KIC 006549164

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 ($S_\oplus$)
006549164-01	OBS	No	545.010774	306.906293	347.3	17.092	8.6	8.3	0.98	5872	1.92	0.60

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006549164-01	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.

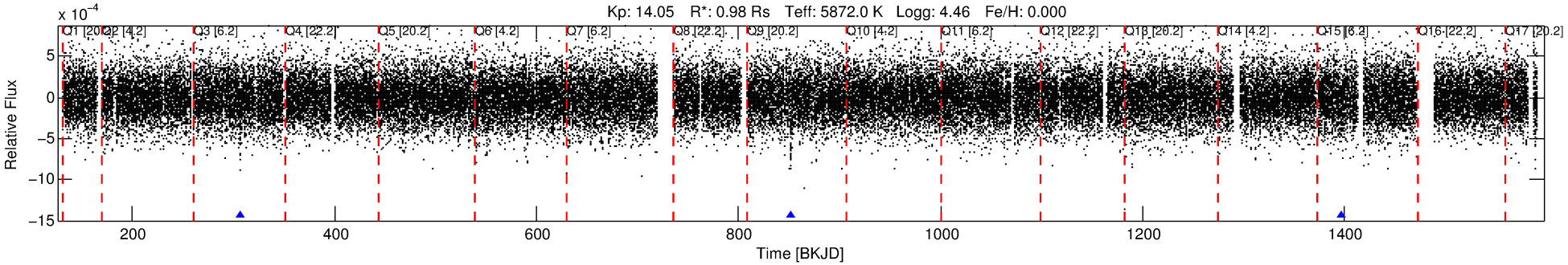
Ephemeris Match Information For 006549164-01

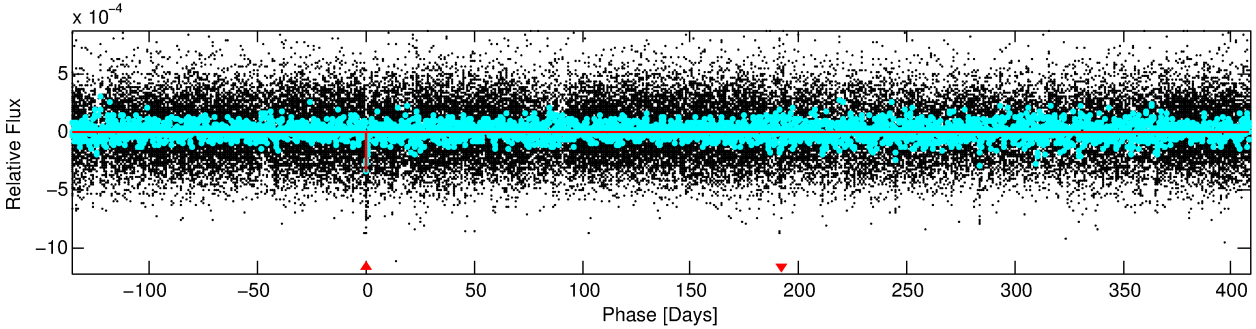
No Significant Match Found

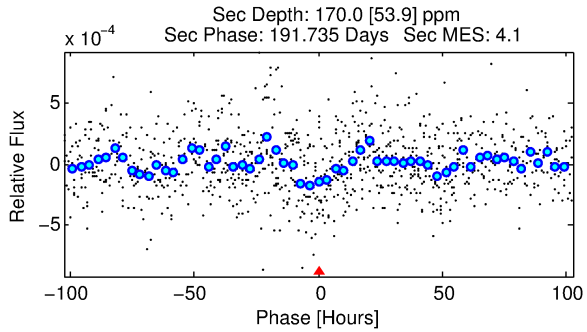
DV One-Page Summary

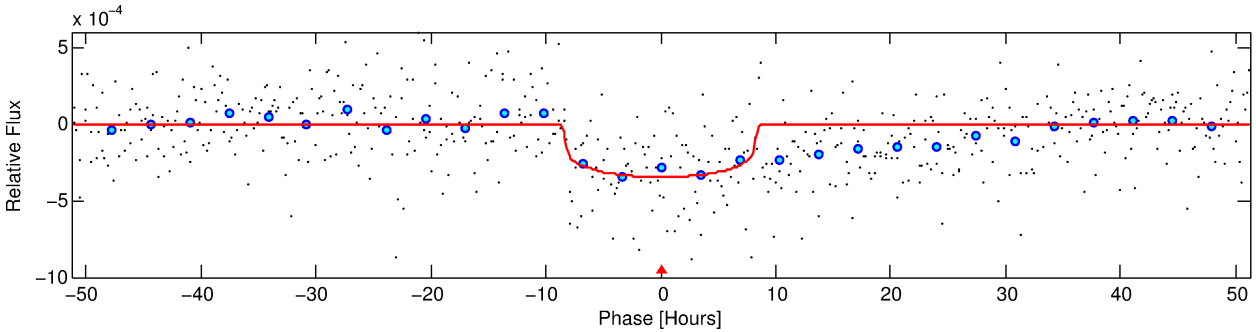
KIC: 6549164 Candidate: 1 of 1 Period: 545.011 d

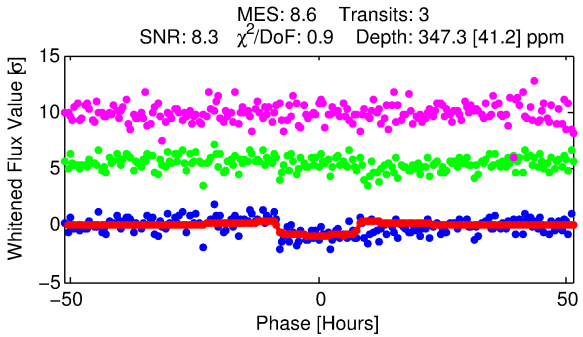
Kp: 14.05 R*: 0.98 Rs Teff: 5872.0 K Logg: 4.46 Fe/H: 0.000

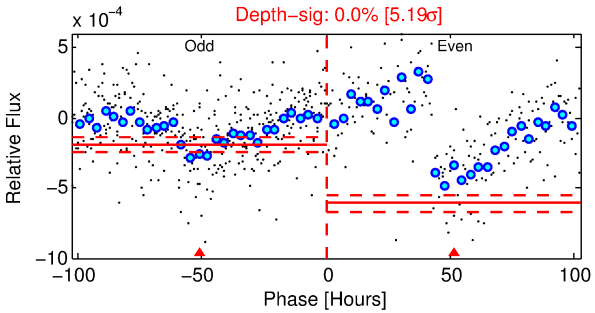


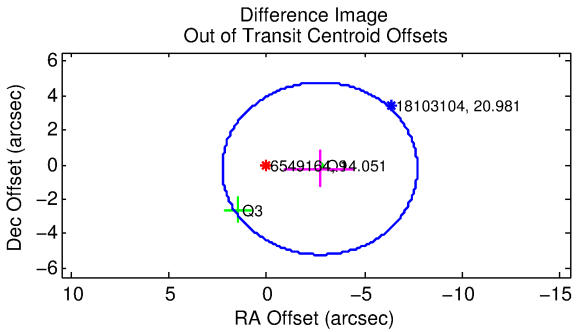












DV Fit Results:

Period = 545.01077 [0.01325] d
Epoch = 306.9063 [0.0176] BKJD
Rp/R* = 0.0179 [0.0081]
a/R* = 195.71 [398.00]
b = 0.63 [2.00]

Seff = 0.60 [0.23]
Teq = 224 [22] K
Rp = 1.92 [1.04] Re
a = 1.3103 [0.3291] AU

Ag = 43756.19 [45182.58] [0.97σ]
Teffp = 5015 [1219] K [3.93σ]

DV Diagnostic Results:

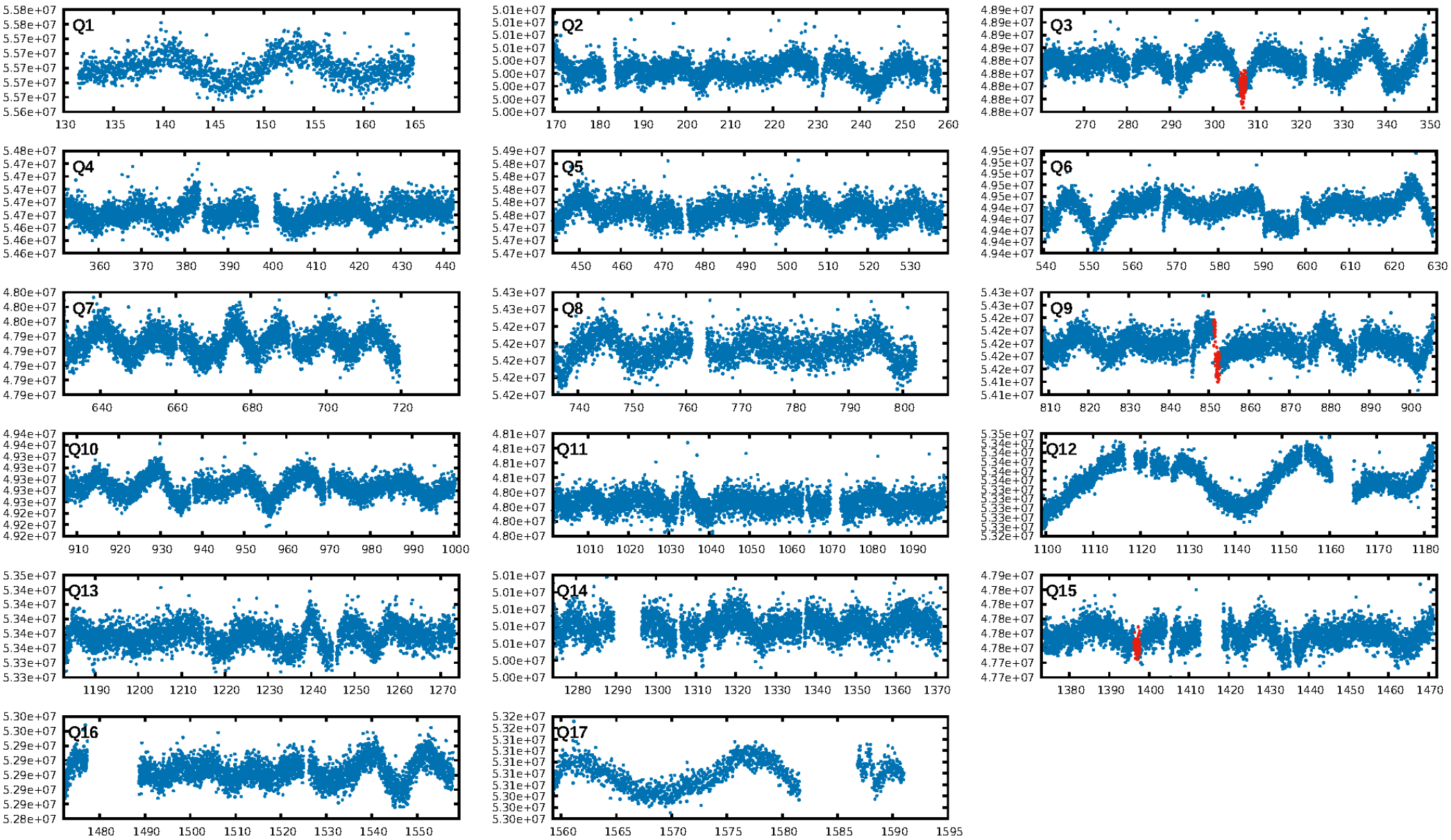
ShortPeriod−sig: N/A
LongPeriod−sig: N/A
ModelChiSquare2−sig: 5.5%
ModelChiSquareGof−sig: 99.9%
Bootstrap−pfa: 4.22e−10
RollingBand−fgt: 1.00 [3/3]
GhostDiagnostic−chr: −3.44

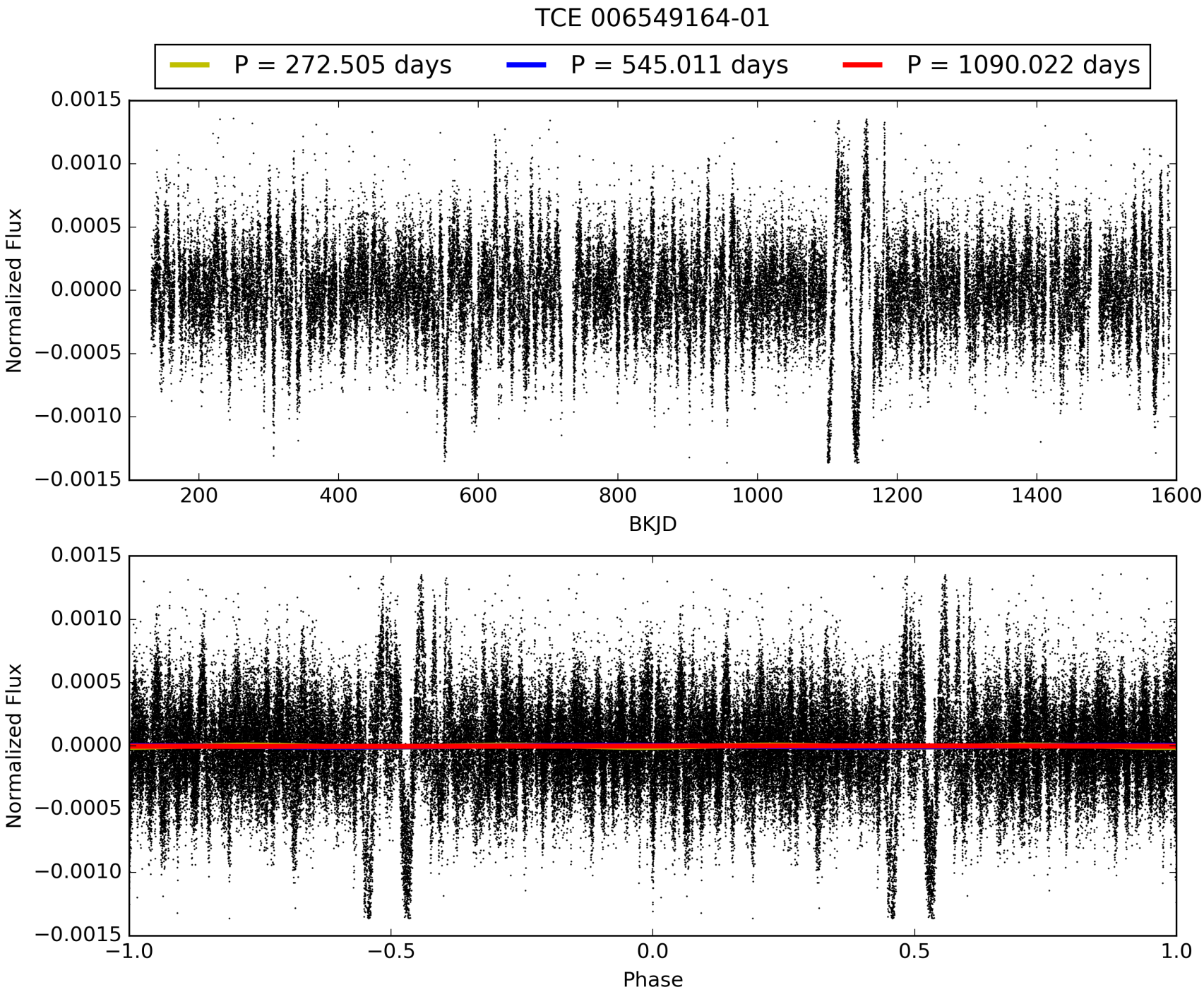
Centroid−sig: 4.2%
Centroid−so: 2.641 arcsec [1.77σ]
OotOffset−rm: 2.725 arcsec [1.64σ]
KicOffset−rm: 2.708 arcsec [1.36σ]
OotOffset−st: 0/1/0/1 [2]
KicOffset−st: 0/1/0/1 [2]
DiffImageQuality−fgm: 0.50 [1/2]
DiffImageOverlap−fno: 1.00 [2/2]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29−Jan−2016 20:20:57 Z

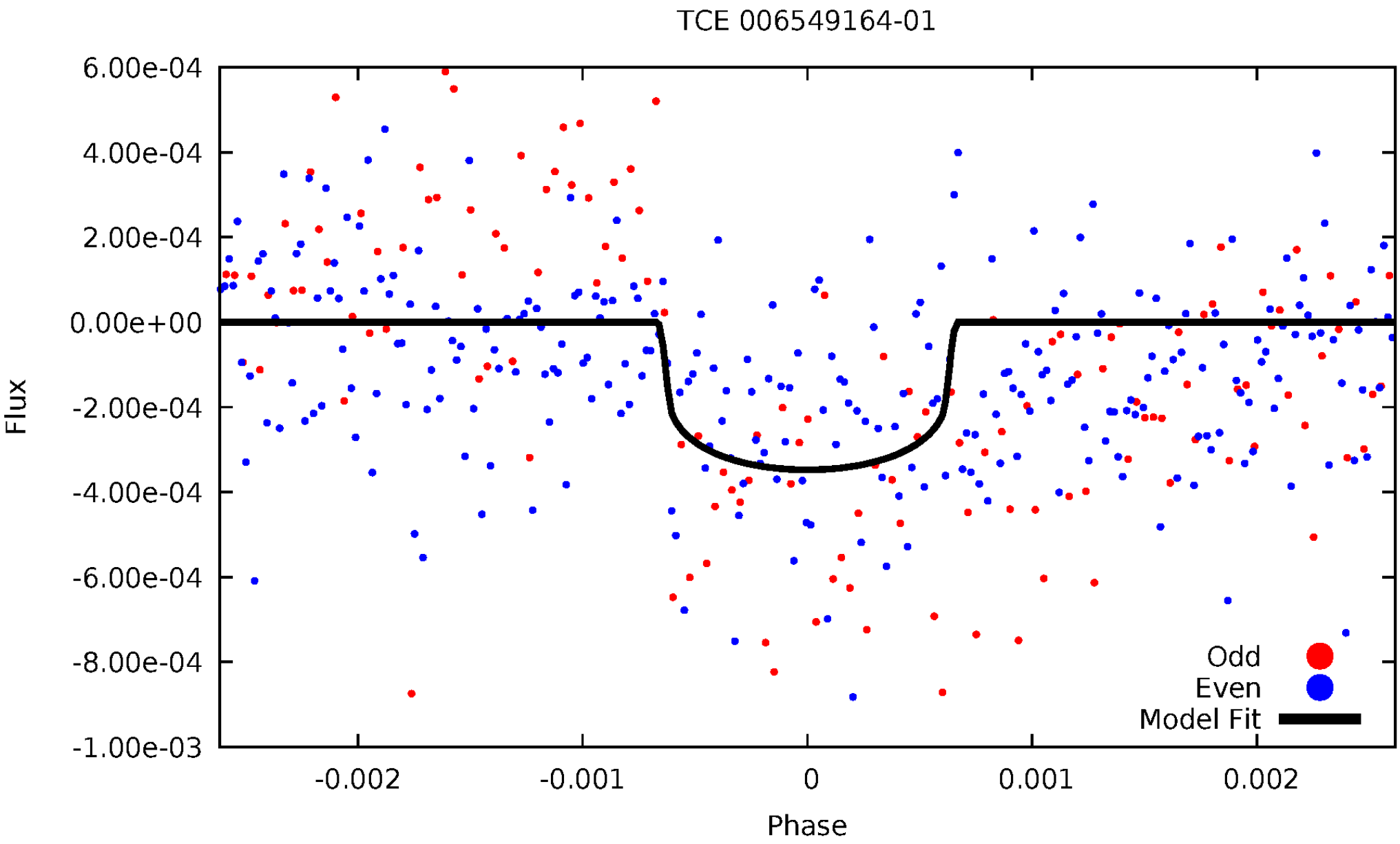
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 006549164-01, PDC Light Curves

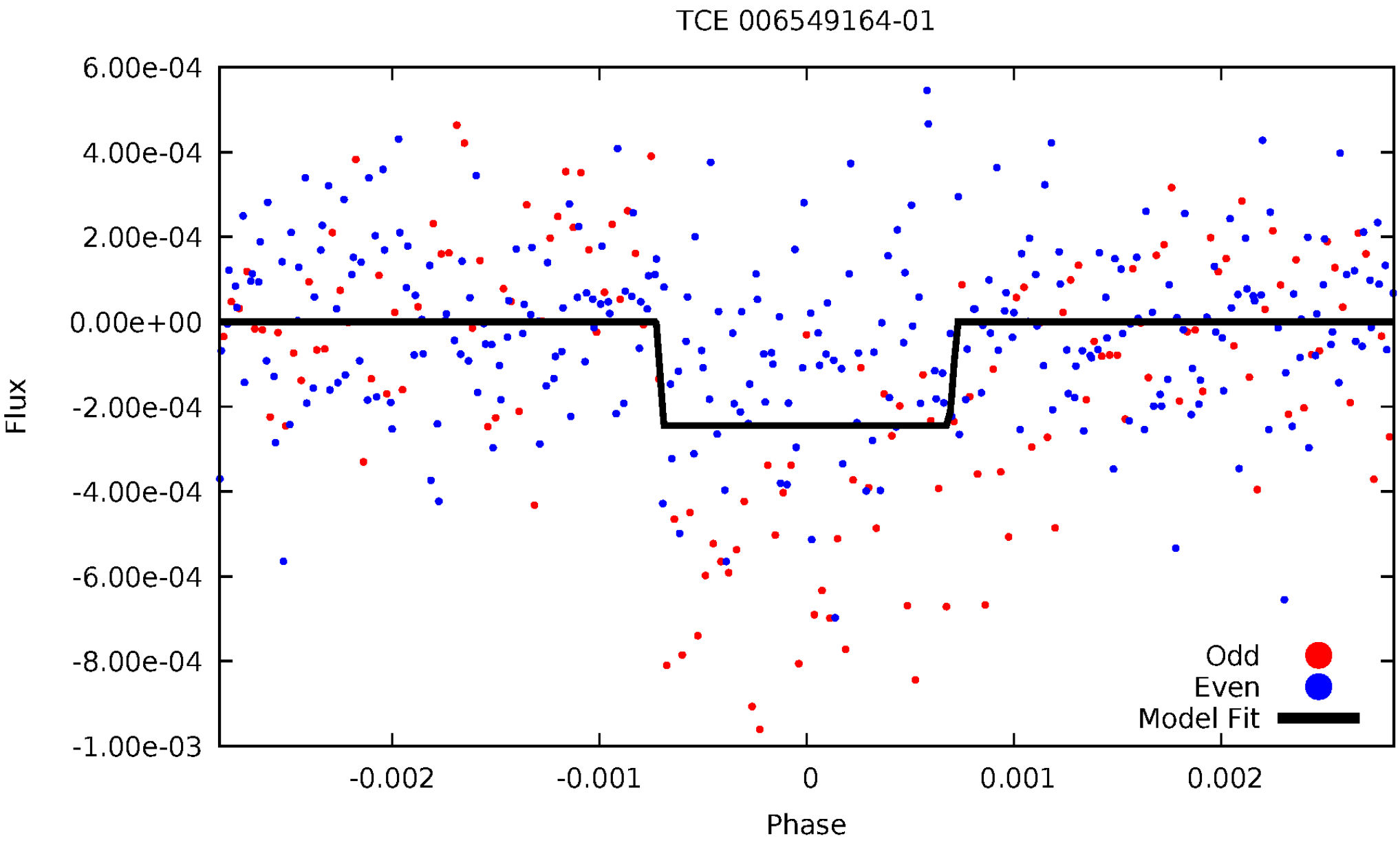



TCE 006549164-01
P = 272.505 days
P = 545.011 days
P = 1090.022 days
Normalized Flux
0.0015
0.0010
0.0005
0.0000
−0.0005
−0.0010
−0.0015
200
400
600
800
1000
1200
1400
1600
BKJD
Normalized Flux
0.0015
0.0010
0.0005
0.0000
−0.0005
−0.0010
−0.0015
−1.0
−0.5
0.0
0.5
1.0
Phase

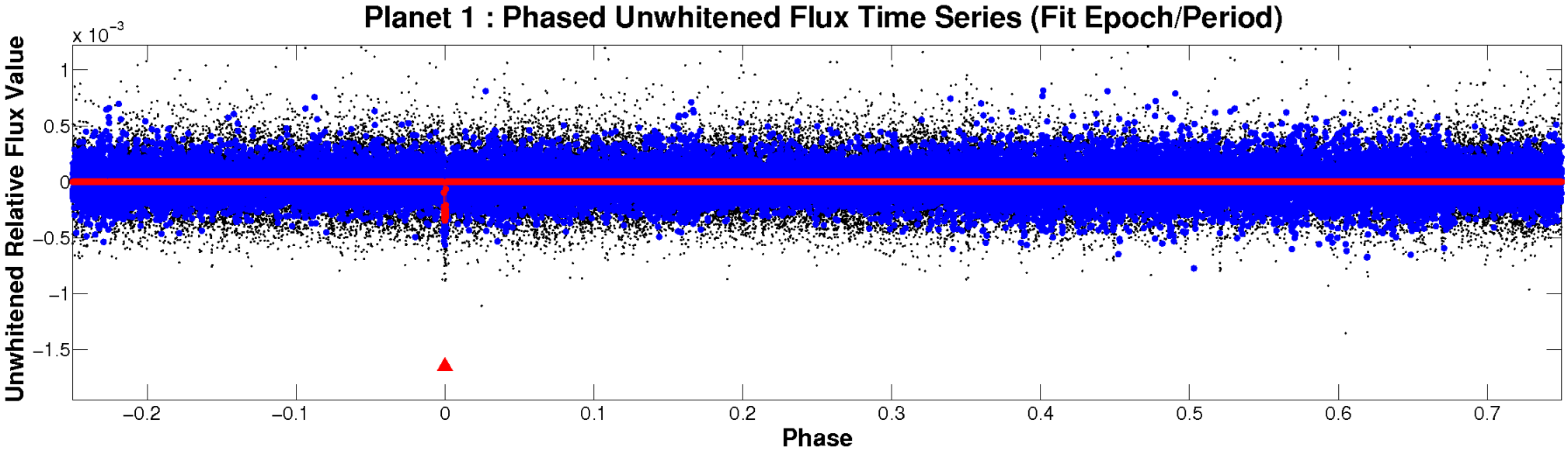
DV Odd/Even

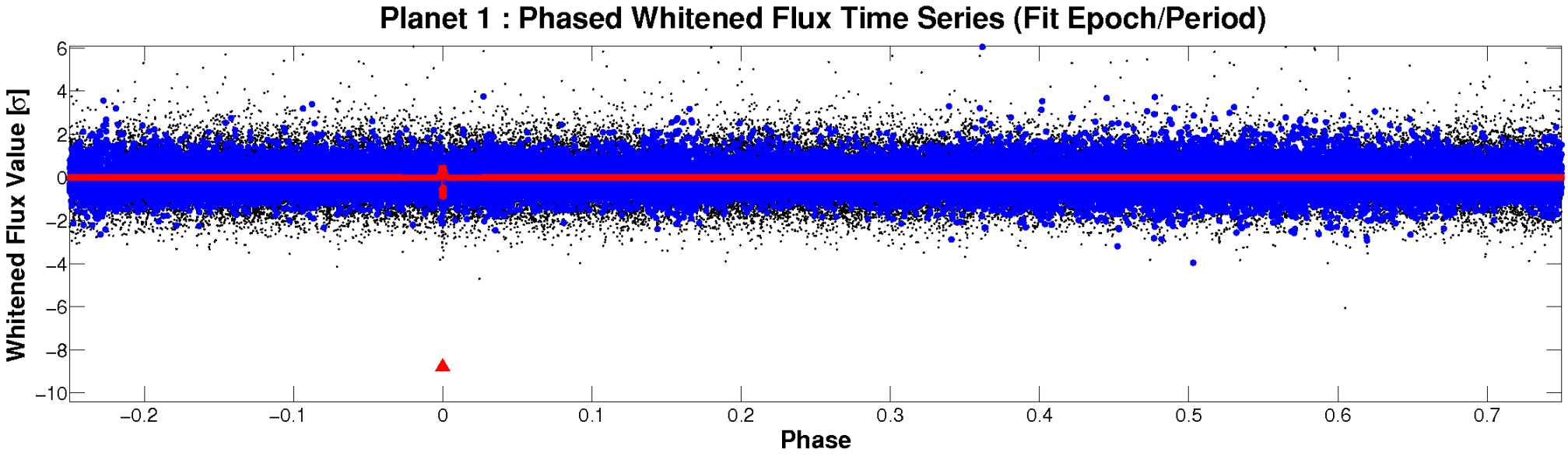

TCE 006549164-01
6.00e-04
4.00e-04
2.00e-04
0.00e+00
-2.00e-04
-4.00e-04
-6.00e-04
-8.00e-04
-1.00e-03
Flux
-0.002
-0.001
0
0.001
0.002
Phase
Odd
Even
Model Fit

ALT Odd/Even


TCE 006549164-01
6.00e-04
4.00e-04
2.00e-04
0.00e+00
-2.00e-04
-4.00e-04
-6.00e-04
-8.00e-04
-1.00e-03
Flux
-0.002
-0.001
0
0.001
0.002
Phase
Odd
Even
Model Fit

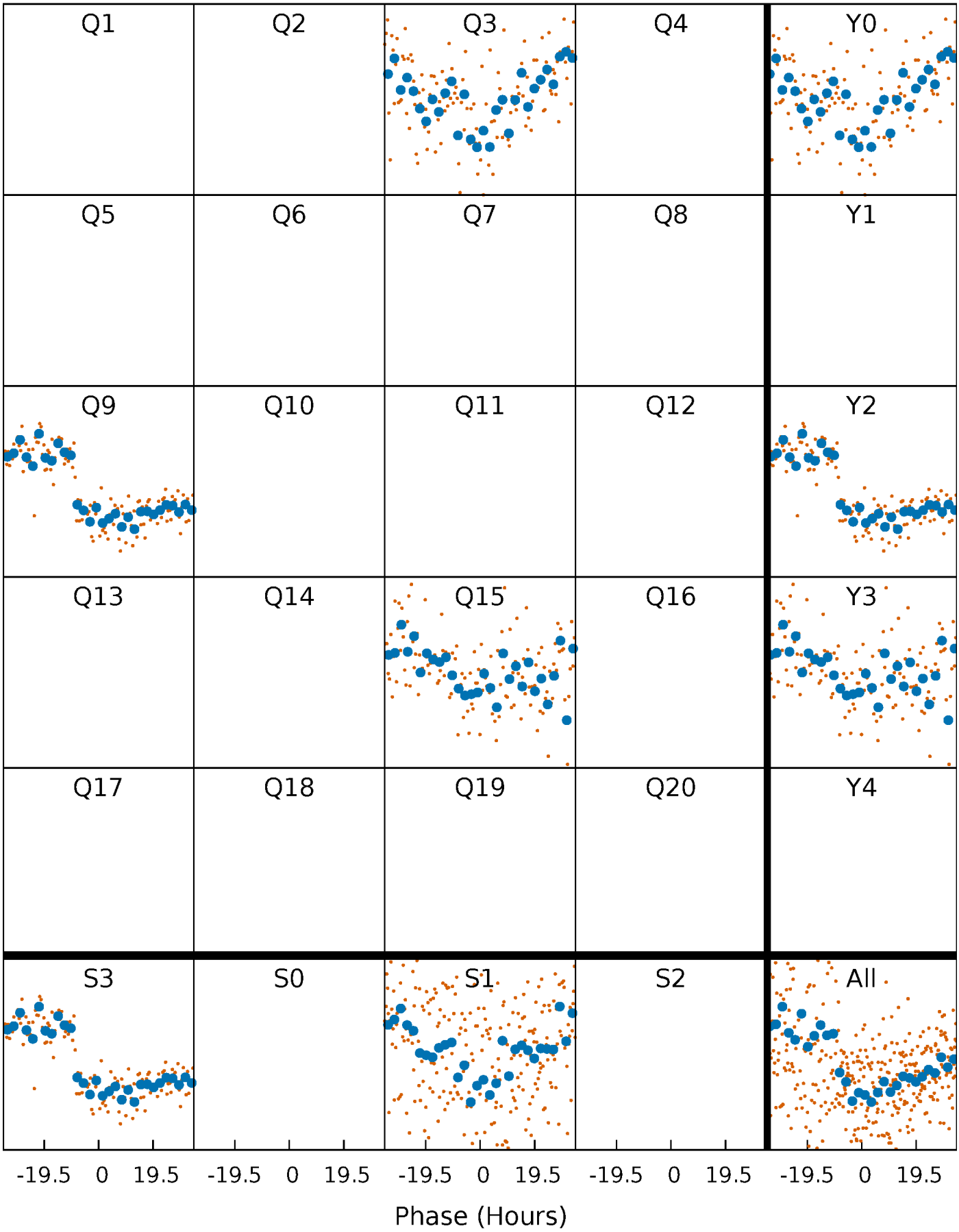
Non-Whitened Vs. Whitened Light Curve





PDC Quarter-Phased Transit Curves

TCE 006549164-01 P=545.010774 Days T_0=306.906293 (BKJD)



DV Quarter-Phased Transit Curves

TCE 006549164-01 P=545.010774 Days T_0=306.906293 (BKJD)

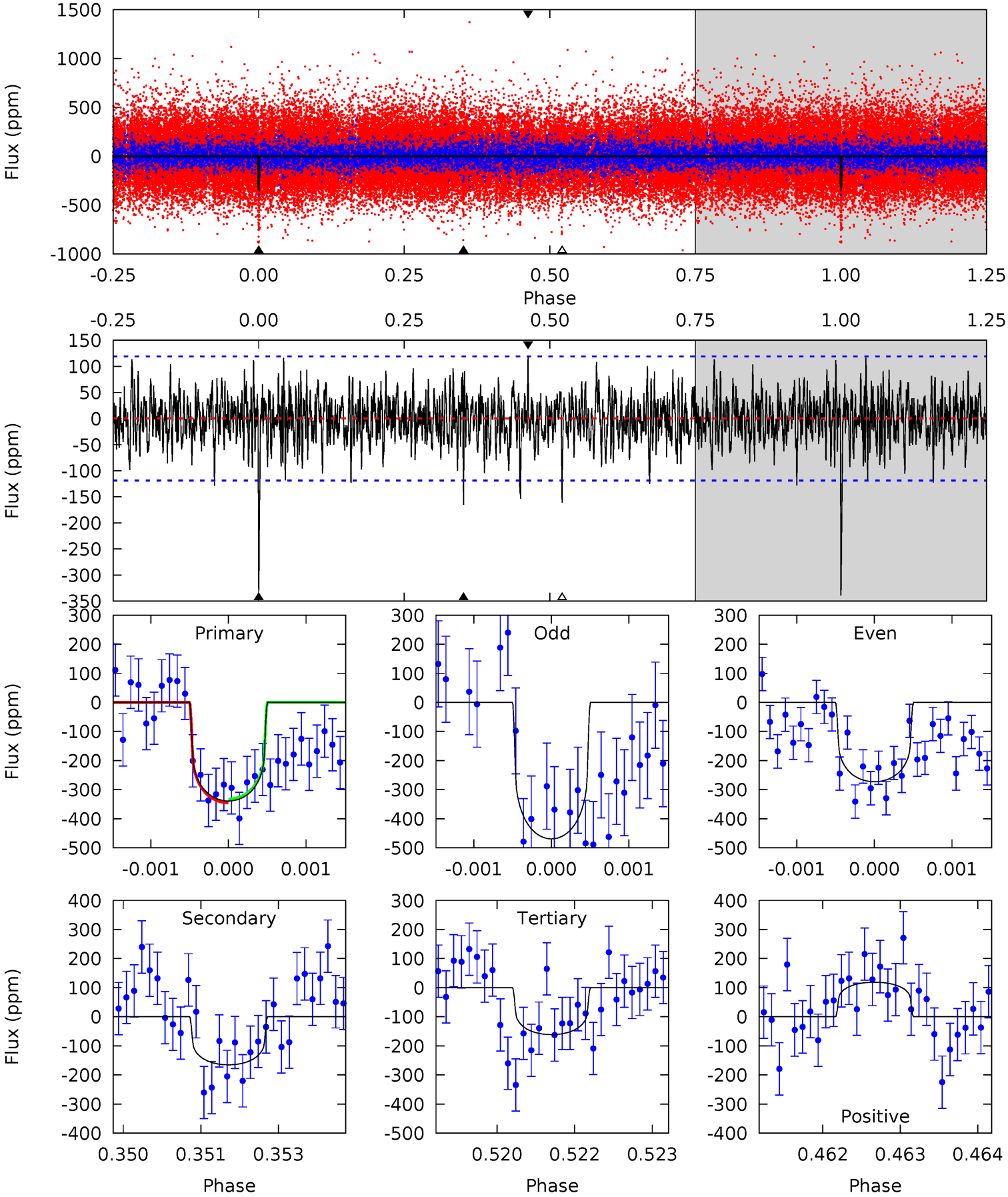
Alt. Detrend Quarter-Phased Transit Curves

TCE 006549164-01 P=545.017535 Days T_0=306.941627 (BKJD)

DV Model-Shift Uniqueness Test

006549164-01, P = 545.010774 Days, E = 306.906293 Days

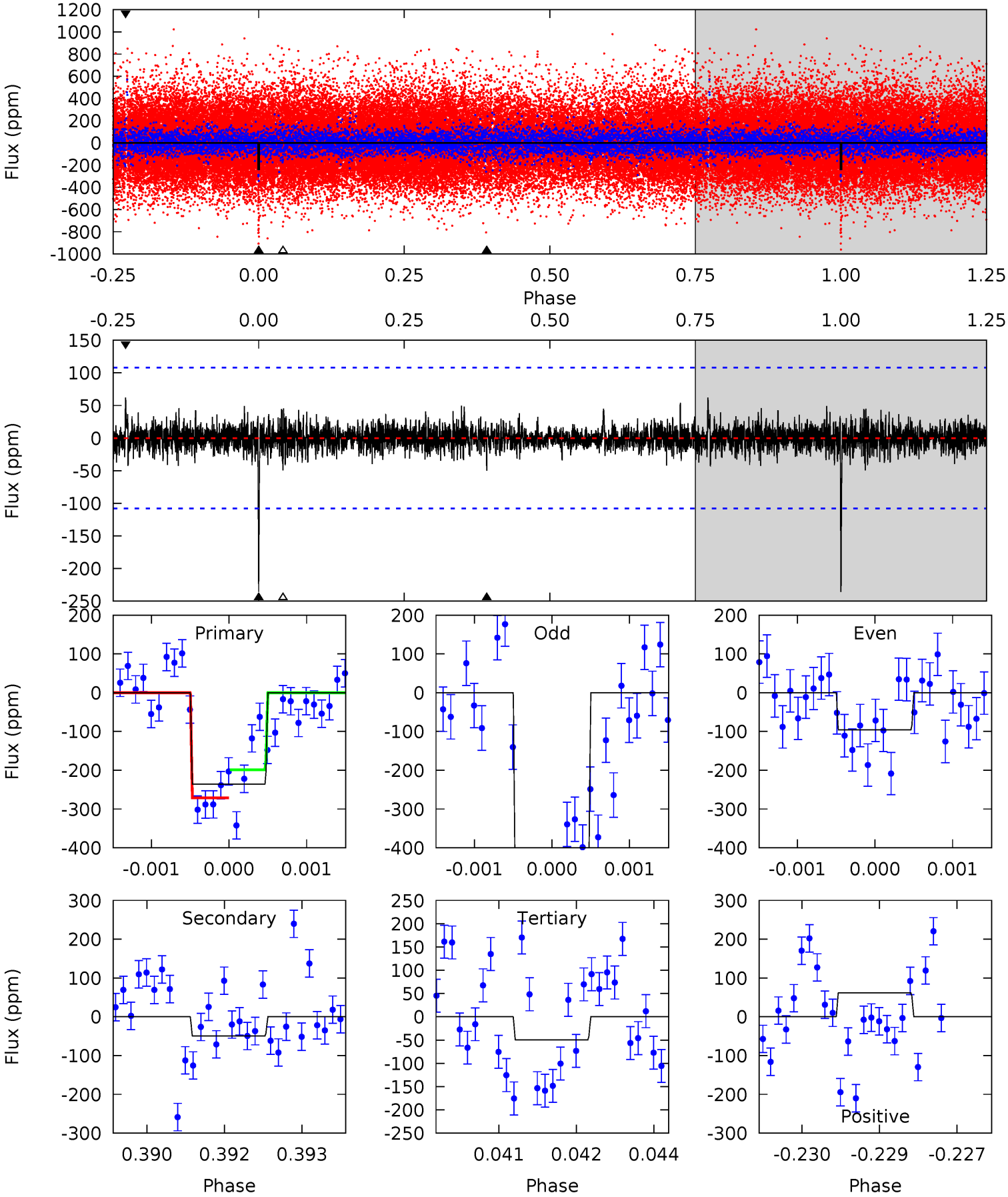
Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.4	7.51	7.34	5.40	5.40	3.21	1.72	8.07	10.0	0.18	2.11	4.24	1.04	0.26	0.30



Alt Model-Shift Uniqueness Test

006549164-01, P = 545.017535 Days, E = 306.941627 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.8	2.48	2.47	3.10	5.38	3.18	0.62	9.30	8.67	0.02	-0.61	9.92	2.34	0.21	1.81



Stellar Parameters For KIC 006549164

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	$M(M_\odot)$	$p_\star$ (g·cm^{-3})
	5872^{+158}_{-176}	$4.458^{+0.067}_{-0.202}$	$0.000^{+0.250}_{-0.300}$	$0.982^{+0.291}_{-0.104}$	$1.012^{+0.127}_{-0.127}$	$1.503^{+0.431}_{-0.760}$
	+3%/-3%	+2%/-5%	+inf%/-inf%	+30%/-11%	+13%/-13%	+29%/-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 006549164-01 / KOI

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-165±22	$2.04^{+0.93}_{-0.85}$	318^{+22}_{-14}	5034^{+1511}_{-727}	38222^{+80522}_{-21072}
Alt.	-50±20	$1.79^{+1.05}_{-0.96}$	319^{+23}_{-15}	4142^{+1566}_{-657}	14024^{+52944}_{-8959}

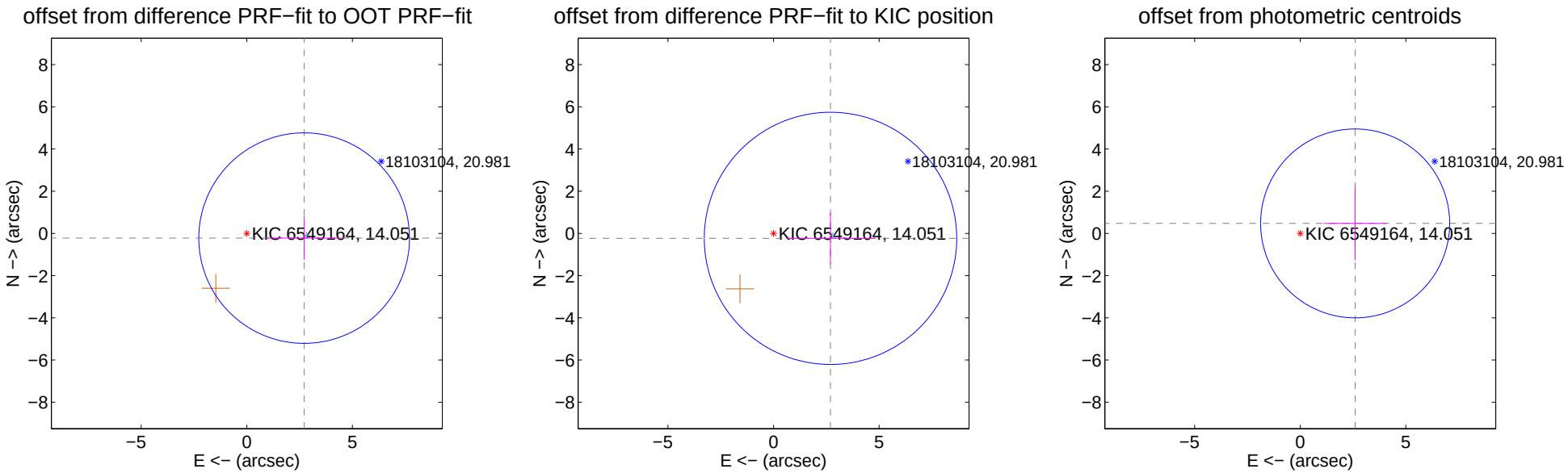
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

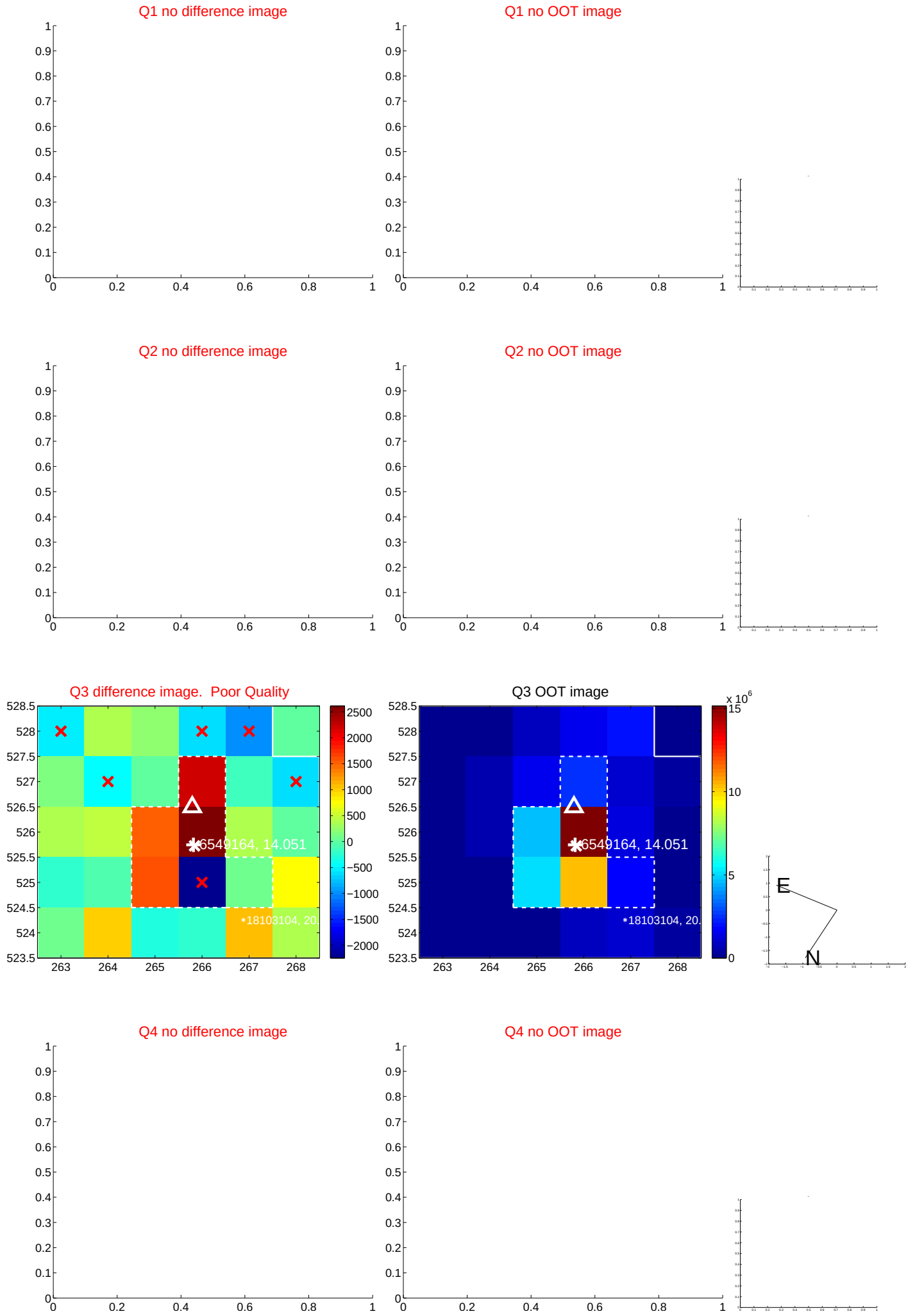
Supplemental centroid analysis for 006549164-01. Kepler magnitude: 14.05. Transit SNR 8.27
There are 1 quarters with good PRF difference image offsets
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.725 ± 1.663	1.64	-2.716 ± 1.753	-0.223 ± 1.031
PRF-fit source offset from KIC position	2.708 ± 1.992	1.36	-2.698 ± 2.106	-0.235 ± 1.217
photometric centroid source offset	2.64 ± 1.49	1.77	-2.60 ± 1.48	0.47 ± 1.74

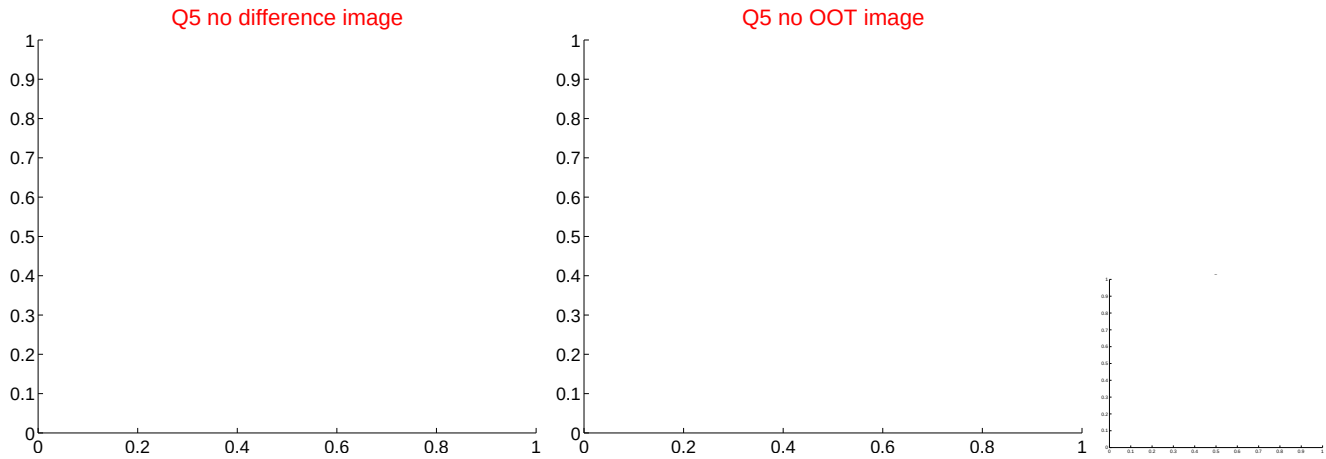


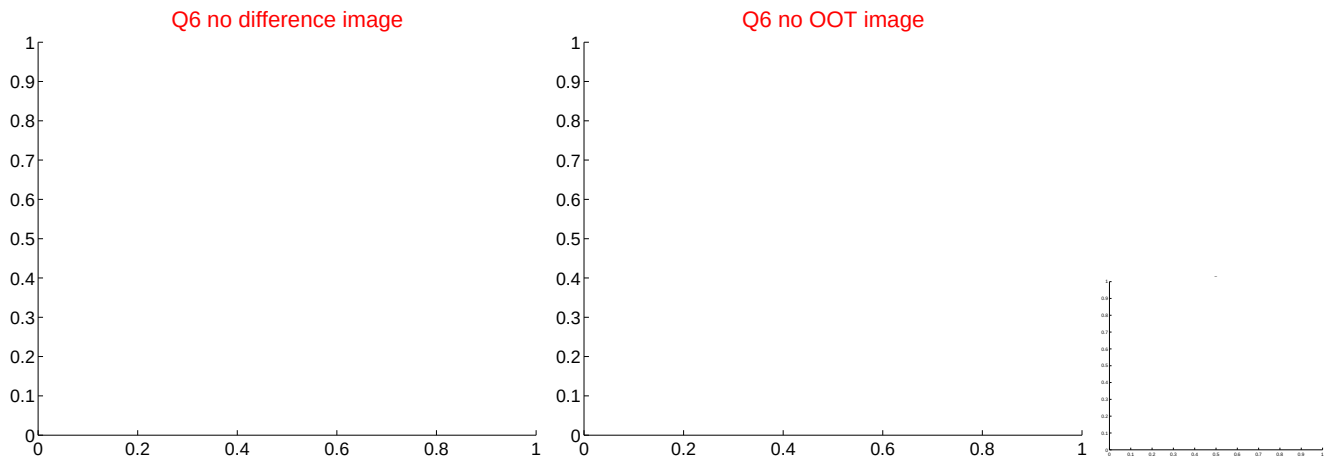
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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

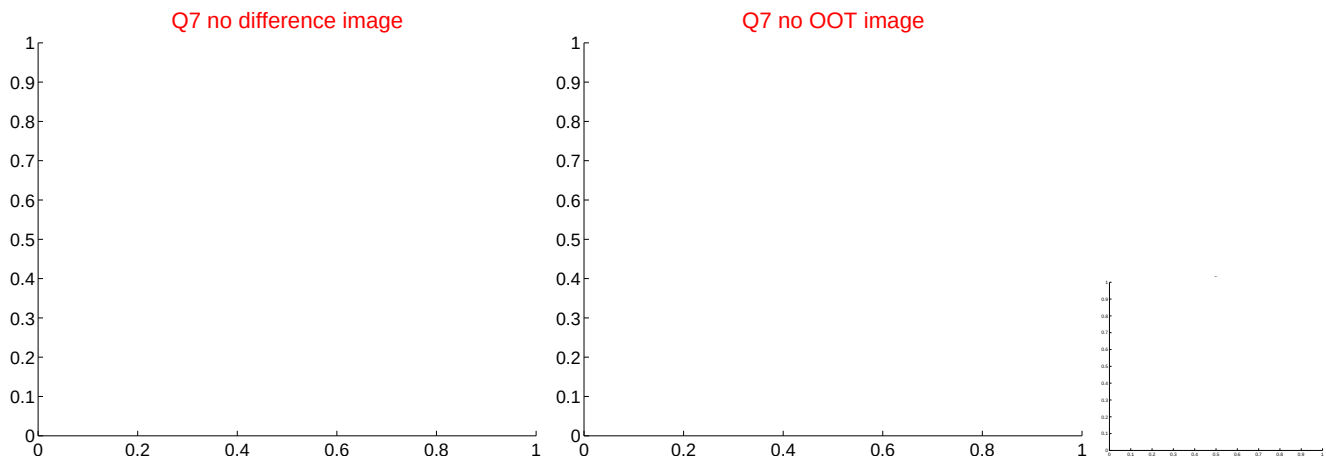
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

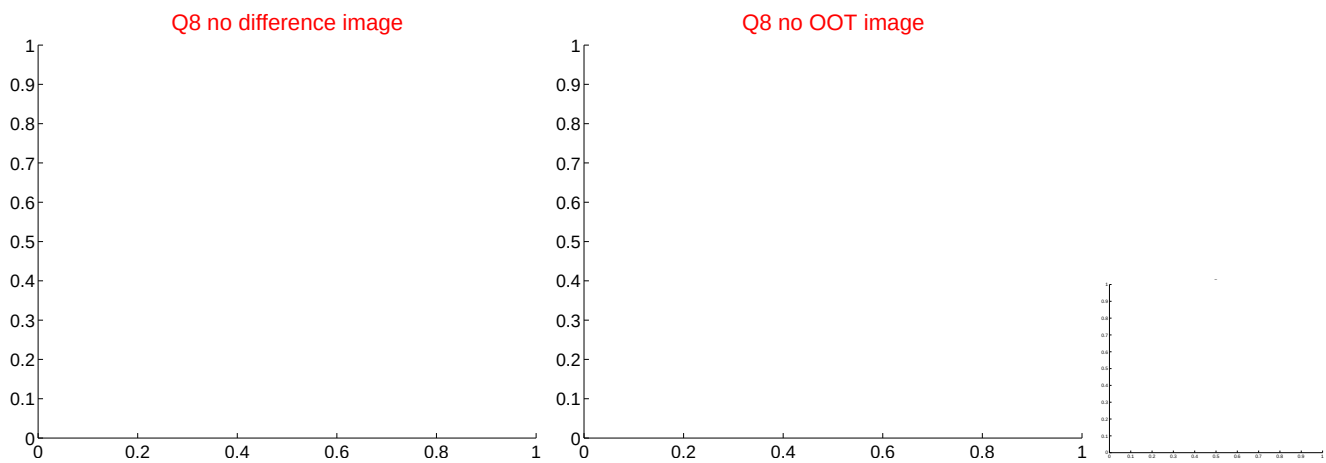


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

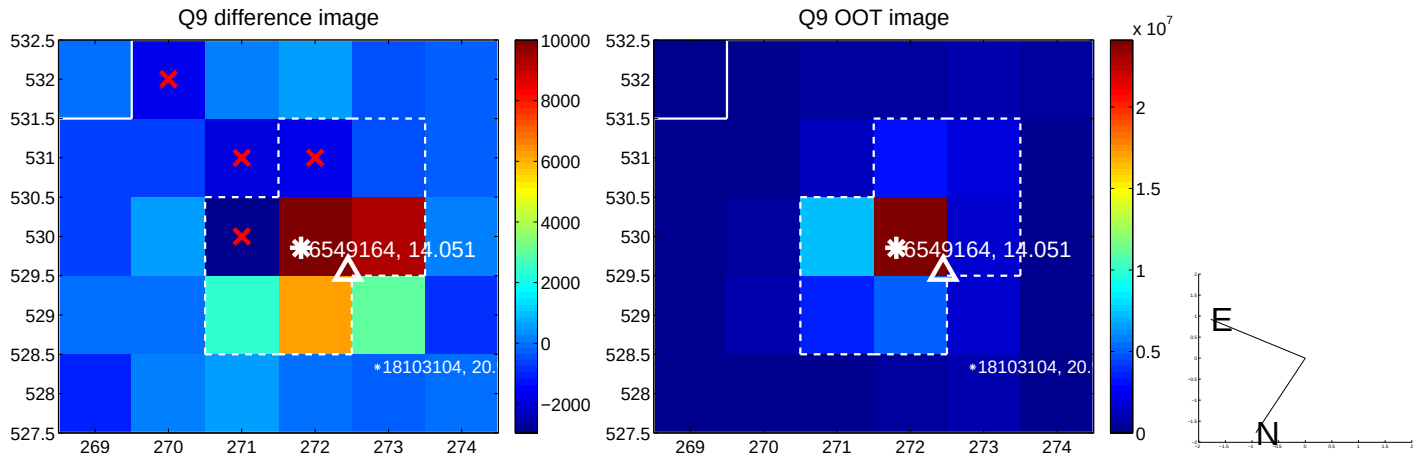


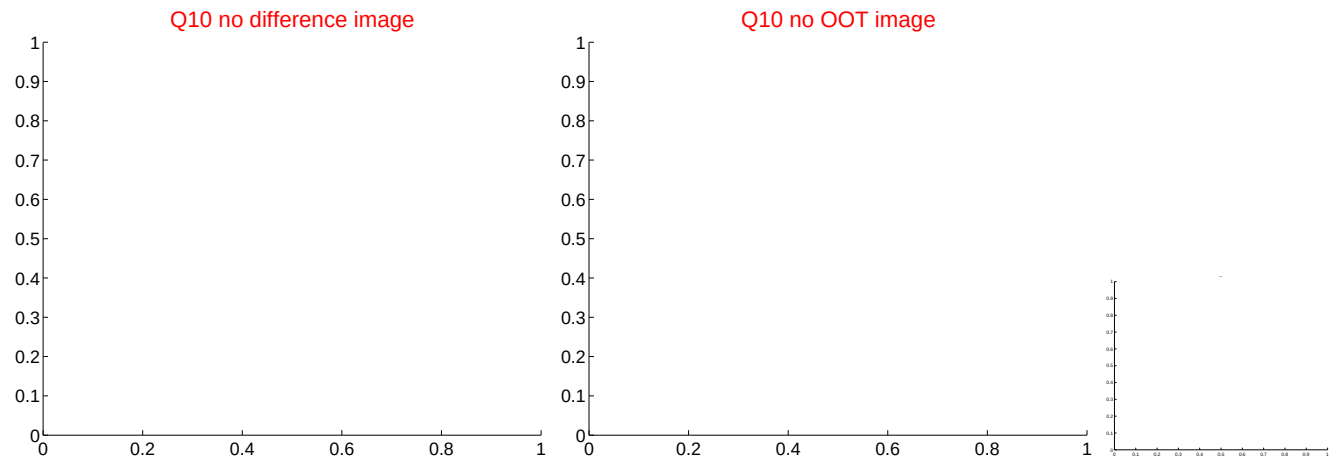


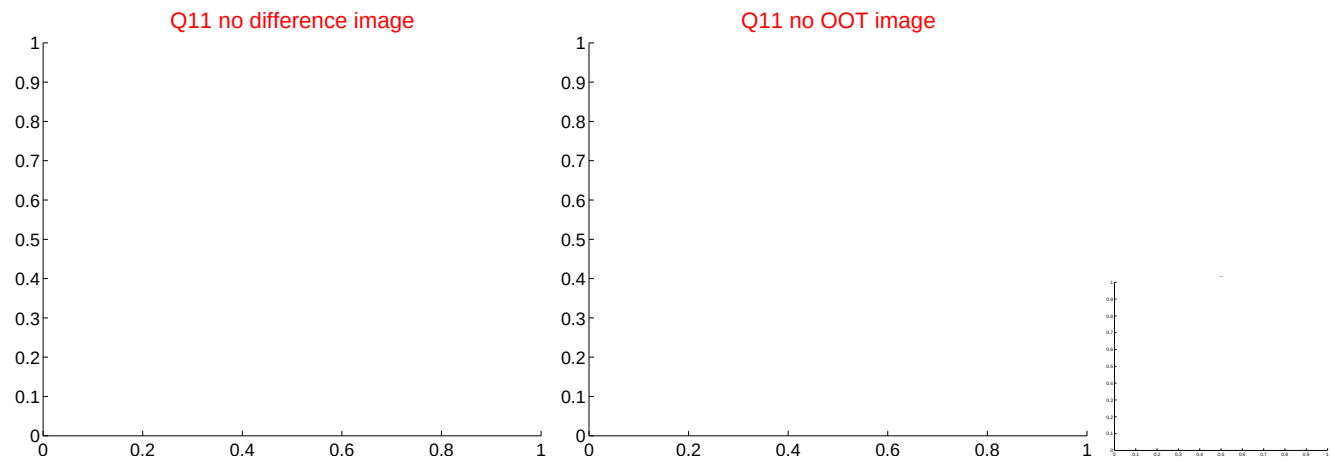


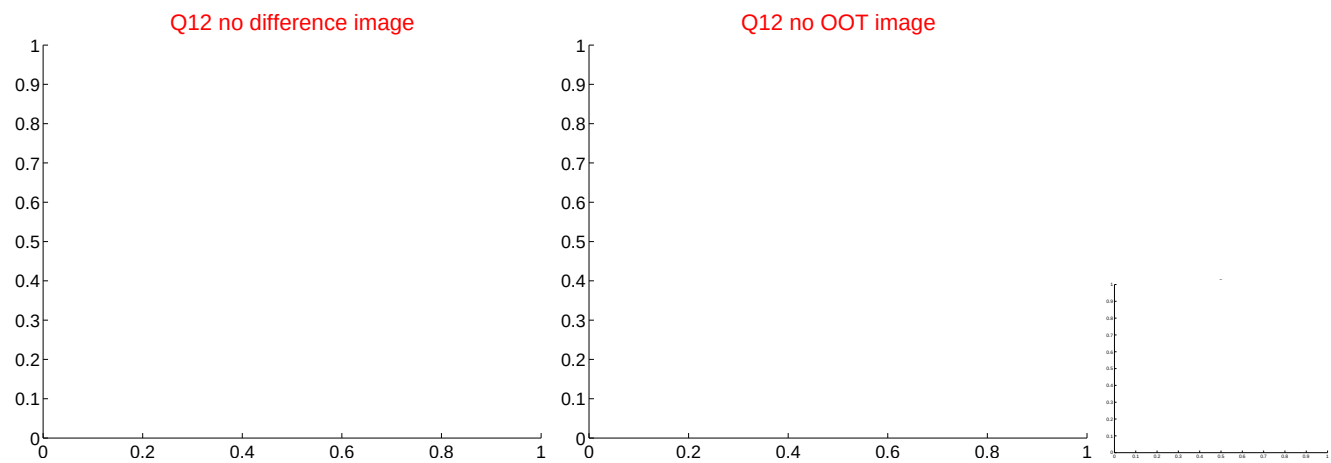


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

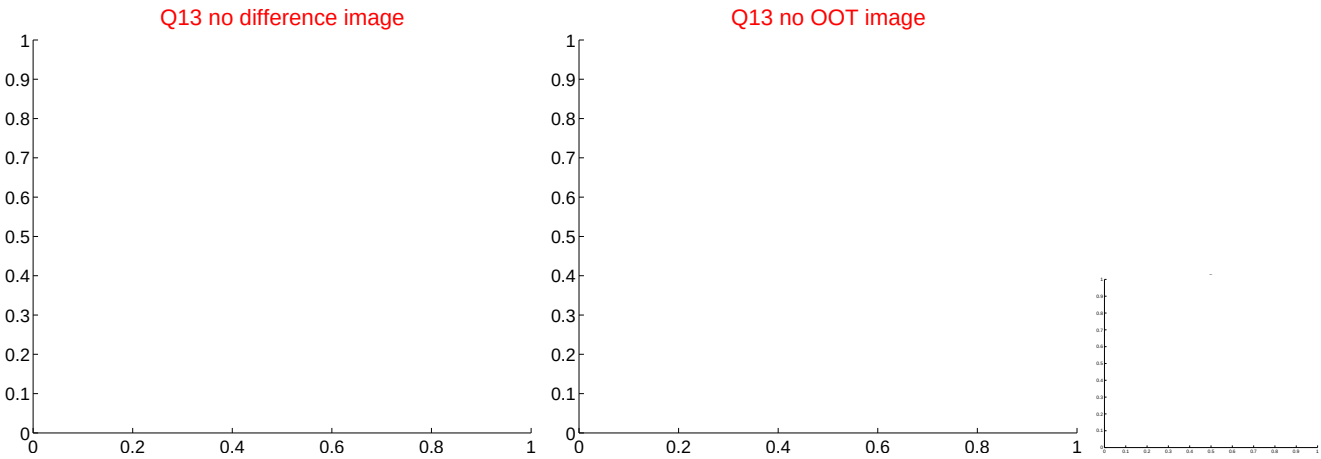


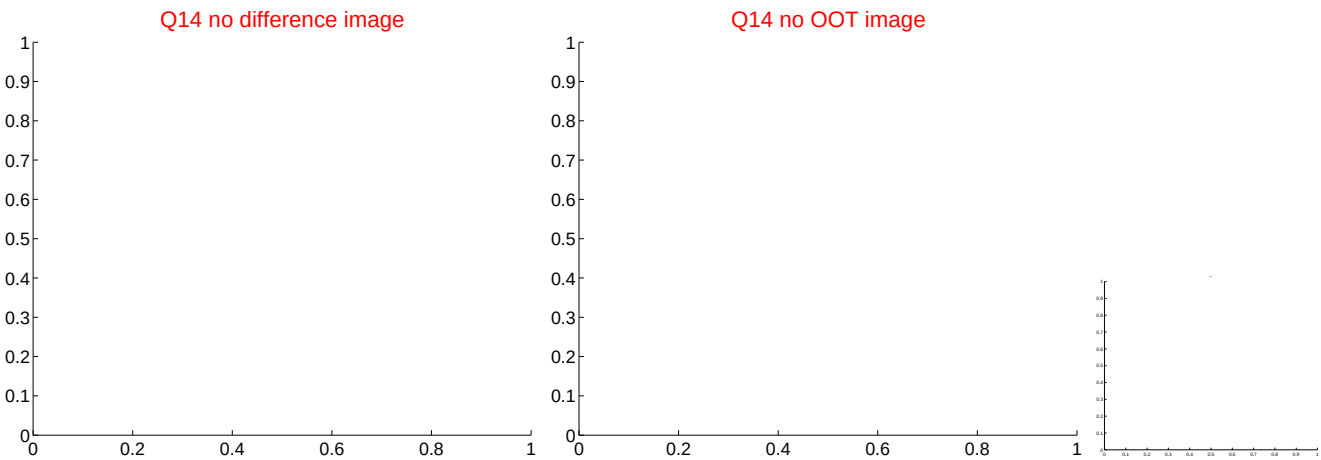


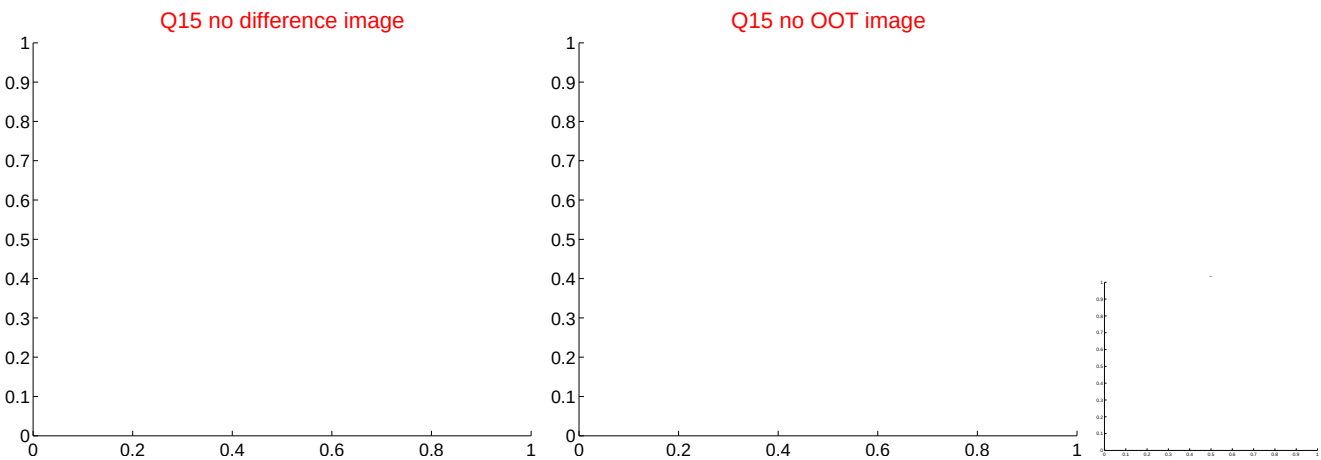


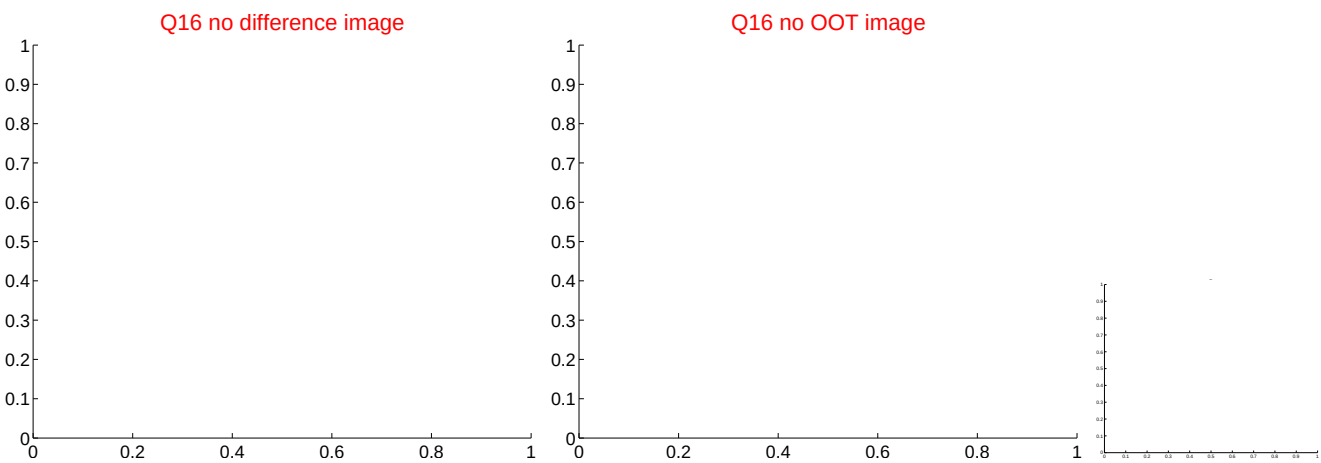


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

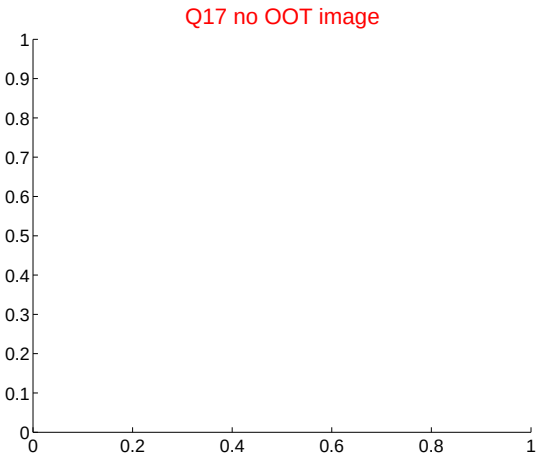


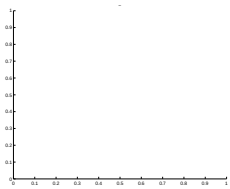


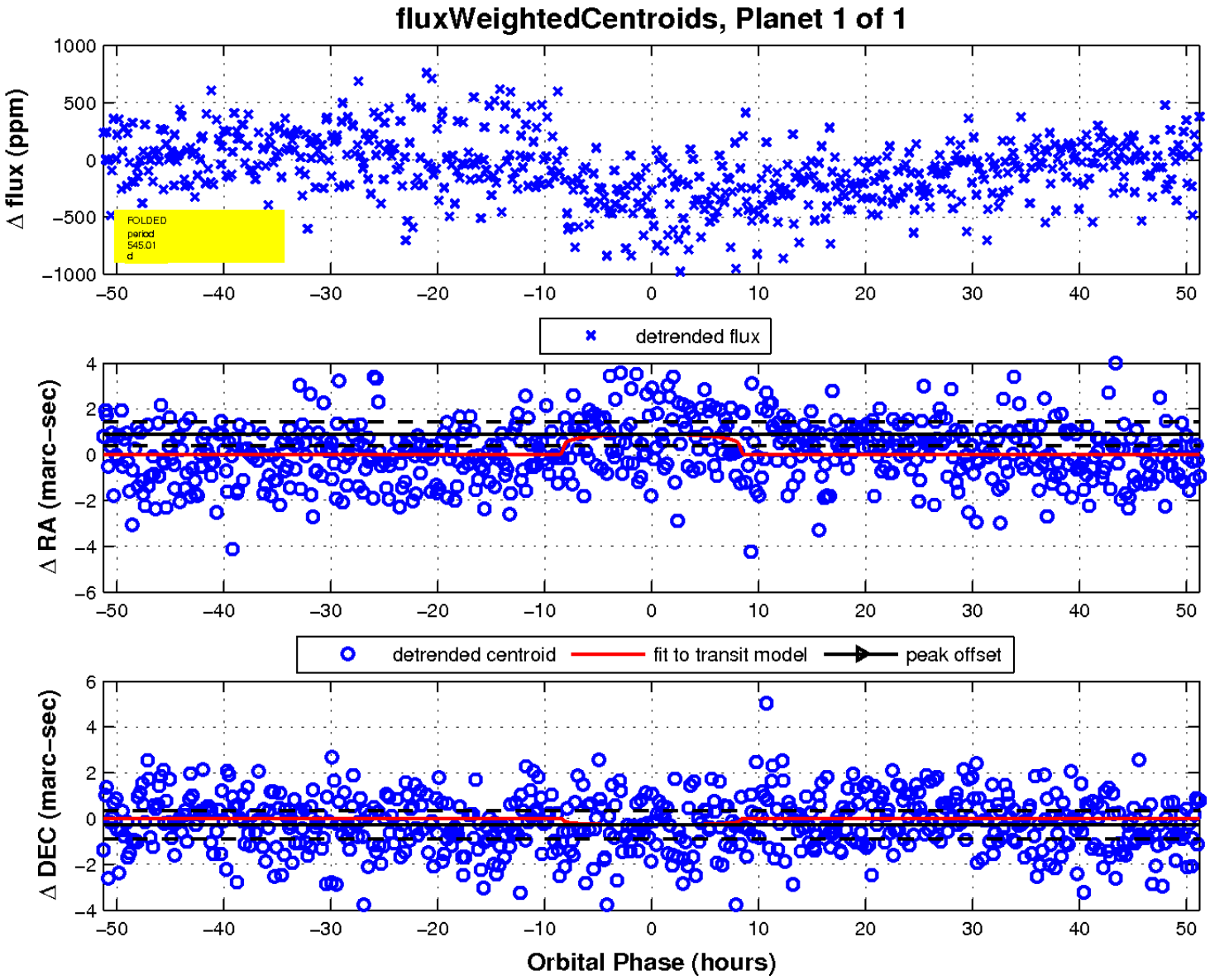
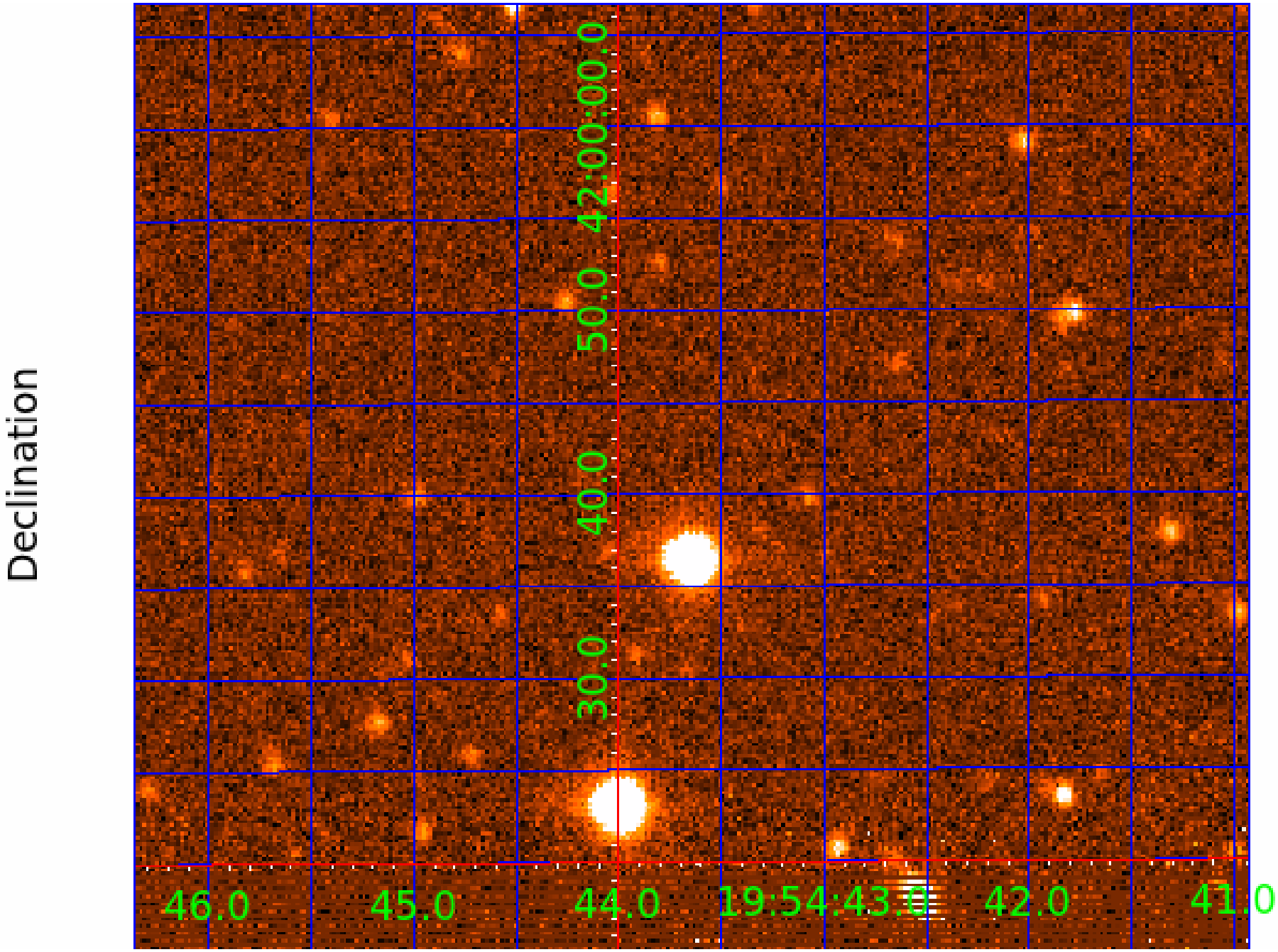




white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.







UKIRT Image