

KIC 010555365

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})
010555365-01	OBS	3771.01	5.801835	131.775742	21128.8	4.029	202.8	169.4	0.92	5687	13.85	226.21

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010555365-01	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.

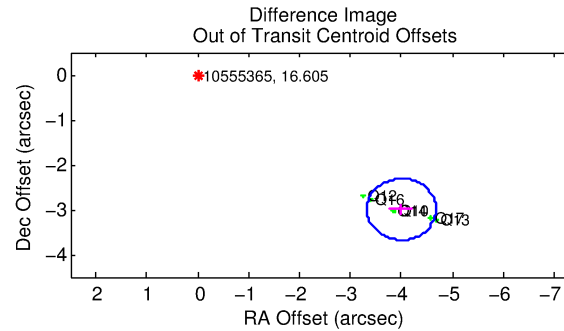
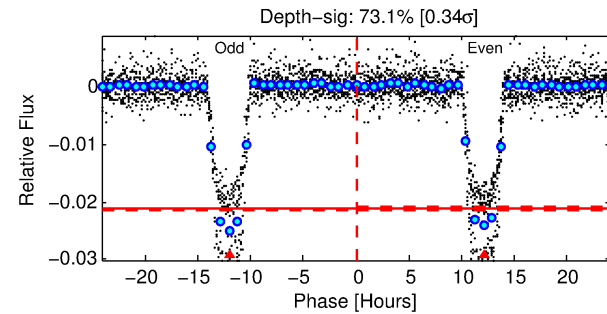
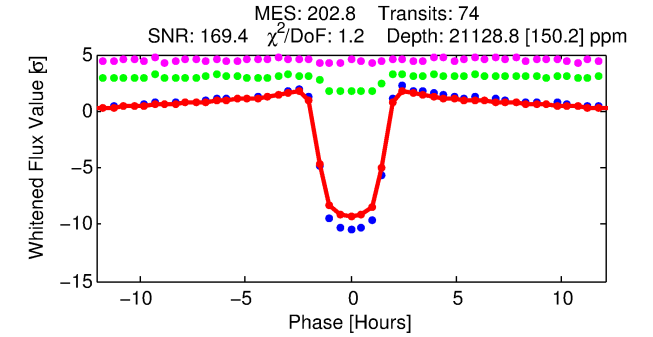
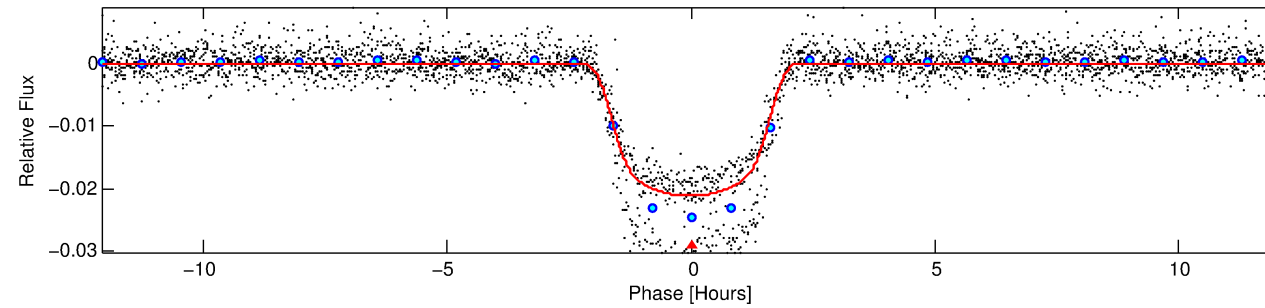
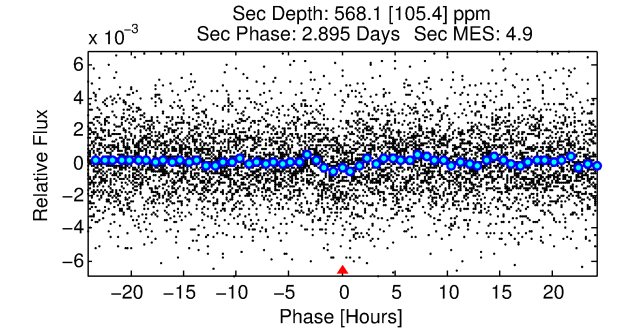
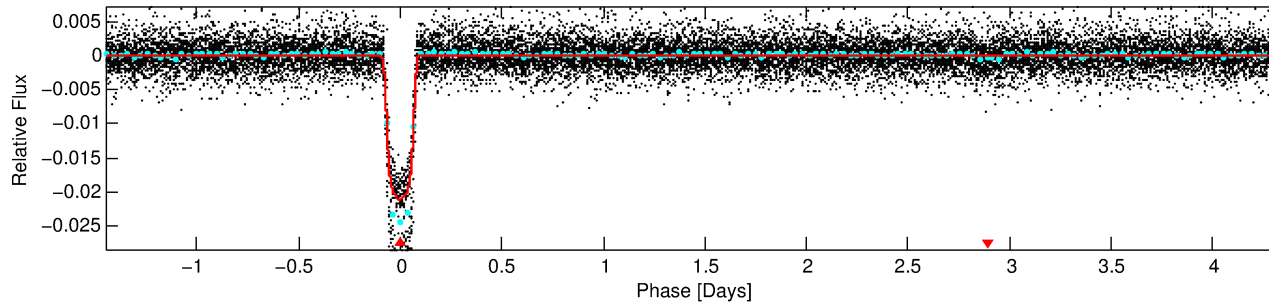
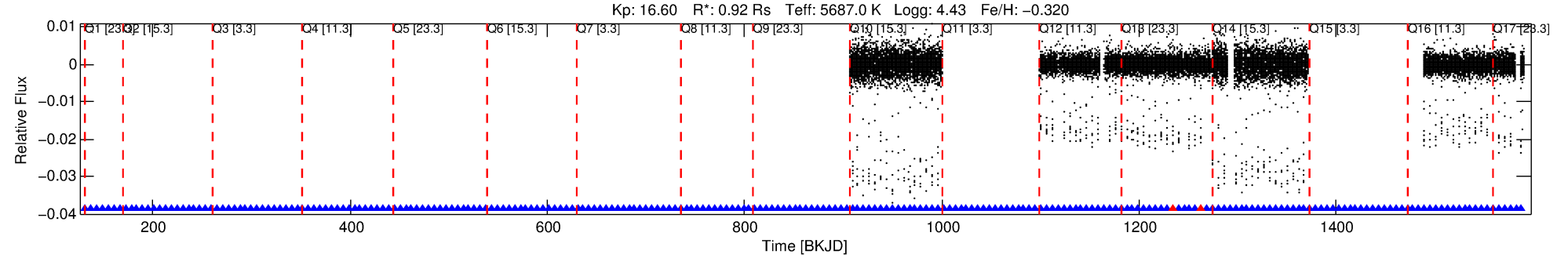
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010555365-01

No Significant Match Found

DV One-Page Summary

KIC: 10555365 Candidate: 1 of 1 Period: 5.802 d
KOI: K03771.01 Corr: 0.984



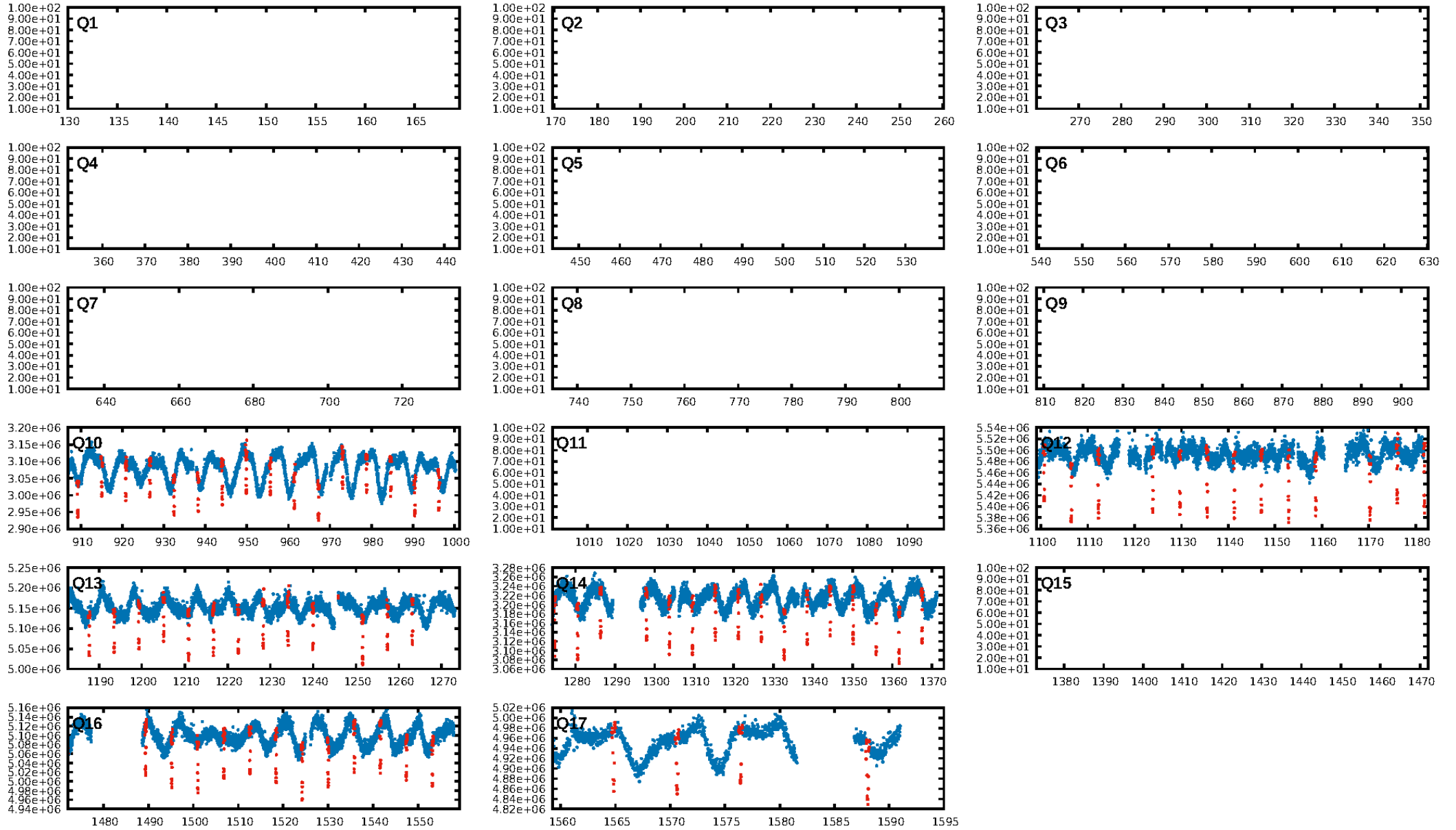
DV Fit Results:

Period = 5.80184 [0.00000] d
Epoch = 131.7757 [0.0007] BKJD
Rp/R* = 0.1378 [0.0015]
a/R* = 10.97 [0.48]
b = 0.55 [0.06]
Seff = 226.21 [82.16]
Teq = 989 [90] K
Rp = 13.85 [3.79] Re
a = 0.0593 [0.0137] AU
Ag = 5.73 [2.22] [2.13σ]
Teffp = 2365 [135] K [8.49σ]

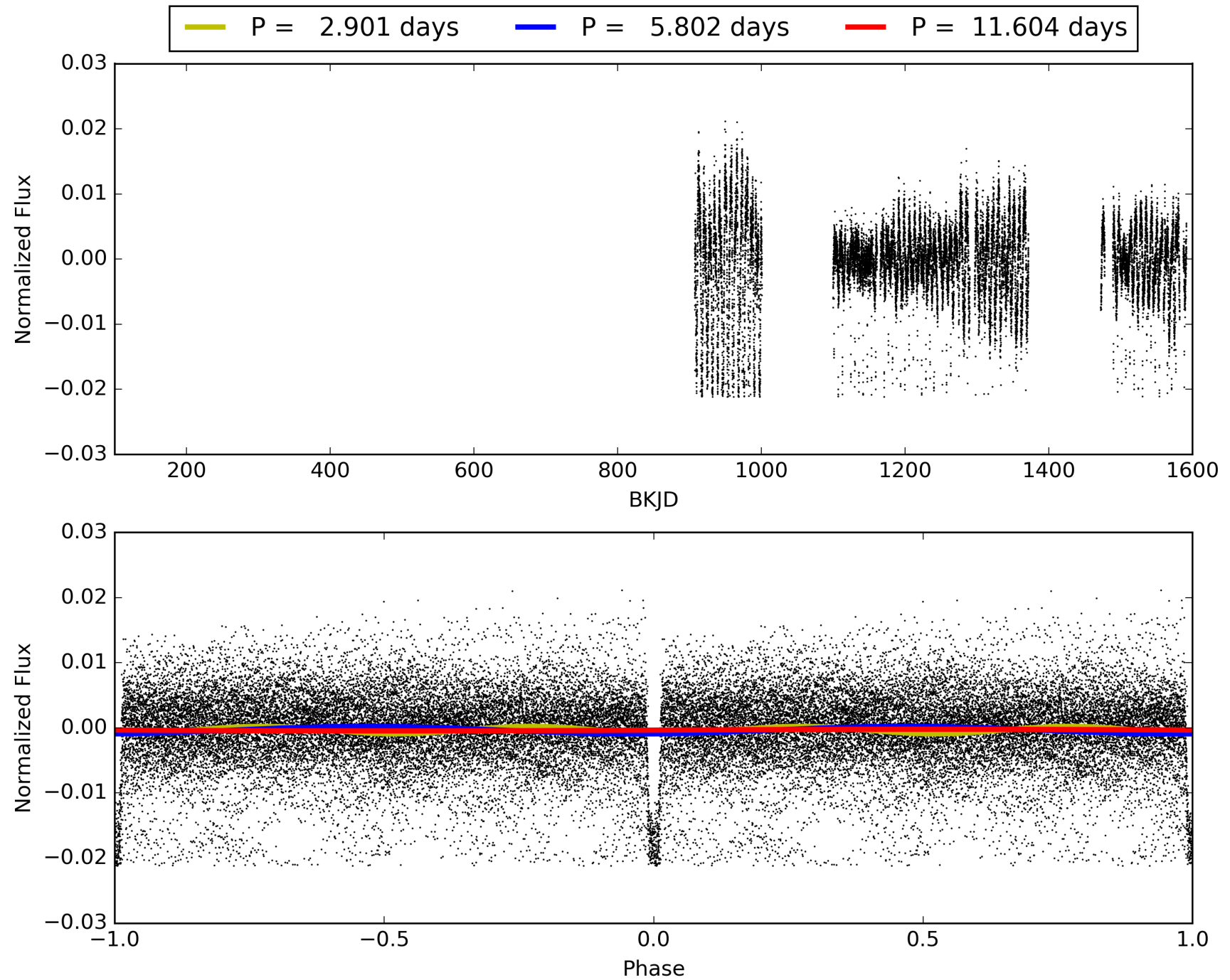
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 59.3%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.97 [68/70]
GhostDiagnostic-chr: 4.321
Centroid-sig: 0.0%
Centroid-so: 3.778 arcsec [383.88σ]
OotOffset-rm: 4.997 arcsec [21.98σ]
KicOffset-rm: 0.088 arcsec [0.91σ]
OotOffset-st: 2/0/2/2 [6]
KicOffset-st: 2/0/2/2 [6]
DiffImageQuality-fgm: 1.00 [6/6]
DiffImageOverlap-fno: 1.00 [6/6]

TCE 010555365-01, PDC Light Curves

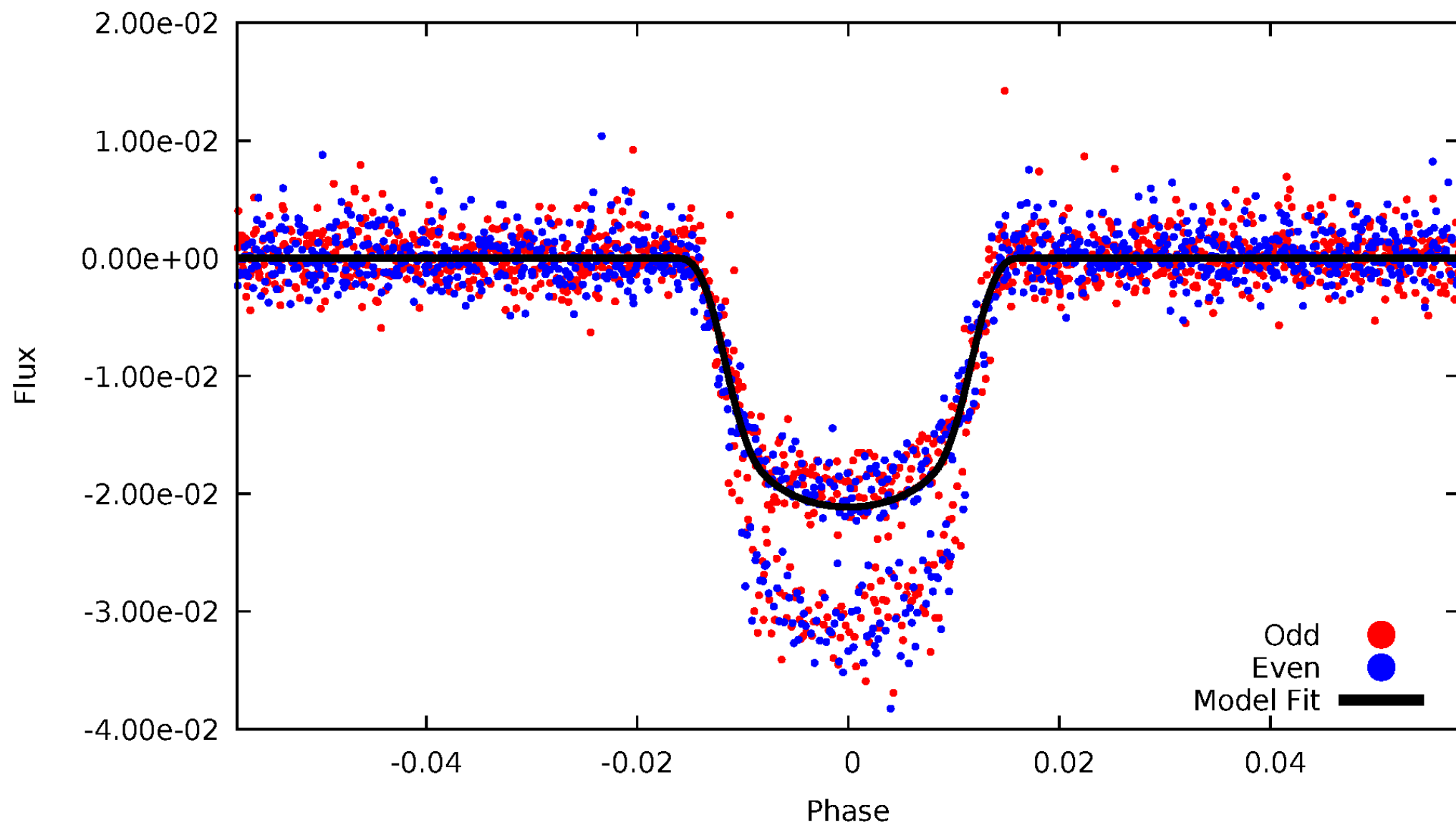


TCE 010555365-01



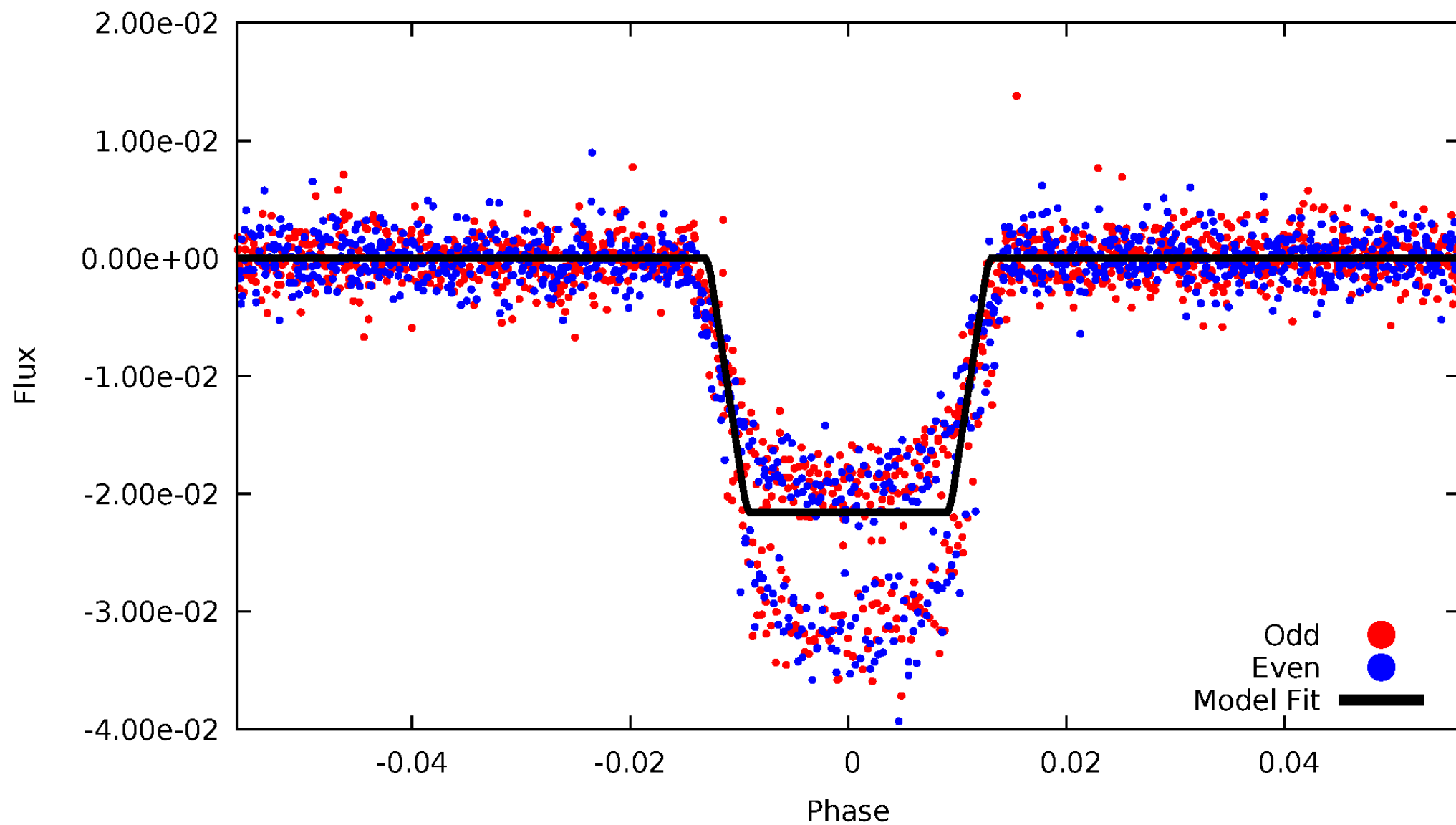
DV Odd/Even

TCE 010555365-01



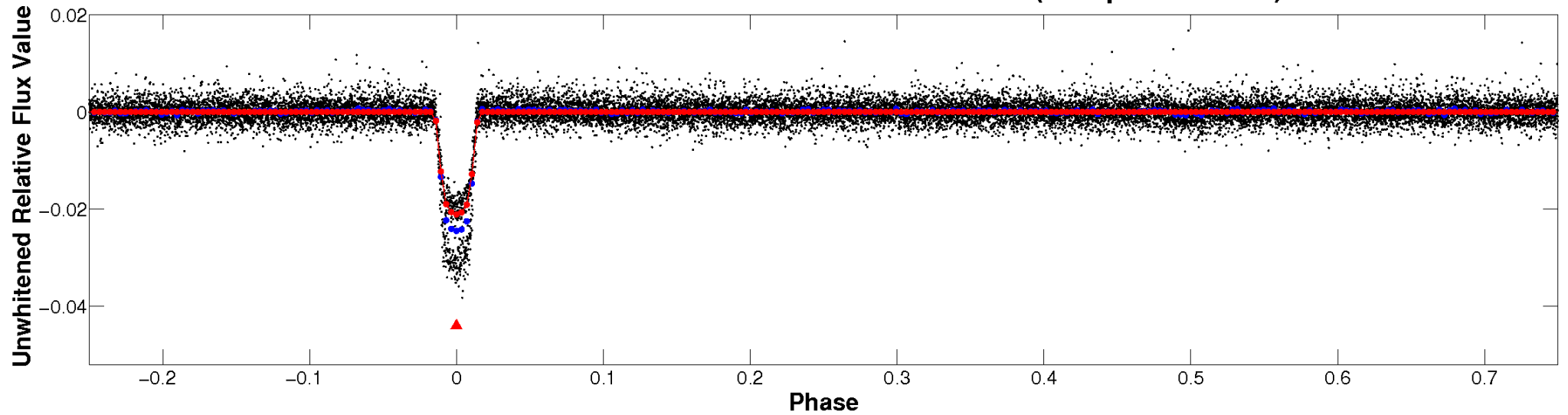
ALT Odd/Even

TCE 010555365-01

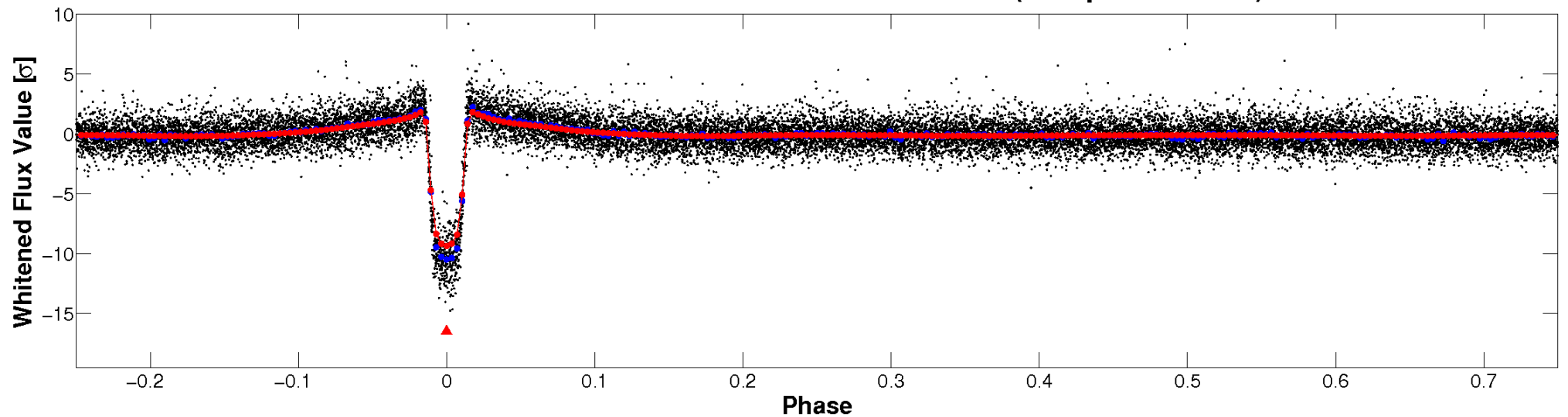


Non-Whitened Vs. Whitened Light Curve

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

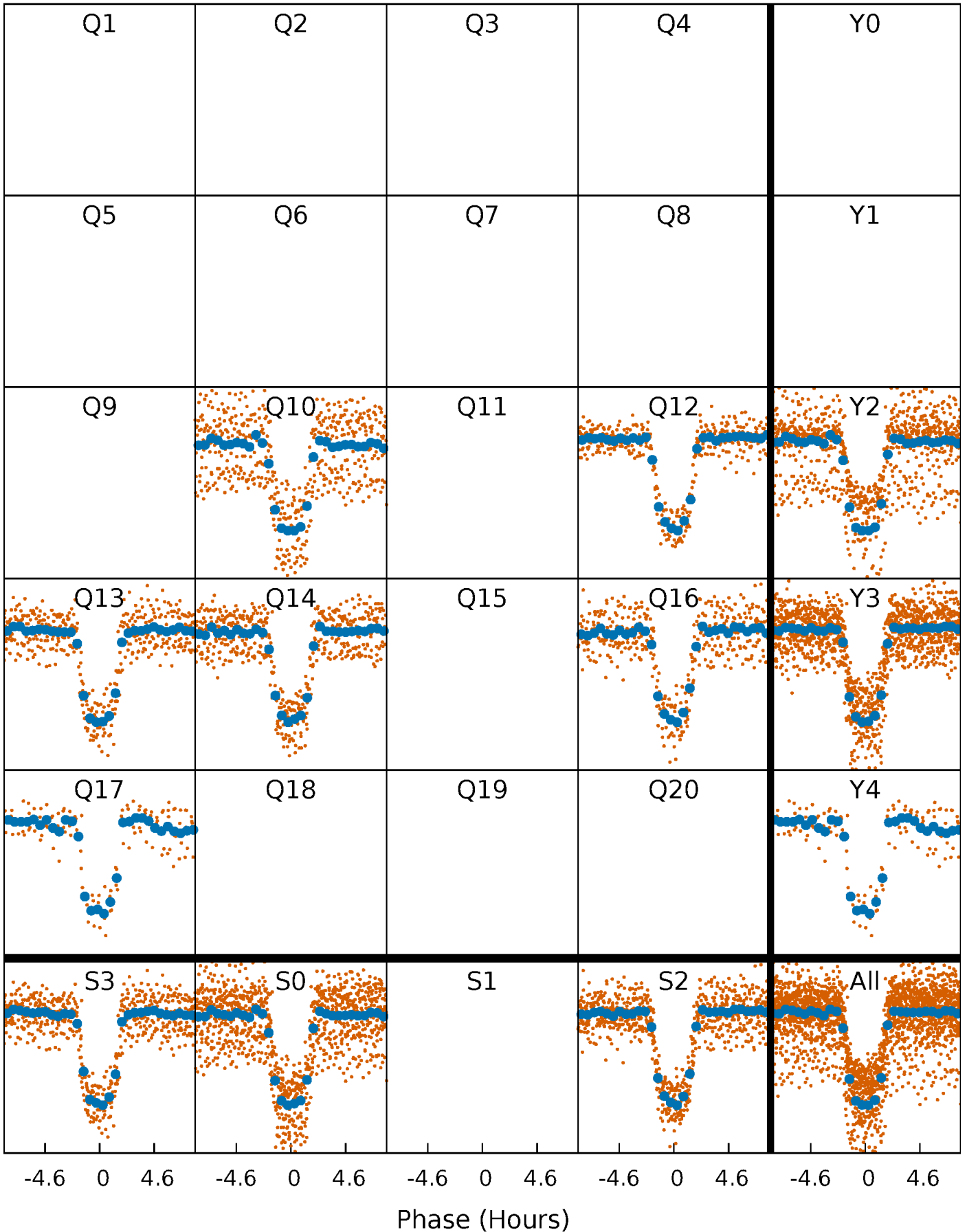


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



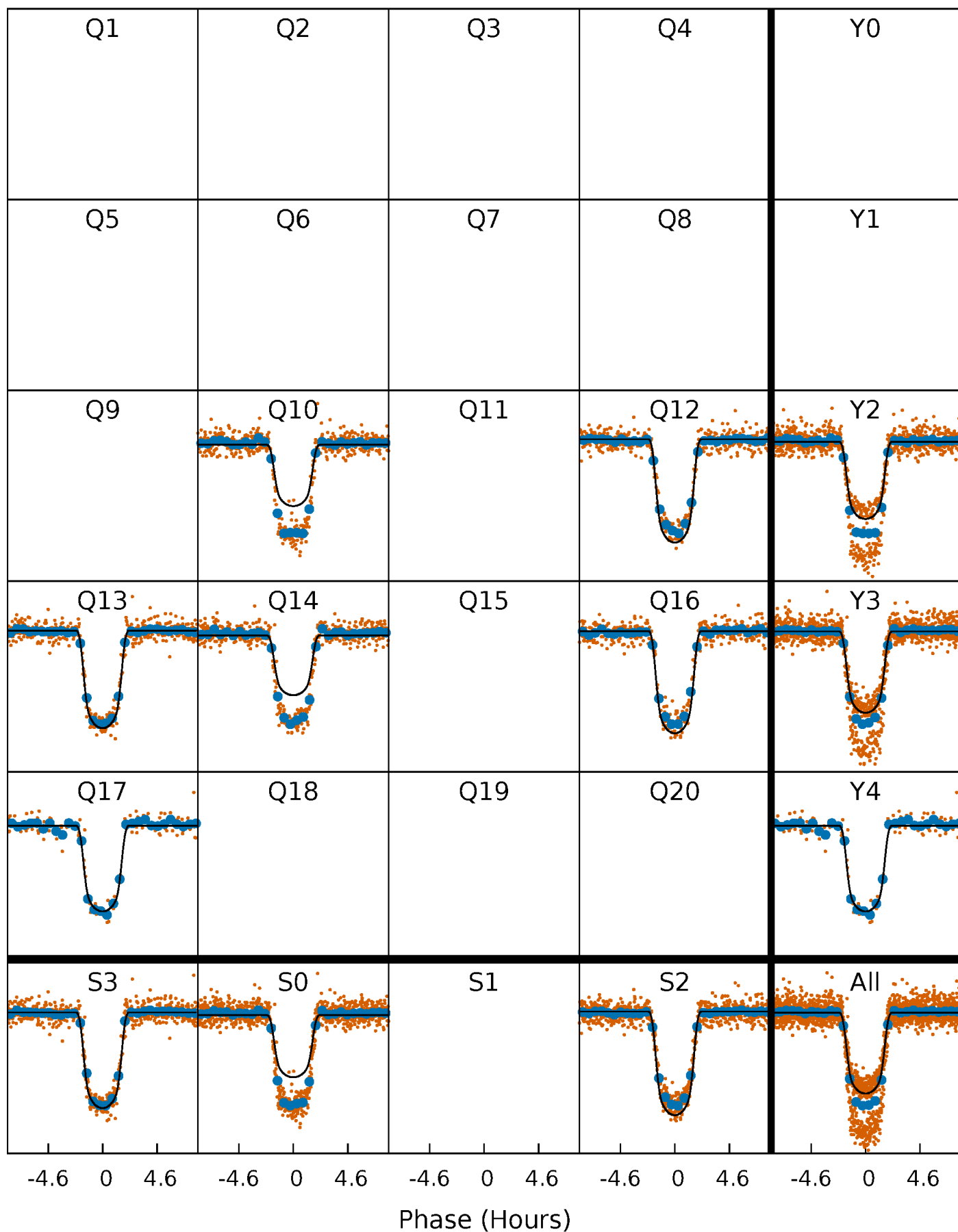
PDC Quarter-Phased Transit Curves

TCE 010555365-01 P= 5.801835 Days $T_0=131.775742$ (BKJD)



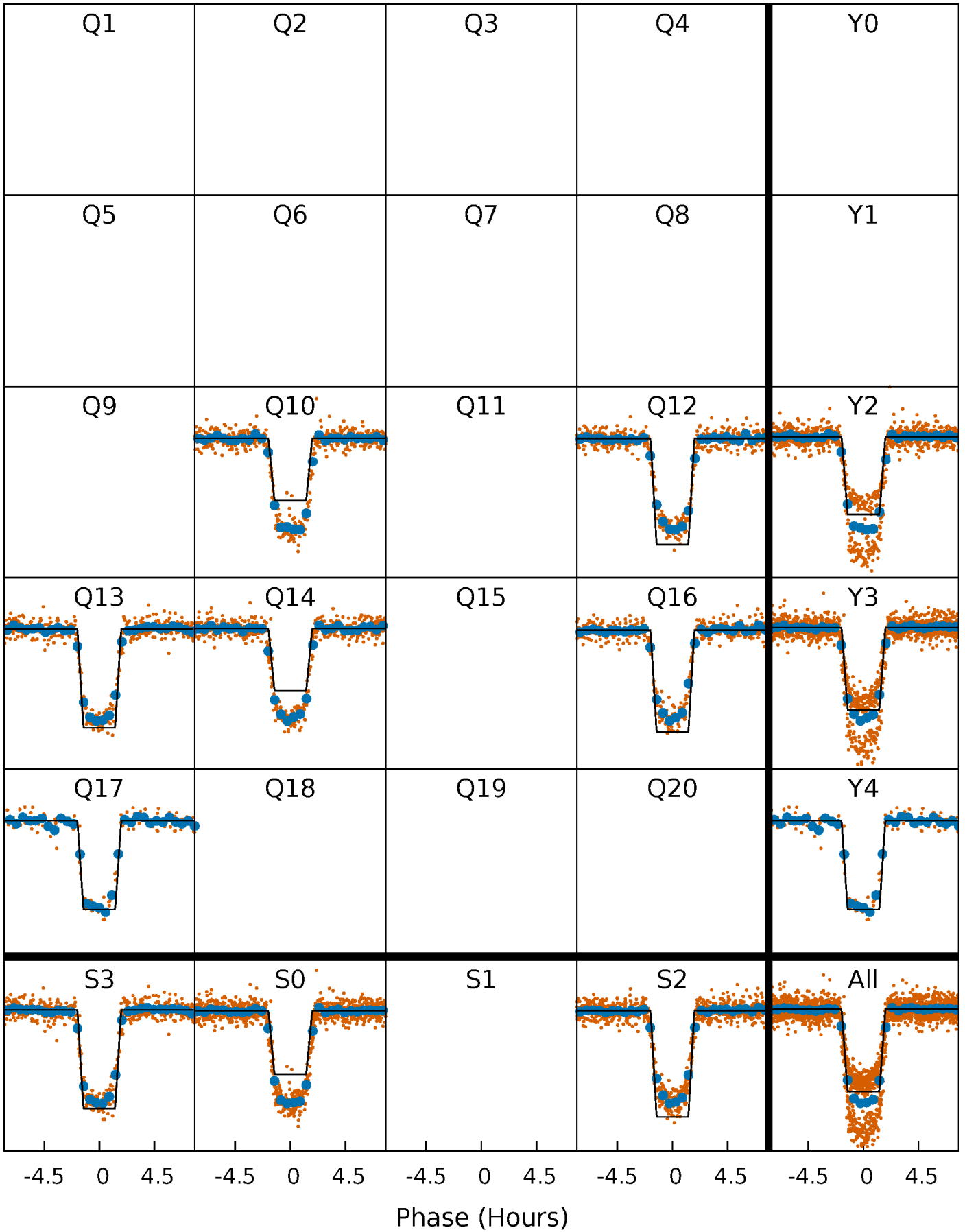
DV Quarter-Phased Transit Curves

TCE 010555365-01 P= 5.801835 Days $T_0=131.775742$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

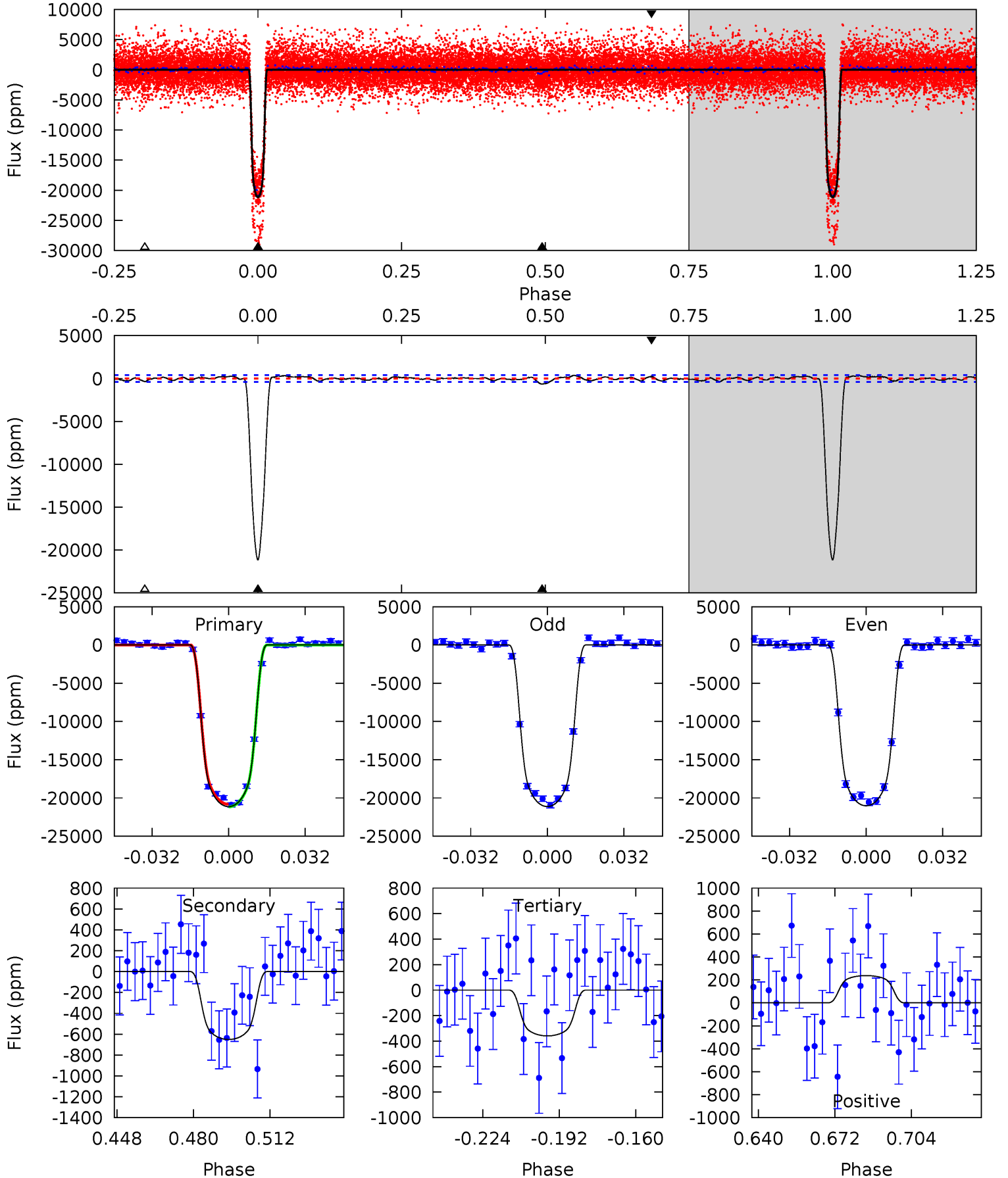
TCE 010555365-01 P= 5.801903 Days $T_0=131.762605$ (BKJD)



DV Model-Shift Uniqueness Test

010555365-01, P = 5.801835 Days, E = 131.775742 Days

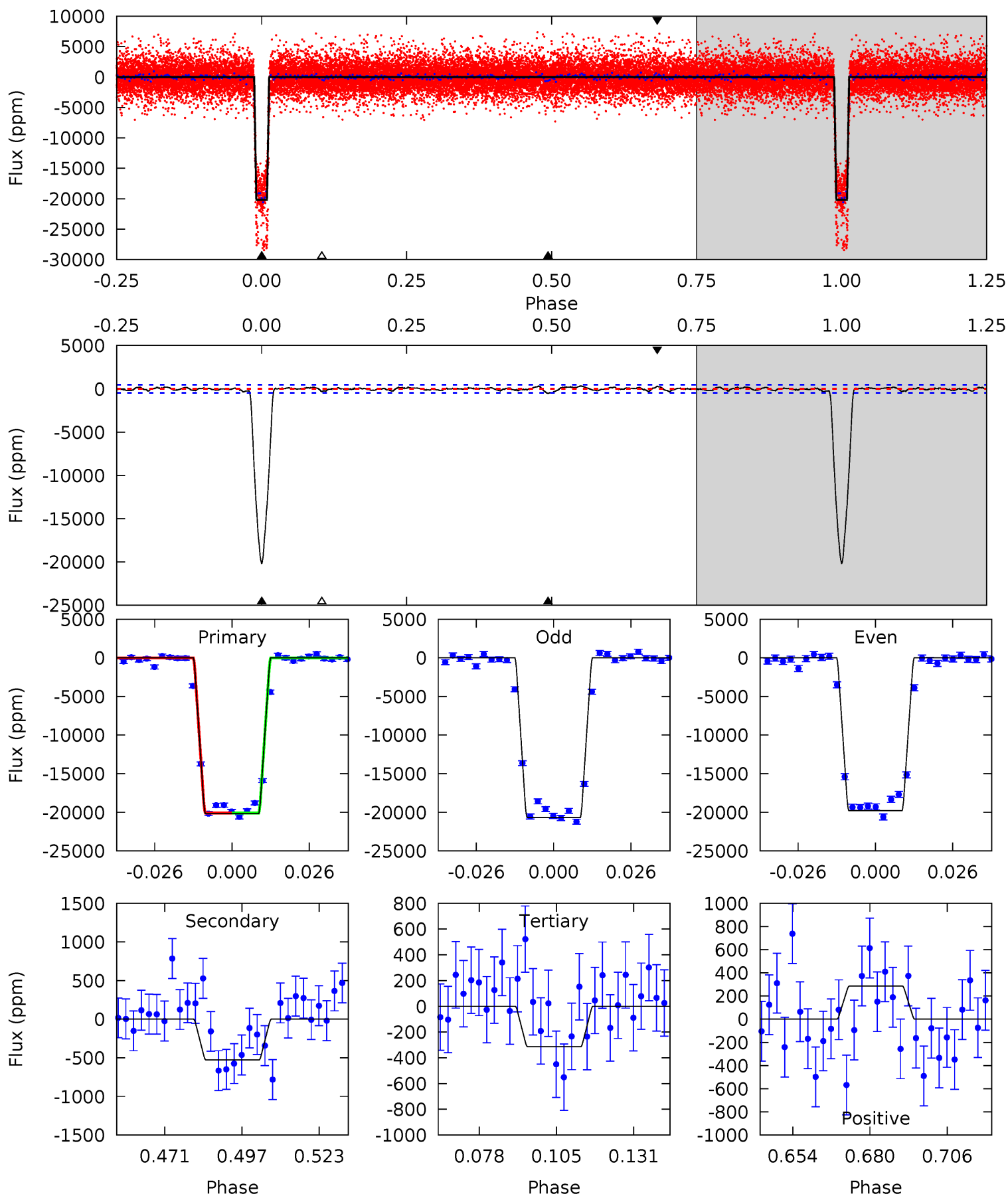
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
249.9	7.69	4.24	2.81	4.80	2.14	1.70	245.6	247.1	3.45	4.89	0.59	1.17	0.02	2.02



Alt Model-Shift Uniqueness Test

010555365-01, P = 5.801903 Days, E = 131.762605 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
210.0	5.50	3.27	2.97	4.84	2.22	1.22	206.7	207.0	2.23	2.53	4.54	1.18	0.02	0



Stellar Parameters For KIC 010555365

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5687^{+186}_{-186}	$4.426^{+0.124}_{-0.186}$	$-0.320^{+0.300}_{-0.300}$	$0.921^{+0.252}_{-0.136}$	$0.826^{+0.117}_{-0.068}$	$1.490^{+0.943}_{-0.709}$
	+3%/-3%	+3%/-4%	+94%/-94%	+27%/-15%	+14%/-8%	+63%/-48%
Source	KIC0	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 010555365-01 / KOI 3771.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-651 ± 85	$13.99^{+2.24}_{-1.17}$	1394^{+98}_{-80}	3058^{+87}_{-83}	$6.320^{+1.632}_{-1.489}$
Alt.	-529 ± 96	$15.02^{+2.21}_{-1.41}$	1395^{+104}_{-82}	2909^{+100}_{-106}	$4.429^{+1.417}_{-1.230}$

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 $A_{obs} \gg 1.0$

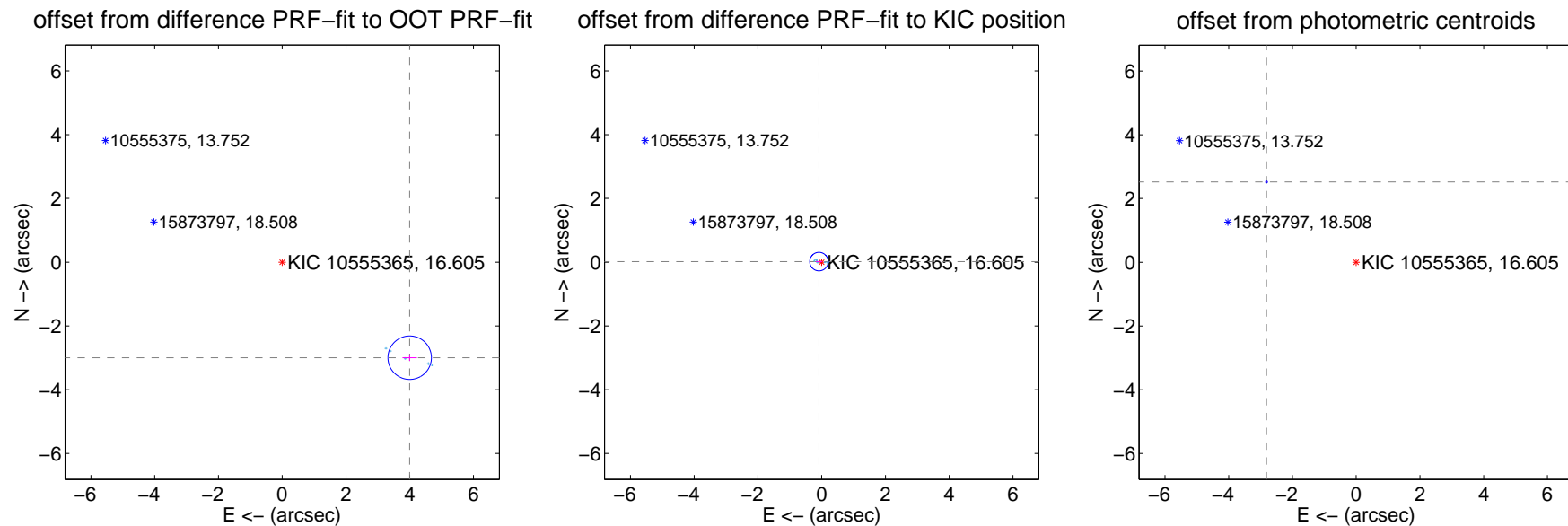
DV Centroid Data

Supplemental centroid analysis for 010555365-01. Kepler magnitude: 16.61. Transit SNR 169.36

There are 6 quarters with good PRF difference image offsets

The OOT PRF centroid is offset from the target star catalog position by about 5.42 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	4.997 ± 0.227	21.98	-3.999 ± 0.226	-2.996 ± 0.101
PRF-fit source offset from KIC position	0.088 ± 0.097	0.91	0.086 ± 0.098	0.018 ± 0.069
photometric centroid source offset	3.78 ± 0.01	383.88	2.82 ± 0.01	2.52 ± 0.01

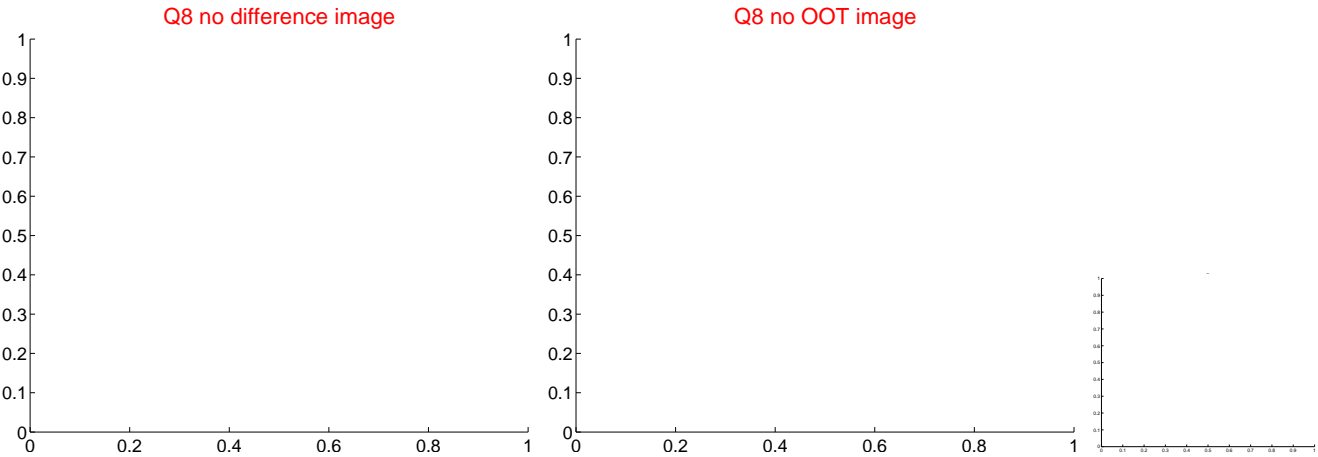
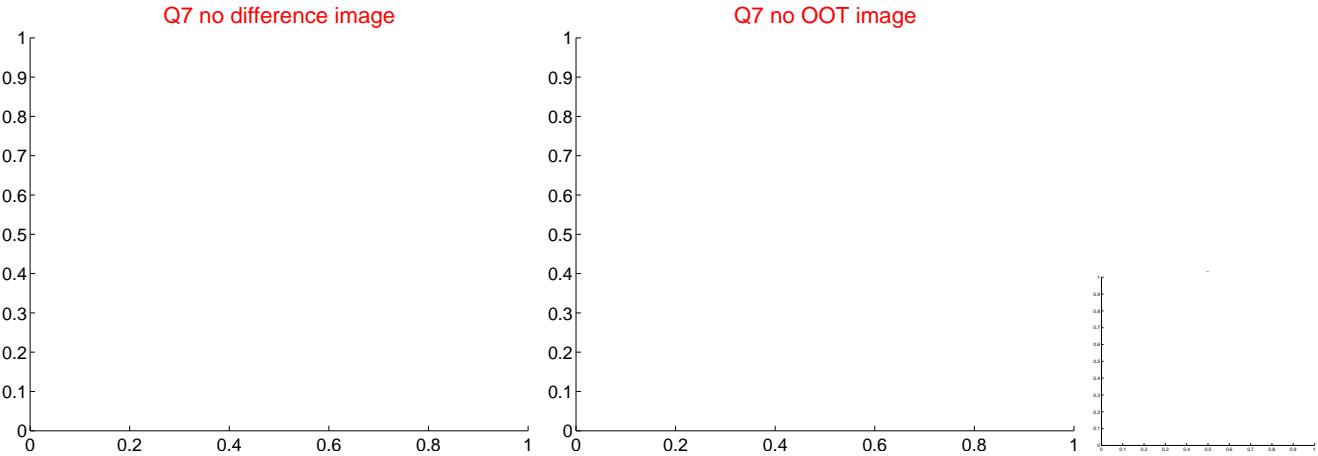
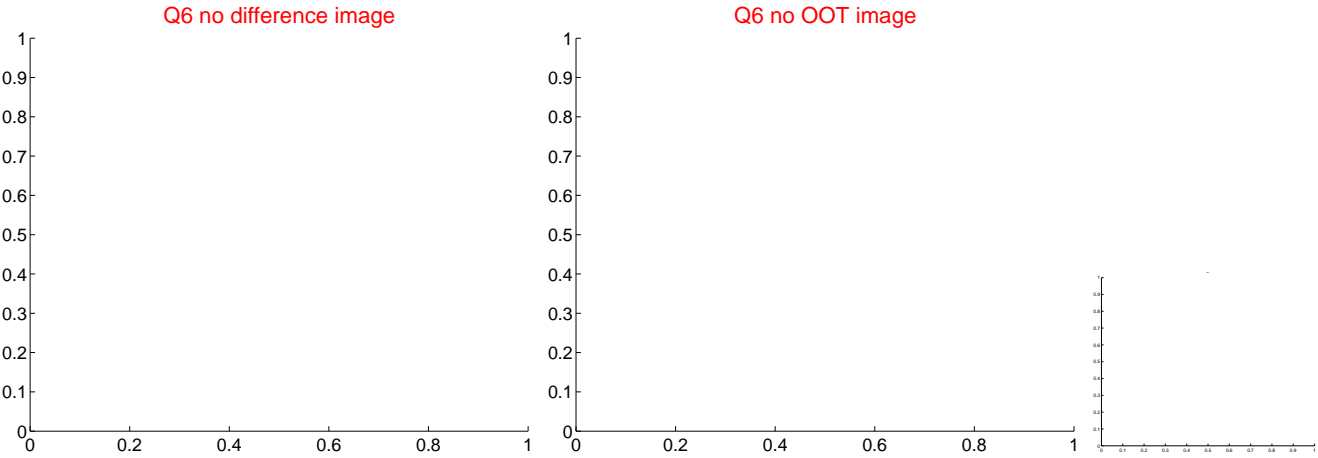
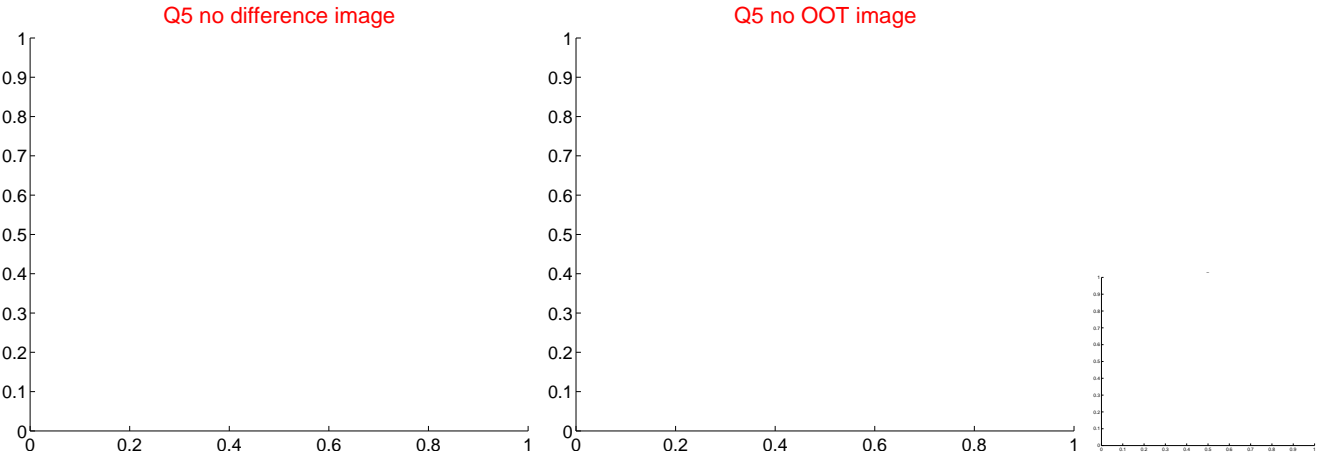


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

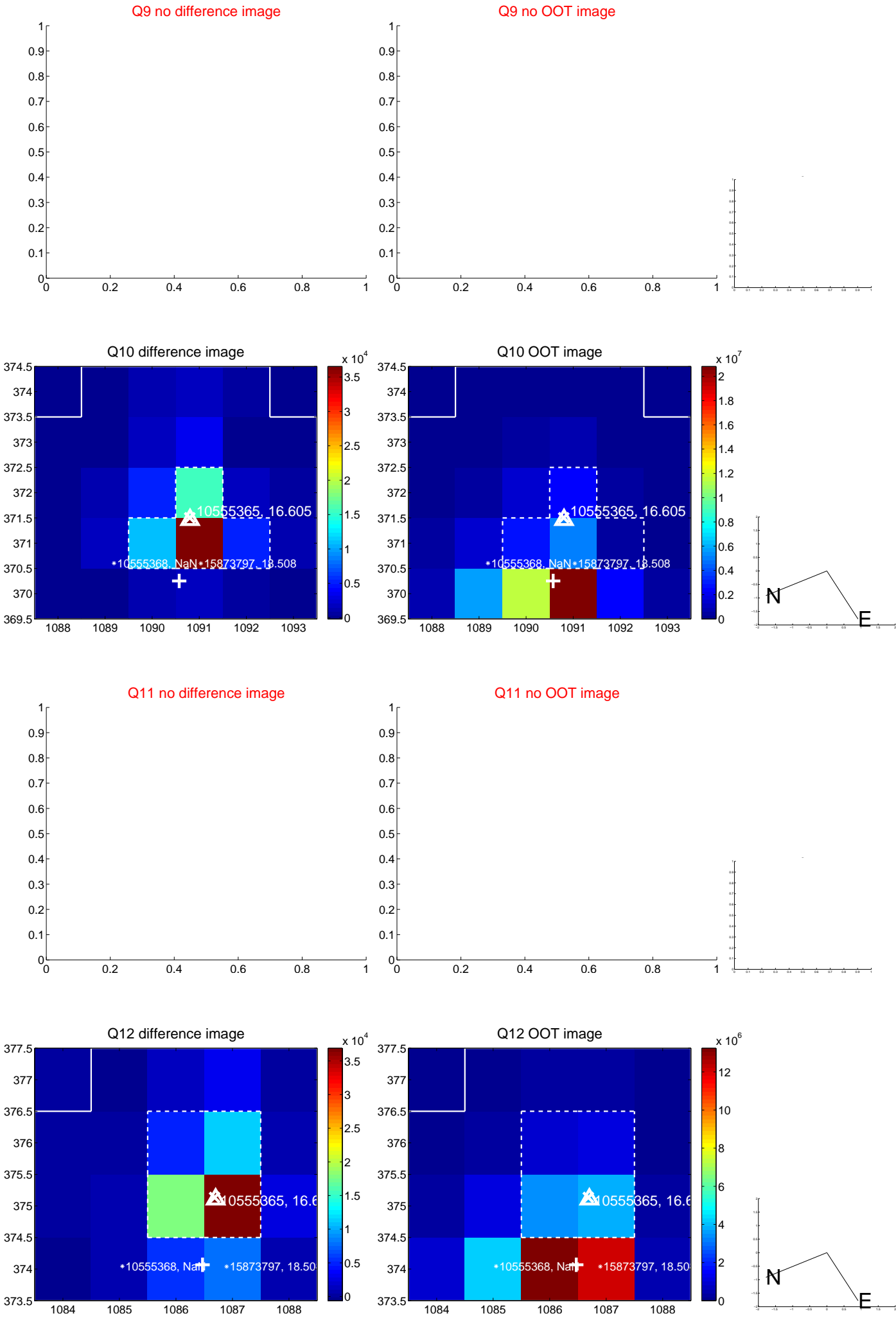
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



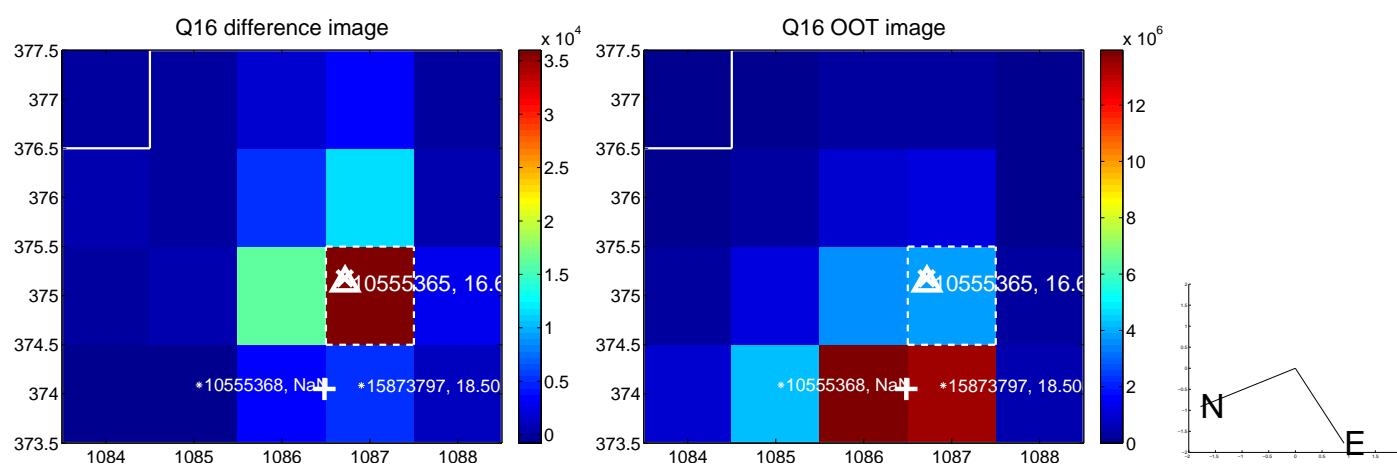
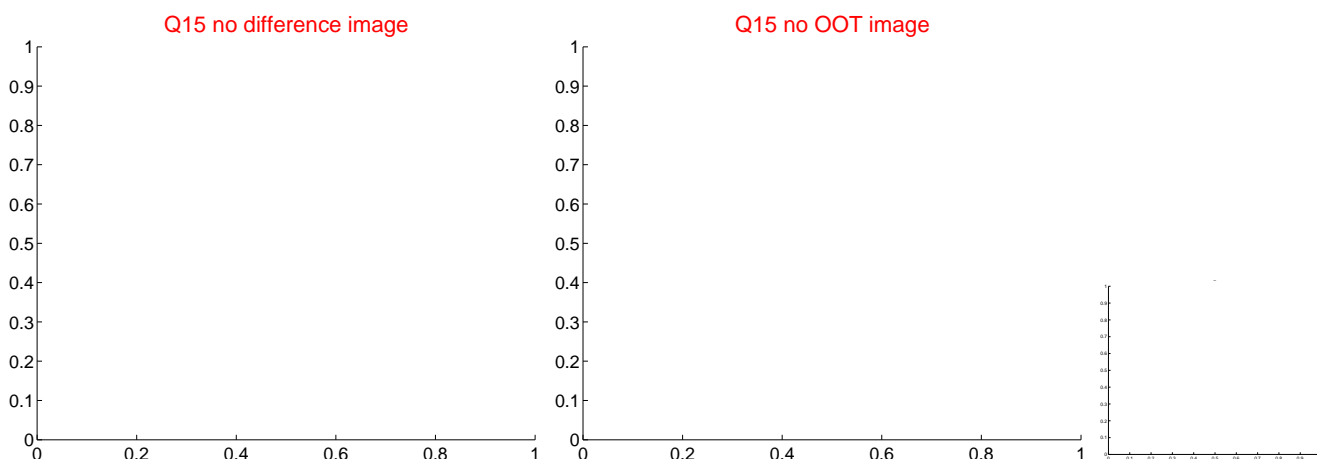
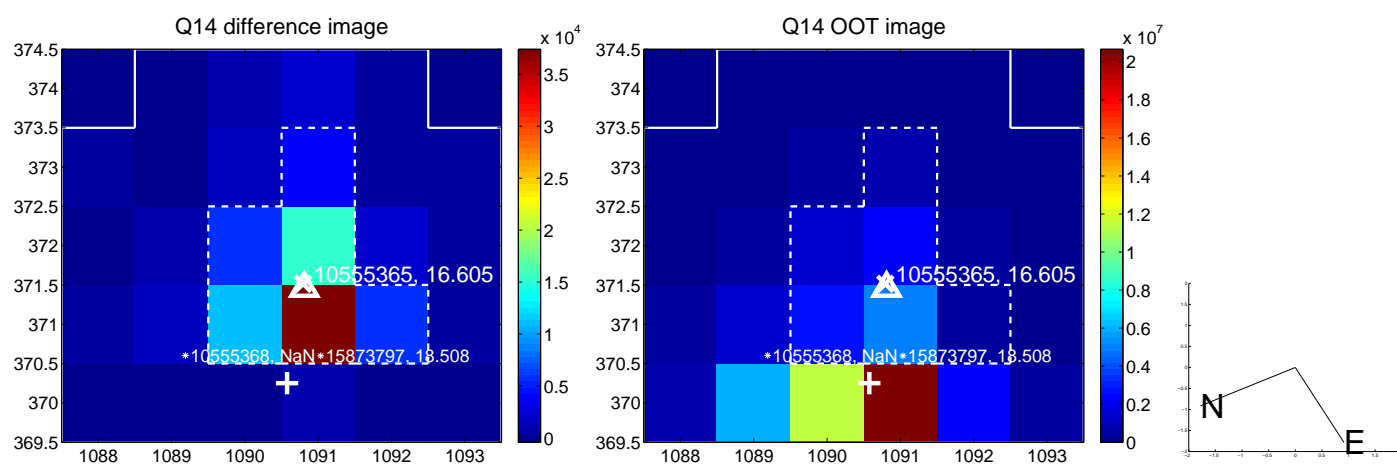
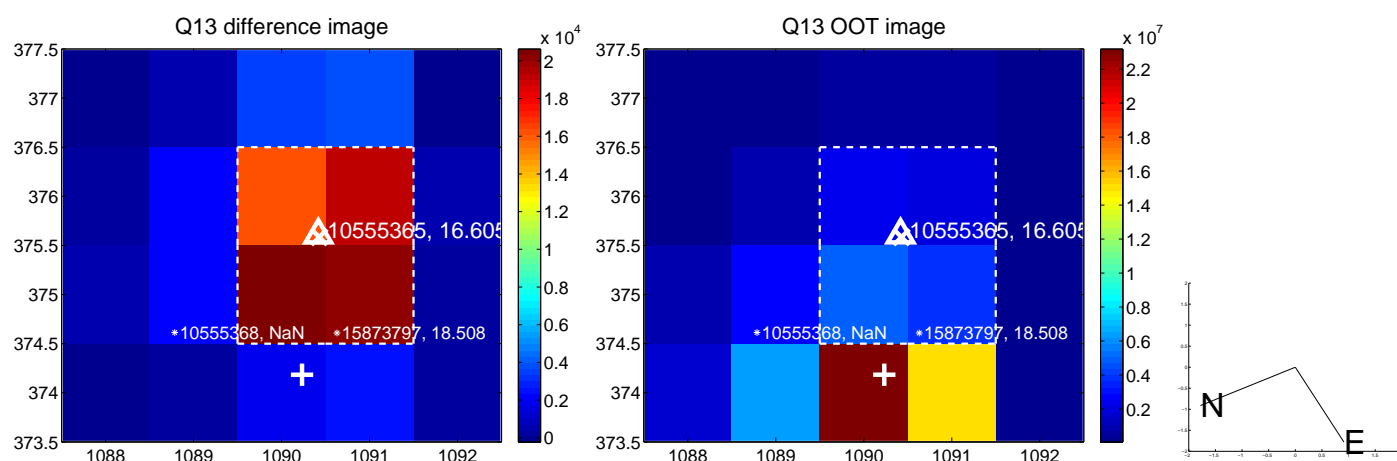
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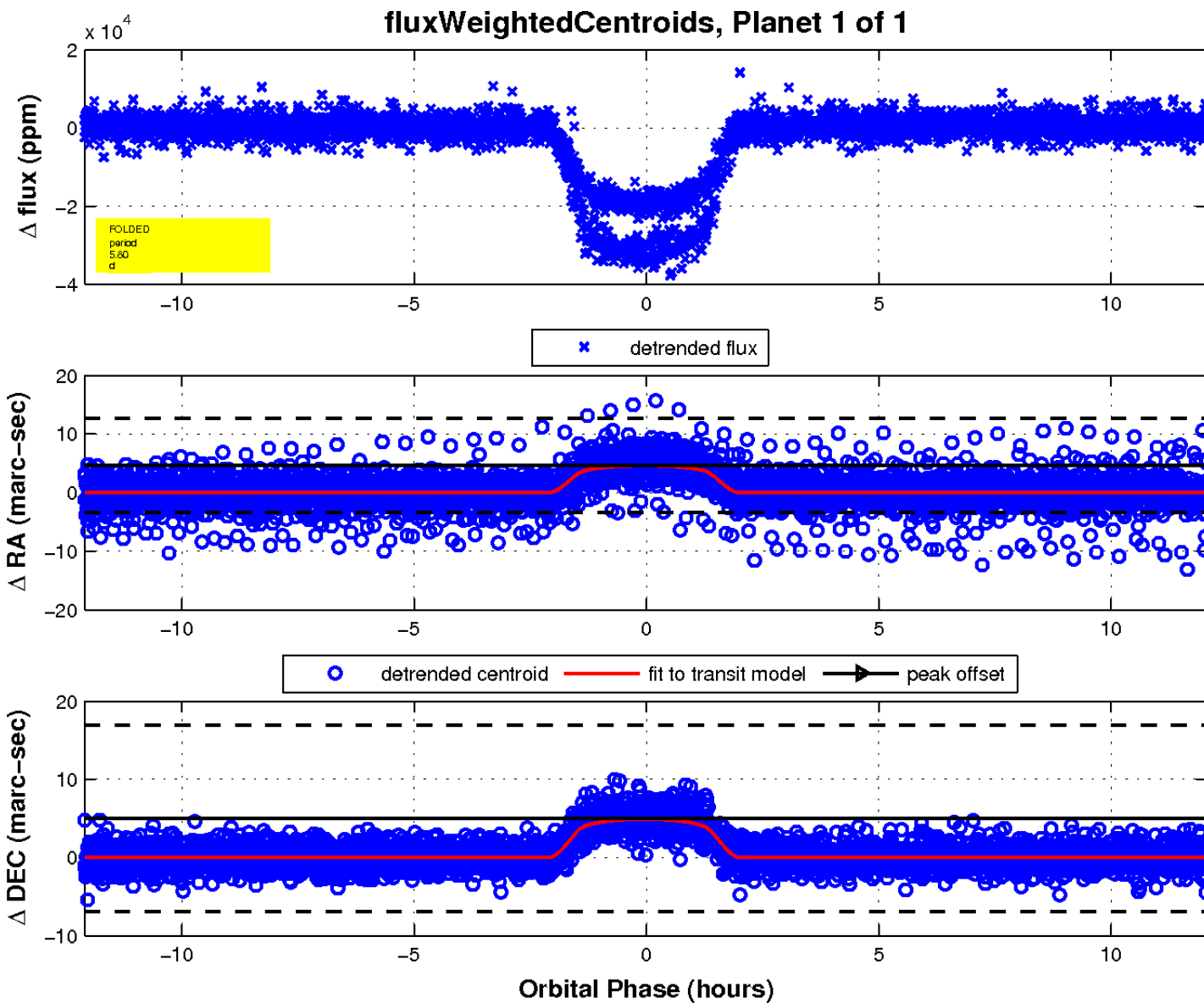
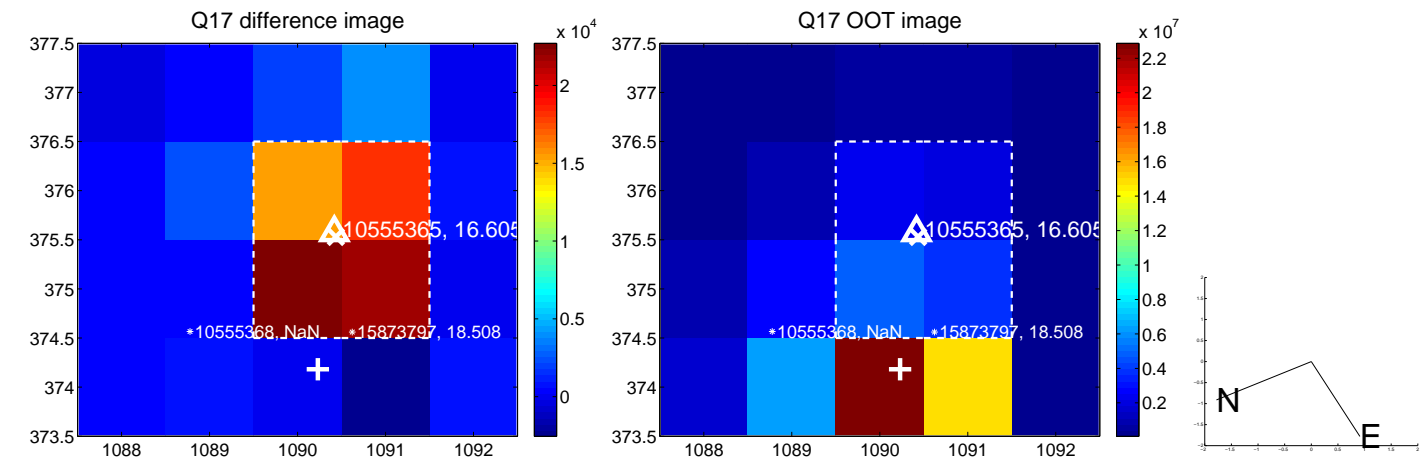
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UKIRT Image

Declination

