

KIC 006627507

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})
006627507-01	OBS	2697.01	7.374481	131.566757	282.9	3.682	25.2	23.8	4.99	5028	15.77	1774.02

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006627507-01	OBS	FP	0.00	0	0	1	0	CENT_RESOLVED_OFFSET—HALO_GHOST

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

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

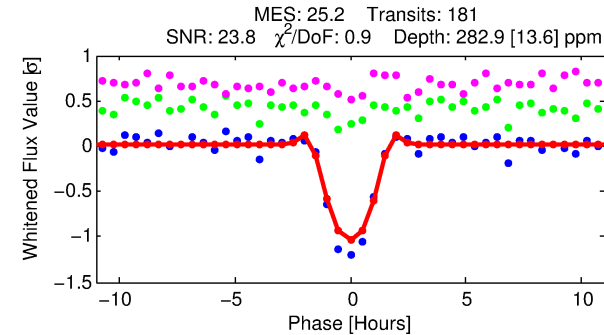
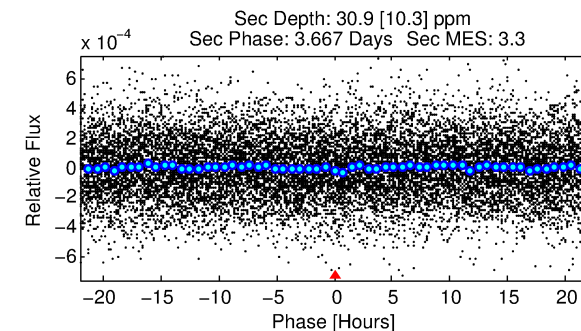
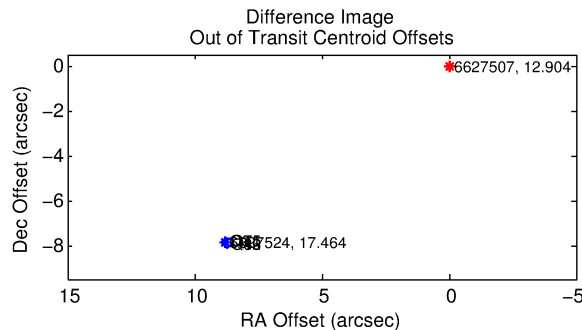
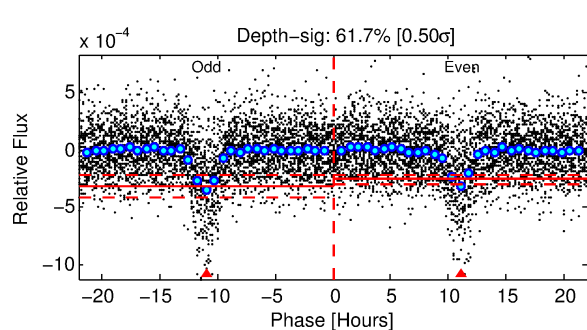
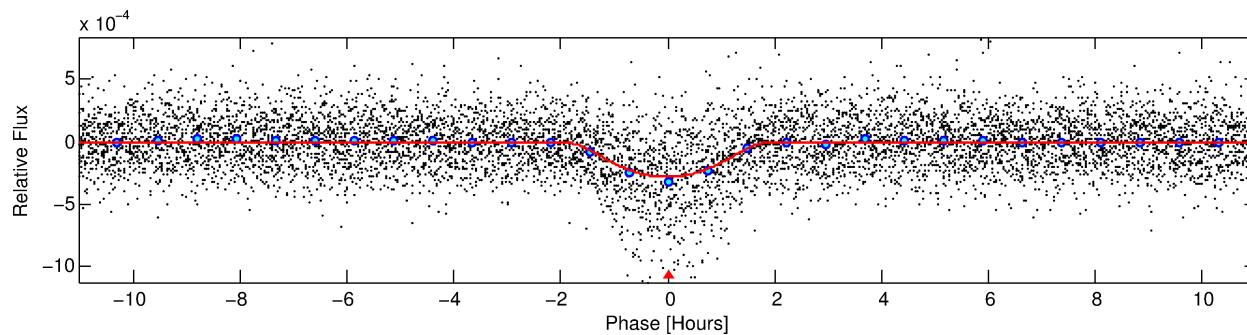
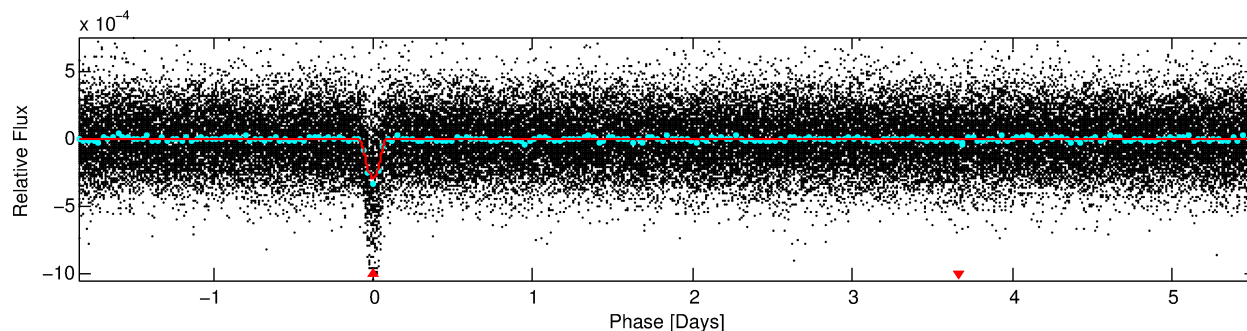
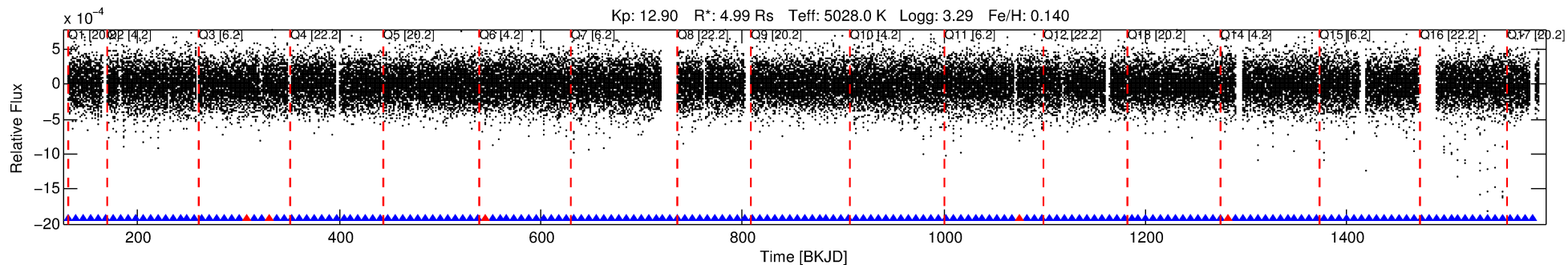
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006627507-01

No Significant Match Found

DV One-Page Summary

KIC: 6627507 Candidate: 1 of 1 Period: 7.374 d
KOI: K02697.01 Corr: 0.977



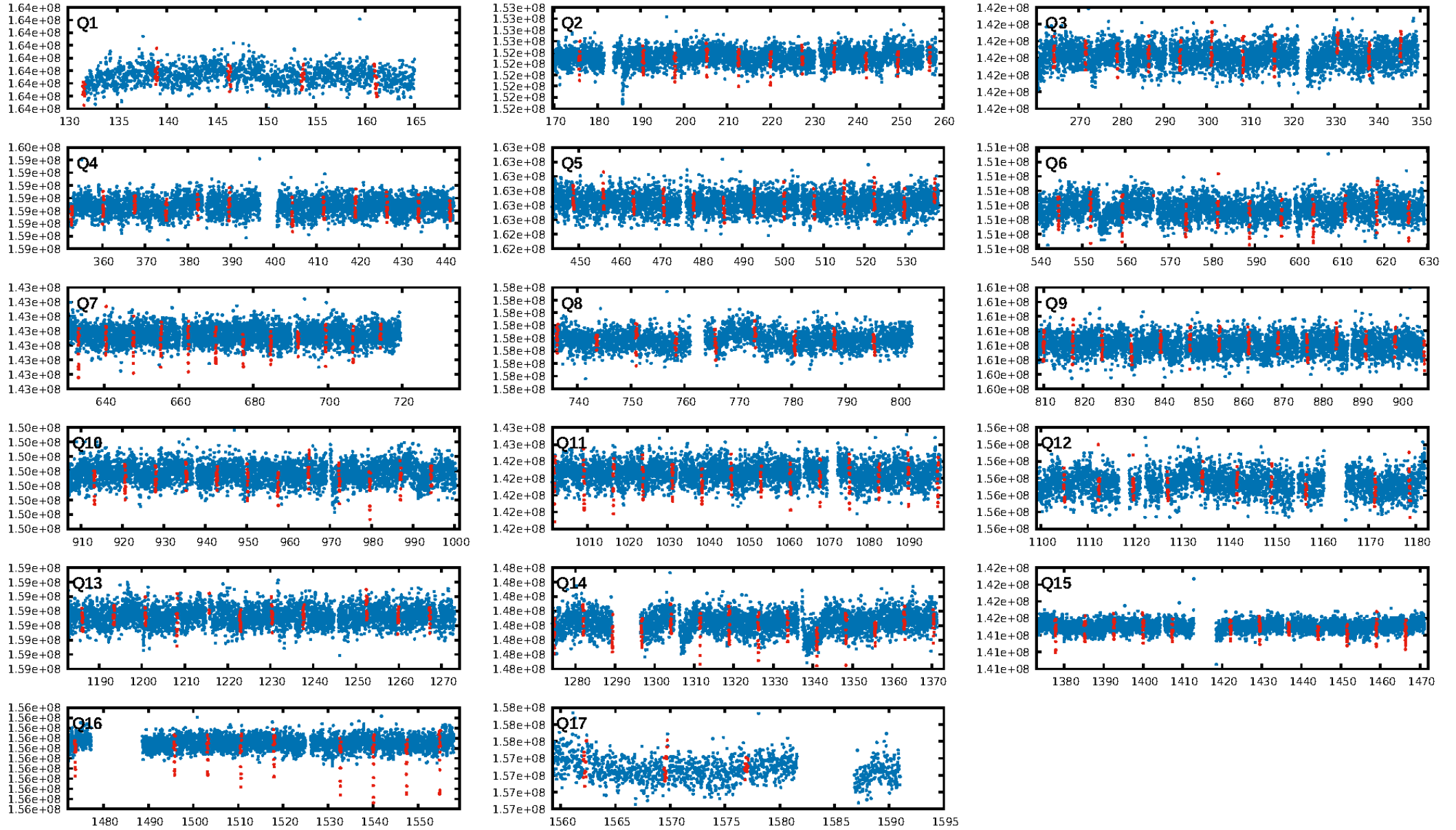
DV Fit Results:

Period = 7.37448 [0.00003] d
Epoch = 131.5668 [0.0032] BKJD
Rp/R* = 0.0289 [0.0197]
a/R* = 4.21 [0.84]
b = 0.99 [0.03]
Seff = 1774.02 [776.53]
Teff = 1655 [181] K
Rp = 15.77 [12.04] Re
a = 0.0897 [0.0259] AU
Ag = 0.55 [0.81] [-0.56 σ]
Teffp = 2204 [776] K [0.69 σ]

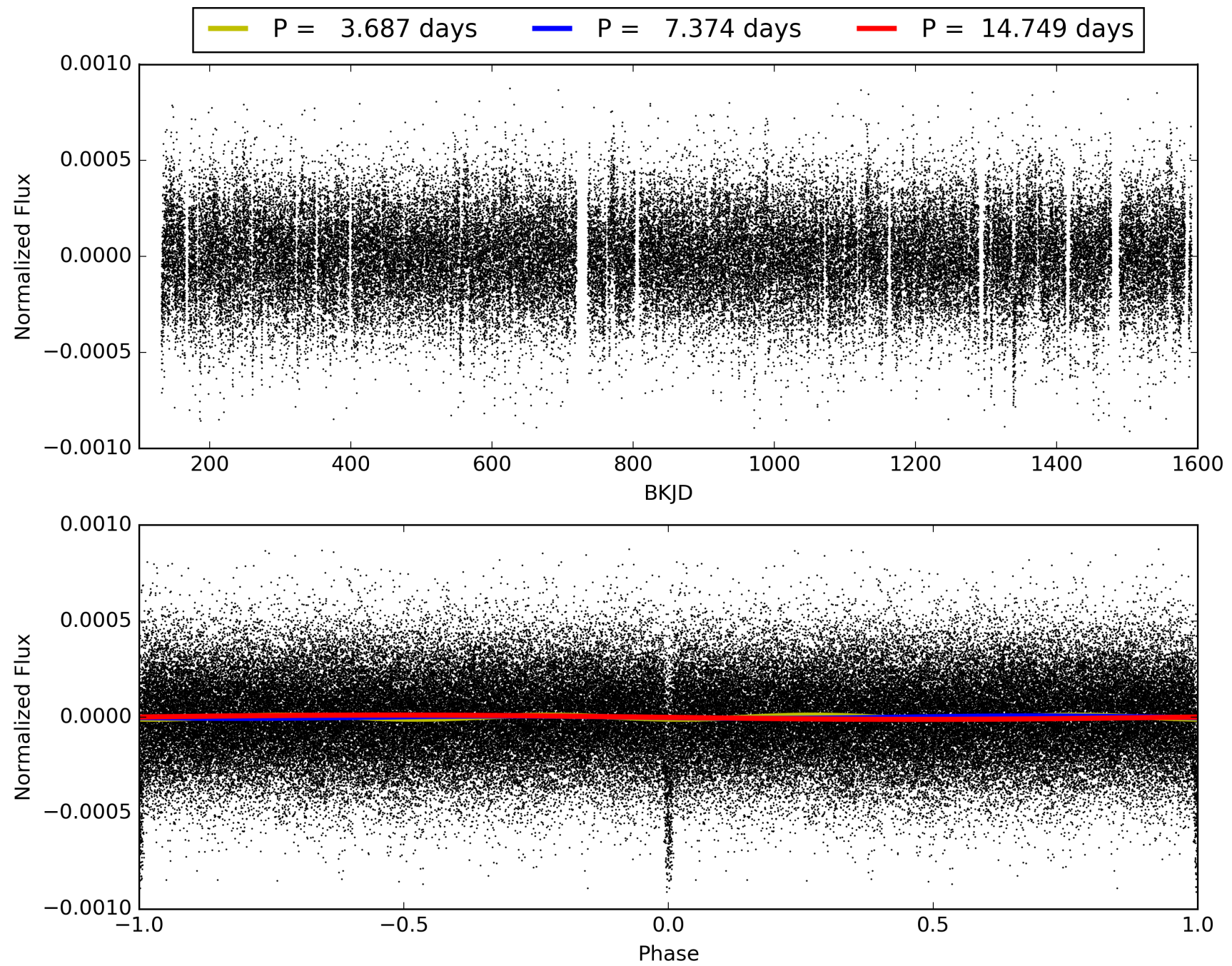
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.62e-121
RollingBand-fgt: 0.97 [168/173]
GhostDiagnostic-chr: -0.09526
Centroid-sig: 0.0%
Centroid-so: 29.124 arcsec [115.05 σ]
OotOffset-rm: 11.755 arcsec [170.15 σ]
KicOffset-rm: 11.874 arcsec [156.19 σ]
OotOffset-st: 0/4/4/0 [8]
KicOffset-st: 0/4/4/0 [8]
DiffImageQuality-fgm: 1.00 [8/8]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 006627507-01, PDC Light Curves

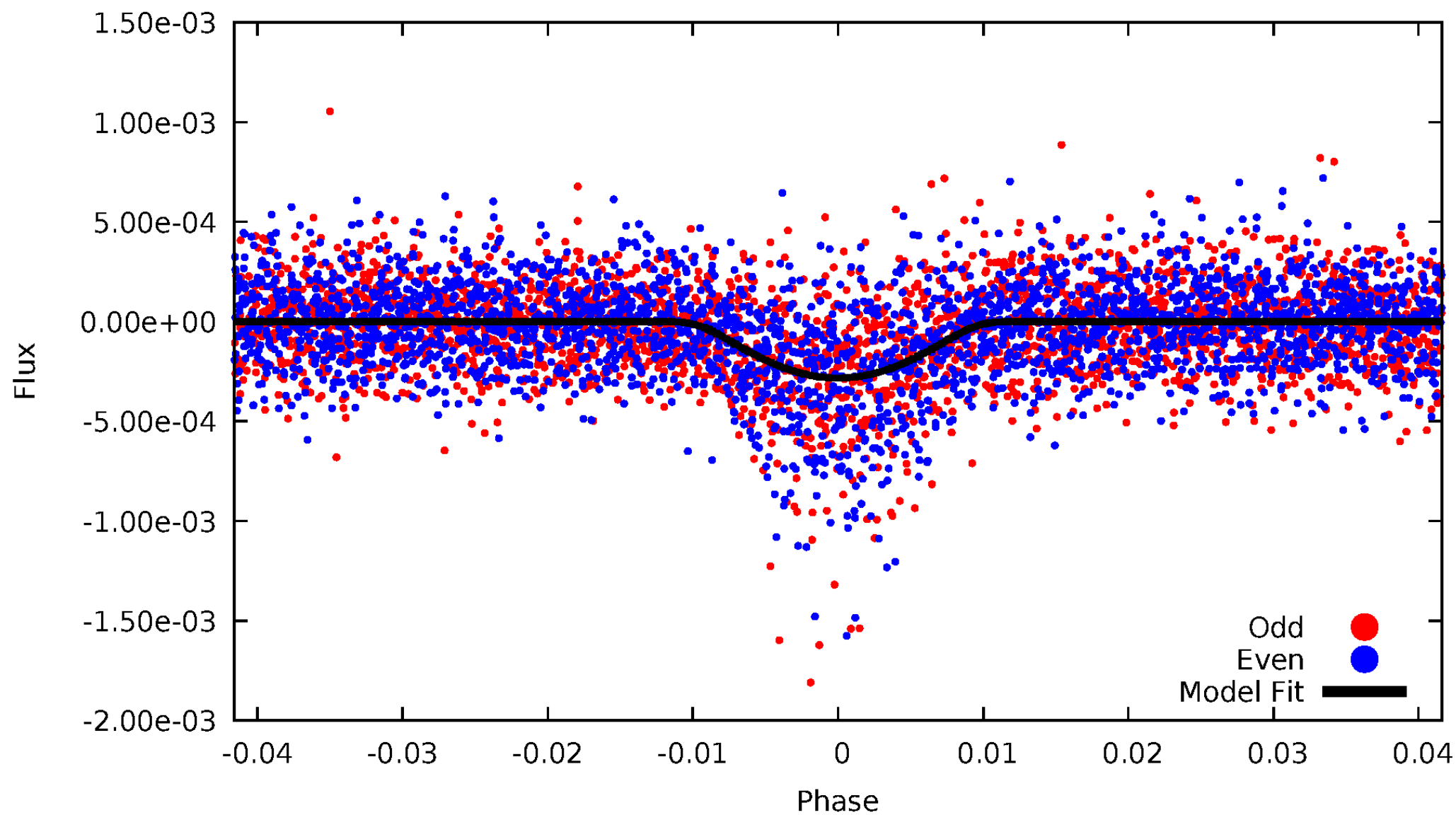


TCE 006627507-01



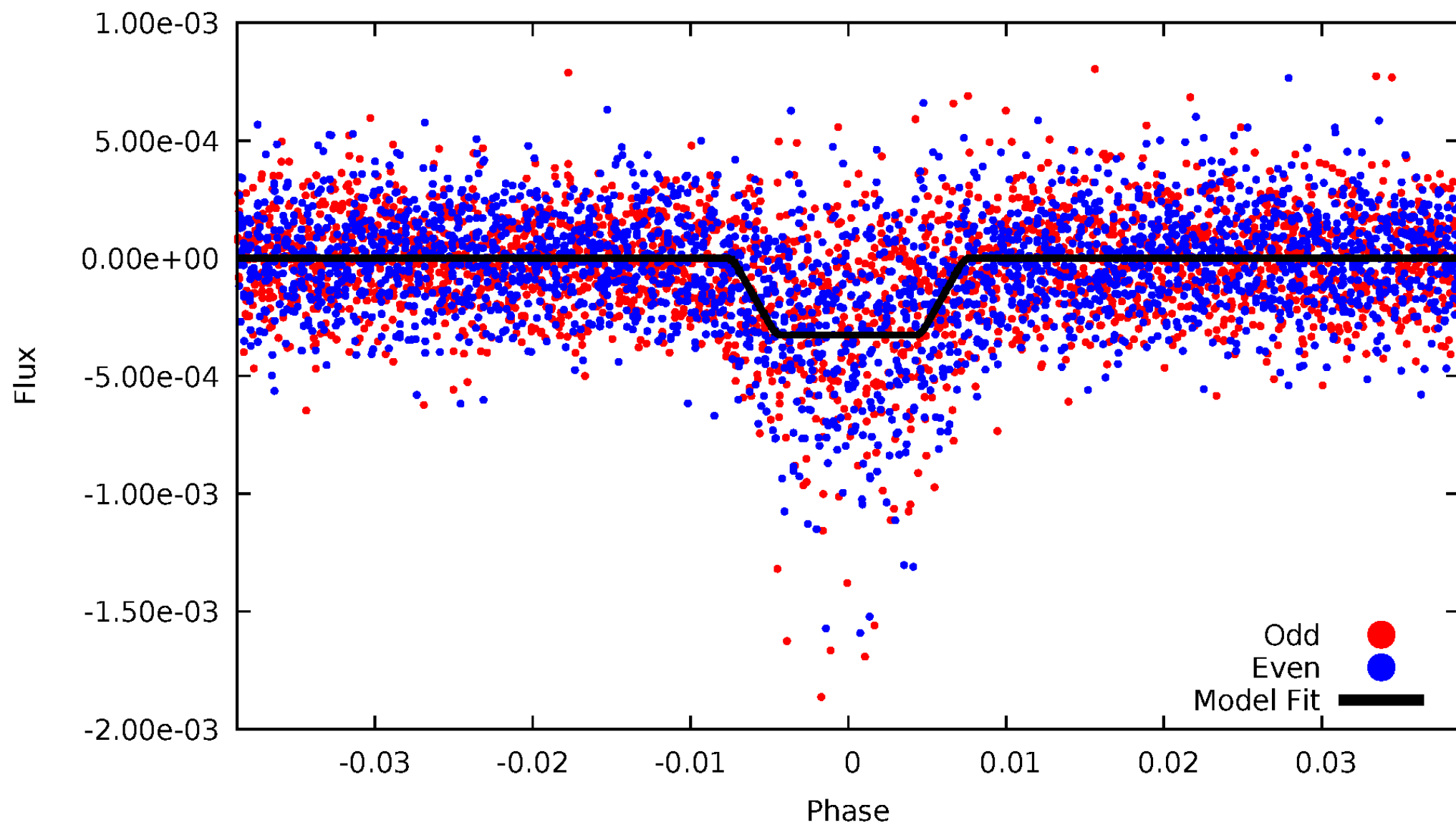
DV Odd/Even

TCE 006627507-01



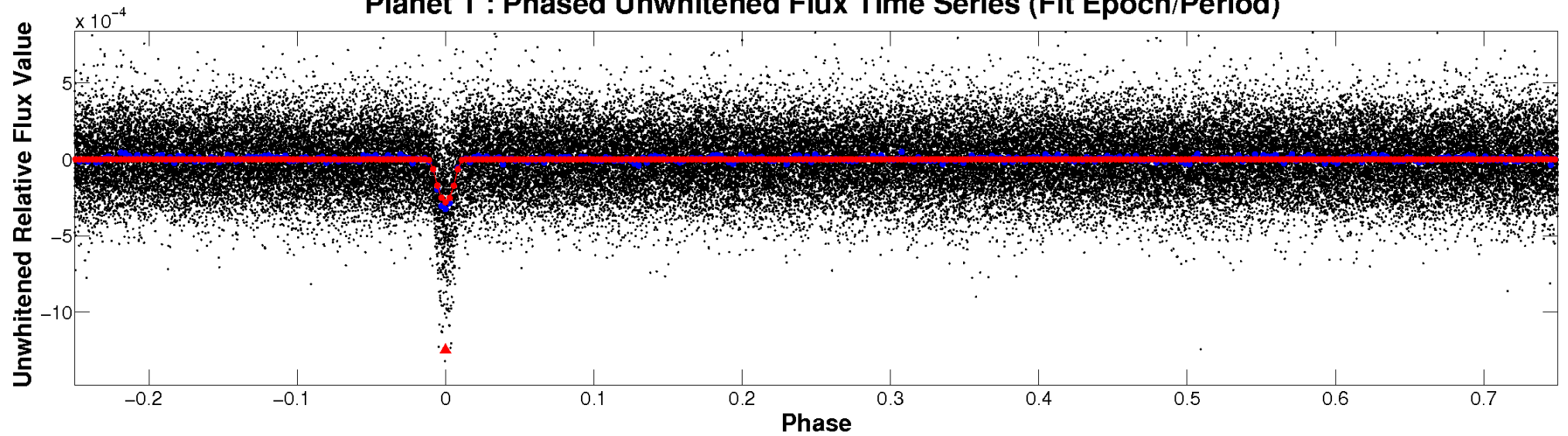
ALT Odd/Even

TCE 006627507-01

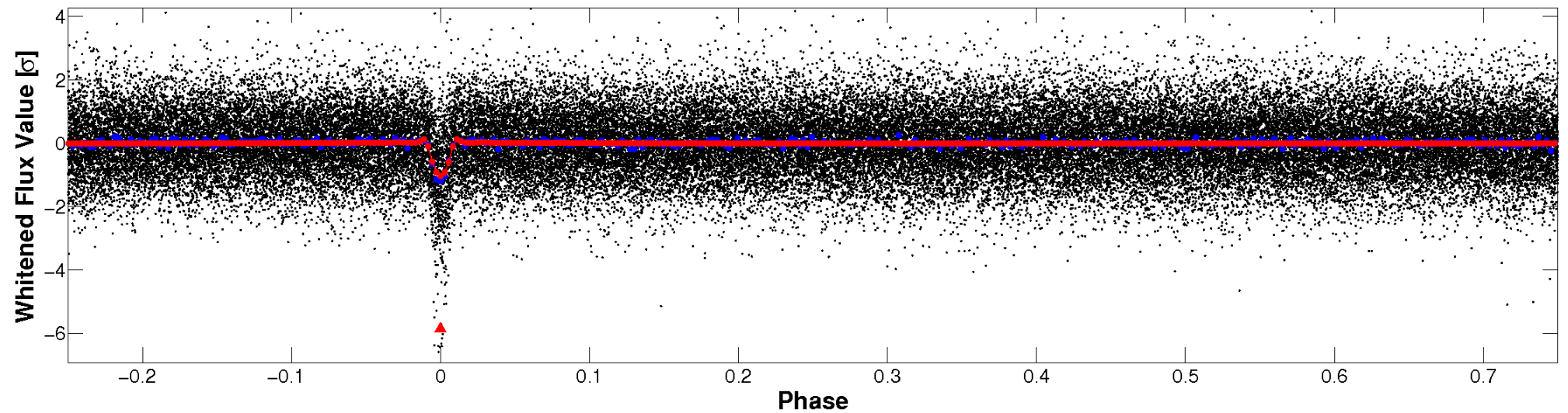


Non-Whitened Vs. Whitened Light Curve

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

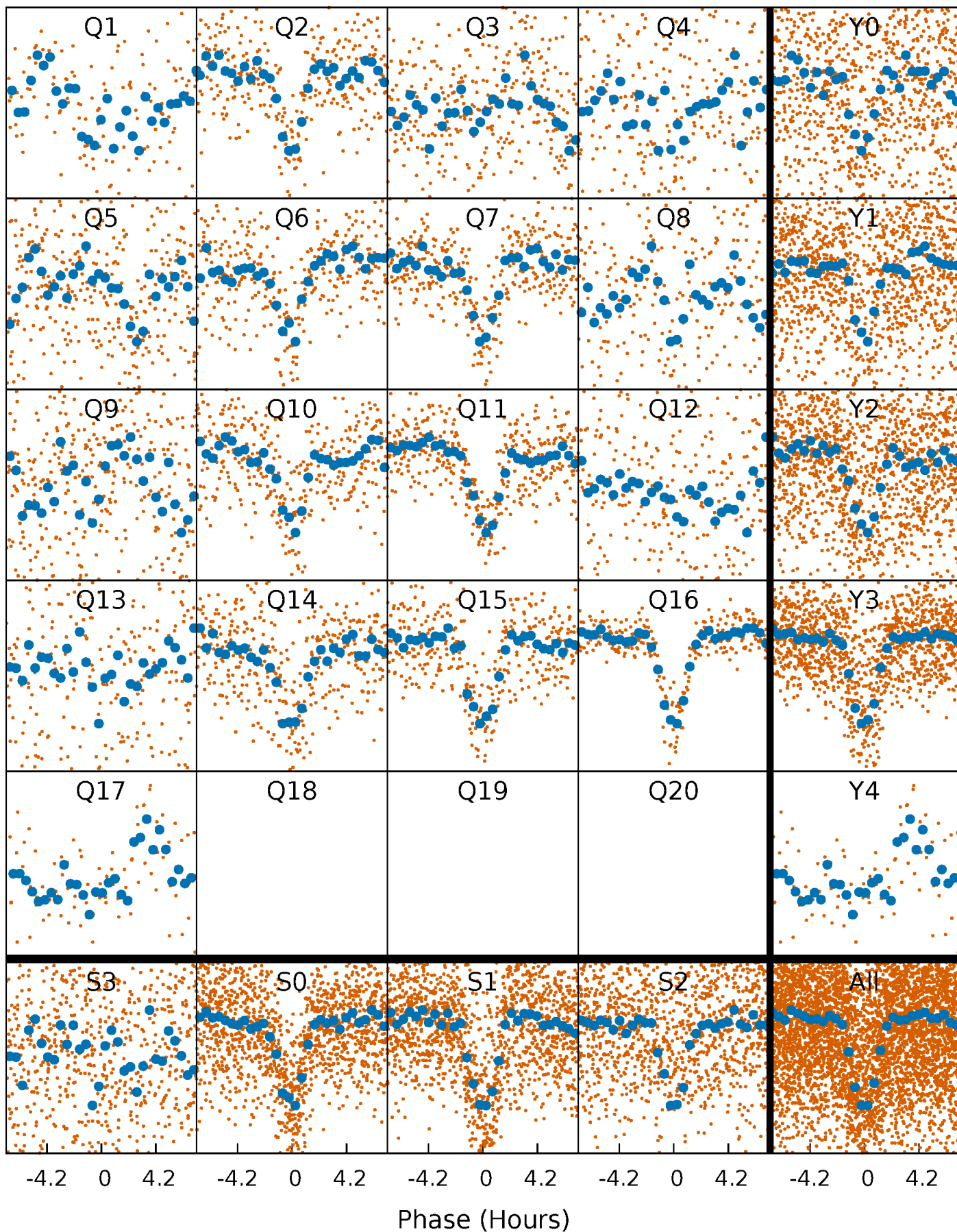


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



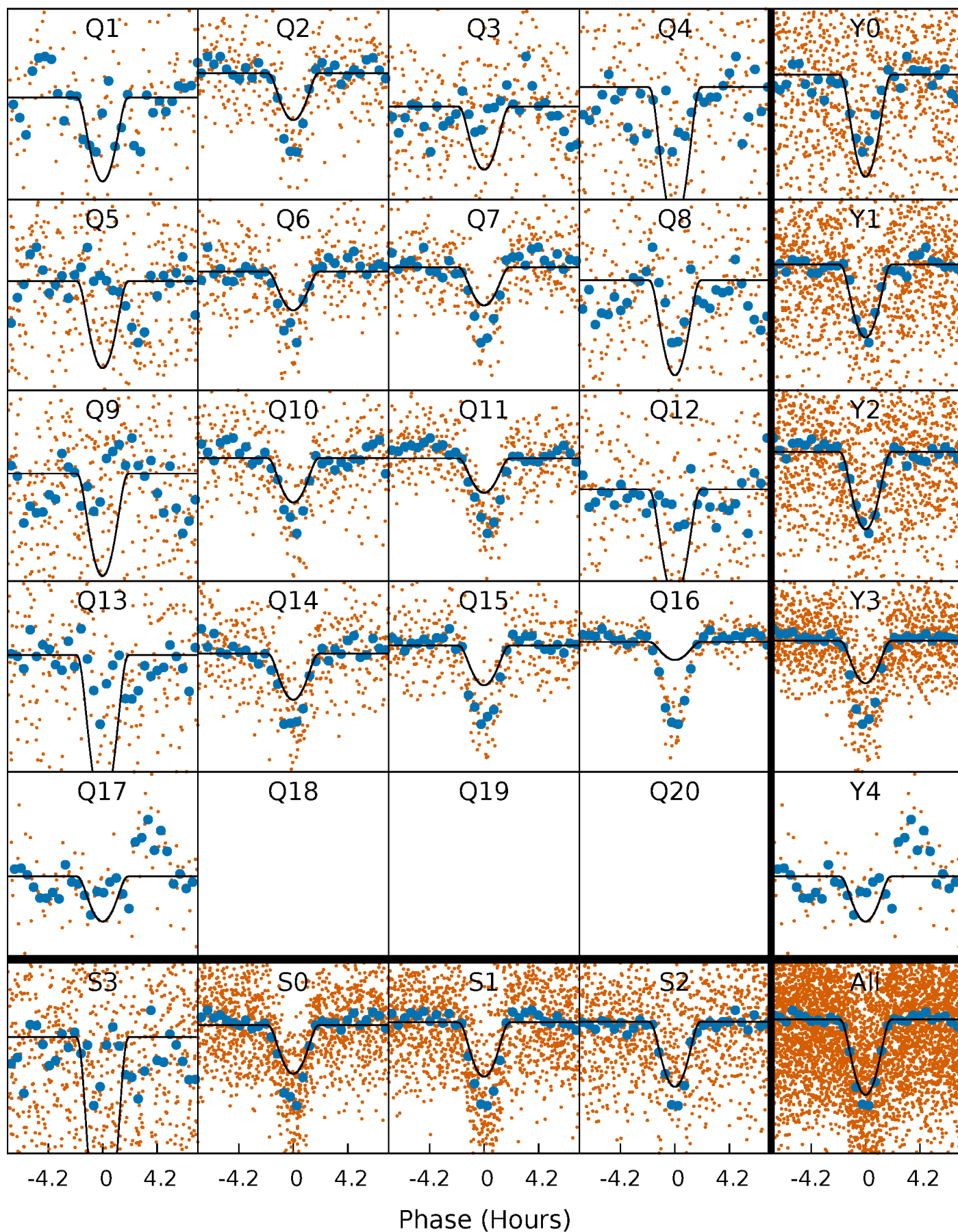
PDC Quarter-Phased Transit Curves

TCE 006627507-01 P= 7.374481 Days $T_0=131.566757$ (BKJD)



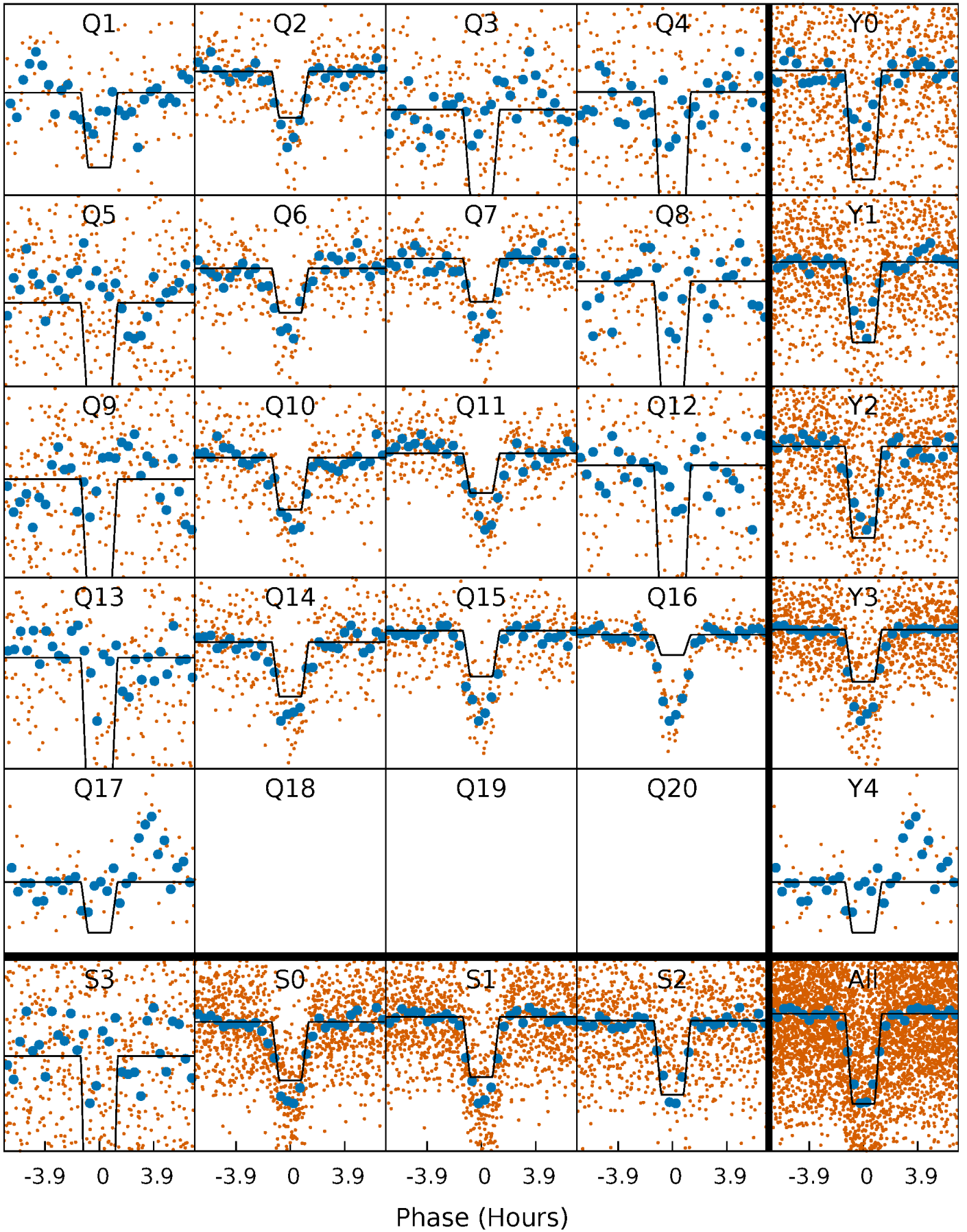
DV Quarter-Phased Transit Curves

TCE 006627507-01 P= 7.374481 Days $T_0=131.566757$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

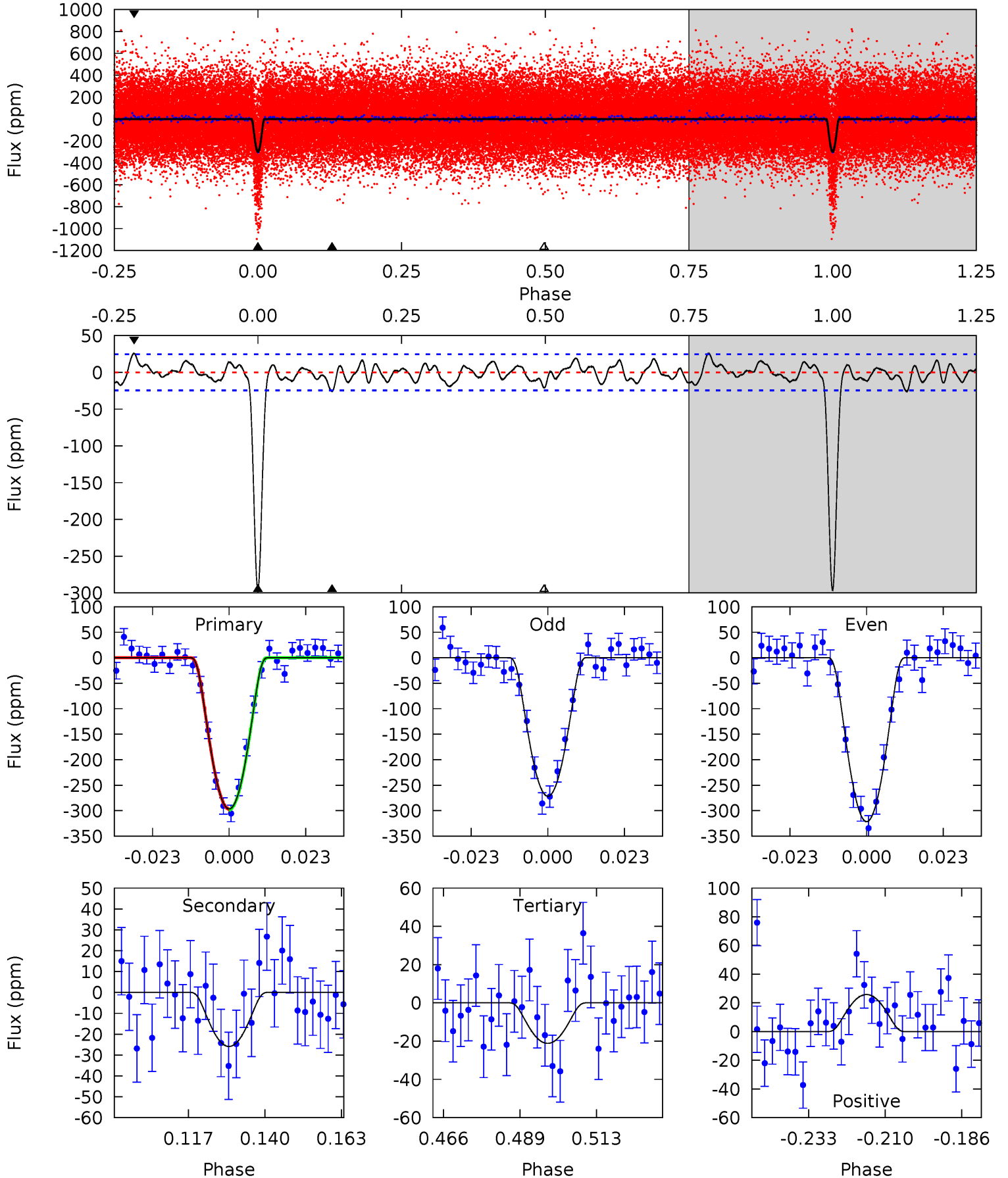
TCE 006627507-01 P= 7.374485 Days $T_0=131.564806$ (BKJD)



DV Model-Shift Uniqueness Test

006627507-01, P = 7.374481 Days, E = 124.192276 Days

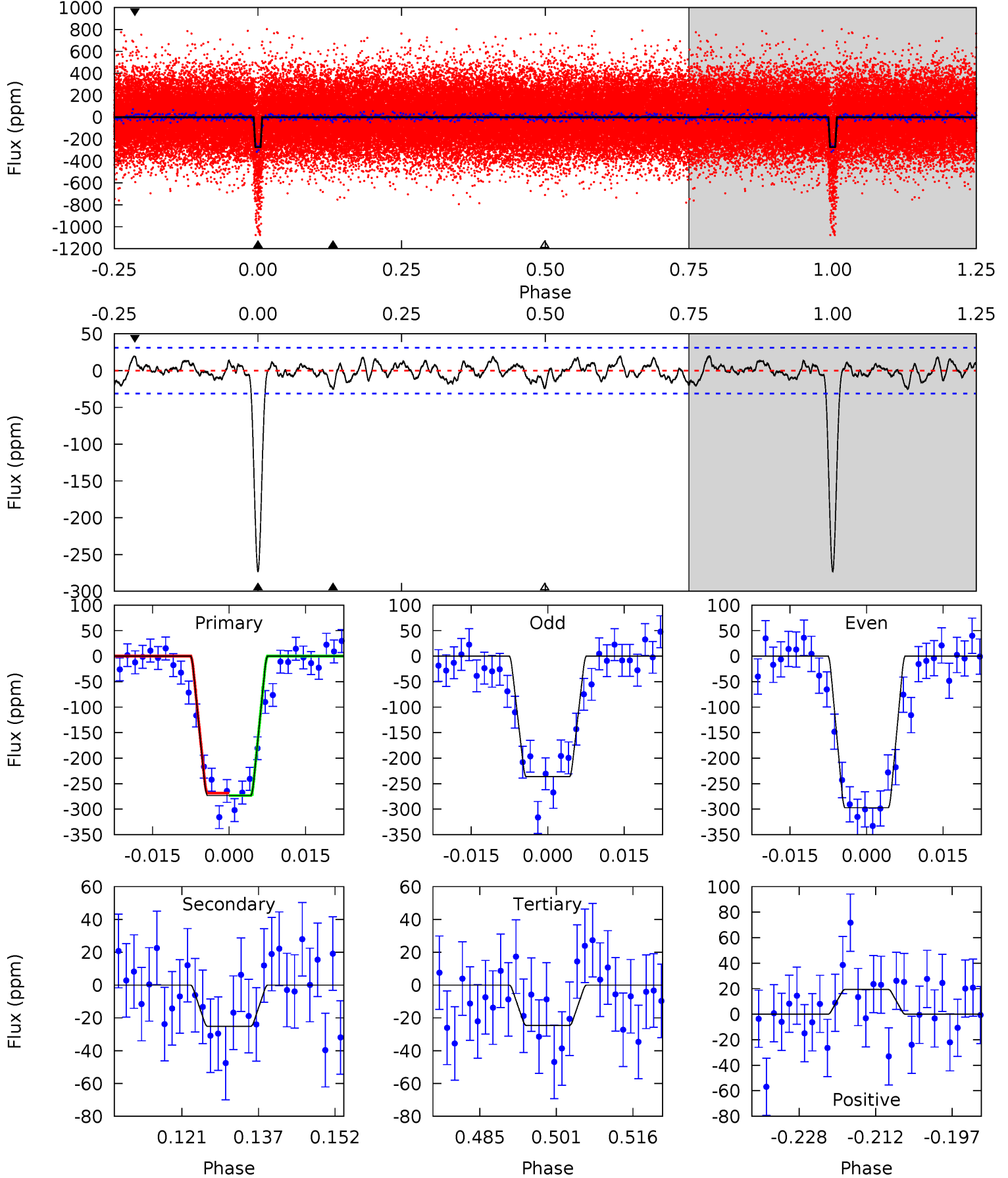
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
58.6	5.12	4.19	5.10	4.86	2.27	1.83	54.4	53.5	0.93	0.01	4.95	1.16	0.08	0.11



Alt Model-Shift Uniqueness Test

006627507-01, P = 7.374485 Days, E = 124.190321 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
43.4	3.99	3.91	3.08	4.95	2.43	1.37	39.5	40.3	0.08	0.90	4.83	1.14	0.07	0.39



Stellar Parameters For KIC 006627507

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5028^{+86}_{-160}	$3.289^{+0.228}_{-0.152}$	$0.140^{+0.150}_{-0.350}$	$4.991^{+0.795}_{-1.722}$	$1.766^{+0.183}_{-0.688}$	$0.020^{+0.030}_{-0.008}$
	+2%/-3%	+7%/-5%	+107%/-250%	+16%/-35%	+10%/-39%	+152%/-39%
Source	PHO1	FLK73	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 006627507-01 / KOI 2697.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-26 ± 5	$16.19^{+9.82}_{-9.12}$	2296^{+146}_{-181}	2323^{+1049}_{-4749}	$0.406^{+1.761}_{-0.255}$
Alt.	-25 ± 6	$12.12^{+9.40}_{-7.95}$	2300^{+130}_{-183}	2743^{+1303}_{-5015}	$0.716^{+5.241}_{-0.496}$

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

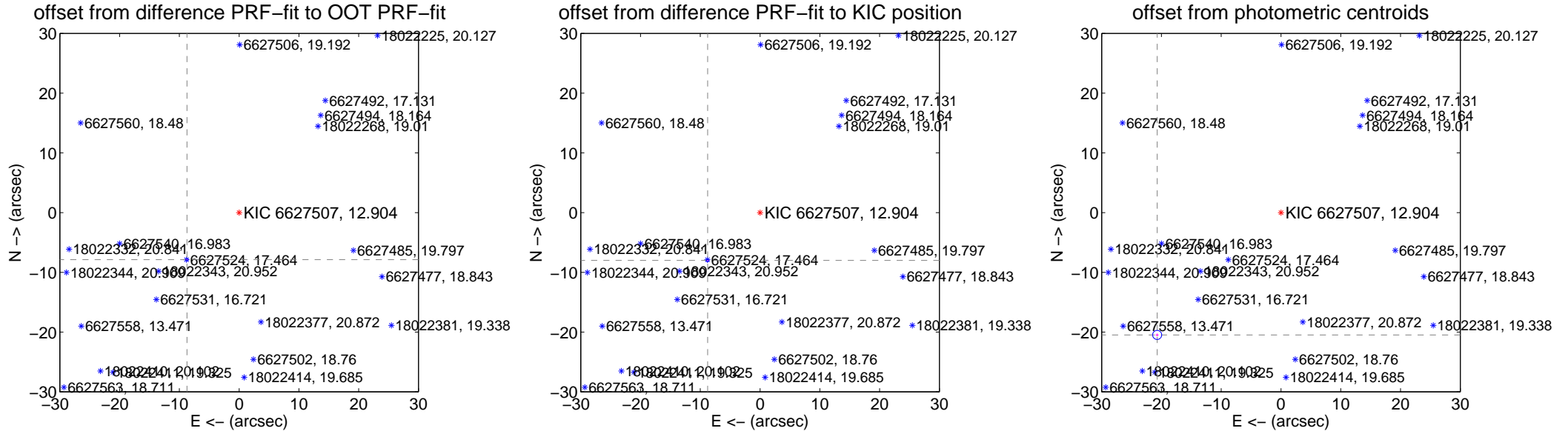
DV Centroid Data

Supplemental centroid analysis for 006627507-01. Kepler magnitude: 12.90. Transit SNR 23.84

There are 8 quarters with good PRF difference image offsets

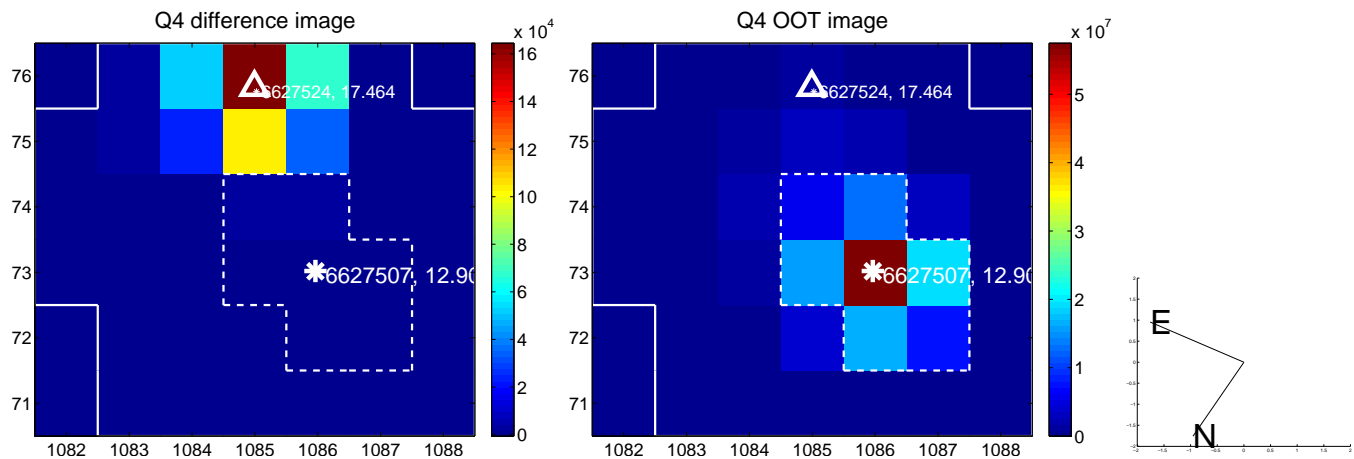
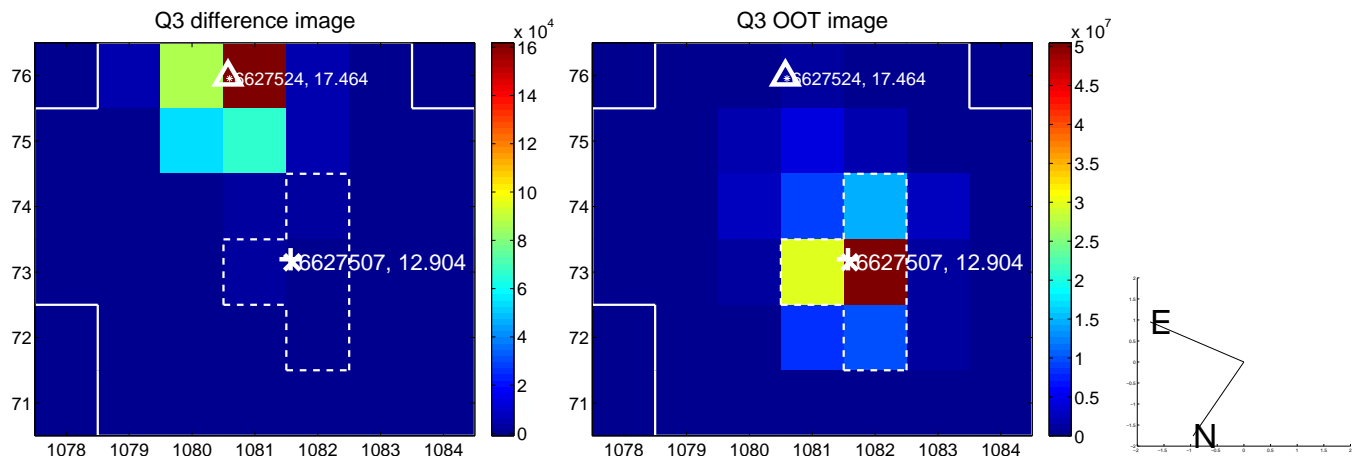
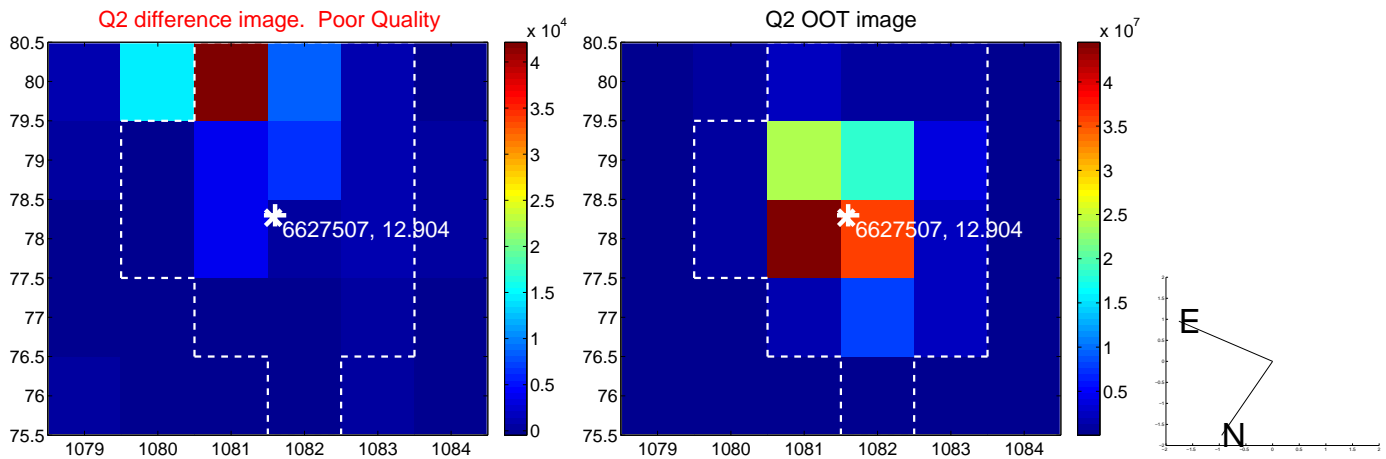
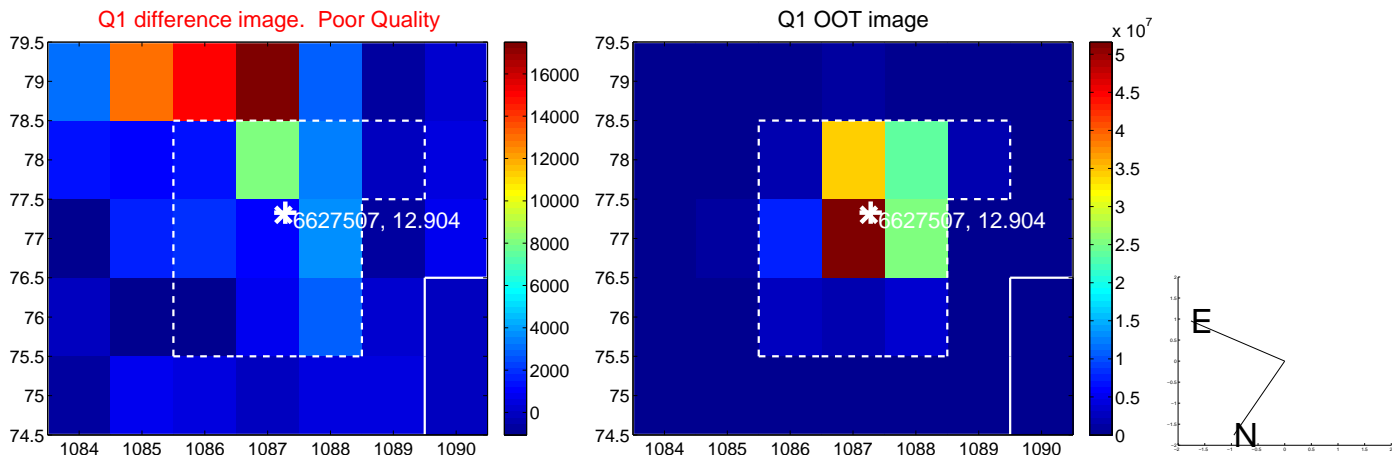
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	11.755 \pm 0.069	170.15	8.724 \pm 0.067	-7.879 \pm 0.071
PRF-fit source offset from KIC position	11.874 \pm 0.076	156.19	8.772 \pm 0.082	-8.003 \pm 0.068
photometric centroid source offset	29.13 \pm 0.25	115.05	20.71 \pm 0.27	-20.47 \pm 0.24

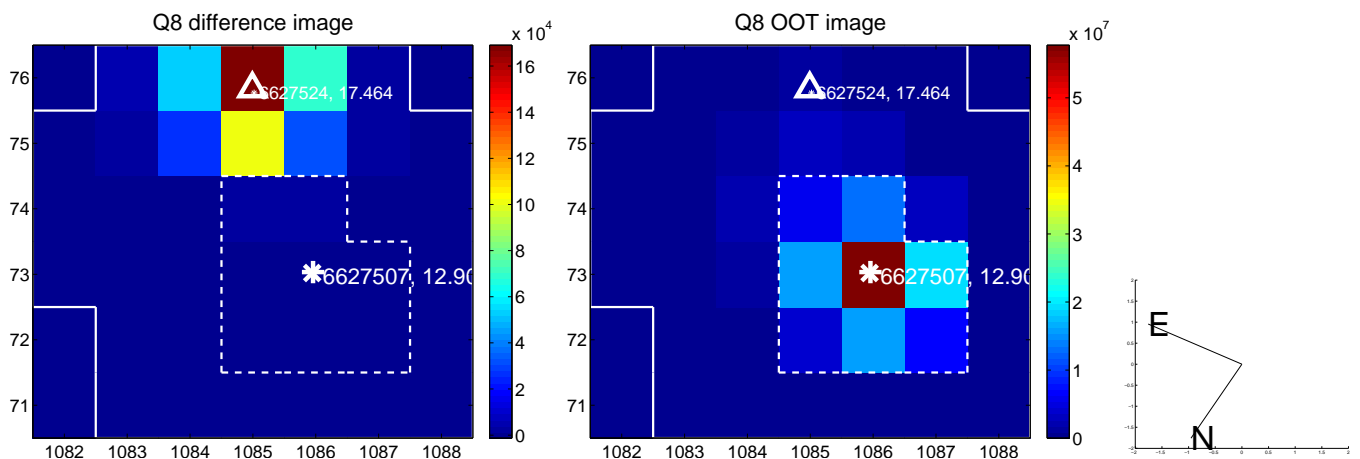
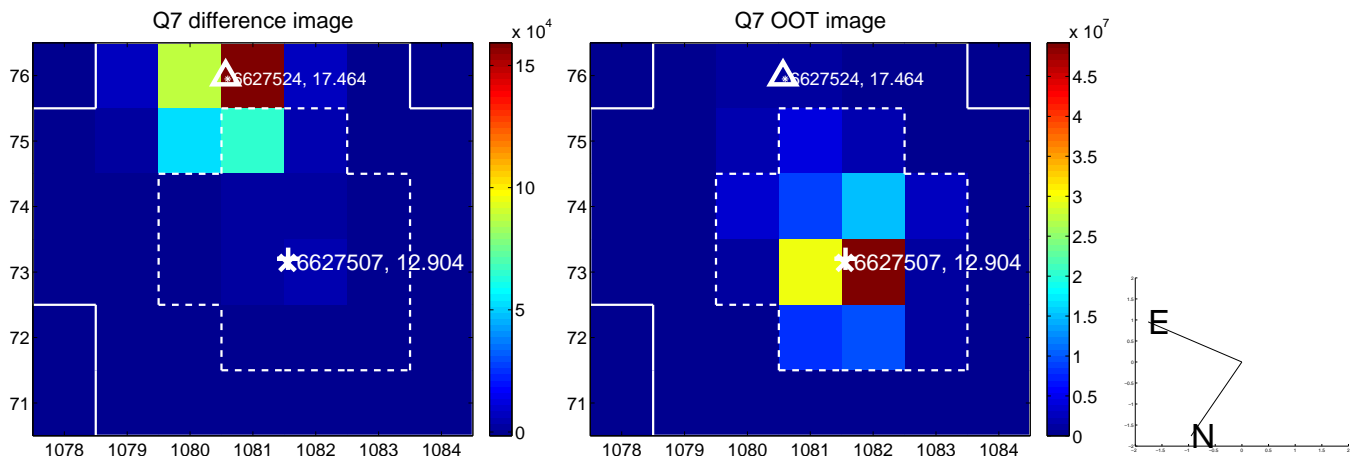
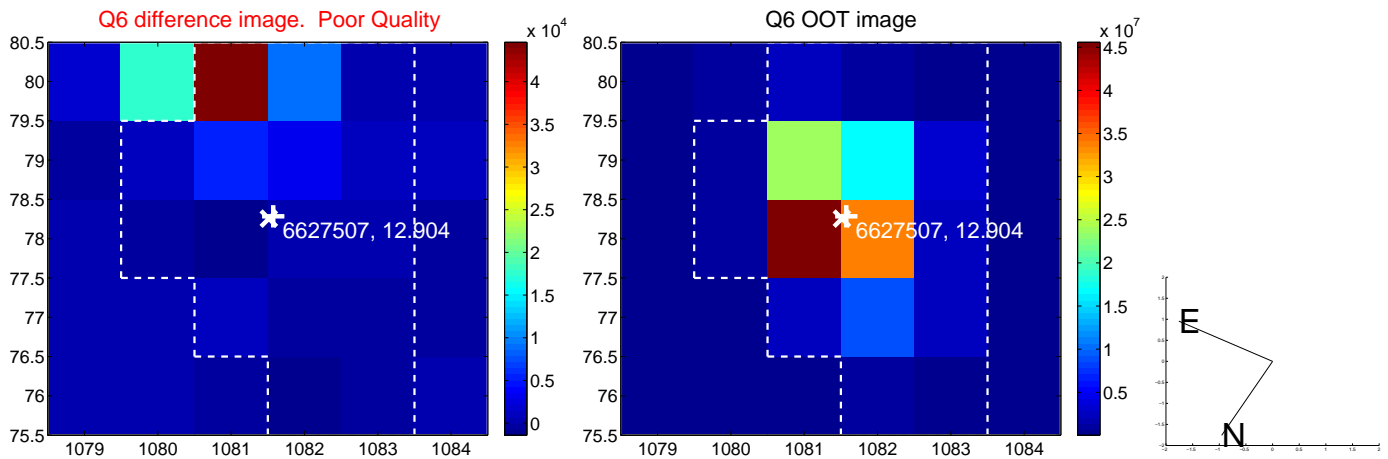
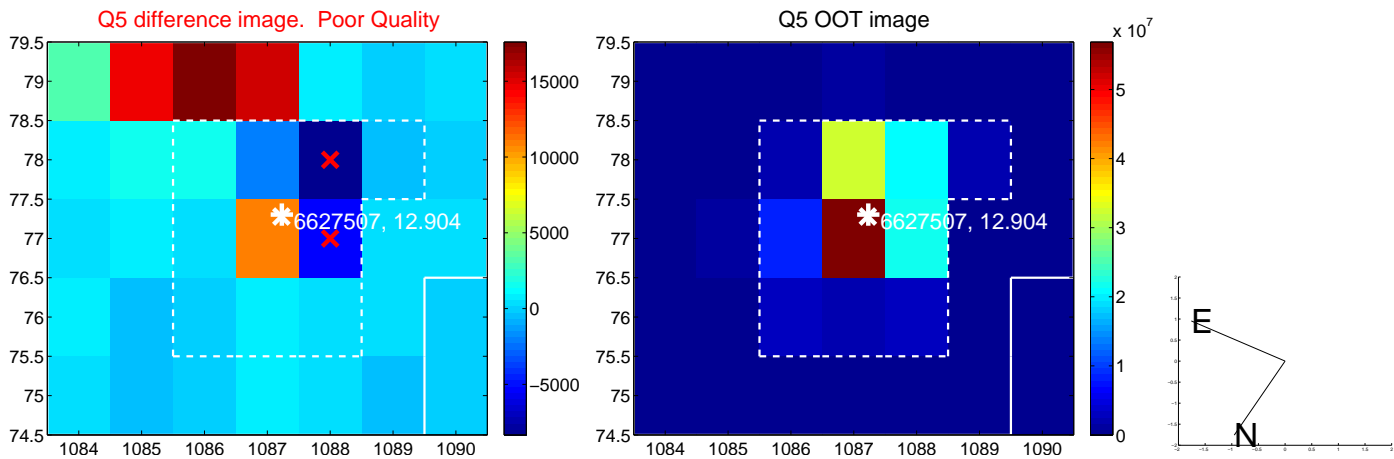


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

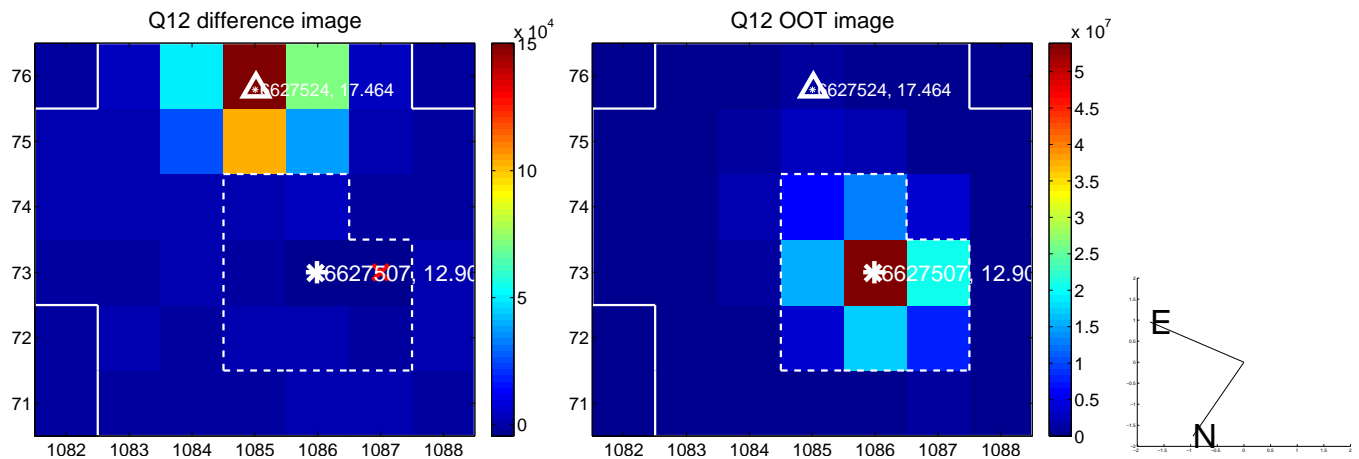
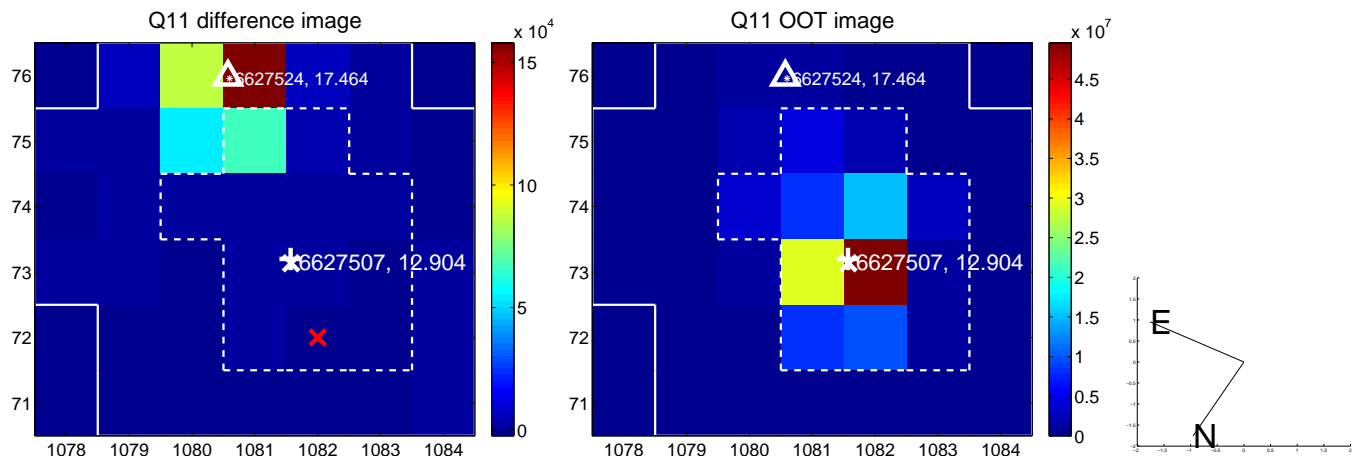
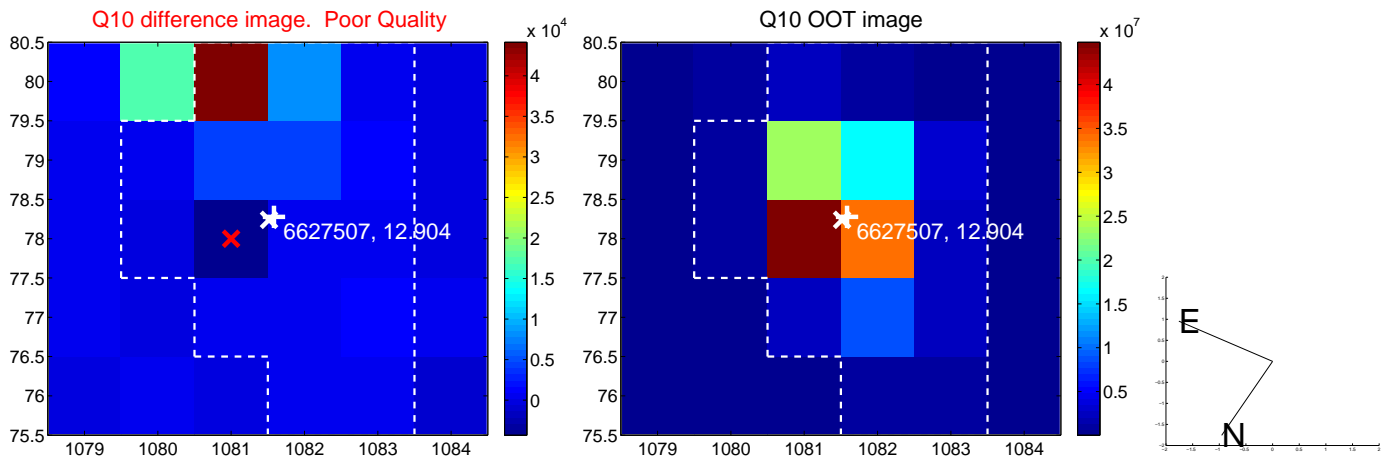
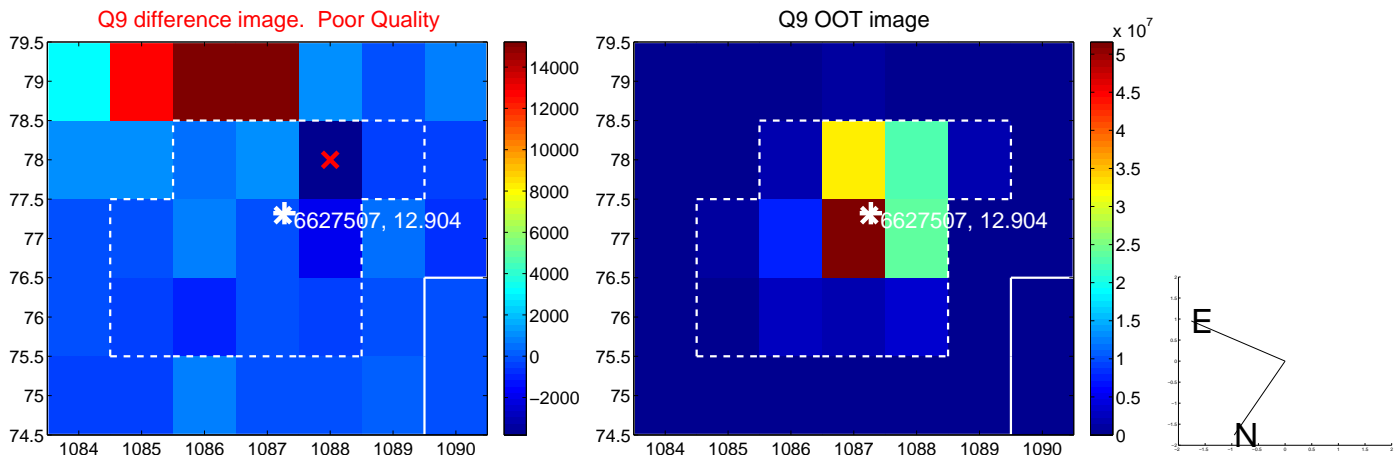
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



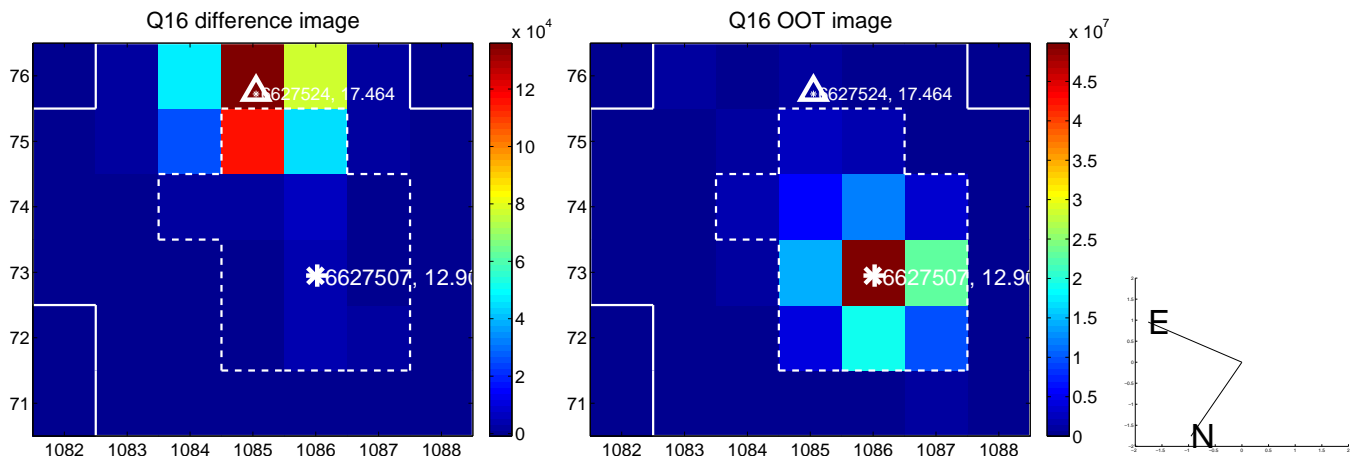
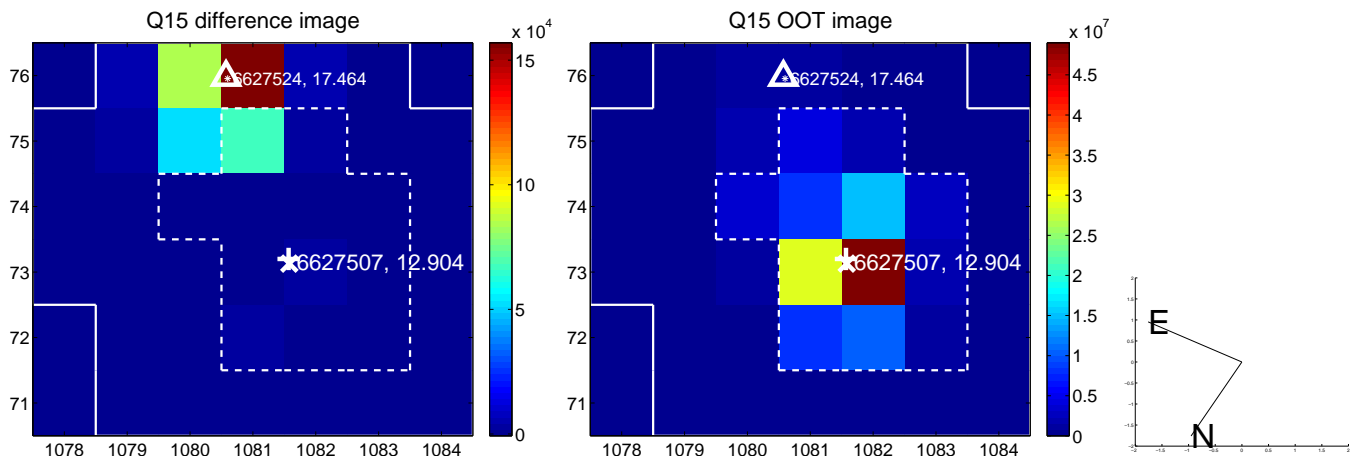
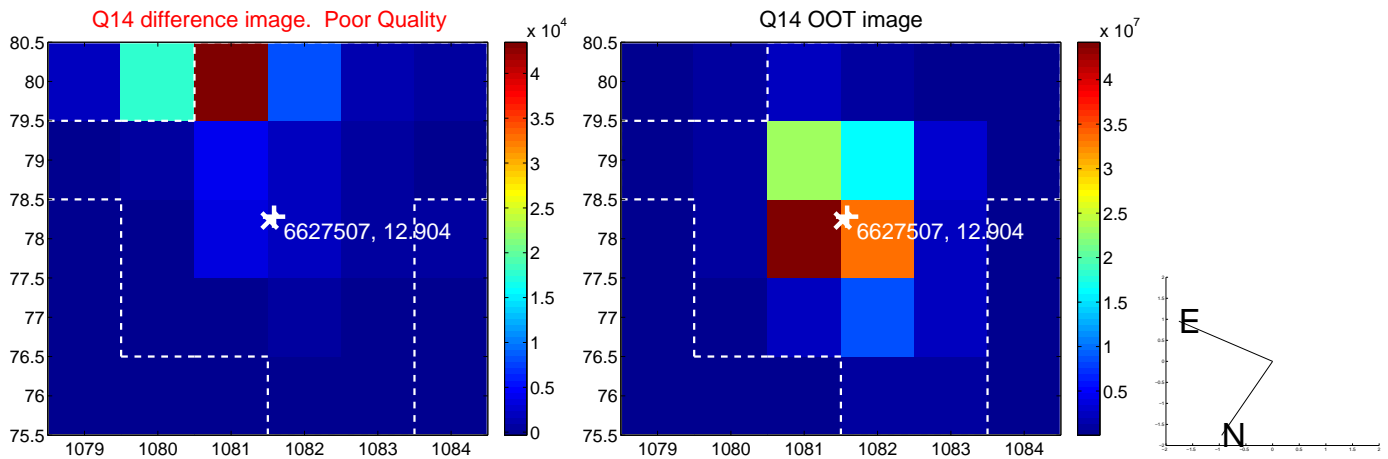
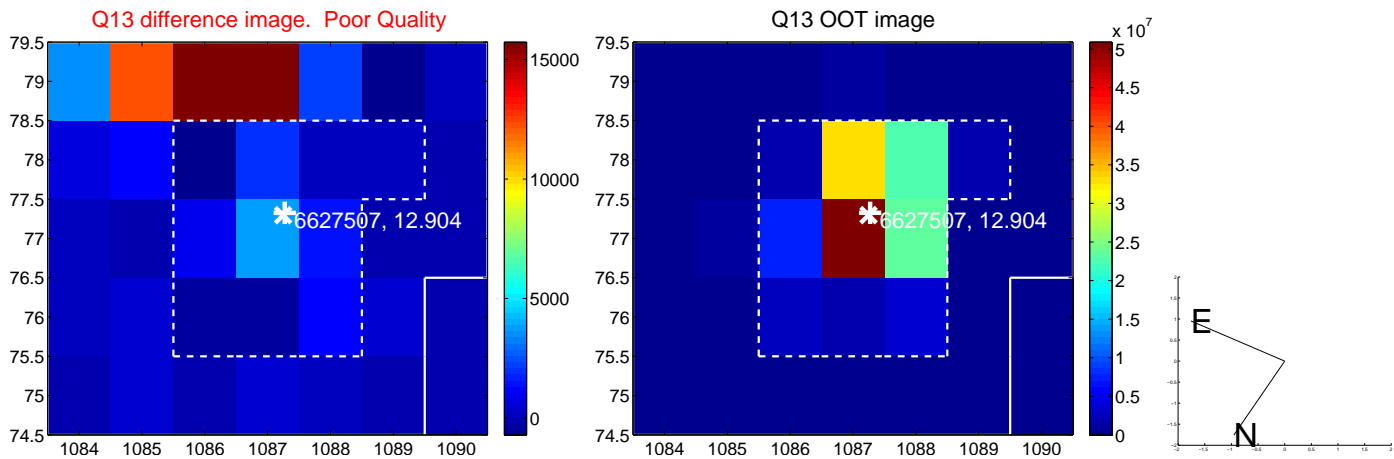
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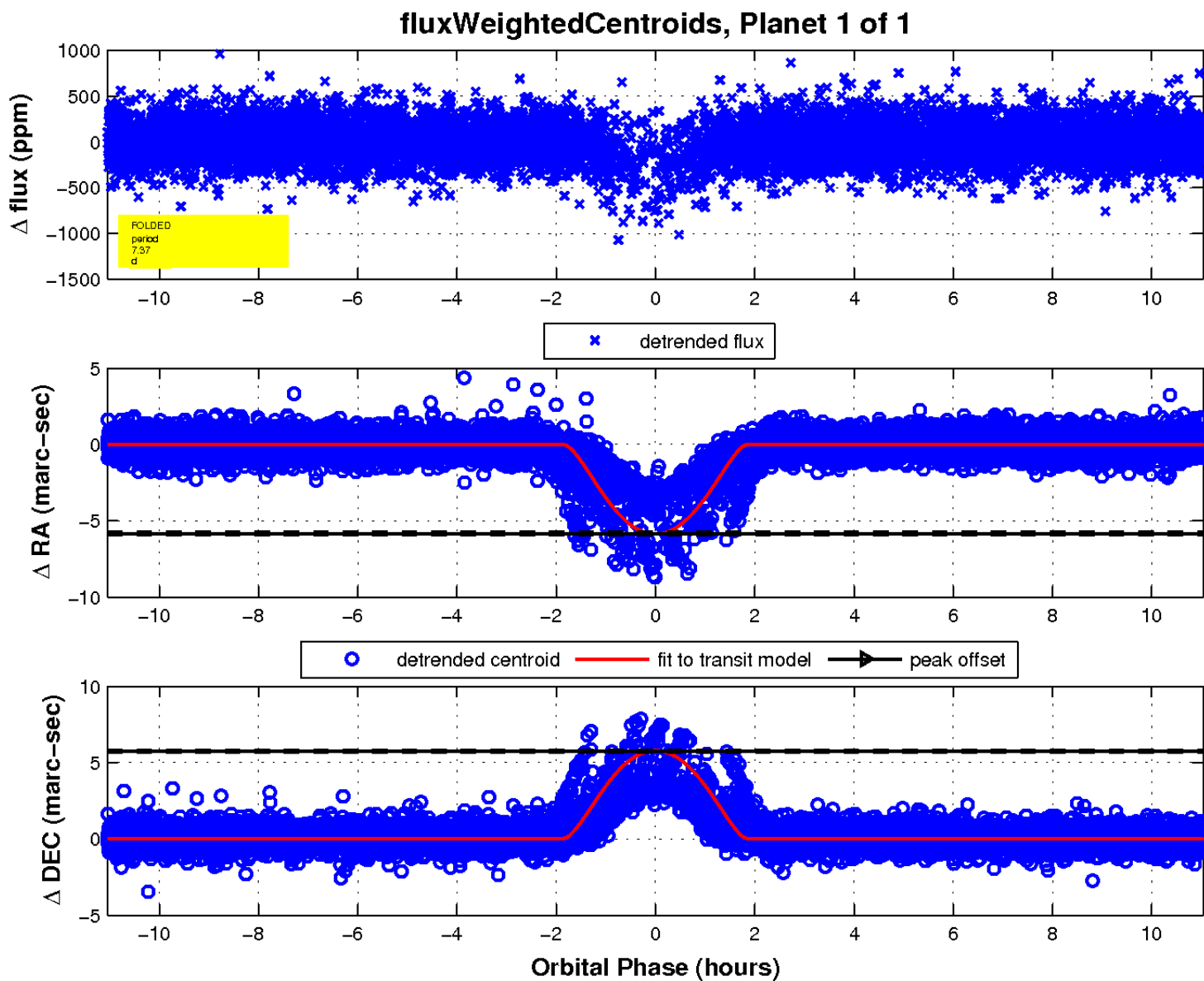
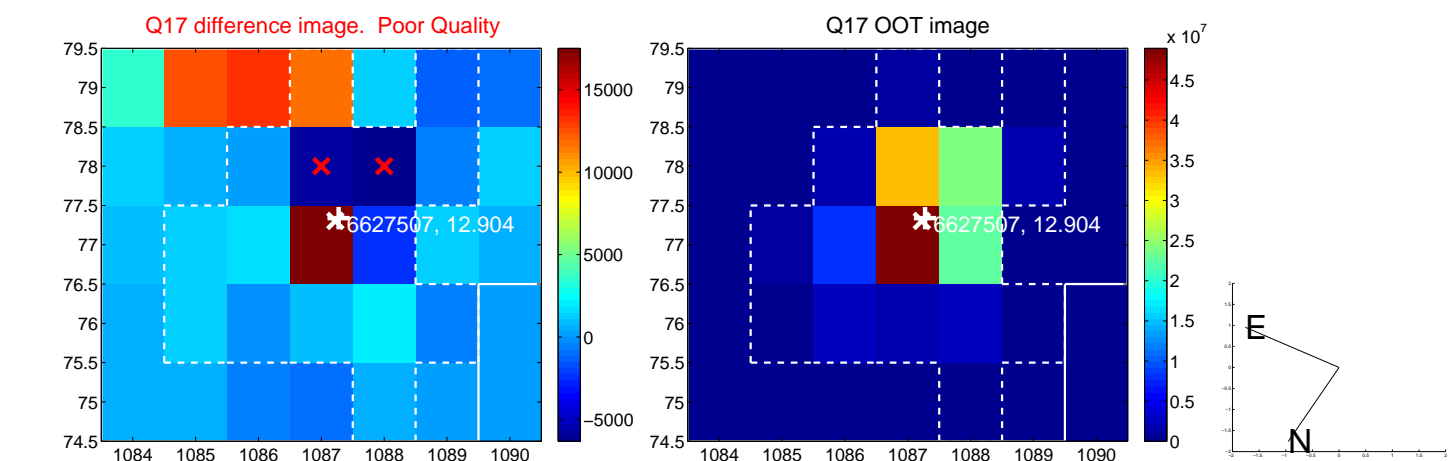
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UKIRT Image

Declination

