

KIC 010527187

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})
010527187-01	OBS	No	554.204644	190.737108	324.8	4.073	7.5	7.0	1.75	7274	5.28	3.31

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010527187-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—INCONSISTENT_TRANS

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

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

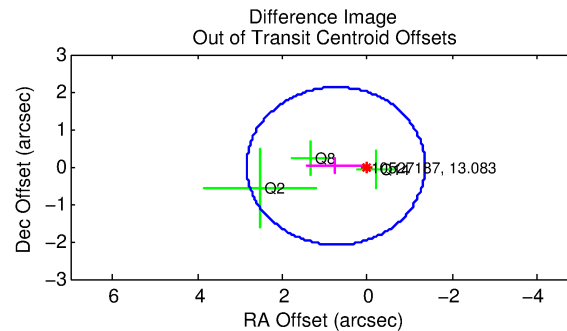
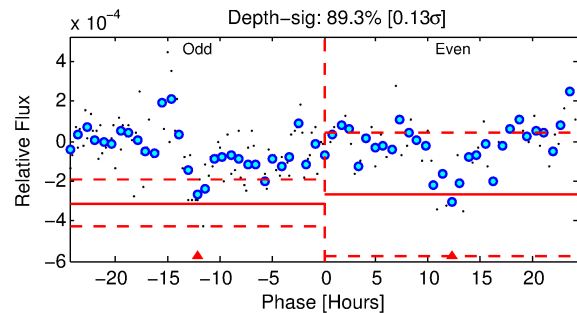
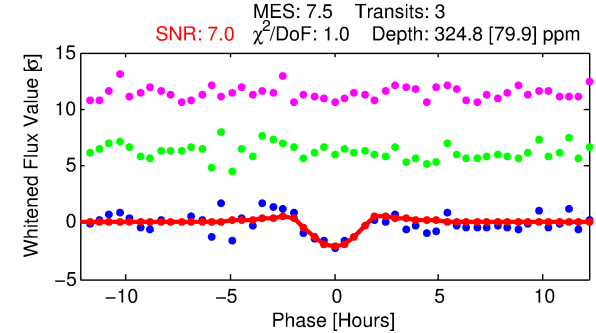
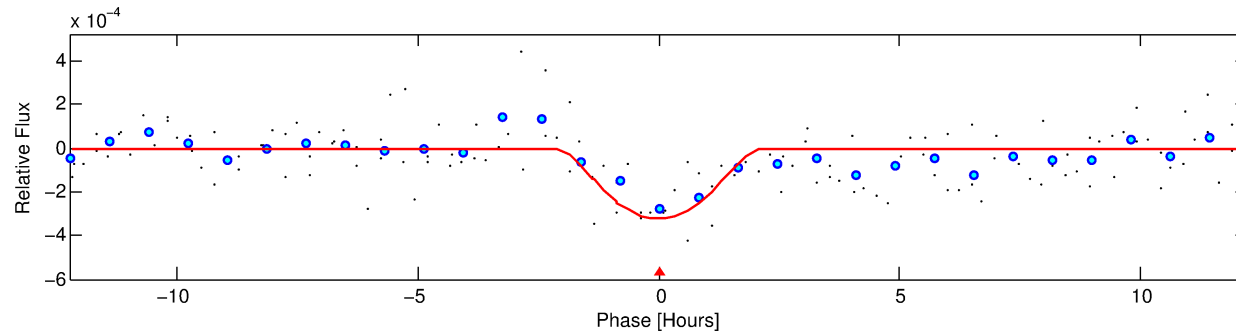
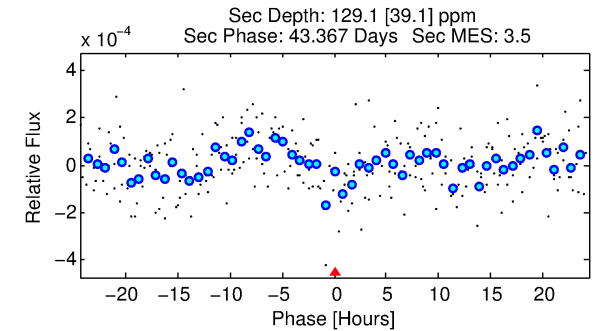
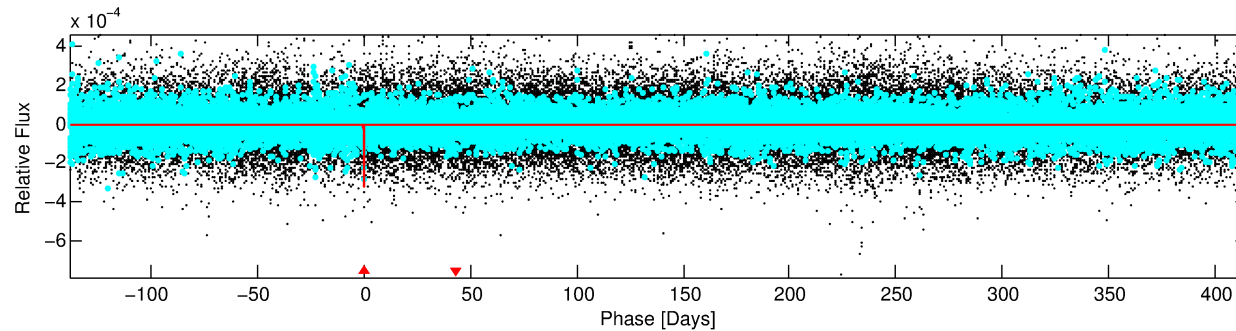
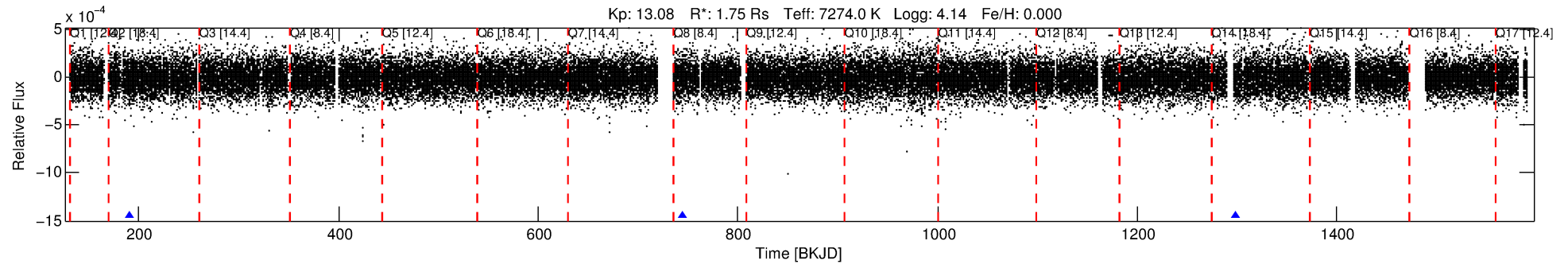
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010527187-01

No Significant Match Found

DV One-Page Summary

KIC: 10527187 Candidate: 1 of 1 Period: 554.205 d



DV Fit Results:

Period = 554.20464 [0.00772] d
Epoch = 190.7371 [0.0105] BKJD
Rp/R* = 0.0275 [0.0657]
a/R* = 273.35 [218.00]
b = 0.99 [0.11]
Seff = 3.31 [1.33]
Teff = 344 [35] K
Rp = 5.28 [12.70] Re
a = 1.5287 [0.3970] AU
Ag = 5961.29 [28586.46] [0.21σ]
Teffp = 4671 [5587] K [0.77σ]

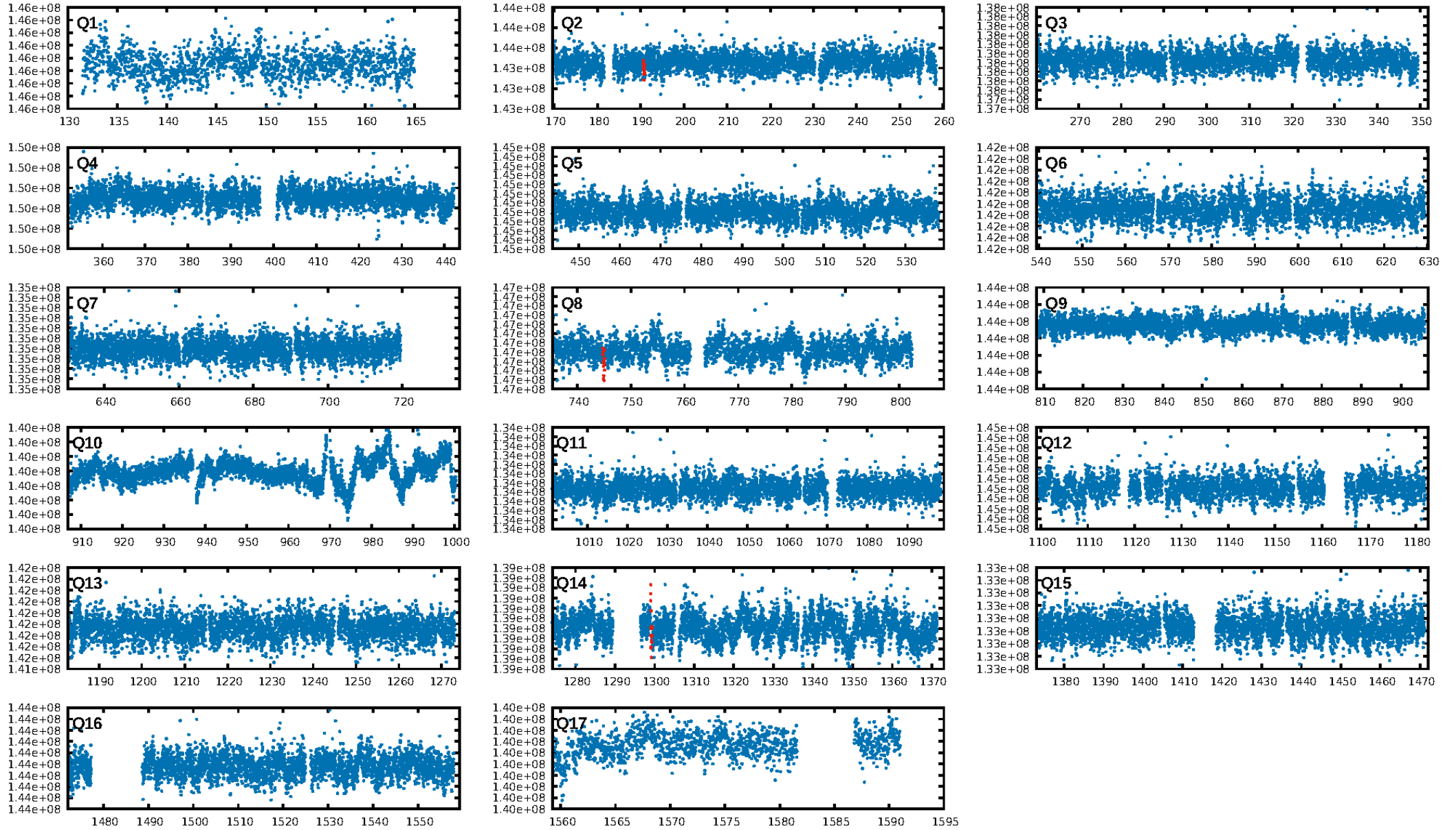
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 14.2%
ModelChiSquareGof-sig: 93.0%
Bootstrap-pfa: 3.59e-11
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -2.452
Centroid-sig: 71.8%
Centroid-so: 0.594 arcsec [0.44σ]
OotOffset-rm: 0.737 arcsec [1.05σ]
OotOffset-st: 2/0/1/0 [3]
KicOffset-rm: 0.814 arcsec [1.16σ]
KicOffset-st: 2/0/1/0 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

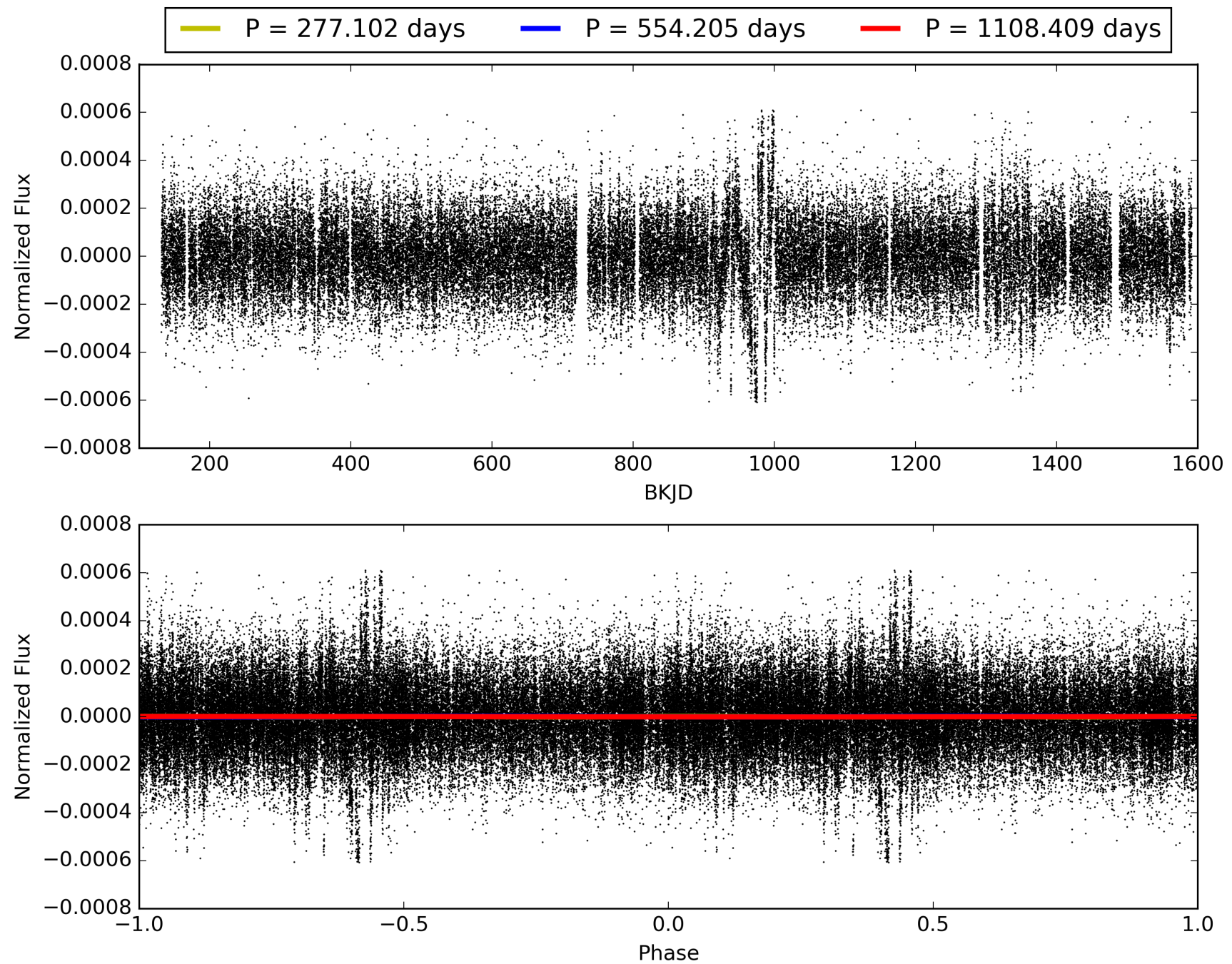
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 21:05:56 Z

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

TCE 010527187-01, PDC Light Curves

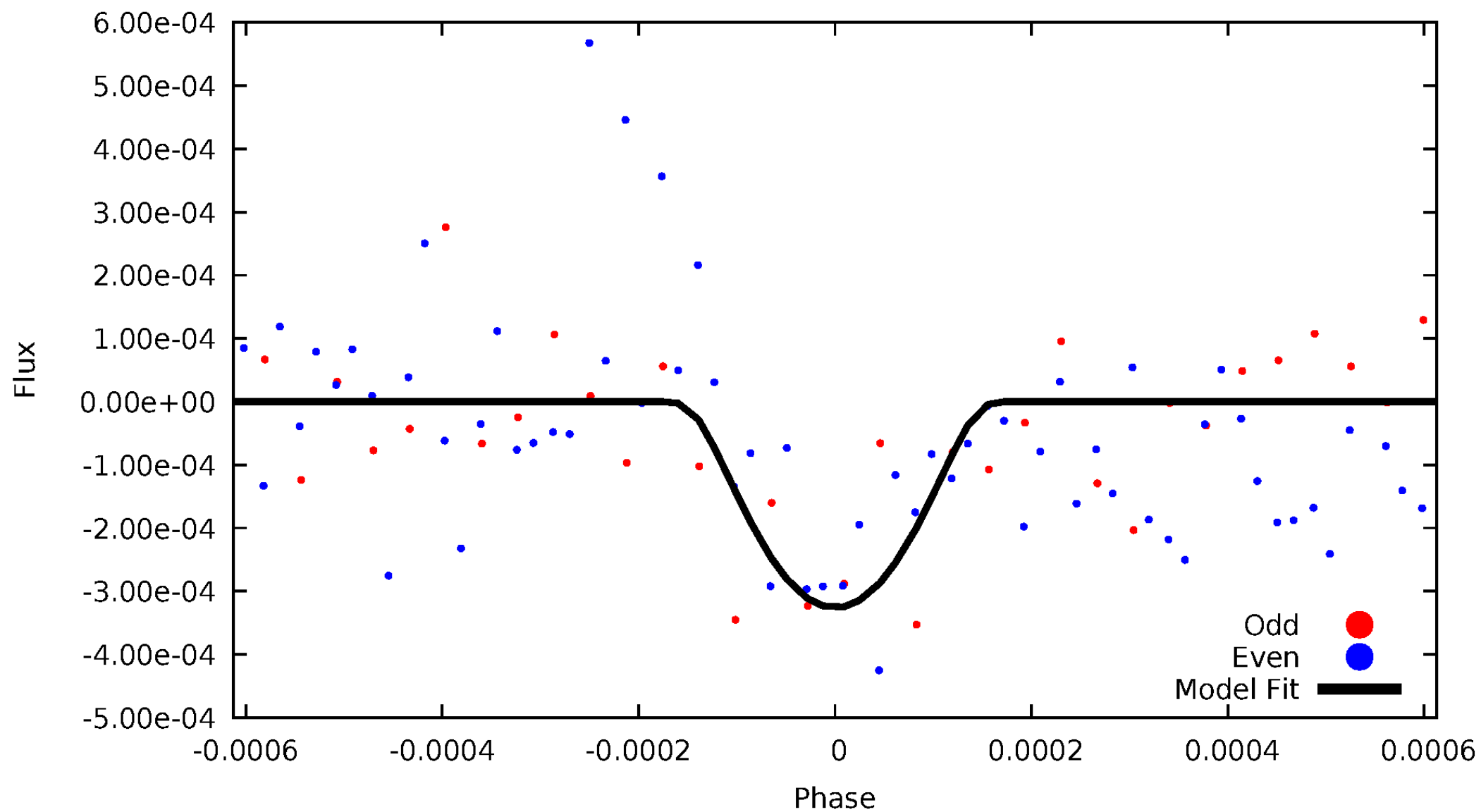


TCE 010527187-01



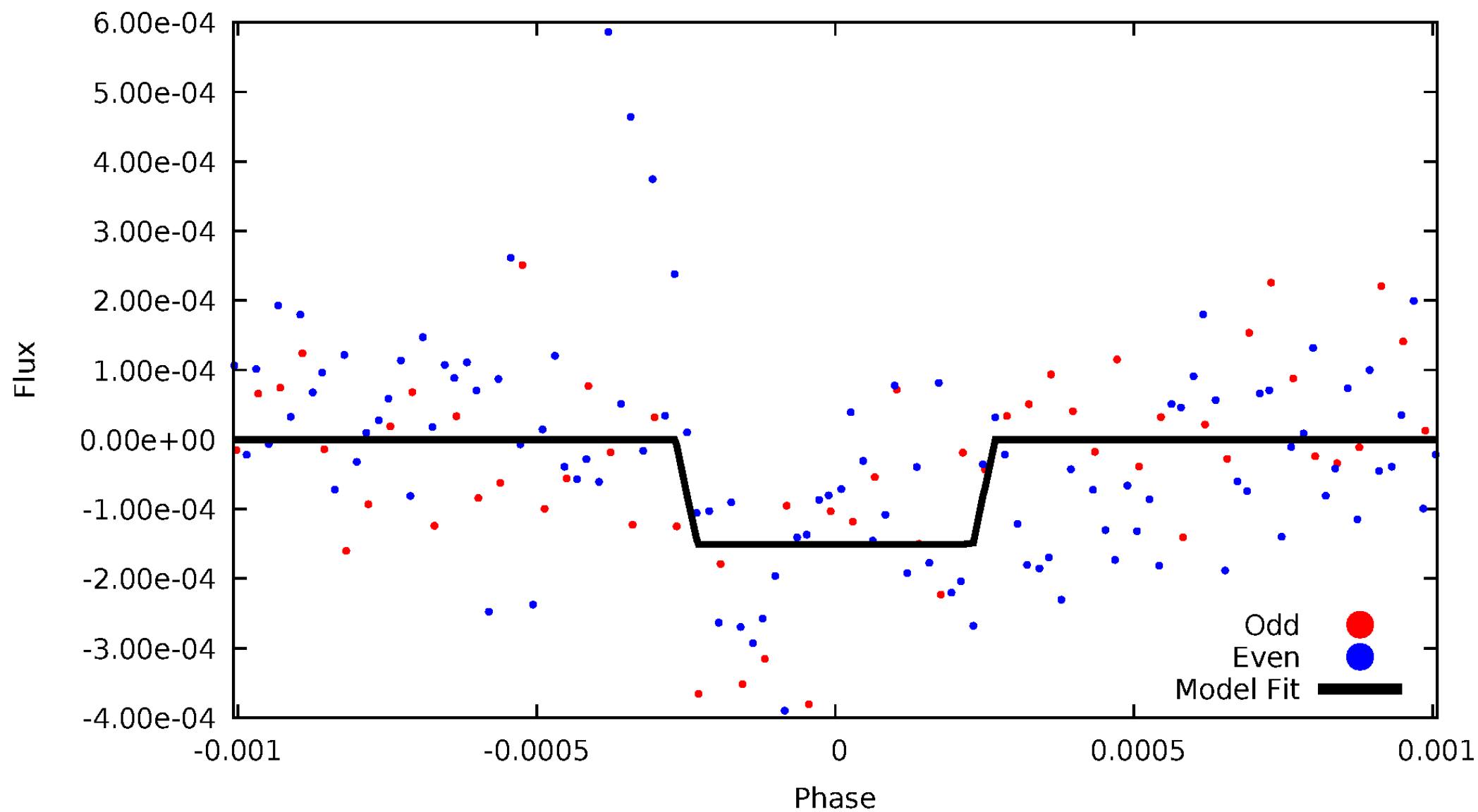
DV Odd/Even

TCE 010527187-01

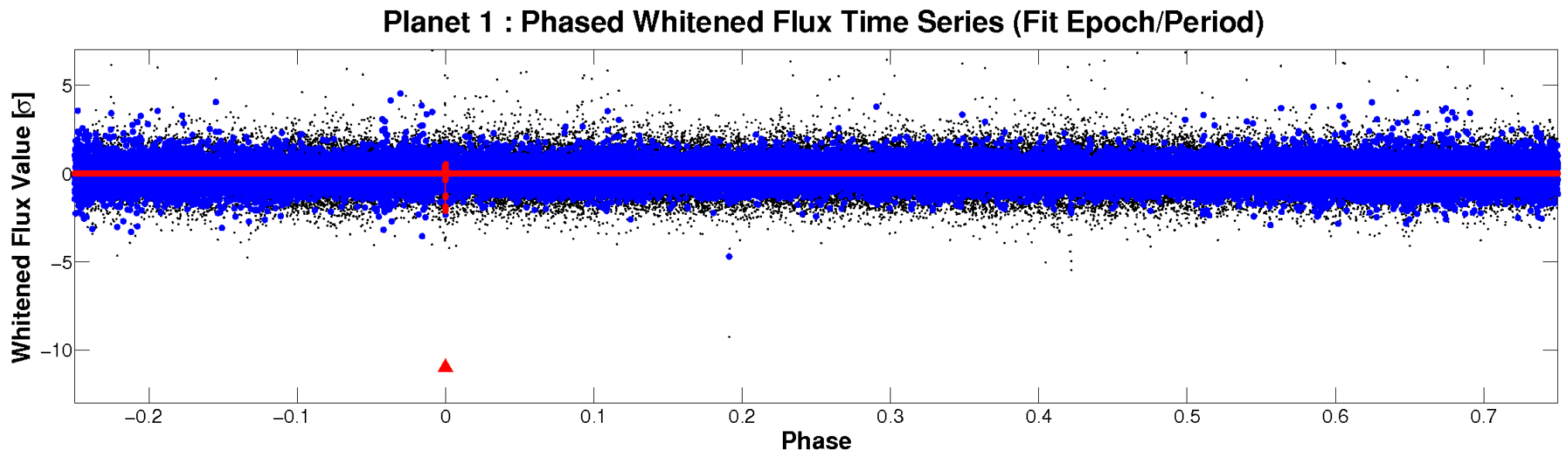
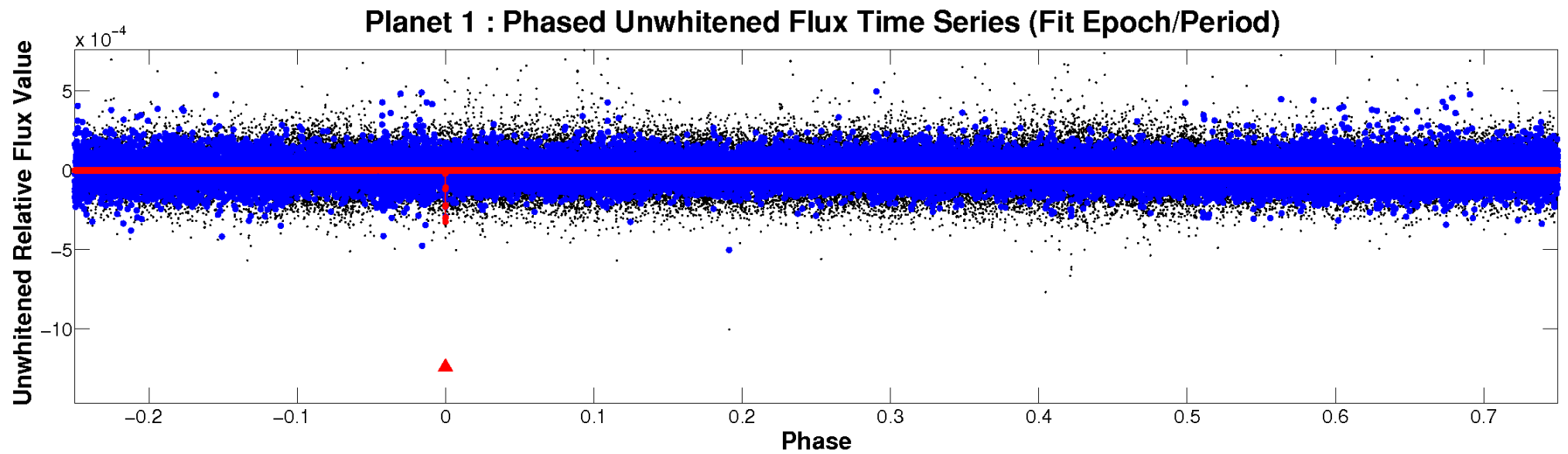


ALT Odd/Even

TCE 010527187-01

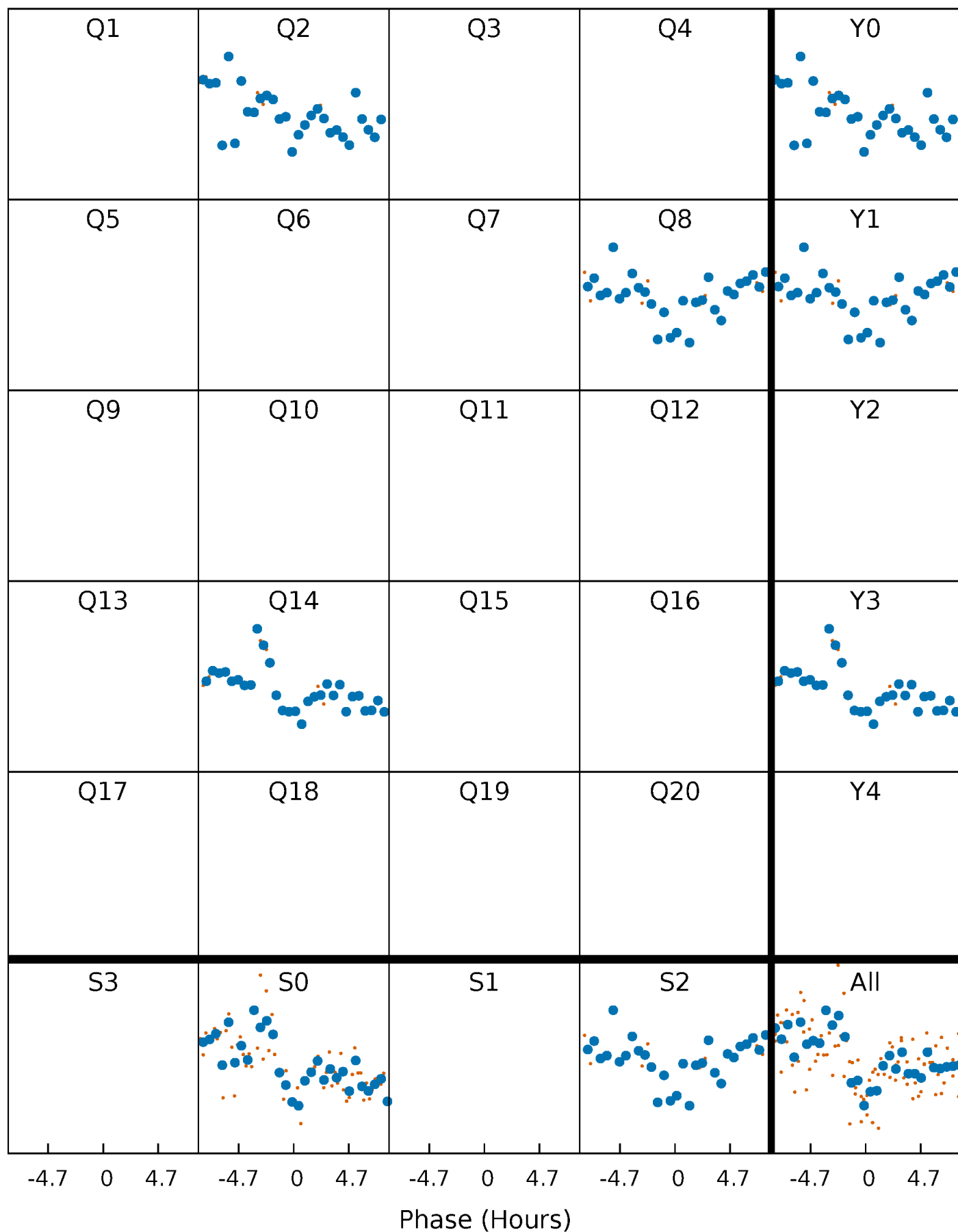


Non-Whitened Vs. Whitened Light Curve



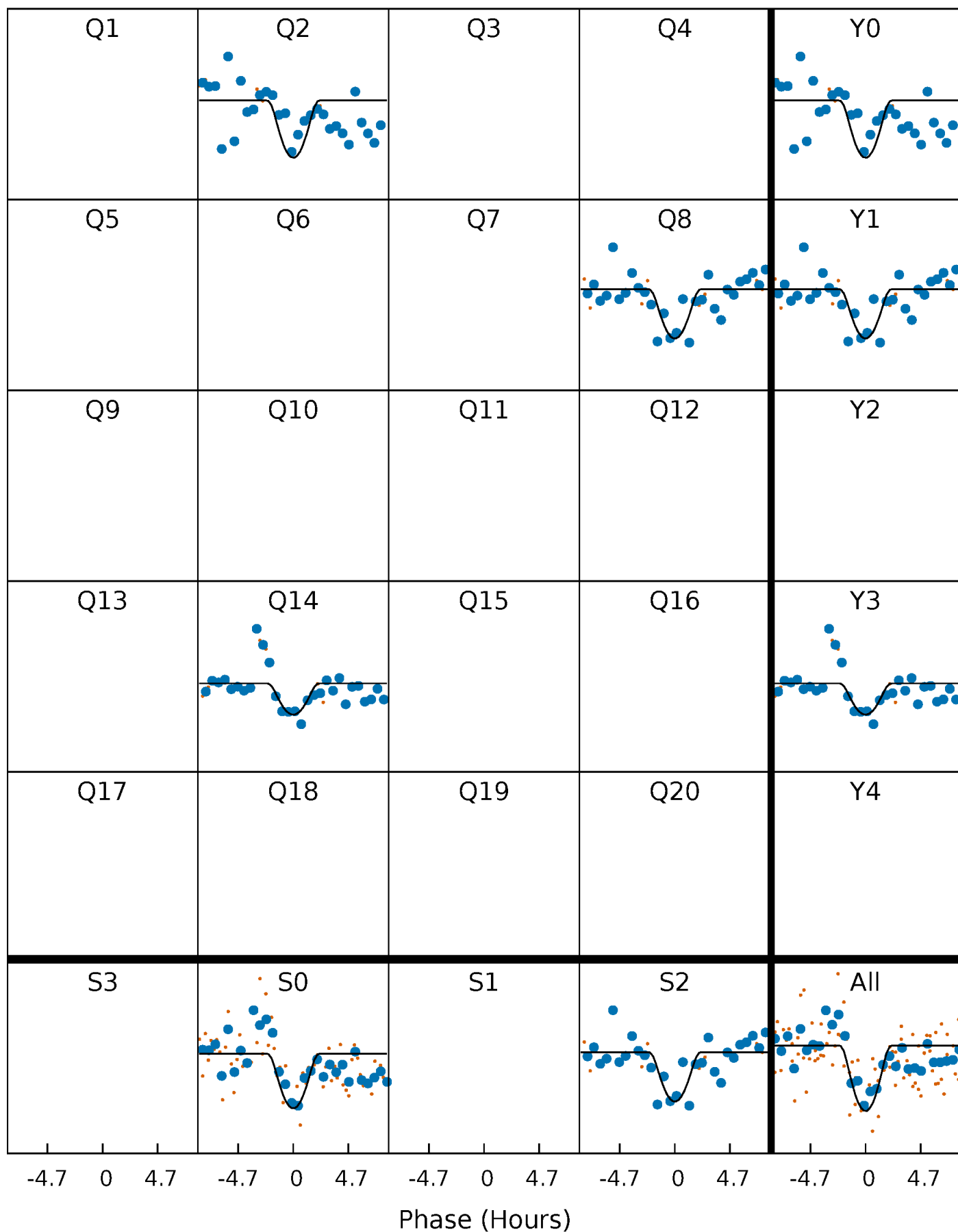
PDC Quarter-Phased Transit Curves

TCE 010527187-01 P=554.204644 Days $T_0=190.737108$ (BKJD)



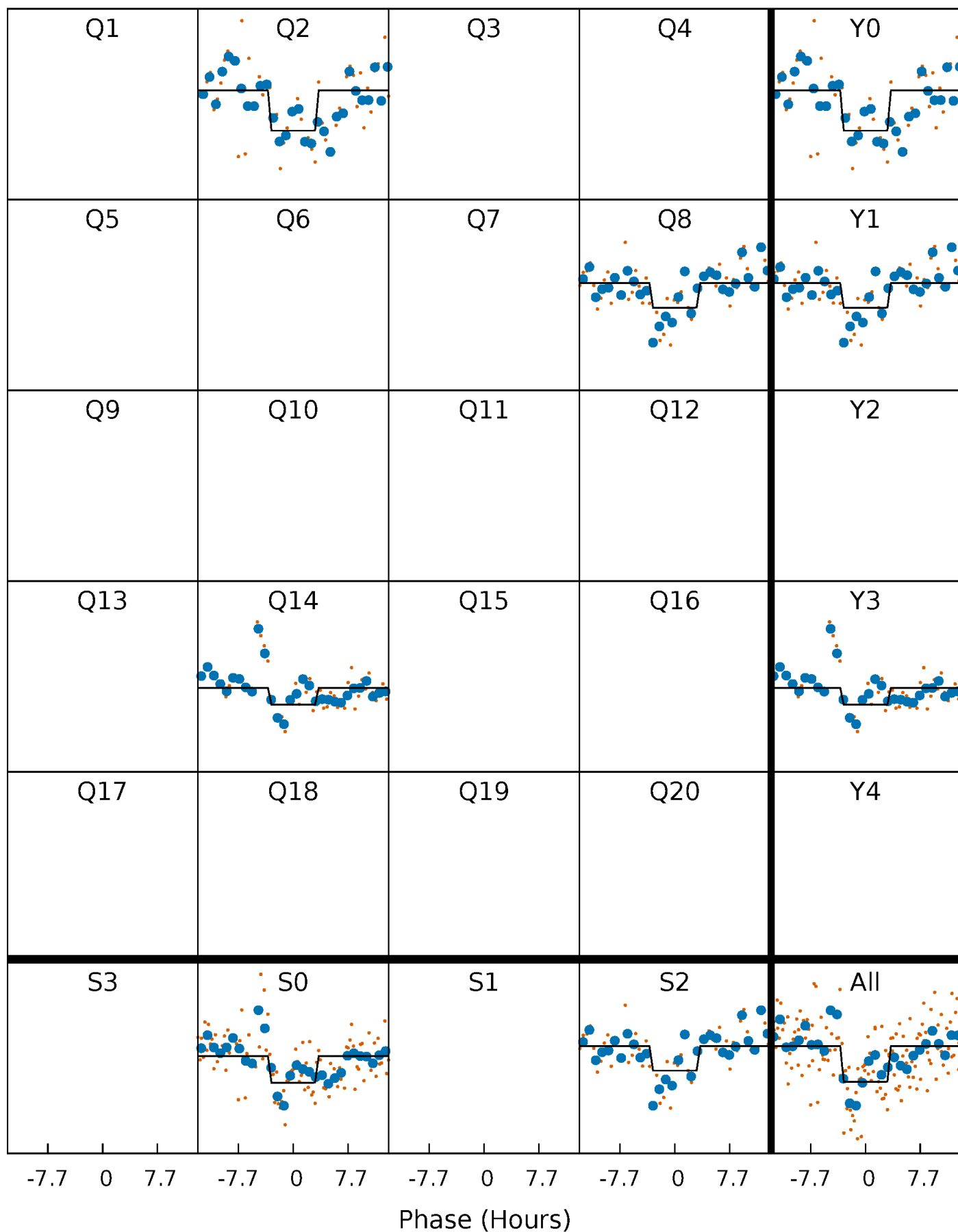
DV Quarter-Phased Transit Curves

TCE 010527187-01 P=554.204644 Days $T_0=190.737108$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

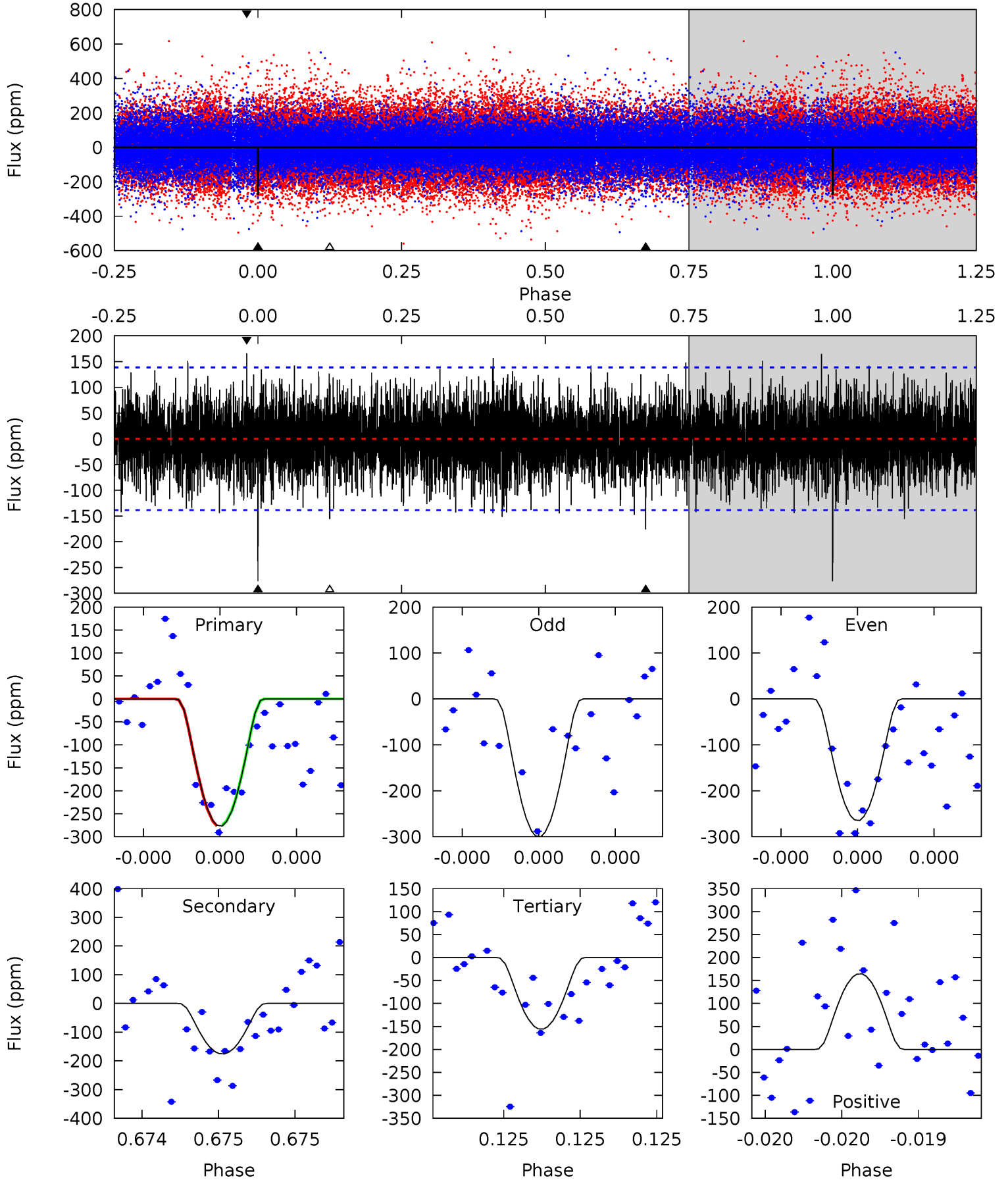
TCE 010527187-01 P=554.205825 Days $T_0=190.806532$ (BKJD)



DV Model-Shift Uniqueness Test

010527187-01, P = 554.204644 Days, E = 190.737108 Days

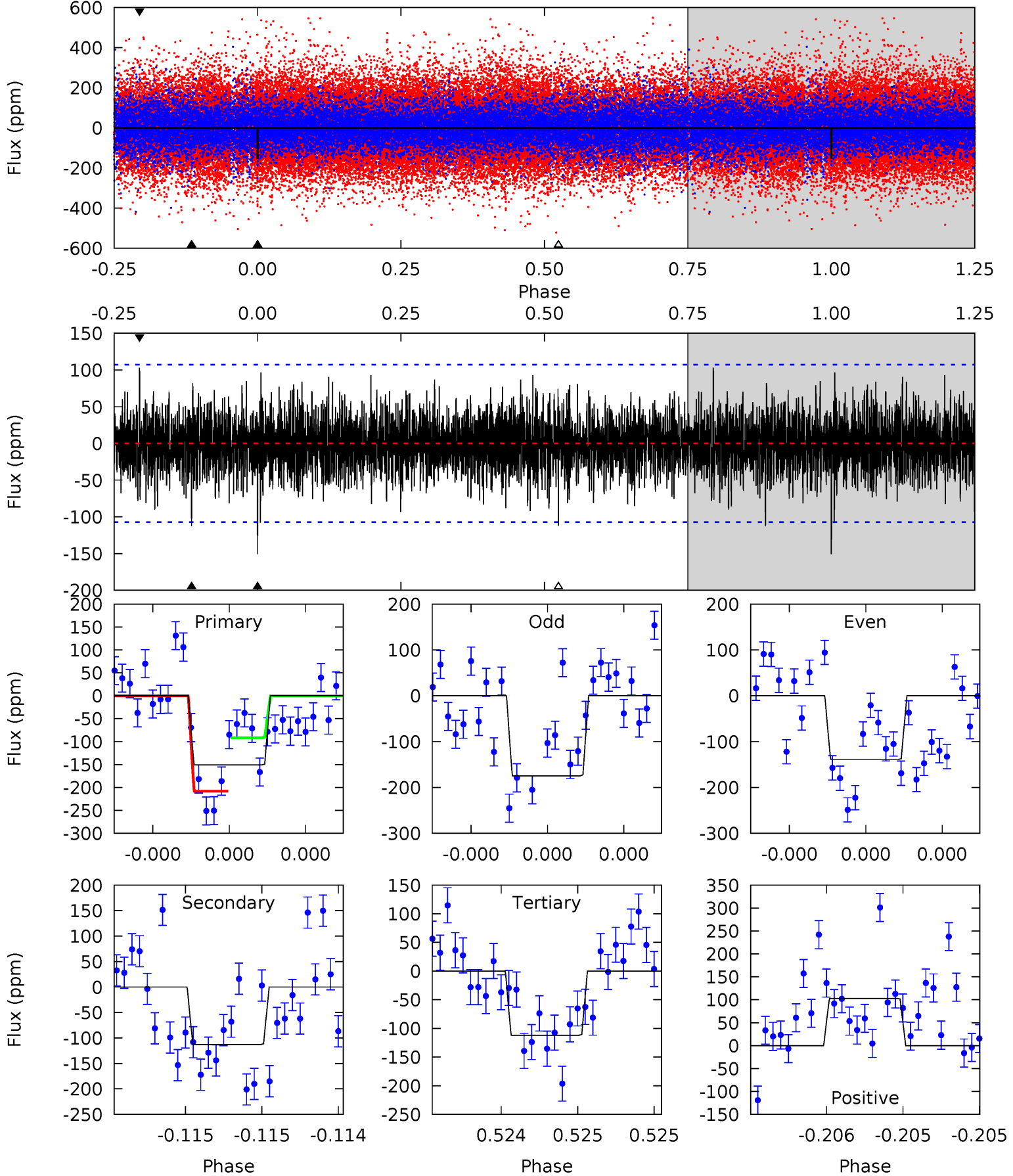
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.3	7.17	6.37	6.72	5.66	3.62	1.78	4.93	4.58	0.81	0.45	0.68	0.92	0.37	0.03



Alt Model-Shift Uniqueness Test

010527187-01, P = 554.205825 Days, E = 190.806532 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.84	5.86	5.82	5.35	5.57	3.48	1.46	2.02	2.48	0.04	0.51	0.87	1.02	0.41	3.03



Stellar Parameters For KIC 010527187

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7274^{+201}_{-316}	$4.140^{+0.128}_{-0.192}$	$0.000^{+0.200}_{-0.350}$	$1.755^{+0.563}_{-0.328}$	$1.549^{+0.221}_{-0.243}$	$0.404^{+0.255}_{-0.208}$
	+3%/-4%	+3%/-5%	+inf%/-inf%	+32%/-19%	+14%/-16%	+63%/-51%
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 010527187-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-176 ± 24	$10.58^{+11.49}_{-7.24}$	481^{+35}_{-31}	3899^{+2485}_{-805}	2021^{+17949}_{-1562}
Alt.	-113 ± 19	$9.57^{+10.19}_{-6.35}$	484^{+36}_{-31}	3725^{+1987}_{-720}	1561^{+11657}_{-1205}

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 $A_{obs} \gg 1.0$

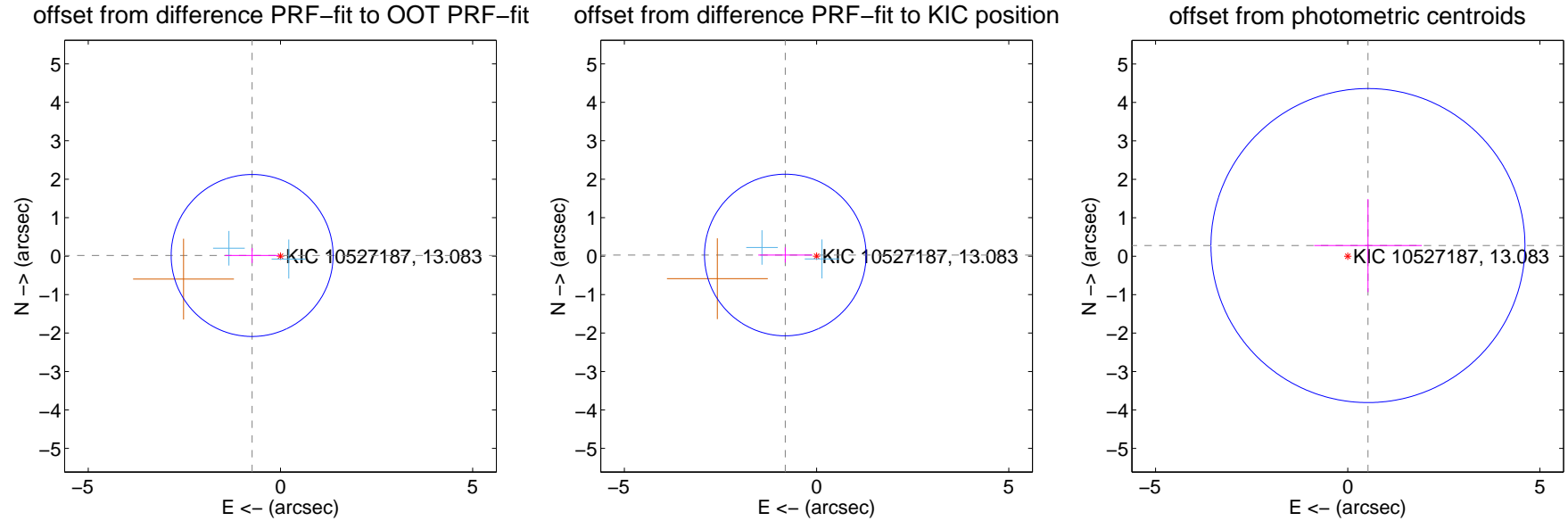
DV Centroid Data

Supplemental centroid analysis for 010527187-01. Kepler magnitude: 13.08. Transit SNR 6.97

There are 2 quarters with good PRF difference image offsets

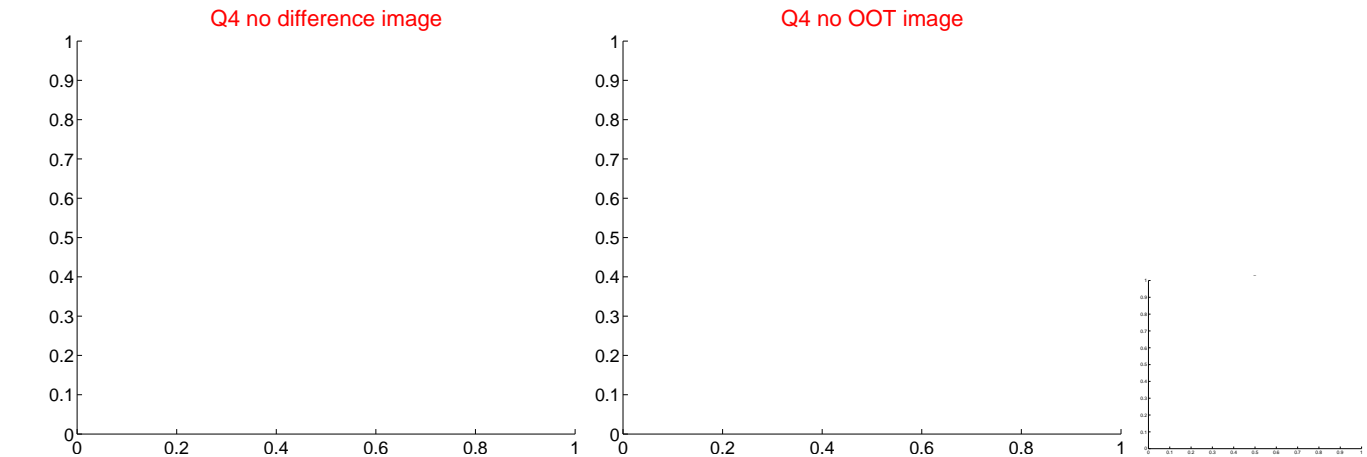
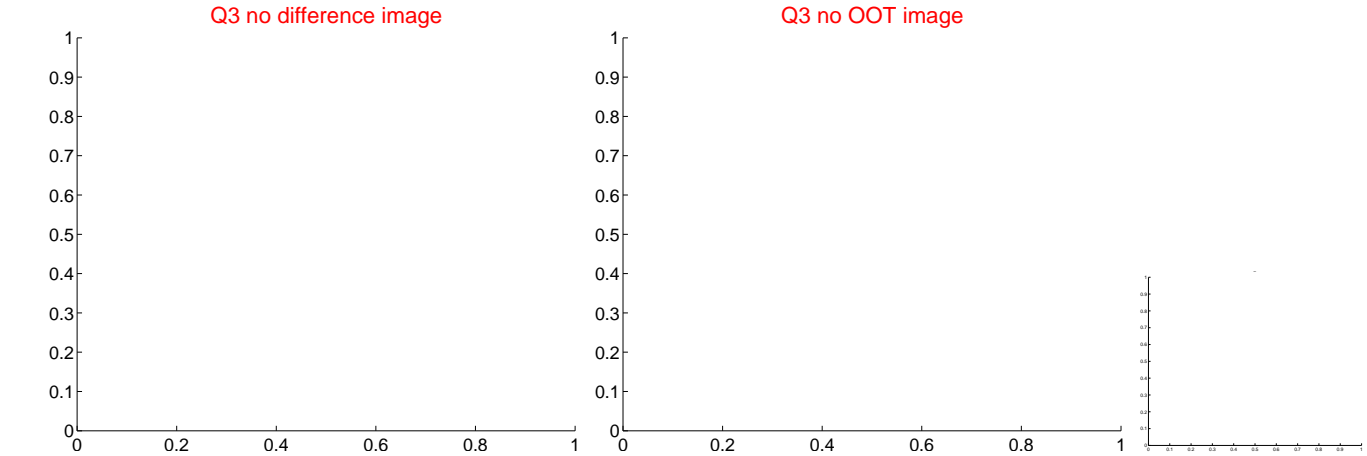
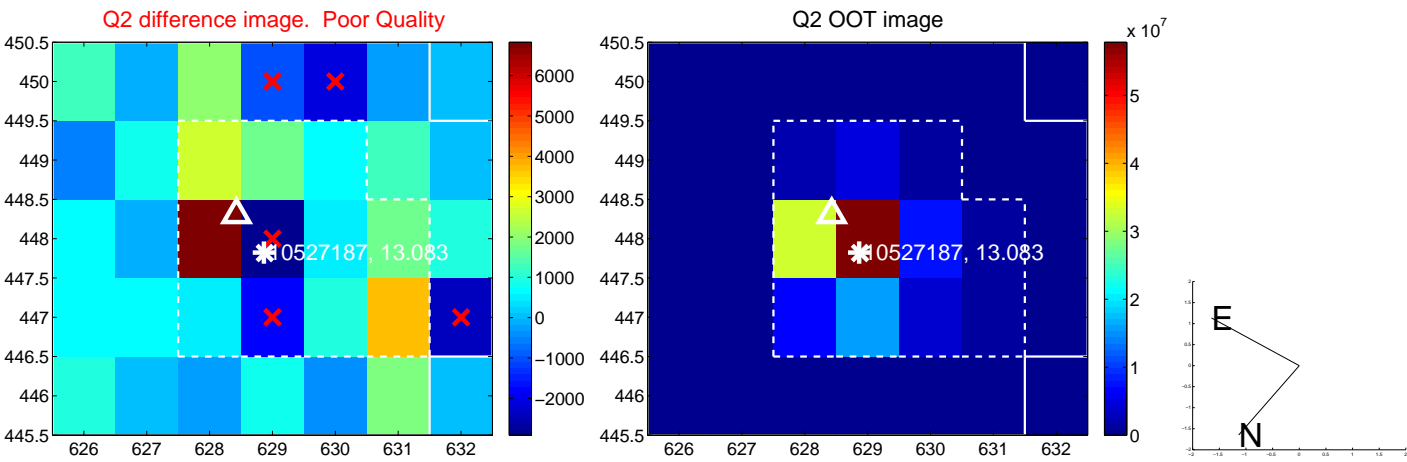
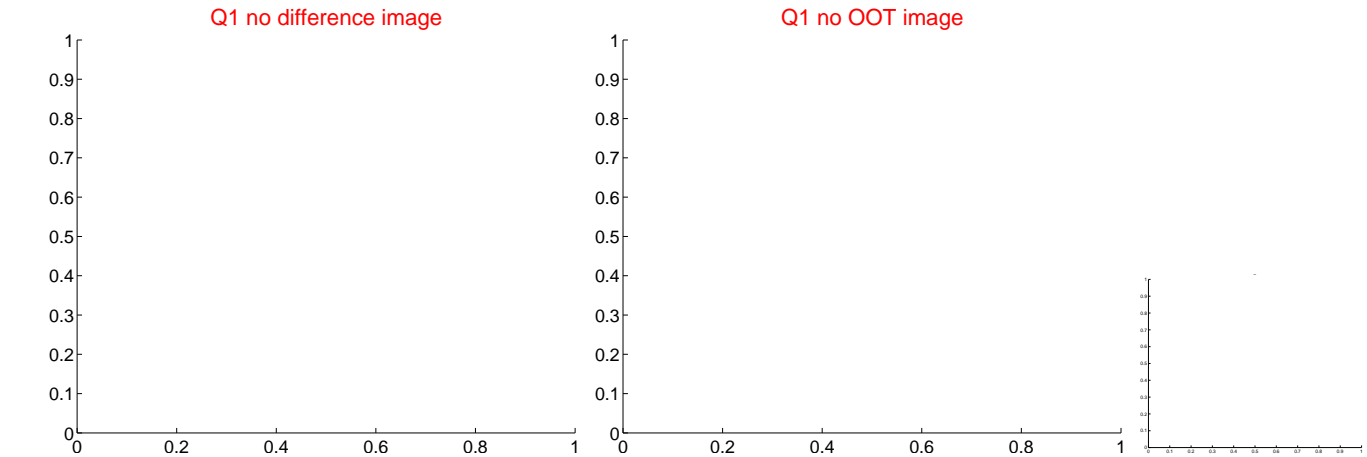
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.737 ± 0.702	1.05	0.737 ± 0.702	0.017 ± 0.195
PRF-fit source offset from KIC position	0.814 ± 0.700	1.16	0.814 ± 0.701	0.029 ± 0.199
photometric centroid source offset	0.59 ± 1.36	0.44	-0.53 ± 1.40	0.28 ± 1.21

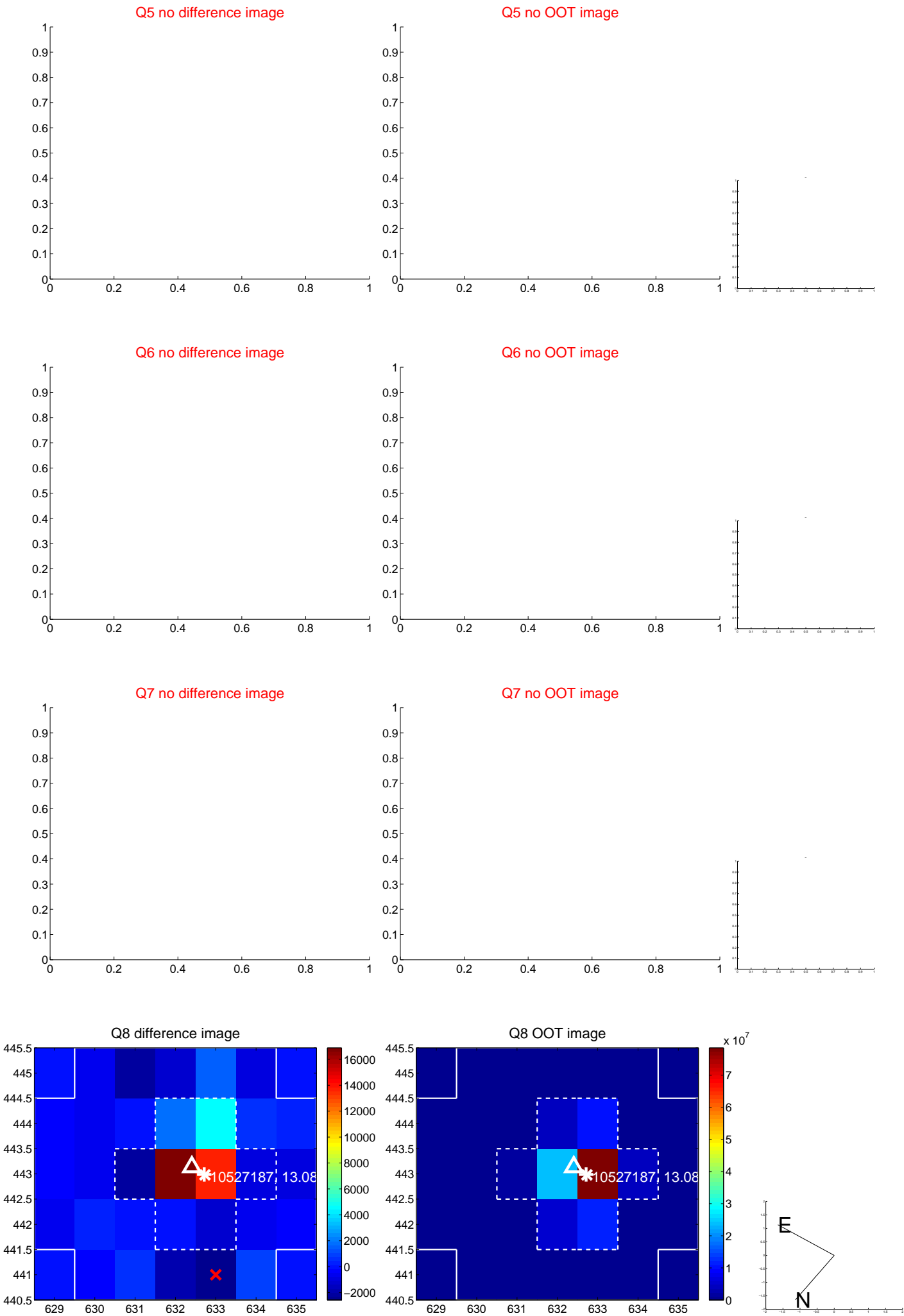


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



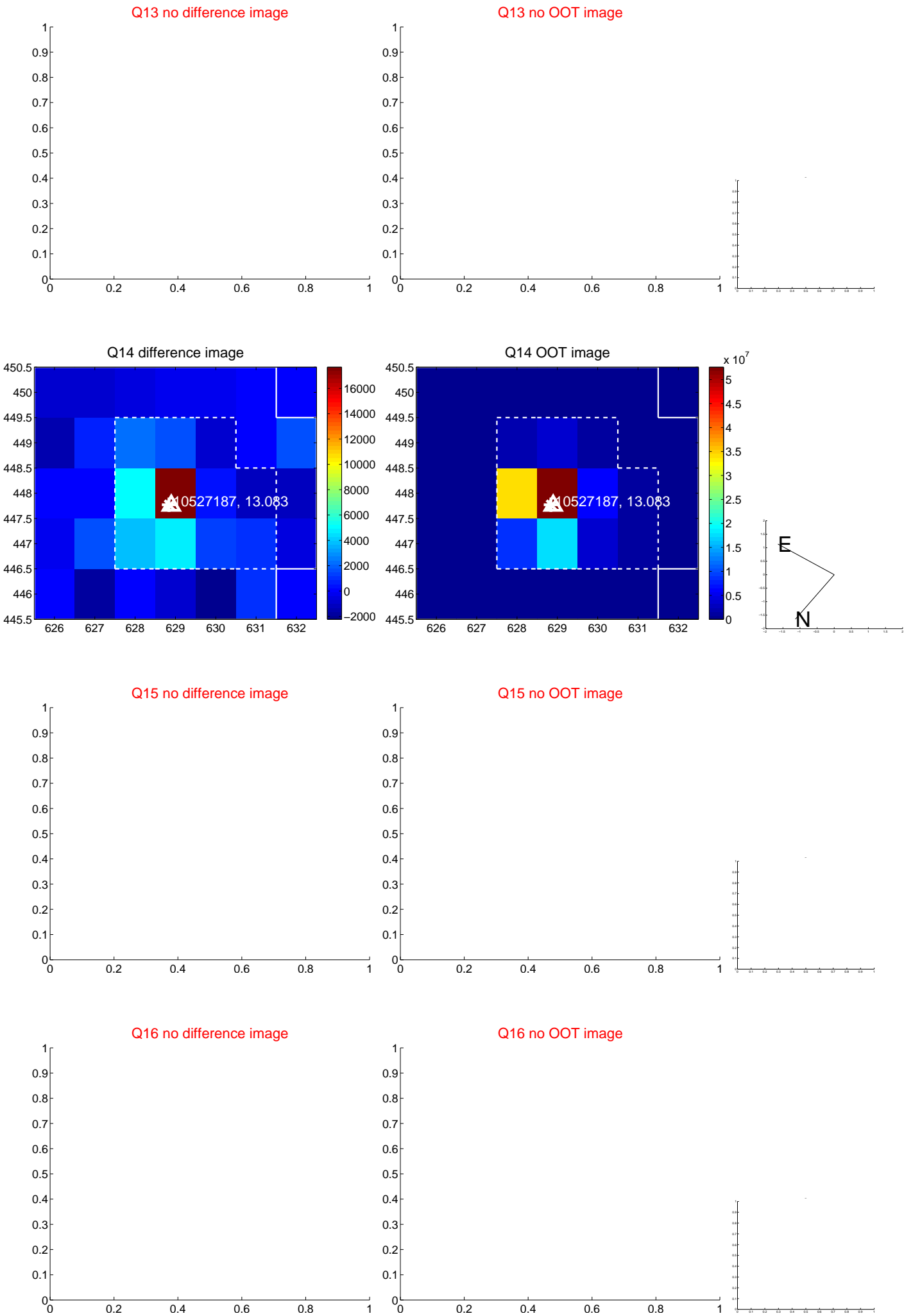
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



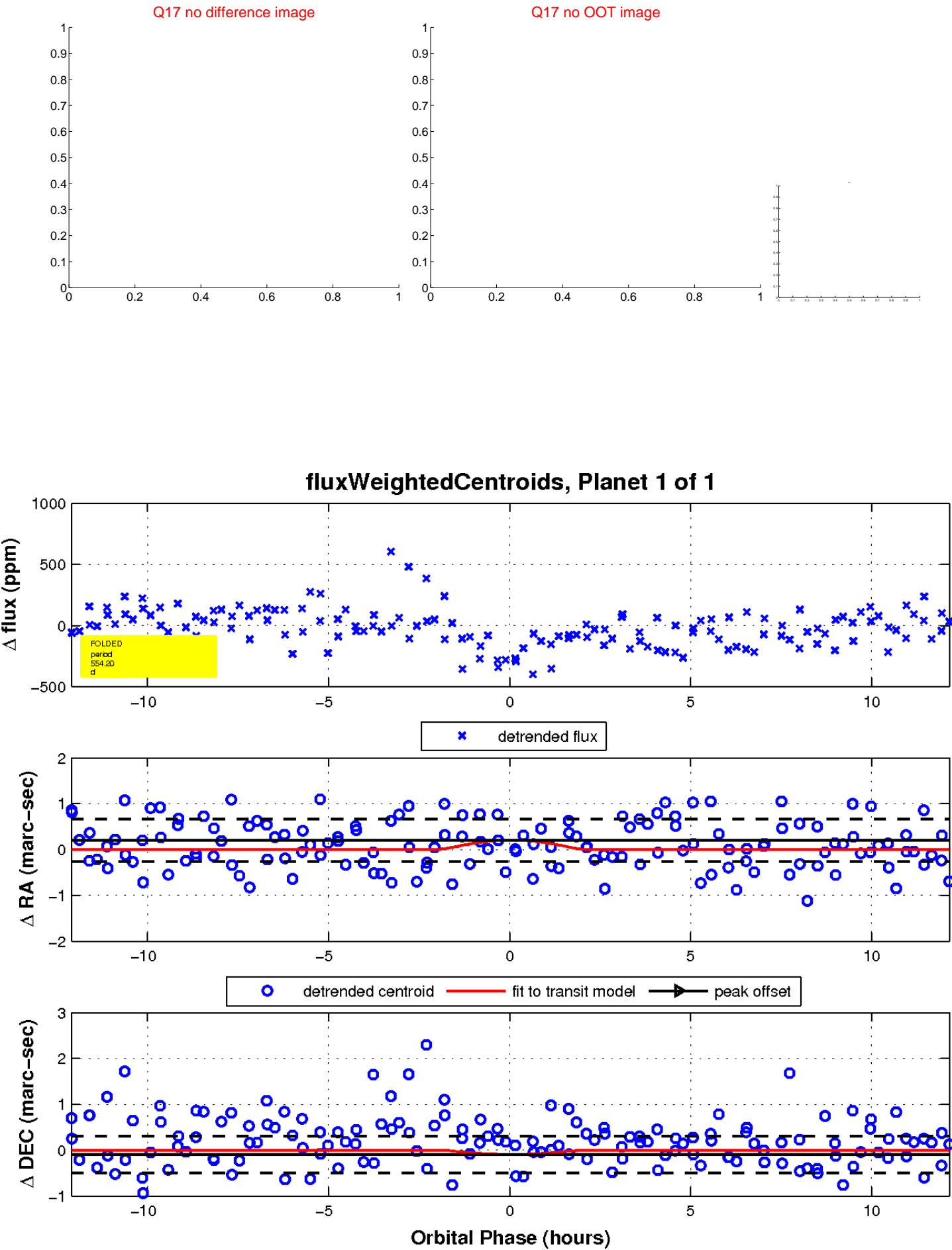
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

