

KIC 005088591

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})
005088591-01	OBS	1801.01	14.532442	140.724702	1362.3	3.359	65.0	69.7	0.86	5345	3.52	46.12

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005088591-01	OBS	PC	1.00	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.

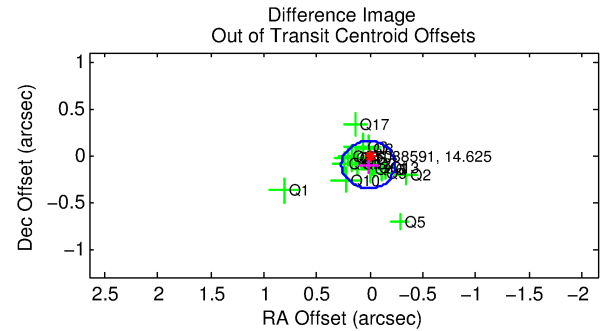
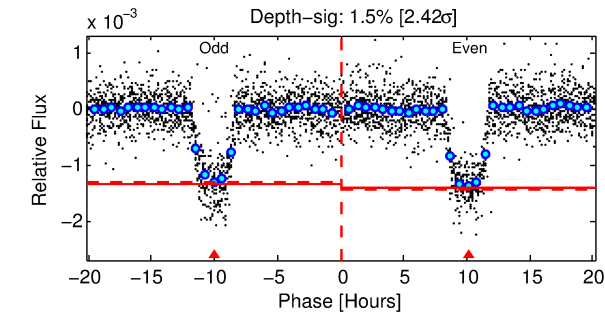
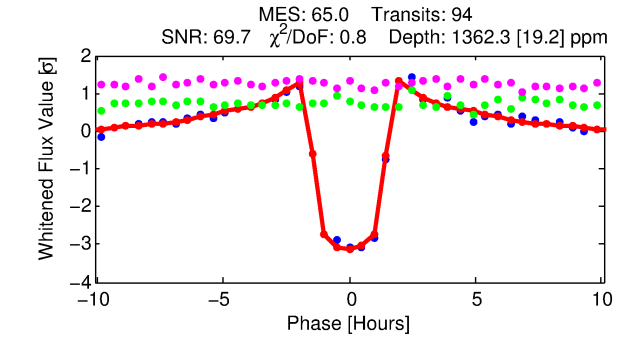
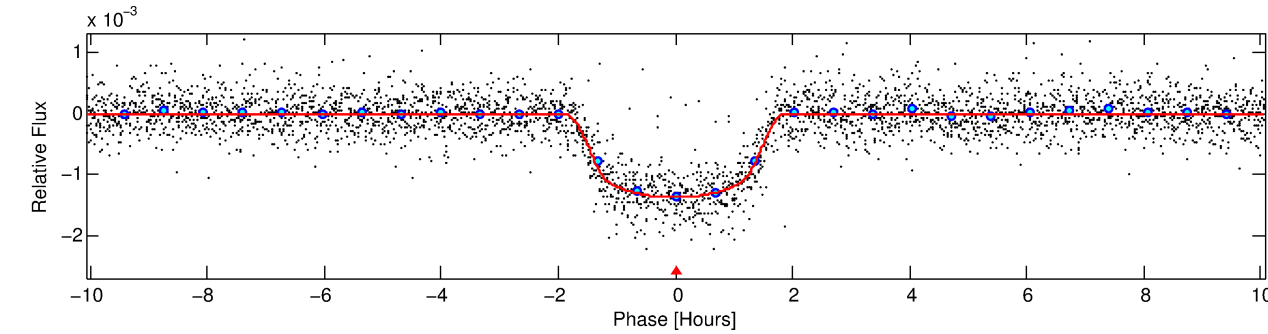
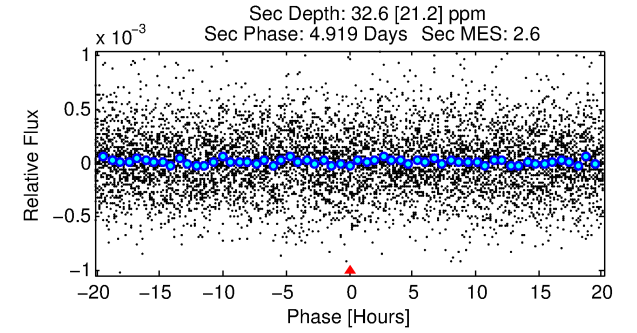
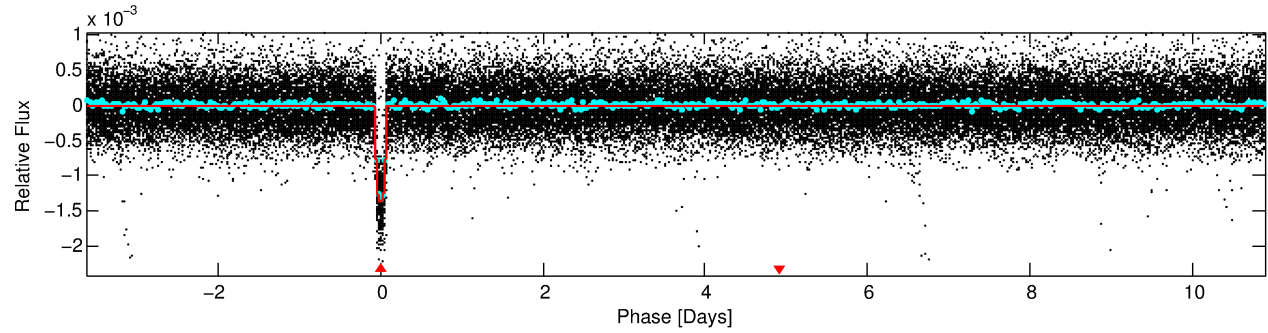
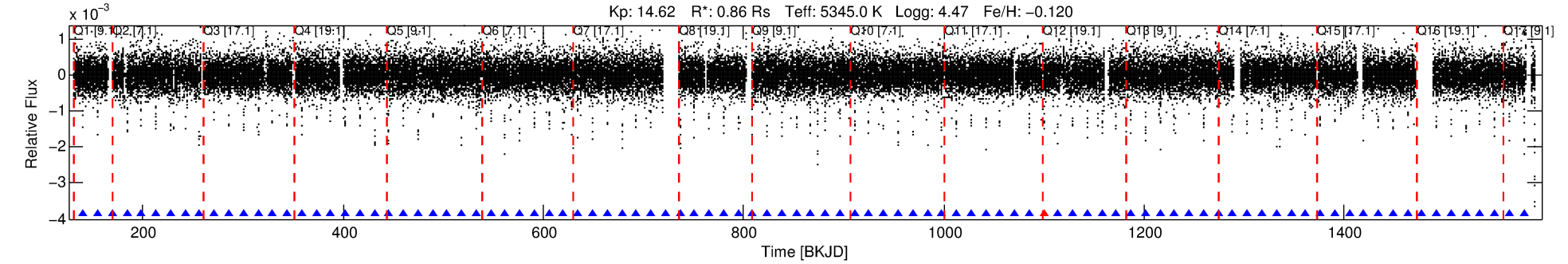
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005088591-01

No Significant Match Found

DV One-Page Summary

KIC: 5088591 Candidate: 1 of 1 Period: 14.532 d
KOI: K01801.01 Corr: 0.972



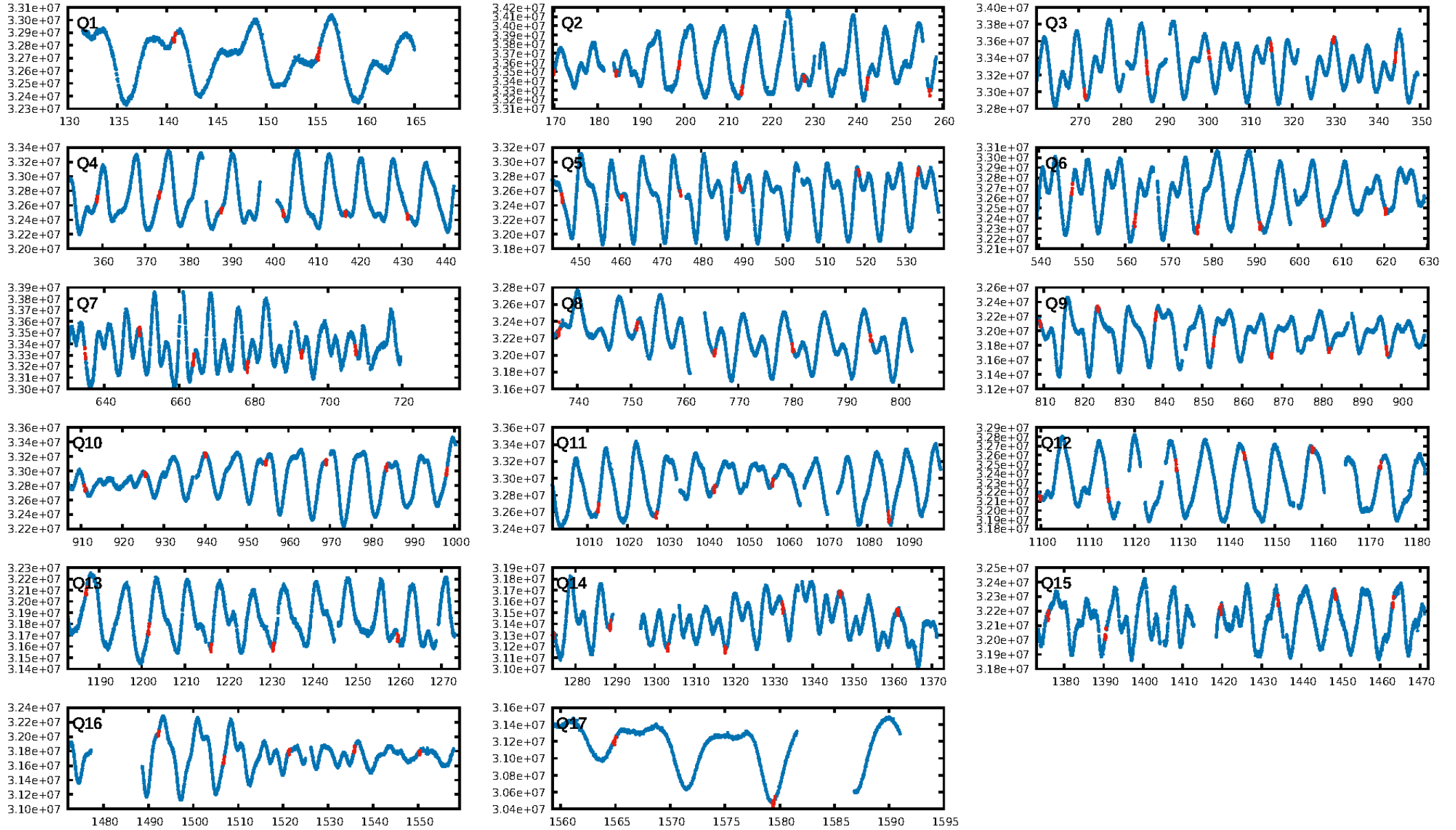
DV Fit Results:

Period = 14.53244 [0.00001] d
Epoch = 140.7247 [0.0008] BKJD
Rp/R* = 0.0375 [0.0022]
a/R* = 22.25 [5.06]
b = 0.79 [0.11]
Seff = 46.12 [11.63]
Teff = 665 [42] K
Rp = 3.52 [0.60] Re
a = 0.1083 [0.0157] AU
Ag = 16.95 [11.81] [1.35σ]
Teffp = 2085 [350] K [4.03σ]

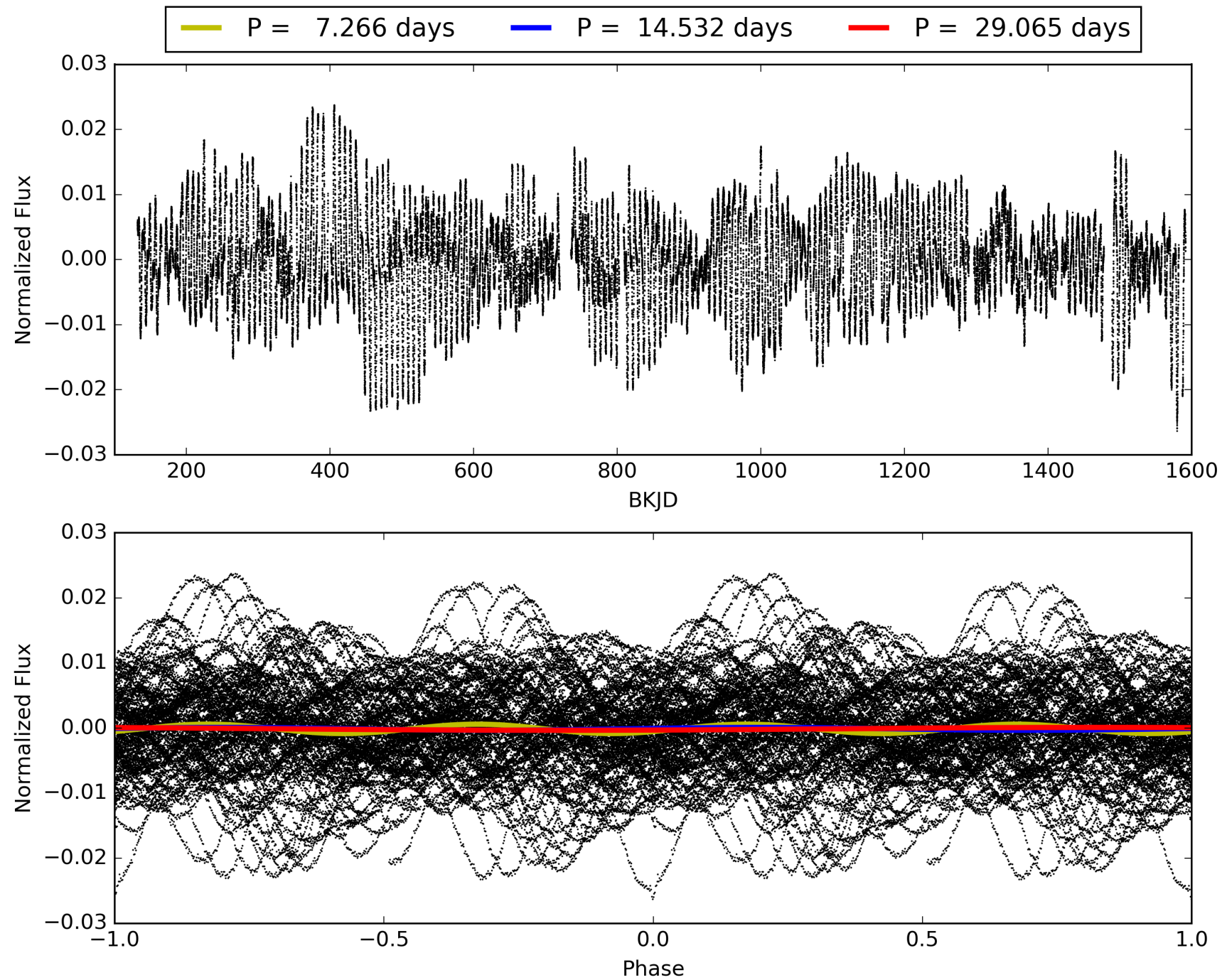
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 95.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.99 [89/90]
GhostDiagnostic-chr: 2.587
Centroid-sig: 0.0%
Centroid-so: 0.111 arcsec [0.87σ]
OotOffset-rm: 0.102 arcsec [1.21σ]
KicOffset-rm: 0.084 arcsec [0.94σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 005088591-01, PDC Light Curves

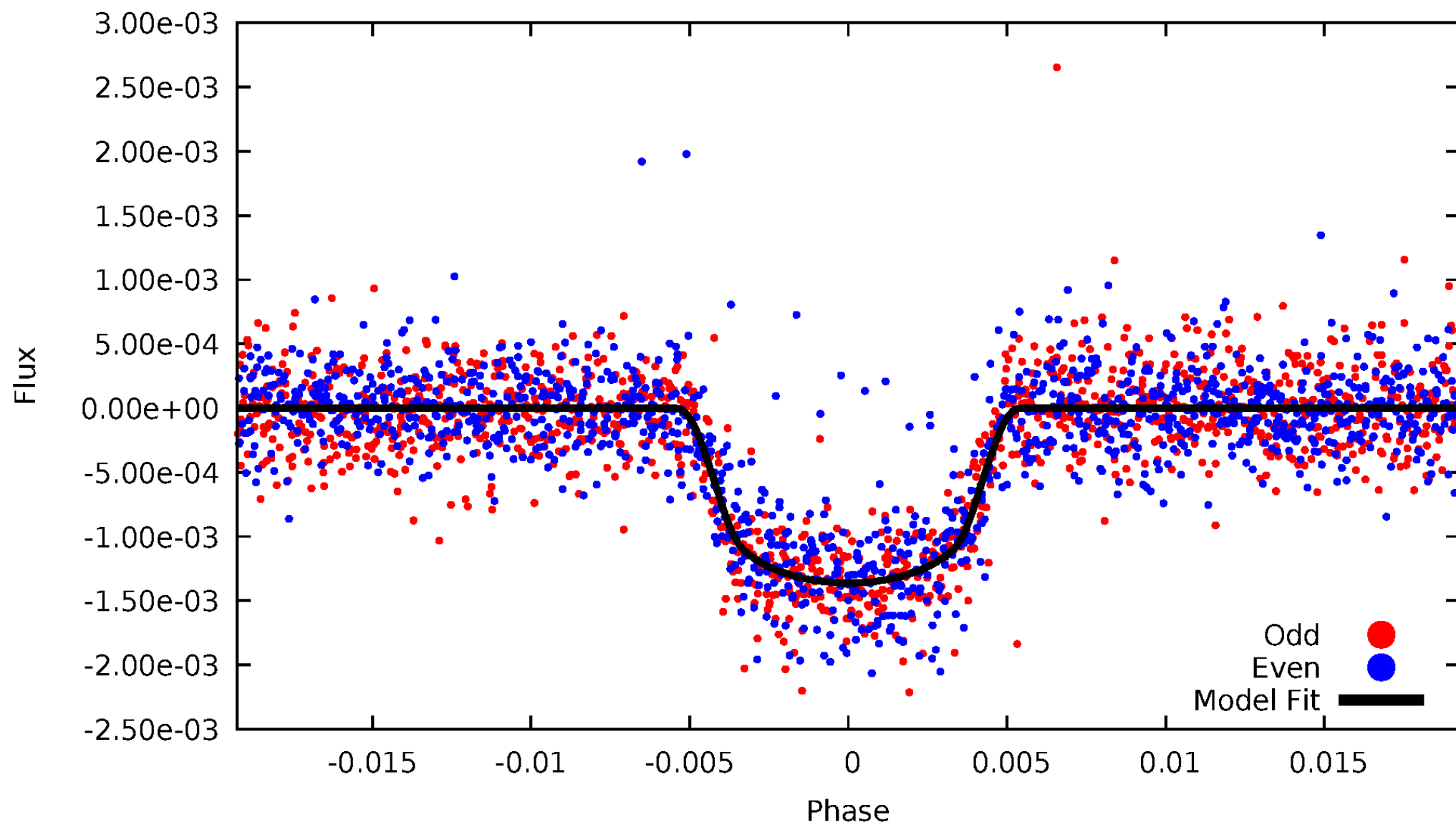


TCE 005088591-01



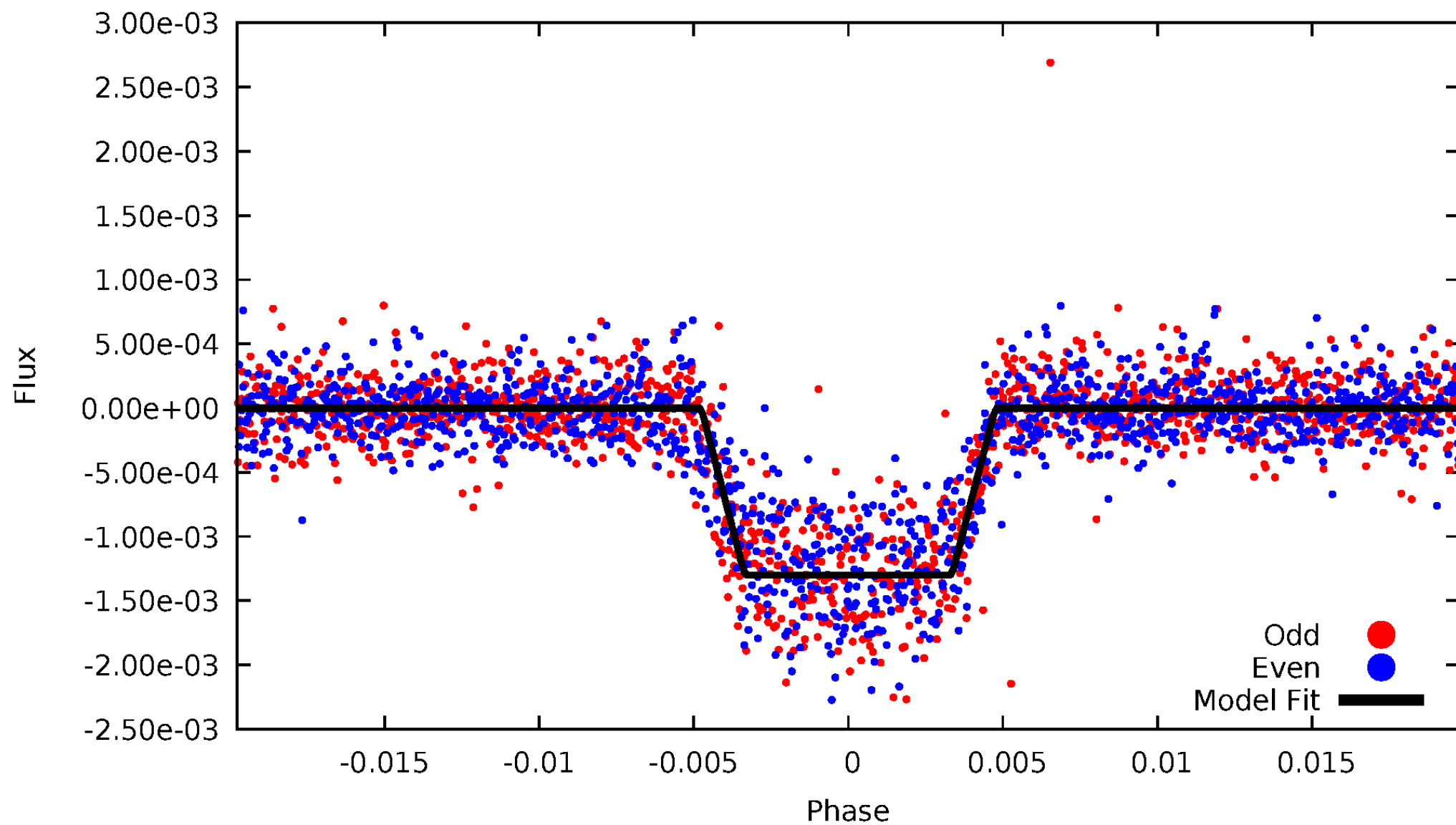
DV Odd/Even

TCE 005088591-01



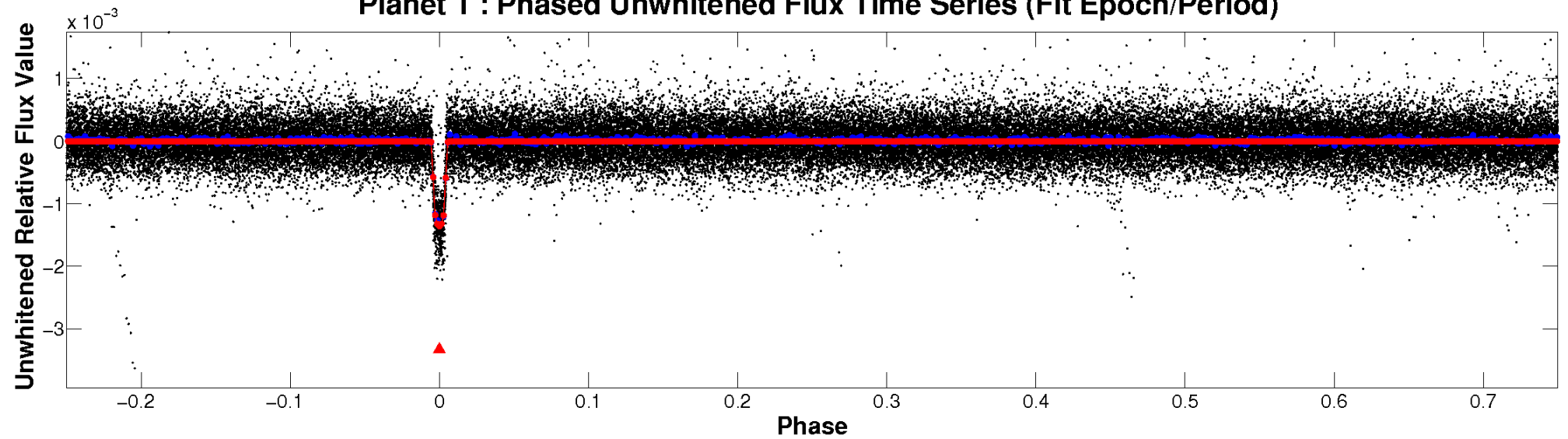
ALT Odd/Even

TCE 005088591-01

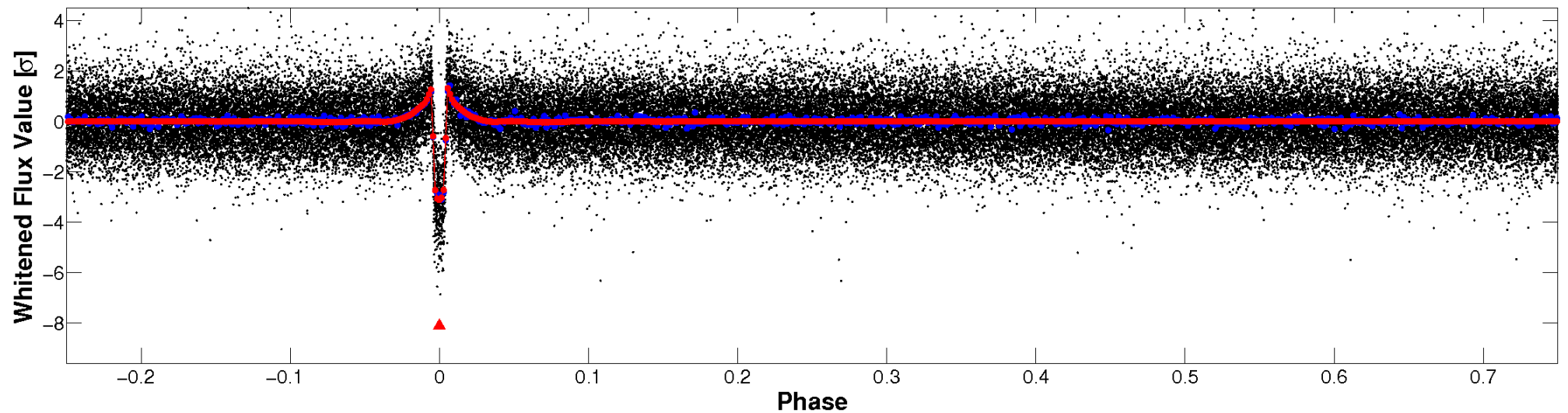


Non-Whitened Vs. Whitened Light Curve

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

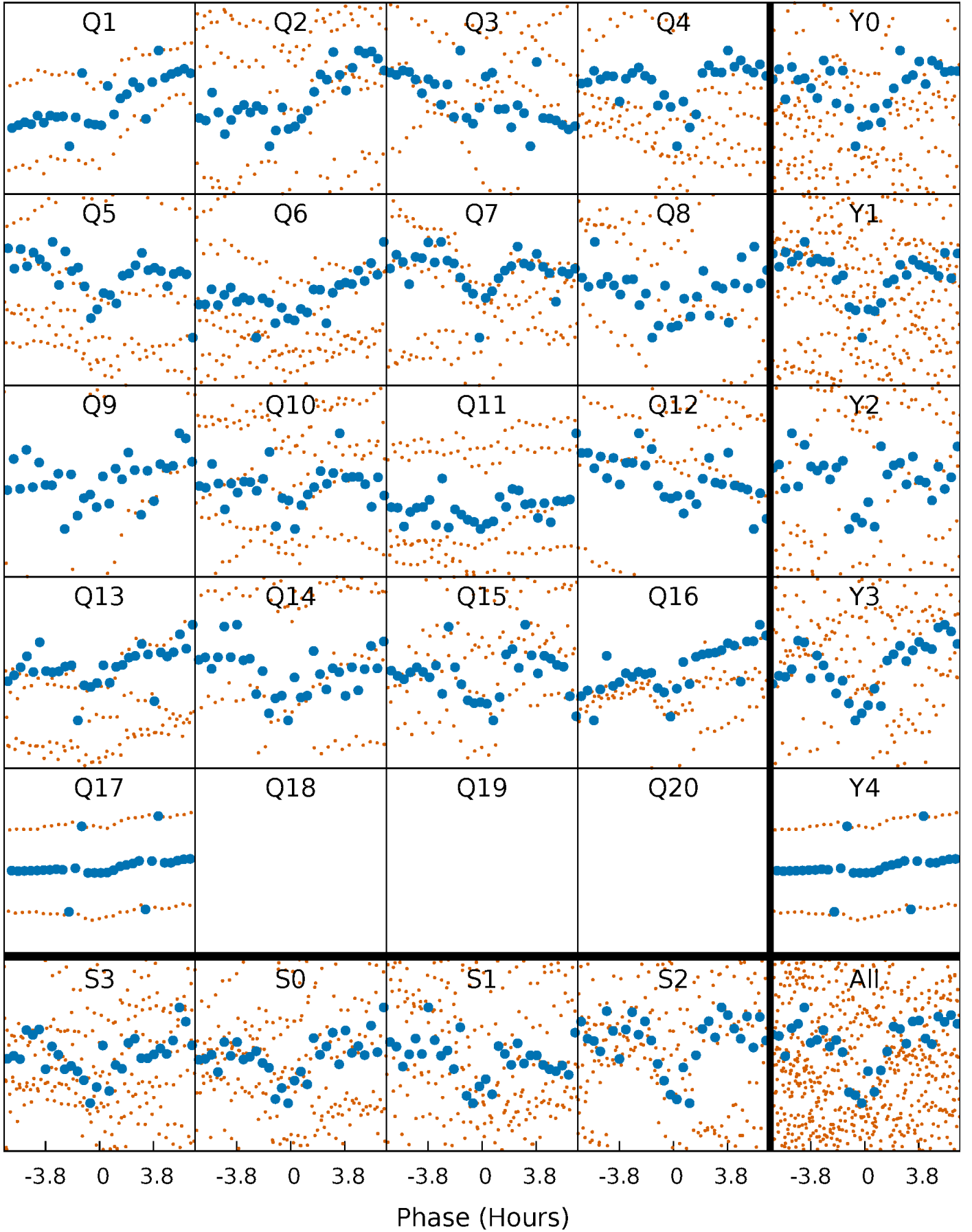


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



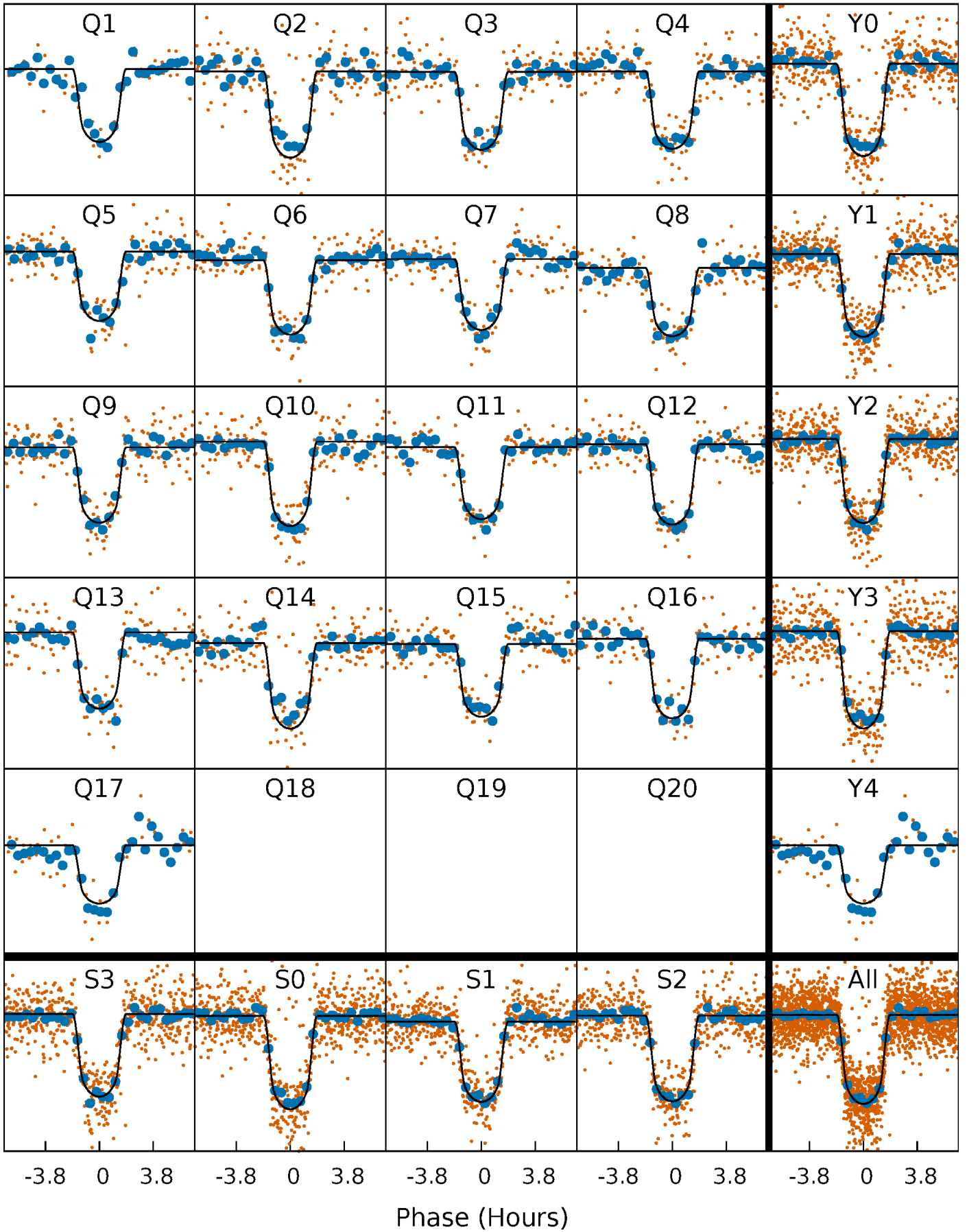
PDC Quarter-Phased Transit Curves

TCE 005088591-01 P= 14.532442 Days $T_0=140.724702$ (BKJD)



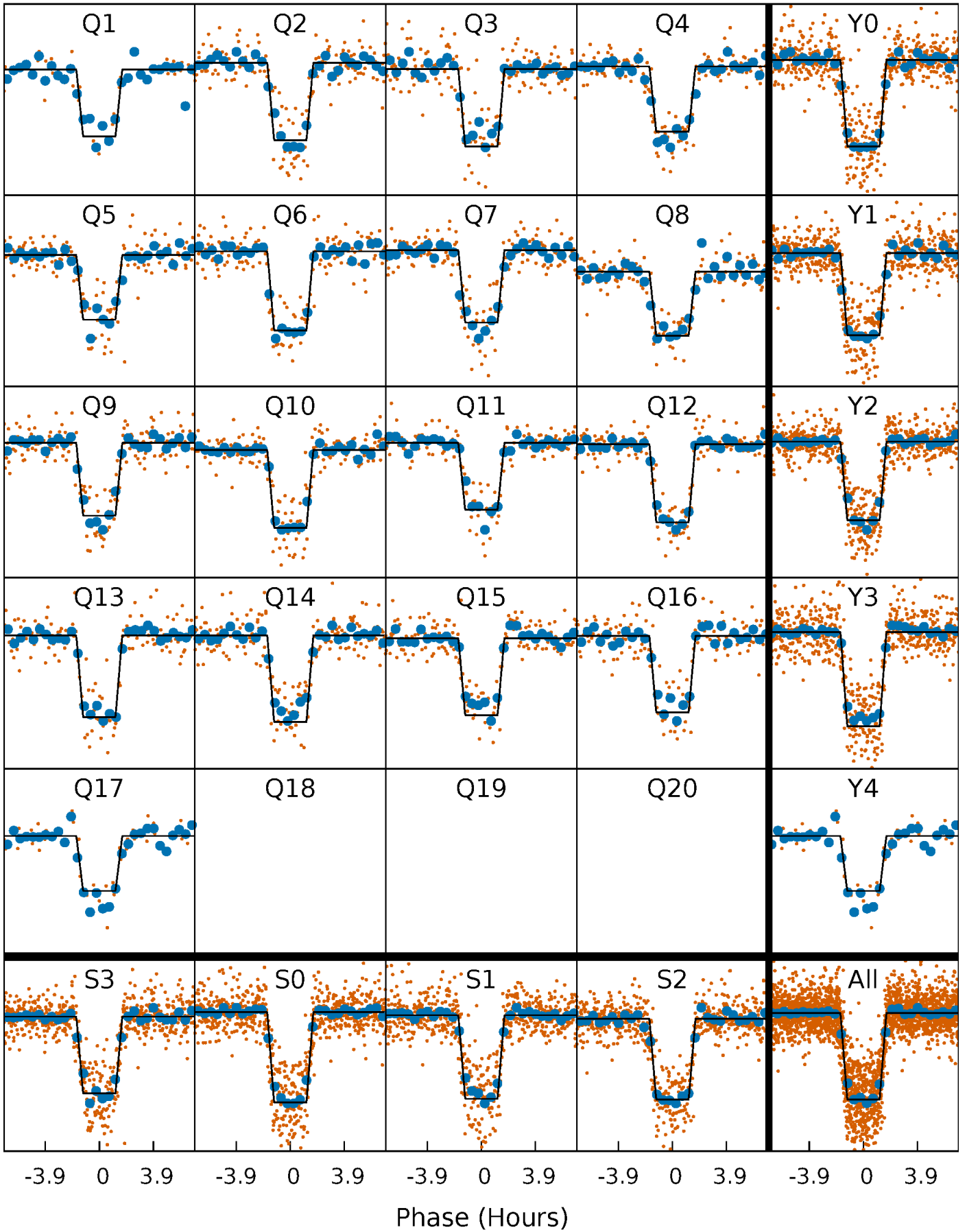
DV Quarter-Phased Transit Curves

TCE 005088591-01 P= 14.532442 Days $T_0=140.724702$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

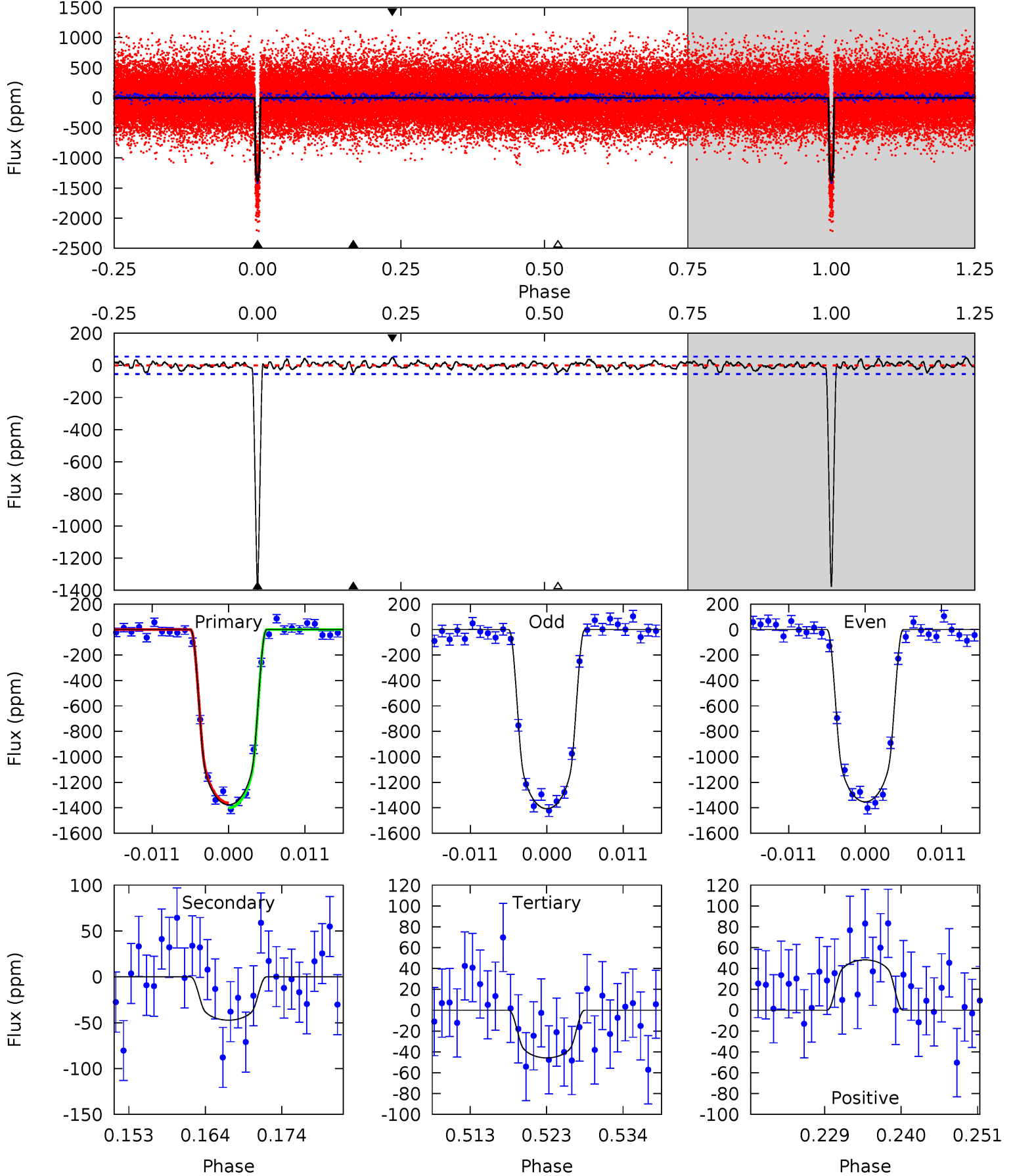
TCE 005088591-01 P= 14.532422 Days $T_0=140.725951$ (BKJD)



DV Model-Shift Uniqueness Test

005088591-01, P = 14.532442 Days, E = 126.192260 Days

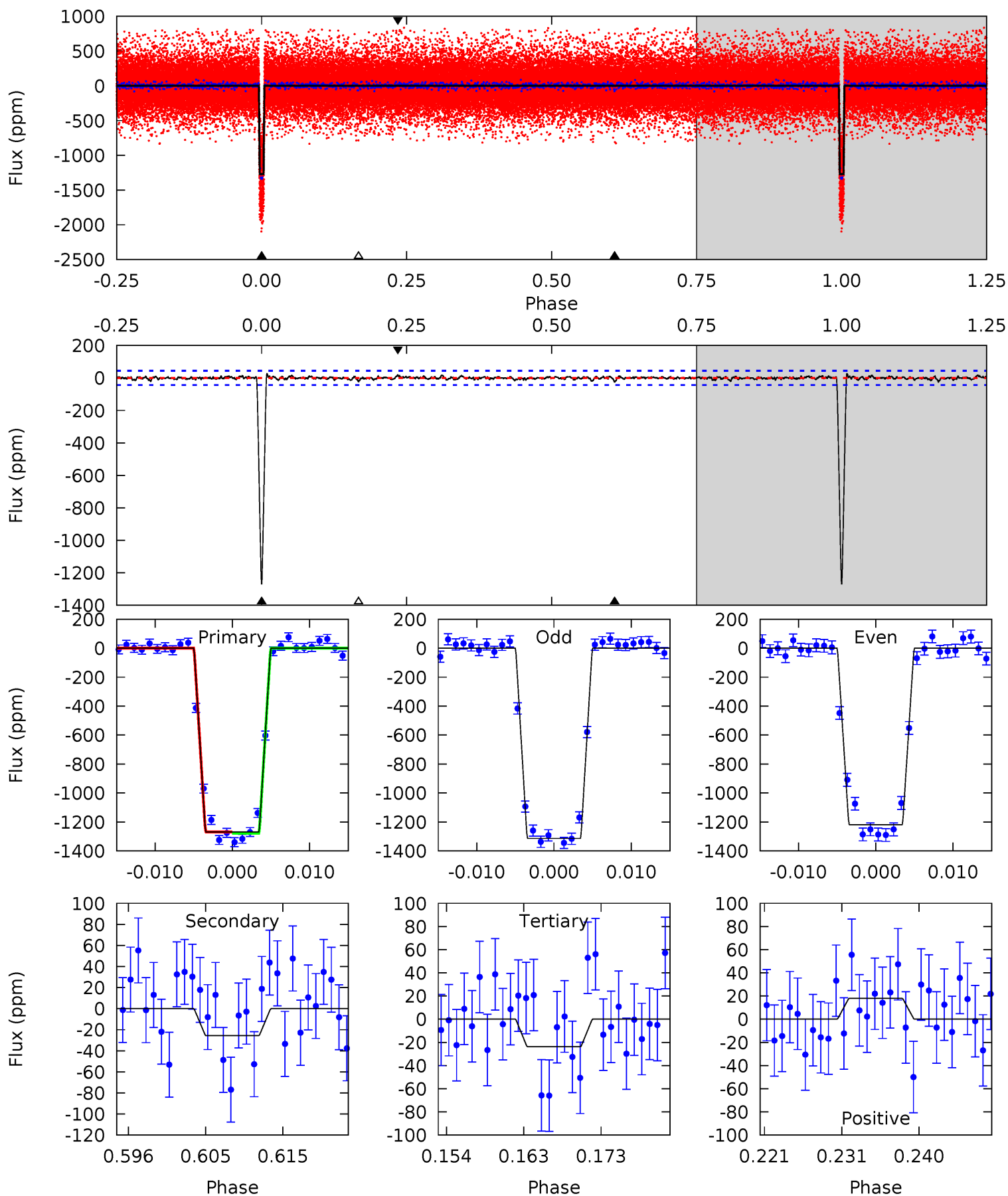
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
128.0	4.40	4.26	4.49	5.01	2.55	1.49	123.8	123.5	0.14	-0.10	2.52	0.99	0.03	1.84



Alt Model-Shift Uniqueness Test

005088591-01, P = 14.532422 Days, E = 126.193529 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
146.0	2.95	2.74	2.06	5.03	2.59	0.65	143.3	143.9	0.20	0.88	5.43	0.98	0.02	0.51



Stellar Parameters For KIC 005088591

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5345^{+159}_{-143}	$4.473^{+0.104}_{-0.127}$	$-0.120^{+0.300}_{-0.300}$	$0.860^{+0.138}_{-0.101}$	$0.802^{+0.113}_{-0.061}$	$1.776^{+0.786}_{-0.644}$
	+3%/-3%	+2%/-3%	+250%/-250%	+16%/-12%	+14%/-8%	+44%/-36%
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 005088591-01 / KOI 1801.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-47 ± 11	$3.58^{+0.41}_{-0.37}$	932^{+52}_{-43}	2949^{+115}_{-117}	24^{+8}_{-7}
Alt.	-26 ± 9	$3.43^{+0.40}_{-0.36}$	933^{+47}_{-44}	2742^{+145}_{-148}	14^{+6}_{-5}

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 $A_{obs} \gg 1.0$

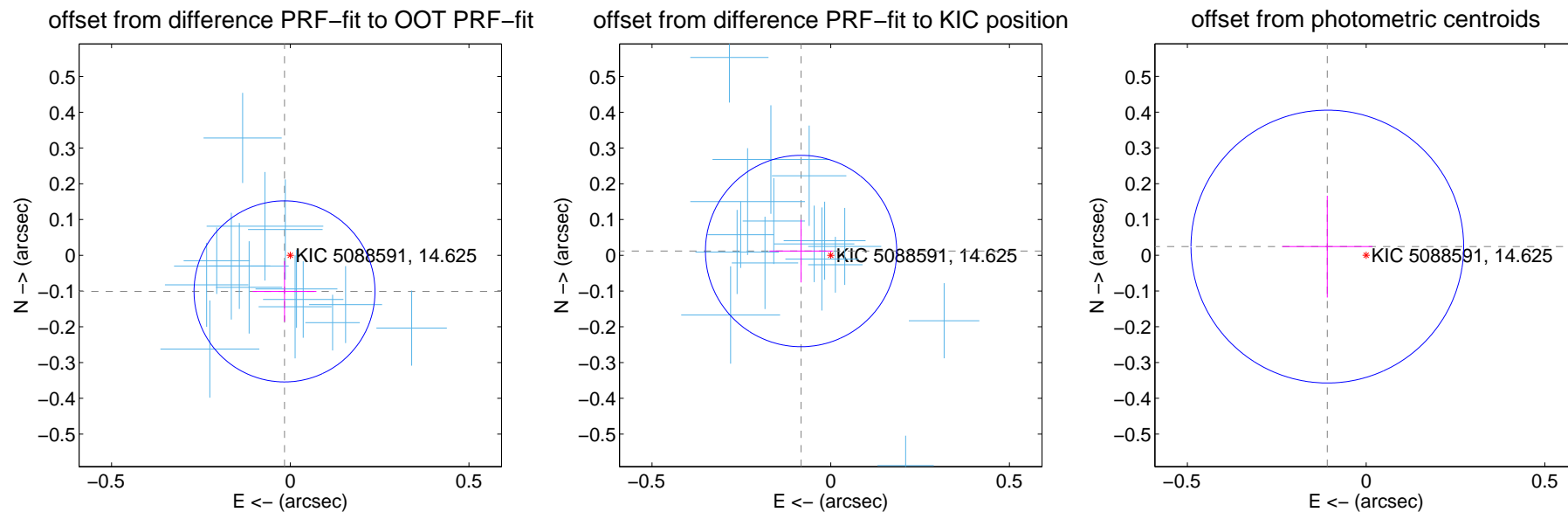
DV Centroid Data

Supplemental centroid analysis for 005088591-01. Kepler magnitude: 14.62. Transit SNR 69.65

There are 17 quarters with good PRF difference image offsets

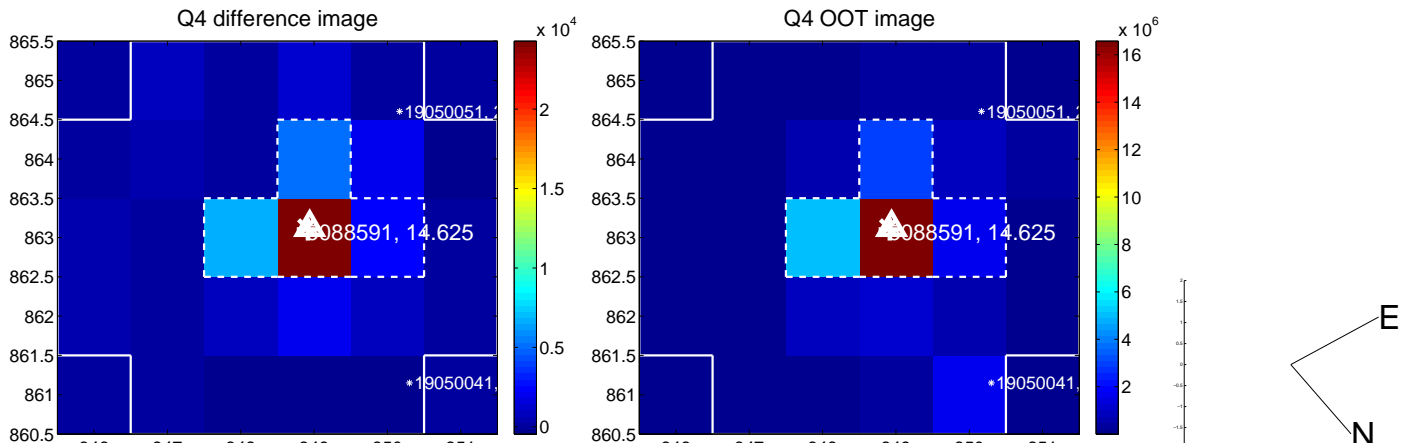
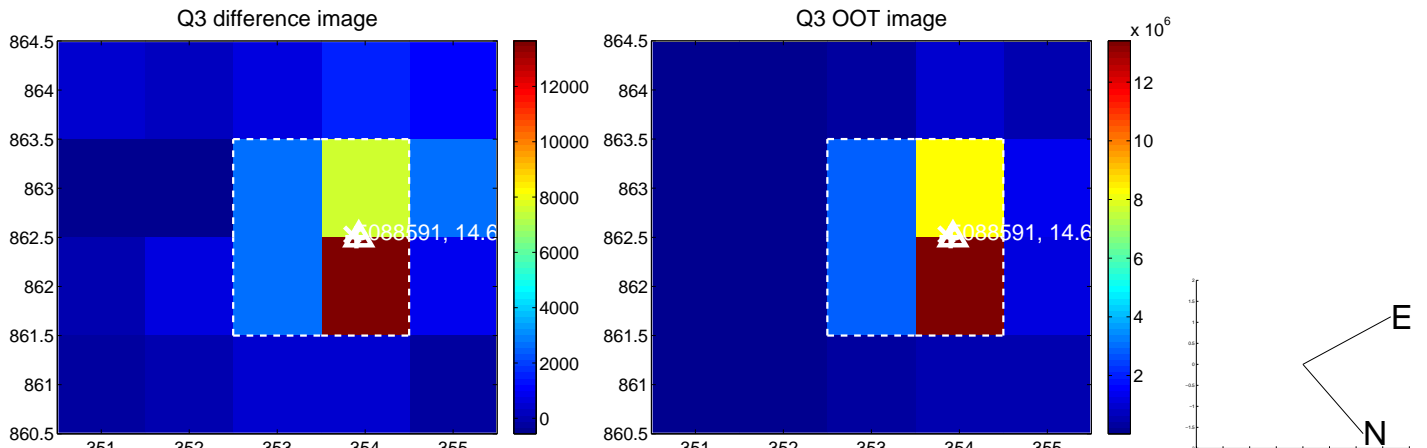
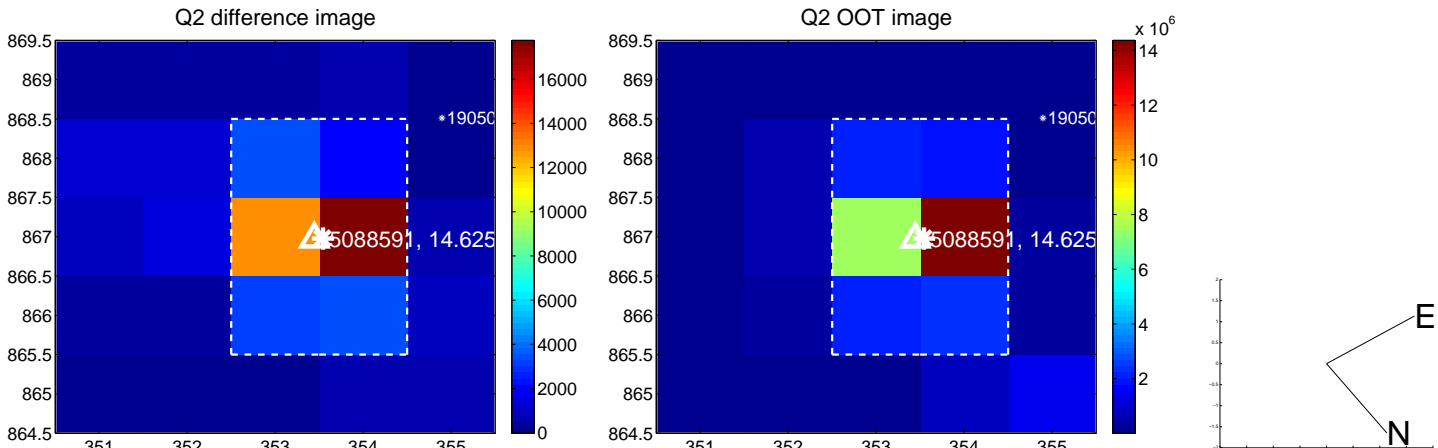
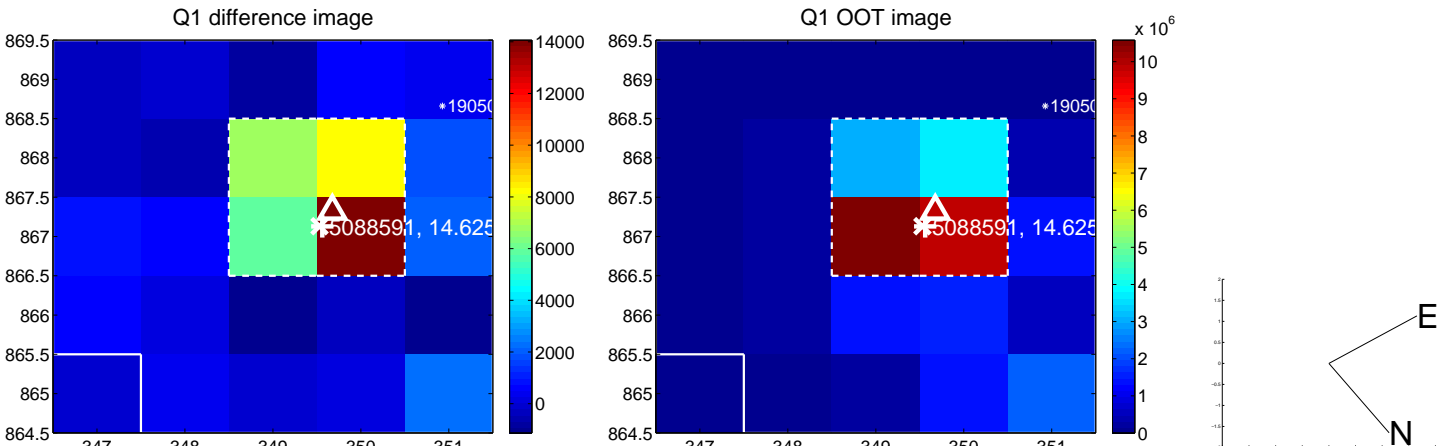
The direct PRF centroid is offset from the target star catalog position by about 0.27 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.102 ± 0.084	1.21	0.016 ± 0.089	-0.101 ± 0.085
PRF-fit source offset from KIC position	0.084 ± 0.089	0.94	0.083 ± 0.089	0.012 ± 0.088
photometric centroid source offset	0.11 ± 0.13	0.87	0.11 ± 0.13	0.02 ± 0.14

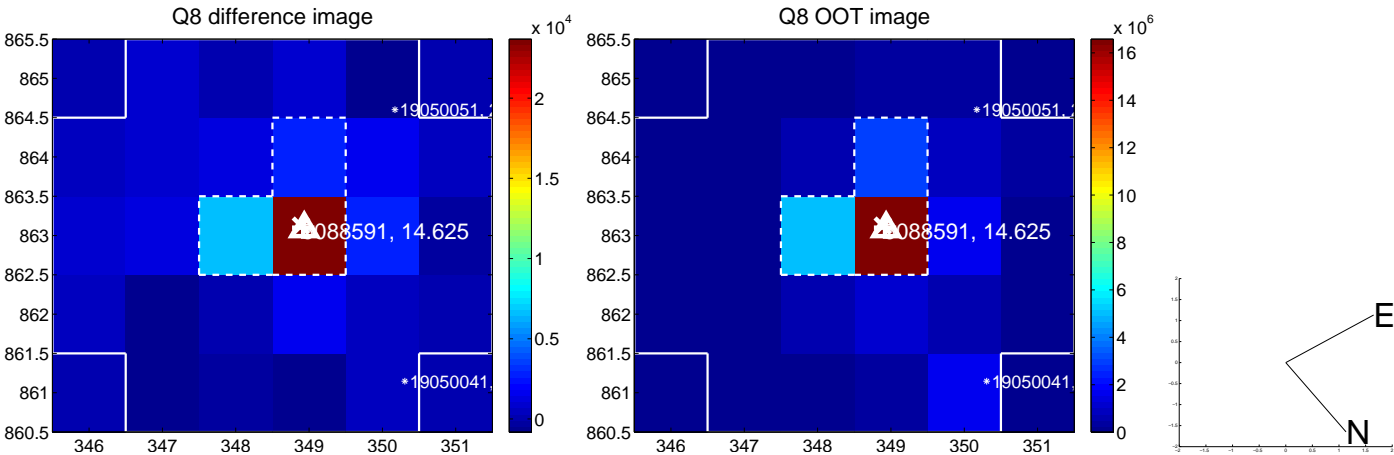
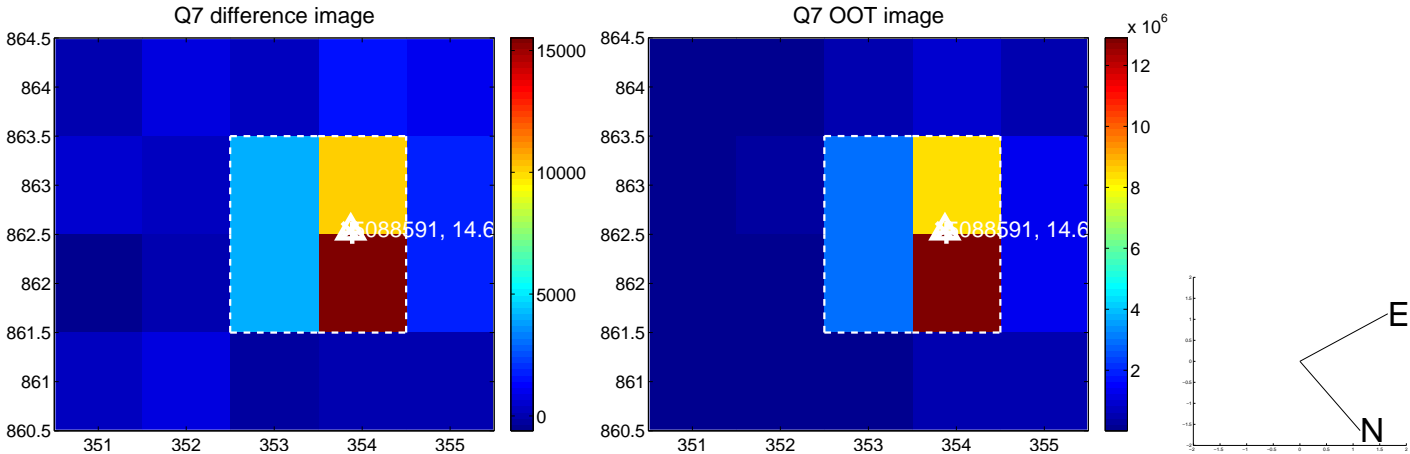
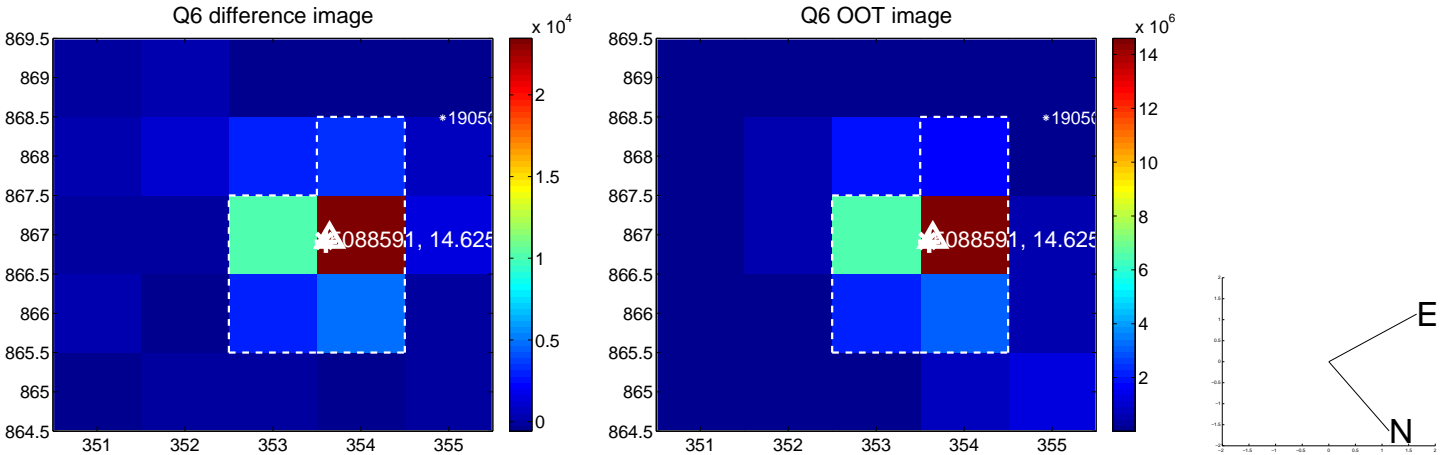
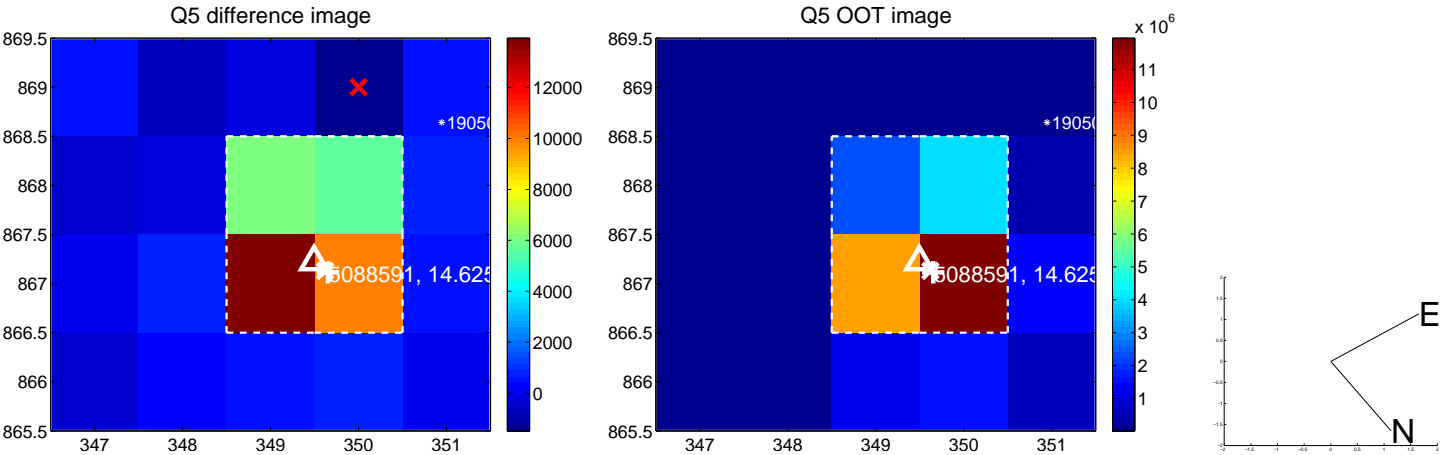


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

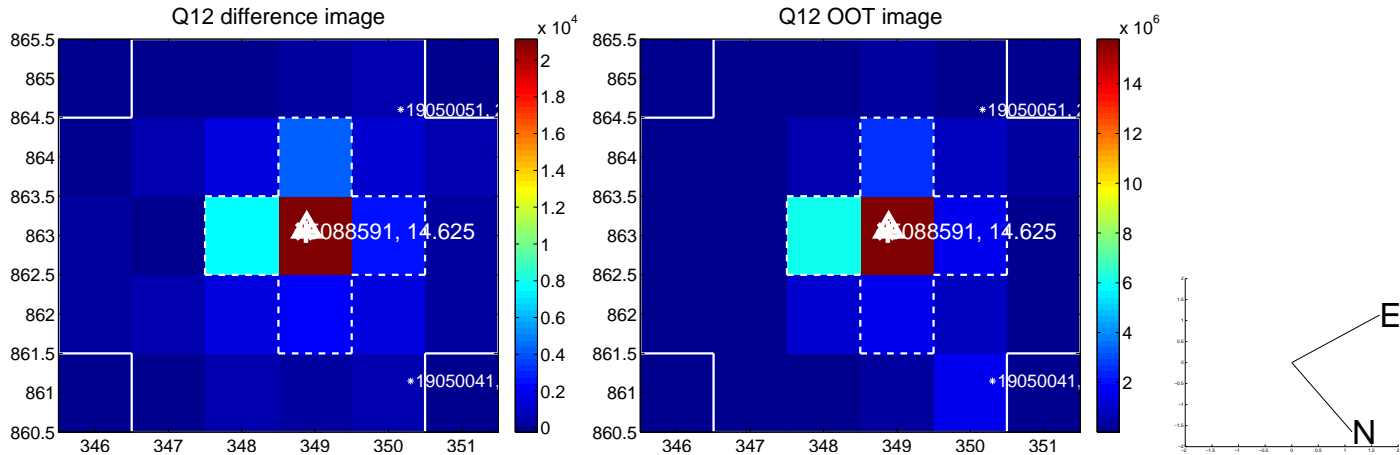
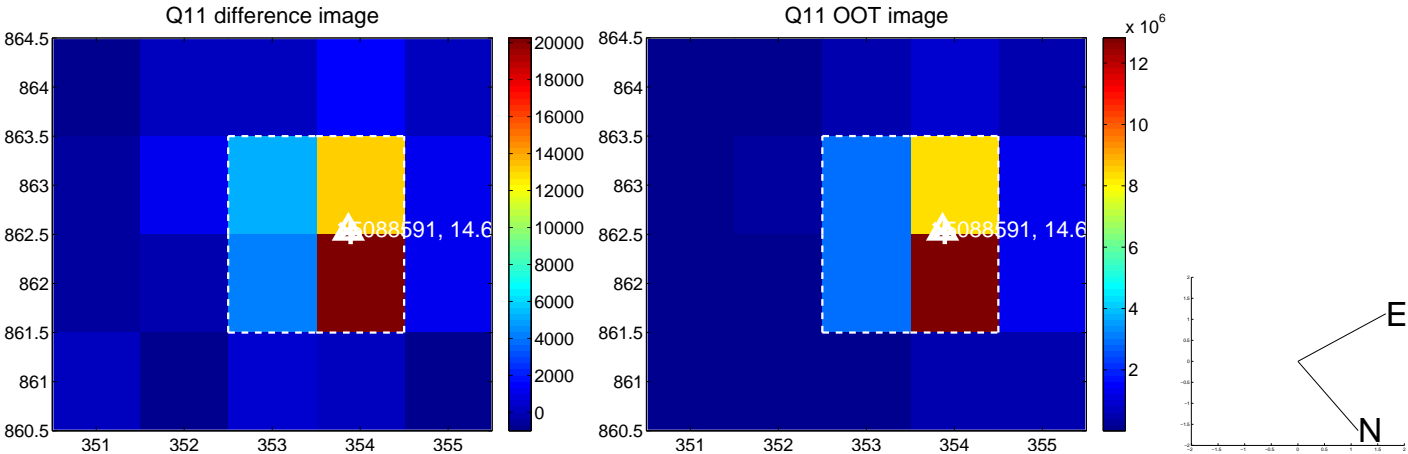
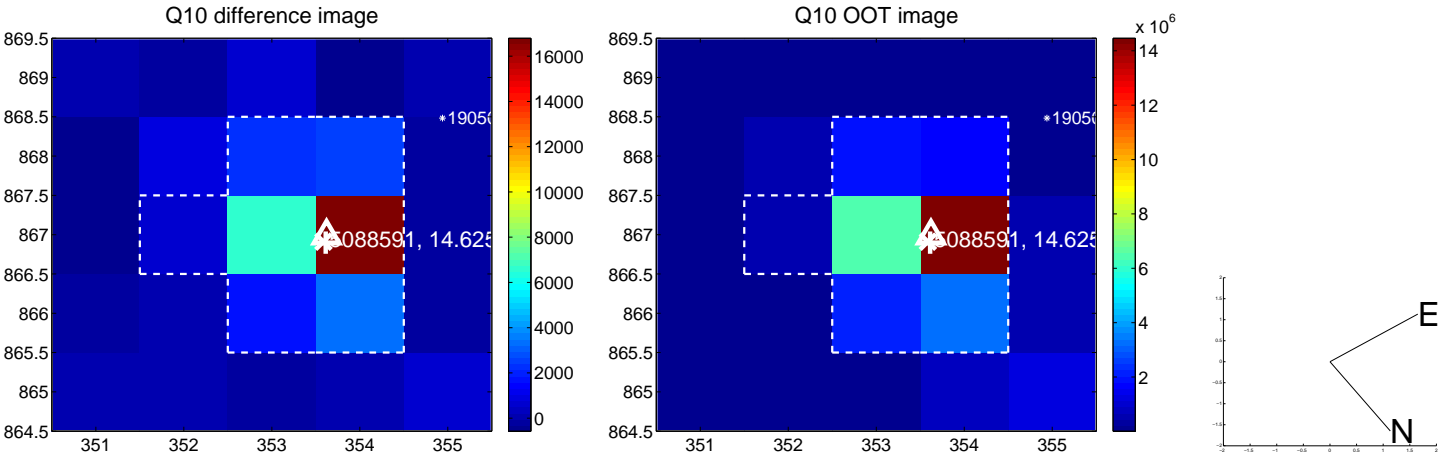
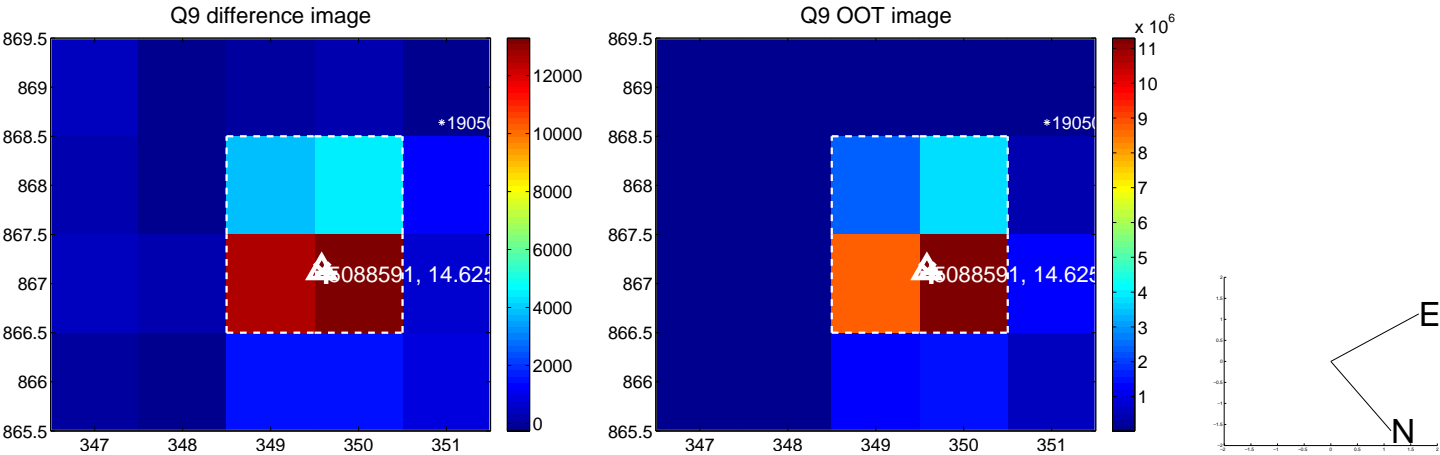
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



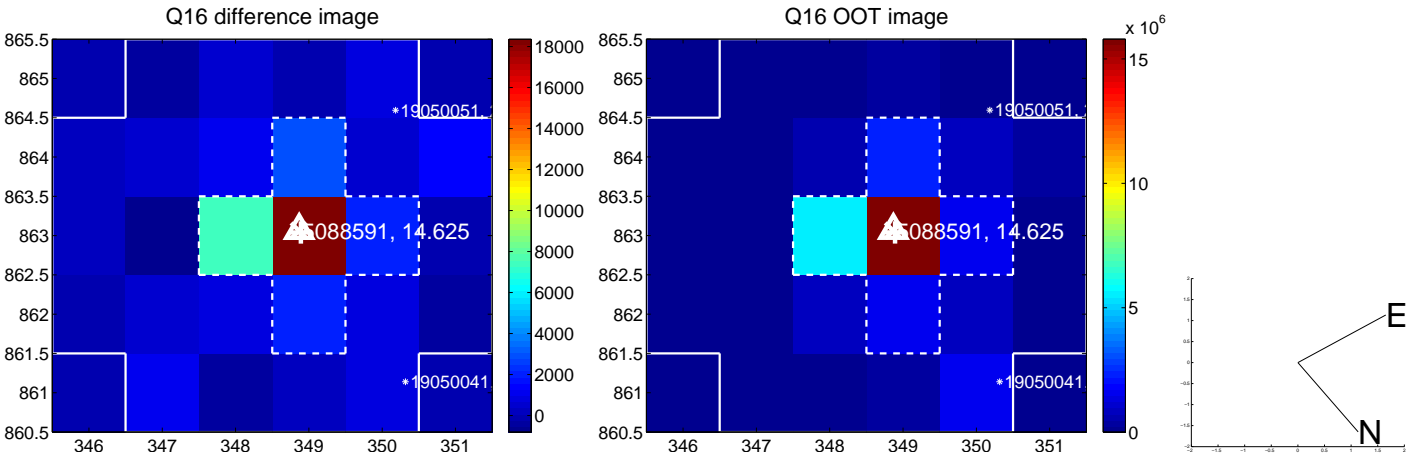
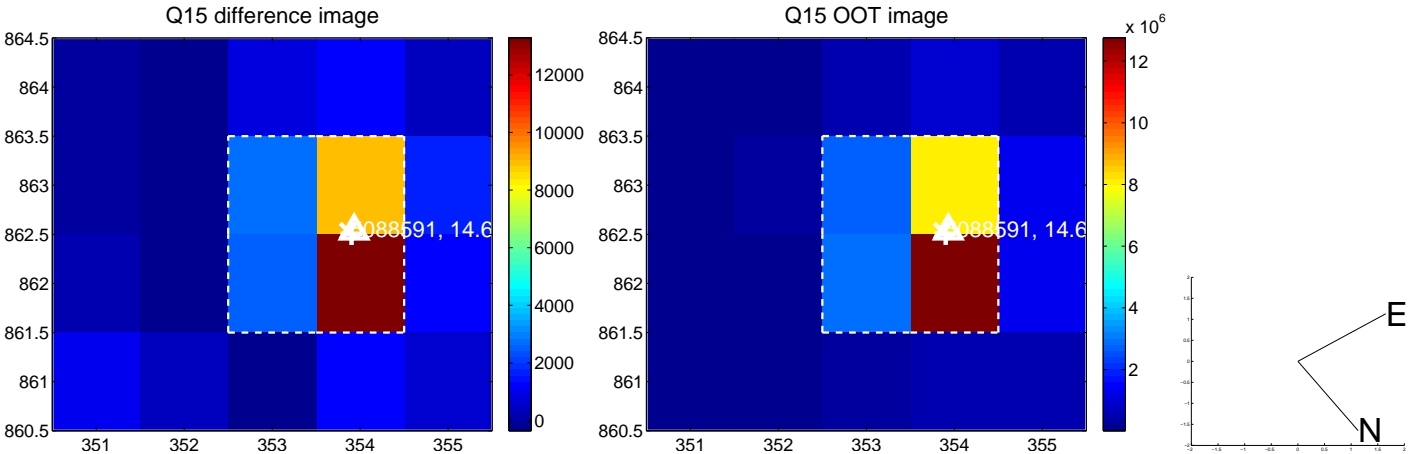
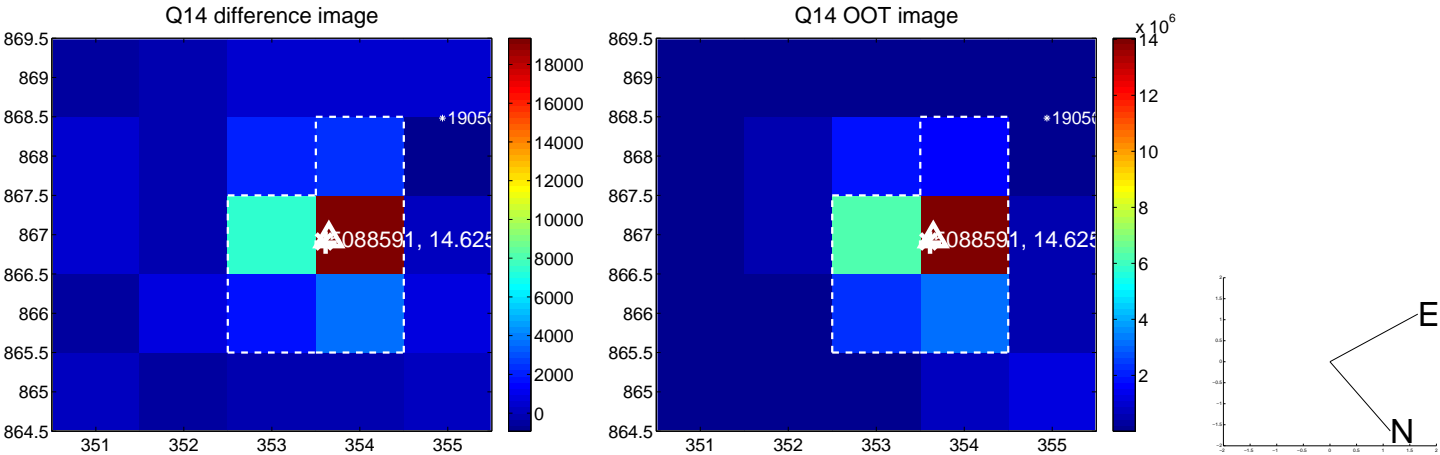
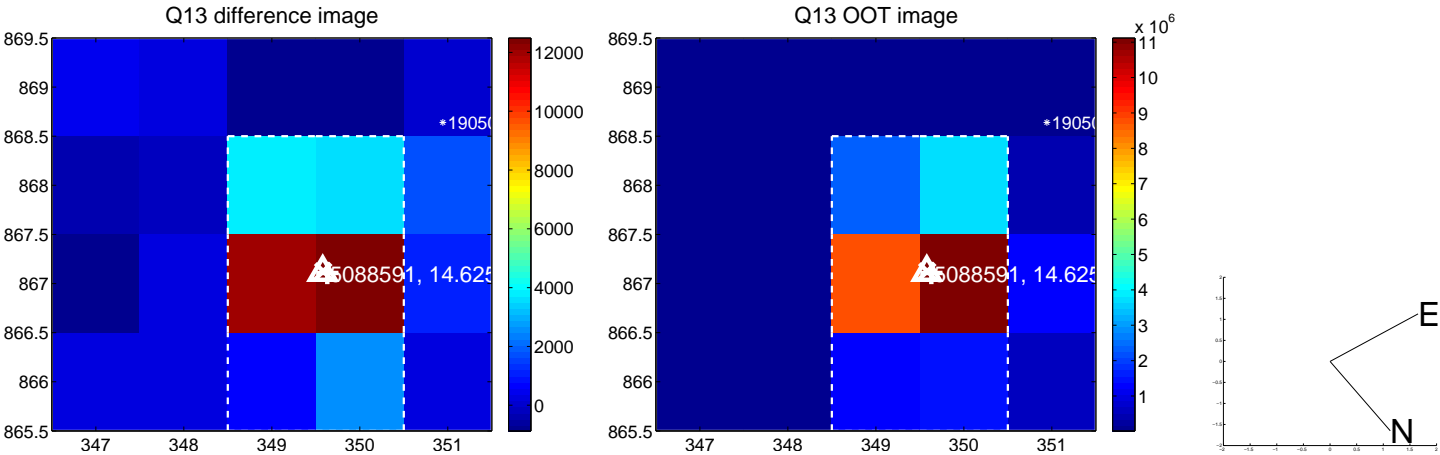
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



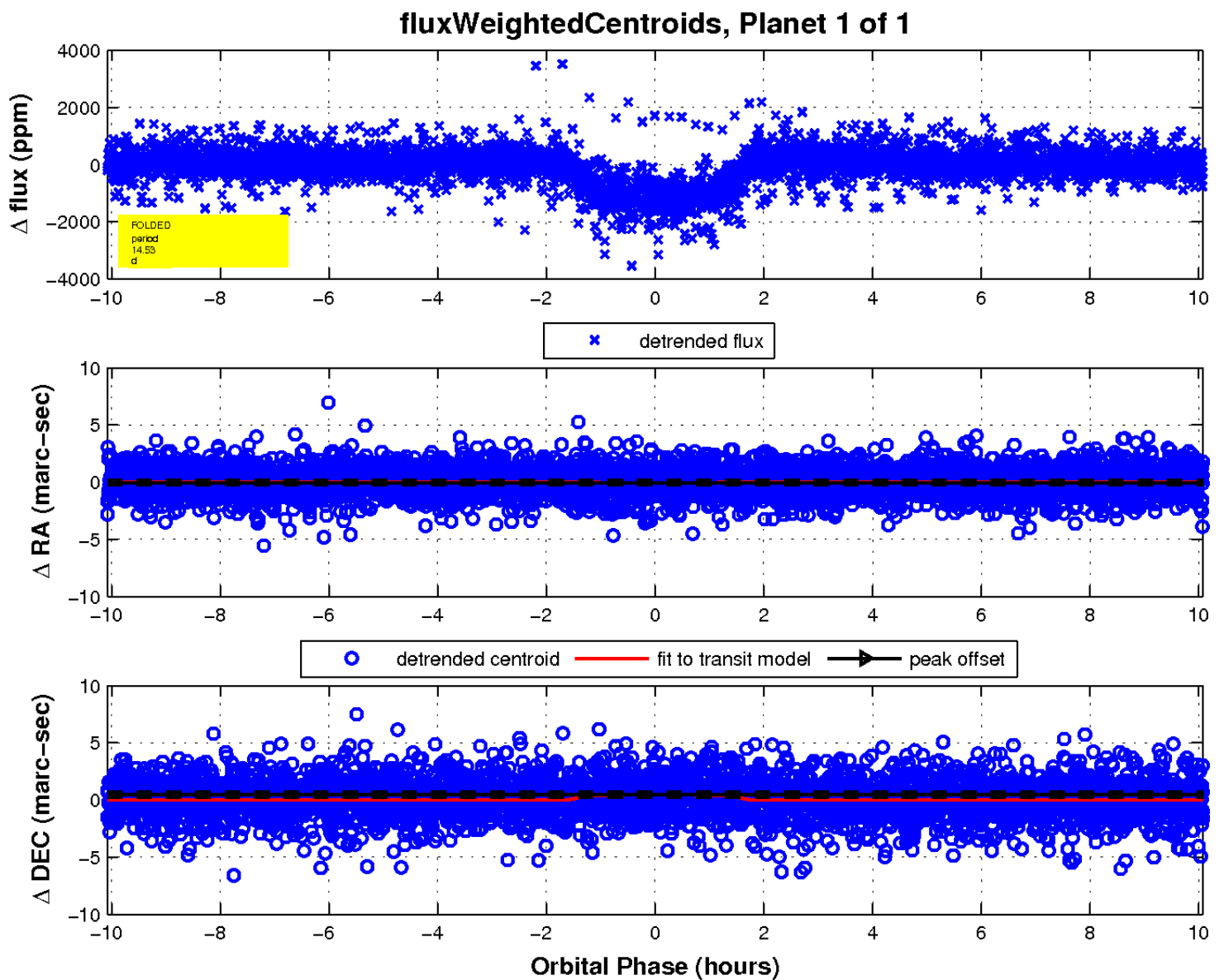
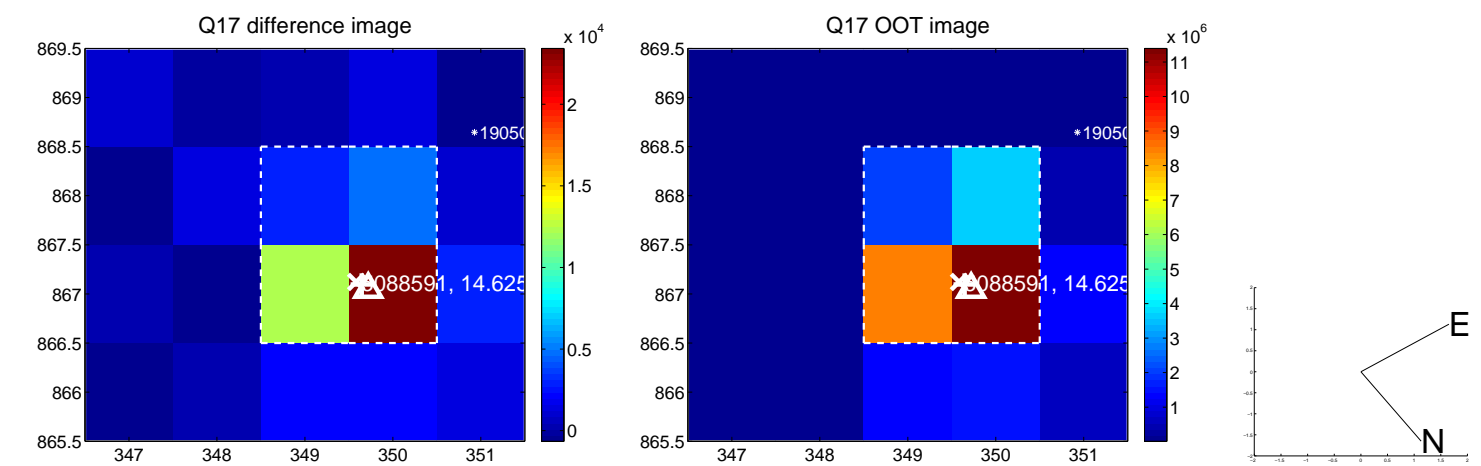
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UKIRT Image

Declination

