

KIC 004489387

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})
004489387-01	OBS	No	1.714126	132.862225	148.4	9.065	7.3	9.0	1.00	5780	1.23	1272.18

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004489387-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_KIC_POS

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

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

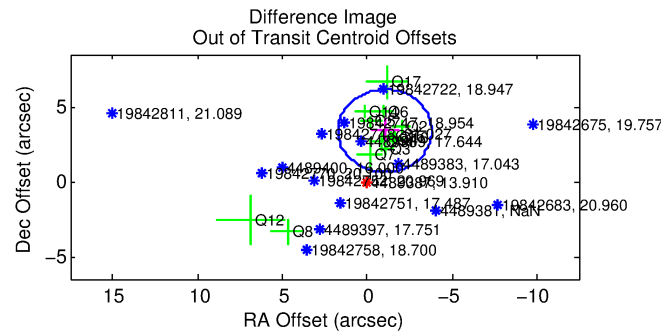
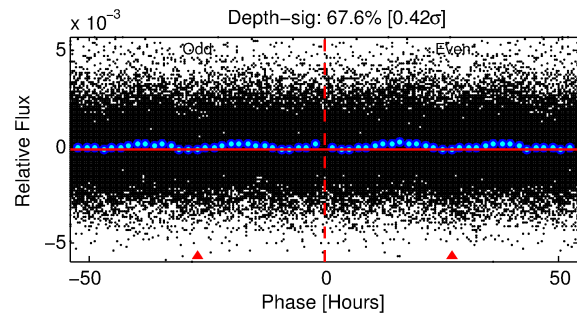
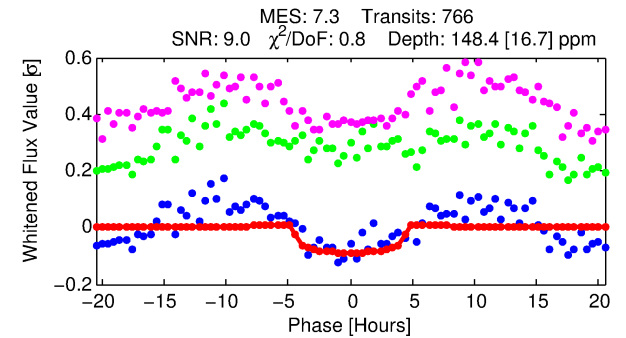
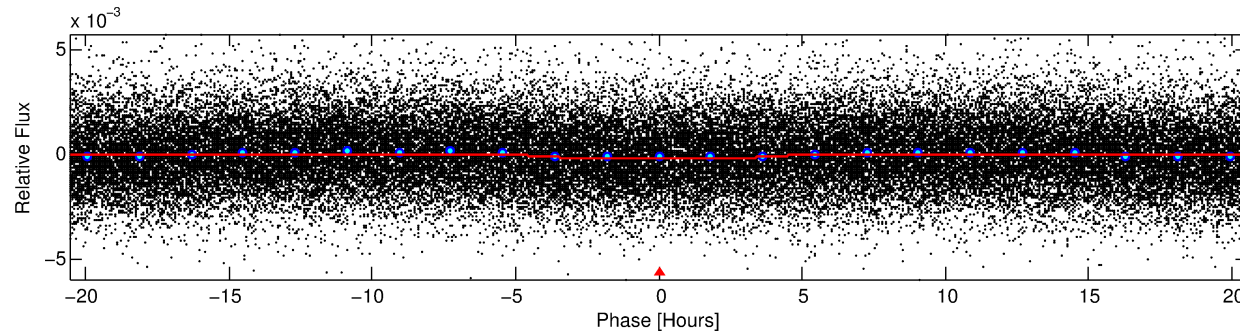
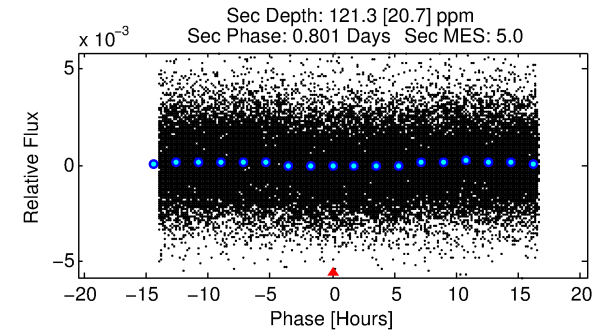
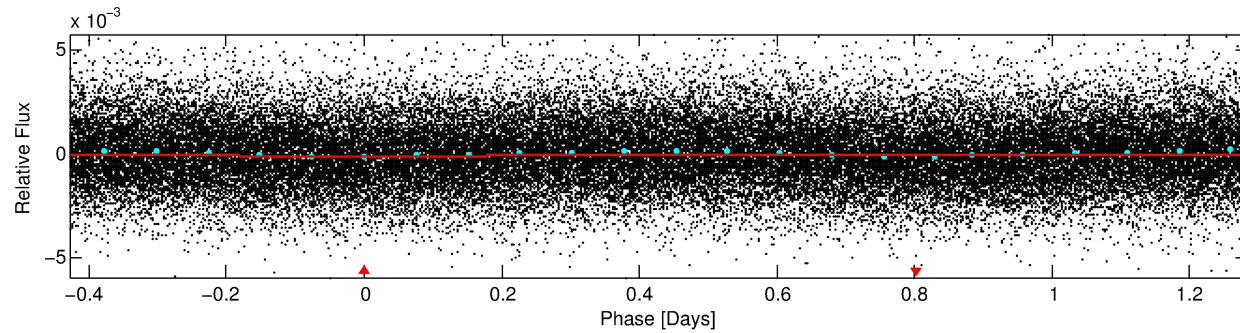
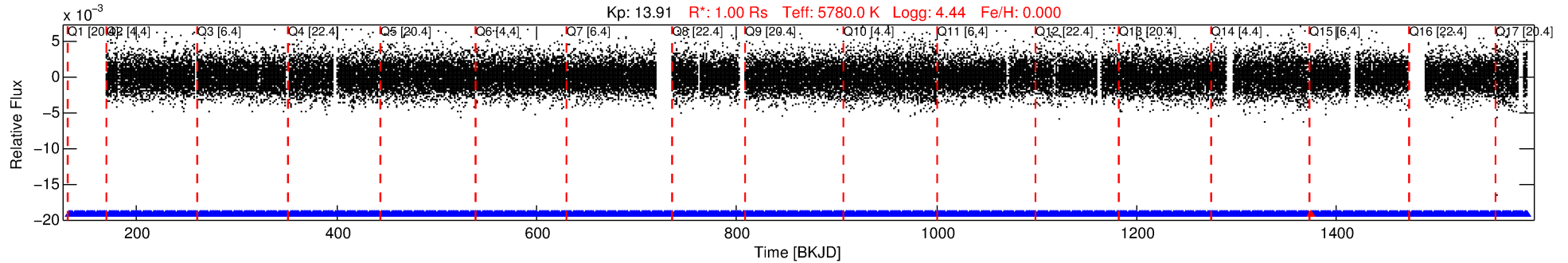
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004489387-01

No Significant Match Found

DV One-Page Summary

KIC: 4489387 Candidate: 1 of 1 Period: 1.714 d



DV Fit Results:

Period = 1.71413 [0.00003] d
Epoch = 132.8622 [0.0104] BKJD
Rp/R* = 0.0112 [0.0209]
a/R* = 1.52 [7.04]
b = 0.37 [19.27]
Seff = 1272.18 [0.03]
Teq = 1523 [0] K
Rp = 1.23 [2.28] Re
a = 0.0280 [0.0000] AU
Ag = 34.96 [130.45] [0.26σ]
Teffp = 5725 [5341] K [0.79σ]

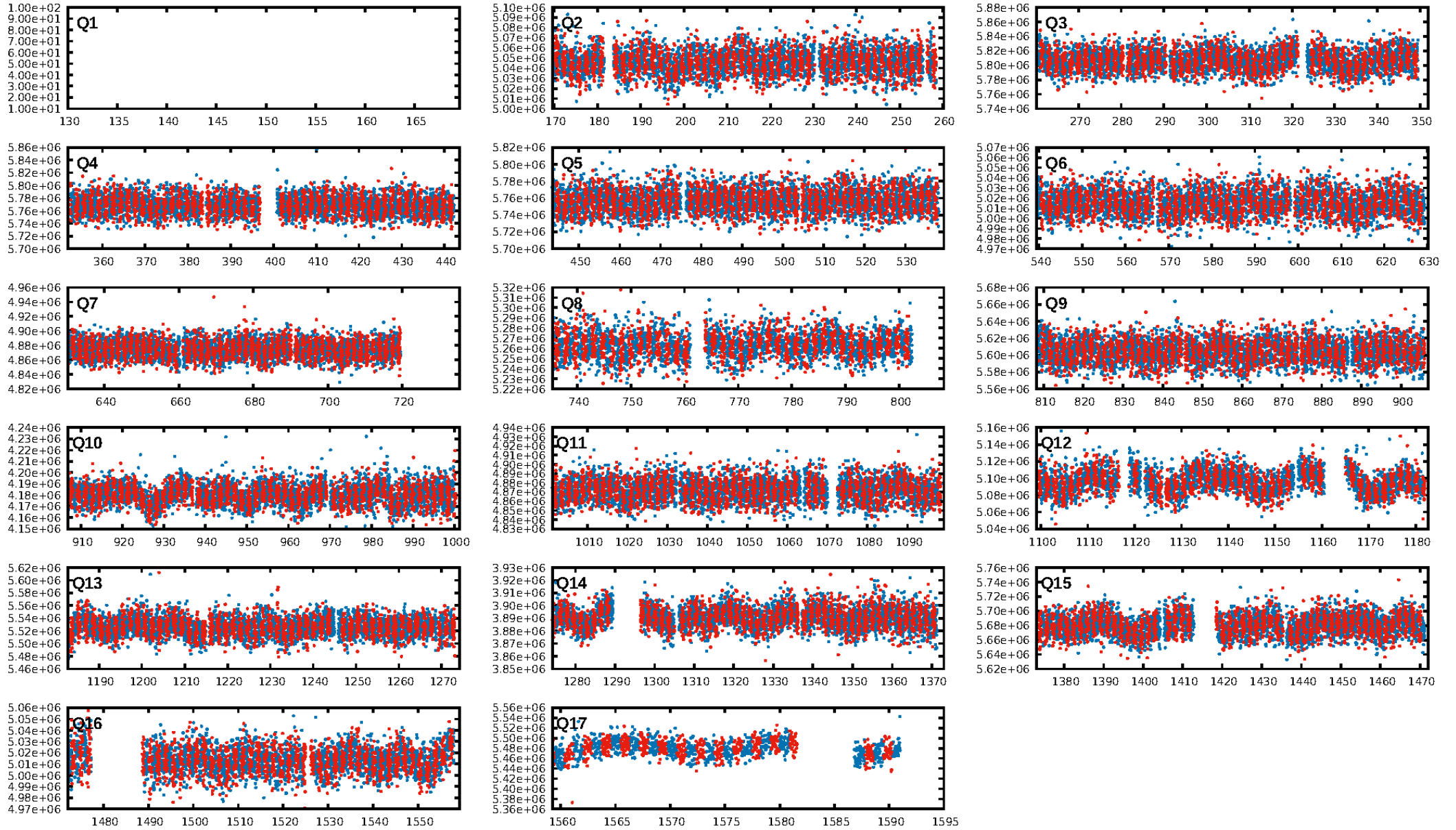
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.30e-11
RollingBand-fgt: 1.00 [750/751]
GhostDiagnostic-chr: 1.285
Centroid-sig: 0.1%
Centroid-so: 0.358 arcsec [0.34σ]
OotOffset-rm: 3.552 arcsec [3.86σ]
KicOffset-rm: 3.057 arcsec [3.27σ]
OotOffset-st: 3/4/4/2 [13]
KicOffset-st: 3/4/4/2 [13]
DiffImageQuality-fgm: 0.54 [7/13]
DiffImageOverlap-fno: 1.00 [16/16]

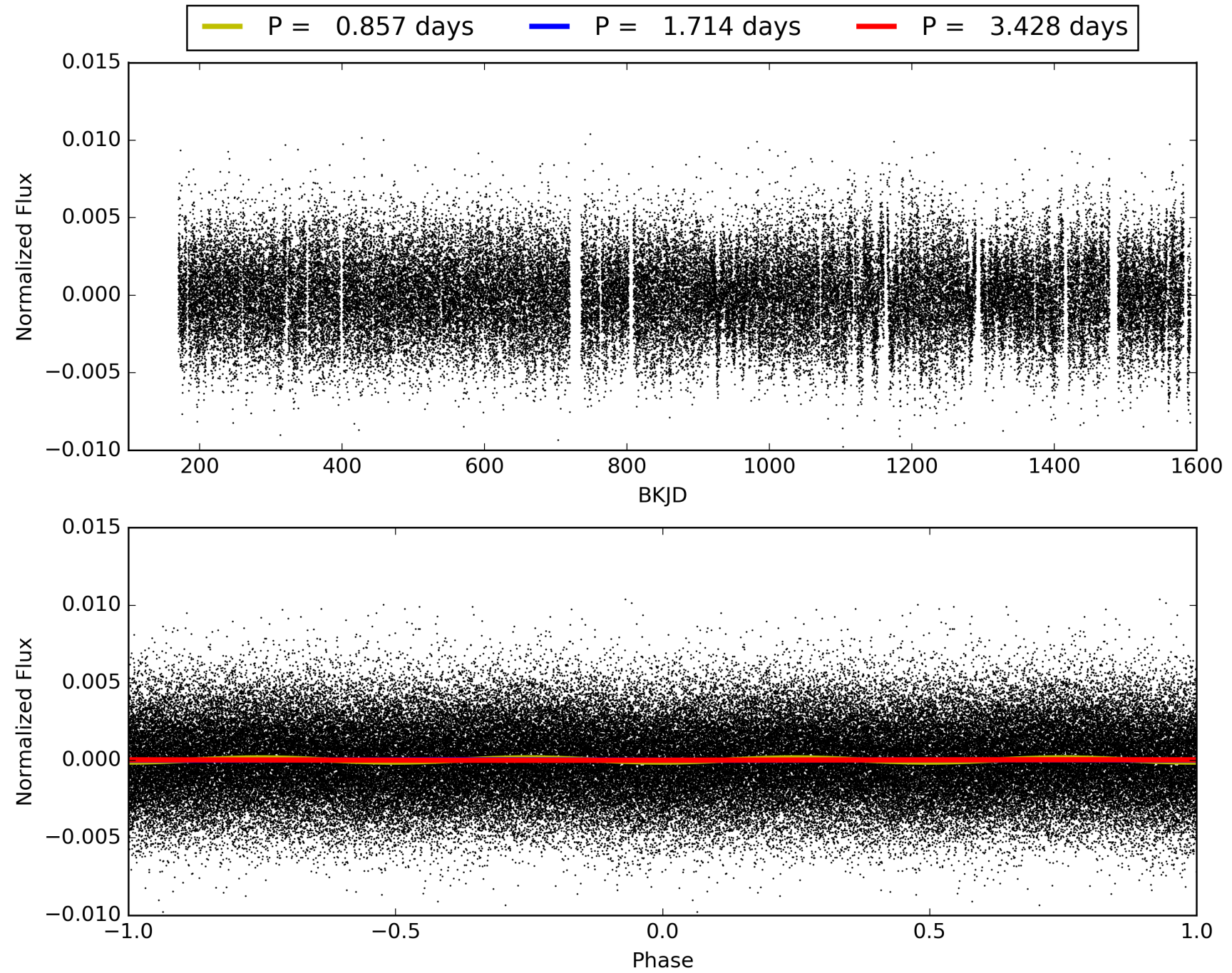
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 14:31:53 Z

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

TCE 004489387-01, PDC Light Curves

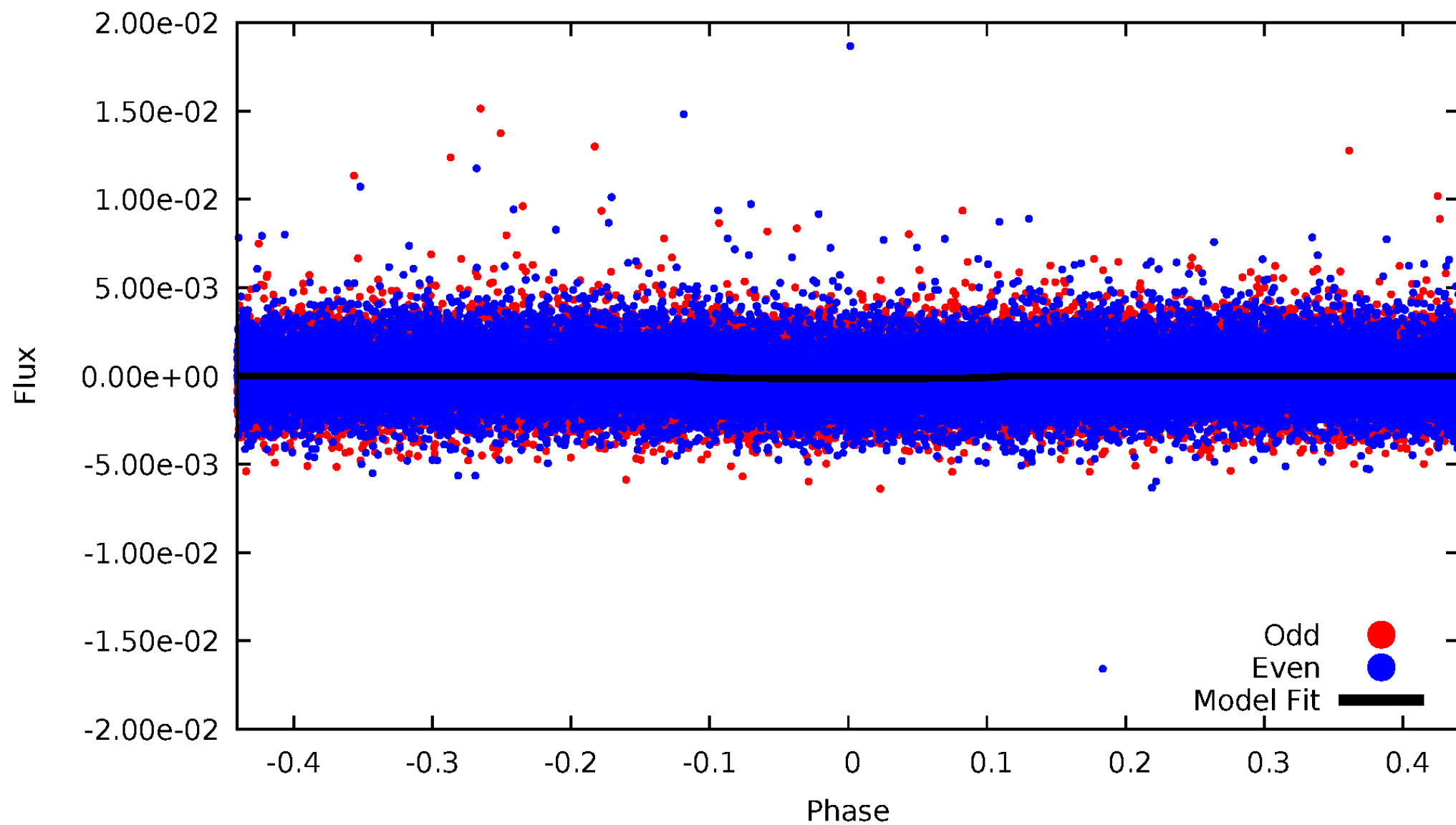


TCE 004489387-01



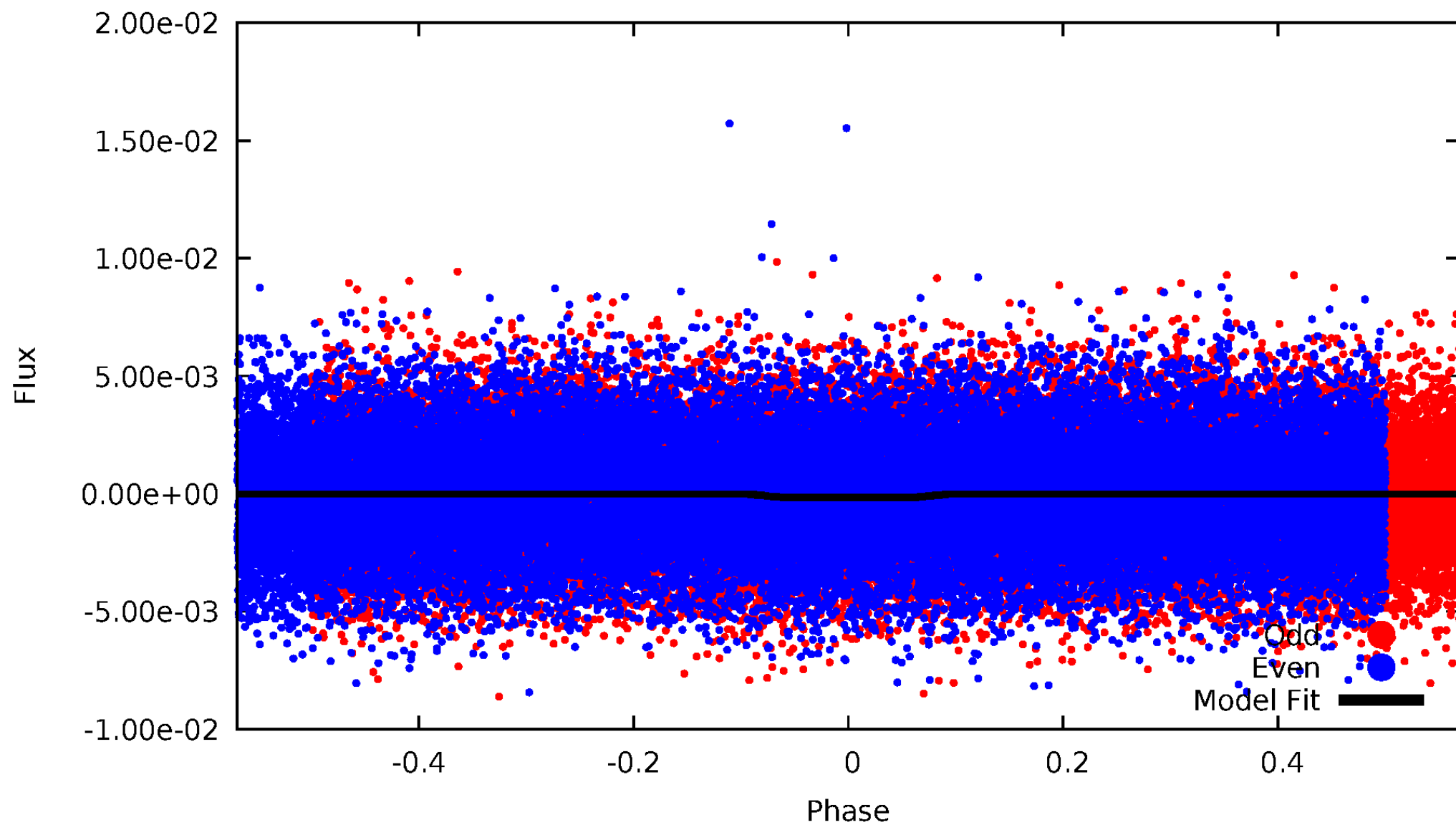
DV Odd/Even

TCE 004489387-01



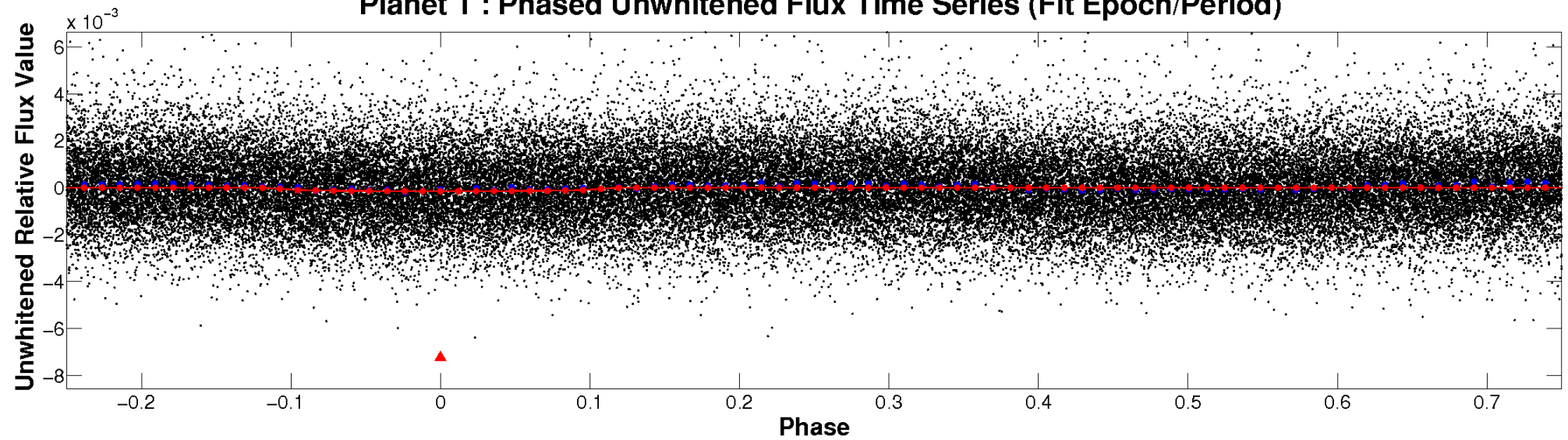
ALT Odd/Even

TCE 004489387-01

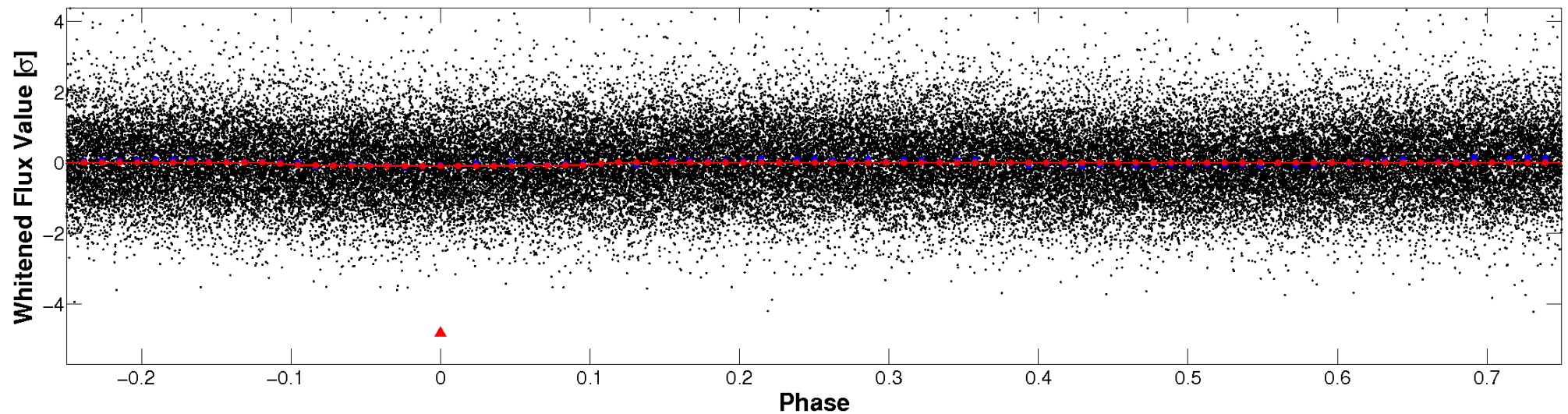


Non-Whitened Vs. Whitened Light Curve

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

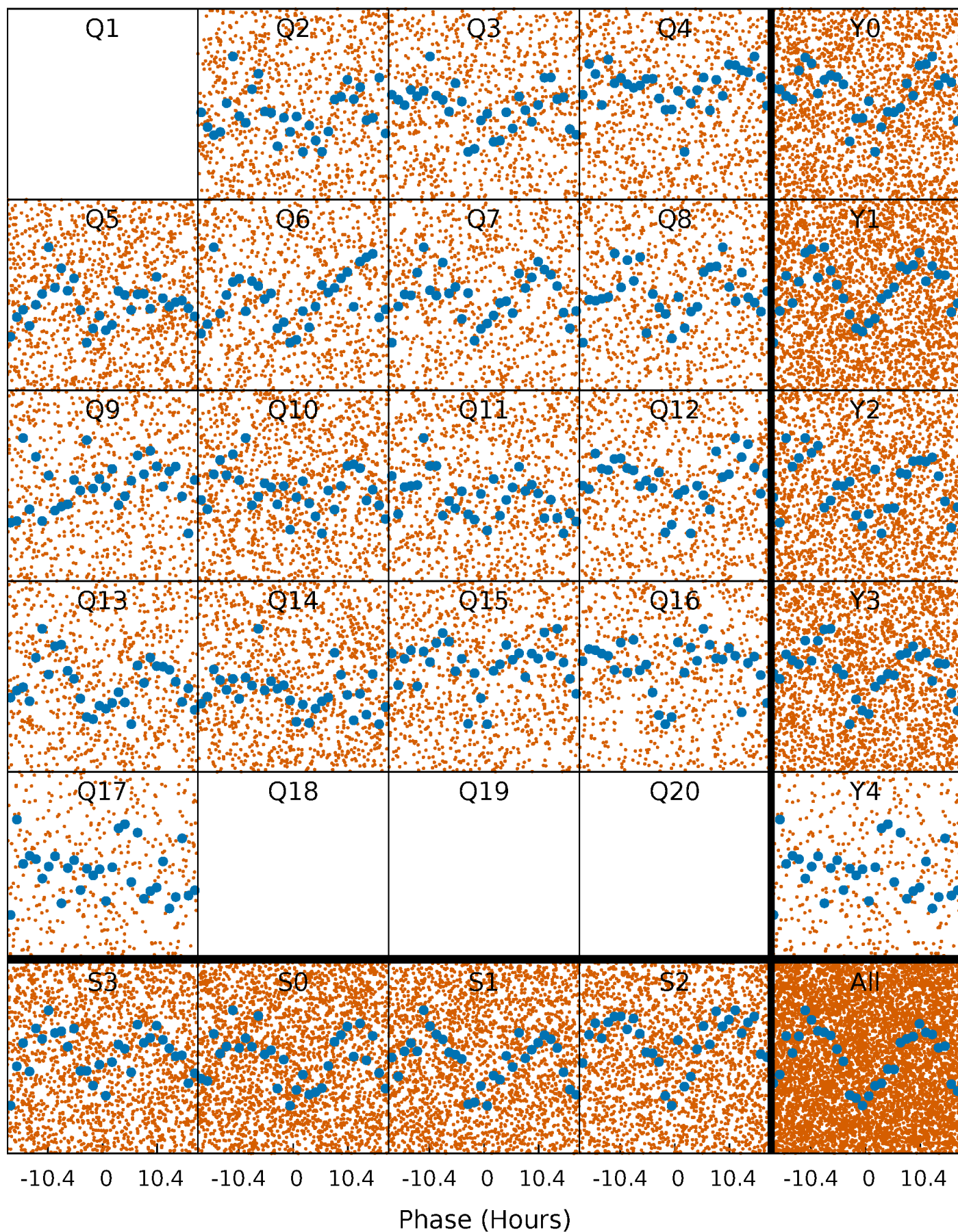


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



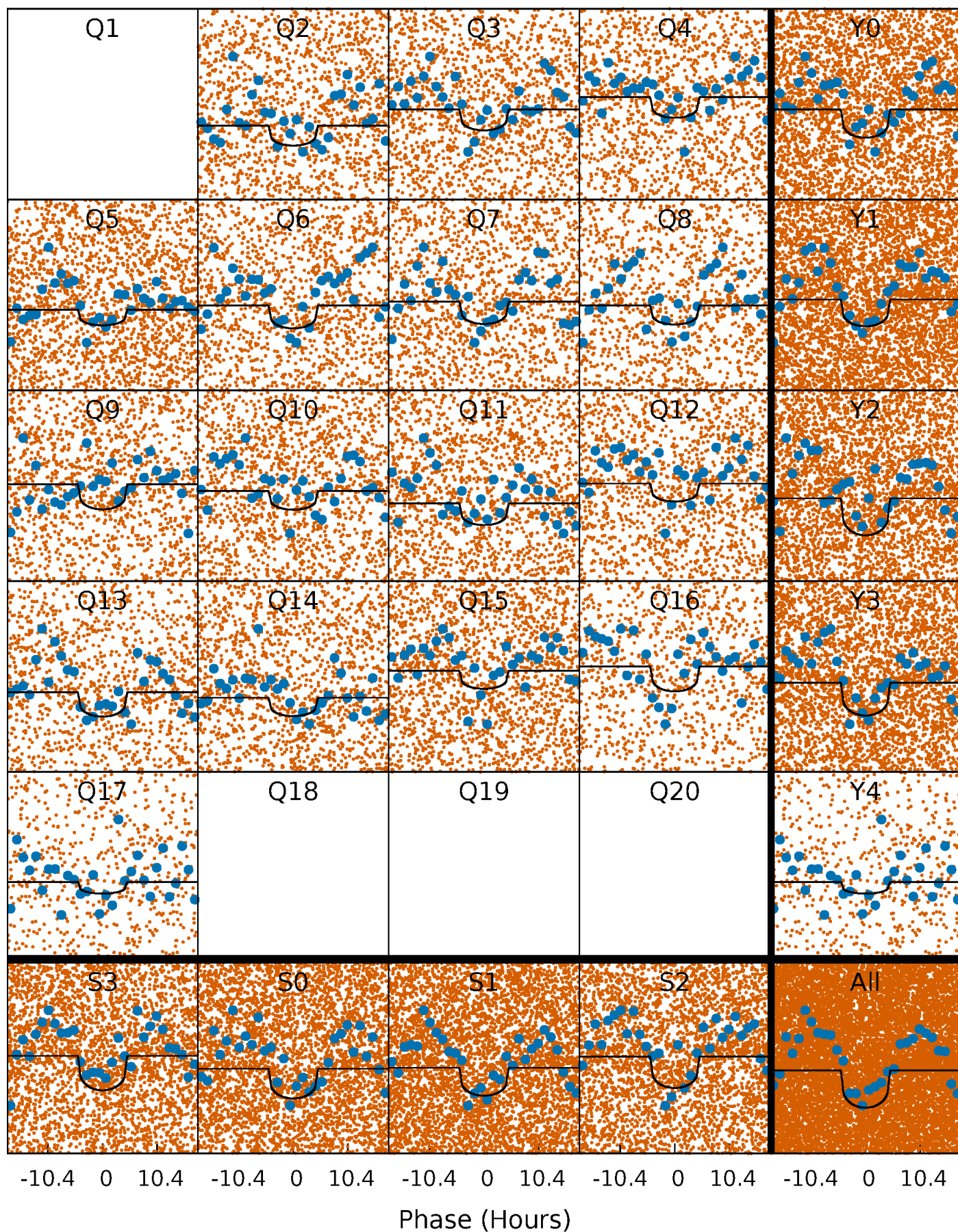
PDC Quarter-Phased Transit Curves

TCE 004489387-01 P= 1.714126 Days $T_0=132.862225$ (BKJD)



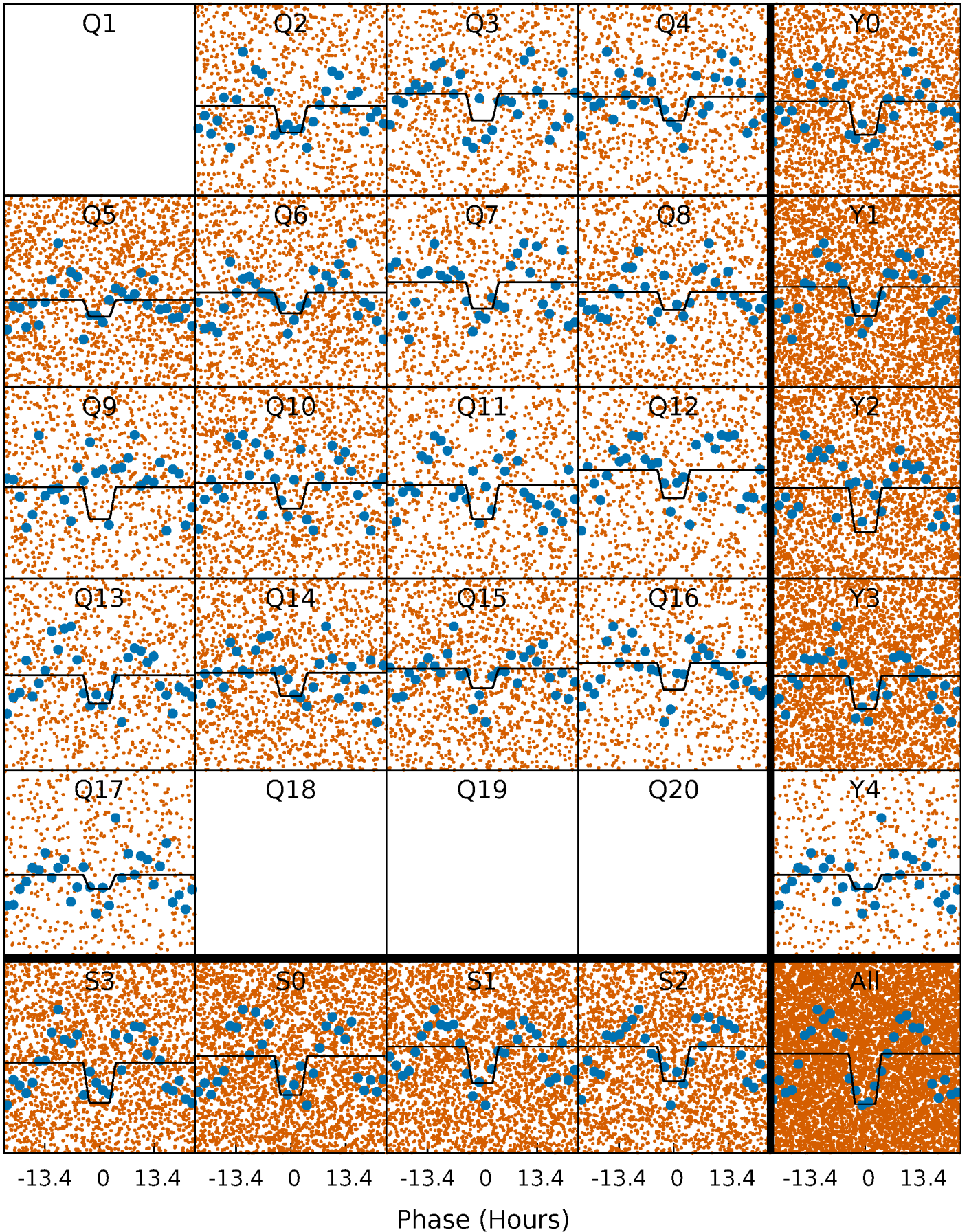
DV Quarter-Phased Transit Curves

TCE 004489387-01 P= 1.714126 Days $T_0=132.862225$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

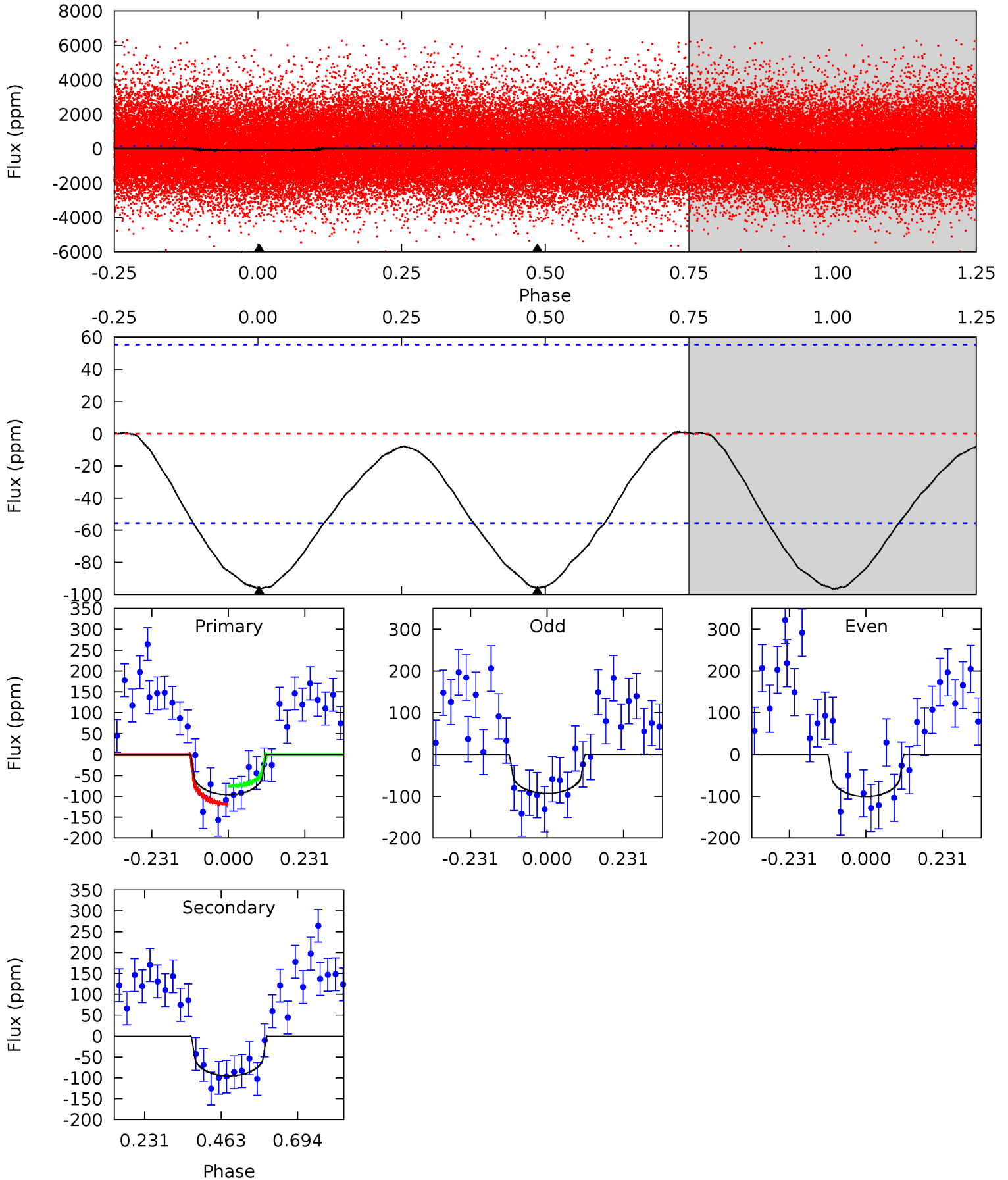
TCE 004489387-01 P= 1.714065 Days $T_0=132.886804$ (BKJD)



DV Model-Shift Uniqueness Test

004489387-01, P = 1.714126 Days, E = 132.862225 Days

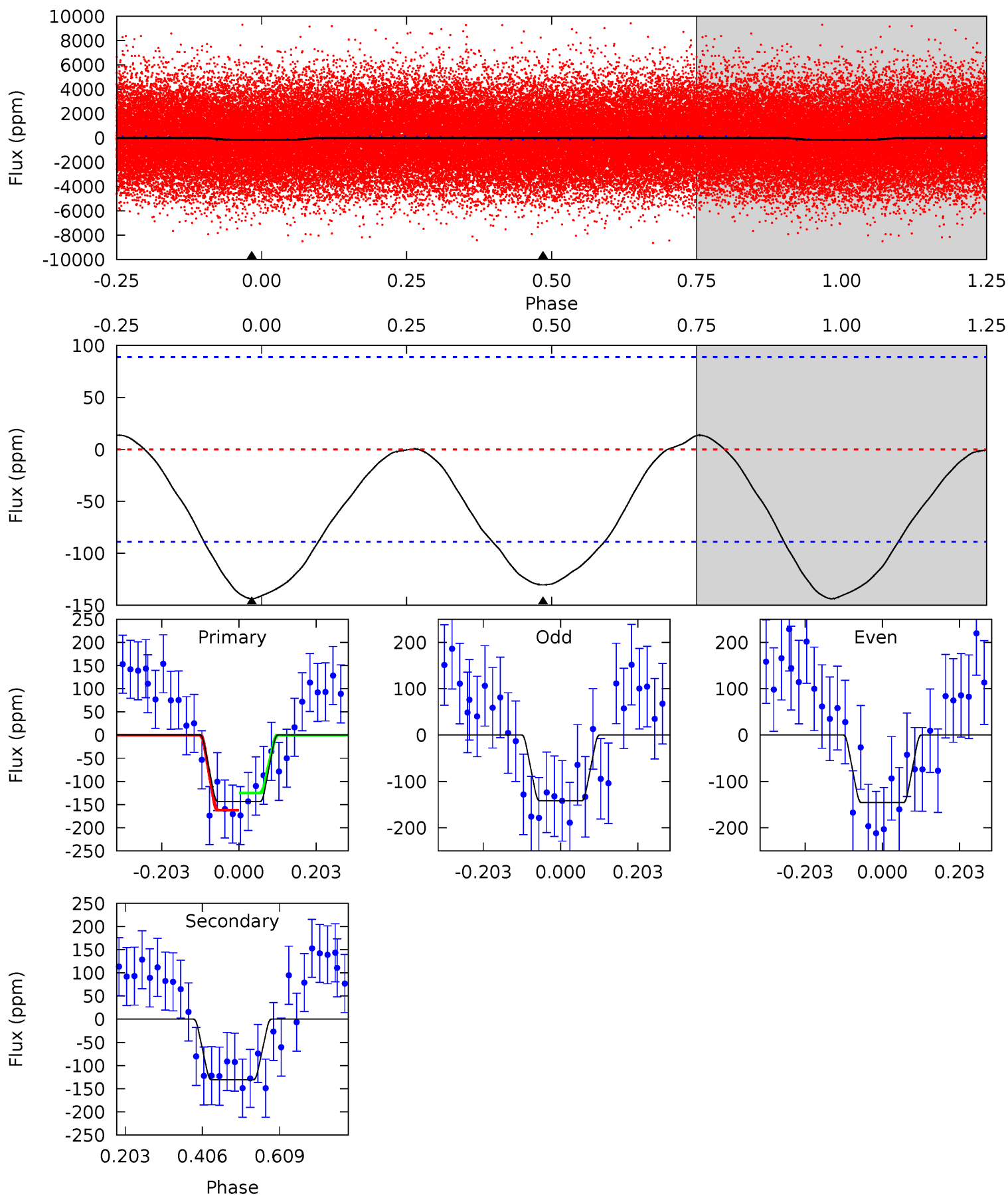
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.63	7.57	0	0	4.39	1.20	0.37	7.63	7.63	7.57	7.57	0.30	1.02	0.01	1.70



Alt Model-Shift Uniqueness Test

004489387-01, P = 1.714065 Days, E = 132.886804 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.13	6.47	0	0	4.41	1.27	0.42	7.13	7.13	6.47	6.47	0.09	1.15	0.09	0.91



Stellar Parameters For KIC 004489387

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5780^{+1}_{-1}	$4.438^{+1.000}_{-1.000}$	$0.000^{+1.000}_{-1.000}$	$1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$
	+0%/-0%	+23%/-23%	+inf%/-inf%	+100%/-100%	+100%/-100%	+100%/-100%
Source	Solar	Solar	Solar	Solar		

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

Secondary Eclipse Parameters for KIC 004489387-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-96 ± 13	$2.05^{+1.99}_{-1.32}$	2135^{+105}_{-100}	4343^{+2802}_{-898}	$9.531^{+69.638}_{-6.887}$
Alt.	-130 ± 20	$2.16^{+1.96}_{-1.41}$	2130^{+102}_{-95}	4509^{+3092}_{-949}	12^{+91}_{-8}

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

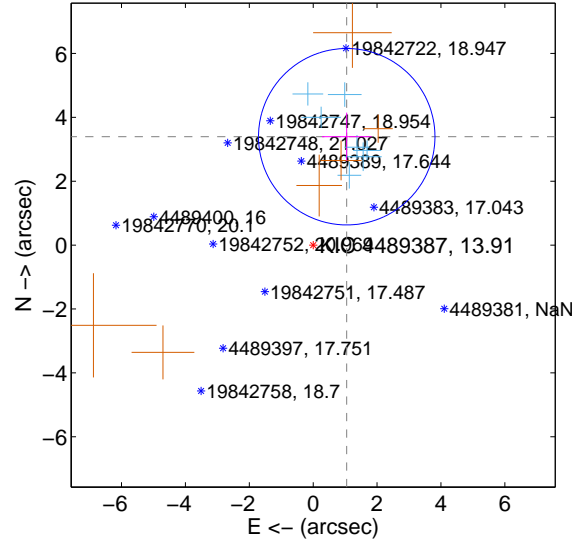
Supplemental centroid analysis for 004489387-01. Kepler magnitude: 13.91. Transit SNR 8.98

There are 7 quarters with good PRF difference image offsets

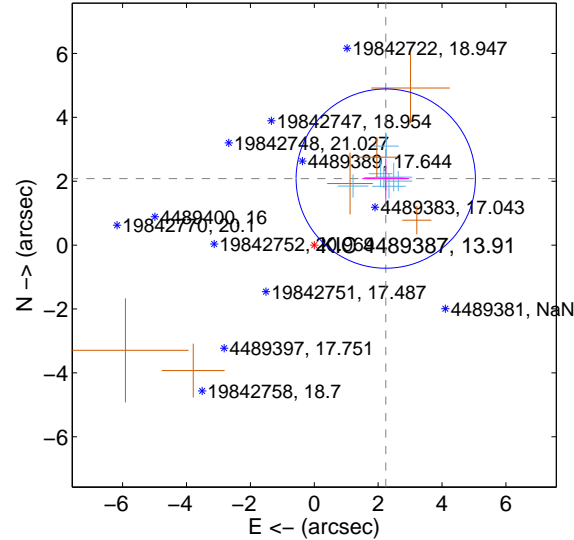
The OOT PRF centroid is offset from the target star catalog position by about 2.49 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.552 ± 0.921	3.86	-1.050 ± 0.776	3.393 ± 0.752
PRF-fit source offset from KIC position	3.057 ± 0.935	3.27	-2.238 ± 0.733	2.082 ± 0.629
photometric centroid source offset	0.36 ± 1.06	0.34	-0.16 ± 1.03	0.32 ± 1.06

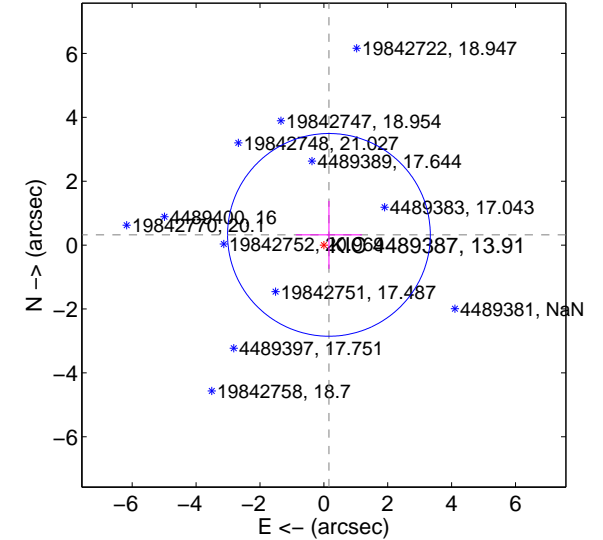
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

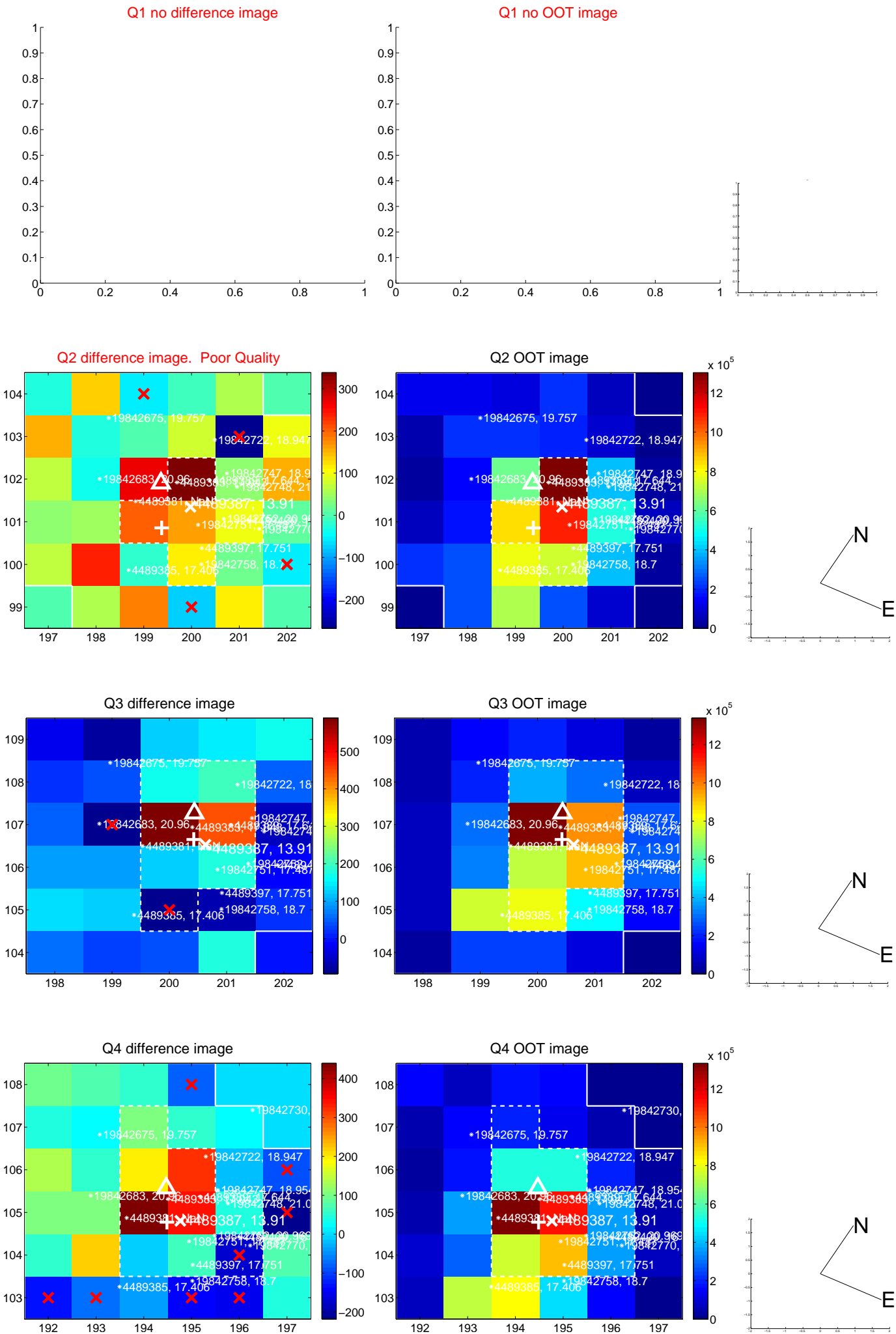


offset from photometric centroids

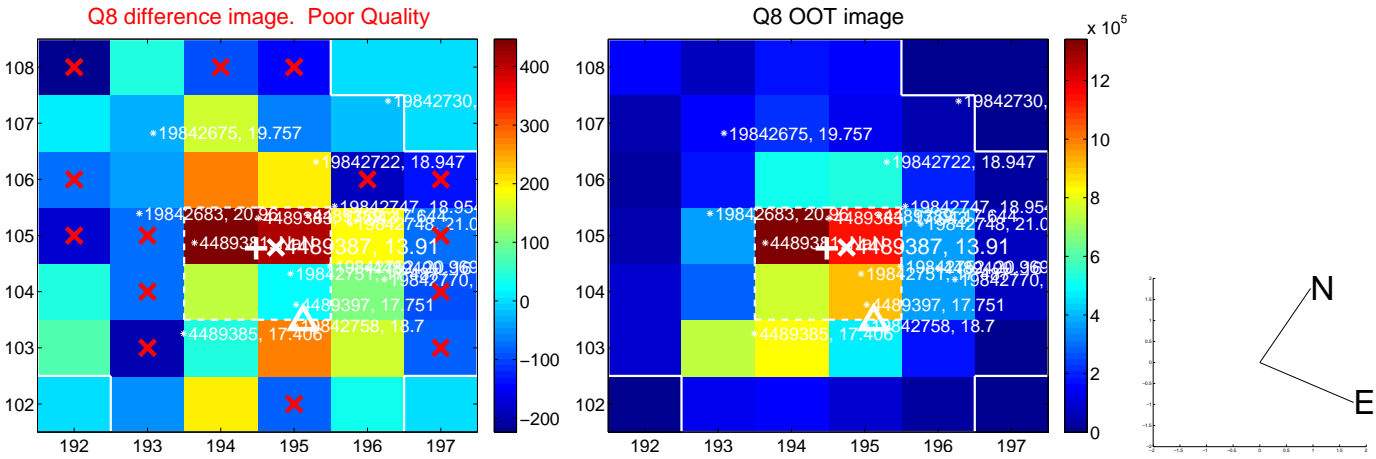
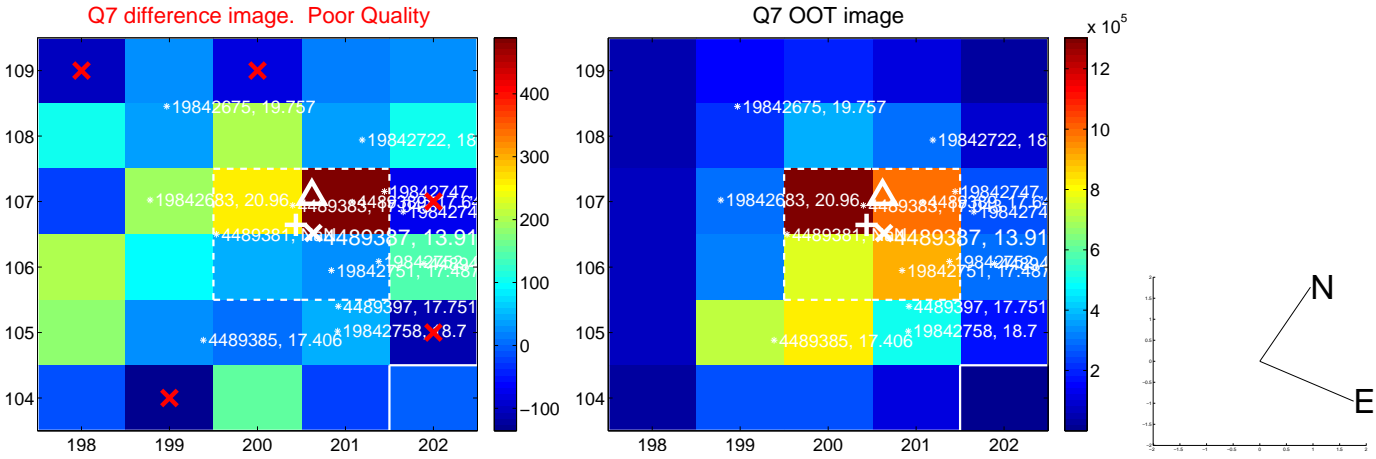
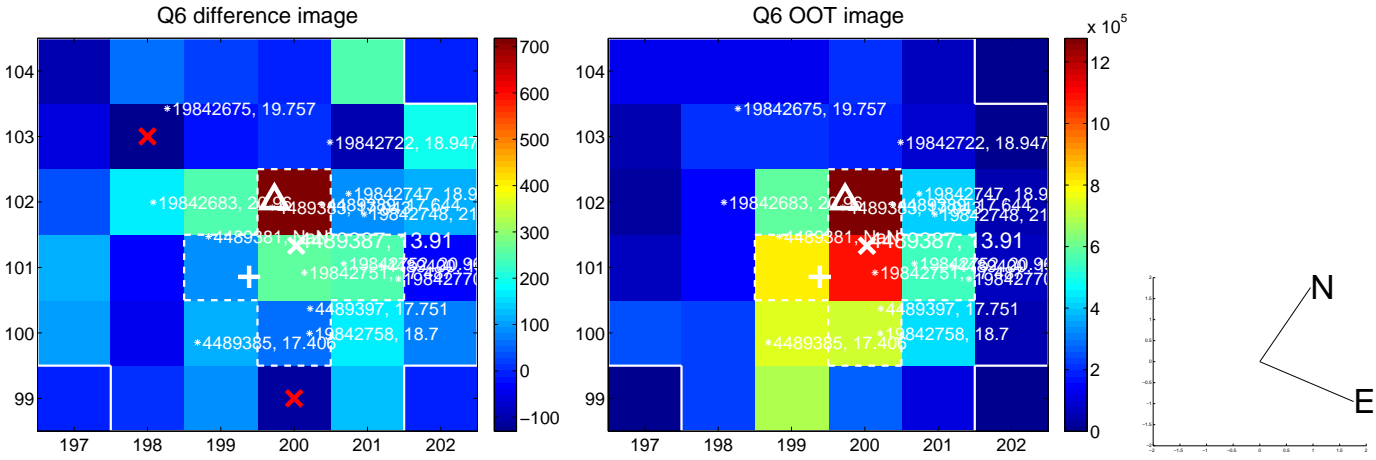
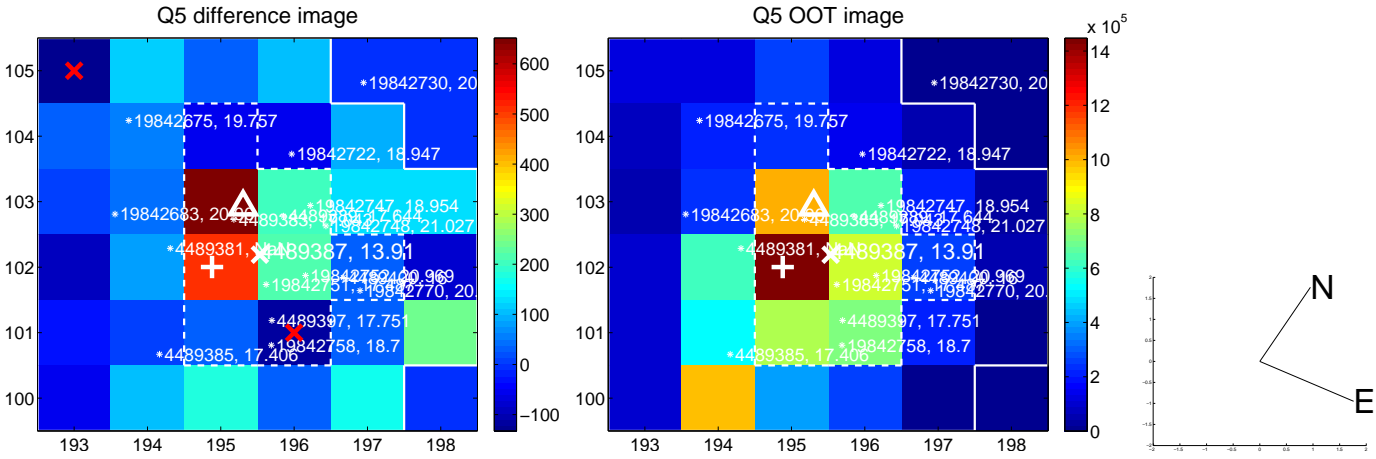


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

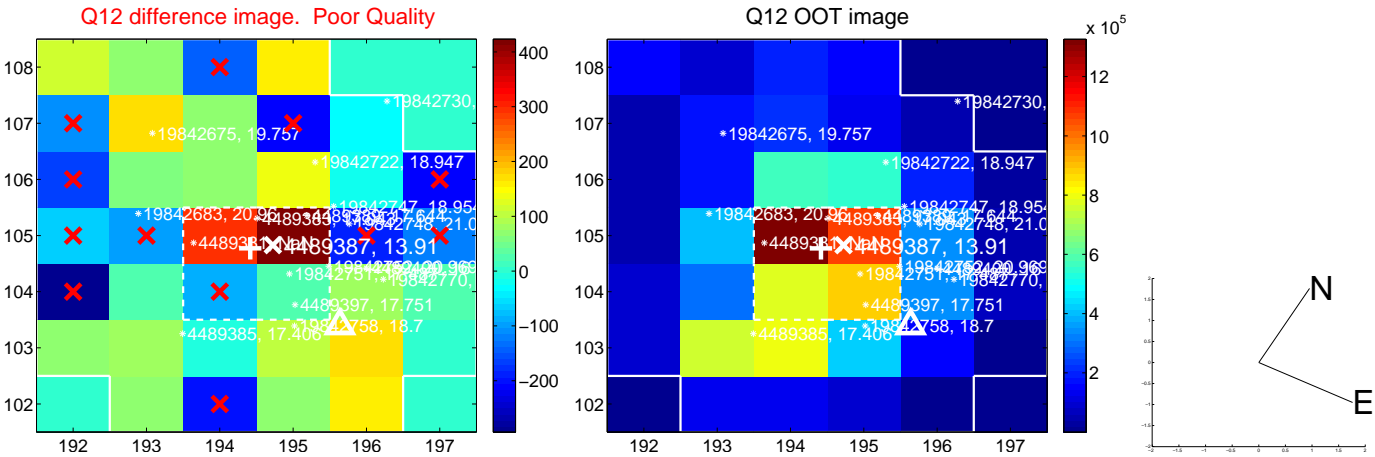
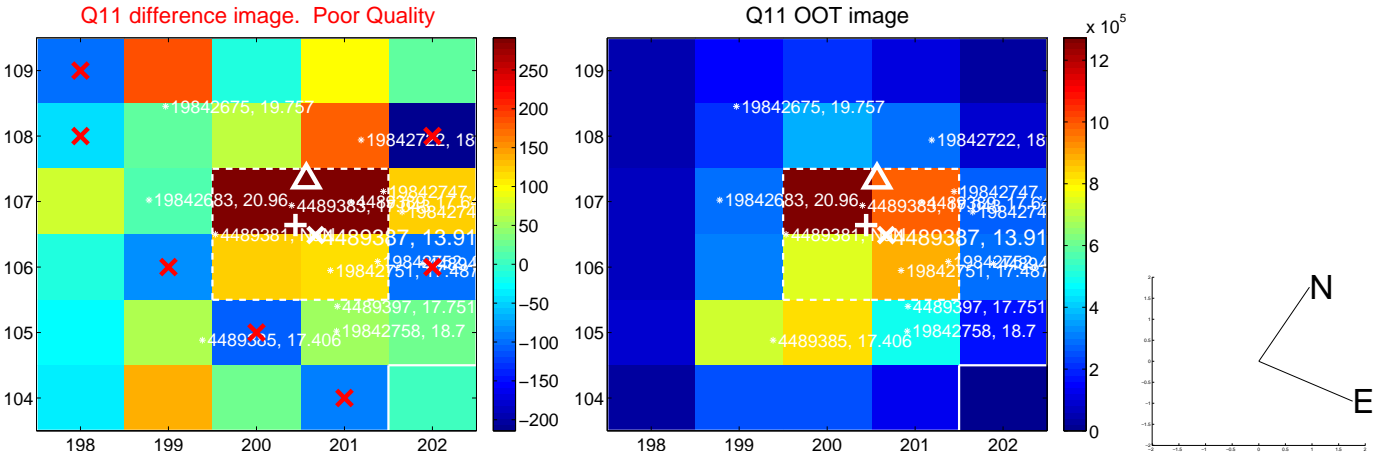
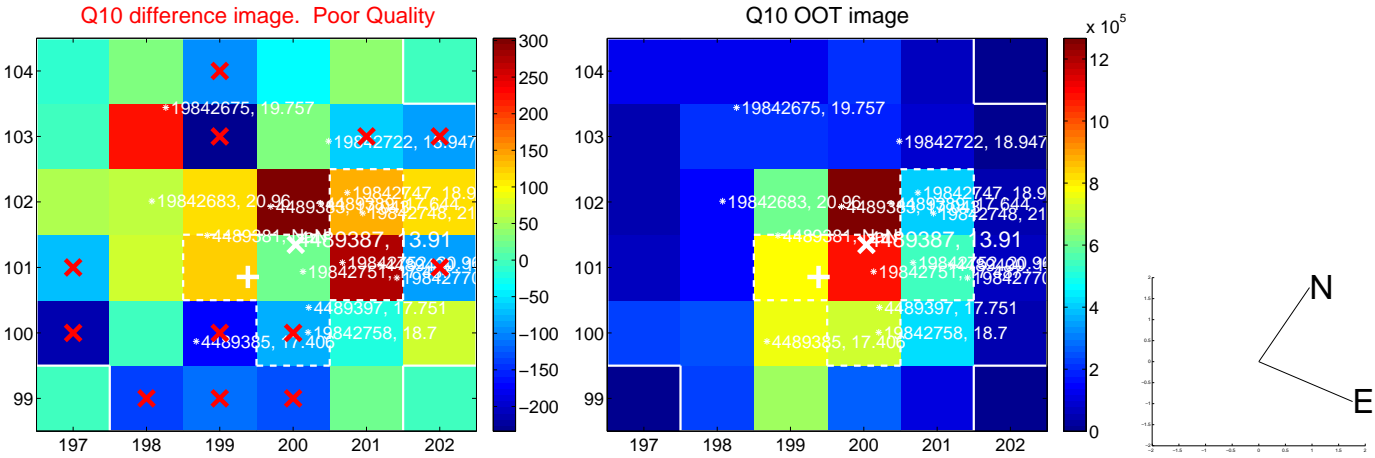
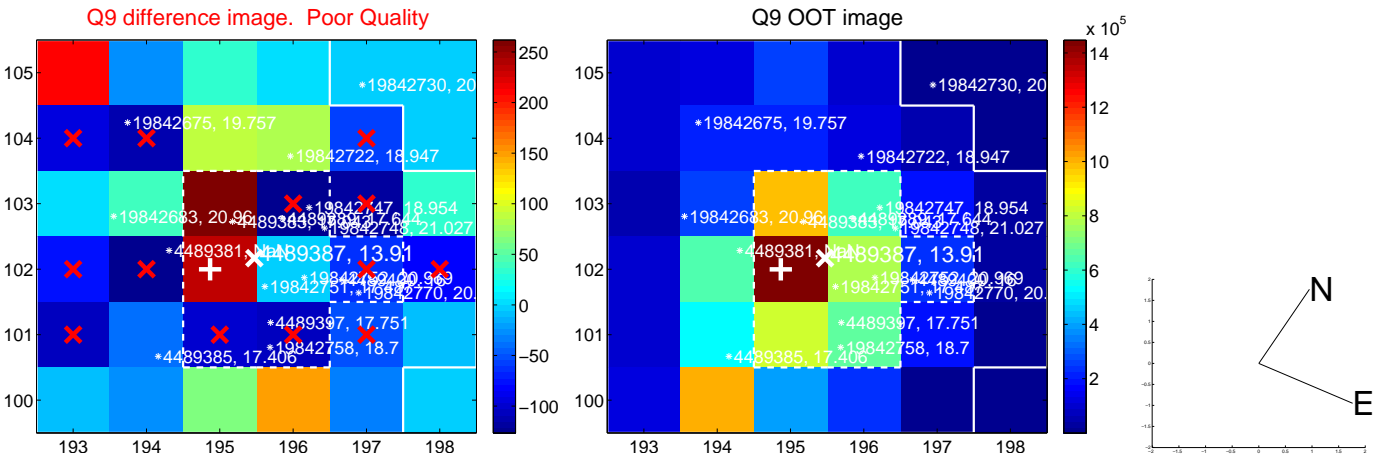
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



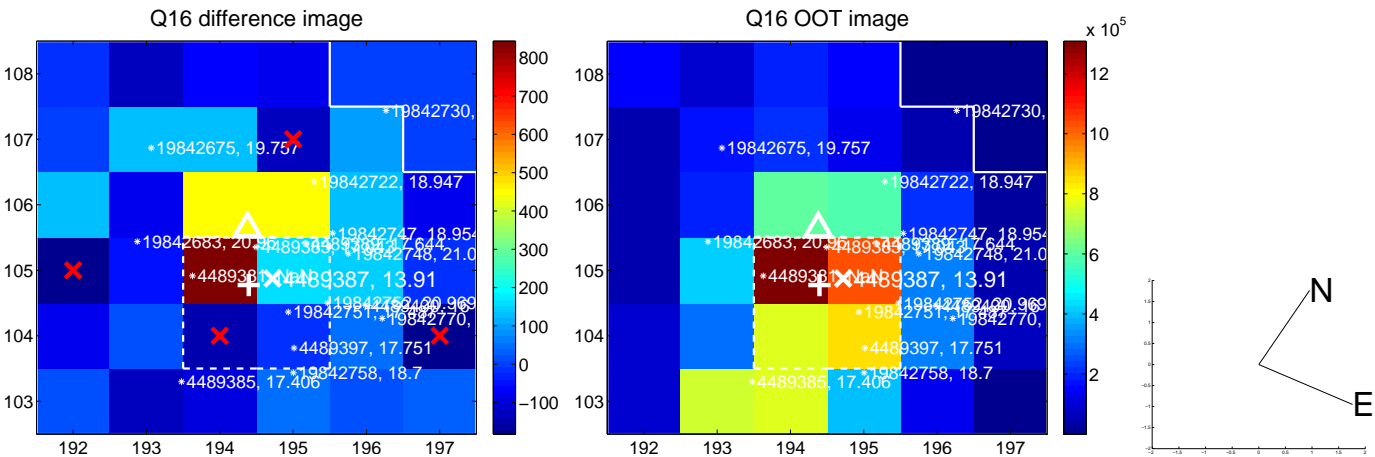
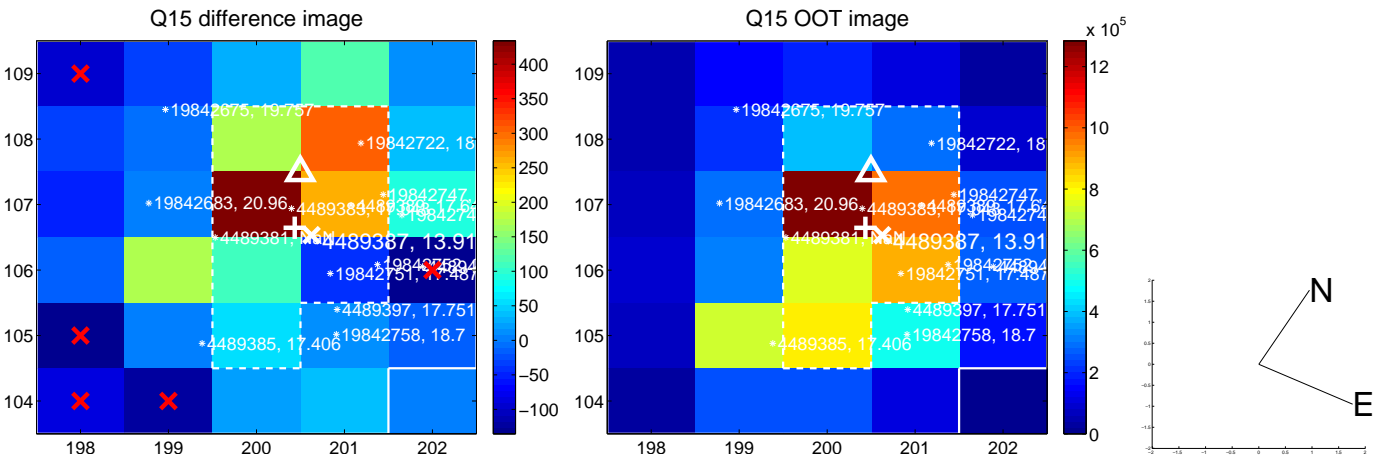
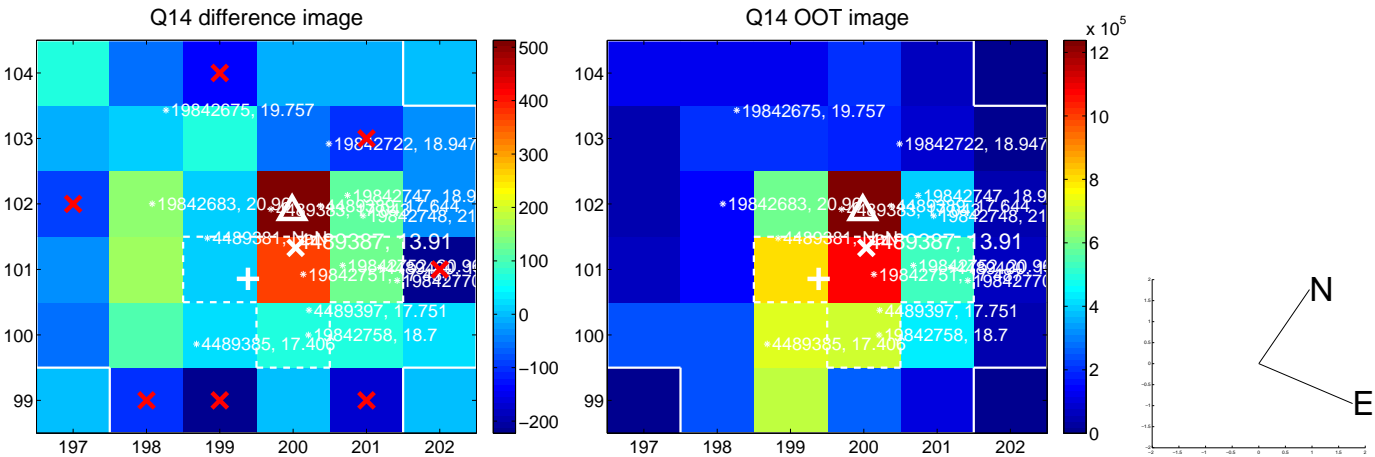
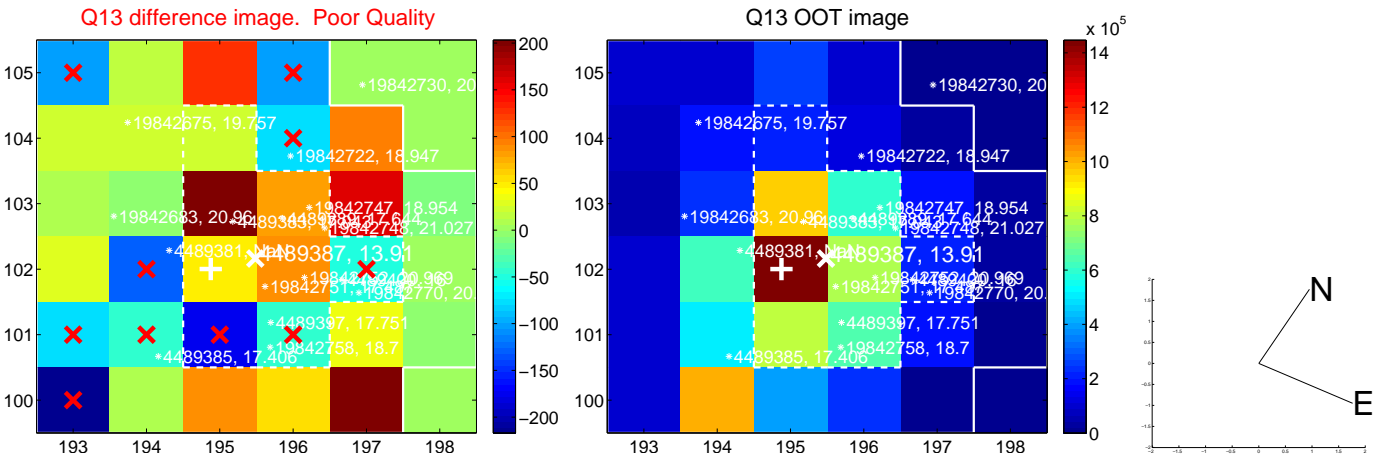
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



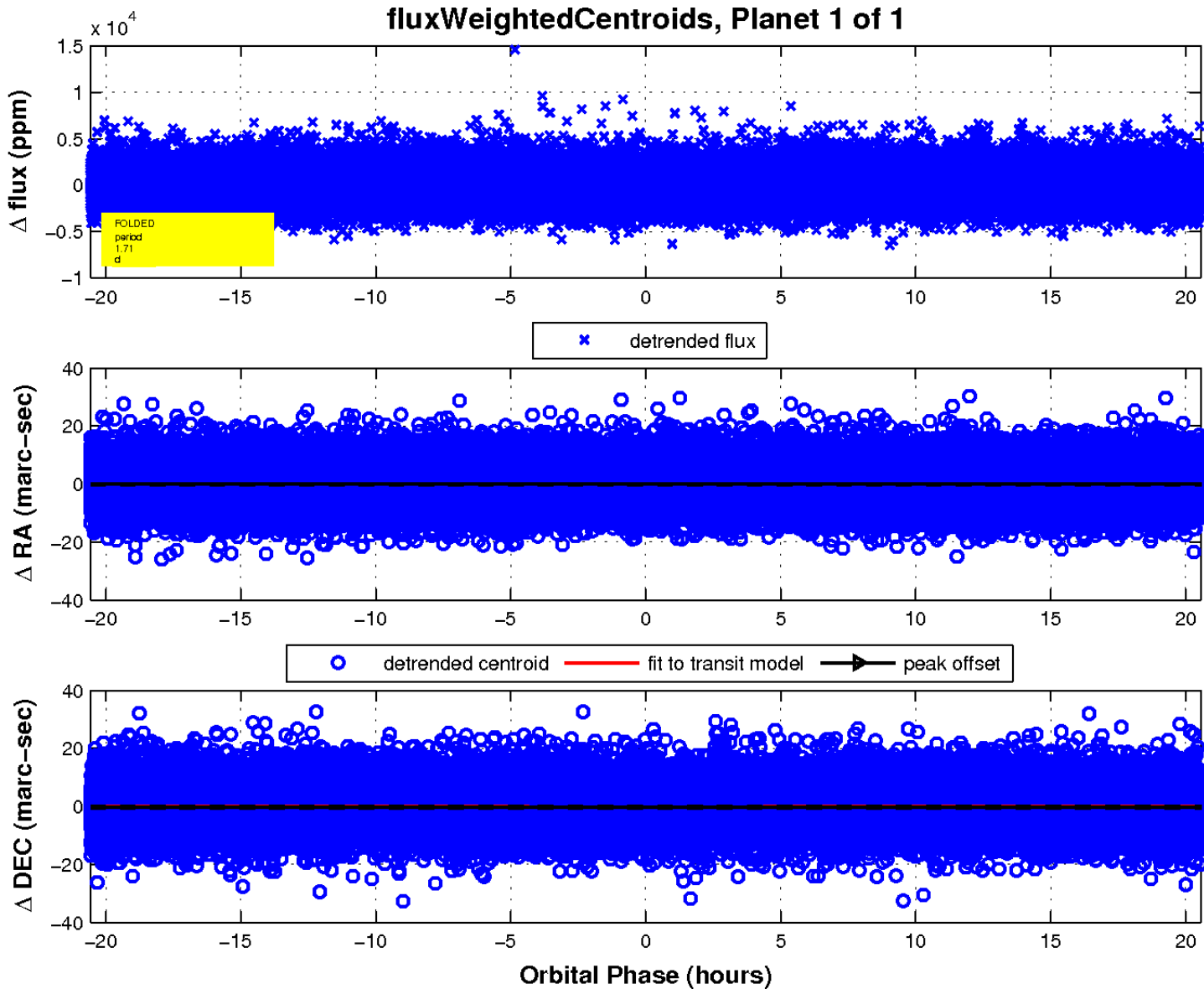
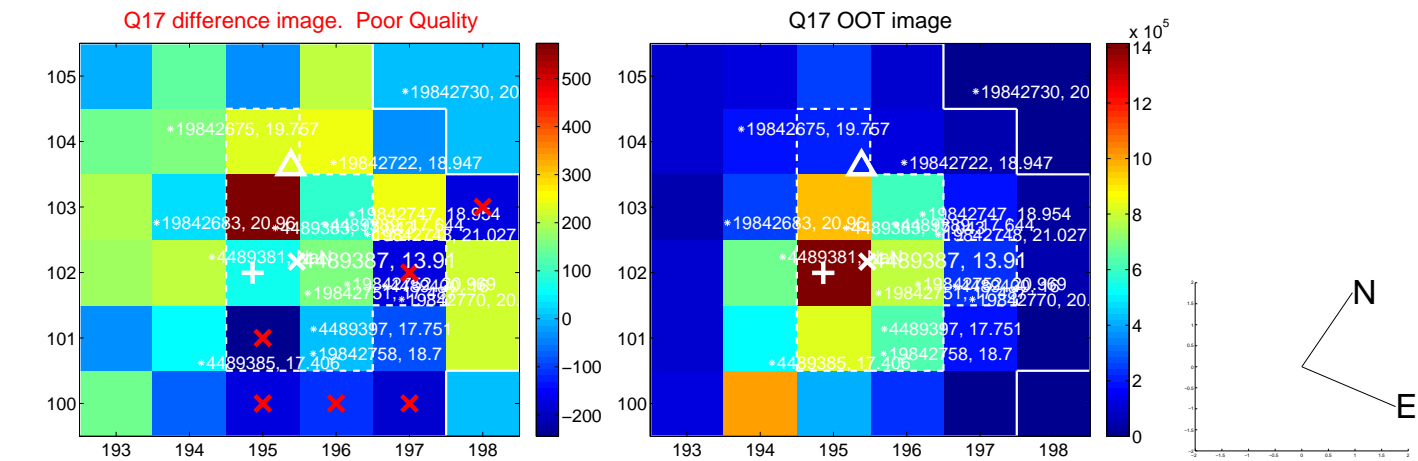
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

