

KIC 004150136

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})
004150136-01	OBS	No	9.473980	135.174439	32.3	24.223	12.1	8.6	1.45	6437	0.92	414.60

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004150136-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_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.

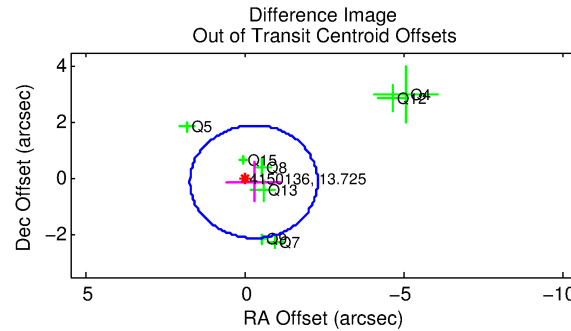
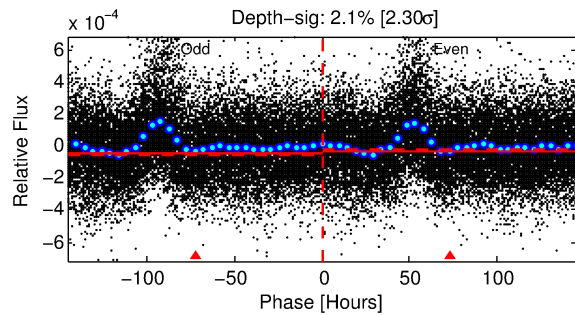
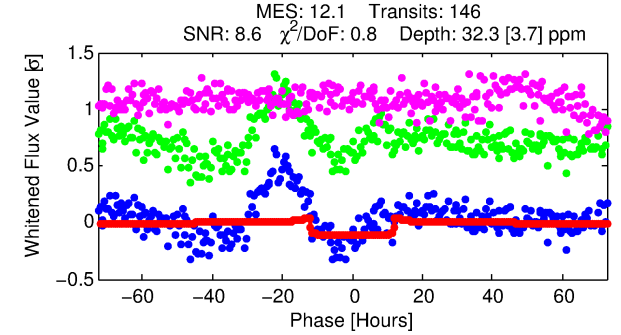
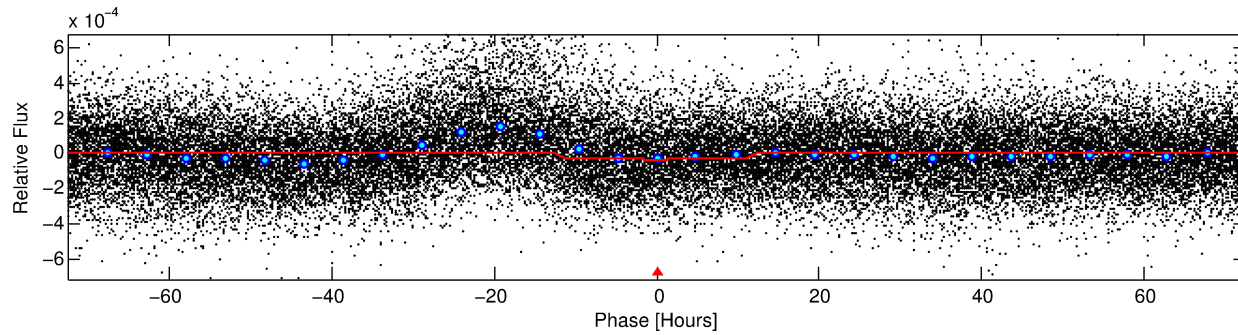
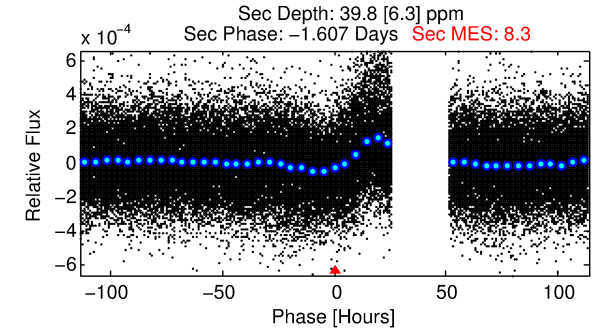
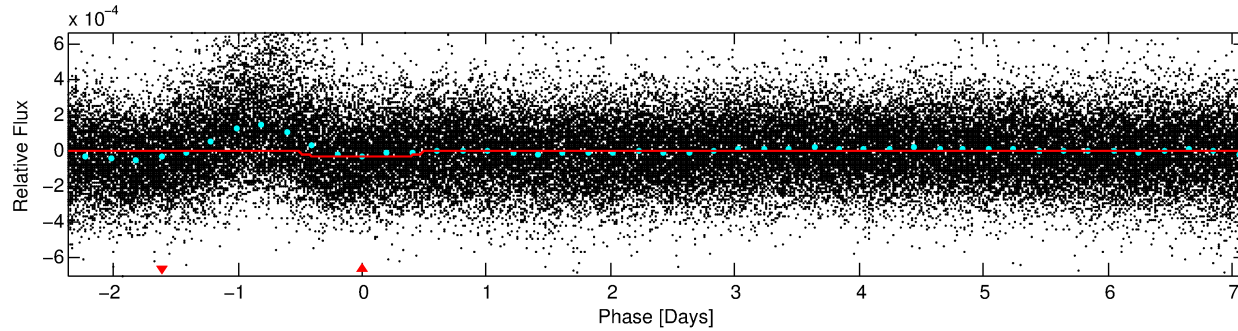
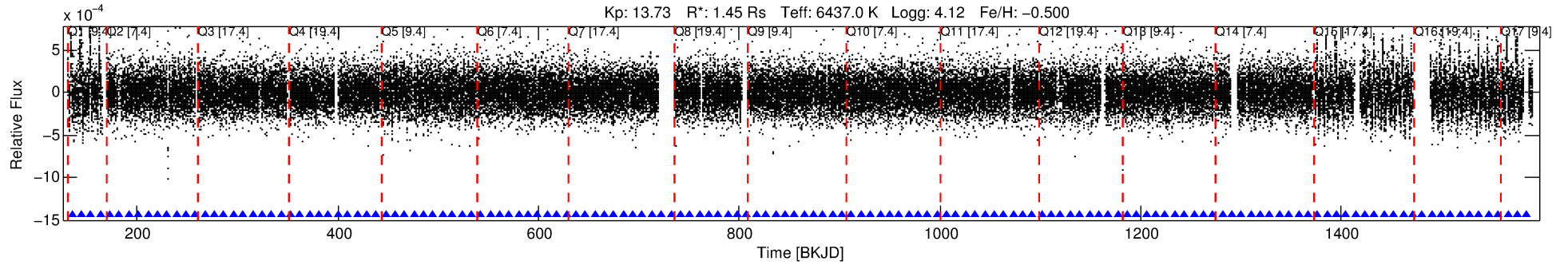
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004150136-01

No Significant Match Found

DV One-Page Summary

KIC: 4150136 Candidate: 1 of 1 Period: 9.474 d



DV Fit Results:

Period = 9.47398 [0.00026] d
Epoch = 135.1744 [0.0214] BKJD
Rp/R* = 0.0058 [0.0009]
a/R* = 1.92 [1.07]
b = 0.83 [0.29]
Seff = 414.60 [193.36]
Teq = 1151 [134] K
Rp = 0.92 [0.29] Re
a = 0.0883 [0.0245] AU
Ag = 201.46 [112.45] [1.78σ]
Teffp = 6702 [602] K [9.00σ]

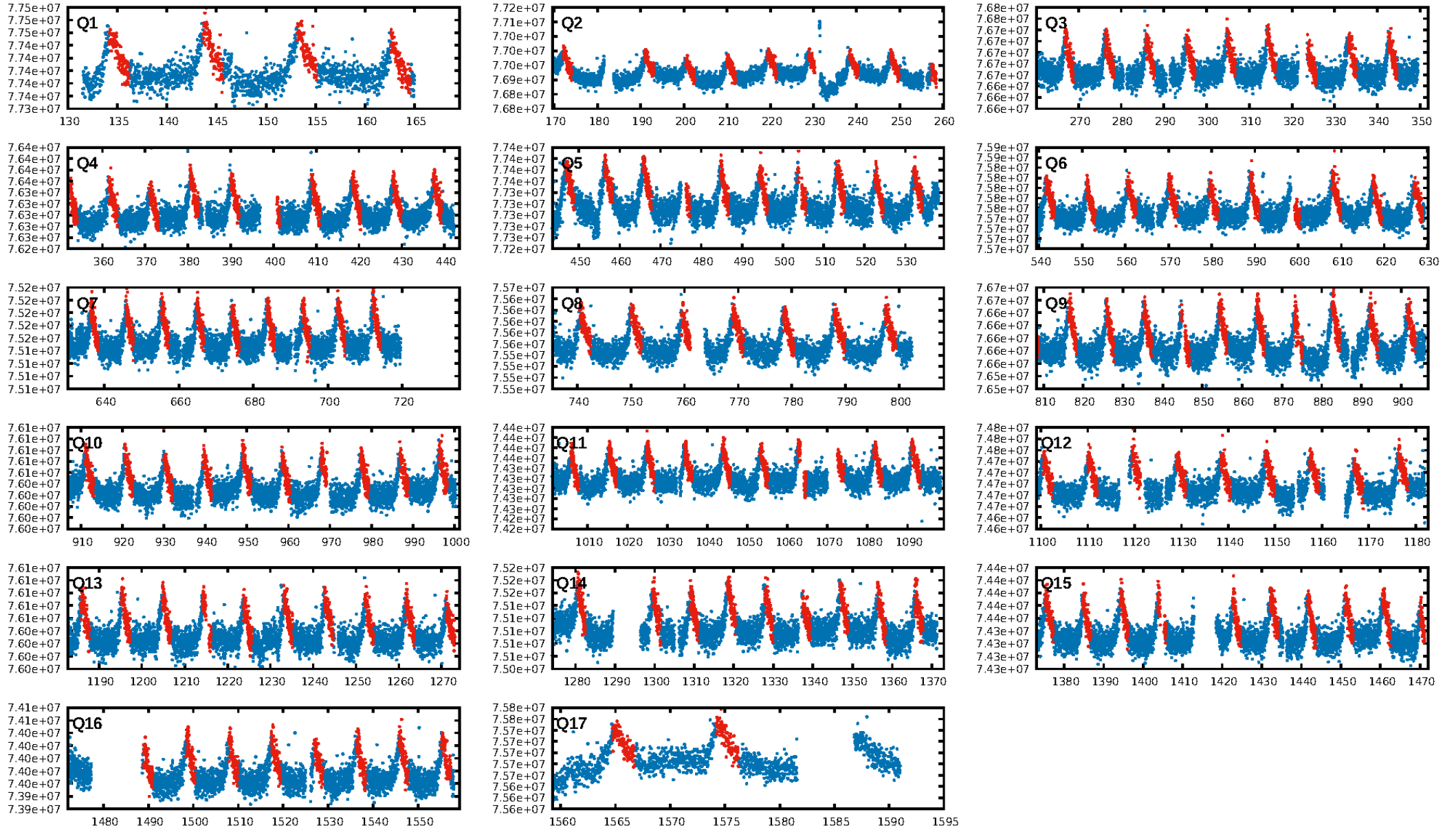
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.72e-32
RollingBand-fgt: 1.00 [140/140]
GhostDiagnostic-chr: -3.459
Centroid-sig: 55.4%
Centroid-so: 0.665 arcsec [0.55σ]
OotOffset-rm: 0.293 arcsec [0.44σ]
OotOffset-st: 0.2/3/3 [8]
KicOffset-rm: 0.338 arcsec [0.50σ]
KicOffset-st: 0.2/3/3 [8]
DiffImageQuality-fgm: 0.00 [0/8]
DiffImageOverlap-fno: 1.00 [17/17]

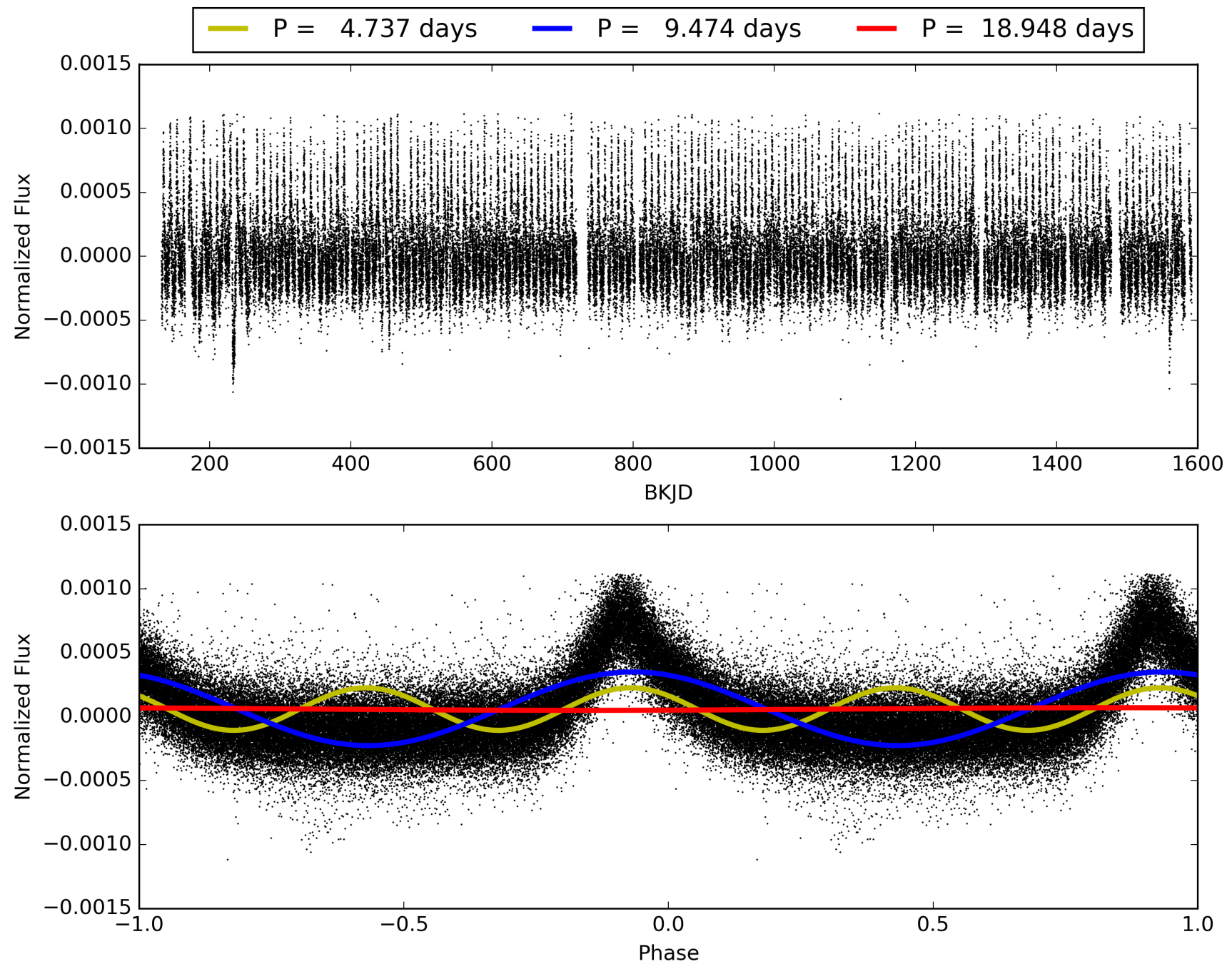
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 15:25:57 Z

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

TCE 004150136-01, PDC Light Curves

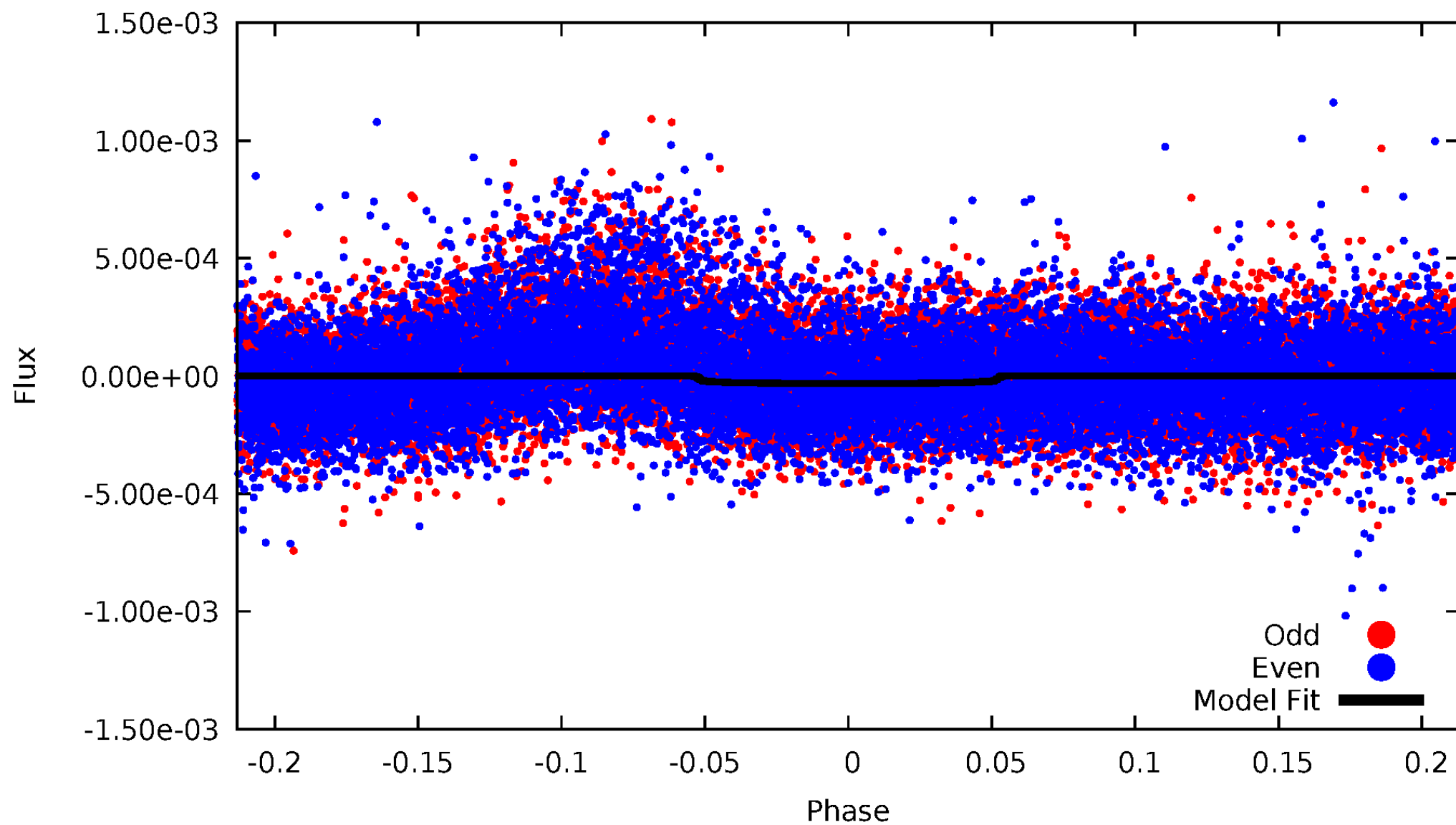


TCE 004150136-01



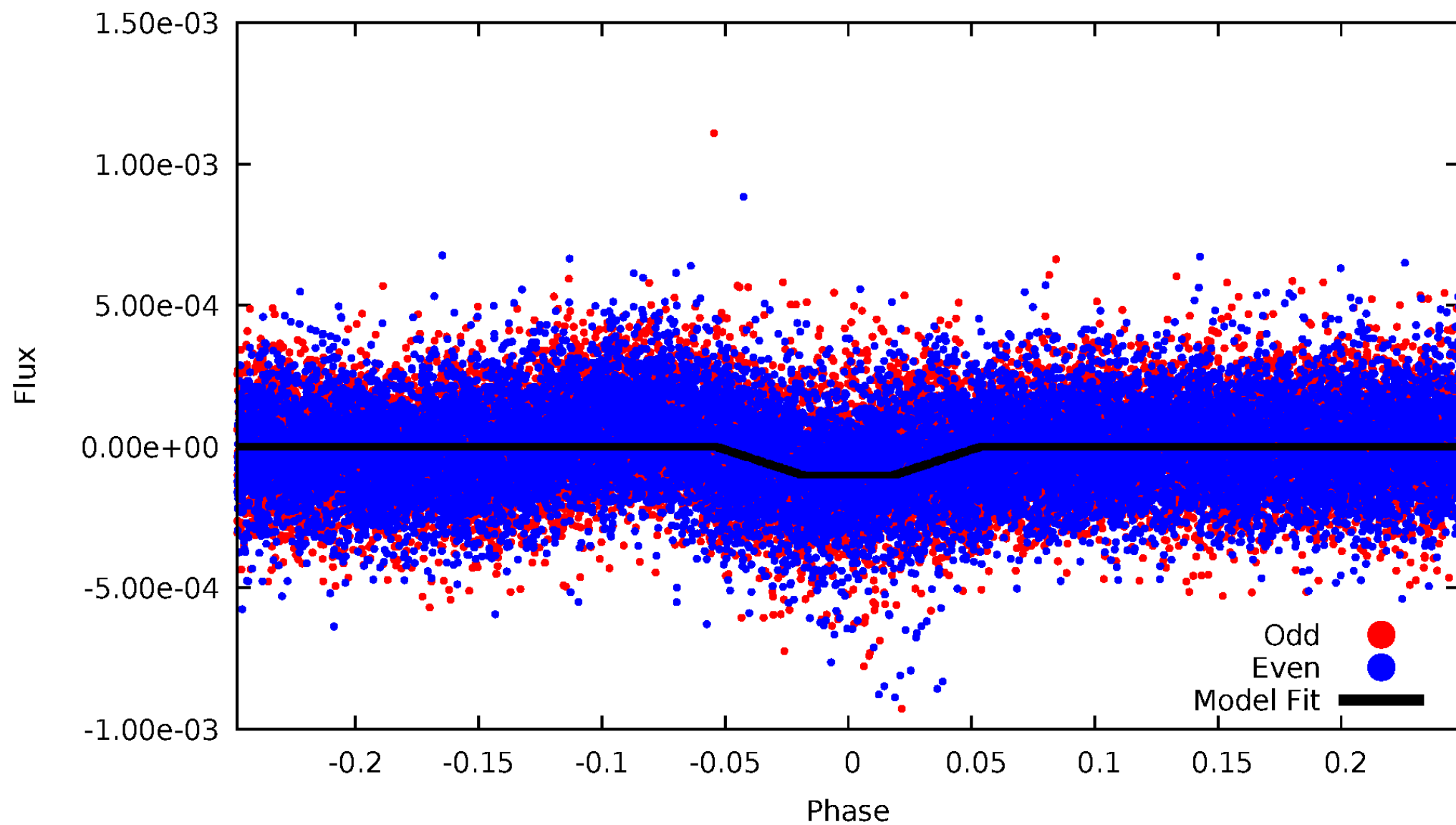
DV Odd/Even

TCE 004150136-01

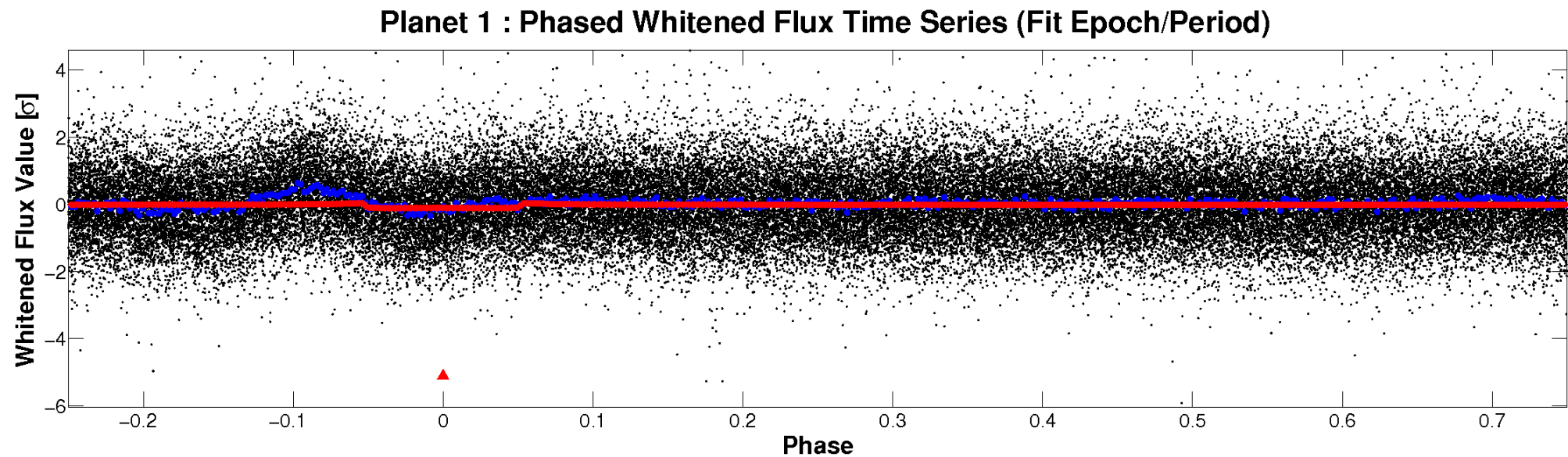
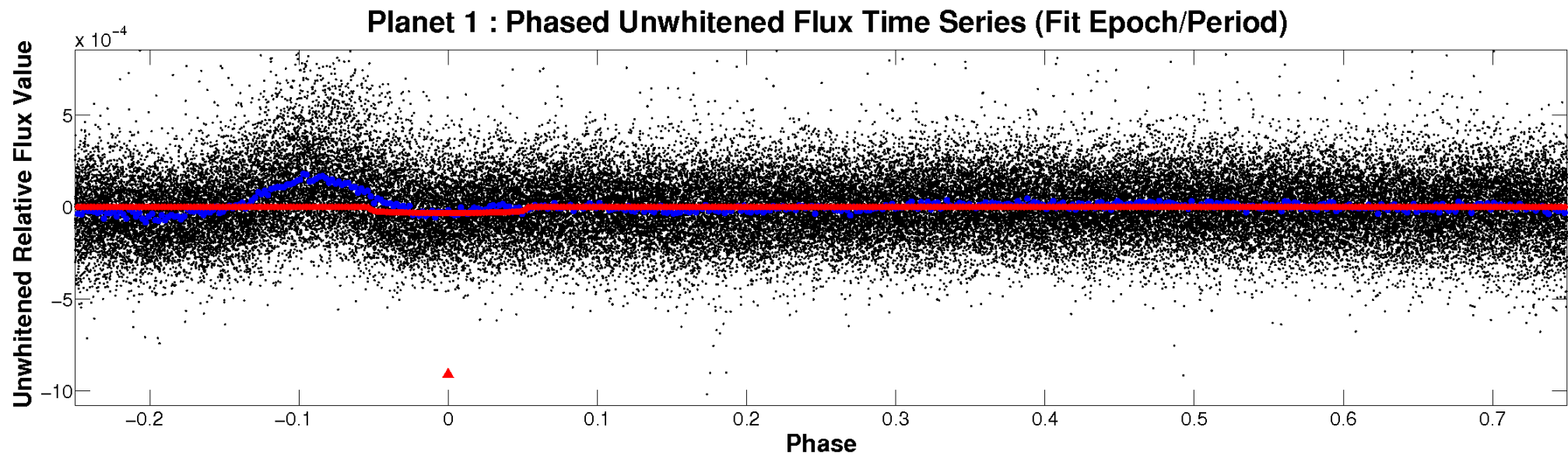


ALT Odd/Even

TCE 004150136-01

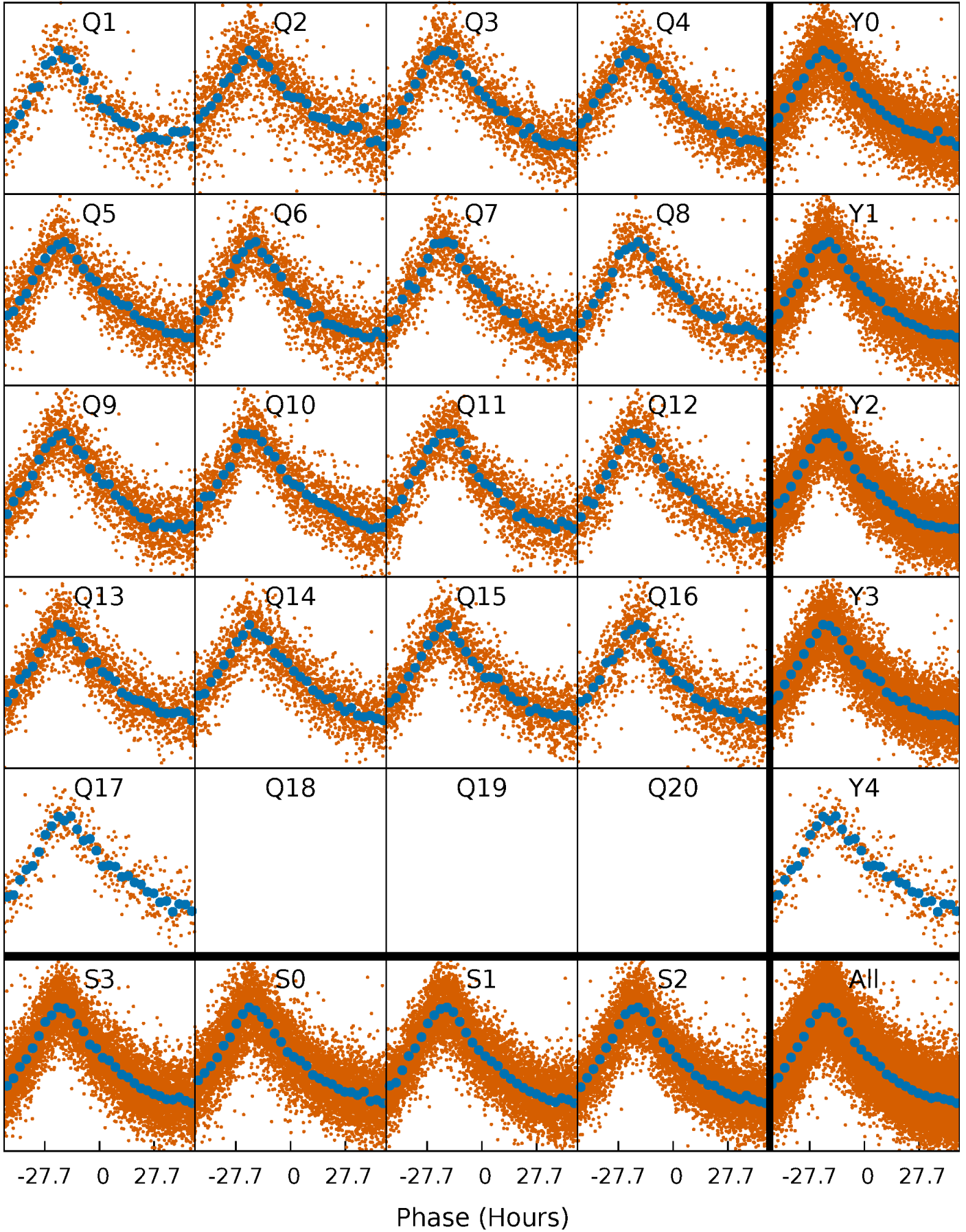


Non-Whitened Vs. Whitened Light Curve



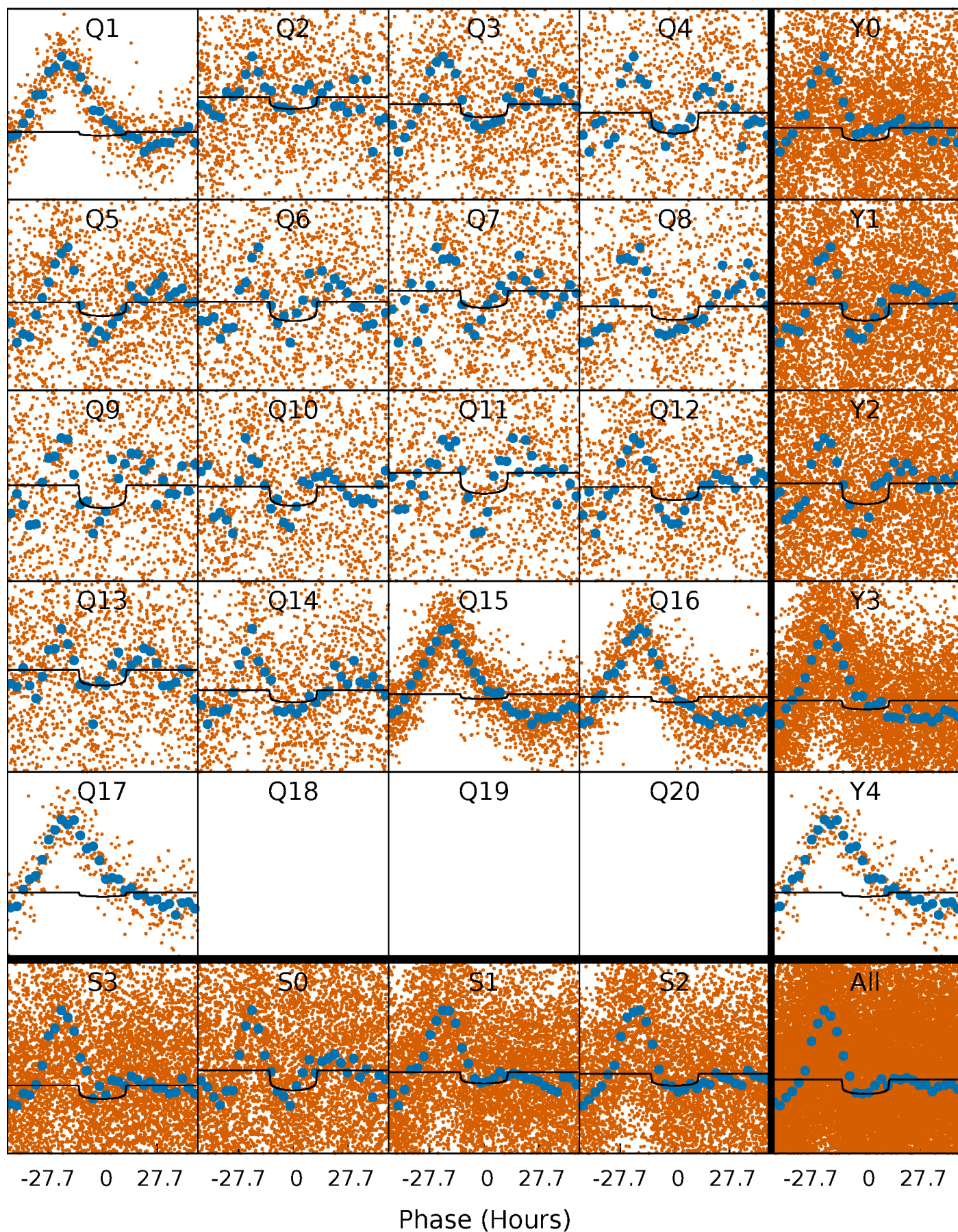
PDC Quarter-Phased Transit Curves

TCE 004150136-01 P= 9.473980 Days $T_0=135.174439$ (BKJD)



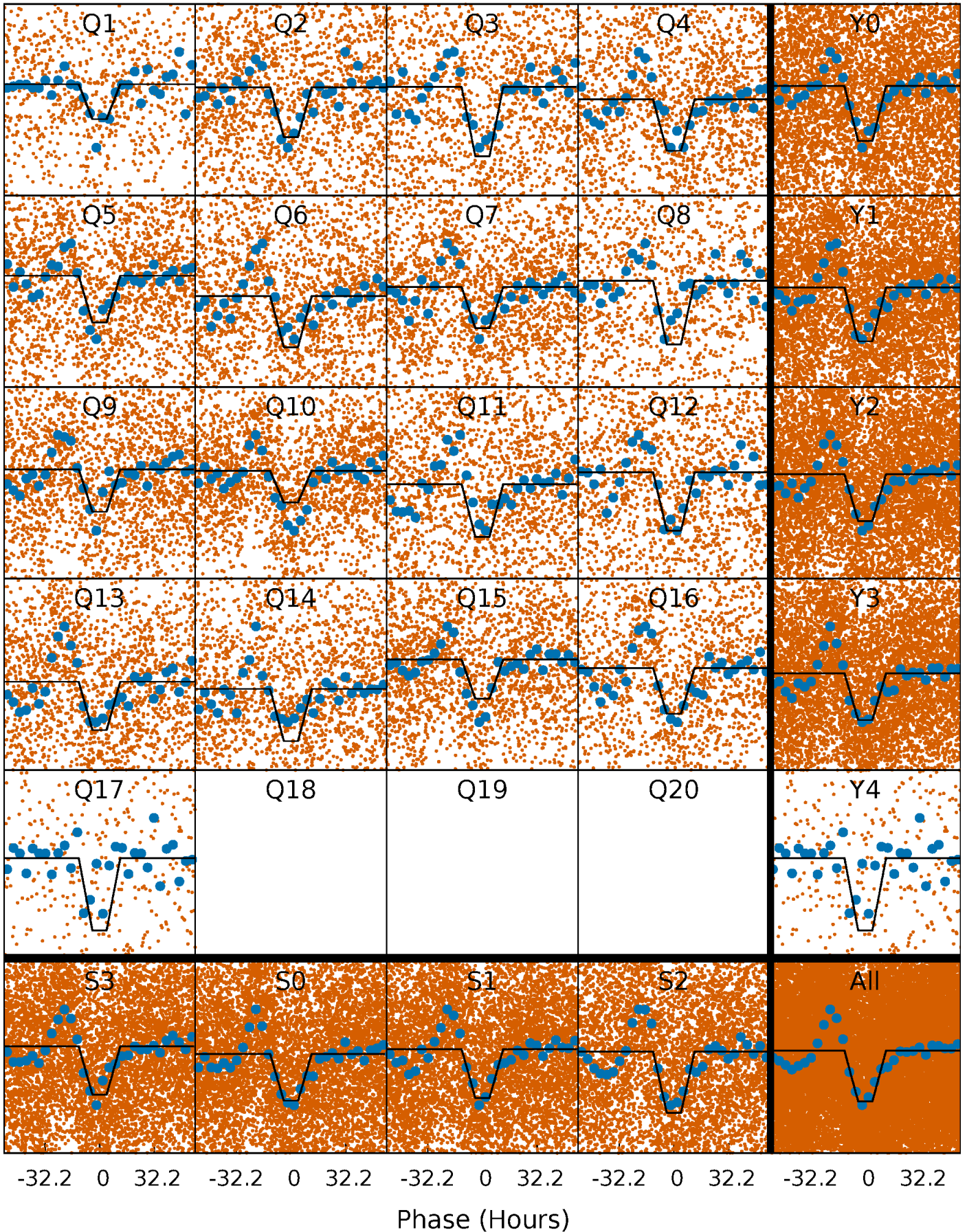
DV Quarter-Phased Transit Curves

TCE 004150136-01 P= 9.473980 Days $T_0=135.174439$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

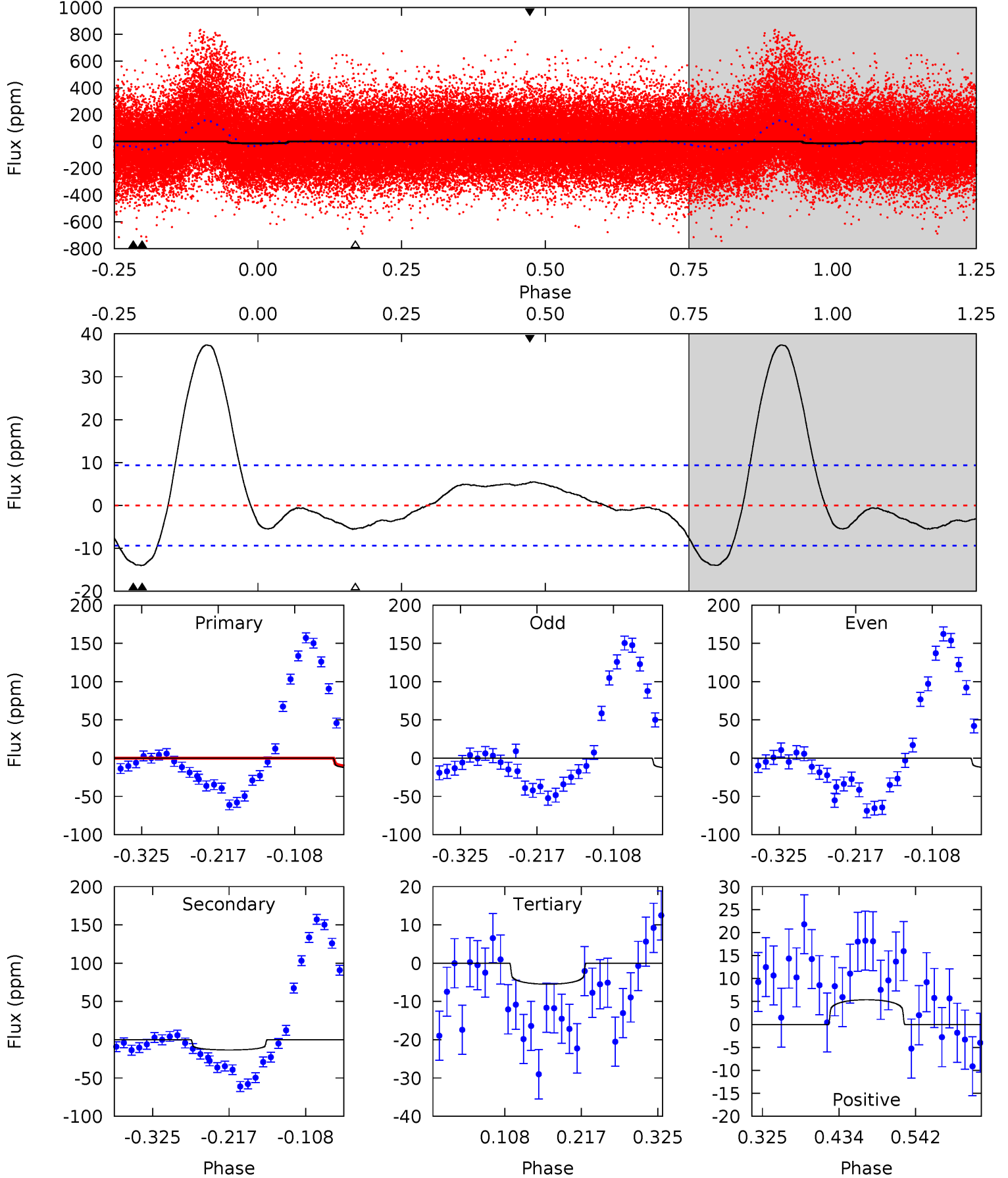
TCE 004150136-01 P= 9.474473 Days $T_0=135.094115$ (BKJD)



DV Model-Shift Uniqueness Test

004150136-01, P = 9.473980 Days, E = 125.700459 Days

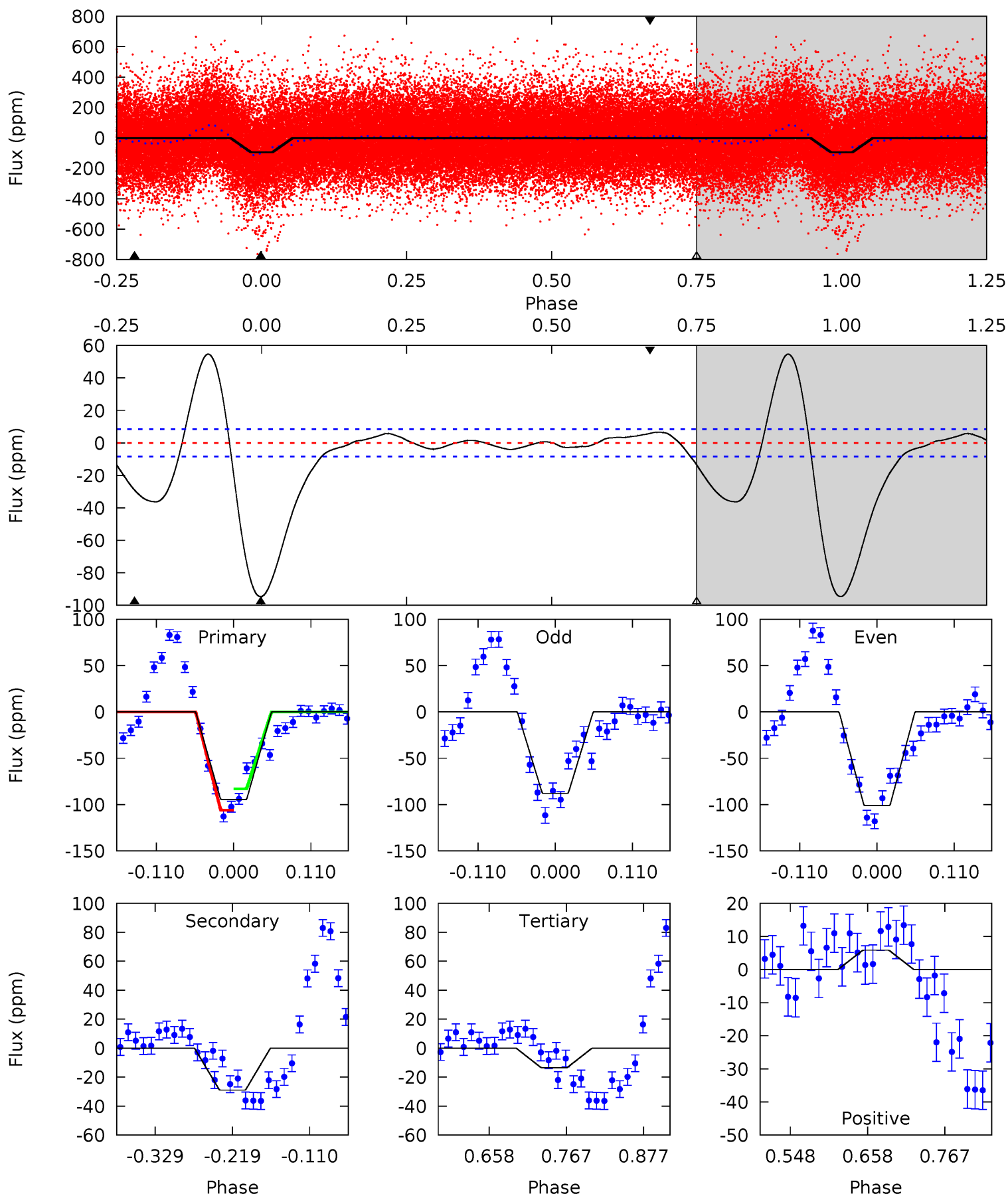
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.79	6.50	2.67	2.61	4.55	1.61	4.09	4.12	4.18	3.83	3.89	0.09	0.54	0.73	1.13



Alt Model-Shift Uniqueness Test

004150136-01, P = 9.474473 Days, E = 125.619642 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
51.2	15.7	7.29	3.16	4.55	1.60	1.89	43.9	48.0	8.38	12.5	3.58	1.07	0.37	6.16



Stellar Parameters For KIC 004150136

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6437^{+175}_{-213}	$4.125^{+0.264}_{-0.154}$	$-0.500^{+0.300}_{-0.300}$	$1.449^{+0.370}_{-0.411}$	$1.021^{+0.157}_{-0.115}$	$0.473^{+0.731}_{-0.218}$
	+3%/-3%	+6%/-4%	+60%/-60%	+26%/-28%	+15%/-11%	+155%/-46%
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 004150136-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-13 ± 2	$0.90^{+0.21}_{-0.19}$	1594^{+117}_{-127}	5143^{+420}_{-375}	69^{+42}_{-24}
Alt.	-29 ± 2	$1.56^{+0.29}_{-0.28}$	1587^{+111}_{-124}	4812^{+231}_{-201}	52^{+24}_{-14}

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 $A_{obs} \gg 1.0$

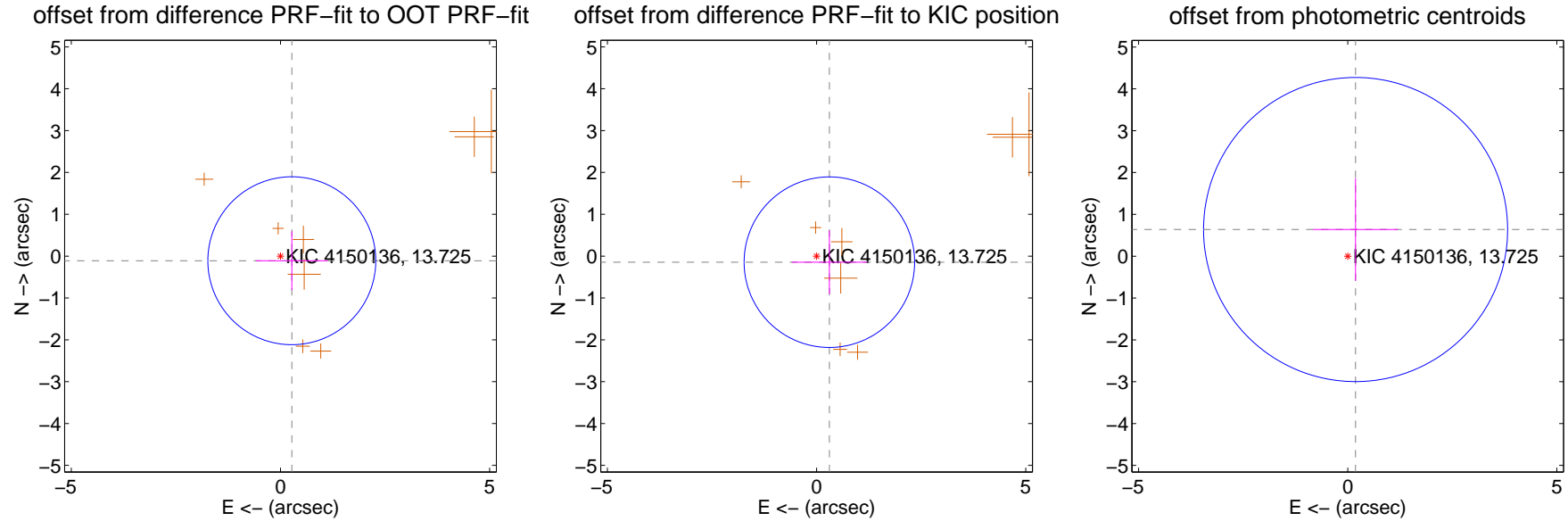
DV Centroid Data

Supplemental centroid analysis for 004150136-01. Kepler magnitude: 13.72. Transit SNR 8.55

There are 0 quarters with good PRF difference image offsets

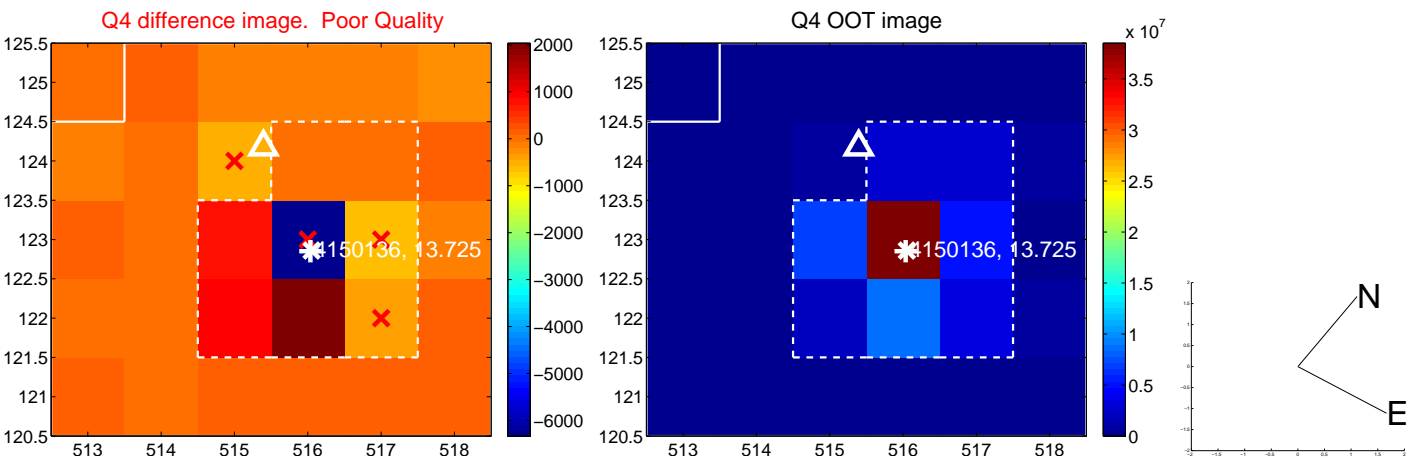
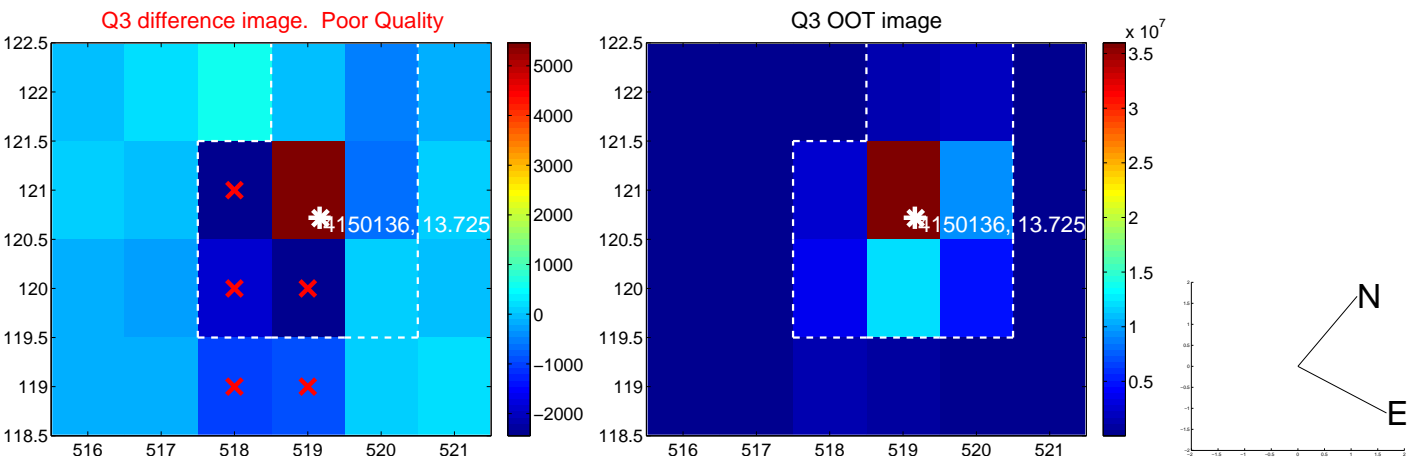
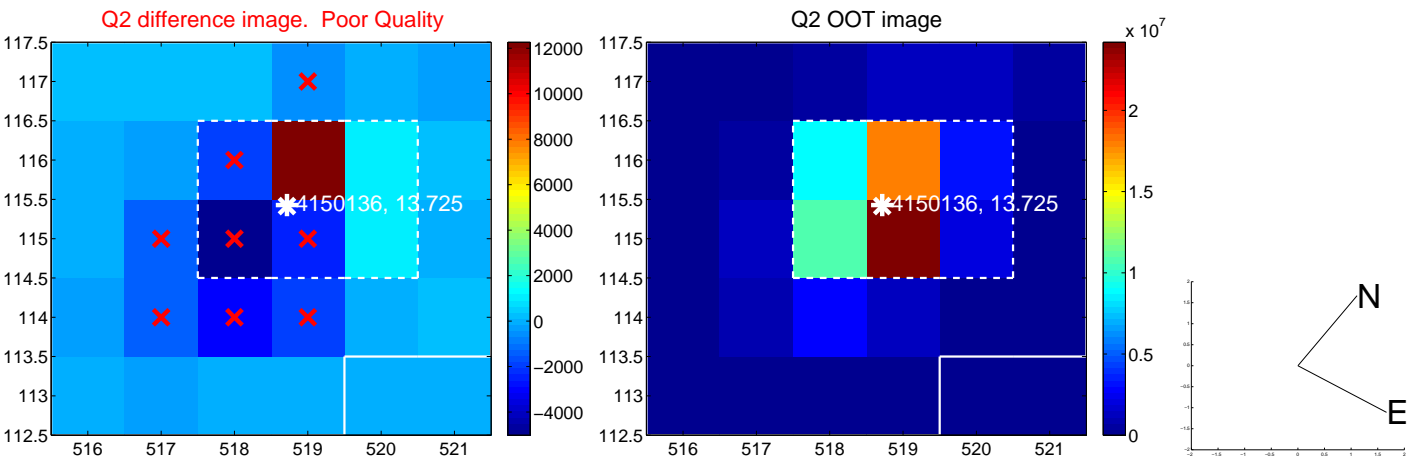
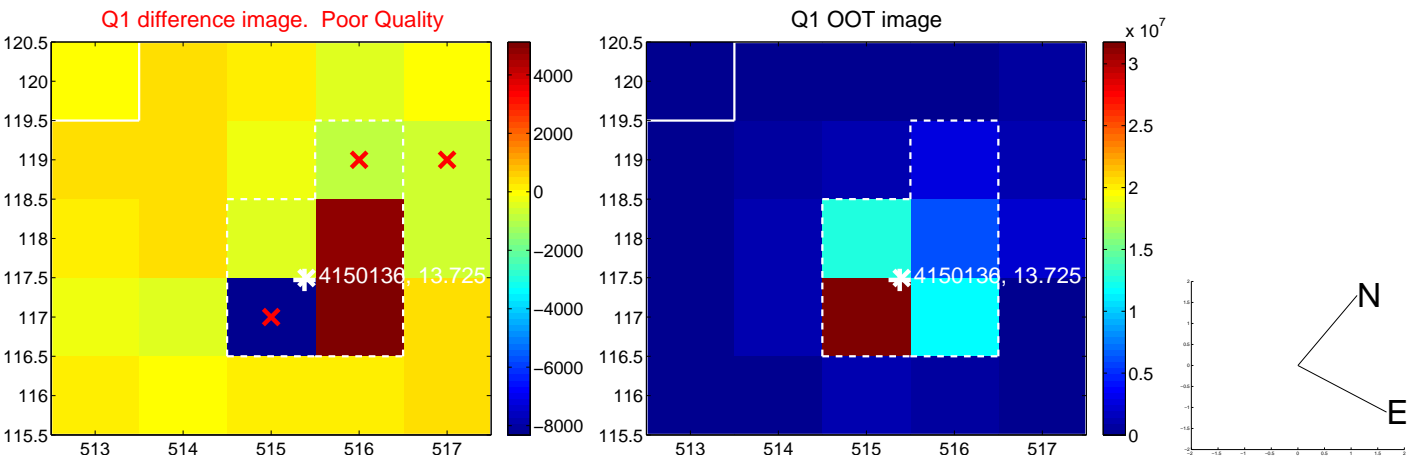
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.293 ± 0.669	0.44	-0.271 ± 0.860	-0.110 ± 0.701
PRF-fit source offset from KIC position	0.338 ± 0.679	0.50	-0.306 ± 0.899	-0.145 ± 0.762
photometric centroid source offset	0.66 ± 1.21	0.55	-0.19 ± 1.01	0.64 ± 1.23

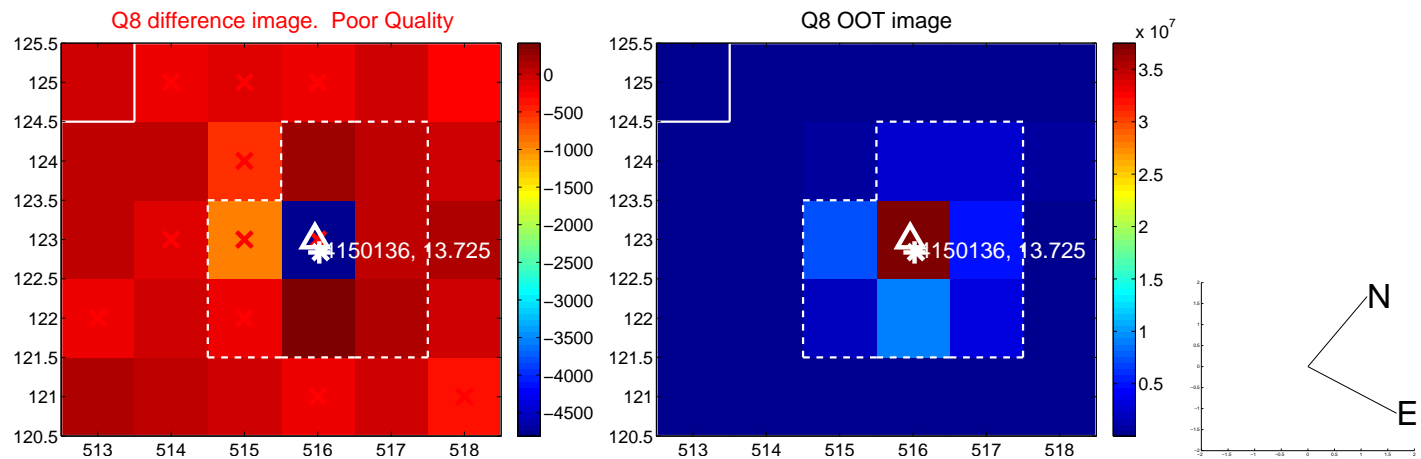
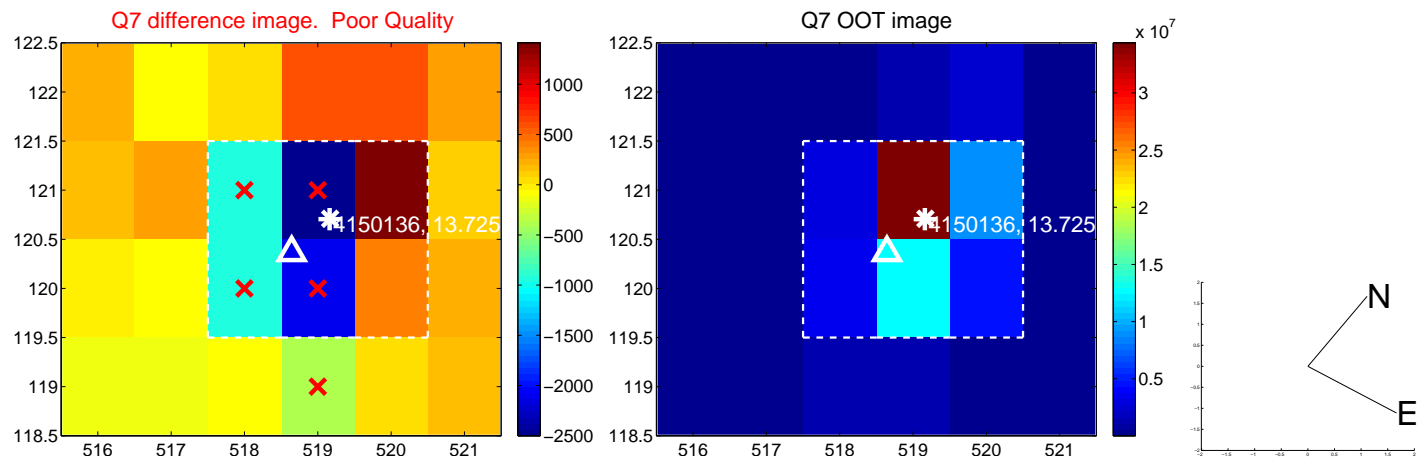
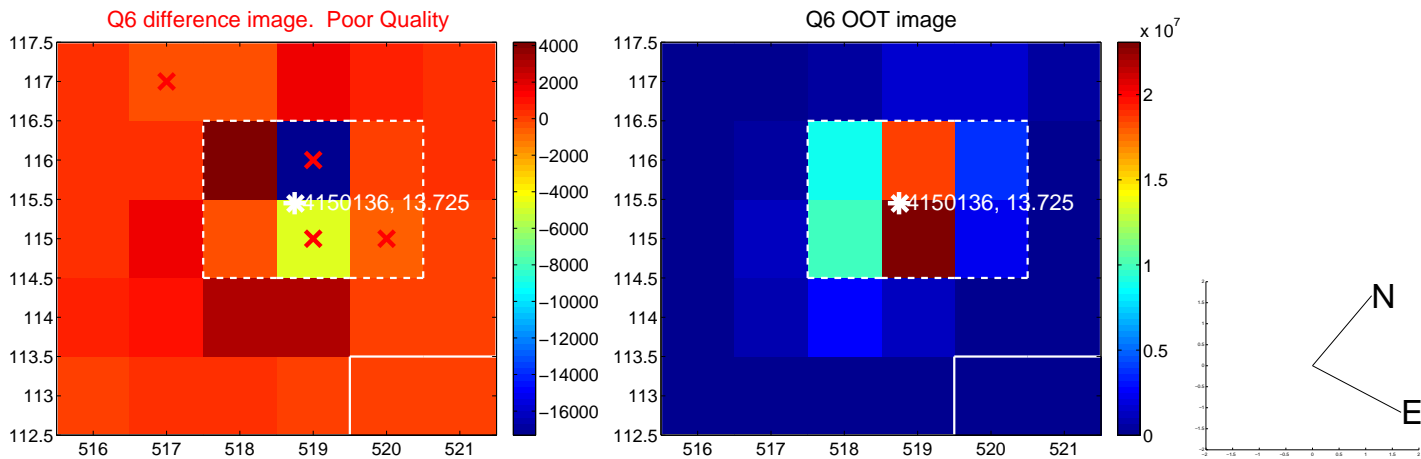
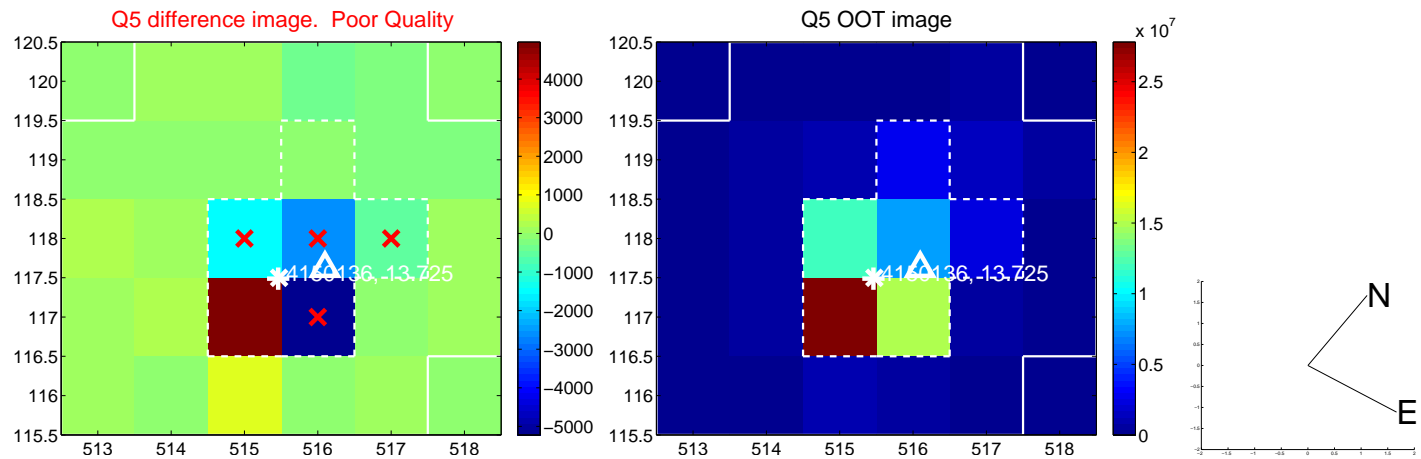


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

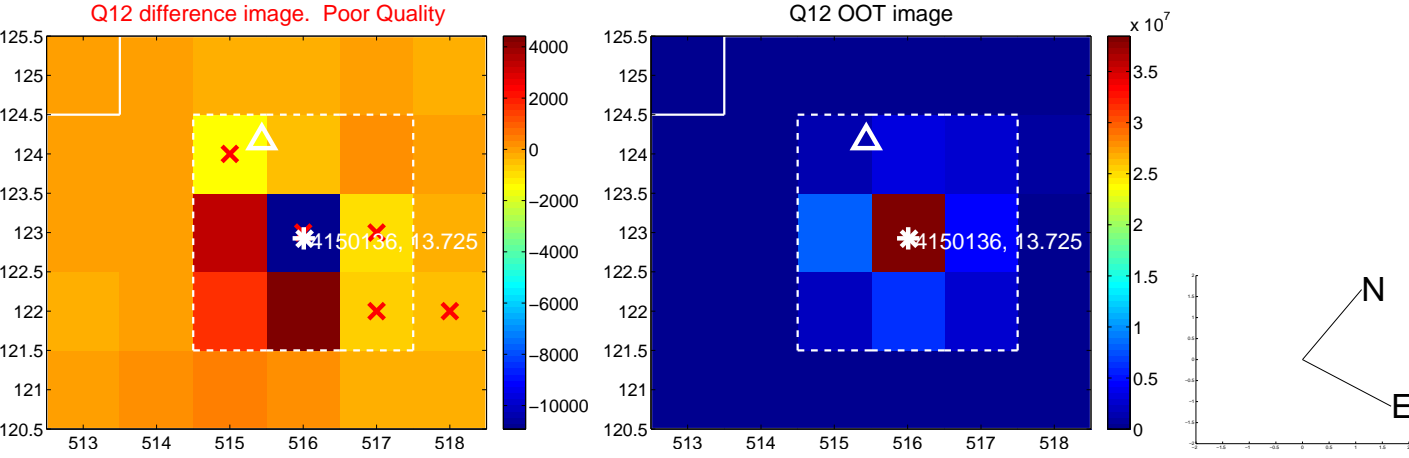
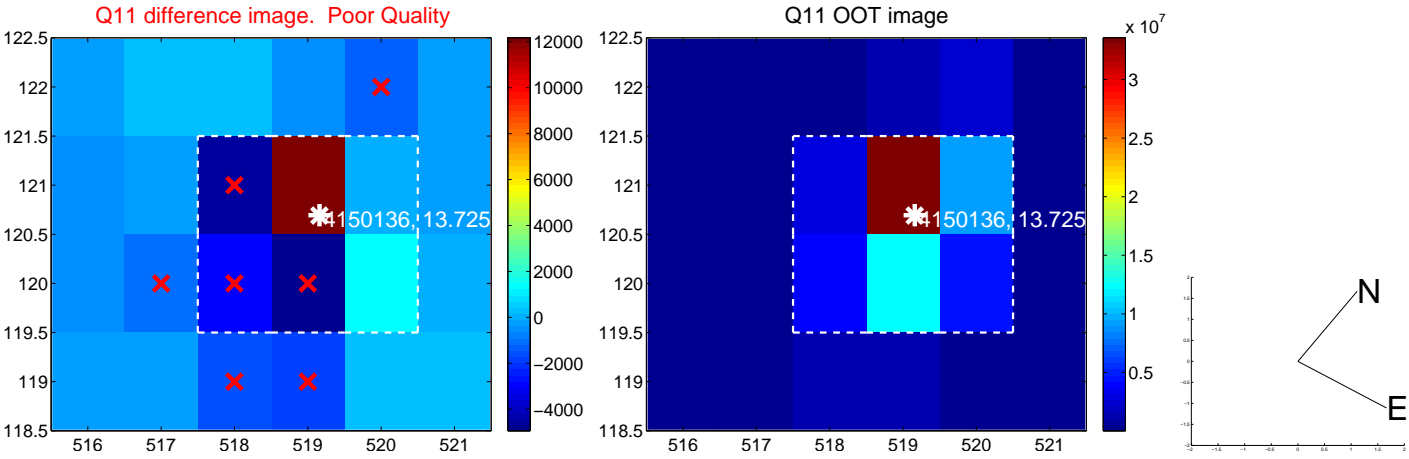
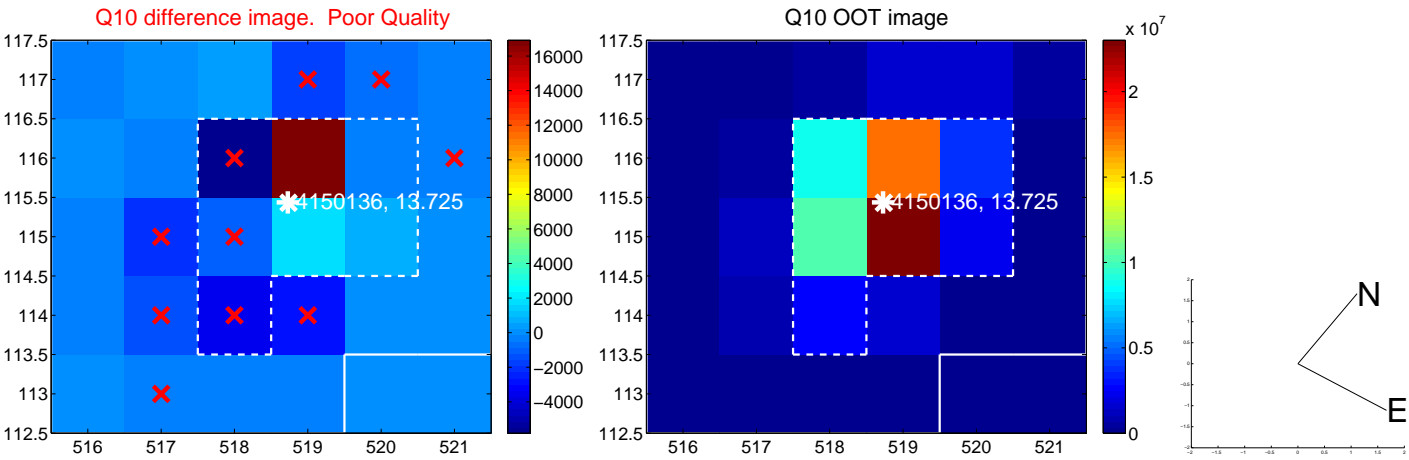
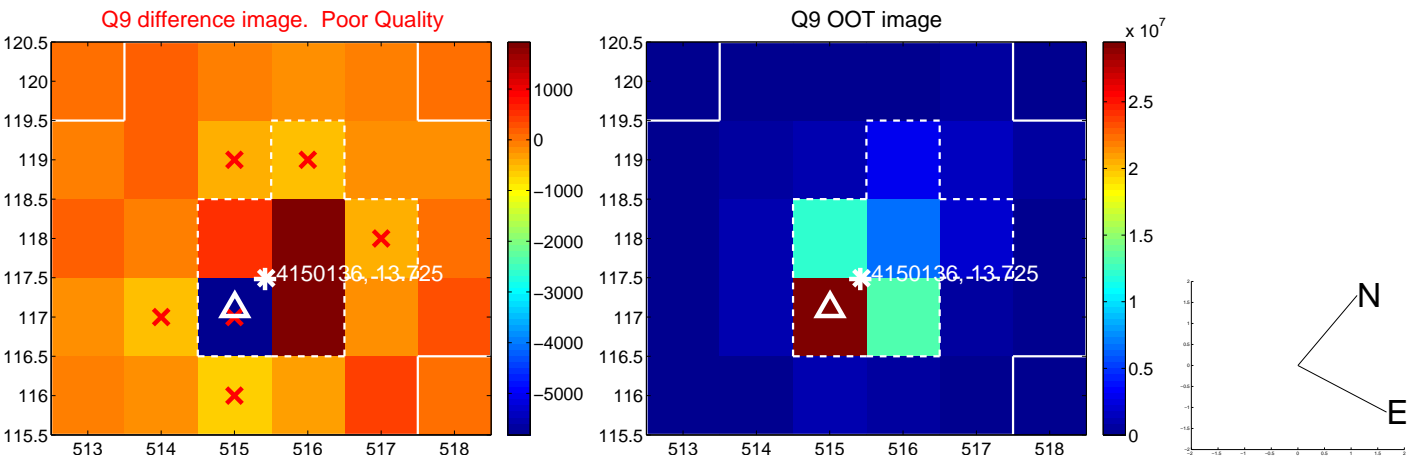
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



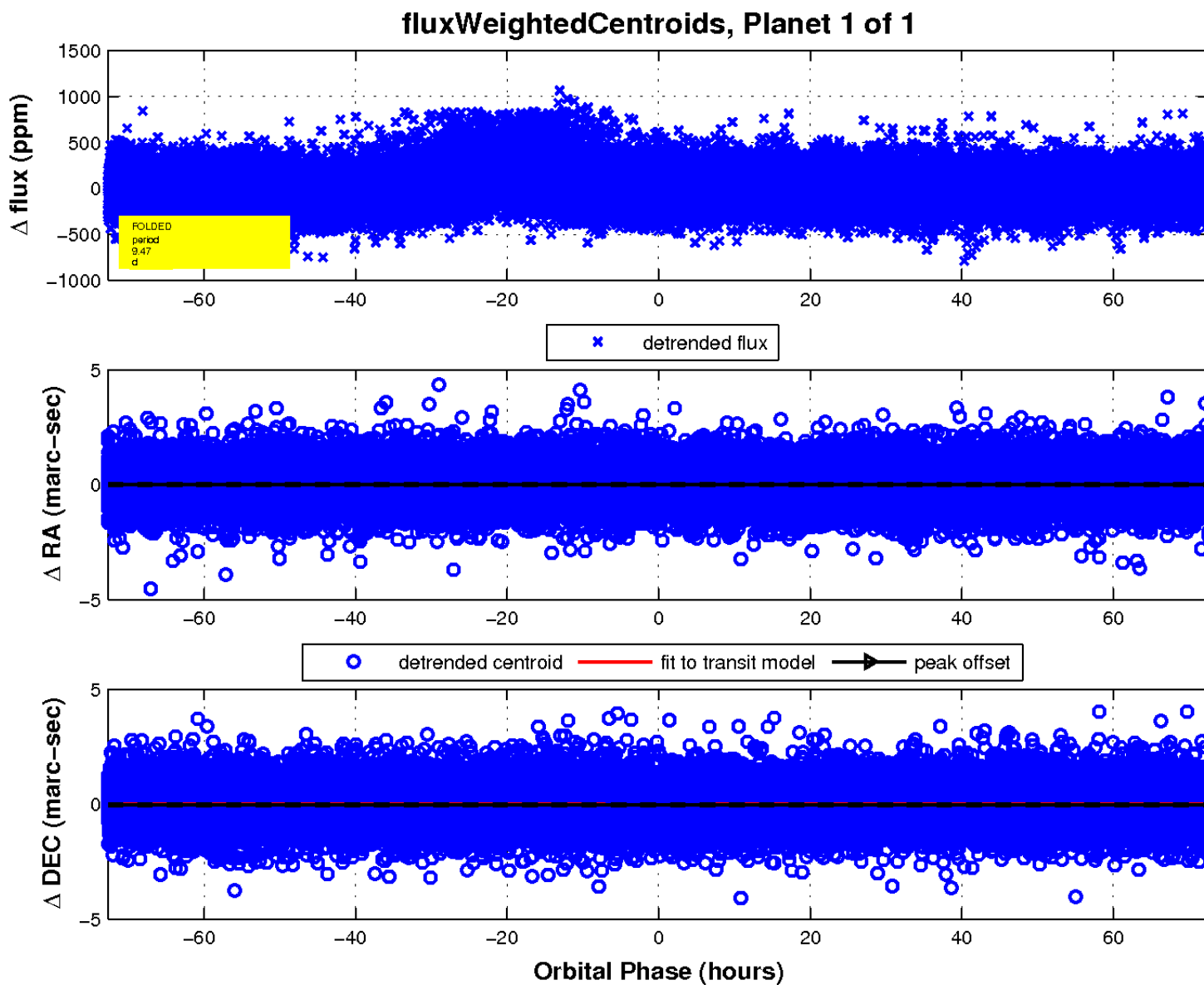
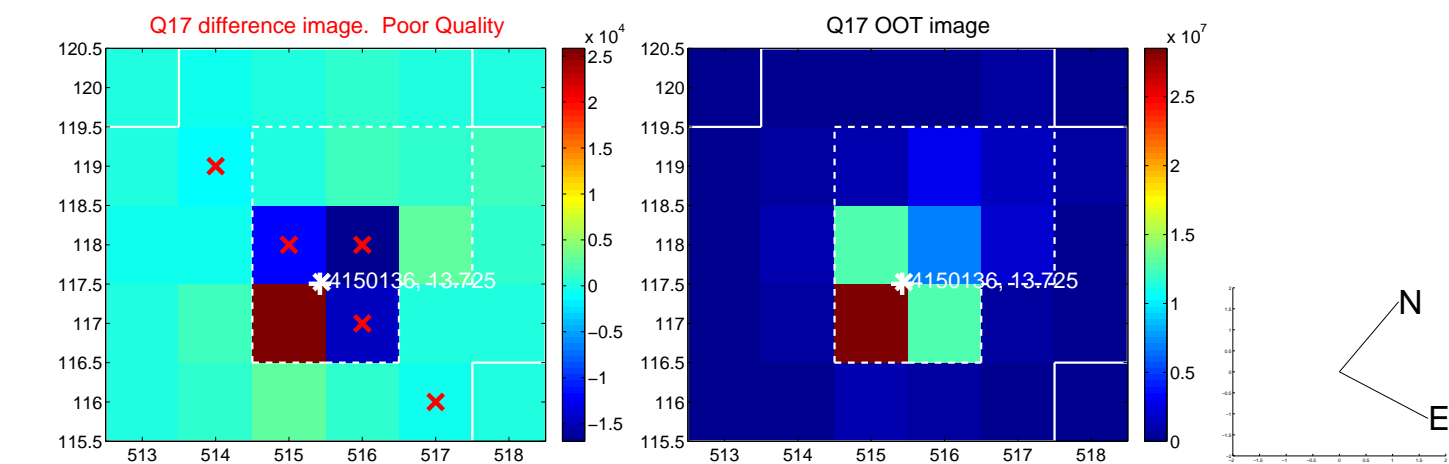
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

