

KIC 008377511

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})
008377511-01	OBS	No	4.366469	133.467857	14.2	27.725	9.1	7.6	11.95	6980	4.54	50699.73

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008377511-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT

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

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

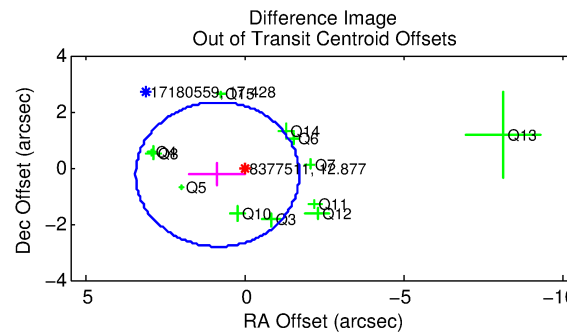
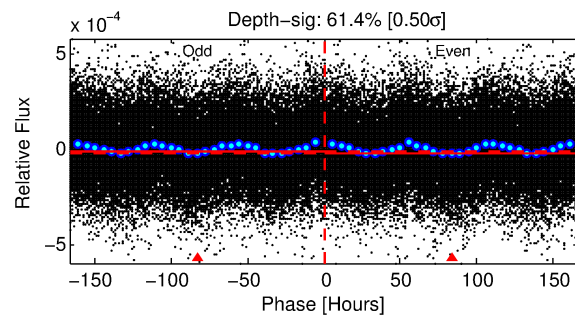
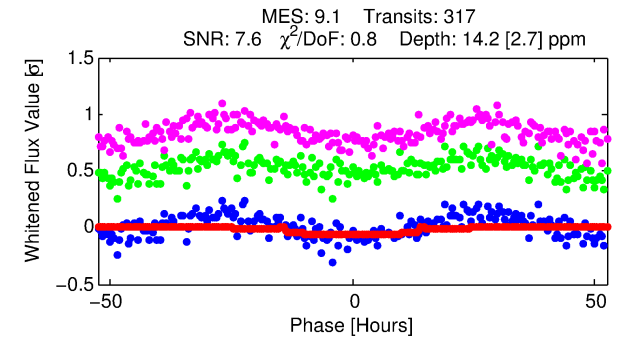
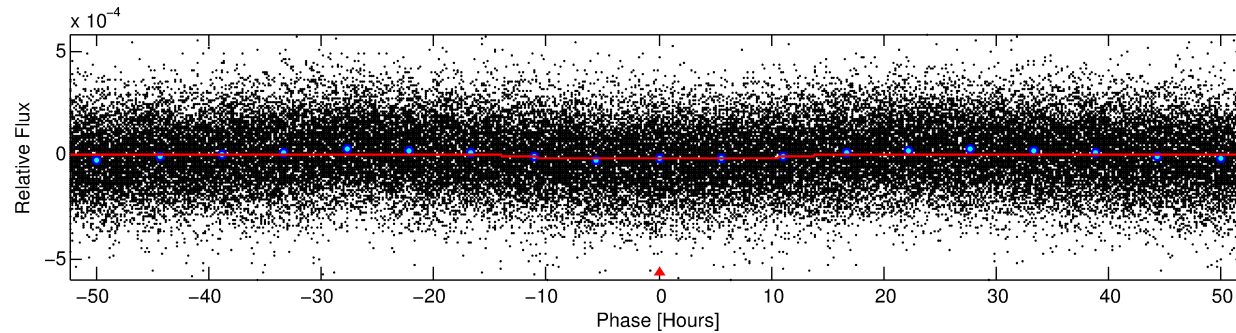
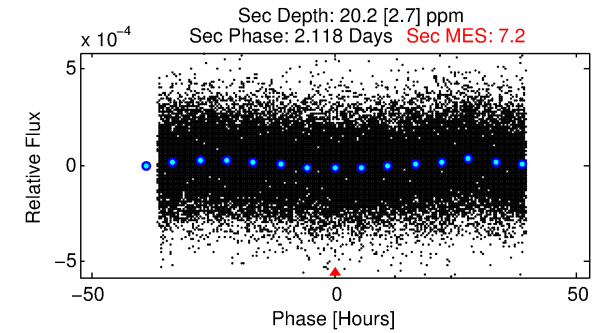
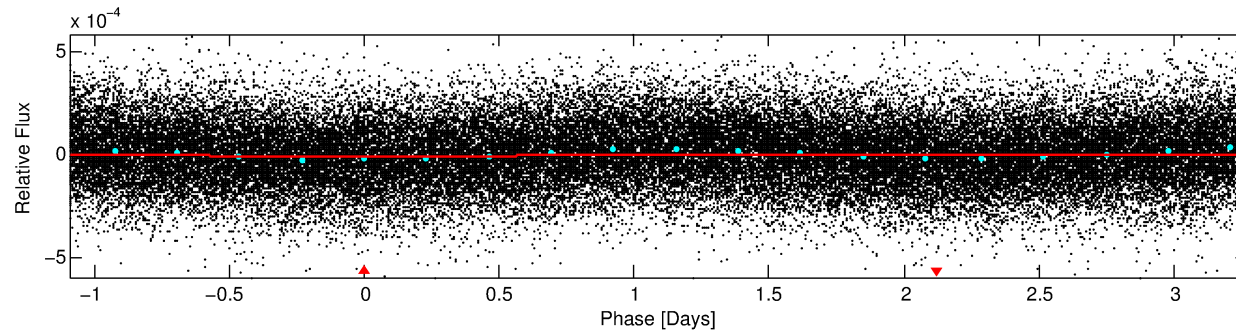
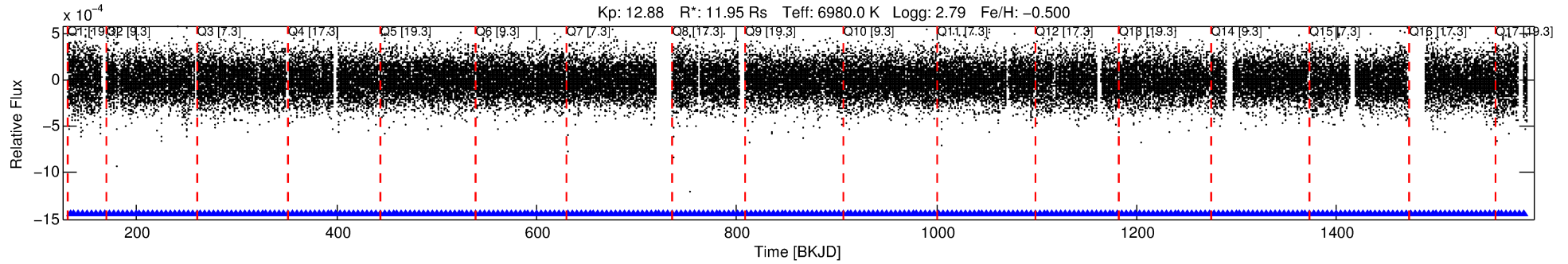
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008377511-01

No Significant Match Found

DV One-Page Summary

KIC: 8377511 Candidate: 1 of 1 Period: 4.366 d



DV Fit Results:

Period = 4.36647 [0.00012] d
Epoch = 133.4679 [0.0179] BKJD
Rp/R* = 0.0035 [0.0032]
a/R* = 1.35 [3.01]
b = 0.19 [25.70]
Seff = 50699.73 [62137.88]
Teq = 3826 [1172] K
Rp = 4.54 [4.79] Re
a = 0.0774 [0.0303] AU
Ag = 3.22 [6.26] [0.35σ]
Teffp = 7925 [4300] K [0.92σ]

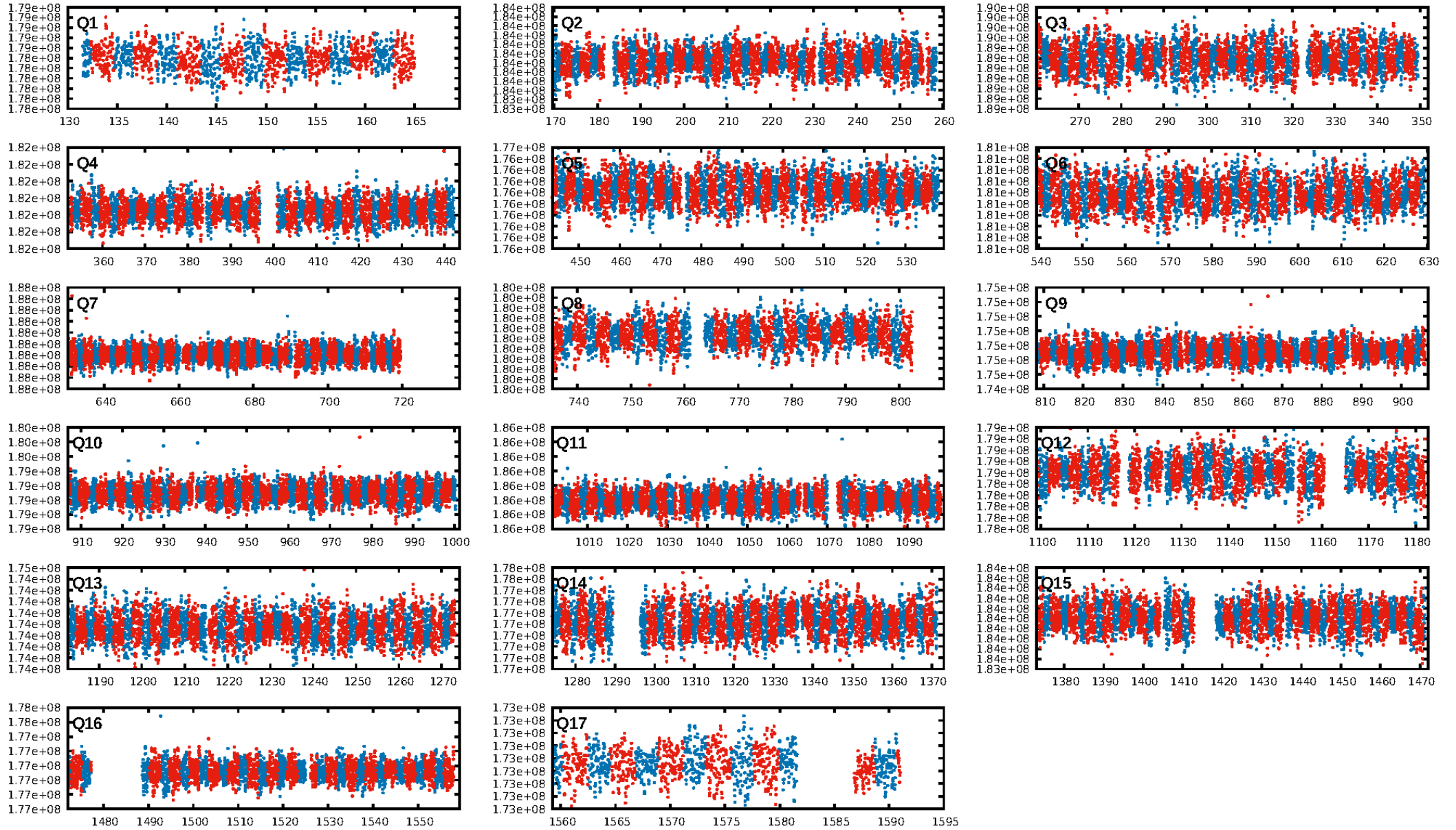
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.34e-25
RollingBand-fgt: 1.00 [303/303]
GhostDiagnostic-chr: 1.78
Centroid-sig: 16.1%
Centroid-so: 0.931 arcsec [1.03σ]
OotOffset-rm: 0.903 arcsec [1.05σ]
OotOffset-st: 3/4/3/2 [12]
KicOffset-rm: 0.958 arcsec [1.23σ]
KicOffset-st: 3/4/3/2 [12]
DiffImageQuality-fgm: 0.67 [8/12]
DiffImageOverlap-fno: 1.00 [17/17]

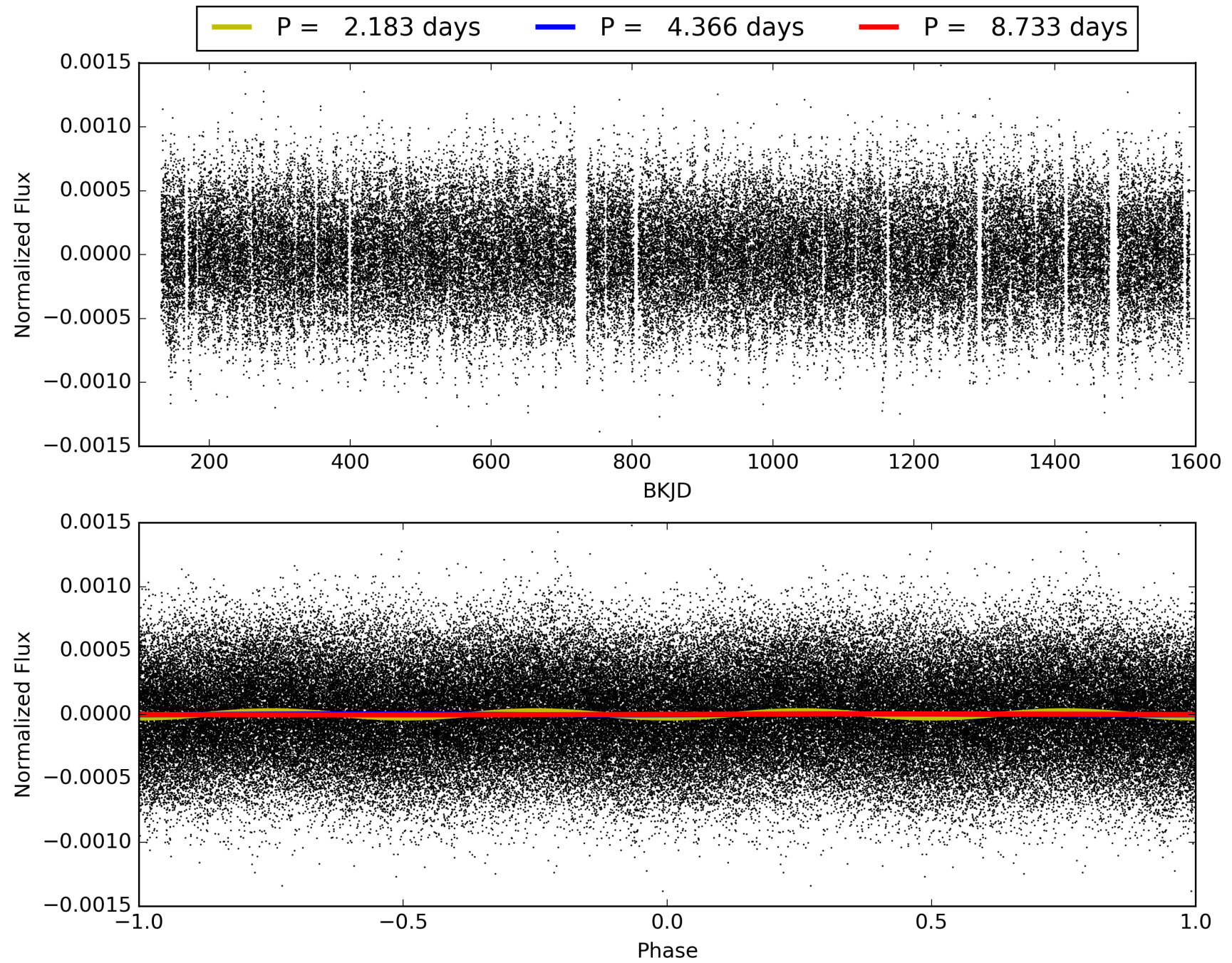
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:15:01 Z

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

TCE 008377511-01, PDC Light Curves

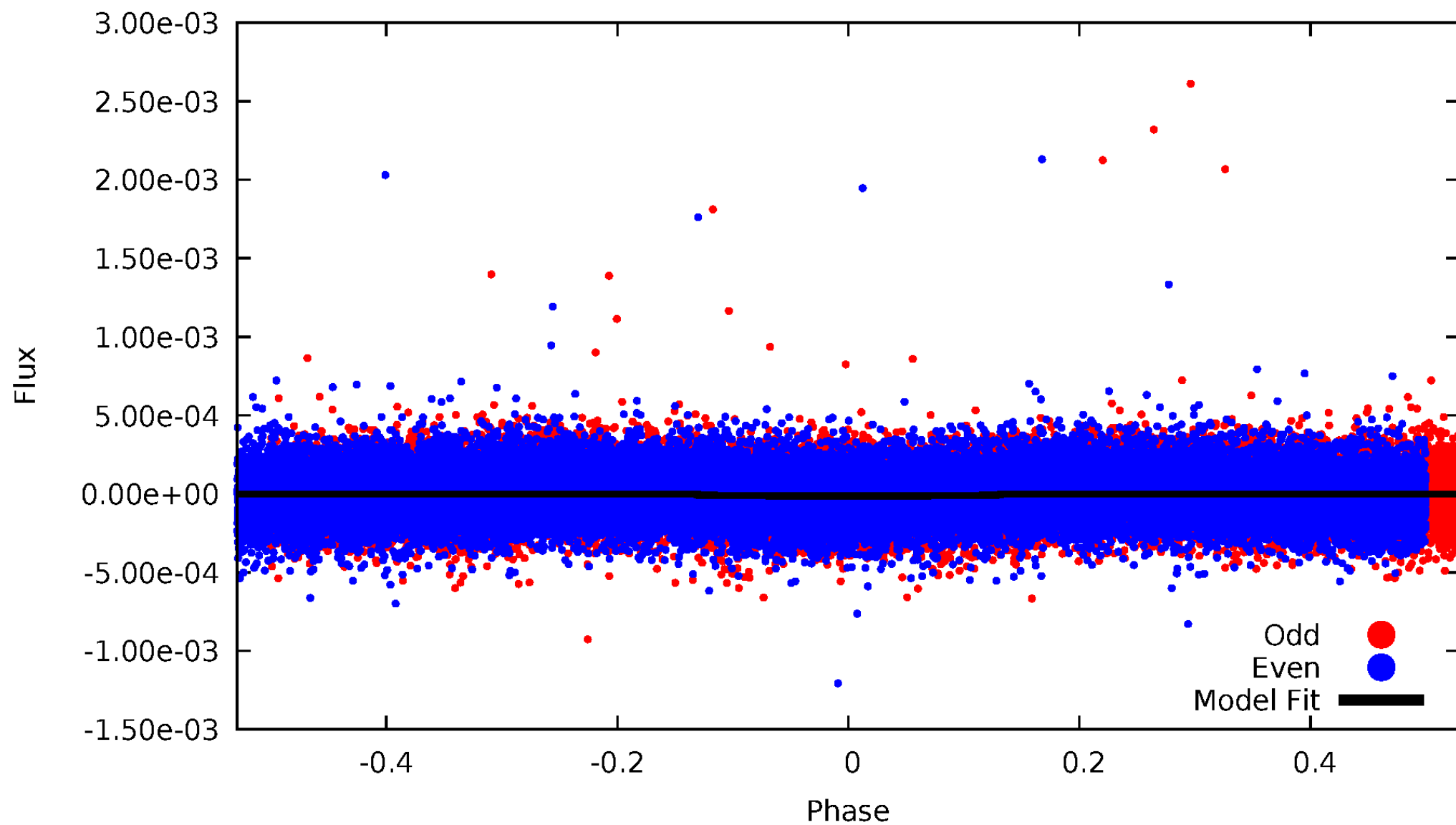


TCE 008377511-01



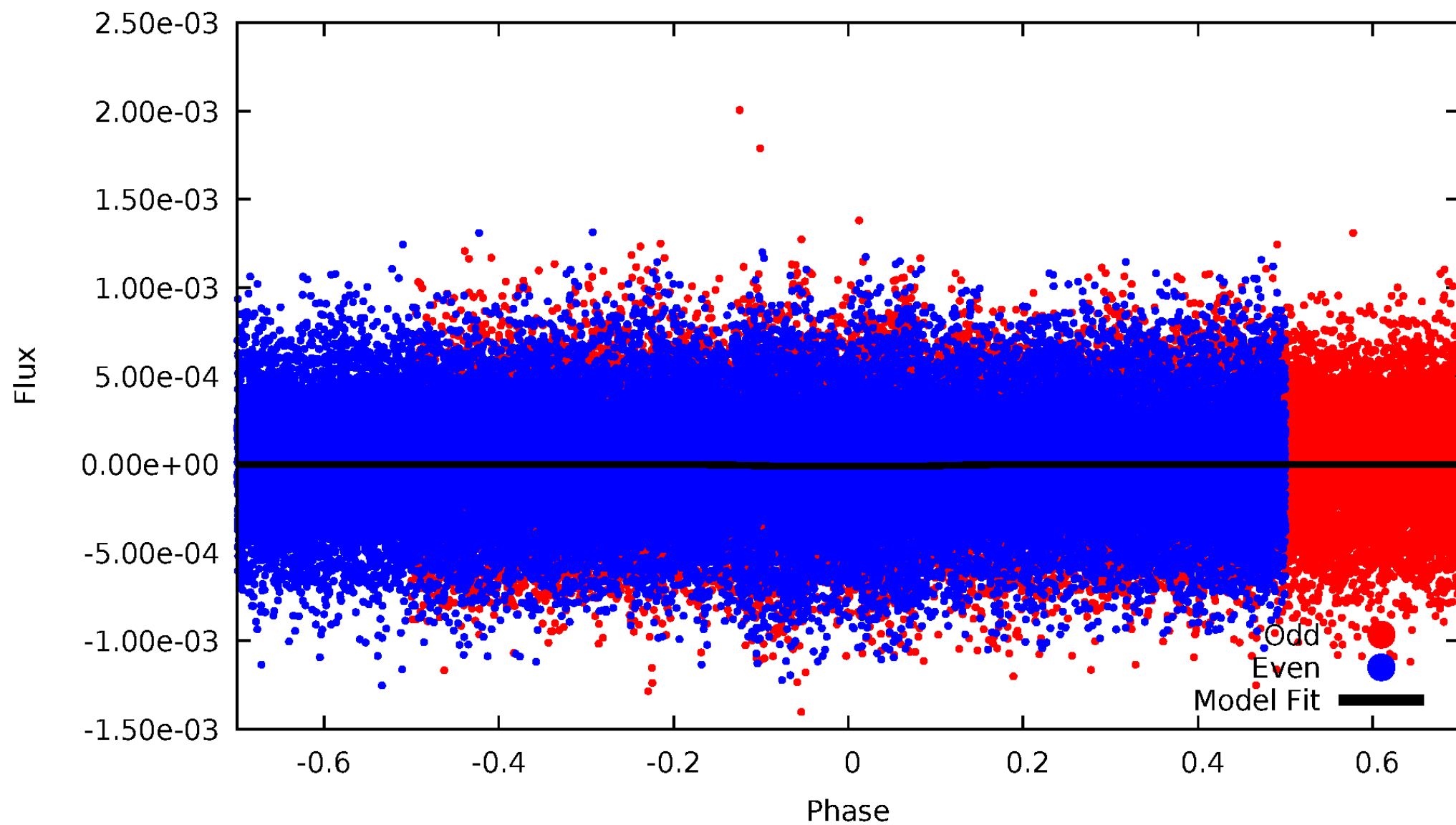
DV Odd/Even

TCE 008377511-01

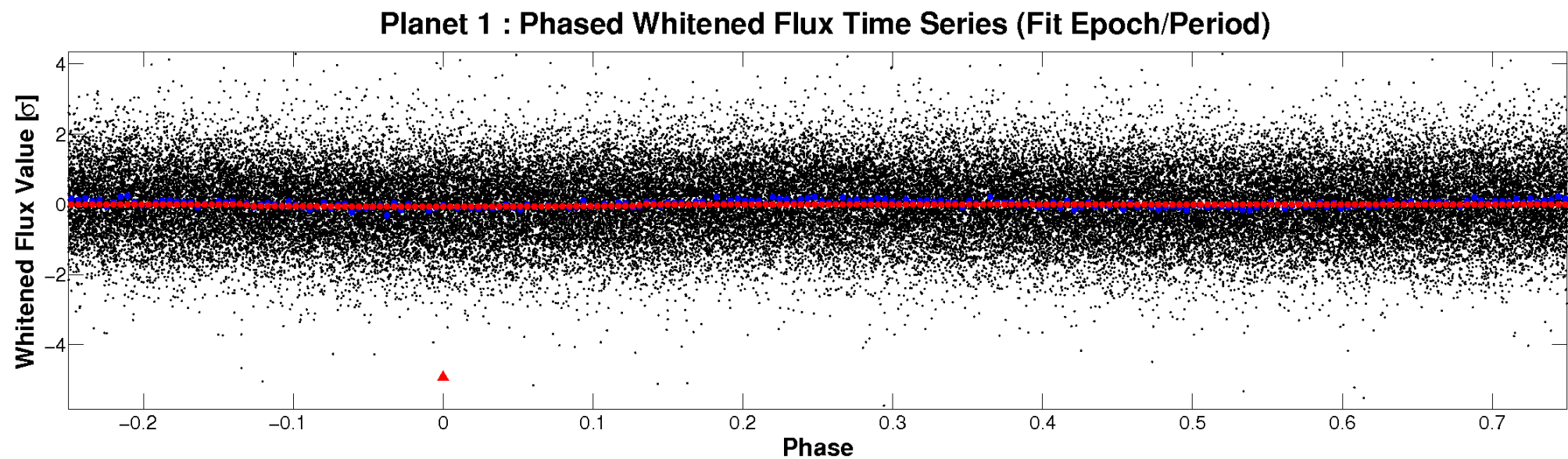
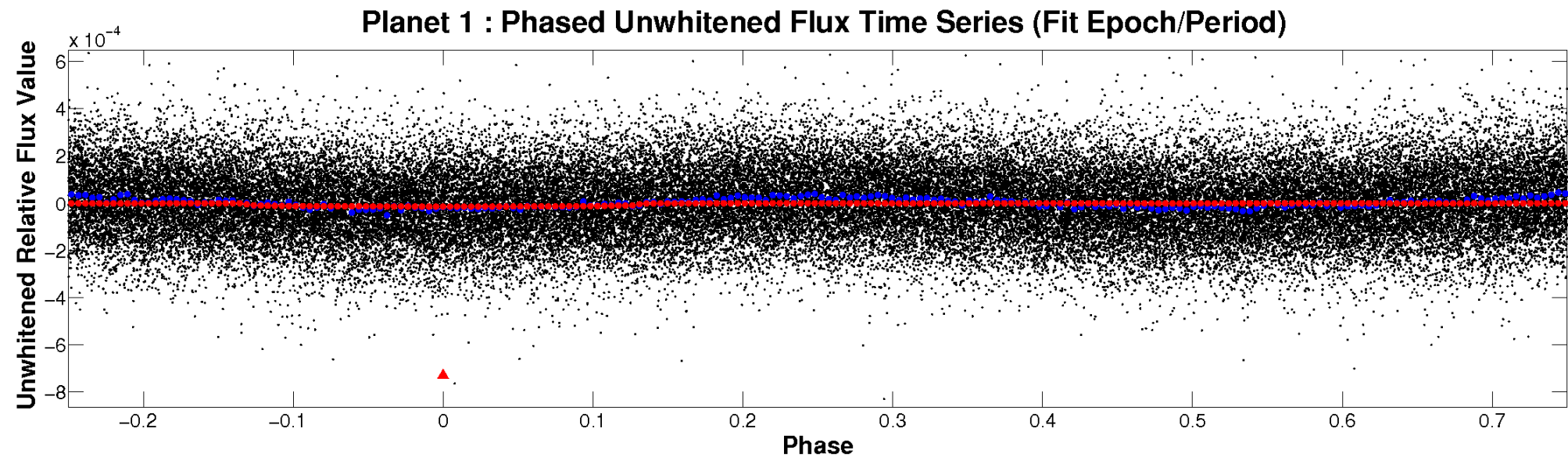


ALT Odd/Even

TCE 008377511-01

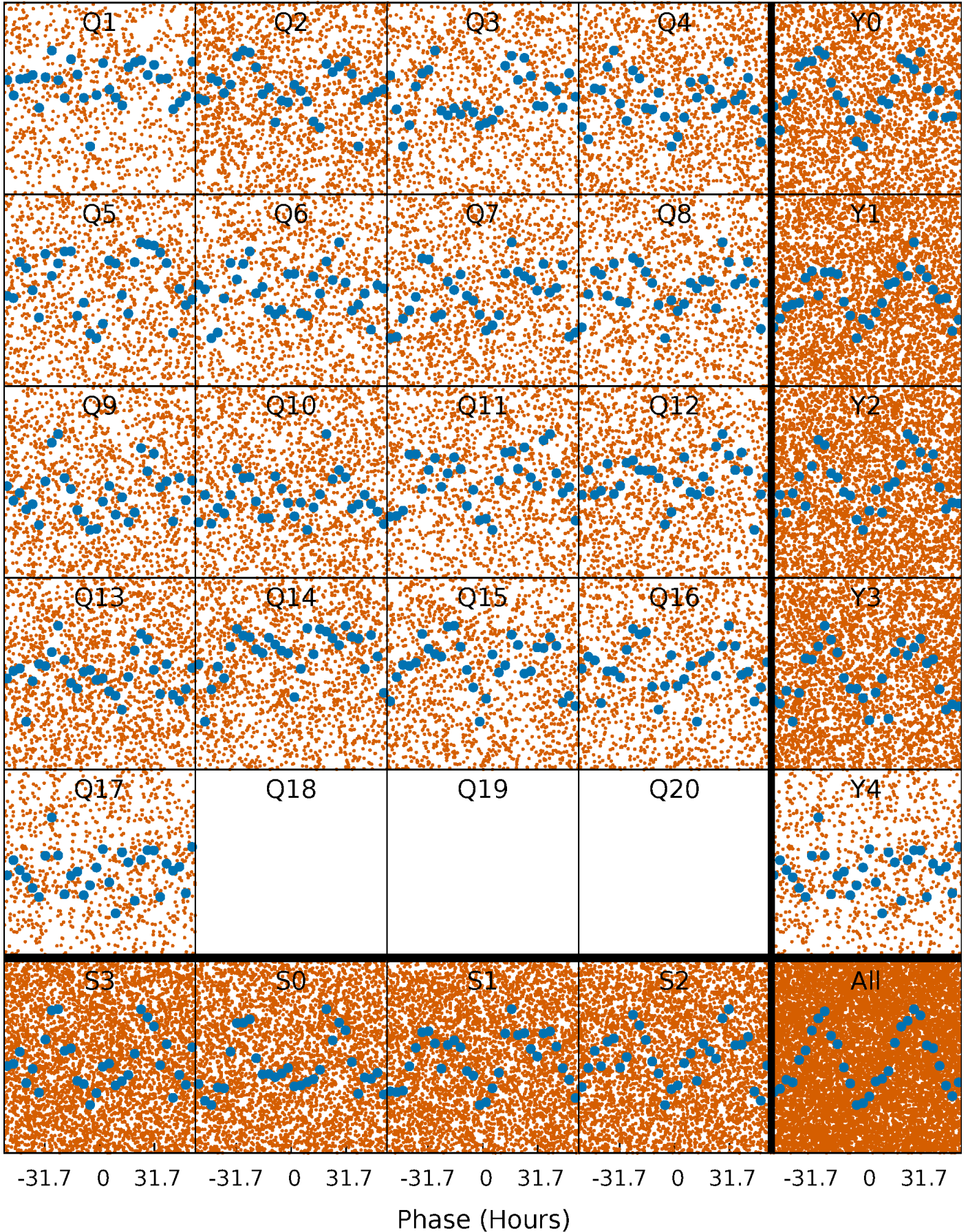


Non-Whitened Vs. Whitened Light Curve



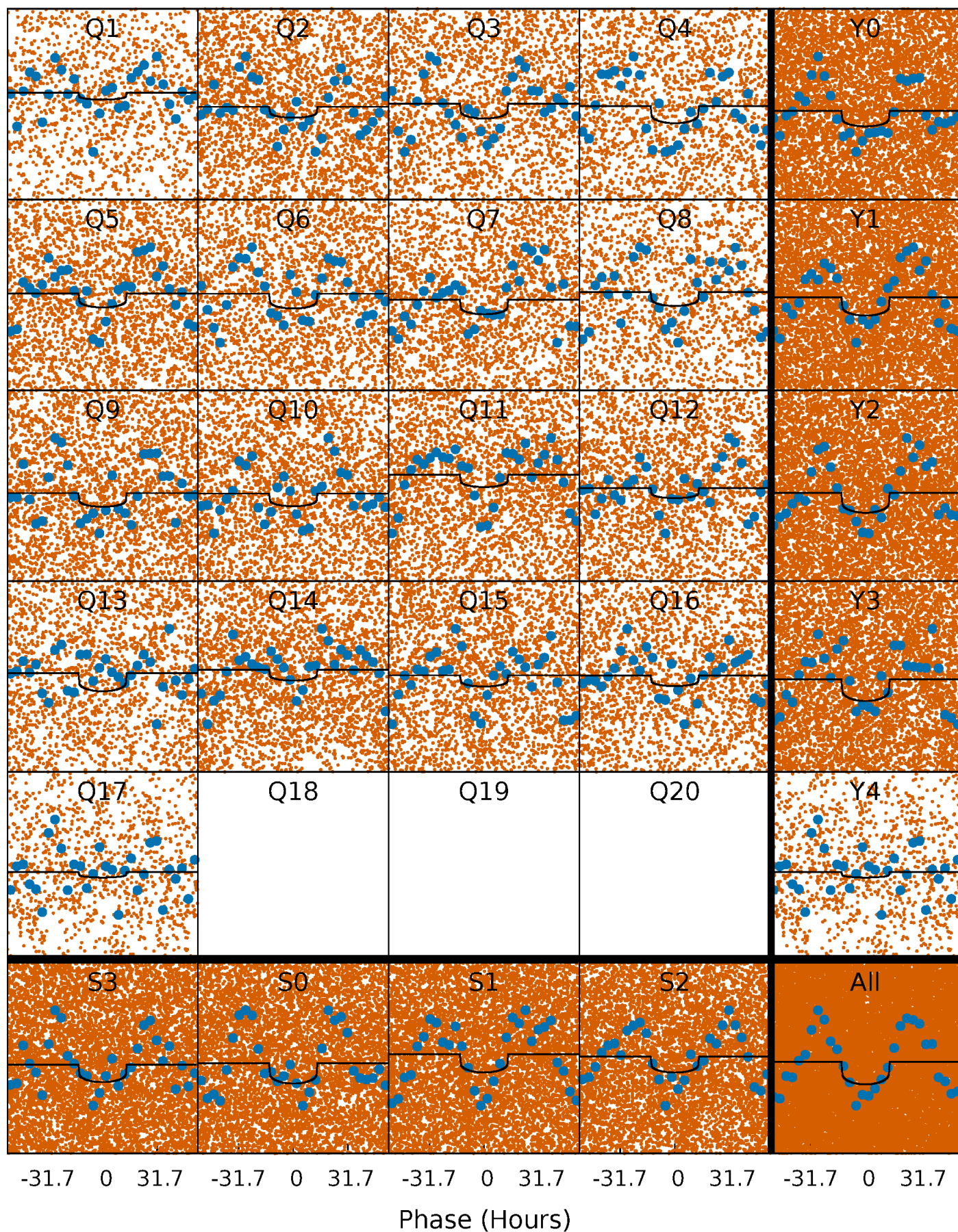
PDC Quarter-Phased Transit Curves

TCE 008377511-01 P= 4.366469 Days $T_0=133.467857$ (BKJD)



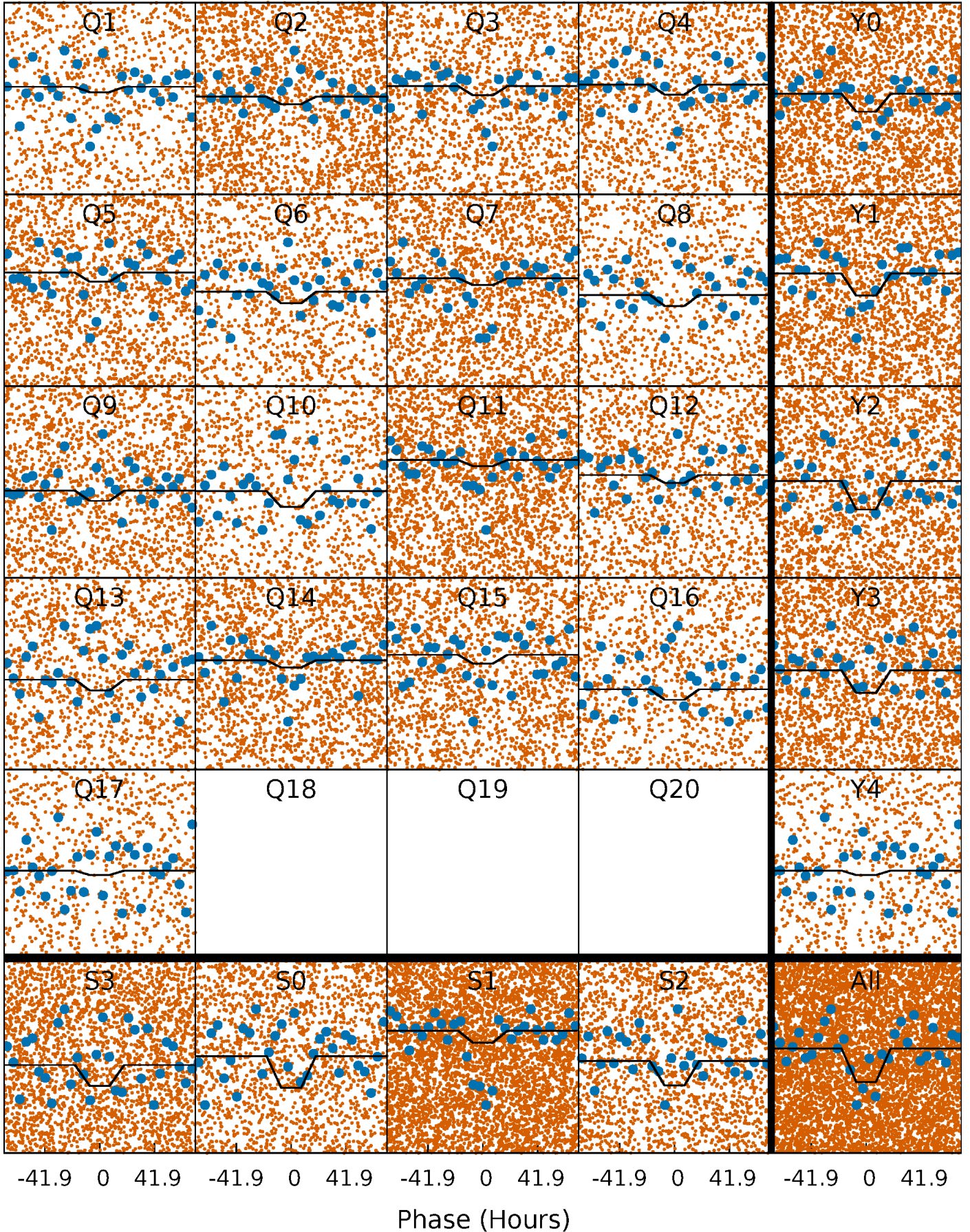
DV Quarter-Phased Transit Curves

TCE 008377511-01 P= 4.366469 Days $T_0=133.467857$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

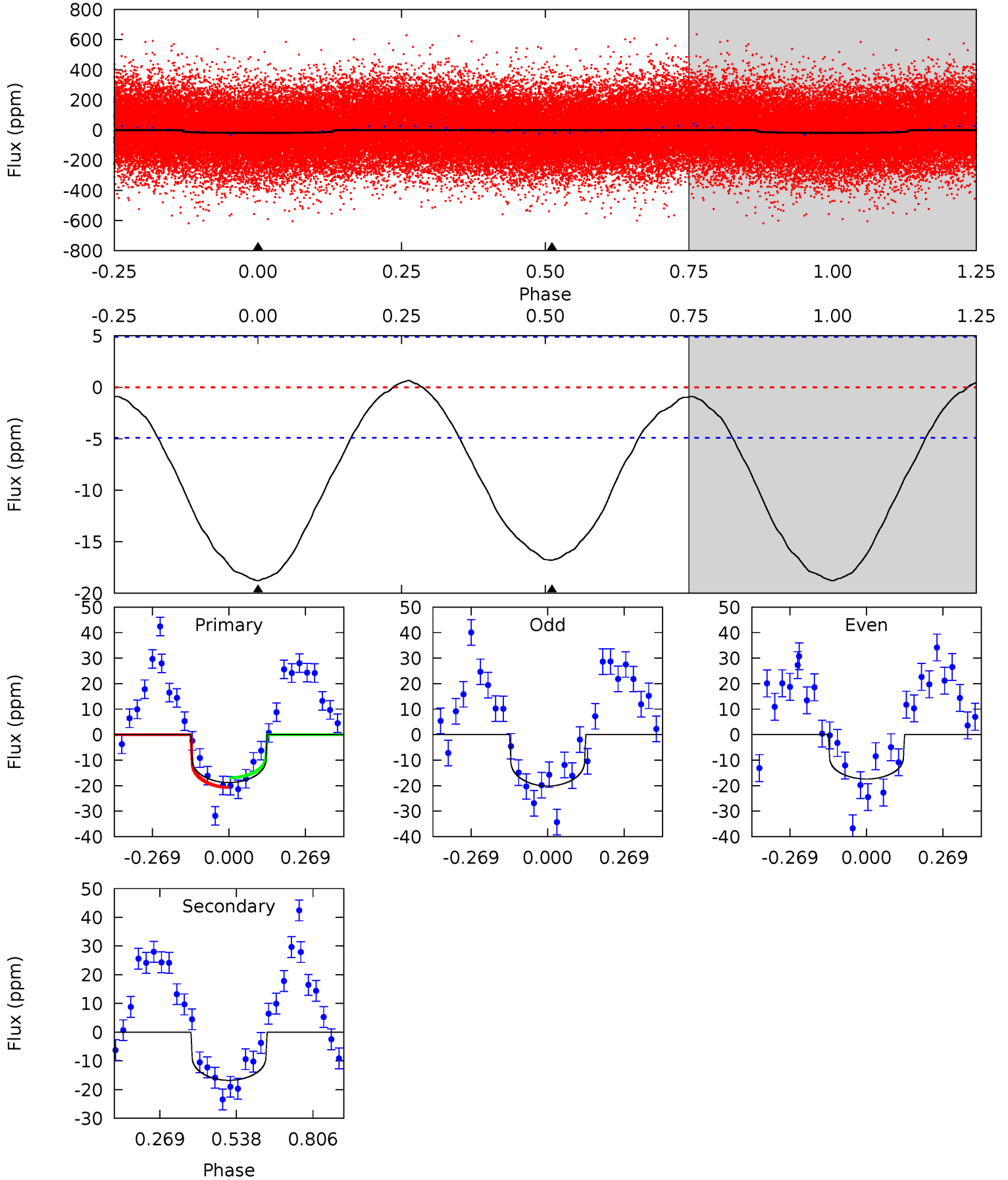
TCE 008377511-01 P= 4.367086 Days $T_0=133.457338$ (BKJD)



DV Model-Shift Uniqueness Test

008377511-01, P = 4.366469 Days, E = 129.101388 Days

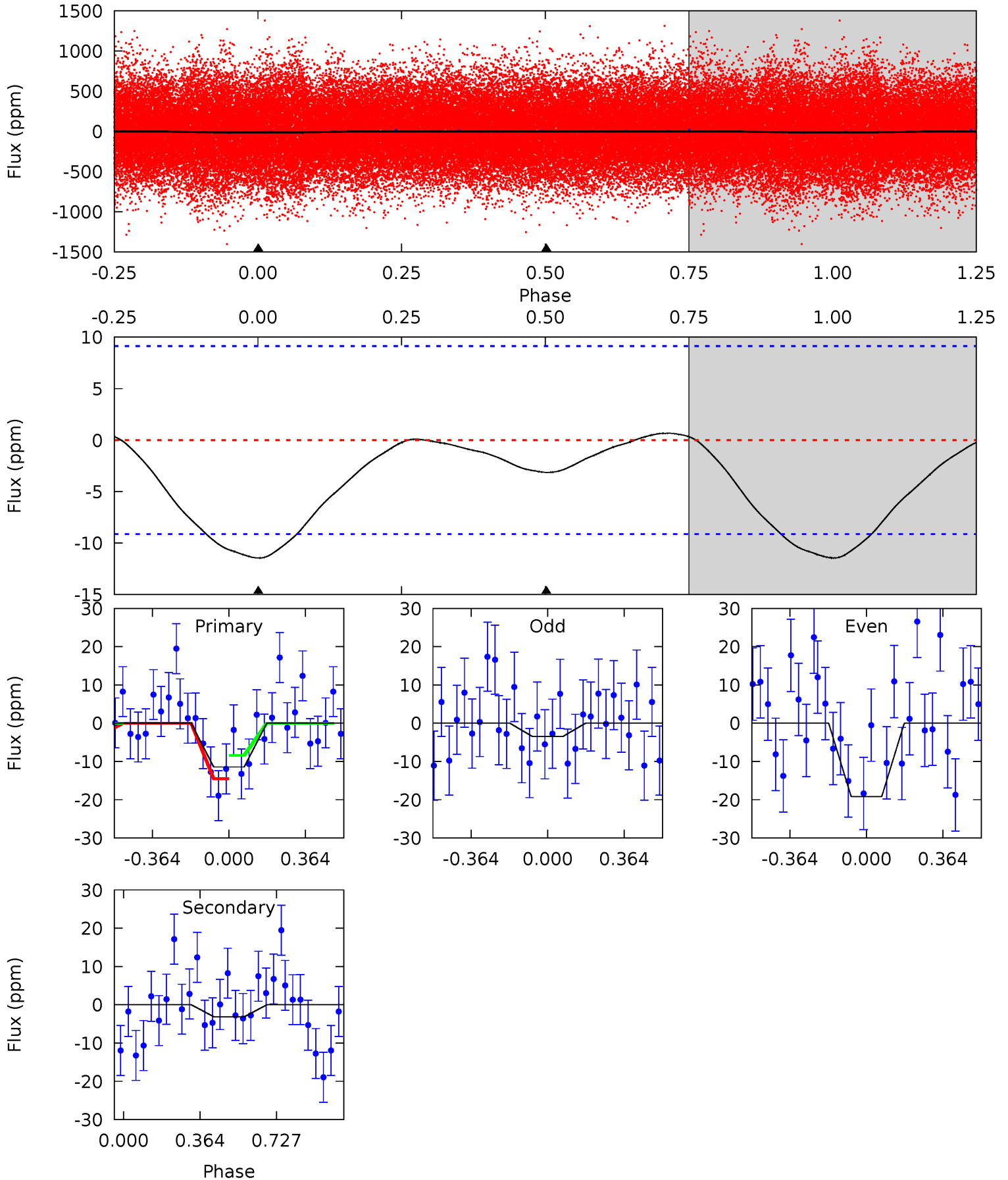
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.7	14.9	0	0	4.35	1.11	0.61	16.7	16.7	14.9	14.9	1.23	1.07	0.03	1.68



Alt Model-Shift Uniqueness Test

008377511-01, P = 4.367086 Days, E = 129.090252 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.38	1.47	0	0	4.29	0.91	0.21	5.38	5.38	1.47	1.47	3.64	0.67	0.06	1.43



Stellar Parameters For KIC 008377511

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6980^{+480}_{-1923}	$2.794^{+0.276}_{-0.184}$	$-0.500^{+0.450}_{-0.200}$	$11.948^{+2.527}_{-5.895}$	$3.239^{+0.205}_{-1.945}$	$0.003^{+0.006}_{-0.001}$
	+7%/-28%	+10%/-7%	+90%/-40%	+21%/-49%	+6%/-60%	+229%/-48%
Source	PHO1	FLK73	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 008377511-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-17 ± 1	$4.94^{+4.10}_{-3.20}$	5129^{+767}_{-1346}	6193^{+6264}_{-2178}	$2.114^{+14.156}_{-1.473}$
Alt.	-3 ± 2	$4.94^{+3.76}_{-3.08}$	5159^{+701}_{-1366}	3035^{+3715}_{-7310}	$0.377^{+2.085}_{-0.310}$

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

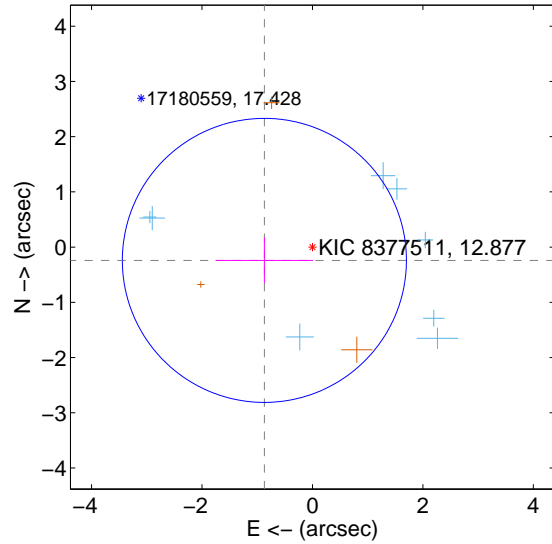
Supplemental centroid analysis for 008377511-01. Kepler magnitude: 12.88. Transit SNR 7.62

There are 8 quarters with good PRF difference image offsets

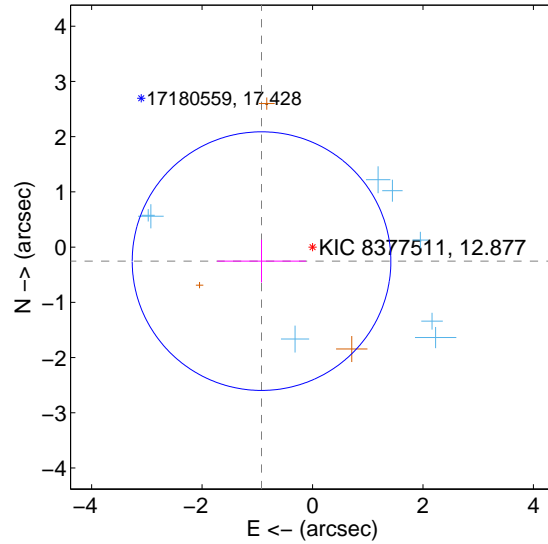
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.903 ± 0.858	1.05	0.870 ± 0.884	-0.241 ± 0.411
PRF-fit source offset from KIC position	0.958 ± 0.781	1.23	0.923 ± 0.806	-0.254 ± 0.389
photometric centroid source offset	0.93 ± 0.91	1.03	-0.27 ± 0.89	-0.89 ± 0.91

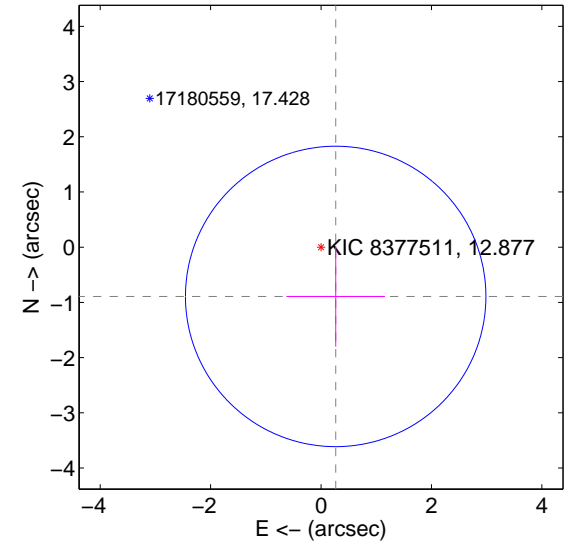
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

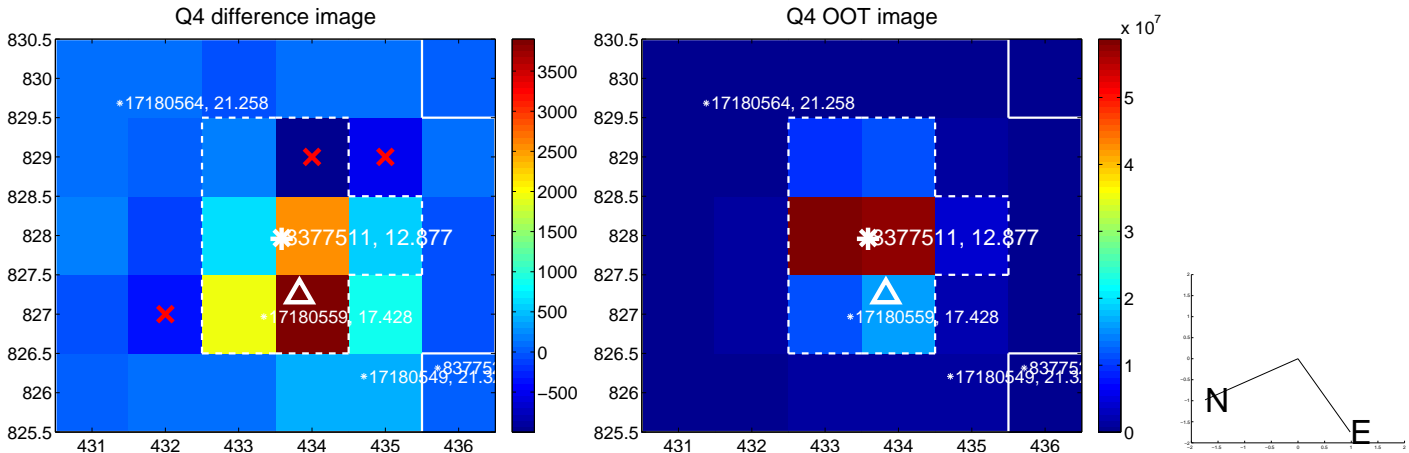
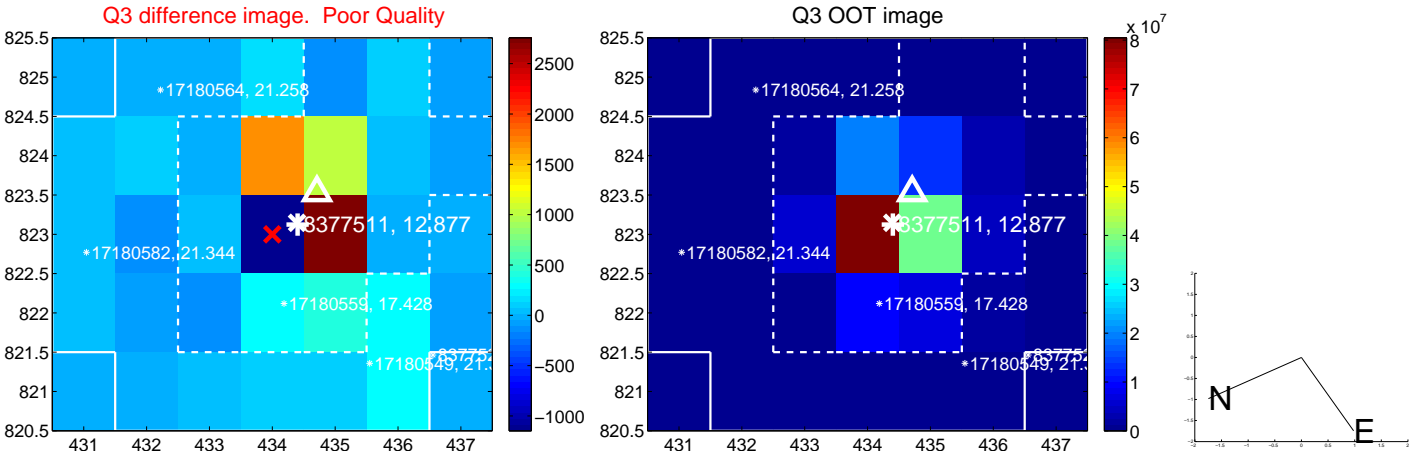
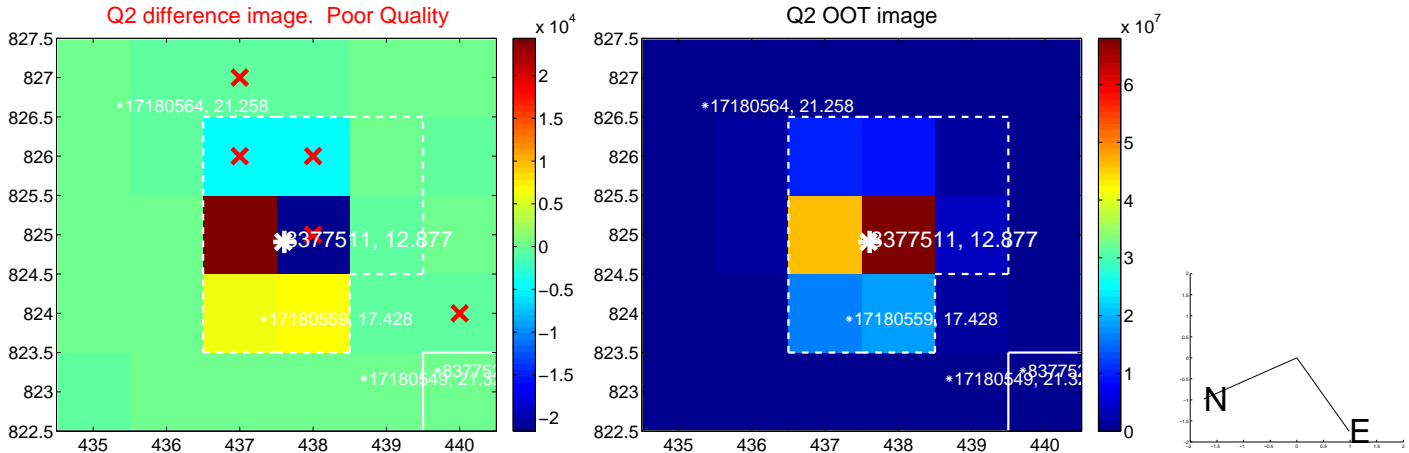
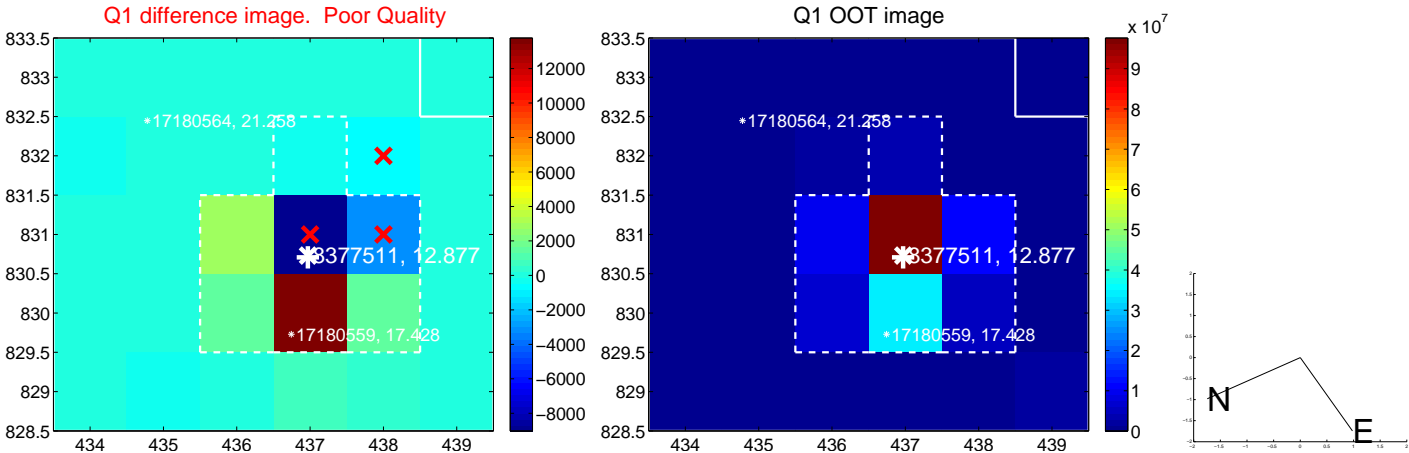


offset from photometric centroids

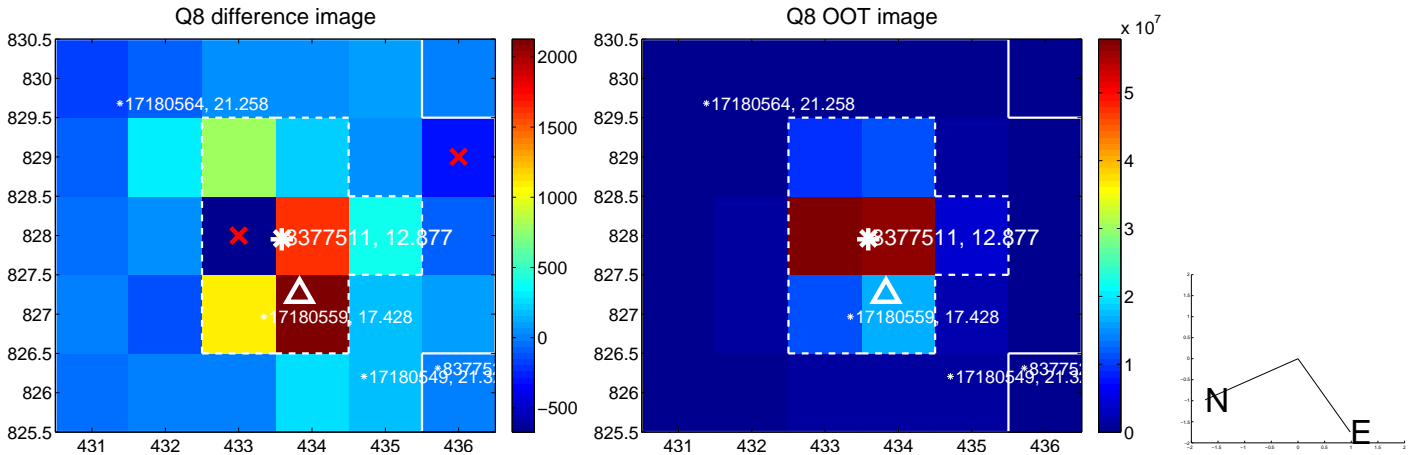
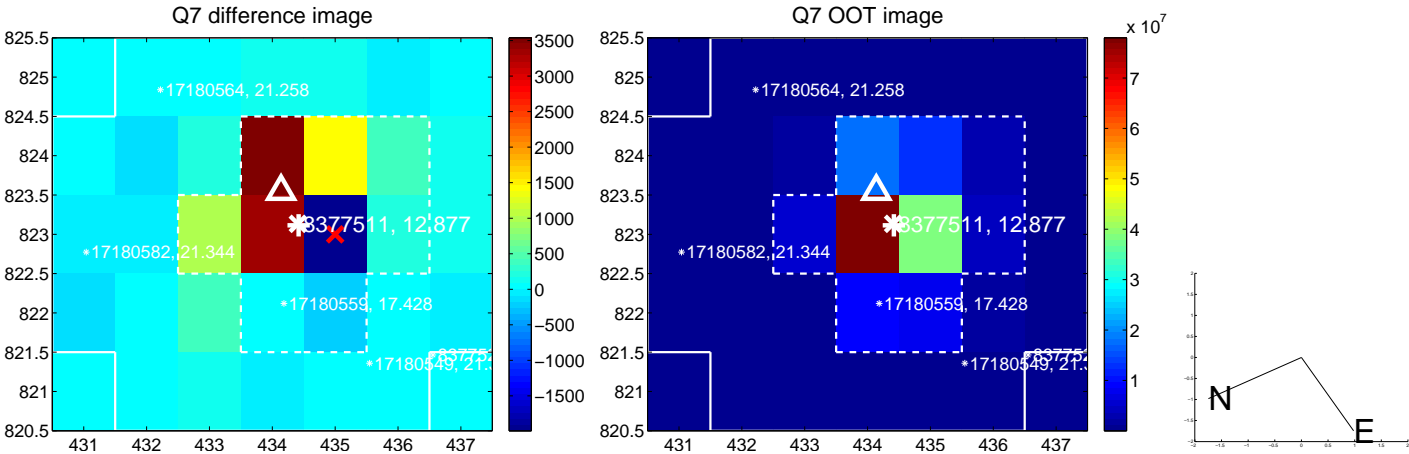
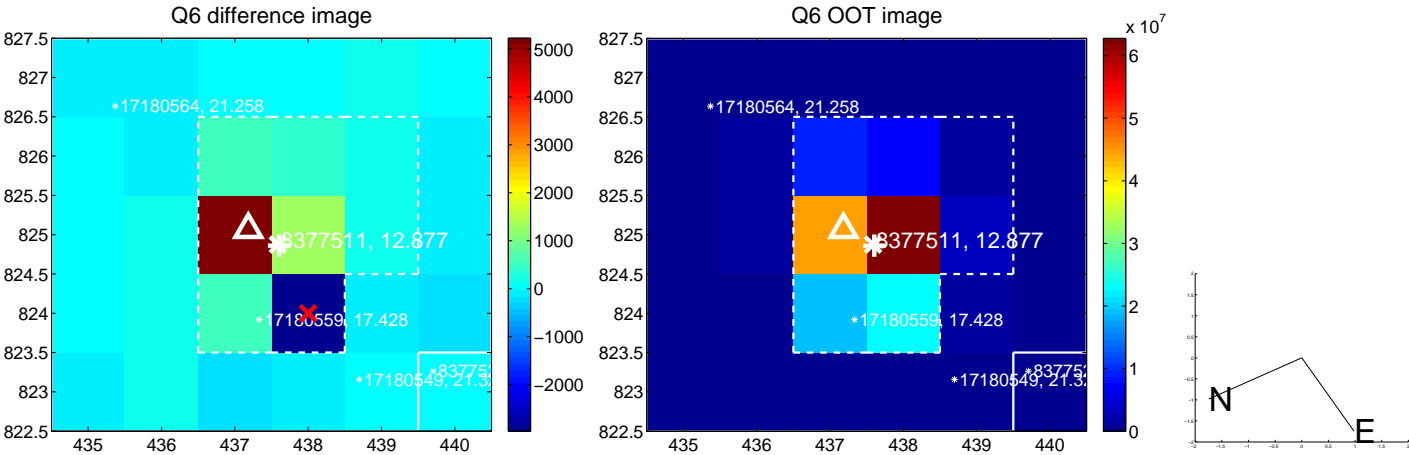
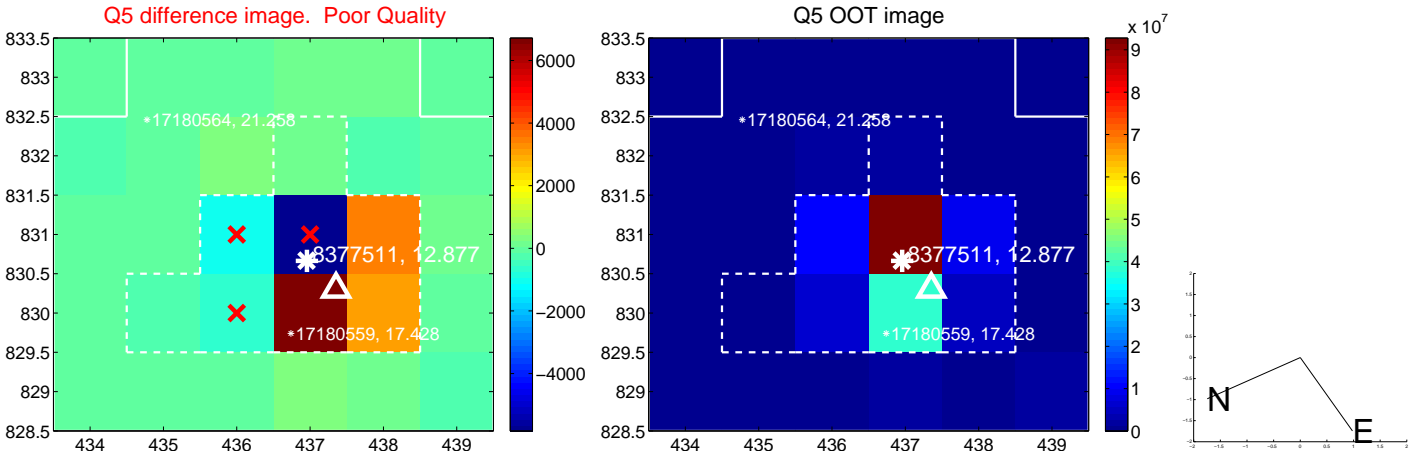


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

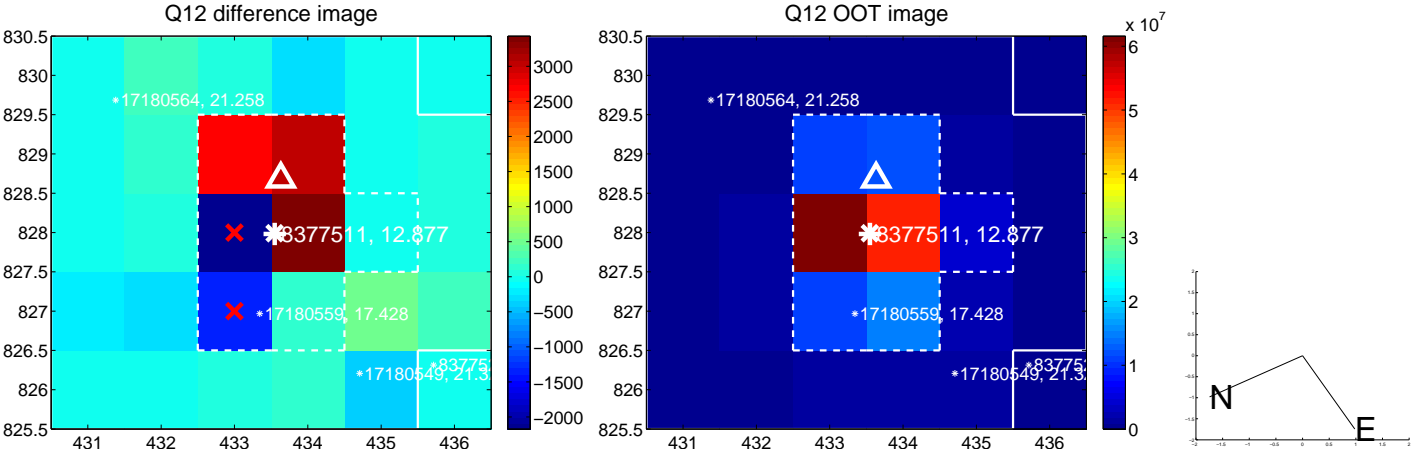
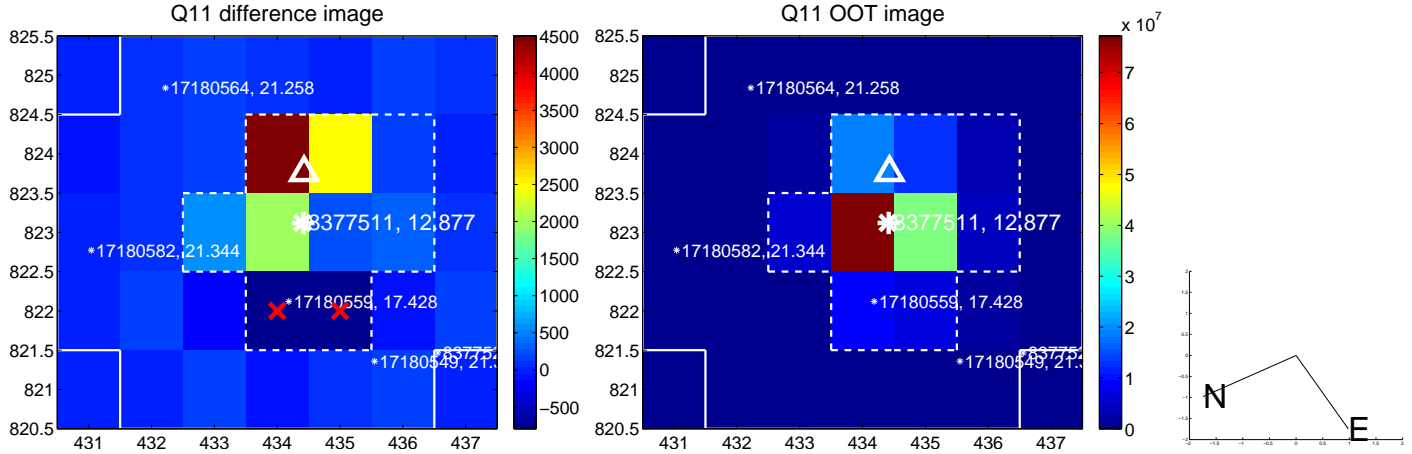
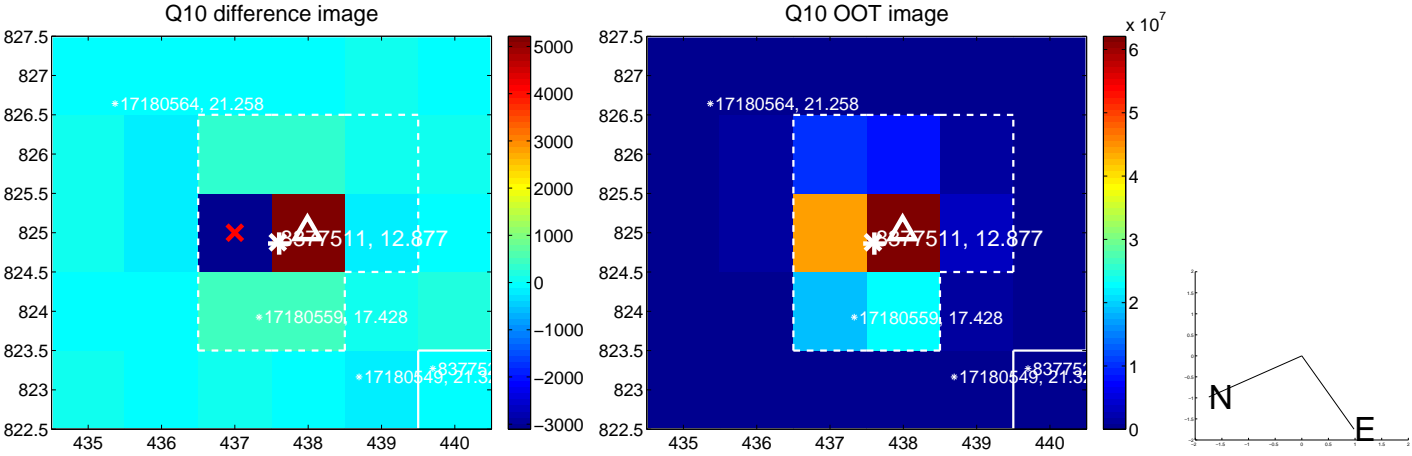
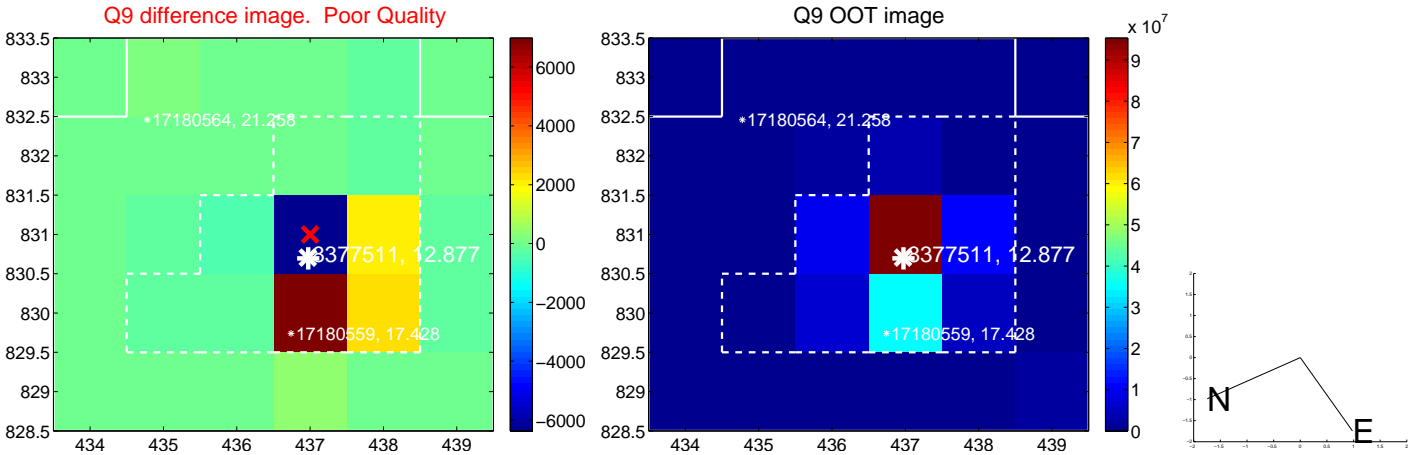
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



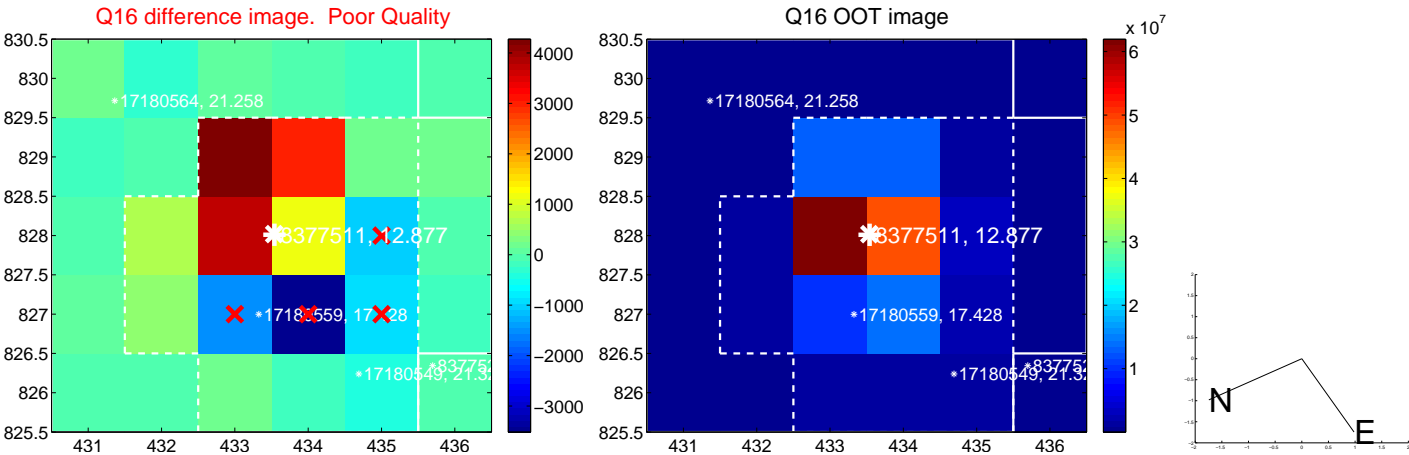
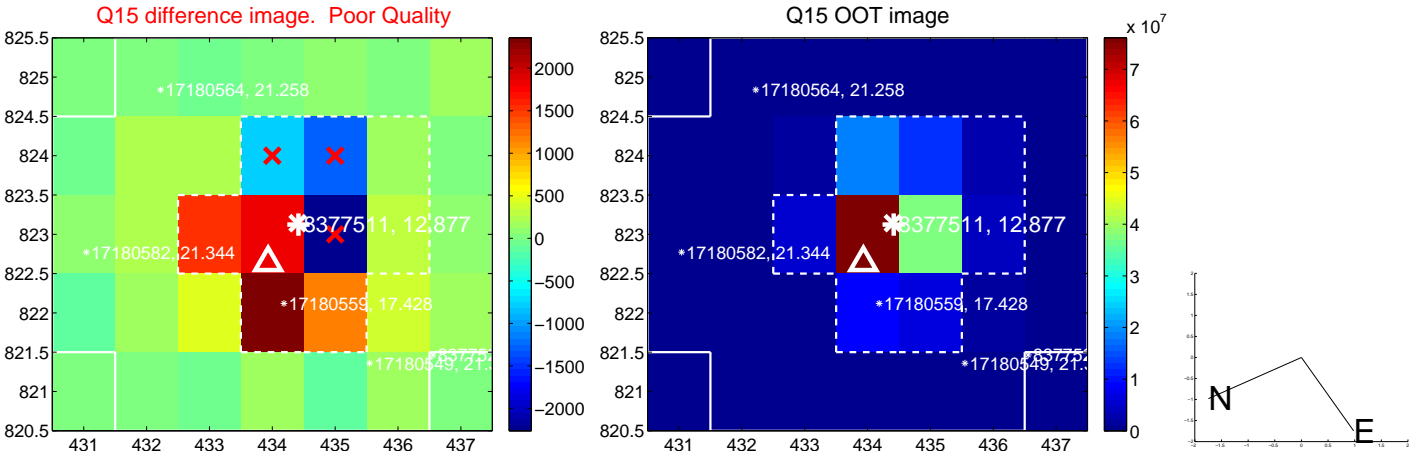
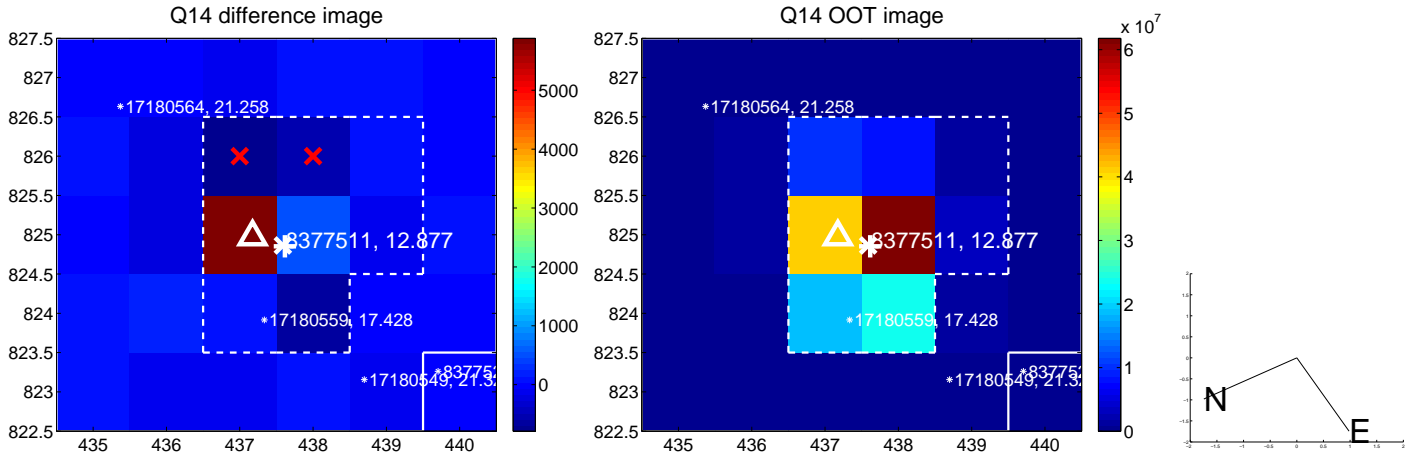
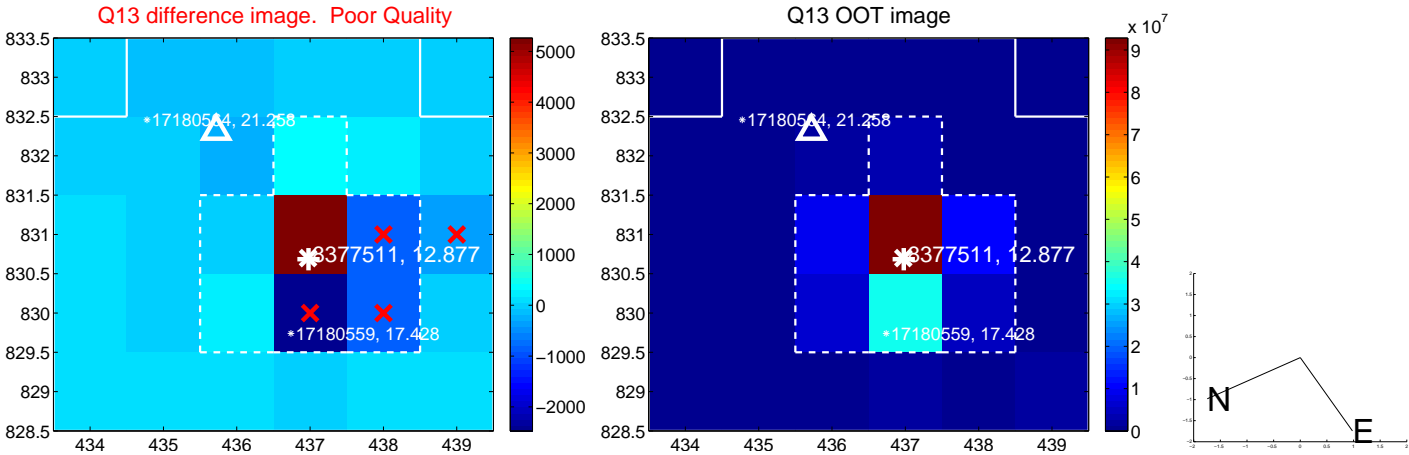
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



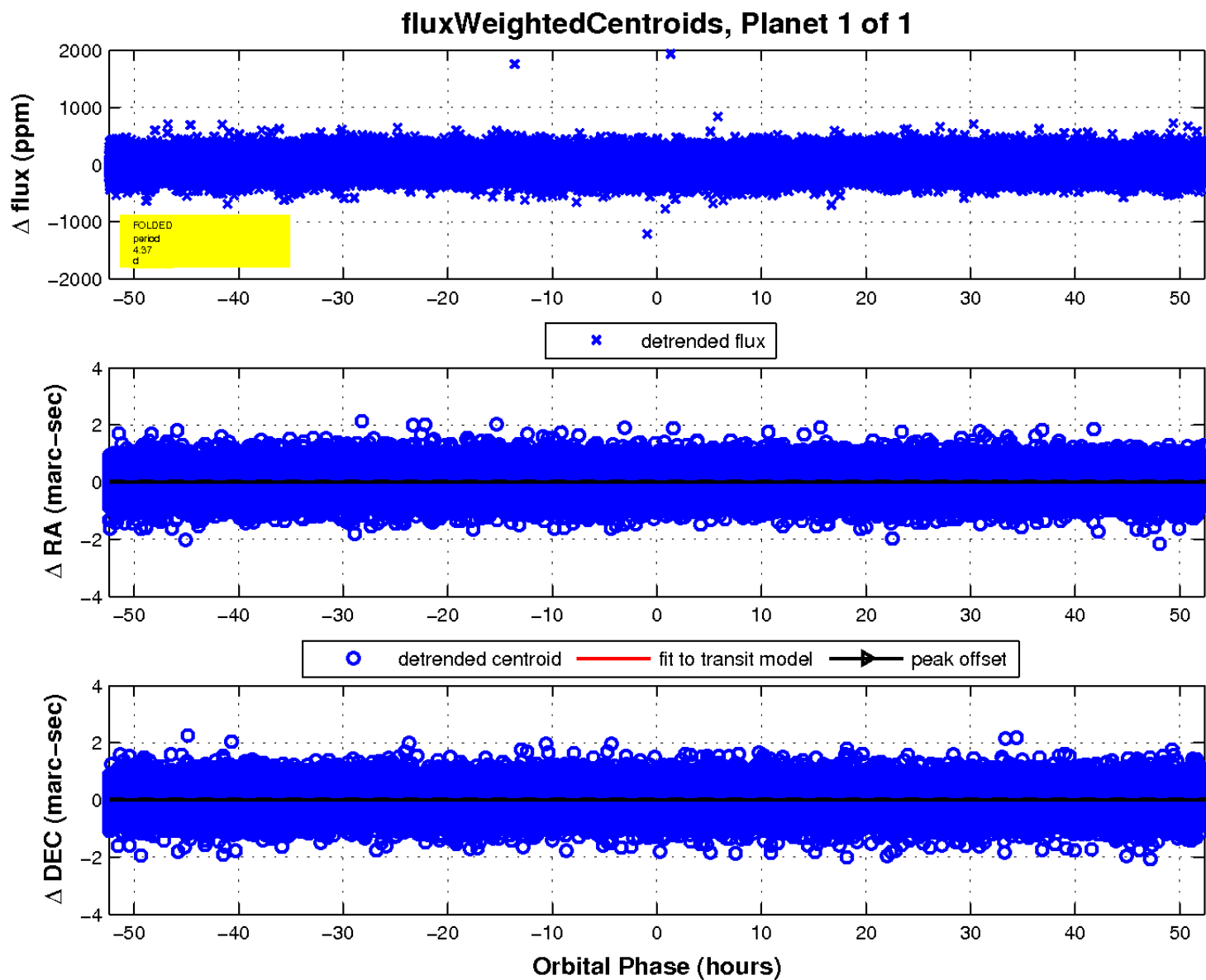
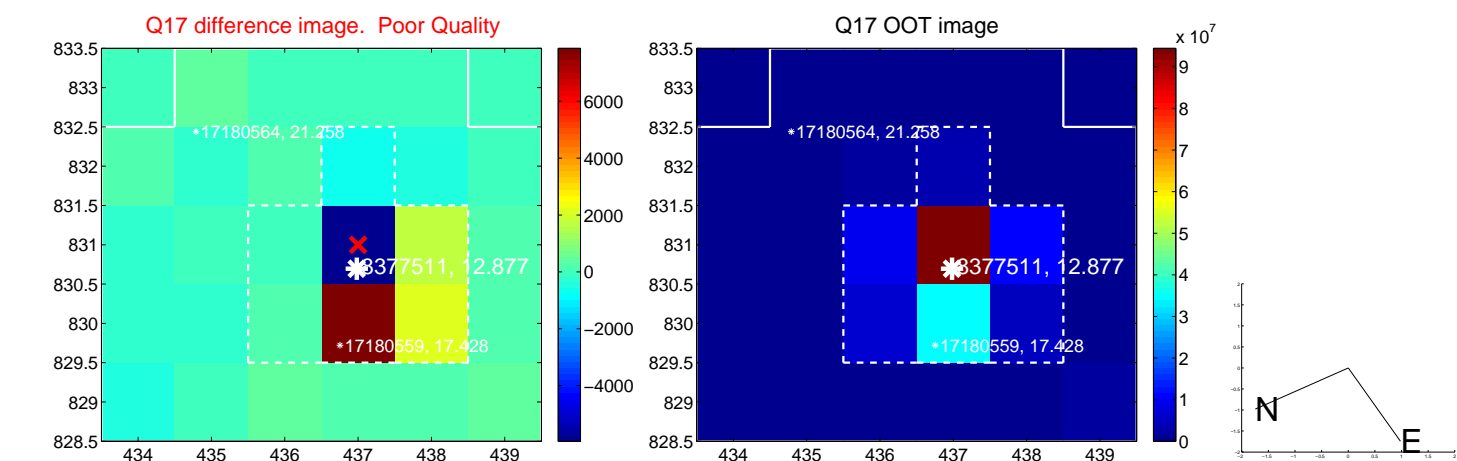
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

