

KIC 005131276

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})
005131276-01	OBS	5129.01	0.668832	131.867842	62.5	1.114	18.5	24.4	150.09	3711	153.15	0.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005131276-01	OBS	PC	0.93	0	0	0	0	PLANET_IN_STAR

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 005131276-01

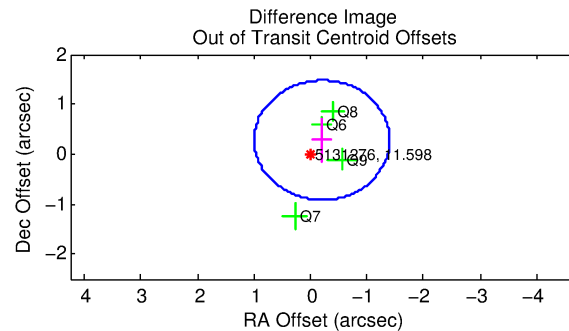
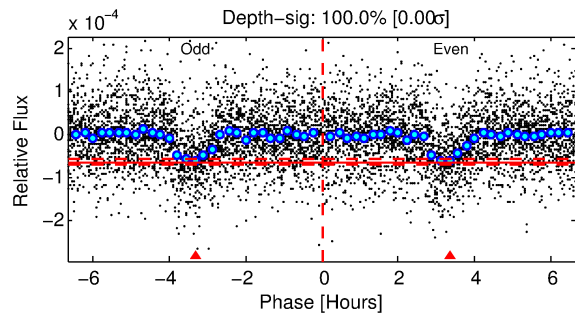
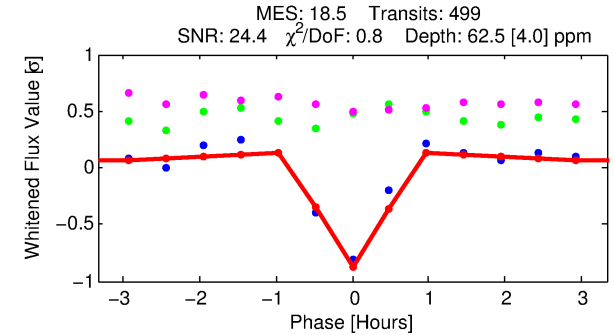
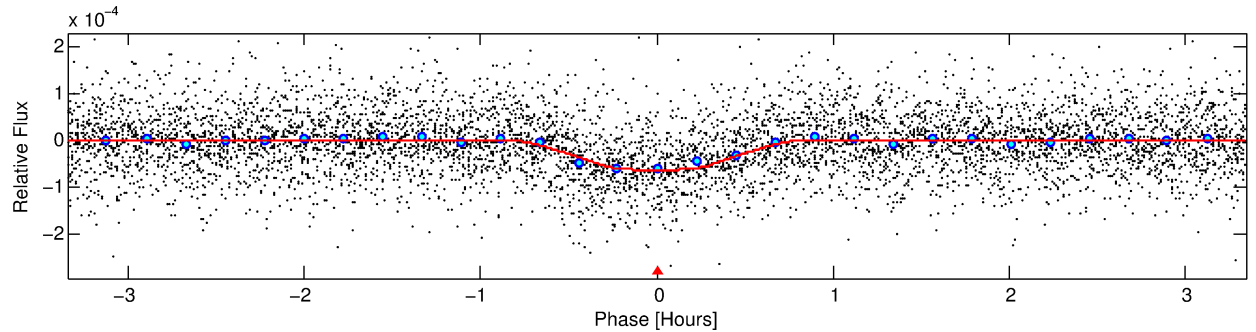
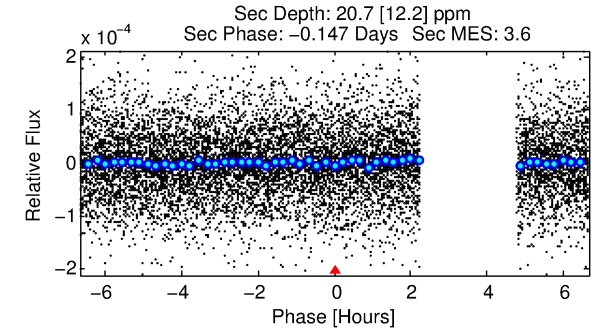
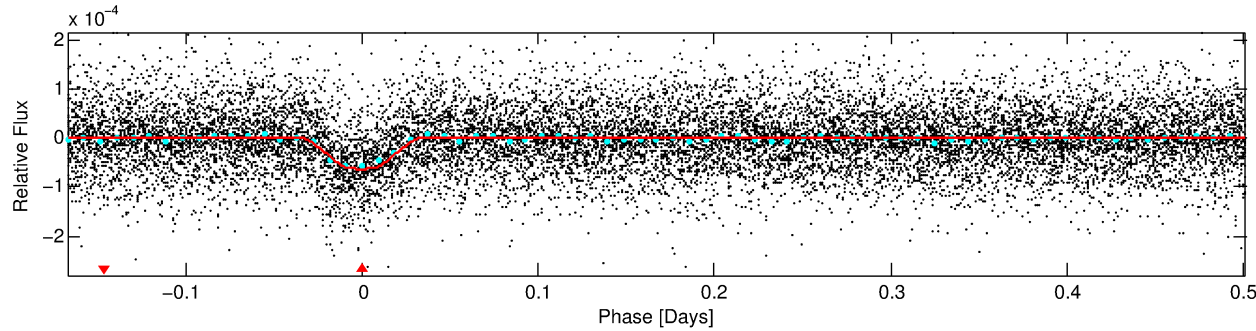
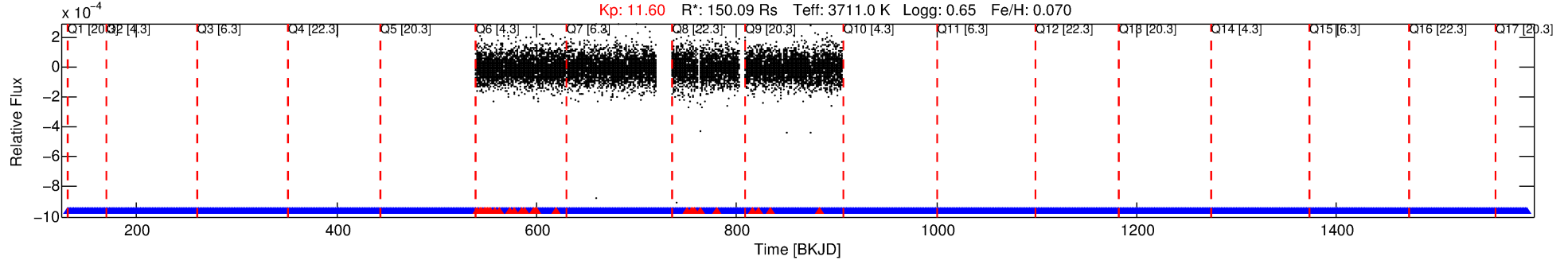
No Significant Match Found

DV One-Page Summary

KIC: 5131276 Candidate: 1 of 1 Period: 0.669 d

KOI: K05129.01 Corr: 0.941

Kp: 11.60 R*: 150.09 Rs Teff: 3711.0 K Logg: 0.65 Fe/H: 0.070



DV Fit Results:

Period = 0.66883 [0.00000] d
Epoch = 131.8678 [0.0007] BKJD
Rp/R* = 0.0094 [0.0033]
a/R* = 2.30 [2.02]
b = 0.90 [0.24]
Seff = N/A
Teq = N/A
Rp = 153.15 [94.56] Re
a = N/A
Ag = N/A
Teffp = N/A

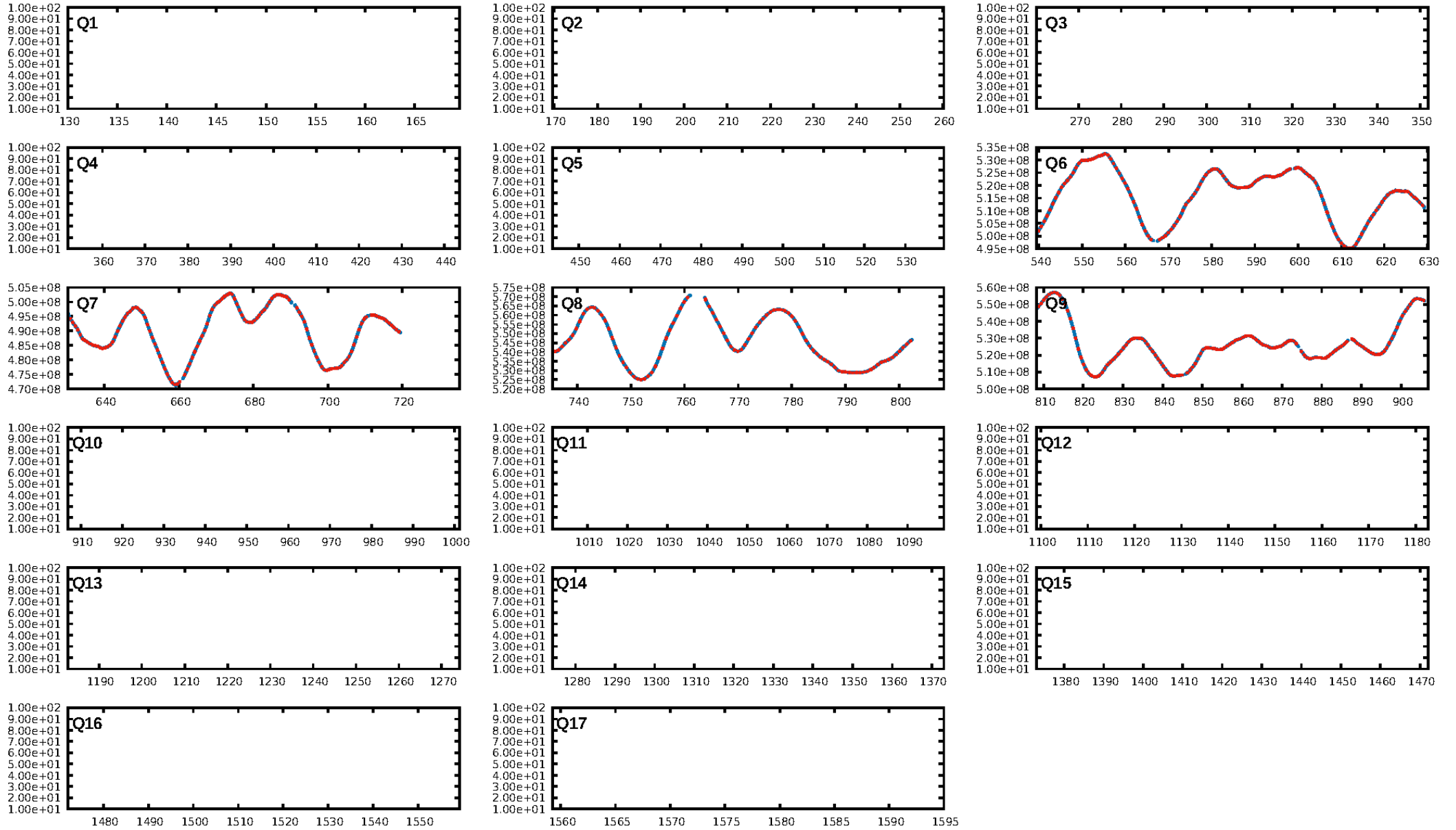
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.99e-79
RollingBand-fgt: 0.93 [466/499]
GhostDiagnostic-chr: -1.278
Centroid-sig: N/A
Centroid-so: 0.723 arcsec [0.94 σ]
OotOffset-rm: 0.345 arcsec [0.86 σ]
KicOffset-rm: 0.437 arcsec [1.23 σ]
OotOffset-st: 1/1/1/1 [4]
KicOffset-st: 1/1/1/1 [4]
DiffImageQuality-fgm: 1.00 [4/4]
DiffImageOverlap-fno: 1.00 [4/4]

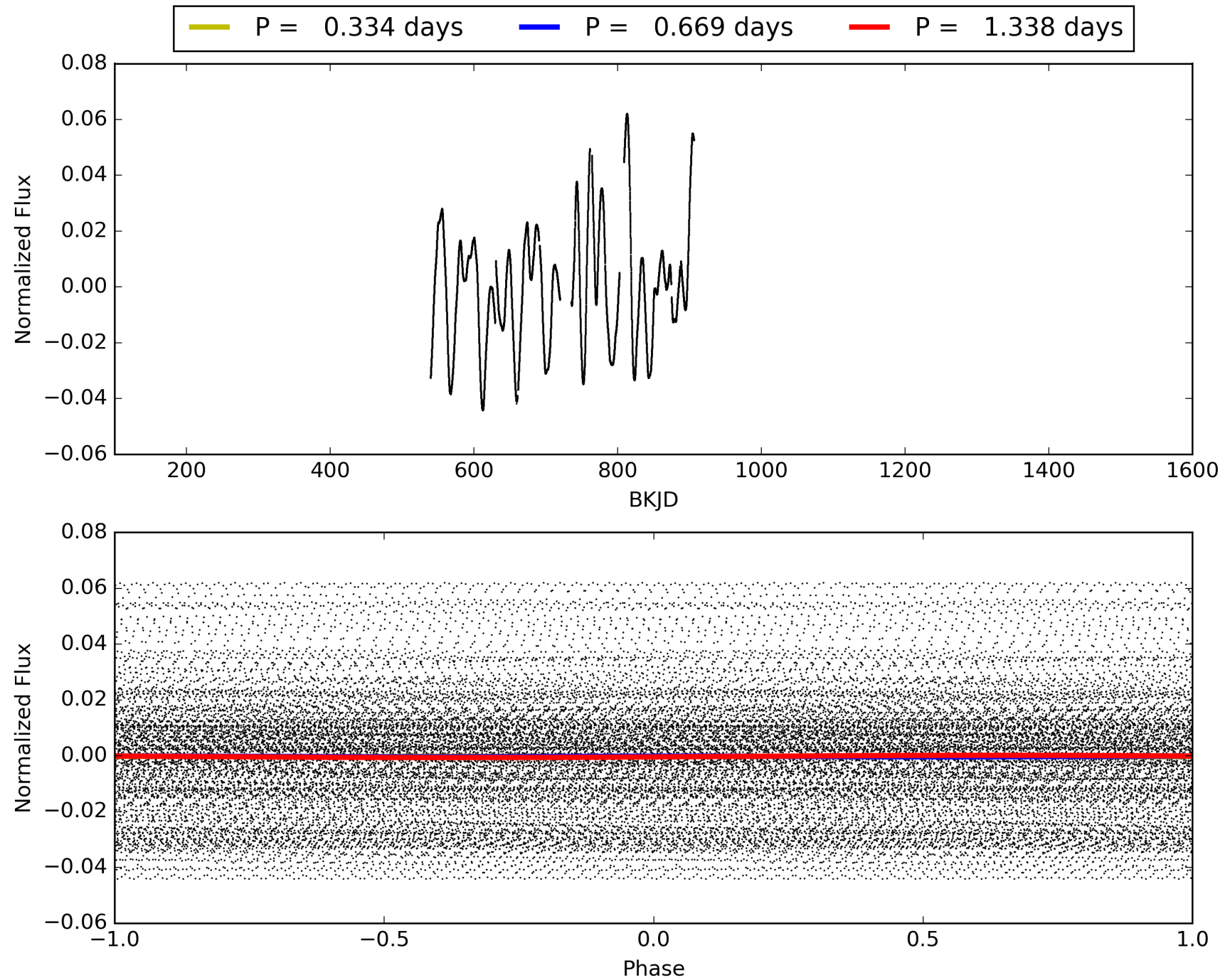
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 09:58:52 Z

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

TCE 005131276-01, PDC Light Curves

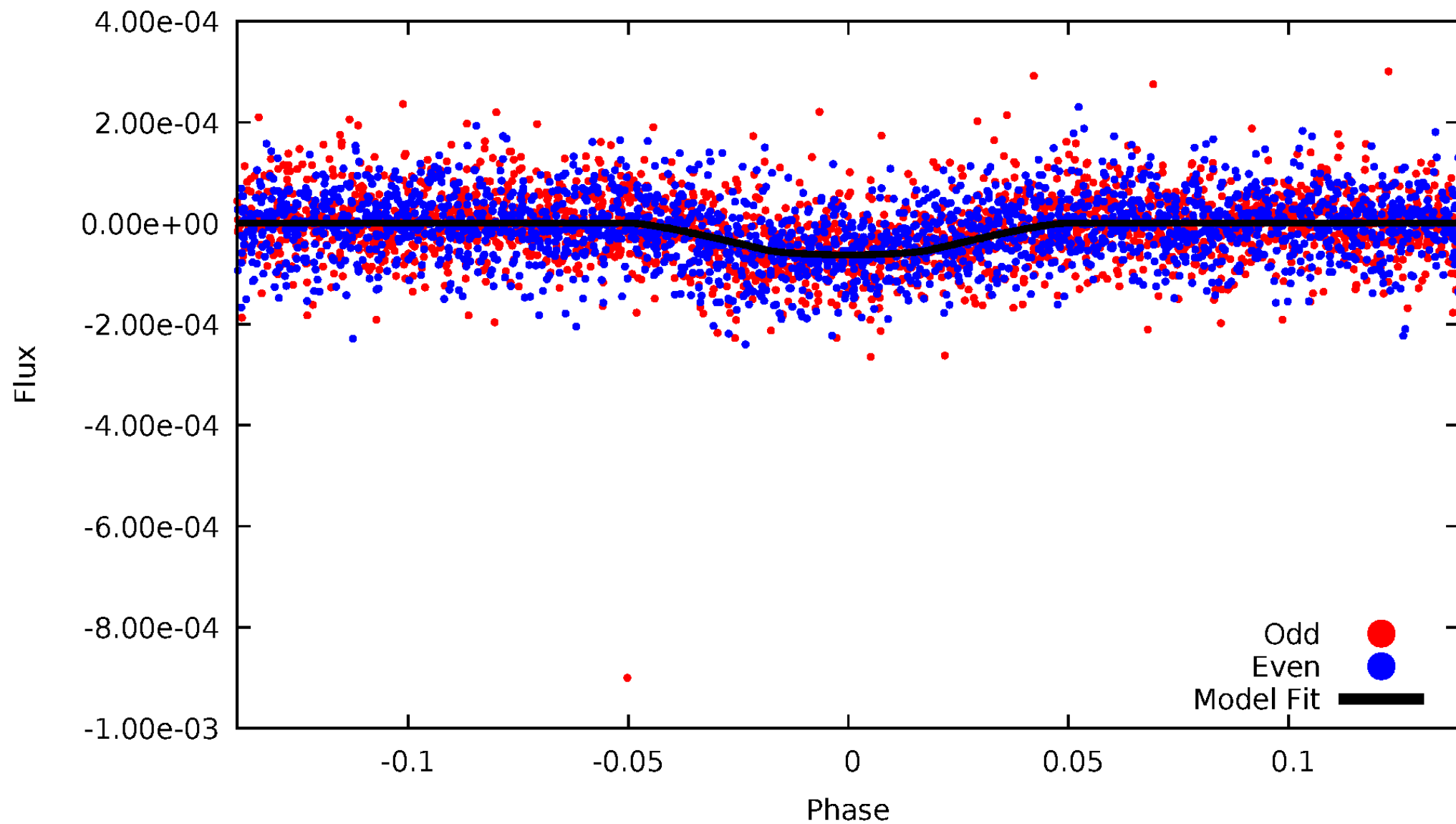


TCE 005131276-01



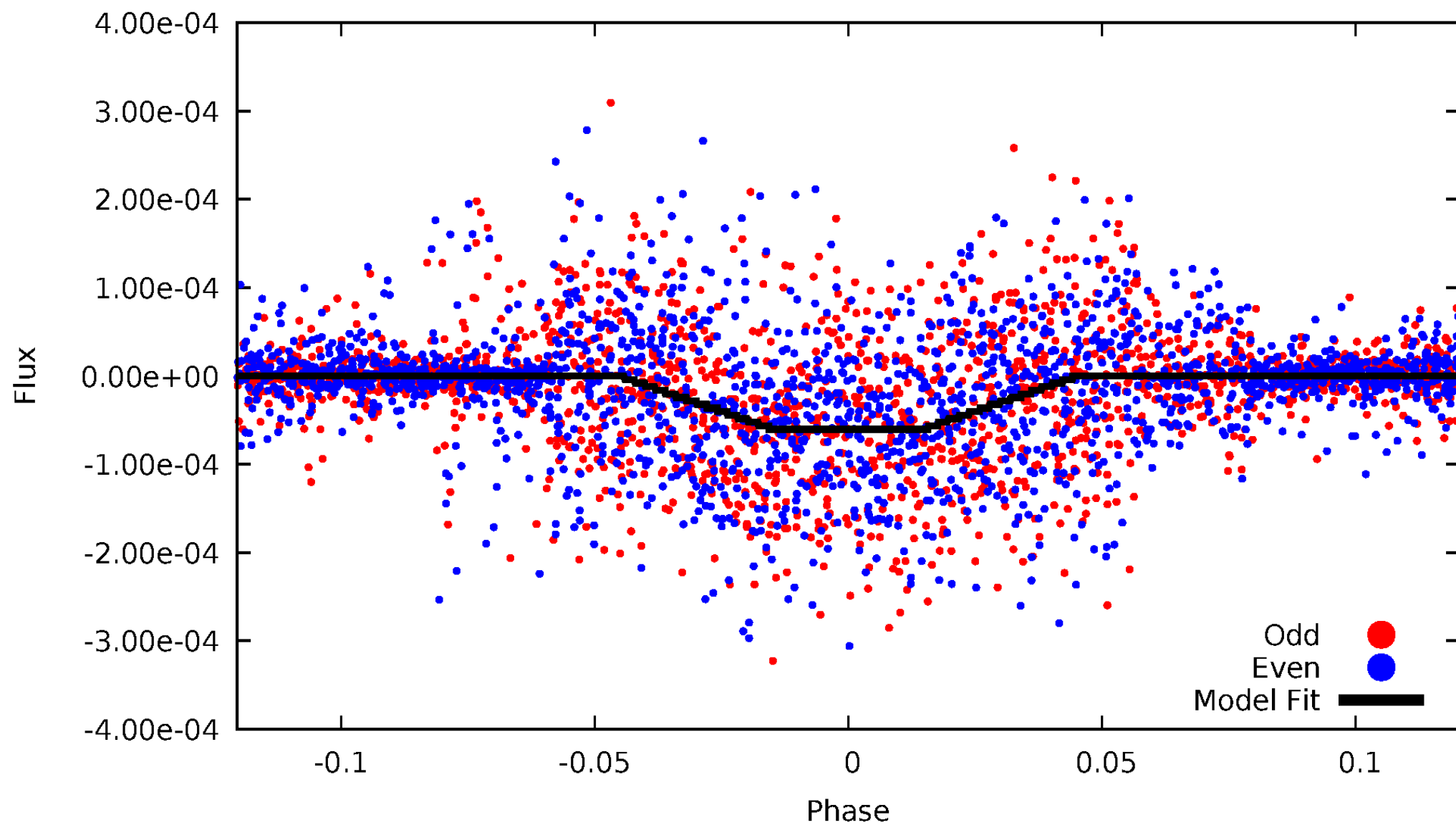
DV Odd/Even

TCE 005131276-01

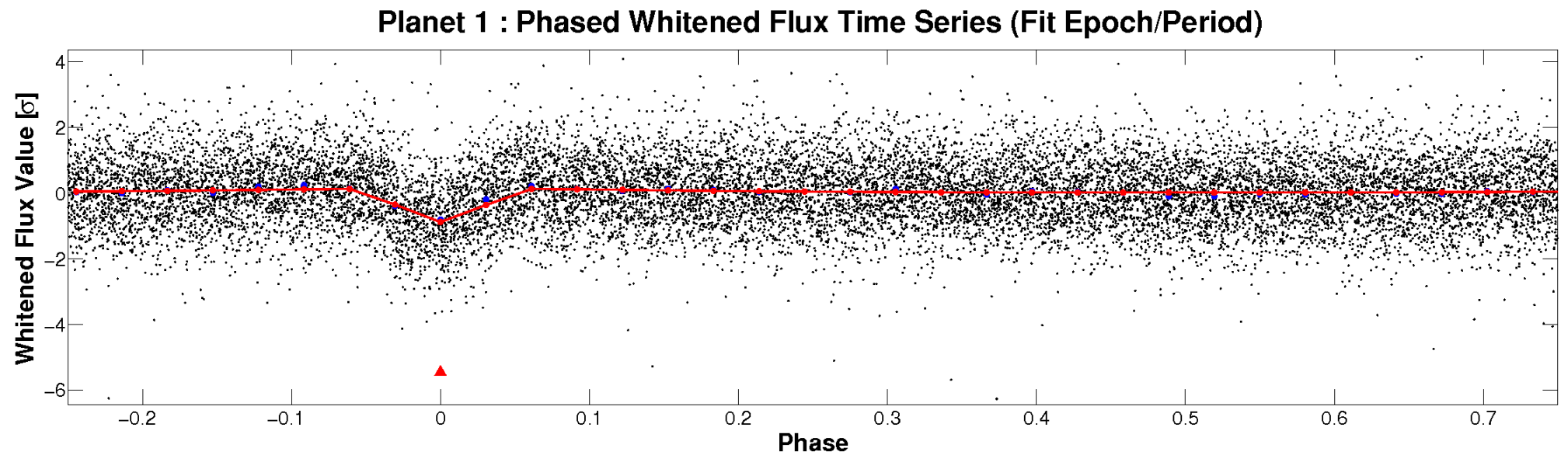
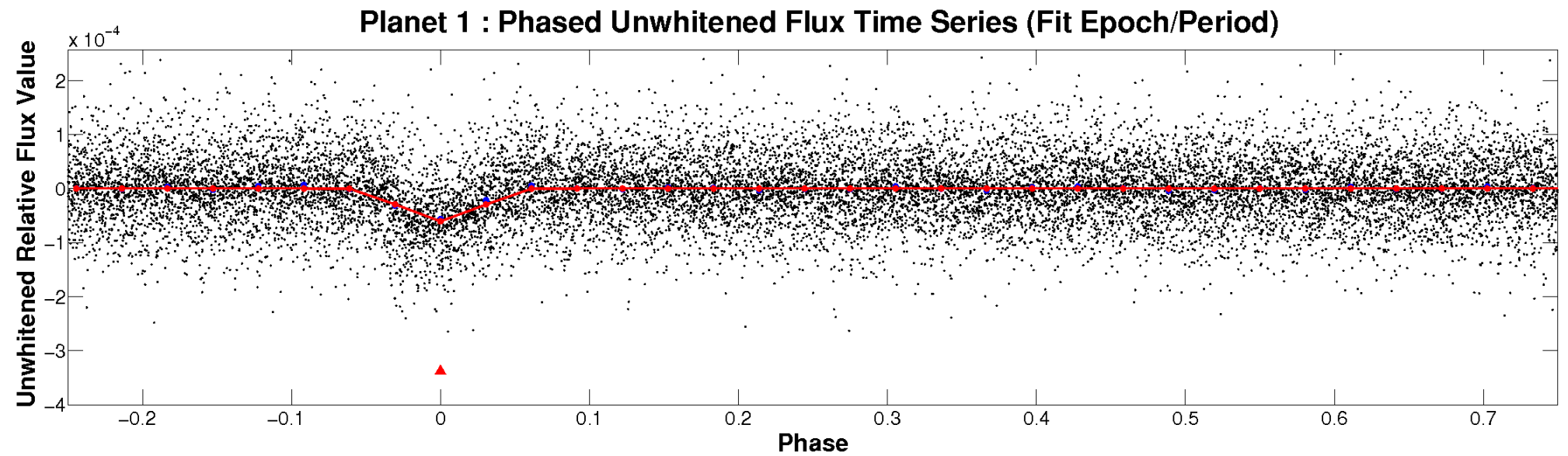


ALT Odd/Even

TCE 005131276-01

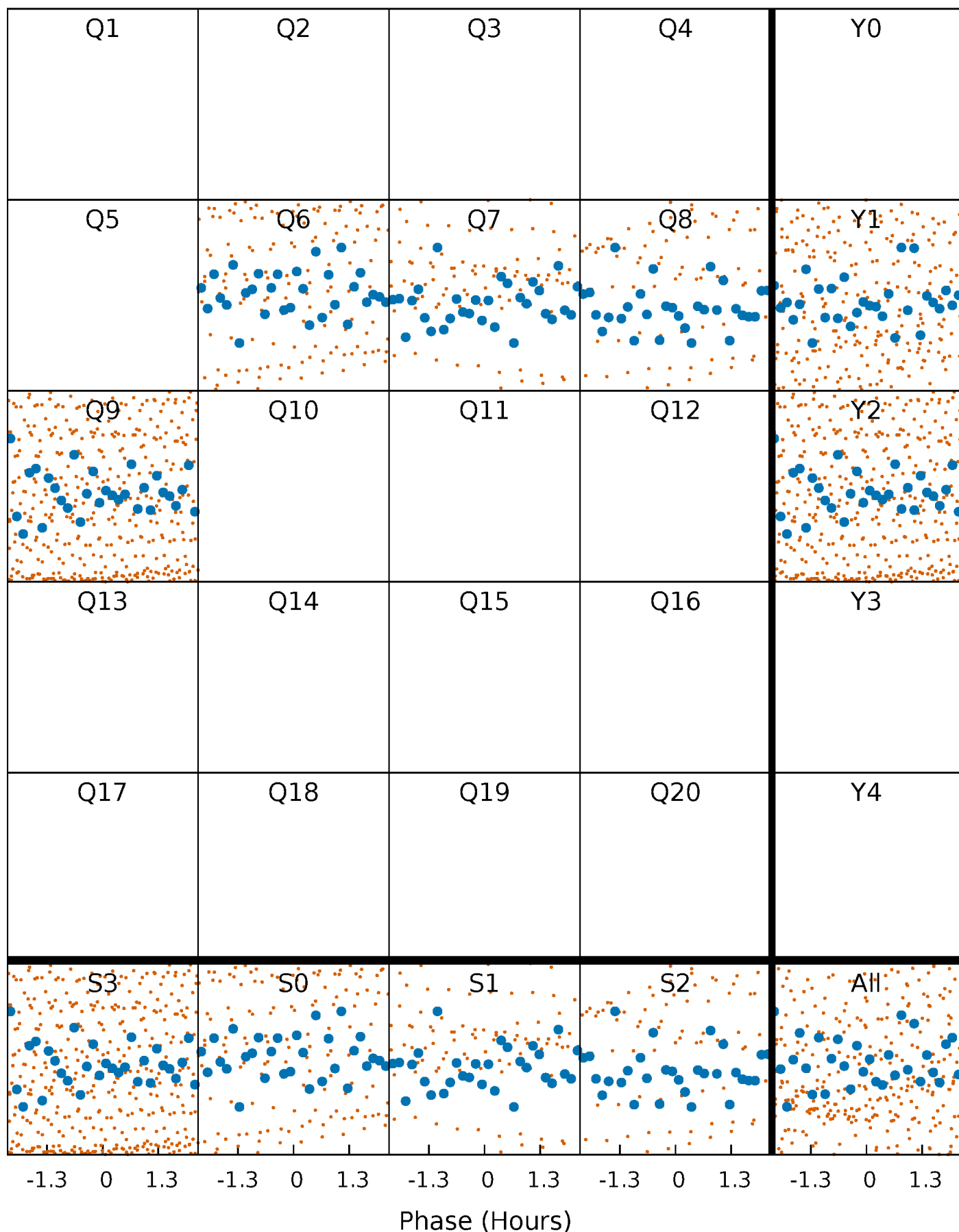


Non-Whitened Vs. Whitened Light Curve



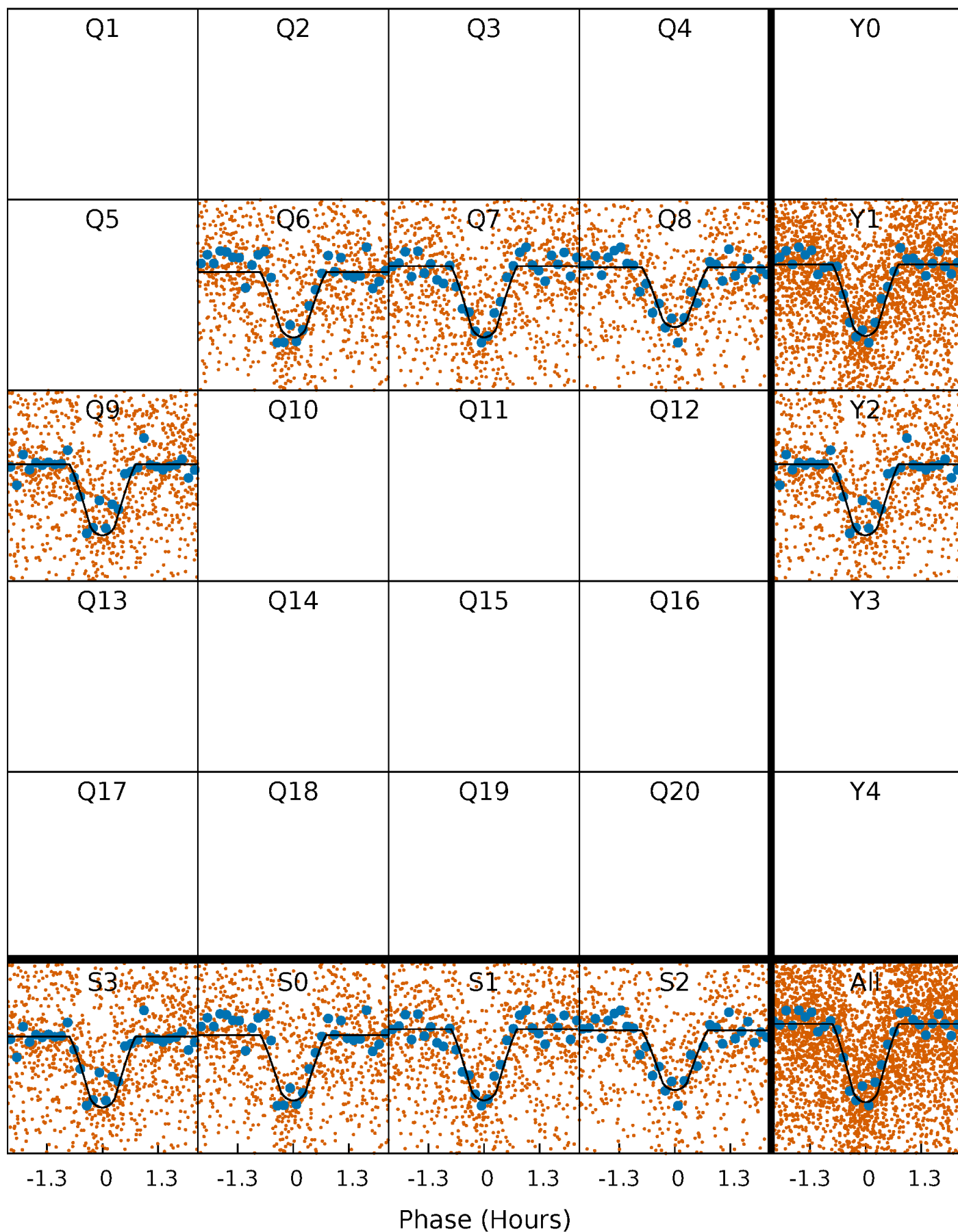
PDC Quarter-Phased Transit Curves

TCE 005131276-01 P= 0.668832 Days $T_0=131.867842$ (BKJD)



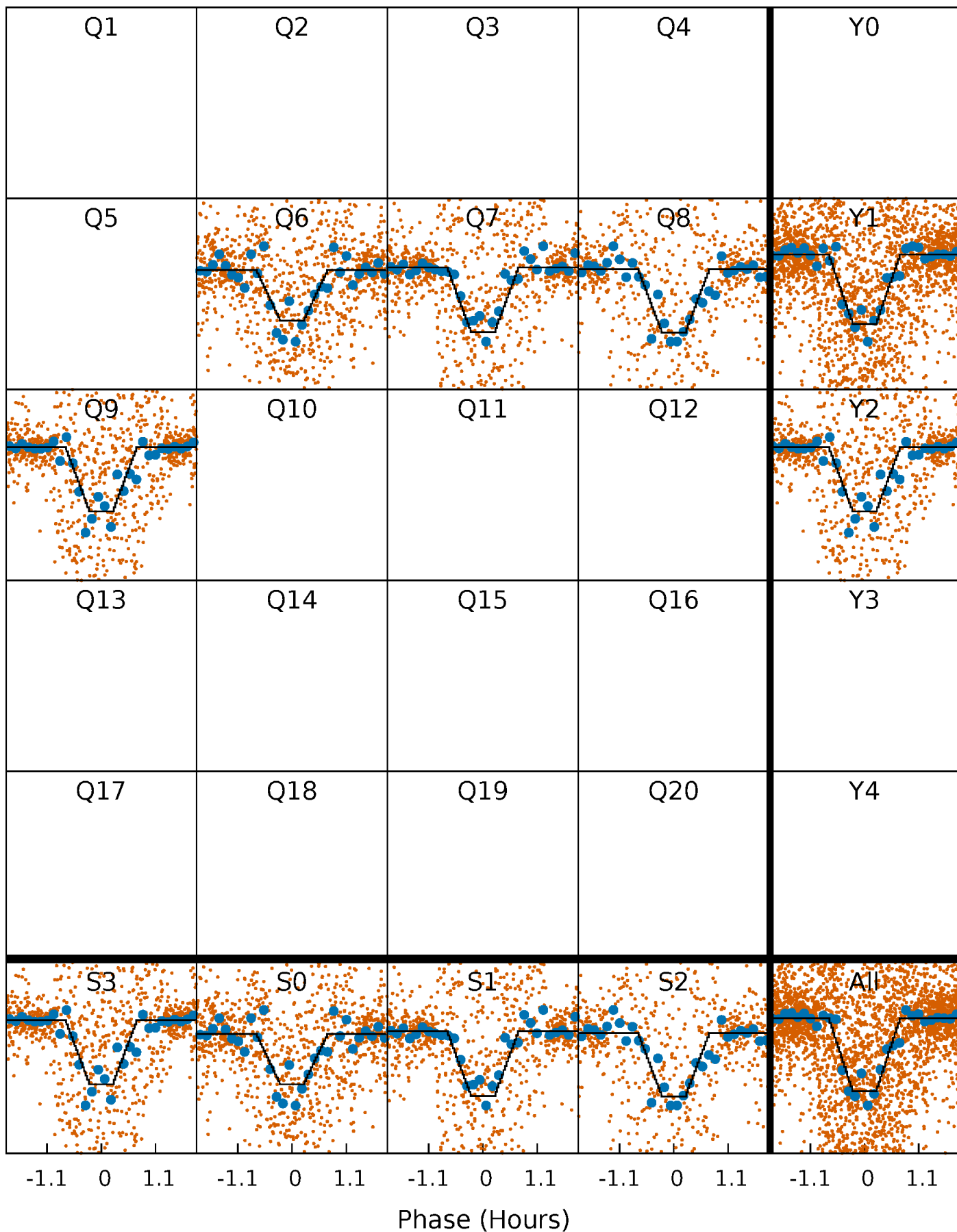
DV Quarter-Phased Transit Curves

TCE 005131276-01 P= 0.668832 Days $T_0=131.867842$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

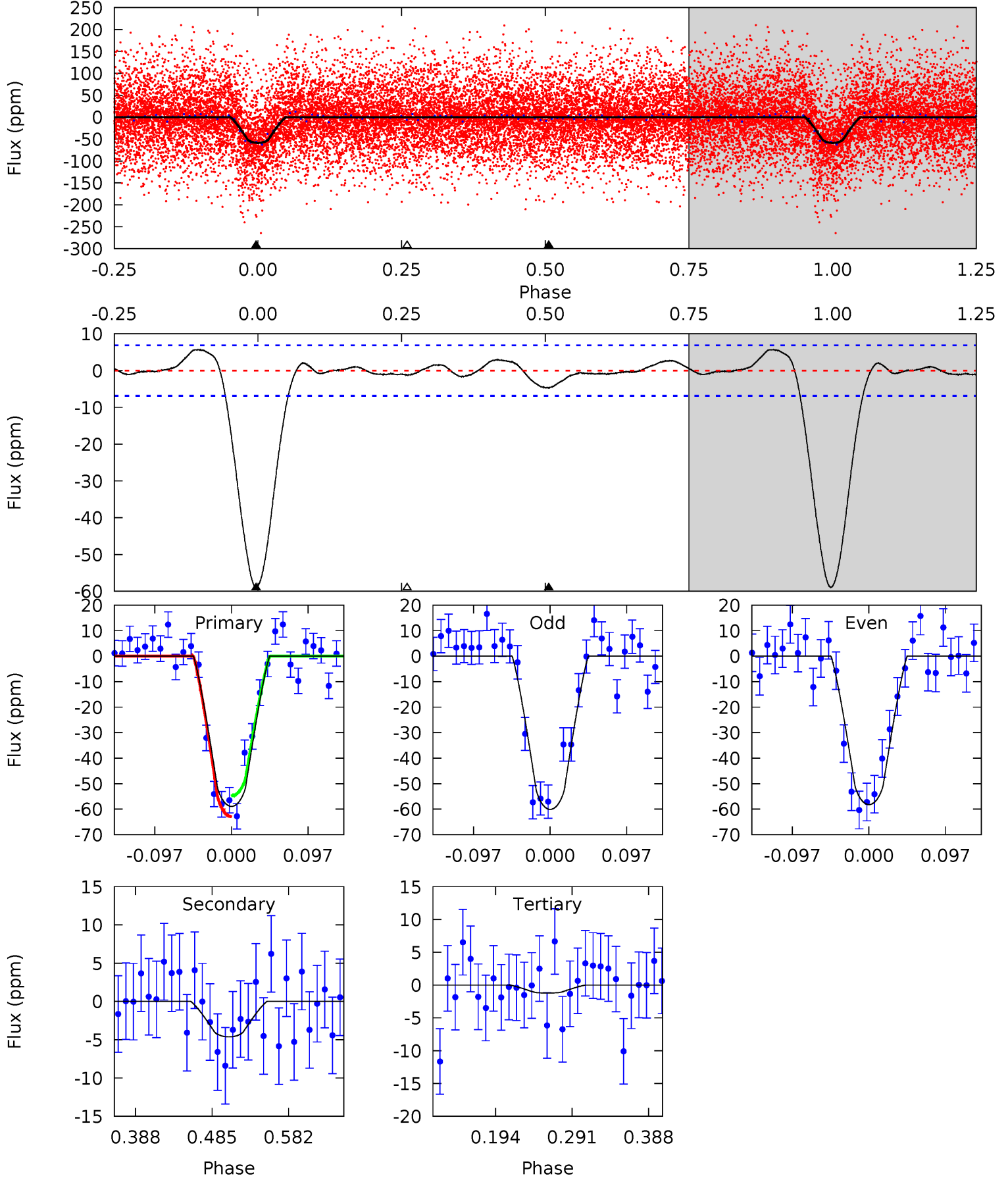
TCE 005131276-01 P= 0.668829 Days $T_0=131.868075$ (BKJD)



DV Model-Shift Uniqueness Test

005131276-01, P = 0.668832 Days, E = 131.867842 Days

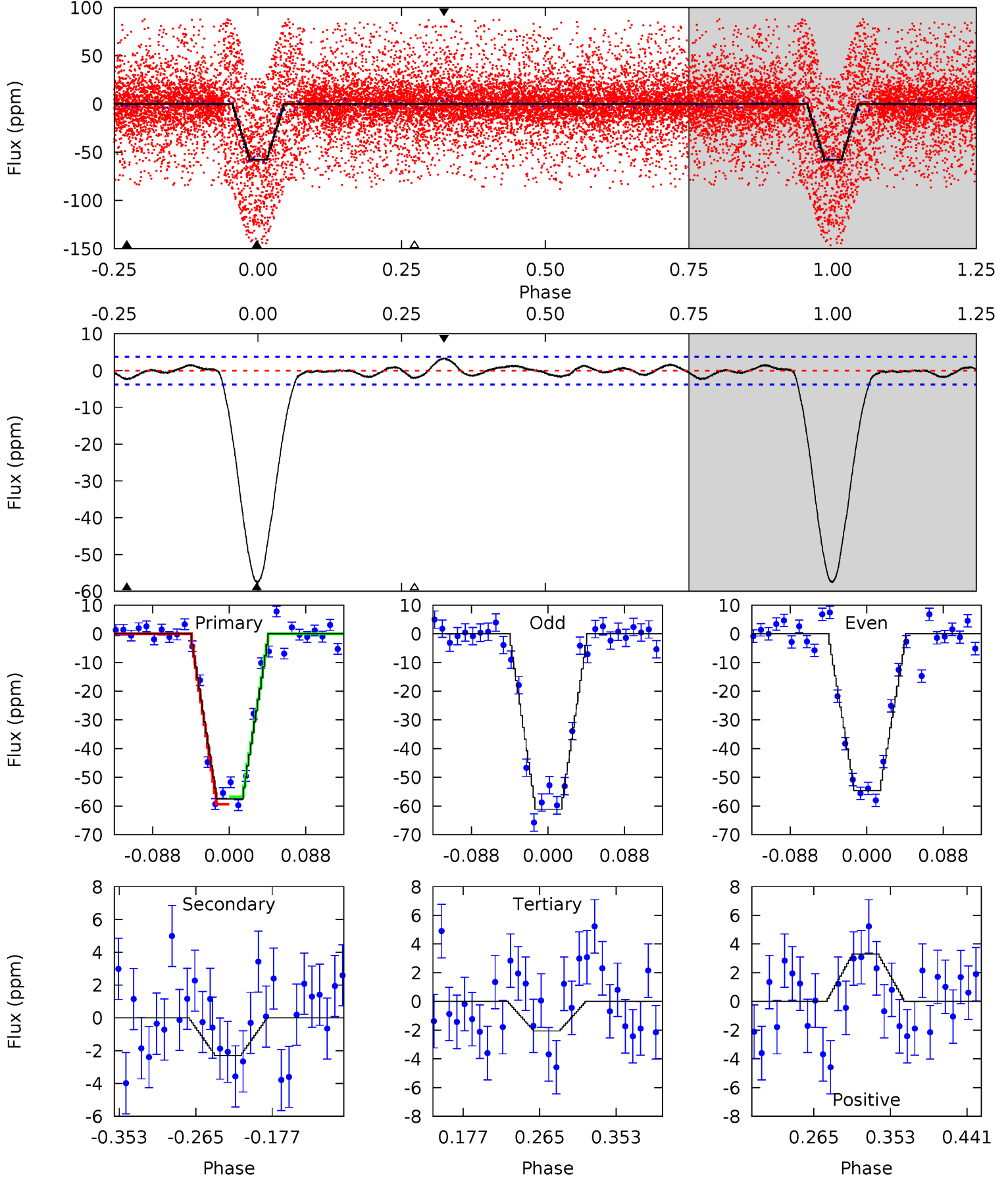
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
39.3	3.09	0.82	0	4.57	1.66	0.99	38.5	39.3	2.27	3.09	0.63	0.98	0.09	2.72



Alt Model-Shift Uniqueness Test

005131276-01, P = 0.668829 Days, E = 131.868075 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
69.8	2.78	2.49	4.00	4.59	1.70	1.29	67.3	65.8	0.29	-1.22	3.88	0.98	0.05	0



Stellar Parameters For KIC 005131276

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3711^{+44}_{-95}	$0.652^{+0.195}_{-0.078}$	$0.070^{+0.100}_{-0.200}$	$150.091^{+13.447}_{-76.199}$	$3.686^{+0.074}_{-2.422}$	$0.000^{+0.000}_{-0.000}$
	+1%/-3%	+30%/-12%	+143%/-286%	+9%/-51%	+2%/-66%	+204%/-18%
Source	SPE74	SPE74	SPE74	DSEP		

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

Secondary Eclipse Parameters for KIC 005131276-01 / KOI 5129.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-5 ± 2	$145.04^{+63.60}_{-55.20}$	18400^{+614}_{-1246}	-19525^{+2806}_{-1876}	$0.000^{+0.000}_{-0.000}$
Alt.	-2 ± 1	$120.65^{+57.04}_{-54.27}$	18365^{+736}_{-1210}	-19410^{+2653}_{-2199}	$0.000^{+0.000}_{-0.000}$

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

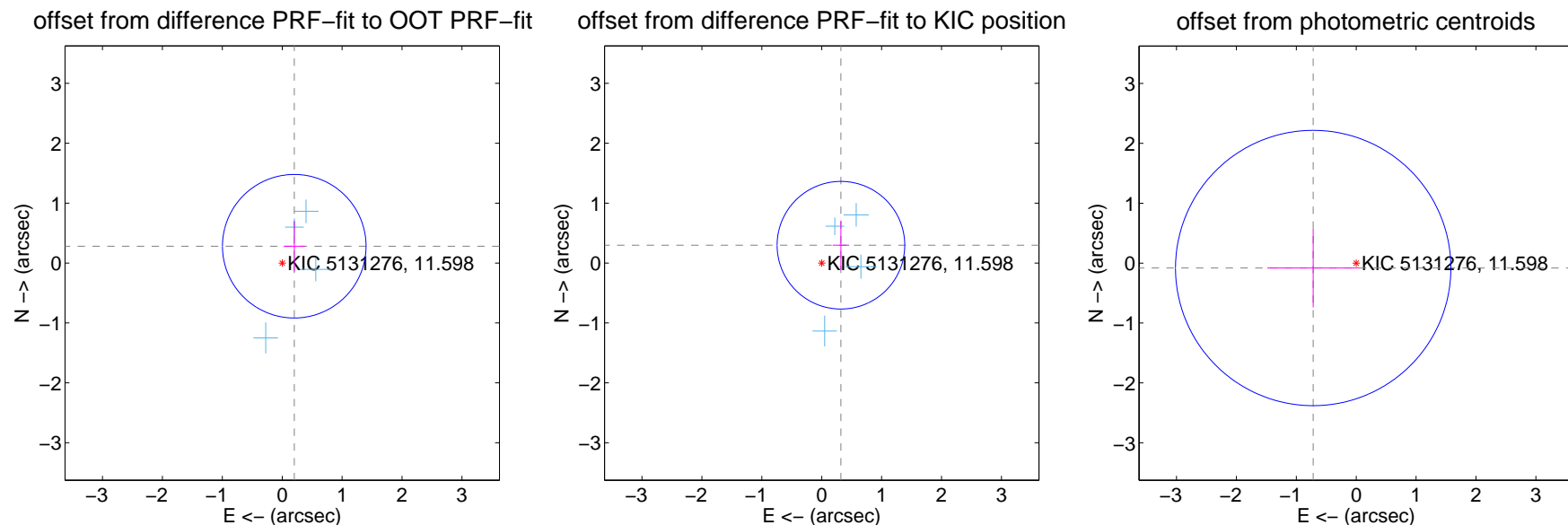
DV Centroid Data

Supplemental centroid analysis for 005131276-01. **Kepler magnitude: 11.60.** Transit SNR 24.45

There are 4 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.345 ± 0.399	0.86	-0.201 ± 0.177	0.281 ± 0.420
PRF-fit source offset from KIC position	0.437 ± 0.355	1.23	-0.320 ± 0.138	0.297 ± 0.412
photometric centroid source offset	0.72 ± 0.77	0.94	0.72 ± 0.77	-0.08 ± 0.66

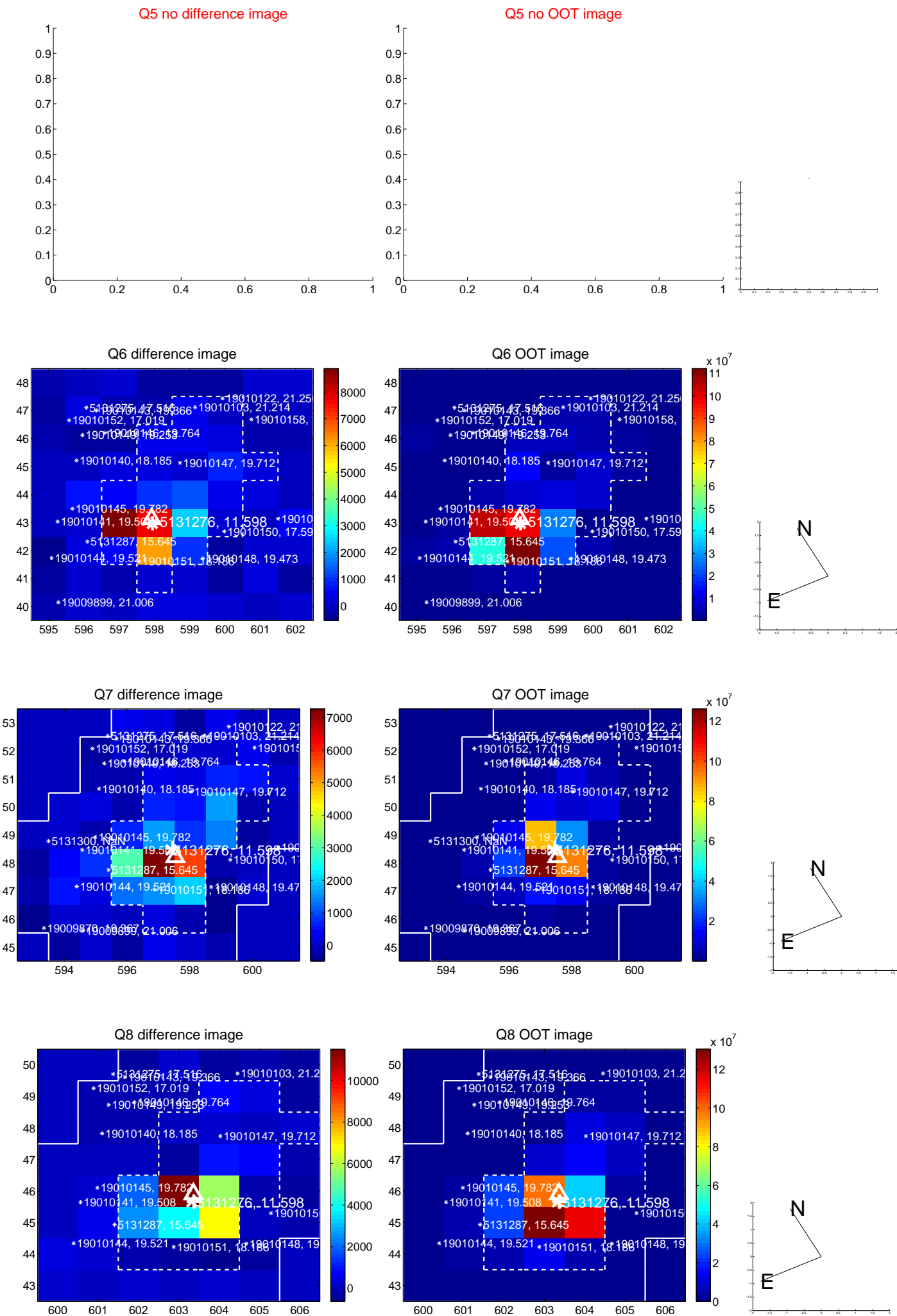


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

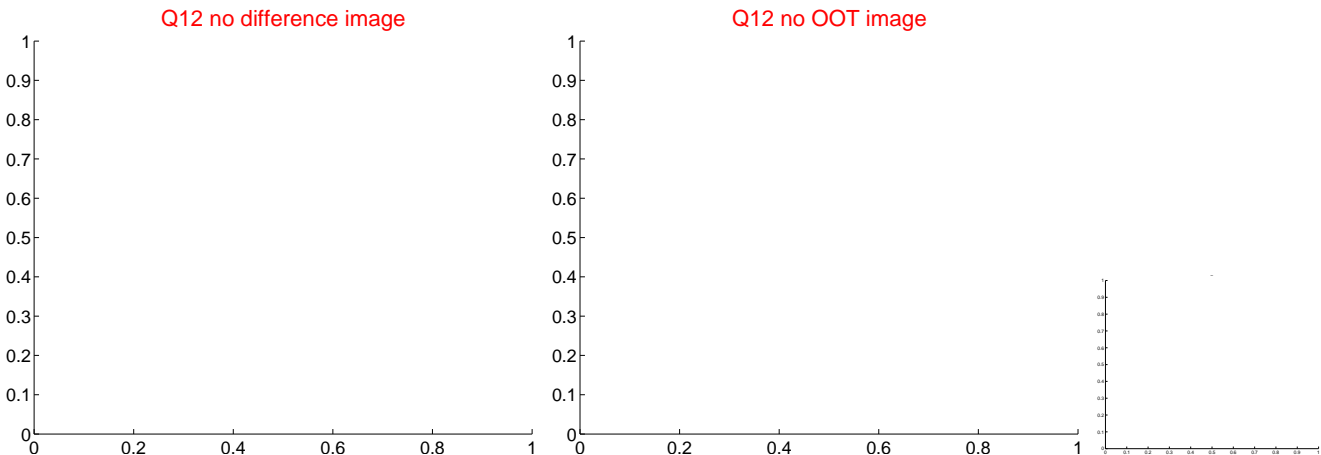
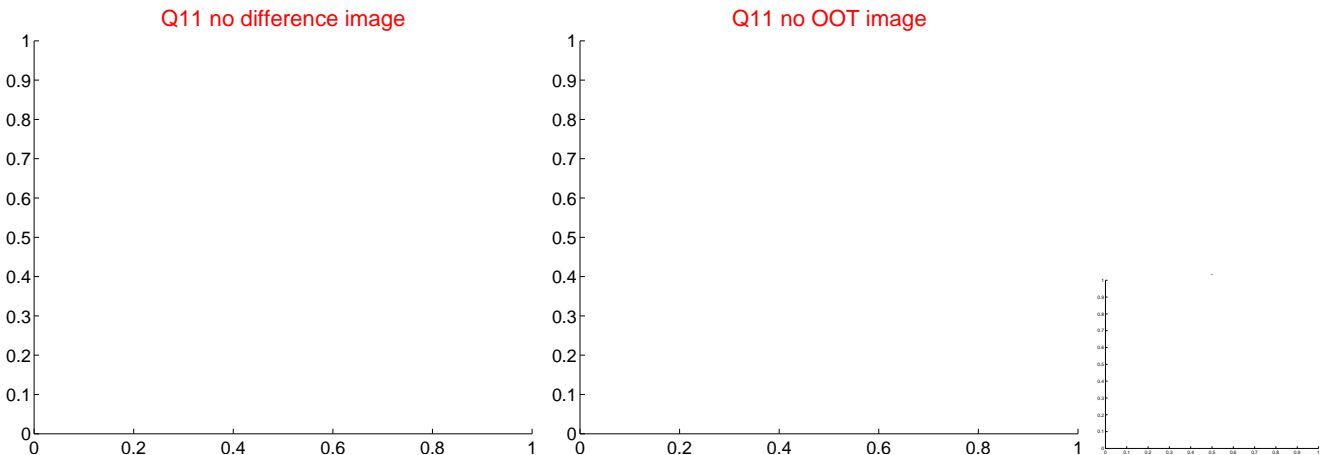
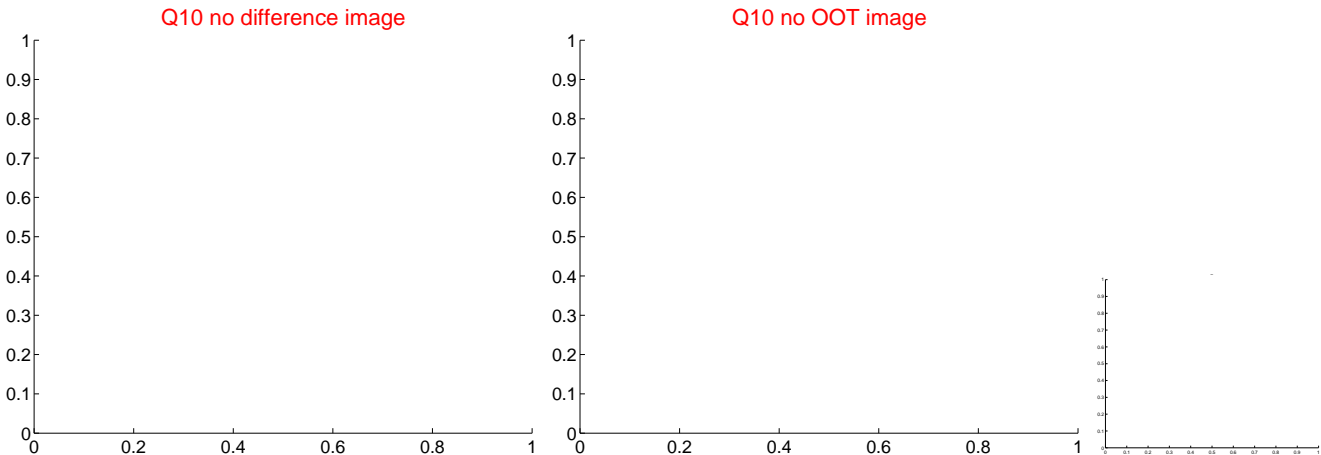
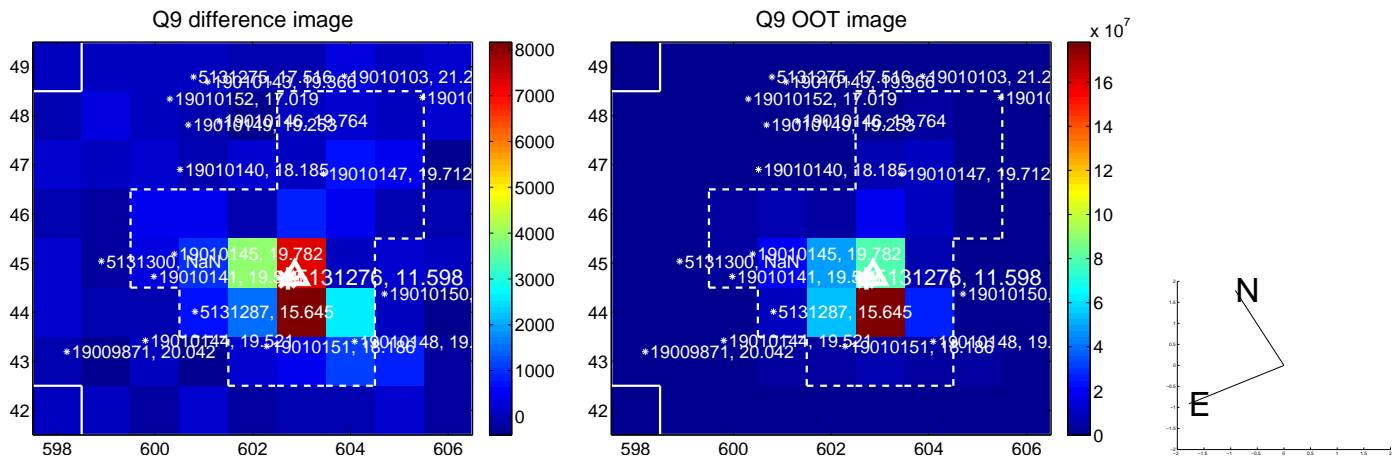
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



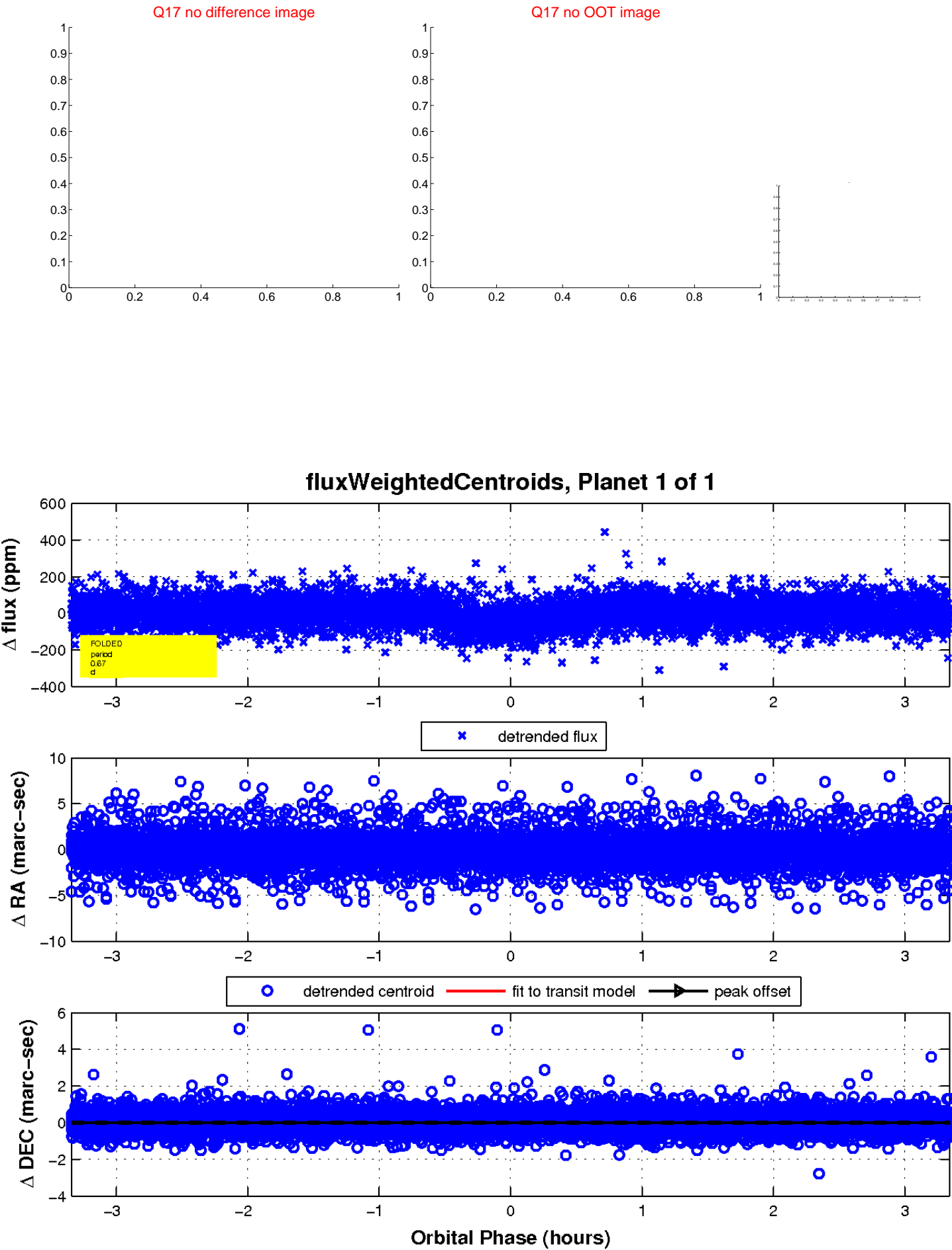
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

