

KIC 011920542

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})
011920542-01	OBS	No	2.502495	132.342260	39.3	7.930	7.6	7.5	0.76	4944	0.64	291.40

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011920542-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_CROWDED—HALO_GHOST

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

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

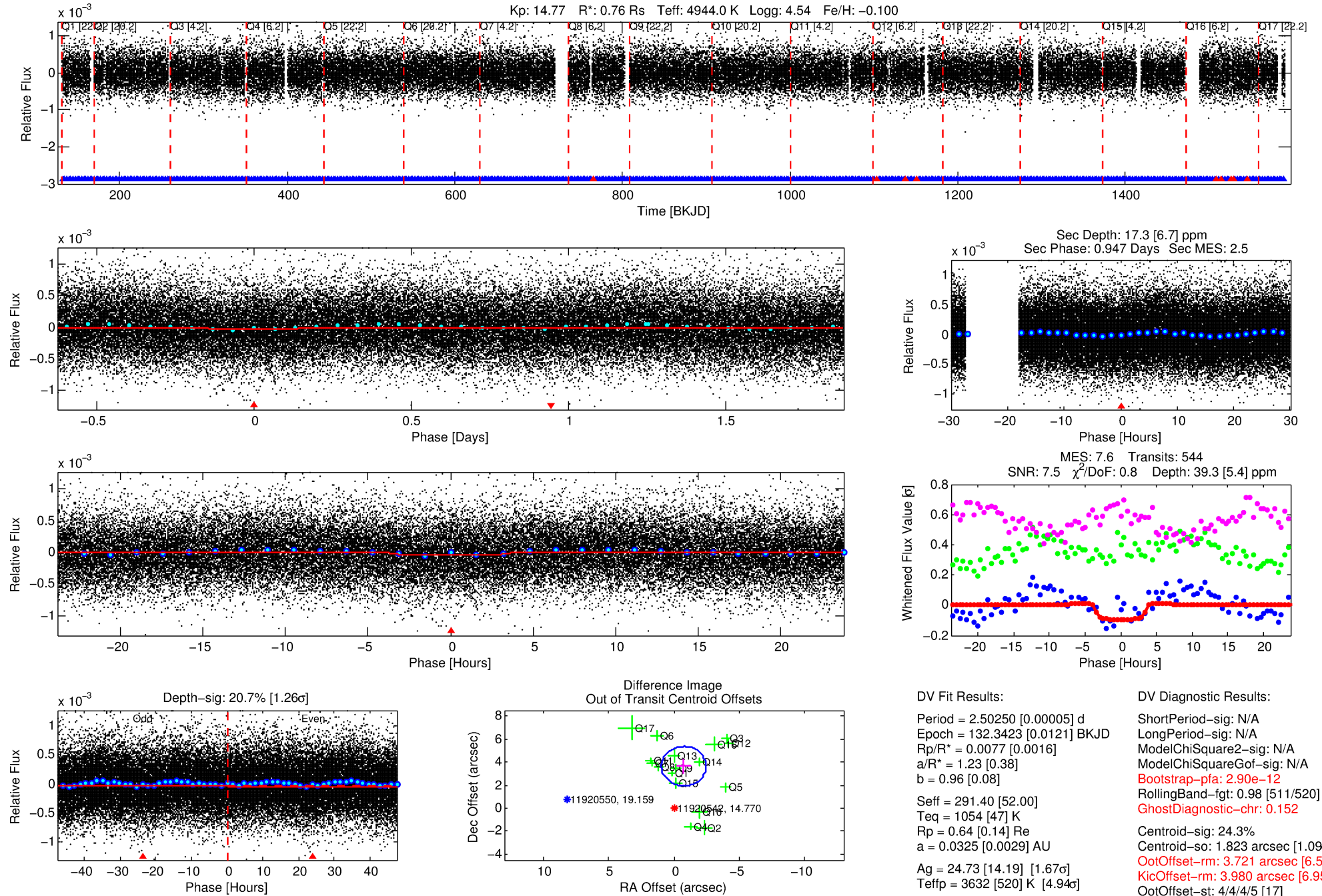
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011920542-01

No Significant Match Found

DV One-Page Summary

KIC: 11920542 Candidate: 1 of 1 Period: 2.502 d



DV Fit Results:

Period = 2.50250 [0.00005] d
Epoch = 132.3423 [0.0121] BKJD
Rp/R* = 0.0077 [0.0016]
a/R* = 1.23 [0.38]
b = 0.96 [0.08]
Seff = 291.40 [52.00]
Teq = 1054 [47] K
Rp = 0.64 [0.14] Re
a = 0.0325 [0.0029] AU
Ag = 24.73 [14.19] [1.67σ]
Teffp = 3632 [520] K [4.94σ]

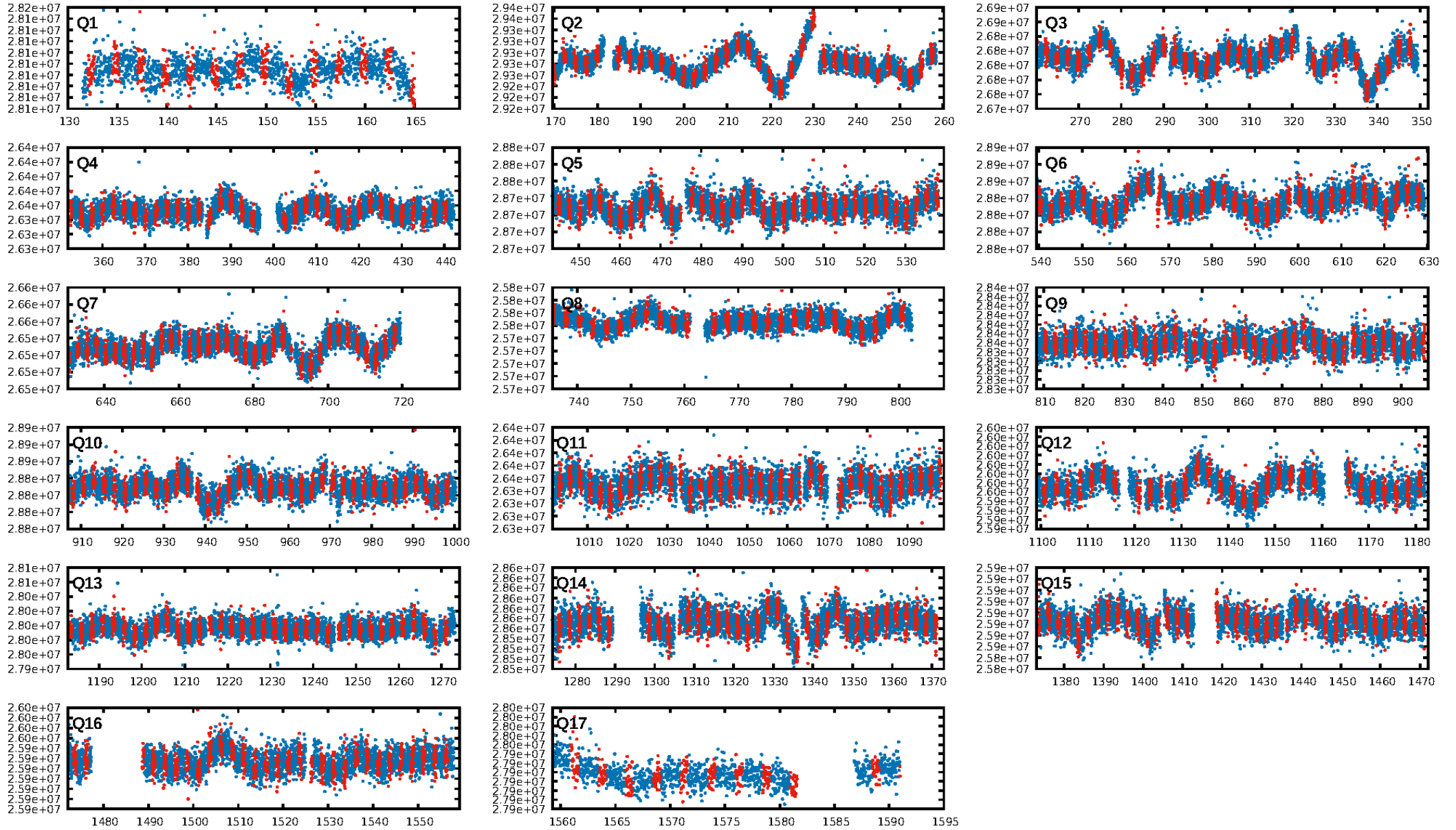
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.90e-12
RollingBand-fgt: 0.98 [511/520]
GhostDiagnostic-chr: 0.152
Centroid-sig: 24.3%
Centroid-so: 1.823 arcsec [1.09σ]
OotOffset-rm: 3.721 arcsec [6.52σ]
KicOffset-rm: 3.980 arcsec [6.95σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.06 [1/17]
DiffImageOverlap-fno: 1.00 [17/17]

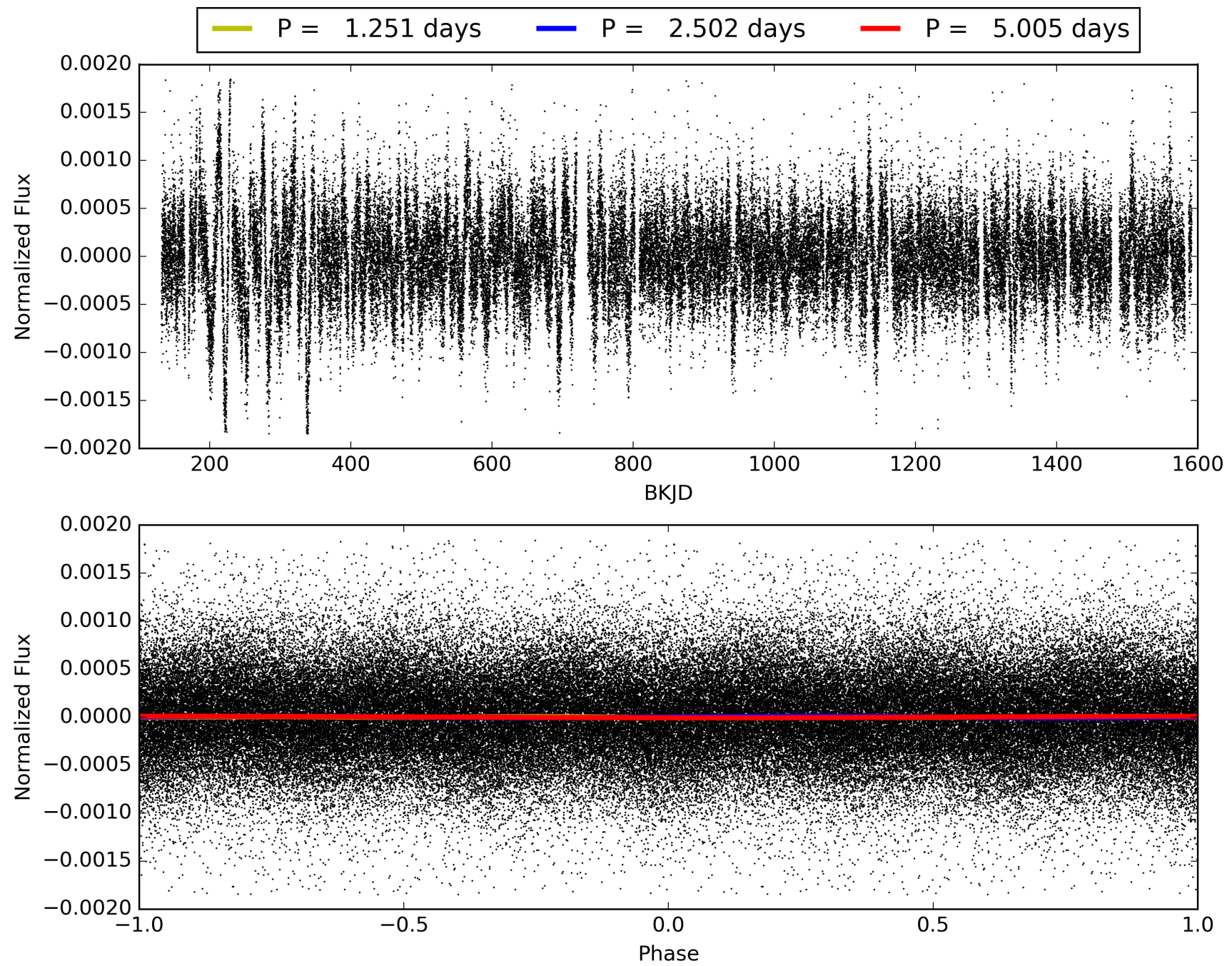
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 21:51:40 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 011920542-01, PDC Light Curves

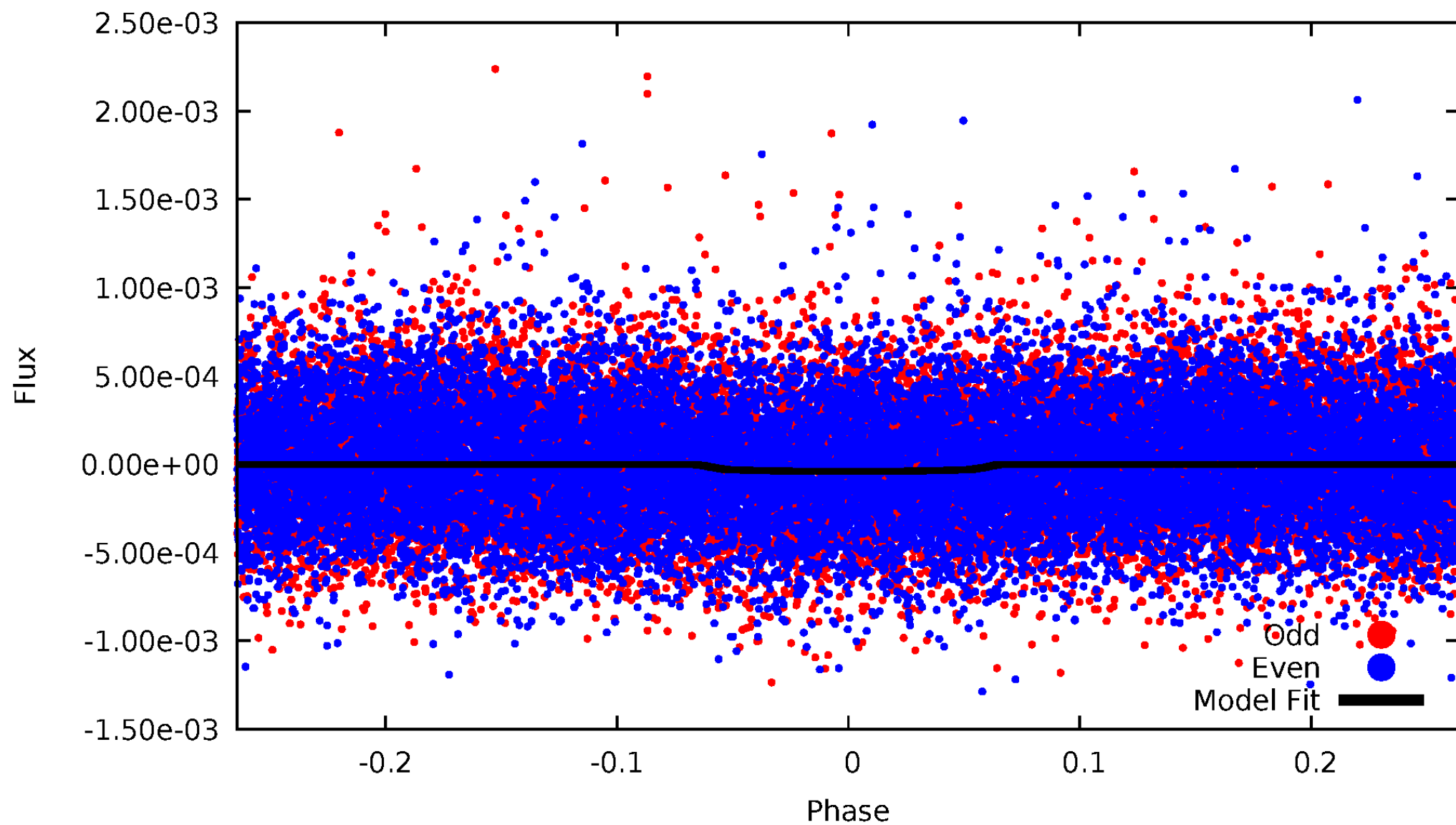


TCE 011920542-01



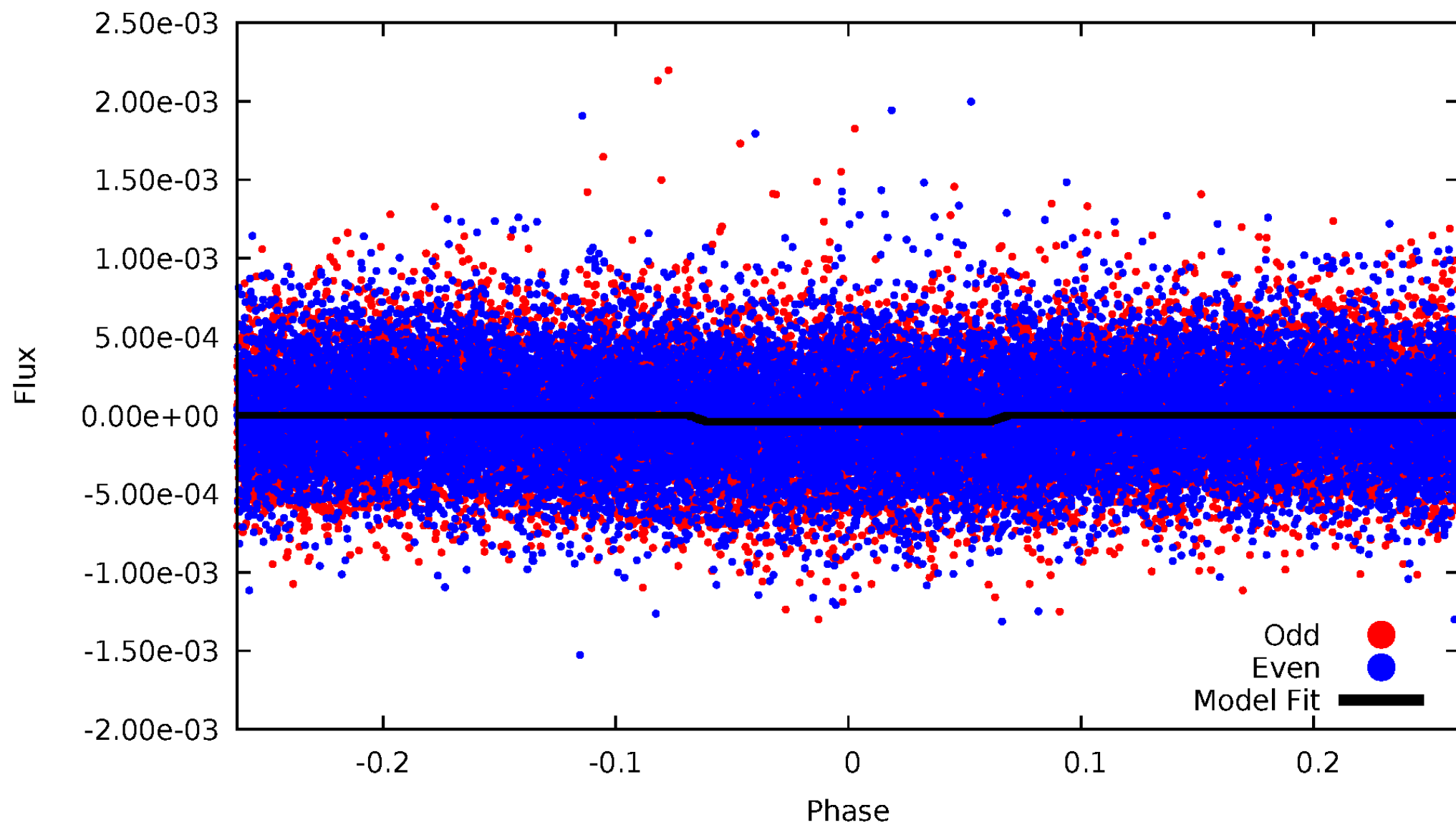
DV Odd/Even

TCE 011920542-01



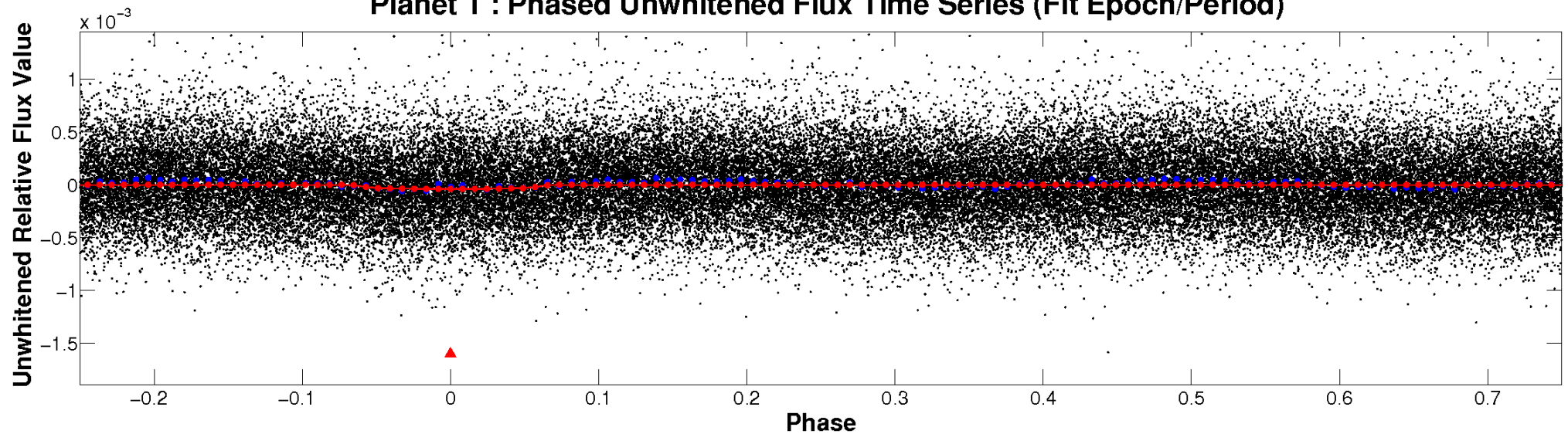
ALT Odd/Even

TCE 011920542-01

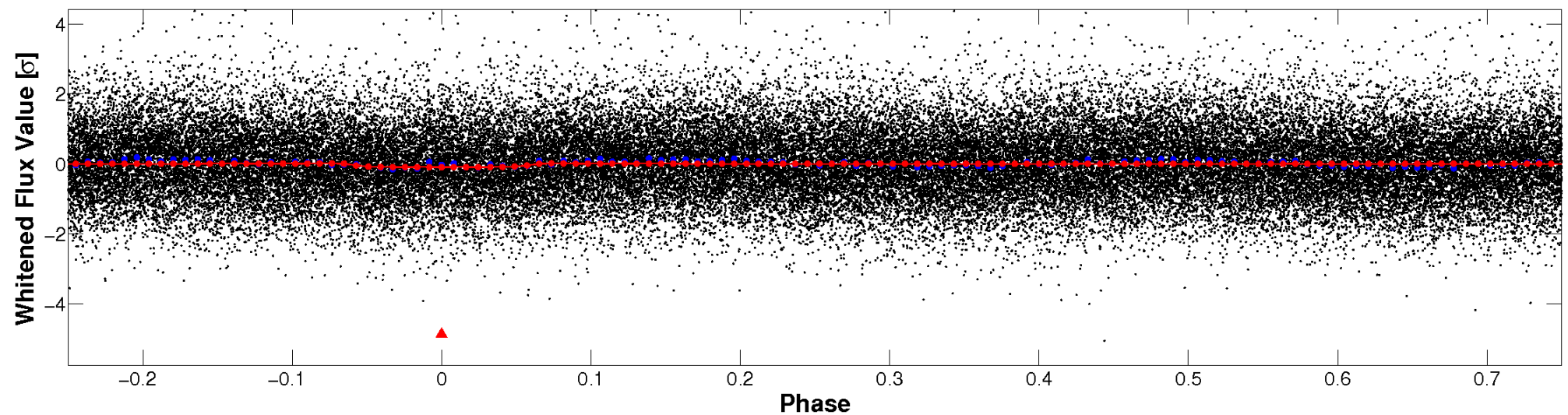


Non-Whitened Vs. Whitened Light Curve

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

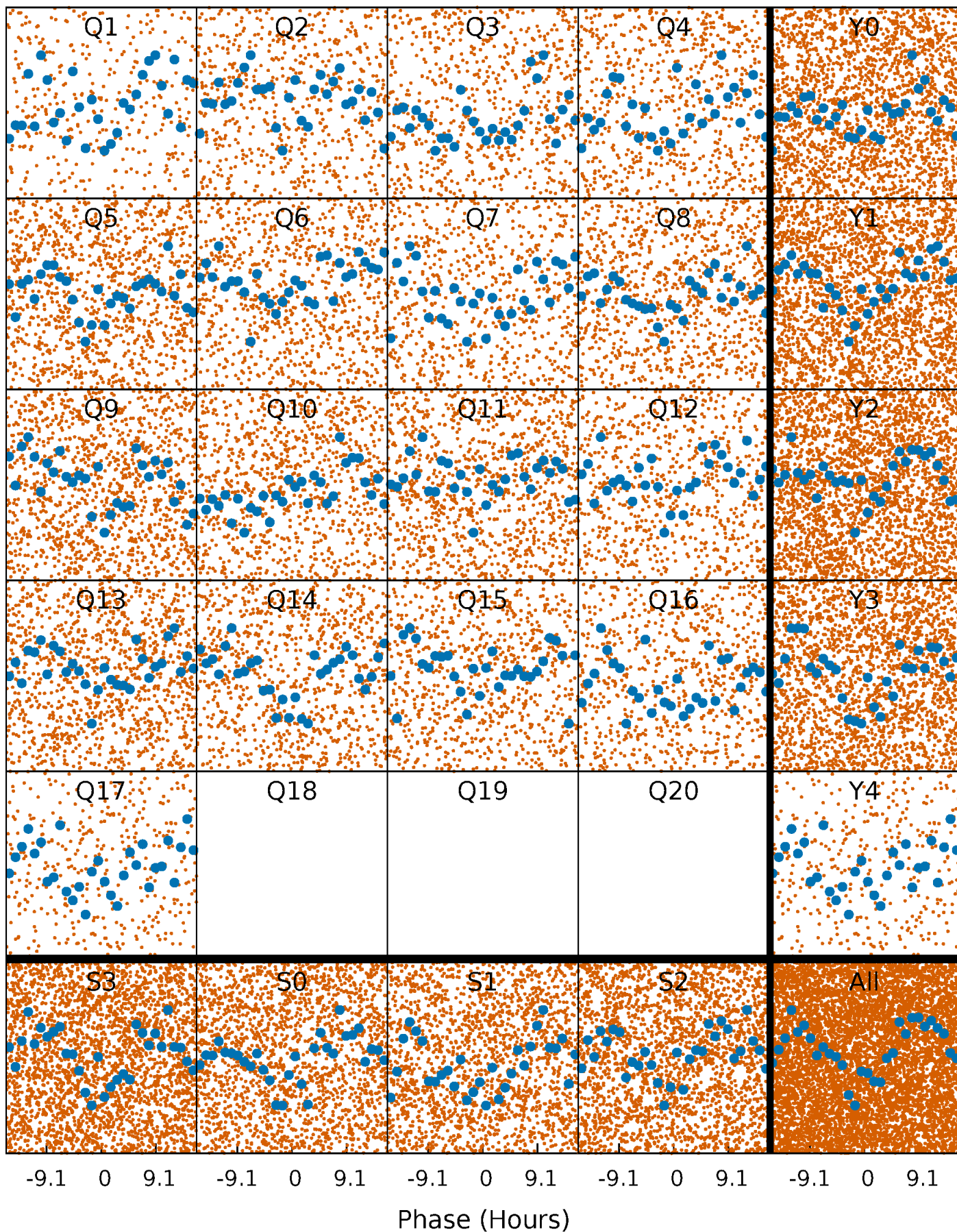


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



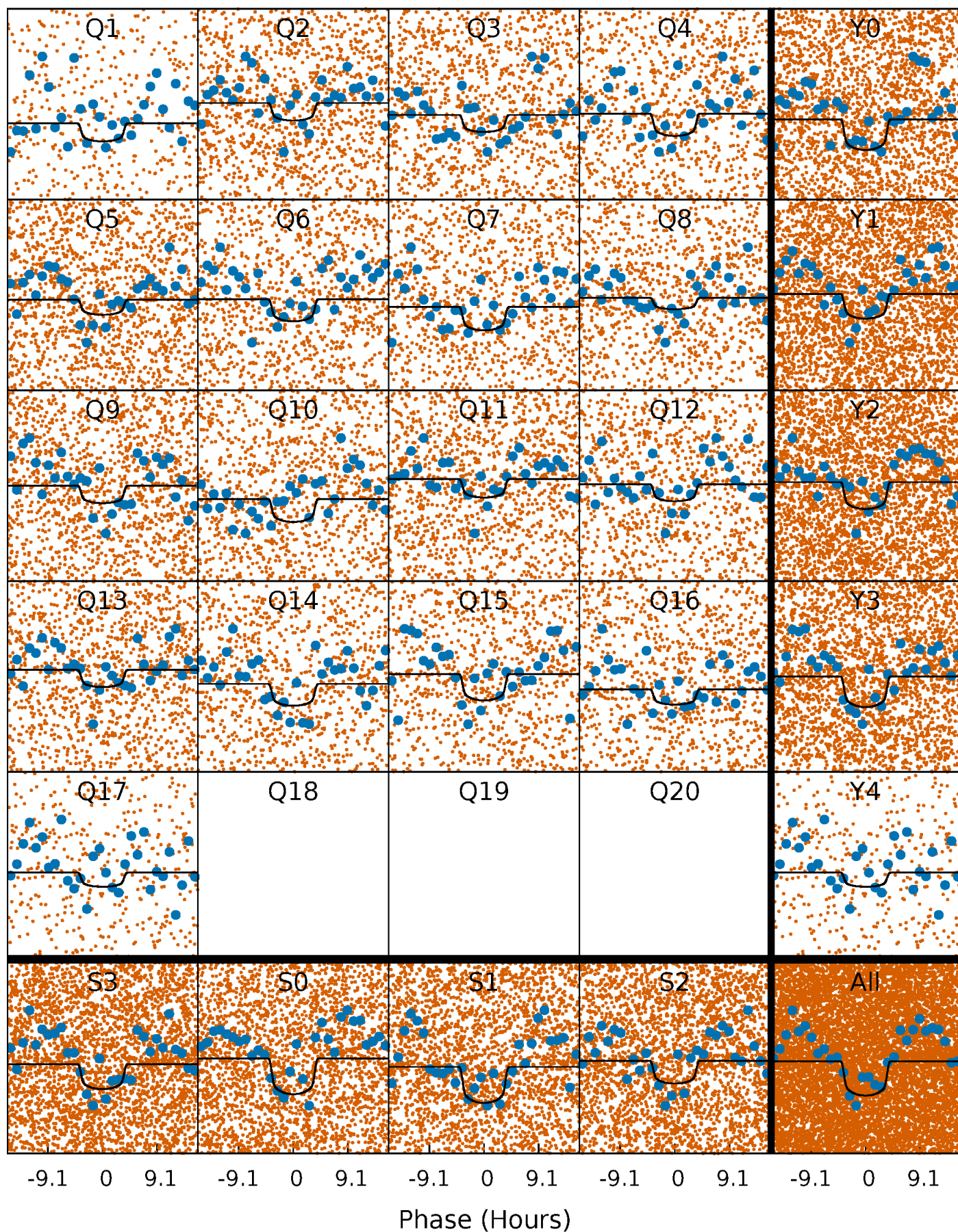
PDC Quarter-Phased Transit Curves

TCE 011920542-01 P= 2.502495 Days $T_0=132.342260$ (BKJD)



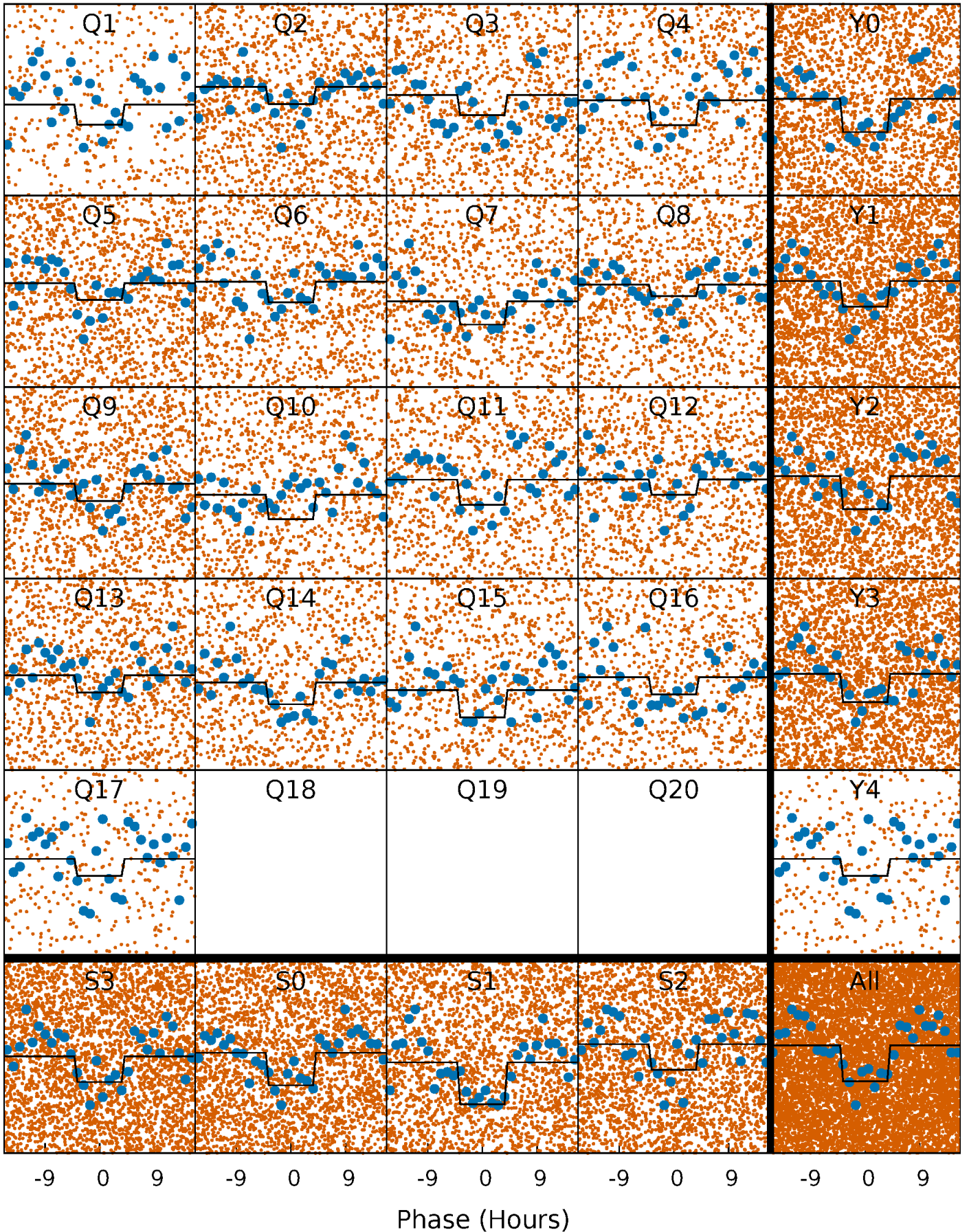
DV Quarter-Phased Transit Curves

TCE 011920542-01 P= 2.502495 Days $T_0=132.342260$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

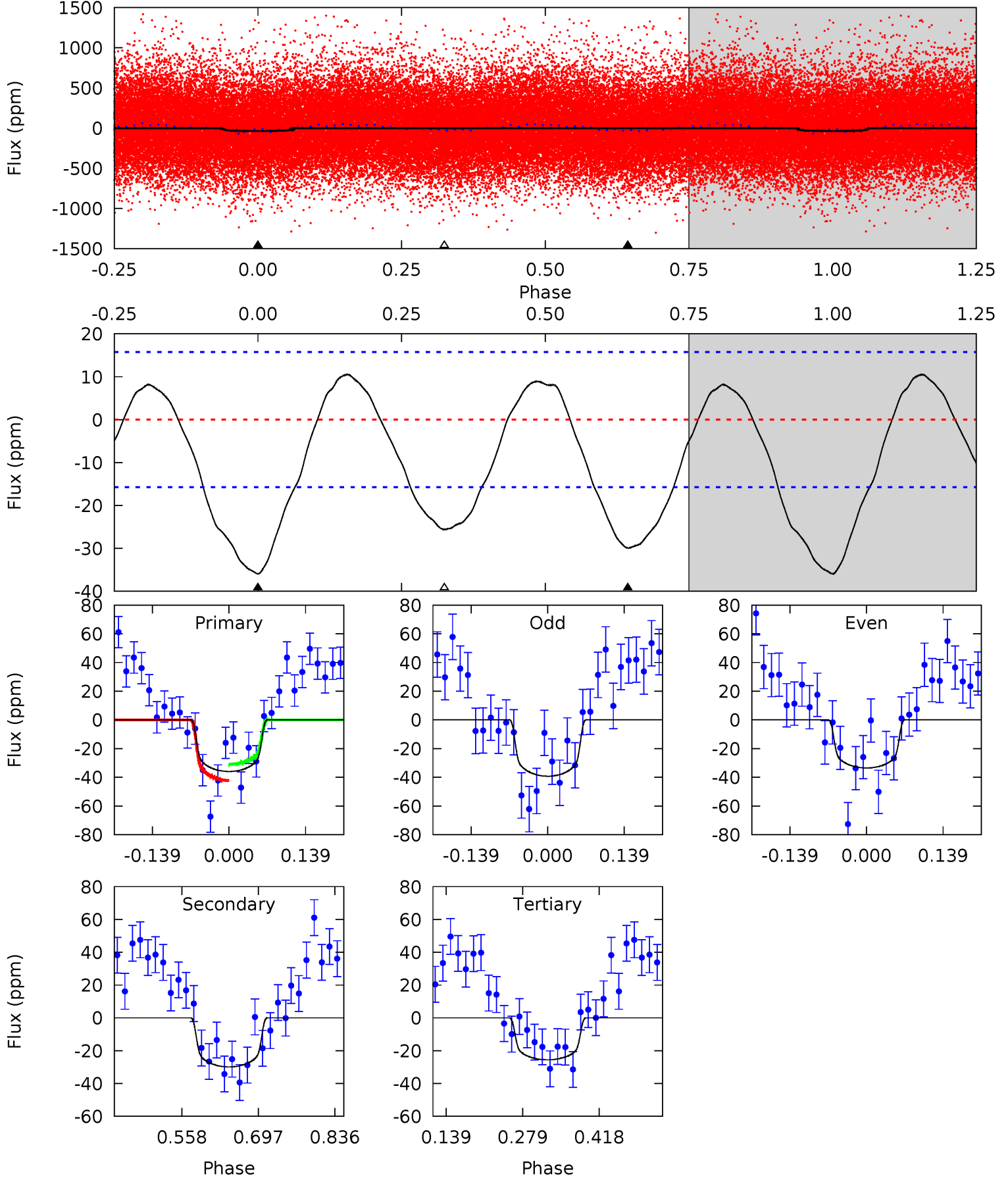
TCE 011920542-01 P= 2.502439 Days $T_0=132.348964$ (BKJD)



DV Model-Shift Uniqueness Test

011920542-01, P = 2.502495 Days, E = 129.839765 Days

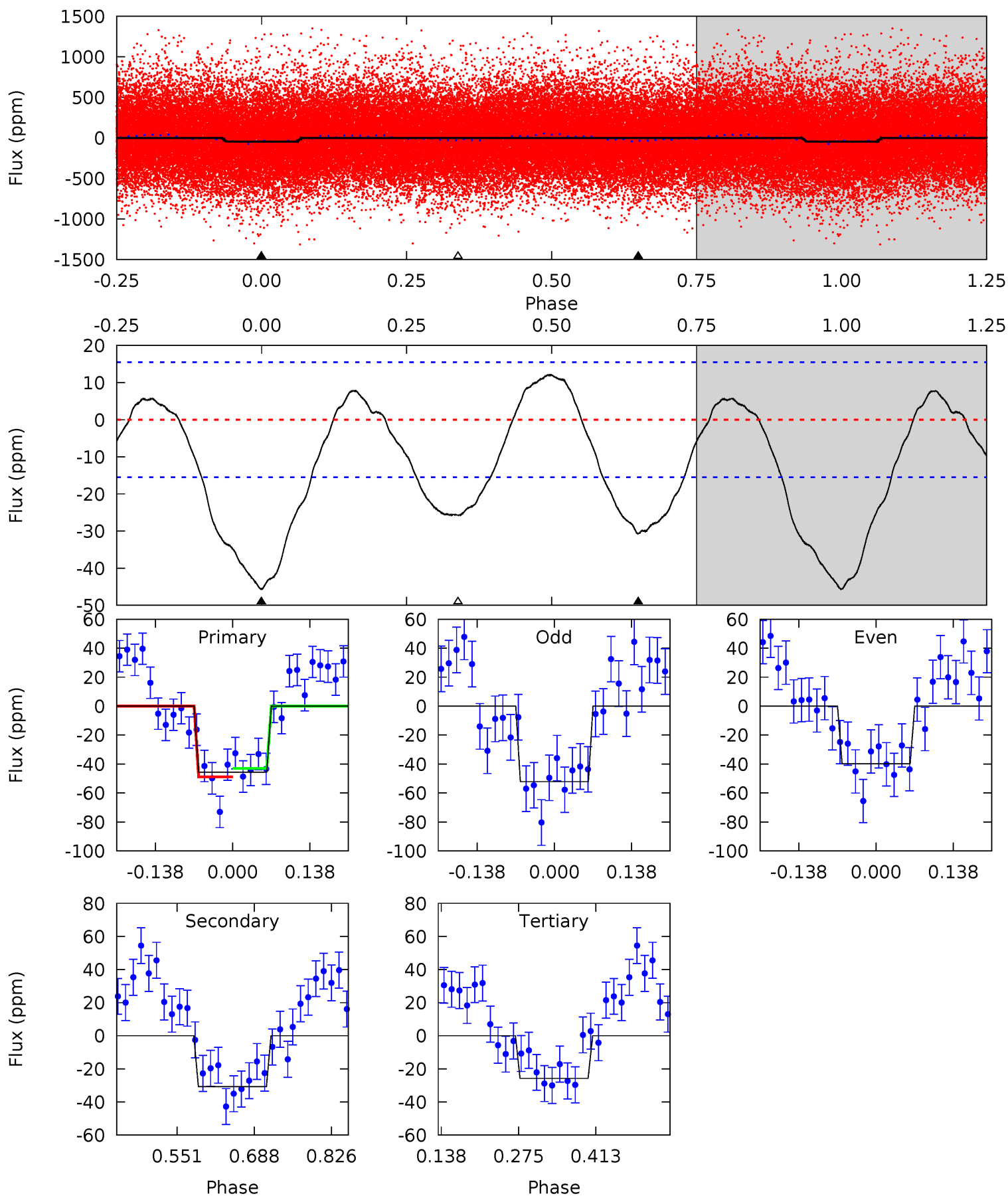
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.3	8.54	7.30	0	4.49	1.48	3.64	2.96	10.3	1.23	8.54	0.82	0.93	0.23	1.64



Alt Model-Shift Uniqueness Test

011920542-01, P = 2.502439 Days, E = 129.846525 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.2	8.90	7.47	0	4.50	1.48	3.66	5.77	13.2	1.43	8.90	1.79	1.05	0.21	0.85



Stellar Parameters For KIC 011920542

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4944^{+151}_{-136}	$4.542^{+0.072}_{-0.048}$	$-0.100^{+0.300}_{-0.300}$	$0.758^{+0.065}_{-0.078}$	$0.731^{+0.087}_{-0.055}$	$2.359^{+0.749}_{-0.396}$
	+3%/-3%	+2%/-1%	+300%/-300%	+9%/-10%	+12%/-8%	+32%/-17%
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 011920542-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-30 ± 4	$0.63^{+0.13}_{-0.14}$	1466^{+59}_{-56}	4330^{+462}_{-340}	45^{+28}_{-16}
Alt.	-31 ± 3	$0.53^{+0.14}_{-0.14}$	1467^{+53}_{-55}	4645^{+683}_{-378}	65^{+58}_{-25}

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

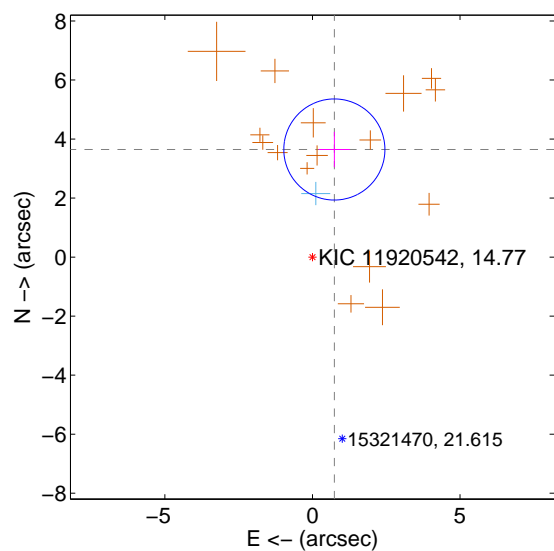
Supplemental centroid analysis for 011920542-01. Kepler magnitude: 14.77. Transit SNR 7.46

There are 1 quarters with good PRF difference image offsets

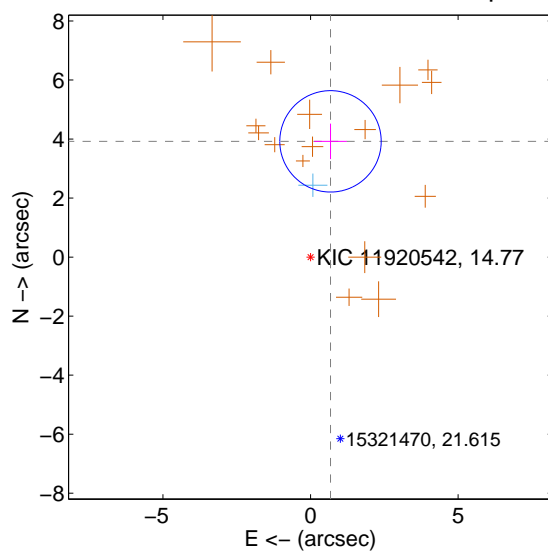
The direct PRF centroid is offset from the target star catalog position by about 0.33 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.721 ± 0.571	6.52	-0.743 ± 0.526	3.646 ± 0.596
PRF-fit source offset from KIC position	3.980 ± 0.573	6.95	-0.677 ± 0.550	3.922 ± 0.601
photometric centroid source offset	1.82 ± 1.67	1.09	-1.43 ± 1.53	-1.13 ± 1.88

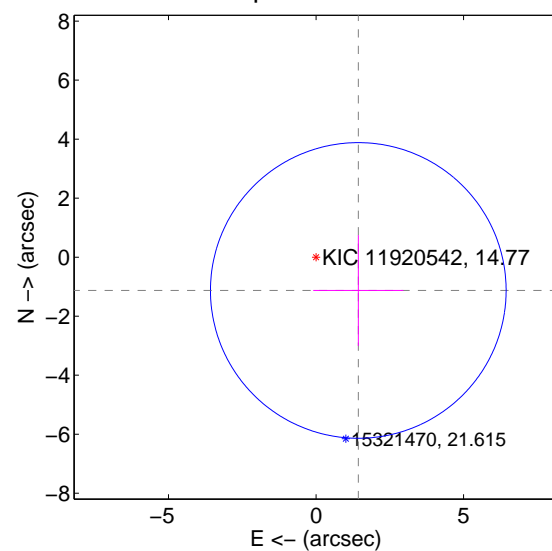
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

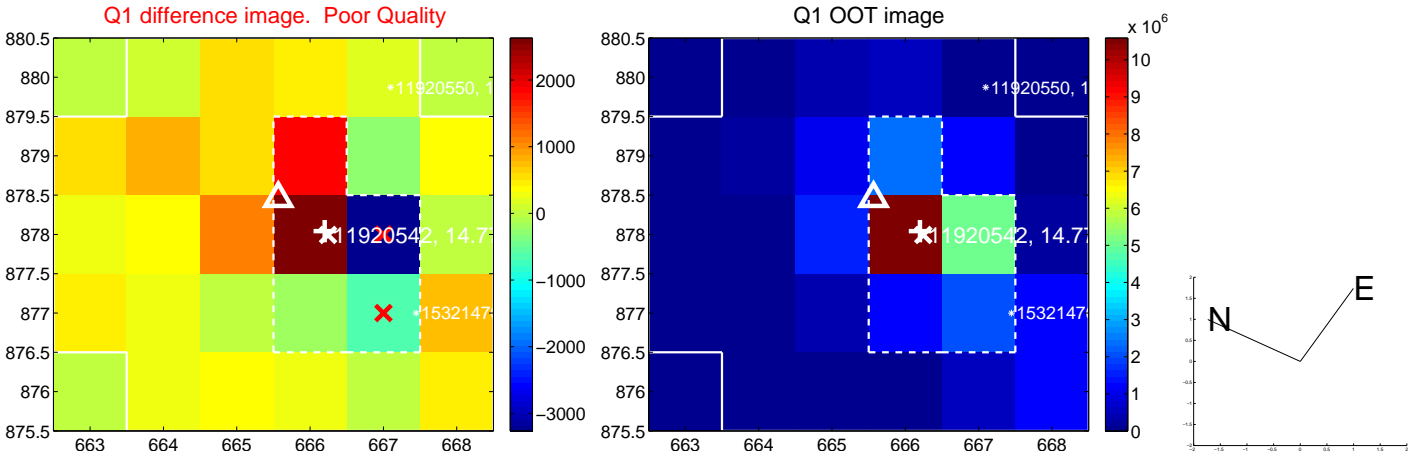


offset from photometric centroids

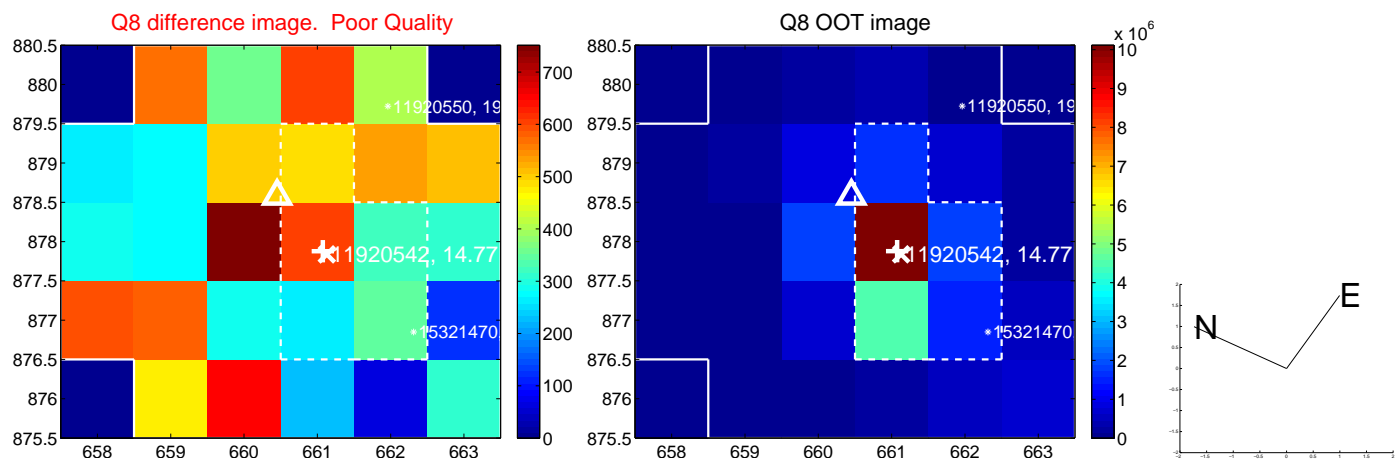
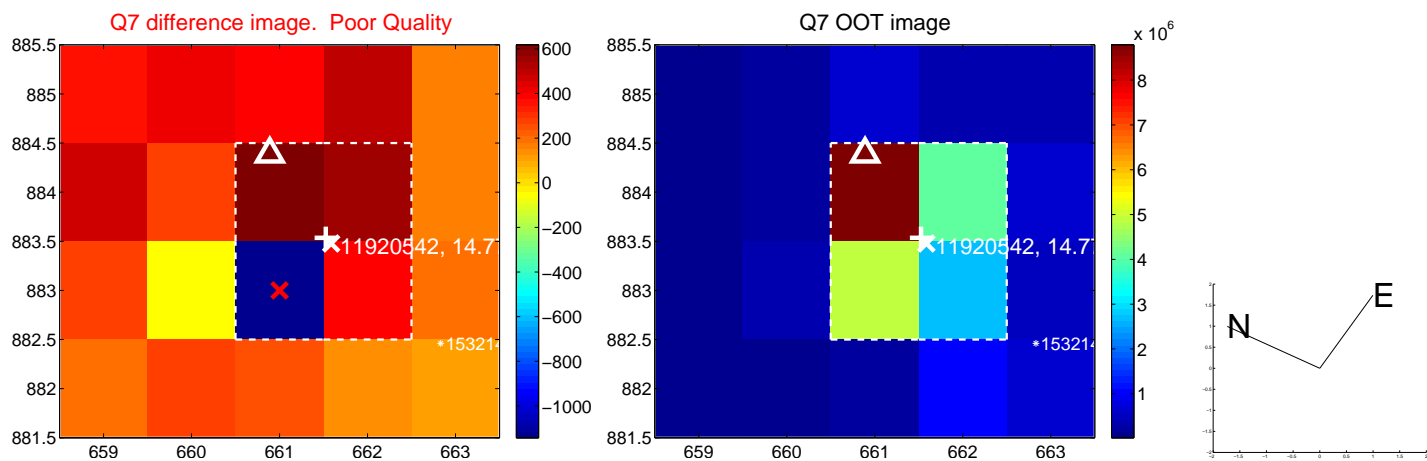
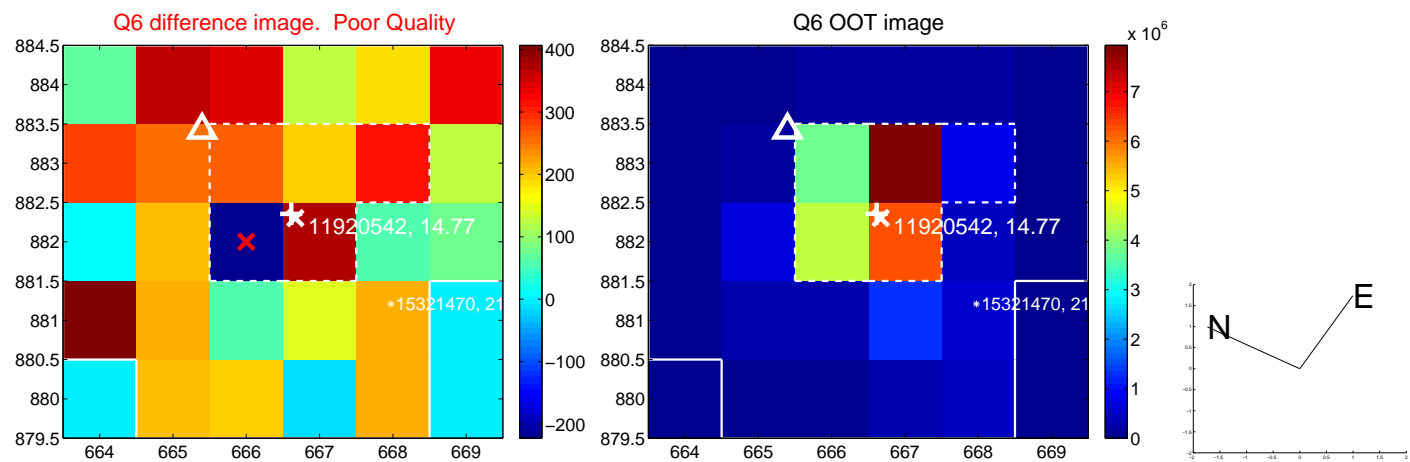
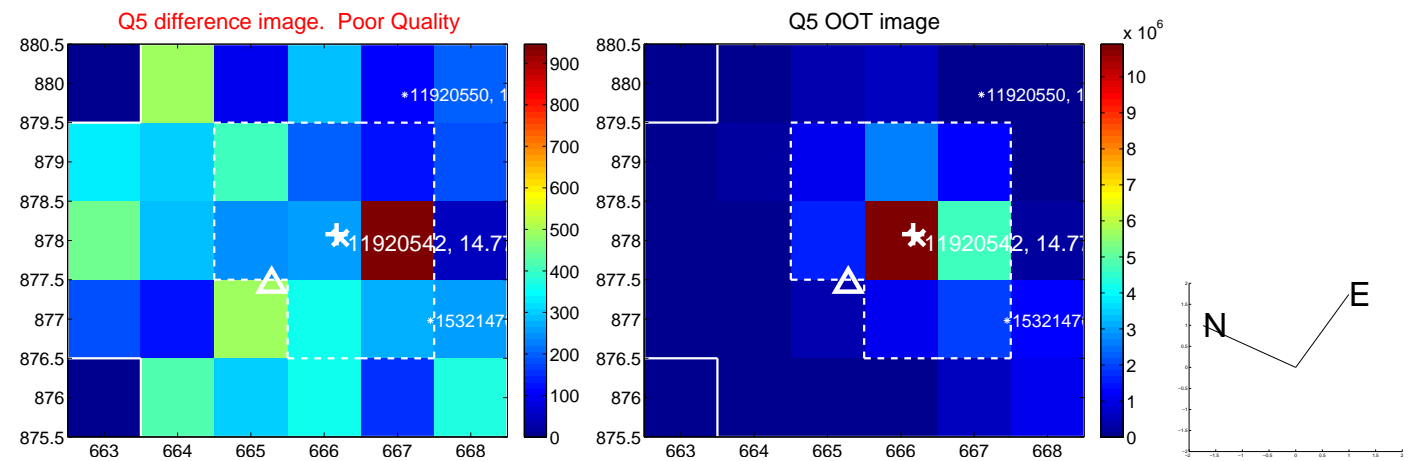


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

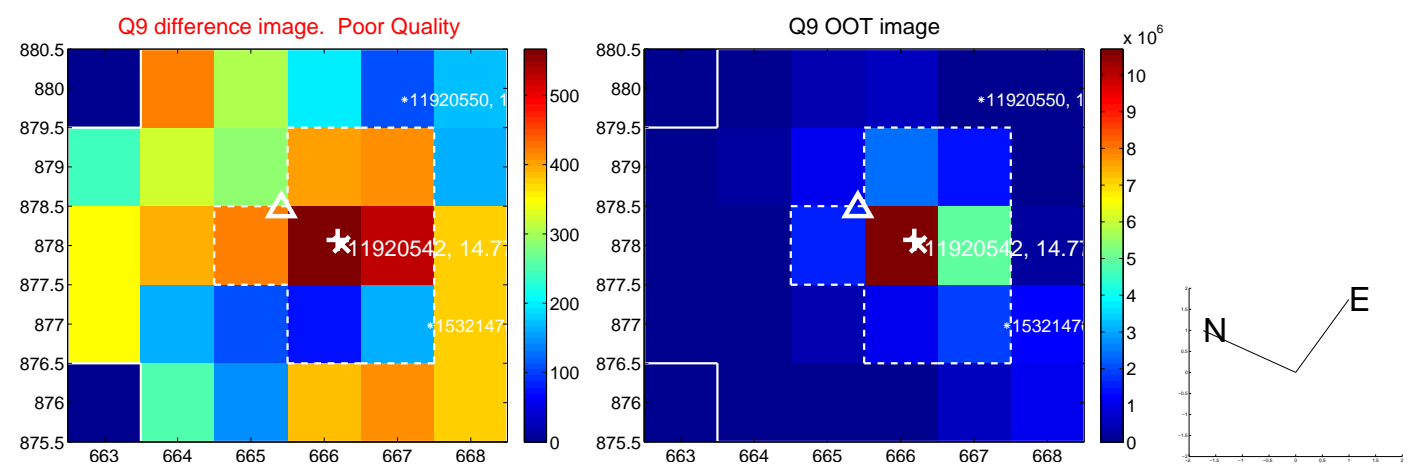
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



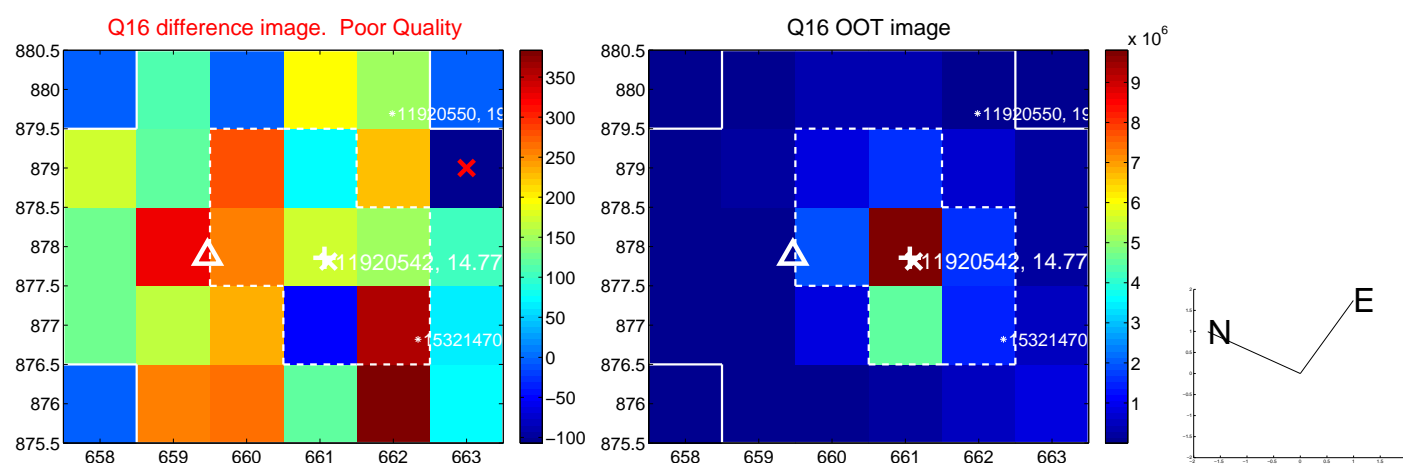
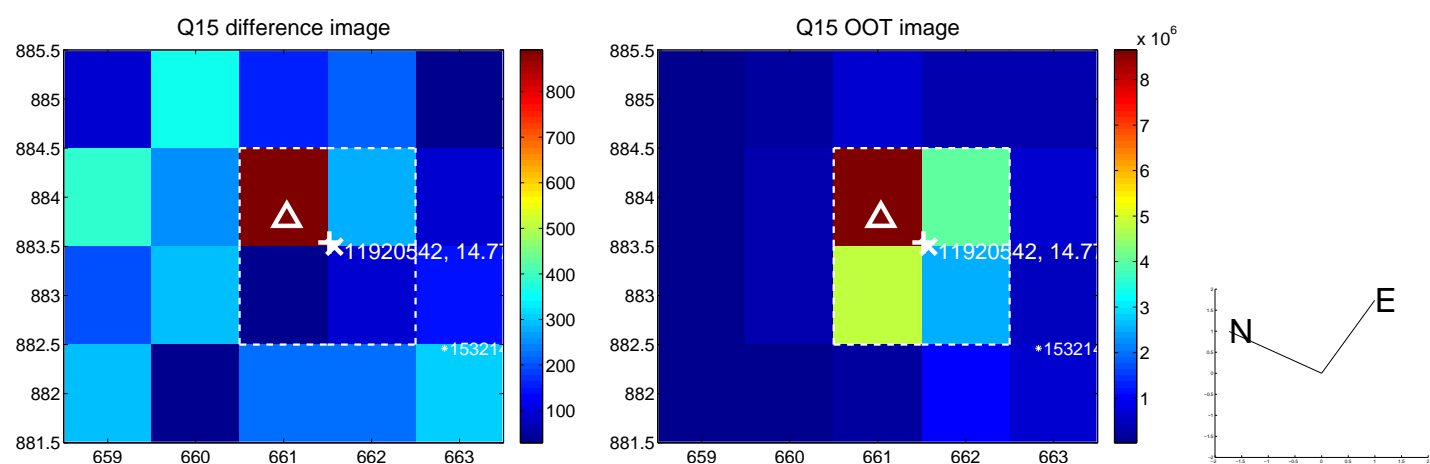
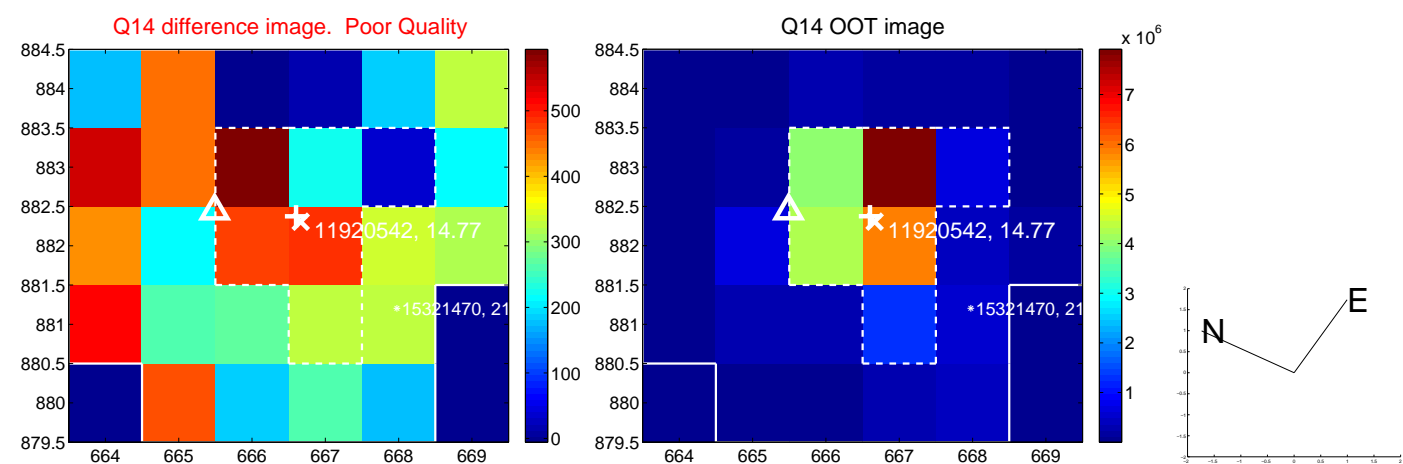
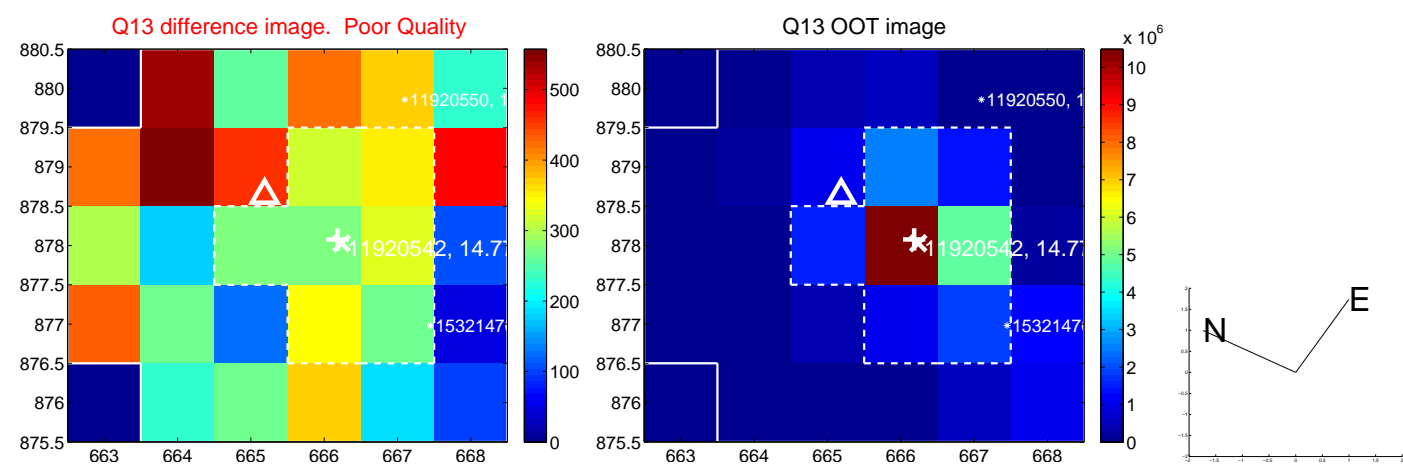
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



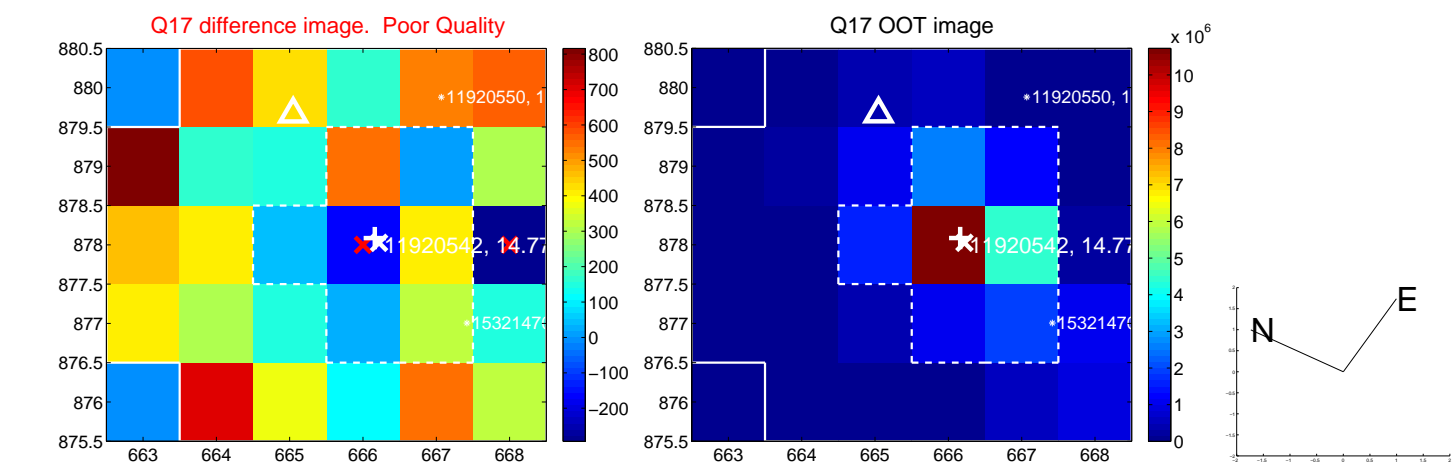
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



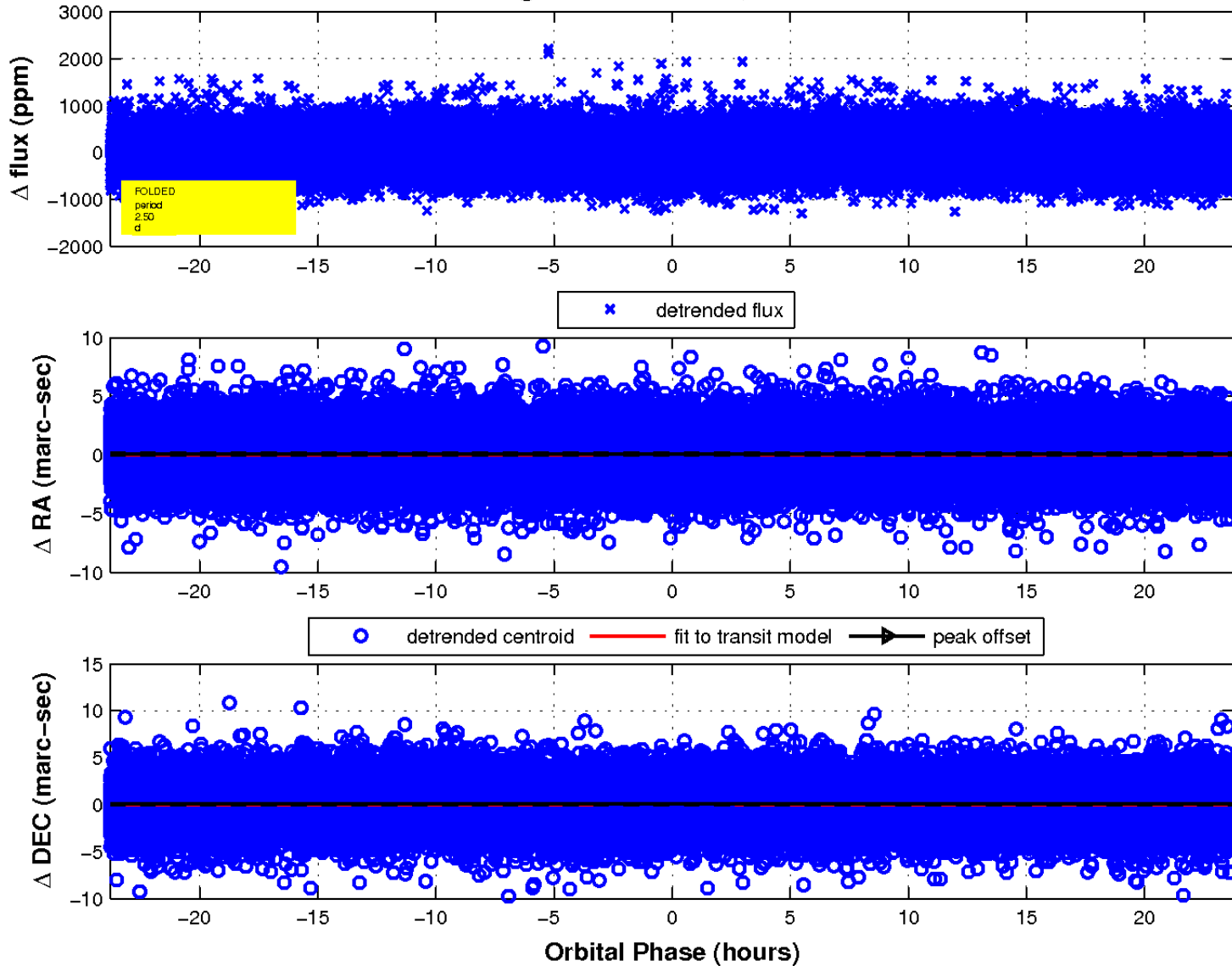
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

