

KIC 005176879

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})
005176879-01	OBS	No	549.197970	453.828421	218.0	21.076	22.8	6.6	152.55	3290	206.68	1341.66

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005176879-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED

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.

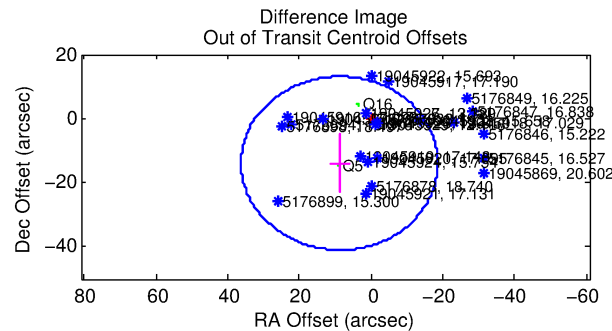
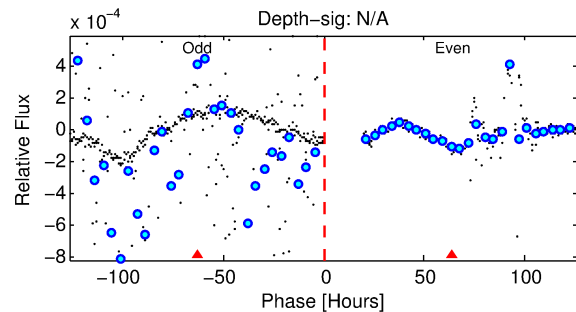
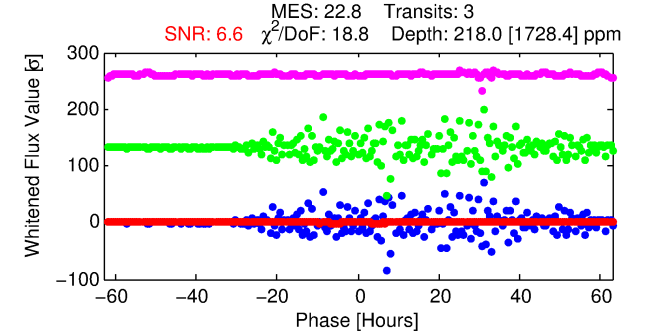
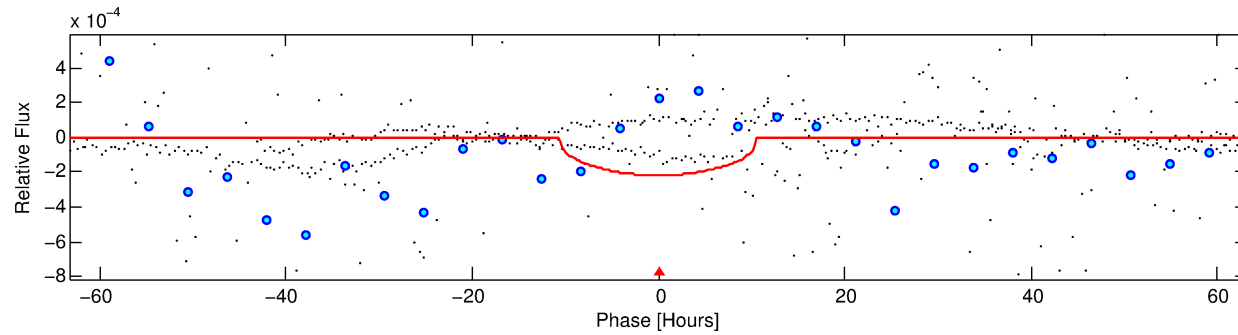
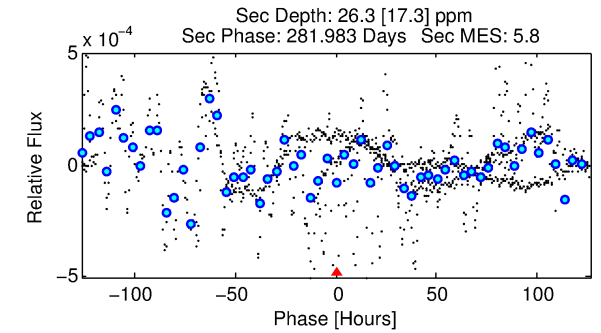
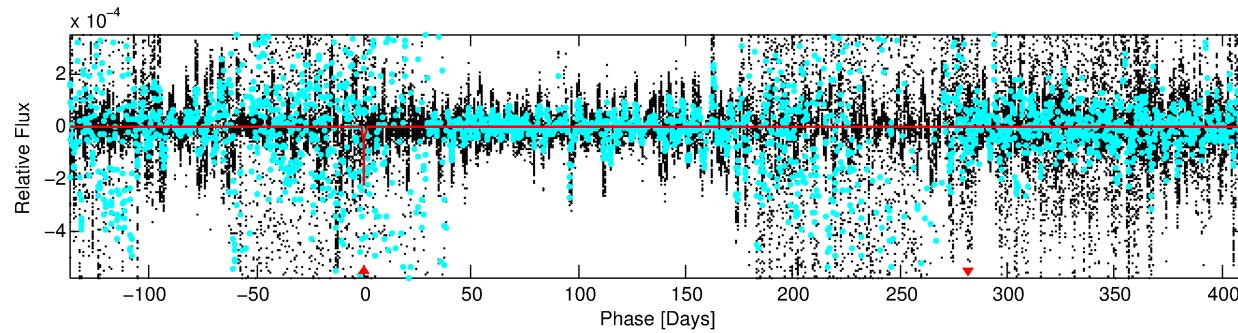
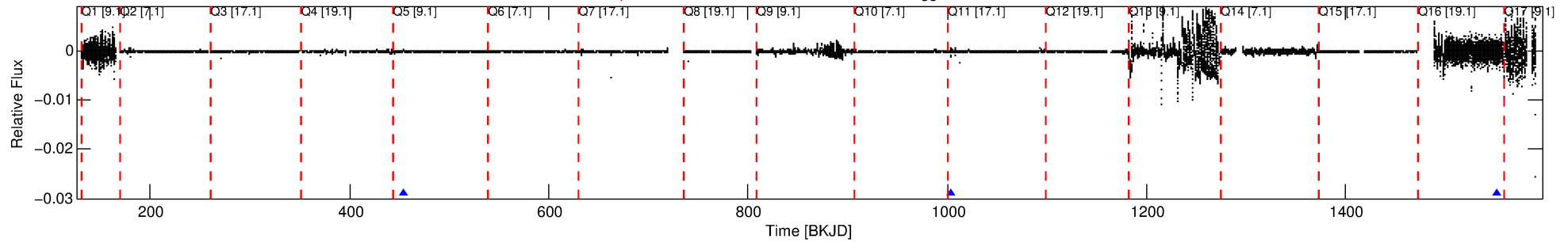
Ephemeris Match Information For 005176879-01

No Significant Match Found

DV One-Page Summary

KIC: 5176879 Candidate: 1 of 1 Period: 549.198 d

Kp: 9.19 R*: 152.55 Rs Teff: 3290.0 K Logg: 0.11 Fe/H: -0.120



DV Fit Results:

Period = 549.19797 [3.64554] d
Epoch = 453.8284 [2.5255] BKJD
Rp/R* = 0.0124 [0.0695]
a/R* = 200.53 [2318.22]
b = 0.10 [149.93]
Seff = 1341.66 [510.49]
Teff = 1543 [147] K
Rp = 206.68 [1158.30] Re
a = 1.3493 [0.2766] AU
Ag = 0.62 [6.92] [-0.06σ]
Teffp = 2114 [5932] K [0.10σ]

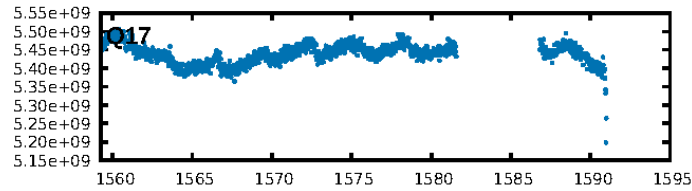
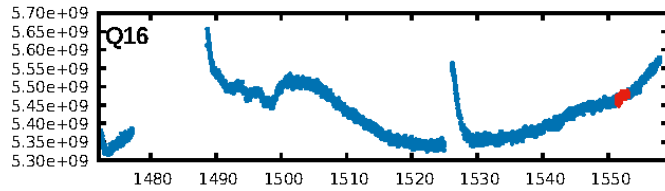
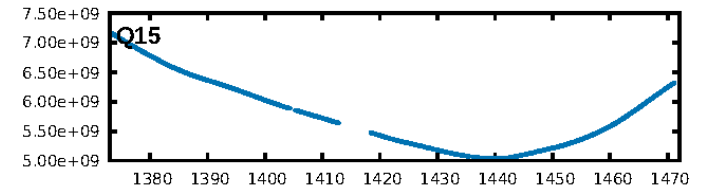
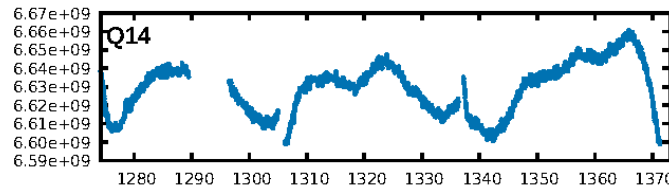
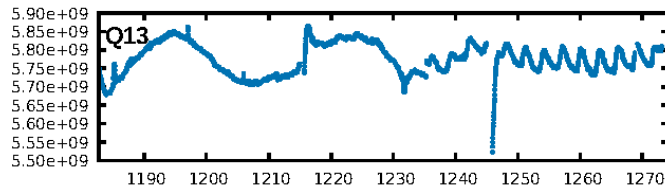
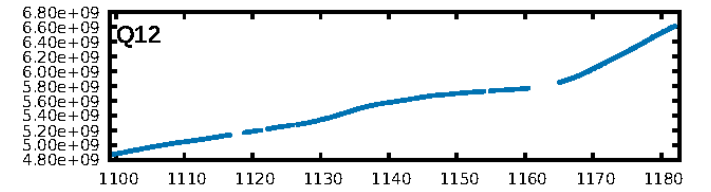
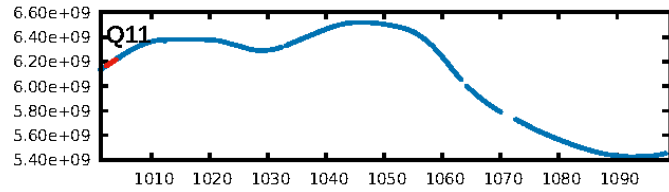
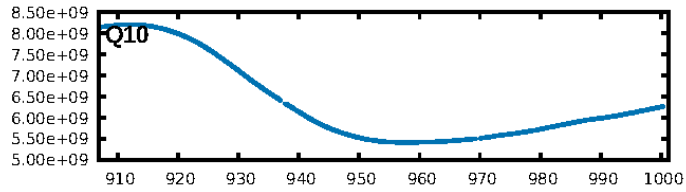
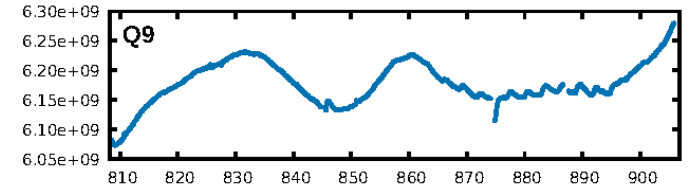
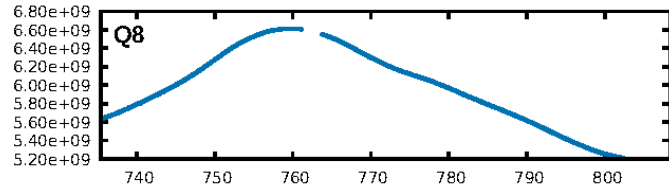
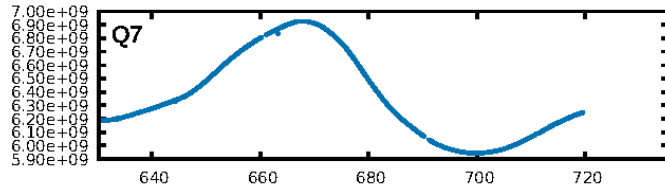
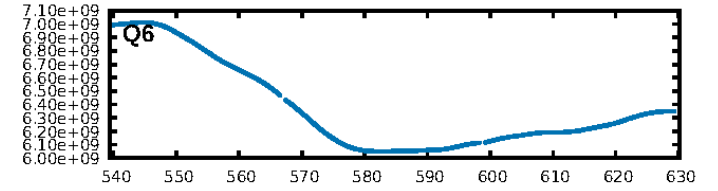
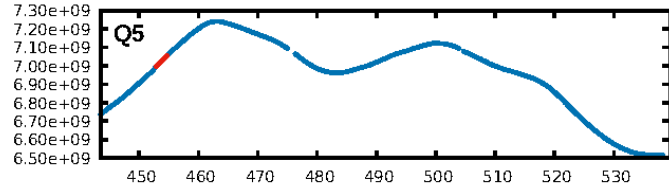
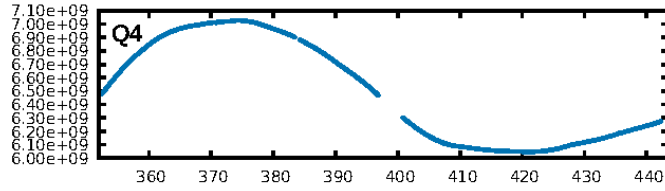
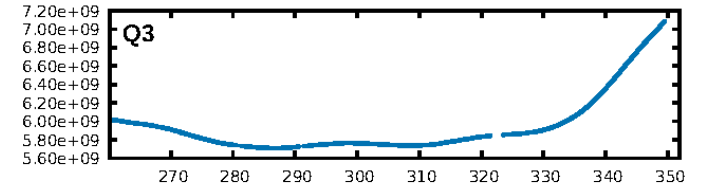
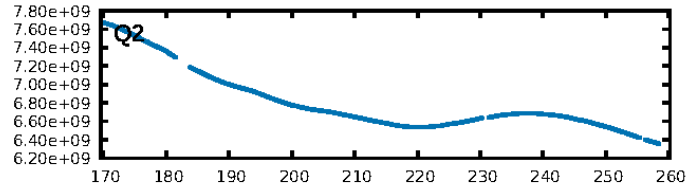
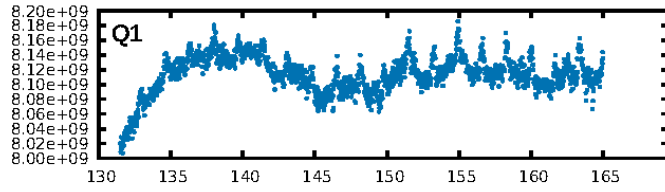
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.6%
ModelChiSquareGof-sig: 90.3%
Bootstrap-pfa: 5.83e-04
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: N/A
Centroid-sig: 39.0%
Centroid-so: 5.944 arcsec [0.92σ]
OotOffset-rm: 16.501 arcsec [1.80σ]
OotOffset-st: 0/0/1/1 [2]
KicOffset-rm: 16.499 arcsec [1.82σ]
KicOffset-st: 0/0/1/1 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [2/2]

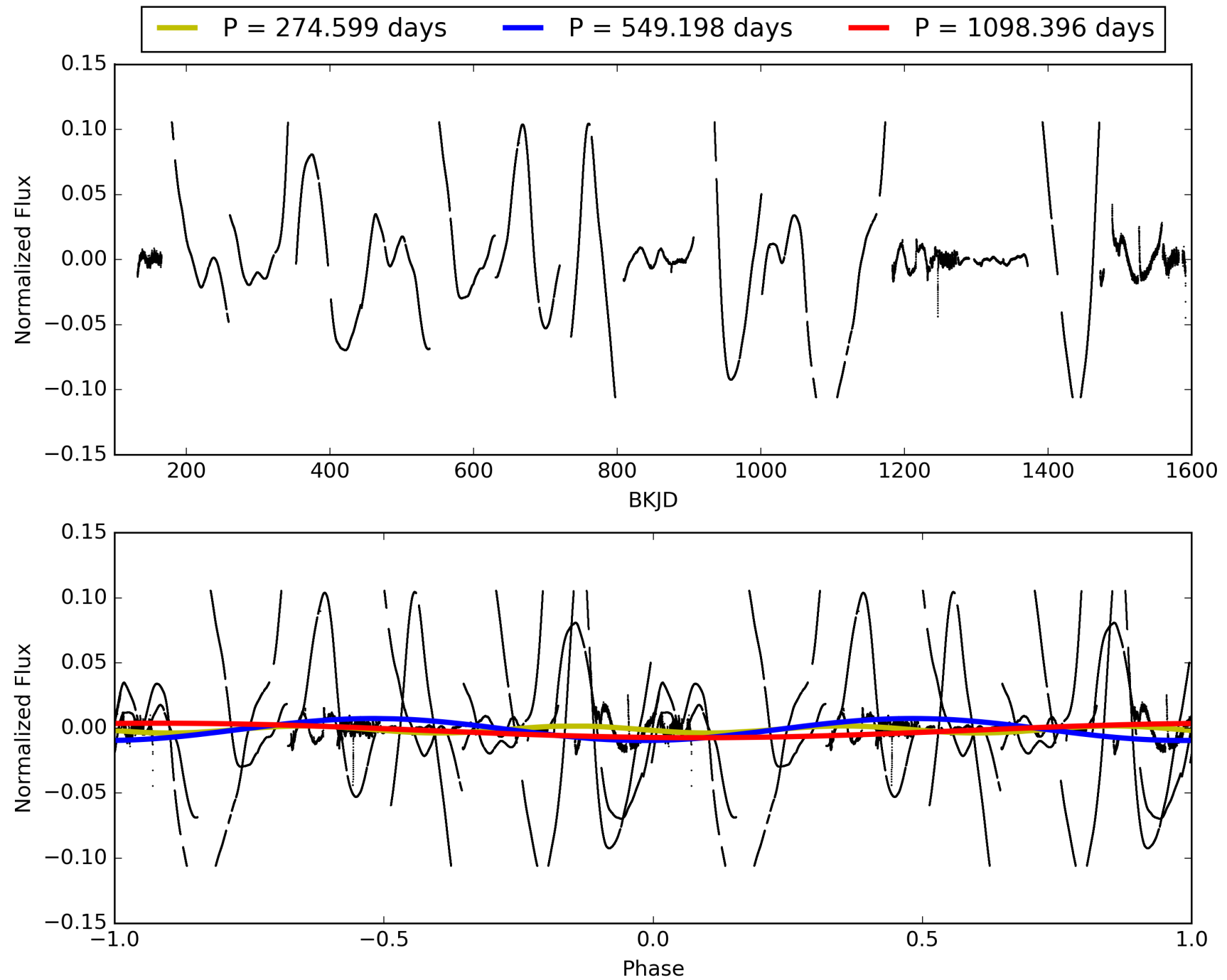
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 17:13:27 Z

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

TCE 005176879-01, PDC Light Curves

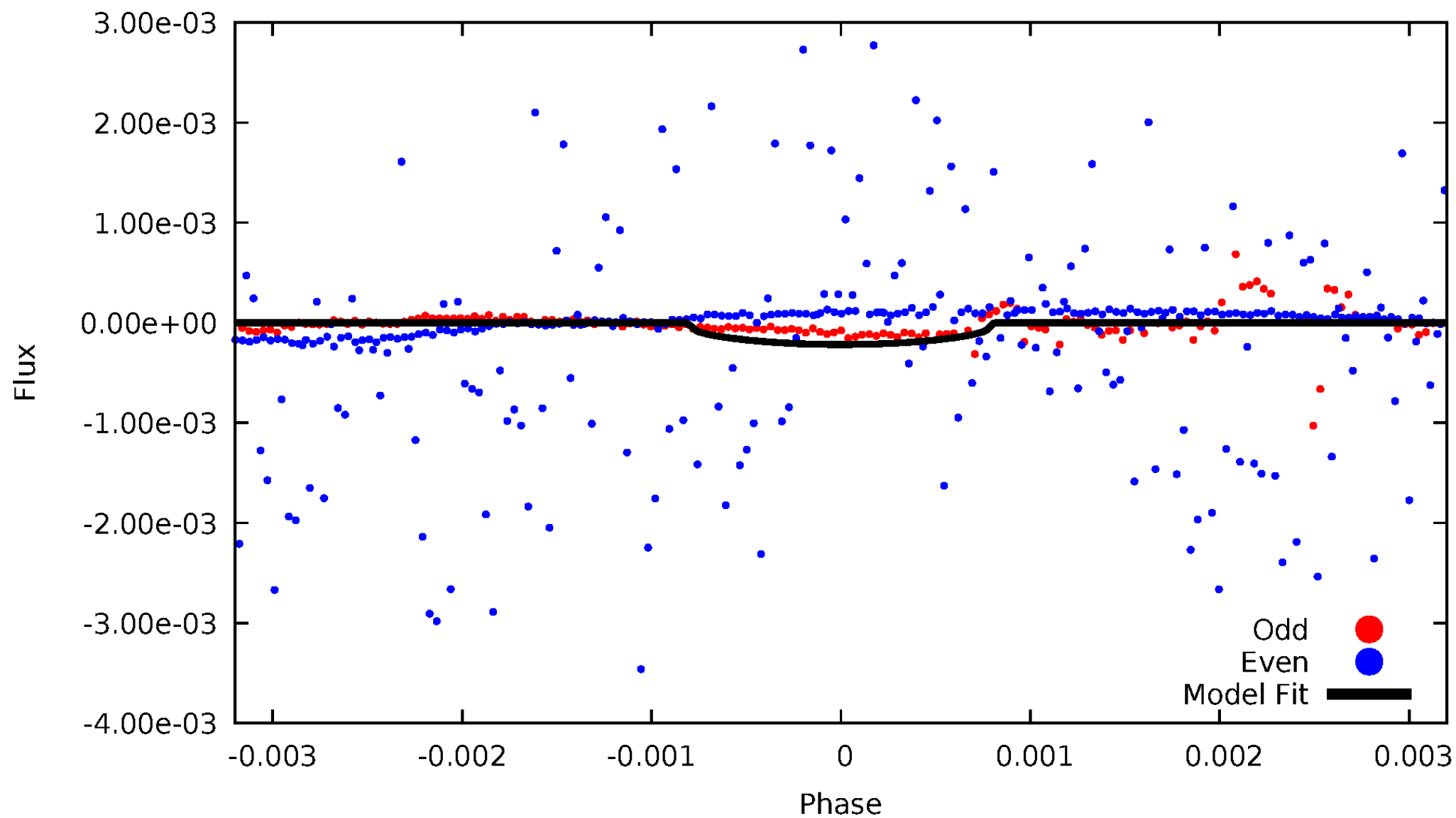


TCE 005176879-01



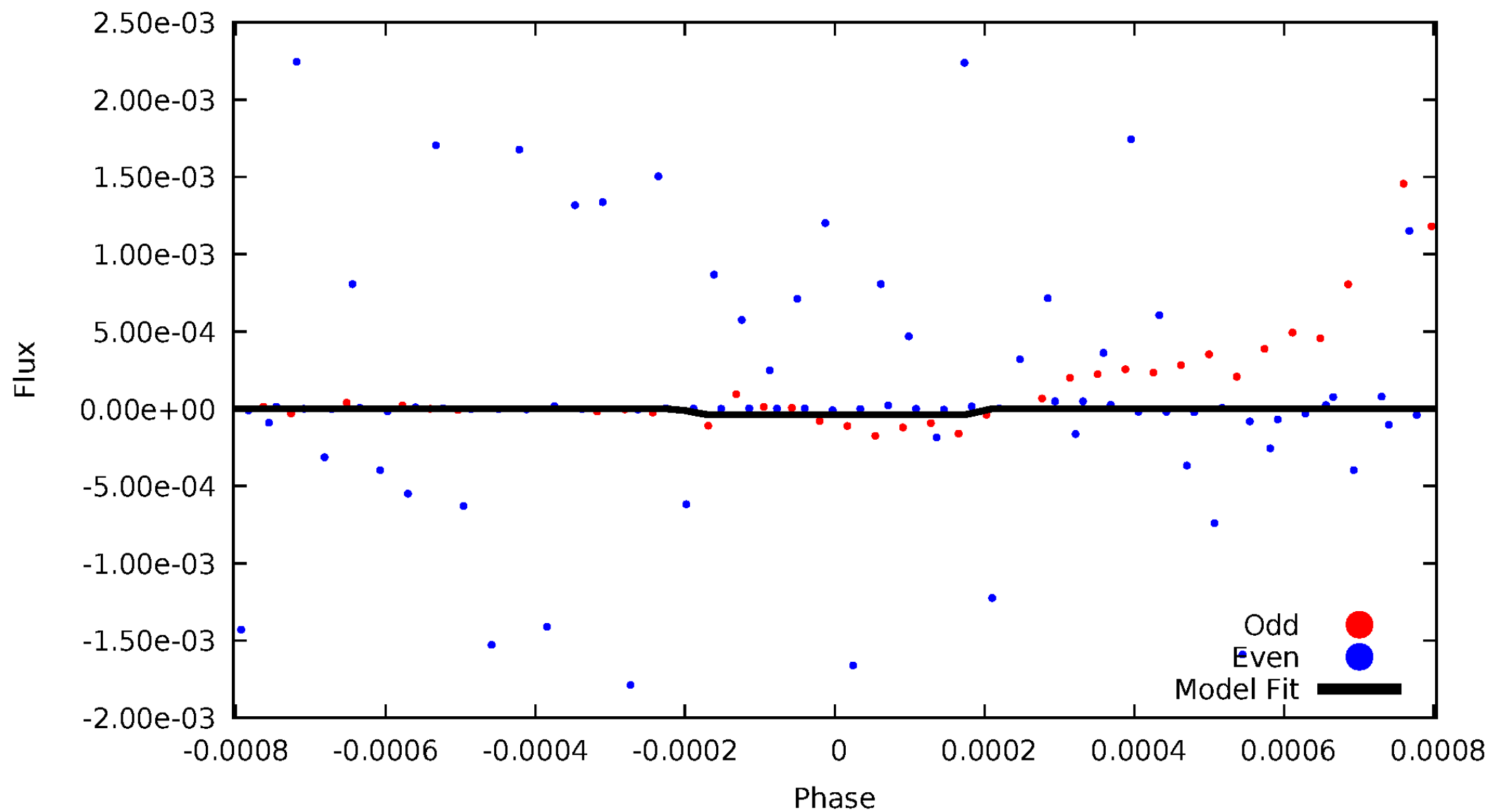
DV Odd/Even

TCE 005176879-01



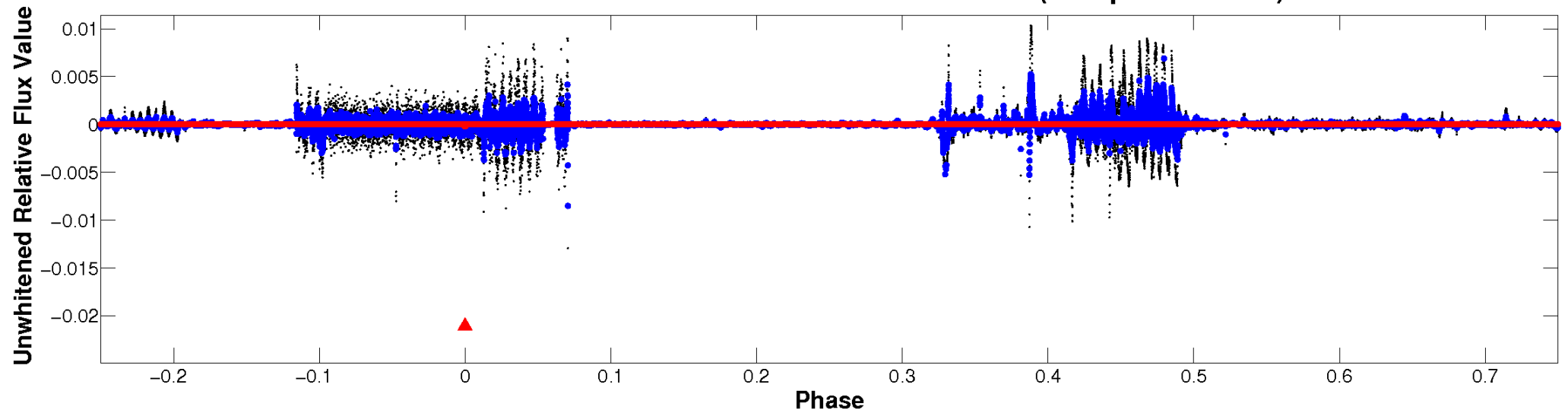
ALT Odd/Even

TCE 005176879-01

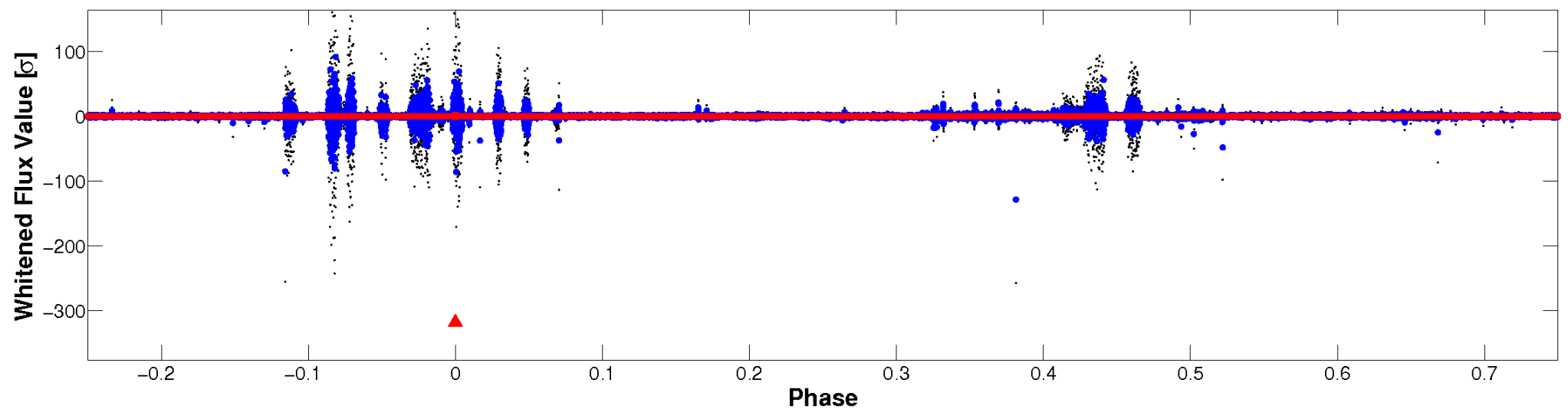


Non-Whitened Vs. Whitened Light Curve

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

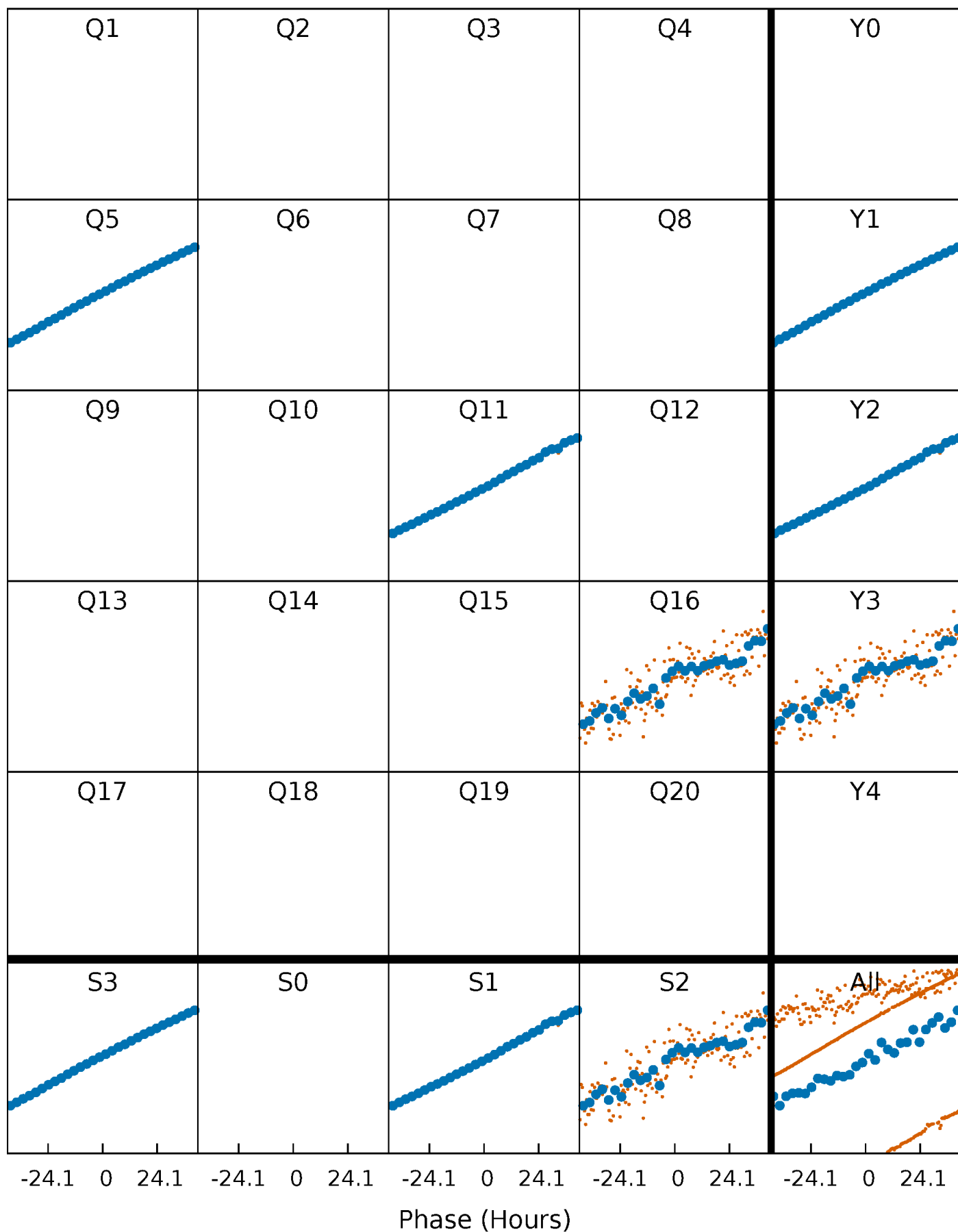


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



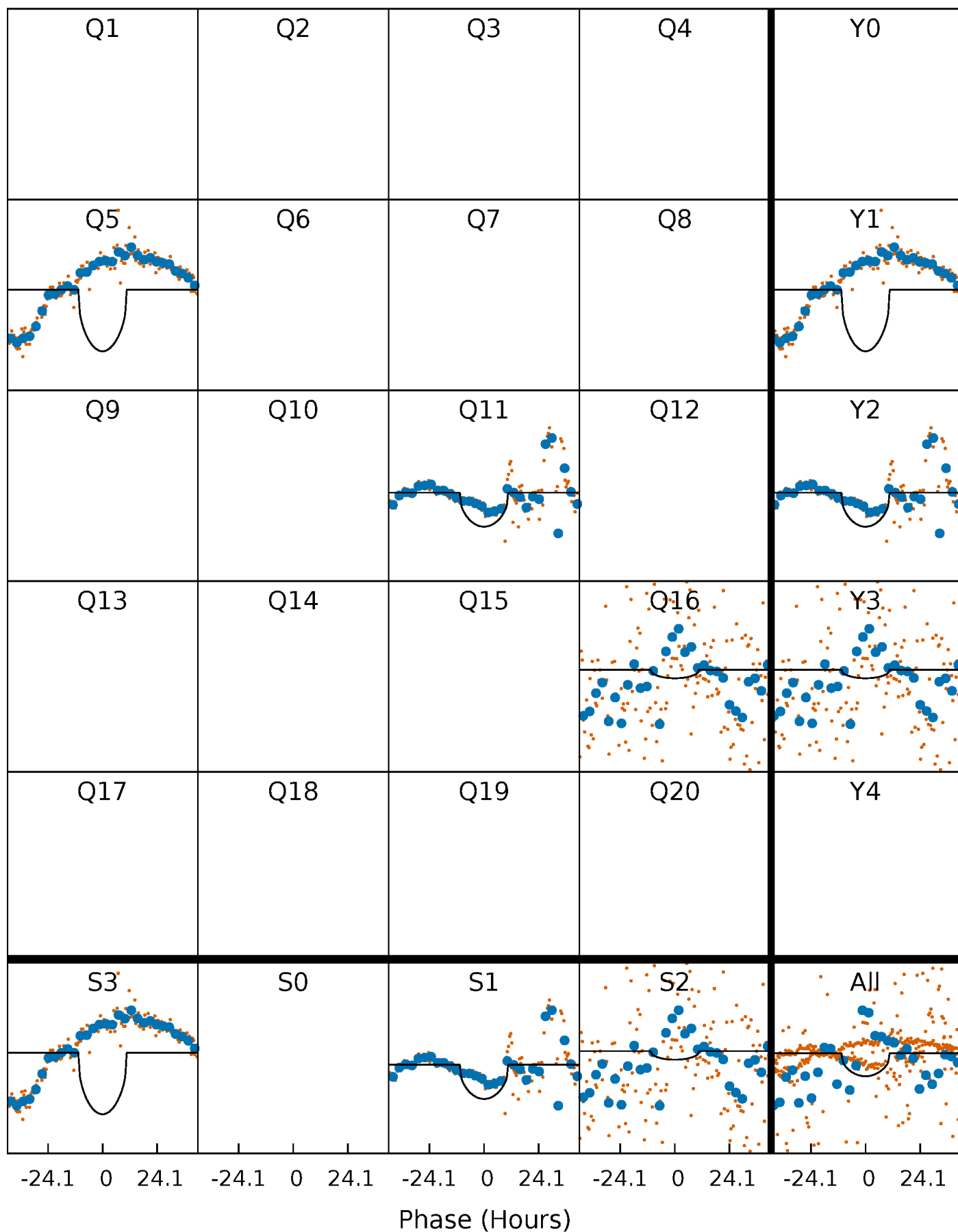
PDC Quarter-Phased Transit Curves

TCE 005176879-01 P=549.197970 Days $T_0=453.828421$ (BKJD)



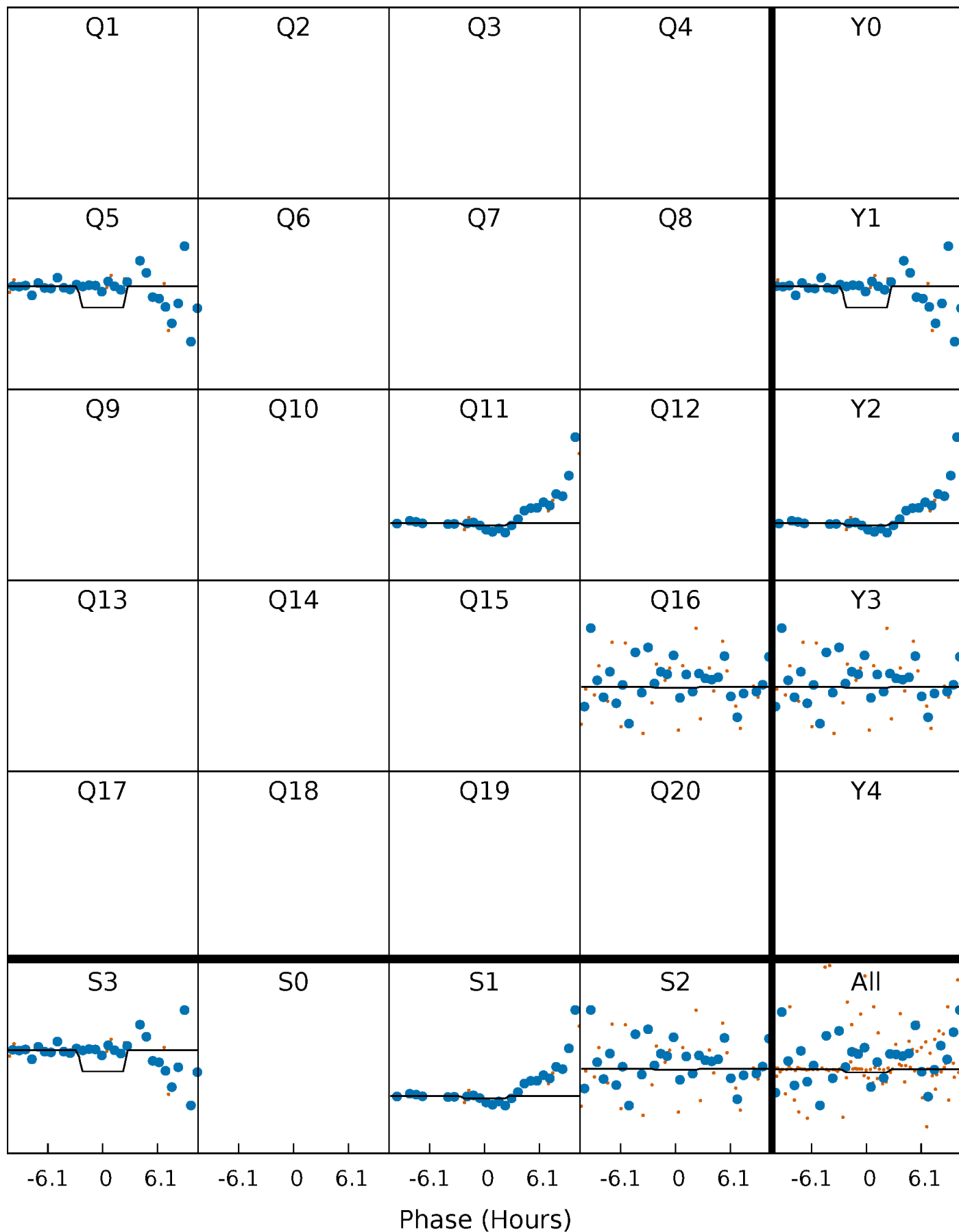
DV Quarter-Phased Transit Curves

TCE 005176879-01 P=549.197970 Days $T_0=453.828421$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

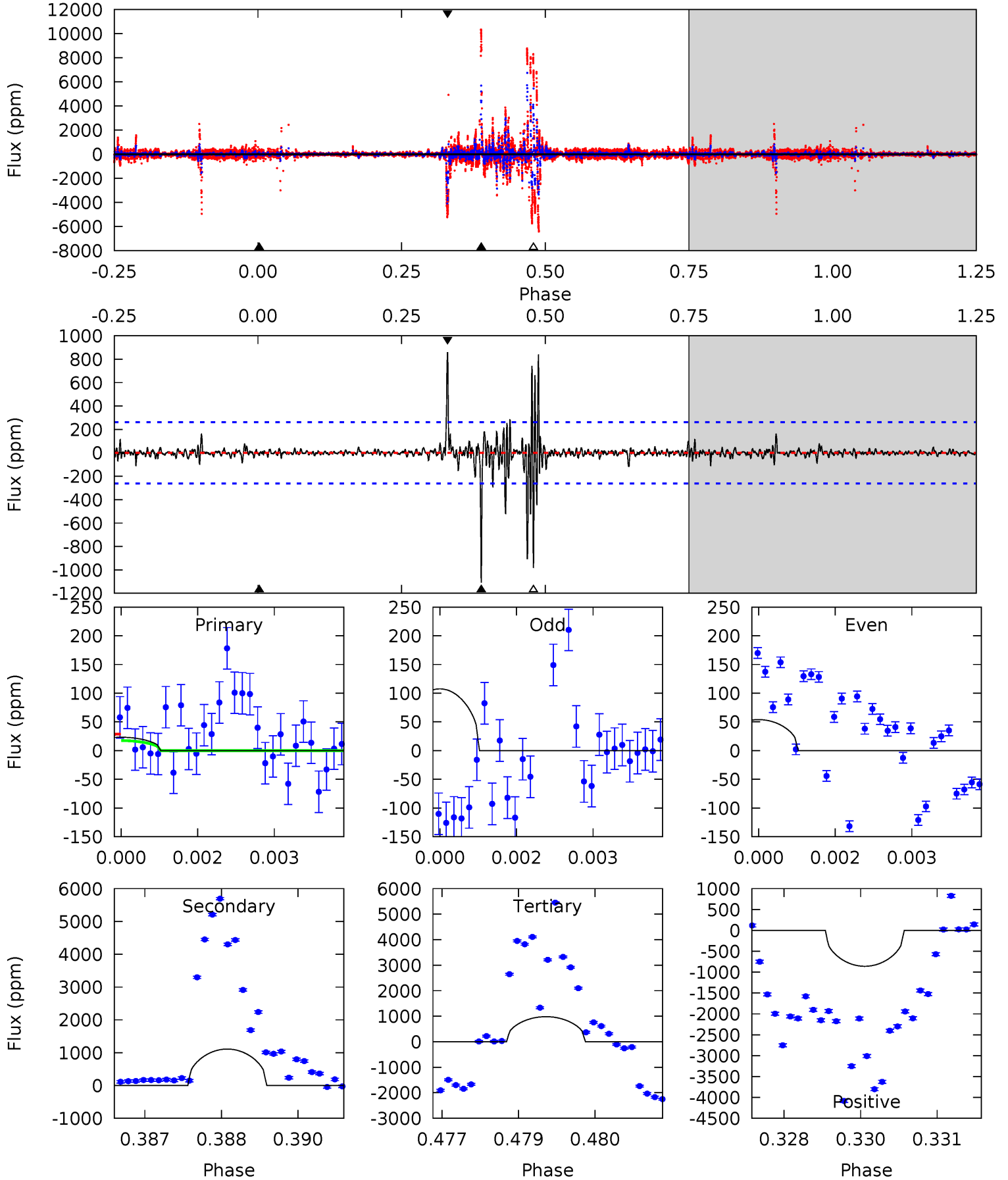
TCE 005176879-01 P=550.003323 Days $T_0=453.750064$ (BKJD)



DV Model-Shift Uniqueness Test

005176879-01, P = 549.197970 Days, E = 453.828421 Days

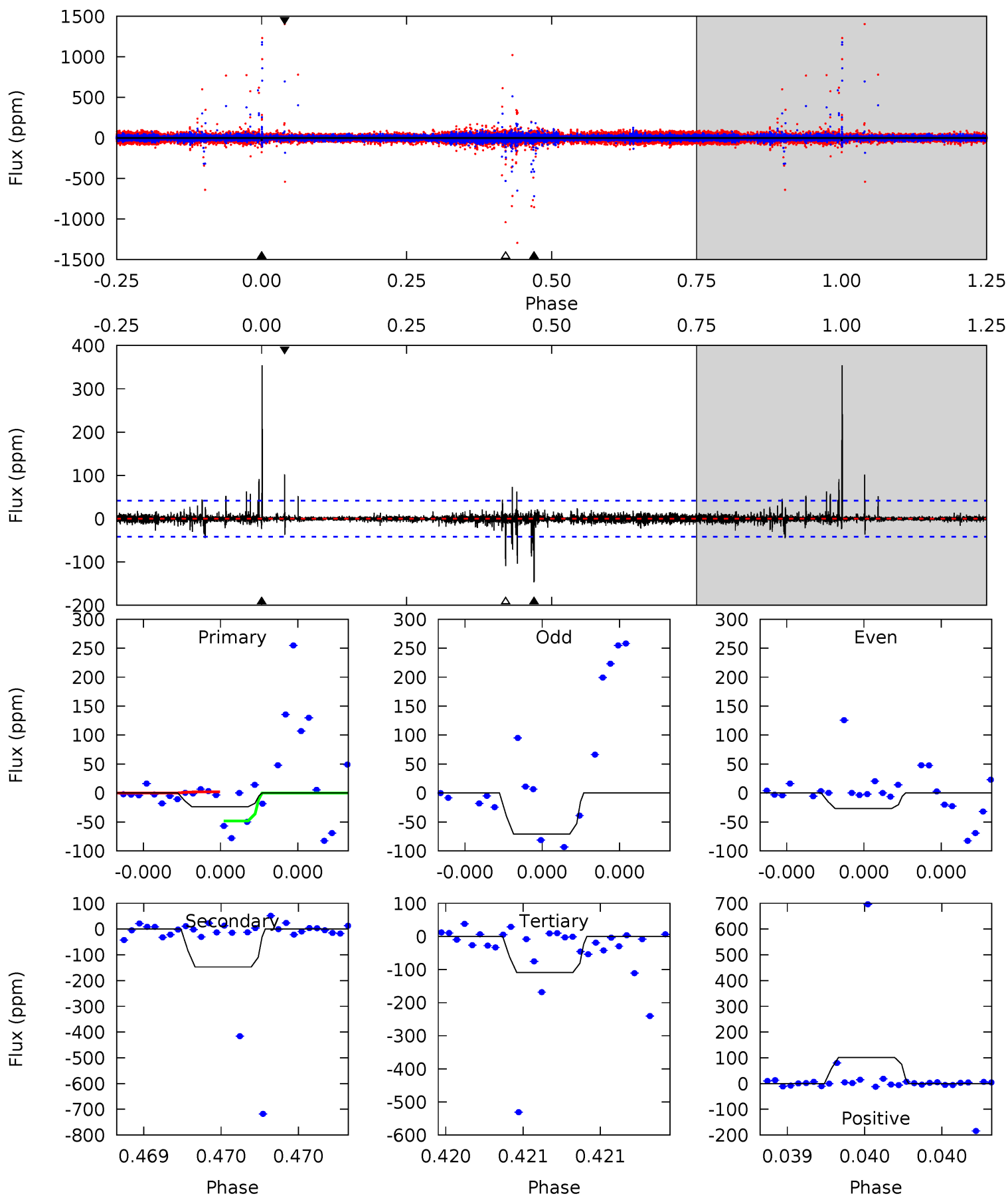
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.48	22.8	20.2	17.6	5.37	3.16	1.72	-19.7	-17.2	2.61	5.12	0.28	1.14	0.44	0.11



Alt Model-Shift Uniqueness Test

005176879-01, P = 550.003323 Days, E = 453.750064 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.20	19.8	14.7	13.6	5.61	3.53	1.12	-11.5	-10.4	5.13	6.17	1.11	83.2	0.71	3.02



Stellar Parameters For KIC 005176879

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3290^{+117}_{-88}	$0.107^{+0.216}_{-0.054}$	$-0.120^{+0.250}_{-0.100}$	$152.547^{+9.192}_{-27.576}$	$1.086^{+0.223}_{-0.120}$	$0.000^{+0.000}_{-0.000}$
	+4%/-3%	+202%/-50%	+208%/-83%	+6%/-18%	+21%/-11%	+89%/-11%
Source	KIC0	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 005176879-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1110 ± 49	$849.82^{+789.28}_{-598.77}$	2118^{+112}_{-132}	2805^{+1403}_{-663}	$1.602^{+16.767}_{-1.164}$
Alt.	-147 ± 7	$786.27^{+883.31}_{-538.49}$	2111^{+110}_{-112}	-1944^{+4968}_{-359}	$0.240^{+2.308}_{-0.187}$

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 $A_{obs} \gg 1.0$

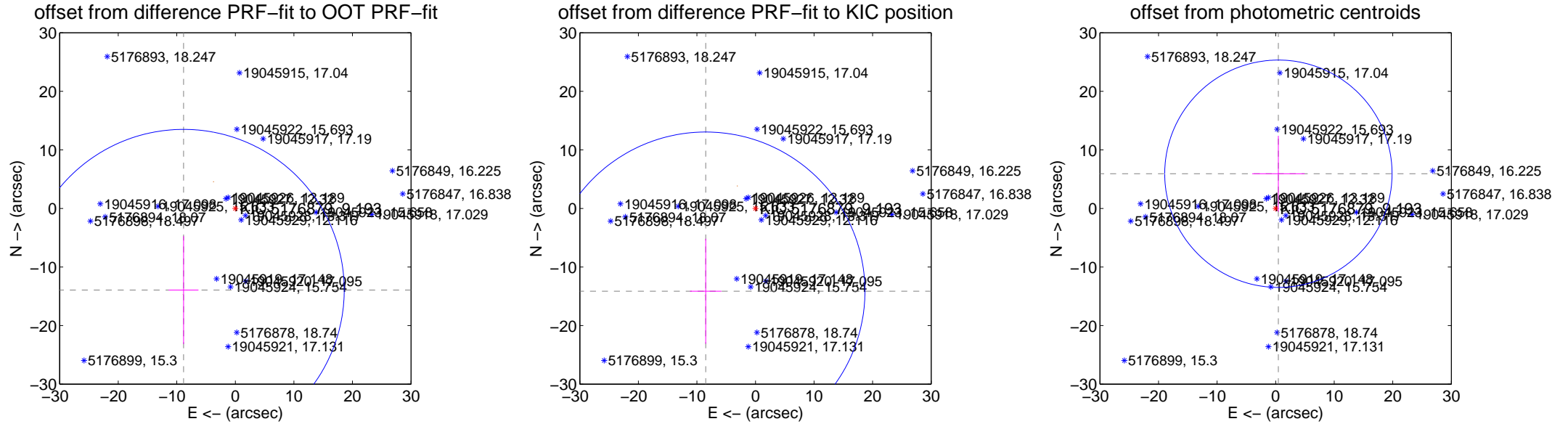
DV Centroid Data

Supplemental centroid analysis for 005176879-01. **Kepler magnitude: 9.19.** Transit SNR 6.63

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.96 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	16.501 ± 9.144	1.80	8.840 ± 2.541	-13.932 ± 9.218
PRF-fit source offset from KIC position	16.499 ± 9.064	1.82	8.502 ± 2.685	-14.140 ± 8.962
photometric centroid source offset	5.94 ± 6.47	0.92	-0.47 ± 4.49	5.93 ± 6.48

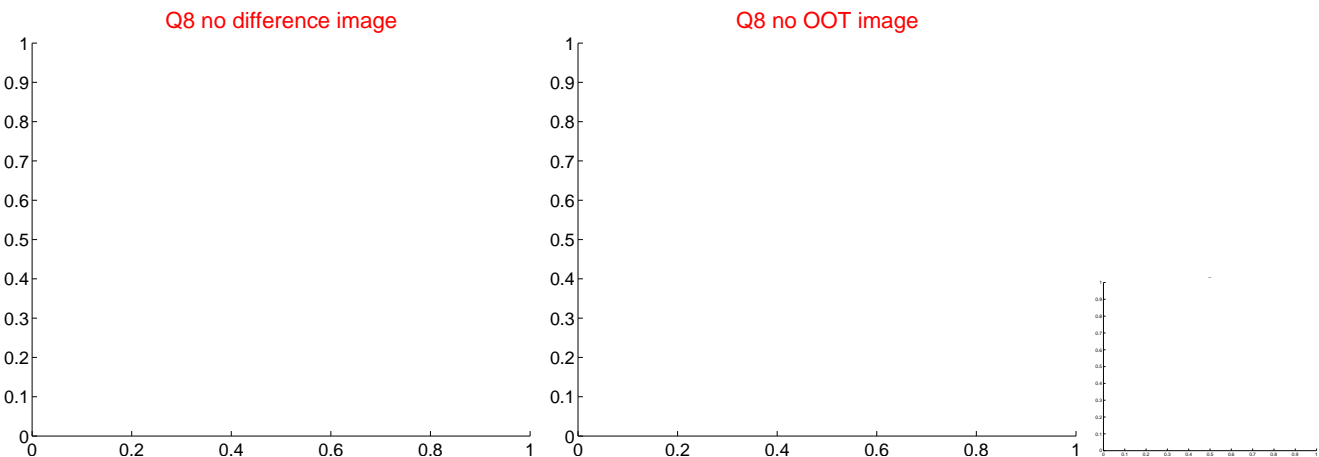
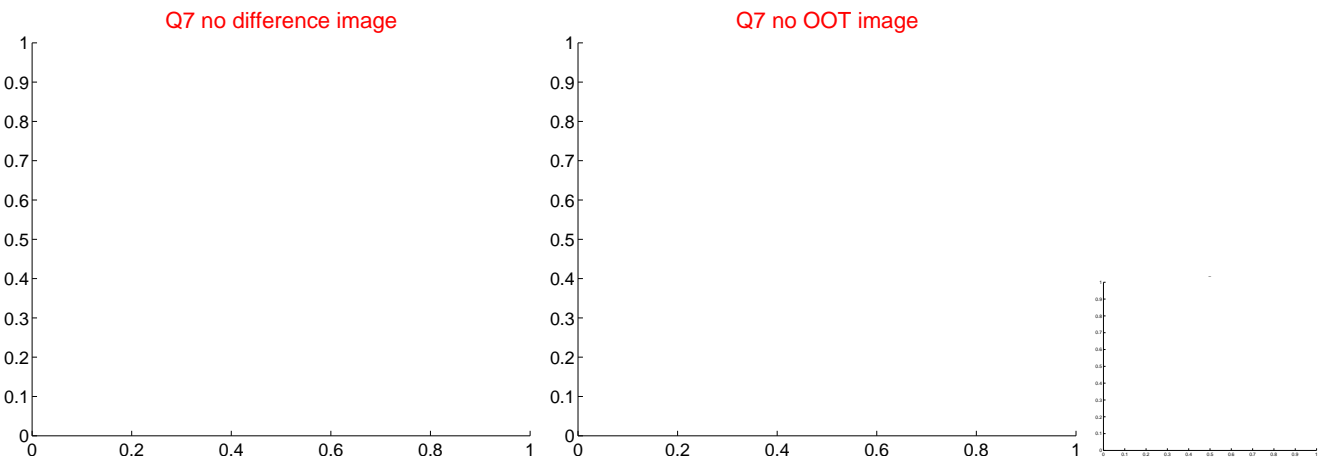
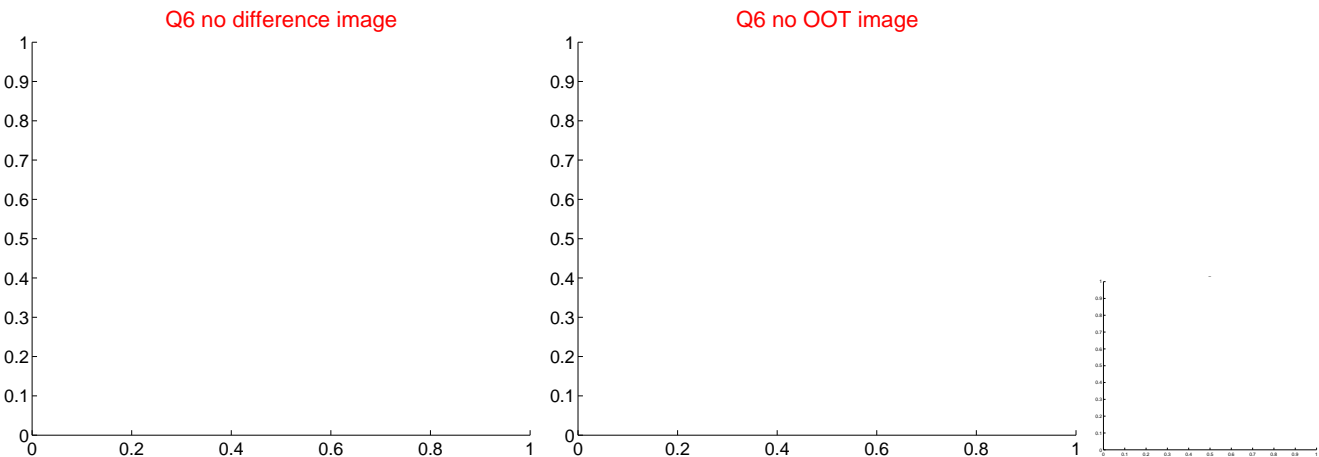
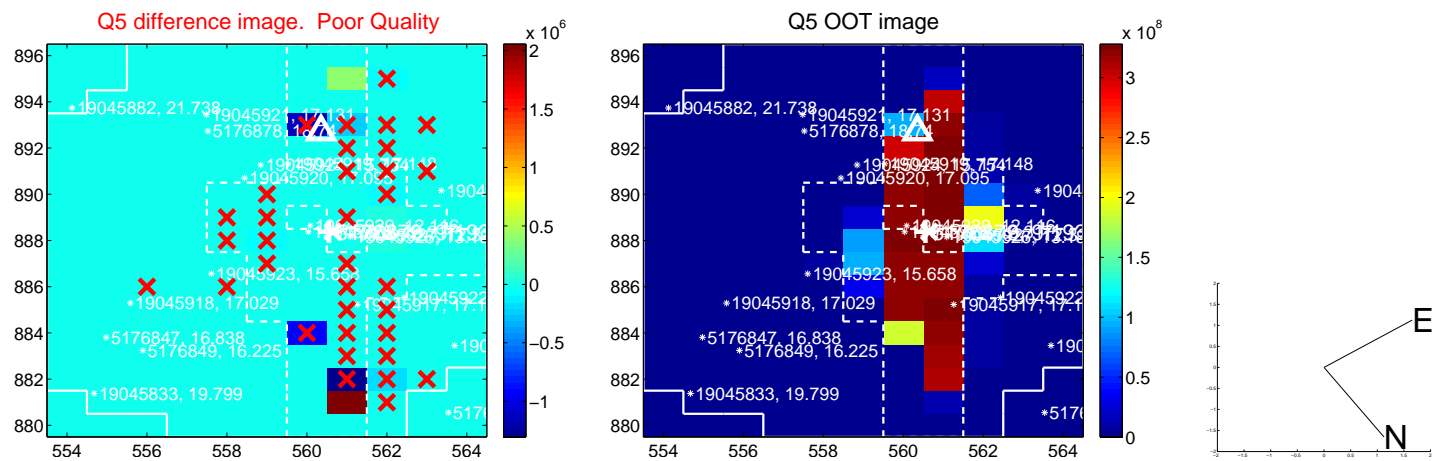


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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



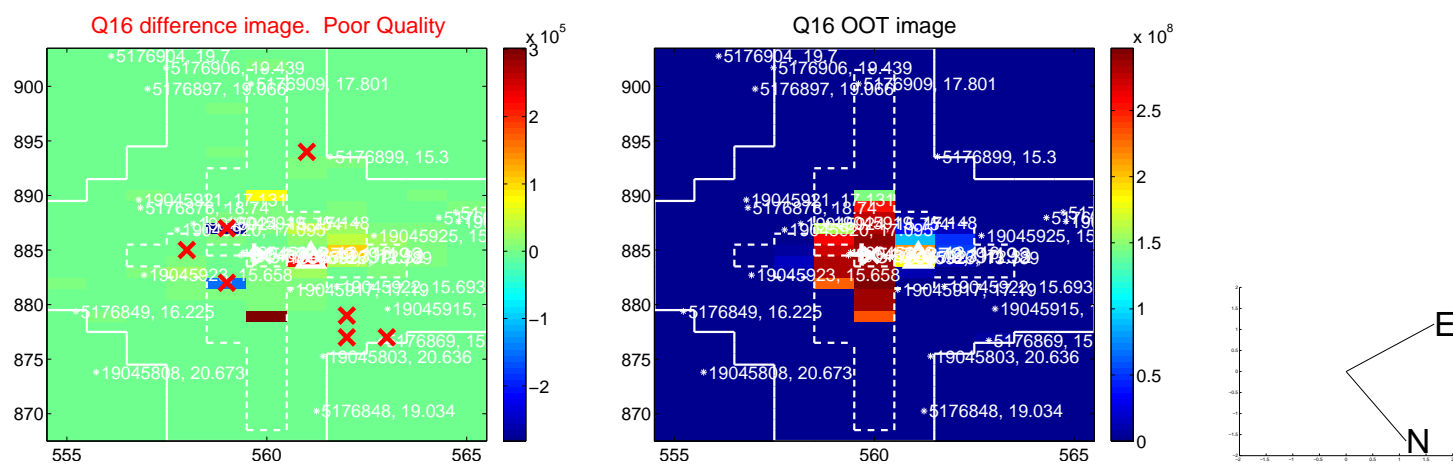
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



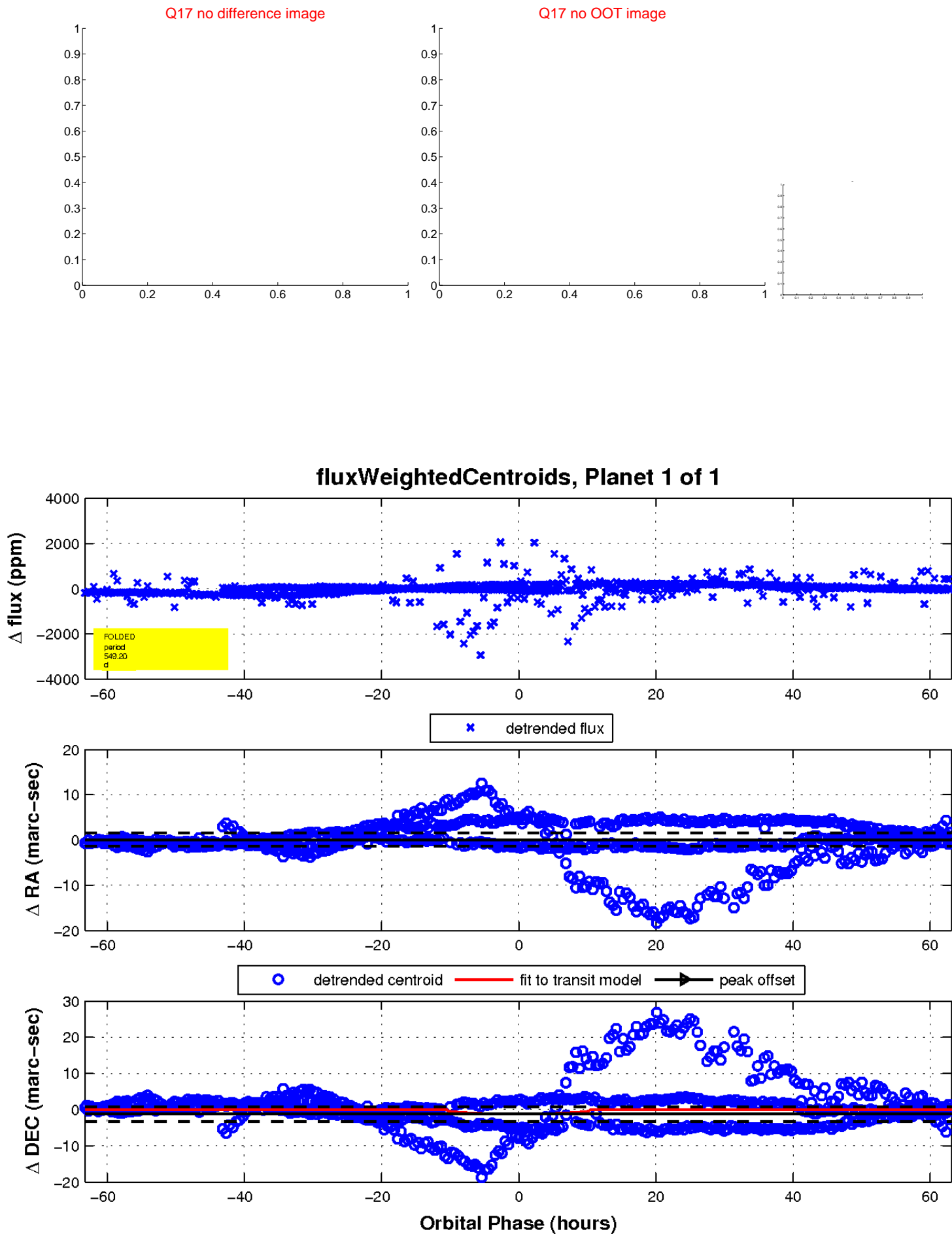
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

