

KIC 006956233

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})
006956233-01	OBS	1352.01	4.818853	131.678933	1000.7	5.715	68.7	58.7	0.65	5030	2.59	98.54

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006956233-01	OBS	FP	0.00	0	1	1	1	MOD_SEC_ALT—CENT_RESOLVED_OFFSET—EPHEM_MATCH

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 006956233-01

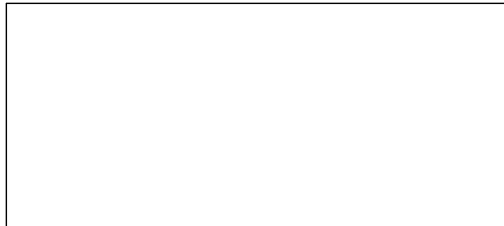
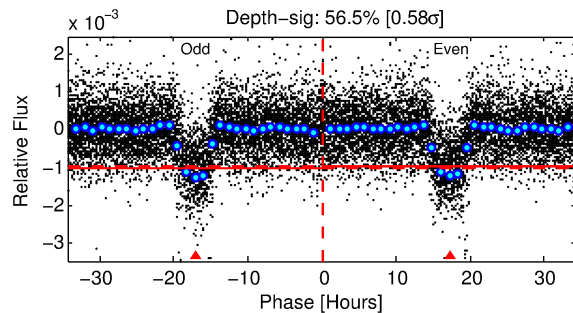
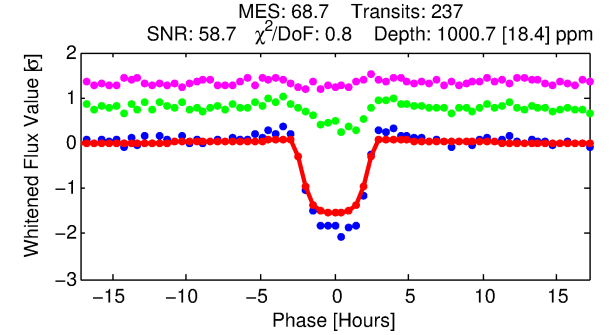
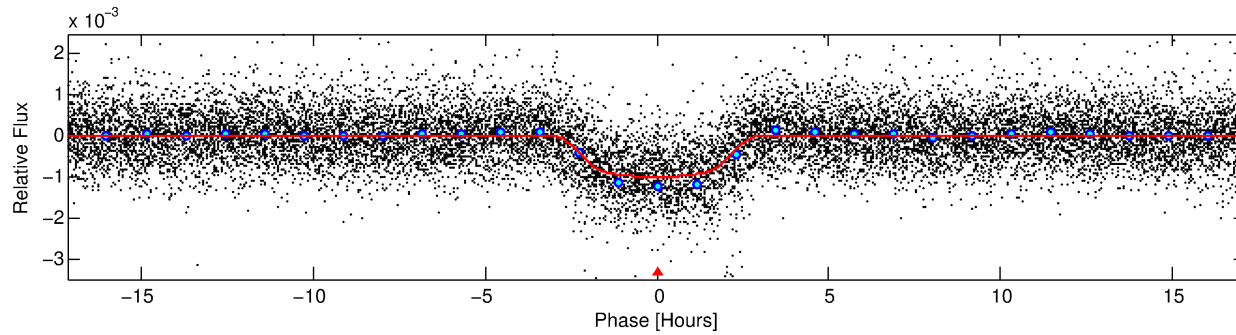
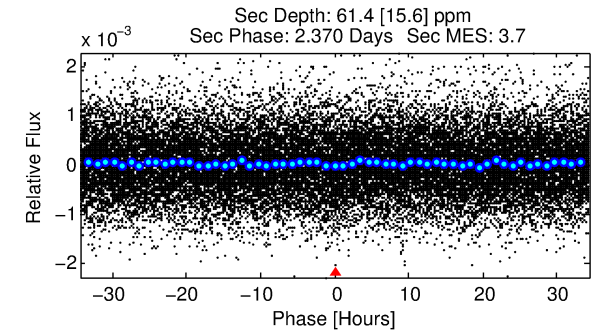
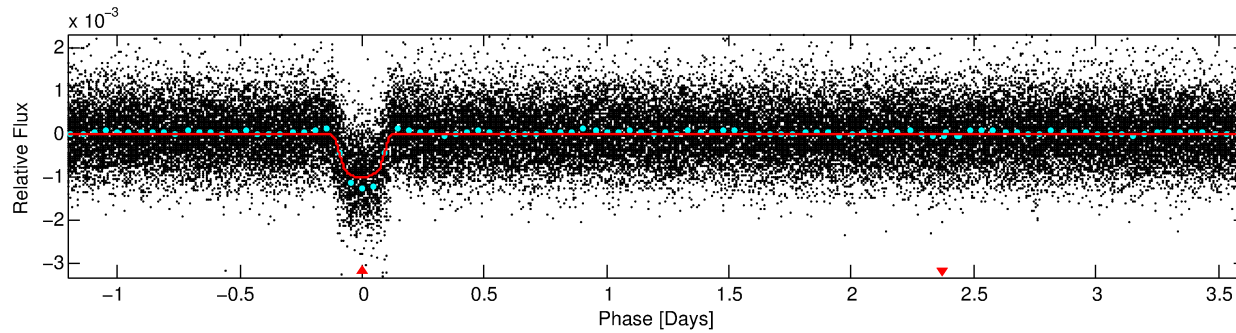
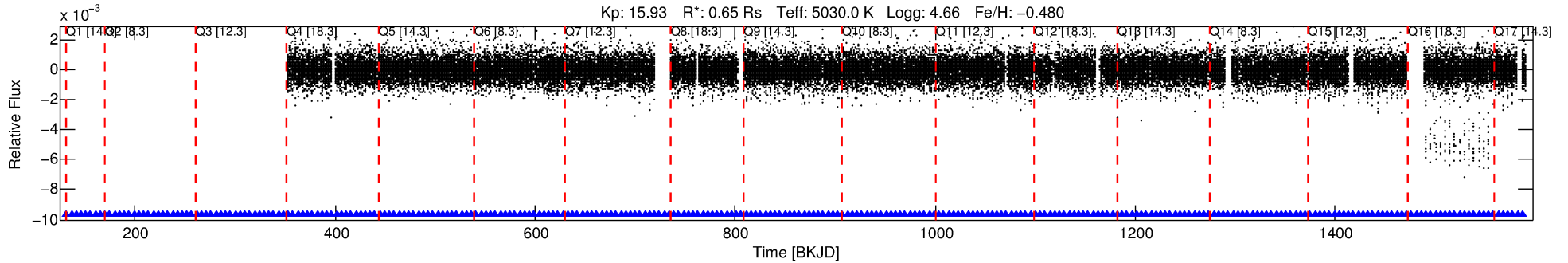
TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
006956233-01	6956233	006956216-pri	6956216	1:1	10.9	0	-3	14.55	15.93	71.63	Direct-PRF	0	0.24	0.01

Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 6956233 Candidate: 1 of 1 Period: 4.819 d
KOI: K01352.01 Corr: 0.976

Kp: 15.93 R*: 0.65 Rs Teff: 5030.0 K Logg: 4.66 Fe/H: -0.480



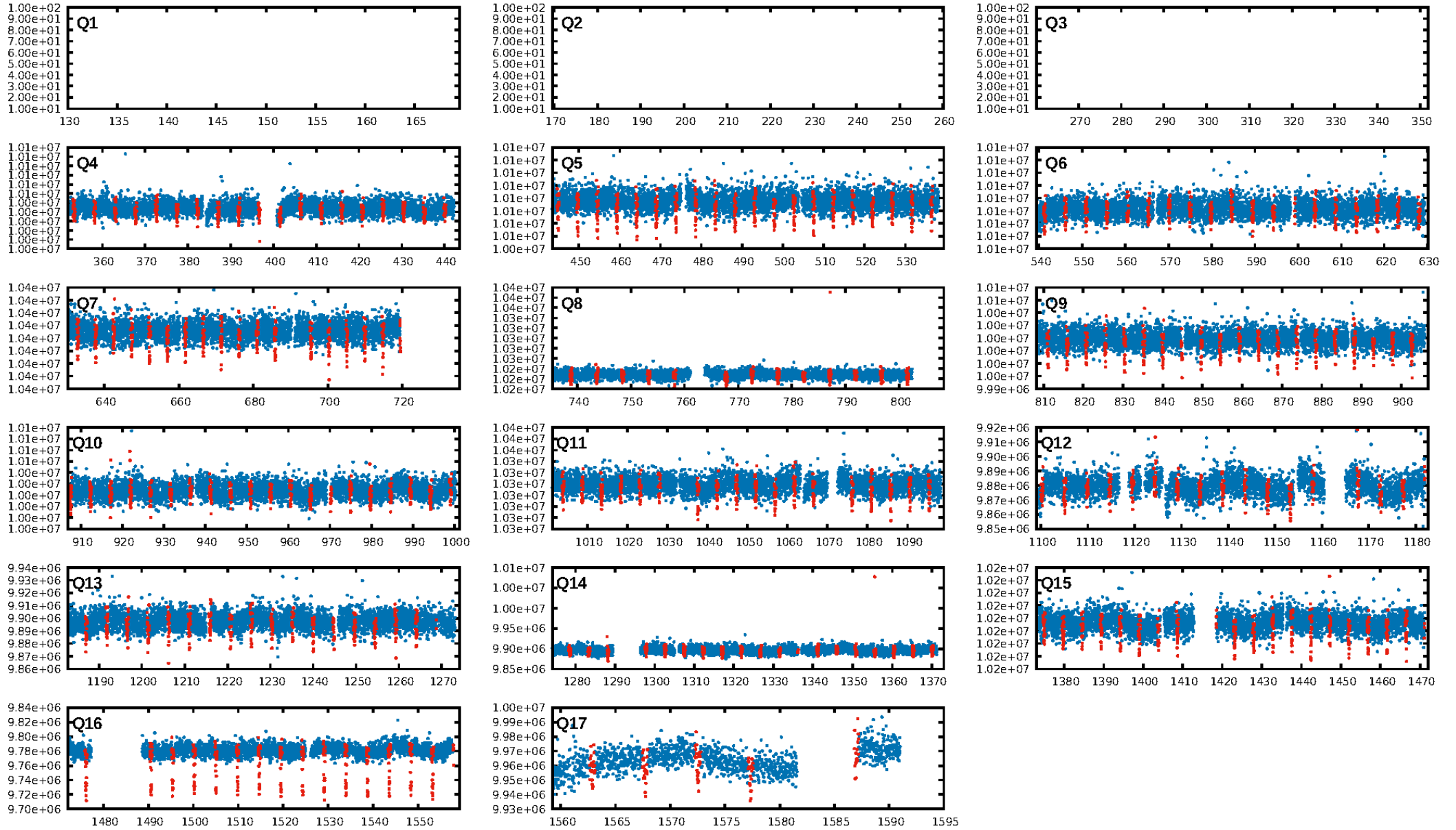
DV Fit Results:

Period = 4.81885 [0.00001] d
Epoch = 131.6789 [0.0023] BKJD
Rp/R* = 0.0364 [0.0007]
a/R* = 3.13 [0.18]
b = 0.93 [0.01]
Seff = 98.54 [19.58]
Teq = 803 [40] K
Rp = 2.59 [0.33] Re
a = 0.0497 [0.0050] AU
Ag = 12.45 [3.64] [3.15σ]
Teffp = 2333 [172] K [8.65σ]

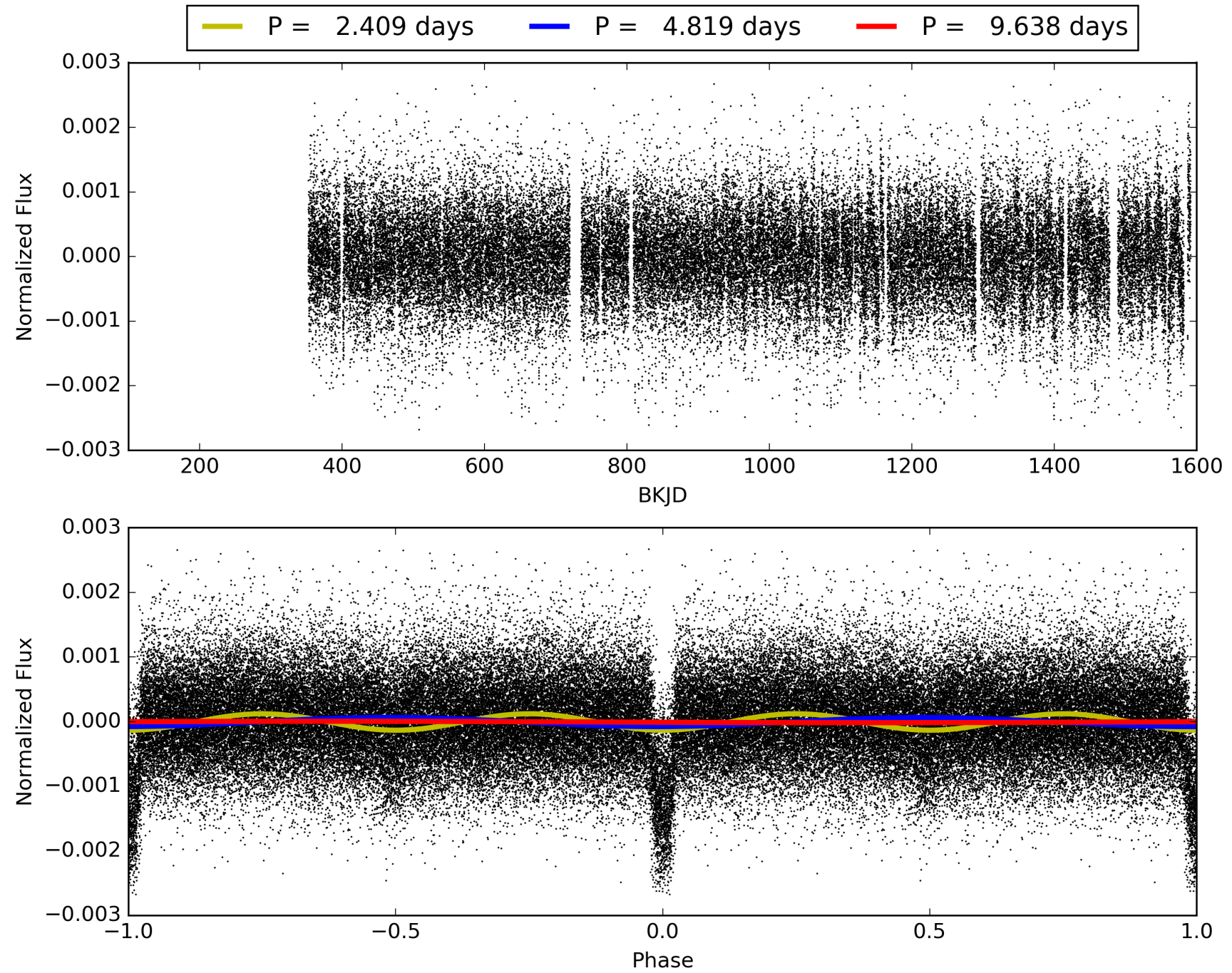
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [232/232]
GhostDiagnostic-chr: -0.31
Centroid-sig: 0.0%
Centroid-so: 78.801 arcsec [410.60σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 0/0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [14/14]

TCE 006956233-01, PDC Light Curves

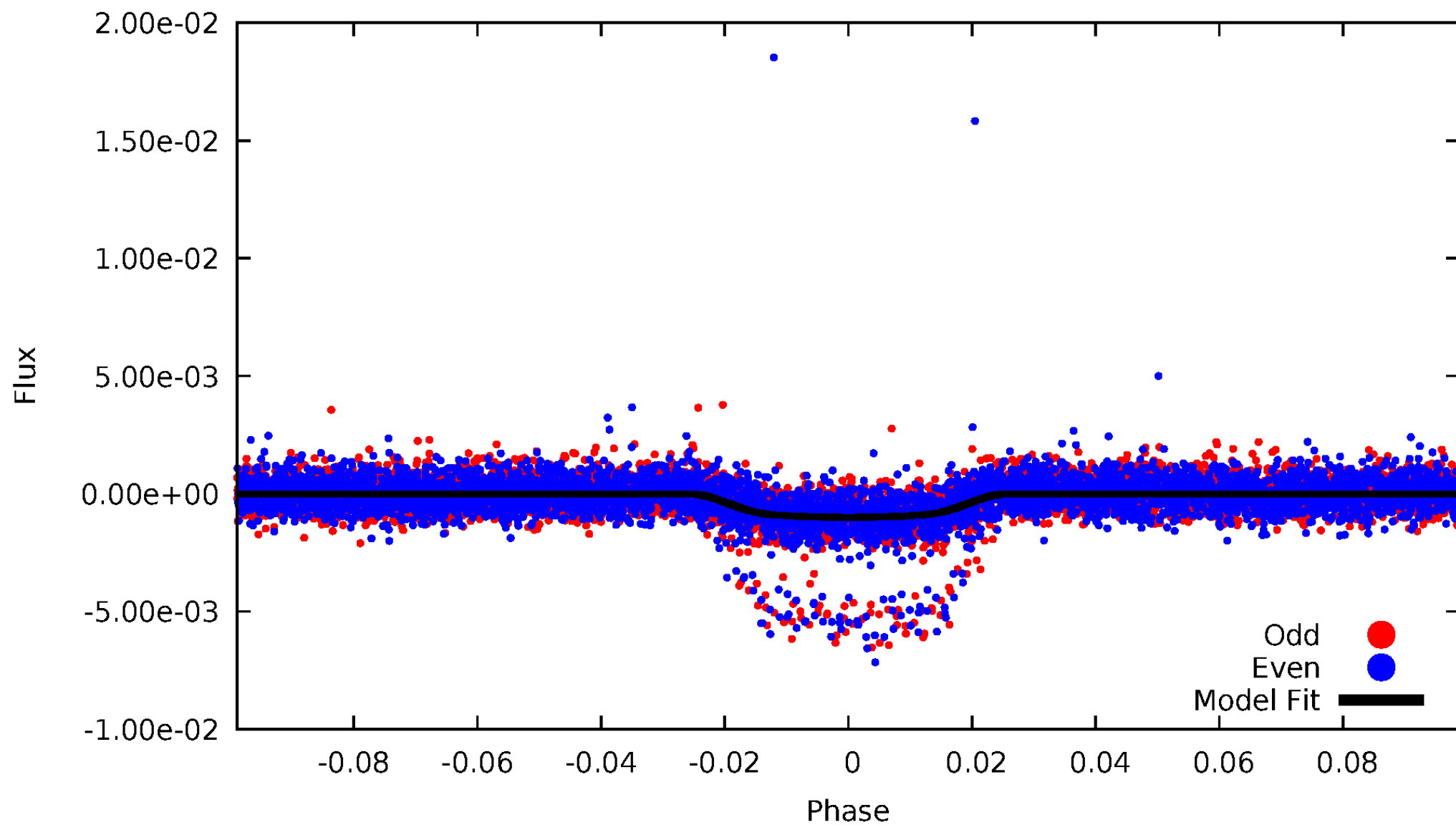


TCE 006956233-01



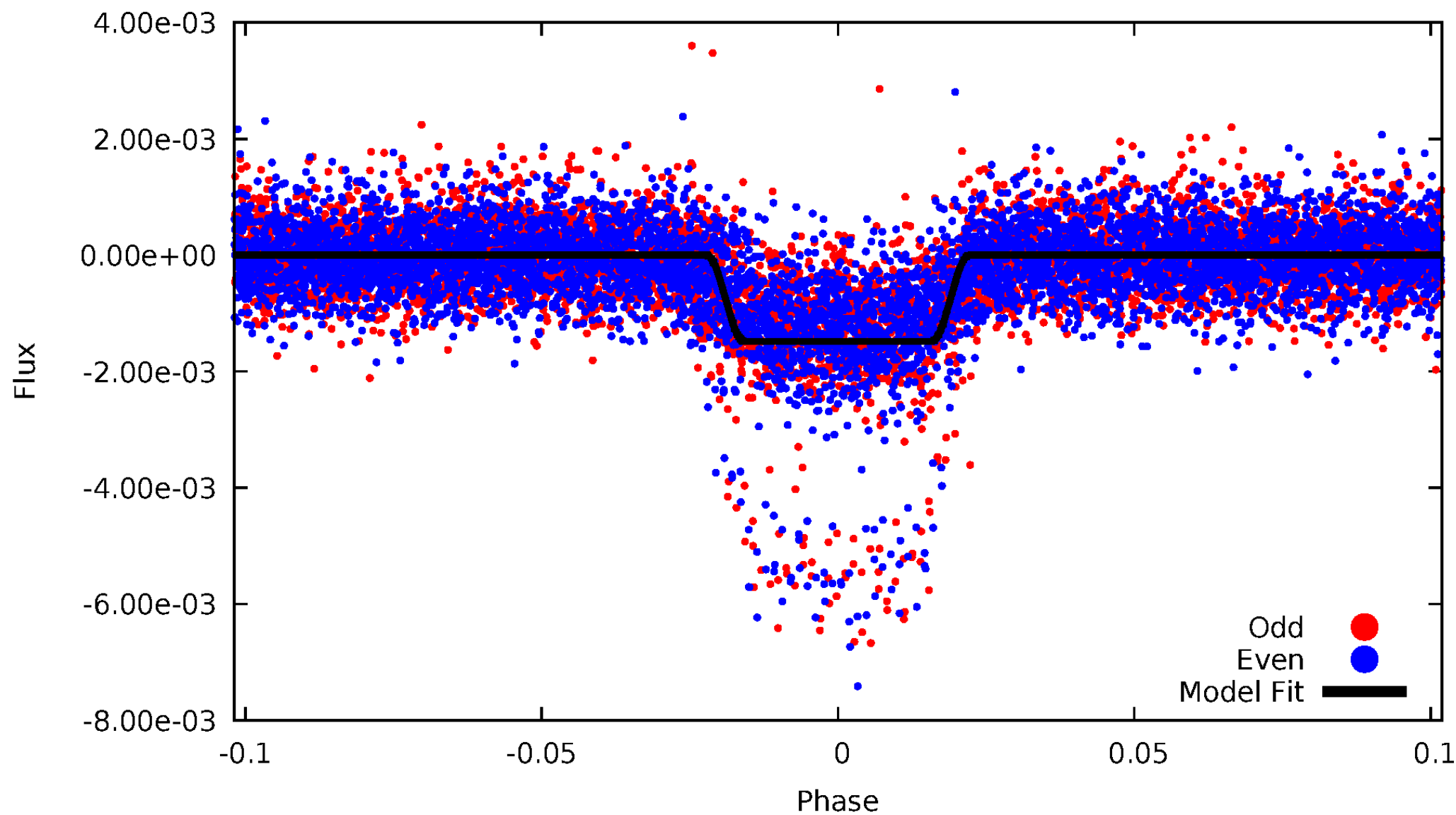
DV Odd/Even

TCE 006956233-01



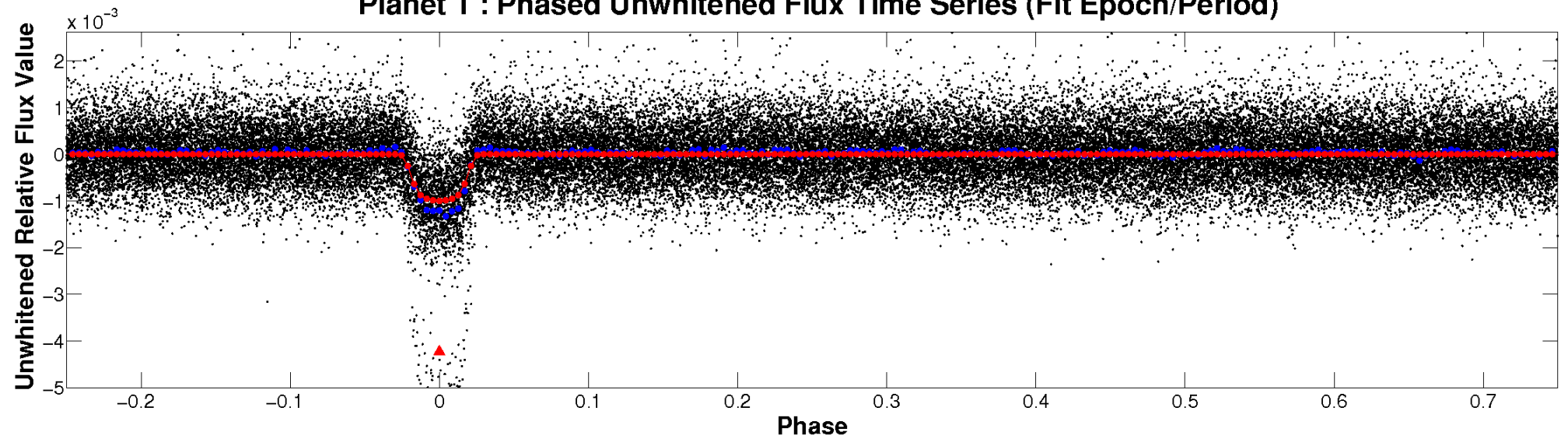
ALT Odd/Even

TCE 006956233-01

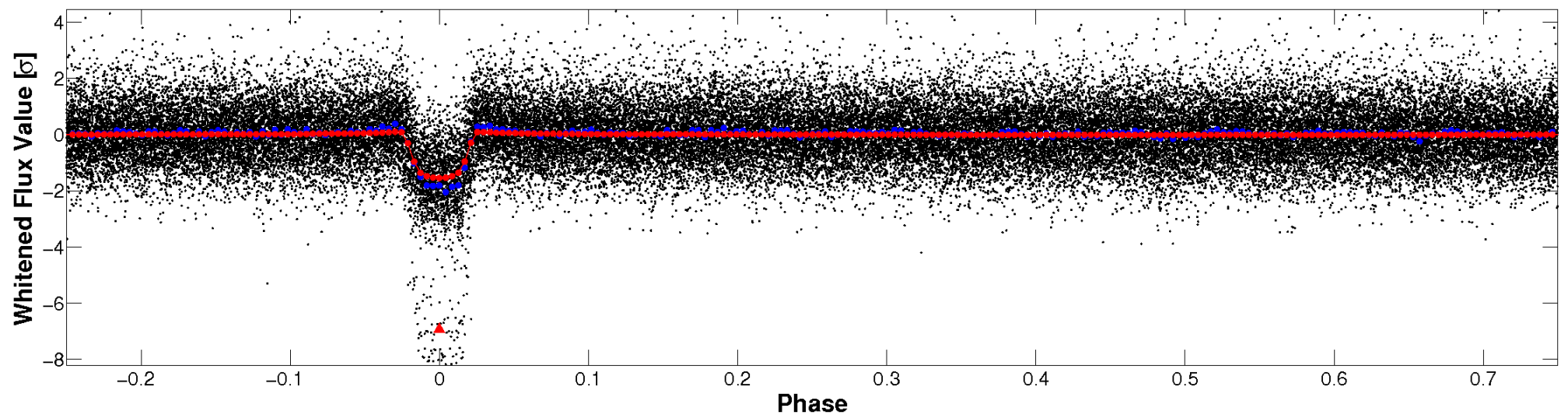


Non-Whitened Vs. Whitened Light Curve

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

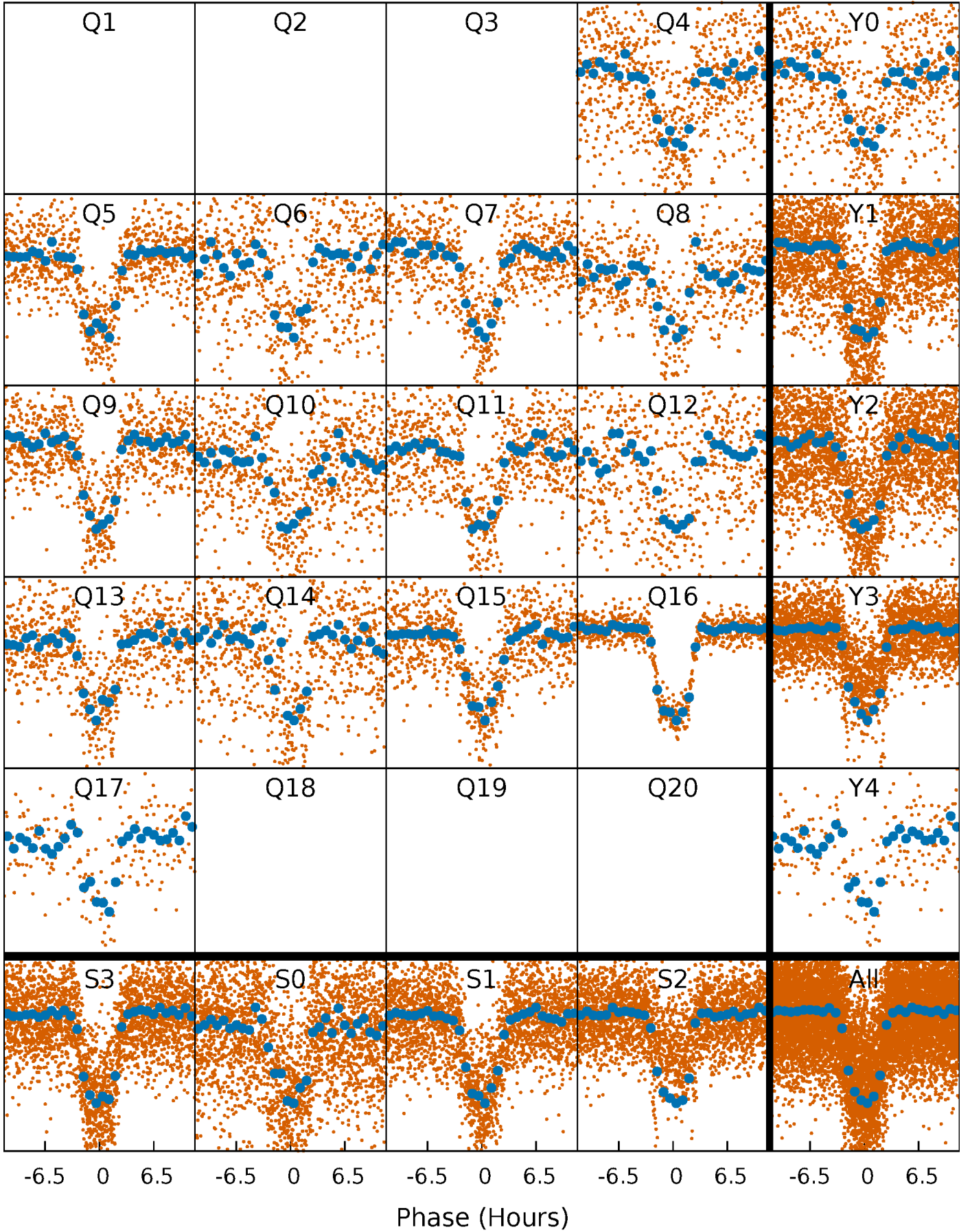


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



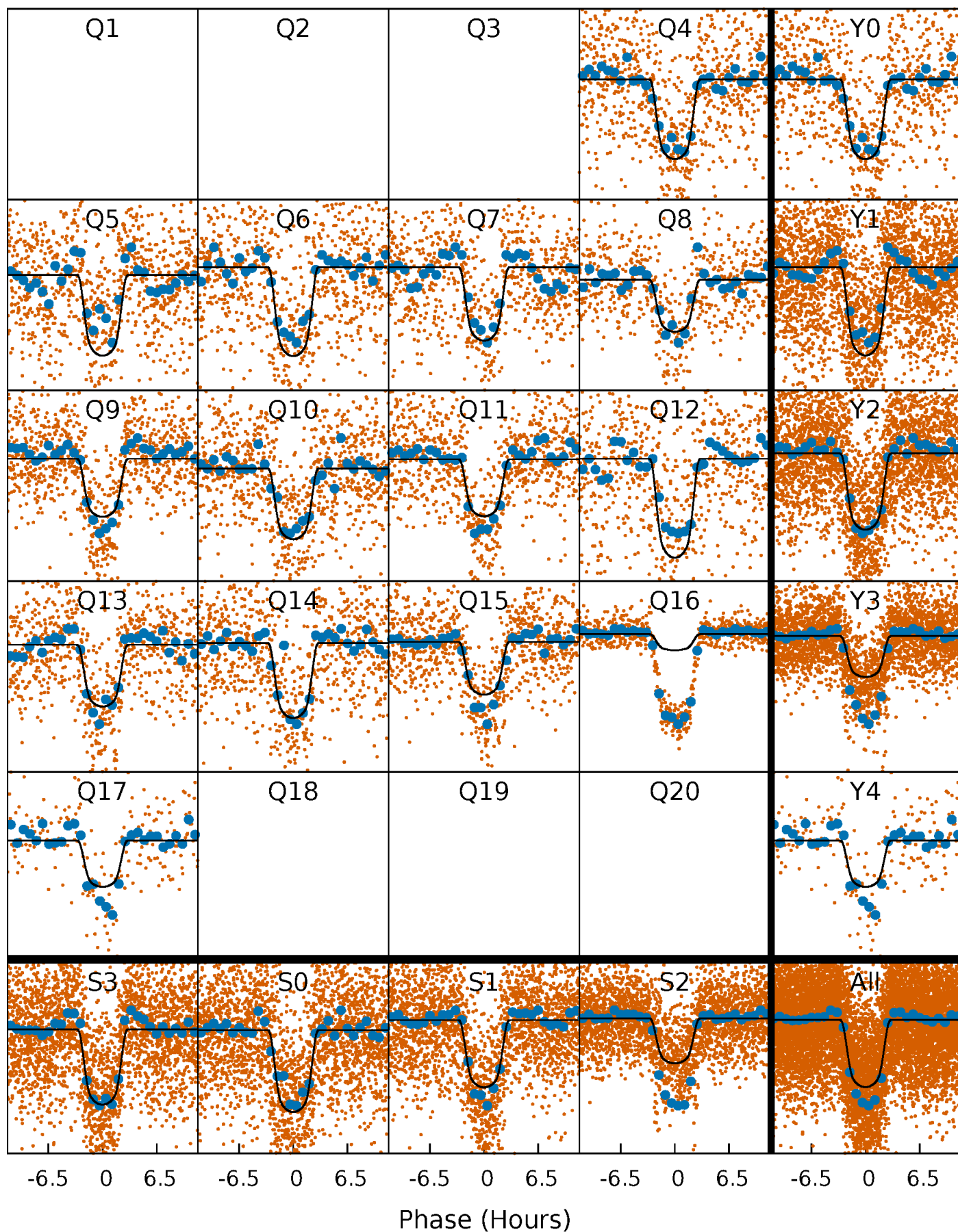
PDC Quarter-Phased Transit Curves

TCE 006956233-01 P= 4.818853 Days $T_0=131.678933$ (BKJD)



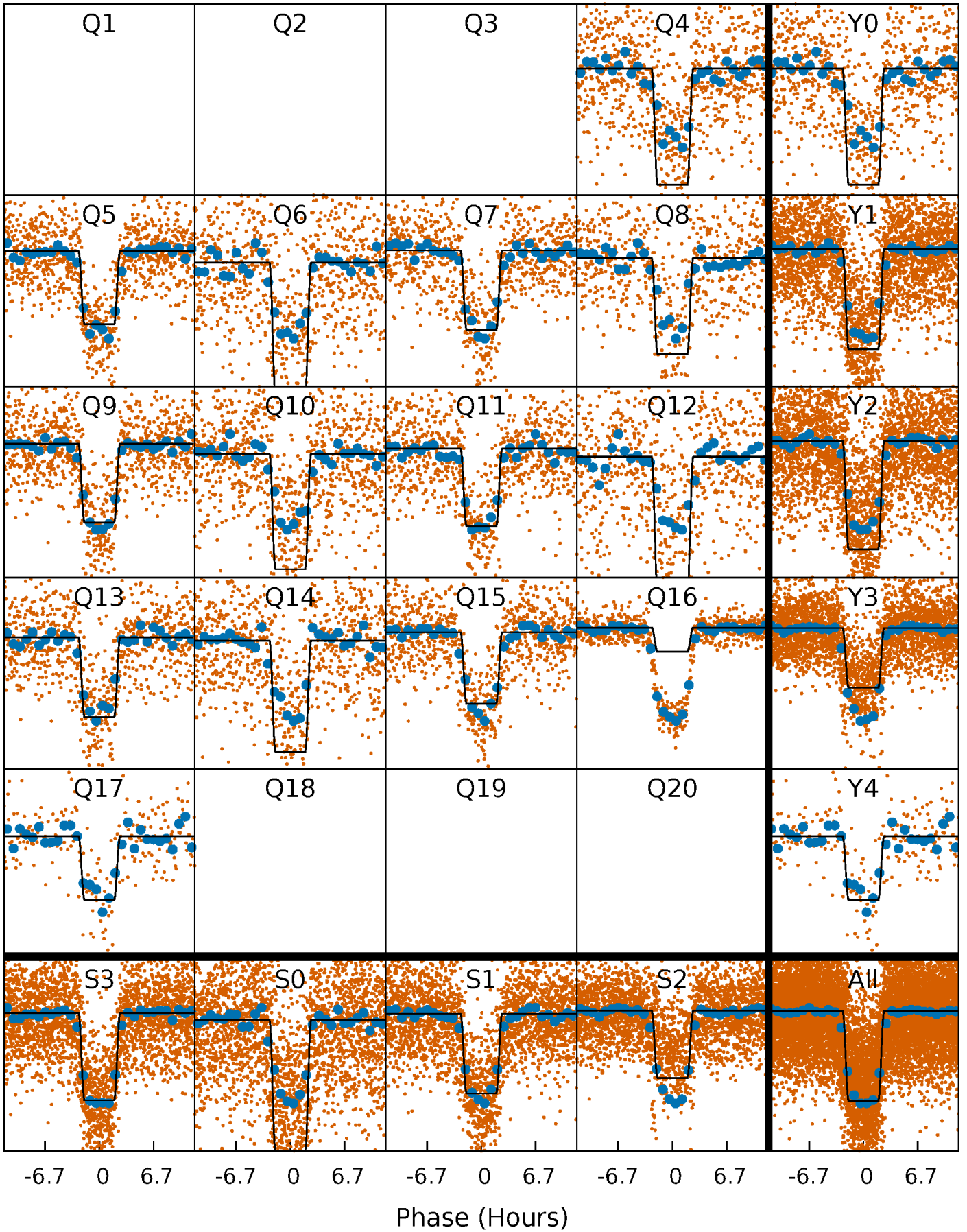
DV Quarter-Phased Transit Curves

TCE 006956233-01 P= 4.818853 Days $T_0=131.678933$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

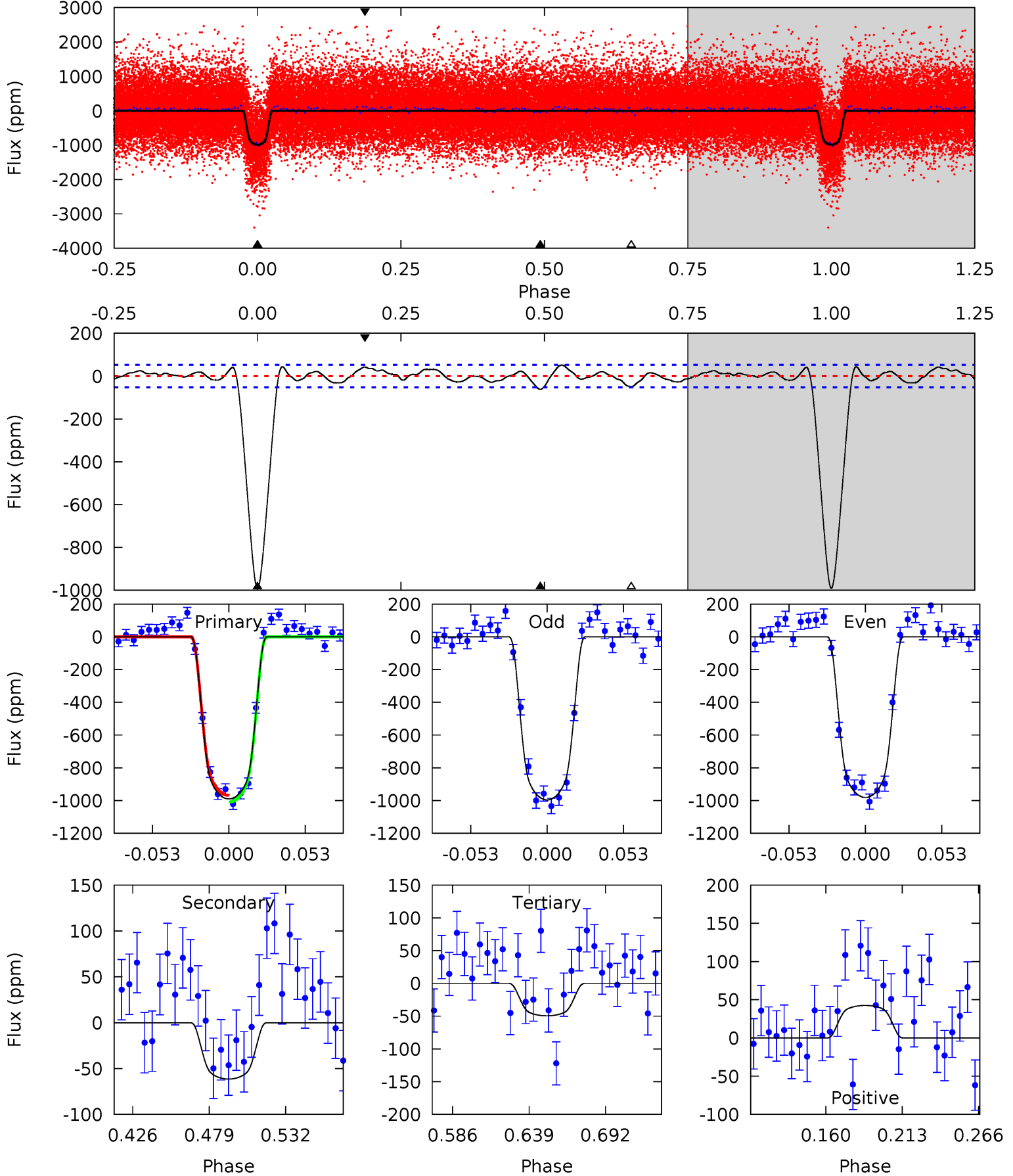
TCE 006956233-01 P= 4.818892 Days $T_0=131.672439$ (BKJD)



DV Model-Shift Uniqueness Test

006956233-01, P = 4.818853 Days, E = 131.678933 Days

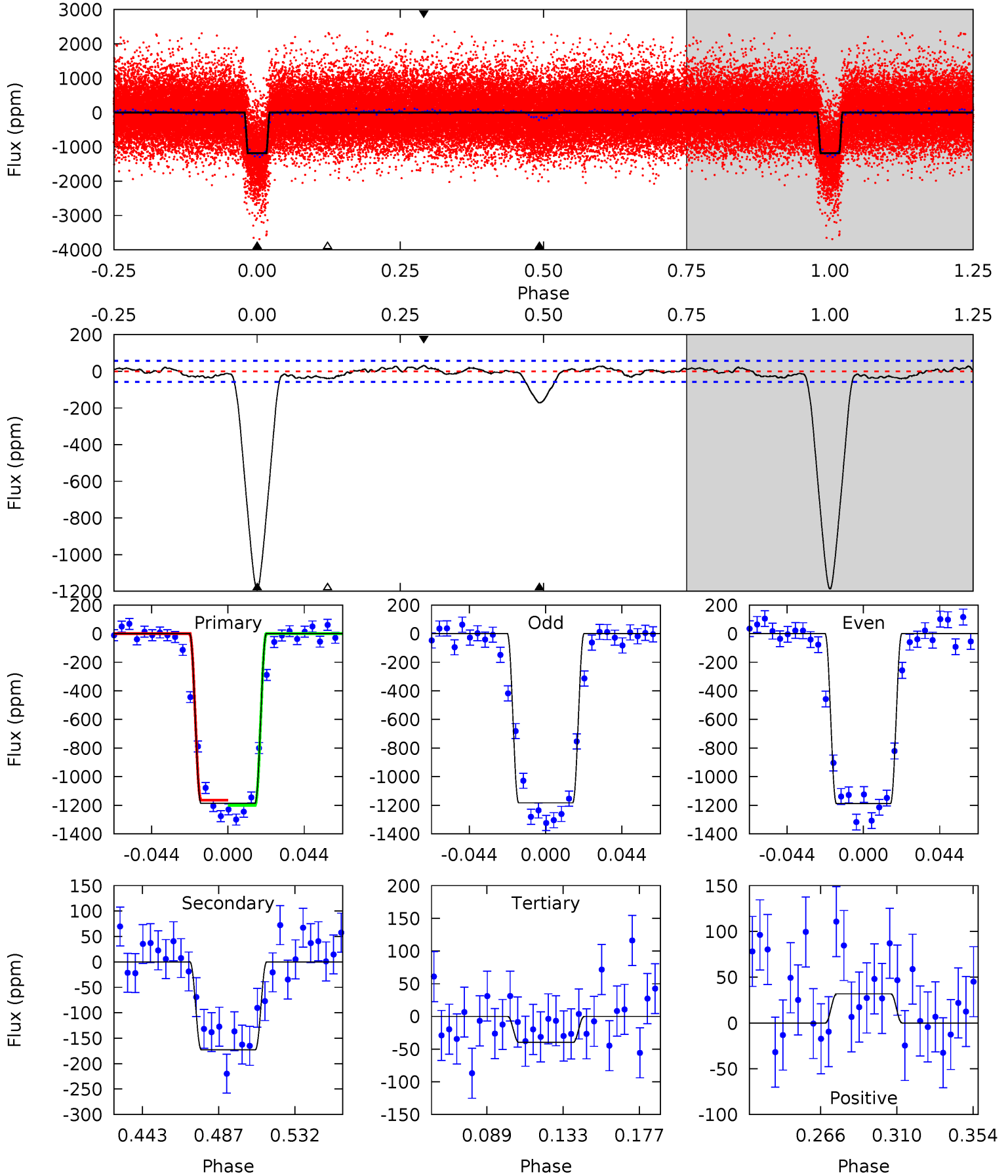
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
88.9	5.52	4.45	3.82	4.70	1.93	1.70	84.5	85.1	1.07	1.70	0.66	1.25	0.05	1.83



Alt Model-Shift Uniqueness Test

006956233-01, P = 4.818892 Days, E = 131.672439 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
98.2	14.3	3.29	2.63	4.73	2.01	1.46	94.9	95.6	11.0	11.6	0.23	1.17	0.03	1.47



Stellar Parameters For KIC 006956233

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5030^{+181}_{-181}	$4.658^{+0.030}_{-0.070}$	$-0.480^{+0.300}_{-0.300}$	$0.651^{+0.083}_{-0.048}$	$0.705^{+0.068}_{-0.062}$	$3.599^{+0.563}_{-0.852}$
	+4%/-4%	+1%/-2%	+62%/-62%	+13%/-7%	+10%/-9%	+16%/-24%
Source	KIC0	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 006956233-01 / KOI 1352.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-61 ± 11	$2.62^{+0.18}_{-0.14}$	1133^{+54}_{-50}	2963^{+106}_{-110}	12^{+3}_{-2}
Alt.	-172 ± 12	$2.76^{+0.20}_{-0.14}$	1134^{+48}_{-46}	3406^{+97}_{-93}	30^{+3}_{-3}

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 $A_{obs} \gg 1.0$

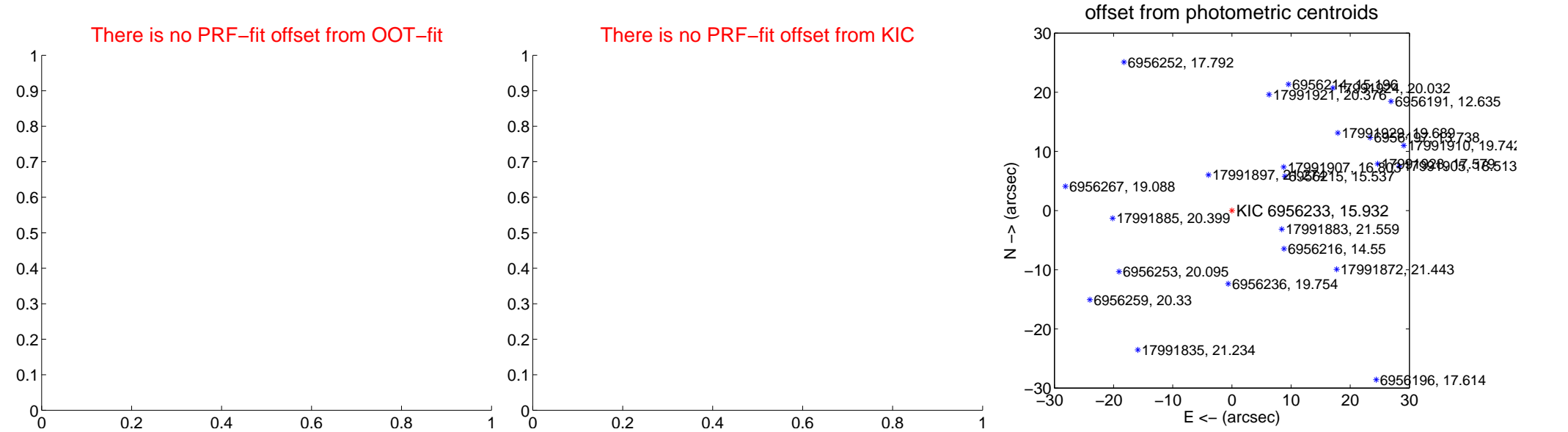
DV Centroid Data

Supplemental centroid analysis for 006956233-01. Kepler magnitude: 15.93. Transit SNR 58.68

There are 0 quarters with good PRF difference image offsets

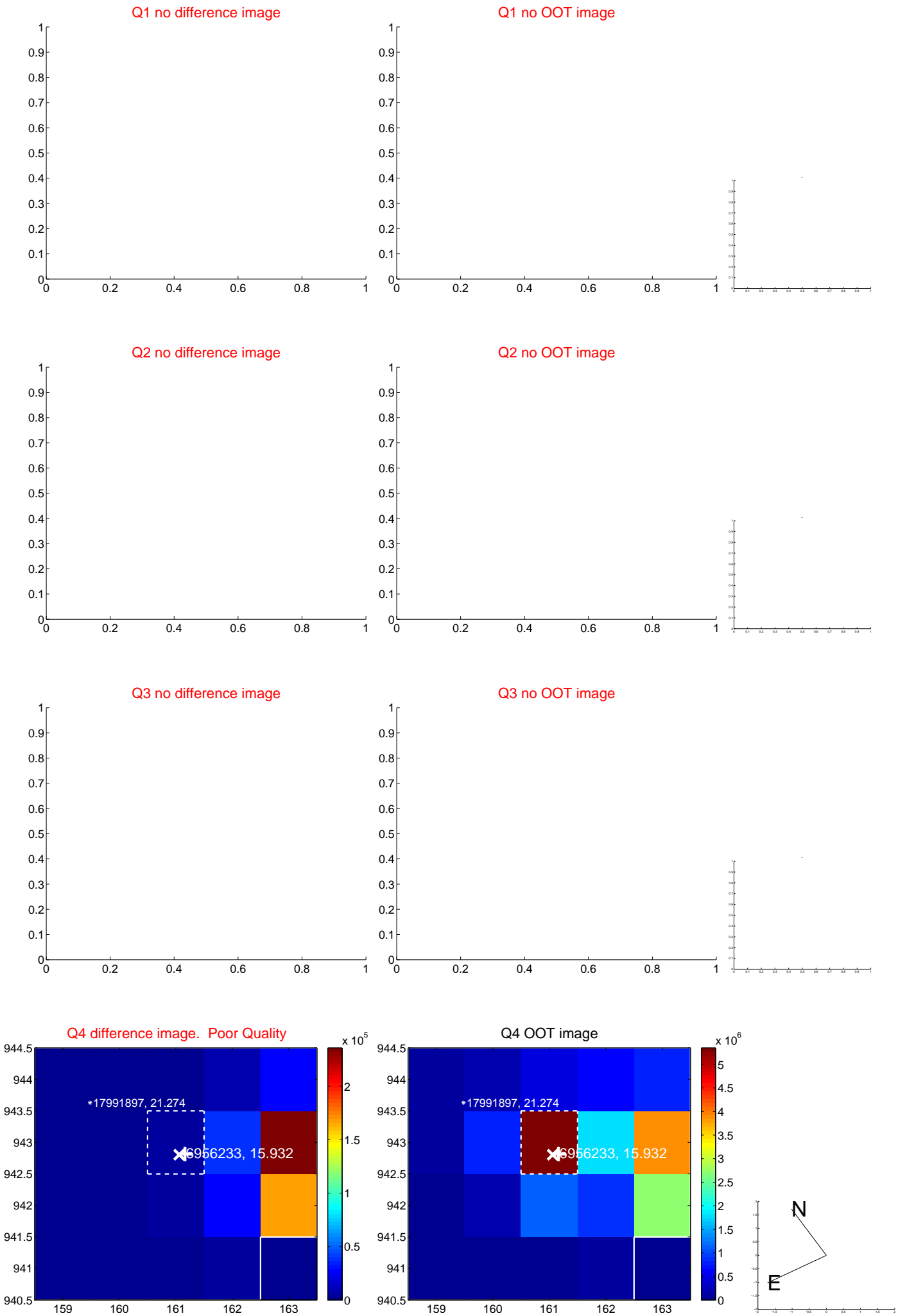
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	78.81 ± 0.19	410.61	-55.75 ± 0.19	-55.70 ± 0.19

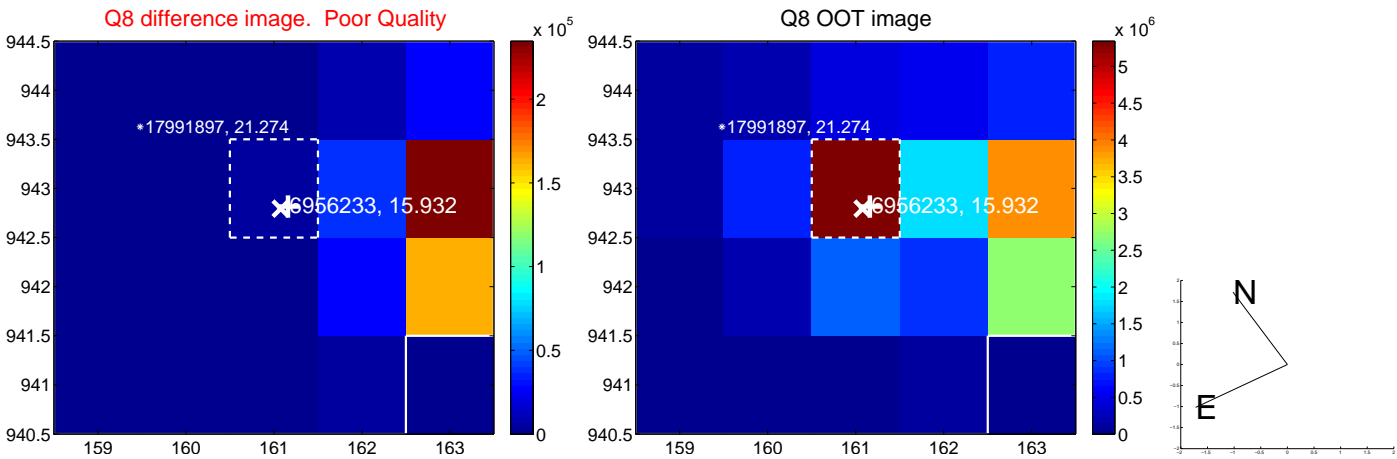
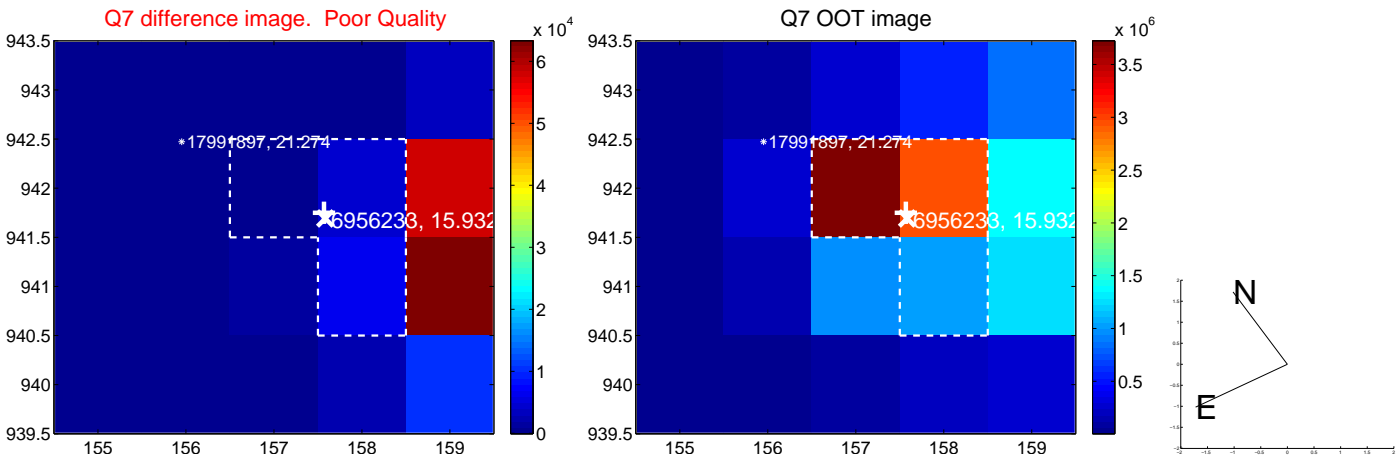
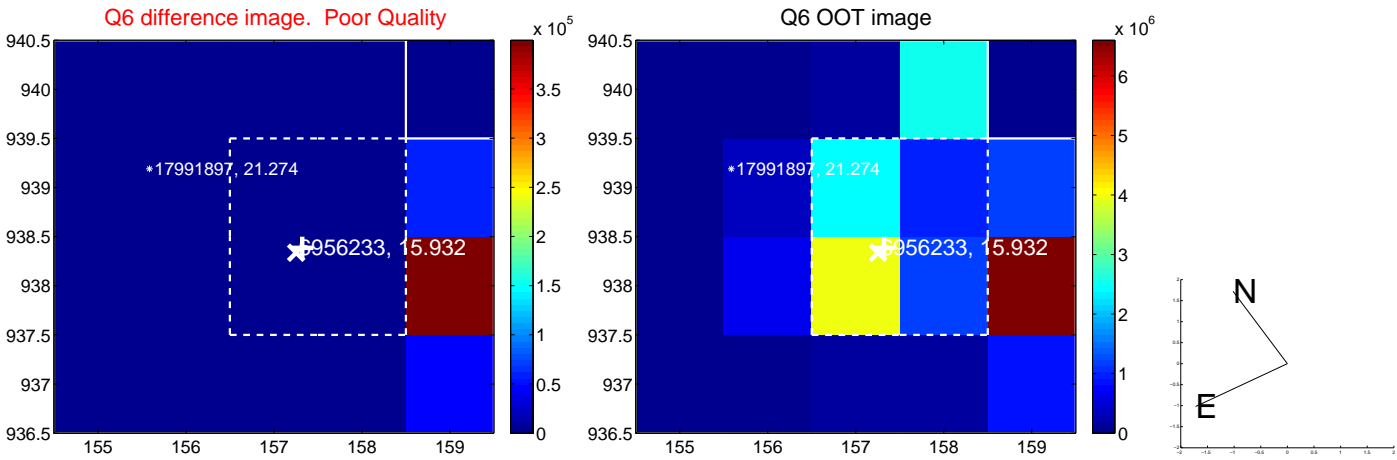
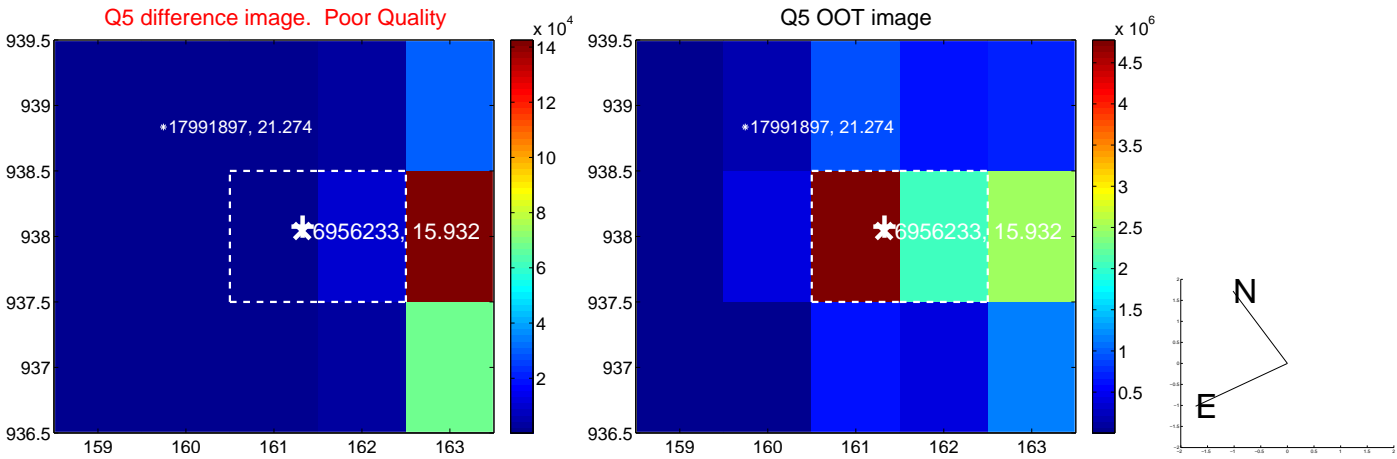


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

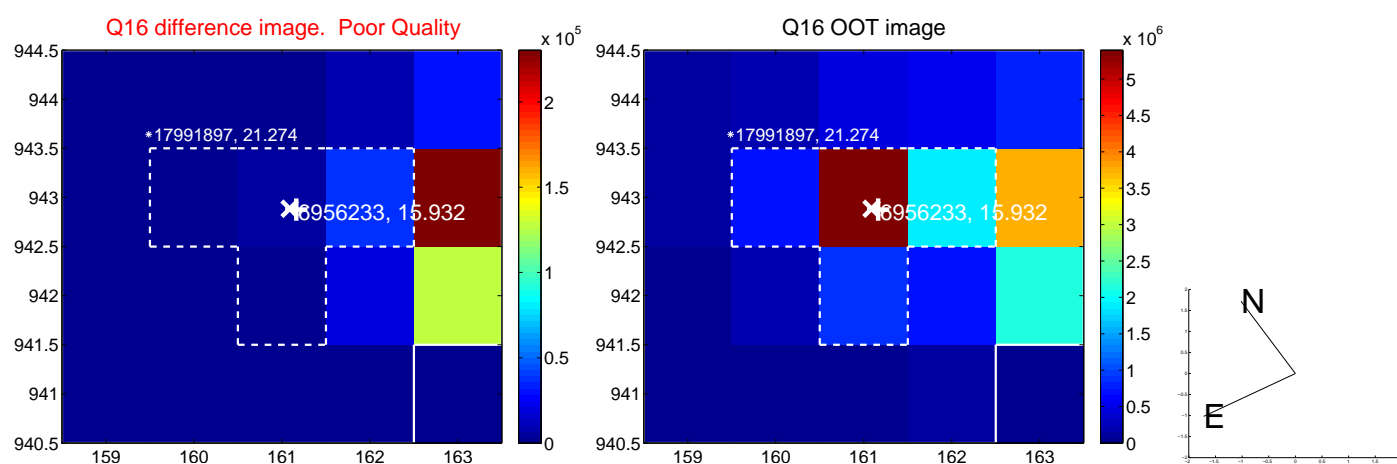
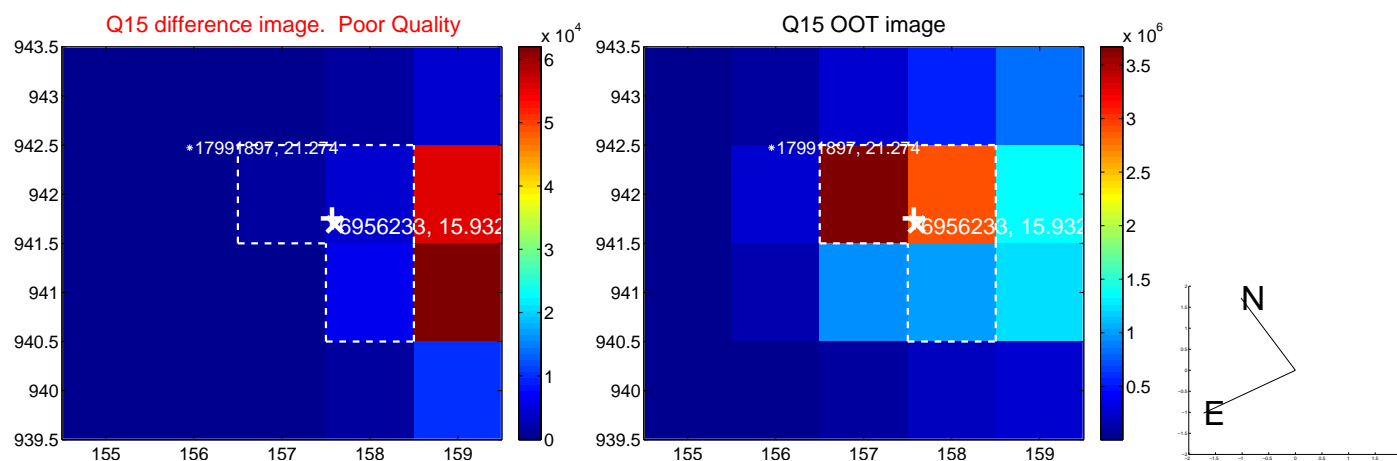
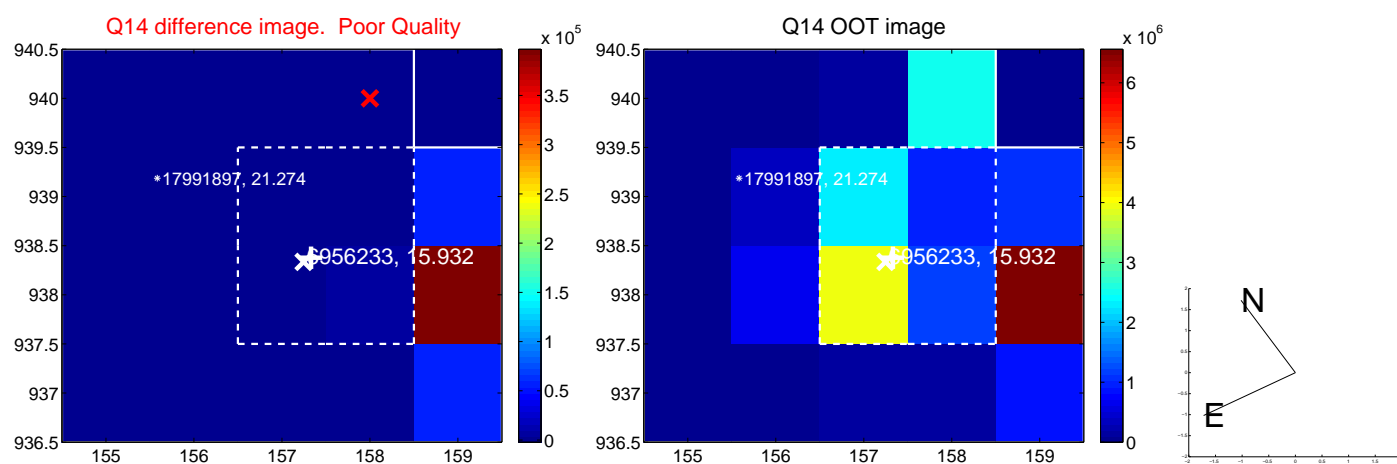
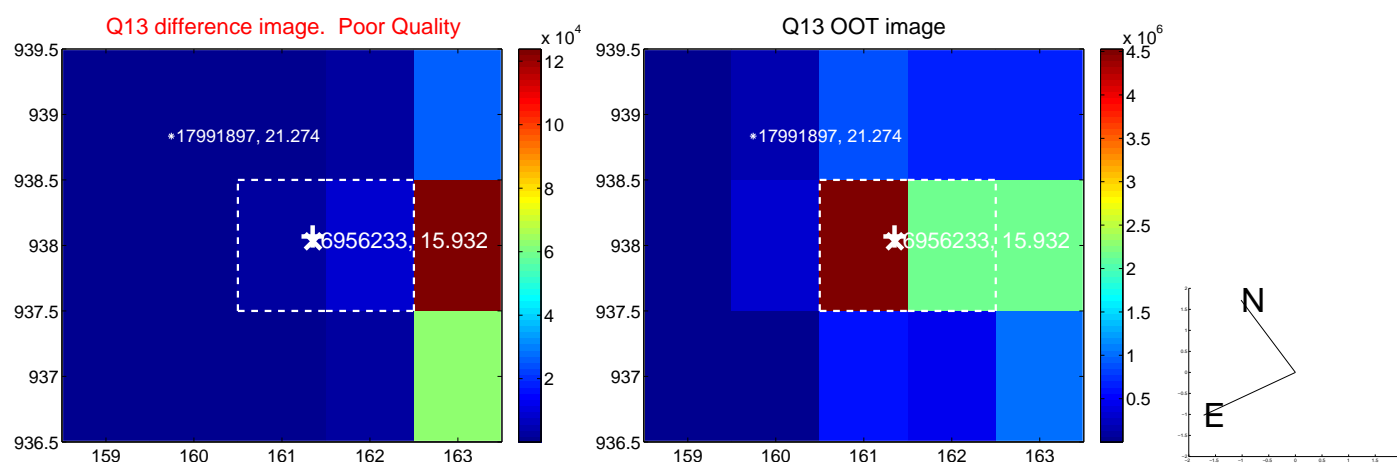
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



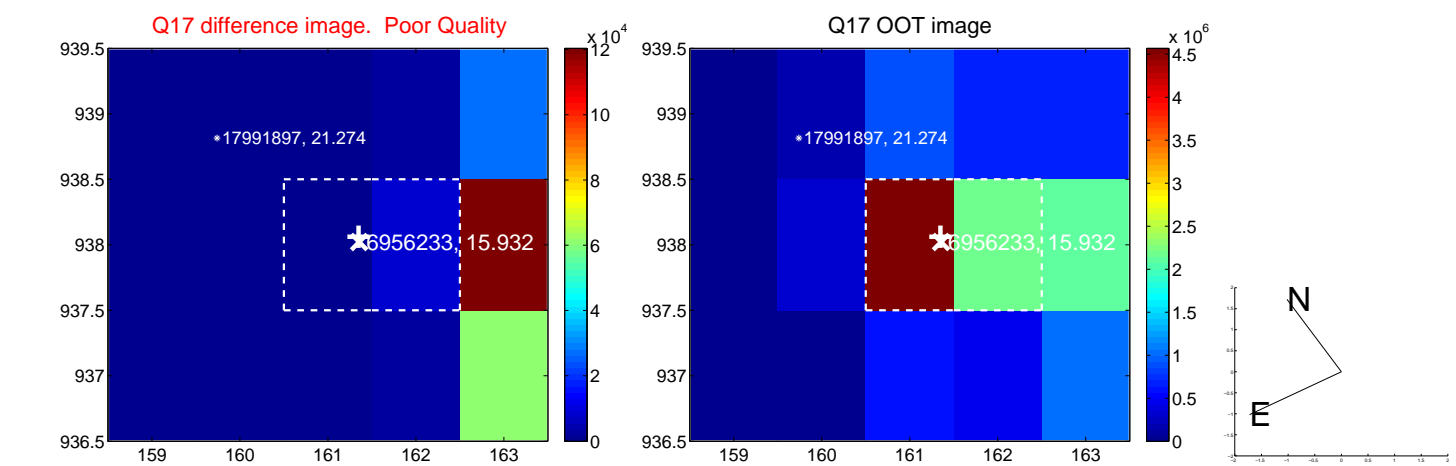
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



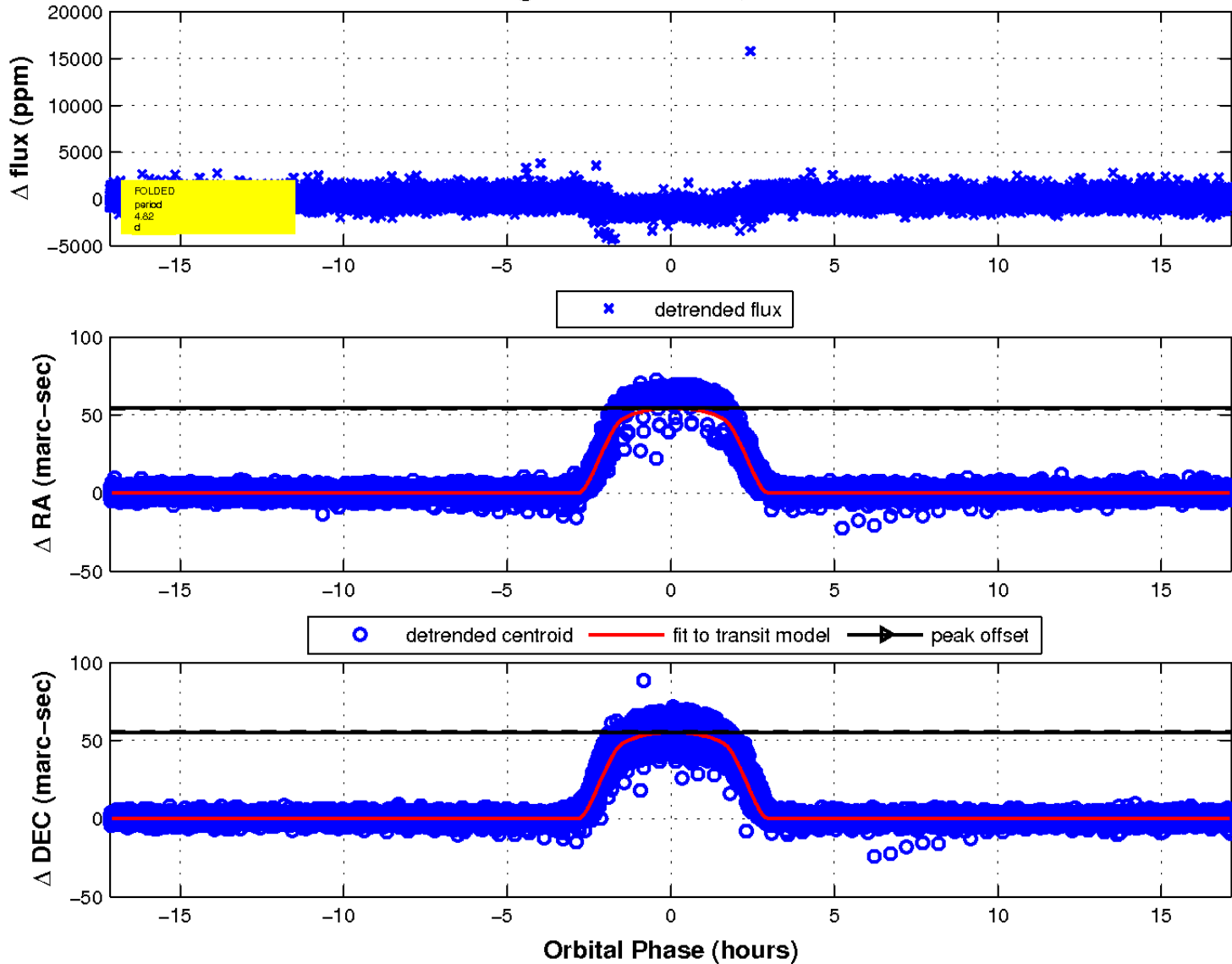
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

