KIC 009207124

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 ($S_\oplus$)
009207124-01	OBS	No	34.198296	132.627285	3845.1	5.010	12.5	9.4	0.35	3447	2.21	0.74

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009207124-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—ALL_TRANS_CHASES—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.

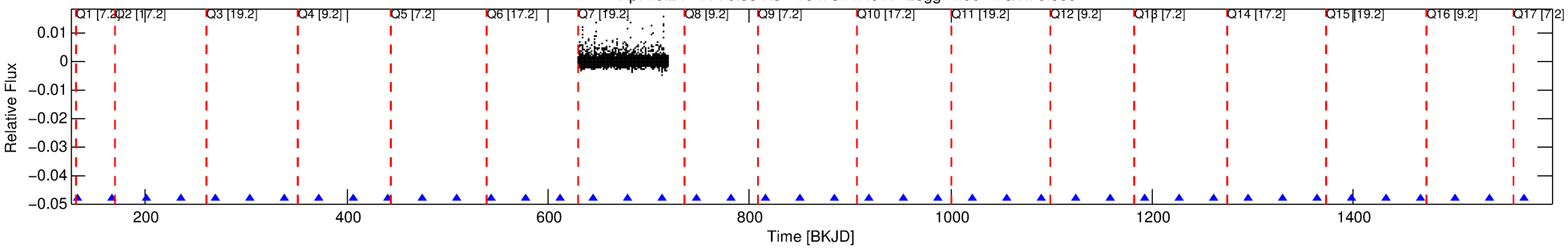
Ephemeris Match Information For 009207124-01

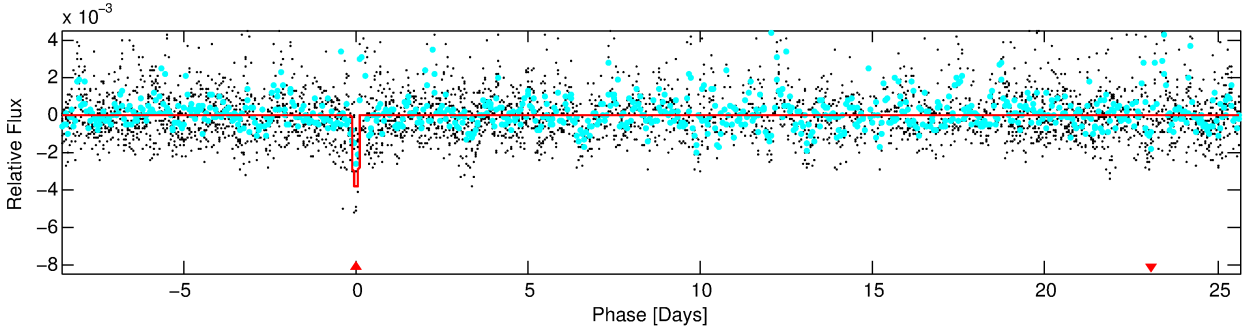
No Significant Match Found

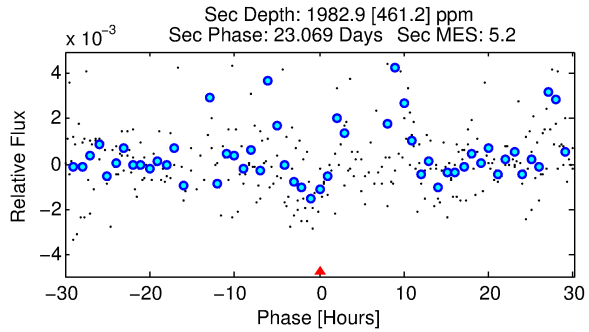
DV One-Page Summary

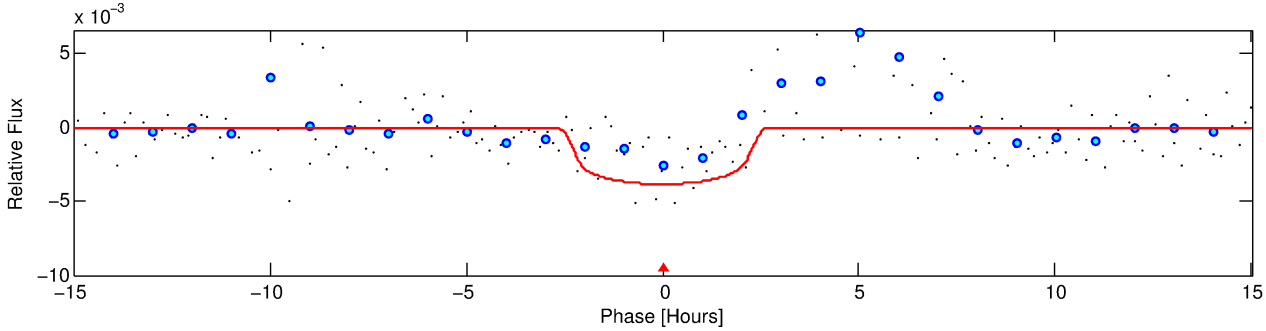
KIC: 9207124 Candidate: 1 of 1 Period: 34.198 d

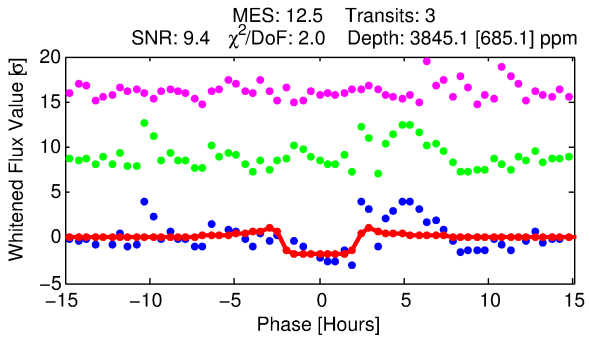
Kp: 16.24 R*: 0.35 Rs Teff: 3447.0 K Logg: 4.90 Fe/H: 0.000

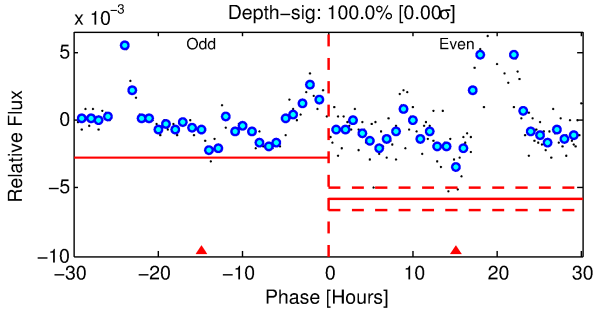


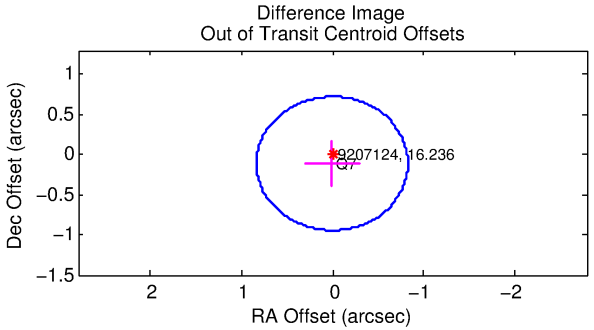












DV Fit Results:

Period = 34.19830 [0.00467] d
Epoch = 132.6273 [0.0768] BKJD
Rp/R* = 0.0573 [0.0504]
a/R* = 50.29 [186.14]
b = 0.43 [6.96]

Seff = 0.74 [0.07]
Teq = 236 [6] K
Rp = 2.22 [1.96] Re
a = 0.1467 [0.0102] AU

Ag = 4782.84 [8492.62] [0.56σ]
Teffp = 3038 [1348] K [2.08σ]

DV Diagnostic Results:

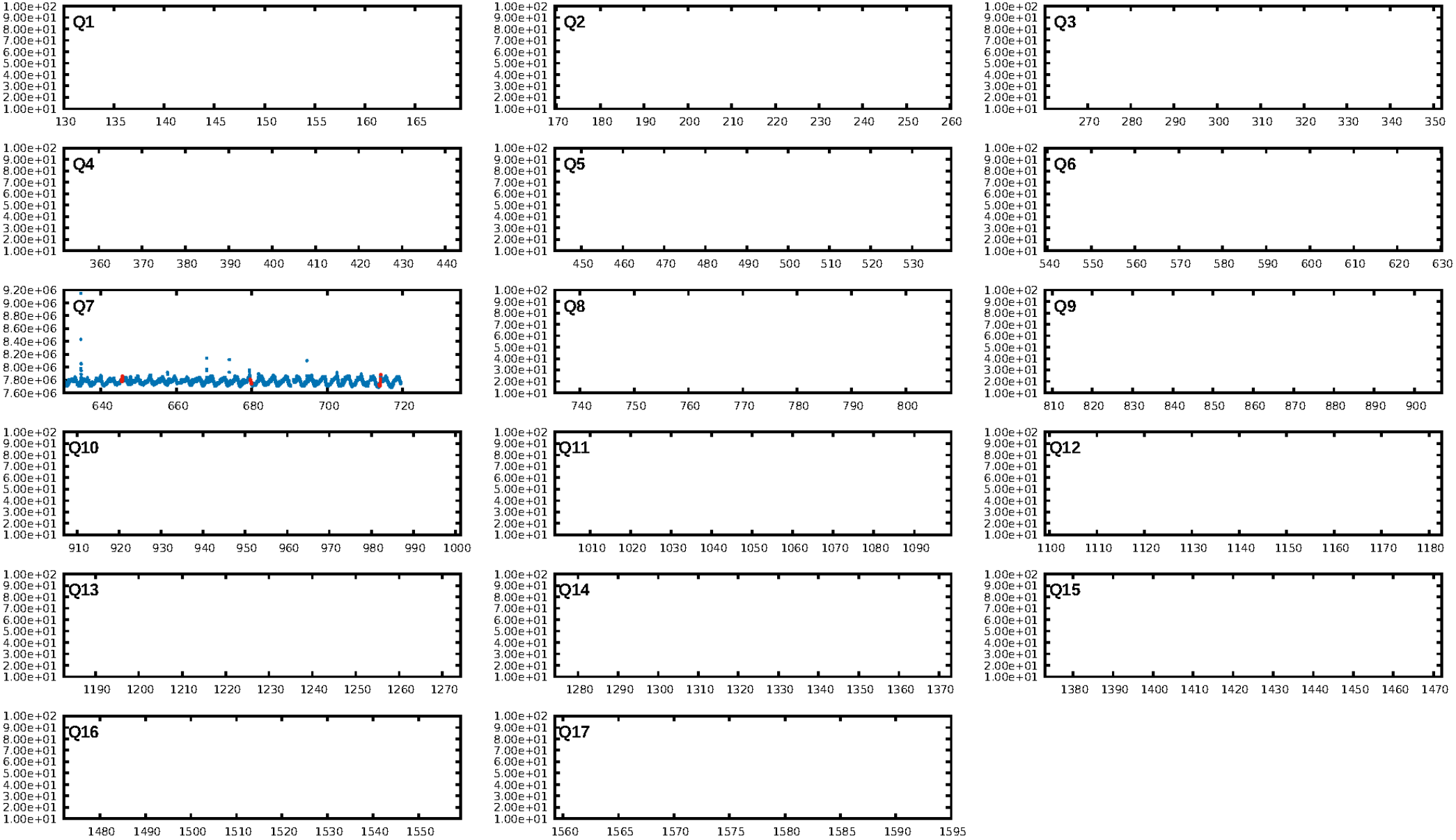
ShortPeriod−sig: N/A
LongPeriod−sig: N/A
ModelChiSquare2−sig: 0.0%
ModelChiSquareGof−sig: 1.0%
Bootstrap−pfa: 1.90e−17
RollingBand−fgt: 1.00 [3/3]
GhostDiagnostic−chr: −16.49

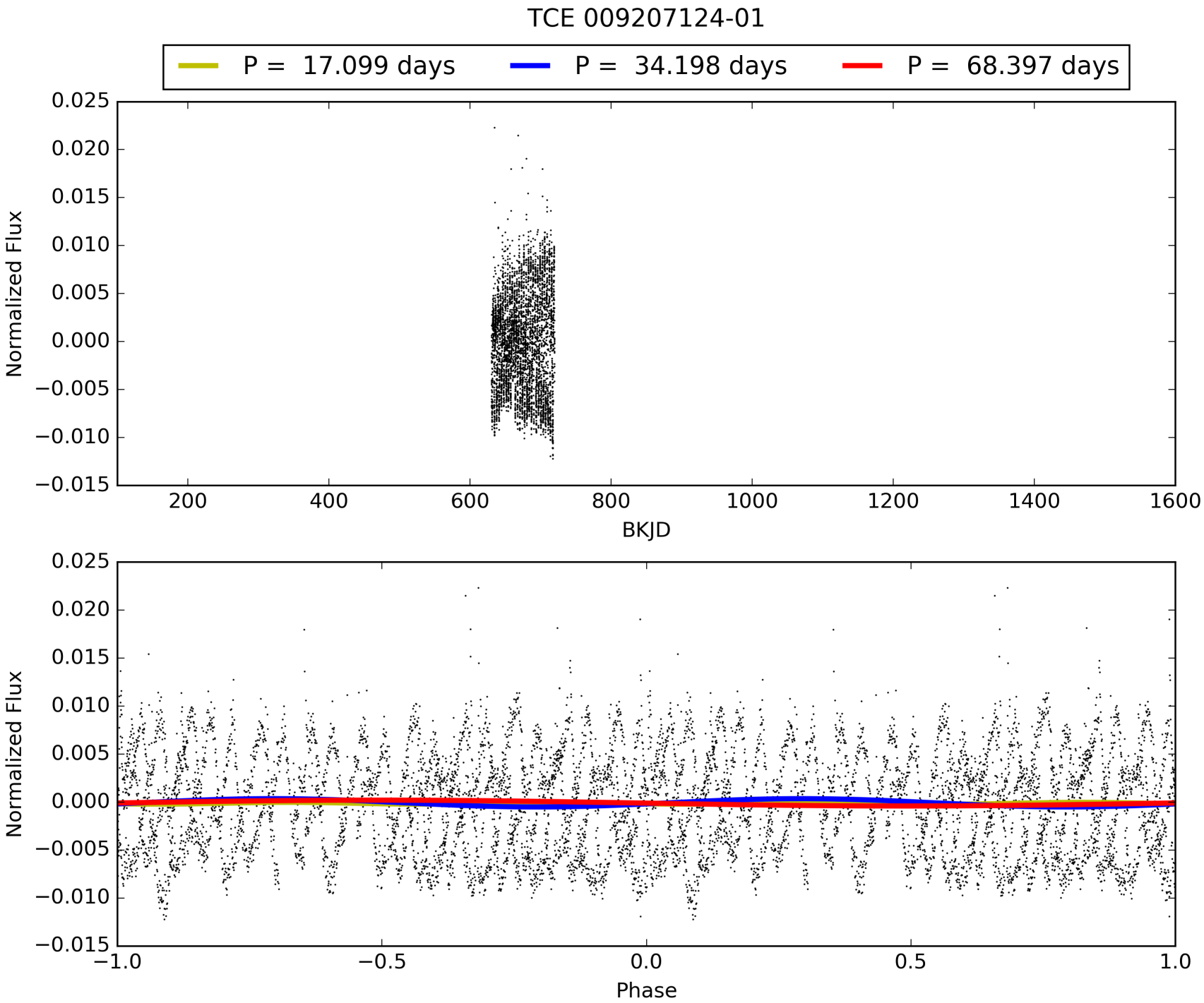
Centroid−sig: 17.5%
Centroid−so: 1.062 arcsec [1.43σ]
OotOffset−rm: 0.111 arcsec [0.40σ]
KicOffset−rm: 0.456 arcsec [1.64σ]
OotOffset−st: 0/1/0/0 [1]
KicOffset−st: 0/1/0/0 [1]
DiffImageQuality−fgm: 1.00 [1/1]
DiffImageOverlap−fno: 1.00 [1/1]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28−Jan−2016 20:21:43 Z

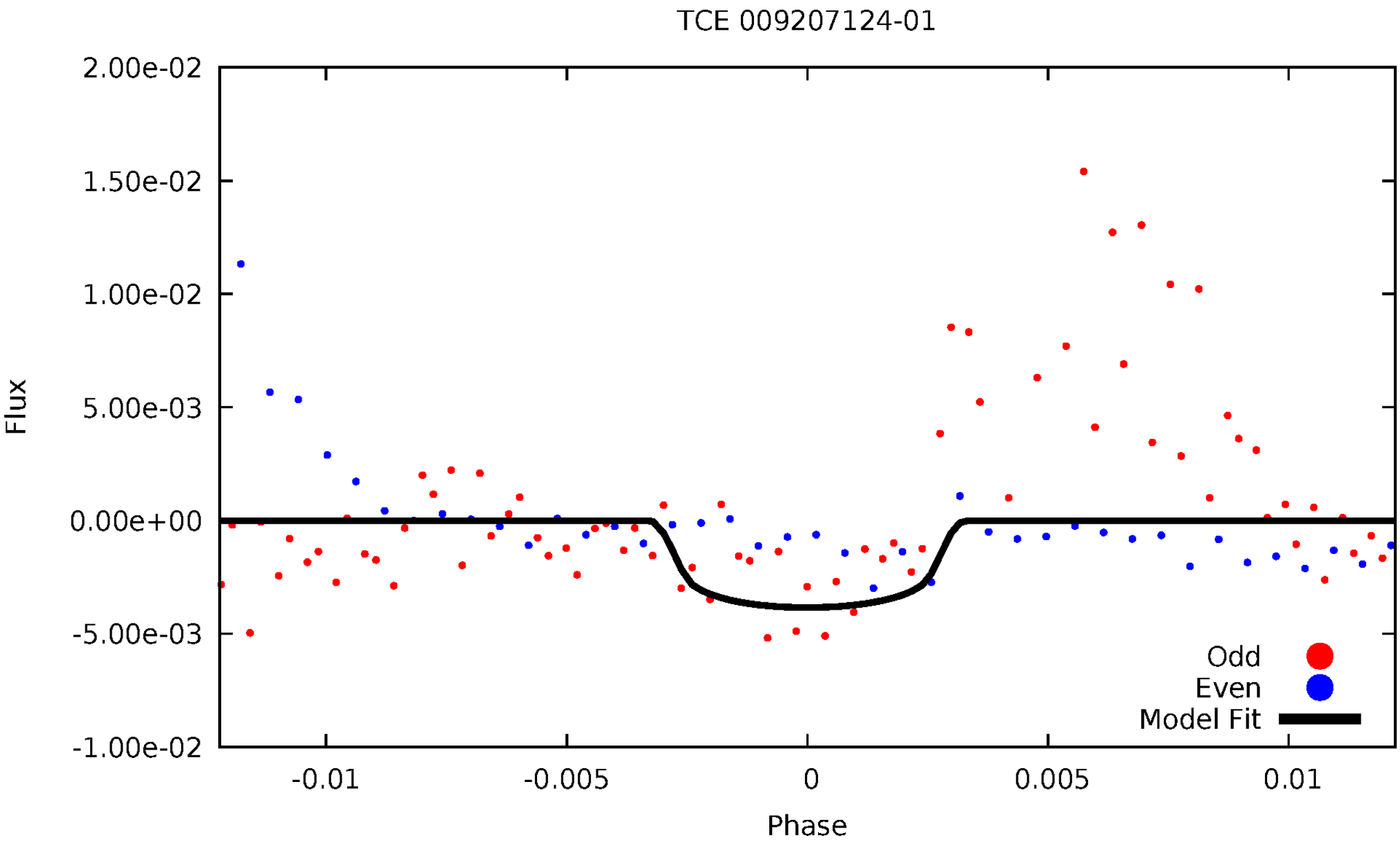
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 009207124-01, PDC Light Curves




TCE 009207124-01
P = 17.099 days
P = 34.198 days
P = 68.397 days
Normalized Flux
BKJD
Normalized Flux
Phase

DV Odd/Even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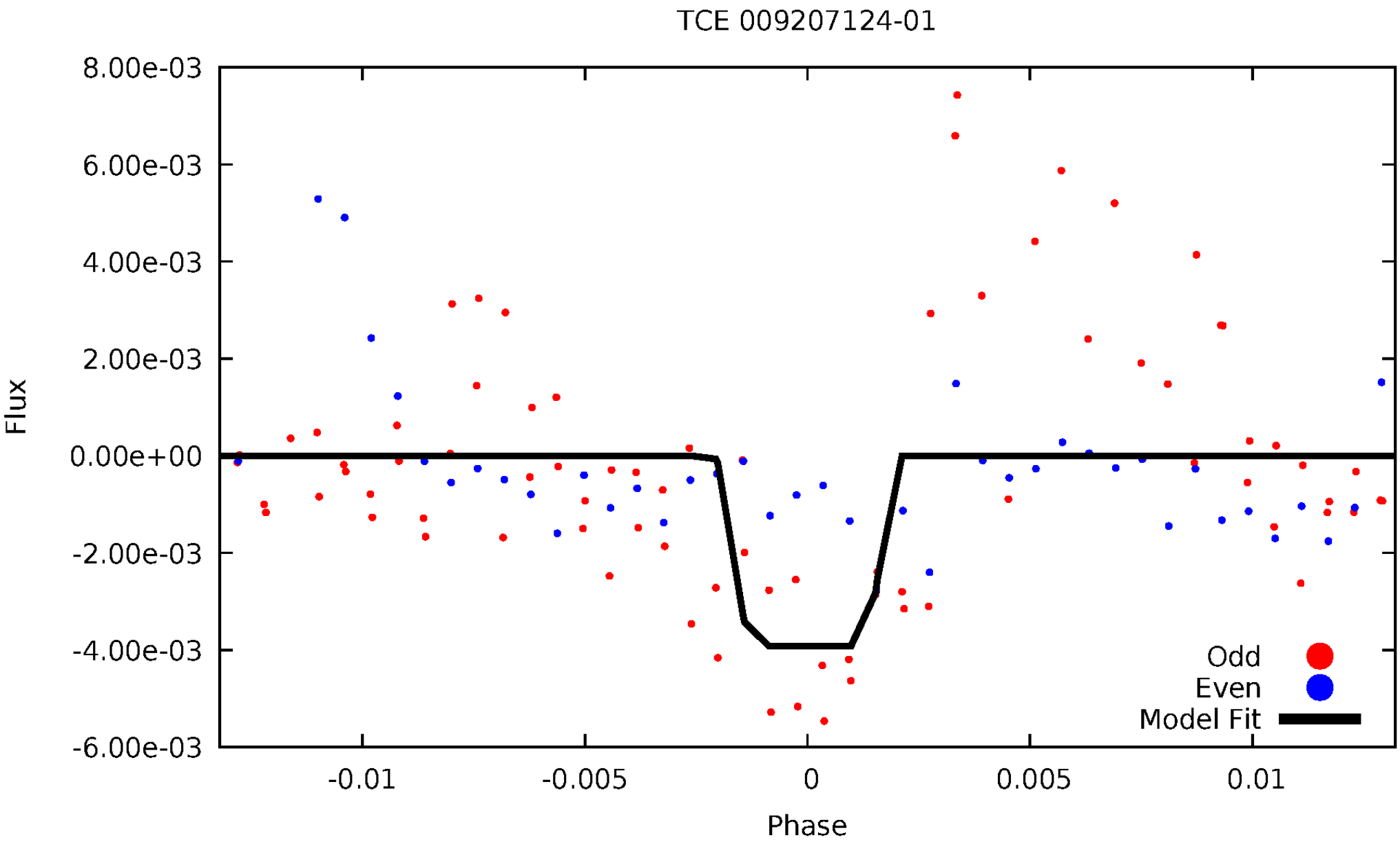
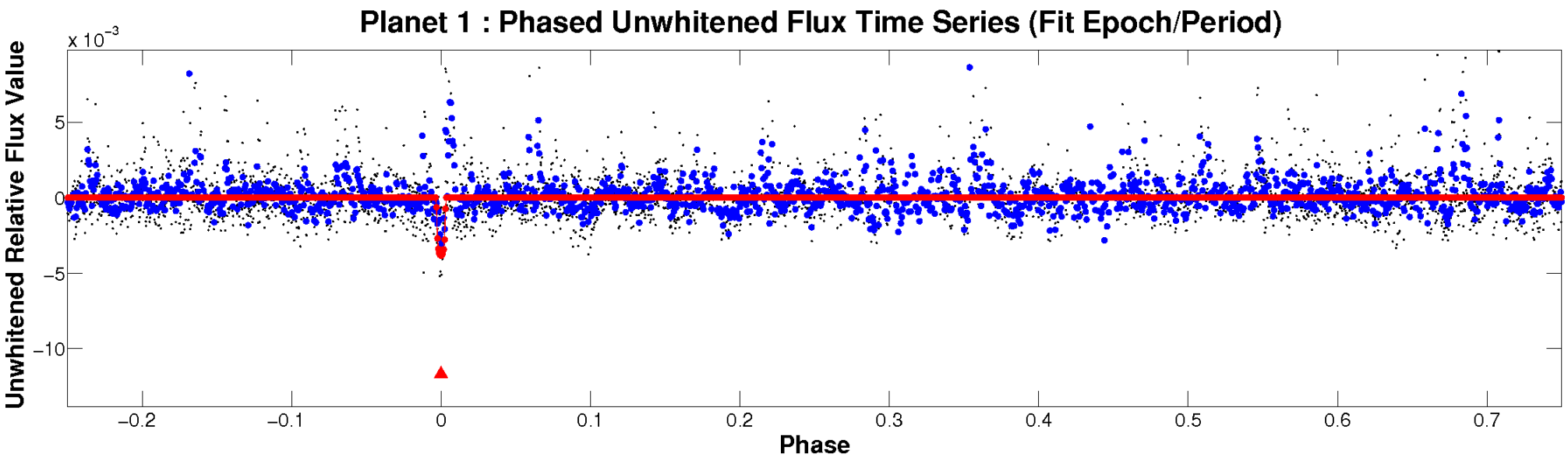
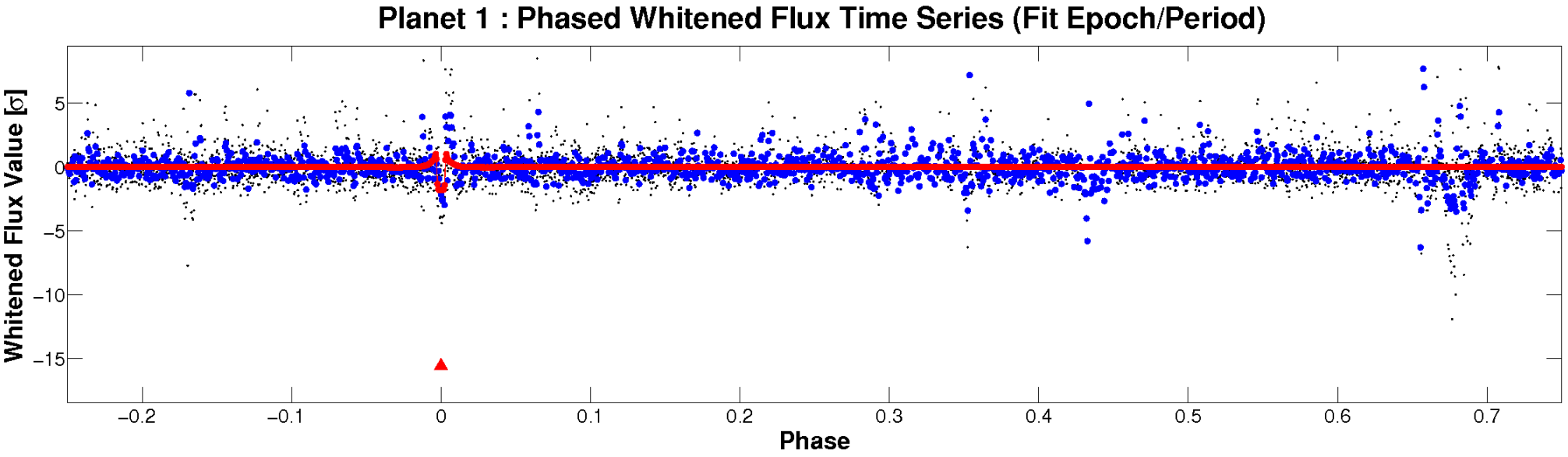
2.00e-02
1.50e-02
1.00e-02
5.00e-03
0.00e+00
-5.00e-03
-1.00e-02
Flux
-0.01
-0.005
0
0.005
0.01
Phase
Odd
Even
Model Fit

ALT Odd/Even


TCE 009207124-01
8.00e-03
6.00e-03
4.00e-03
2.00e-03
0.00e+00
-2.00e-03
-4.00e-03
-6.00e-03
Flux
-0.01
-0.005
0
0.005
0.01
Phase
Odd
Even
Model Fit

Non-Whitened Vs. Whitened Light Curve



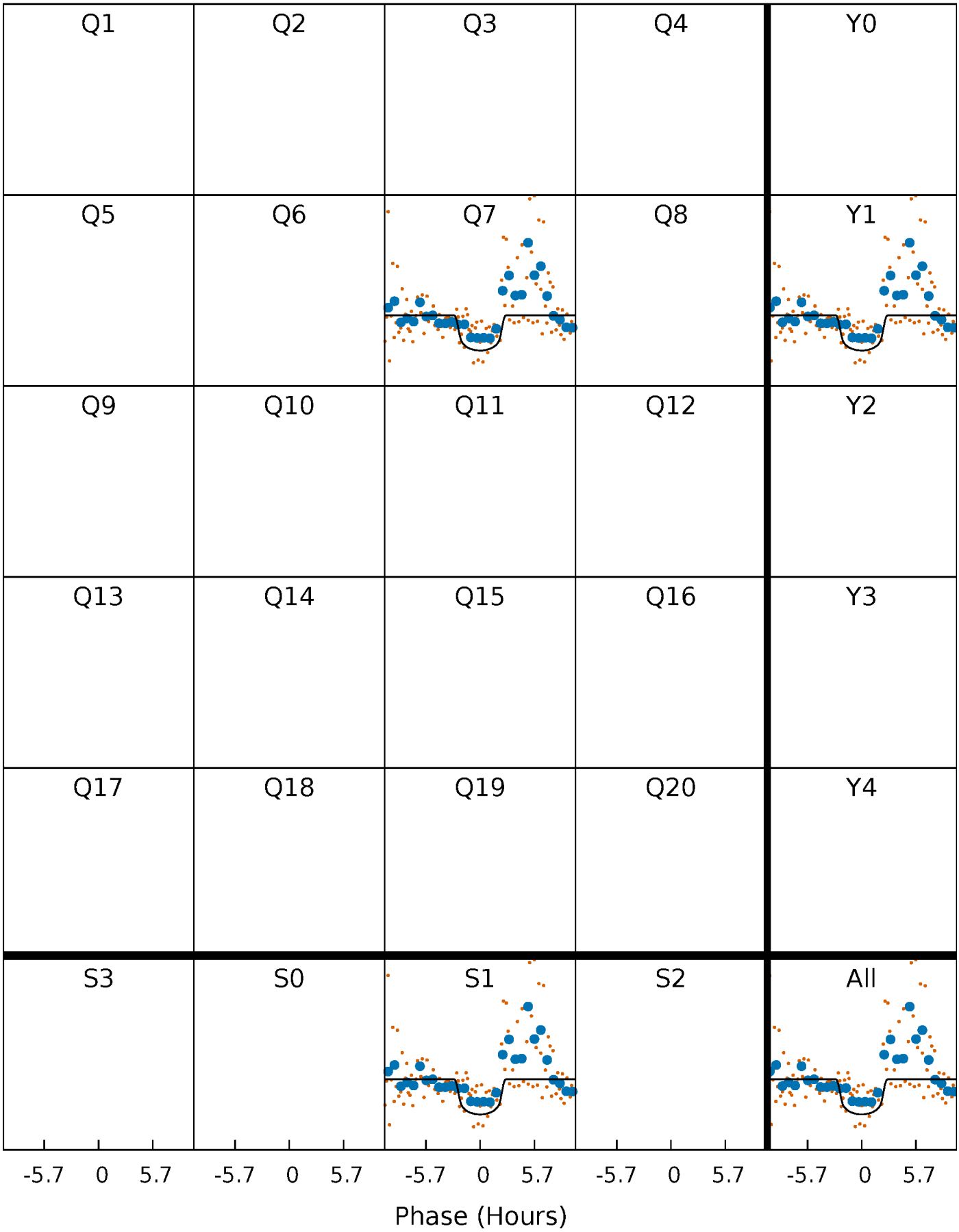


PDC Quarter-Phased Transit Curves

TCE 009207124-01 P= 34.198296 Days T_0=132.627285 (BKJD)

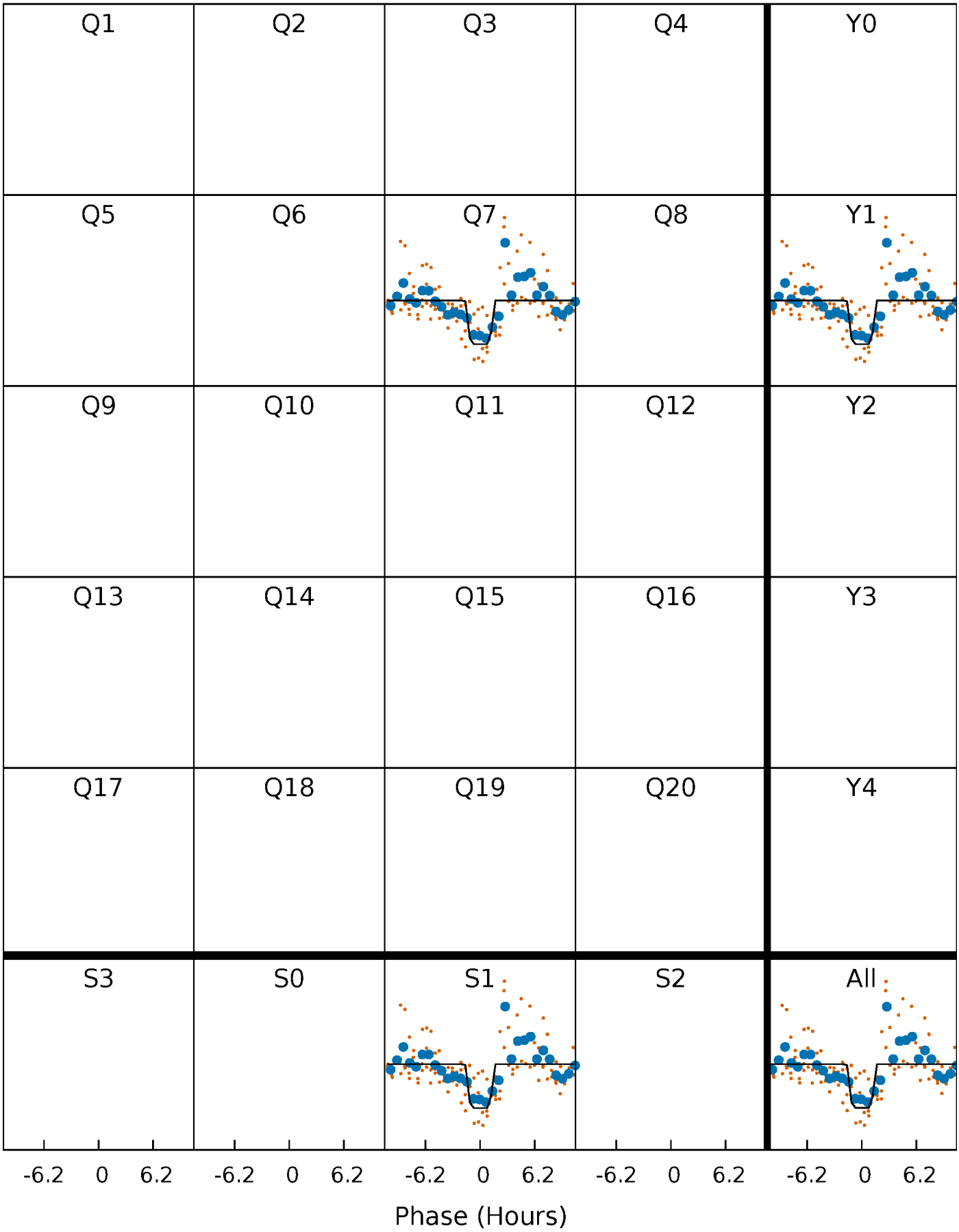
DV Quarter-Phased Transit Curves

TCE 009207124-01 P= 34.198296 Days T_0=132.627285 (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

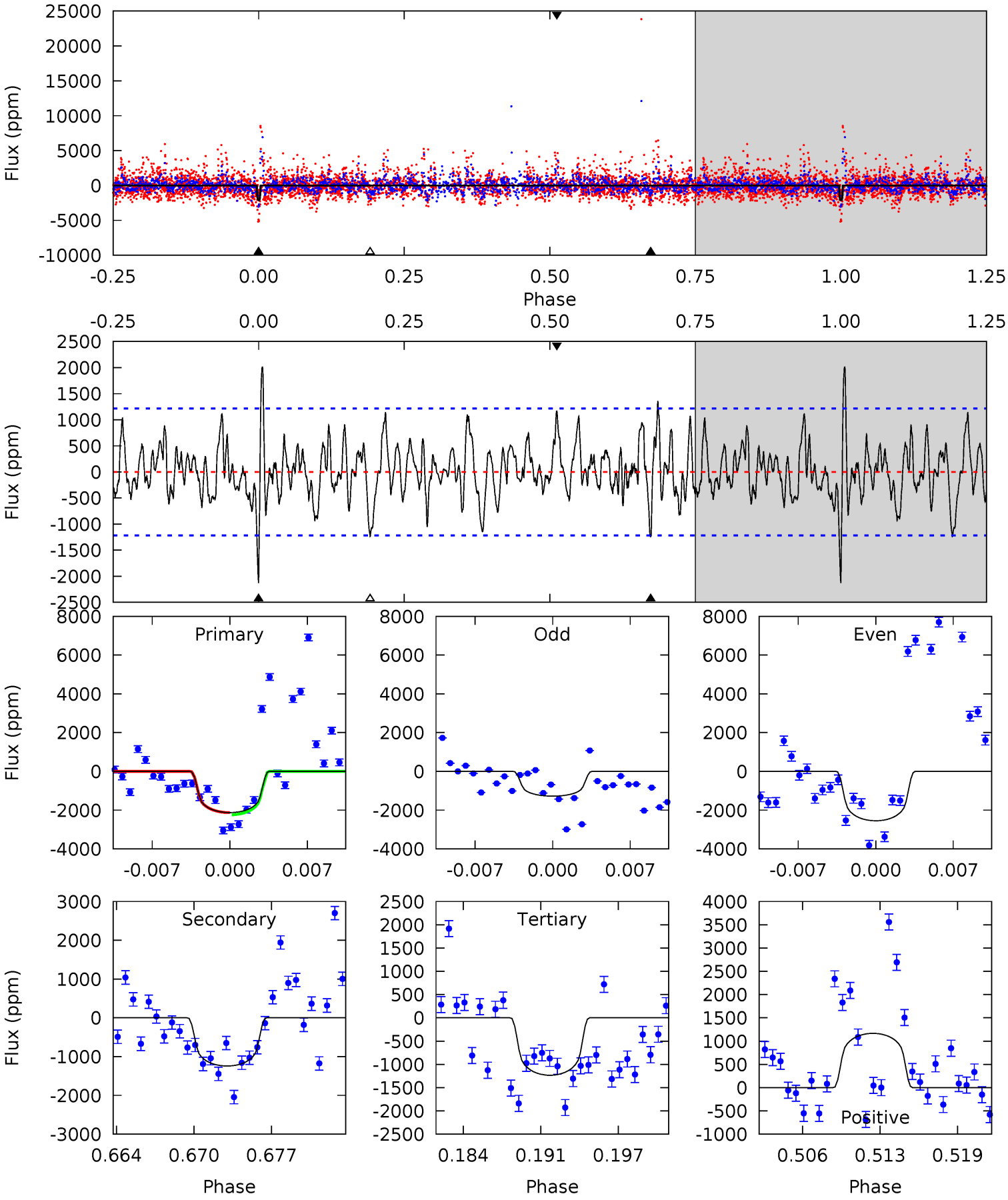
TCE 009207124-01 P= 34.203819 Days T_0=132.532980 (BKJD)



DV Model-Shift Uniqueness Test

009207124-01, P = 34.198296 Days, E = 132.627285 Days

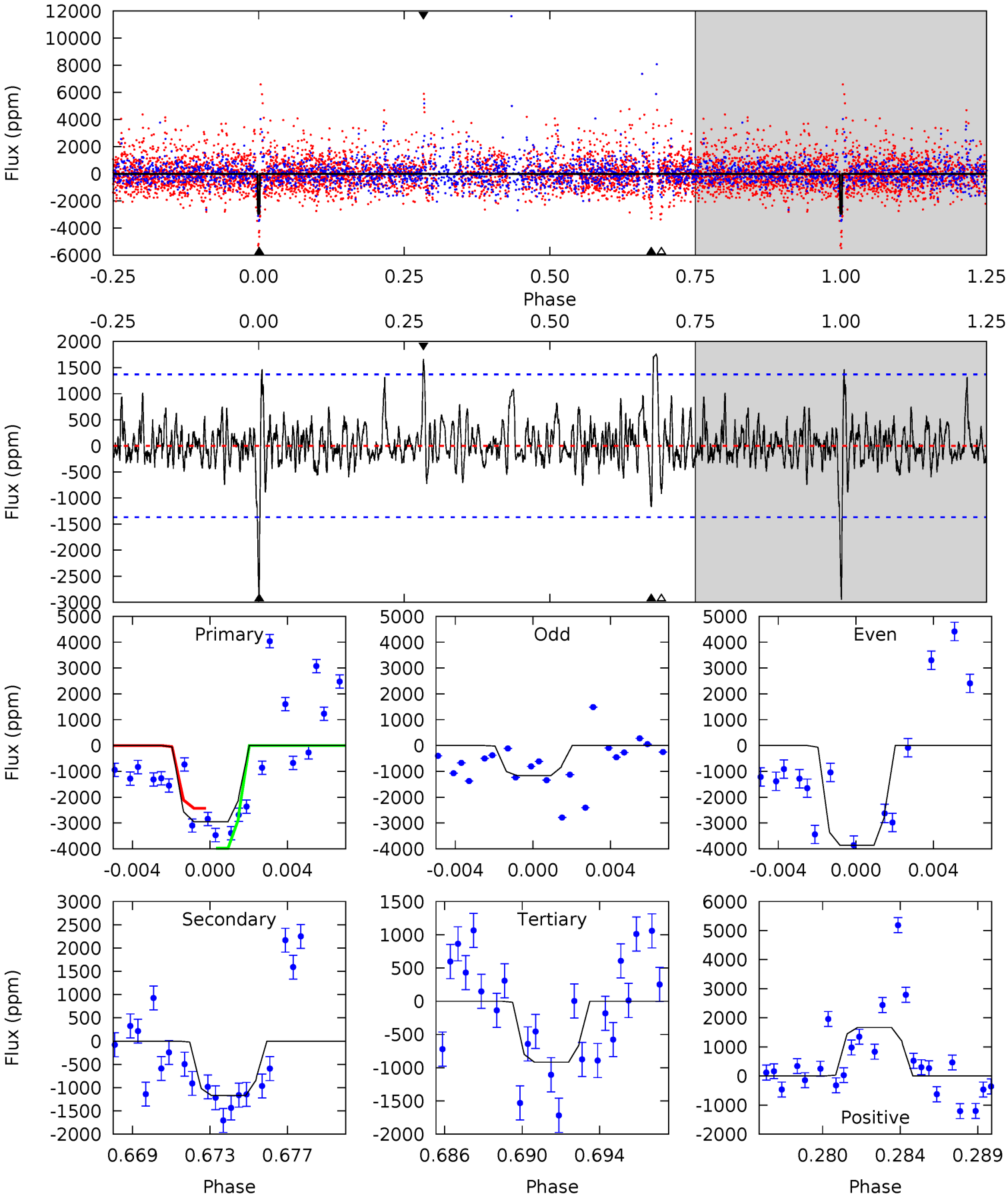
Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.92	5.21	5.18	4.89	5.11	2.72	1.82	3.74	4.03	0.03	0.32	2.01	1.42	0.49	0.24



Alt Model-Shift Uniqueness Test

009207124-01, P = 34.203819 Days, E = 132.532980 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.2	4.44	3.49	6.32	5.19	2.86	1.27	7.71	4.87	0.96	-1.88	4.91	0.96	0.37	2.86



Stellar Parameters For KIC 009207124

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	$M(M_\odot)$	$p_\star$ (g·cm^{-3})
	3447^{+44}_{-44}	$4.896^{+0.035}_{-0.031}$	$0.000^{+0.100}_{-0.100}$	$0.354^{+0.031}_{-0.034}$	$0.360^{+0.037}_{-0.041}$	$11.390^{+2.214}_{-1.541}$
	+1%/-1%	+1%/-1%	+inf%/-inf%	+9%/-10%	+10%/-11%	+19%/-14%
Source	PHO2	PHO2	PHO2	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 009207124-01 / KOI

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1242±238	$2.56^{+1.85}_{-1.55}$	330^{+7}_{-7}	2878^{+936}_{-414}	2374^{+12398}_{-1657}
Alt.	-1170±263	$2.71^{+1.87}_{-1.64}$	330^{+6}_{-7}	2790^{+929}_{-345}	1805^{+11392}_{-1145}

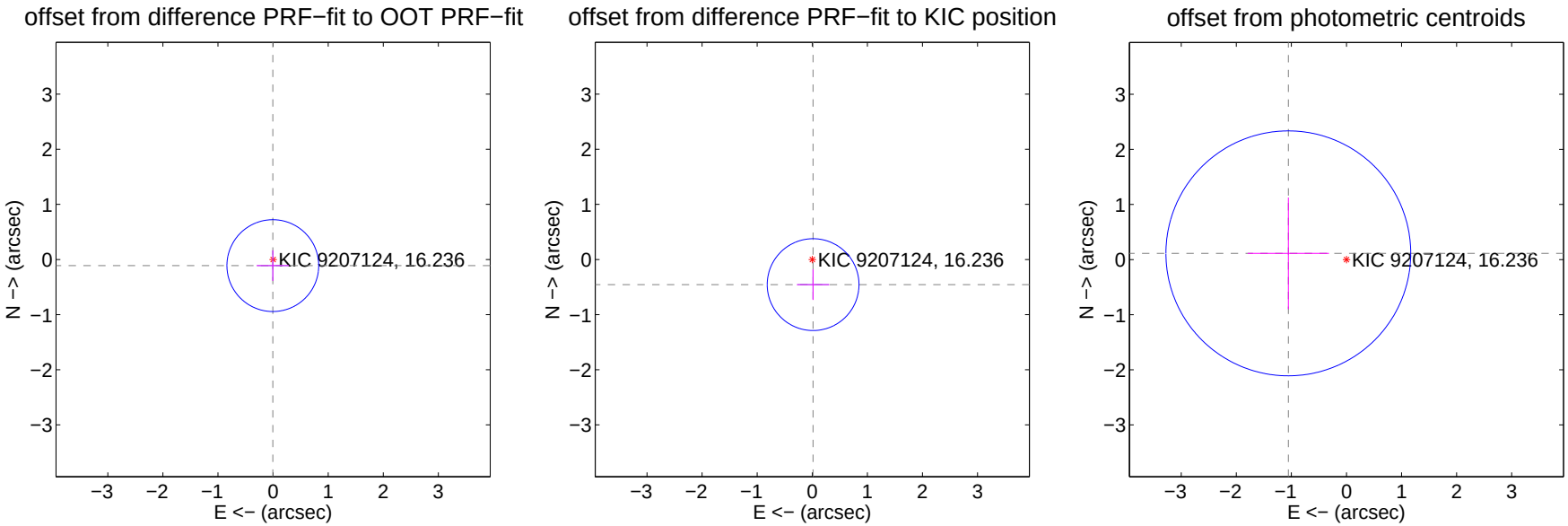
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

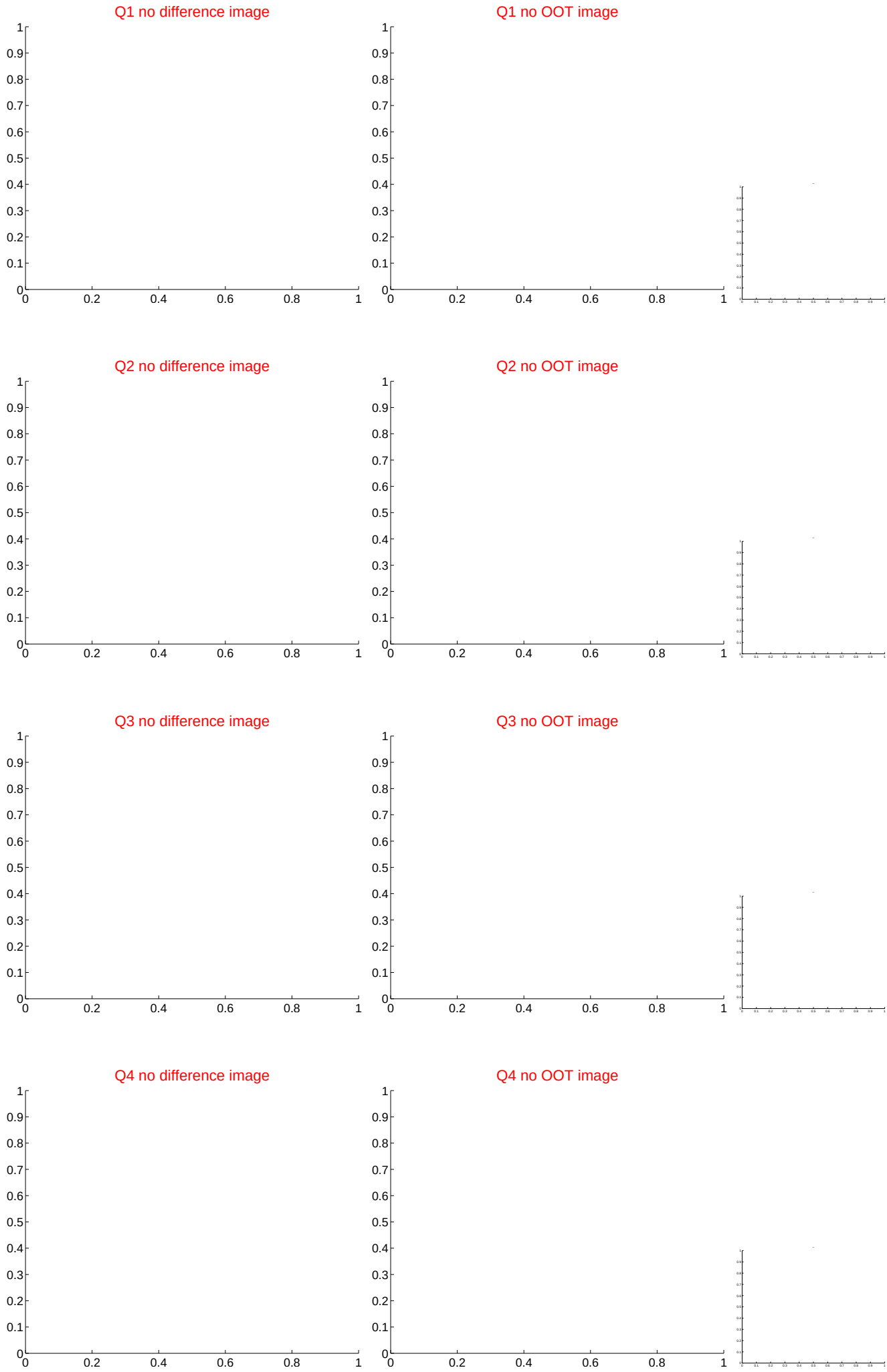
Supplemental centroid analysis for 009207124-01. Kepler magnitude: 16.24. Transit SNR 9.38
There are 1 quarters with good PRF difference image offsets
The direct PRF centroid is offset from the target star catalog position by about 0.35 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.111 ± 0.278	0.40	0.005 ± 0.294	-0.111 ± 0.278
PRF-fit source offset from KIC position	0.456 ± 0.278	1.64	-0.015 ± 0.294	-0.456 ± 0.278
photometric centroid source offset	1.06 ± 0.74	1.43	1.06 ± 0.74	0.11 ± 1.01

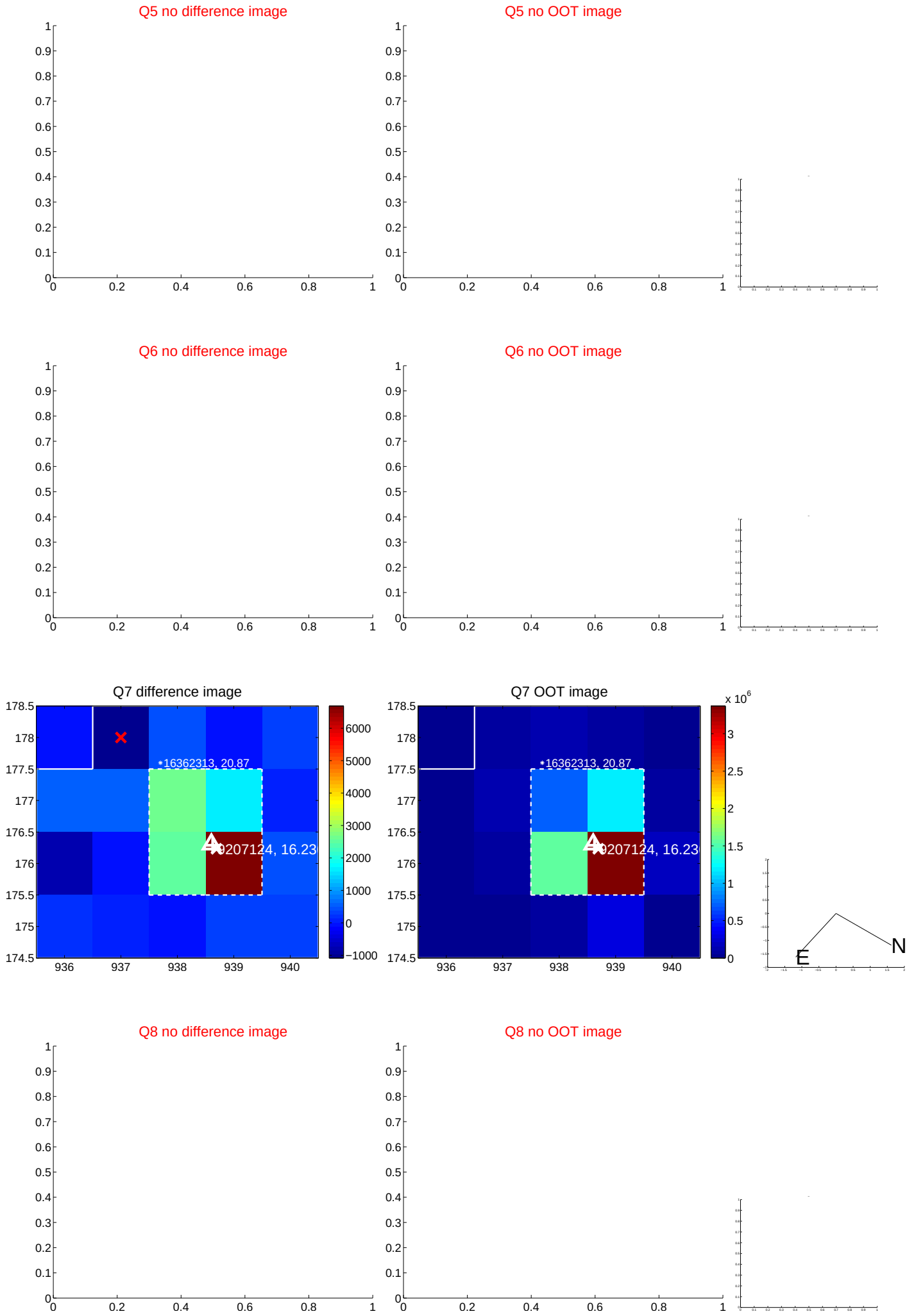


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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

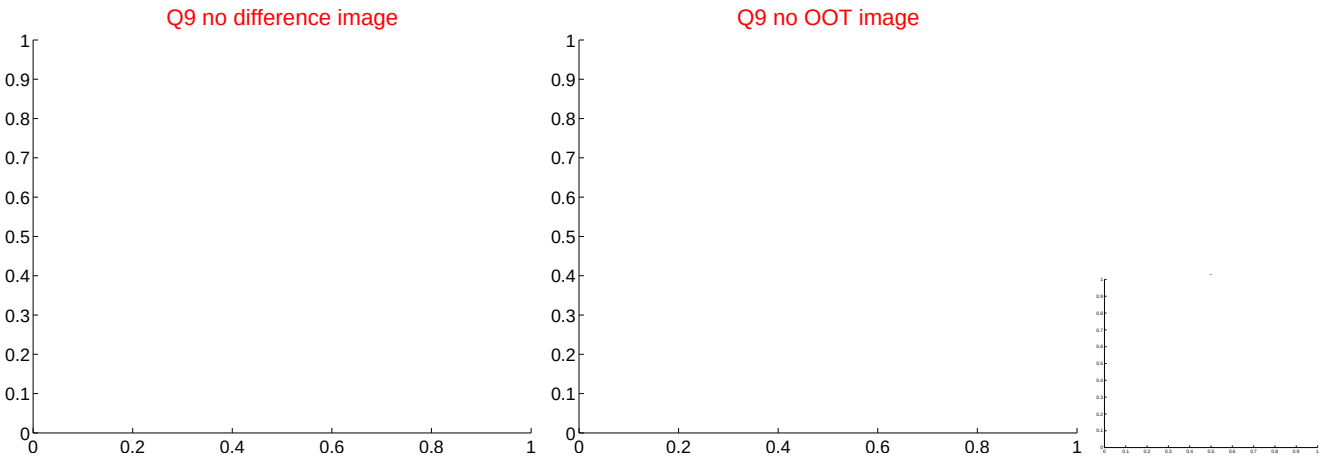
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

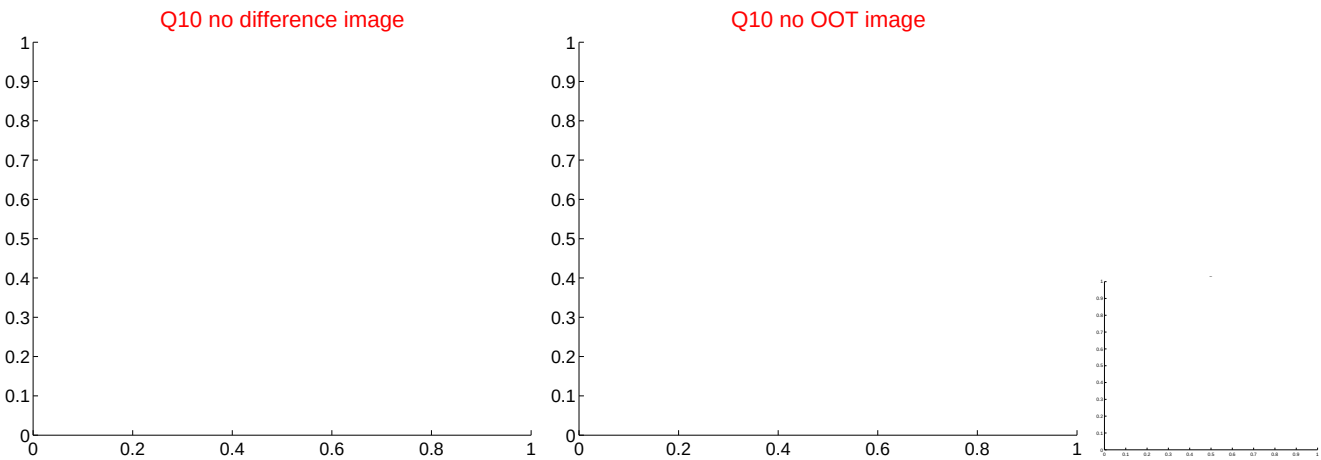


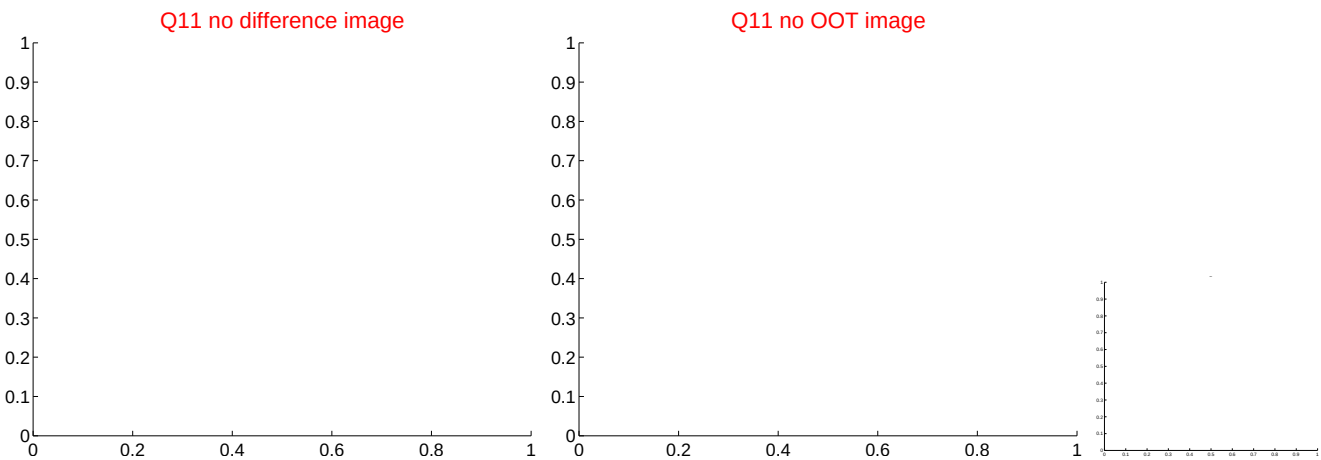
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

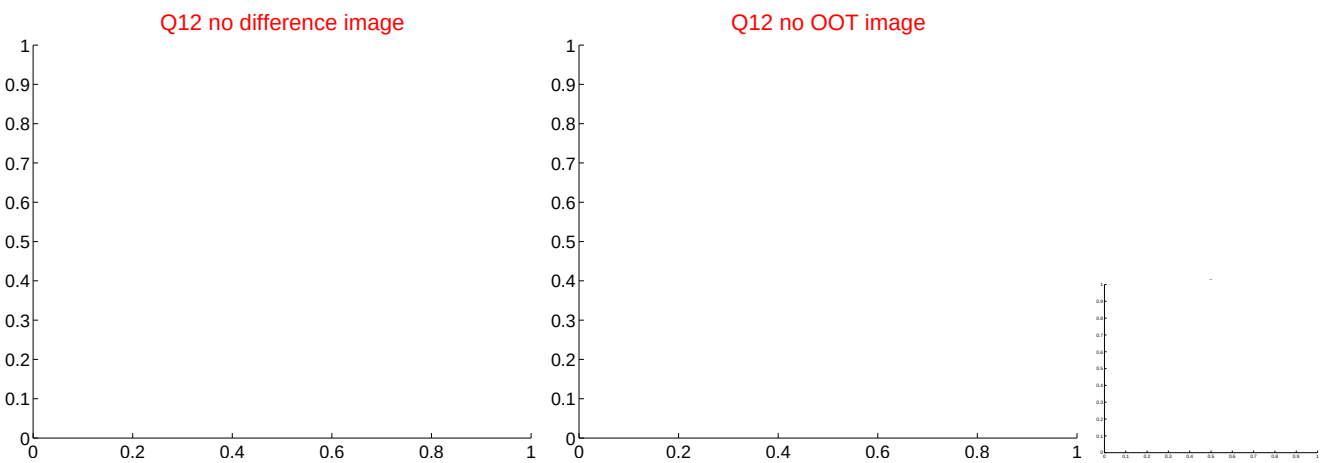


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

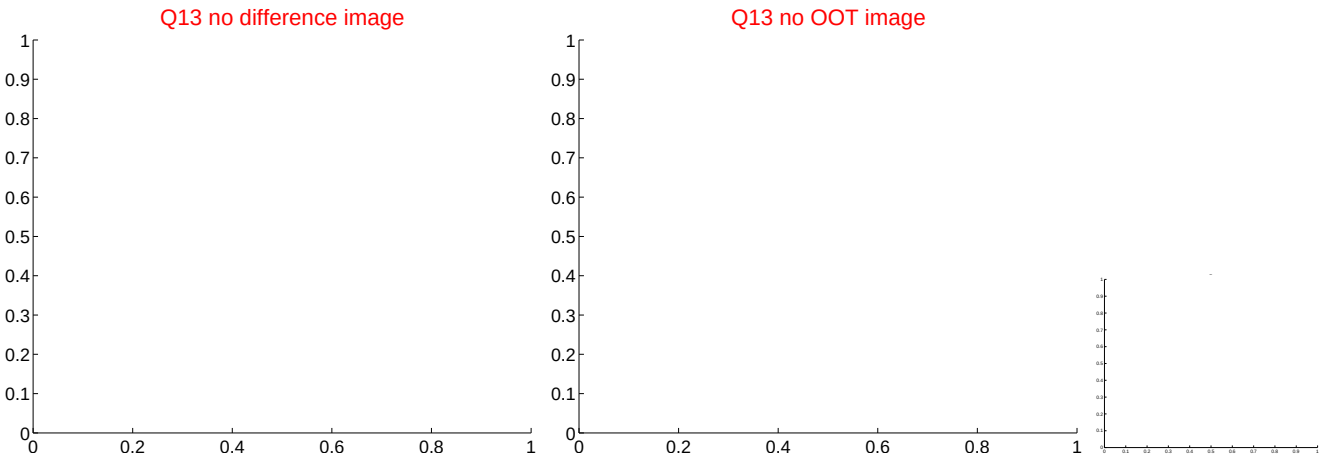


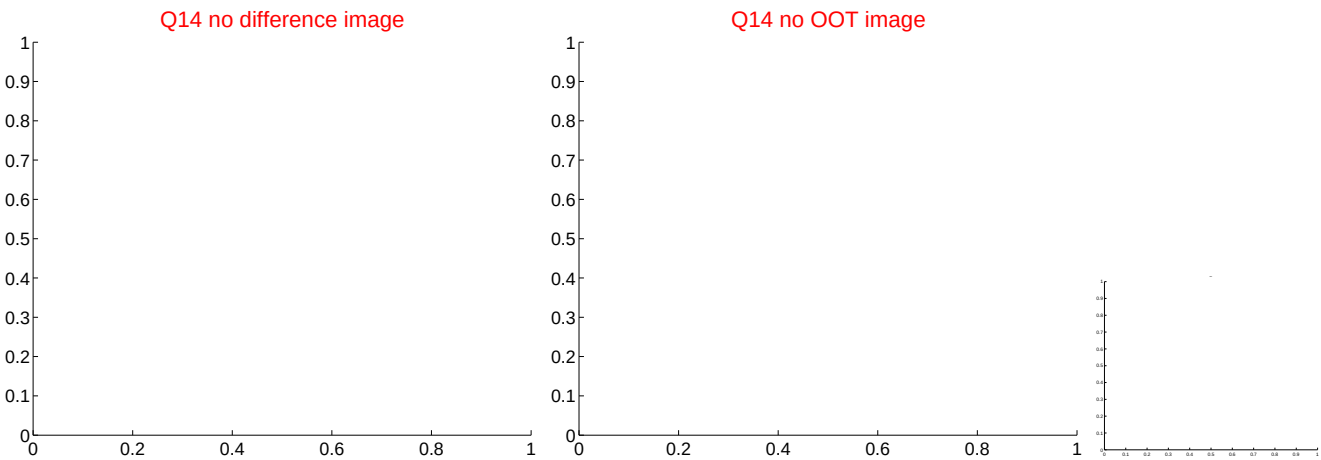


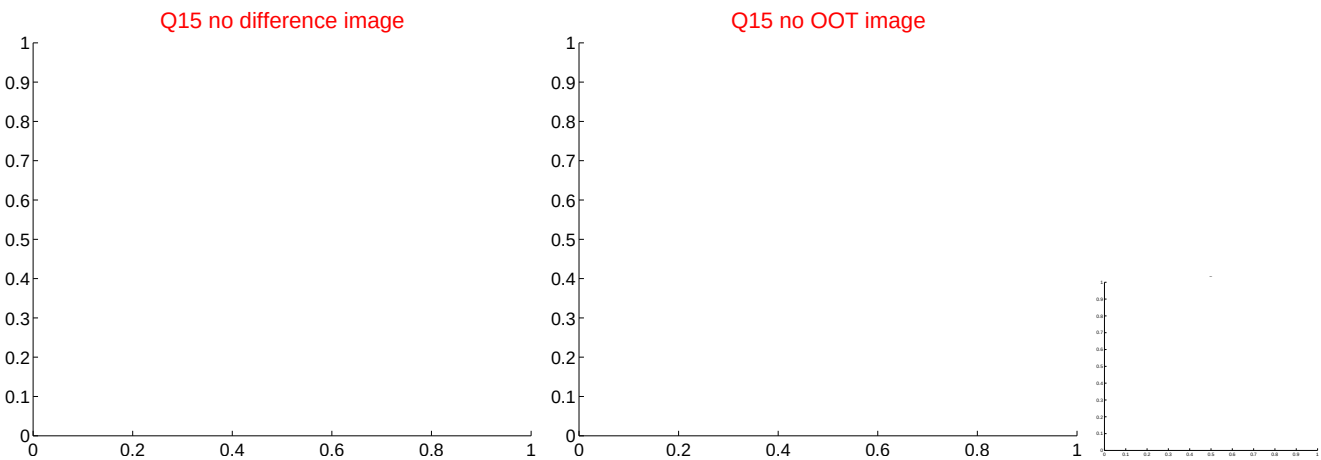


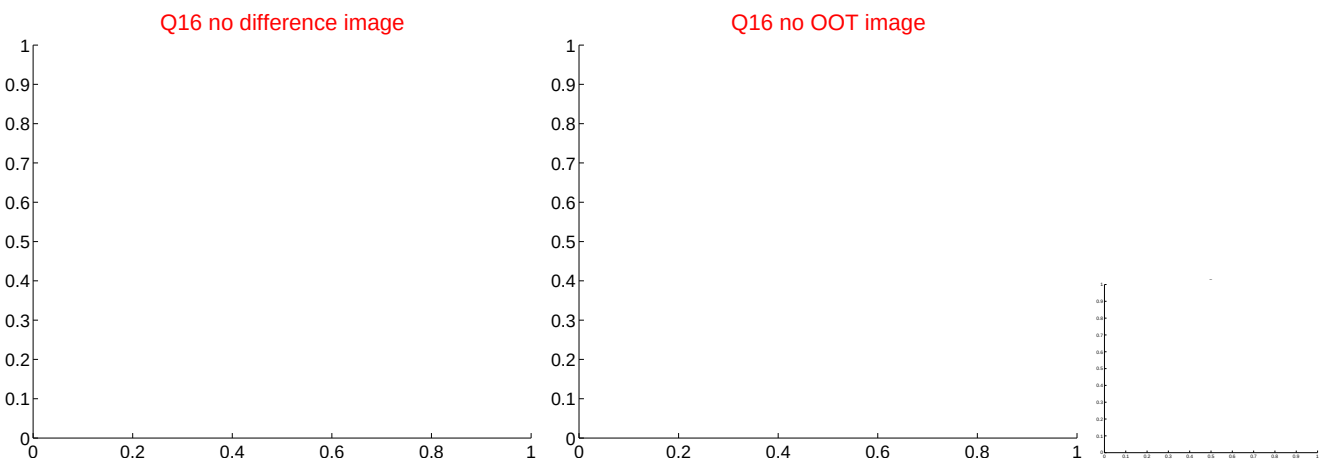


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

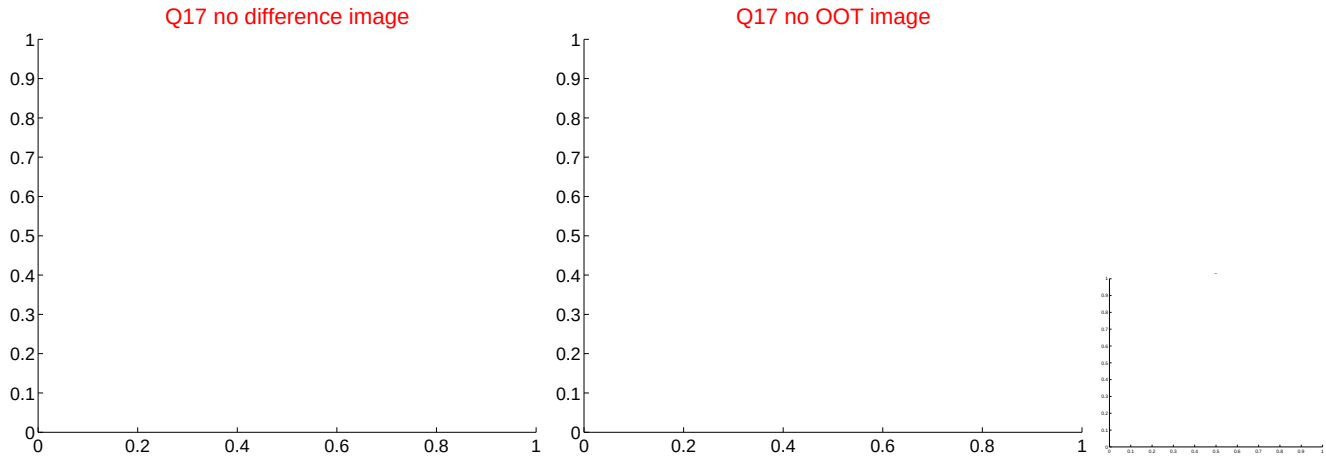


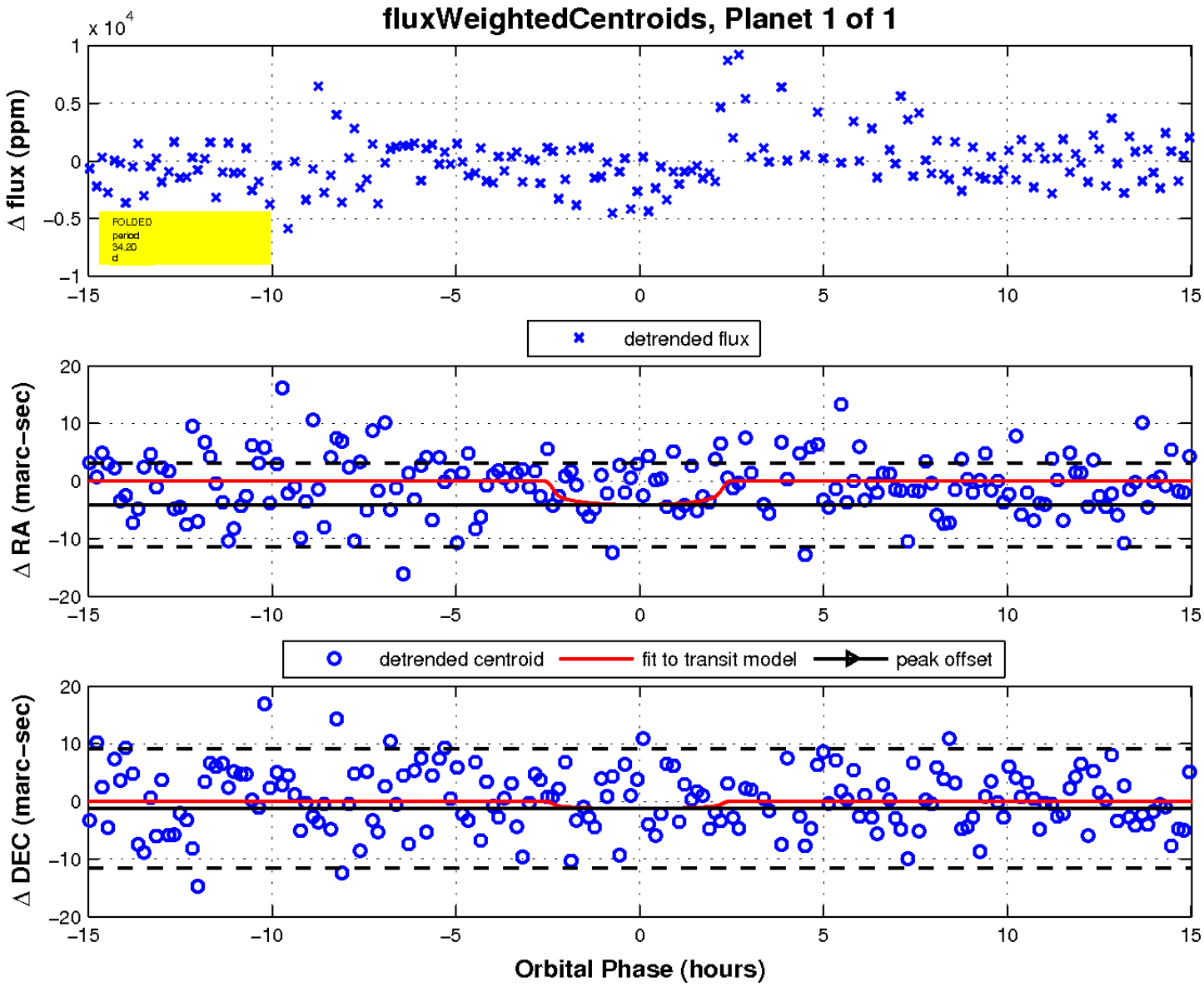




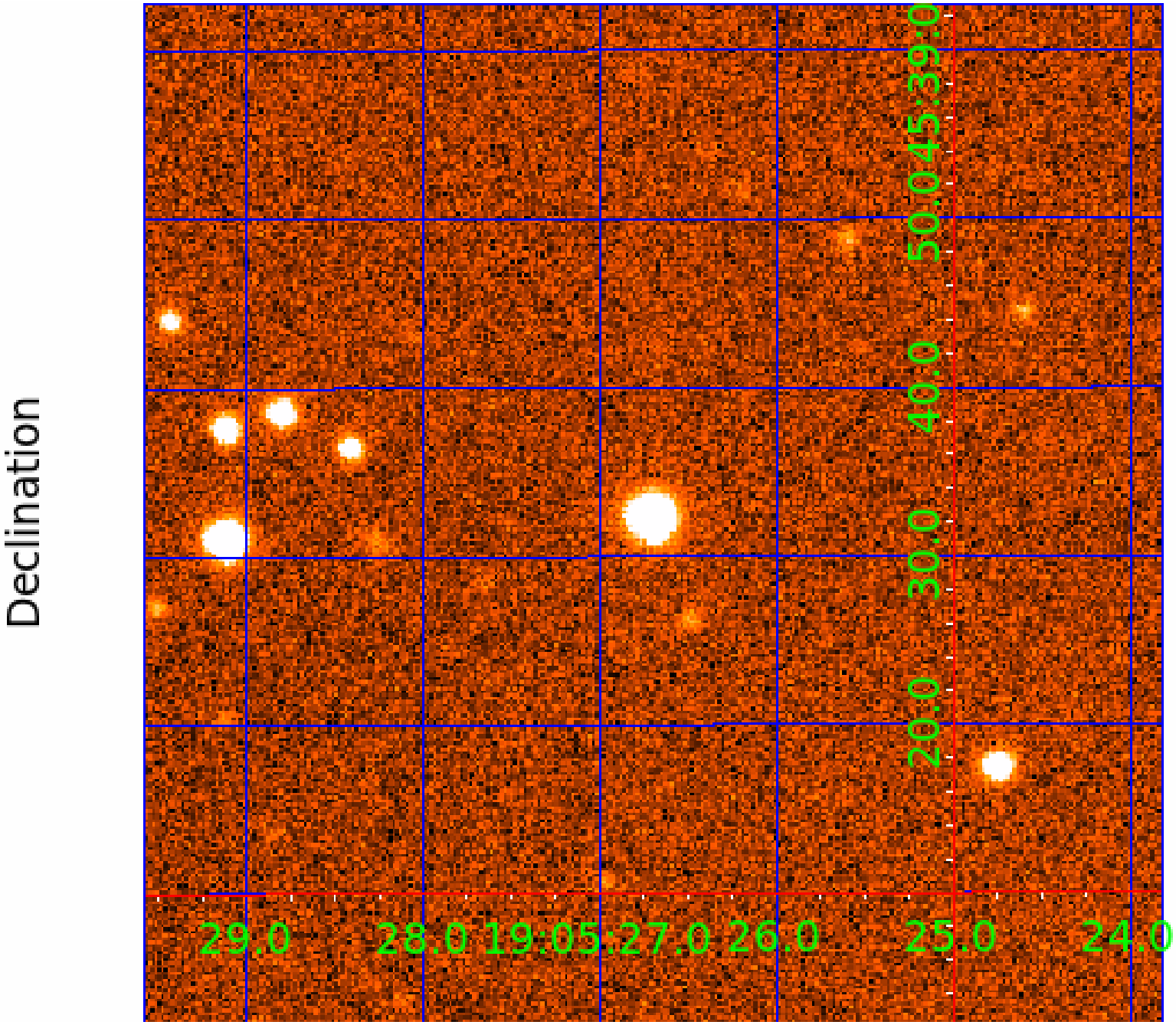


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.





UKIRT Image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