

KIC 009550035

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})
009550035-01	OBS	No	4.326592	132.227149	11.4	30.937	7.5	4.8	0.88	5548	0.32	283.73

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009550035-01	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.

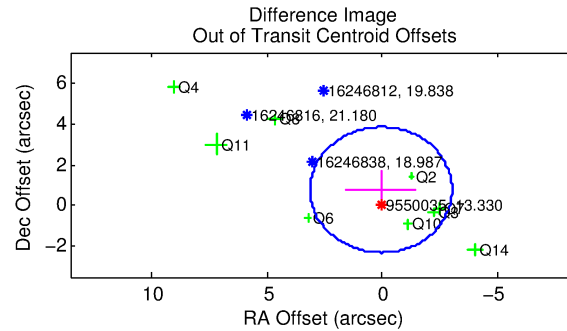
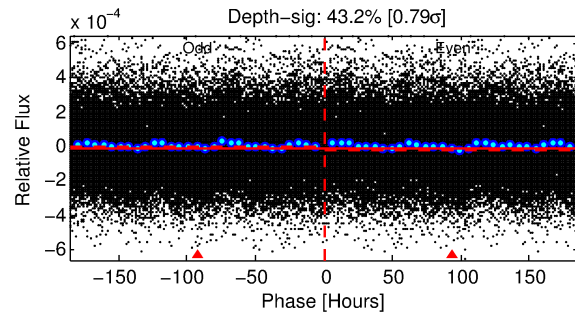
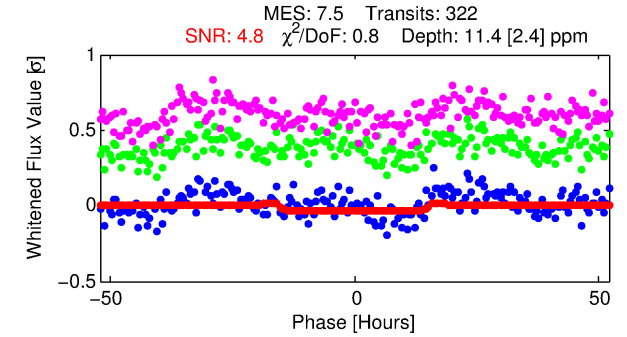
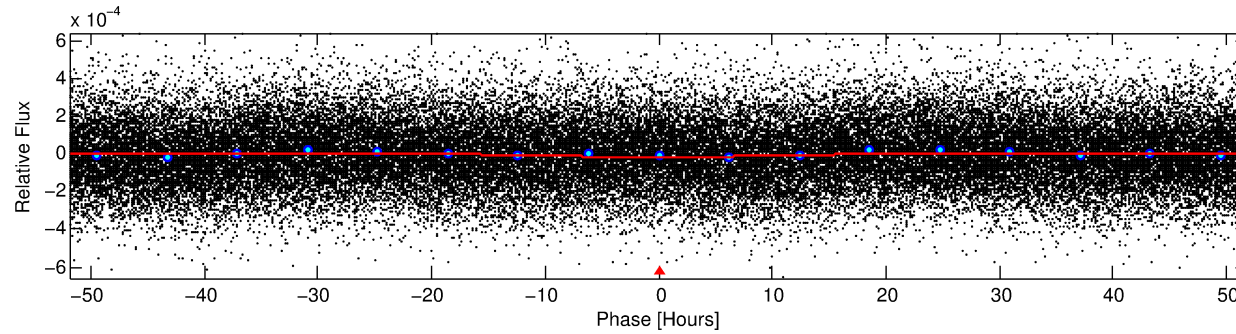
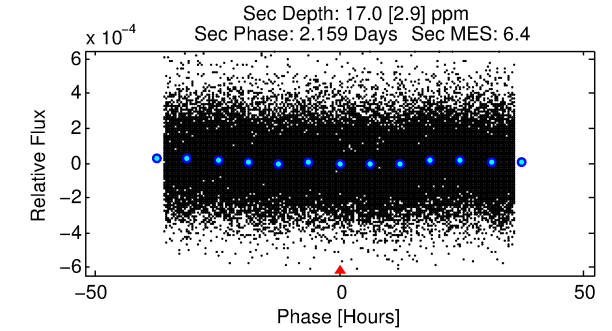
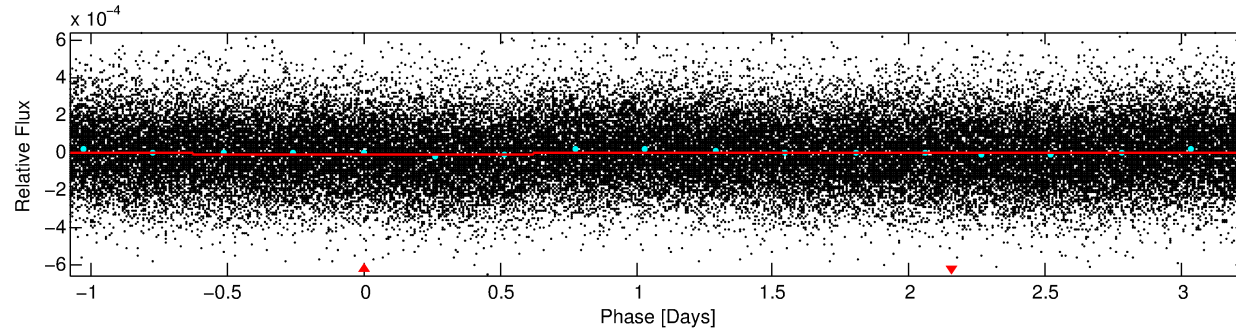
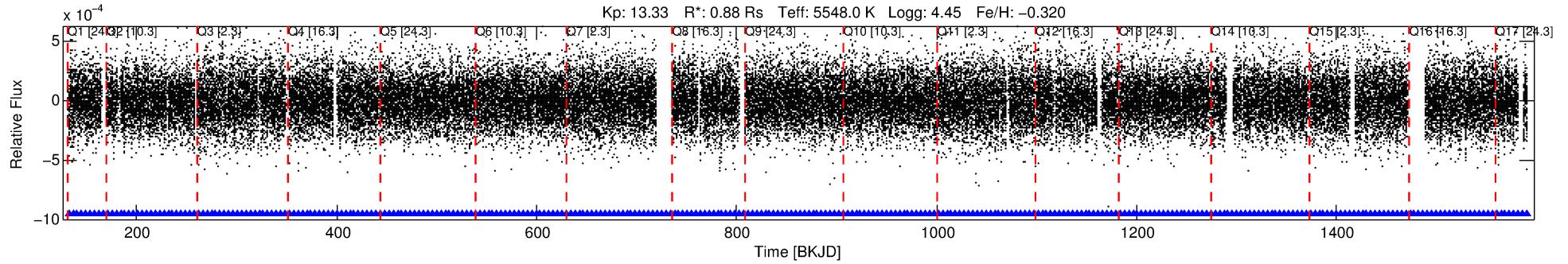
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009550035-01

No Significant Match Found

DV One-Page Summary

KIC: 9550035 Candidate: 1 of 1 Period: 4.327 d



DV Fit Results:

Period = 4.32659 [0.00022] d
Epoch = 132.2271 [0.0354] BKJD
Rp/R* = 0.0033 [0.0025]
a/R* = 1.13 [0.79]
b = 0.73 [2.19]
Seff = 283.73 [86.52]
Teq = 1047 [80] K
Rp = 0.32 [0.25] Re
a = 0.0480 [0.0092] AU
Ag = 212.01 [325.03] [0.65σ]
Teffp = 6174 [2334] K [2.20σ]

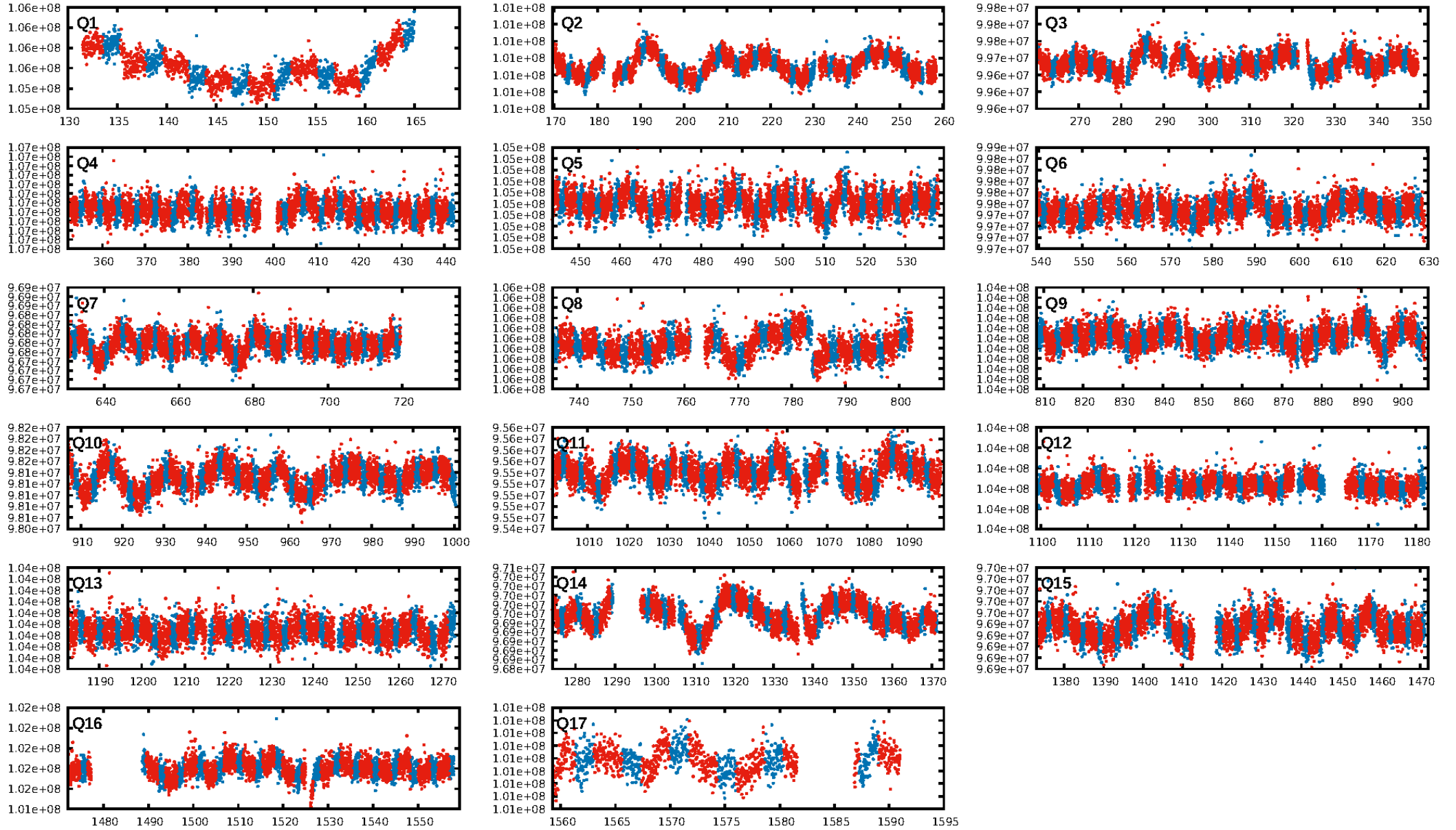
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [307/307]
GhostDiagnostic-chr: 1.425
Centroid-sig: 13.9%
Centroid-so: 3.228 arcsec [1.36σ]
OotOffset-rm: 0.768 arcsec [0.75σ]
OotOffset-st: 4/3/2/0 [9]
KicOffset-rm: 1.097 arcsec [1.13σ]
KicOffset-st: 4/3/2/0 [9]
DiffImageQuality-fgm: 0.56 [5/9]
DiffImageOverlap-fno: 1.00 [17/17]

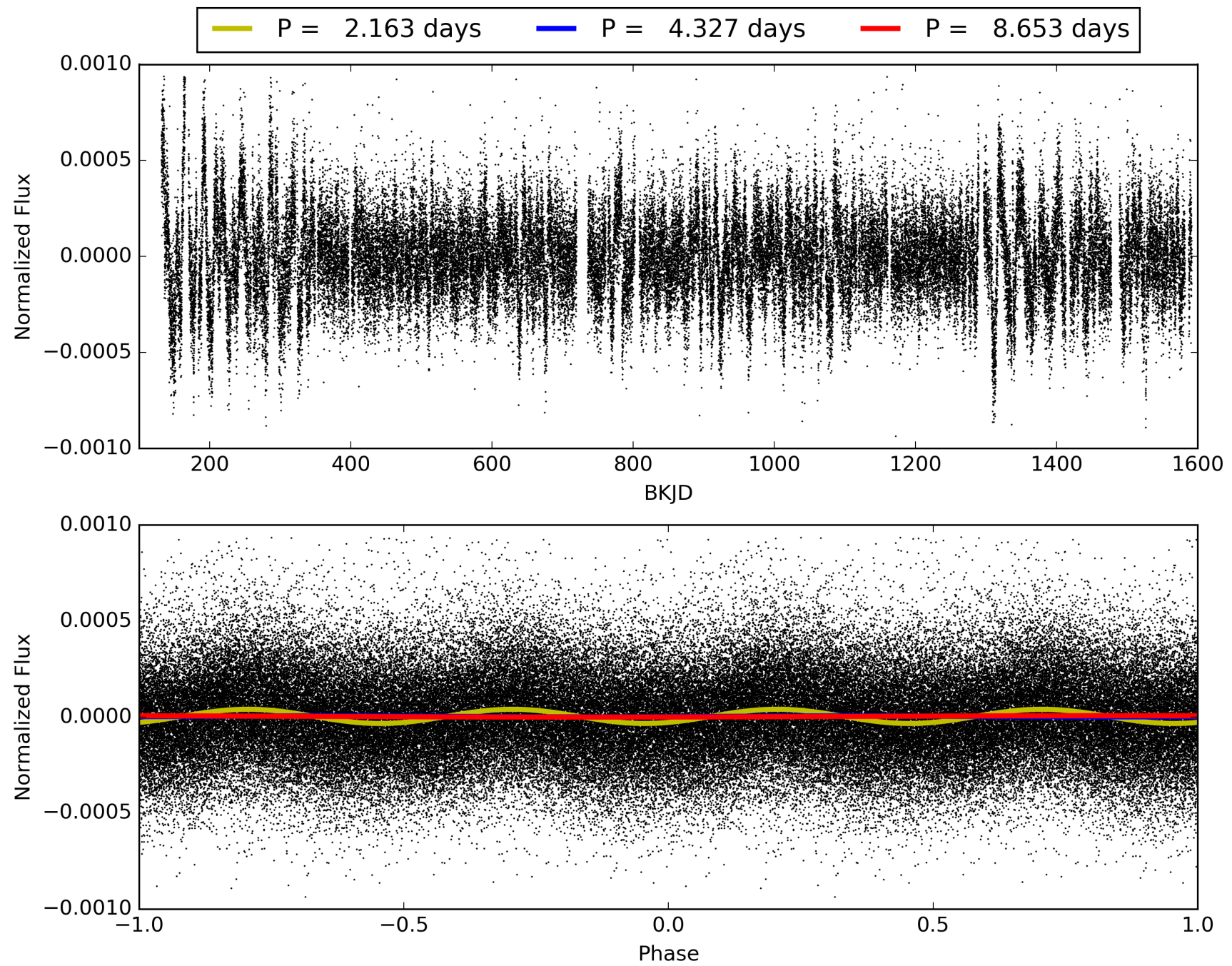
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 03:36:59 Z

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

TCE 009550035-01, PDC Light Curves

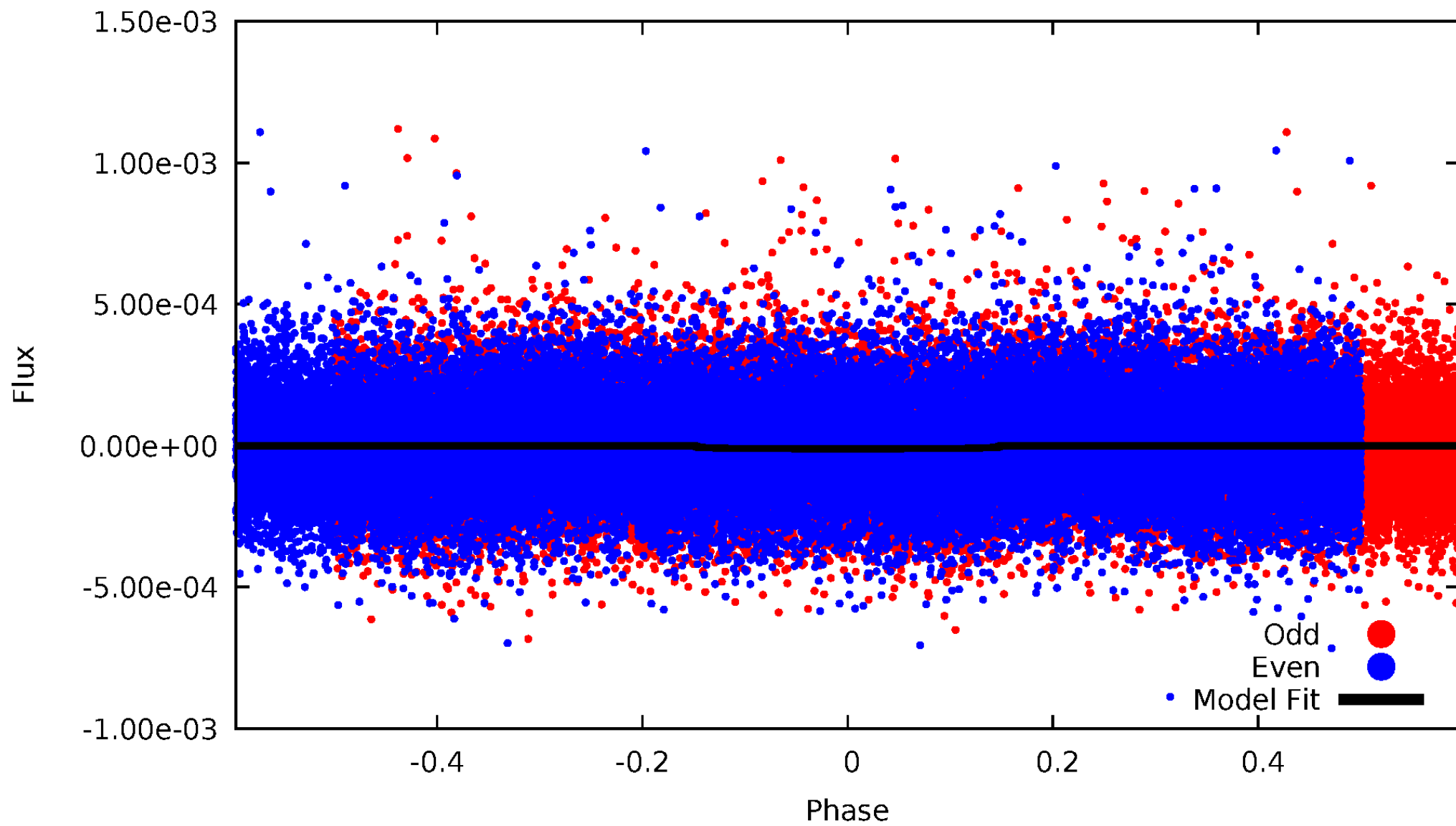


TCE 009550035-01



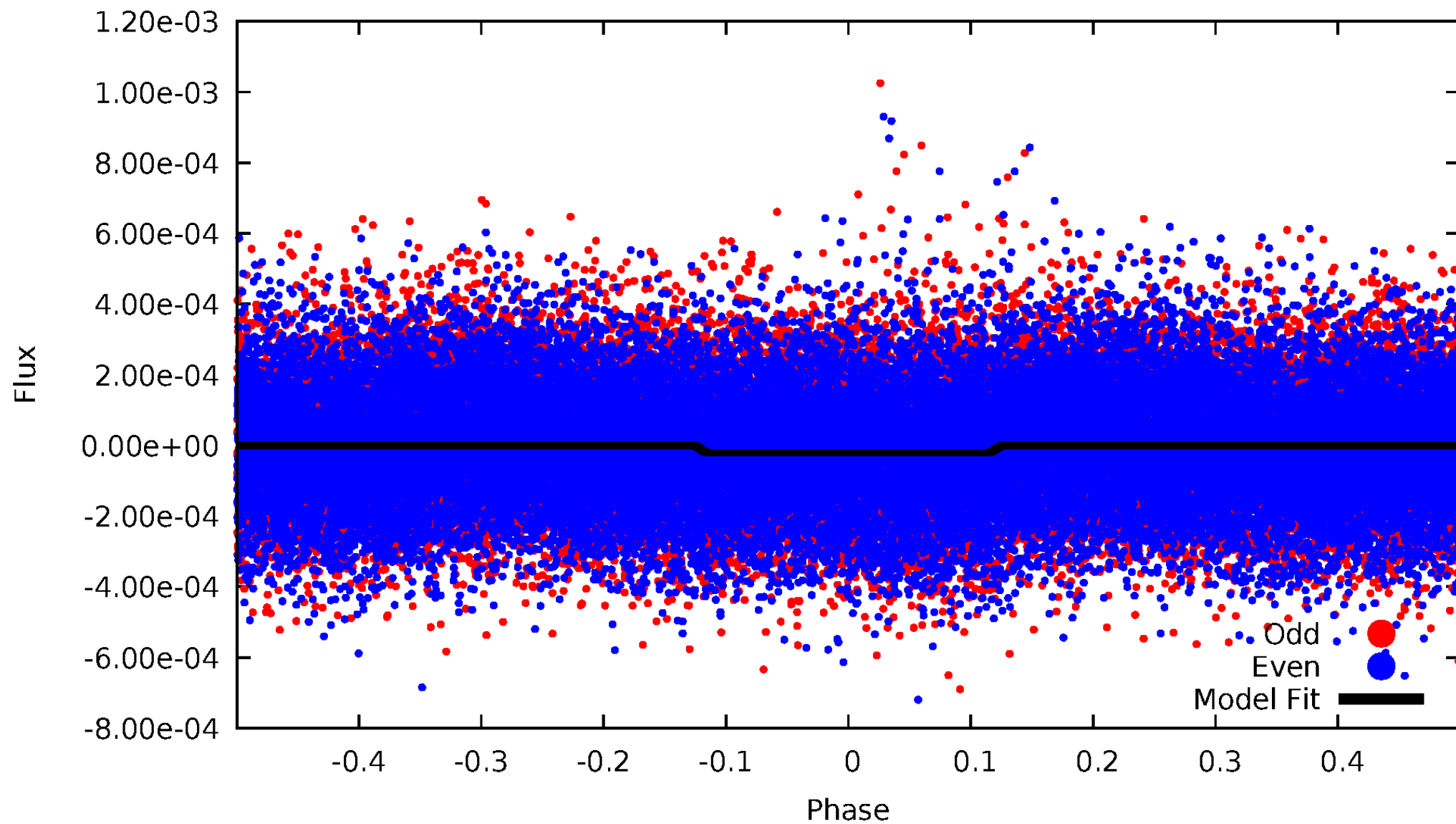
DV Odd/Even

TCE 009550035-01



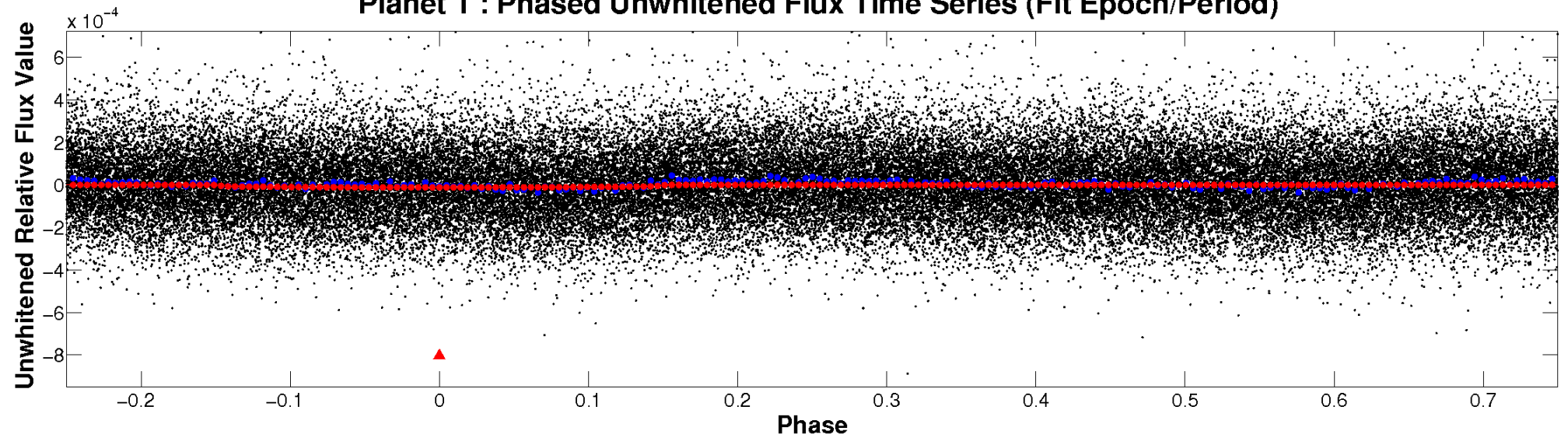
ALT Odd/Even

TCE 009550035-01

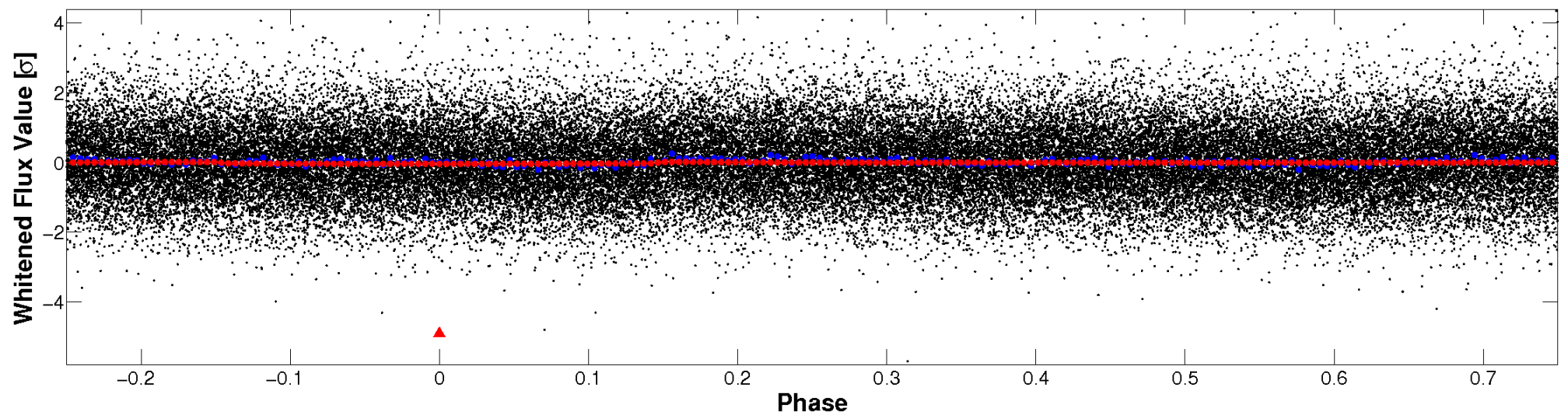


Non-Whitened Vs. Whitened Light Curve

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

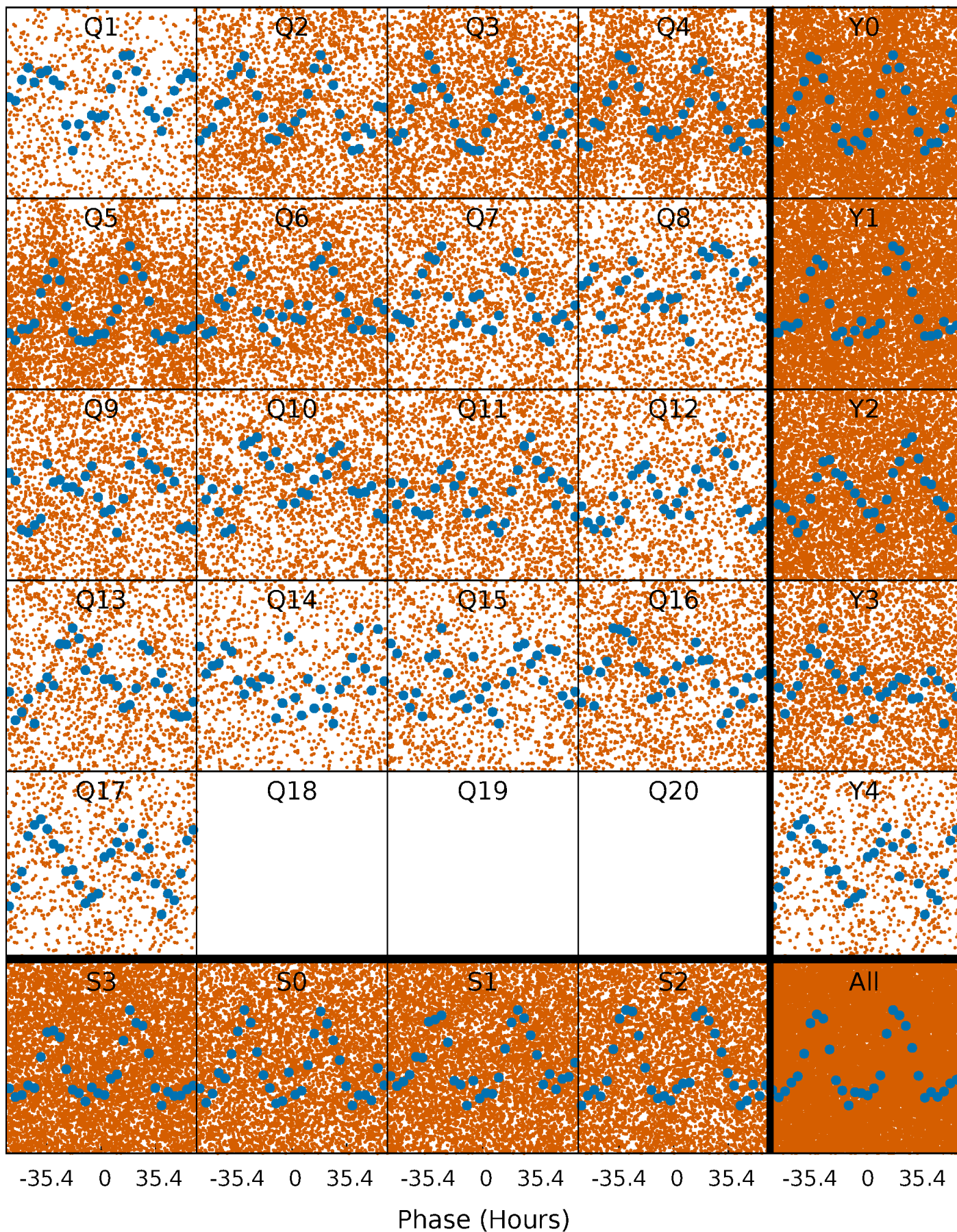


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



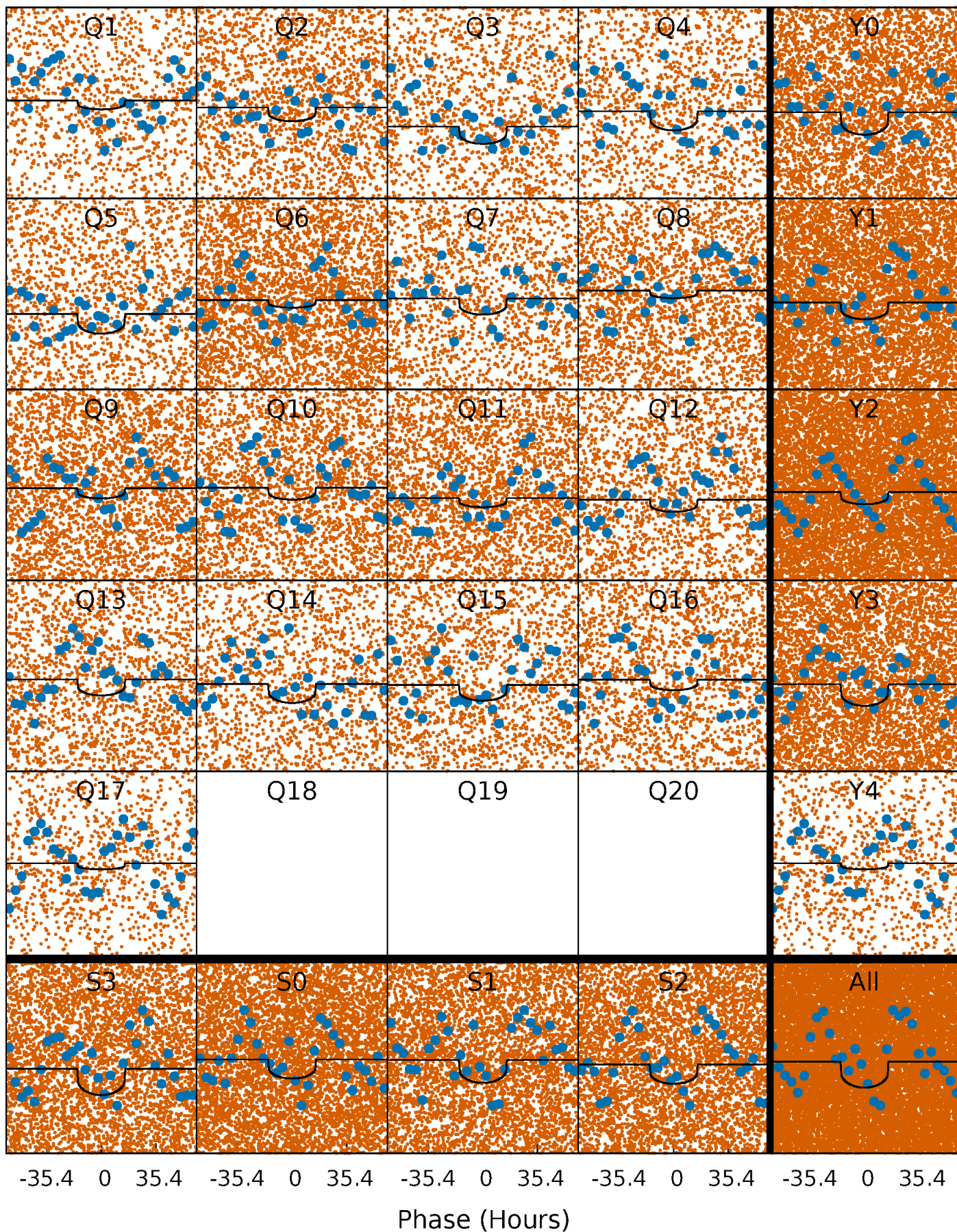
PDC Quarter-Phased Transit Curves

TCE 009550035-01 P= 4.326592 Days $T_0=132.227149$ (BKJD)



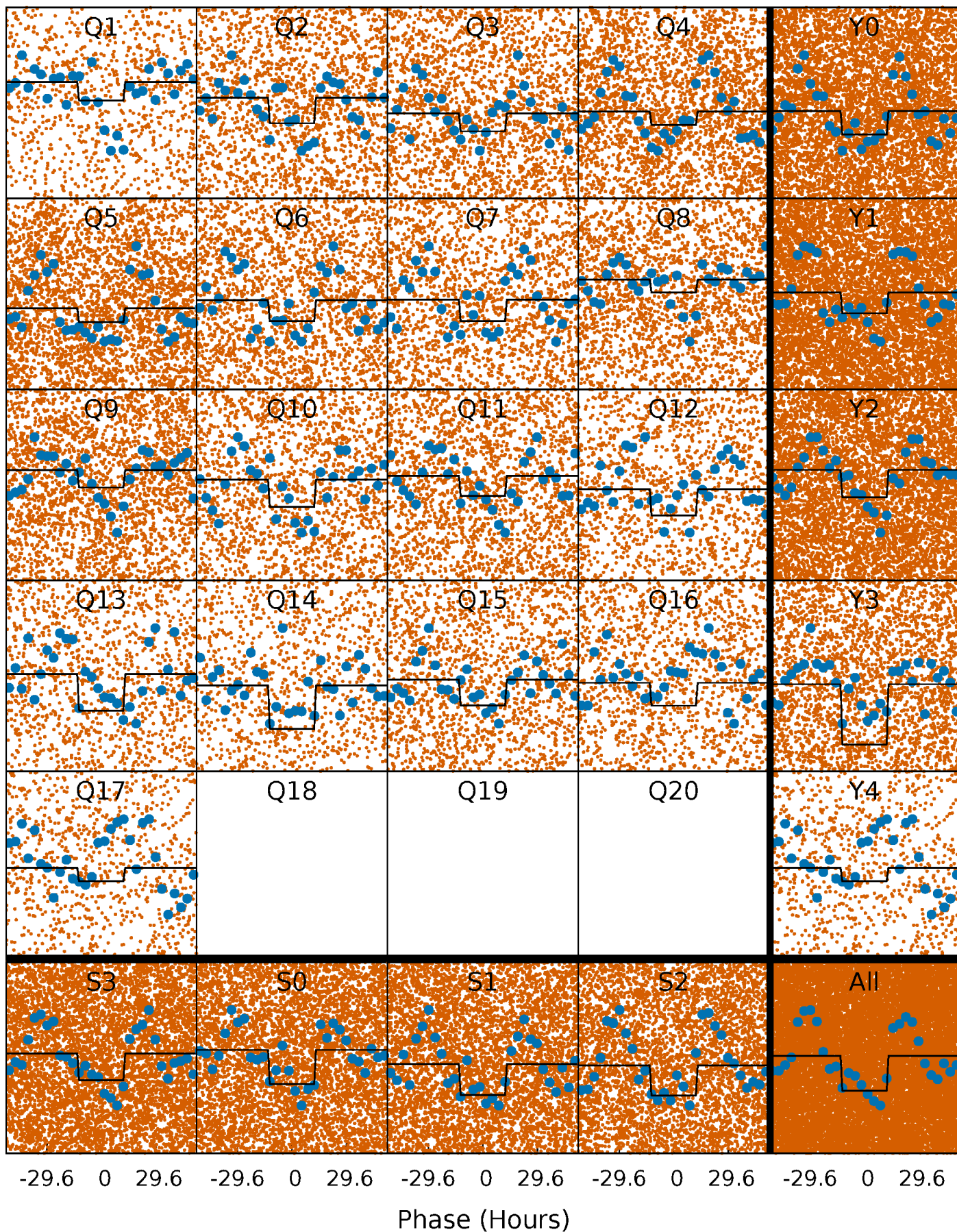
DV Quarter-Phased Transit Curves

TCE 009550035-01 P= 4.326592 Days $T_0=132.227149$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

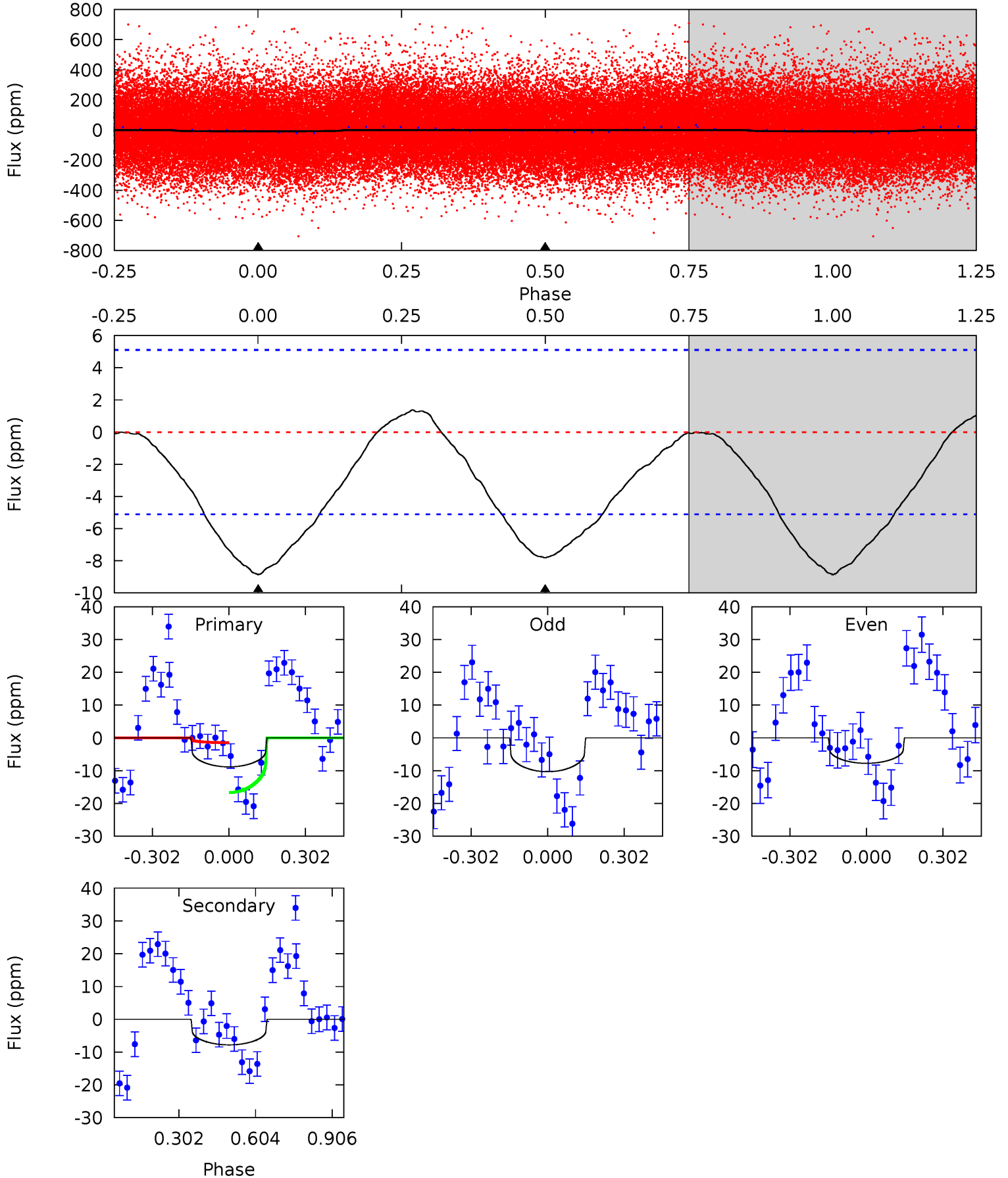
TCE 009550035-01 P= 4.327004 Days $T_0=132.213281$ (BKJD)



DV Model-Shift Uniqueness Test

009550035-01, P = 4.326592 Days, E = 127.900557 Days

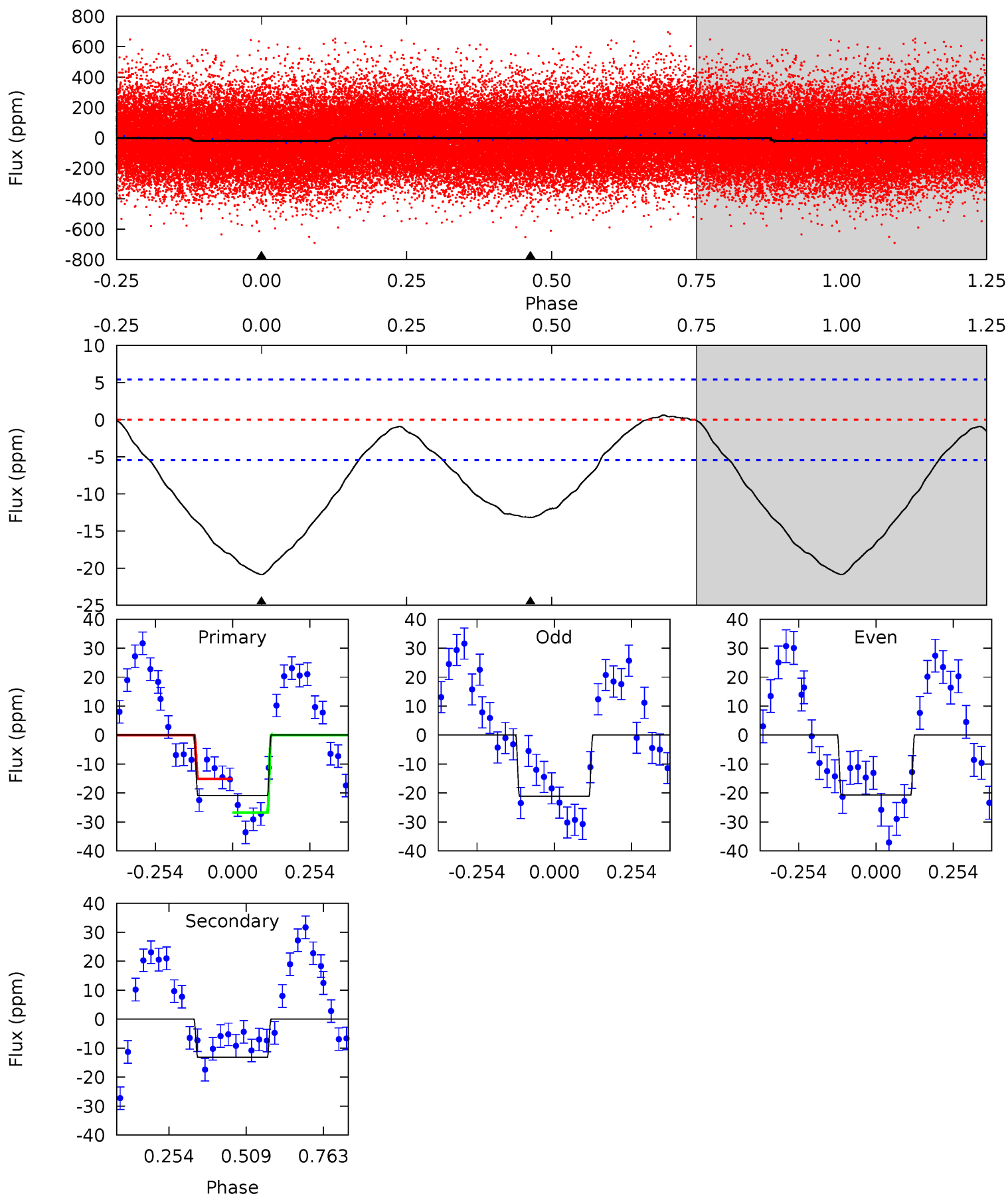
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.50	6.61	0	0	4.33	1.03	0.54	7.50	7.50	6.61	6.61	1.08	1.92	0.13	6.44



Alt Model-Shift Uniqueness Test

009550035-01, P = 4.327004 Days, E = 127.886277 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.8	10.6	0	0	4.36	1.14	0.64	16.8	16.8	10.6	10.6	0.14	1.00	0.03	4.69



Stellar Parameters For KIC 009550035

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5548^{+167}_{-150}	$4.448^{+0.126}_{-0.154}$	$-0.320^{+0.350}_{-0.300}$	$0.878^{+0.198}_{-0.132}$	$0.790^{+0.114}_{-0.057}$	$1.644^{+0.913}_{-0.683}$
	+3%/-3%	+3%/-3%	+109%/-94%	+23%/-15%	+14%/-7%	+56%/-42%
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 009550035-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-8 ± 1	$0.36^{+0.24}_{-0.22}$	1470^{+93}_{-77}	4923^{+2793}_{-911}	78^{+380}_{-51}
Alt.	-13 ± 1	$0.44^{+0.25}_{-0.22}$	1467^{+94}_{-82}	4985^{+2065}_{-767}	85^{+256}_{-50}

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

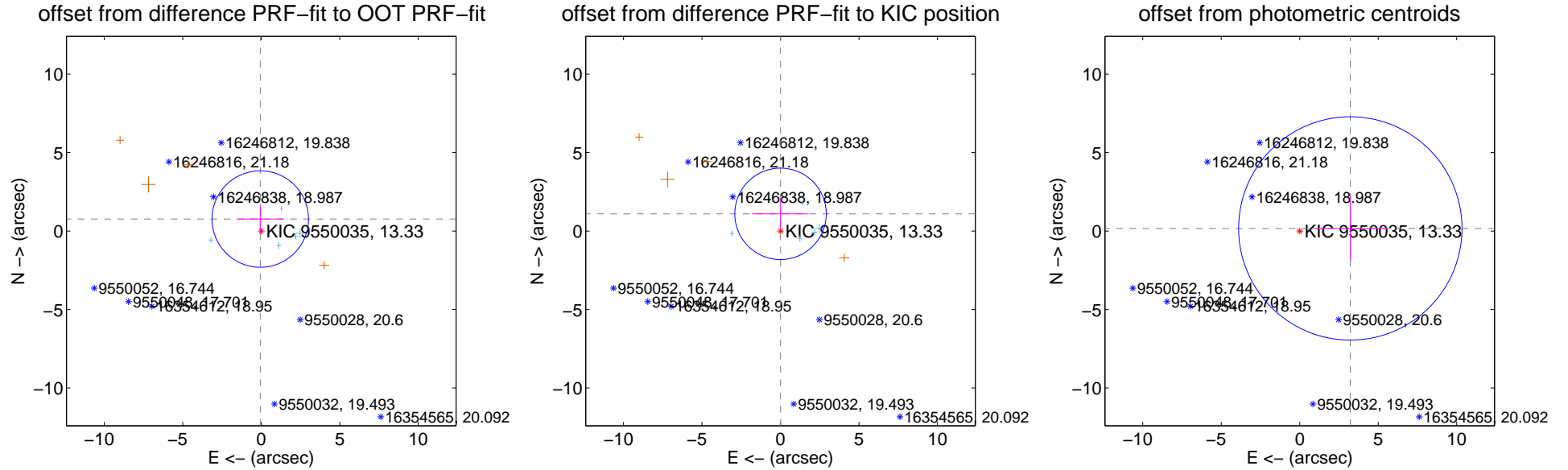
DV Centroid Data

Supplemental centroid analysis for 009550035-01. Kepler magnitude: 13.33. Transit SNR 4.81

There are 5 quarters with good PRF difference image offsets

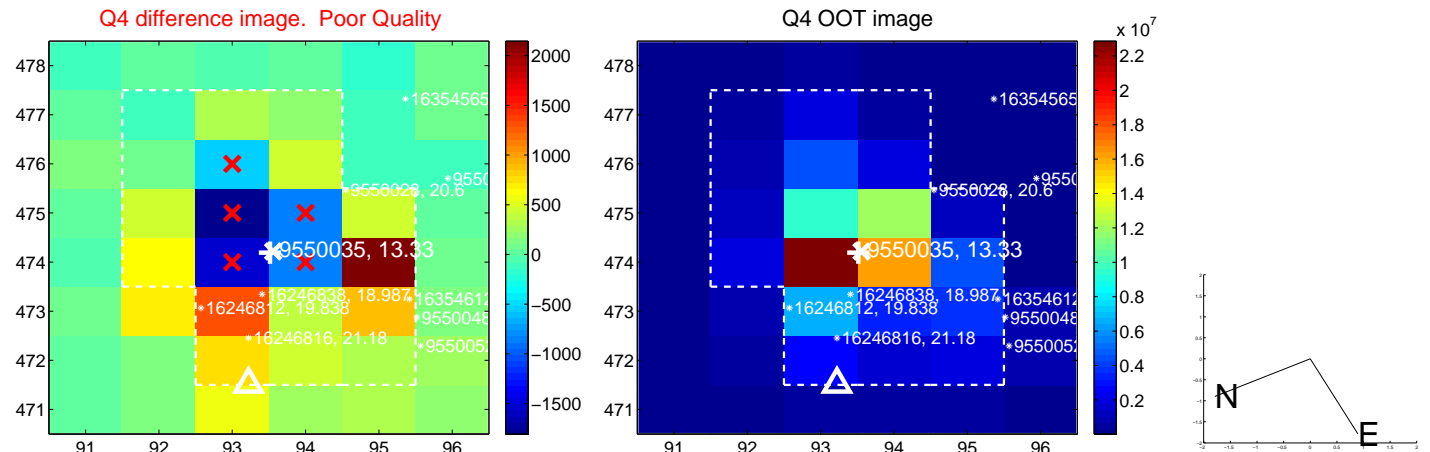
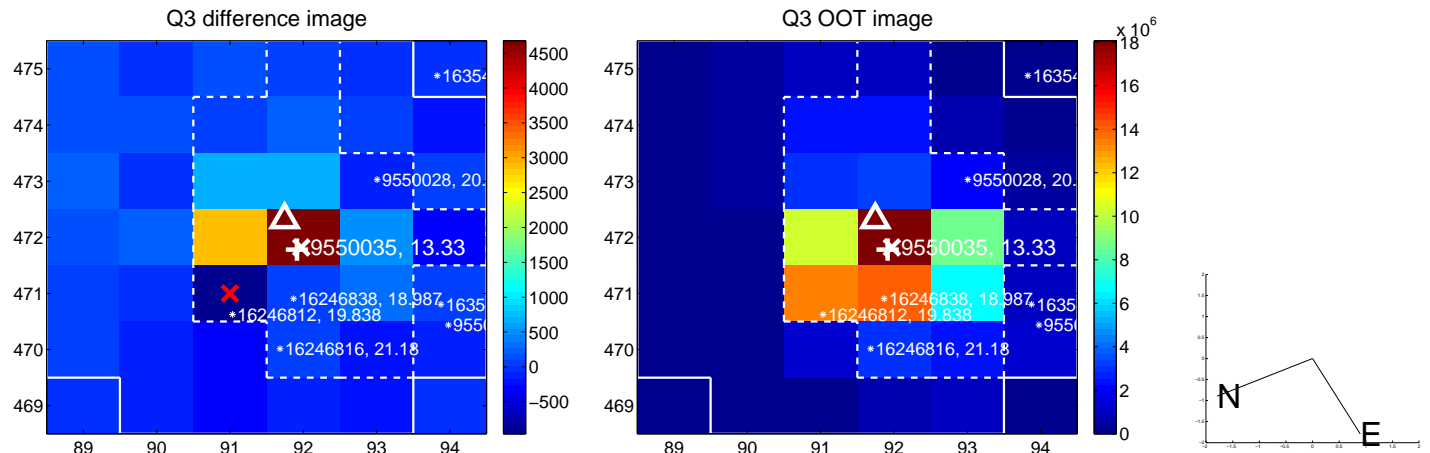
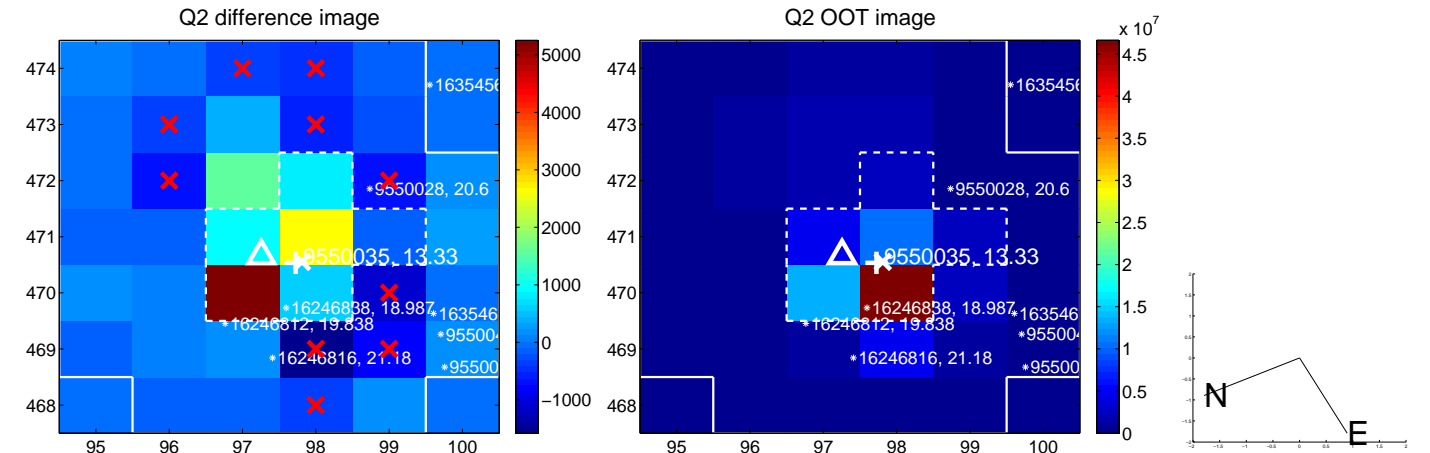
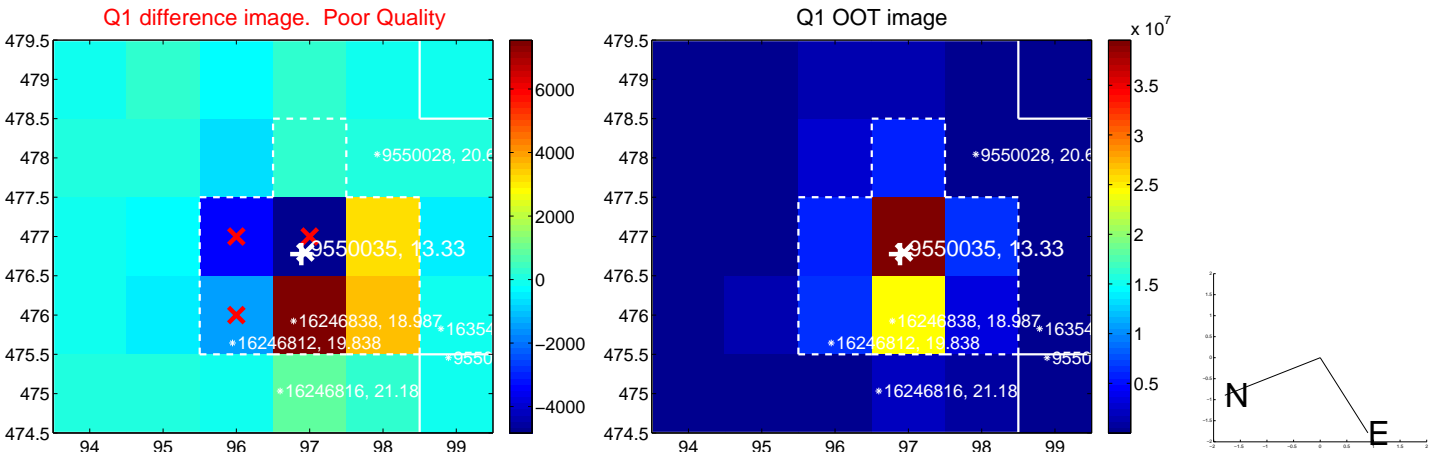
The direct PRF centroid is offset from the target star catalog position by about 0.48 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.768 ± 1.025	0.75	0.064 ± 1.486	0.765 ± 0.921
PRF-fit source offset from KIC position	1.097 ± 0.971	1.13	-0.001 ± 1.790	1.097 ± 0.973
photometric centroid source offset	3.23 ± 2.37	1.36	-3.22 ± 2.37	0.17 ± 2.07

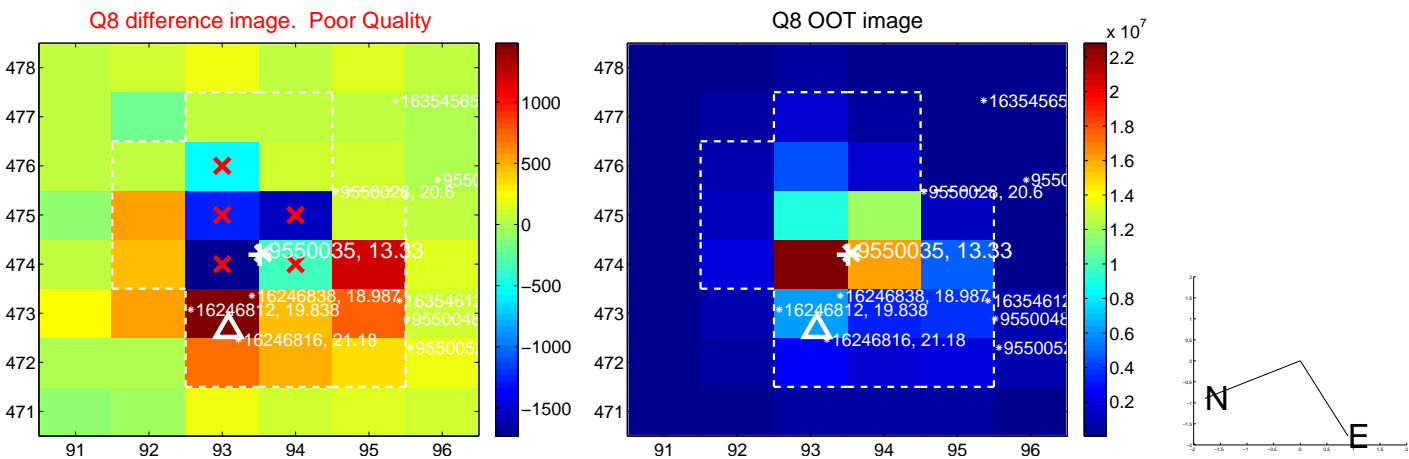
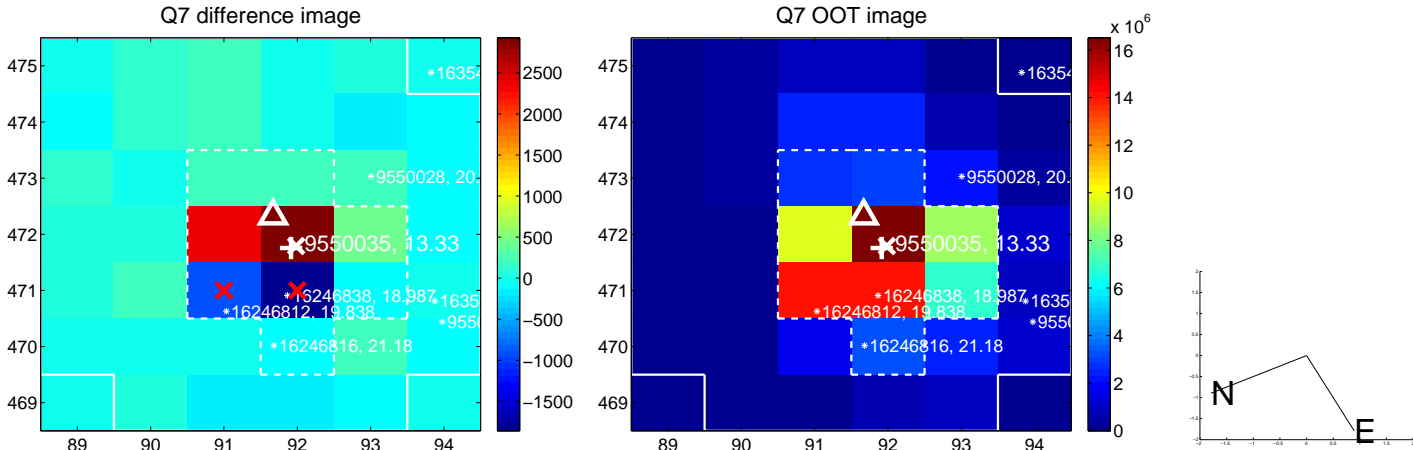
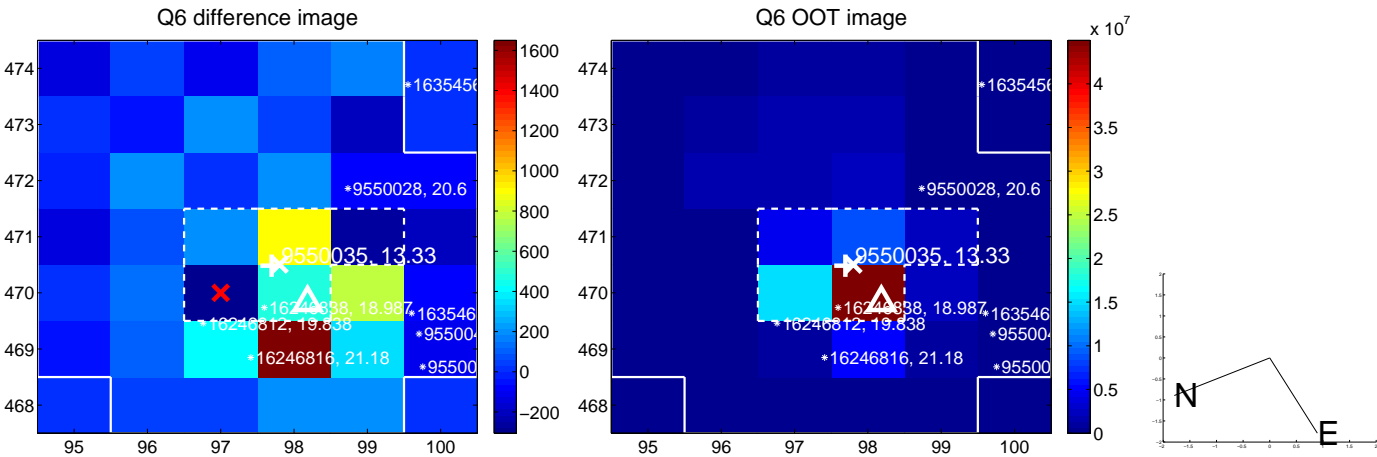
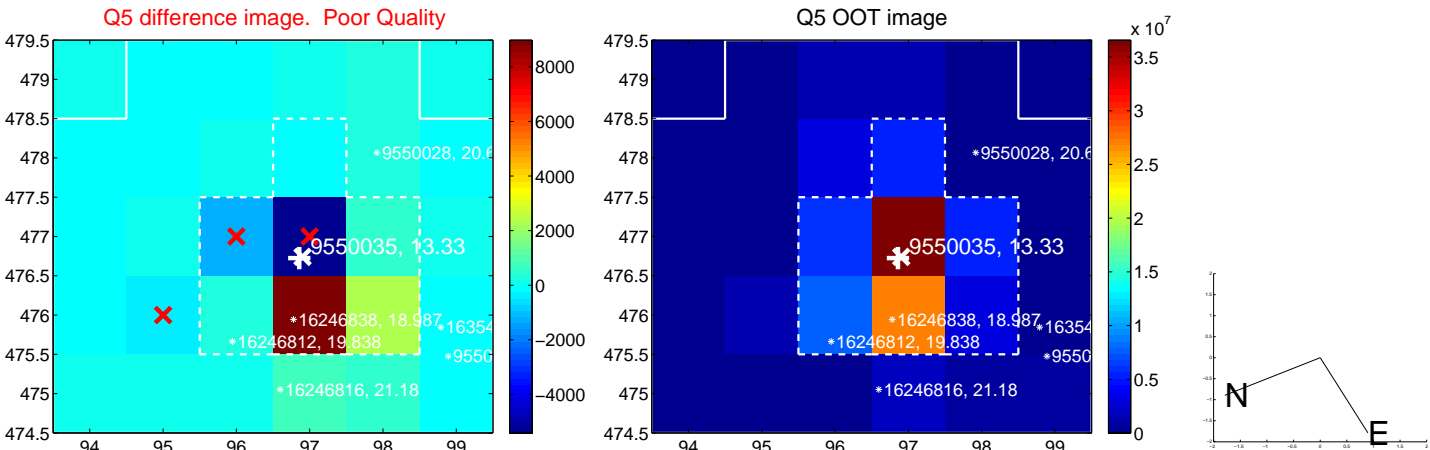


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

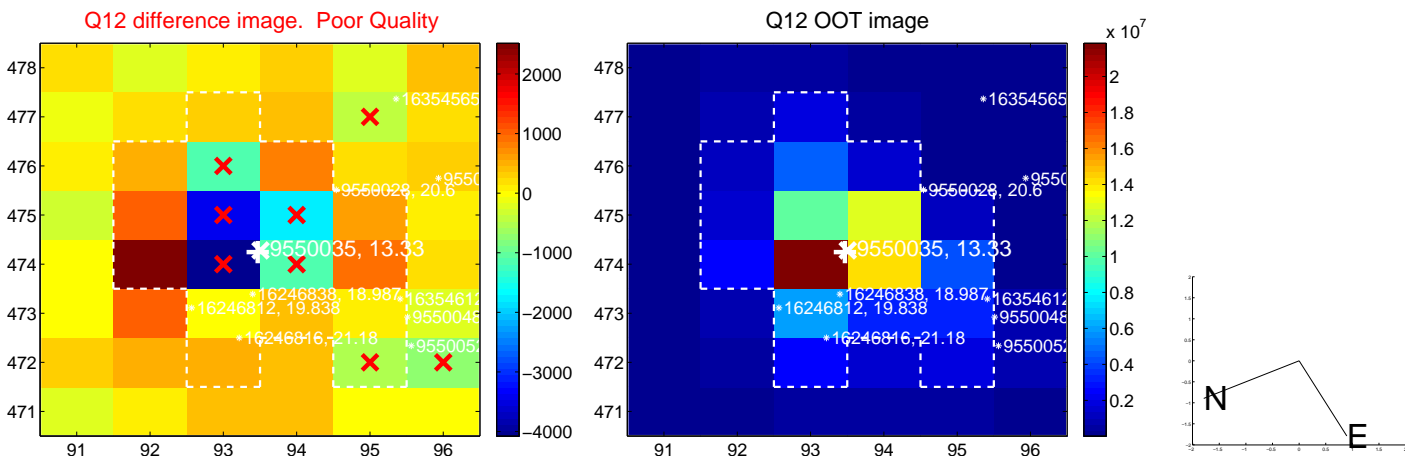
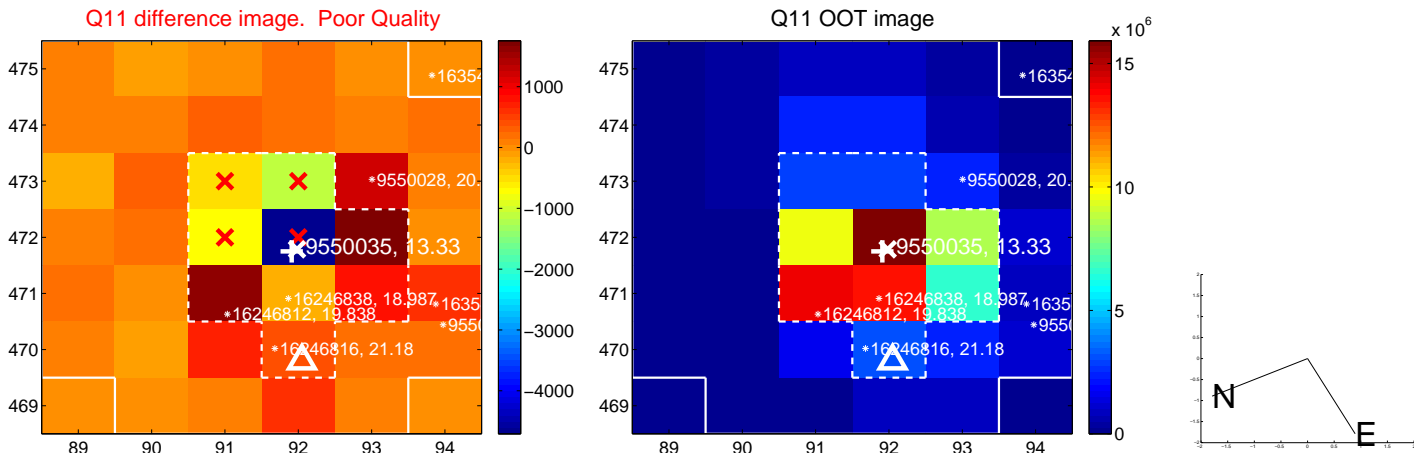
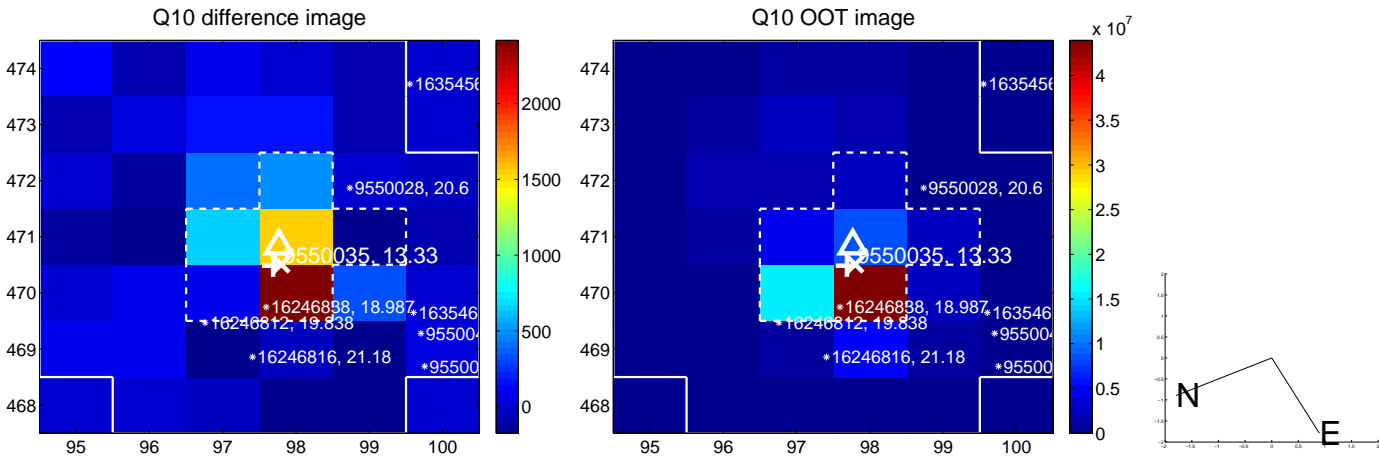
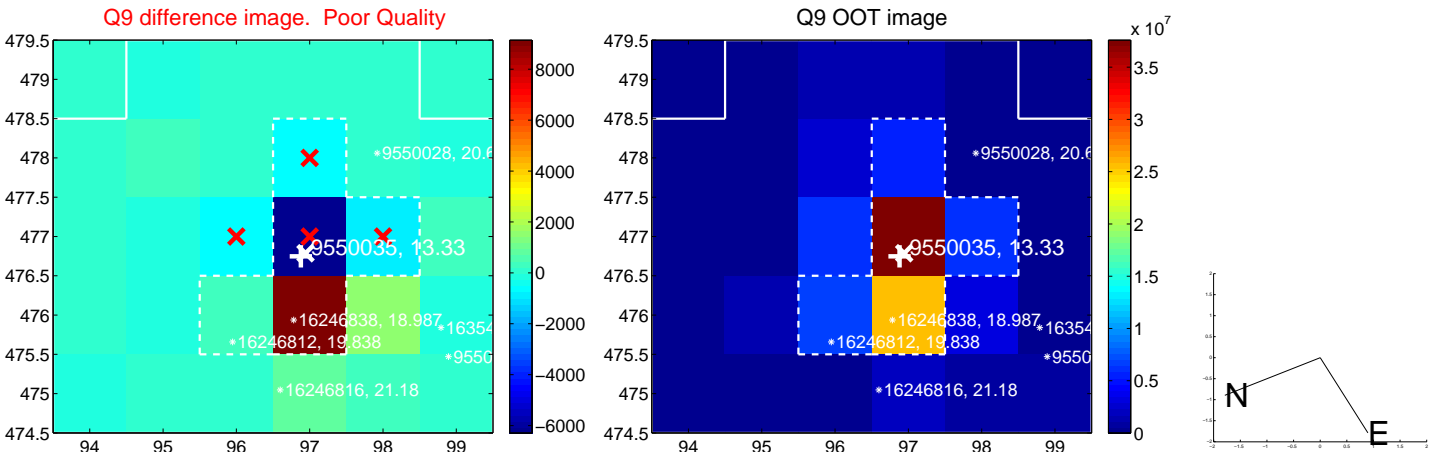
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



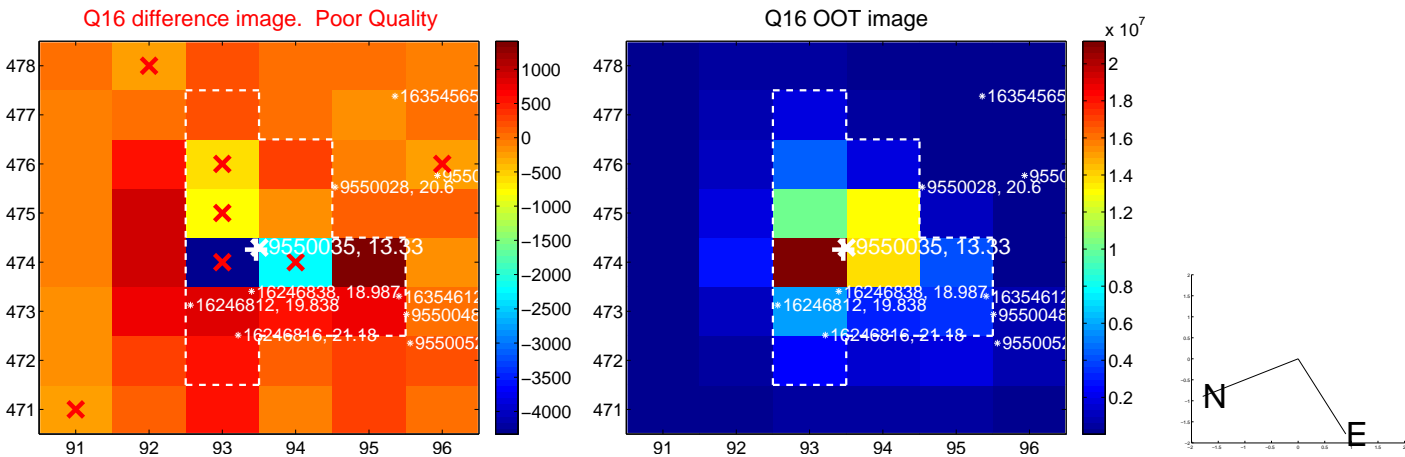
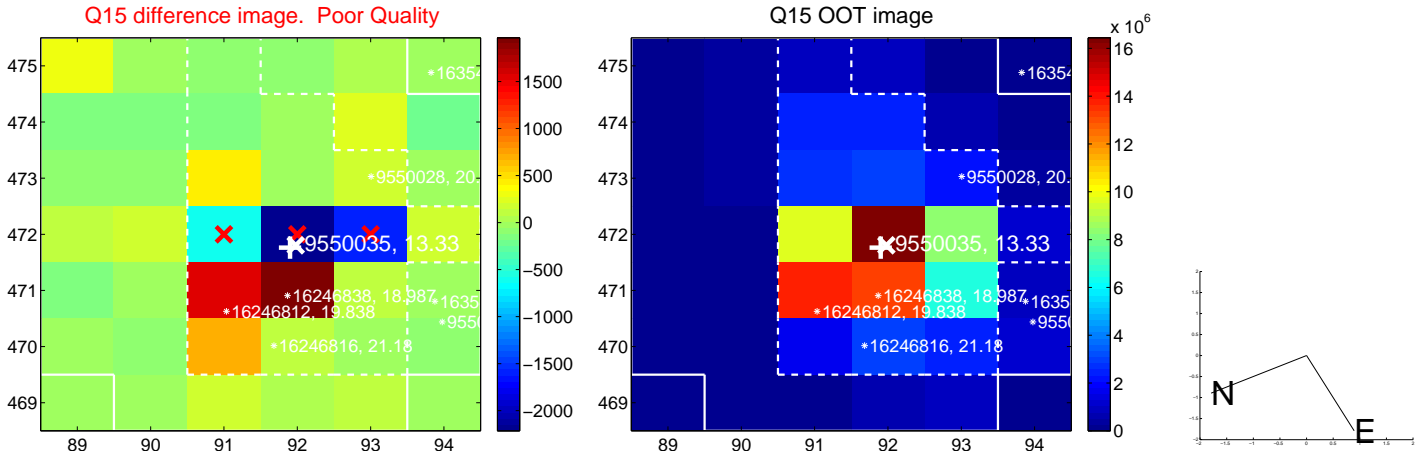
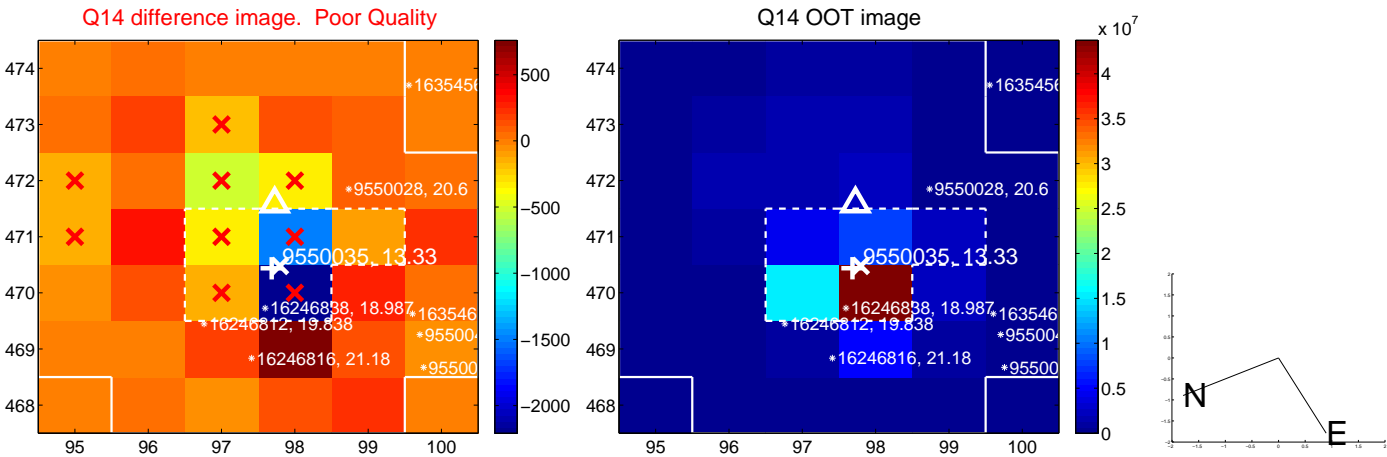
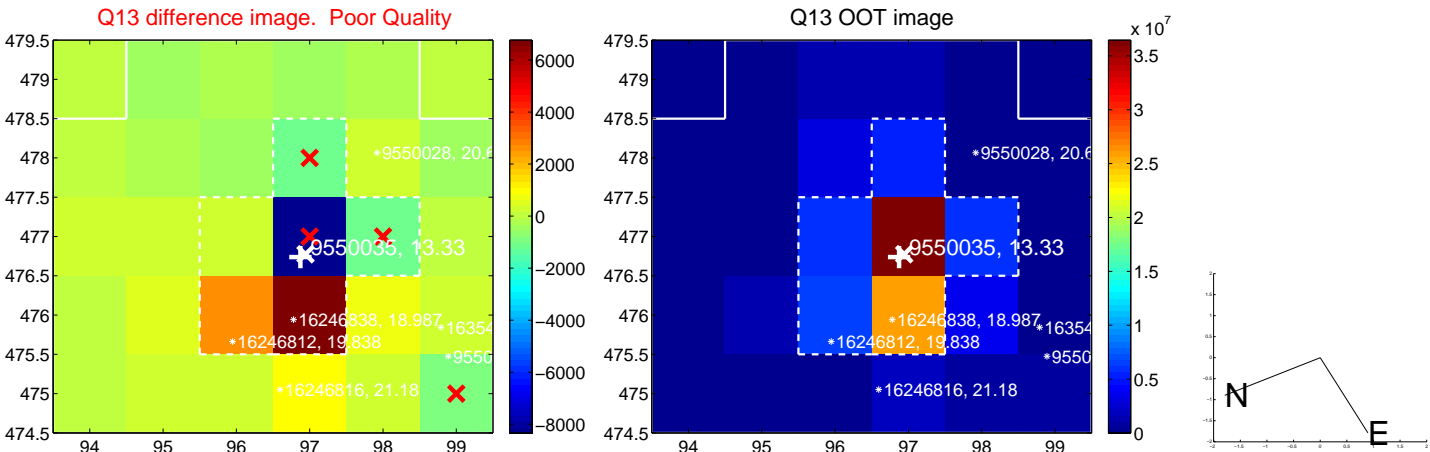
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



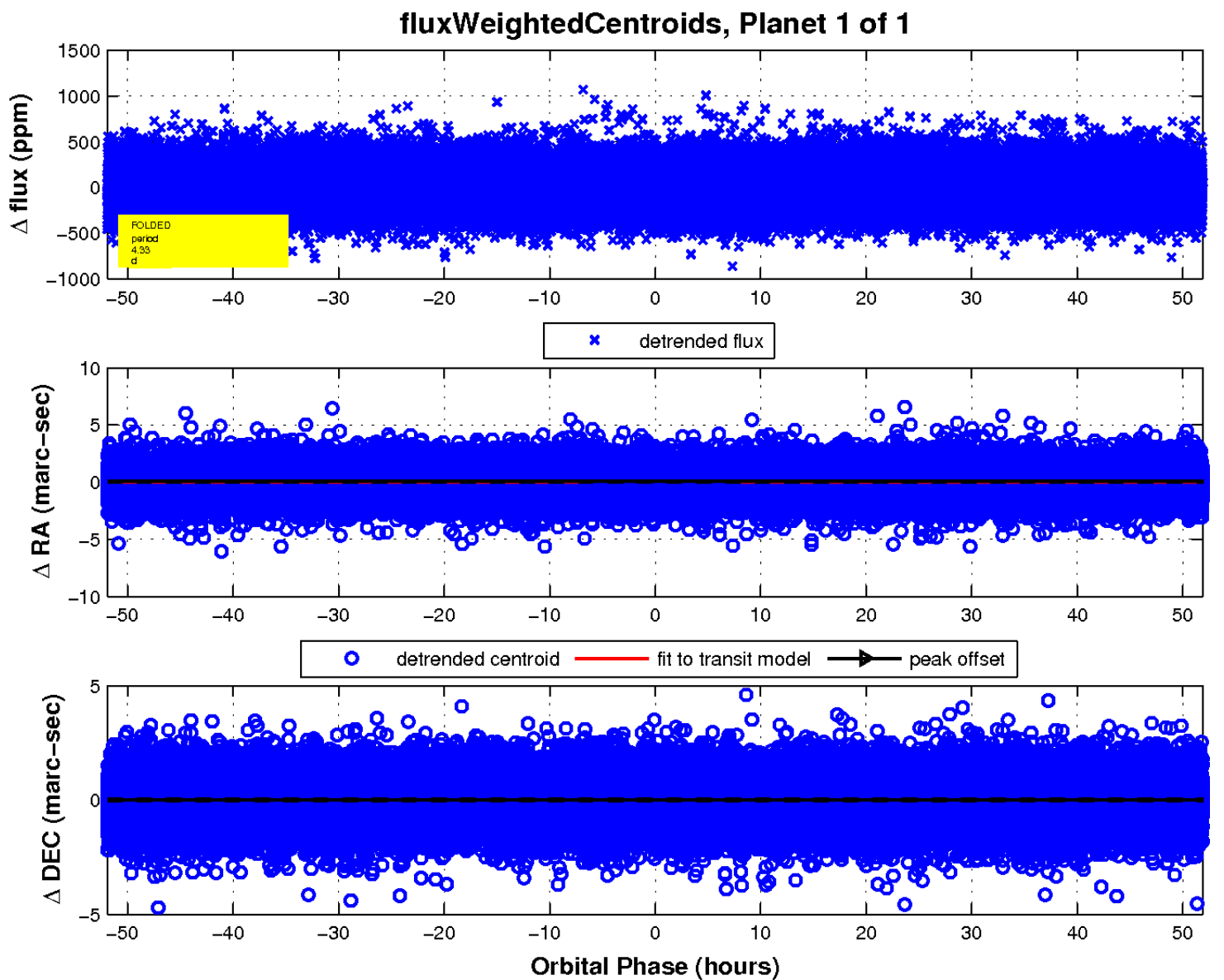
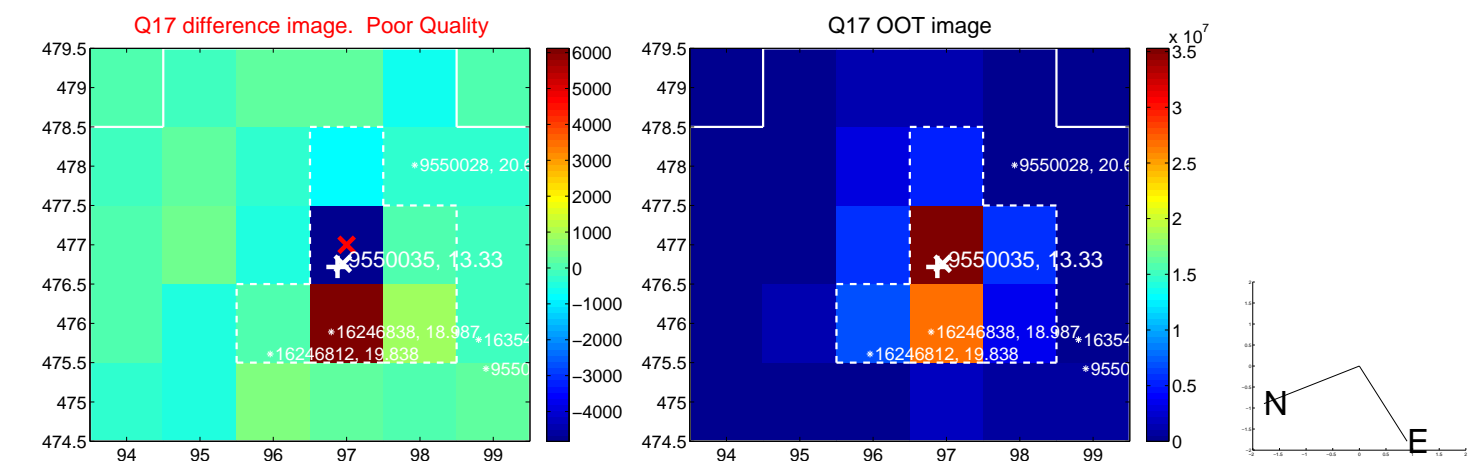
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UKIRT Image

