

KIC 004391466

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})
004391466-01	OBS	No	2.867780	131.653980	10.4	21.769	8.4	8.7	2.15	7884	0.74	6812.66

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004391466-01	OBS	FP	0.00	1	0	0	0	LPP_DV—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.

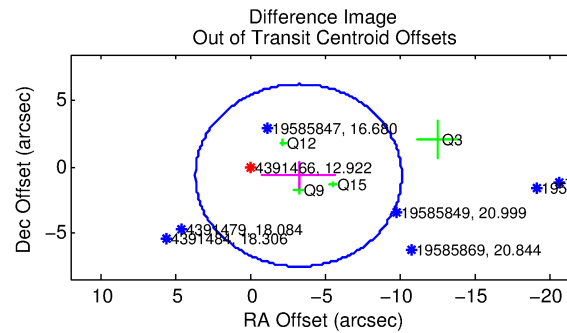
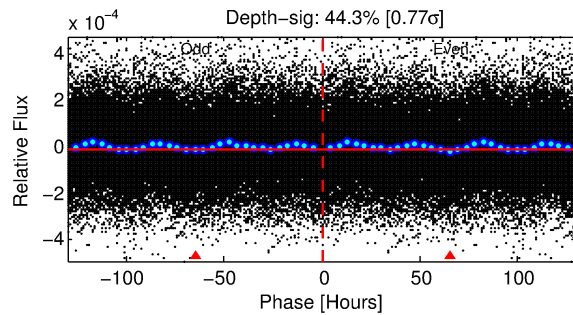
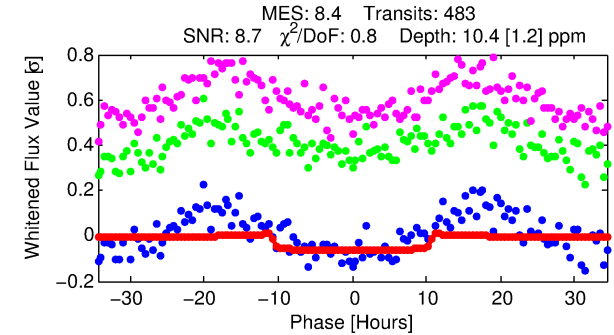
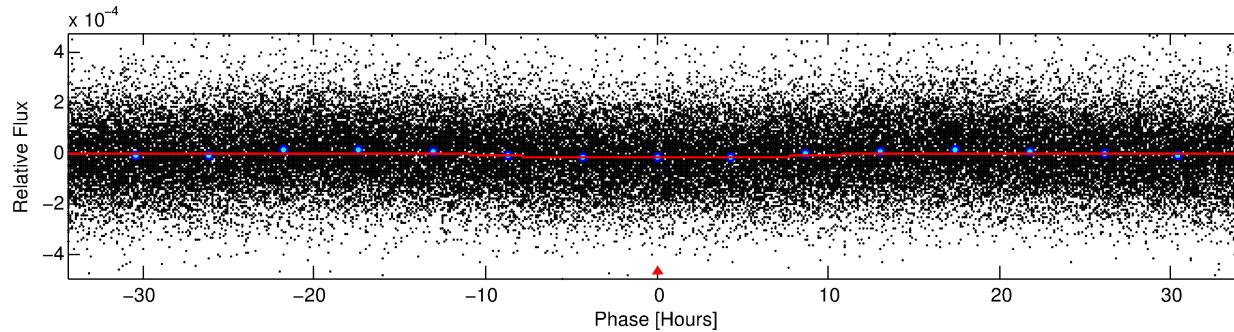
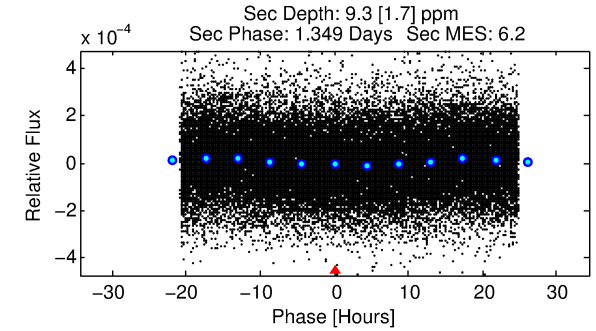
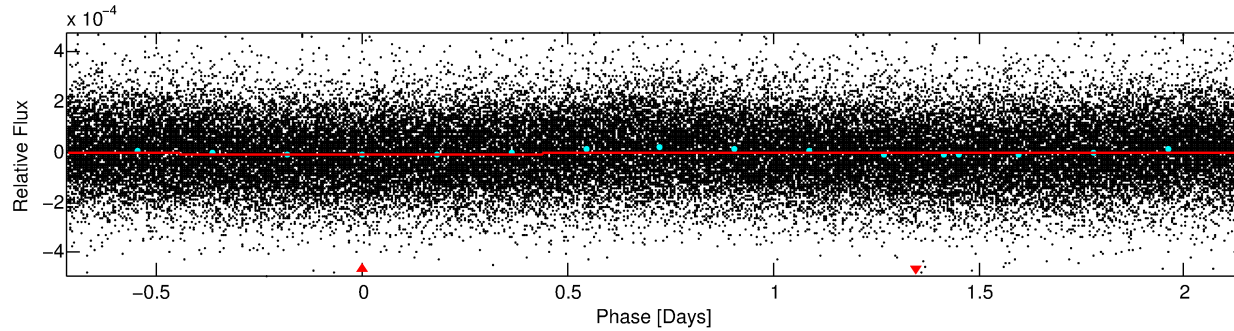
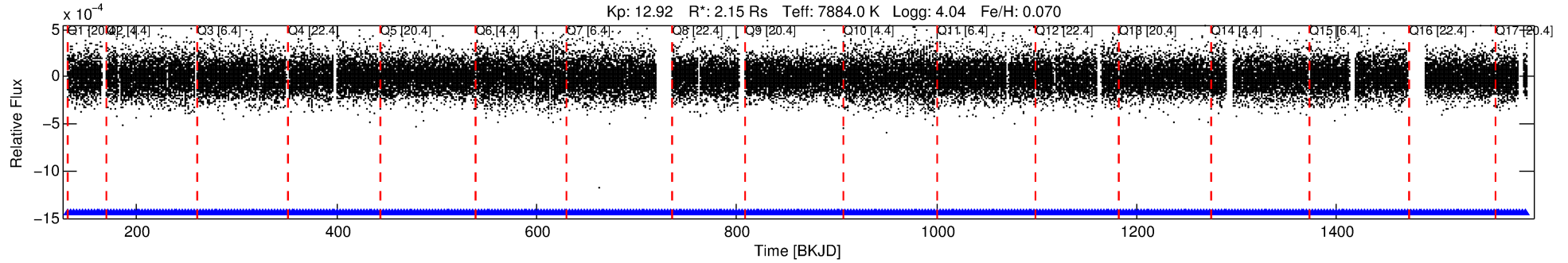
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004391466-01

No Significant Match Found

DV One-Page Summary

KIC: 4391466 Candidate: 1 of 1 Period: 2.868 d



DV Fit Results:

Period = 2.86778 [0.00008] d
Epoch = 131.6540 [0.0171] BKJD
Rp/R* = 0.0031 [0.0023]
a/R* = 1.11 [0.97]
b = 0.67 [3.68]
Seff = 6812.66 [2284.60]
Teq = 2317 [194] K
Rp = 0.74 [0.56] Re
a = 0.0486 [0.0097] AU
Ag = 21.97 [32.66] [0.64σ]
Teffp = 7754 [2844] K [1.91σ]

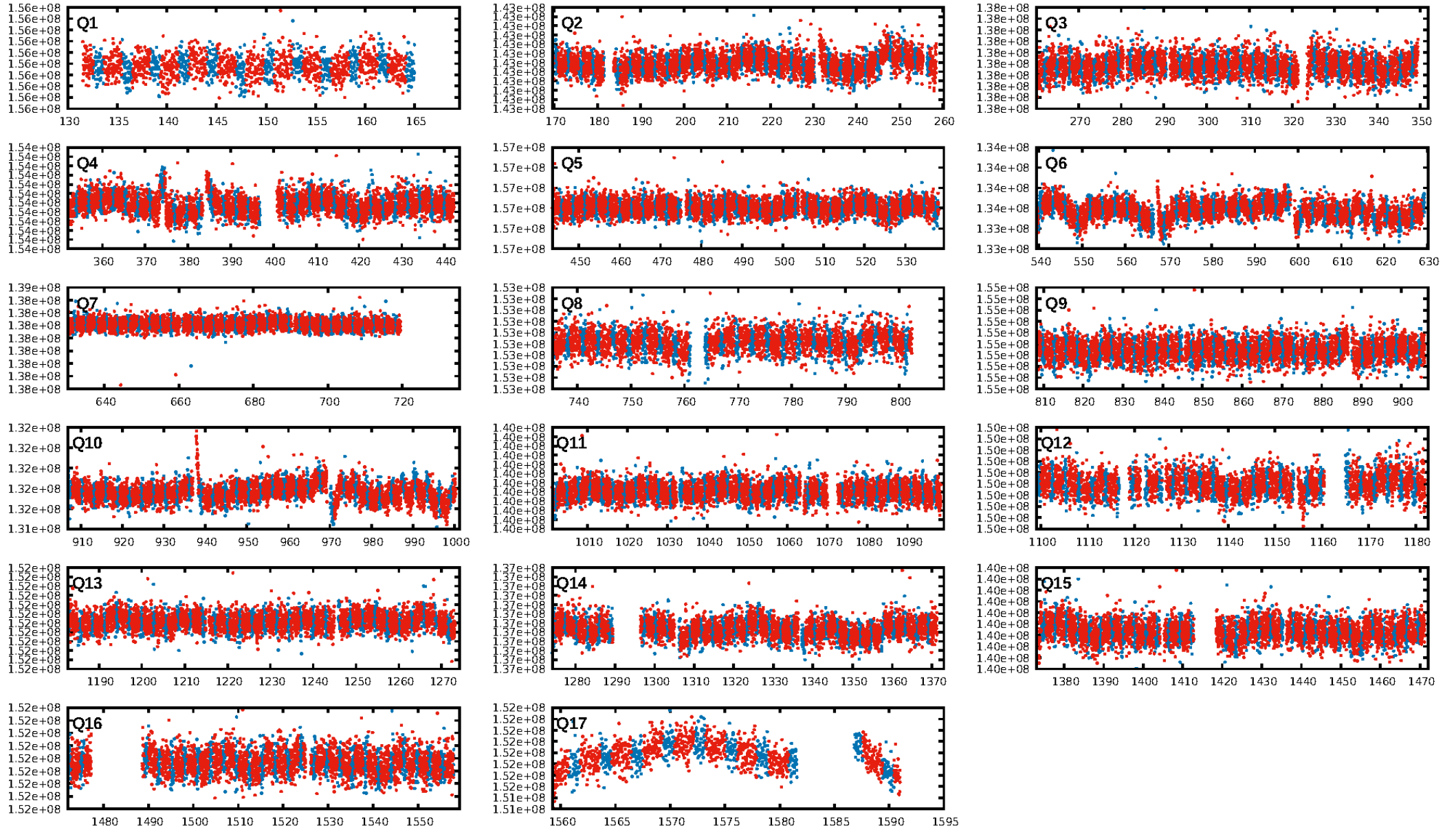
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [461/461]
GhostDiagnostic-chr: 2.085
Centroid-sig: 0.4%
Centroid-so: 3.141 arcsec [1.86σ]
OotOffset-rm: 3.319 arcsec [1.44σ]
OotOffset-st: 0.2/1/1 [4]
KicOffset-rm: 3.259 arcsec [2.82σ]
KicOffset-st: 0.2/1/1 [4]
DiffImageQuality-fgm: 0.25 [1/4]
DiffImageOverlap-fno: 1.00 [17/17]

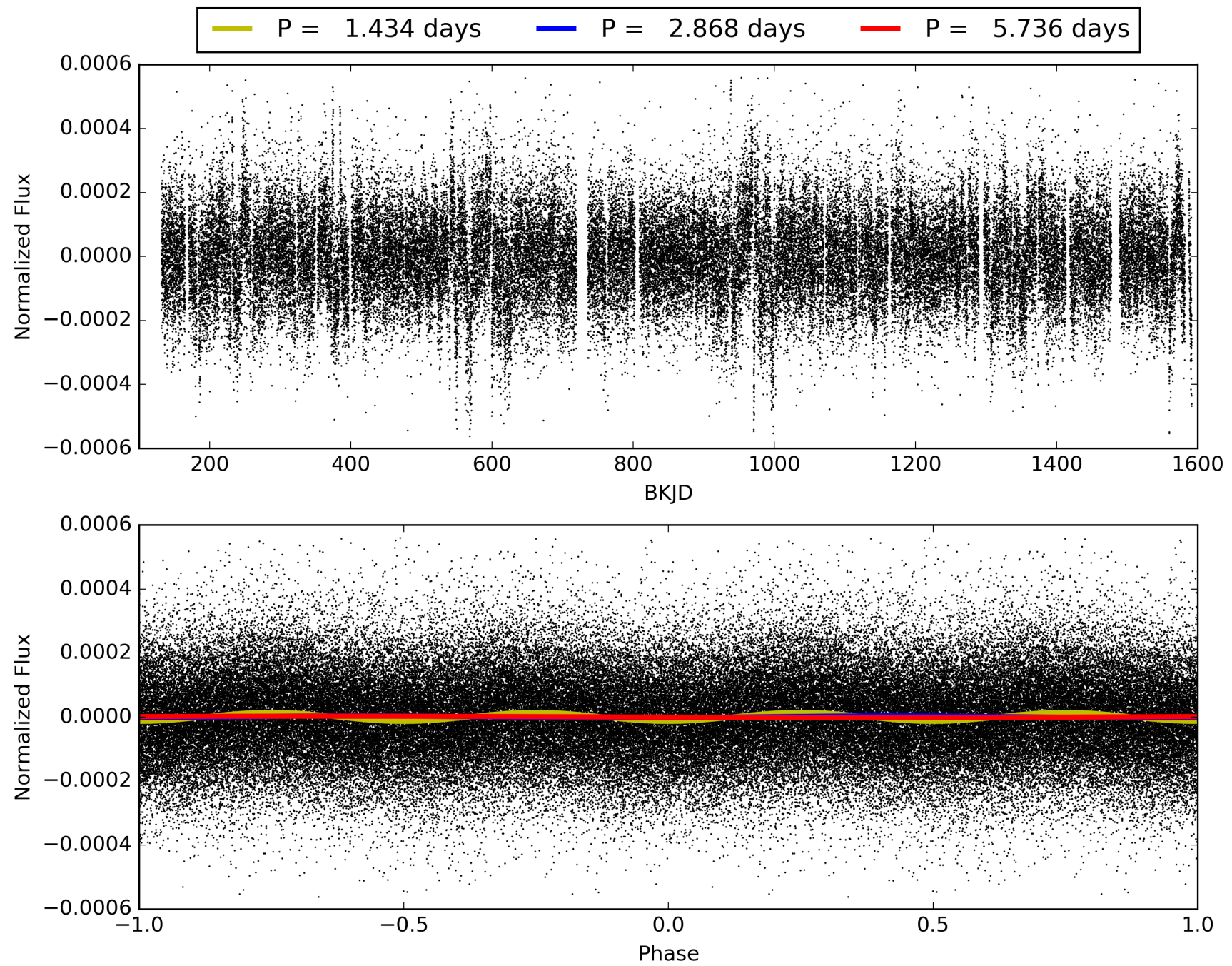
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 06:42:31 Z

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

TCE 004391466-01, PDC Light Curves

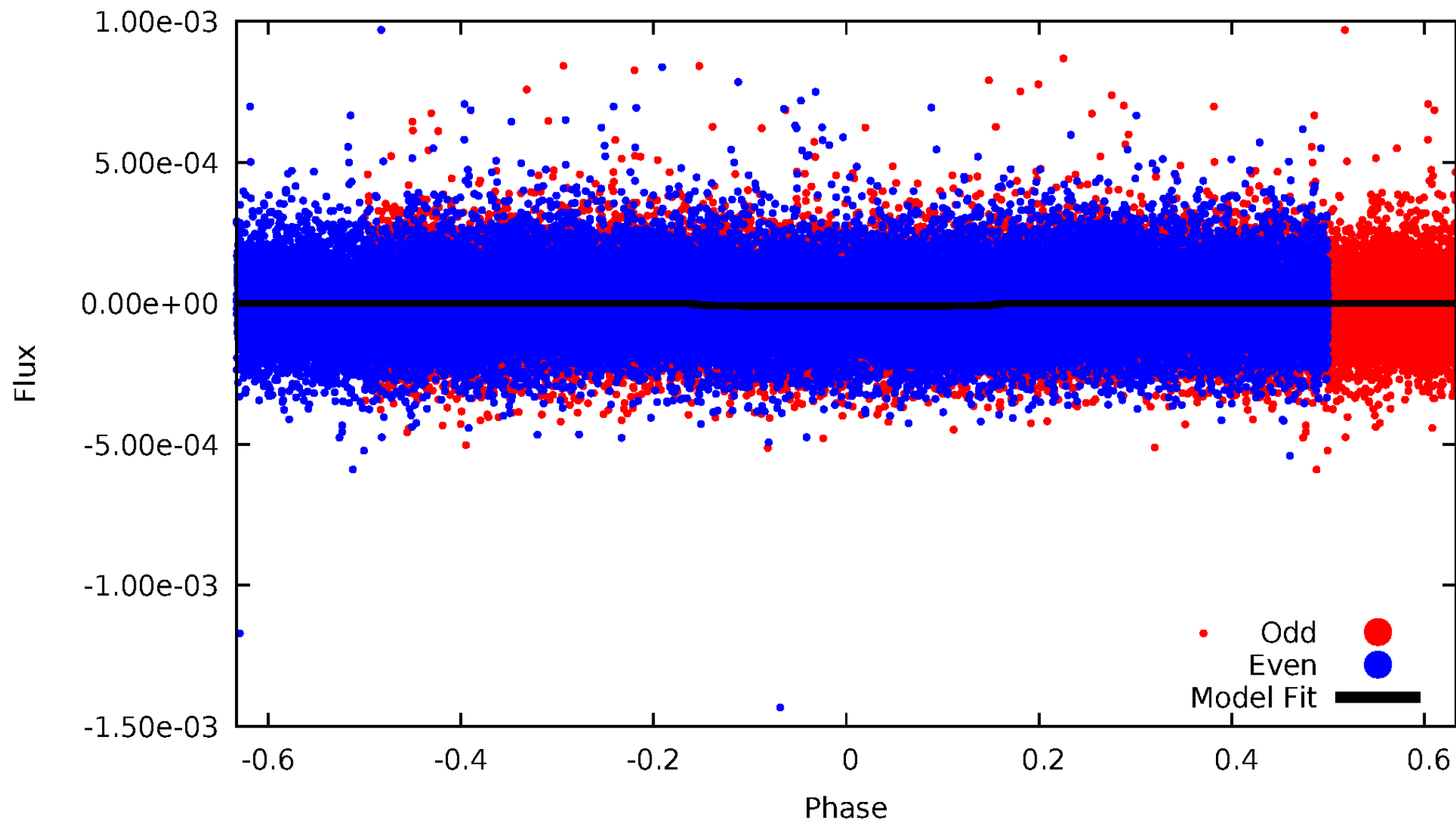


TCE 004391466-01



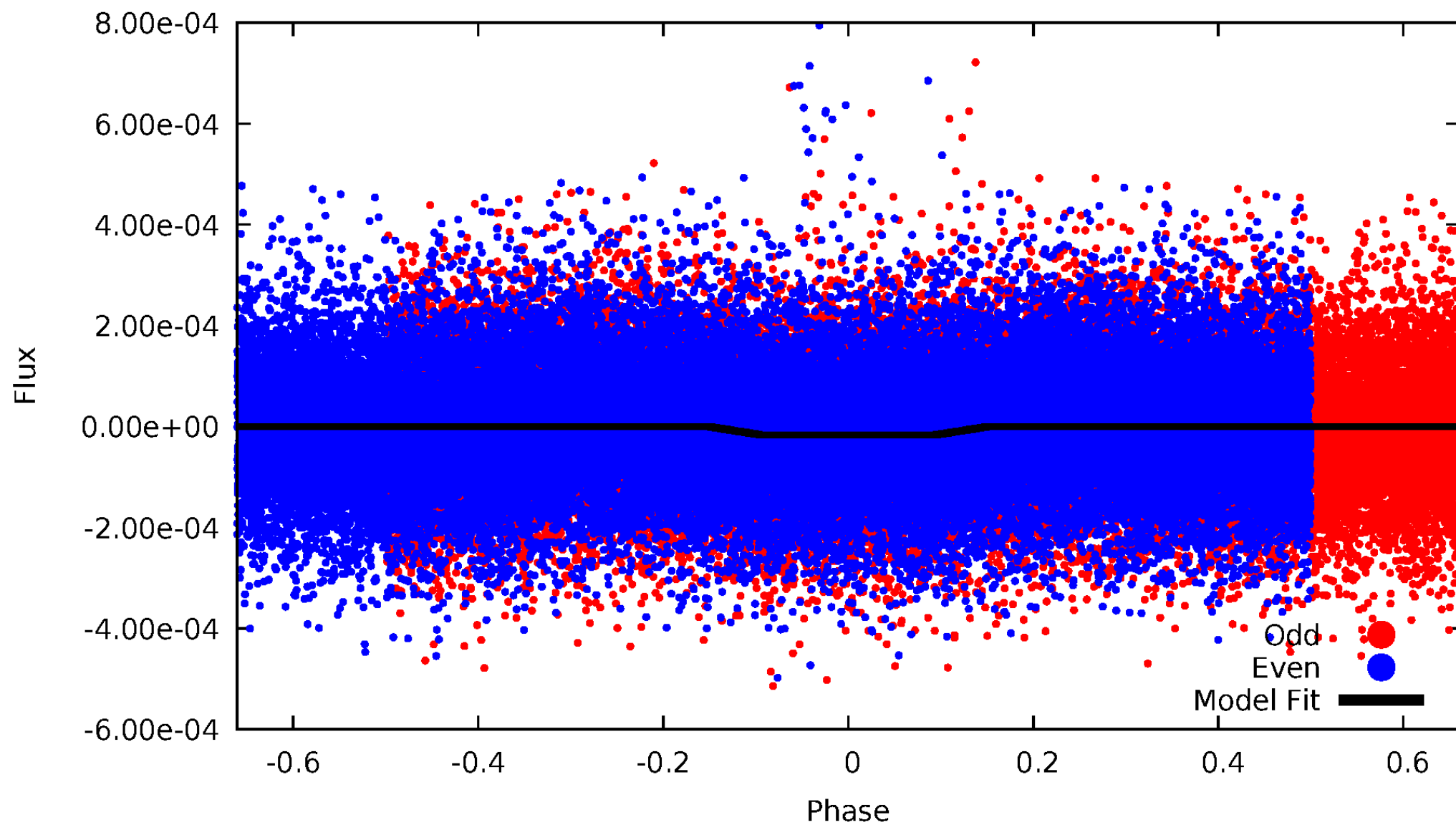
DV Odd/Even

TCE 004391466-01

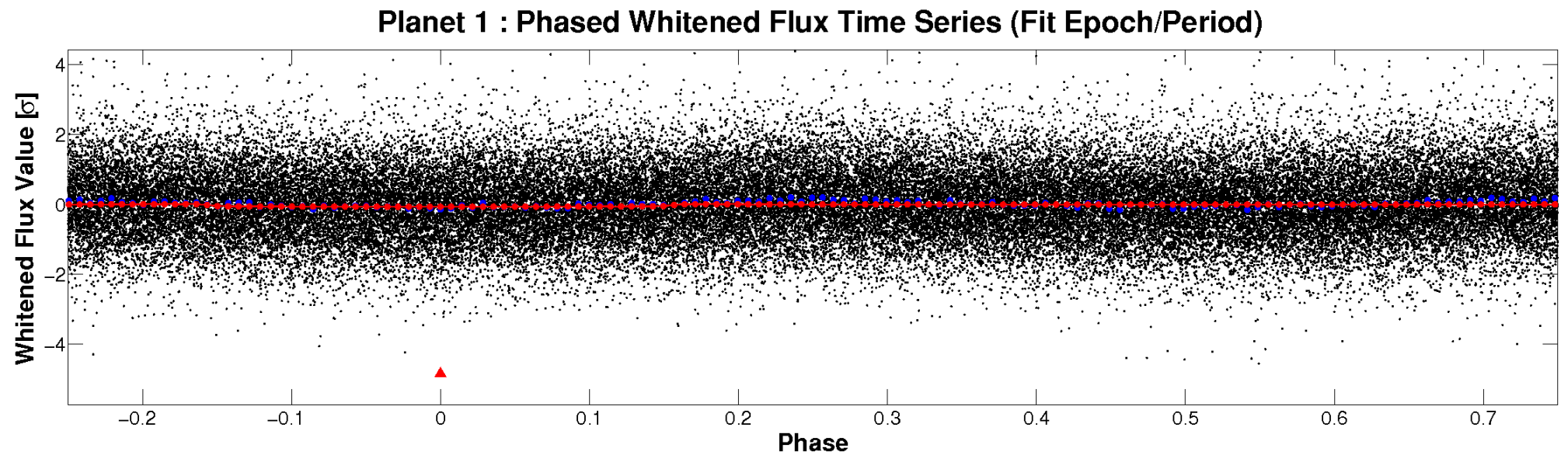
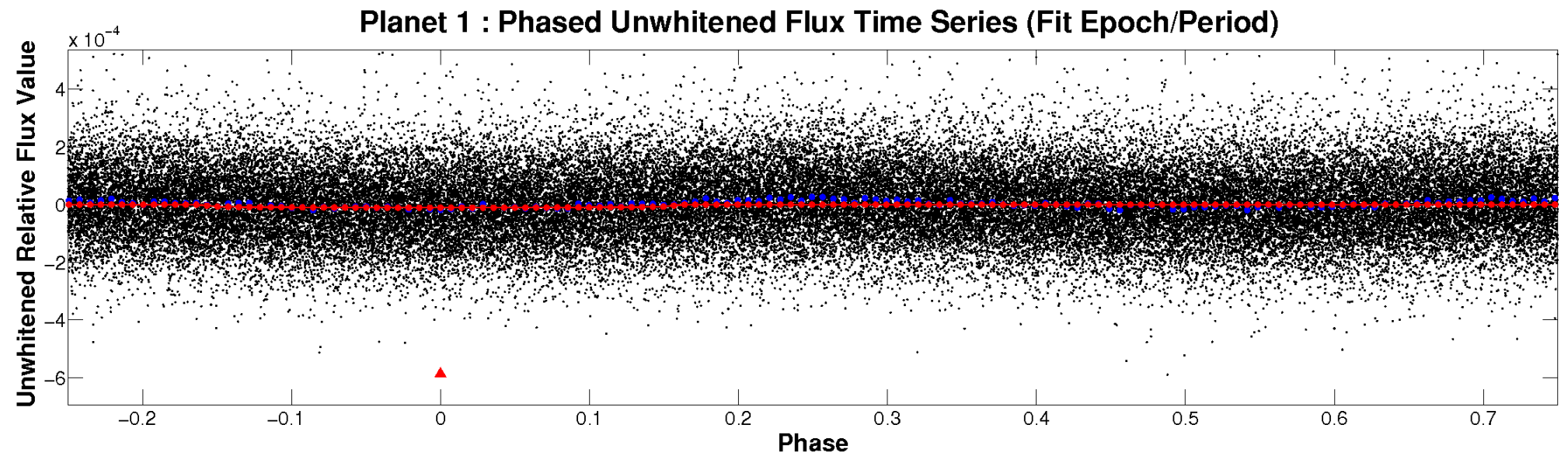


ALT Odd/Even

TCE 004391466-01

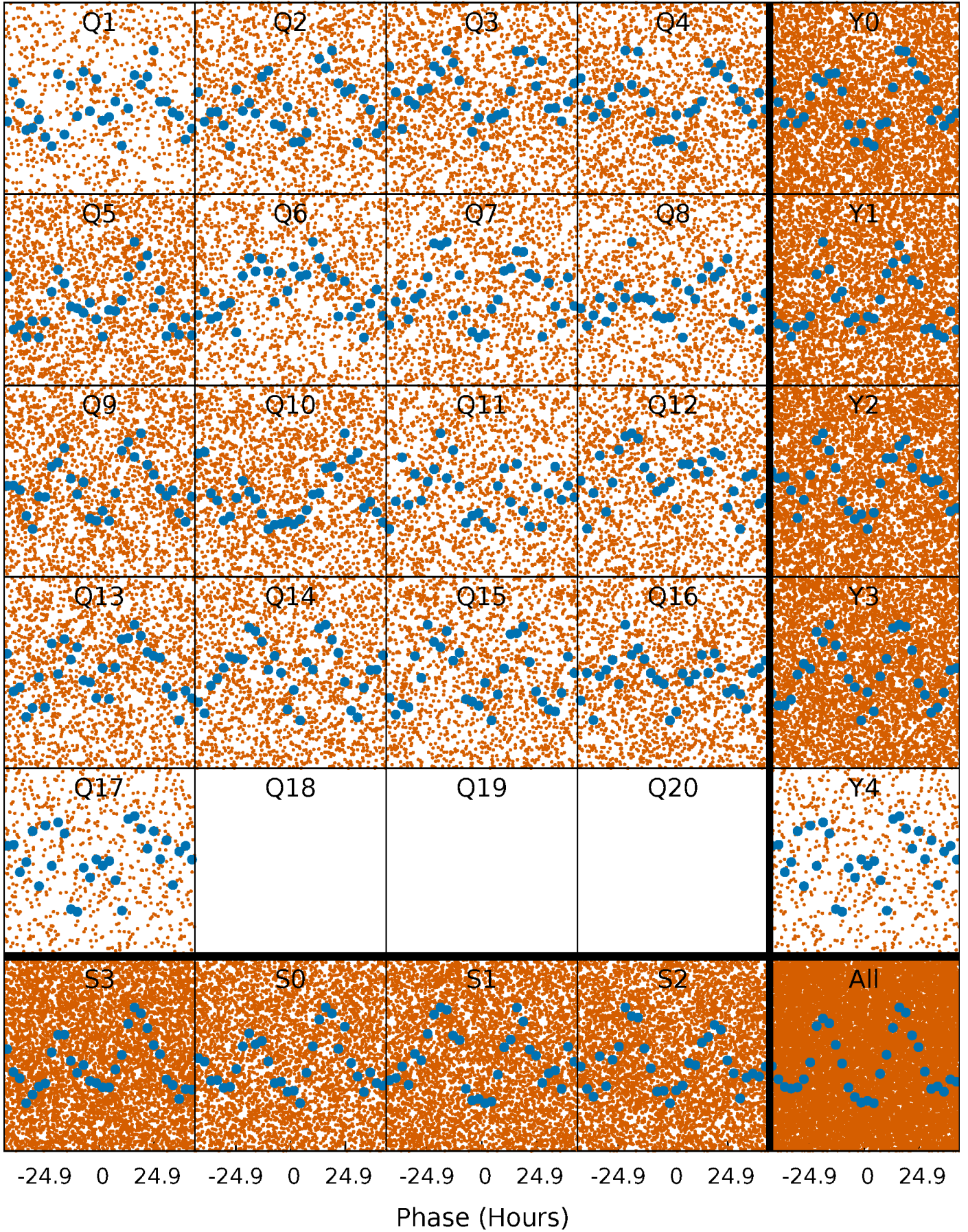


Non-Whitened Vs. Whitened Light Curve



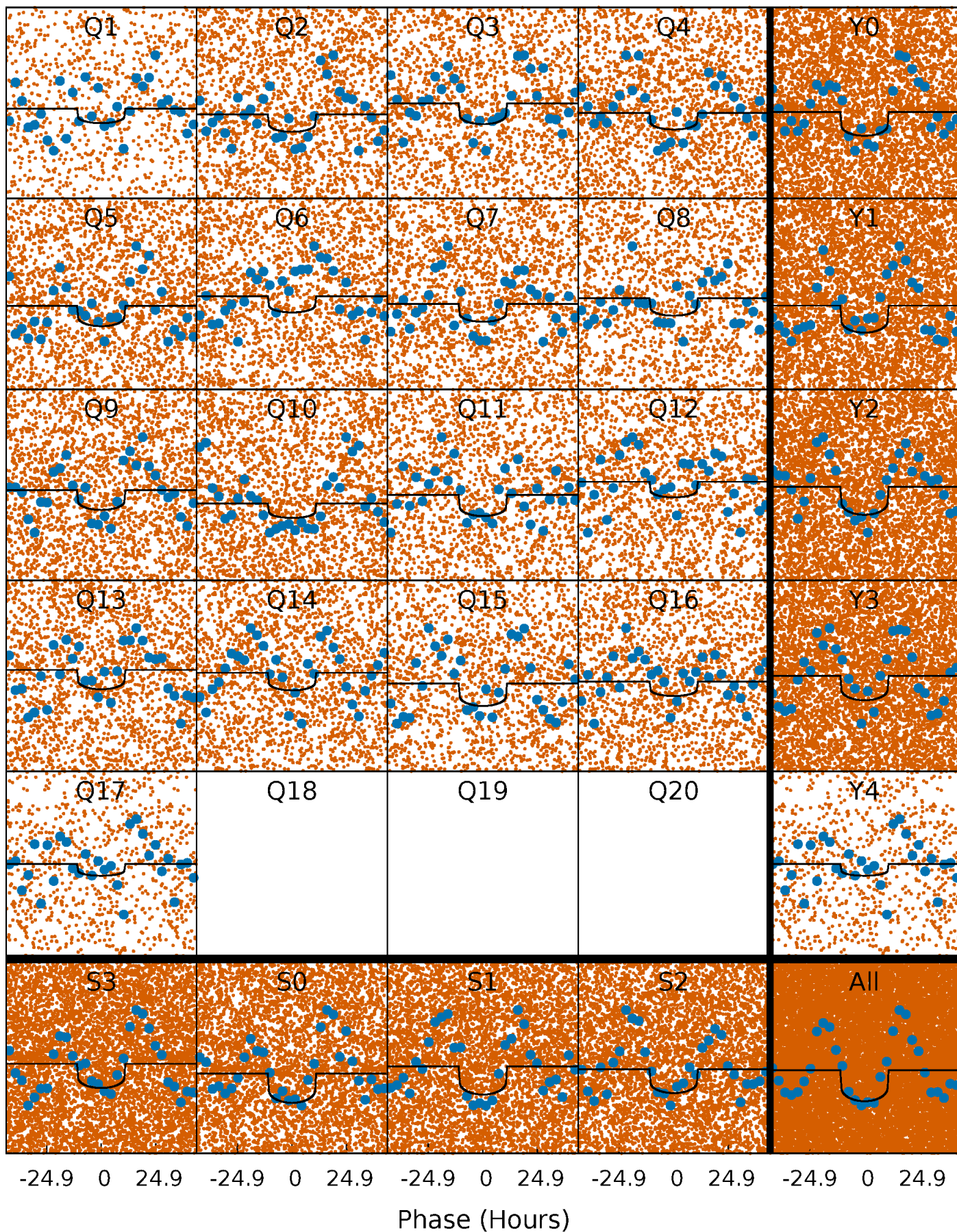
PDC Quarter-Phased Transit Curves

TCE 004391466-01 P= 2.867780 Days $T_0=131.653979$ (BKJD)



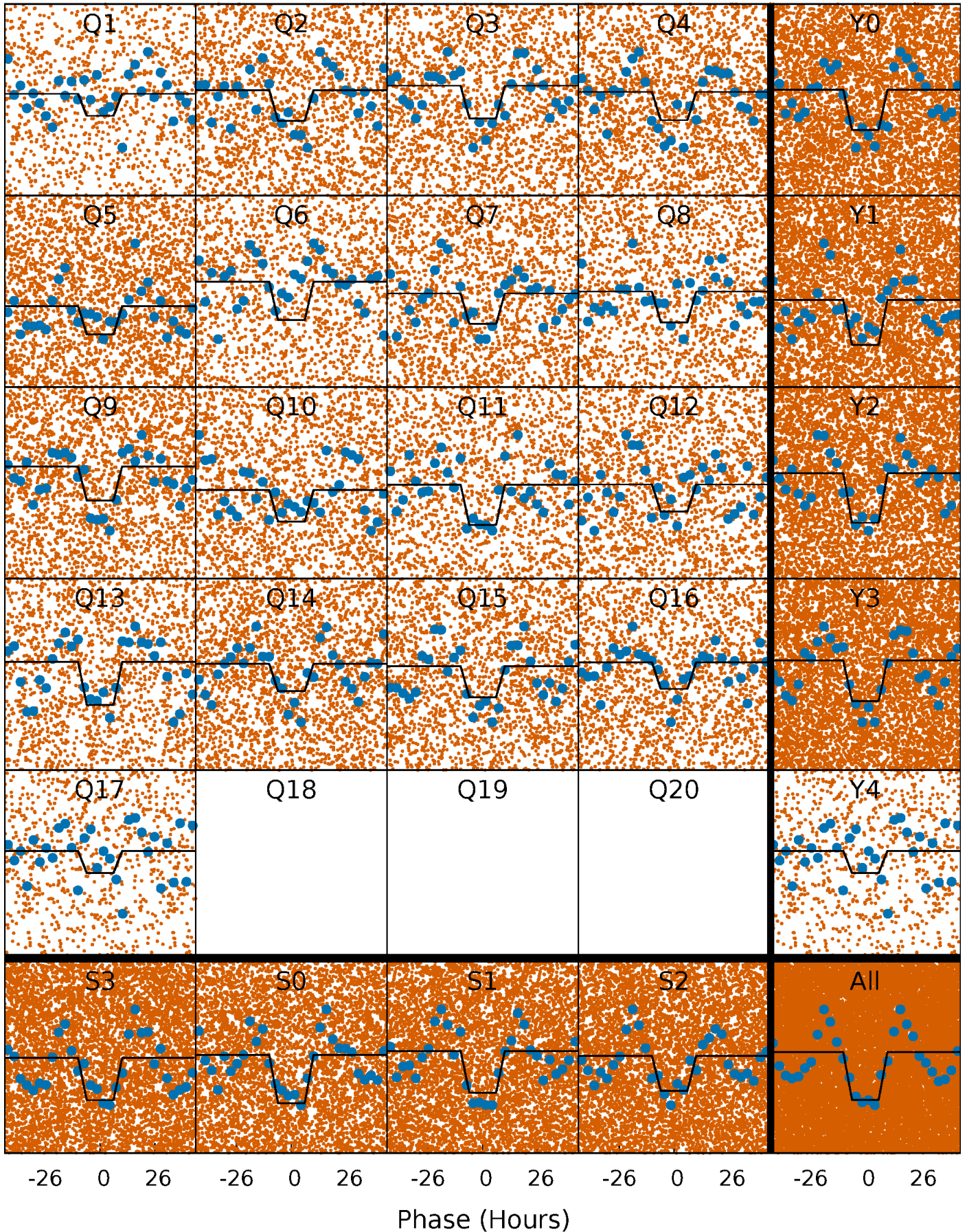
DV Quarter-Phased Transit Curves

TCE 004391466-01 P= 2.867780 Days $T_0=131.653979$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

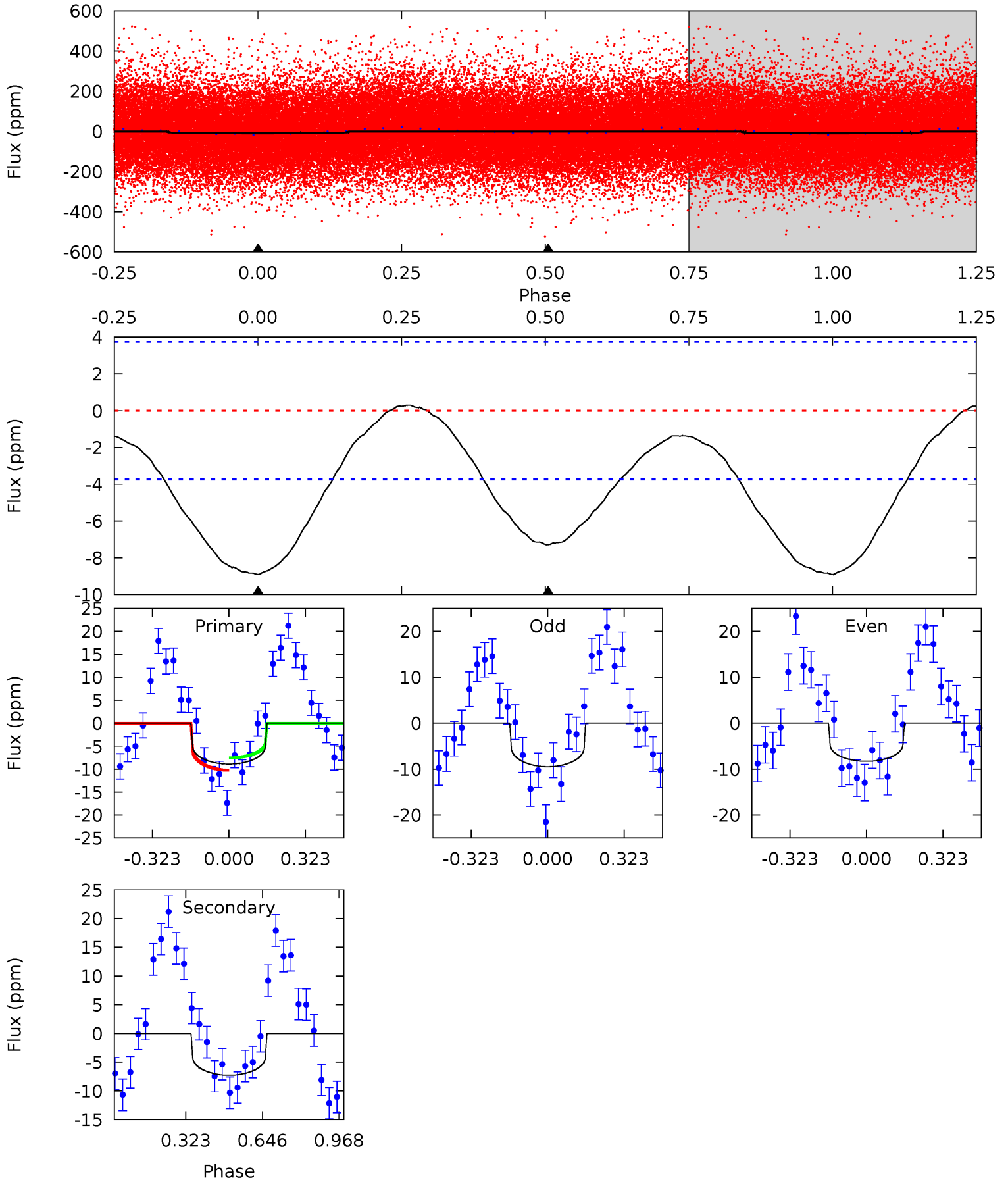
TCE 004391466-01 P= 2.867719 Days $T_0=131.662322$ (BKJD)



DV Model-Shift Uniqueness Test

004391466-01, P = 2.867780 Days, E = 128.786199 Days

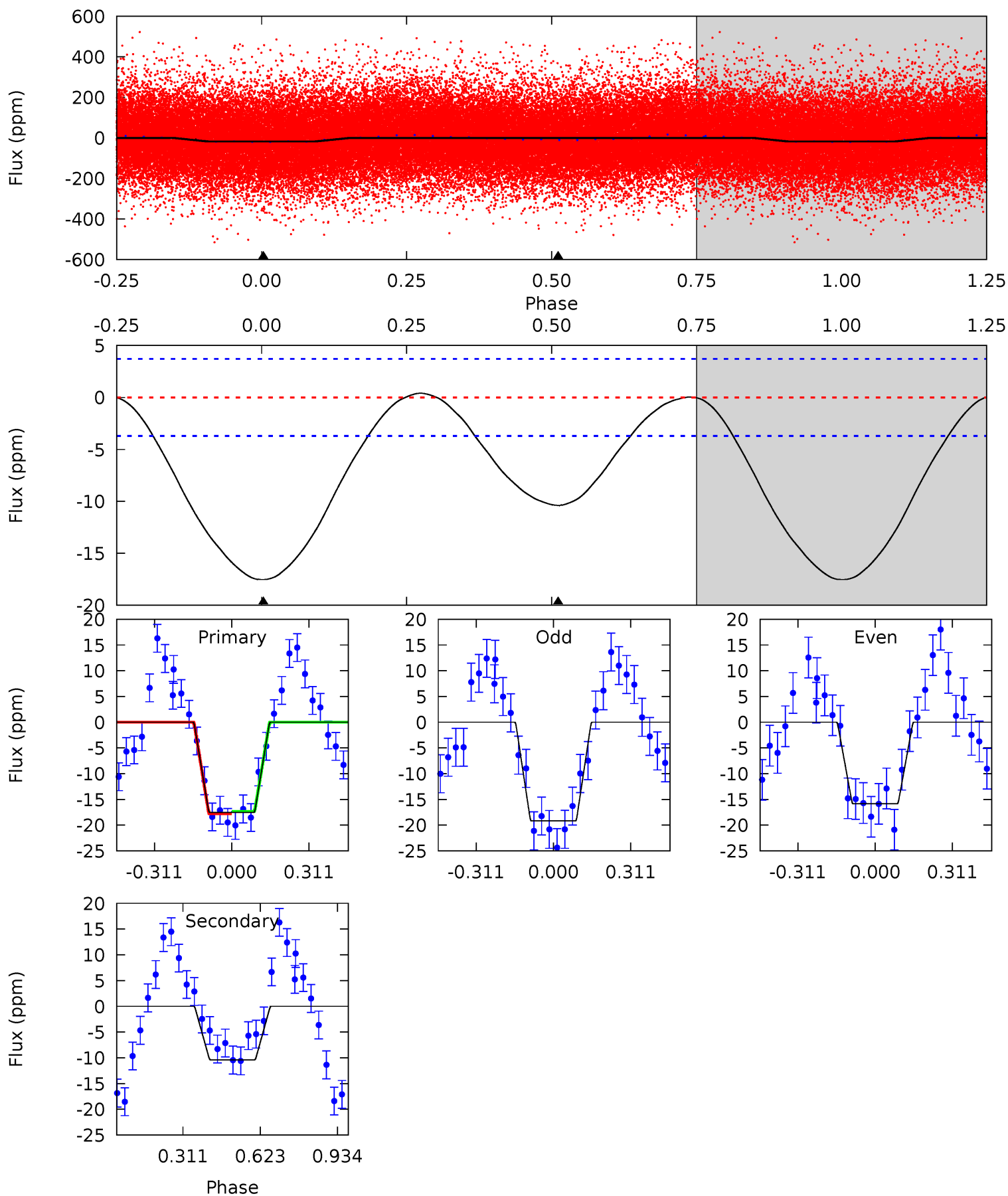
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.3	8.40	0	0	4.31	0.99	0.97	10.3	10.3	8.40	8.40	0.68	-0.83	0.03	1.58



Alt Model-Shift Uniqueness Test

004391466-01, P = 2.867719 Days, E = 128.794603 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.4	12.1	0	0	4.32	1.01	0.43	20.4	20.4	12.1	12.1	1.95	0.95	0.02	0.26



Stellar Parameters For KIC 004391466

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7884^{+216}_{-324}	$4.040^{+0.160}_{-0.144}$	$0.070^{+0.150}_{-0.400}$	$2.154^{+0.461}_{-0.512}$	$1.853^{+0.147}_{-0.344}$	$0.261^{+0.261}_{-0.105}$
	+3%/-4%	+4%/-4%	+214%/-571%	+21%/-24%	+8%/-19%	+100%/-40%
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 004391466-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-7 ± 1	$0.80^{+0.57}_{-0.44}$	3230^{+219}_{-204}	6730^{+4922}_{-1529}	14^{+61}_{-10}
Alt.	-10 ± 1	$0.95^{+0.58}_{-0.46}$	3231^{+204}_{-224}	6760^{+3567}_{-1421}	14^{+41}_{-9}

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 $A_{obs} \gg 1.0$

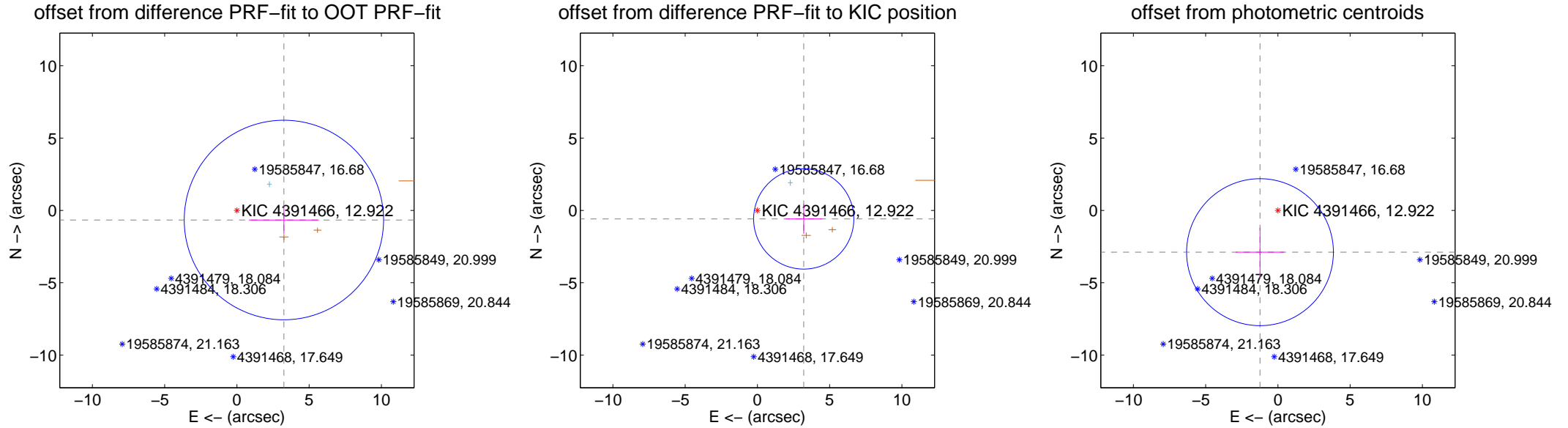
DV Centroid Data

Supplemental centroid analysis for 004391466-01. Kepler magnitude: 12.92. Transit SNR 8.66

There are 1 quarters with good PRF difference image offsets

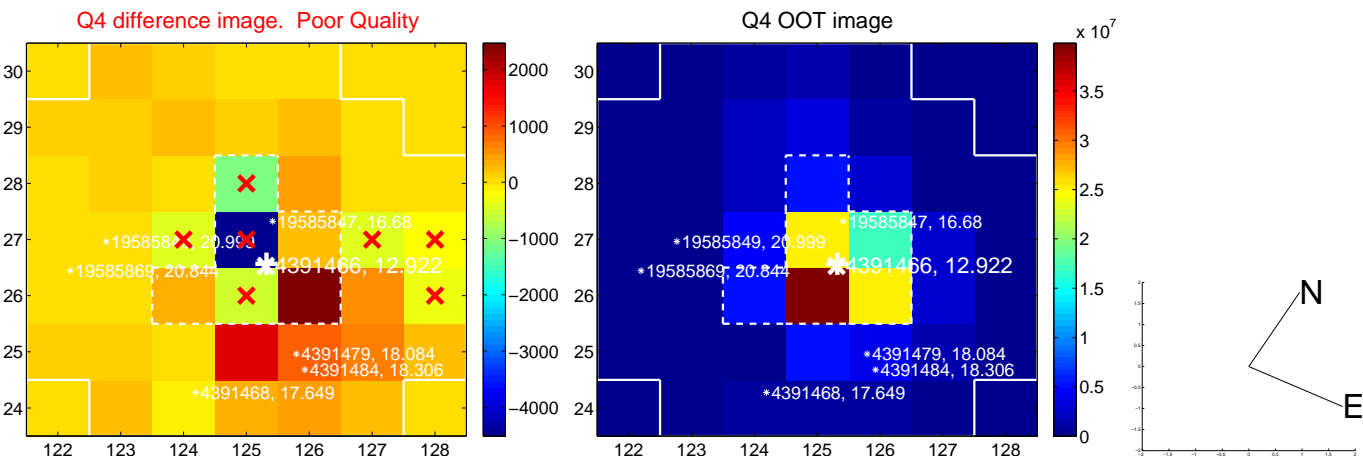
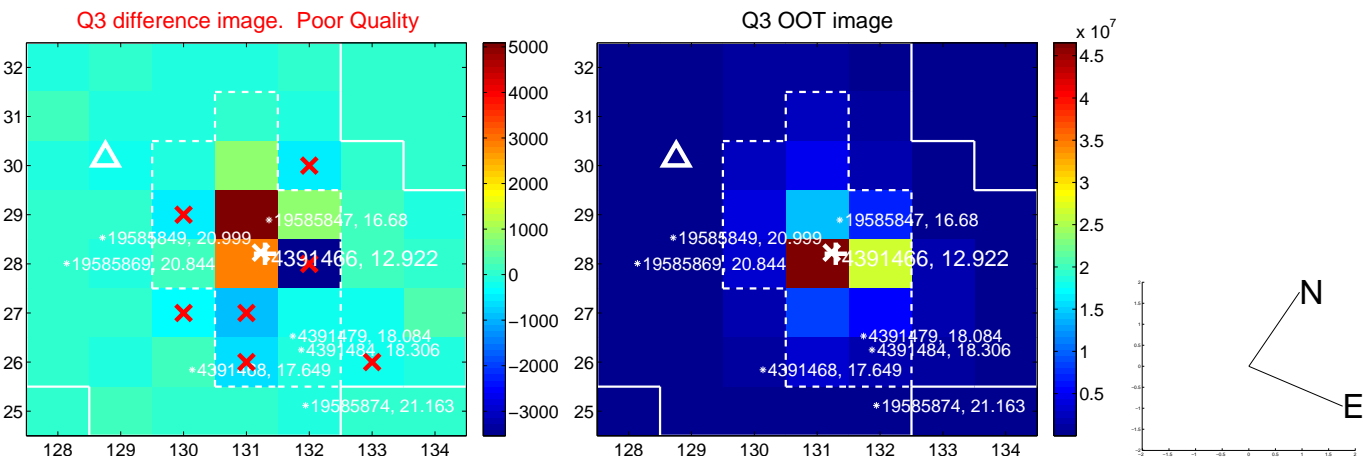
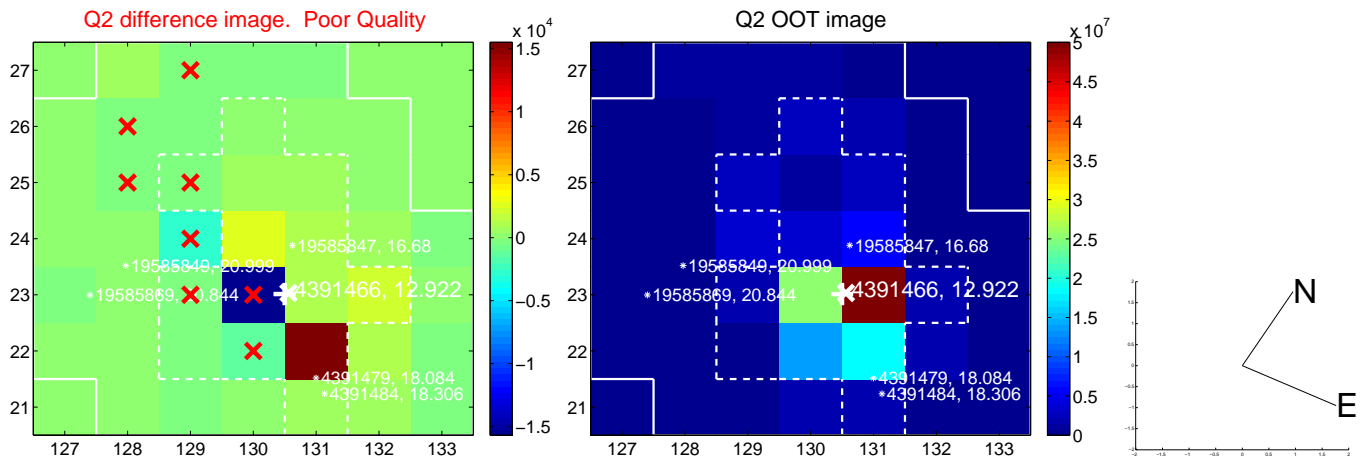
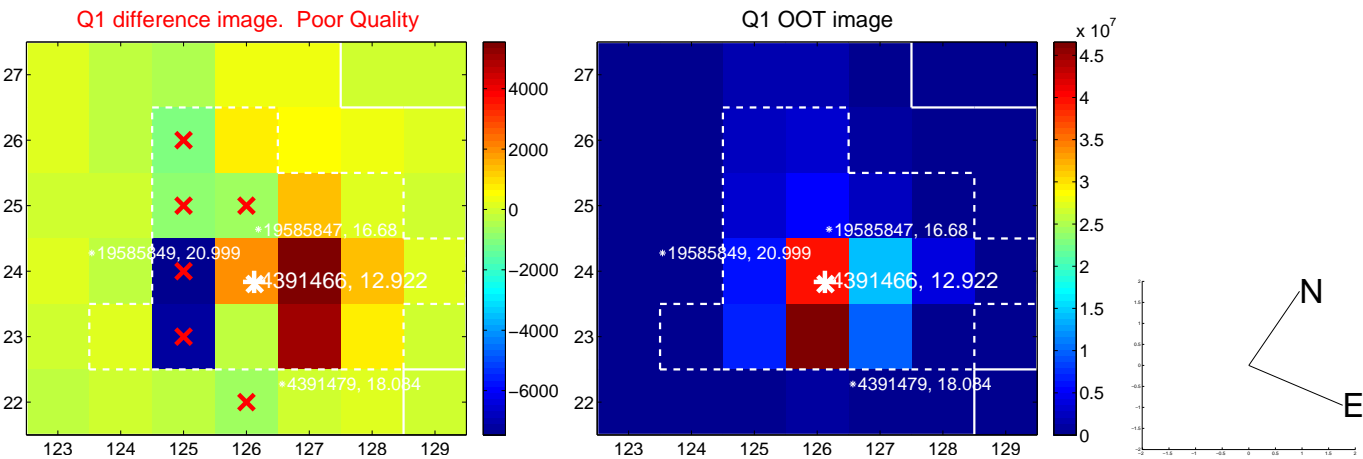
The direct PRF centroid is offset from the target star catalog position by about 0.39 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.319 ± 2.299	1.44	-3.252 ± 2.419	-0.663 ± 0.955
PRF-fit source offset from KIC position	3.259 ± 1.156	2.82	-3.205 ± 1.252	-0.589 ± 1.025
photometric centroid source offset	3.14 ± 1.69	1.86	1.24 ± 1.67	-2.89 ± 1.70

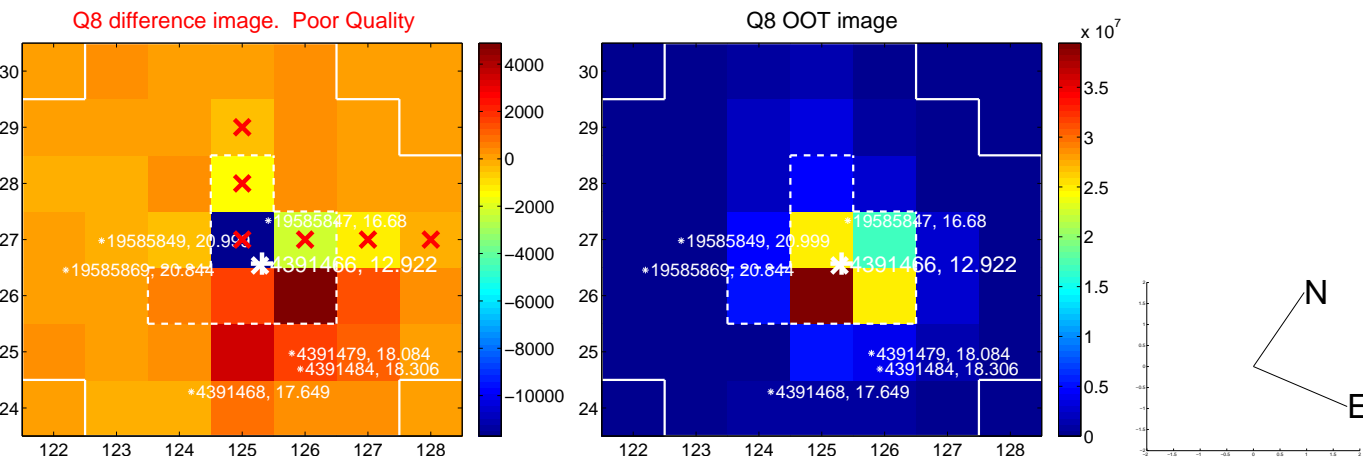
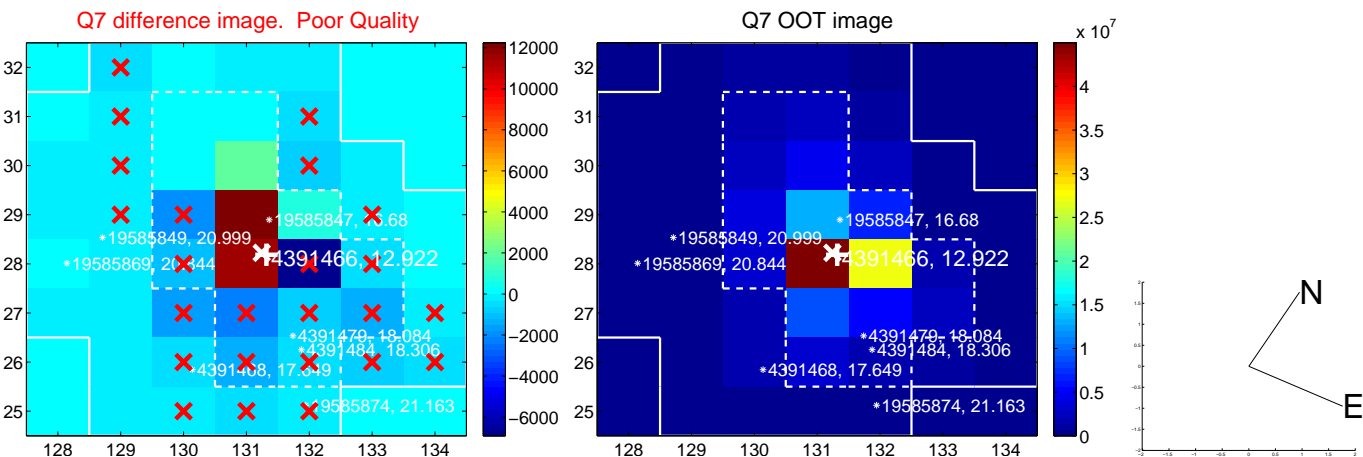
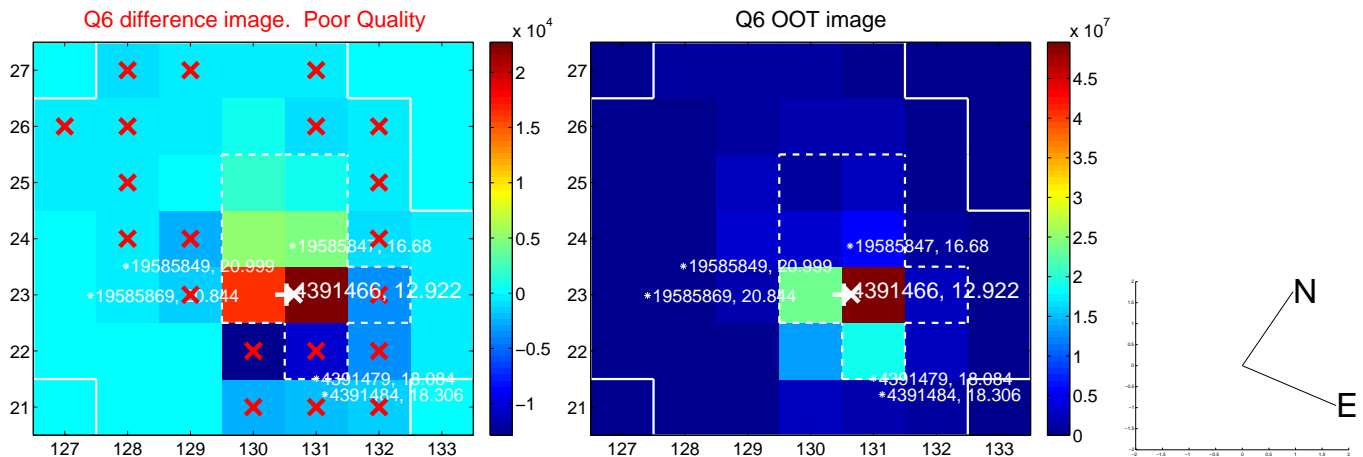
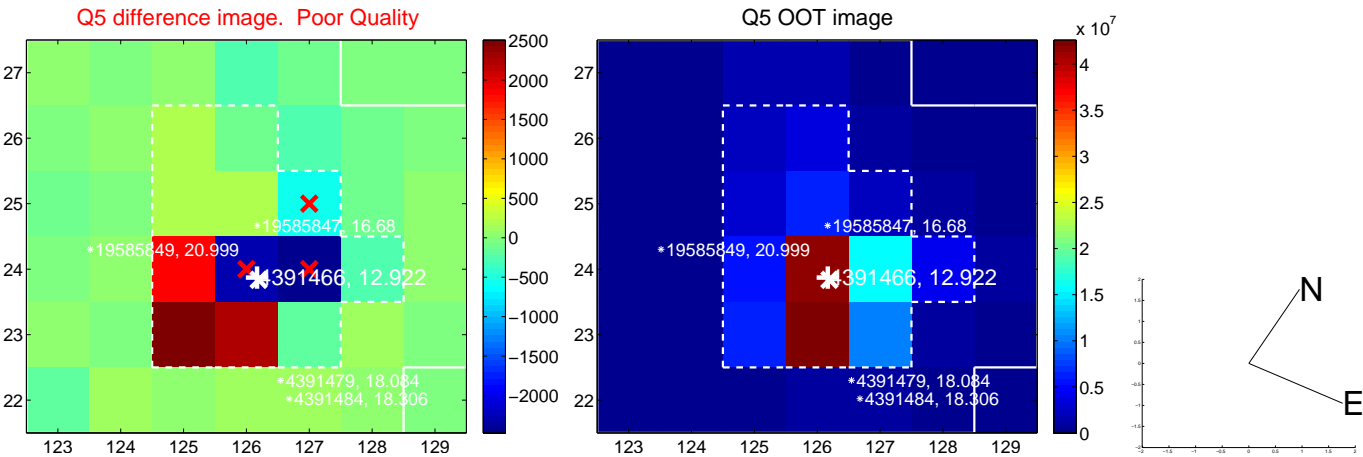


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

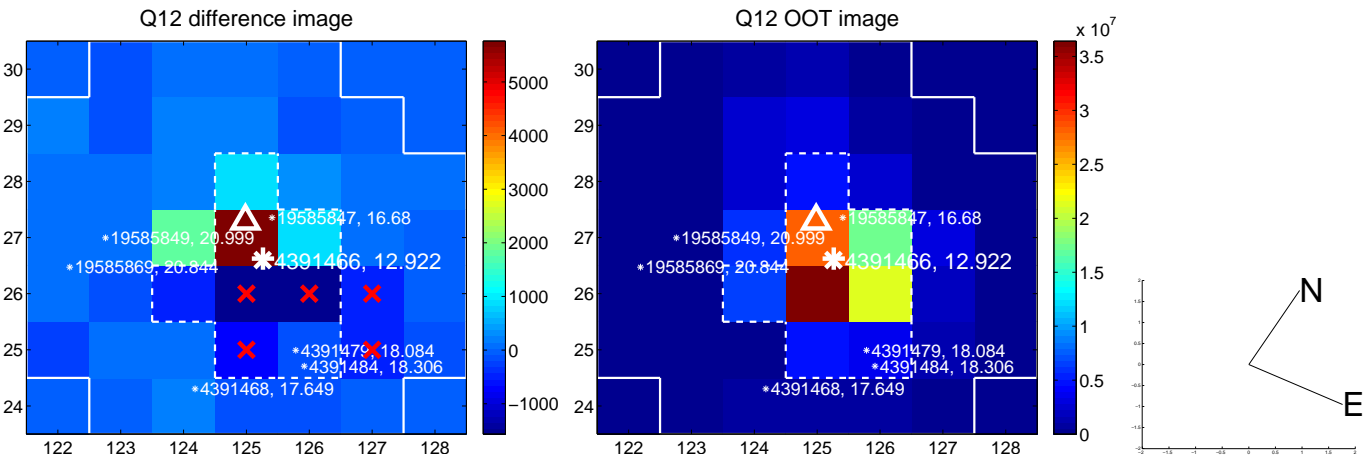
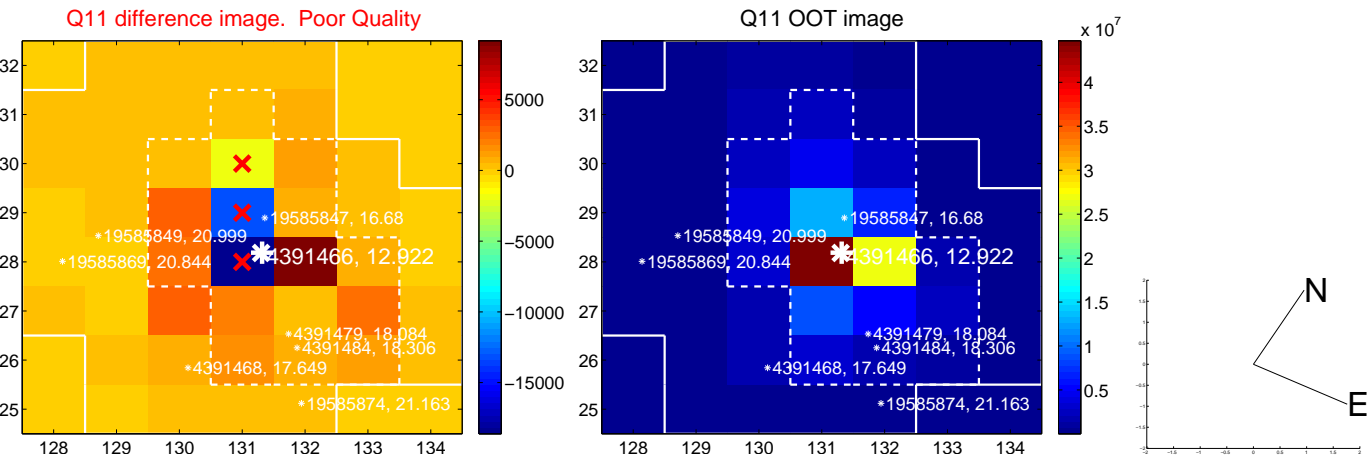
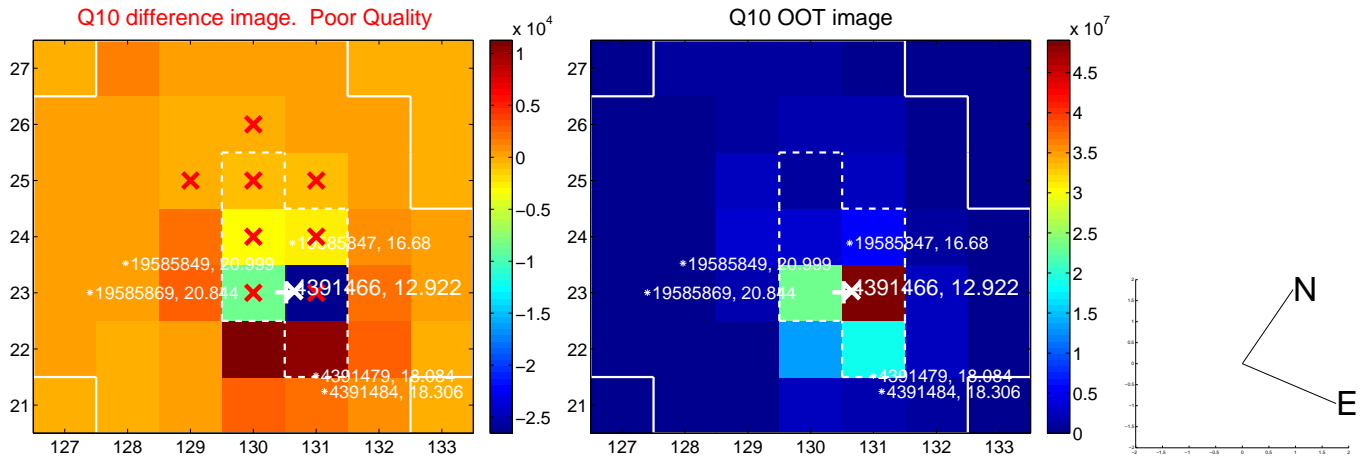
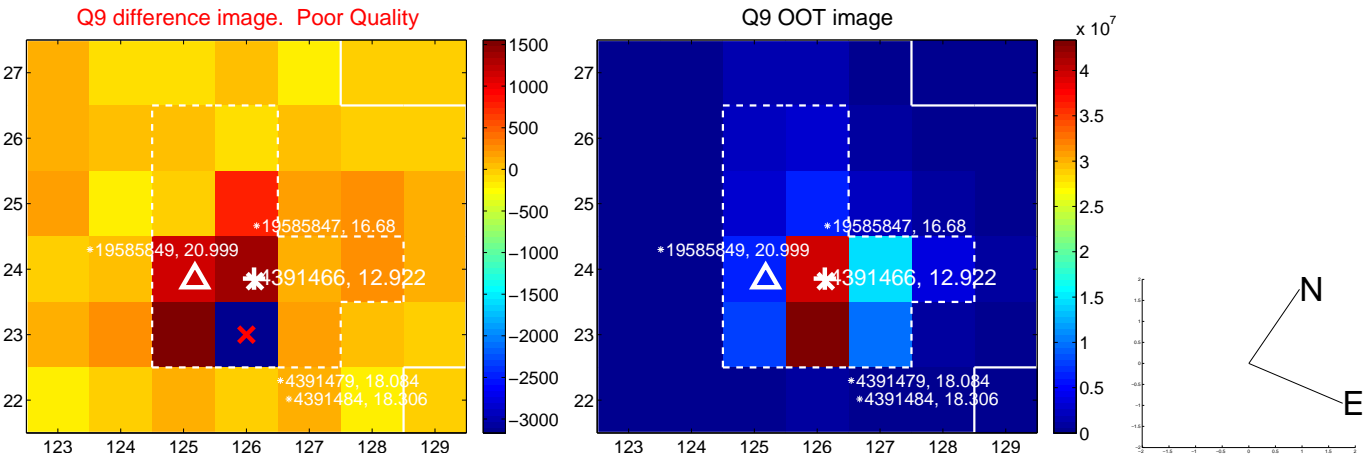
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



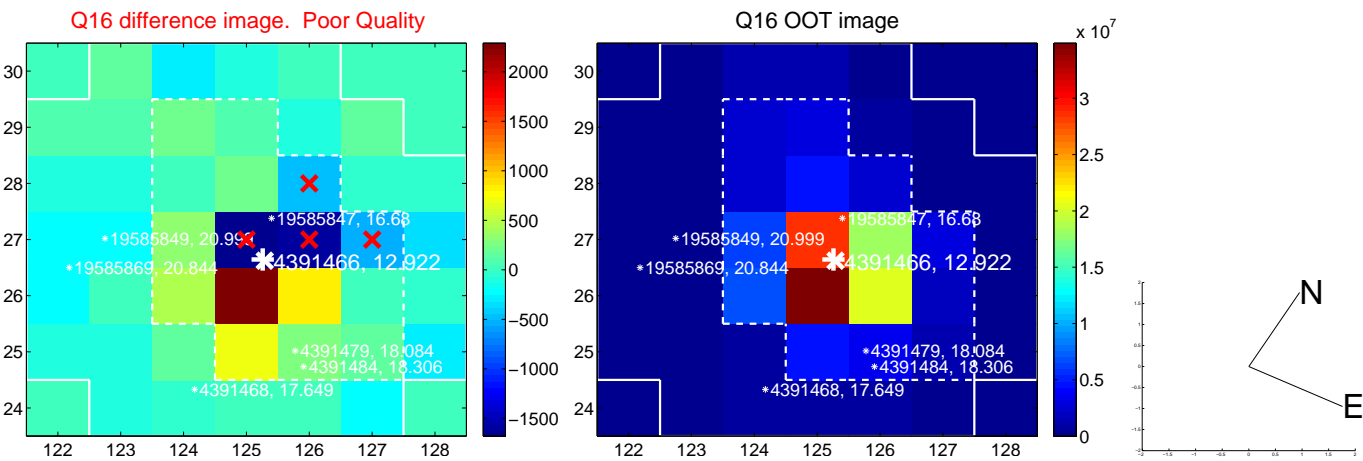
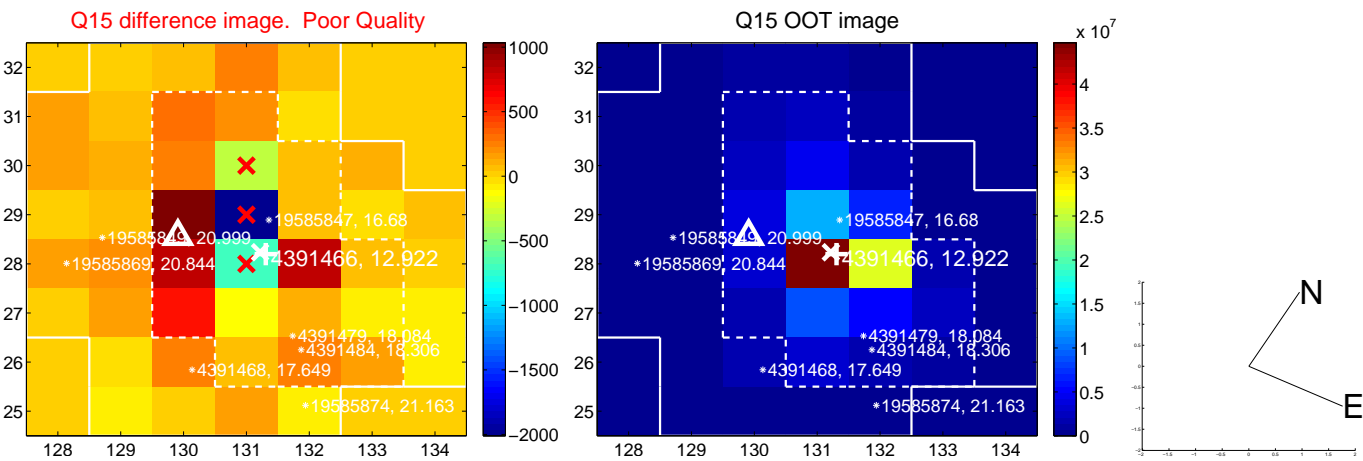
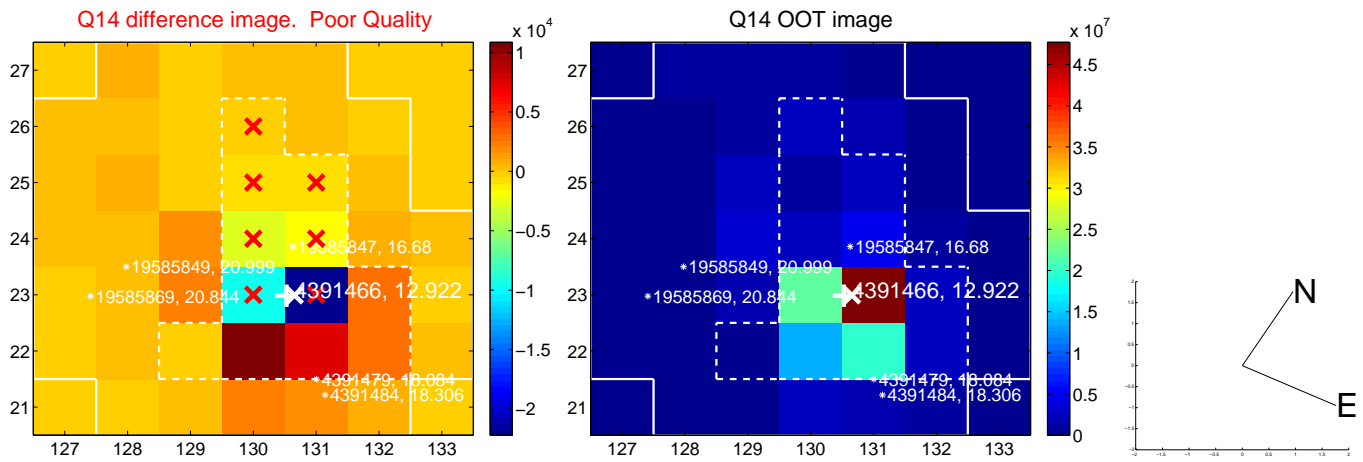
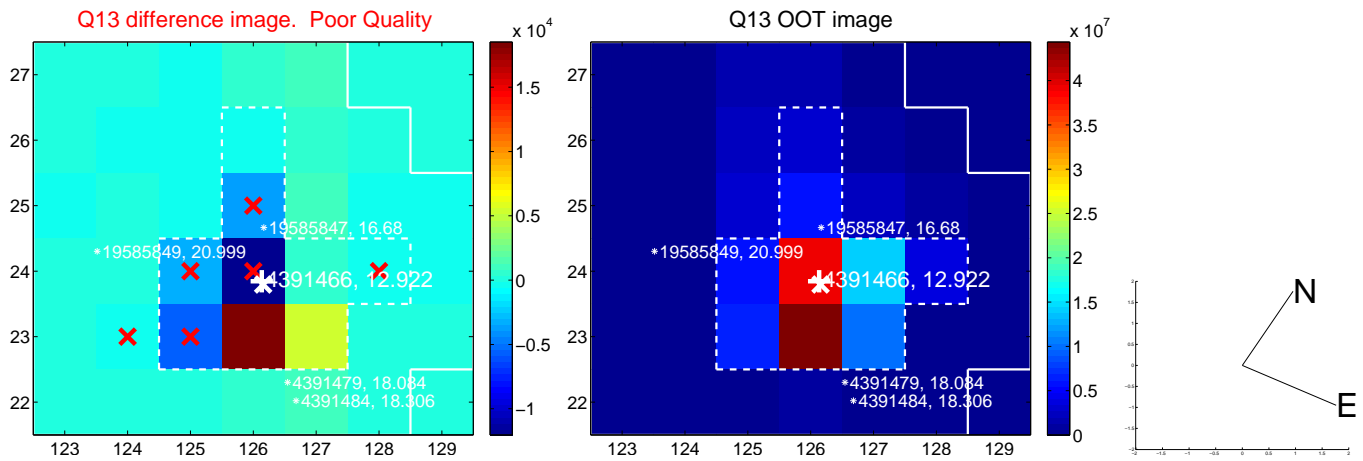
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



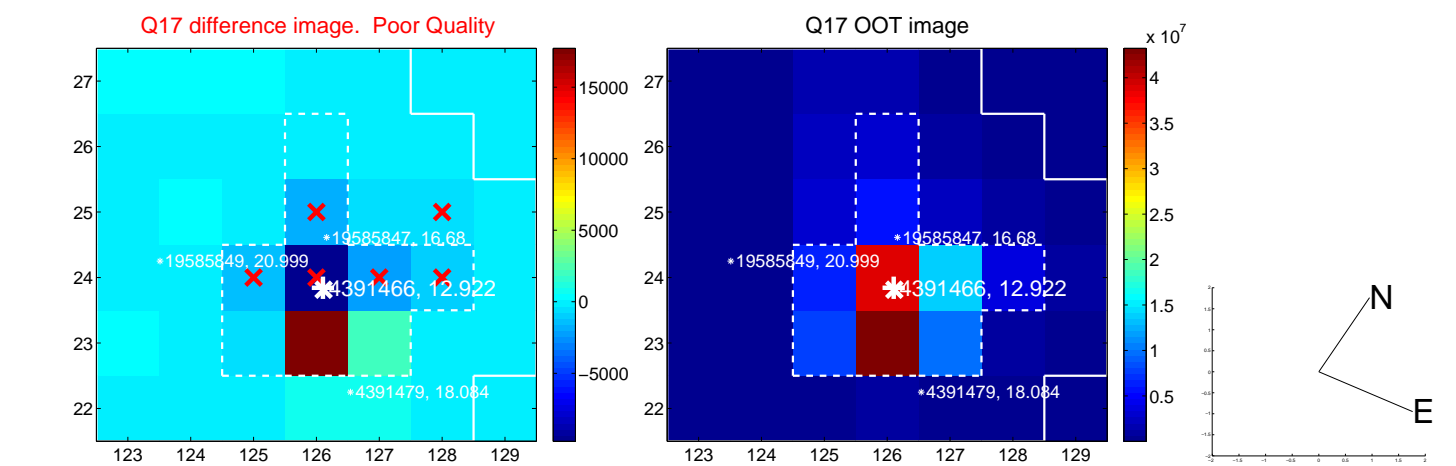
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



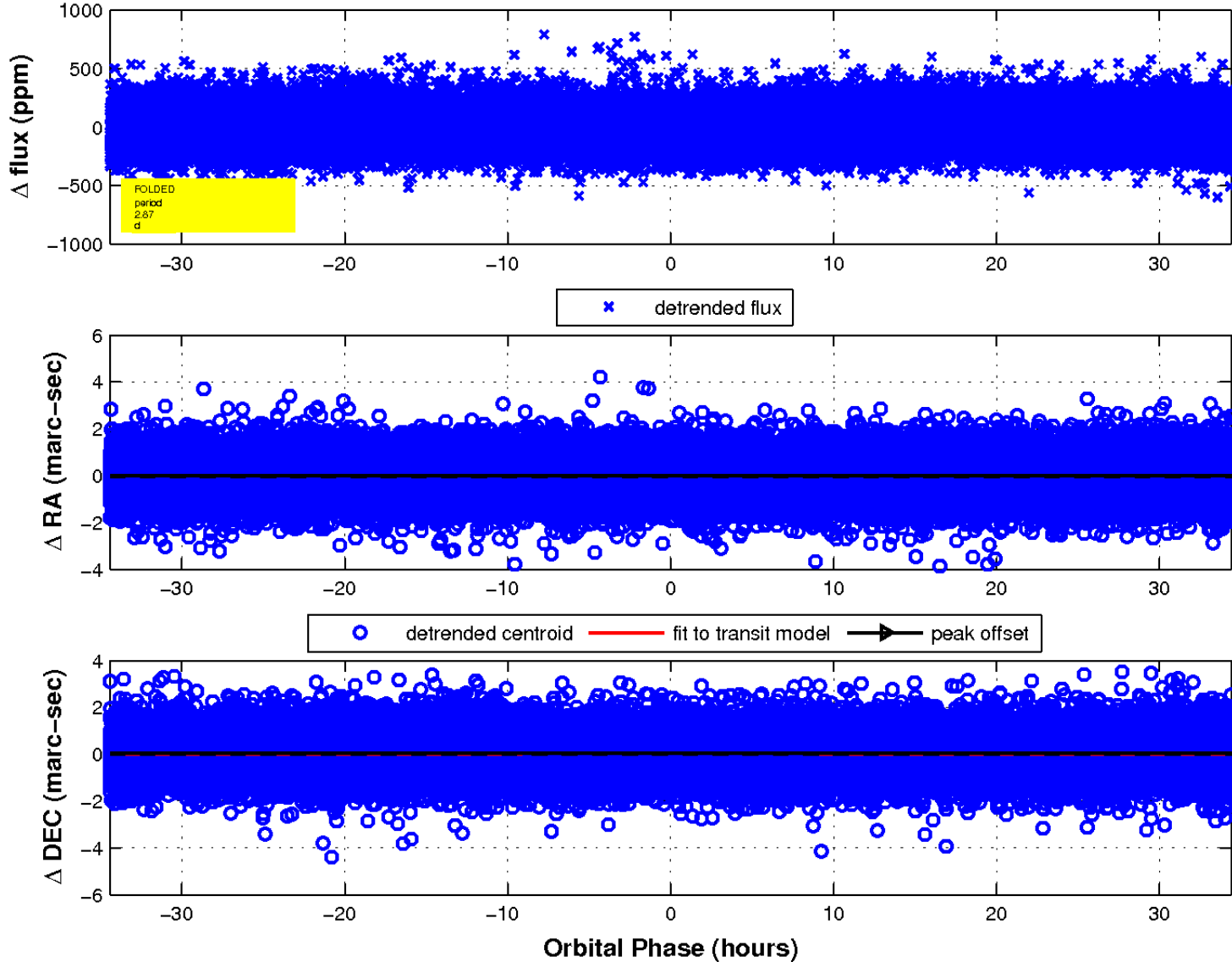
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

