

KIC 011566256

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})
011566256-01	OBS	2361.01	5.783866	135.579252	395.9	1.405	16.5	19.7	1.01	6063	2.11	289.38

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011566256-01	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.

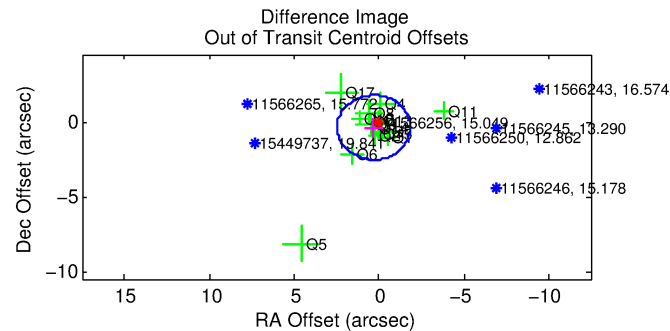
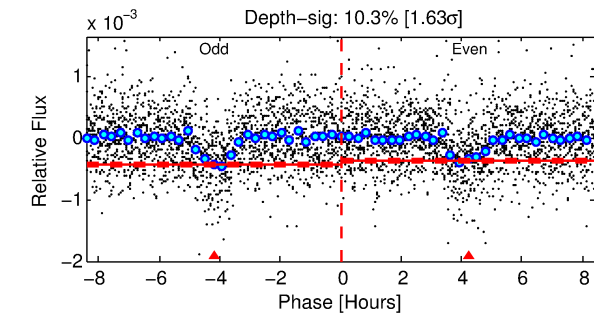
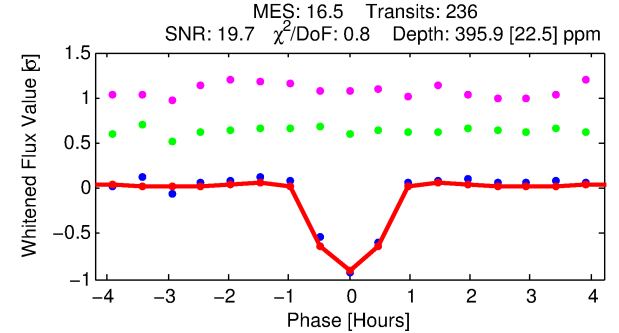
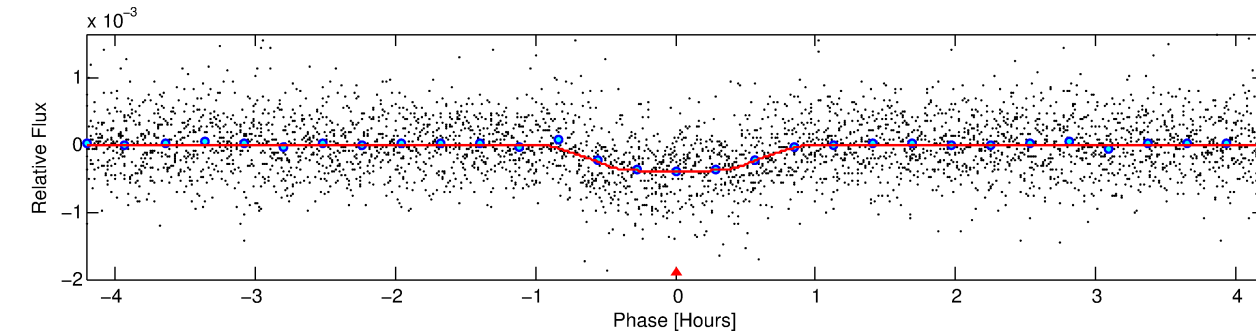
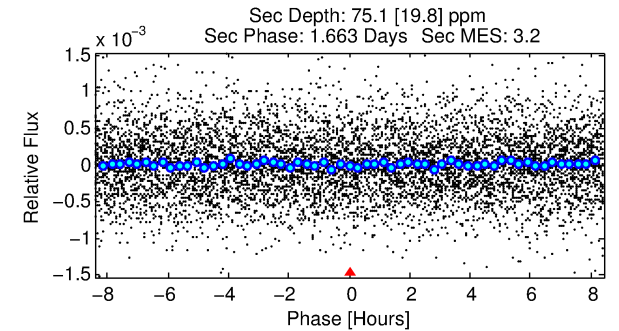
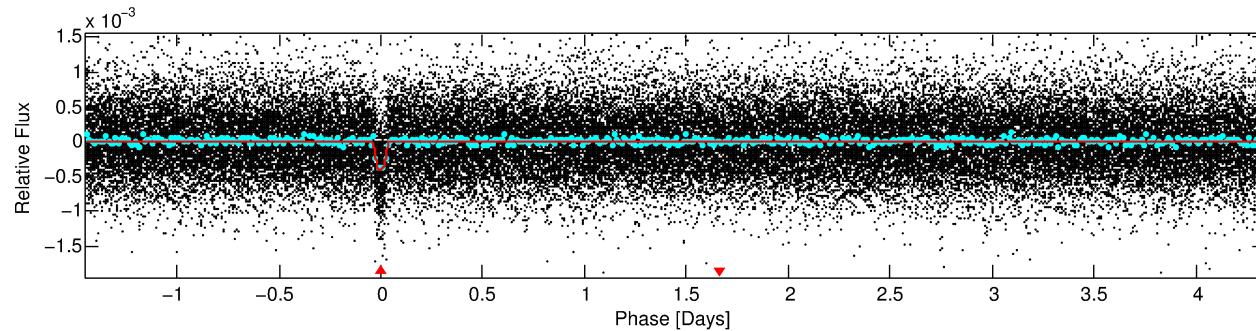
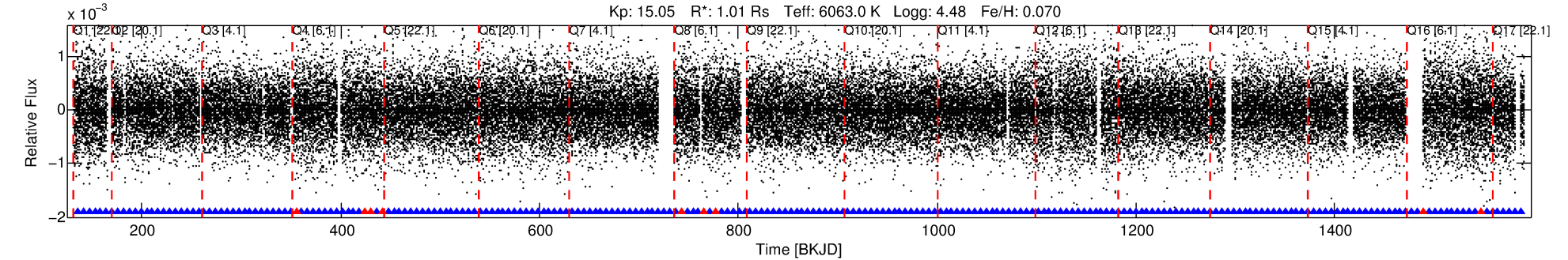
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011566256-01

No Significant Match Found

DV One-Page Summary

KIC: 11566256 Candidate: 1 of 1 Period: 5.784 d
KOI: K02361.01 Corr: 0.972



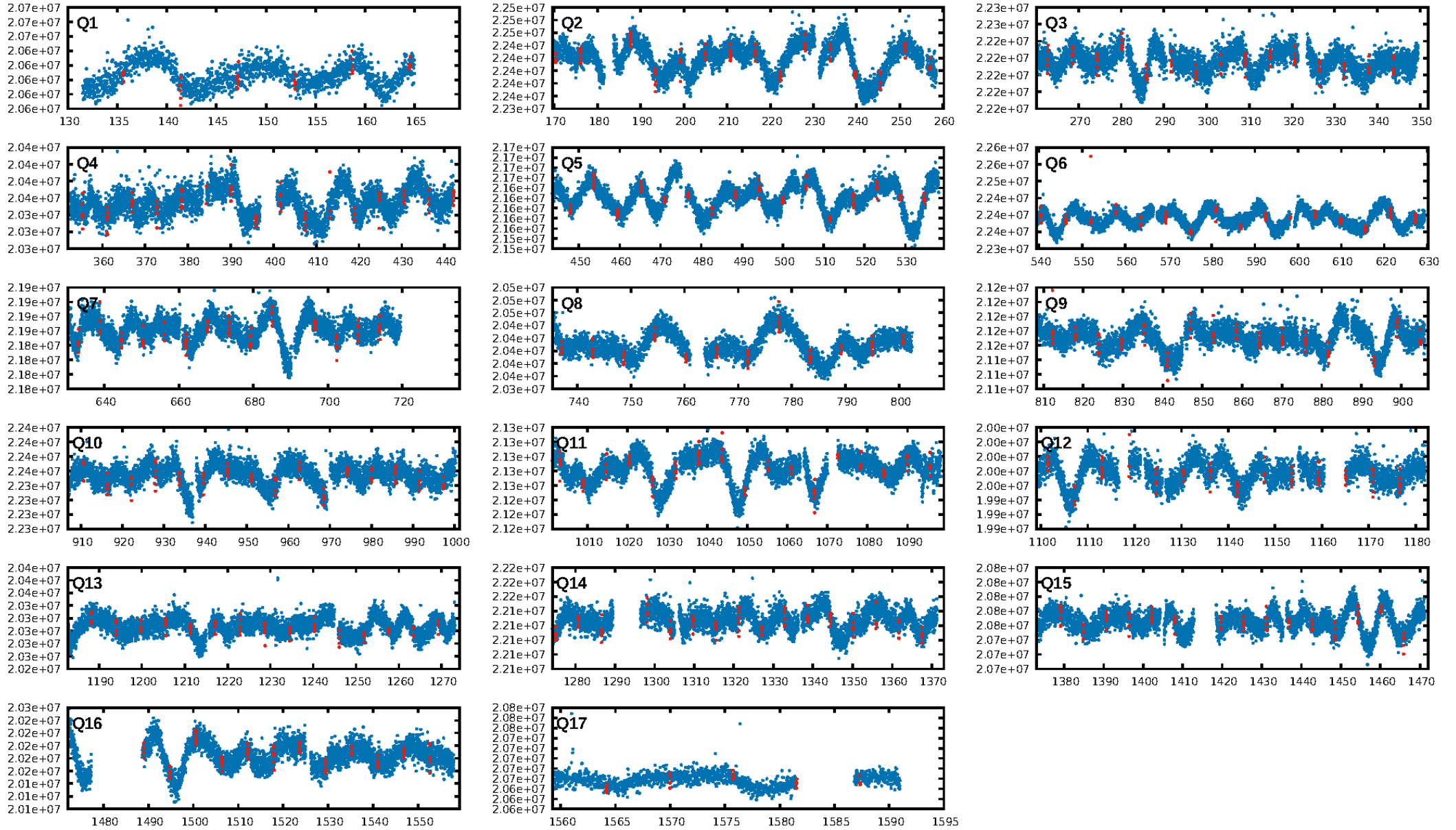
DV Fit Results:

Period = 5.78387 [0.00001] d
Epoch = 135.5793 [0.0017] BKJD
Rp/R* = 0.0191 [0.0067]
a/R* = 26.08 [42.57]
b = 0.59 [1.81]
Seff = 289.38 [110.93]
Teff = 1052 [101] K
Rp = 2.11 [0.97] Re
a = 0.0655 [0.0162] AU
Ag = 39.88 [32.96] [1.18σ]
Teffp = 4086 [776] K [3.88σ]

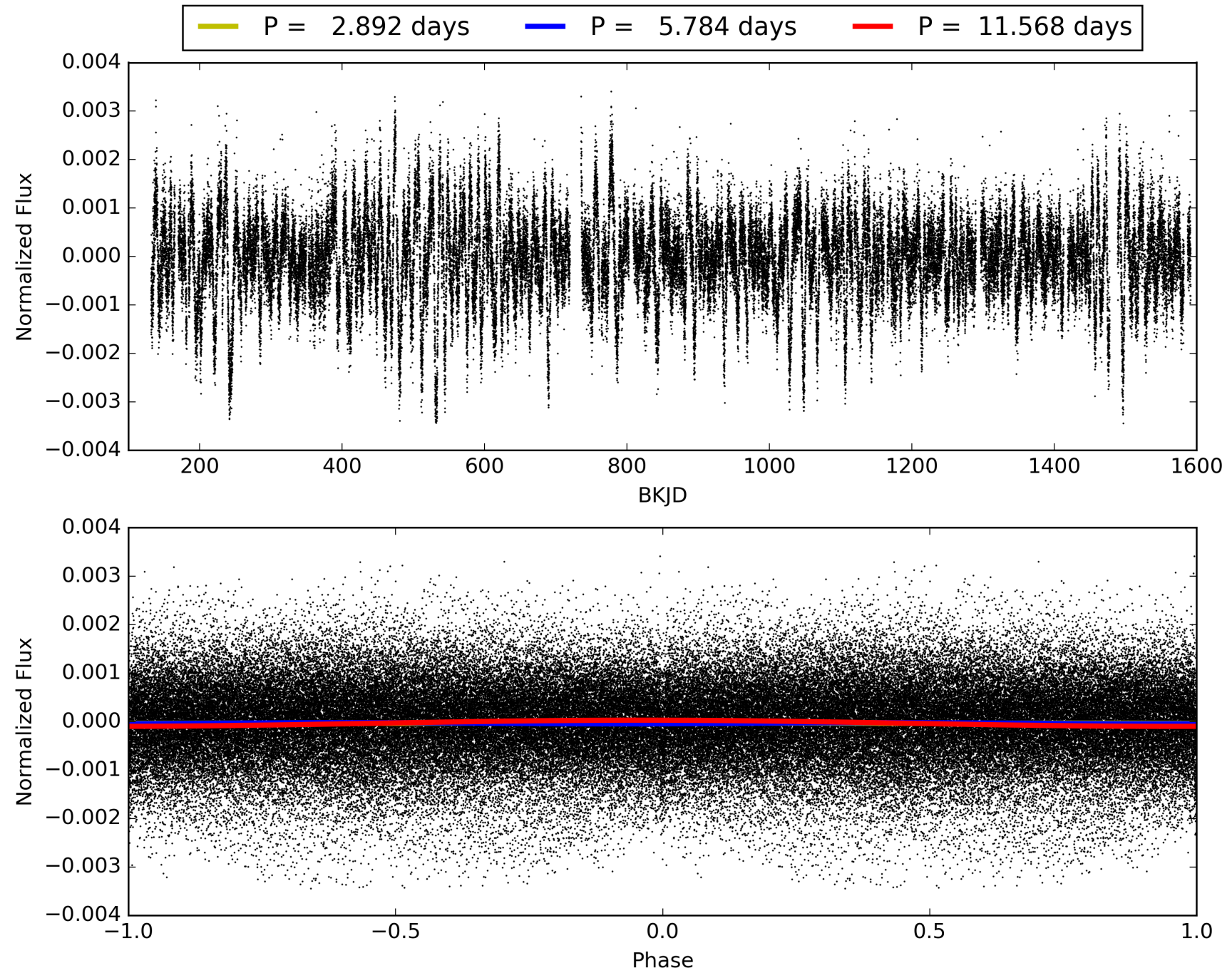
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 5.39e-58
RollingBand-fgt: 0.96 [216/225]
GhostDiagnostic-chr: 2.112
Centroid-sig: 19.9%
Centroid-so: 0.954 arcsec [2.26σ]
OotOffset-rm: 0.492 arcsec [0.69σ]
KicOffset-rm: 0.701 arcsec [1.16σ]
OotOffset-st: 4/3/2/5 [14]
KicOffset-st: 4/3/2/5 [14]
DiffImageQuality-fgm: 0.79 [11/14]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 011566256-01, PDC Light Curves

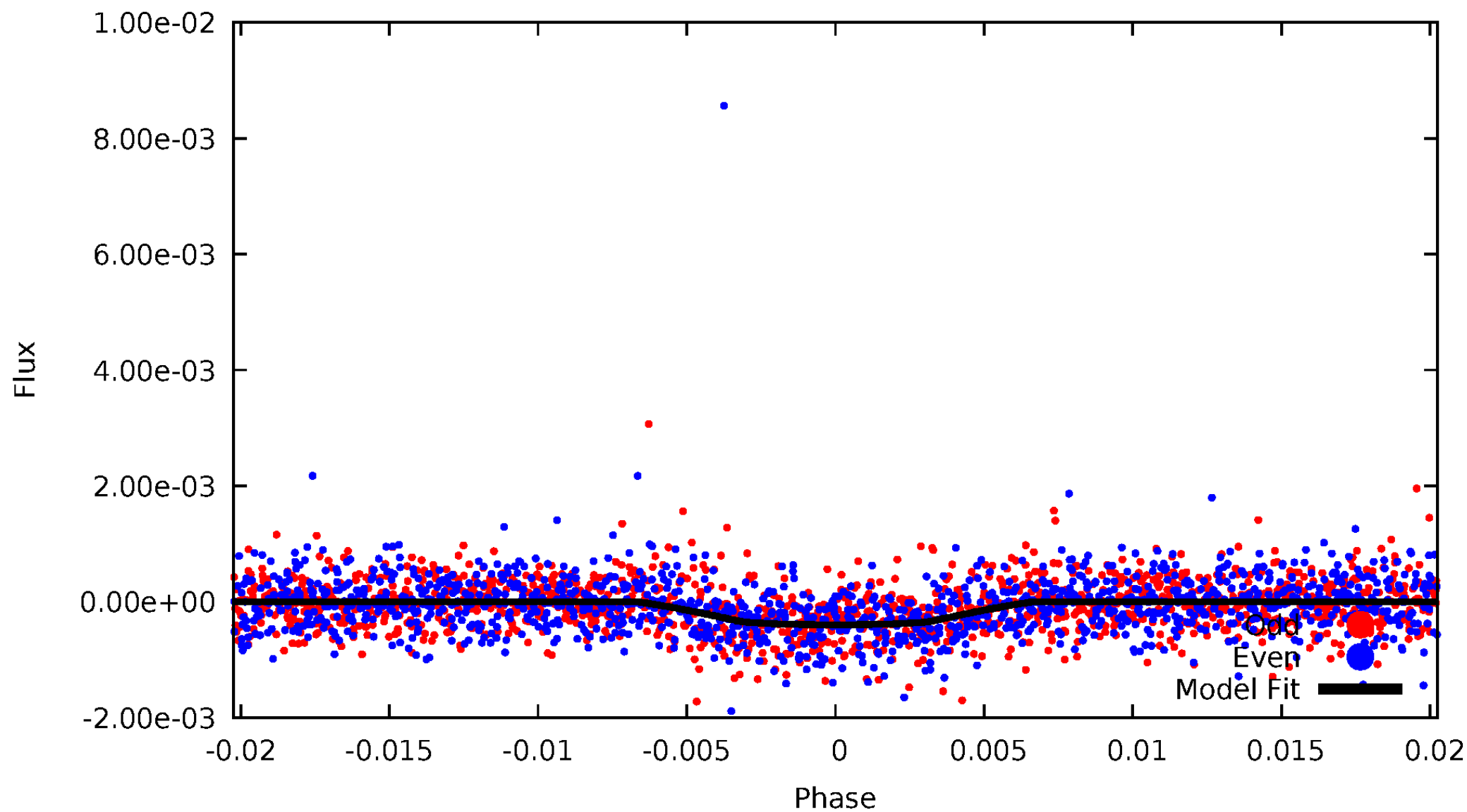


TCE 011566256-01



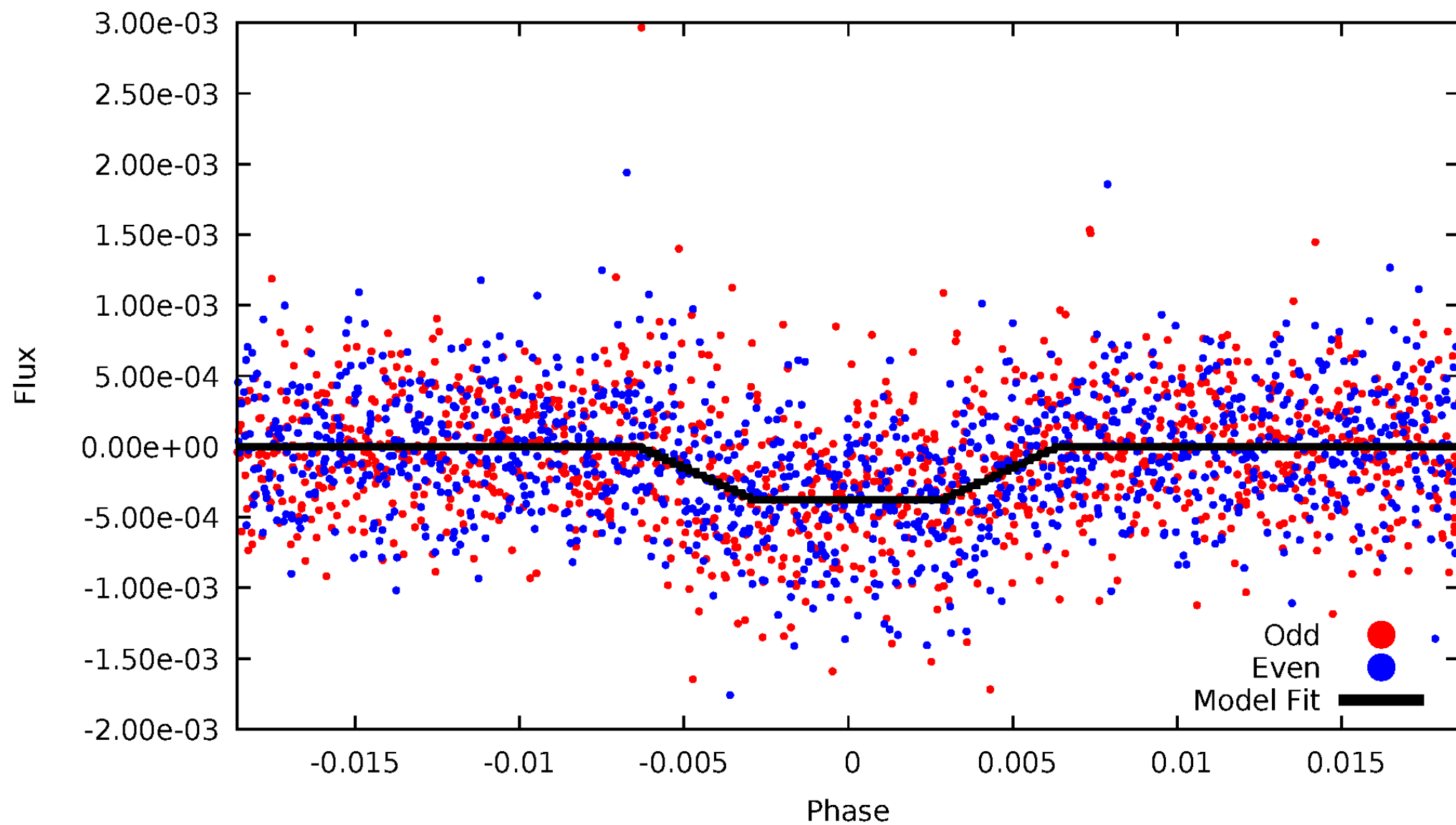
DV Odd/Even

TCE 011566256-01



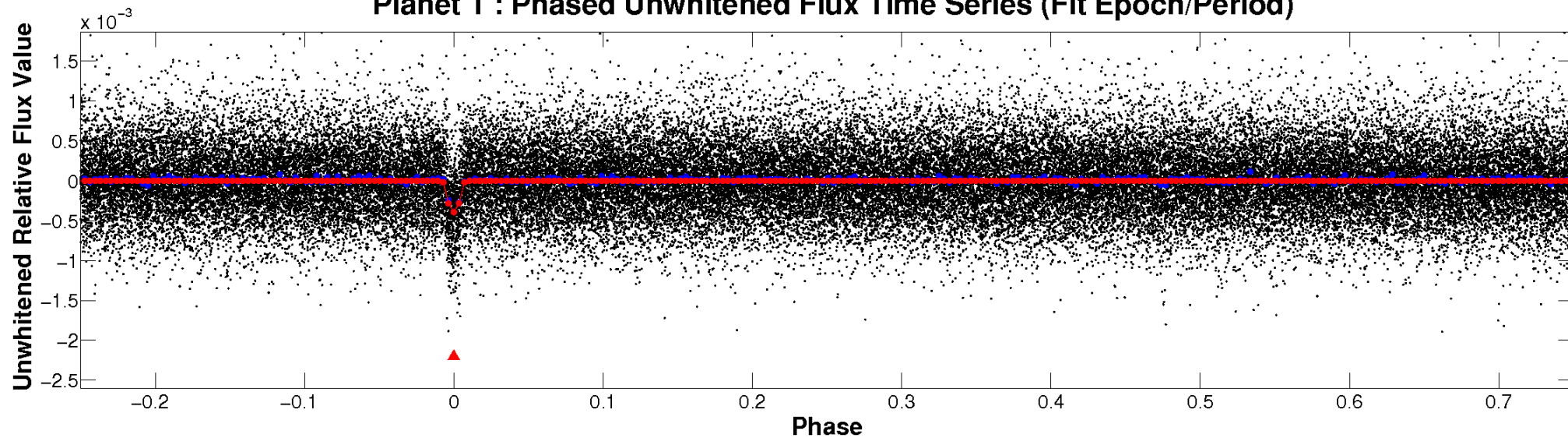
ALT Odd/Even

TCE 011566256-01

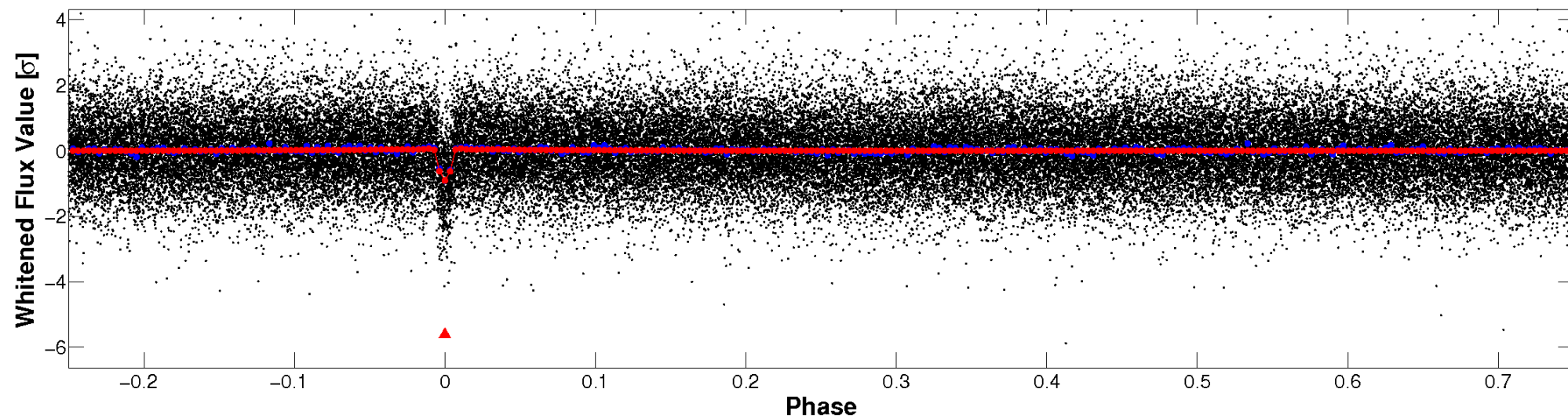


Non-Whitened Vs. Whitened Light Curve

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

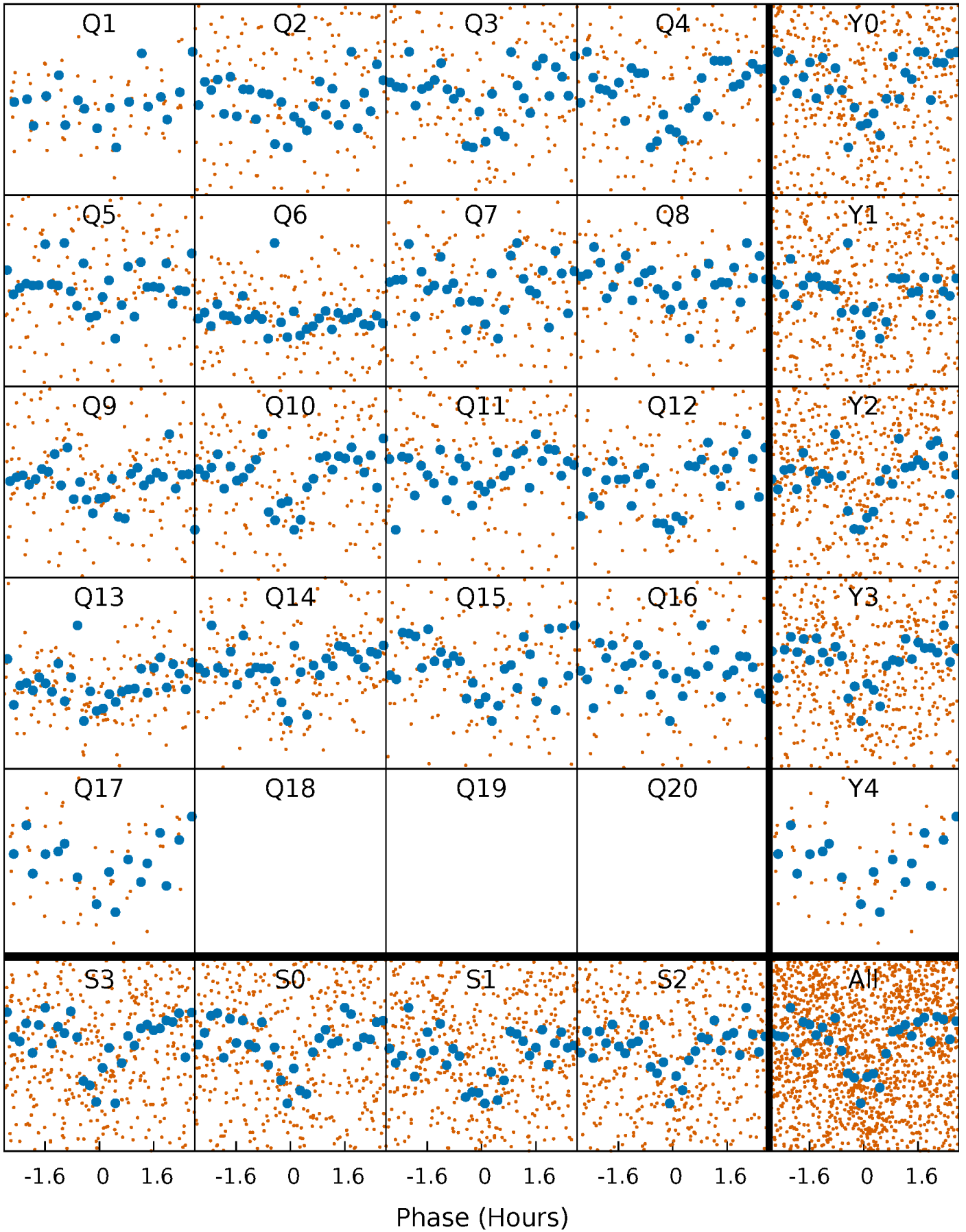


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



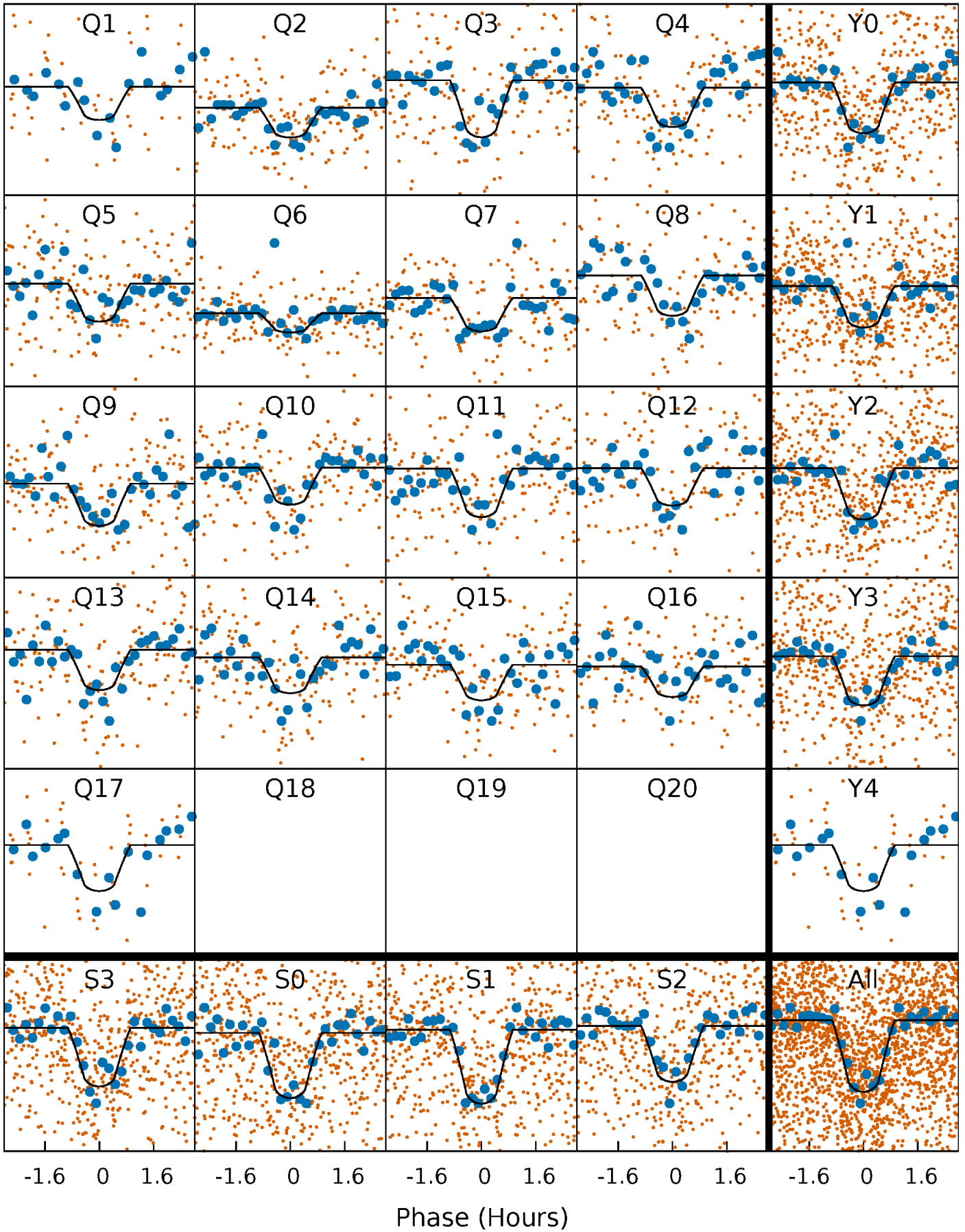
PDC Quarter-Phased Transit Curves

TCE 011566256-01 P= 5.783866 Days $T_0=135.579252$ (BKJD)



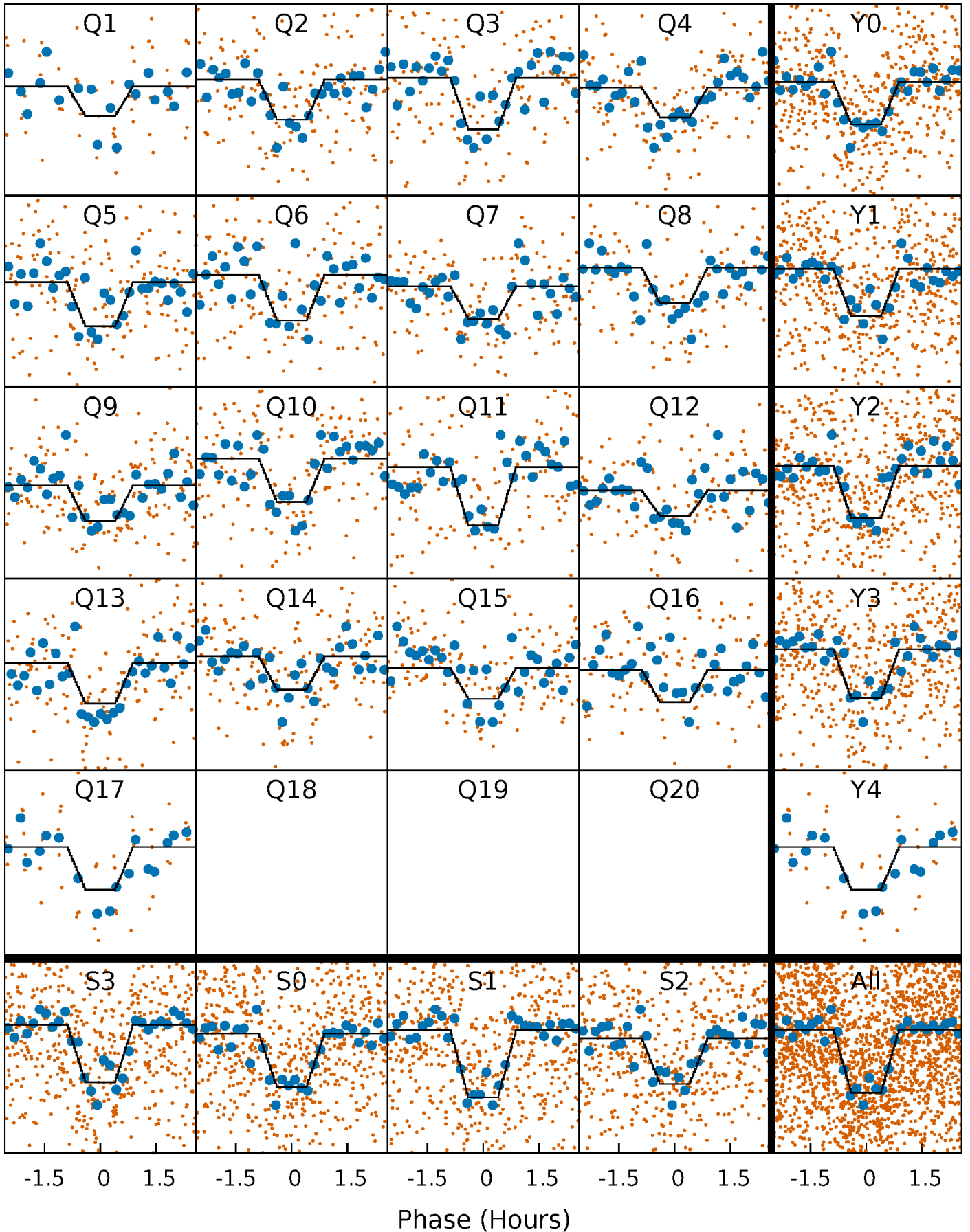
DV Quarter-Phased Transit Curves

TCE 011566256-01 P= 5.783866 Days $T_0=135.579252$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

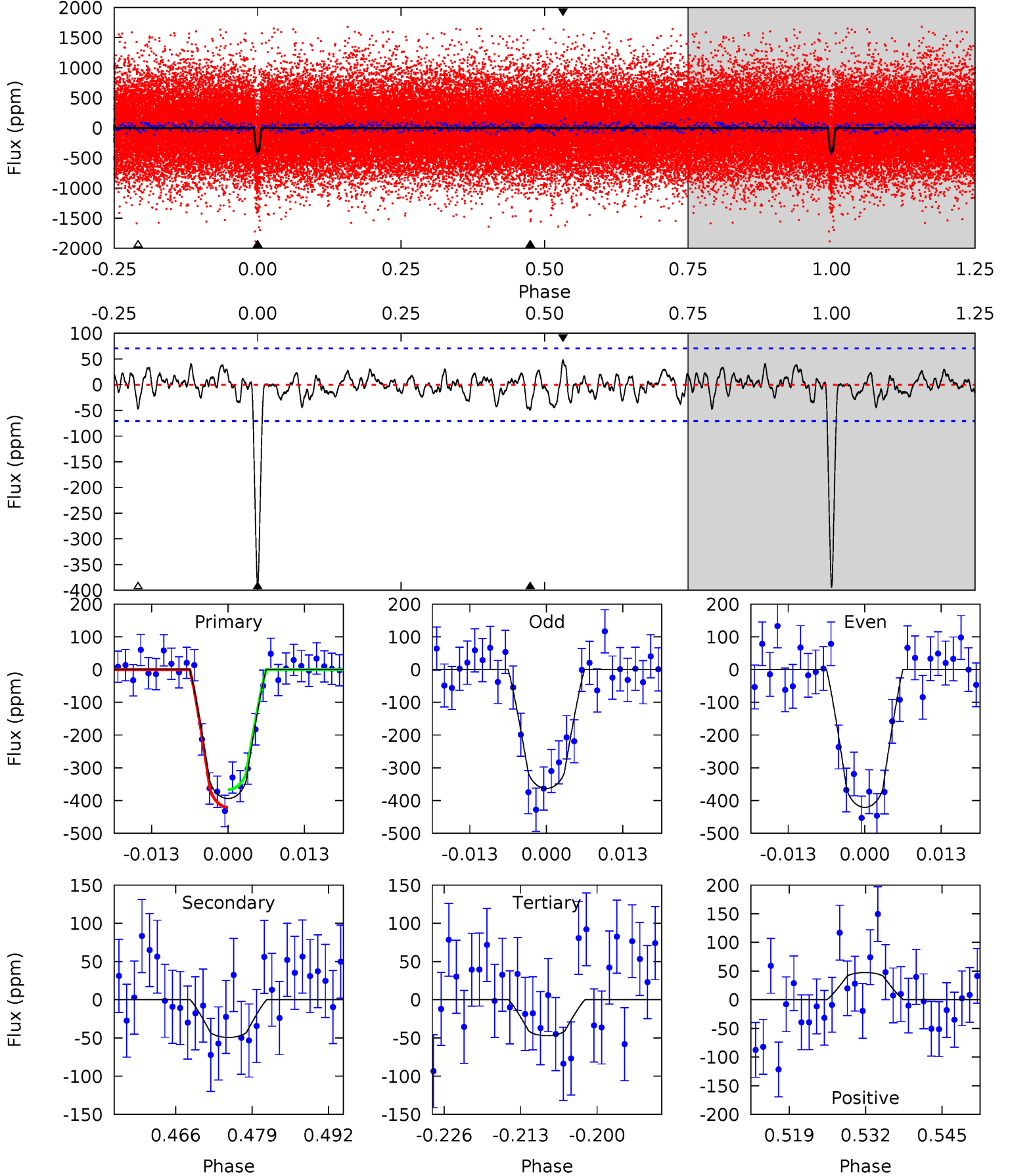
TCE 011566256-01 P= 5.783860 Days $T_0=135.580060$ (BKJD)



DV Model-Shift Uniqueness Test

011566256-01, P = 5.783866 Days, E = 129.795386 Days

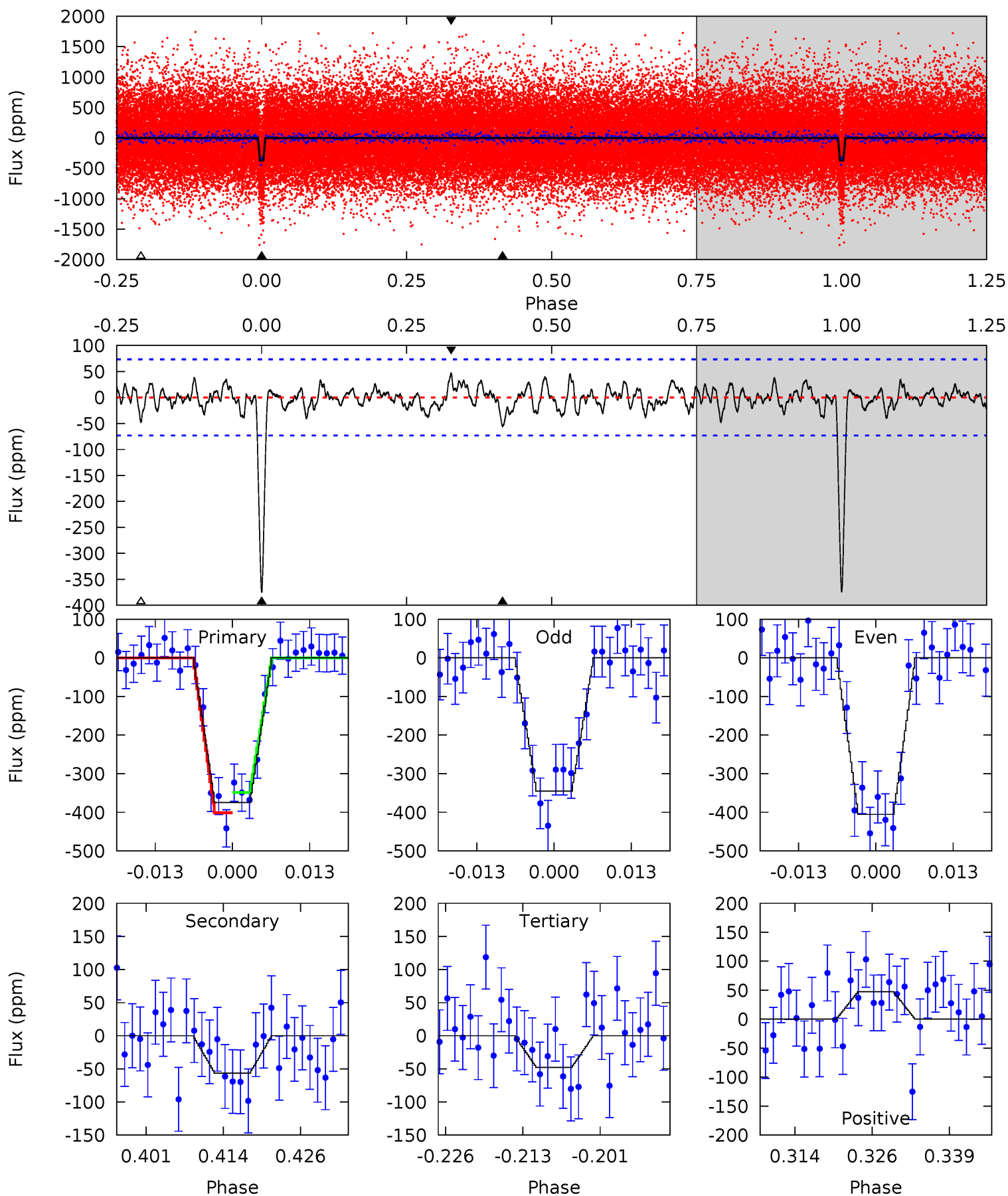
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.7	3.46	3.31	3.34	4.97	2.48	1.16	24.4	24.4	0.16	0.13	2.03	0.90	0.11	1.91



Alt Model-Shift Uniqueness Test

011566256-01, P = 5.783860 Days, E = 129.796200 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.5	3.83	3.26	3.23	4.98	2.50	1.16	22.2	22.3	0.58	0.60	2.04	0.95	0.11	1.79



Stellar Parameters For KIC 011566256

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6063^{+181}_{-217}	$4.476^{+0.048}_{-0.192}$	$0.070^{+0.250}_{-0.300}$	$1.012^{+0.302}_{-0.101}$	$1.117^{+0.130}_{-0.145}$	$1.519^{+0.310}_{-0.765}$
	+3%/-4%	+1%/-4%	+357%/-429%	+30%/-10%	+12%/-13%	+20%/-50%
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 011566256-01 / KOI 2361.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-49 ± 14	$2.17^{+0.87}_{-0.76}$	1494^{+105}_{-72}	3975^{+753}_{-480}	24^{+34}_{-13}
Alt.	-56 ± 15	$2.24^{+0.89}_{-0.83}$	1502^{+103}_{-73}	4059^{+828}_{-452}	25^{+42}_{-13}

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 $A_{obs} \gg 1.0$

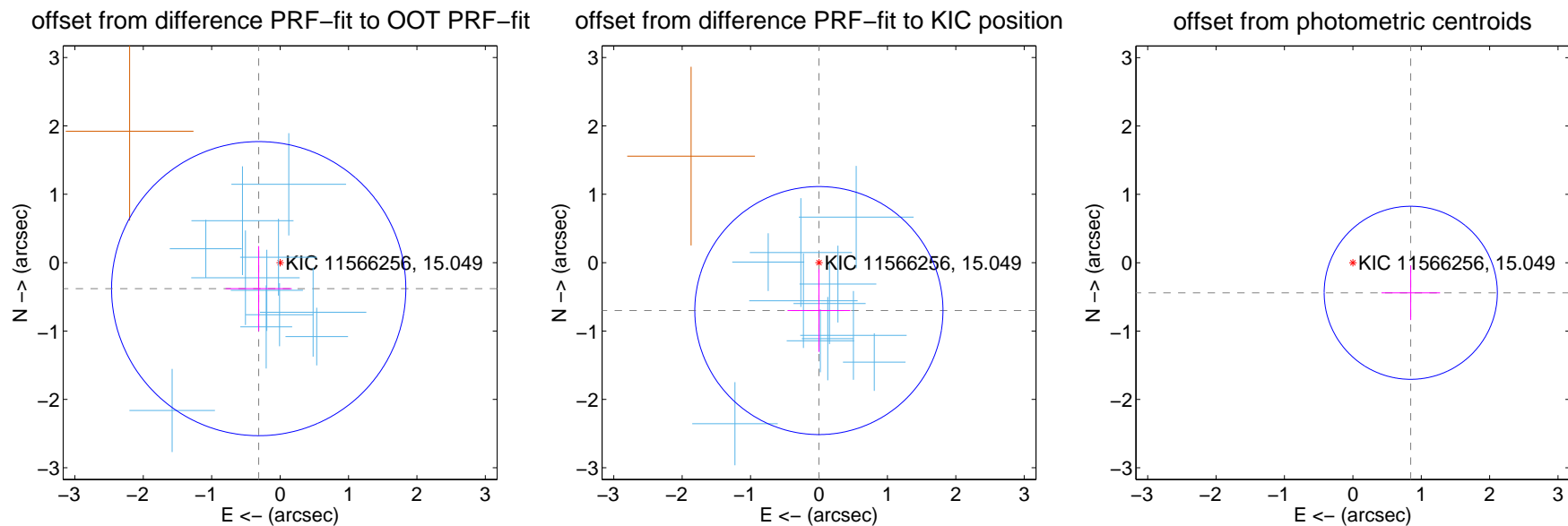
DV Centroid Data

Supplemental centroid analysis for 011566256-01. Kepler magnitude: 15.05. Transit SNR 19.67

There are 11 quarters with good PRF difference image offsets

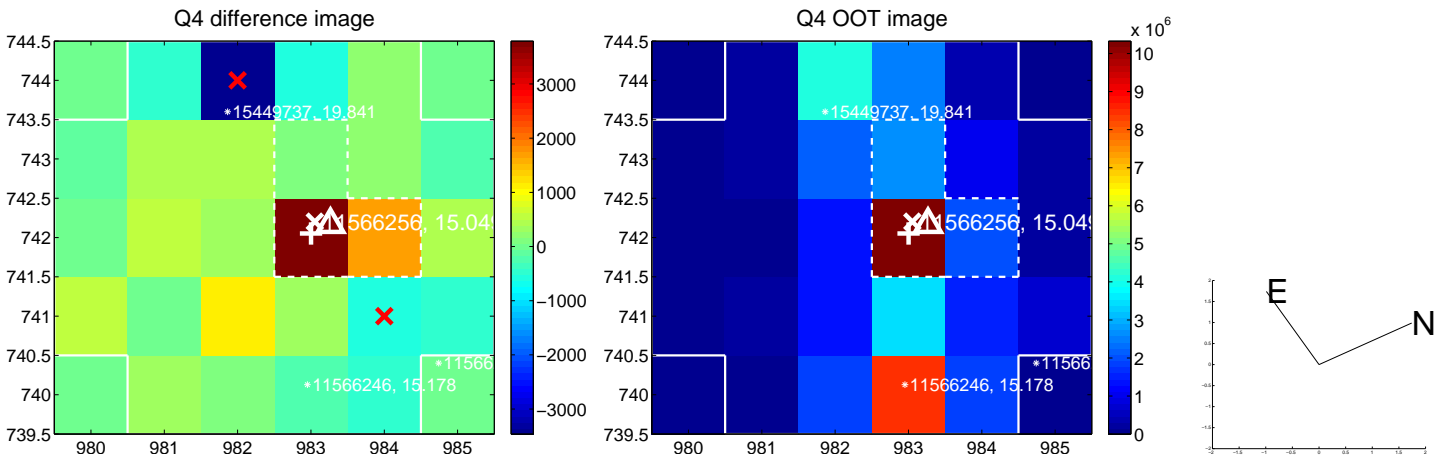
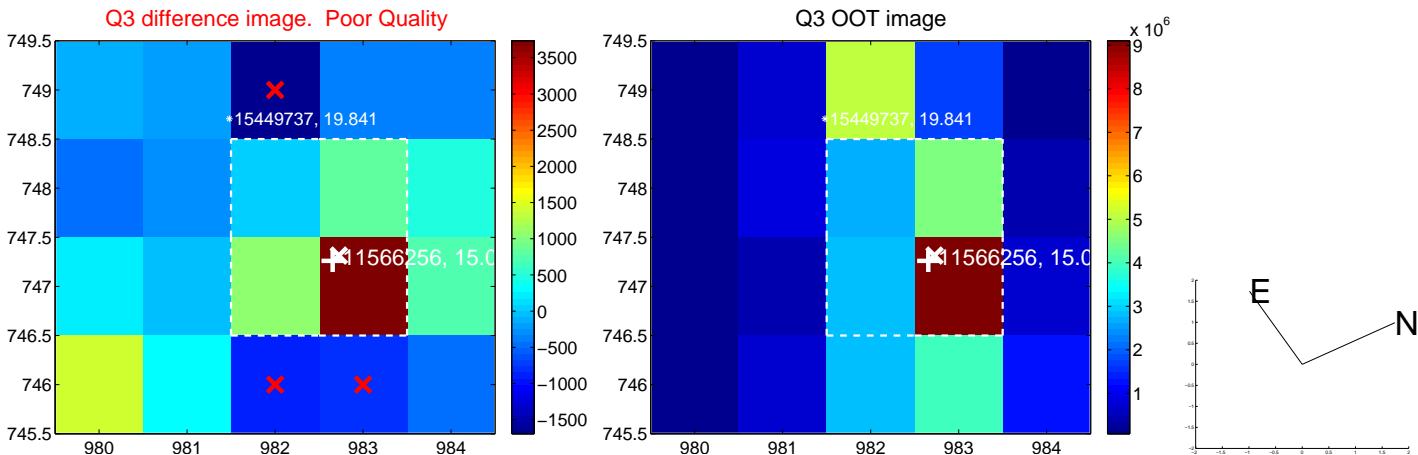
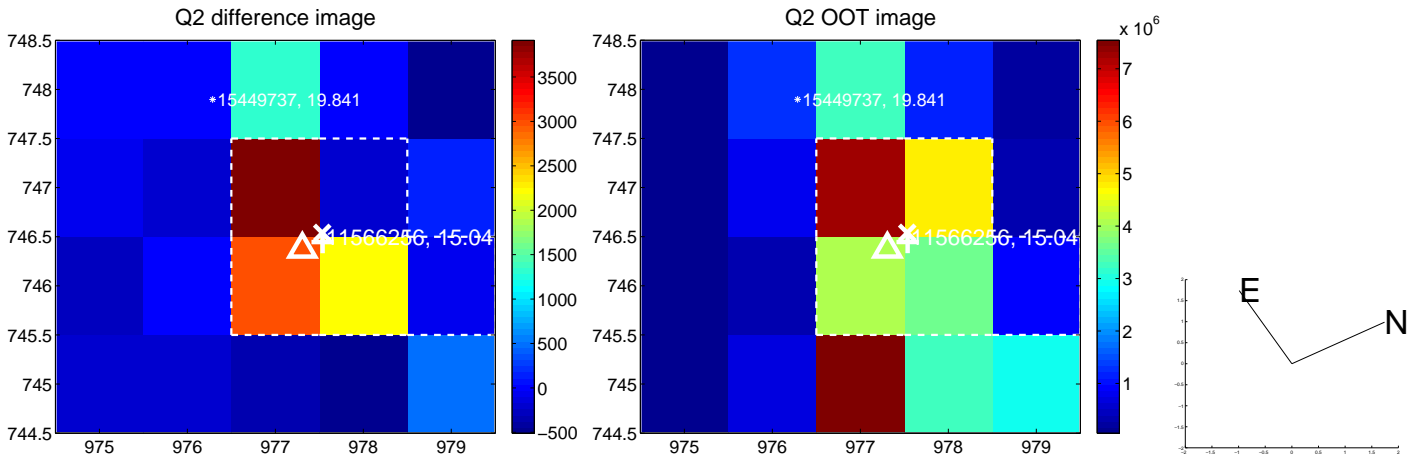
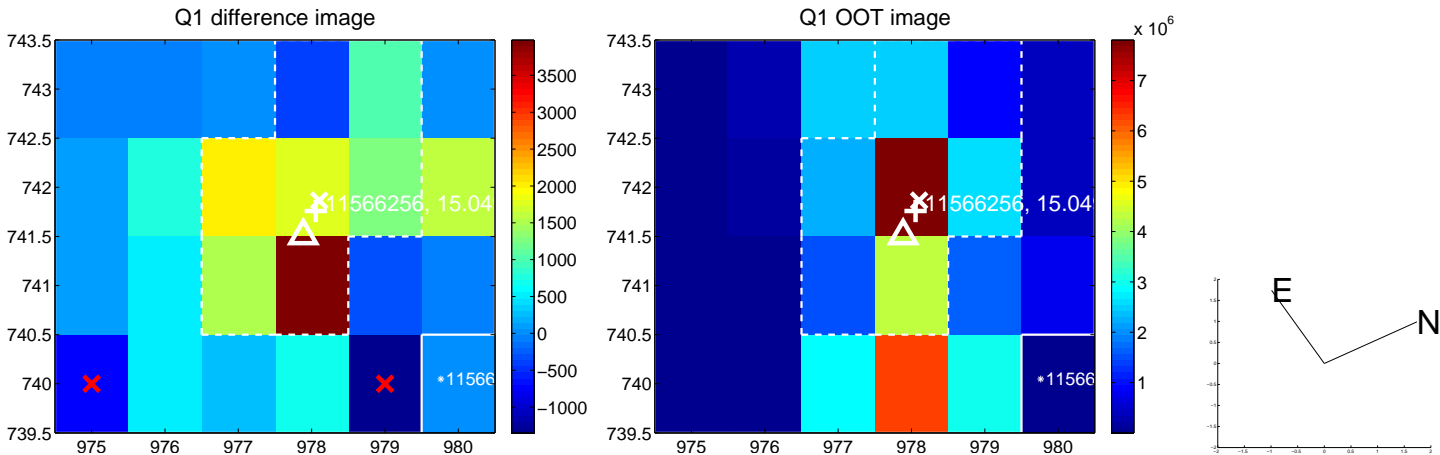
The direct PRF centroid is offset from the target star catalog position by about 0.49 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.492 ± 0.717	0.69	0.313 ± 0.484	-0.380 ± 0.622
PRF-fit source offset from KIC position	0.701 ± 0.605	1.16	0.001 ± 0.459	-0.701 ± 0.604
photometric centroid source offset	0.95 ± 0.42	2.26	-0.85 ± 0.43	-0.44 ± 0.40

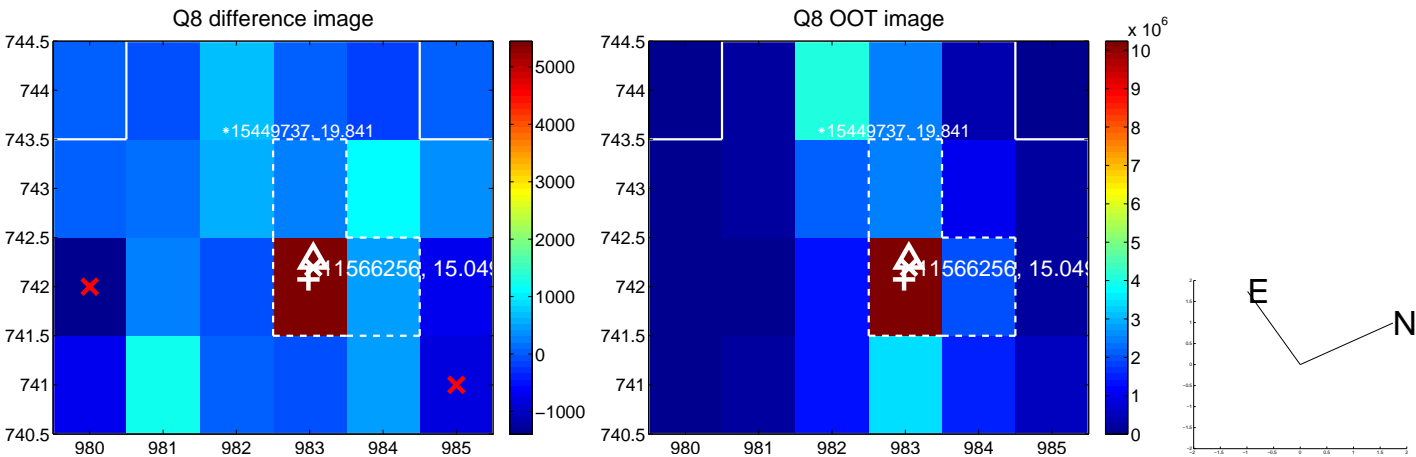
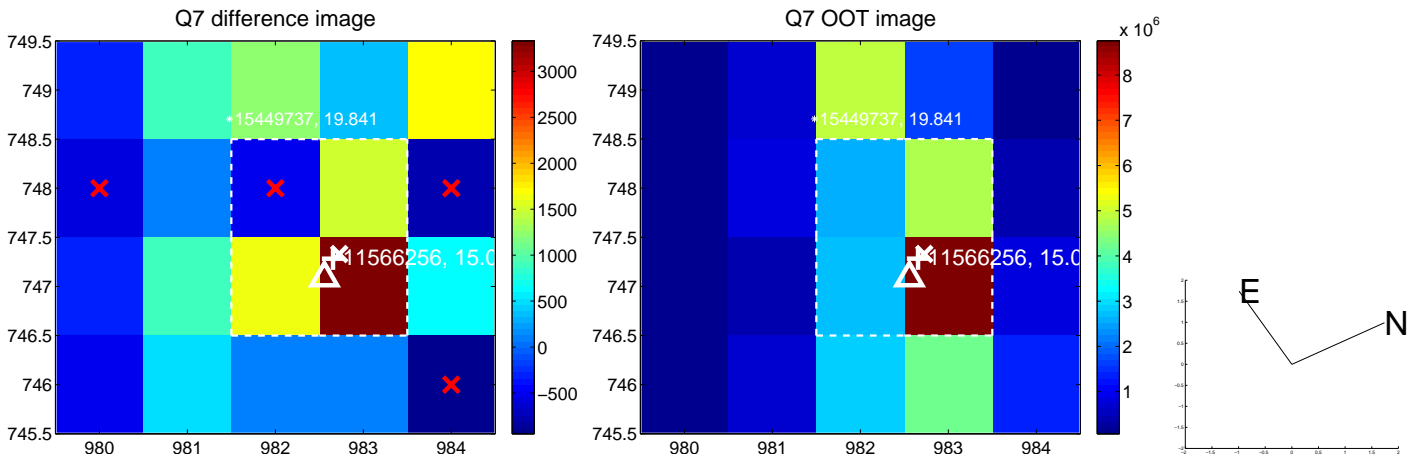
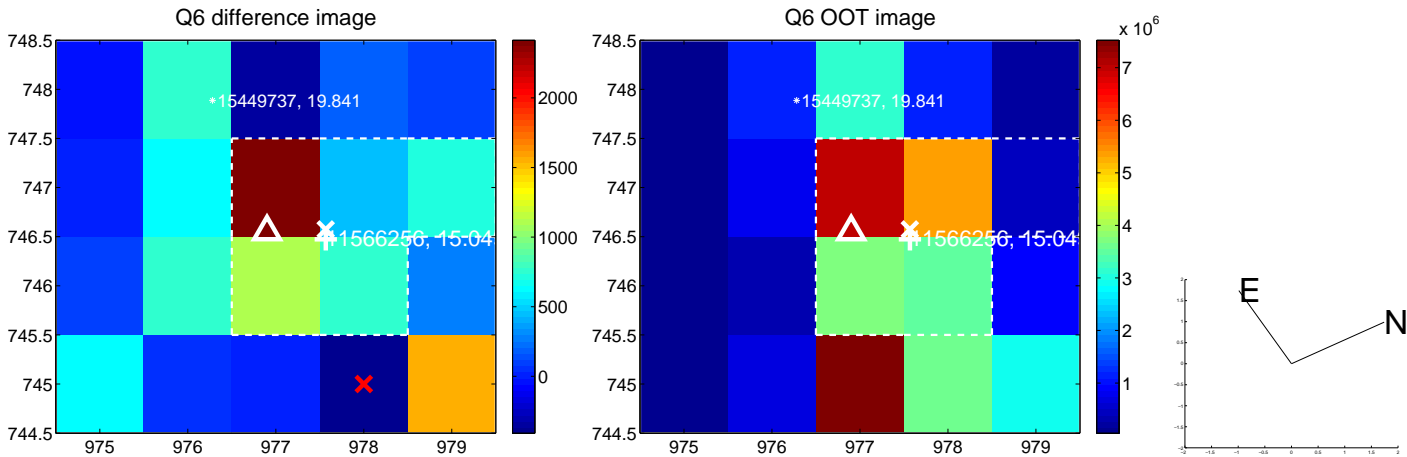
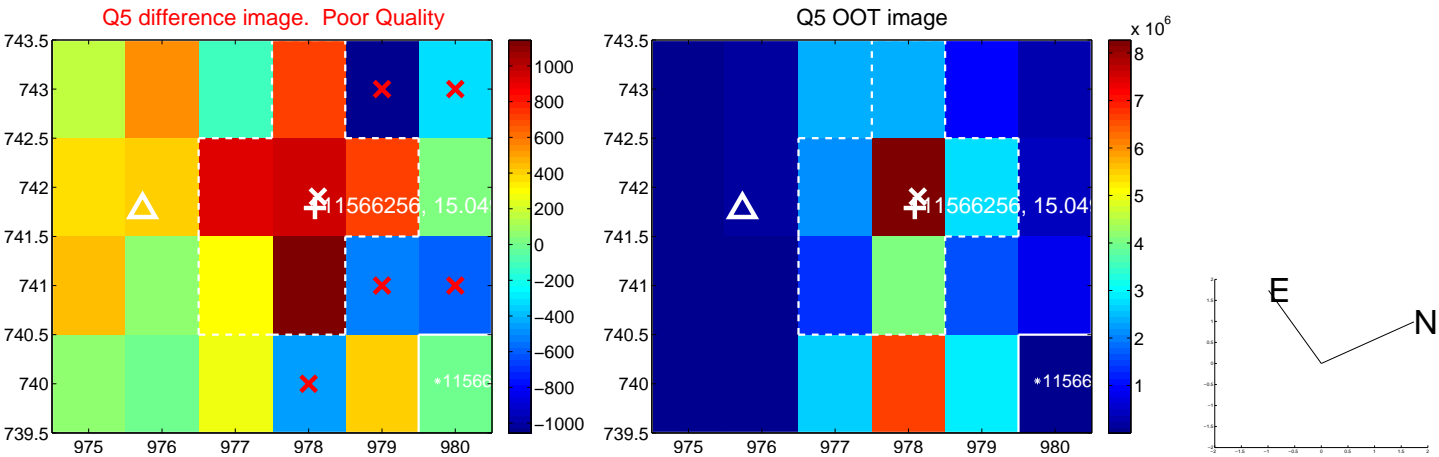


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

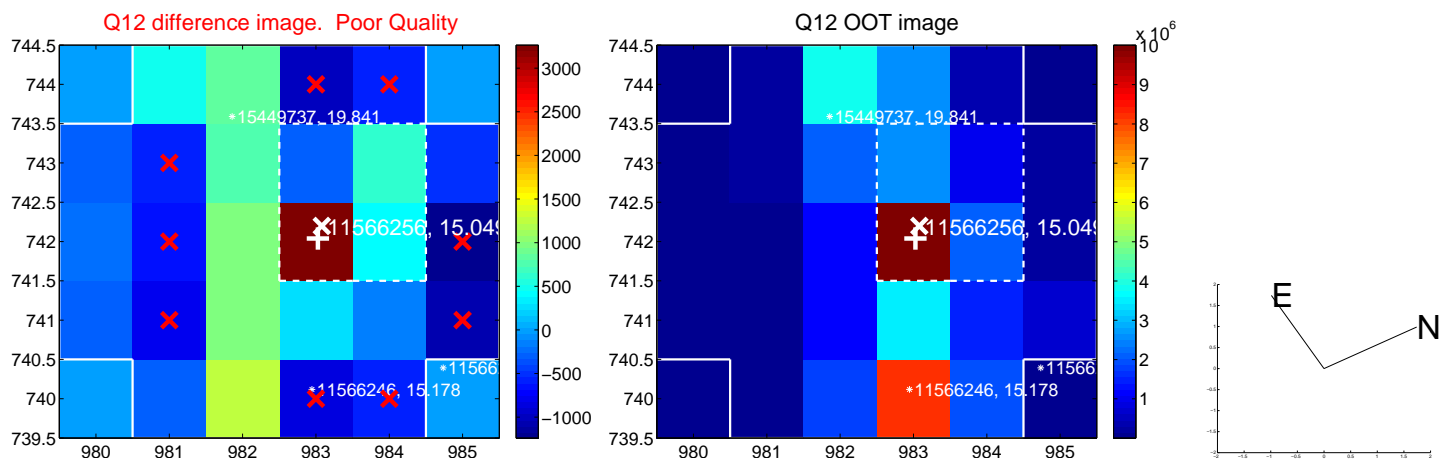
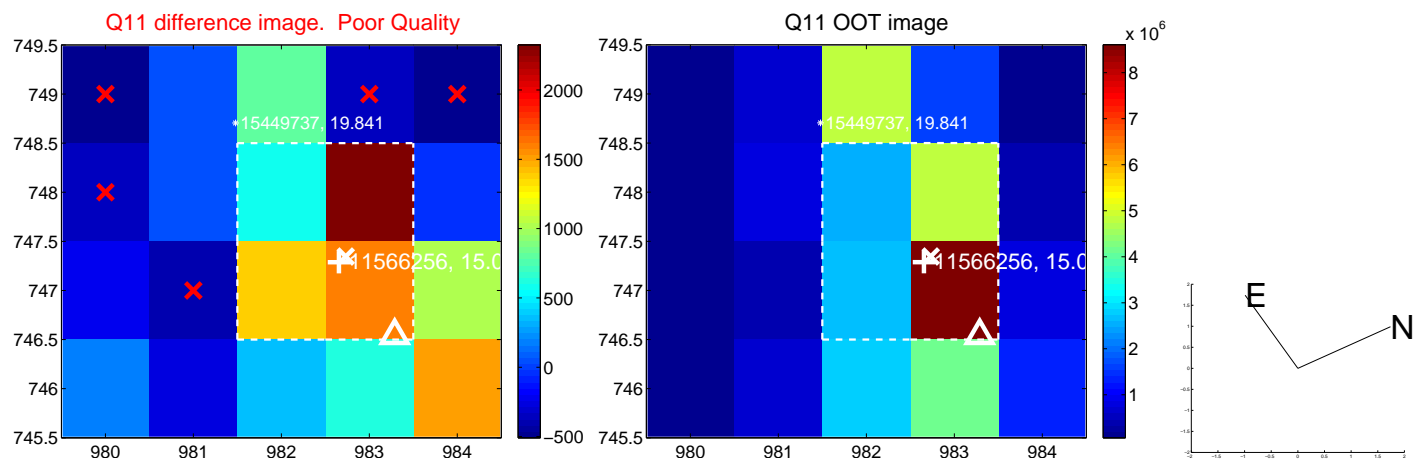
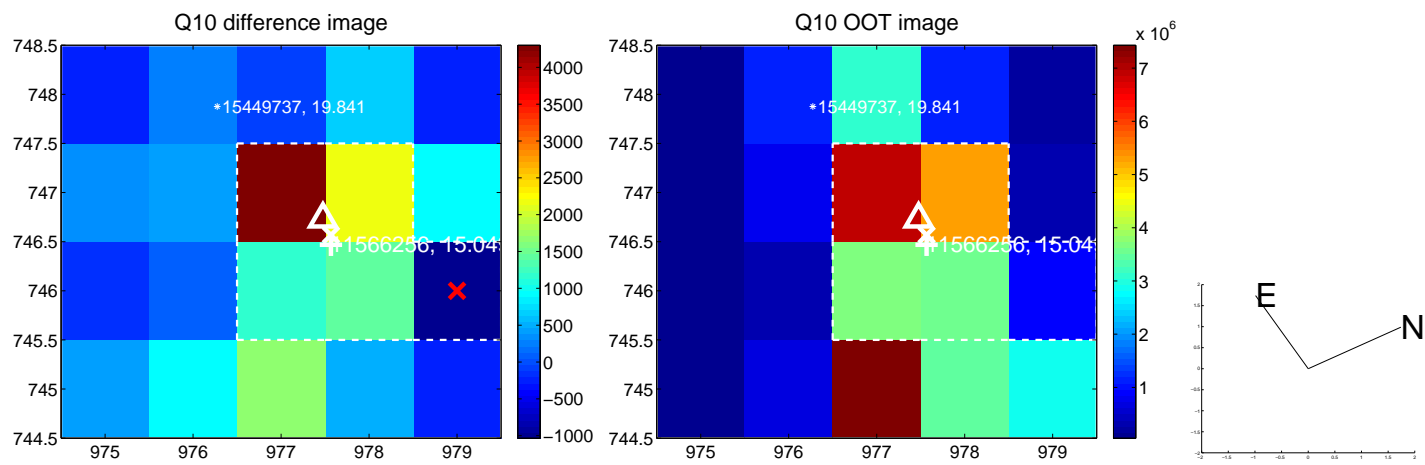
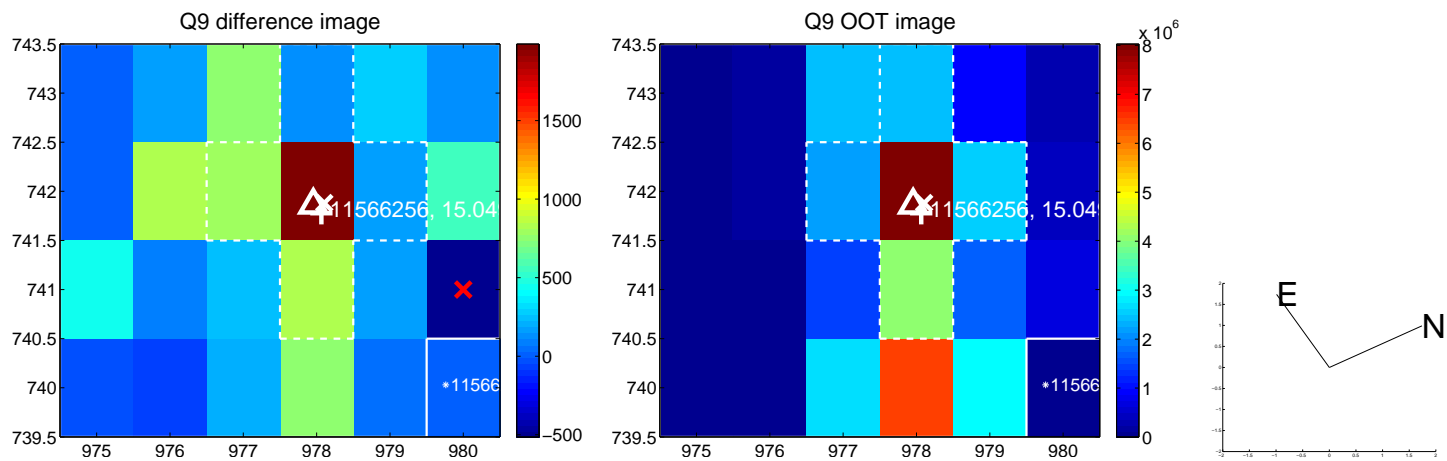
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



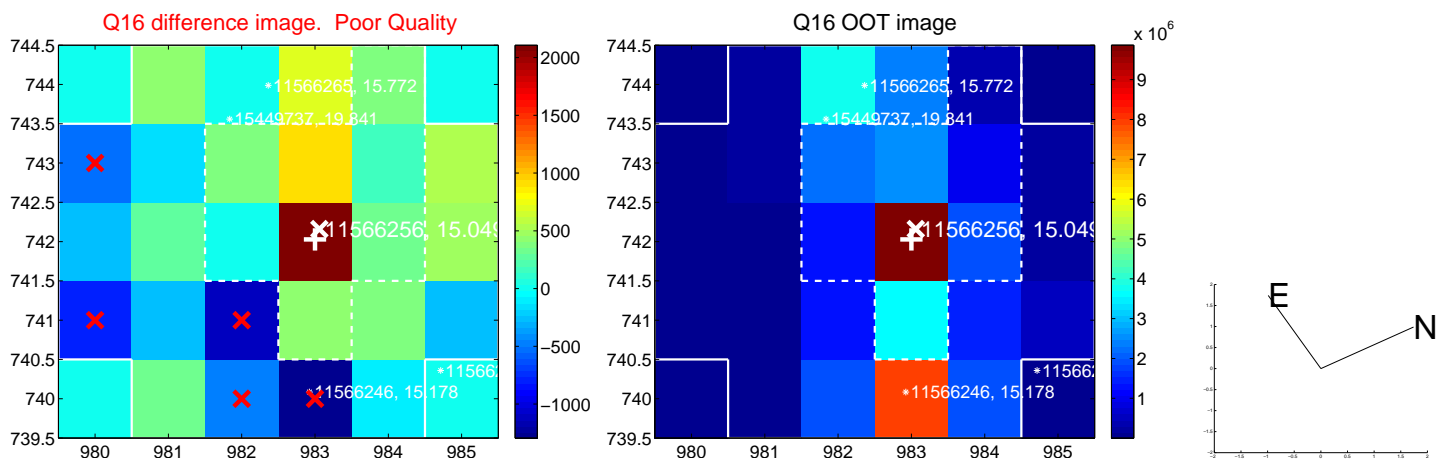
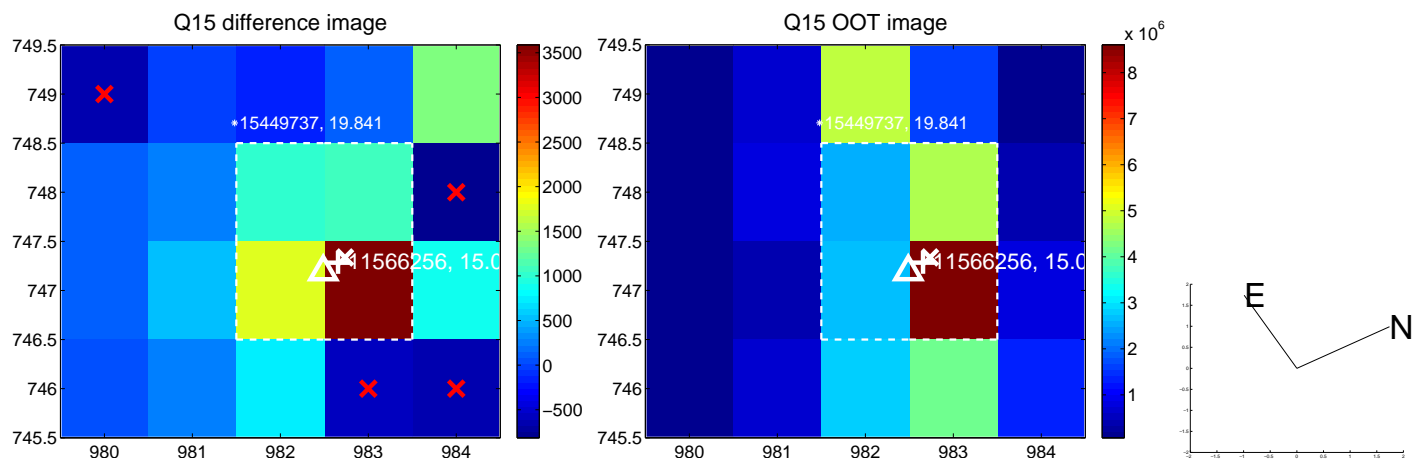
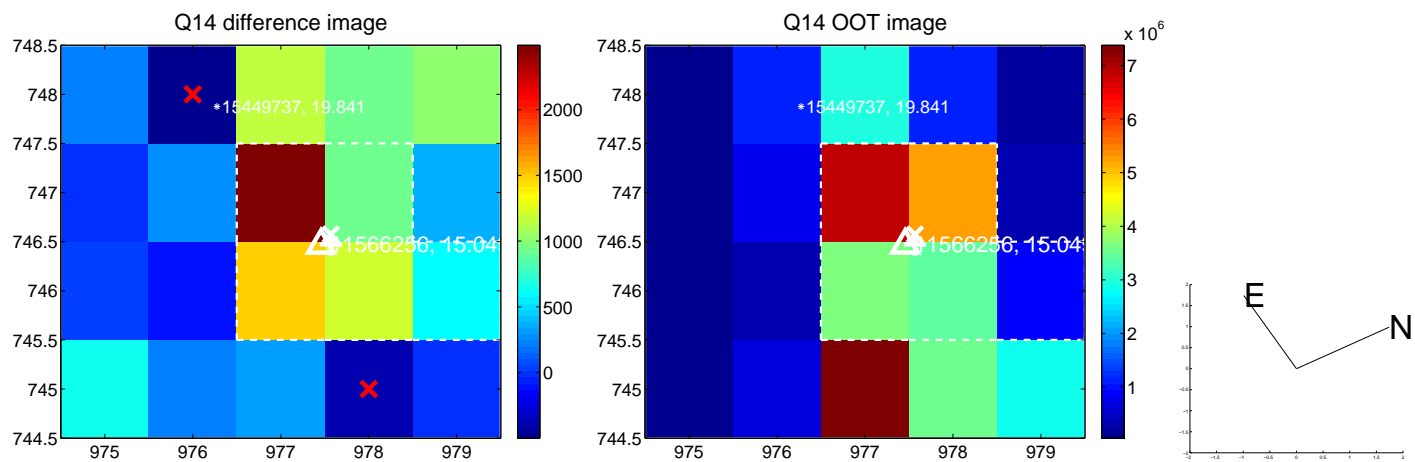
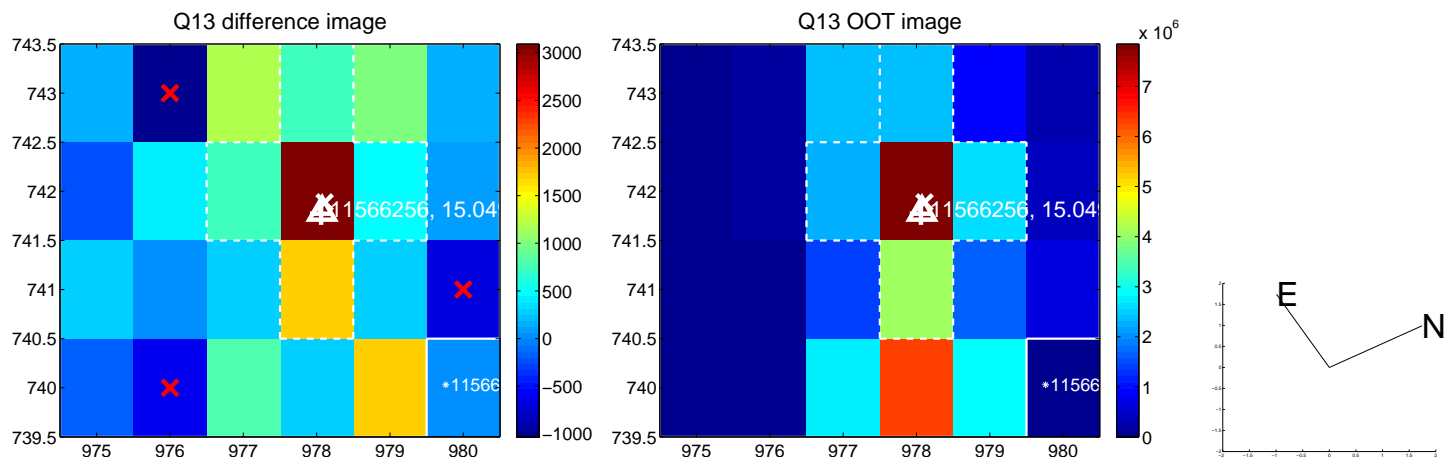
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



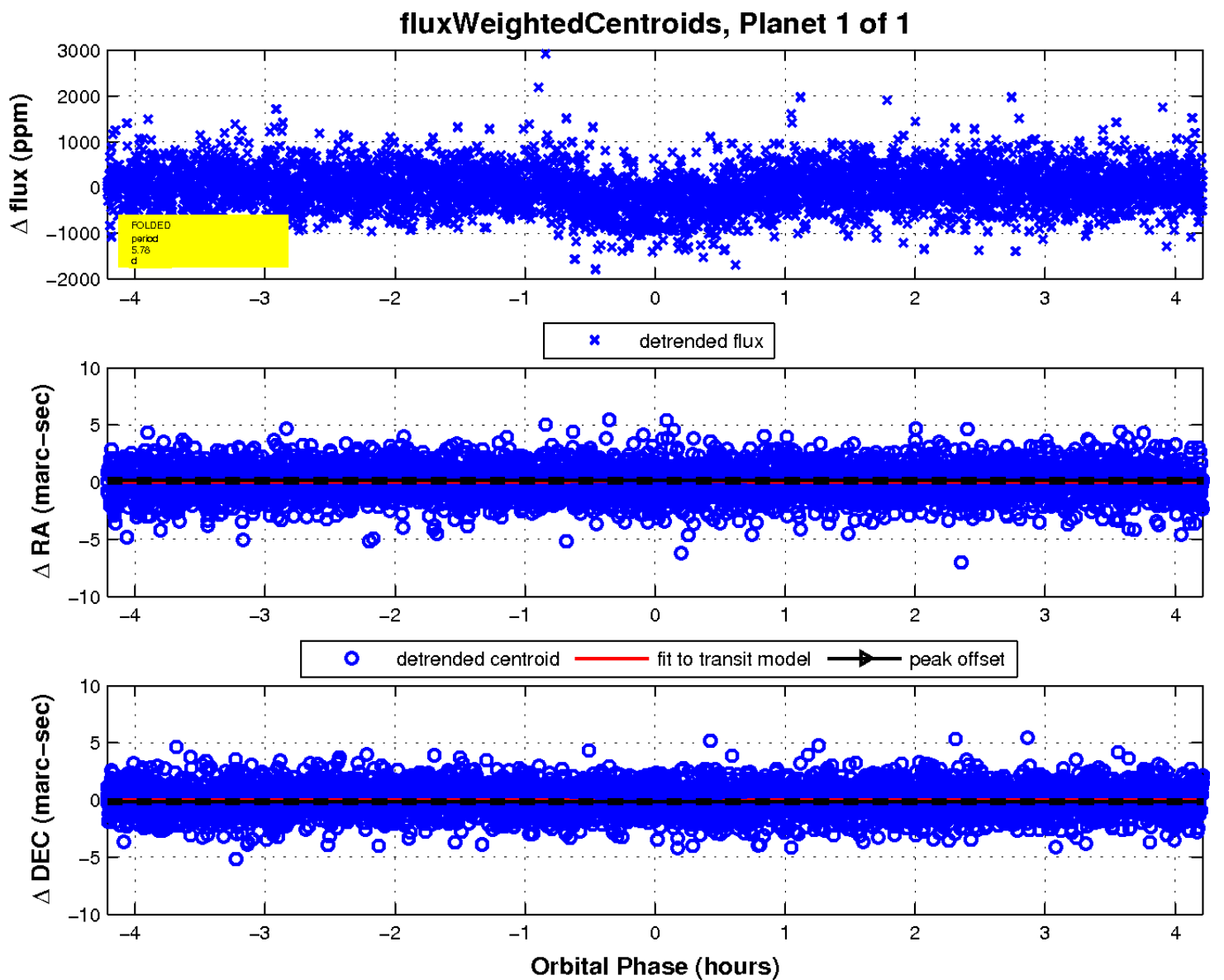
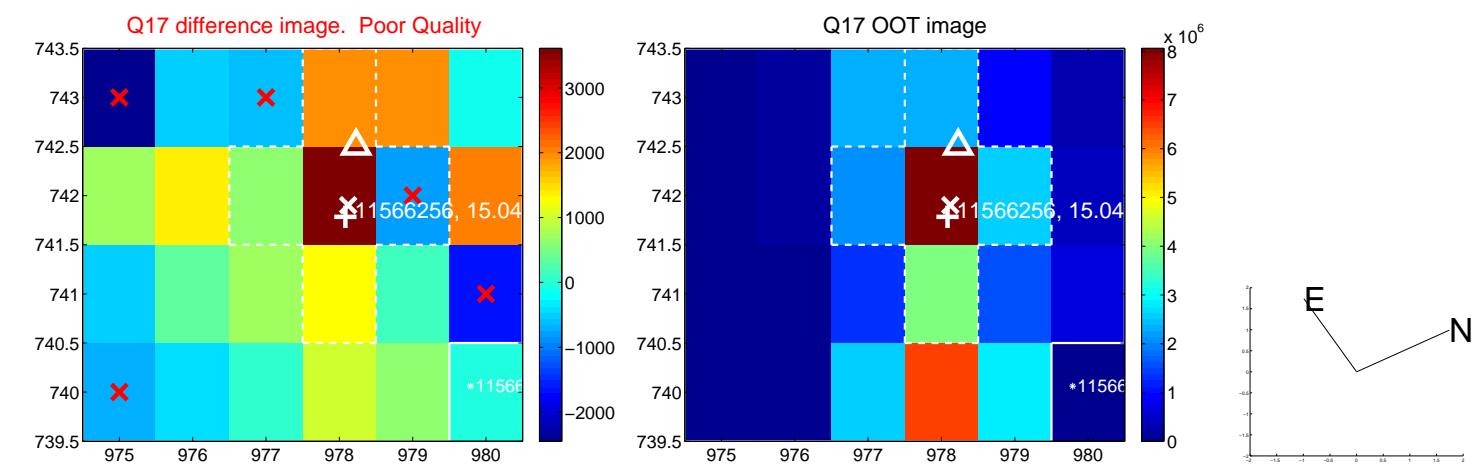
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UKIRT Image

Declination

