KIC 009269281

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 ($S_\oplus$)
009269281-01	OBS	1398.01	5.823517	133.699491	861.2	2.323	33.2	36.8	0.86	5774	3.01	196.59

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009269281-01	OBS	PC	1.00	0	0	0	0	CENT_KIC_POS

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.

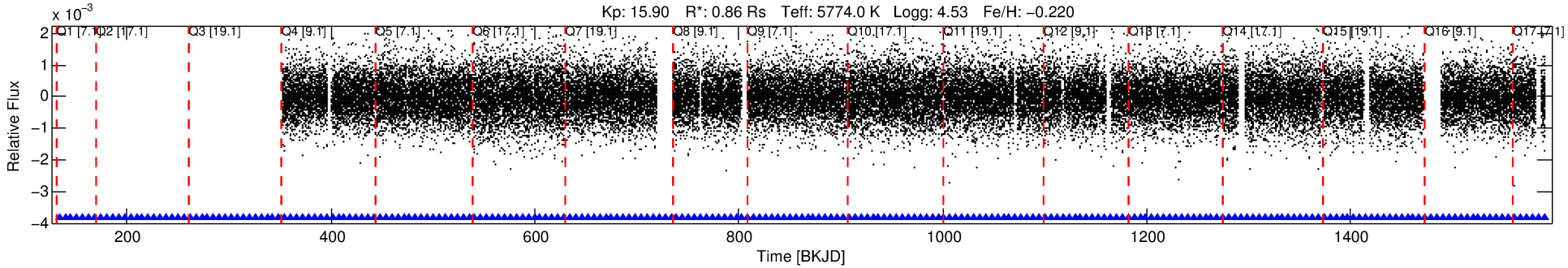
Ephemeris Match Information For 009269281-01

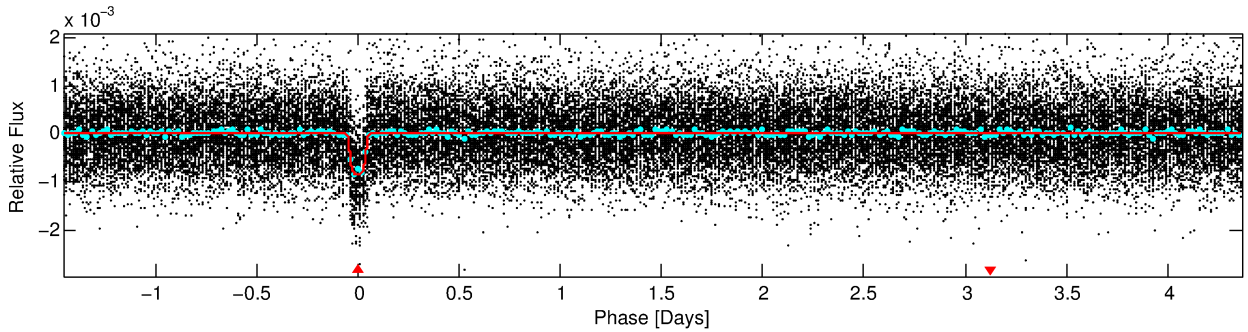
No Significant Match Found

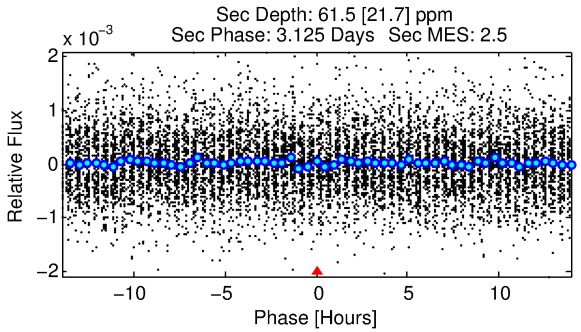
DV One-Page Summary

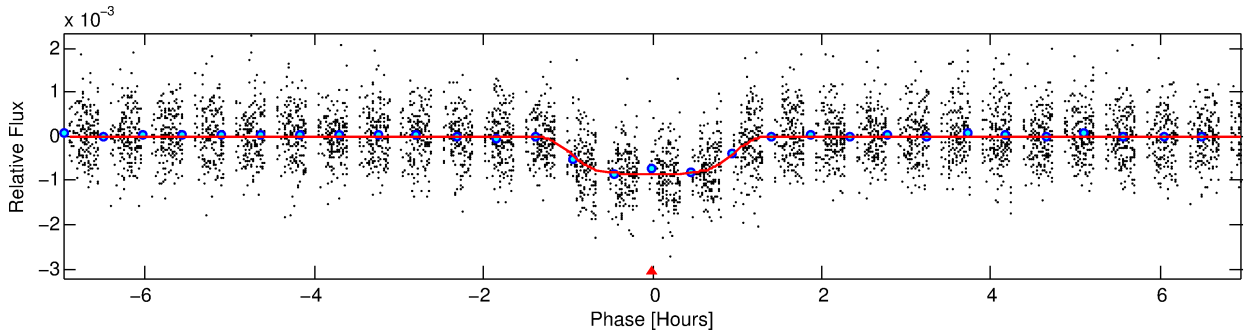
KIC: 9269281 Candidate: 1 of 1 Period: 5.824 d
KOI: K01398.01 Corr: 0.952

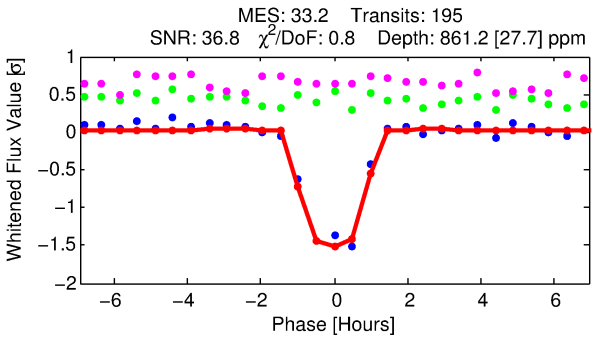
Kp: 15.90 R*: 0.86 Rs Teff: 5774.0 K Logg: 4.53 Fe/H: −0.220

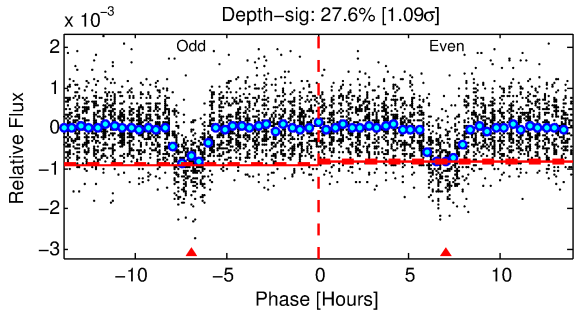


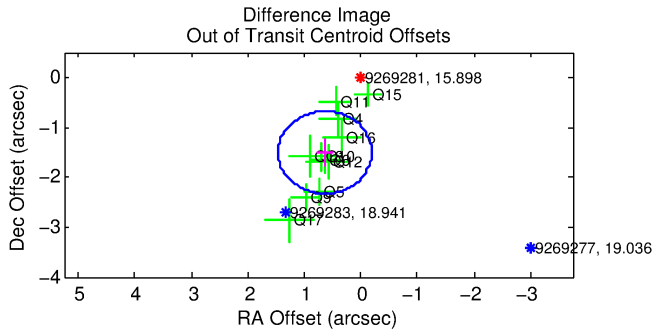












DV Fit Results:

Period = 5.82352 [0.00001] d
Epoch = 133.6995 [0.0017] BKJD
Rp/R* = 0.0319 [0.0028]
a/R* = 9.73 [3.82]
b = 0.90 [0.09]

Seff = 196.59 [73.80]
Teq = 955 [90] K
Rp = 3.01 [0.91] Re
a = 0.0615 [0.0149] AU

Ag = 14.10 [7.43] [1.76σ]
Teffp = 2861 [296] K [6.17σ]

DV Diagnostic Results:

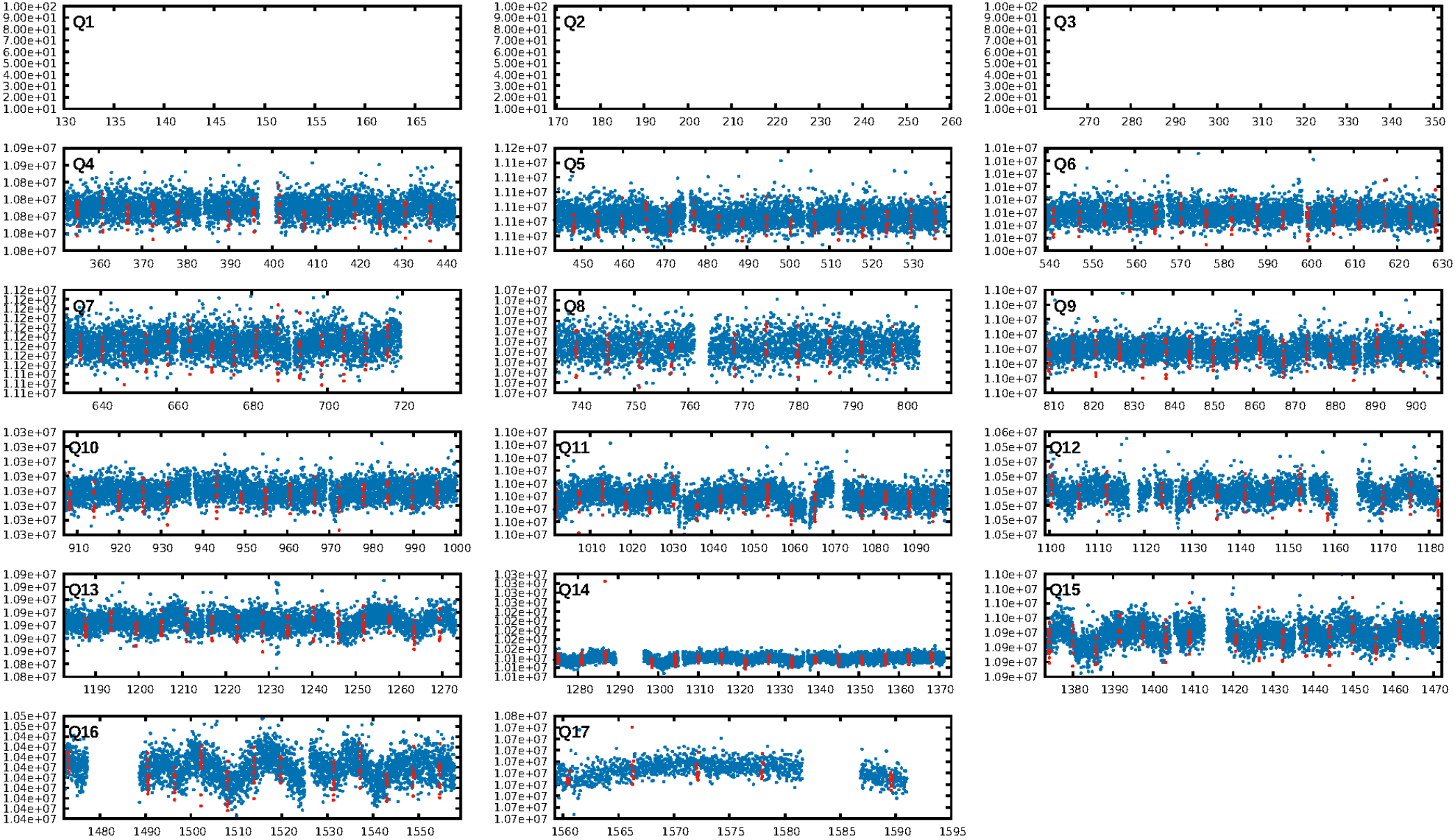
ShortPeriod−sig: N/A
LongPeriod−sig: N/A
ModelChiSquare2−sig: 100.0%
ModelChiSquareGof−sig: 100.0%
Bootstrap−pfa: 7.11e−235
RollingBand−fgt: 1.00 [190/190]
GhostDiagnostic−chr: 12.03

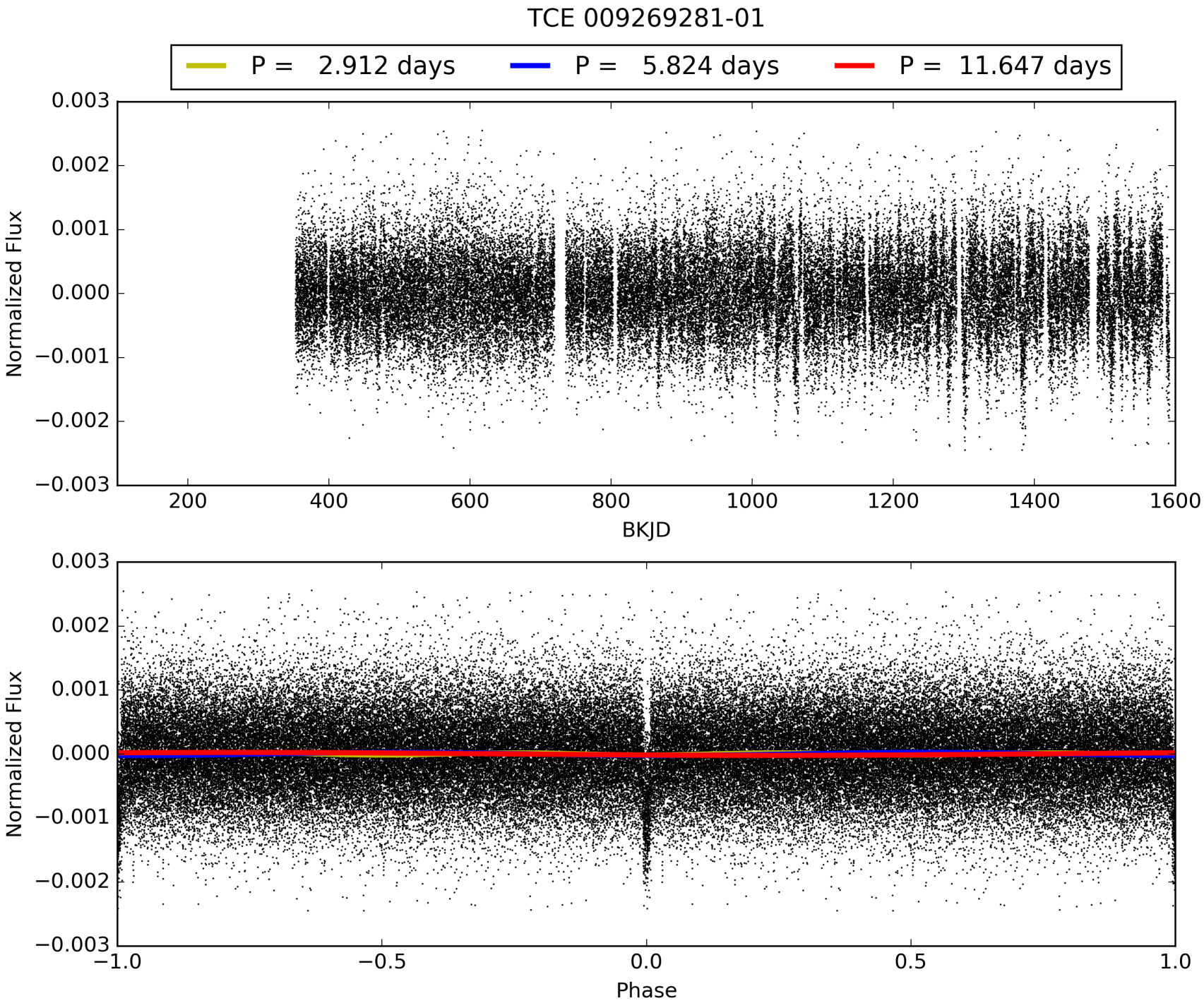
Centroid−sig: 0.1%
Centroid−so: 0.962 arcsec [3.27σ]
OotOffset−rm: 1.636 arcsec [5.94σ]
KicOffset−rm: 0.064 arcsec [0.41σ]
OotOffset−st: 2/2/3/4 [11]
KicOffset−st: 2/2/3/4 [11]
DiffImageQuality−fgm: 1.00 [11/11]
DiffImageOverlap−fno: 1.00 [14/14]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28−Jan−2016 21:25:36 Z

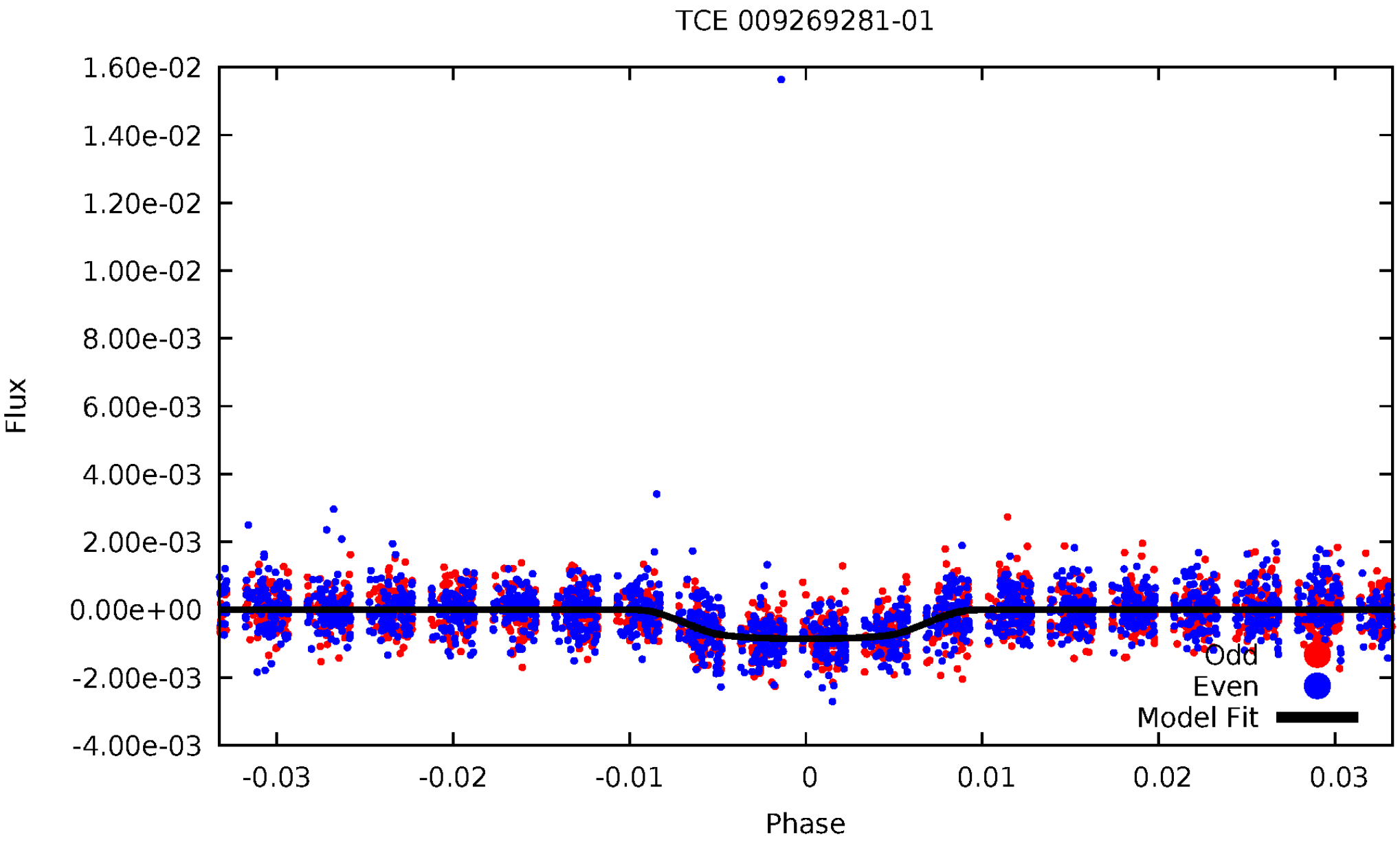
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 009269281-01, PDC Light Curves




TCE 009269281-01
P = 2.912 days
P = 5.824 days
P = 11.647 days
Normalized Flux
BKJD
Normalized Flux
Phase

DV Odd/Even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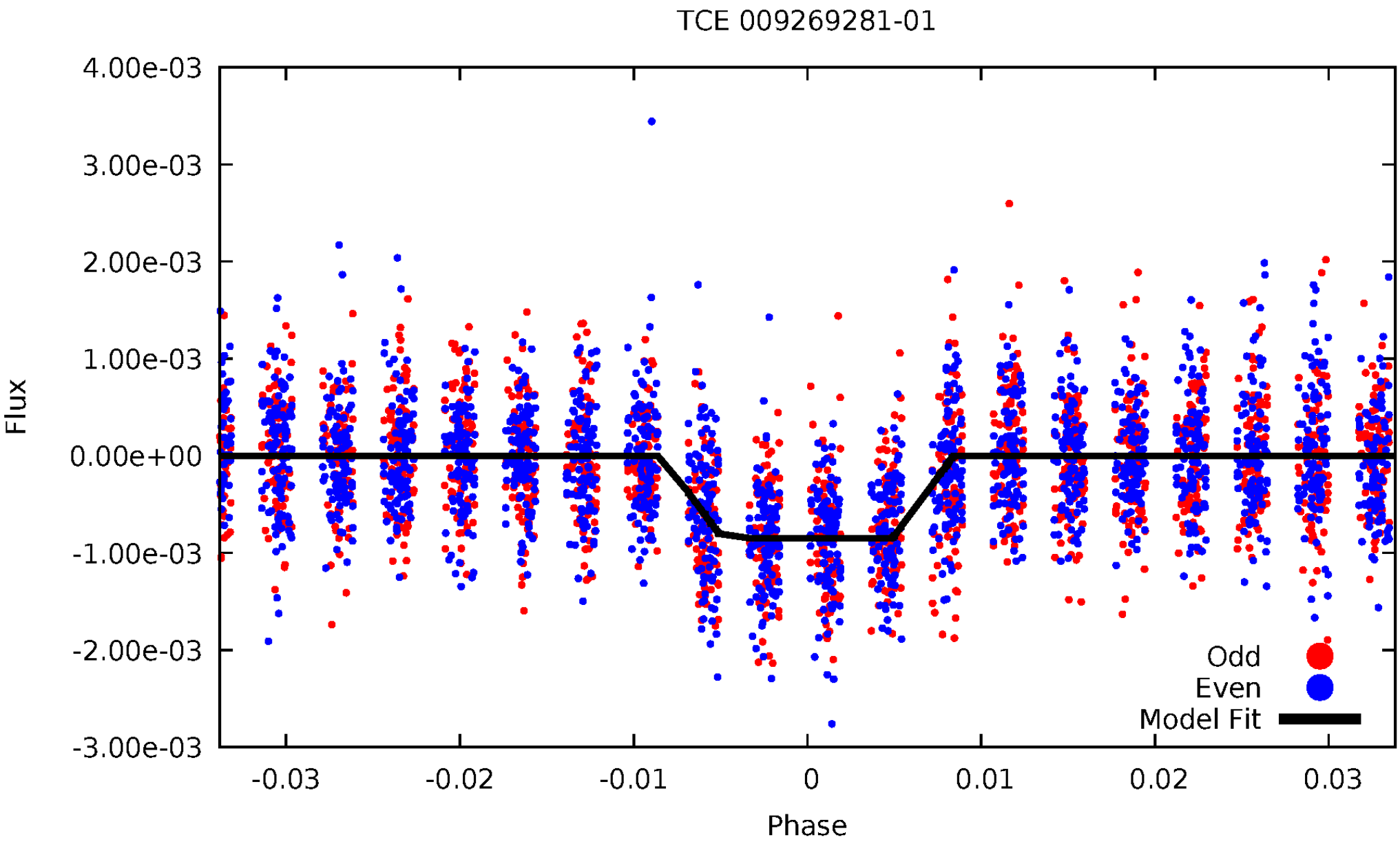
1.40e-02
1.20e-02
1.00e-02
8.00e-03
6.00e-03
4.00e-03
2.00e-03
0.00e+00
-2.00e-03
-4.00e-03
Flux
-0.03
-0.02
-0.01
0
0.01
0.02
0.03
Phase
Odd
Even
Model Fit

ALT Odd/Even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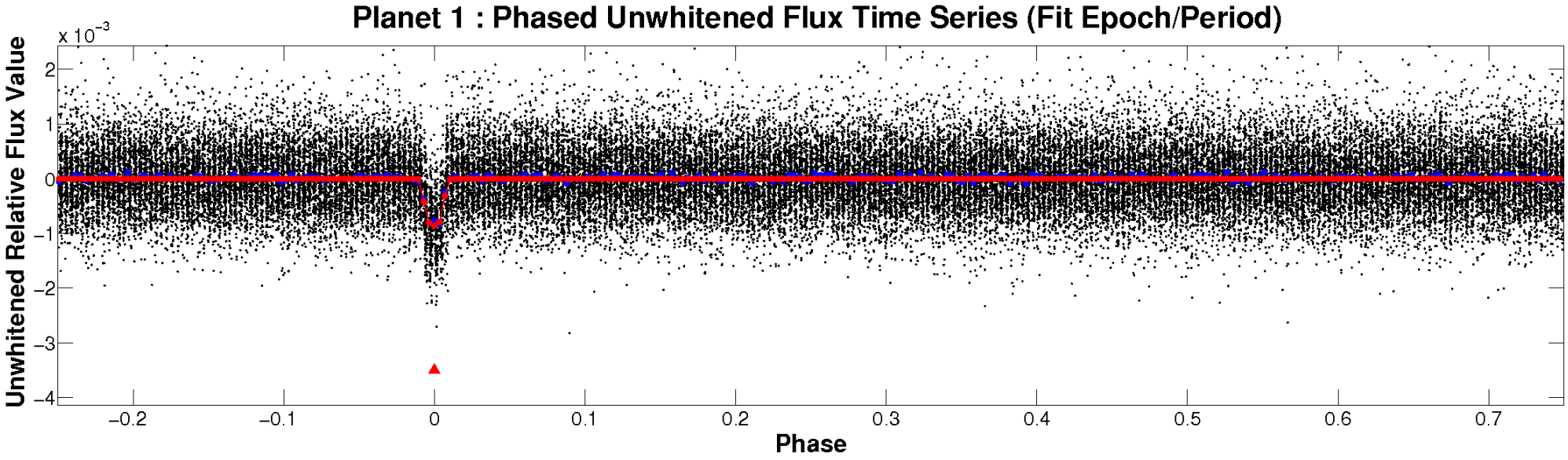
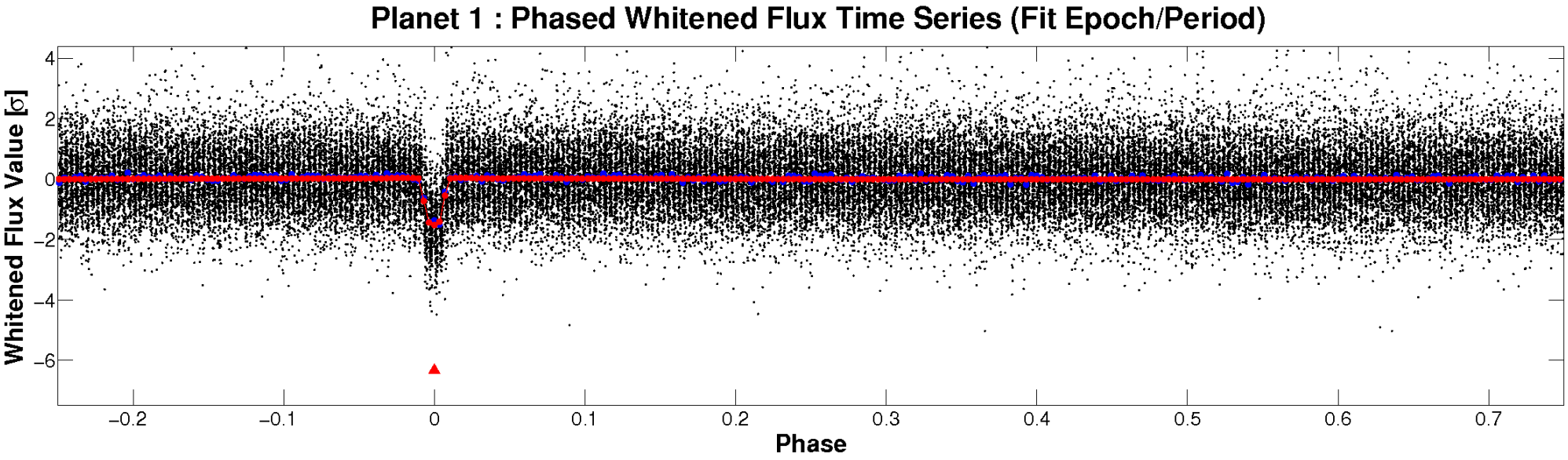
3.00e-03
2.00e-03
1.00e-03
0.00e+00
-1.00e-03
-2.00e-03
-3.00e-03
Flux
-0.03
-0.02
-0.01
0
0.01
0.02
0.03
Phase
Odd
Even
Model Fit

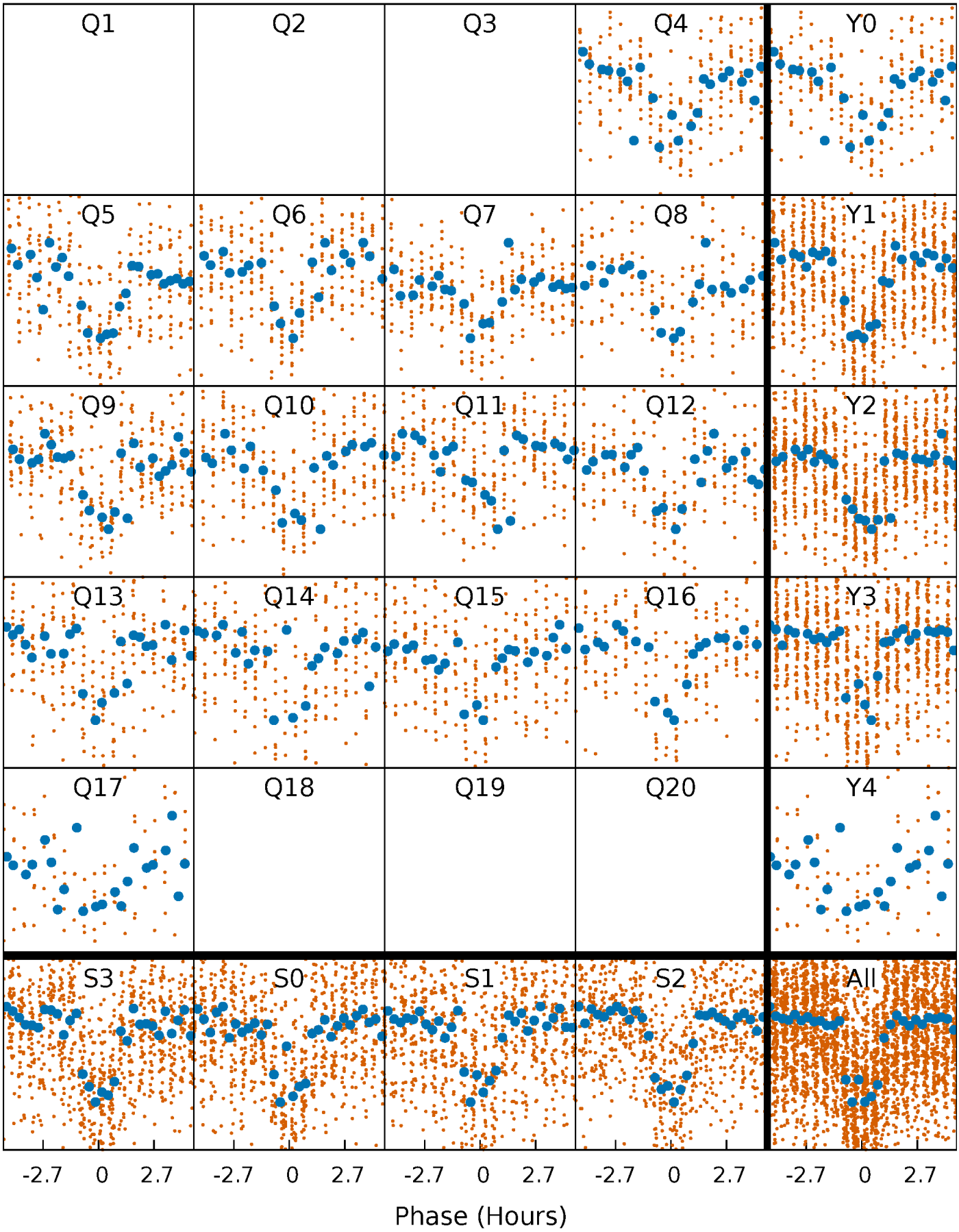
Non-Whitened Vs. Whitened Light Curve





PDC Quarter-Phased Transit Curves

TCE 009269281-01 P= 5.823517 Days T_0=133.699490 (BKJD)



DV Quarter-Phased Transit Curves

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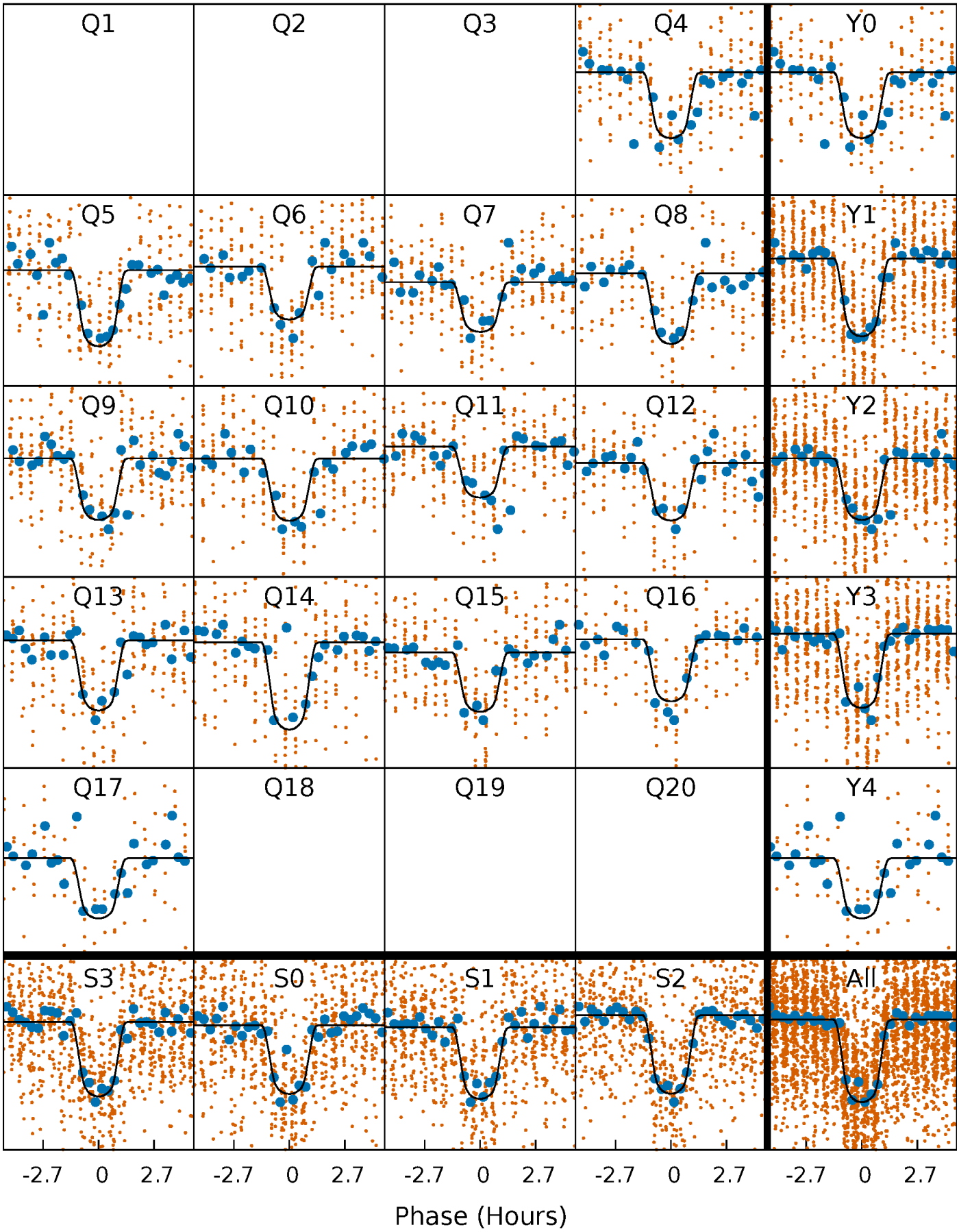
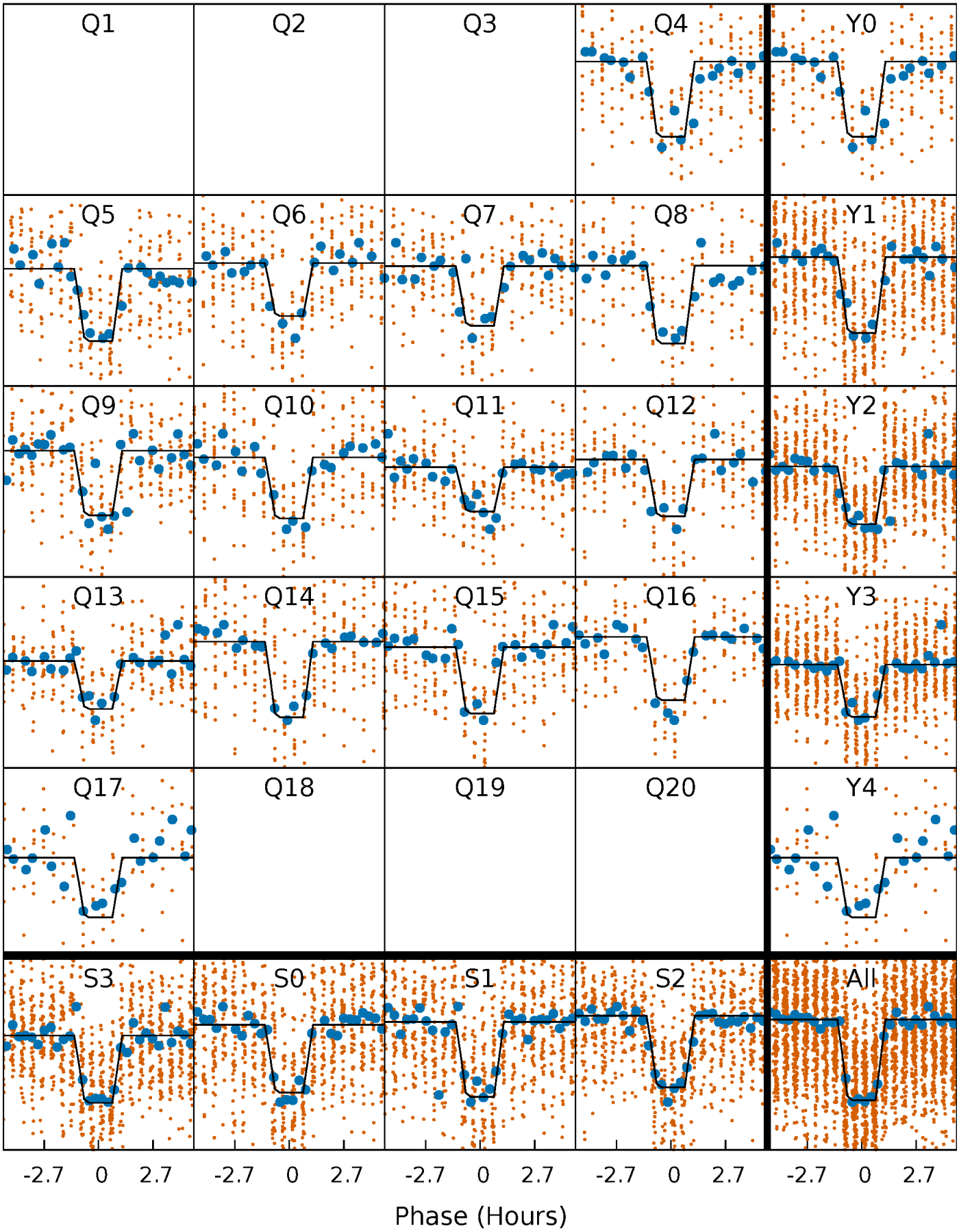


Alt. Detrend Quarter-Phased Transit Curves

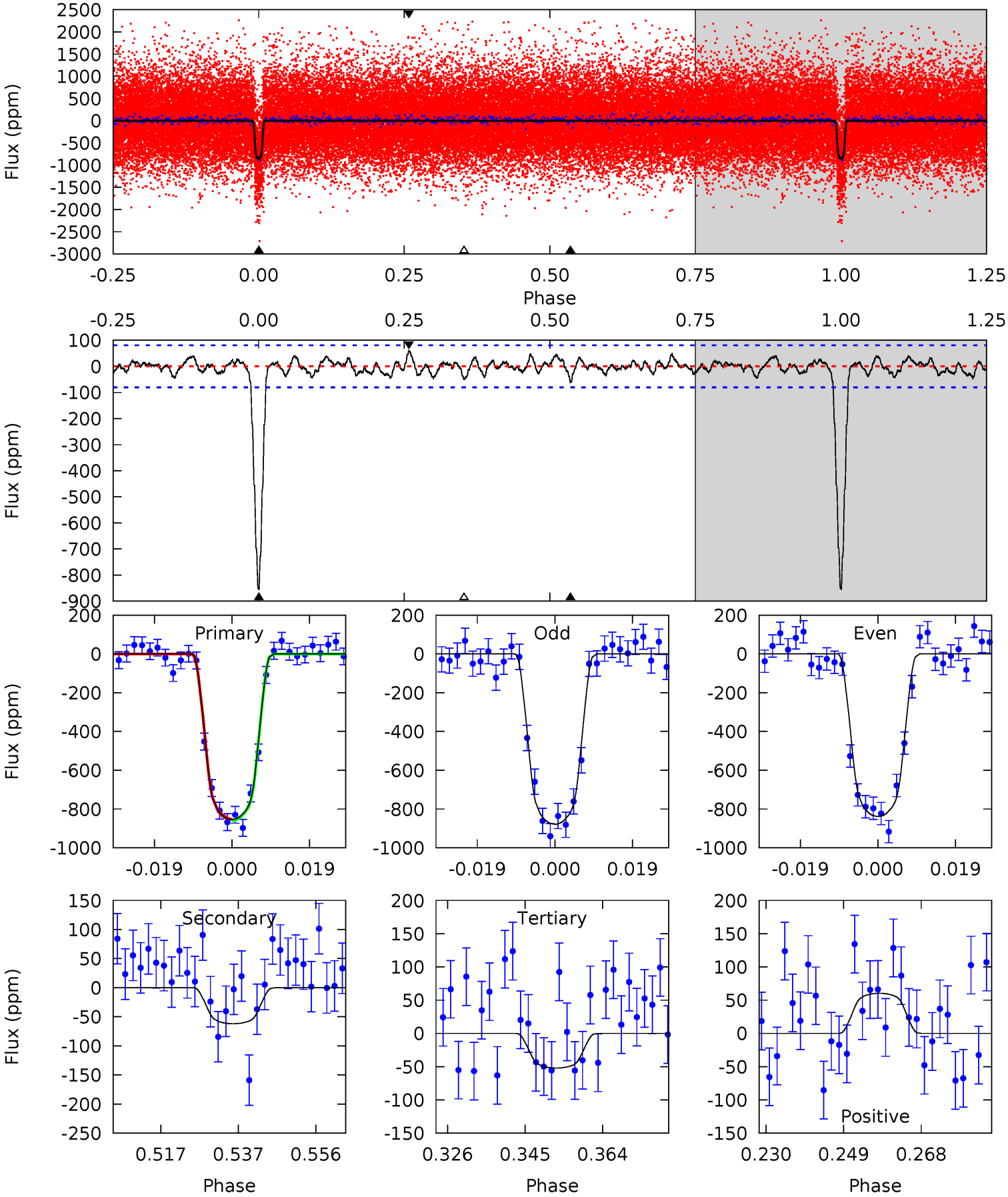
TCE 009269281-01 P= 5.823541 Days T_0=133.696428 (BKJD)



DV Model-Shift Uniqueness Test

009269281-01, P = 5.823517 Days, E = 133.699490 Days

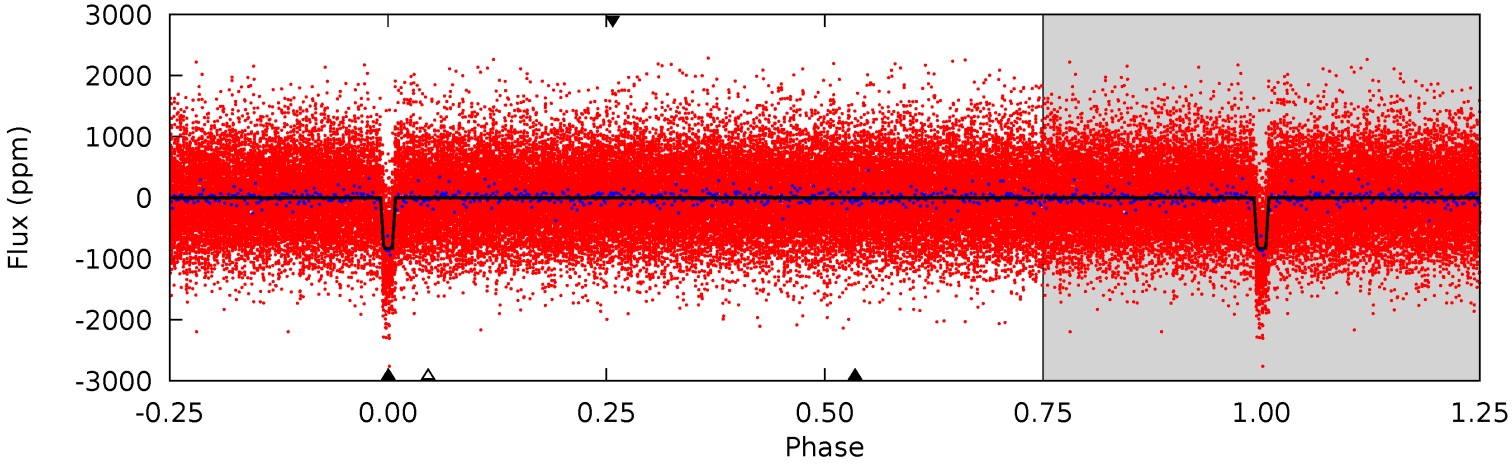
Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
51.7	3.75	3.16	3.66	4.90	2.34	1.17	48.6	48.1	0.60	0.10	1.21	0.97	0.07	0.16

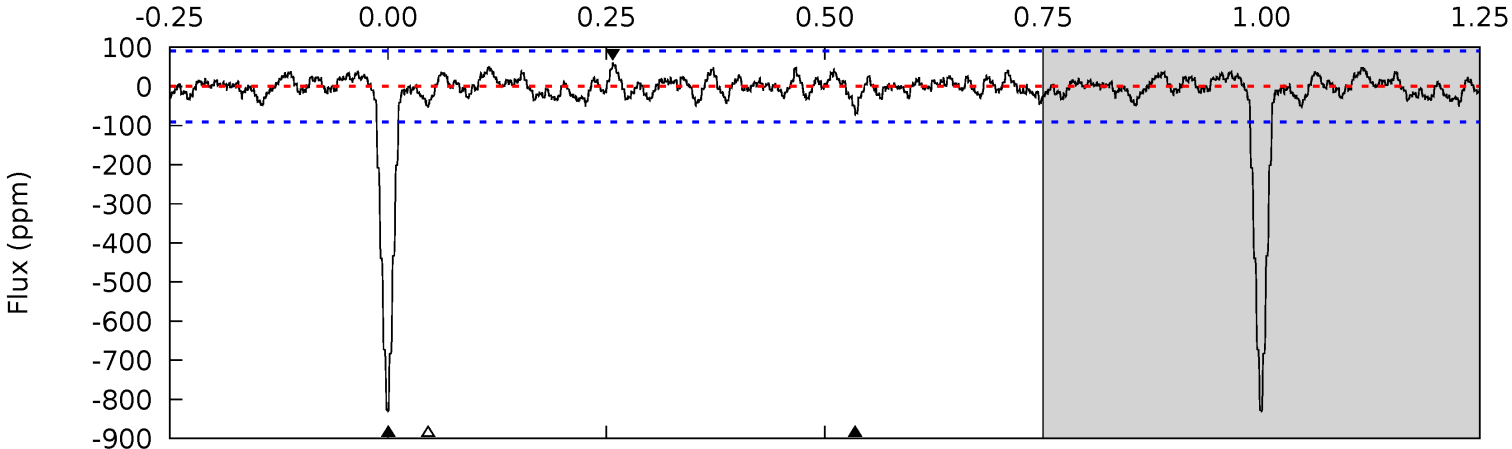


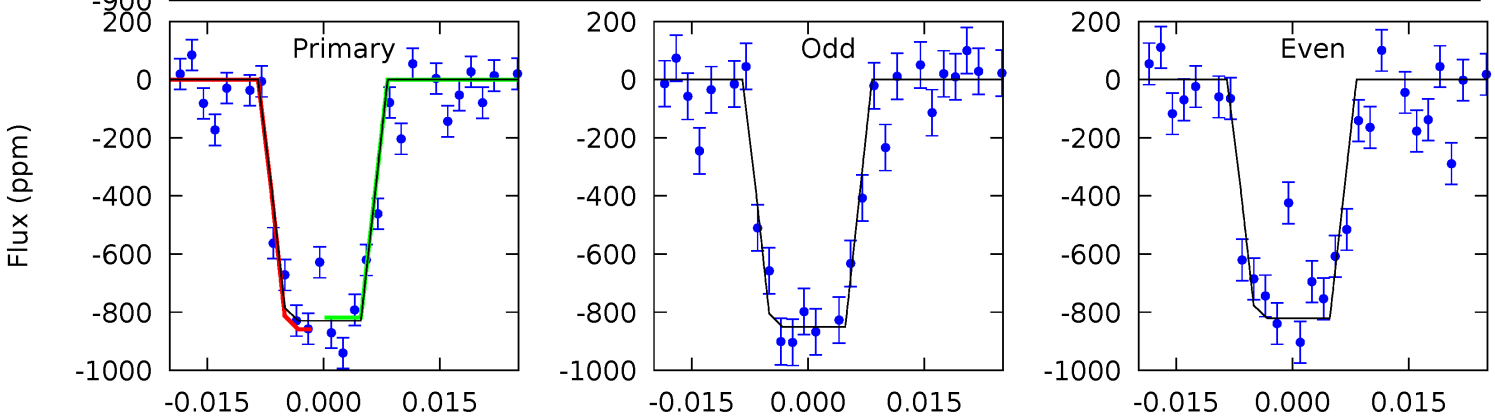
Alt Model-Shift Uniqueness Test

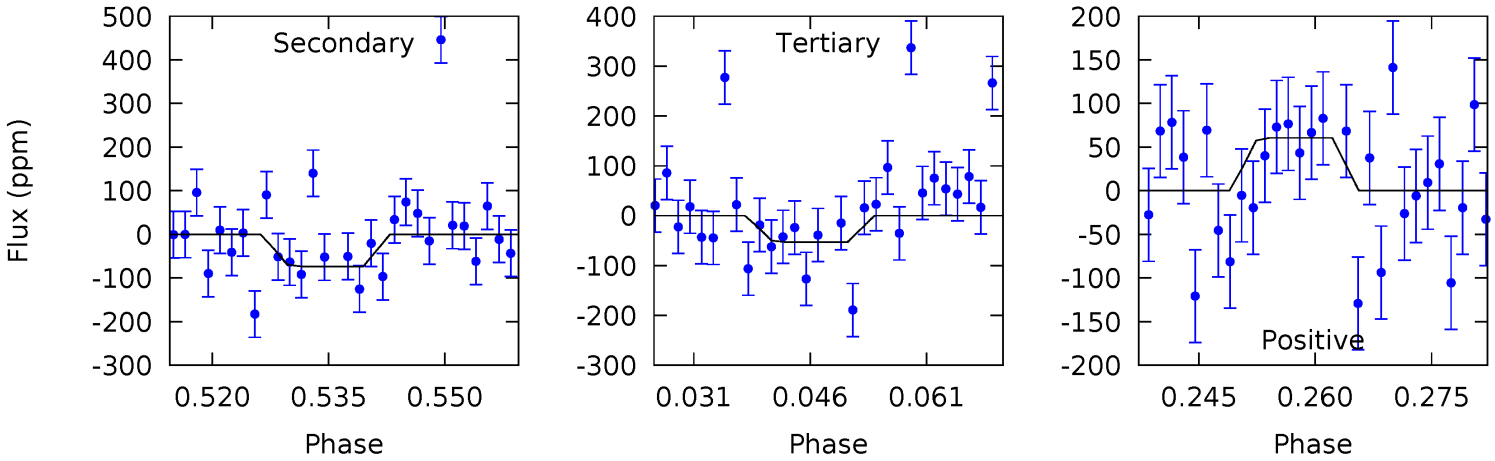
009269281-01, P = 5.823541 Days, E = 133.696428 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
45.3	4.01	2.88	3.31	4.94	2.43	1.06	42.4	42.0	1.12	0.69	0.82	1.00	0.07	1.11









Stellar Parameters For KIC 009269281

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	$M(M_\odot)$	$p_\star$ (g·cm^{-3})
	5774^{+172}_{-189}	$4.526^{+0.048}_{-0.192}$	$-0.220^{+0.300}_{-0.300}$	$0.864^{+0.249}_{-0.083}$	$0.916^{+0.110}_{-0.100}$	$1.998^{+0.518}_{-0.999}$
	+3%/-3%	+1%/-4%	+136%/-136%	+29%/-10%	+12%/-11%	+26%/-50%
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 009269281-01 / KOI 1398.01

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-62±17	$3.15^{+0.49}_{-0.41}$	1362^{+90}_{-64}	3364^{+185}_{-188}	12^{+5}_{-4}
Alt.	-73±18	$2.87^{+0.48}_{-0.35}$	1362^{+93}_{-67}	3565^{+203}_{-222}	18^{+8}_{-6}

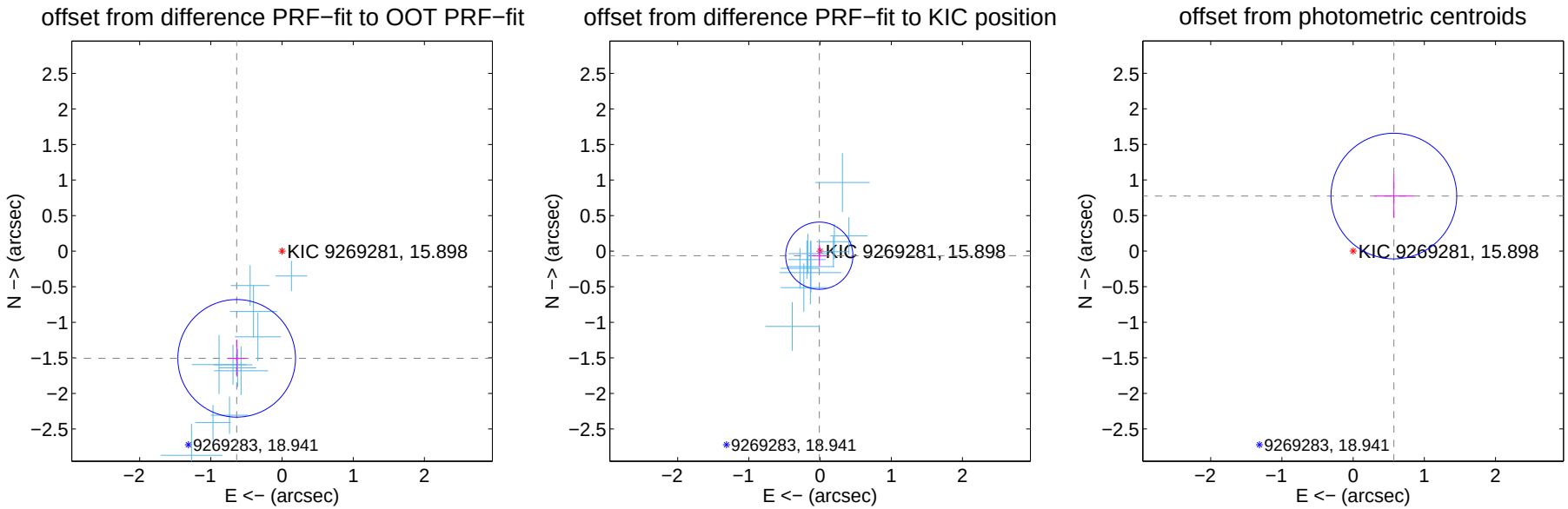
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

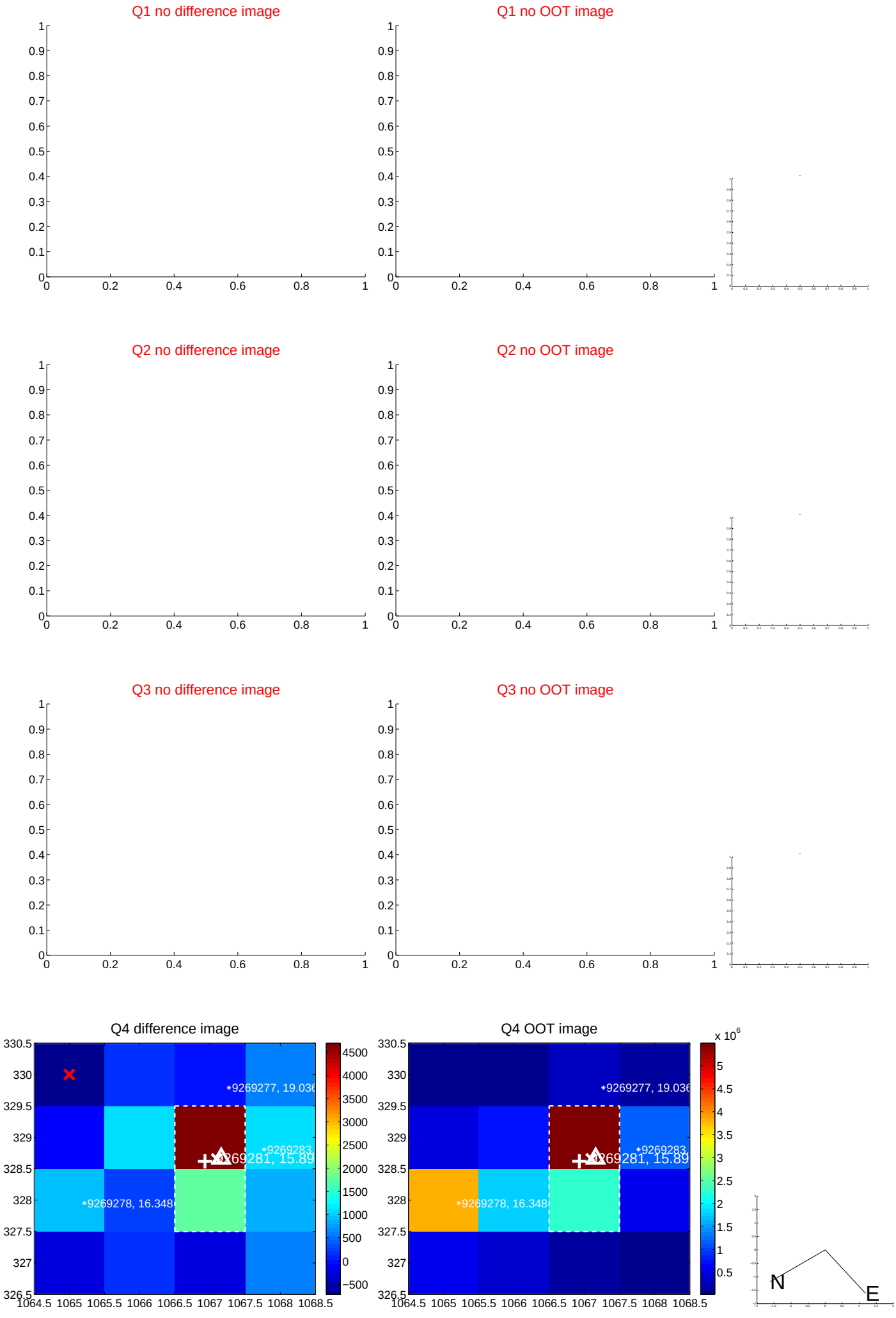
Supplemental centroid analysis for 009269281-01. Kepler magnitude: 15.90. Transit SNR 36.83
There are 11 quarters with good PRF difference image offsets
The OOT PRF centroid is offset from the target star catalog position by about 2.81 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.636 ± 0.276	5.94	0.637 ± 0.131	-1.506 ± 0.255
PRF-fit source offset from KIC position	0.064 ± 0.157	0.41	0.011 ± 0.098	-0.063 ± 0.150
photometric centroid source offset	0.96 ± 0.29	3.27	-0.57 ± 0.27	0.77 ± 0.30

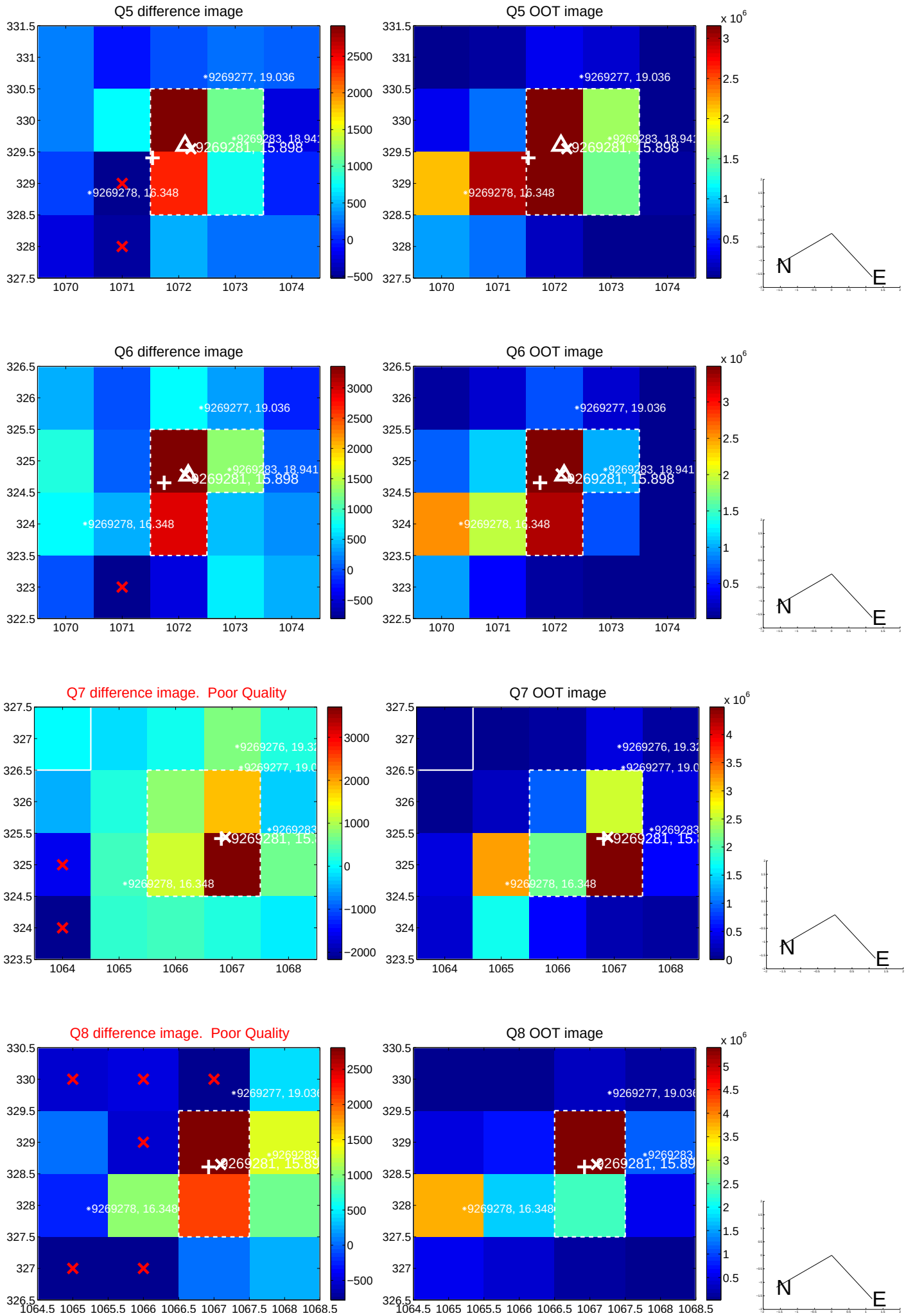


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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

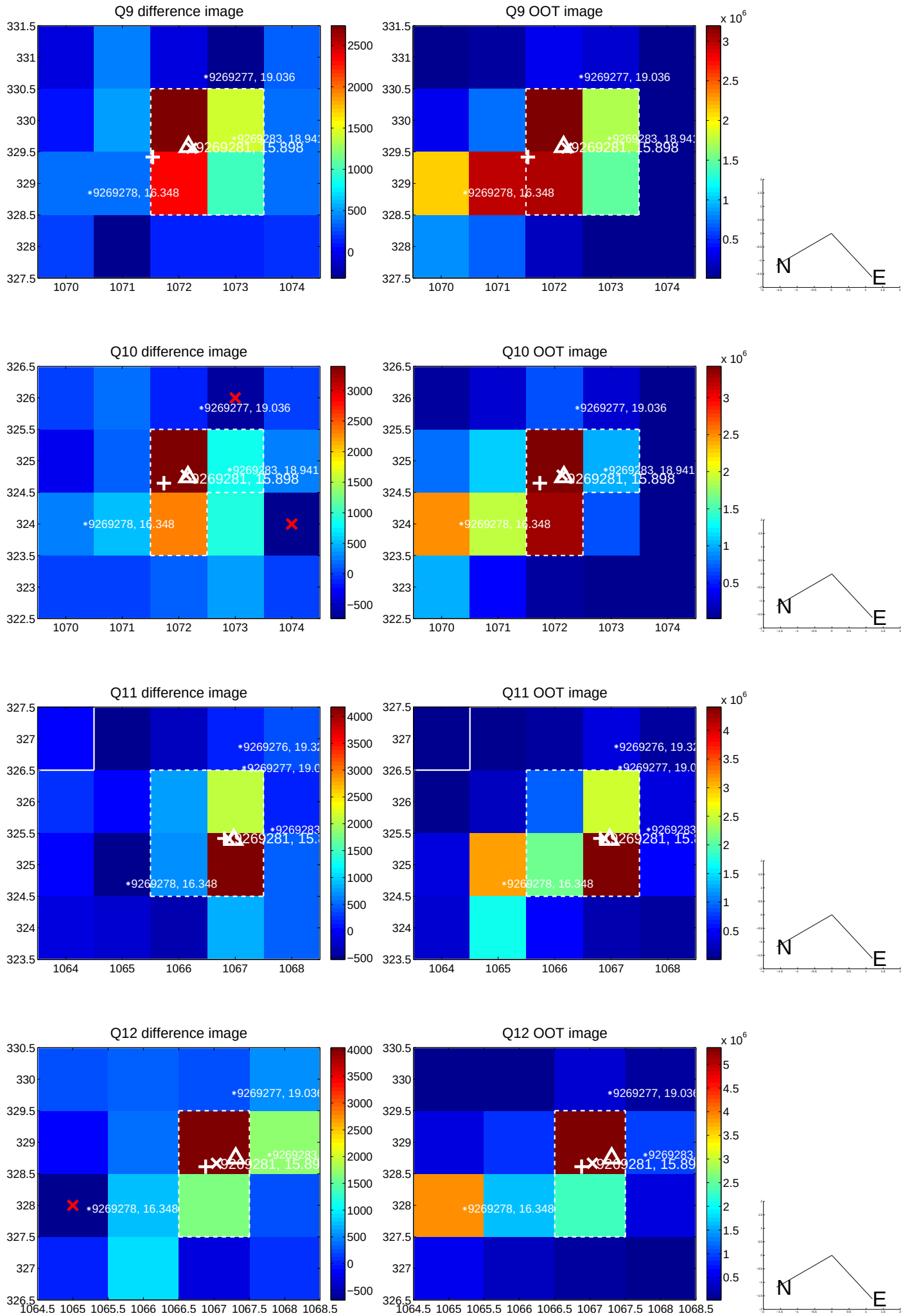
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



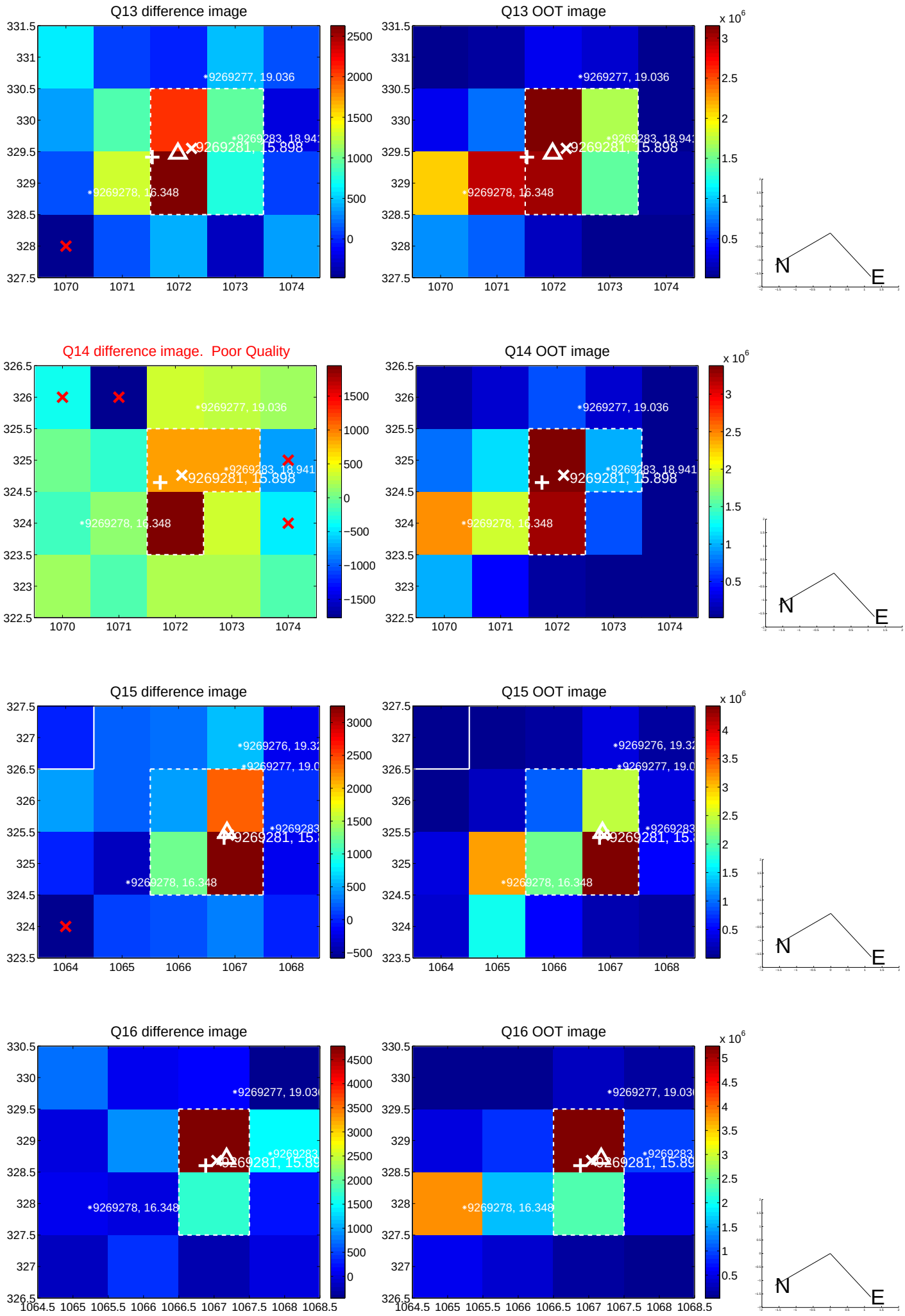
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



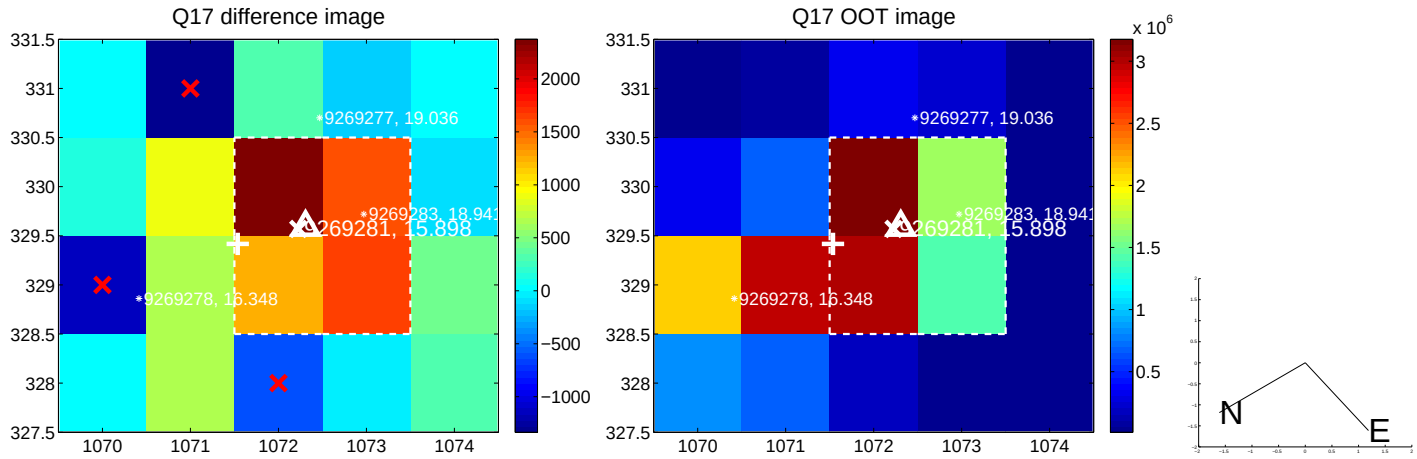
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

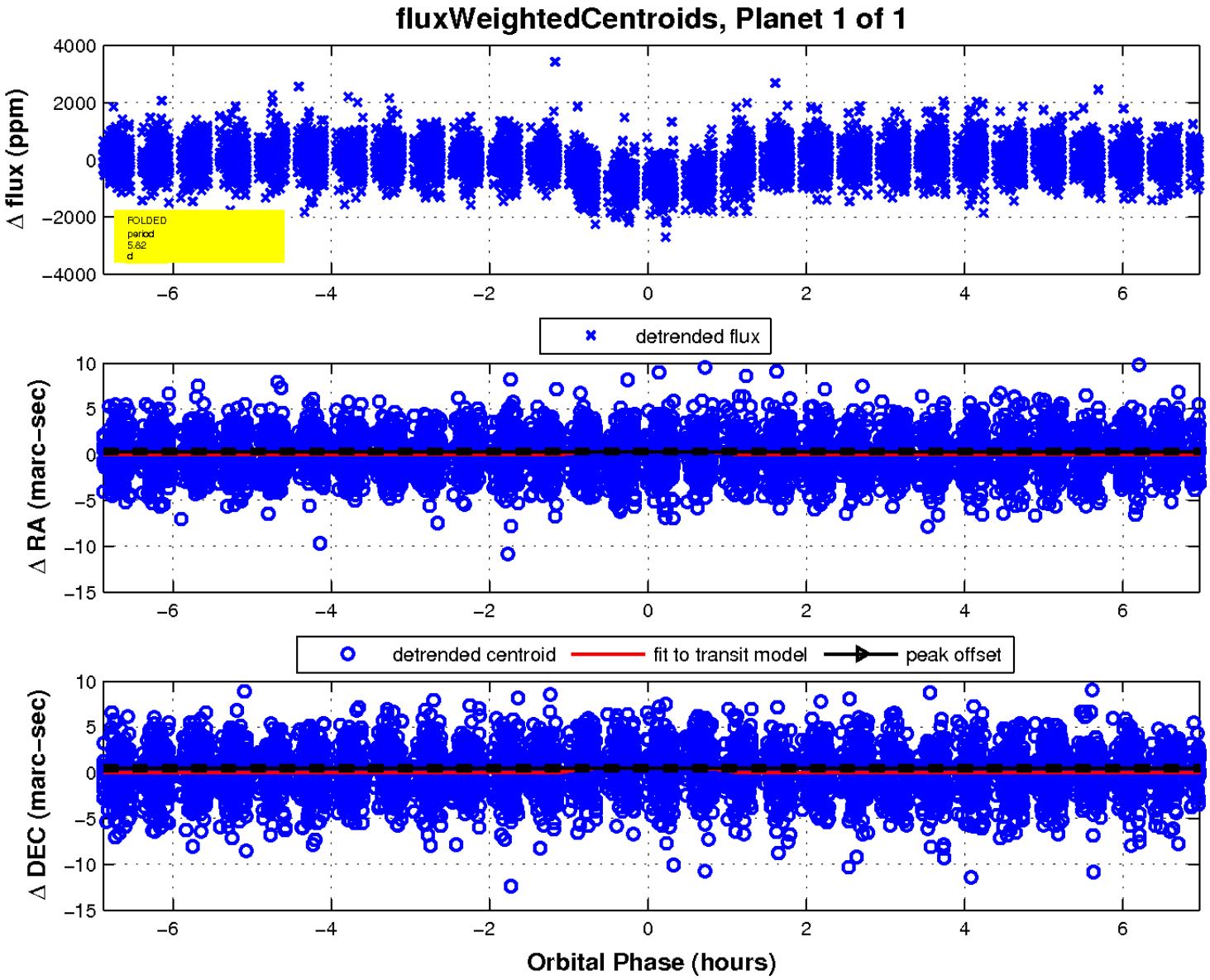


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

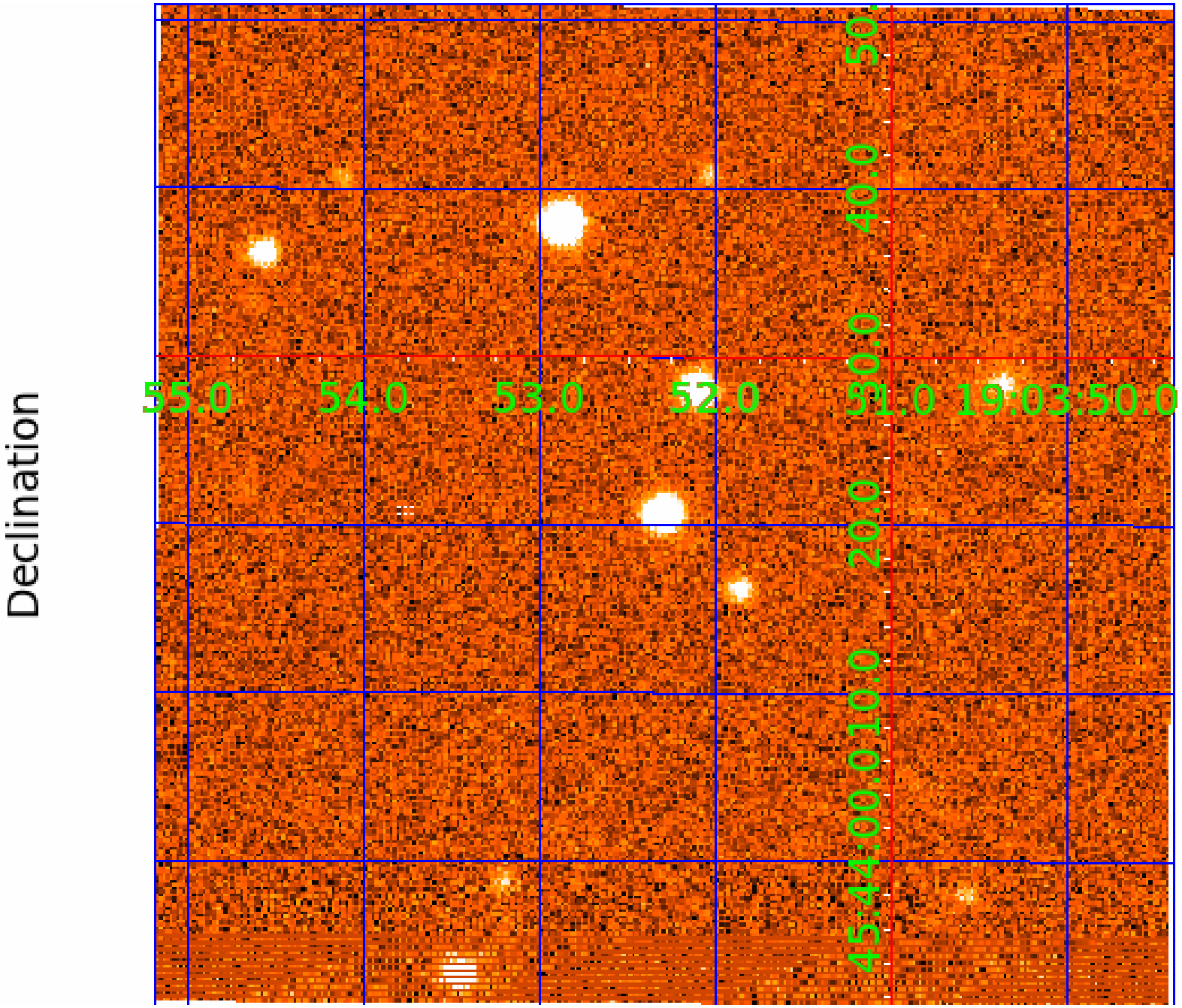


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.





UKIRT Image


Declination
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