

KIC 005560830

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R _★ (R _☉)	T _★ (K)	R _p (R _⊕)	S _p (S _⊕)
005560830-01	OBS	3879.01	0.867718	132.161763	470.7	3.385	467.8	66.1	1.06	6220	4.42	4662.94

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005560830-01	OBS	FP	0.00	1	0	1	1	MOD_NONUNIQ_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.

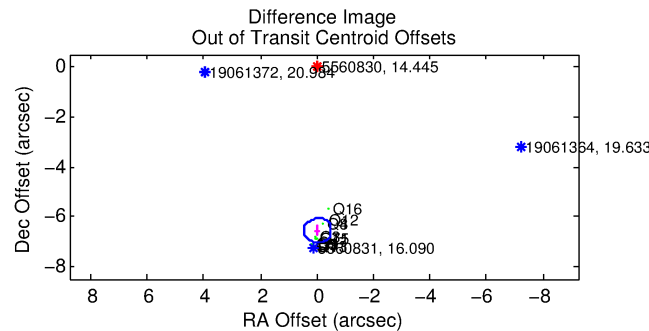
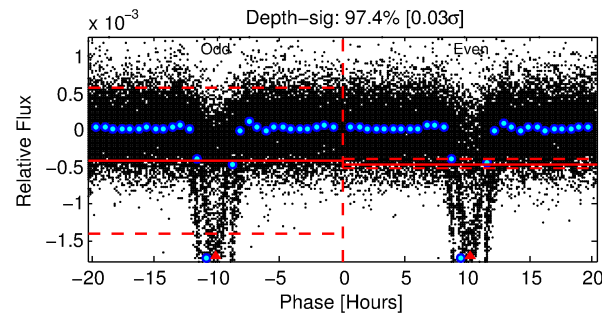
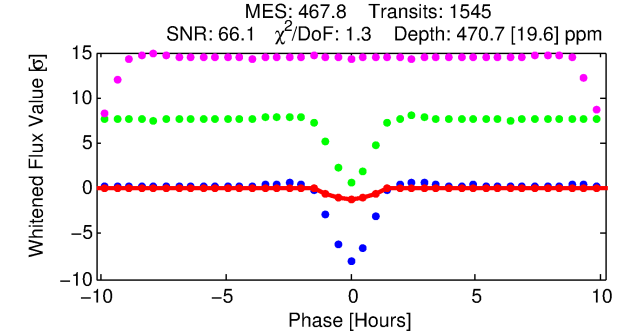
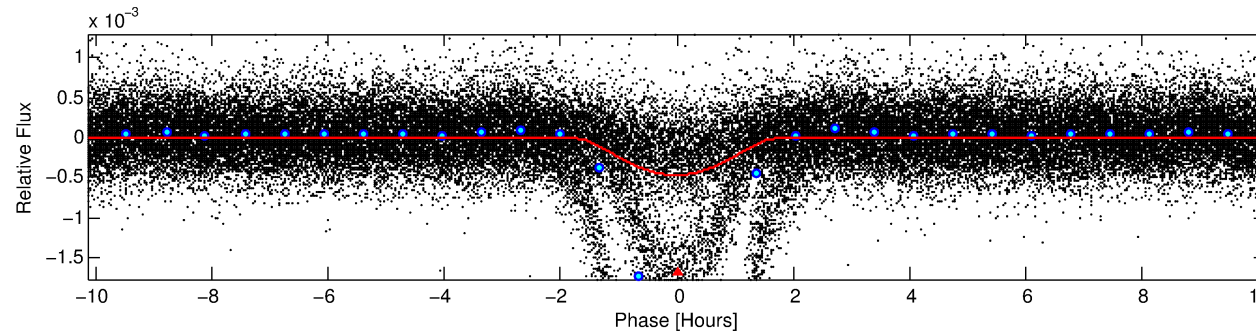
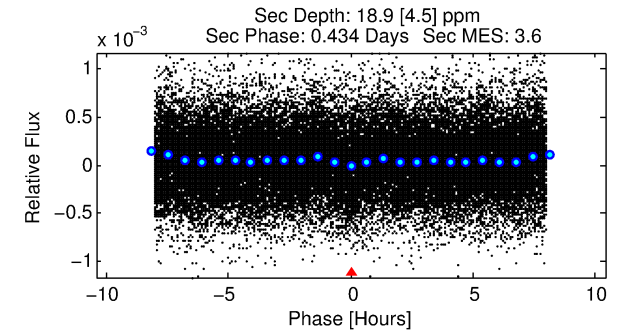
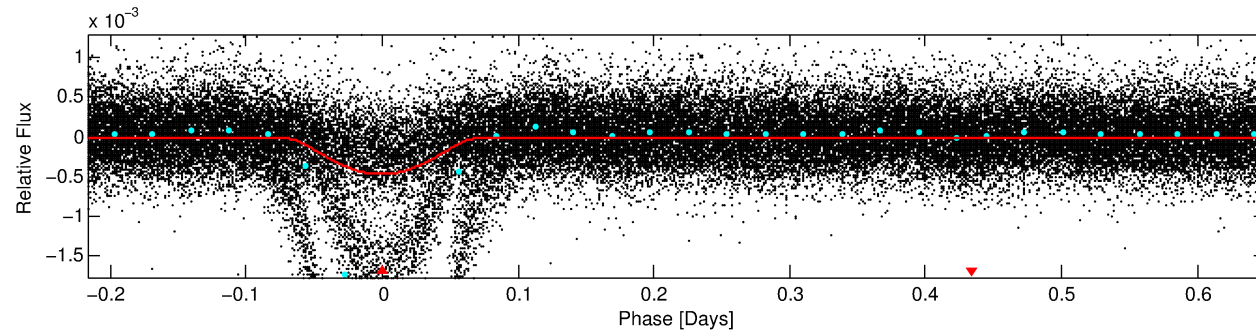
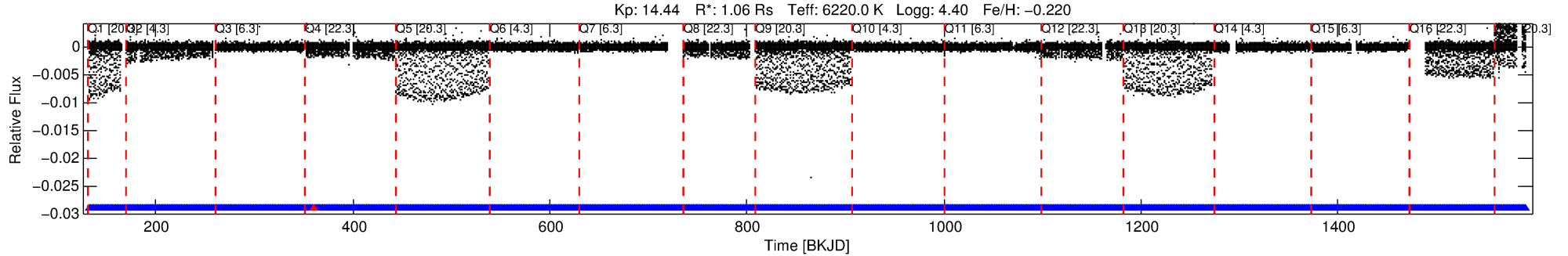
Ephemeris Match Information For 005560830-01

TCE (1)	KIC	Parent (2)	Parent KIC	P ₁ :P ₂	Dist (″)	ΔRow	ΔCol	m ₂	m ₁	D ₂ /D ₁	Mechanism	Flag	σ _P	σ _T
005560830-01	5560830	005560831-pri	5560831	1:1	7.3	2	-1	16.09	14.45	251.38	Direct-PRF	0	0.29	0.07

Notes: P₁:P₂ is the period ratio. Dist is the distance in arcseconds. ΔRow and ΔCol are the number of pixels apart in row and column. m₂ and m₁ are the magnitudes of the parent and child. D₂/D₁ 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 σ_P < 5.0 and σ_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: 5560830 Candidate: 1 of 1 Period: 0.868 d
KOI: K03879.01 Corr: 0.851



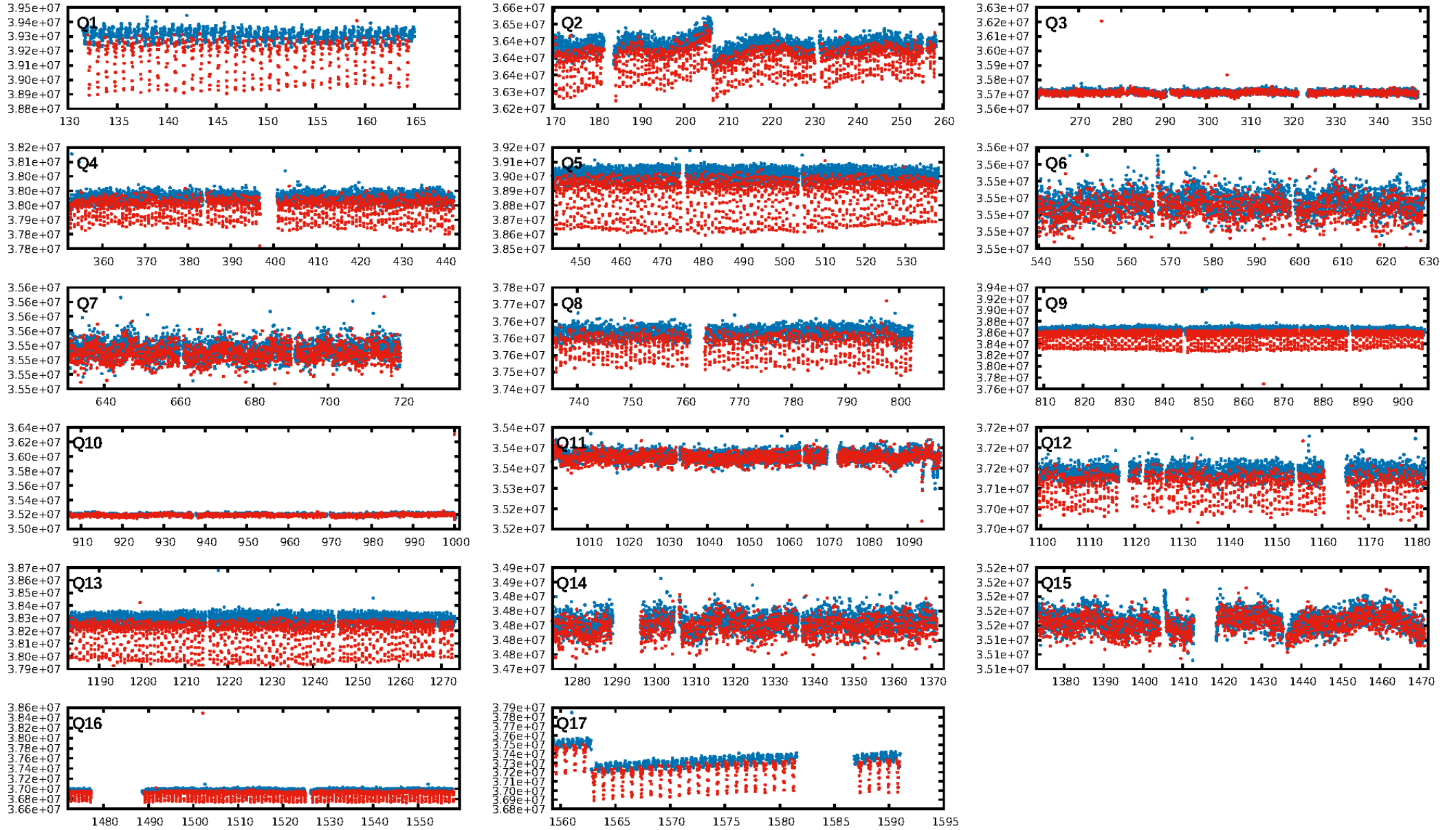
DV Fit Results:

Period = 0.86772 [0.00000] d
Epoch = 132.1618 [0.0006] BKJD
Rp/R* = 0.0383 [0.0198]
a/R* = 1.15 [0.01]
b = 1.00 [0.03]
Seff = 4662.94 [1823.30]
Teff = 2107 [206] K
Rp = 4.42 [2.66] Re
a = 0.0179 [0.0046] AU
Ag = 0.17 [0.19] [-4.35σ]
Teffp = 2093 [559] K [-0.02σ]

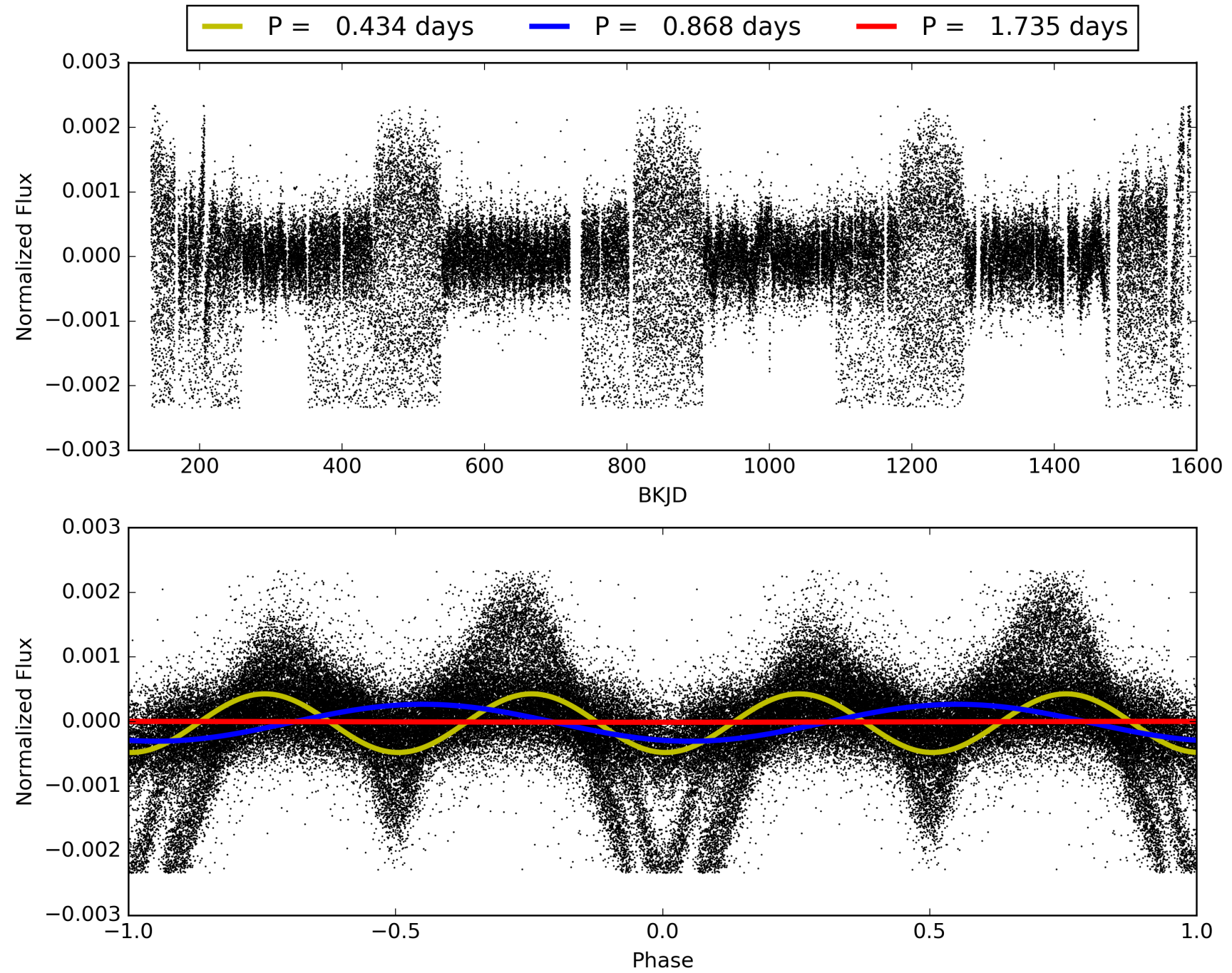
DV Diagnostic Results:

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 [1475/1476]
GhostDiagnostic-chr: -0.5186
Centroid-sig: N/A
Centroid-so: 93.532 arcsec [582.54σ]
OotOffset-rm: 6.553 arcsec [40.66σ]
KicOffset-rm: 7.298 arcsec [99.45σ]
OotOffset-st: 0/4/4/5 [13]
KicOffset-st: 0/4/4/5 [13]
DiffImageQuality-fgm: 1.00 [13/13]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 005560830-01, PDC Light Curves

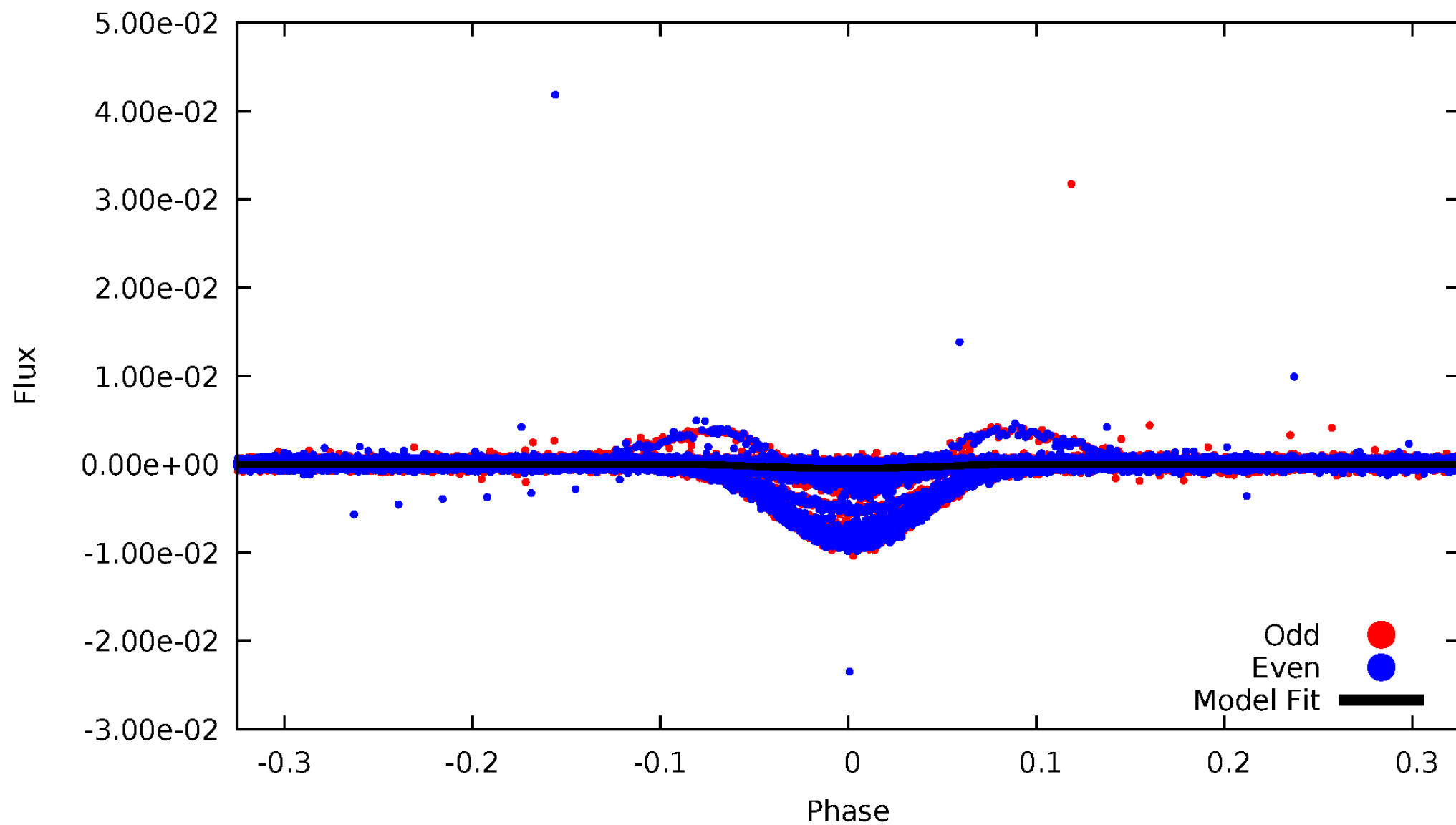


TCE 005560830-01



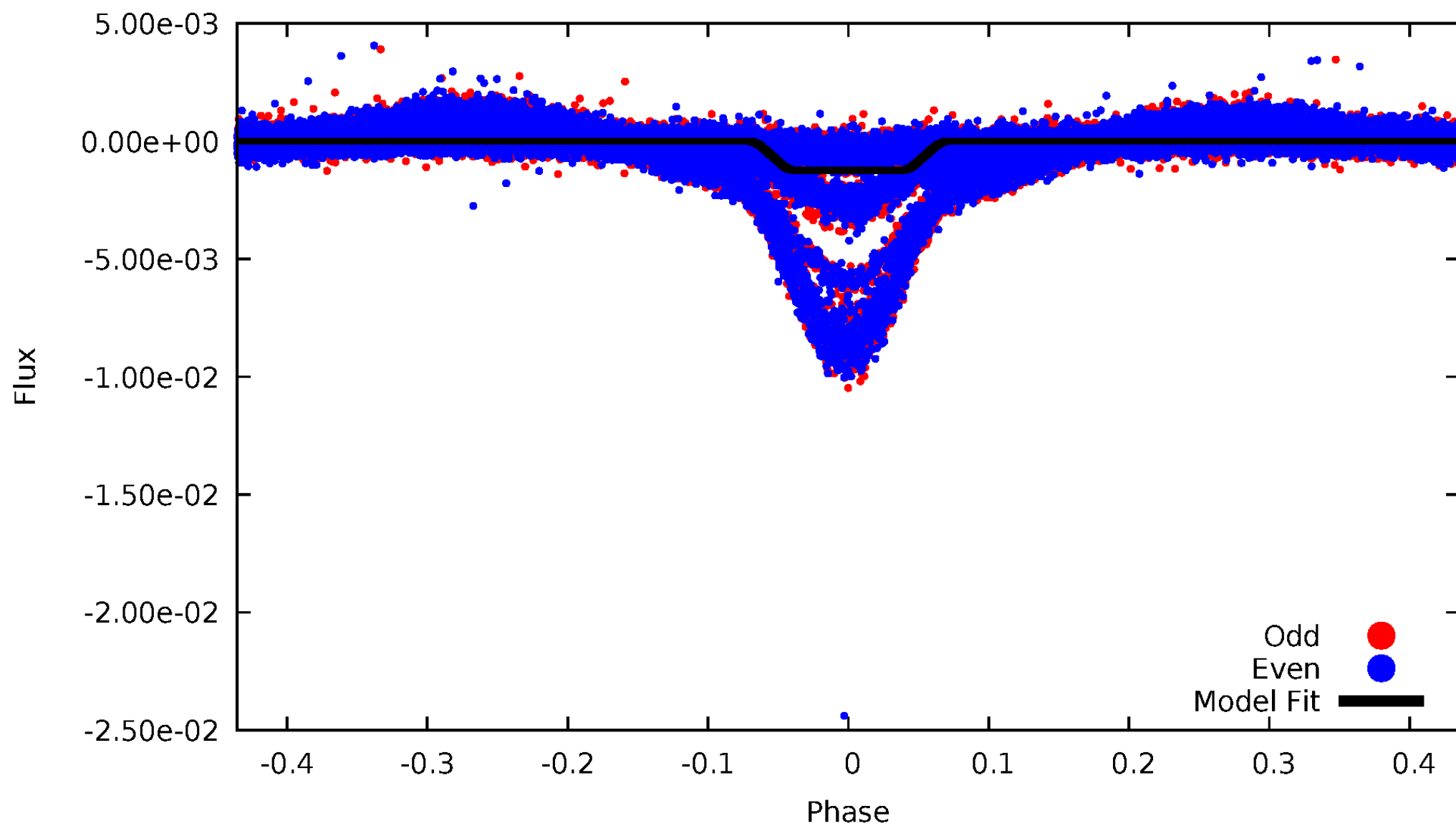
DV Odd/Even

TCE 005560830-01



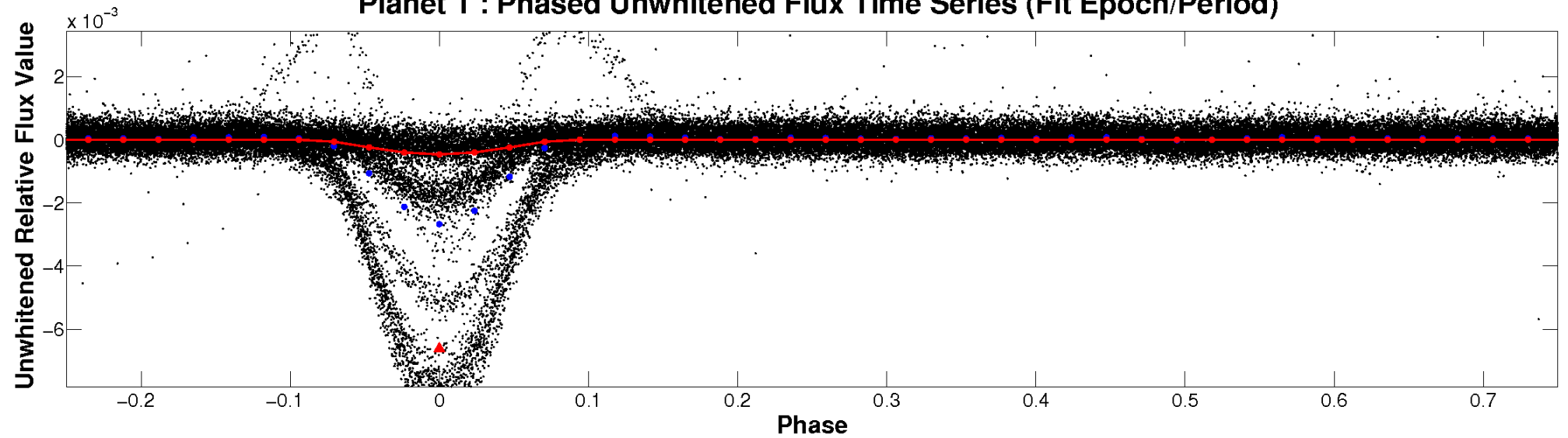
ALT Odd/Even

TCE 005560830-01

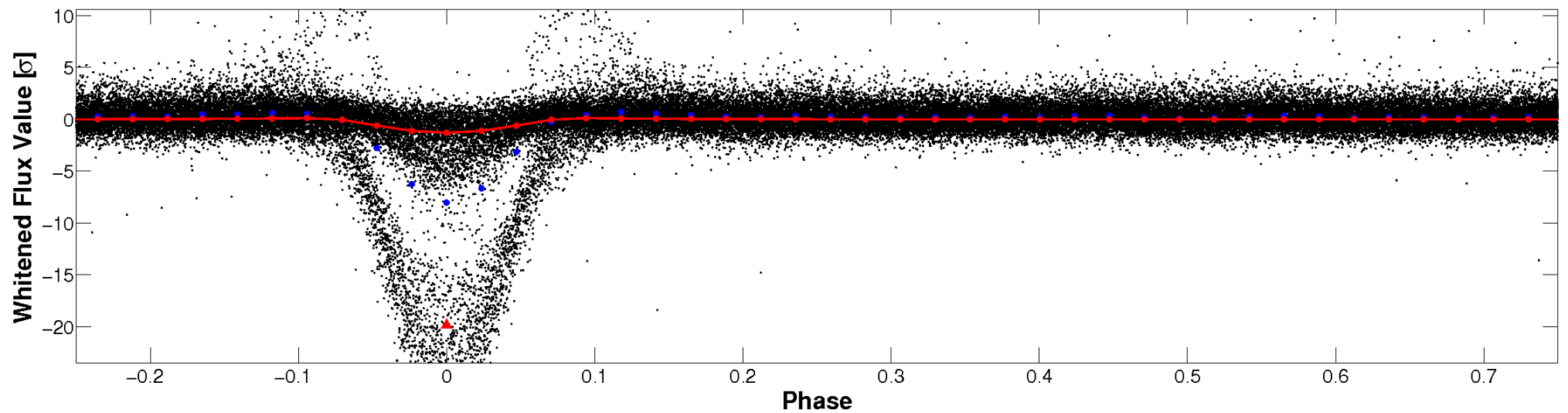


Non-Whitened Vs. Whitened Light Curve

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

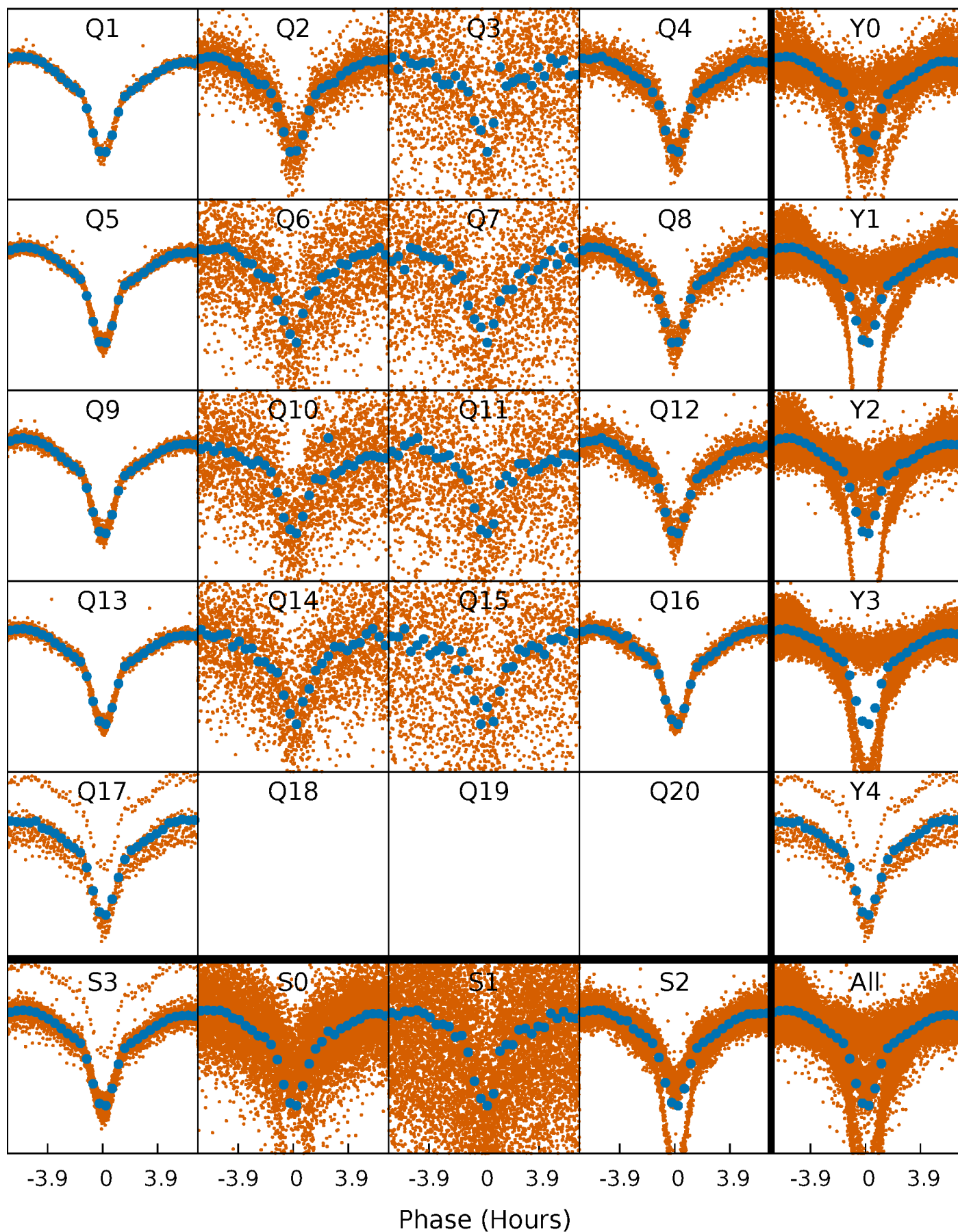


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



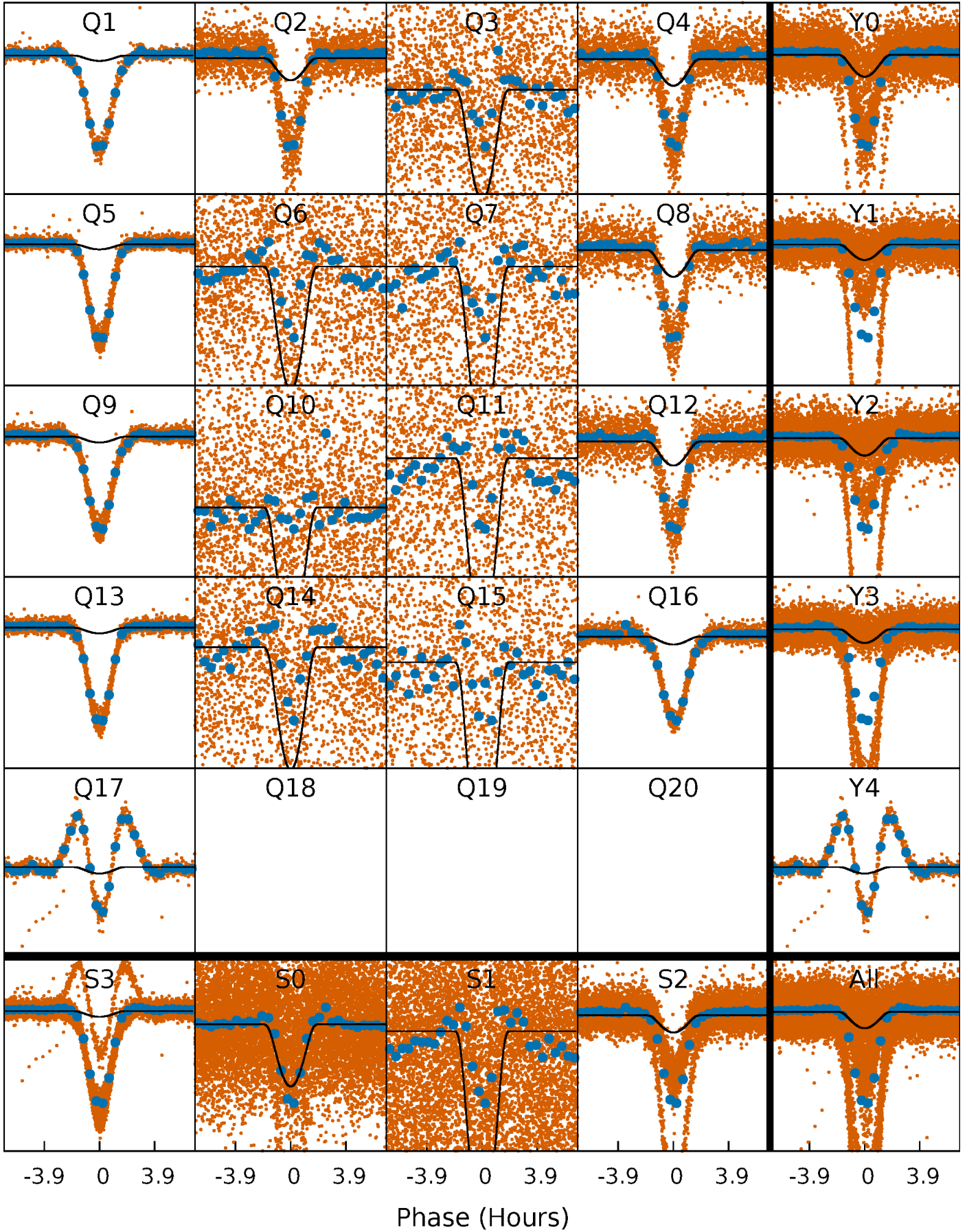
PDC Quarter-Phased Transit Curves

TCE 005560830-01 P= 0.867718 Days $T_0=132.161763$ (BKJD)



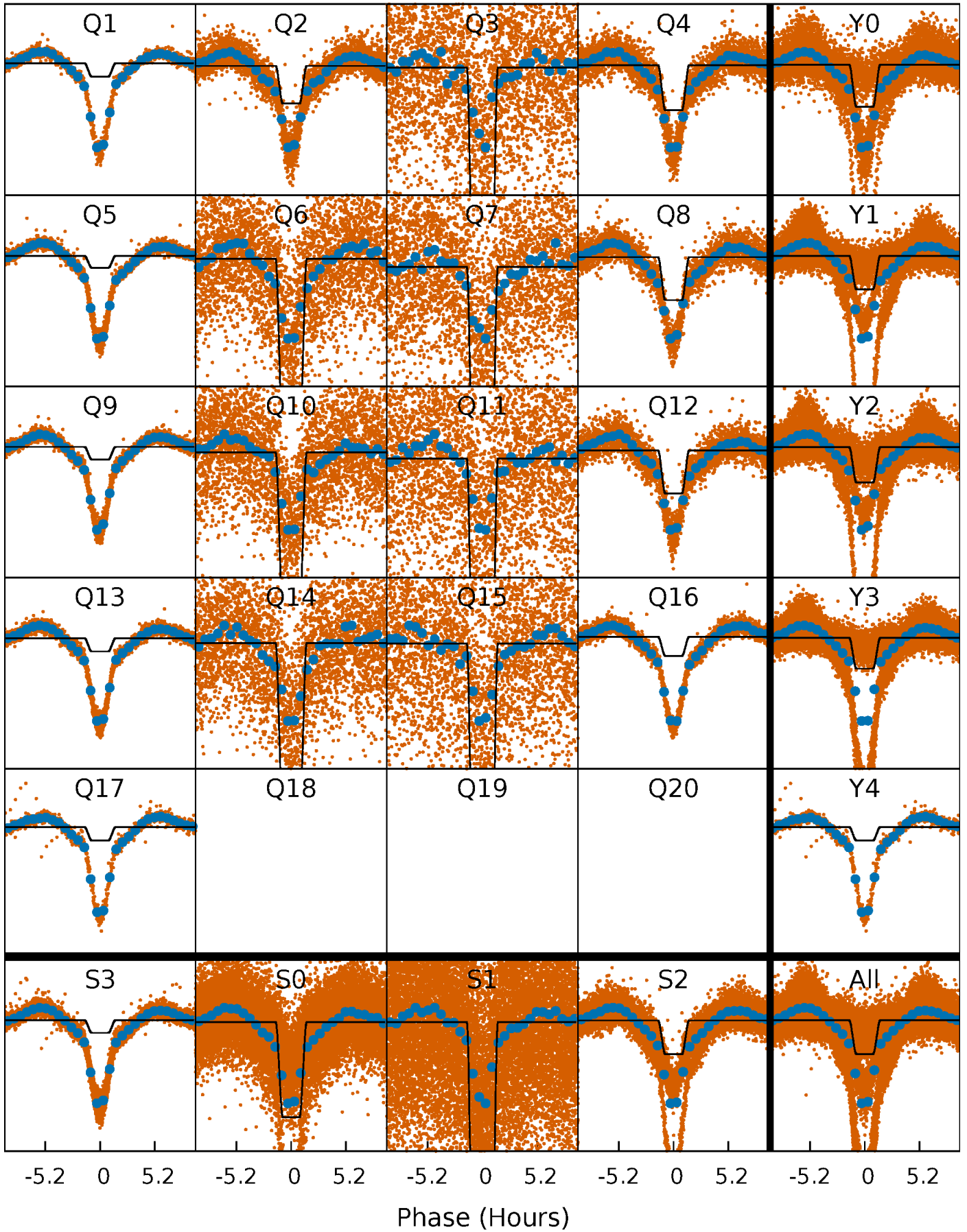
DV Quarter-Phased Transit Curves

TCE 005560830-01 P= 0.867718 Days $T_0=132.161763$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

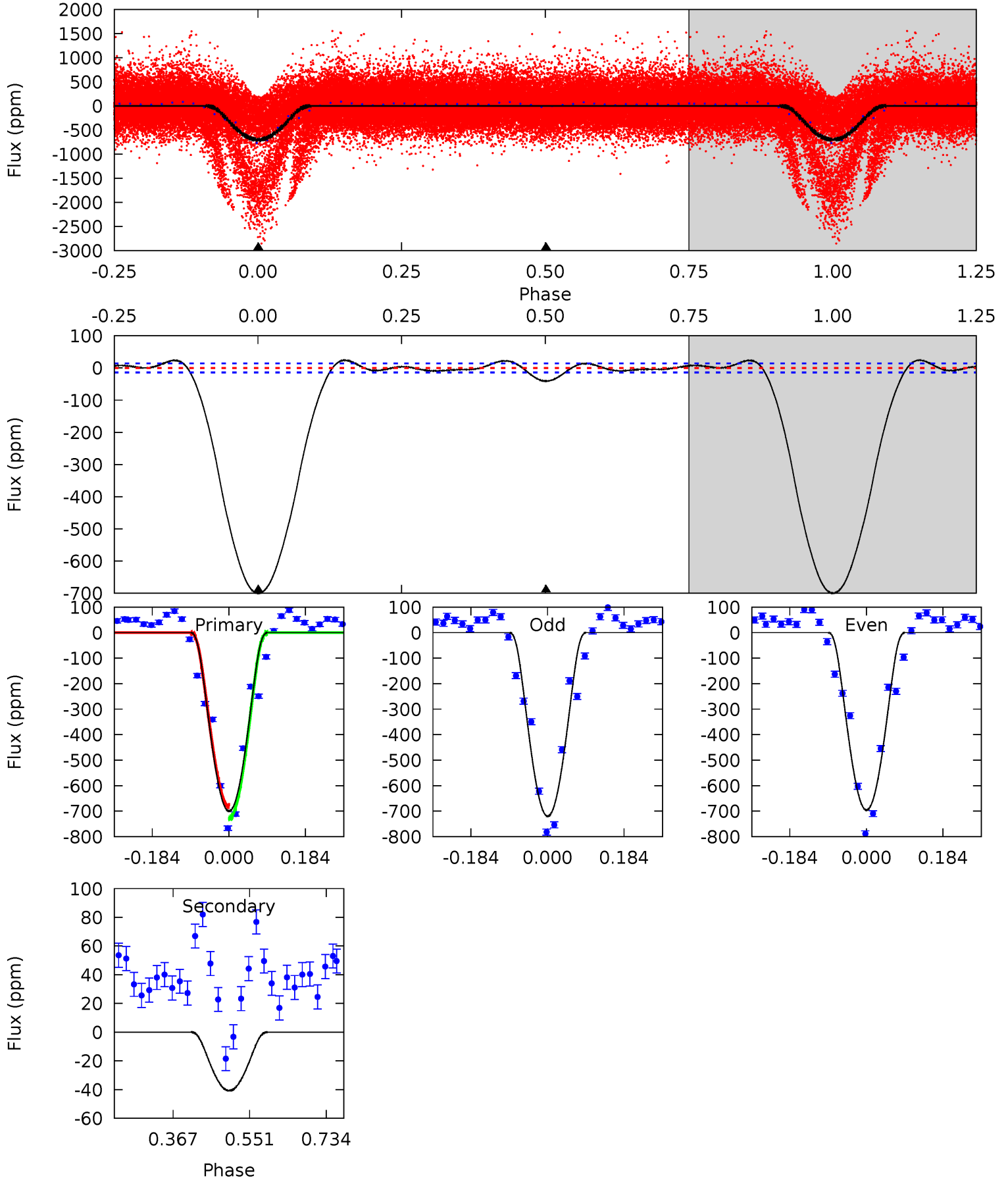
TCE 005560830-01 P= 0.867720 Days $T_0=132.163635$ (BKJD)



DV Model-Shift Uniqueness Test

005560830-01, P = 0.867718 Days, E = 131.294045 Days

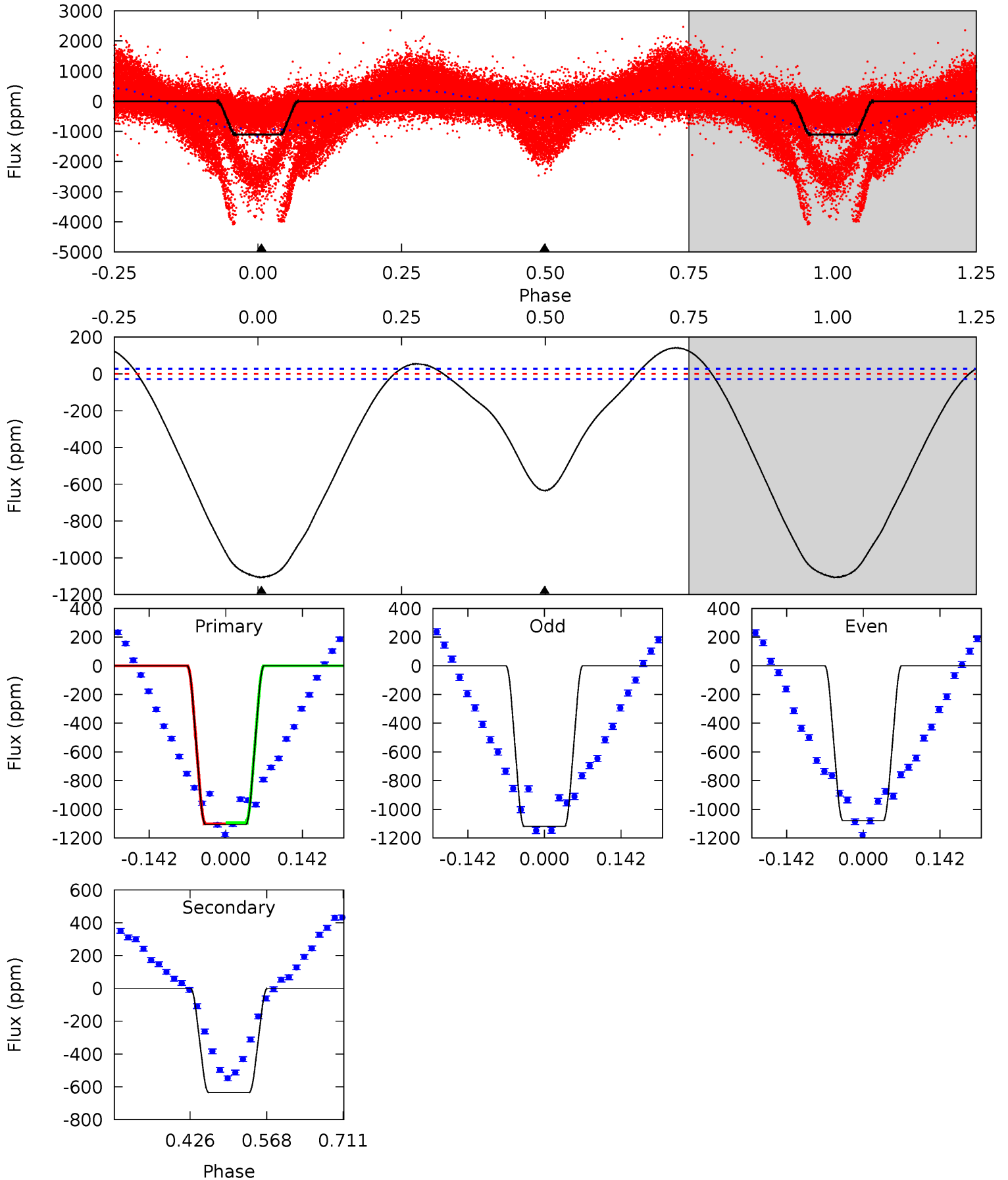
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
219.1	12.8	0	0	4.44	1.33	1.55	219.1	219.1	12.8	12.8	3.77	2.08	0.03	7.50



Alt Model-Shift Uniqueness Test

005560830-01, P = 0.867720 Days, E = 131.295915 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
176.7	101.5	0	0	4.49	1.47	24.8	176.7	176.7	101.5	101.5	3.14	1.44	0.11	0.62



Stellar Parameters For KIC 005560830

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6220^{+169}_{-225}	$4.398^{+0.090}_{-0.195}$	$-0.220^{+0.250}_{-0.300}$	$1.056^{+0.326}_{-0.140}$	$1.013^{+0.158}_{-0.115}$	$1.210^{+0.472}_{-0.653}$
	+3%/-4%	+2%/-4%	+114%/-136%	+31%/-13%	+16%/-11%	+39%/-54%
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 005560830-01 / KOI 3879.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-41 ± 3	$4.52^{+2.46}_{-2.04}$	2974^{+213}_{-167}	2334^{+1348}_{-5157}	$0.341^{+0.857}_{-0.192}$
Alt.	-635 ± 6	$4.32^{+2.77}_{-2.25}$	2969^{+223}_{-155}	5174^{+2253}_{-956}	$5.965^{+19.828}_{-3.706}$

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 $A_{obs} \gg 1.0$

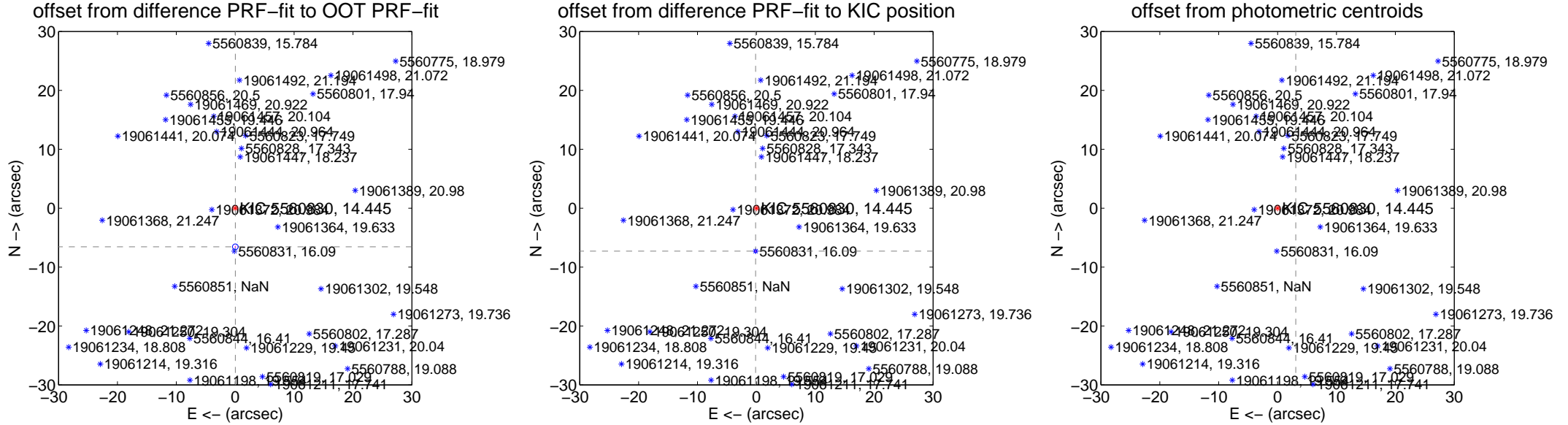
DV Centroid Data

Supplemental centroid analysis for 005560830-01. Kepler magnitude: 14.45. Transit SNR 66.12

There are 13 quarters with good PRF difference image offsets

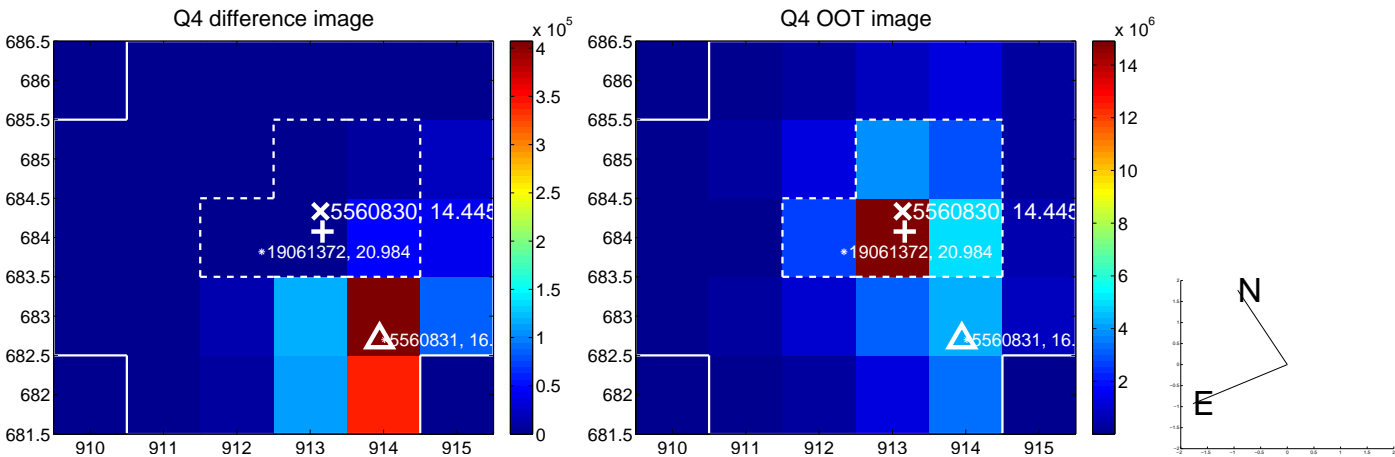
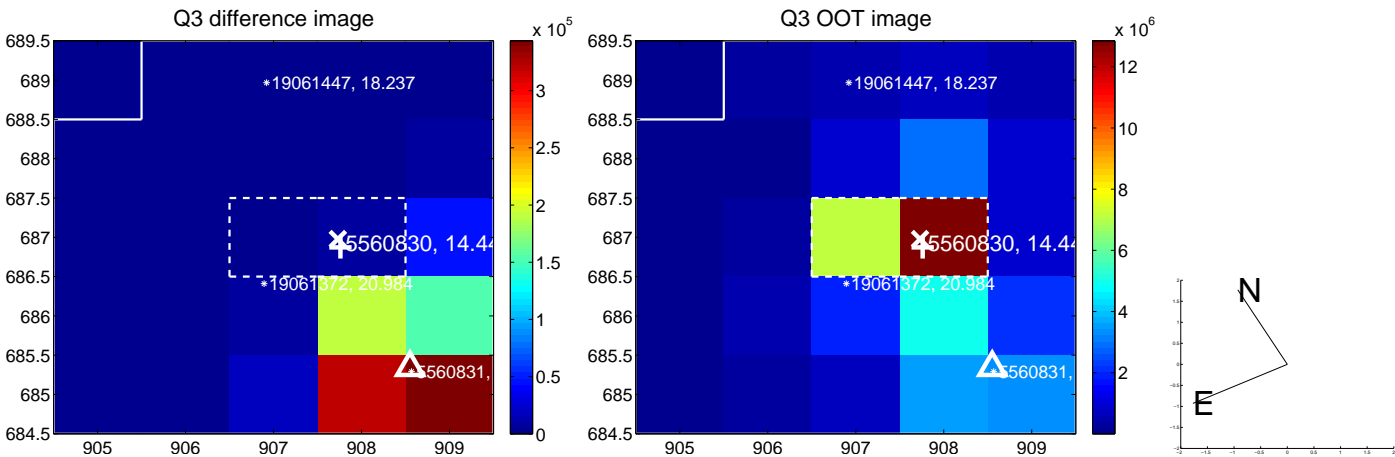
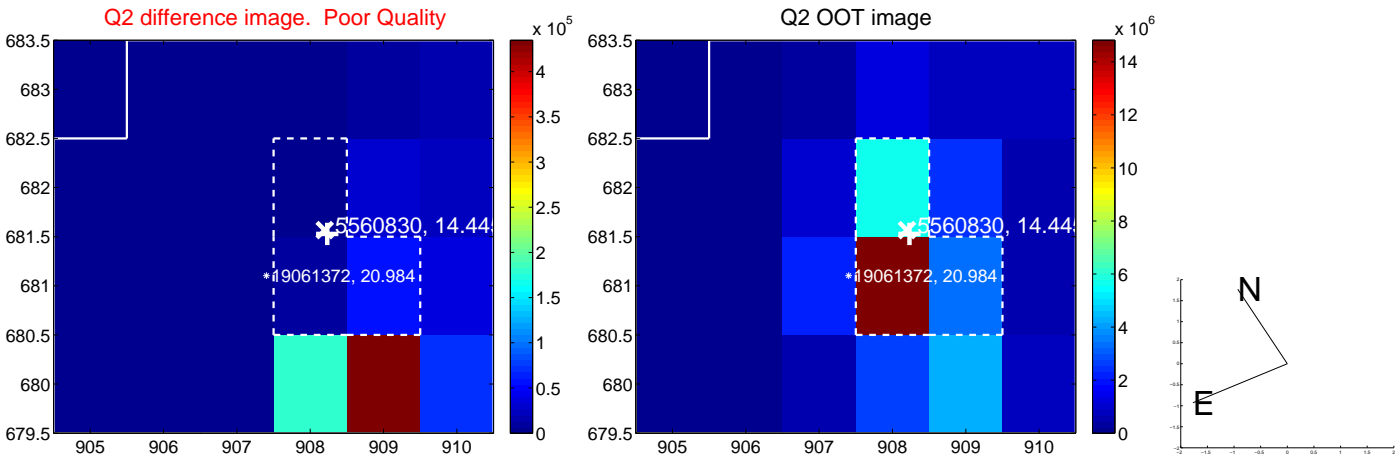
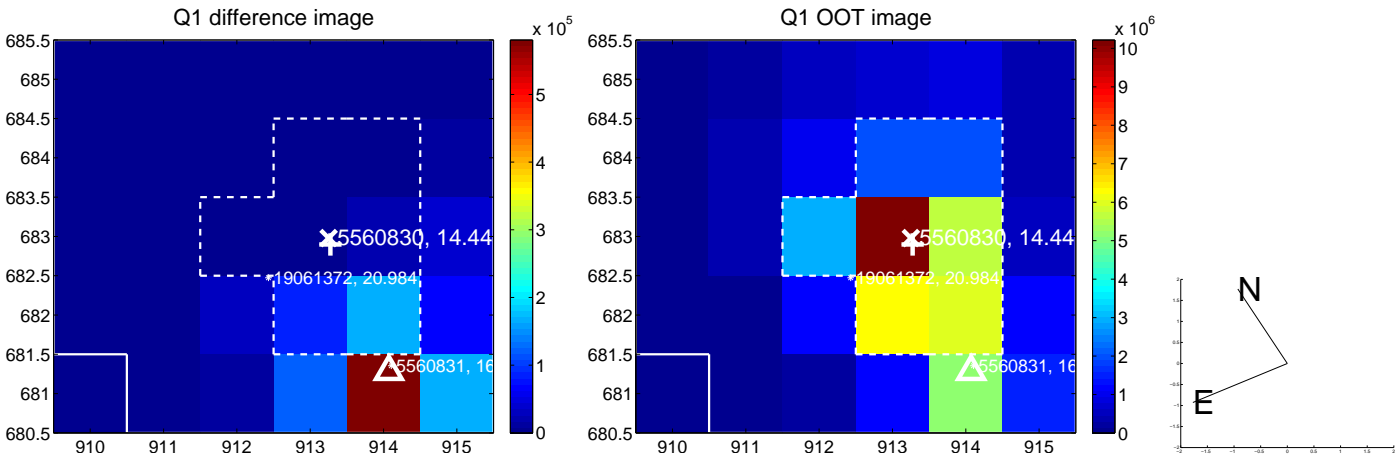
The direct PRF centroid is offset from the target star catalog position by about 0.33 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	6.553 ± 0.161	40.66	-0.024 ± 0.082	-6.553 ± 0.161
PRF-fit source offset from KIC position	7.298 ± 0.073	99.45	0.139 ± 0.067	-7.297 ± 0.073
photometric centroid source offset	93.53 ± 0.16	582.54	-3.08 ± 0.14	-93.48 ± 0.16

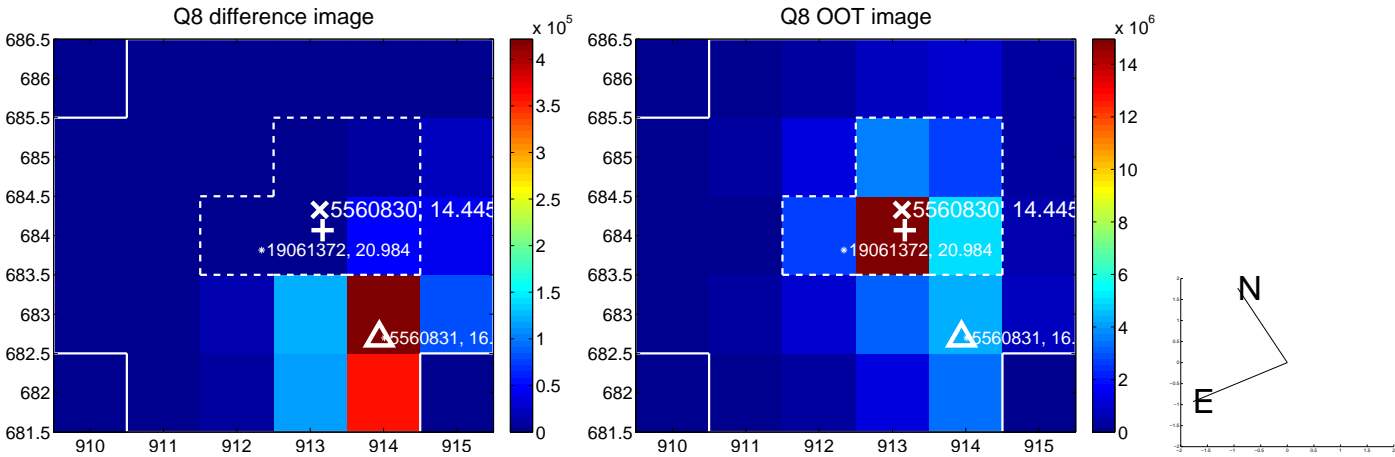
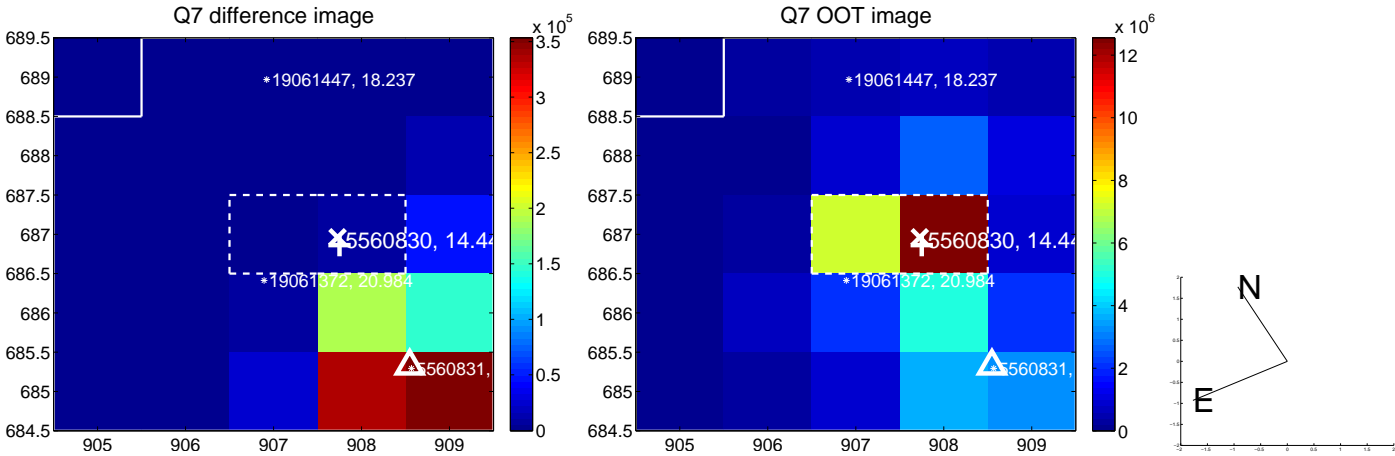
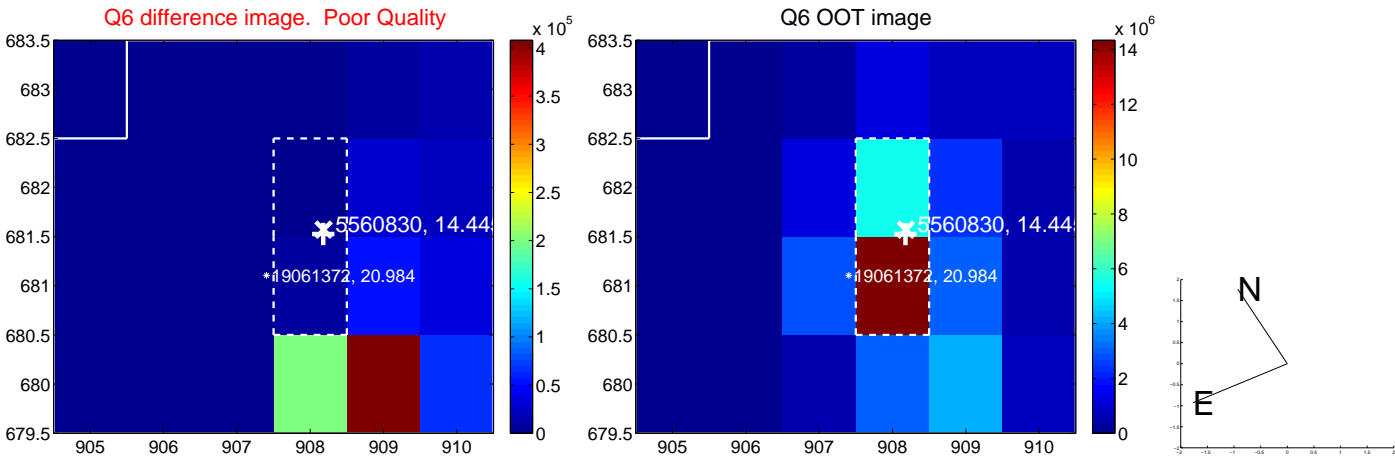
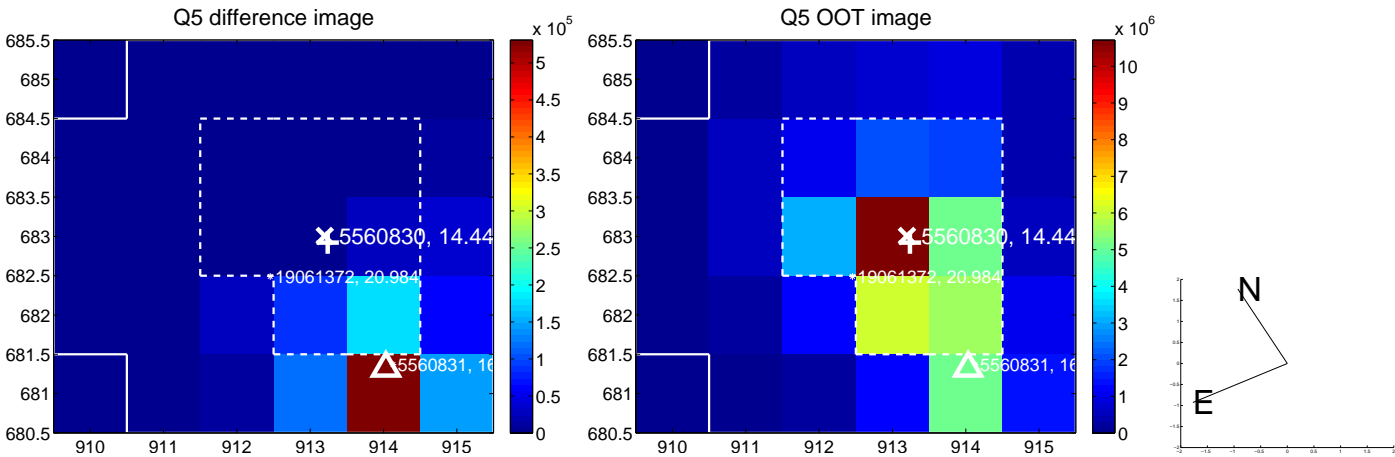


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

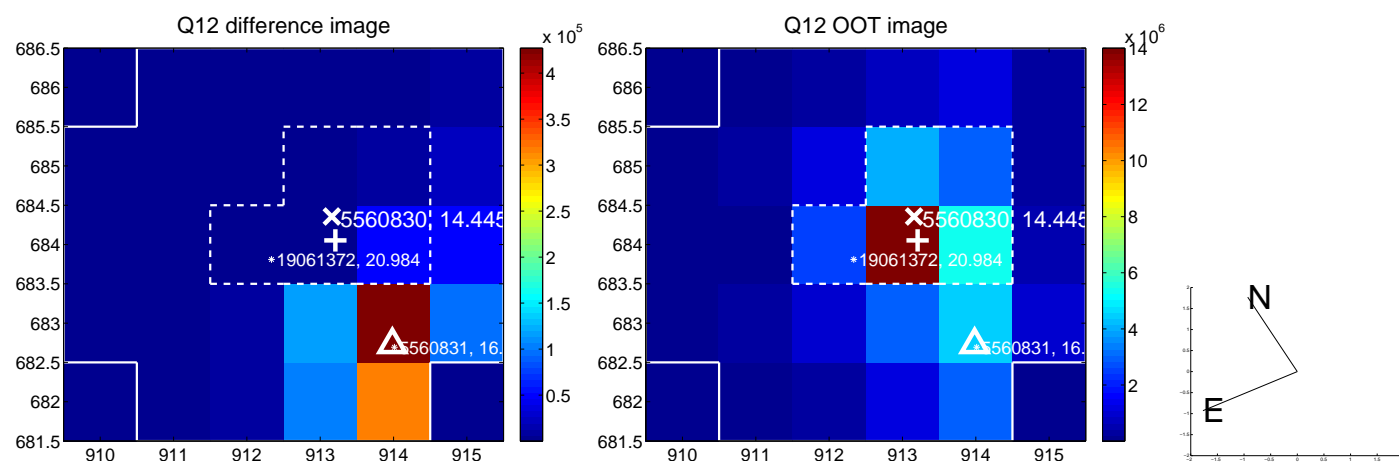
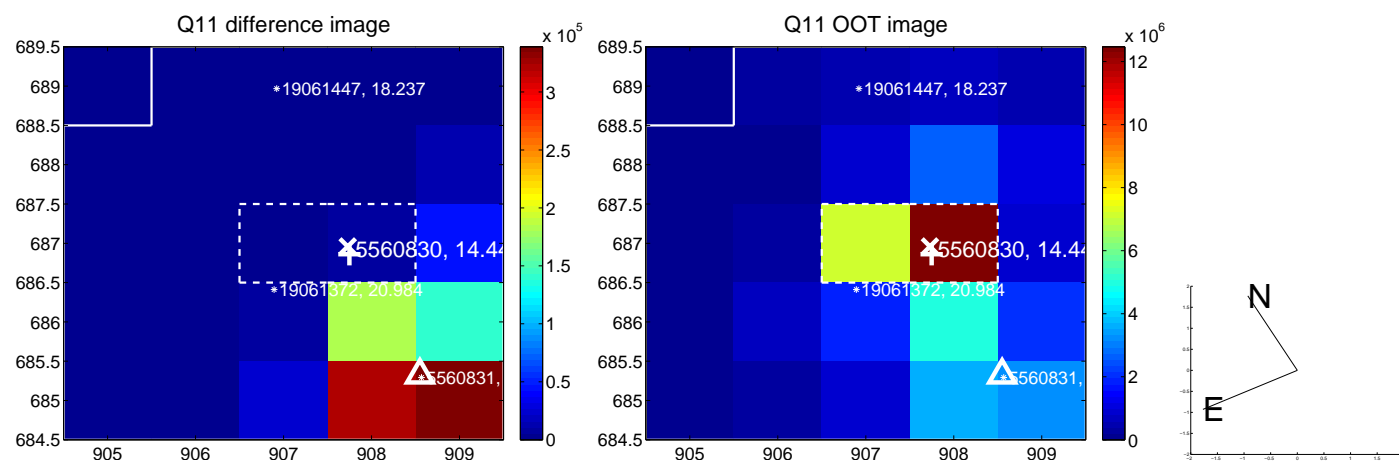
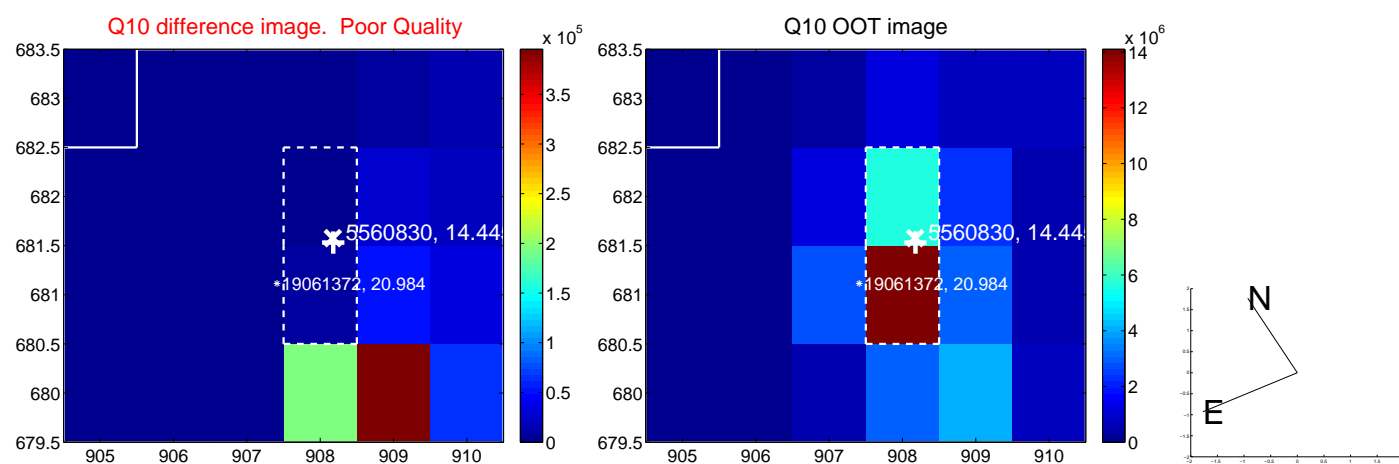
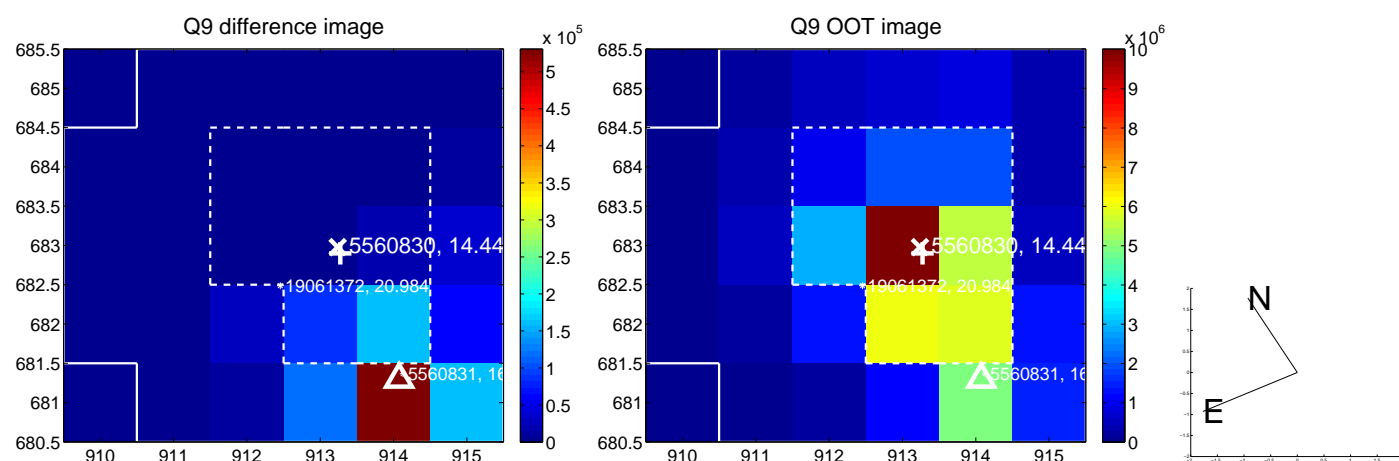
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



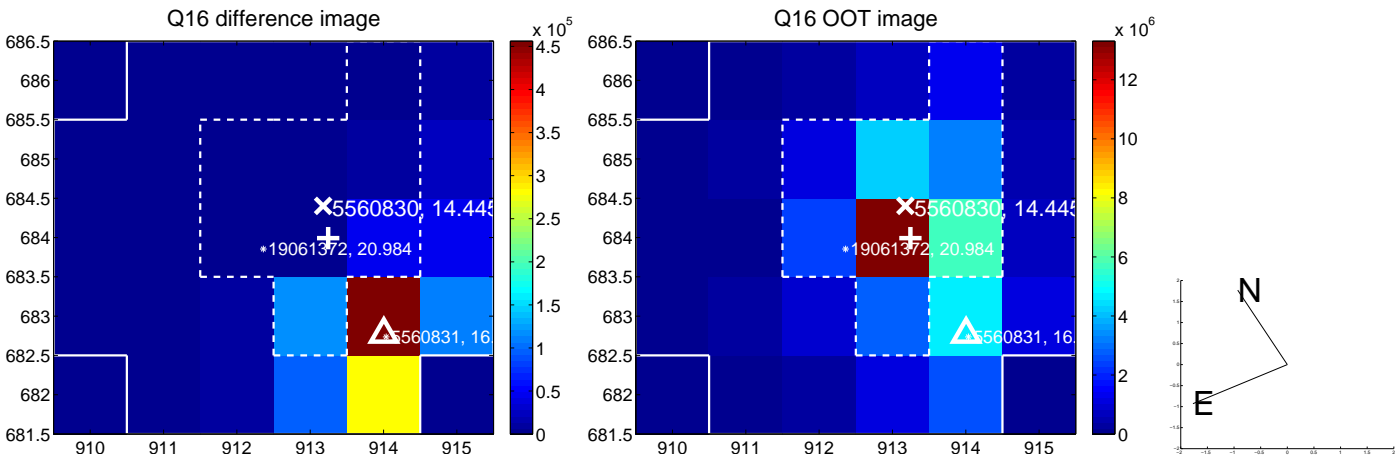
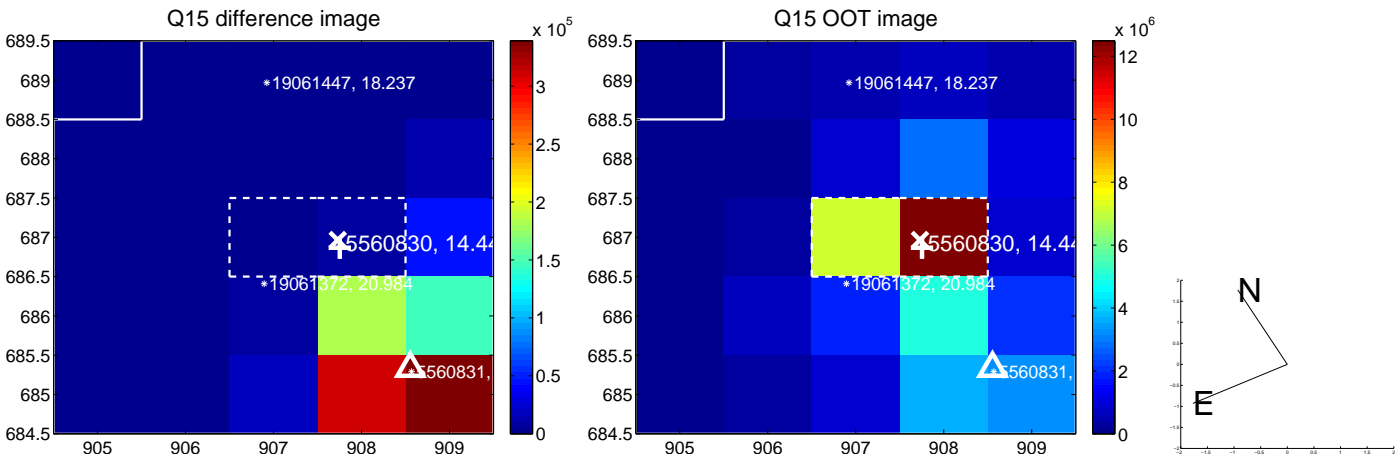
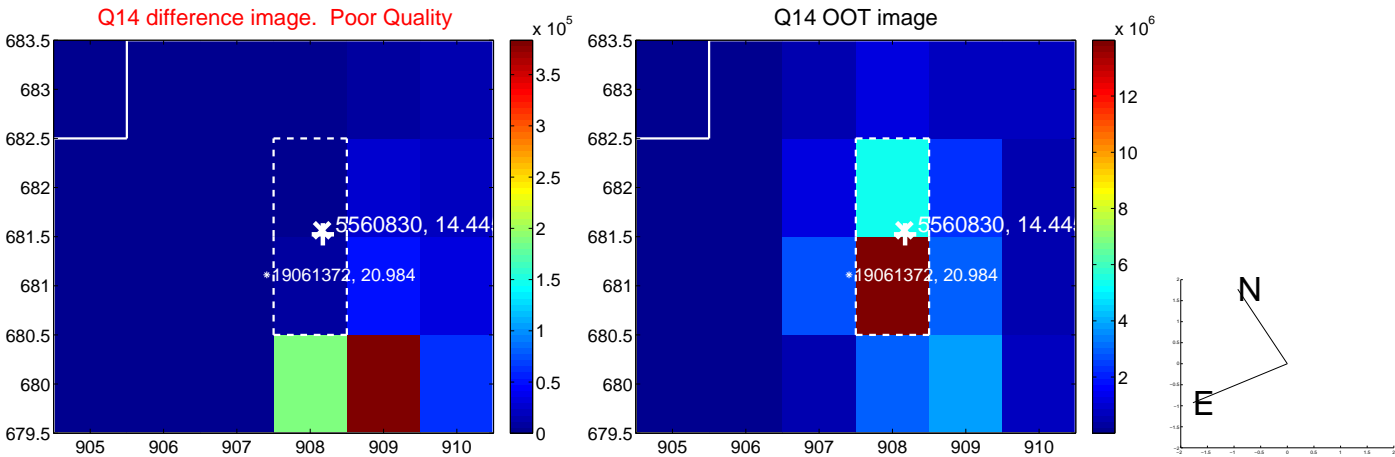
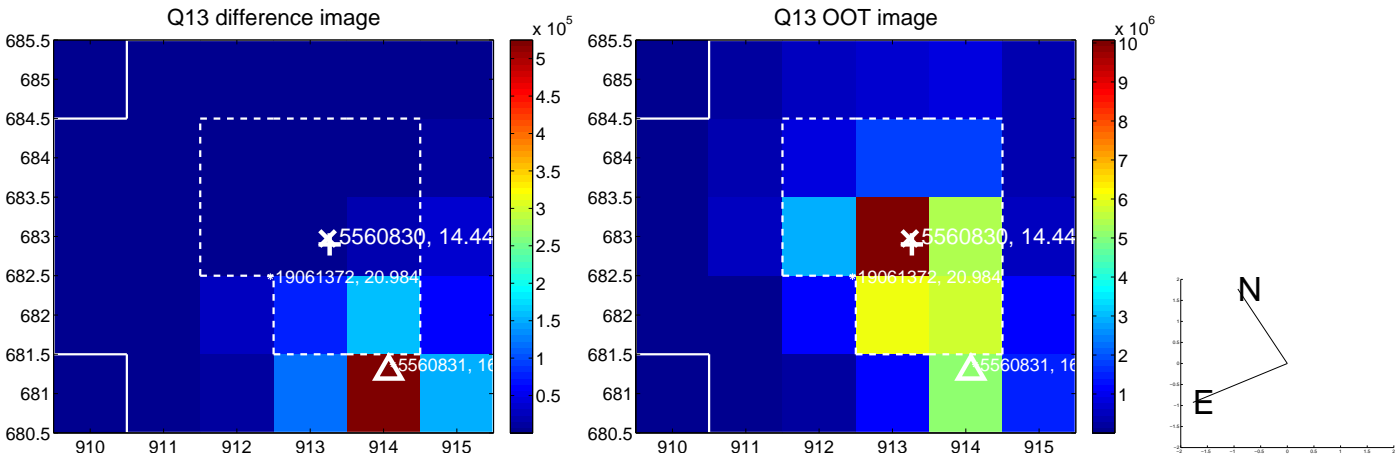
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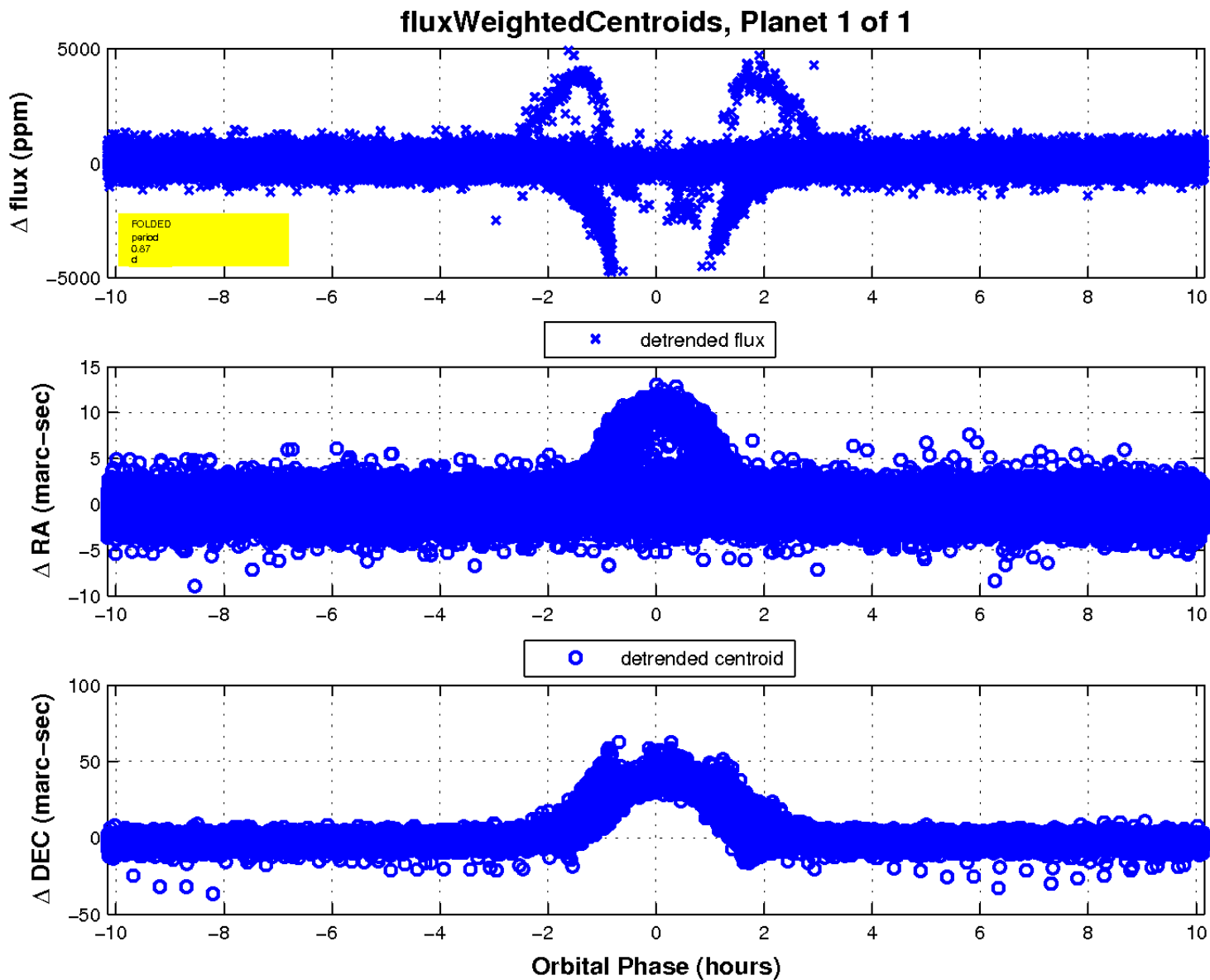
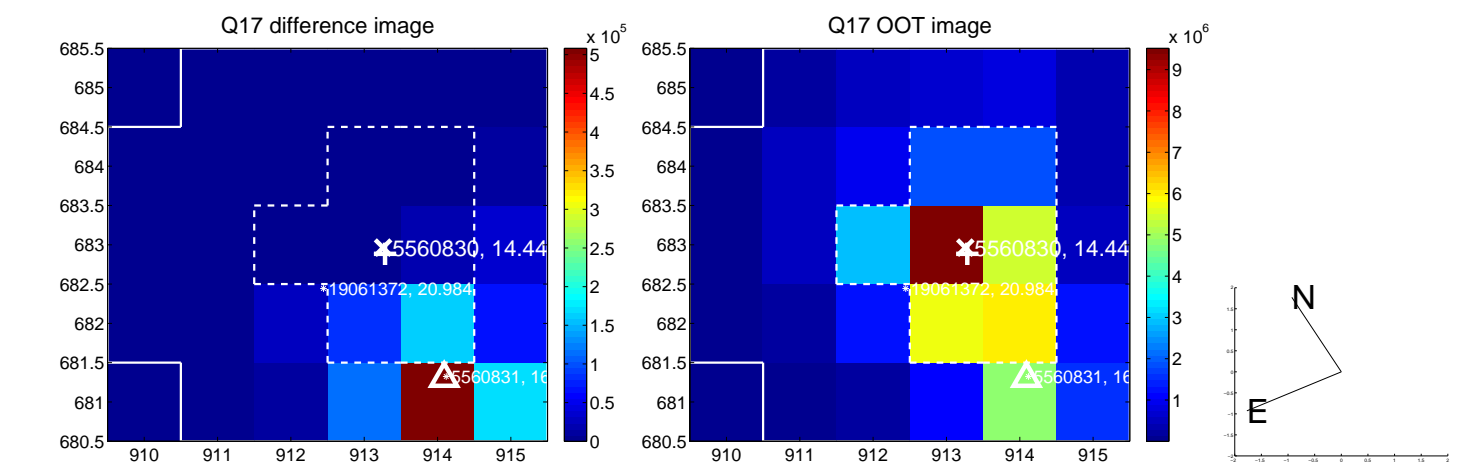
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UKIRT Image

Declination

