KIC 006460385

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 ($S_\oplus$)
006460385-01	OBS	No	23.563593	154.242202	3531.9	3.402	9.5	9.4	2.68	10974	16.40	1780.18

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006460385-01	OBS	FP	0.00	1	0	1	0	MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_RESOLVED_OFFSET

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.

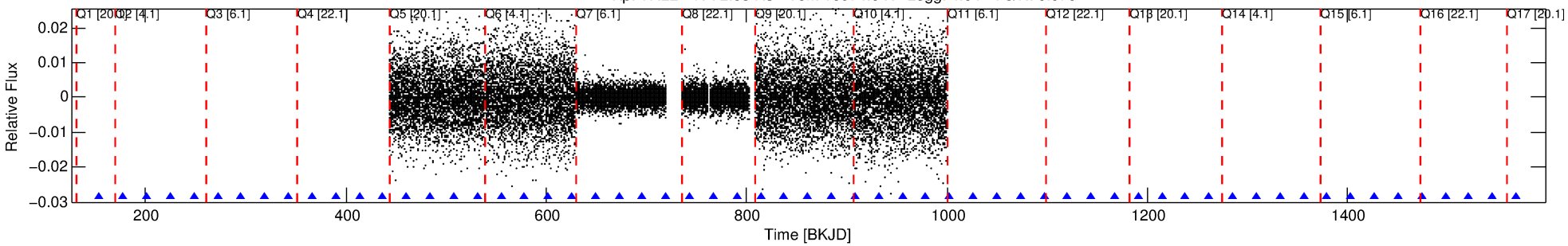
Ephemeris Match Information For 006460385-01

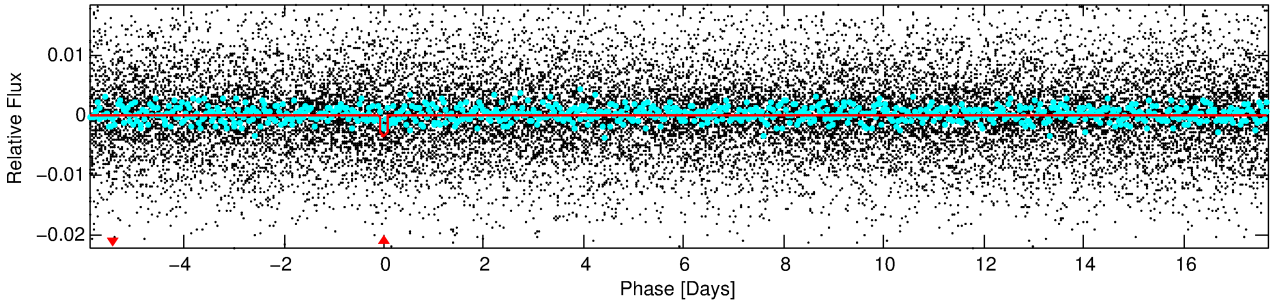
No Significant Match Found

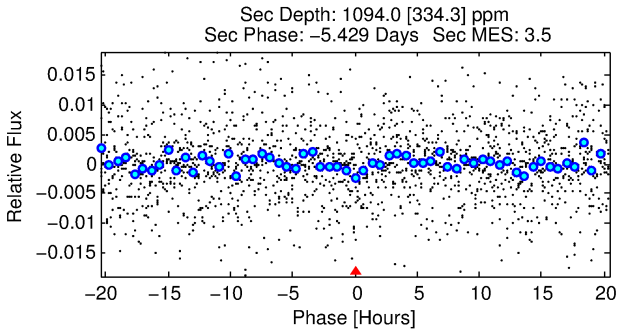
DV One-Page Summary

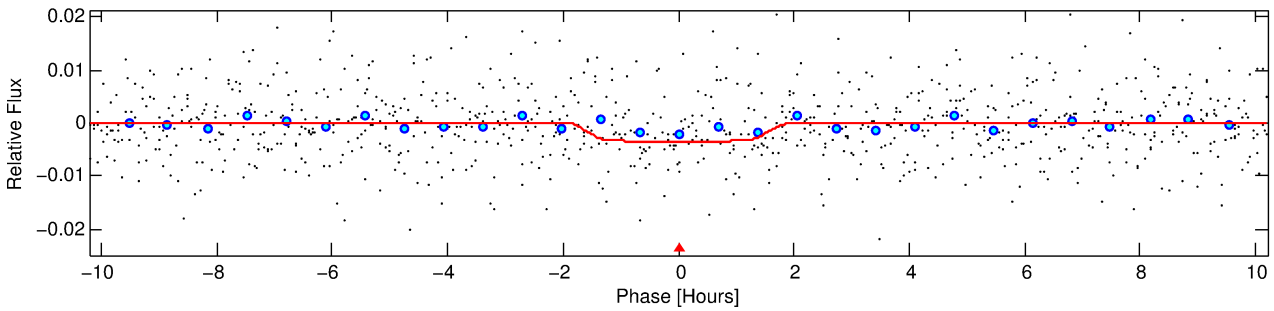
KIC: 6460385 Candidate: 1 of 1 Period: 23.564 d

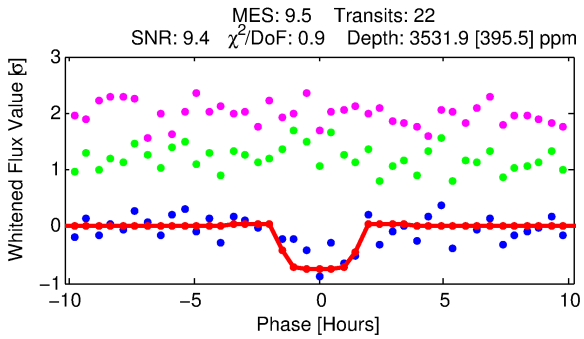
Kp: 17.22 R*: 2.68 Rs Teff: 10974.0 K Logg: 4.04 Fe/H: 0.070

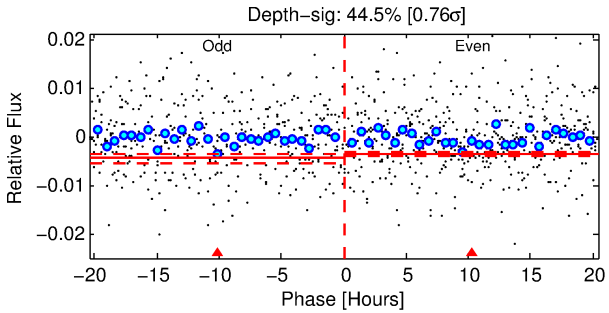


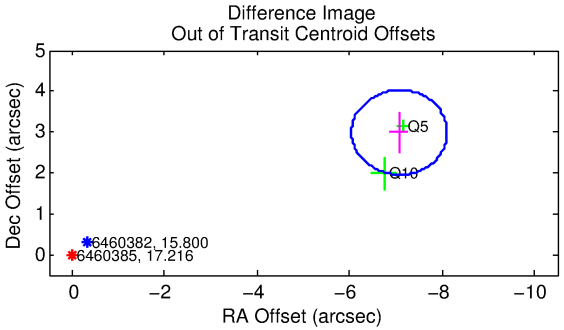












DV Fit Results:

Period = 23.56359 [0.00098] d
Epoch = 154.2422 [0.0239] BKJD
Rp/R* = 0.0561 [0.0451]
a/R* = 55.69 [333.13]
b = 0.09 [68.83]

Seff = 1780.18 [874.31]
Teq = 1656 [203] K
Rp = 16.40 [14.32] Re
a = 0.2287 [0.0690] AU

Ag = 117.10 [198.99] [0.58σ]
Teffp = 8424 [3468] K [1.95σ]

DV Diagnostic Results:

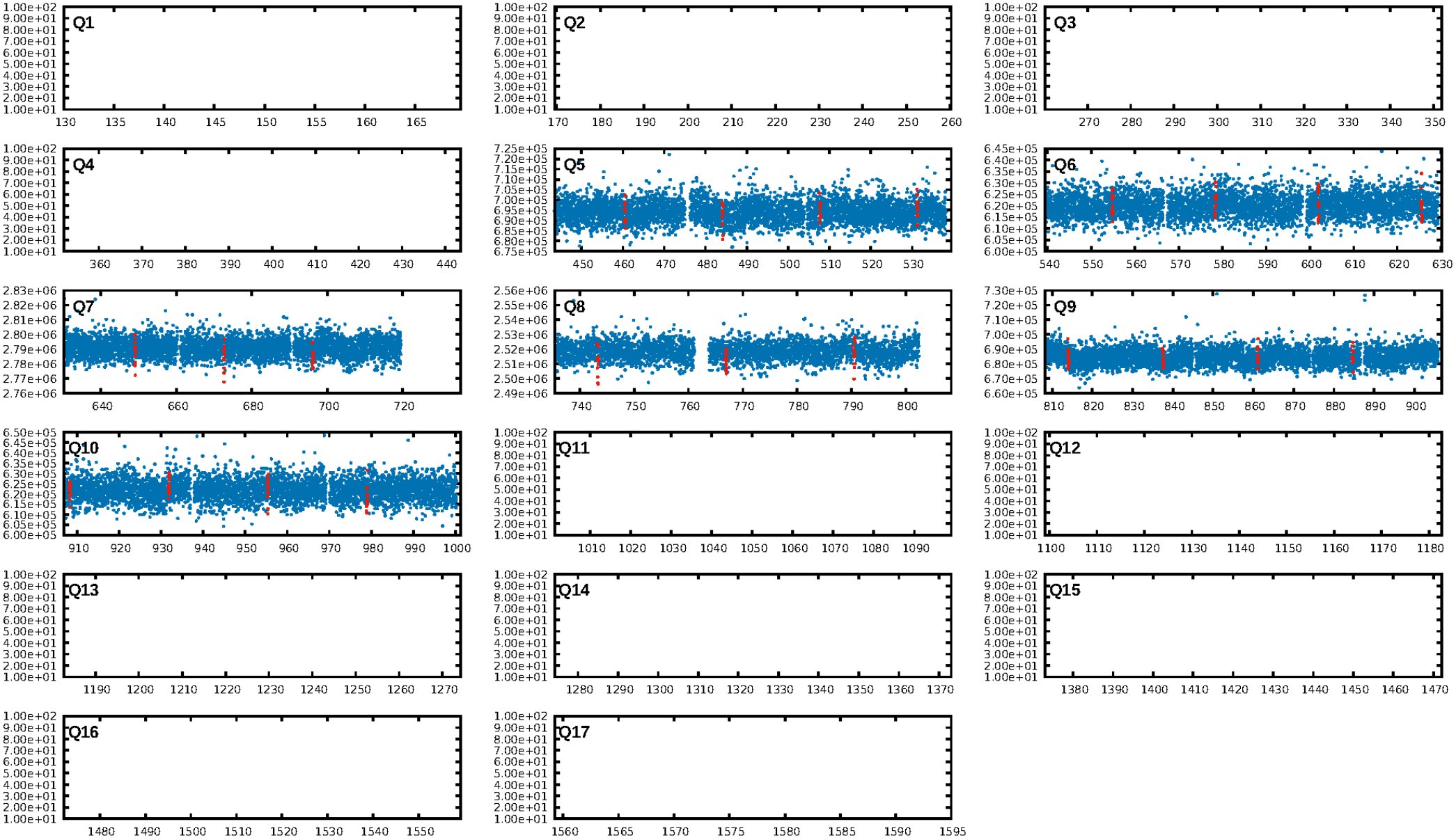
ShortPeriod−sig: N/A
LongPeriod−sig: N/A
ModelChiSquare2−sig: 13.8%
ModelChiSquareGof−sig: 99.9%
Bootstrap−pfa: 1.35e−23
RollingBand−fgt: 1.00 [22/22]
GhostDiagnostic−chr: −0.6725

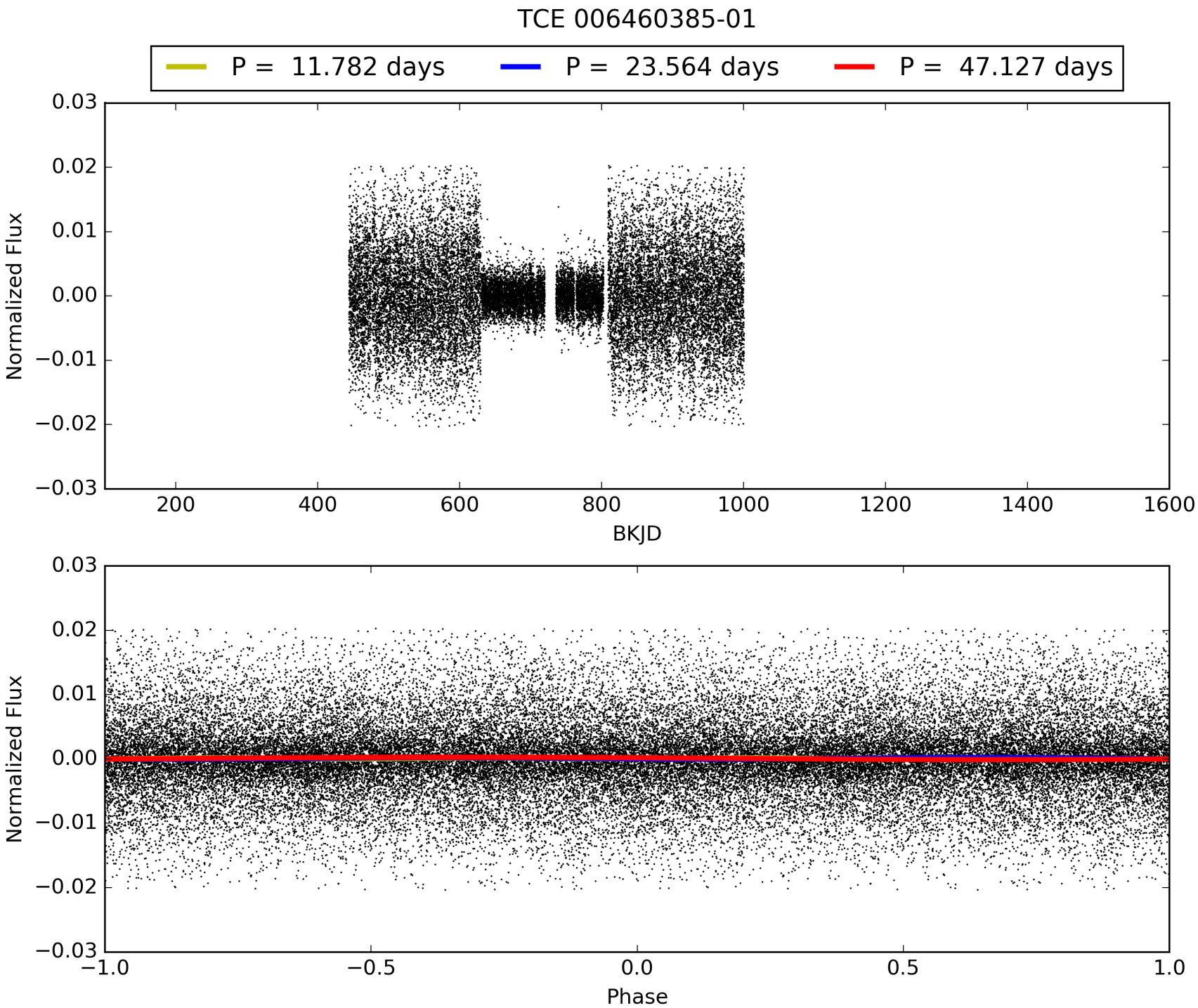
Centroid−sig: 0.0%
Centroid−so: 4.735 arcsec [12.91σ]
OotOffset−rm: 7.682 arcsec [22.29σ]
KicOffset−rm: 8.850 arcsec [14.79σ]
OotOffset−st: 1/0/0/1 [2]
KicOffset−st: 1/0/0/1 [2]
DiffImageQuality−fgm: 1.00 [2/2]
DiffImageOverlap−fno: 1.00 [6/6]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30−Jan−2016 10:13:20 Z

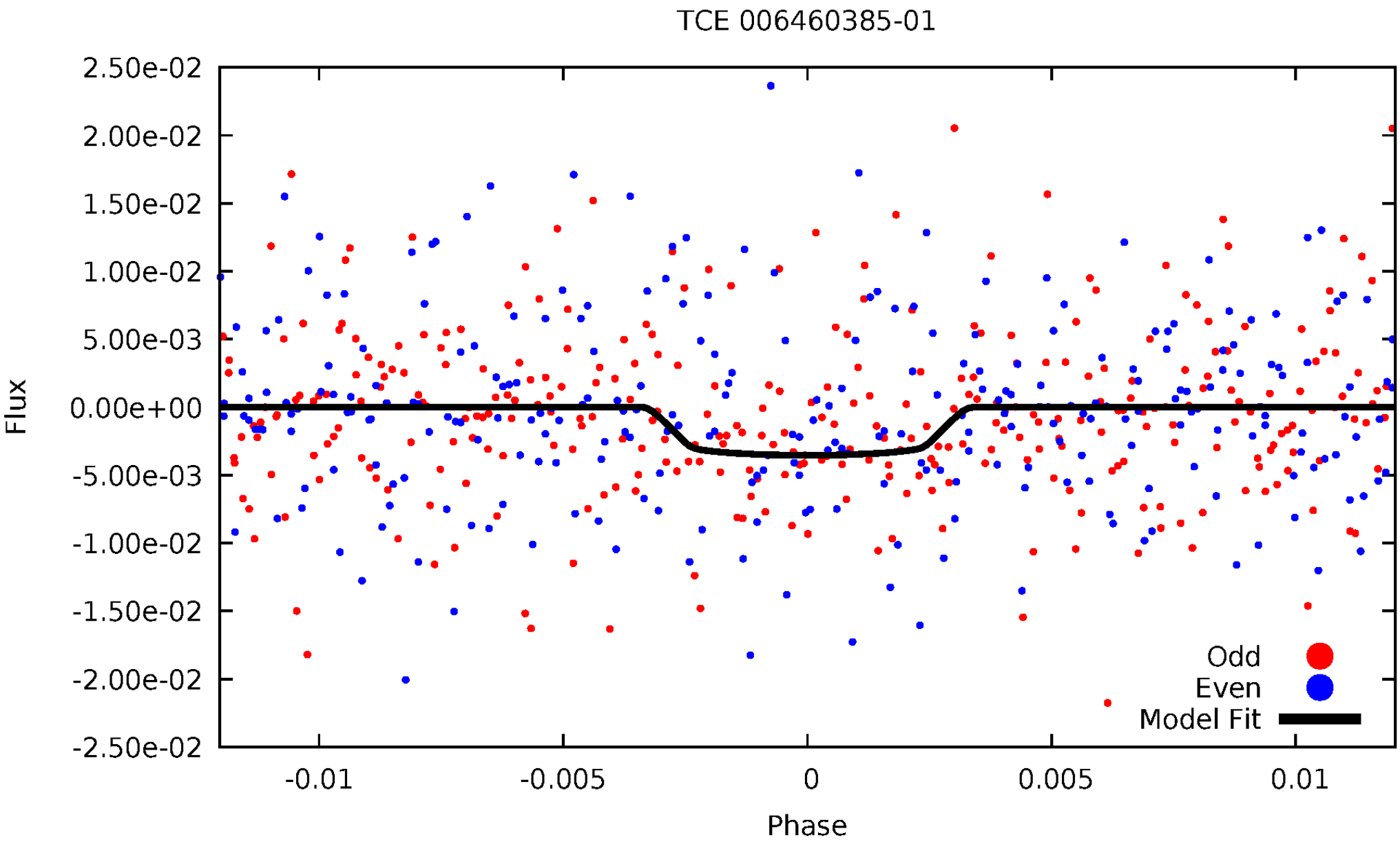
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 006460385-01, PDC Light Curves

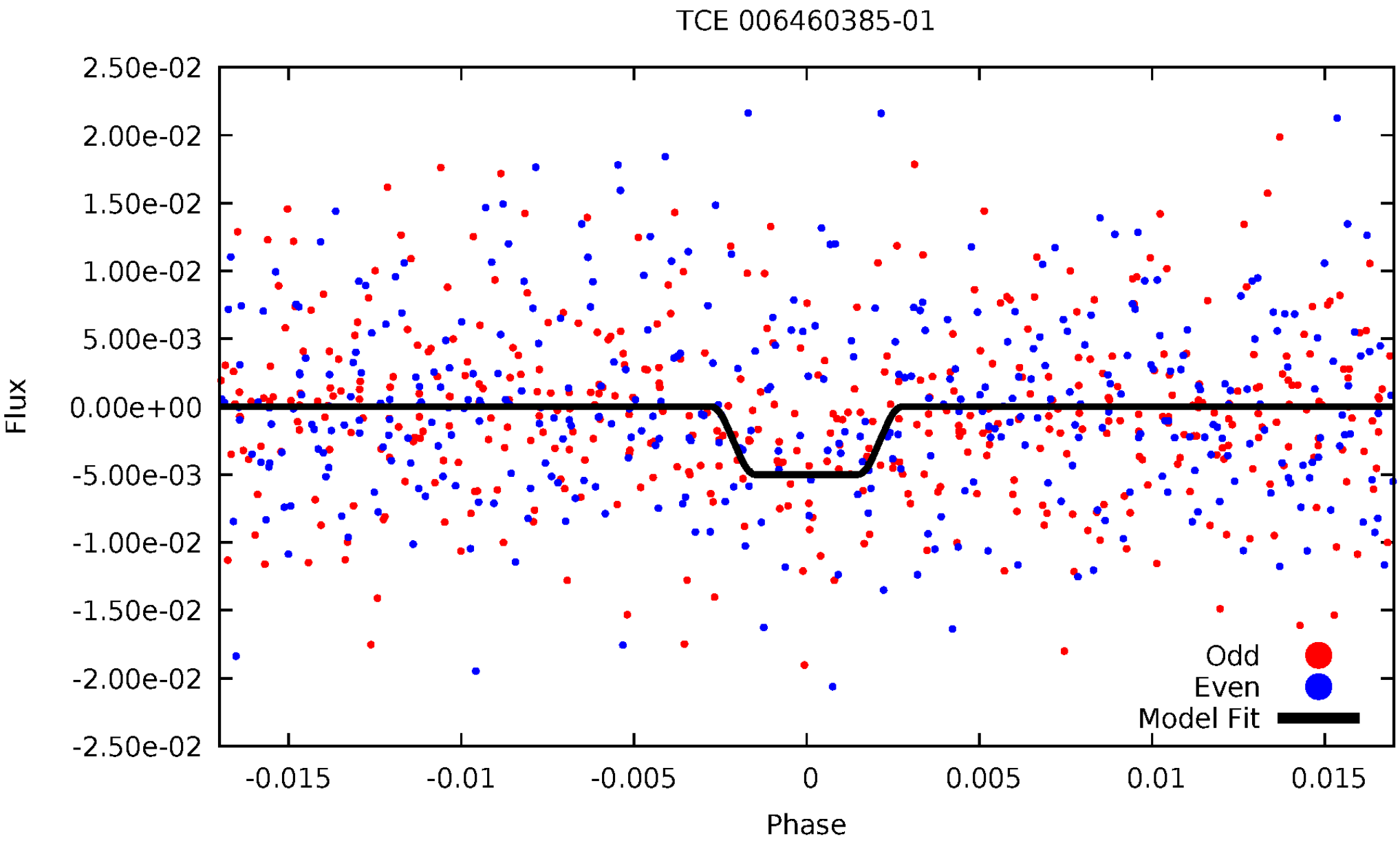



TCE 006460385-01
P = 11.782 days
P = 23.564 days
P = 47.127 days
Normalized Flux
BKJD
Normalized Flux
Phase

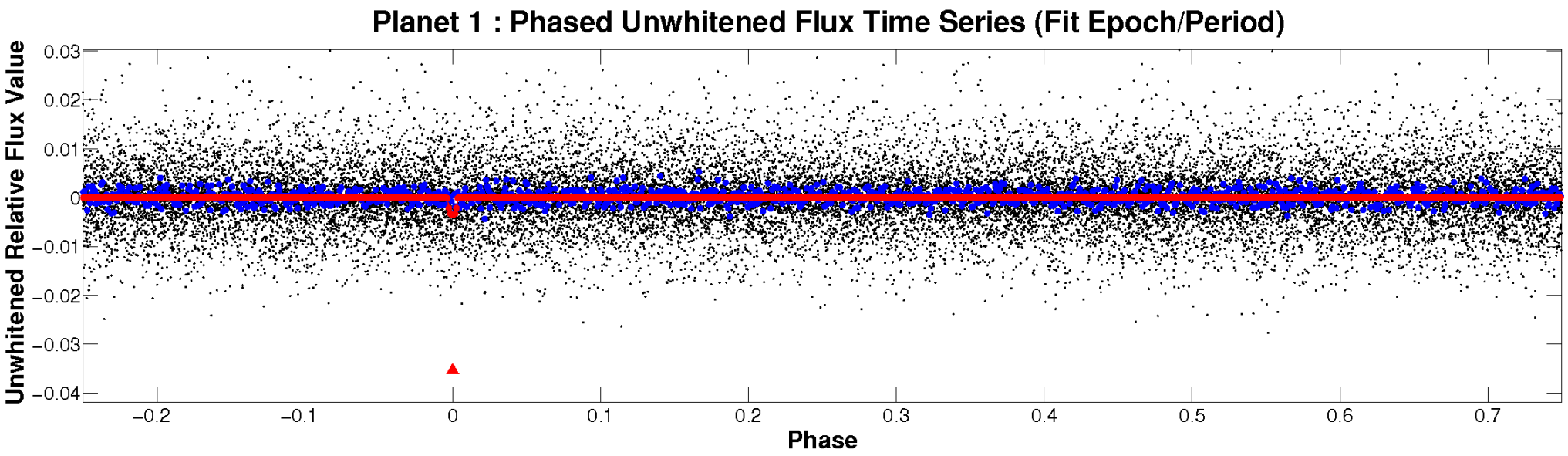
DV Odd/Even

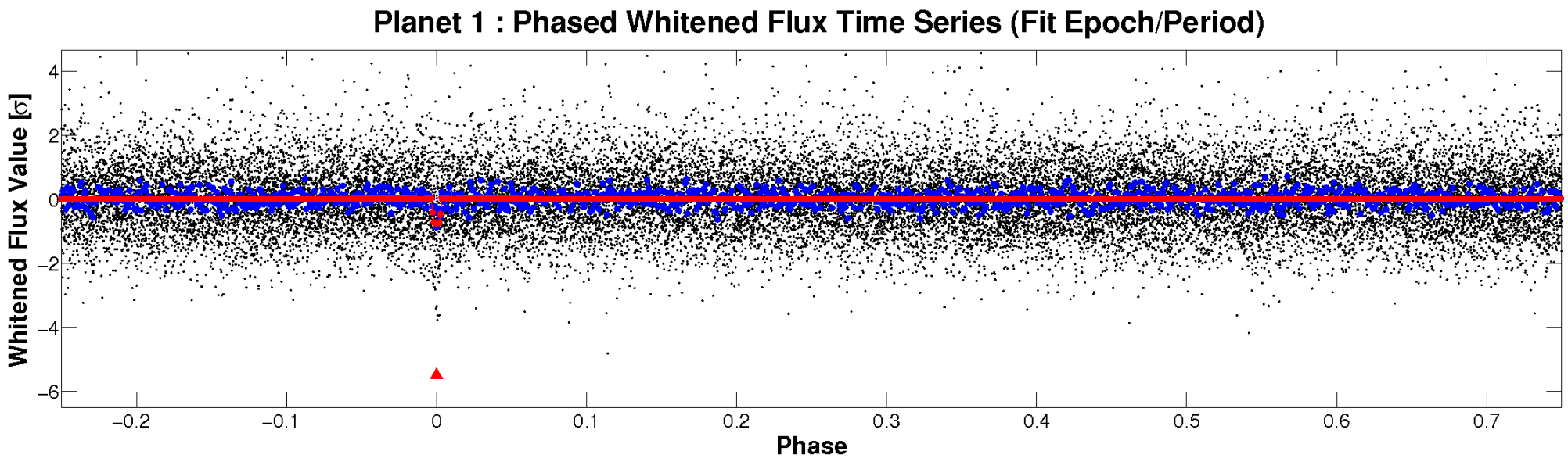

TCE 006460385-01
2.50e-02
2.00e-02
1.50e-02
1.00e-02
5.00e-03
0.00e+00
-5.00e-03
-1.00e-02
-1.50e-02
-2.00e-02
-2.50e-02
Flux
-0.01
-0.005
0
0.005
0.01
Phase
Odd
Even
Model Fit

ALT Odd/Even


TCE 006460385-01
2.50e-02
2.00e-02
1.50e-02
1.00e-02
5.00e-03
0.00e+00
-5.00e-03
-1.00e-02
-1.50e-02
-2.00e-02
-2.50e-02
Flux
-0.015
-0.01
-0.005
0
0.005
0.01
0.015
Phase
Odd
Even
Model Fit

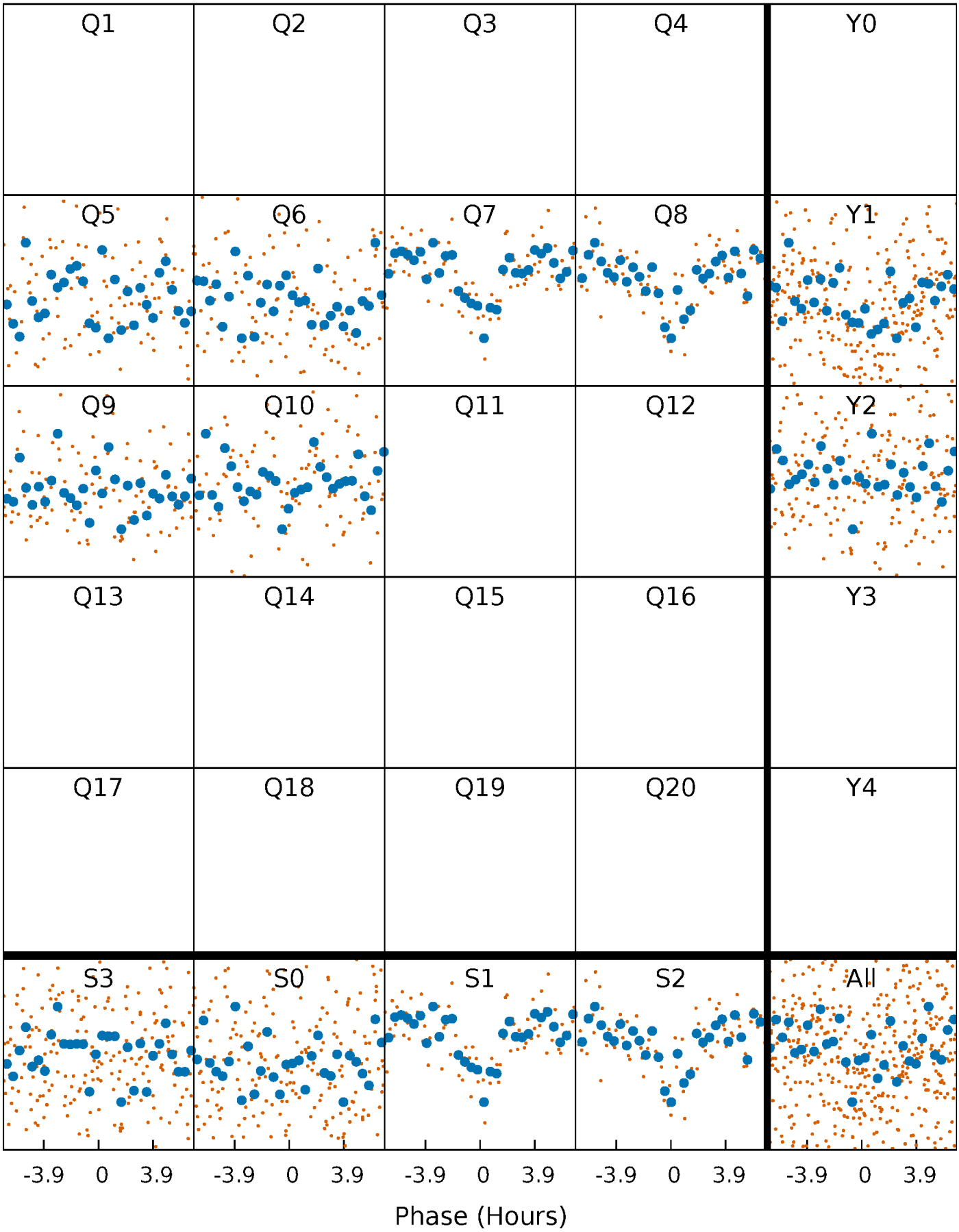
Non-Whitened Vs. Whitened Light Curve





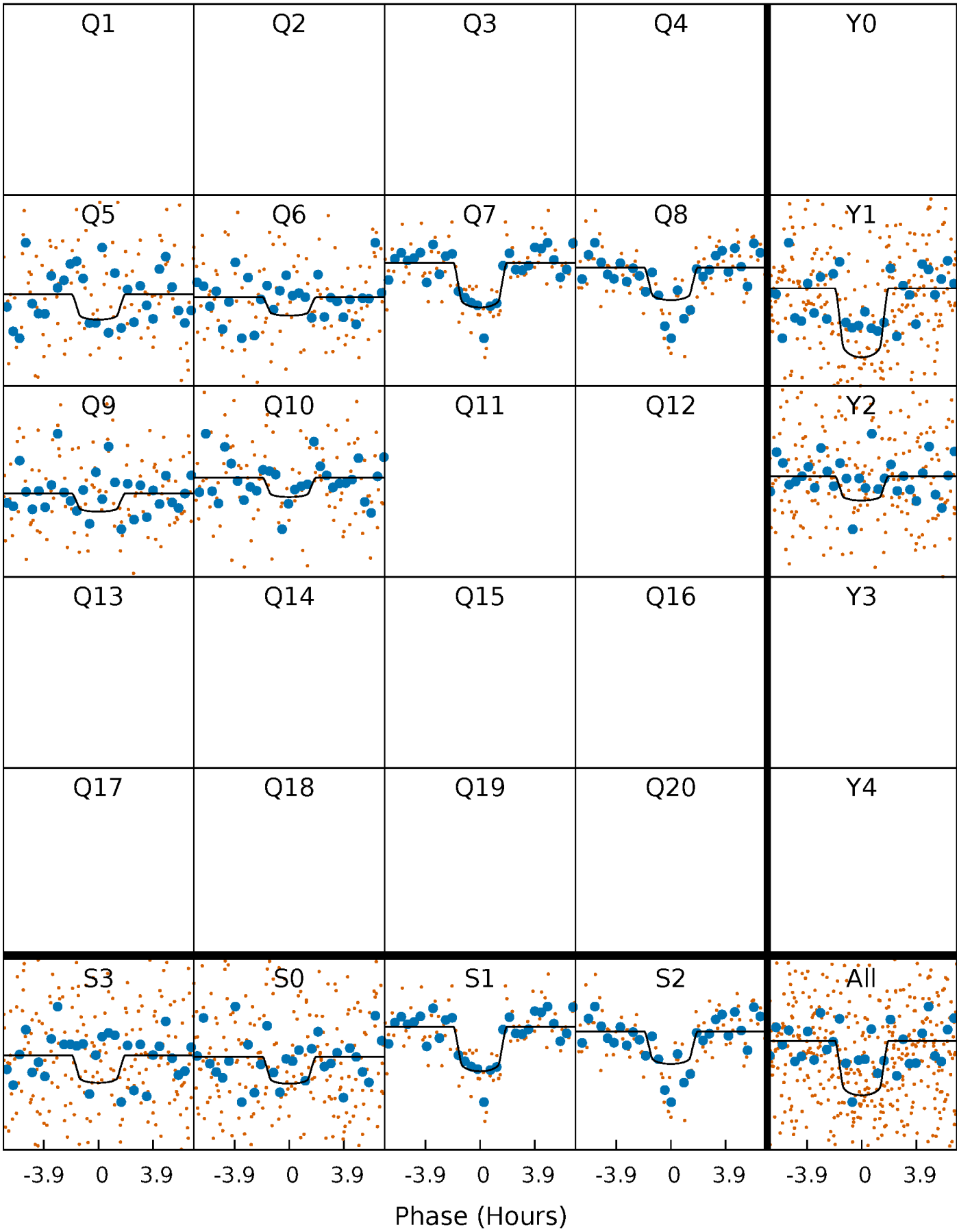
PDC Quarter-Phased Transit Curves

TCE 006460385-01 P= 23.563593 Days T_0=154.242202 (BKJD)



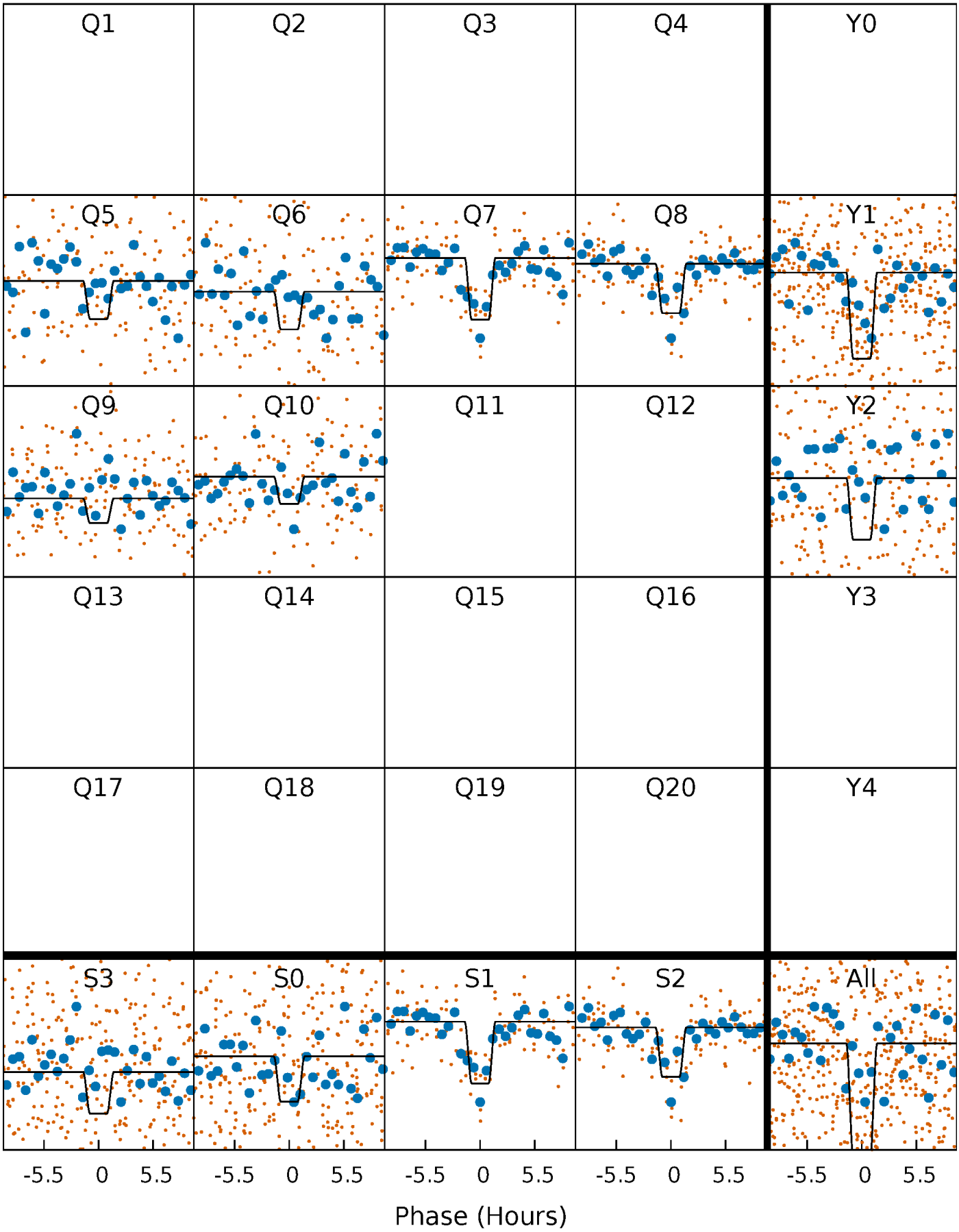
DV Quarter-Phased Transit Curves

TCE 006460385-01 P= 23.563593 Days T_0=154.242202 (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

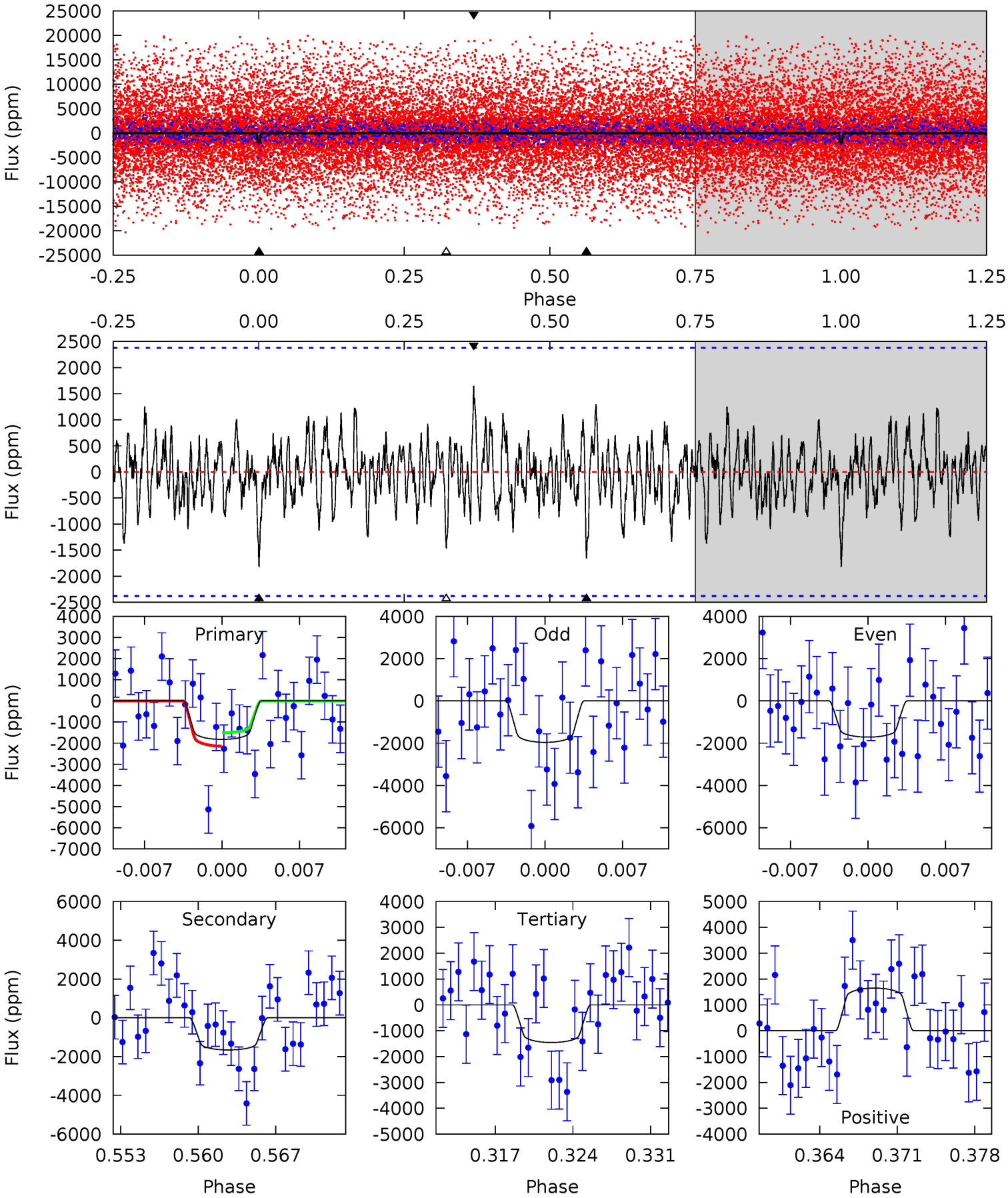
TCE 006460385-01 P= 23.558779 Days T_0=154.360616 (BKJD)



DV Model-Shift Uniqueness Test

006460385-01, P = 23.563593 Days, E = 154.242202 Days

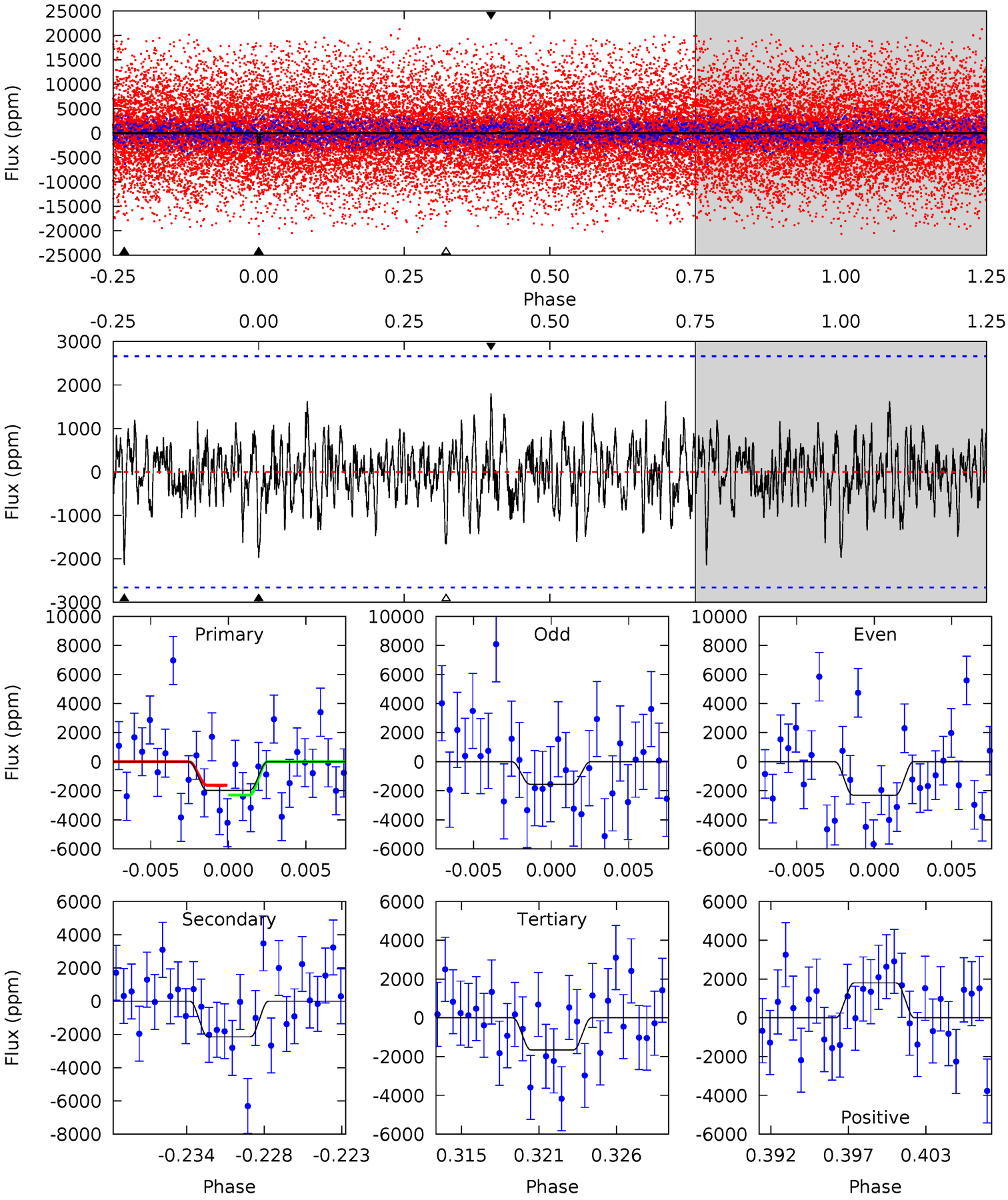
Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.91	3.55	3.12	3.54	5.10	2.71	1.06	0.79	0.37	0.43	0.01	0.27	0.81	0.48	0.69



Alt Model-Shift Uniqueness Test

006460385-01, P = 23.558779 Days, E = 154.360616 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.82	4.15	3.21	3.48	5.14	2.78	1.08	0.62	0.34	0.94	0.67	0.72	0.70	0.46	0.67



Stellar Parameters For KIC 006460385

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	M($M_\odot$)	$p_\star$ (g·cm^{-3})
	10974^{+266}_{-495}	$4.041^{+0.258}_{-0.172}$	$0.070^{+0.150}_{-0.600}$	$2.677^{+0.748}_{-0.914}$	$2.873^{+0.241}_{-0.723}$	$0.211^{+0.363}_{-0.103}$
	+2%/-5%	+6%/-4%	+214%/-857%	+28%/-34%	+8%/-25%	+172%/-49%
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 006460385-01 / KOI

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1656±467	$17.05^{+12.87}_{-10.06}$	2301^{+175}_{-215}	8155^{+8377}_{-2242}	154^{+784}_{-108}
Alt.	-2145±517	$20.60^{+12.85}_{-11.65}$	2281^{+193}_{-214}	7735^{+6870}_{-1698}	130^{+633}_{-80}

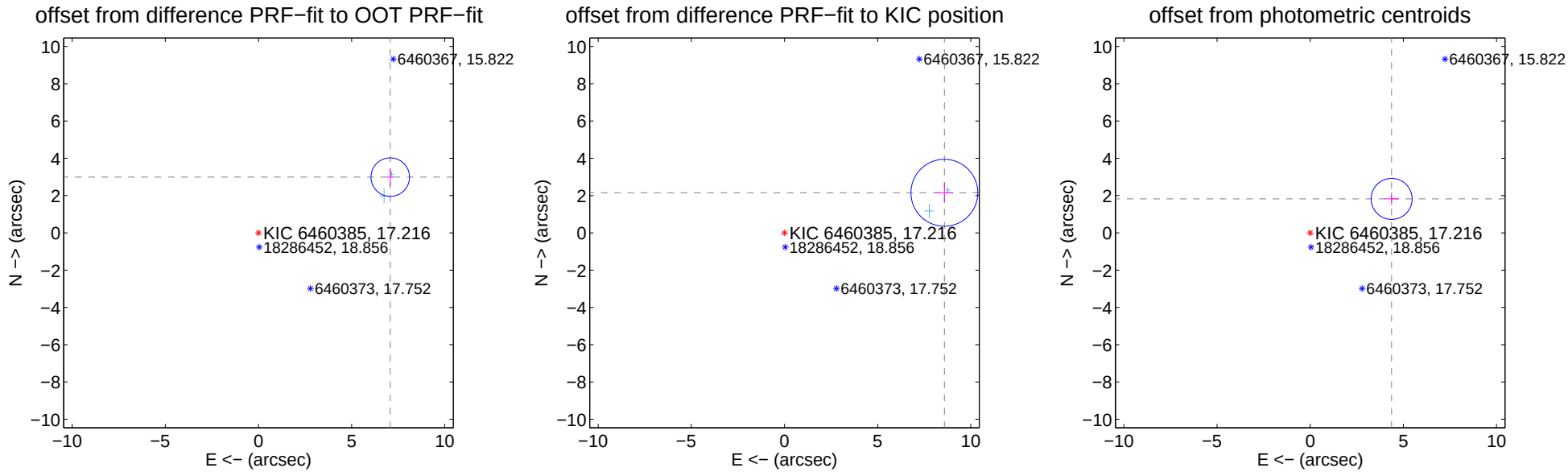
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

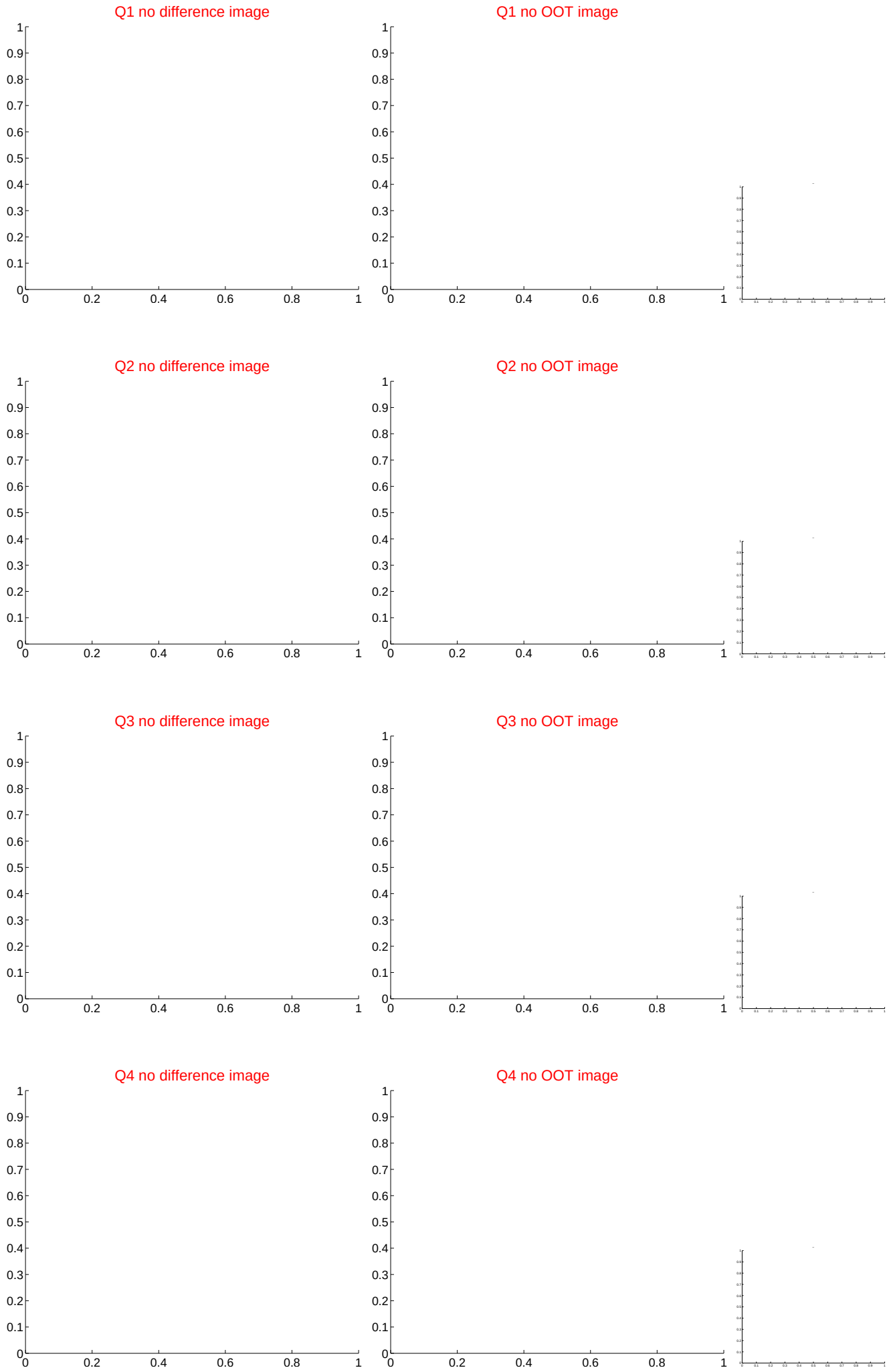
Supplemental centroid analysis for 006460385-01. Kepler magnitude: 17.22. Transit SNR 9.36
There are 2 quarters with good PRF difference image offsets
The direct PRF centroid is offset from the target star catalog position by about 1.31 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	7.682 ± 0.345	22.29	-7.076 ± 0.179	2.990 ± 0.480
PRF-fit source offset from KIC position	8.850 ± 0.598	14.79	-8.584 ± 0.483	2.151 ± 0.542
photometric centroid source offset	4.74 ± 0.37	12.91	-4.37 ± 0.37	1.82 ± 0.32

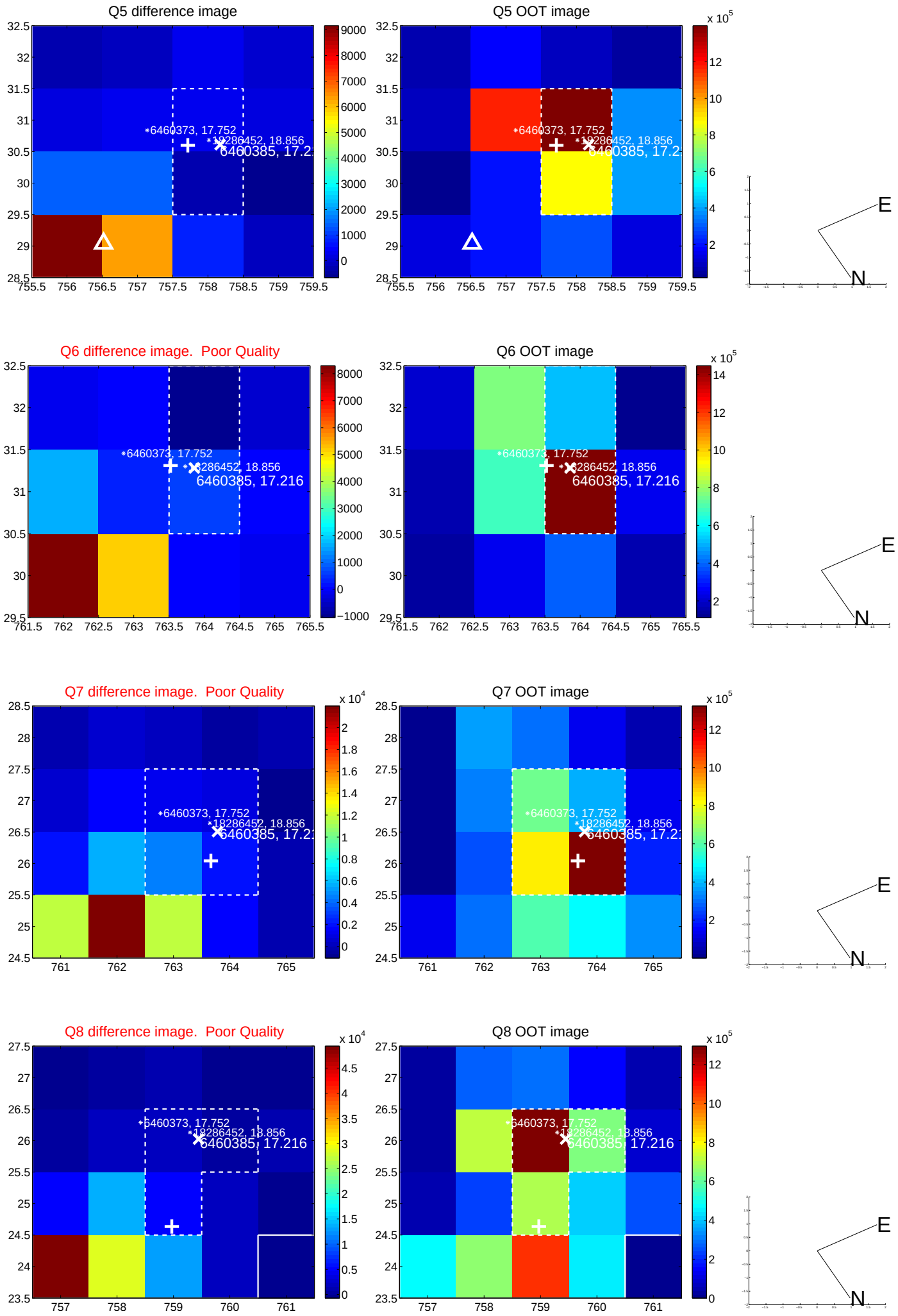


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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

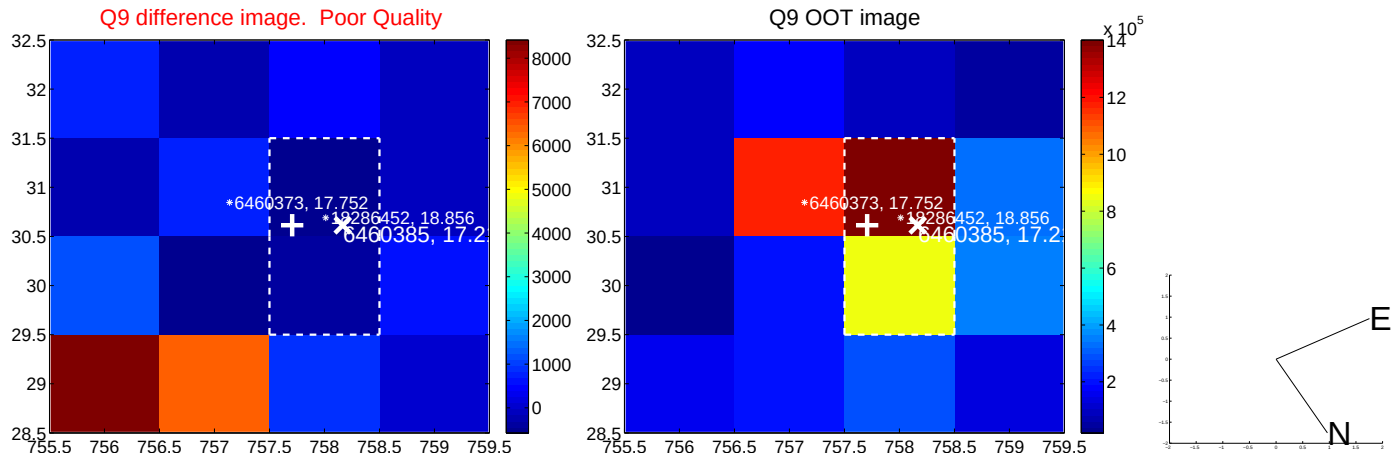
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

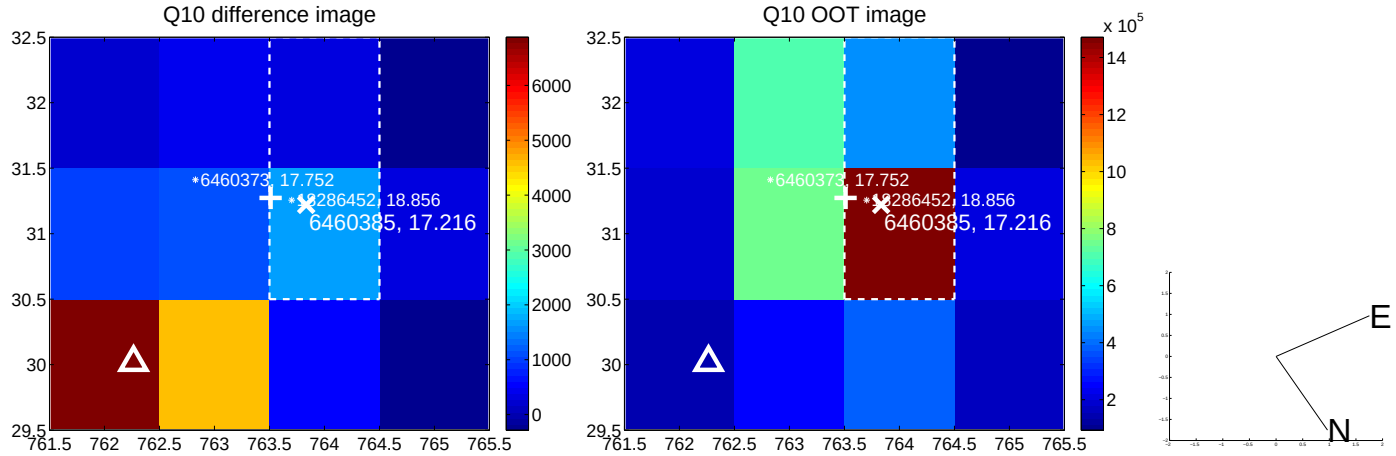


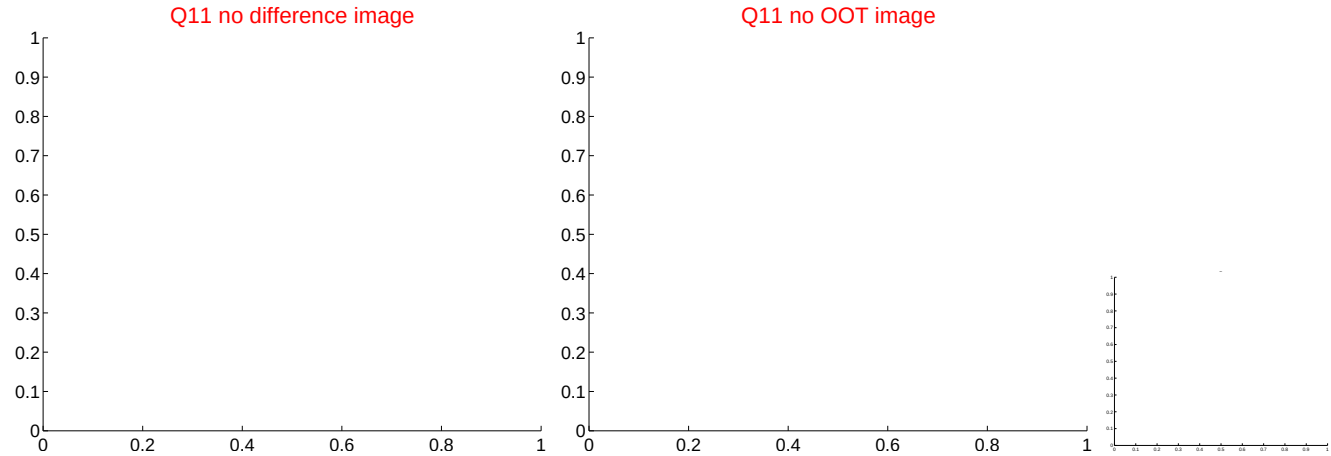
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

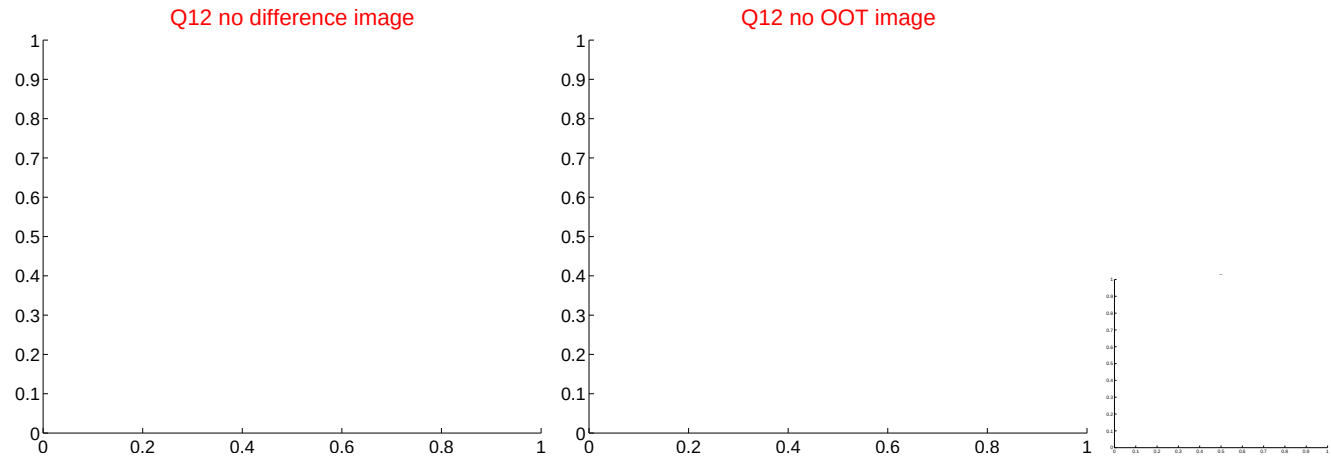


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

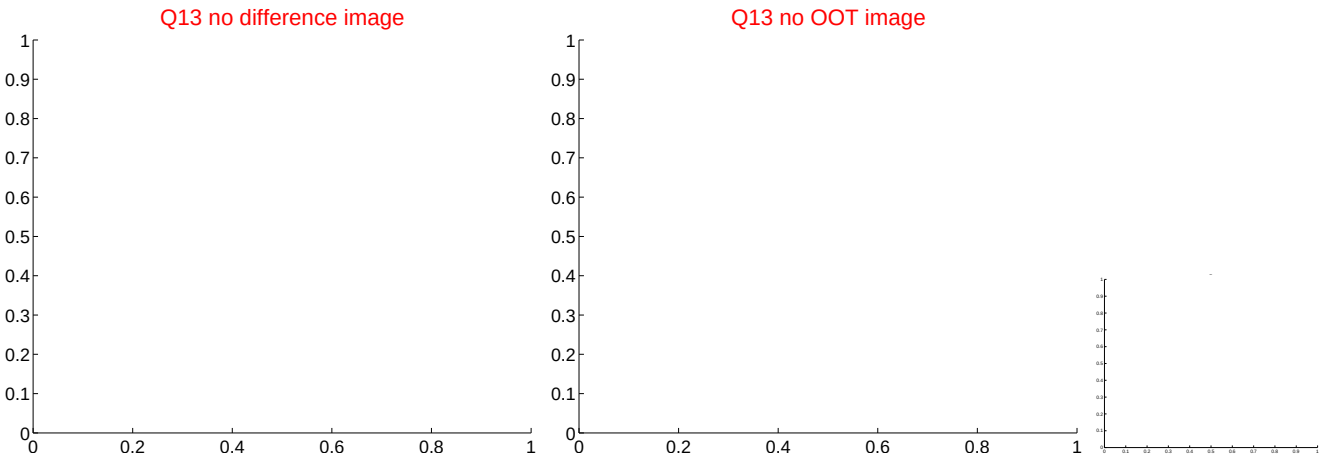


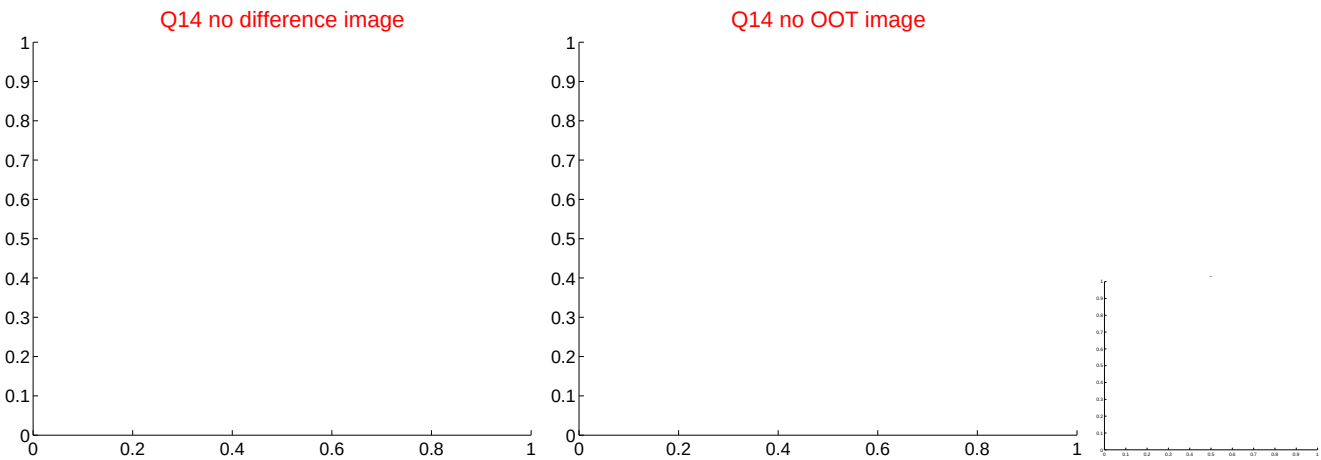


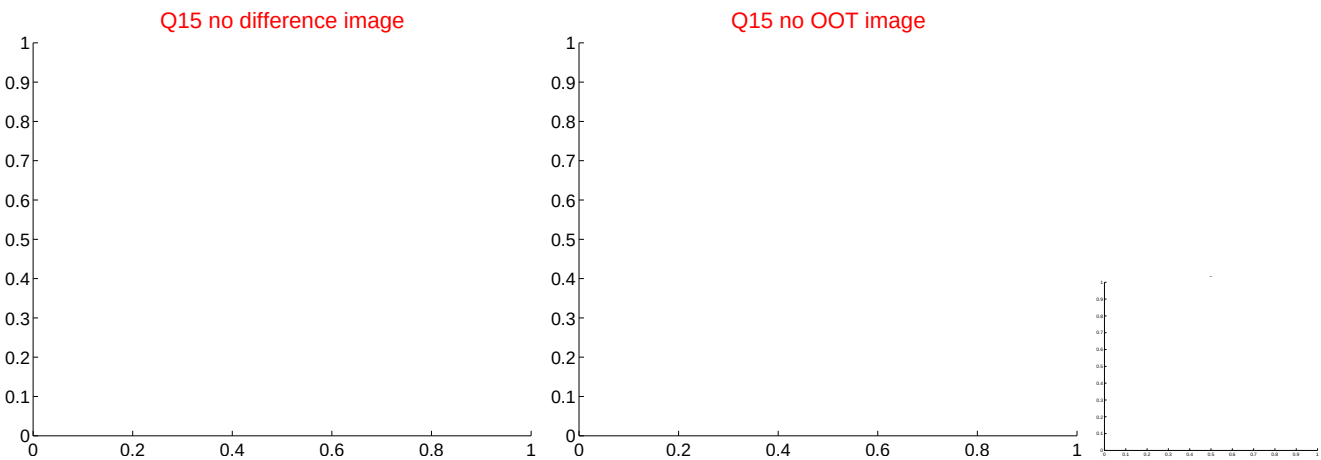


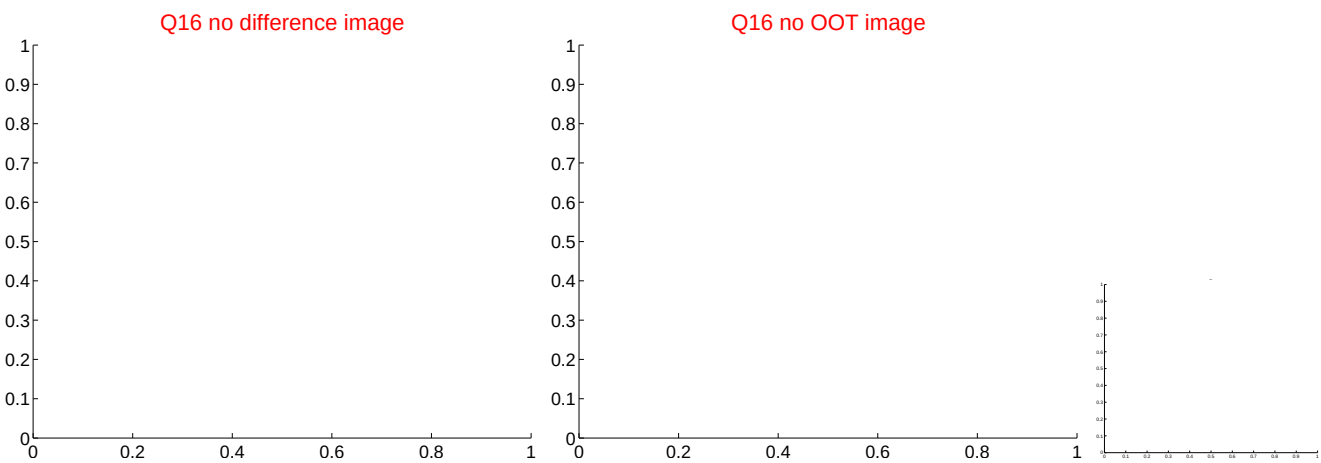


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

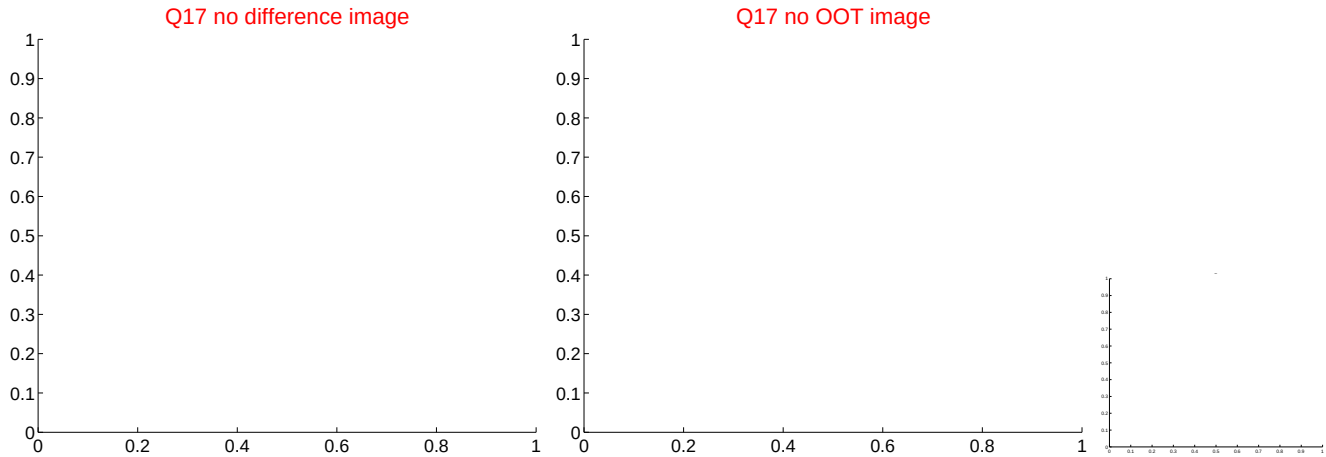


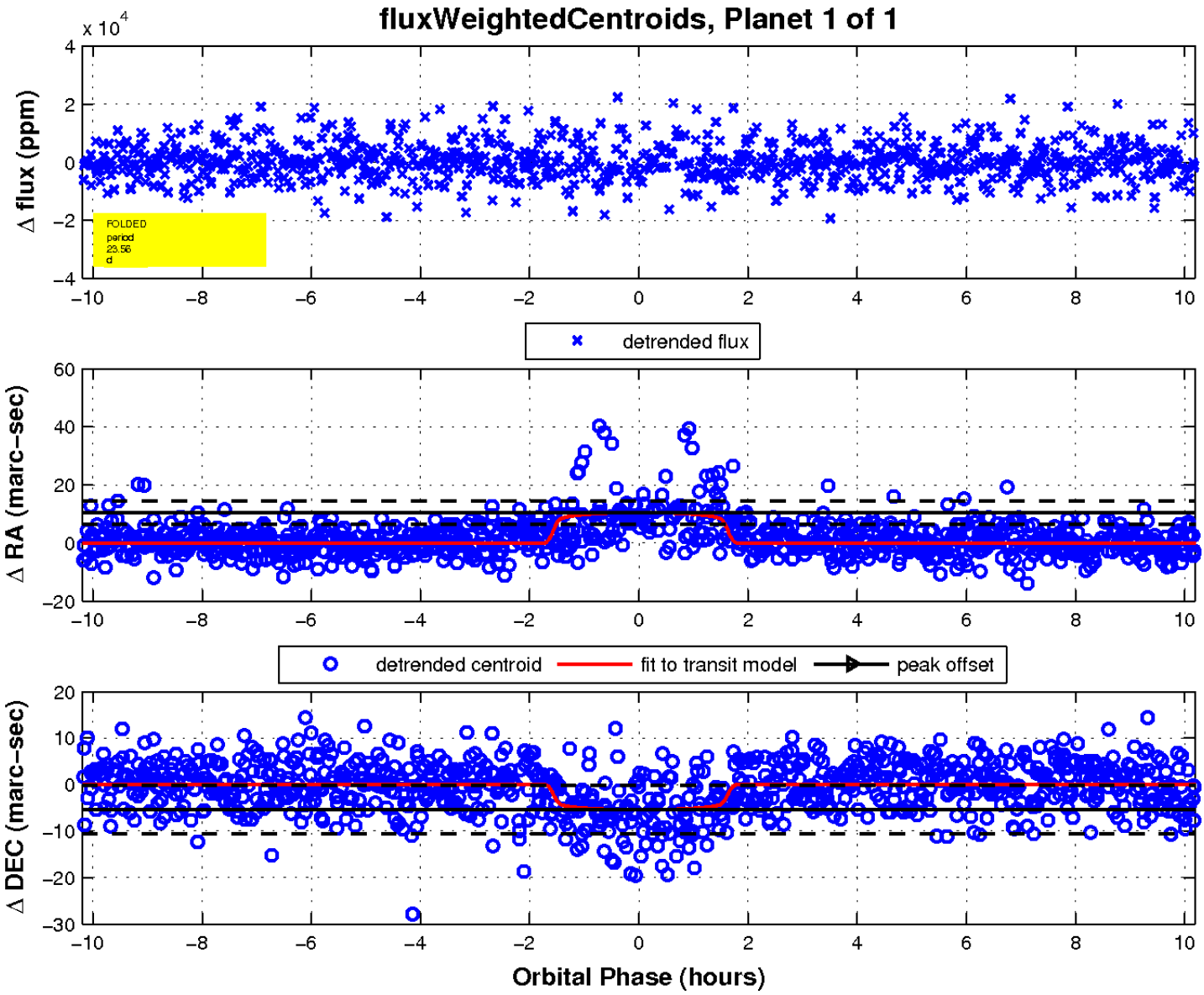




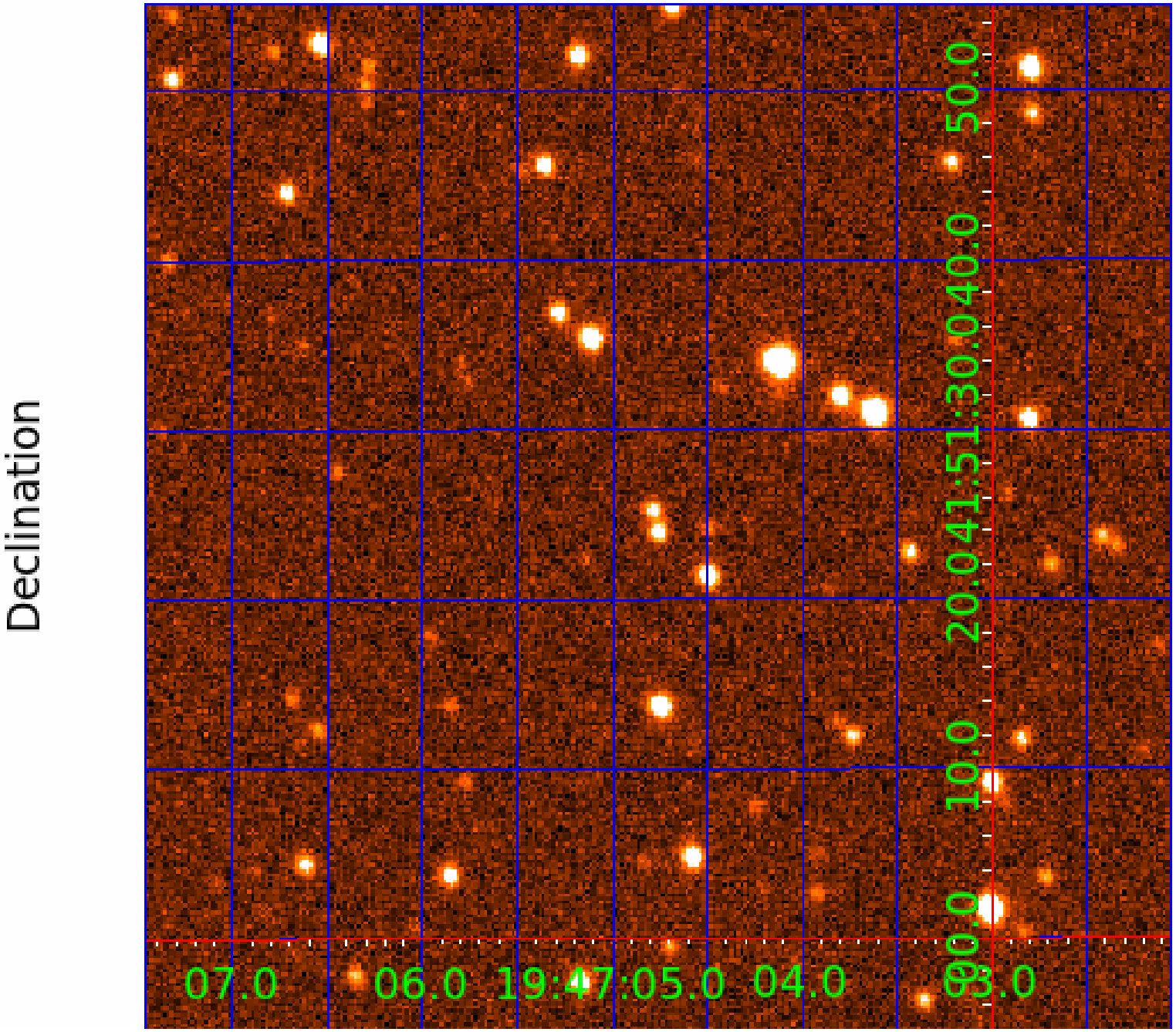


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.





UKIRT Image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