KIC 006580299

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 ($S_\oplus$)
006580299-01	OBS	No	541.317607	430.898921	156.7	16.492	10.3	9.9	1.48	5906	2.00	1.49

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006580299-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—INCONSISTENT_TRANS—CENT_FEW_DIFFS

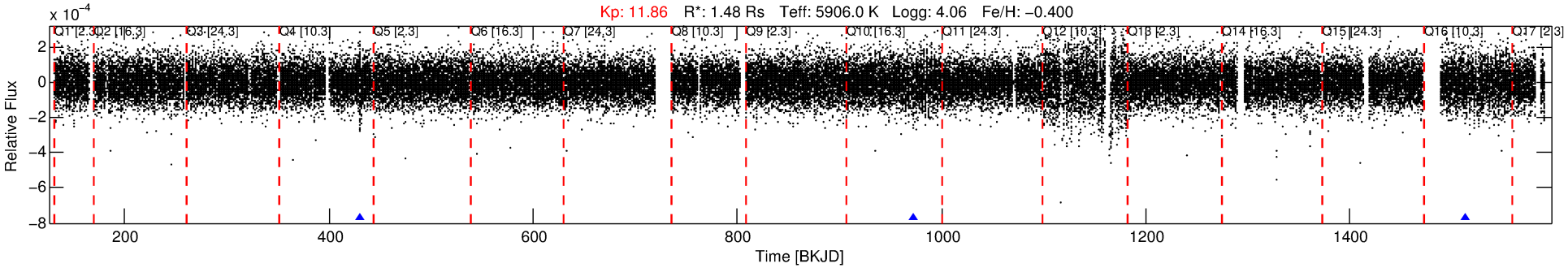
Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.
See `http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col` for comment definitions.

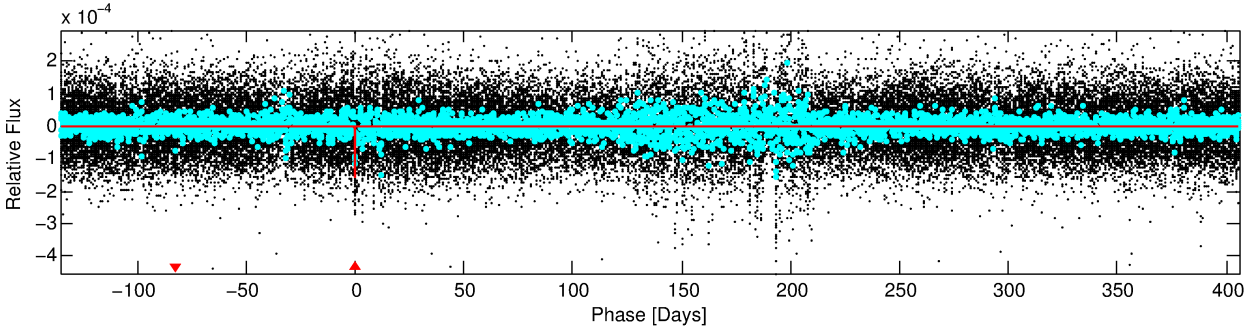
Ephemeris Match Information For 006580299-01

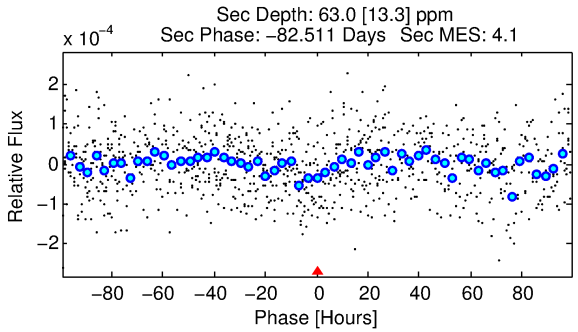
No Significant Match Found

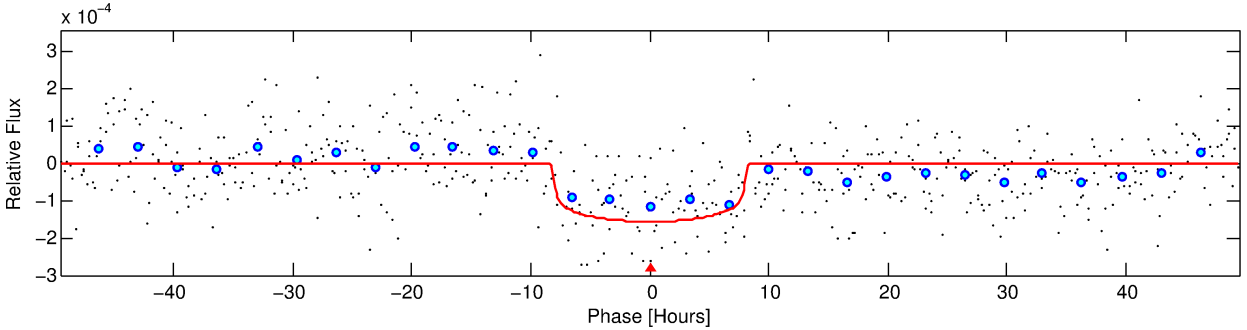
DV One-Page Summary

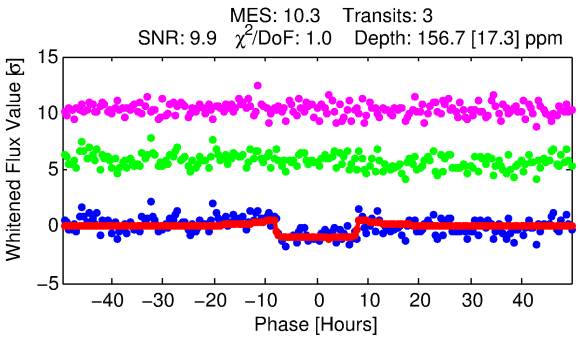
KIC: 6580299 Candidate: 1 of 1 Period: 541.318 d

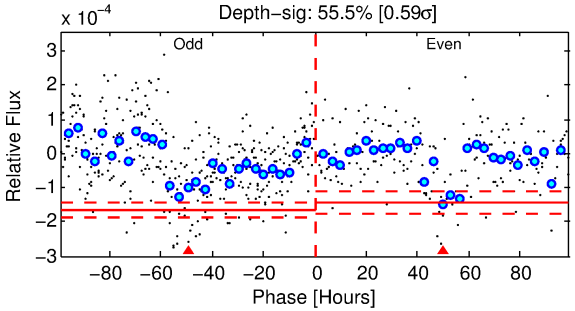


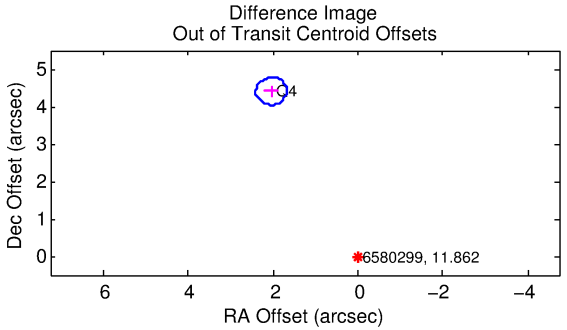












DV Fit Results:

Period = 541.31761 [0.01049] d
Epoch = 430.8989 [0.0130] BKJD
Rp/R* = 0.0124 [0.0028]
a/R* = 172.65 [188.55]
b = 0.74 [0.66]

Seff = 1.49 [0.74]
Teq = 282 [35] K
Rp = 2.00 [0.76] Re
a = 1.2624 [0.3789] AU

Ag = 13831.39 [9685.16] [1.43σ]
Teffp = 4722 [610] K [7.27σ]

DV Diagnostic Results:

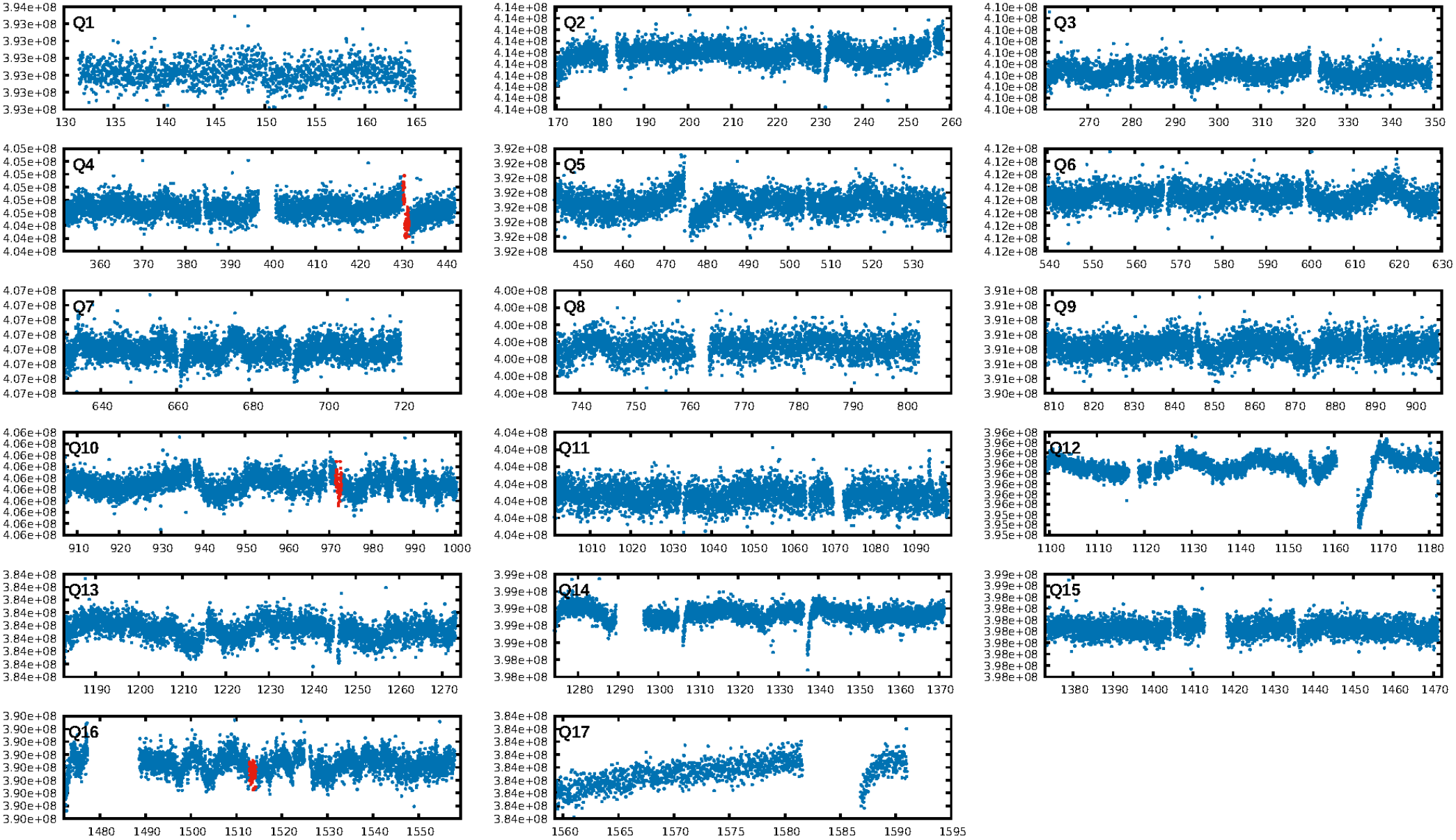
ShortPeriod−sig: N/A
LongPeriod−sig: N/A
ModelChiSquare2−sig: 2.1%
ModelChiSquareGof−sig: 99.7%
Bootstrap−pfa: 8.70e−18
RollingBand−fgt: 1.00 [3/3]
GhostDiagnostic−chr: 1.792

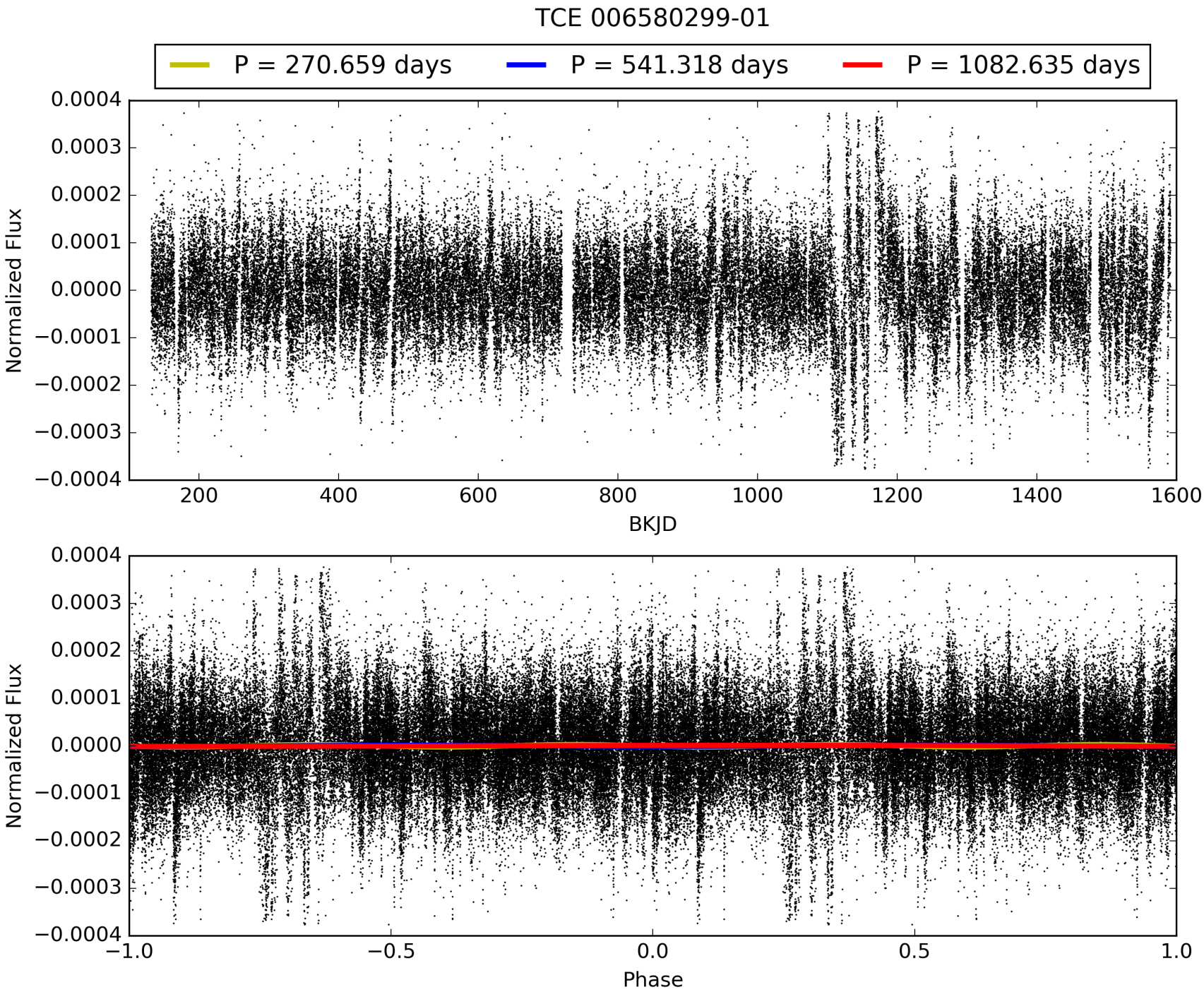
Centroid−sig: 0.9%
Centroid−so: 3.099 arcsec [1.78σ]
OotOffset−rm: 4.860 arcsec [40.06σ]
KicOffset−rm: 4.634 arcsec [38.19σ]
OotOffset−st: 0/0/1/0 [1]
KicOffset−st: 0/0/1/0 [1]
DiffImageQuality−fgm: 1.00 [1/1]
DiffImageOverlap−fno: 1.00 [3/3]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31−Jan−2016 22:31:33 Z

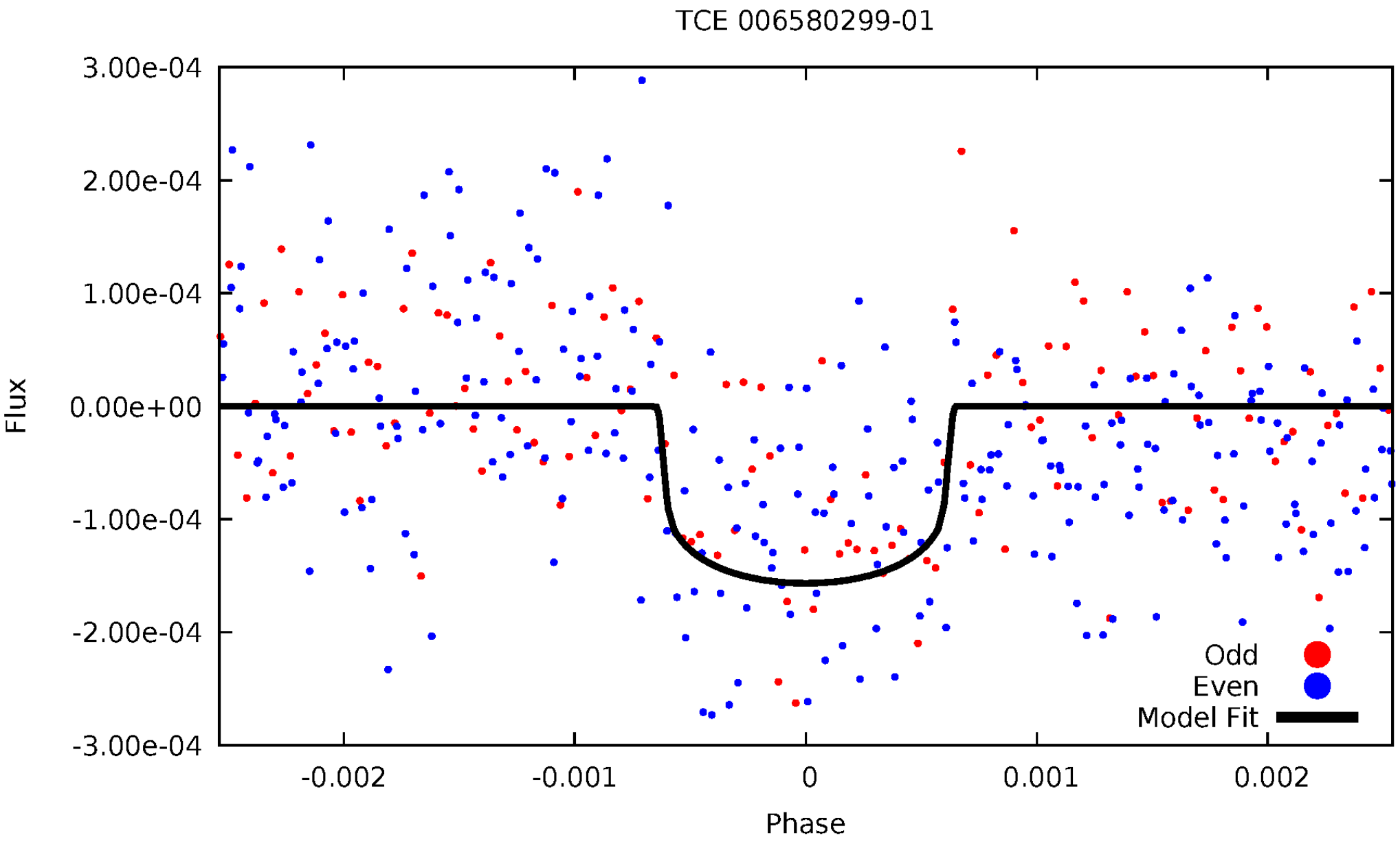
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 006580299-01, PDC Light Curves




TCE 006580299-01
P = 270.659 days
P = 541.318 days
P = 1082.635 days
Normalized Flux
BKJD
Normalized Flux
Phase

DV Odd/Even


TCE 006580299-01
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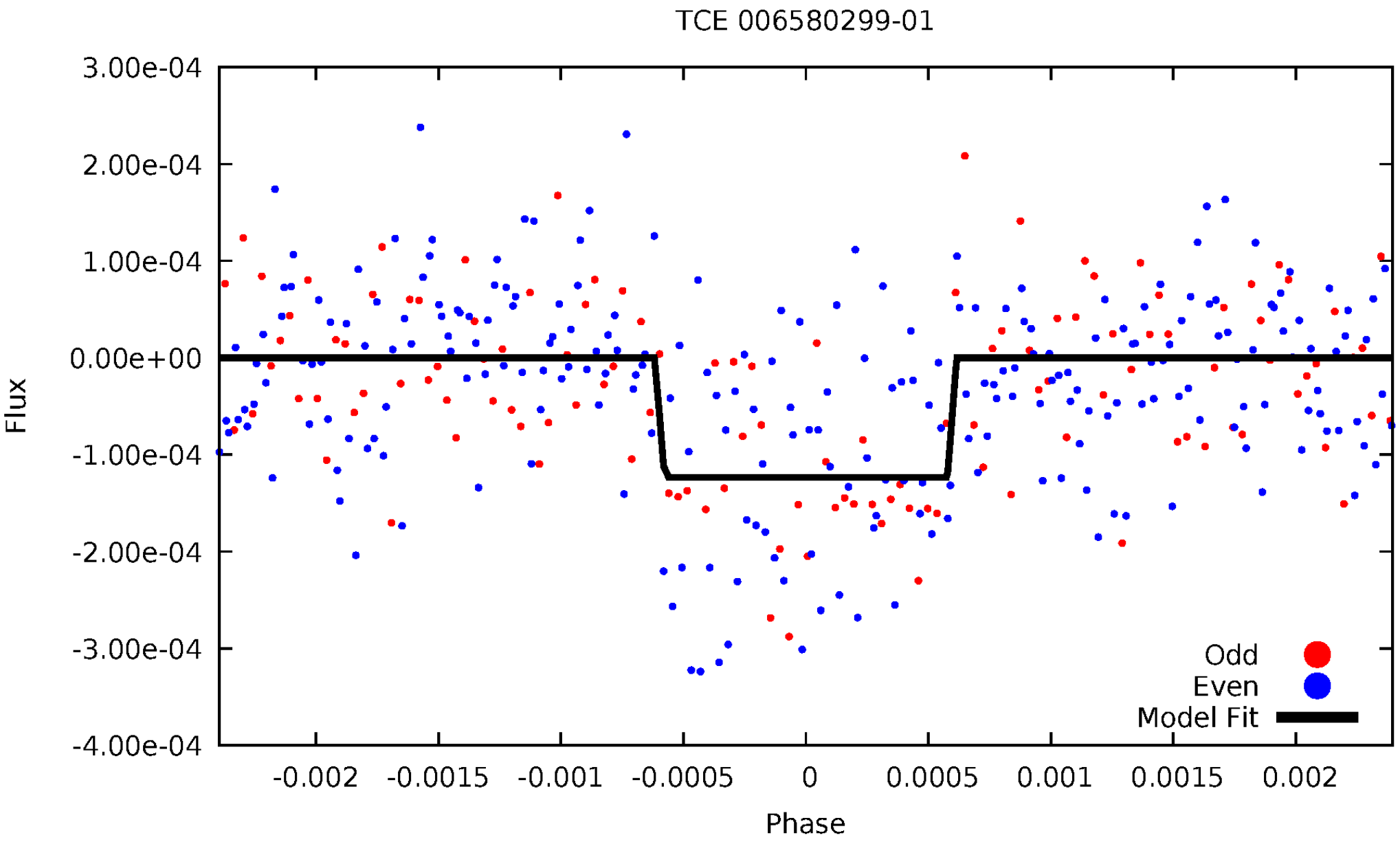
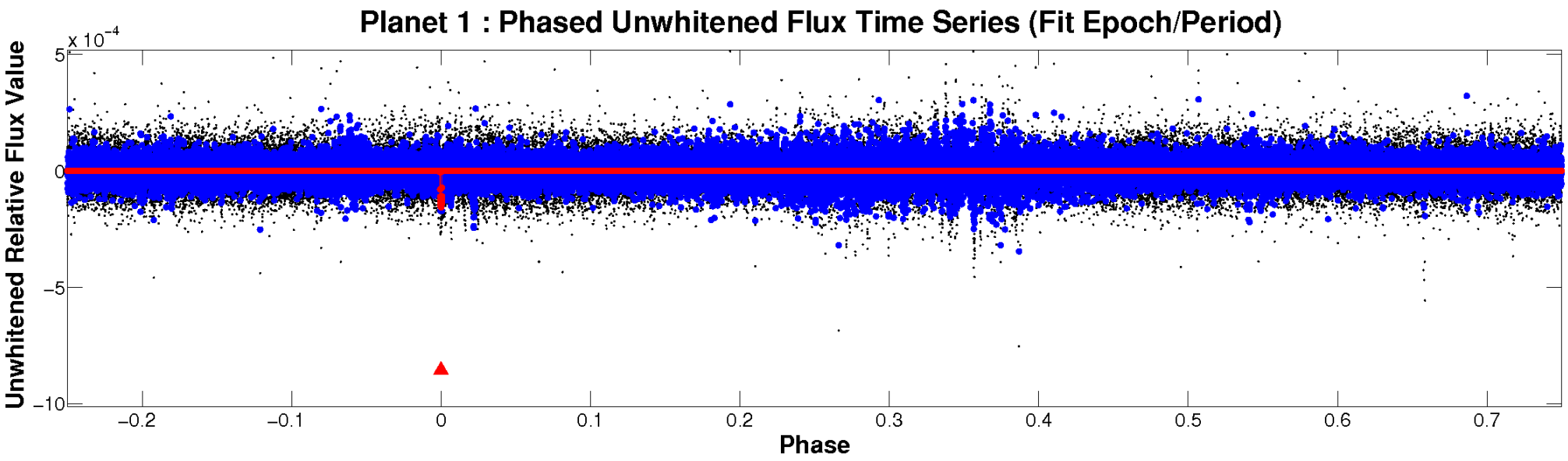
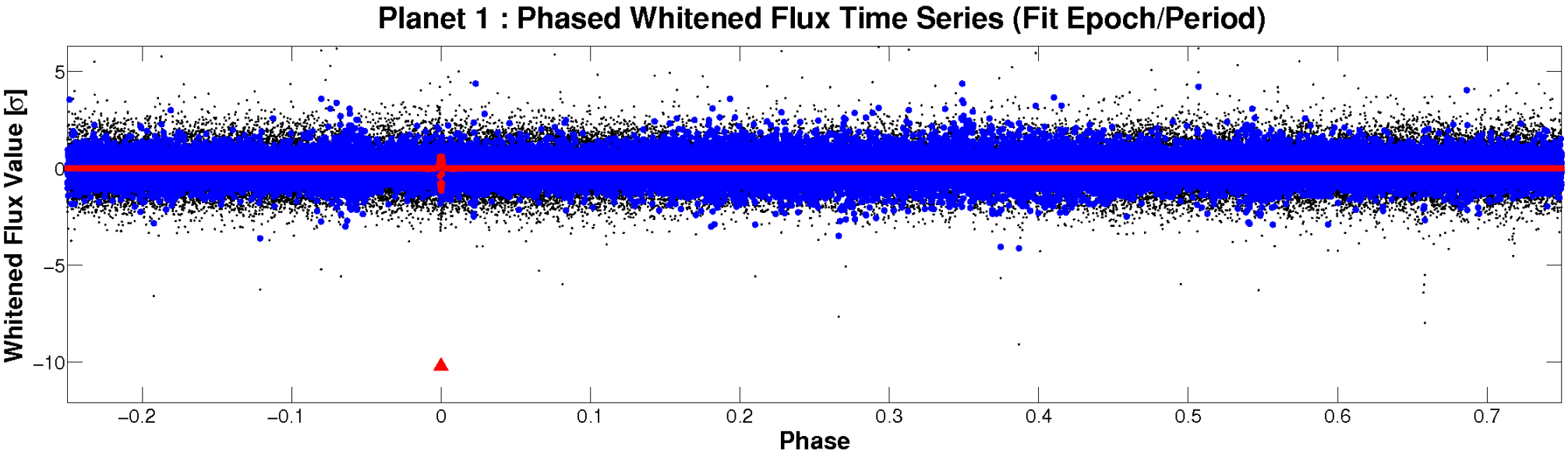
2.00e-04
1.00e-04
0.00e+00
-1.00e-04
-2.00e-04
-3.00e-04
Flux
-0.002
-0.001
0
0.001
0.002
Phase
Odd
Even
Model Fit

ALT Odd/Even


TCE 006580299-01
3.00e-04
2.00e-04
1.00e-04
0.00e+00
-1.00e-04
-2.00e-04
-3.00e-04
-4.00e-04
Flux
-0.002
-0.0015
-0.001
-0.0005
0
0.0005
0.001
0.0015
0.002
Phase
Odd
Even
Model Fit

Non-Whitened Vs. Whitened Light Curve



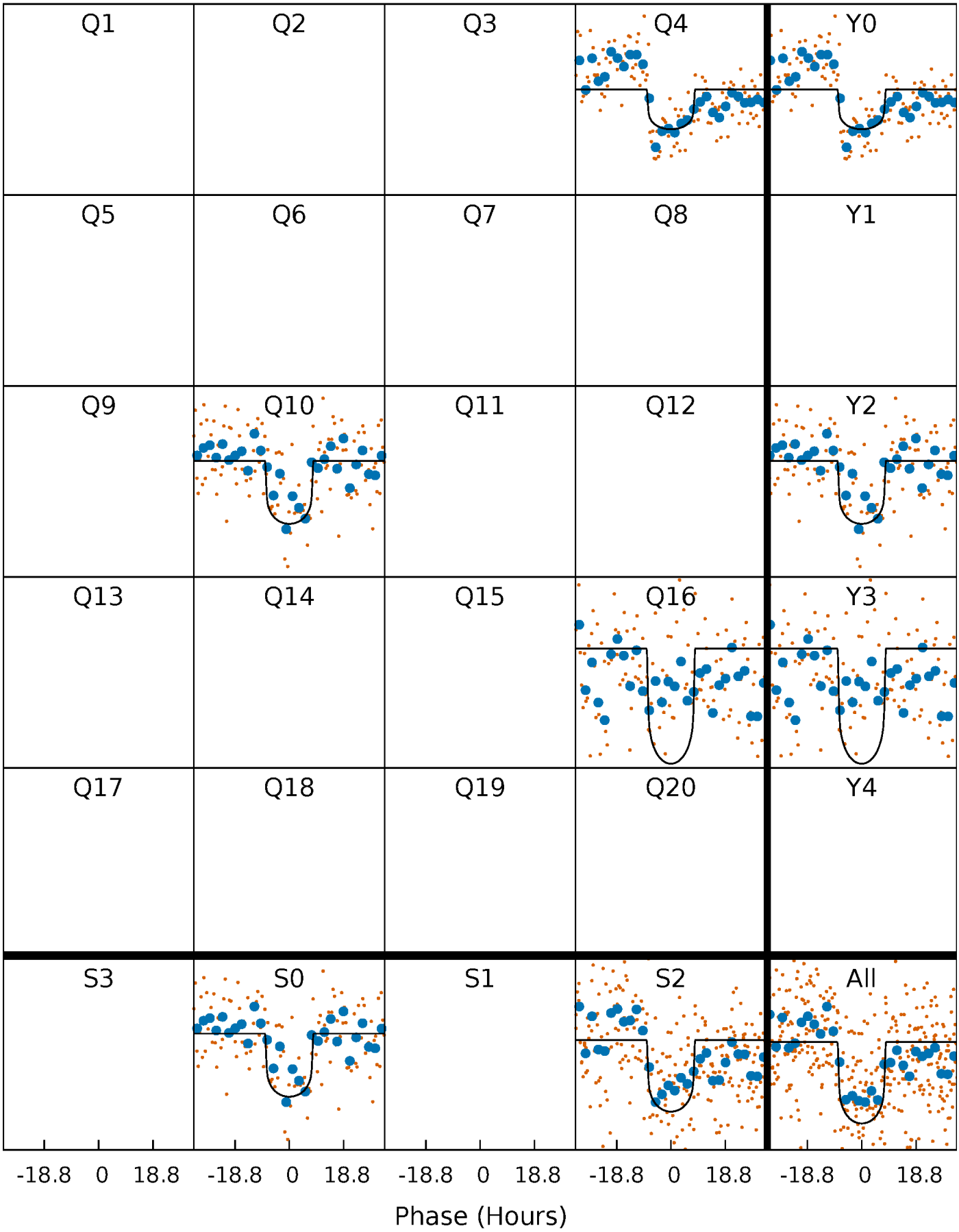


PDC Quarter-Phased Transit Curves

TCE 006580299-01 P=541.317607 Days T_0=430.898921 (BKJD)

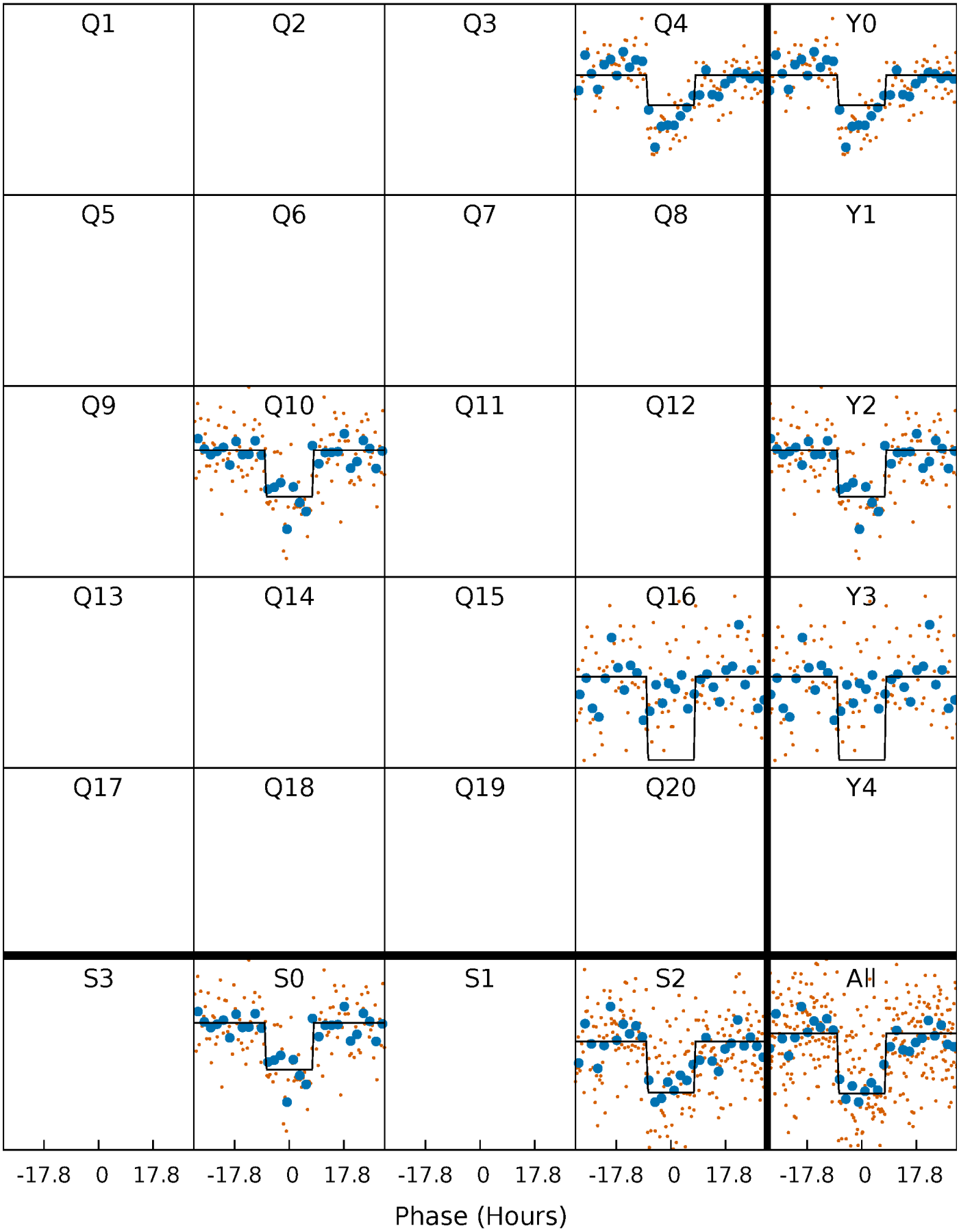
DV Quarter-Phased Transit Curves

TCE 006580299-01 P=541.317607 Days T_0=430.898921 (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

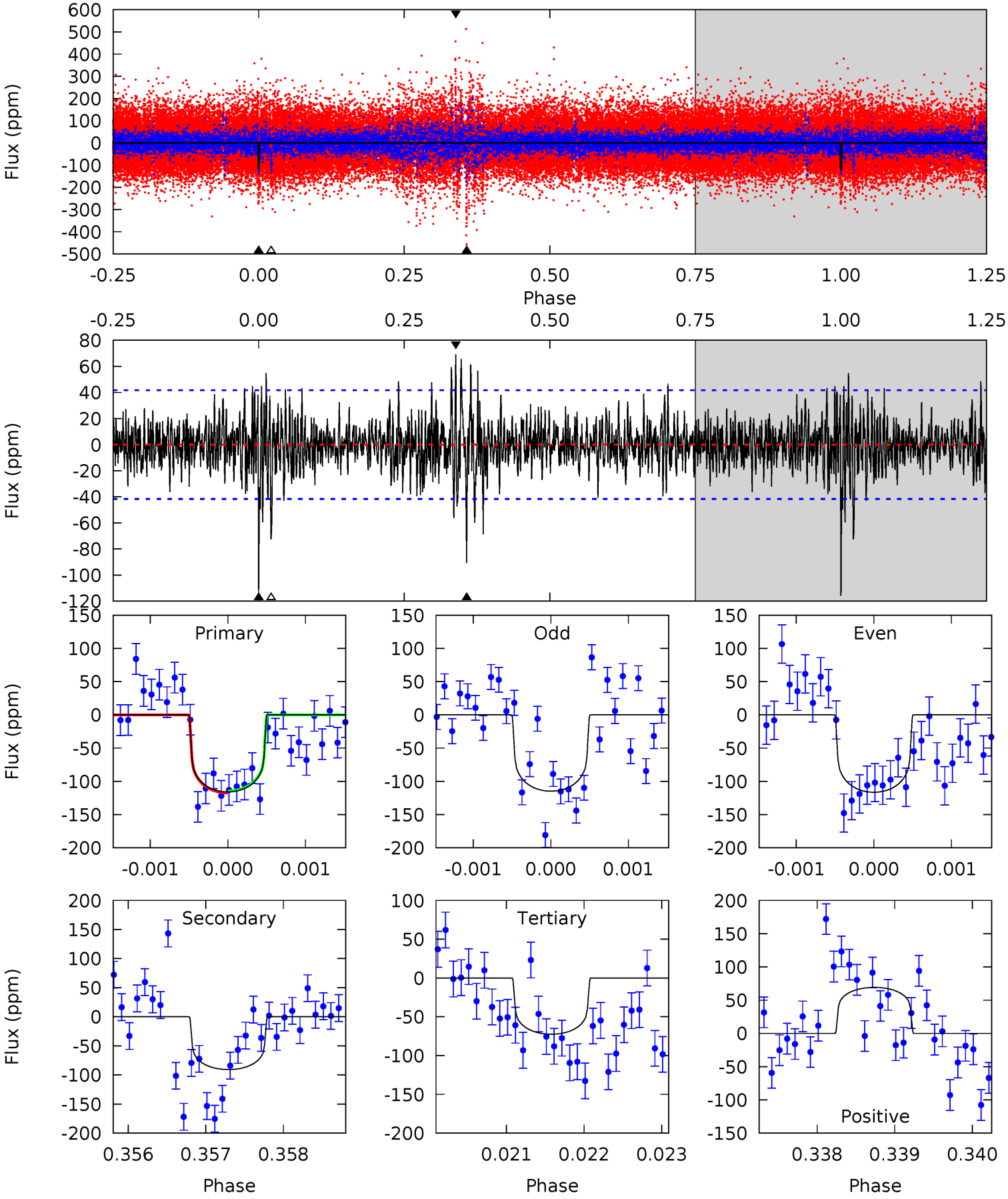
TCE 006580299-01 P=541.319060 Days T_0=430.911202 (BKJD)



DV Model-Shift Uniqueness Test

006580299-01, P = 541.317607 Days, E = 430.898921 Days

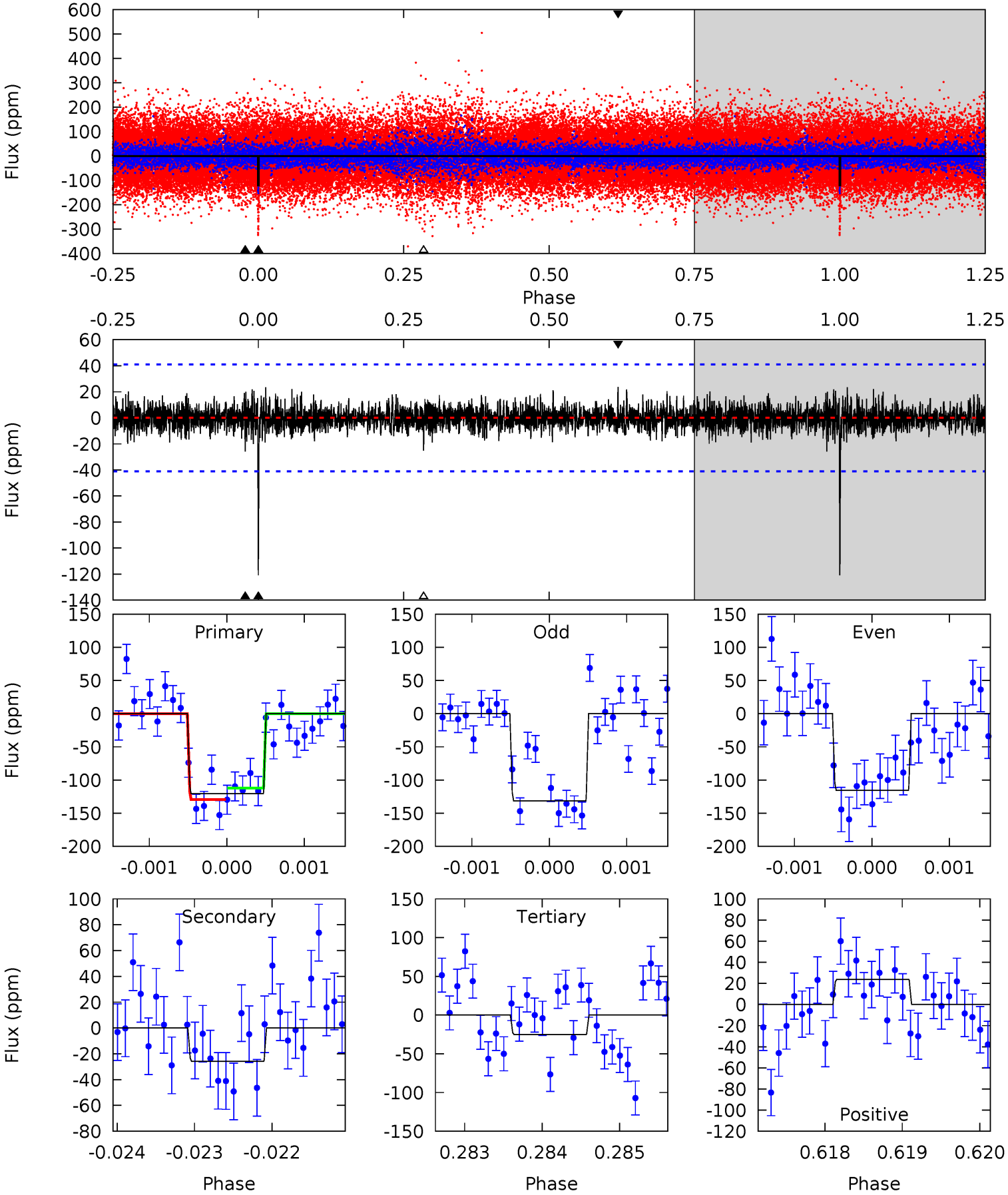
Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.0	11.8	9.39	8.96	5.41	3.22	1.92	5.63	6.06	2.36	2.79	0.10	1.00	0.37	0.20



Alt Model-Shift Uniqueness Test

006580299-01, P = 541.319060 Days, E = 430.911202 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.9	3.40	3.30	3.13	5.42	3.24	0.80	12.6	12.8	0.10	0.27	0.98	0.91	0.16	1.14



Stellar Parameters For KIC 006580299

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	$M(M_\odot)$	$p_\star$ (g·cm^{-3})
	5906^{+163}_{-133}	$4.062^{+0.287}_{-0.123}$	$-0.400^{+0.350}_{-0.200}$	$1.475^{+0.300}_{-0.451}$	$0.916^{+0.142}_{-0.087}$	$0.402^{+0.724}_{-0.141}$
	+3%/-2%	+7%/-3%	+87%/-50%	+20%/-31%	+16%/-9%	+180%/-35%
Source	PHO1	FLK73	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 006580299-01 / KOI

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-91±8	$1.93^{+0.57}_{-0.54}$	390^{+24}_{-34}	5244^{+670}_{-464}	21921^{+20399}_{-9177}
Alt.	-26±8	$1.69^{+0.51}_{-0.45}$	389^{+25}_{-32}	4269^{+548}_{-448}	7689^{+7848}_{-3607}

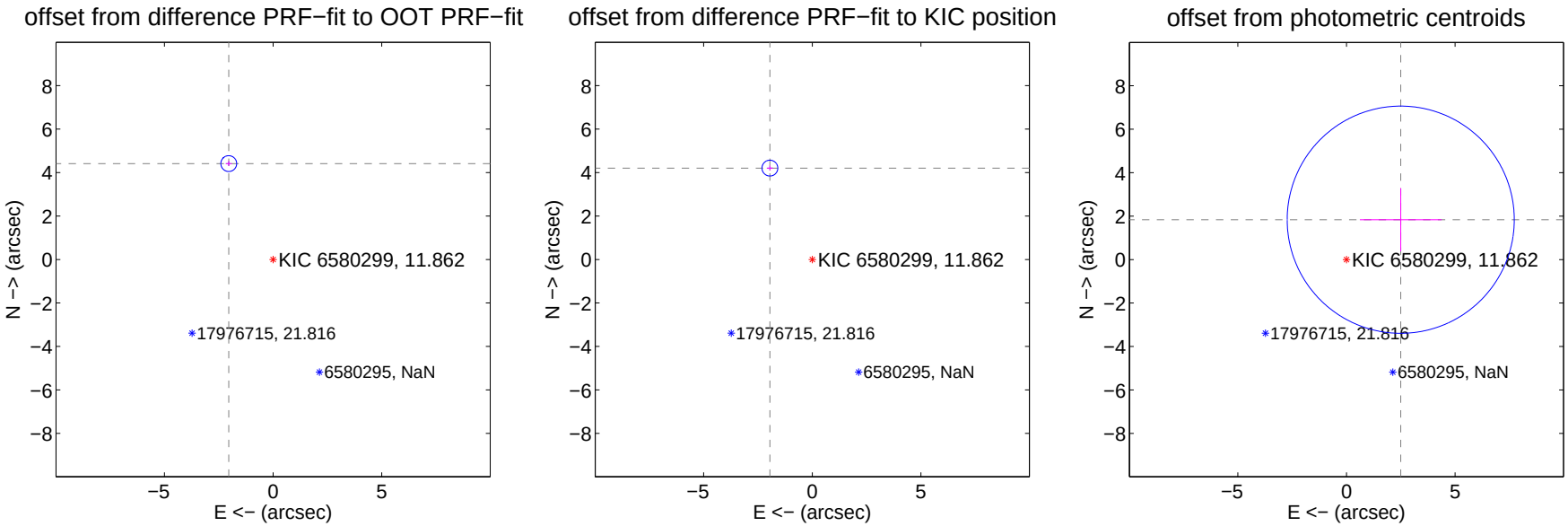
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

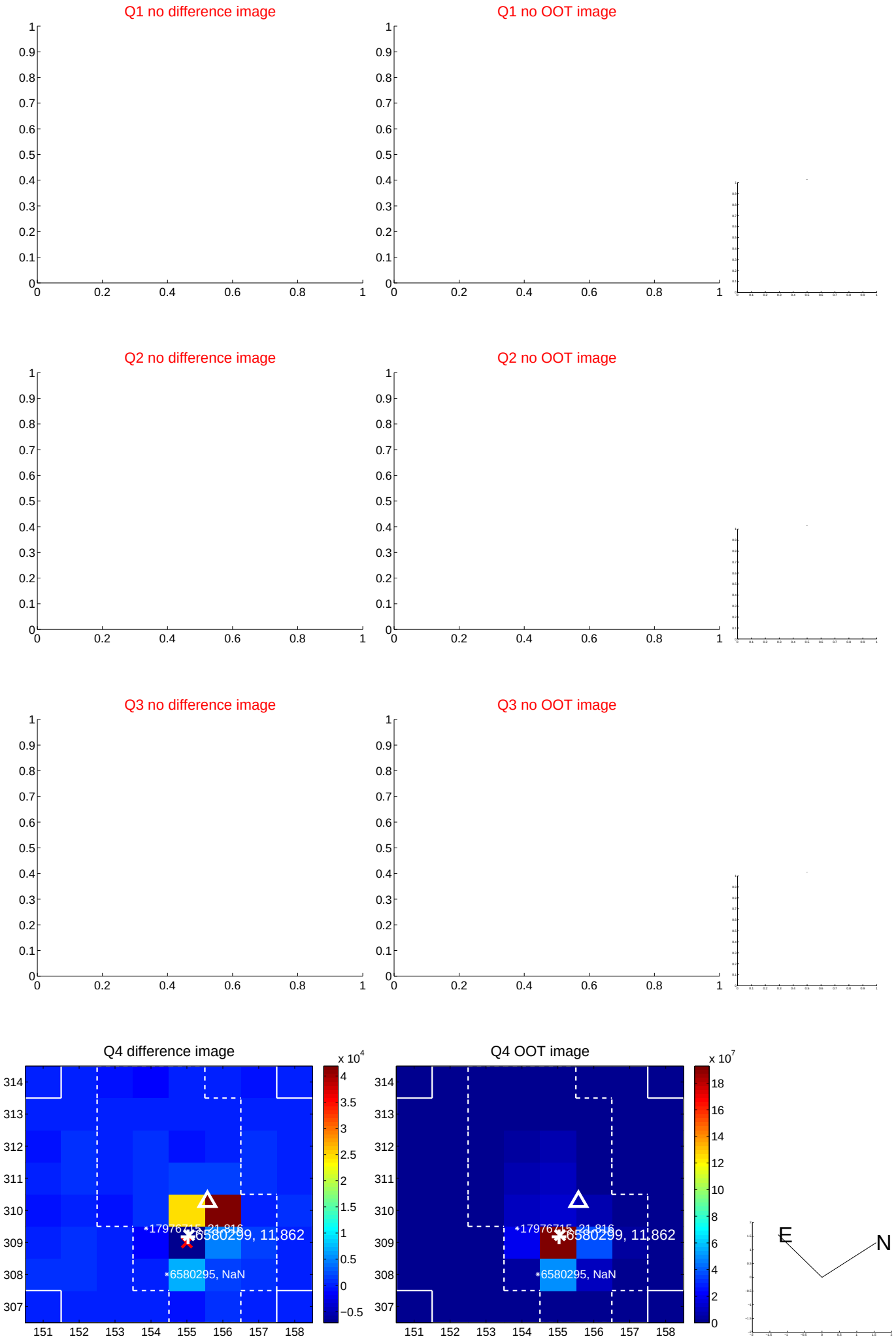
Supplemental centroid analysis for 006580299-01. Kepler magnitude: 11.86. Transit SNR 9.94
There are 1 quarters with good PRF difference image offsets
The direct PRF centroid is offset from the target star catalog position by about 0.23 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.860 ± 0.121	40.06	2.040 ± 0.141	4.411 ± 0.117
PRF-fit source offset from KIC position	4.634 ± 0.121	38.19	1.950 ± 0.141	4.203 ± 0.117
photometric centroid source offset	3.10 ± 1.74	1.78	-2.50 ± 1.88	1.83 ± 1.45

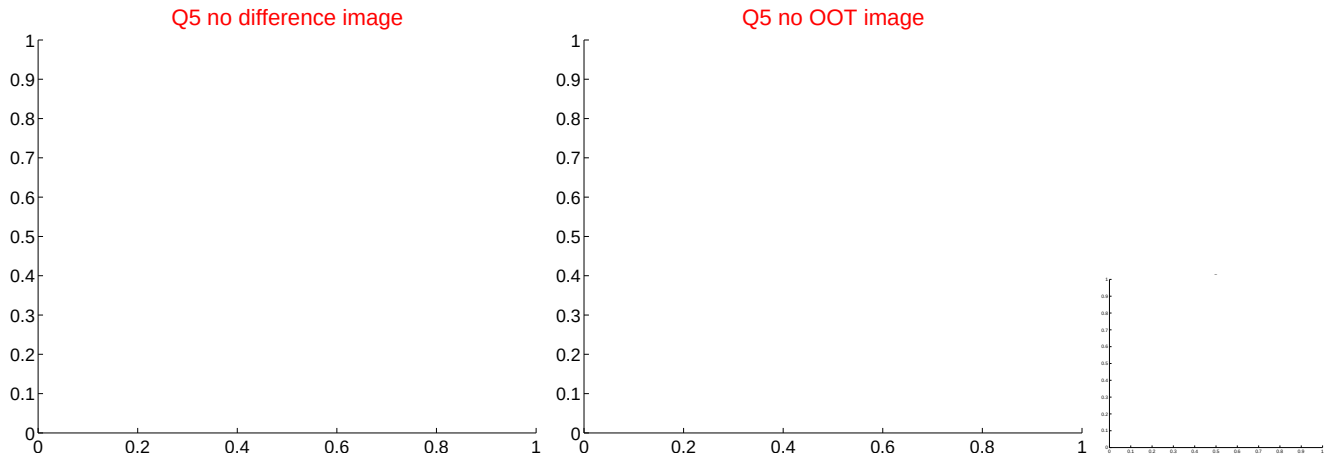


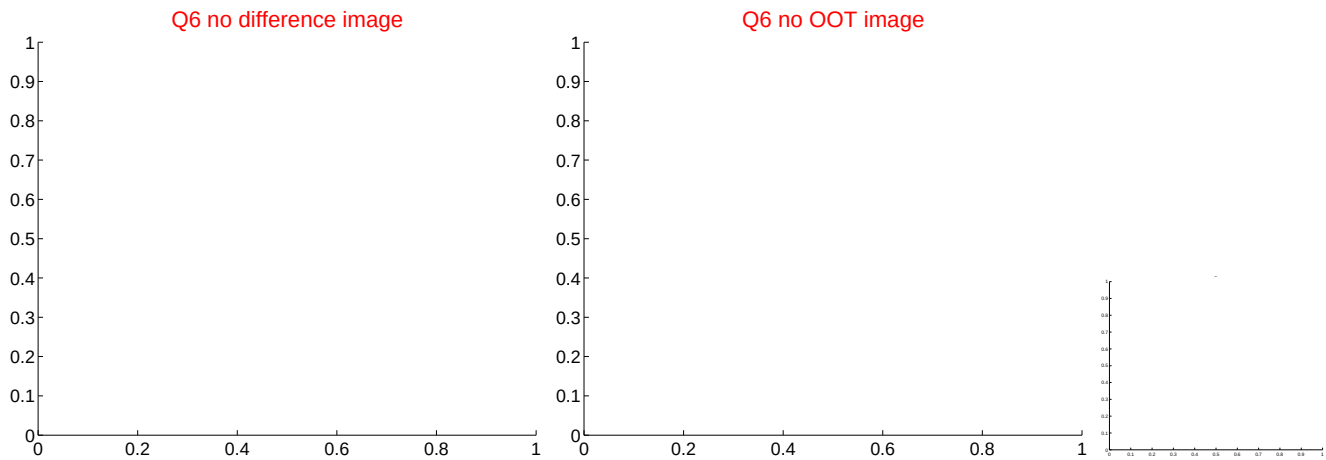
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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

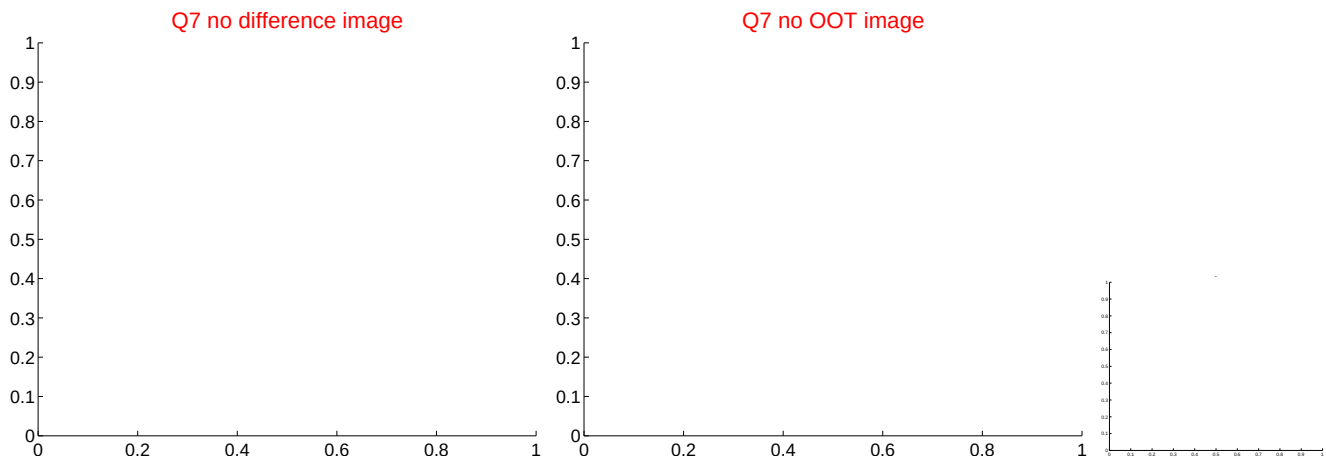
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

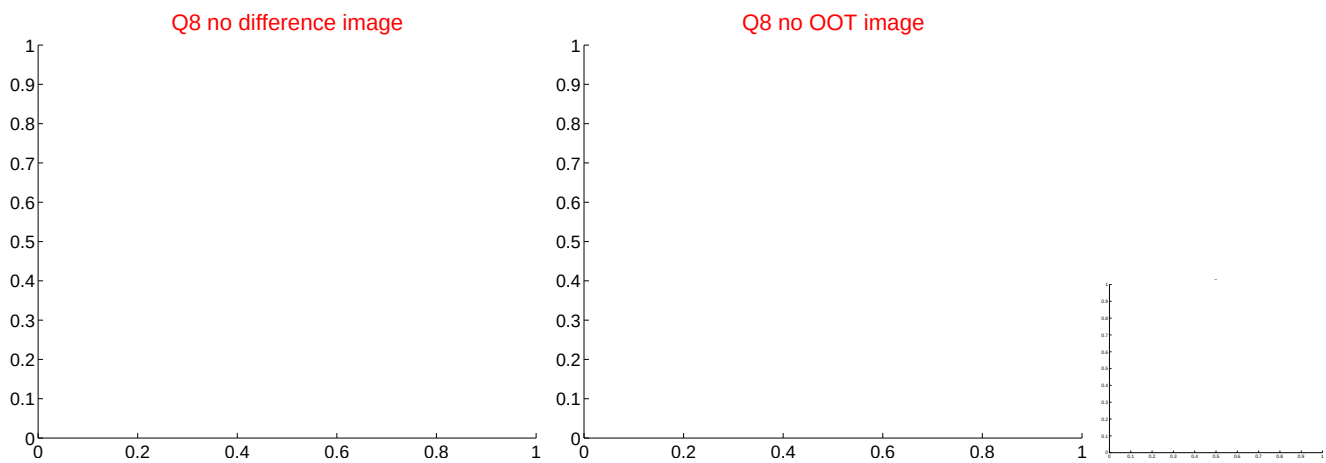


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

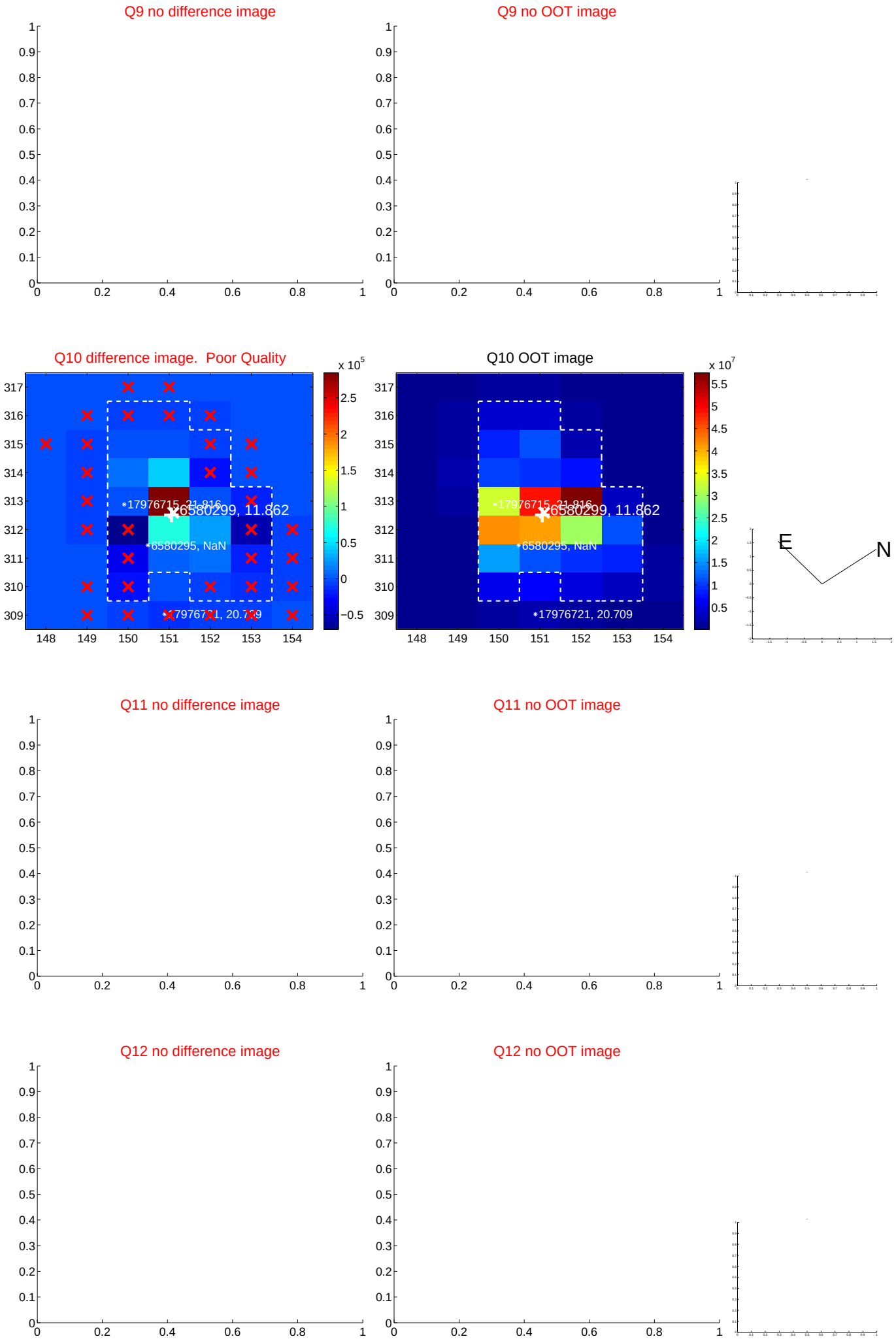




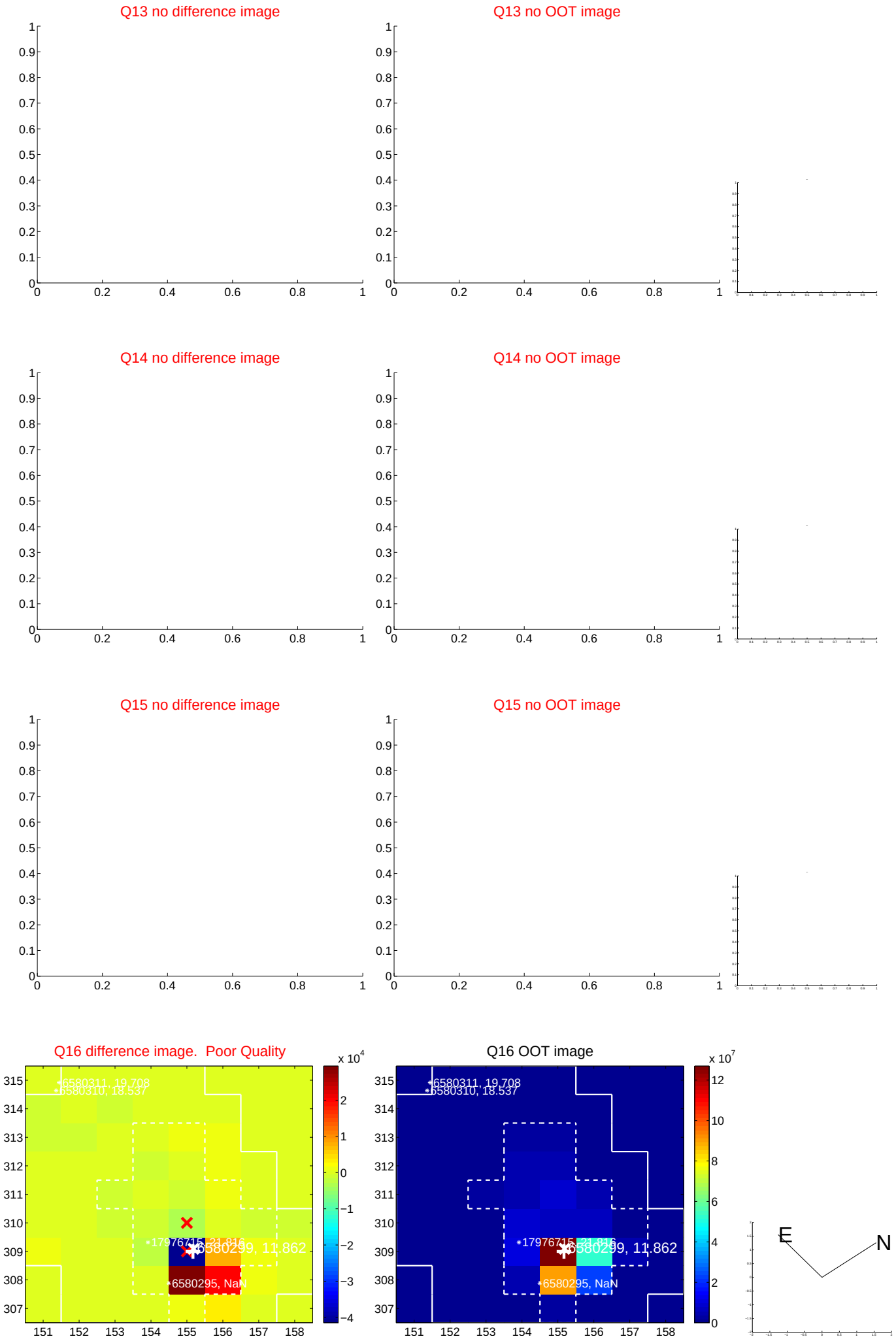




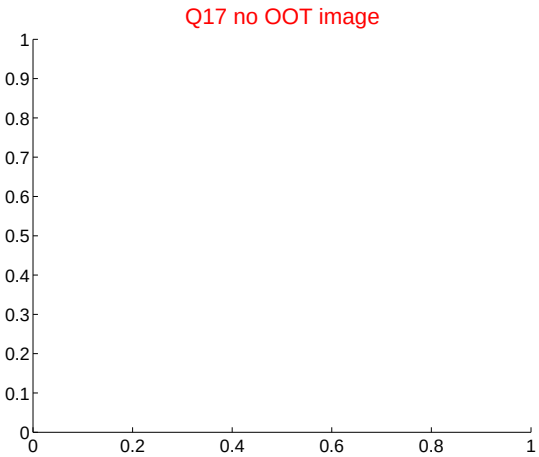
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

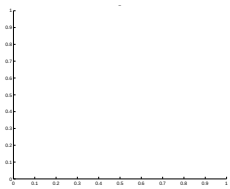


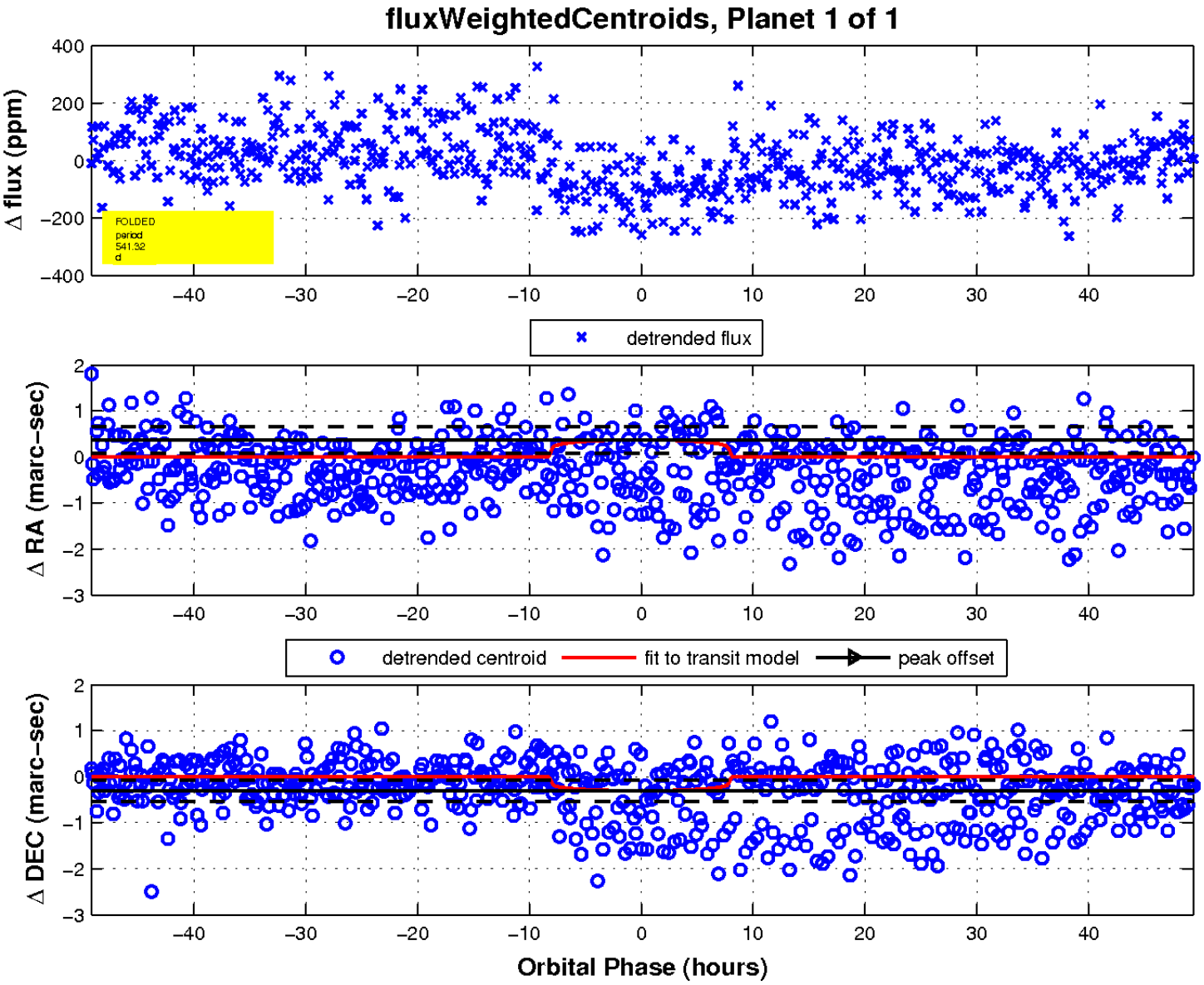
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



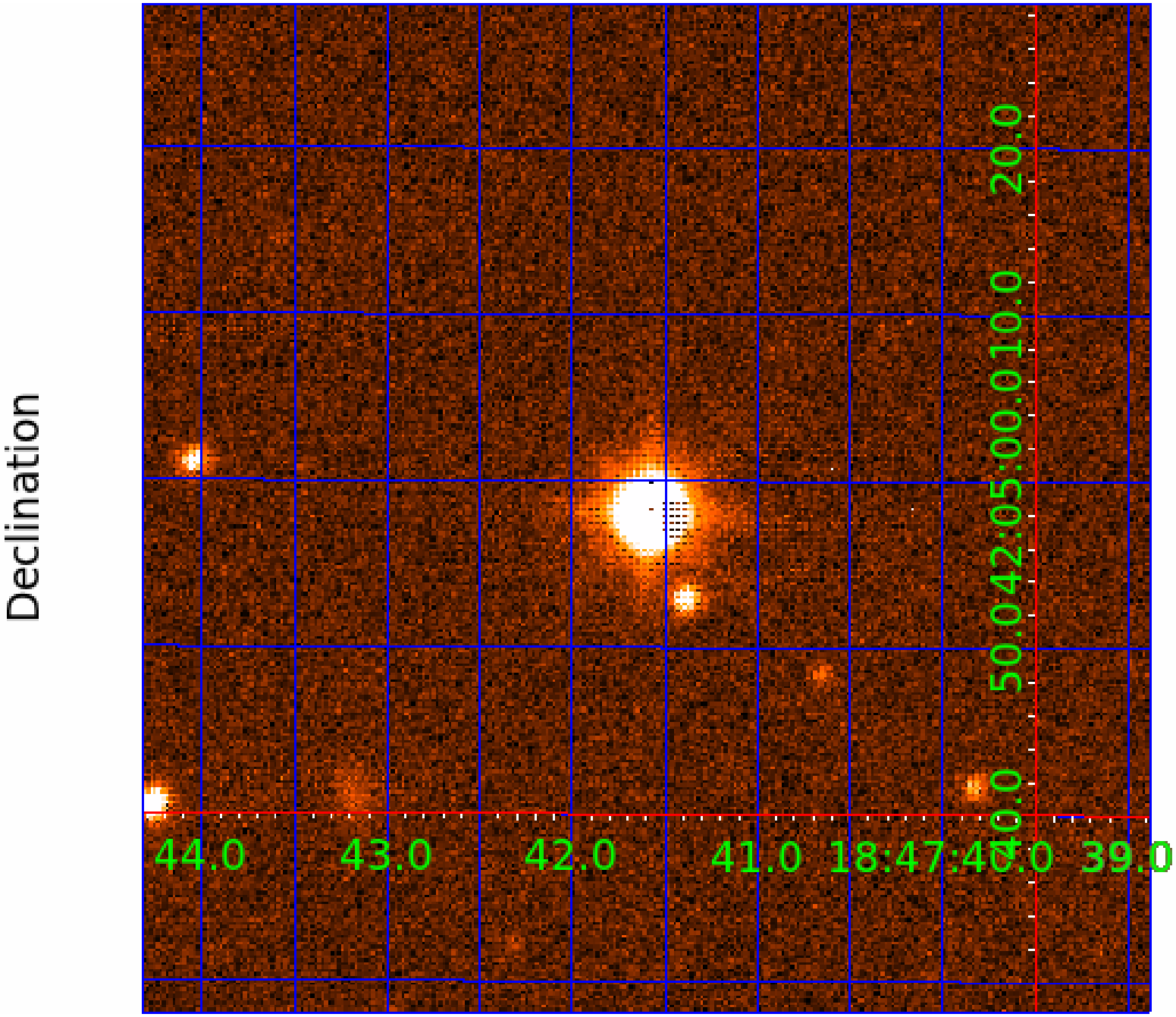
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.







UKIRT Image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