

KIC 005560831

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})
005560831-01	OBS	3819.01	0.867708	132.154850	70035.0	1.935	2868.1	1497.9	1.28	5510	35.27	4510.62

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005560831-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—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.

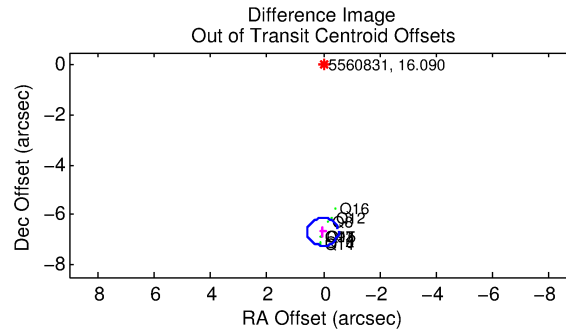
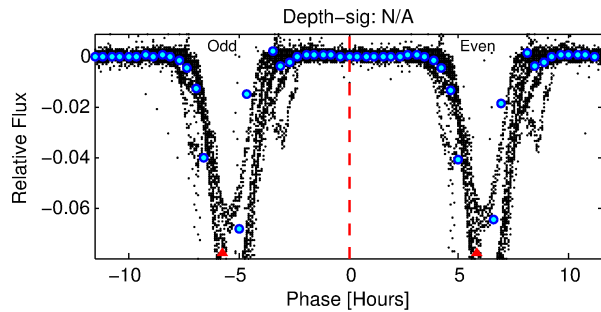
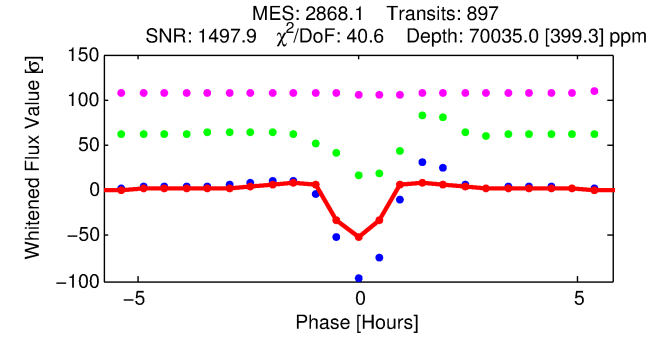
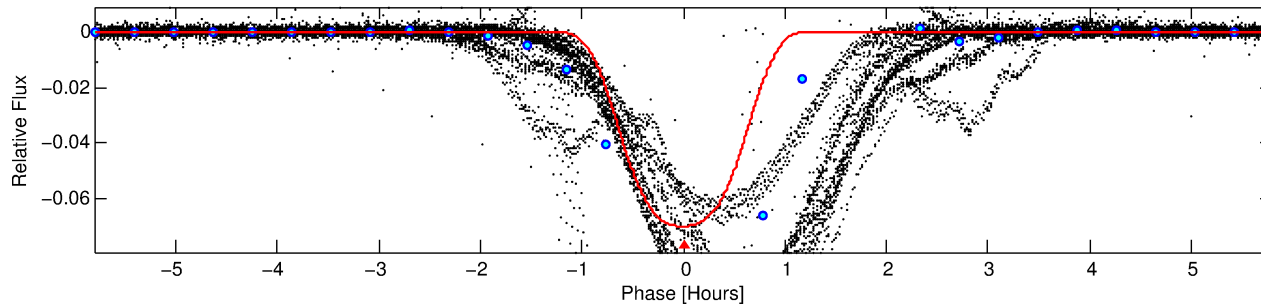
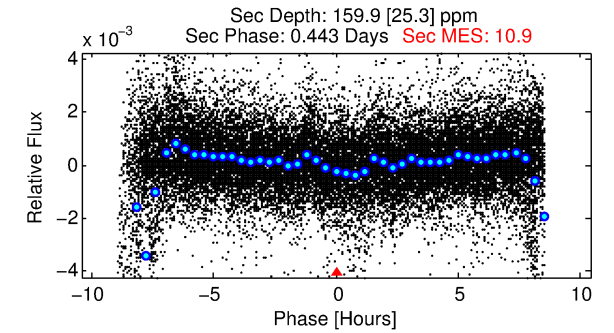
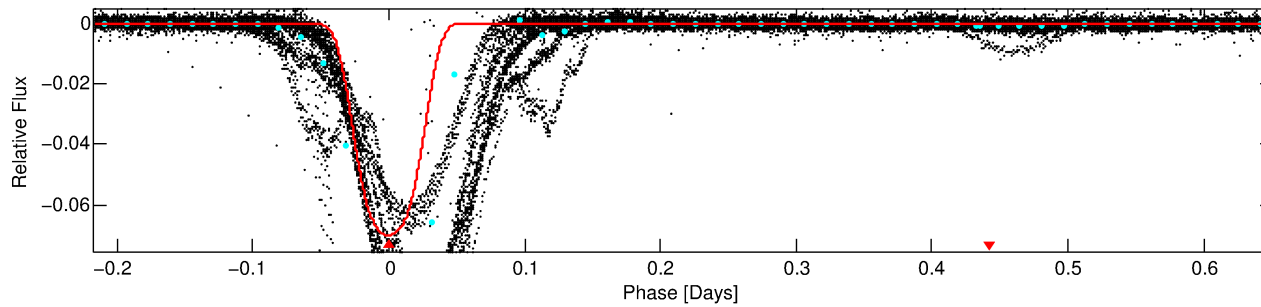
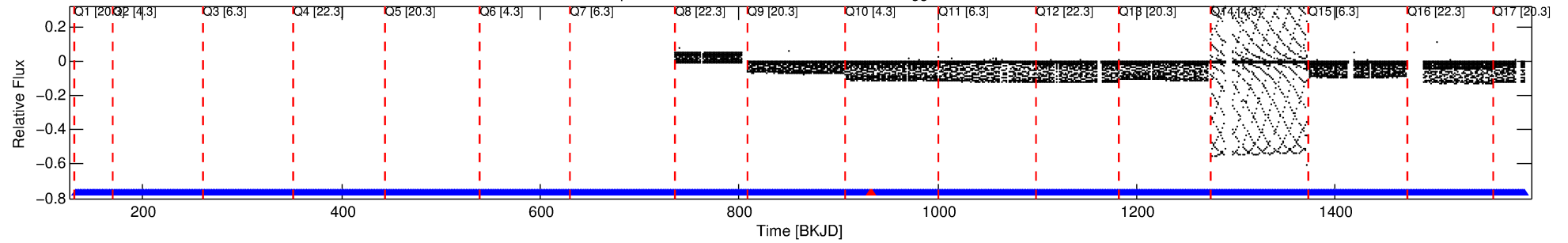
Ephemeris Match Information For 005560831-01

No Significant Match Found

DV One-Page Summary

KIC: 5560831 Candidate: 1 of 1 Period: 0.868 d
KOI: K03819.01 Corr: 0.797

Kp: 16.09 R*: 1.28 Rs Teff: 5510.0 K Logg: 4.19 Fe/H: 0.080



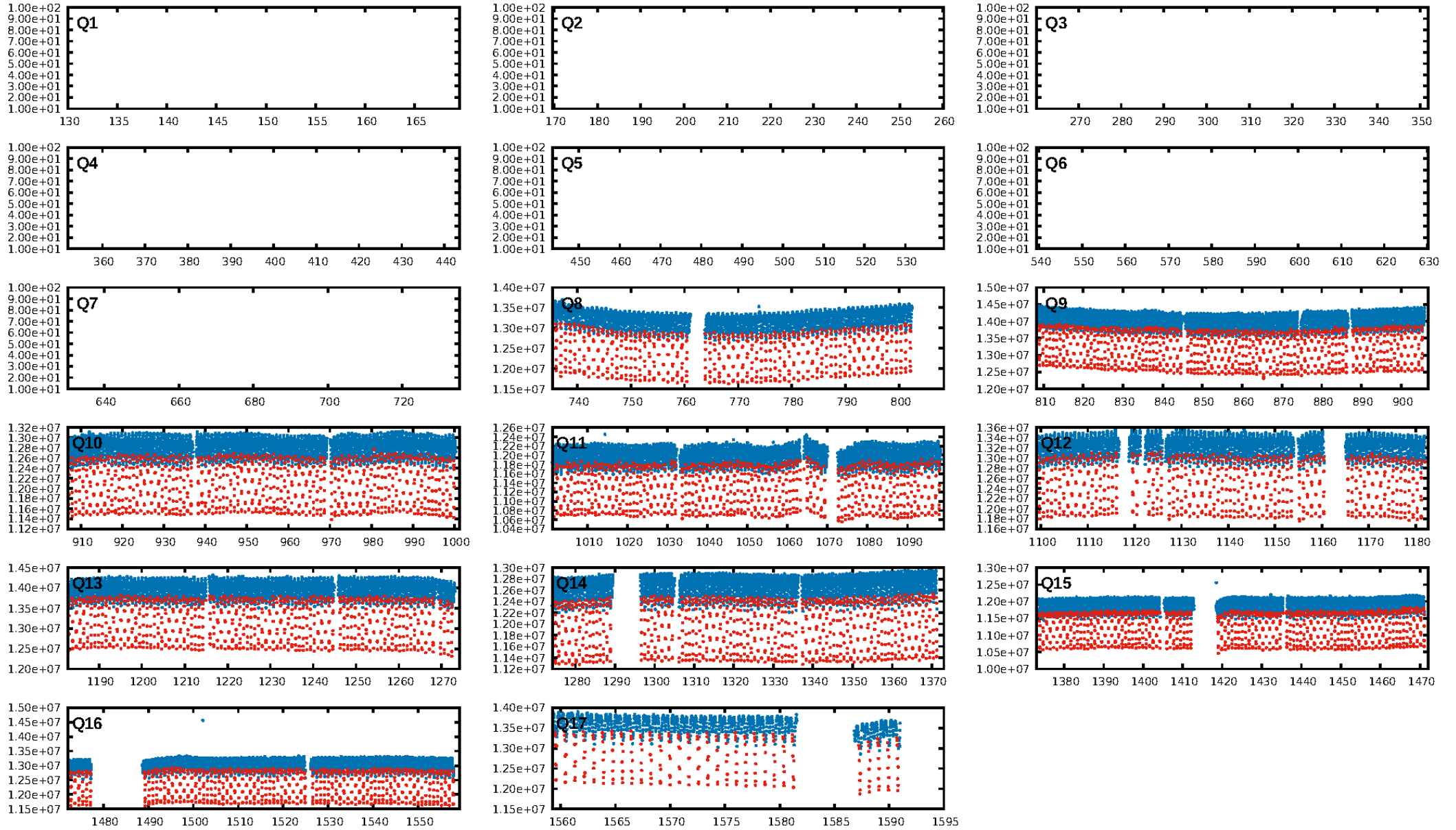
DV Fit Results:

Period = 0.86771 [0.00000] d
Epoch = 132.1549 [0.0001] BKJD
Rp/R* = 0.2533 [0.0015]
a/R* = 3.92 [0.05]
b = 0.57 [0.02]
Seff = 4510.62 [2322.02]
Teq = 2090 [269] K
Rp = 35.27 [10.62] Re
a = 0.0173 [0.0052] AU
Ag = 0.02 [0.01] [-89.47σ]
Teffp = 1231 [66] K [-3.10σ]

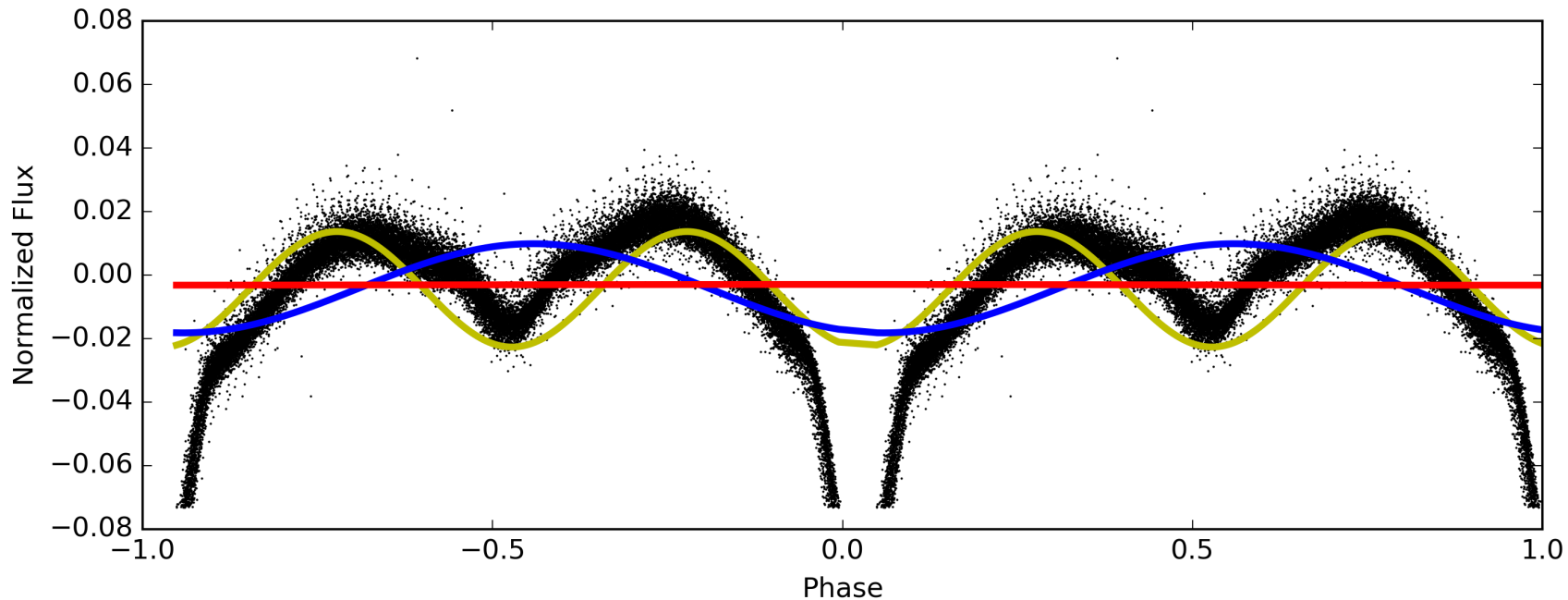
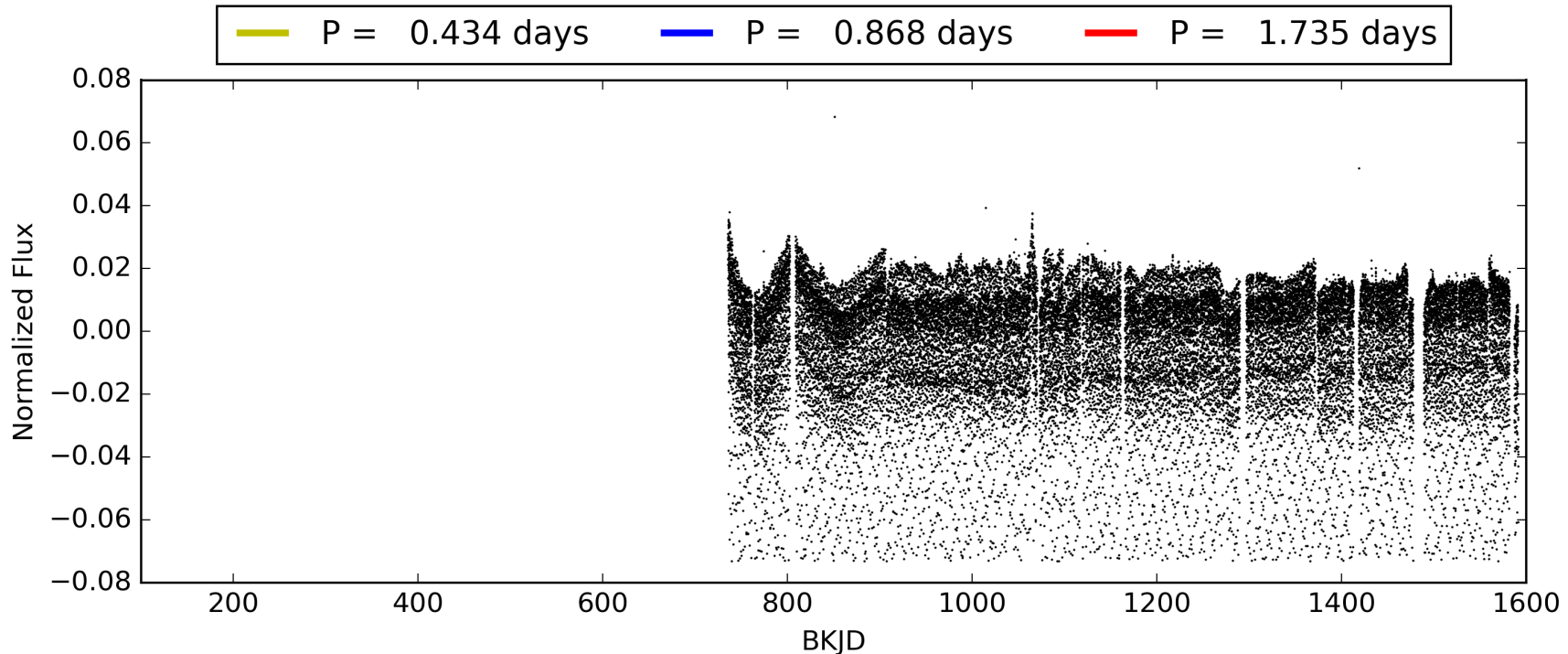
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGoF-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [864/866]
GhostDiagnostic-chr: N/A
Centroid-sig: 0.0%
Centroid-so: 1.623 arcsec [563.86σ]
OotOffset-rm: 6.699 arcsec [36.17σ]
KicOffset-rm: 0.014 arcsec [0.20σ]
OotOffset-st: 2/2/3/3 [10]
KicOffset-st: 2/2/3/3 [10]
DiffImageQuality-fgm: 1.00 [10/10]
DiffImageOverlap-fno: 1.00 [10/10]

TCE 005560831-01, PDC Light Curves

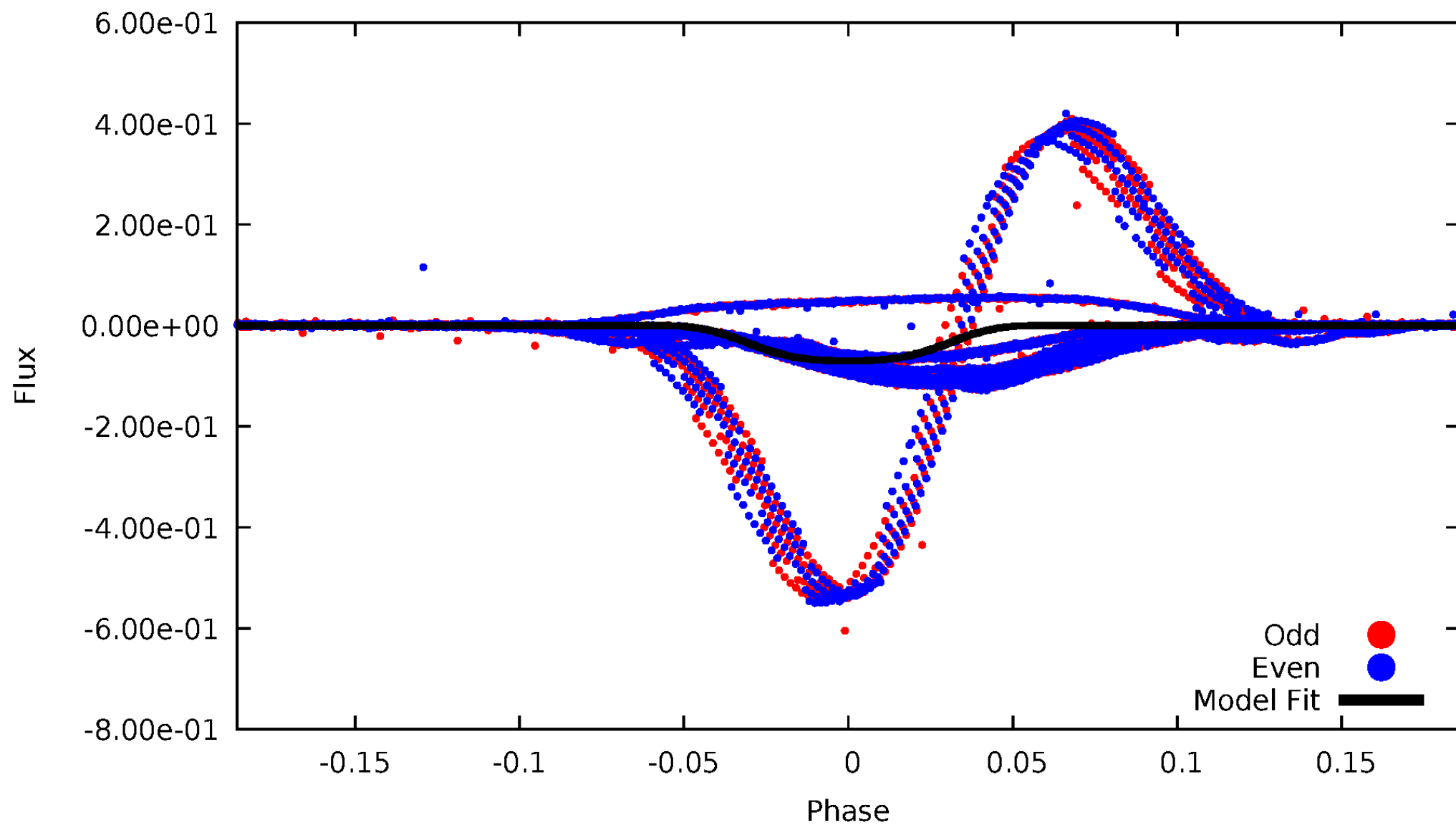


TCE 005560831-01



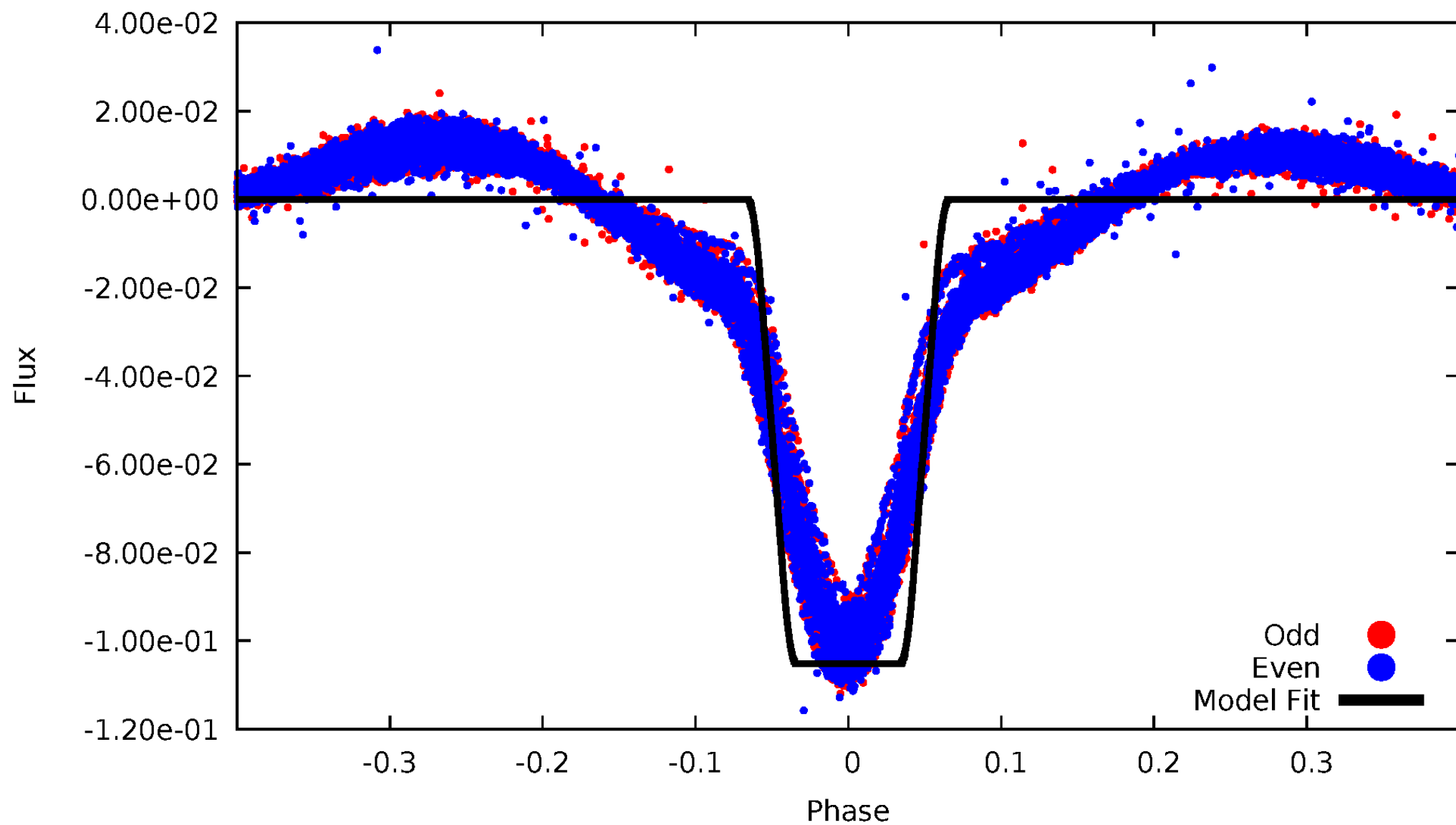
DV Odd/Even

TCE 005560831-01



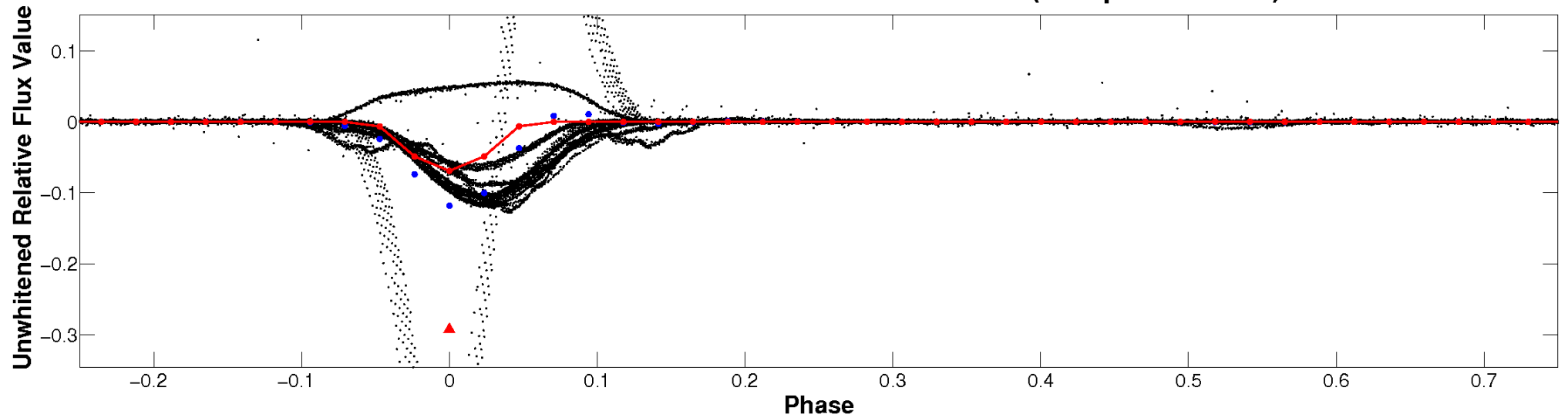
ALT Odd/Even

TCE 005560831-01

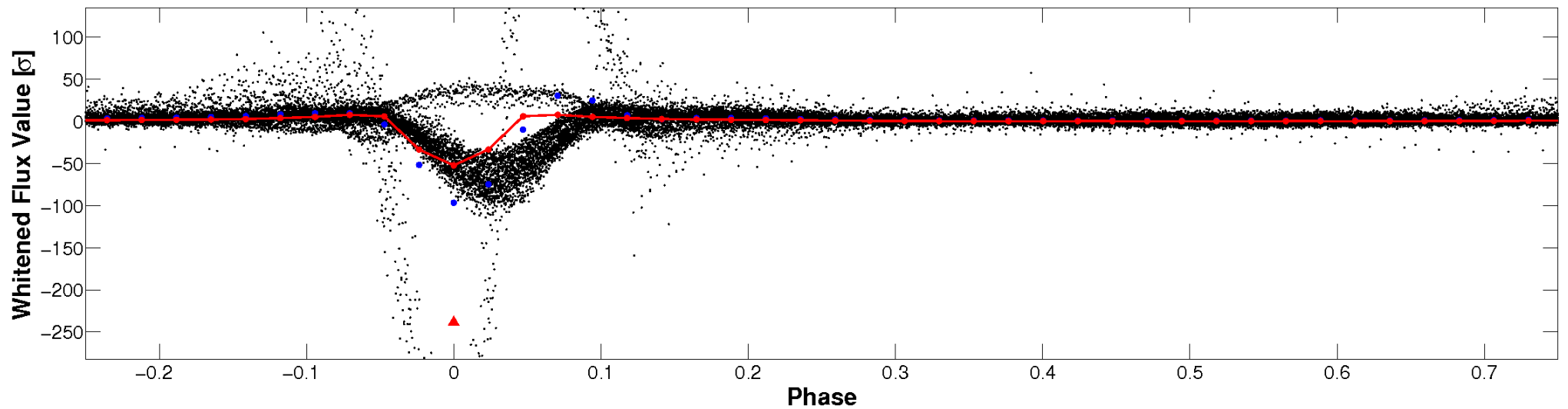


Non-Whitened Vs. Whitened Light Curve

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

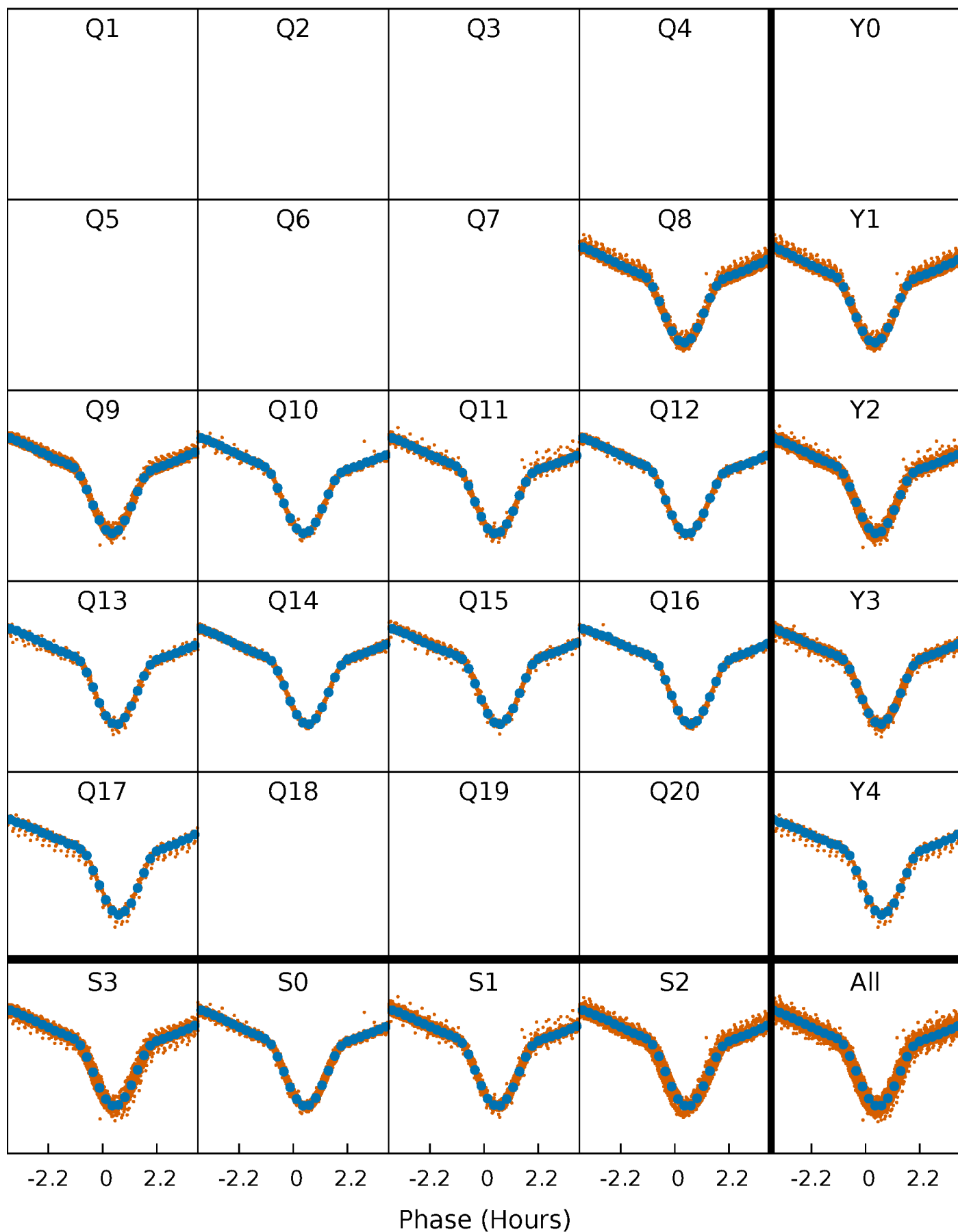


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



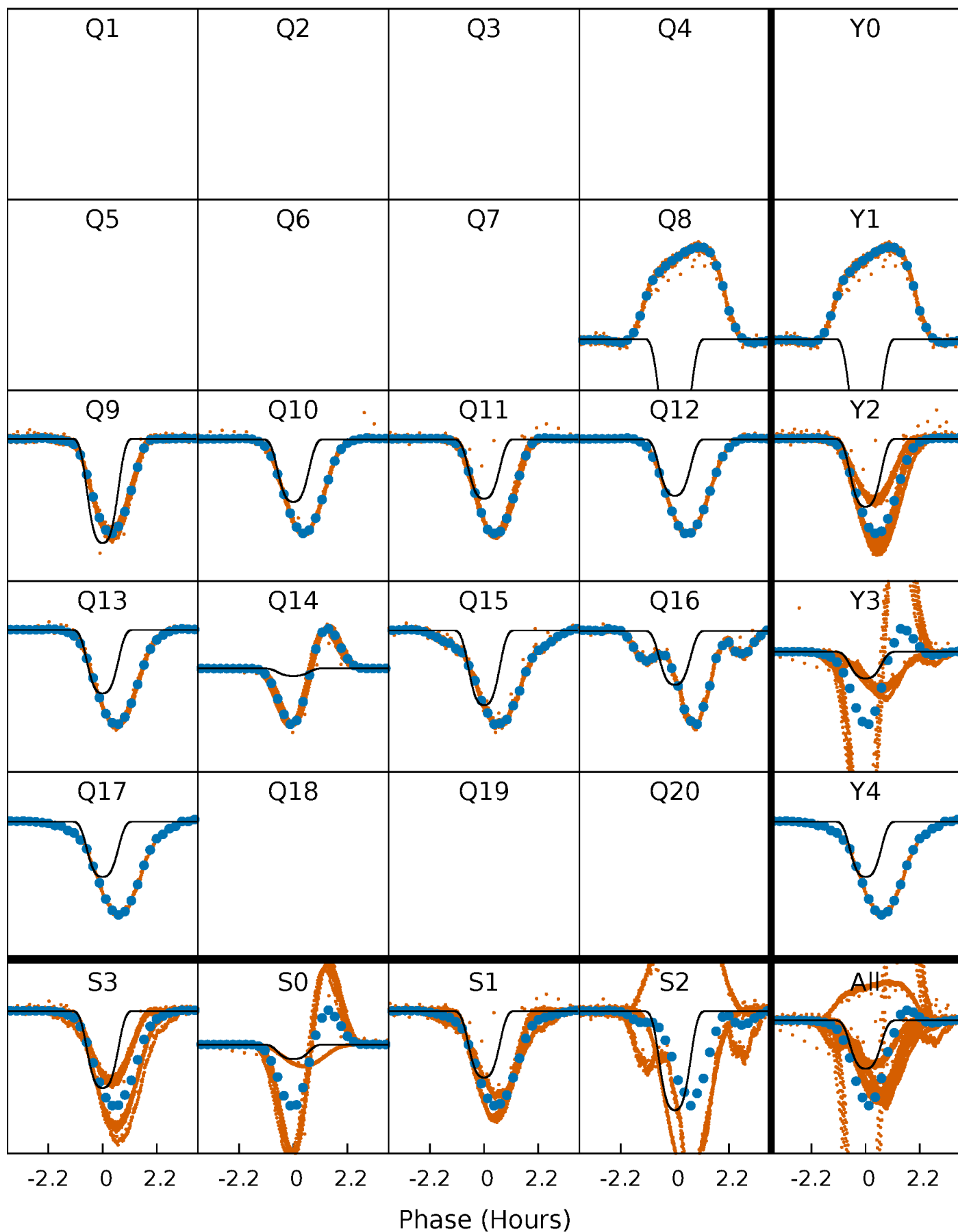
PDC Quarter-Phased Transit Curves

TCE 005560831-01 P= 0.867708 Days $T_0=132.154850$ (BKJD)



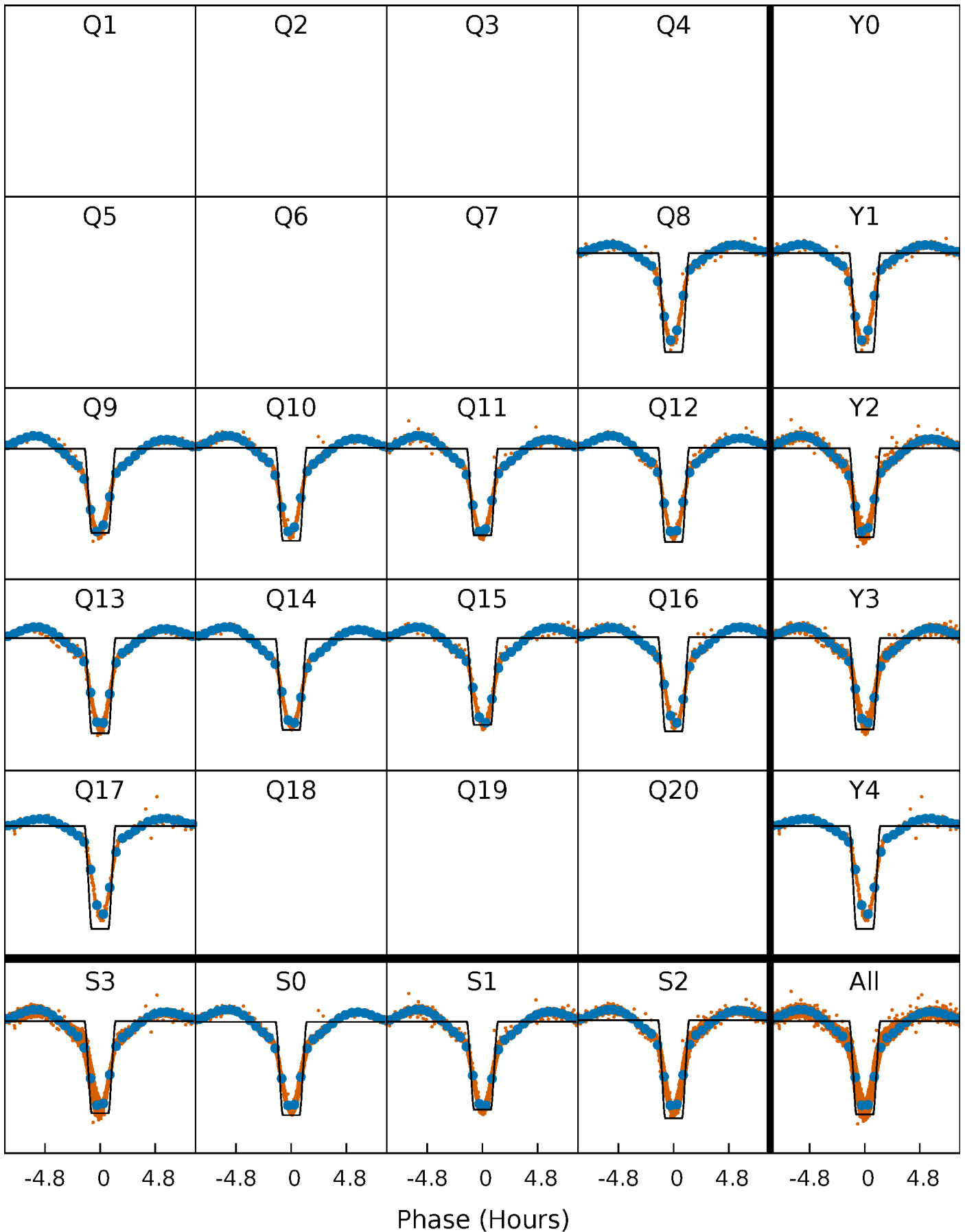
DV Quarter-Phased Transit Curves

TCE 005560831-01 P= 0.867708 Days $T_0=132.154850$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

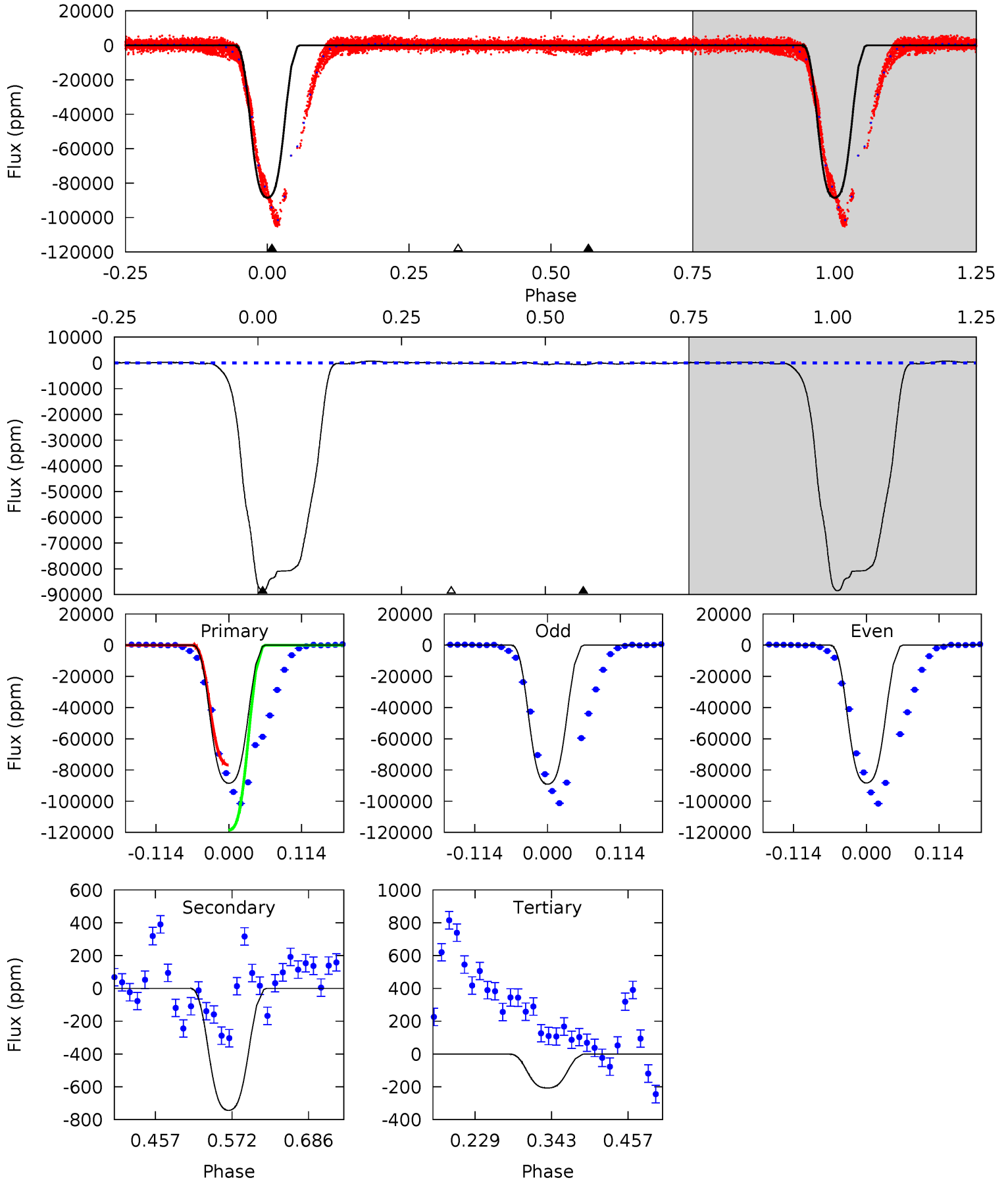
TCE 005560831-01 P= 0.867710 Days $T_0=132.174380$ (BKJD)



DV Model-Shift Uniqueness Test

005560831-01, P = 0.867708 Days, E = 132.154850 Days

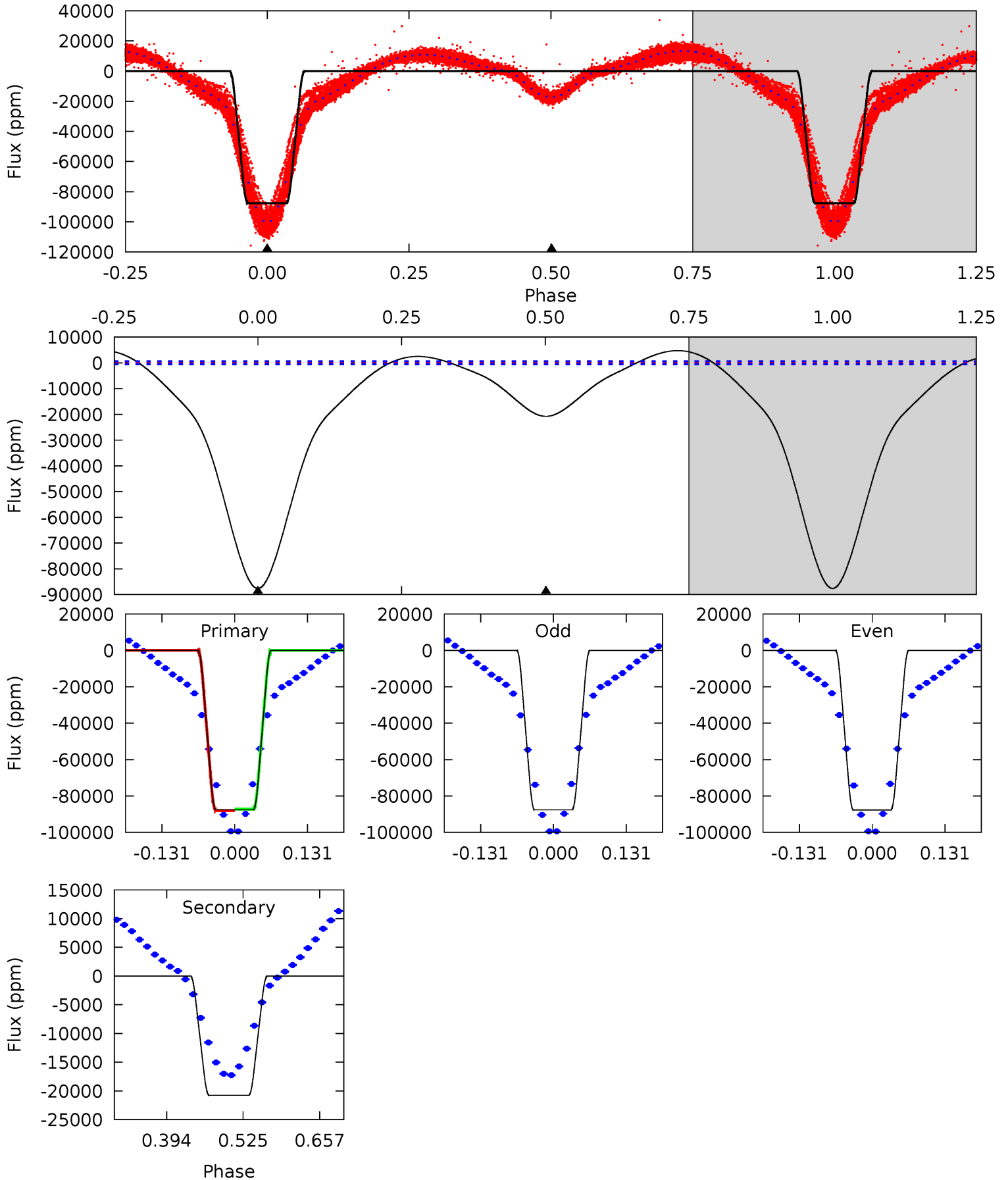
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2366	19.9	5.55	0	4.54	1.58	9.77	2360	2366	14.3	19.9	10.7	1.26	0.01	0



Alt Model-Shift Uniqueness Test

005560831-01, P = 0.867710 Days, E = 132.174380 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
686.9	162.9	0	0	4.51	1.51	44.7	686.9	686.9	162.9	162.9	0.14	1.00	0.05	3.17



Stellar Parameters For KIC 005560831

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5510^{+200}_{-166}	$4.186^{+0.294}_{-0.196}$	$0.080^{+0.250}_{-0.250}$	$1.276^{+0.384}_{-0.384}$	$0.911^{+0.113}_{-0.075}$	$0.618^{+1.122}_{-0.308}$
	+4%/-3%	+7%/-5%	+312%/-312%	+30%/-30%	+12%/-8%	+181%/-50%
Source	PHO54	PHO54	PHO54	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 005560831-01 / KOI 3819.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-744 ± 37	$35.15^{+5.47}_{-5.75}$	2912^{+232}_{-272}	-2866^{+231}_{-173}	$0.100^{+0.043}_{-0.026}$
Alt.	-20774 ± 128	$45.25^{+7.33}_{-7.10}$	2918^{+248}_{-250}	3866^{+113}_{-99}	$1.728^{+0.674}_{-0.425}$

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

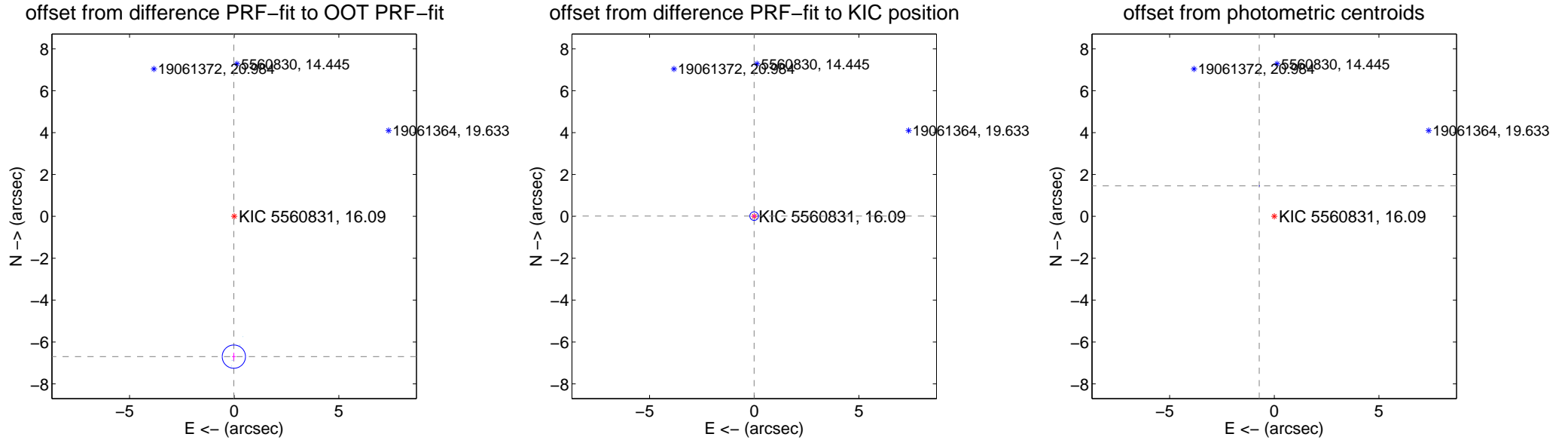
DV Centroid Data

Supplemental centroid analysis for 005560831-01. Kepler magnitude: 16.09. Transit SNR 1497.88

There are 10 quarters with good PRF difference image offsets

The OOT PRF centroid is offset from the target star catalog position by about 6.96 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	6.699 ± 0.185	36.17	0.017 ± 0.090	-6.699 ± 0.185
PRF-fit source offset from KIC position	0.014 ± 0.068	0.20	0.005 ± 0.067	0.013 ± 0.069
photometric centroid source offset	1.62 ± 0.00	563.86	0.72 ± 0.00	1.46 ± 0.00

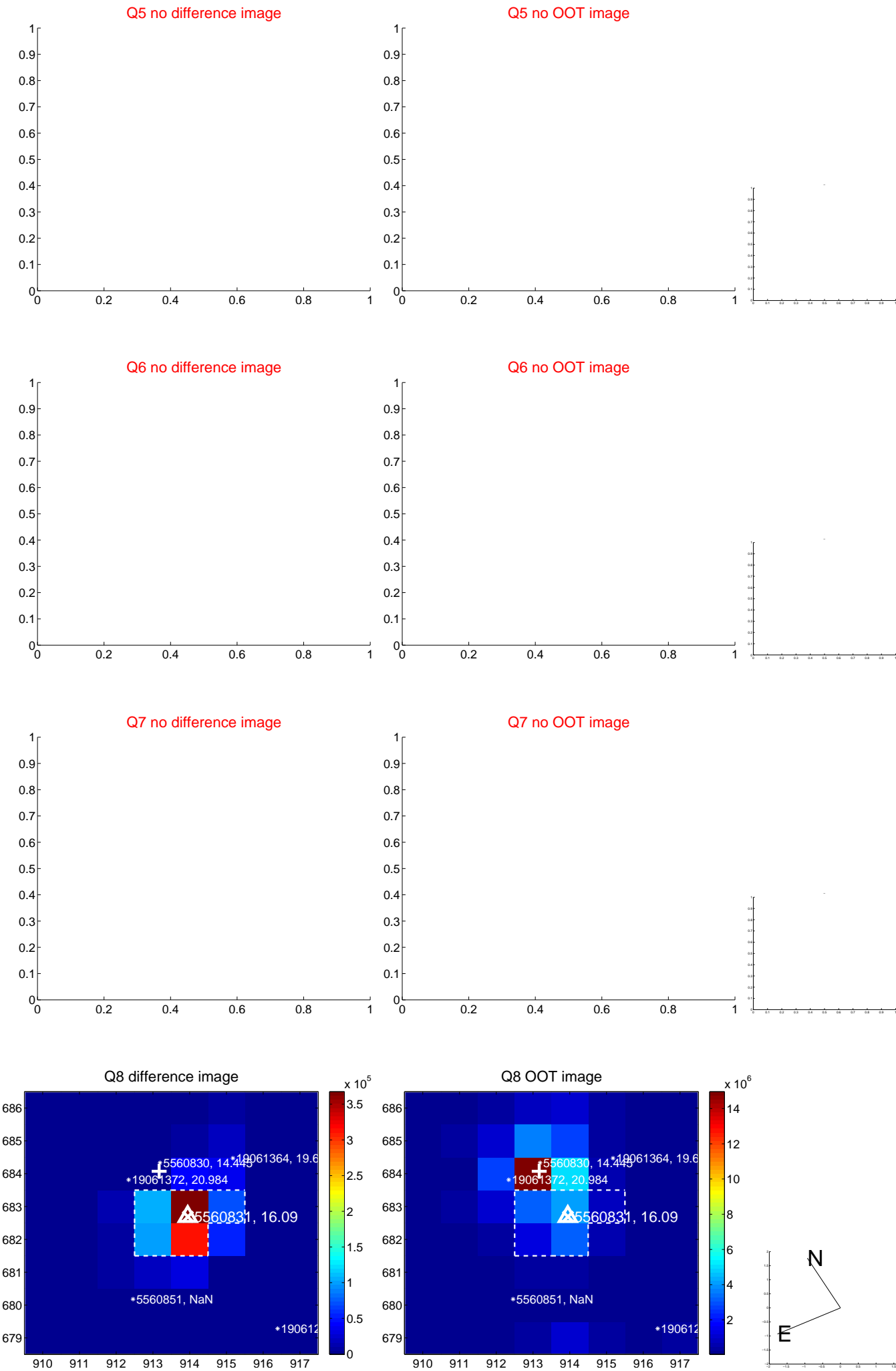


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

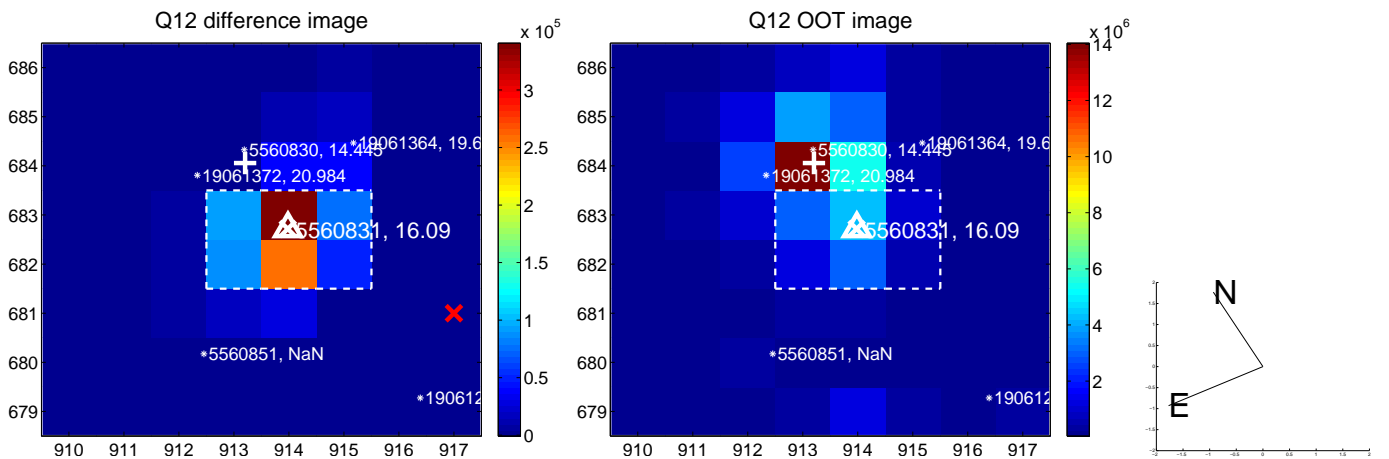
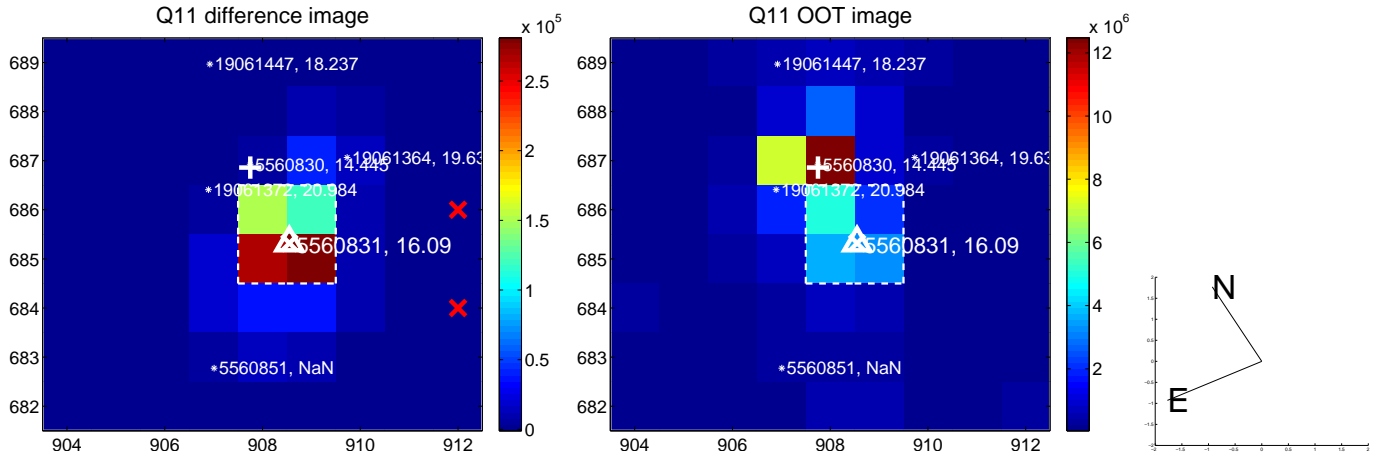
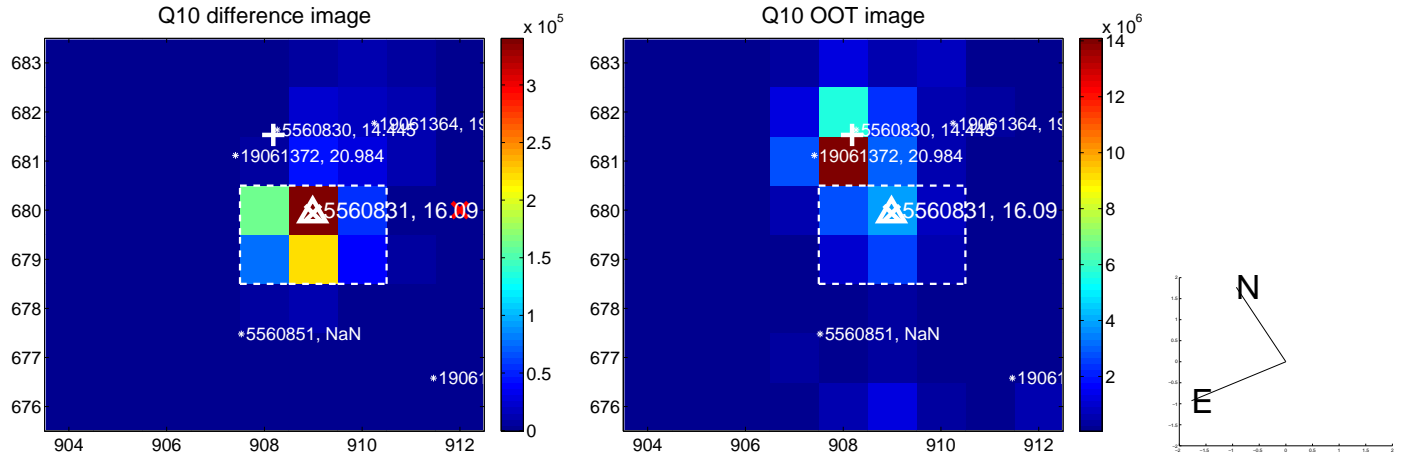
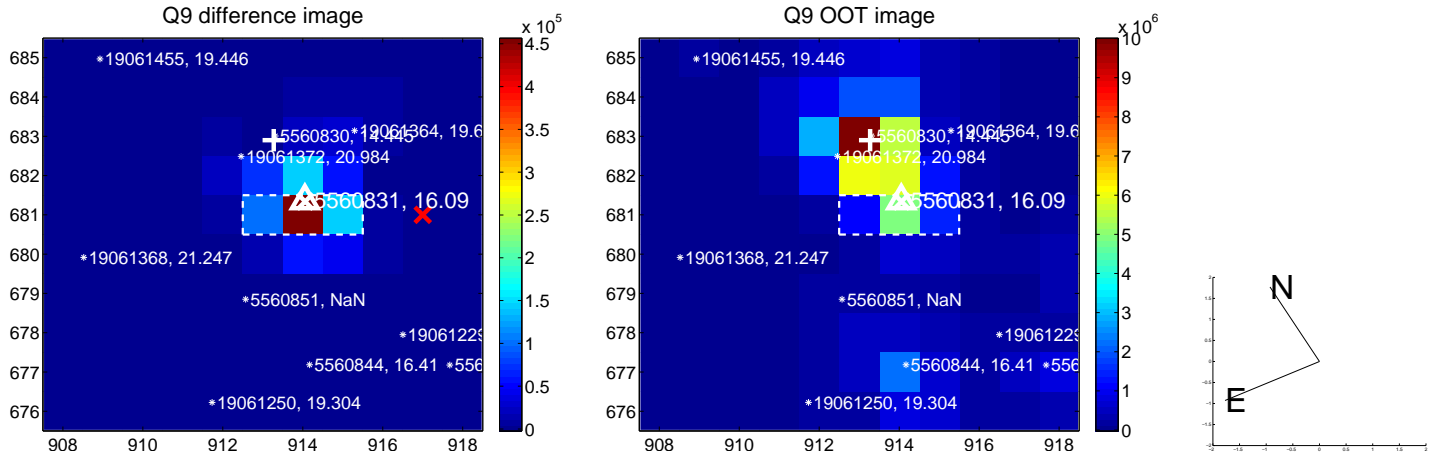
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



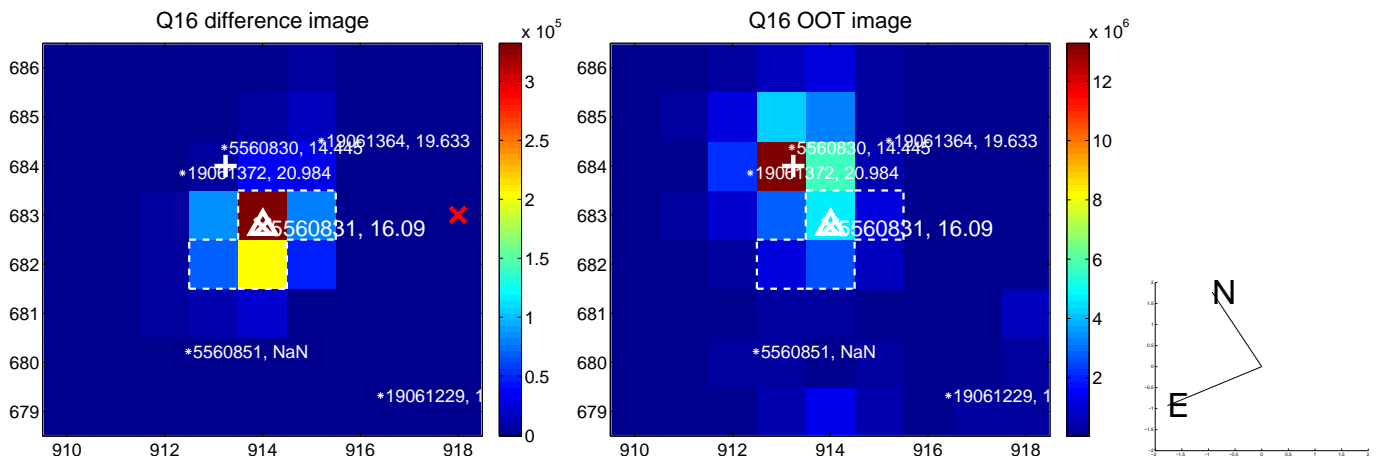
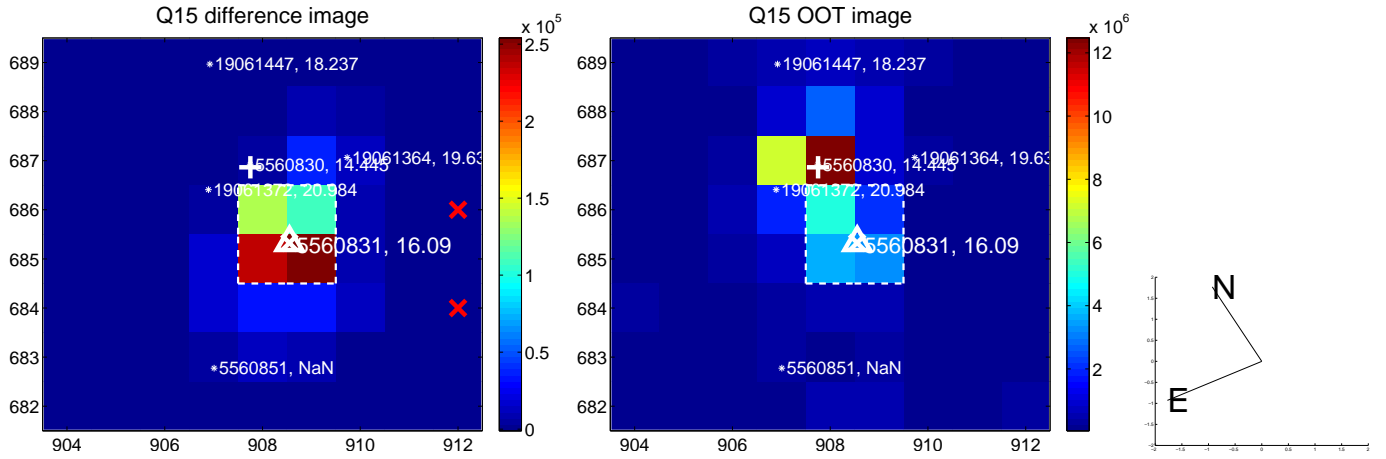
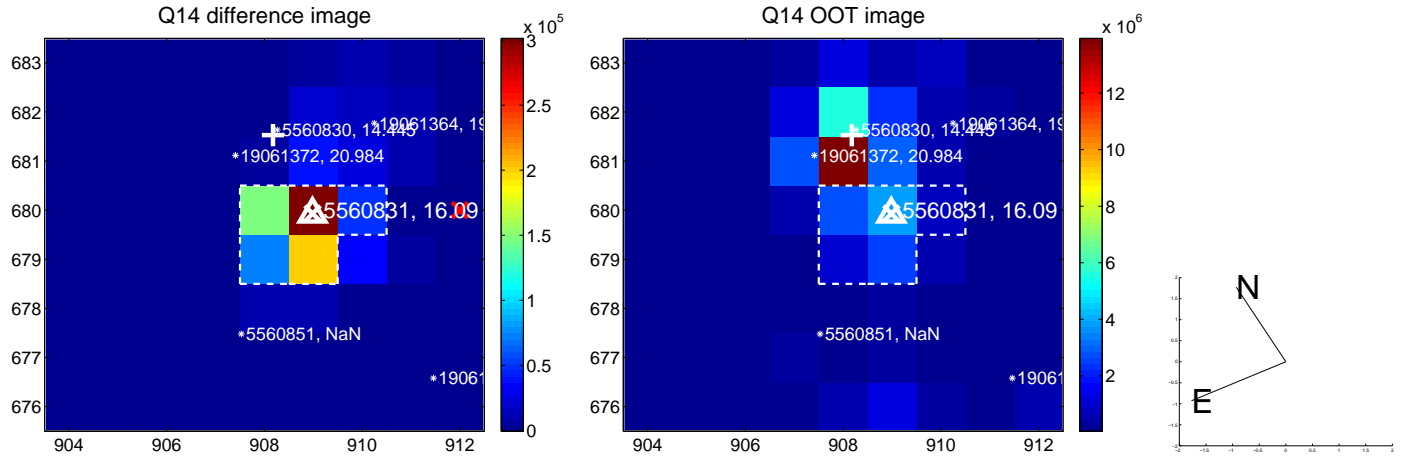
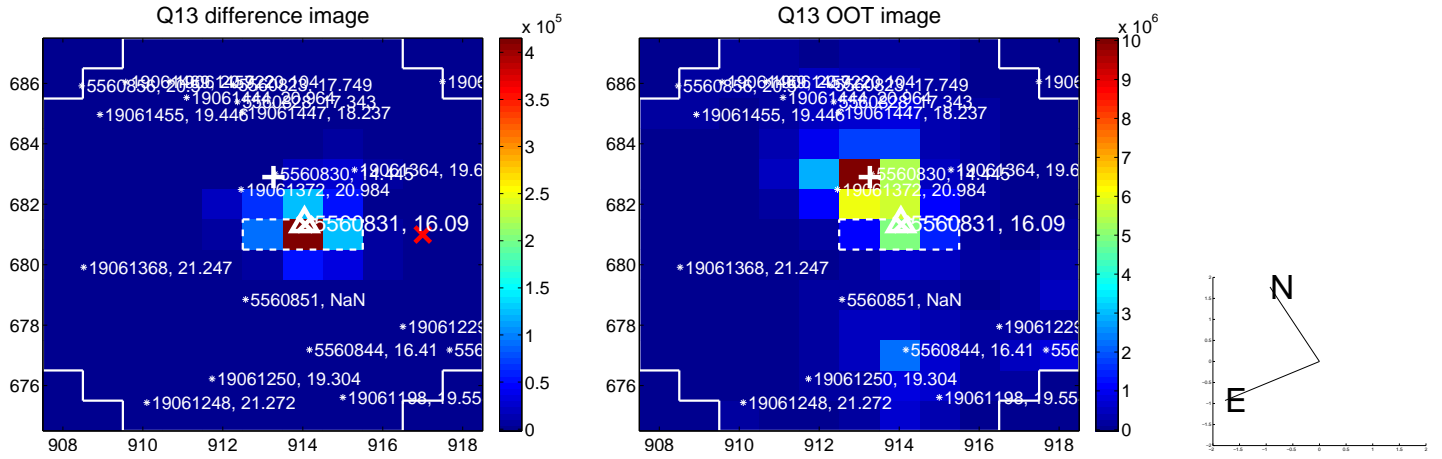
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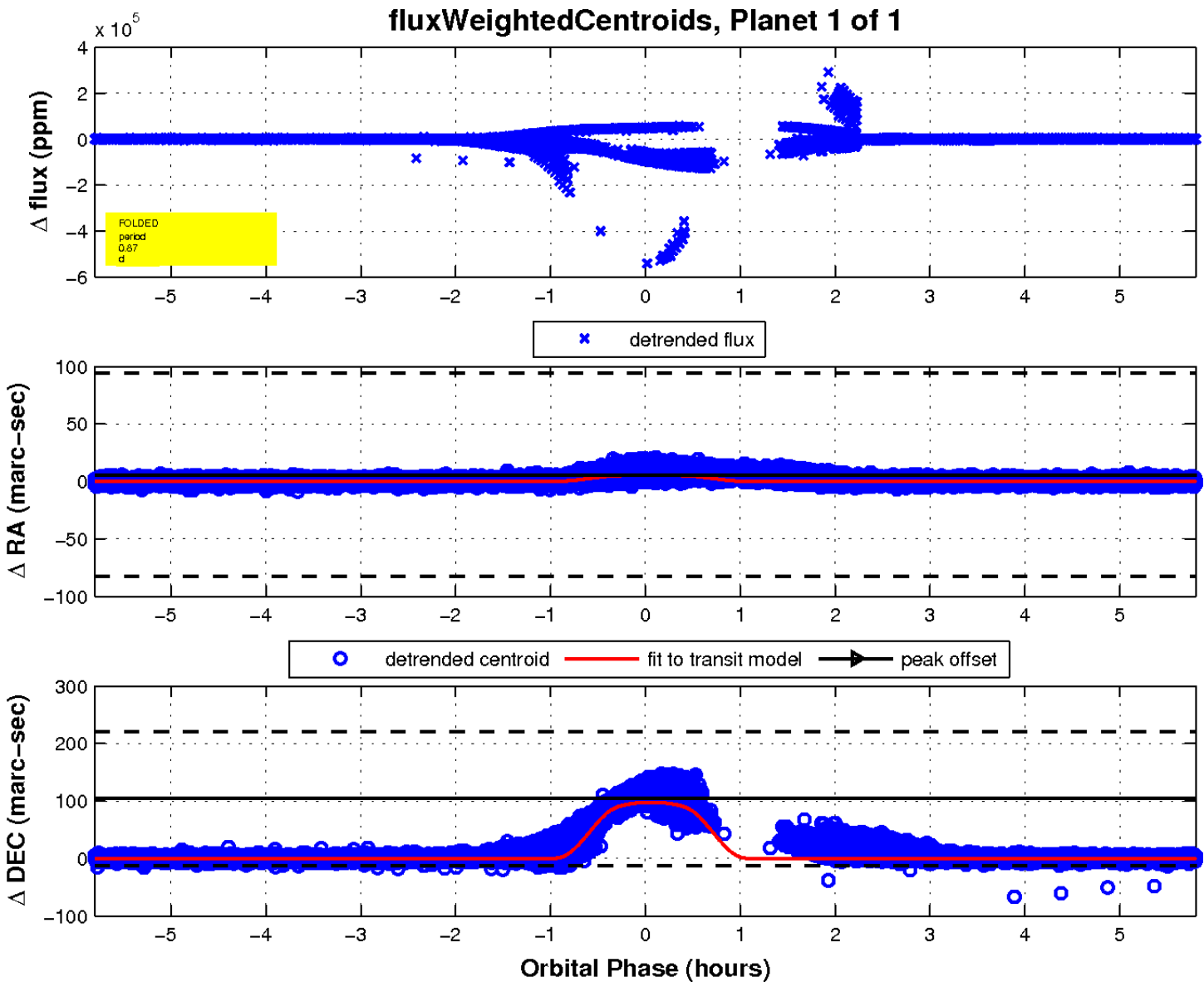
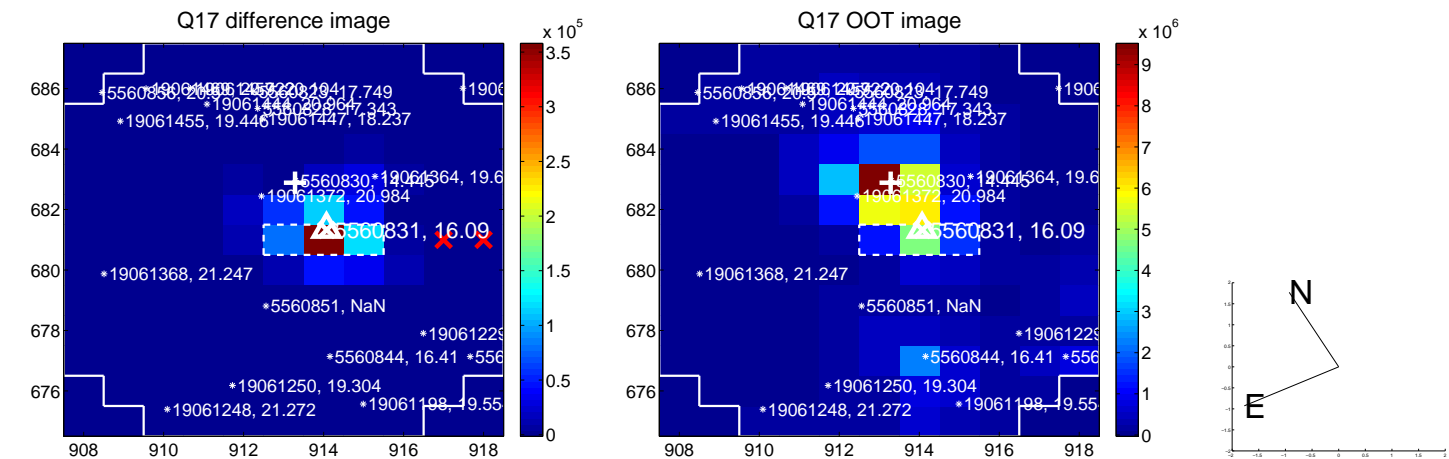
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UKIRT Image

Declination

