KIC 006549597

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 ($S_\oplus$)
006549597-01	OBS	No	453.801881	317.161486	1028.9	4.413	13.6	6.2	0.72	5242	2.37	0.34
006549597-02	OBS	No	377.273262	200.989738	698.4	5.512	13.1	4.7	0.72	5242	1.95	0.43
006549597-03	OBS	No	572.990151	174.651734	1142.7	4.307	12.8	7.3	0.72	5242	2.45	0.25
006549597-04	OBS	No	579.547481	387.118423	1139.7	3.349	10.2	6.7	0.72	5242	2.72	0.24
006549597-05	OBS	No	302.585009	417.774367	1139.6	2.915	10.4	6.5	0.72	5242	2.60	0.58

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006549597-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
006549597-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
006549597-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006549597-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006549597-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS

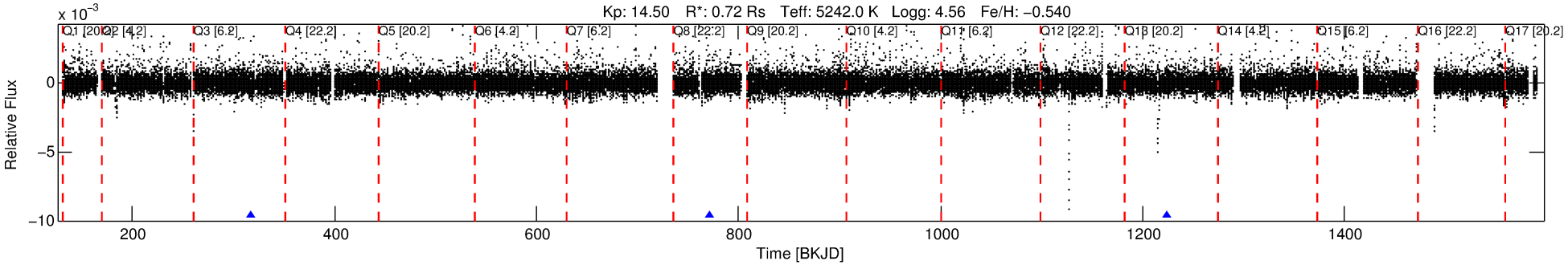
Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.
See `http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col` for comment definitions.

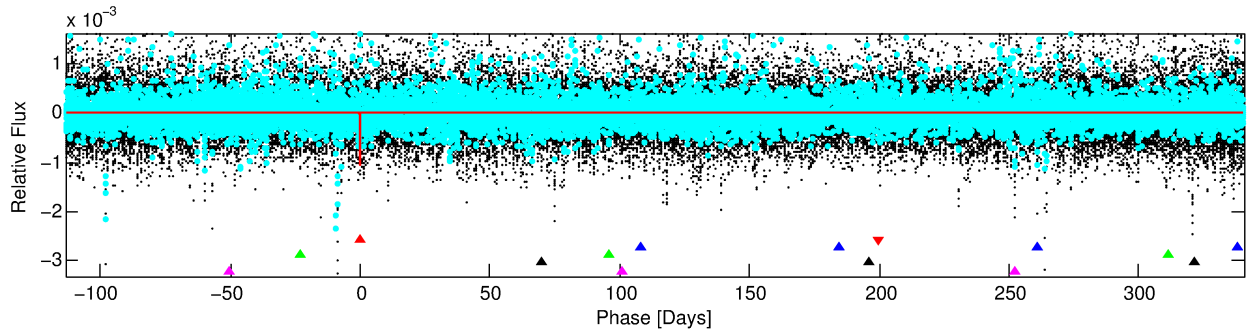
Ephemeris Match Information For 006549597-01

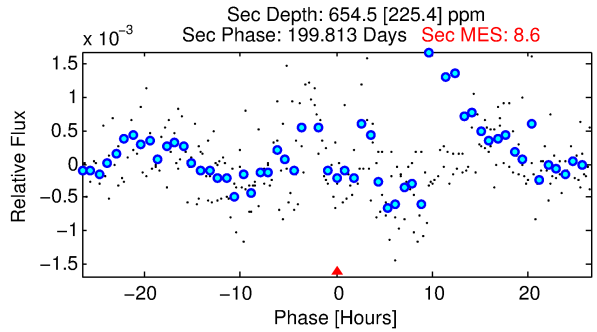
No Significant Match Found

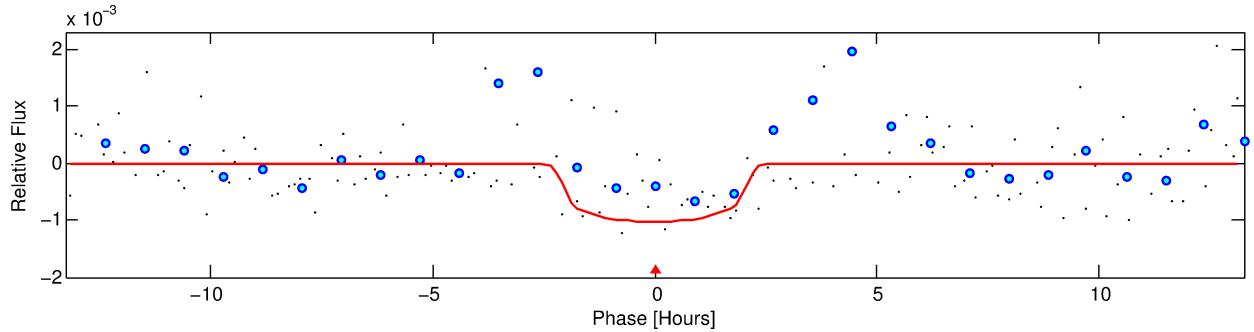
DV One-Page Summary

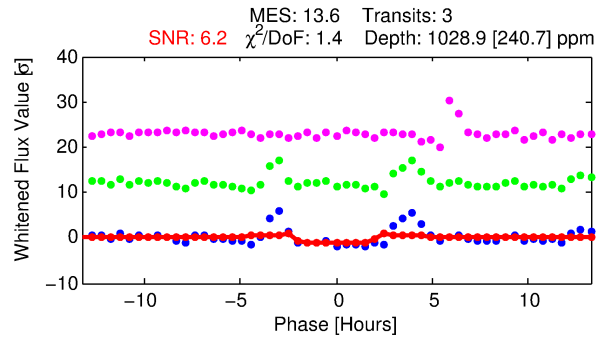
KIC: 6549597 Candidate: 1 of 5 Period: 453.802 d

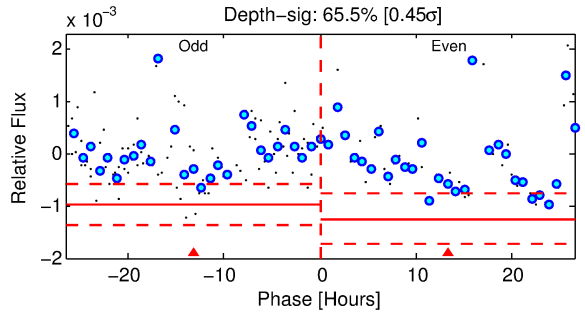


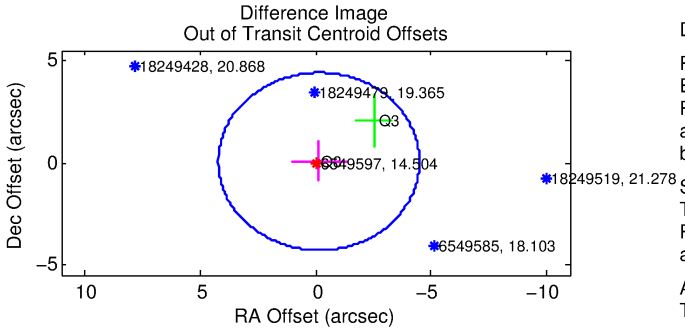












DV Fit Results:

Period = 453.80188 [0.00944] d
Epoch = 317.1615 [0.0126] BKJD
Rp/R* = 0.0301 [0.0647]
a/R* = 690.82 [5896.41]
b = 0.54 [11.48]

Seff = 0.34 [0.07]
Teq = 195 [10] K
Rp = 2.37 [5.11] Re
a = 1.0185 [0.1083] AU

Ag = 66394.52 [286681.34] [0.23σ]
Teffp = 4832 [5215] K [0.89σ]

DV Diagnostic Results:

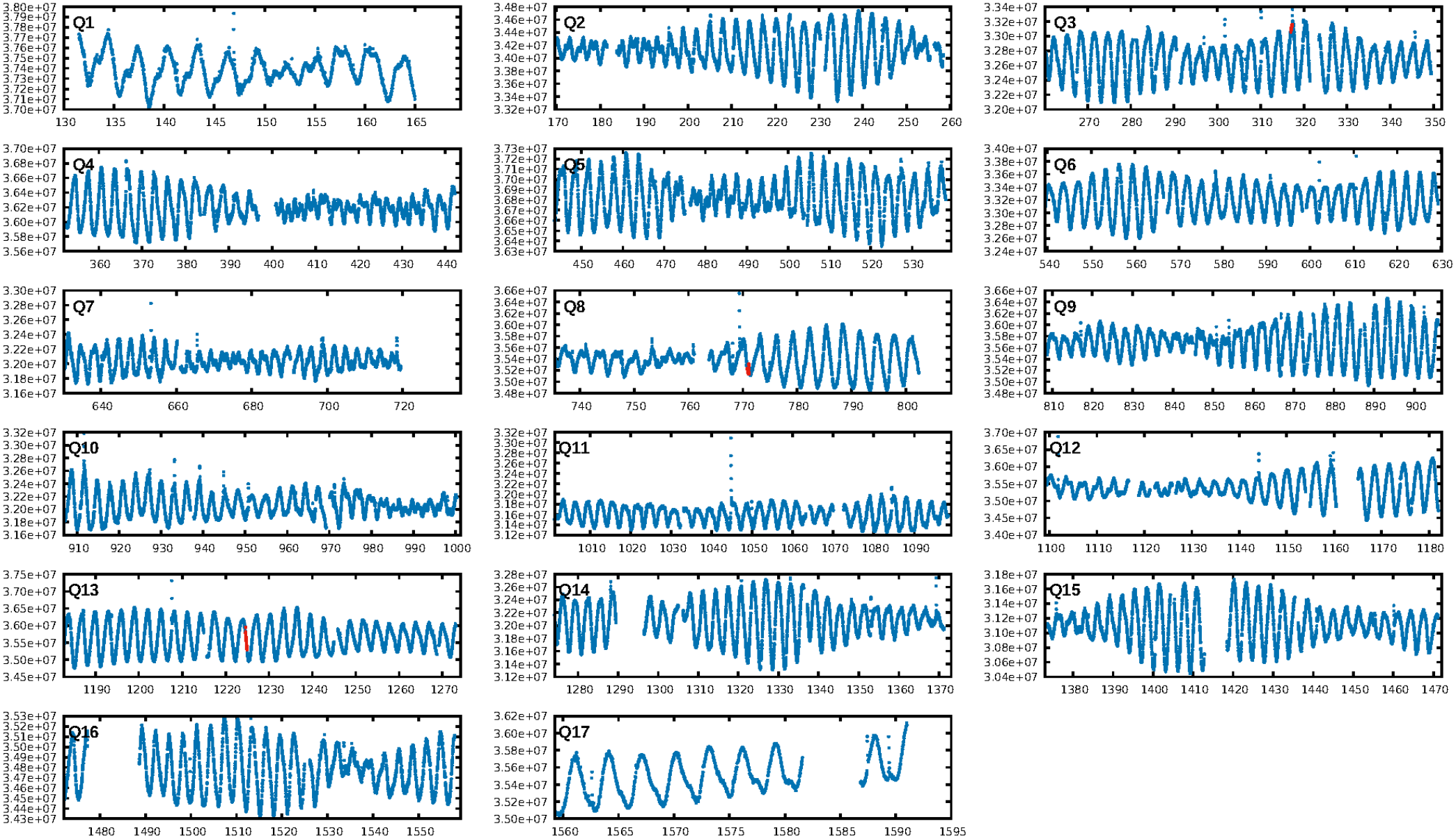
ShortPeriod−sig: 100.0% [260.10σ]
LongPeriod−sig: 100.0% [463.86σ]
ModelChiSquare2−sig: 92.6%
ModelChiSquareGof−sig: 78.9%
Bootstrap−pfa: 1.38e−11
RollingBand−fgt: 1.00 [3/3]
GhostDiagnostic−chr: 5.603

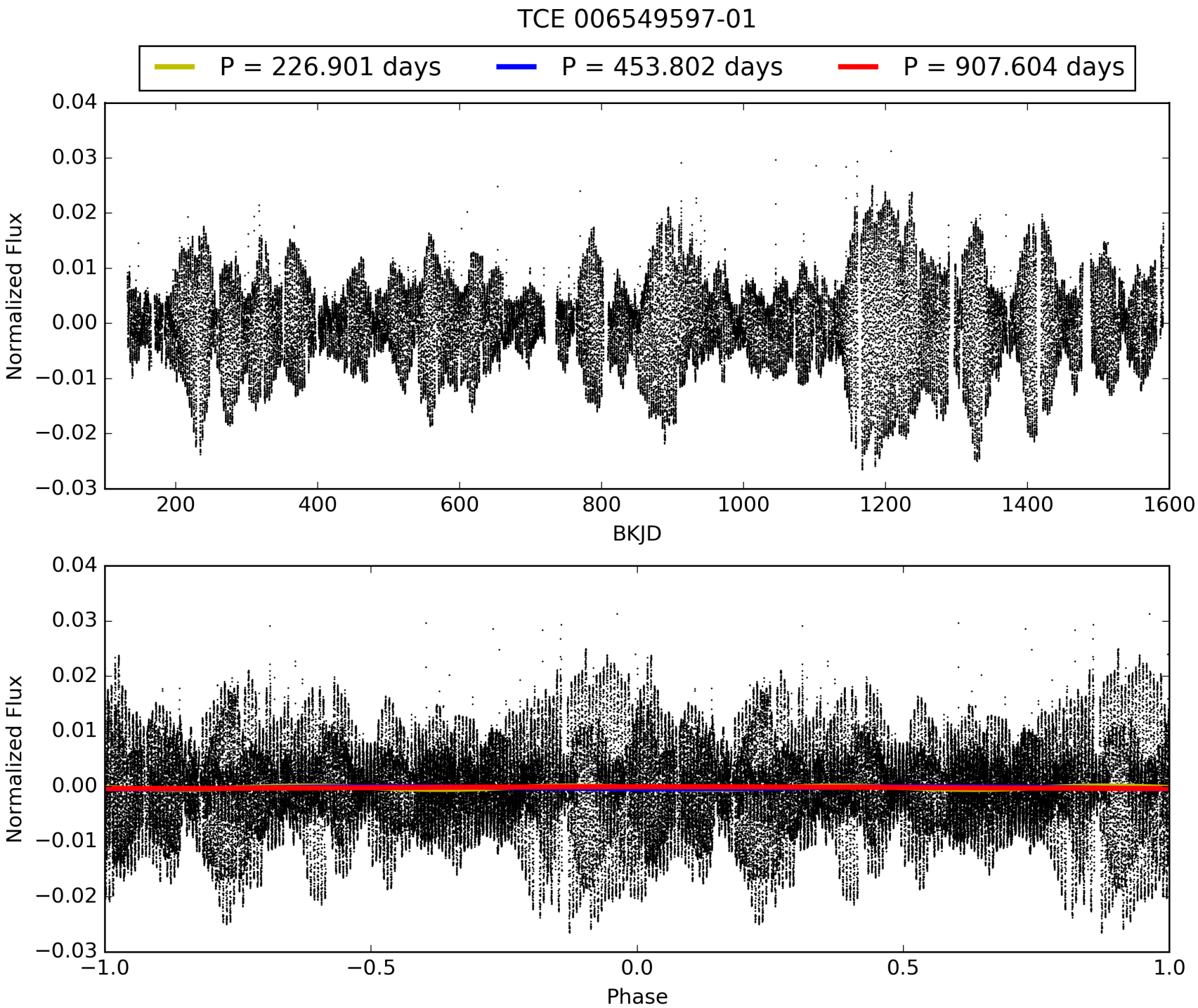
Centroid−sig: 16.0%
Centroid−so: 1.493 arcsec [1.05σ]
OotOffset−rm: 0.153 arcsec [0.11σ]
KicOffset−rm: 0.258 arcsec [0.51σ]
OotOffset−st: 0/1/1/0 [2]
KicOffset−st: 0/1/1/0 [2]
DiffImageQuality−fgm: 0.50 [1/2]
DiffImageOverlap−fno: 1.00 [3/3]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31−Jan−2016 05:27:33 Z

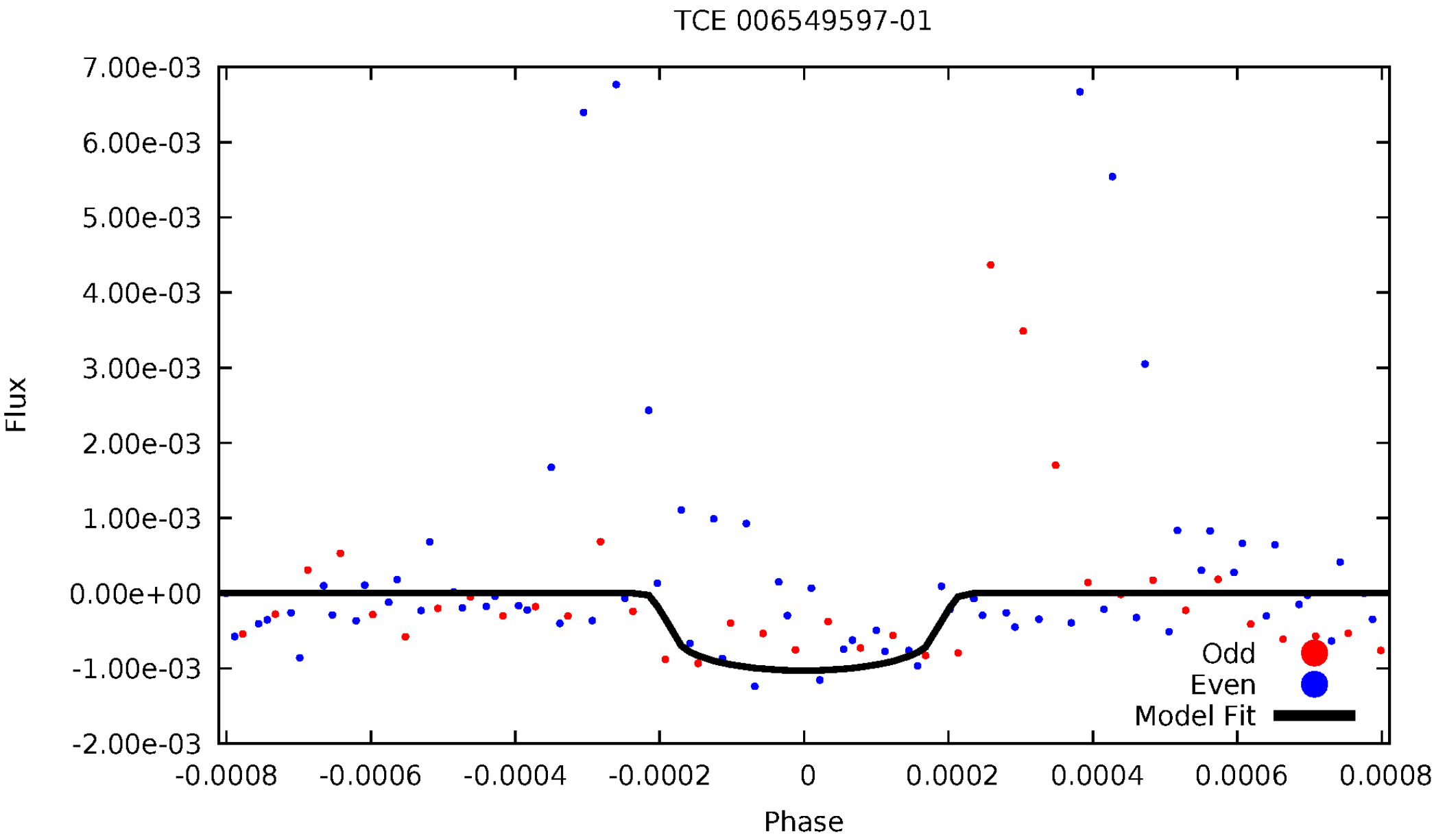
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 006549597-01, PDC Light Curves




TCE 006549597-01
P = 226.901 days
P = 453.802 days
P = 907.604 days
Normalized Flux
BKJD
Normalized Flux
Phase

DV Odd/Even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6.00e-03
5.00e-03
4.00e-03
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2.00e-03
1.00e-03
0.00e+00
-1.00e-03
-2.00e-03
Flux
-0.0008
-0.0006
-0.0004
-0.0002
0
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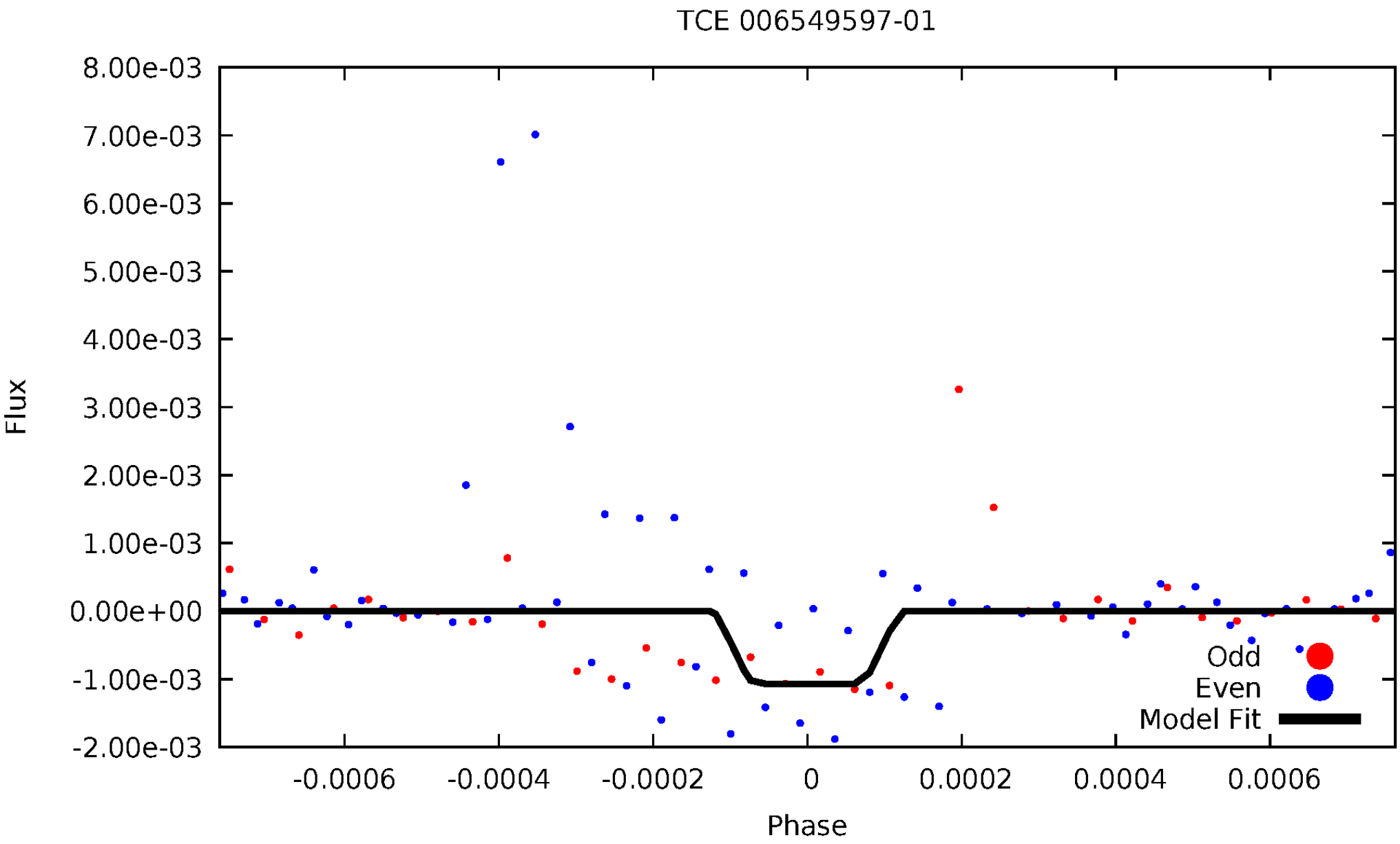
0.0004
0.0006
0.0008
Phase
Odd
Even
Model Fit

ALT Odd/Even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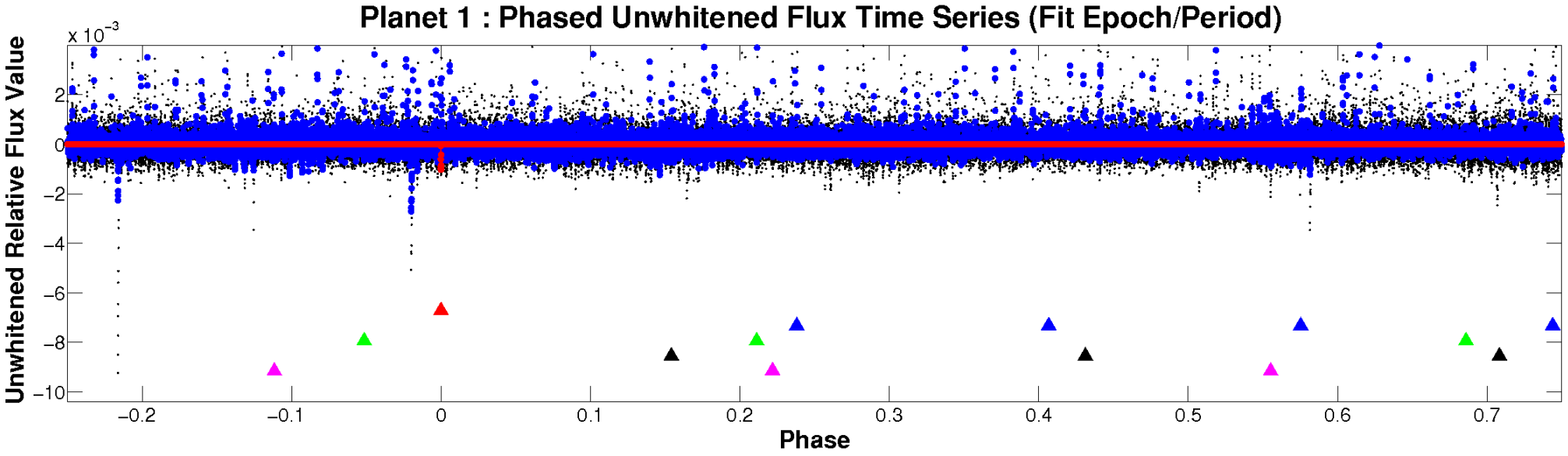
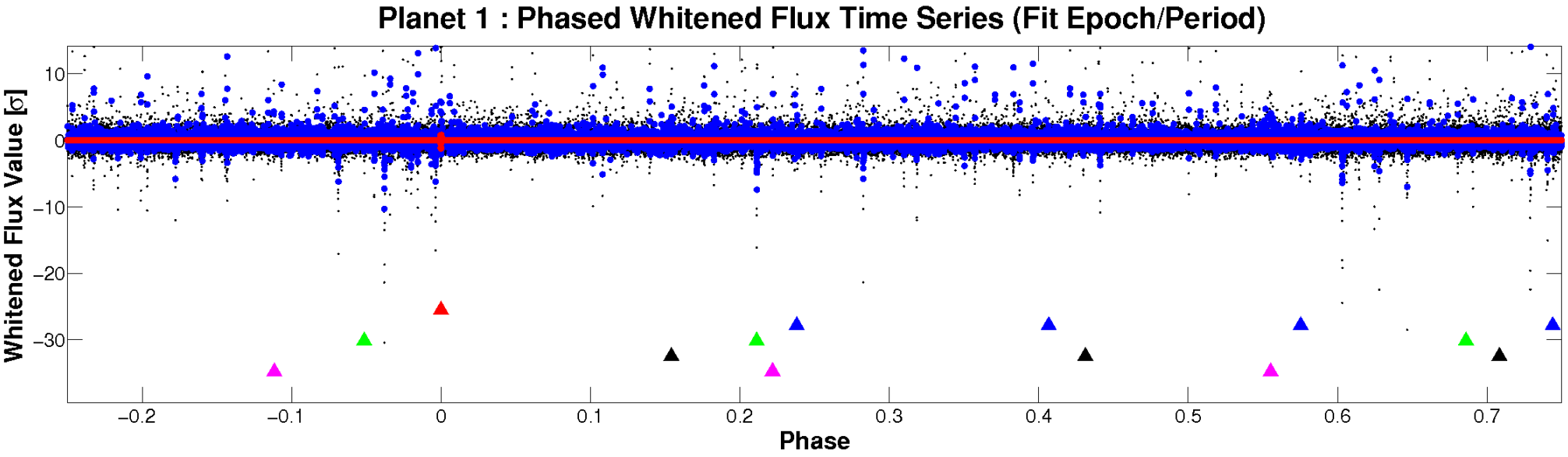
5.00e-03
4.00e-03
3.00e-03
2.00e-03
1.00e-03
0.00e+00
-1.00e-03
-2.00e-03
Flux
-0.0006
-0.0004
-0.0002
0
0.0002
0.0004
0.0006
Phase
Odd
Even
Model Fit

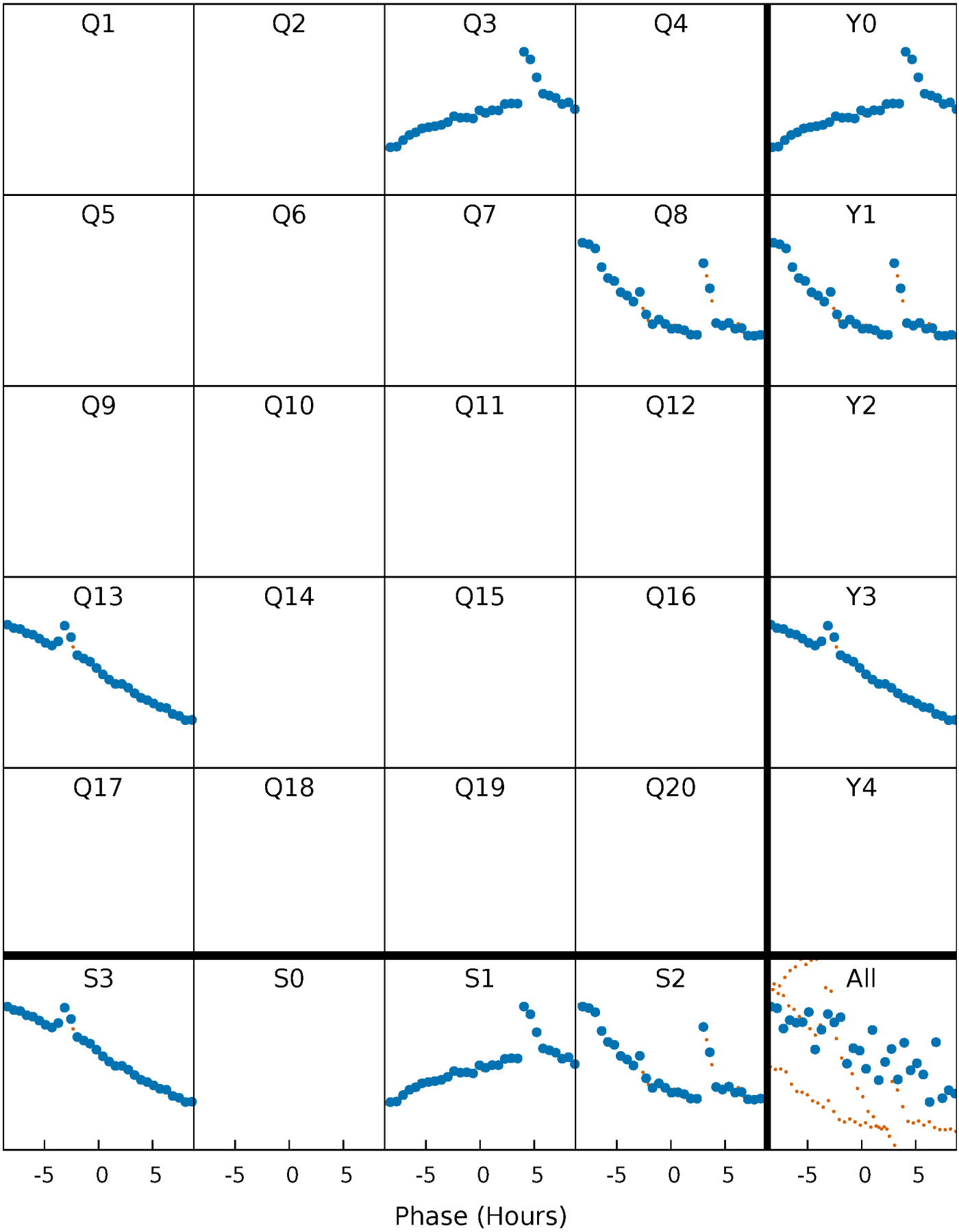
Non-Whitened Vs. Whitened Light Curve





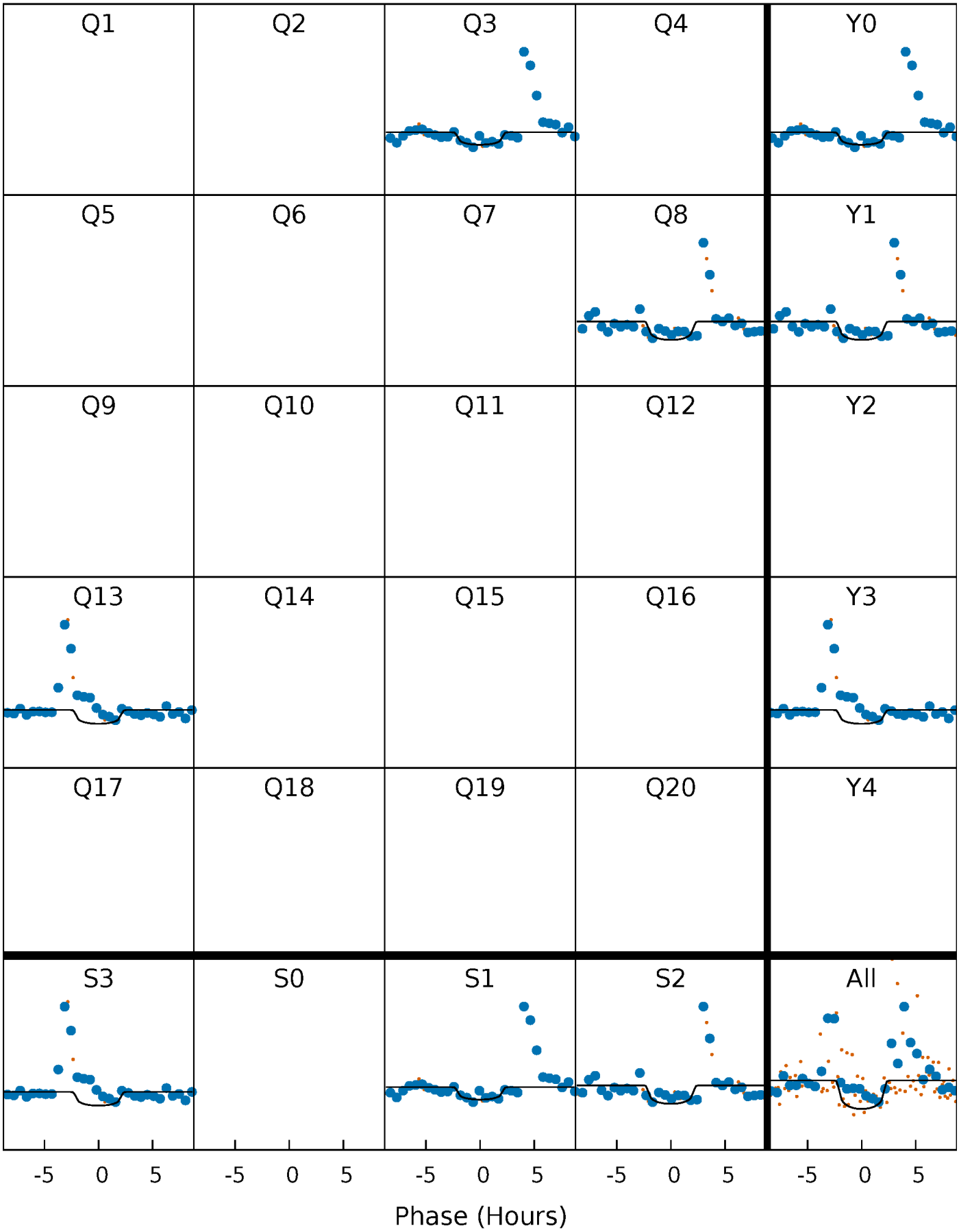
PDC Quarter-Phased Transit Curves

TCE 006549597-01 P=453.801881 Days T_0=317.161486 (BKJD)



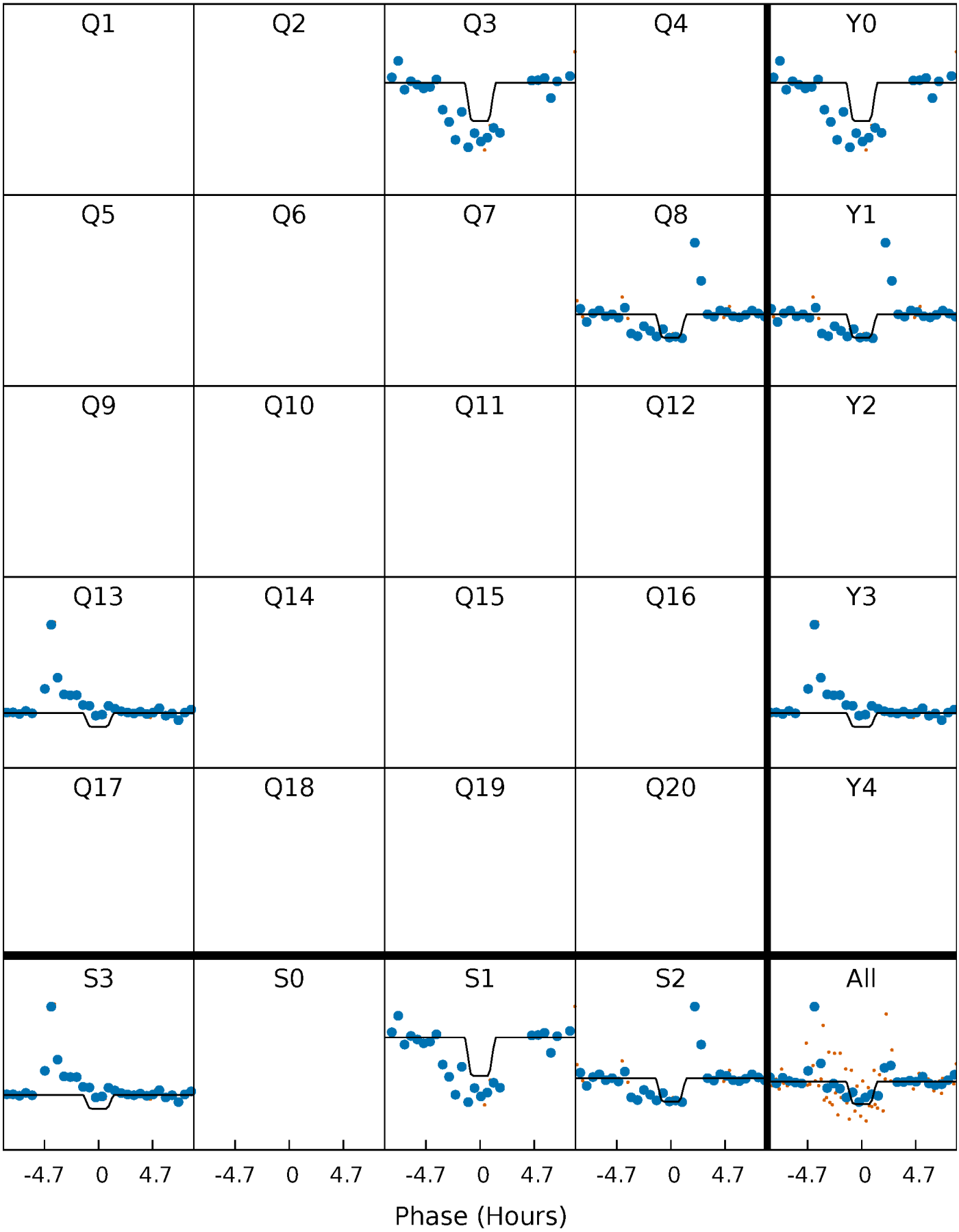
DV Quarter-Phased Transit Curves

TCE 006549597-01 P=453.801881 Days T_0=317.161486 (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

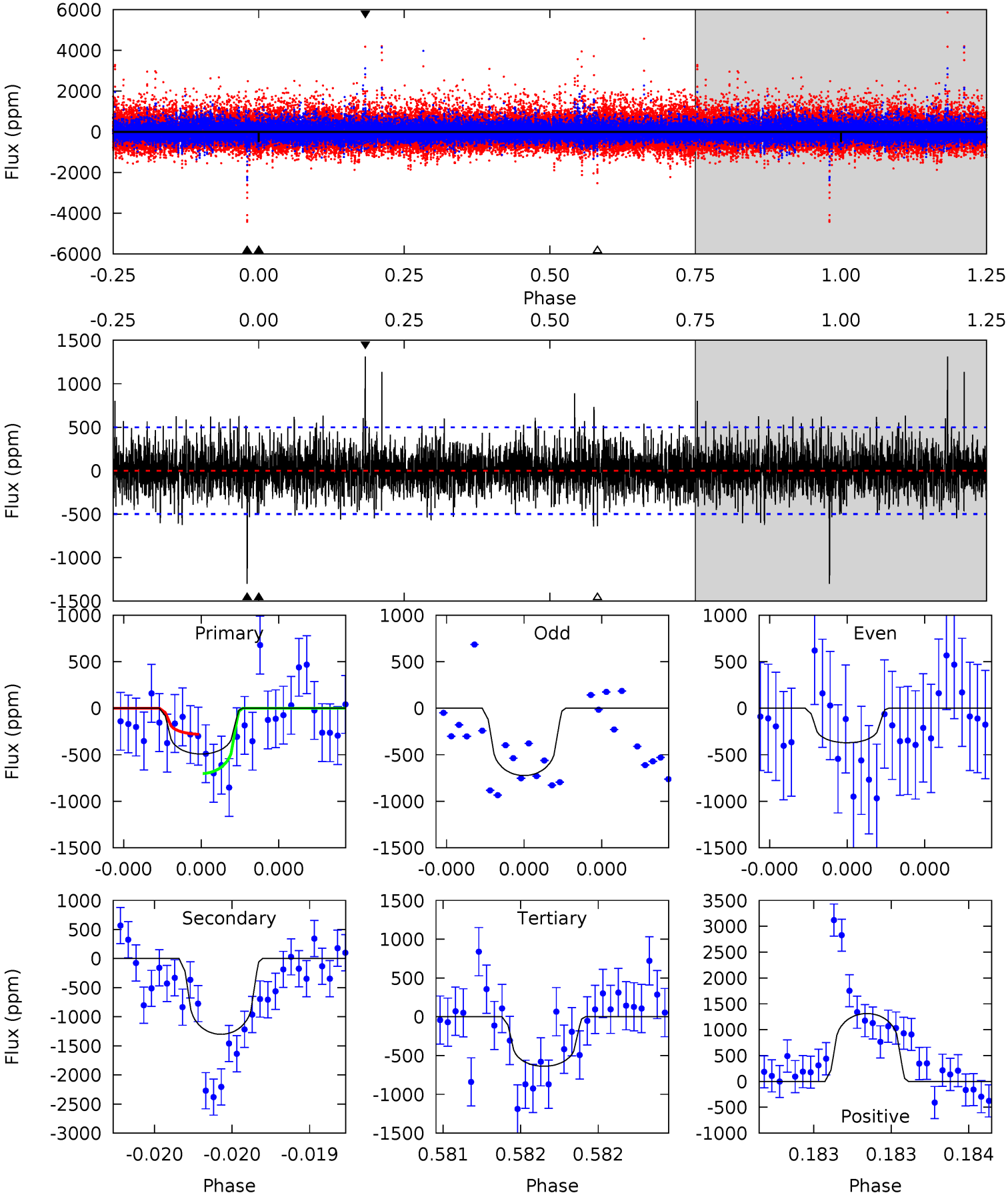
TCE 006549597-01 P=453.795312 Days T_0=317.216558 (BKJD)



DV Model-Shift Uniqueness Test

006549597-01, P = 453.801881 Days, E = 317.161486 Days

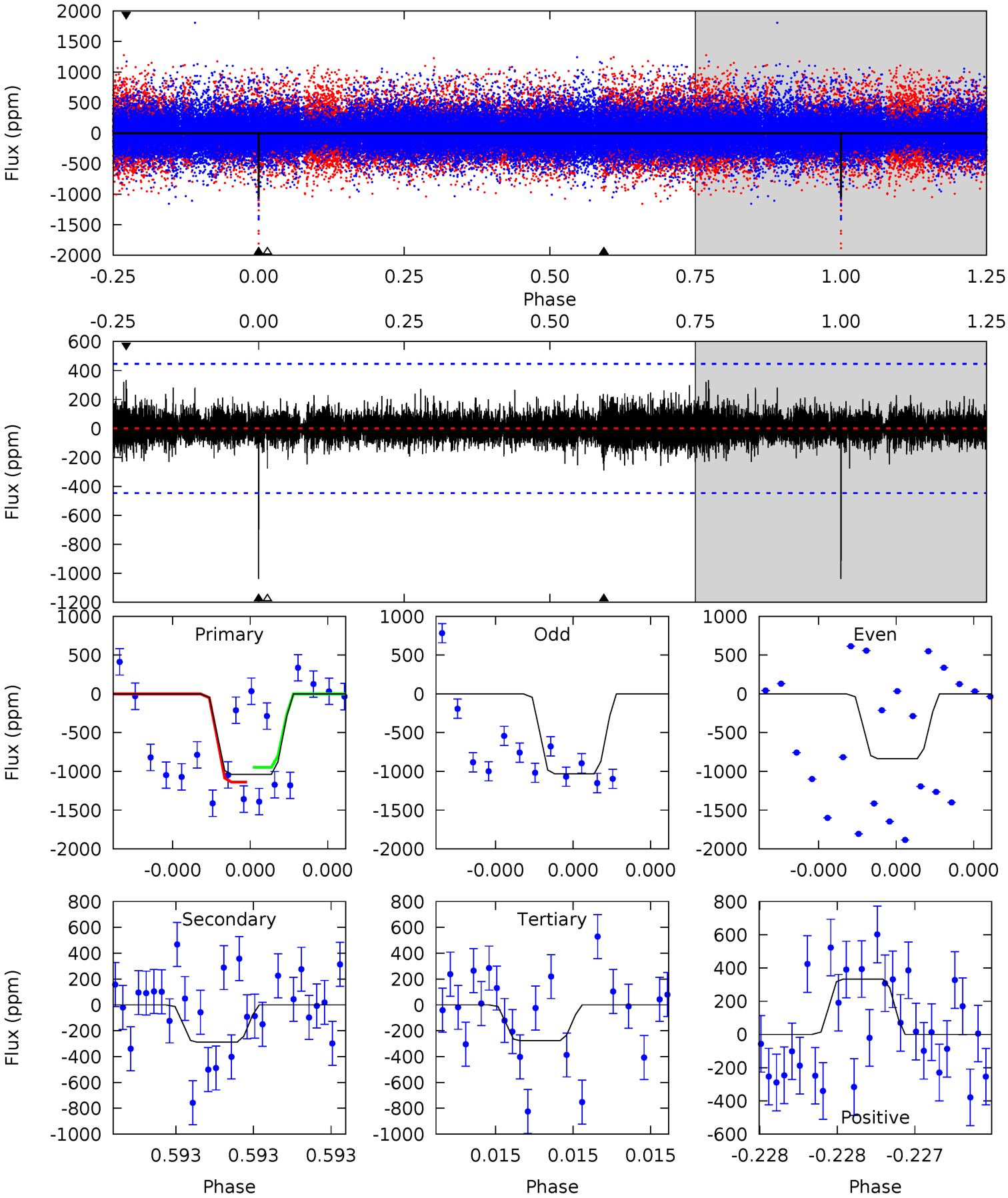
Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.53	14.6	7.17	14.8	5.60	3.52	2.00	-1.64	-9.22	7.45	-0.13	1.46	0.68	0.50	2.39



Alt Model-Shift Uniqueness Test

006549597-01, P = 453.795312 Days, E = 317.216558 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.3	3.69	3.55	4.26	5.71	3.69	0.76	9.75	9.03	0.15	-0.57	1.27	0.87	0.24	1.20



Stellar Parameters For KIC 006549597

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	$M(M_\odot)$	$p_\star$ (g·cm^{-3})
	5242^{+157}_{-157}	$4.556^{+0.088}_{-0.072}$	$-0.540^{+0.350}_{-0.300}$	$0.722^{+0.089}_{-0.081}$	$0.684^{+0.095}_{-0.038}$	$2.561^{+0.947}_{-0.580}$
	+3%/-3%	+2%/-2%	+65%/-56%	+12%/-11%	+14%/-6%	+37%/-23%
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 006549597-01 / KOI

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1300±89	$4.37^{+4.16}_{-2.99}$	271^{+12}_{-12}	4372^{+3168}_{-899}	$38372^{+354873}_{-28001}$
Alt.	-288±78	$4.43^{+4.17}_{-3.02}$	271^{+12}_{-12}	3377^{+1620}_{-613}	8916^{+68033}_{-6821}

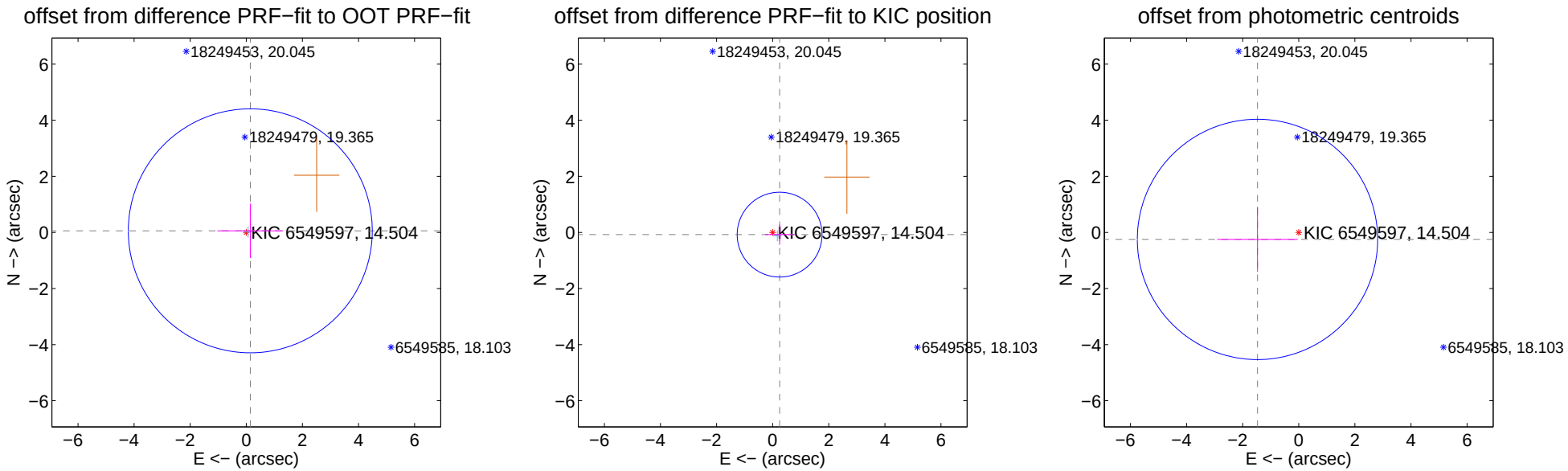
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

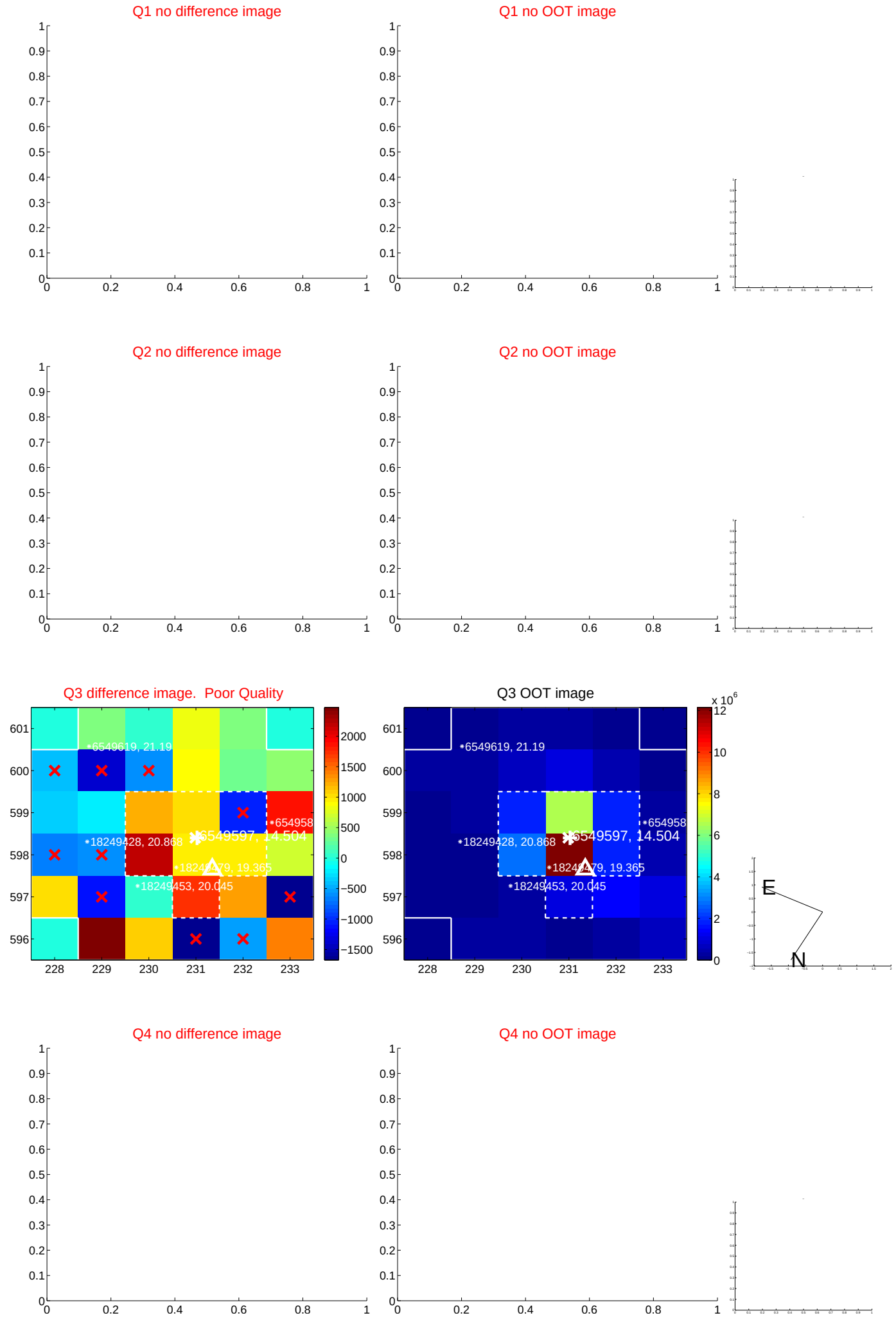
Supplemental centroid analysis for 006549597-01. Kepler magnitude: 14.50. Transit SNR 6.20
There are 1 quarters with good PRF difference image offsets
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.153 ± 1.449	0.11	-0.142 ± 1.172	0.057 ± 0.972
PRF-fit source offset from KIC position	0.258 ± 0.504	0.51	-0.246 ± 0.516	-0.079 ± 0.362
photometric centroid source offset	1.49 ± 1.43	1.05	1.47 ± 1.43	-0.25 ± 1.16

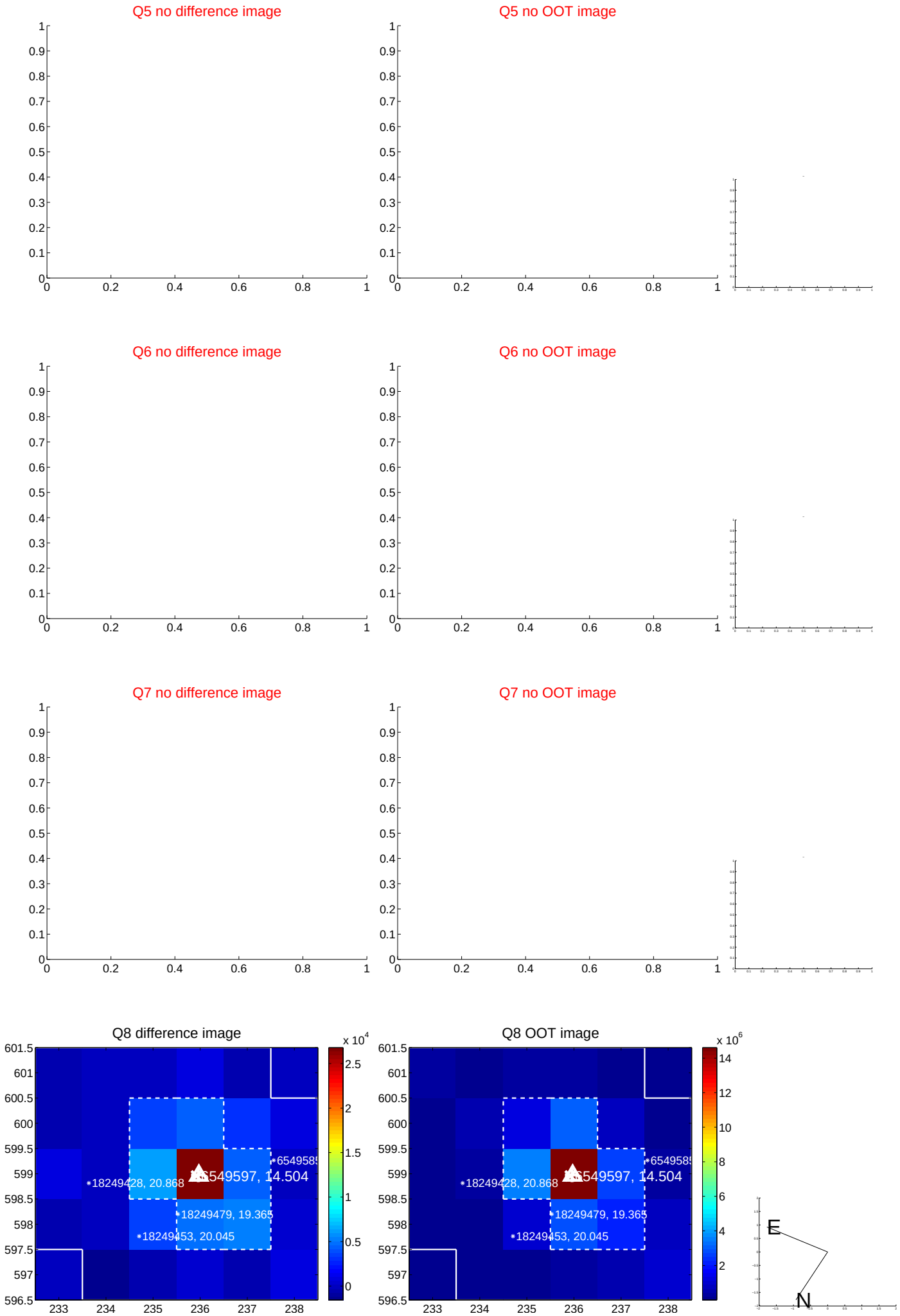


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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

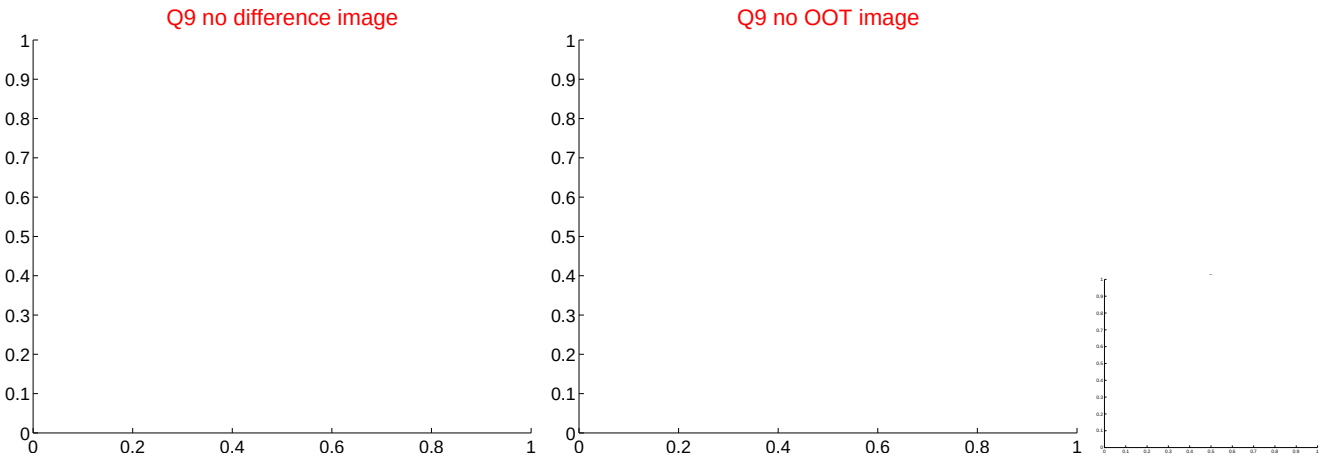
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

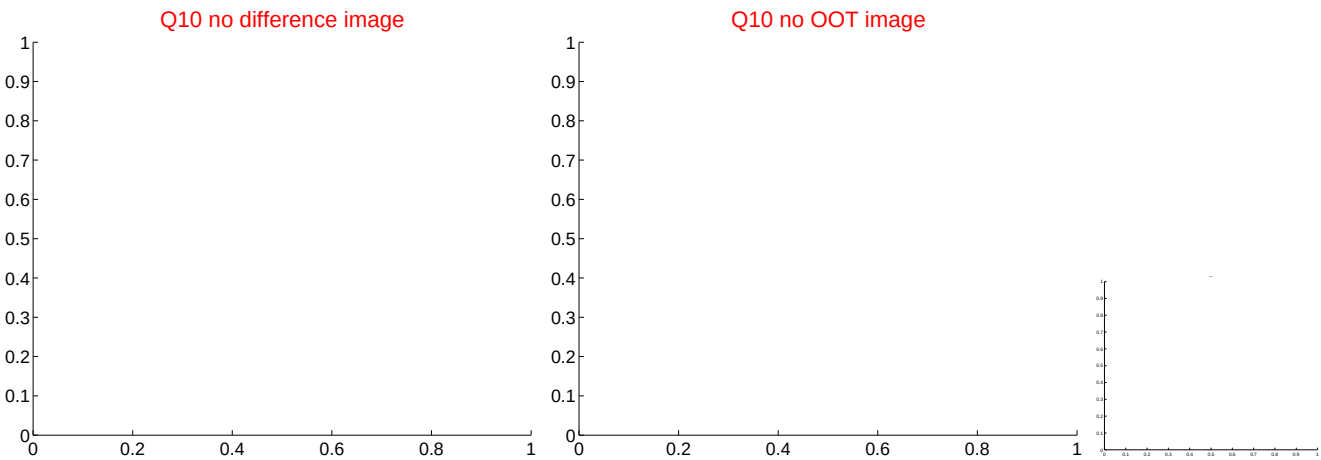


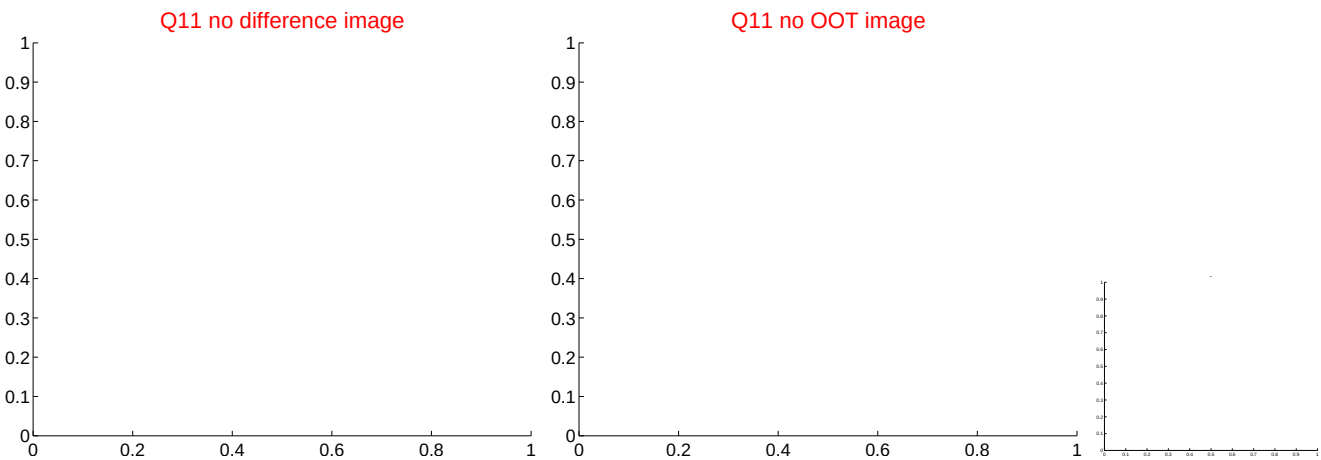
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

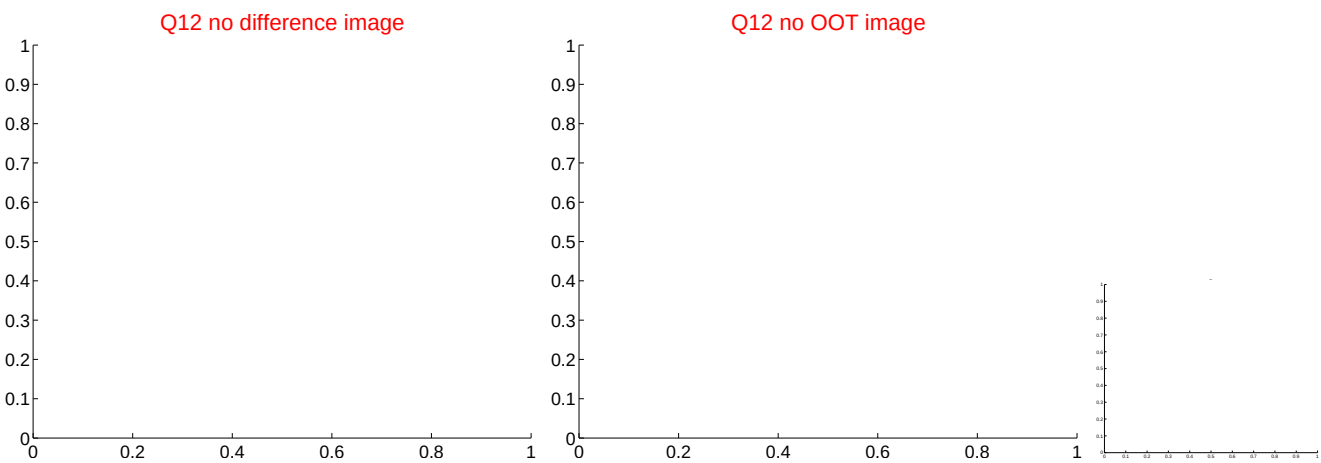


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

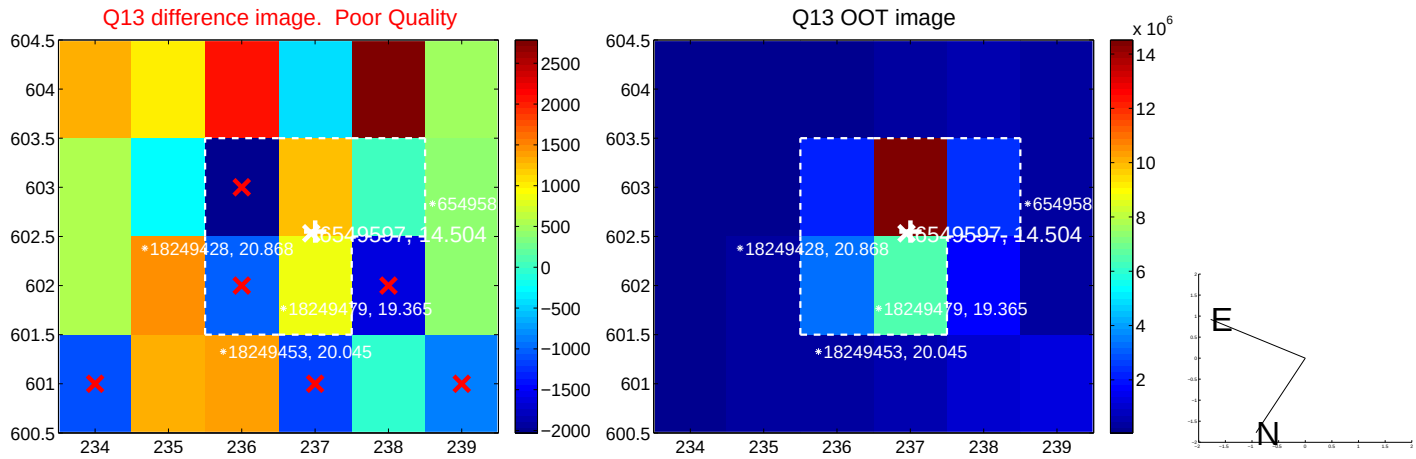


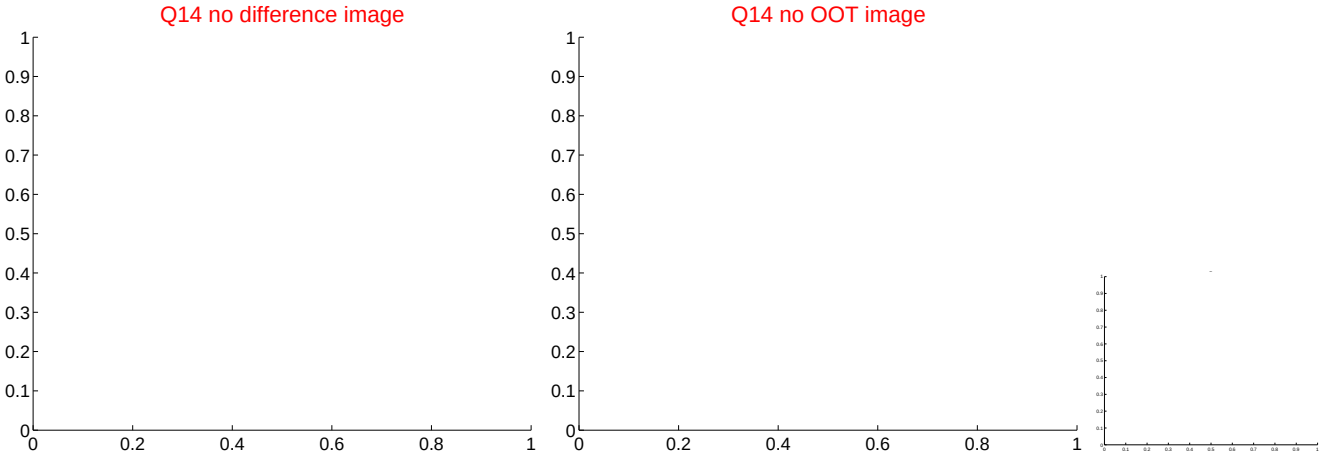


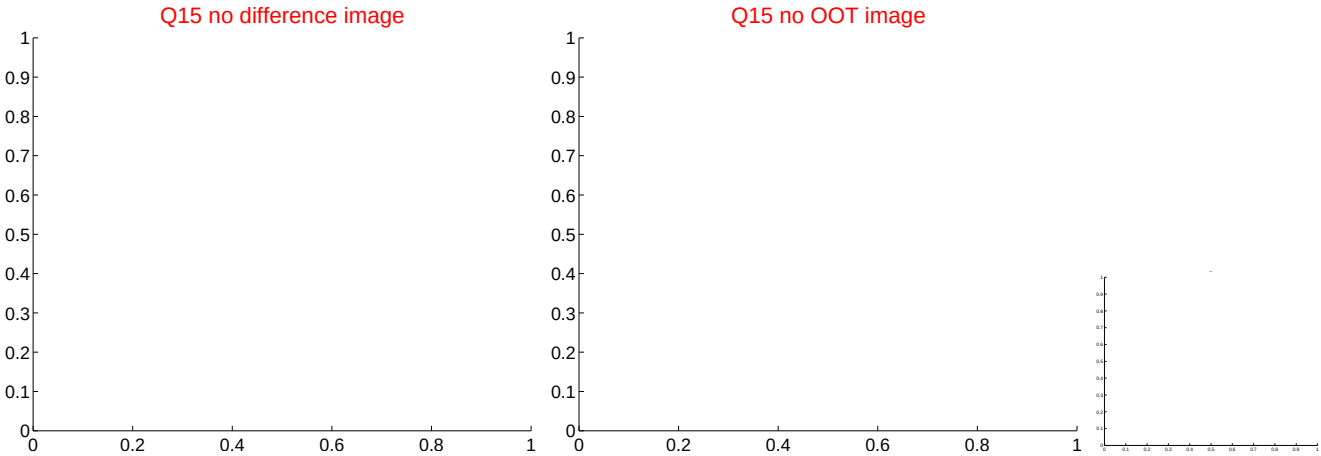


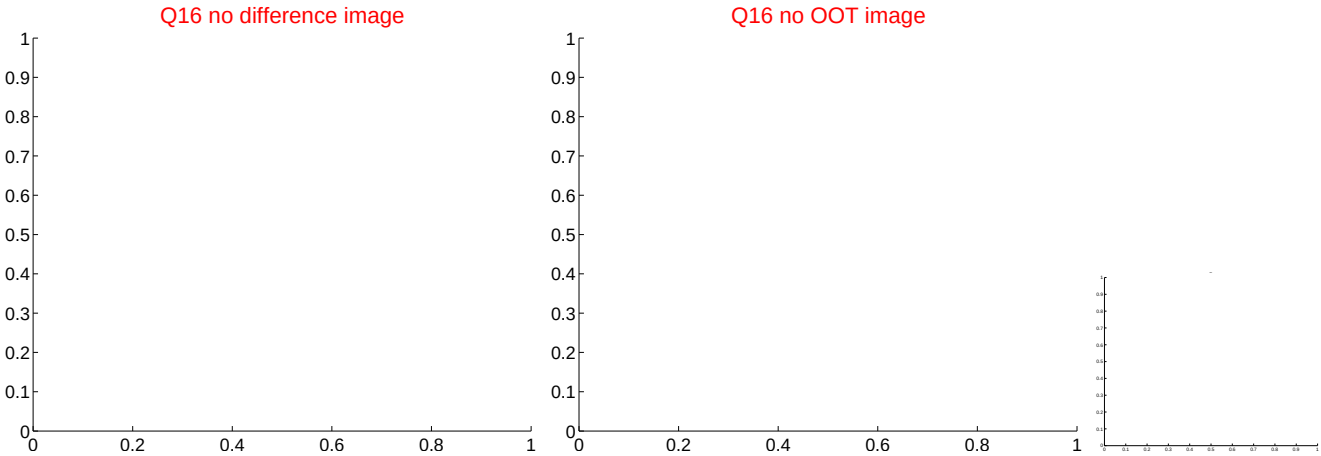


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.

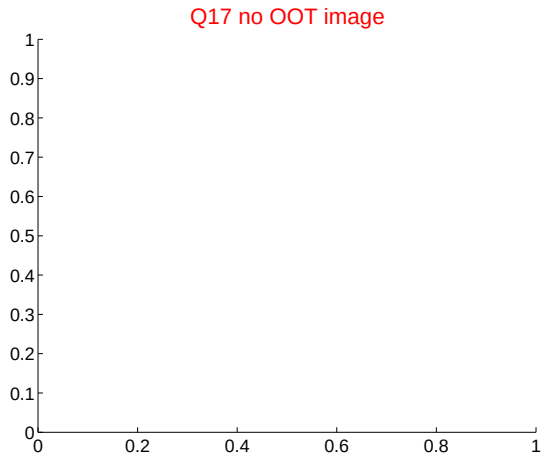


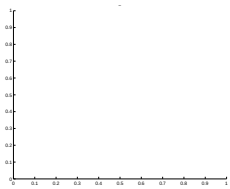


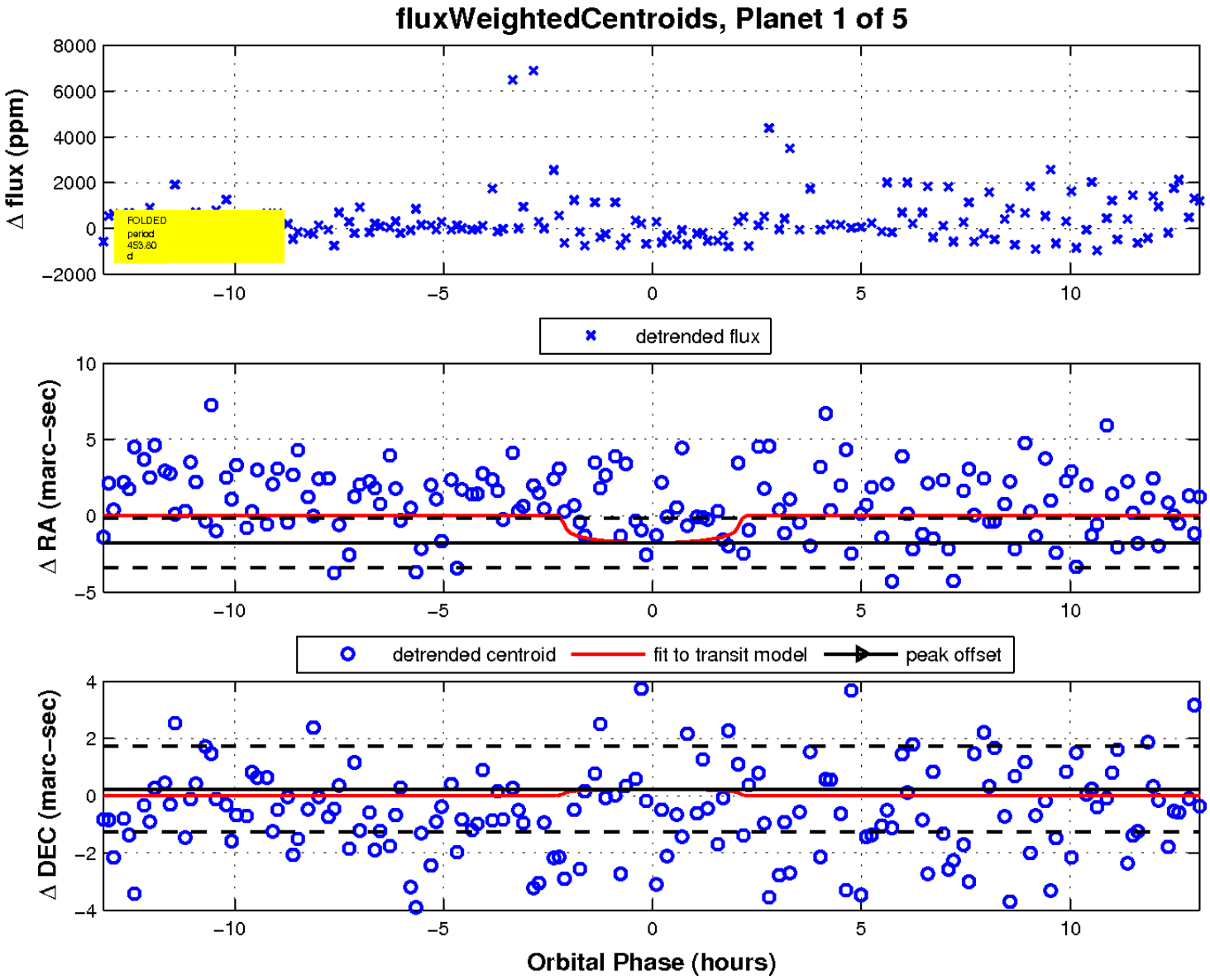




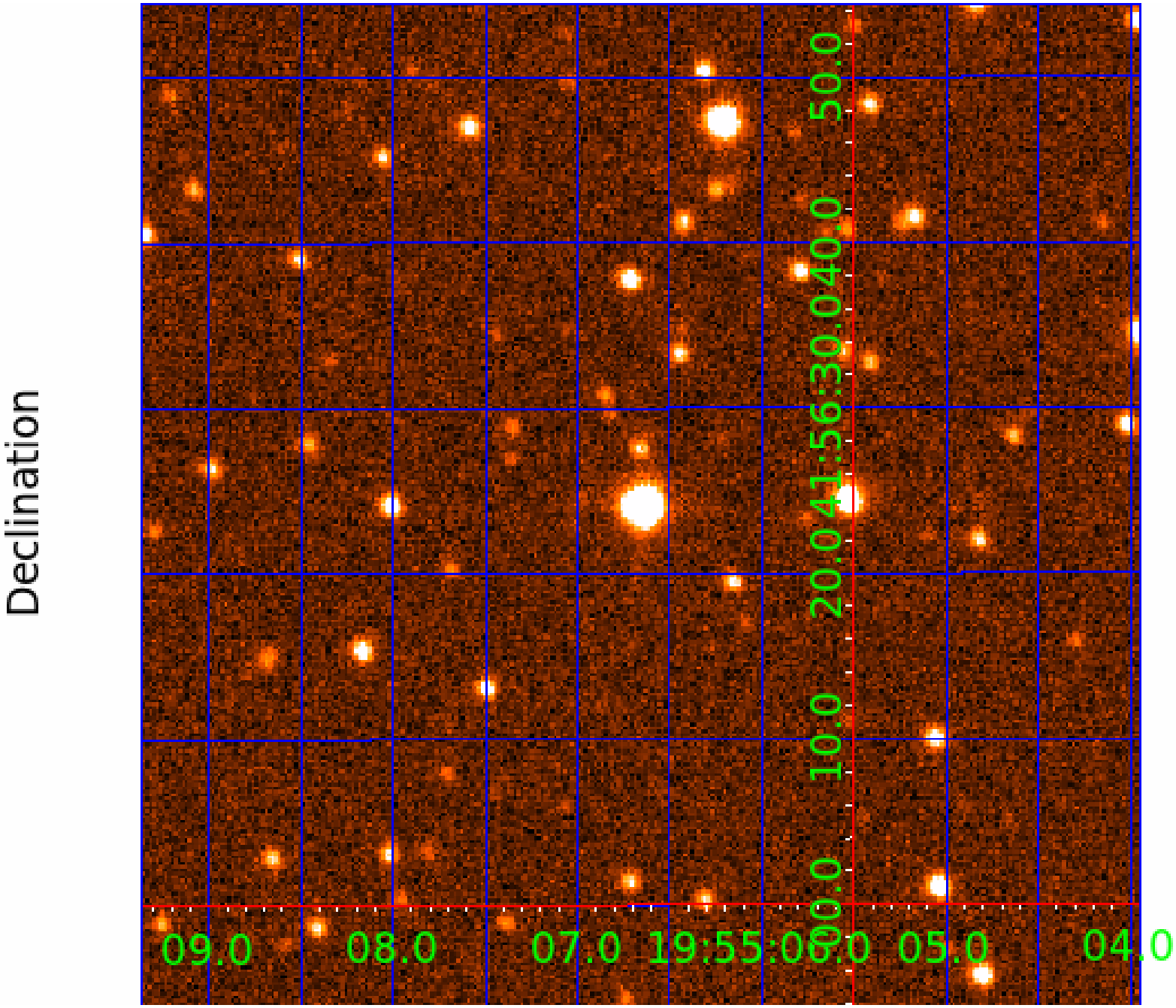
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.







UKIRT Image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05.0
04.0

KIC 006549597

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 ($S_\oplus$)
006549597-01	OBS	No	453.801881	317.161486	1028.9	4.413	13.6	6.2	0.72	5242	2.37	0.34
006549597-02	OBS	No	377.273262	200.989738	698.4	5.512	13.1	4.7	0.72	5242	1.95	0.43
006549597-03	OBS	No	572.990151	174.651734	1142.7	4.307	12.8	7.3	0.72	5242	2.45	0.25
006549597-04	OBS	No	579.547481	387.118423	1139.7	3.349	10.2	6.7	0.72	5242	2.72	0.24
006549597-05	OBS	No	302.585009	417.774367	1139.6	2.915	10.4	6.5	0.72	5242	2.60	0.58

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006549597-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
006549597-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
006549597-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006549597-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006549597-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS

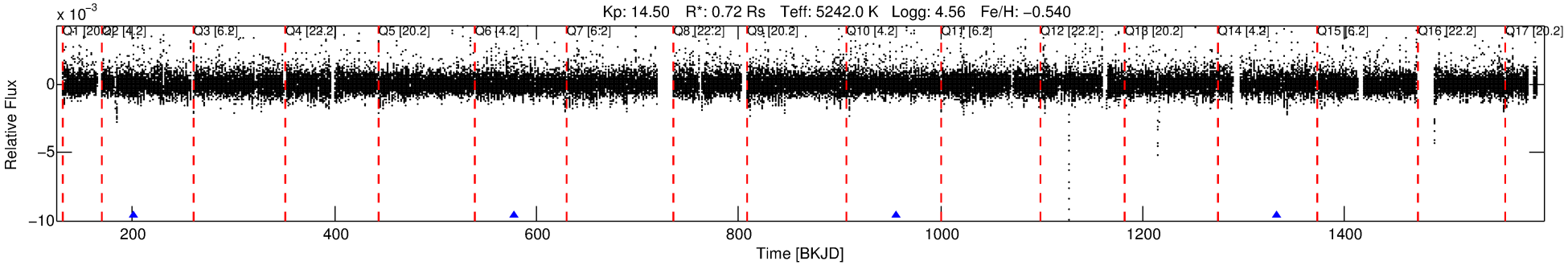
Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.
See `http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col` for comment definitions.

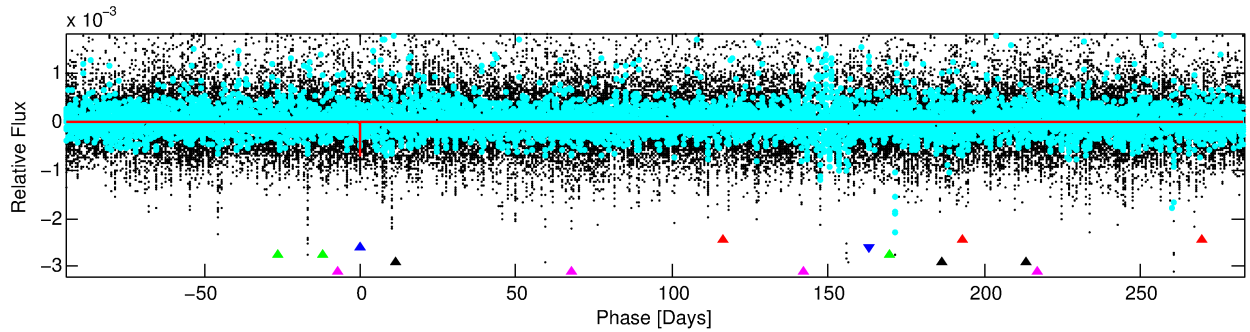
Ephemeris Match Information For 006549597-02

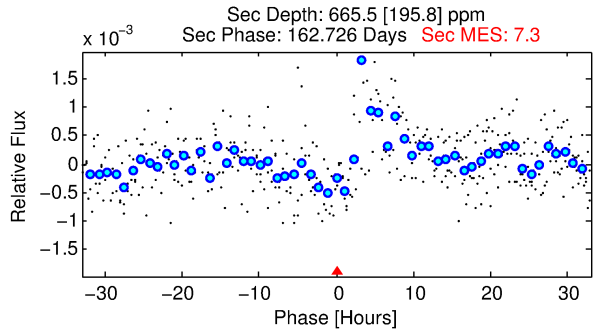
No Significant Match Found

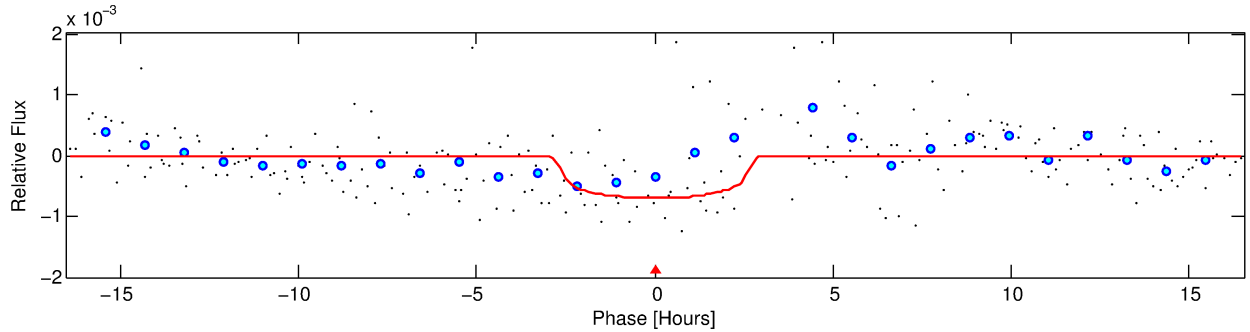
DV One-Page Summary

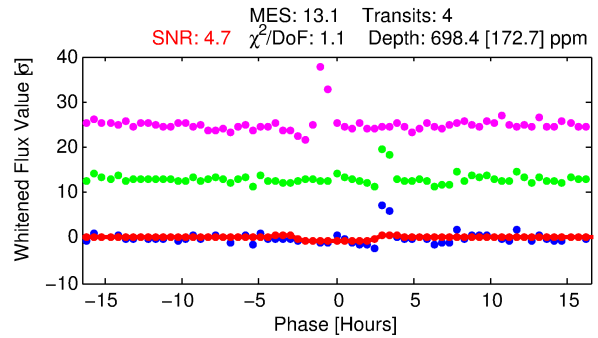
KIC: 6549597 Candidate: 2 of 5 Period: 377.273 d

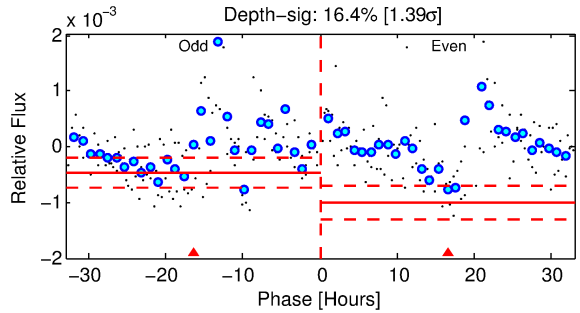


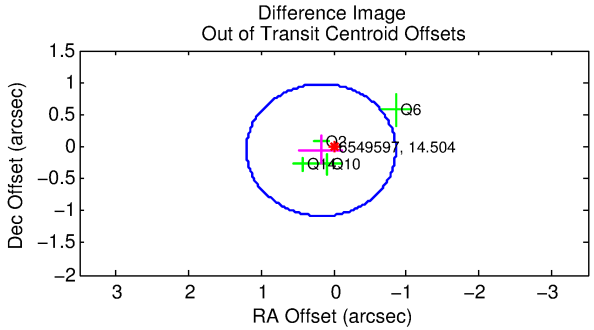












DV Fit Results:

Period = 377.27326 [0.00596] d
Epoch = 200.9897 [0.0113] BKJD
Rp/R* = 0.0247 [0.0427]
a/R* = 461.80 [3144.05]
b = 0.52 [9.68]

Seff = 0.43 [0.09]
Teq = 207 [10] K
Rp = 1.95 [3.37] Re
a = 0.9005 [0.0958] AU

Ag = 78309.91 [271992.30] [0.29σ]
Teffp = 5356 [4648] K [1.11σ]

DV Diagnostic Results:

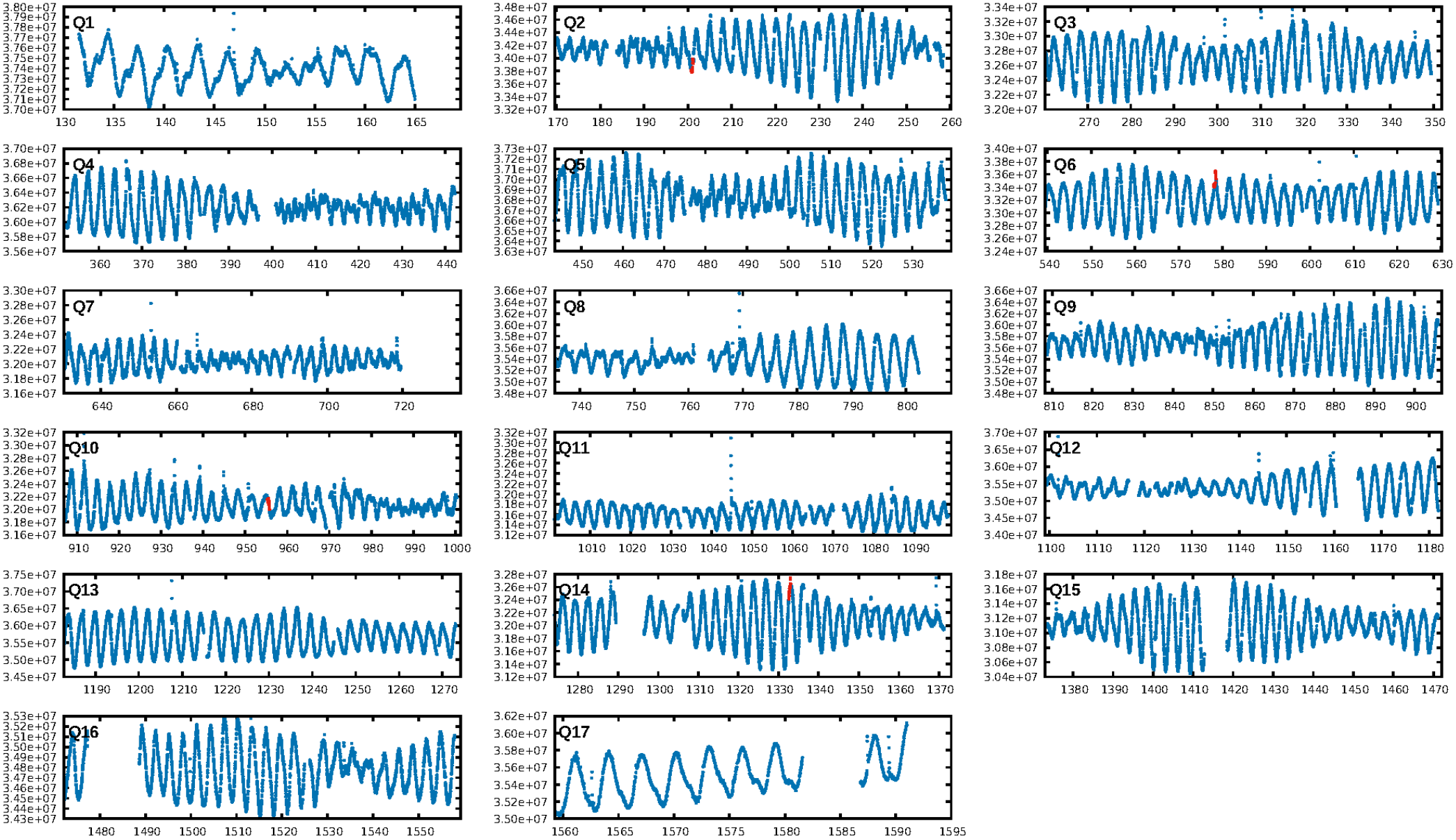
ShortPeriod−sig: 100.0% [287.46σ]
LongPeriod−sig: 100.0% [260.10σ]
ModelChiSquare2−sig: 3.5%
ModelChiSquareGof−sig: 93.6%
Bootstrap−pfa: 1.74e−11
RollingBand−fgt: 1.00 [4/4]
GhostDiagnostic−chr: 1.846

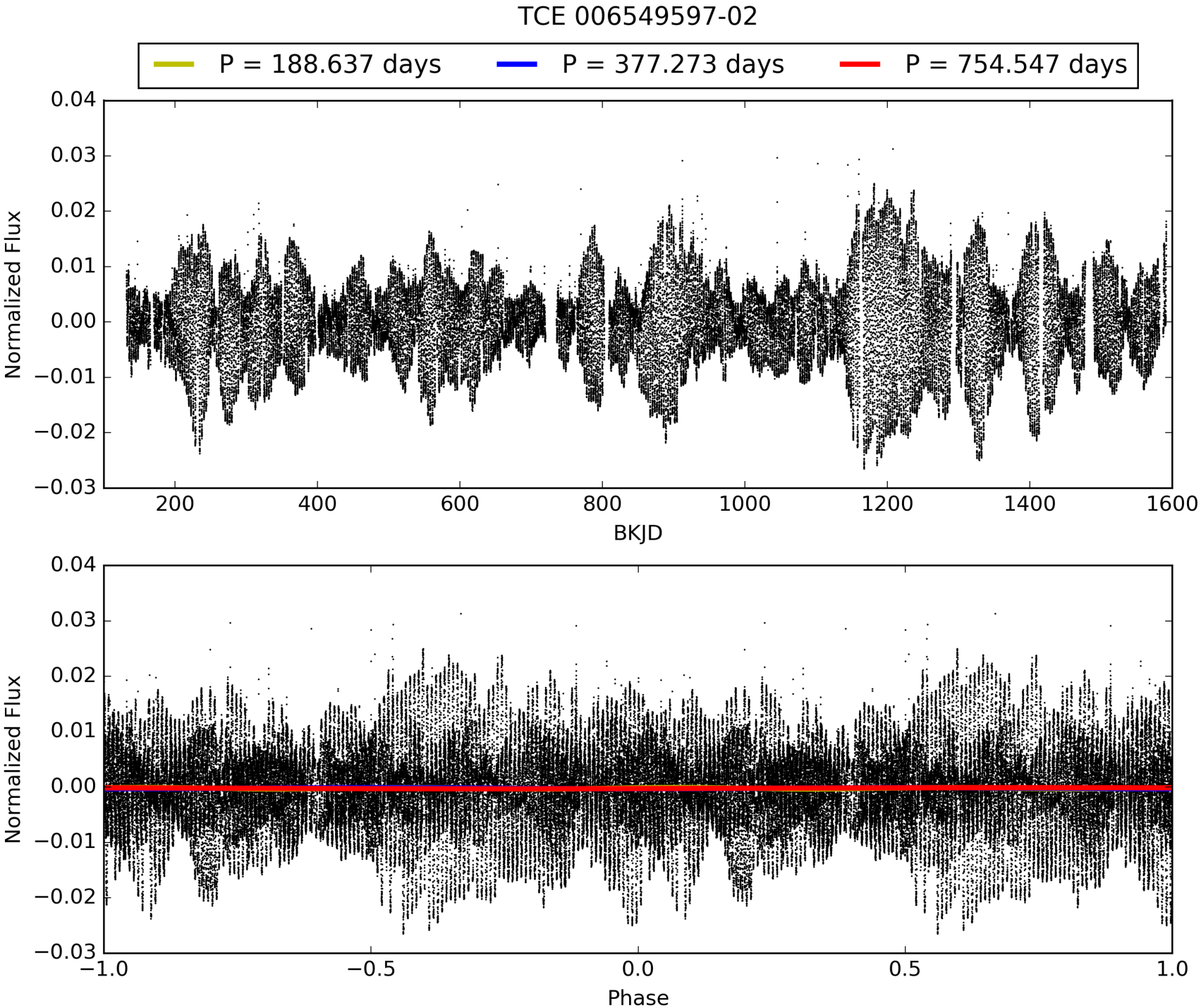
Centroid−sig: 6.0%
Centroid−so: 1.479 arcsec [1.40σ]
OotOffset−rm: 0.179 arcsec [0.52σ]
KicOffset−rm: 0.149 arcsec [0.69σ]
OotOffset−st: 4/0/0/0 [4]
KicOffset−st: 4/0/0/0 [4]
DiffImageQuality−fgm: 0.25 [1/4]
DiffImageOverlap−fno: 1.00 [4/4]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31−Jan−2016 05:27:46 Z

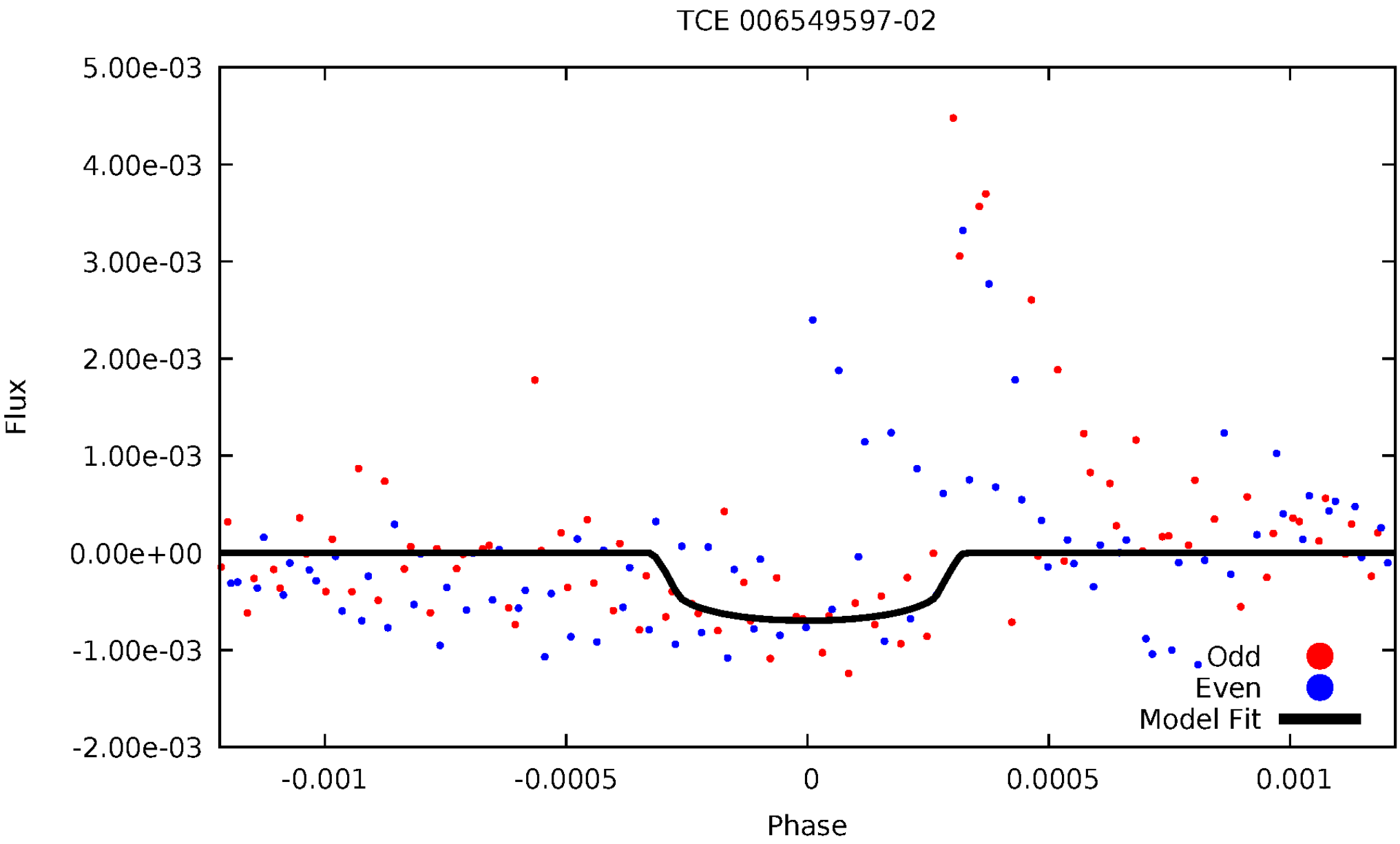
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 006549597-02, PDC Light Curves




TCE 006549597-02
P = 188.637 days
P = 377.273 days
P = 754.547 days
Normalized Flux
BKJD
Normalized Flux
Phase

DV Odd/Even


TCE 006549597-02
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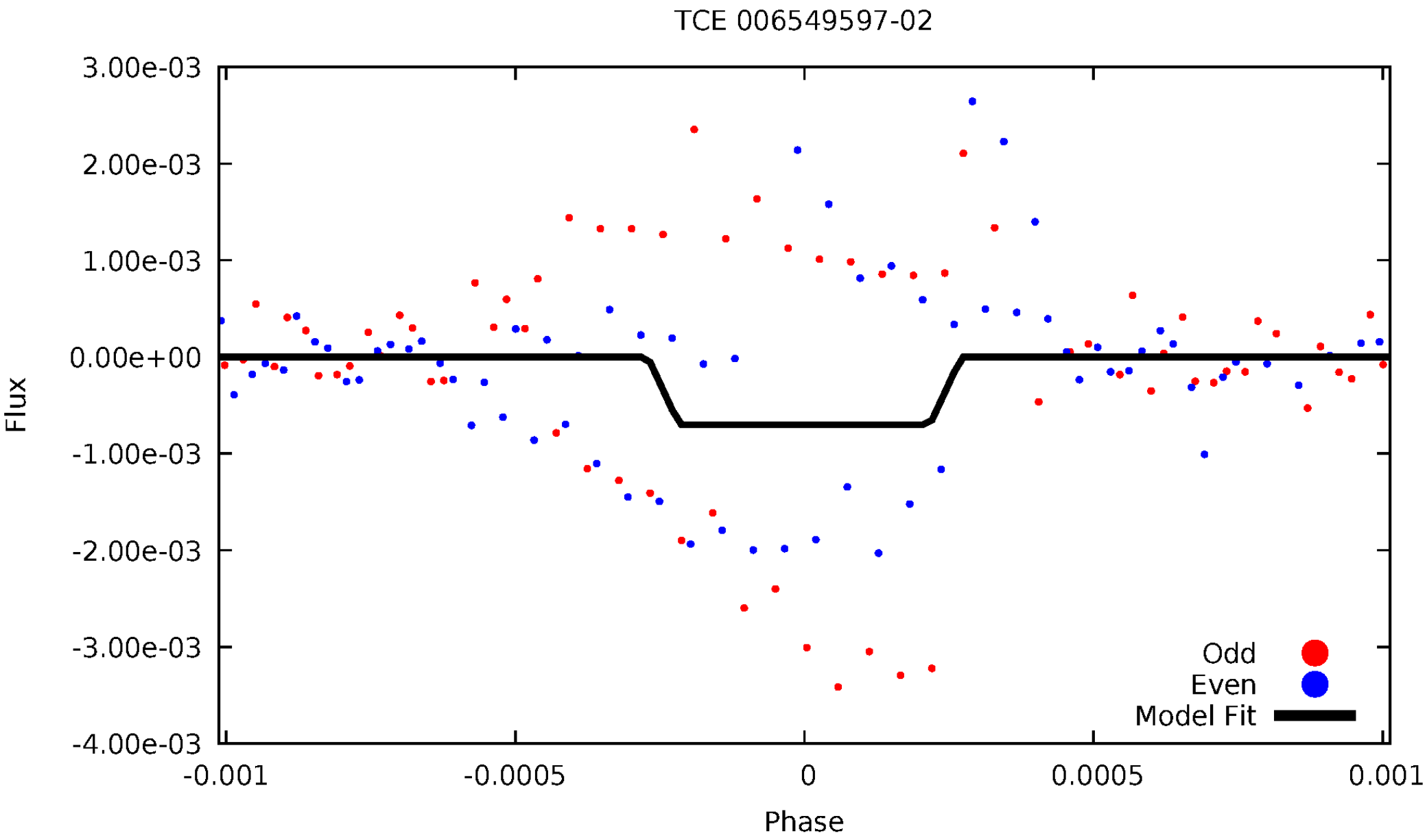
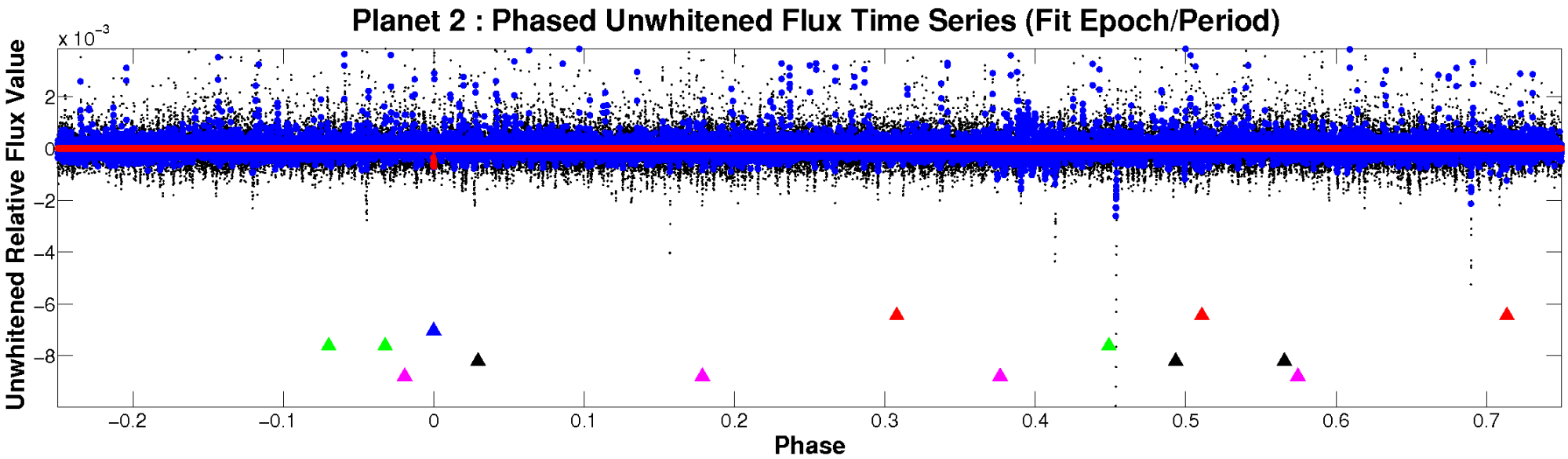
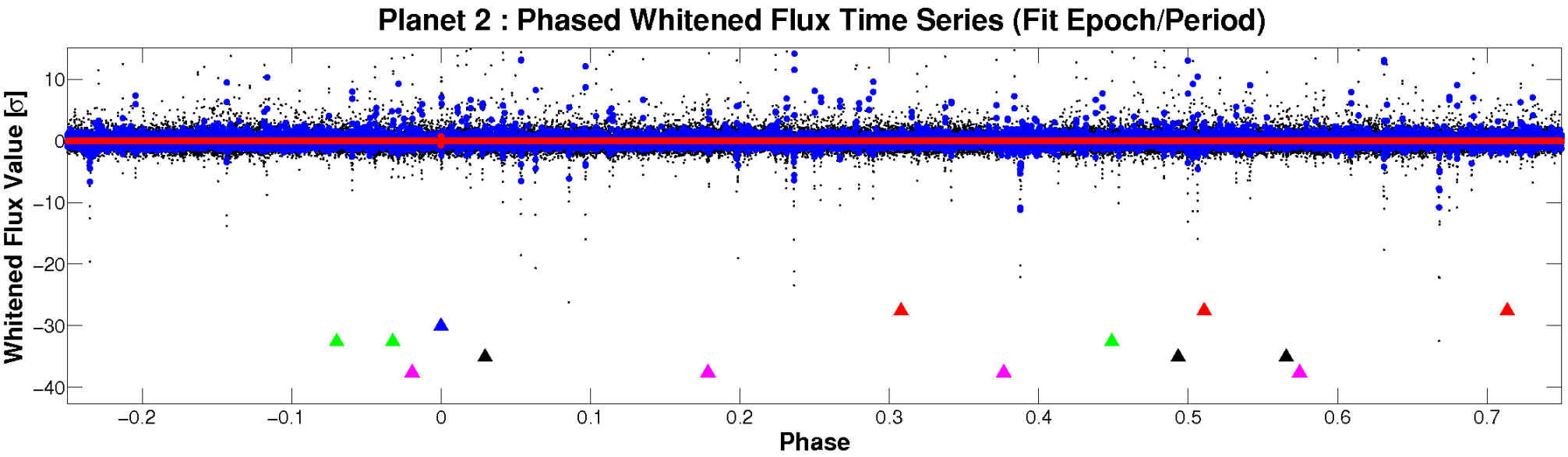
4.00e-03
3.00e-03
2.00e-03
1.00e-03
0.00e+00
-1.00e-03
-2.00e-03
Flux
-0.001
-0.0005
0
0.0005
0.001
Phase
Odd
Even
Model Fit

ALT Odd/Even


TCE 006549597-02
3.00e-03
2.00e-03
1.00e-03
0.00e+00
-1.00e-03
-2.00e-03
-3.00e-03
-4.00e-03
Flux
-0.001
-0.0005
0
0.0005
0.001
Phase
Odd
Even
Model Fit

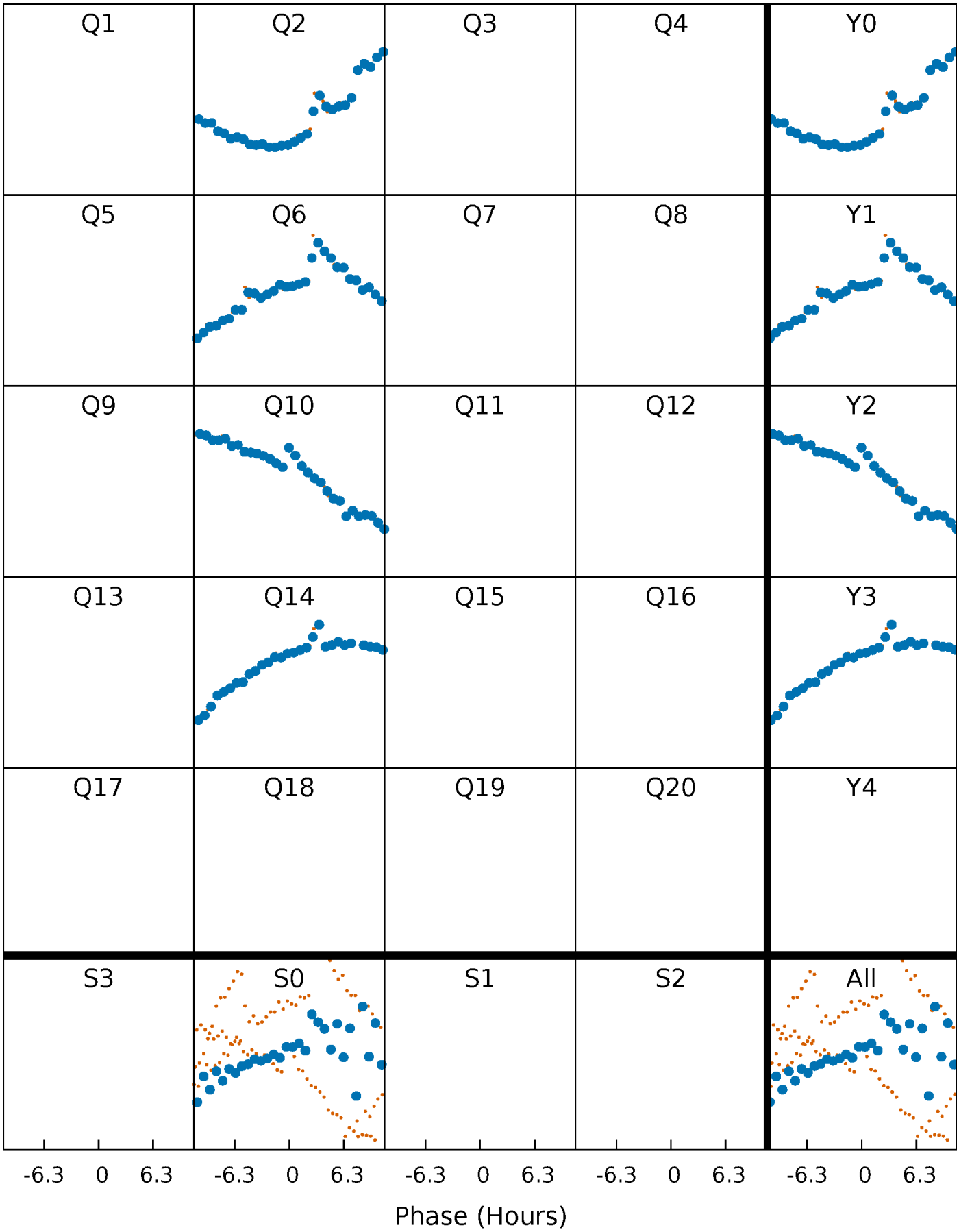
Non-Whitened Vs. Whitened Light Curve





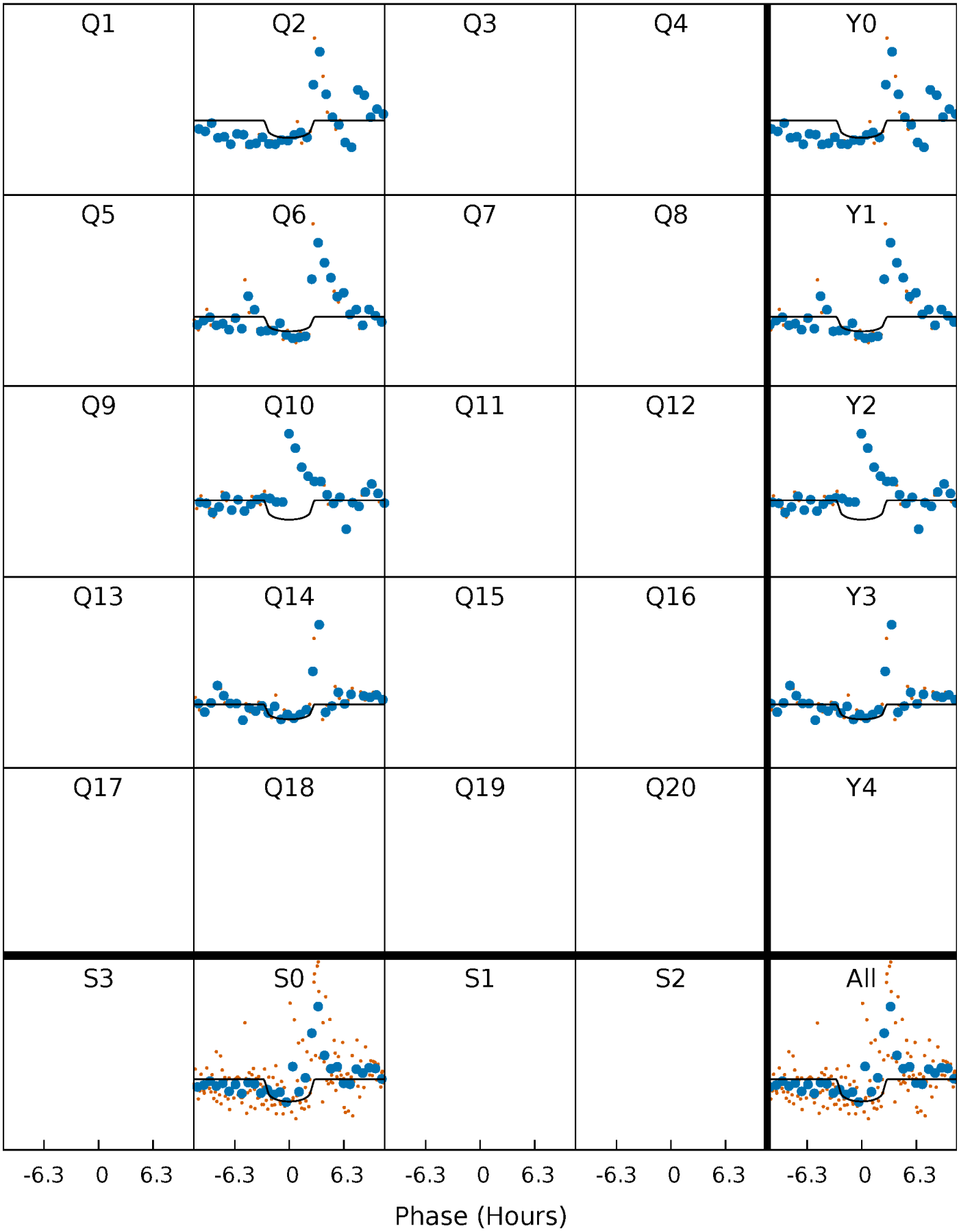
PDC Quarter-Phased Transit Curves

TCE 006549597-02 P=377.273262 Days T_0=200.989738 (BKJD)



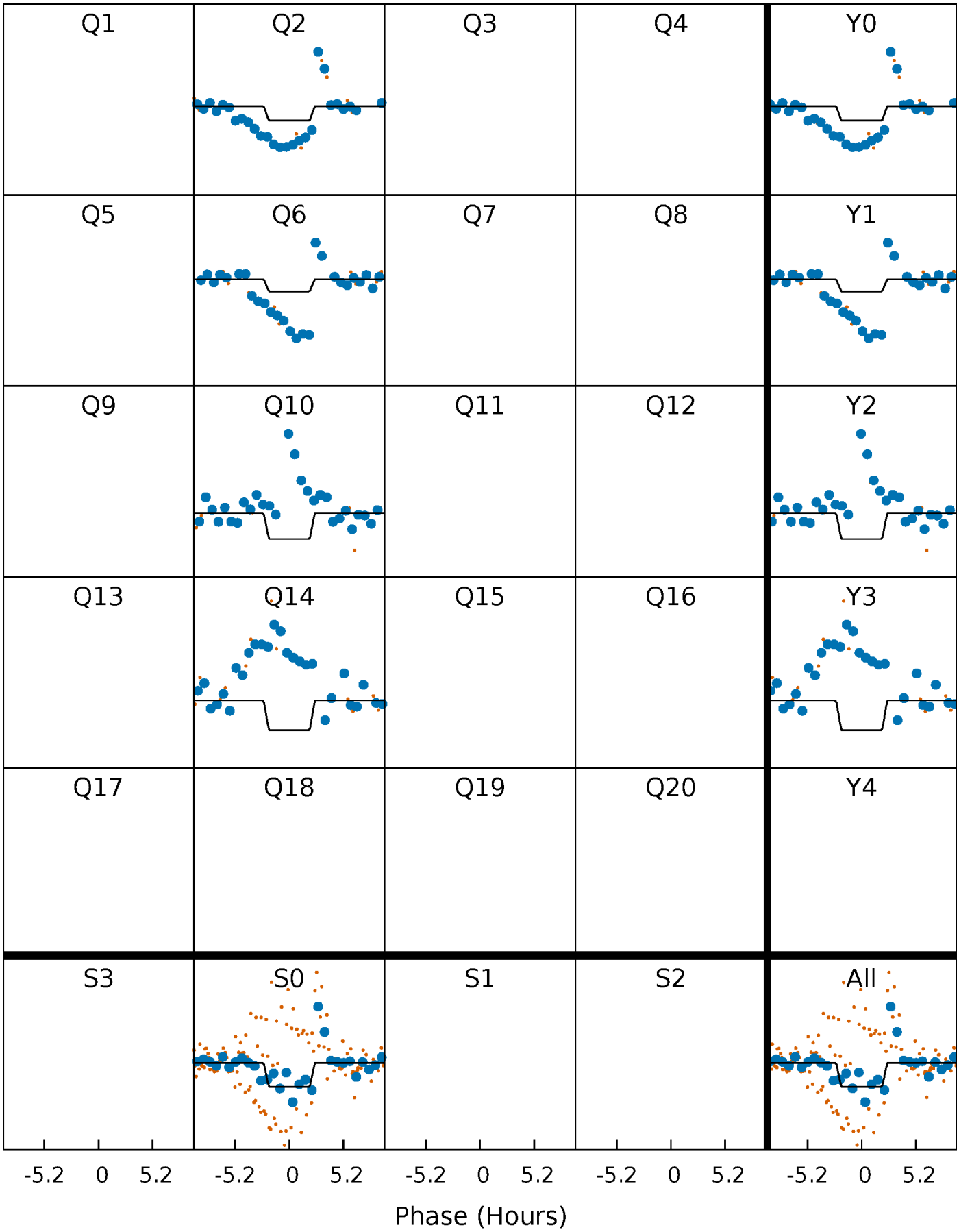
DV Quarter-Phased Transit Curves

TCE 006549597-02 P=377.273262 Days T_0=200.989738 (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

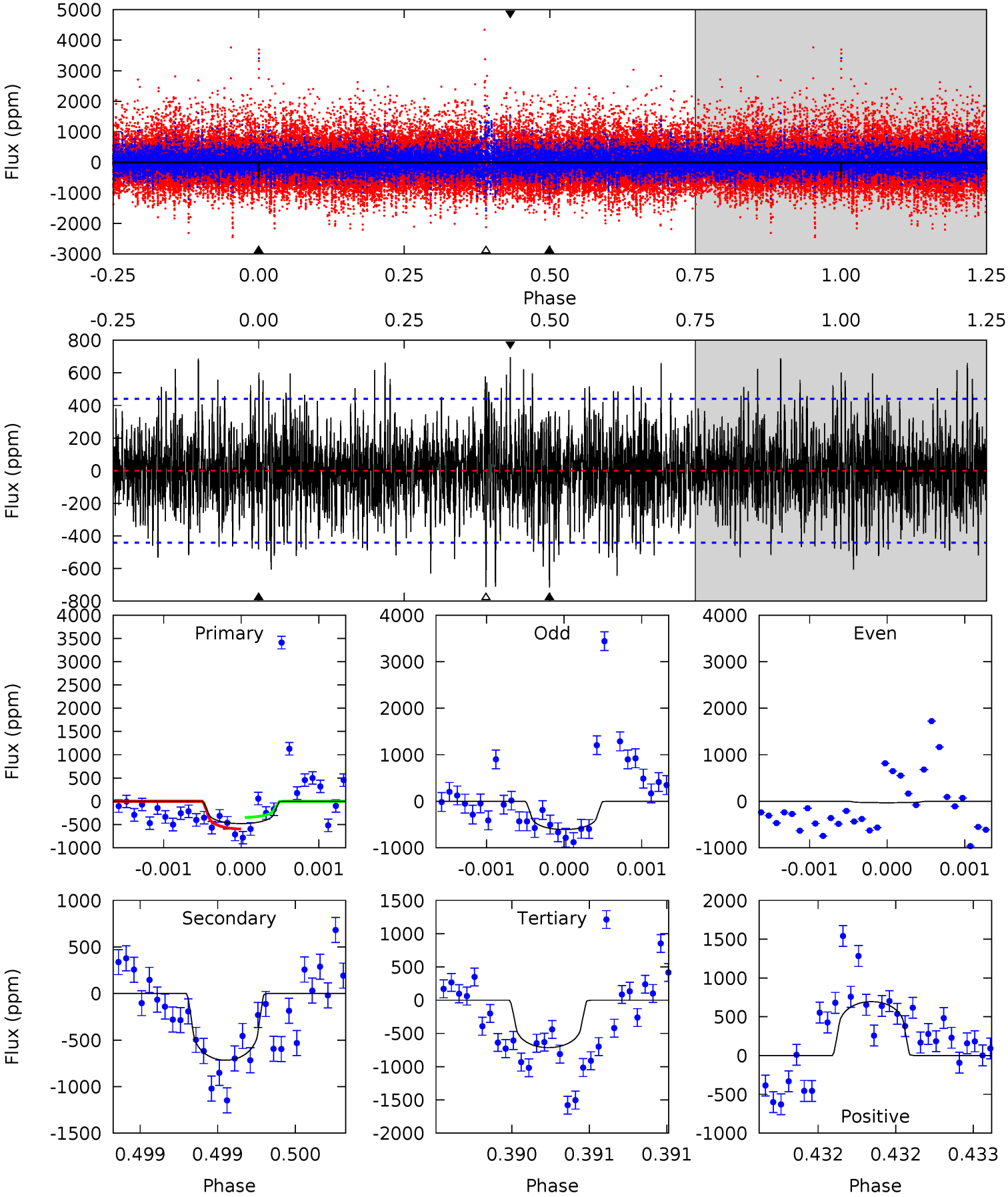
TCE 006549597-02 P=377.271630 Days T_0=201.001597 (BKJD)



DV Model-Shift Uniqueness Test

006549597-02, P = 377.273262 Days, E = 200.989738 Days

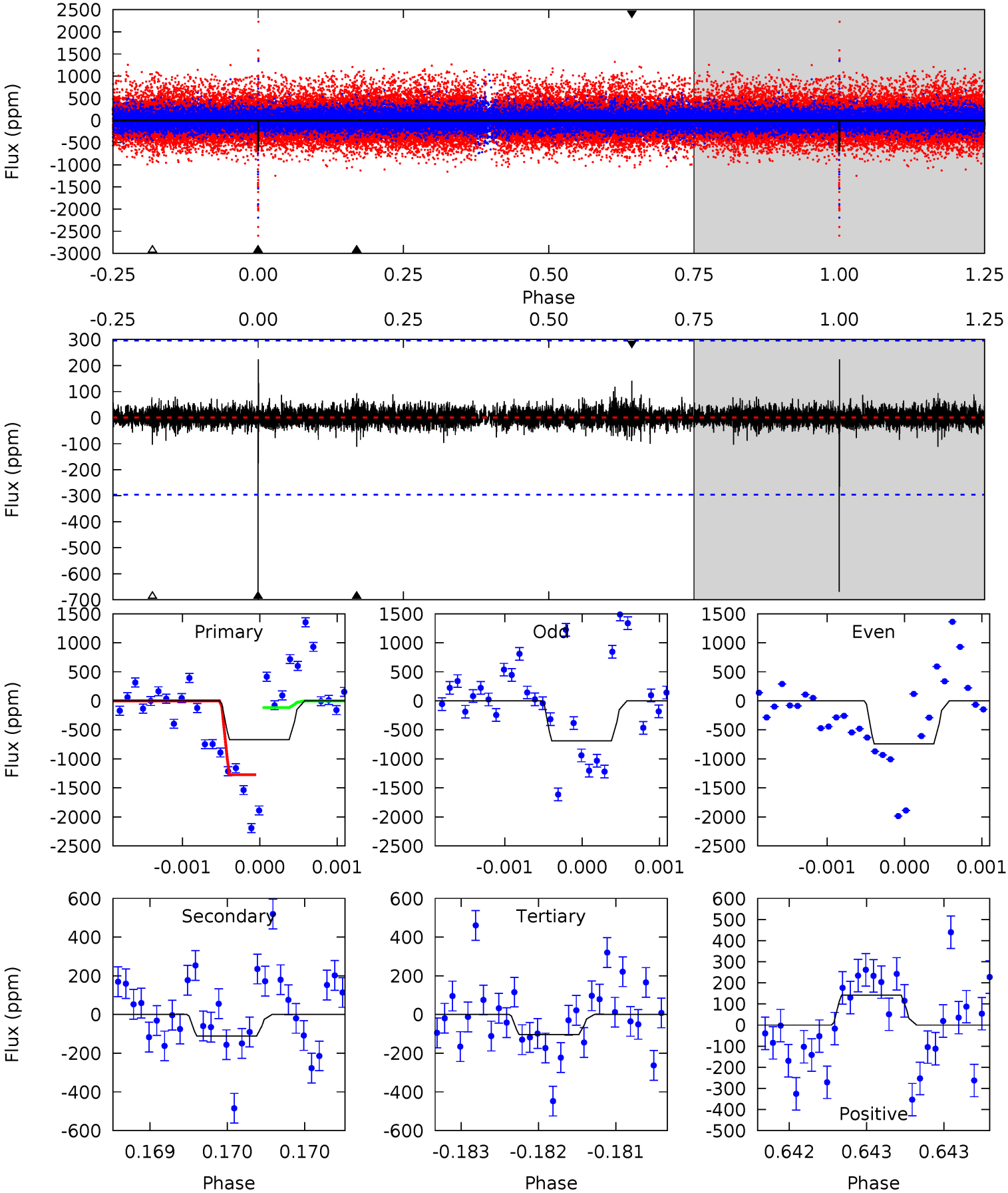
Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.01	8.97	8.93	8.70	5.53	3.41	2.33	-2.92	-2.69	0.03	0.26	3.33	0.43	0.49	1.56



Alt Model-Shift Uniqueness Test

006549597-02, P = 377.271630 Days, E = 201.001597 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.6	2.10	1.95	2.66	5.56	3.46	0.39	10.6	9.92	0.15	-0.56	0.54	1.19	0.25	0



Stellar Parameters For KIC 006549597

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	$M(M_\odot)$	$p_\star$ (g·cm^{-3})
	5242^{+157}_{-157}	$4.556^{+0.088}_{-0.072}$	$-0.540^{+0.350}_{-0.300}$	$0.722^{+0.089}_{-0.081}$	$0.684^{+0.095}_{-0.038}$	$2.561^{+0.947}_{-0.580}$
	+3%/-3%	+2%/-2%	+65%/-56%	+12%/-11%	+14%/-6%	+37%/-23%
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 006549597-02 / KOI

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-716±80	$3.26^{+2.82}_{-2.07}$	289^{+11}_{-12}	4413^{+2665}_{-859}	$32534^{+210136}_{-23548}$
Alt.	-112±53	$3.28^{+2.84}_{-2.22}$	289^{+12}_{-13}	3216^{+1380}_{-596}	4797^{+37890}_{-3728}

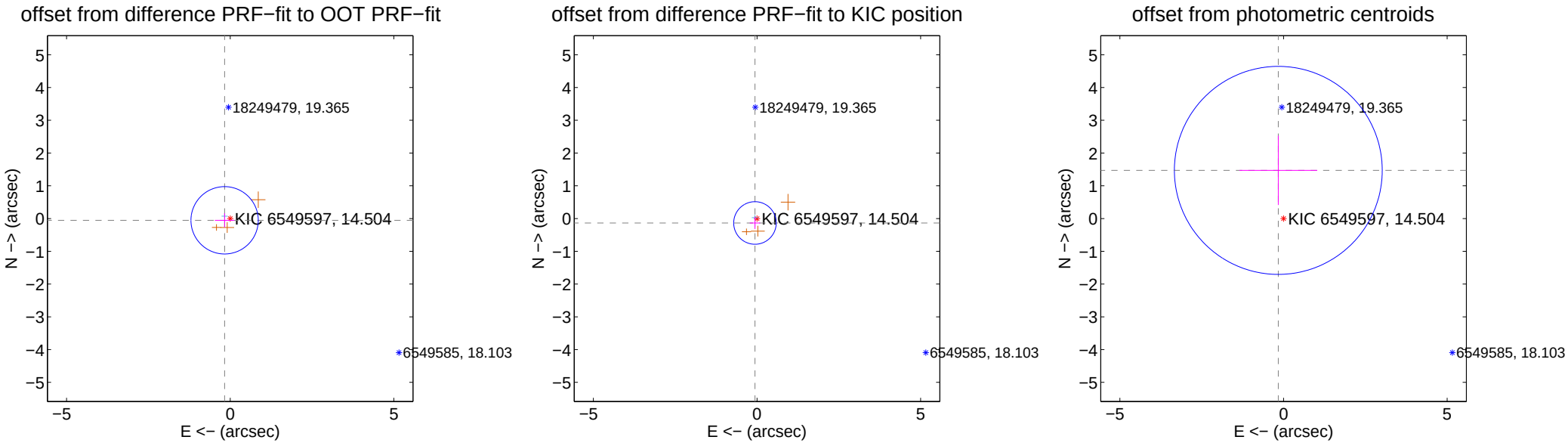
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

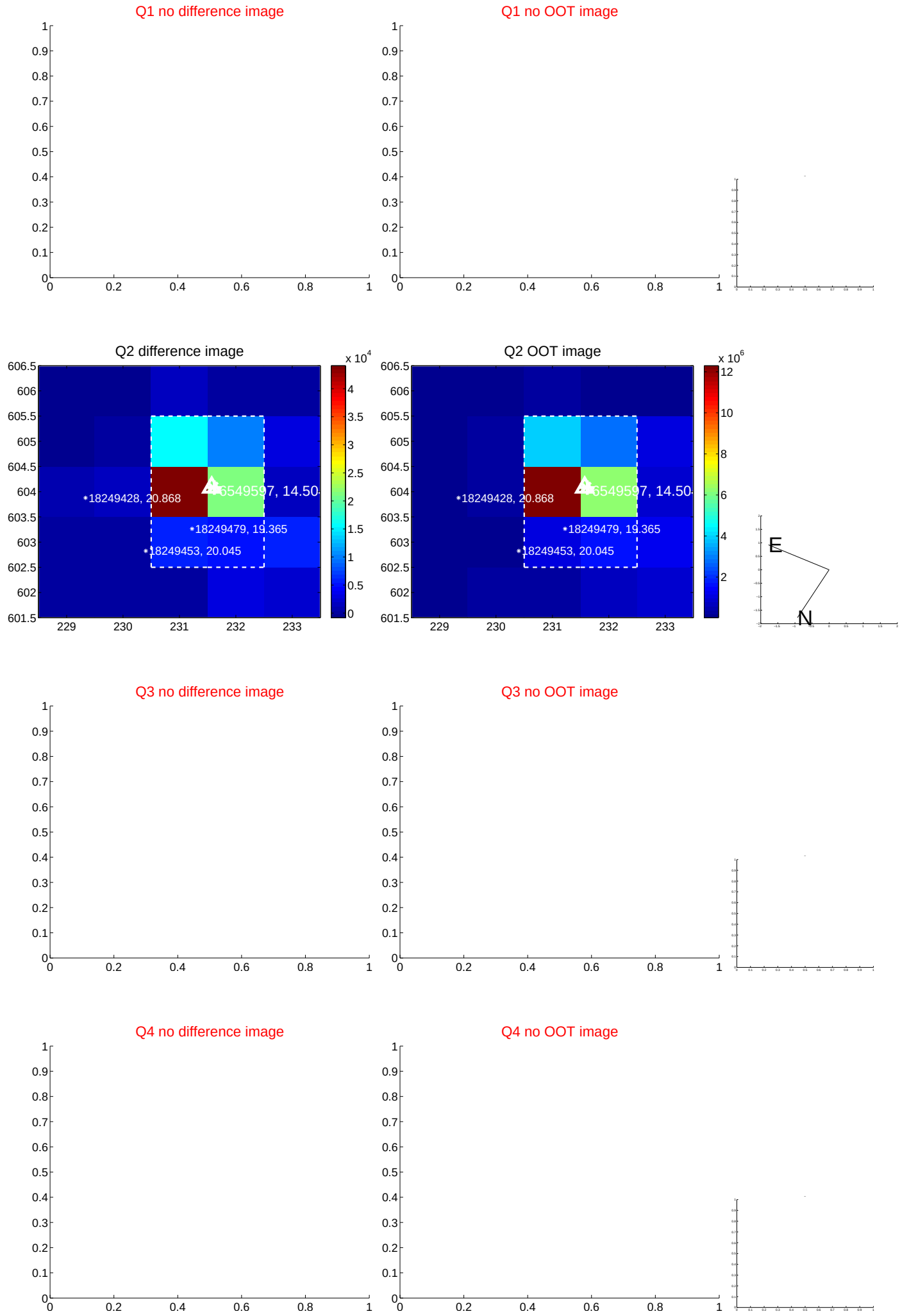
Supplemental centroid analysis for 006549597-02. Kepler magnitude: 14.50. Transit SNR 4.69
There are 1 quarters with good PRF difference image offsets
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.179 ± 0.343	0.52	0.171 ± 0.298	-0.053 ± 0.216
PRF-fit source offset from KIC position	0.149 ± 0.217	0.69	0.062 ± 0.159	-0.135 ± 0.184
photometric centroid source offset	1.48 ± 1.06	1.40	0.16 ± 1.19	1.47 ± 1.06

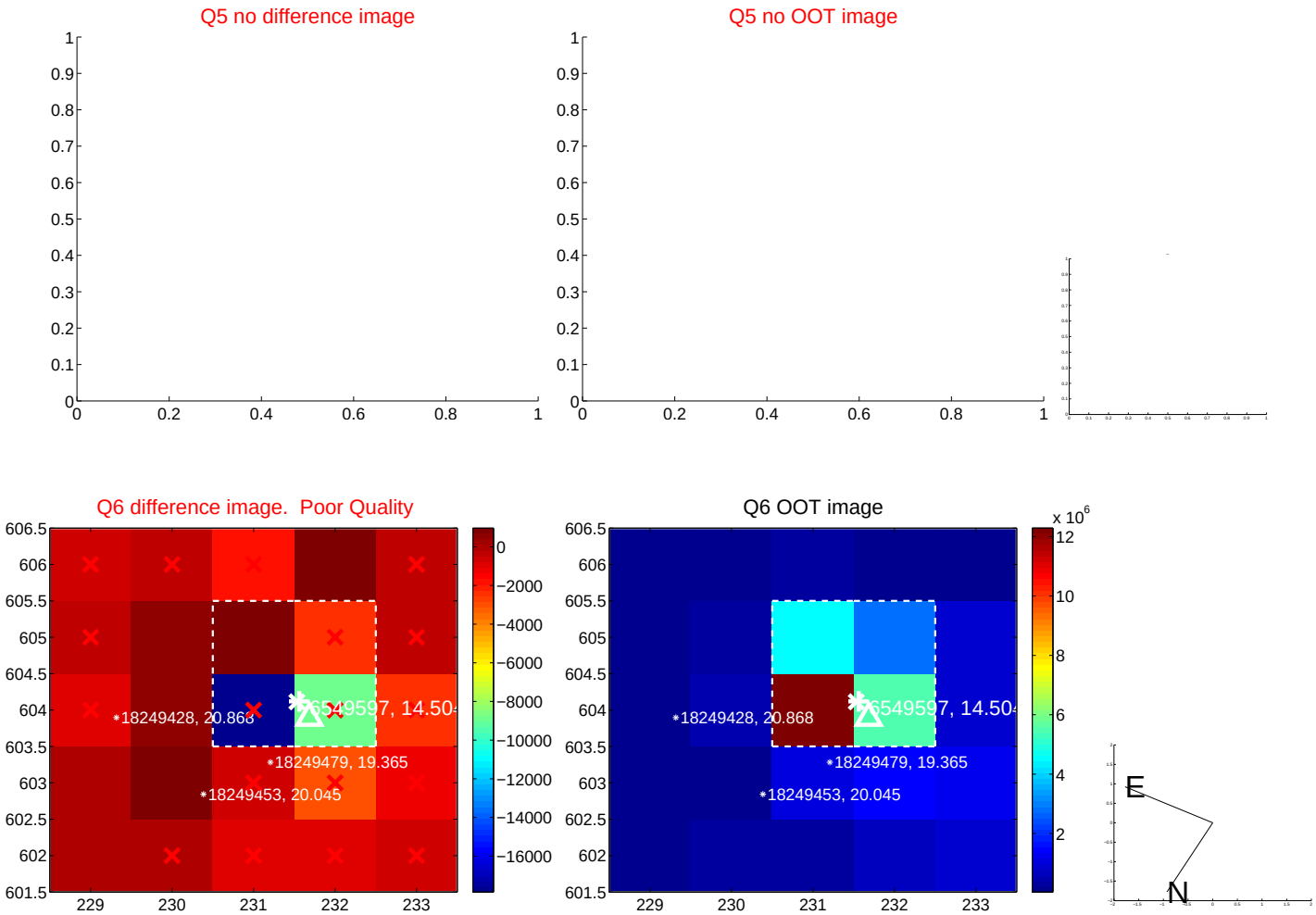


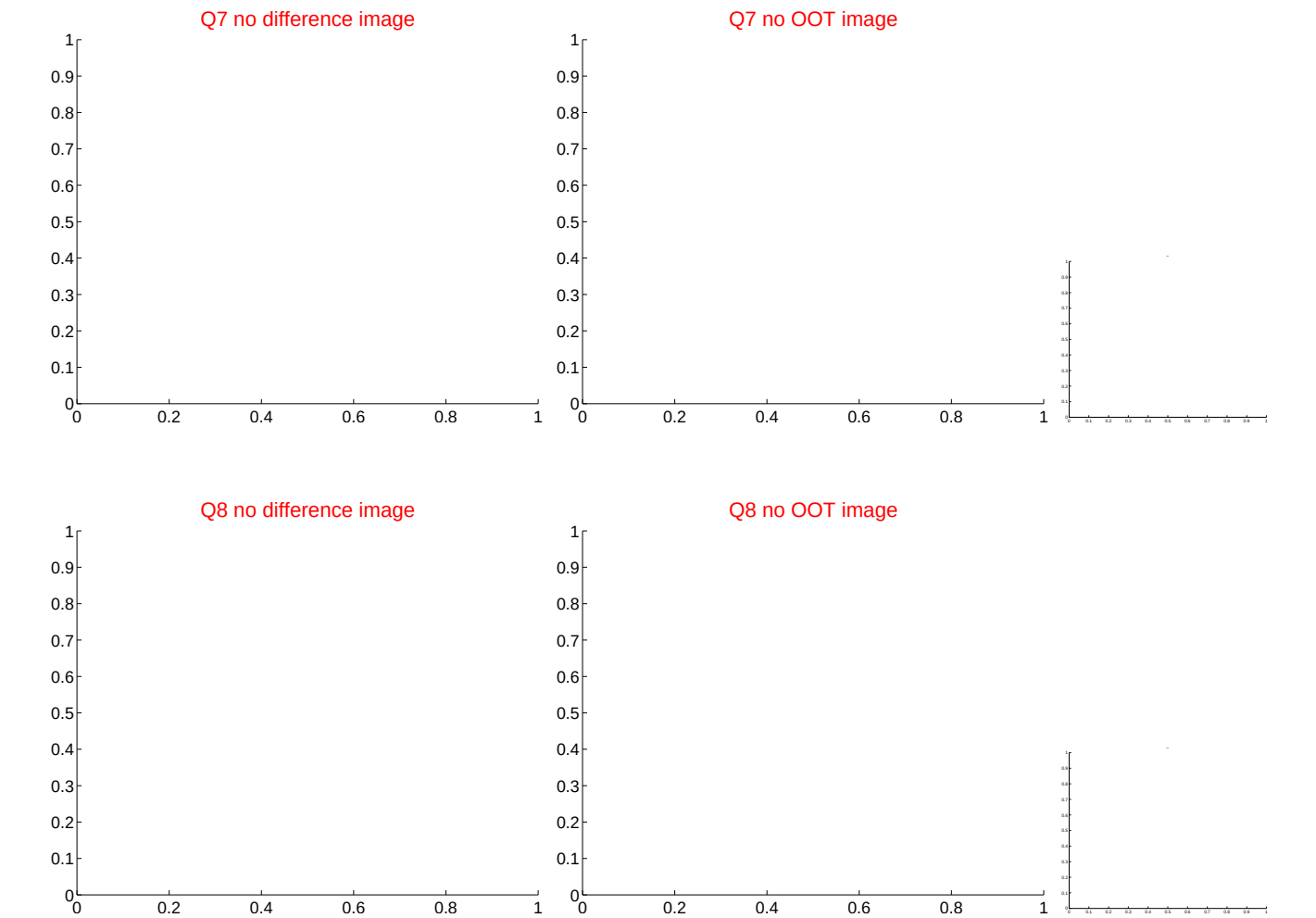
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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

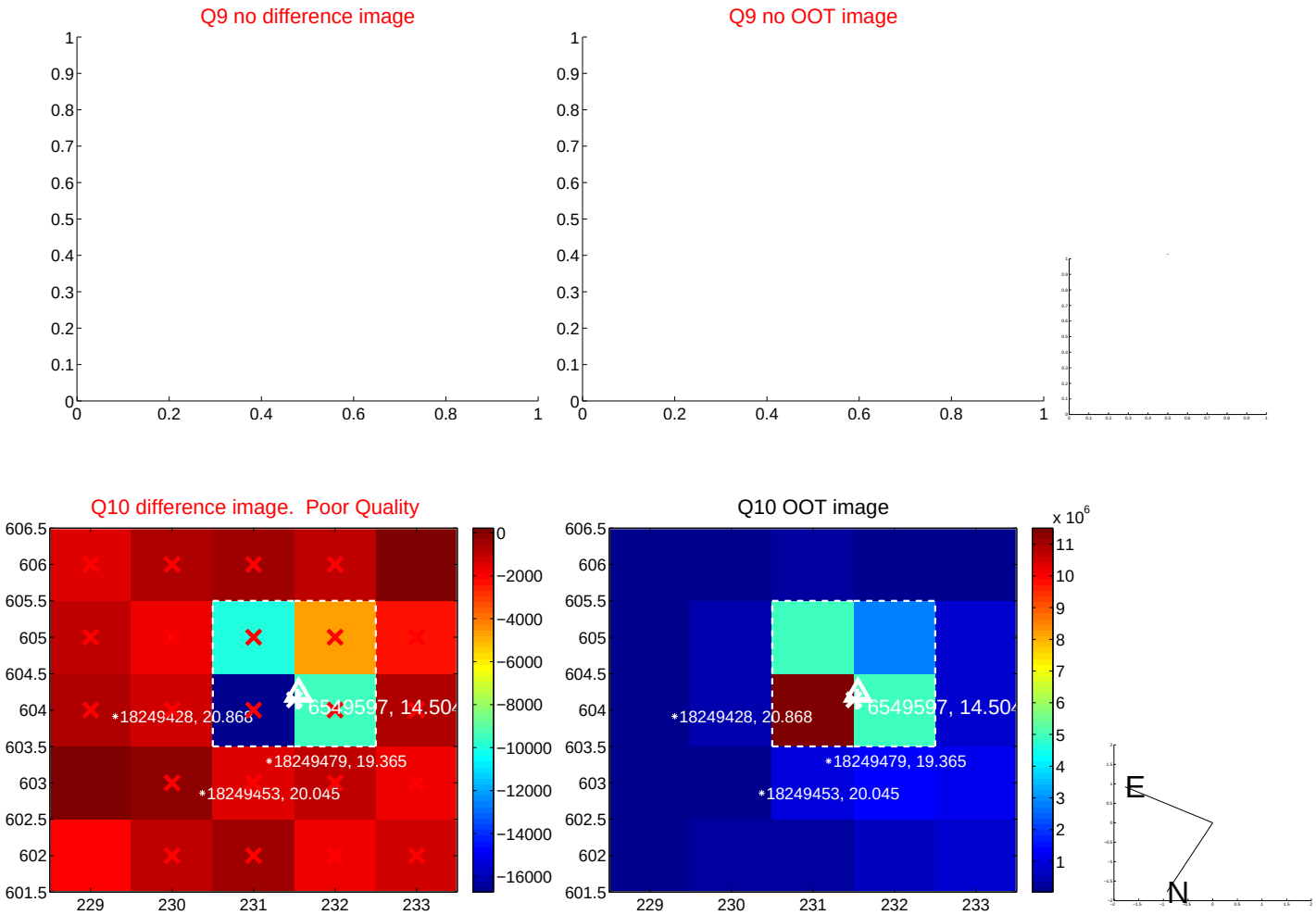


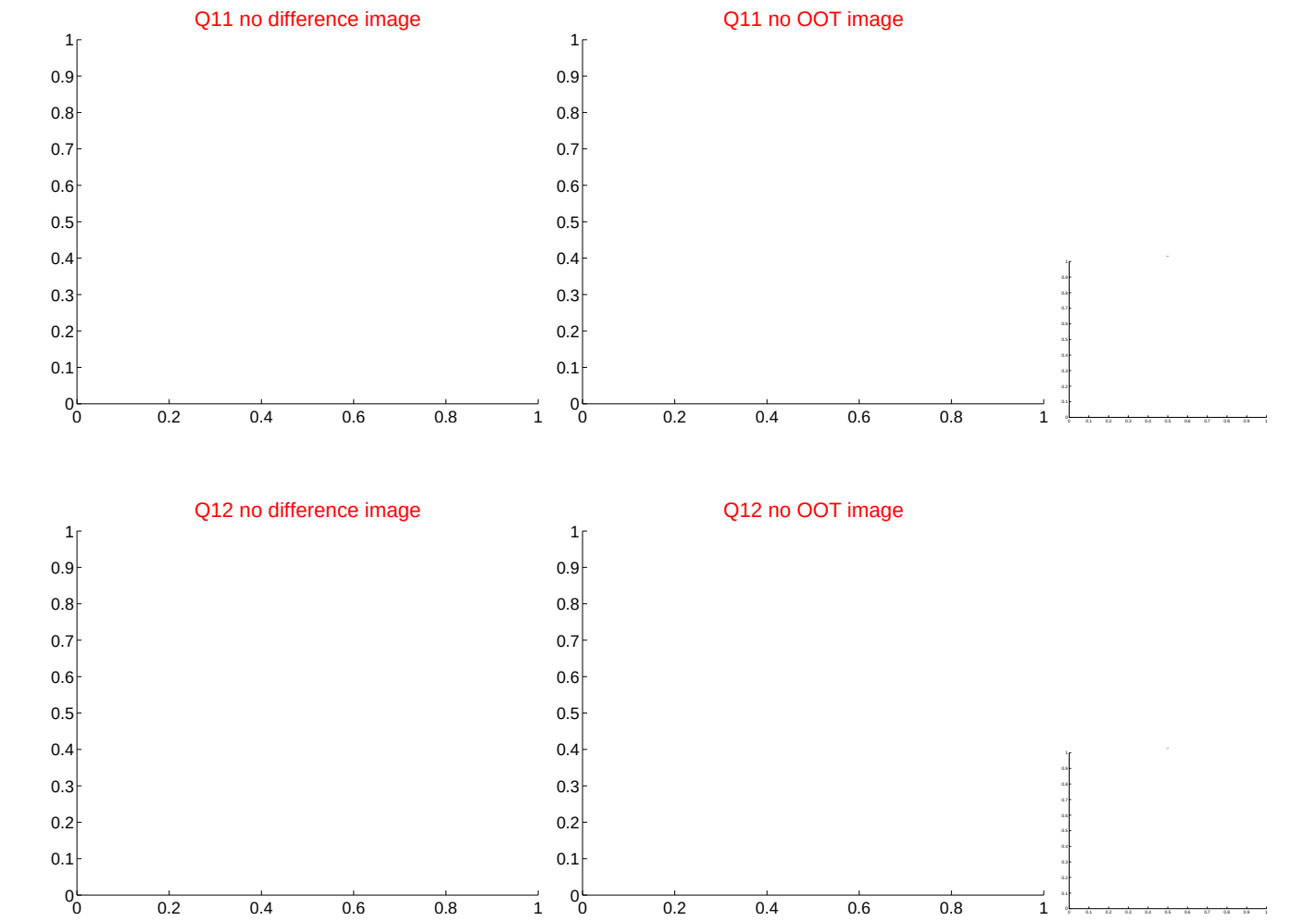
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



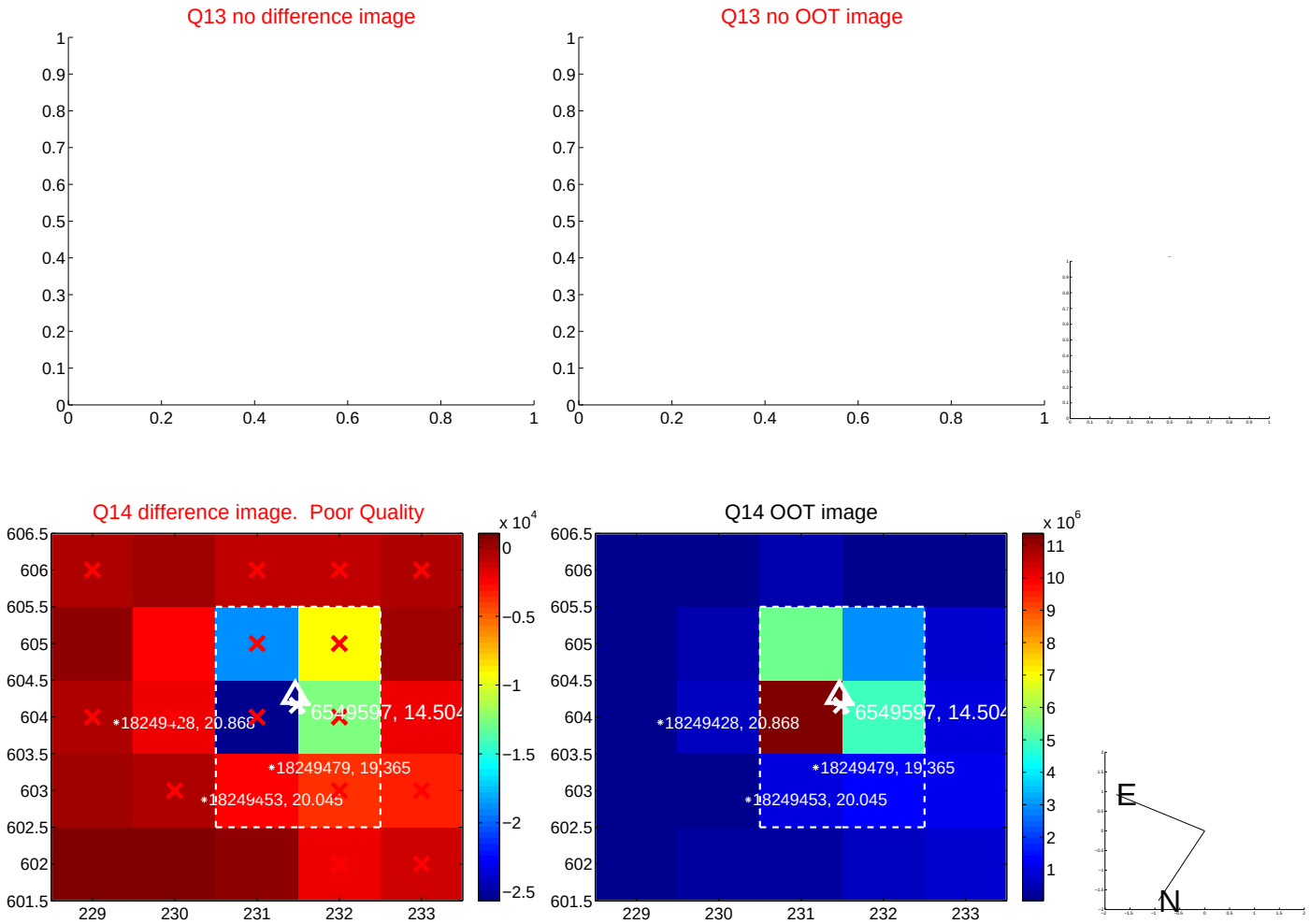


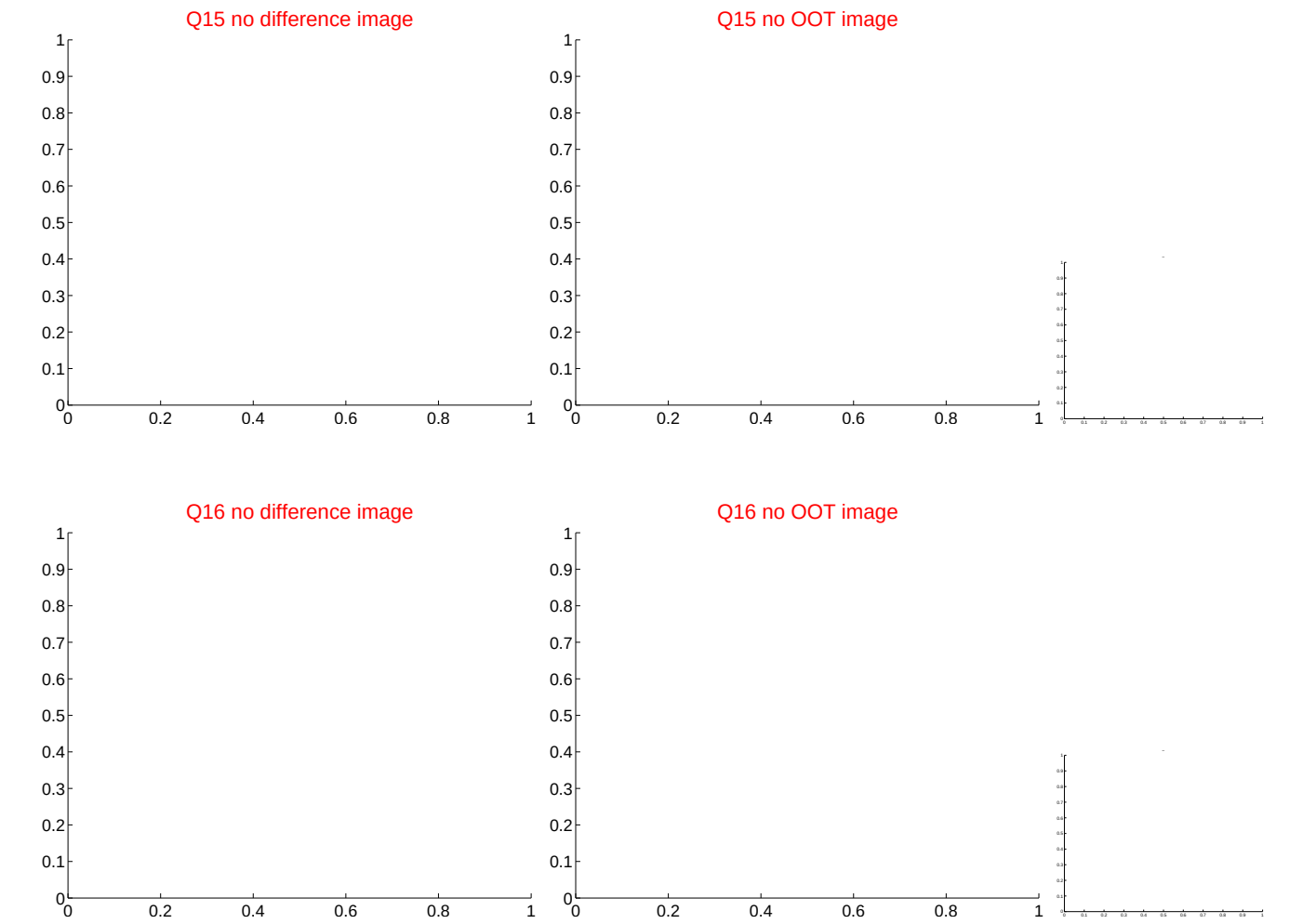
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



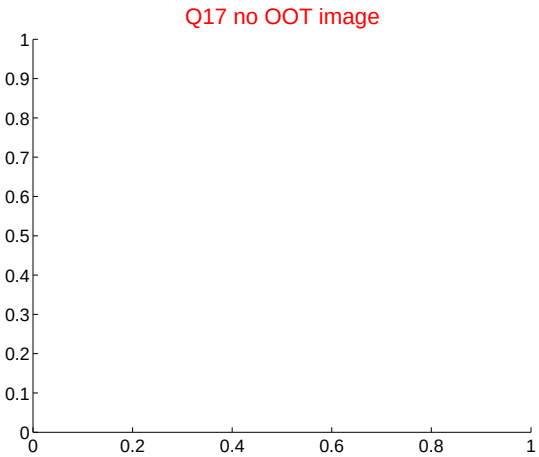


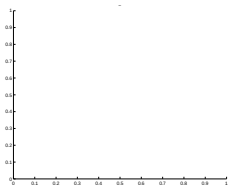
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

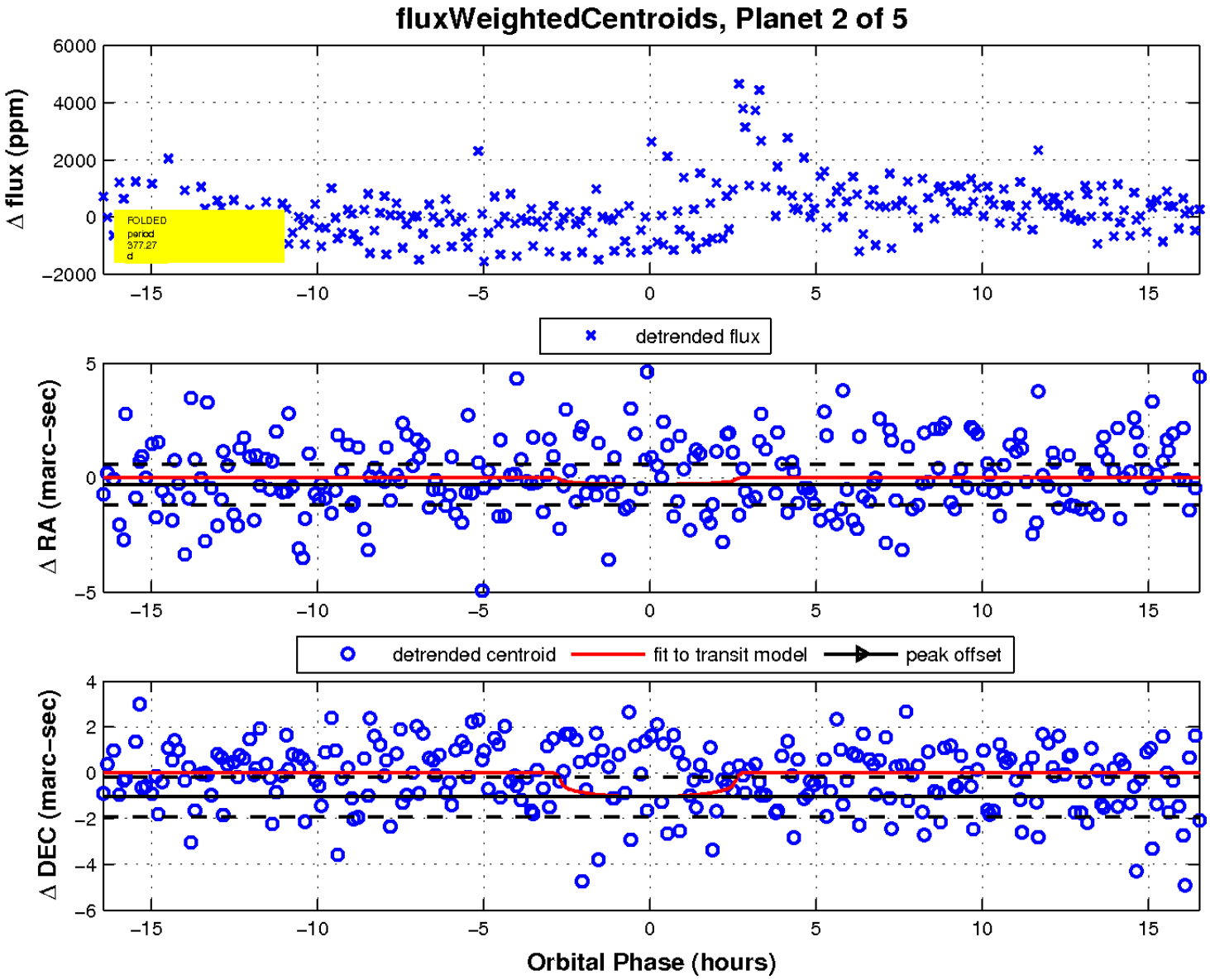




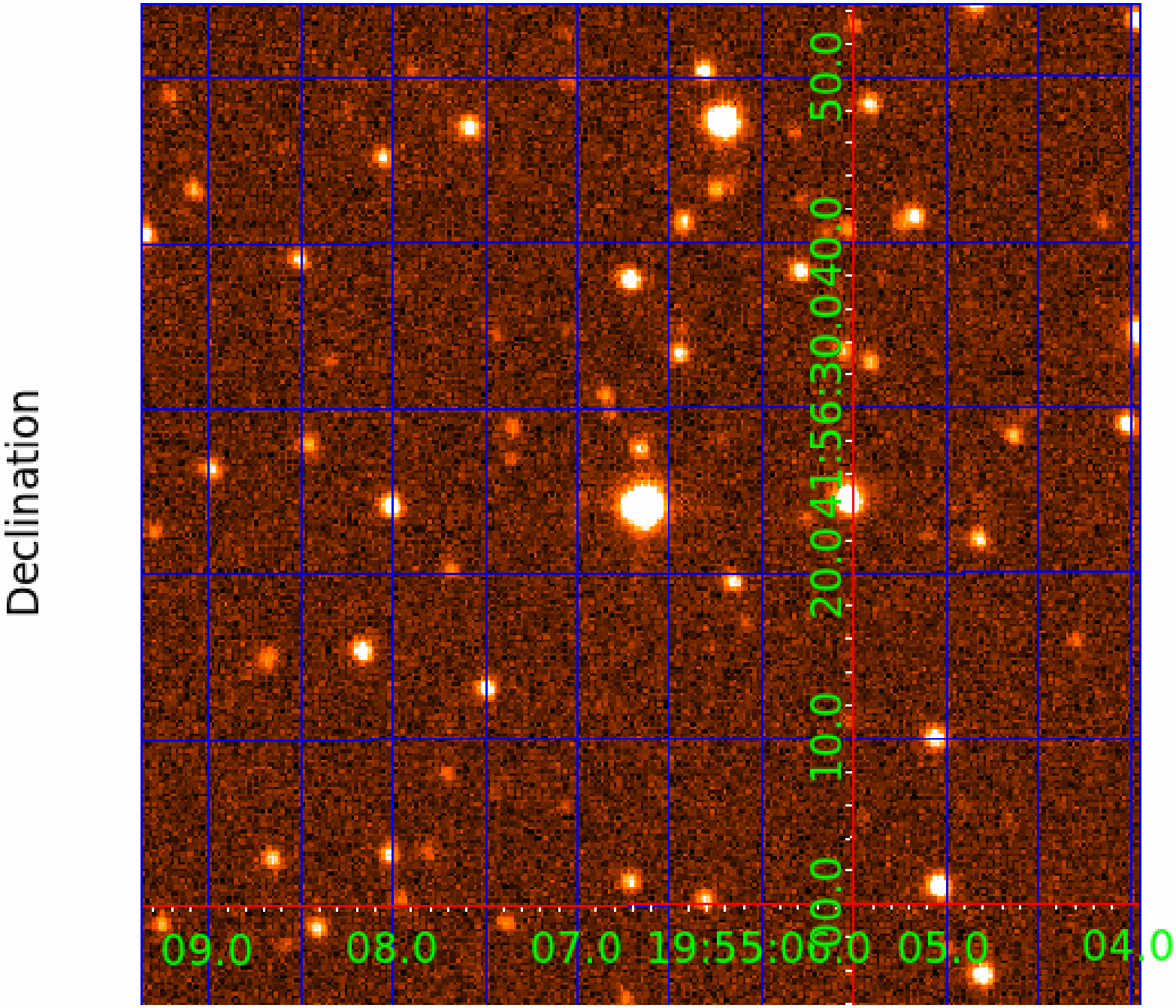
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.







UKIRT Image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09.0
08.0
07.0
19:55:06.0
05.0
04.0

KIC 006549597

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 ($S_\oplus$)
006549597-01	OBS	No	453.801881	317.161486	1028.9	4.413	13.6	6.2	0.72	5242	2.37	0.34
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006549597-03	OBS	No	572.990151	174.651734	1142.7	4.307	12.8	7.3	0.72	5242	2.45	0.25
006549597-04	OBS	No	579.547481	387.118423	1139.7	3.349	10.2	6.7	0.72	5242	2.72	0.24
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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006549597-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
006549597-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
006549597-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006549597-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006549597-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS

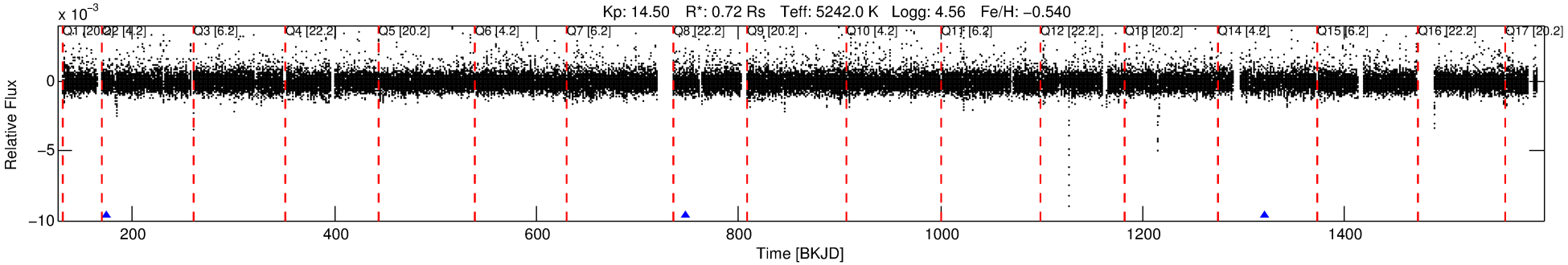
Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.
See `http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col` for comment definitions.

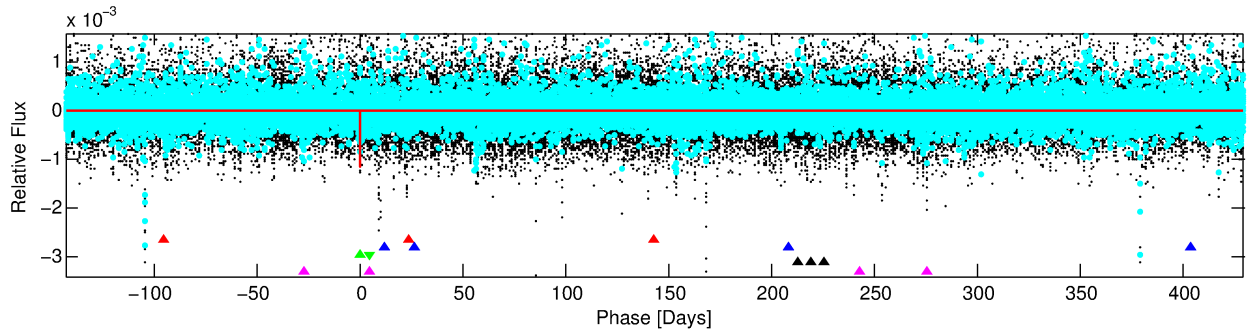
Ephemeris Match Information For 006549597-03

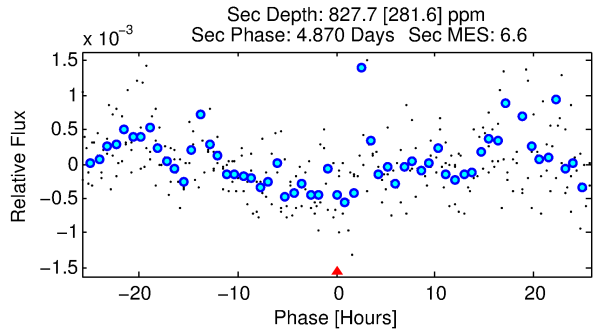
No Significant Match Found

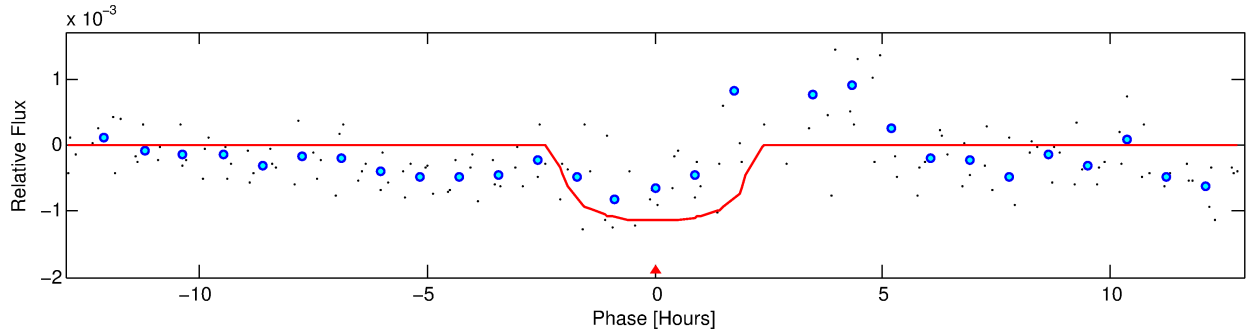
DV One-Page Summary

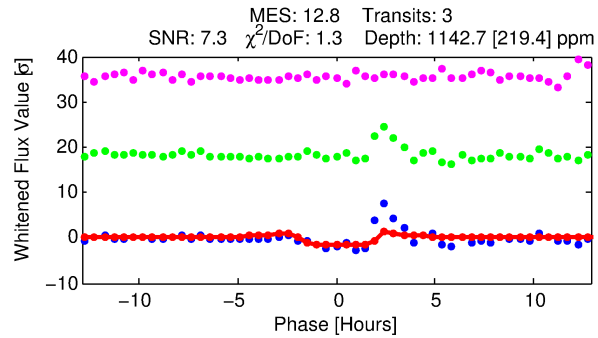
KIC: 6549597 Candidate: 3 of 5 Period: 572.990 d

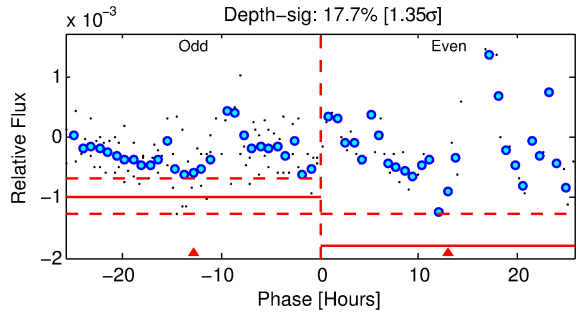


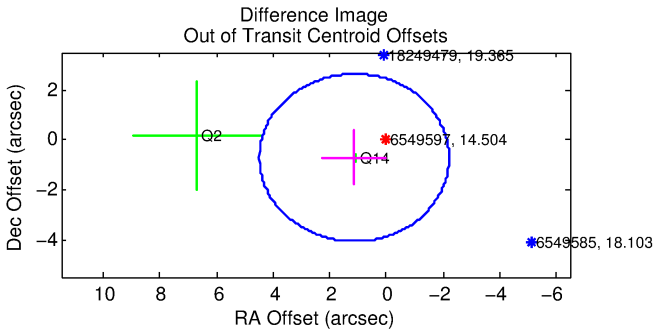












DV Fit Results:

Period = 572.99015 [0.00719] d
Epoch = 174.6517 [0.0091] BKJD
Rp/R* = 0.0312 [0.0974]
a/R* = 957.51 [11959.01]
b = 0.42 [24.85]

Seff = 0.25 [0.05]
Teq = 180 [9] K
Rp = 2.45 [7.68] Re
a = 1.1898 [0.1266] AU

Ag = 107021.52 [670641.66] [0.16σ]
Teffp = 5038 [7891] K [0.62σ]

DV Diagnostic Results:

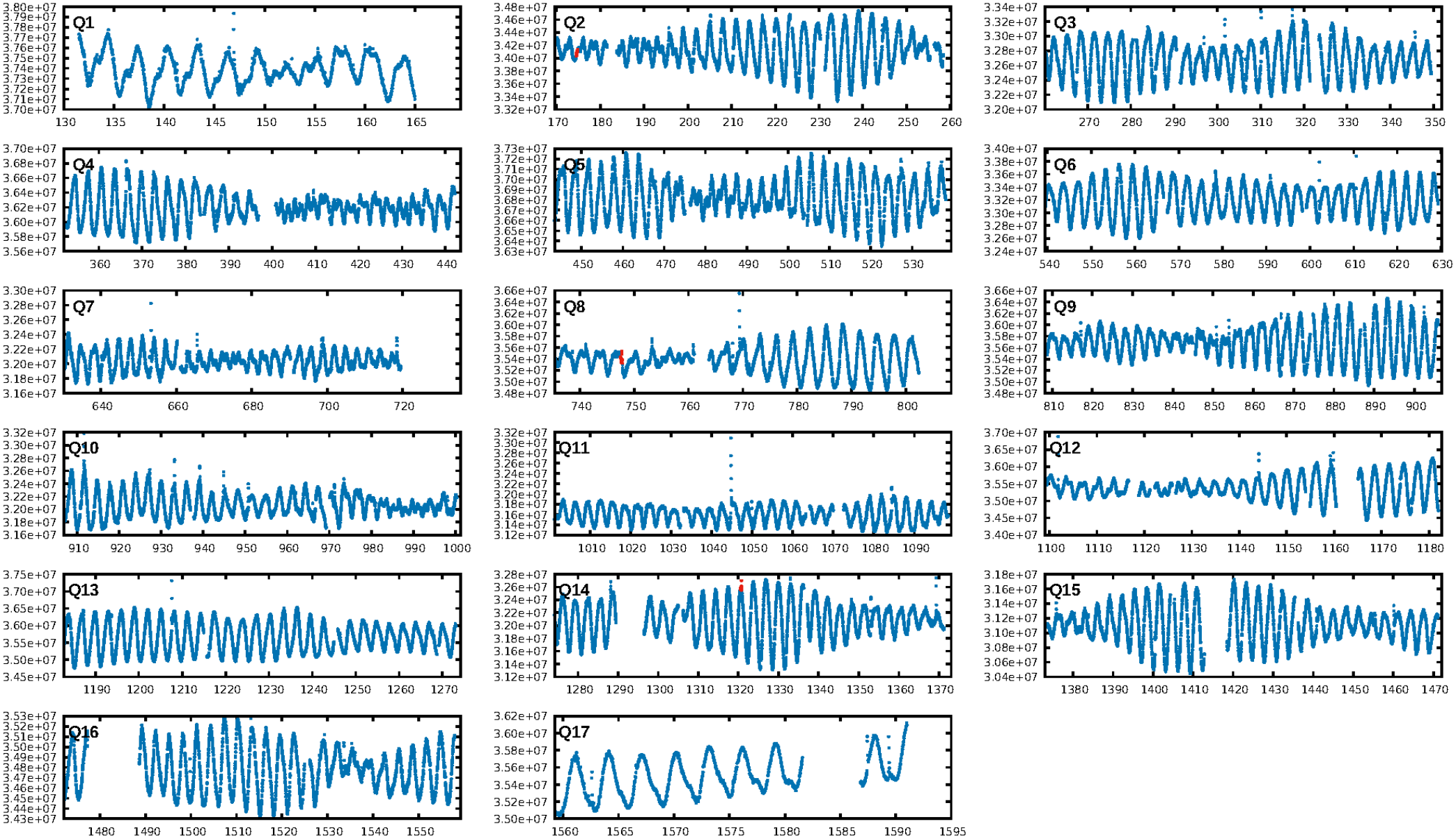
ShortPeriod−sig: 100.0% [463.86σ]
LongPeriod−sig: 100.0% [28.85σ]
ModelChiSquare2−sig: 0.0%
ModelChiSquareGof−sig: 29.9%
Bootstrap−pfa: 1.02e−10
RollingBand−fgt: 1.00 [3/3]
GhostDiagnostic−chr: 0.3634

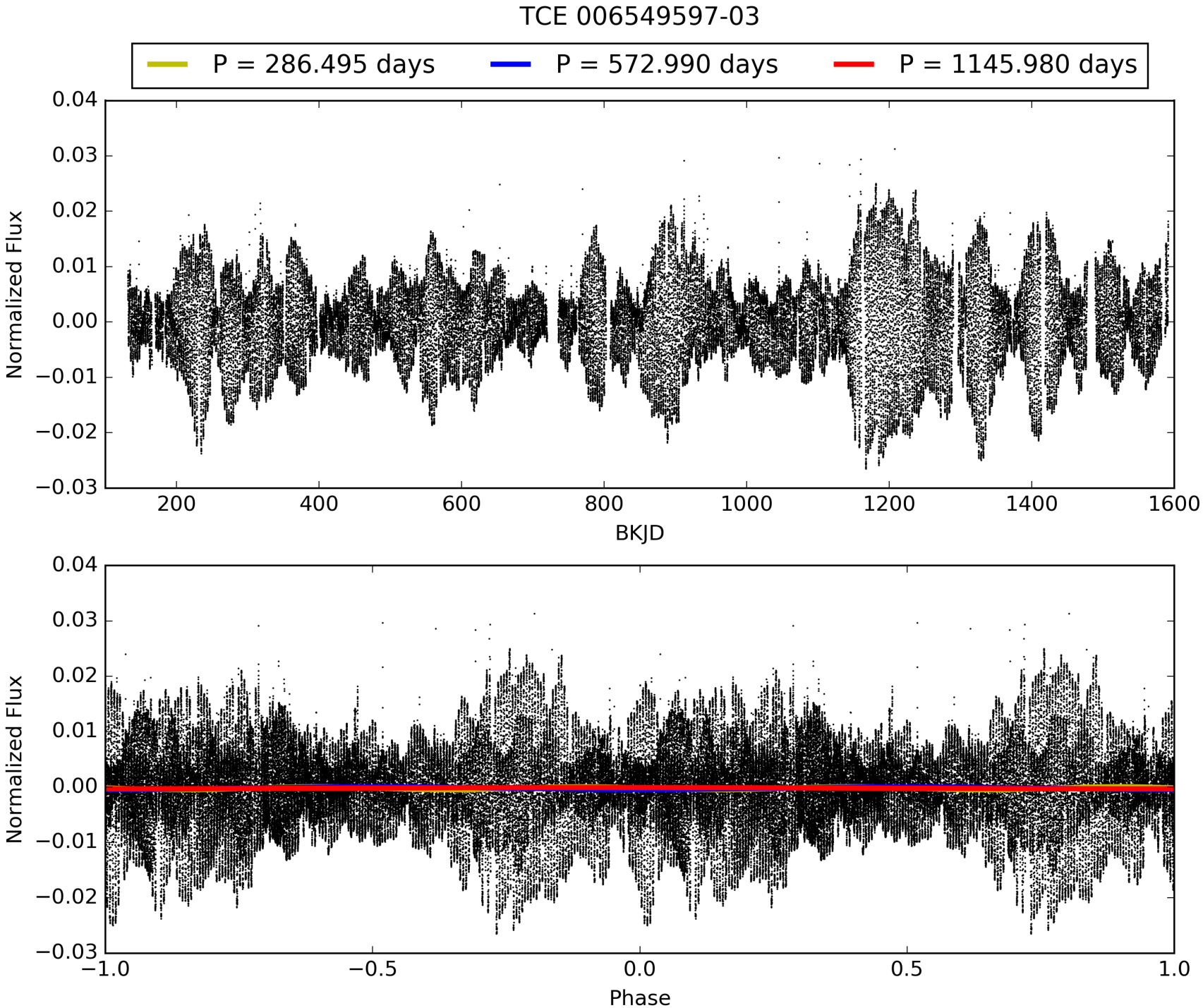
Centroid−sig: 48.8%
Centroid−so: 0.627 arcsec [0.58σ]
OotOffset−rm: 1.345 arcsec [1.20σ]
KicOffset−rm: 1.325 arcsec [0.88σ]
OotOffset−st: 2/0/0/0 [2]
KicOffset−st: 2/0/0/0 [2]
DiffImageQuality−fgm: 0.00 [0/2]
DiffImageOverlap−fno: 1.00 [3/3]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31−Jan−2016 05:28:05 Z

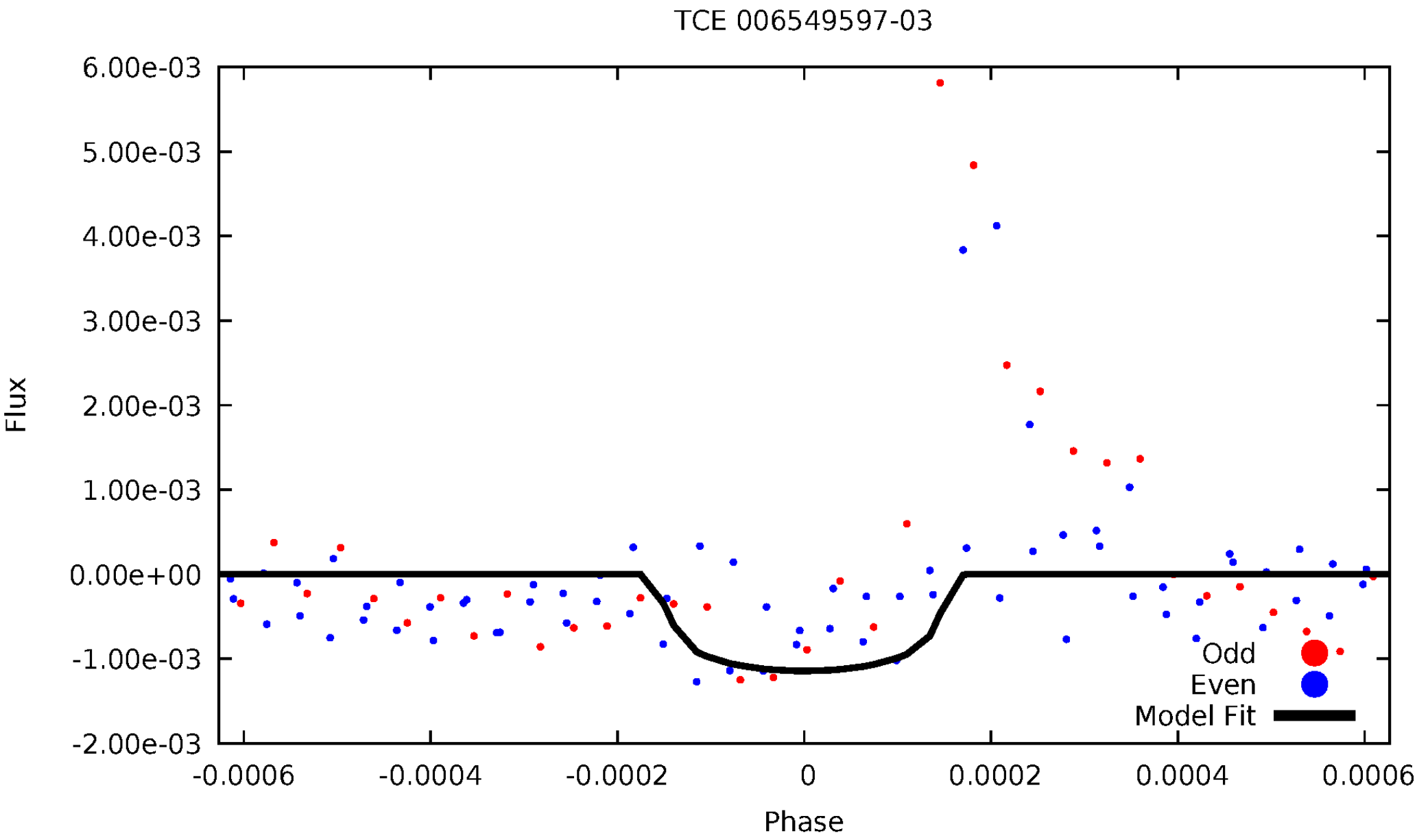
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 006549597-03, PDC Light Curves

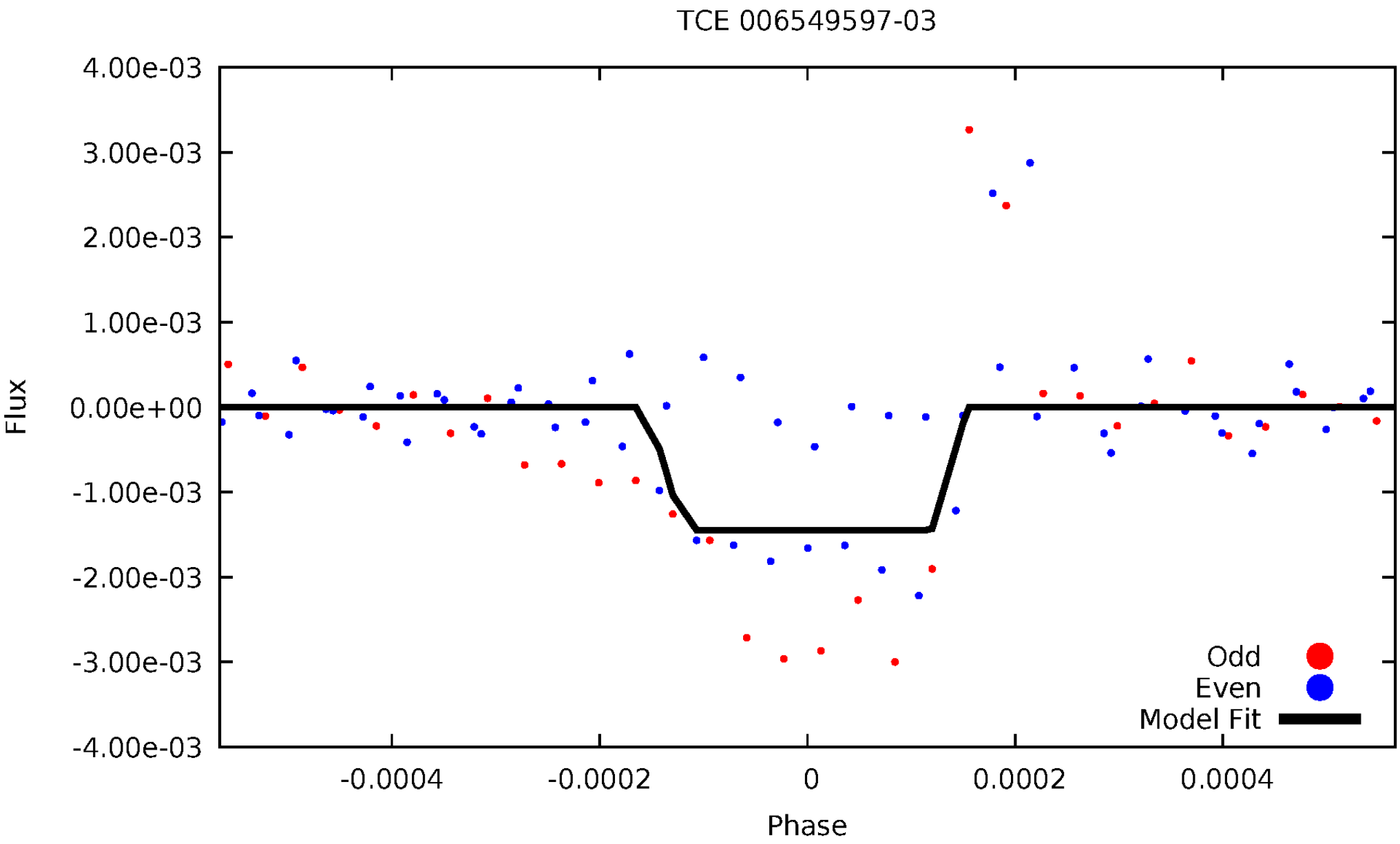



TCE 006549597-03
P = 286.495 days
P = 572.990 days
P = 1145.980 days
Normalized Flux
BKJD
Phase

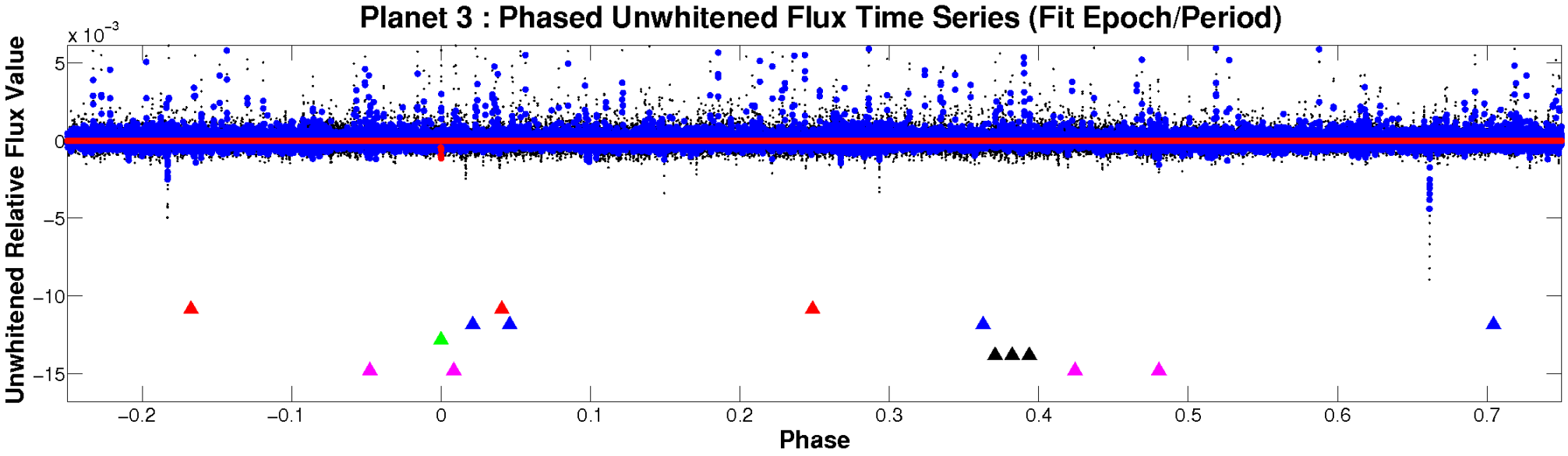
DV Odd/Even

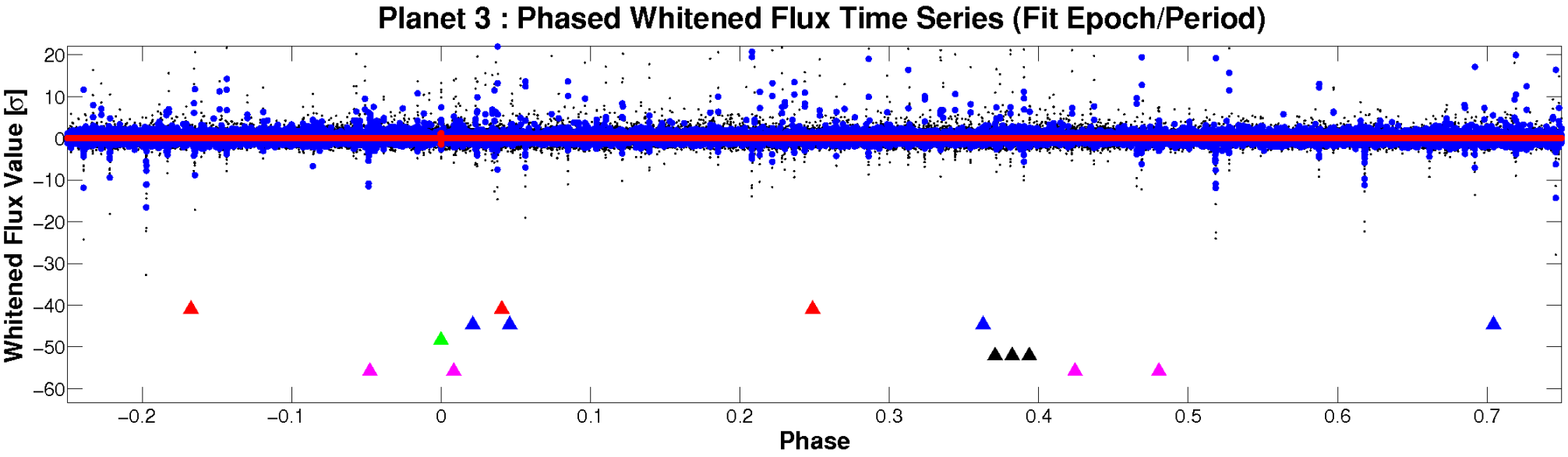

TCE 006549597-03
6.00e-03
5.00e-03
4.00e-03
3.00e-03
2.00e-03
1.00e-03
0.00e+00
-1.00e-03
-2.00e-03
Flux
-0.0006
-0.0004
-0.0002
0
0.0002
0.0004
0.0006
Phase
Odd
Even
Model Fit

ALT Odd/Even


TCE 006549597-03
4.00e-03
3.00e-03
2.00e-03
1.00e-03
0.00e+00
-1.00e-03
-2.00e-03
-3.00e-03
-4.00e-03
Flux
-0.0004
-0.0002
0
0.0002
0.0004
Phase
Odd
Even
Model Fit

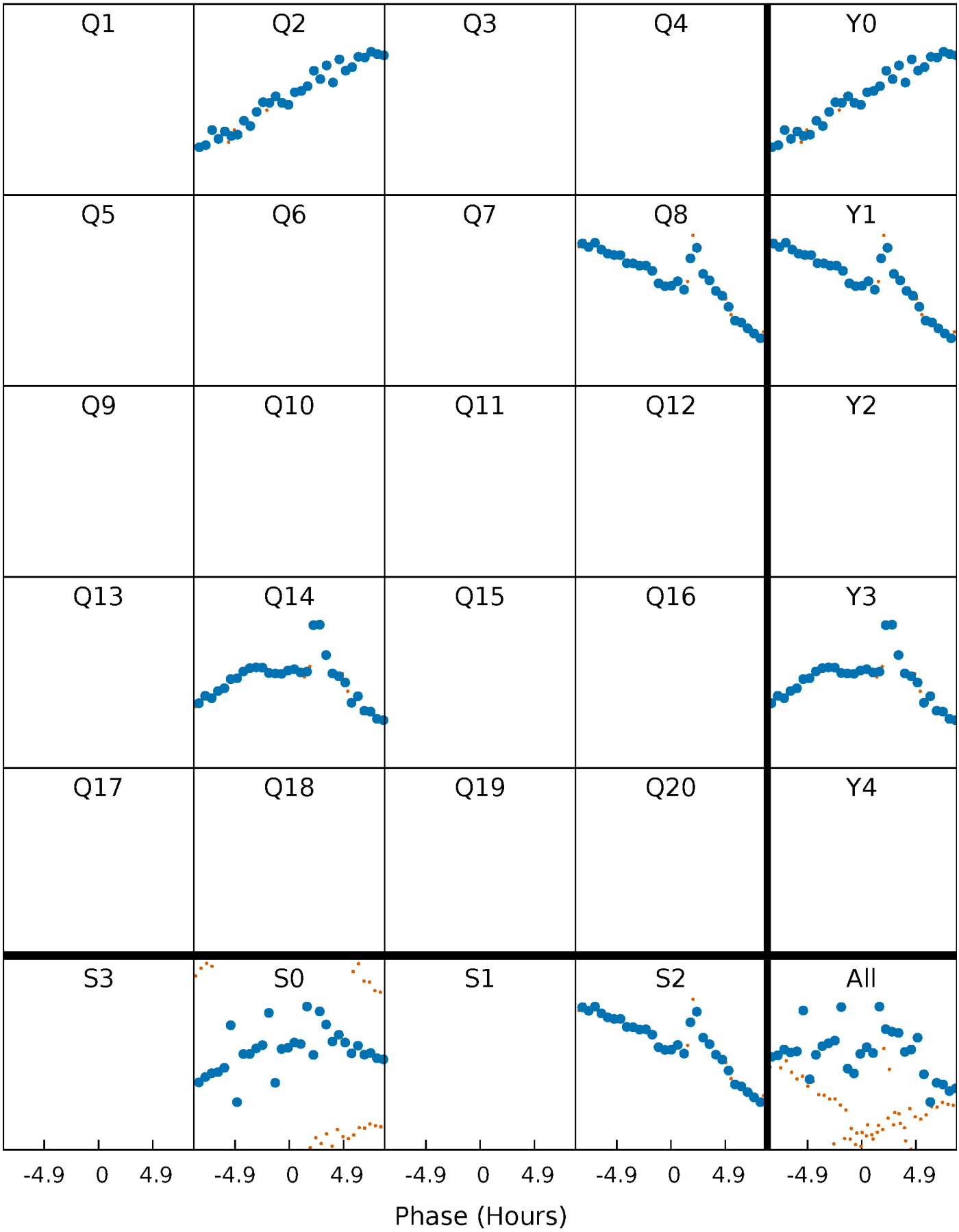
Non-Whitened Vs. Whitened Light Curve





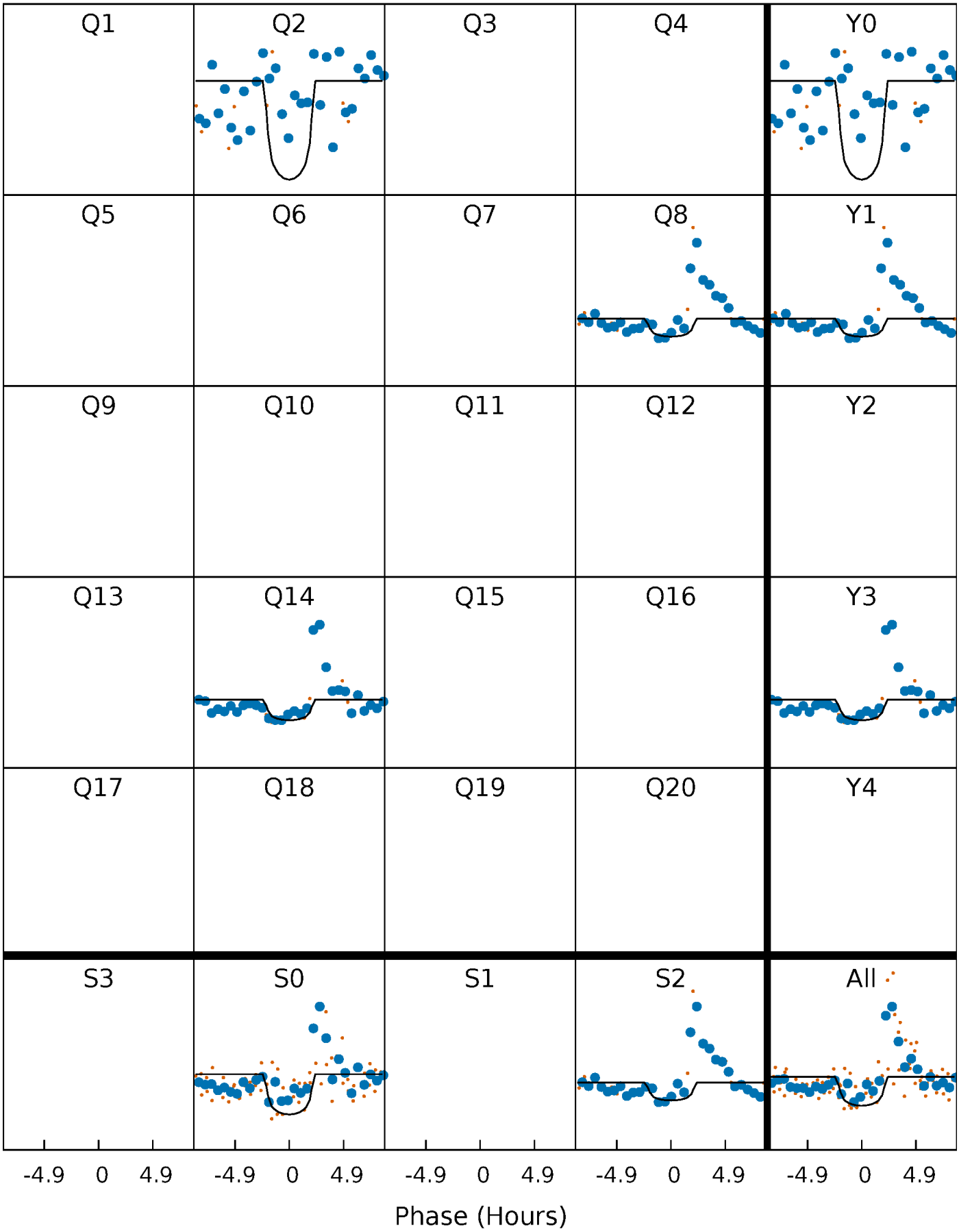
PDC Quarter-Phased Transit Curves

TCE 006549597-03 P=572.990151 Days T_0=174.651734 (BKJD)



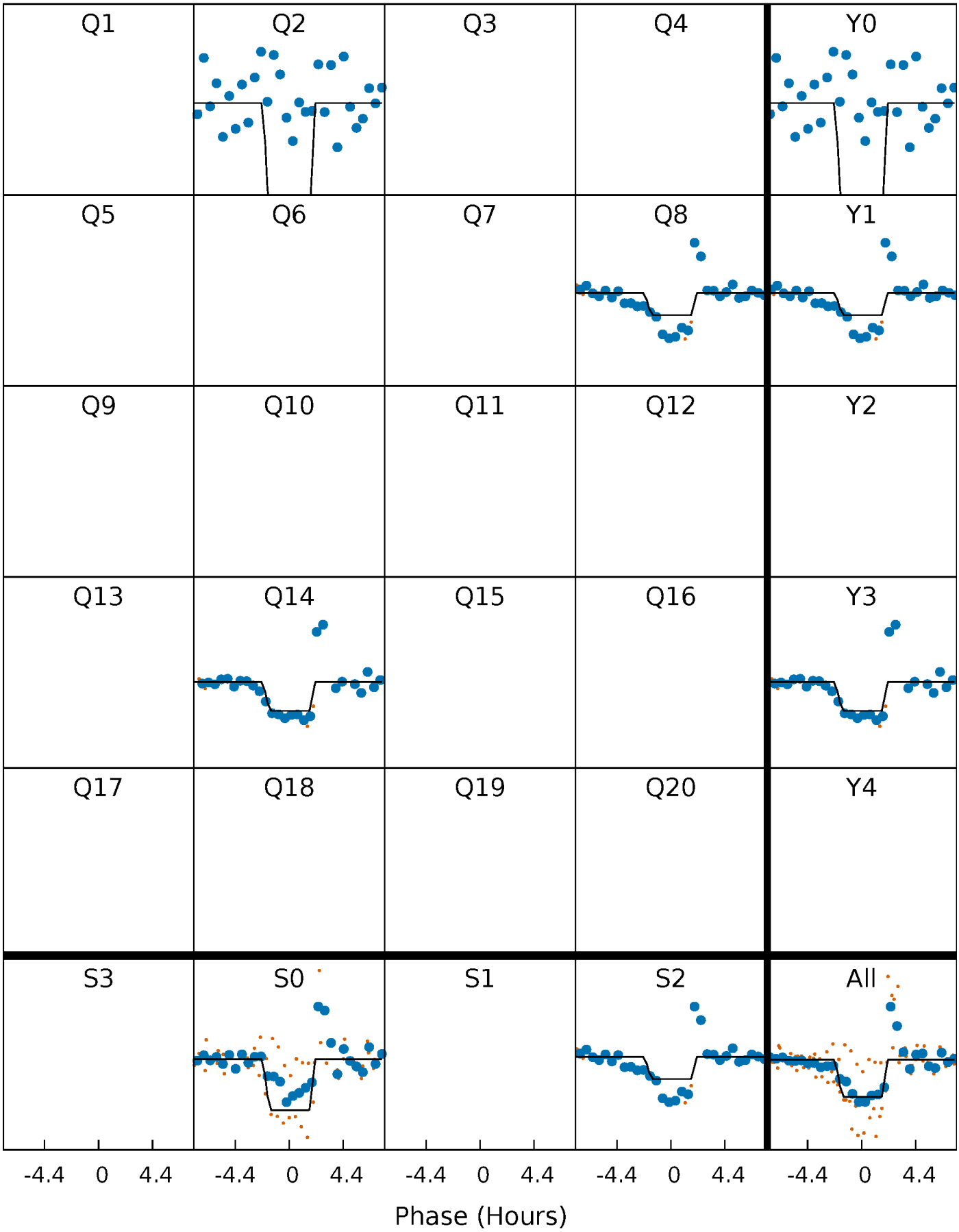
DV Quarter-Phased Transit Curves

TCE 006549597-03 P=572.990151 Days T_0=174.651734 (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

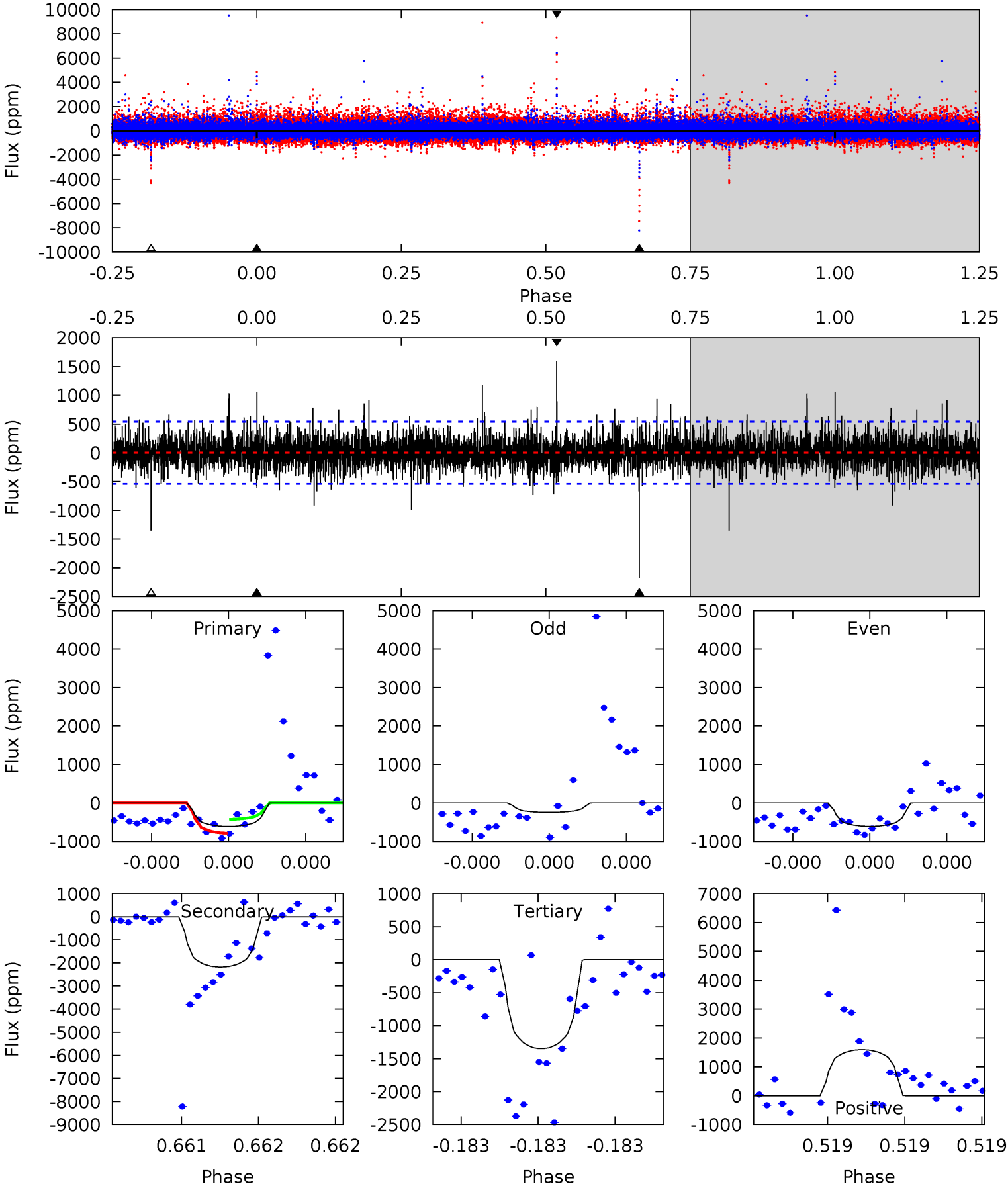
TCE 006549597-03 P=572.991078 Days T_0=174.645062 (BKJD)



DV Model-Shift Uniqueness Test

006549597-03, P = 572.990151 Days, E = 174.651734 Days

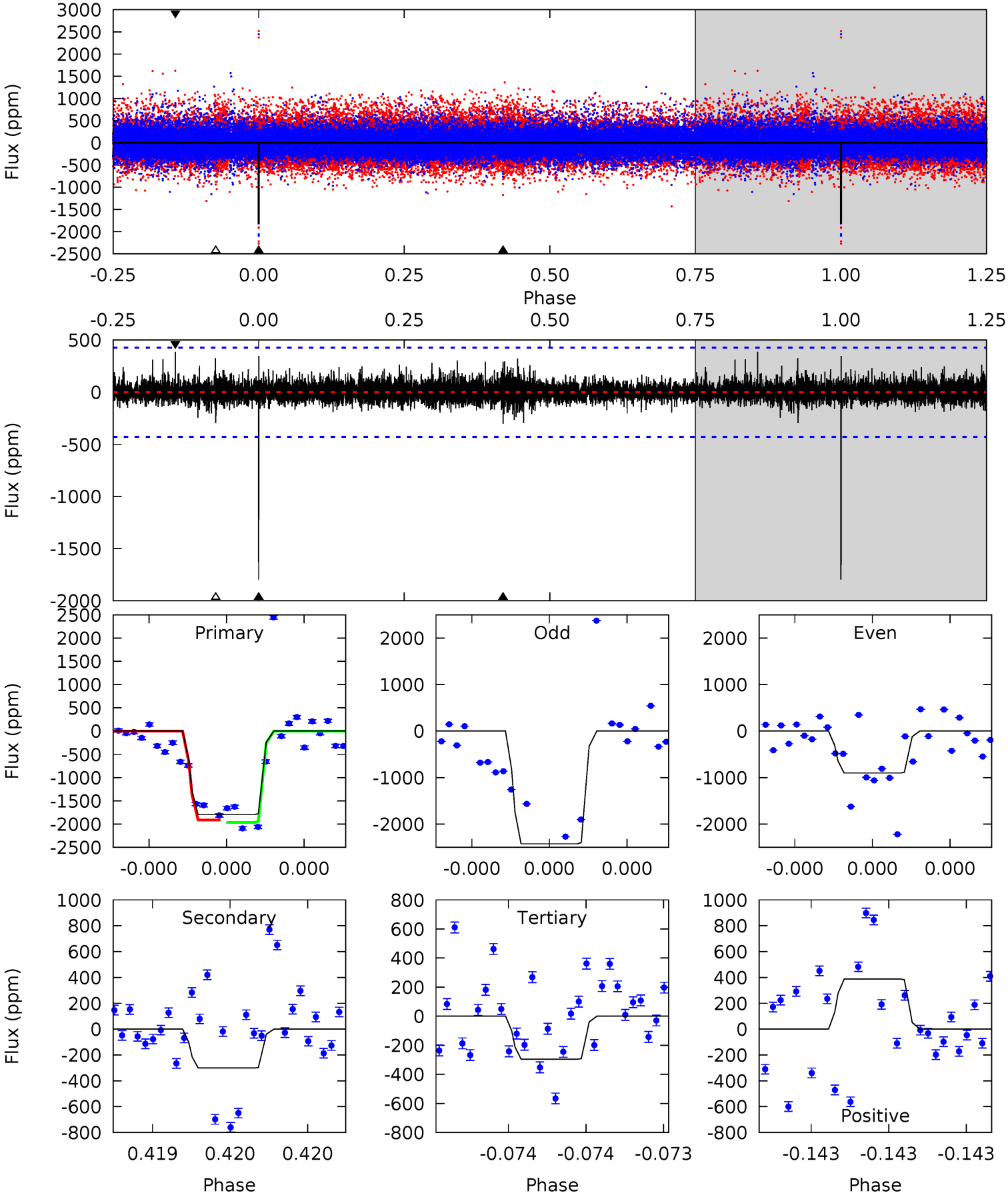
Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.38	22.7	14.1	16.6	5.65	3.60	2.01	-7.71	-10.3	8.65	6.09	1.32	1.98	0.42	1.87



Alt Model-Shift Uniqueness Test

006549597-03, P = 572.991078 Days, E = 174.645062 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.8	3.98	3.91	5.13	5.67	3.62	0.73	19.9	18.7	0.07	-1.14	12.5	0.77	0.18	0.34



Stellar Parameters For KIC 006549597

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	$M(M_\odot)$	$p_\star$ (g·cm^{-3})
	5242^{+157}_{-157}	$4.556^{+0.088}_{-0.072}$	$-0.540^{+0.350}_{-0.300}$	$0.722^{+0.089}_{-0.081}$	$0.684^{+0.095}_{-0.038}$	$2.561^{+0.947}_{-0.580}$
	+3%/-3%	+2%/-2%	+65%/-56%	+12%/-11%	+14%/-6%	+37%/-23%
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 006549597-03 / KOI

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-2180±96	$6.39^{+5.90}_{-4.42}$	251^{+10}_{-10}	4213^{+2864}_{-831}	$42417^{+383570}_{-30998}$
Alt.	-301±76	$6.41^{+6.58}_{-4.37}$	251^{+11}_{-11}	3057^{+1365}_{-557}	5887^{+51527}_{-4572}

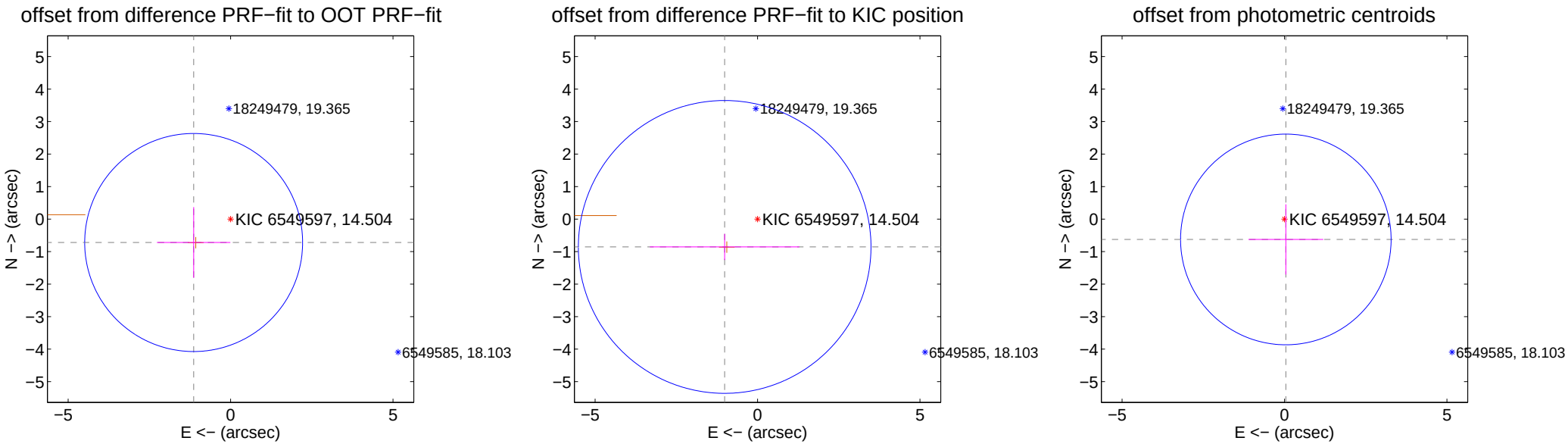
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

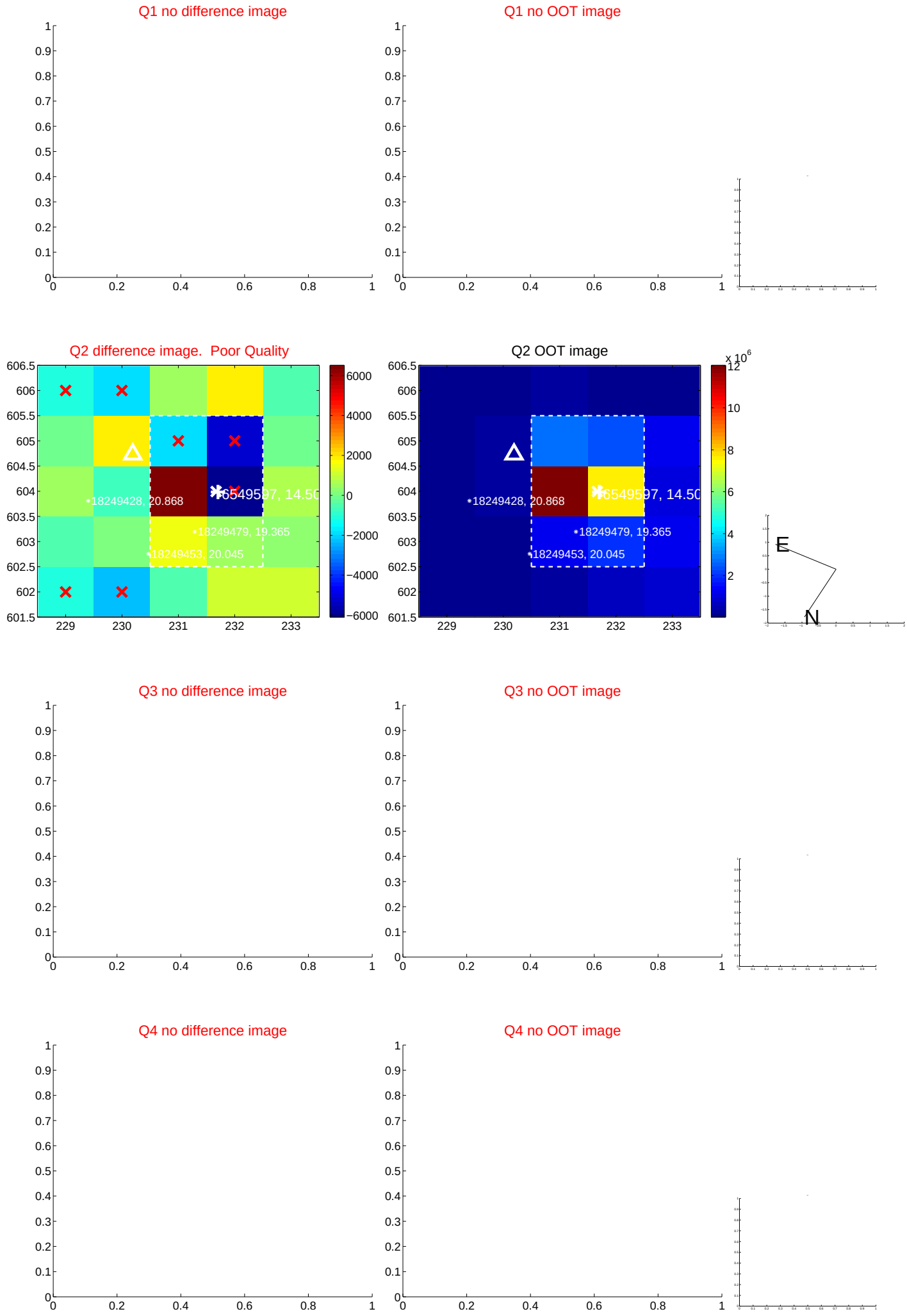
Supplemental centroid analysis for 006549597-03. Kepler magnitude: 14.50. Transit SNR 7.27
There are 0 quarters with good PRF difference image offsets
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.345 ± 1.118	1.20	1.136 ± 1.129	-0.720 ± 1.089
PRF-fit source offset from KIC position	1.325 ± 1.501	0.88	1.012 ± 2.300	-0.856 ± 0.401
photometric centroid source offset	0.63 ± 1.08	0.58	-0.04 ± 1.15	-0.63 ± 1.08

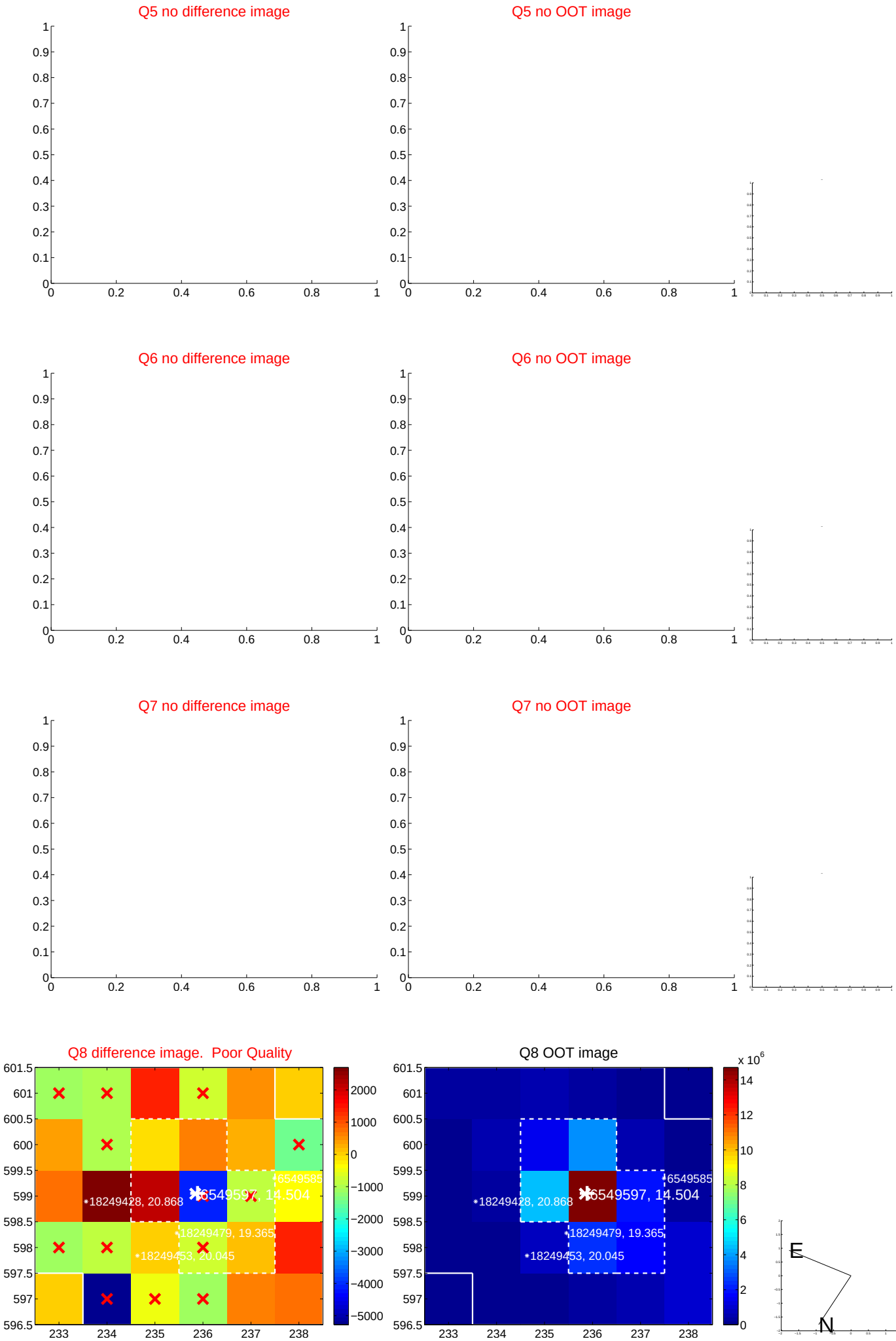


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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

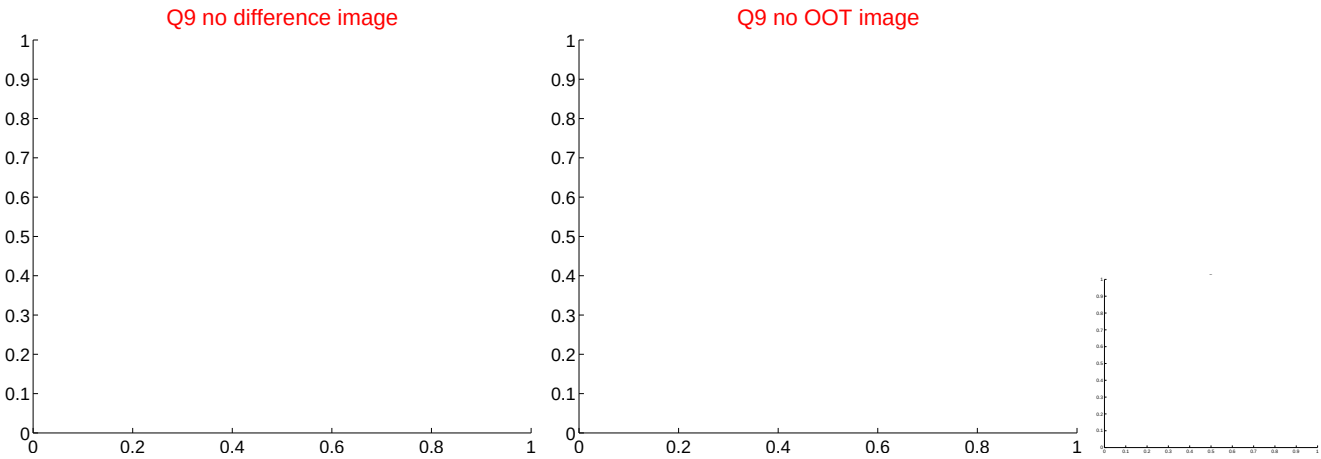
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

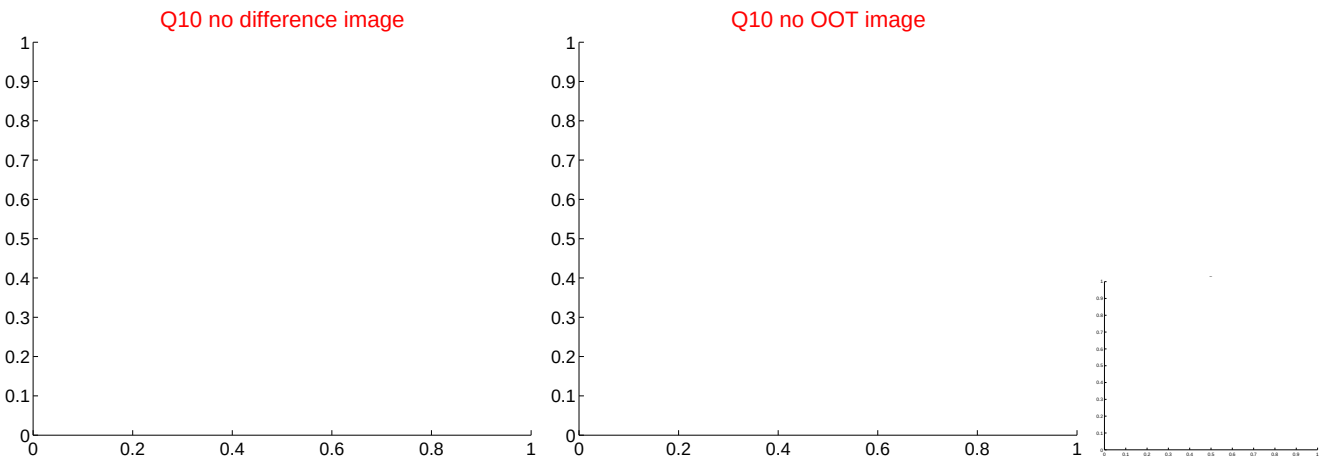


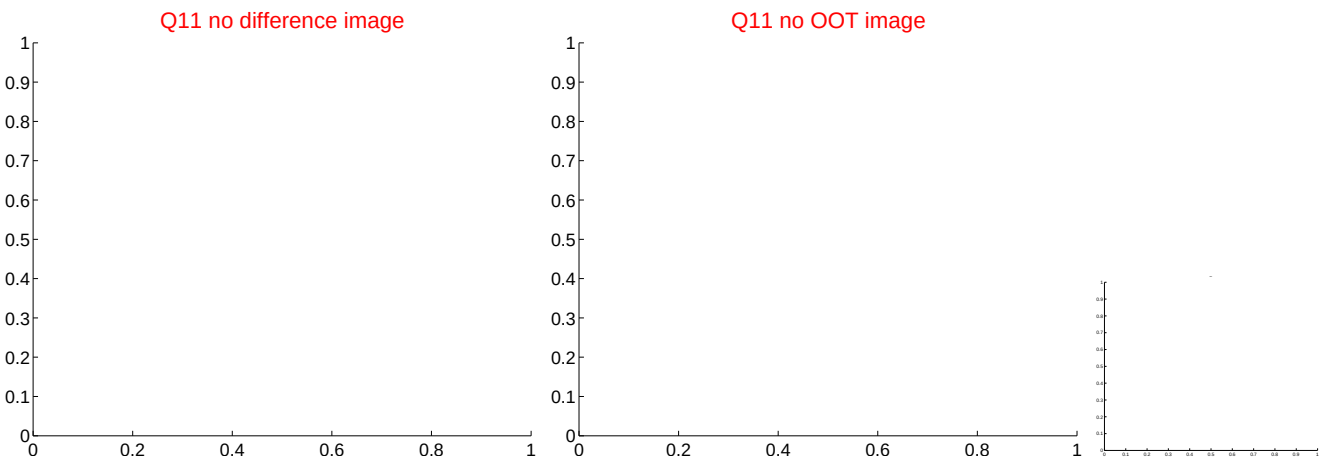
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

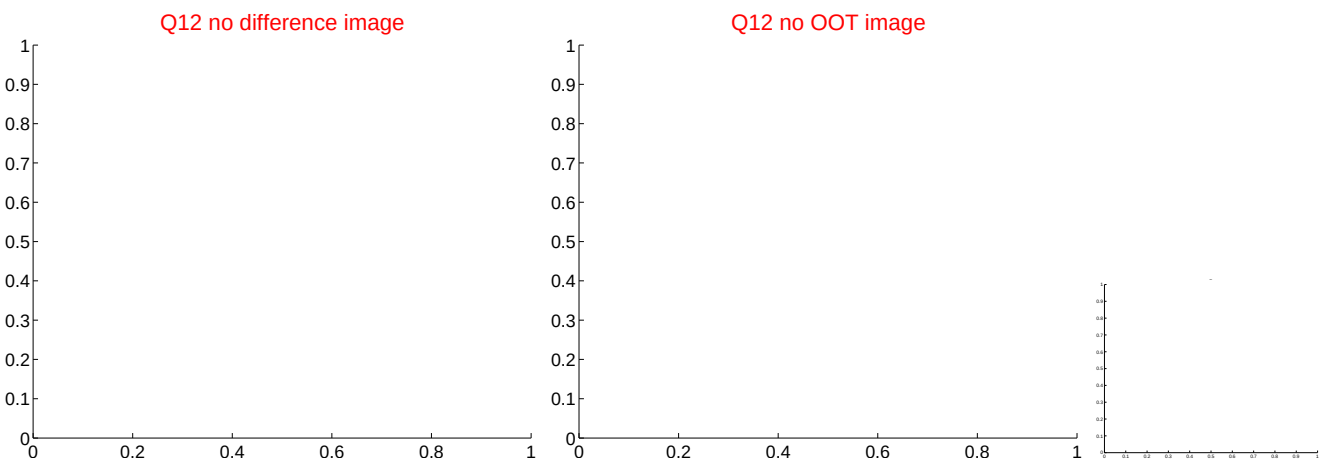


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

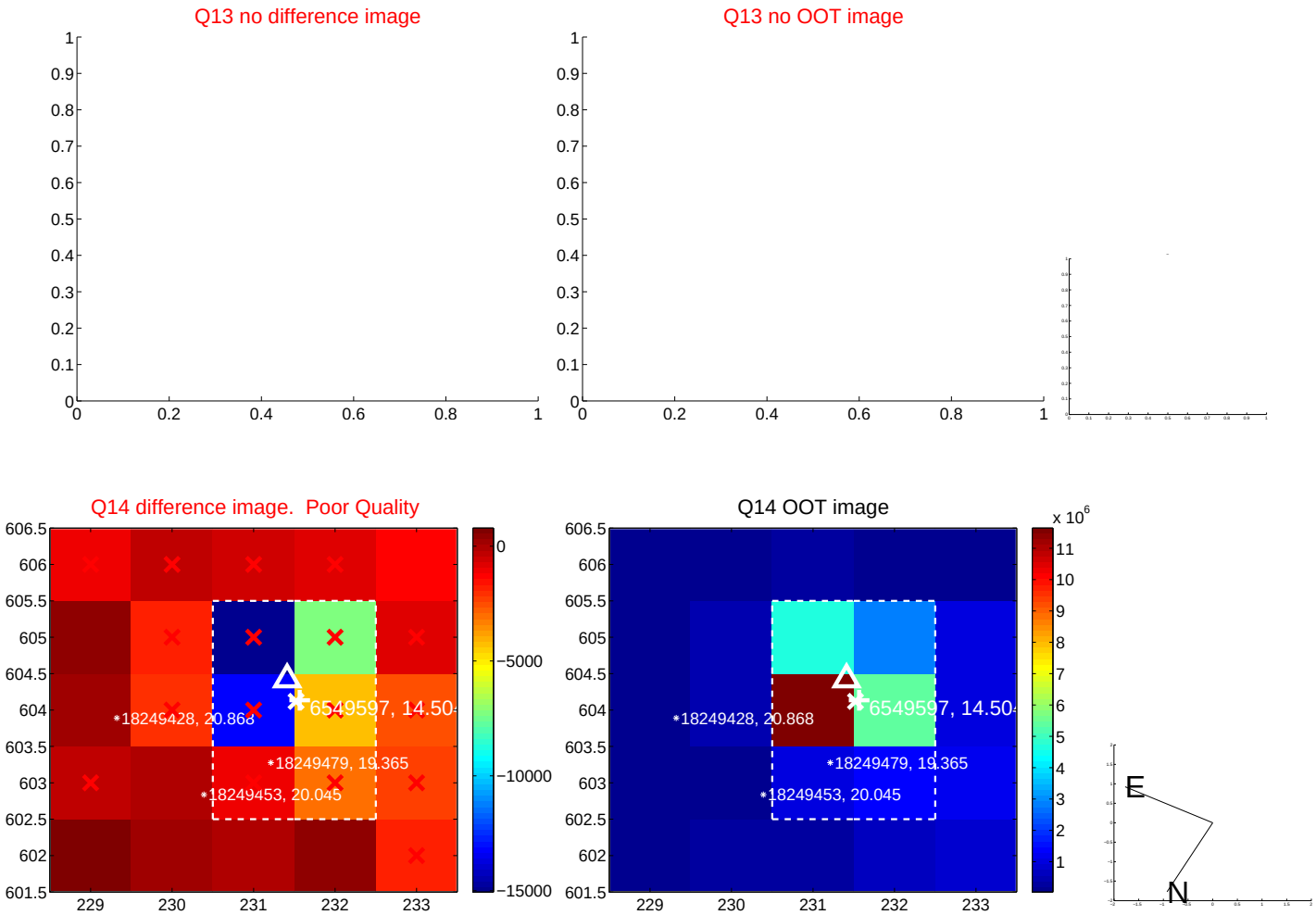


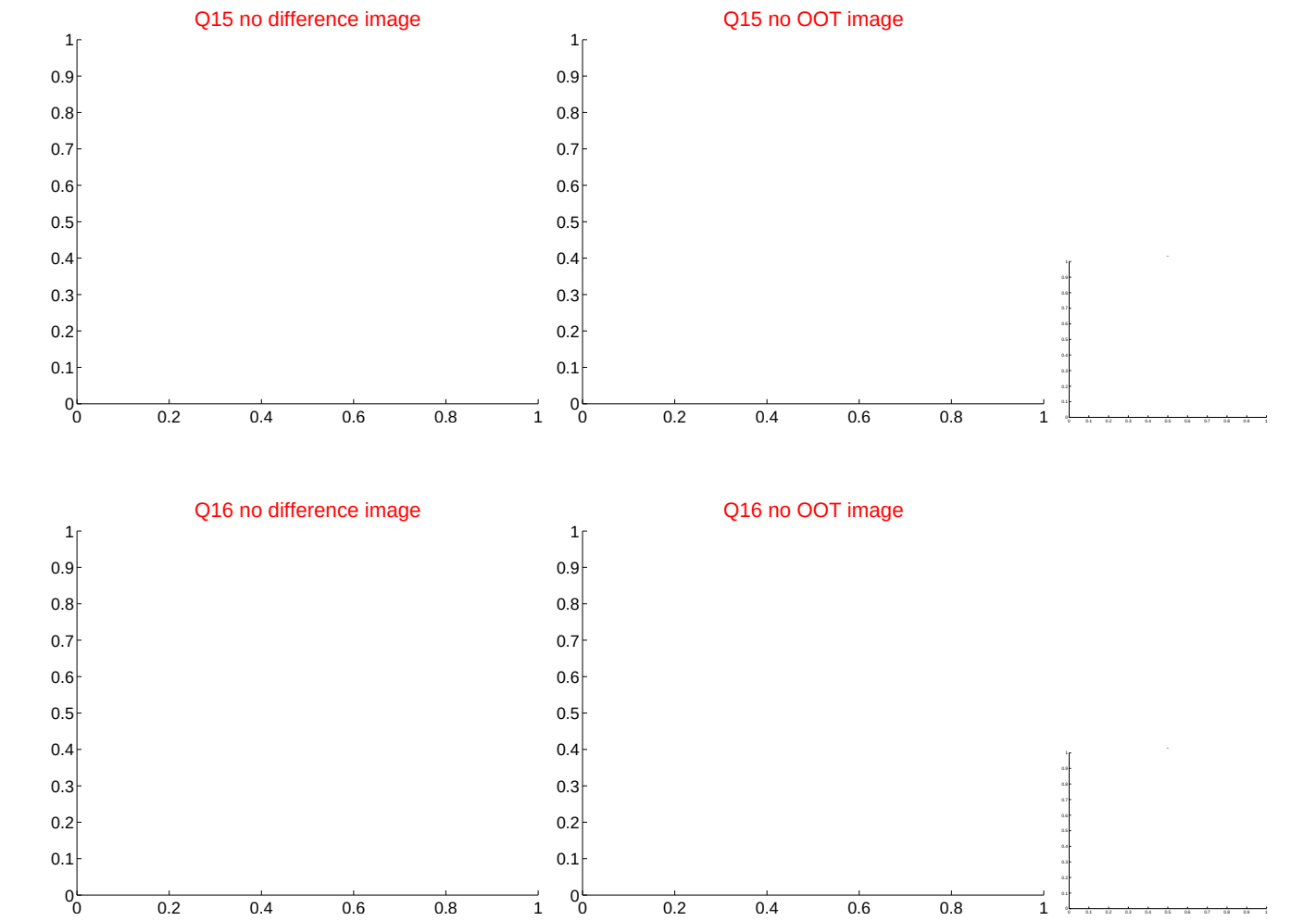




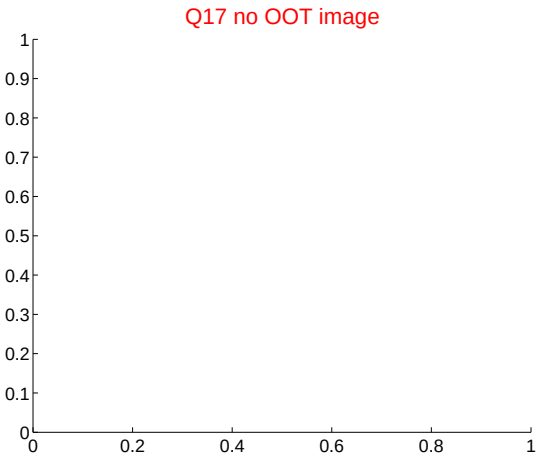


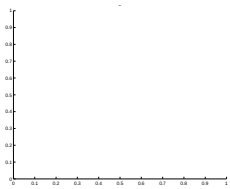
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

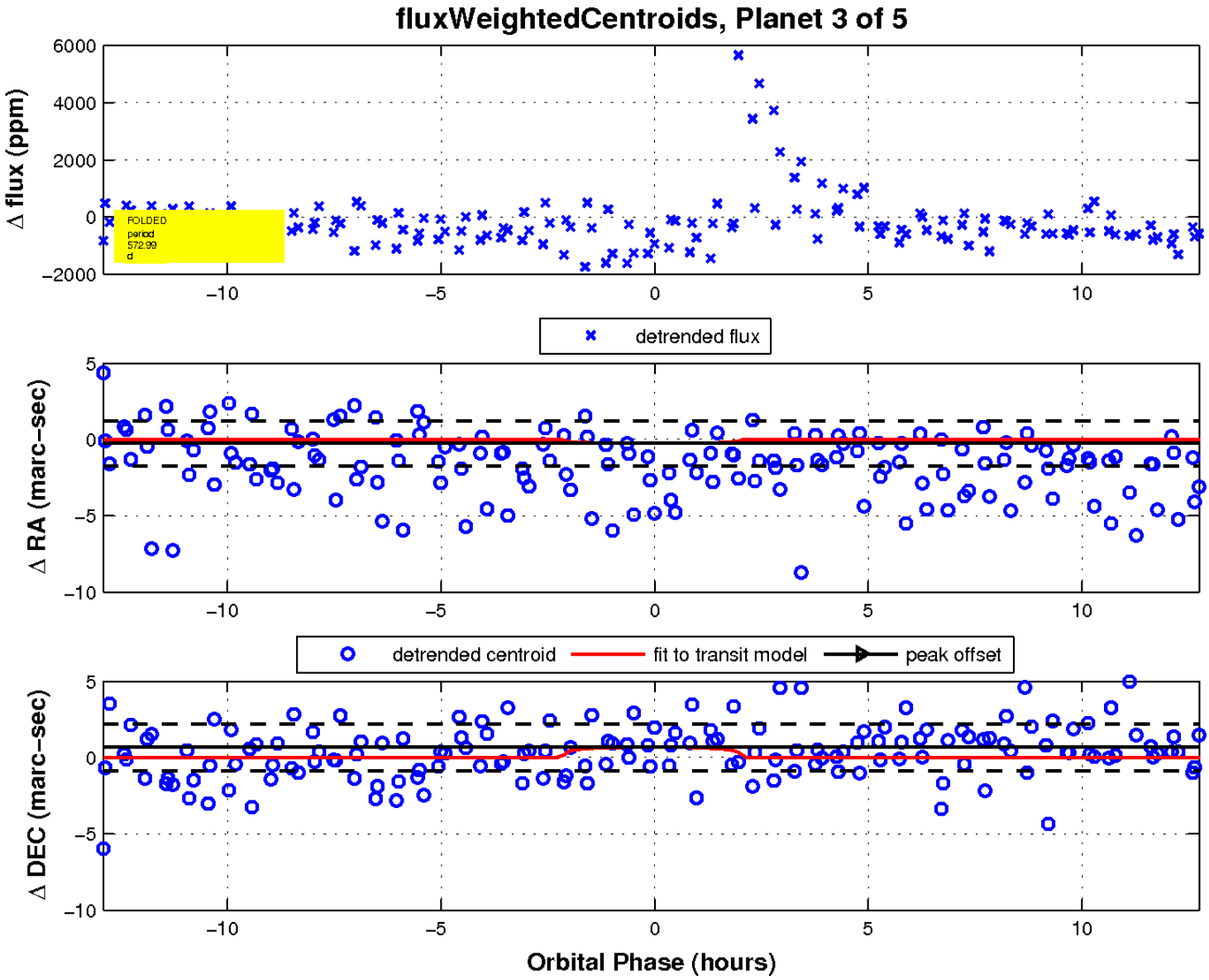




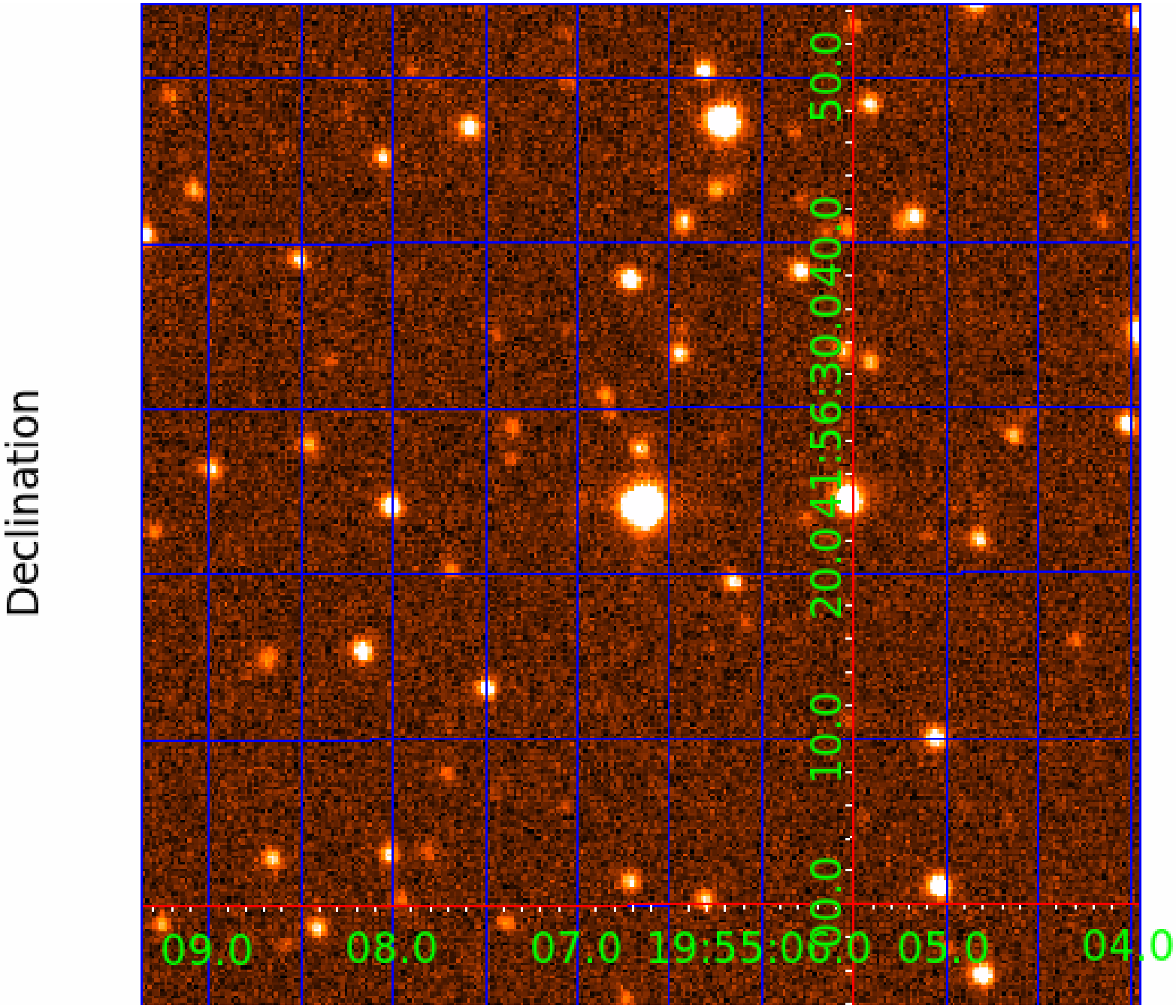
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.







UKIRT Image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09.0
08.0
07.0
19:55:06.0
05.0
04.0

KIC 006549597

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 ($S_\oplus$)
006549597-01	OBS	No	453.801881	317.161486	1028.9	4.413	13.6	6.2	0.72	5242	2.37	0.34
006549597-02	OBS	No	377.273262	200.989738	698.4	5.512	13.1	4.7	0.72	5242	1.95	0.43
006549597-03	OBS	No	572.990151	174.651734	1142.7	4.307	12.8	7.3	0.72	5242	2.45	0.25
006549597-04	OBS	No	579.547481	387.118423	1139.7	3.349	10.2	6.7	0.72	5242	2.72	0.24
006549597-05	OBS	No	302.585009	417.774367	1139.6	2.915	10.4	6.5	0.72	5242	2.60	0.58

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006549597-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
006549597-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
006549597-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006549597-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006549597-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS

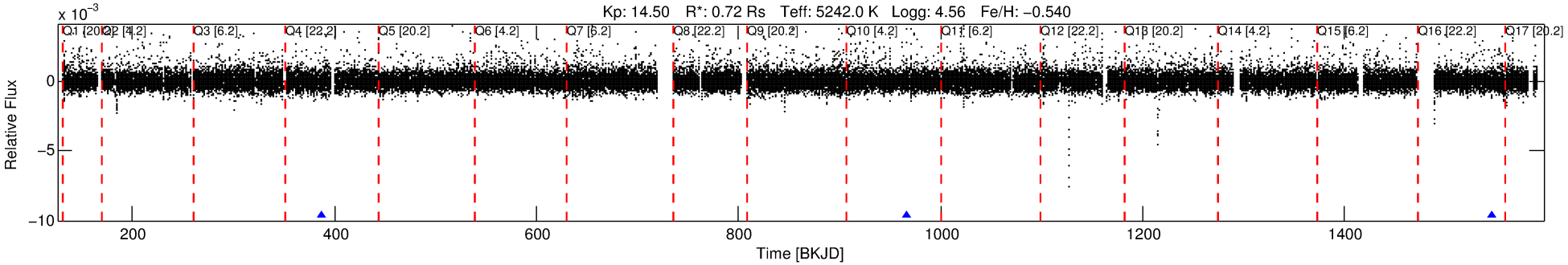
Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.
See `http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col` for comment definitions.

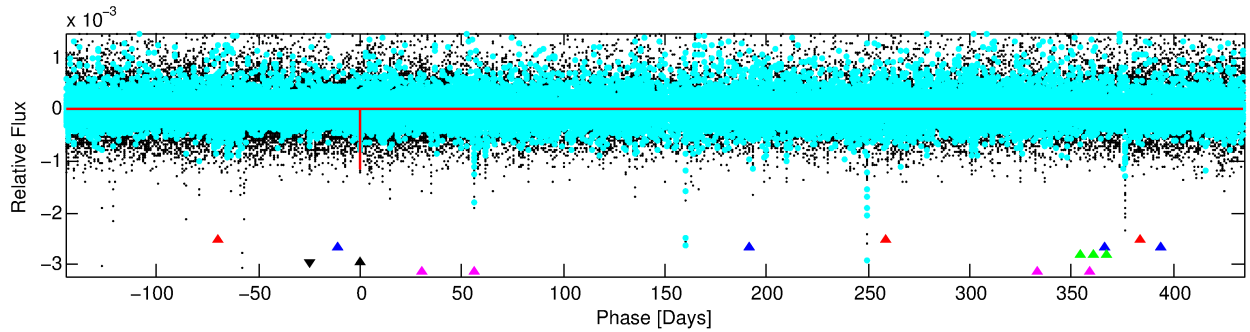
Ephemeris Match Information For 006549597-04

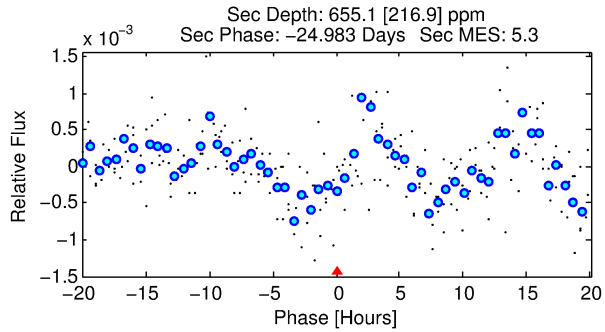
No Significant Match Found

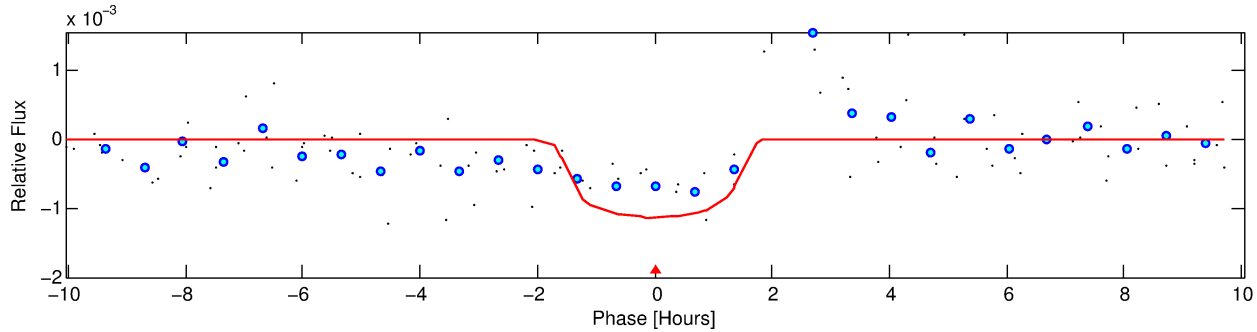
DV One-Page Summary

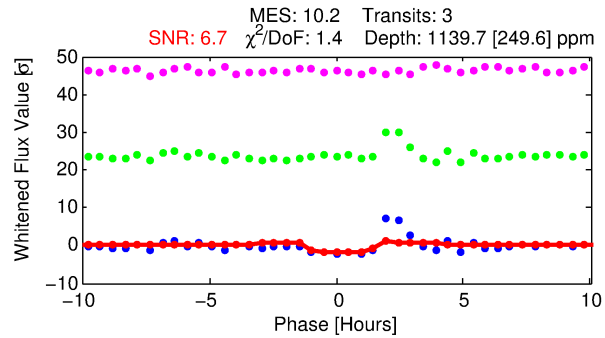
KIC: 6549597 Candidate: 4 of 5 Period: 579.547 d

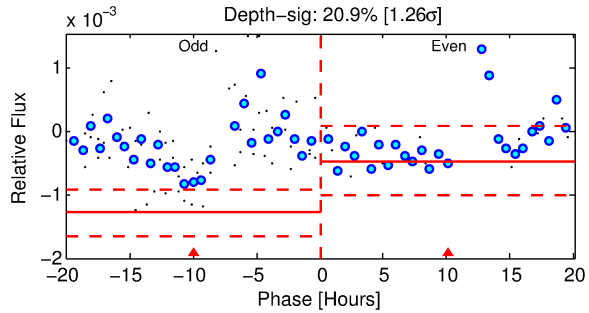


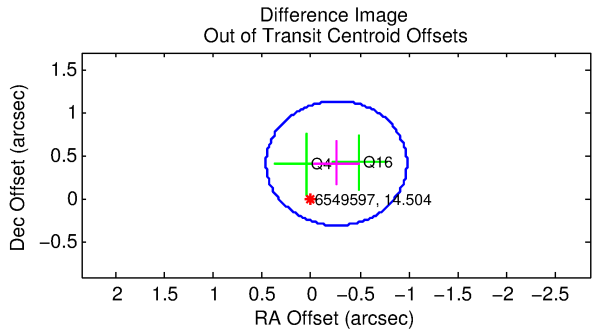












DV Fit Results:

Period = 579.54748 [0.00650] d
Epoch = 387.1184 [0.0098] BKJD
Rp/R* = 0.0345 [0.0273]
a/R* = 864.39 [2671.57]
b = 0.80 [1.41]

Seff = 0.25 [0.05]
Teq = 179 [9] K
Rp = 2.72 [2.17] Re
a = 1.1989 [0.1275] AU

Ag = 70081.76 [113638.78] [0.62σ]
Teffp = 4515 [1826] K [2.37σ]

DV Diagnostic Results:

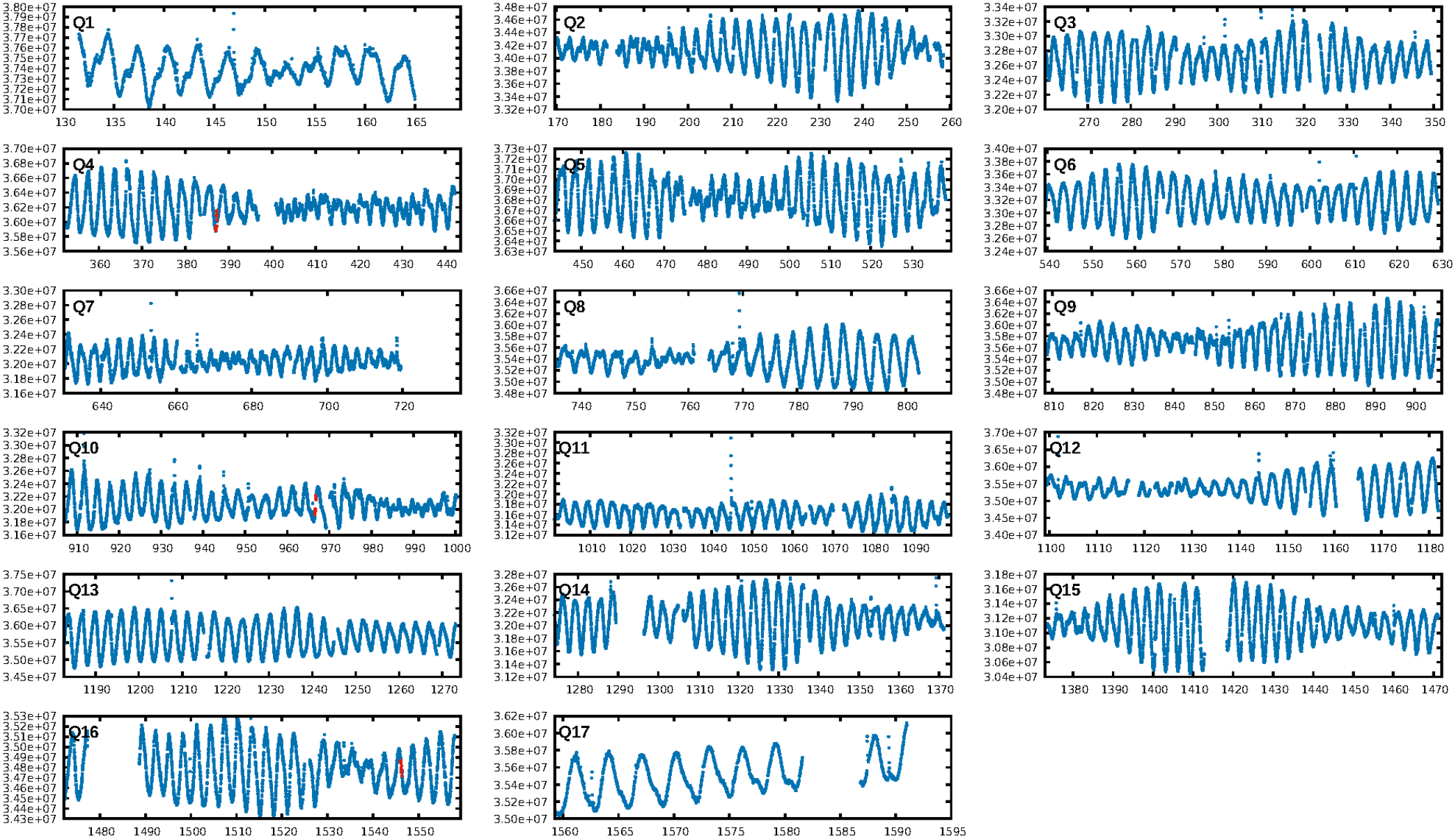
ShortPeriod−sig: 100.0% [28.85σ]
LongPeriod−sig: N/A
ModelChiSquare2−sig: 42.8%
ModelChiSquareGof−sig: 99.0%
Bootstrap−pfa: 2.44e−08
RollingBand−fgt: 1.00 [3/3]
GhostDiagnostic−chr: 12.46

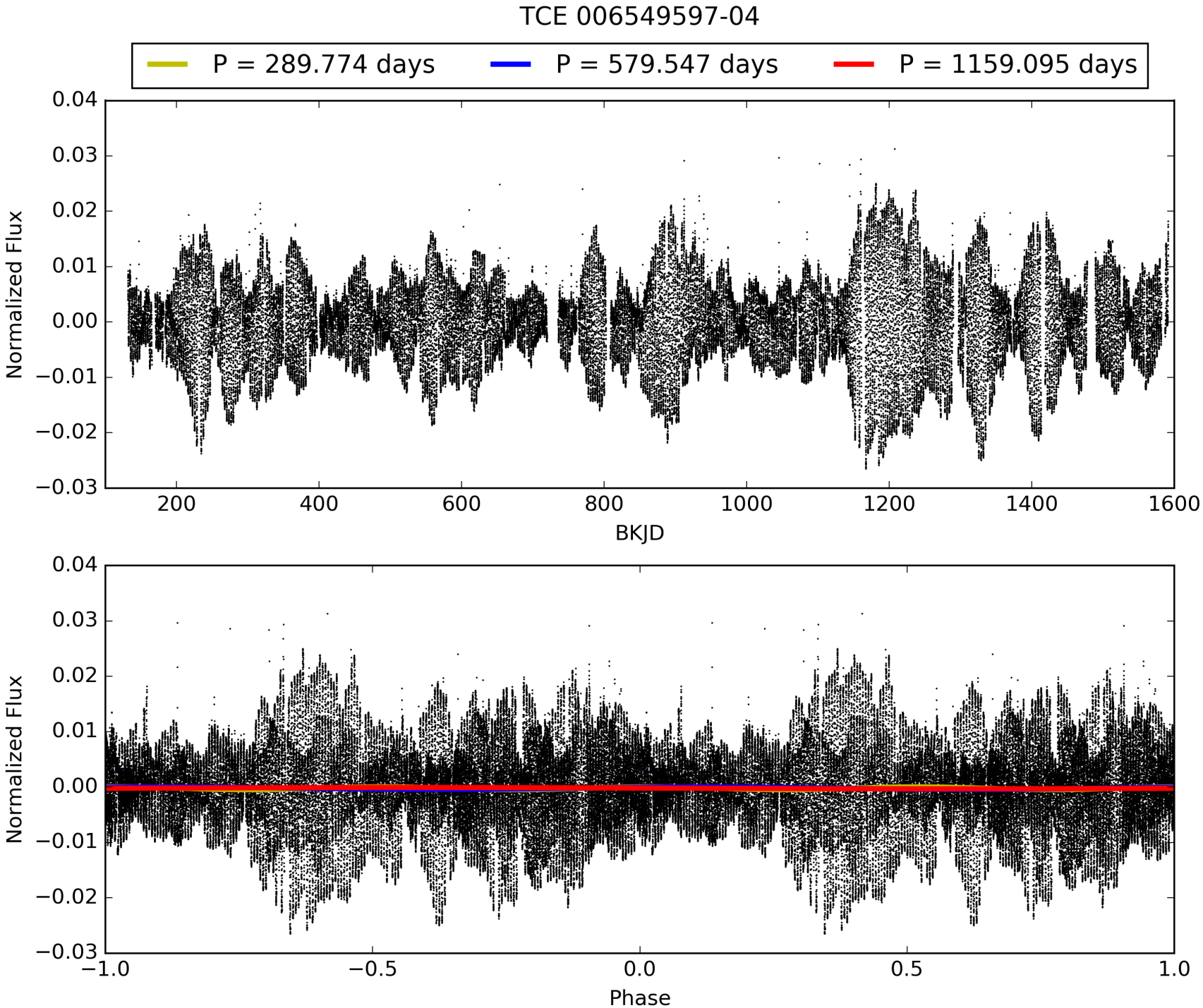
Centroid−sig: 42.6%
Centroid−so: 0.697 arcsec [0.54σ]
OotOffset−rm: 0.490 arcsec [2.04σ]
KicOffset−rm: 0.482 arcsec [2.06σ]
OotOffset−st: 0/0/2/0 [2]
KicOffset−st: 0/0/2/0 [2]
DiffImageQuality−fgm: 1.00 [2/2]
DiffImageOverlap−fno: 1.00 [2/2]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31−Jan−2016 05:28:29 Z

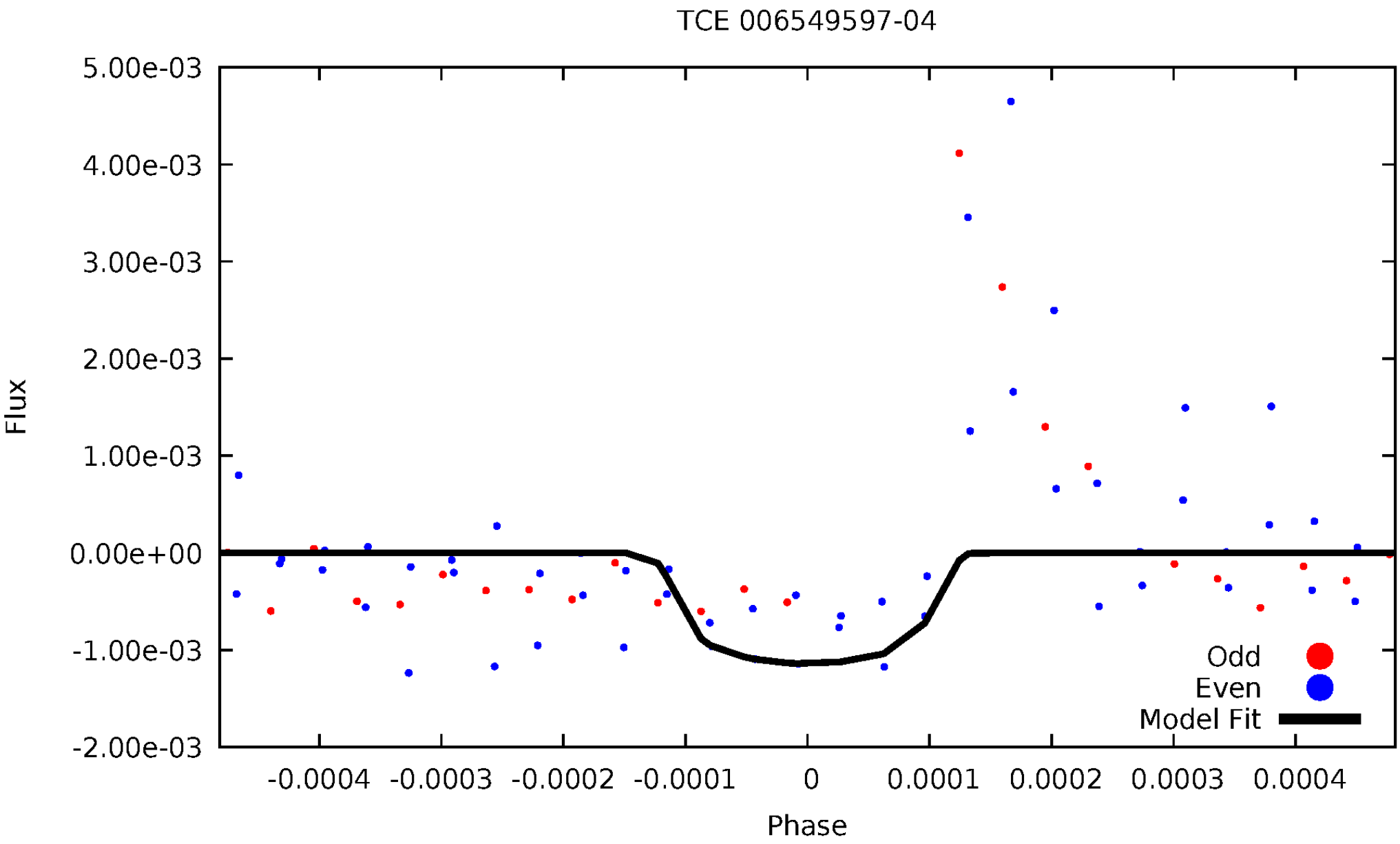
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 006549597-04, PDC Light Curves

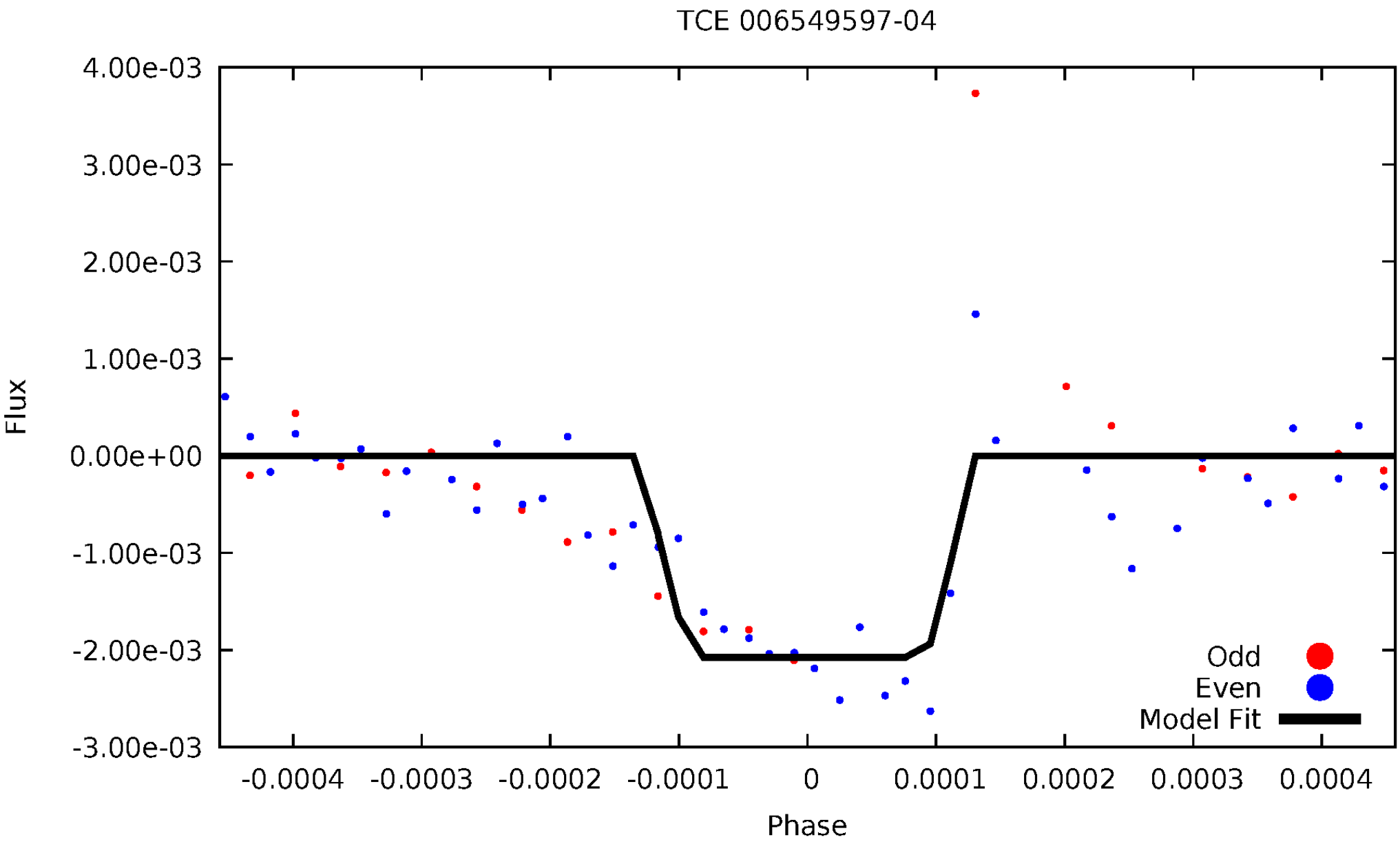



TCE 006549597-04
P = 289.774 days
P = 579.547 days
P = 1159.095 days
Normalized Flux
BKJD
Phase

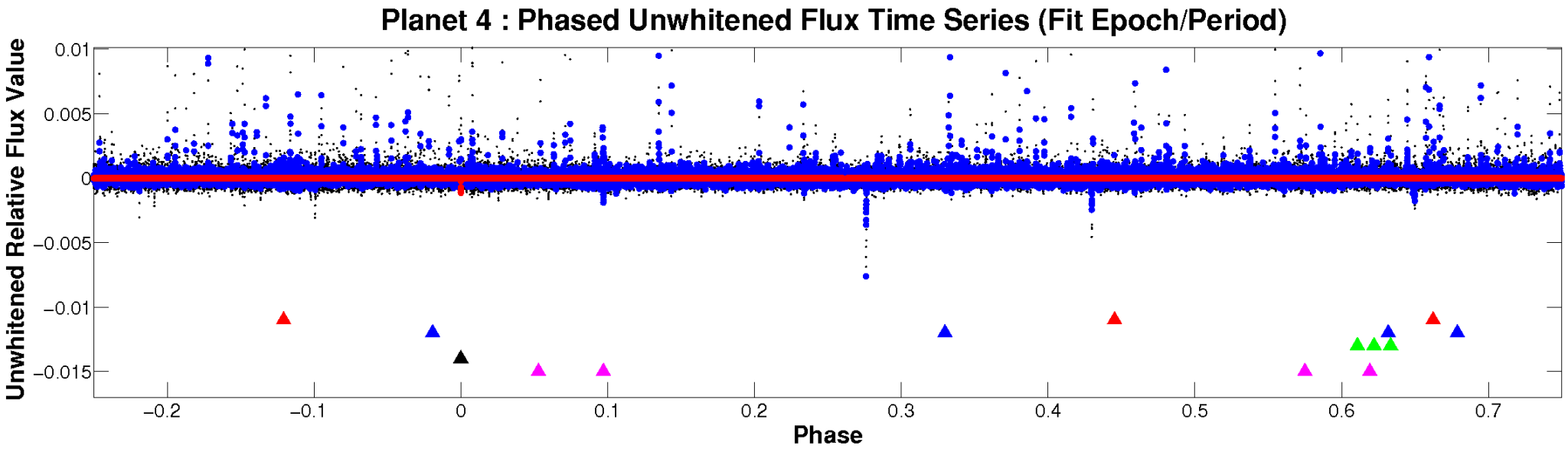
DV Odd/Even

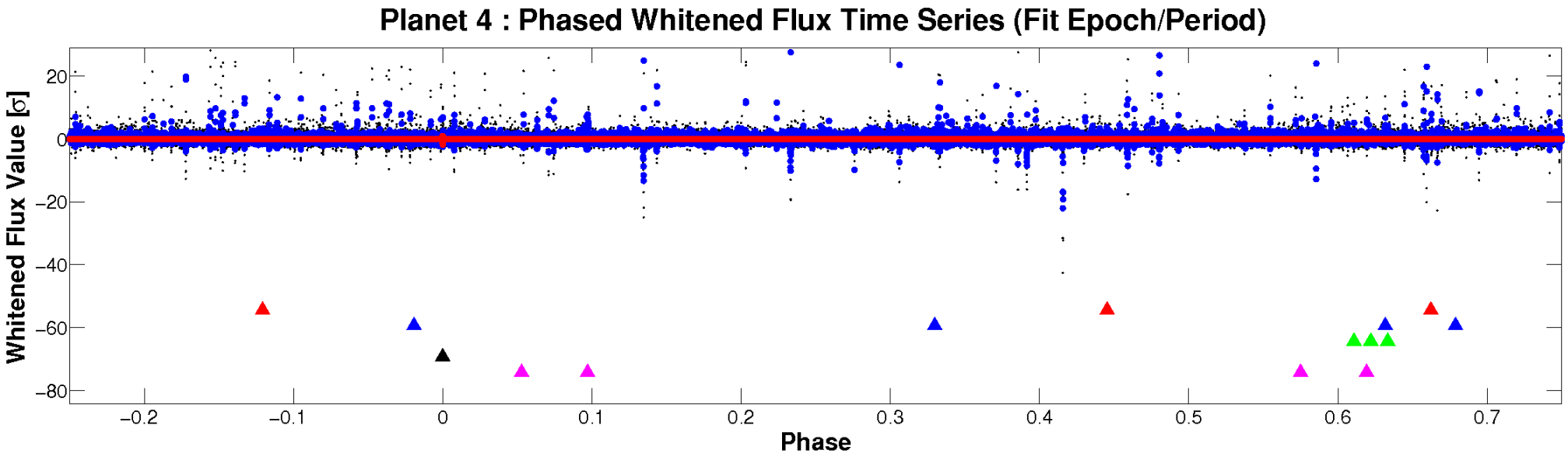

TCE 006549597-04
5.00e-03
4.00e-03
3.00e-03
2.00e-03
1.00e-03
0.00e+00
-1.00e-03
-2.00e-03
Flux
-0.0004
-0.0003
-0.0002
-0.0001
0
0.0001
0.0002
0.0003
0.0004
Phase
Odd
Even
Model Fit

ALT Odd/Even


TCE 006549597-04
4.00e-03
3.00e-03
2.00e-03
1.00e-03
0.00e+00
-1.00e-03
-2.00e-03
-3.00e-03
Flux
-0.0004
-0.0003
-0.0002
-0.0001
0
0.0001
0.0002
0.0003
0.0004
Phase
Odd
Even
Model Fit

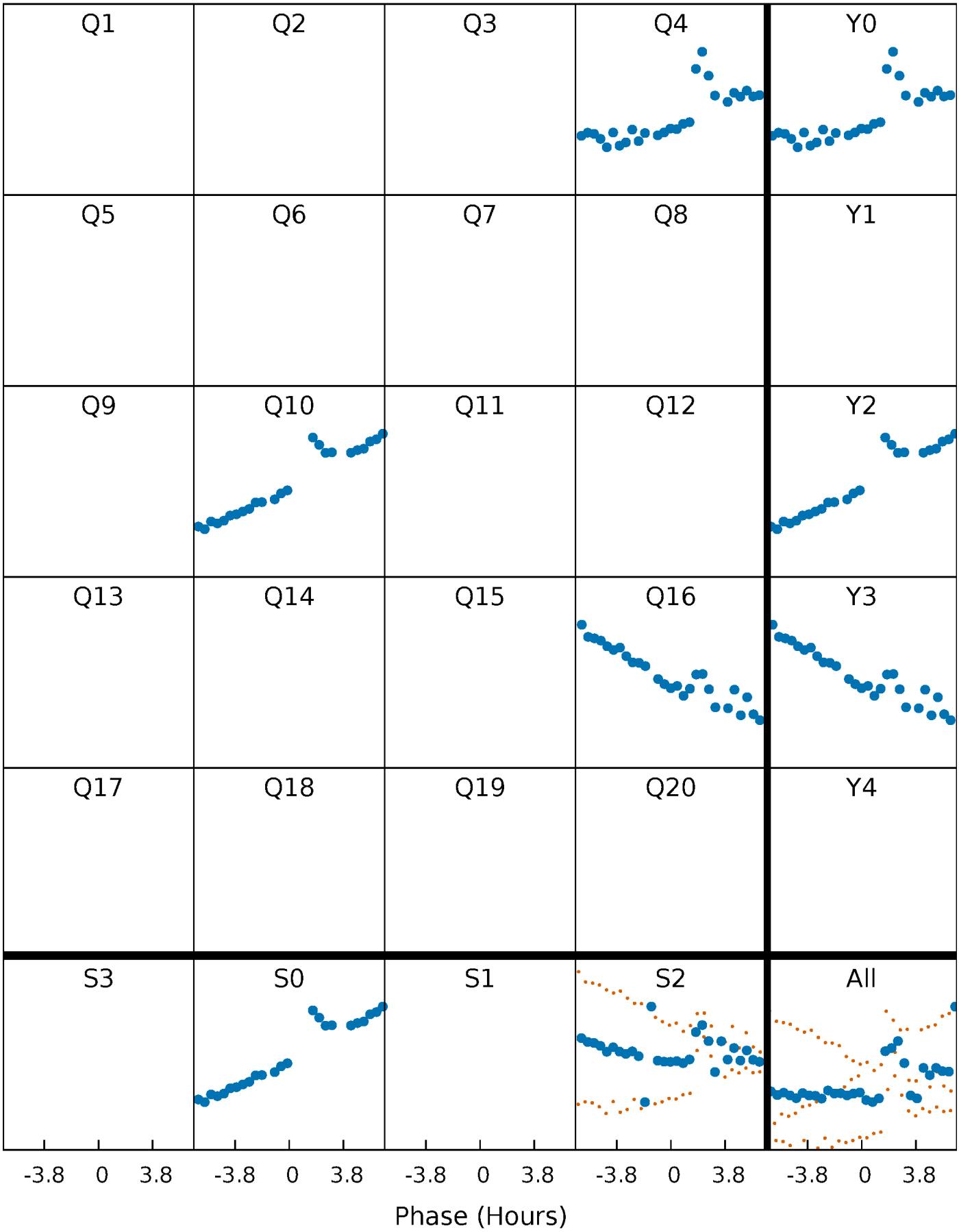
Non-Whitened Vs. Whitened Light Curve





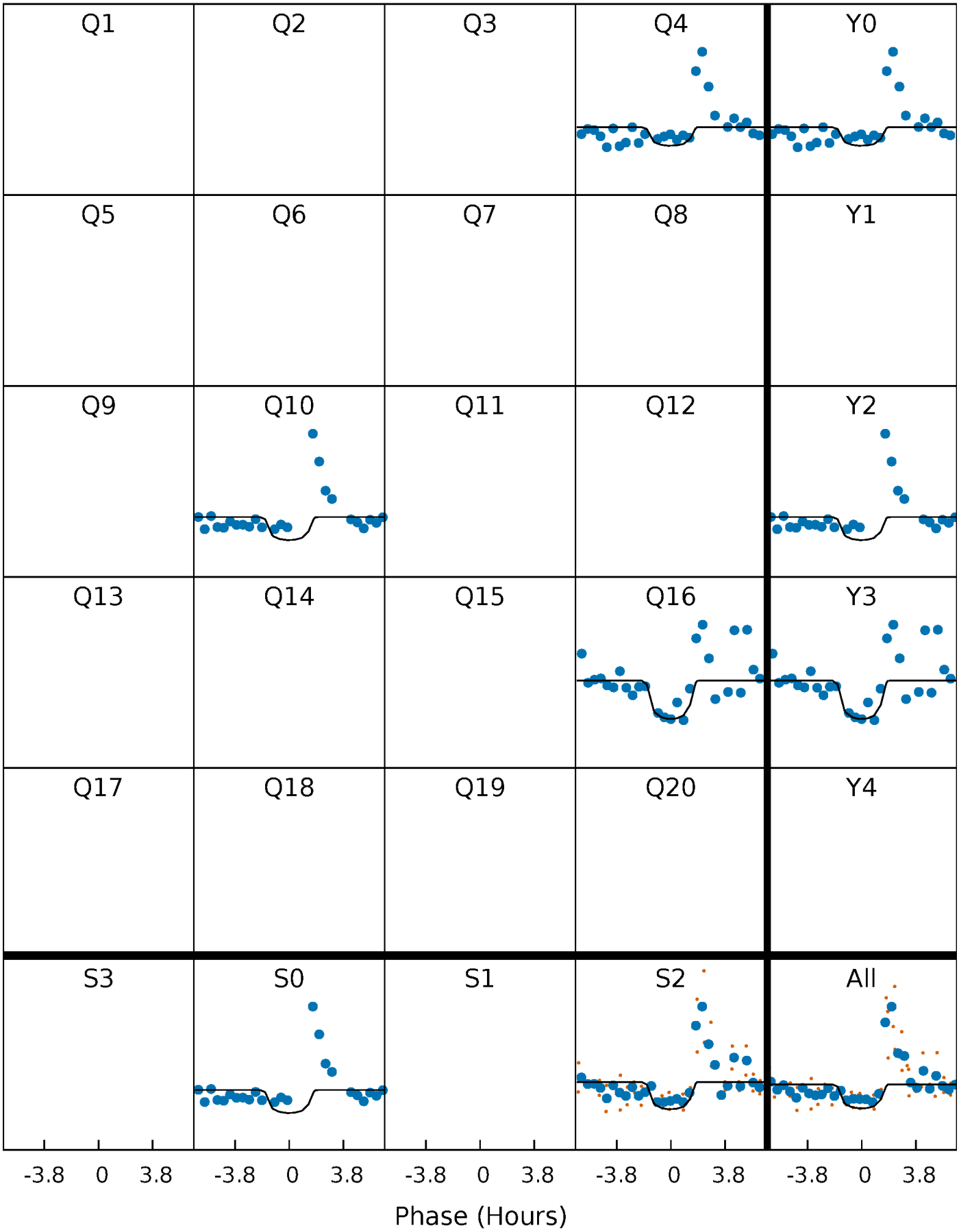
PDC Quarter-Phased Transit Curves

TCE 006549597-04 P=579.547481 Days T_0=387.118423 (BKJD)



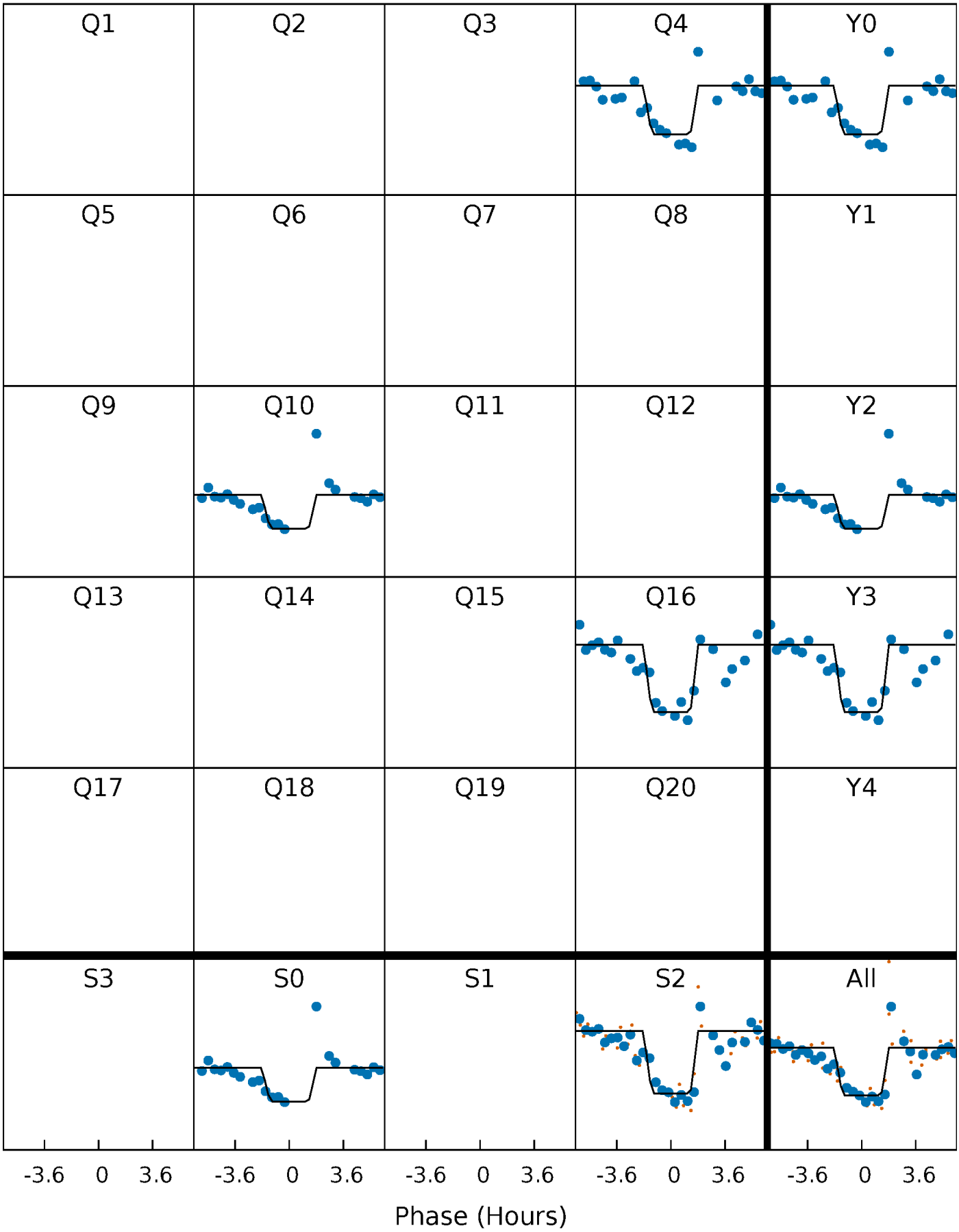
DV Quarter-Phased Transit Curves

TCE 006549597-04 P=579.547481 Days T_0=387.118423 (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

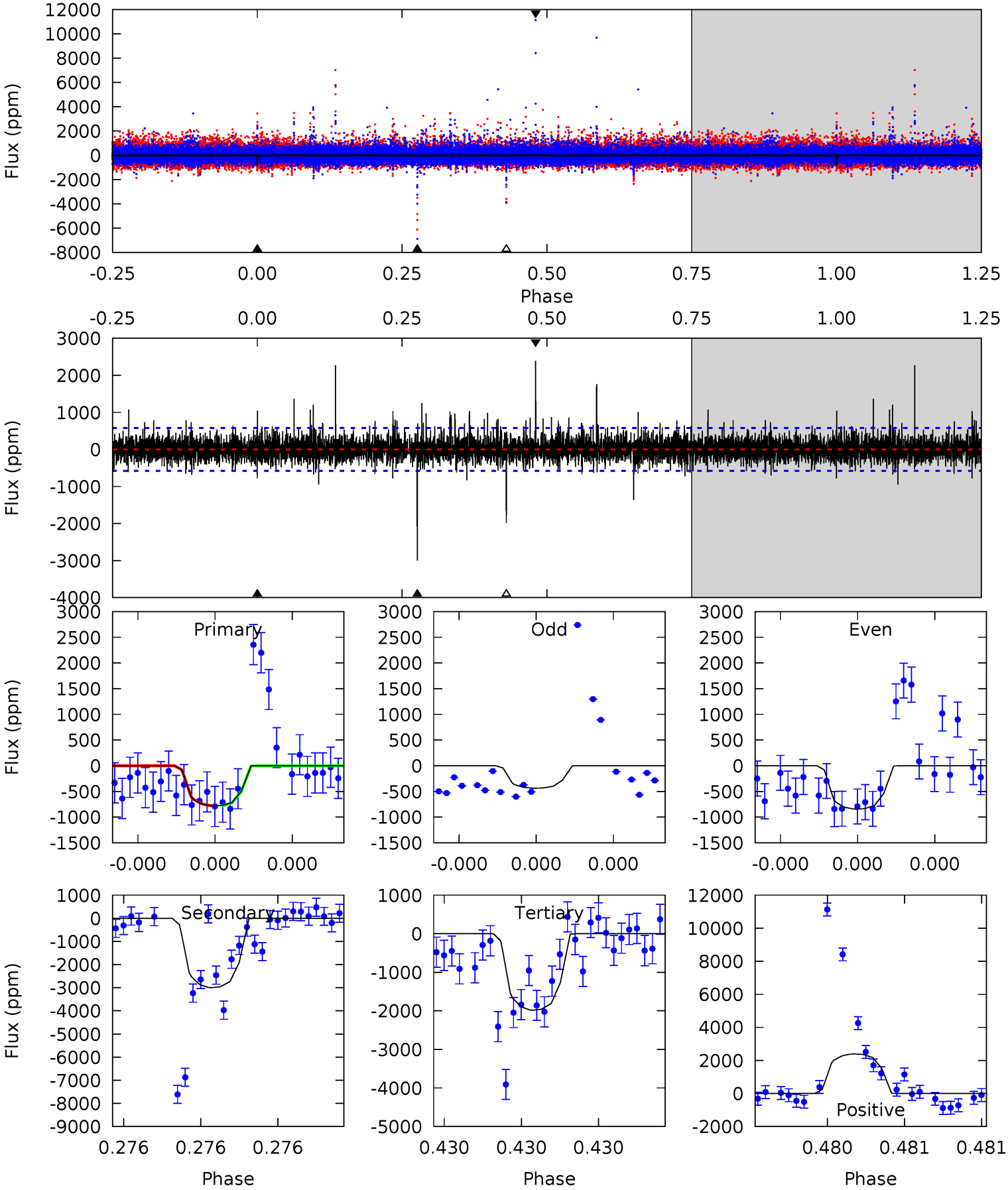
TCE 006549597-04 P=579.543440 Days T_0=387.118839 (BKJD)



DV Model-Shift Uniqueness Test

006549597-04, P = 579.547481 Days, E = 387.118423 Days

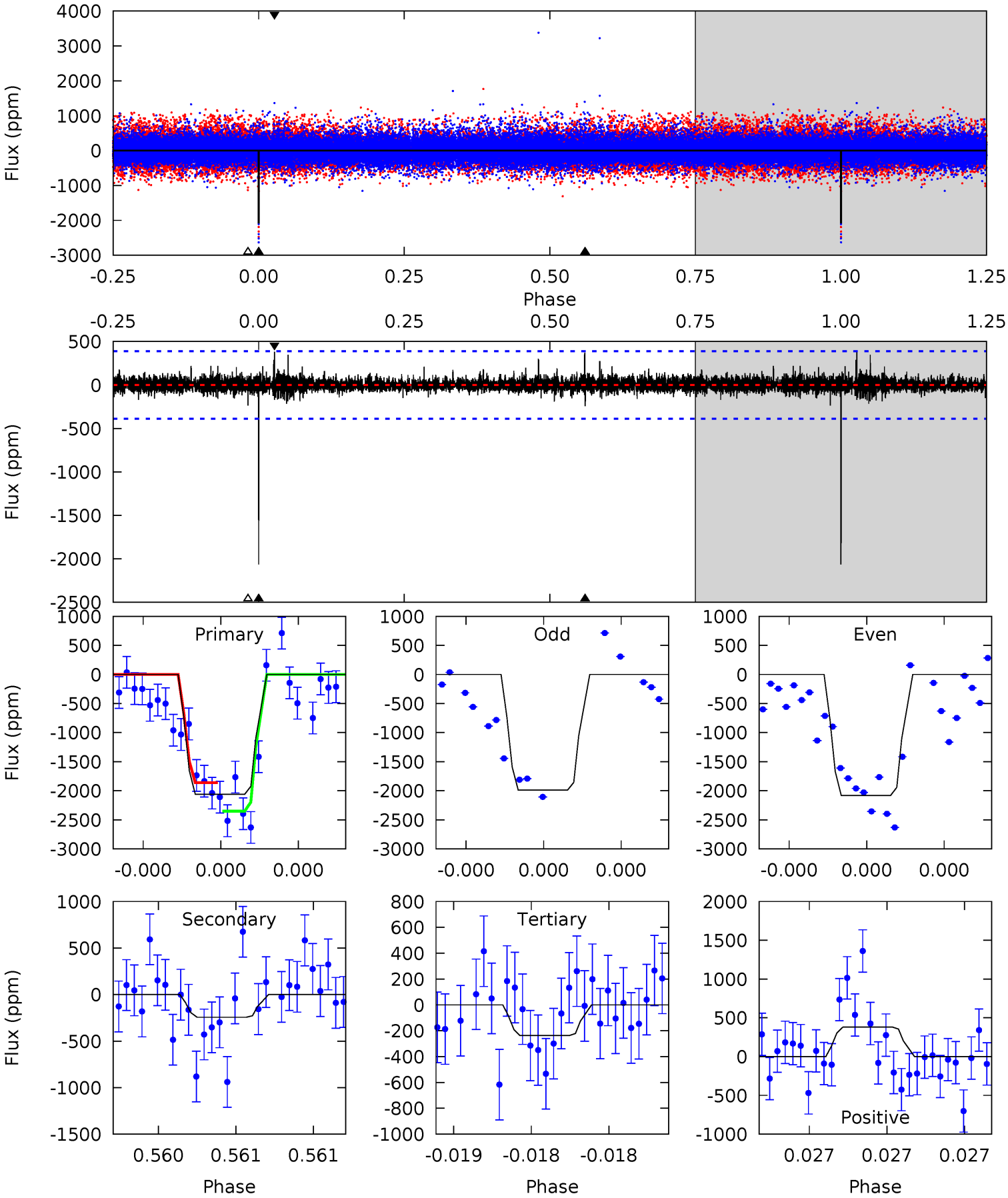
Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.67	29.5	19.5	23.5	5.67	3.63	2.08	-11.8	-15.8	9.98	5.97	0.95	1.05	0.44	0.00



Alt Model-Shift Uniqueness Test

006549597-04, P = 579.543440 Days, E = 387.118839 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
30.3	3.58	3.48	5.59	5.70	3.67	0.64	26.8	24.7	0.10	-2.01	0.51	1.03	0.16	3.59



Stellar Parameters For KIC 006549597

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	$M(M_\odot)$	$p_\star$ (g·cm^{-3})
	5242^{+157}_{-157}	$4.556^{+0.088}_{-0.072}$	$-0.540^{+0.350}_{-0.300}$	$0.722^{+0.089}_{-0.081}$	$0.684^{+0.095}_{-0.038}$	$2.561^{+0.947}_{-0.580}$
	+3%/-3%	+2%/-2%	+65%/-56%	+12%/-11%	+14%/-6%	+37%/-23%
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 006549597-04 / KOI

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-3002±102	$2.92^{+2.11}_{-1.84}$	250^{+11}_{-10}	6349^{+5927}_{-1433}	$290527^{+1773463}_{-193760}$
Alt.	-244±68	$3.77^{+2.03}_{-1.96}$	251^{+11}_{-11}	3479^{+1040}_{-446}	14184^{+48432}_{-8596}

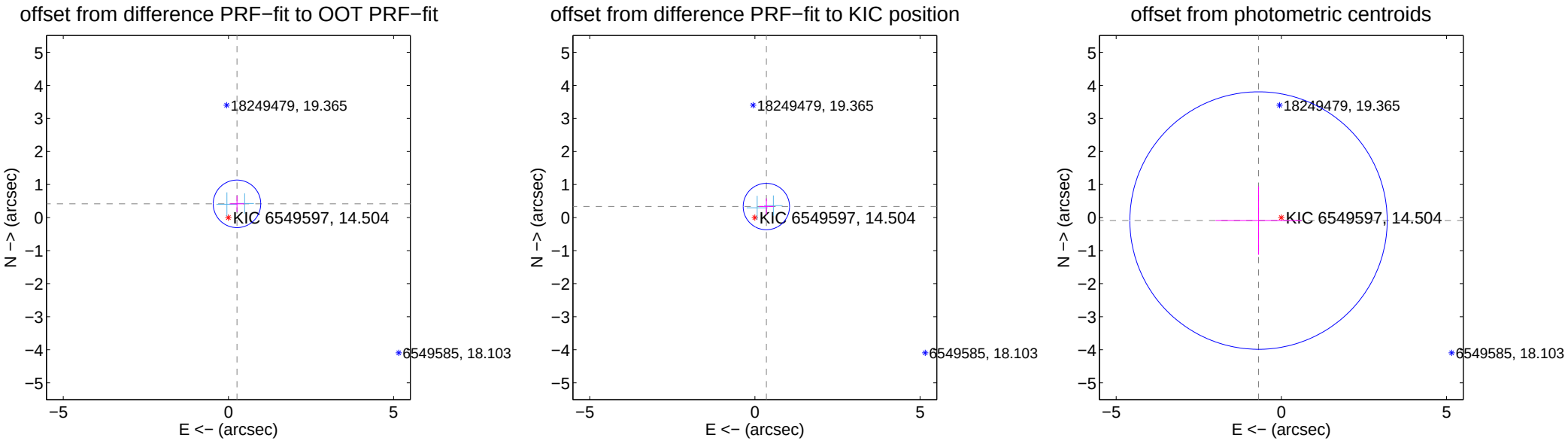
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

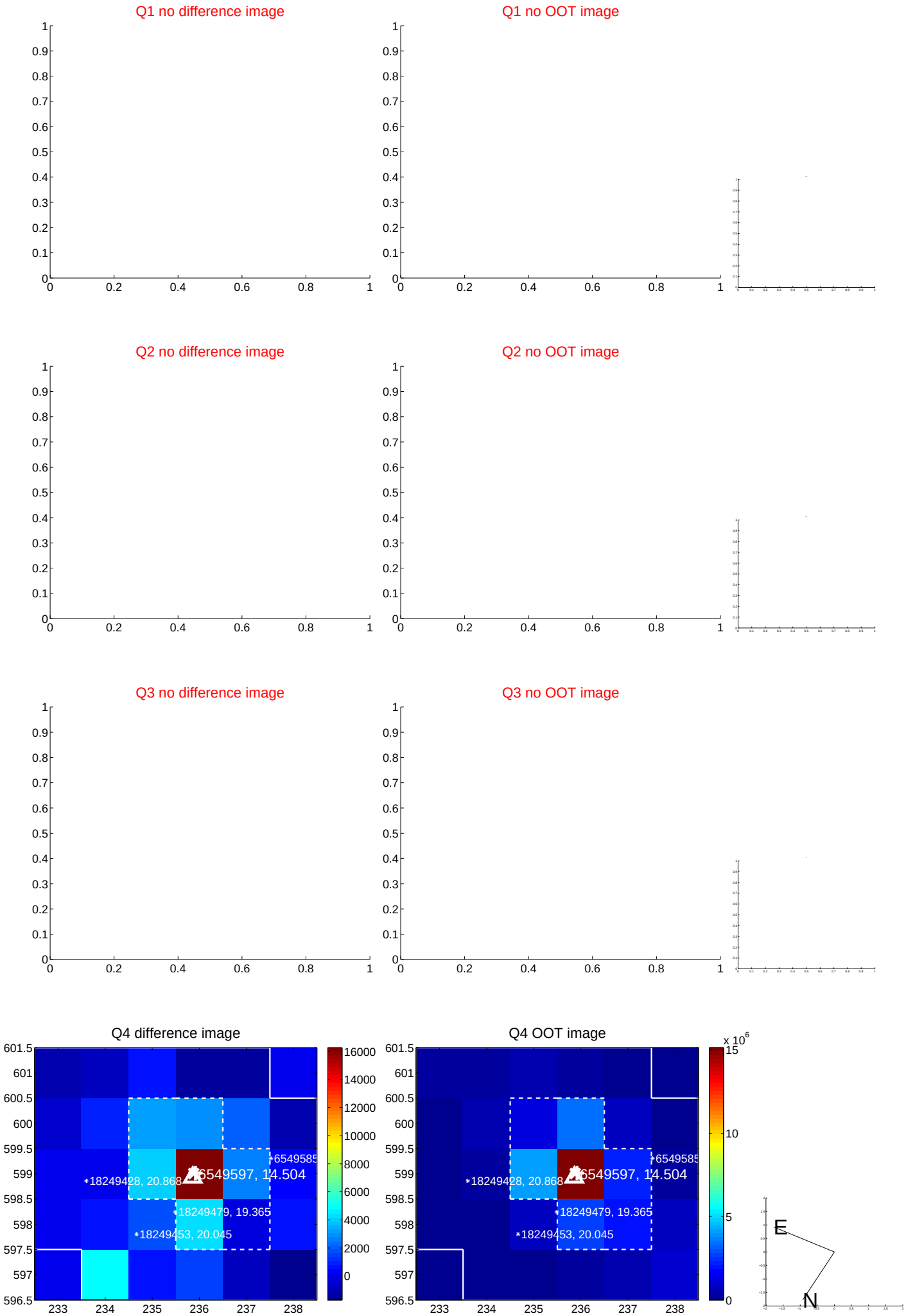
Supplemental centroid analysis for 006549597-04. Kepler magnitude: 14.50. Transit SNR 6.75
There are 2 quarters with good PRF difference image offsets
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.490 ± 0.240	2.04	-0.259 ± 0.222	0.416 ± 0.247
PRF-fit source offset from KIC position	0.482 ± 0.234	2.06	-0.347 ± 0.222	0.334 ± 0.247
photometric centroid source offset	0.70 ± 1.30	0.54	0.69 ± 1.30	-0.09 ± 1.03

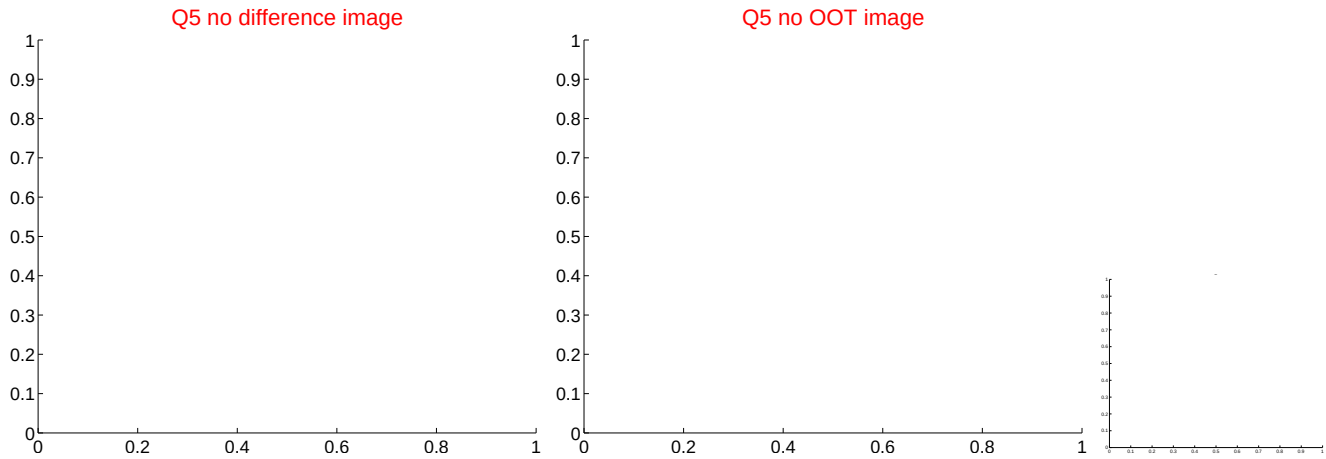


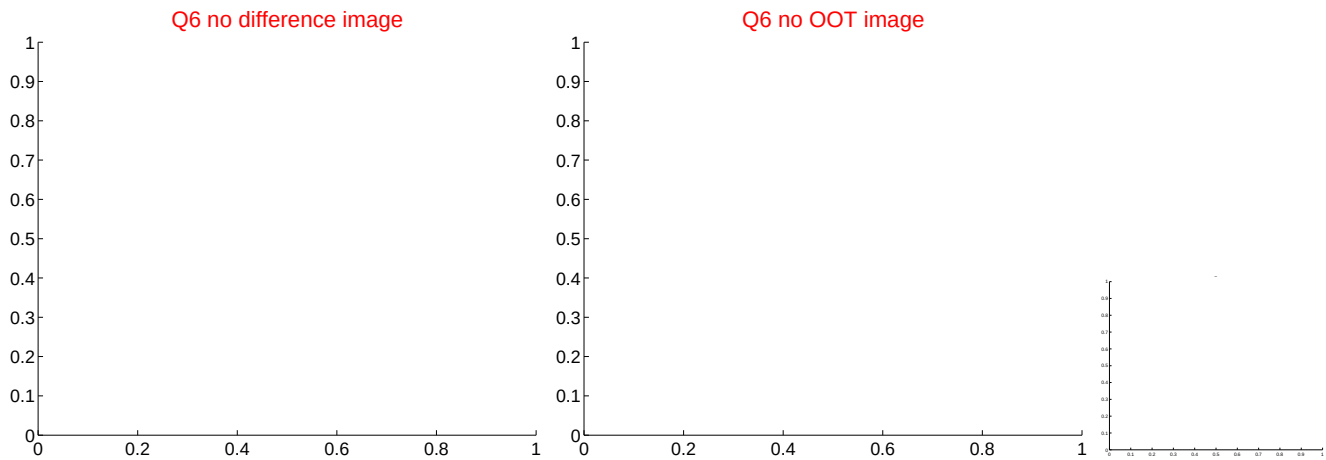
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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

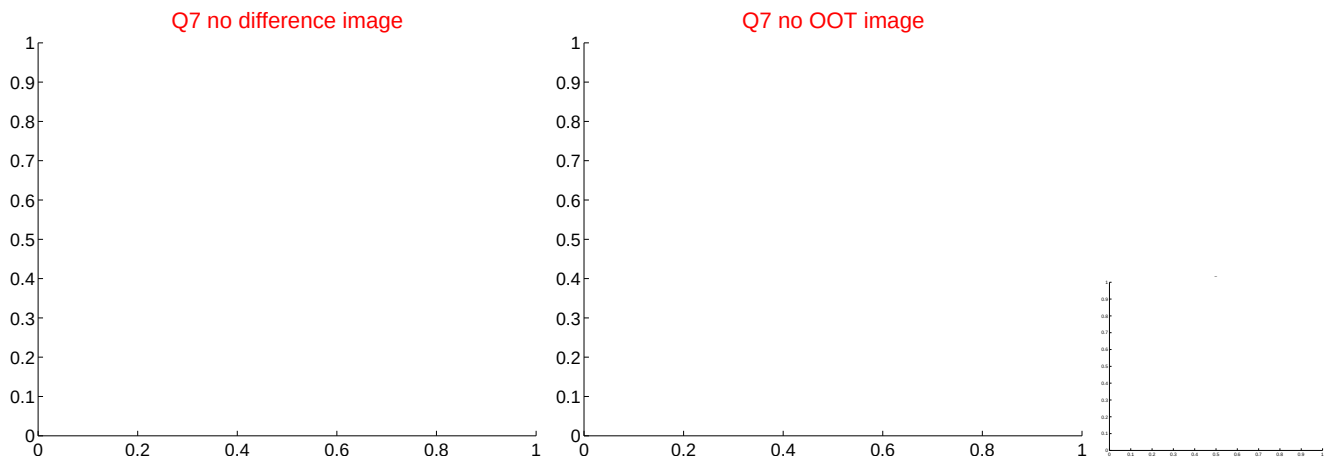
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

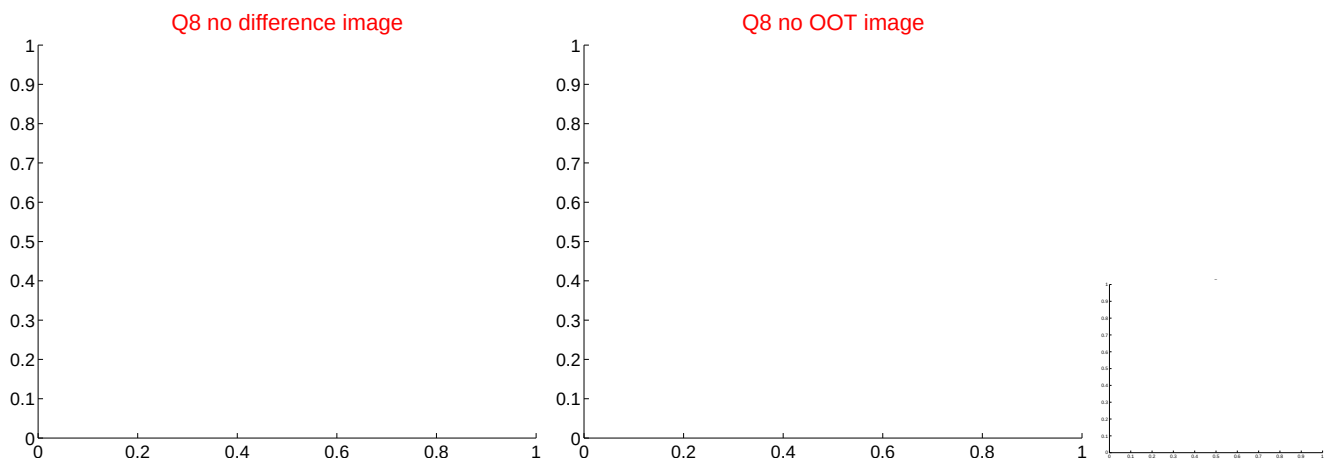


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

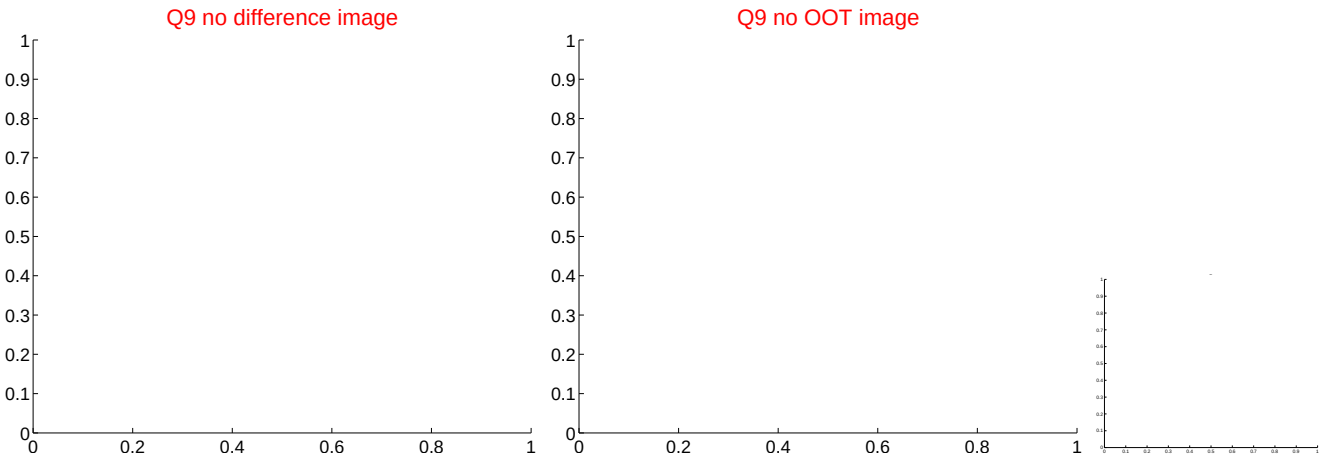


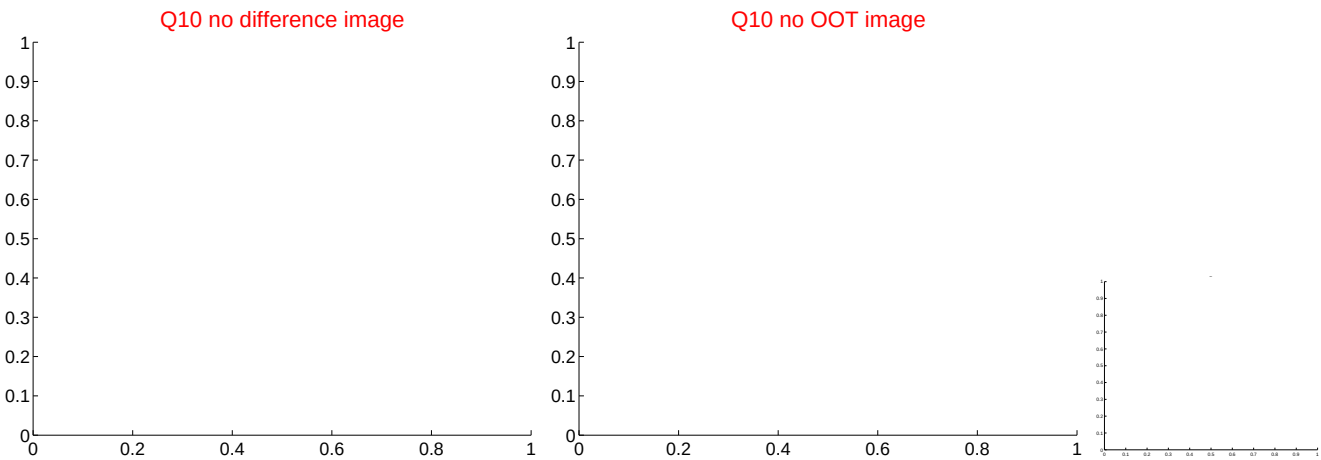


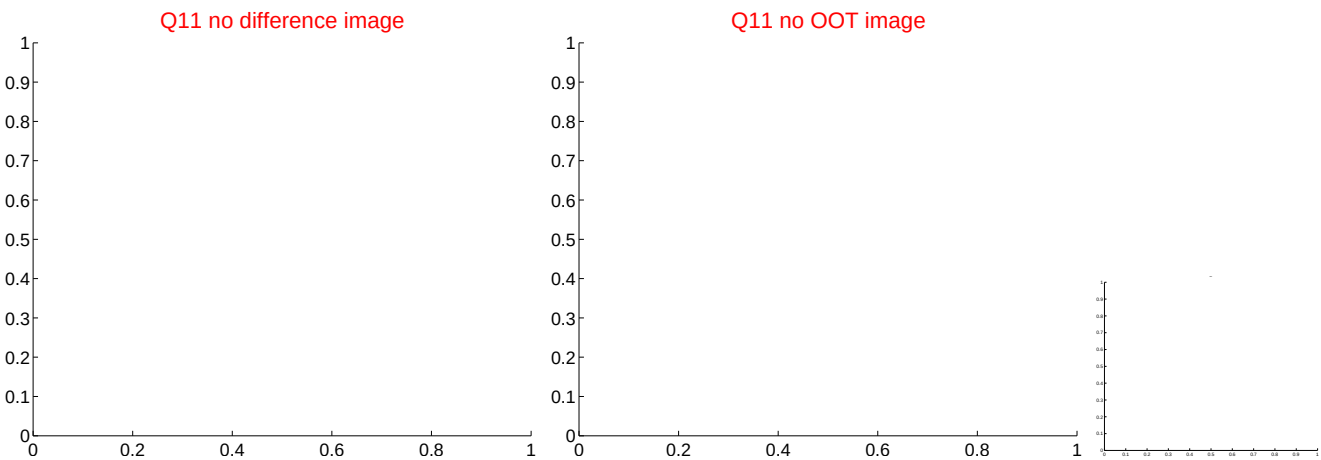


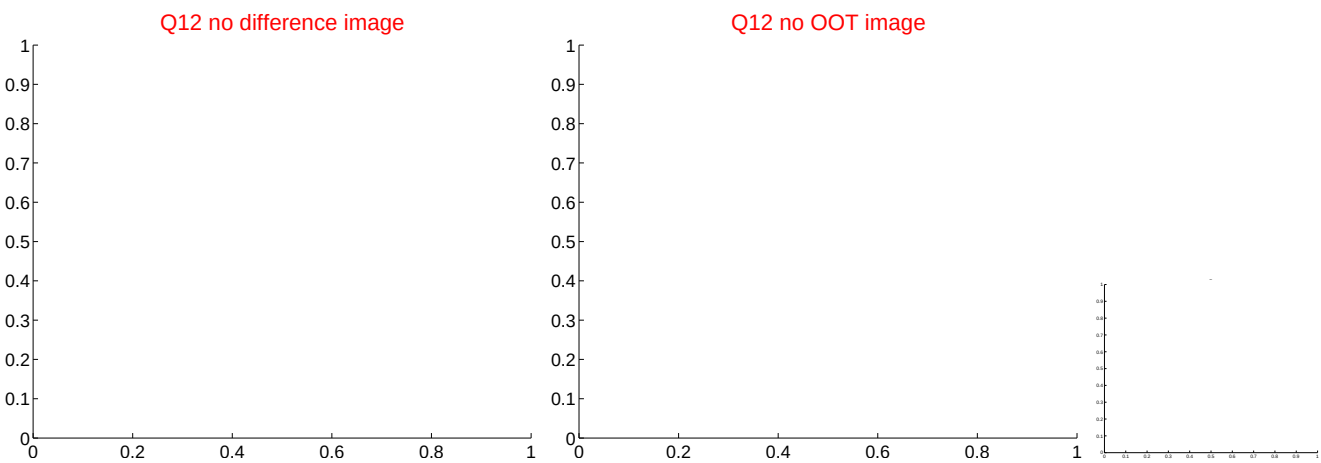


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

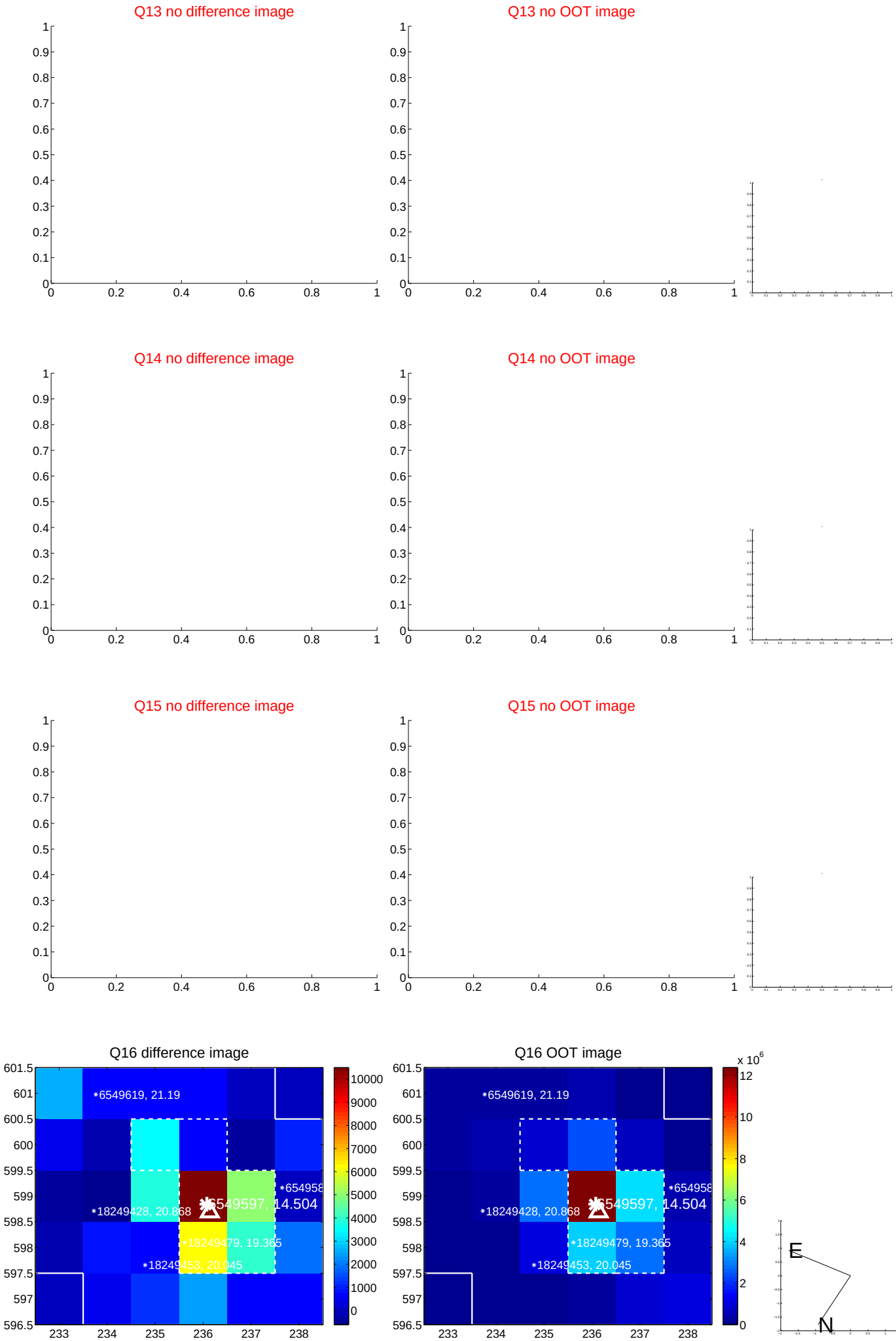




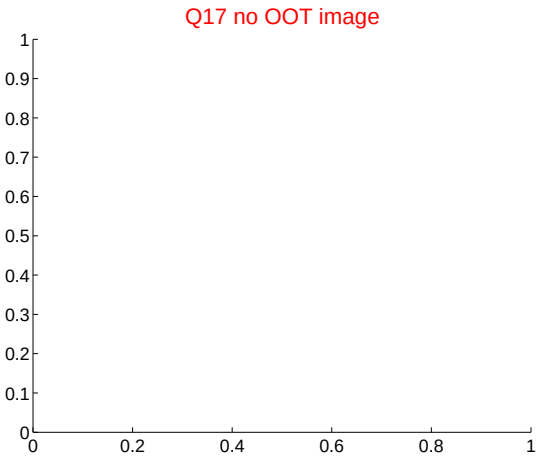


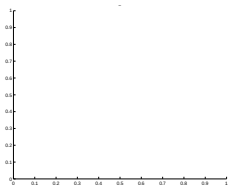


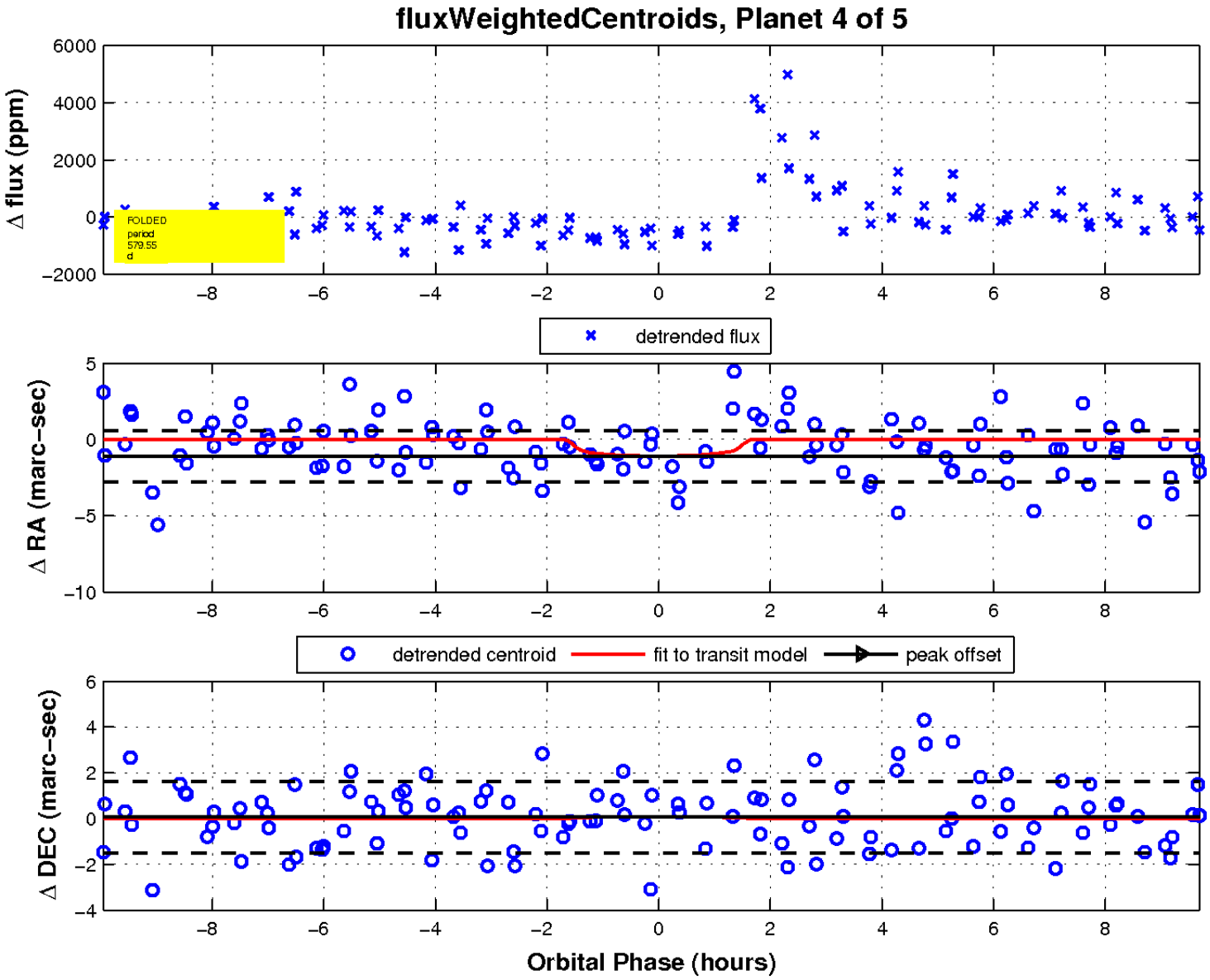
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



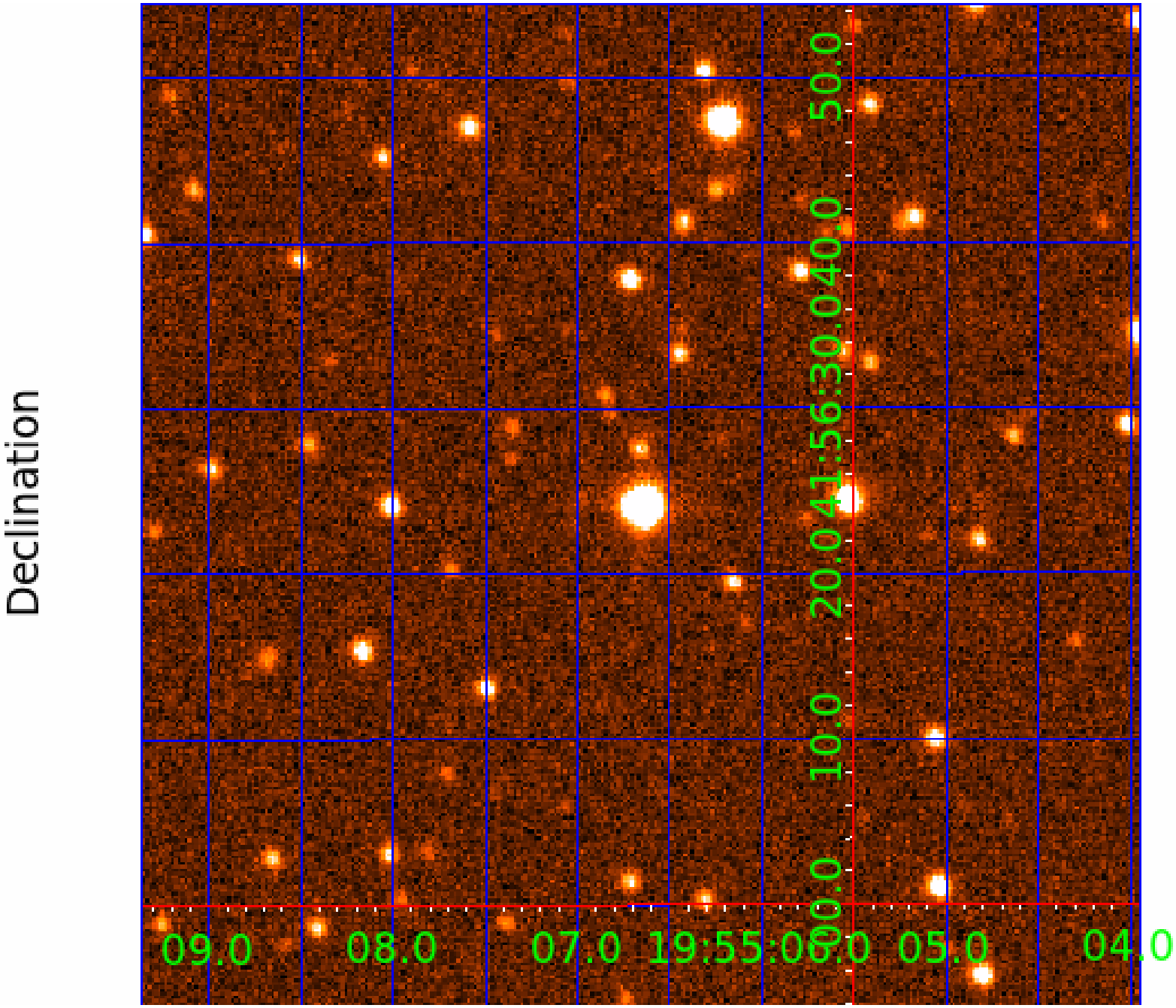
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.







UKIRT Image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08.0
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05.0
04.0

KIC 006549597

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 ($S_\oplus$)
006549597-01	OBS	No	453.801881	317.161486	1028.9	4.413	13.6	6.2	0.72	5242	2.37	0.34
006549597-02	OBS	No	377.273262	200.989738	698.4	5.512	13.1	4.7	0.72	5242	1.95	0.43
006549597-03	OBS	No	572.990151	174.651734	1142.7	4.307	12.8	7.3	0.72	5242	2.45	0.25
006549597-04	OBS	No	579.547481	387.118423	1139.7	3.349	10.2	6.7	0.72	5242	2.72	0.24
006549597-05	OBS	No	302.585009	417.774367	1139.6	2.915	10.4	6.5	0.72	5242	2.60	0.58

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006549597-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
006549597-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
006549597-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006549597-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006549597-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS

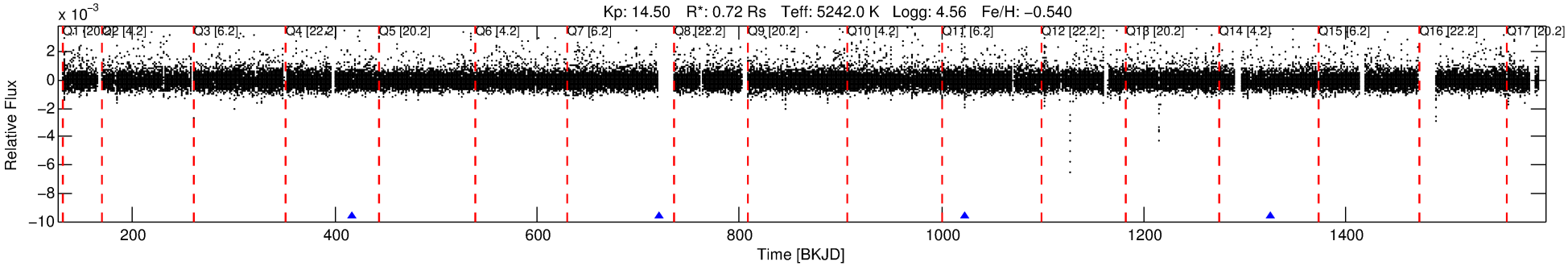
Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.
See `http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col` for comment definitions.

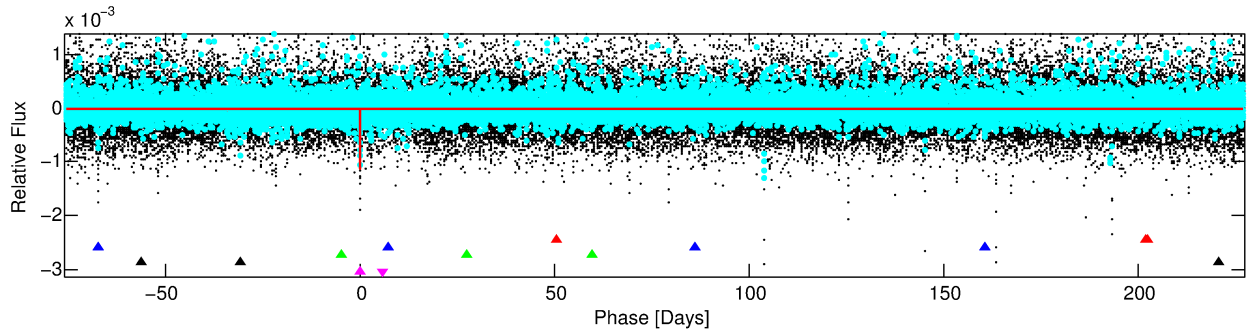
Ephemeris Match Information For 006549597-05

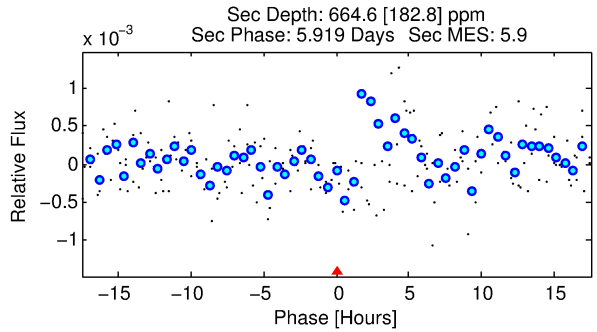
No Significant Match Found

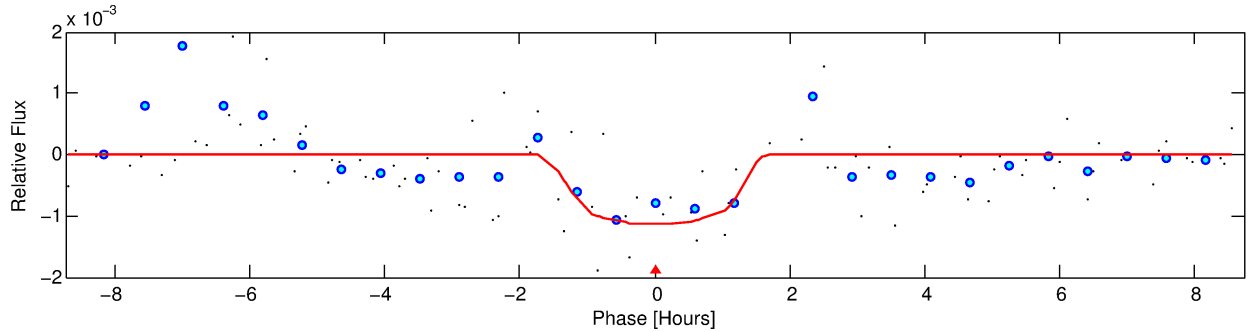
DV One-Page Summary

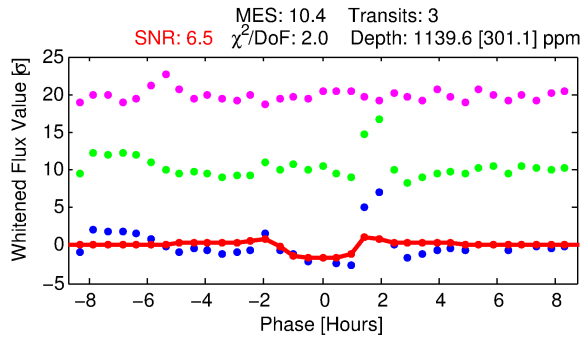
KIC: 6549597 Candidate: 5 of 5 Period: 302.585 d

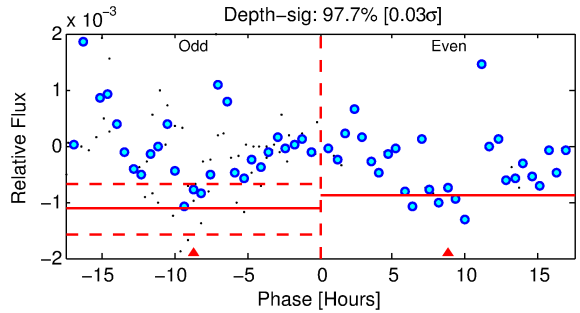


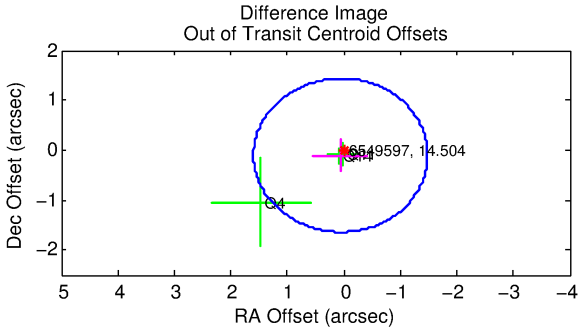












DV Fit Results:

Period = 302.58501 [0.00510] d
Epoch = 417.7744 [0.0101] BKJD
Rp/R* = 0.0330 [0.0597]
a/R* = 604.06 [4347.80]
b = 0.70 [5.37]

Seff = 0.58 [0.12]
Teq = 223 [11] K
Rp = 2.60 [4.72] Re
a = 0.7774 [0.0827] AU

Ag = 32664.26 [118690.18] [0.28σ]
Teffp = 4632 [4206] K [1.05σ]

DV Diagnostic Results:

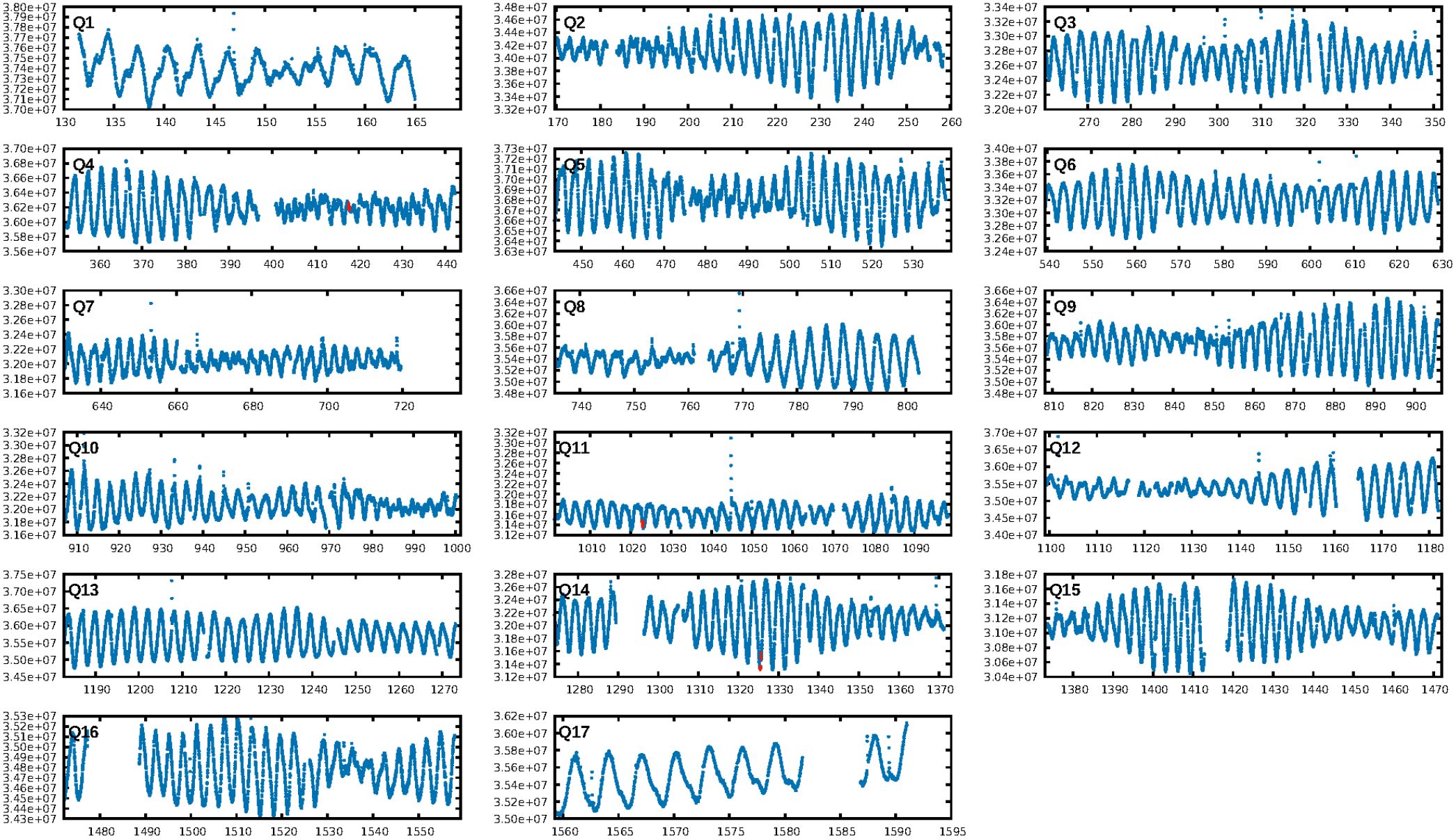
ShortPeriod−sig: N/A
LongPeriod−sig: 100.0% [287.46σ]
ModelChiSquare2−sig: 2.9%
ModelChiSquareGof−sig: 21.9%
Bootstrap−pfa: 9.76e−09
RollingBand−fgt: 1.00 [3/3]
GhostDiagnostic−chr: 0.6295

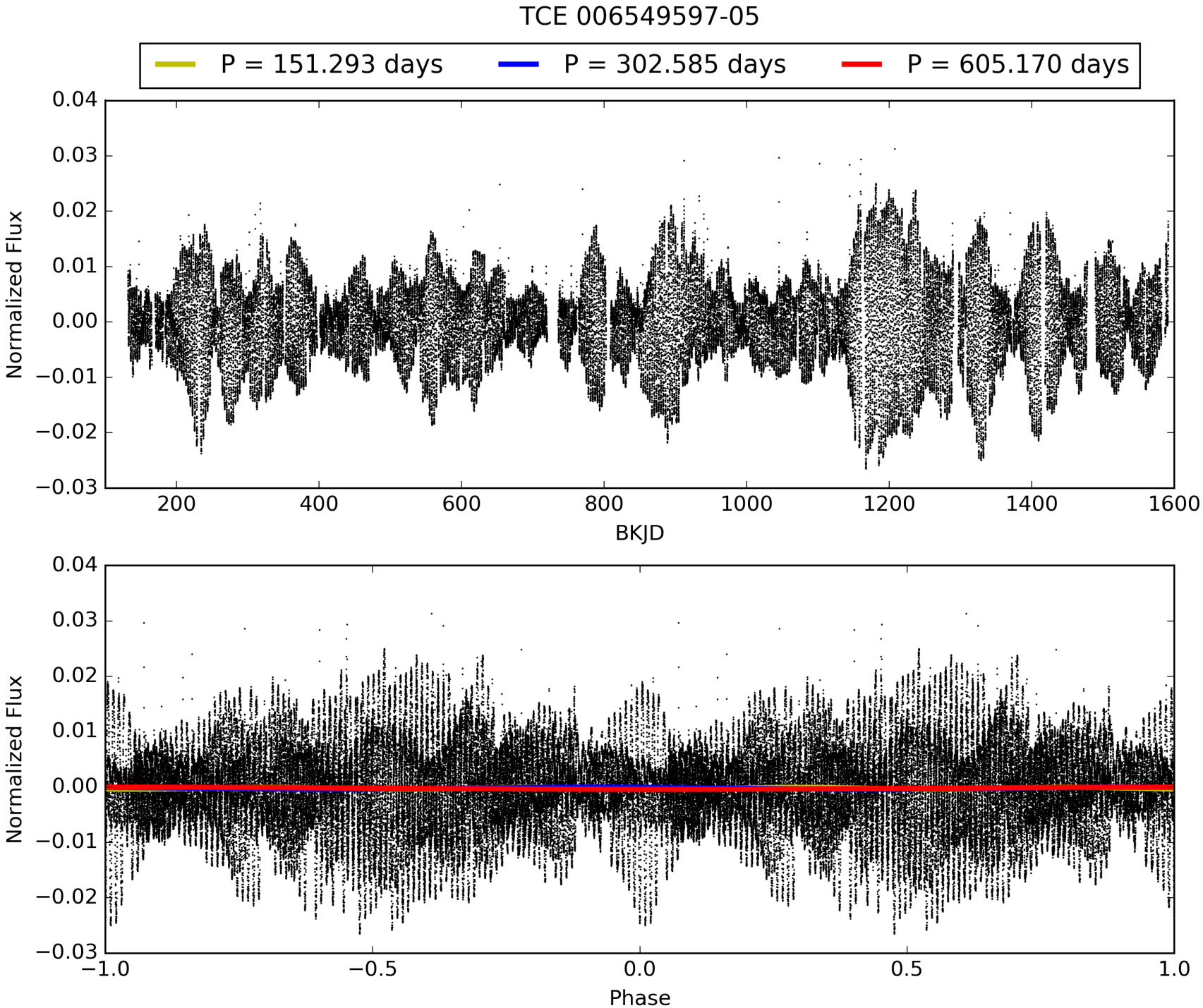
Centroid−sig: 2.8%
Centroid−so: 1.631 arcsec [1.27σ]
OotOffset−rm: 0.118 arcsec [0.23σ]
KicOffset−rm: 0.237 arcsec [0.75σ]
OotOffset−st: 1/1/1/0 [3]
KicOffset−st: 1/1/1/0 [3]
DiffImageQuality−fgm: 0.67 [2/3]
DiffImageOverlap−fno: 1.00 [3/3]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31−Jan−2016 05:28:45 Z

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

TCE 006549597-05, PDC Light Curves

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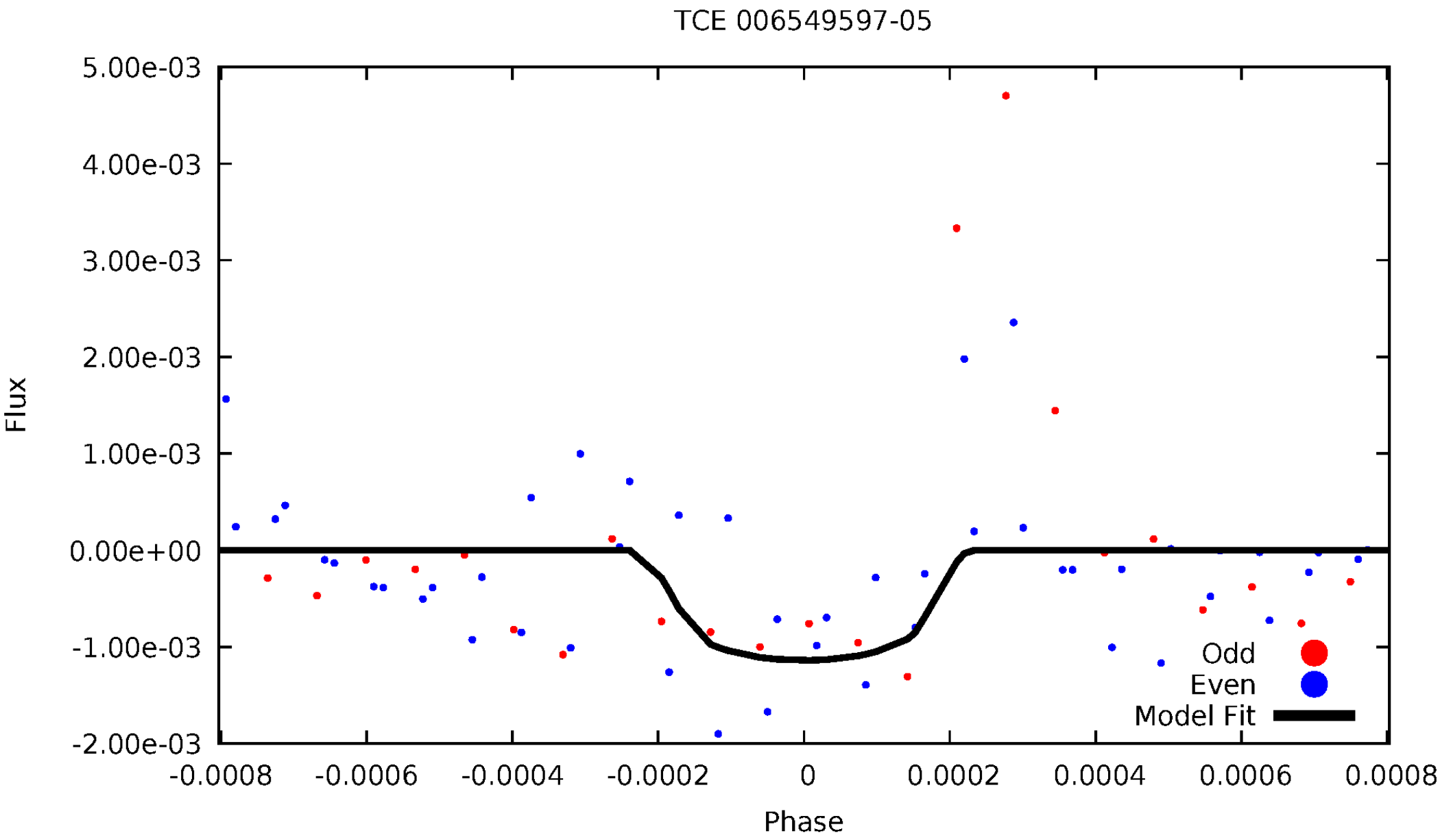
P = 151.293 days
P = 302.585 days
P = 605.170 days
Normalized Flux
BKJD
Phase

DV Odd/Even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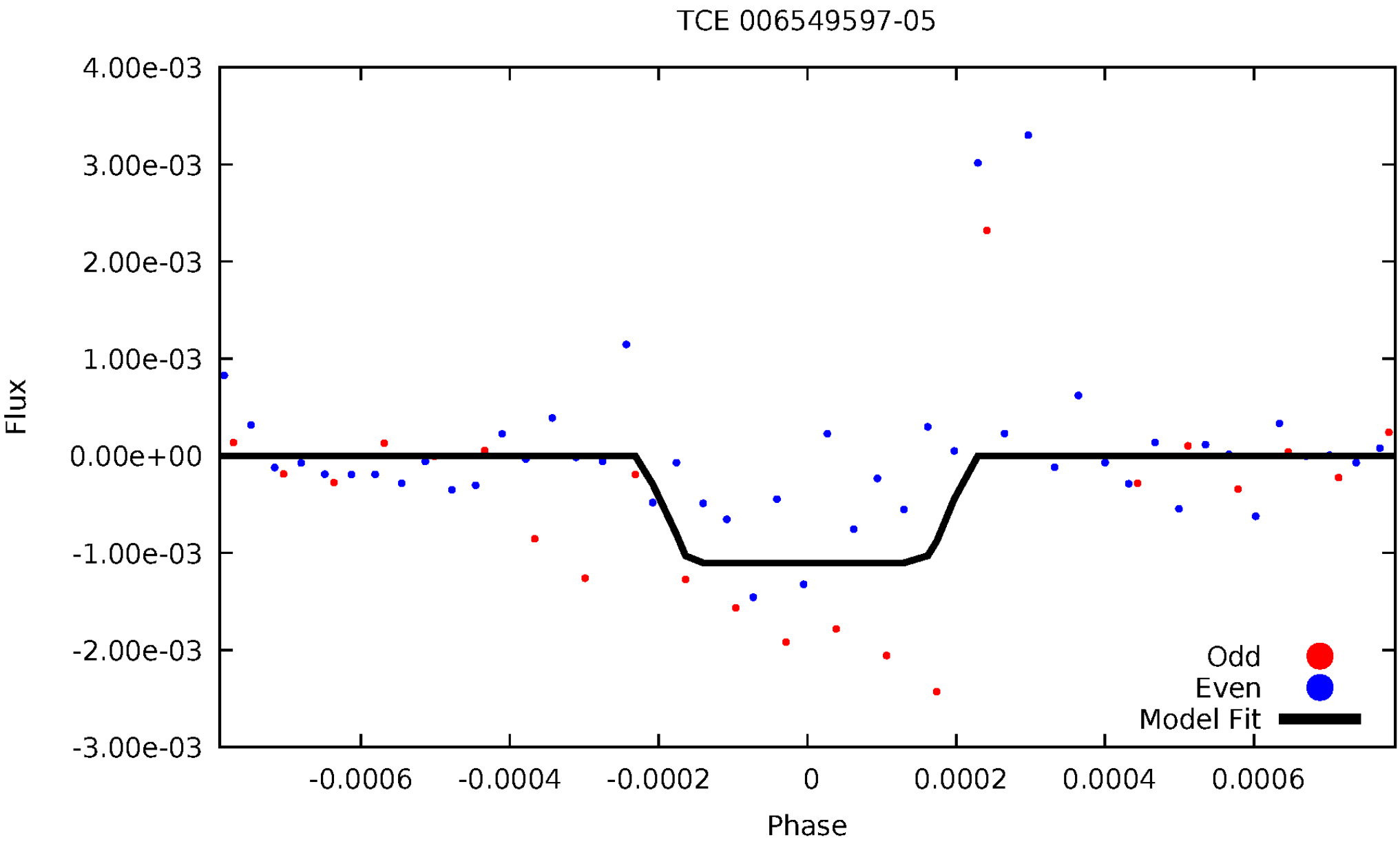
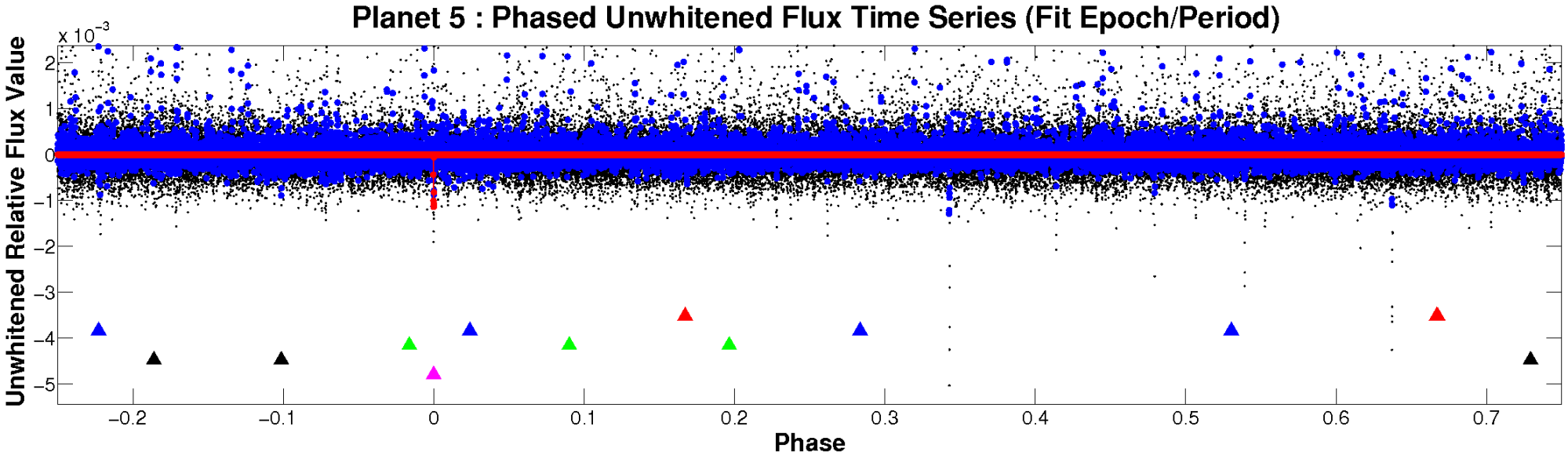
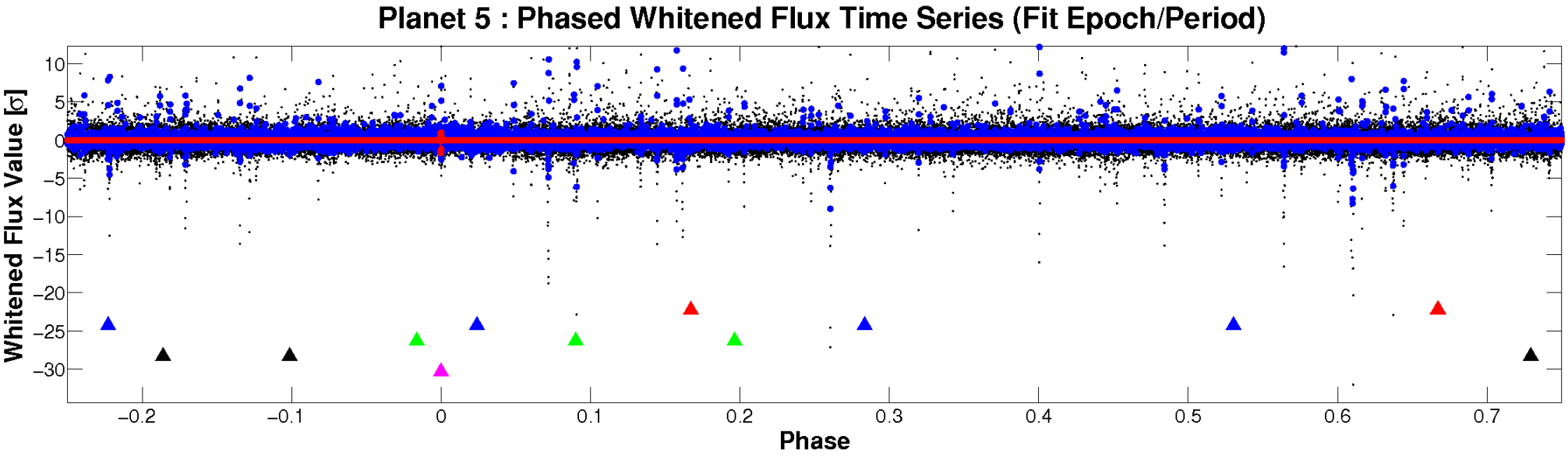
4.00e-03
3.00e-03
2.00e-03
1.00e-03
0.00e+00
-1.00e-03
-2.00e-03
Flux
-0.0008
-0.0006
-0.0004
-0.0002
0
0.0002
0.0004
0.0006
0.0008
Phase
Odd
Even
Model Fit

ALT Odd/Even


TCE 006549597-05
4.00e-03
3.00e-03
2.00e-03
1.00e-03
0.00e+00
-1.00e-03
-2.00e-03
-3.00e-03
Flux
-0.0006
-0.0004
-0.0002
0
0.0002
0.0004
0.0006
Phase
Odd
Even
Model Fit

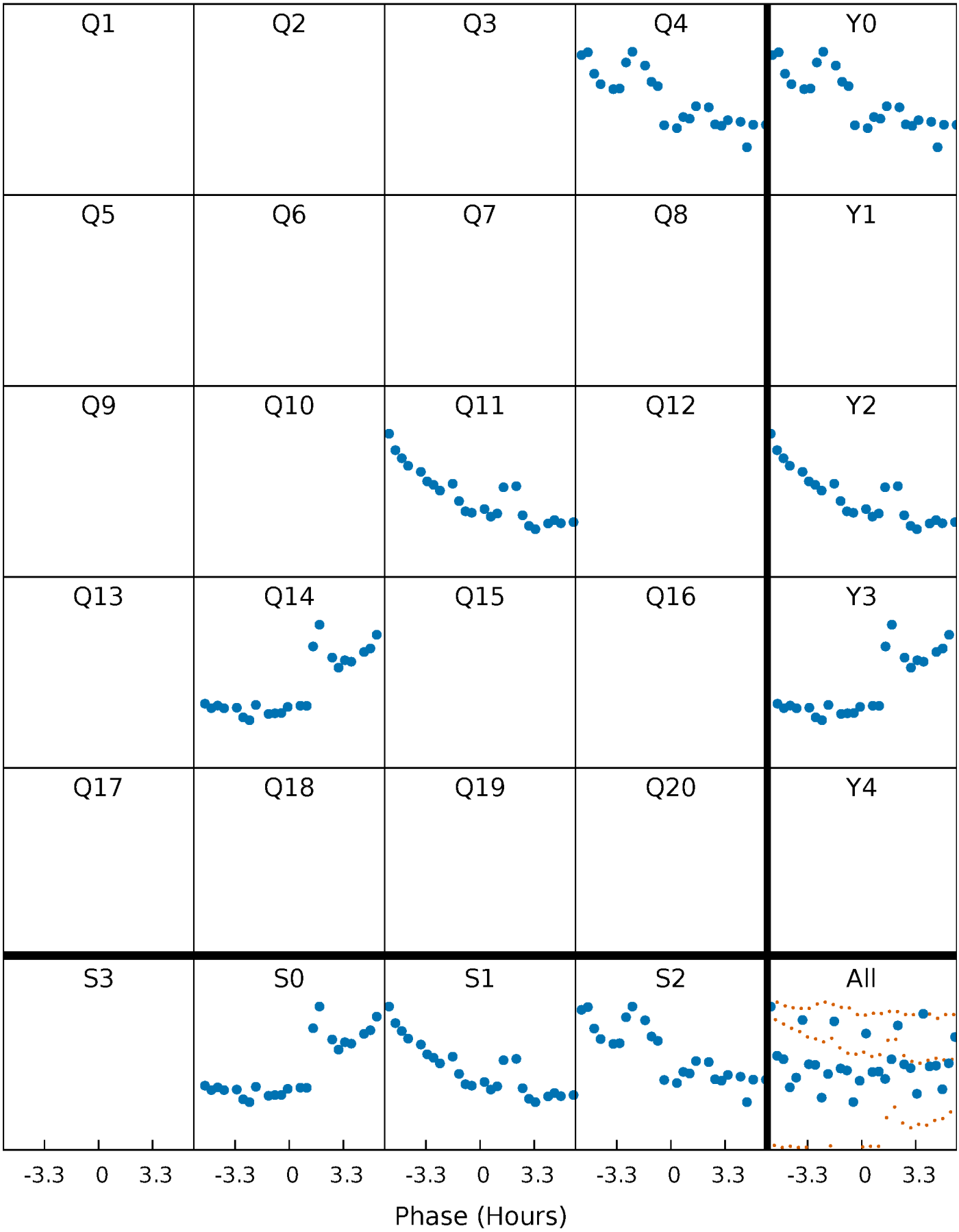
Non-Whitened Vs. Whitened Light Curve





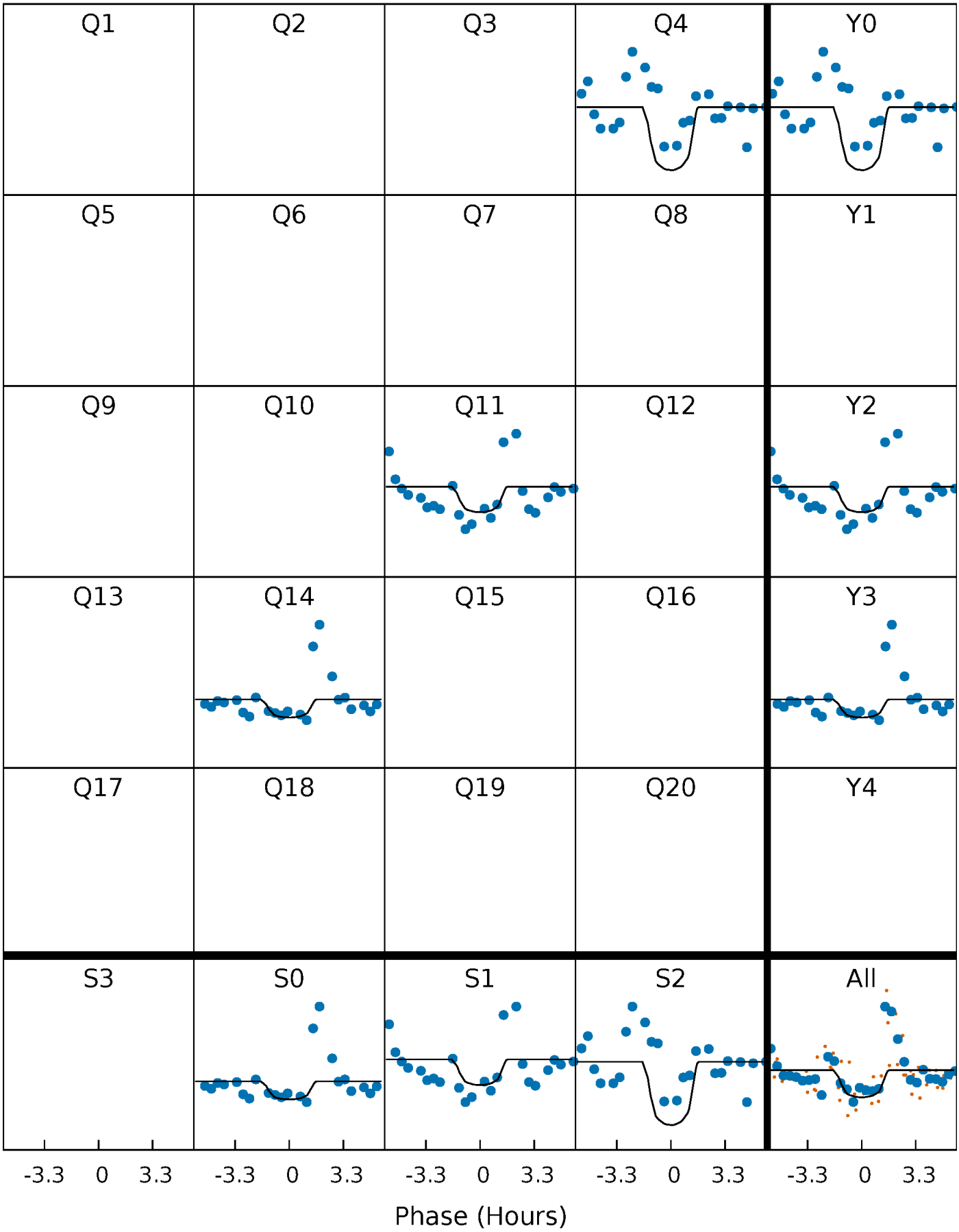
PDC Quarter-Phased Transit Curves

TCE 006549597-05 P=302.585009 Days T_0=417.774367 (BKJD)



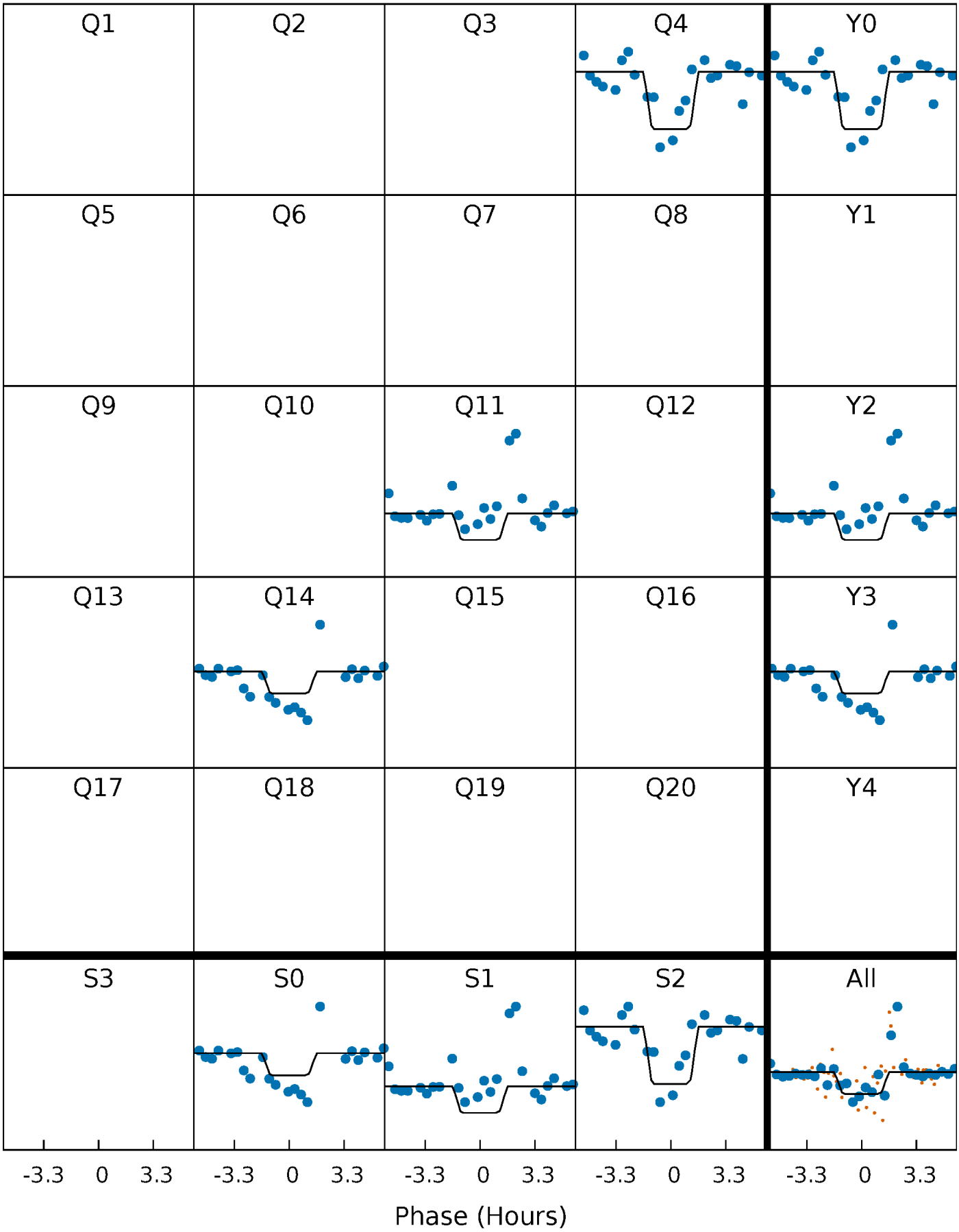
DV Quarter-Phased Transit Curves

TCE 006549597-05 P=302.585009 Days T_0=417.774367 (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

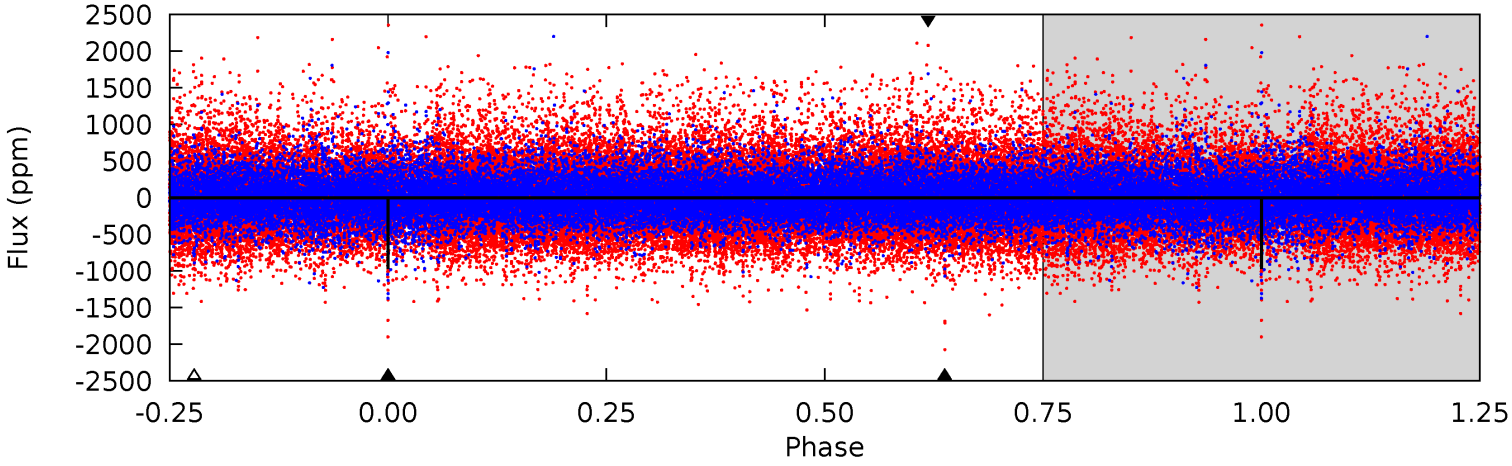
TCE 006549597-05 P=302.578172 Days T_0=417.785266 (BKJD)

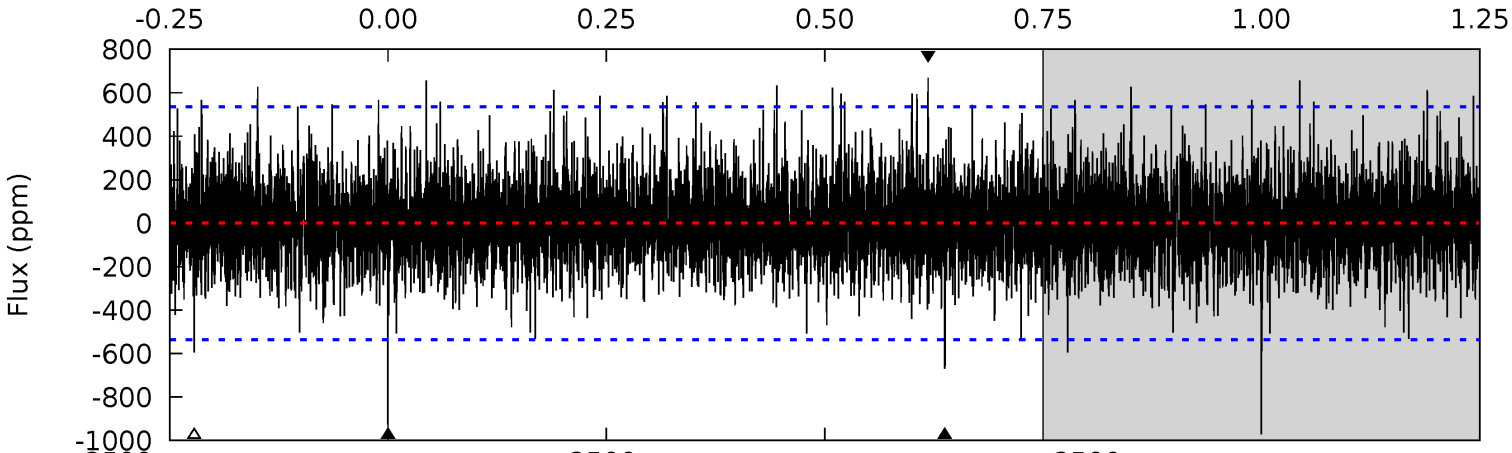


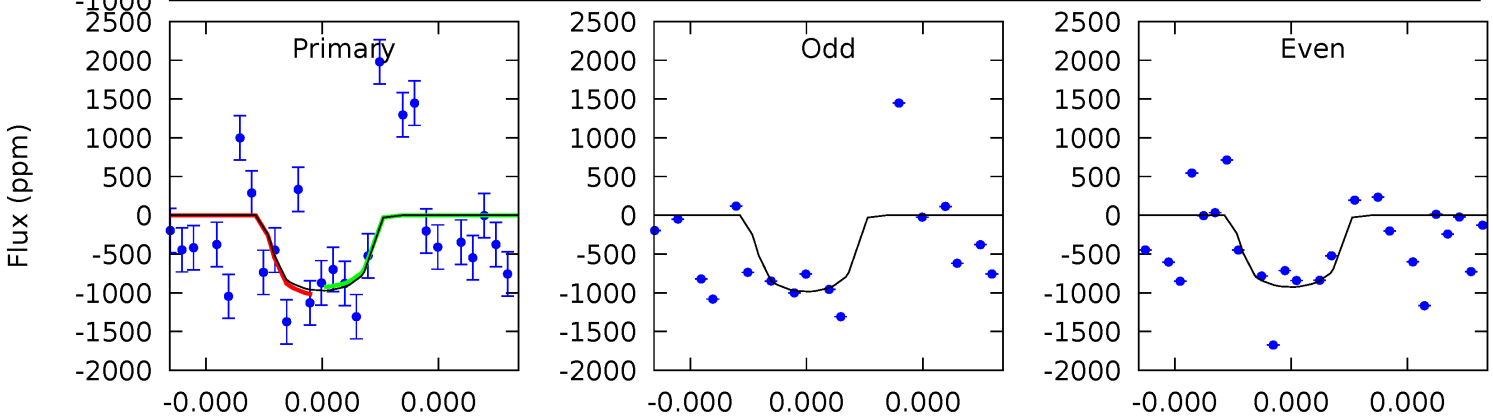
DV Model-Shift Uniqueness Test

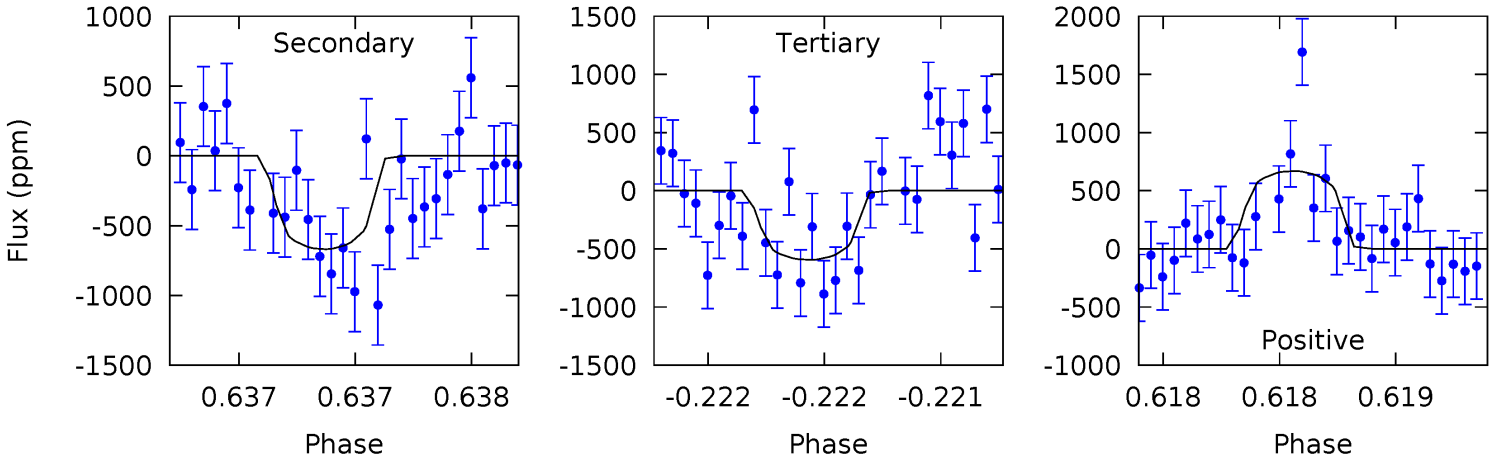
006549597-05, P = 302.585009 Days, E = 115.189358 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.1	7.00	6.21	7.00	5.60	3.53	1.56	3.94	3.15	0.79	0.00	0.28	0.96	0.41	0.49





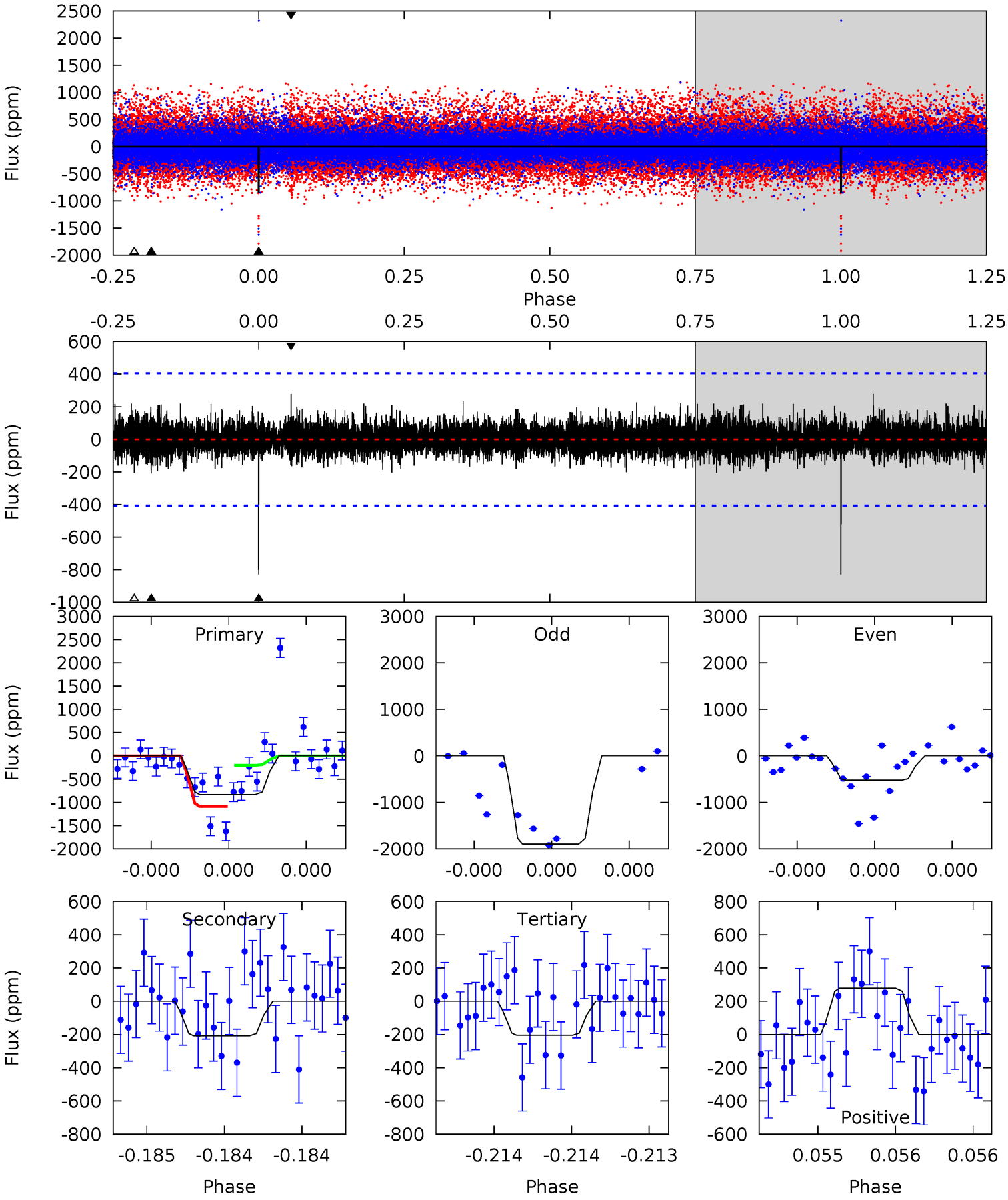




Alt Model-Shift Uniqueness Test

006549597-05, P = 302.578172 Days, E = 115.207094 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.5	2.88	2.84	3.85	5.62	3.56	0.73	8.64	7.63	0.04	-0.97	9.86	1.10	0.25	5.82



Stellar Parameters For KIC 006549597

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	$M(M_\odot)$	$p_\star$ (g·cm^{-3})
	5242^{+157}_{-157}	$4.556^{+0.088}_{-0.072}$	$-0.540^{+0.350}_{-0.300}$	$0.722^{+0.089}_{-0.081}$	$0.684^{+0.095}_{-0.038}$	$2.561^{+0.947}_{-0.580}$
	+3%/-3%	+2%/-2%	+65%/-56%	+12%/-11%	+14%/-6%	+37%/-23%
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 006549597-05 / KOI

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-669±96	$4.29^{+3.85}_{-2.82}$	311^{+13}_{-14}	3918^{+2271}_{-727}	12012^{+88084}_{-8645}
Alt.	-208±72	$4.43^{+3.96}_{-3.01}$	311^{+13}_{-13}	3195^{+1540}_{-532}	3493^{+28874}_{-2608}

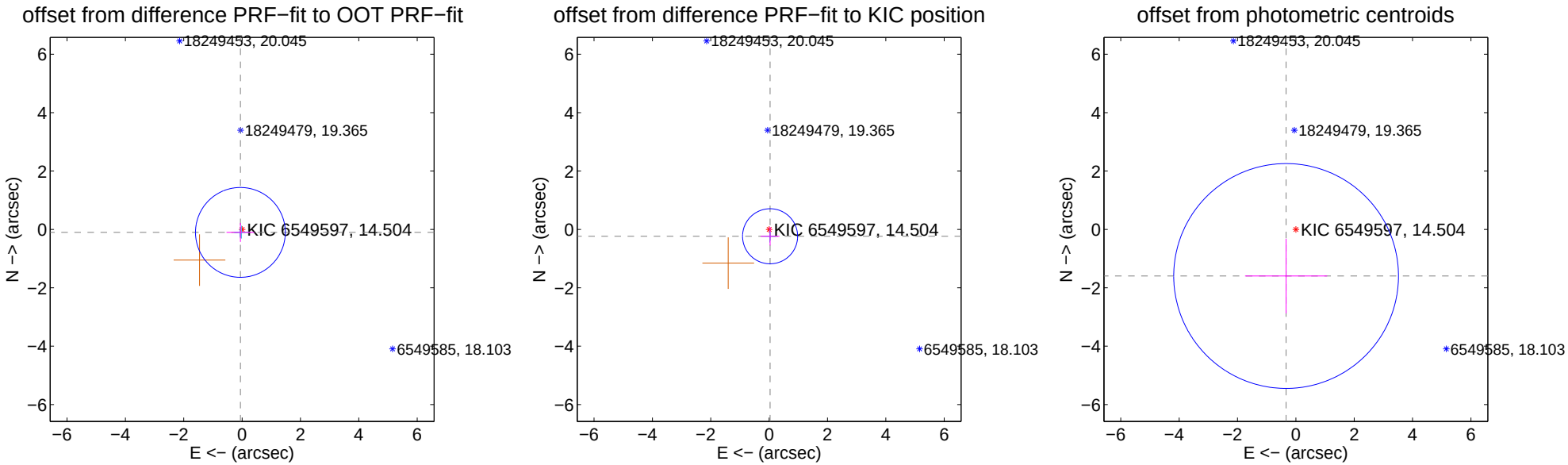
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

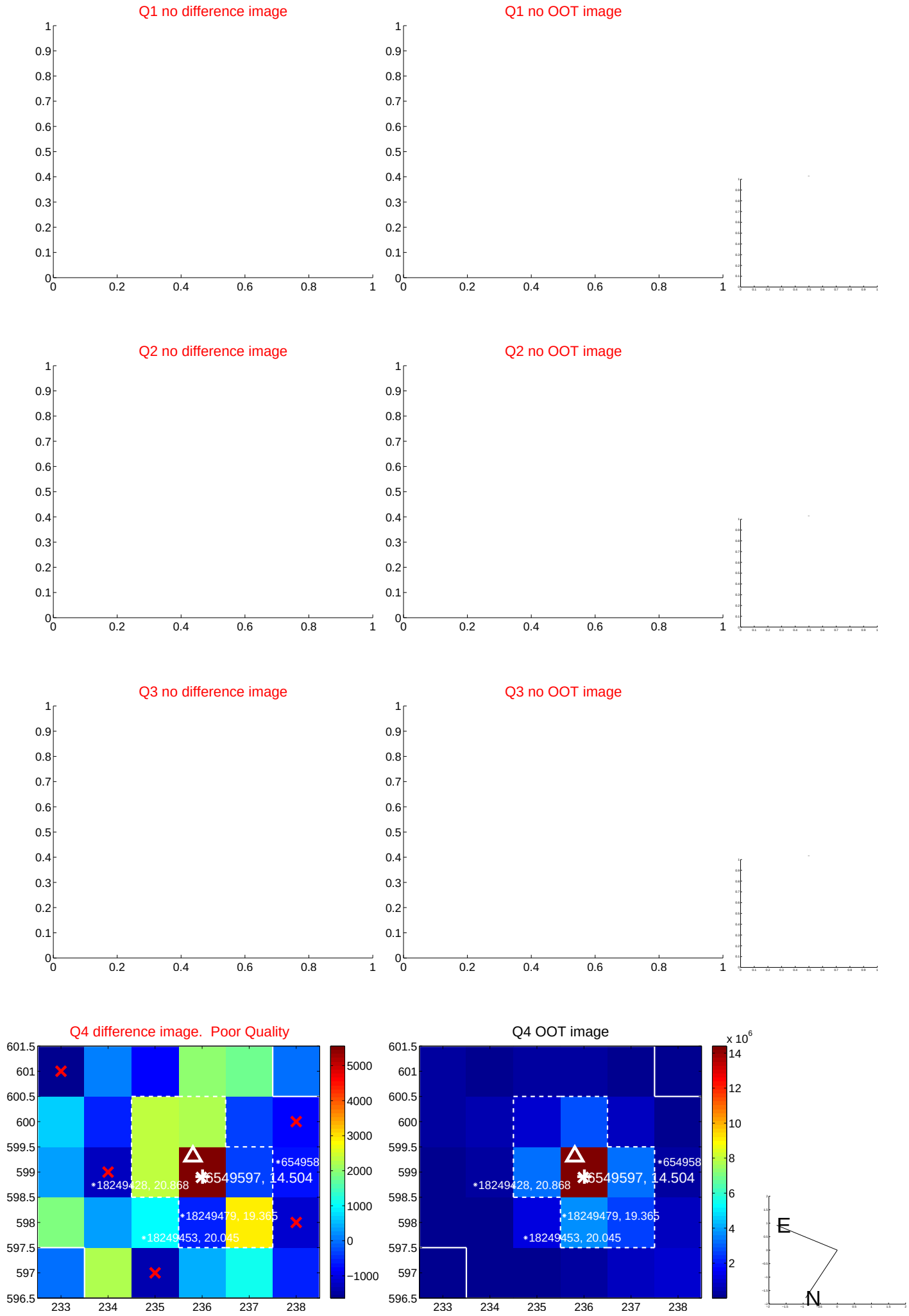
Supplemental centroid analysis for 006549597-05. Kepler magnitude: 14.50. Transit SNR 6.45
There are 2 quarters with good PRF difference image offsets
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.118 ± 0.513	0.23	0.058 ± 0.475	-0.103 ± 0.324
PRF-fit source offset from KIC position	0.237 ± 0.314	0.75	-0.033 ± 0.322	-0.235 ± 0.314
photometric centroid source offset	1.63 ± 1.28	1.27	0.33 ± 1.41	-1.60 ± 1.28

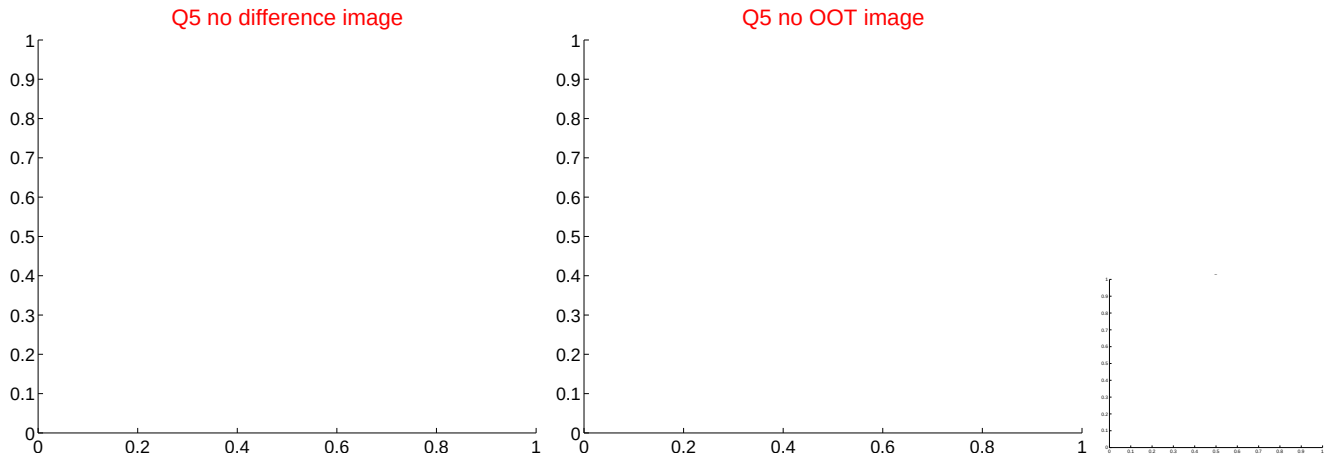


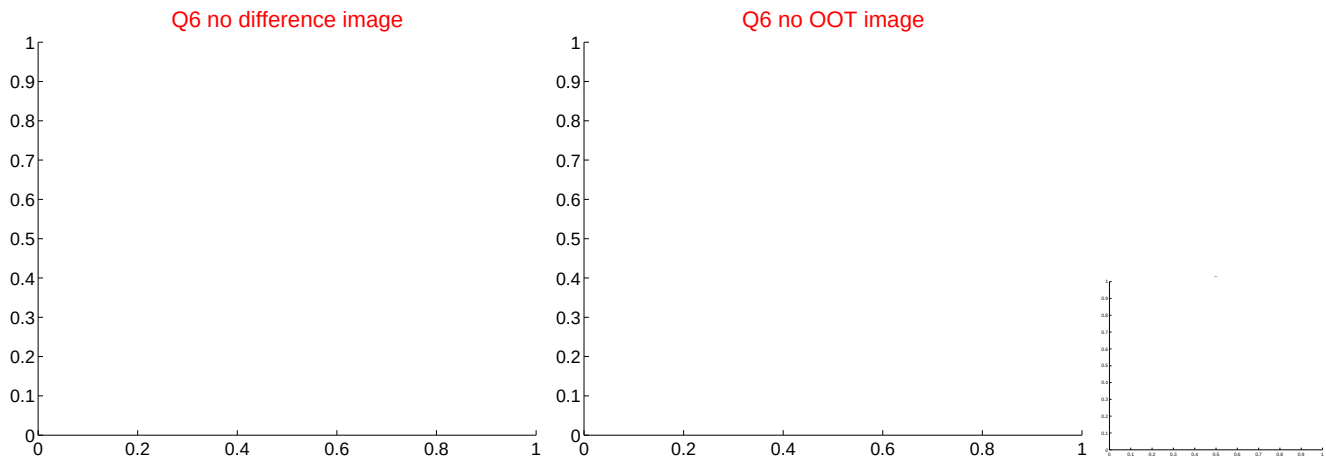
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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

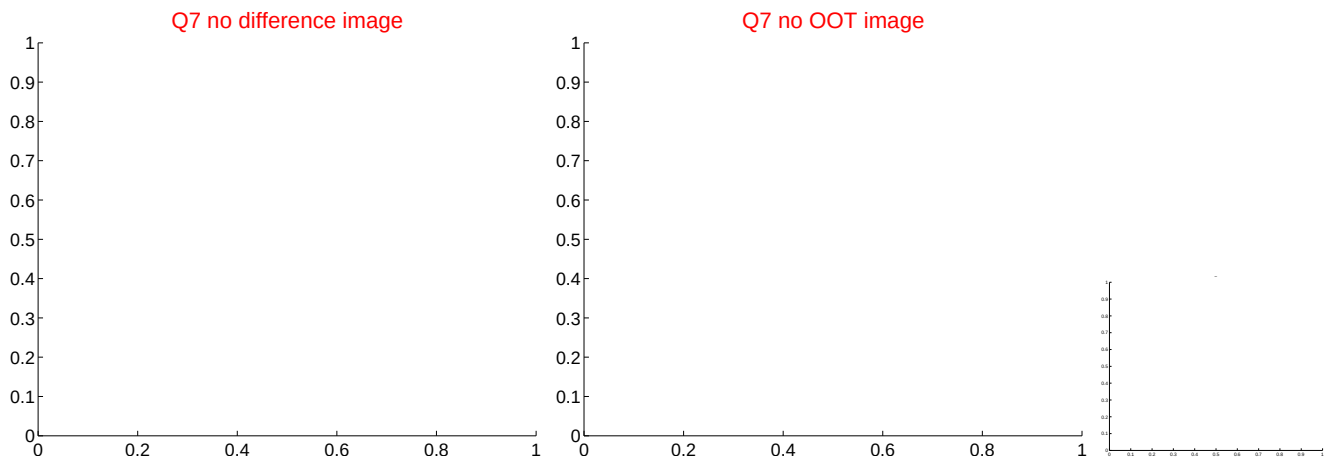
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

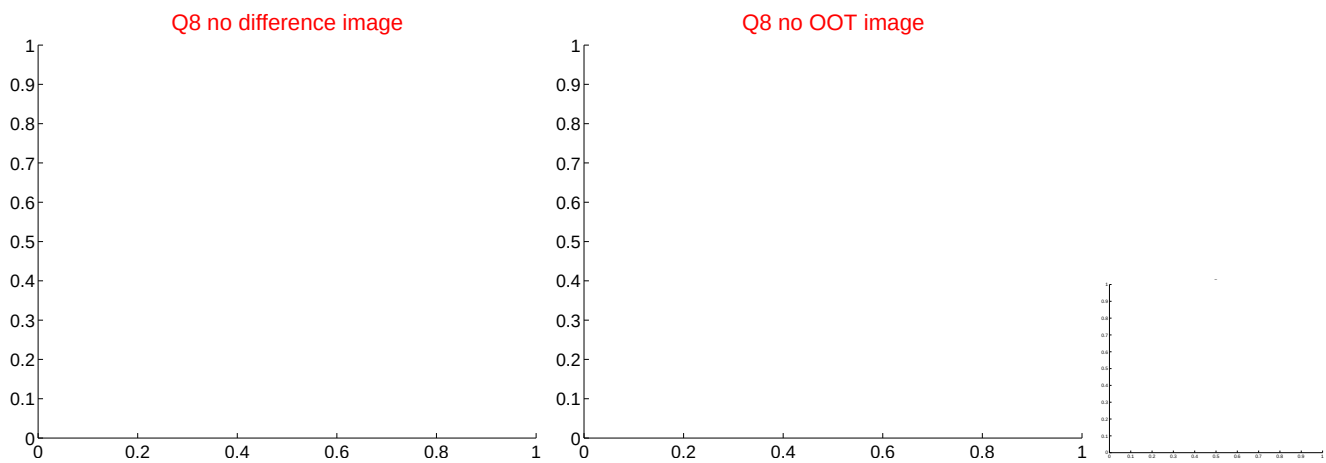


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

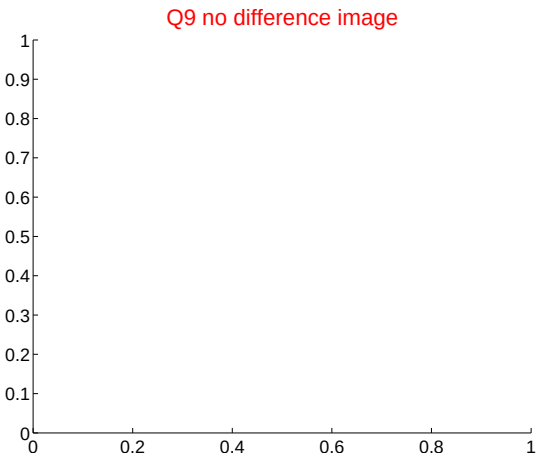


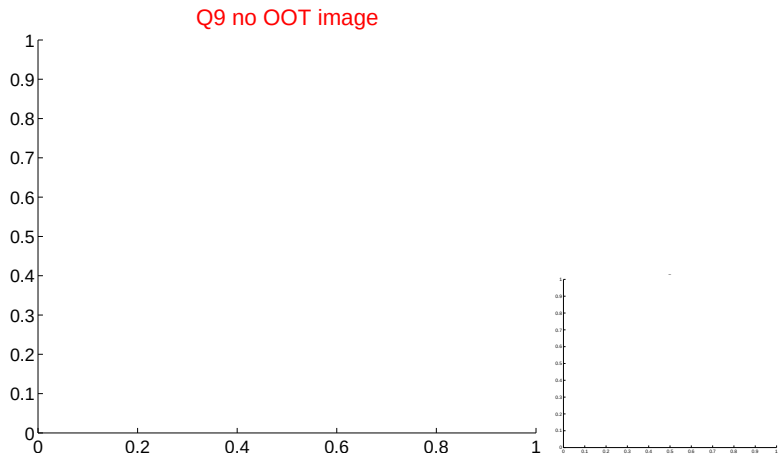


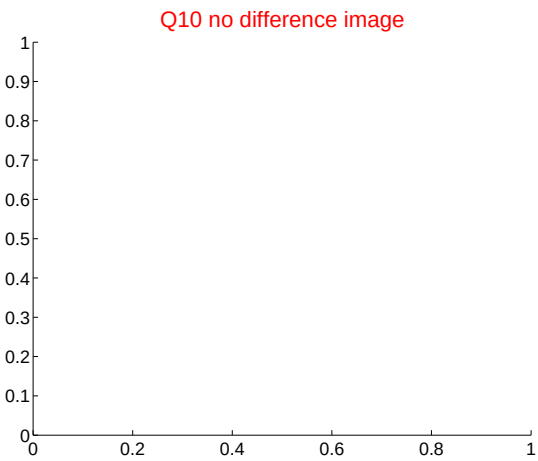


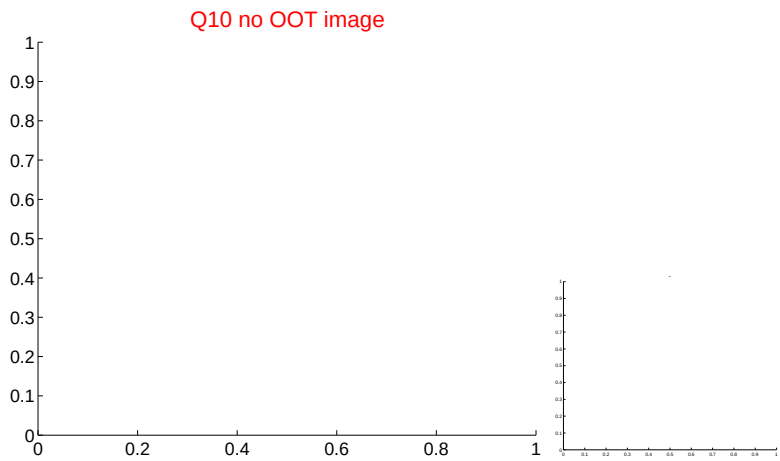


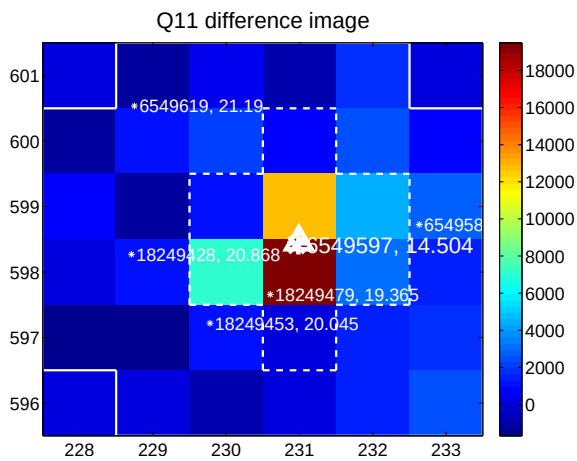
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

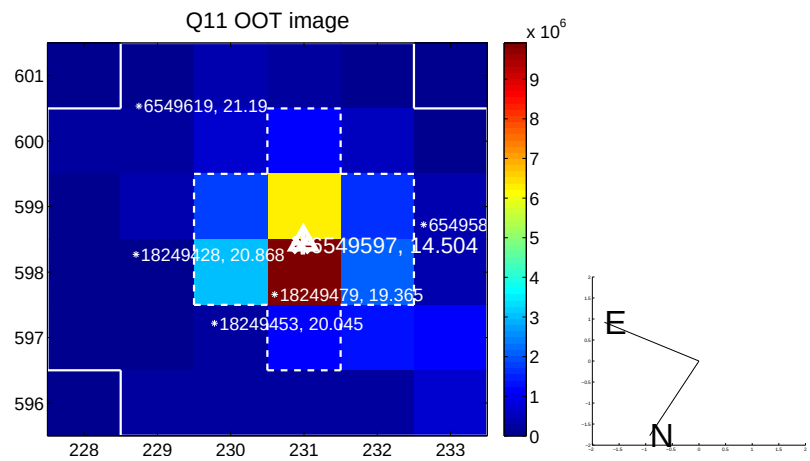


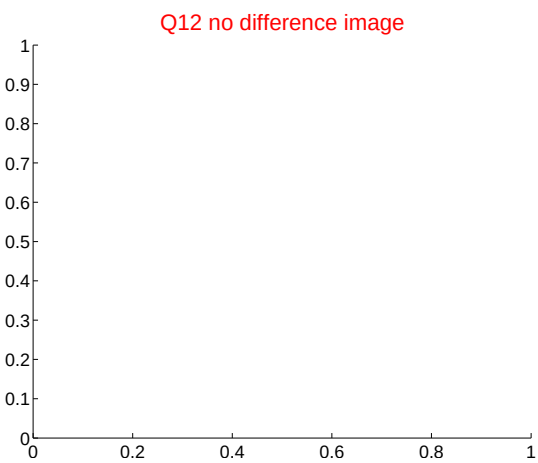


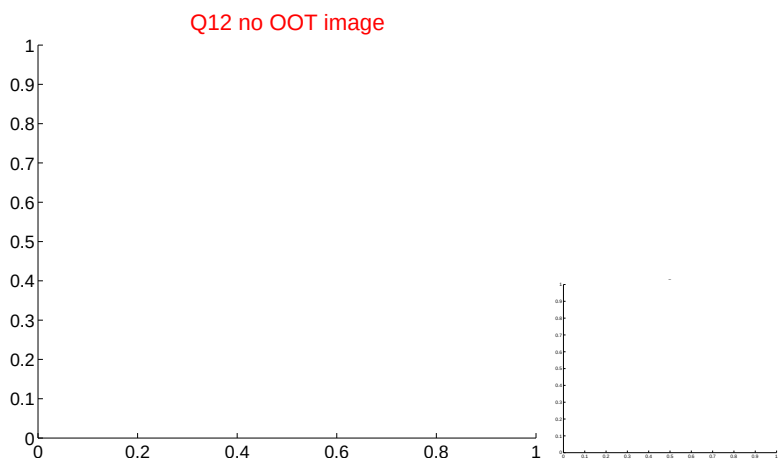




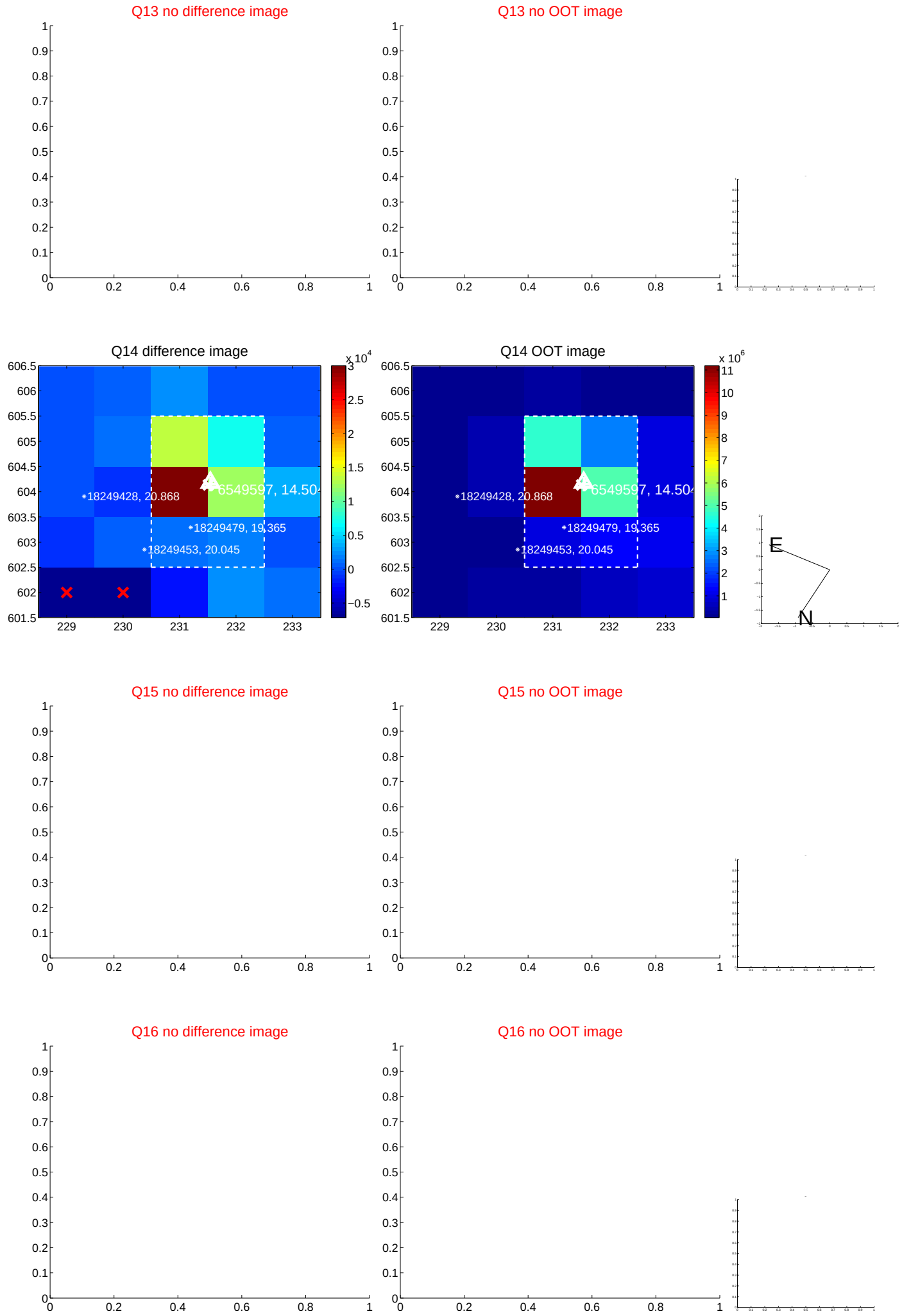




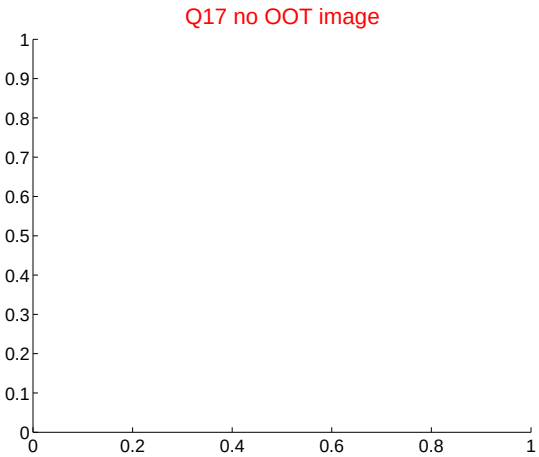


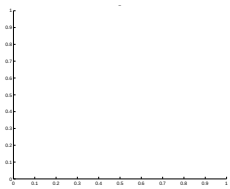


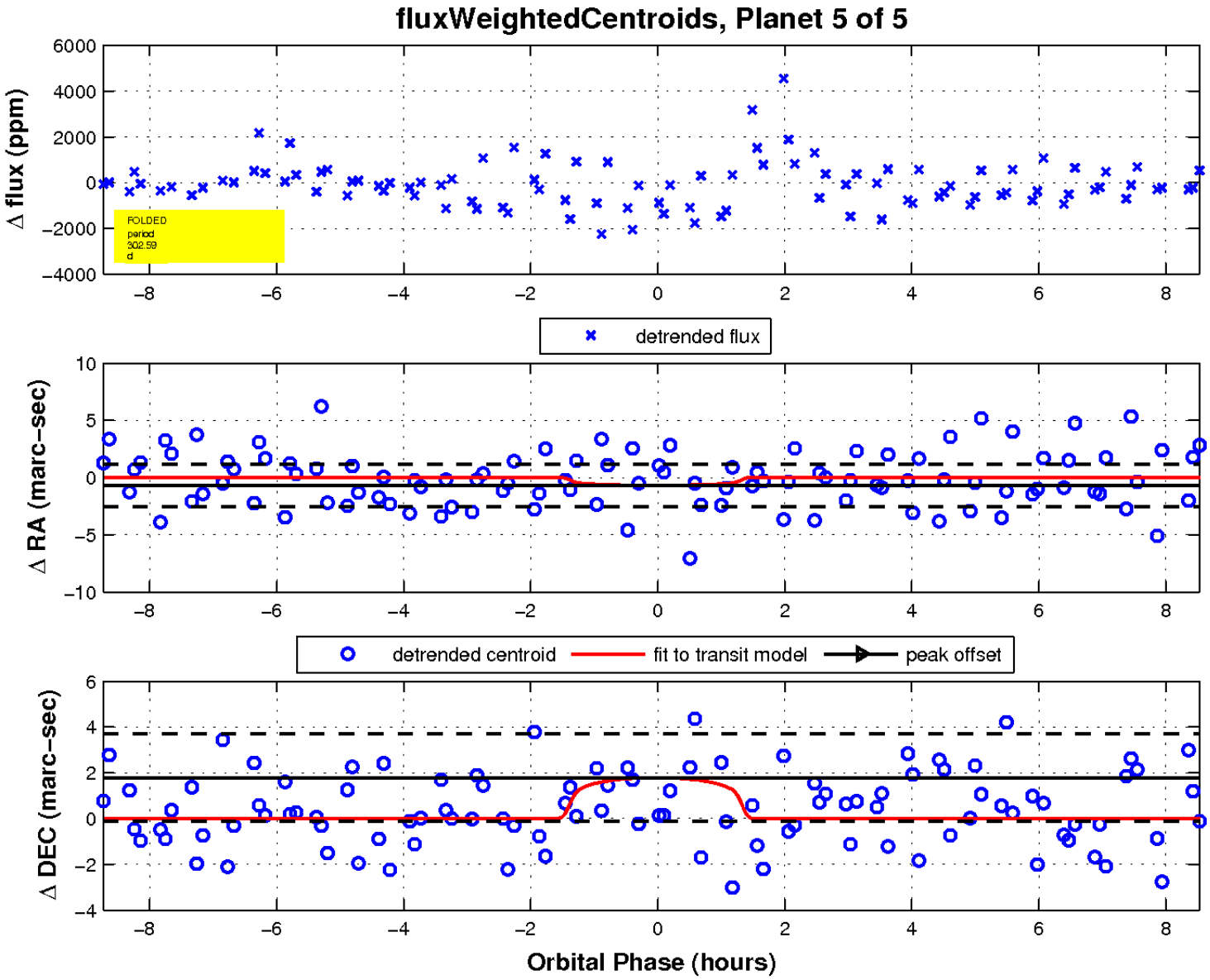
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



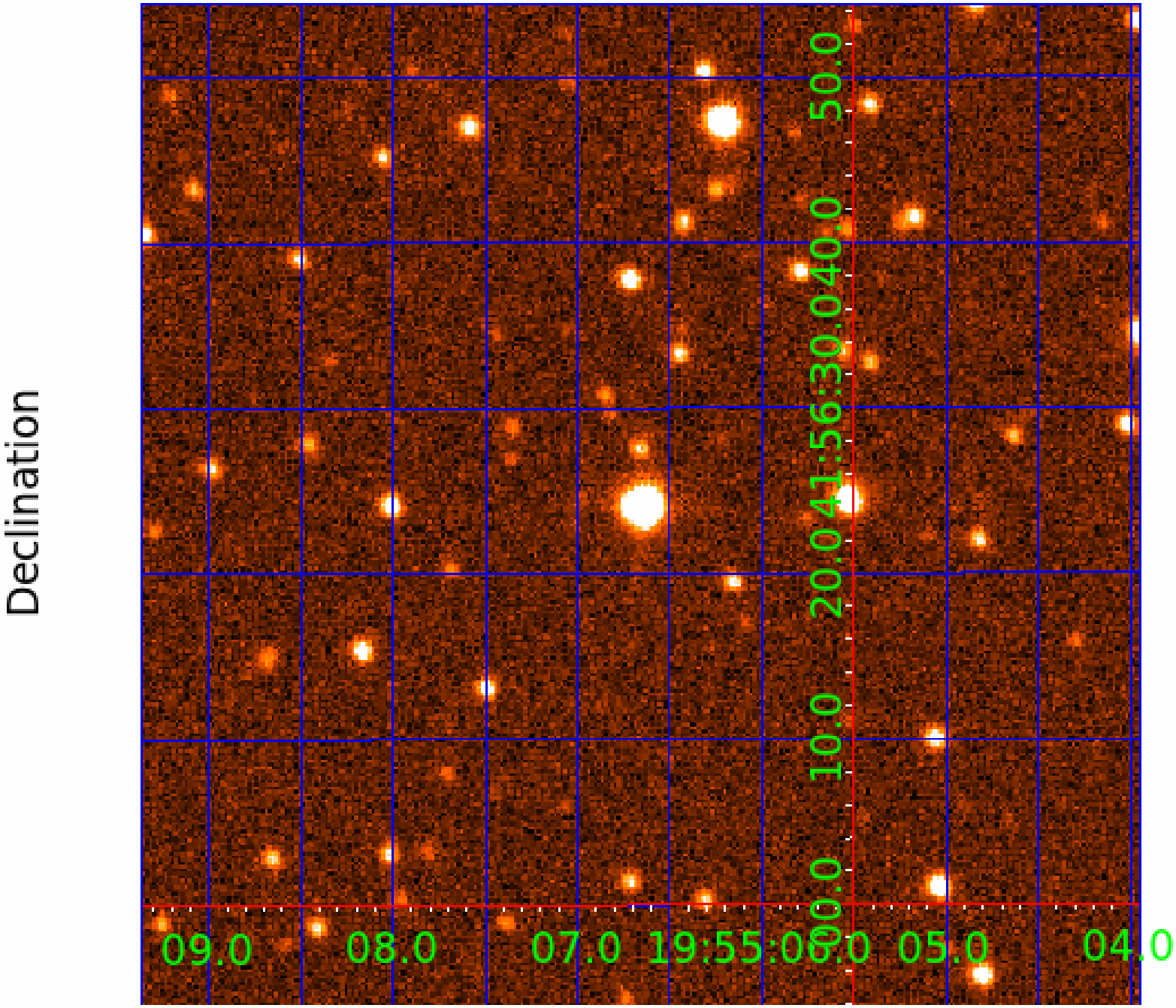
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.







UKIRT Image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