

KIC 006606282

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})
006606282-01	OBS	6740.01	1.053577	132.425297	2488.7	1.559	934.8	647.6	7.38	5838	44.19	0.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006606282-01	OBS	FP	0.00	0	1	0	0	PLANET_IN_STAR—DEPTH_ODDEVEN_DV—DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_DV—MOD_ODDEVEN_ALT

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

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

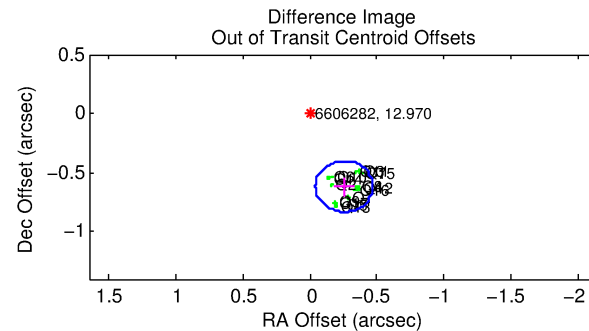
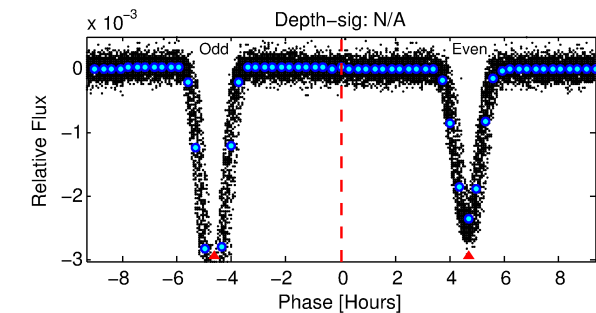
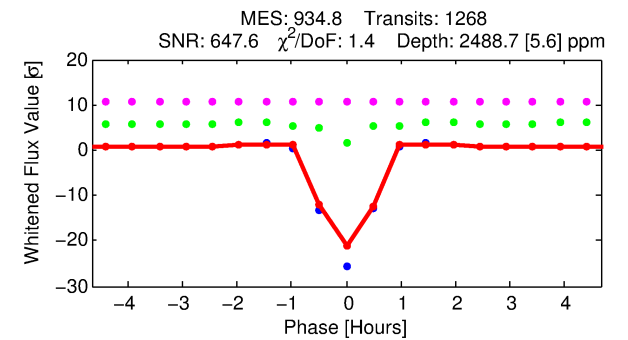
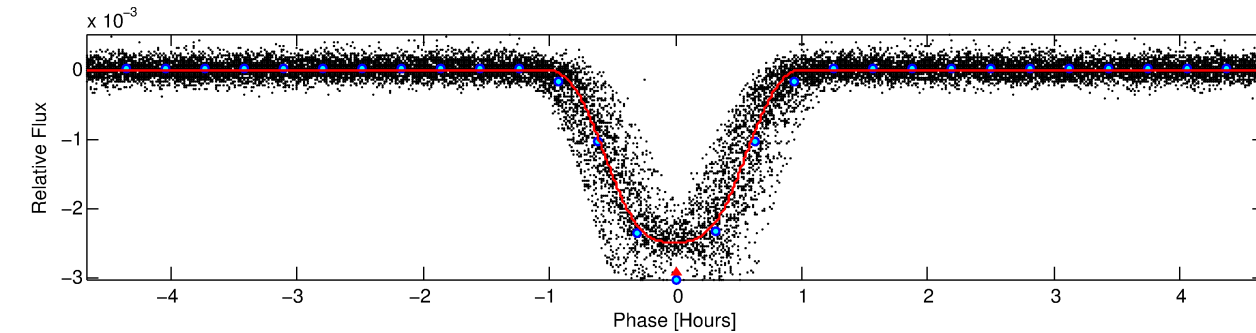
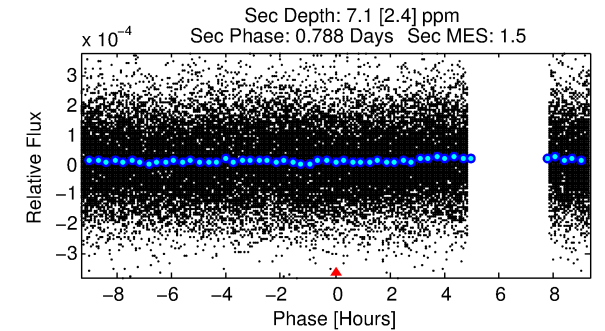
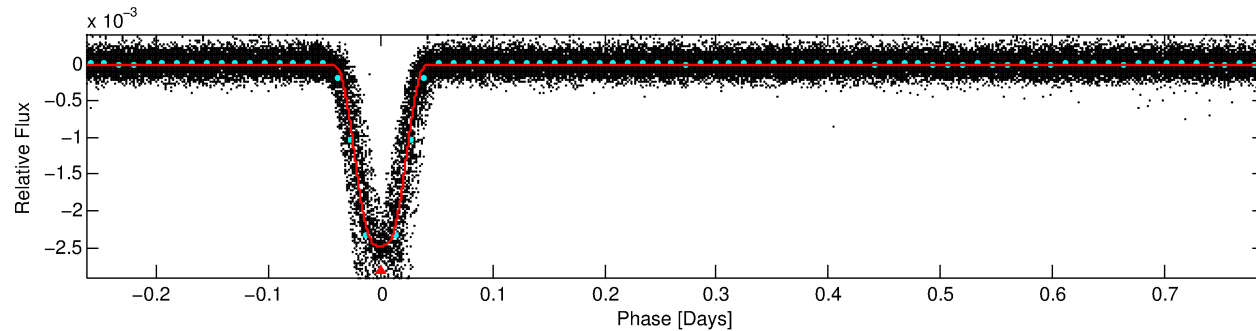
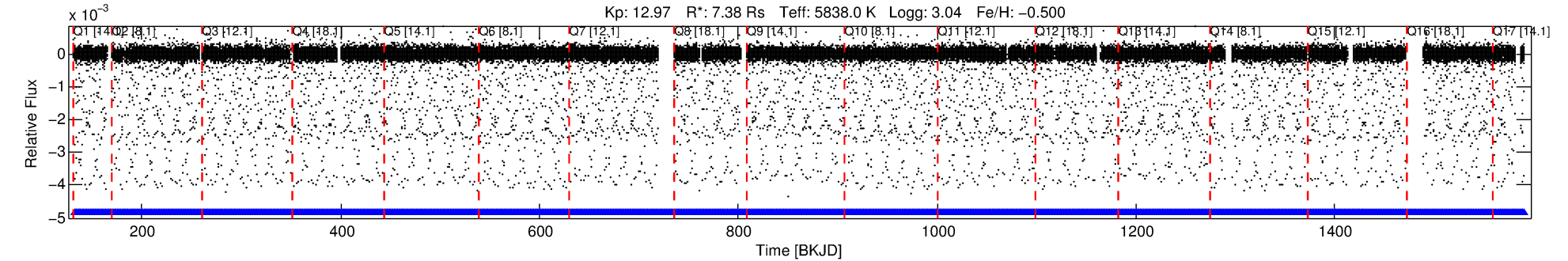
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006606282-01

No Significant Match Found

DV One-Page Summary

KIC: 6606282 Candidate: 1 of 1 Period: 1.054 d
KOI: K06740.01 Corr: 0.956



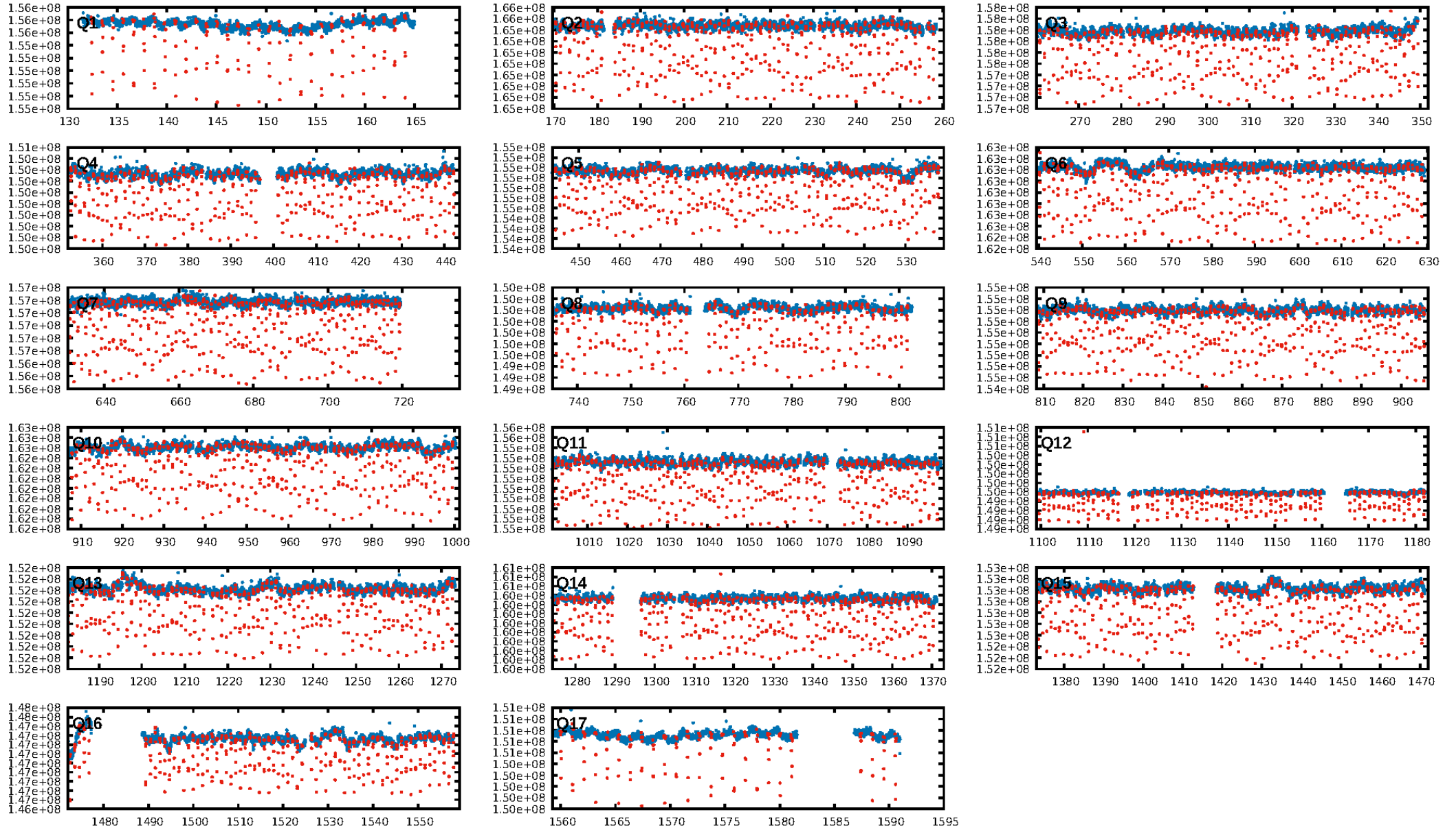
DV Fit Results:

Period = 1.05358 [0.00000] d
Epoch = 132.4253 [0.0000] BKJD
Rp/R* = 0.0548 [0.0002]
a/R* = 2.91 [0.02]
b = 0.91 [0.00]
Seff = N/A
Teq = N/A
Rp = 44.19 [21.30] Re
a = N/A
Ag = N/A
Teffp = N/A

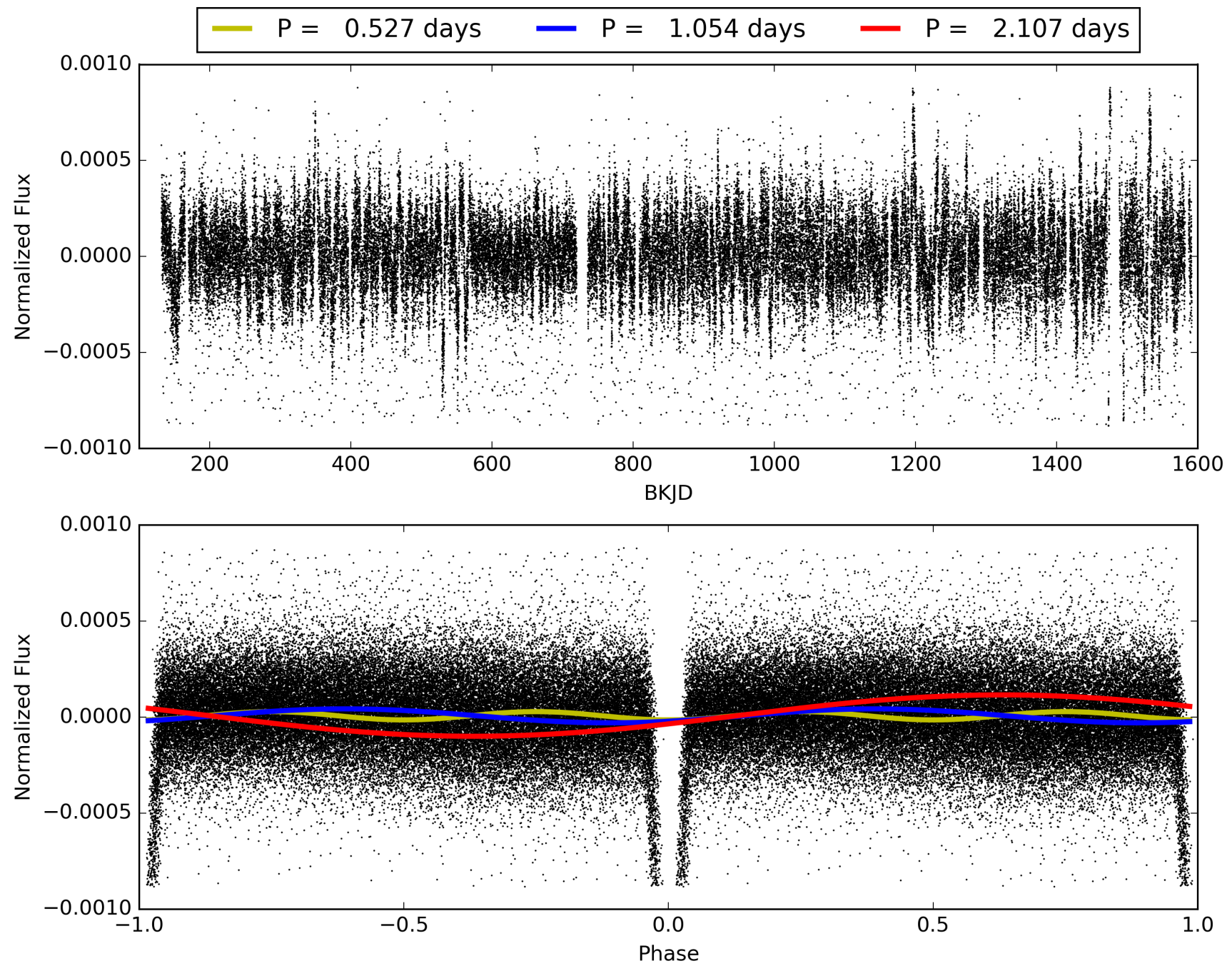
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1212/1212]
GhostDiagnostic-chr: 8.786
Centroid-sig: 0.0%
Centroid-so: 0.171 arcsec [14.80σ]
OotOffset-rm: 0.668 arcsec [9.33σ]
KicOffset-rm: 0.342 arcsec [4.95σ]
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 006606282-01, PDC Light Curves

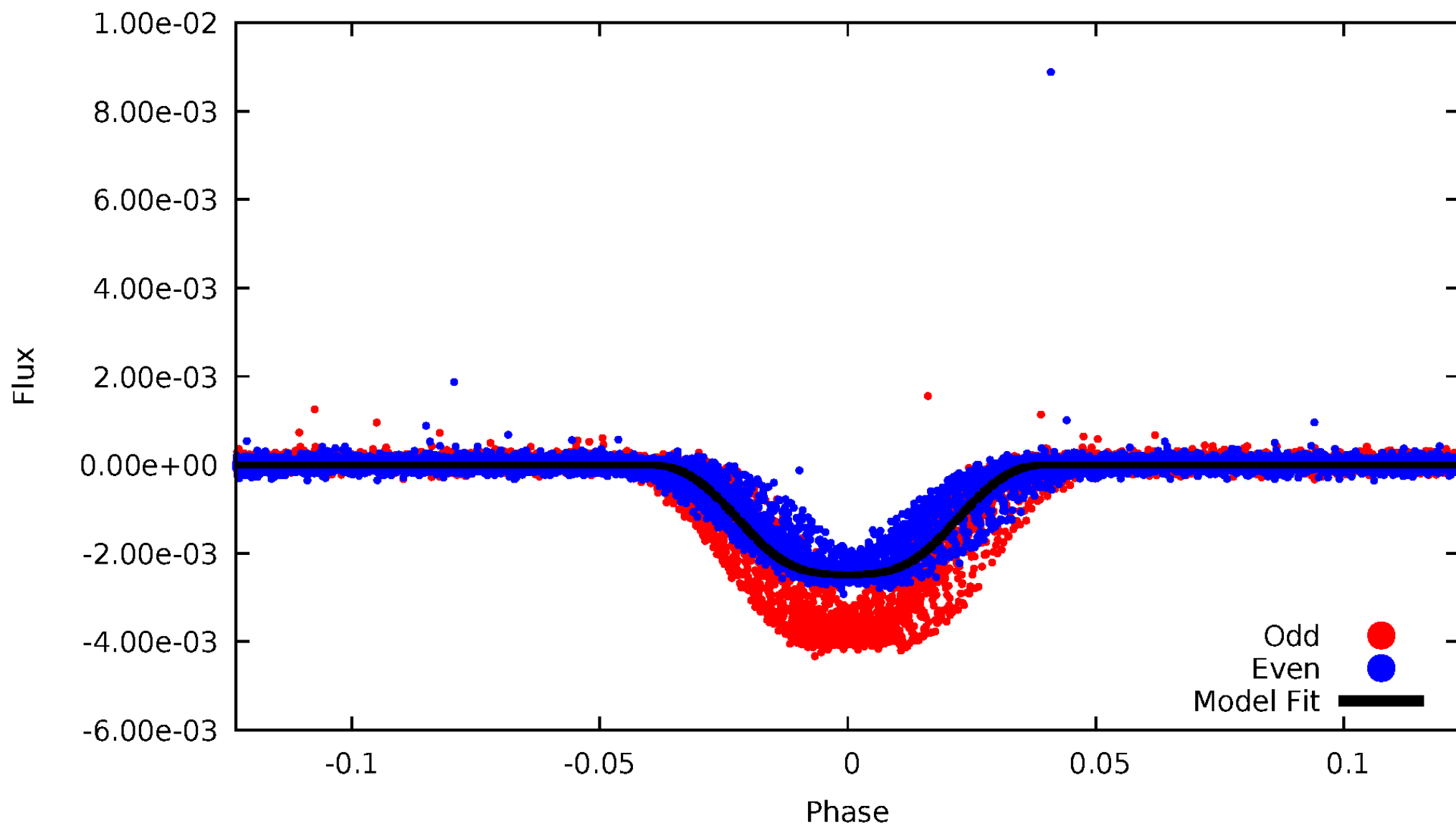


TCE 006606282-01



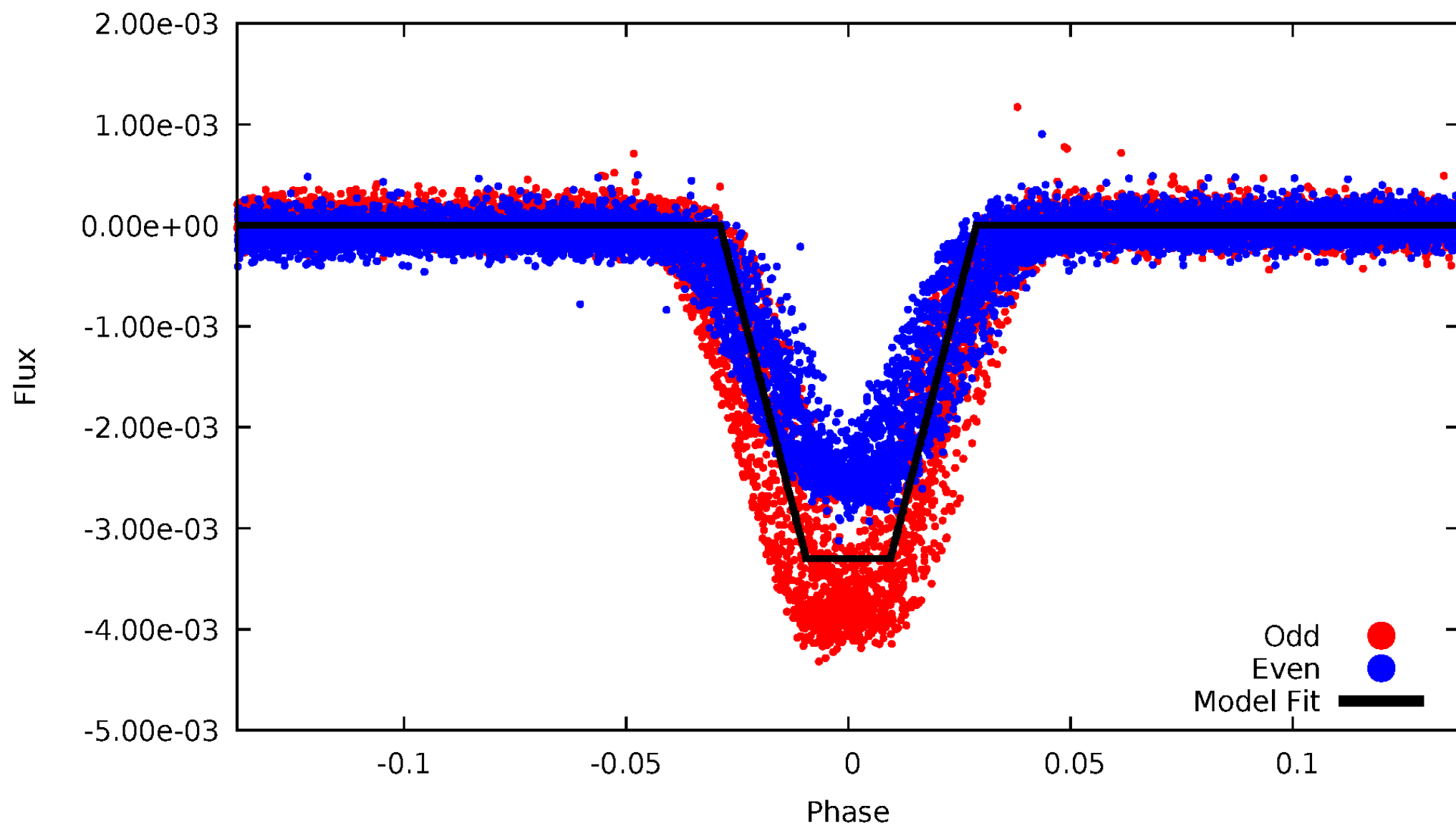
DV Odd/Even

TCE 006606282-01



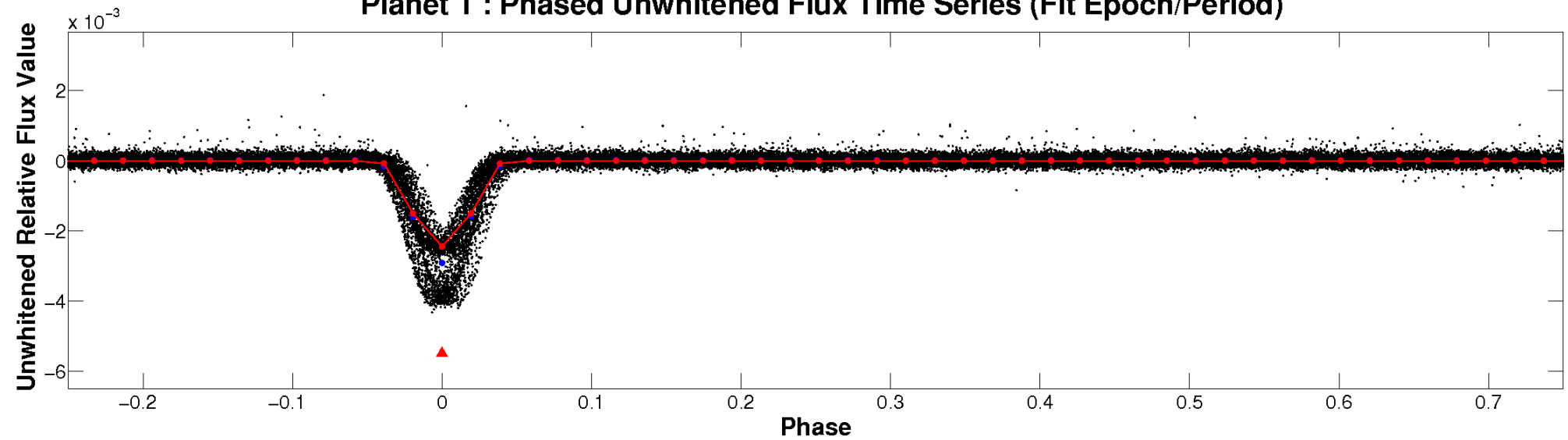
ALT Odd/Even

TCE 006606282-01

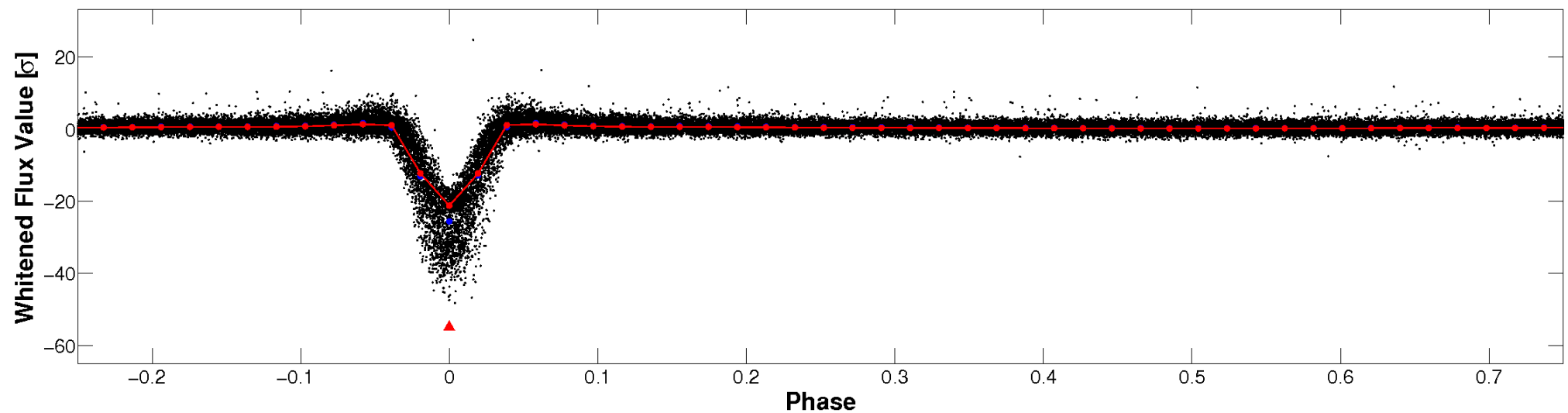


Non-Whitened Vs. Whitened Light Curve

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

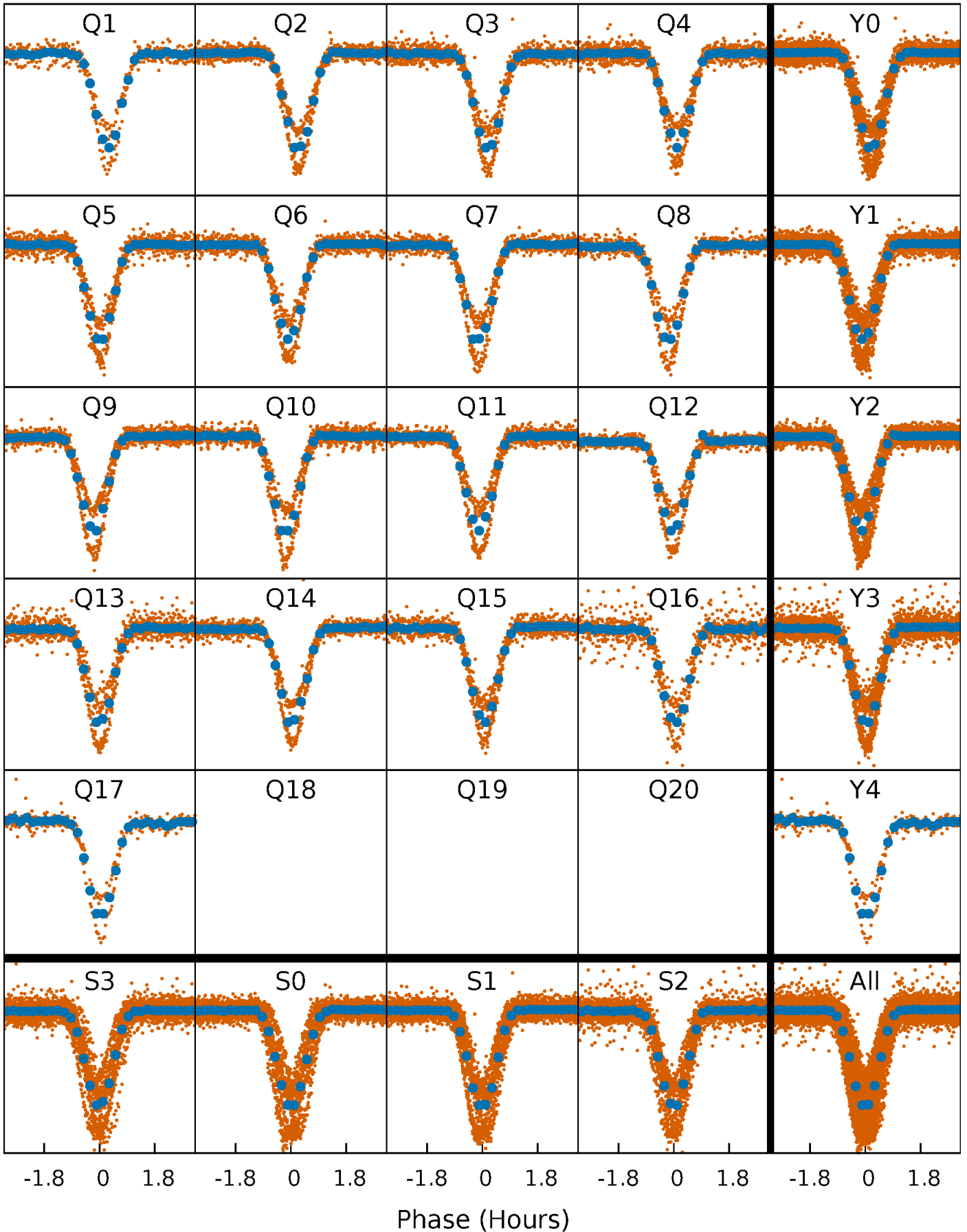


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



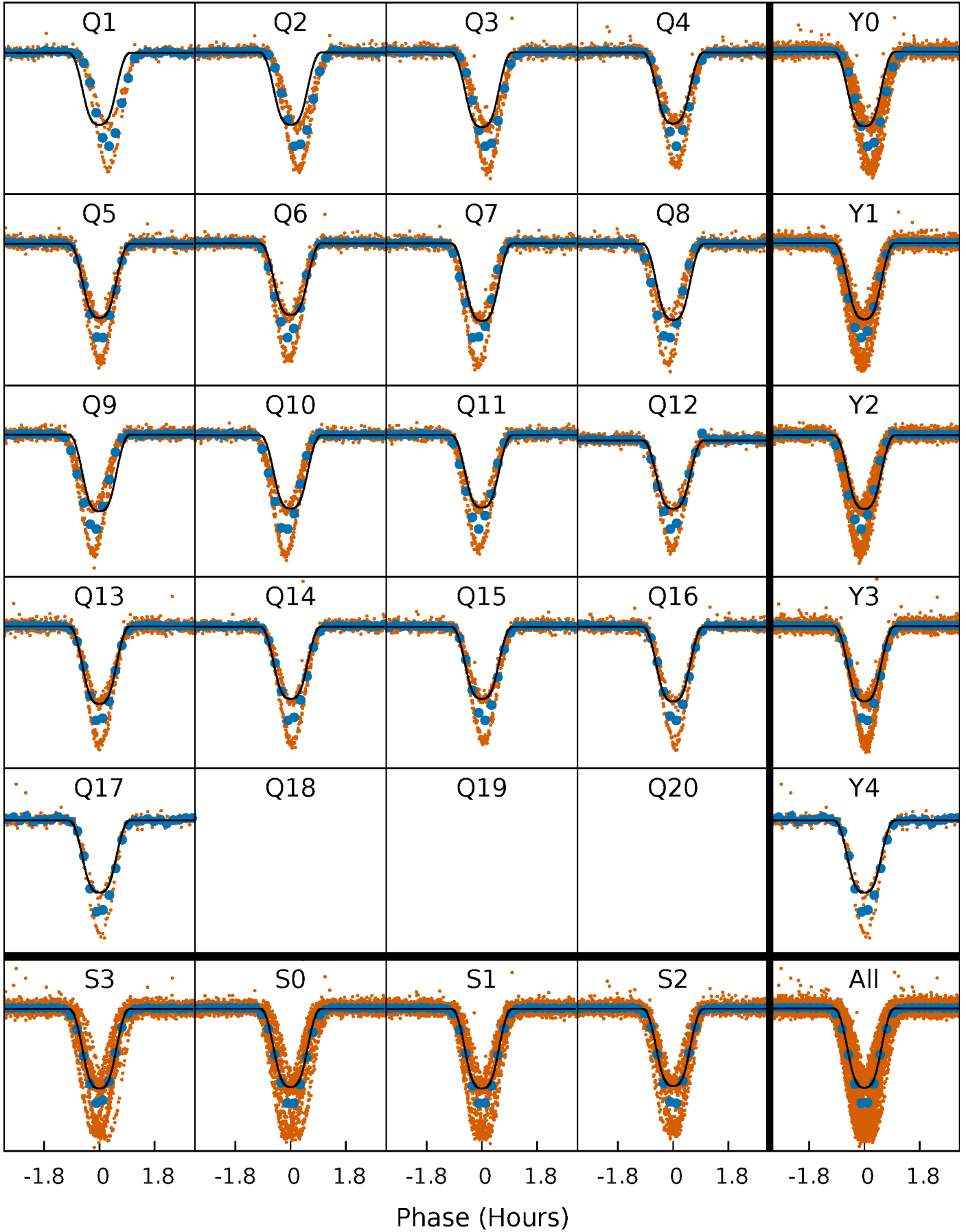
PDC Quarter-Phased Transit Curves

TCE 006606282-01 P= 1.053577 Days $T_0=132.425297$ (BKJD)



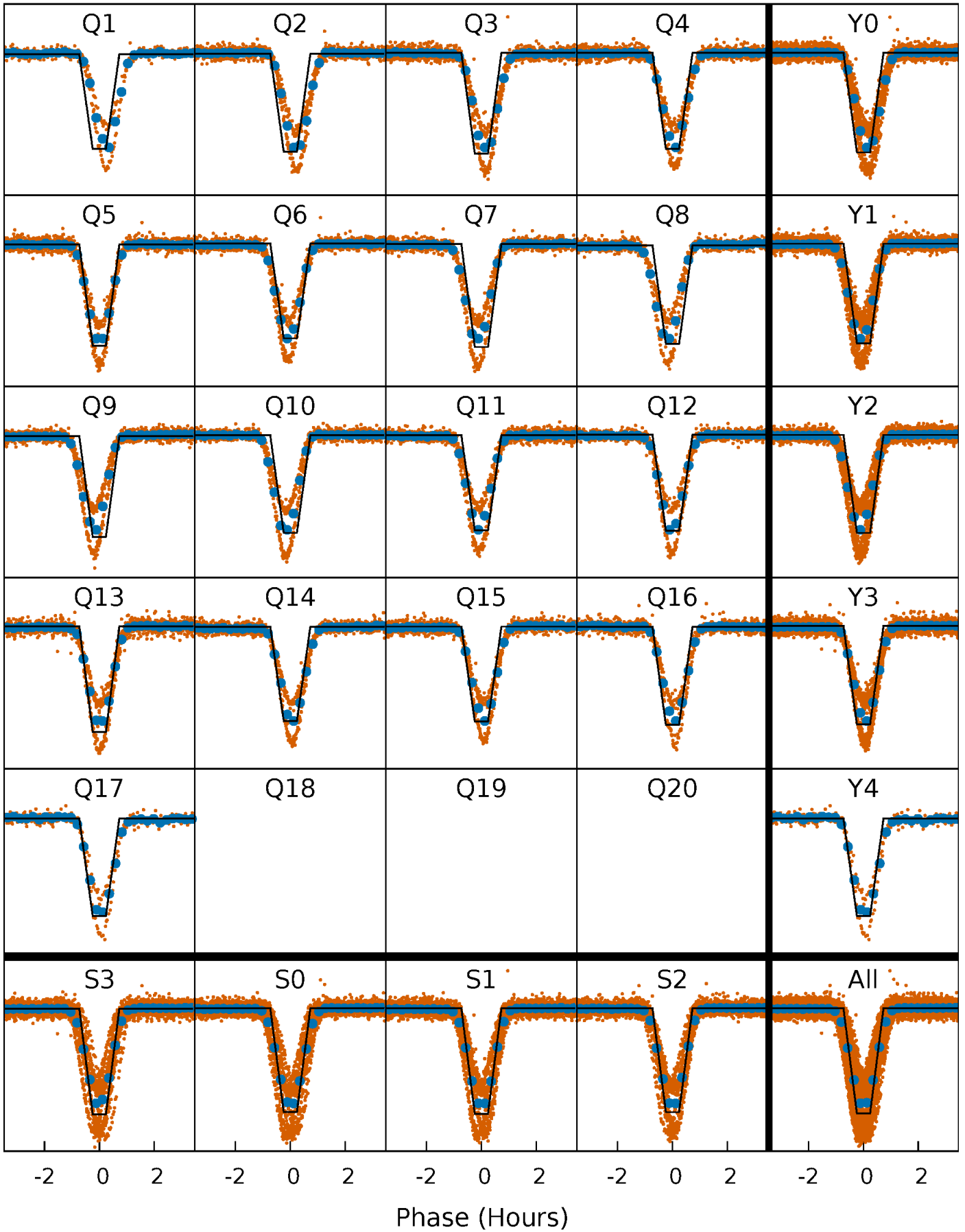
DV Quarter-Phased Transit Curves

TCE 006606282-01 P= 1.053577 Days $T_0=132.425297$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

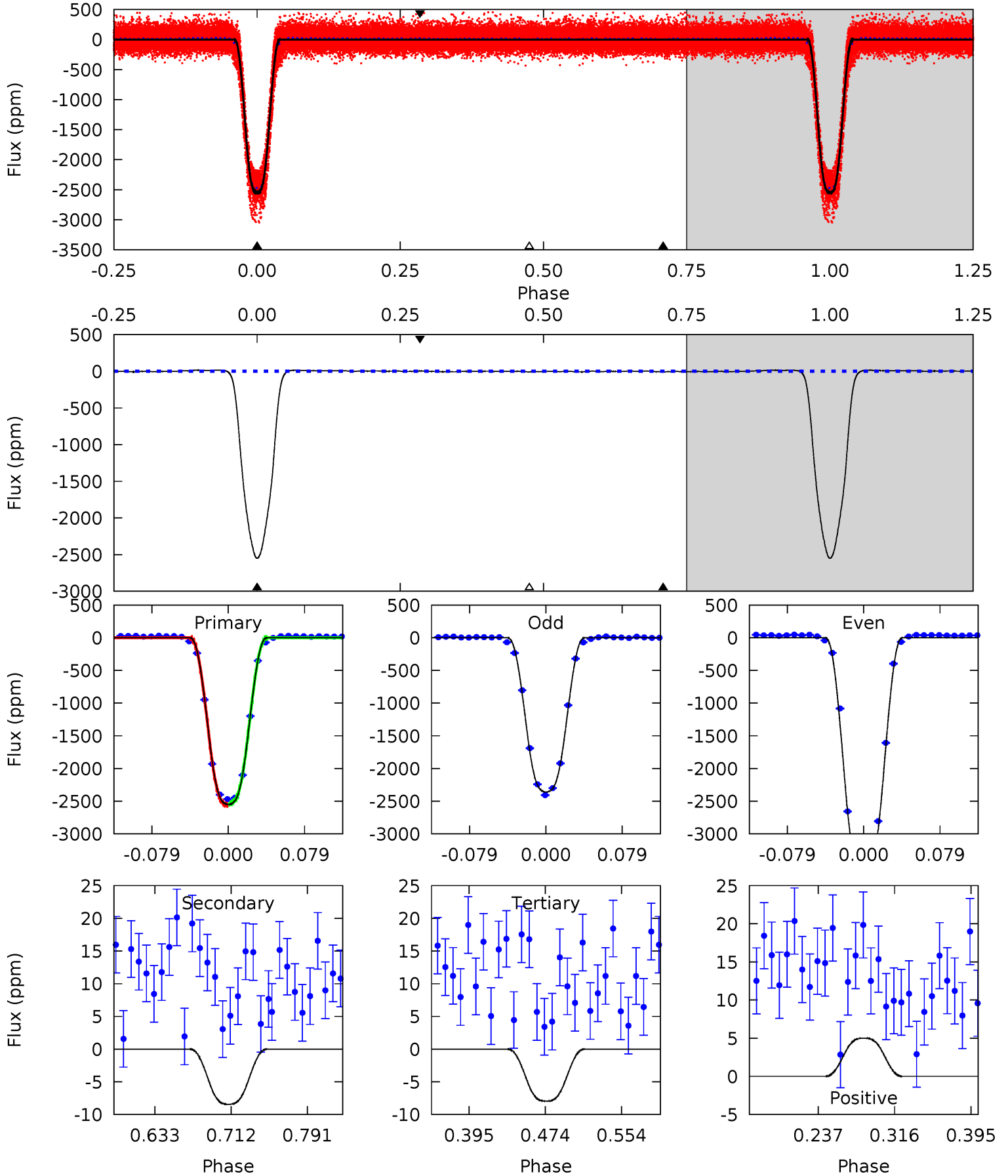
TCE 006606282-01 P= 1.053575 Days $T_0=132.426637$ (BKJD)



DV Model-Shift Uniqueness Test

006606282-01, P = 1.053577 Days, E = 131.371720 Days

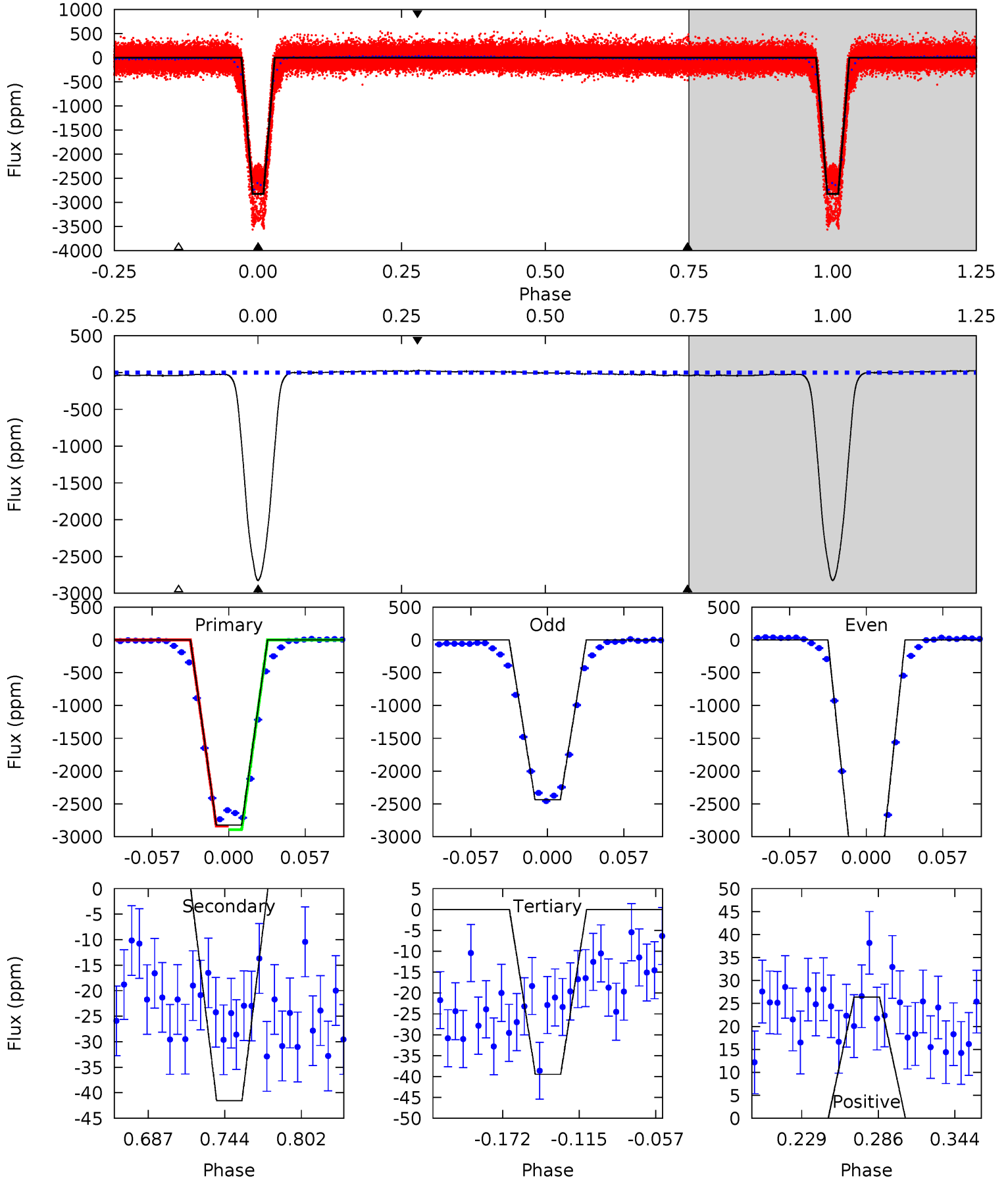
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1319	4.36	4.12	2.59	4.61	1.76	2.69	1315	1316	0.25	1.77	340.8	1.09	0.01	0



Alt Model-Shift Uniqueness Test

006606282-01, P = 1.053575 Days, E = 131.373062 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
978.1	14.4	13.7	9.14	4.68	1.90	7.00	964.4	968.9	0.72	5.24	265.2	1.03	0.01	0



Stellar Parameters For KIC 006606282

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5838^{+143}_{-245}	$3.038^{+0.405}_{-0.135}$	$-0.500^{+0.350}_{-0.400}$	$7.385^{+2.589}_{-3.559}$	$2.172^{+0.269}_{-0.699}$	$0.008^{+0.028}_{-0.004}$
	+2%/-4%	+13%/-4%	+70%/-80%	+35%/-48%	+12%/-32%	+363%/-48%
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 006606282-01 / KOI 6740.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-8 ± 2	$41.24^{+8.01}_{-9.54}$	5805^{+536}_{-668}	-4851^{+469}_{-390}	$0.002^{+0.001}_{-0.001}$
Alt.	-42 ± 3	$43.44^{+8.53}_{-11.10}$	5803^{+571}_{-712}	-4827^{+491}_{-414}	$0.008^{+0.005}_{-0.002}$

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 $A_{obs} \gg 1.0$

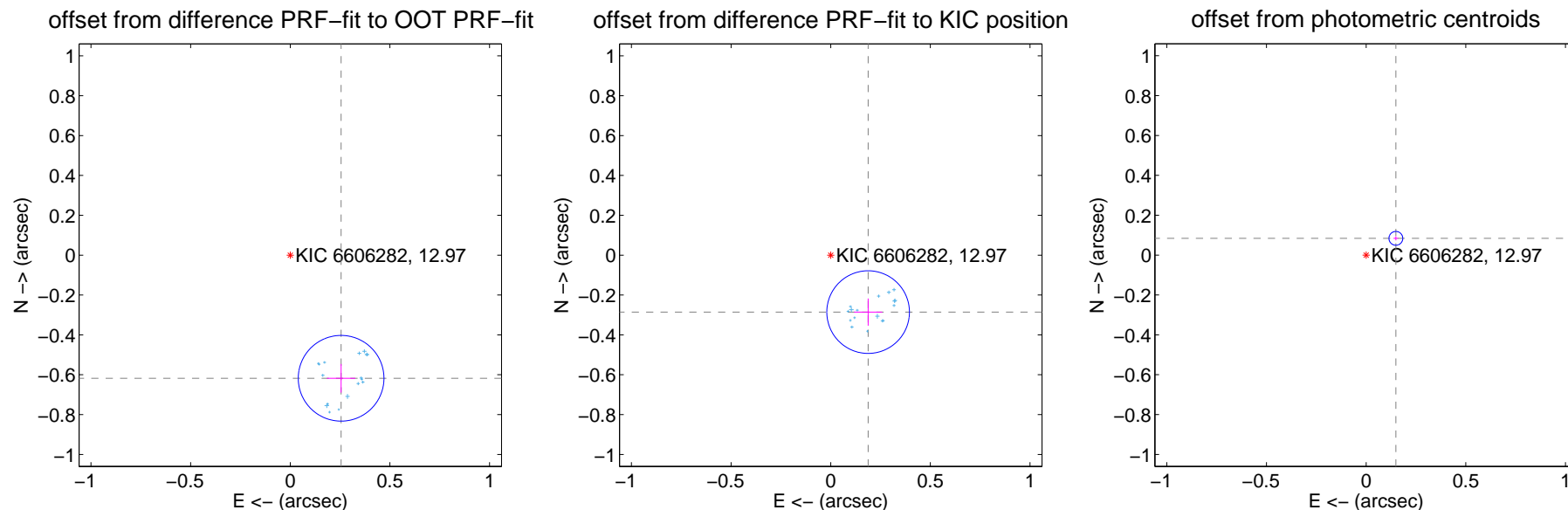
DV Centroid Data

Supplemental centroid analysis for 006606282-01. Kepler magnitude: 12.97. Transit SNR 647.61

There are 17 quarters with good PRF difference image offsets

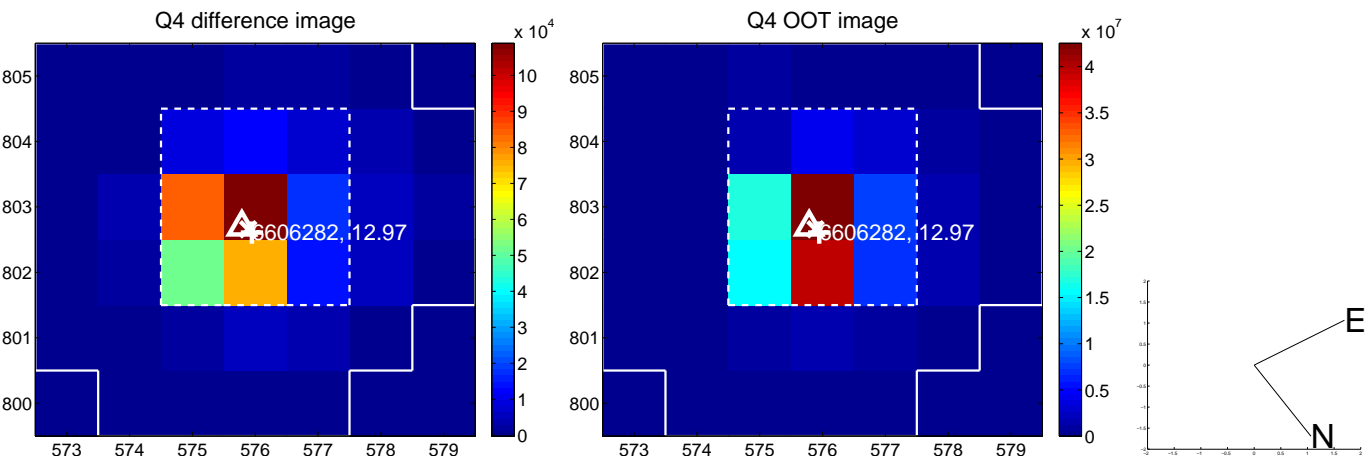
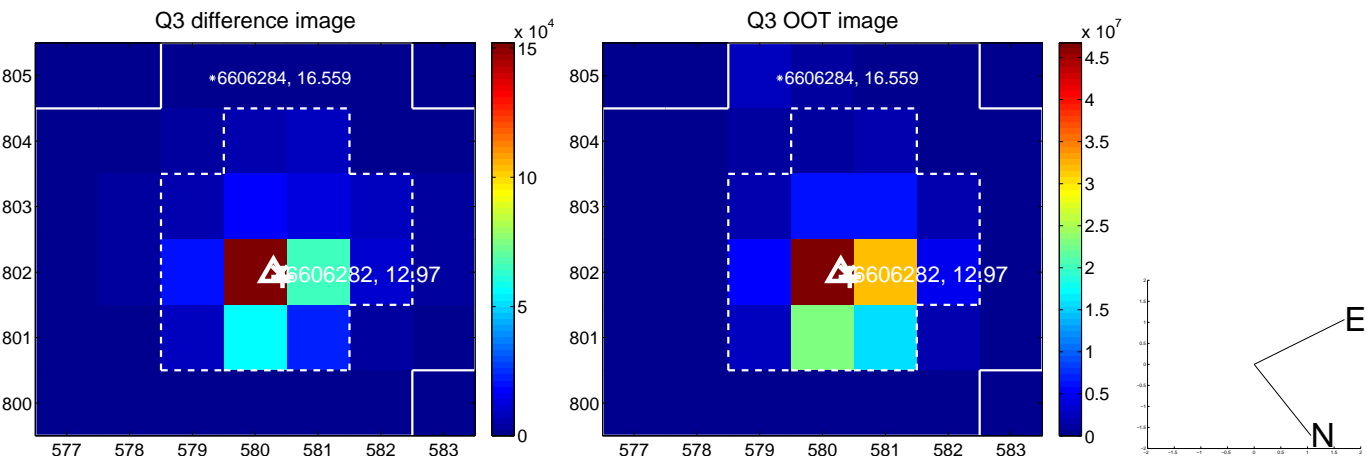
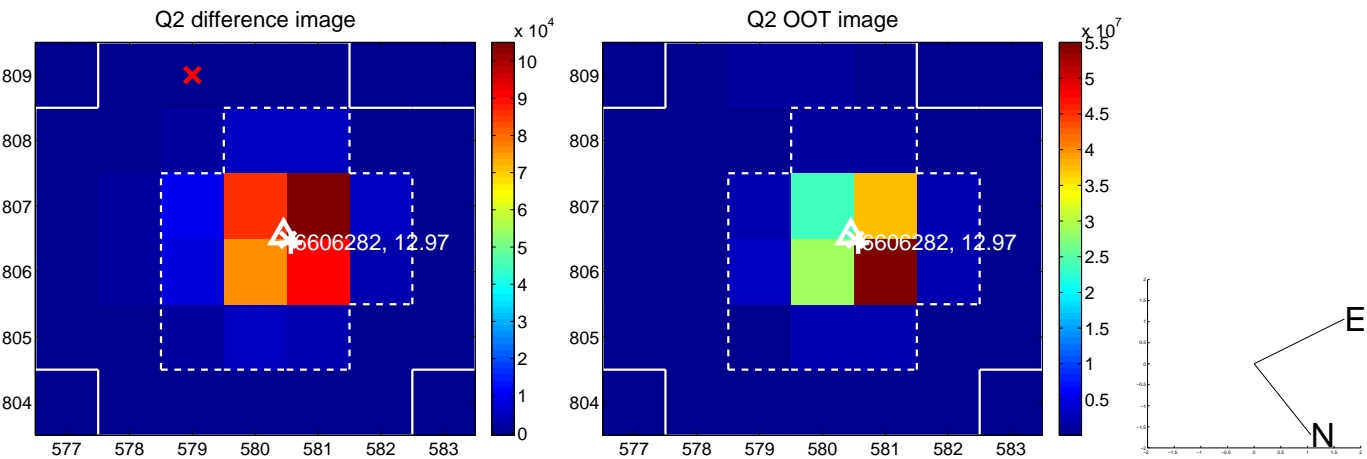
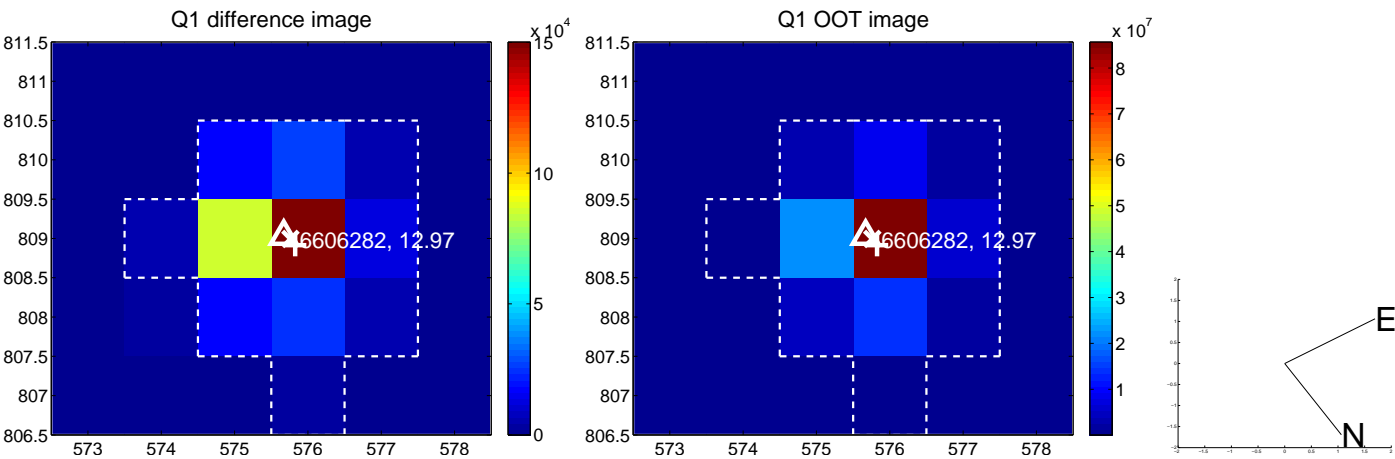
The direct PRF centroid is offset from the target star catalog position by about 0.49 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.668 ± 0.072	9.33	-0.255 ± 0.071	-0.618 ± 0.072
PRF-fit source offset from KIC position	0.342 ± 0.069	4.95	-0.188 ± 0.071	-0.286 ± 0.068
photometric centroid source offset	0.17 ± 0.01	14.80	-0.15 ± 0.01	0.08 ± 0.01

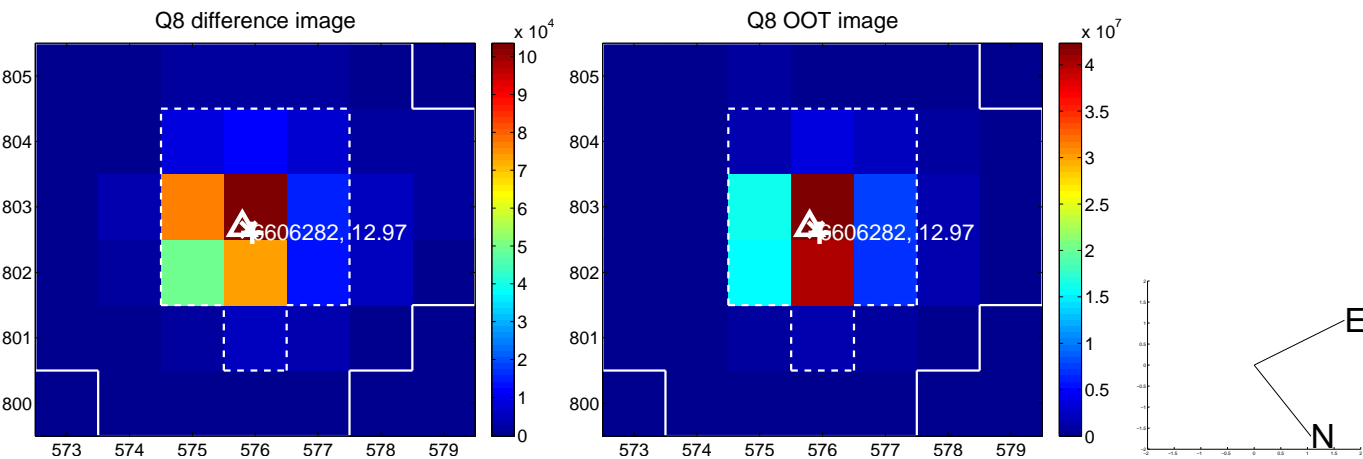
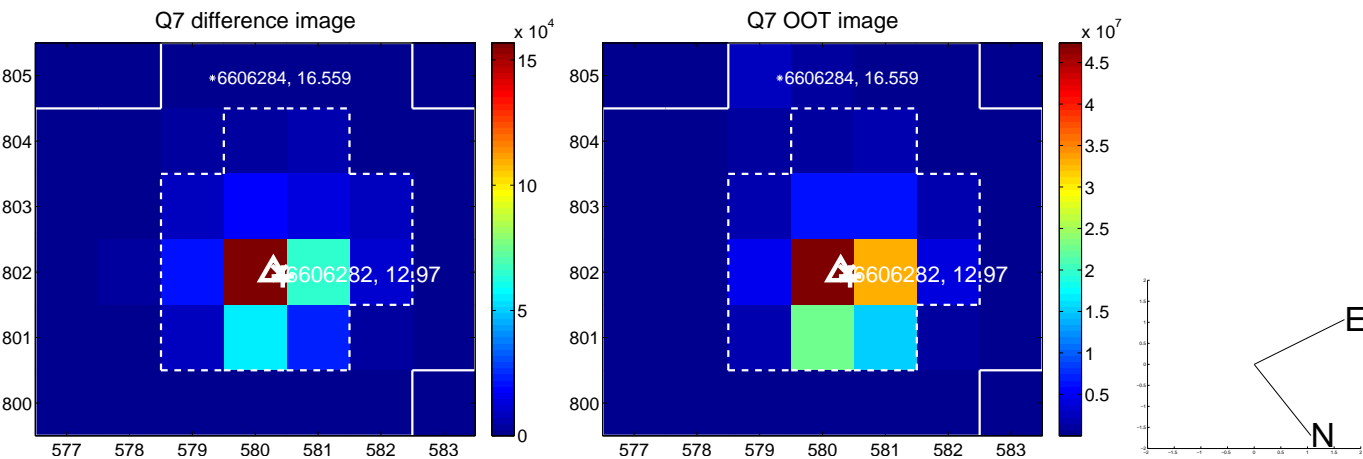
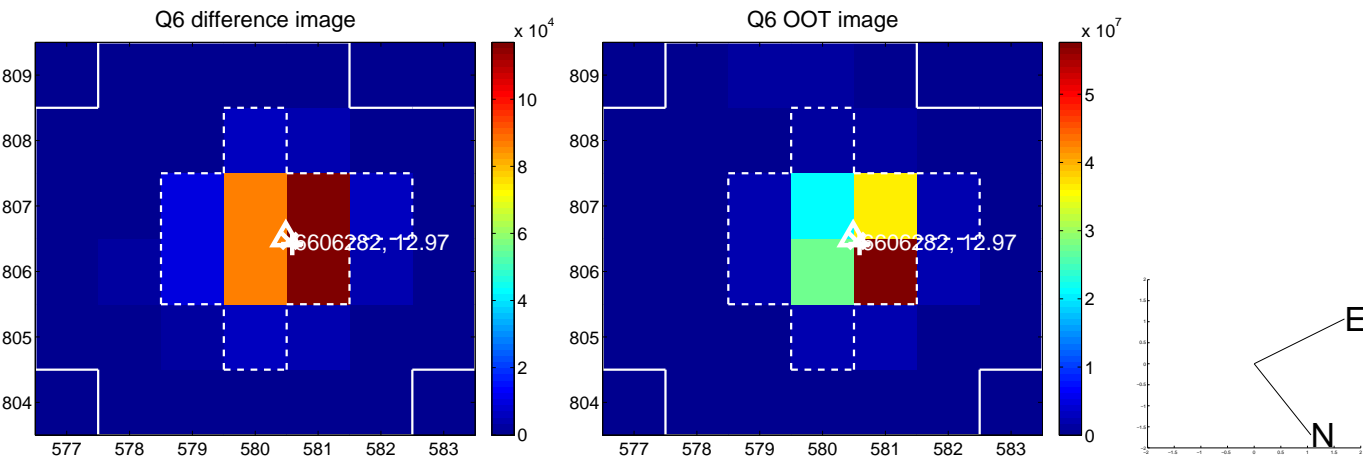
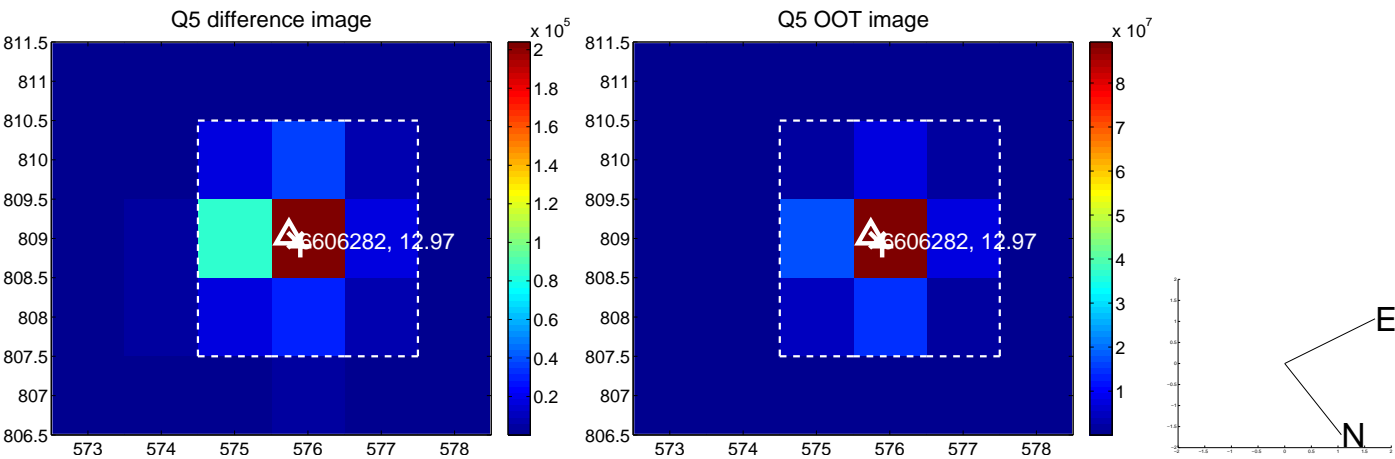


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

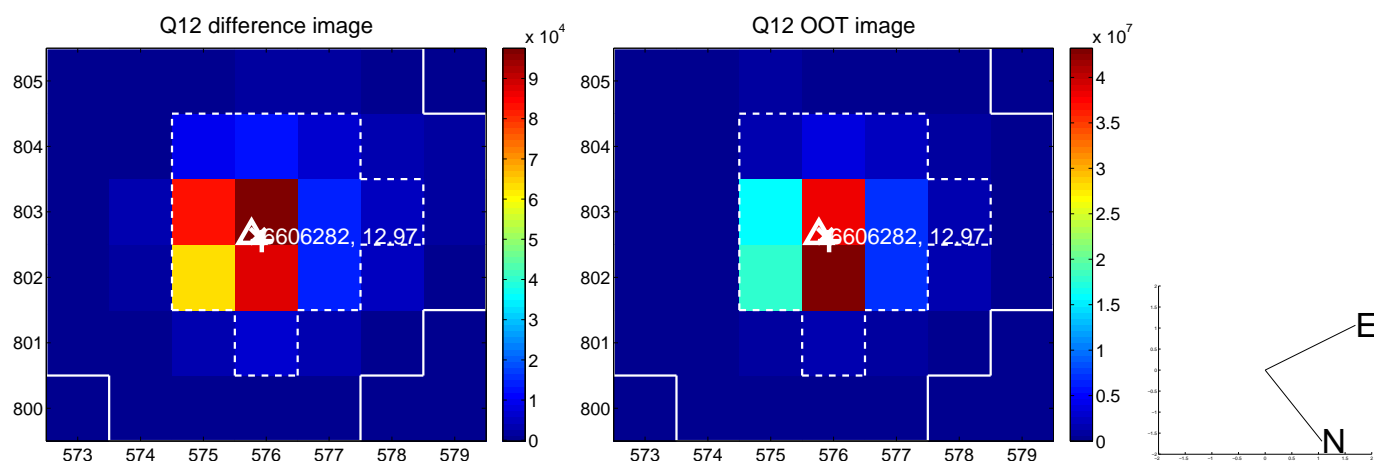
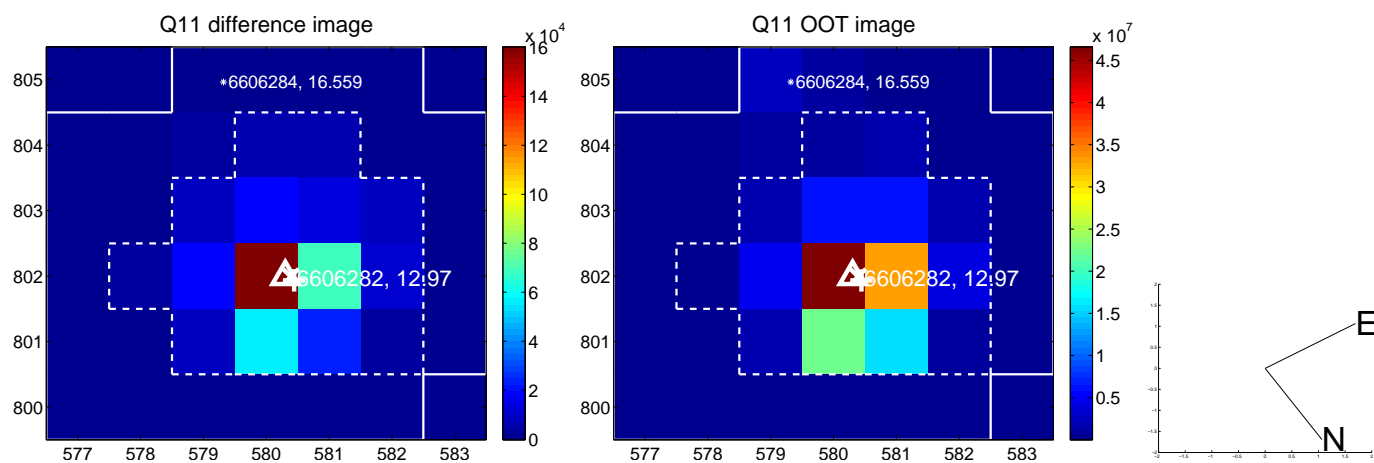
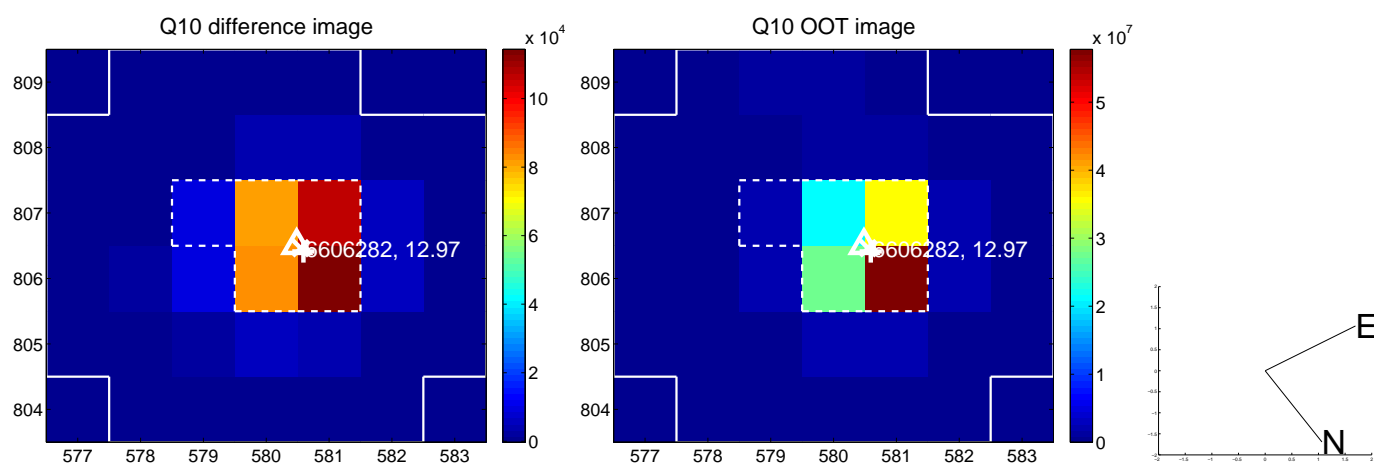
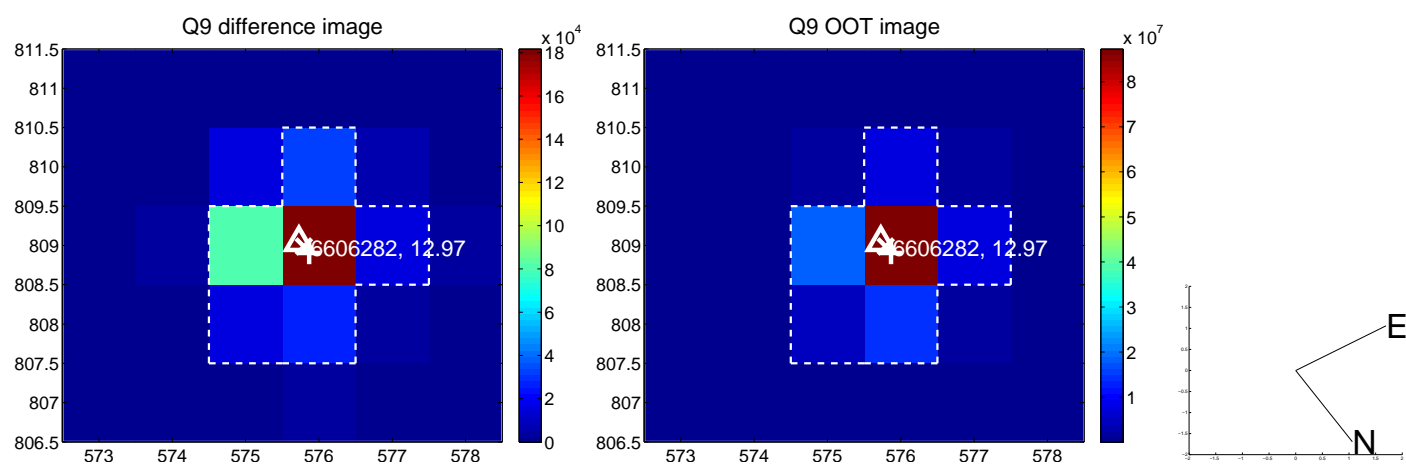
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



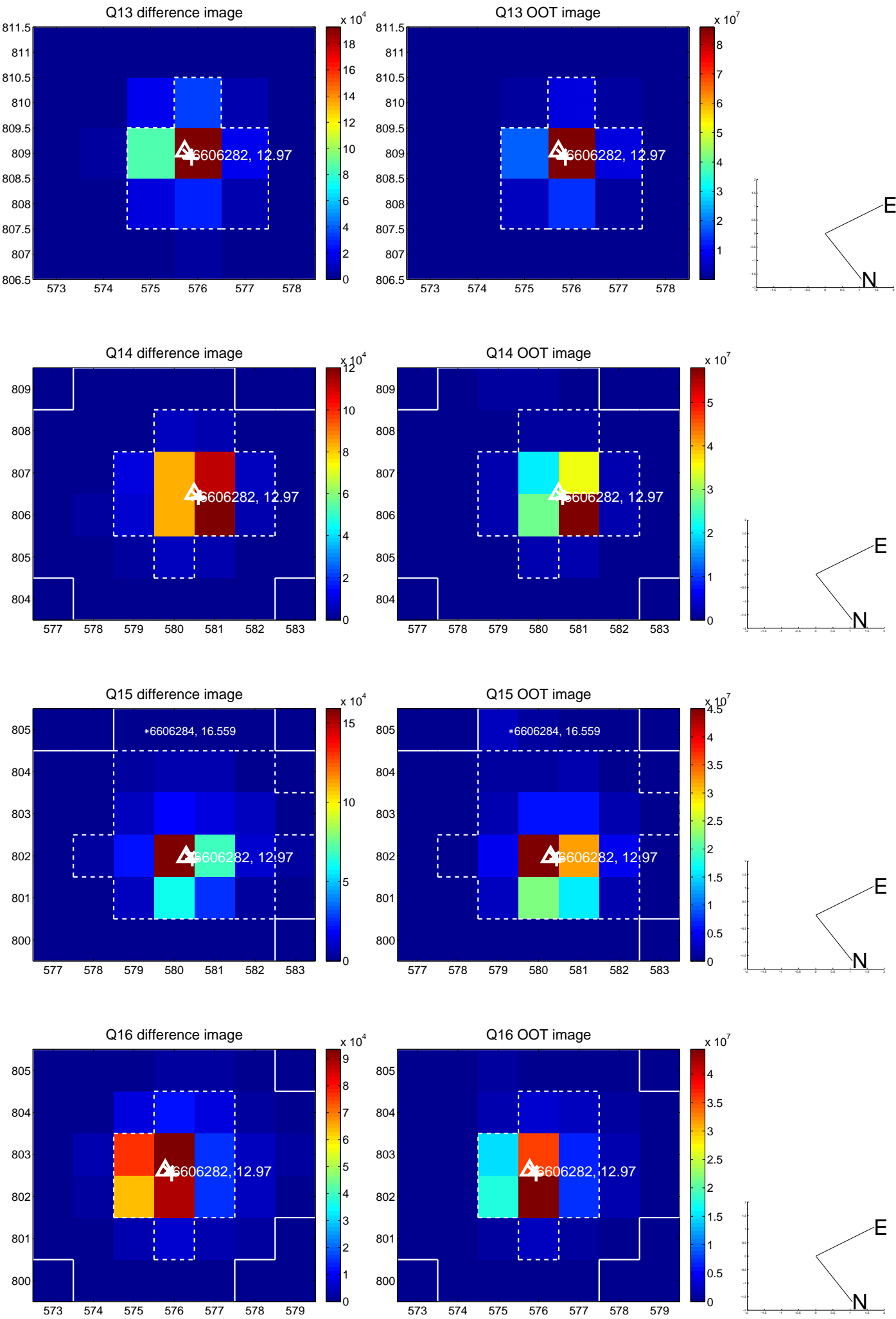
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



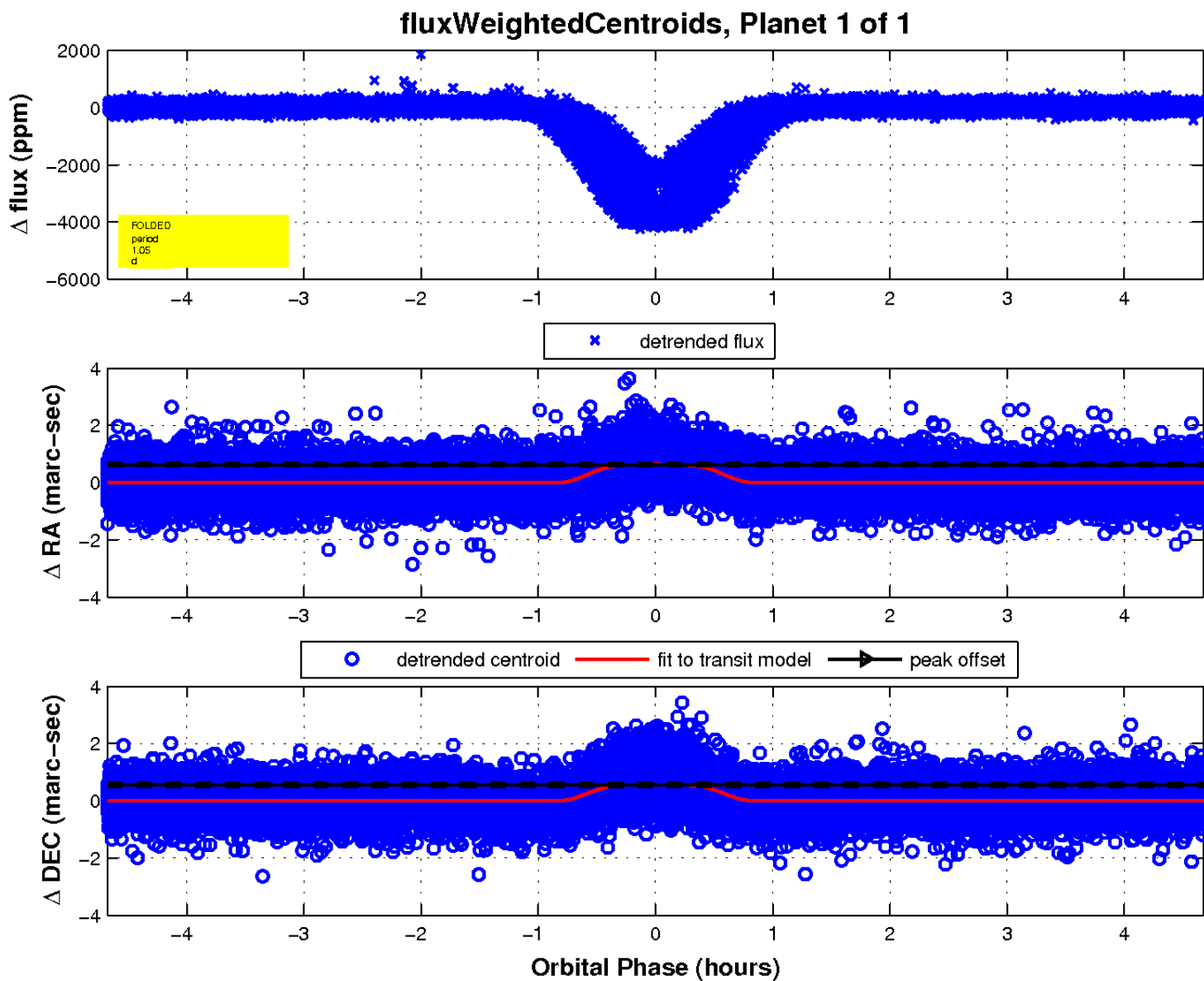
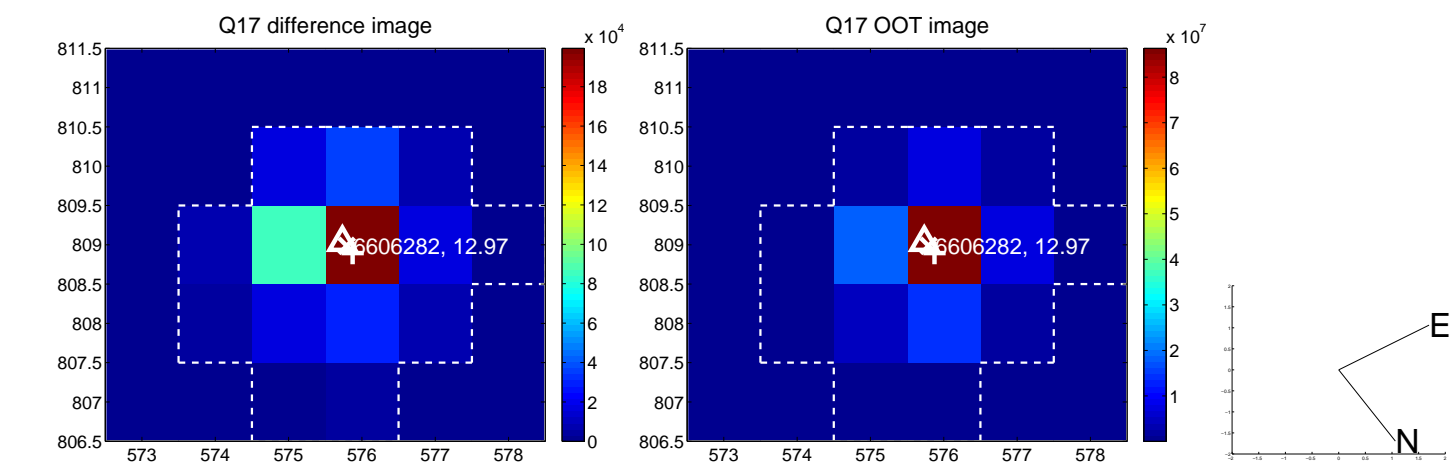
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

