

KIC 011612280

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})
011612280-01	OBS	4304.01	9.406077	137.714692	78.8	4.903	11.5	12.1	1.27	5855	1.34	219.72

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011612280-01	OBS	PC	0.97	0	0	0	0	NO_COMMENT

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

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

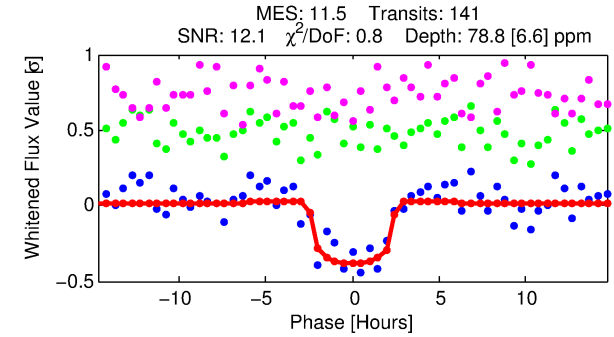
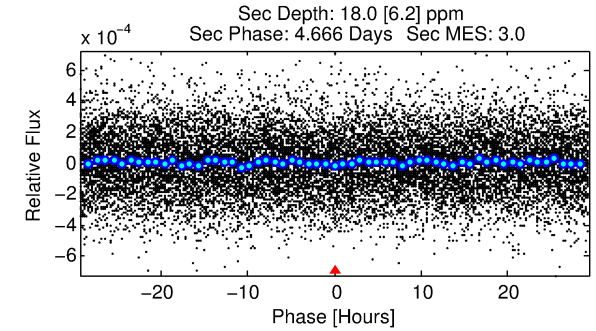
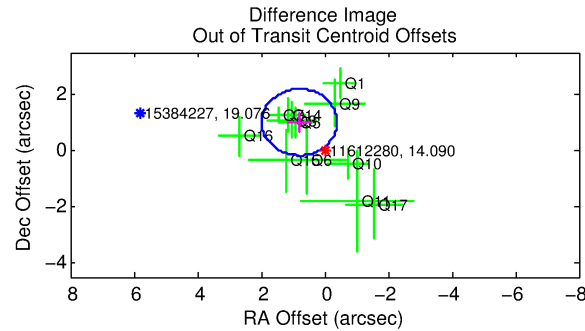
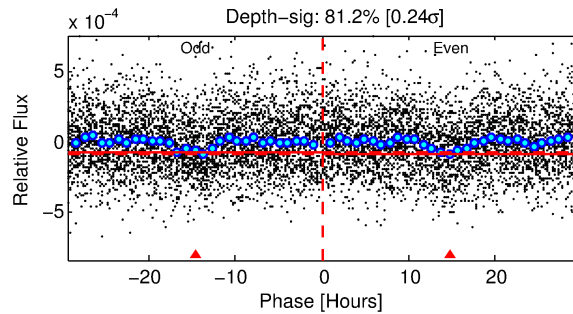
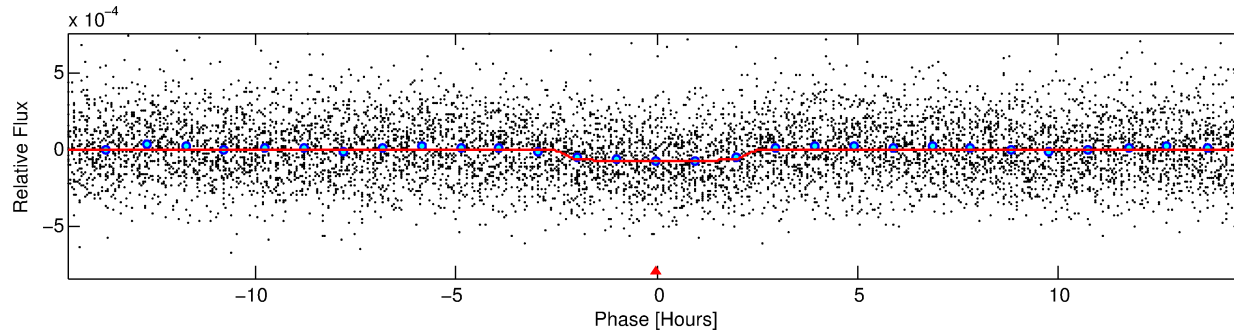
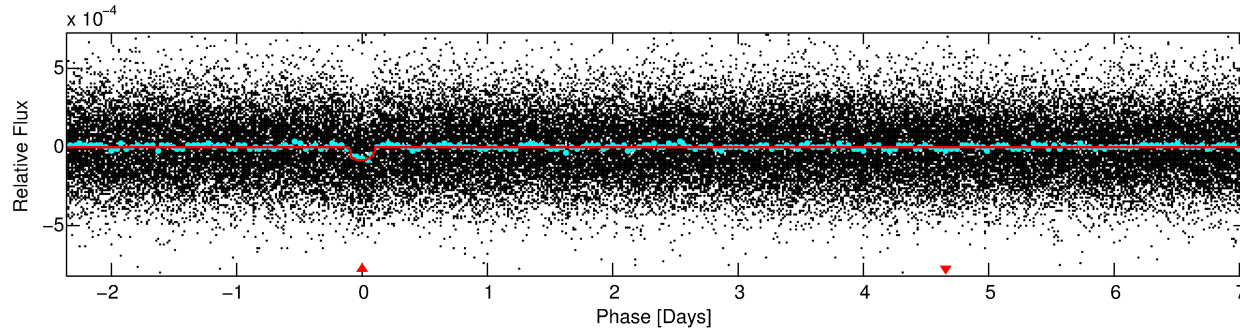
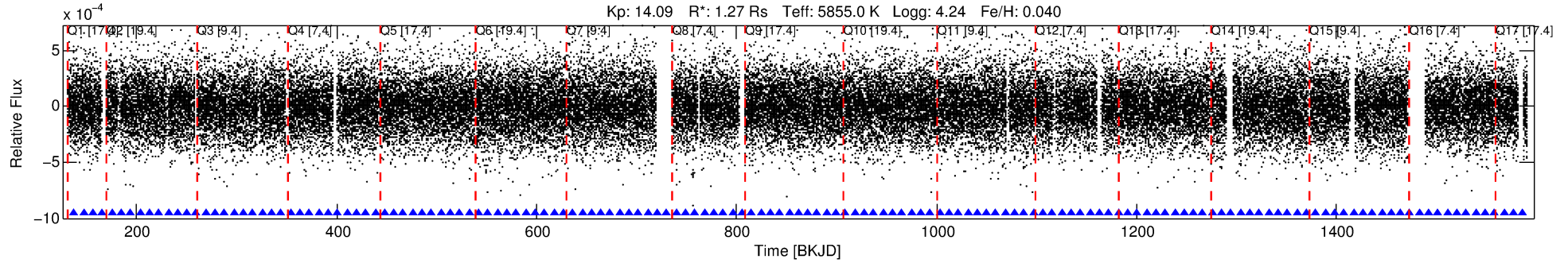
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011612280-01

No Significant Match Found

DV One-Page Summary

KIC: 11612280 Candidate: 1 of 1 Period: 9.406 d
KOI: K04304.01 Corr: 0.974



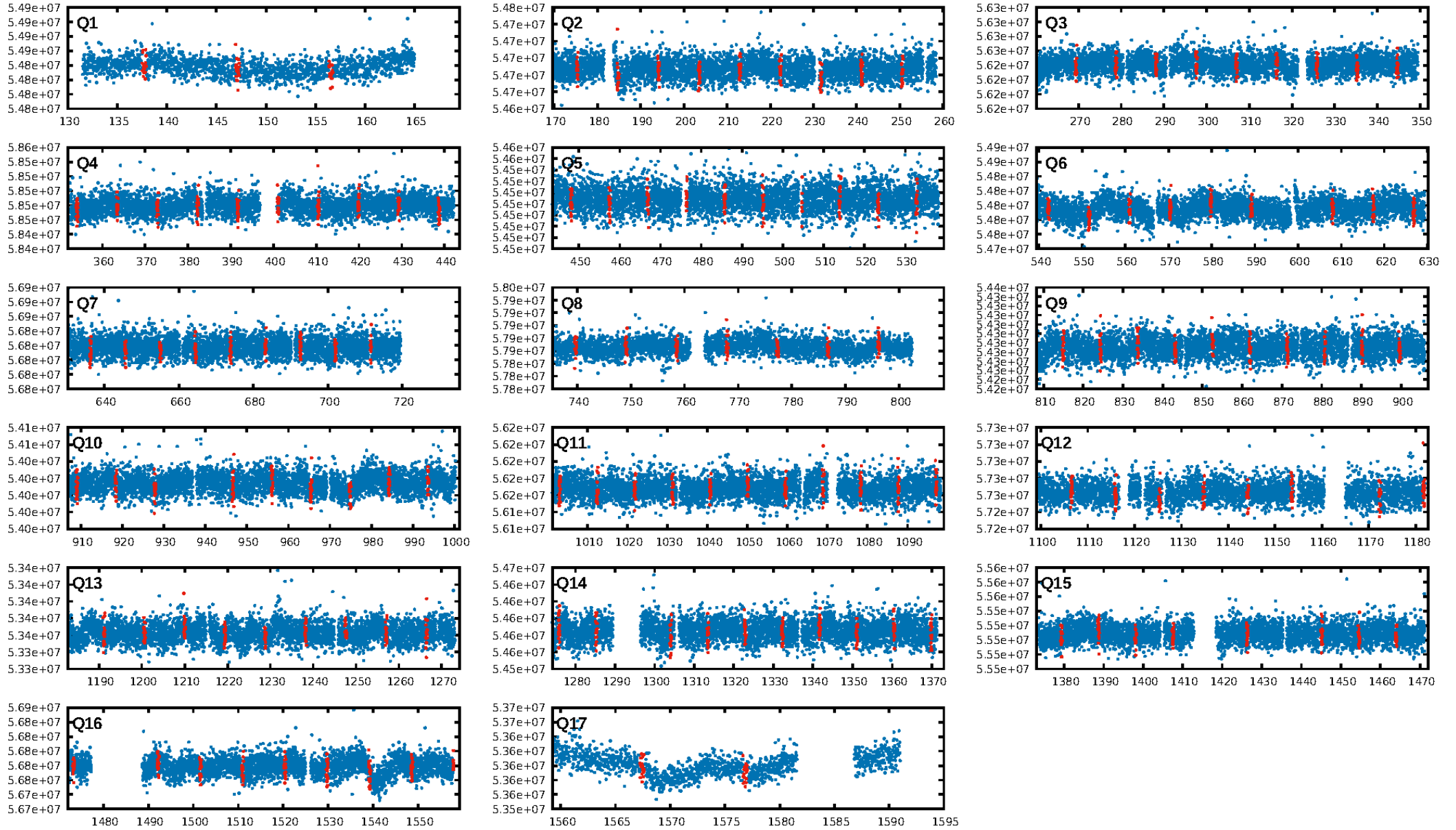
DV Fit Results:

Period = 9.40608 [0.00009] d
Epoch = 137.7147 [0.0078] BKJD
Rp/R* = 0.0097 [0.0040]
a/R* = 6.75 [13.37]
b = 0.90 [0.43]
Seff = 219.72 [63.15]
Teq = 982 [71] K
Rp = 1.34 [0.60] Re
a = 0.0878 [0.0152] AU
Ag = 42.75 [39.88] [1.05 σ]
Teffp = 3881 [868] K [3.33 σ]

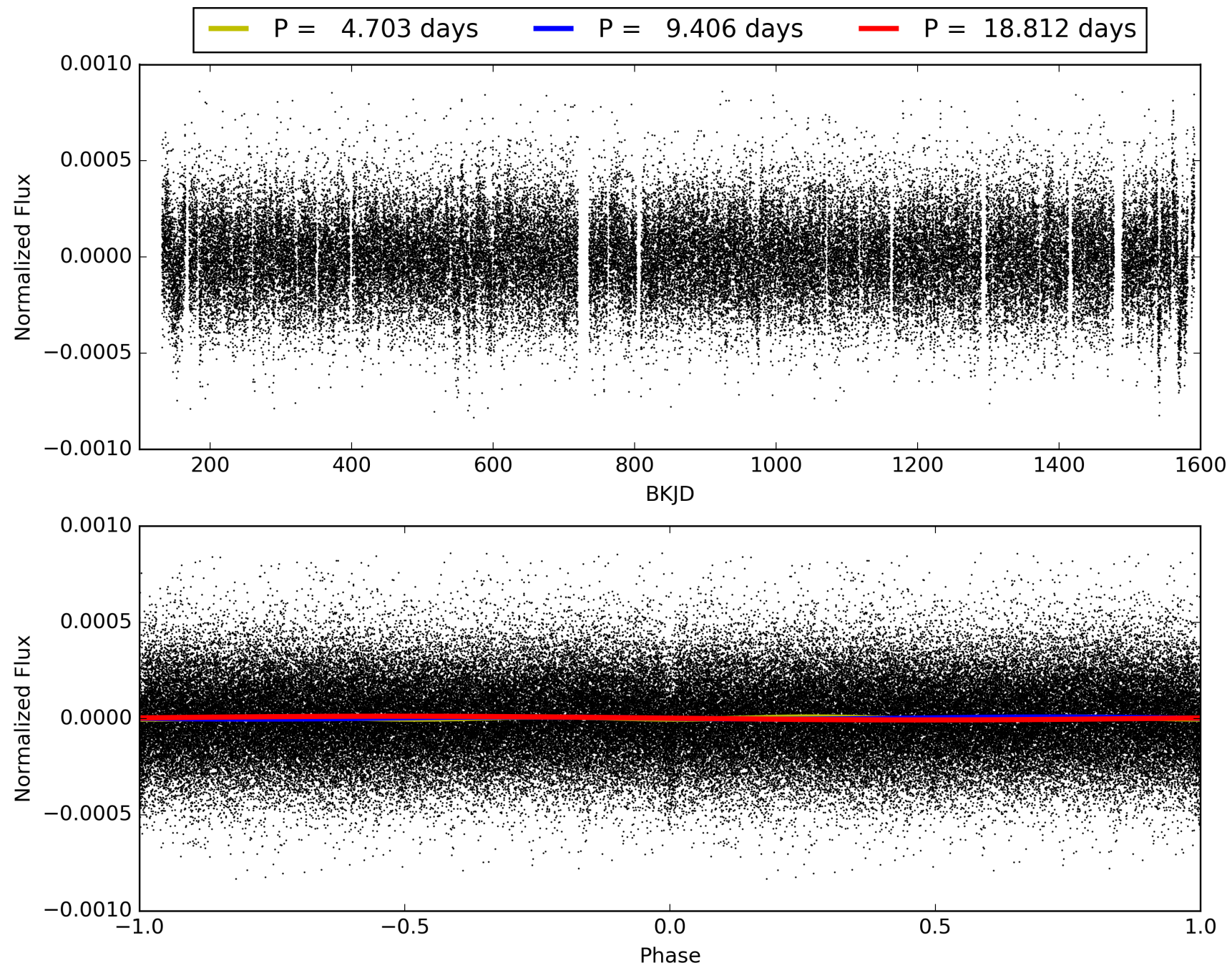
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.83e-30
RollingBand-fgt: 1.00 [136/136]
GhostDiagnostic-chr: 1.441
Centroid-sig: 20.8%
Centroid-so: 1.418 arcsec [1.37 σ]
OotOffset-rm: 1.290 arcsec [3.27 σ]
KicOffset-rm: 1.336 arcsec [3.01 σ]
OotOffset-st: 3/4/1/4 [12]
KicOffset-st: 3/4/1/4 [12]
DiffImageQuality-fgm: 0.83 [10/12]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 011612280-01, PDC Light Curves

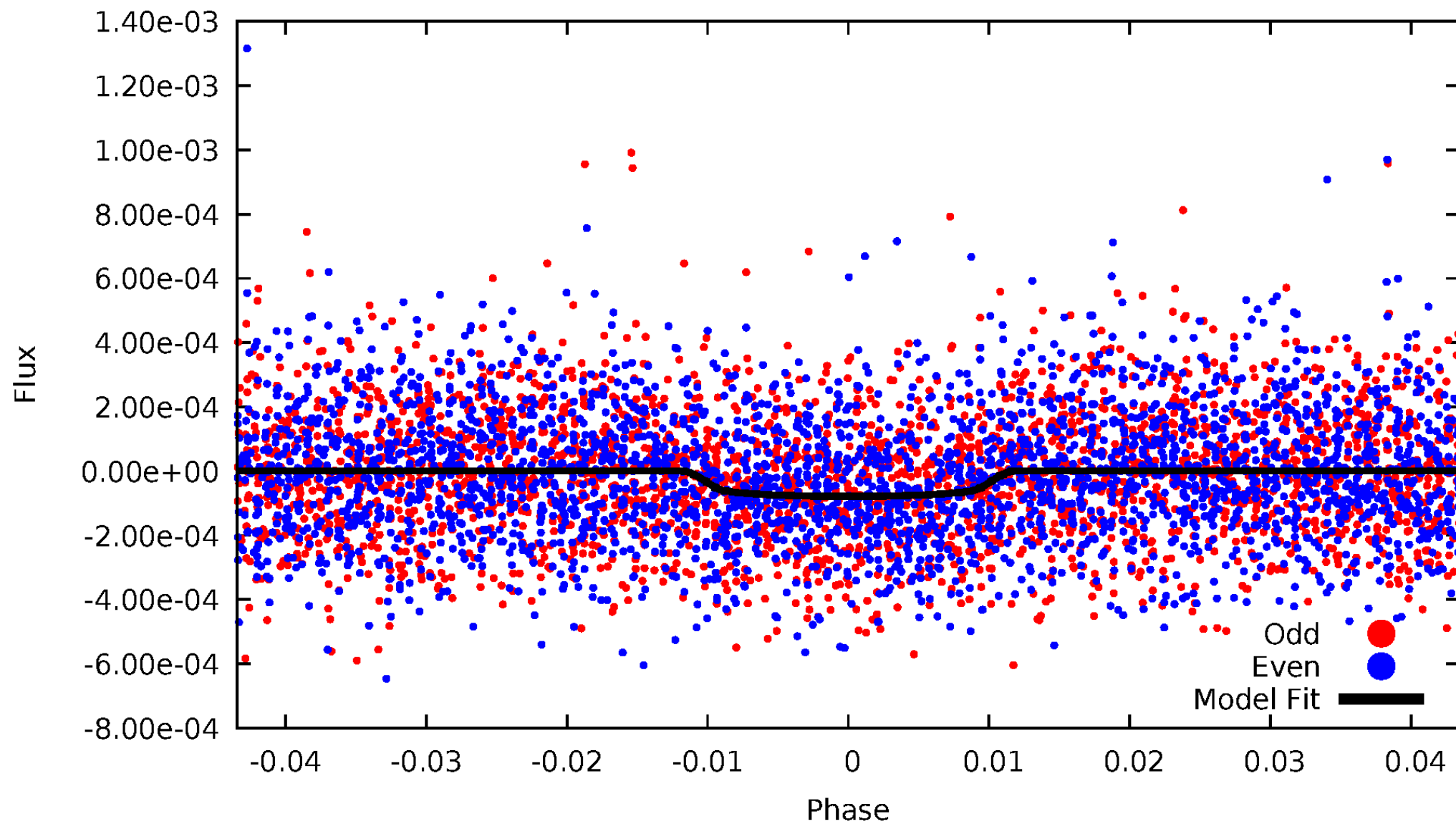


TCE 011612280-01



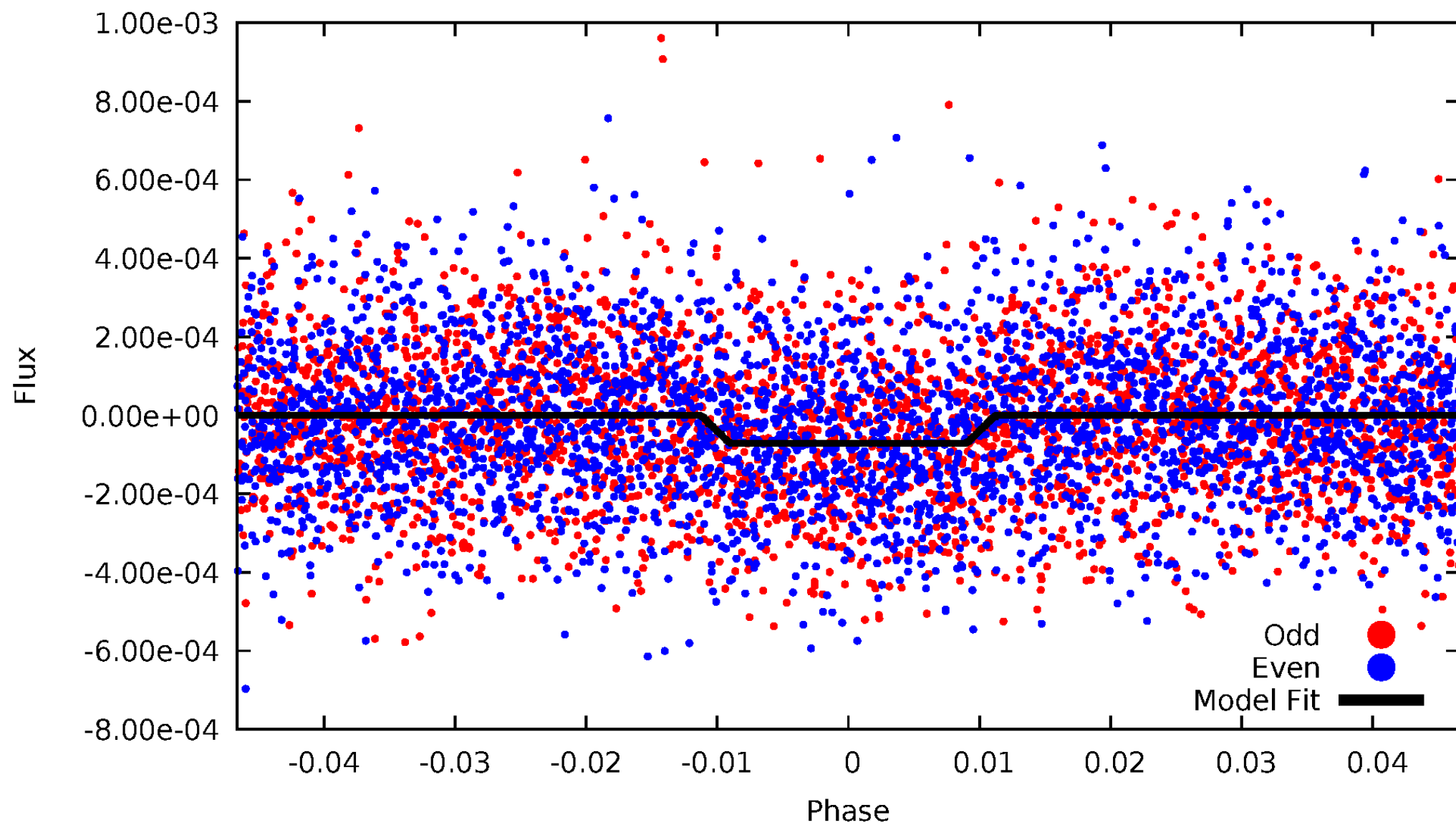
DV Odd/Even

TCE 011612280-01

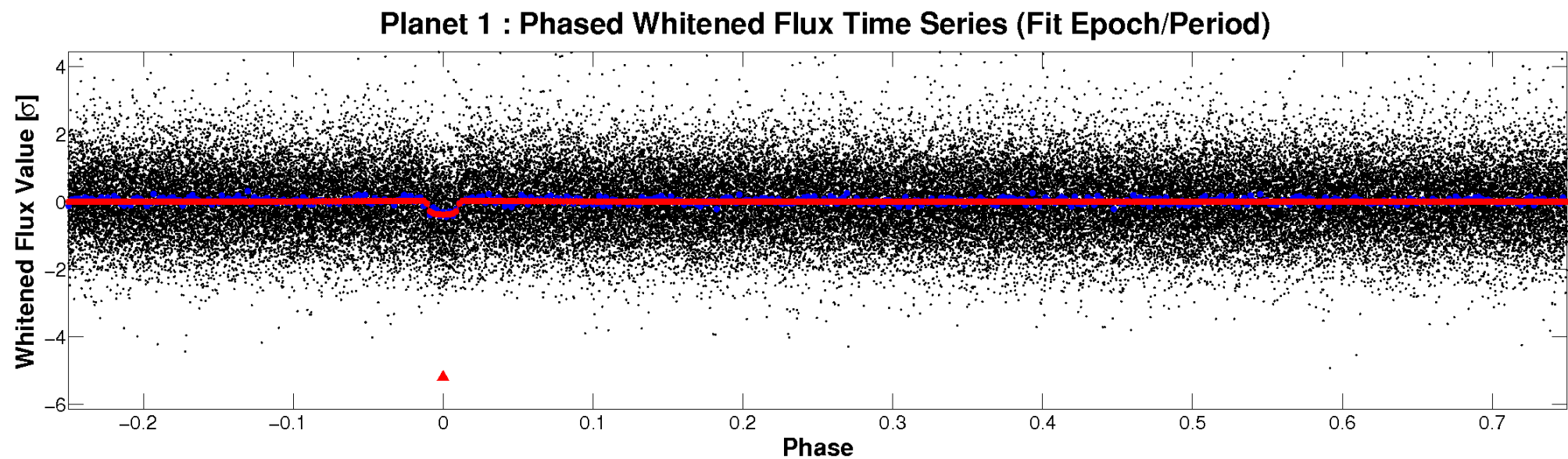
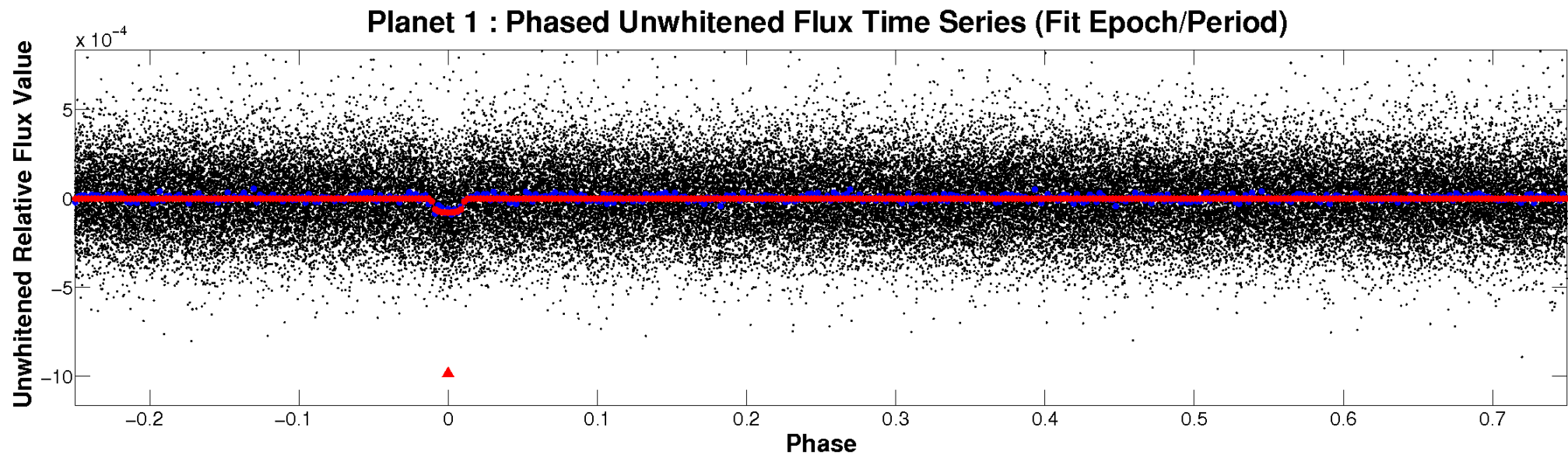


ALT Odd/Even

TCE 011612280-01

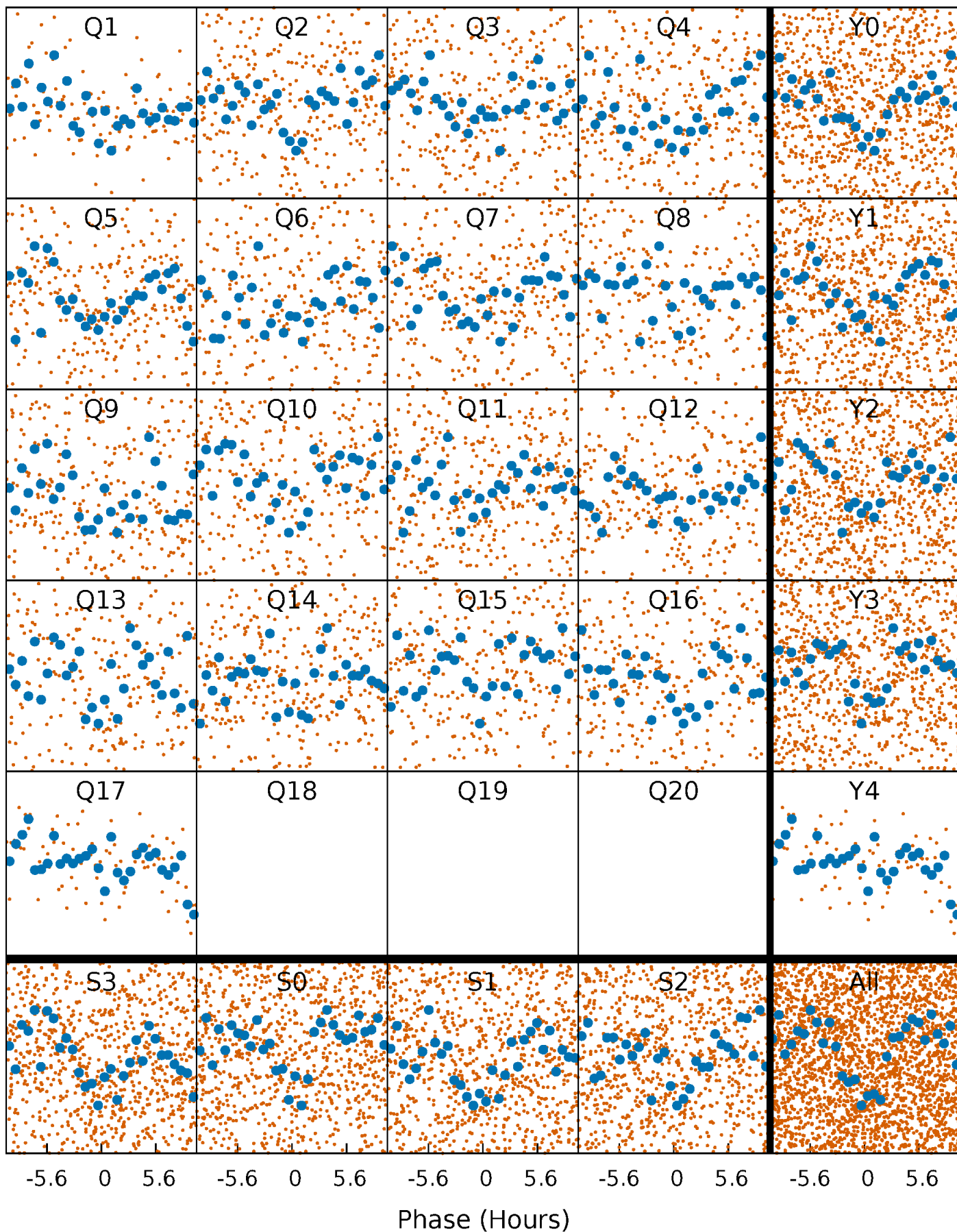


Non-Whitened Vs. Whitened Light Curve



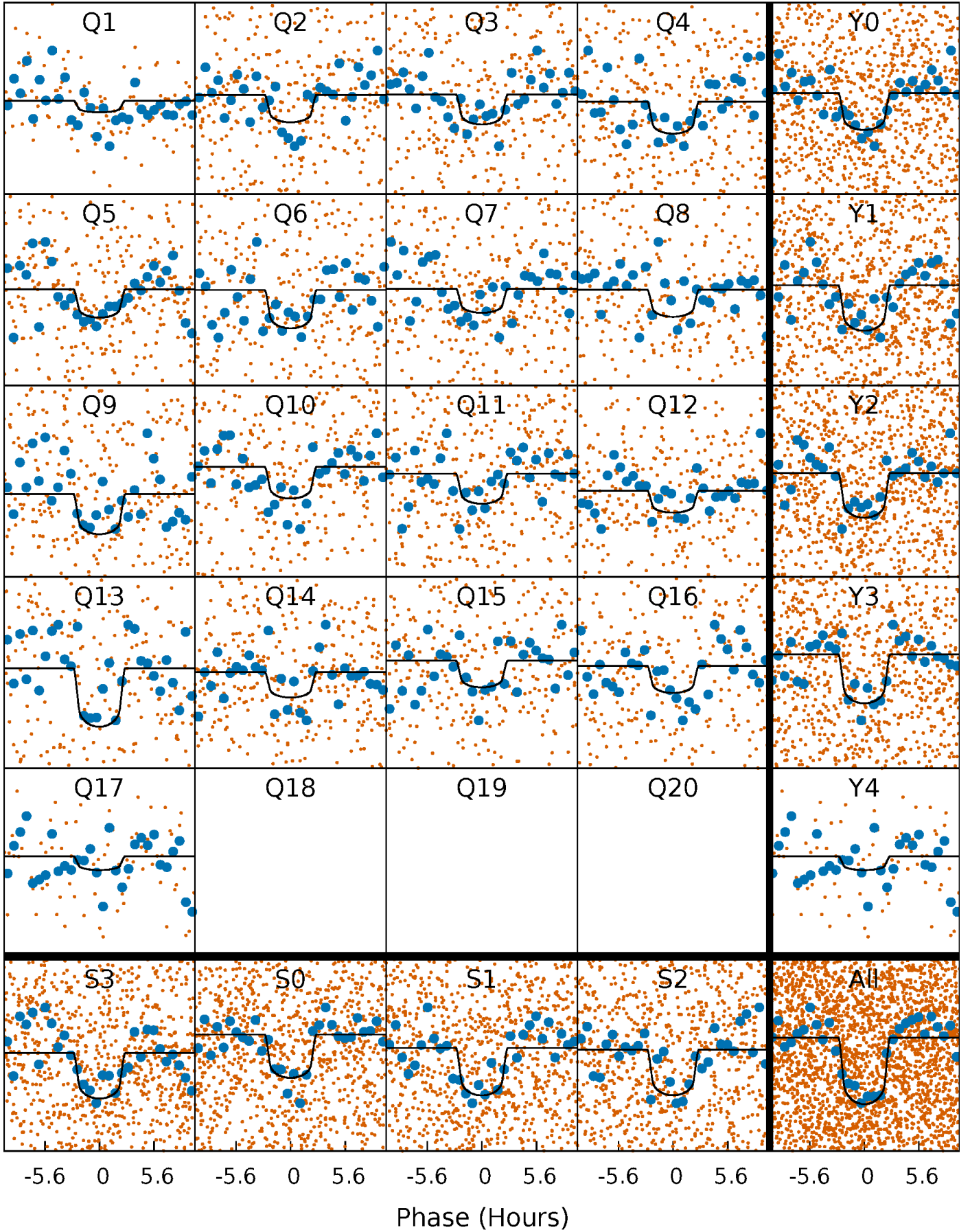
PDC Quarter-Phased Transit Curves

TCE 011612280-01 P= 9.406077 Days $T_0=137.714692$ (BKJD)



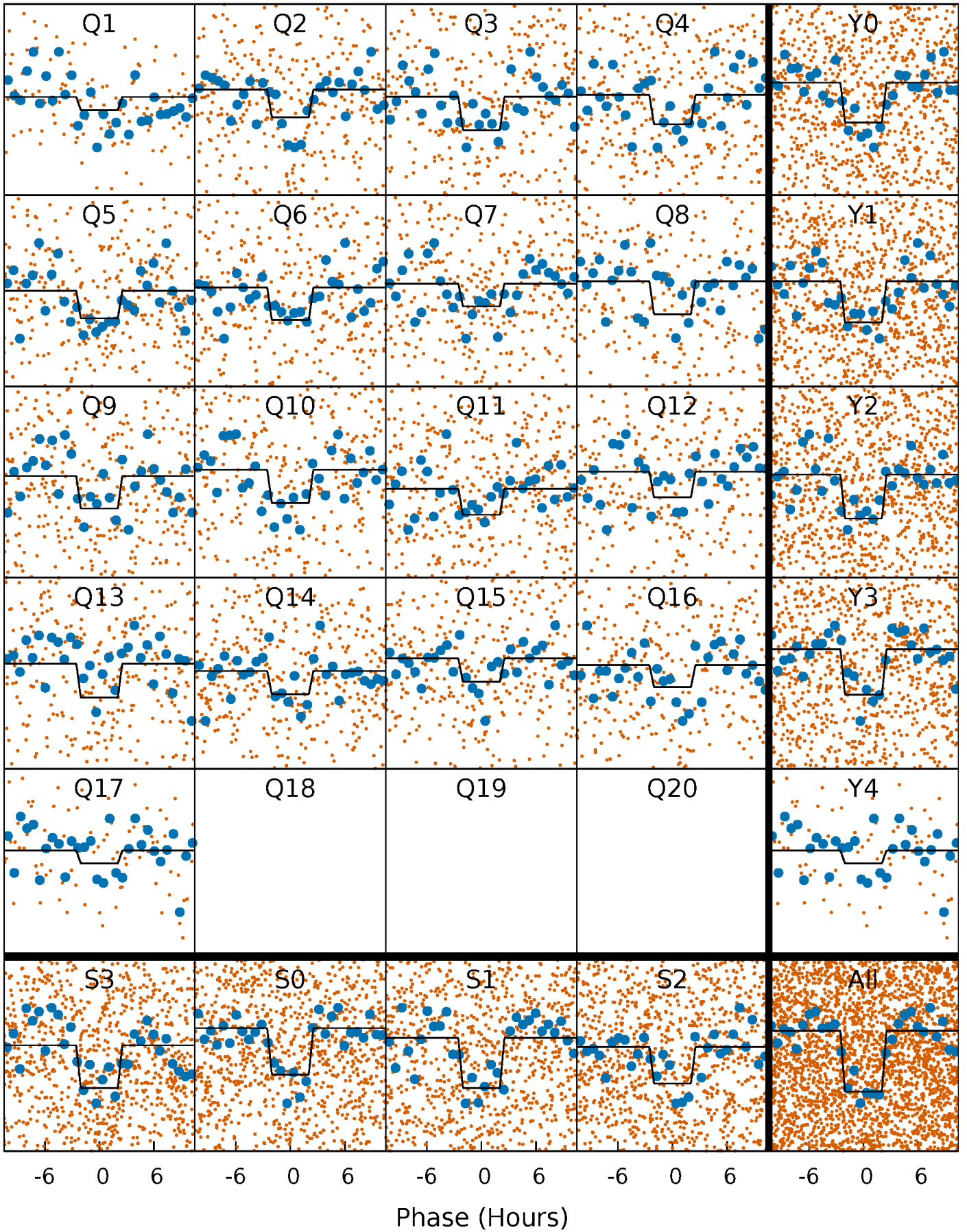
DV Quarter-Phased Transit Curves

TCE 011612280-01 P= 9.406077 Days $T_0=137.714692$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

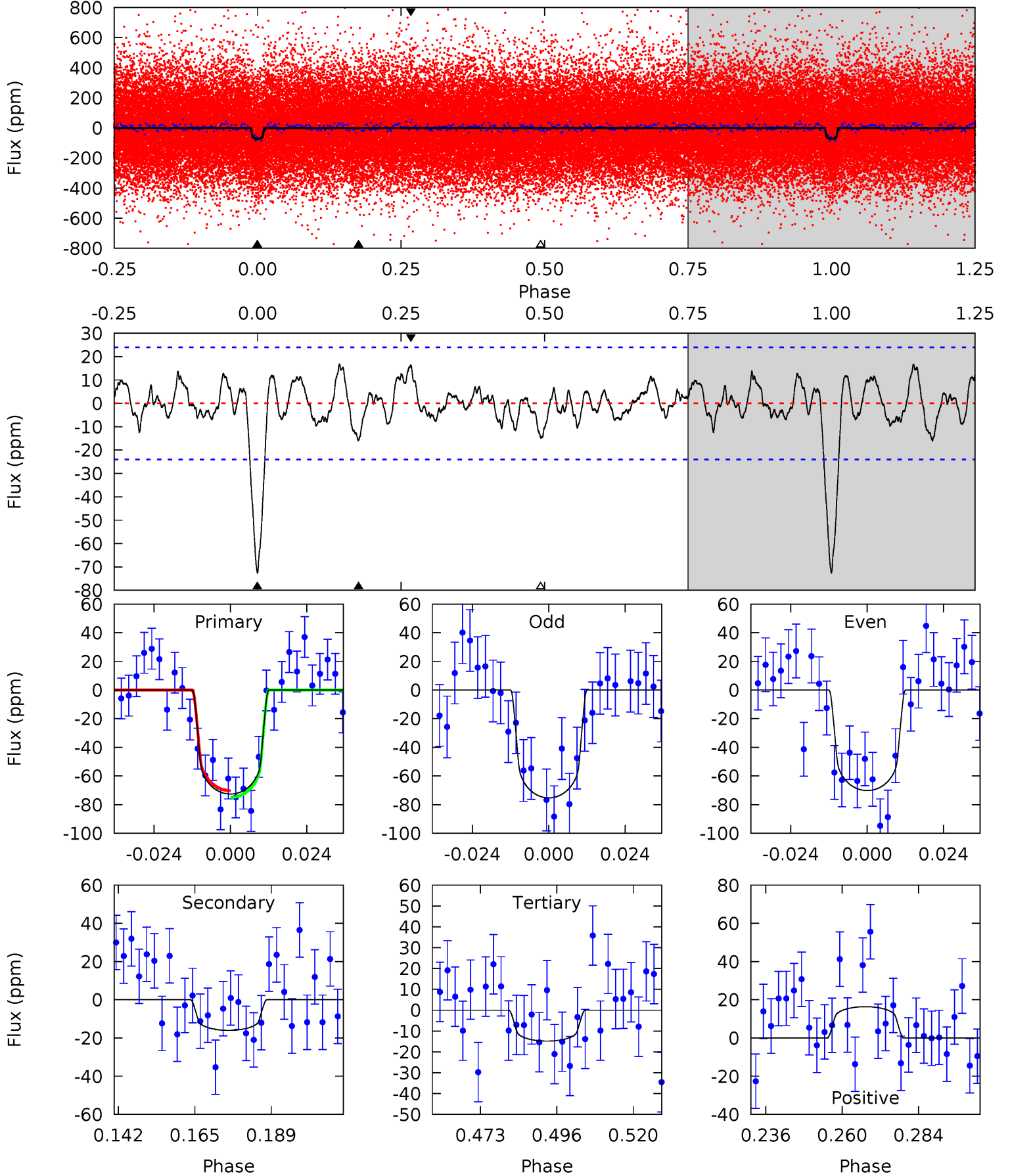
TCE 011612280-01 P= 9.406165 Days $T_0=137.702111$ (BKJD)



DV Model-Shift Uniqueness Test

011612280-01, P = 9.406077 Days, E = 128.308615 Days

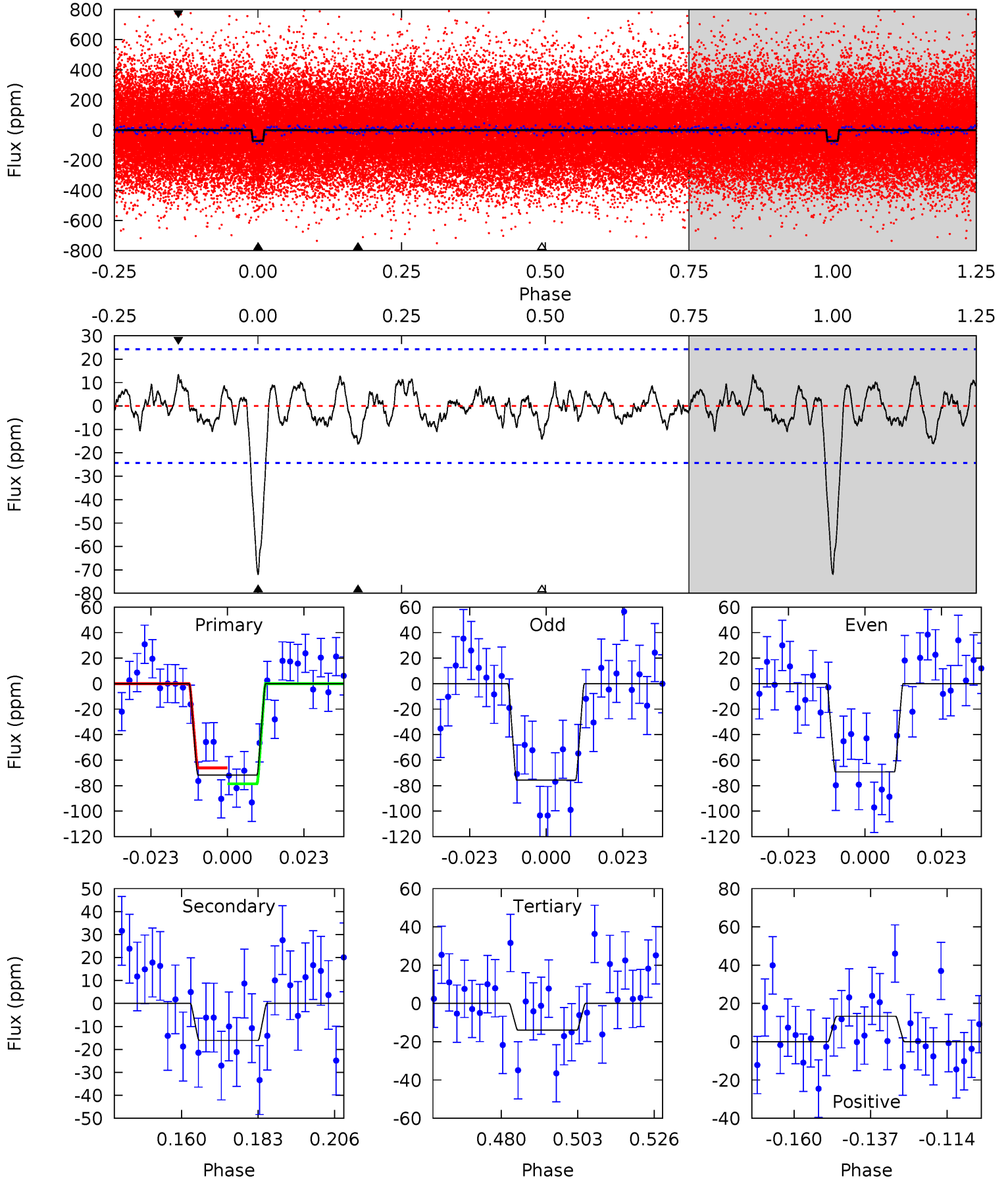
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.7	3.25	3.01	3.32	4.86	2.26	1.24	11.7	11.4	0.24	-0.07	0.52	0.98	0.19	0.48



Alt Model-Shift Uniqueness Test

011612280-01, P = 9.406165 Days, E = 128.295946 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.4	3.22	2.80	2.66	4.87	2.28	1.05	11.6	11.7	0.42	0.56	0.65	0.91	0.16	1.26



Stellar Parameters For KIC 011612280

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5855^{+105}_{-117}	$4.240^{+0.162}_{-0.108}$	$0.040^{+0.150}_{-0.150}$	$1.268^{+0.207}_{-0.228}$	$1.020^{+0.093}_{-0.070}$	$0.704^{+0.525}_{-0.217}$
	+2%/-2%	+4%/-3%	+375%/-375%	+16%/-18%	+9%/-7%	+75%/-31%
Source	SPE12	SPE12	SPE12	DSEP		

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

Secondary Eclipse Parameters for KIC 011612280-01 / KOI 4304.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-16 ± 5	$1.33^{+0.56}_{-0.56}$	1364^{+69}_{-75}	4007^{+966}_{-476}	36^{+76}_{-20}
Alt.	-16 ± 5	$1.14^{+0.57}_{-0.53}$	1361^{+61}_{-69}	4263^{+1211}_{-608}	52^{+125}_{-31}

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

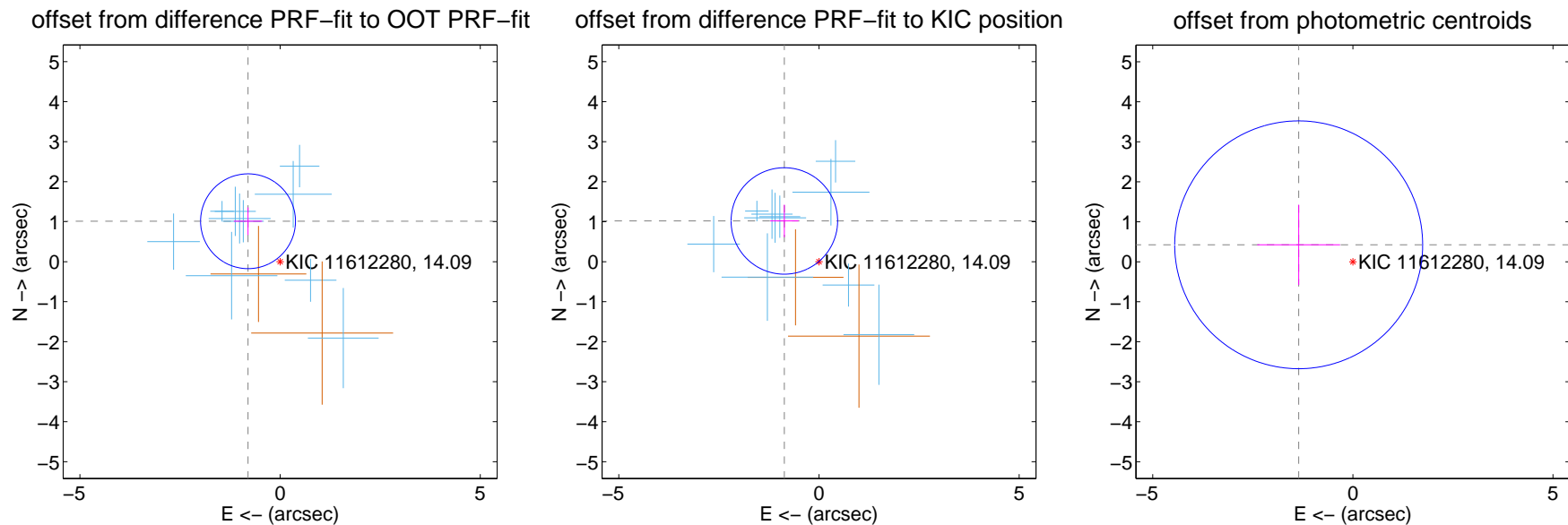
DV Centroid Data

Supplemental centroid analysis for 011612280-01. Kepler magnitude: 14.09. Transit SNR 12.10

There are 10 quarters with good PRF difference image offsets

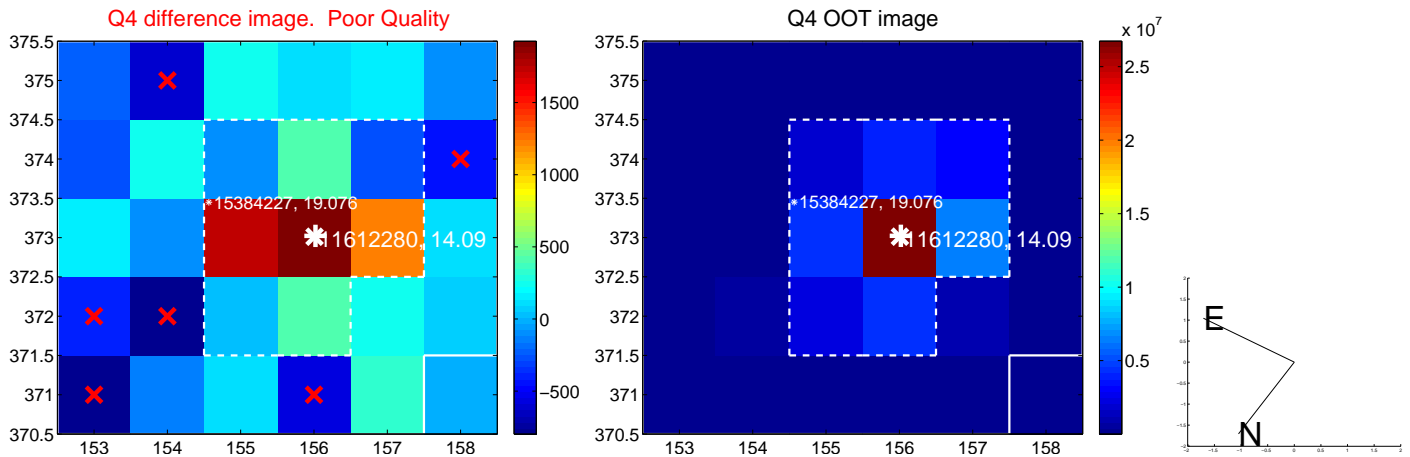
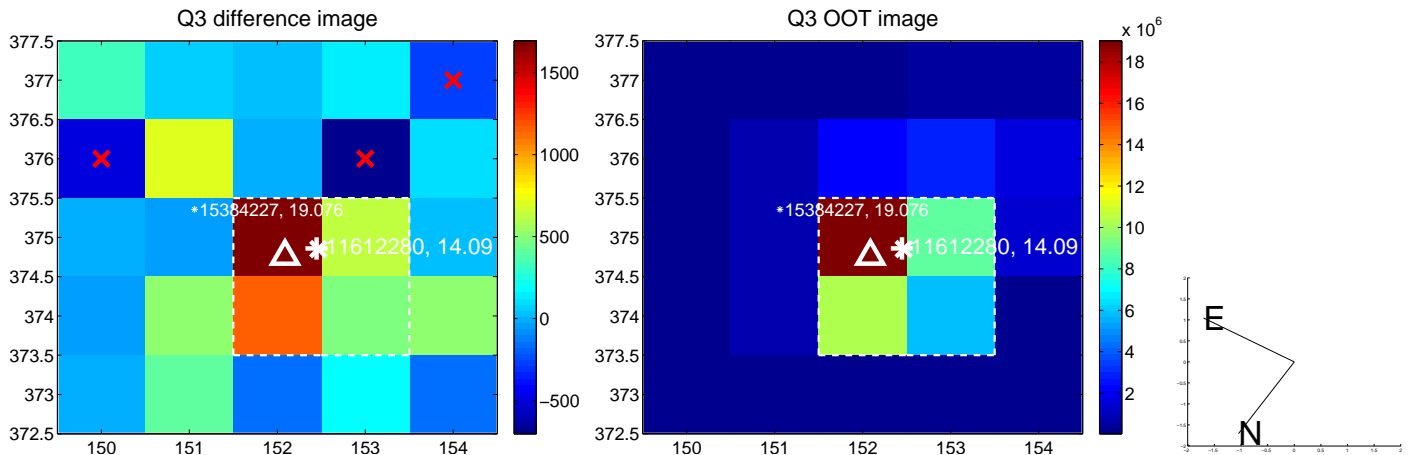
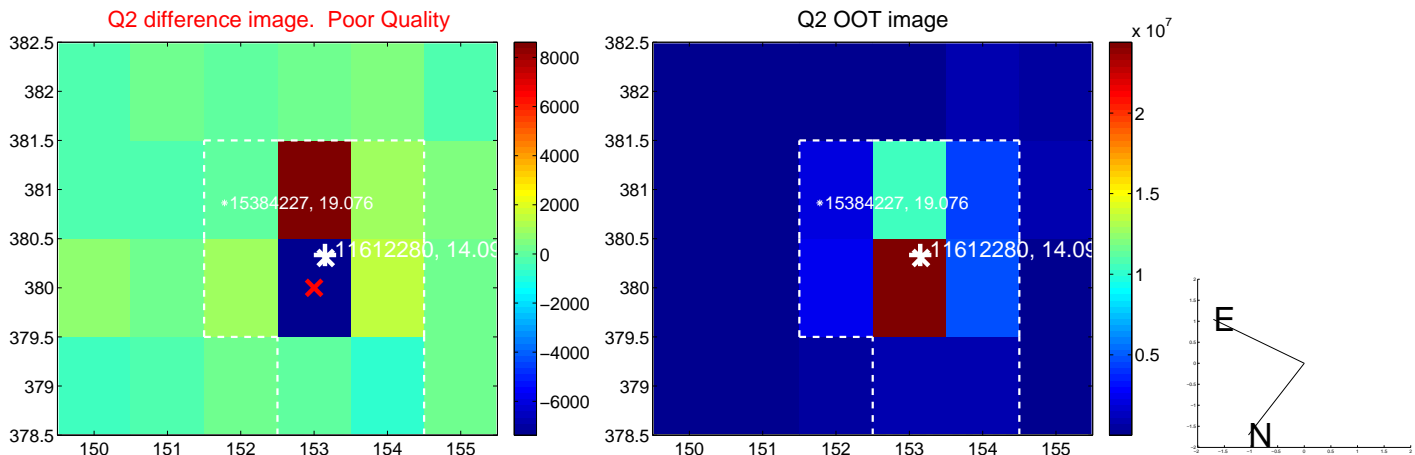
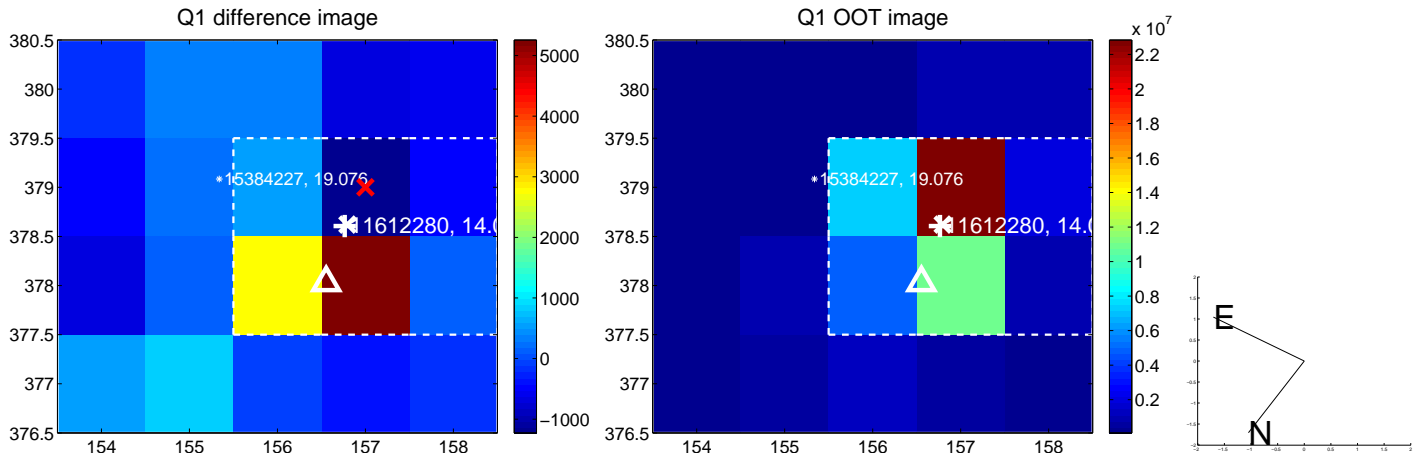
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.290 ± 0.395	3.27	0.801 ± 0.354	1.011 ± 0.344
PRF-fit source offset from KIC position	1.336 ± 0.443	3.01	0.865 ± 0.355	1.018 ± 0.406
photometric centroid source offset	1.42 ± 1.03	1.37	1.35 ± 1.04	0.42 ± 1.00

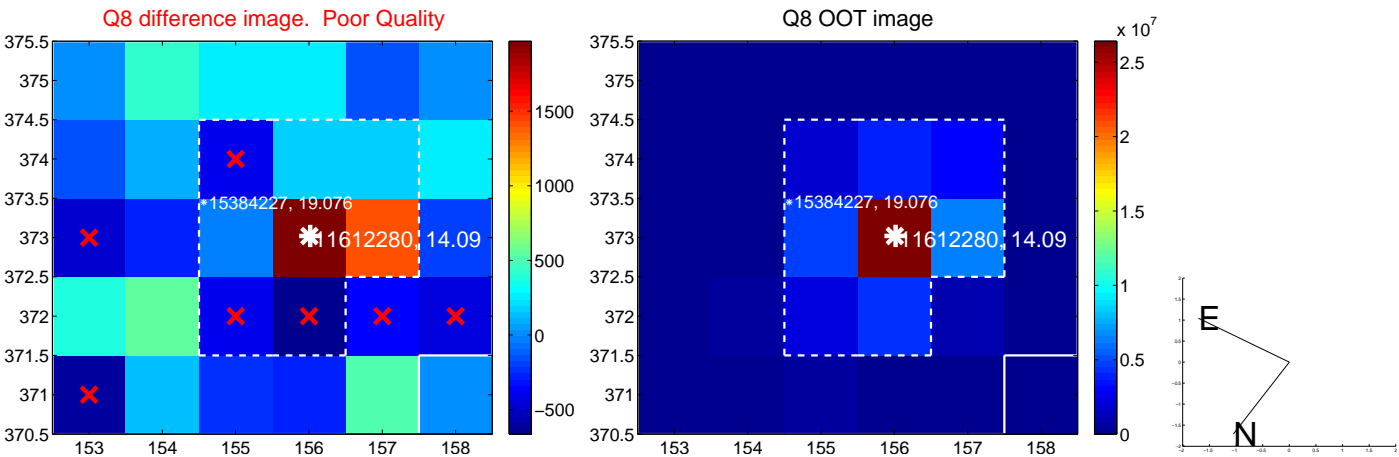
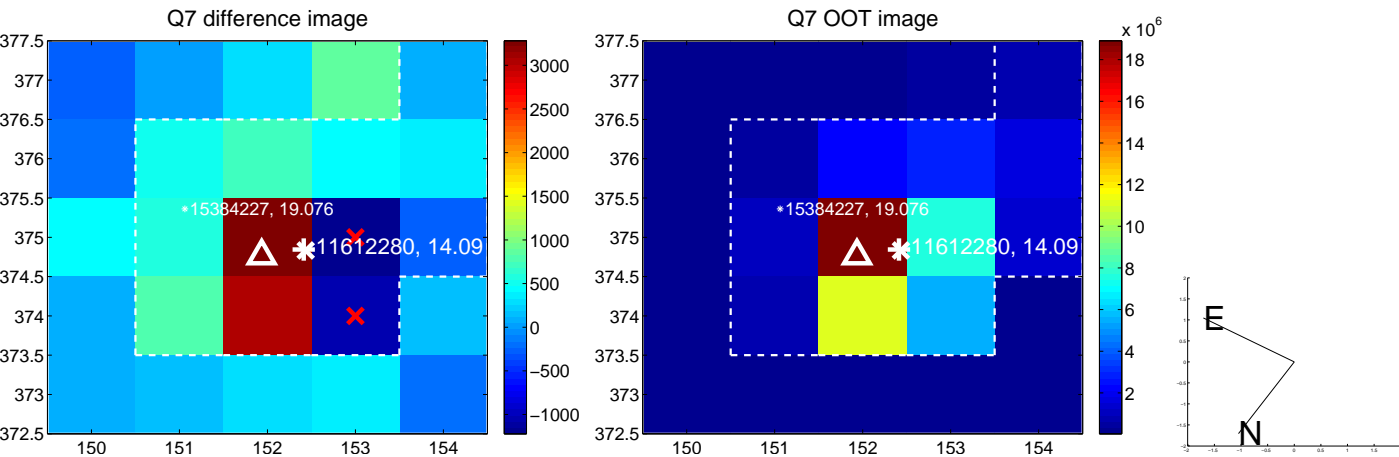
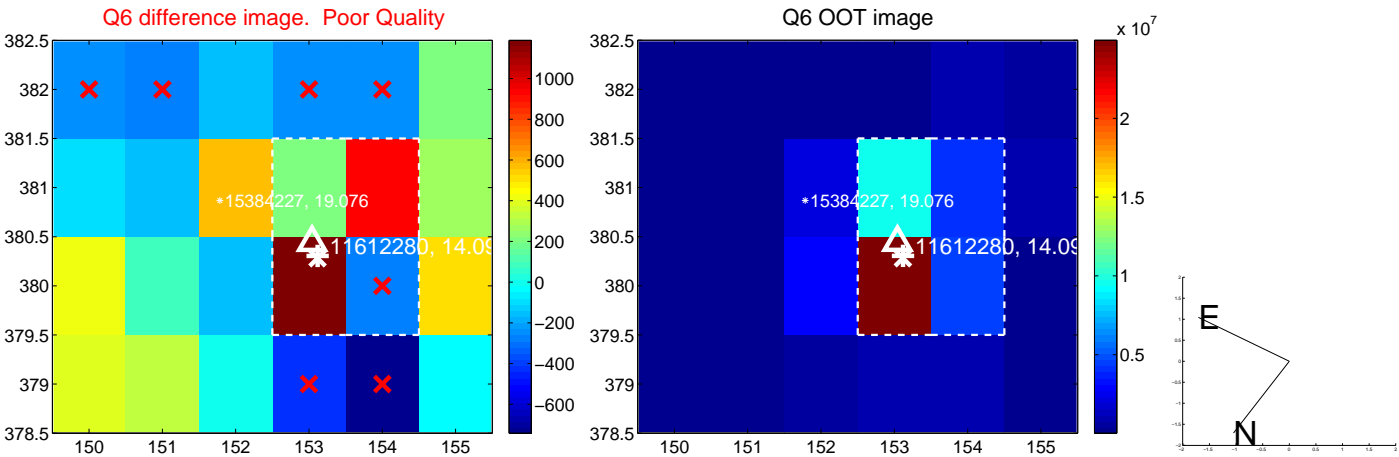
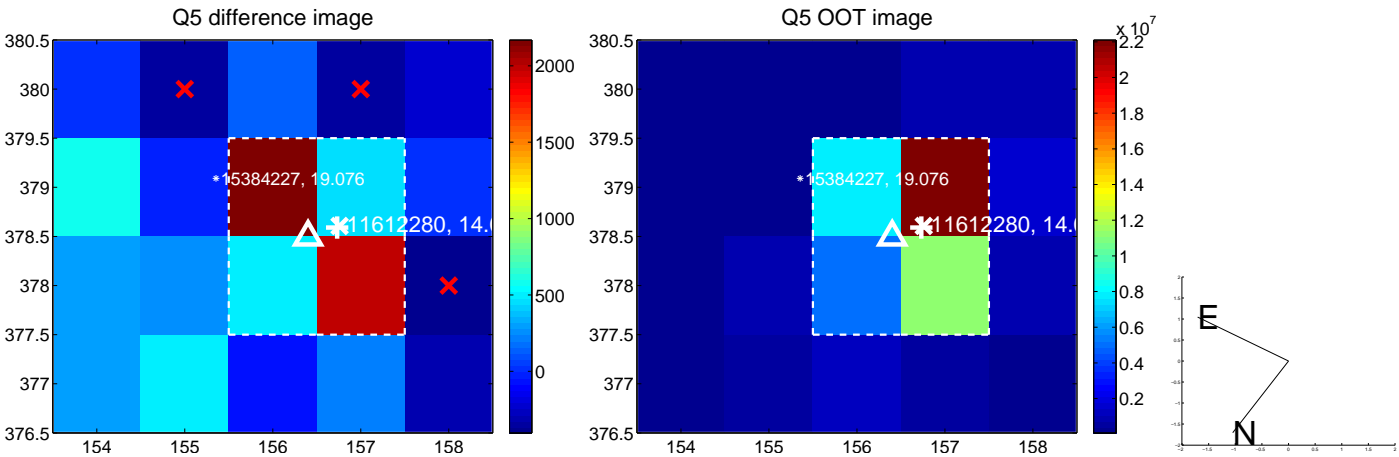


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

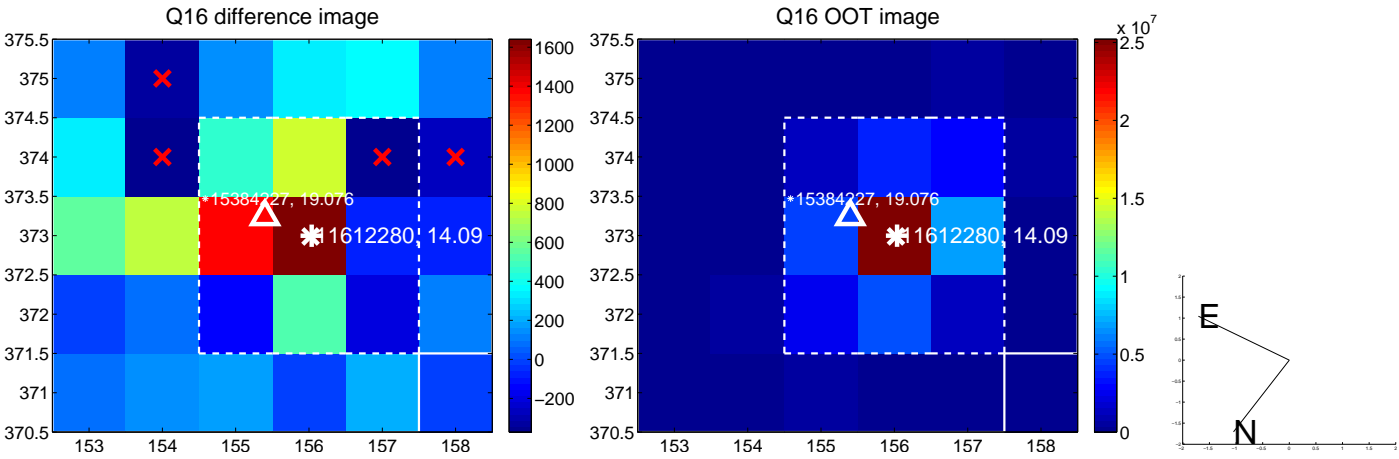
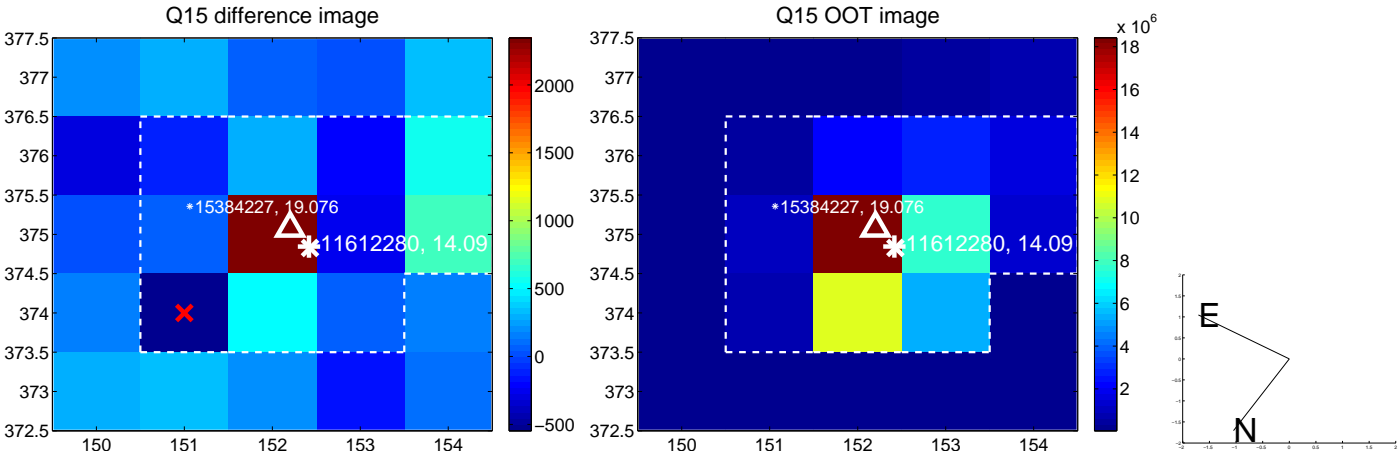
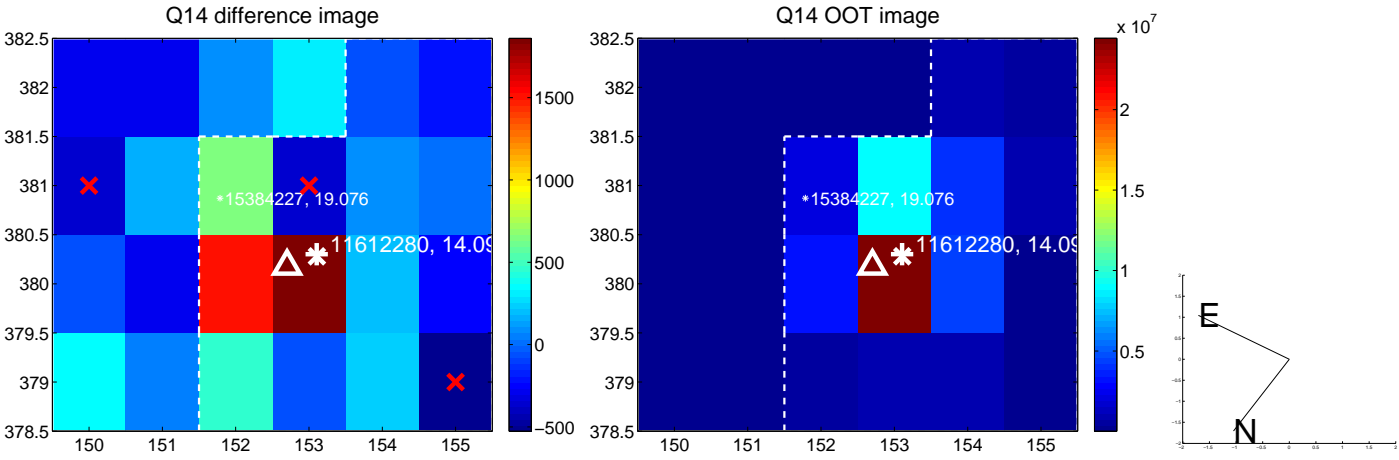
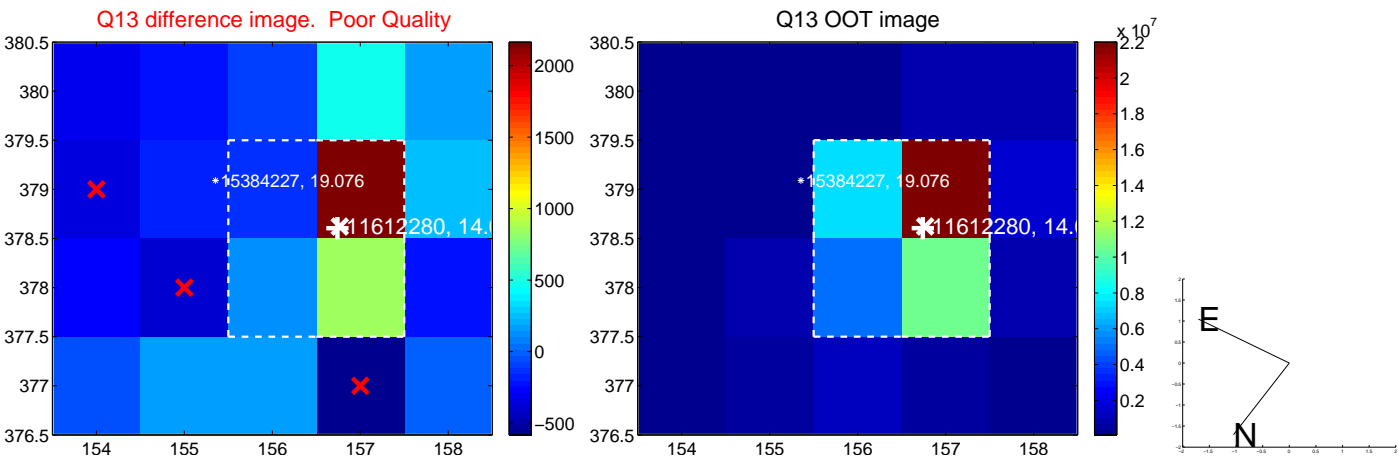
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



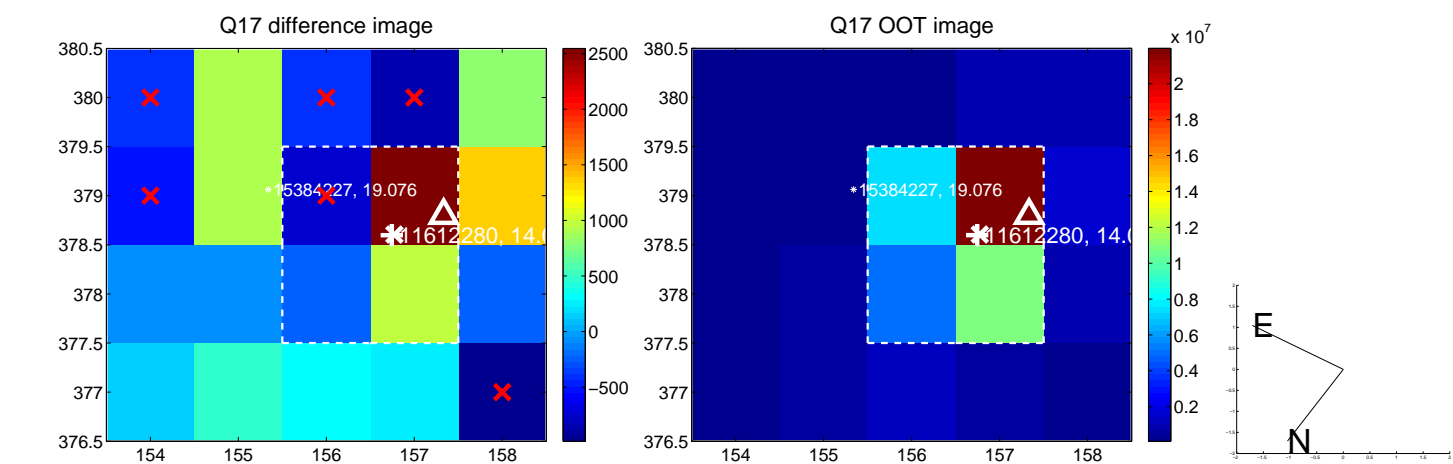
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



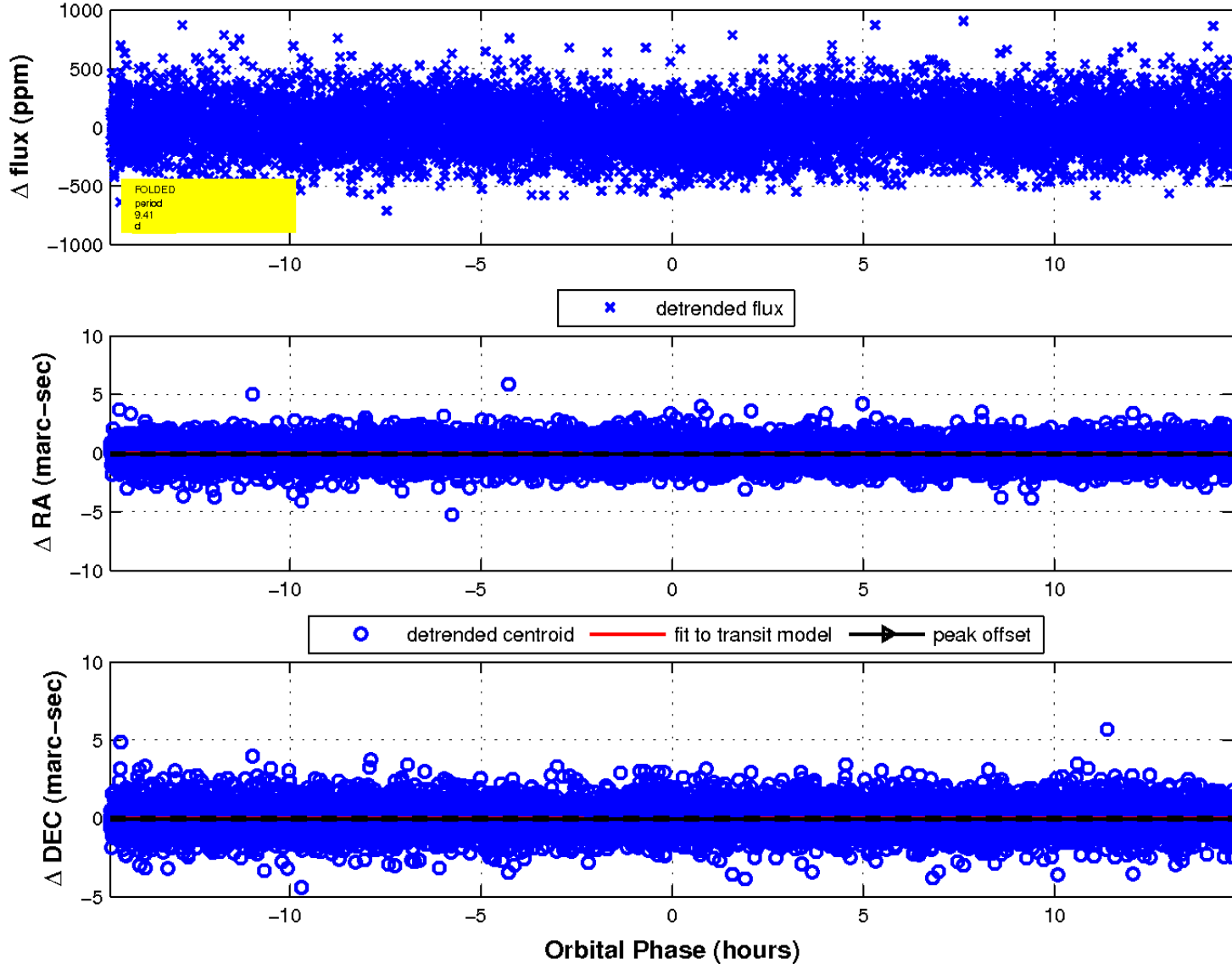
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

