

KIC 005429092

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})
005429092-01	OBS	No	634.580065	157.262100	217.5	17.011	7.7	7.1	1.55	6388	2.40	1.58

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005429092-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—MOD_NONUNIQ_ALT—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.

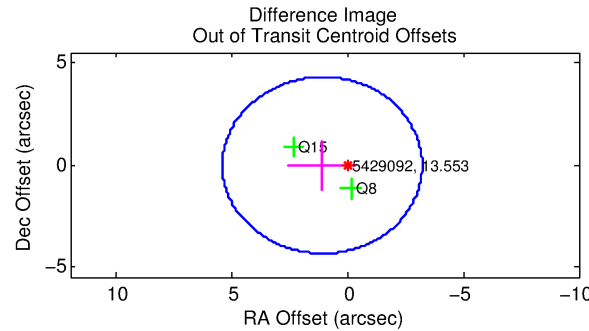
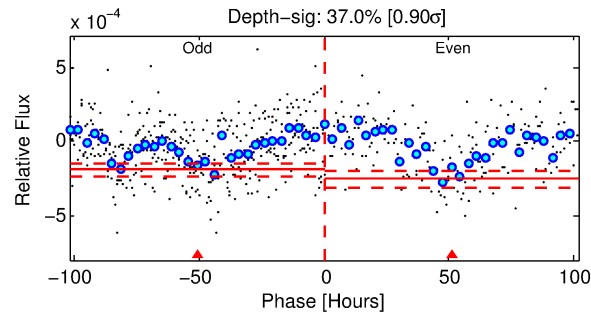
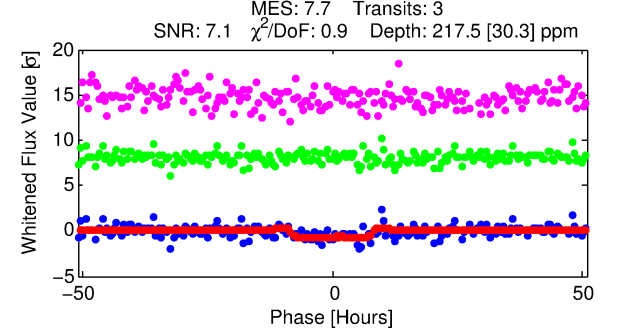
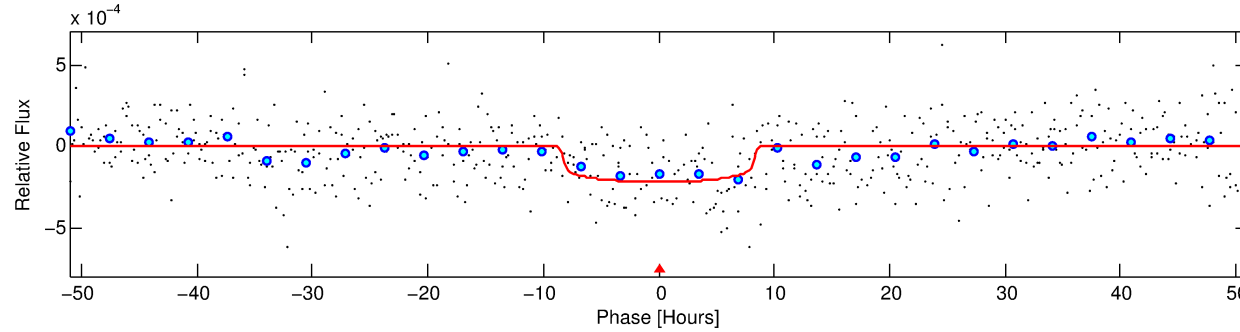
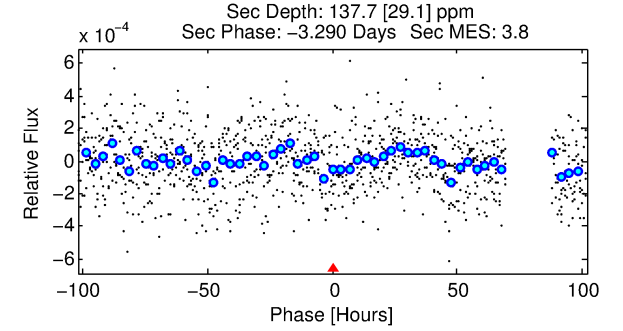
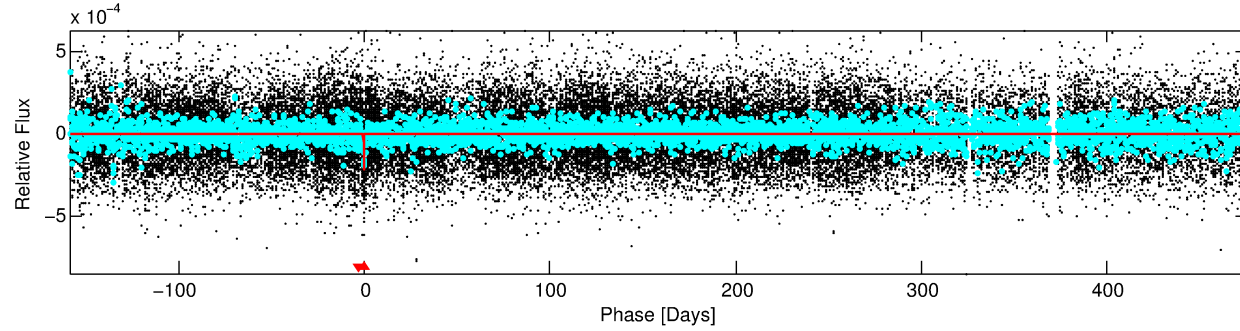
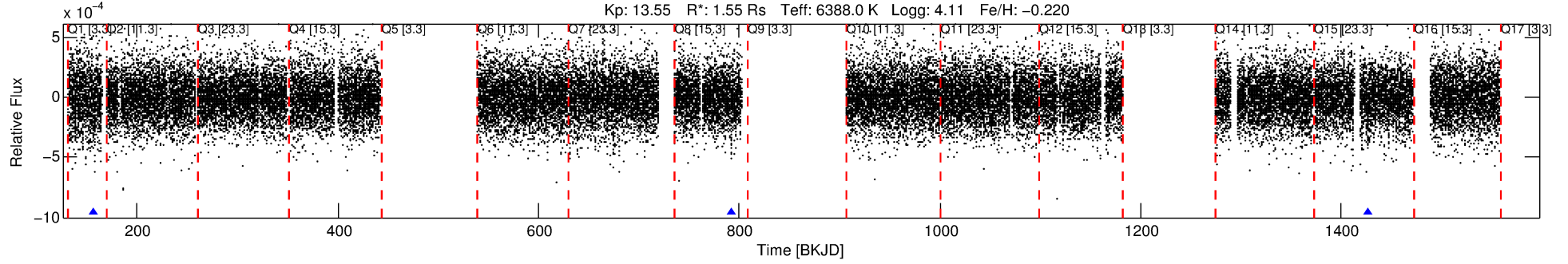
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005429092-01

No Significant Match Found

DV One-Page Summary

KIC: 5429092 Candidate: 1 of 1 Period: 634.580 d



DV Fit Results:

Period = 634.58007 [0.01502] d
Epoch = 157.2621 [0.0185] BKJD
Rp/R* = 0.0142 [0.0078]
a/R* = 228.28 [668.13]
b = 0.62 [2.90]
Seff = 1.58 [0.71]
Teq = 286 [32] K
Rp = 2.40 [1.50] Re
a = 1.5040 [0.4147] AU
Ag = 29671.94 [35761.08] [0.83σ]
Teffp = 5805 [1641] K [3.36σ]

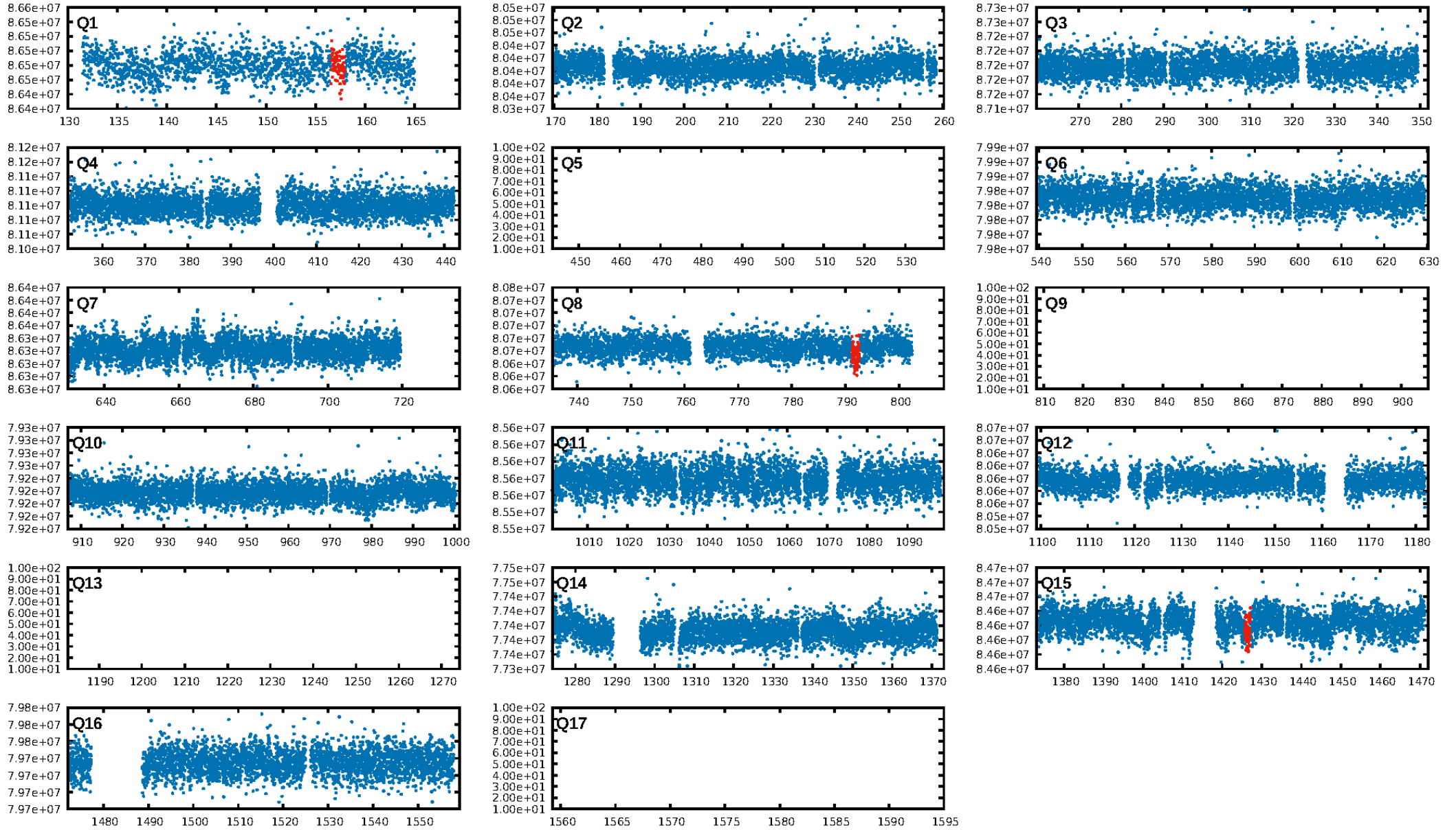
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 13.5%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 1.84e-10
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: 1.217
Centroid-sig: 2.0%
Centroid-so: 2.242 arcsec [1.57σ]
OotOffset-rm: 1.101 arcsec [0.76σ]
OotOffset-st: 0/1/1/0 [2]
KicOffset-rm: 1.261 arcsec [0.84σ]
KicOffset-st: 0/1/1/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [3/3]

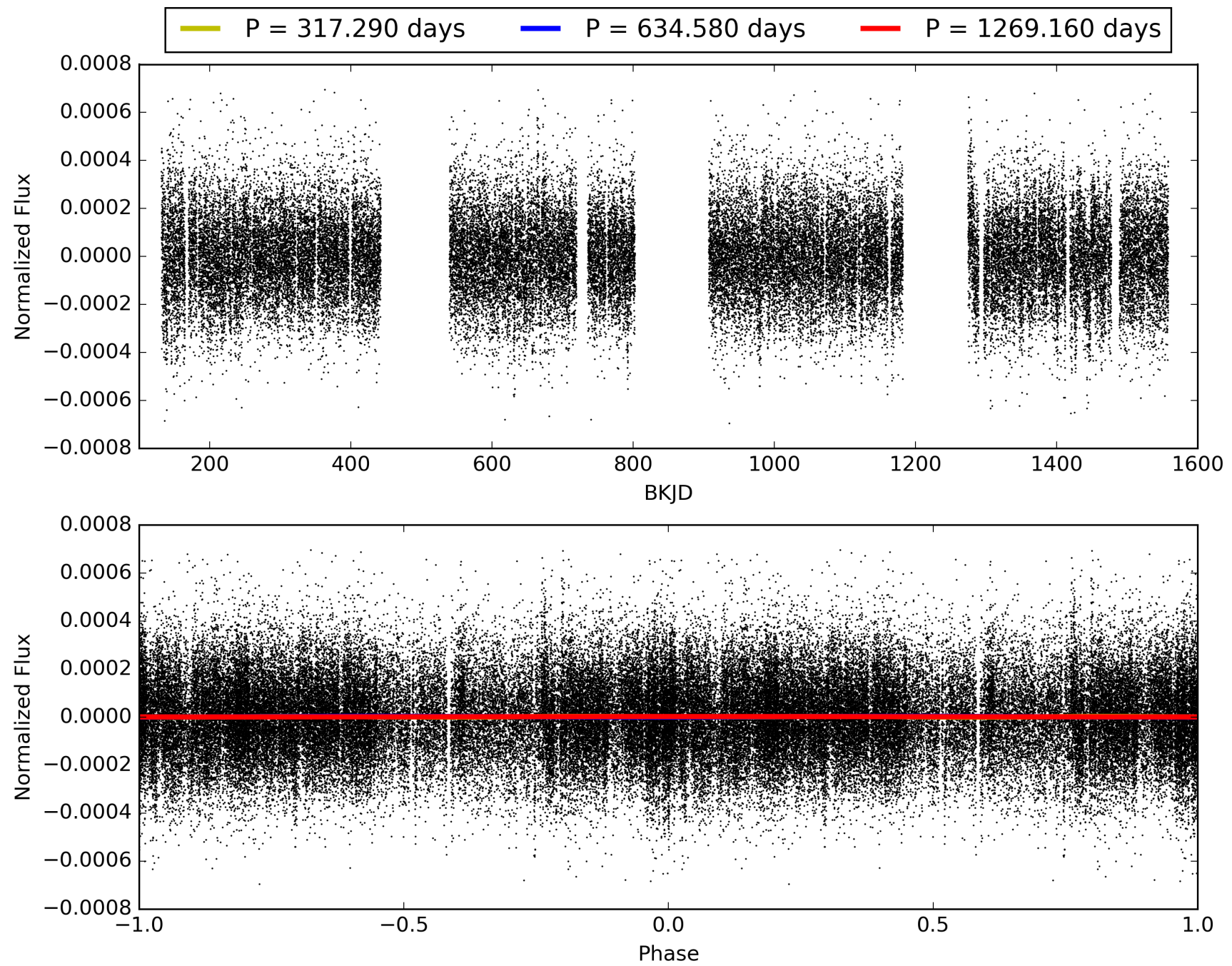
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 22:18:34 Z

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

TCE 005429092-01, PDC Light Curves

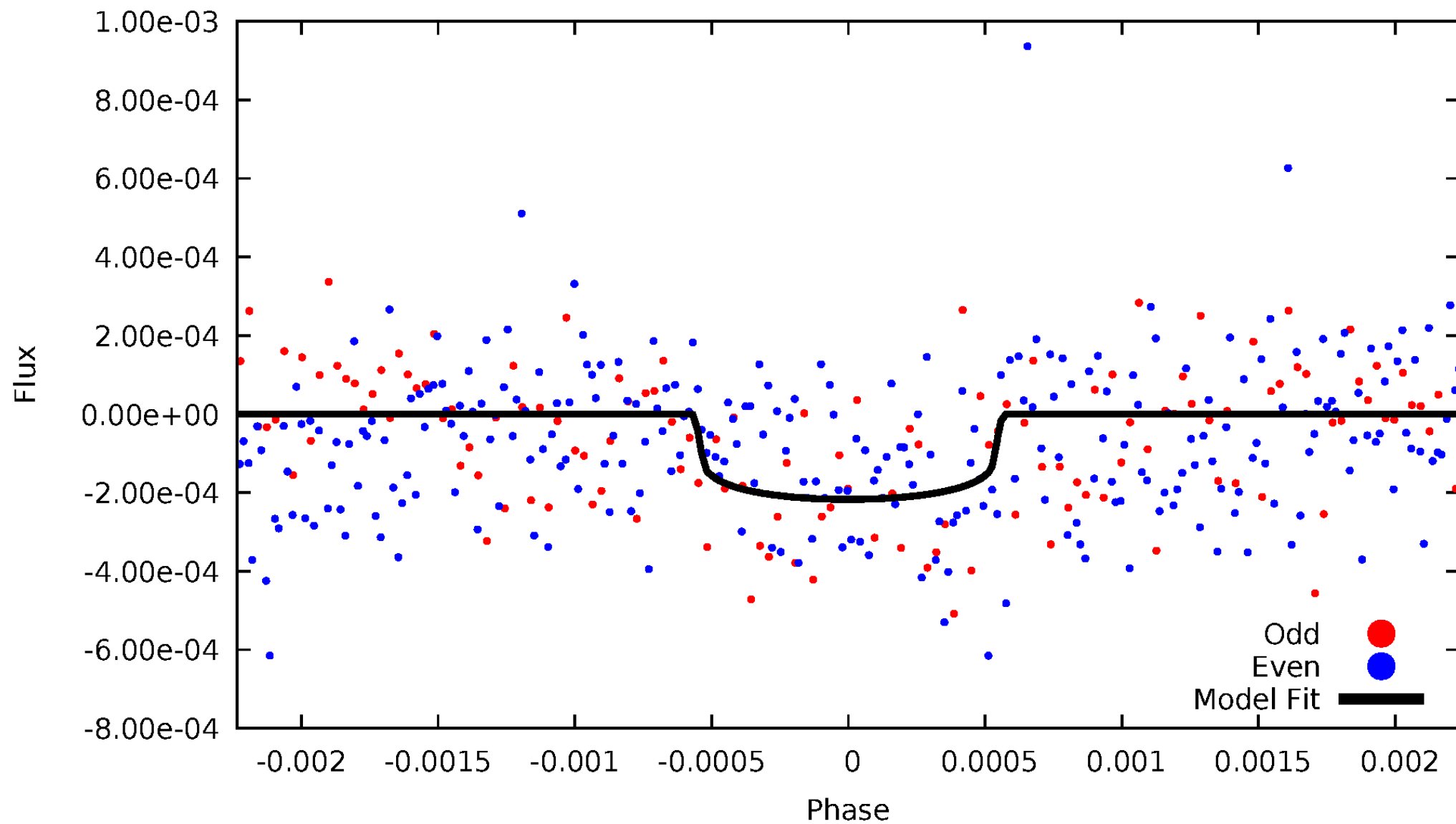


TCE 005429092-01



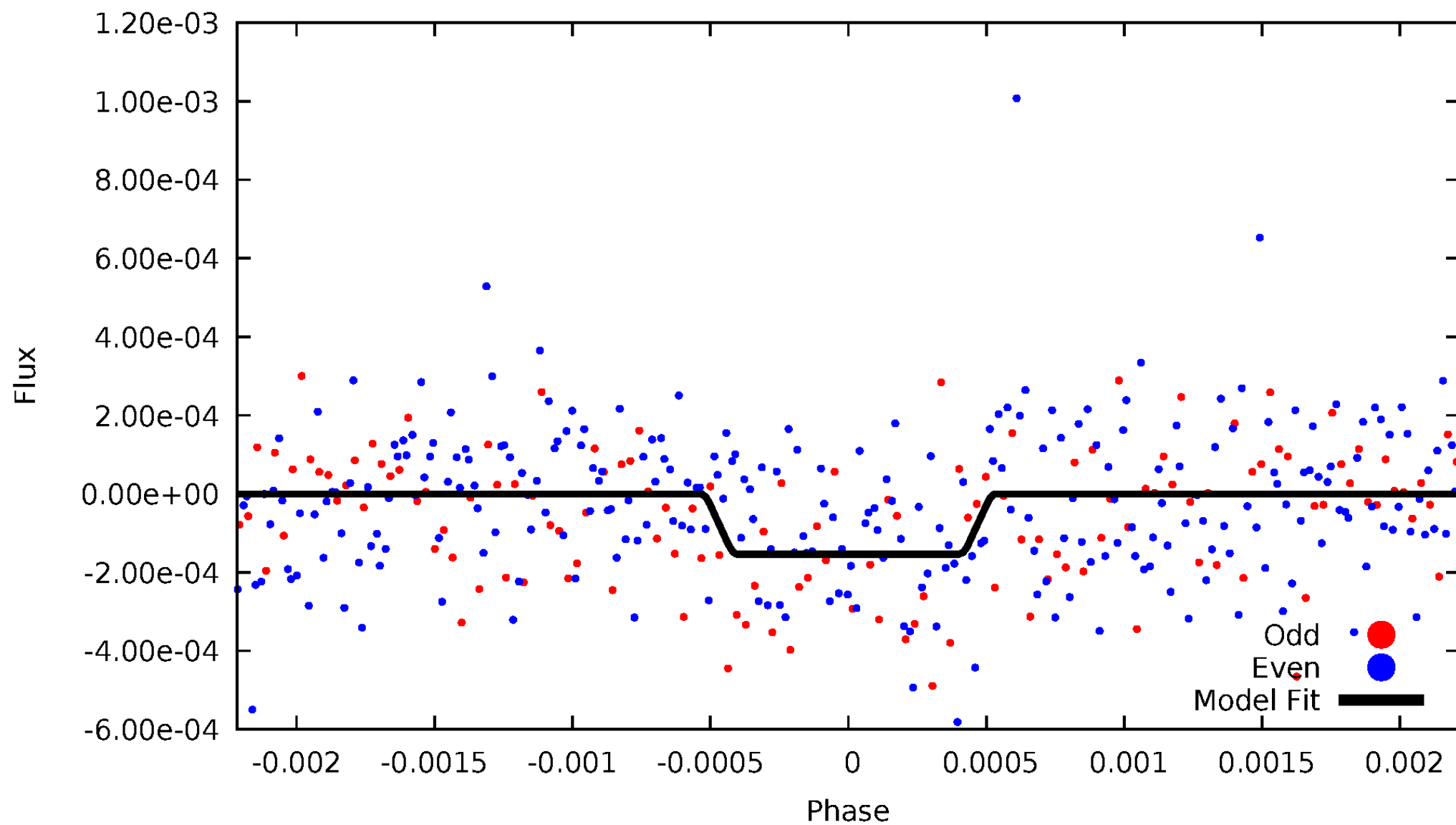
DV Odd/Even

TCE 005429092-01

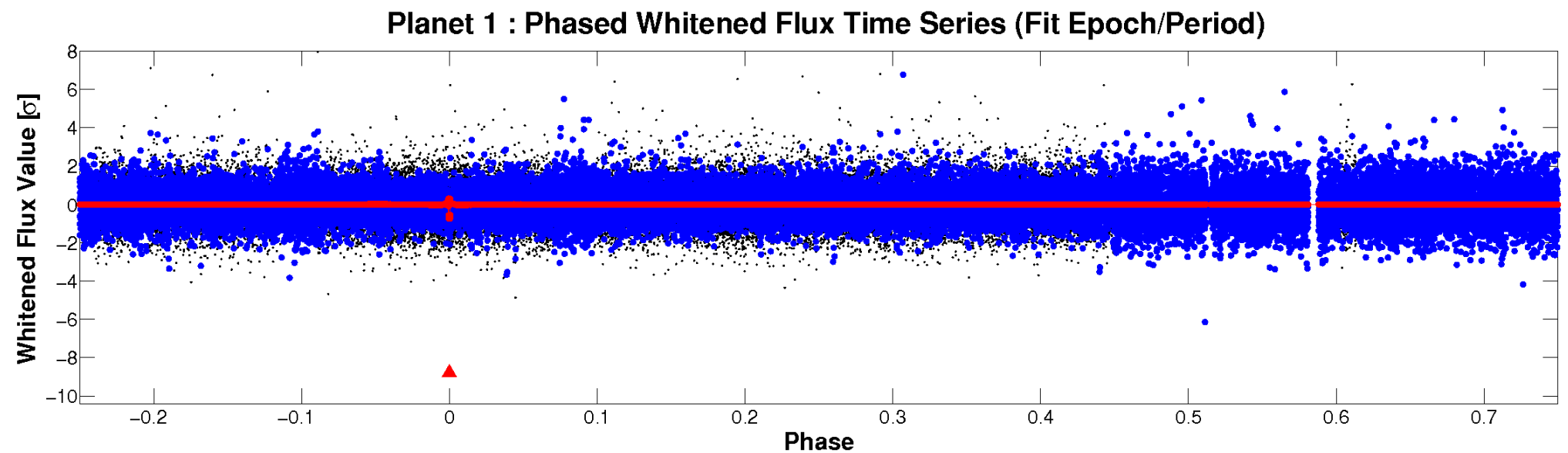
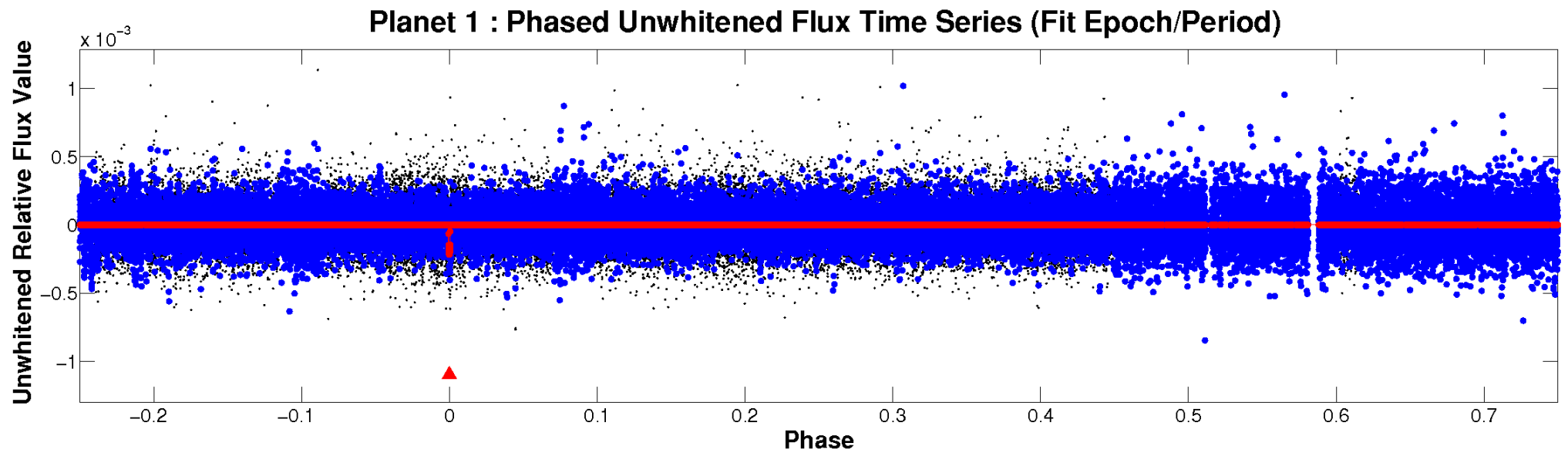


ALT Odd/Even

TCE 005429092-01



Non-Whitened Vs. Whitened Light Curve



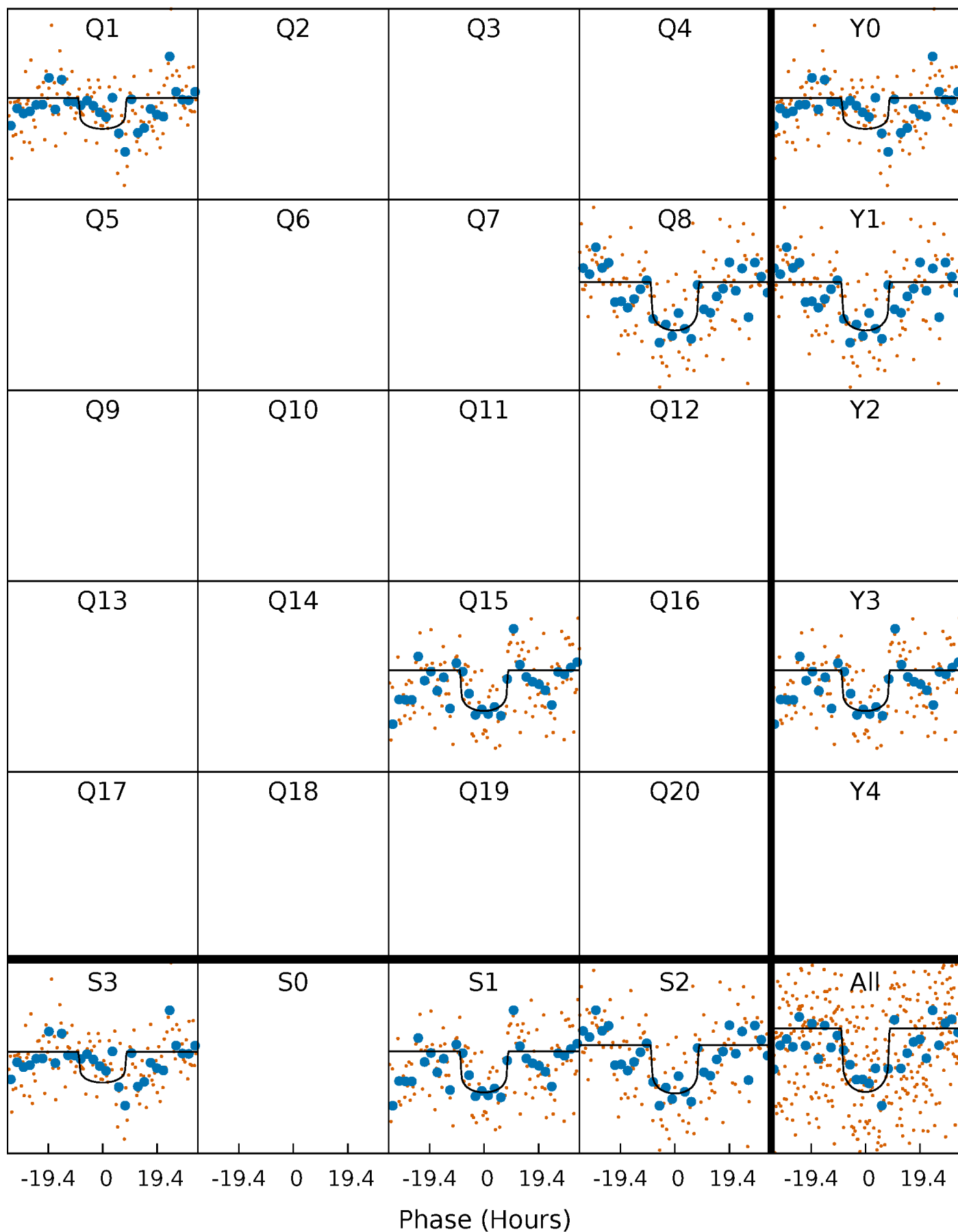
PDC Quarter-Phased Transit Curves

TCE 005429092-01 P=634.580065 Days $T_0=157.262100$ (BKJD)



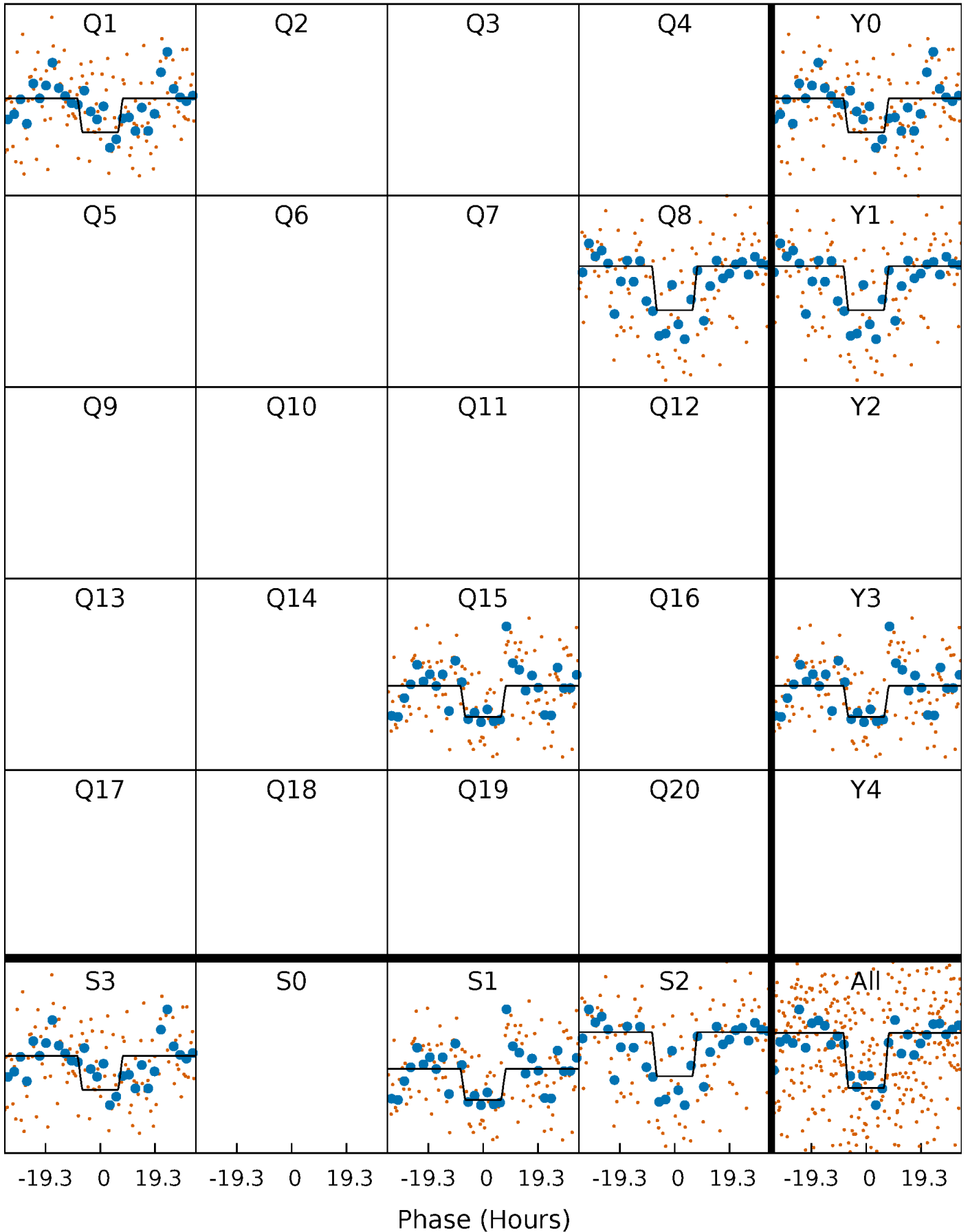
DV Quarter-Phased Transit Curves

TCE 005429092-01 $P=634.580065$ Days $T_0=157.262100$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

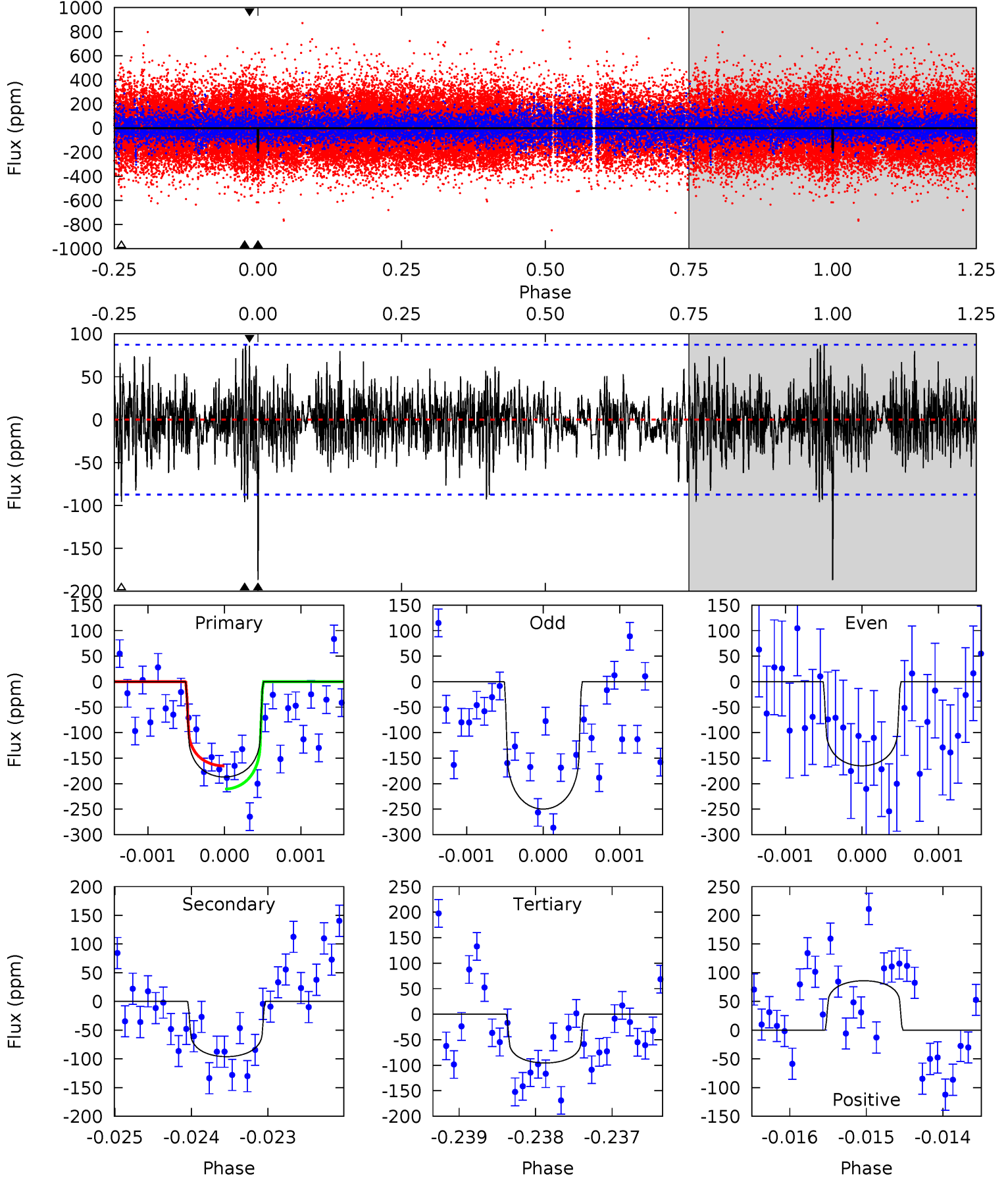
TCE 005429092-01 P=634.557395 Days $T_0=157.336168$ (BKJD)



DV Model-Shift Uniqueness Test

005429092-01, P = 634.580065 Days, E = 157.262100 Days

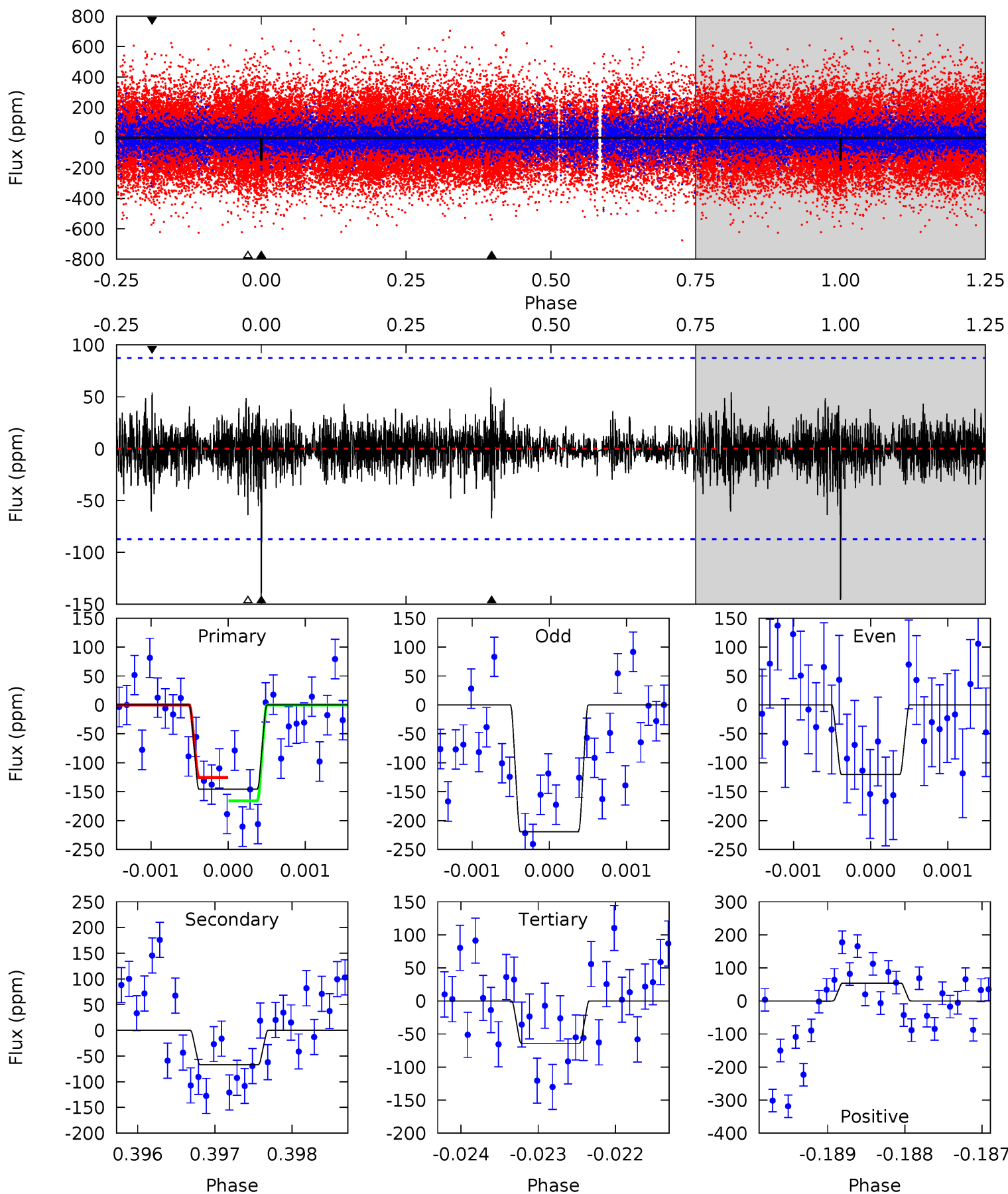
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.6	5.98	5.95	5.36	5.43	3.26	1.54	5.69	6.28	0.04	0.63	2.45	0.89	0.32	1.41



Alt Model-Shift Uniqueness Test

005429092-01, P = 634.557395 Days, E = 157.336168 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.07	4.17	3.99	3.36	5.44	3.27	0.88	5.08	5.70	0.19	0.81	2.85	1.02	0.29	1.27



Stellar Parameters For KIC 005429092

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	ρ_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6388^{+162}_{-194}	$4.109^{+0.252}_{-0.168}$	$-0.220^{+0.250}_{-0.300}$	$1.550^{+0.457}_{-0.411}$	$1.127^{+0.192}_{-0.139}$	$0.426^{+0.658}_{-0.199}$
	+3%/-3%	+6%/-4%	+114%/-136%	+29%/-27%	+17%/-12%	+154%/-47%
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 005429092-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-96 ± 16	$2.32^{+1.38}_{-1.16}$	398^{+32}_{-33}	5344^{+2459}_{-874}	21503^{+67468}_{-12728}
Alt.	-67 ± 16	$2.19^{+1.44}_{-1.15}$	394^{+30}_{-28}	5062^{+2428}_{-894}	17515^{+60673}_{-11523}

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

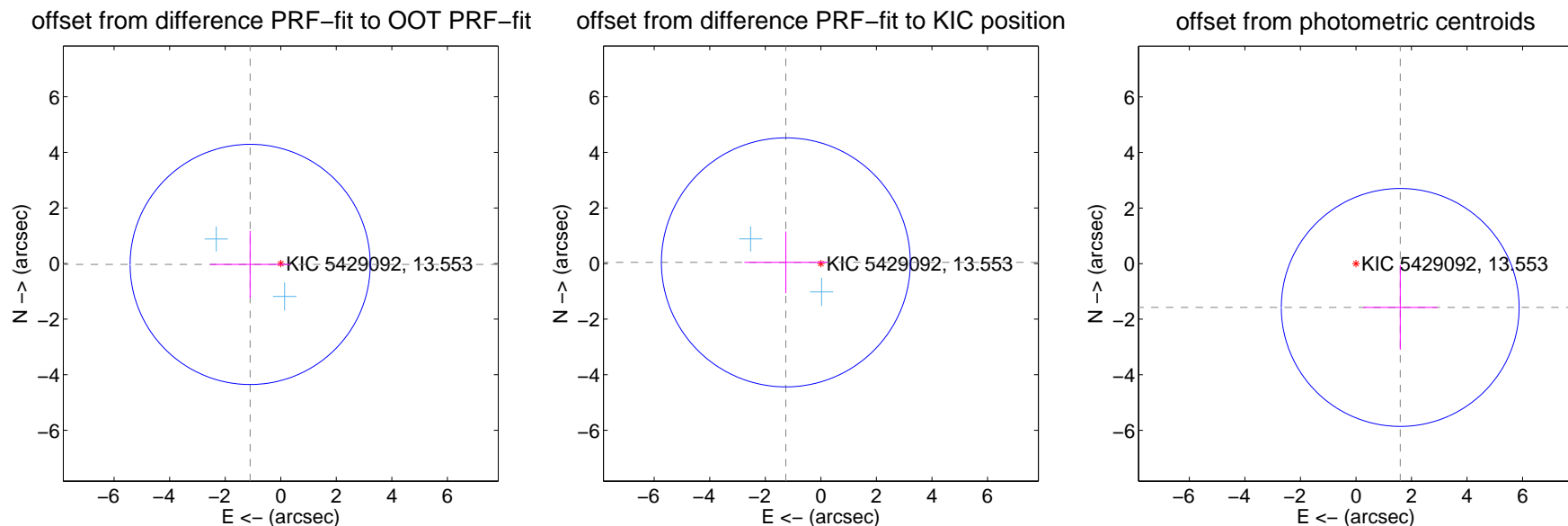
DV Centroid Data

Supplemental centroid analysis for 005429092-01. Kepler magnitude: 13.55. Transit SNR 7.13

There are 2 quarters with good PRF difference image offsets

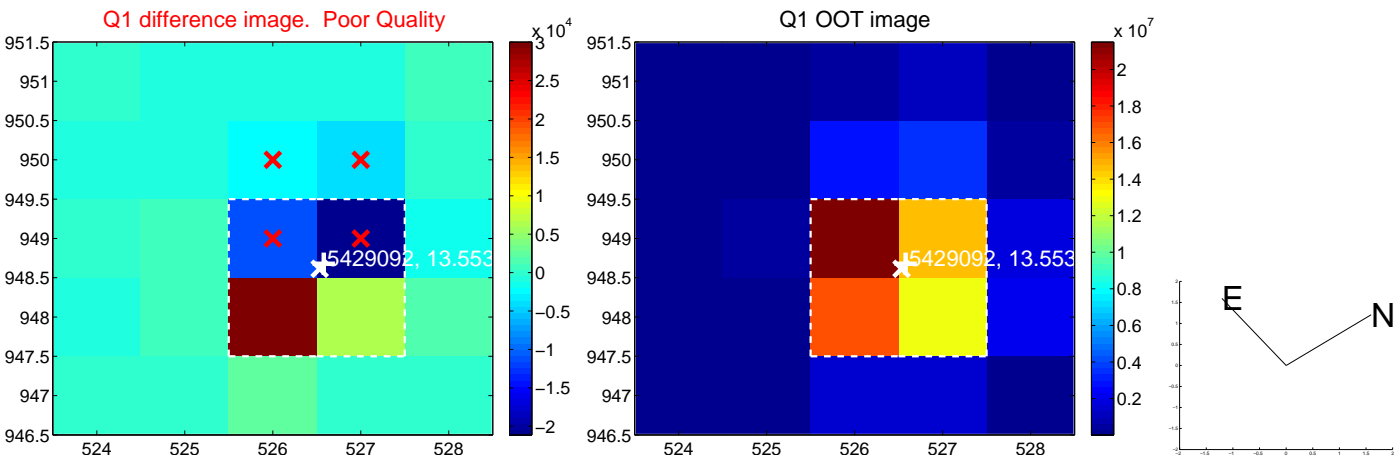
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.101 ± 1.440	0.76	1.101 ± 1.440	-0.032 ± 1.203
PRF-fit source offset from KIC position	1.261 ± 1.493	0.84	1.260 ± 1.493	0.042 ± 1.109
photometric centroid source offset	2.24 ± 1.43	1.57	-1.59 ± 1.33	-1.58 ± 1.52



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



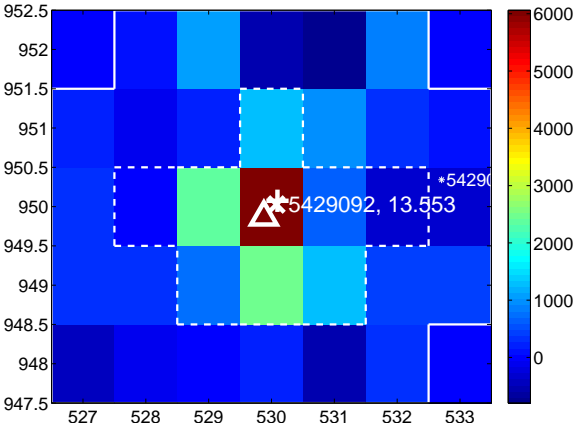
Q7 no difference image



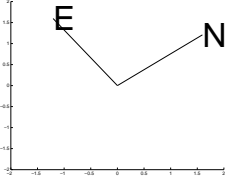
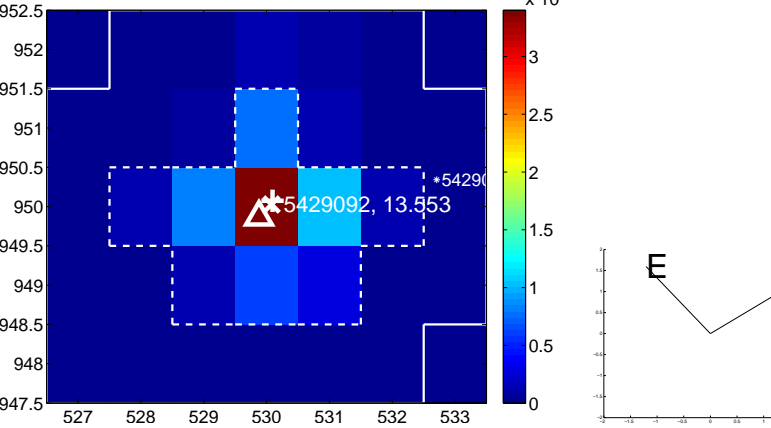
Q7 no OOT image



Q8 difference image



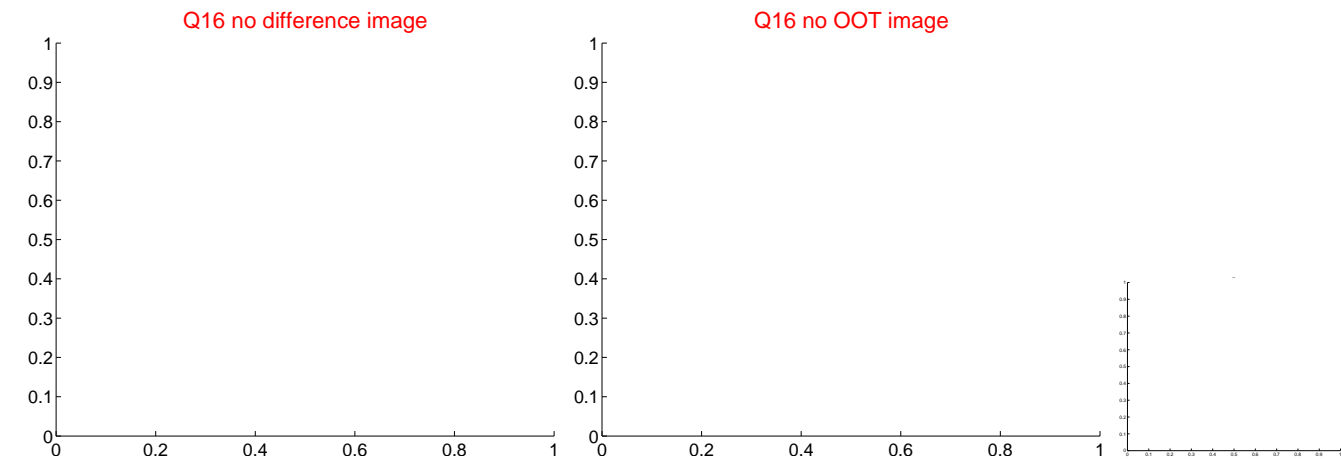
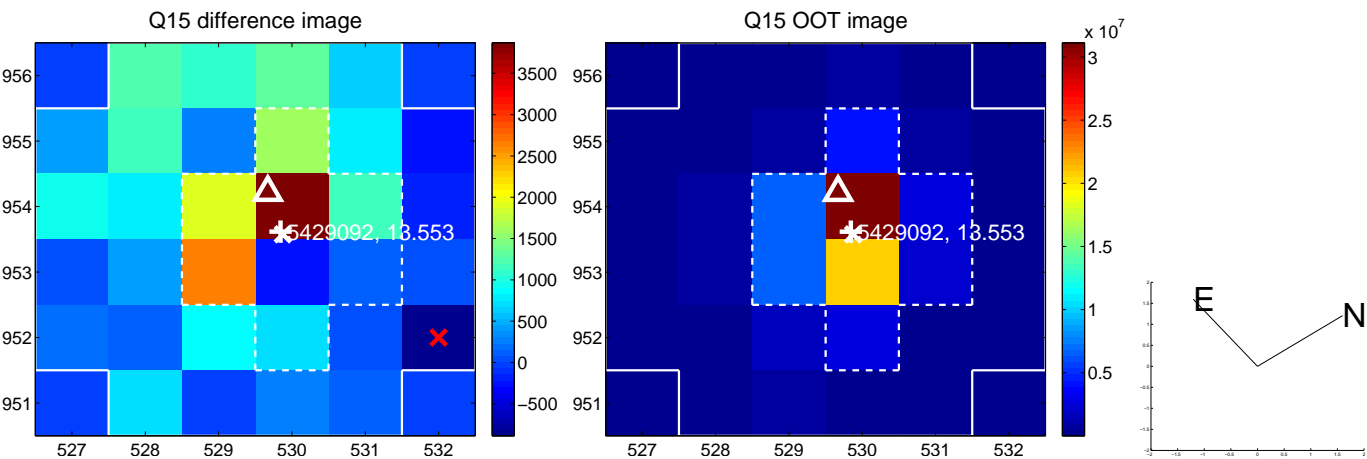
Q8 OOT image



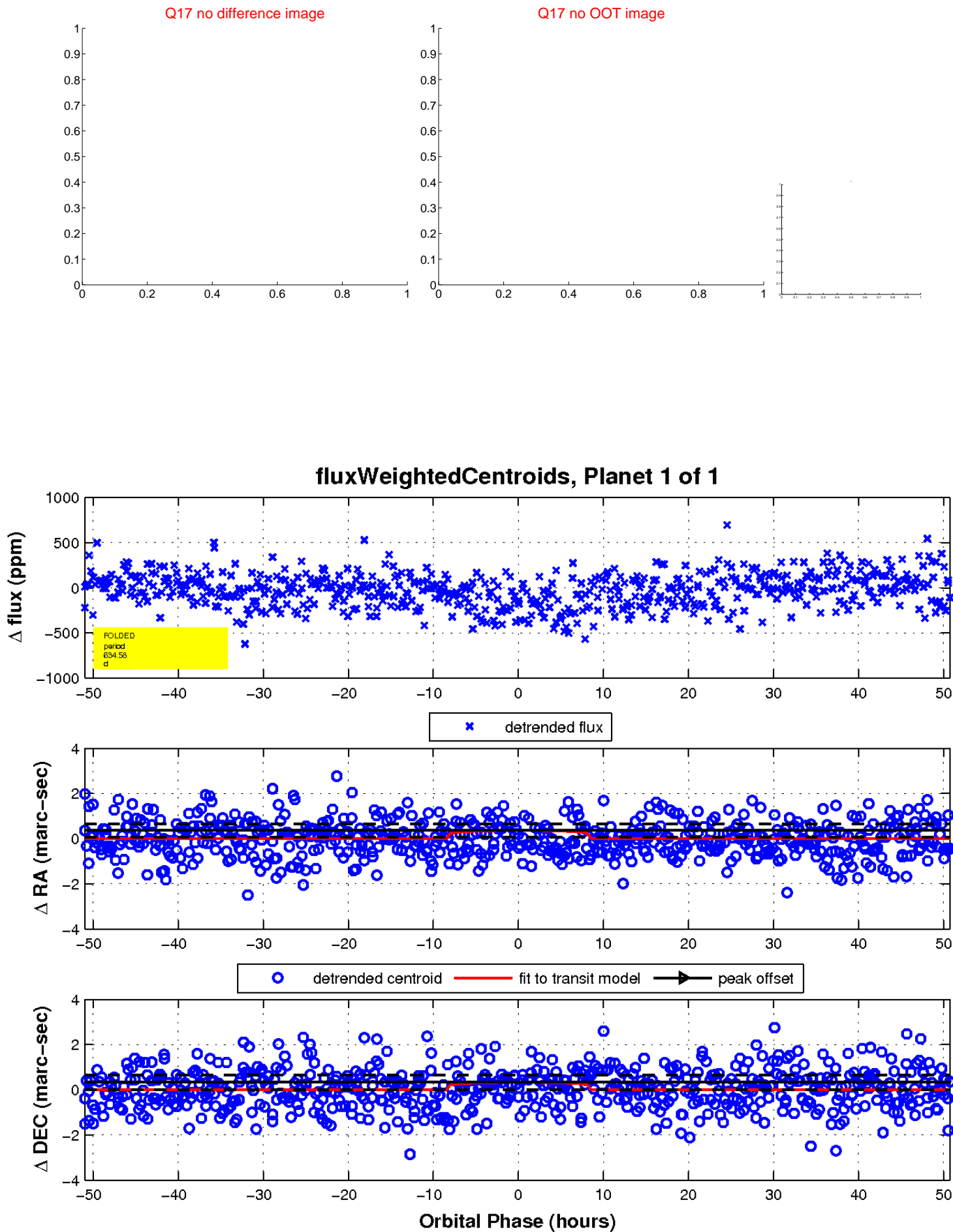
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

