

KIC 006144039

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})
006144039-01	OBS	4602.01	2.858593	132.277330	76.2	2.031	10.2	9.9	0.96	5441	0.90	510.65

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006144039-01	OBS	PC	0.96	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.

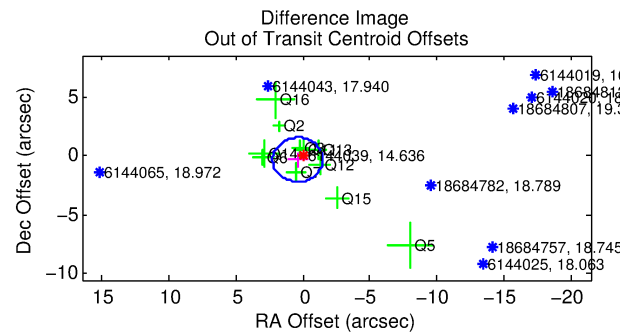
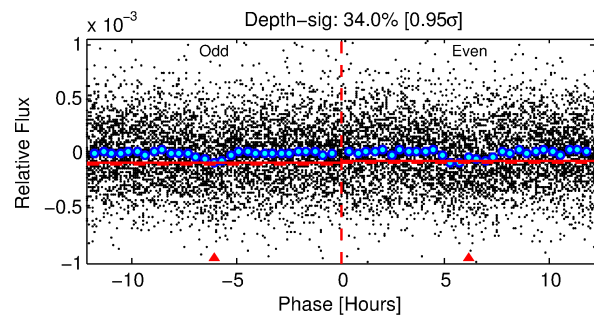
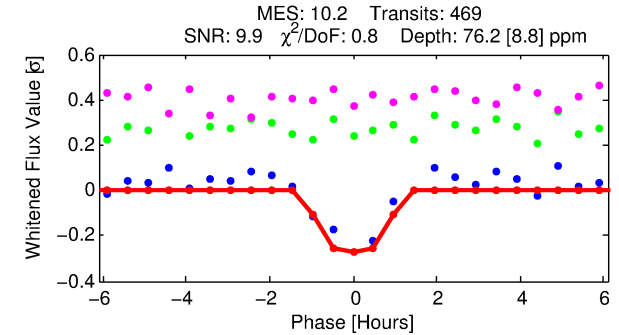
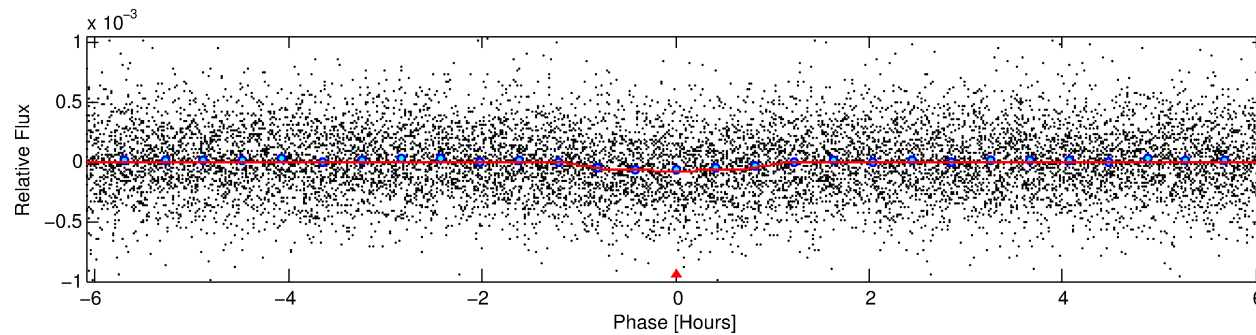
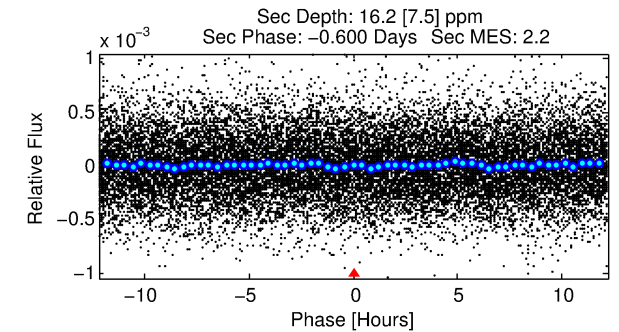
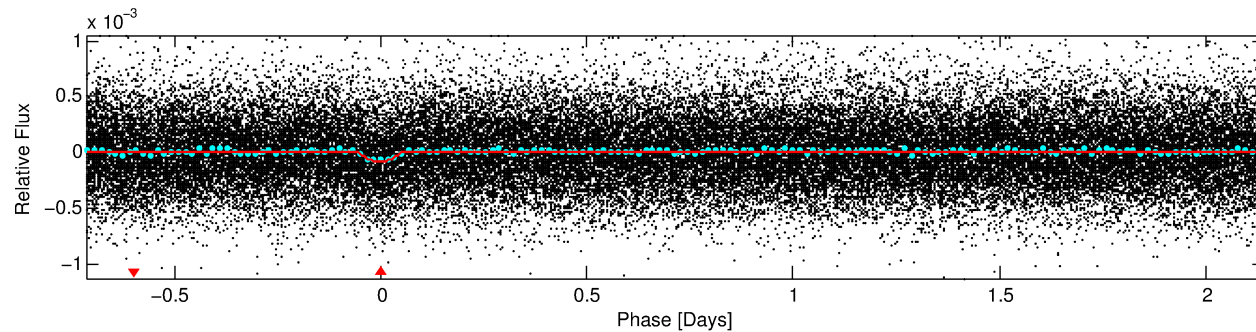
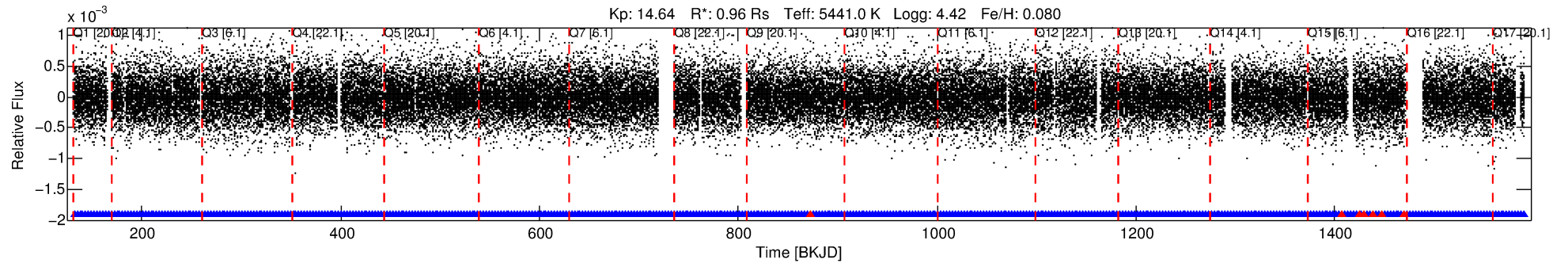
Ephemeris Match Information For 006144039-01

No Significant Match Found

DV One-Page Summary

KIC: 6144039 Candidate: 1 of 1 Period: 2.859 d

KOI: K04602.01 Corr: 0.938



DV Fit Results:

Period = 2.85859 [0.00002] d
Epoch = 132.2773 [0.0037] BKJD
Rp/R* = 0.0086 [0.0043]
a/R* = 7.79 [14.96]
b = 0.71 [1.42]
Seff = 510.65 [97.28]
Teff = 1212 [58] K
Rp = 0.90 [0.46] Re
a = 0.0378 [0.0042] AU
Ag = 15.70 [17.42] [0.84σ]
Teffp = 3730 [1022] K [2.46σ]

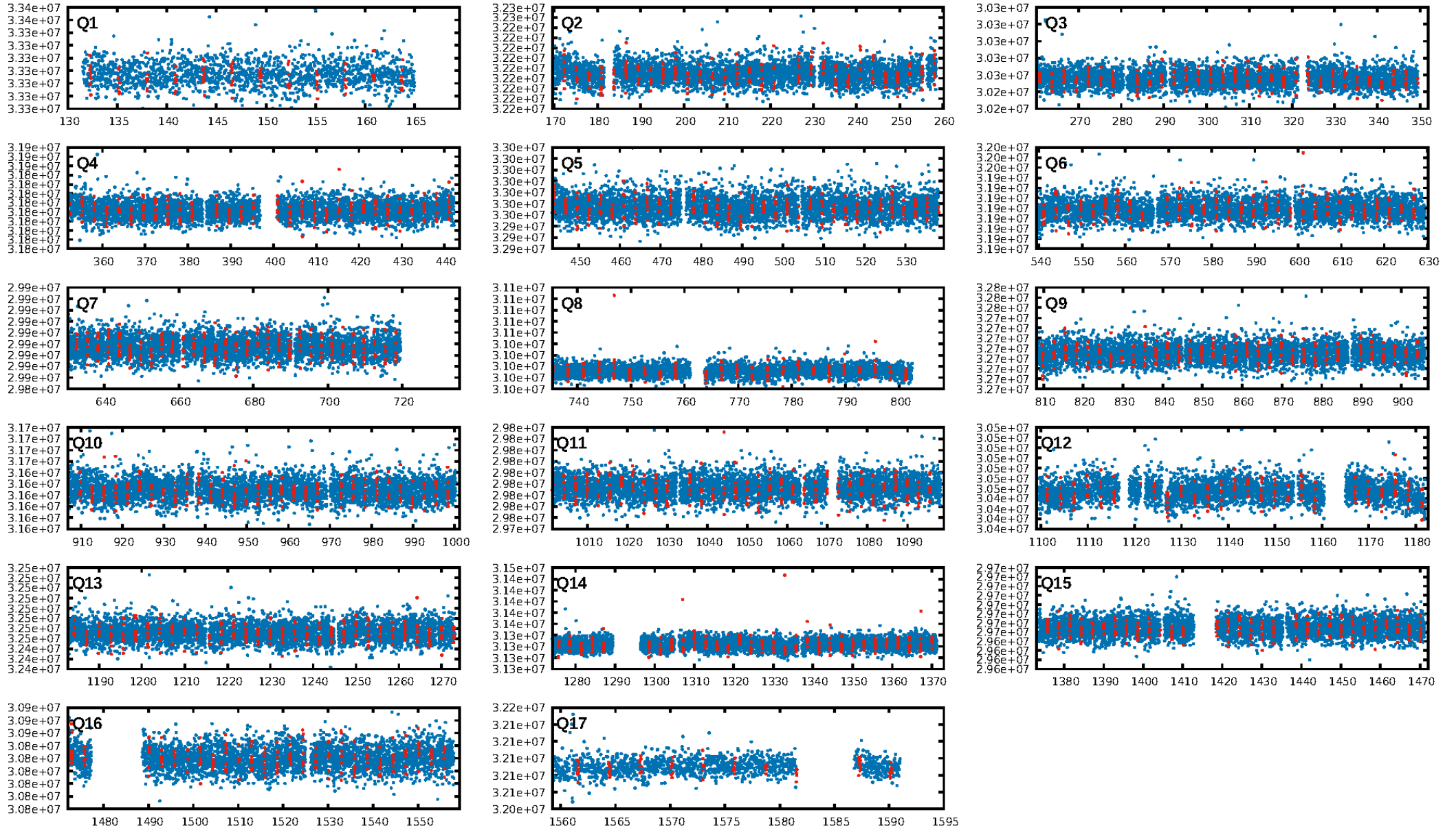
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.74e-24
RollingBand-fgt: 0.98 [440/447]
GhostDiagnostic-chr: -20.56
Centroid-sig: 49.5%
Centroid-so: 1.203 arcsec [0.80σ]
OotOffset-rm: 0.508 arcsec [0.81σ]
KicOffset-rm: 0.643 arcsec [1.08σ]
OotOffset-st: 3/4/2/2 [11]
KicOffset-st: 3/4/2/2 [11]
DiffImageQuality-fgm: 0.45 [5/11]
DiffImageOverlap-fno: 1.00 [17/17]

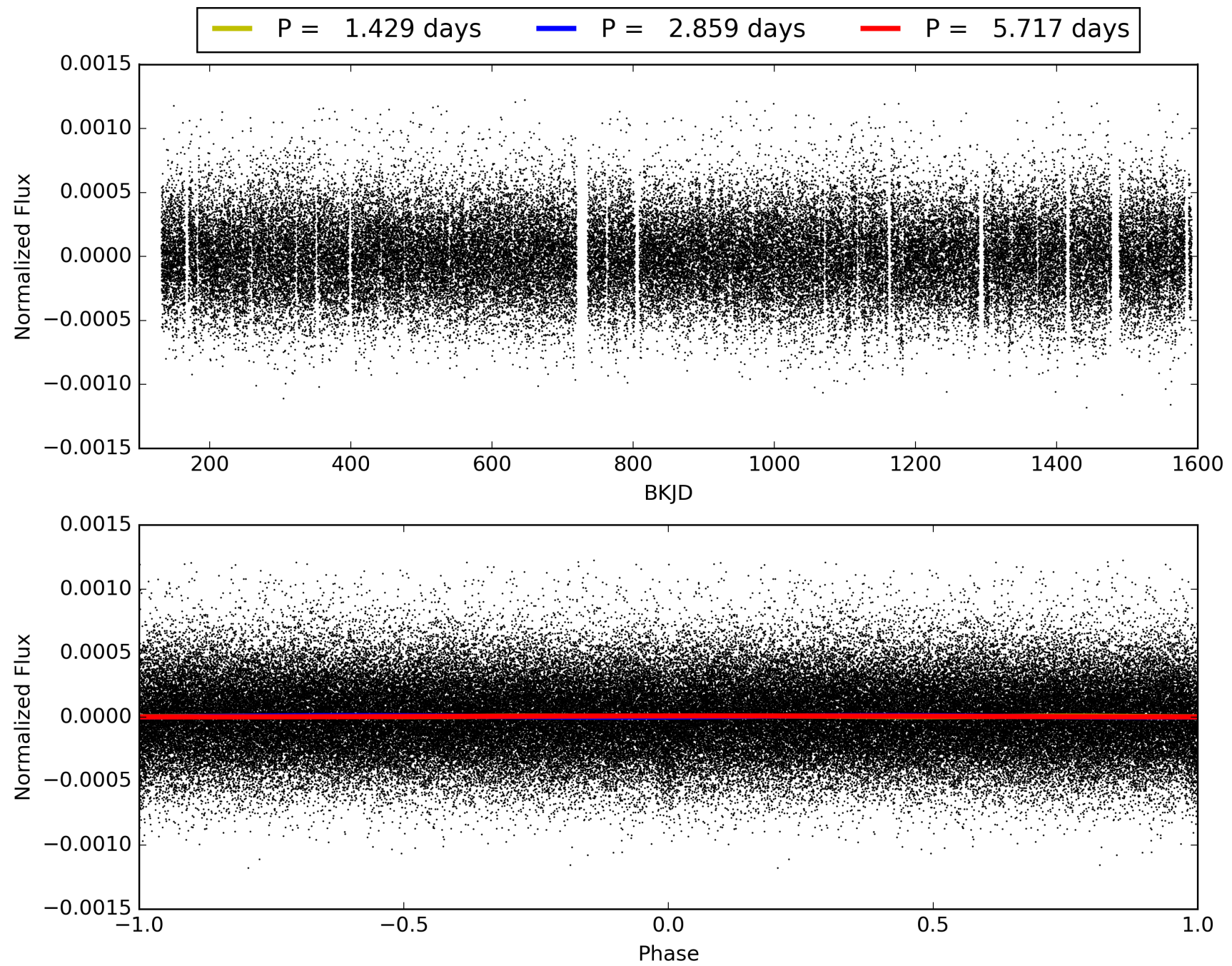
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 12:22:24 Z

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

TCE 006144039-01, PDC Light Curves

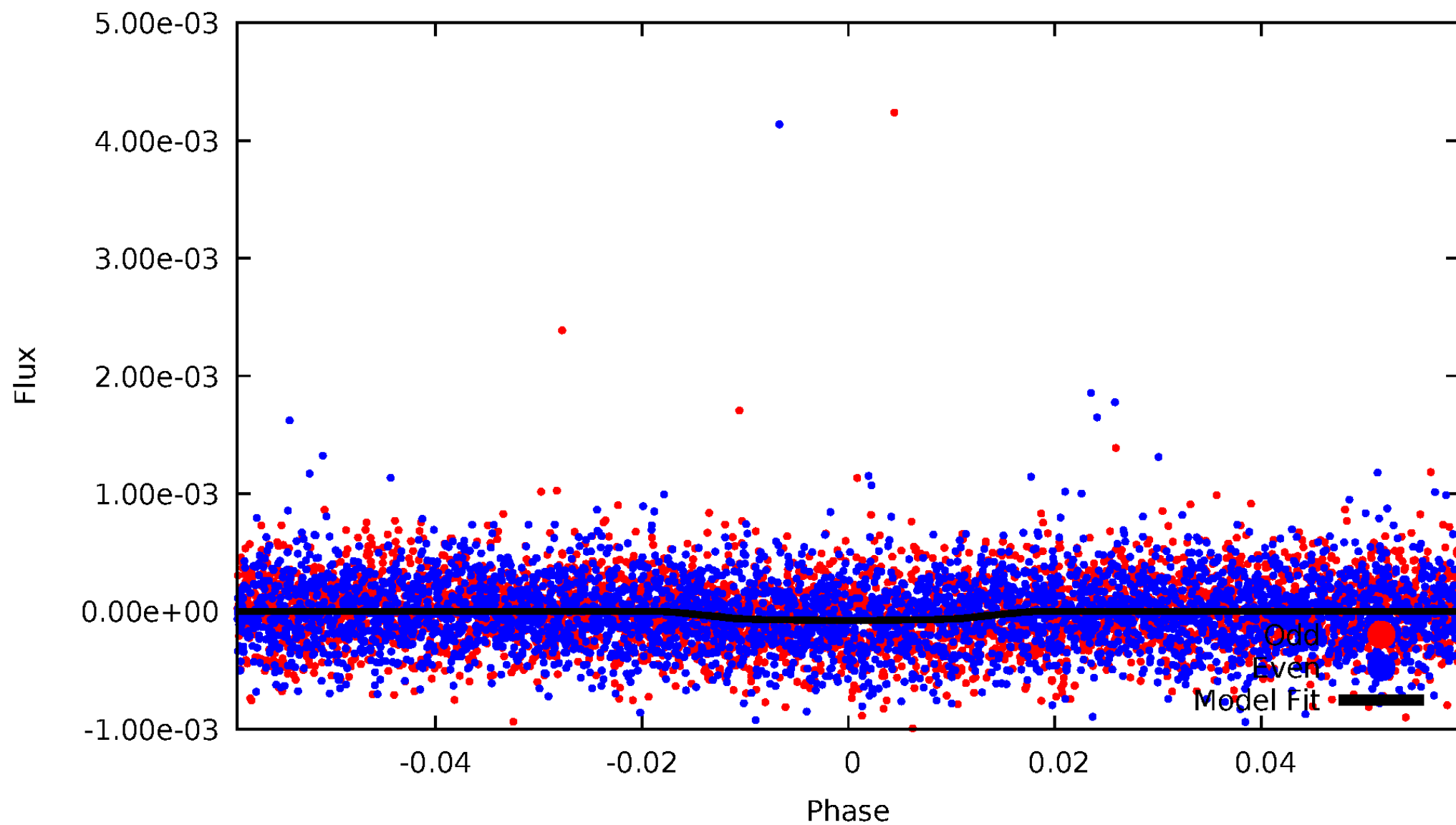


TCE 006144039-01



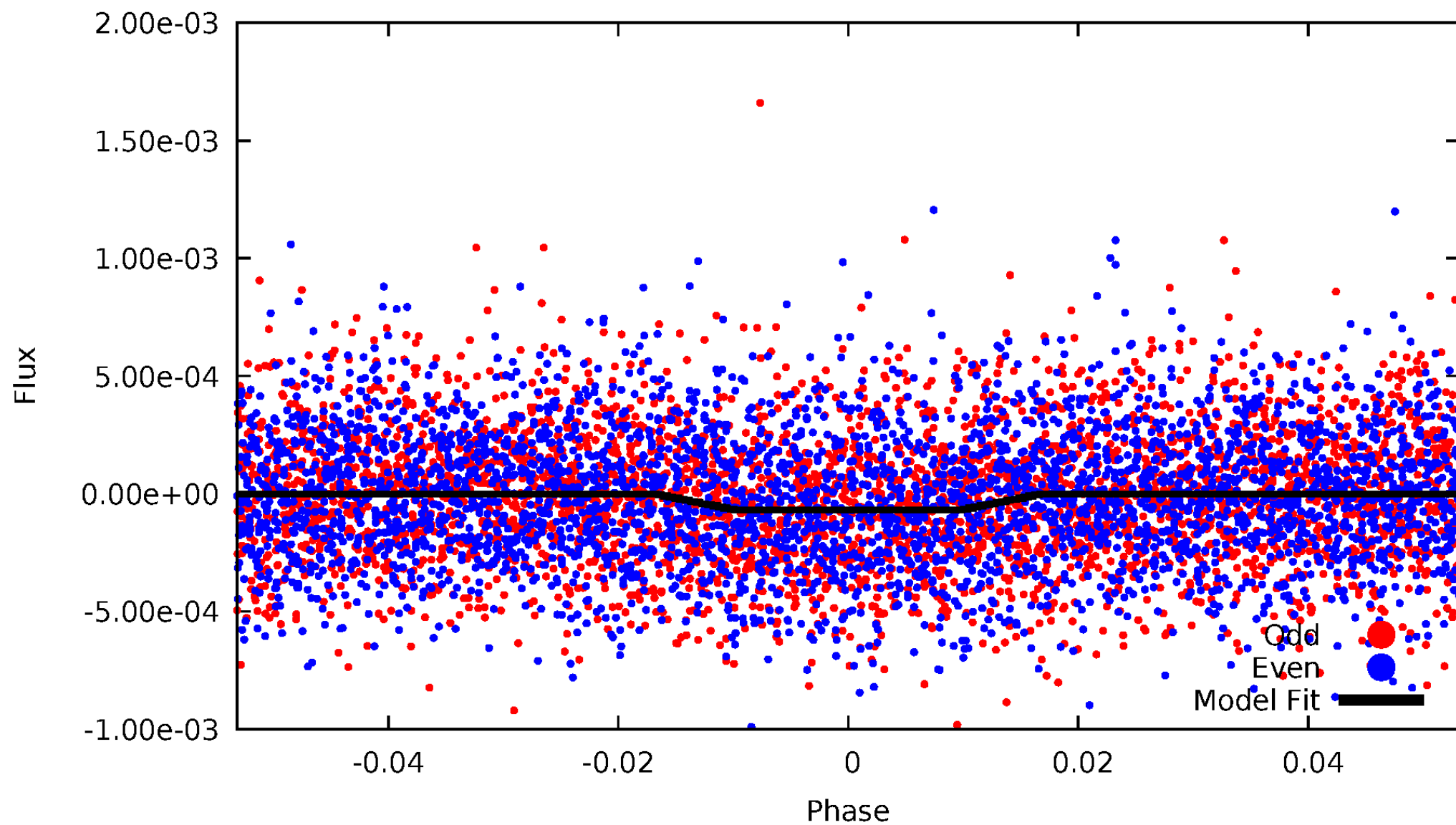
DV Odd/Even

TCE 006144039-01



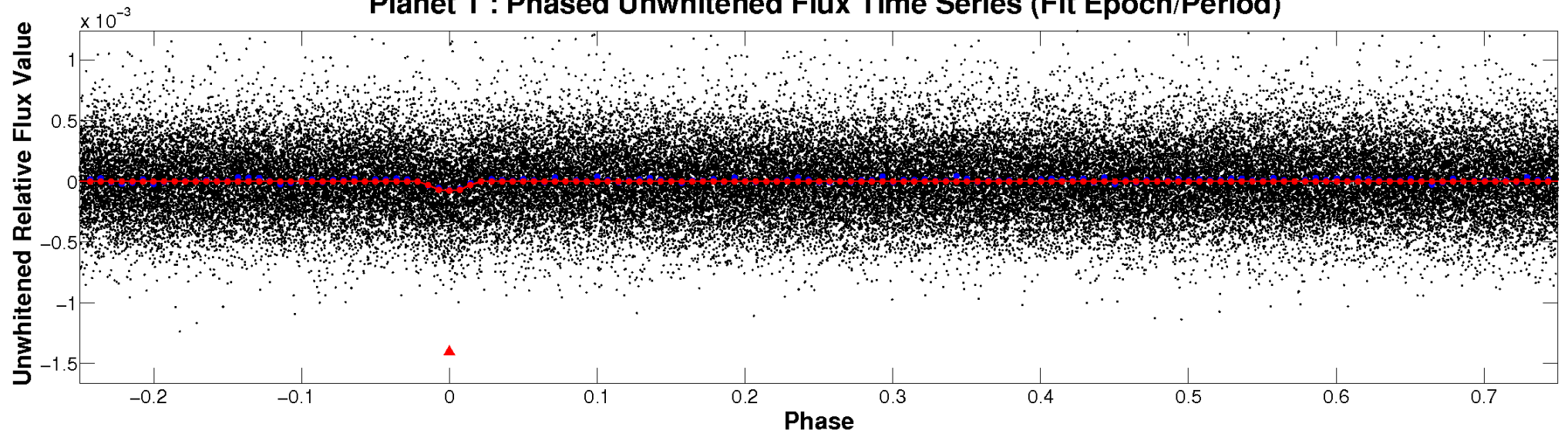
ALT Odd/Even

TCE 006144039-01

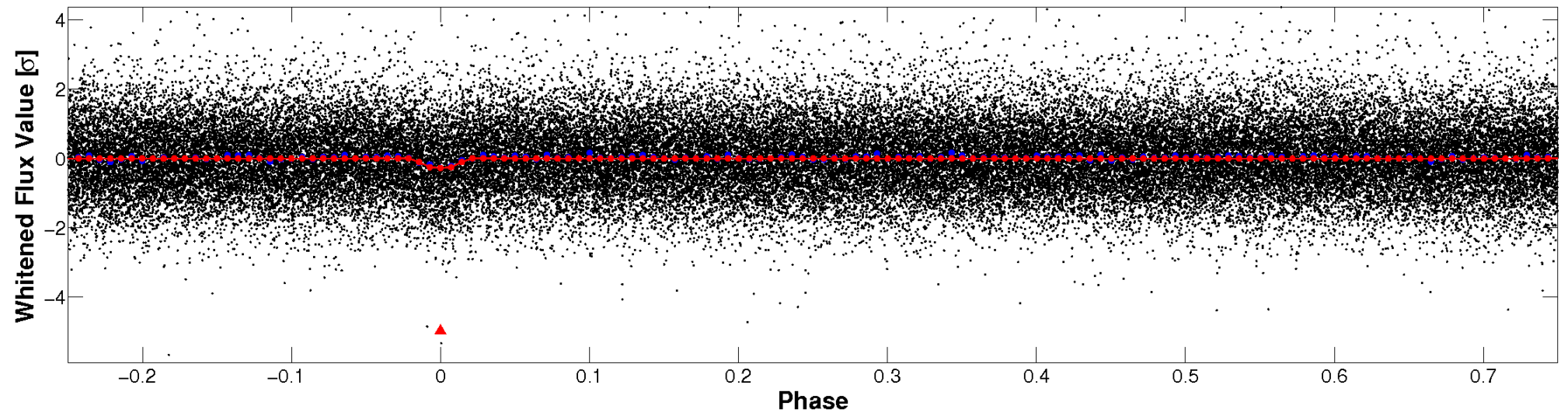


Non-Whitened Vs. Whitened Light Curve

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

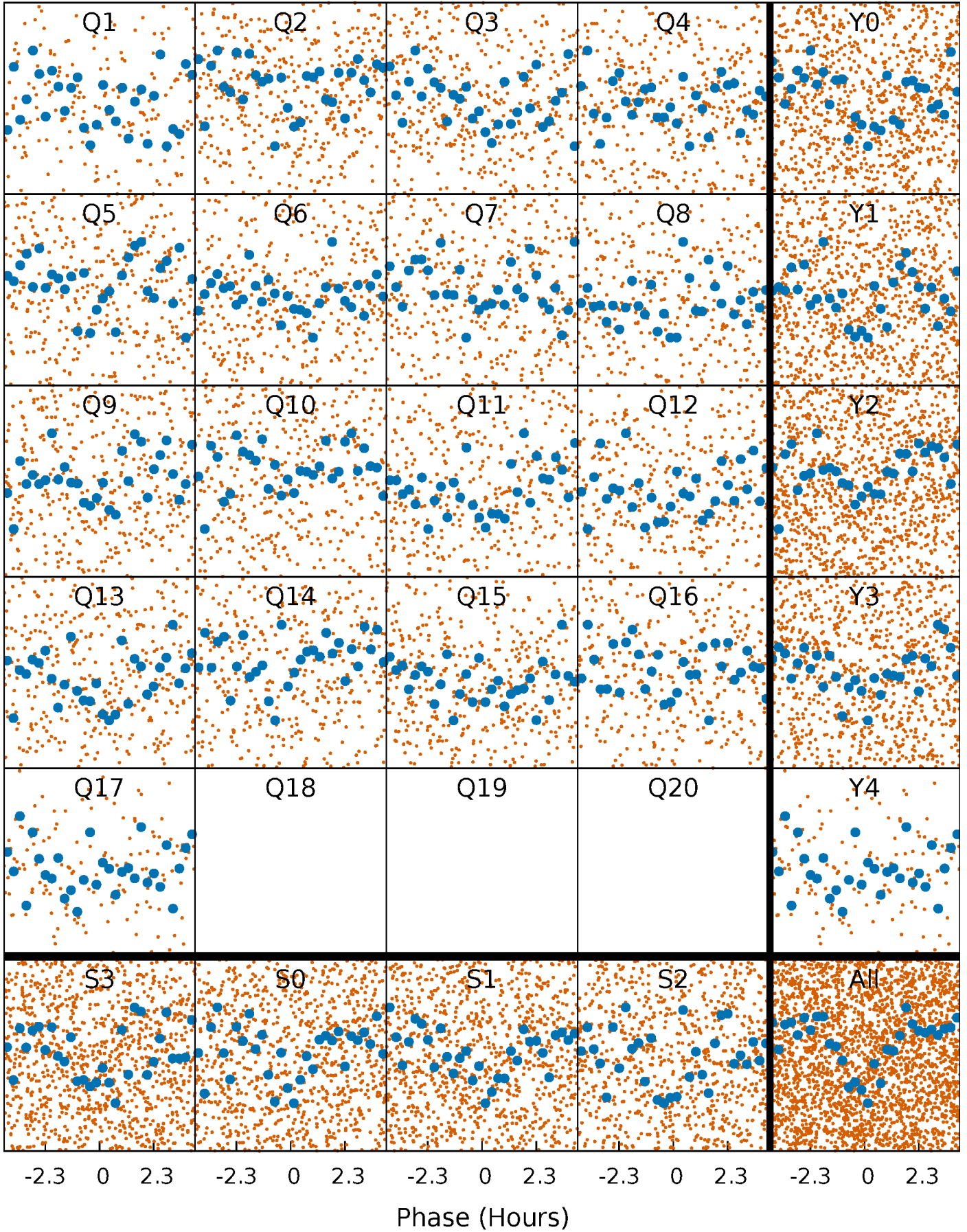


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



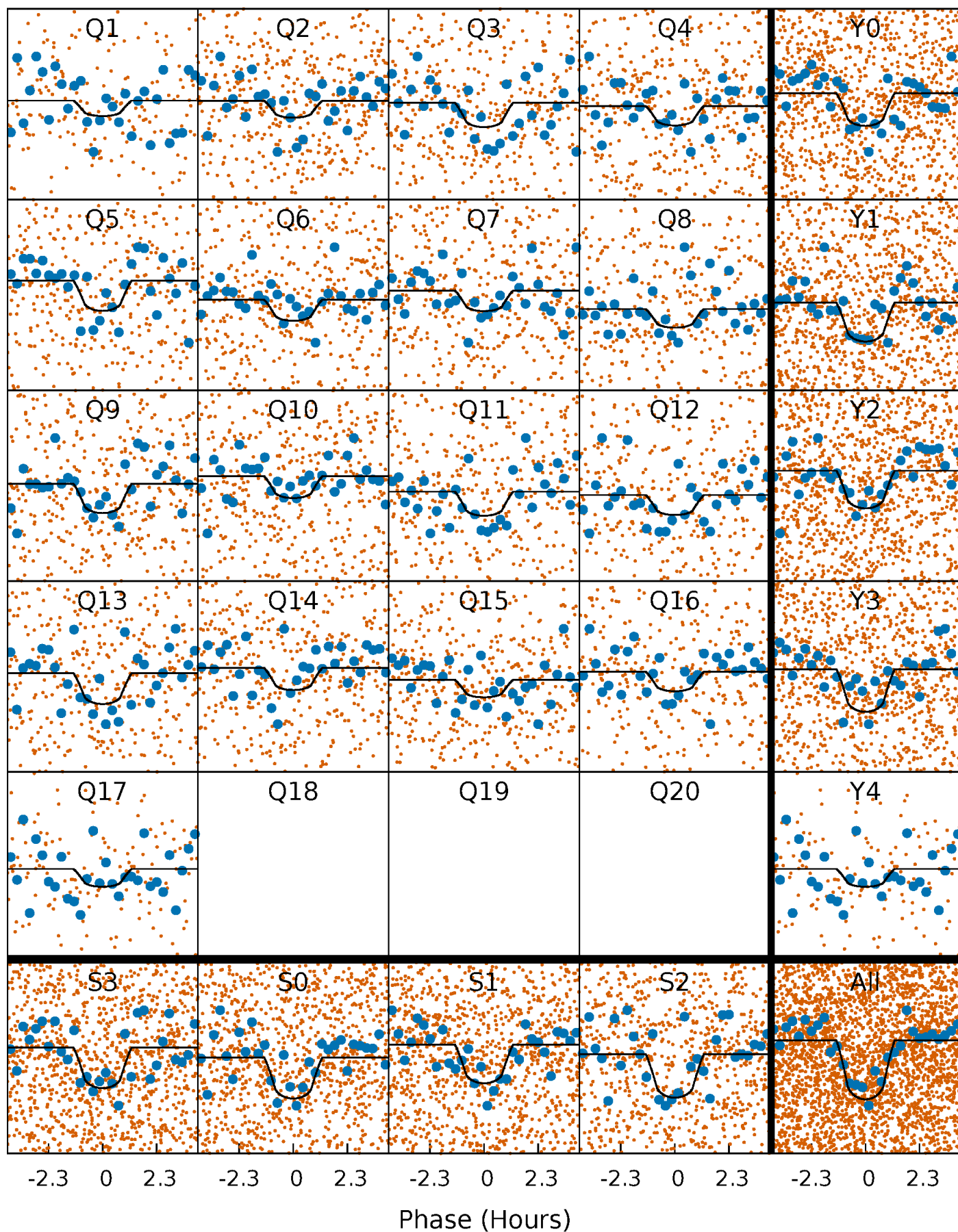
PDC Quarter-Phased Transit Curves

TCE 006144039-01 P= 2.858593 Days $T_0=132.277330$ (BKJD)



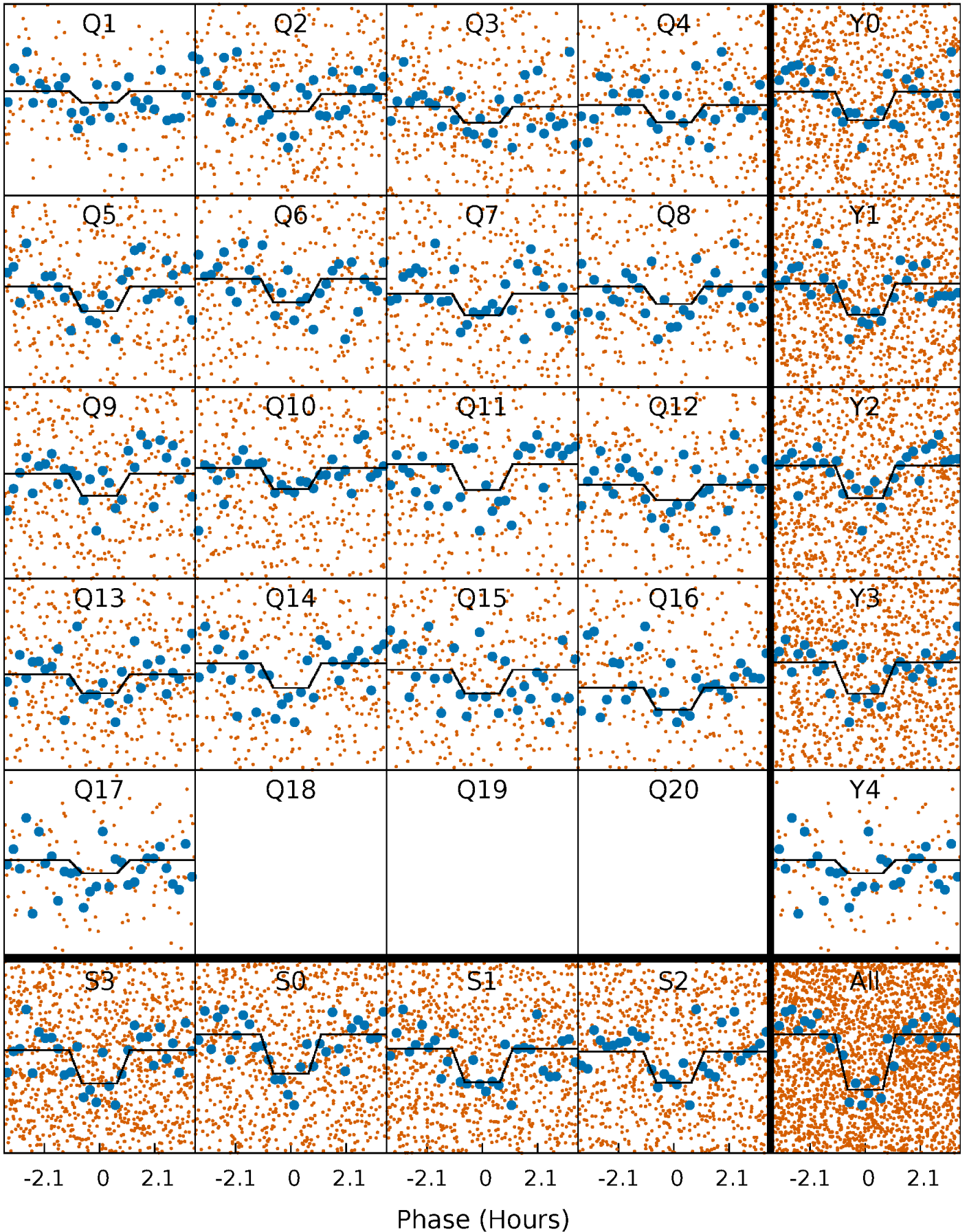
DV Quarter-Phased Transit Curves

TCE 006144039-01 P= 2.858593 Days $T_0=132.277330$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

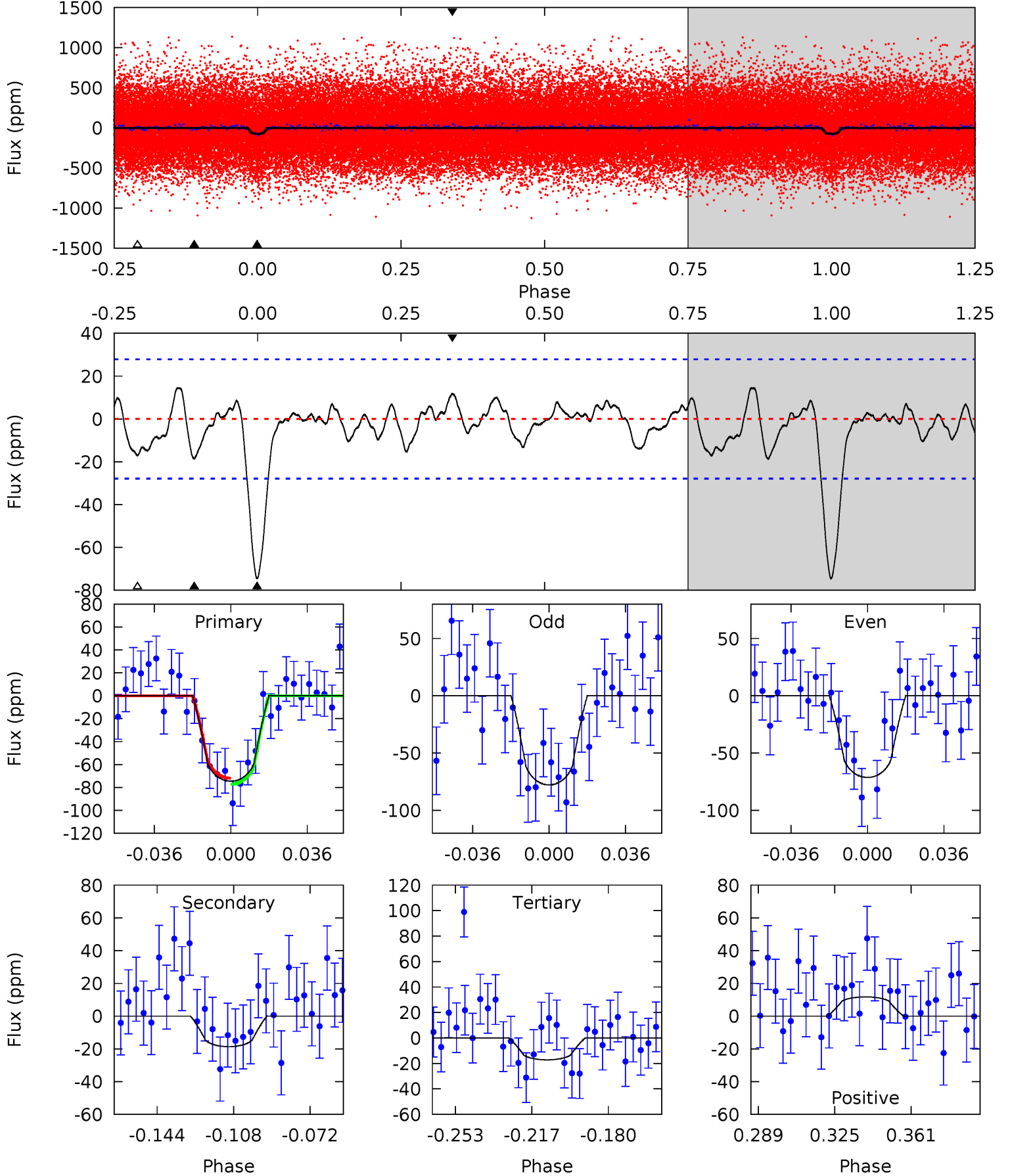
TCE 006144039-01 P= 2.858521 Days $T_0=132.291959$ (BKJD)



DV Model-Shift Uniqueness Test

006144039-01, P = 2.858593 Days, E = 129.418737 Days

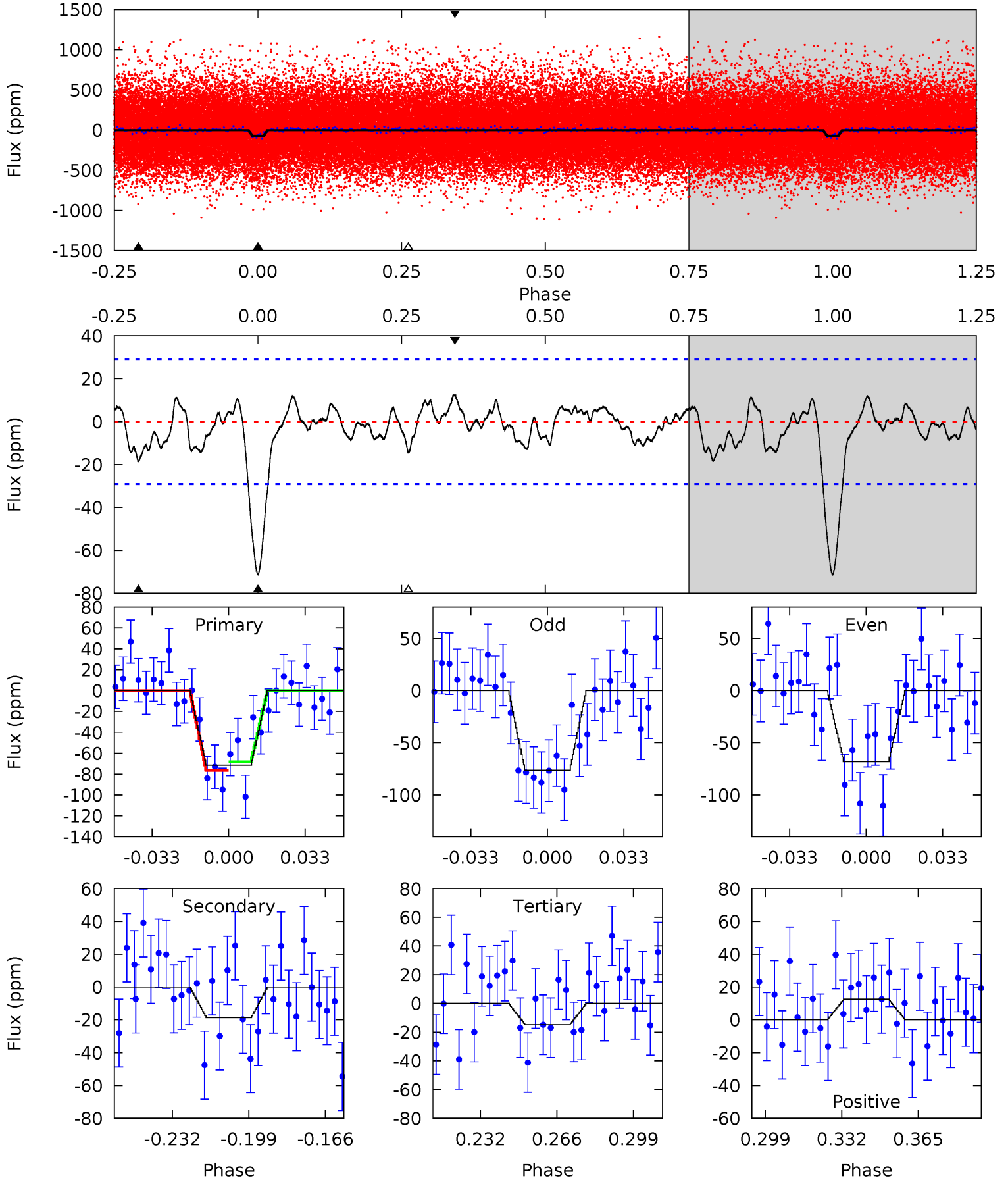
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.8	3.20	2.94	2.01	4.77	2.10	1.09	9.83	10.8	0.26	1.19	0.56	0.93	0.16	0.45



Alt Model-Shift Uniqueness Test

006144039-01, P = 2.858521 Days, E = 129.433438 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.8	3.07	2.43	2.09	4.79	2.13	1.02	9.34	9.68	0.64	0.98	0.66	1.04	0.15	0.69



Stellar Parameters For KIC 006144039

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5441^{+76}_{-76}	$4.415^{+0.108}_{-0.081}$	$0.080^{+0.150}_{-0.150}$	$0.964^{+0.109}_{-0.100}$	$0.881^{+0.061}_{-0.039}$	$1.386^{+0.535}_{-0.354}$
	+1%/-1%	+2%/-2%	+188%/-188%	+11%/-10%	+7%/-4%	+39%/-26%
Source	SPE90	SPE90	SPE90	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 006144039-01 / KOI 4602.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-19 ± 6	$0.92^{+0.42}_{-0.46}$	1689^{+57}_{-60}	4070^{+1218}_{-560}	17^{+44}_{-10}
Alt.	-19 ± 6	$0.88^{+0.46}_{-0.44}$	1690^{+58}_{-55}	4145^{+1272}_{-598}	19^{+54}_{-12}

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

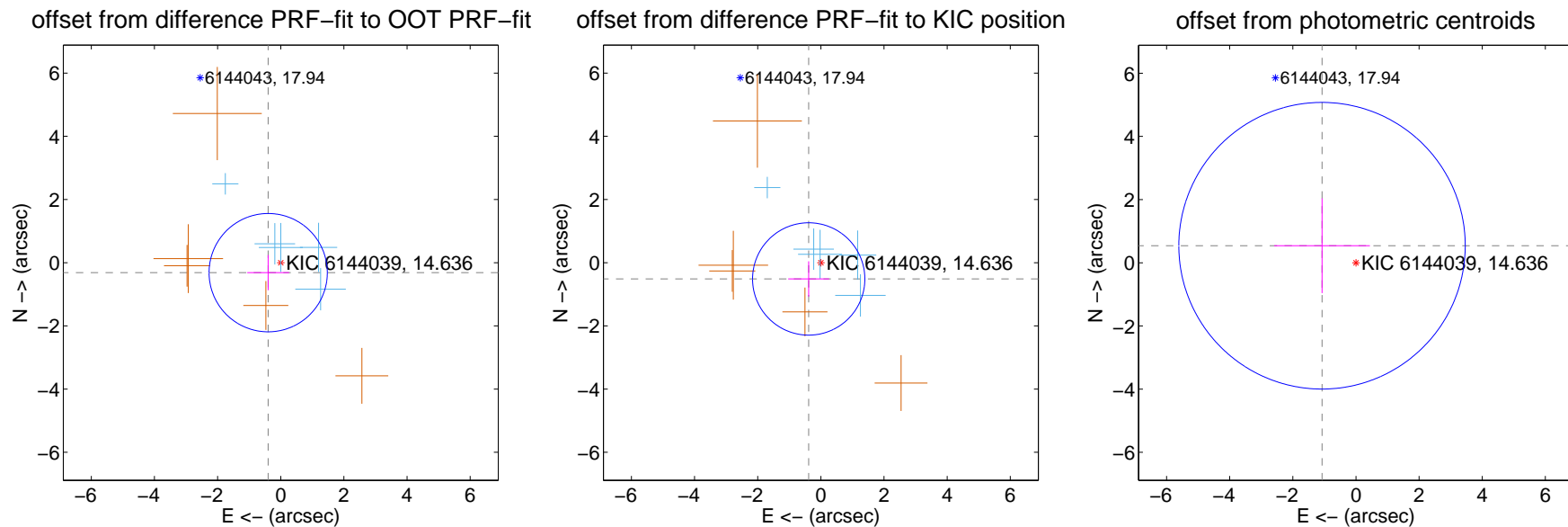
DV Centroid Data

Supplemental centroid analysis for 006144039-01. Kepler magnitude: 14.64. Transit SNR 9.95

There are 5 quarters with good PRF difference image offsets

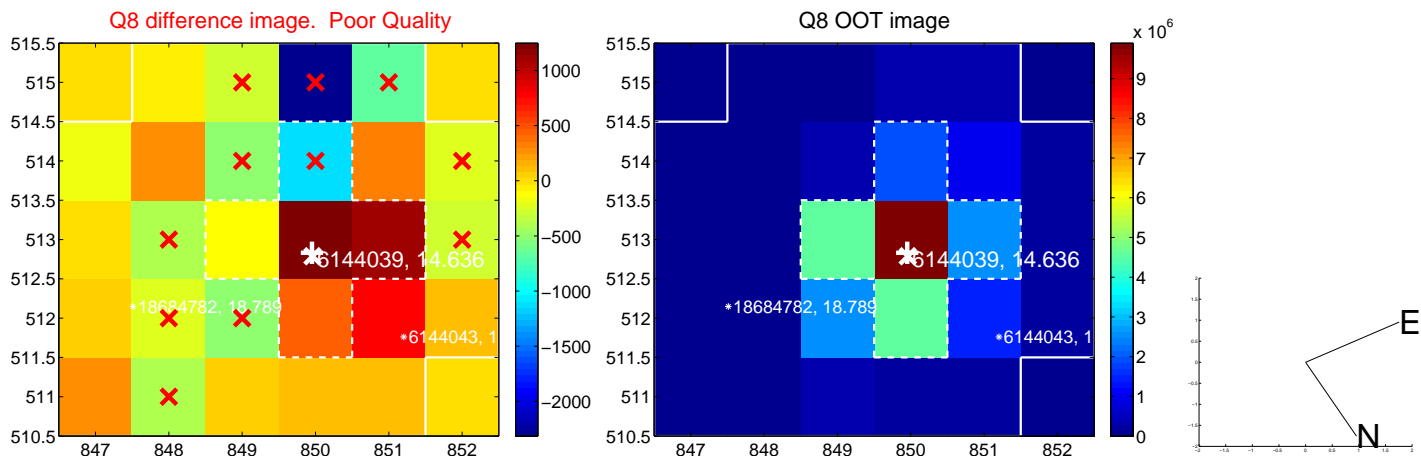
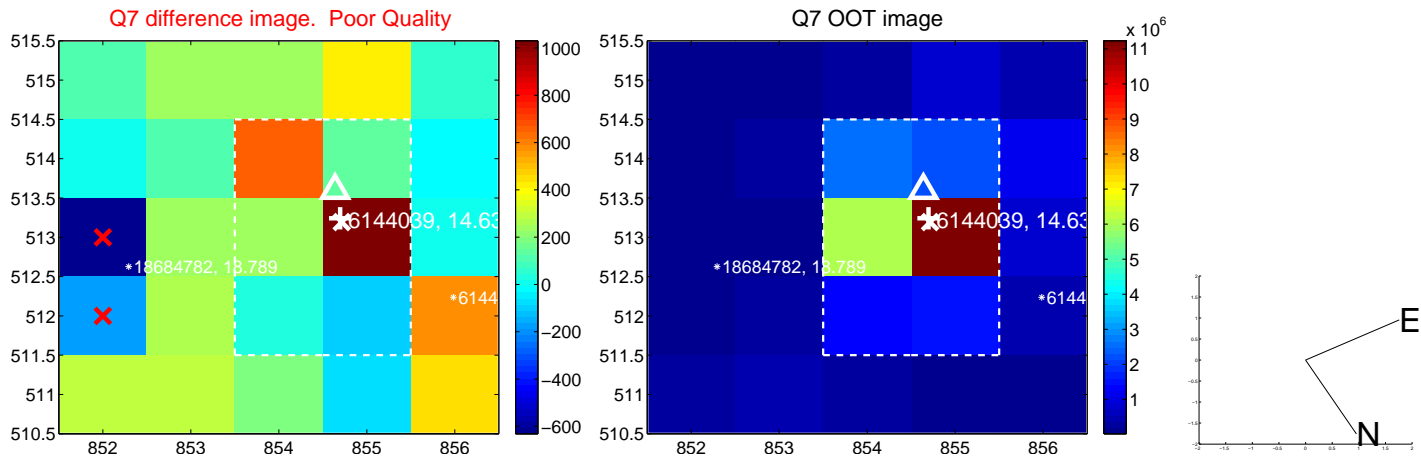
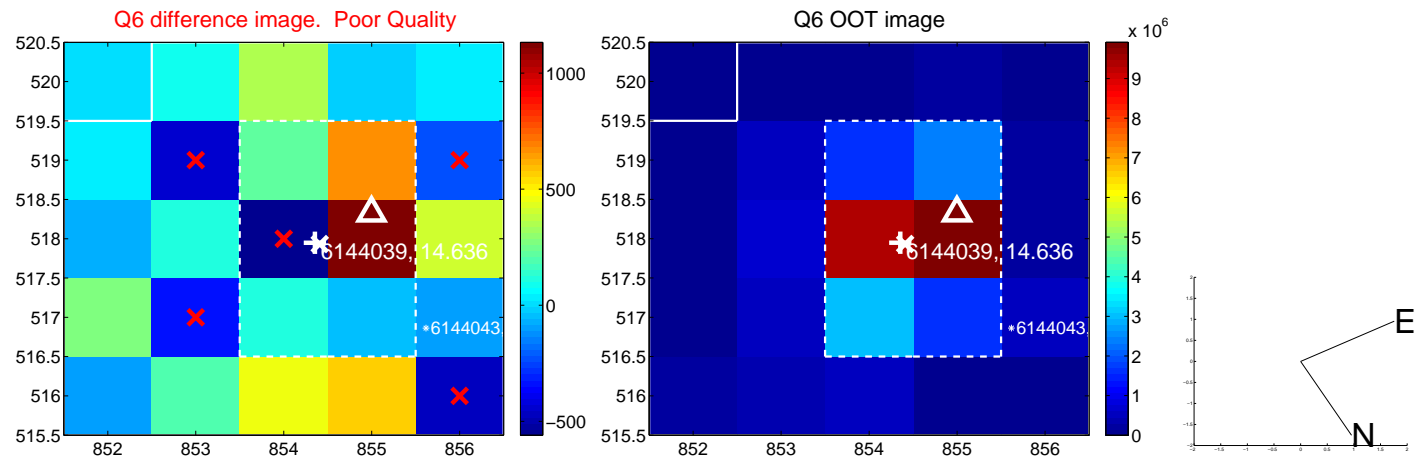
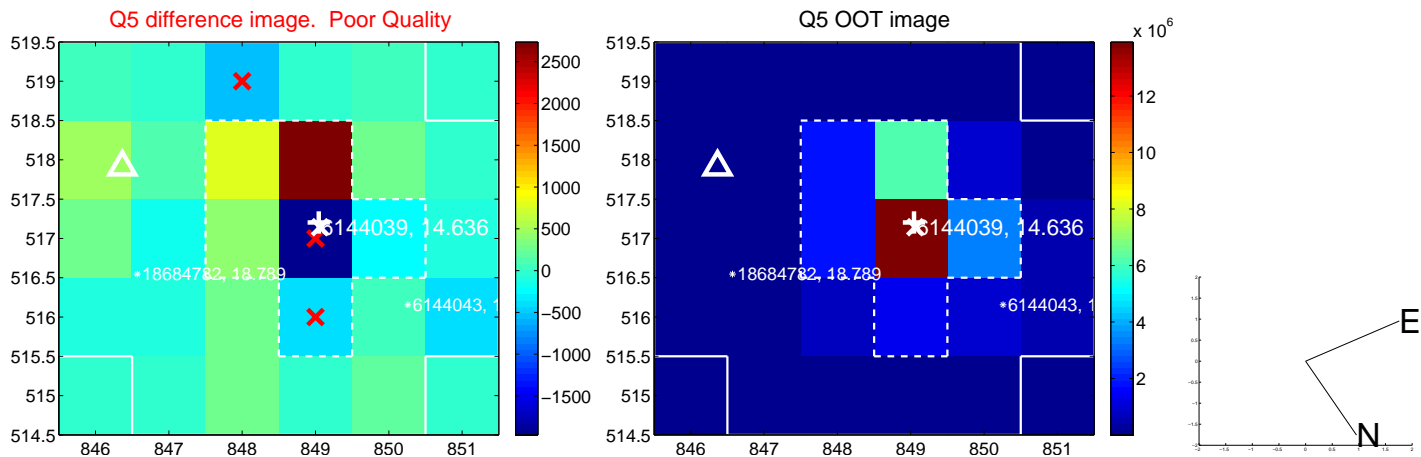
The direct PRF centroid is offset from the target star catalog position by about 0.24 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.508 ± 0.624	0.81	0.398 ± 0.663	-0.316 ± 0.558
PRF-fit source offset from KIC position	0.643 ± 0.593	1.08	0.385 ± 0.648	-0.514 ± 0.559
photometric centroid source offset	1.20 ± 1.51	0.80	1.07 ± 1.52	0.54 ± 1.50

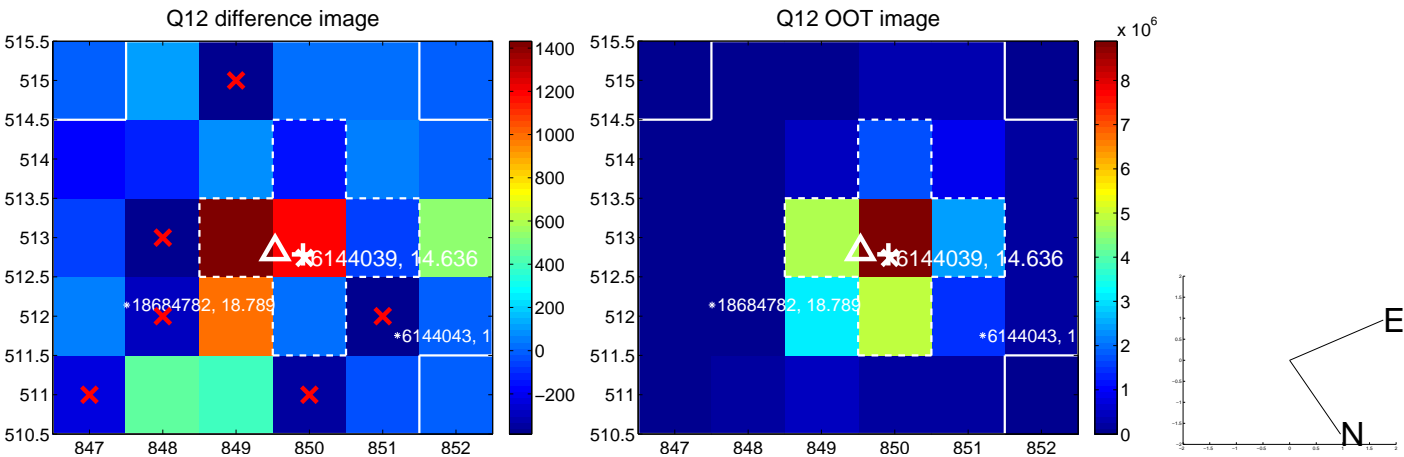
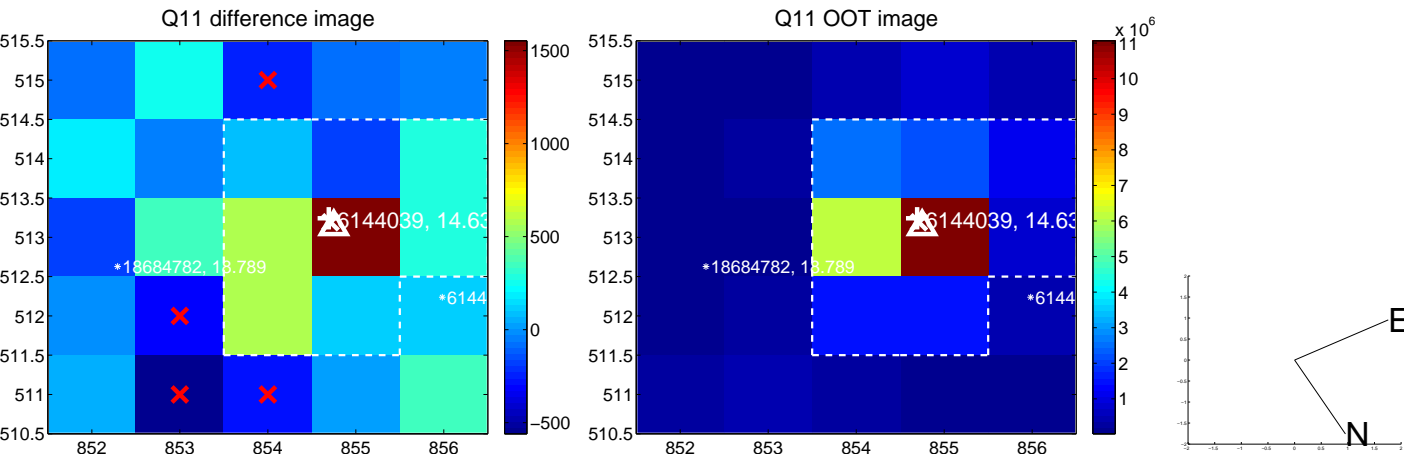
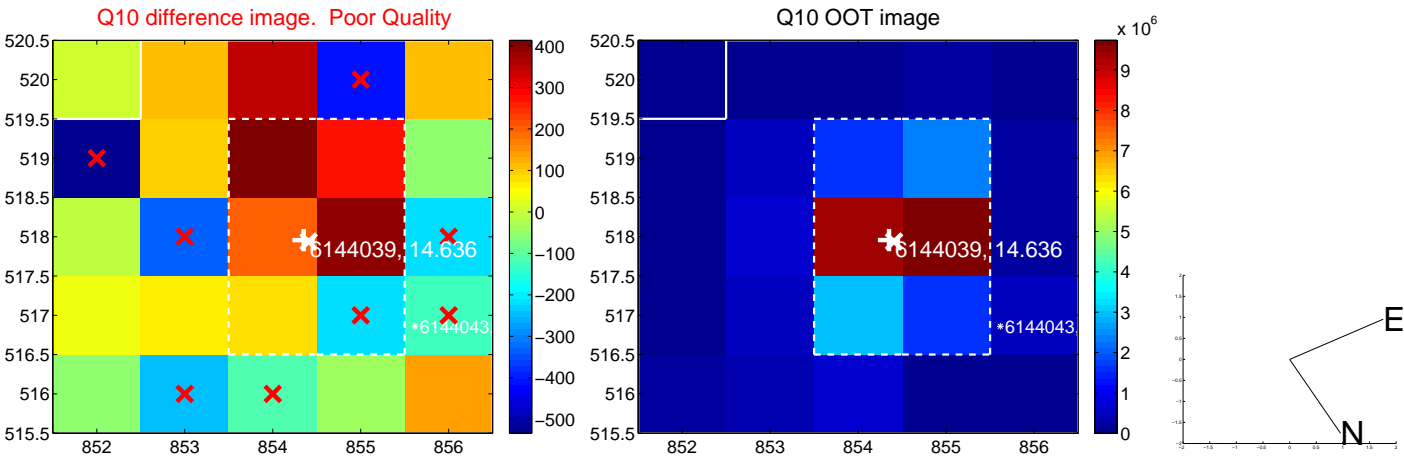
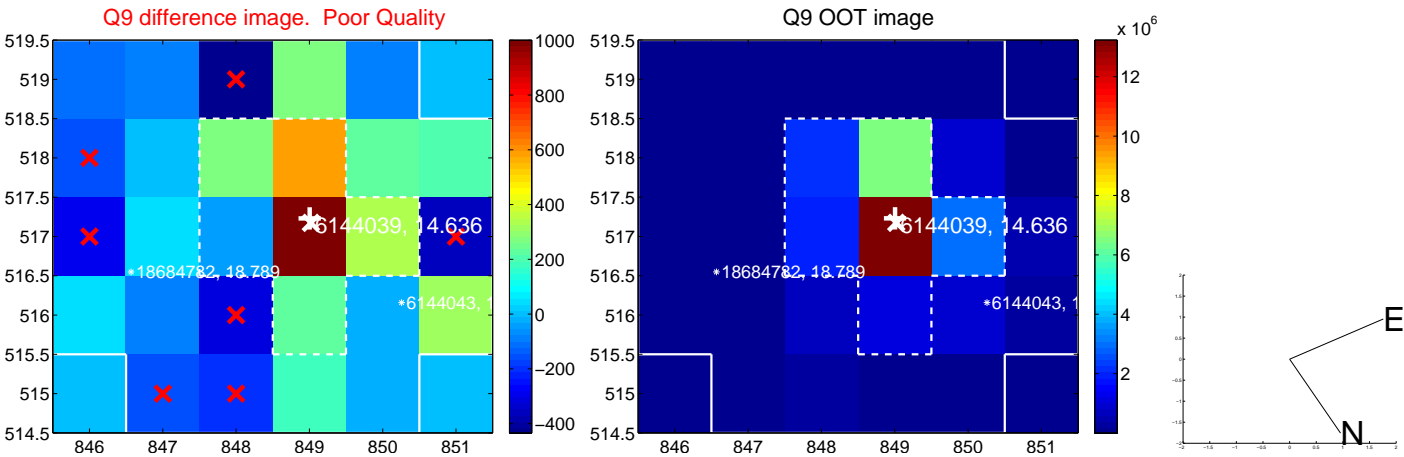


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

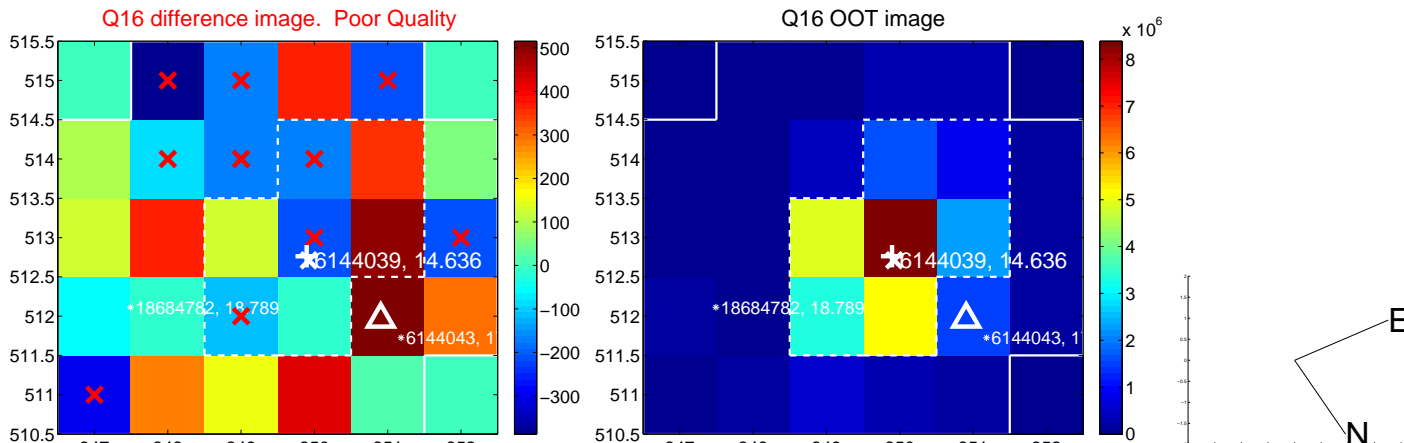
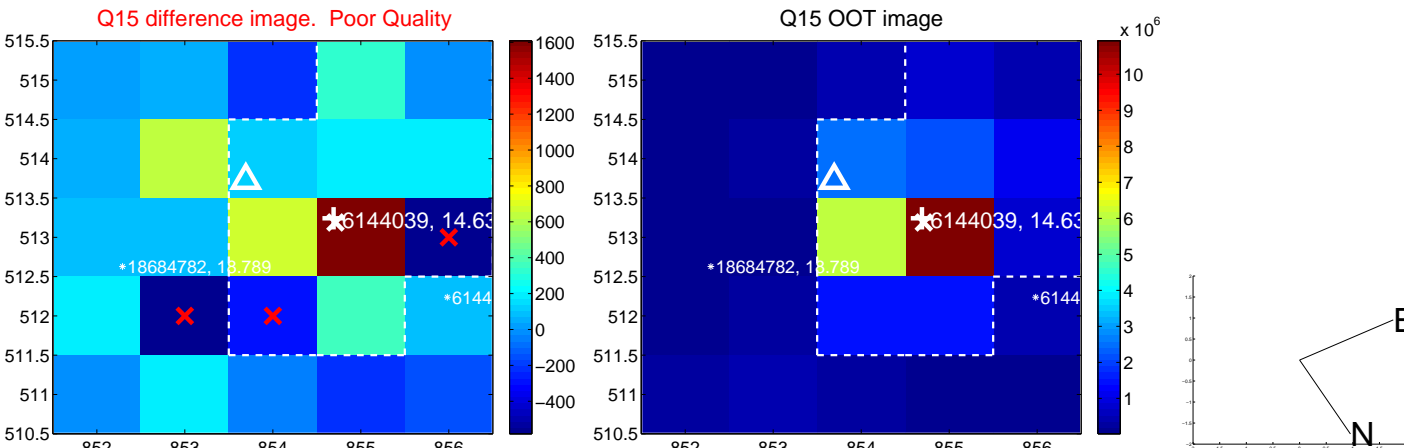
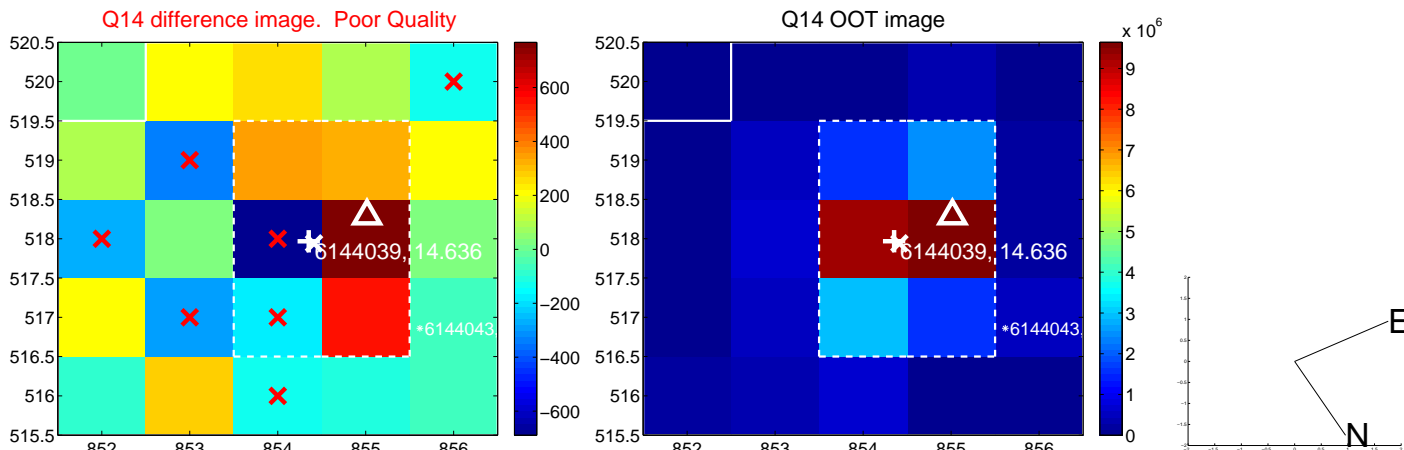
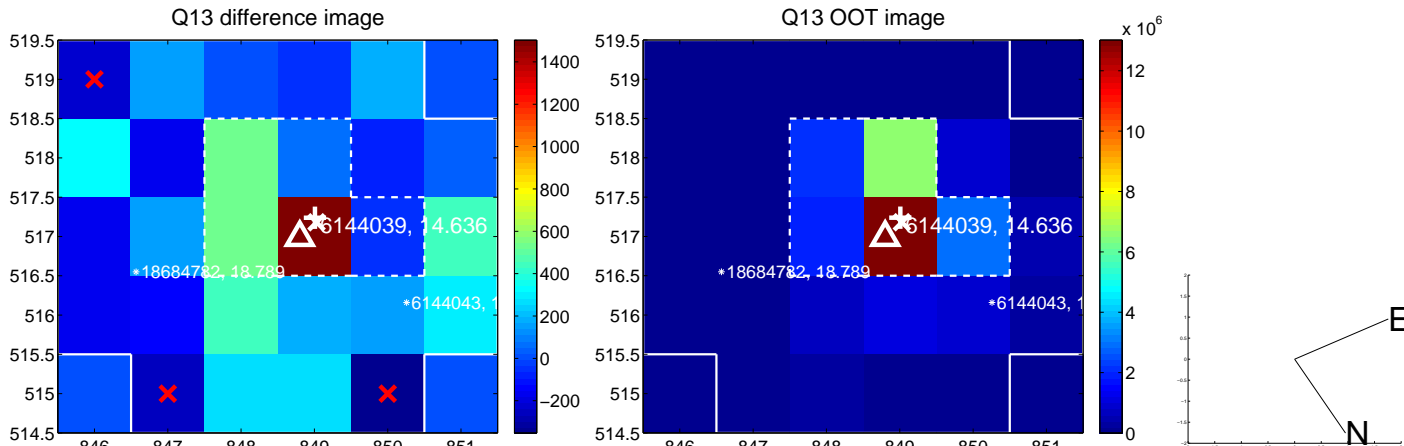
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



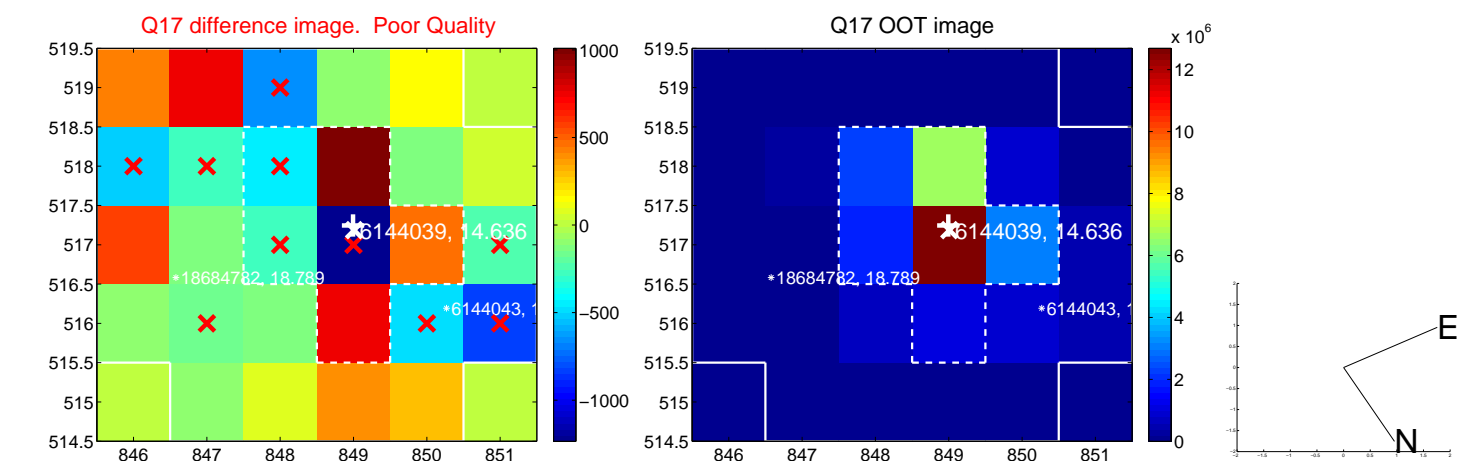
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



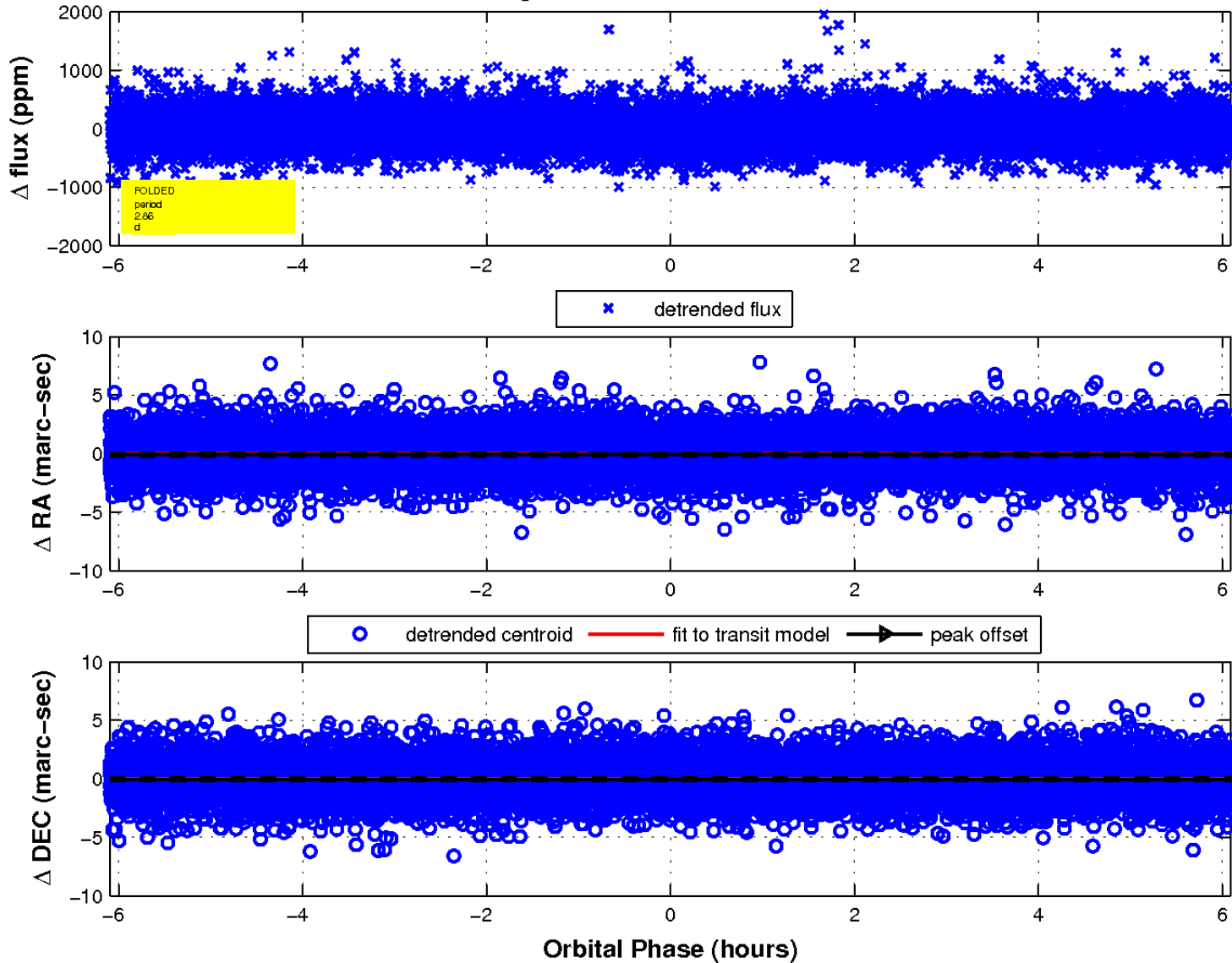
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

