

KIC 005285607

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})
005285607-01	OBS	6553.01	1.949701	132.426768	38262.9	4.271	11932.9	8620.5	1.19	6469	40.12	2051.38

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005285607-01	OBS	FP	0.00	0	1	0	0	DEPTH_ODDEVEN_DV—DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_DV—MOD_ODDEVEN_ALT—DEEP_V_SHAPED—CENT_SATURATED

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.

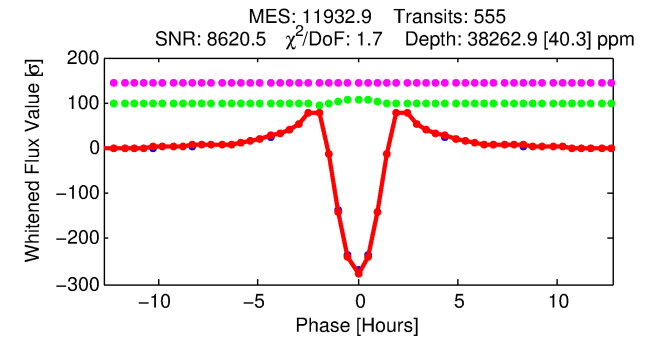
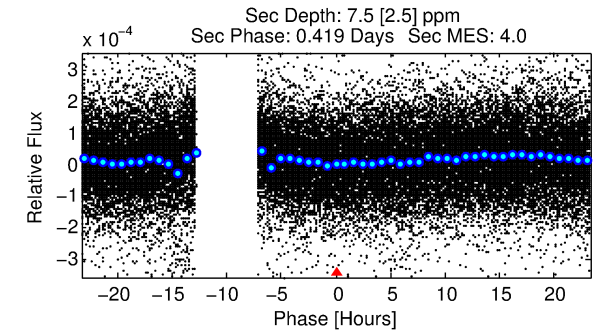
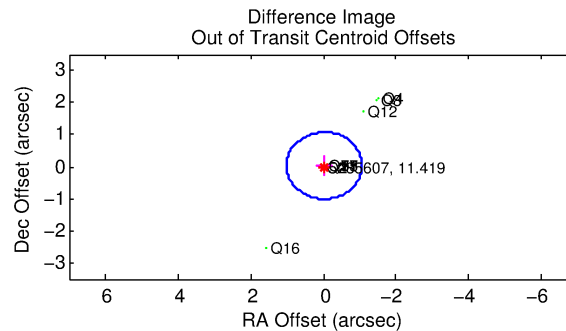
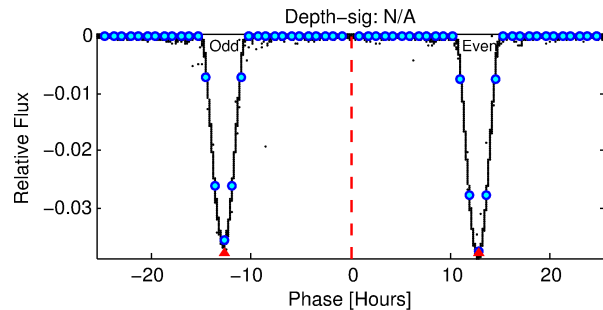
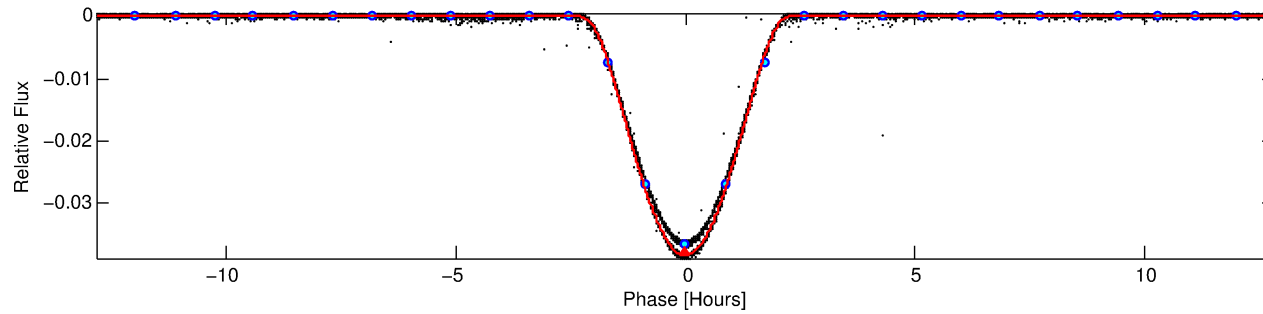
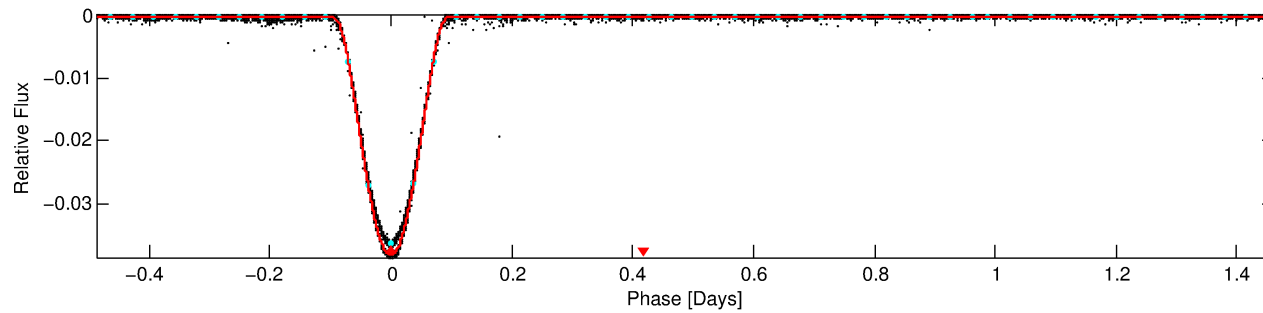
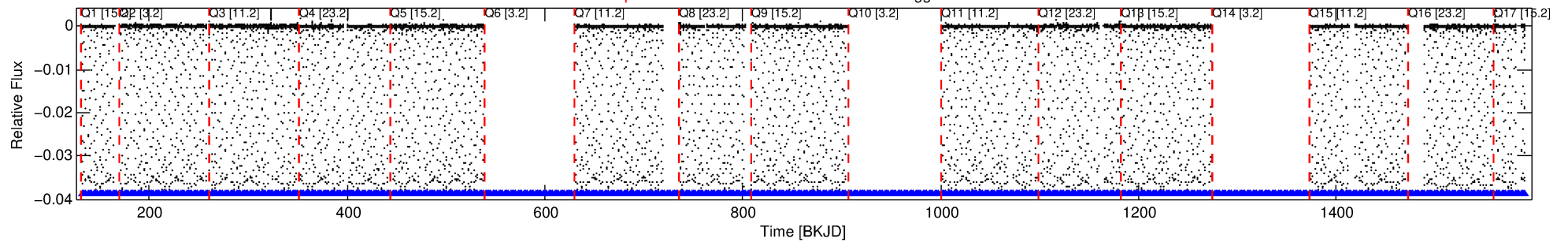
Ephemeris Match Information For 005285607-01

No Significant Match Found

DV One-Page Summary

KIC: 5285607 Candidate: 1 of 1 Period: 1.950 d
KOI: K06553.01 Corr: 0.991

Kp: 11.42 R*: 1.19 Rs Teff: 6469.0 K Logg: 4.38 Fe/H: 0.070



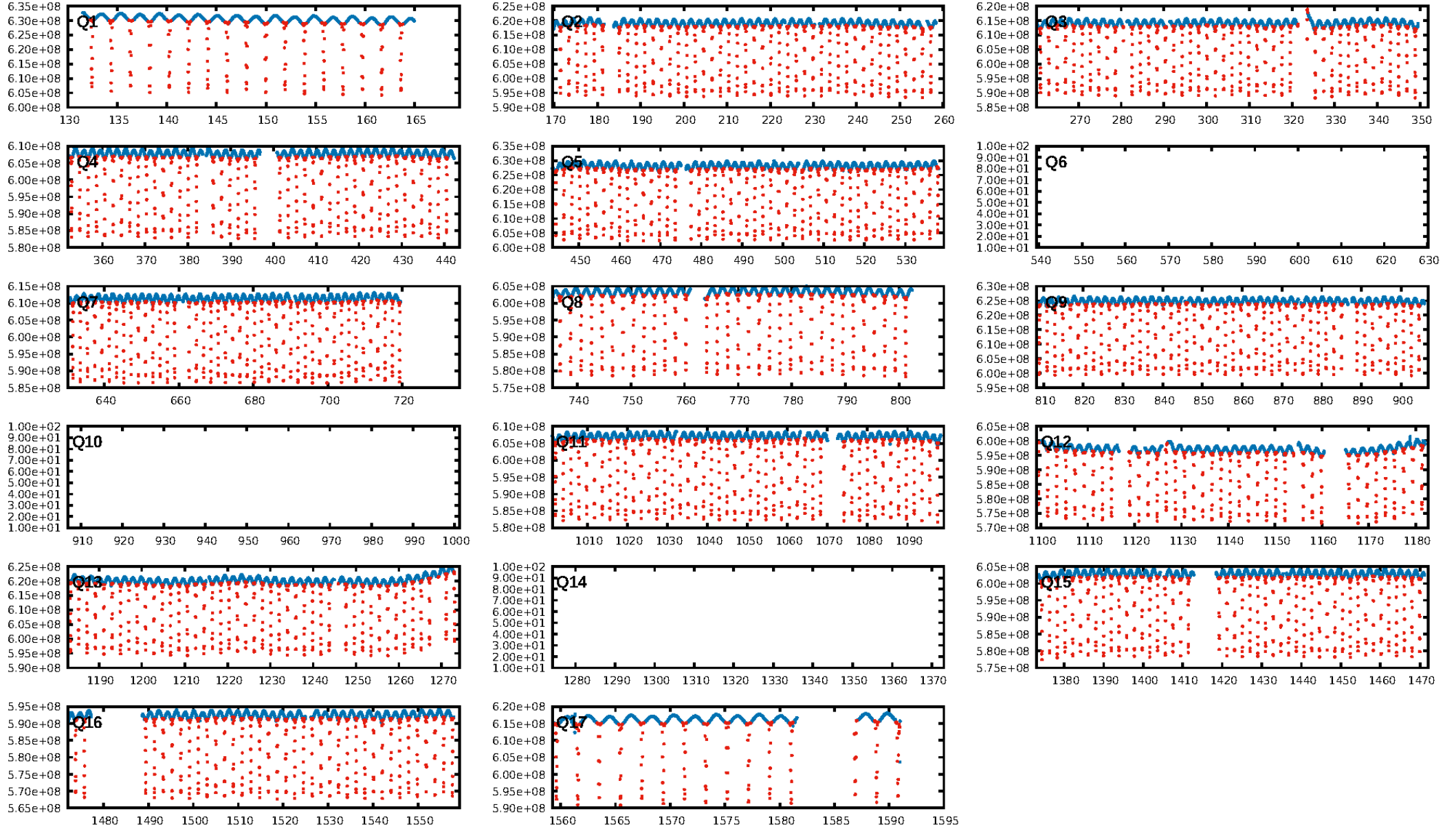
DV Fit Results:

Period = 1.94970 [0.00000] d
Epoch = 132.4268 [0.0000] BKJD
Rp/R* = 0.3081 [0.0021]
a/R* = 3.15 [0.00]
b = 1.00 [0.00]
Seff = 2051.38 [930.44]
Teff = 1716 [195] K
Rp = 40.12 [14.50] Re
a = 0.0330 [0.0100] AU
Ag = 0.00 [0.00] [-645.38σ]
Teffp = 610 [54] K [-5.47σ]

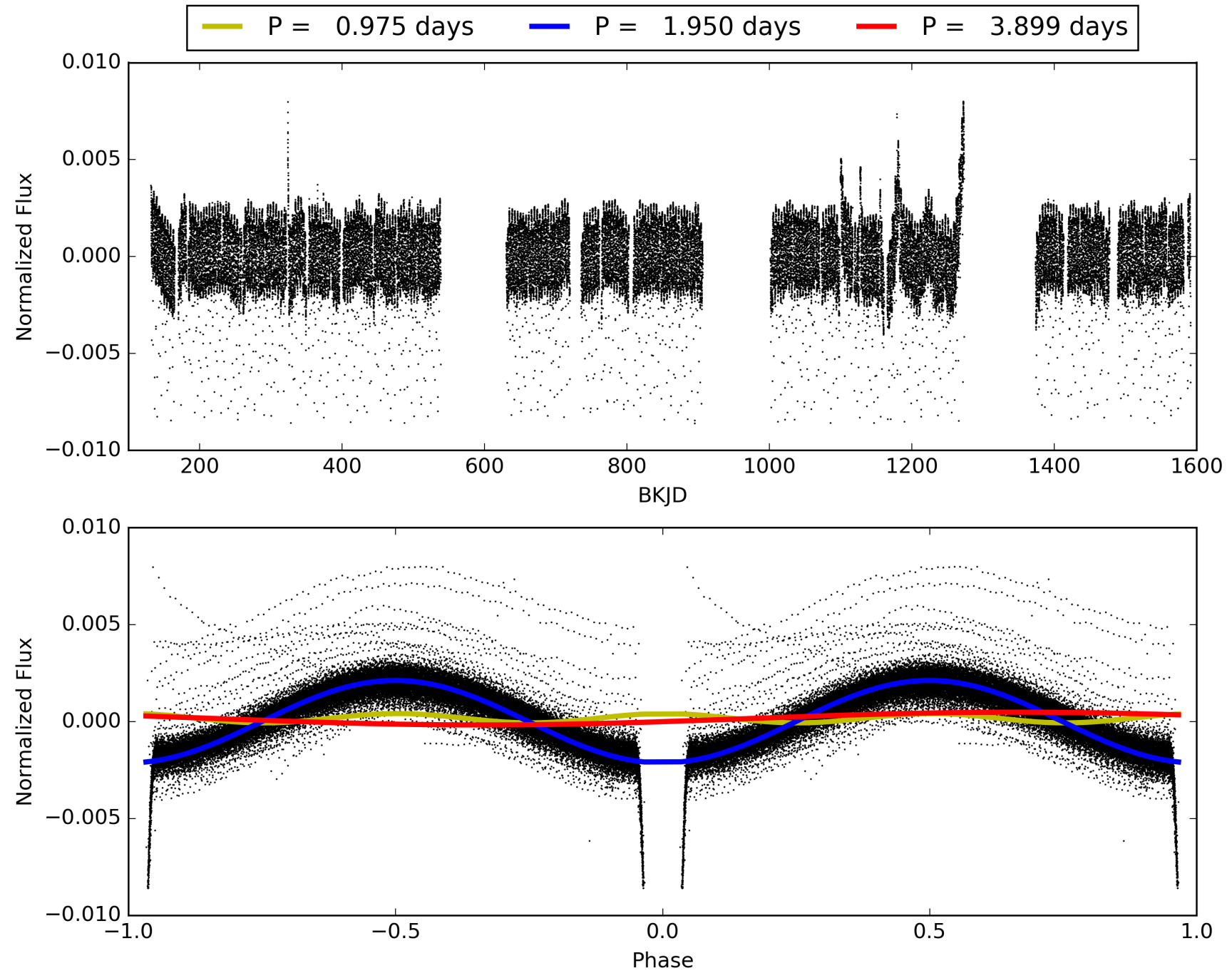
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [523/523]
GhostDiagnostic-chr: 2.09
Centroid-sig: 0.00%
Centroid-so: 0.333 arcsec [629.44σ]
OotOffset-rm: 0.038 arcsec [0.11σ]
KicOffset-rm: 0.309 arcsec [3.24σ]
OotOffset-st: 1/4/4/5 [14]
KicOffset-st: 1/4/4/5 [14]
DiffImageQuality-fgm: 0.79 [11/14]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 005285607-01, PDC Light Curves

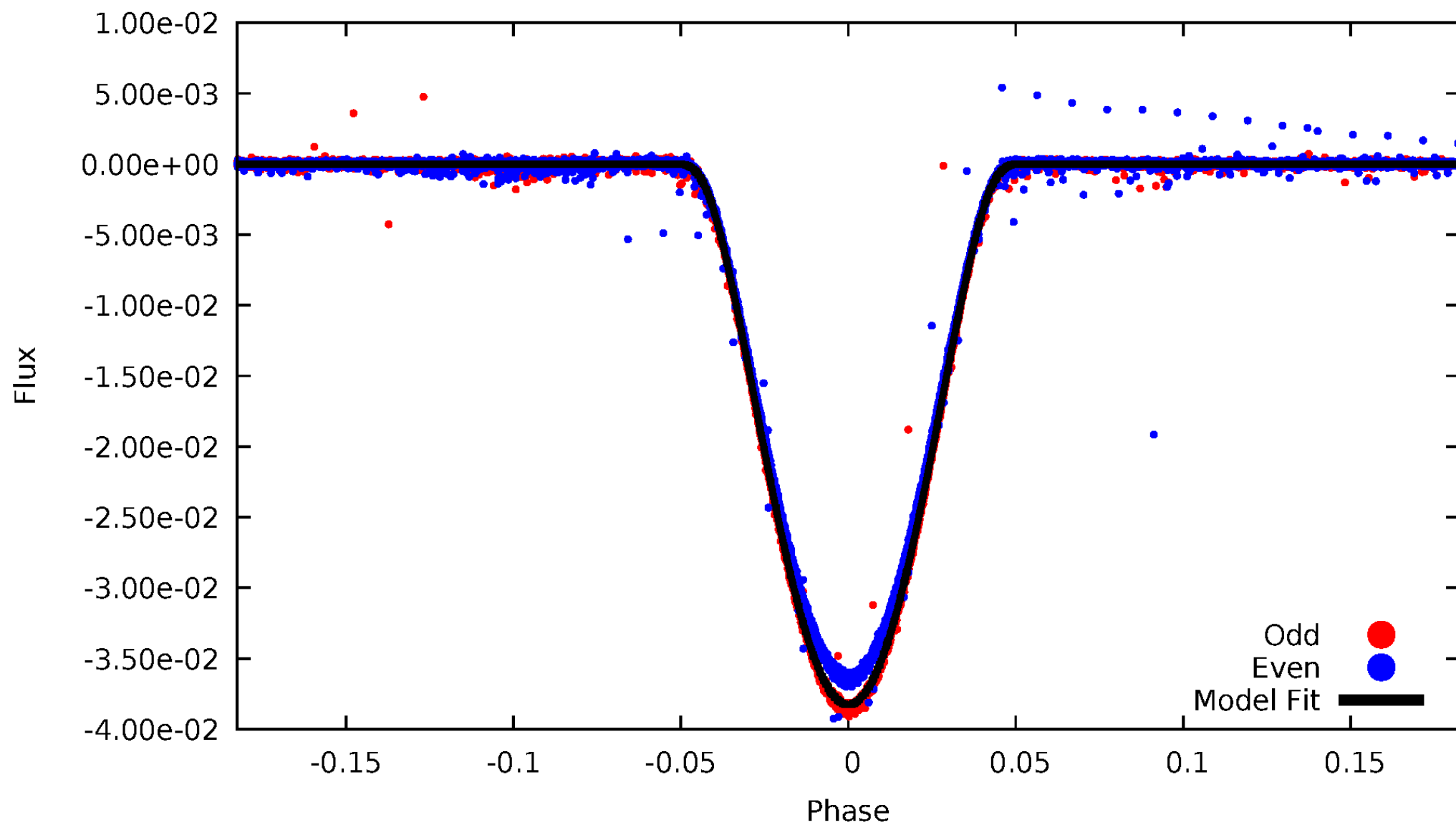


TCE 005285607-01



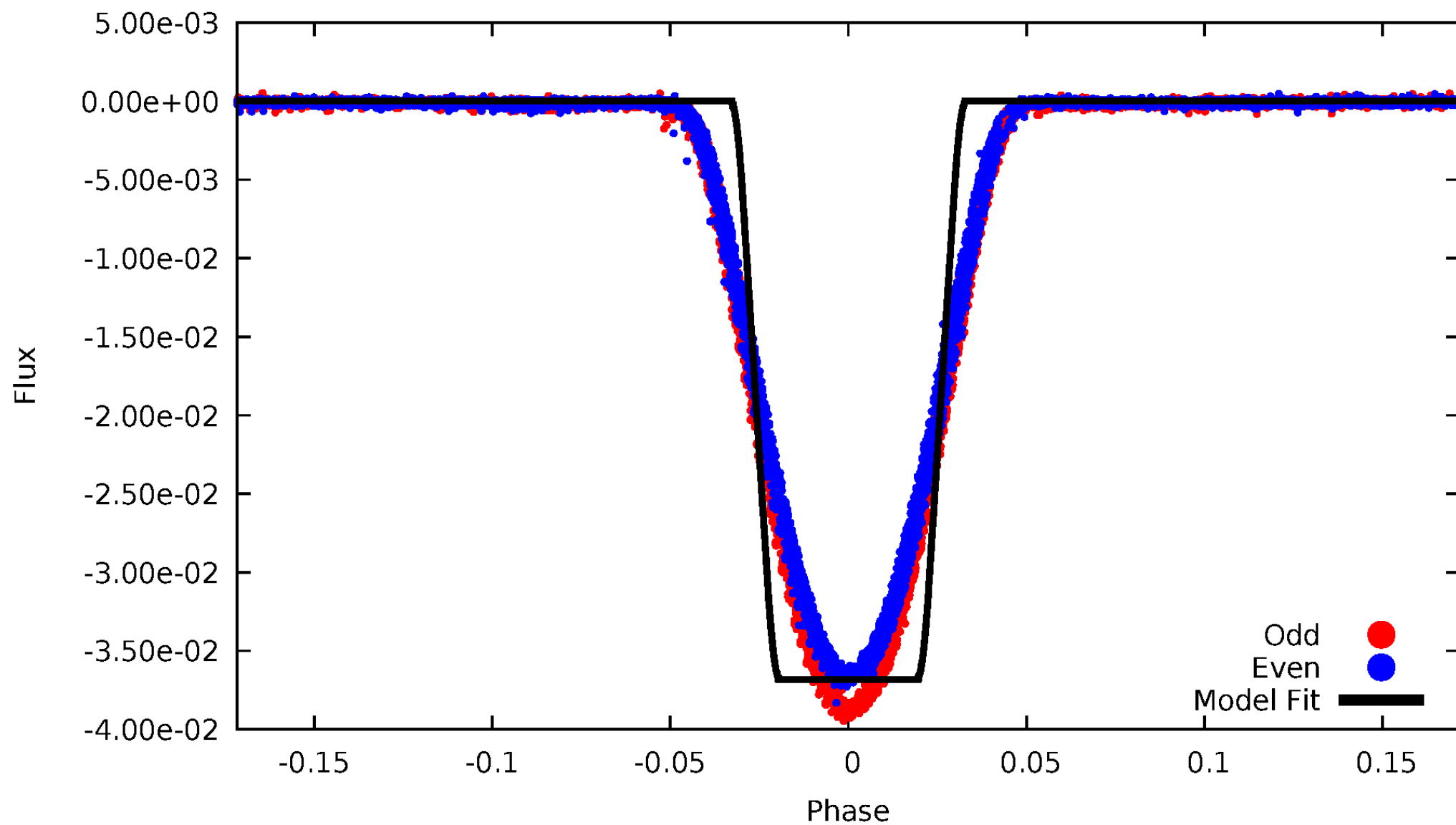
DV Odd/Even

TCE 005285607-01



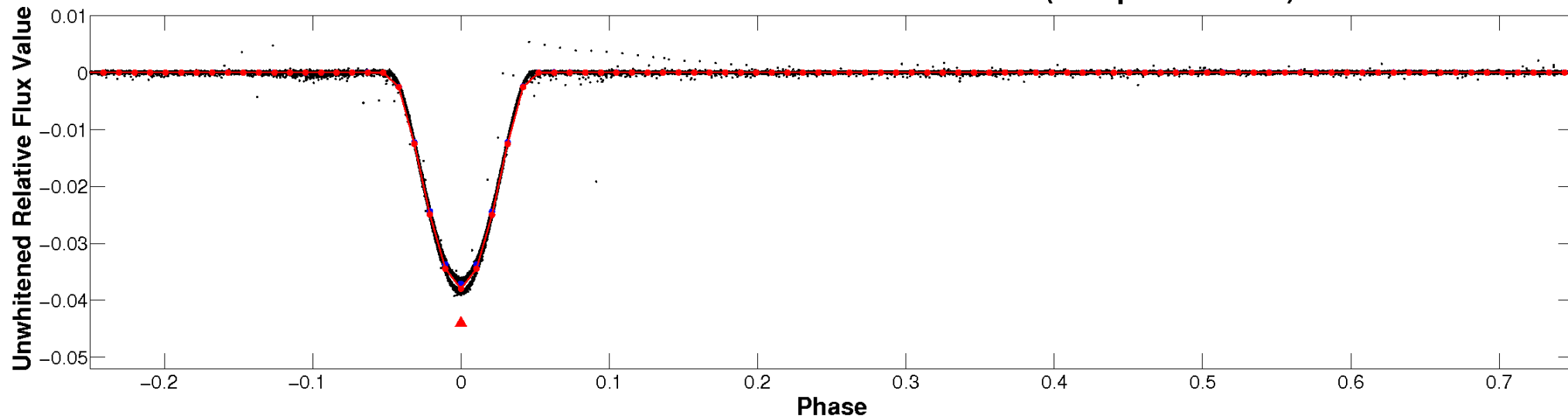
ALT Odd/Even

TCE 005285607-01

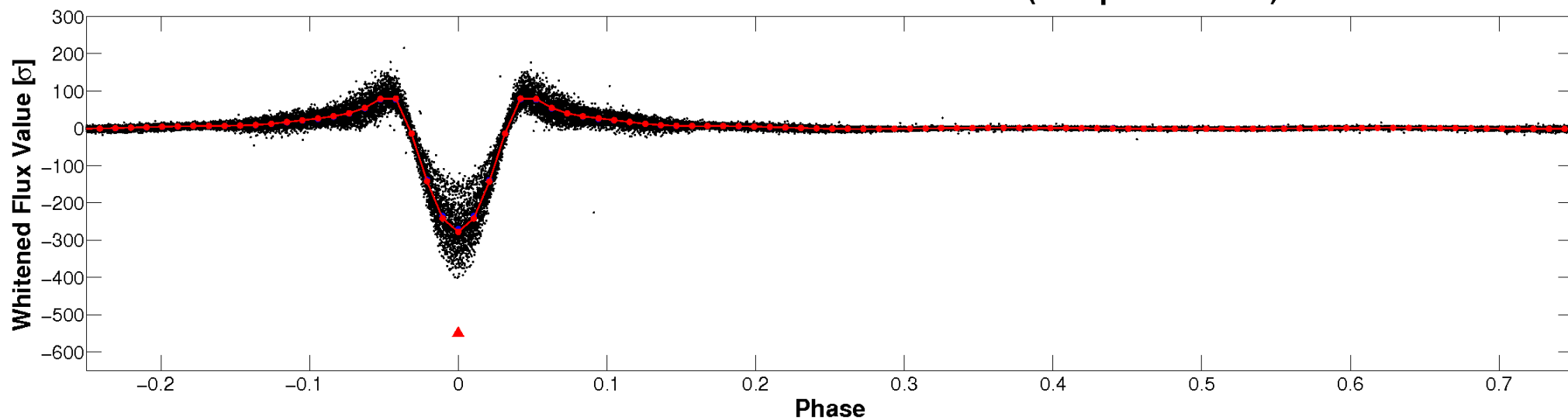


Non-Whitened Vs. Whitened Light Curve

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

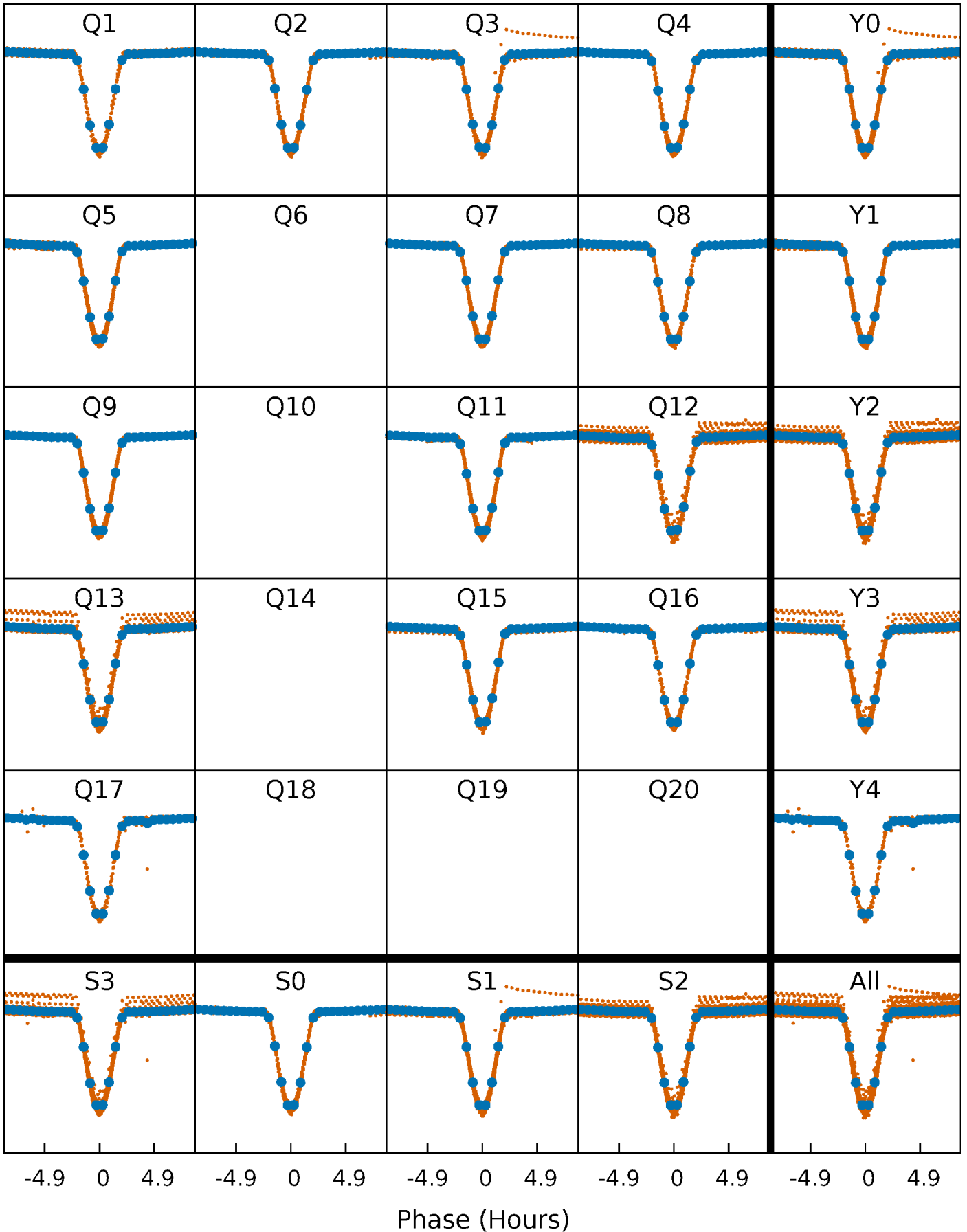


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



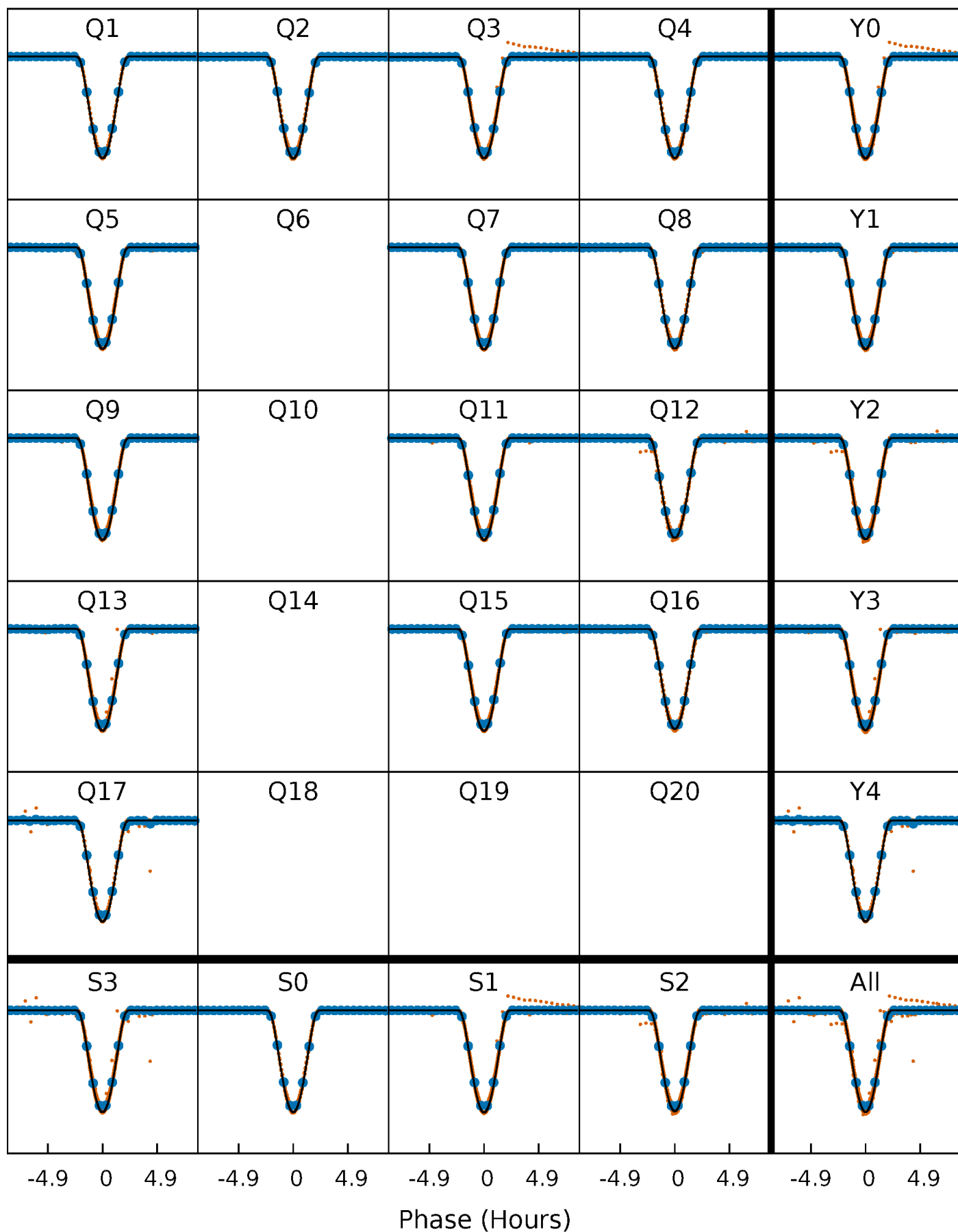
PDC Quarter-Phased Transit Curves

TCE 005285607-01 P= 1.949701 Days $T_0=132.426768$ (BKJD)



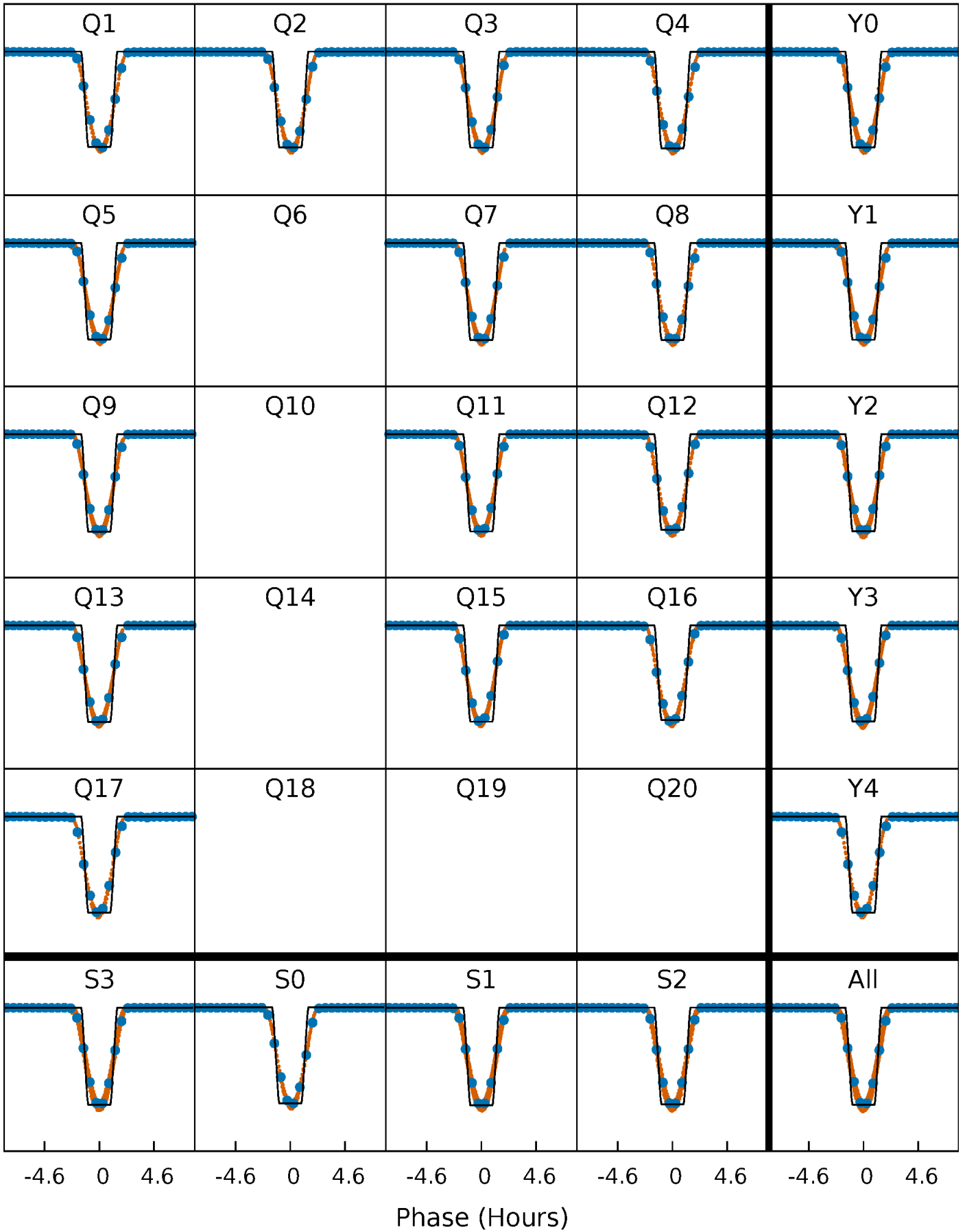
DV Quarter-Phased Transit Curves

TCE 005285607-01 P= 1.949701 Days $T_0=132.426768$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

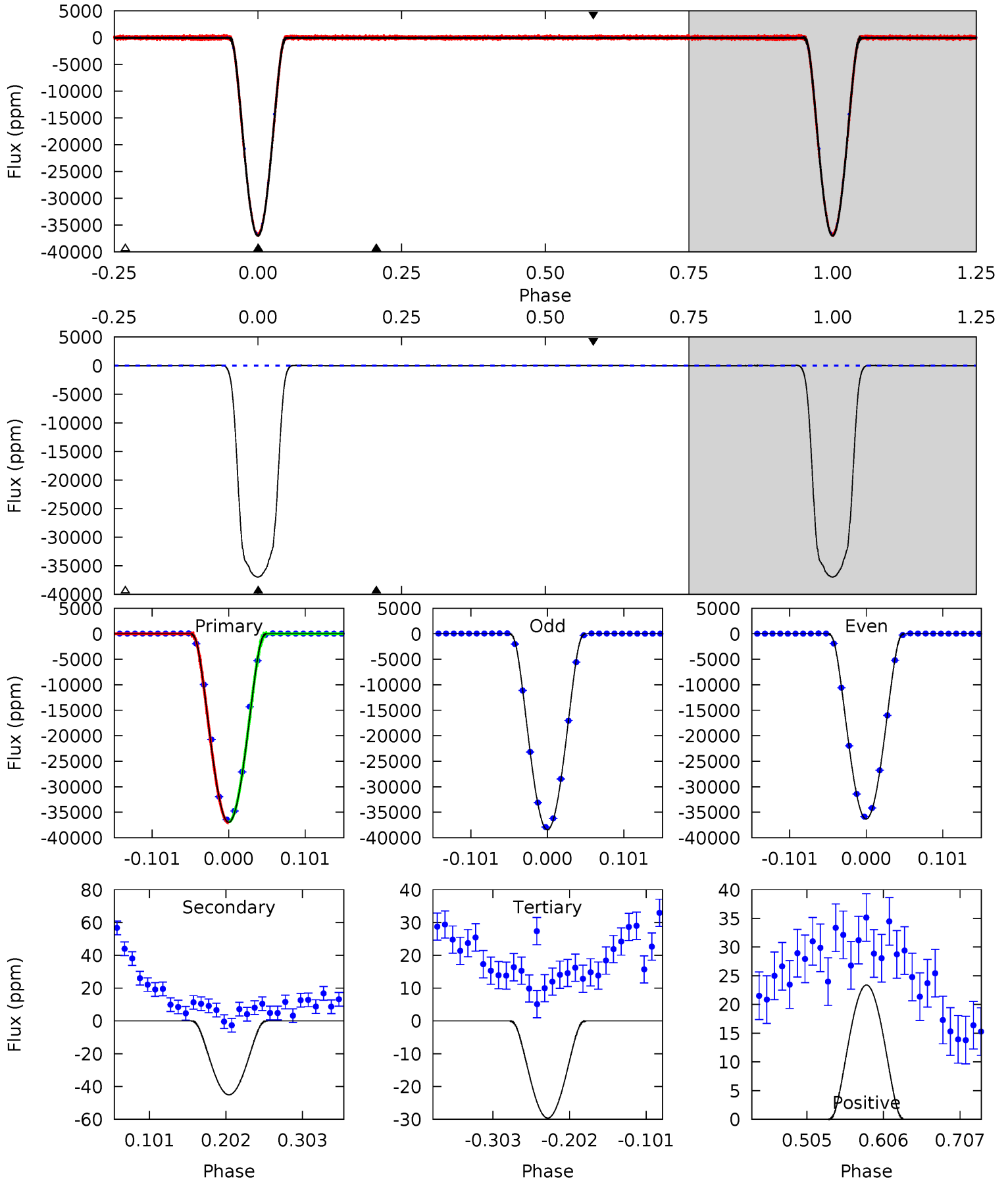
TCE 005285607-01 P= 1.949710 Days $T_0=132.422632$ (BKJD)



DV Model-Shift Uniqueness Test

005285607-01, P = 1.949701 Days, E = 130.477067 Days

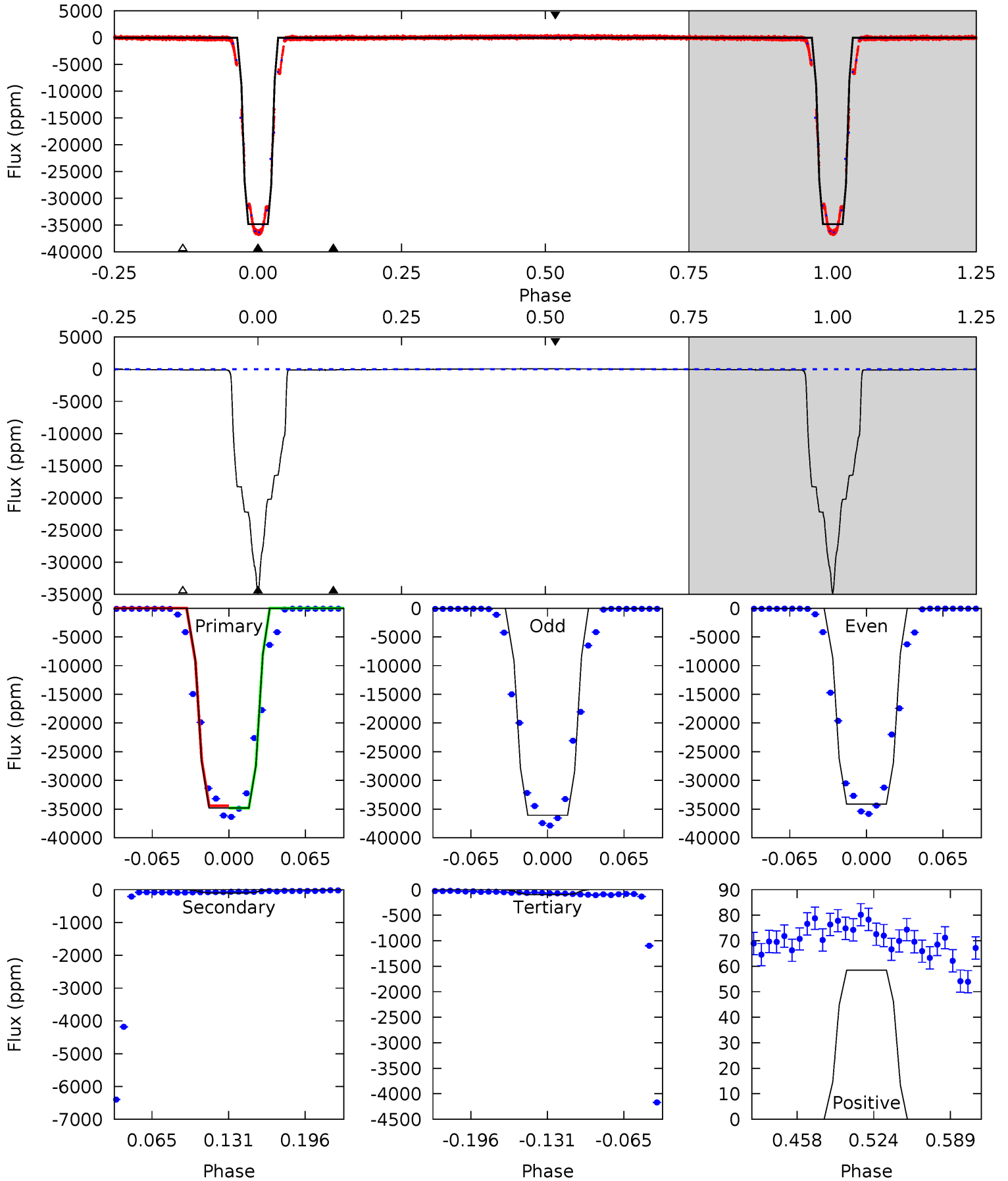
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17784	21.7	14.3	11.3	4.56	1.64	6.84	17770	17773	7.43	10.4	751.8	1.01	0.00	0



Alt Model-Shift Uniqueness Test

005285607-01, P = 1.949710 Days, E = 130.472922 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7962	22.8	22.2	13.4	4.65	1.84	12.2	7940	7949	0.66	9.47	244.2	1.00	0.00	45.2



Stellar Parameters For KIC 005285607

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6469^{+145}_{-193}	$4.385^{+0.056}_{-0.238}$	$0.070^{+0.250}_{-0.300}$	$1.193^{+0.431}_{-0.144}$	$1.260^{+0.184}_{-0.184}$	$1.047^{+0.251}_{-0.607}$
	+2%/-3%	+1%/-5%	+357%/-429%	+36%/-12%	+15%/-15%	+24%/-58%
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 005285607-01 / KOI 6553.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-45 ± 2	$41.31^{+8.39}_{-3.43}$	2453^{+219}_{-115}	-2747^{+70}_{-136}	$0.016^{+0.003}_{-0.005}$
Alt.	-100 ± 4	$26.11^{+4.83}_{-2.55}$	2460^{+221}_{-127}	-2647^{+89}_{-162}	$0.086^{+0.017}_{-0.023}$

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

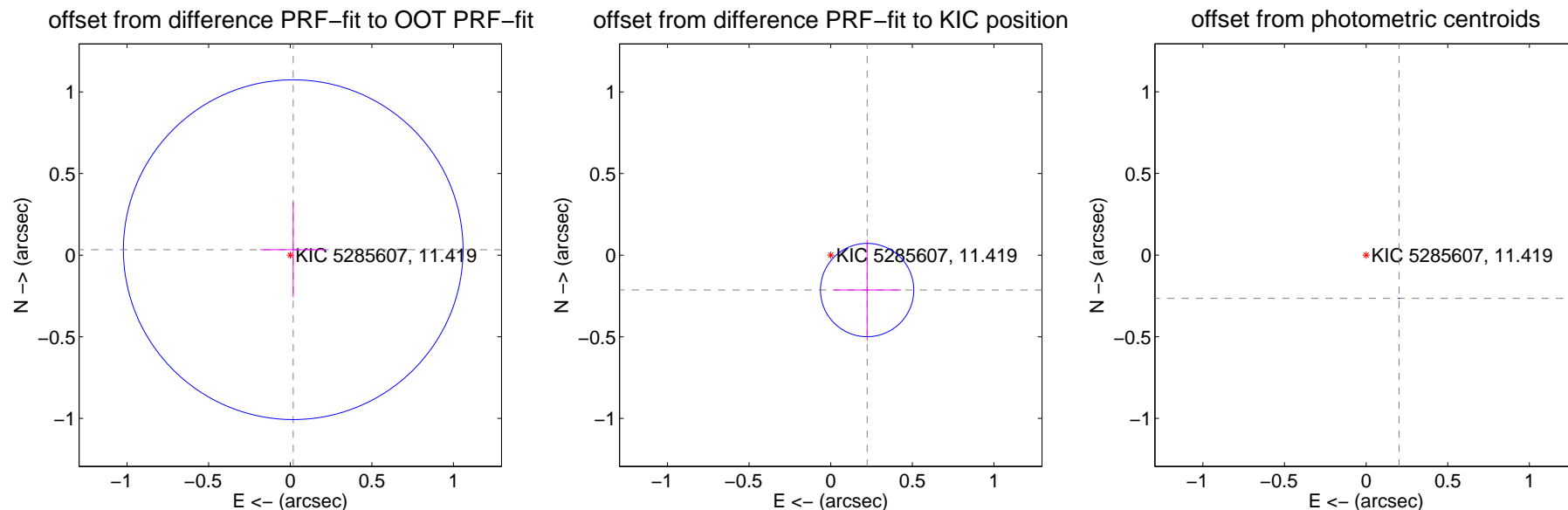
DV Centroid Data

Supplemental centroid analysis for 005285607-01. **Kepler magnitude: 11.42.** Transit SNR 8620.52

There are 11 quarters with good PRF difference image offsets

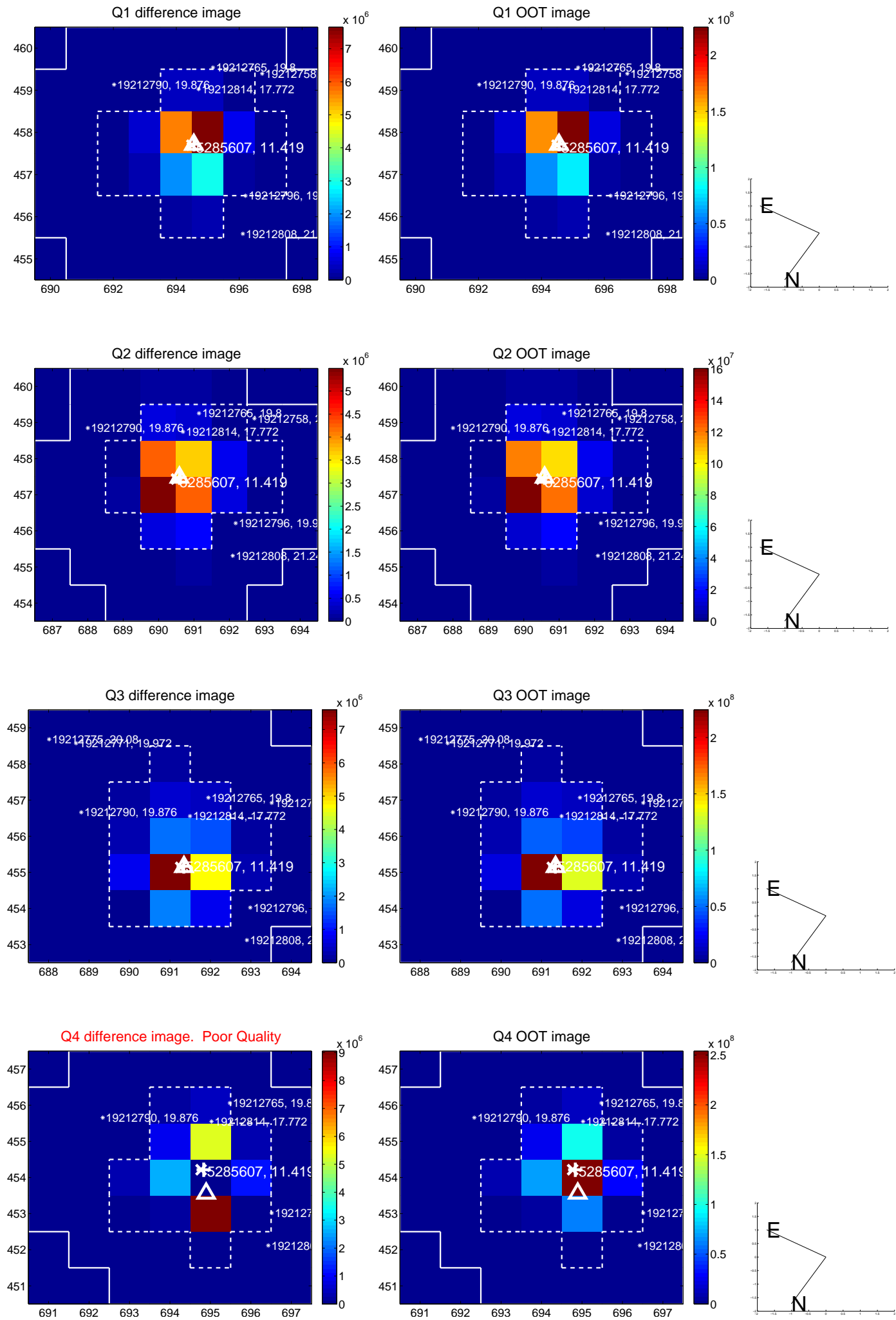
The direct PRF centroid is offset from the target star catalog position by about 0.32 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.038 ± 0.347	0.11	-0.018 ± 0.202	0.033 ± 0.291
PRF-fit source offset from KIC position	0.309 ± 0.095	3.24	-0.223 ± 0.206	-0.214 ± 0.308
photometric centroid source offset	0.33 ± 0.00	629.44	-0.20 ± 0.00	-0.26 ± 0.00

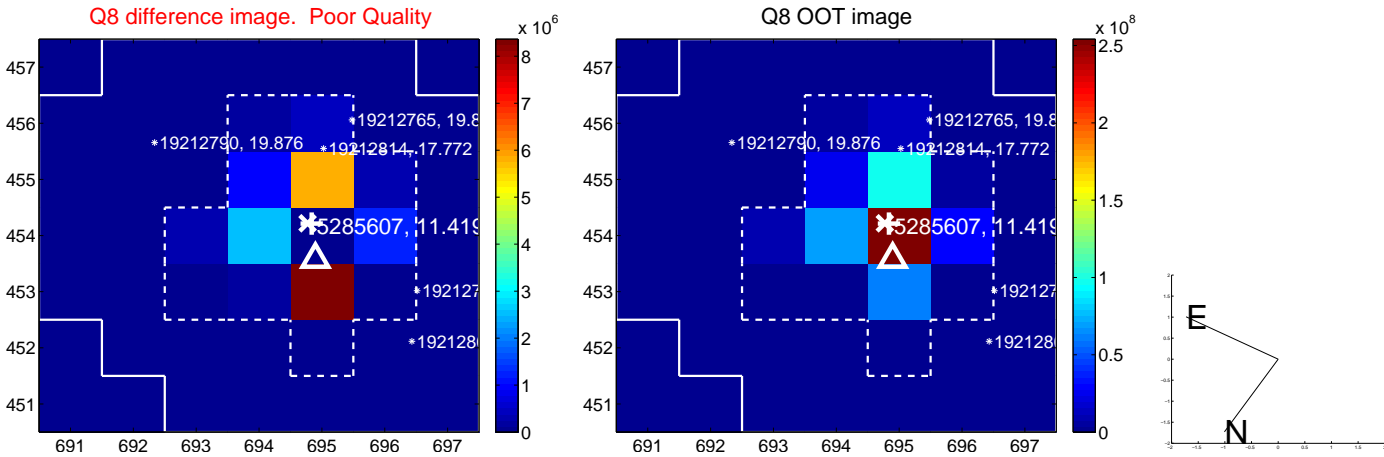
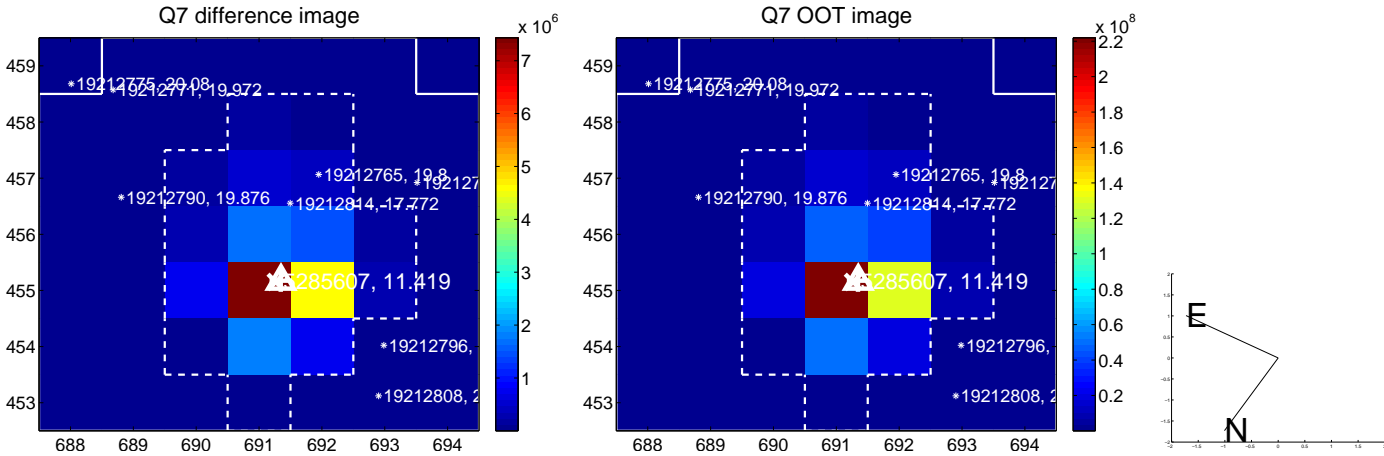
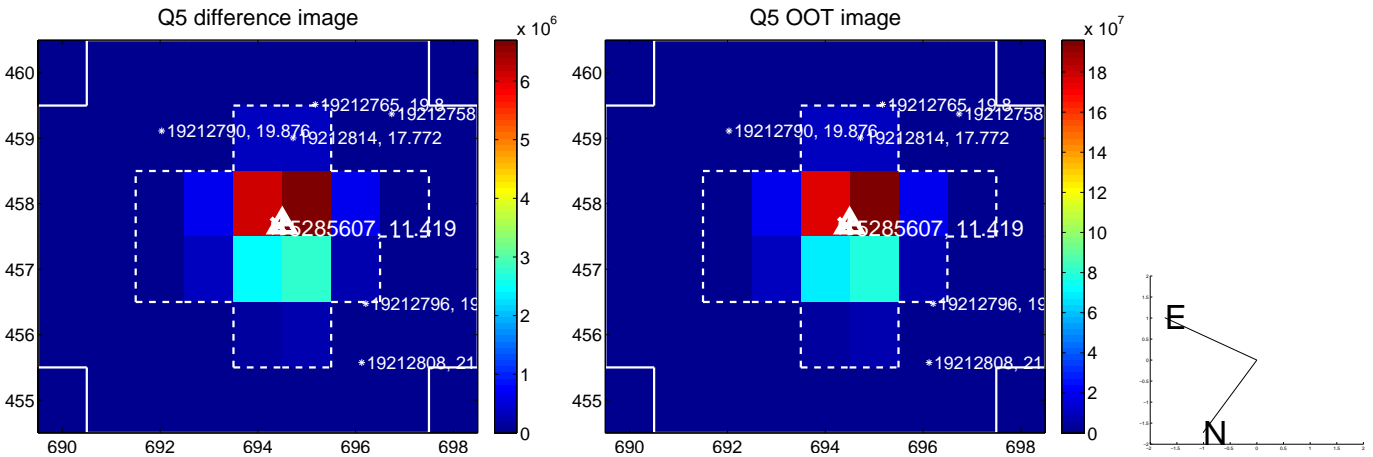


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

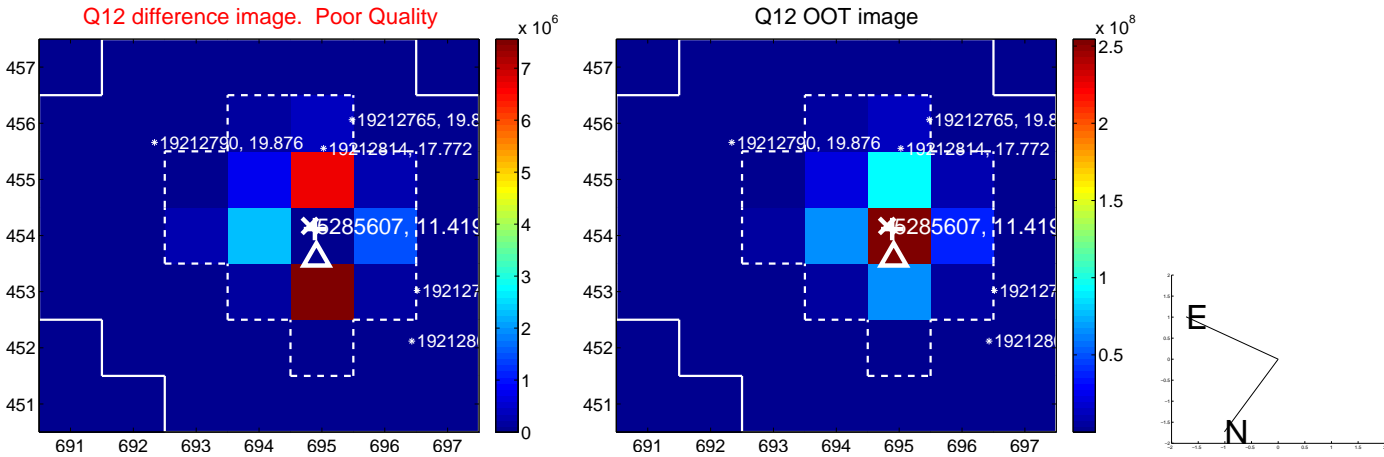
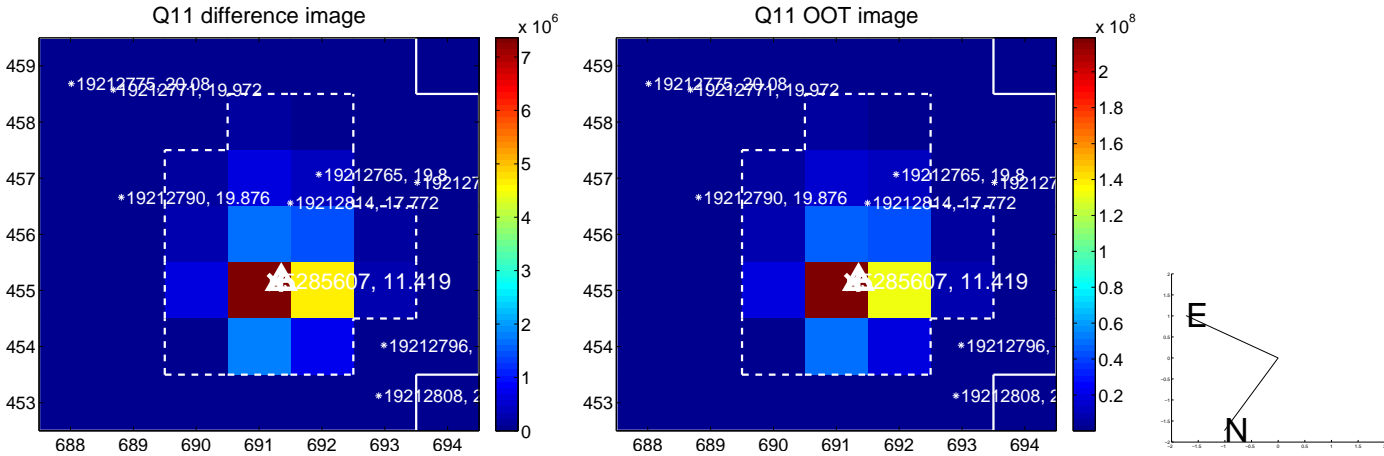
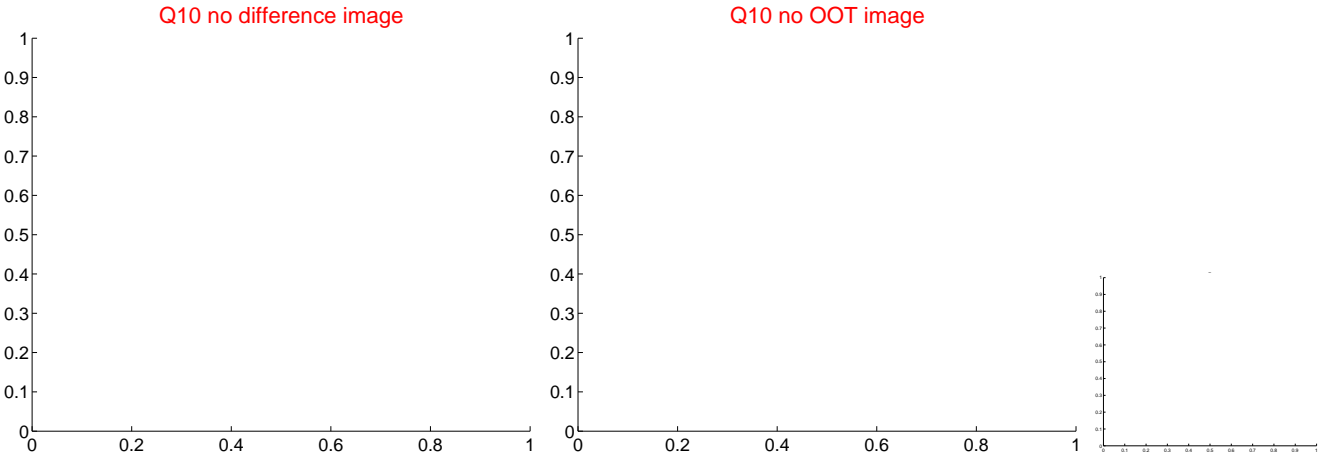
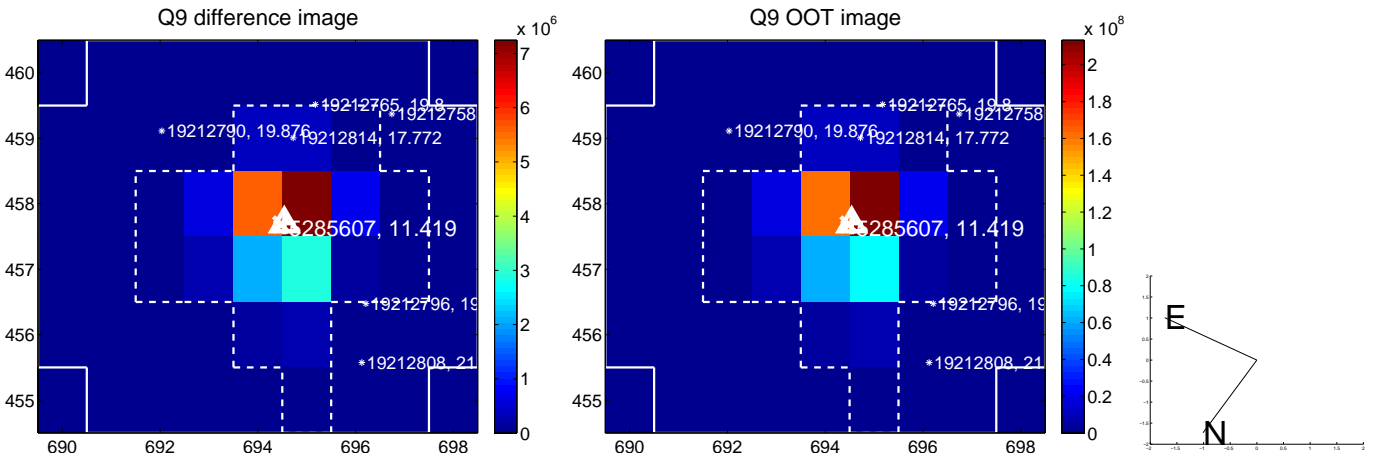
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



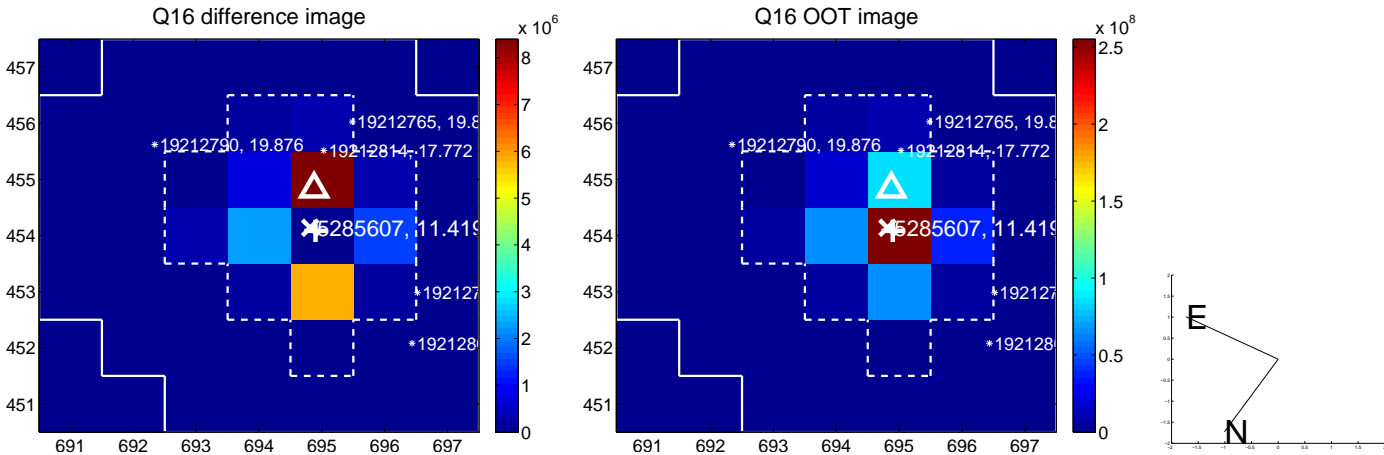
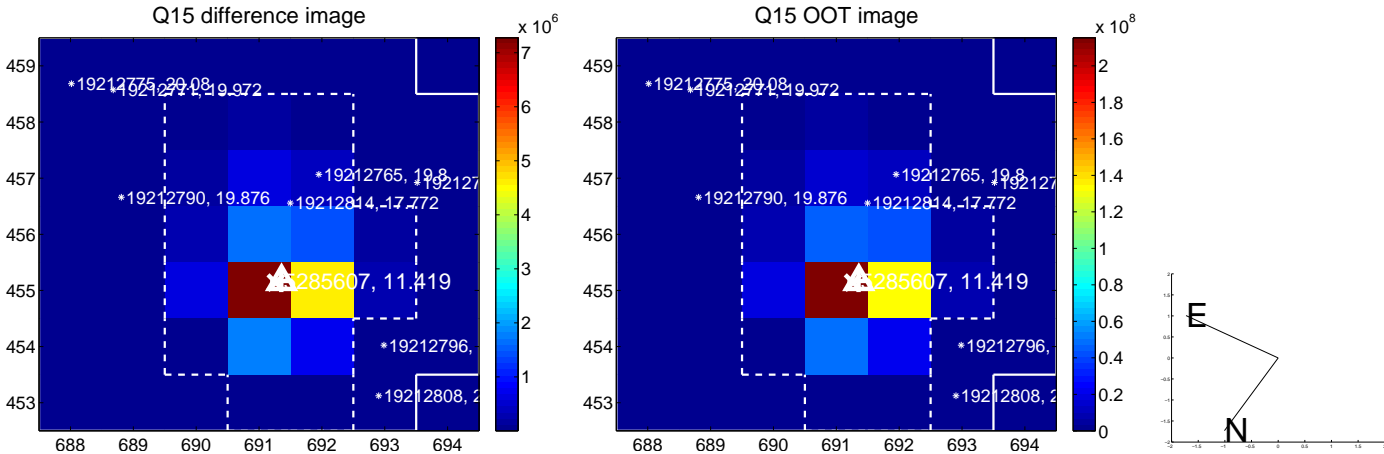
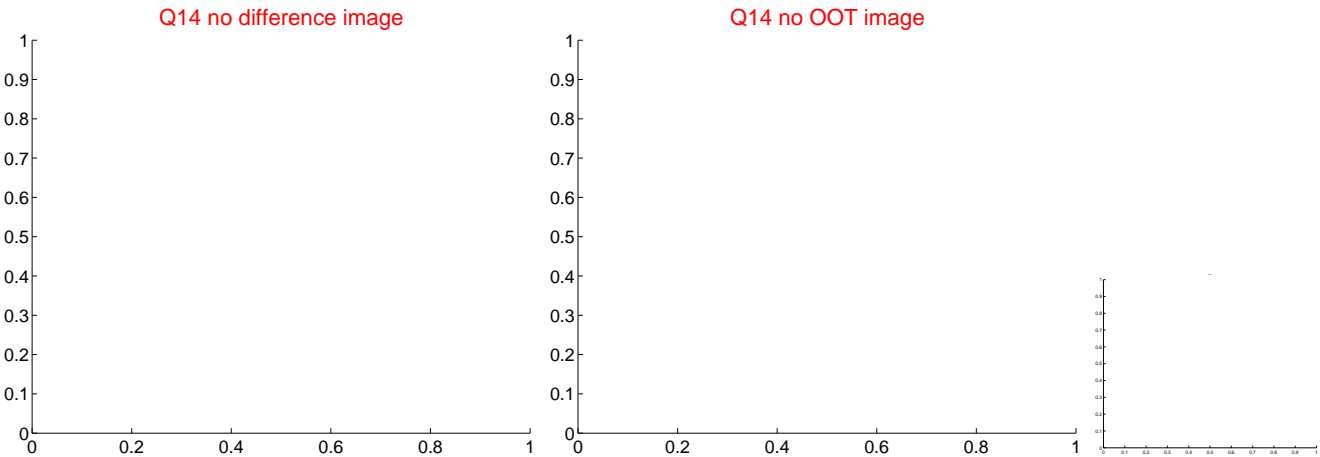
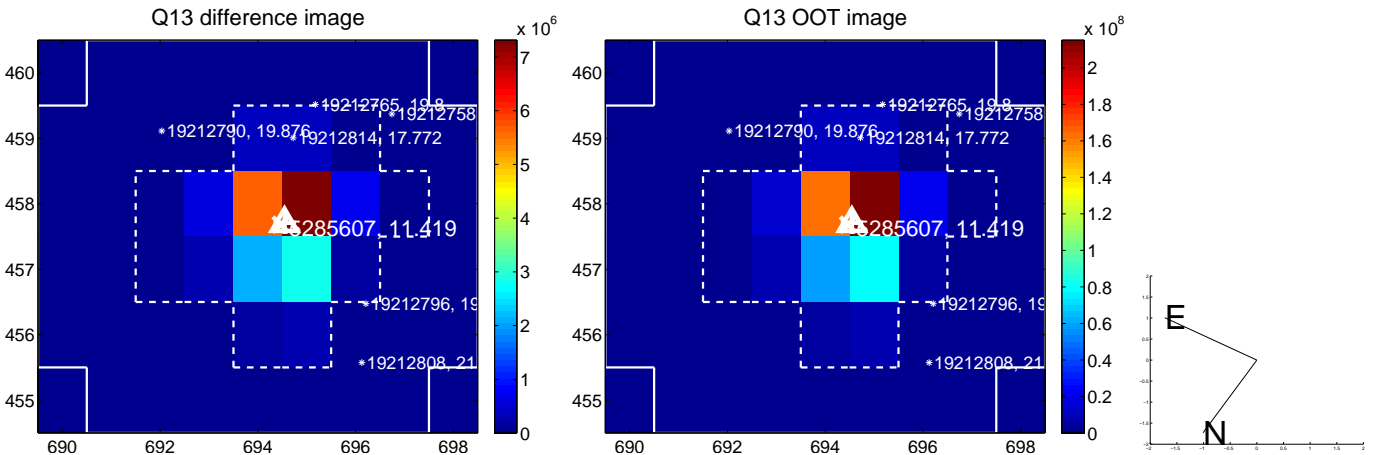
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



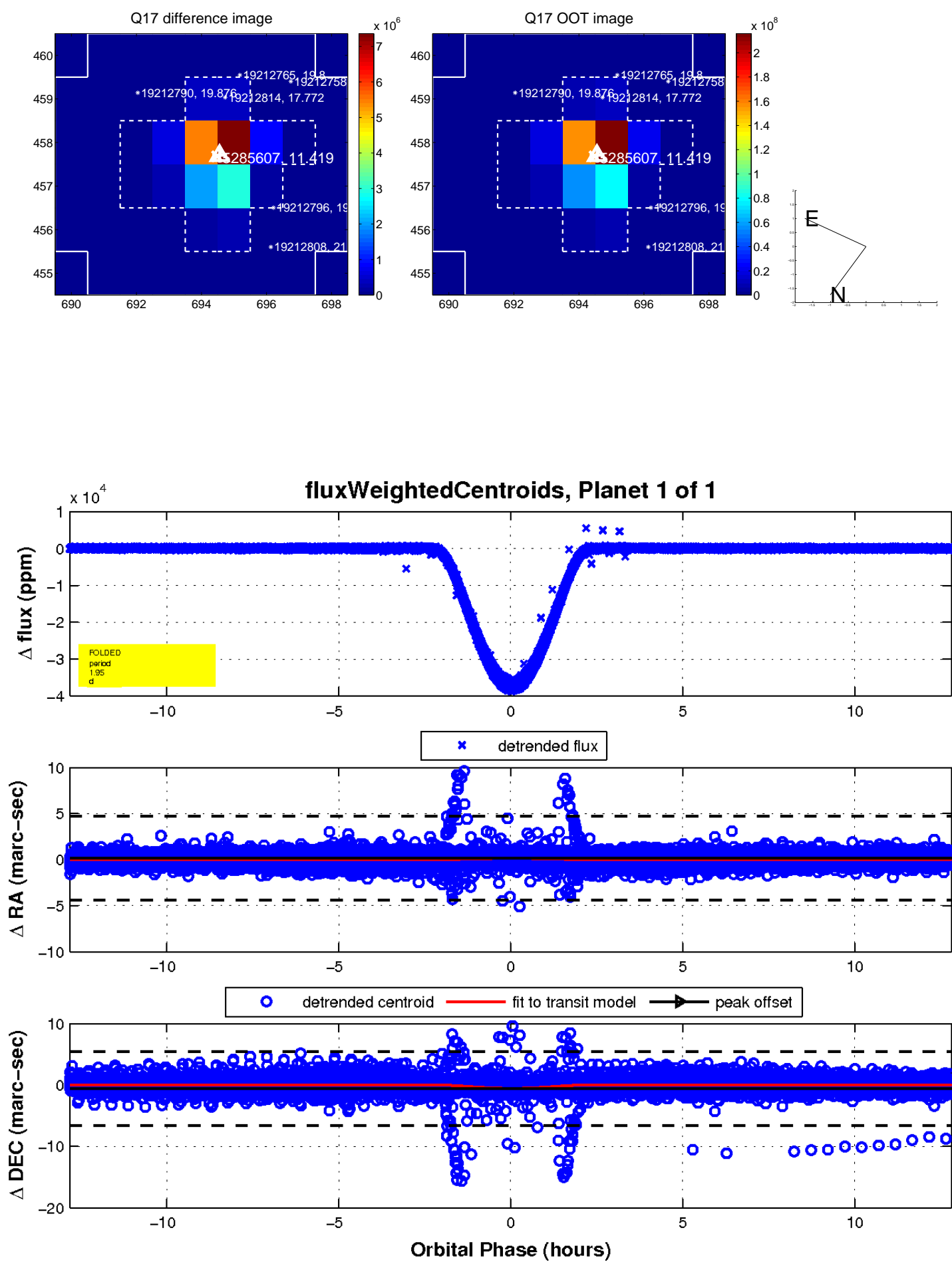
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

