

KIC 004663185

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})
004663185-01	OBS	3805.01	56.699222	146.145810	5123.9	7.577	43.6	58.1	13.55	4727	187.11	599.37

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004663185-01	OBS	FP	0.00	0	1	1	0	DEEP_V_SHAPED—CENT_SATURATED—HALO_GHOST

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

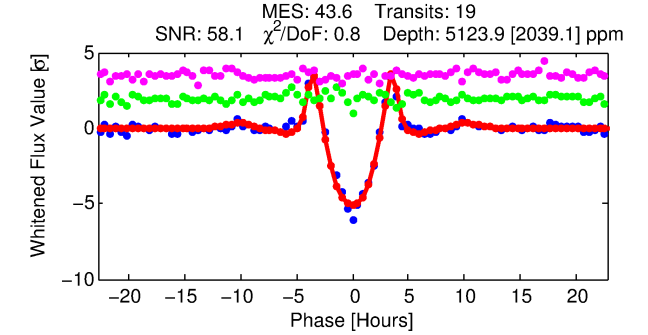
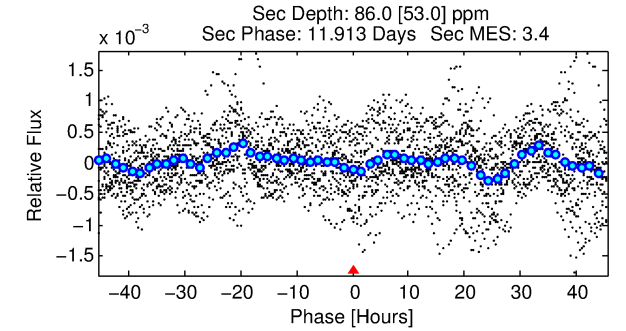
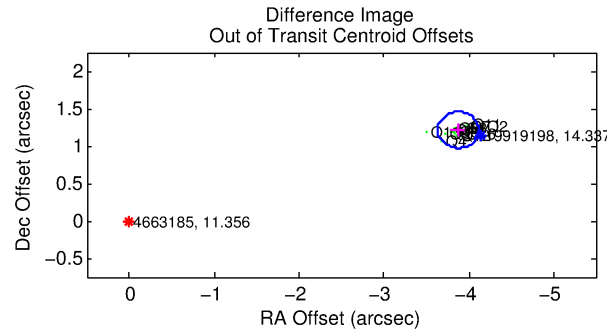
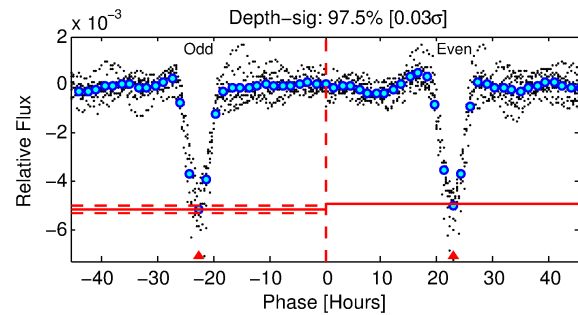
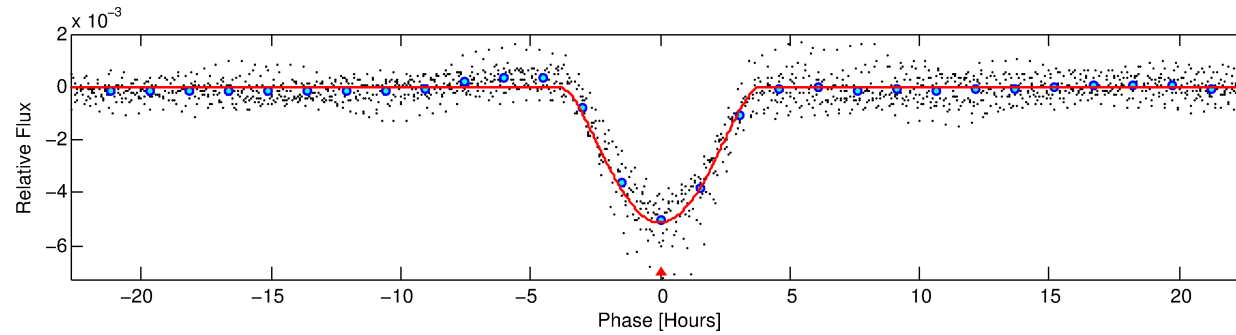
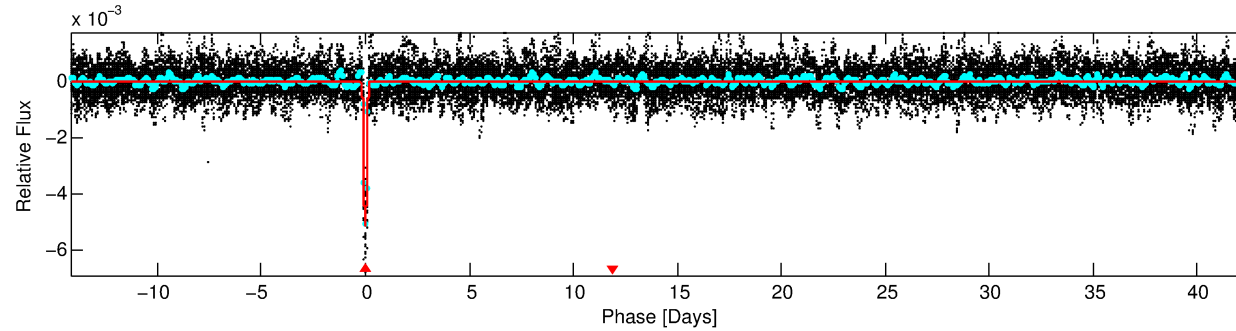
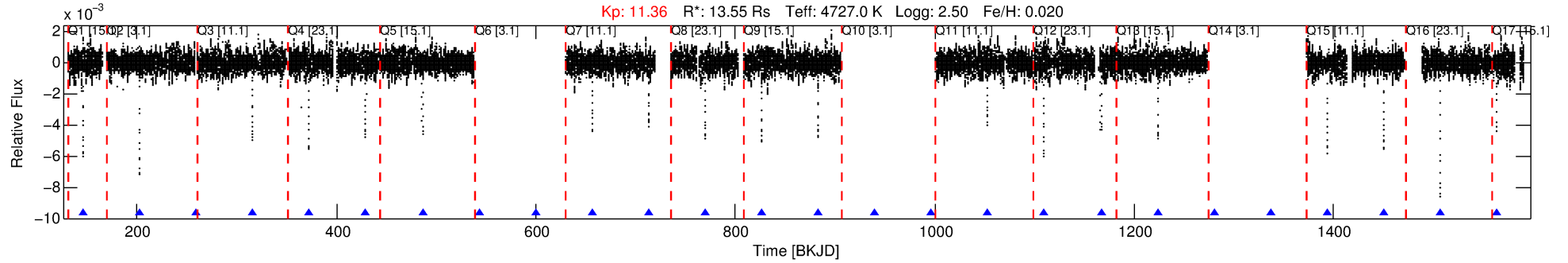
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004663185-01

No Significant Match Found

DV One-Page Summary

KIC: 4663185 Candidate: 1 of 1 Period: 56.699 d
KOI: K03805.01 Corr: 0.992



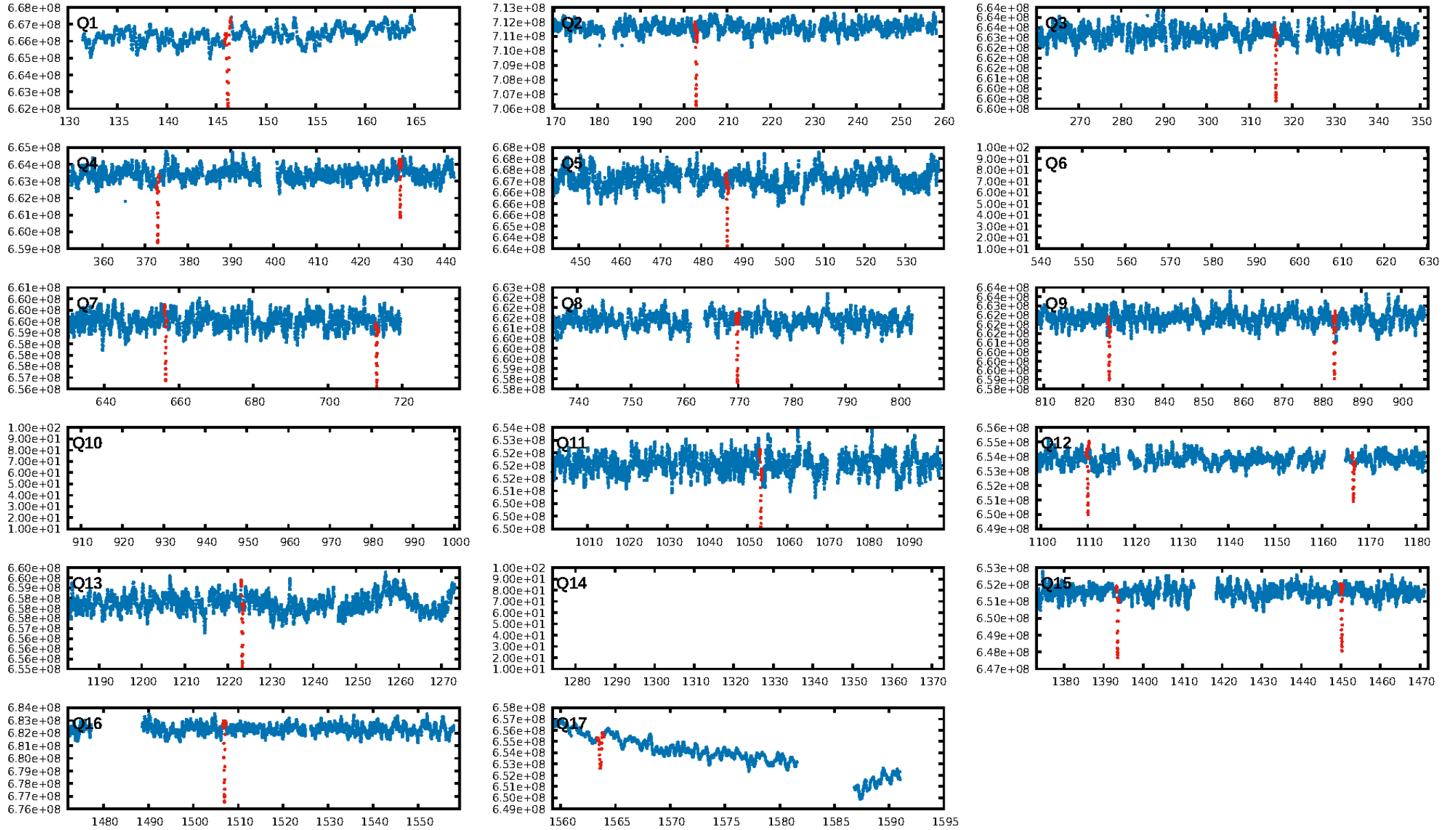
DV Fit Results:

Period = 56.69922 [0.00009] d
Epoch = 146.1458 [0.0014] BKJD
Rp/R* = 0.1266 [0.0202]
a/R* = 29.68 [0.73]
b = 1.00 [0.00]
Seff = 599.37 [196.29]
Teq = 1262 [103] K
Rp = 187.11 [65.43] Re
a = 0.3701 [0.0886] AU
Ag = 0.19 [0.14] [-5.77 σ]
Teffp = 1279 [224] K [0.07 σ]

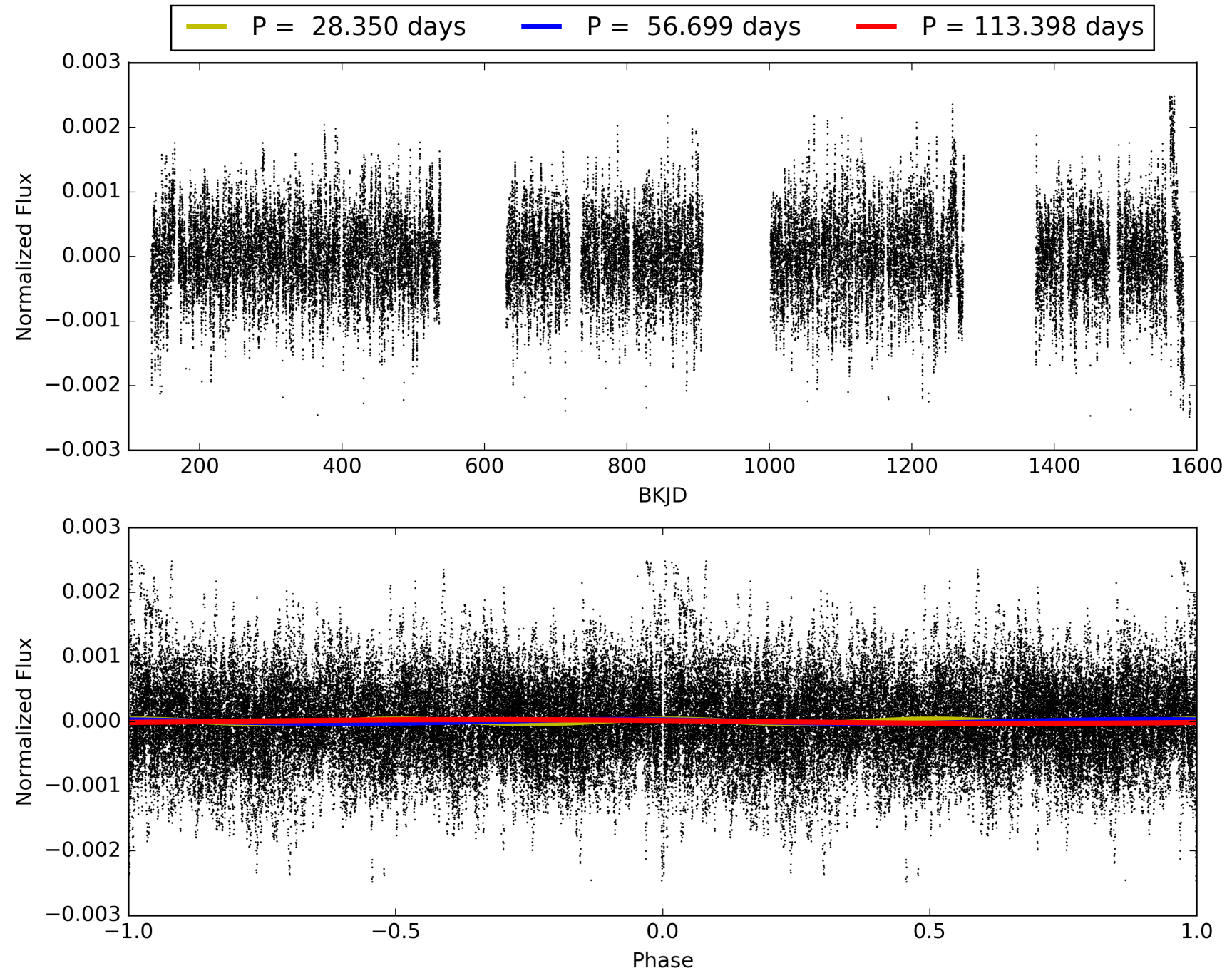
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.61e-268
RollingBand-fgt: 1.00 [17/17]
GhostDiagnostic-chr: 0.02501
Centroid-sig: 0.0%
Centroid-so: 8.445 arcsec [162.35 σ]
OotOffset-rm: 4.059 arcsec [50.35 σ]
KicOffset-rm: 4.331 arcsec [58.10 σ]
OotOffset-st: 1/3/4/5 [13]
KicOffset-st: 1/3/4/5 [13]
DiffImageQuality-fgm: 1.00 [13/13]
DiffImageOverlap-fno: 1.00 [13/13]

TCE 004663185-01, PDC Light Curves

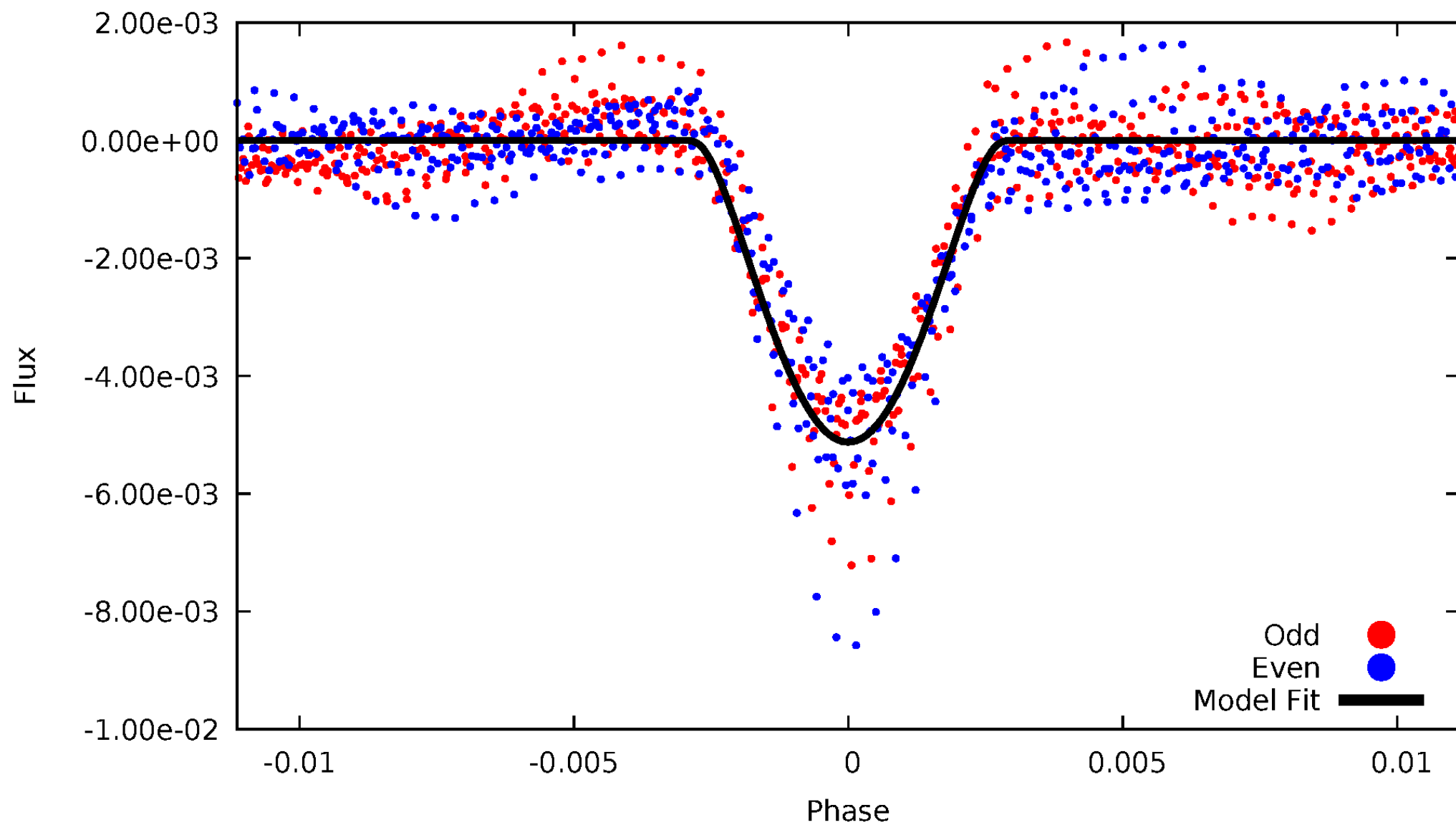


TCE 004663185-01



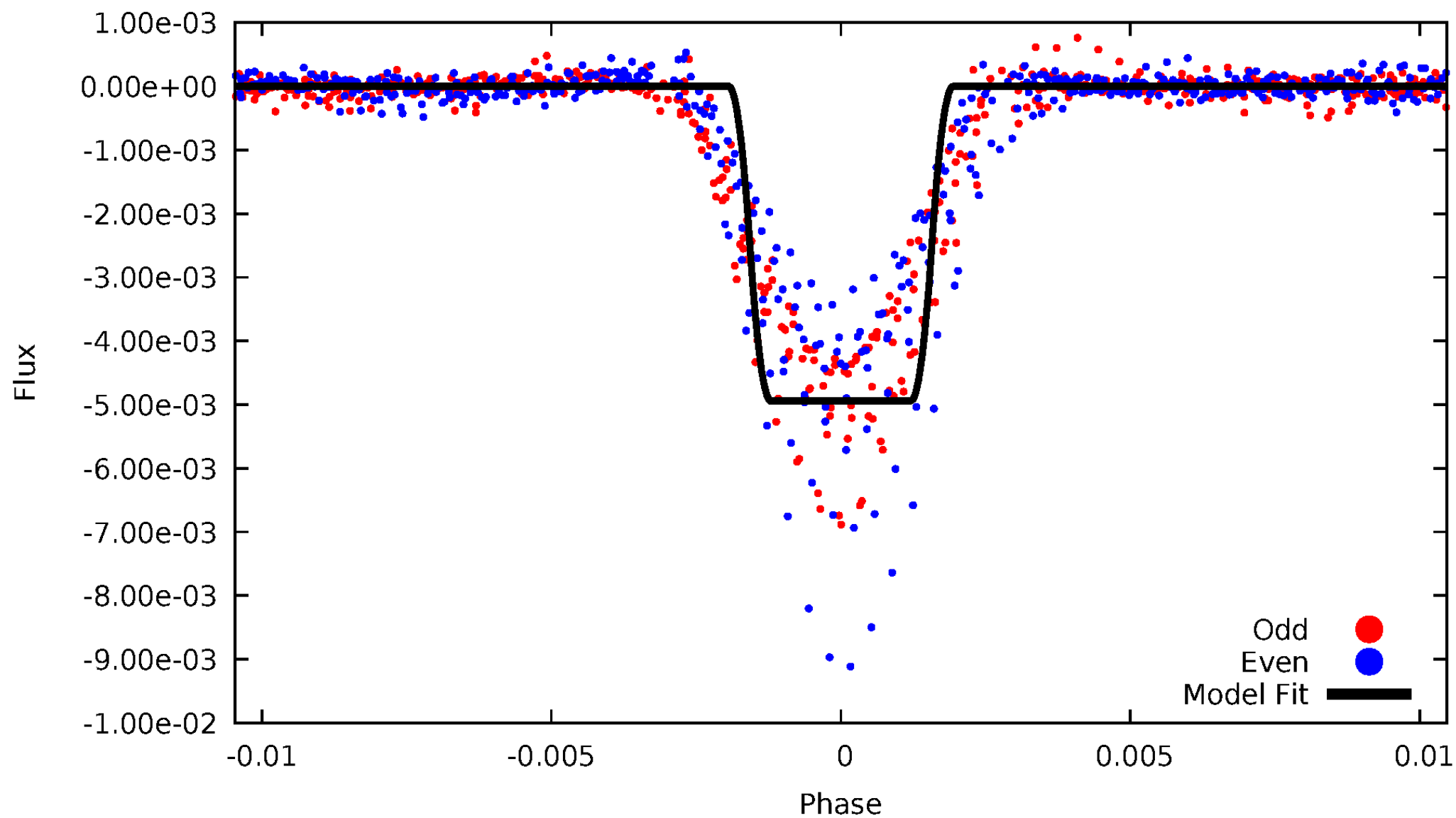
DV Odd/Even

TCE 004663185-01

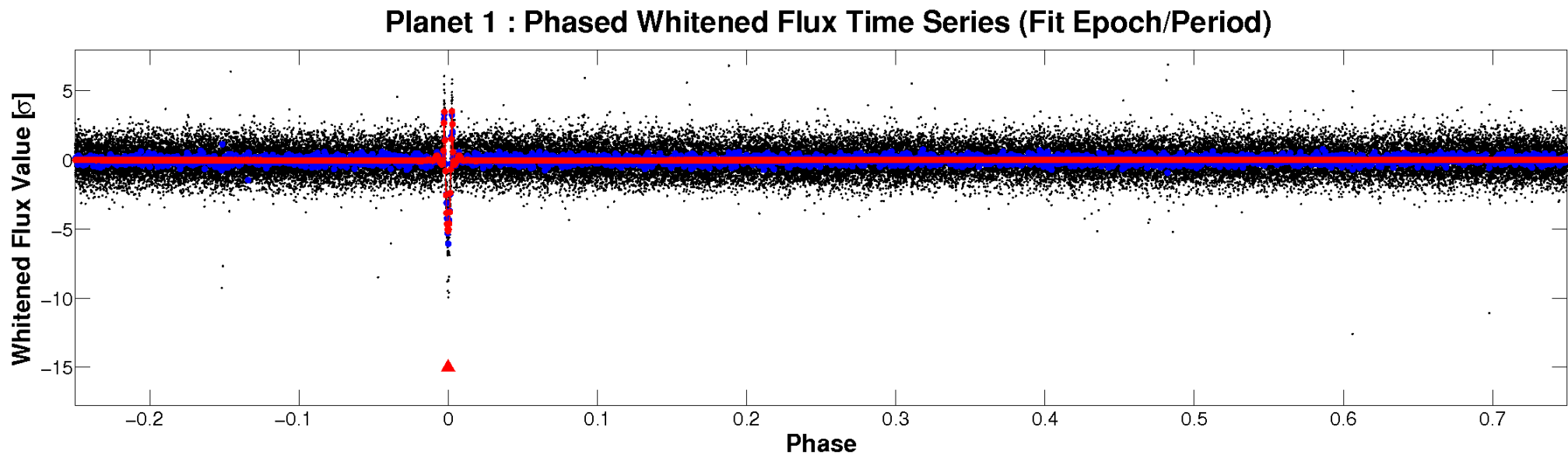
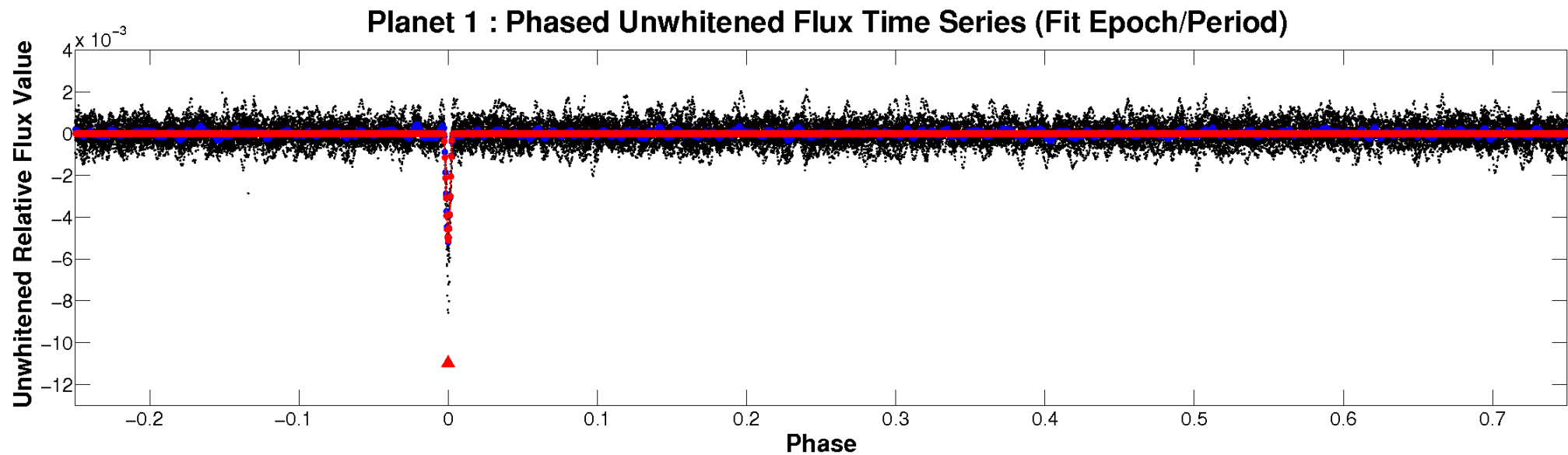


ALT Odd/Even

TCE 004663185-01

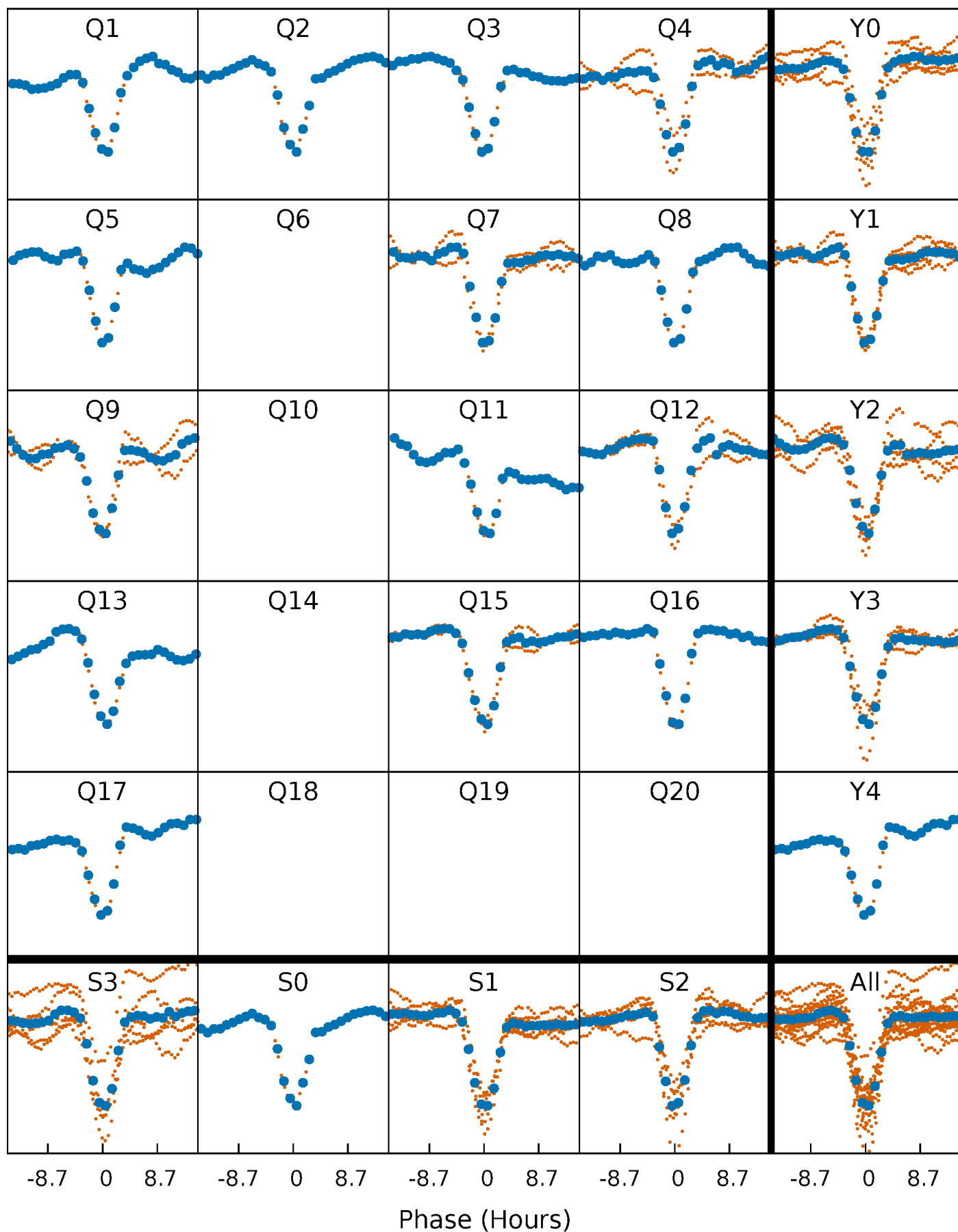


Non-Whitened Vs. Whitened Light Curve



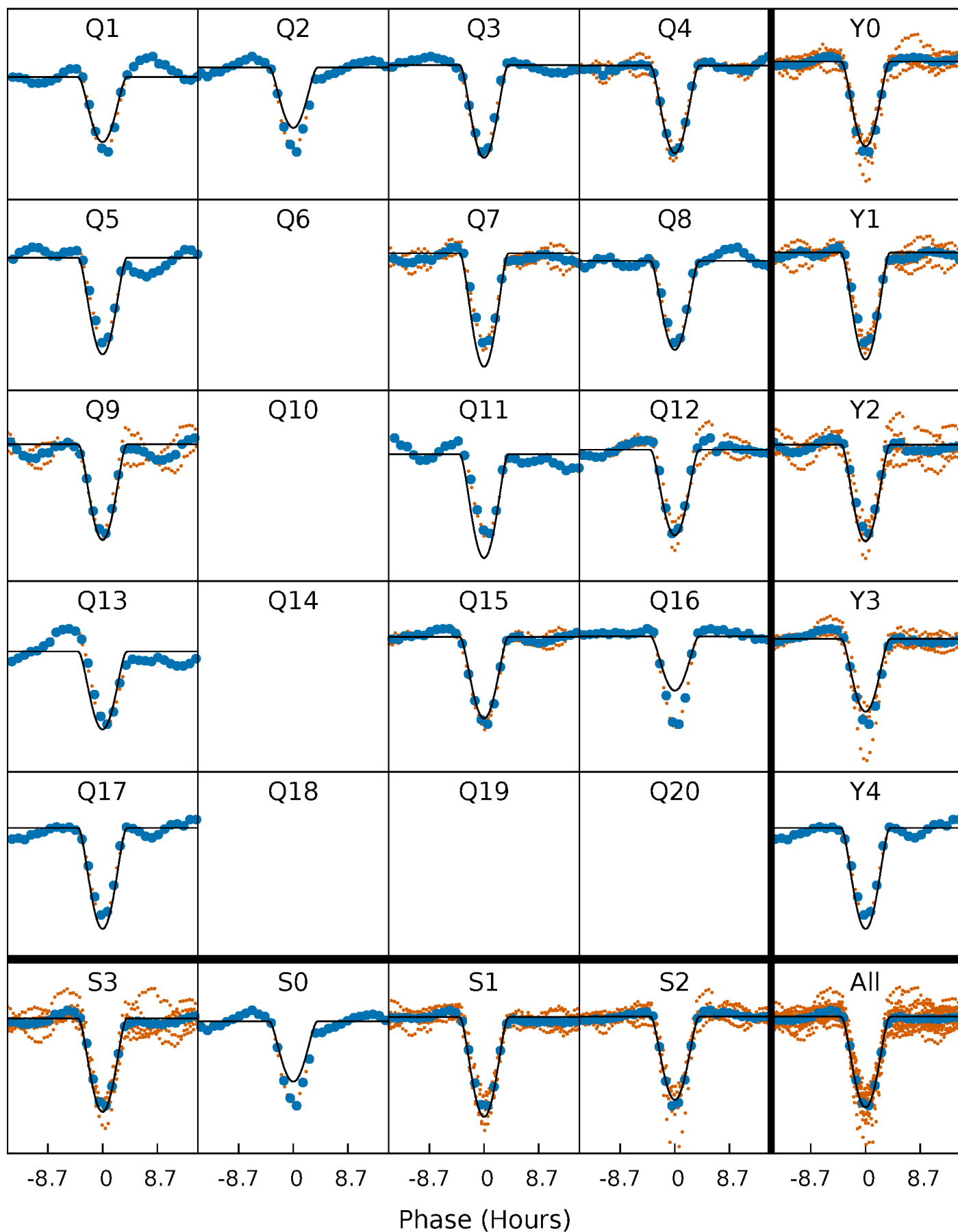
PDC Quarter-Phased Transit Curves

TCE 004663185-01 P= 56.699222 Days $T_0=146.145810$ (BKJD)



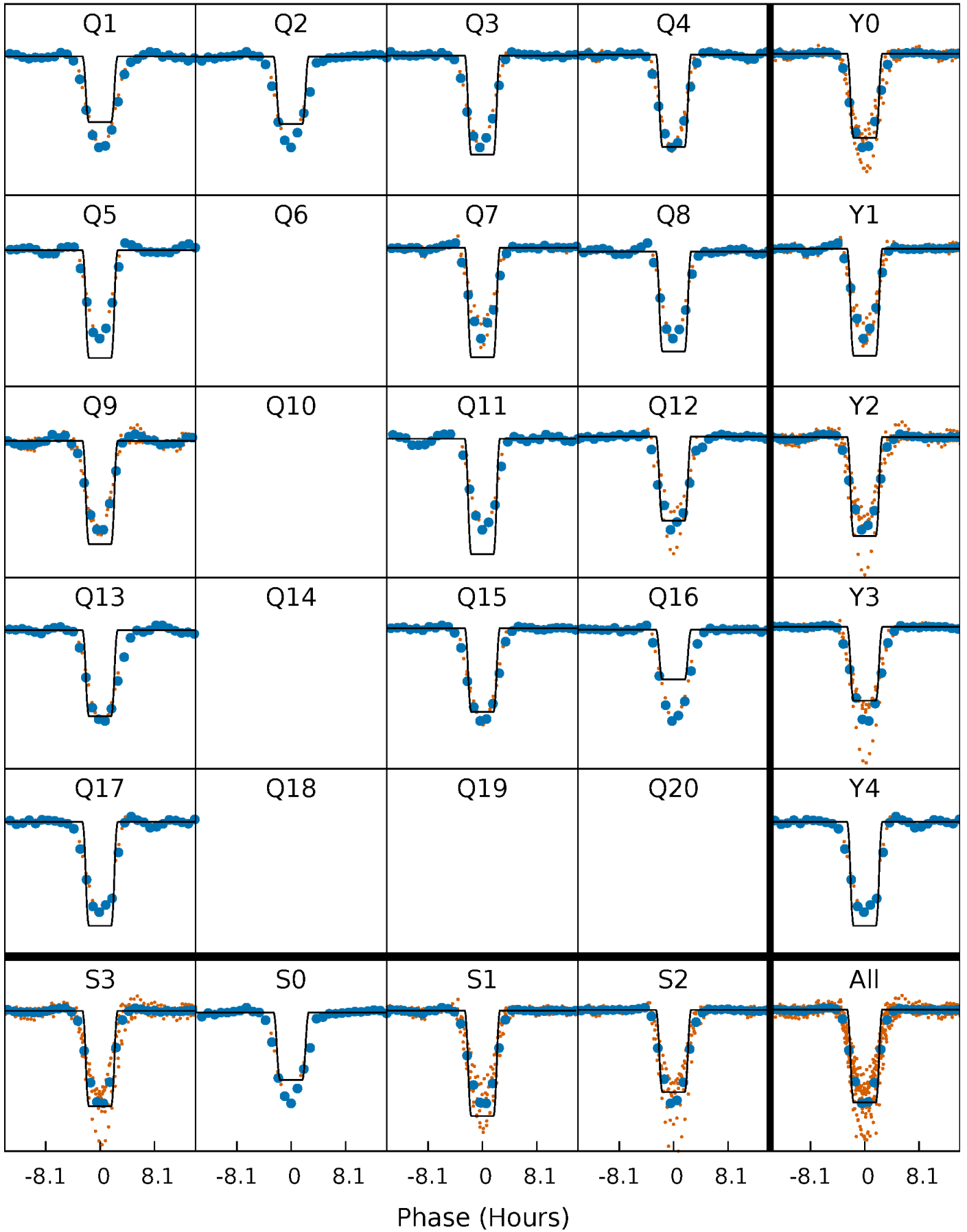
DV Quarter-Phased Transit Curves

TCE 004663185-01 P= 56.699222 Days $T_0=146.145810$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

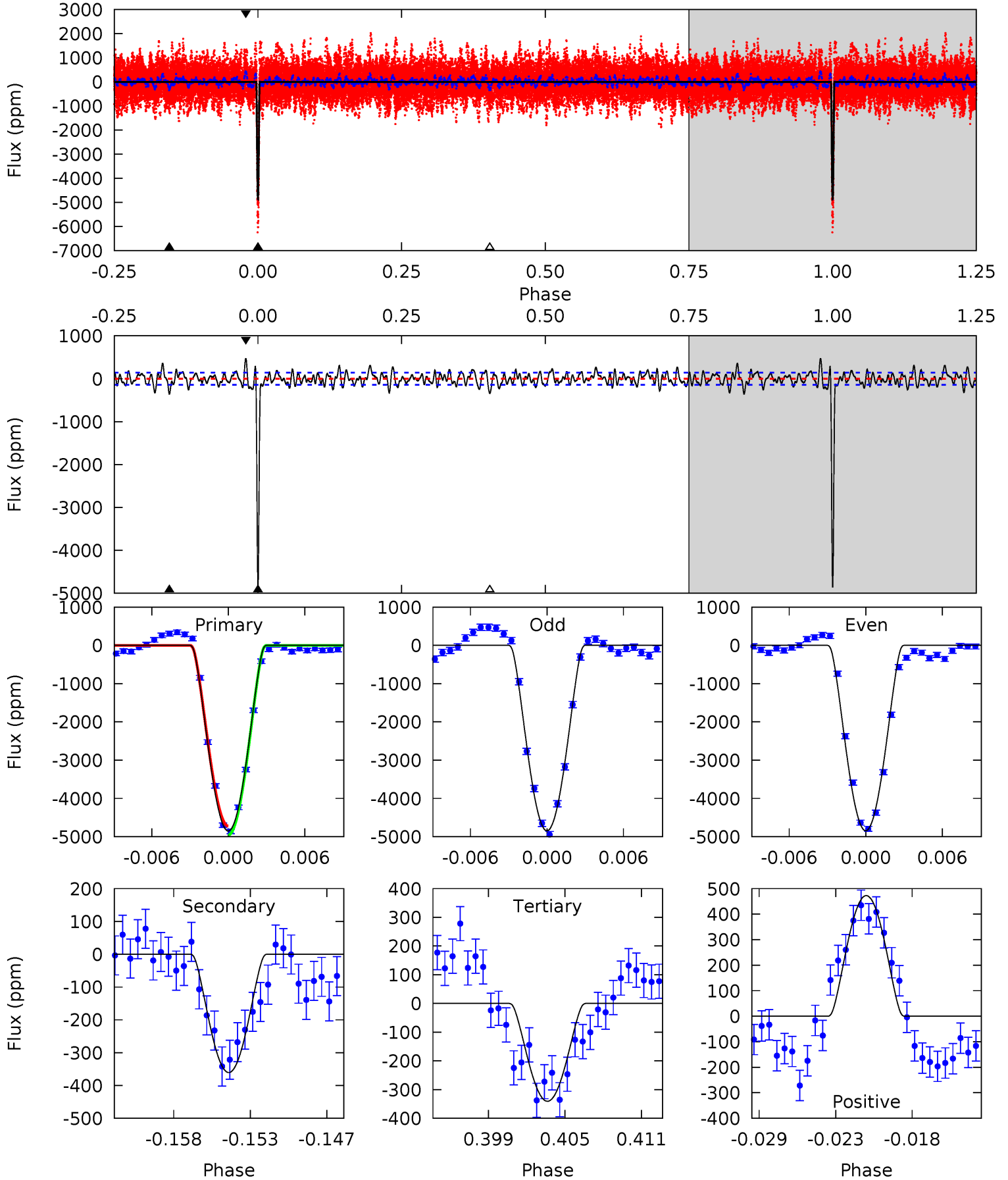
TCE 004663185-01 P= 56.698942 Days $T_0=146.151329$ (BKJD)



DV Model-Shift Uniqueness Test

004663185-01, P = 56.699222 Days, E = 89.446588 Days

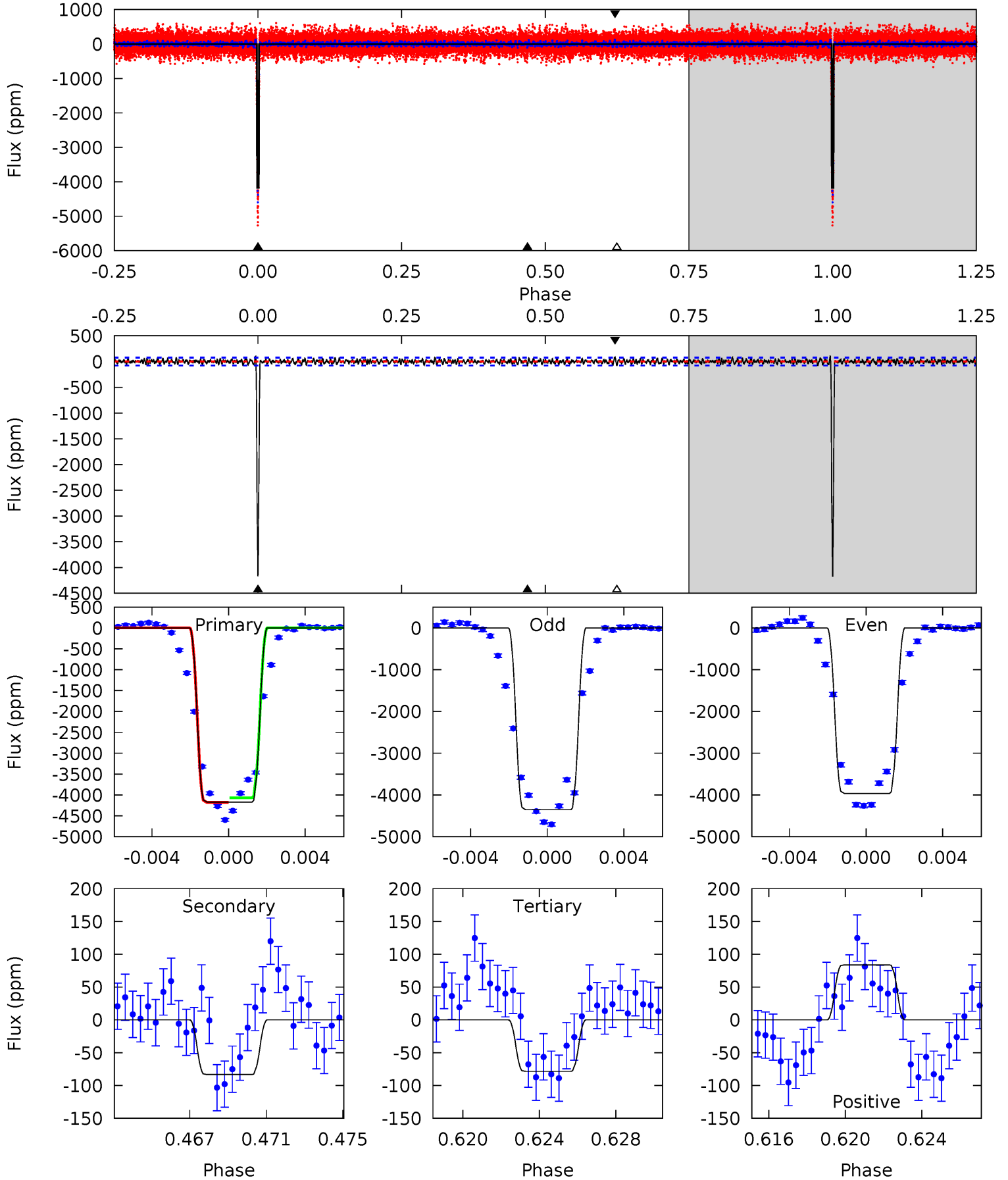
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
176.9	13.2	12.4	17.2	5.13	2.76	4.26	164.5	159.6	0.73	-4.08	0.00	1.09	0.09	4.20



Alt Model-Shift Uniqueness Test

004663185-01, P = 56.698942 Days, E = 89.452387 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
287.5	5.74	5.41	5.78	5.21	2.89	1.81	282.0	281.7	0.33	-0.04	13.2	1.13	0.02	3.72



Stellar Parameters For KIC 004663185

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4727^{+56}_{-98}	$2.497^{+0.156}_{-0.096}$	$0.020^{+0.100}_{-0.200}$	$13.547^{+2.810}_{-4.215}$	$2.100^{+0.878}_{-0.878}$	$0.001^{+0.001}_{-0.000}$
	+1%/-2%	+6%/-4%	+500%/-1000%	+21%/-31%	+42%/-42%	+100%/-28%
Source	SPE74	SPE74	SPE74	DSEP		

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

Secondary Eclipse Parameters for KIC 004663185-01 / KOI 3805.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-361 ± 27	$191.71^{+43.96}_{-49.64}$	1747^{+86}_{-106}	2440^{+168}_{-181}	$0.792^{+0.432}_{-0.261}$
Alt.	-83 ± 15	$104.32^{+39.52}_{-34.70}$	1746^{+90}_{-106}	2283^{+330}_{-452}	$0.596^{+0.580}_{-0.263}$

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 $A_{obs} \gg 1.0$

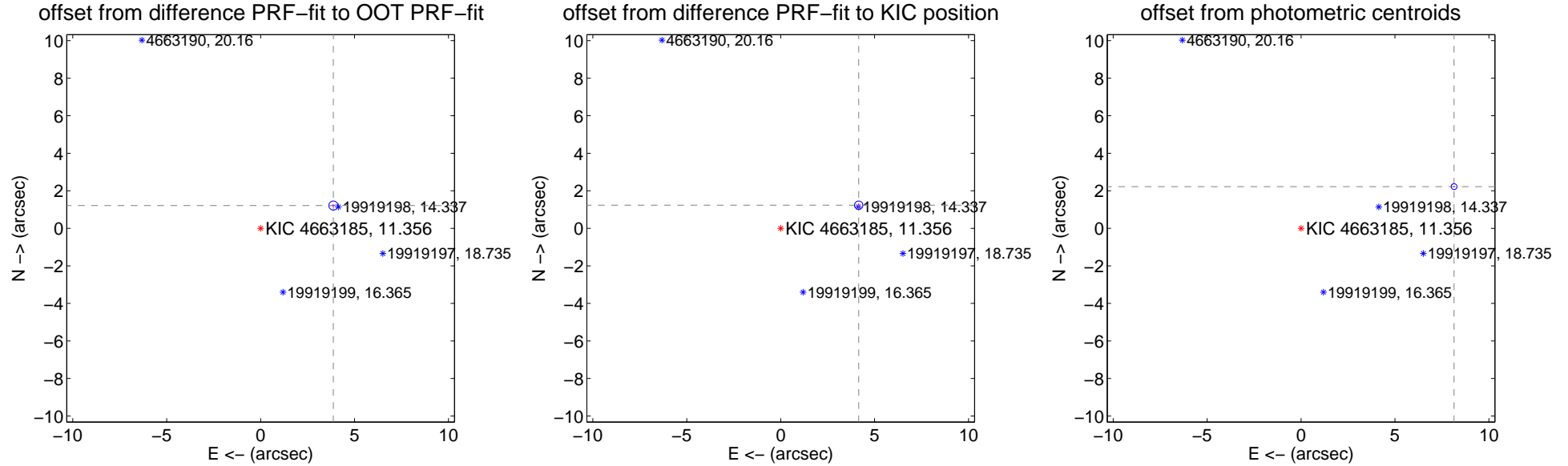
DV Centroid Data

Supplemental centroid analysis for 004663185-01. **Kepler magnitude: 11.36.** Transit SNR 58.09

There are 13 quarters with good PRF difference image offsets

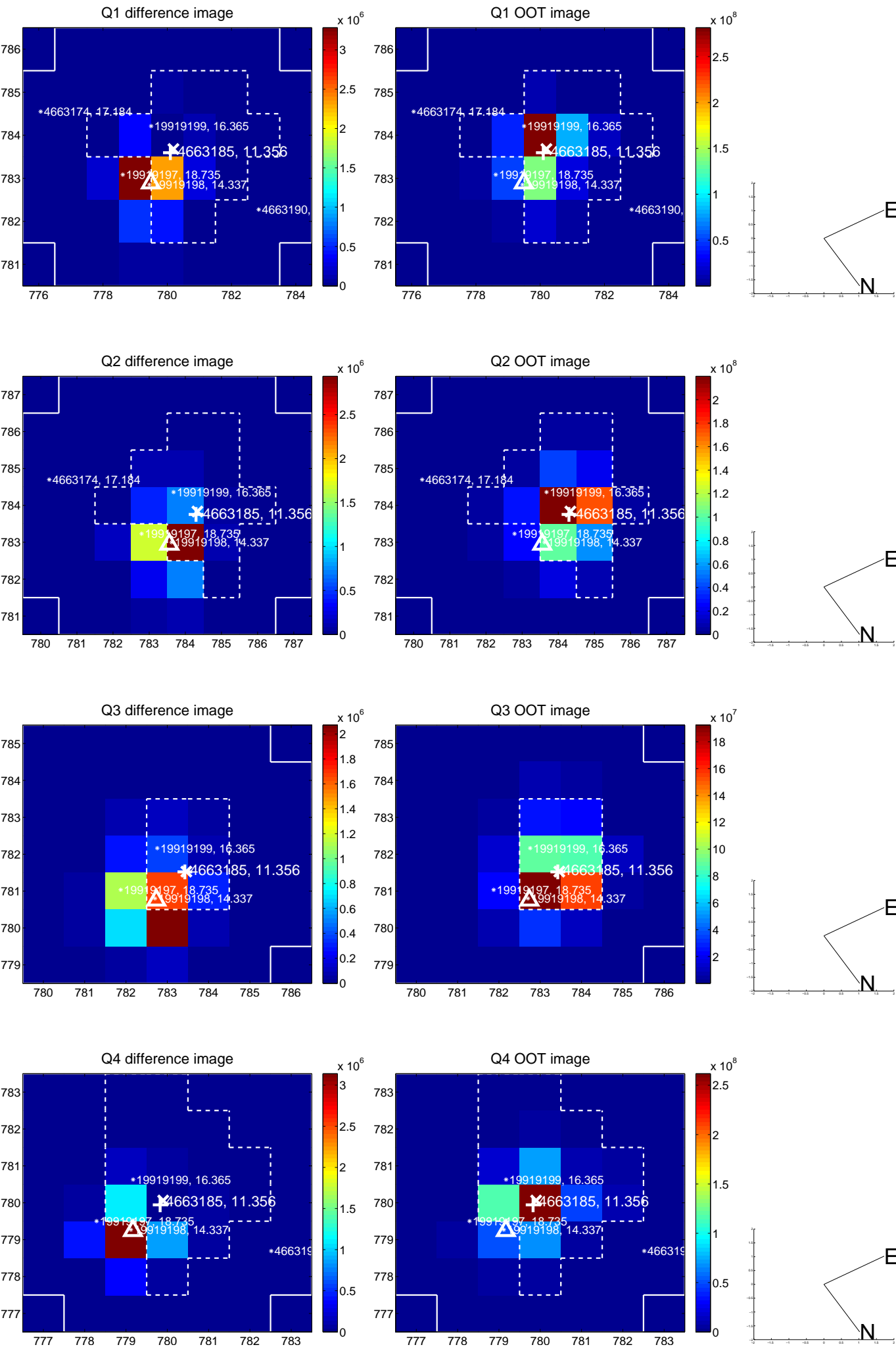
The direct PRF centroid is offset from the target star catalog position by about 0.42 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.059 \pm 0.081	50.35	-3.873 \pm 0.082	1.214 \pm 0.069
PRF-fit source offset from KIC position	4.331 \pm 0.075	58.10	-4.152 \pm 0.073	1.232 \pm 0.070
photometric centroid source offset	8.44 \pm 0.05	162.35	-8.15 \pm 0.05	2.22 \pm 0.03

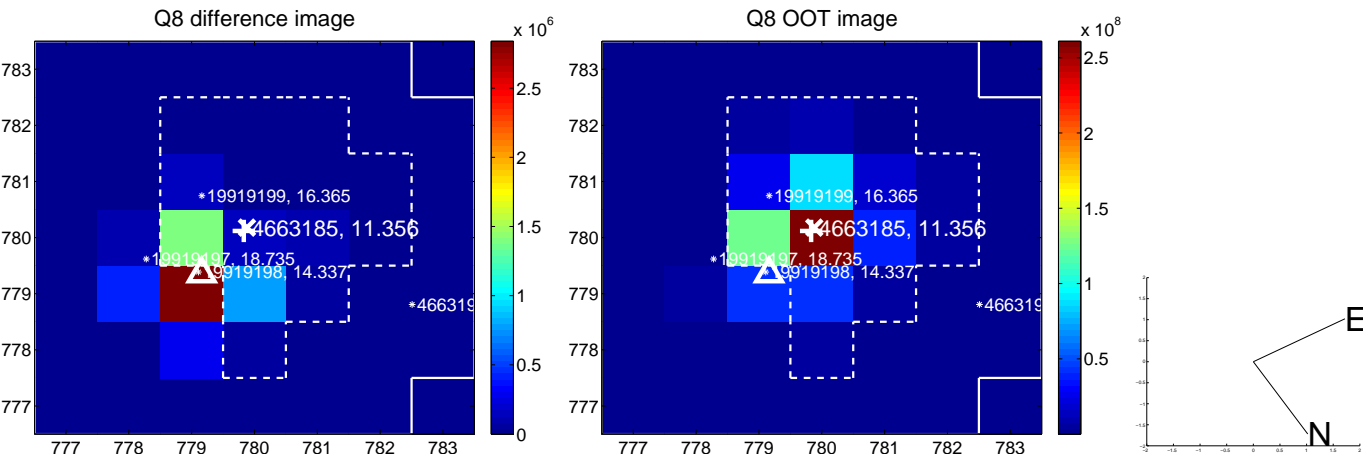
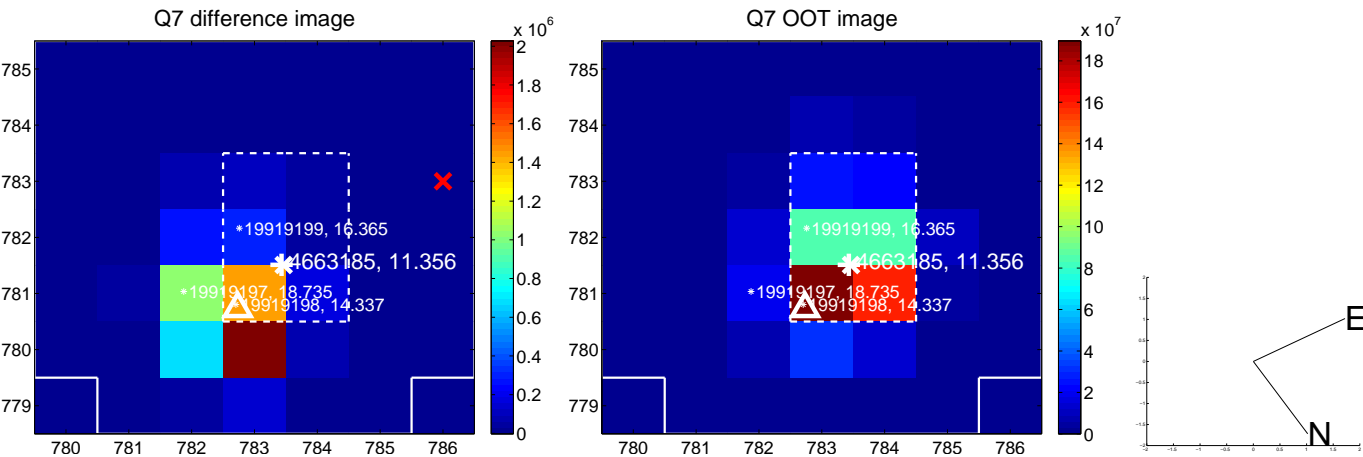
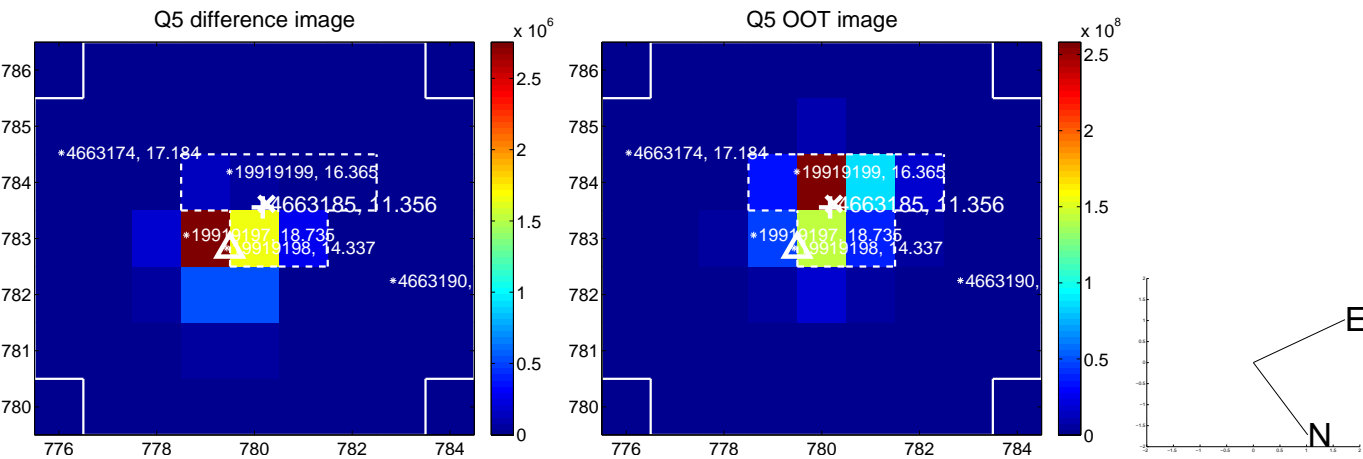


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

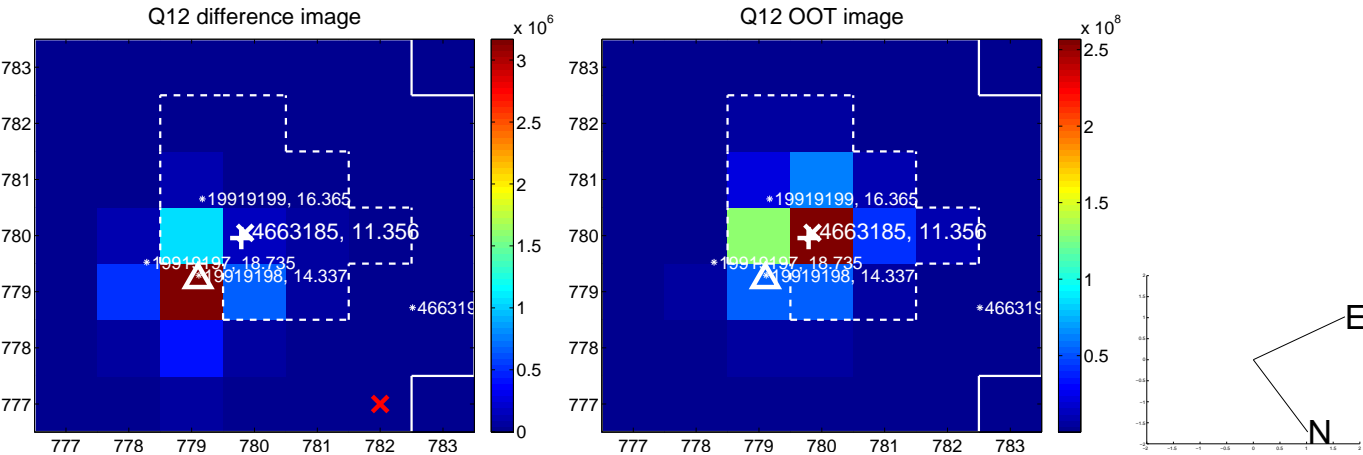
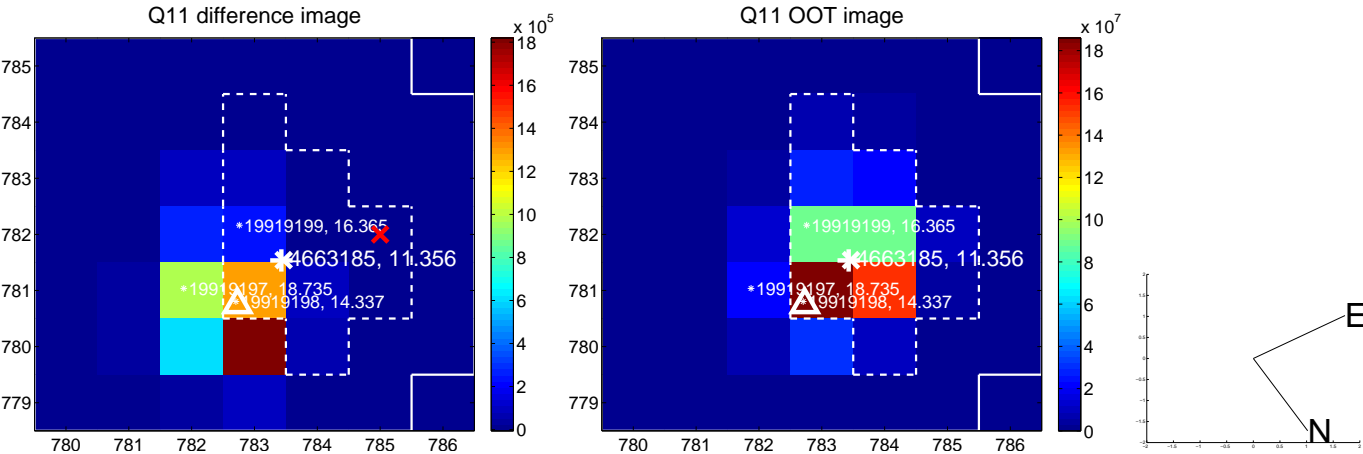
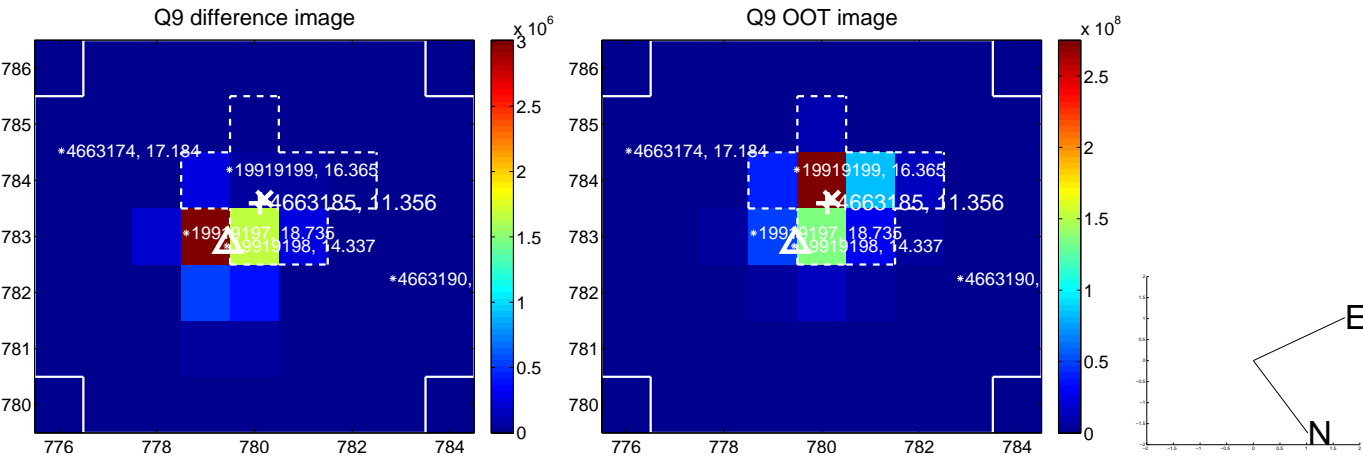
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



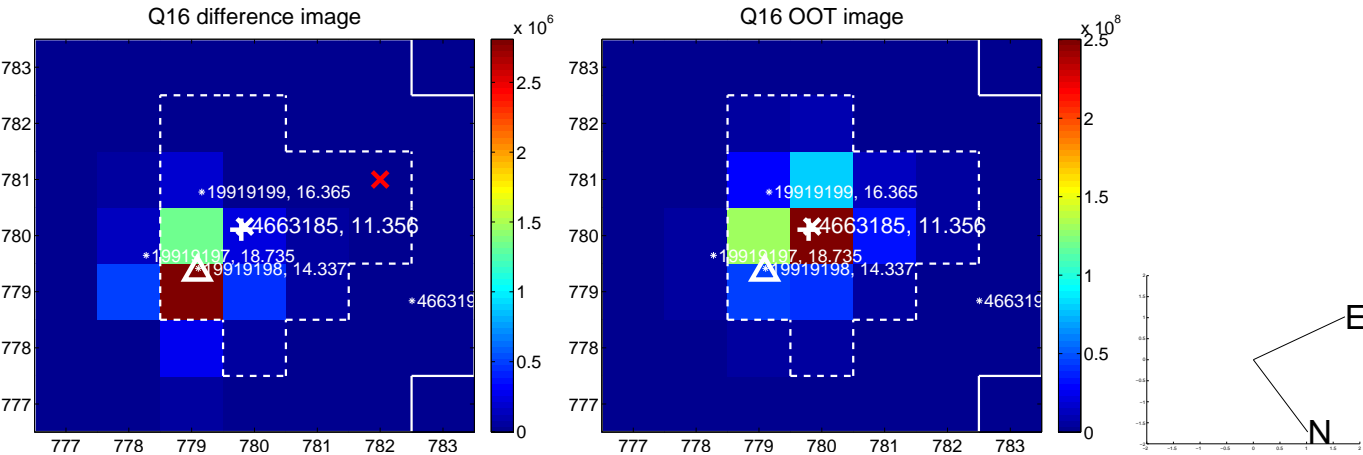
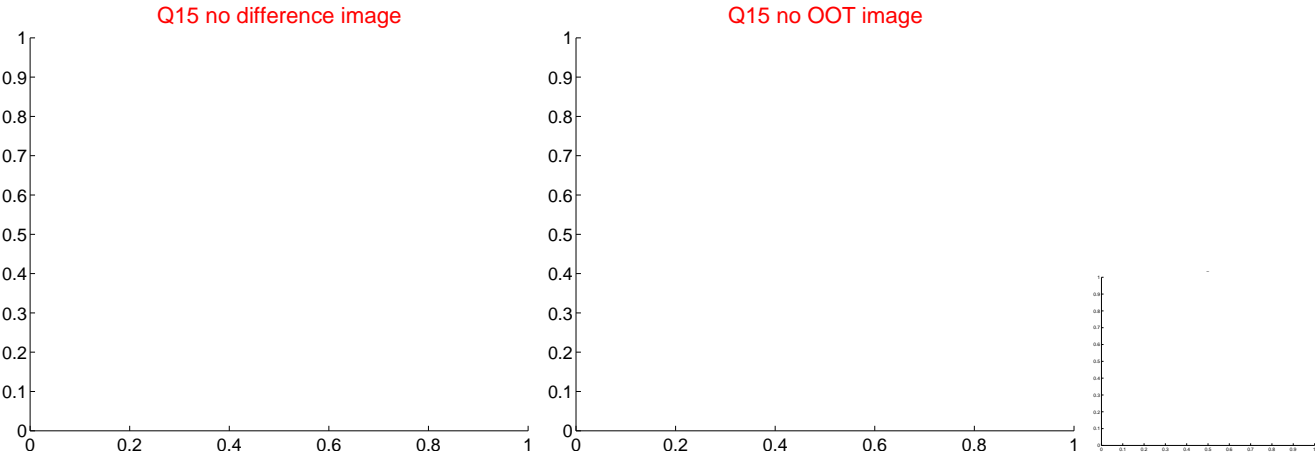
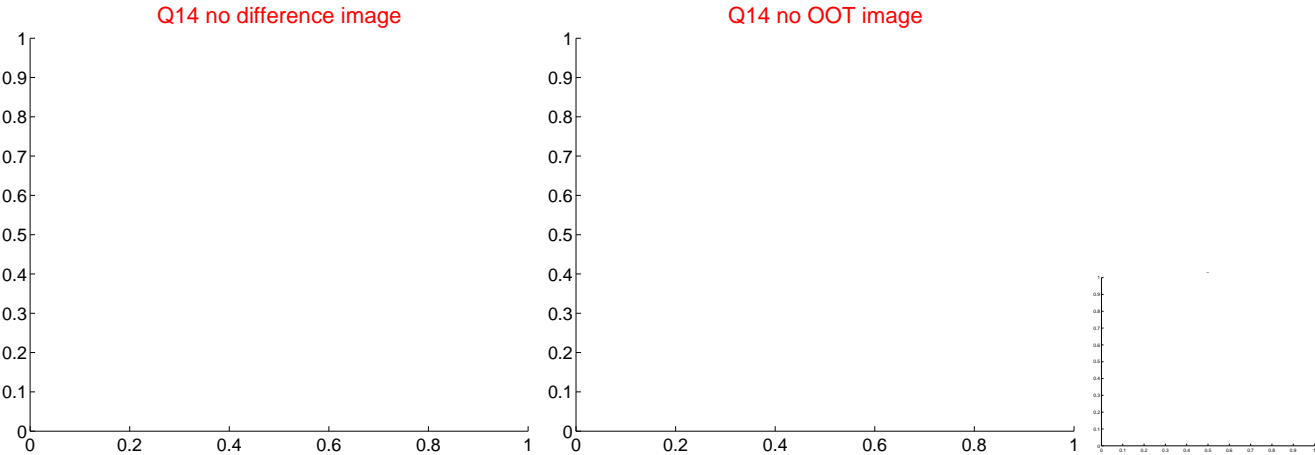
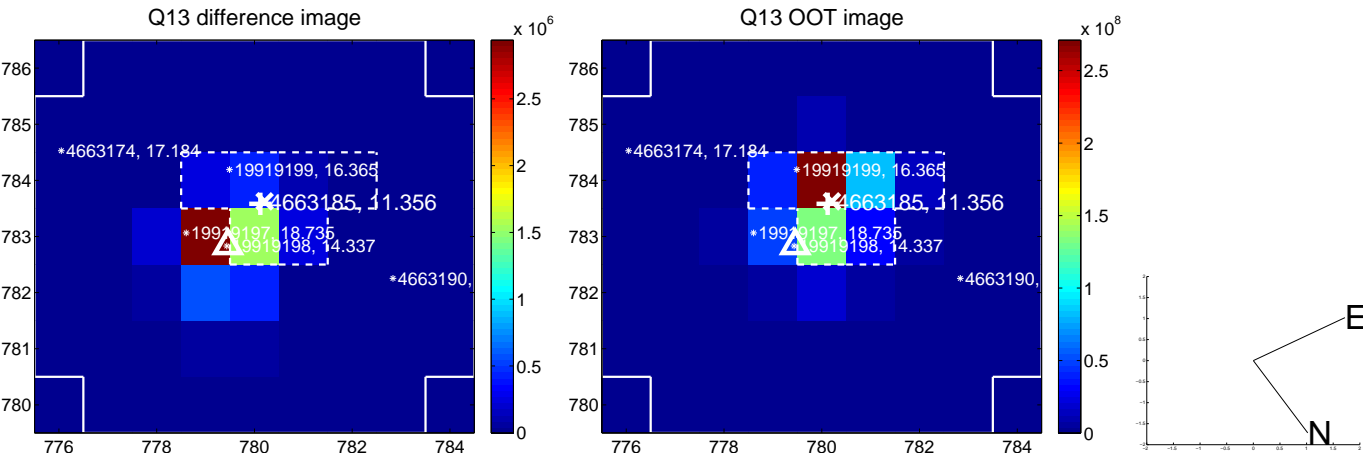
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



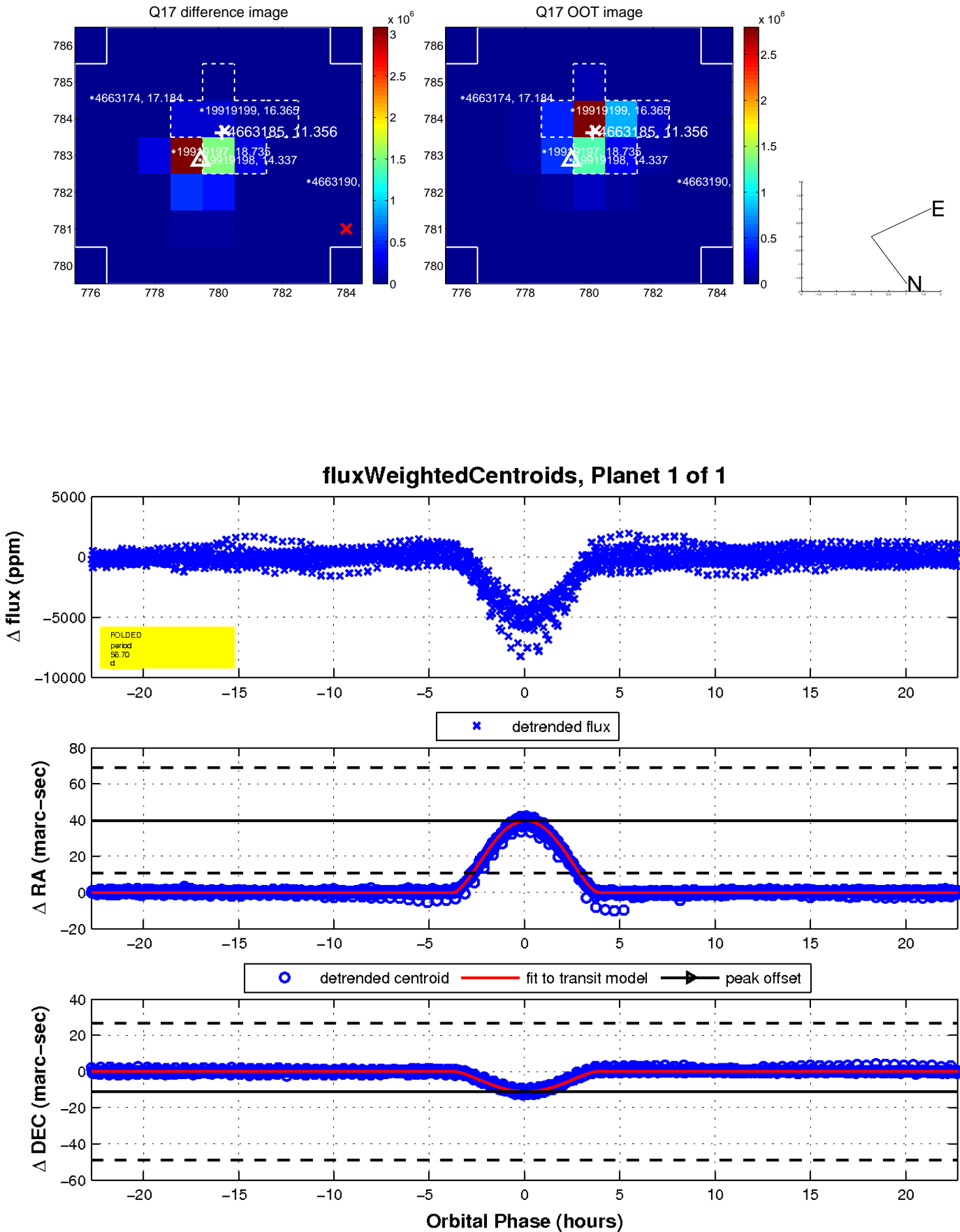
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

