

KIC 006945786

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})
006945786-01	OBS	3136.01	2.391607	133.083576	191.7	1.994	12.4	13.8	0.69	4935	1.01	267.25

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006945786-01	OBS	PC	0.99	0	0	0	0	NO_COMMENT

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 006945786-01

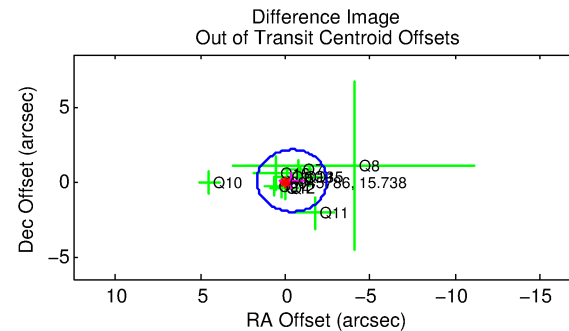
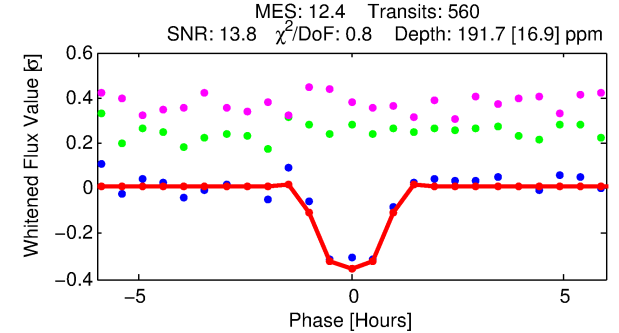
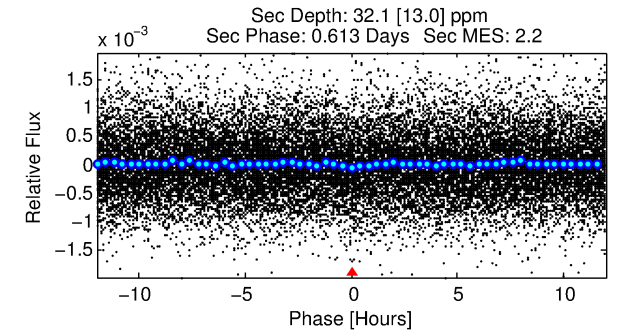
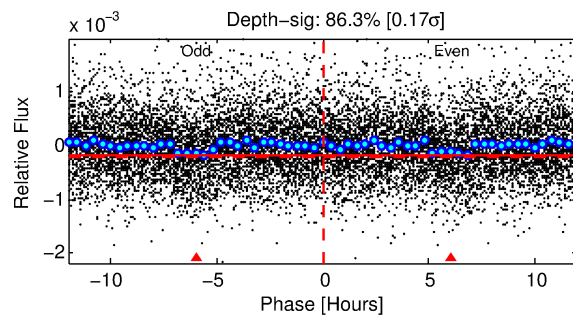
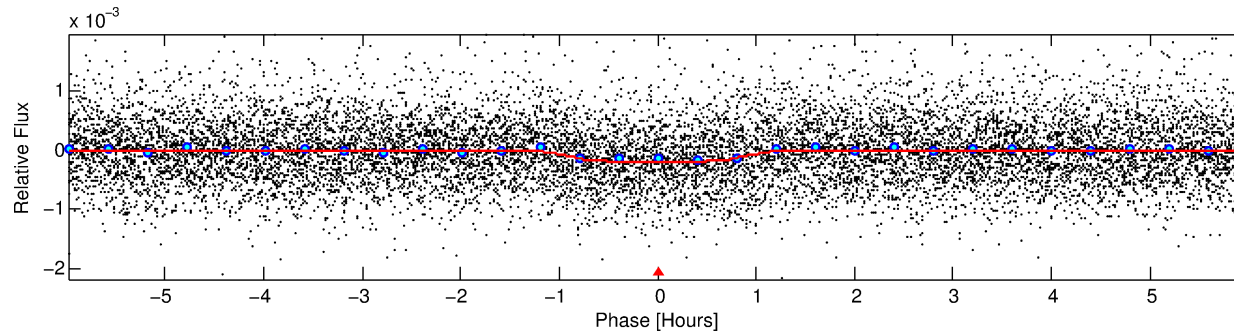
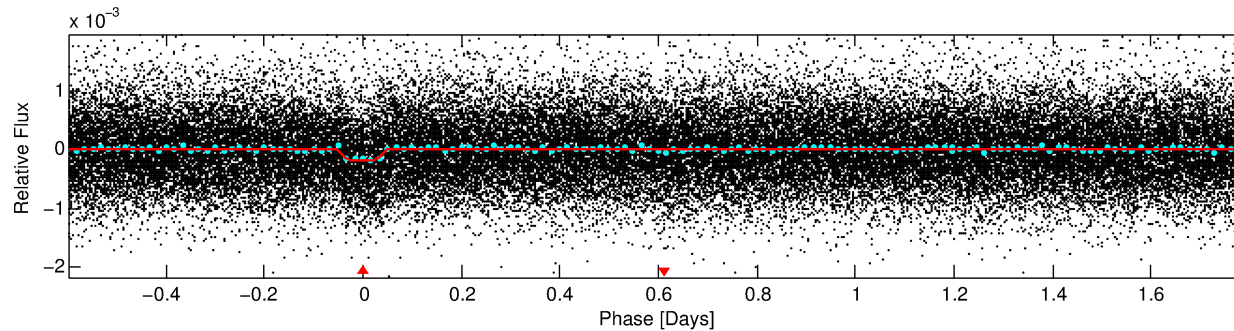
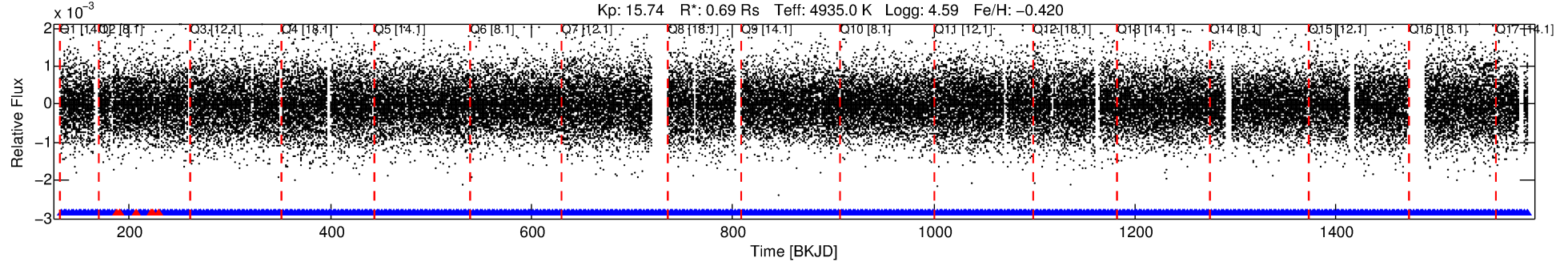
No Significant Match Found

DV One-Page Summary

KIC: 6945786 Candidate: 1 of 1 Period: 2.392 d

KOI: K03136.01 Corr: 0.963

Kp: 15.74 R*: 0.69 Rs Teff: 4935.0 K Logg: 4.59 Fe/H: -0.420



DV Fit Results:

Period = 2.39161 [0.00001] d
Epoch = 133.0836 [0.0025] BKJD
Rp/R* = 0.0135 [0.0104]
a/R* = 6.87 [18.38]
b = 0.69 [2.14]
Seff = 267.25 [45.39]
Teff = 1031 [44] K
Rp = 1.01 [0.78] Re
a = 0.0305 [0.0025] AU
Ag = 16.17 [25.85] [0.59σ]
Teffp = 3197 [1277] K [1.69σ]

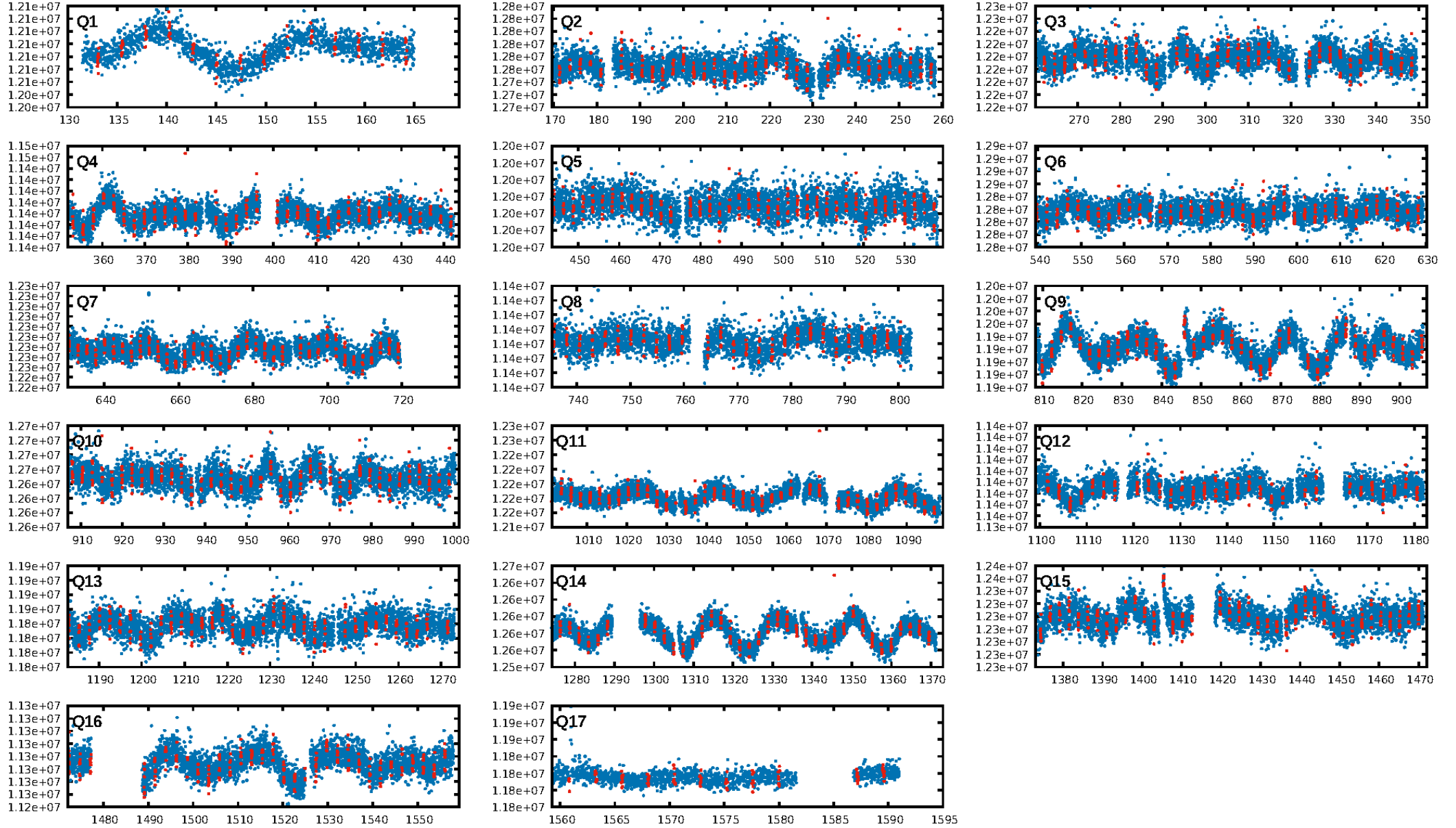
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 6.78e-35
RollingBand-fgt: 0.99 [529/535]
GhostDiagnostic-chr: 4.617
Centroid-sig: 8.4%
Centroid-so: 1.637 arcsec [1.58σ]
OotOffset-rm: 0.401 arcsec [0.58σ]
KicOffset-rm: 0.313 arcsec [0.45σ]
OotOffset-st: 2/3/4/2 [11]
KicOffset-st: 2/3/4/2 [11]
DiffImageQuality-fgm: 0.36 [4/11]
DiffImageOverlap-fno: 1.00 [17/17]

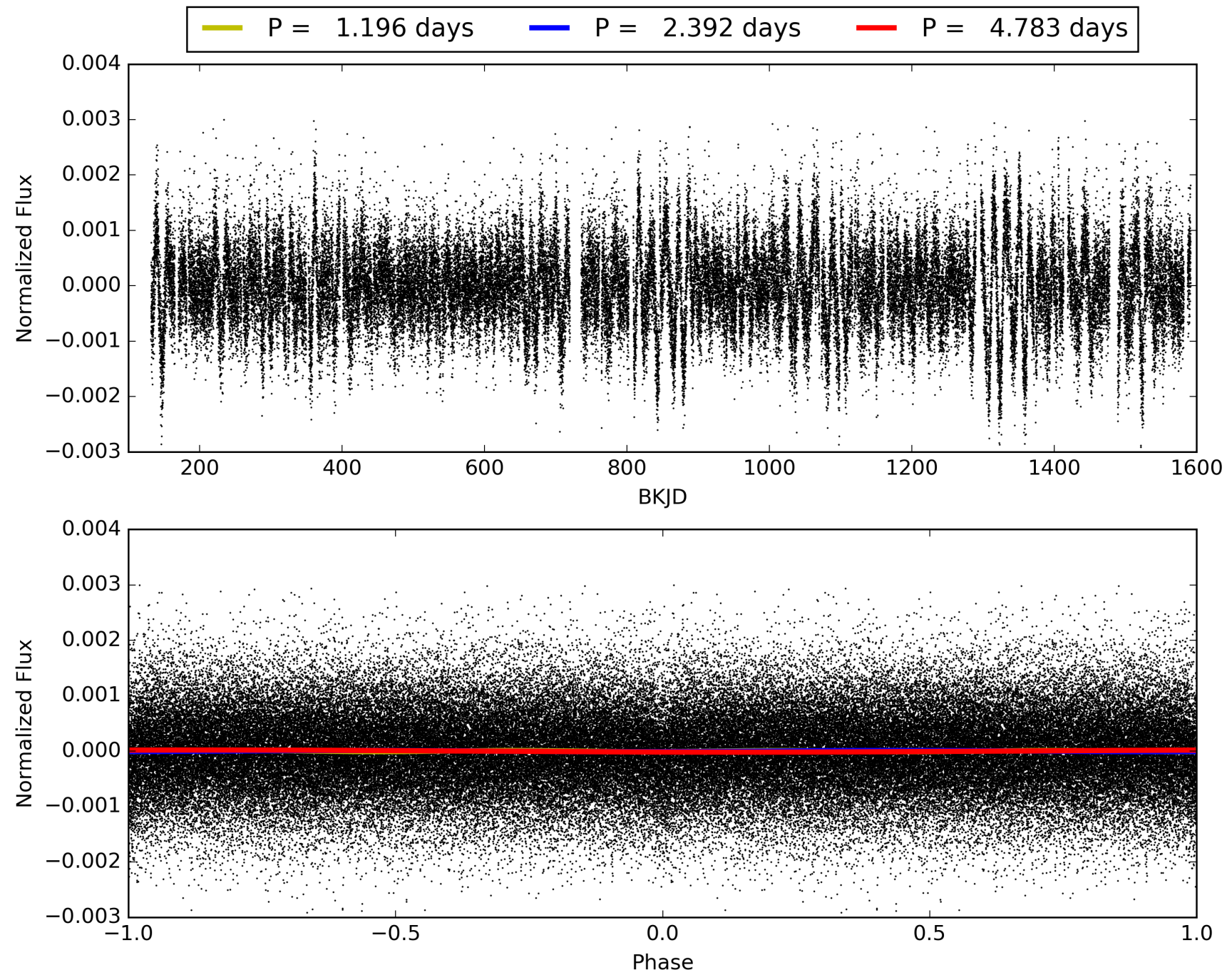
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 06:04:50 Z

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

TCE 006945786-01, PDC Light Curves

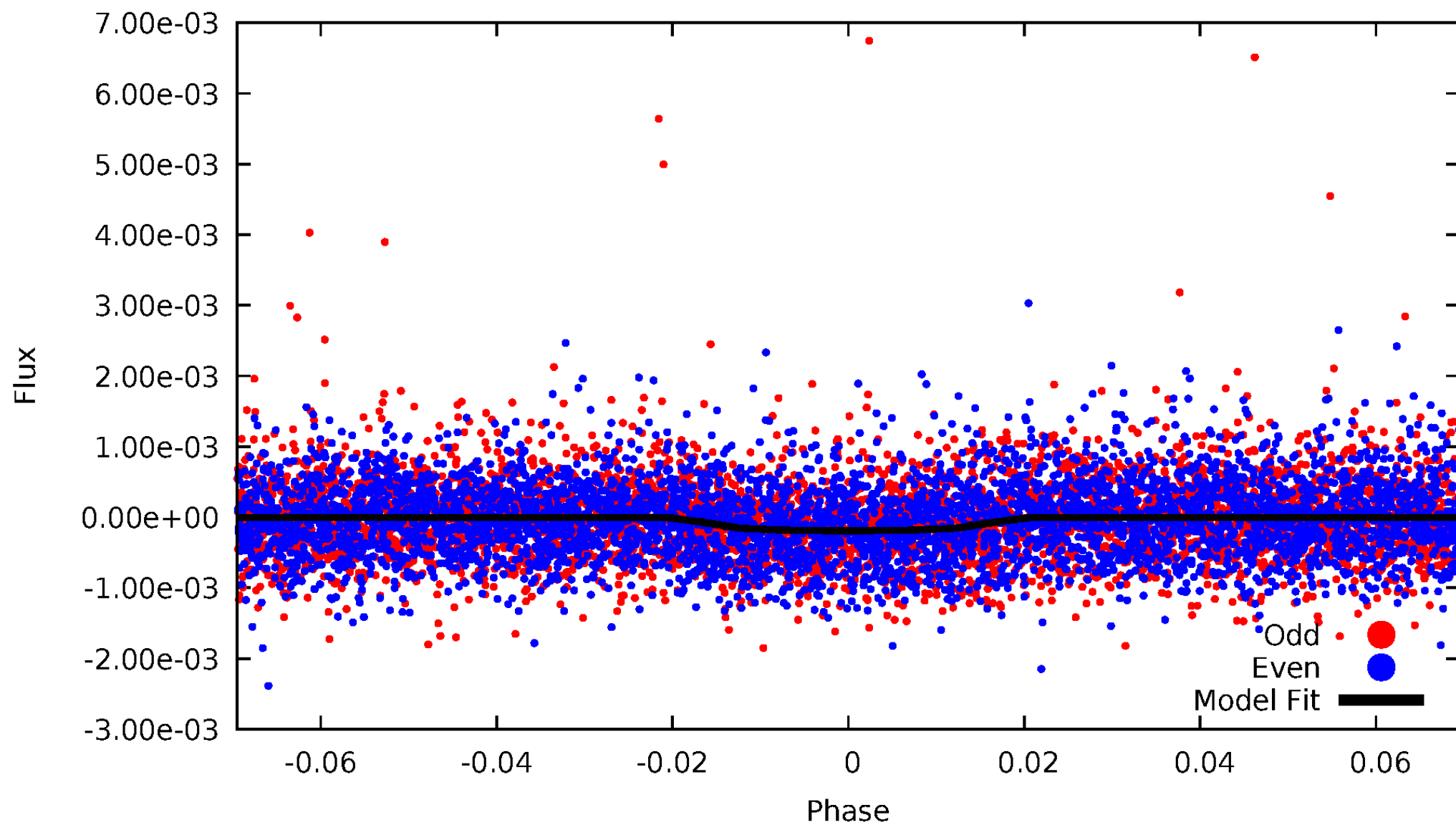


TCE 006945786-01



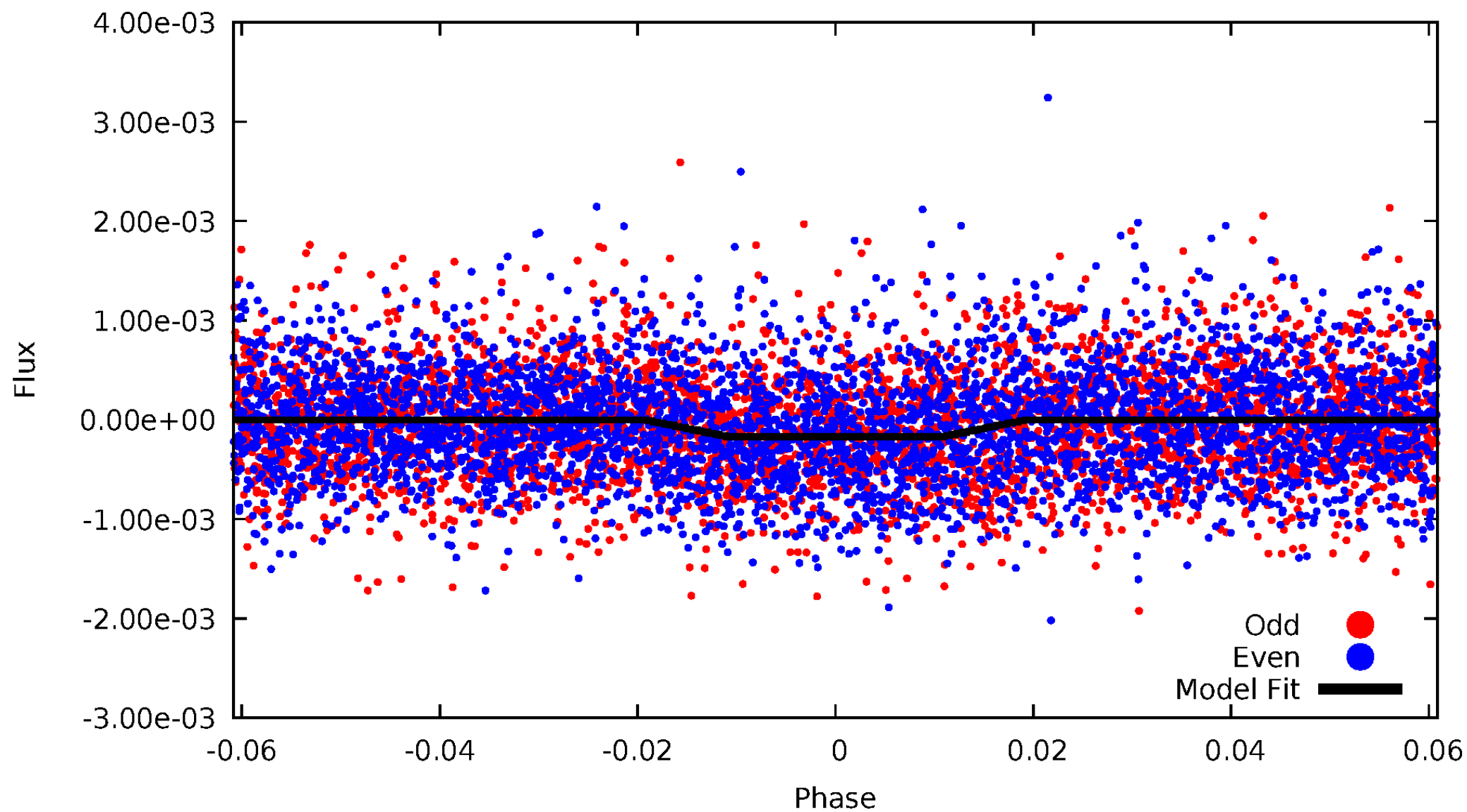
DV Odd/Even

TCE 006945786-01



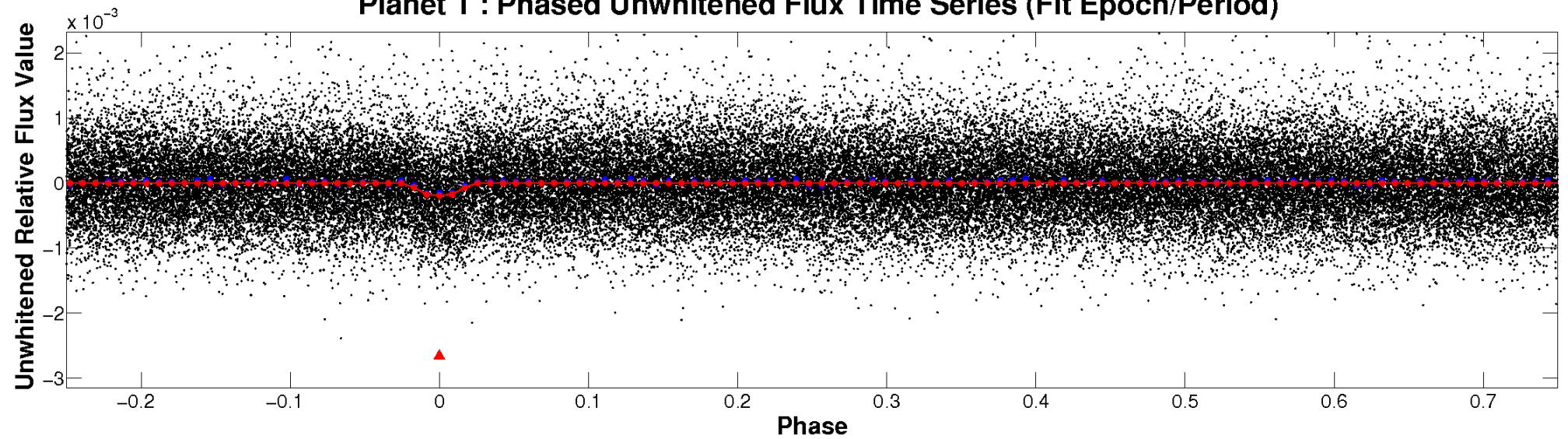
ALT Odd/Even

TCE 006945786-01

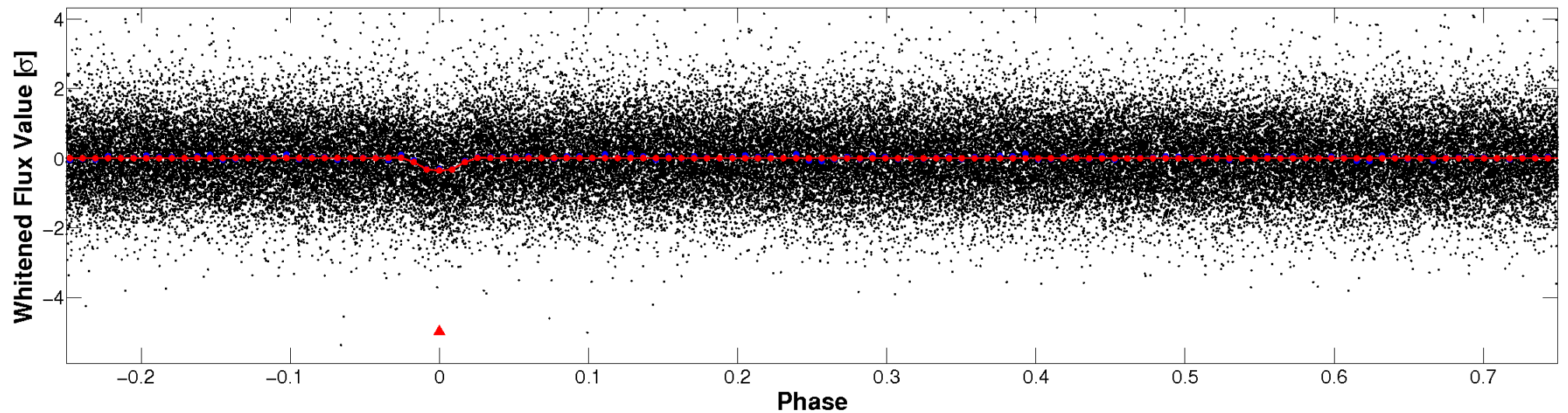


Non-Whitened Vs. Whitened Light Curve

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

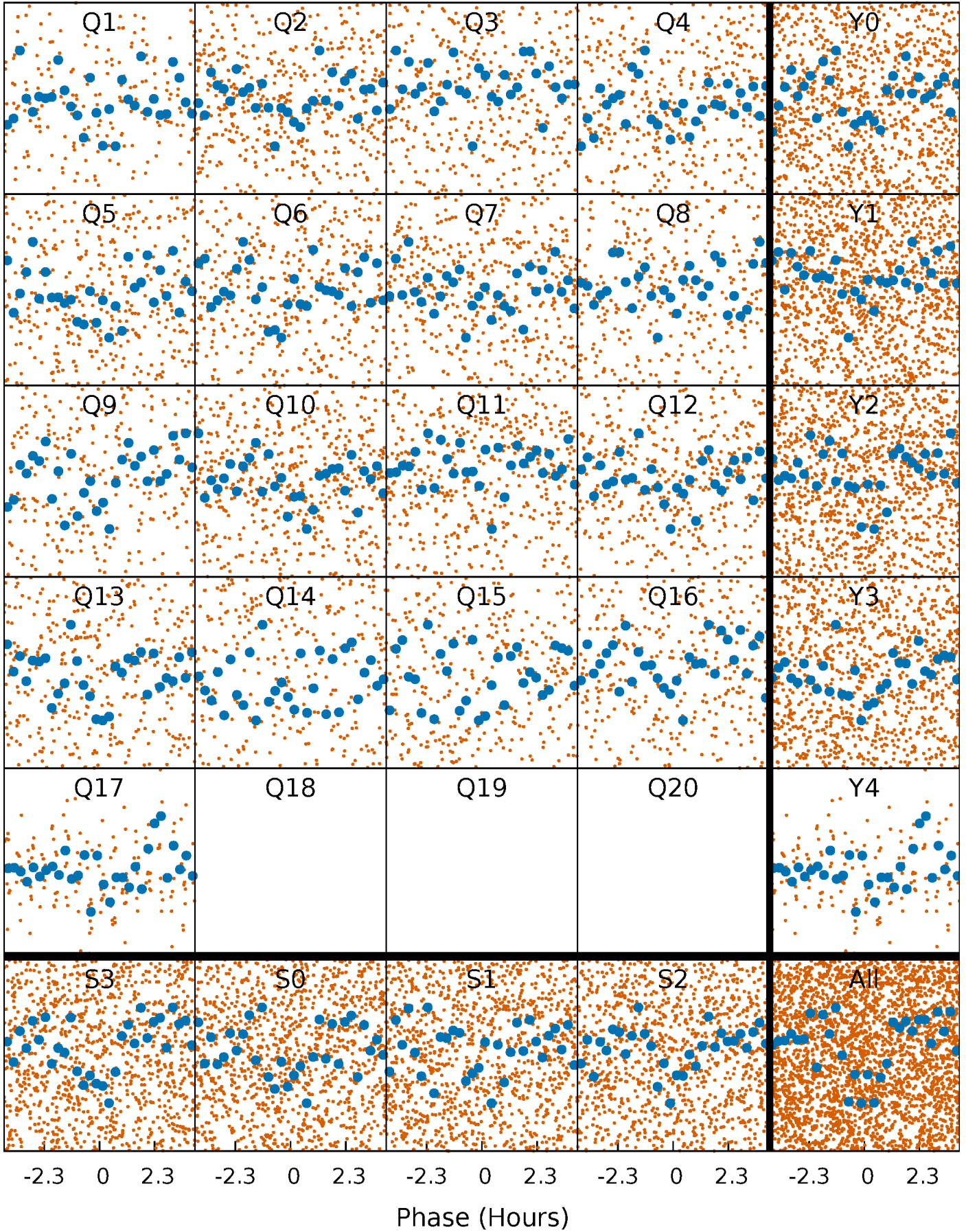


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



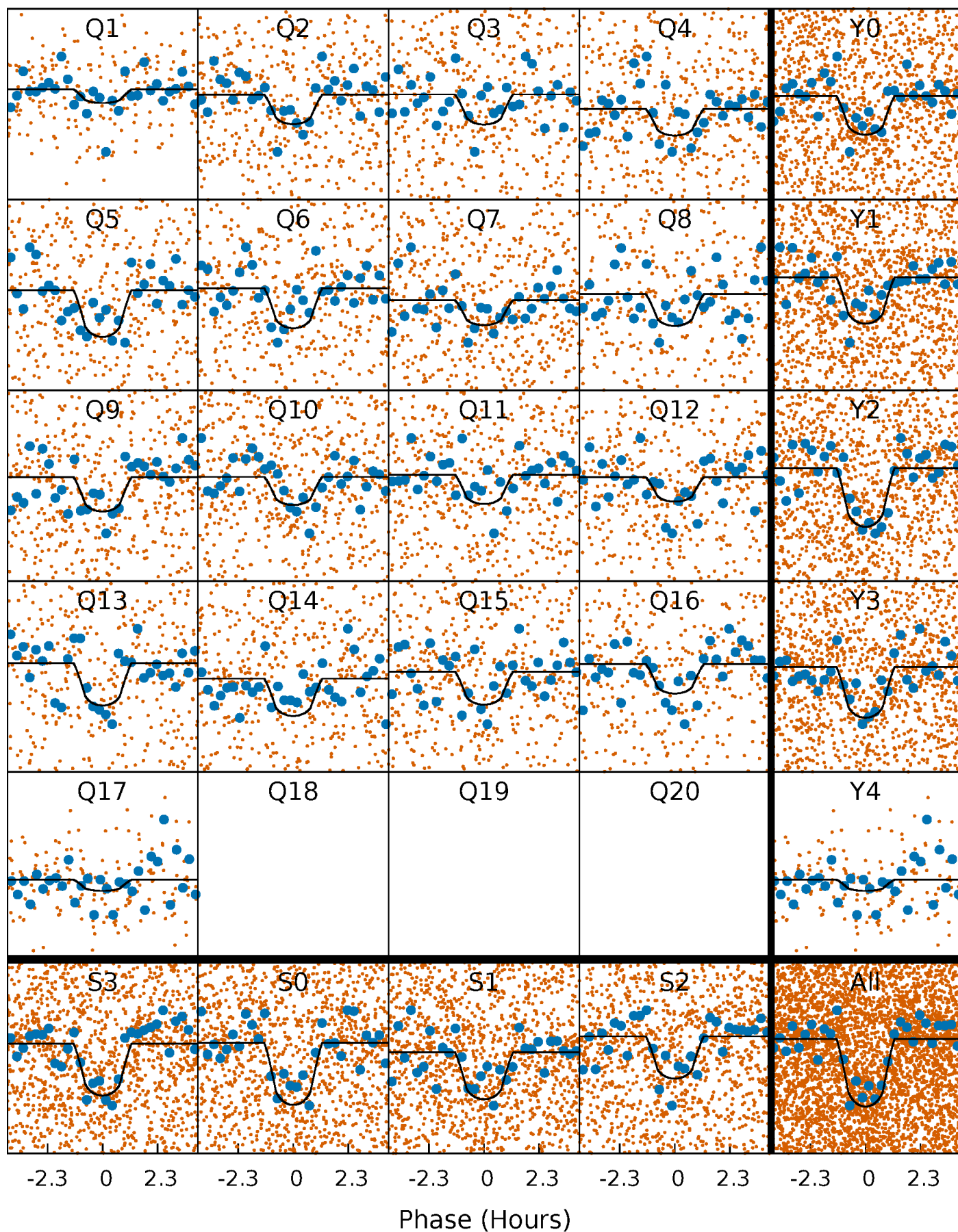
PDC Quarter-Phased Transit Curves

TCE 006945786-01 P= 2.391607 Days $T_0=133.083576$ (BKJD)



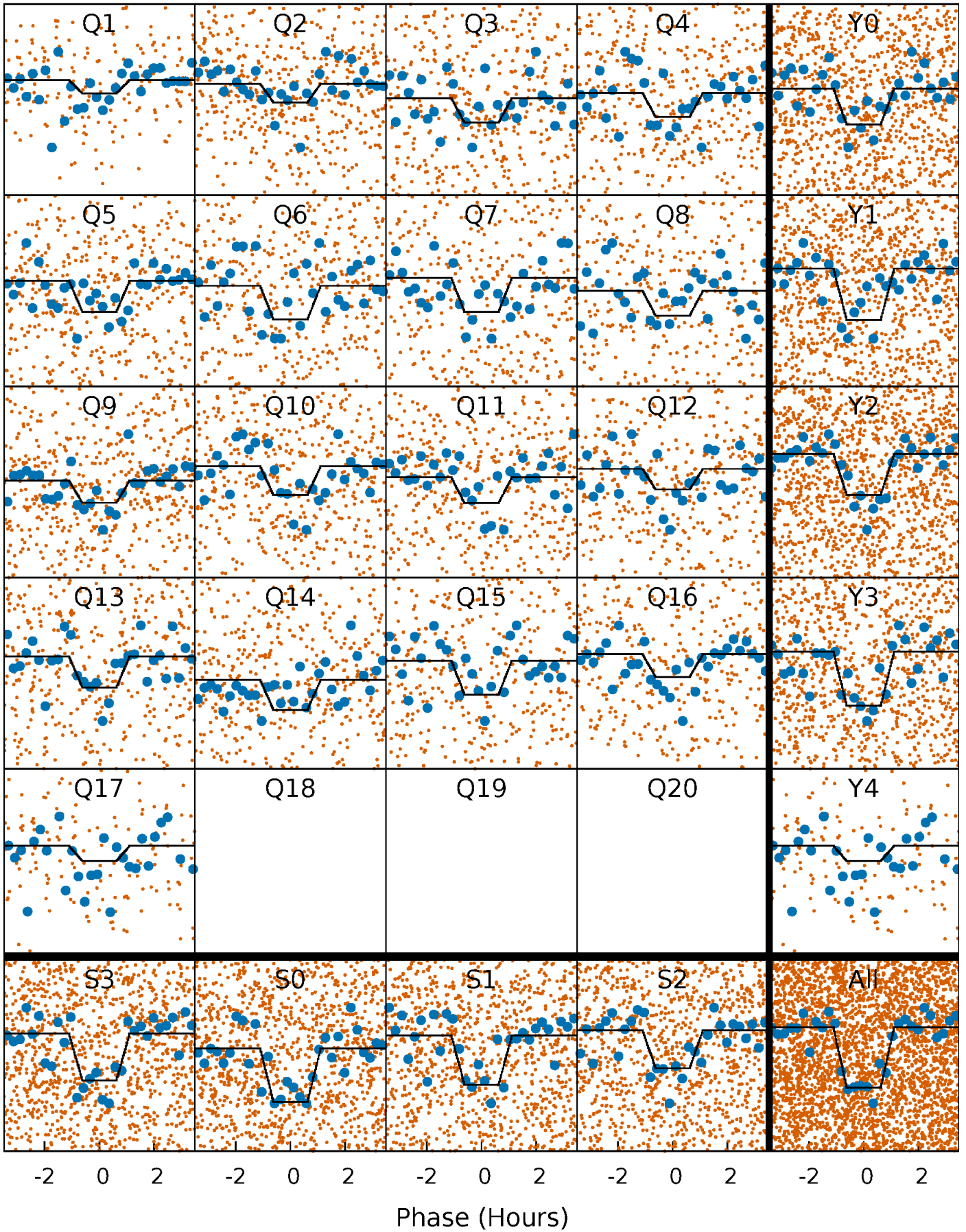
DV Quarter-Phased Transit Curves

TCE 006945786-01 P= 2.391607 Days $T_0=133.083576$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

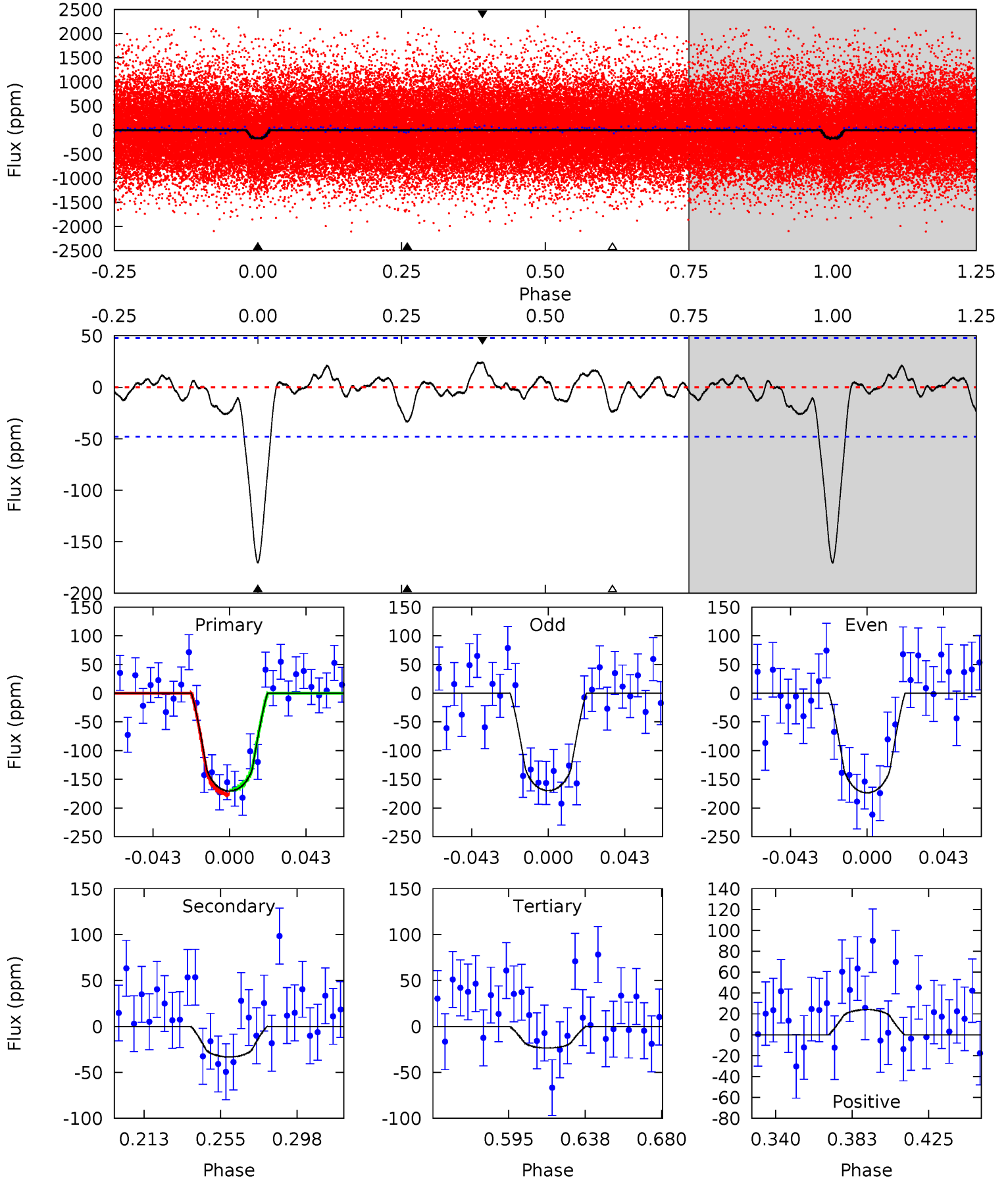
TCE 006945786-01 P= 2.391615 Days $T_0=133.080842$ (BKJD)



DV Model-Shift Uniqueness Test

006945786-01, P = 2.391607 Days, E = 130.691969 Days

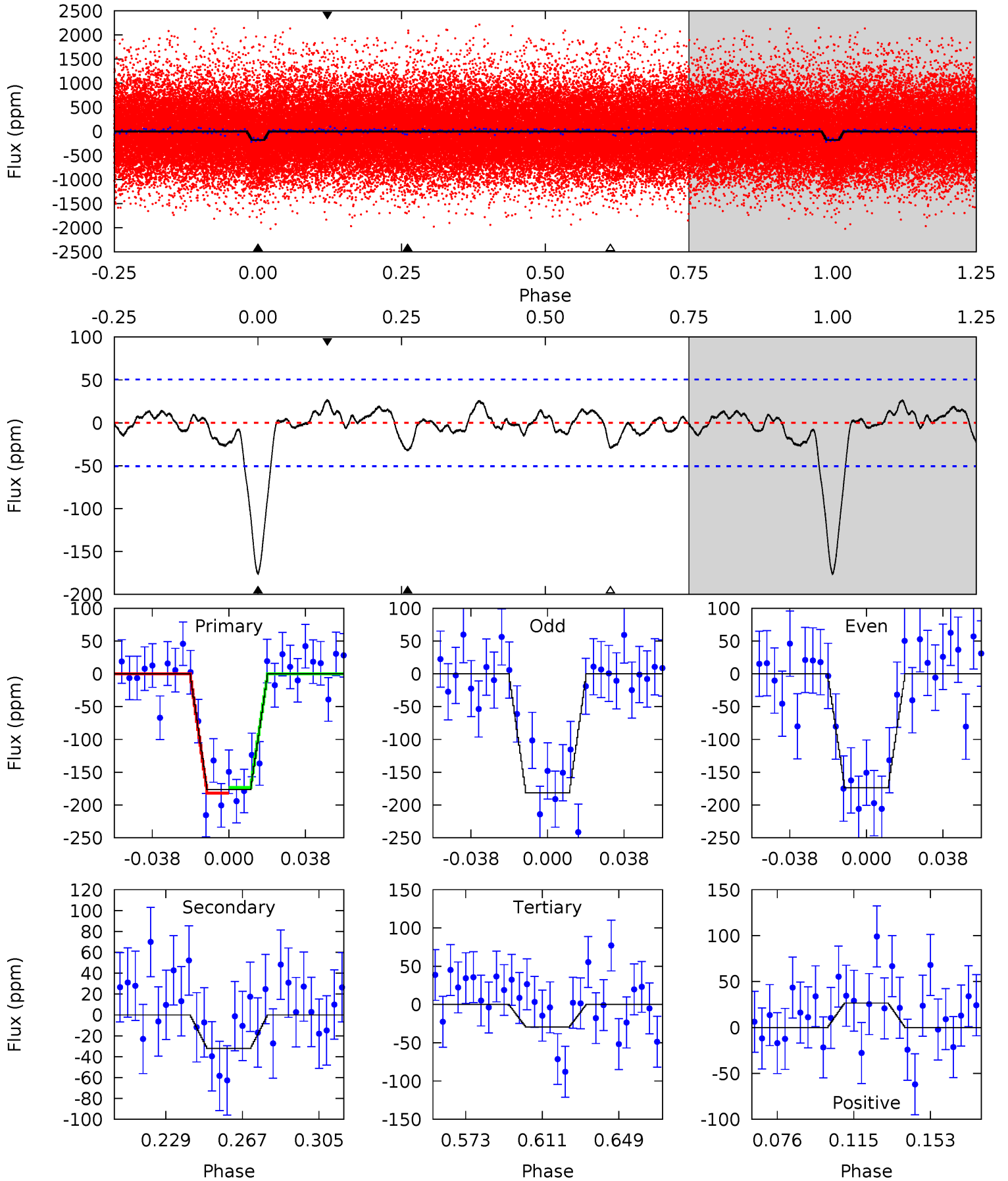
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.9	3.29	2.34	2.38	4.74	2.03	0.98	14.5	14.5	0.96	0.91	0.19	0.88	0.12	0.37



Alt Model-Shift Uniqueness Test

006945786-01, P = 2.391615 Days, E = 130.689227 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.6	3.03	2.77	2.51	4.76	2.07	1.04	13.9	14.1	0.26	0.51	0.38	0.83	0.13	0.41



Stellar Parameters For KIC 006945786

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4935^{+147}_{-133}	$4.589^{+0.066}_{-0.039}$	$-0.420^{+0.350}_{-0.300}$	$0.685^{+0.061}_{-0.068}$	$0.663^{+0.088}_{-0.044}$	$2.910^{+0.829}_{-0.449}$
	+3%/-3%	+1%/-1%	+83%/-71%	+9%/-10%	+13%/-7%	+28%/-15%
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 006945786-01 / KOI 3136.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-33 ± 10	$1.12^{+0.78}_{-0.65}$	1435^{+50}_{-53}	3448^{+1374}_{-508}	14^{+68}_{-9}
Alt.	-32 ± 11	$1.06^{+0.74}_{-0.62}$	1432^{+47}_{-48}	3494^{+1411}_{-538}	15^{+80}_{-10}

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 $A_{obs} \gg 1.0$

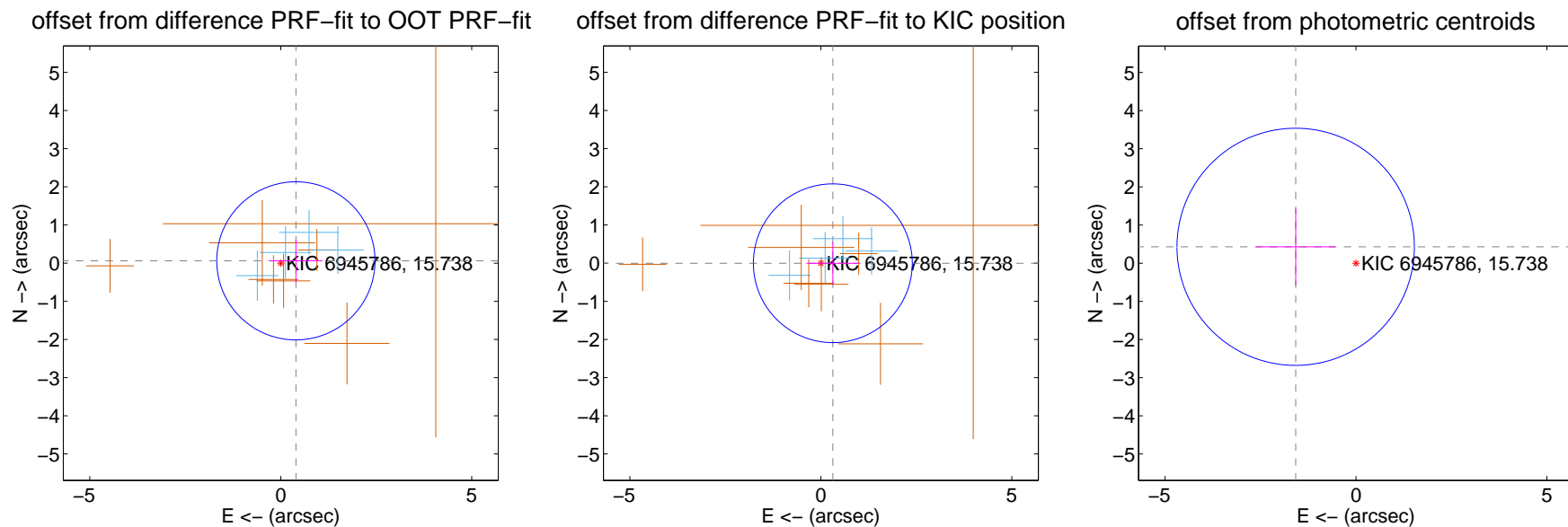
DV Centroid Data

Supplemental centroid analysis for 006945786-01. Kepler magnitude: 15.74. Transit SNR 13.84

There are 4 quarters with good PRF difference image offsets

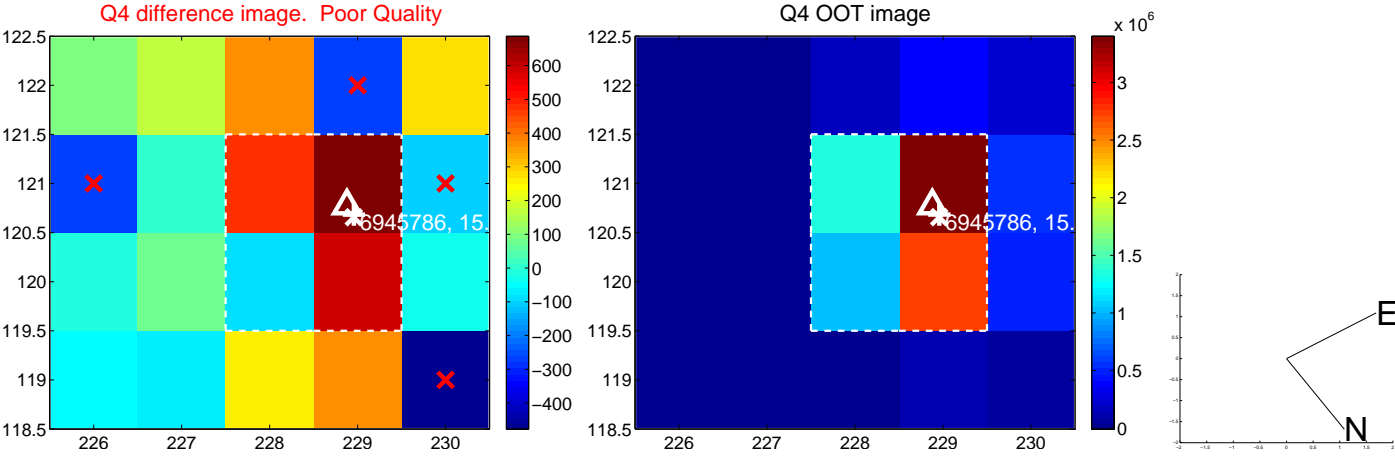
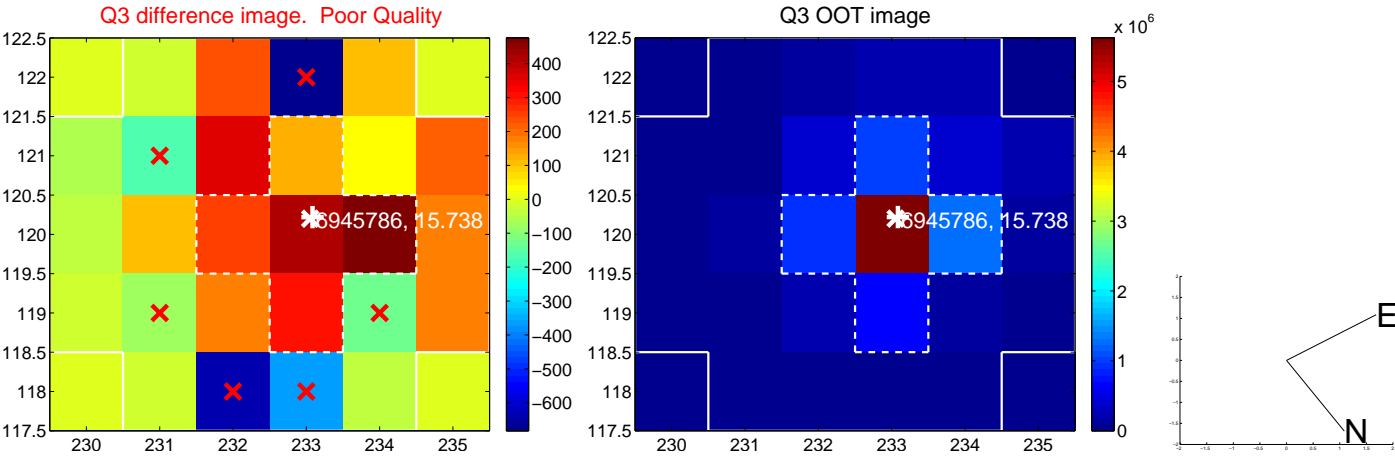
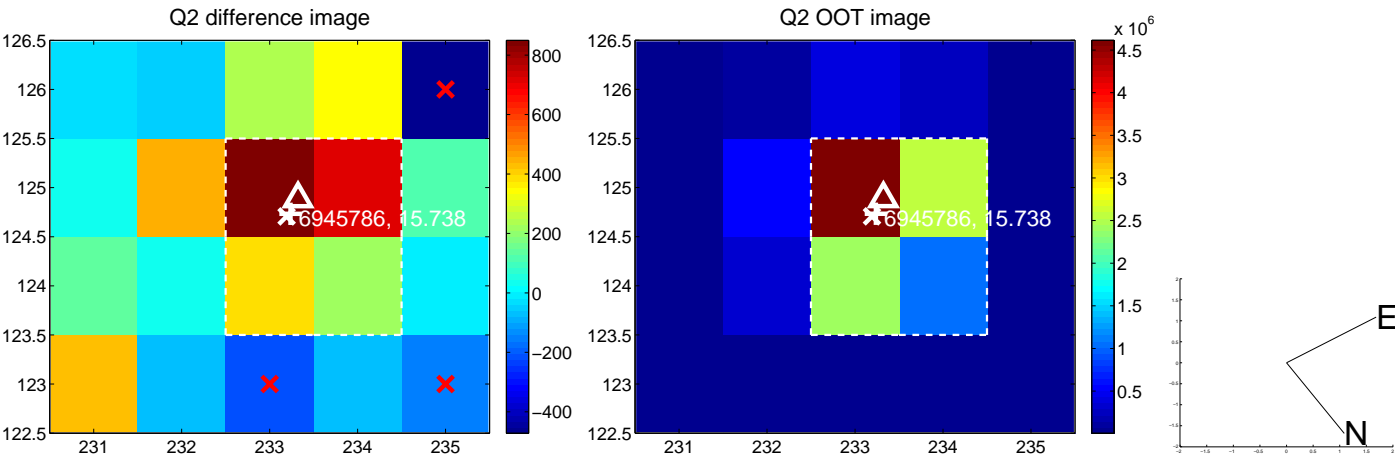
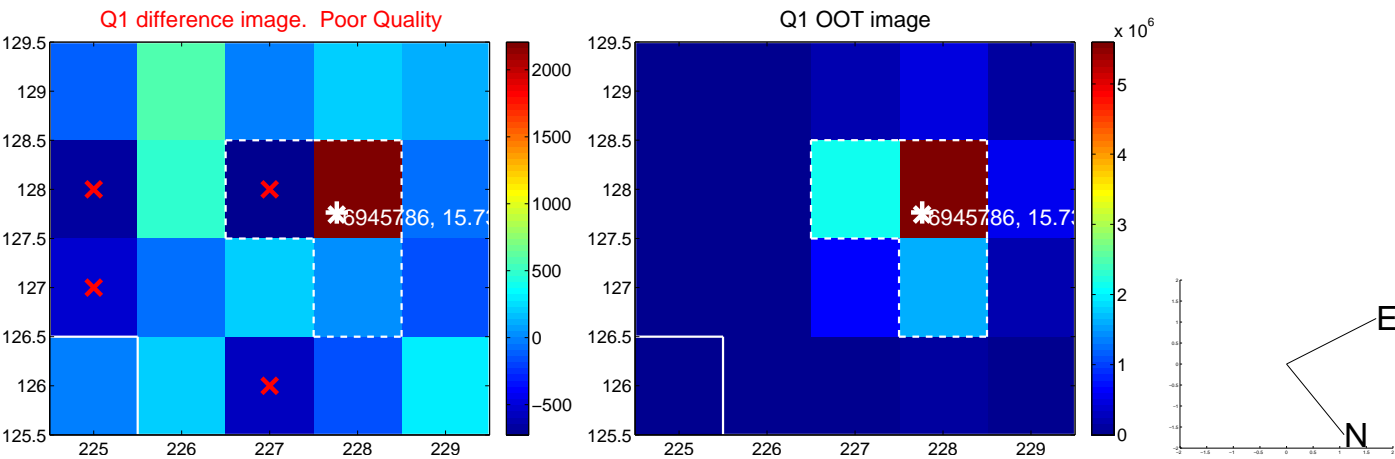
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.401 ± 0.691	0.58	-0.396 ± 0.693	0.060 ± 0.558
PRF-fit source offset from KIC position	0.313 ± 0.693	0.45	-0.313 ± 0.693	-0.003 ± 0.558
photometric centroid source offset	1.64 ± 1.04	1.58	1.58 ± 1.04	0.43 ± 1.00

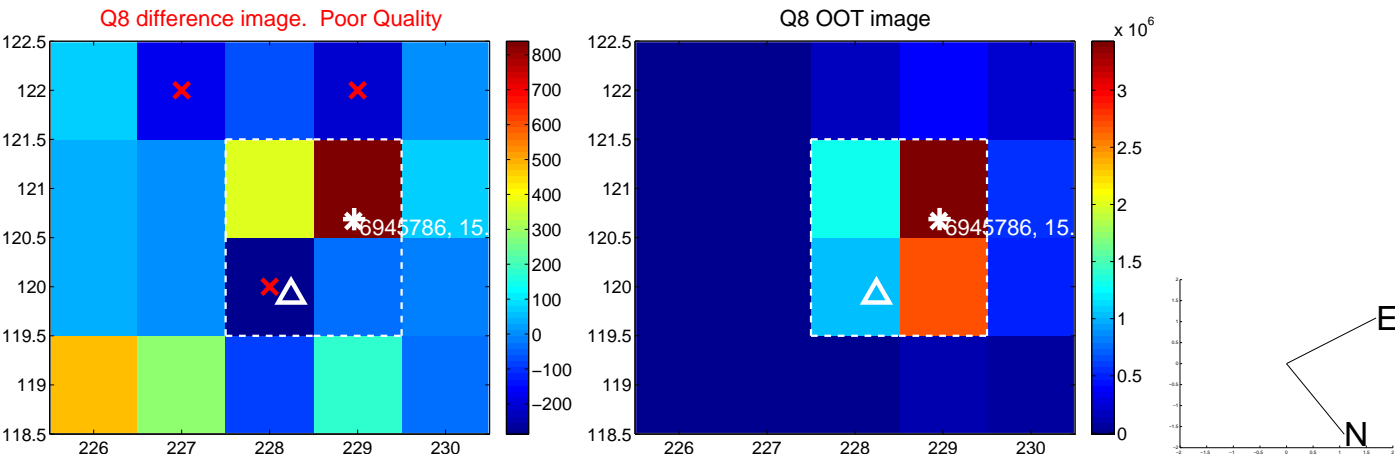
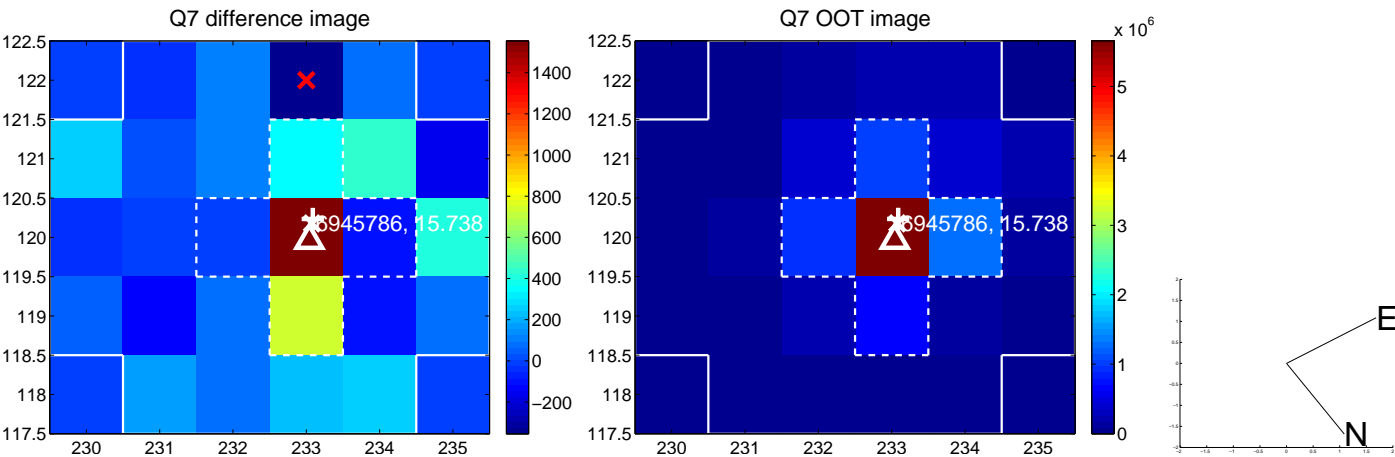
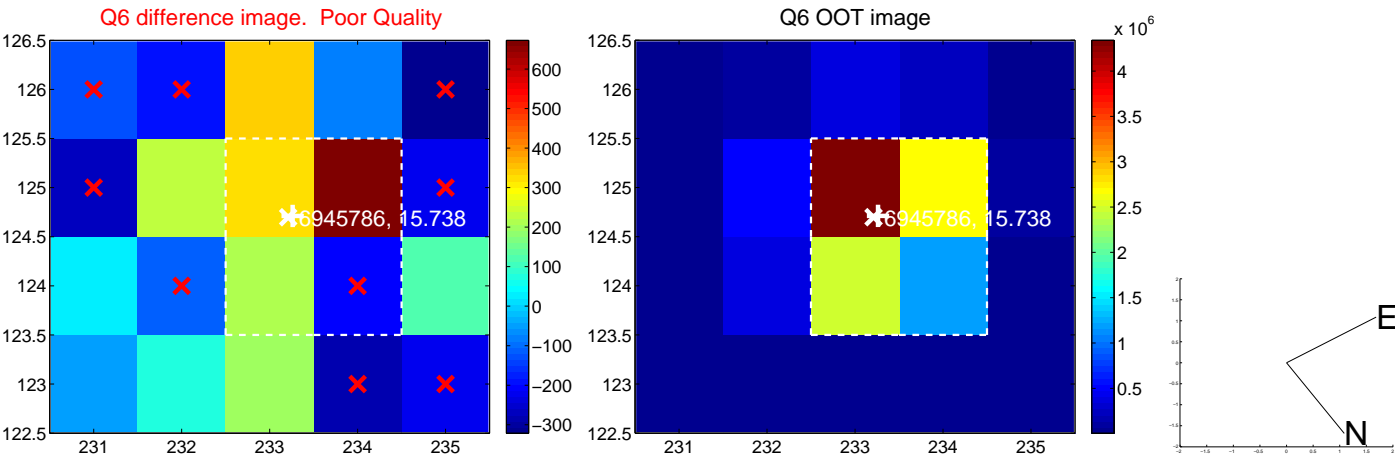
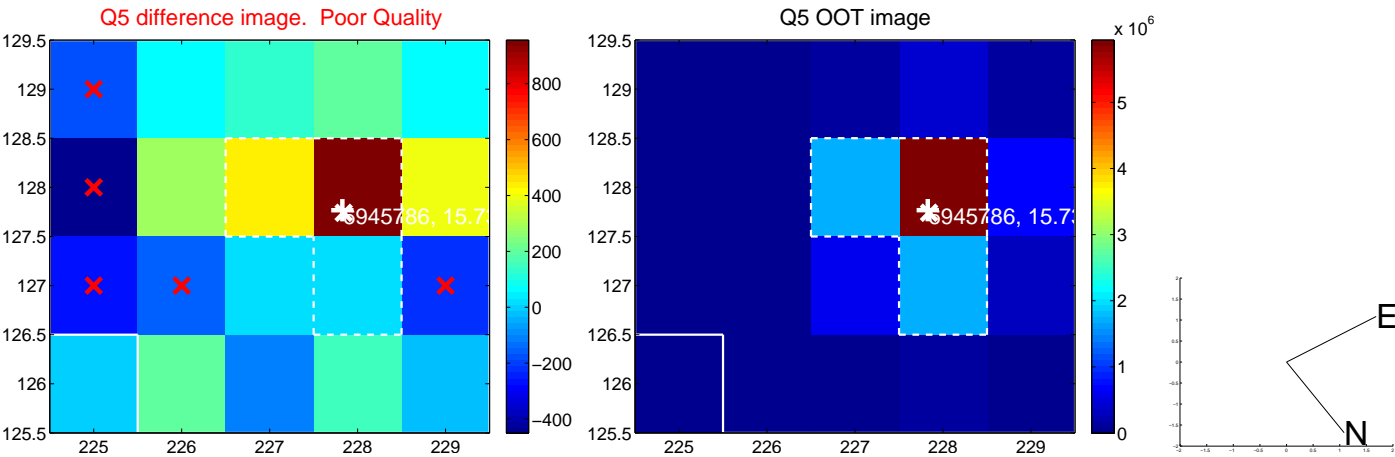


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

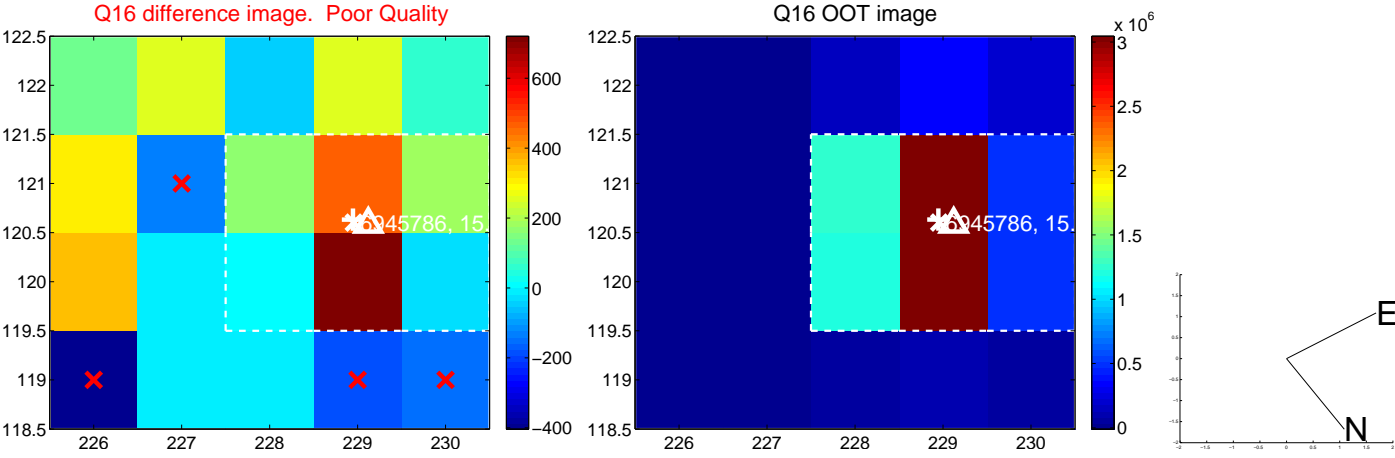
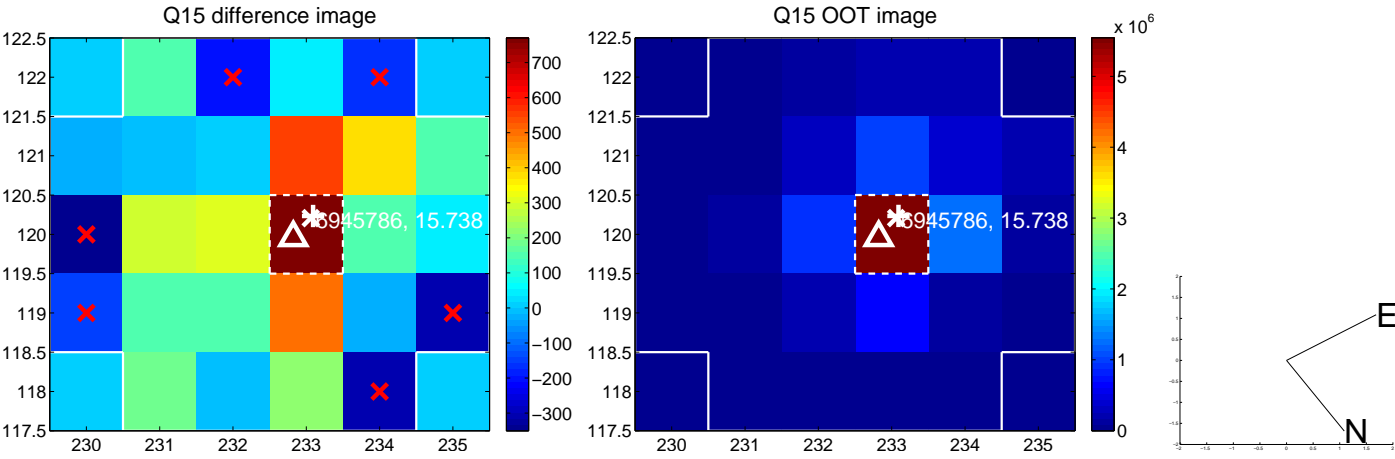
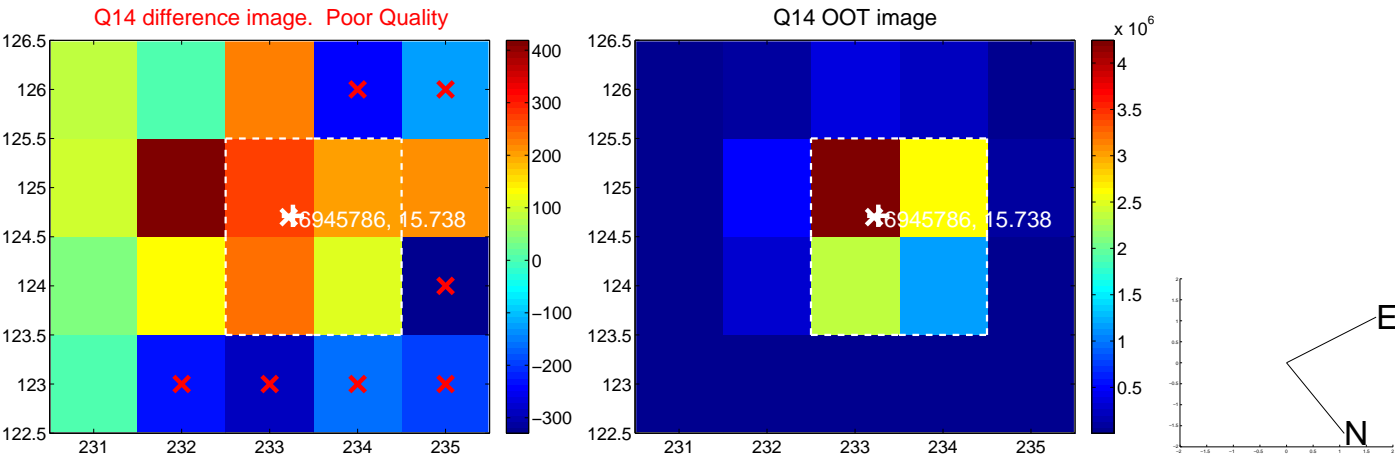
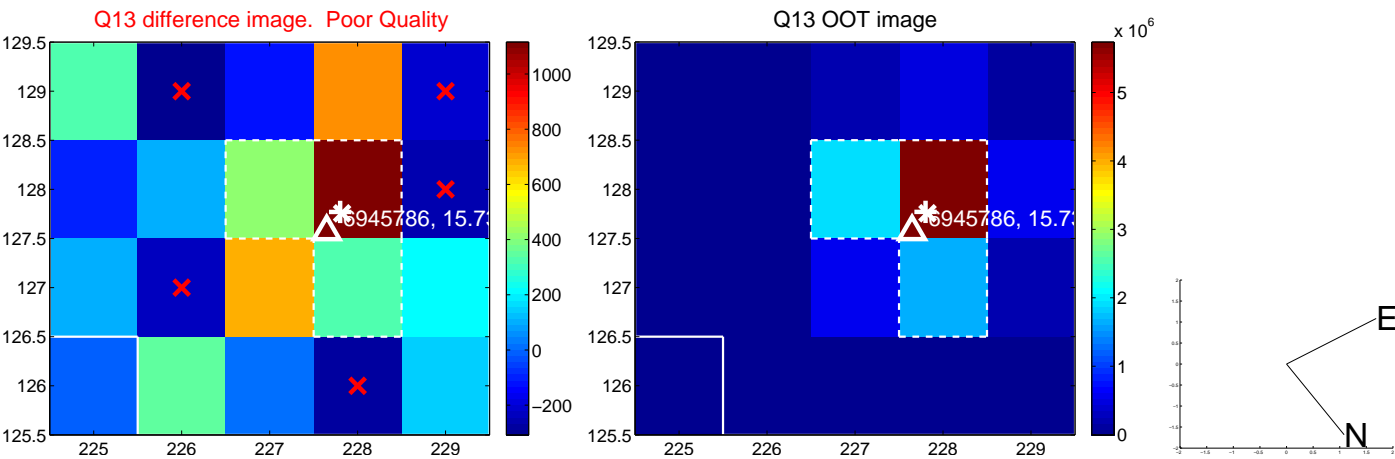
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



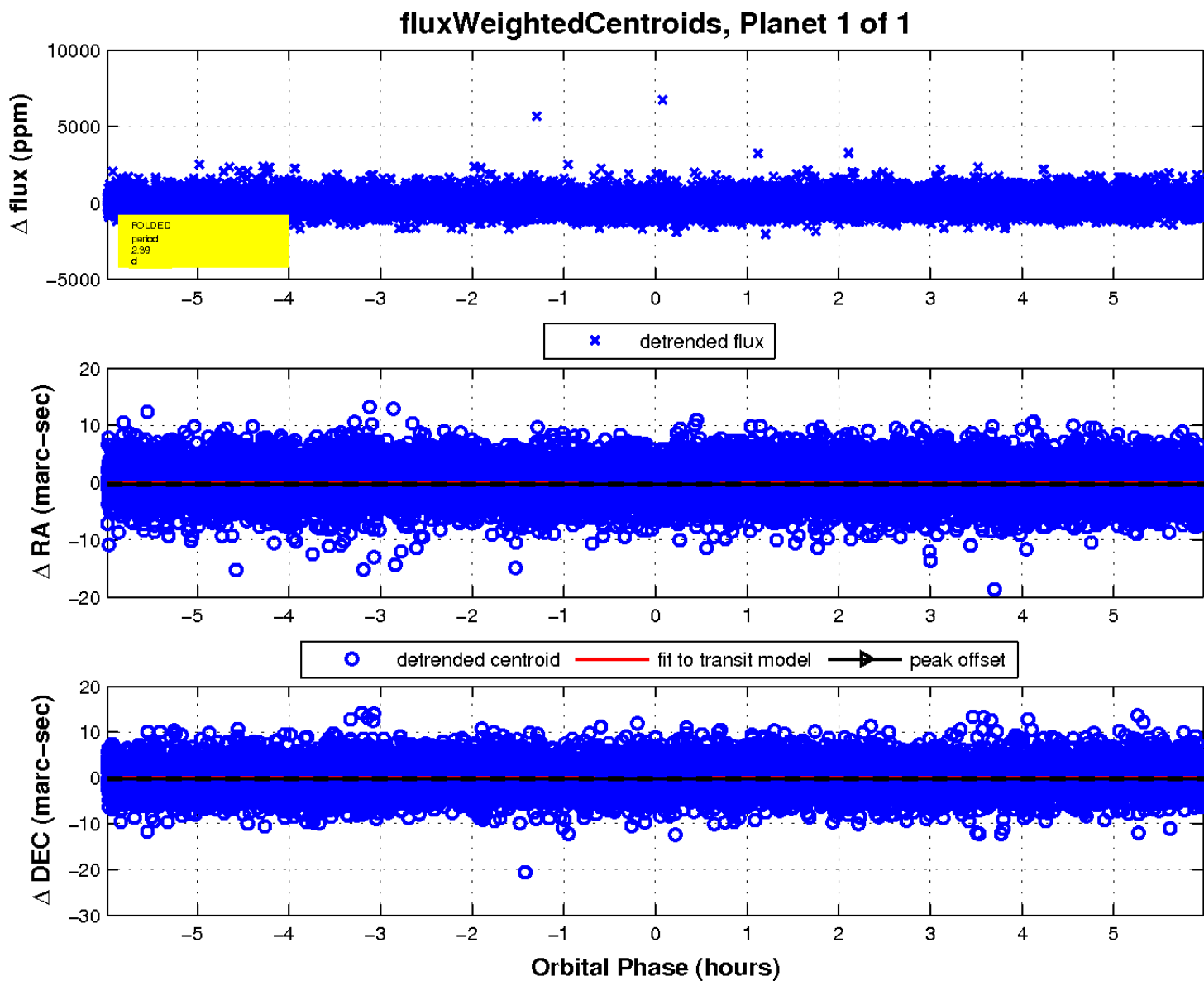
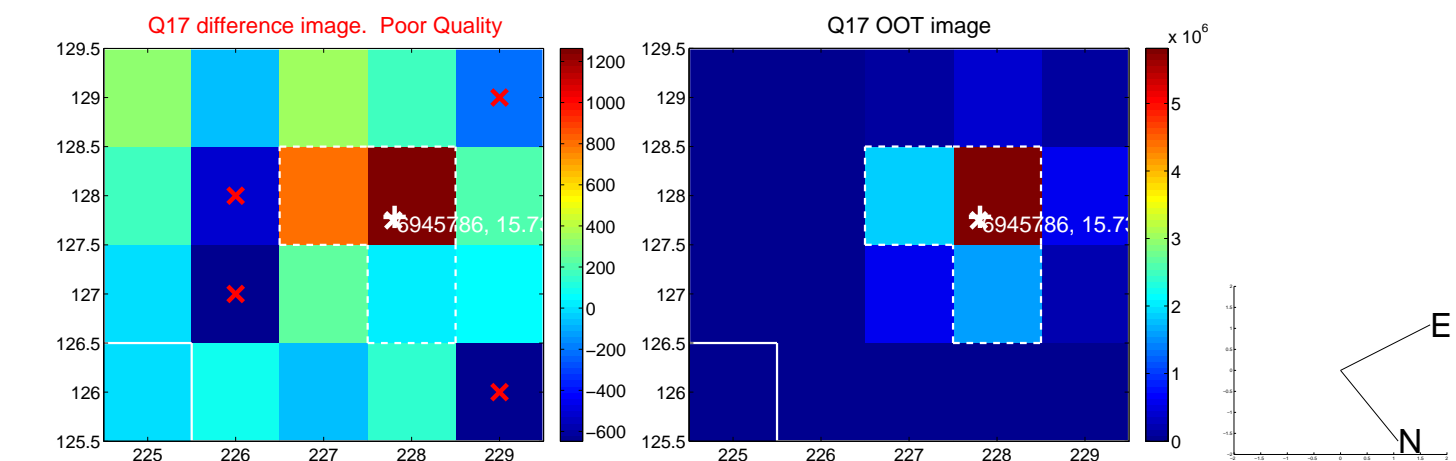
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

