

KIC 007900450

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})
007900450-01	OBS	5441.01	25.481600	145.414324	157.6	11.562	9.4	9.8	0.99	6250	1.45	44.74

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007900450-01	OBS	PC	1.00	0	0	0	0	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.

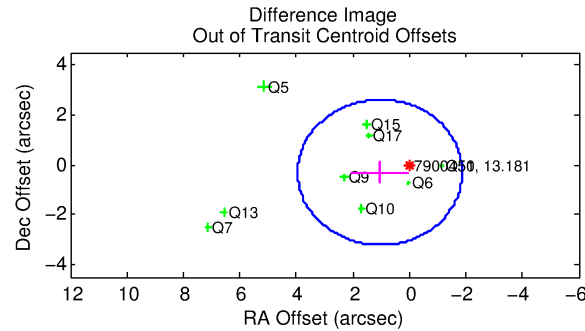
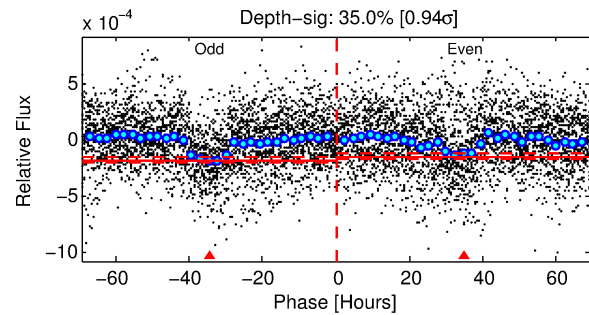
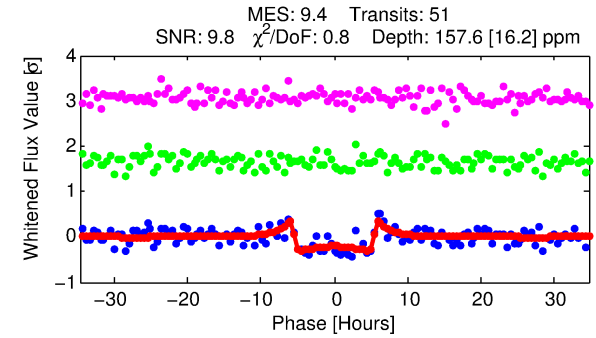
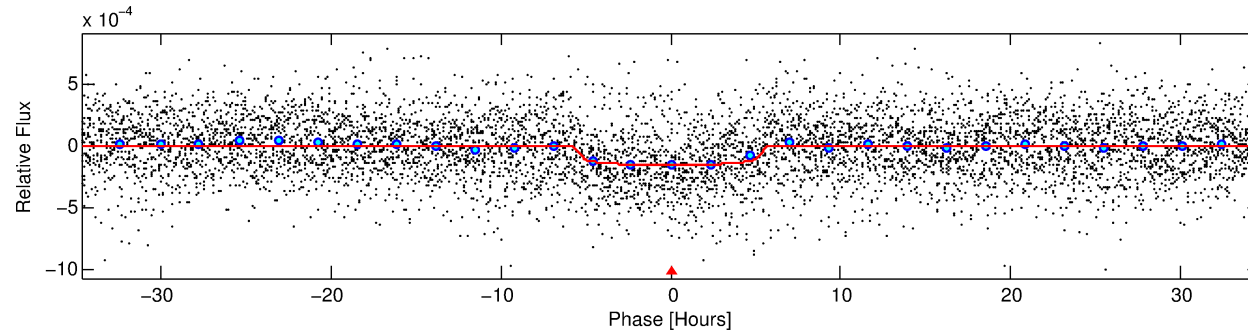
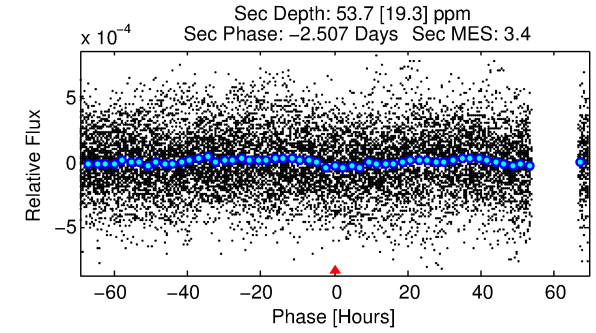
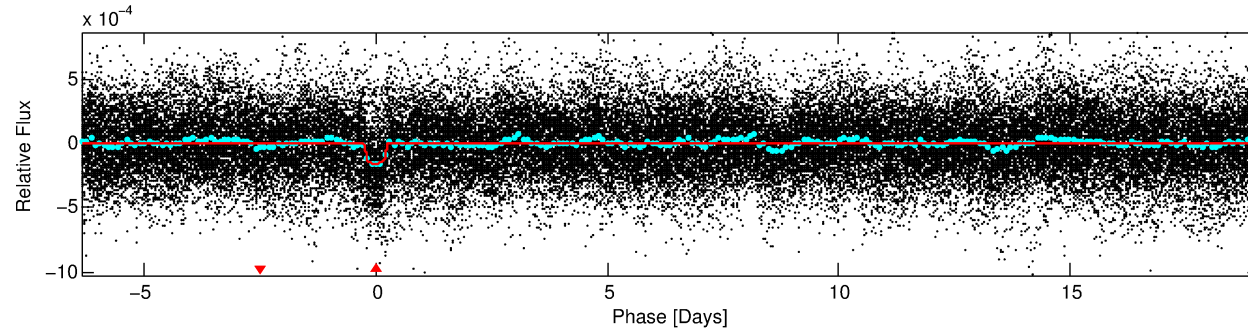
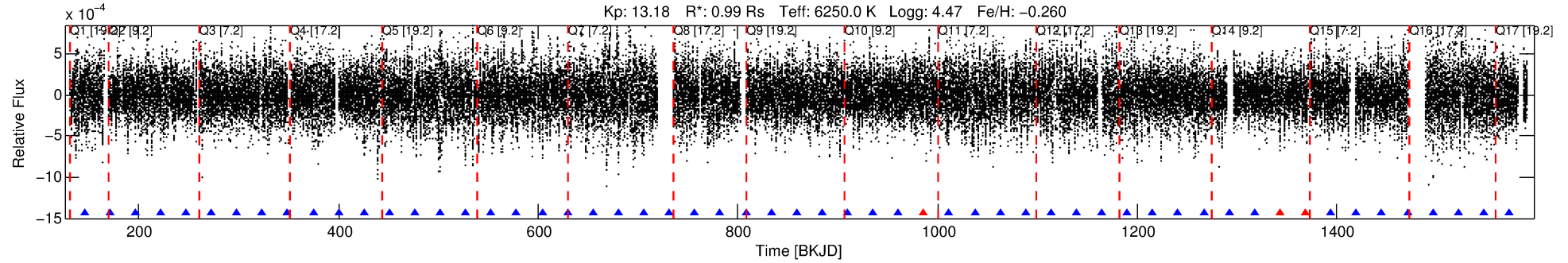
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007900450-01

No Significant Match Found

DV One-Page Summary

KIC: 7900450 Candidate: 1 of 1 Period: 25.482 d
KOI: K05441.01 Corr: 0.965



DV Fit Results:

Period = 25.48160 [0.00022] d
Epoch = 145.4143 [0.0071] BKJD
Rp/R* = 0.0135 [0.0010]
a/R* = 7.88 [1.96]
b = 0.90 [0.05]
Seff = 44.74 [18.00]
Teff = 659 [66] K
Rp = 1.45 [0.46] Re
a = 0.1724 [0.0450] AU
Ag = 416.76 [226.66] [1.83σ]
Teffp = 4607 [473] K [8.26σ]

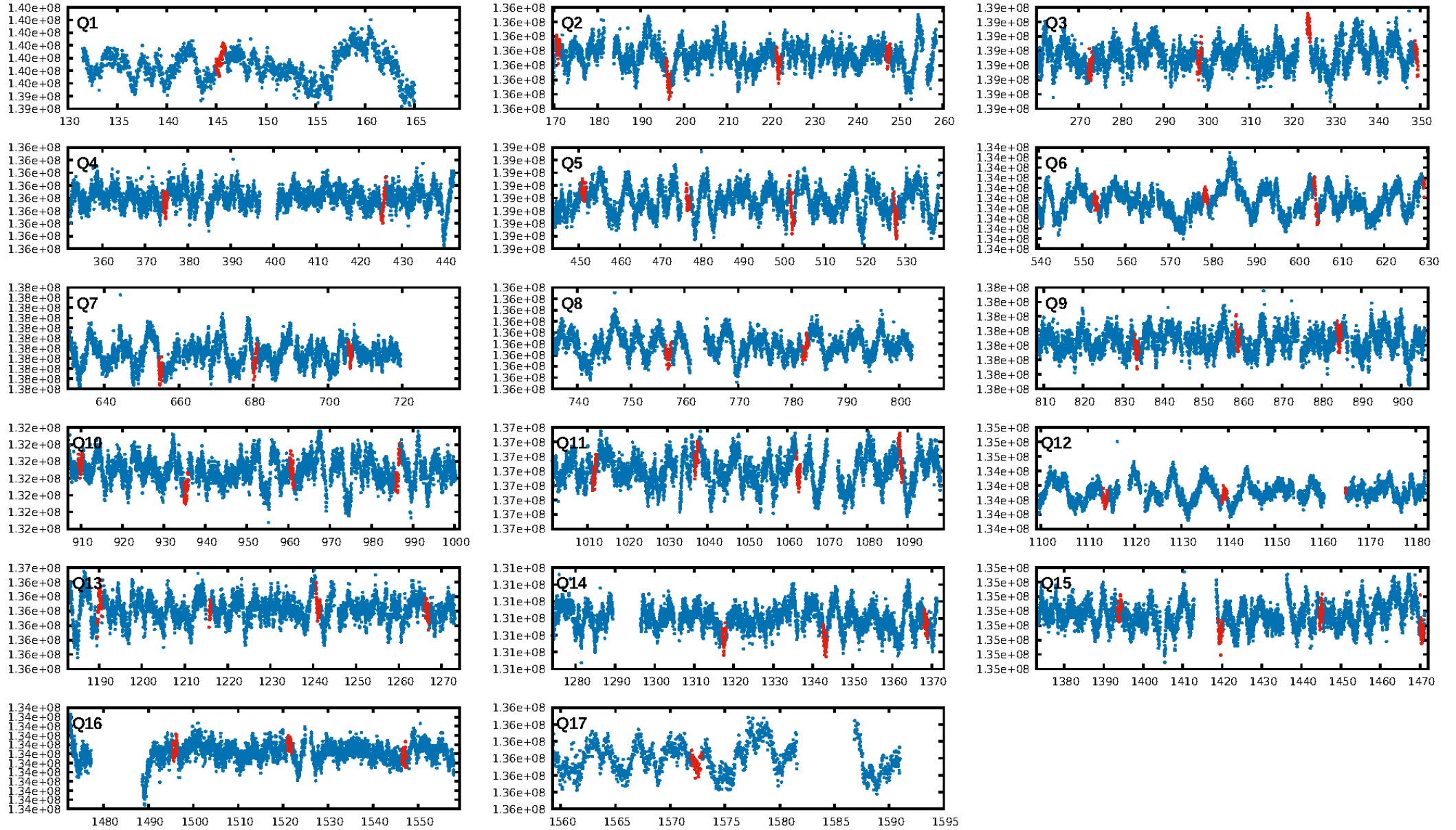
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 96.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 5.62e-19
RollingBand-fgt: 0.94 [46/49]
GhostDiagnostic-chr: -8.898
Centroid-sig: 0.2%
Centroid-so: 2.307 arcsec [2.77σ]
OotOffset-rm: 1.088 arcsec [1.12σ]
KicOffset-rm: 6.382 arcsec [6.66σ]
OotOffset-st: 2/3/0/4 [9]
KicOffset-st: 2/3/0/4 [9]
DiffImageQuality-fgm: 0.44 [4/9]
DiffImageOverlap-fno: 1.00 [17/17]

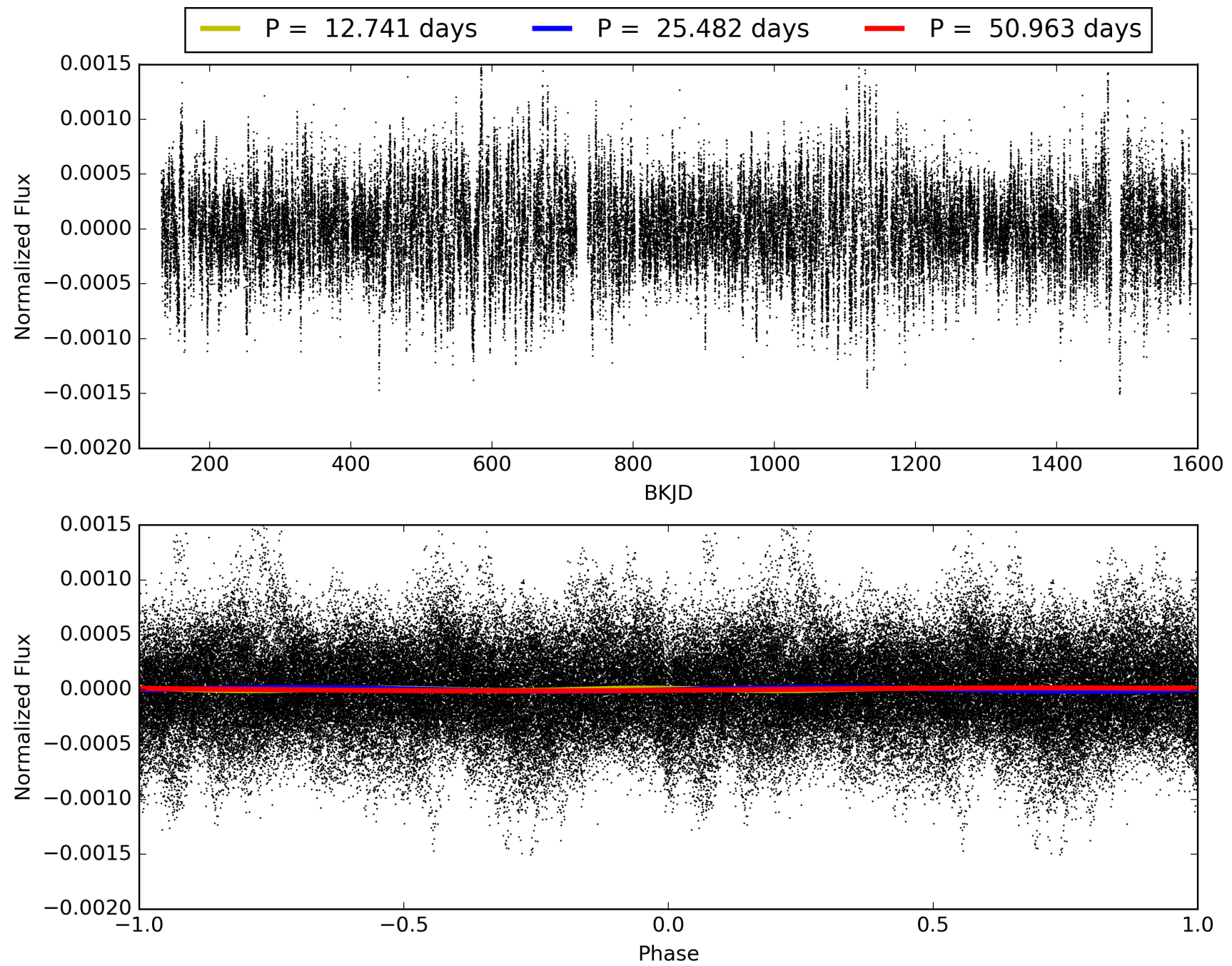
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 00:42:09 Z

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

TCE 007900450-01, PDC Light Curves

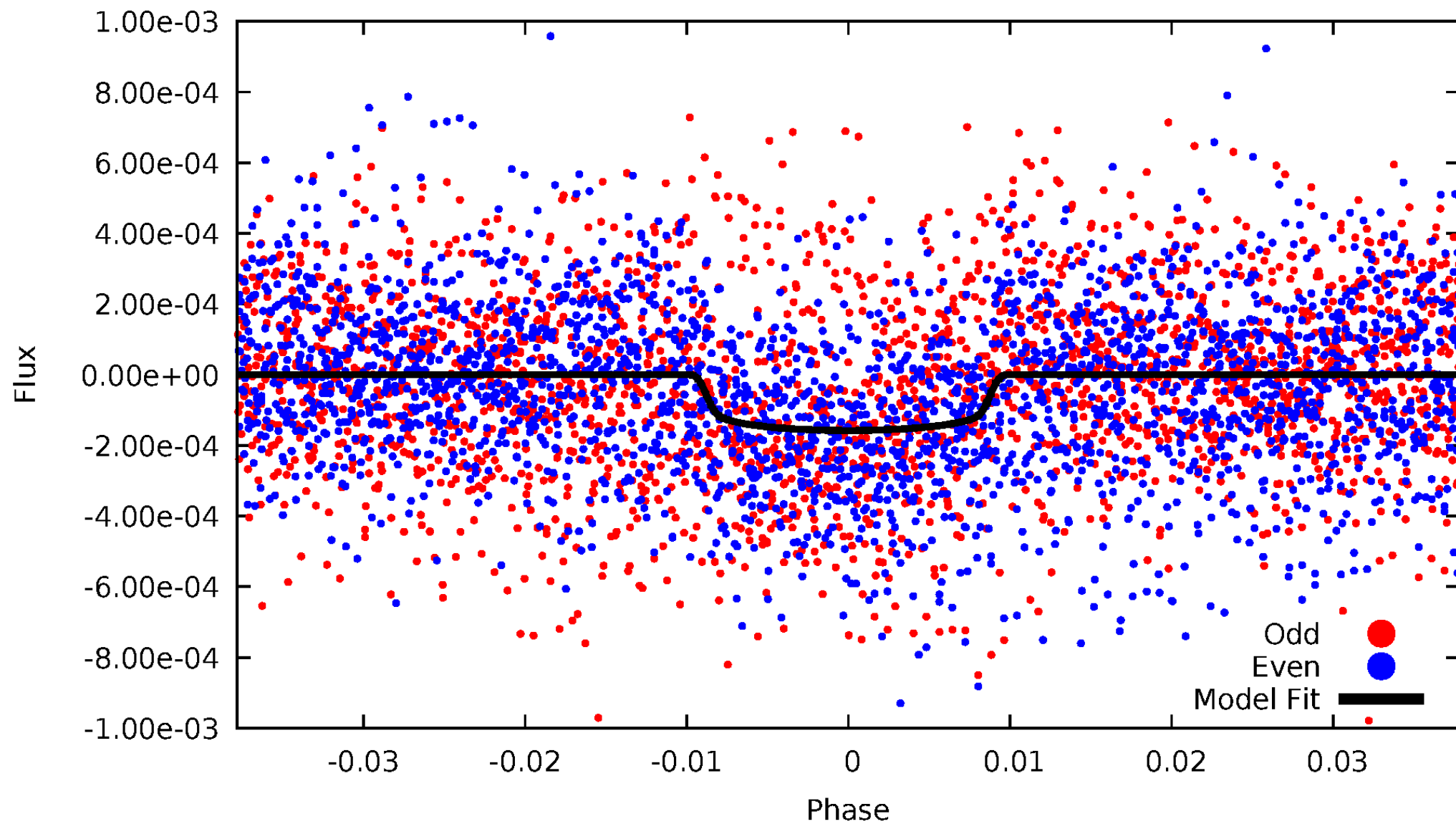


TCE 007900450-01



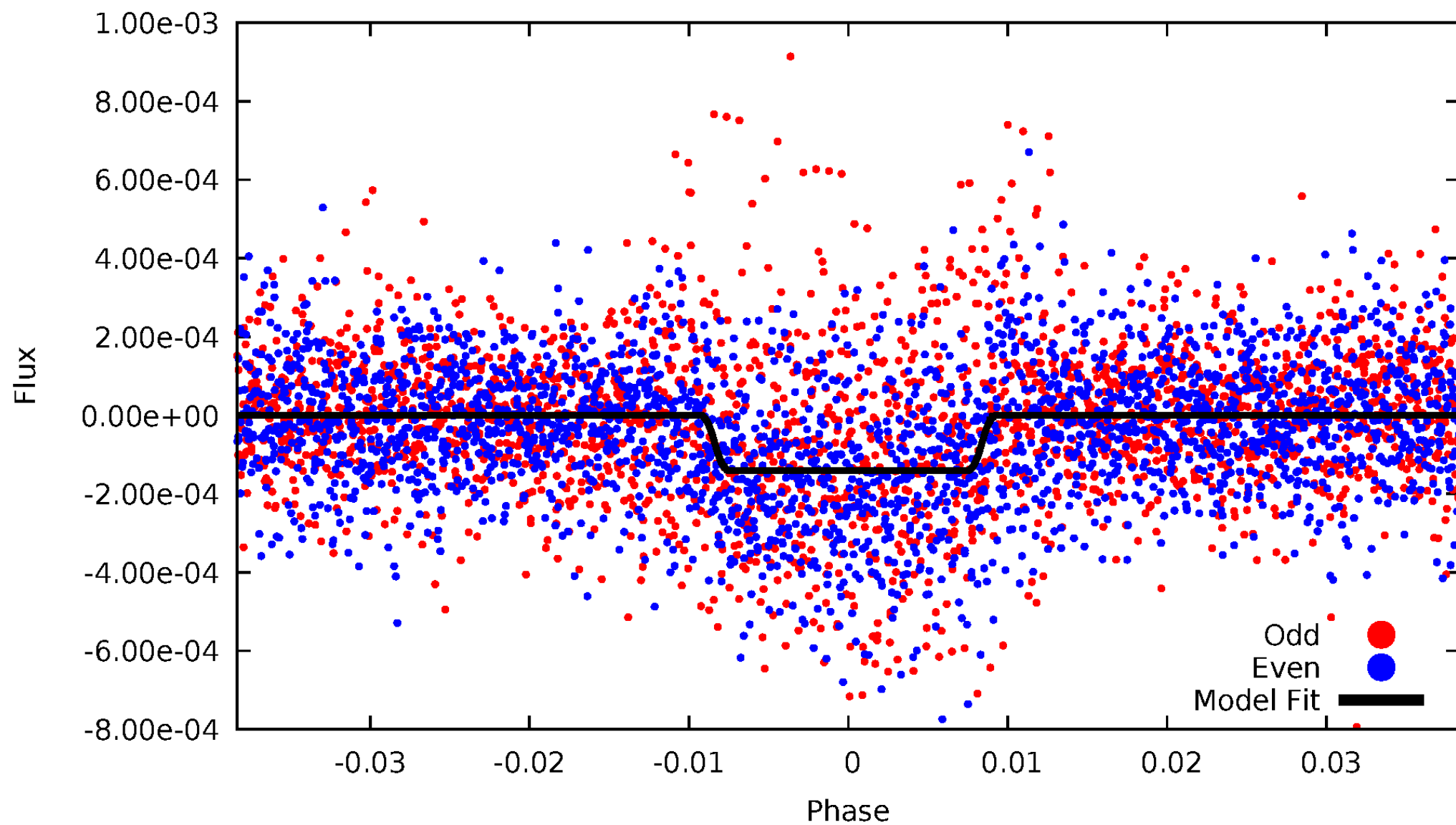
DV Odd/Even

TCE 007900450-01



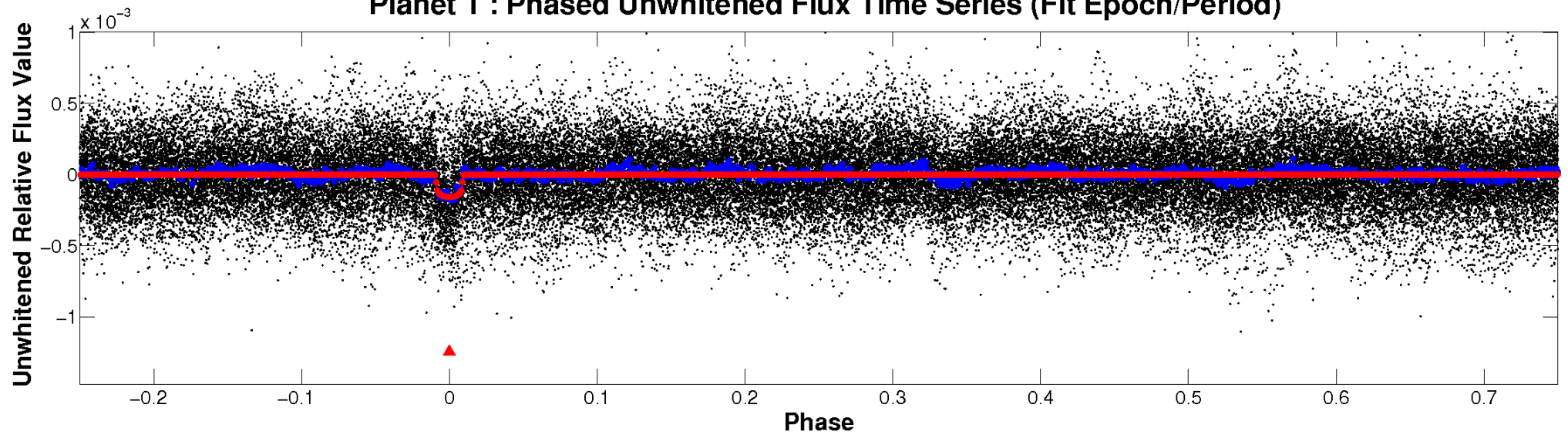
ALT Odd/Even

TCE 007900450-01

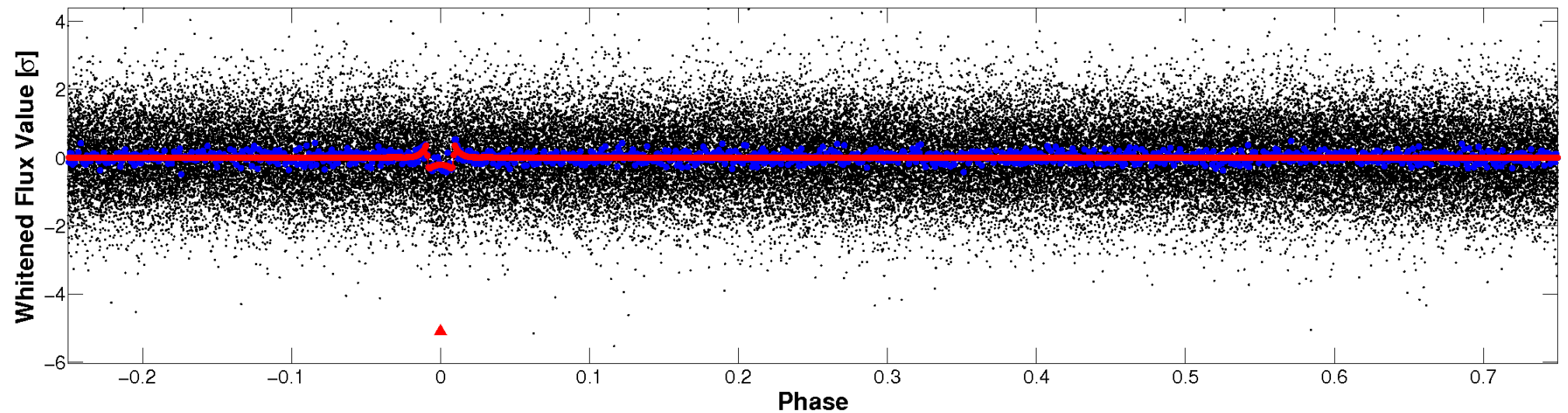


Non-Whitened Vs. Whitened Light Curve

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

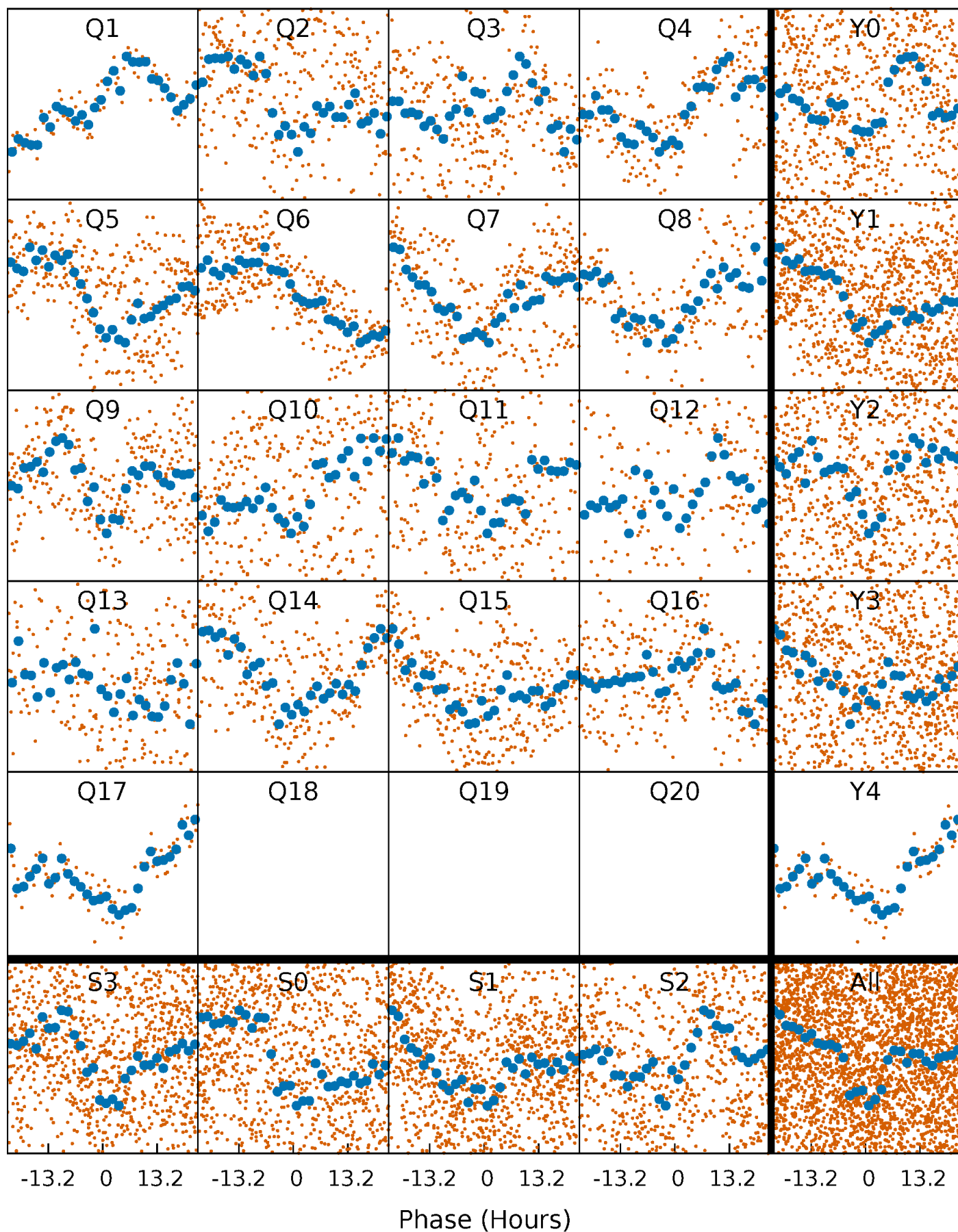


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



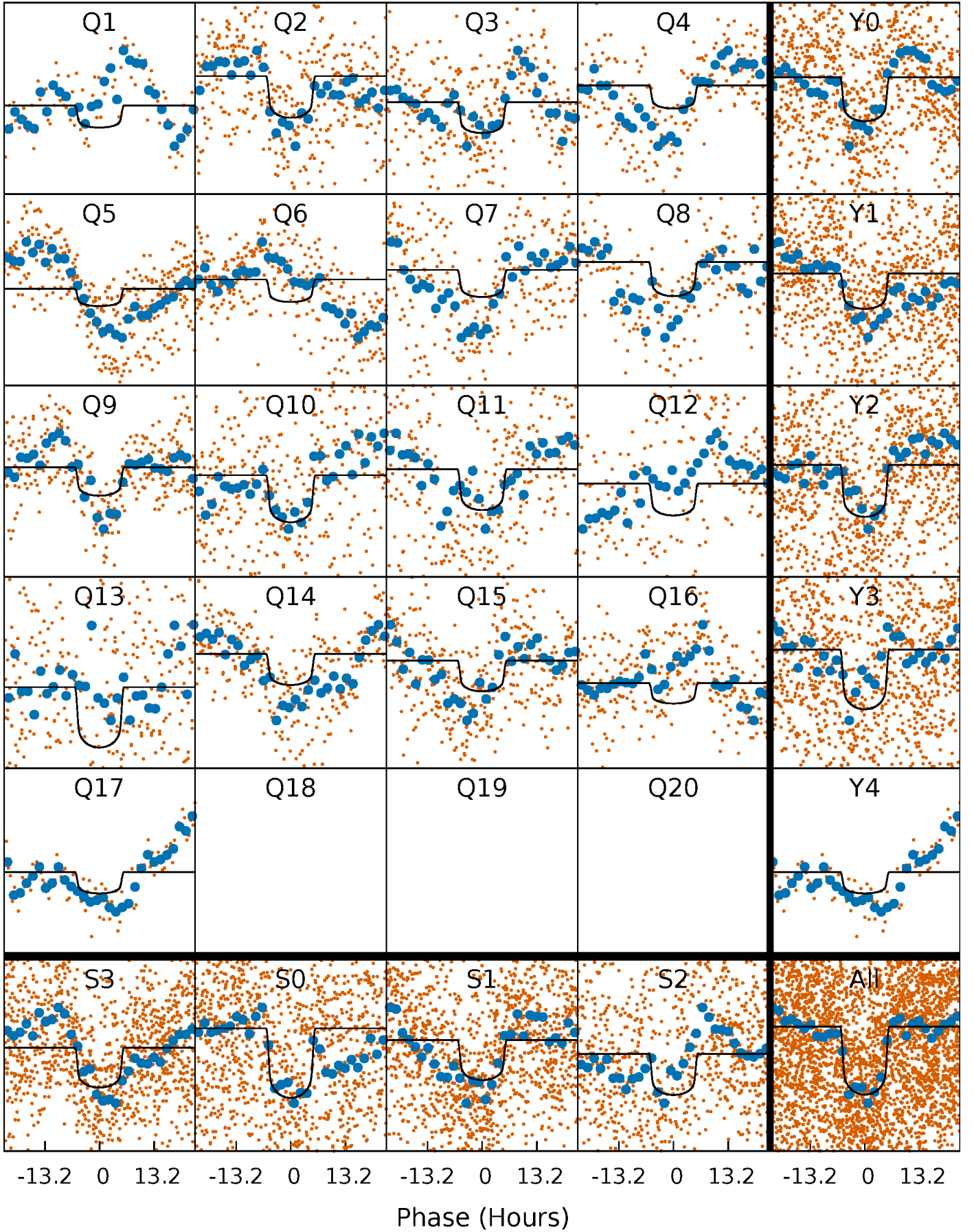
PDC Quarter-Phased Transit Curves

TCE 007900450-01 P= 25.481600 Days $T_0=145.414324$ (BKJD)



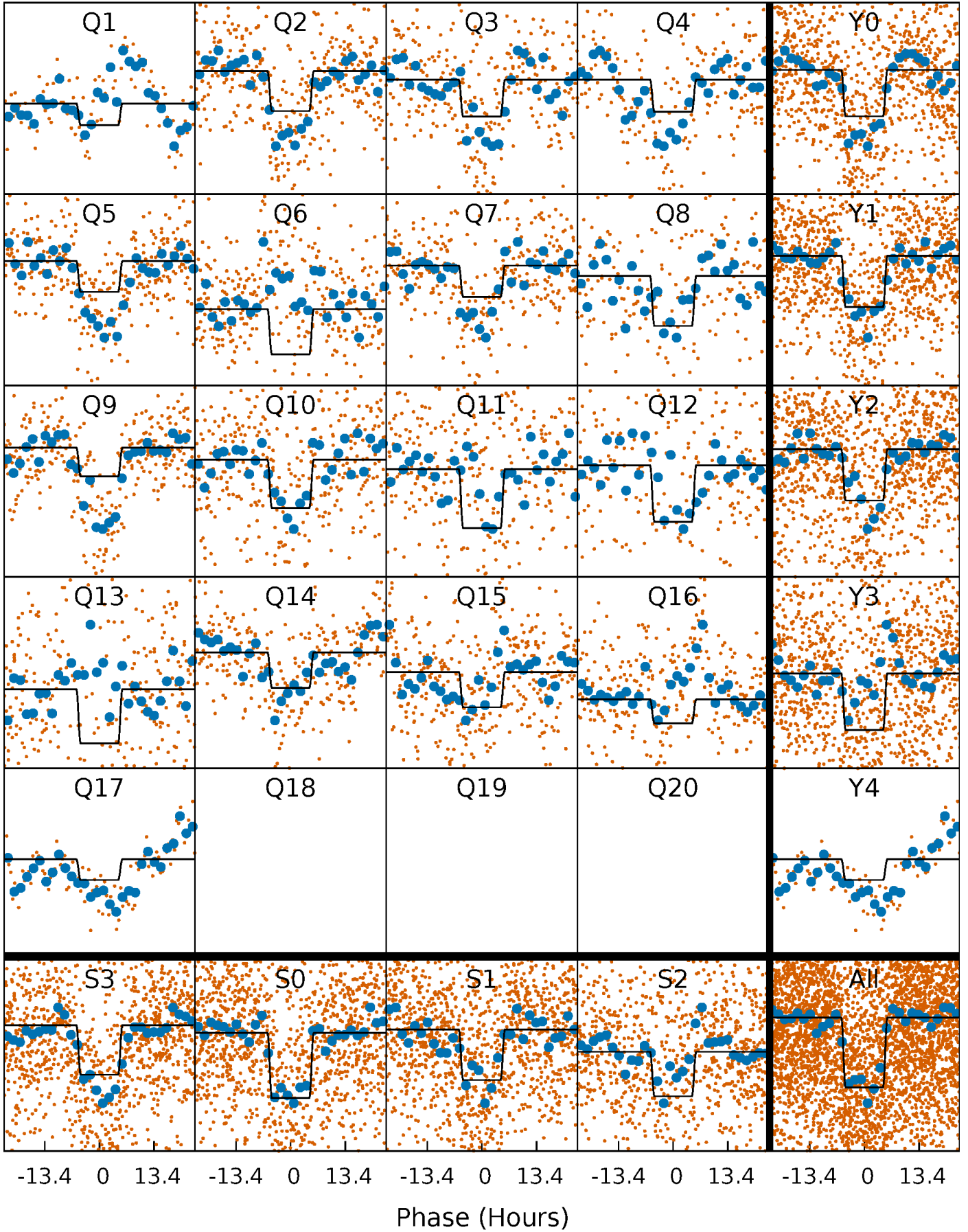
DV Quarter-Phased Transit Curves

TCE 007900450-01 P= 25.481600 Days $T_0=145.414324$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

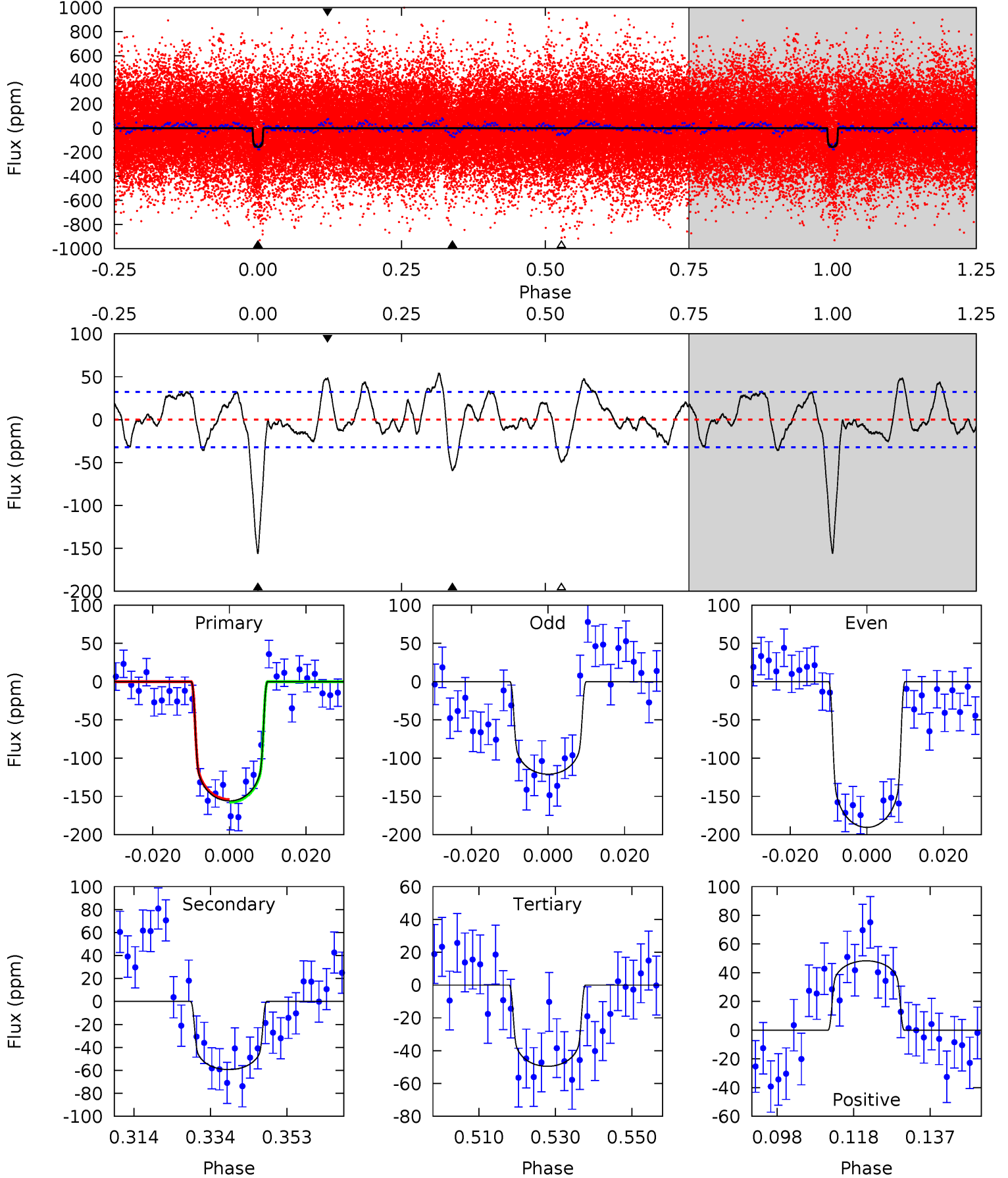
TCE 007900450-01 P= 25.481848 Days $T_0=145.409030$ (BKJD)



DV Model-Shift Uniqueness Test

007900450-01, P = 25.481600 Days, E = 119.932724 Days

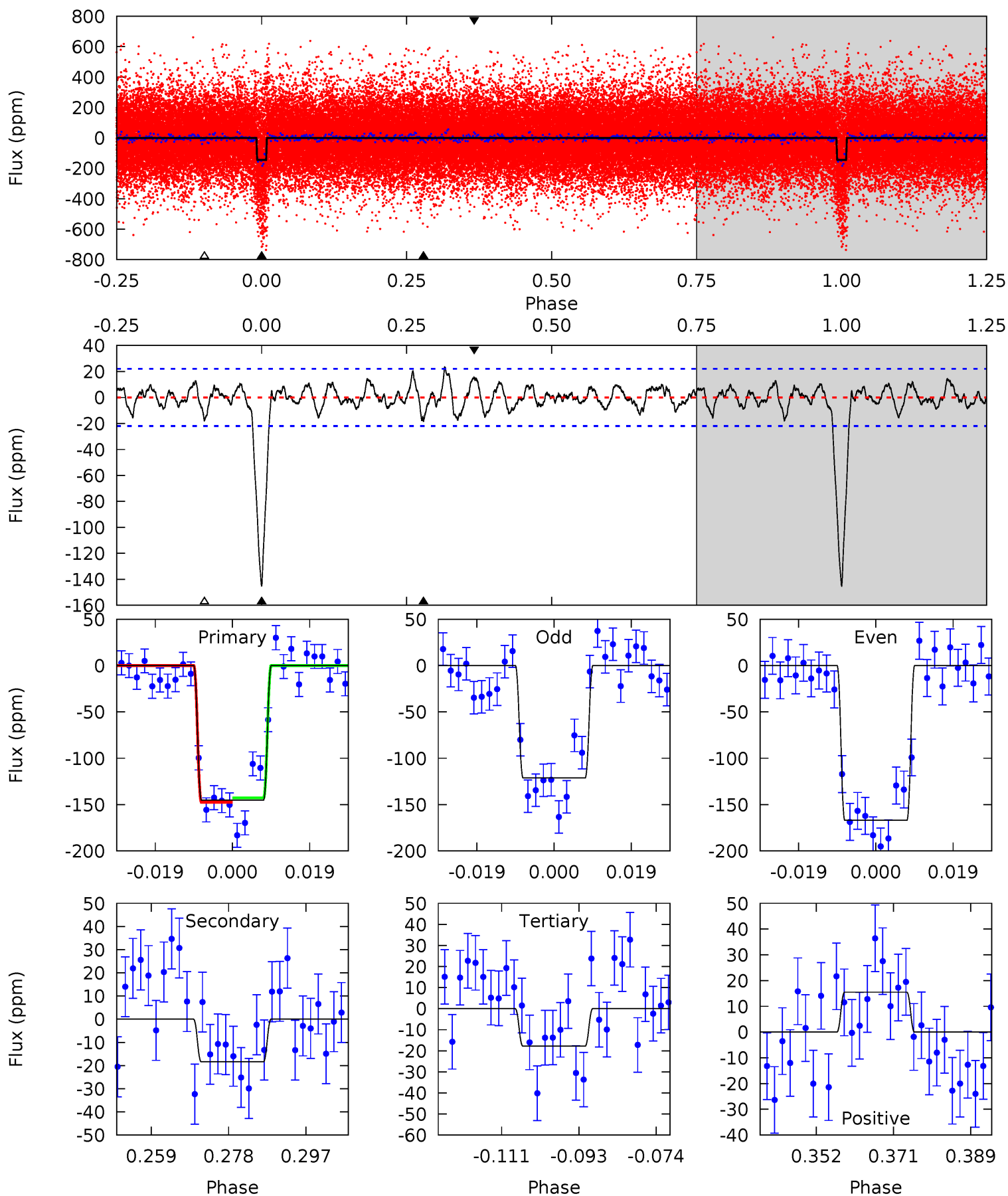
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.6	9.00	7.51	7.33	4.90	2.33	3.01	16.1	16.3	1.49	1.68	5.30	0.79	0.26	0.26



Alt Model-Shift Uniqueness Test

007900450-01, P = 25.481848 Days, E = 119.927182 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
32.3	4.10	3.97	3.45	4.91	2.35	1.52	28.3	28.8	0.13	0.65	5.10	0.91	0.14	0.52



Stellar Parameters For KIC 007900450

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6250^{+150}_{-206}	$4.472^{+0.052}_{-0.208}$	$-0.260^{+0.300}_{-0.300}$	$0.986^{+0.305}_{-0.102}$	$1.052^{+0.144}_{-0.144}$	$1.544^{+0.433}_{-0.809}$
	+2%/-3%	+1%/-5%	+115%/-115%	+31%/-10%	+14%/-14%	+28%/-52%
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 007900450-01 / KOI 5441.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-59 ± 7	$1.50^{+0.28}_{-0.17}$	939^{+71}_{-46}	4827^{+212}_{-221}	415^{+111}_{-108}
Alt.	-18 ± 4	$1.33^{+0.23}_{-0.17}$	942^{+73}_{-45}	4062^{+211}_{-253}	162^{+72}_{-55}

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 $A_{obs} \gg 1.0$

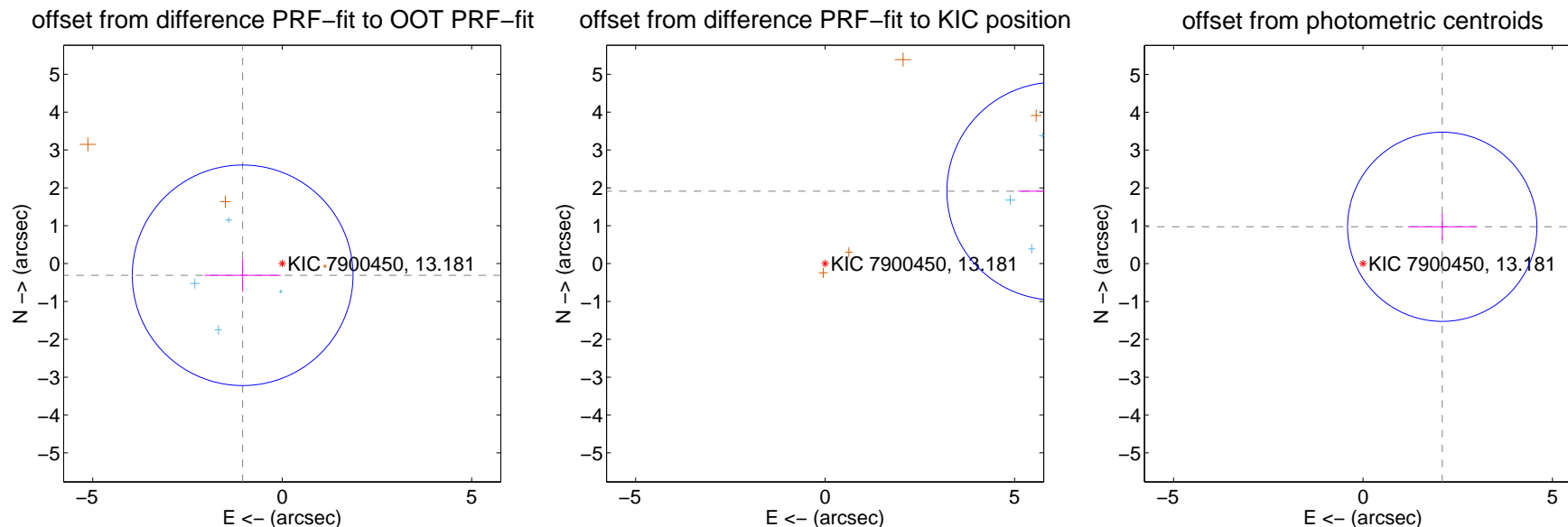
DV Centroid Data

Supplemental centroid analysis for 007900450-01. Kepler magnitude: 13.18. Transit SNR 9.83

There are 4 quarters with good PRF difference image offsets

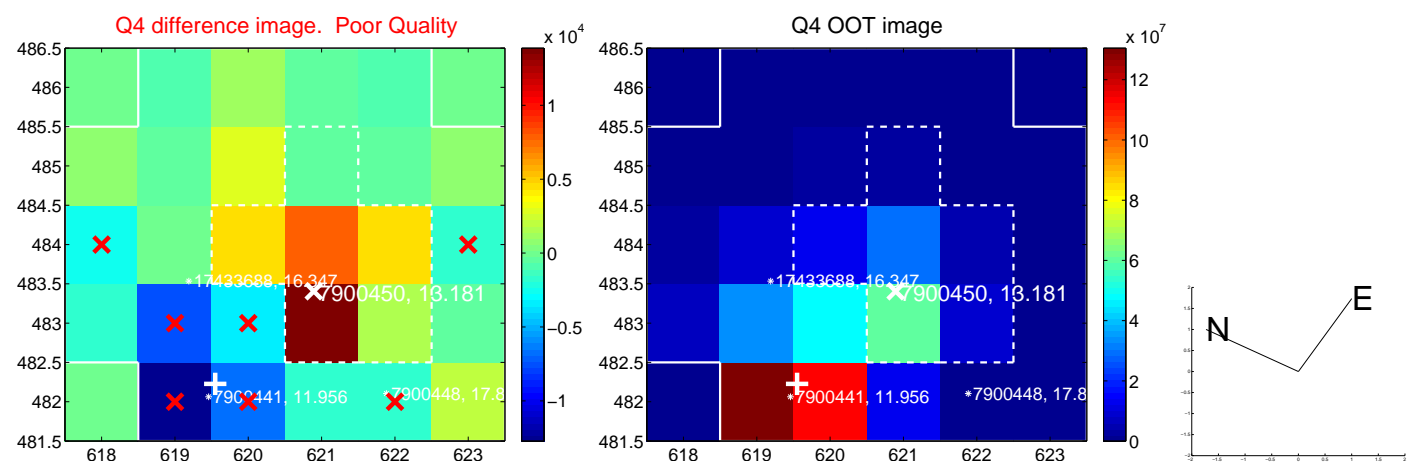
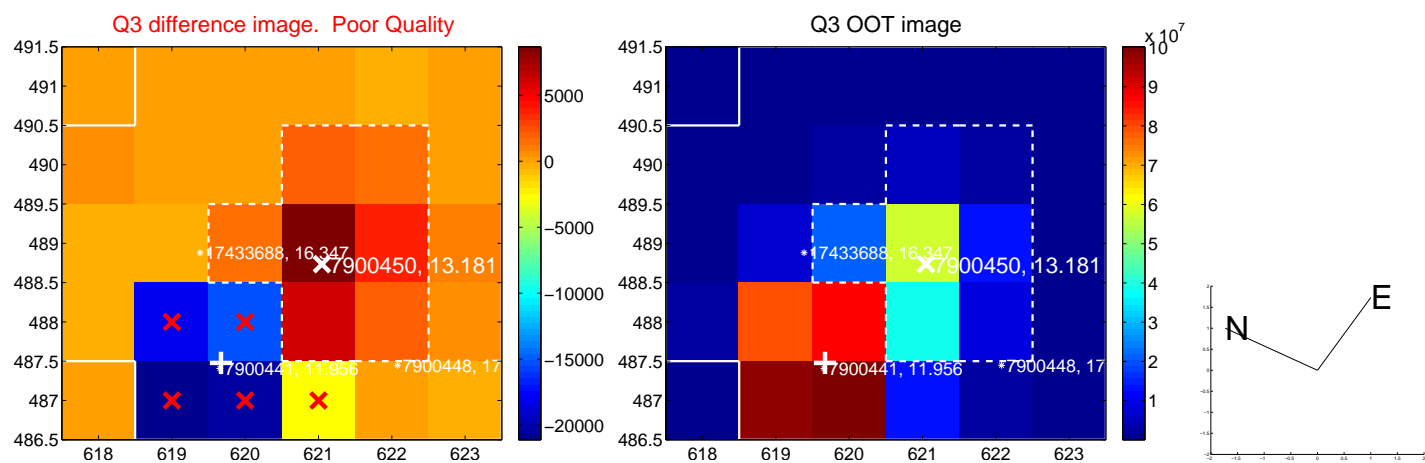
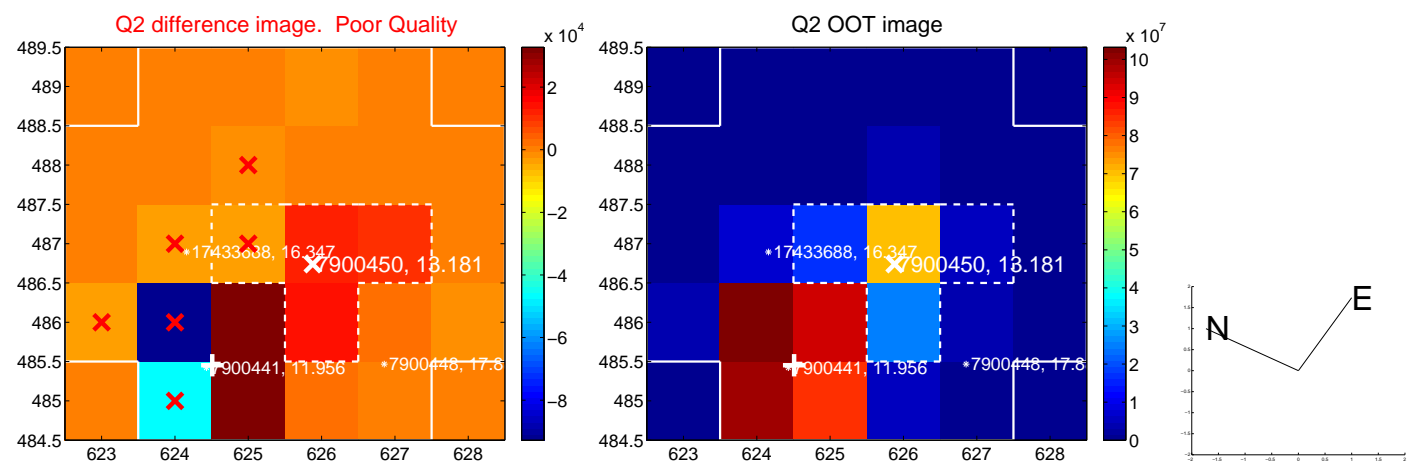
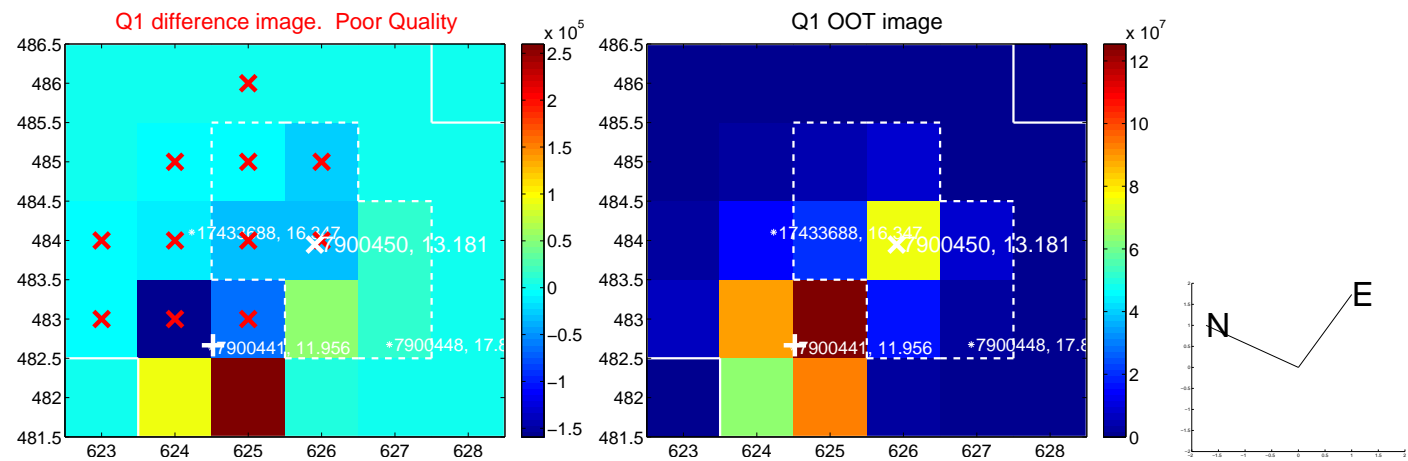
The OOT PRF centroid is offset from the target star catalog position by about 7.49 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.088 ± 0.971	1.12	1.043 ± 1.004	-0.309 ± 0.437
PRF-fit source offset from KIC position	6.382 ± 0.959	6.66	-6.089 ± 0.995	1.912 ± 0.446
photometric centroid source offset	2.31 ± 0.83	2.77	-2.09 ± 0.90	0.97 ± 0.36

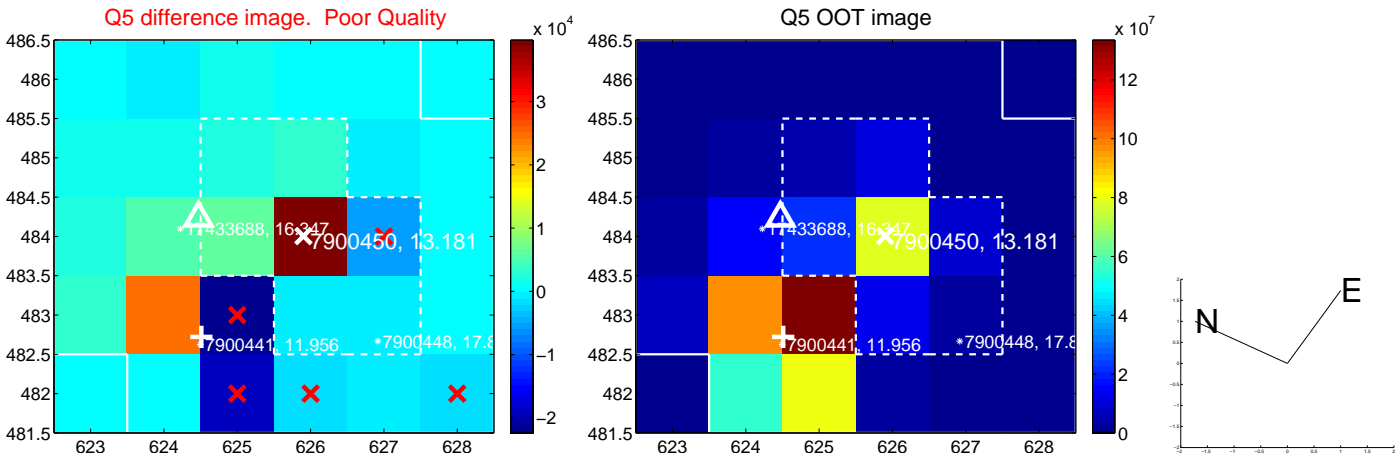


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

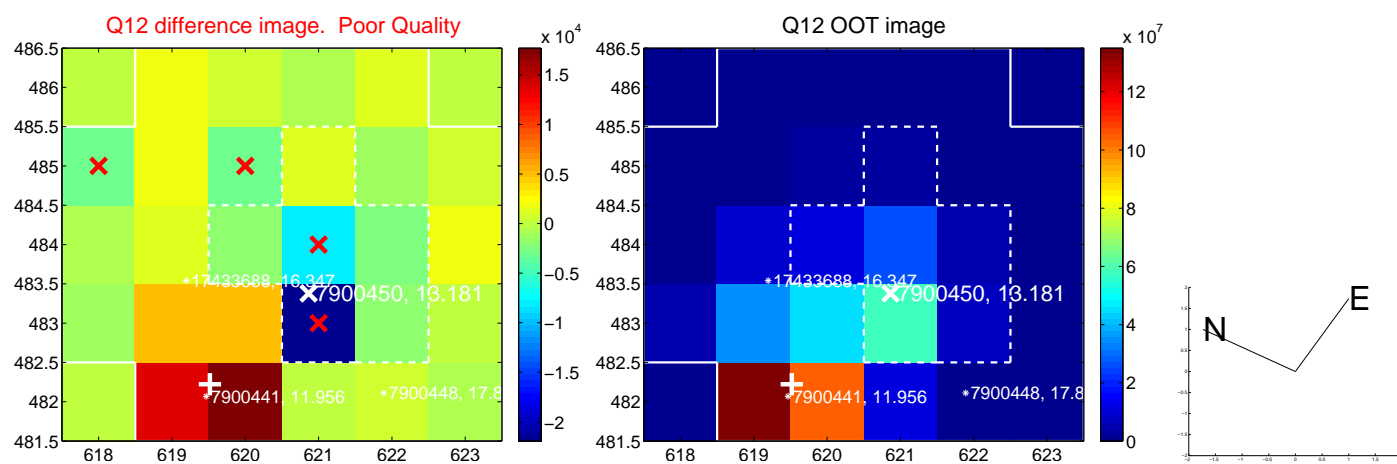
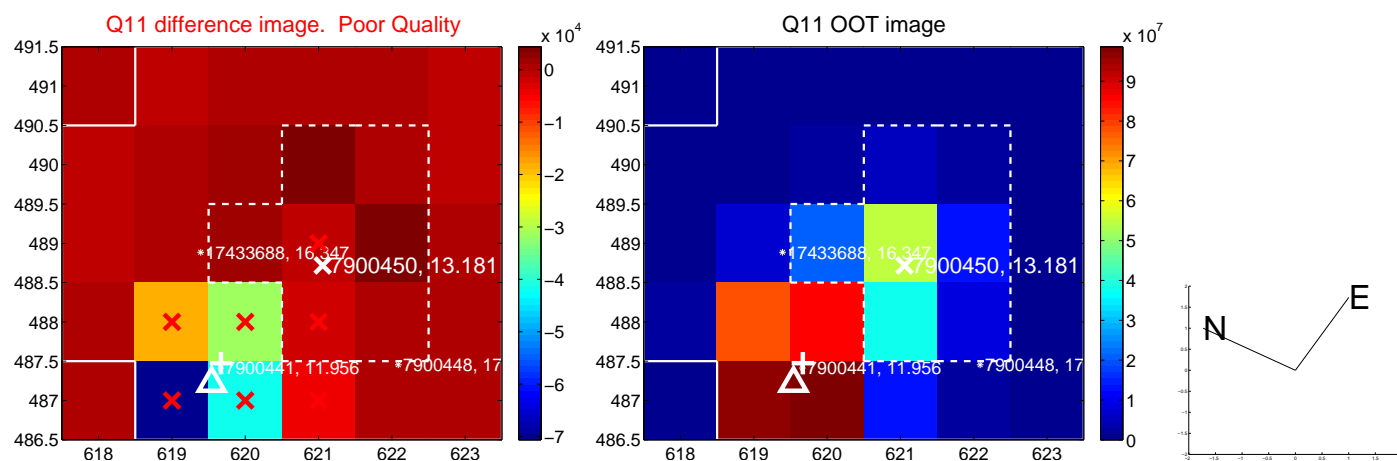
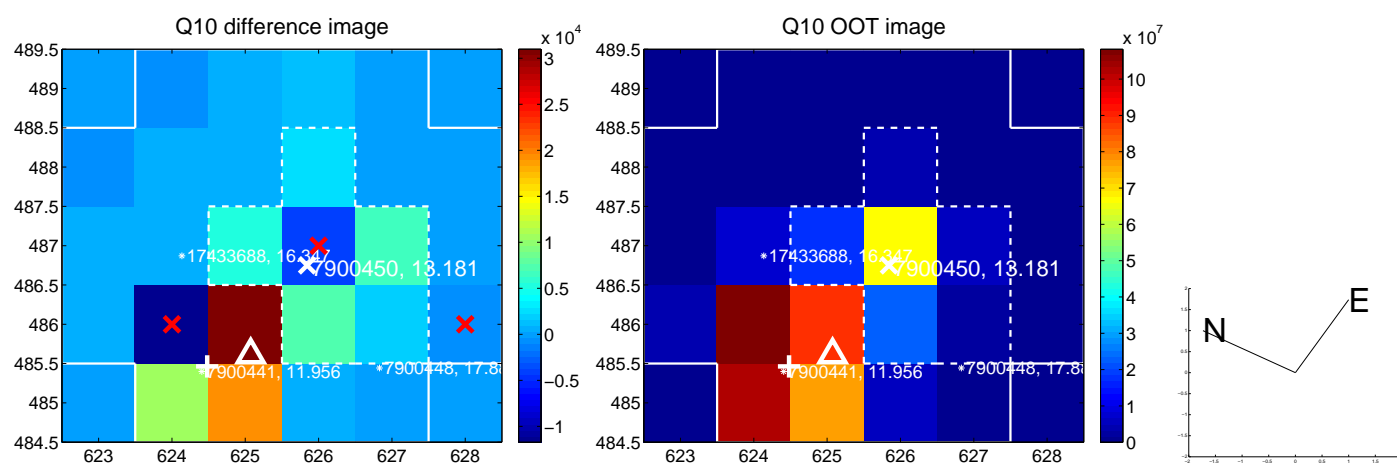
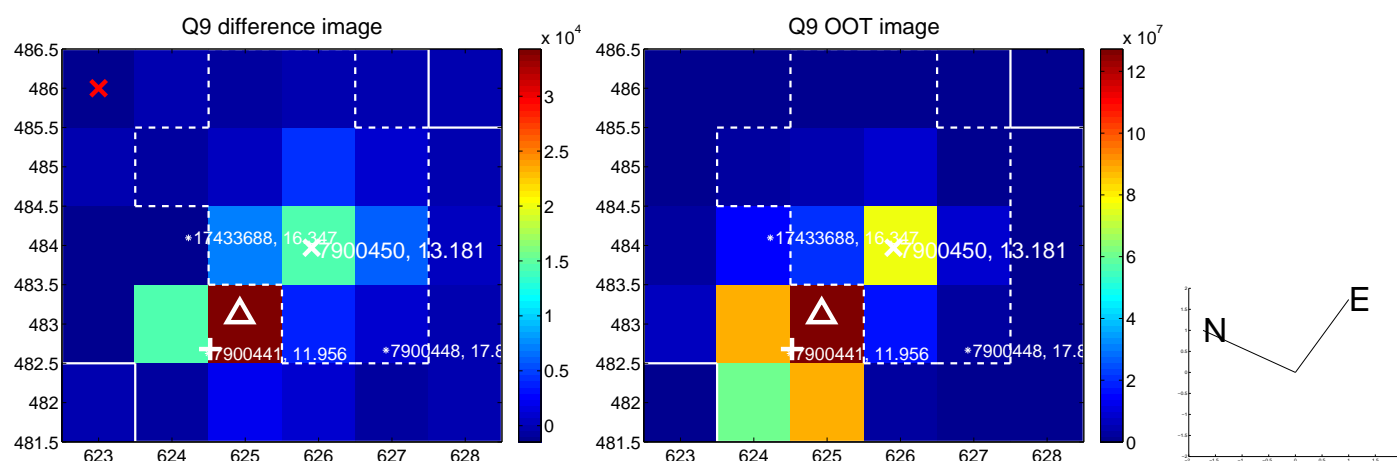
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



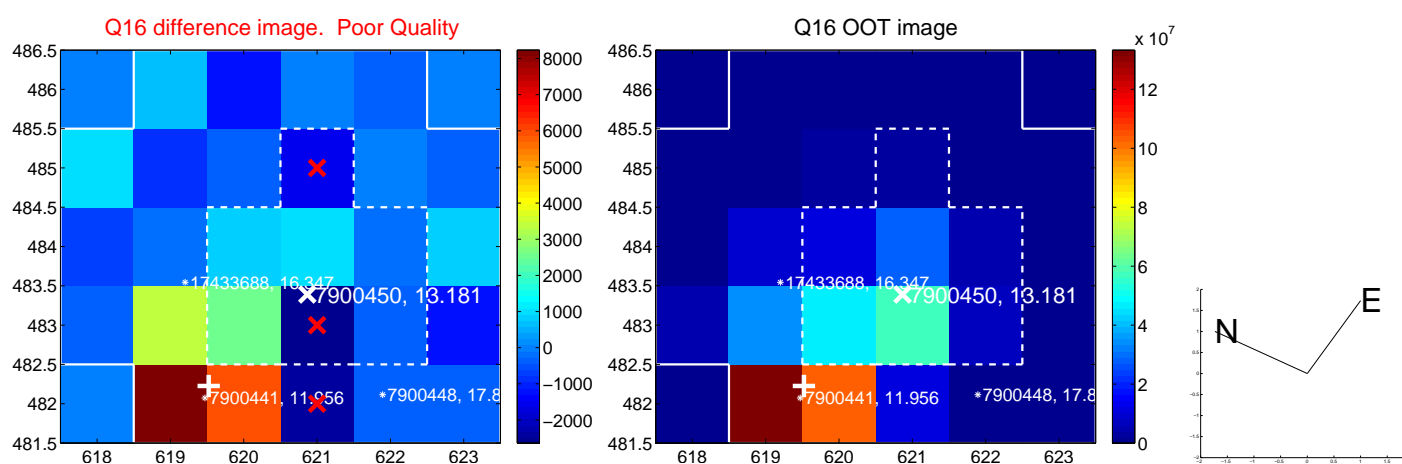
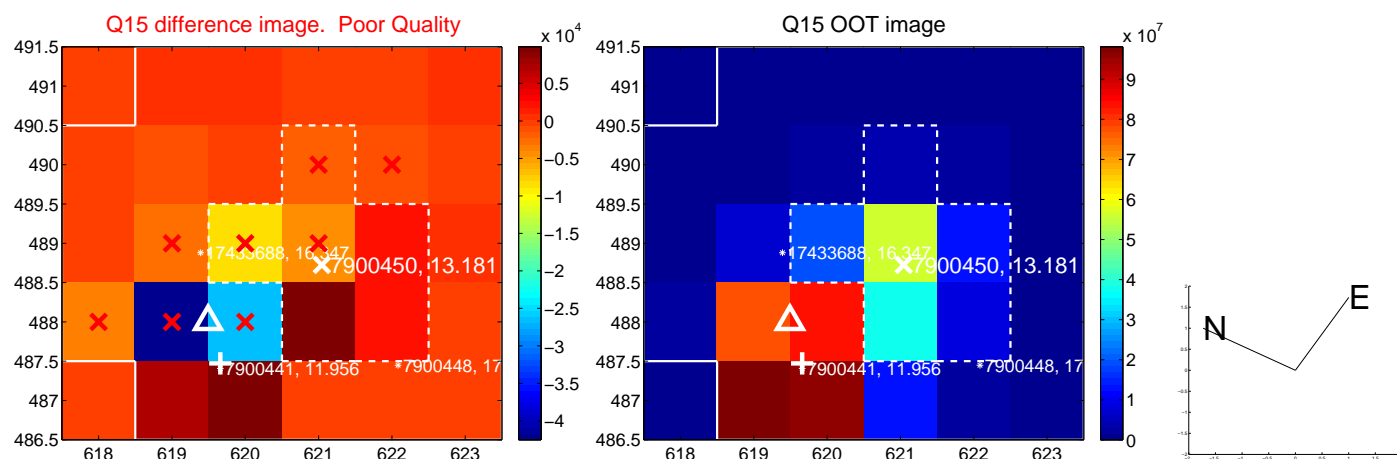
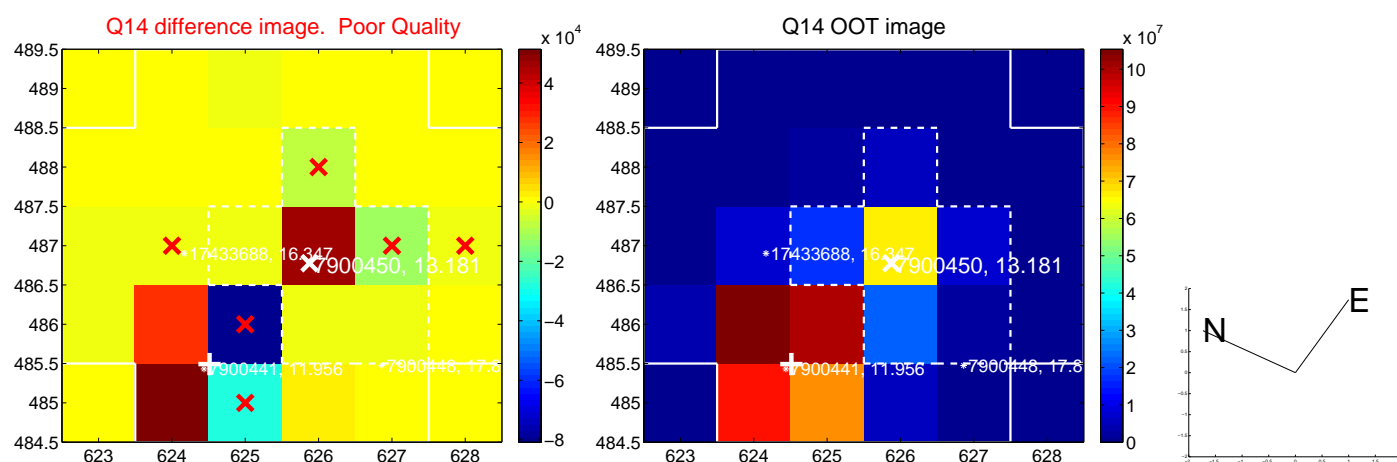
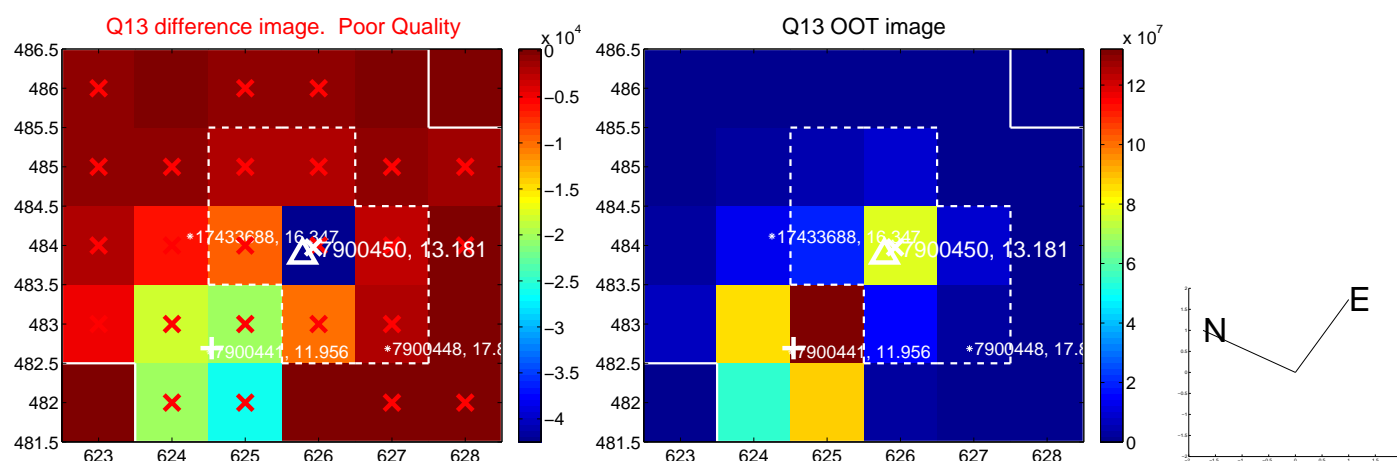
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



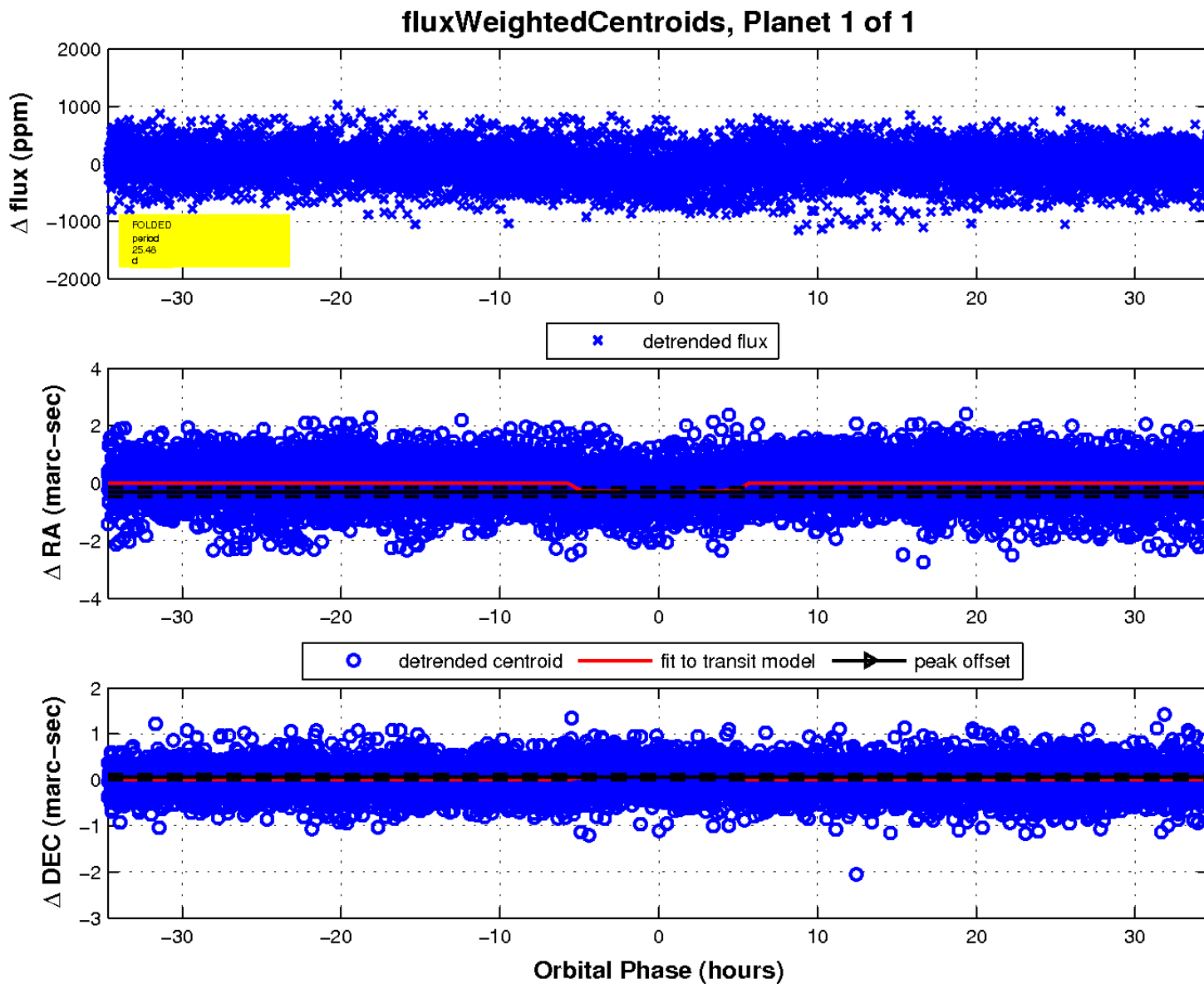
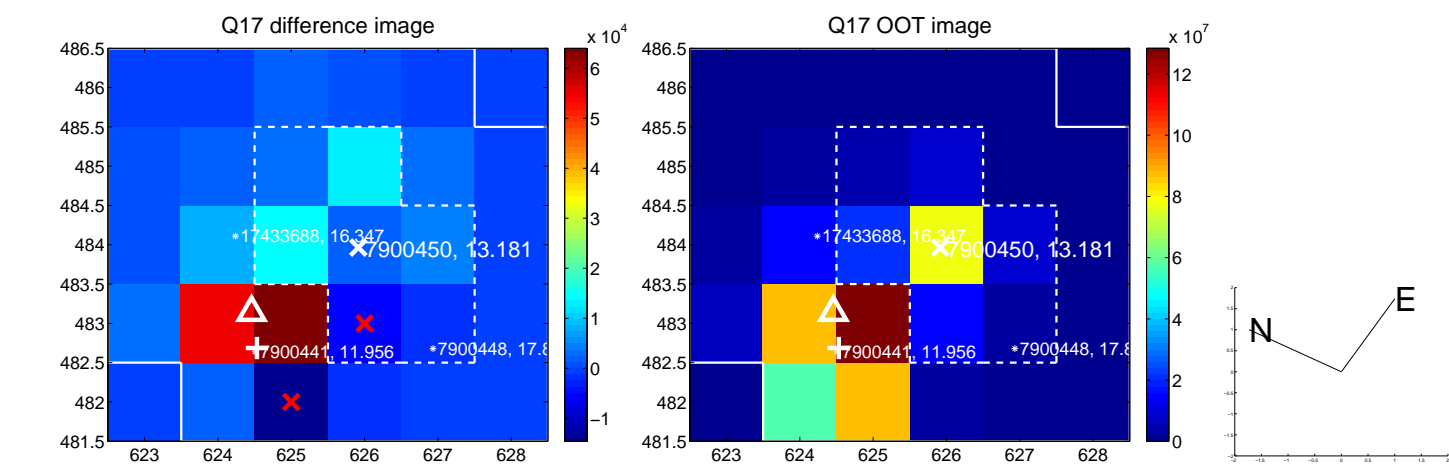
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

