

KIC 011139685

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})
011139685-01	OBS	No	537.111936	135.697523	556.4	13.821	9.5	8.0	0.71	4861	1.75	0.19

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011139685-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

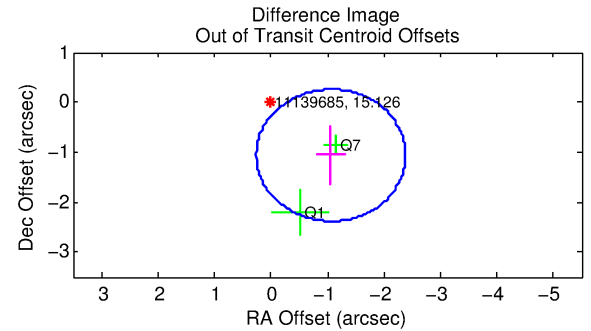
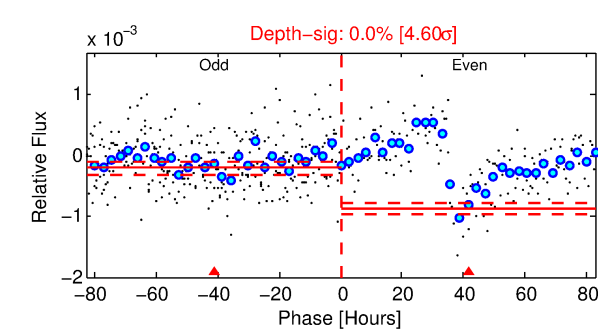
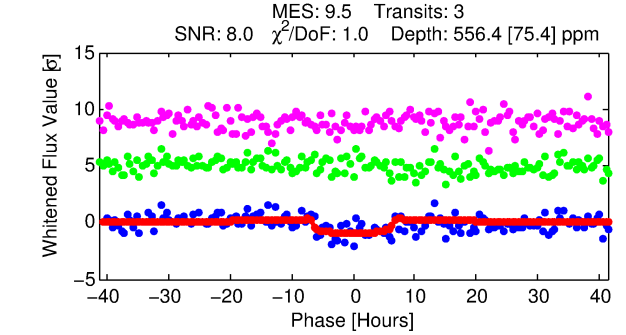
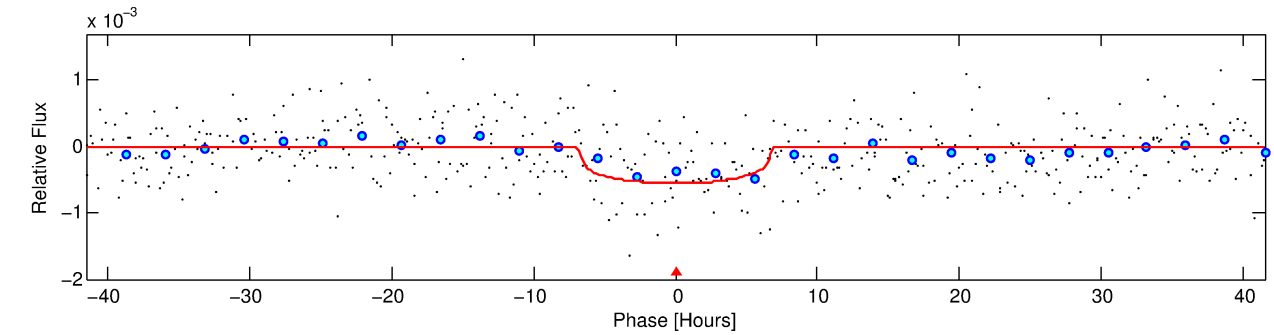
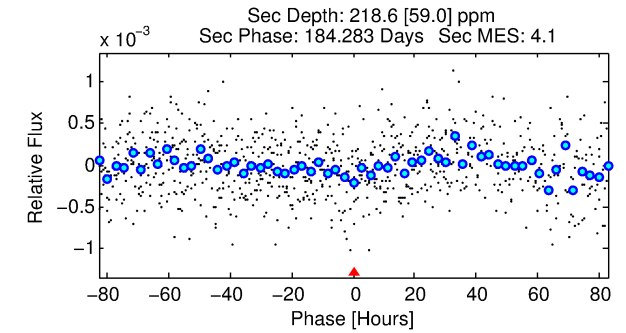
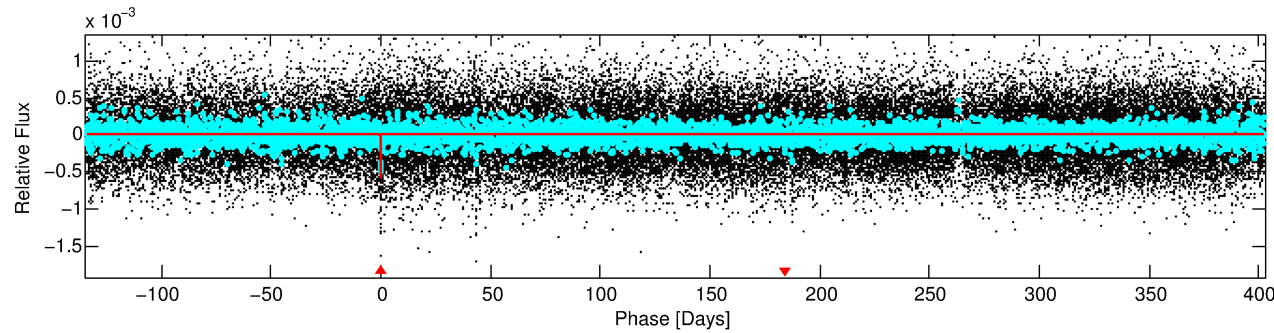
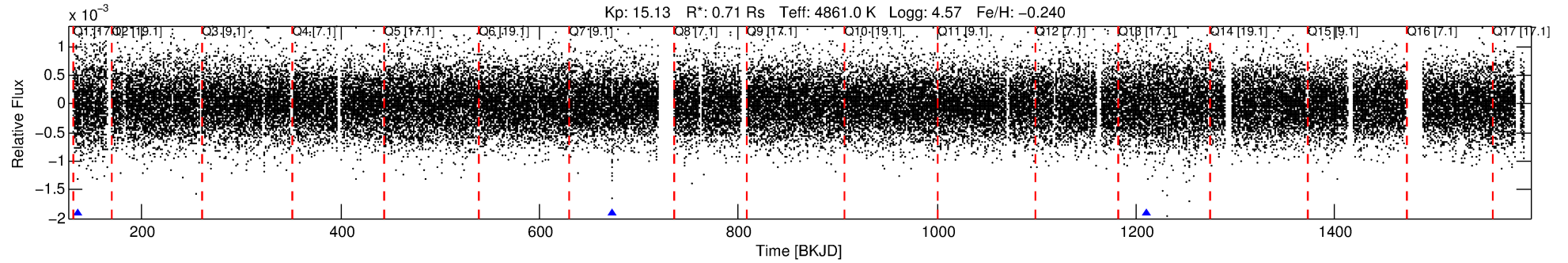
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011139685-01

No Significant Match Found

DV One-Page Summary

KIC: 11139685 Candidate: 1 of 1 Period: 537.112 d



DV Fit Results:

Period = 537.11194 [0.01819] d
Epoch = 135.6975 [0.0238] BKJD
Rp/R* = 0.0226 [0.0167]
a/R* = 233.71 [589.40]
b = 0.65 [2.25]
Seff = 0.19 [0.03]
Teq = 169 [7] K
Rp = 1.75 [1.30] Re
a = 1.1416 [0.0908] AU
Ag = 51038.05 [76700.03] [0.67 σ]
Teffp = 3927 [1476] K [2.55 σ]

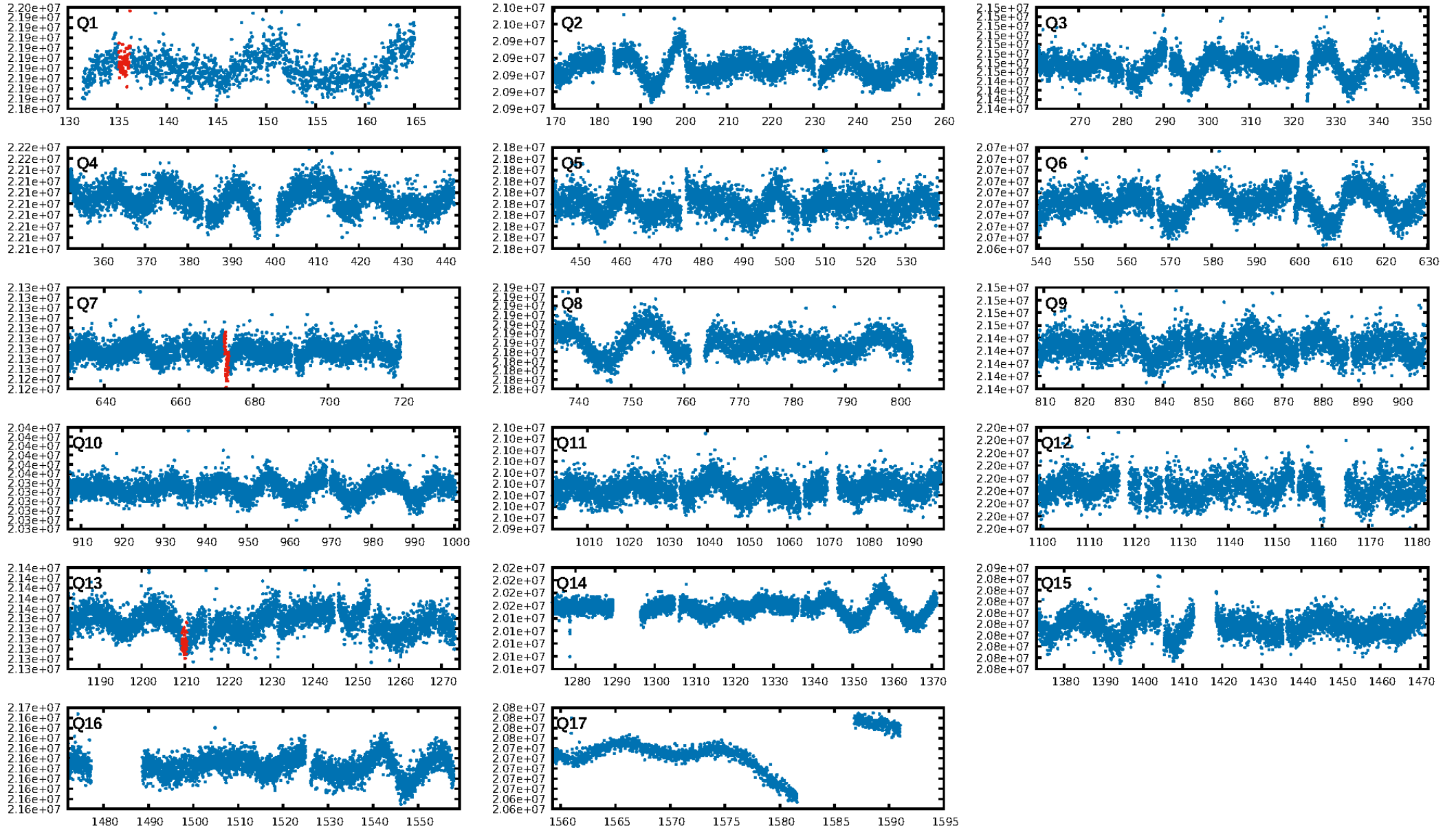
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.9%
ModelChiSquareGof-sig: 98.2%
Bootstrap-pfa: 2.47e-23
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: 0.9267
Centroid-sig: 96.2%
Centroid-so: 0.650 arcsec [0.53 σ]
OotOffset-rm: 1.503 arcsec [3.41 σ]
KicOffset-rm: 2.120 arcsec [4.79 σ]
OotOffset-st: 0/1/0/1 [2]
KicOffset-st: 0/1/0/1 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [3/3]

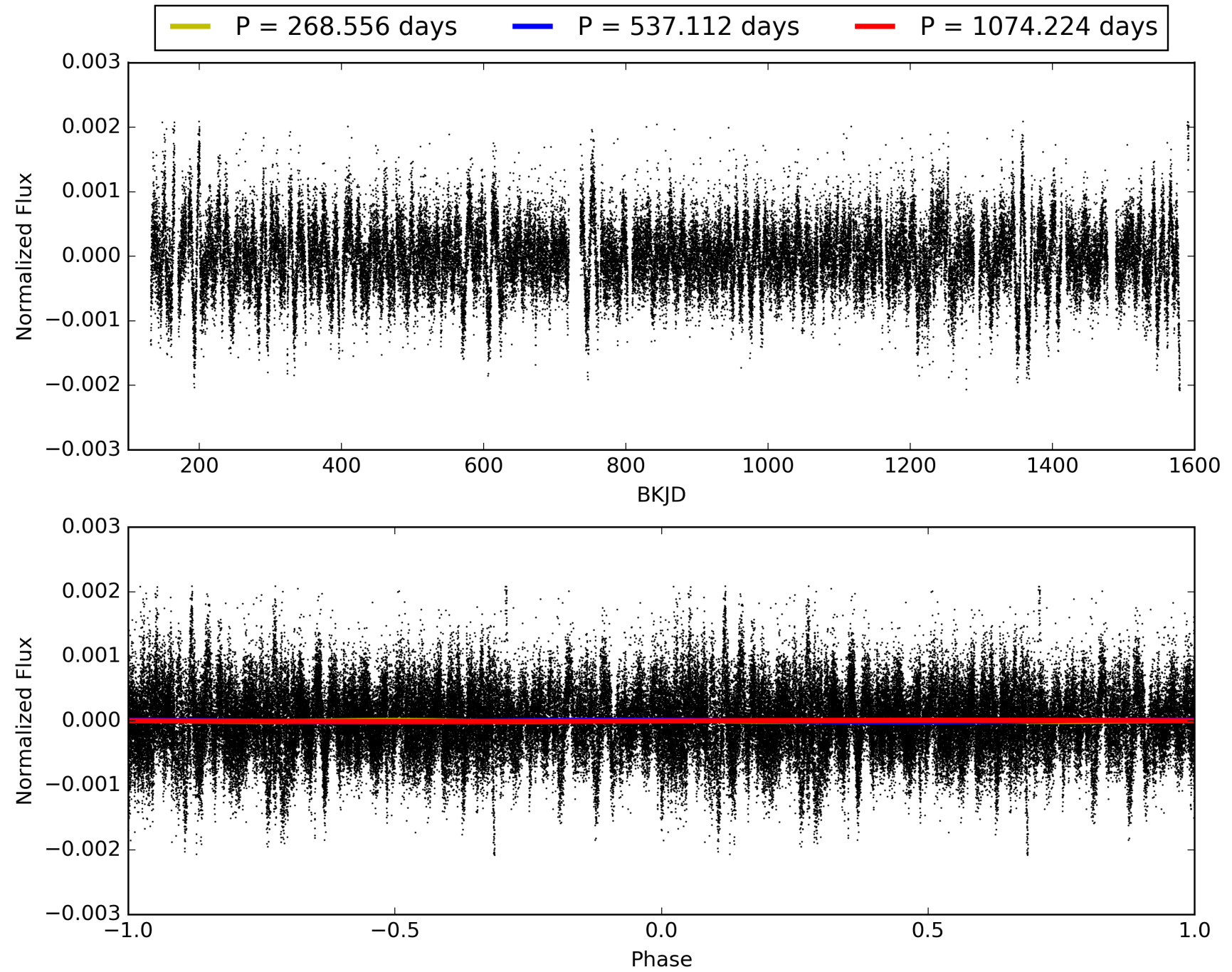
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 20:58:48 Z

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

TCE 011139685-01, PDC Light Curves

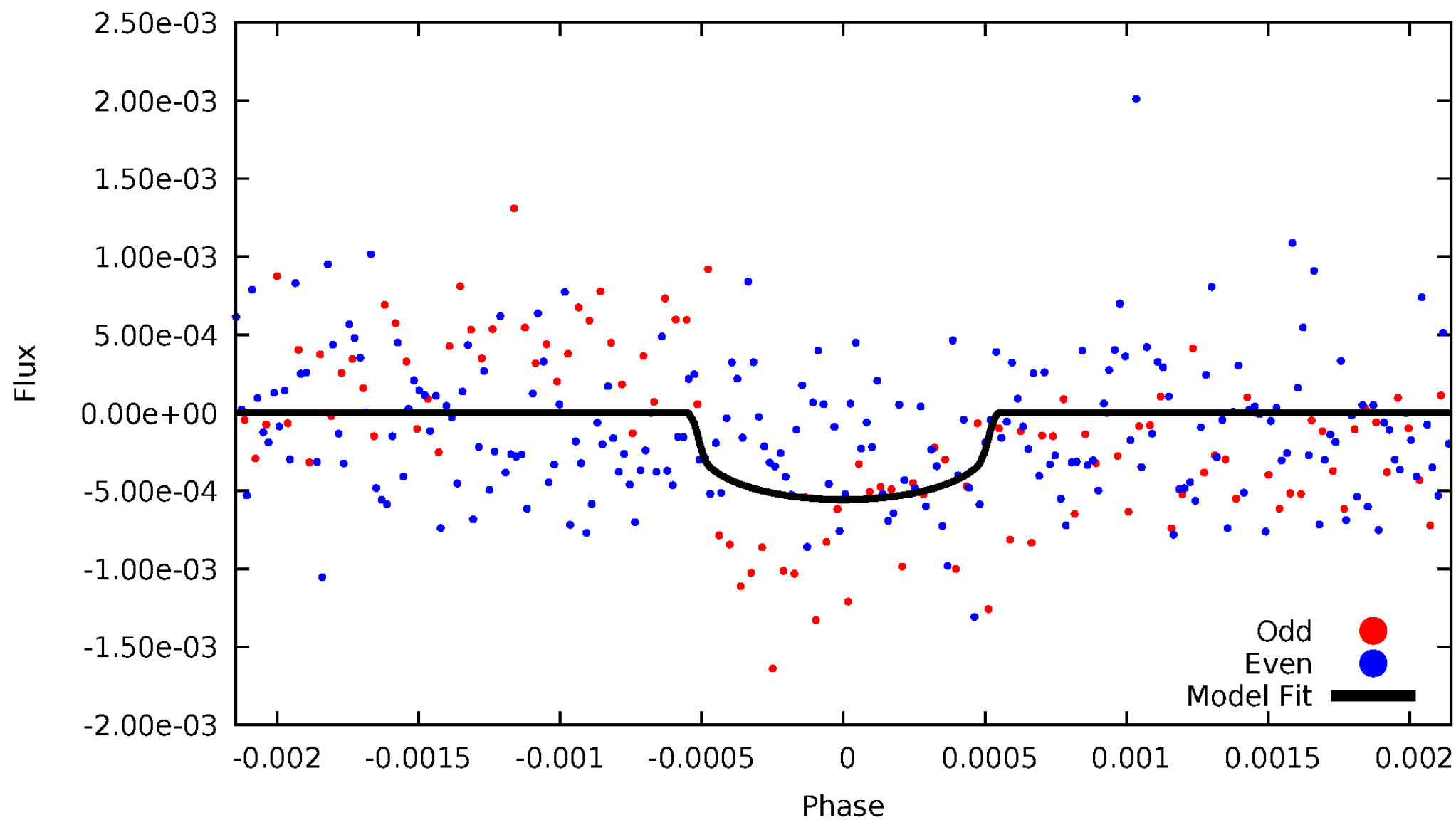


TCE 011139685-01



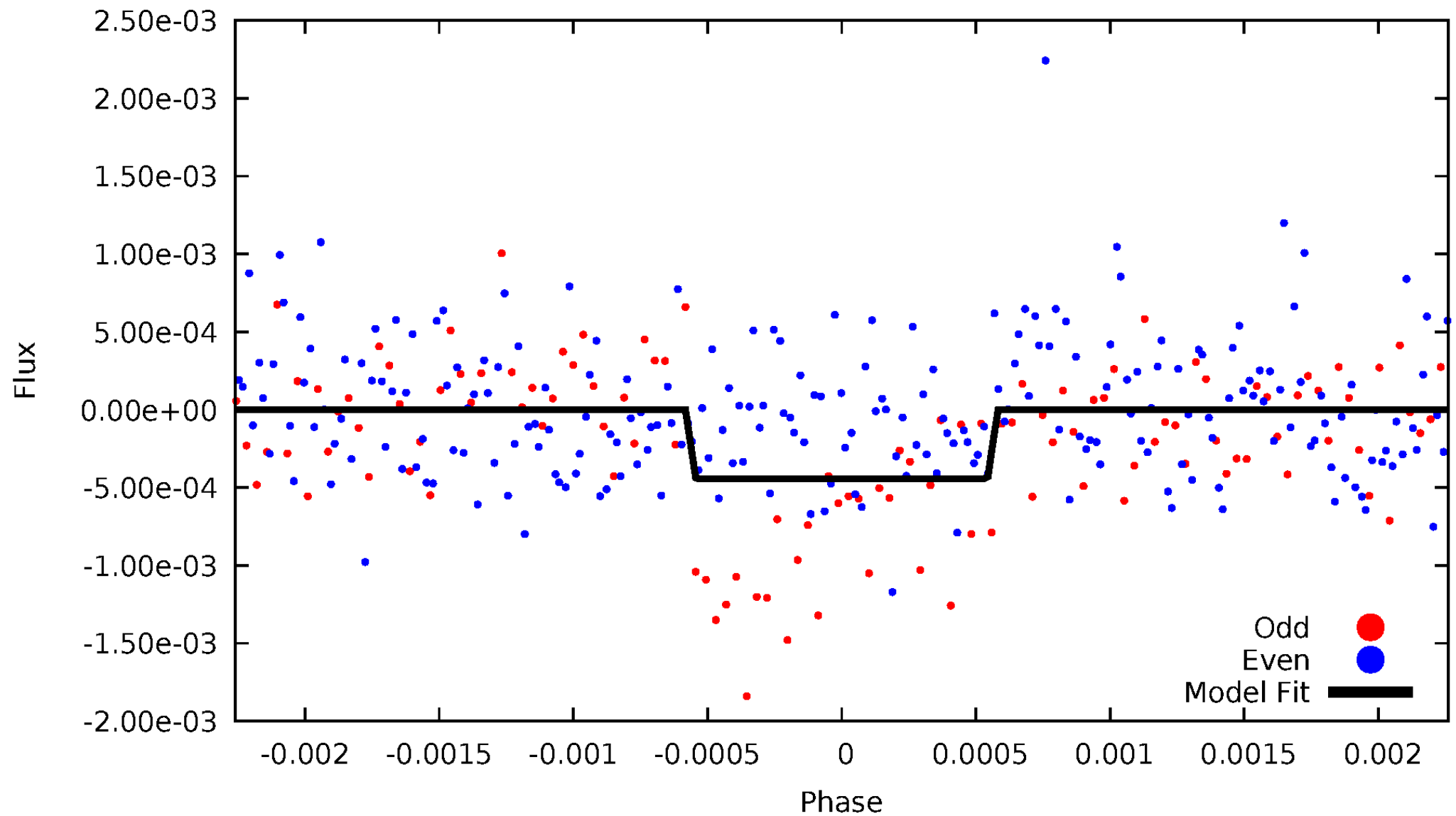
DV Odd/Even

TCE 011139685-01

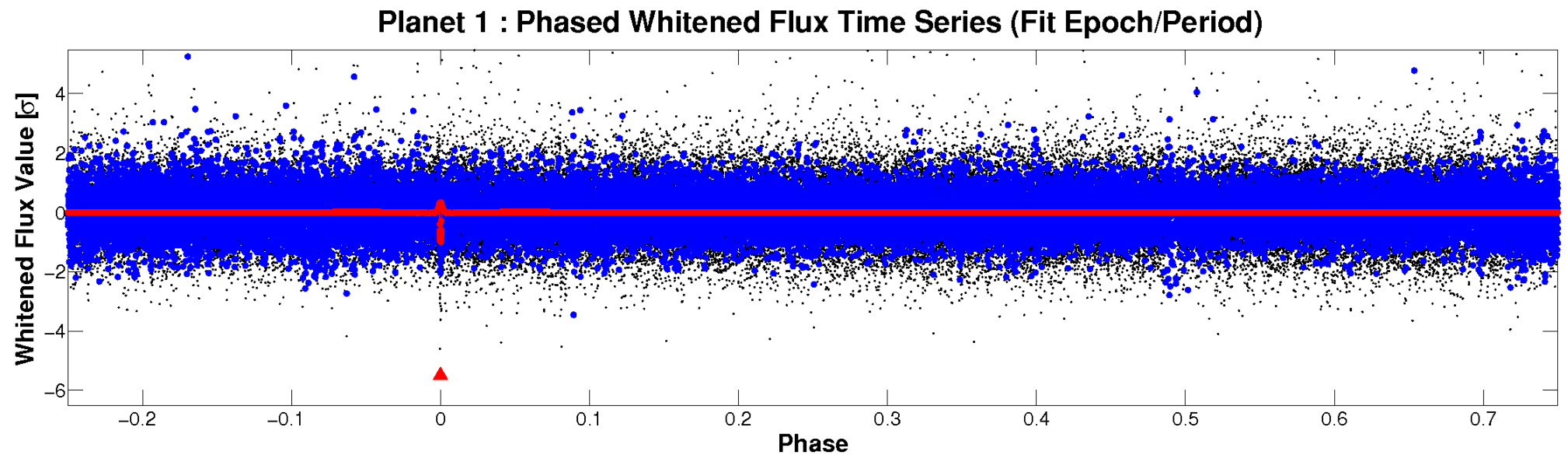
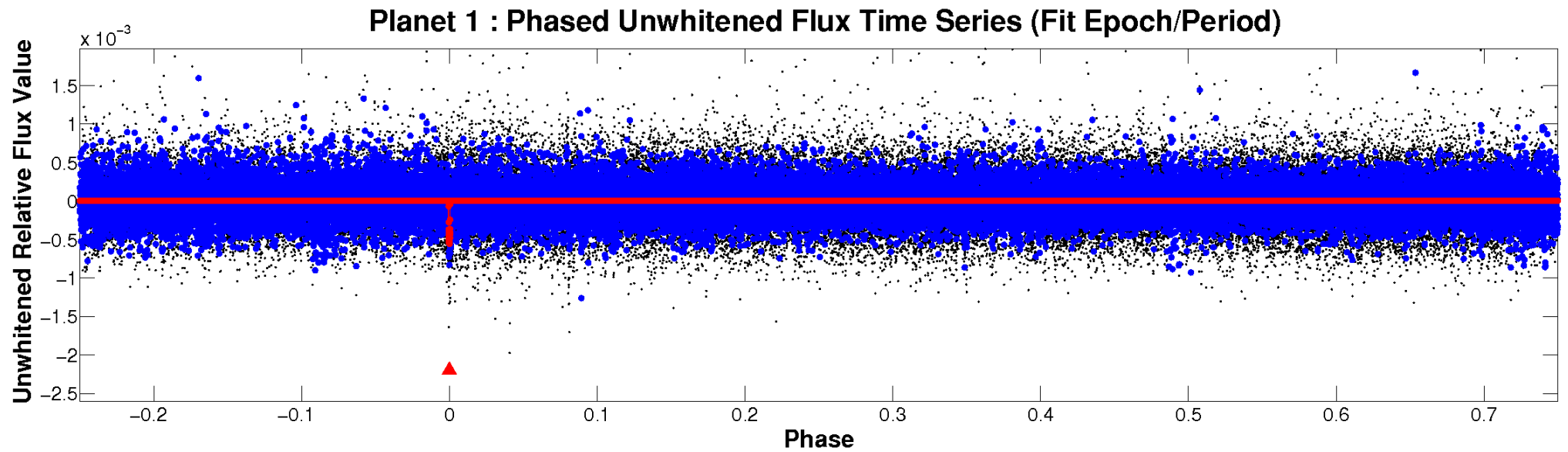


ALT Odd/Even

TCE 011139685-01



Non-Whitened Vs. Whitened Light Curve



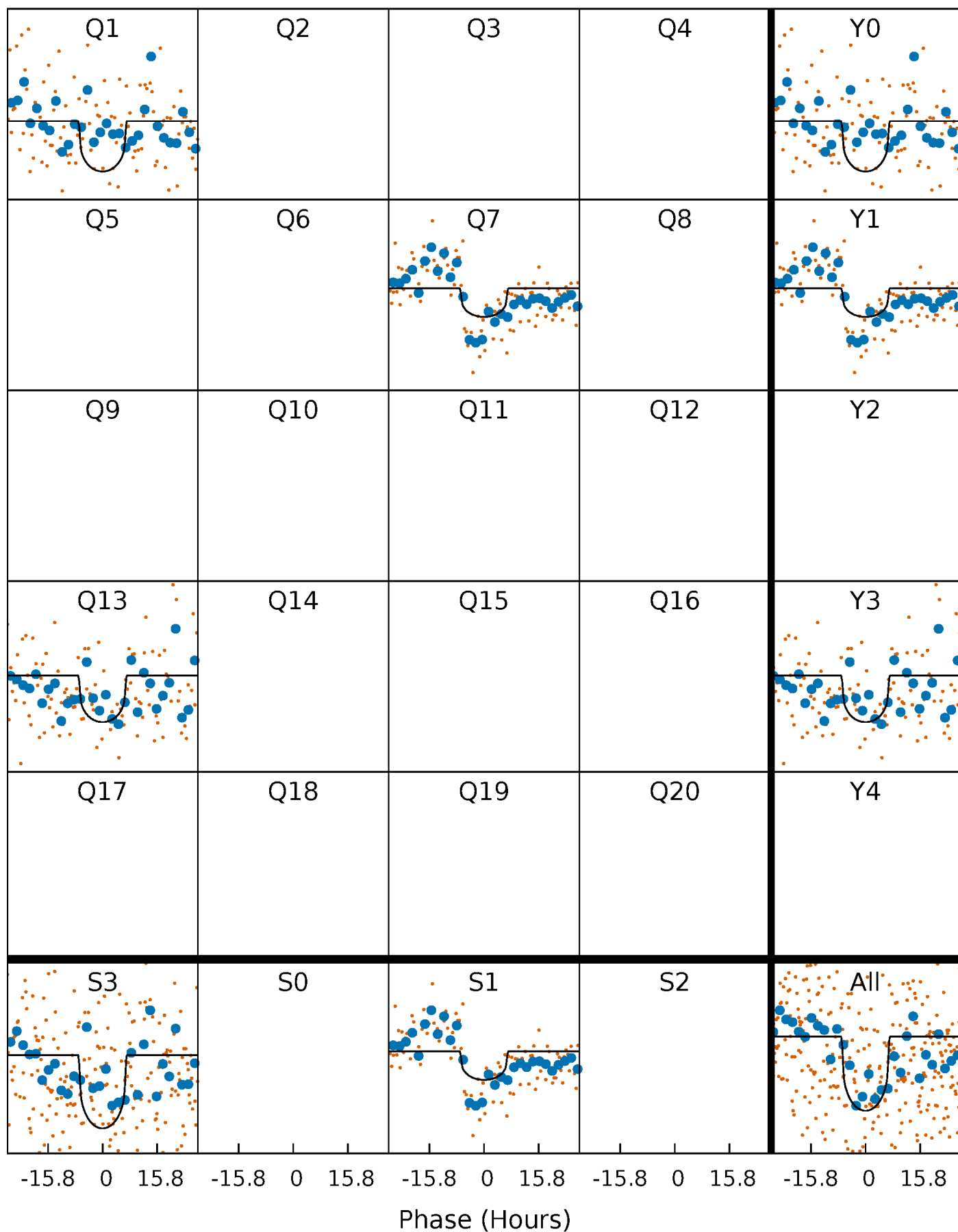
PDC Quarter-Phased Transit Curves

TCE 011139685-01 P=537.111936 Days $T_0=135.697523$ (BKJD)



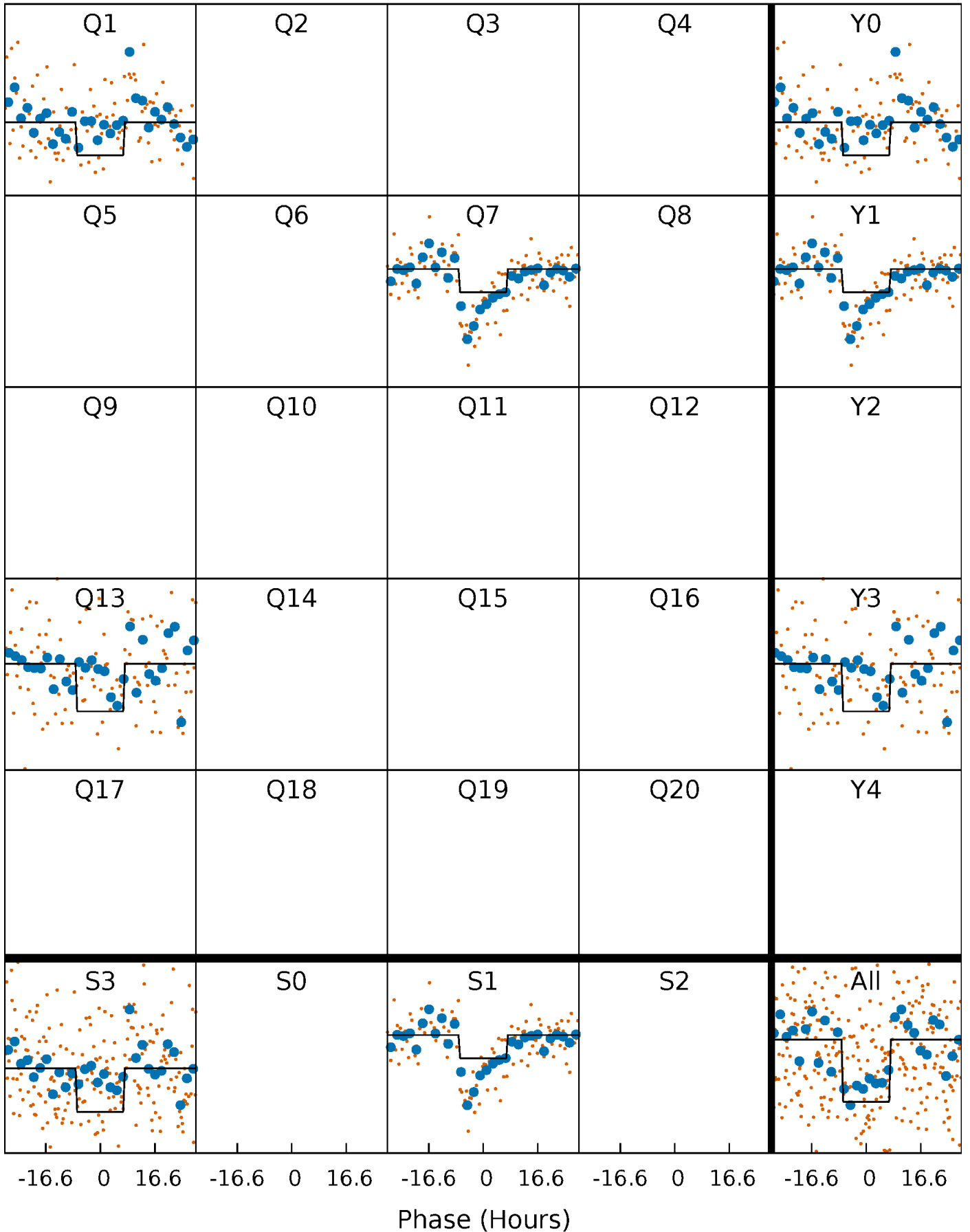
DV Quarter-Phased Transit Curves

TCE 011139685-01 P=537.111936 Days $T_0=135.697523$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

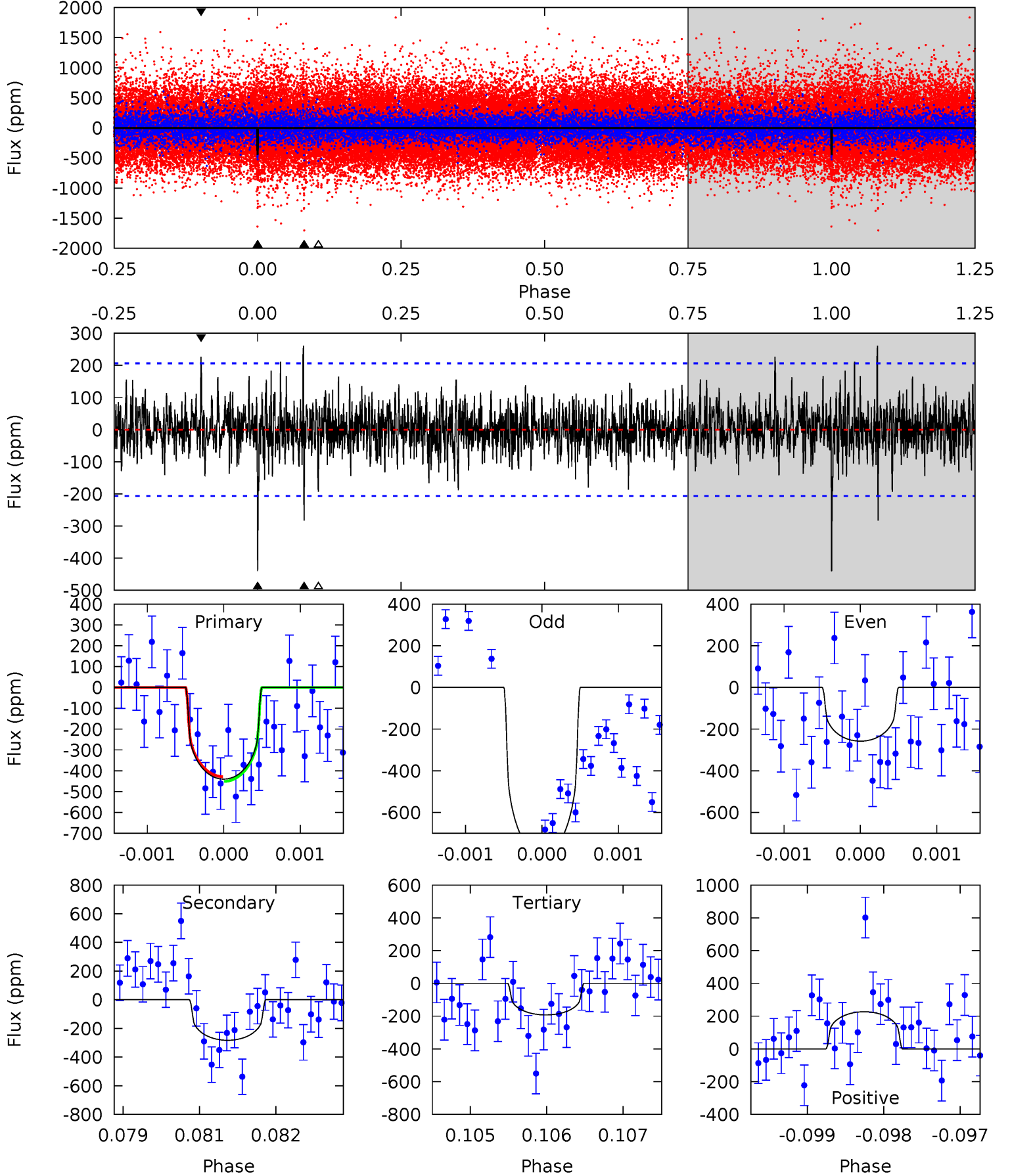
TCE 011139685-01 P=537.021201 Days $T_0=135.844809$ (BKJD)



DV Model-Shift Uniqueness Test

011139685-01, $P = 537.111936$ Days, $E = 135.697523$ Days

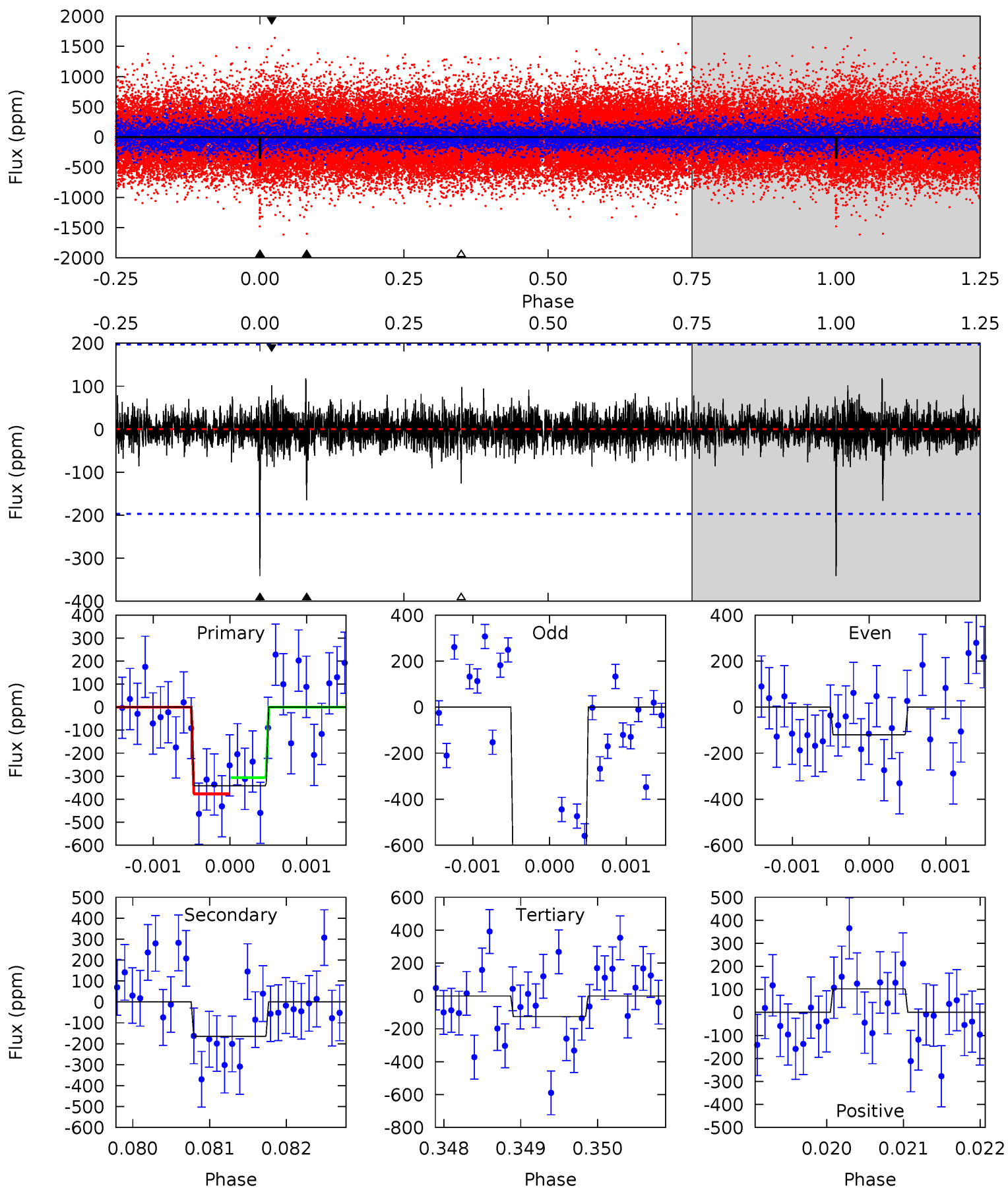
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.6	7.45	5.08	5.97	5.43	3.26	1.40	6.51	5.62	2.37	1.48	6.84	1.14	0.37	0.29



Alt Model-Shift Uniqueness Test

011139685-01, P = 537.021201 Days, E = 135.844809 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.41	4.56	3.47	2.82	5.43	3.25	0.67	5.94	6.59	1.08	1.73	9.41	2.75	0.26	0.98



Stellar Parameters For KIC 011139685

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4861^{+131}_{-146}	$4.574^{+0.060}_{-0.035}$	$-0.240^{+0.300}_{-0.300}$	$0.709^{+0.062}_{-0.069}$	$0.689^{+0.088}_{-0.047}$	$2.717^{+0.781}_{-0.391}$
	+3%/-3%	+1%/-1%	+125%/-125%	+9%/-10%	+13%/-7%	+29%/-14%
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 011139685-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-283 ± 38	$1.85^{+1.29}_{-1.03}$	235^{+8}_{-9}	4232^{+1754}_{-698}	$59276^{+252166}_{-38247}$
Alt.	-165 ± 36	$1.78^{+1.20}_{-1.01}$	235^{+8}_{-9}	3909^{+1530}_{-647}	$38910^{+145406}_{-25842}$

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

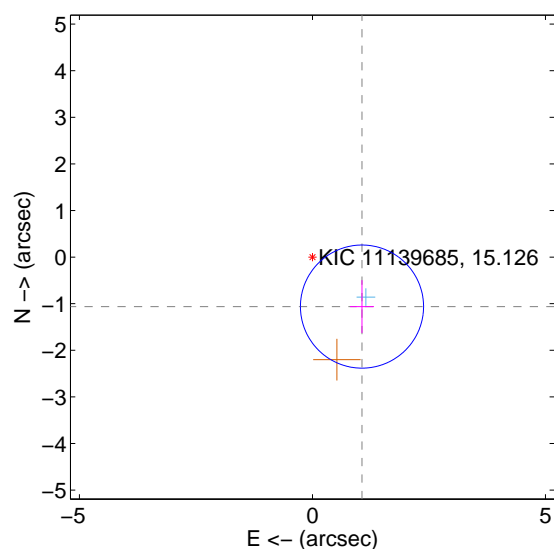
Supplemental centroid analysis for 011139685-01. Kepler magnitude: 15.13. Transit SNR 8.01

There are 1 quarters with good PRF difference image offsets

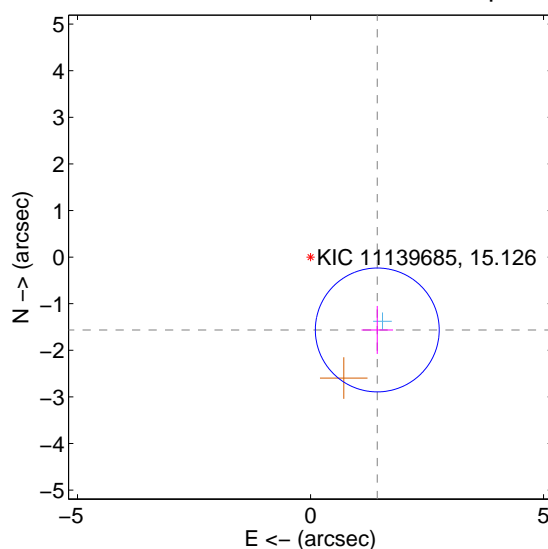
The direct PRF centroid is offset from the target star catalog position by about 0.65 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.503 ± 0.440	3.41	-1.063 ± 0.257	-1.062 ± 0.567
PRF-fit source offset from KIC position	2.120 ± 0.443	4.79	-1.432 ± 0.338	-1.563 ± 0.515
photometric centroid source offset	0.65 ± 1.23	0.53	-0.45 ± 1.24	-0.47 ± 1.21

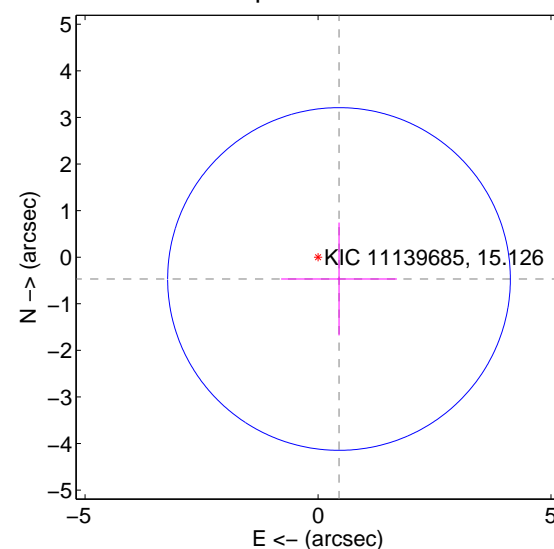
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

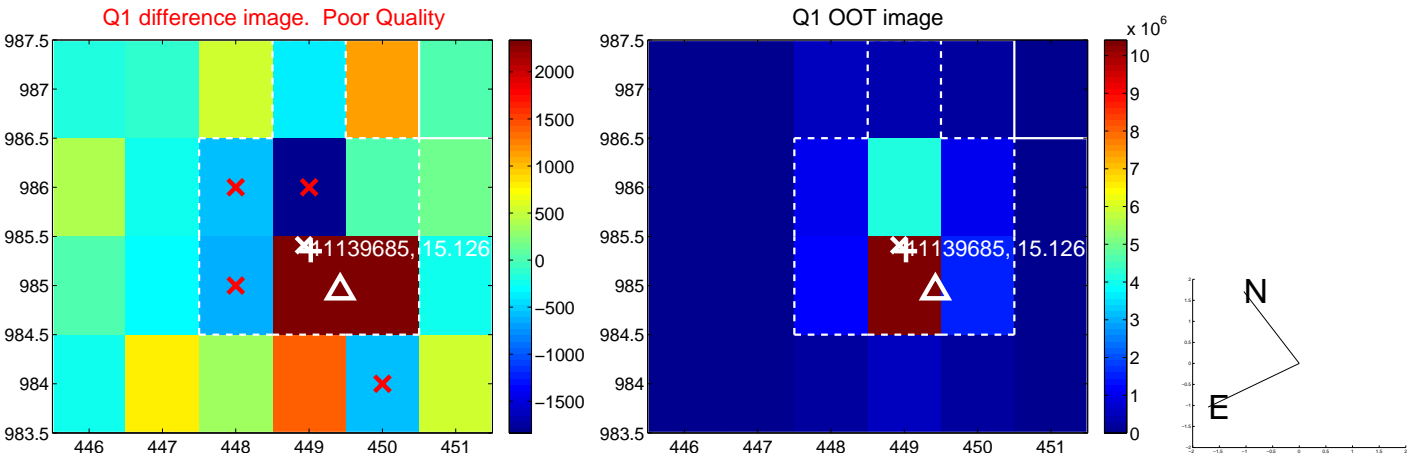


offset from photometric centroids



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.

Q5 no difference image



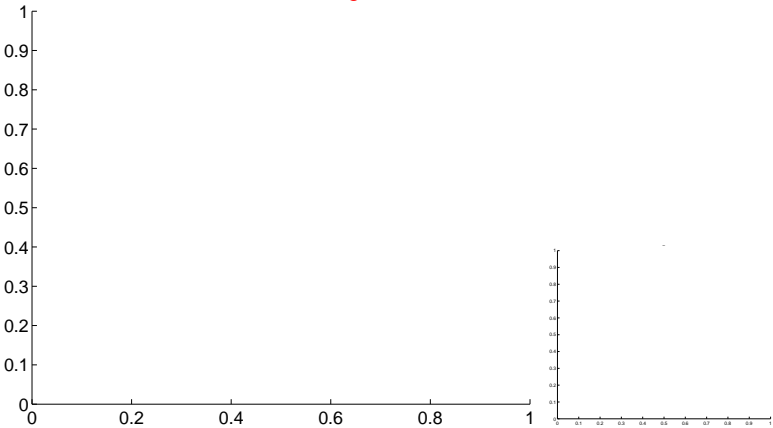
Q5 no OOT image



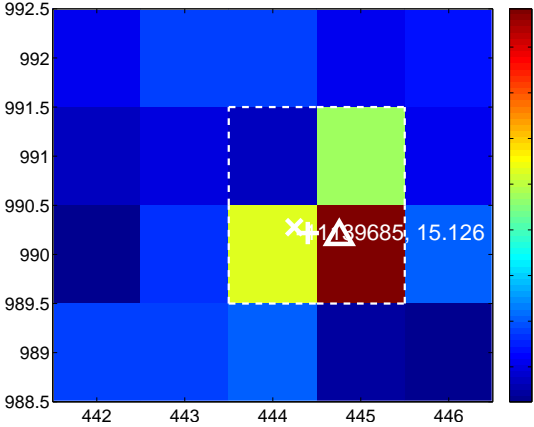
Q6 no difference image



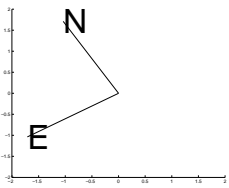
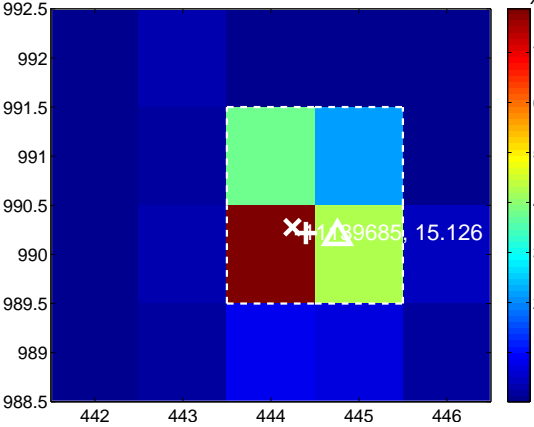
Q6 no OOT image



Q7 difference image



Q7 OOT image



Q8 no difference image



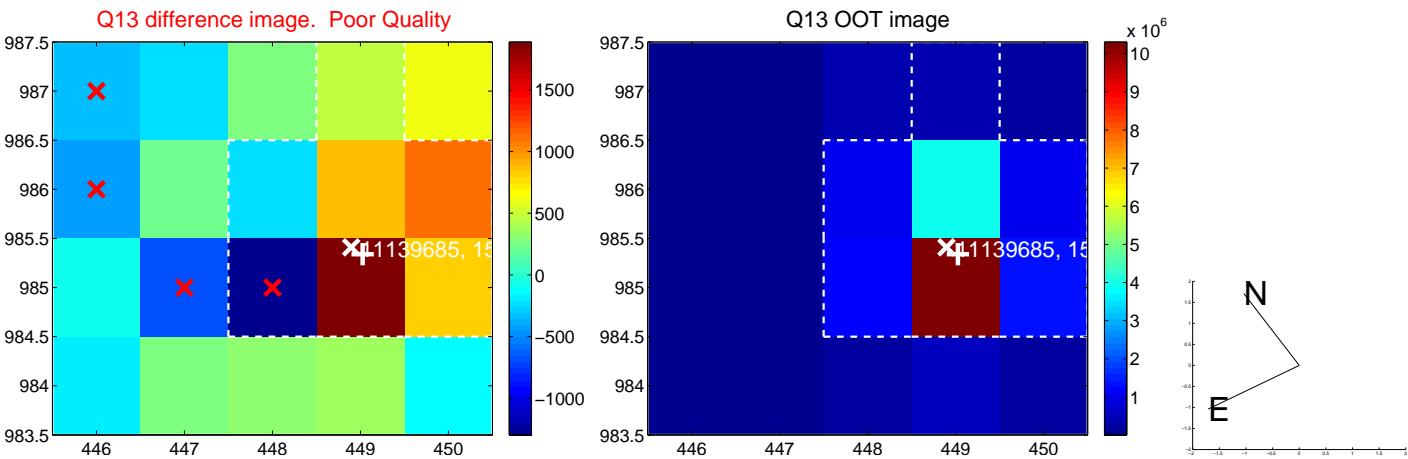
Q8 no OOT image



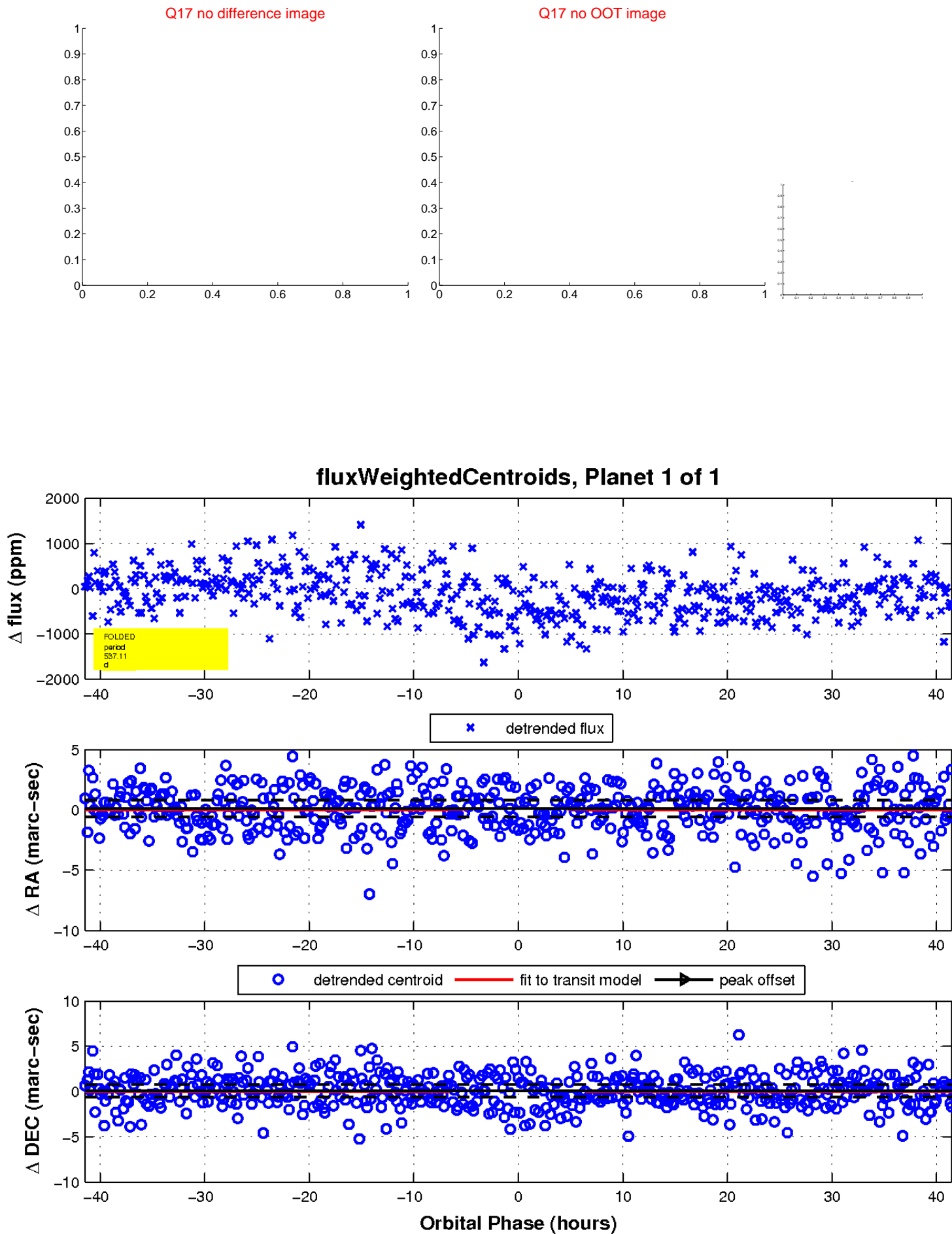
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

