

KIC 006784887

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})
006784887-01	OBS	5328.01	44.714448	135.341913	89976.2	5.754	3018.8	2567.2	0.94	6185	41.15	19.11

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006784887-01	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.

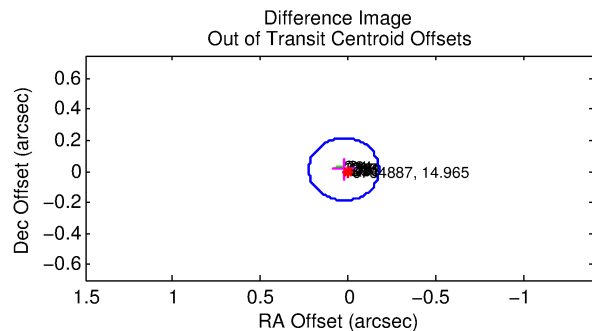
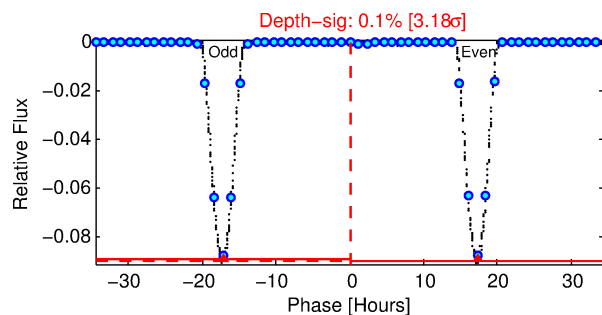
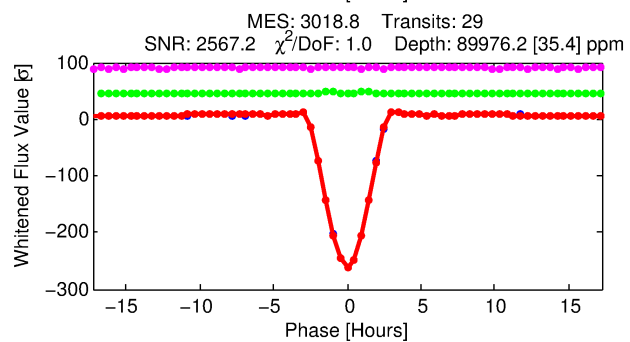
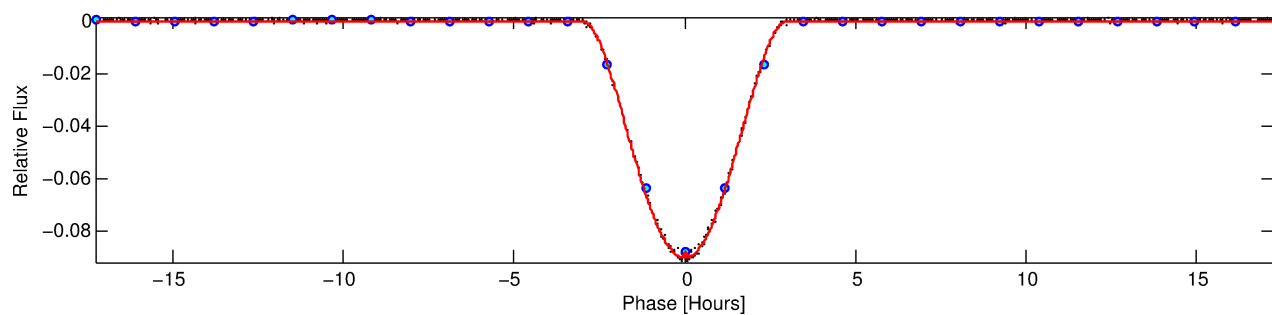
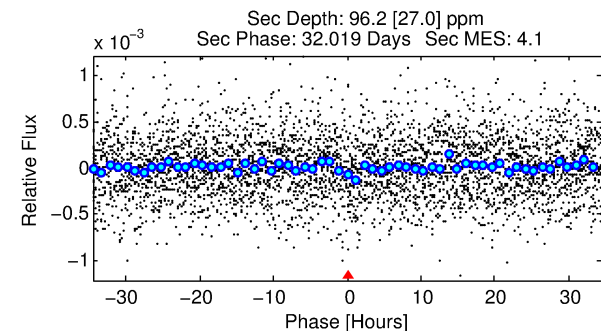
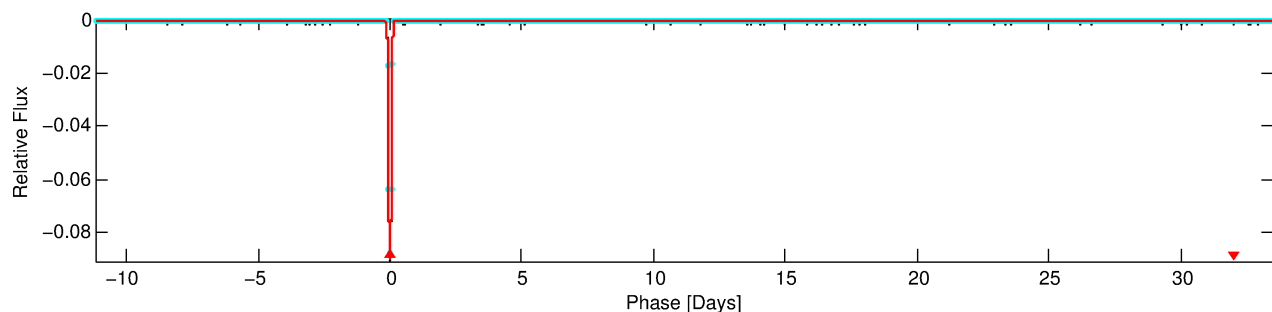
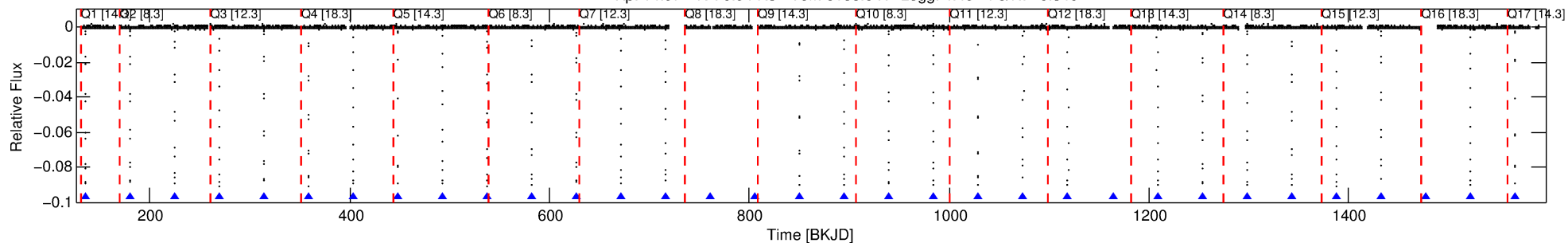
Ephemeris Match Information For 006784887-01

No Significant Match Found

DV One-Page Summary

KIC: 6784887 Candidate: 1 of 1 Period: 44.714 d
KOI: K05328.01 Corr: 0.999

Kp: 14.97 R*: 0.94 Rs Teff: 6185.0 K Logg: 4.49 Fe/H: -0.340



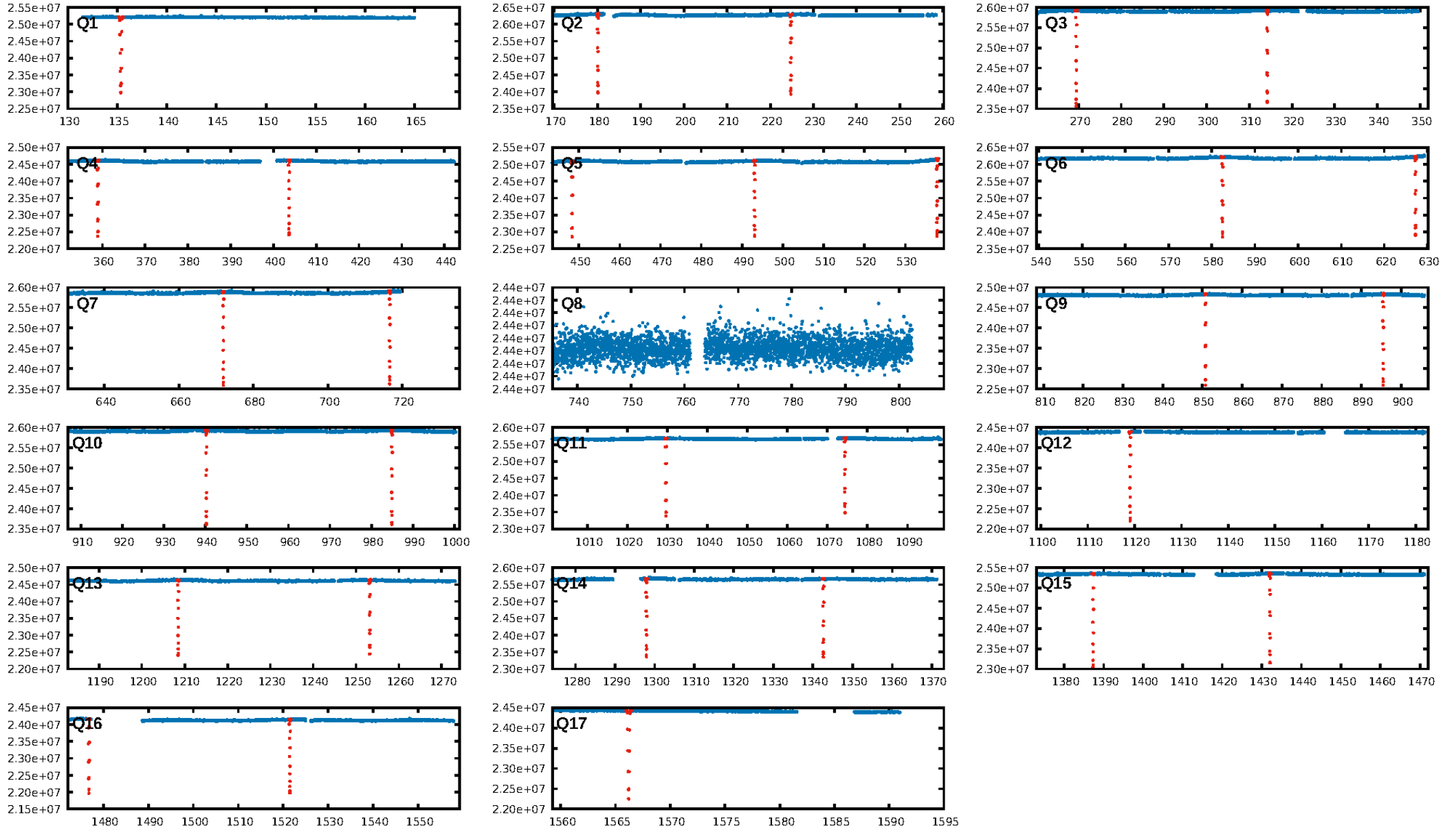
DV Fit Results:

Period = 44.71445 [0.00000] d
Epoch = 135.3419 [0.0000] BKJD
Rp/R* = 0.4007 [0.0105]
a/R* = 63.30 [0.03]
b = 0.91 [0.02]
Seff = 19.12 [8.06]
Teq = 533 [56] K
Rp = 41.15 [13.38] Re
a = 0.2464 [0.0671] AU
Ag = 1.90 [0.93] [0.97σ]
Teffp = 968 [78] K [4.53σ]

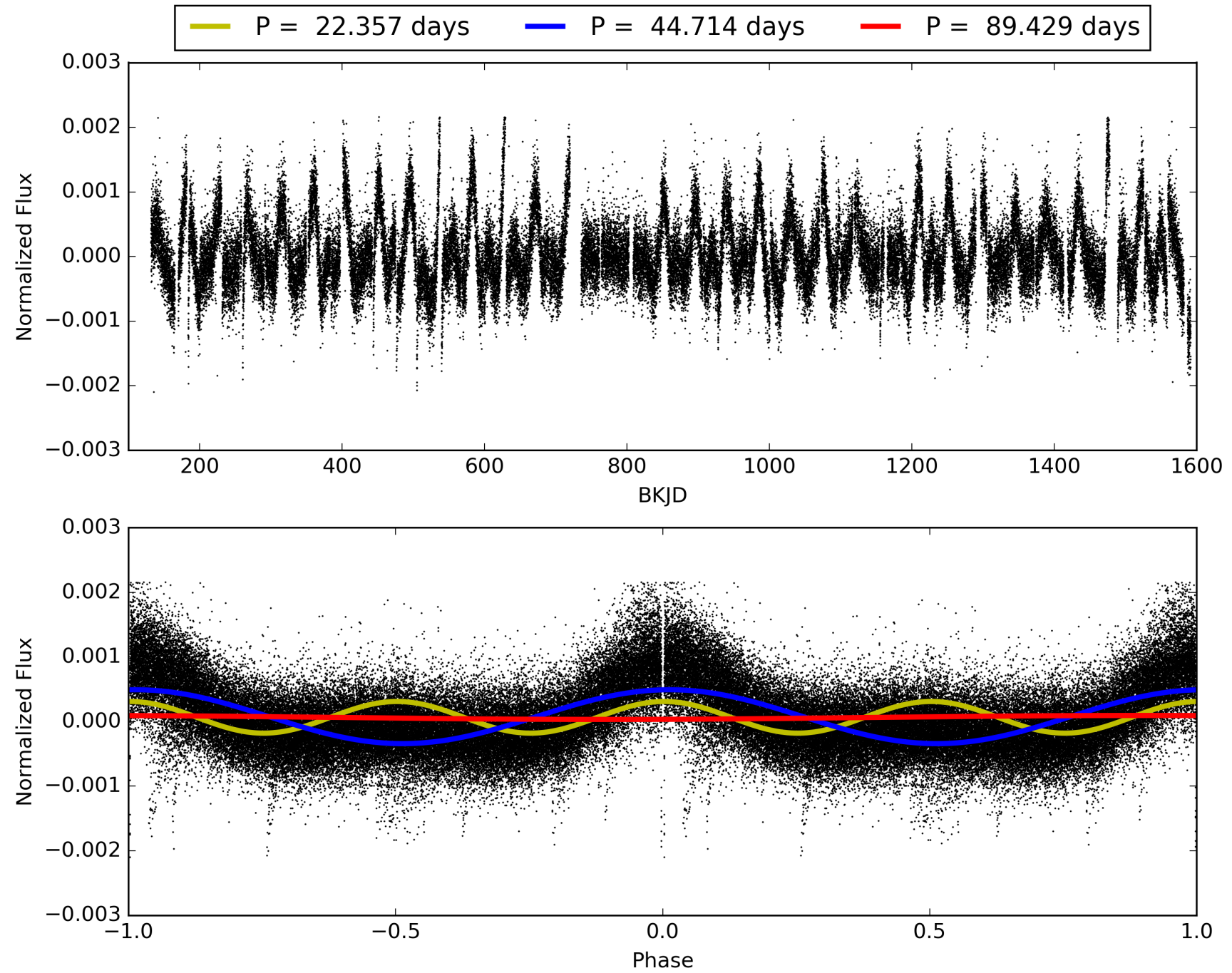
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [27/27]
GhostDiagnostic-chr: 8.142
Centroid-sig: 0.0%
Centroid-so: 0.103 arcsec [24.31σ]
OotOffset-rm: 0.029 arcsec [0.43σ]
KicOffset-rm: 0.053 arcsec [0.78σ]
OotOffset-st: 4/4/2/5 [15]
KicOffset-st: 4/4/2/5 [15]
DiffImageQuality-fgm: 1.00 [15/15]
DiffImageOverlap-fno: 1.00 [15/15]

TCE 006784887-01, PDC Light Curves

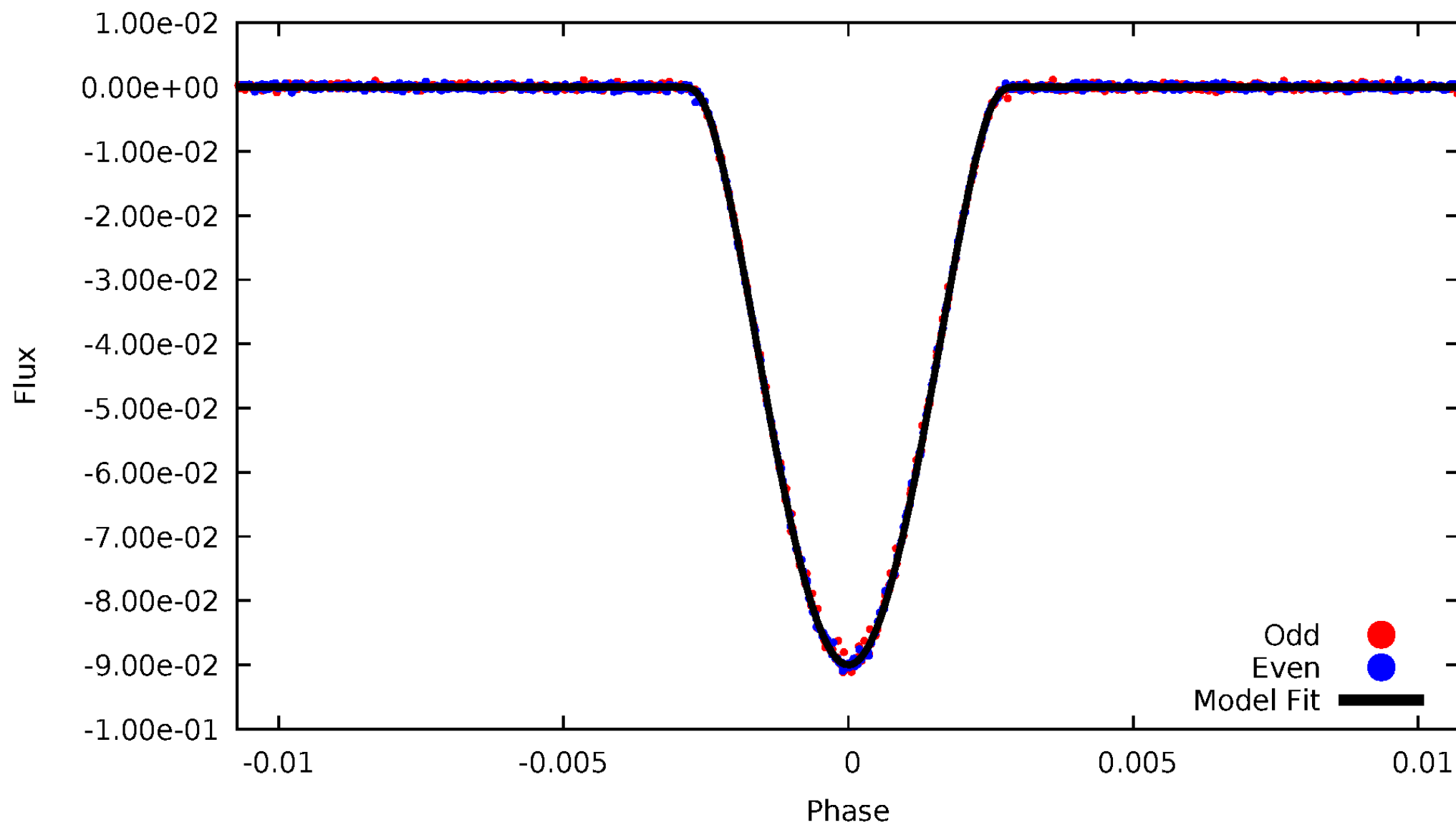


TCE 006784887-01



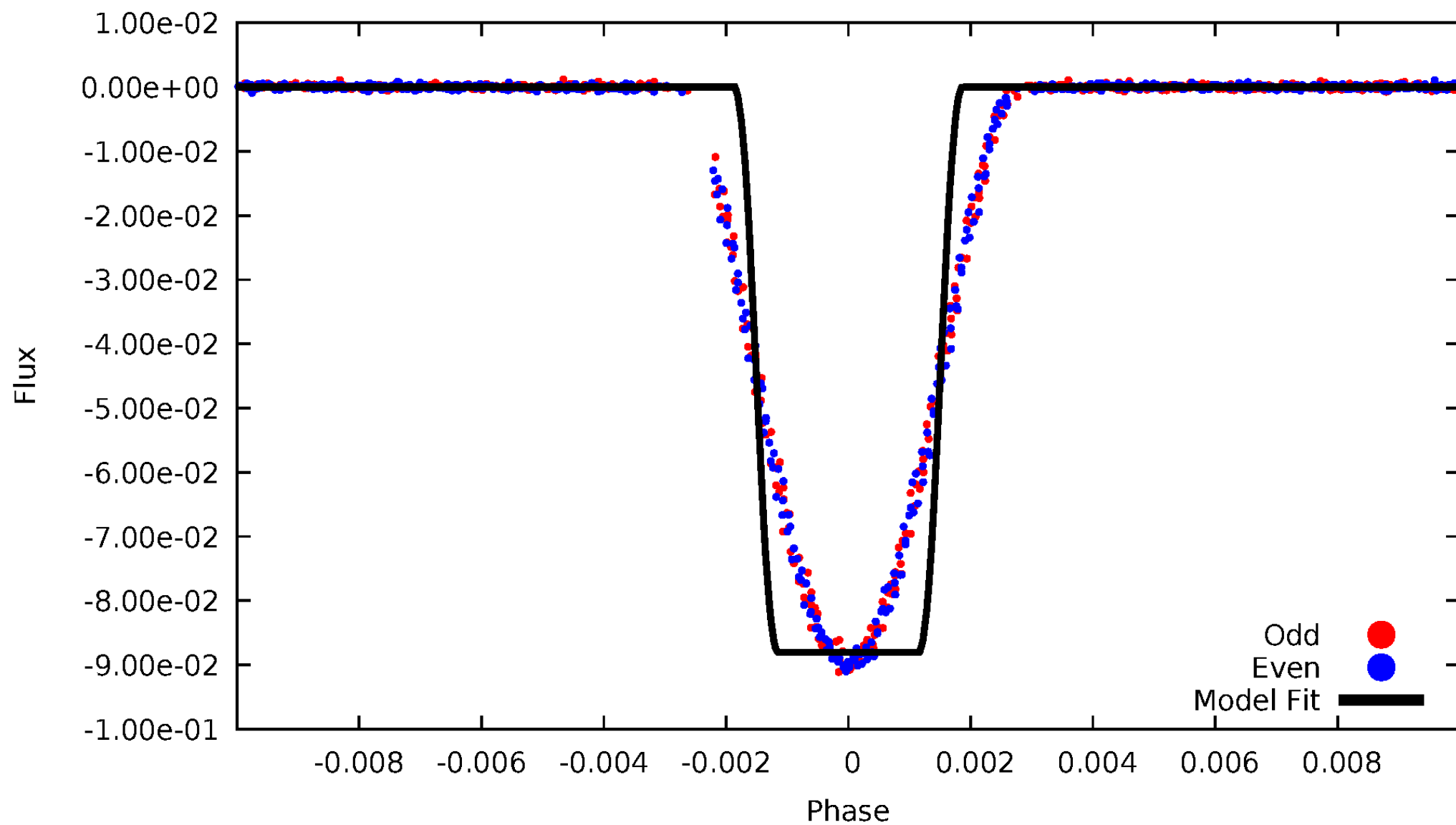
DV Odd/Even

TCE 006784887-01



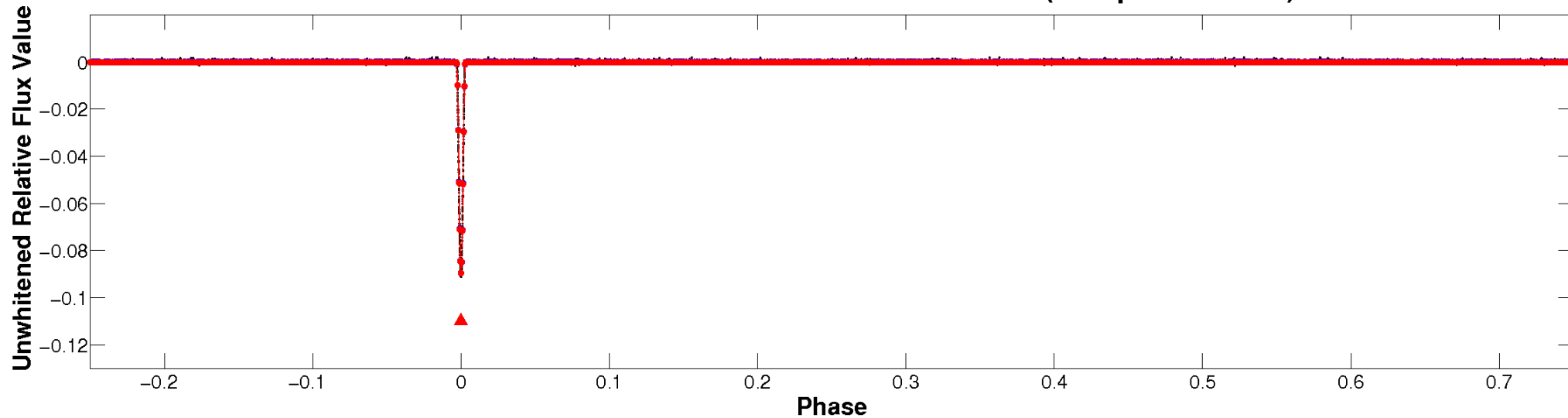
ALT Odd/Even

TCE 006784887-01

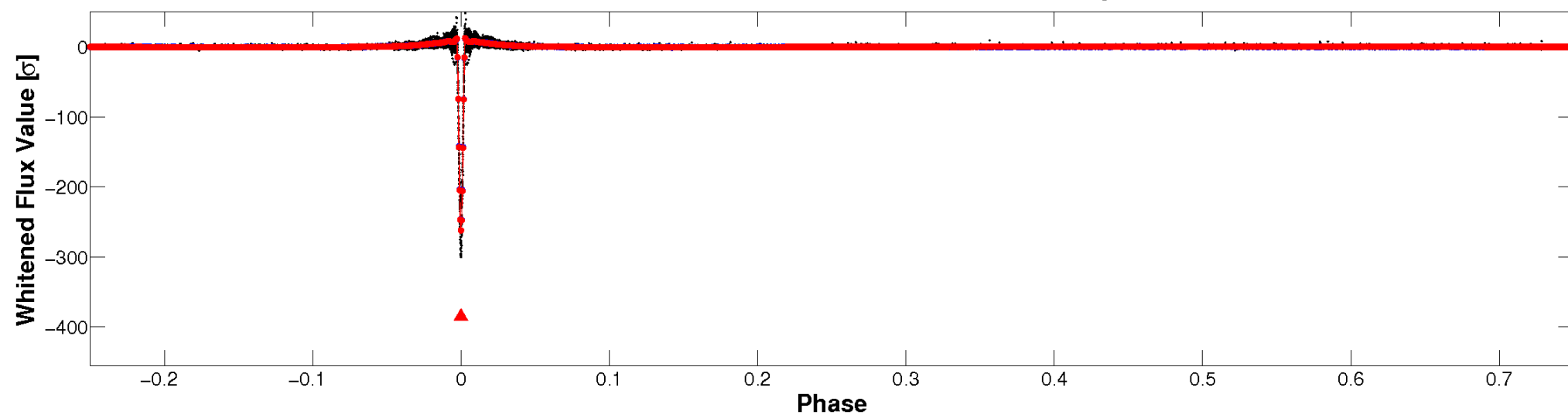


Non-Whitened Vs. Whitened Light Curve

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

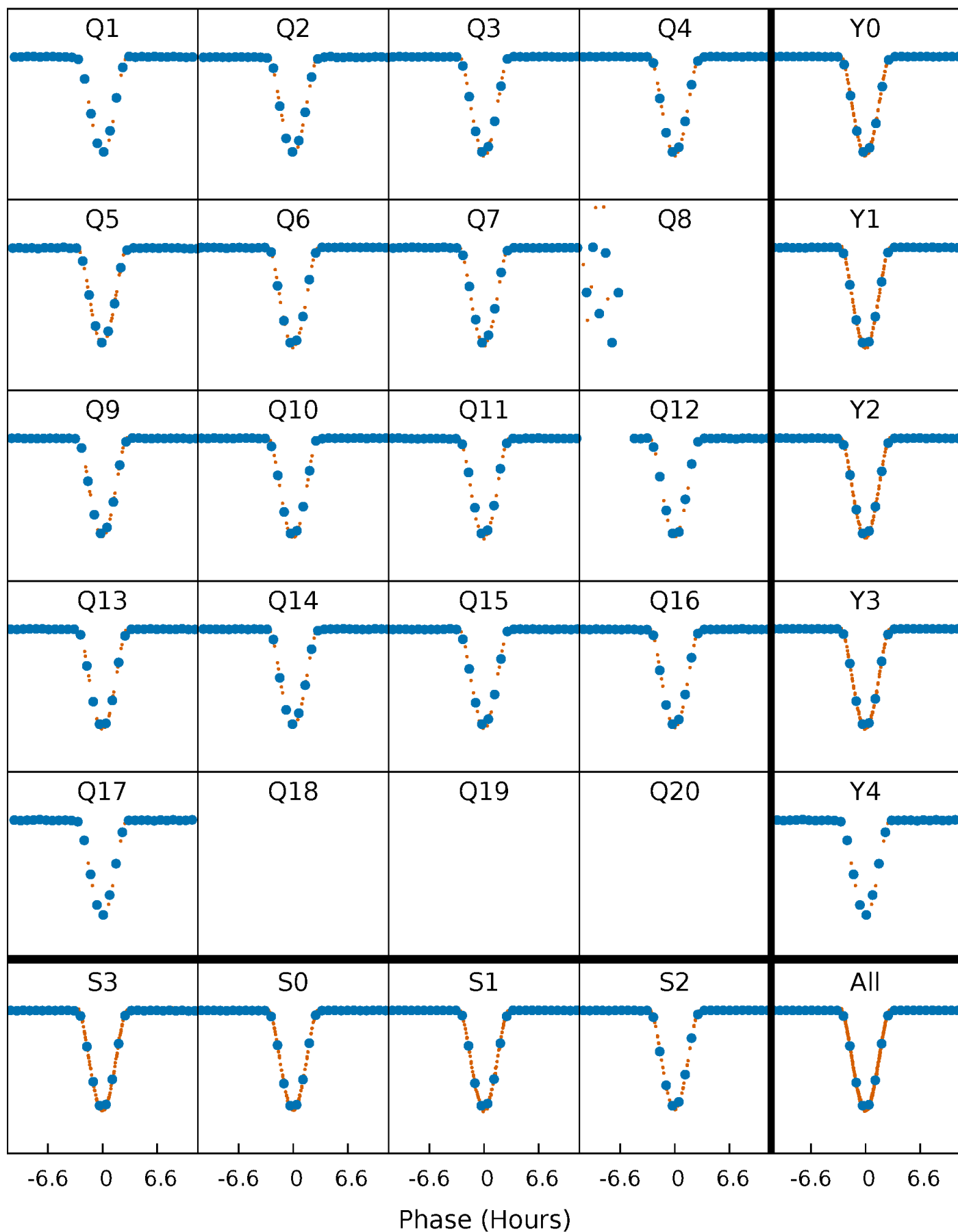


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



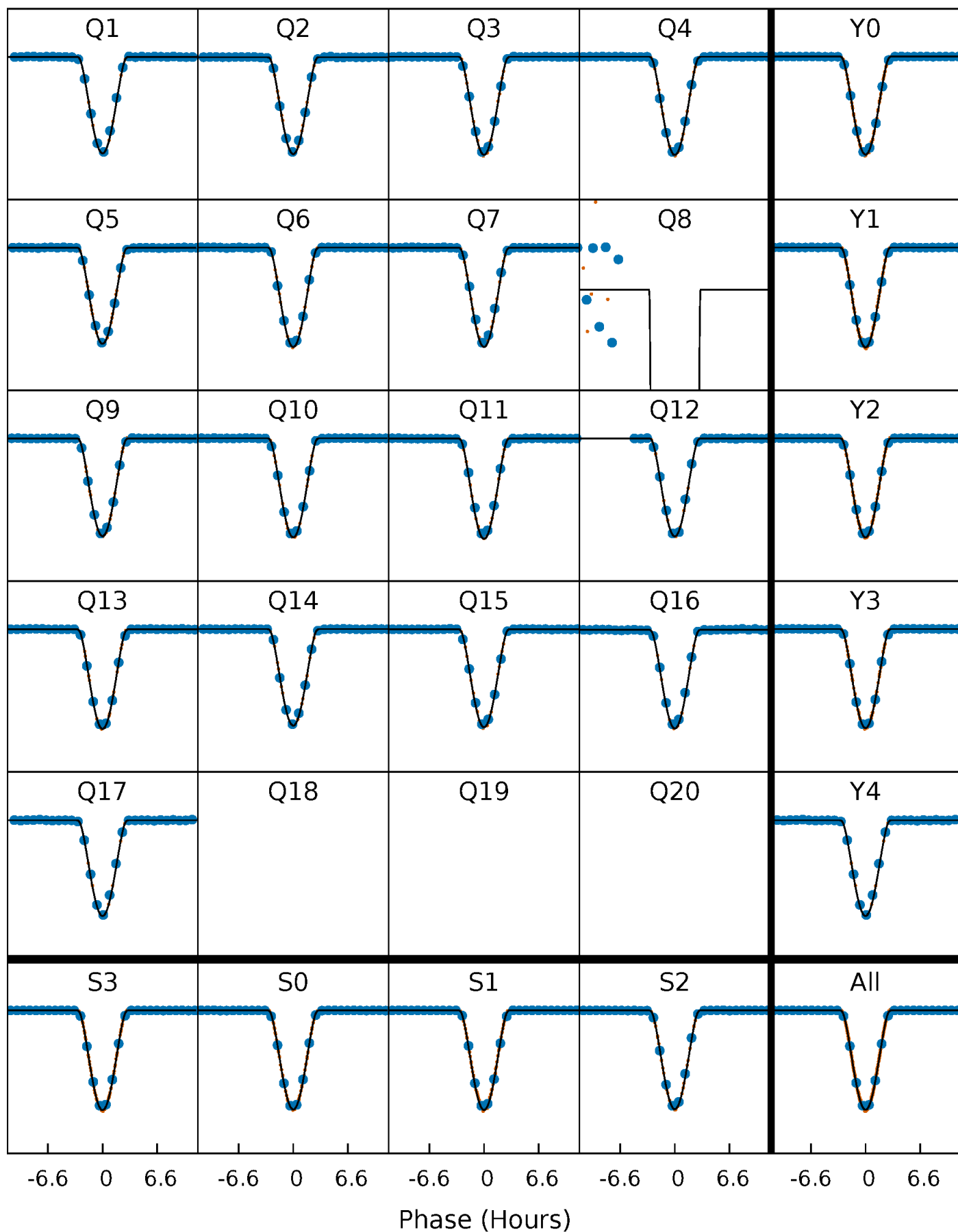
PDC Quarter-Phased Transit Curves

TCE 006784887-01 P= 44.714448 Days $T_0=135.341913$ (BKJD)



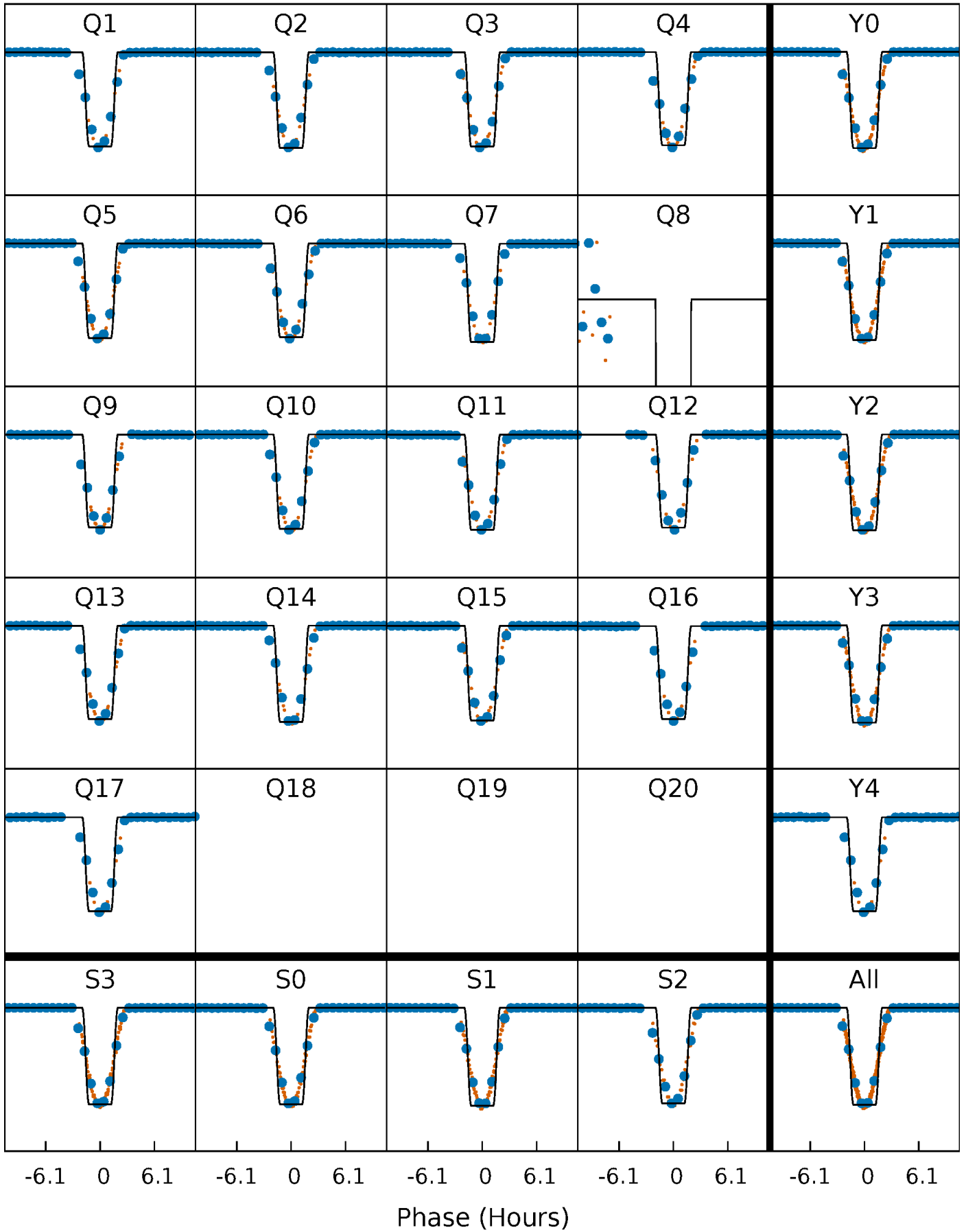
DV Quarter-Phased Transit Curves

TCE 006784887-01 P= 44.714448 Days $T_0=135.341913$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

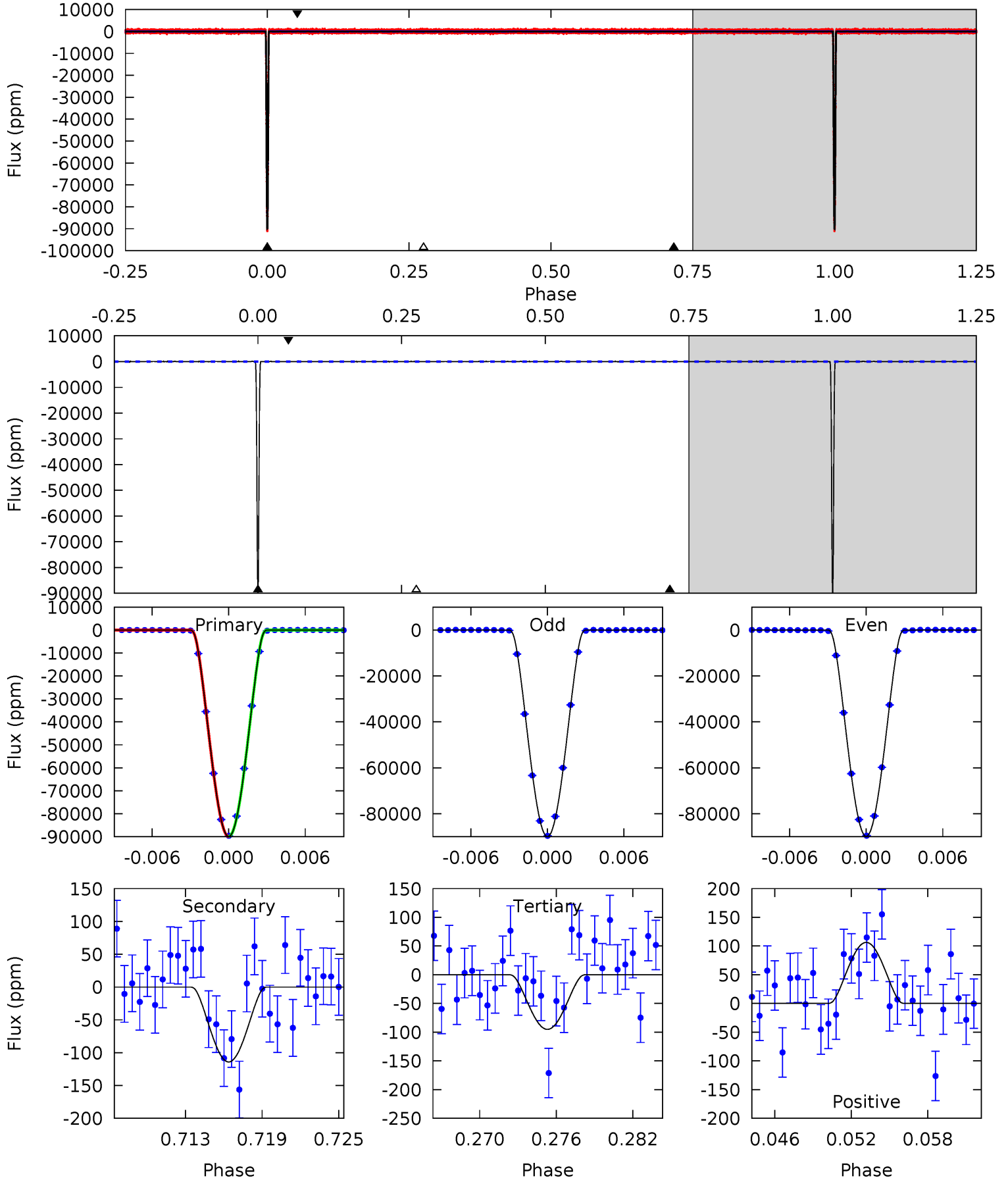
TCE 006784887-01 P= 44.714220 Days $T_0=135.345417$ (BKJD)



DV Model-Shift Uniqueness Test

006784887-01, P = 44.714448 Days, E = 90.627465 Days

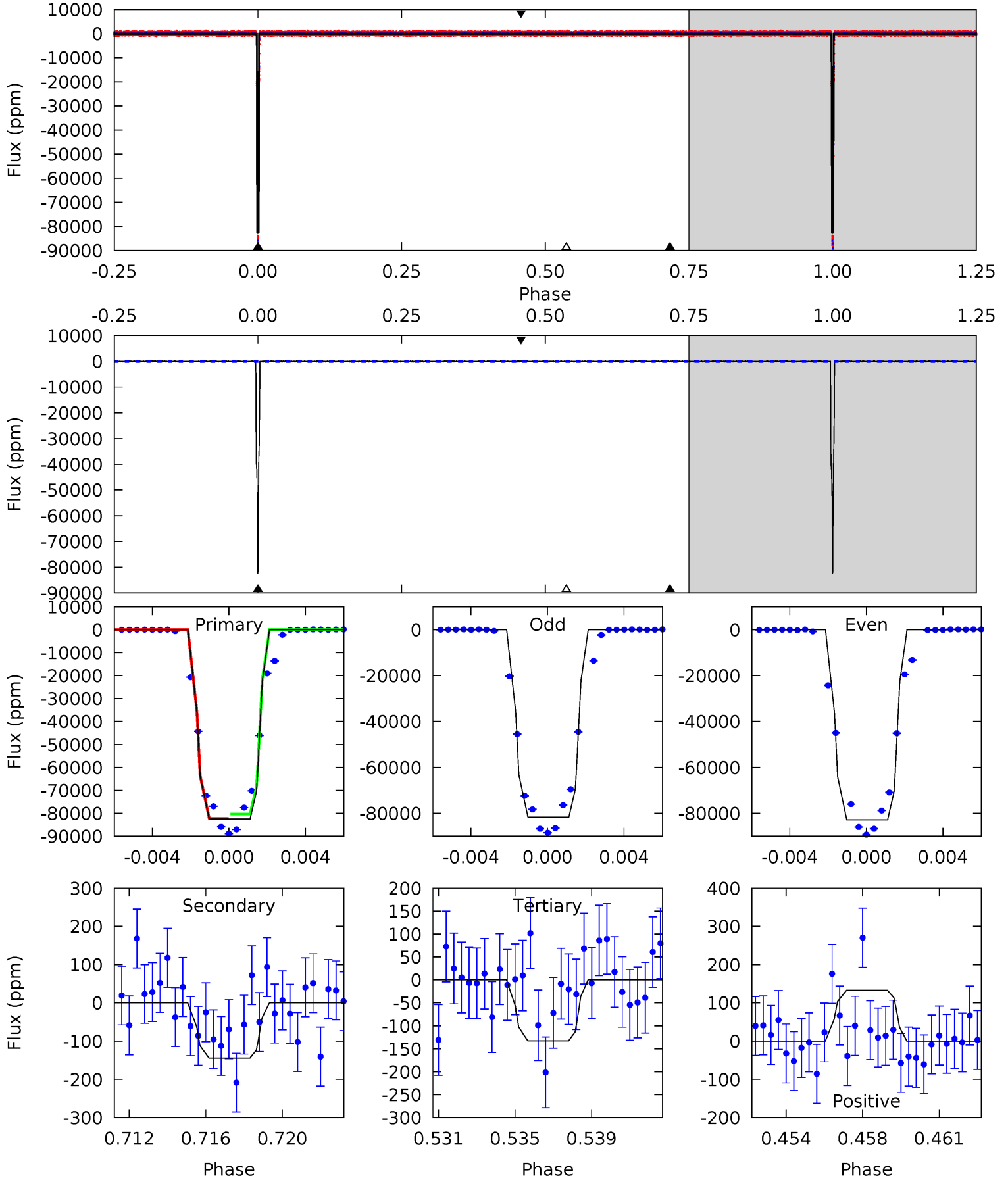
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5331	6.77	5.64	6.31	5.13	2.76	1.64	5326	5325	1.13	0.46	3.42	1.00	0.00	3.13



Alt Model-Shift Uniqueness Test

006784887-01, P = 44.714220 Days, E = 90.631197 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2471	4.33	3.98	3.99	5.21	2.90	1.14	2467	2467	0.35	0.34	17.7	1.00	0.00	26.2



Stellar Parameters For KIC 006784887

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6185^{+188}_{-225}	$4.490^{+0.054}_{-0.216}$	$-0.340^{+0.300}_{-0.300}$	$0.941^{+0.305}_{-0.102}$	$0.999^{+0.136}_{-0.123}$	$1.689^{+0.491}_{-0.907}$
	+3%/-4%	+1%/-5%	+88%/-88%	+32%/-11%	+14%/-12%	+29%/-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 006784887-01 / KOI 5328.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-114 ± 17	$42.14^{+6.89}_{-3.25}$	760^{+55}_{-39}	1972^{+46}_{-45}	$2.035^{+0.510}_{-0.554}$
Alt.	-145 ± 33	$31.51^{+5.50}_{-2.90}$	760^{+56}_{-38}	2181^{+67}_{-72}	$4.705^{+1.617}_{-1.483}$

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 $A_{obs} \gg 1.0$

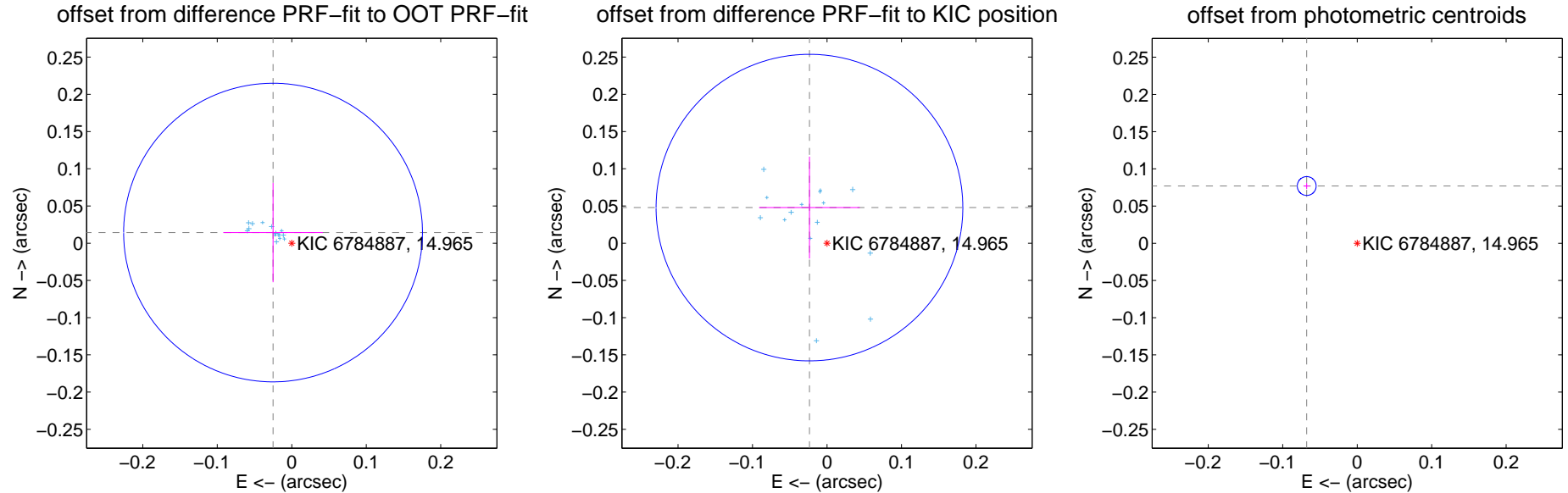
DV Centroid Data

Supplemental centroid analysis for 006784887-01. Kepler magnitude: 14.96. Transit SNR 2567.16

There are 15 quarters with good PRF difference image offsets

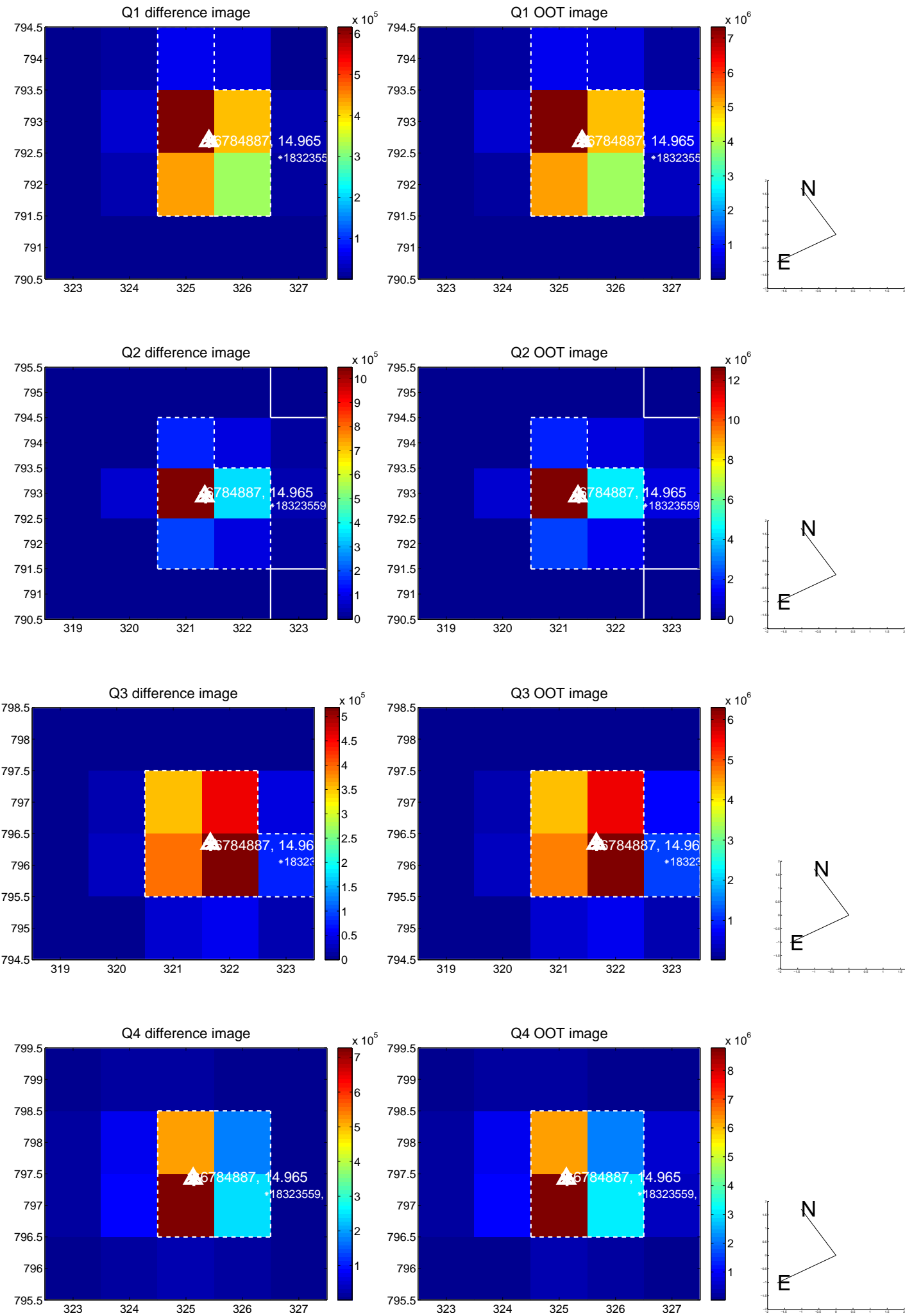
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.029 ± 0.067	0.43	0.025 ± 0.067	0.014 ± 0.067
PRF-fit source offset from KIC position	0.053 ± 0.069	0.78	0.024 ± 0.068	0.048 ± 0.068
photometric centroid source offset	0.10 ± 0.00	24.31	0.07 ± 0.00	0.08 ± 0.00

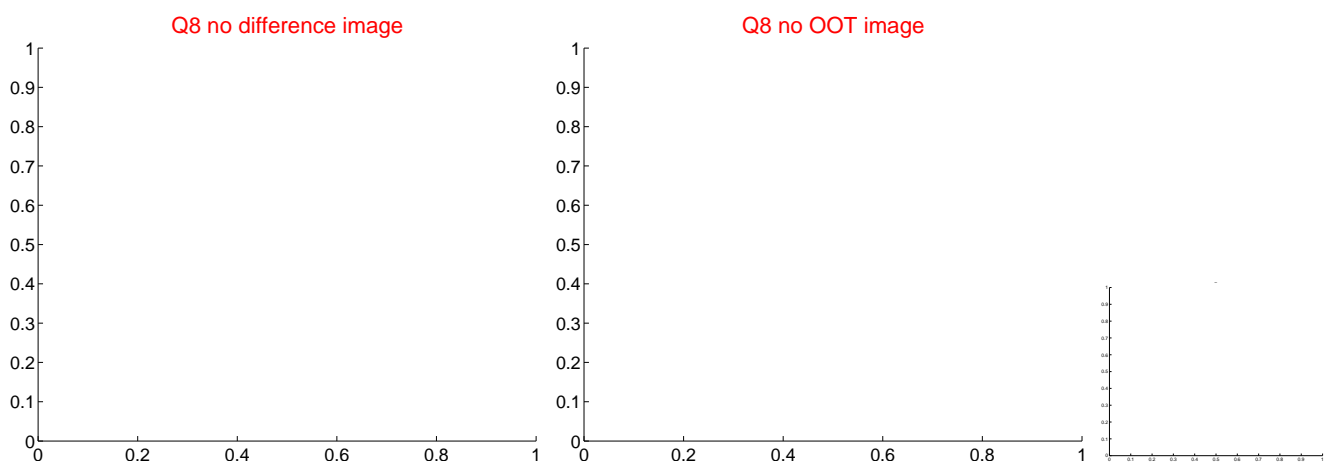
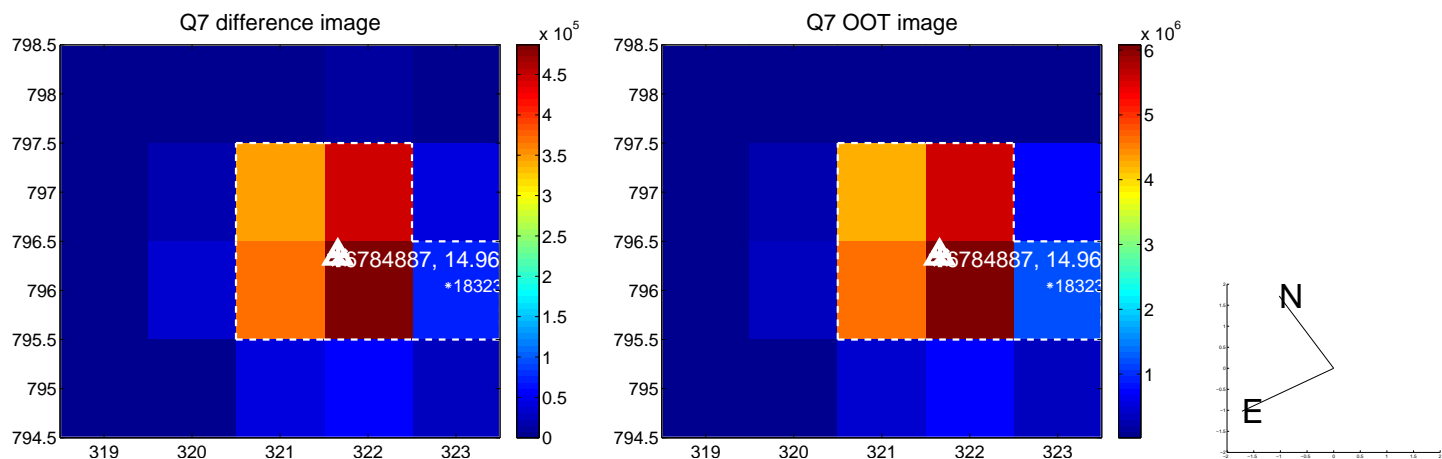
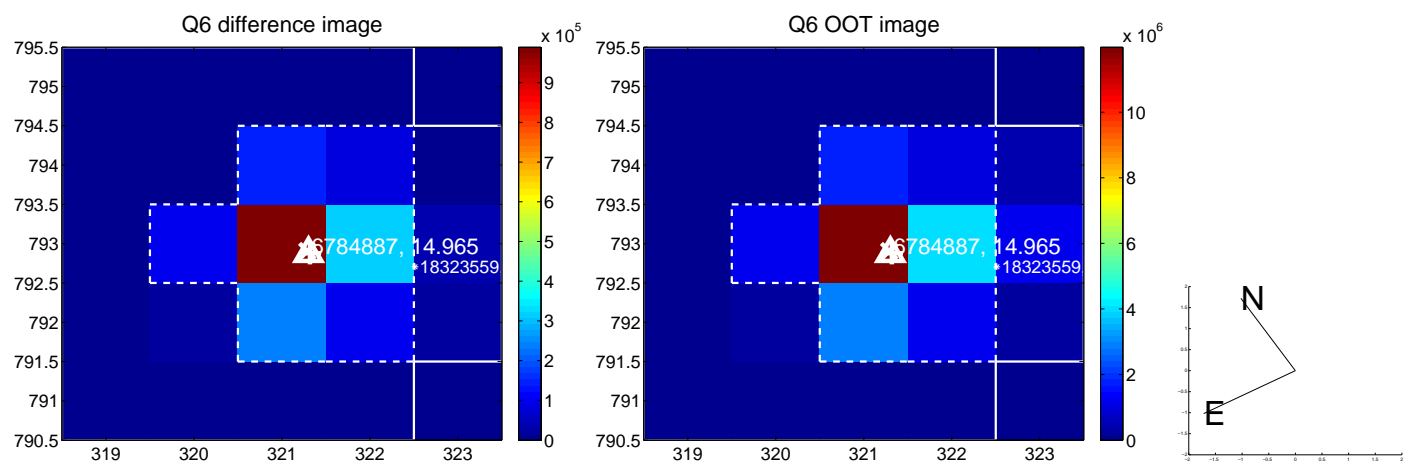
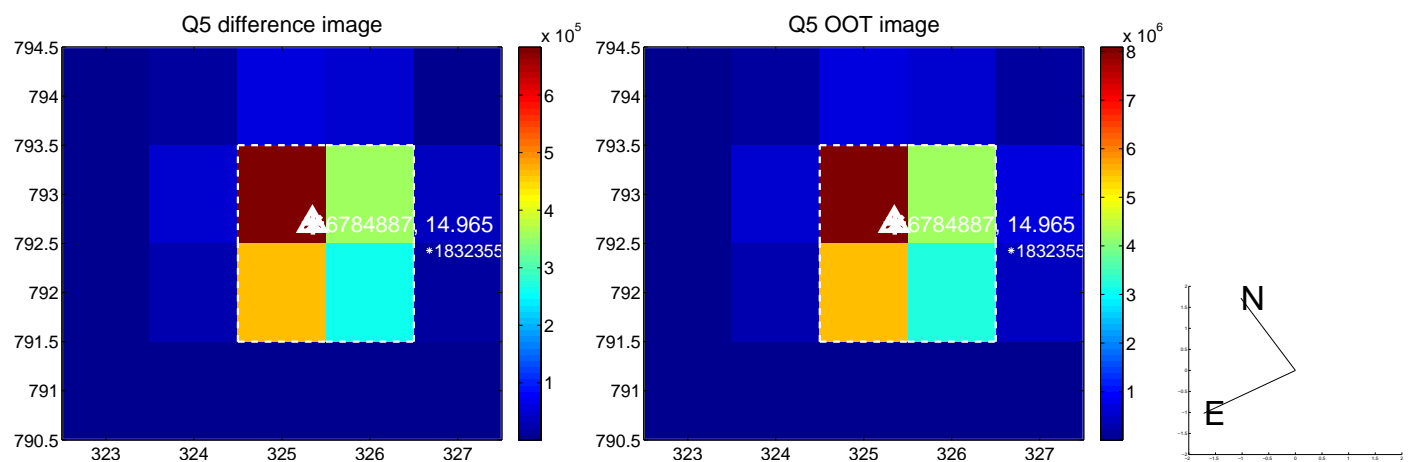


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

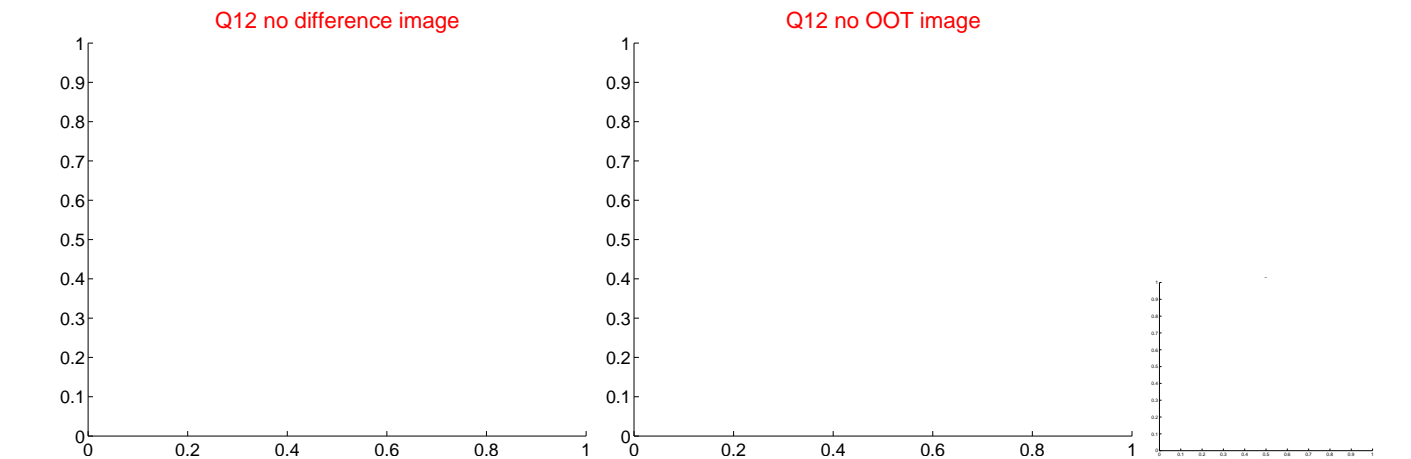
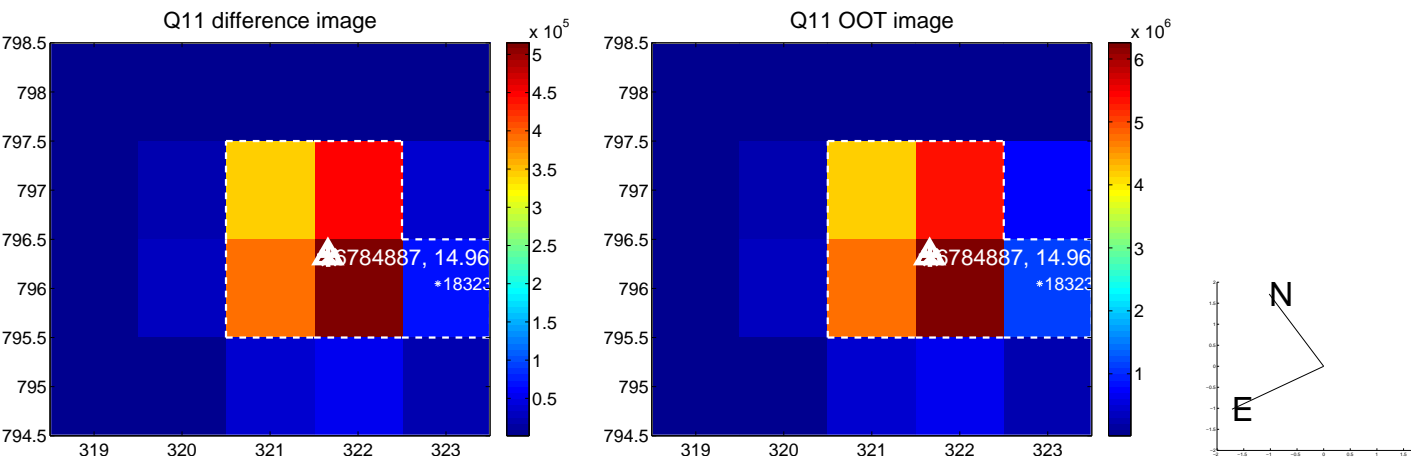
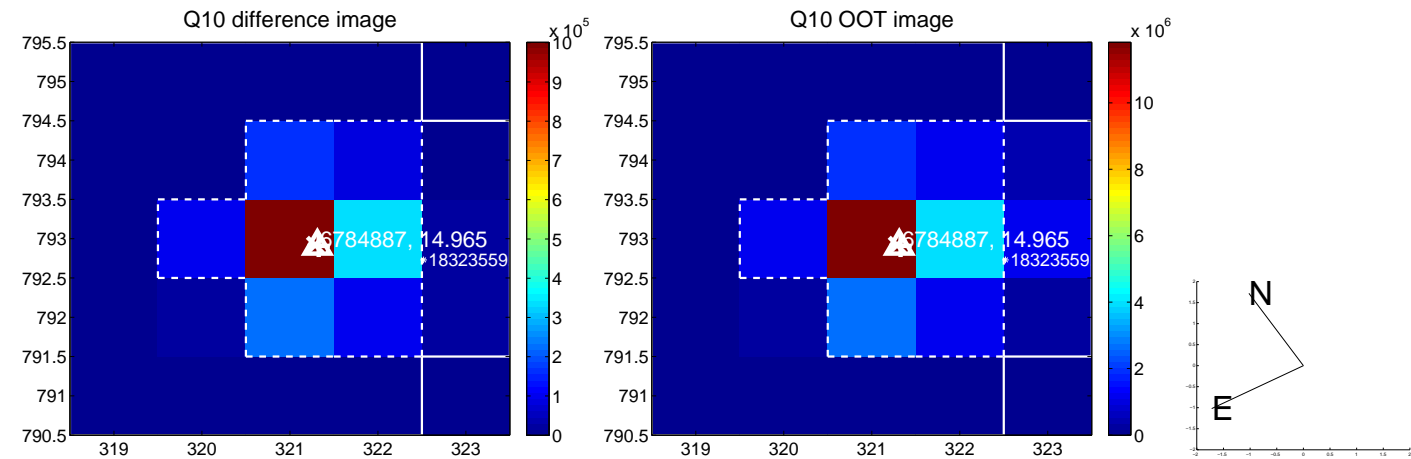
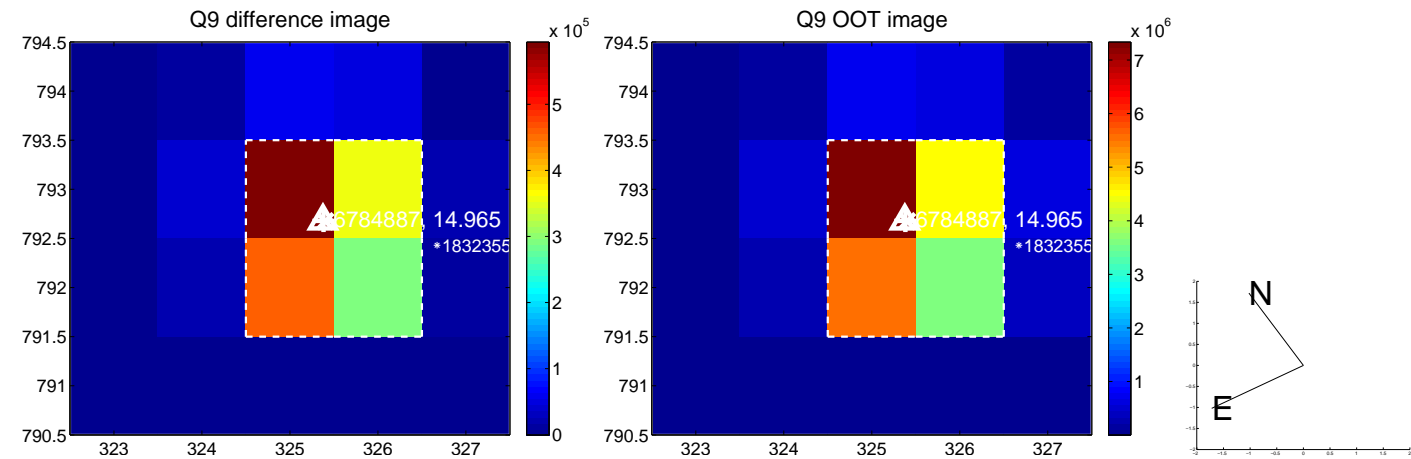
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



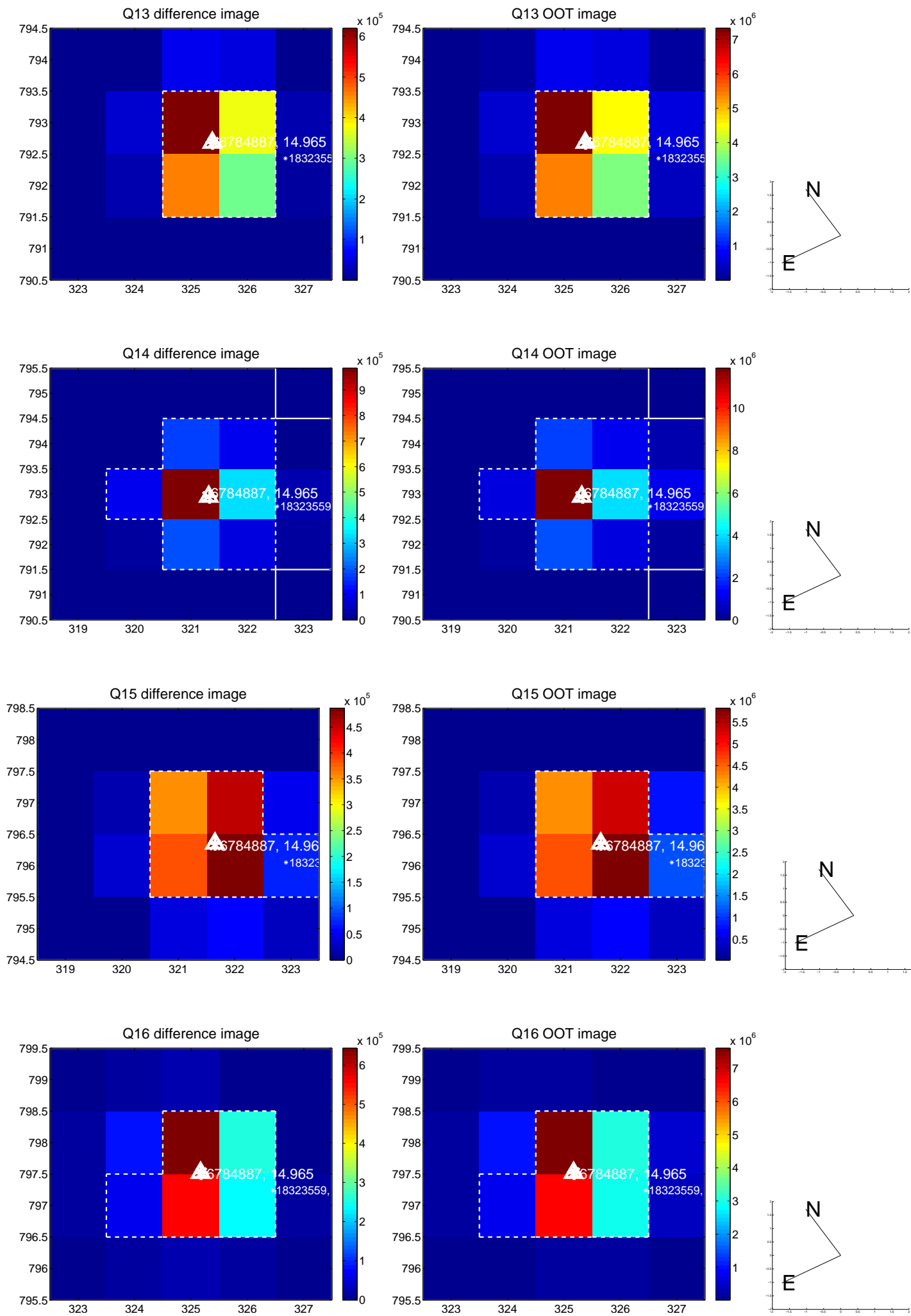
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



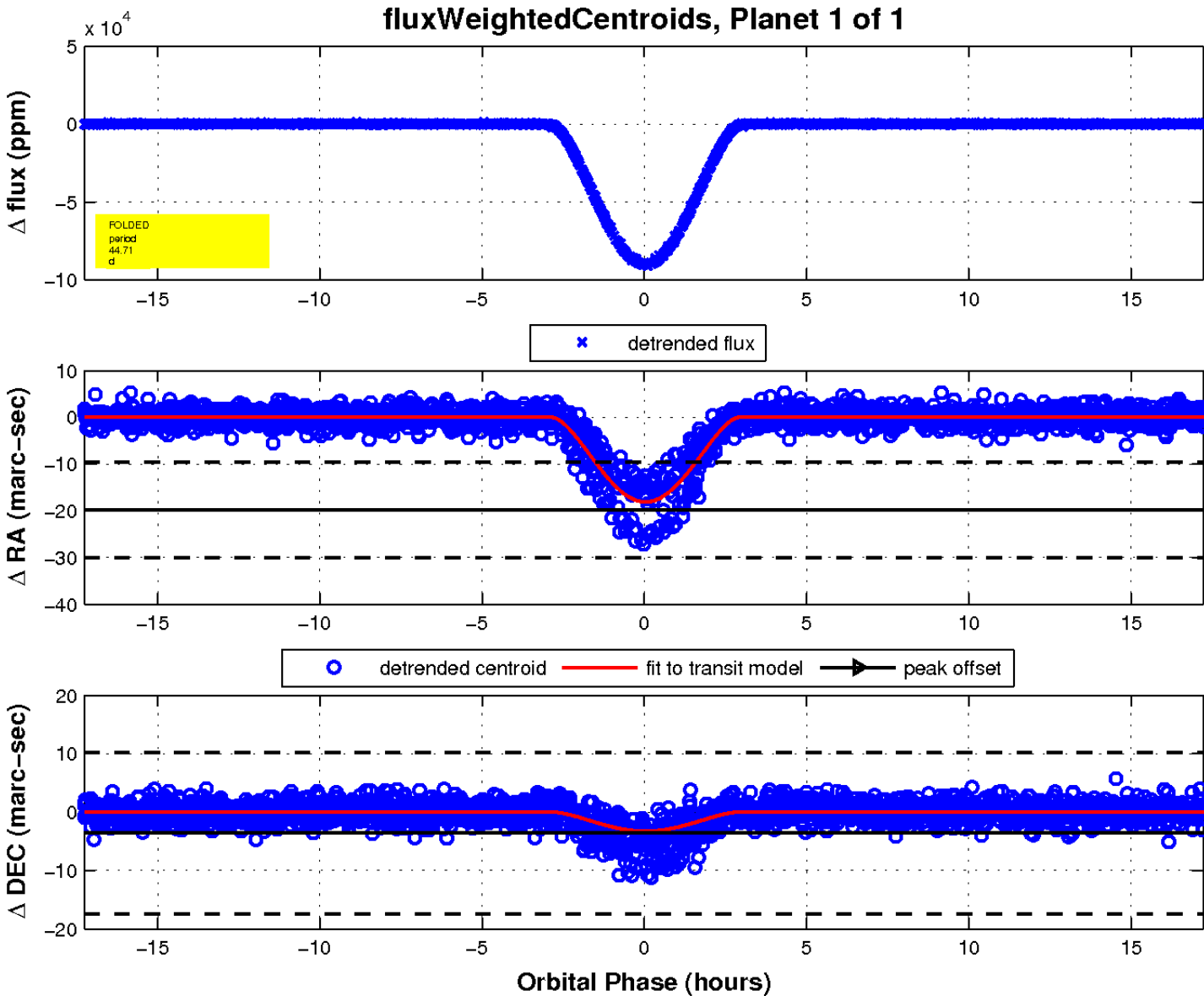
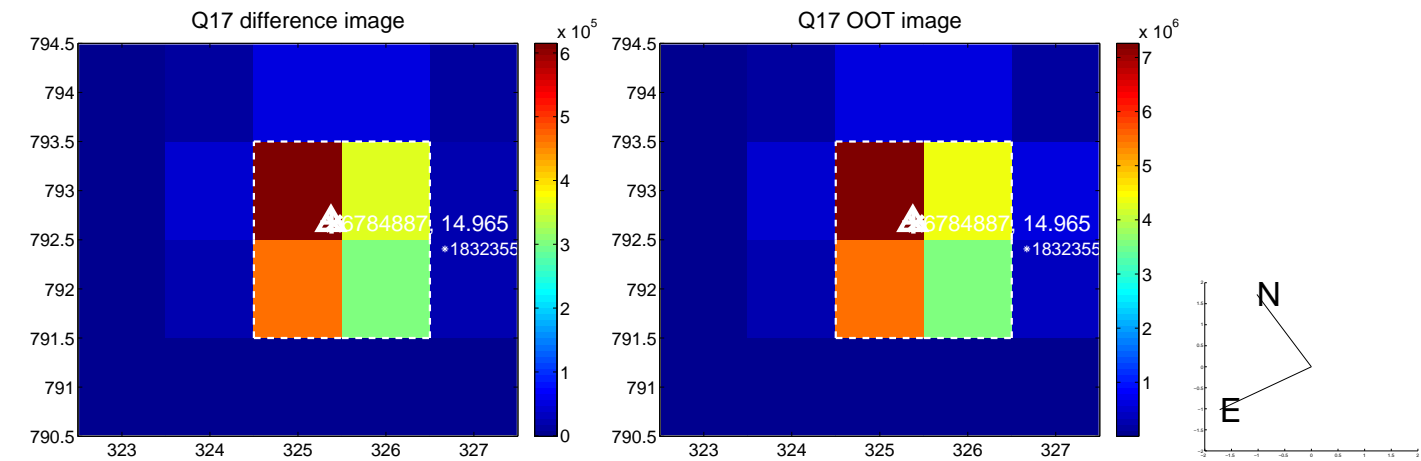
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

