

KIC 008939211

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})
008939211-01	OBS	5586.01	27.073535	137.282908	272.6	42.508	21.4	29.7	0.85	5906	2.78	30.04

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008939211-01	OBS	FP	0.00	1	0	0	0	LPP_DV

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

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

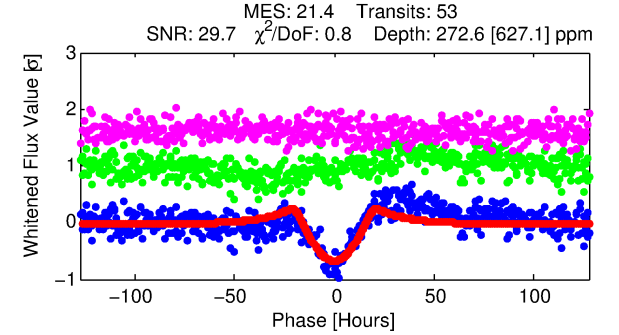
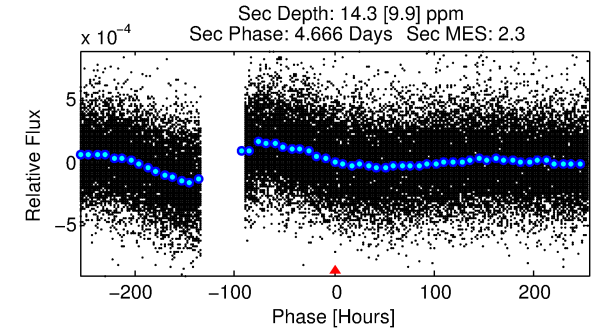
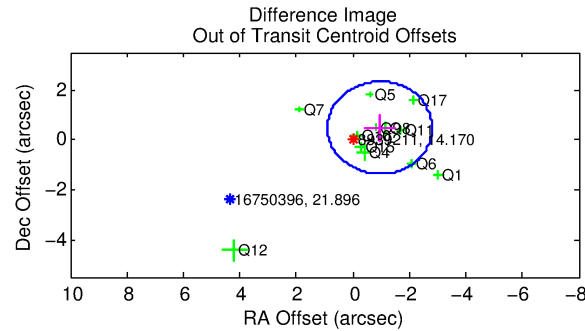
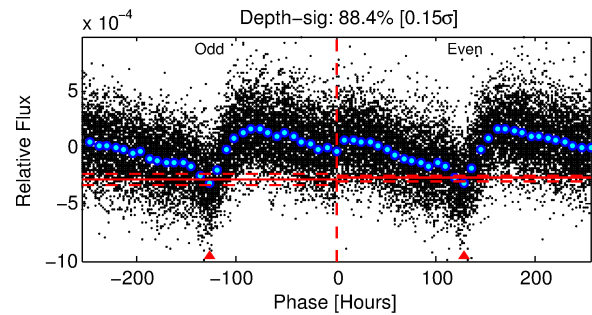
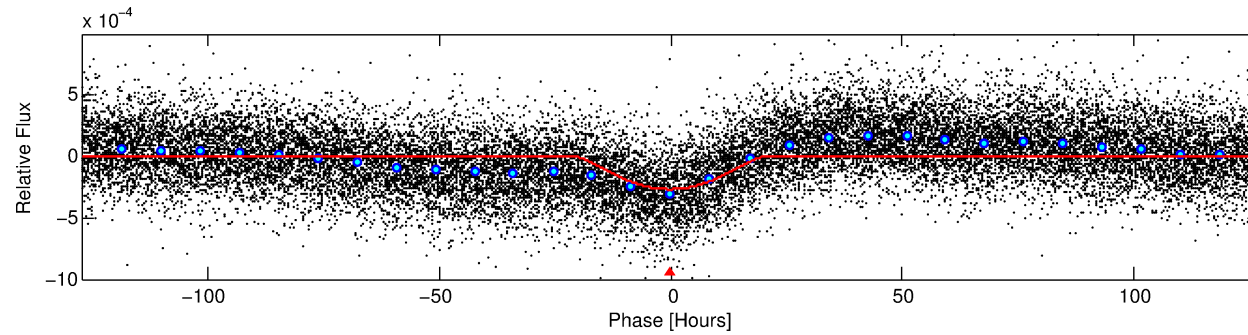
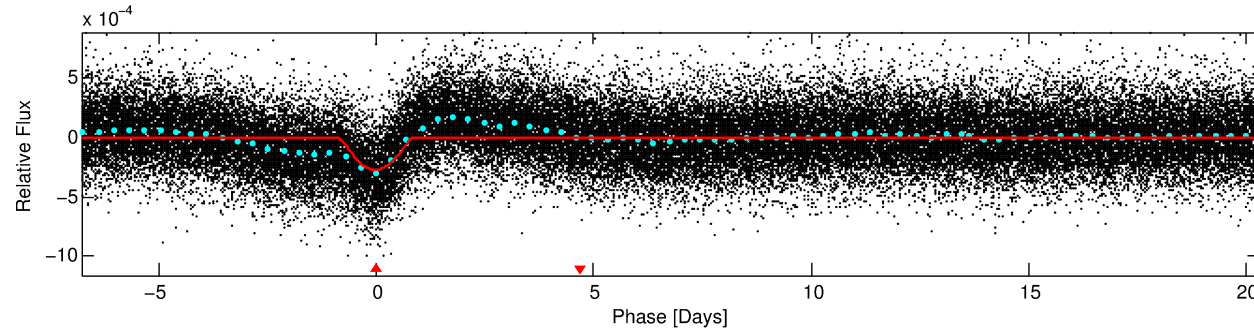
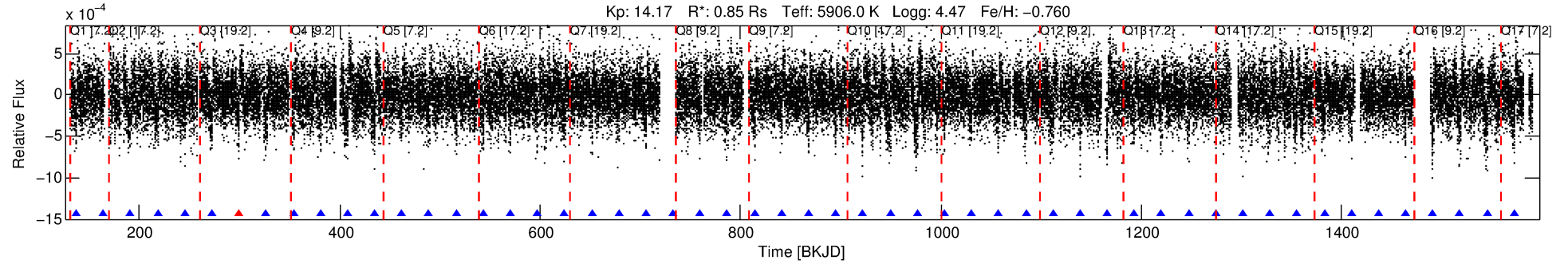
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008939211-01

No Significant Match Found

DV One-Page Summary

KIC: 8939211 Candidate: 1 of 1 Period: 27.074 d
KOI: K05586.01 Corr: 0.987



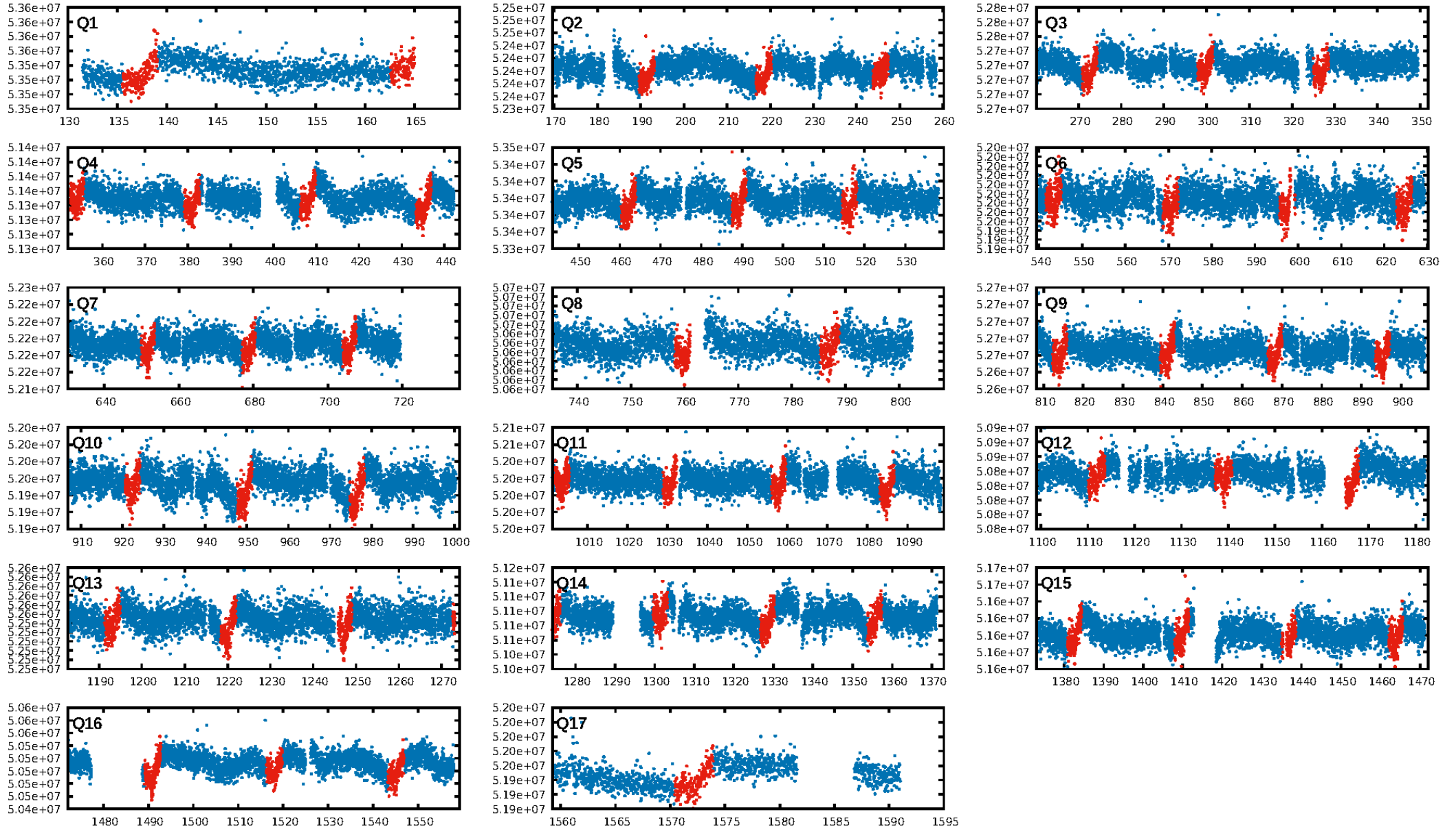
DV Fit Results:

Period = 27.07354 [0.00082] d
Epoch = 137.2829 [0.0246] BKJD
Rp/R* = 0.0299 [0.0217]
a/R* = 1.57 [0.16]
b = 1.00 [0.02]
Seff = 30.03 [8.93]
Teq = 597 [44] K
Rp = 2.78 [2.10] Re
a = 0.1619 [0.0302] AU
Ag = 26.83 [43.70] [0.59 σ]
Teffp = 2101 [845] K [1.78 σ]

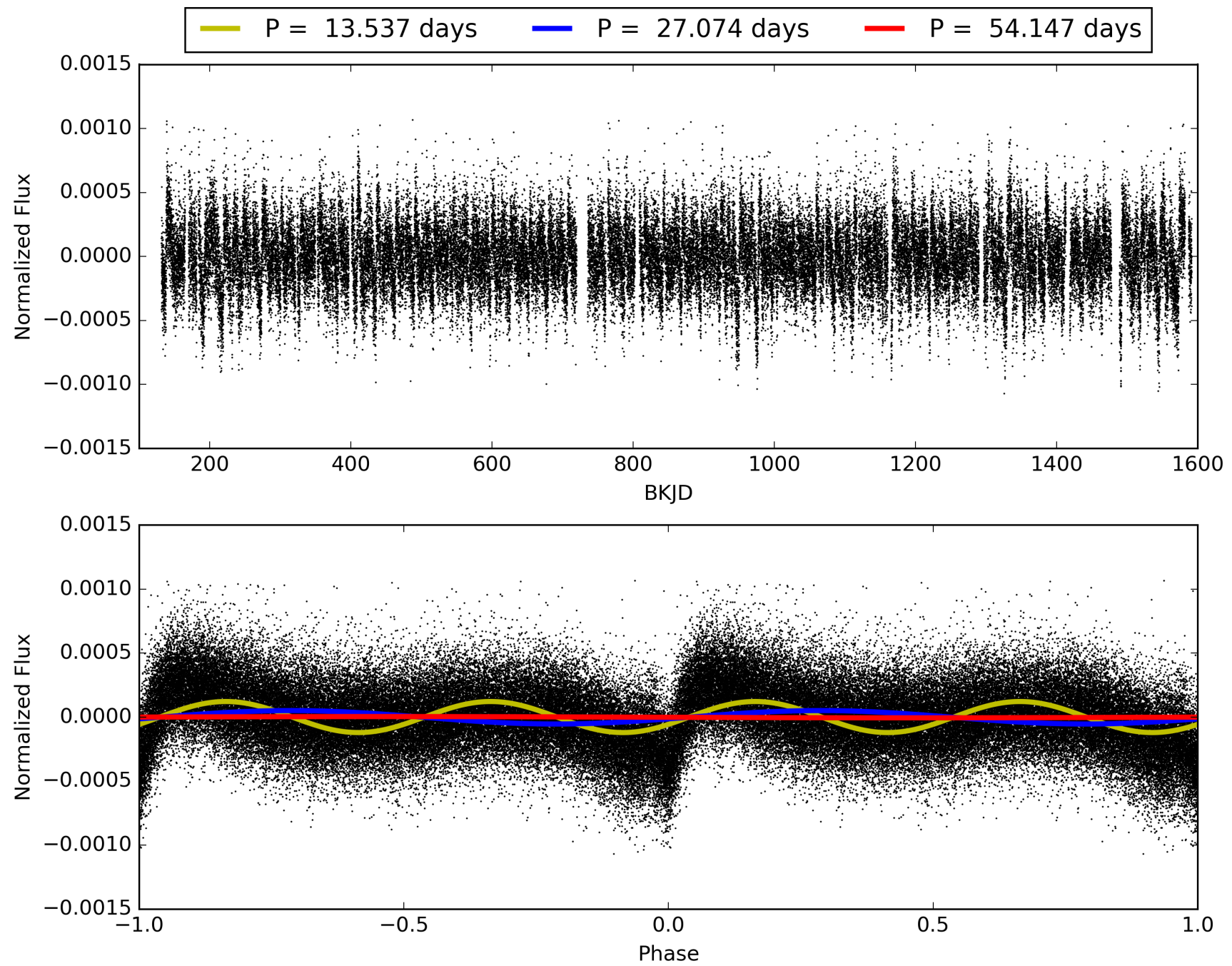
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 53.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.00e-96
RollingBand-fgt: 0.98 [49/50]
GhostDiagnostic-chr: 1.693
Centroid-sig: 34.2%
Centroid-so: 0.344 arcsec [1.07 σ]
OotOffset-rm: 1.063 arcsec [1.72 σ]
OotOffset-st: 2/3/3/4 [12]
KicOffset-rm: 1.141 arcsec [2.06 σ]
KicOffset-st: 2/3/3/4 [12]
DiffImageQuality-fgm: 0.83 [10/12]
DiffImageOverlap-fno: 1.00 [15/15]

TCE 008939211-01, PDC Light Curves

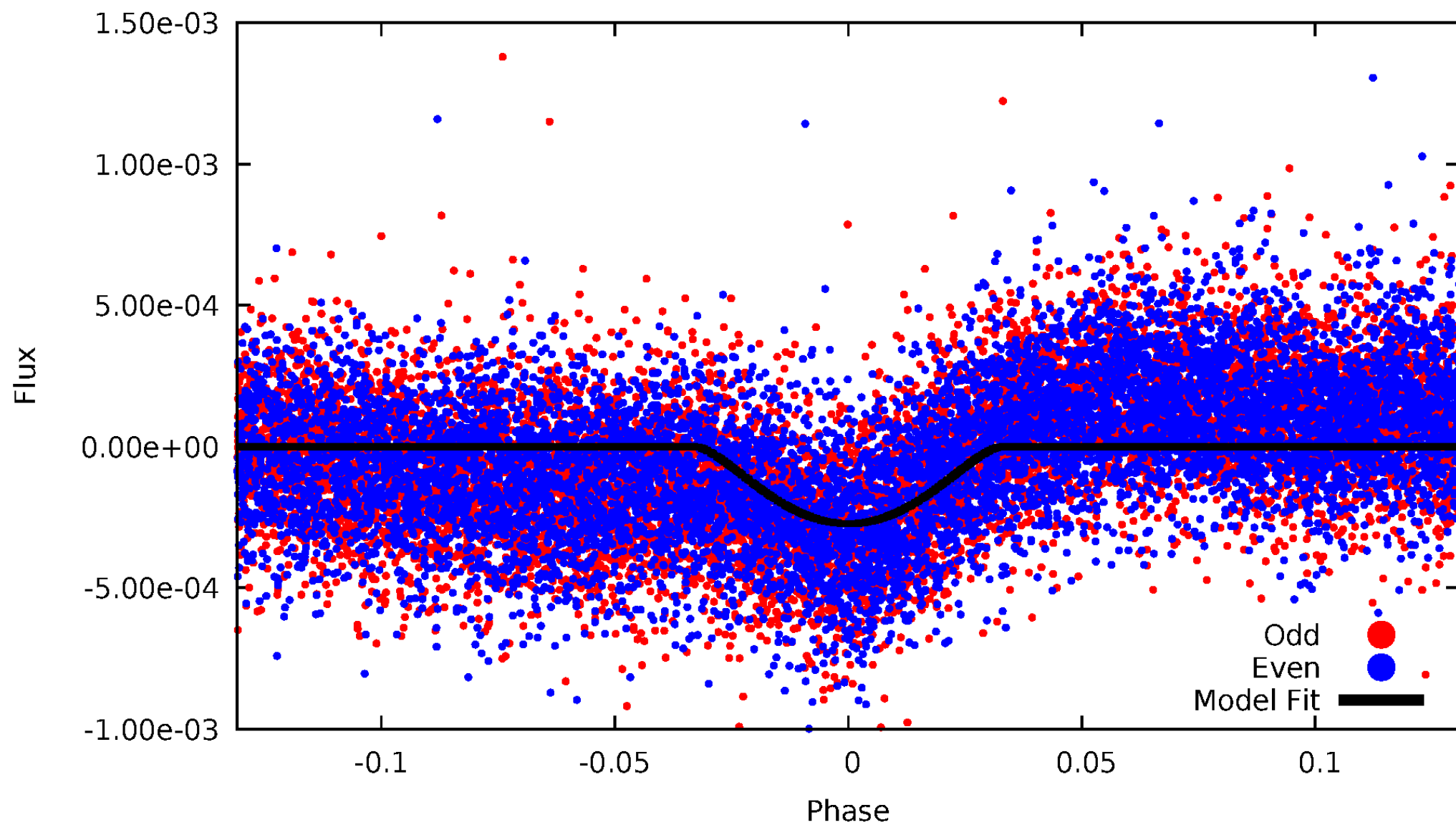


TCE 008939211-01



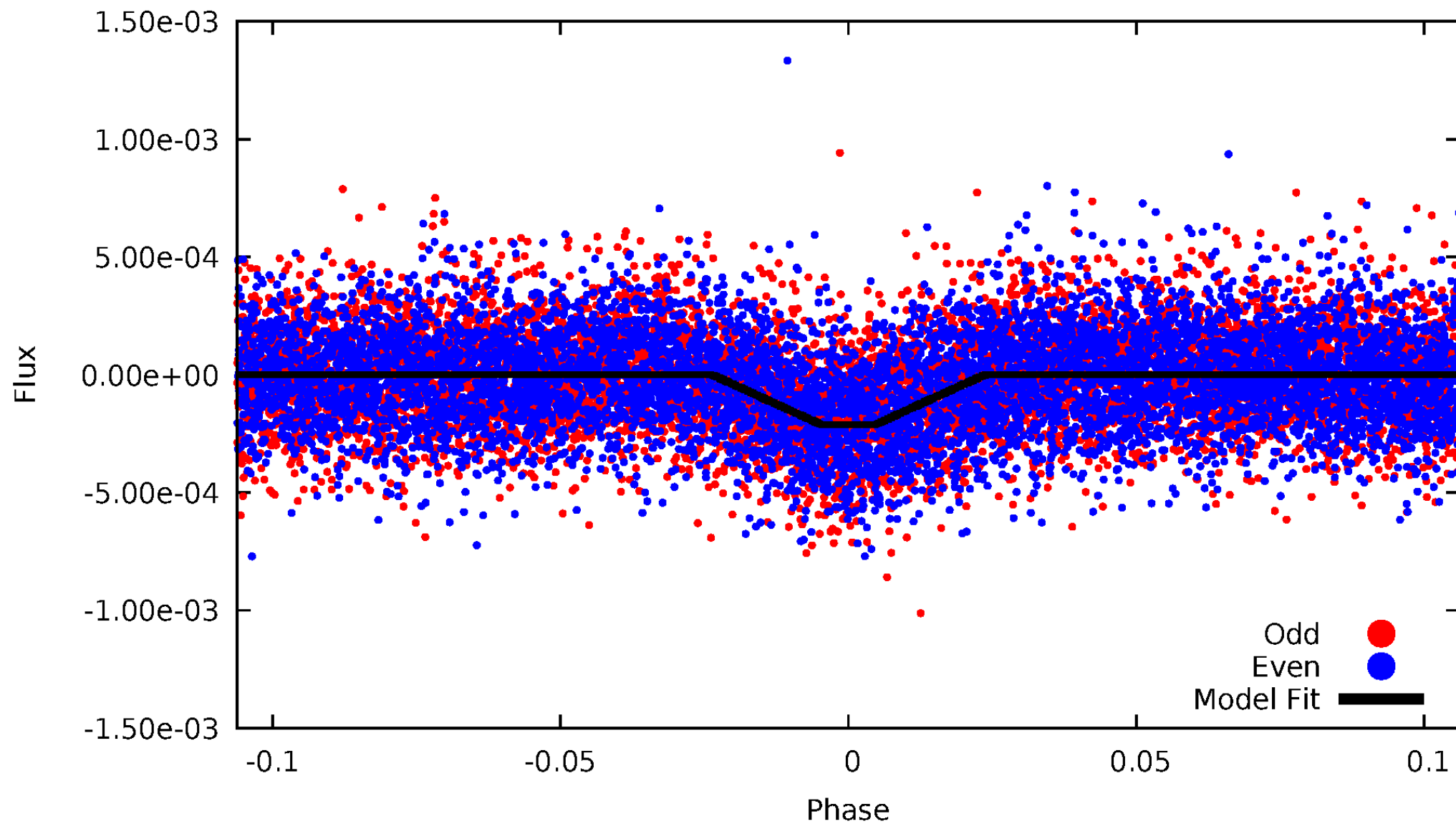
DV Odd/Even

TCE 008939211-01

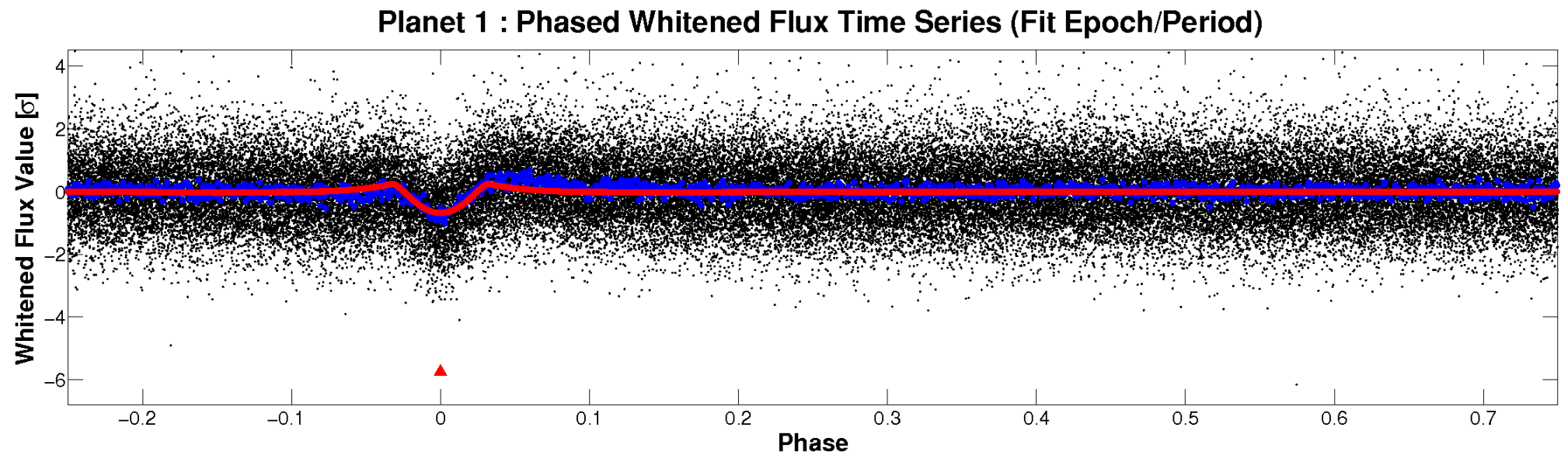
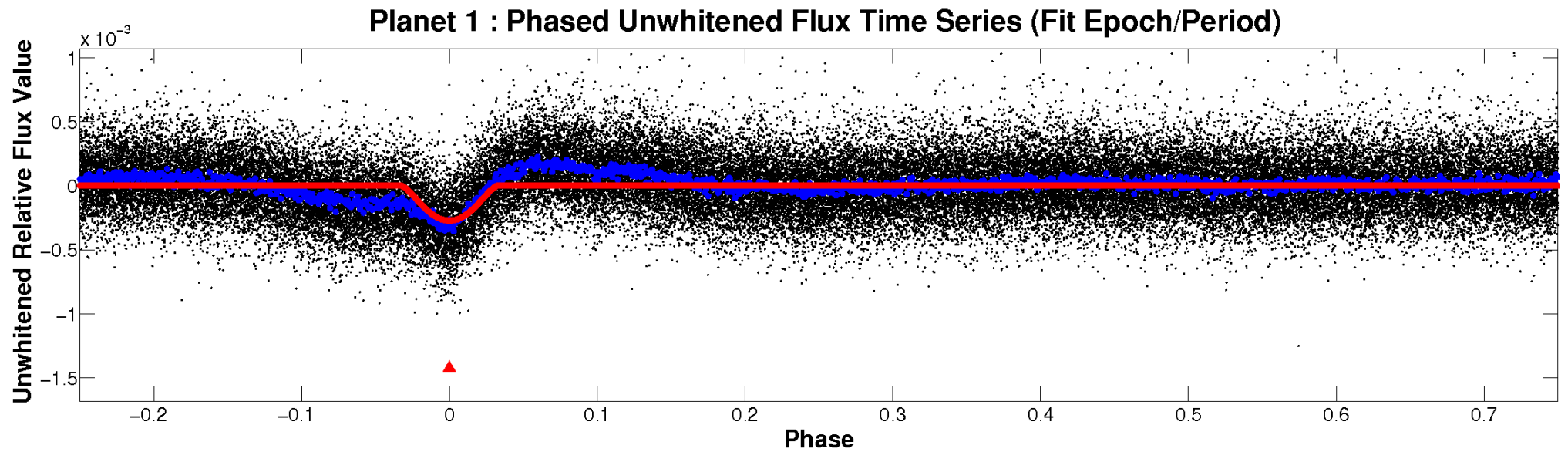


ALT Odd/Even

TCE 008939211-01

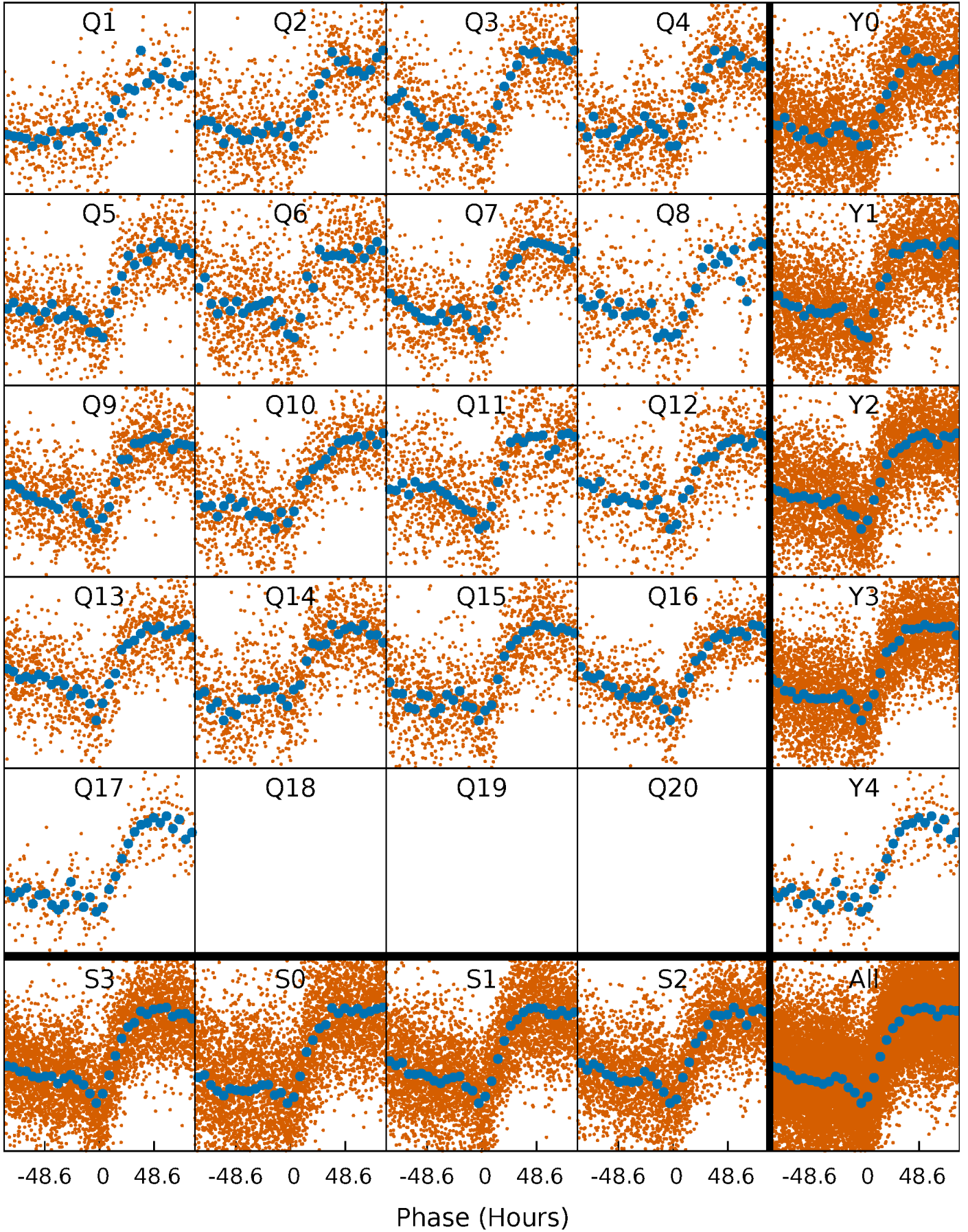


Non-Whitened Vs. Whitened Light Curve



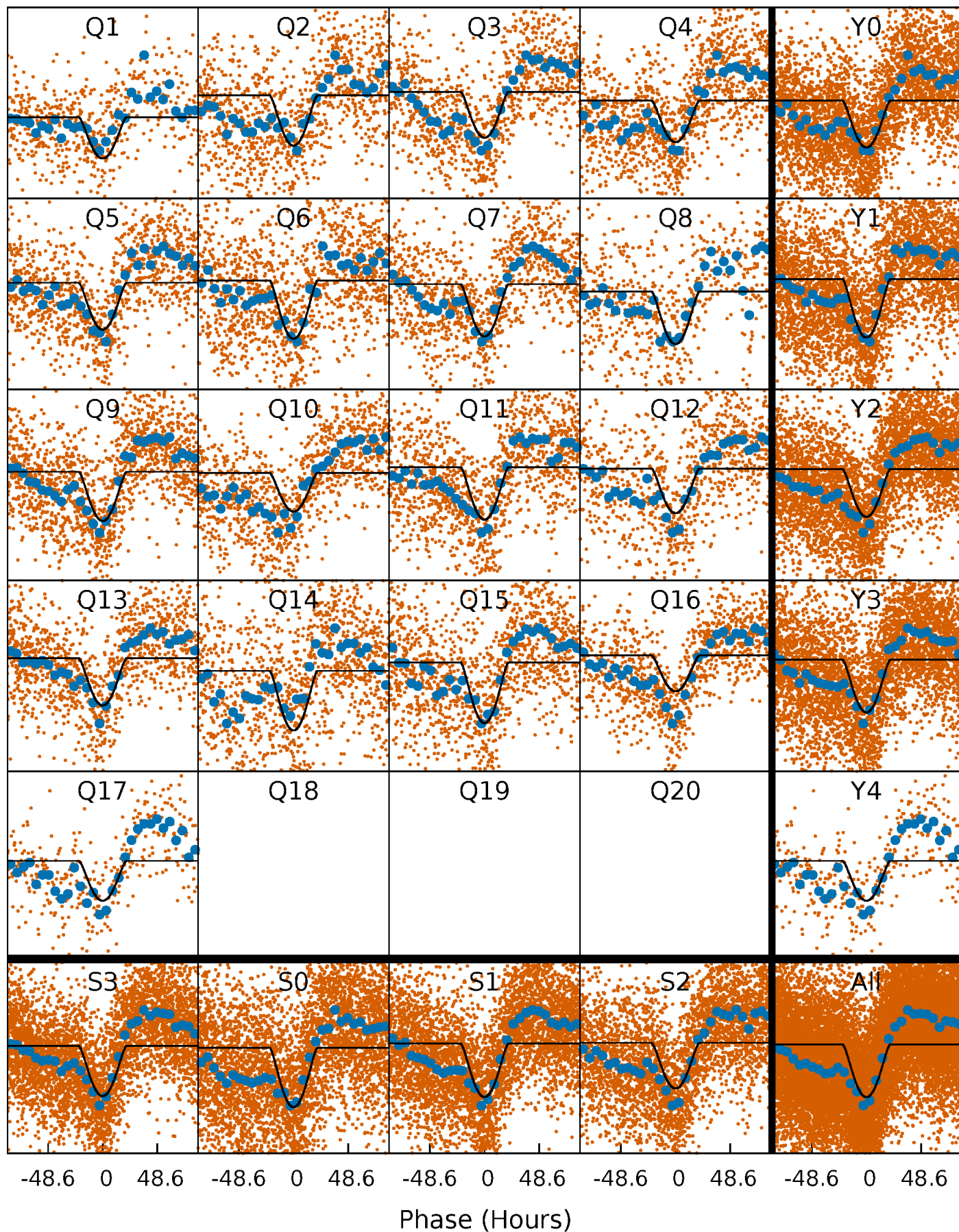
PDC Quarter-Phased Transit Curves

TCE 008939211-01 P= 27.073535 Days $T_0=137.282908$ (BKJD)



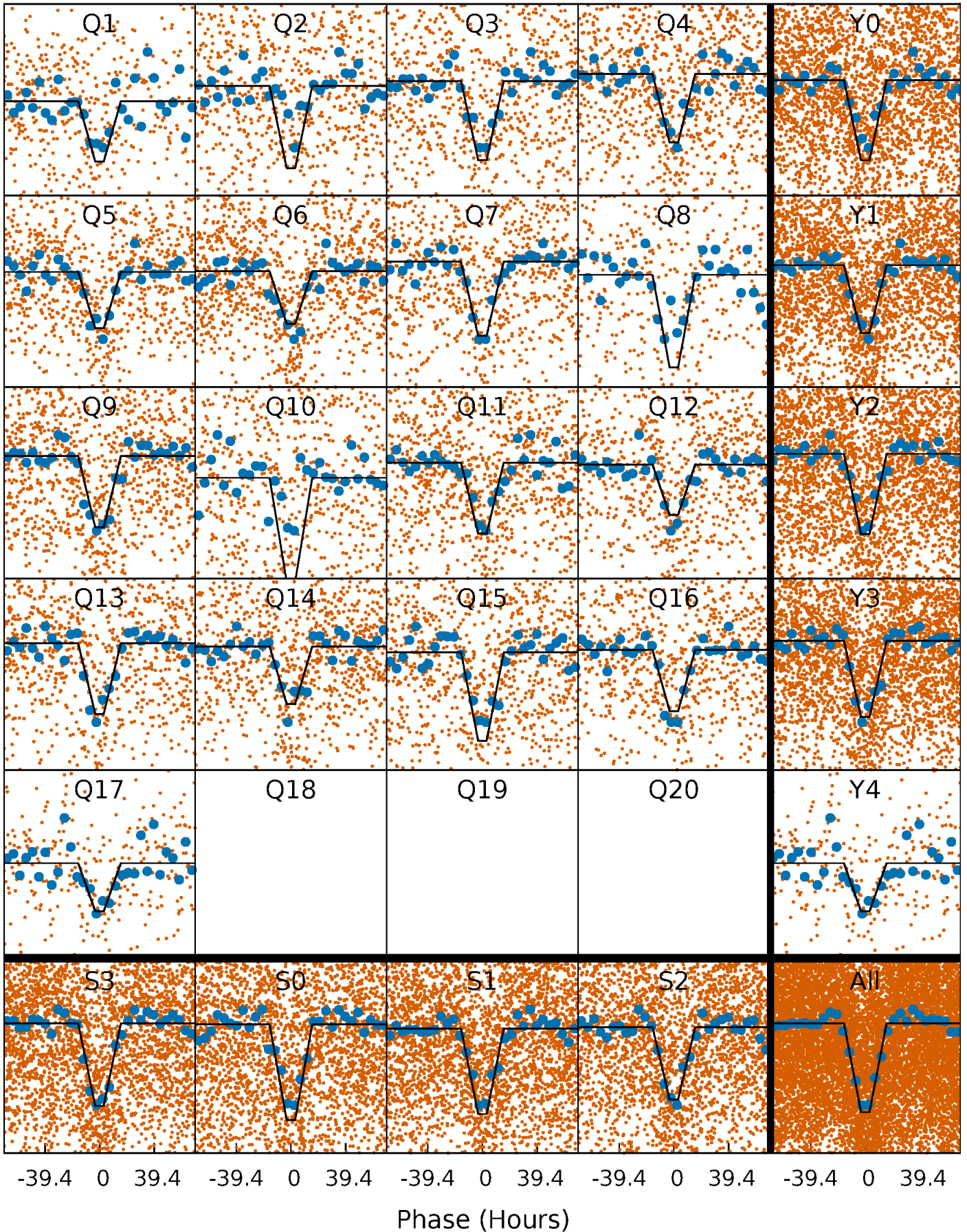
DV Quarter-Phased Transit Curves

TCE 008939211-01 P= 27.073535 Days $T_0=137.282908$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

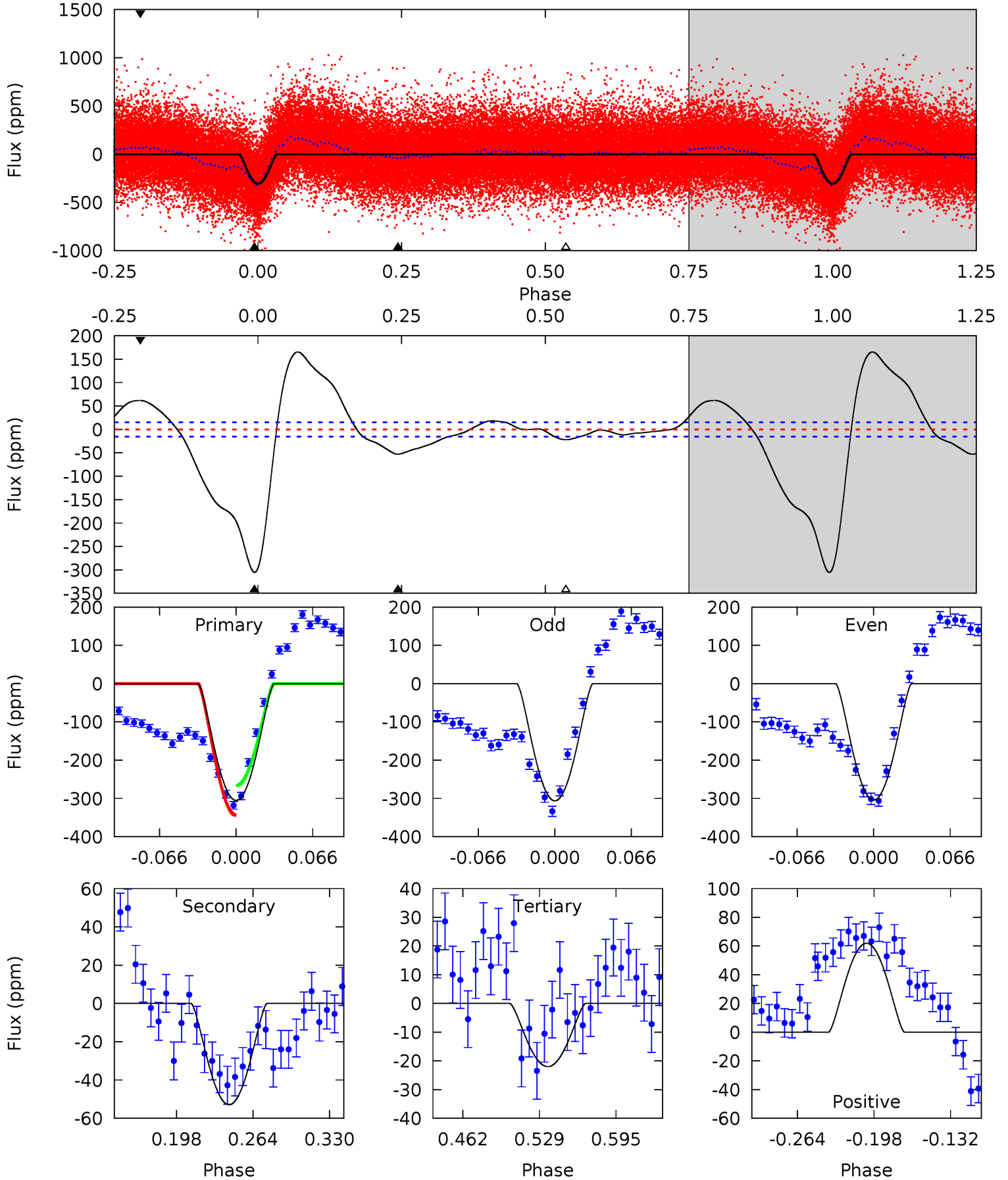
TCE 008939211-01 P= 27.072698 Days $T_0=137.320939$ (BKJD)



DV Model-Shift Uniqueness Test

008939211-01, P = 27.073535 Days, E = 110.209373 Days

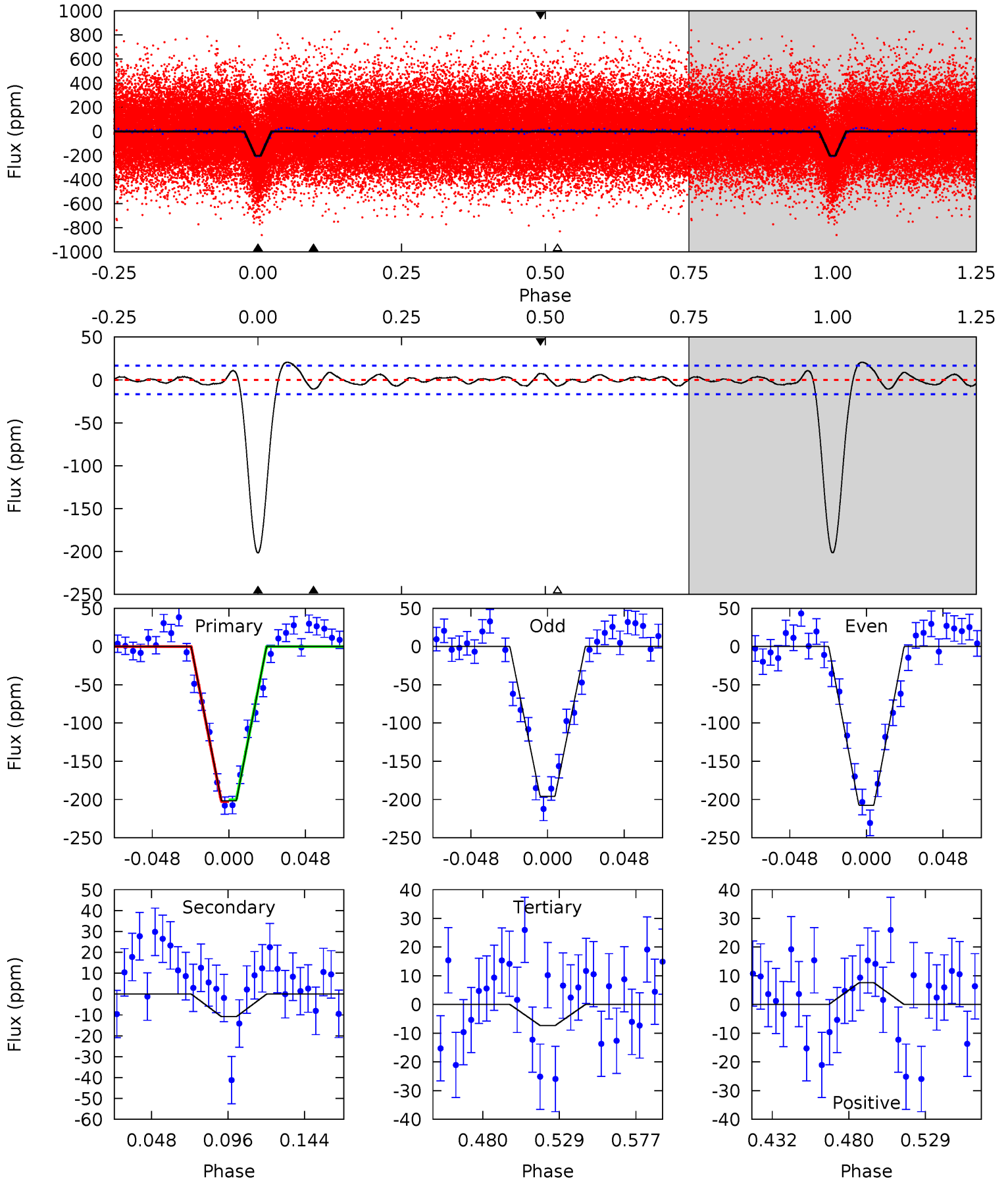
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
93.0	16.1	6.70	18.9	4.65	1.84	16.9	86.3	74.1	9.41	-2.75	0.33	1.01	0.35	11.8



Alt Model-Shift Uniqueness Test

008939211-01, $P = 27.072698$ Days, $E = 110.248241$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
57.4	3.08	2.09	2.16	4.72	1.98	0.99	55.3	55.2	0.99	0.93	1.66	0.97	0.09	0.34



Stellar Parameters For KIC 008939211

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5906^{+159}_{-159}	$4.467^{+0.112}_{-0.154}$	$-0.760^{+0.300}_{-0.300}$	$0.850^{+0.184}_{-0.107}$	$0.773^{+0.091}_{-0.049}$	$1.772^{+0.947}_{-0.764}$
	+3%/-3%	+3%/-3%	+39%/-39%	+22%/-13%	+12%/-6%	+53%/-43%
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 008939211-01 / KOI 5586.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-53 ± 3	$2.92^{+2.03}_{-1.72}$	837^{+44}_{-41}	3362^{+1180}_{-455}	89^{+456}_{-57}
Alt.	-11 ± 4	$1.96^{+1.87}_{-1.26}$	838^{+47}_{-40}	2973^{+1260}_{-503}	37^{+304}_{-28}

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 $A_{obs} \gg 1.0$

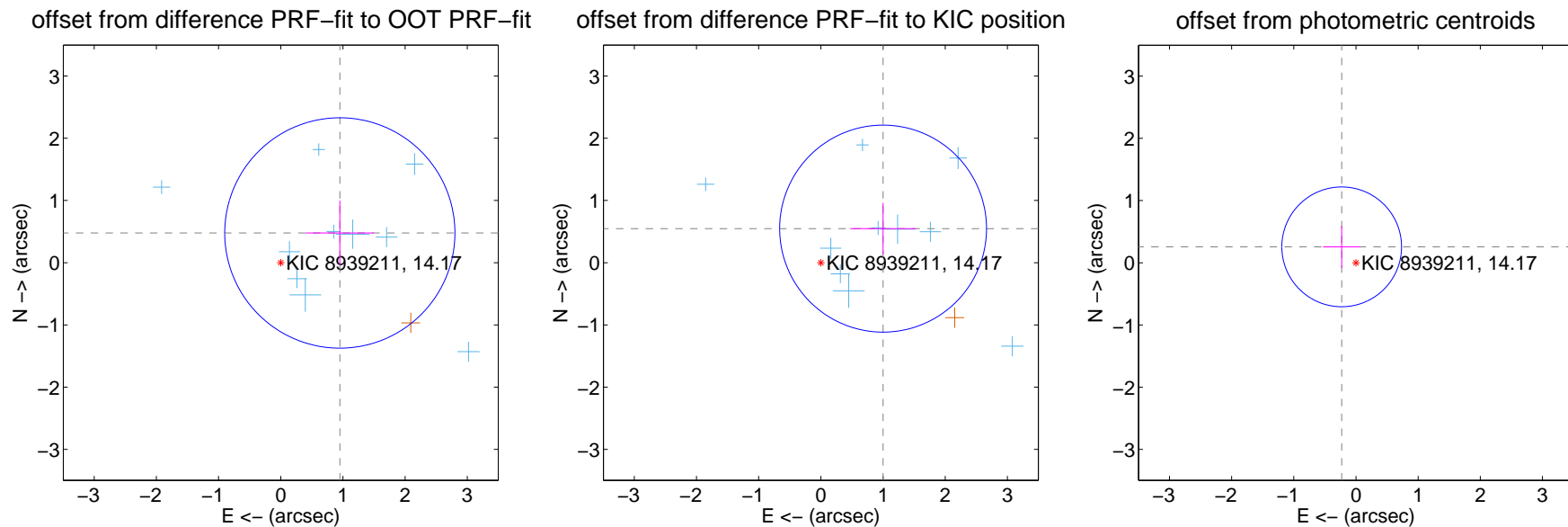
DV Centroid Data

Supplemental centroid analysis for 008939211-01. Kepler magnitude: 14.17. Transit SNR 29.68

There are 10 quarters with good PRF difference image offsets

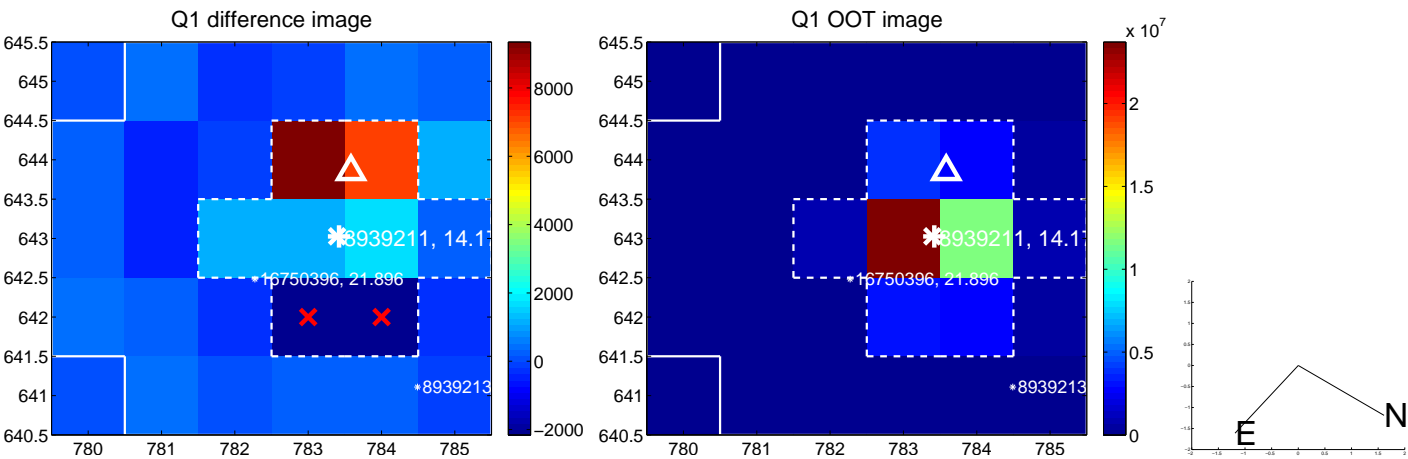
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.063 ± 0.617	1.72	-0.950 ± 0.546	0.478 ± 0.519
PRF-fit source offset from KIC position	1.141 ± 0.554	2.06	-1.001 ± 0.528	0.547 ± 0.415
photometric centroid source offset	0.34 ± 0.32	1.07	0.23 ± 0.30	0.26 ± 0.34

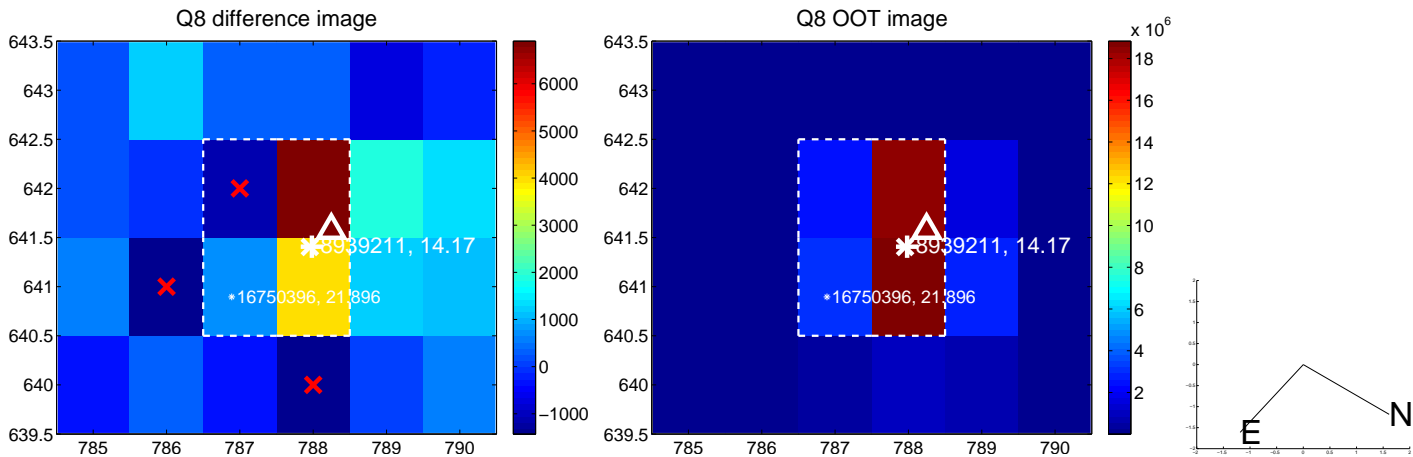
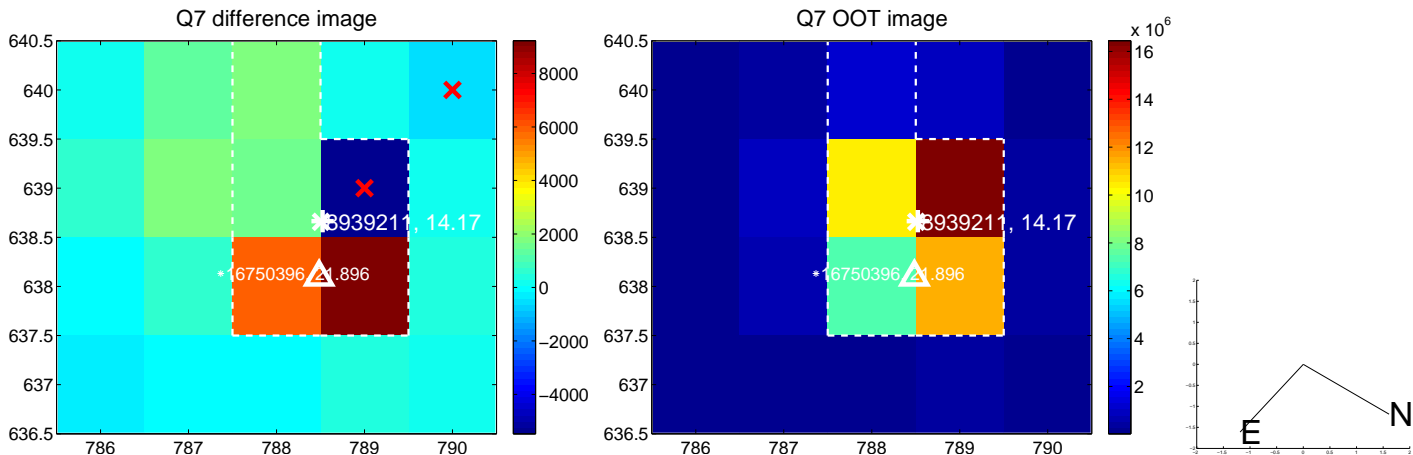
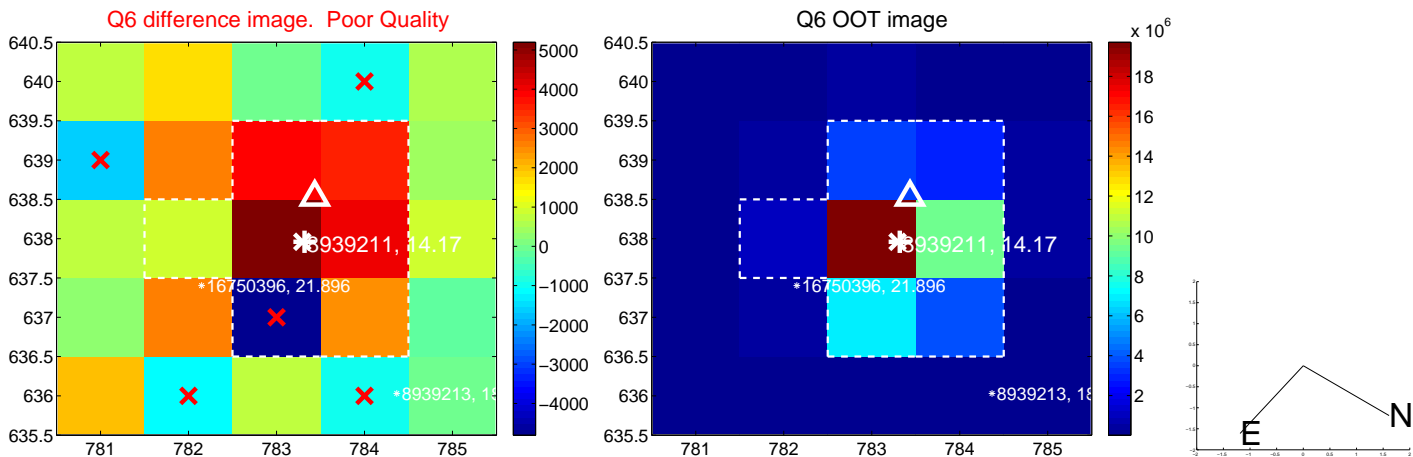
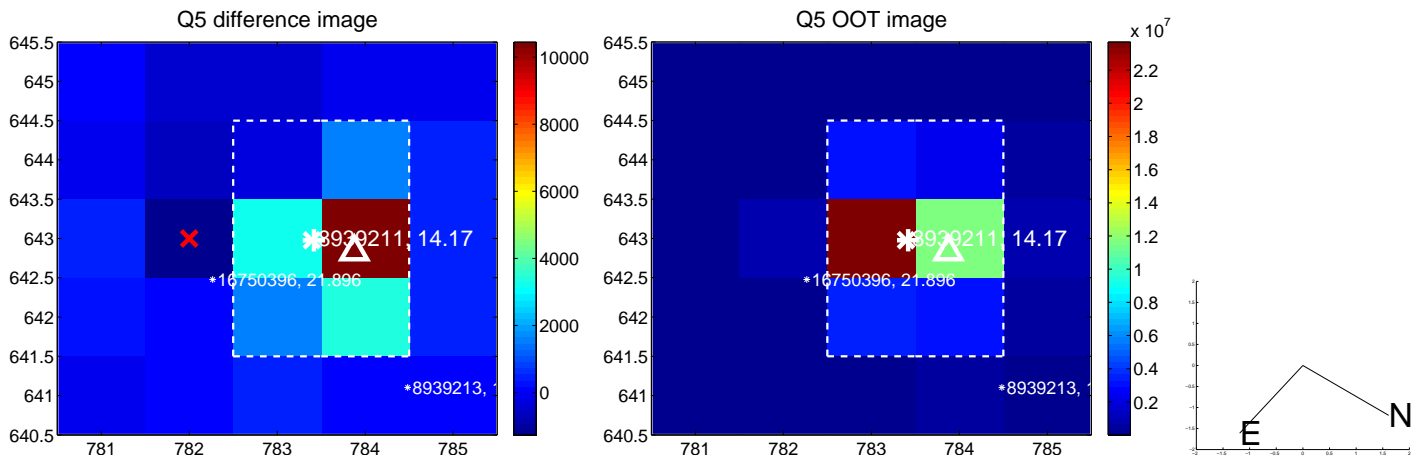


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

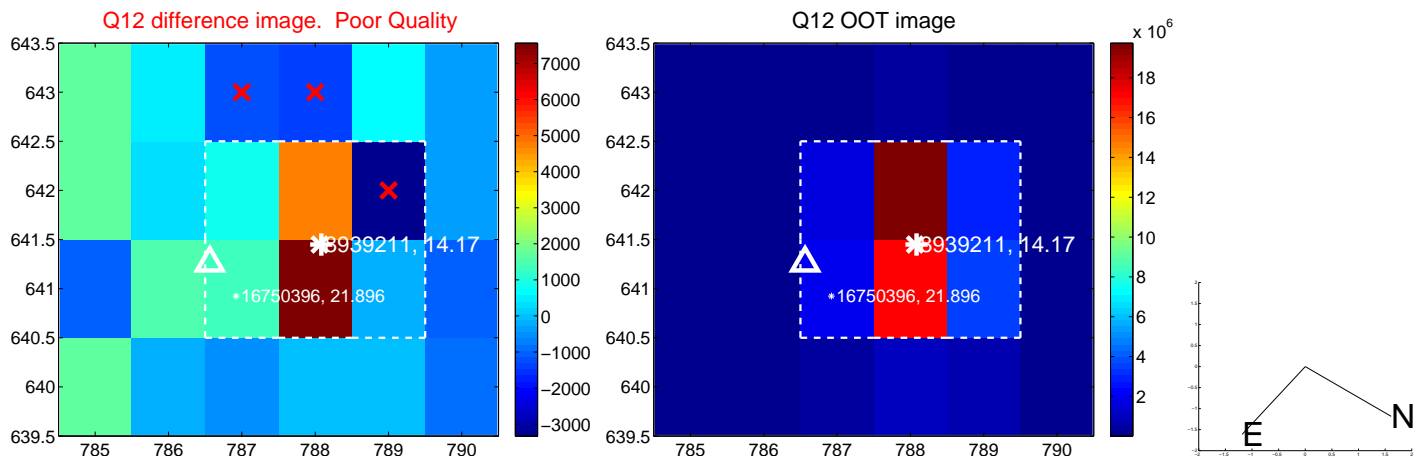
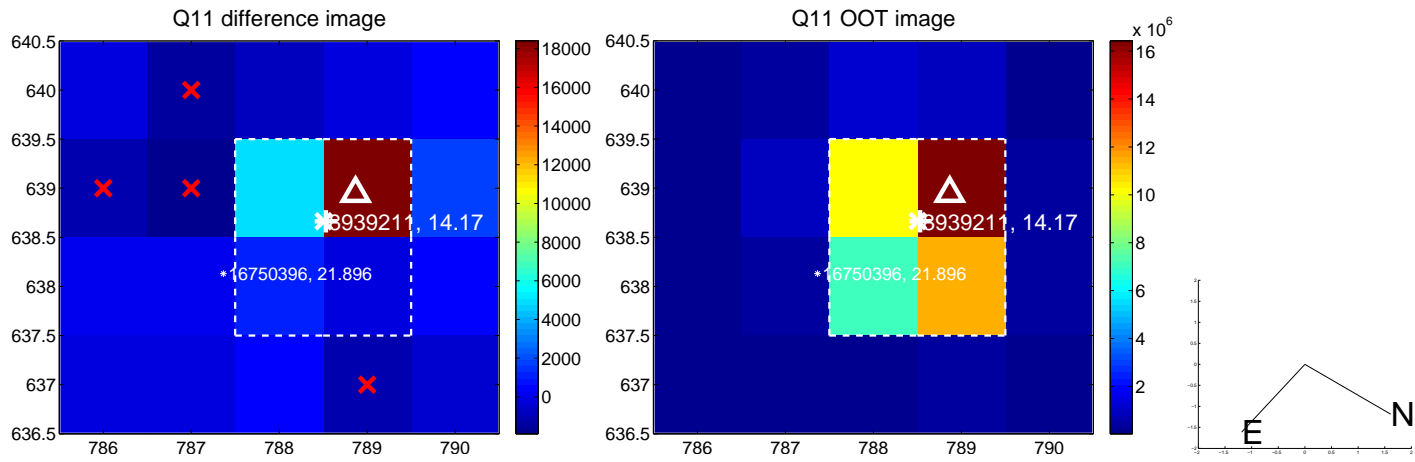
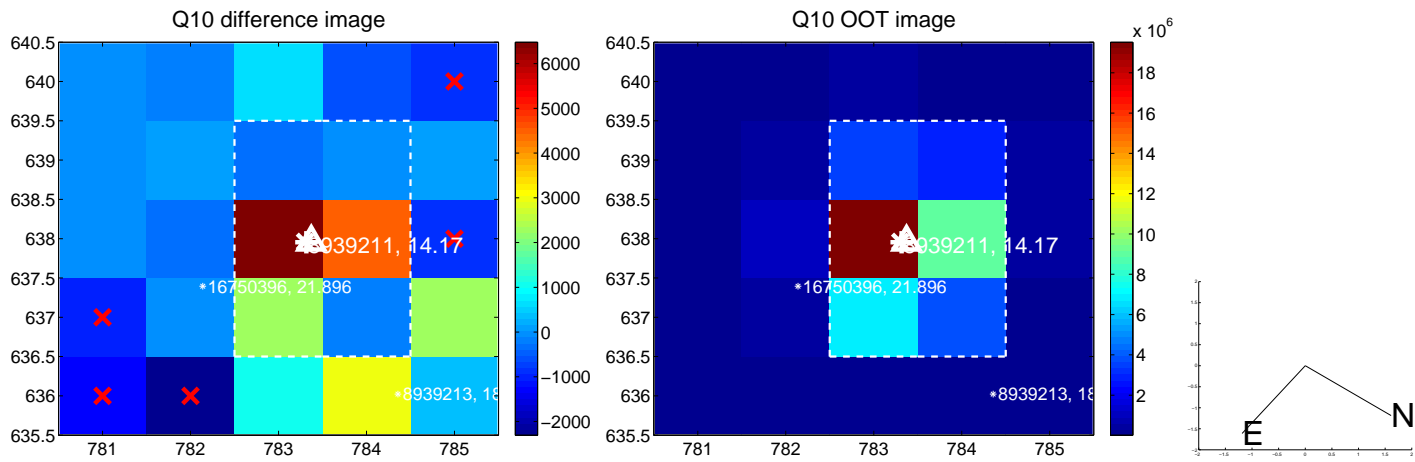
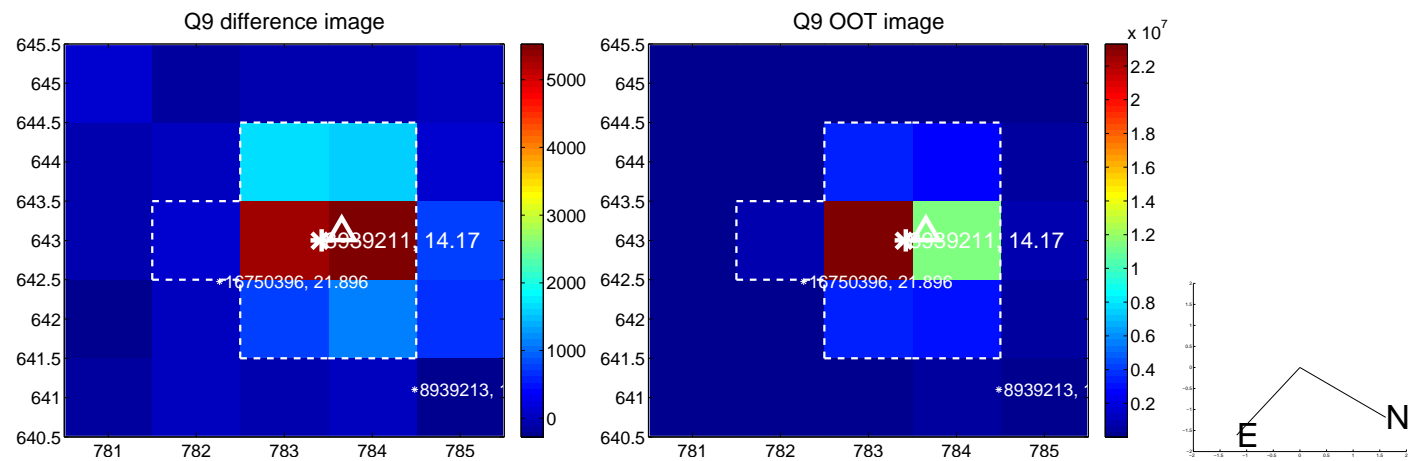
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



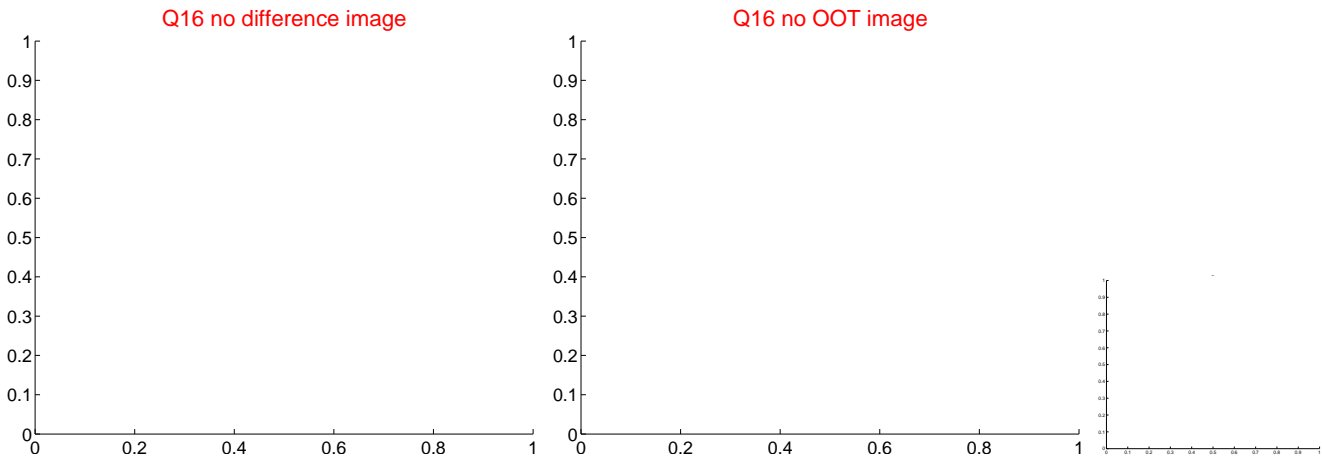
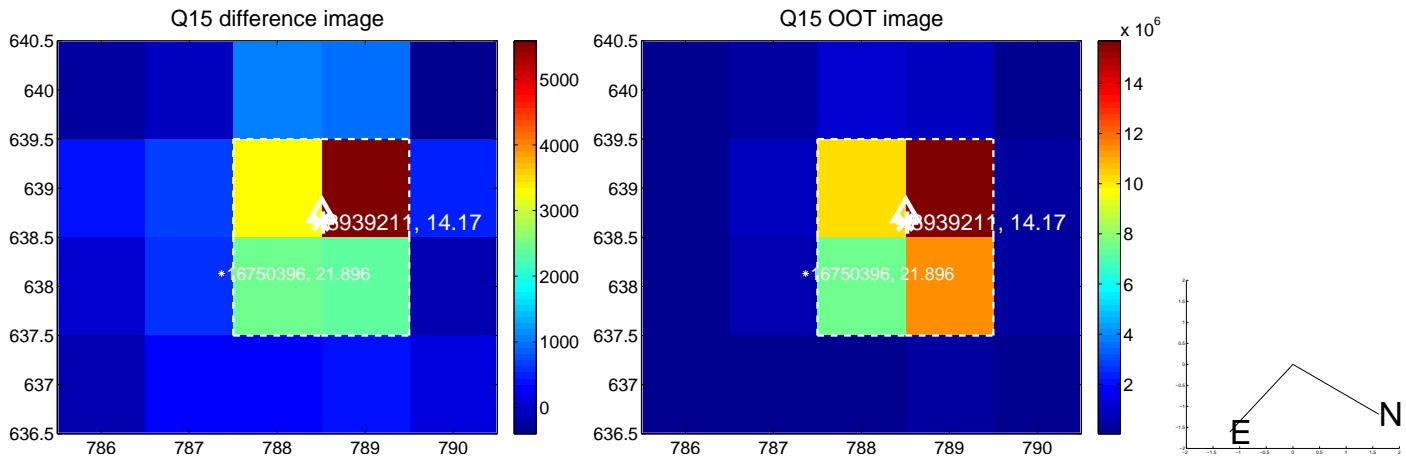
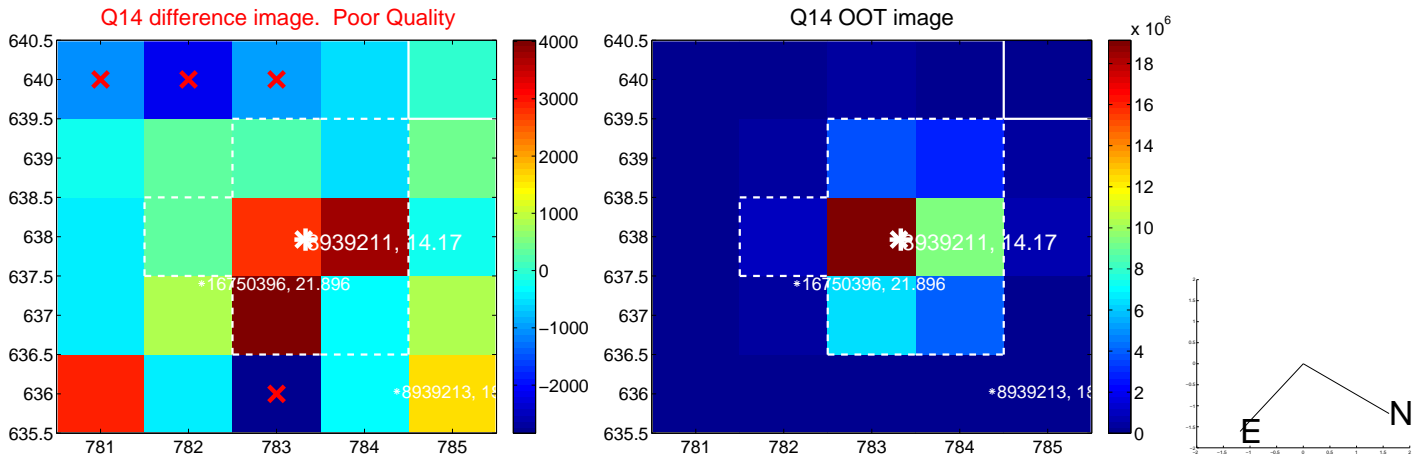
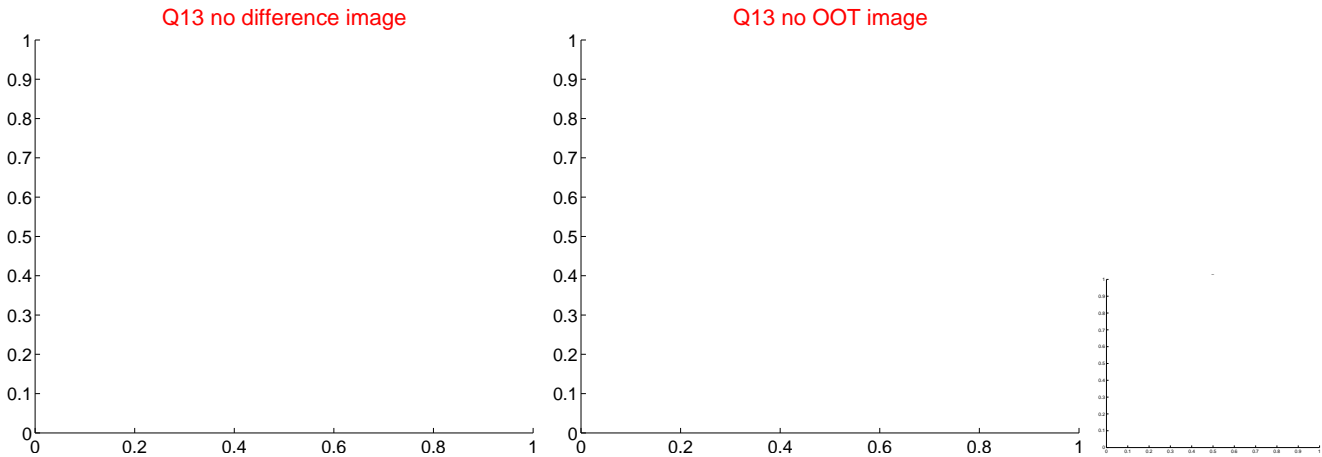
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



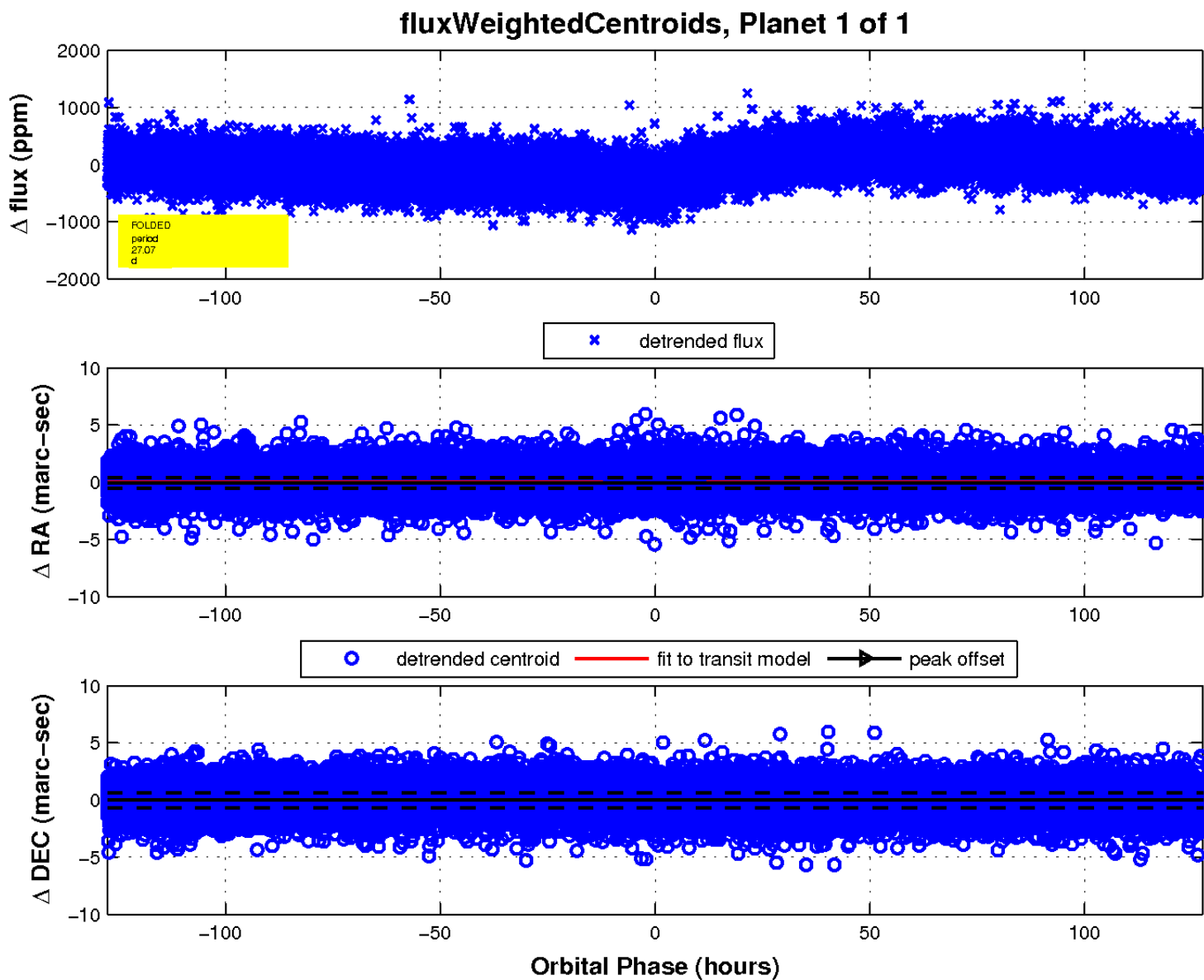
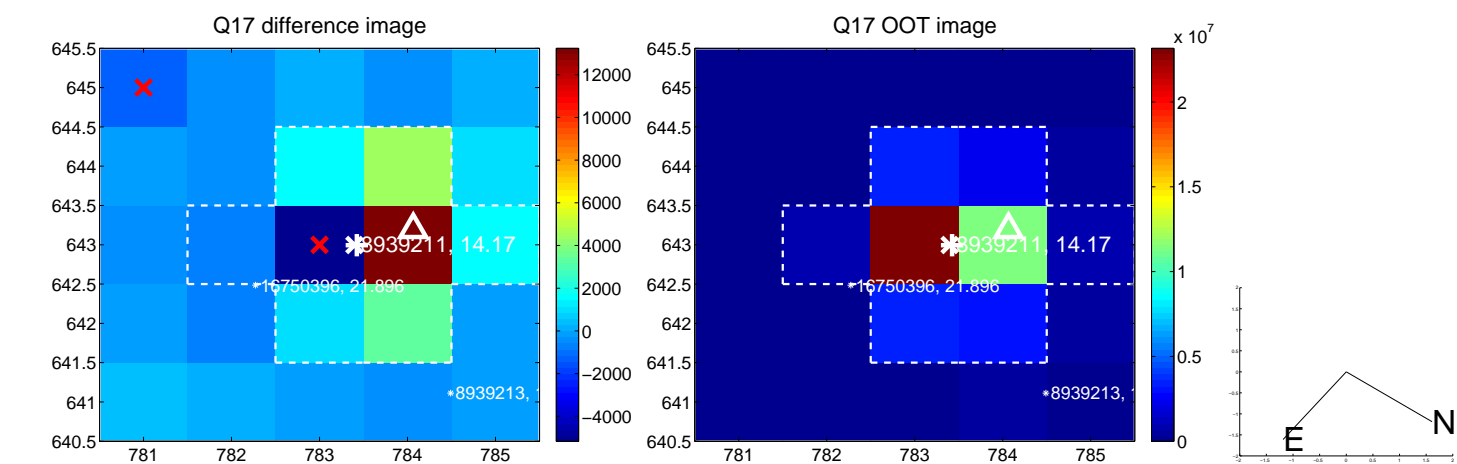
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UKIRT Image

Declination

