

KIC 007033748

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})
007033748-01	OBS	6814.01	2.196356	133.514846	242884.6	9.577	19598.9	11975.6	1.27	6438	80.00	2448.20

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007033748-01	OBS	FP	0.00	0	1	0	0	DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_DV—MOD_ODDEVEN_ALT—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.

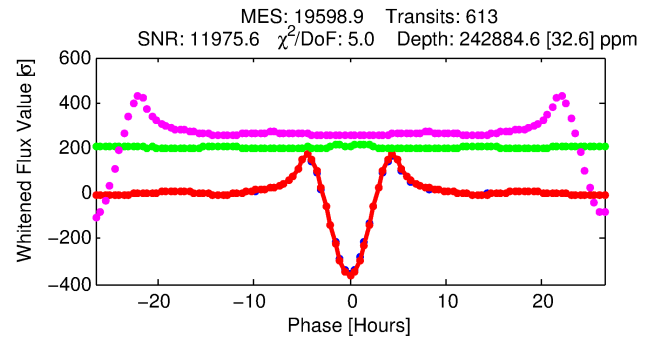
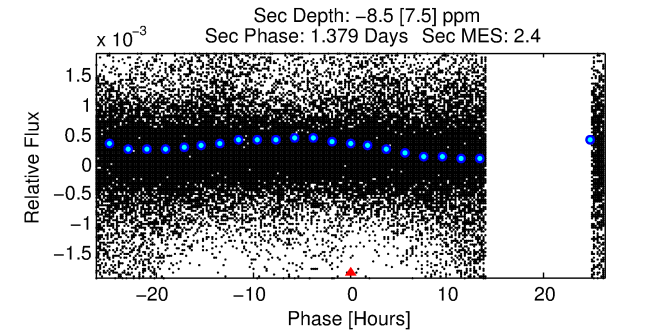
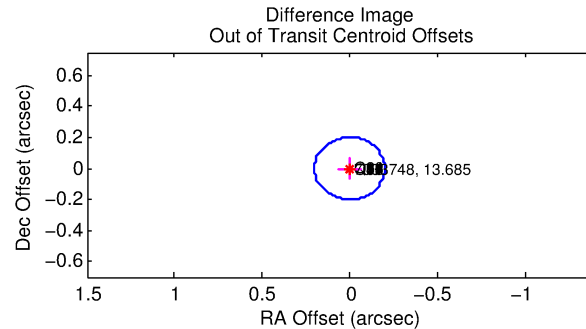
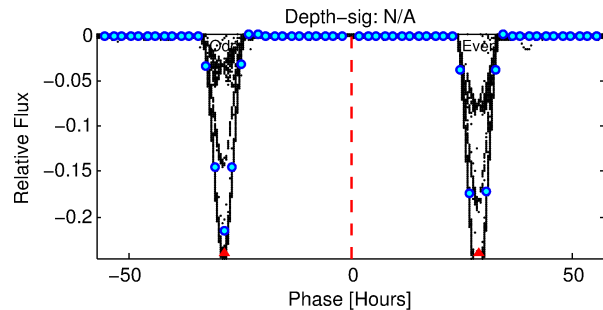
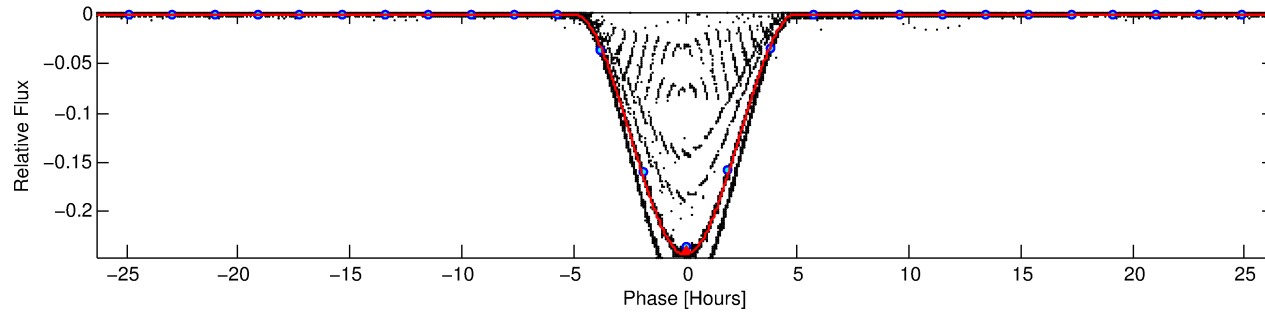
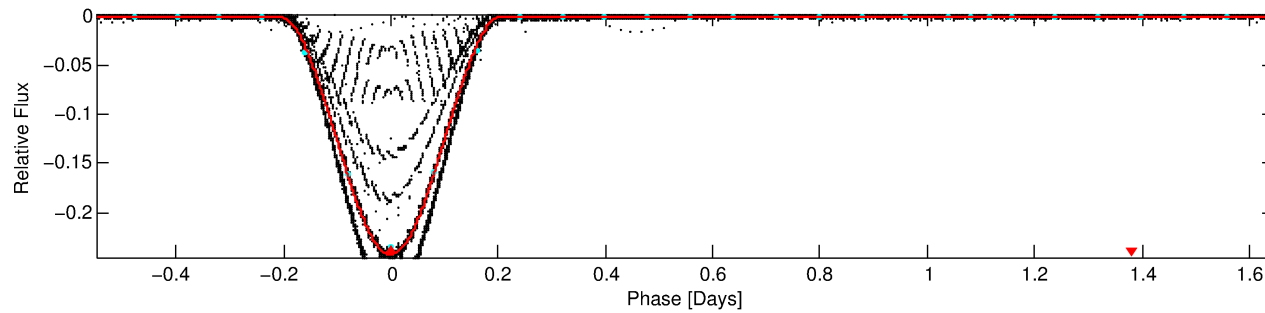
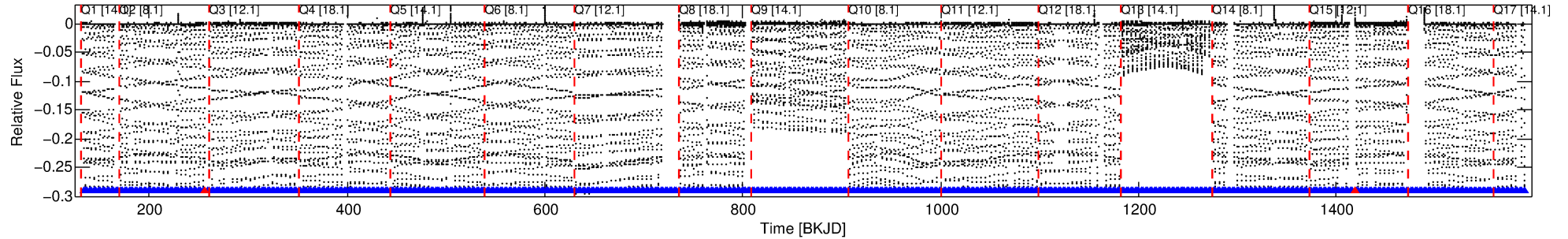
Ephemeris Match Information For 007033748-01

No Significant Match Found

DV One-Page Summary

KIC: 7033748 Candidate: 1 of 1 Period: 2.196 d
KOI: K06814.01 Corr: 0.994

Kp: 13.69 R*: 1.27 Rs Teff: 6438.0 K Logg: 4.18 Fe/H: -0.820



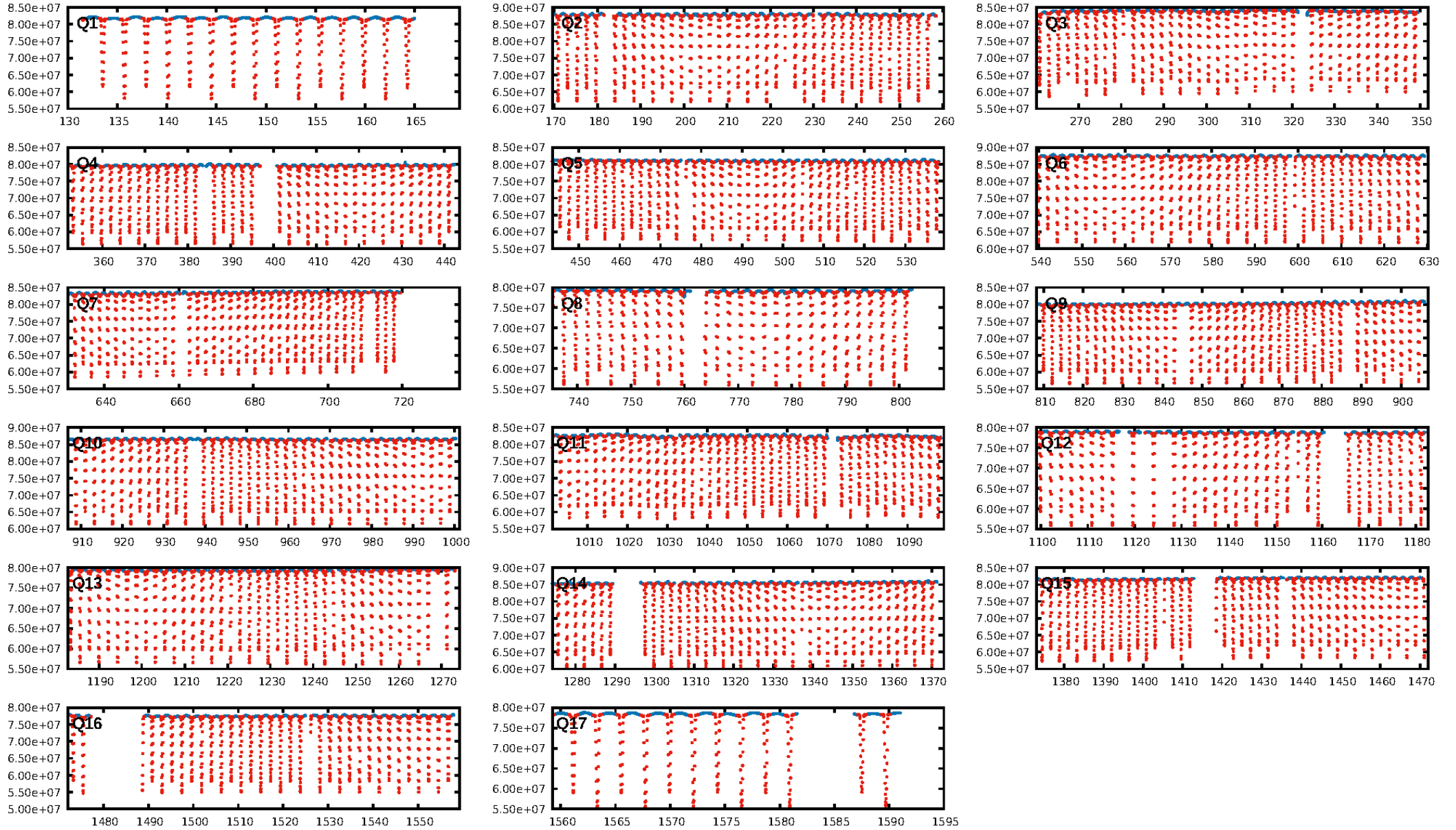
DV Fit Results:

Period = 2.19636 [0.00000] d
Epoch = 133.5148 [0.0000] BKJD
Rp/R* = 0.5759 [0.0048]
a/R* = 2.68 [0.00]
b = 0.74 [0.01]
Seff = 2448.20 [1194.49]
Teq = 1794 [219] K
Rp = 80.00 [21.06] Re
a = 0.0319 [0.0090] AU
Ag = N/A
Teffp = N/A

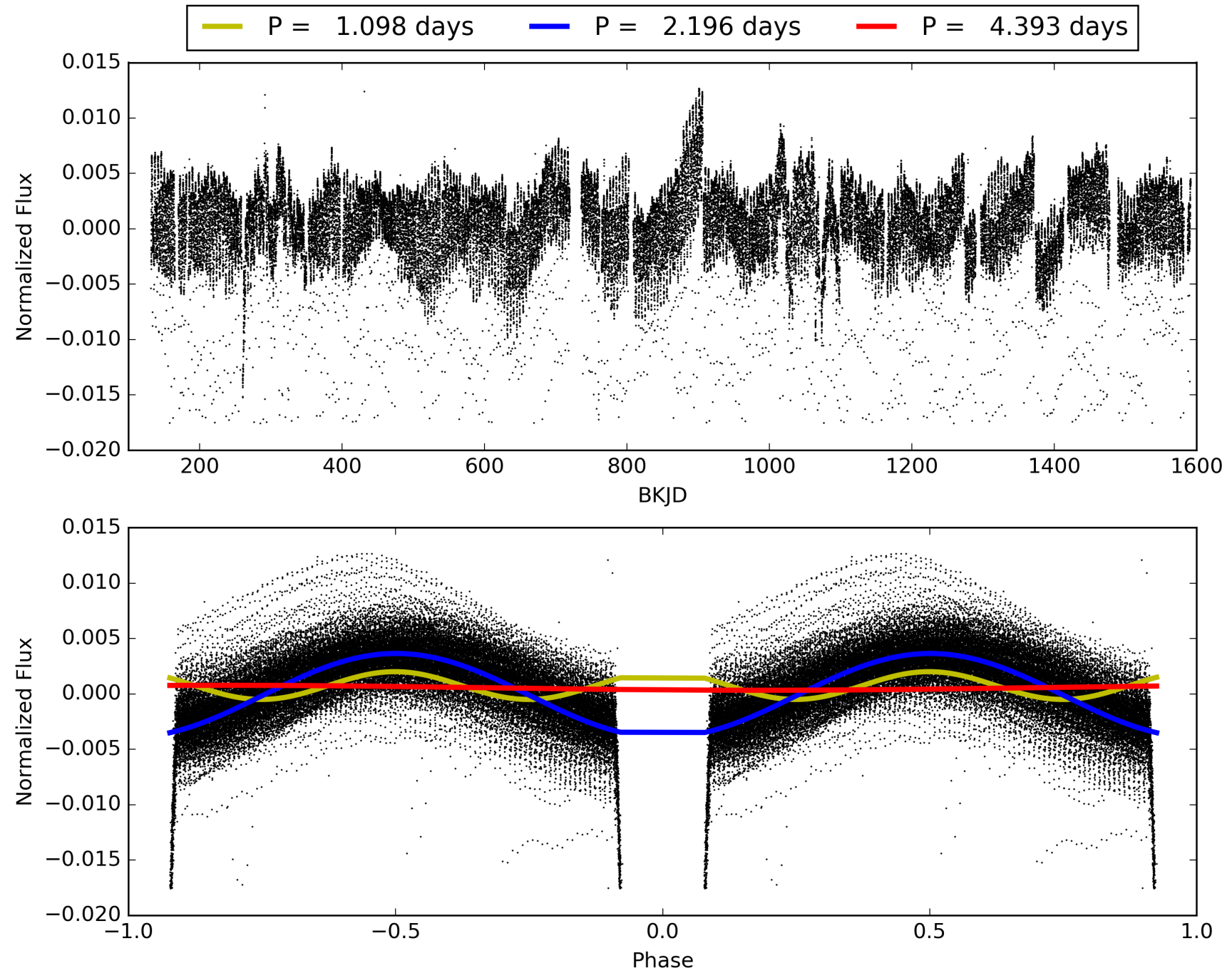
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [583/585]
GhostDiagnostic-chr: 1.088
Centroid-sig: 0.0%
Centroid-so: 0.086 arcsec [286.49σ]
OotOffset-rm: 0.003 arcsec [0.05σ]
KicOffset-rm: 0.047 arcsec [0.70σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 007033748-01, PDC Light Curves

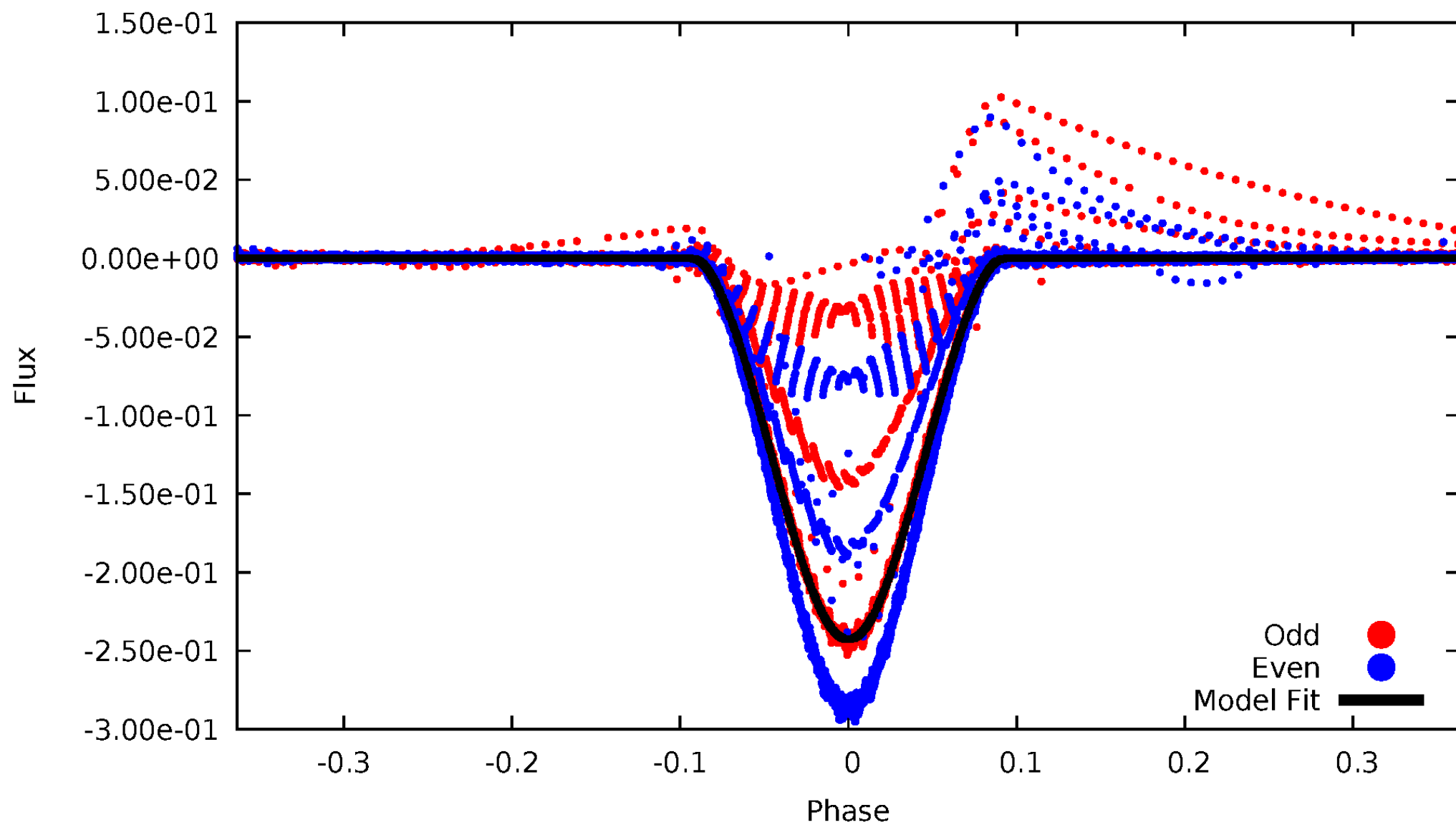


TCE 007033748-01



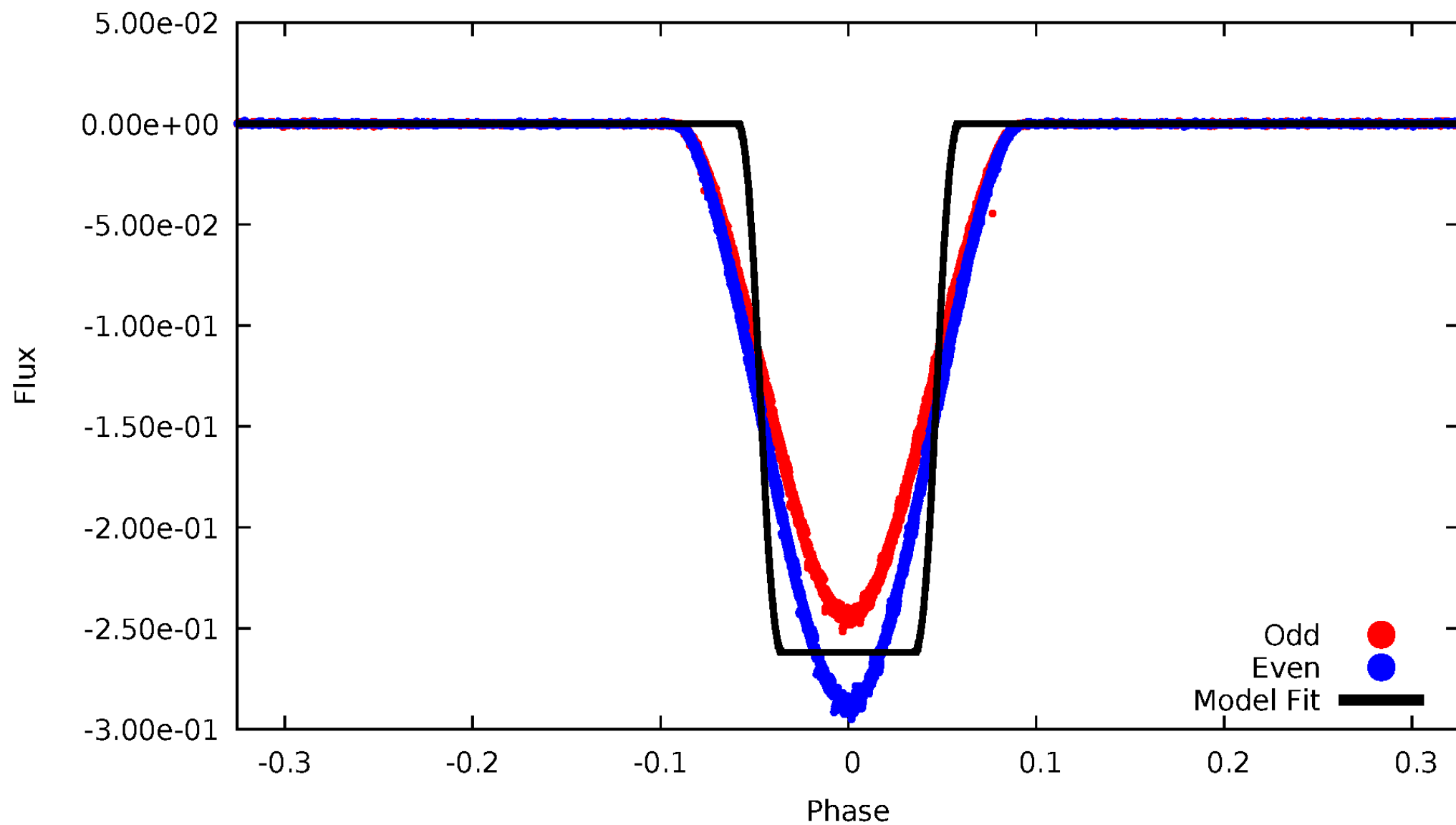
DV Odd/Even

TCE 007033748-01



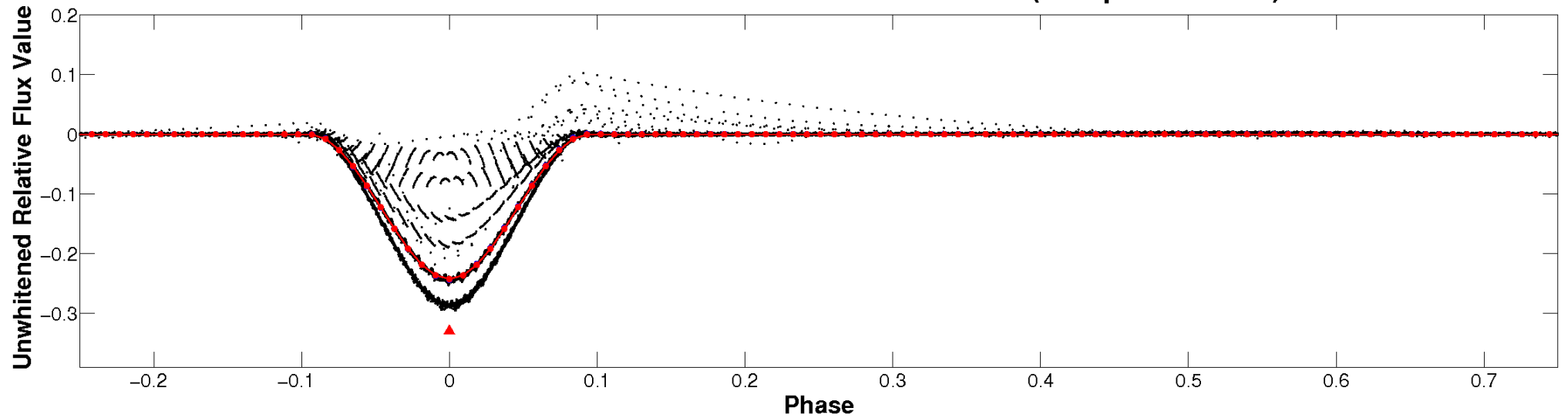
ALT Odd/Even

TCE 007033748-01

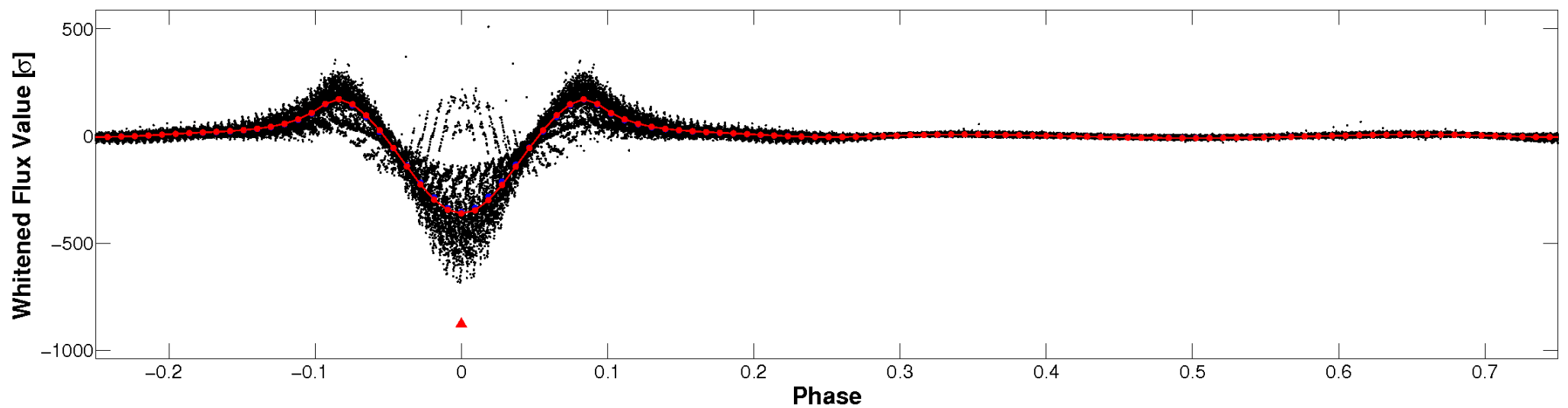


Non-Whitened Vs. Whitened Light Curve

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

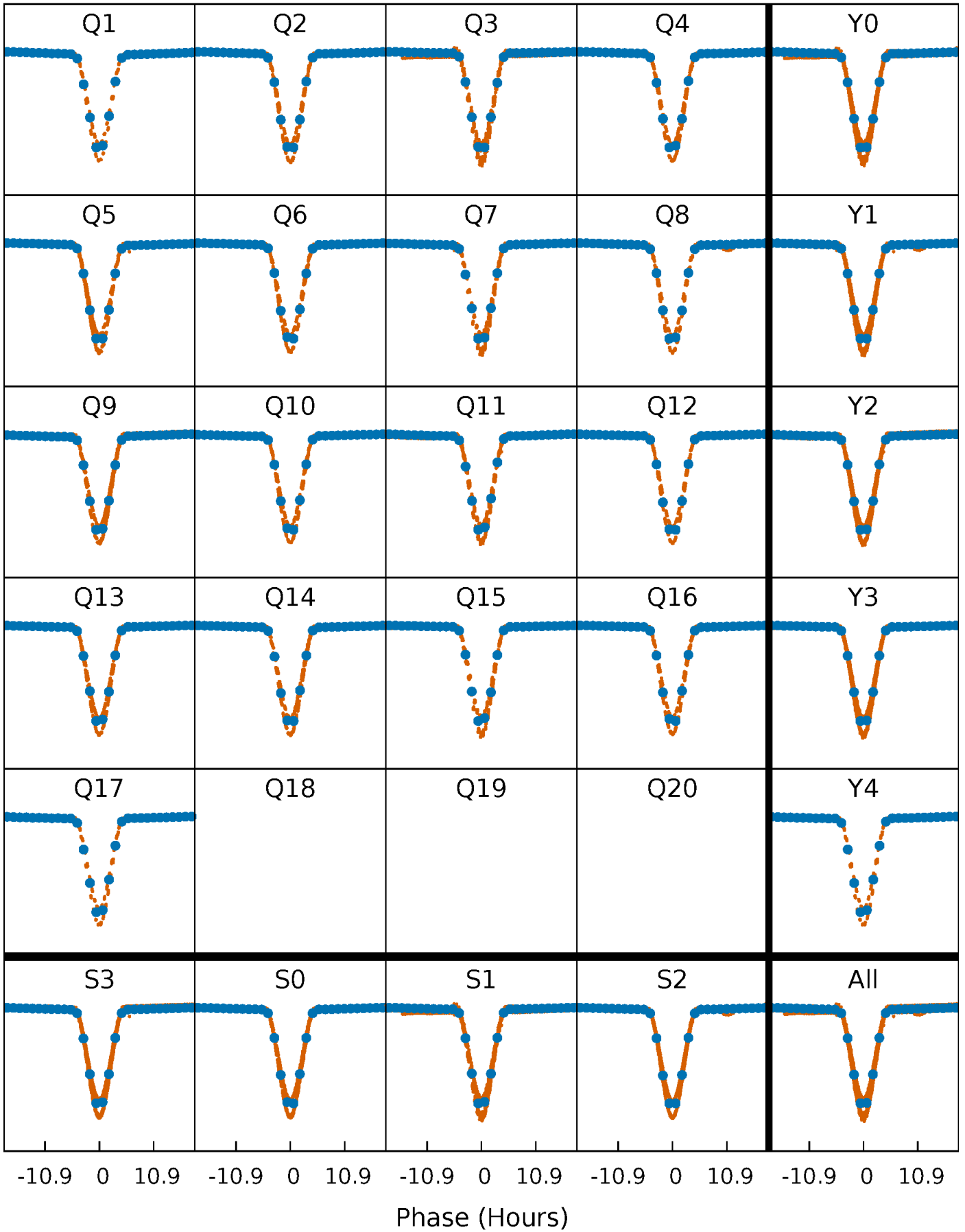


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



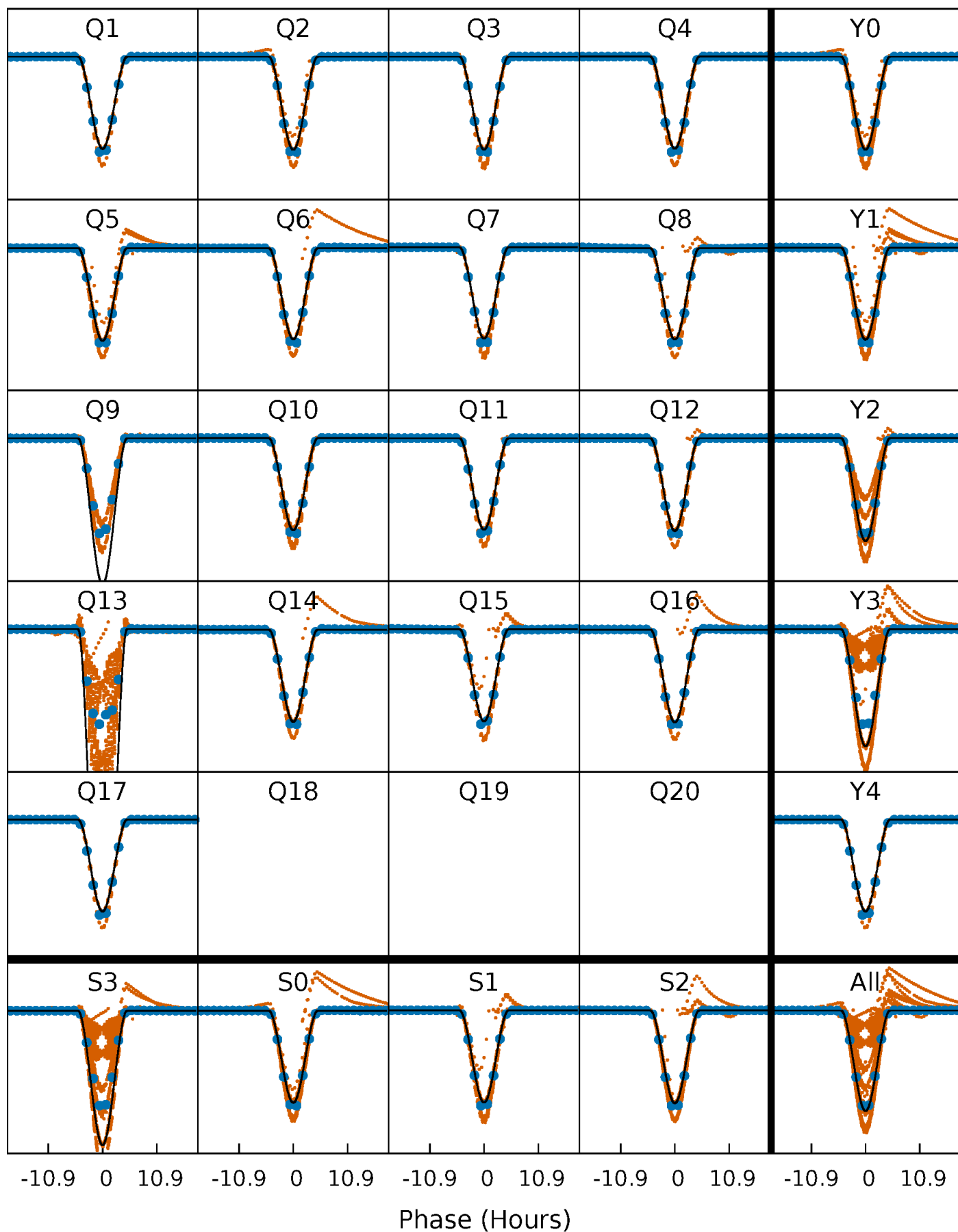
PDC Quarter-Phased Transit Curves

TCE 007033748-01 P= 2.196356 Days $T_0=133.514846$ (BKJD)



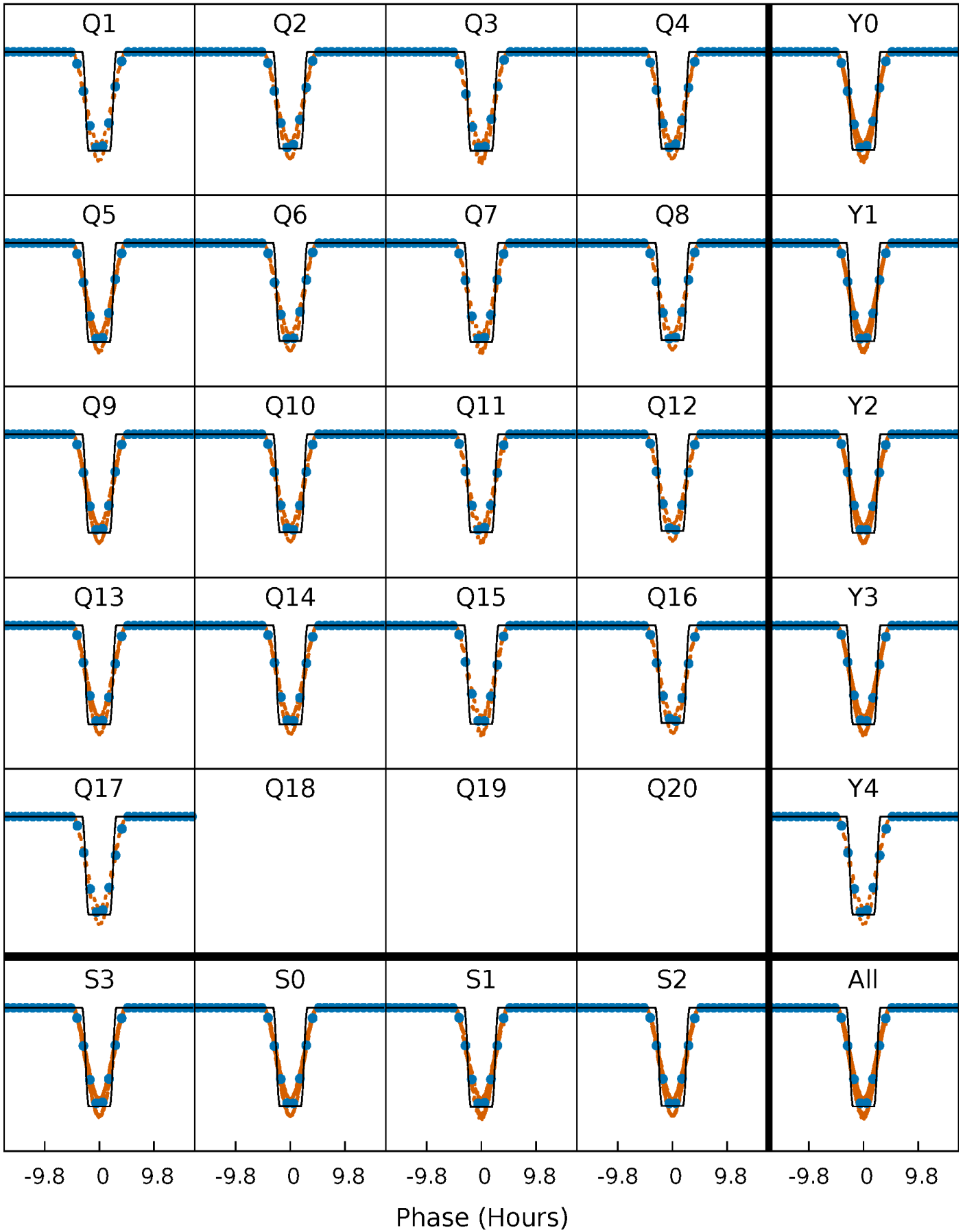
DV Quarter-Phased Transit Curves

TCE 007033748-01 P= 2.196356 Days $T_0=133.514846$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

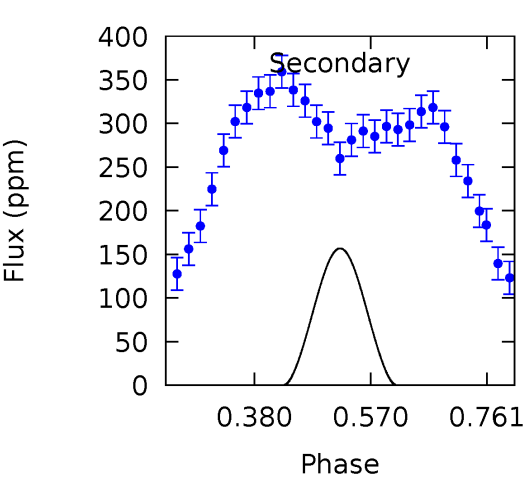
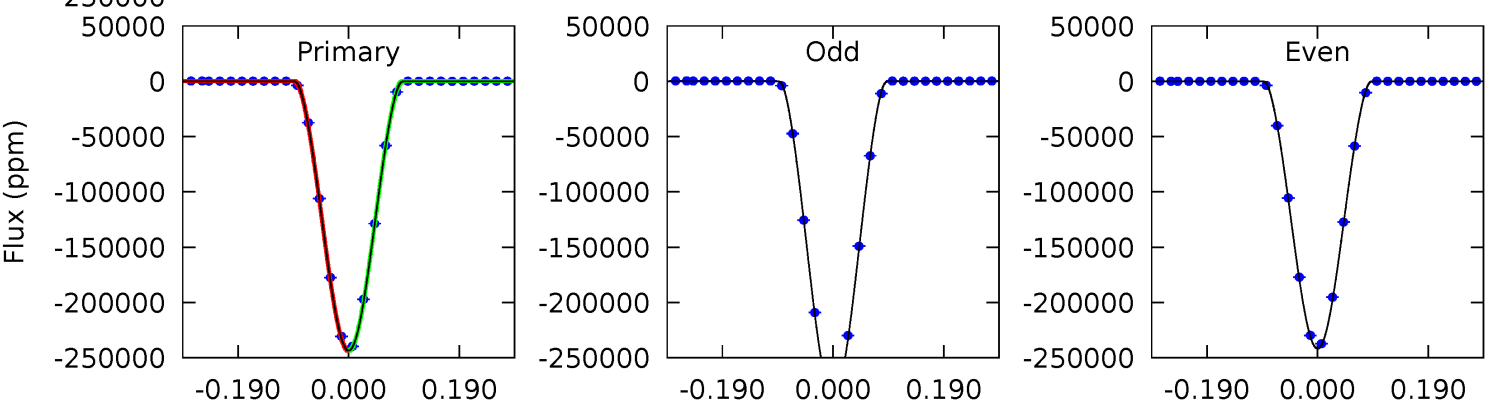
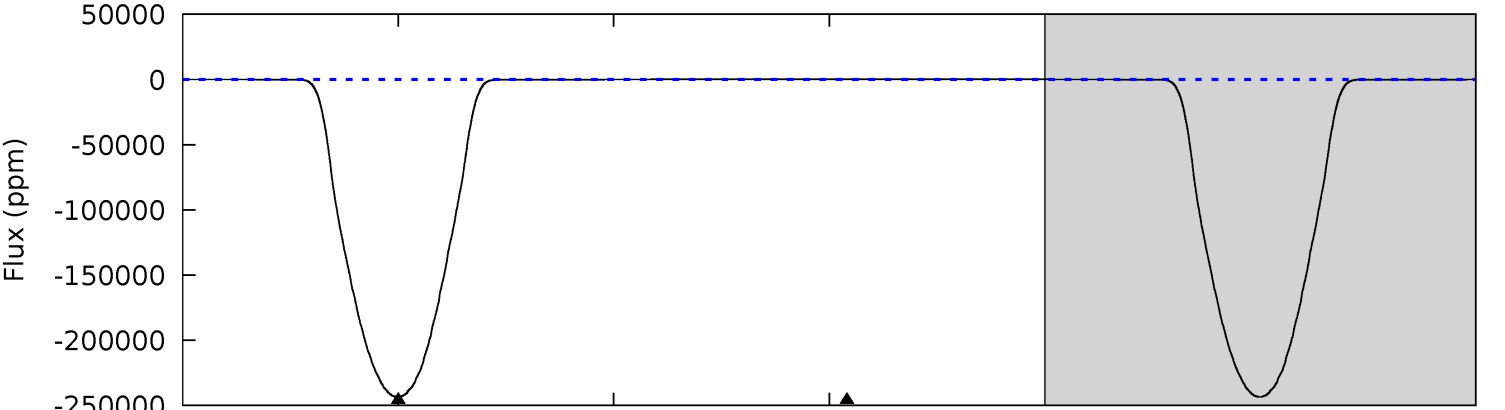
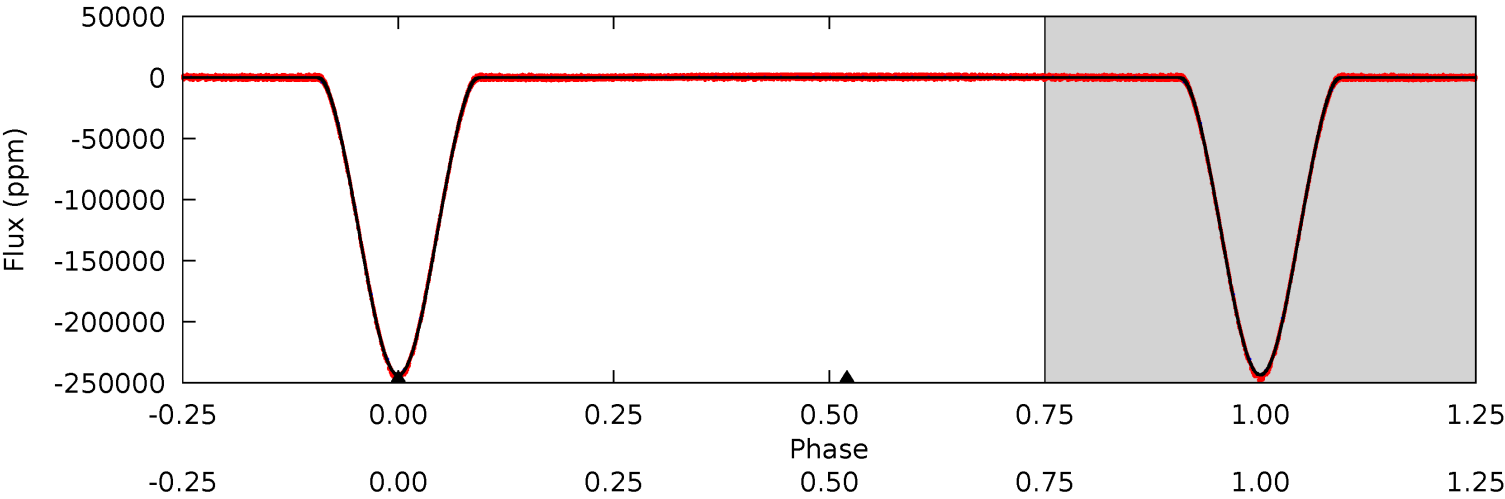
TCE 007033748-01 P= 2.196347 Days $T_0=133.517755$ (BKJD)



DV Model-Shift Uniqueness Test

007033748-01, P = 2.196356 Days, E = 131.318490 Days

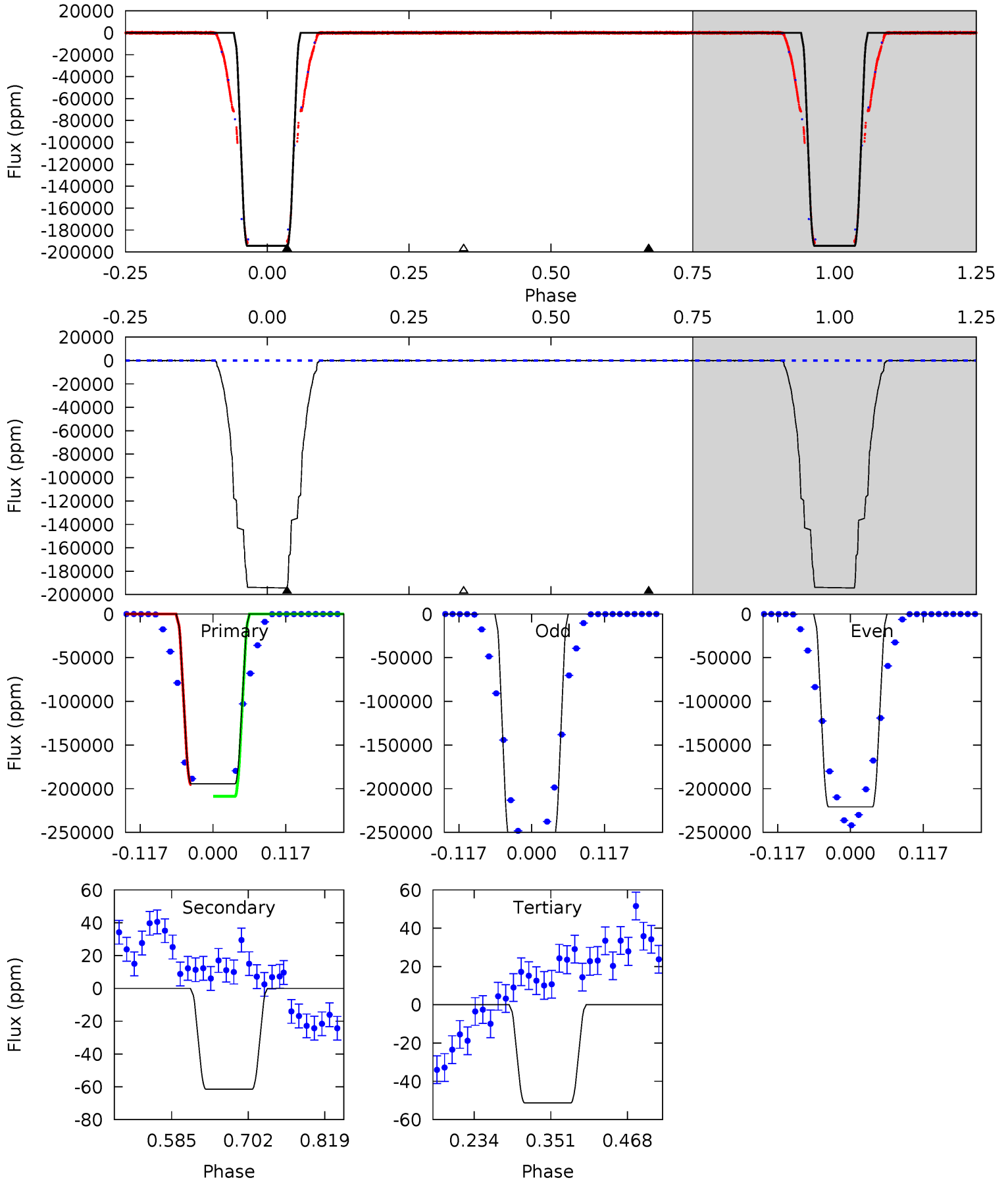
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26498	-17.1	0	0	4.43	1.31	8.31	26498	26498	-17.1	-17.1	2946	0.98	0.00	0



Alt Model-Shift Uniqueness Test

007033748-01, P = 2.196347 Days, E = 131.321408 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4999	1.58	1.32	0	4.53	1.57	10.2	4997	4999	0.26	1.58	3788	1.04	0.00	0



Stellar Parameters For KIC 007033748

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6438^{+174}_{-194}	$4.182^{+0.286}_{-0.154}$	$-0.820^{+0.300}_{-0.300}$	$1.273^{+0.302}_{-0.335}$	$0.899^{+0.117}_{-0.078}$	$0.613^{+0.928}_{-0.281}$
	+3%/-3%	+7%/-4%	+37%/-37%	+24%/-26%	+13%/-9%	+151%/-46%
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 007033748-01 / KOI 6814.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	157 ± 9	$79.53^{+10.01}_{-12.91}$	2474^{+191}_{-211}	-2797^{+120}_{-110}	$-0.014^{+0.003}_{-0.006}$
Alt.	-61 ± 39	$70.91^{+9.20}_{-11.64}$	2480^{+178}_{-196}	-2775^{+117}_{-109}	$0.007^{+0.006}_{-0.004}$

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

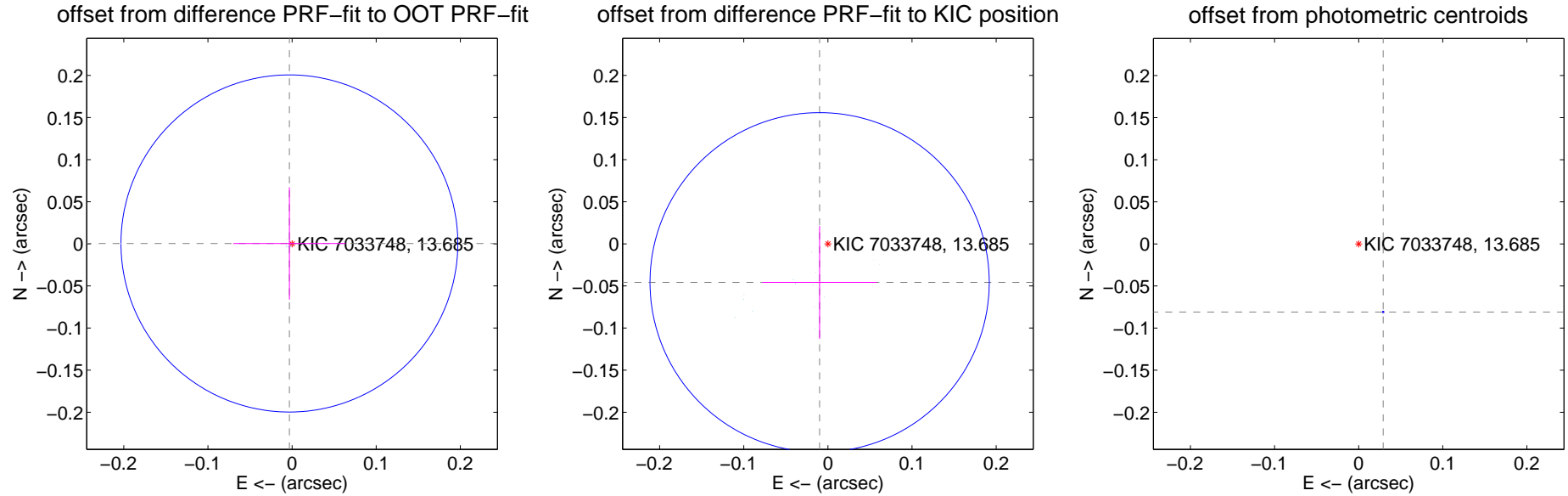
DV Centroid Data

Supplemental centroid analysis for 007033748-01. Kepler magnitude: 13.69. Transit SNR 11975.58

There are 17 quarters with good PRF difference image offsets

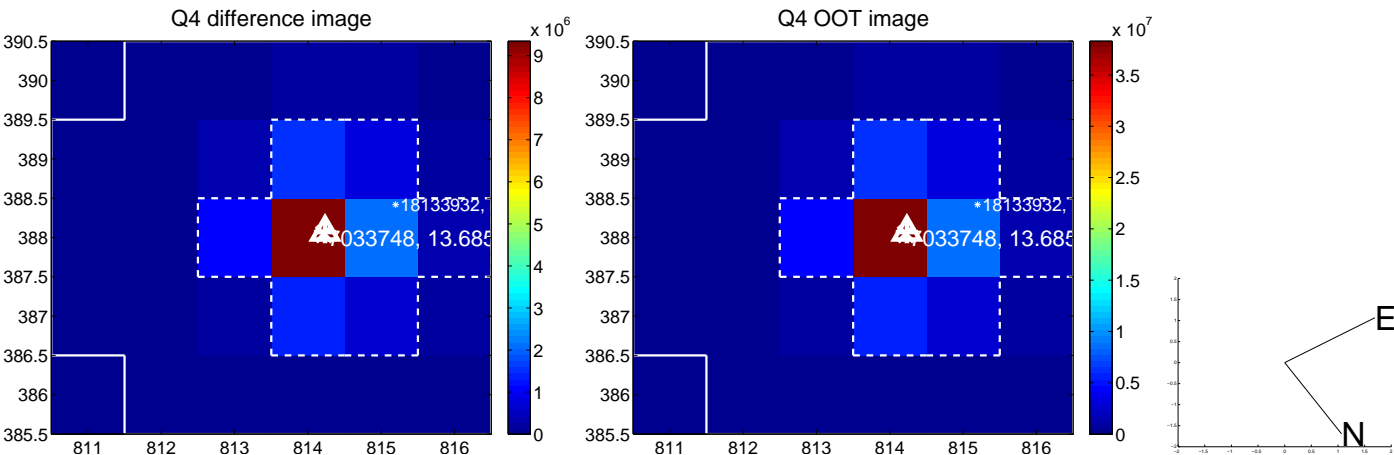
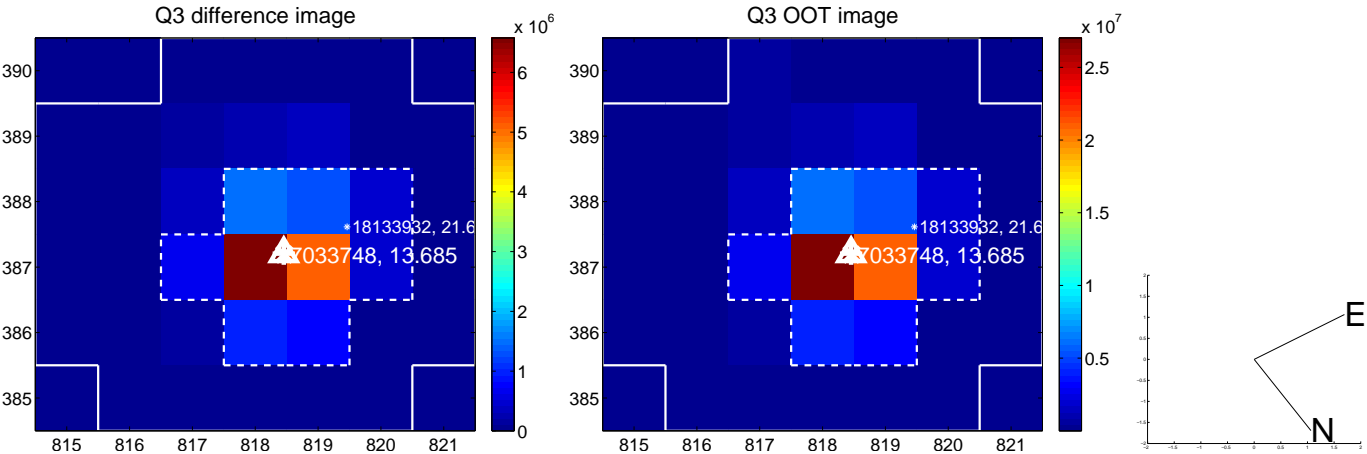
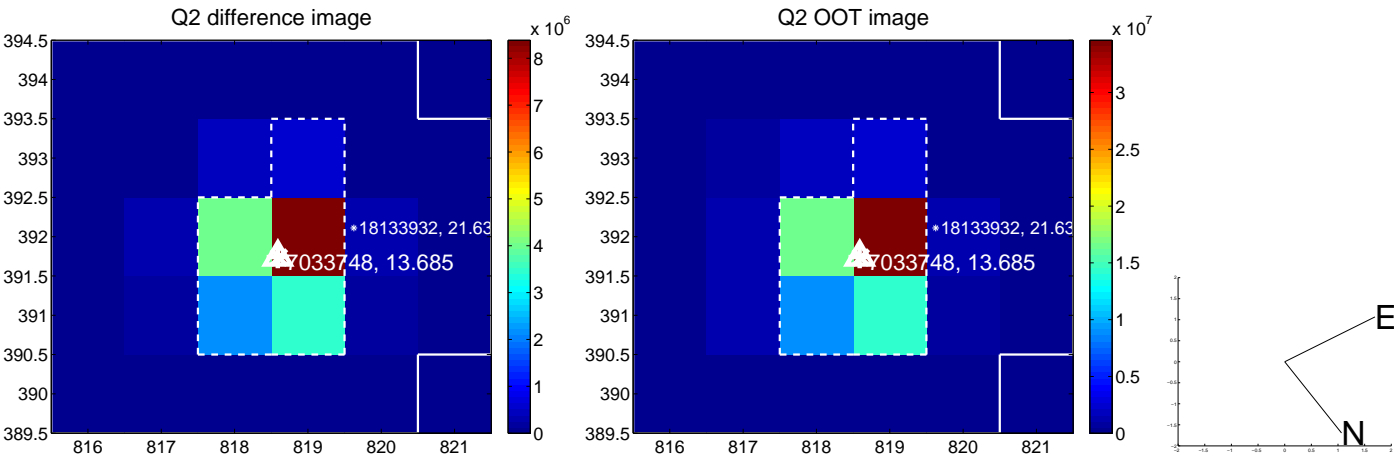
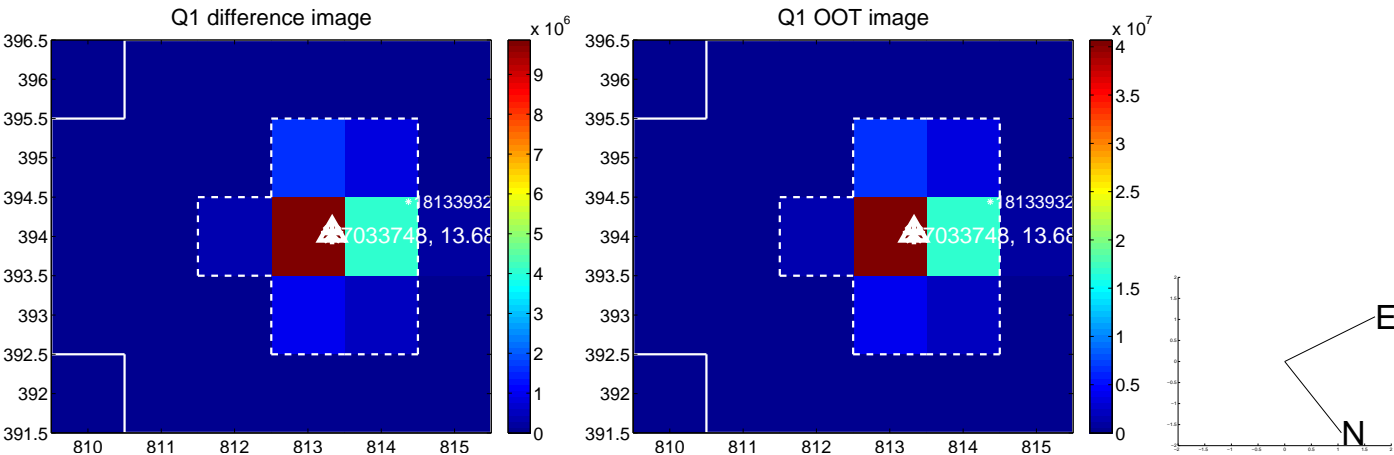
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.003 ± 0.067	0.05	0.003 ± 0.067	0.000 ± 0.067
PRF-fit source offset from KIC position	0.047 ± 0.067	0.70	0.010 ± 0.068	-0.046 ± 0.067
photometric centroid source offset	0.09 ± 0.00	286.49	-0.03 ± 0.00	-0.08 ± 0.00

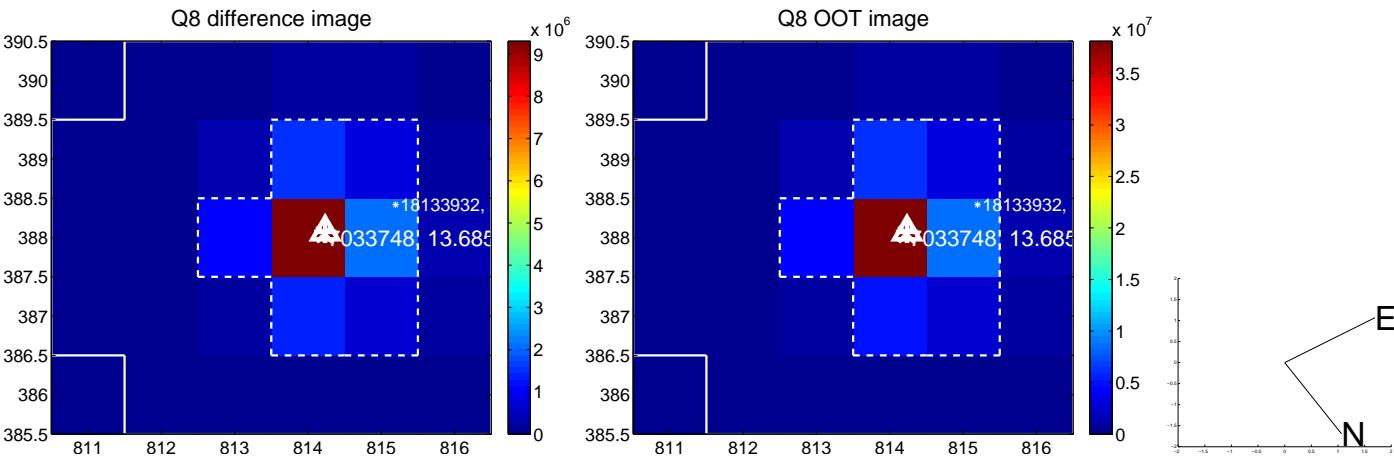
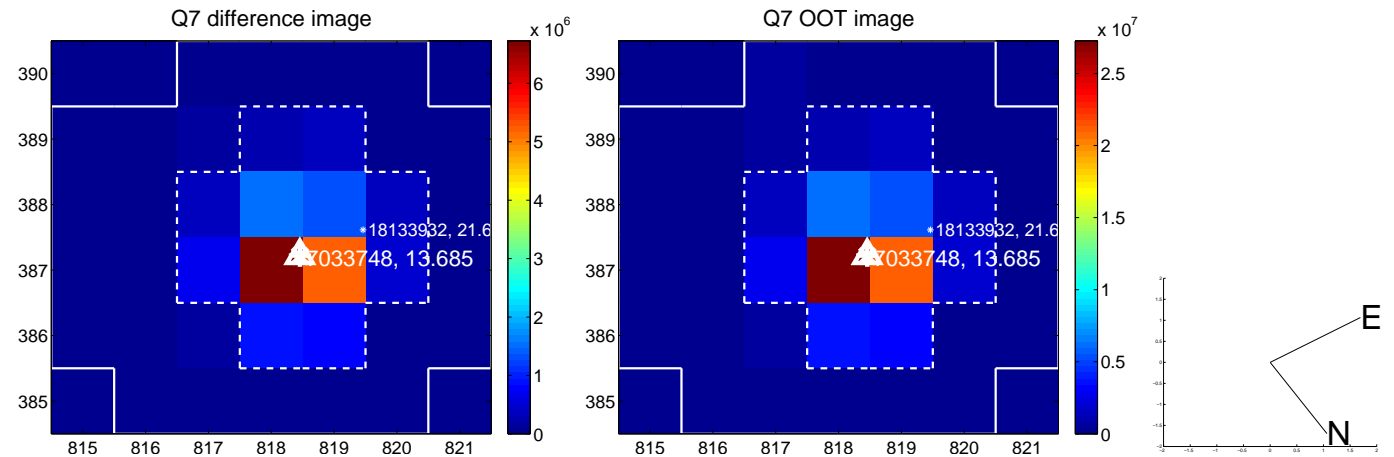
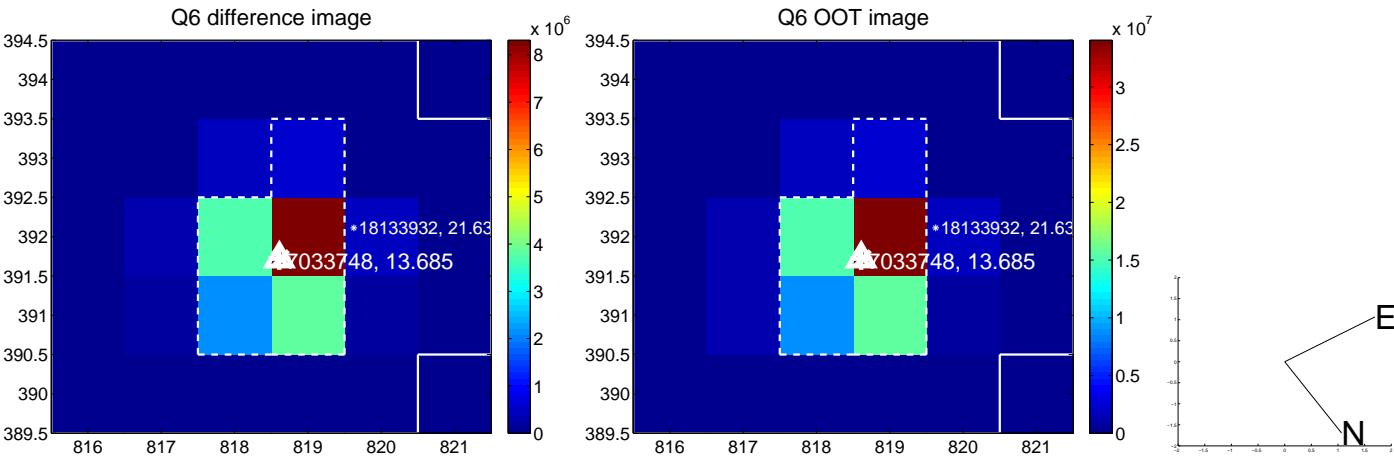
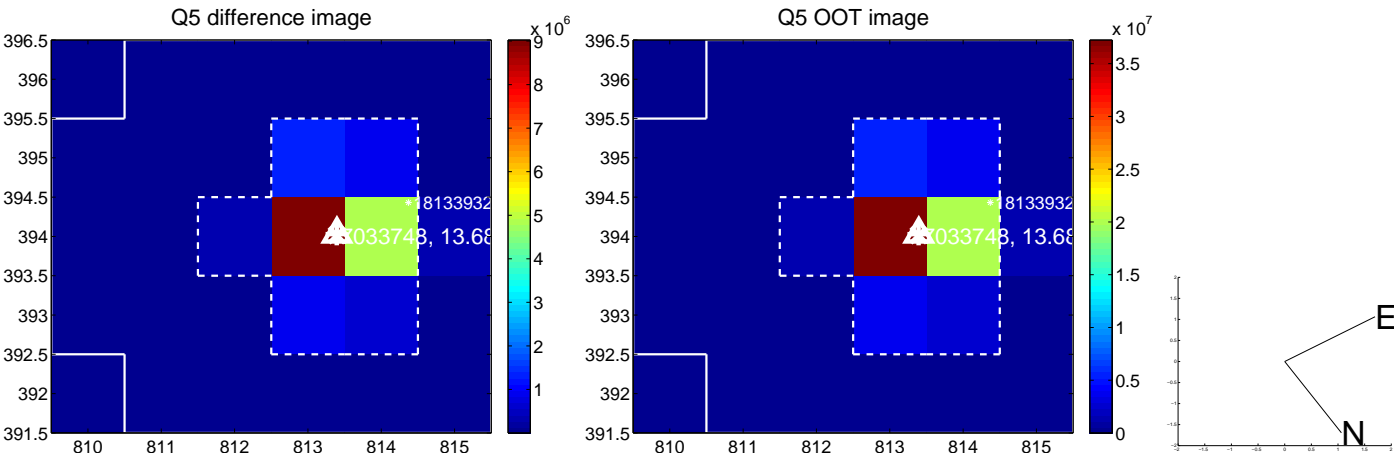


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

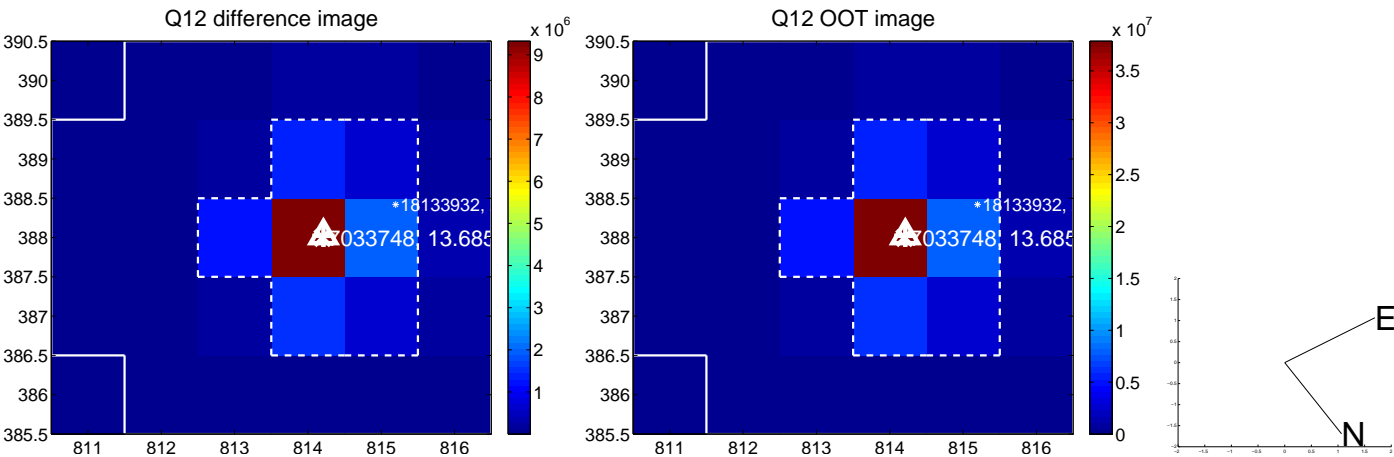
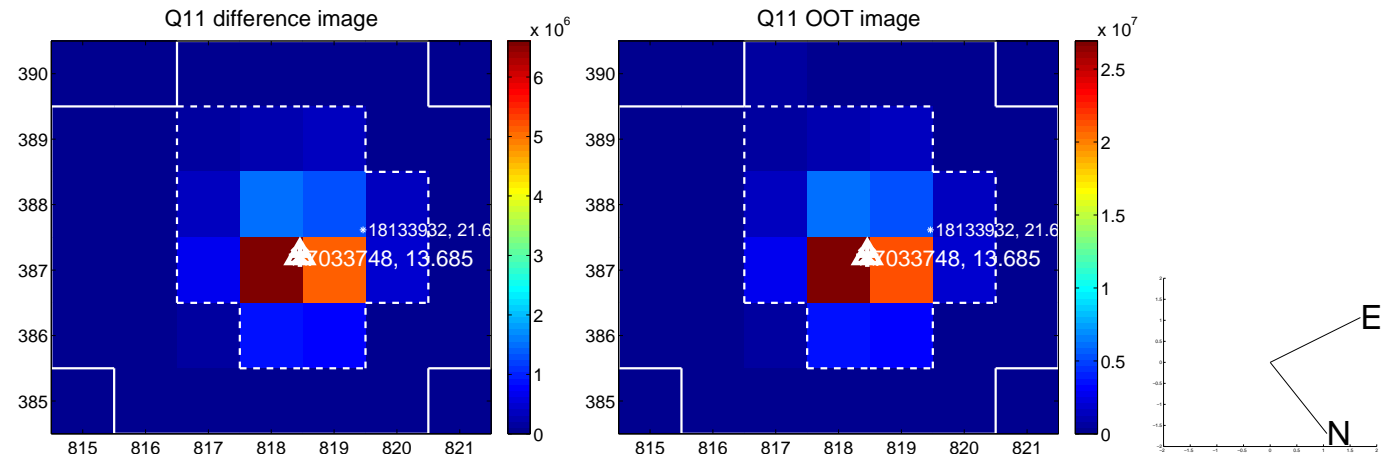
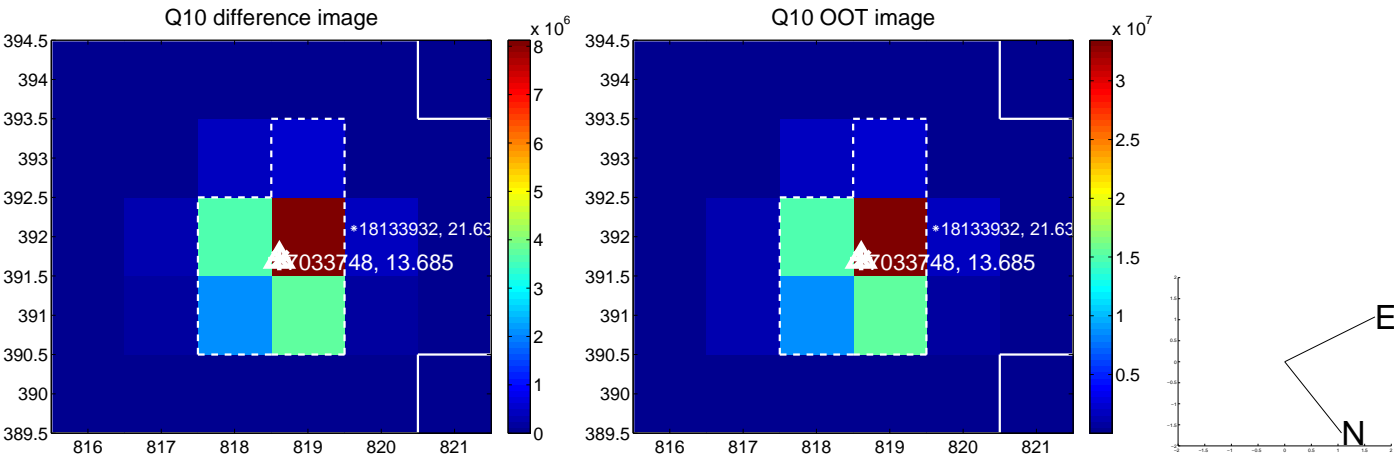
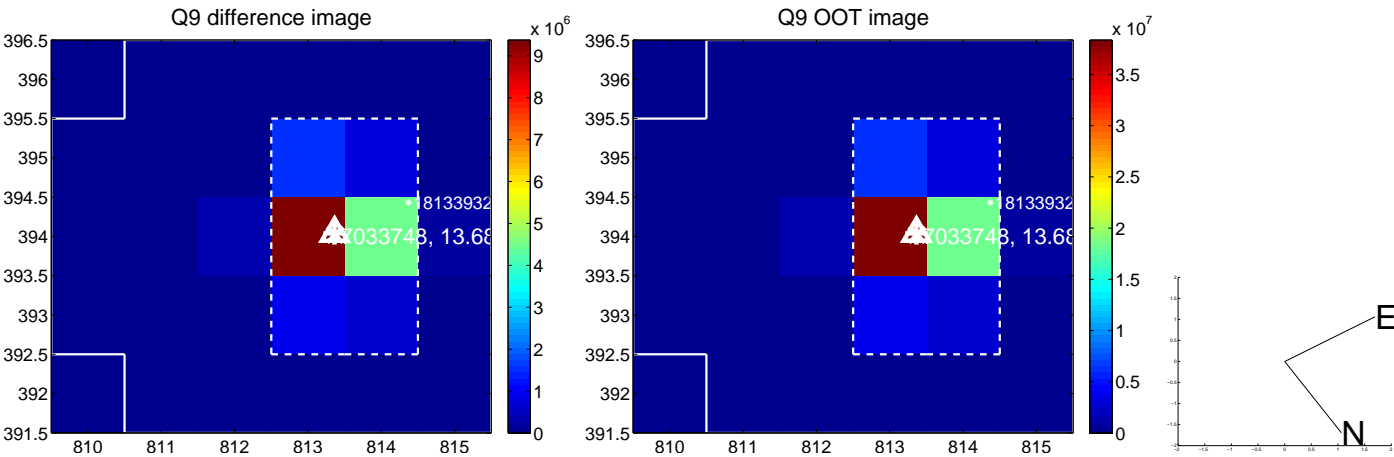
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



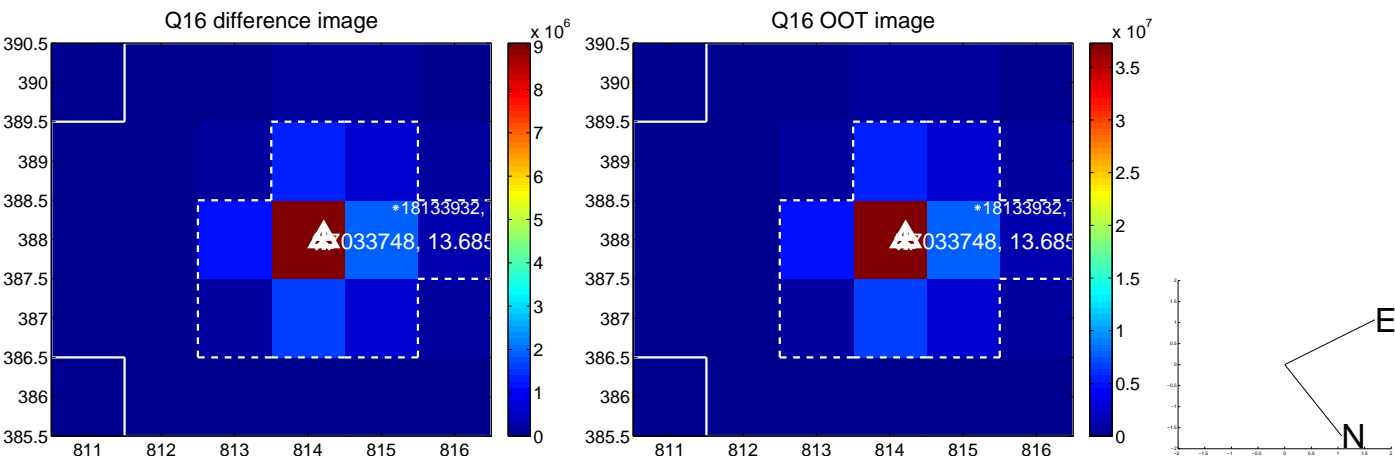
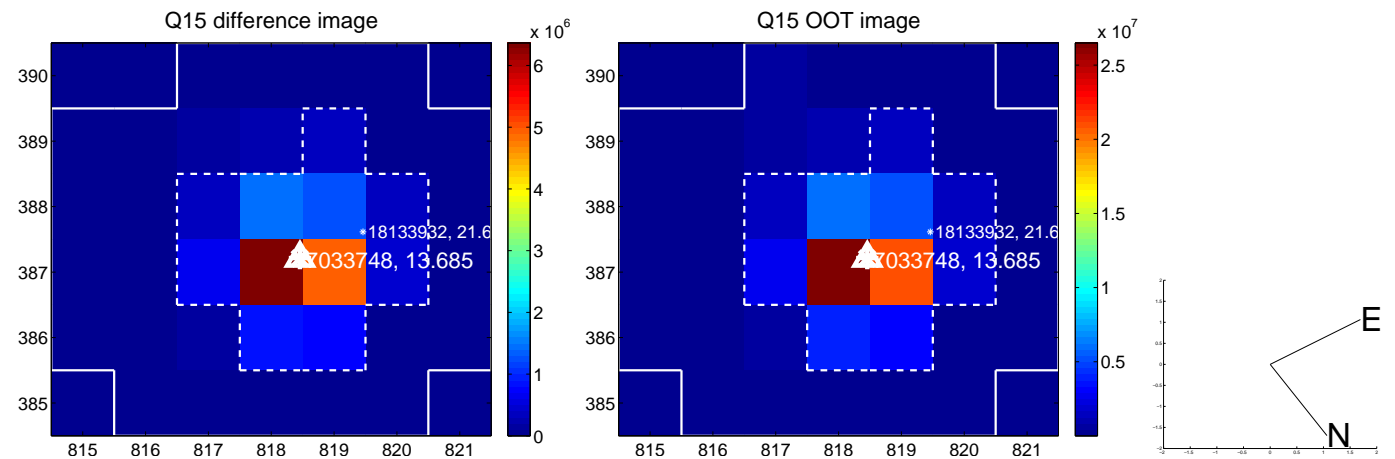
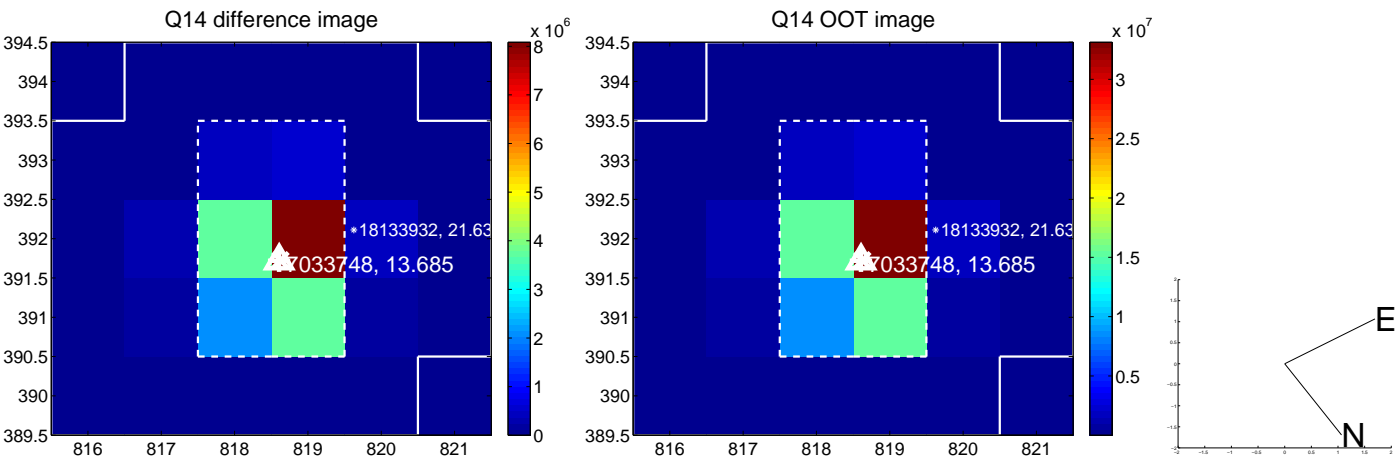
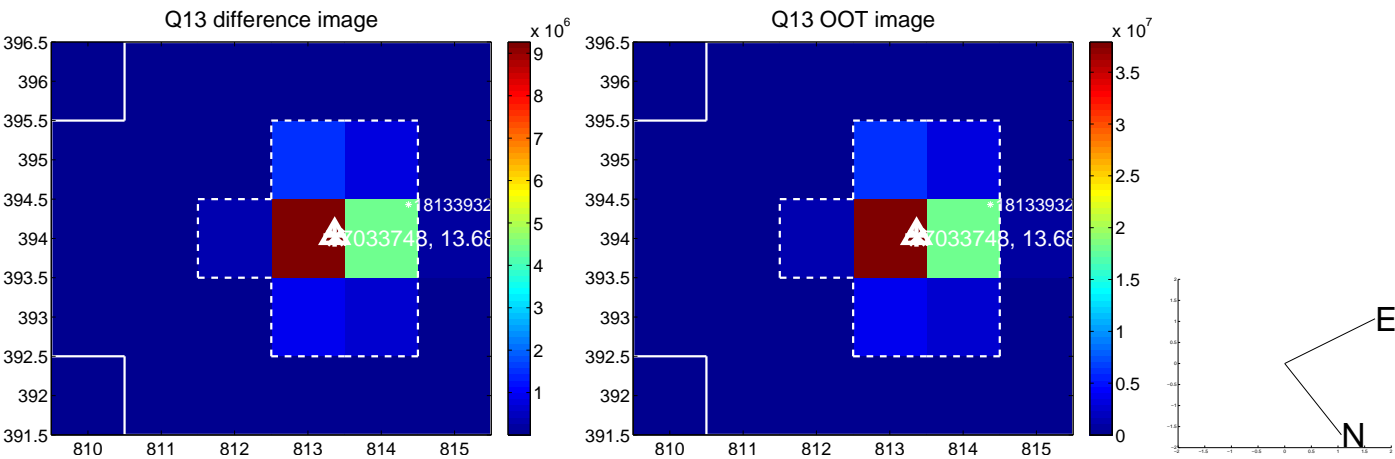
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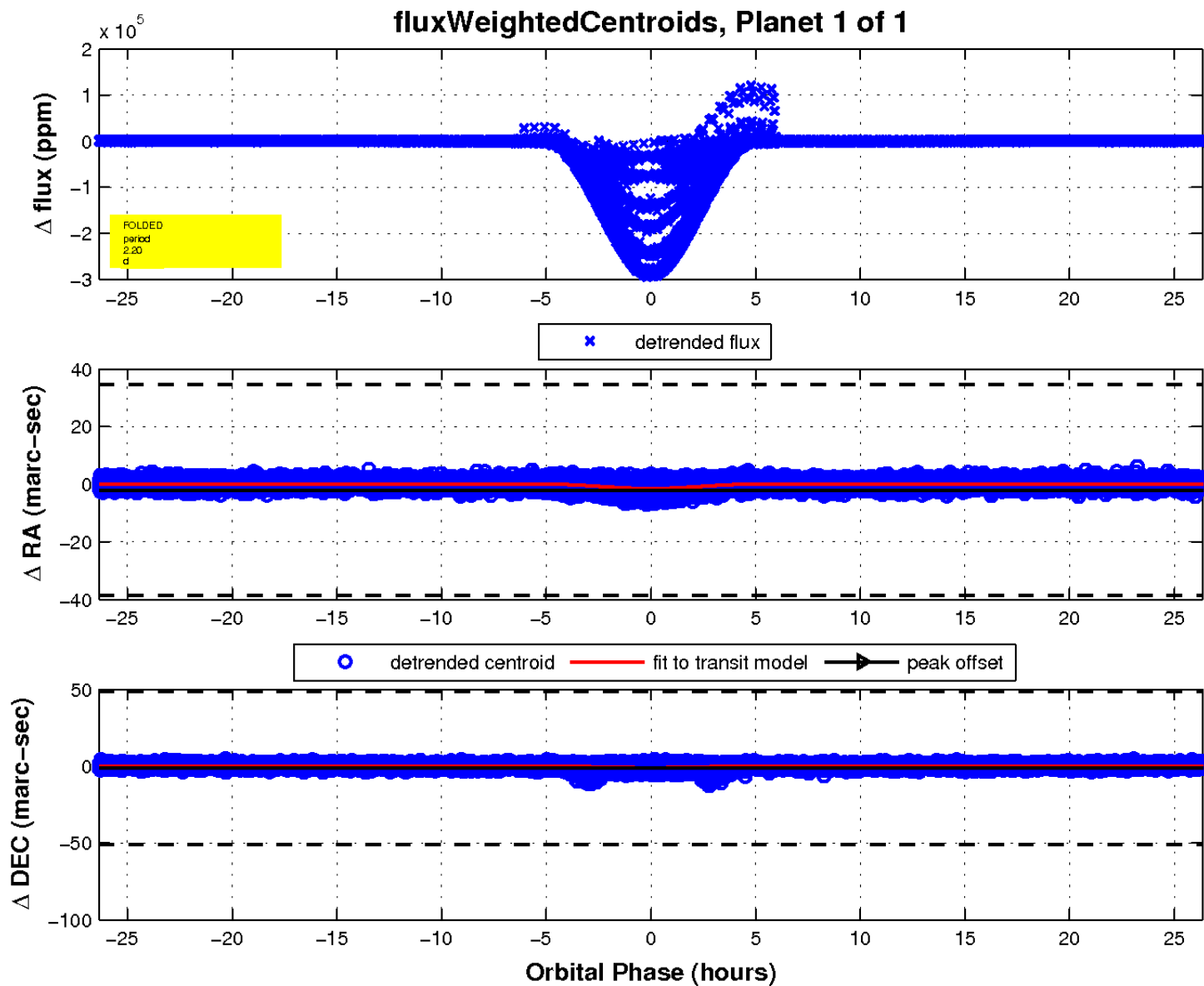
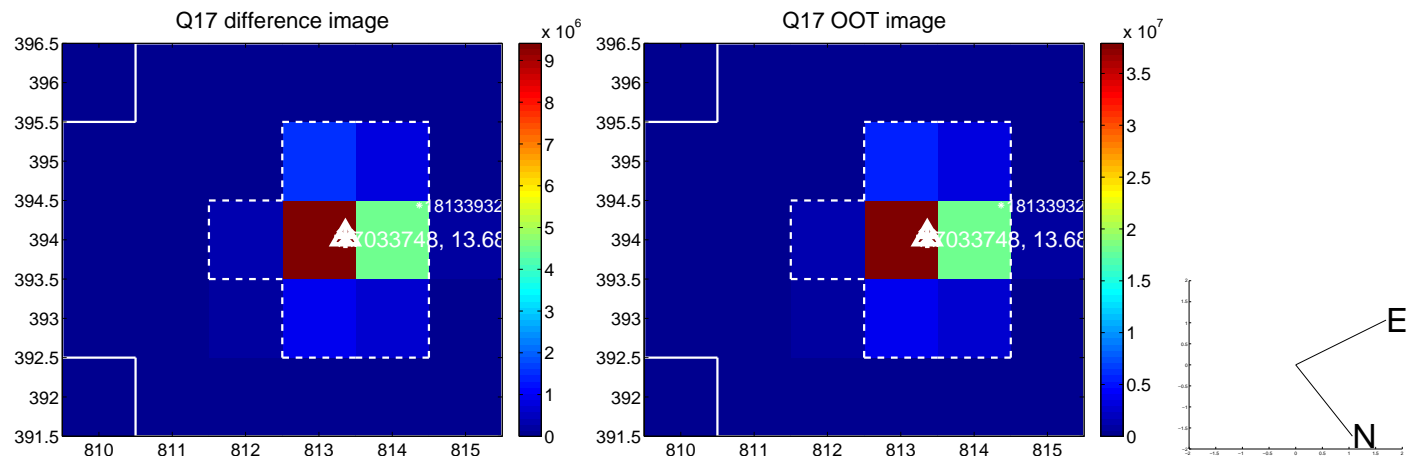
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UKIRT Image

Declination

