	-3.173 ± 0.068
photometric centroid source offset	1.01 ± 0.25	4.12	0.14 ± 0.24	-1.00 ± 0.25

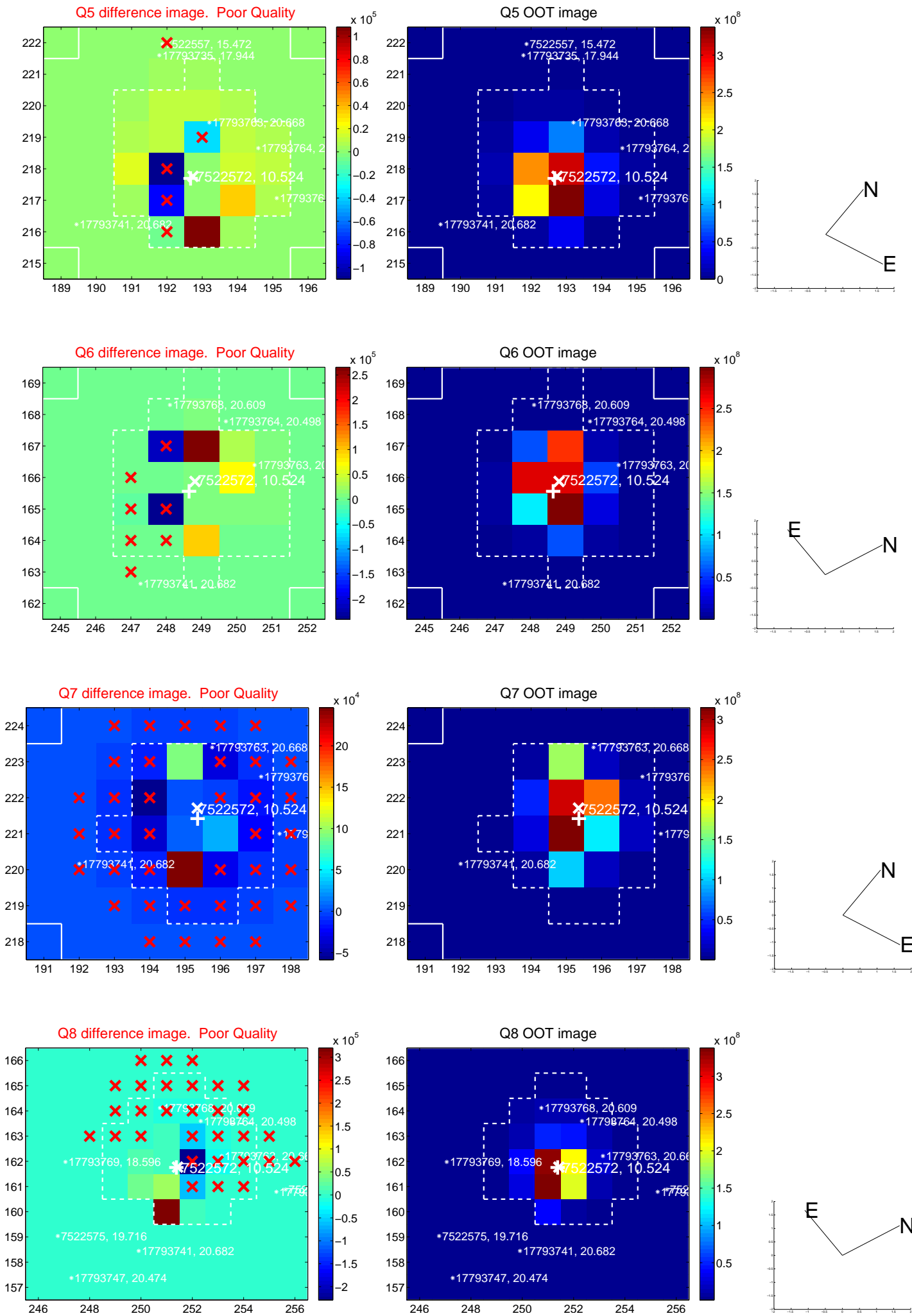


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

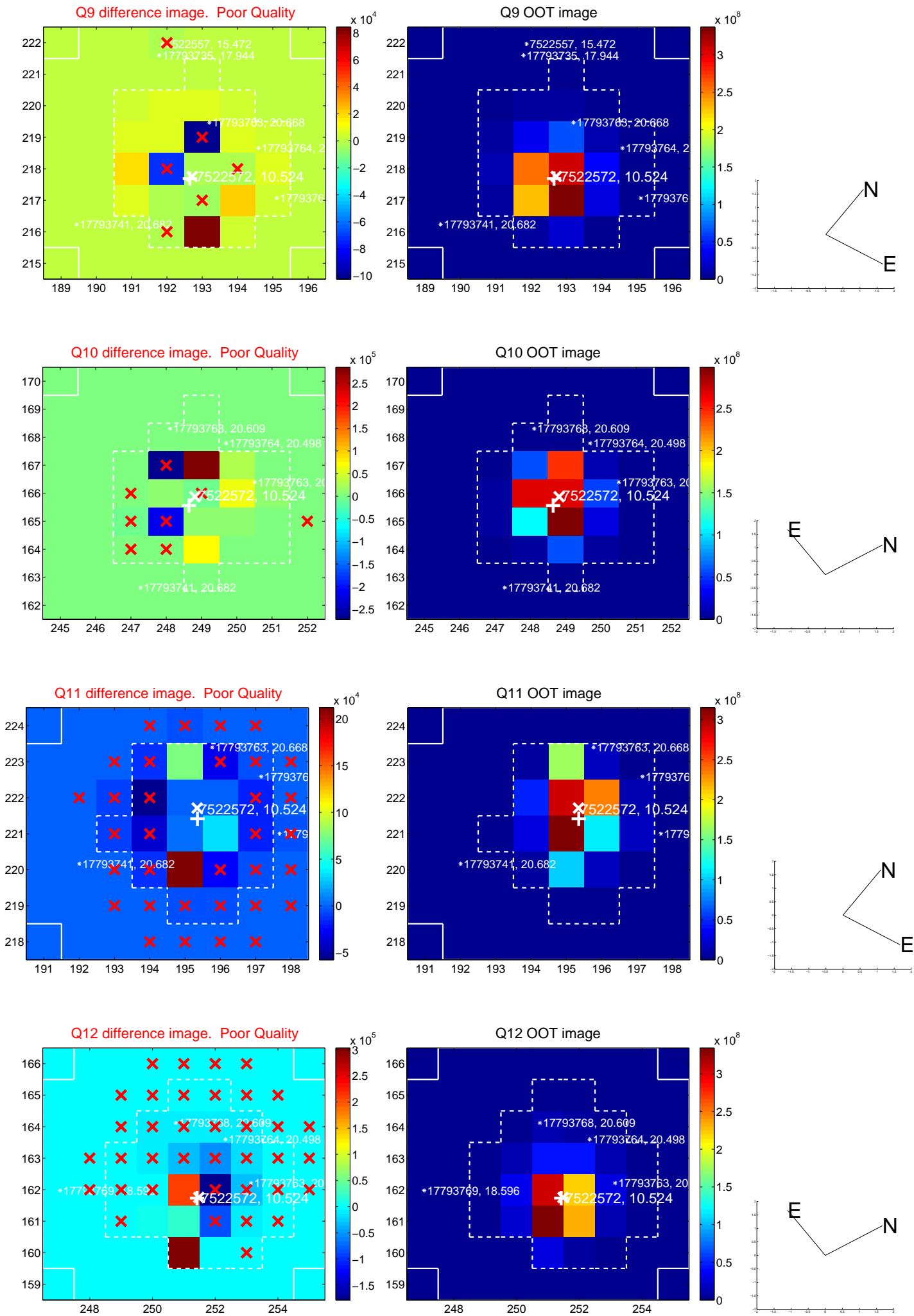
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



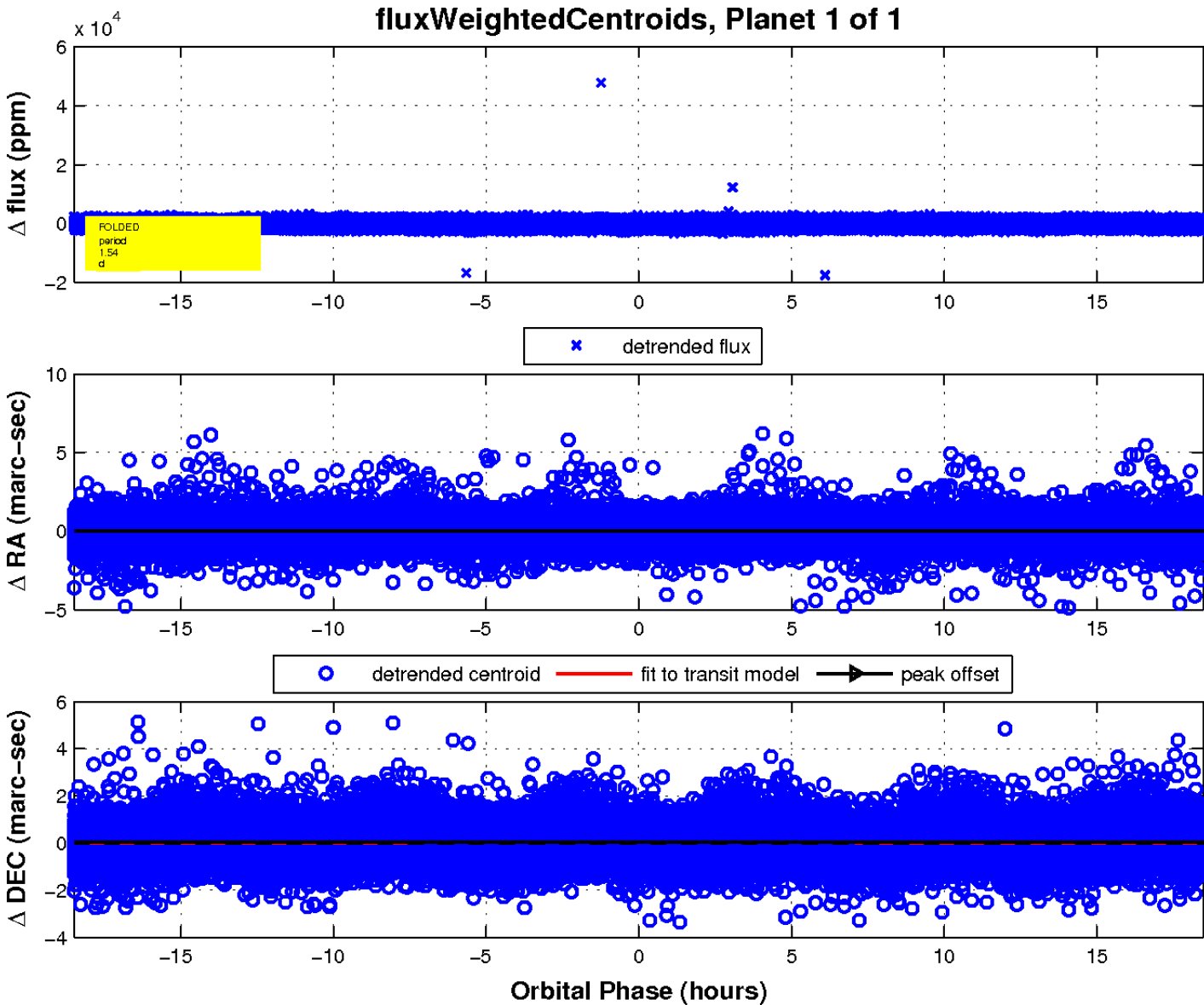
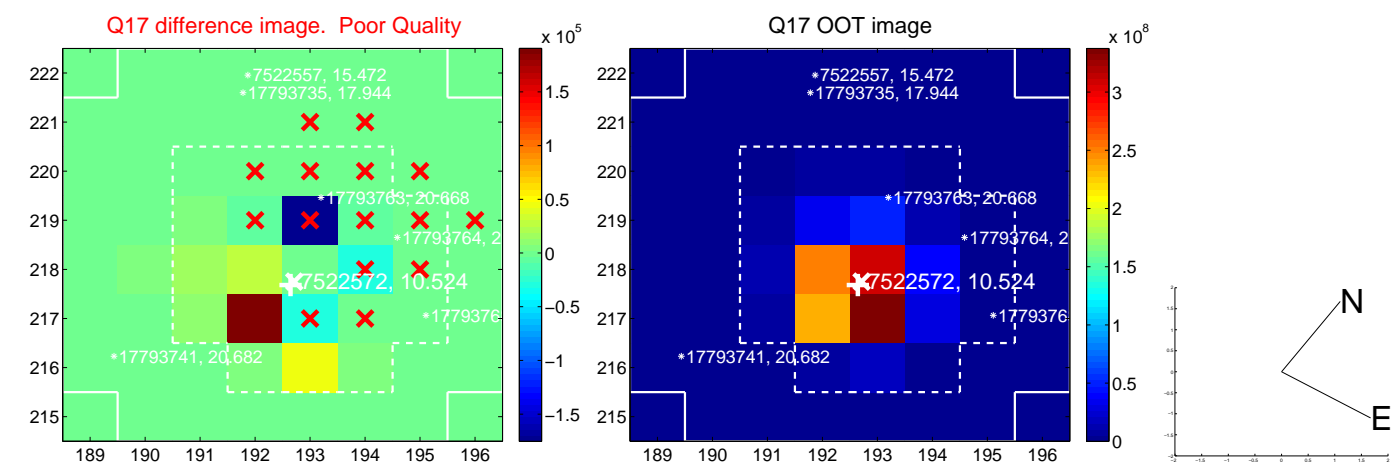
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

