

KIC 005282656

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})
005282656-01	OBS	6551.01	1.516352	131.837656	80.9	1.485	8.3	8.3	1.05	6142	1.11	1914.64

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005282656-01	OBS	FP	0.19	0	0	1	0	CENT_RESOLVED_OFFSET

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.

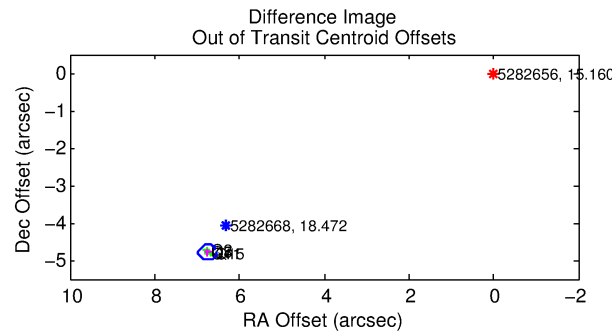
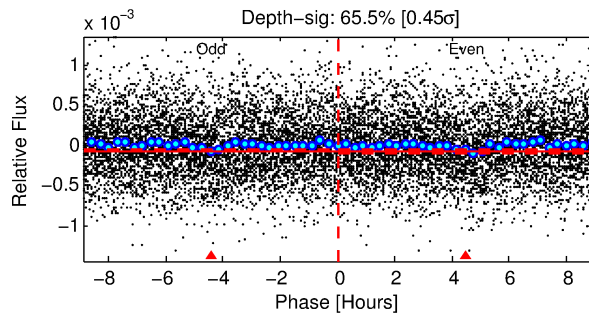
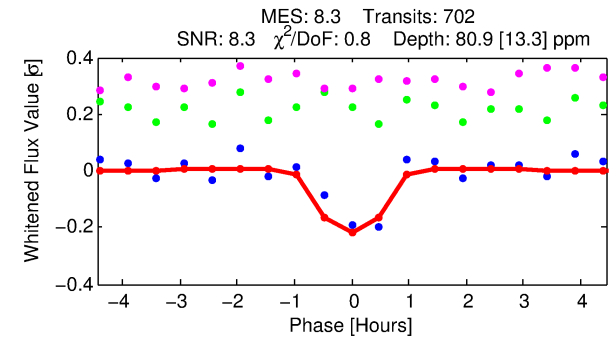
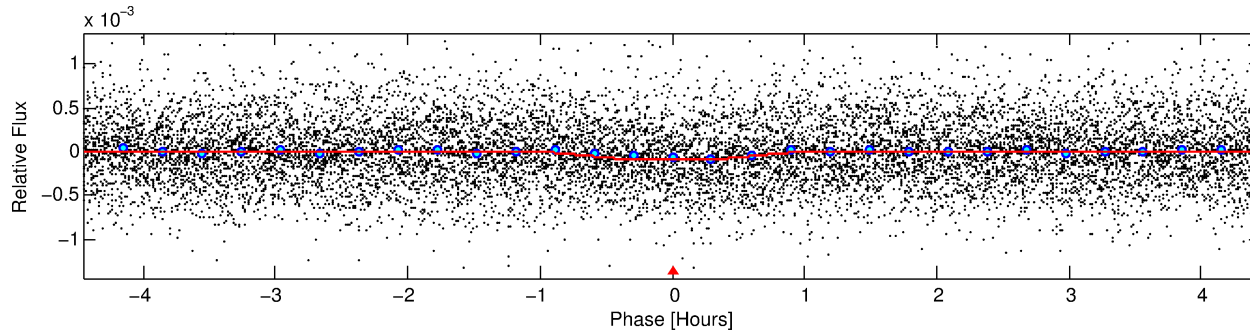
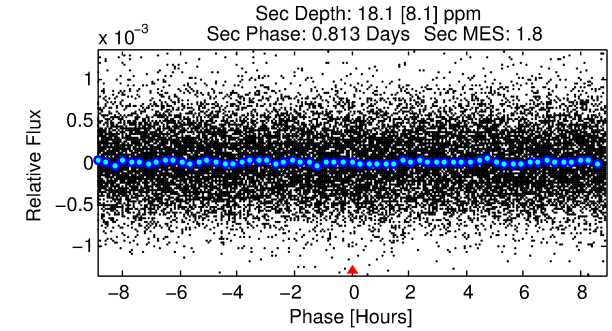
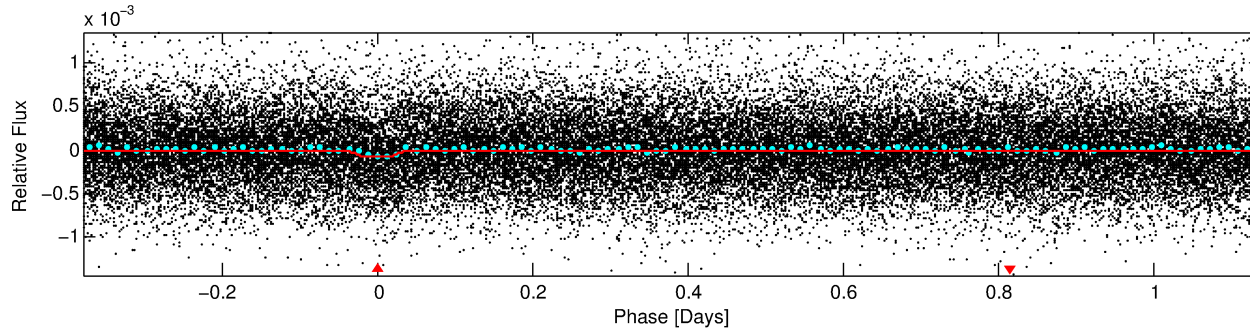
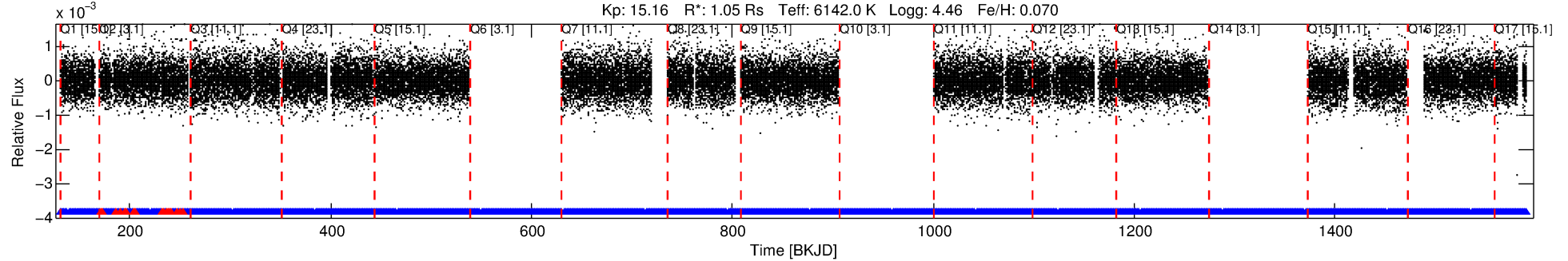
Ephemeris Match Information For 005282656-01

No Significant Match Found

DV One-Page Summary

KIC: 5282656 Candidate: 1 of 1 Period: 1.516 d
KOI: K06551.01 Corr: 0.870

Kp: 15.16 R*: 1.05 Rs Teff: 6142.0 K Logg: 4.46 Fe/H: 0.070



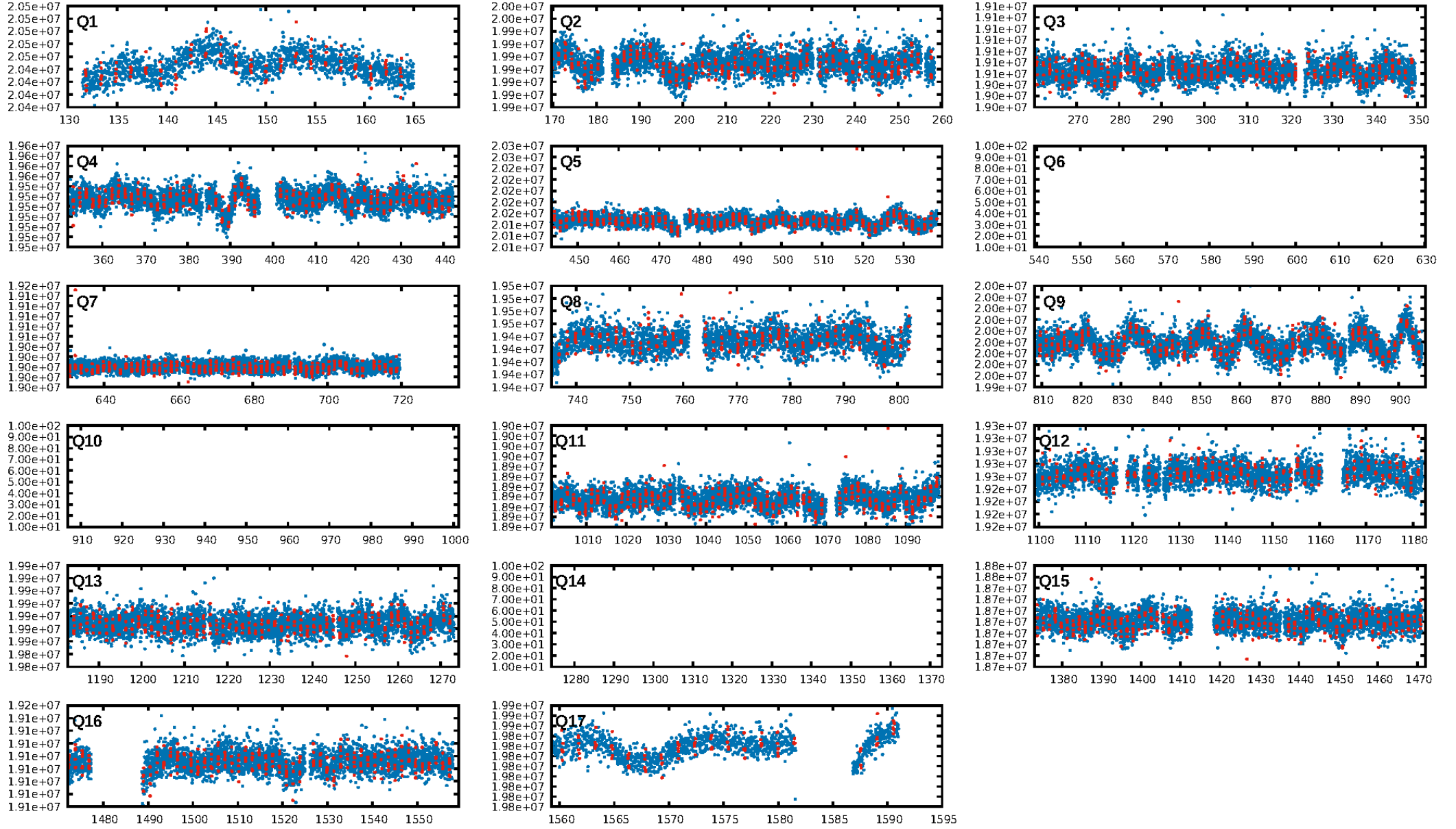
DV Fit Results:

Period = 1.51635 [0.00001] d
Epoch = 131.8377 [0.0029] BKJD
Rp/R* = 0.0097 [0.0088]
a/R* = 3.72 [16.10]
b = 0.90 [1.03]
Seff = 1914.64 [832.58]
Teq = 1687 [183] K
Rp = 1.11 [1.06] Re
a = 0.0270 [0.0075] AU
Ag = 5.89 [11.18] [0.44σ]
Teffp = 4063 [1889] K [1.25σ]

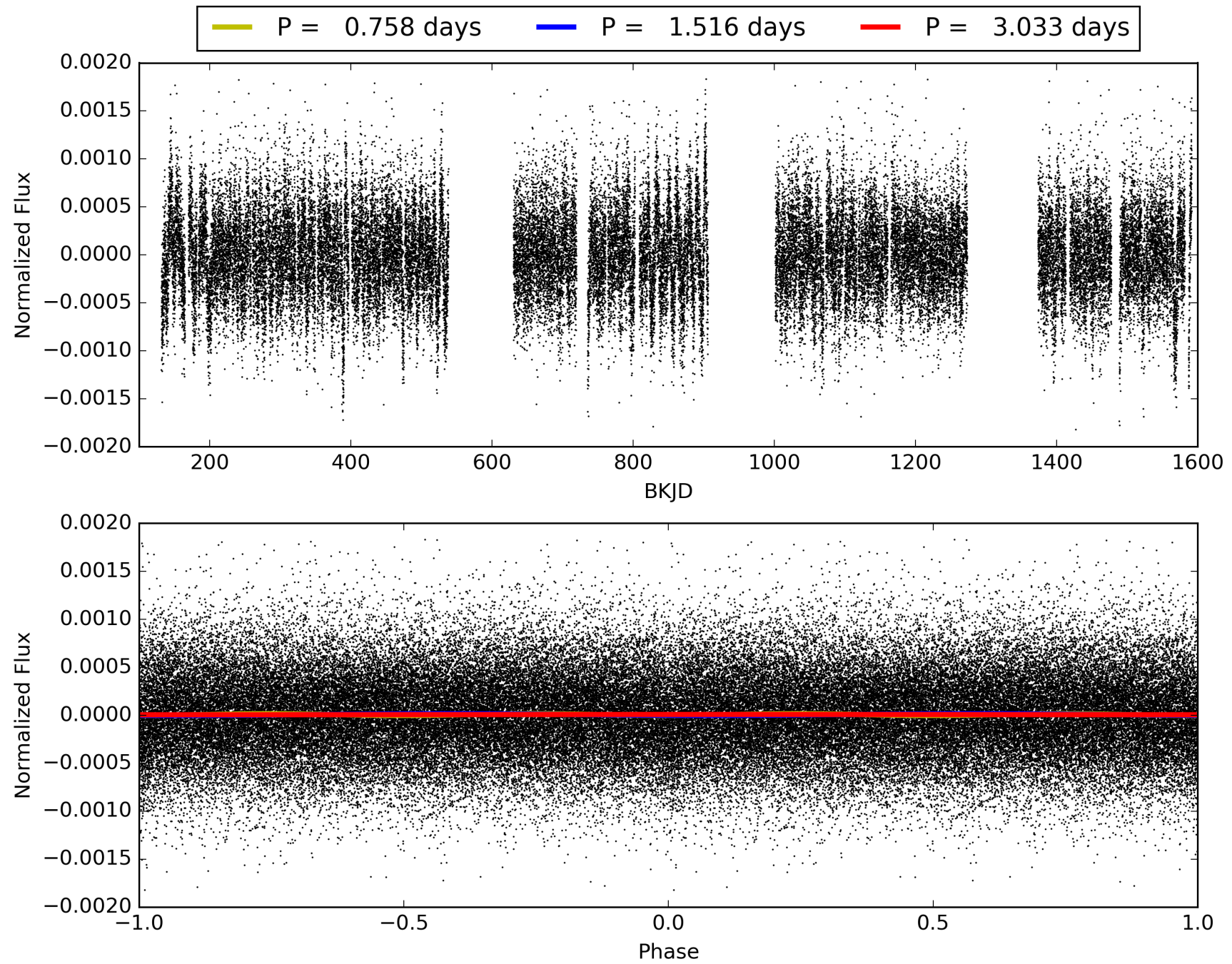
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.30e-16
RollingBand-fgt: 0.97 [645/662]
GhostDiagnostic-chr: -0.9363
Centroid-sig: 0.0%
Centroid-so: 33.380 arcsec [21.89σ]
OotOffset-rm: 8.279 arcsec [118.67σ]
KicOffset-rm: 8.222 arcsec [105.99σ]
OotOffset-st: 1/4/0/0 [5]
KicOffset-st: 1/4/0/0 [5]
DiffImageQuality-fgm: 1.00 [5/5]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 005282656-01, PDC Light Curves

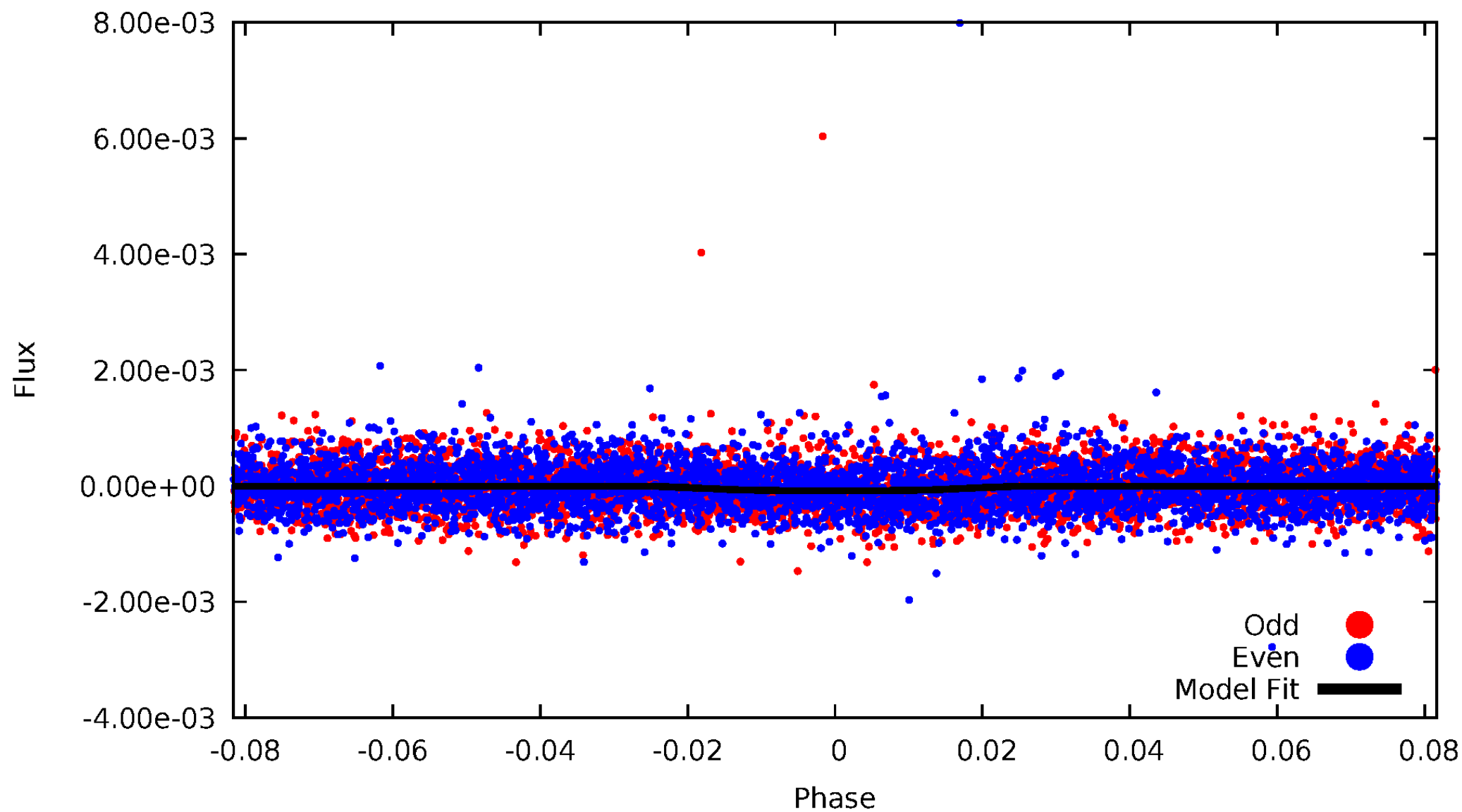


TCE 005282656-01



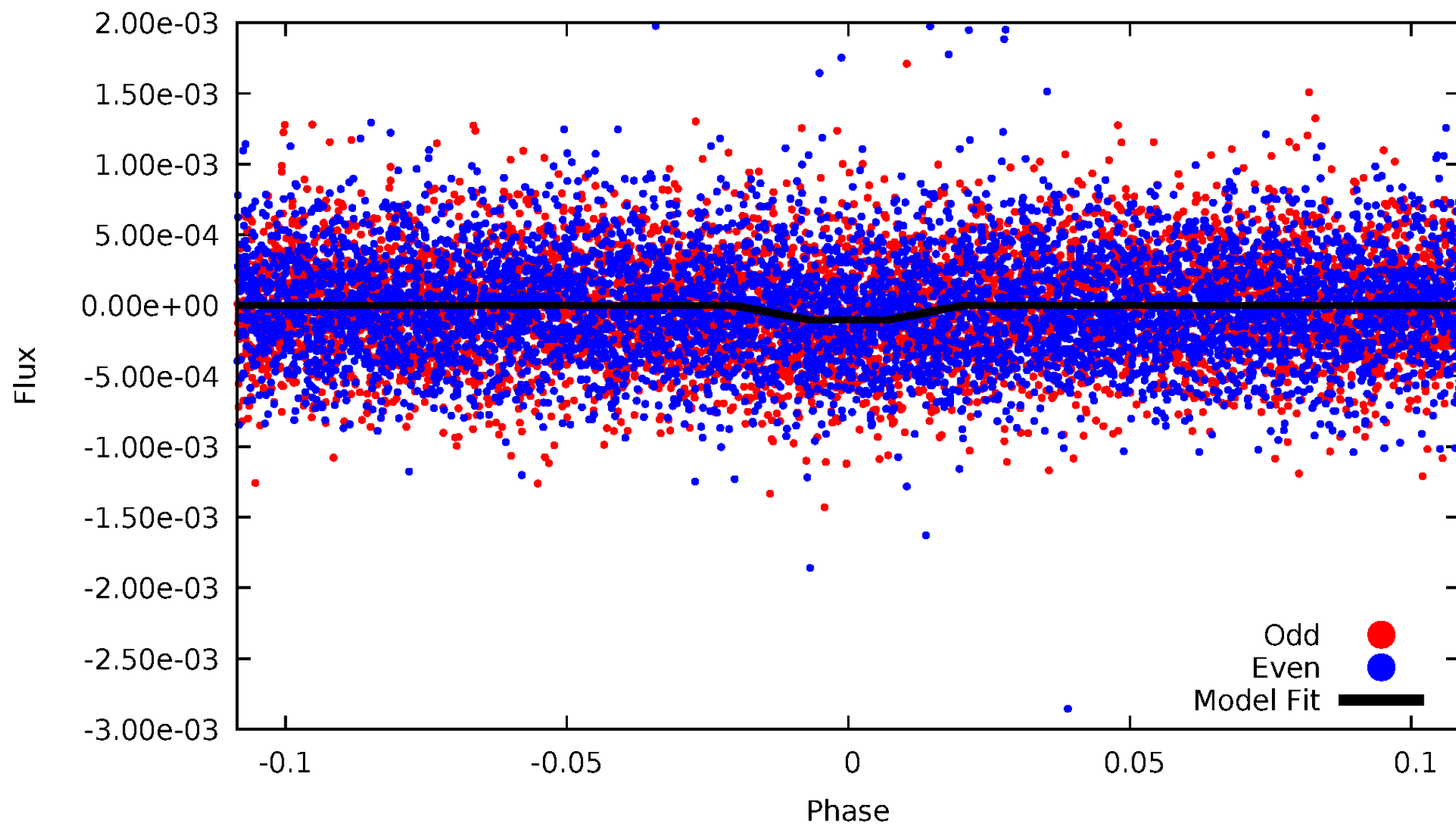
DV Odd/Even

TCE 005282656-01



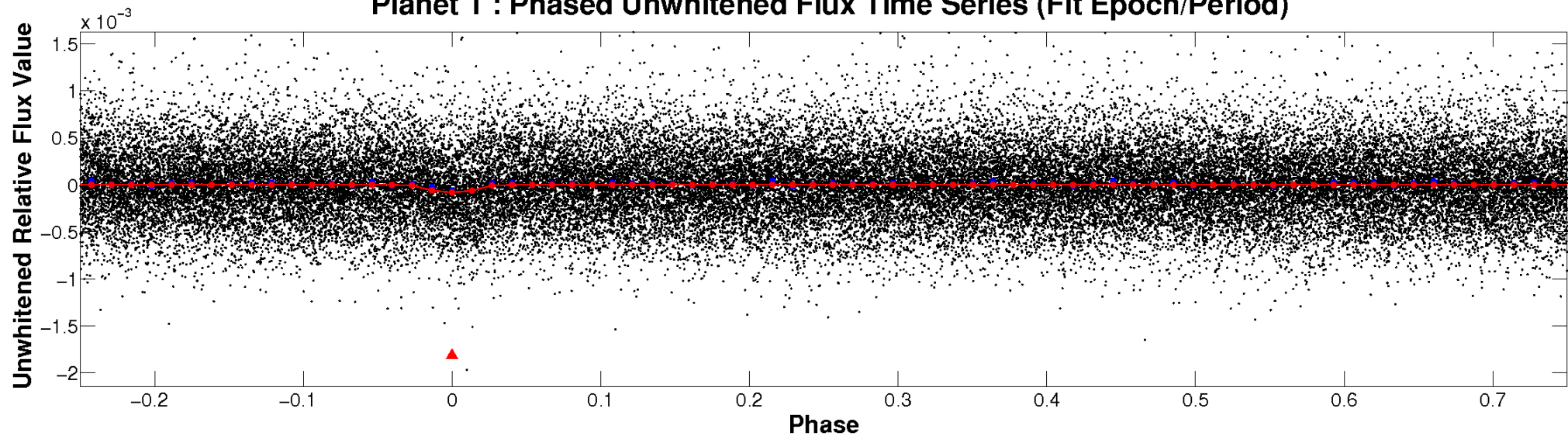
ALT Odd/Even

TCE 005282656-01

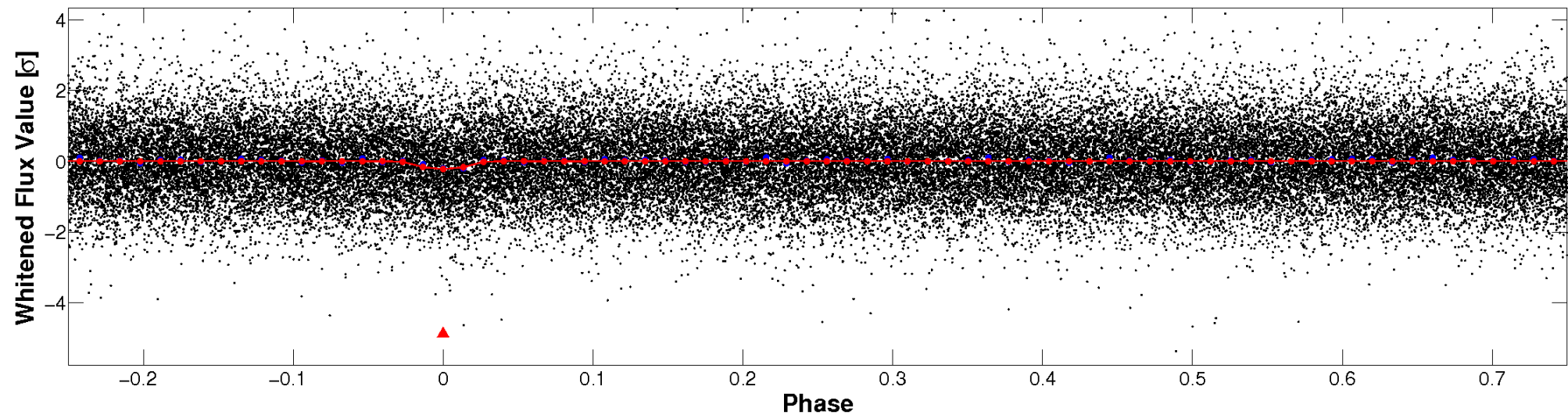


Non-Whitened Vs. Whitened Light Curve

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

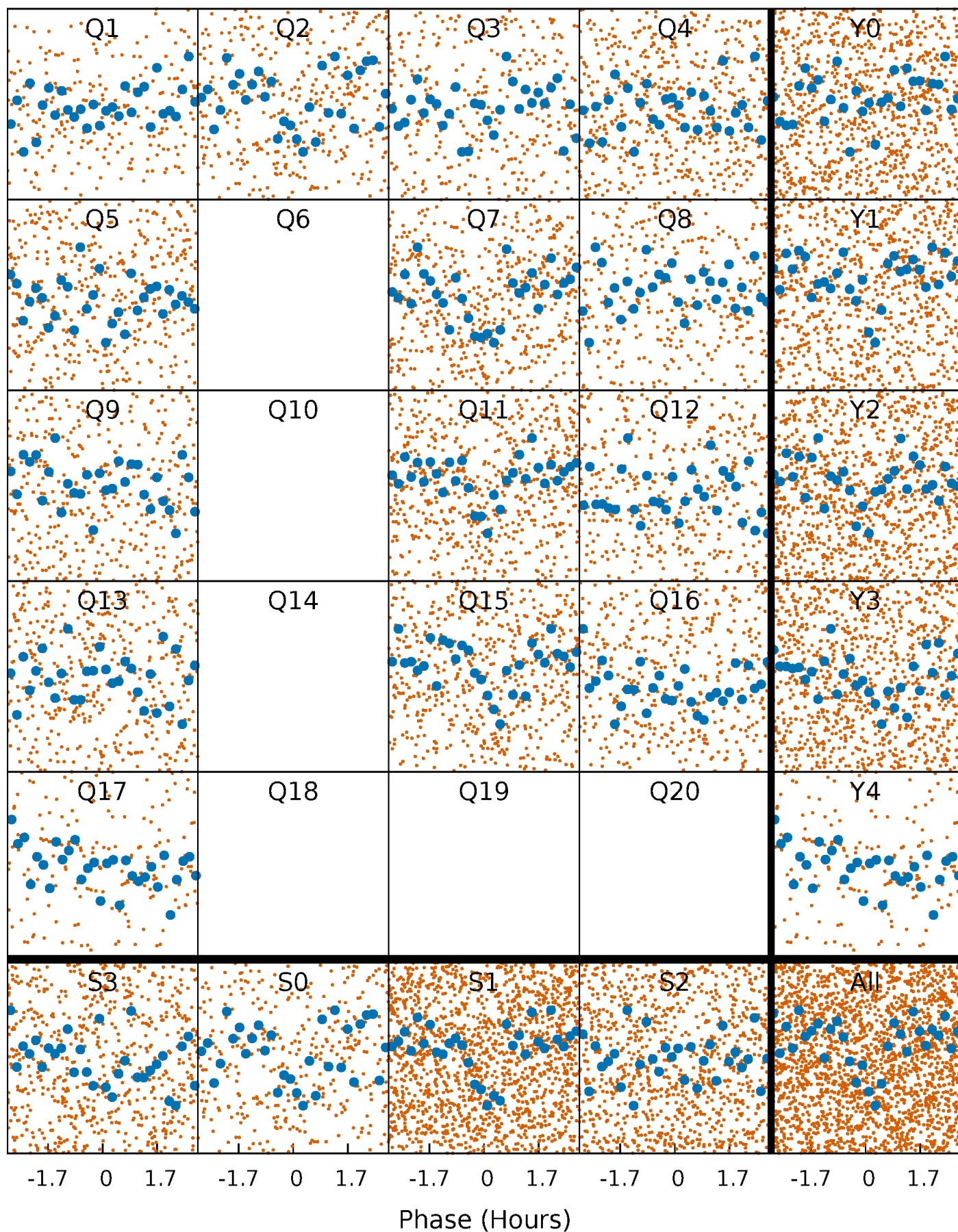


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



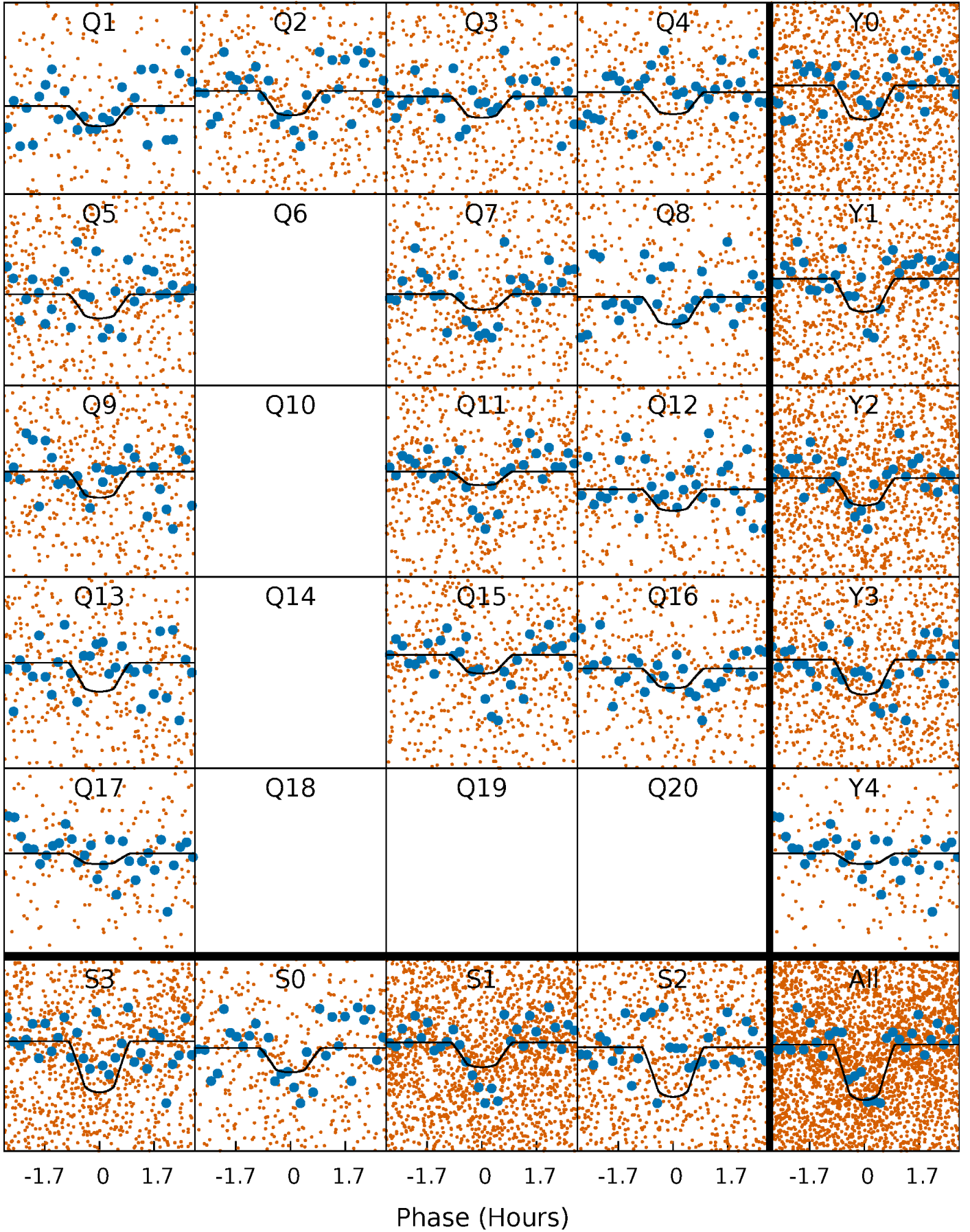
PDC Quarter-Phased Transit Curves

TCE 005282656-01 P= 1.516352 Days $T_0=131.837656$ (BKJD)



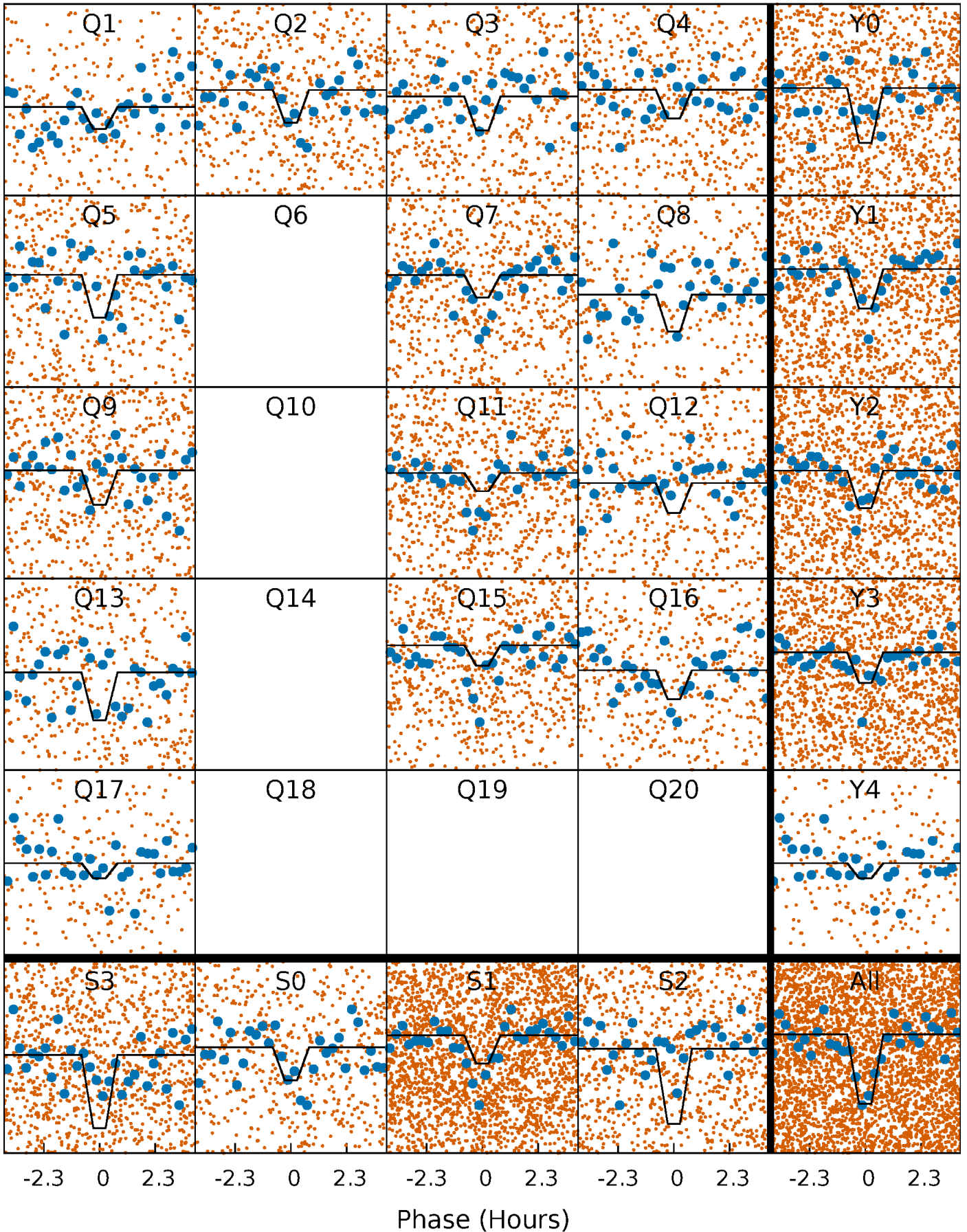
DV Quarter-Phased Transit Curves

TCE 005282656-01 P= 1.516352 Days $T_0=131.837656$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

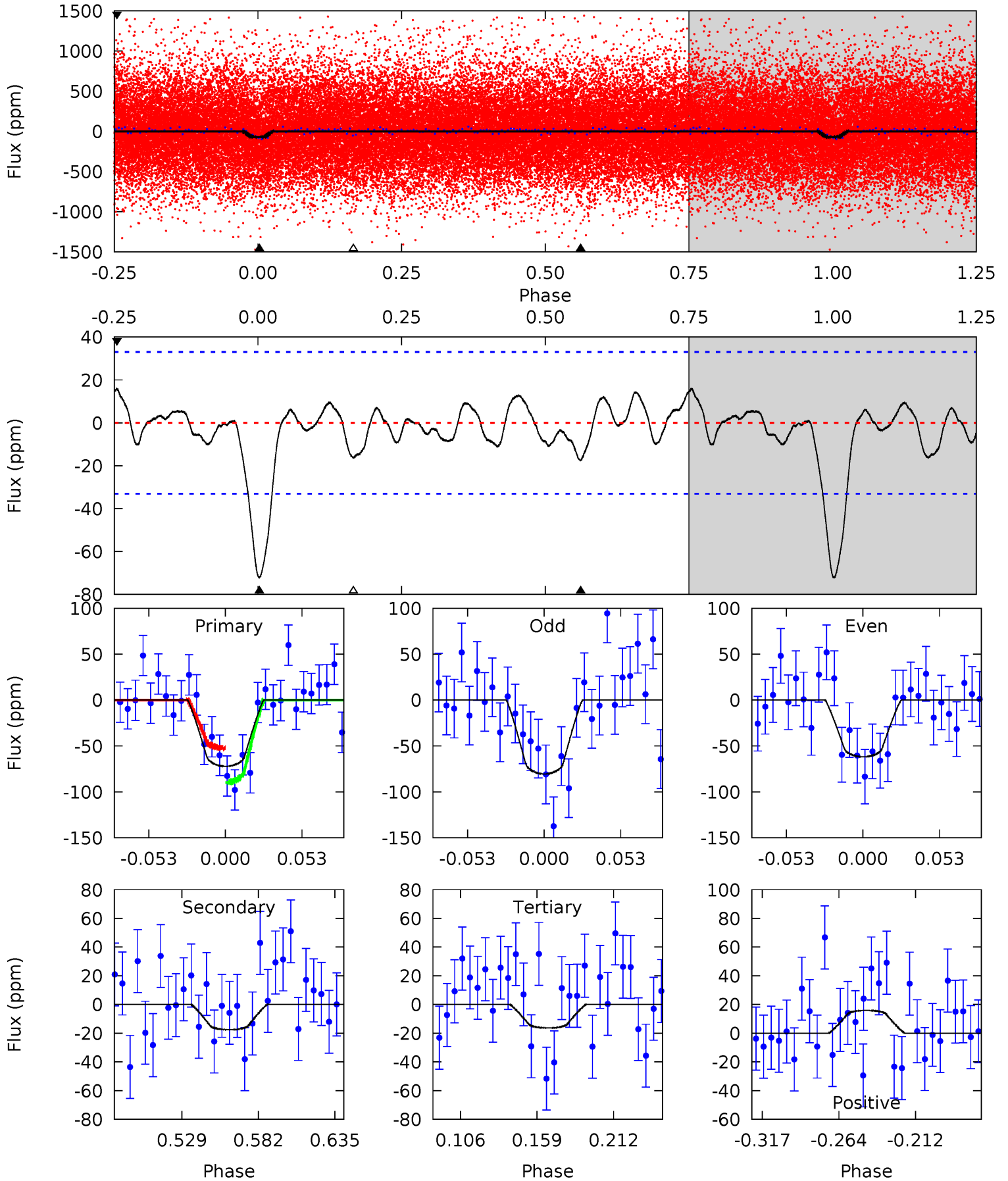
TCE 005282656-01 P= 1.516403 Days $T_0=131.819791$ (BKJD)



DV Model-Shift Uniqueness Test

005282656-01, P = 1.516352 Days, E = 130.321304 Days

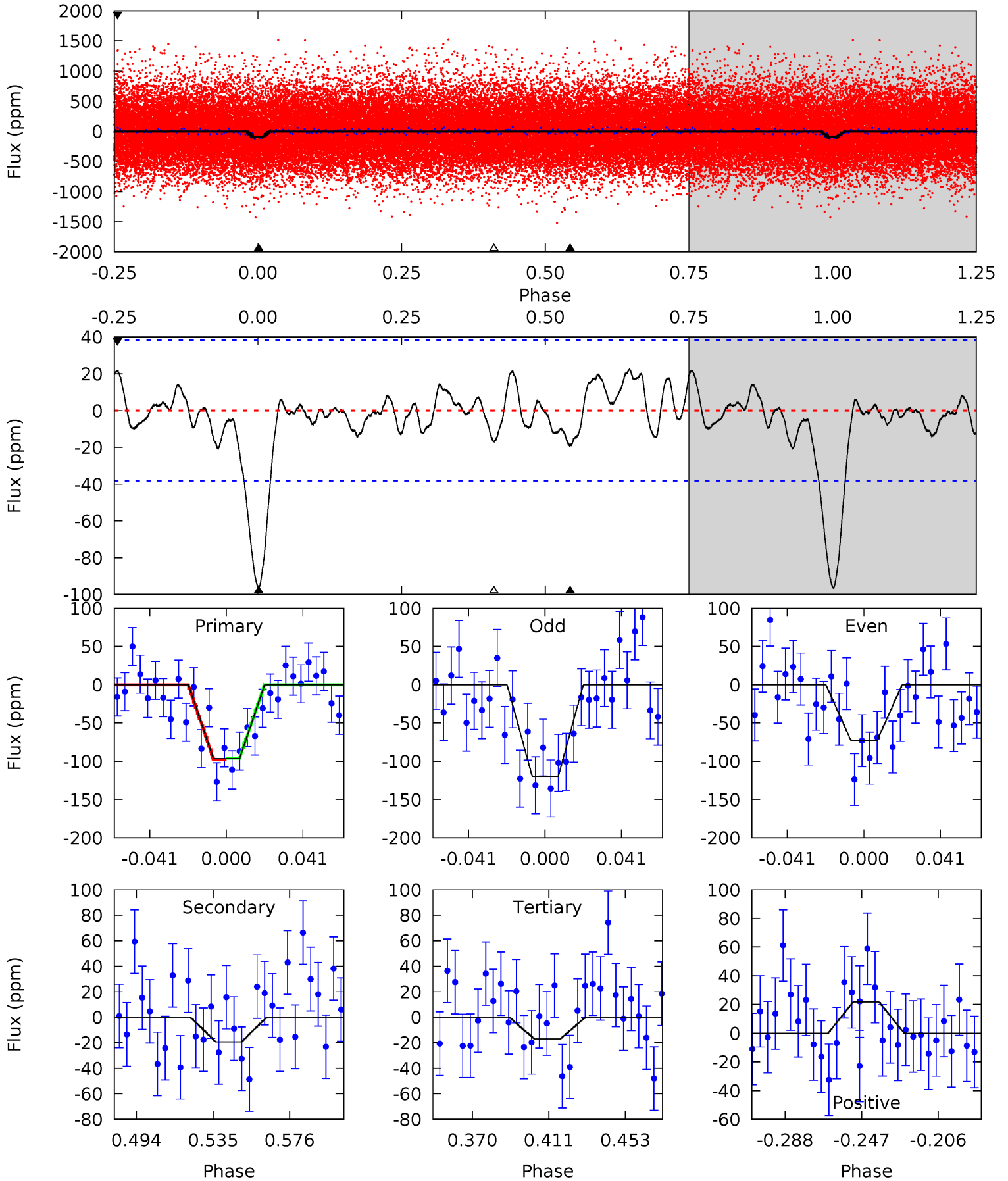
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.3	2.49	2.32	2.26	4.70	1.94	1.00	7.93	7.99	0.17	0.23	1.33	0.84	0.18	2.65



Alt Model-Shift Uniqueness Test

005282656-01, P = 1.516403 Days, E = 130.303388 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.0	2.39	2.11	2.70	4.75	2.04	1.16	9.91	9.32	0.28	-0.31	2.92	0.96	0.19	0.10



Stellar Parameters For KIC 005282656

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6142^{+171}_{-236}	$4.456^{+0.056}_{-0.224}$	$0.070^{+0.250}_{-0.350}$	$1.046^{+0.341}_{-0.114}$	$1.143^{+0.135}_{-0.166}$	$1.407^{+0.408}_{-0.746}$
	+3%/-4%	+1%/-5%	+357%/-500%	+33%/-11%	+12%/-15%	+29%/-53%
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 005282656-01 / KOI 6551.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-18 ± 7	$1.39^{+0.98}_{-0.77}$	2406^{+166}_{-123}	3874^{+1631}_{-749}	$3.215^{+14.339}_{-2.134}$
Alt.	-19 ± 8	$1.36^{+1.05}_{-0.79}$	2404^{+183}_{-127}	3980^{+1802}_{-783}	$3.687^{+17.738}_{-2.543}$

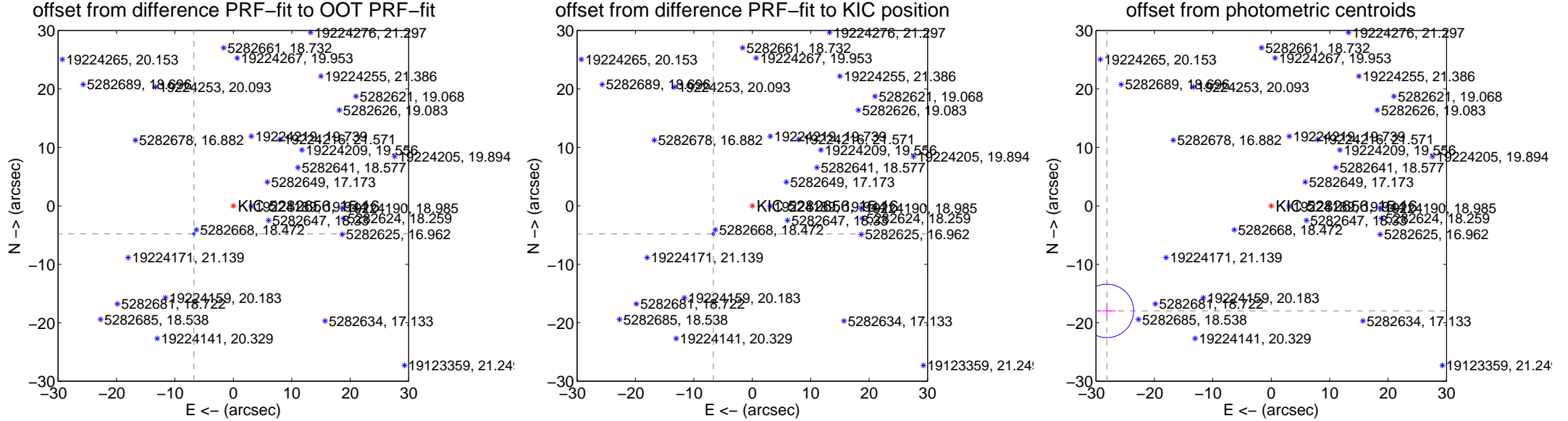
T_{max} = Theoretical Maximum Planetary Temperature
 T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)
 A_{obs} = Observed Albedo (Assuming $T=0$)

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

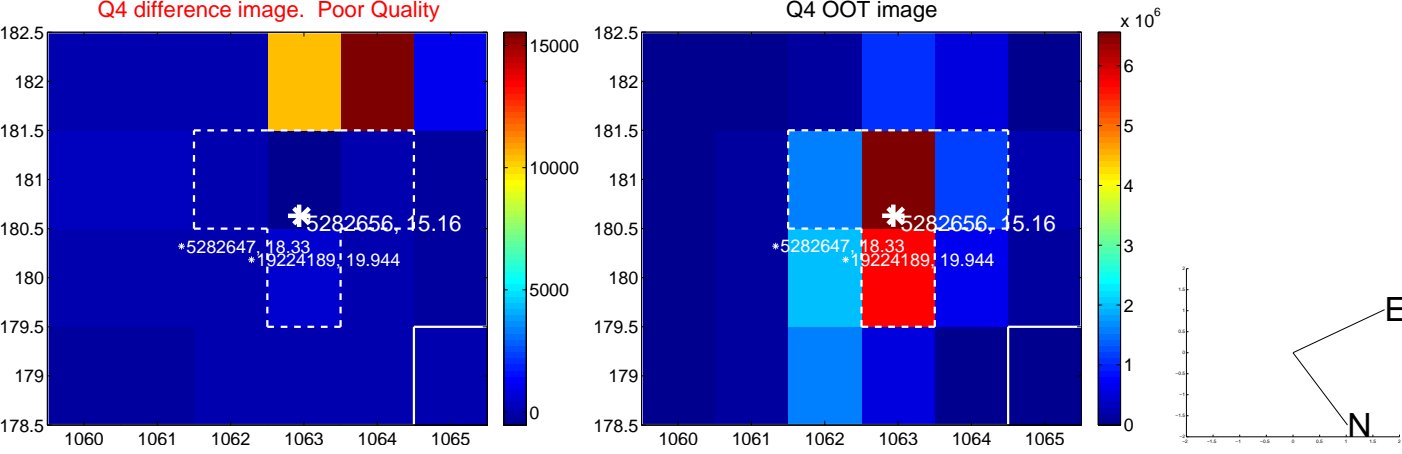
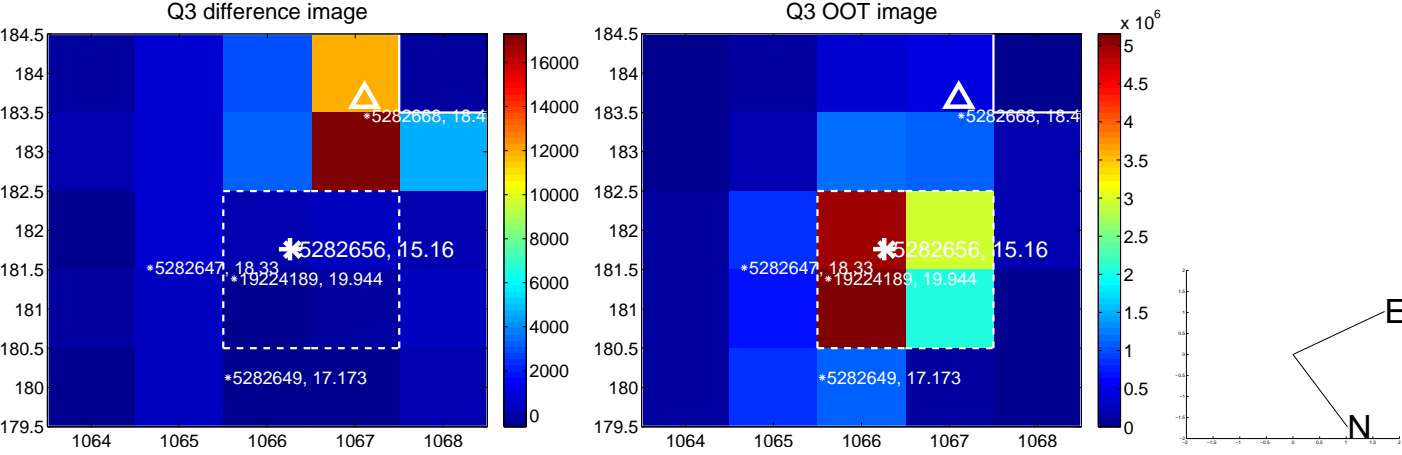
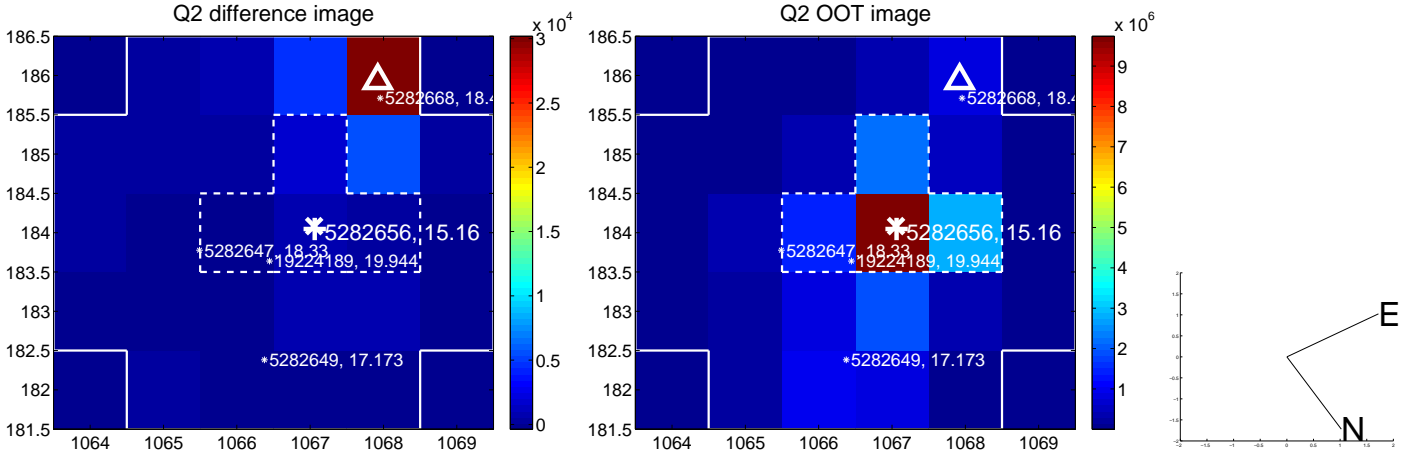
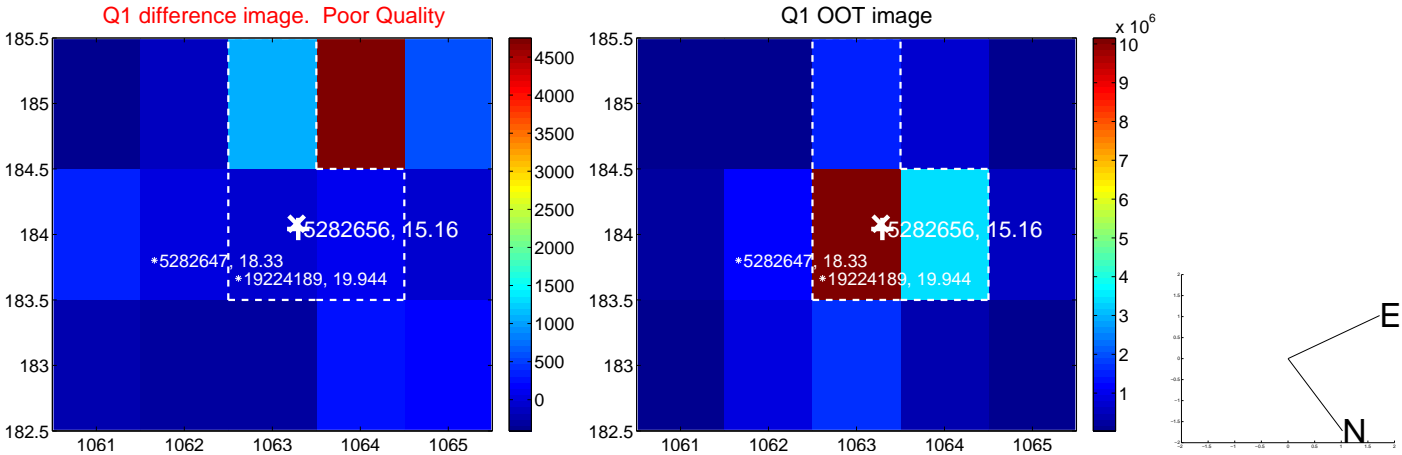
Supplemental centroid analysis for 005282656-01. Kepler magnitude: 15.16. Transit SNR 8.31
 There are 5 quarters with good PRF difference image offsets
 The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	8.279 \pm 0.070	118.67	6.753 \pm 0.070	-4.791 \pm 0.069
PRF-fit source offset from KIC position	8.222 \pm 0.078	105.99	6.671 \pm 0.075	-4.806 \pm 0.082
photometric centroid source offset	33.38 \pm 1.52	21.89	28.13 \pm 1.58	-17.97 \pm 1.38

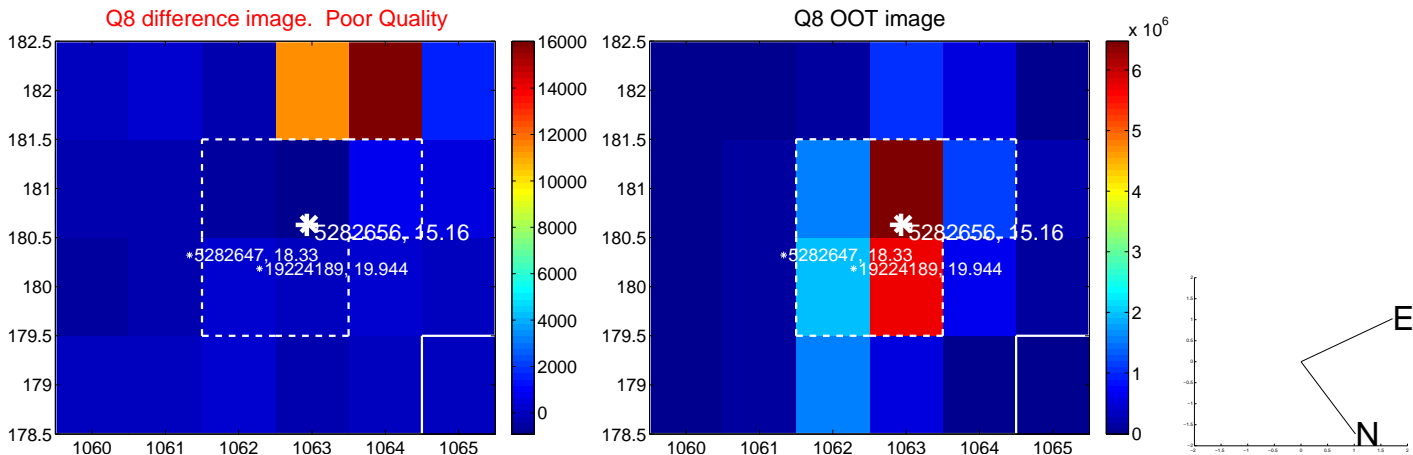
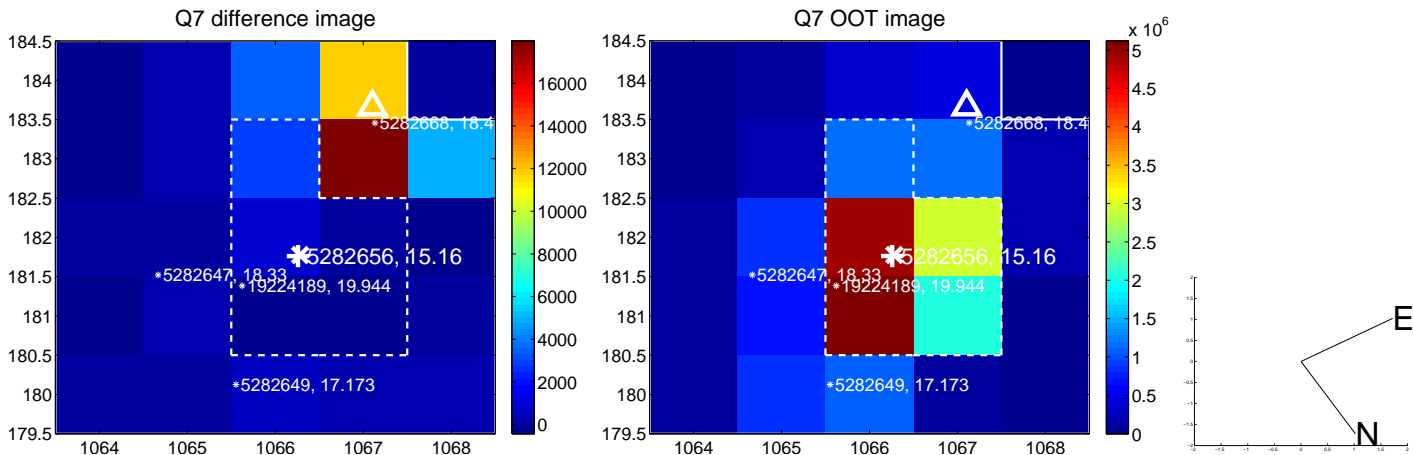
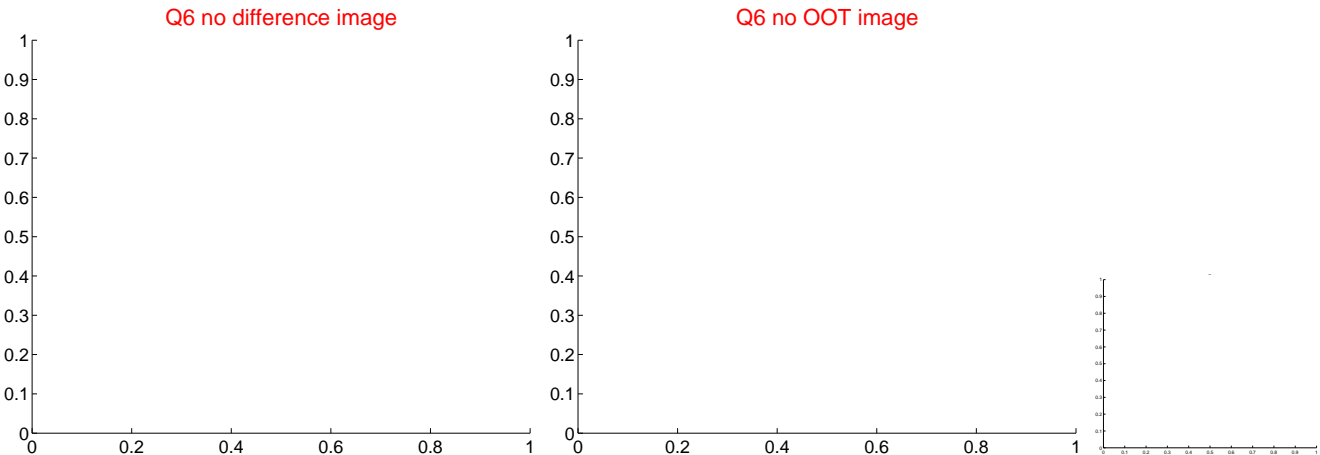
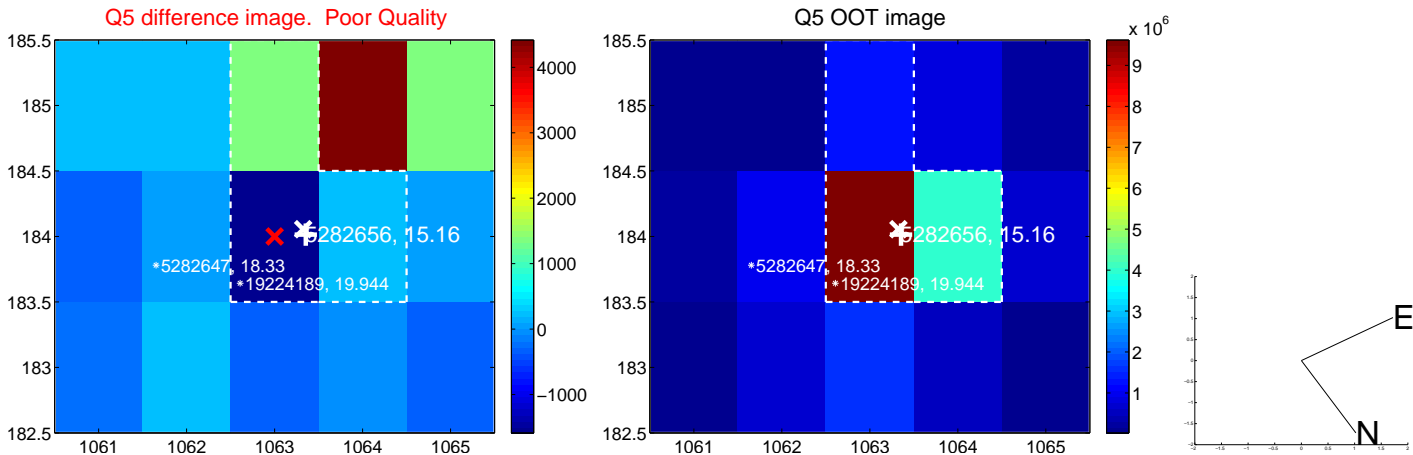


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

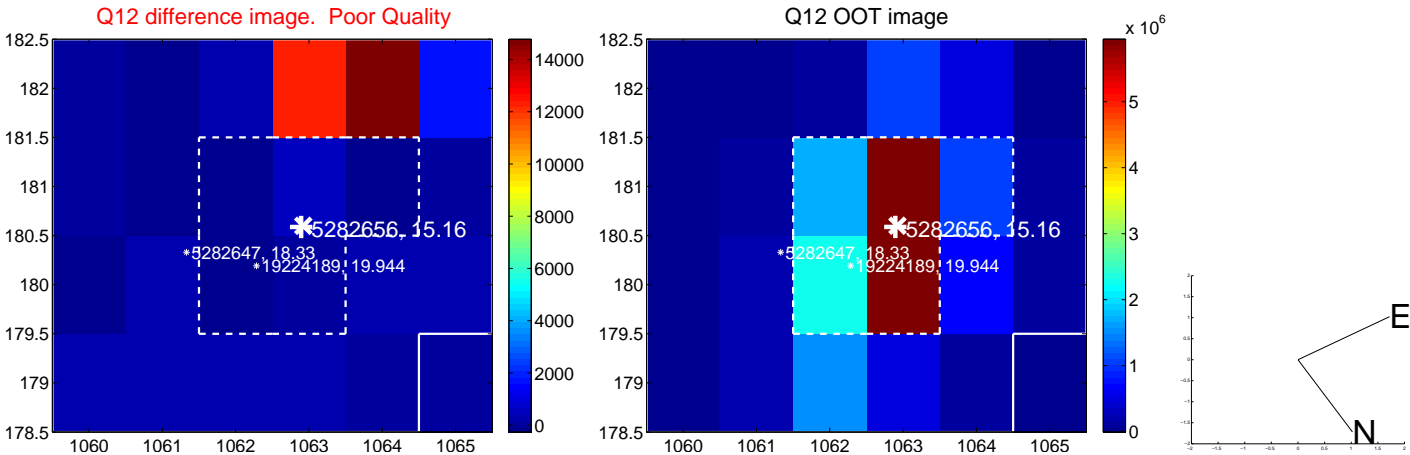
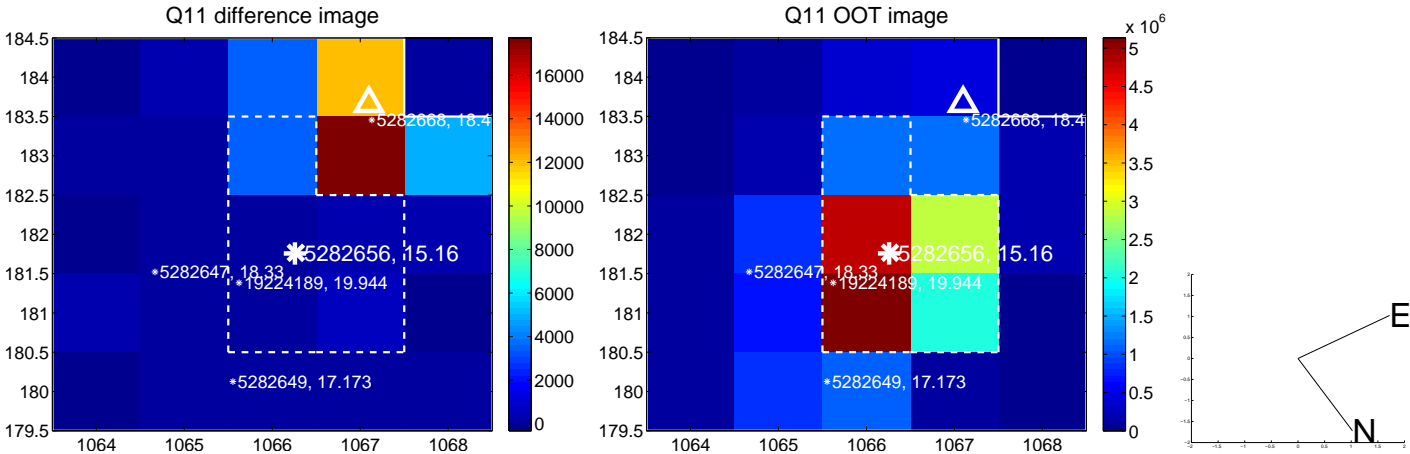
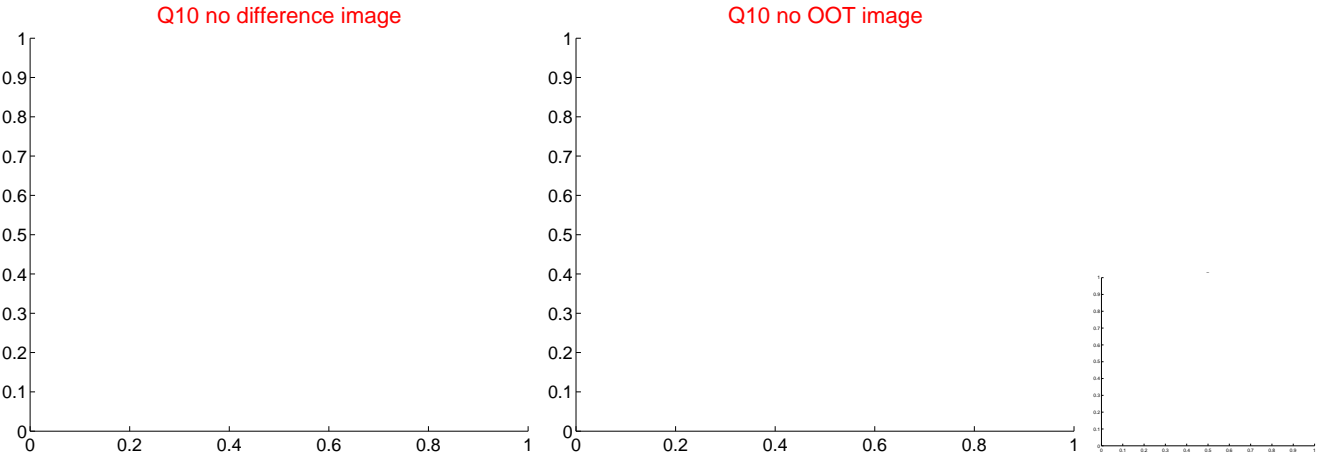
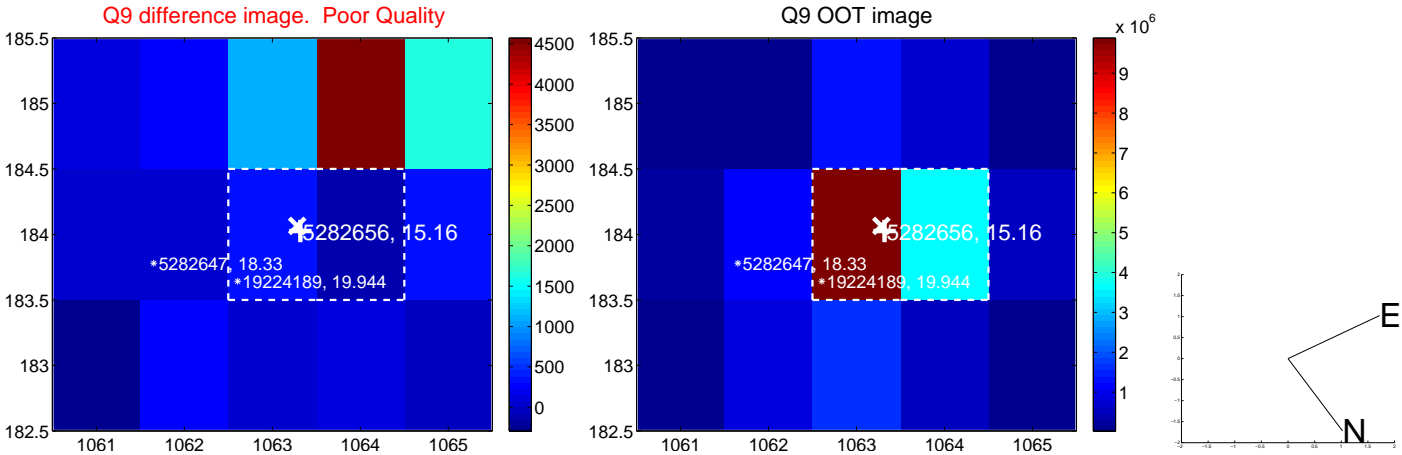
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



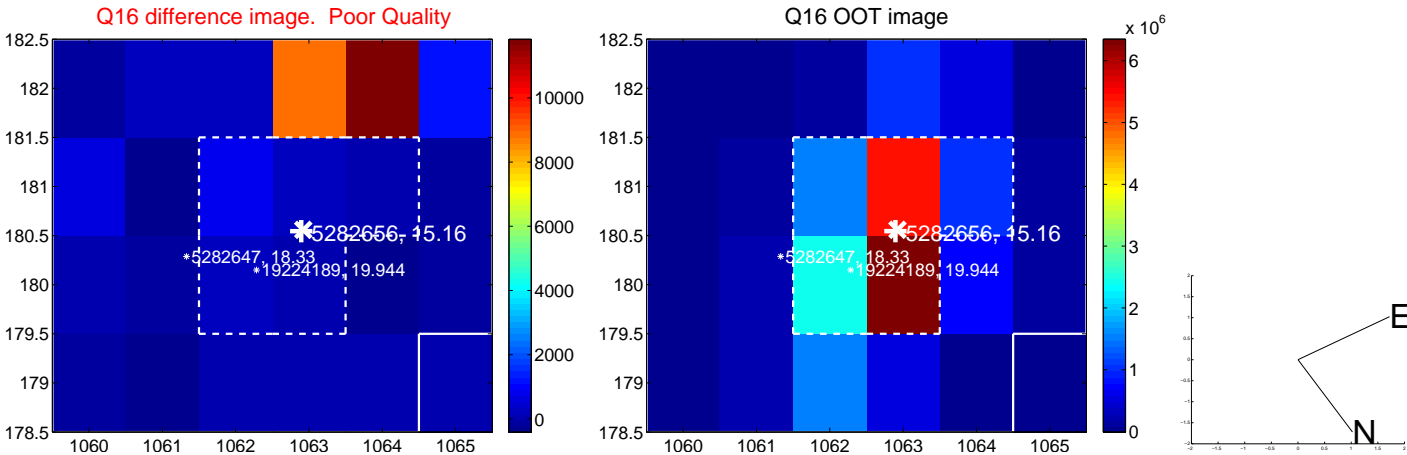
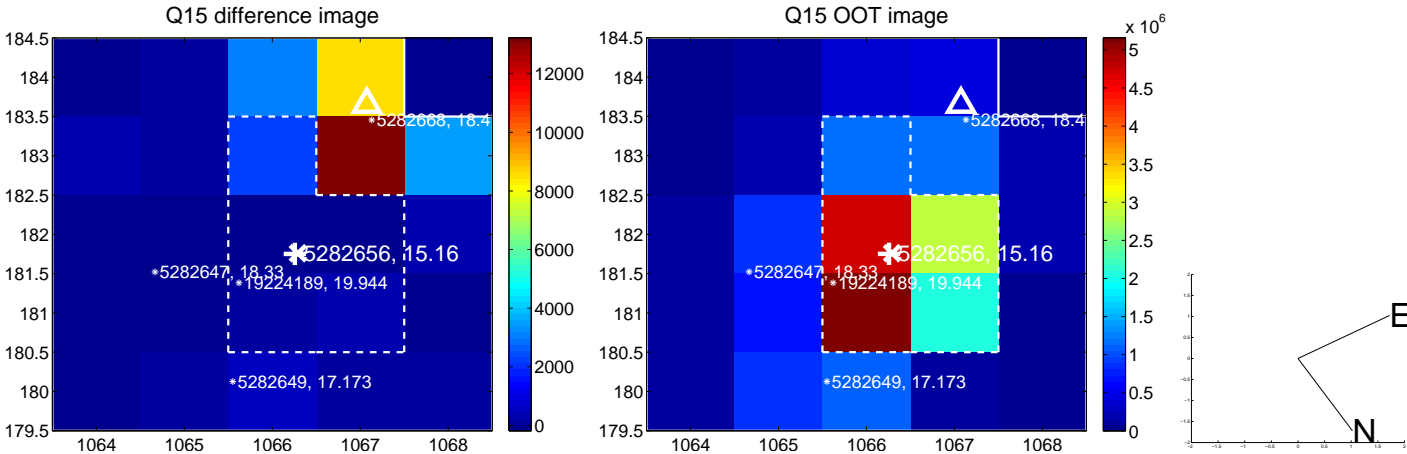
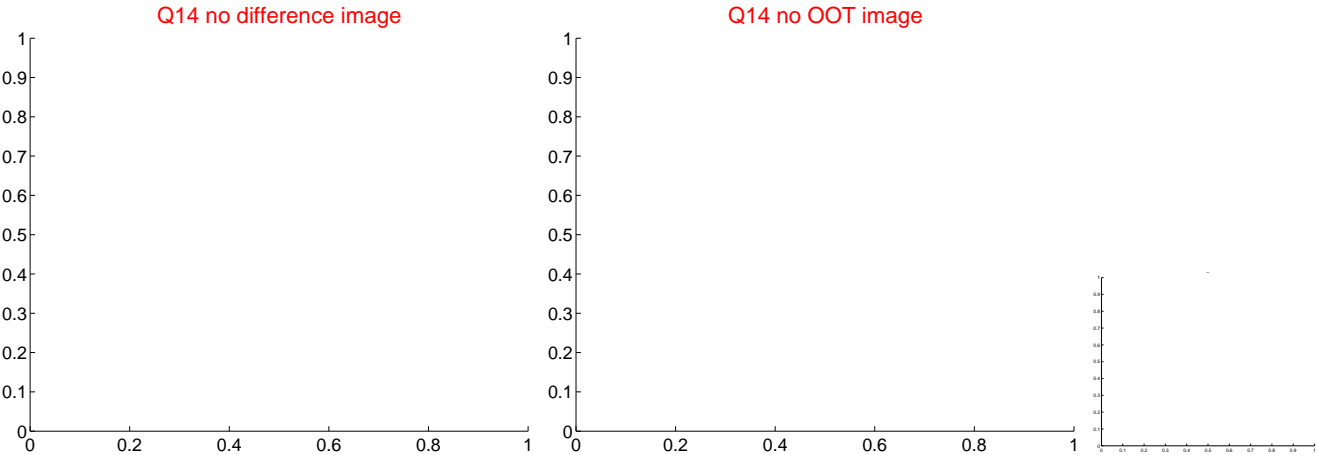
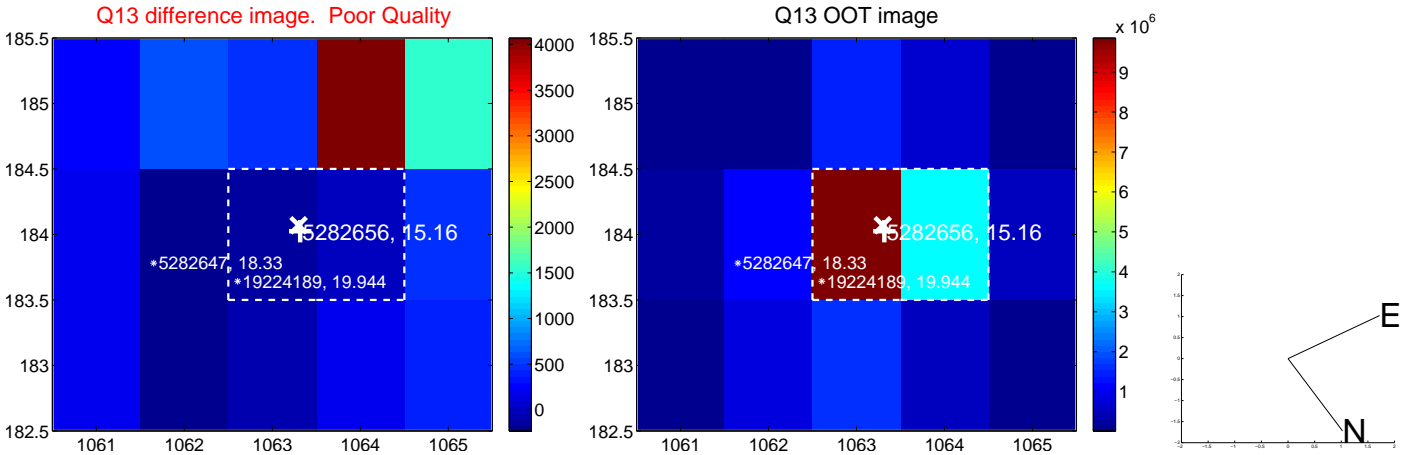
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



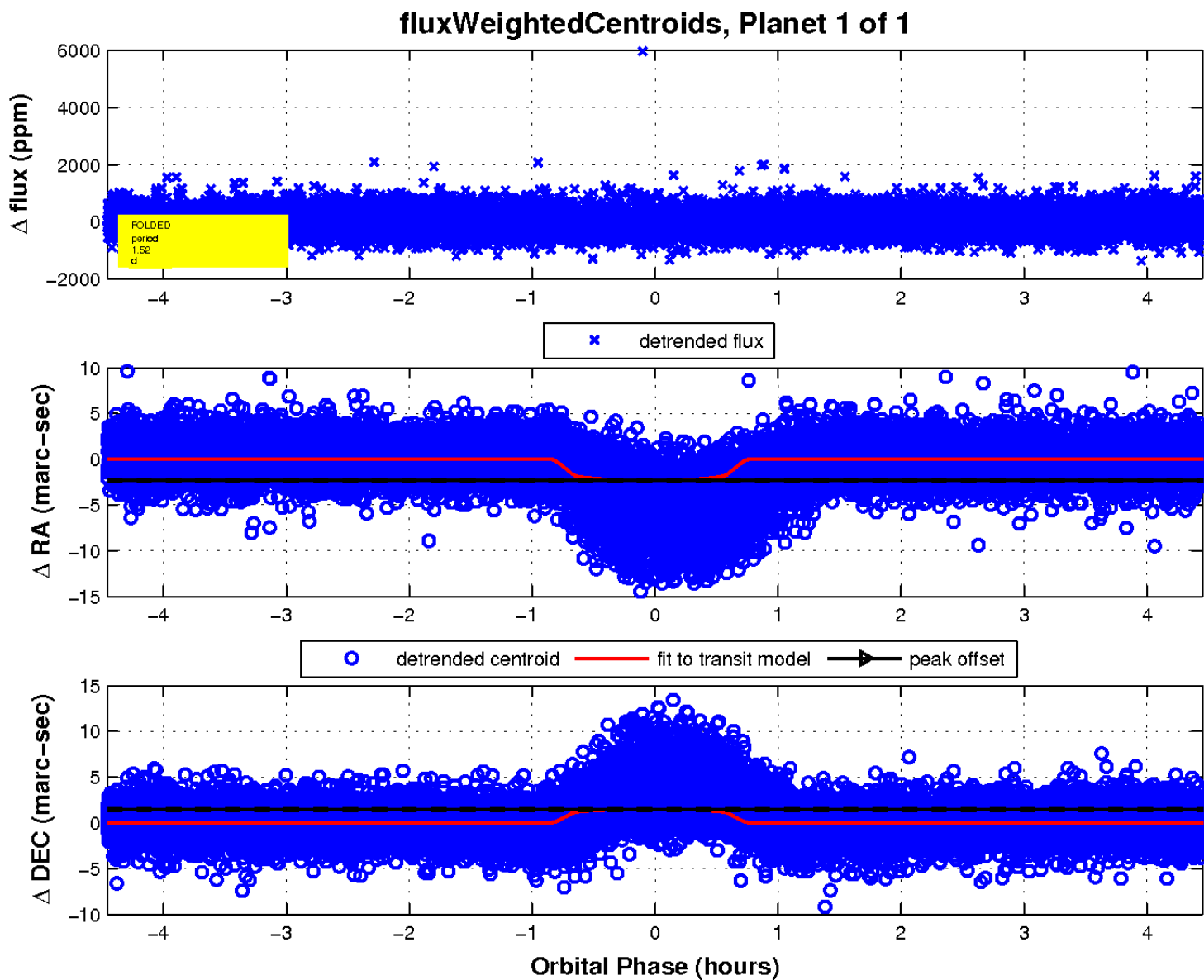
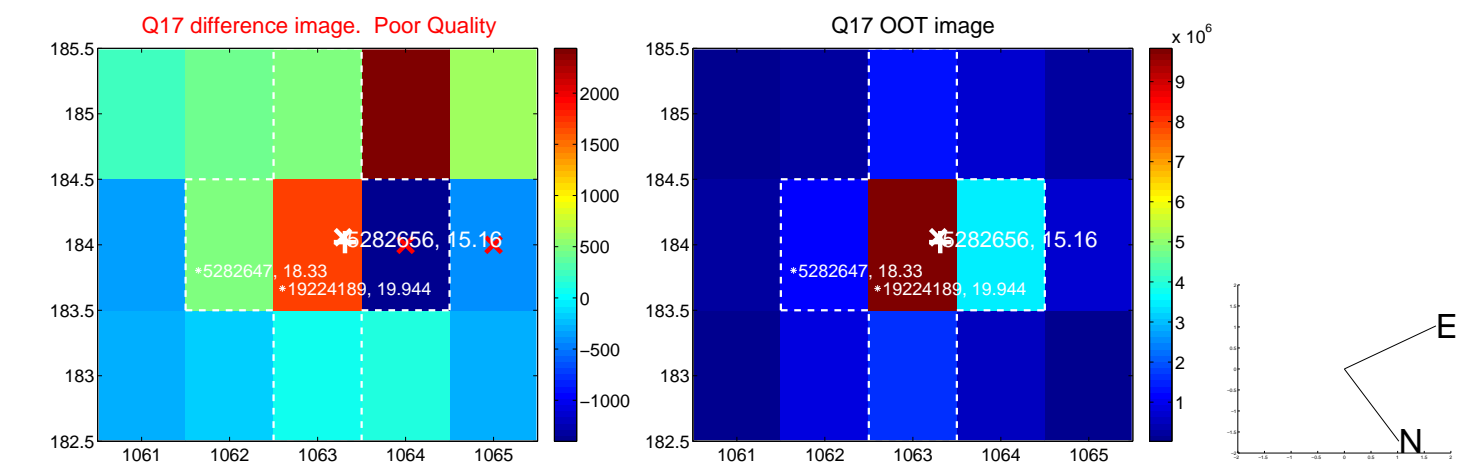
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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.



UKIRT Image

Declination

