

KIC 011658036

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})
011658036-01	OBS	4771.01	142.702421	212.034896	204.2	5.872	8.6	8.2	1.29	6701	2.04	8.89

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011658036-01	OBS	PC	0.92	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.

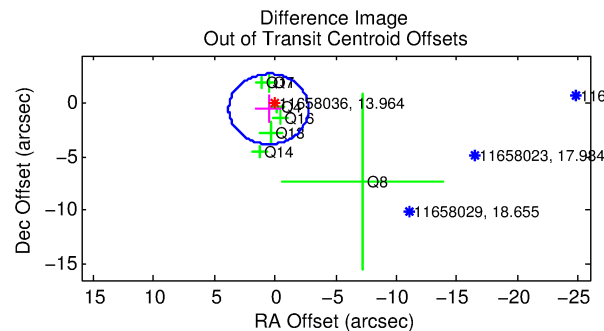
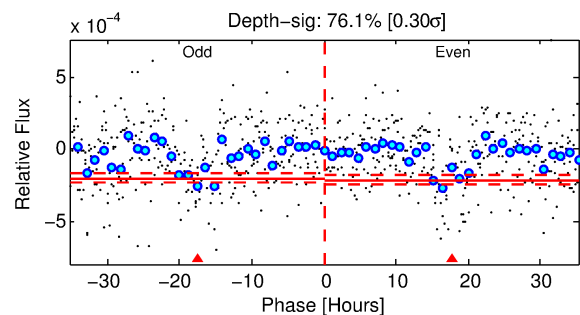
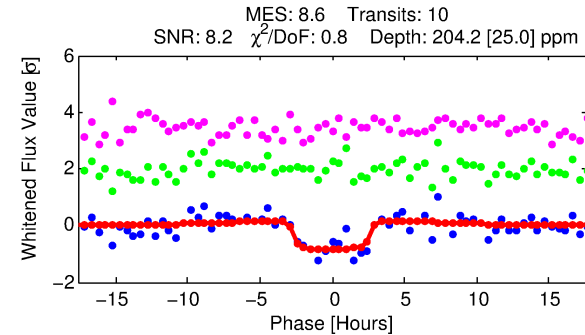
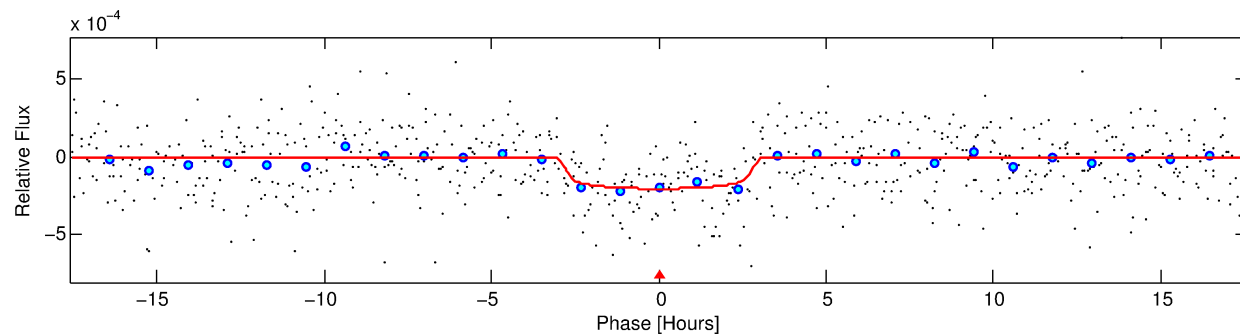
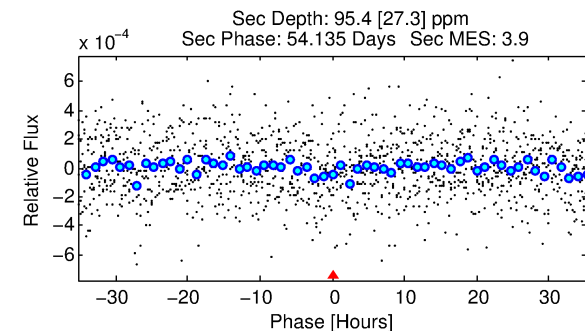
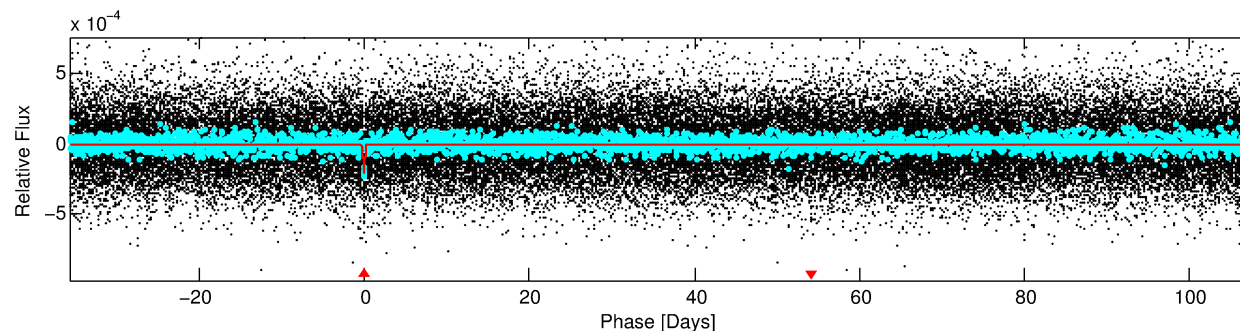
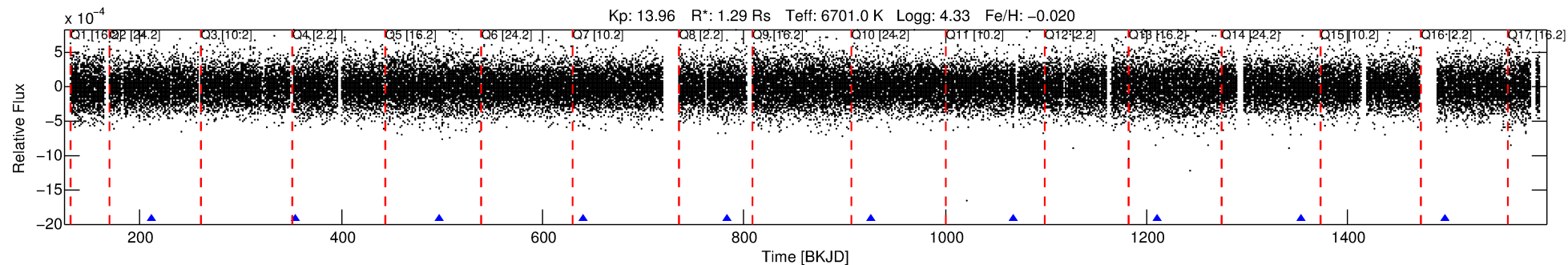
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011658036-01

No Significant Match Found

DV One-Page Summary

KIC: 11658036 Candidate: 1 of 1 Period: 142.702 d
KOI: K04771.01 Corr: 0.955



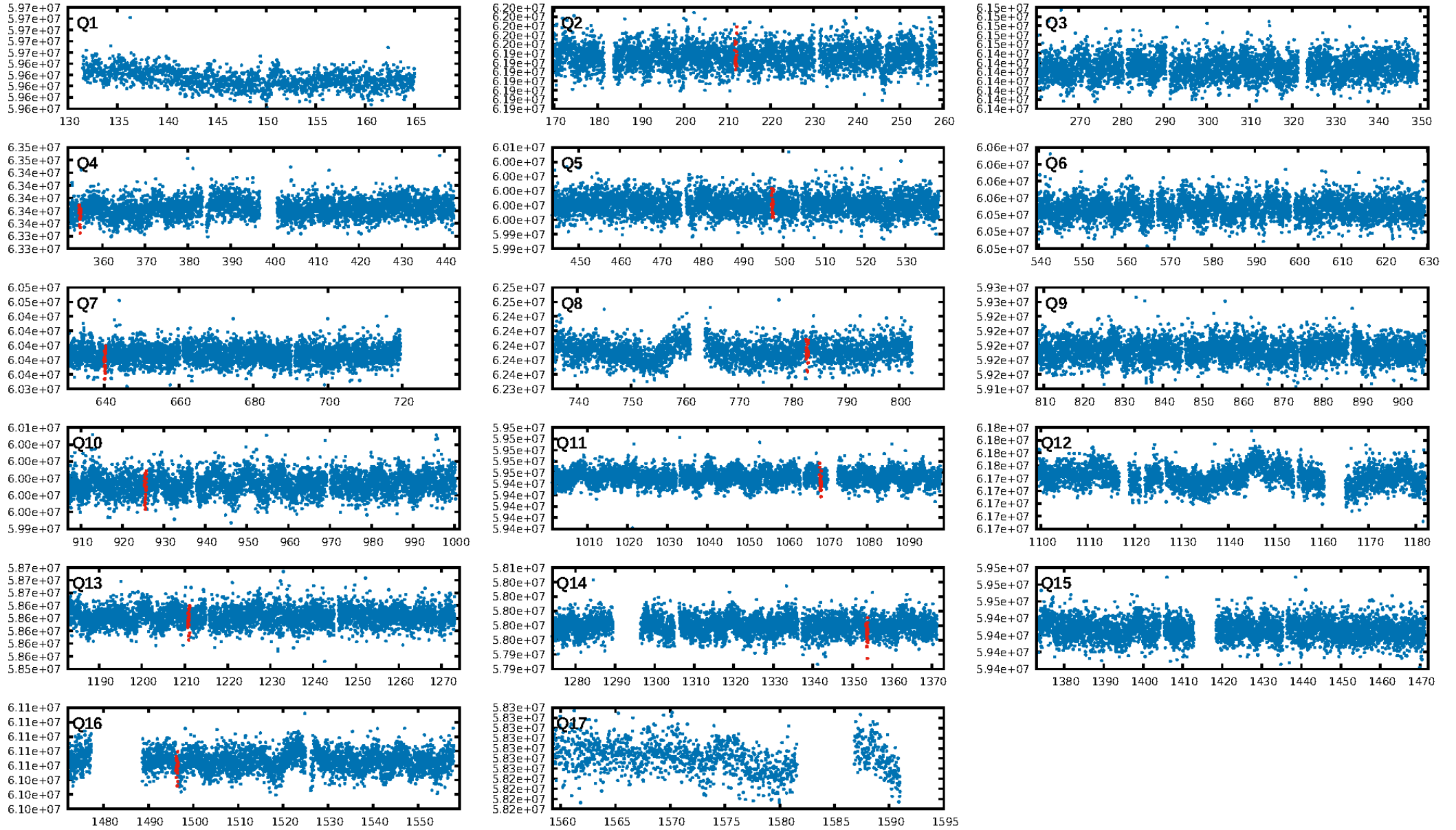
DV Fit Results:

Period = 142.70242 [0.00228] d
Epoch = 212.0349 [0.0129] BKJD
Rp/R* = 0.0145 [0.0067]
a/R* = 113.90 [297.65]
b = 0.81 [1.13]
Seff = 8.89 [3.87]
Teq = 440 [48] K
Rp = 2.04 [1.19] Re
a = 0.5810 [0.1695] AU
Ag = 4256.35 [4477.99] [0.95σ]
Teffp = 5499 [1346] K [3.75σ]

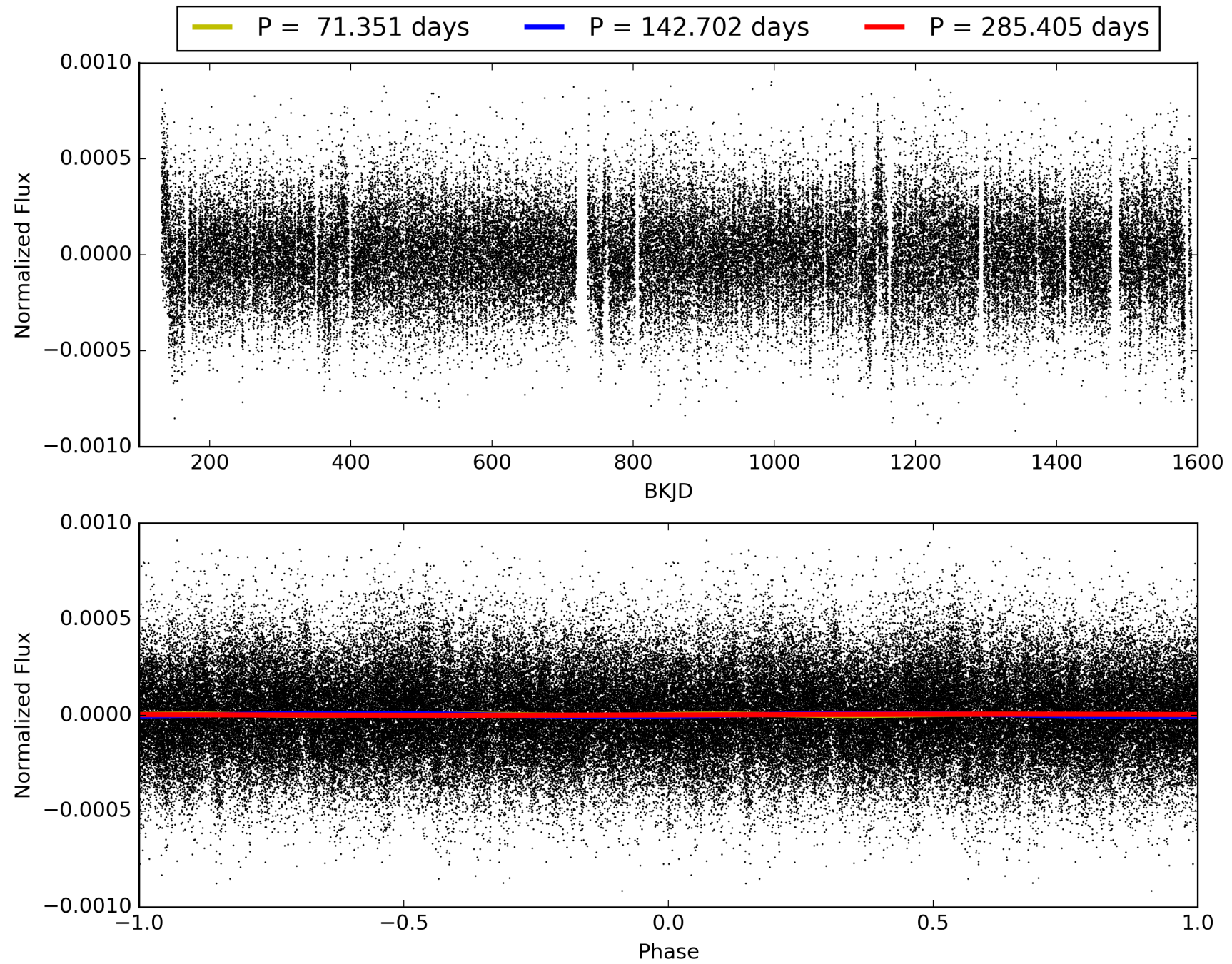
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 93.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.99e-16
RollingBand-fgt: 1.00 [10/10]
GhostDiagnostic-chr: 7.995
Centroid-sig: 78.9%
Centroid-so: 0.945 arcsec [0.62σ]
OotOffset-rm: 0.746 arcsec [0.68σ]
KicOffset-rm: 0.867 arcsec [0.81σ]
OotOffset-st: 1/2/3/1 [7]
KicOffset-st: 1/2/3/1 [7]
DiffImageQuality-fgm: 0.57 [4/7]
DiffImageOverlap-fno: 1.00 [10/10]

TCE 011658036-01, PDC Light Curves

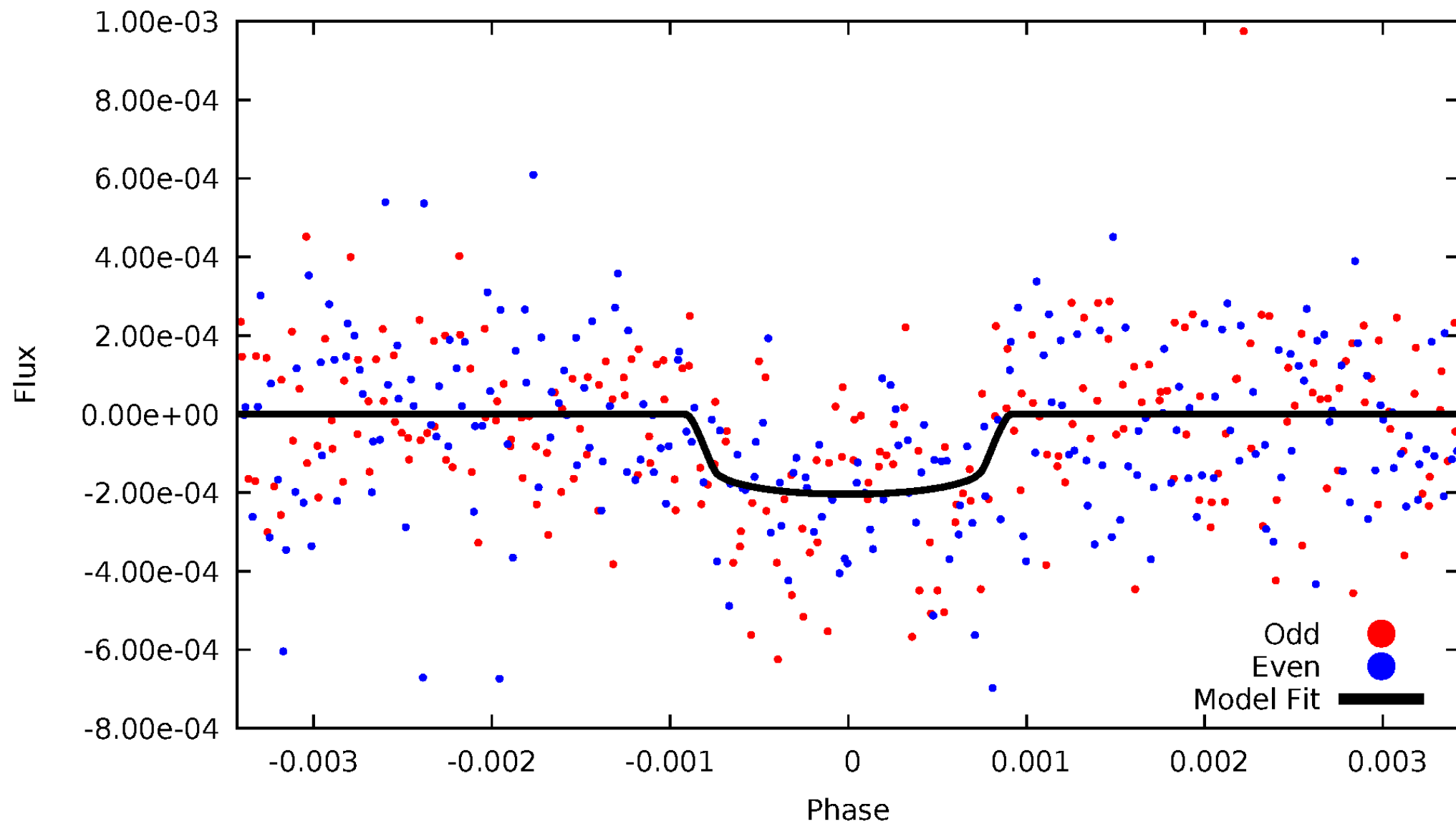


TCE 011658036-01



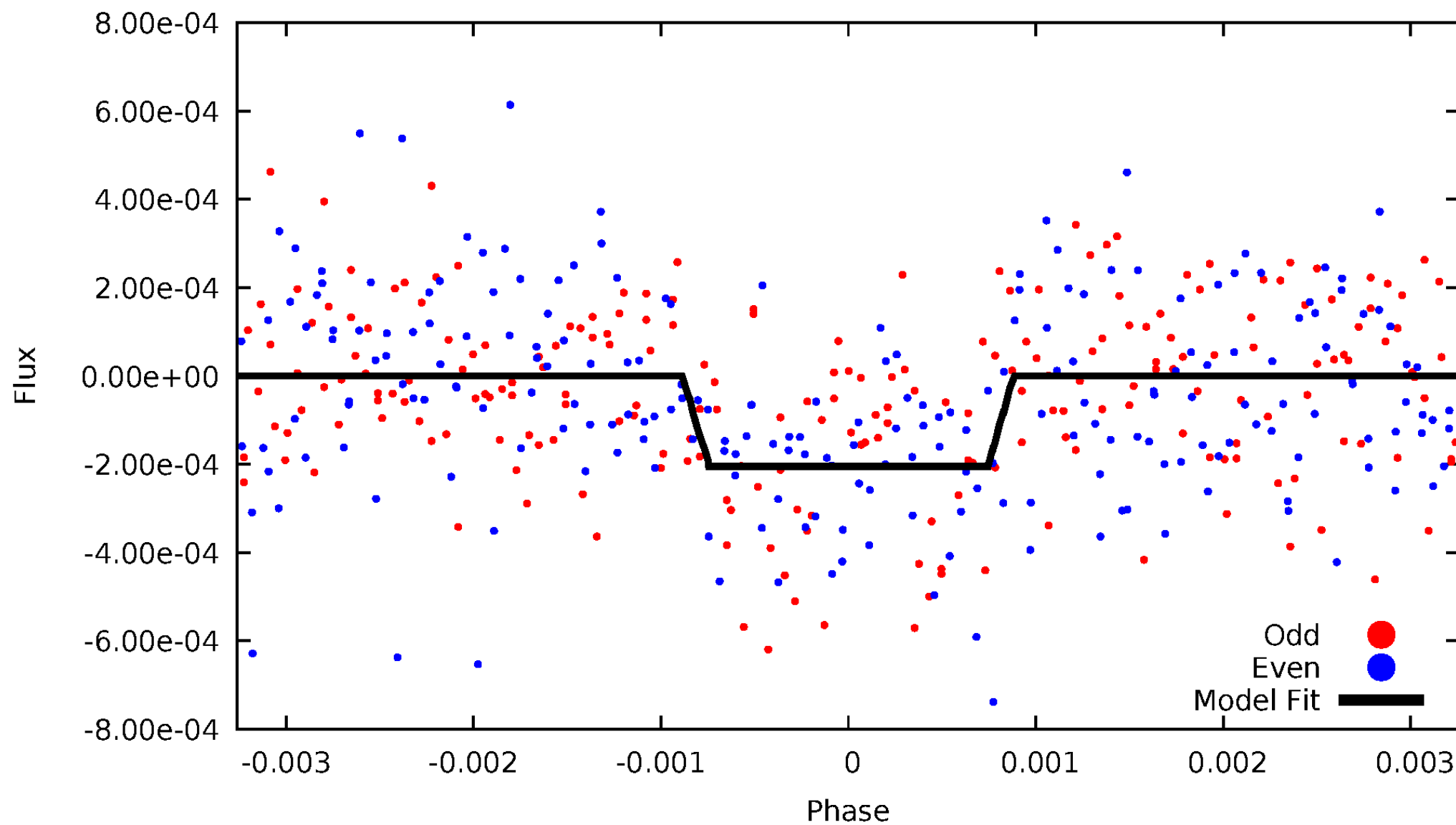
DV Odd/Even

TCE 011658036-01



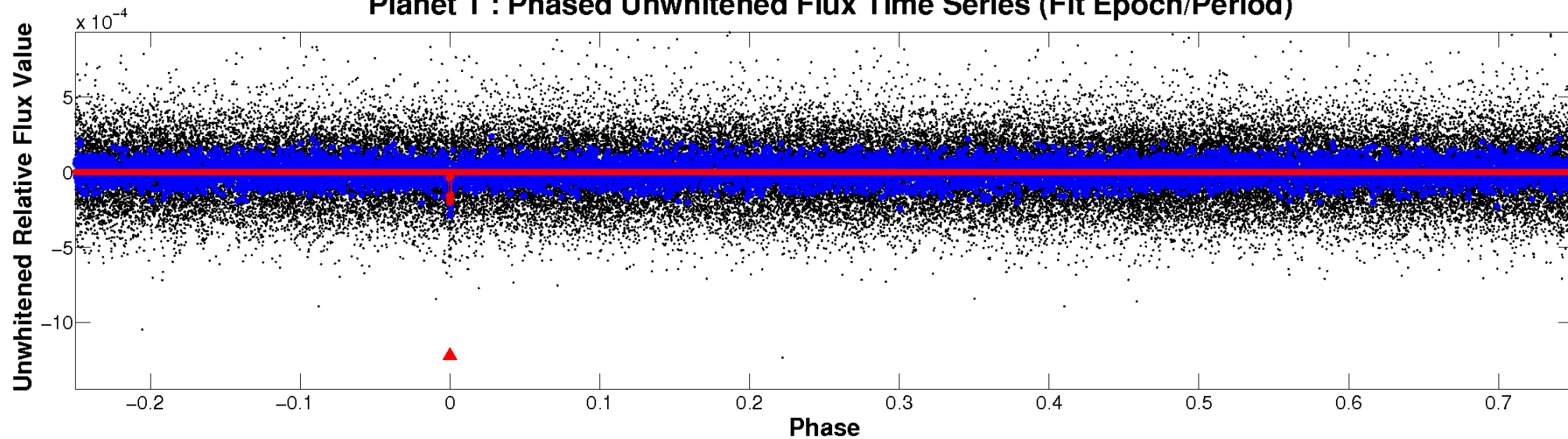
ALT Odd/Even

TCE 011658036-01

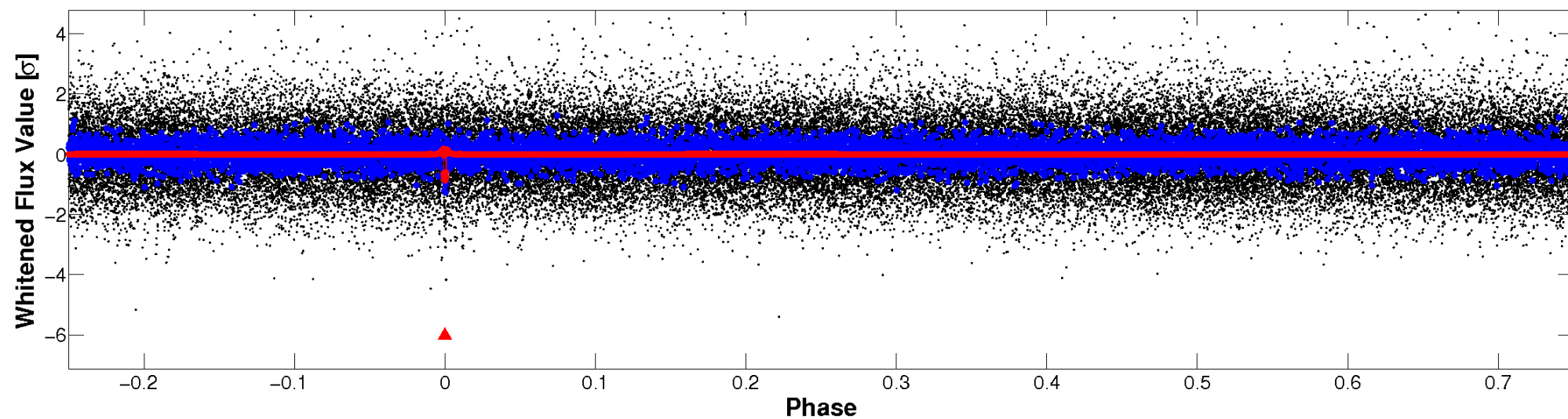


Non-Whitened Vs. Whitened Light Curve

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

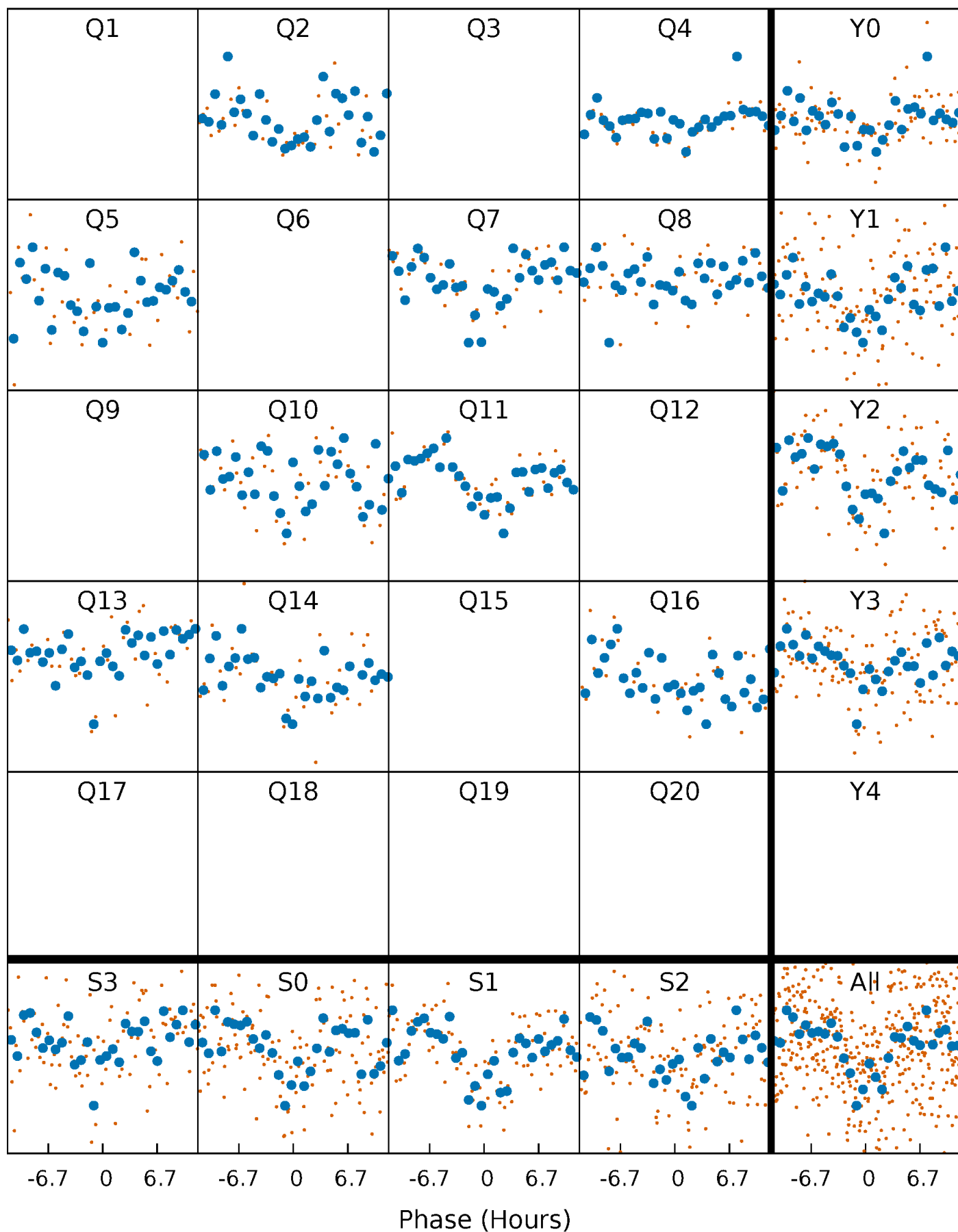


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



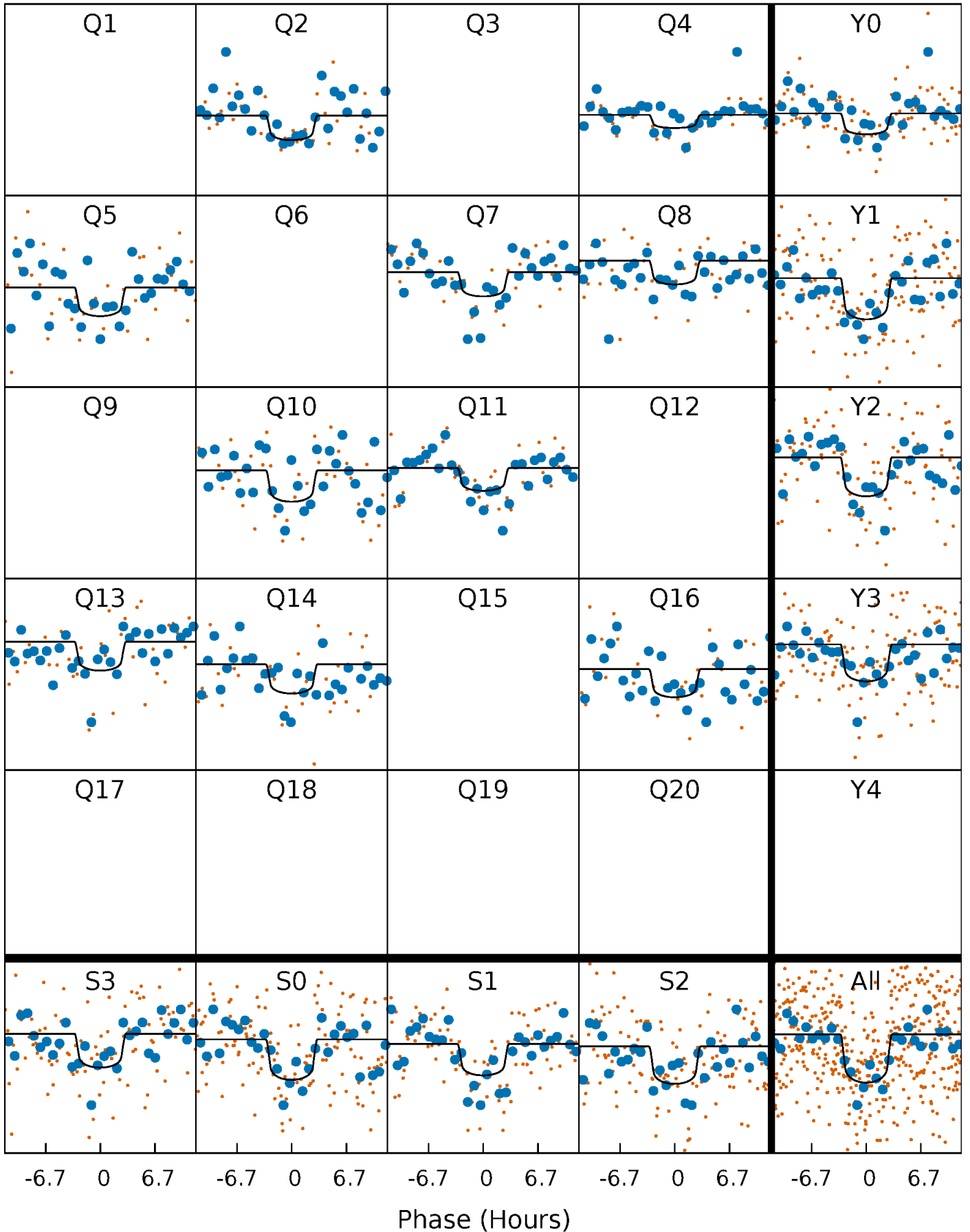
PDC Quarter-Phased Transit Curves

TCE 011658036-01 P=142.702421 Days $T_0=212.034896$ (BKJD)



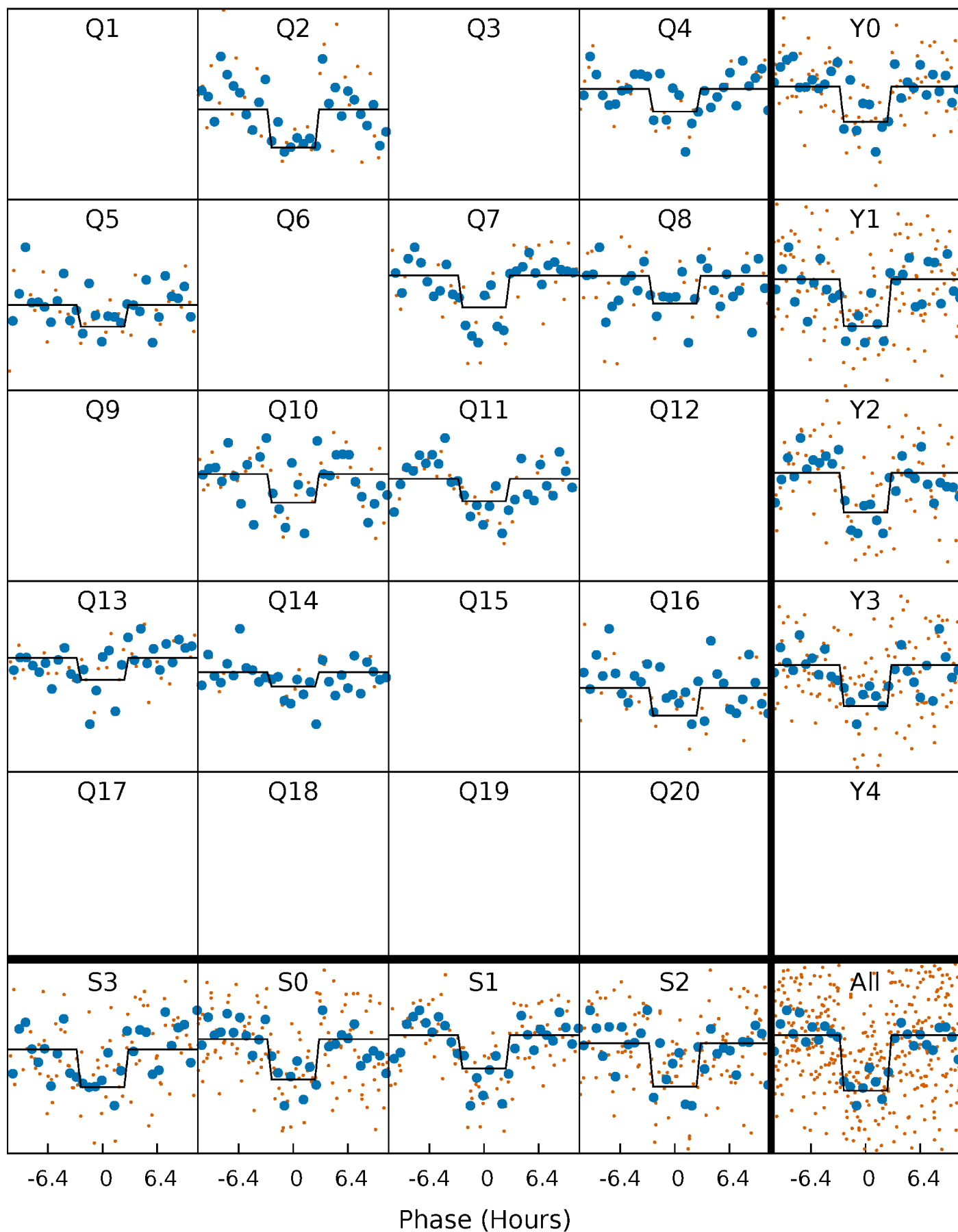
DV Quarter-Phased Transit Curves

TCE 011658036-01 P=142.702421 Days $T_0=212.034896$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

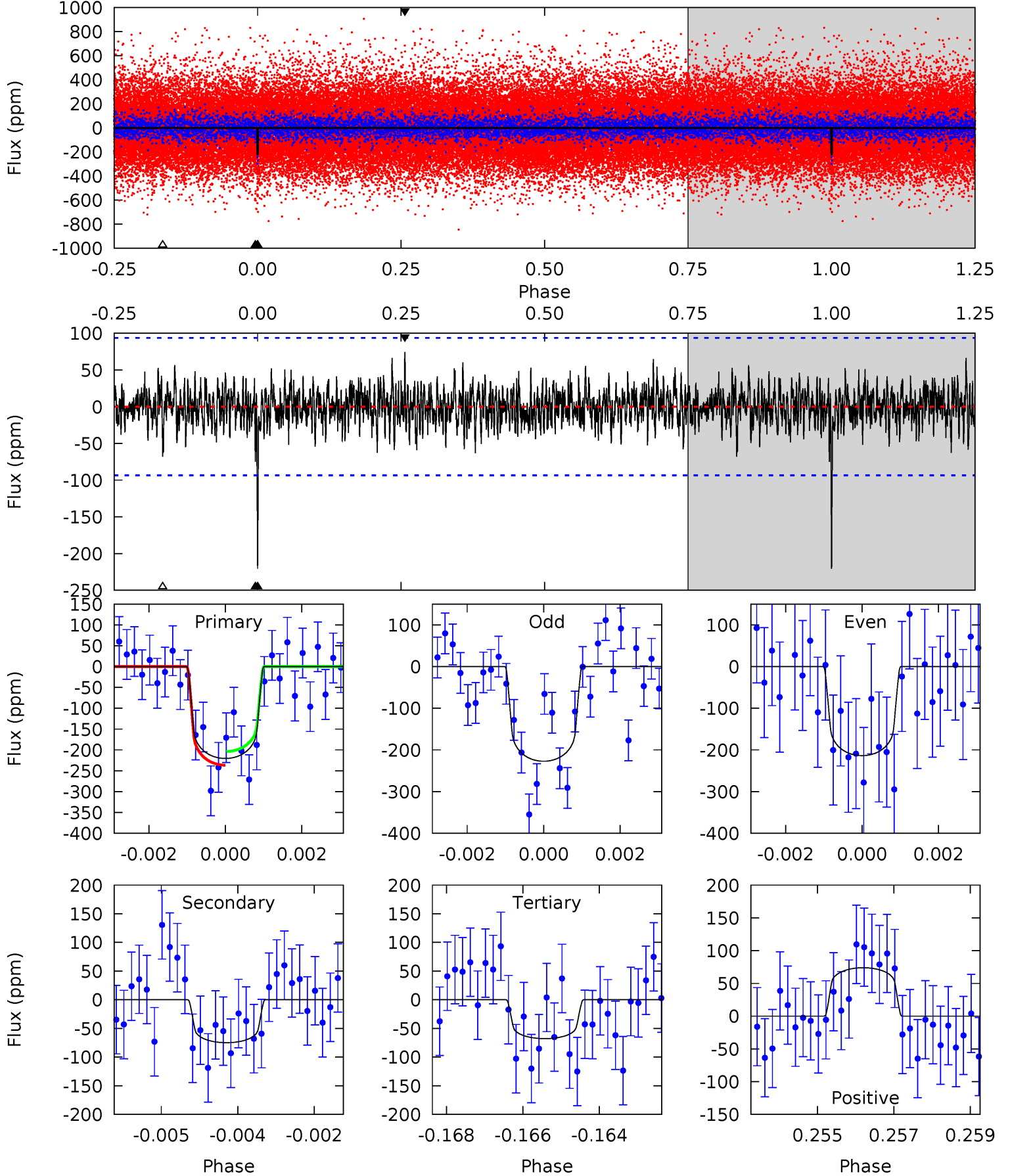
TCE 011658036-01 P=142.703085 Days $T_0=212.034779$ (BKJD)



DV Model-Shift Uniqueness Test

011658036-01, $P = 142.702421$ Days, $E = 69.332475$ Days

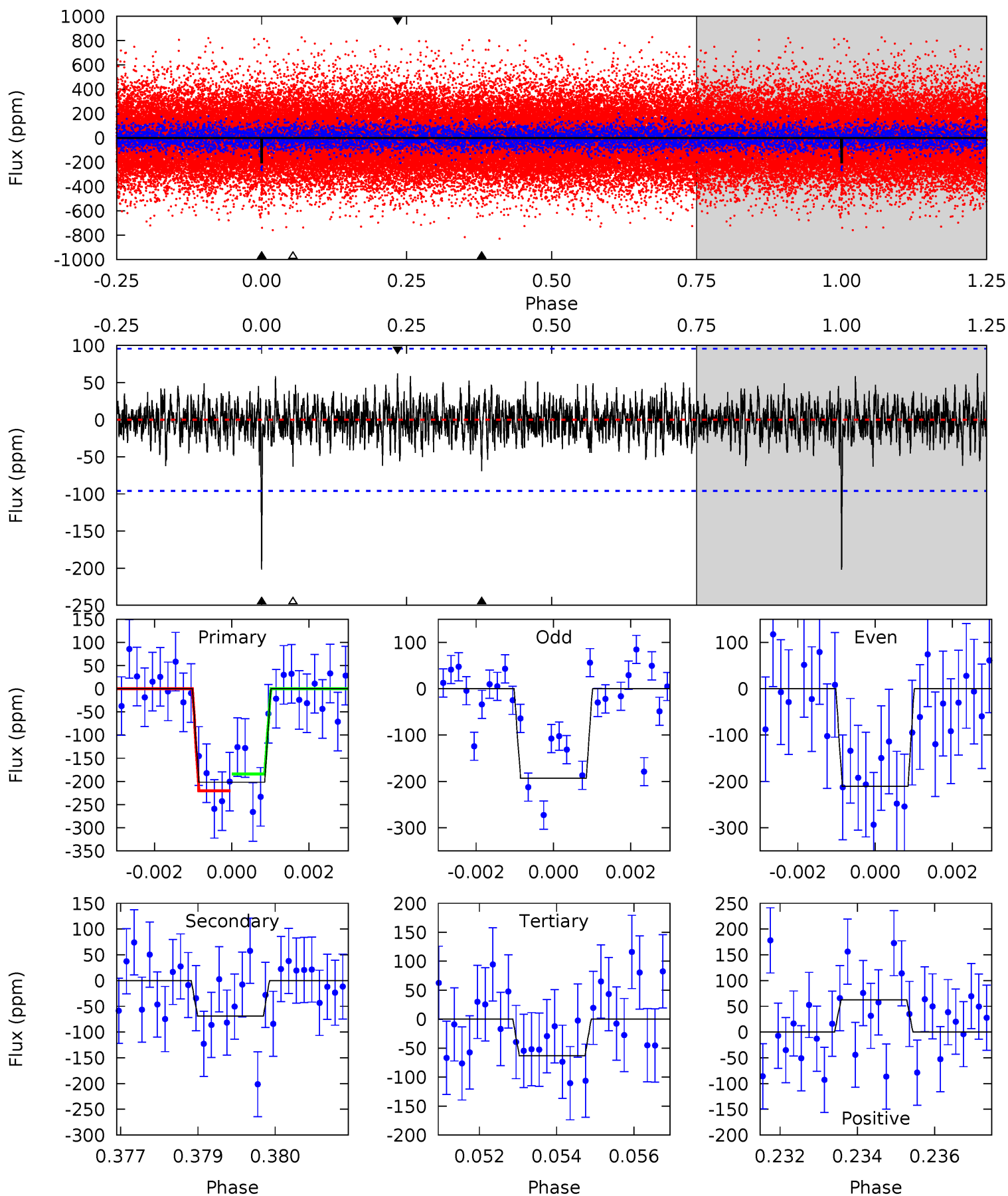
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.6	4.28	3.87	4.22	5.34	3.12	1.15	8.72	8.37	0.40	0.06	0.39	1.02	0.25	0.94



Alt Model-Shift Uniqueness Test

011658036-01, P = 142.703085 Days, E = 69.331694 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.3	3.86	3.53	3.48	5.35	3.13	1.02	7.75	7.79	0.33	0.38	0.50	1.11	0.24	1.02



Stellar Parameters For KIC 011658036

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6701^{+161}_{-241}	$4.326^{+0.058}_{-0.217}$	$-0.020^{+0.250}_{-0.350}$	$1.289^{+0.463}_{-0.154}$	$1.292^{+0.206}_{-0.187}$	$0.850^{+0.259}_{-0.464}$
	+2%/-4%	+1%/-5%	+1250%/-1750%	+36%/-12%	+16%/-14%	+30%/-55%
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 011658036-01 / KOI 4771.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-75 ± 18	$2.24^{+0.94}_{-1.09}$	628^{+52}_{-32}	5122^{+1963}_{-759}	2836^{+7575}_{-1590}
Alt.	-69 ± 18	$2.18^{+1.09}_{-1.03}$	627^{+47}_{-30}	5066^{+1691}_{-755}	2572^{+6400}_{-1475}

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

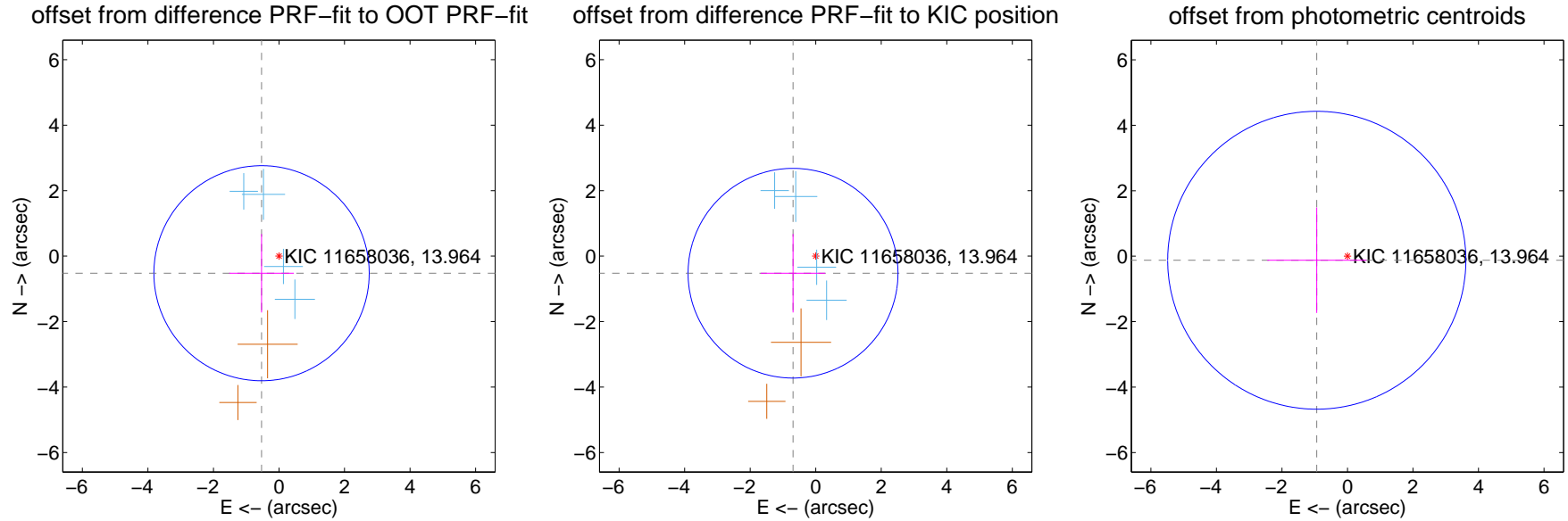
DV Centroid Data

Supplemental centroid analysis for 011658036-01. Kepler magnitude: 13.96. Transit SNR 8.23

There are 4 quarters with good PRF difference image offsets

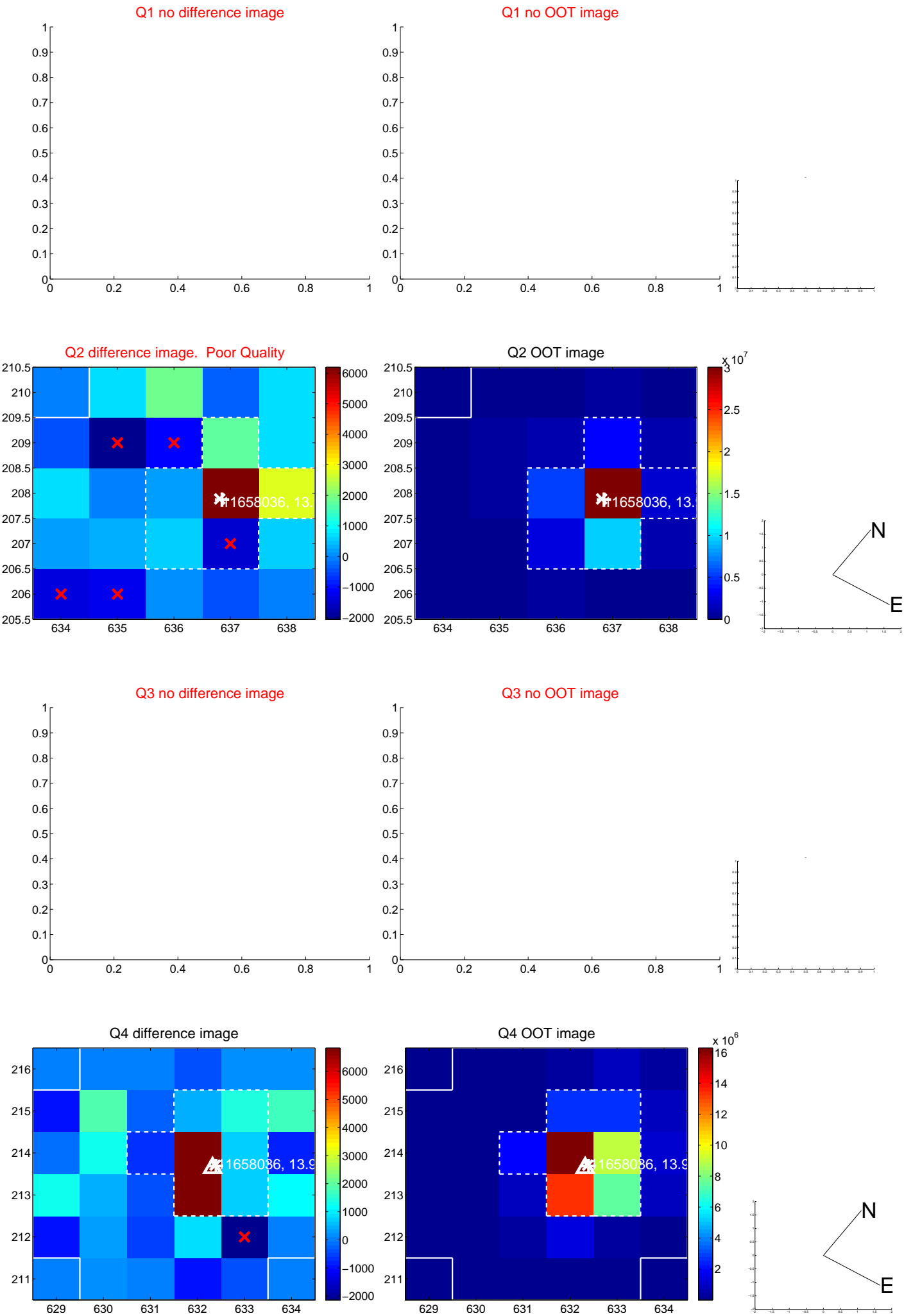
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.746 ± 1.095	0.68	0.532 ± 0.986	-0.522 ± 1.198
PRF-fit source offset from KIC position	0.867 ± 1.068	0.81	0.693 ± 0.986	-0.522 ± 1.198
photometric centroid source offset	0.95 ± 1.52	0.62	0.94 ± 1.52	-0.12 ± 1.61

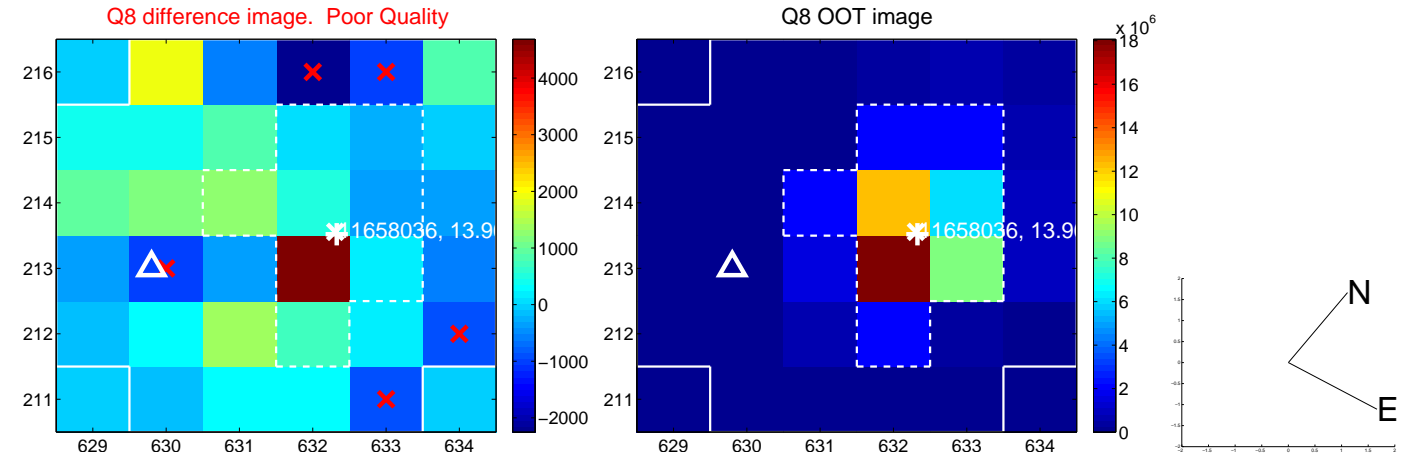
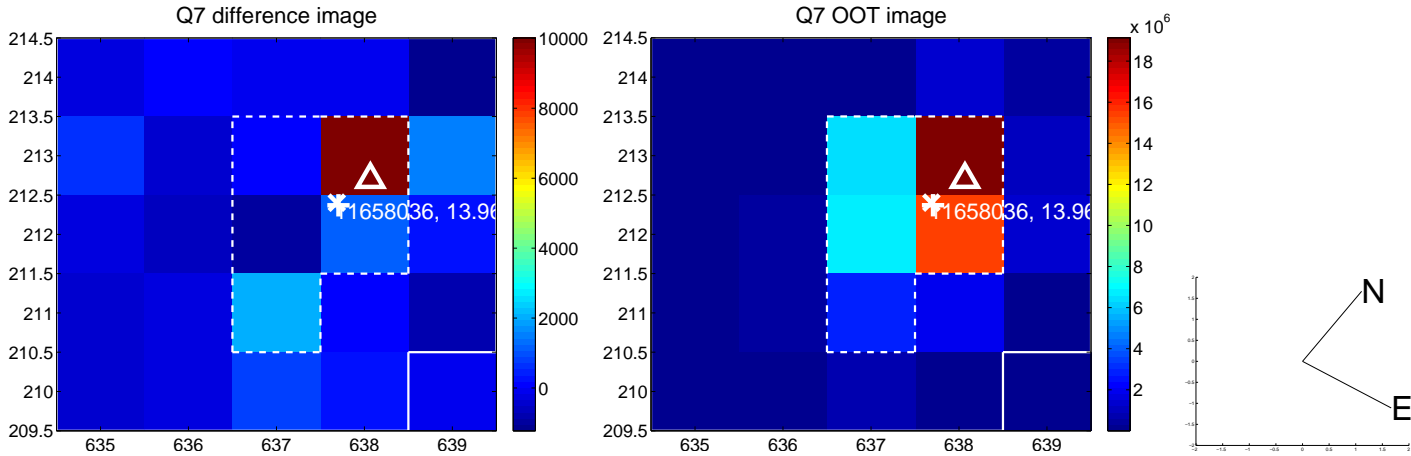
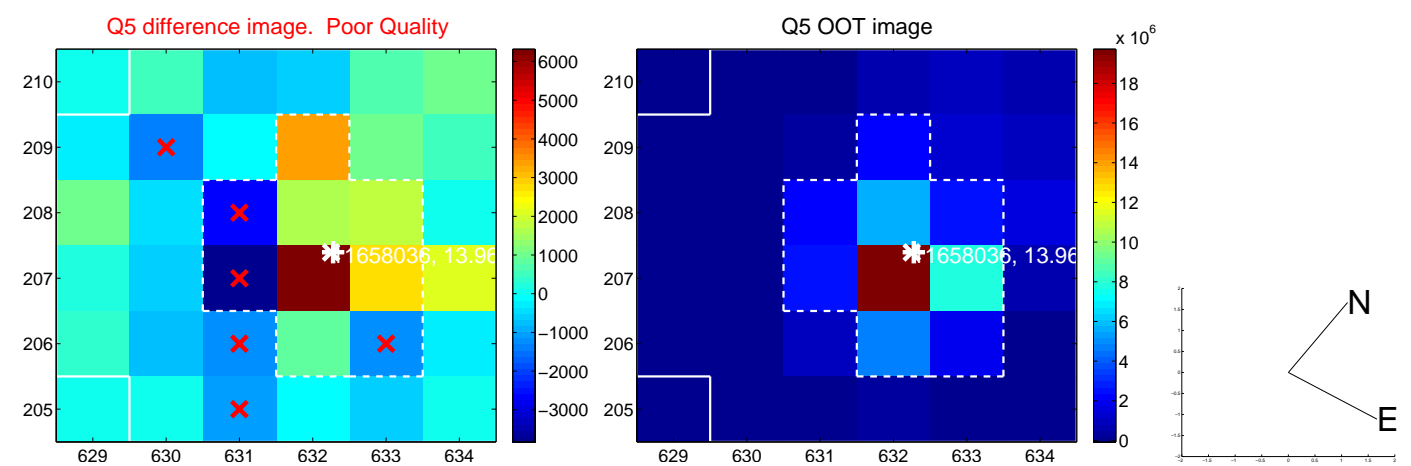


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

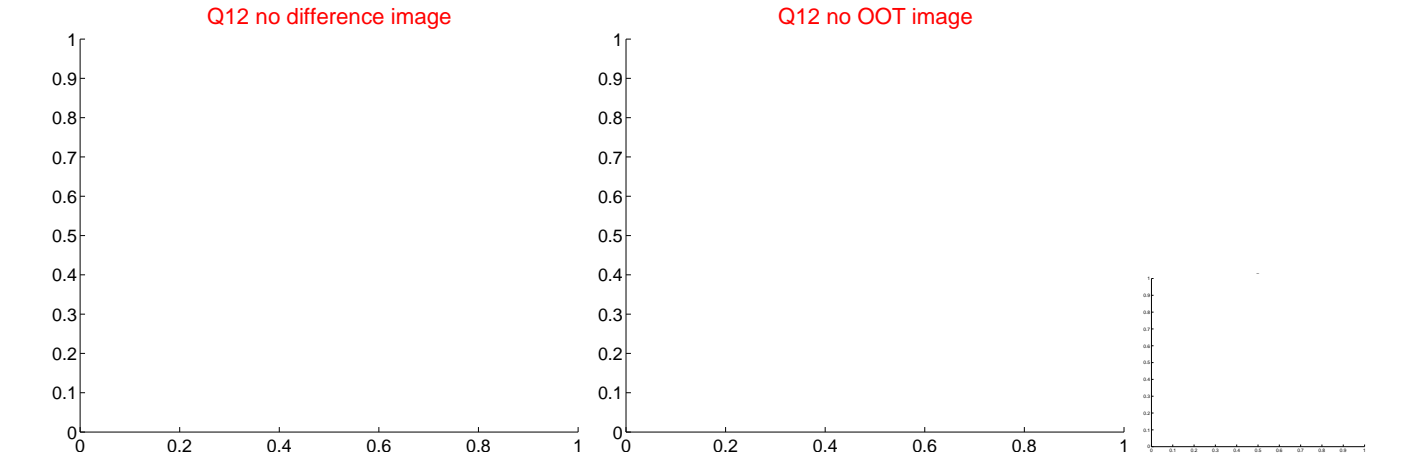
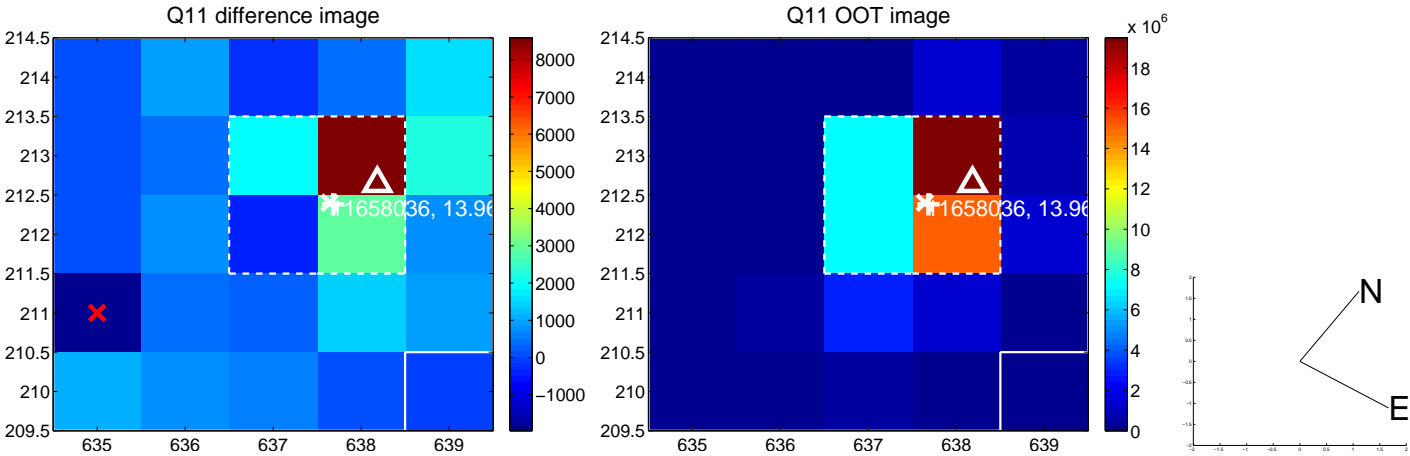
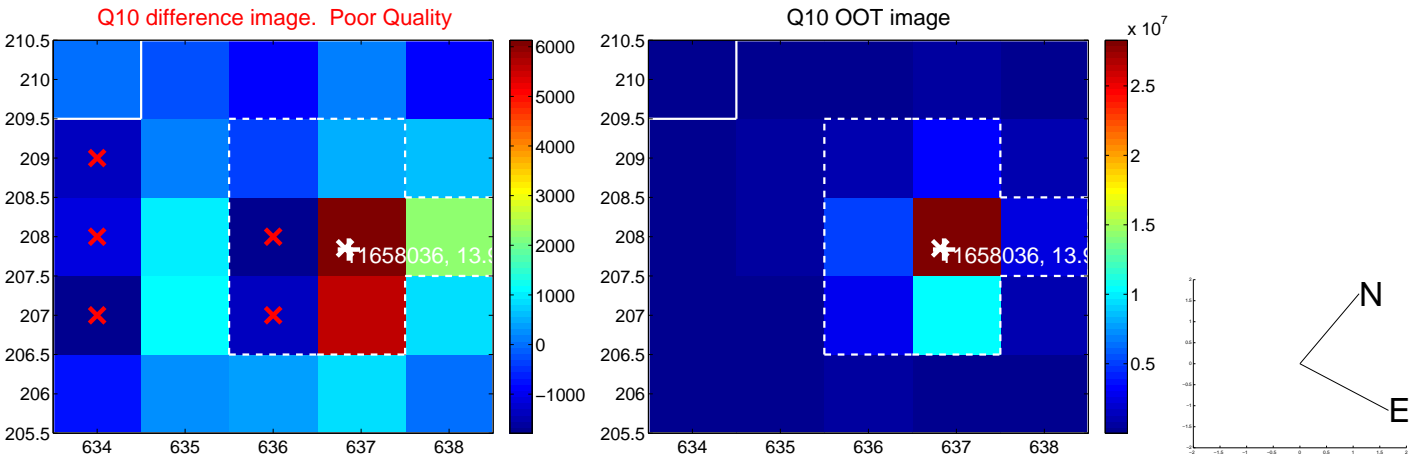
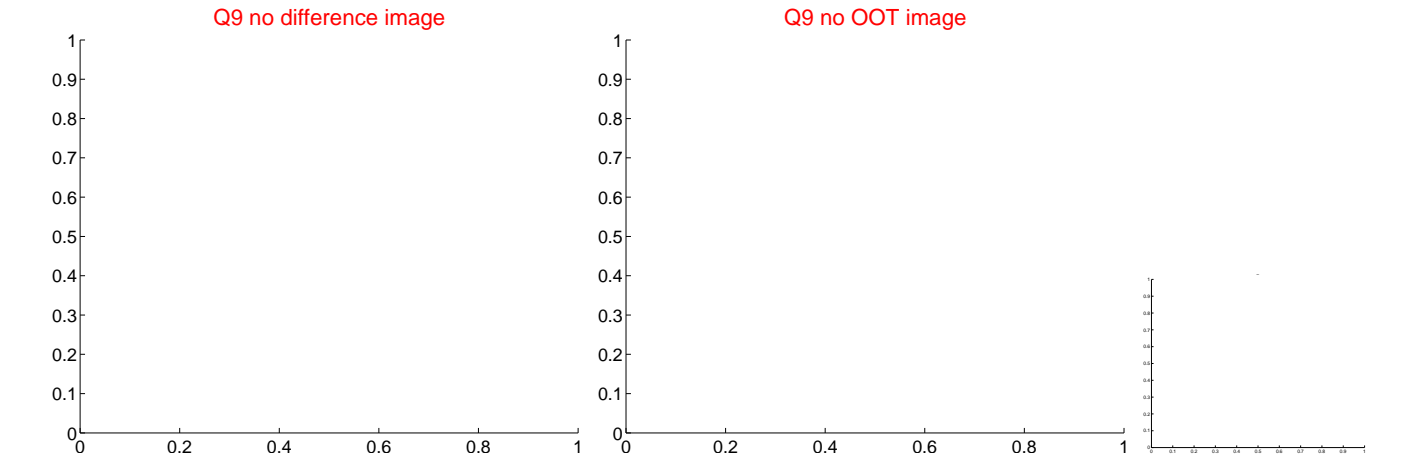
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



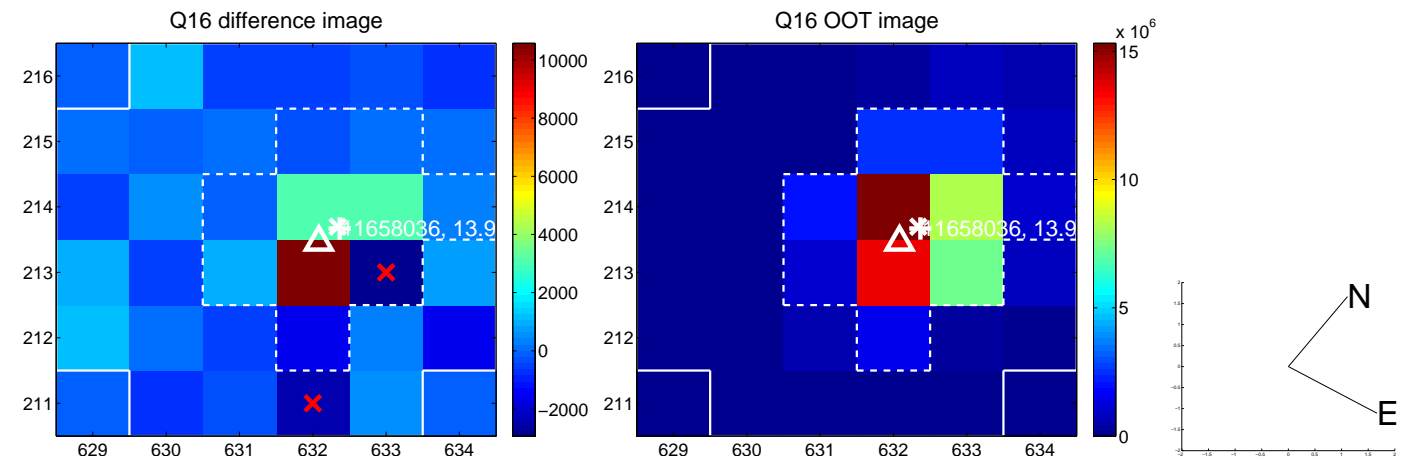
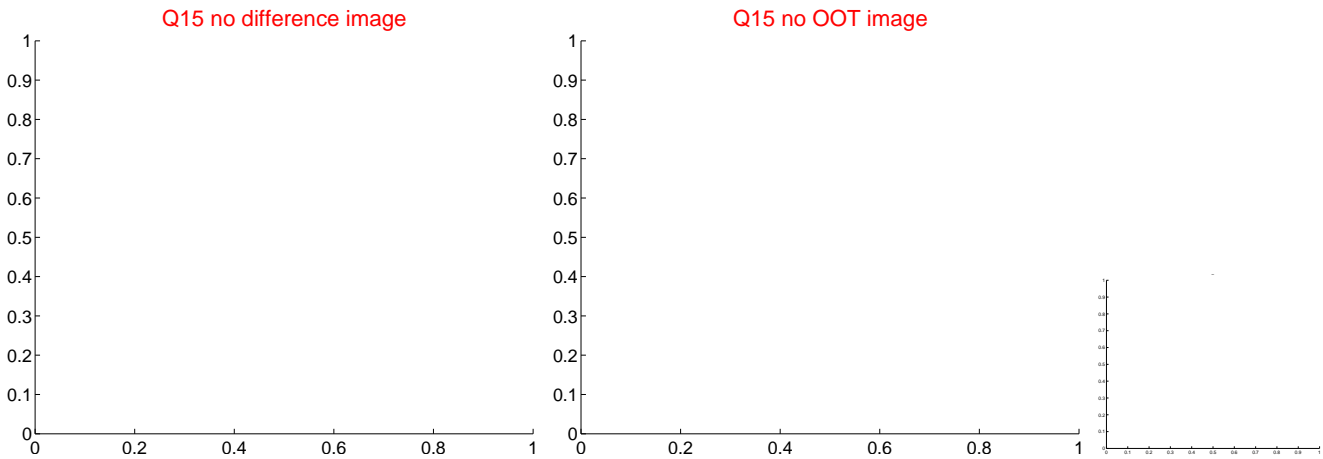
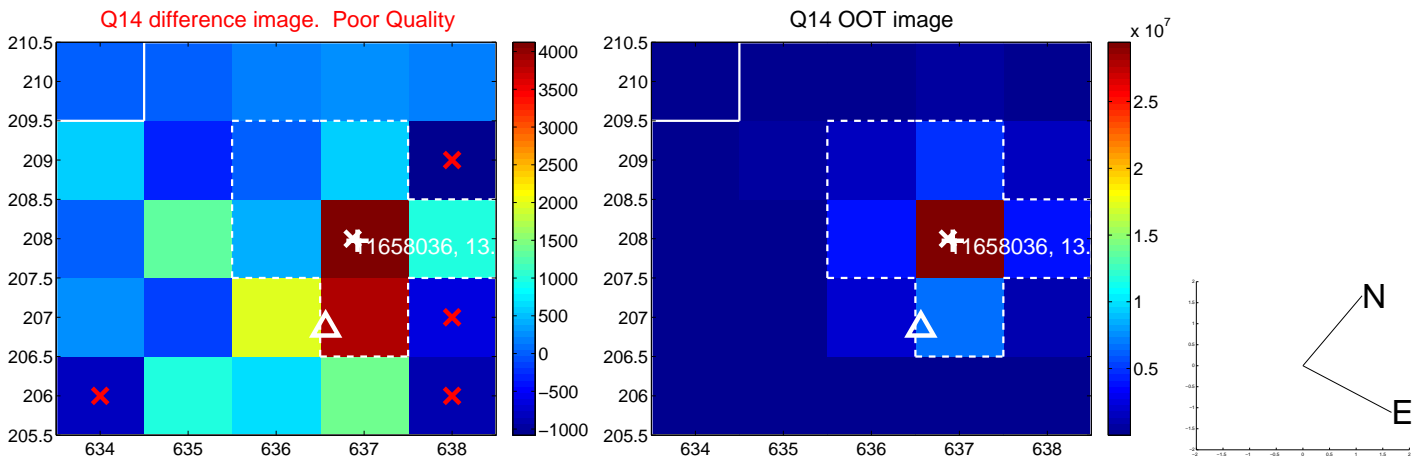
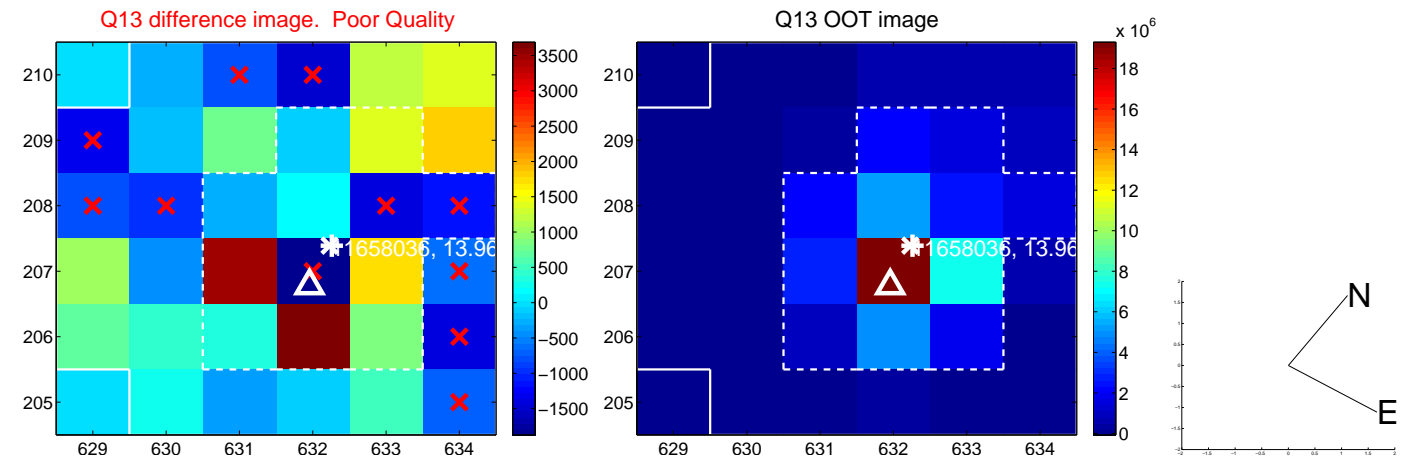
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



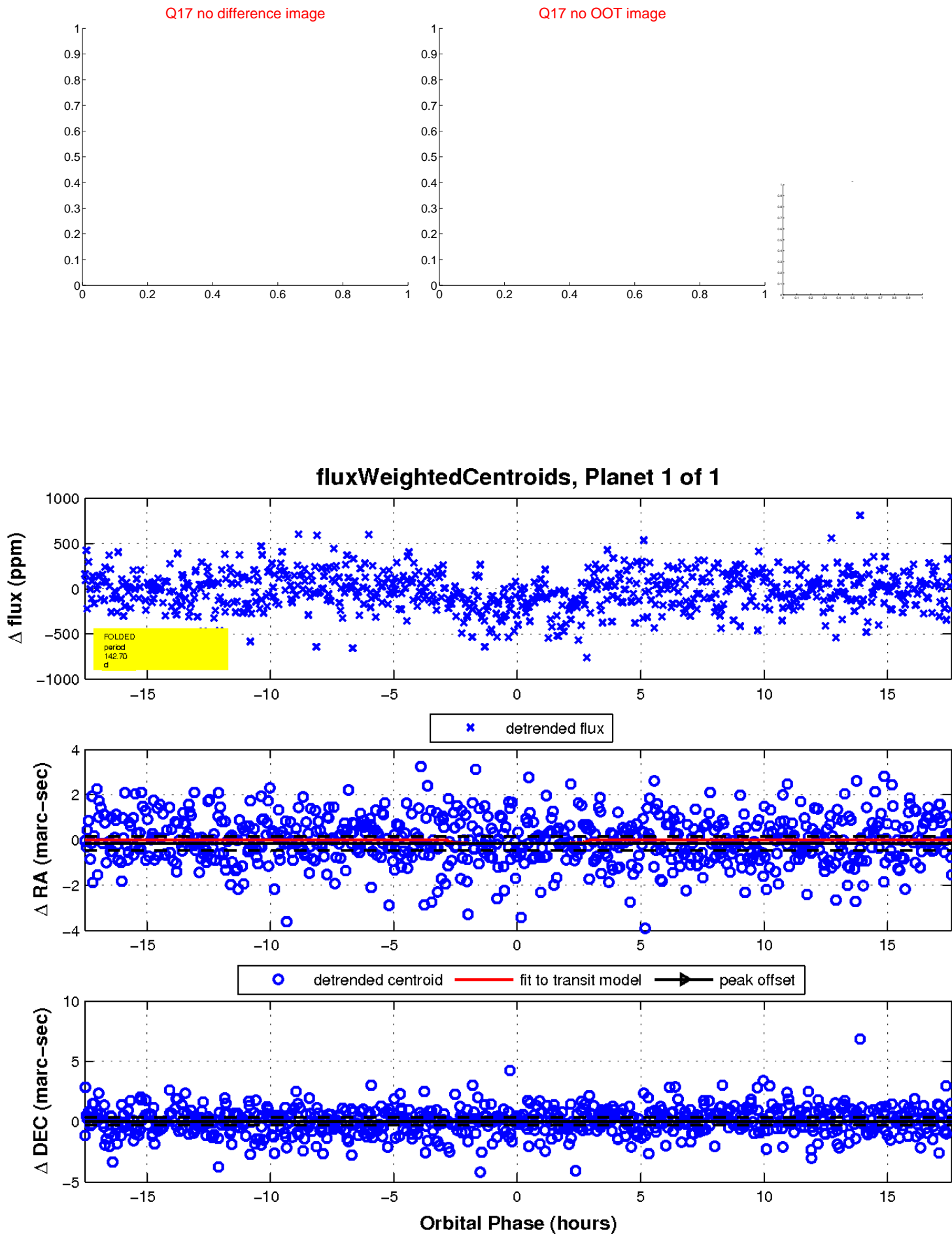
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UKIRT Image

Declination

