

KIC 006527229

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})
006527229-01	OBS	5296.01	200.799743	263.875740	92221.9	7.633	932.9	892.6	0.92	5896	40.30	2.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006527229-01	OBS	FP	0.00	0	1	0	0	DEEP_V_SHAPED

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 006527229-01

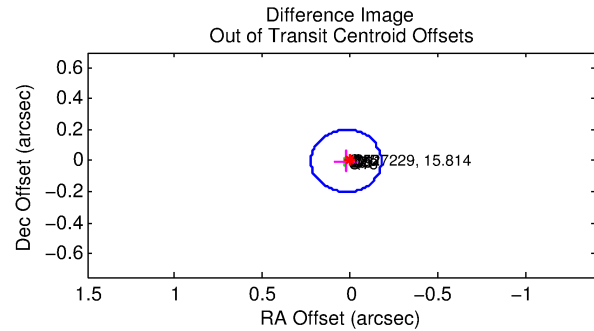
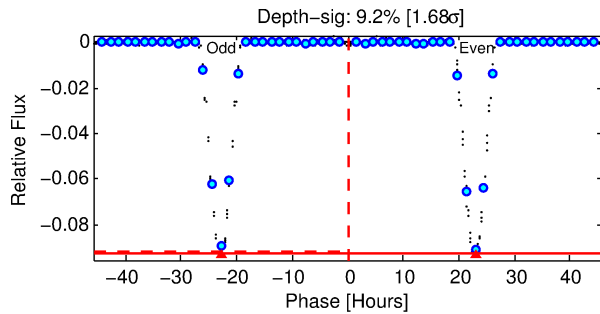
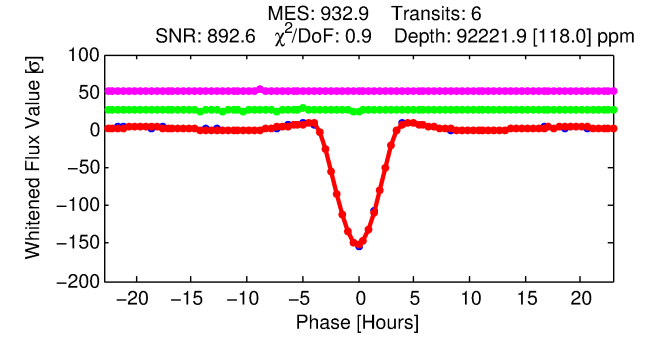
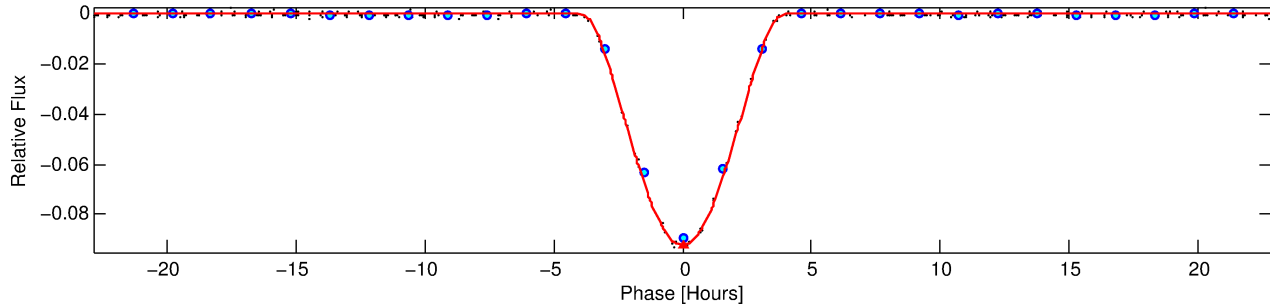
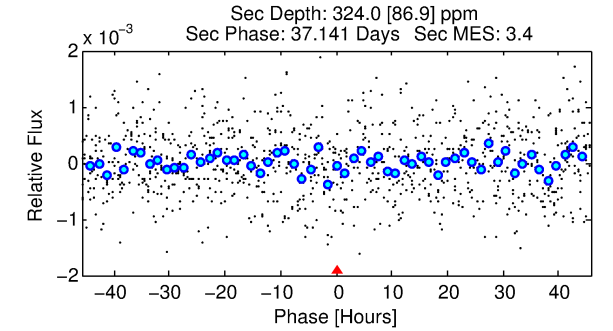
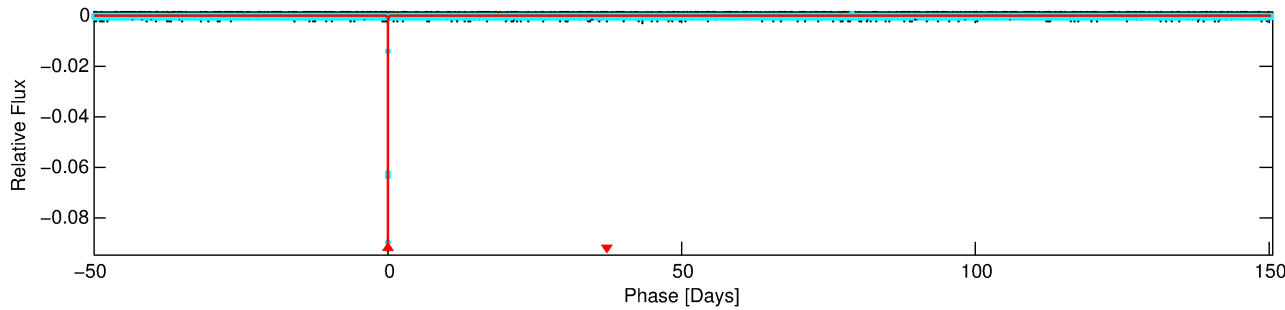
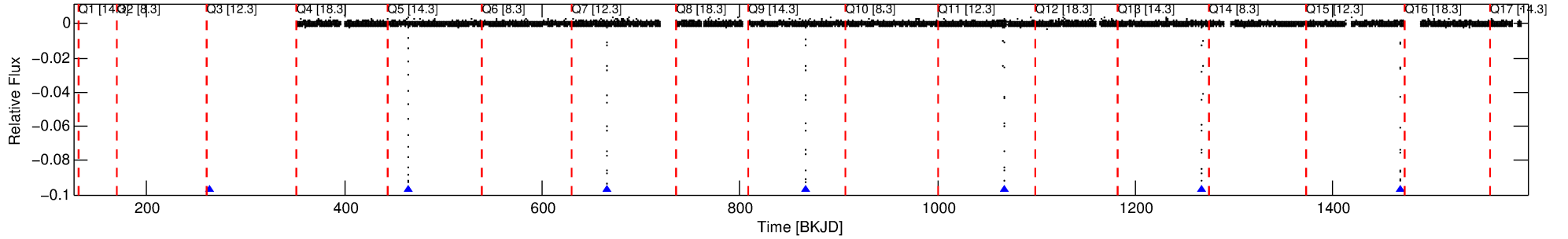
No Significant Match Found

DV One-Page Summary

KIC: 6527229 Candidate: 1 of 1 Period: 200.800 d

KOI: K05296.01 Corr: 0.999

Kp: 15.81 R*: 0.92 Rs Teff: 5896.0 K Logg: 4.52 Fe/H: -0.080



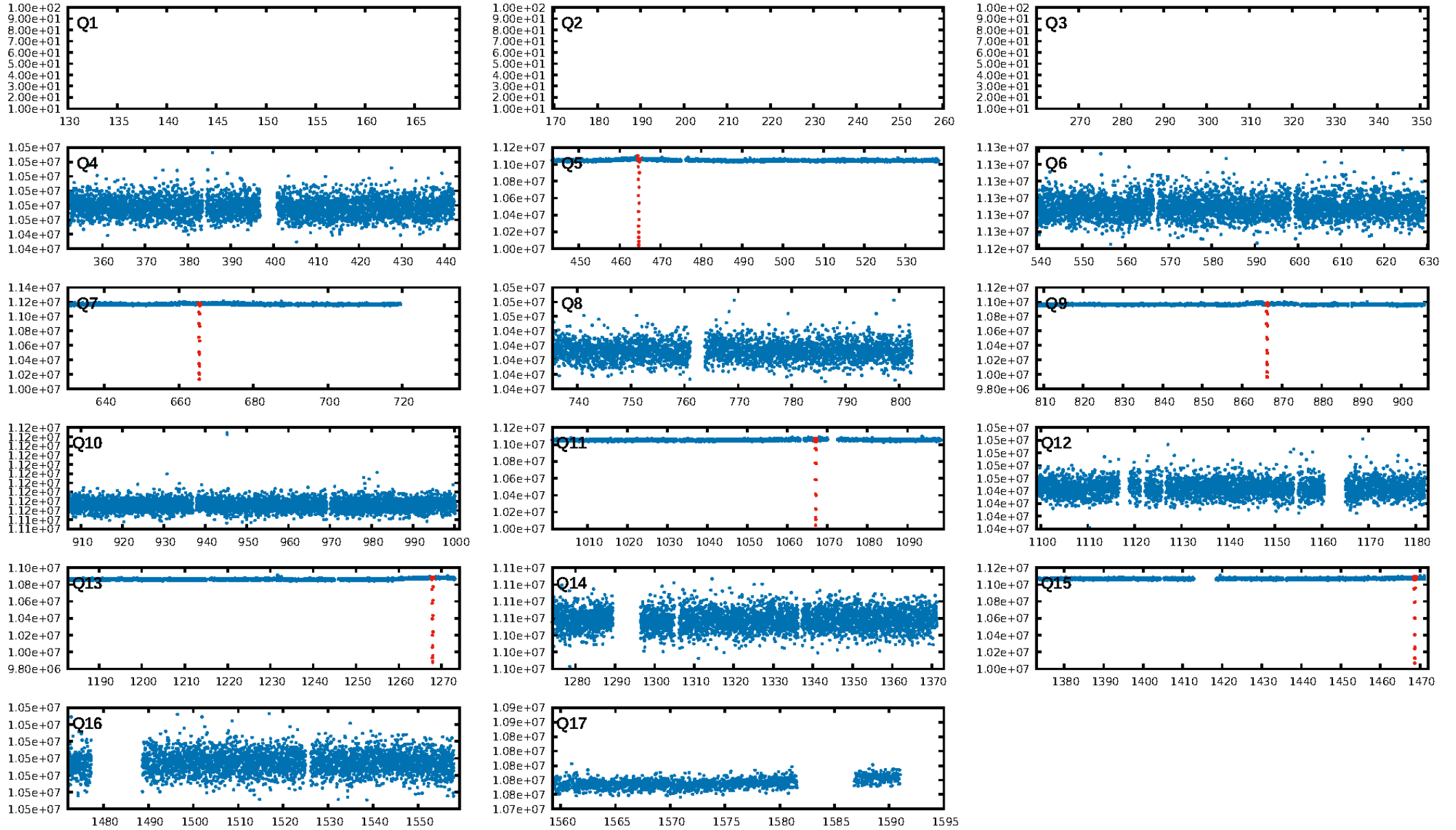
DV Fit Results:

Period = 200.79974 [0.00006] d
Epoch = 263.8757 [0.0002] BKJD
Rp/R* = 0.4032 [0.0384]
a/R* = 216.12 [0.33]
b = 0.90 [0.06]
Seff = 2.00 [0.79]
Teq = 303 [30] K
Rp = 40.30 [12.40] Re
a = 0.6732 [0.1684] AU
Ag = 49.74 [24.58] [1.98σ]
Teffp = 1246 [111] K [8.18σ]

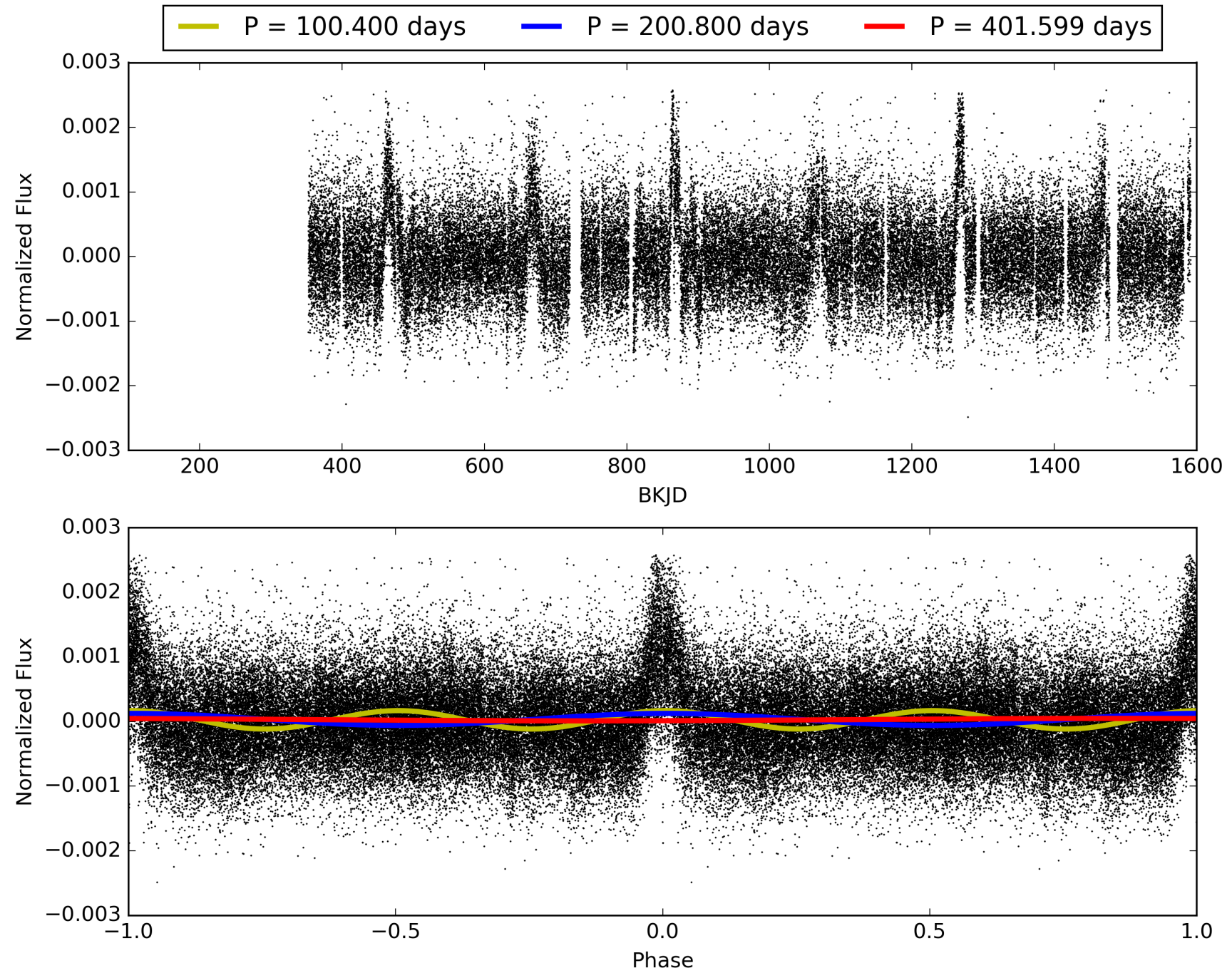
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.3%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [6/6]
GhostDiagnostic-chr: 6.426
Centroid-sig: 0.0%
Centroid-so: 0.060 arcsec [3.79σ]
OotOffset-rm: 0.024 arcsec [0.35σ]
KicOffset-rm: 0.055 arcsec [0.78σ]
OotOffset-st: 0/3/0/3 [6]
KicOffset-st: 0/3/0/3 [6]
DiffImageQuality-fgm: 1.00 [6/6]
DiffImageOverlap-fno: 1.00 [6/6]

TCE 006527229-01, PDC Light Curves

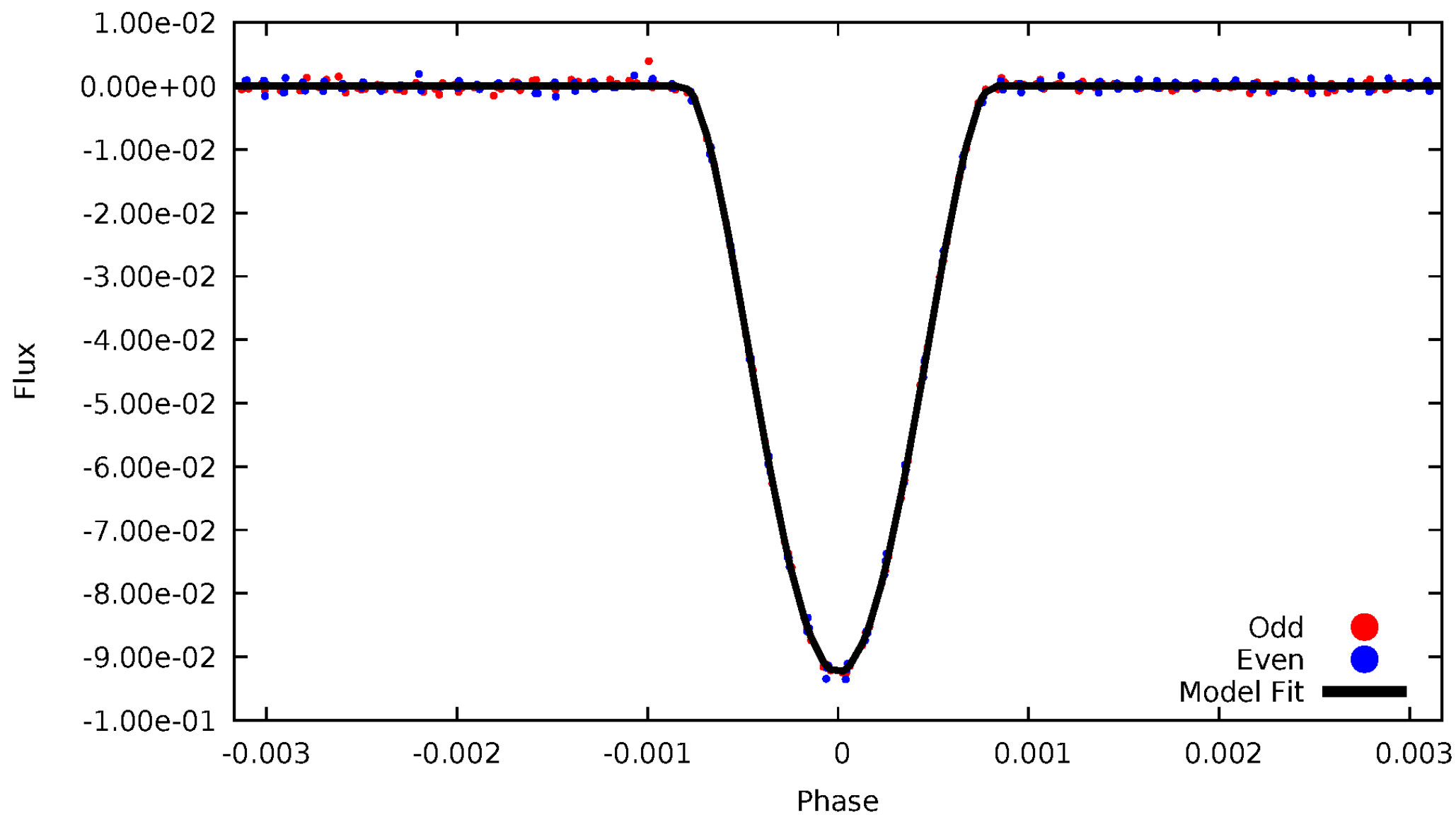


TCE 006527229-01



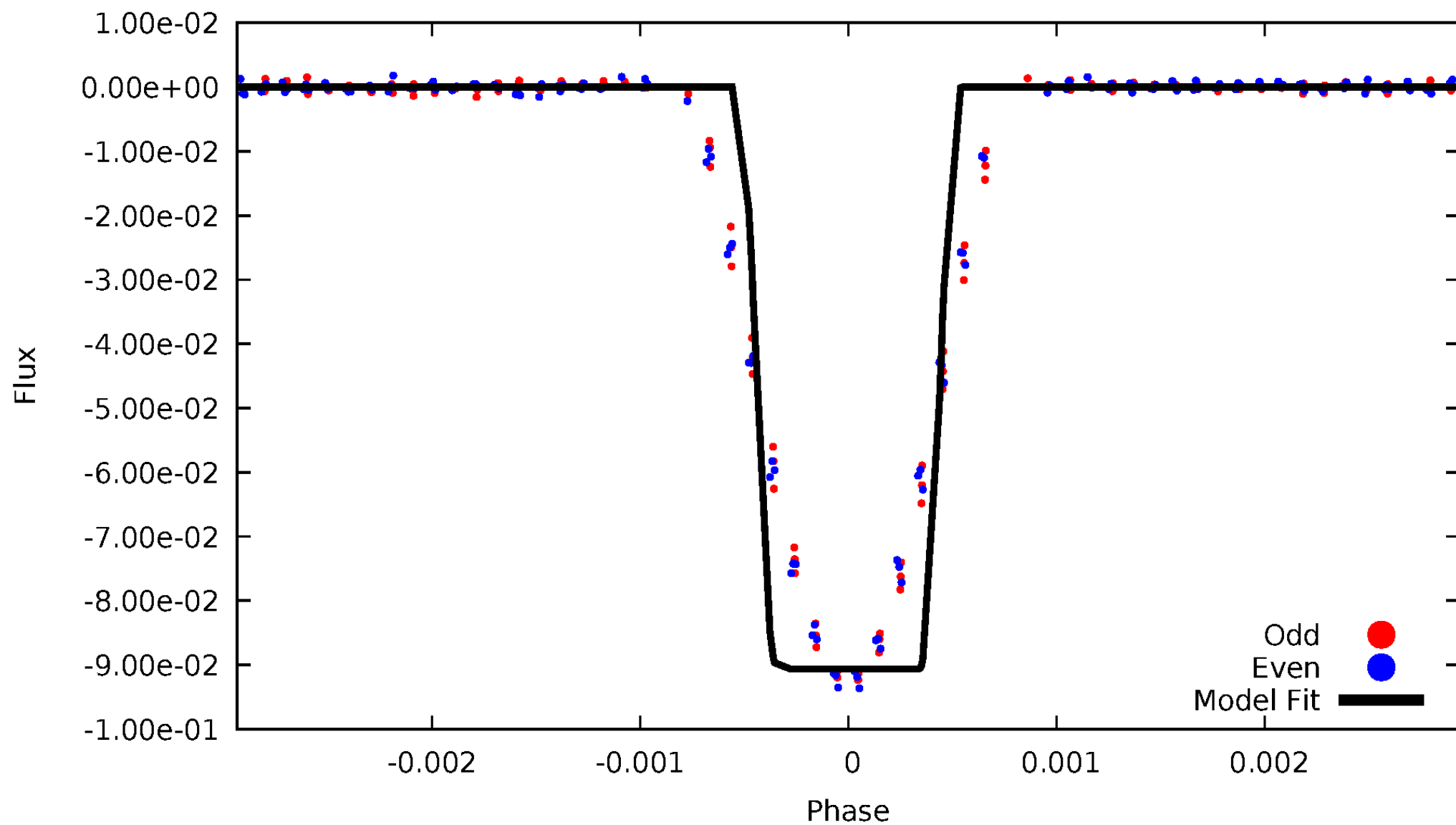
DV Odd/Even

TCE 006527229-01



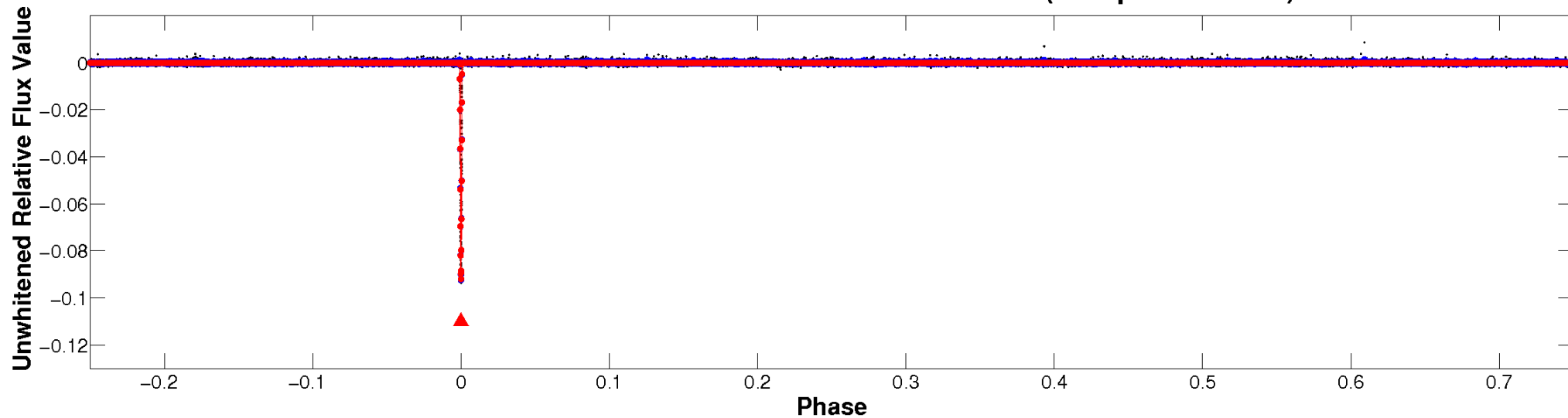
ALT Odd/Even

TCE 006527229-01

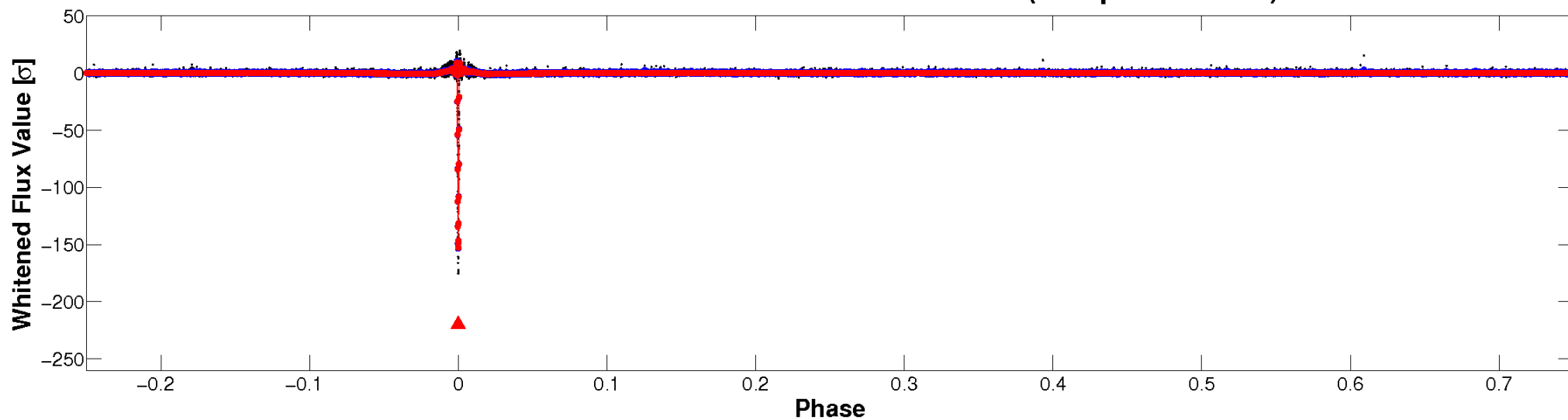


Non-Whitened Vs. Whitened Light Curve

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

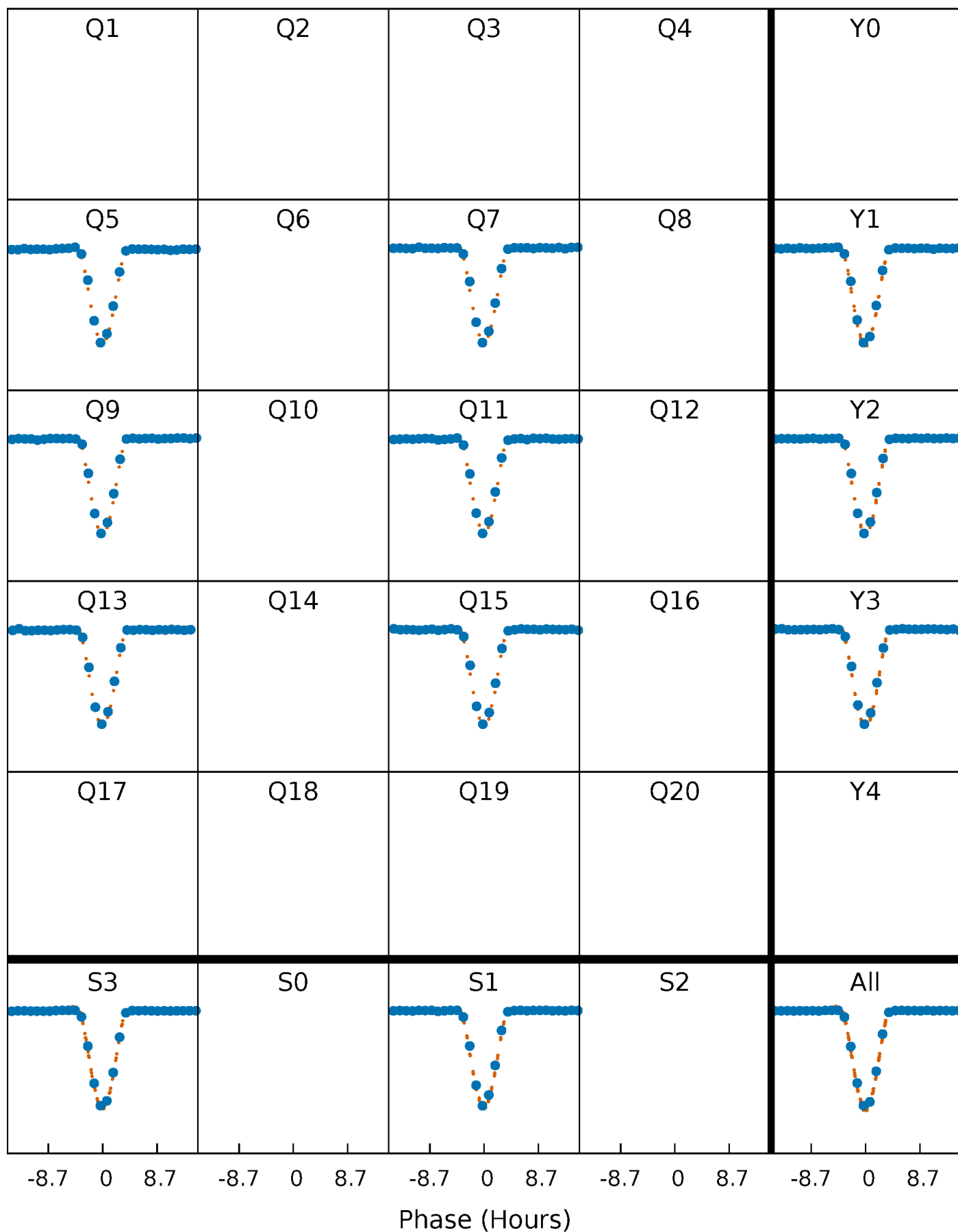


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



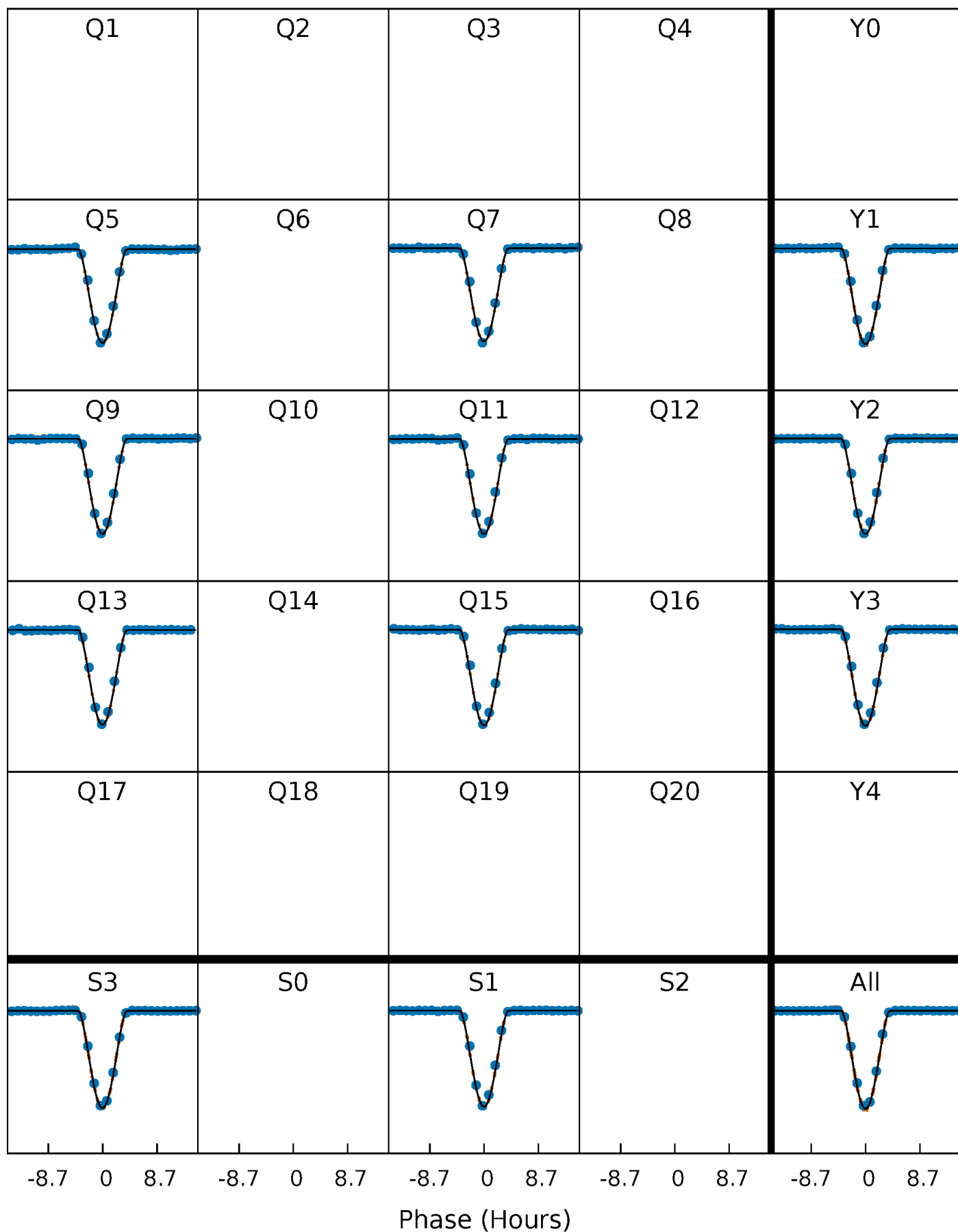
PDC Quarter-Phased Transit Curves

TCE 006527229-01 P=200.799743 Days $T_0=263.875740$ (BKJD)



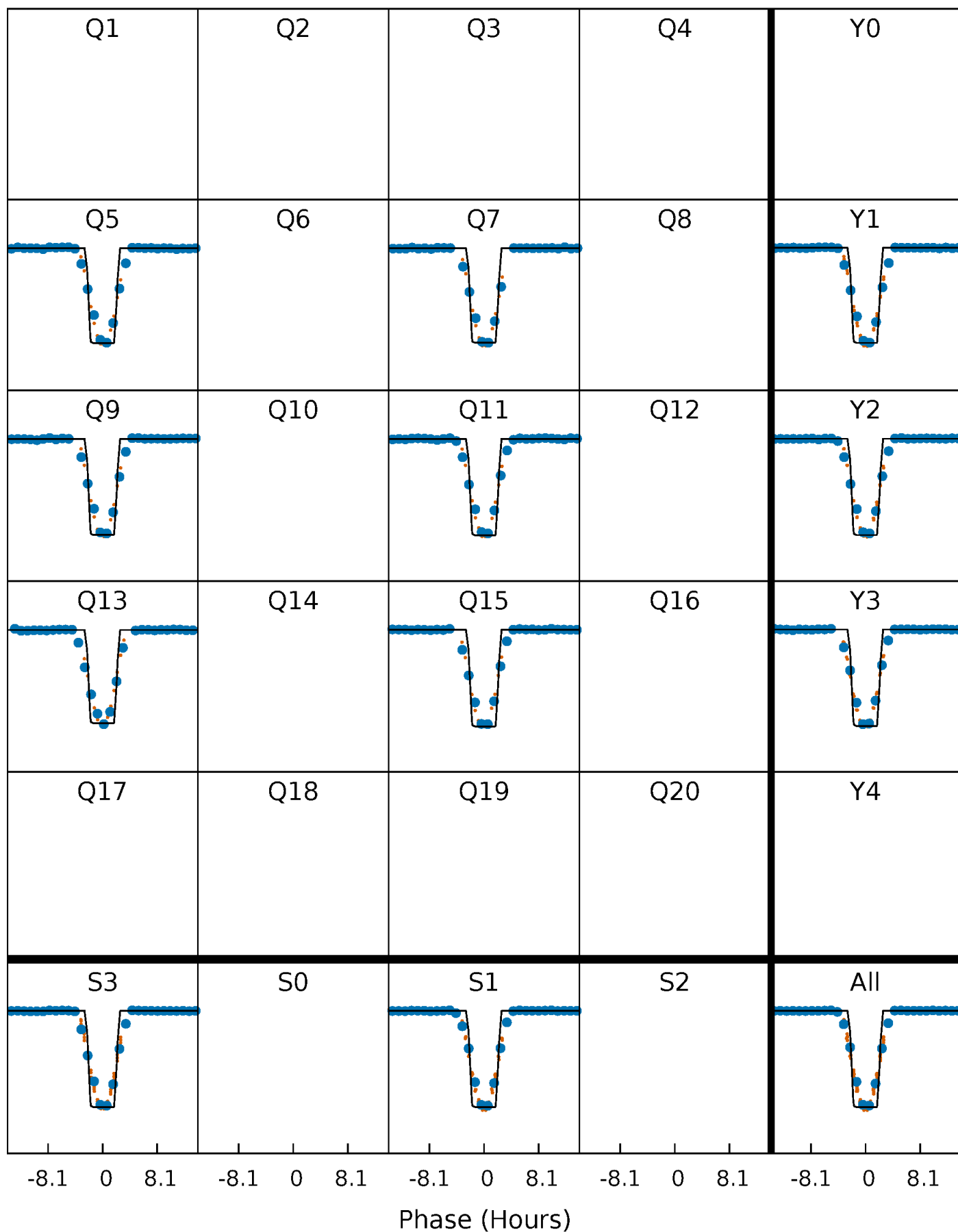
DV Quarter-Phased Transit Curves

TCE 006527229-01 P=200.799743 Days $T_0=263.875740$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

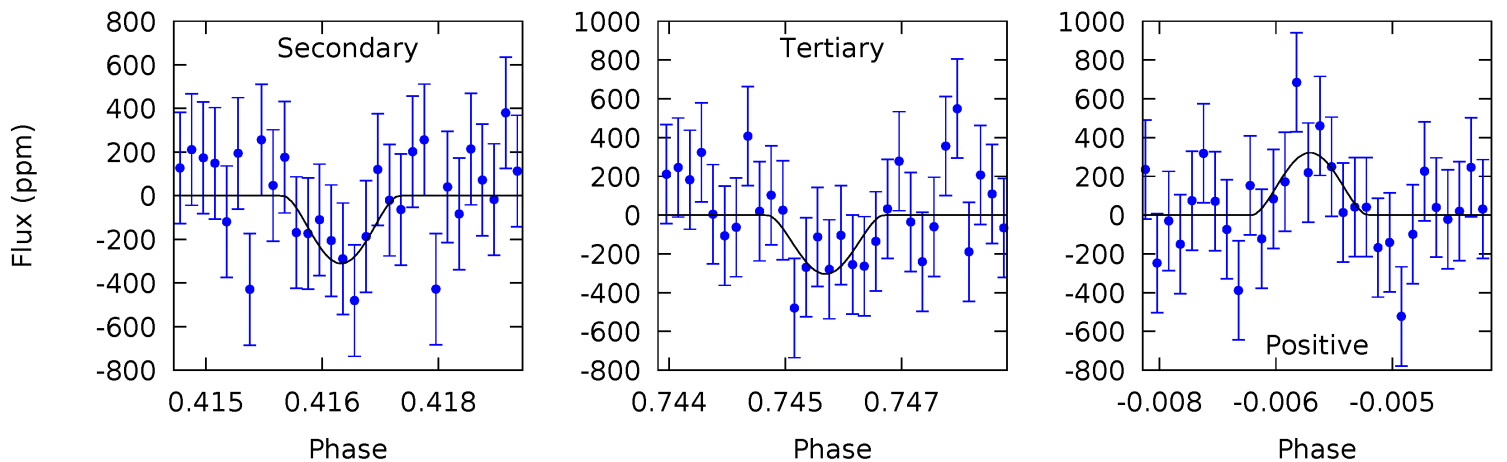
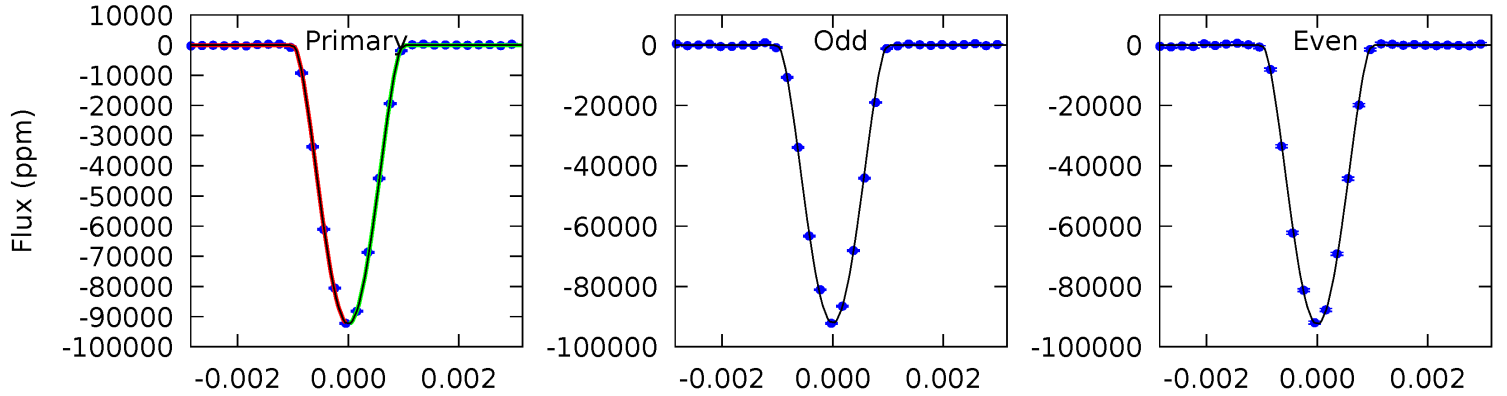
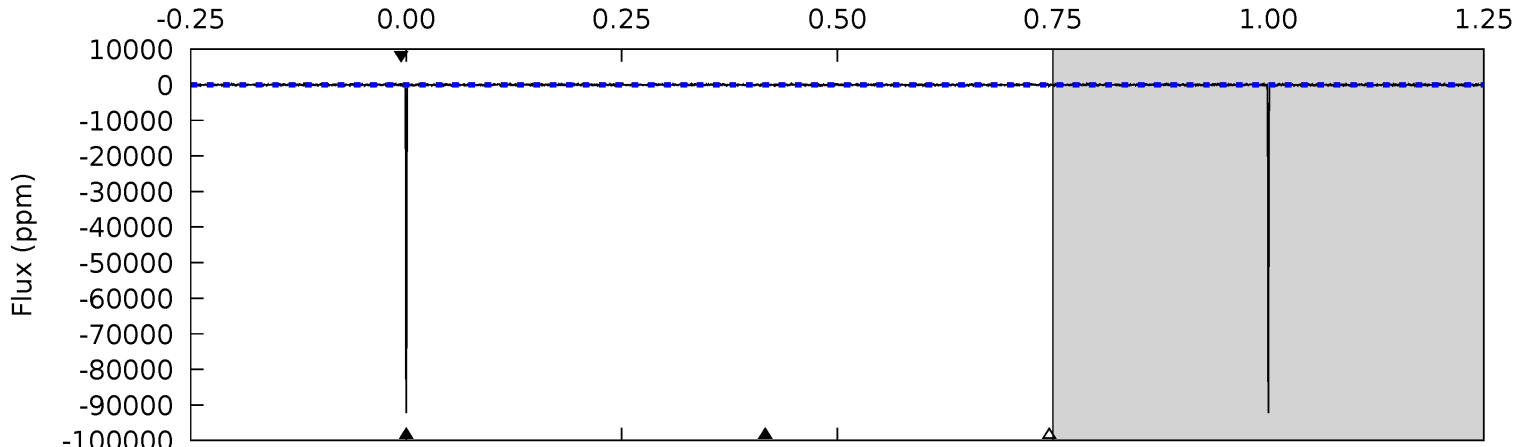
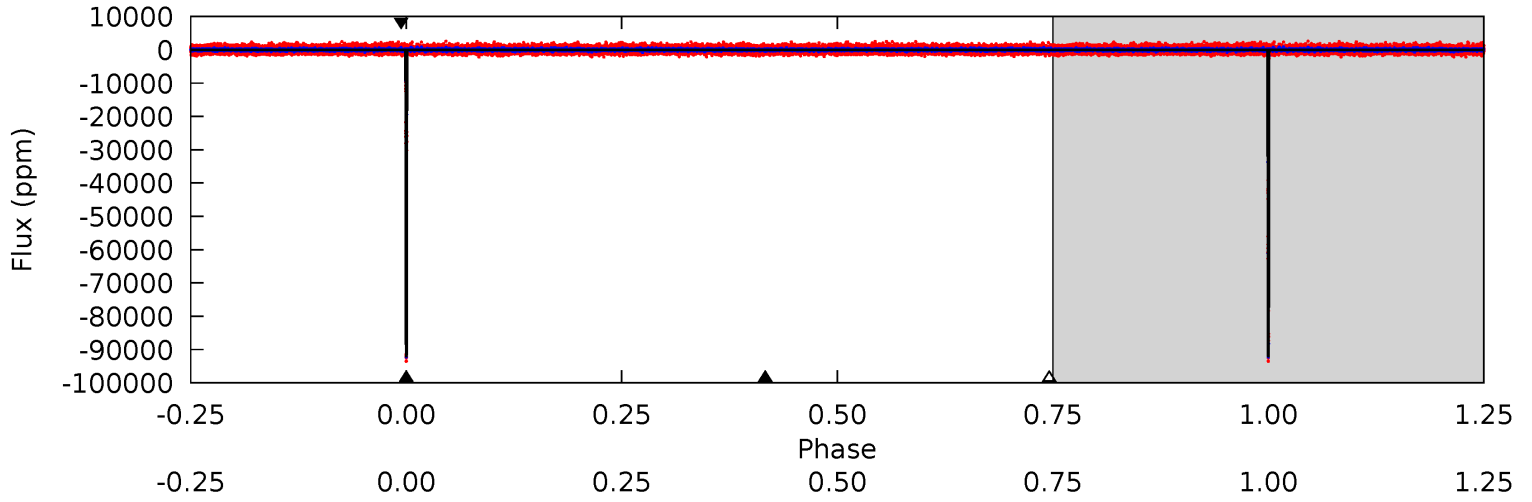
TCE 006527229-01 P=200.801435 Days $T_0=263.869832$ (BKJD)



DV Model-Shift Uniqueness Test

006527229-01, P = 200.799743 Days, E = 263.875740 Days

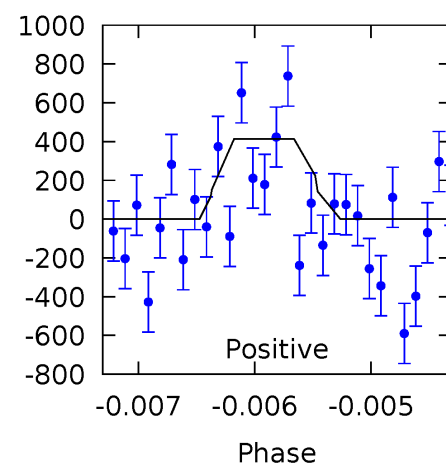
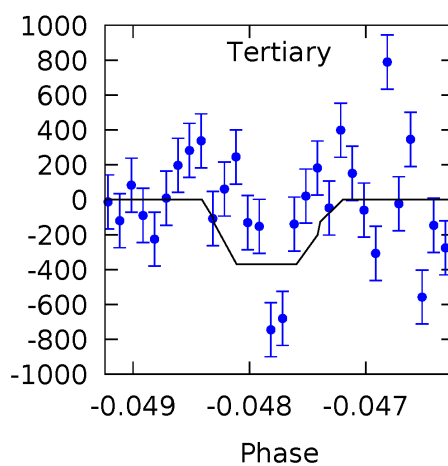
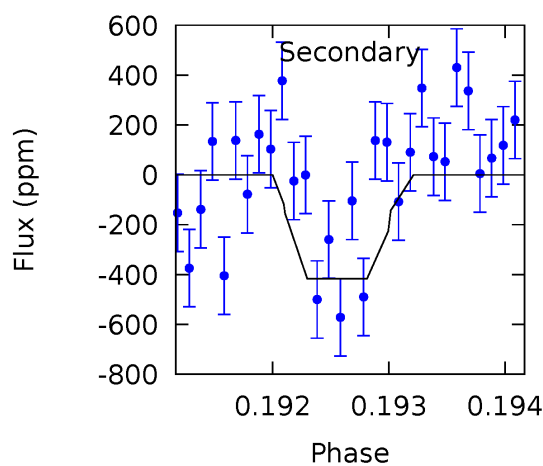
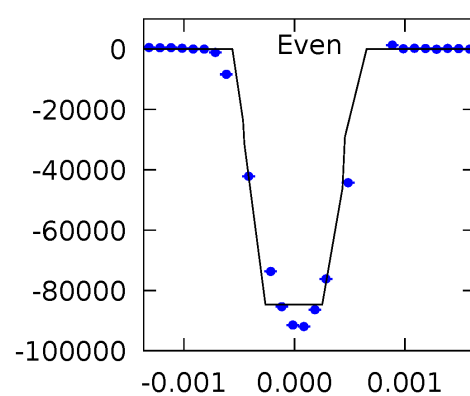
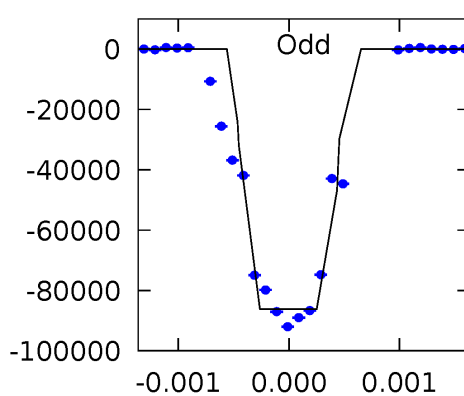
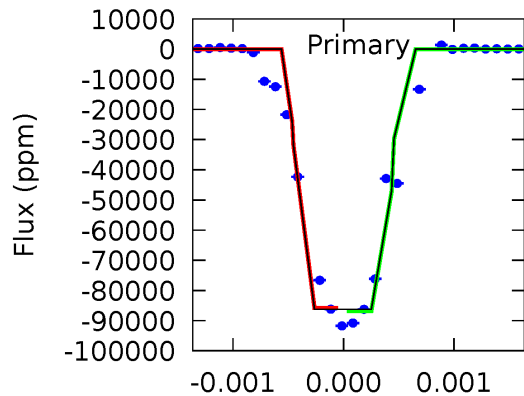
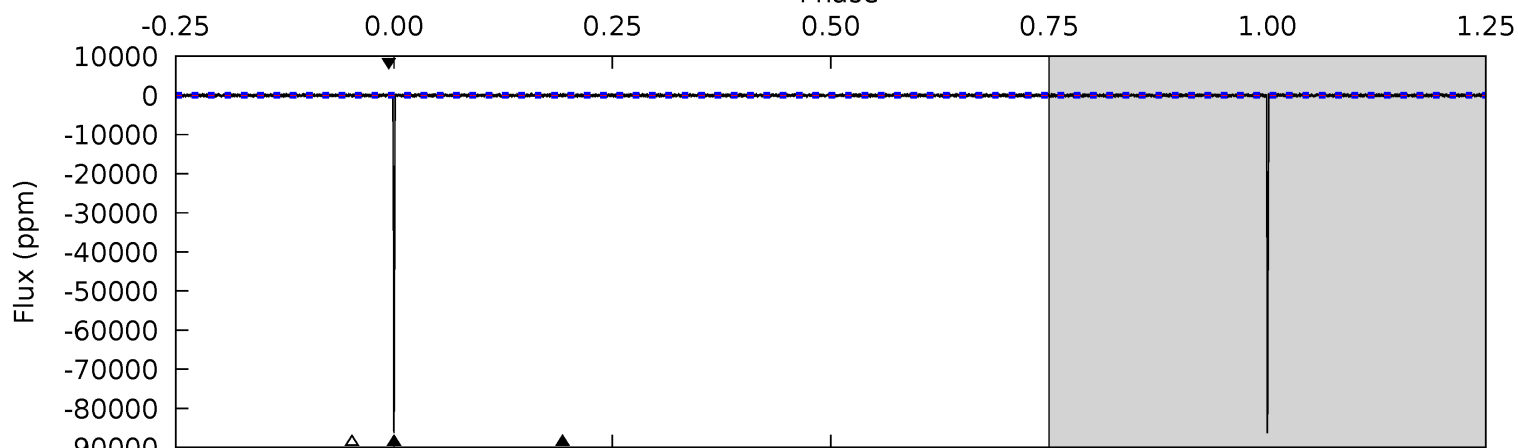
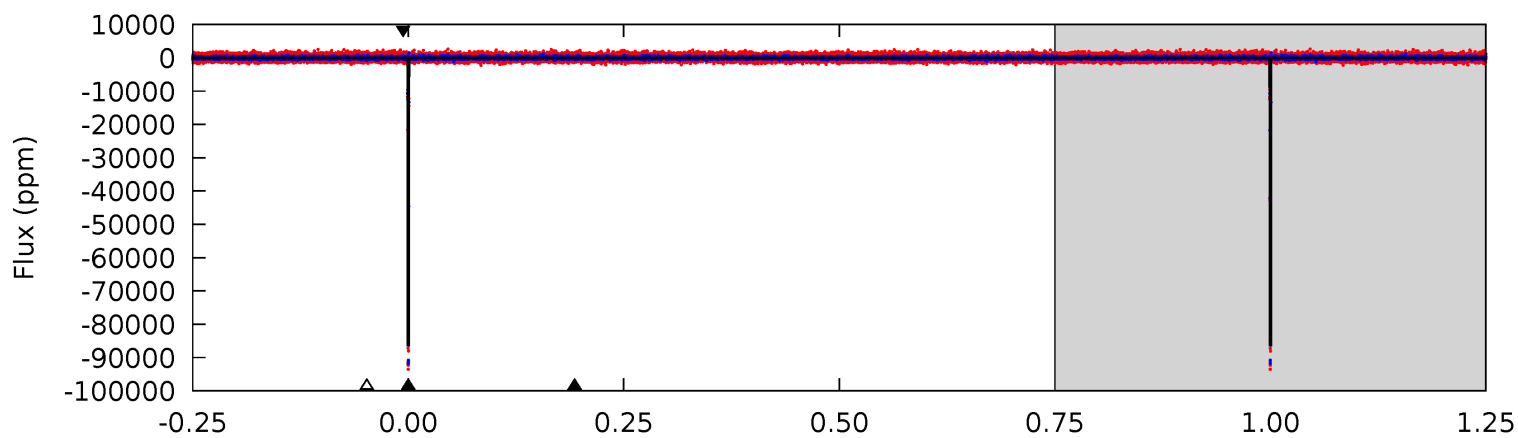
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1593	5.36	5.24	5.55	5.37	3.15	1.58	1588	1587	0.12	-0.19	3.20	1.00	0.00	2.02



Alt Model-Shift Uniqueness Test

006527229-01, P = 200.801435 Days, E = 263.869832 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
915.8	4.42	3.93	4.39	5.45	3.29	1.80	911.9	911.4	0.49	0.03	8.41	1.00	0.00	5.03



Stellar Parameters For KIC 006527229

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5896^{+184}_{-205}	$4.518^{+0.036}_{-0.204}$	$-0.080^{+0.300}_{-0.300}$	$0.916^{+0.268}_{-0.089}$	$1.008^{+0.127}_{-0.127}$	$1.849^{+0.382}_{-0.985}$
	+3%/-3%	+1%/-5%	+375%/-375%	+29%/-10%	+13%/-13%	+21%/-53%
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 006527229-01 / KOI 5296.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-310 ± 58	$42.34^{+7.79}_{-5.32}$	435^{+33}_{-22}	2184^{+66}_{-72}	41^{+14}_{-12}
Alt.	-416 ± 94	$31.62^{+6.26}_{-4.80}$	436^{+31}_{-20}	2413^{+108}_{-105}	99^{+46}_{-33}

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

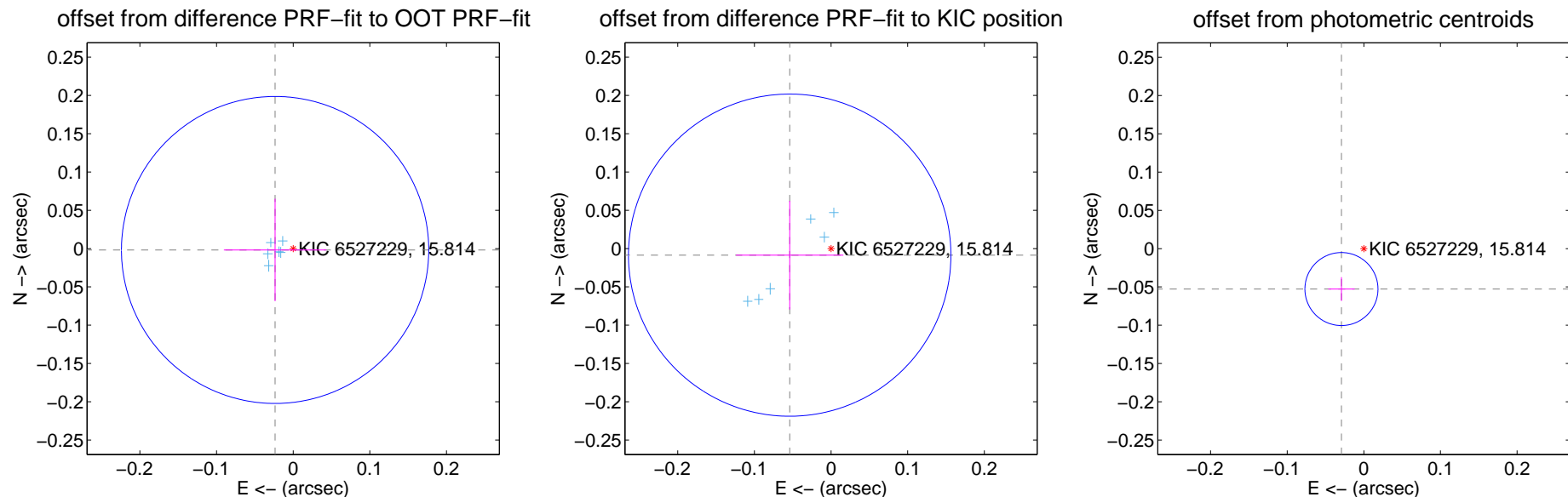
DV Centroid Data

Supplemental centroid analysis for 006527229-01. Kepler magnitude: 15.81. Transit SNR 892.61

There are 6 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.024 ± 0.067	0.35	0.024 ± 0.067	-0.002 ± 0.067
PRF-fit source offset from KIC position	0.055 ± 0.070	0.78	0.054 ± 0.070	-0.009 ± 0.071
photometric centroid source offset	0.06 ± 0.02	3.79	0.03 ± 0.02	-0.05 ± 0.02

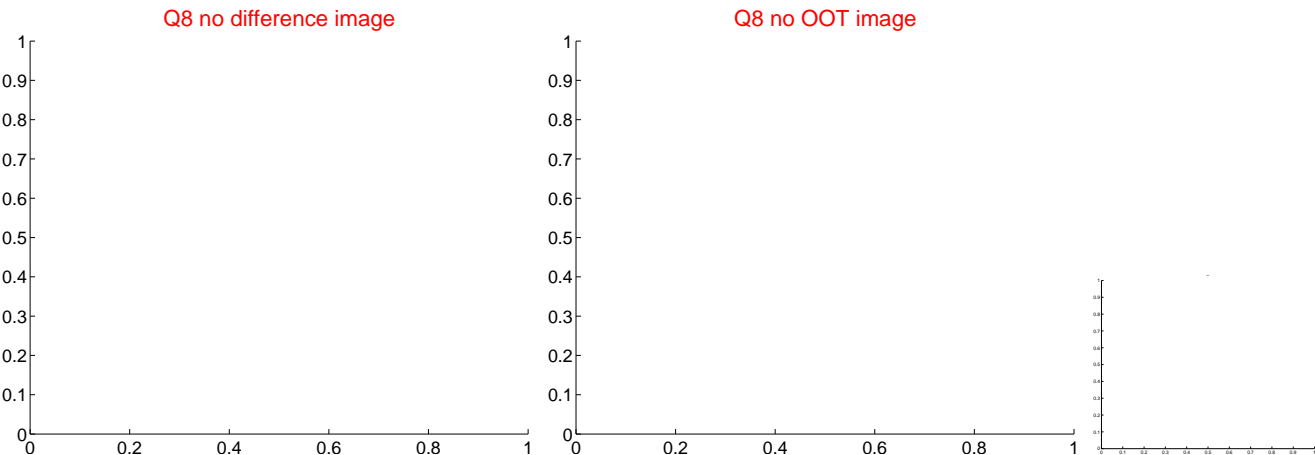
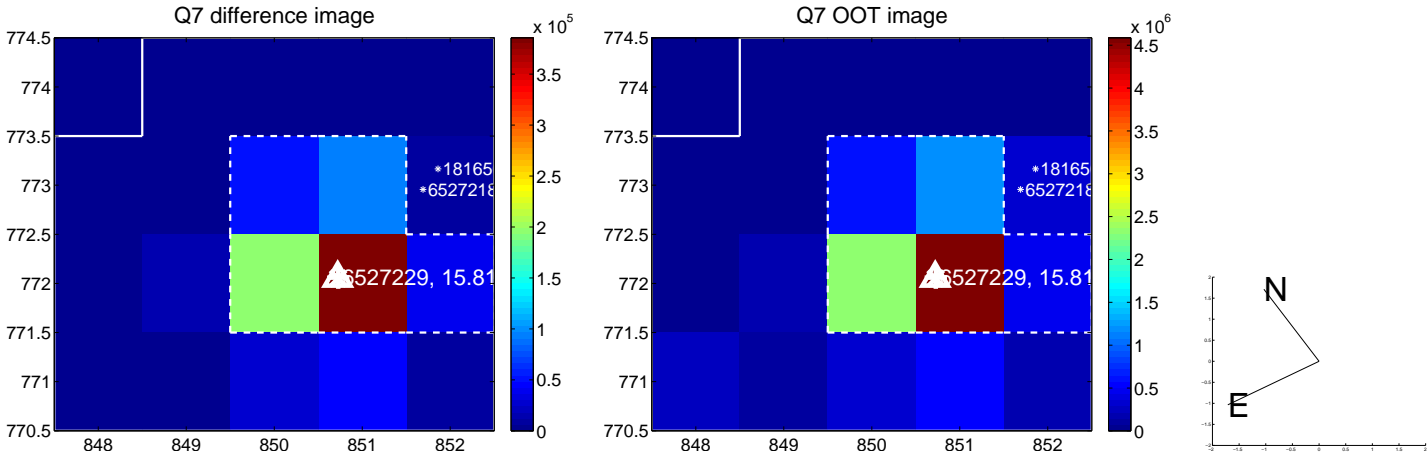
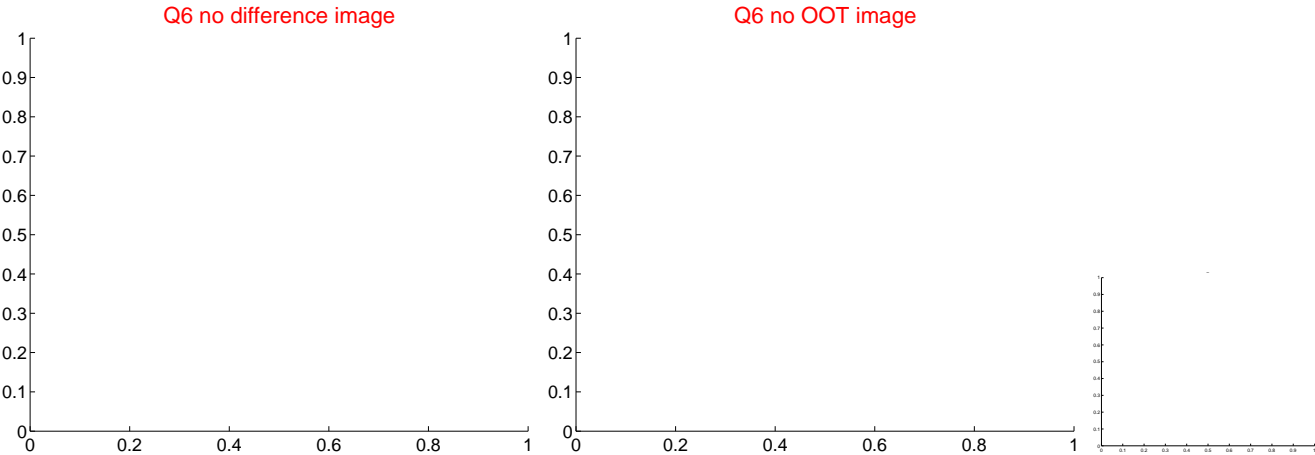
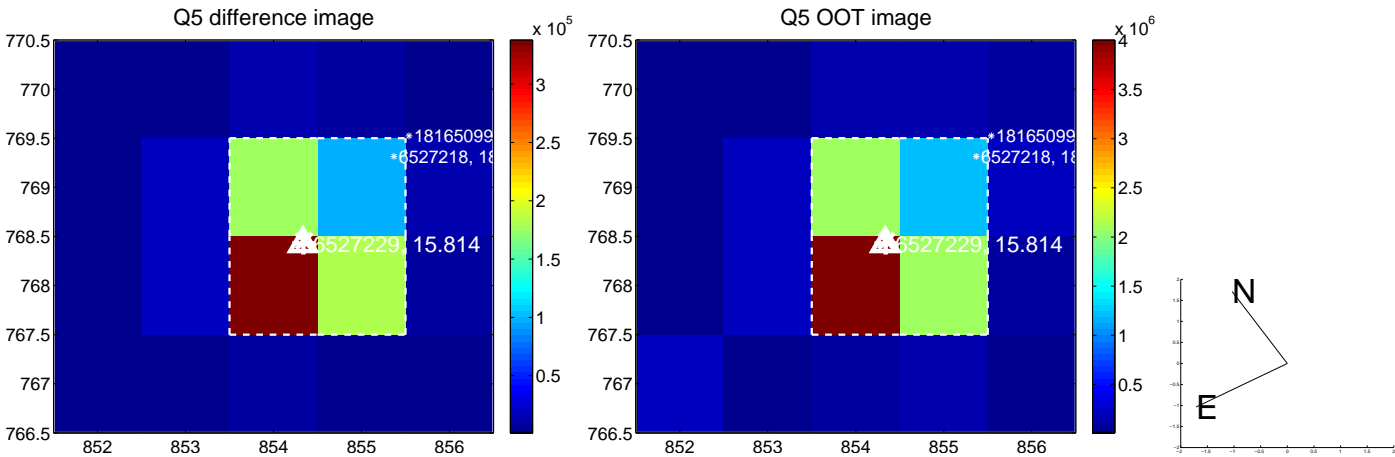


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

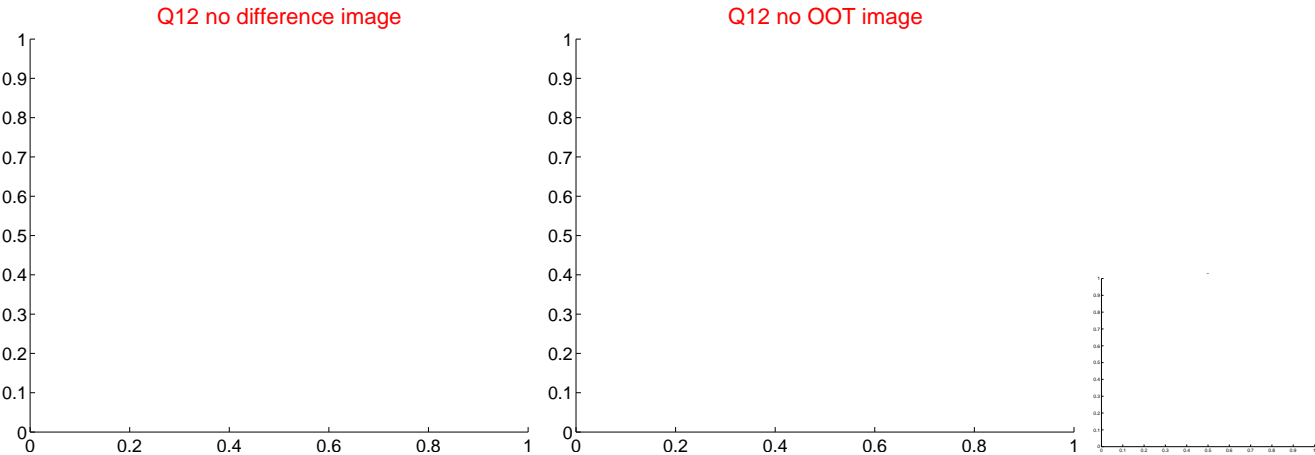
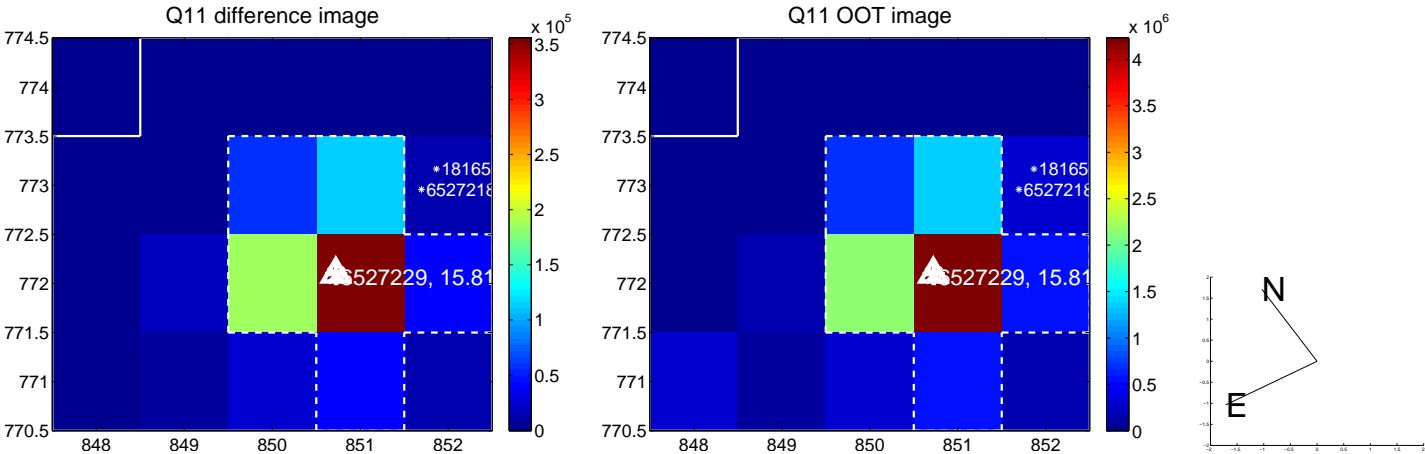
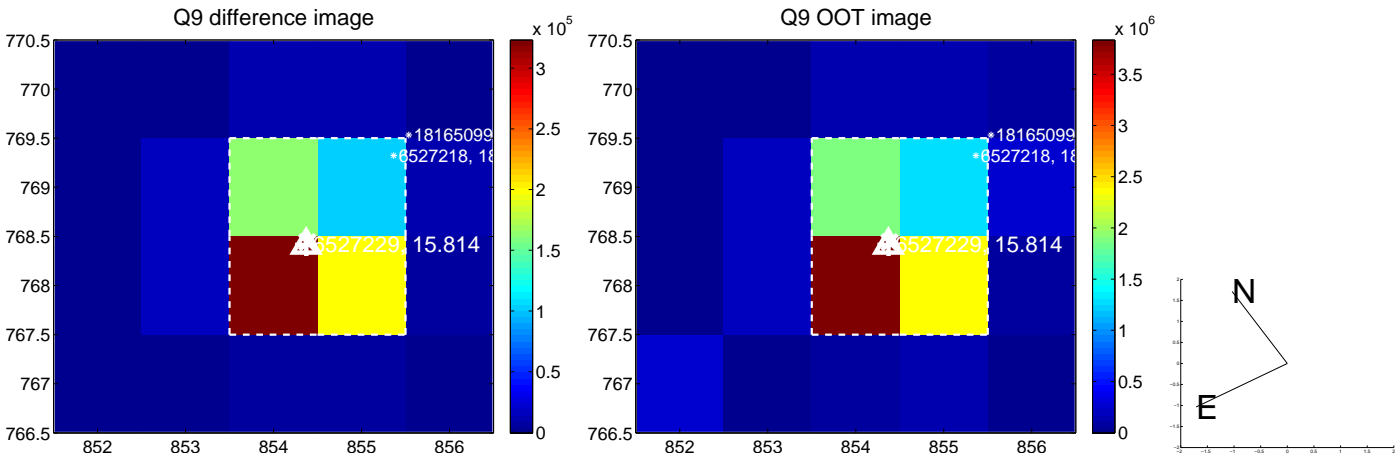
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



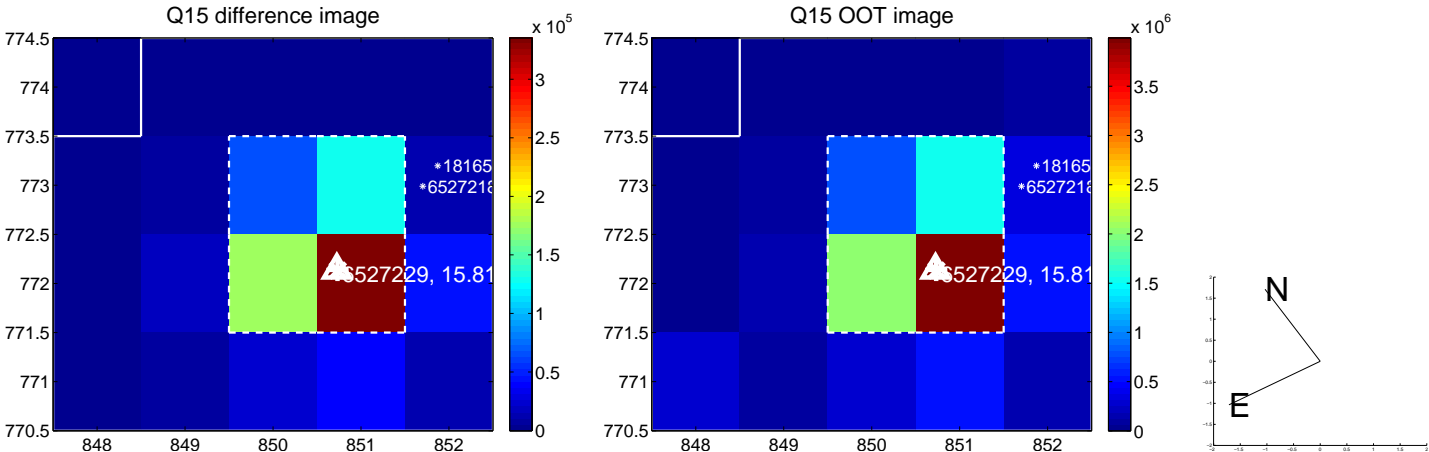
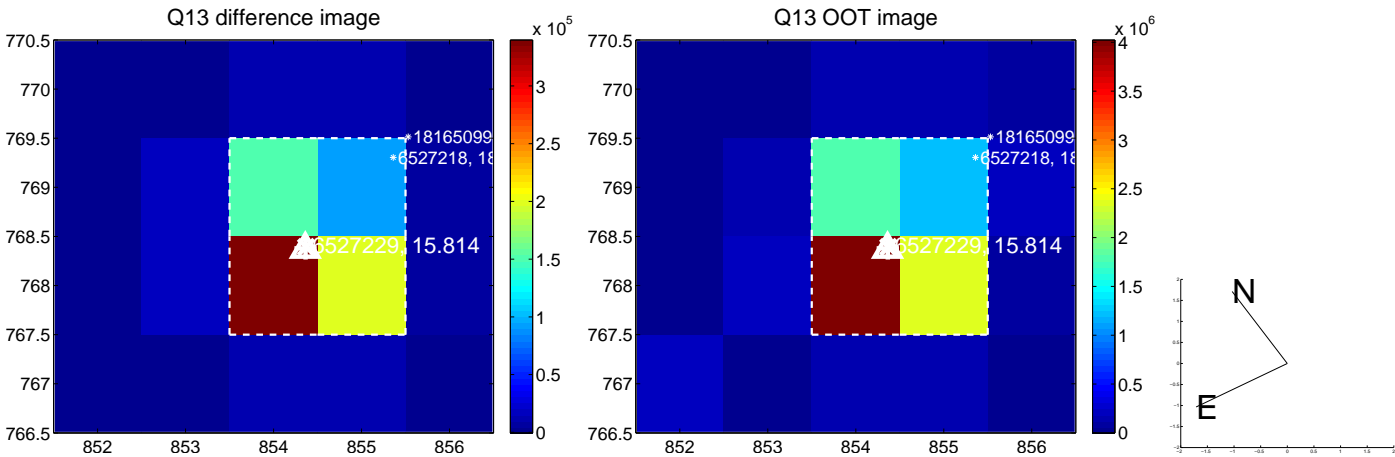
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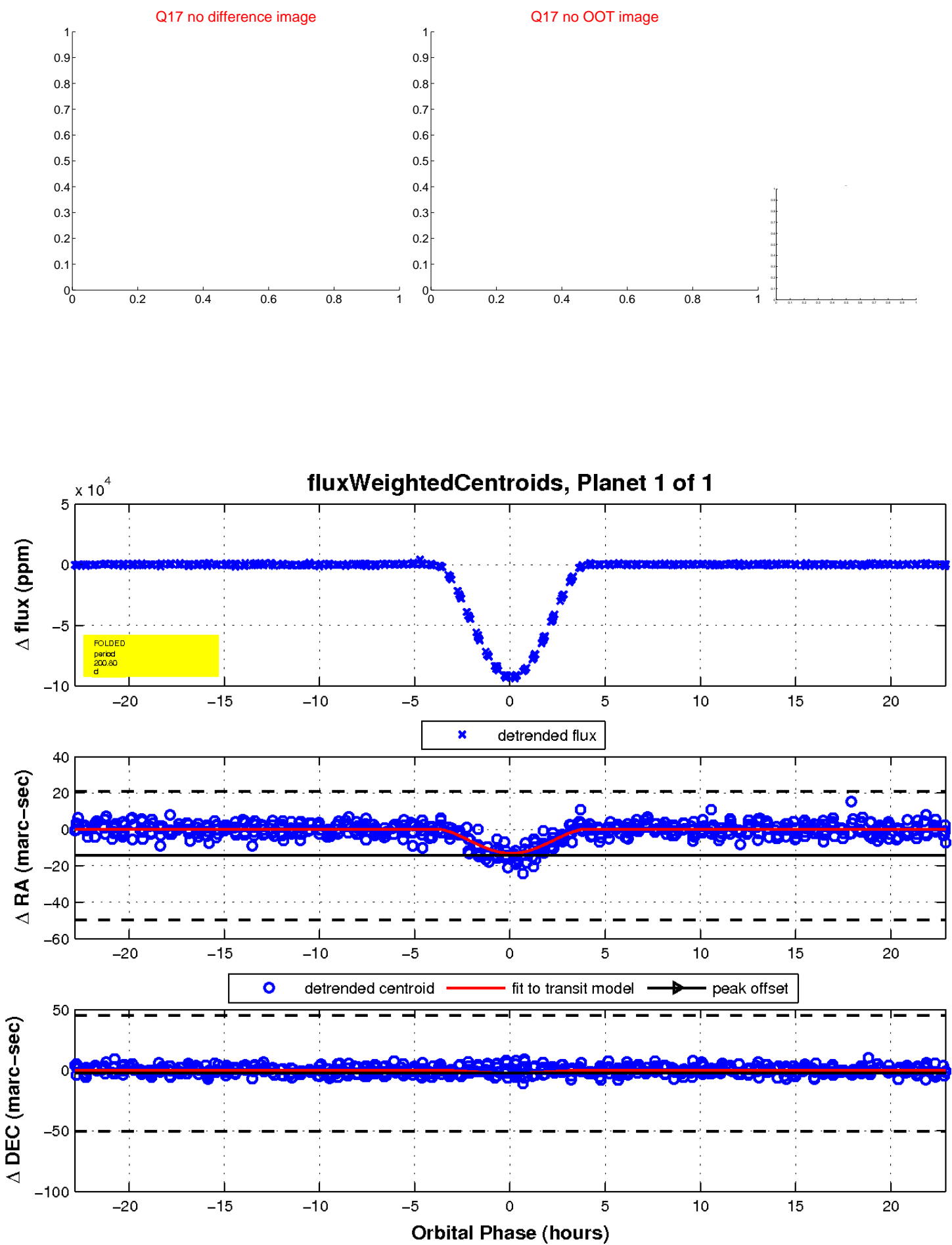
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UKIRT Image

Declination

