KIC 006367159

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 ($S_\oplus$)
006367159-01	OBS	No	456.364376	533.746366	1416.5	9.993	19.3	5.2	3.68	7776	16.93	21.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006367159-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—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.

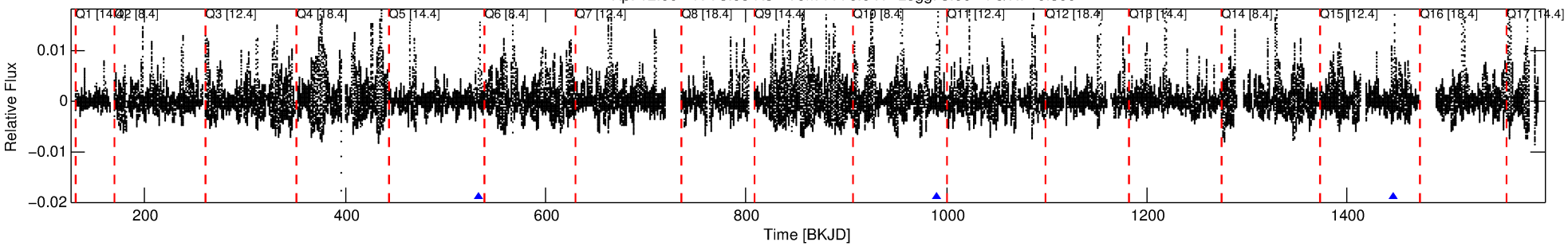
Ephemeris Match Information For 006367159-01

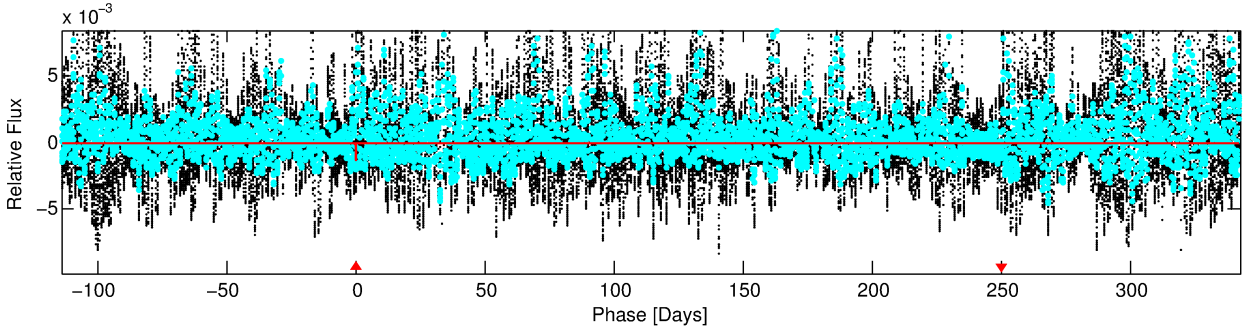
No Significant Match Found

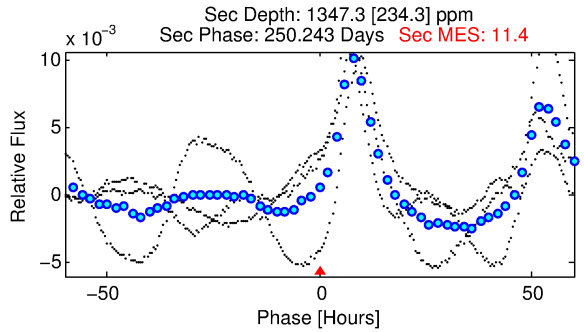
DV One-Page Summary

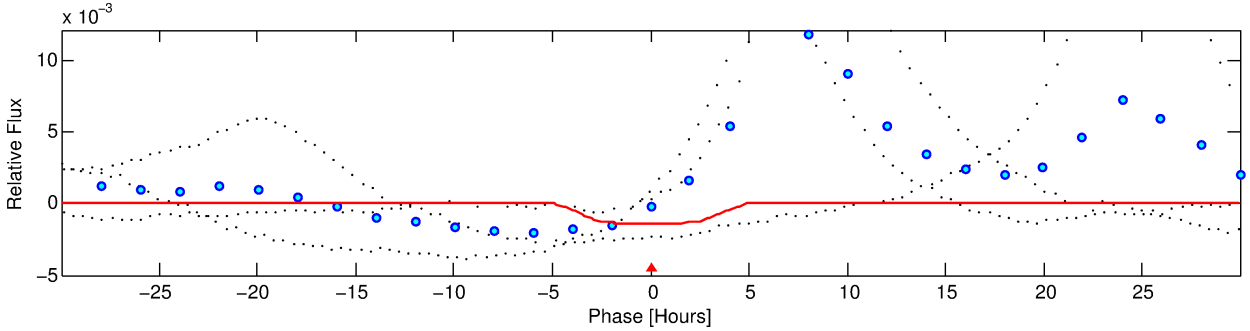
KIC: 6367159 Candidate: 1 of 1 Period: 456.364 d

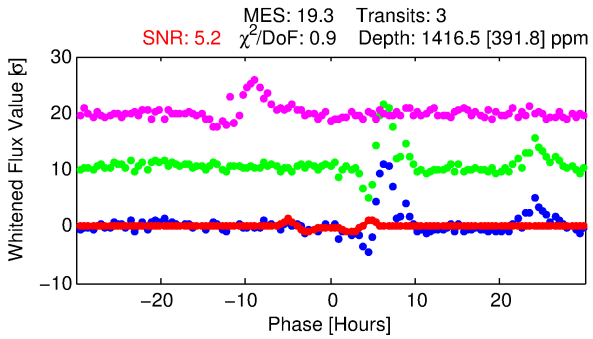
Kp: 12.60 R*: 3.68 Rs Teff: 7776.0 K Logg: 3.60 Fe/H: −0.300

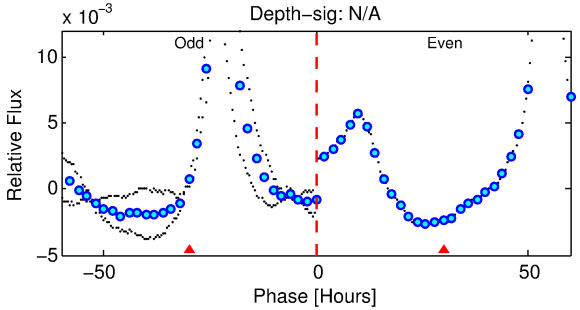


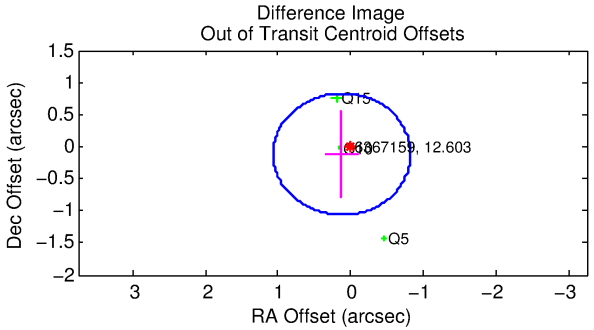












DV Fit Results:

Period = 456.36438 [0.00908] d
Epoch = 533.7464 [0.0115] BKJD
Rp/R* = 0.0421 [0.0059]
a/R* = 158.11 [11.79]
b = 0.94 [0.01]

Seff = 21.00 [20.16]
Teq = 546 [131] K
Rp = 16.93 [9.62] Re
a = 1.4545 [0.8283] AU

Ag = 5470.91 [5474.34] [1.00σ]
Teffp = 7259 [672] K [9.80σ]

DV Diagnostic Results:

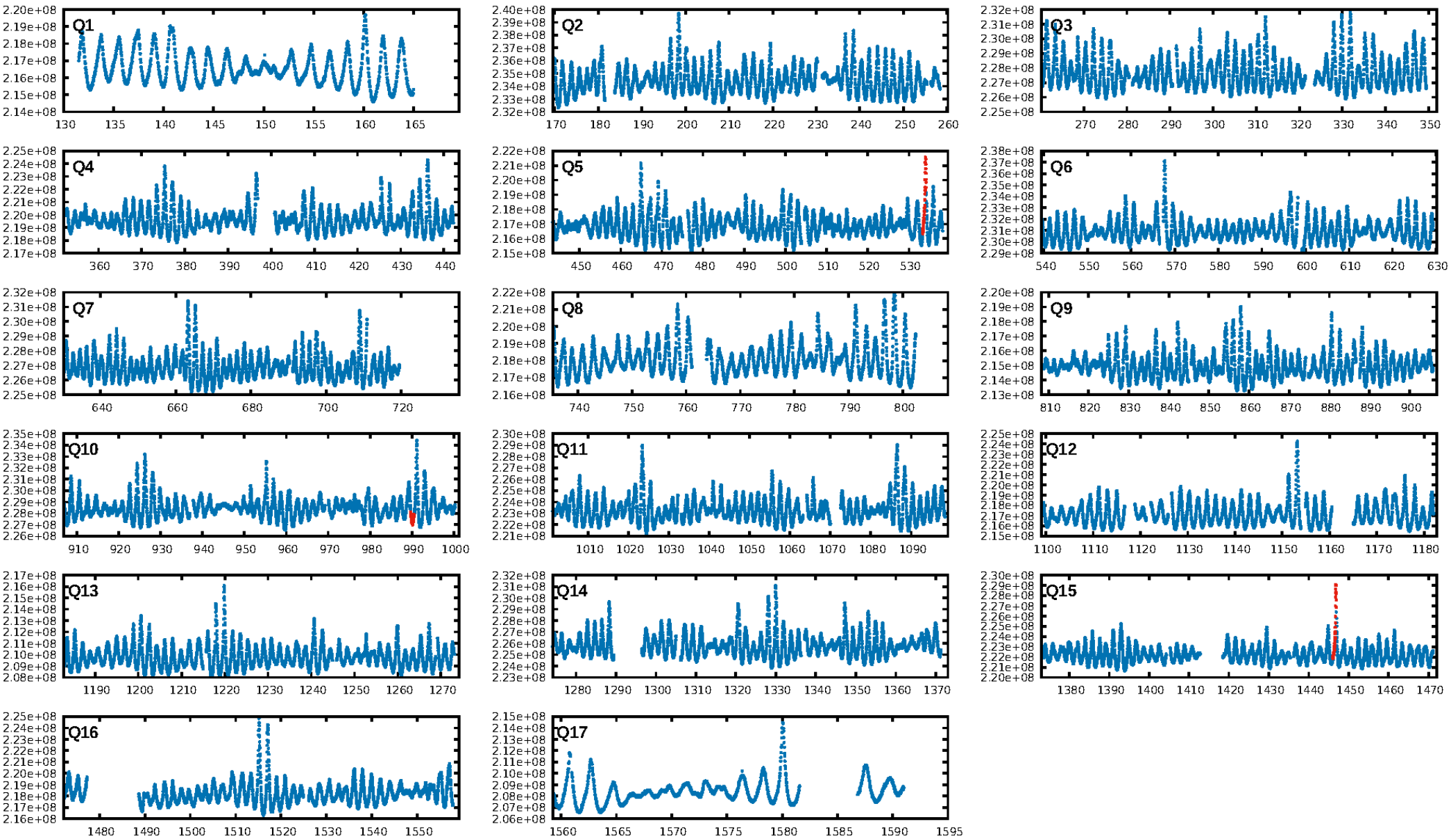
ShortPeriod−sig: N/A
LongPeriod−sig: N/A
ModelChiSquare2−sig: 0.0%
ModelChiSquareGof−sig: 97.0%
Bootstrap−pfa: 4.16e−17
RollingBand−fgt: 1.00 [3/3]
GhostDiagnostic−chr: 0.7753

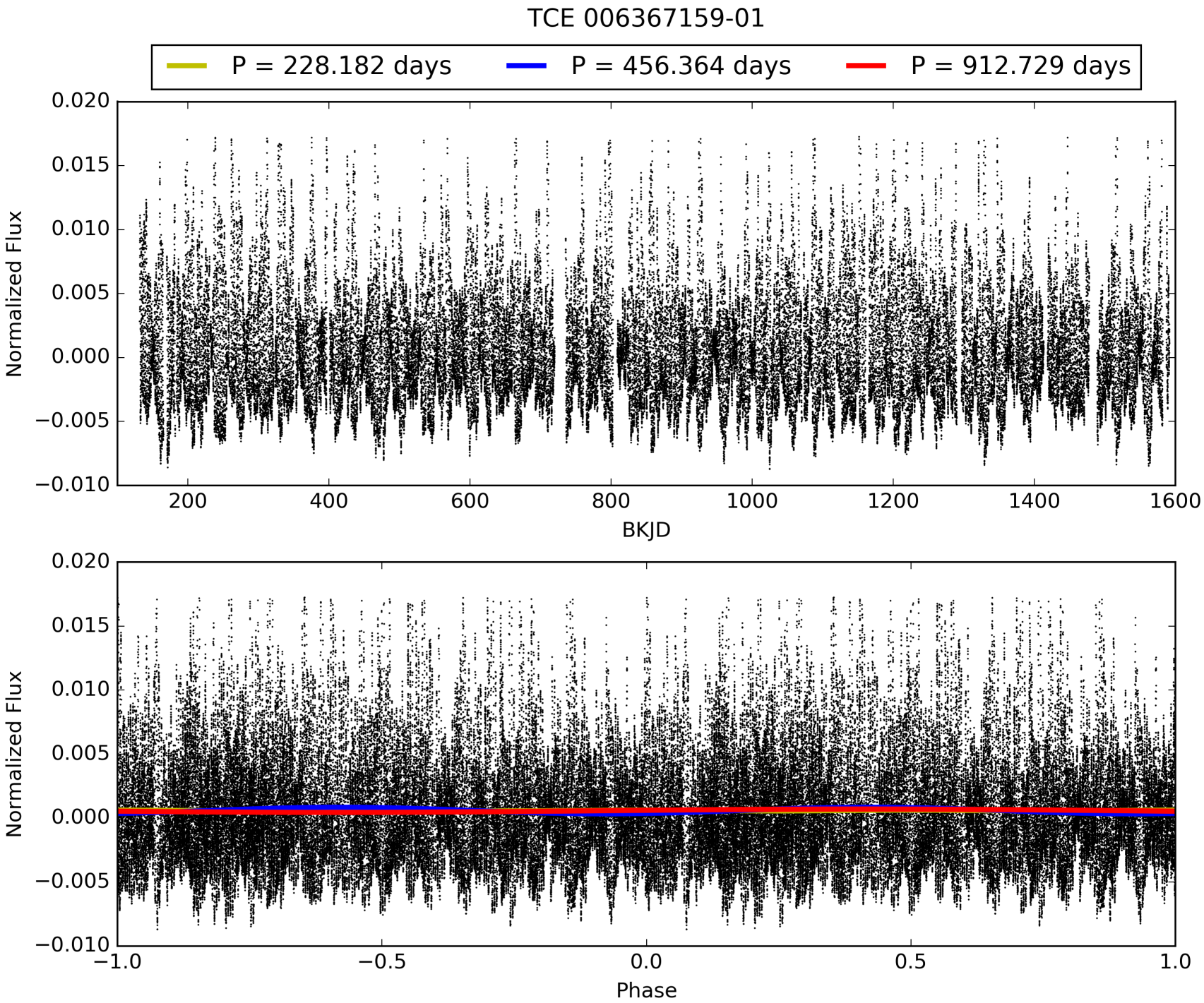
Centroid−sig: 65.1%
Centroid−so: 0.114 arcsec [0.40σ]
OotOffset−rm: 0.170 arcsec [0.54σ]
KicOffset−rm: 0.178 arcsec [0.70σ]
OotOffset−st: 1/1/0/1 [3]
KicOffset−st: 1/1/0/1 [3]
DiffImageQuality−fgm: 0.67 [2/3]
DiffImageOverlap−fno: 1.00 [3/3]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02−Feb−2016 21:25:11 Z

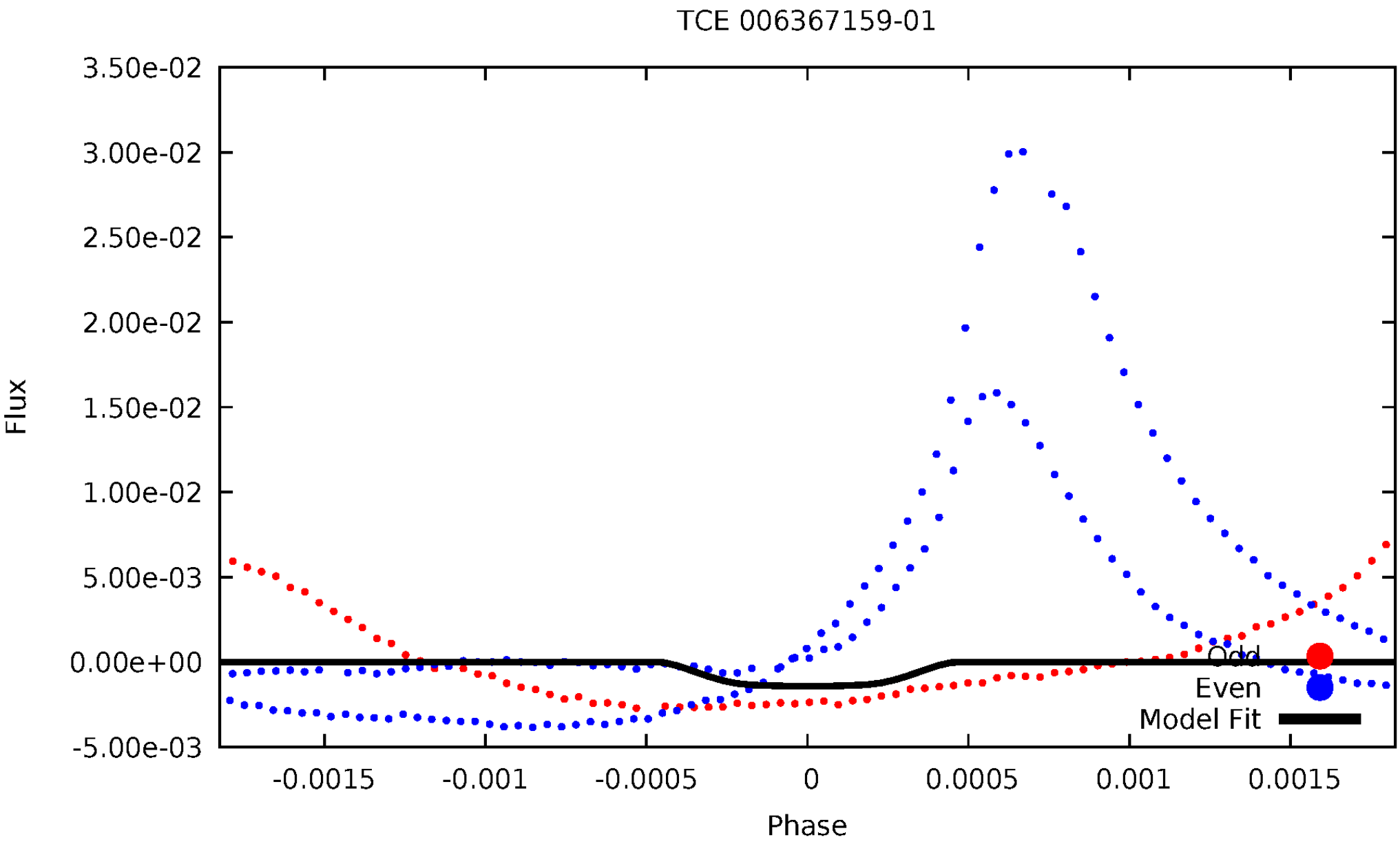
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 006367159-01, PDC Light Curves




TCE 006367159-01
P = 228.182 days
P = 456.364 days
P = 912.729 days
Normalized Flux
BKJD
Normalized Flux
Phase

DV Odd/Even


TCE 006367159-01
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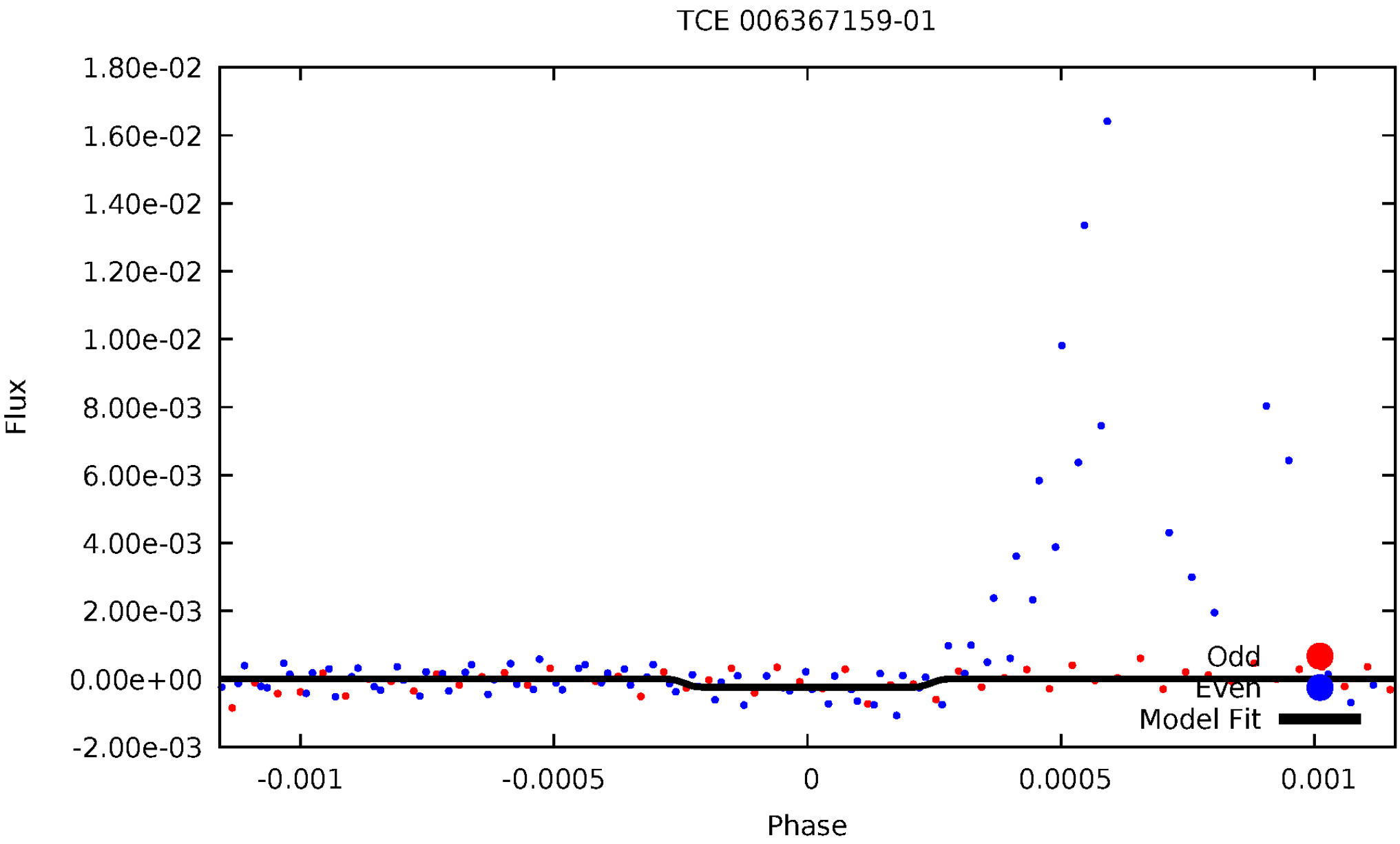
3.00e-02
2.50e-02
2.00e-02
1.50e-02
1.00e-02
5.00e-03
0.00e+00
-5.00e-03
Flux
-0.0015
-0.001
-0.0005
0
0.0005
0.001
0.0015
Phase
Odd
Even
Model Fit

ALT Odd/Even


TCE 006367159-01
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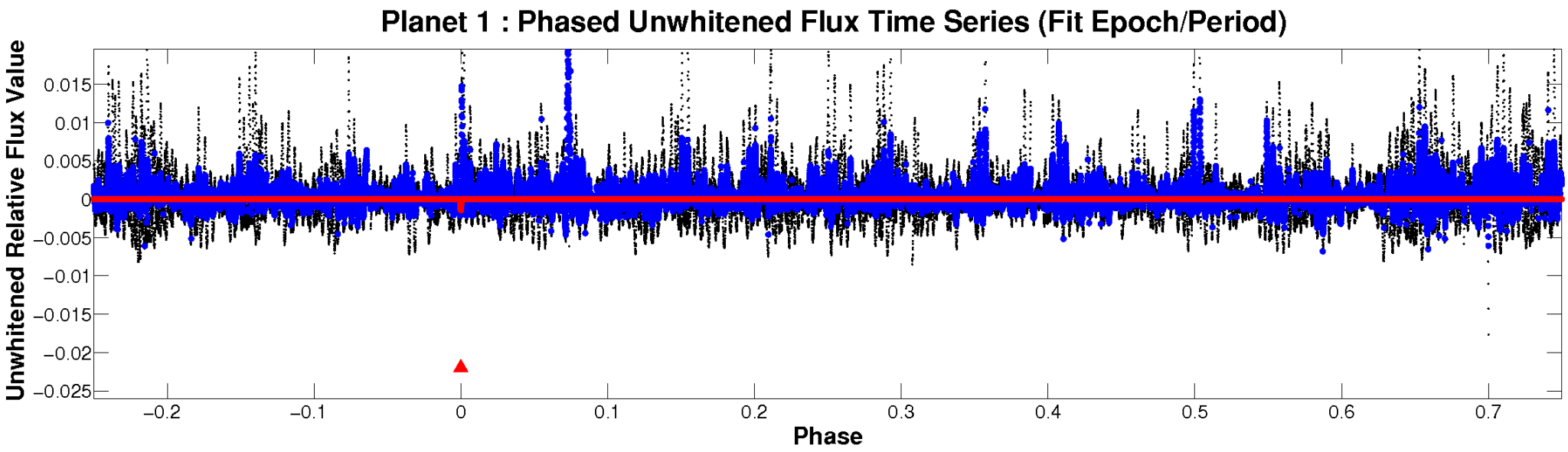
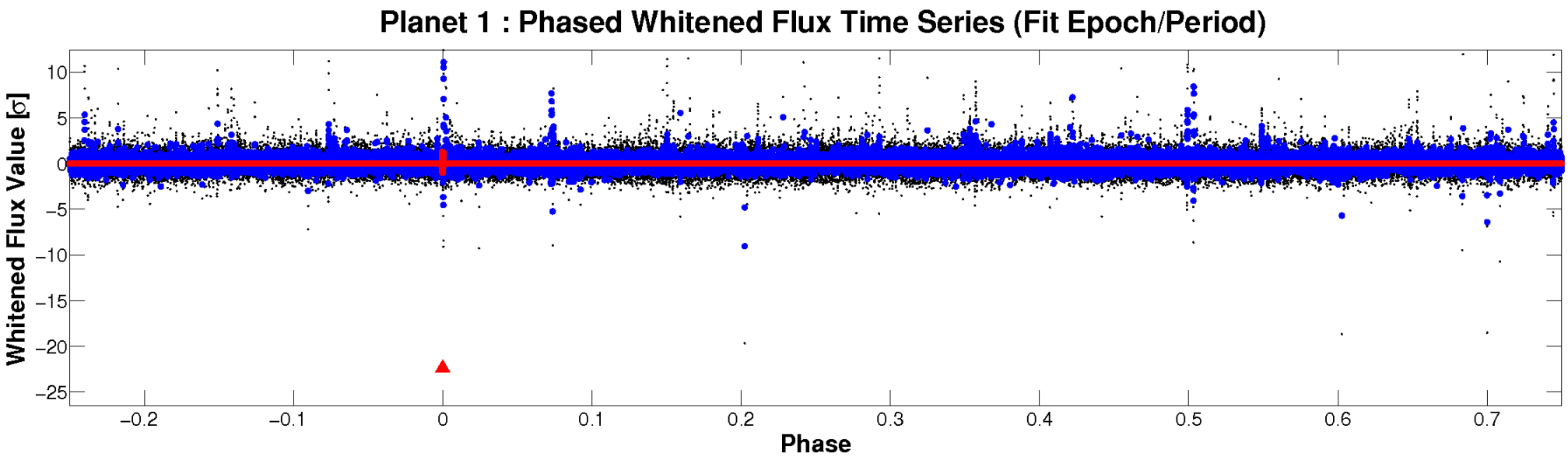
1.60e-02
1.40e-02
1.20e-02
1.00e-02
8.00e-03
6.00e-03
4.00e-03
2.00e-03
0.00e+00
-2.00e-03
Flux
-0.001
-0.0005
0
0.0005
0.001
Phase
Odd
Even
Model Fit

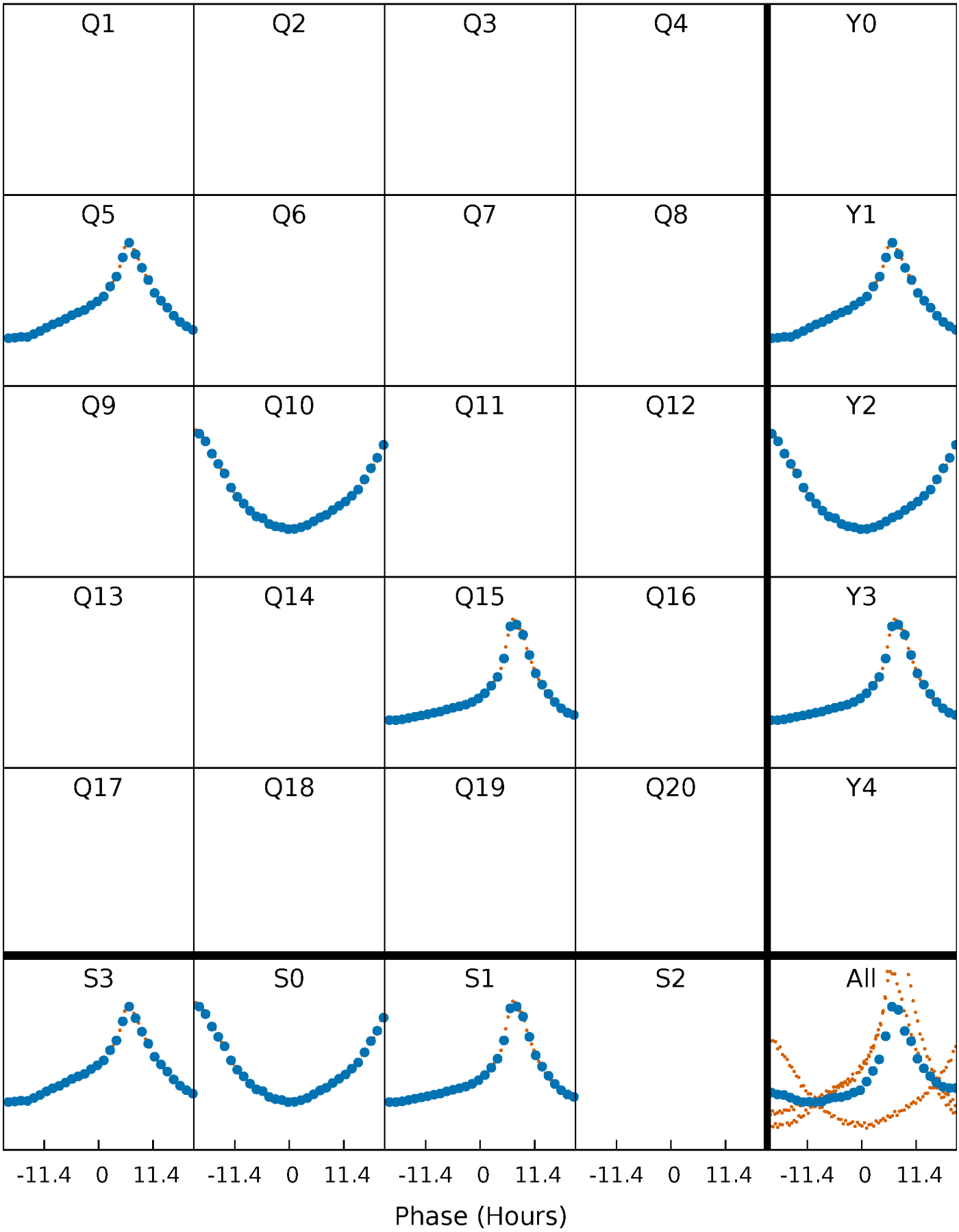
Non-Whitened Vs. Whitened Light Curve





PDC Quarter-Phased Transit Curves

TCE 006367159-01 P=456.364376 Days T_0=533.746366 (BKJD)



DV Quarter-Phased Transit Curves

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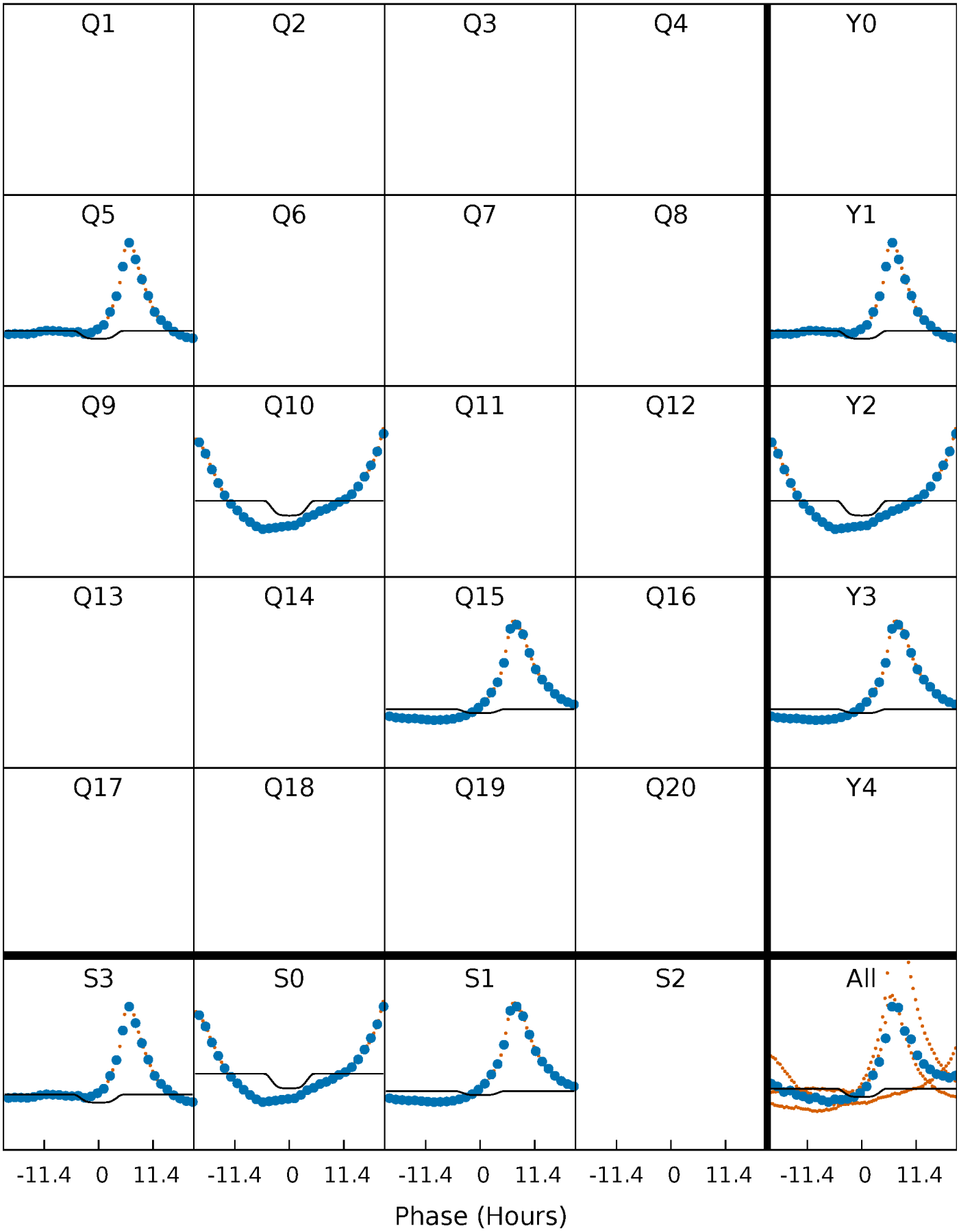
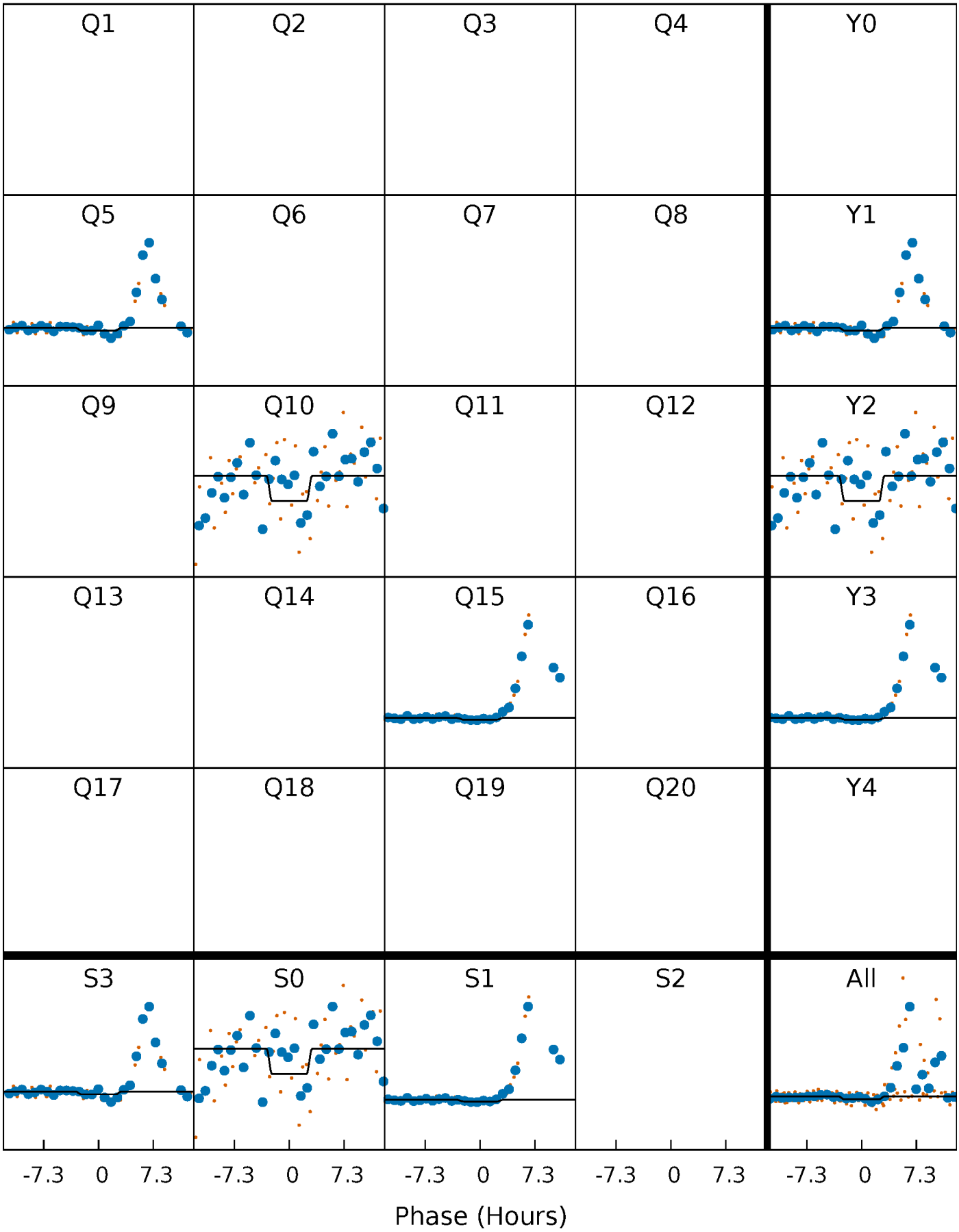


Alt. Detrend Quarter-Phased Transit Curves

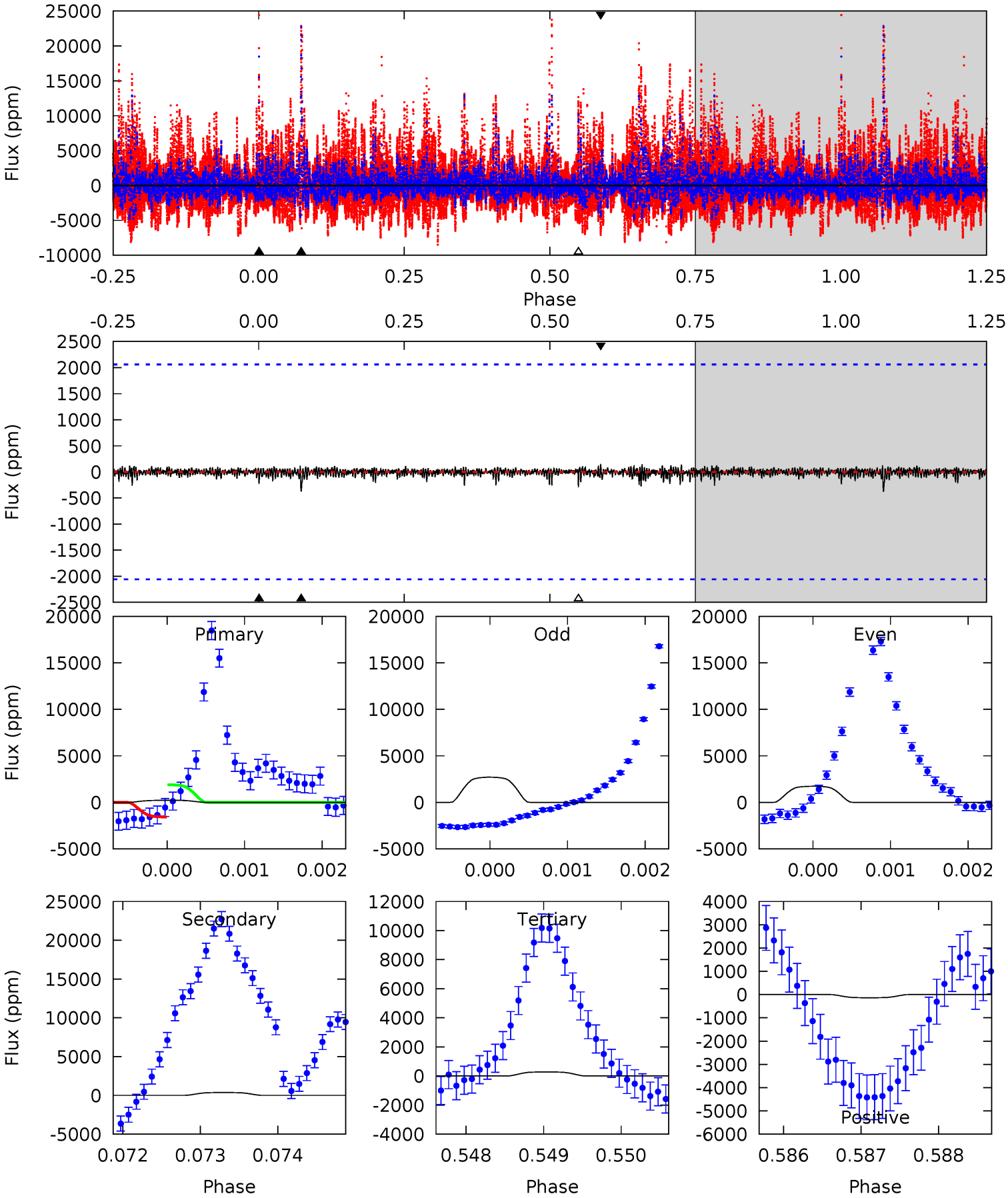
TCE 006367159-01 P=456.369940 Days T_0=533.730033 (BKJD)



DV Model-Shift Uniqueness Test

006367159-01, P = 456.364376 Days, E = 77.381990 Days

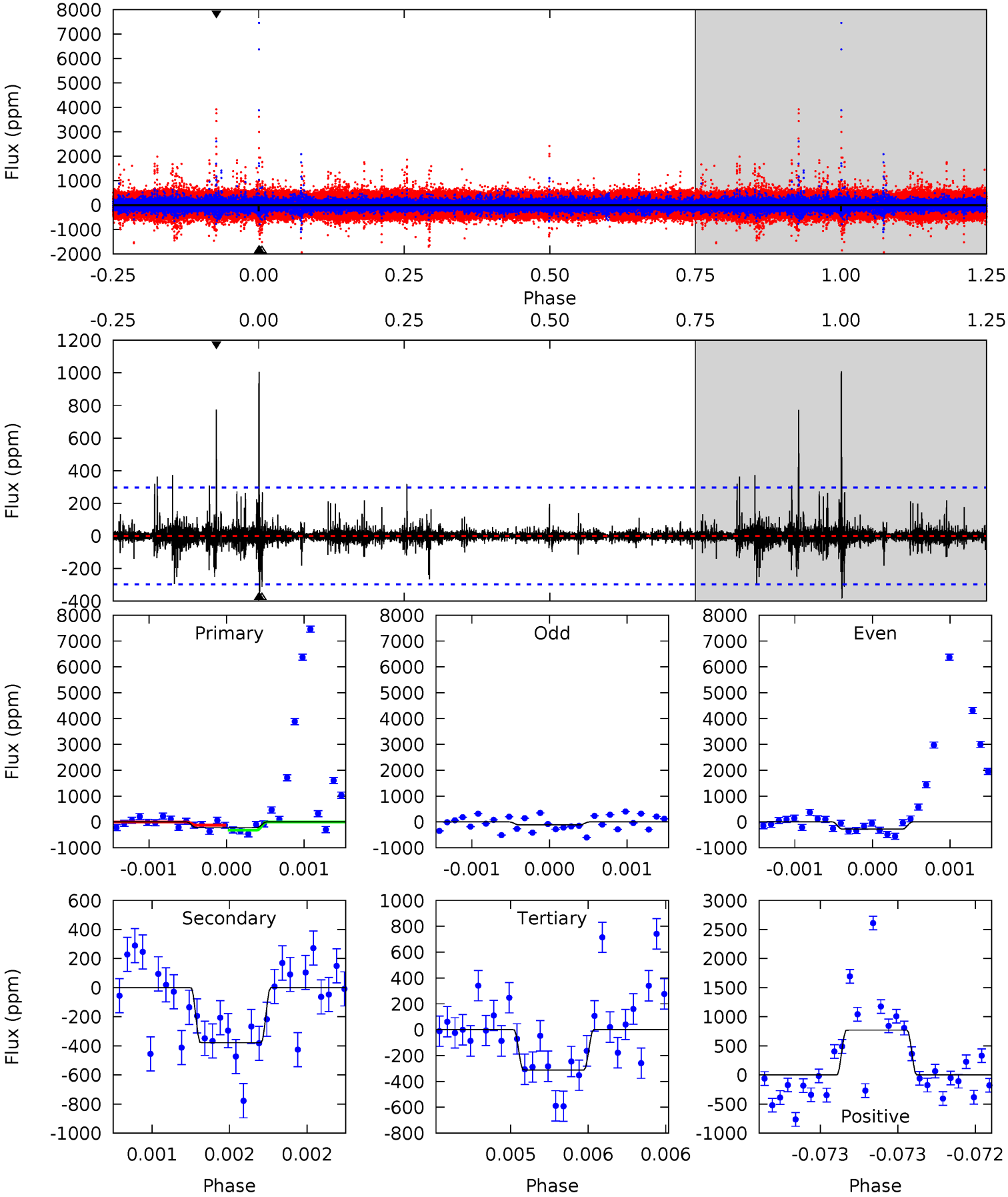
Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.58	0.98	0.74	0.36	5.46	3.31	0.13	-0.16	0.21	0.24	0.62	1.12	0.17	0.27	0.43



Alt Model-Shift Uniqueness Test

006367159-01, P = 456.369940 Days, E = 77.360093 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.15	7.10	5.84	14.5	5.56	3.46	0.77	-1.69	-10.3	1.25	-7.38	1.28	1.22	0.73	1.83



Stellar Parameters For KIC 006367159

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	$M(M_\odot)$	$p_\star$ (g·cm^{-3})
	7776^{+218}_{-328}	$3.600^{+0.567}_{-0.063}$	$-0.300^{+0.200}_{-0.300}$	$3.683^{+0.507}_{-2.029}$	$1.972^{+0.069}_{-0.518}$	$0.056^{+0.354}_{-0.017}$
	+3%/-4%	+16%/-2%	+67%/-100%	+14%/-55%	+3%/-26%	+637%/-30%
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 006367159-01 / KOI

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-369±377	$15.03^{+3.31}_{-4.08}$	724^{+59}_{-102}	5085^{+1005}_{-8355}	1665^{+2840}_{-1818}
Alt.	-378±53	$5.29^{+2.47}_{-2.23}$	729^{+52}_{-104}	8938^{+3848}_{-1644}	15218^{+31707}_{-8199}

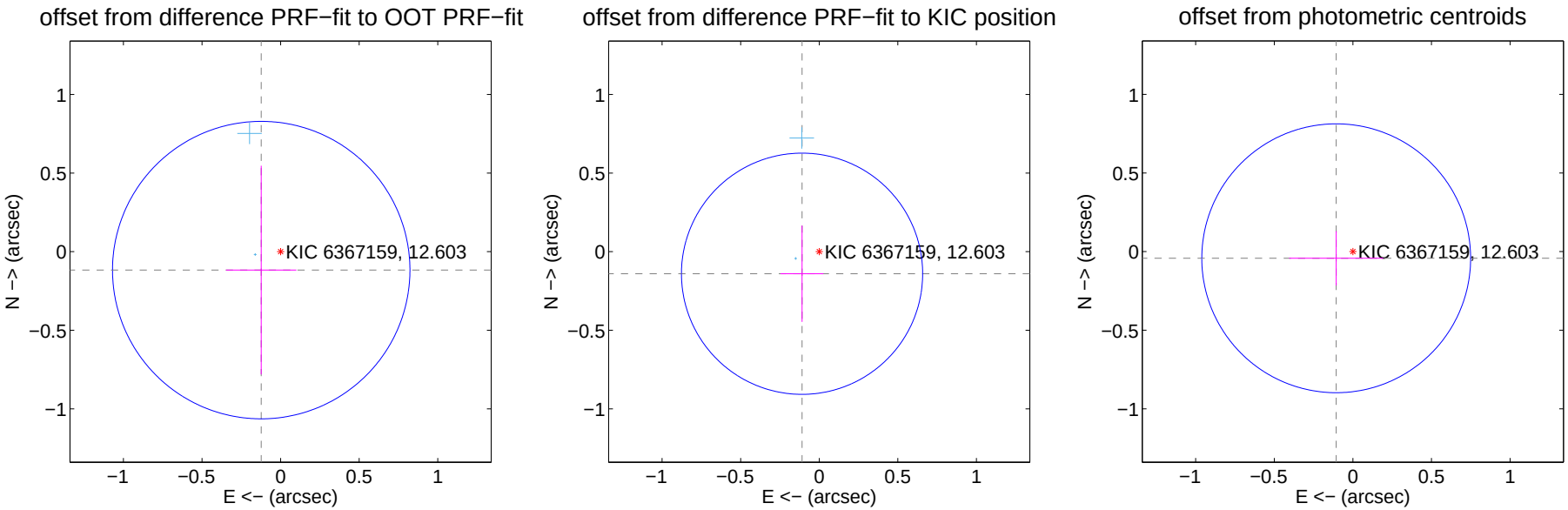
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

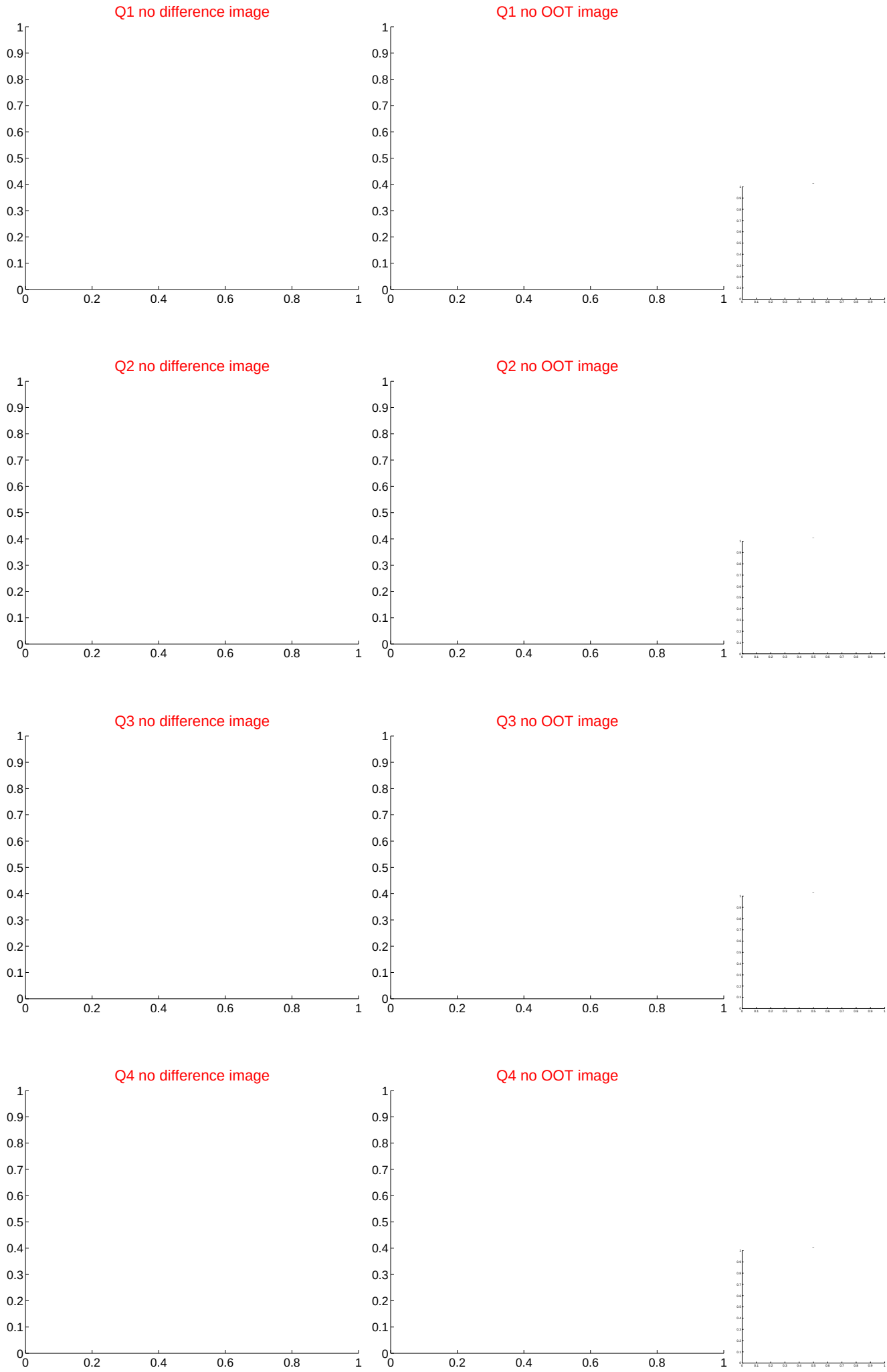
Supplemental centroid analysis for 006367159-01. Kepler magnitude: 12.60. Transit SNR 5.23
There are 2 quarters with good PRF difference image offsets
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.170 ± 0.315	0.54	0.123 ± 0.224	-0.117 ± 0.664
PRF-fit source offset from KIC position	0.178 ± 0.256	0.70	0.109 ± 0.136	-0.140 ± 0.306
photometric centroid source offset	0.11 ± 0.28	0.40	0.11 ± 0.30	-0.04 ± 0.17

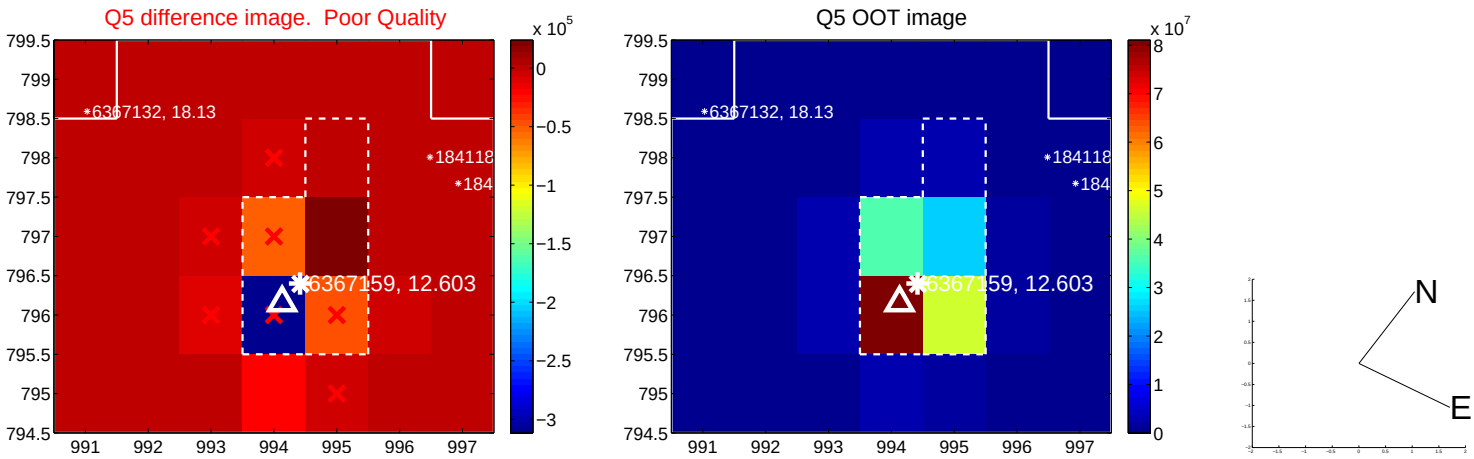


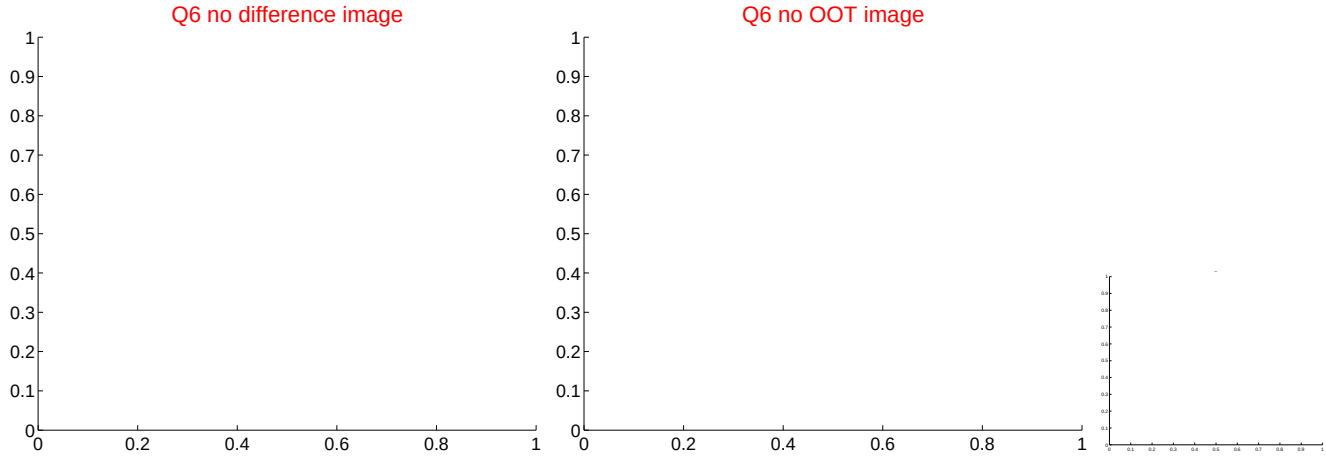
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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

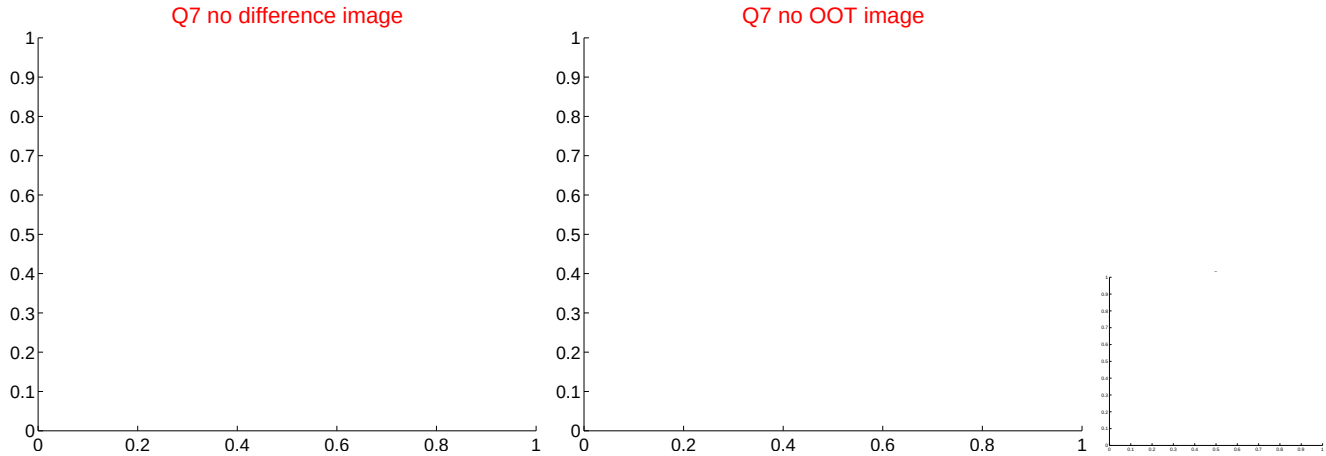
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

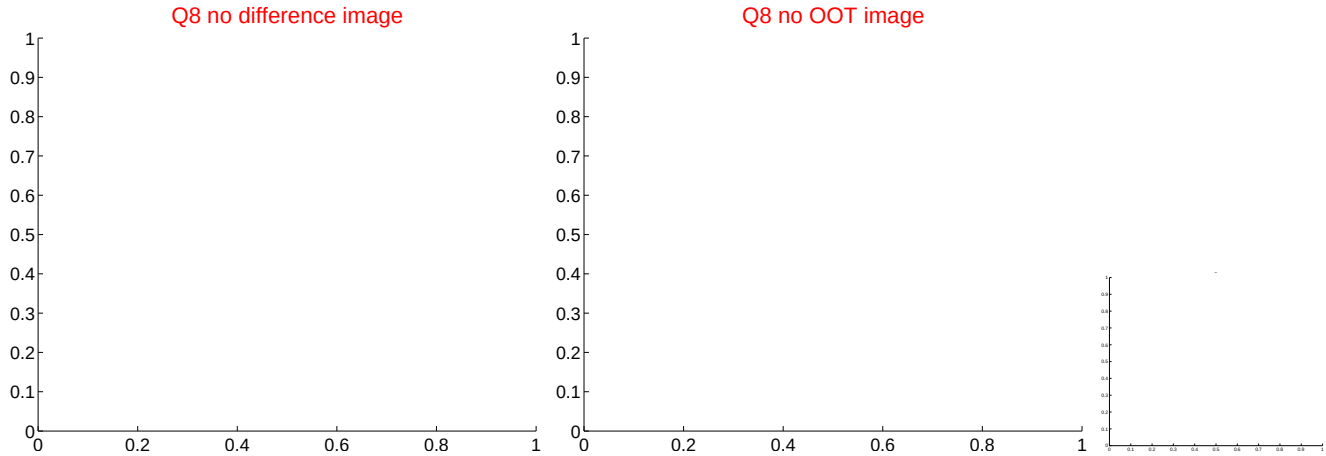


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

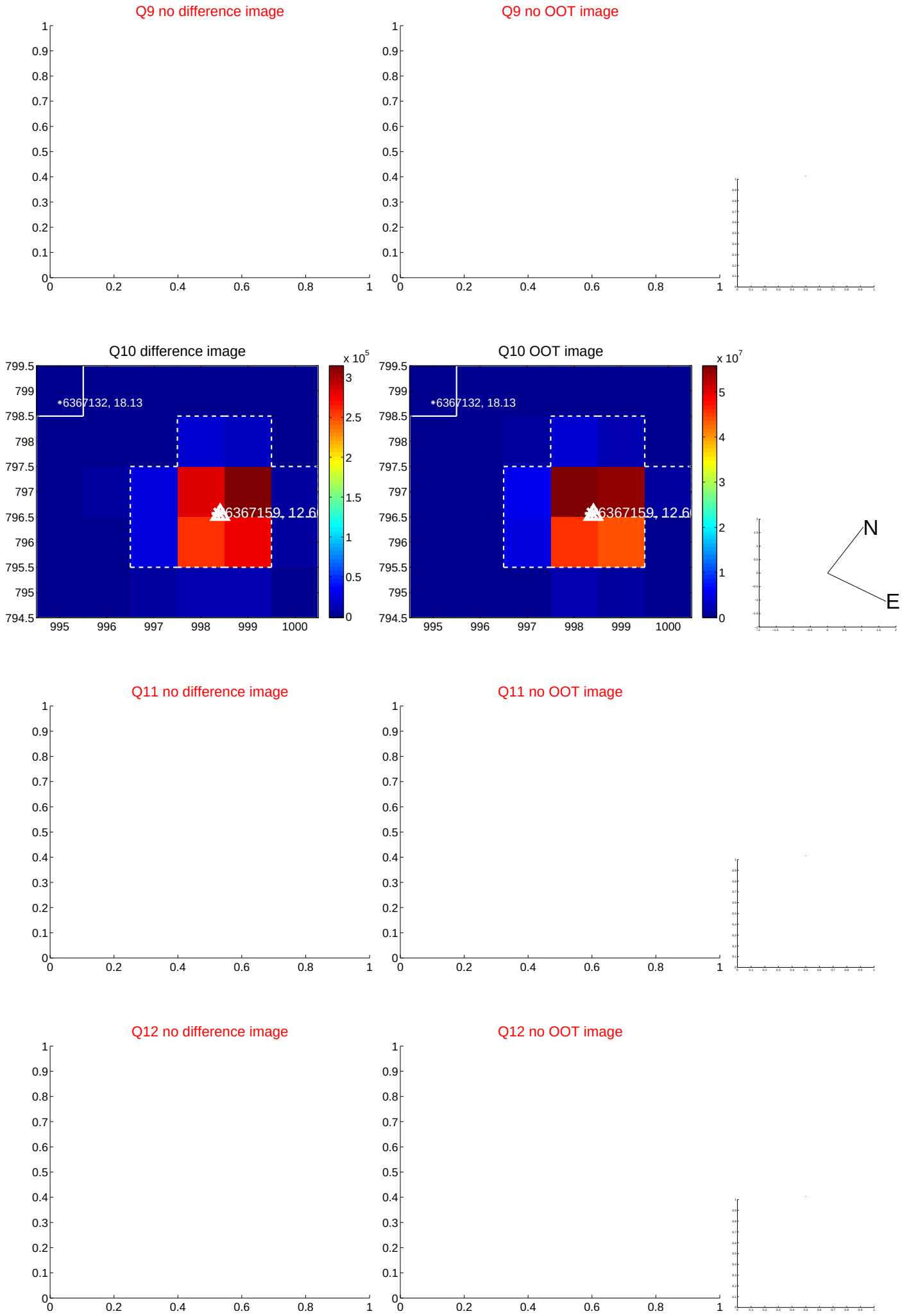




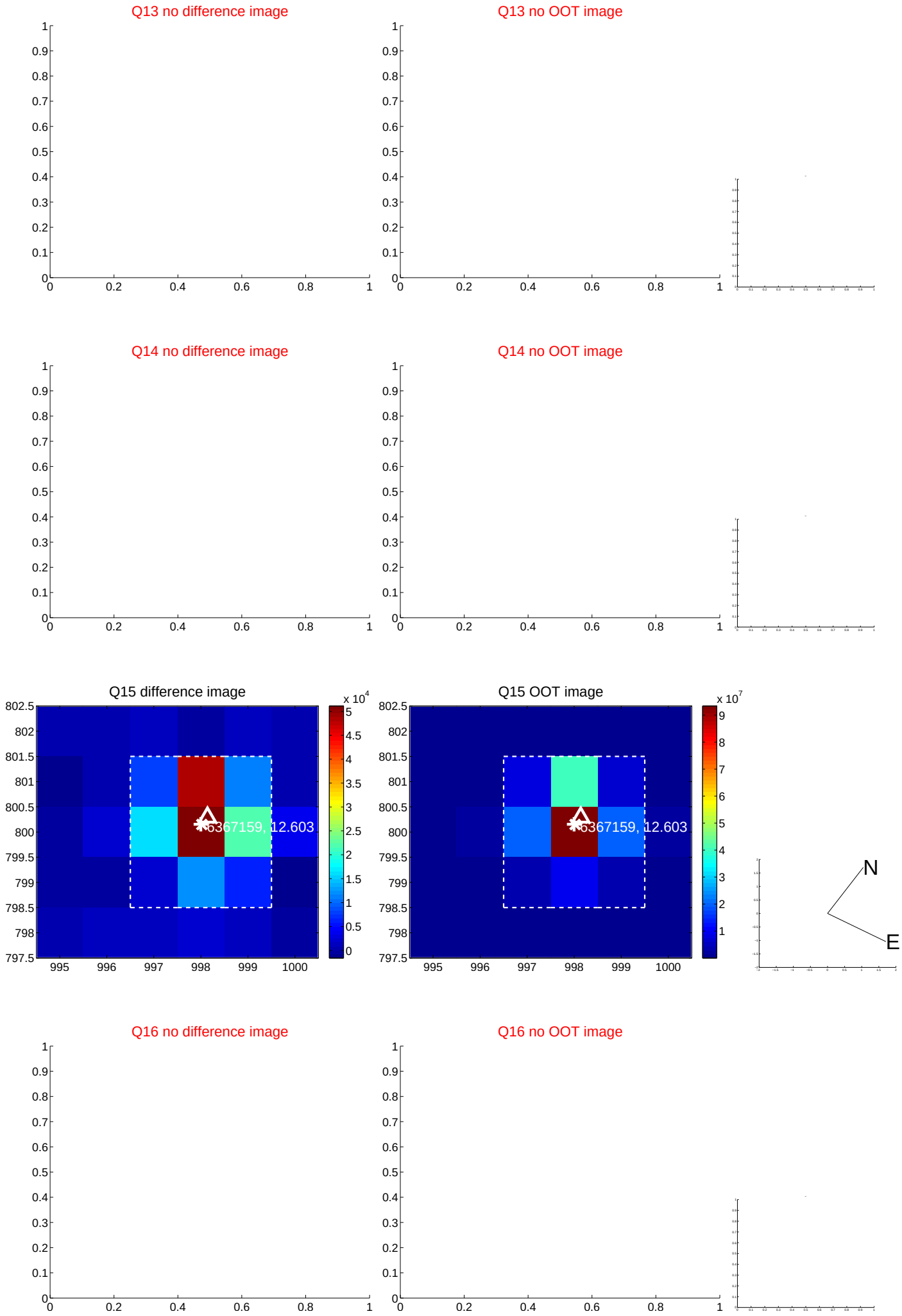




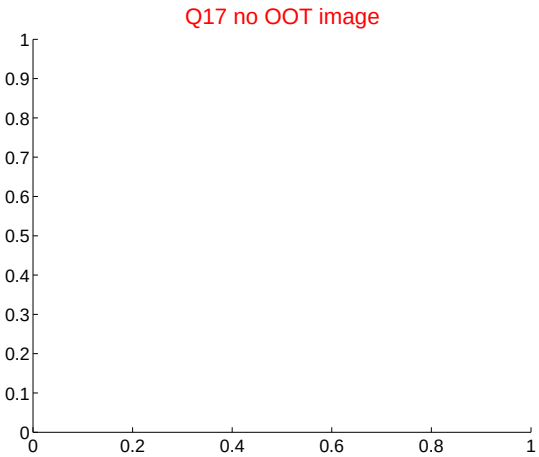
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

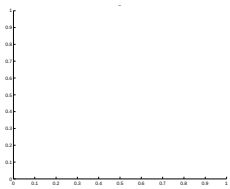


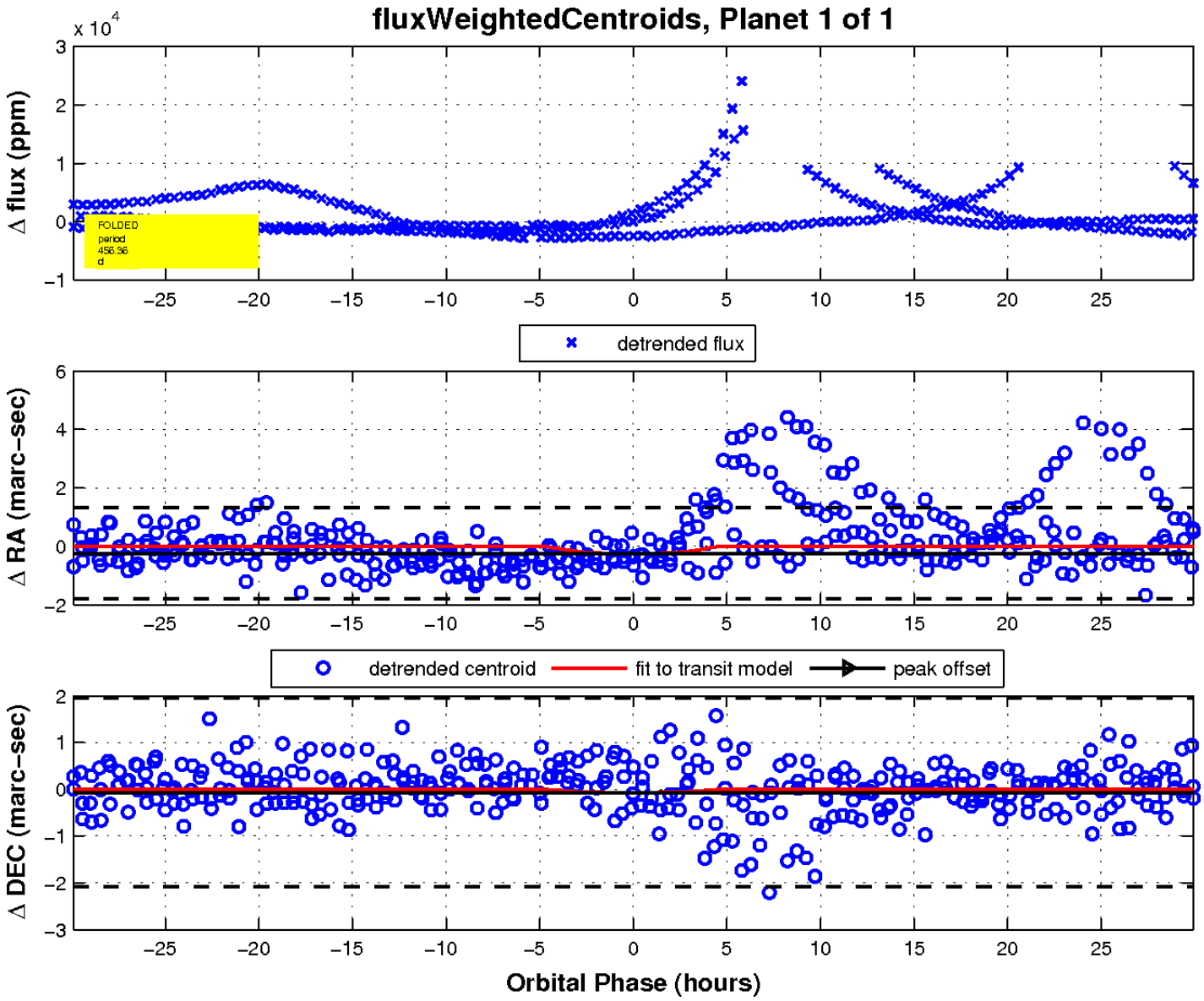
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



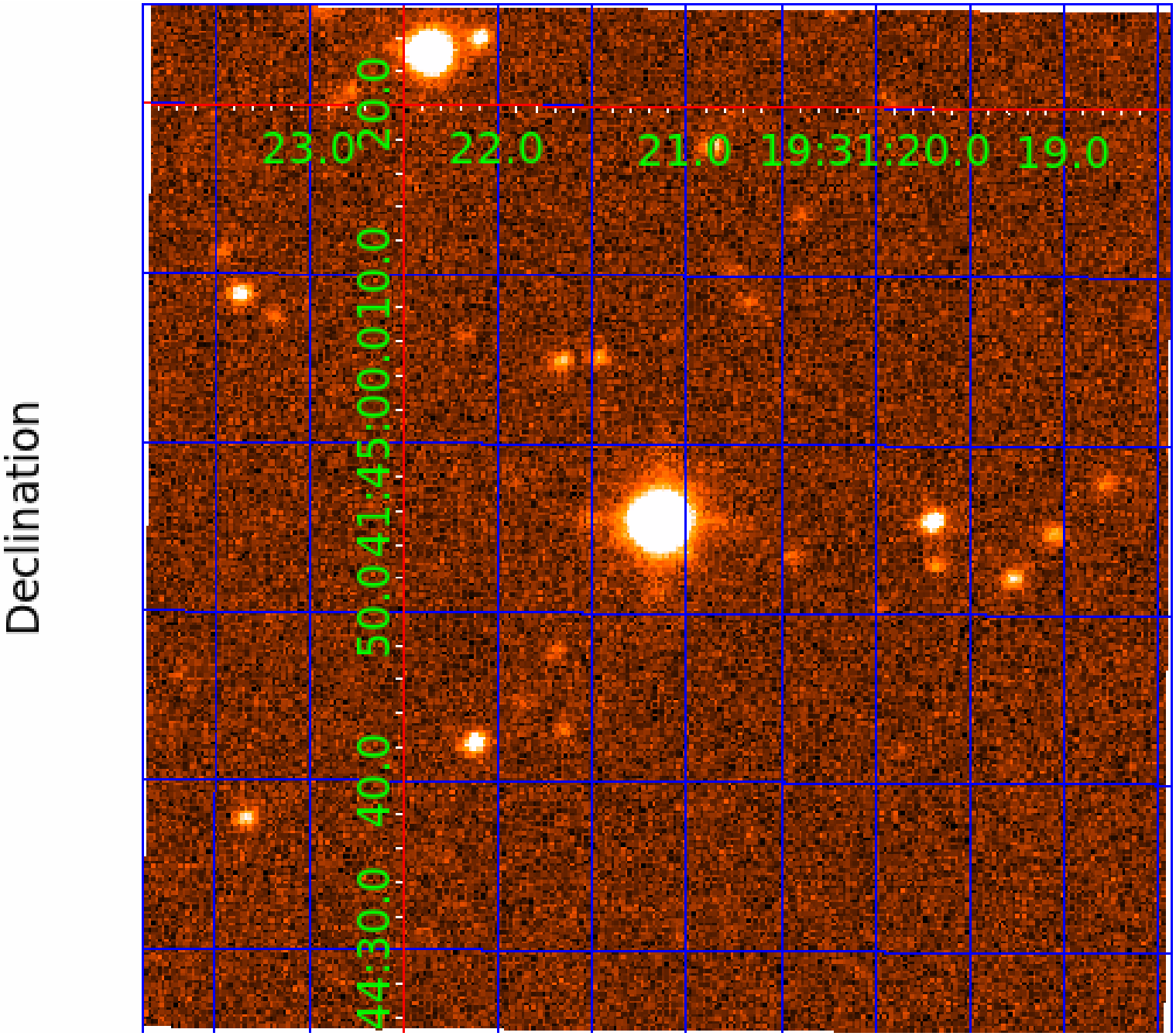
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.







UKIRT Image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