

KIC 006521045

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})
006521045-01	OBS	0041.01	12.815898	135.763176	221.1	6.500	68.6	74.1	1.47	5788	2.44	184.08
006521045-02	OBS	0041.02	6.887056	133.178553	70.7	4.547	27.5	30.2	1.47	5788	1.48	421.34
006521045-03	OBS	0041.03	35.333074	153.985486	97.1	6.042	18.0	19.2	1.47	5788	1.75	47.62

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006521045-01	OBS	PC	1.00	0	0	0	0	CENT_SATURATED
006521045-02	OBS	PC	1.00	0	0	0	0	CENT_SATURATED
006521045-03	OBS	PC	1.00	0	0	0	0	CENT_SATURATED

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.

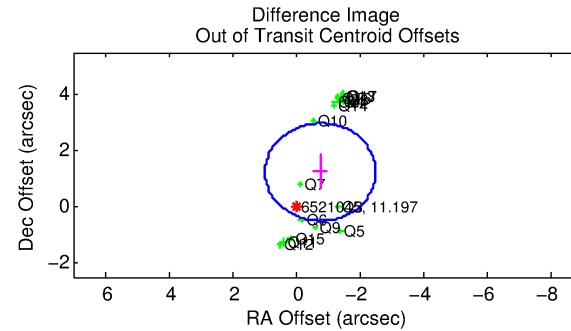
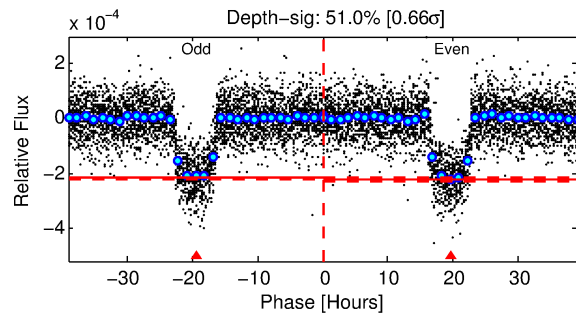
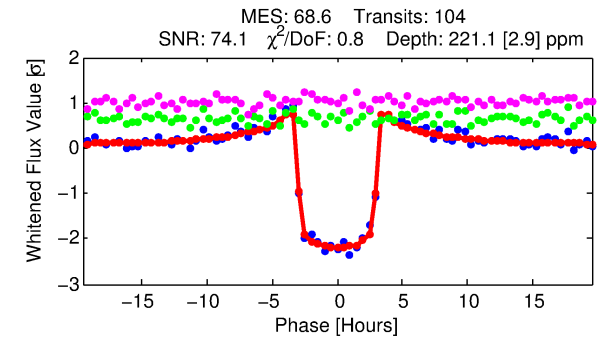
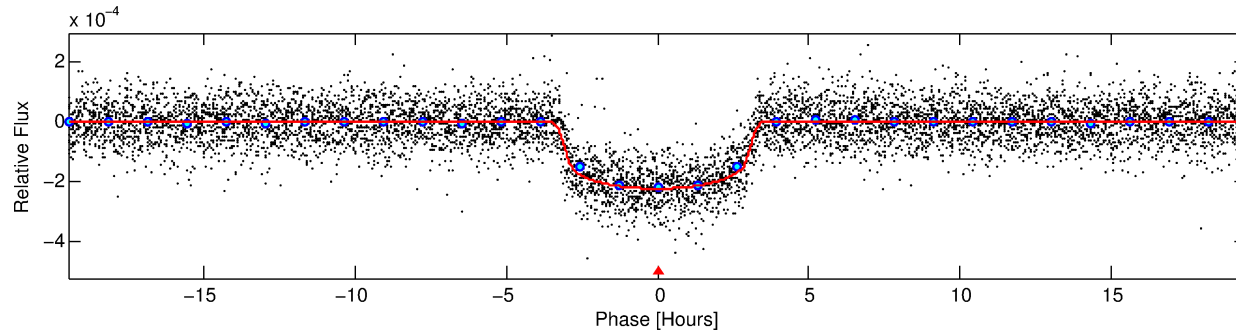
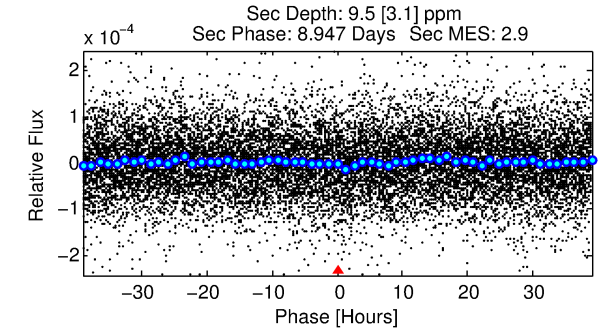
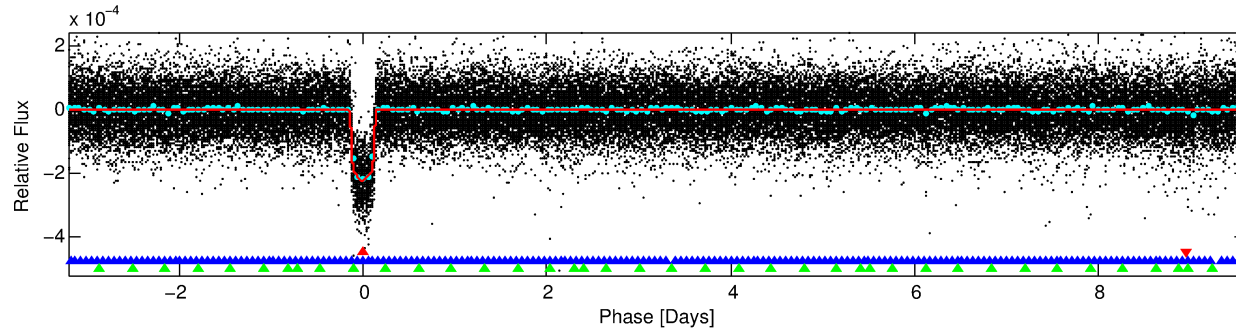
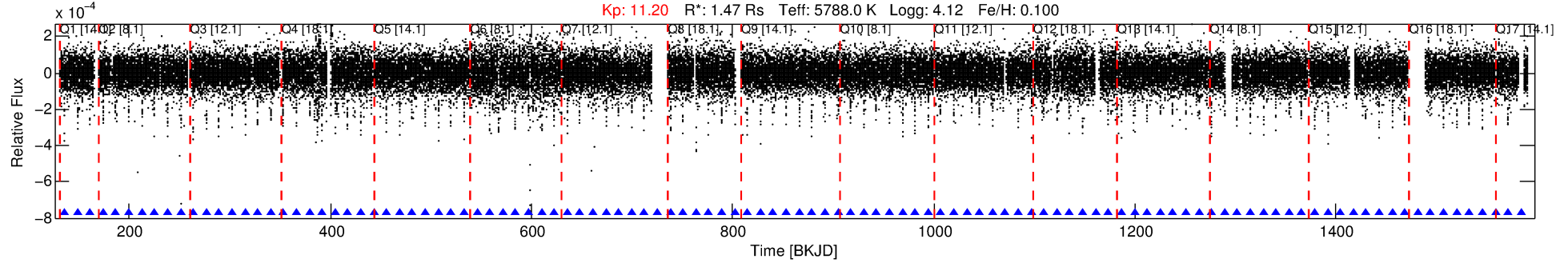
Ephemeris Match Information For 006521045-01

No Significant Match Found

DV One-Page Summary

KIC: 6521045 Candidate: 1 of 3 Period: 12.816 d
KOI: K00041.01 Name: Kepler-100c Corr: 0.990

Kp: 11.20 R*: 1.47 Rs Teff: 5788.0 K Logg: 4.12 Fe/H: 0.100



DV Fit Results:

Period = 12.81590 [0.00002] d
Epoch = 135.7632 [0.0011] BKJD
Rp/R* = 0.0152 [0.0009]
a/R* = 9.38 [2.34]
b = 0.80 [0.11]
Seff = 184.08 [15.71]
Teq = 939 [20] K
Rp = 2.44 [0.21] Re
a = 0.1089 [0.0054] AU
Ag = 10.42 [3.71] [2.54σ]
Teffp = 2609 [231] K [7.21σ]

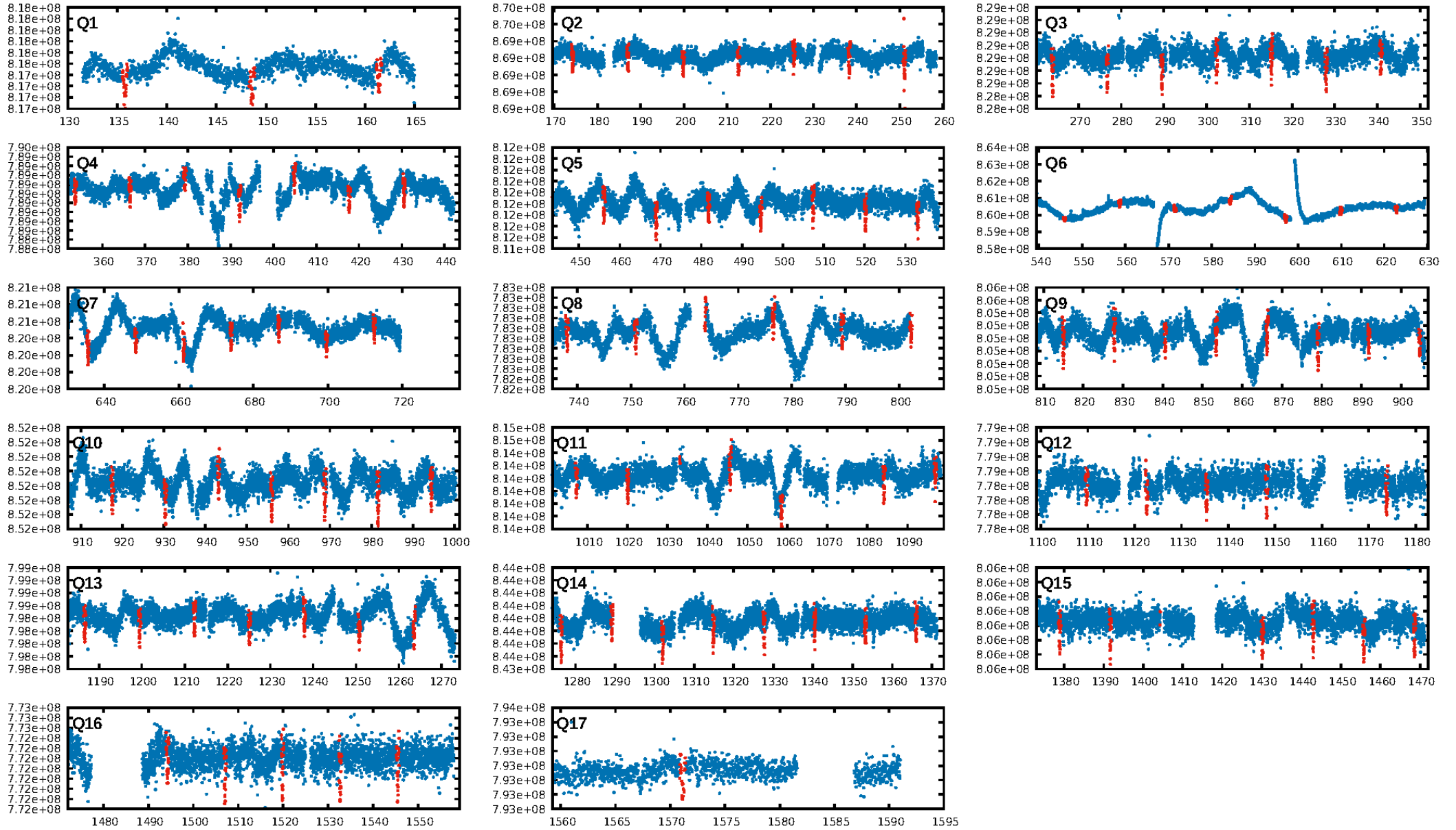
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [17.94σ]
LongPeriod-sig: 100.0% [60.90σ]
ModelChiSquare2-sig: 99.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [100/100]
GhostDiagnostic-chr: 9.358
Centroid-sig: 0.0%
Centroid-so: 0.456 arcsec [2.95σ]
OotOffset-rm: 1.459 arcsec [2.52σ]
KicOffset-rm: 1.004 arcsec [1.77σ]
OotOffset-st: 4/4/4/4 [16]
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DiffImageOverlap-fno: 1.00 [17/17]

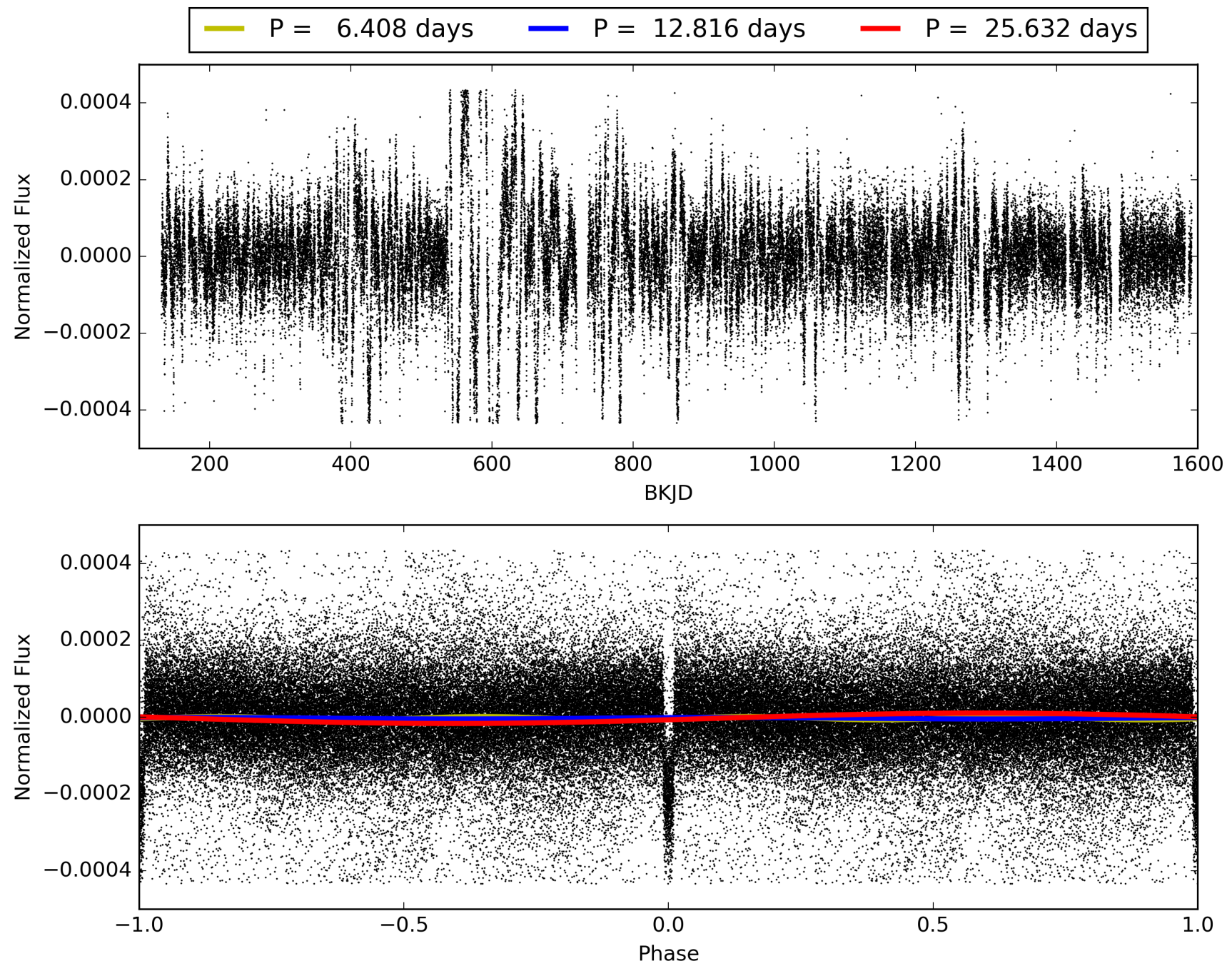
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 006521045-01, PDC Light Curves

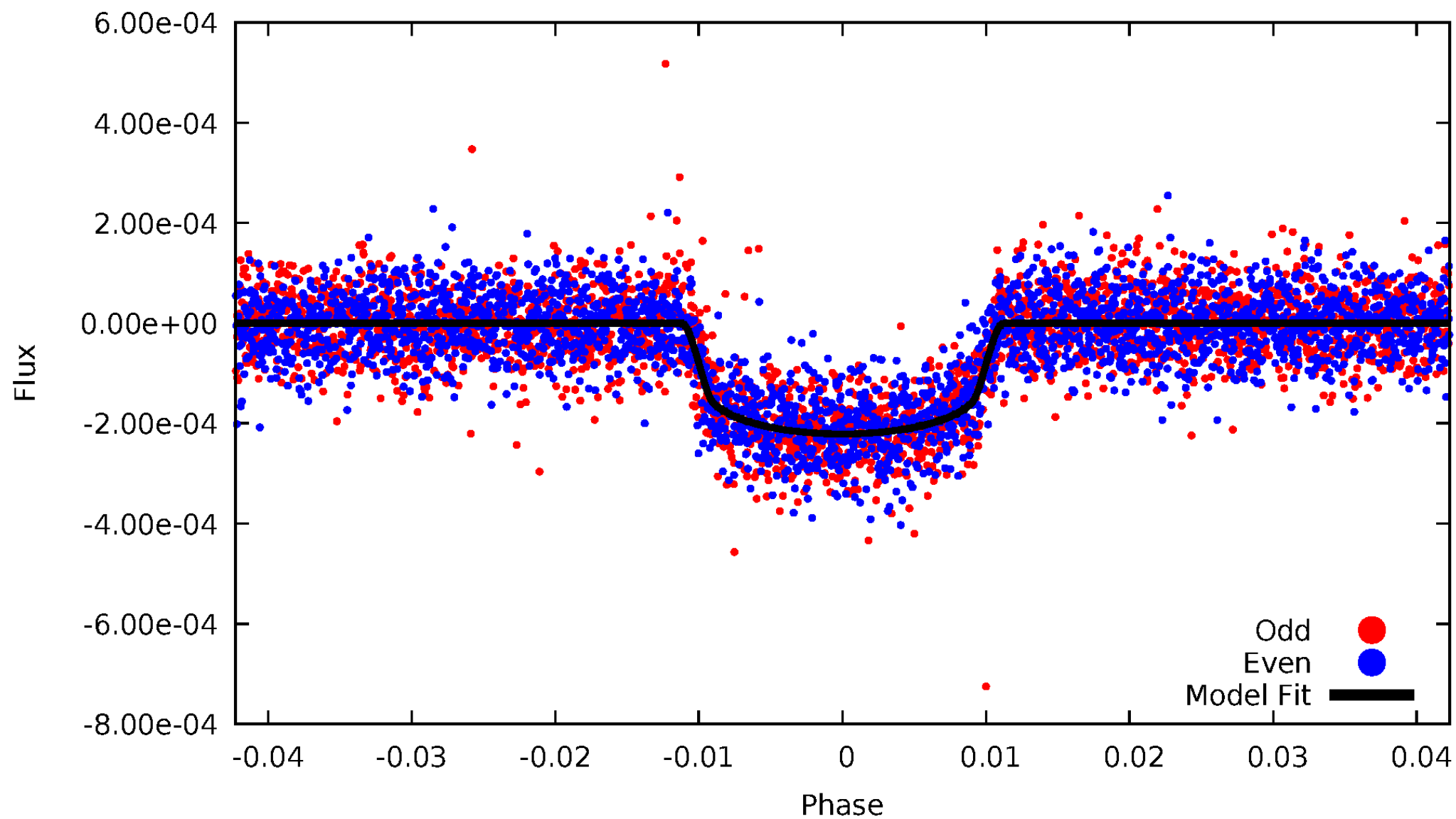


TCE 006521045-01



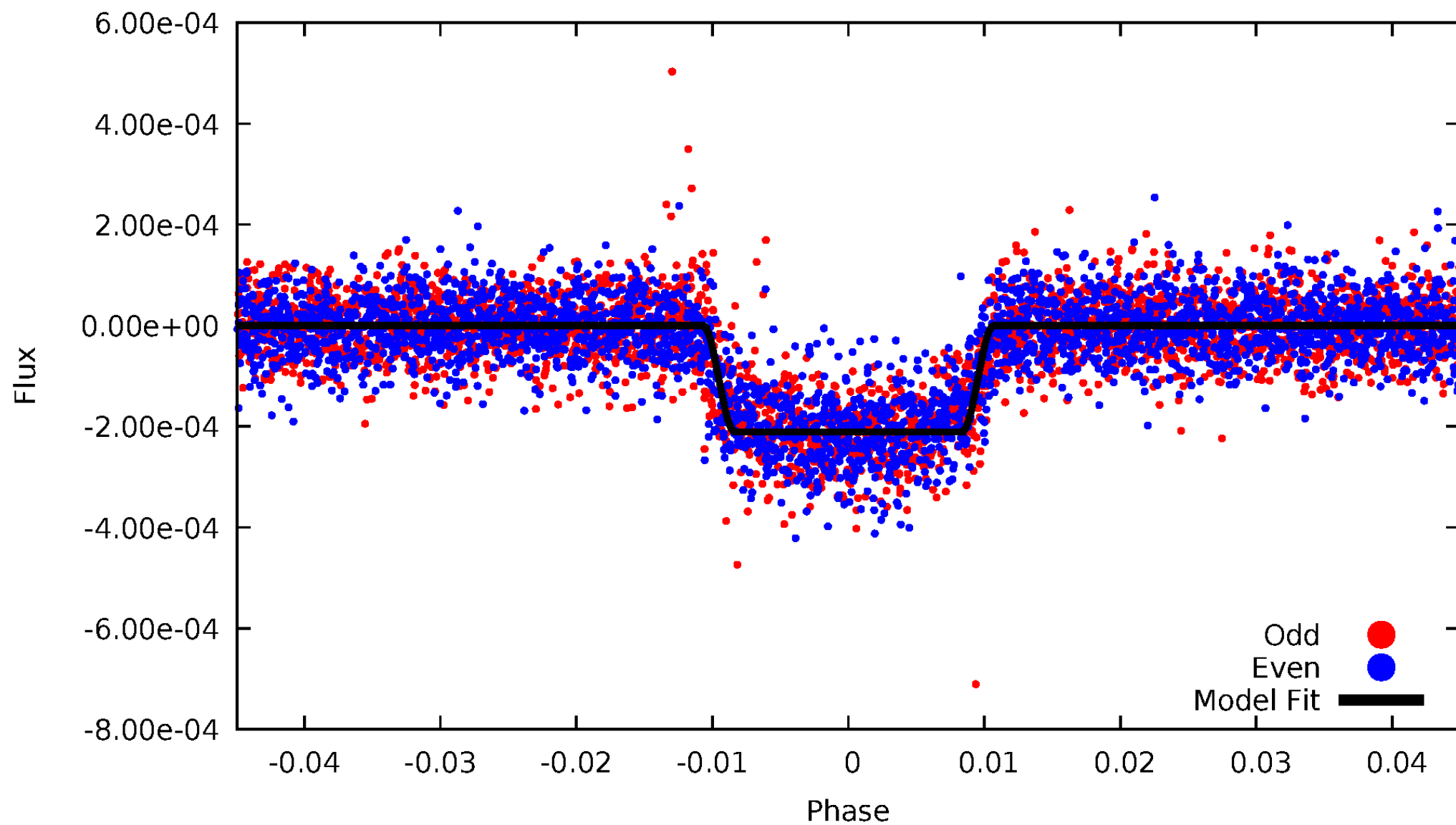
DV Odd/Even

TCE 006521045-01



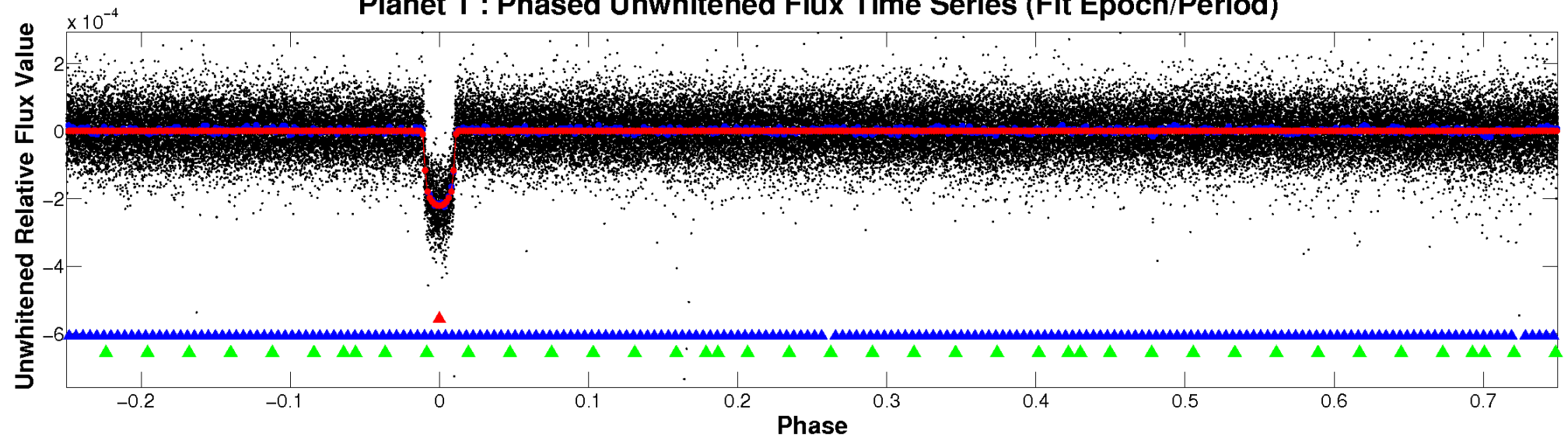
ALT Odd/Even

TCE 006521045-01

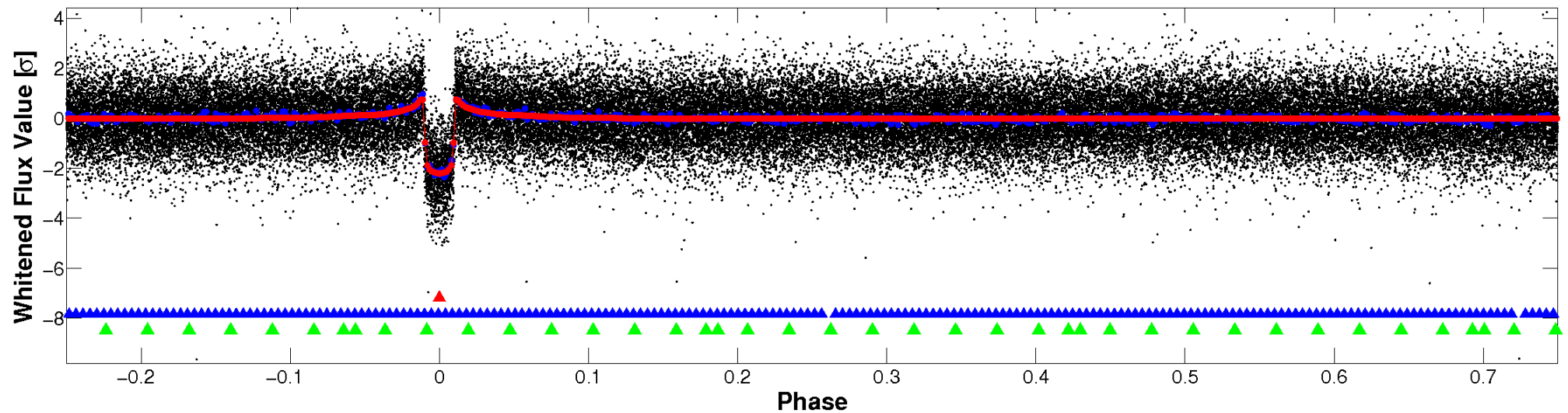


Non-Whitened Vs. Whitened Light Curve

Planet 1 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

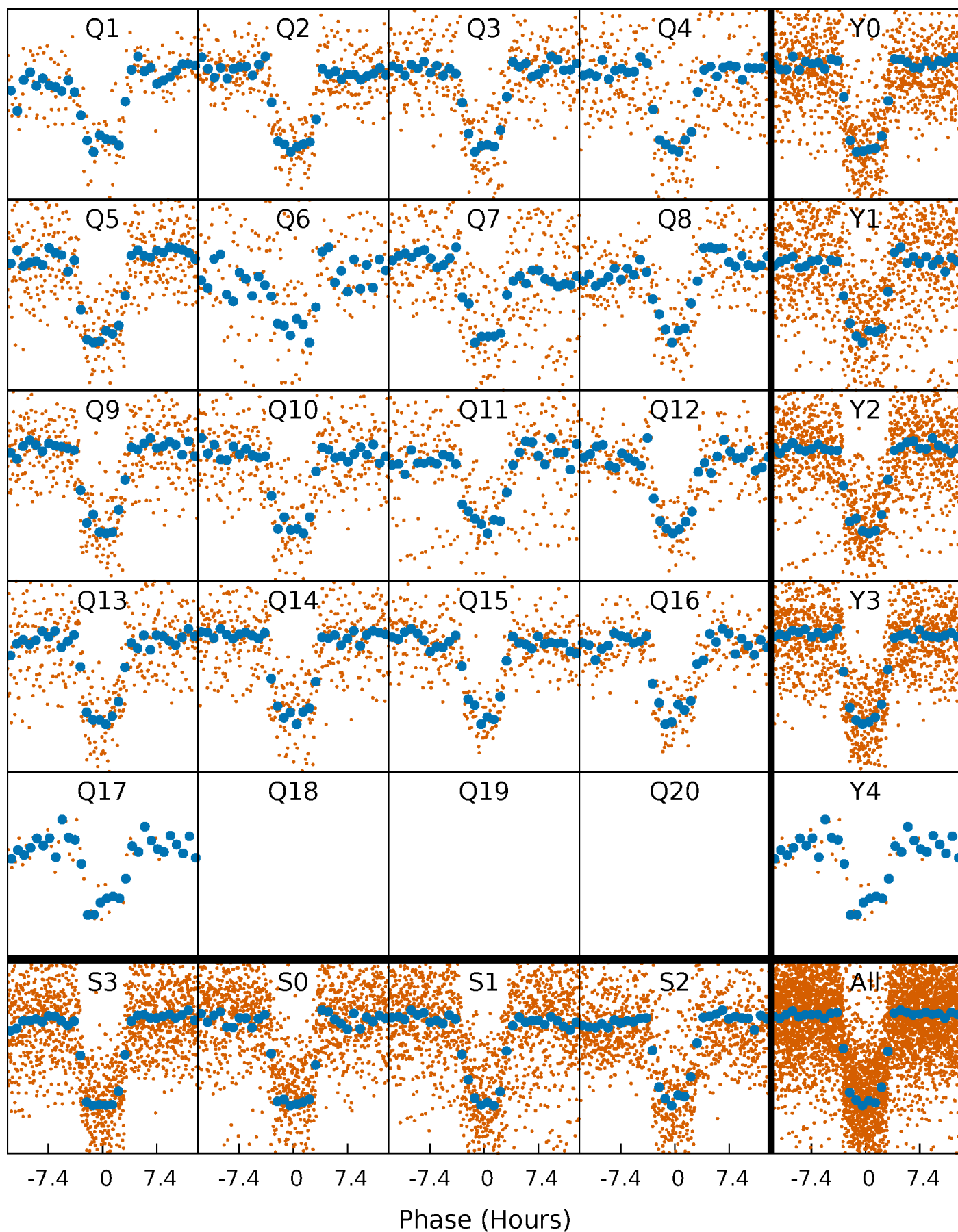


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



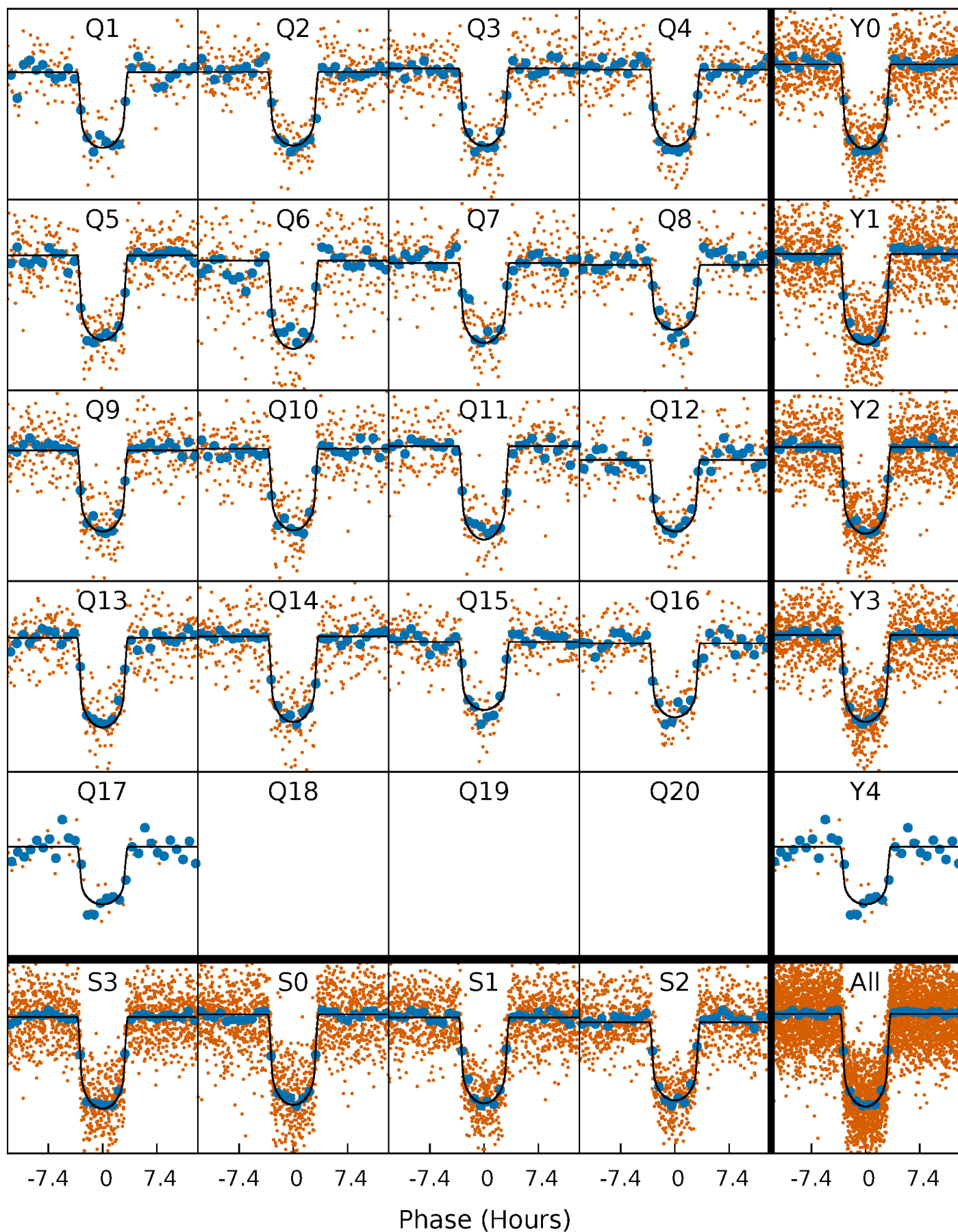
PDC Quarter-Phased Transit Curves

TCE 006521045-01 P= 12.815898 Days $T_0=135.763176$ (BKJD)



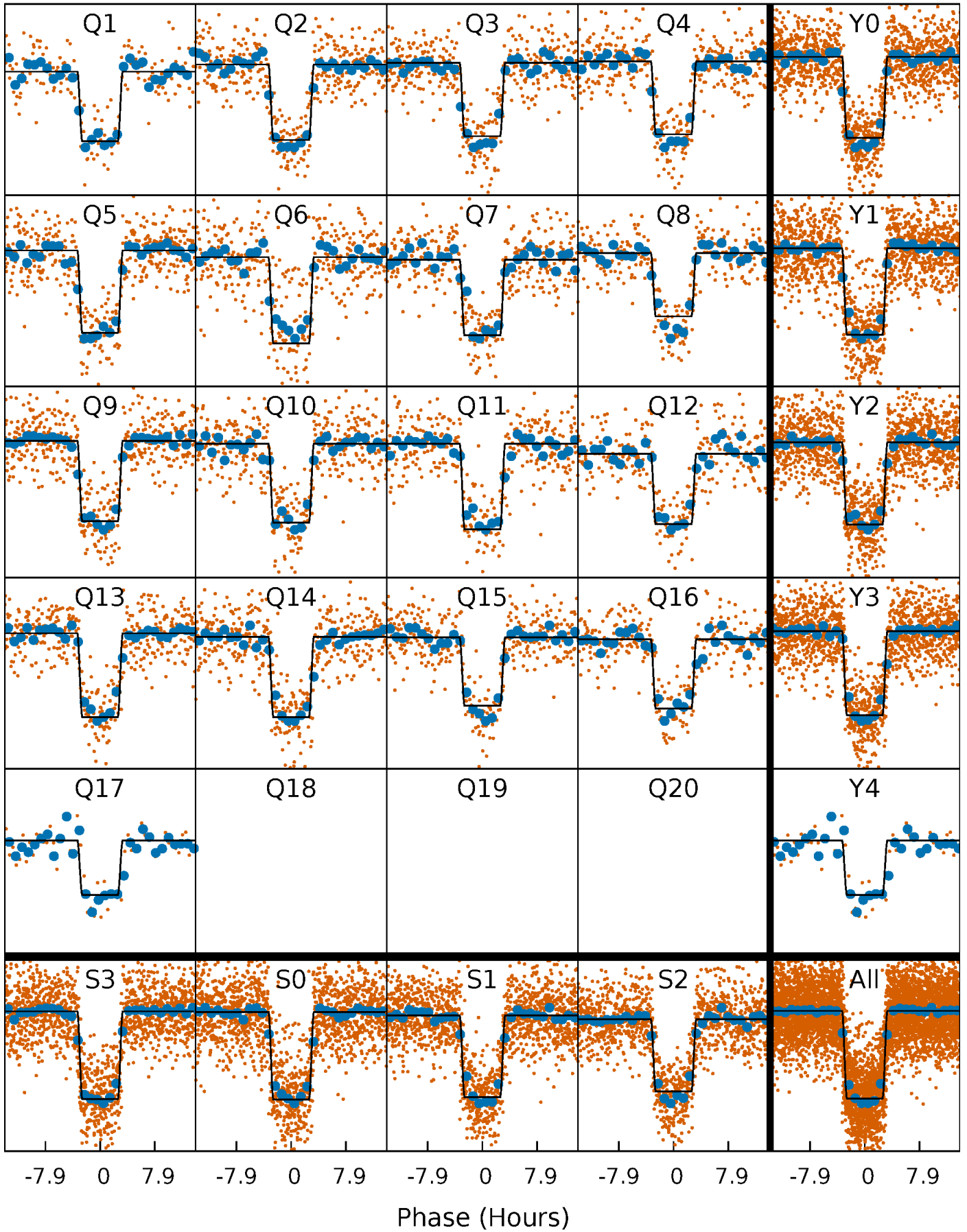
DV Quarter-Phased Transit Curves

TCE 006521045-01 P= 12.815898 Days $T_0=135.763176$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

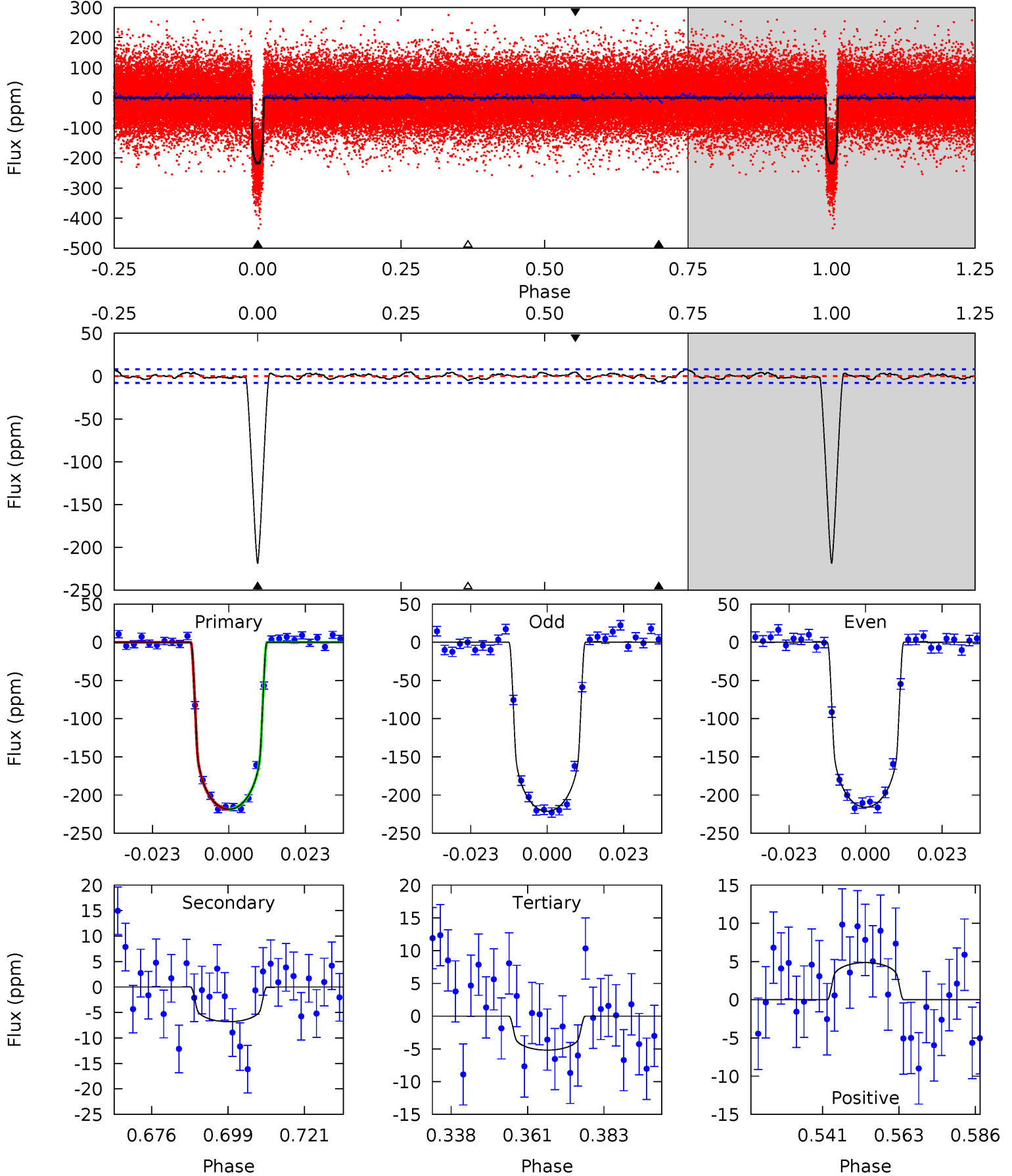
TCE 006521045-01 P= 12.815718 Days $T_0=135.772831$ (BKJD)



DV Model-Shift Uniqueness Test

006521045-01, $P = 12.815898$ Days, $E = 122.947278$ Days

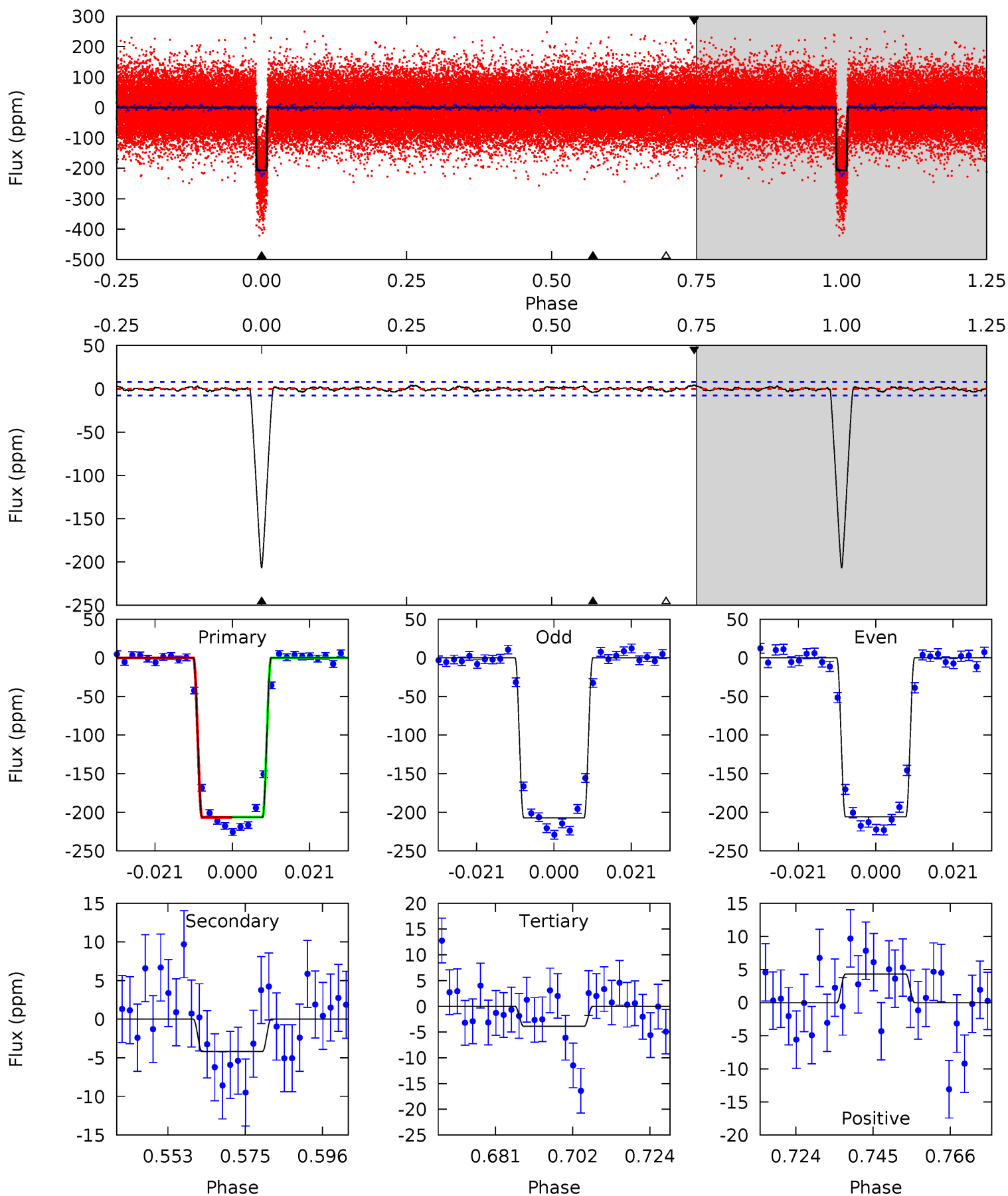
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
133.3	4.15	3.17	2.97	4.87	2.28	1.44	130.2	130.4	0.99	1.19	1.68	1.00	0.04	0.06



Alt Model-Shift Uniqueness Test

006521045-01, P = 12.815718 Days, E = 122.957113 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
128.9	2.61	2.43	2.69	4.88	2.30	0.99	126.5	126.2	0.19	-0.07	0.40	0.99	0.02	0.16



Stellar Parameters For KIC 006521045

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5788^{+78}_{-78}	$4.122^{+0.033}_{-0.027}$	$0.100^{+0.150}_{-0.150}$	$1.474^{+0.094}_{-0.079}$	$1.050^{+0.126}_{-0.068}$	$0.462^{+0.056}_{-0.050}$
	+1%/-1%	+1%/-1%	+150%/-150%	+6%/-5%	+12%/-6%	+12%/-11%
Source	SPE72	AST69	SPE72	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 006521045-01 / KOI 0041.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-7 ± 2	$2.45^{+0.16}_{-0.17}$	1312^{+23}_{-26}	3037^{+112}_{-140}	$7.519^{+2.152}_{-1.889}$
Alt.	-4 ± 2	$2.34^{+0.17}_{-0.14}$	1312^{+25}_{-25}	2864^{+148}_{-193}	$5.013^{+2.198}_{-1.959}$

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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

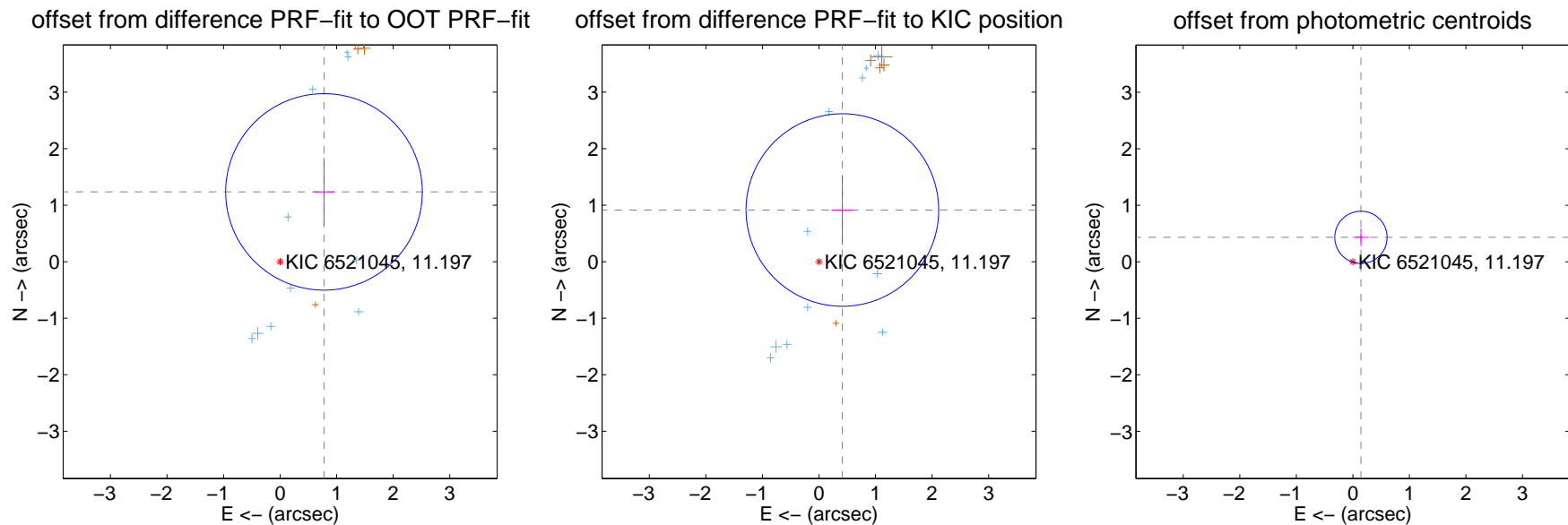
DV Centroid Data

Supplemental centroid analysis for 006521045-01. **Kepler magnitude: 11.20.** Transit SNR 74.06

There are 11 quarters with good PRF difference image offsets

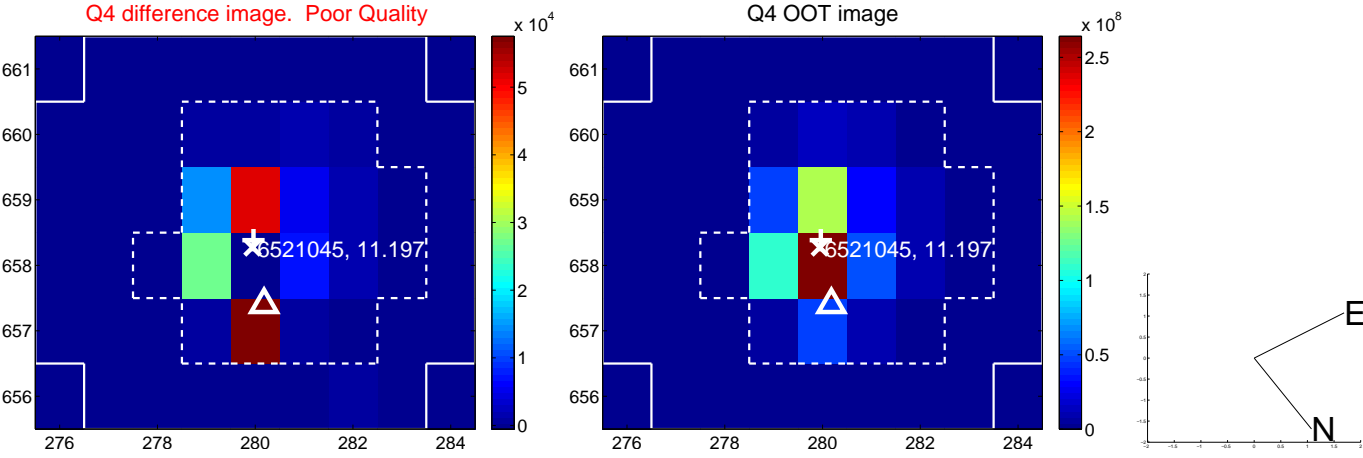
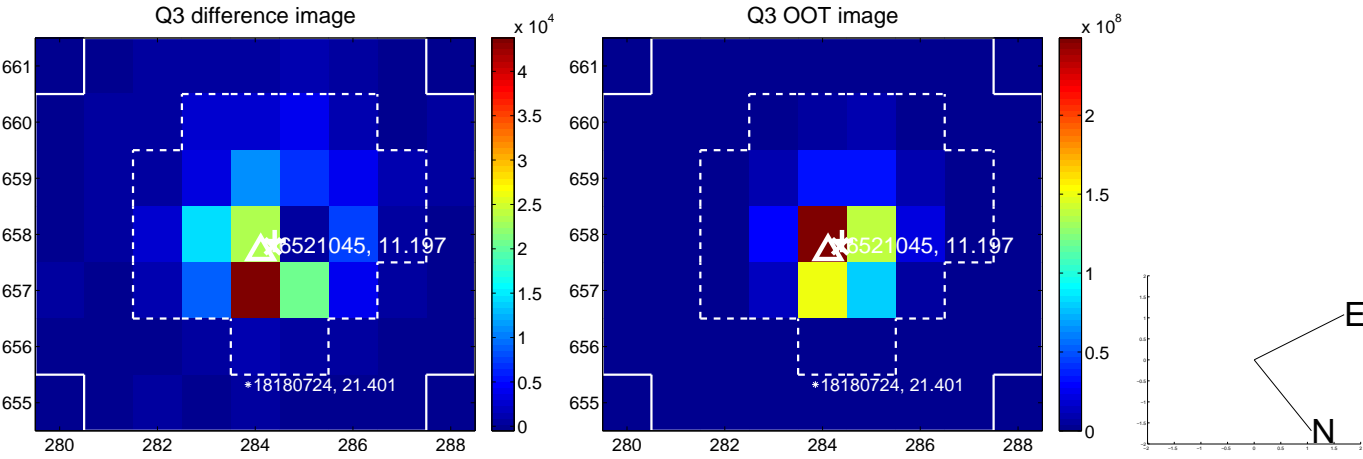
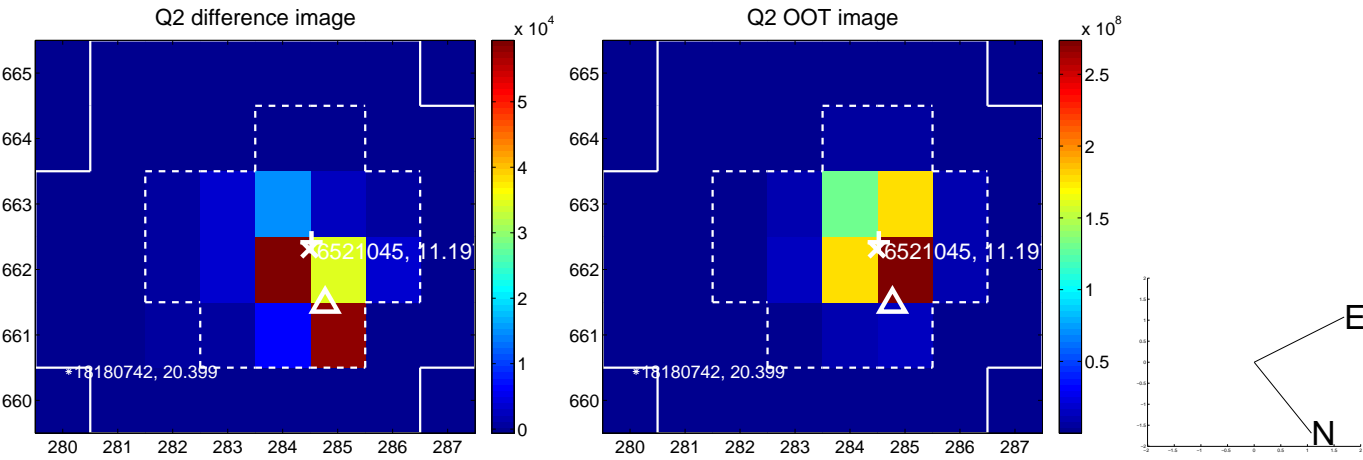
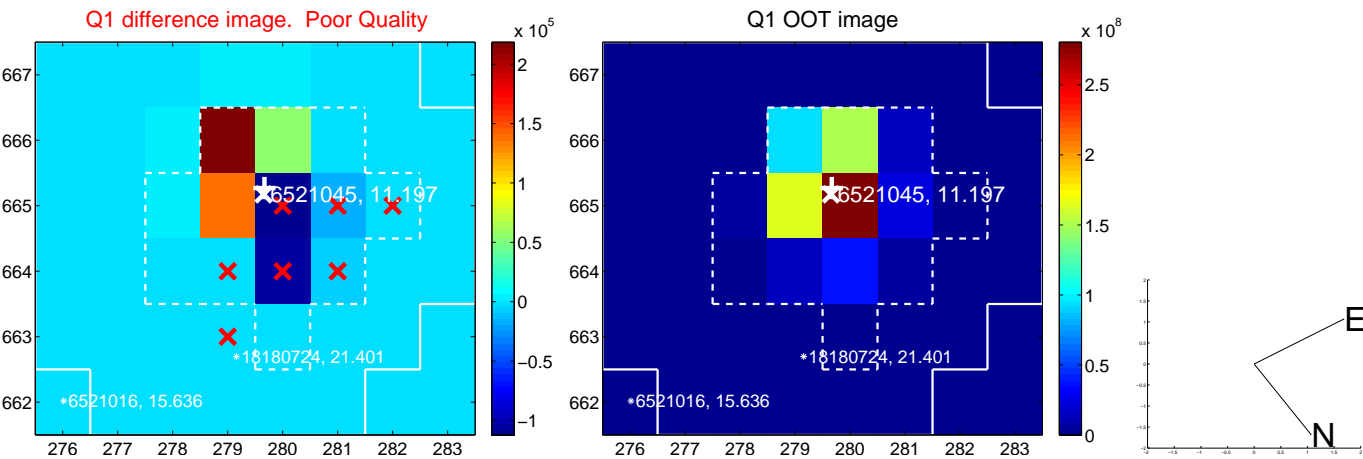
The direct PRF centroid is offset from the target star catalog position by about 0.50 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.459 ± 0.580	2.52	-0.776 ± 0.190	1.235 ± 0.598
PRF-fit source offset from KIC position	1.004 ± 0.568	1.77	-0.414 ± 0.196	0.915 ± 0.617
photometric centroid source offset	0.46 ± 0.15	2.95	-0.14 ± 0.14	0.43 ± 0.16

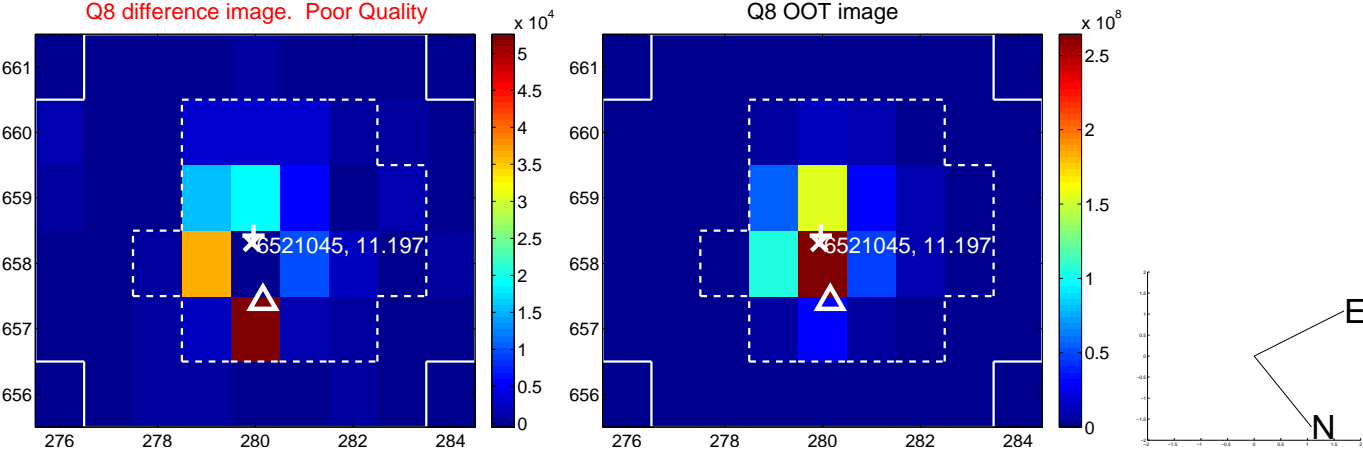
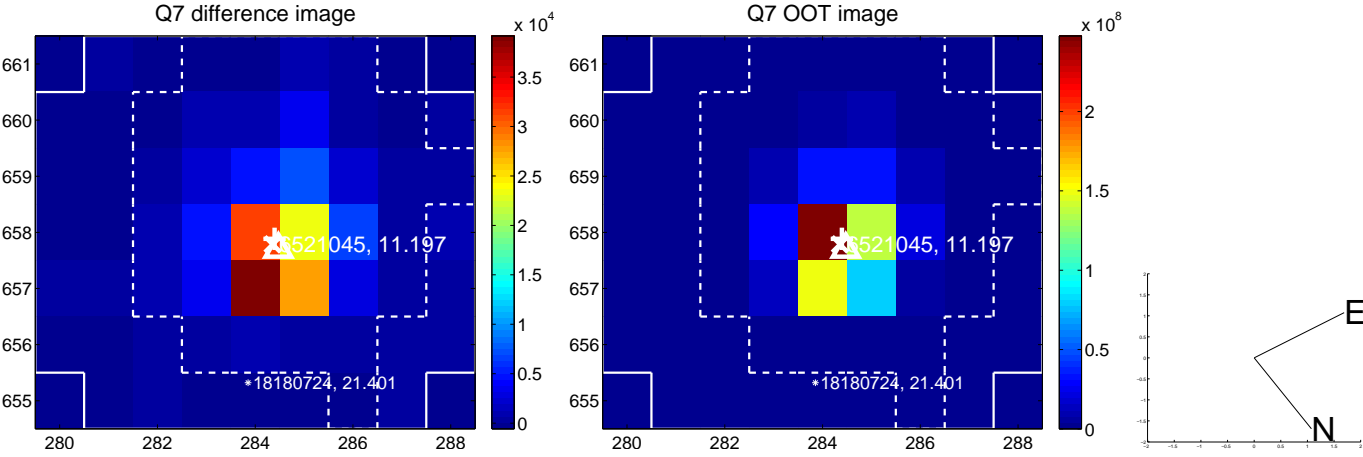
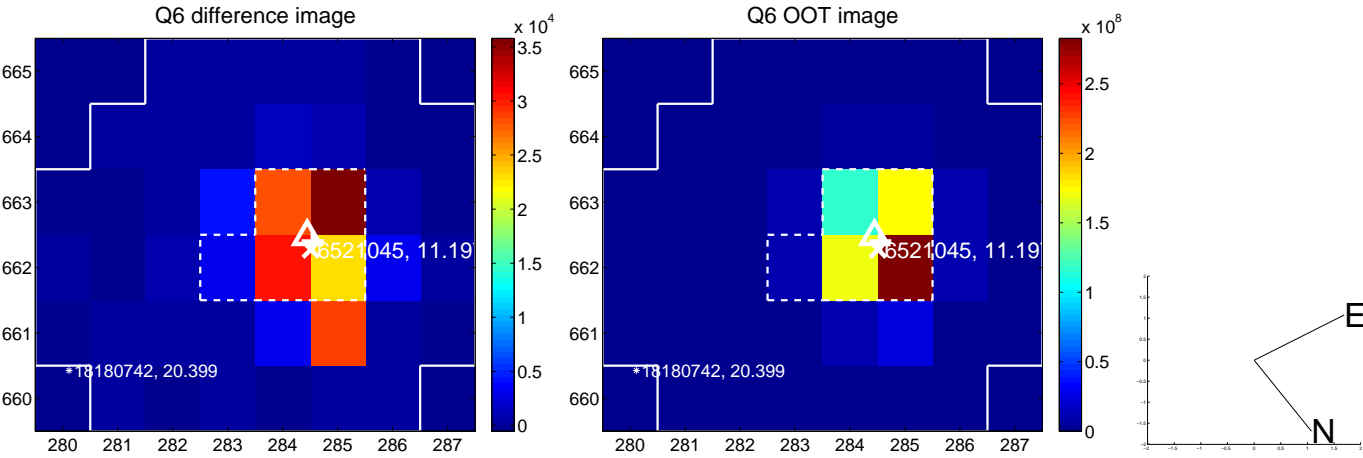
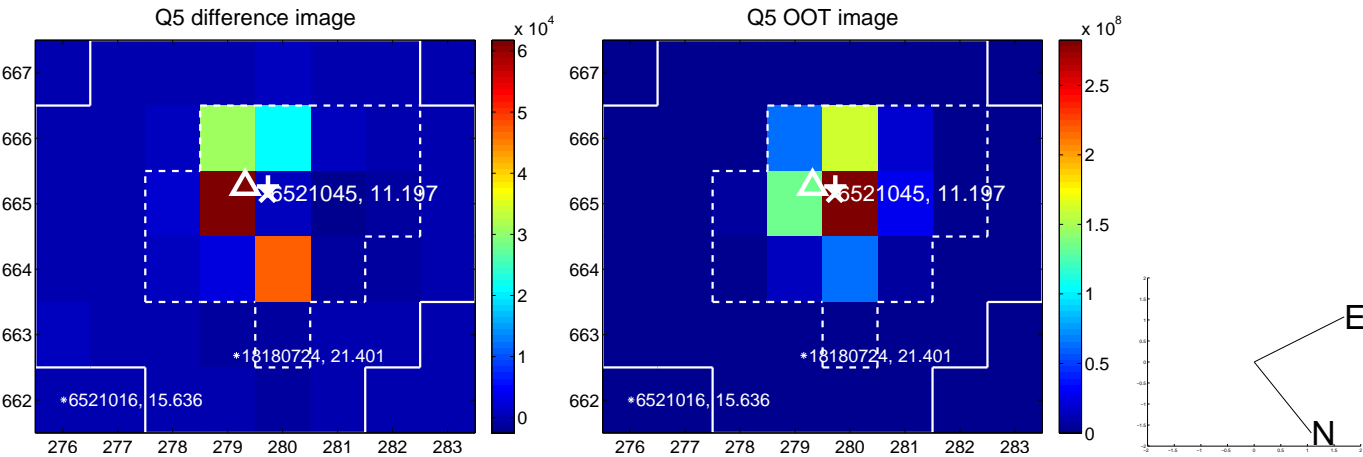


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

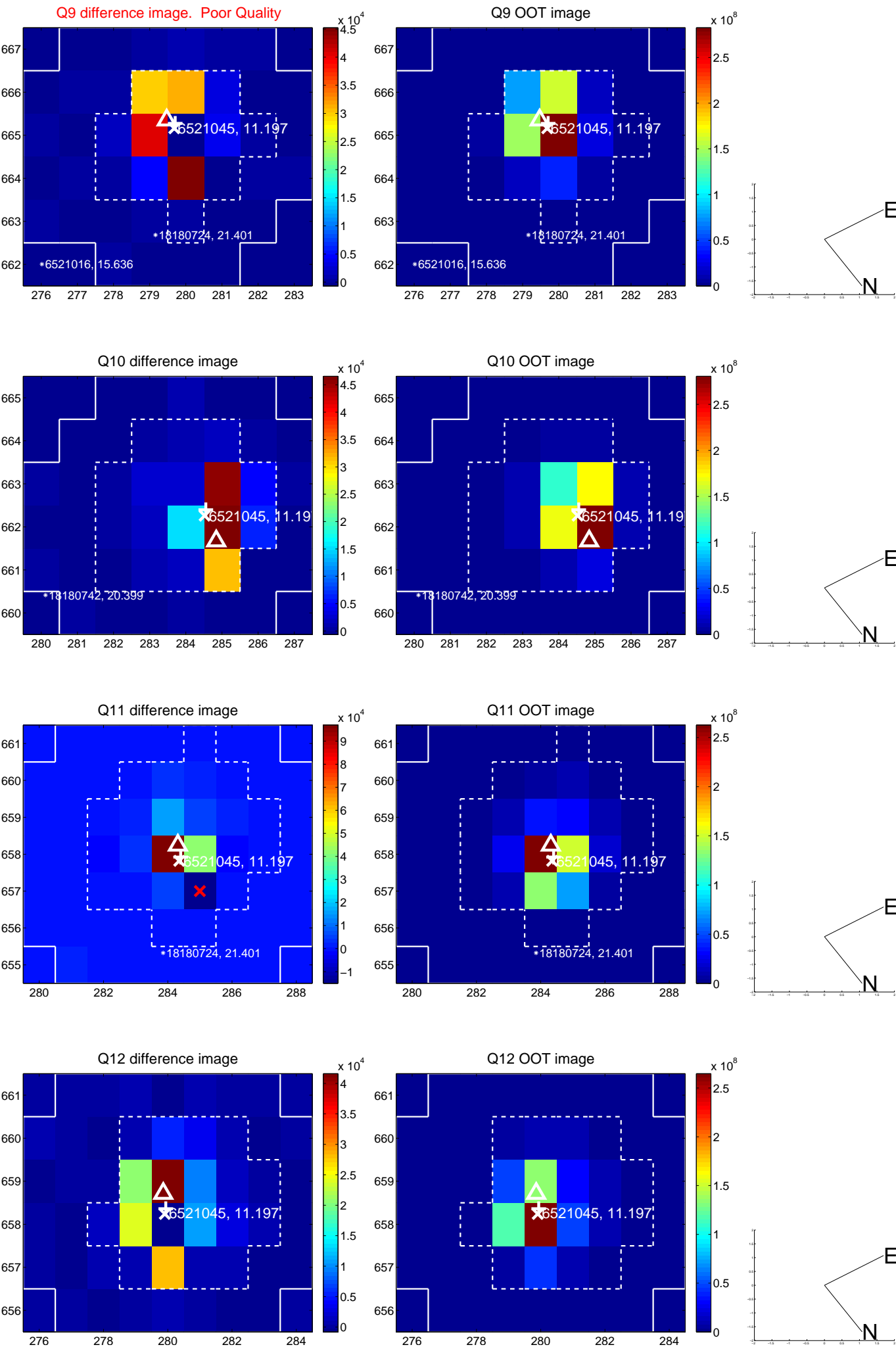
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



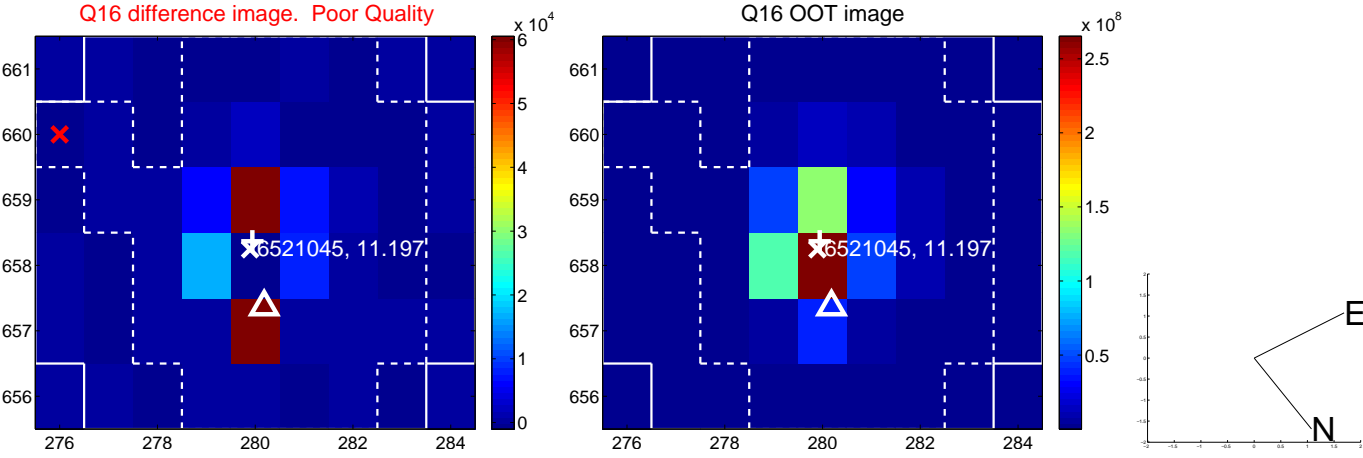
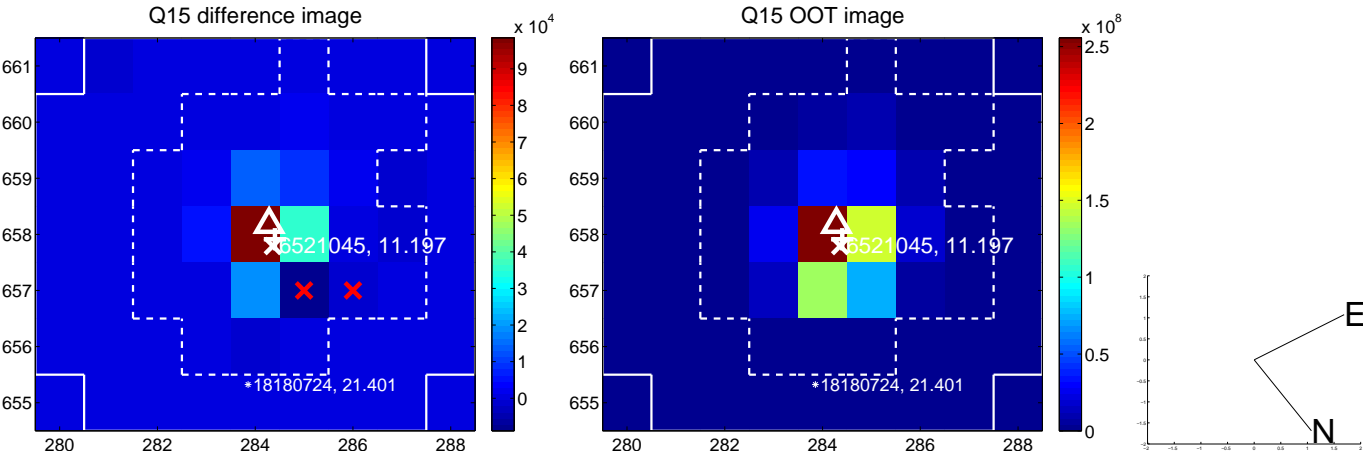
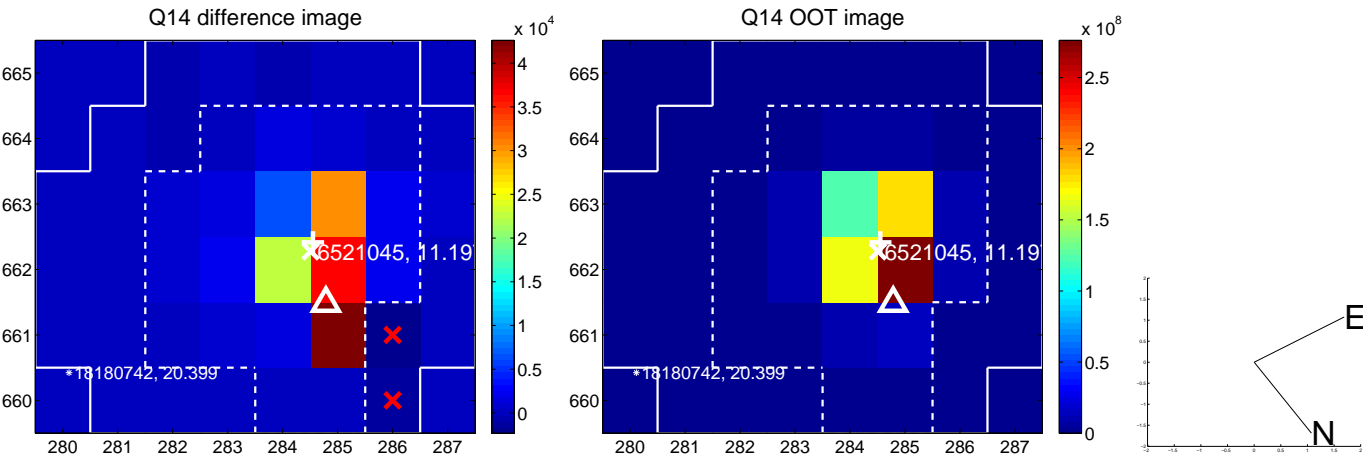
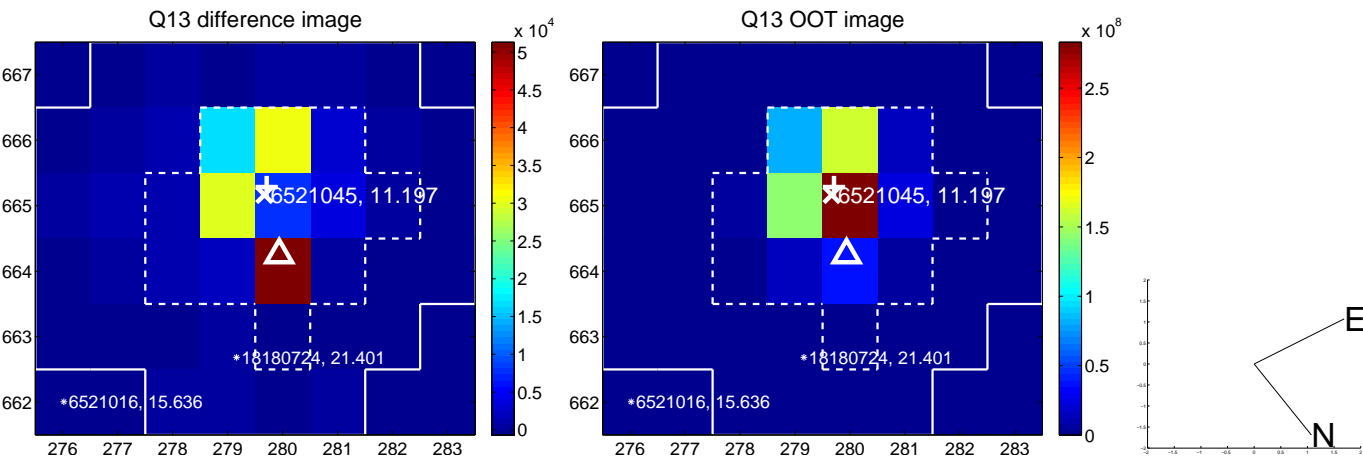
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



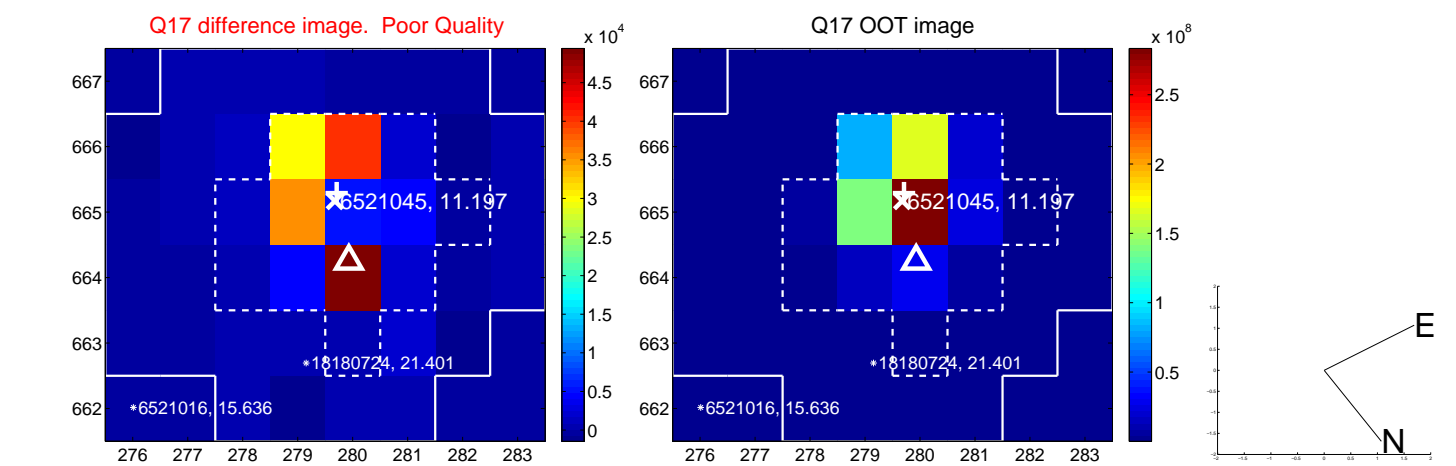
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



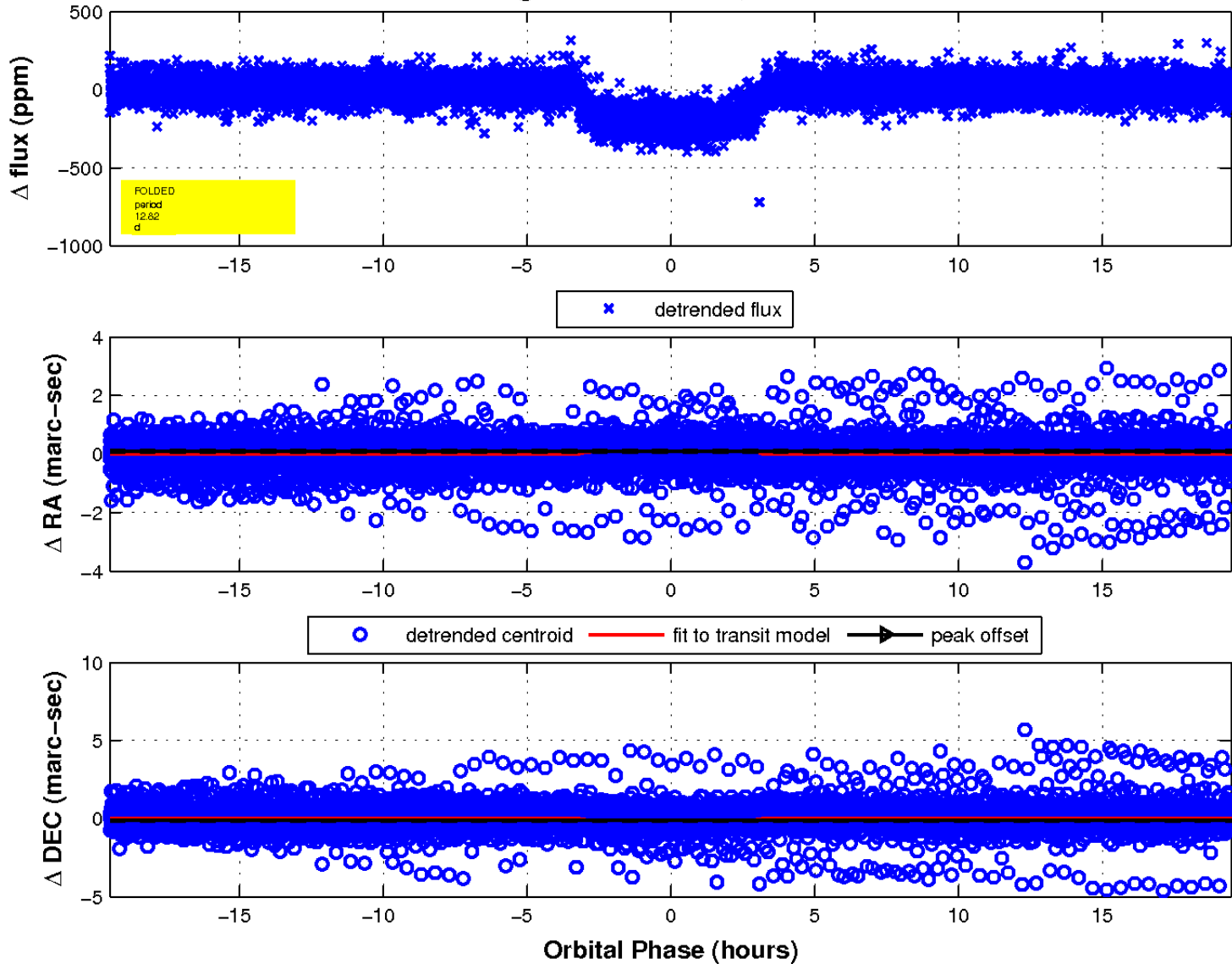
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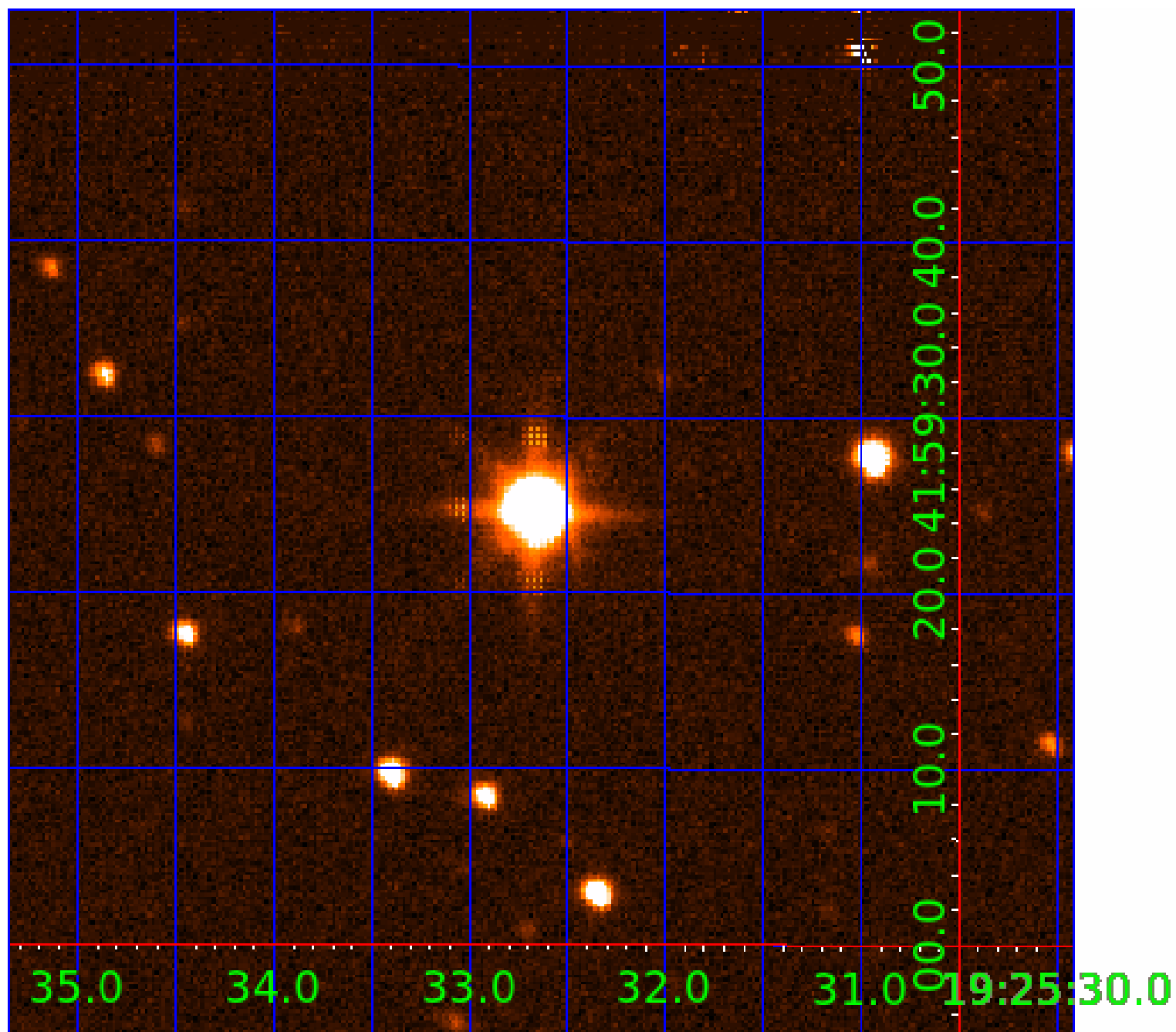


fluxWeightedCentroids, Planet 1 of 3



UKIRT Image

Declination



KIC 006521045

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})
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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006521045-01	OBS	PC	1.00	0	0	0	0	CENT_SATURATED
006521045-02	OBS	PC	1.00	0	0	0	0	CENT_SATURATED
006521045-03	OBS	PC	1.00	0	0	0	0	CENT_SATURATED

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.

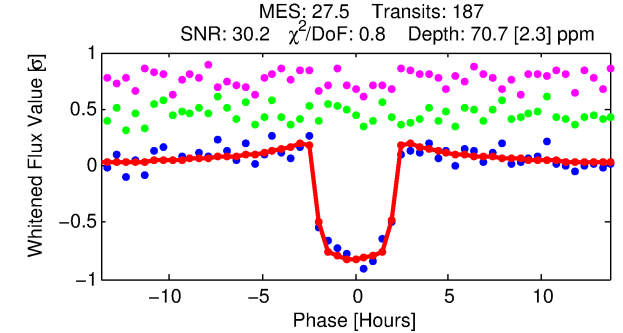
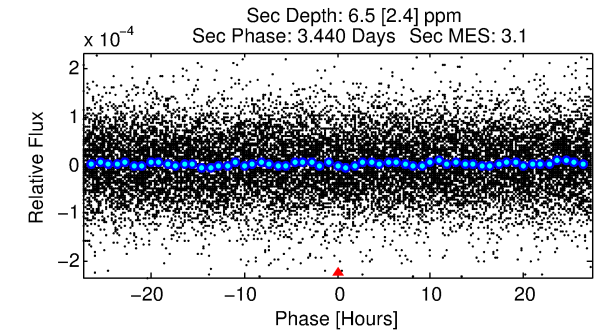
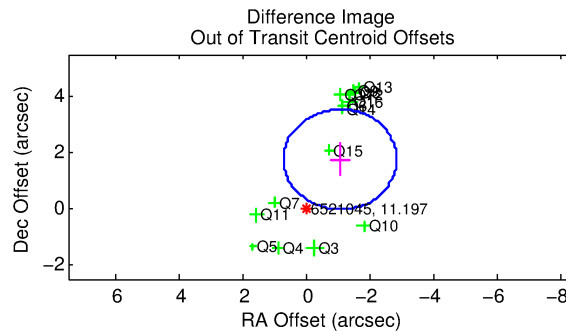
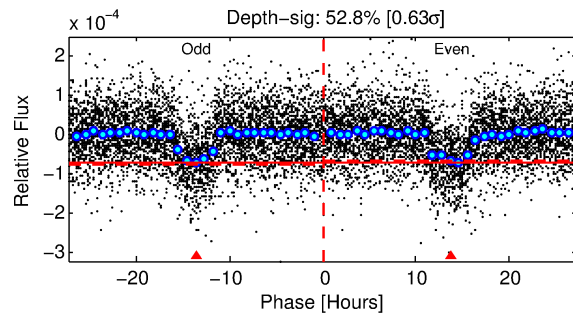
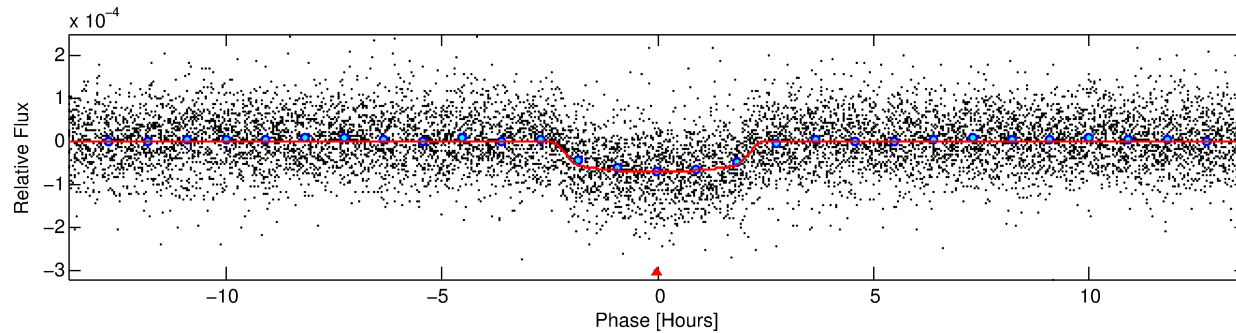
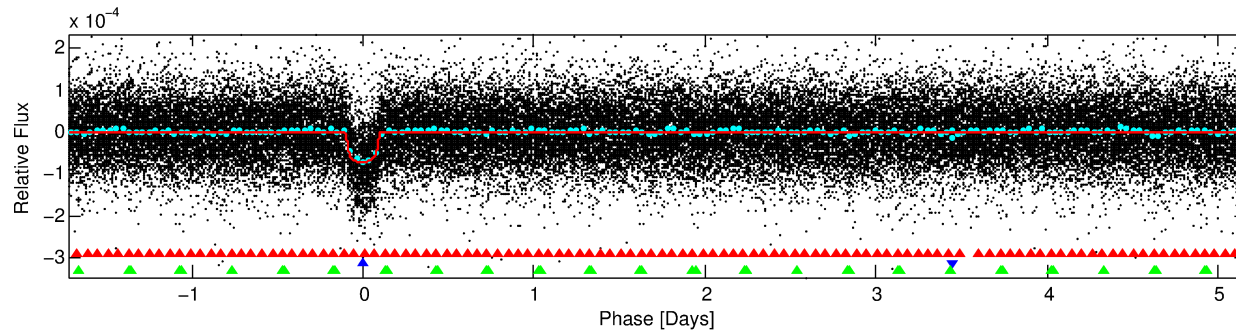
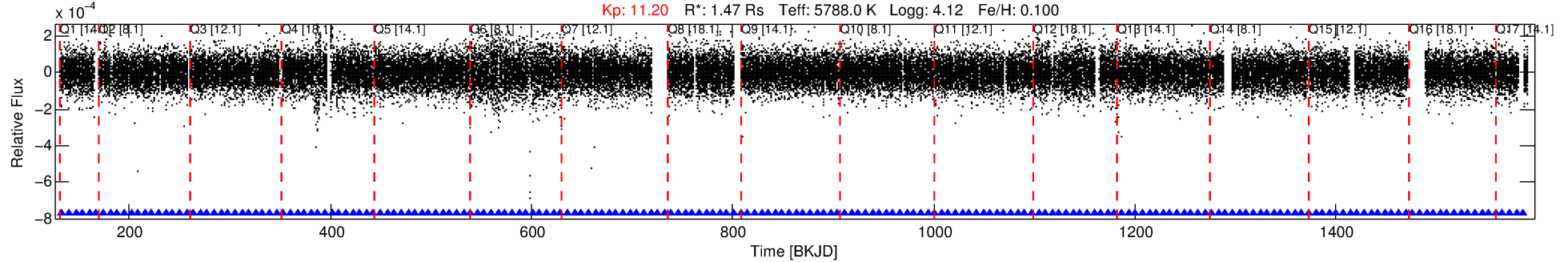
Ephemeris Match Information For 006521045-02

No Significant Match Found

DV One-Page Summary

KIC: 6521045 Candidate: 2 of 3 Period: 6.887 d
KOI: K00041.02 Name: Kepler-100b Corr: 0.987

Kp: 11.20 R*: 1.47 Rs Teff: 5788.0 K Logg: 4.12 Fe/H: 0.100



DV Fit Results:

Period = 6.88706 [0.00002] d
Epoch = 133.1786 [0.0020] BKJD
Rp/R* = 0.0092 [0.0011]
a/R* = 5.30 [2.98]
b = 0.90 [0.12]
Seff = 421.34 [35.95]
Teq = 1155 [25] K
Rp = 1.48 [0.20] Re
a = 0.0720 [0.0036] AU
Ag = 8.54 [3.75] [2.01σ]
Teffp = 3053 [334] K [5.67σ]

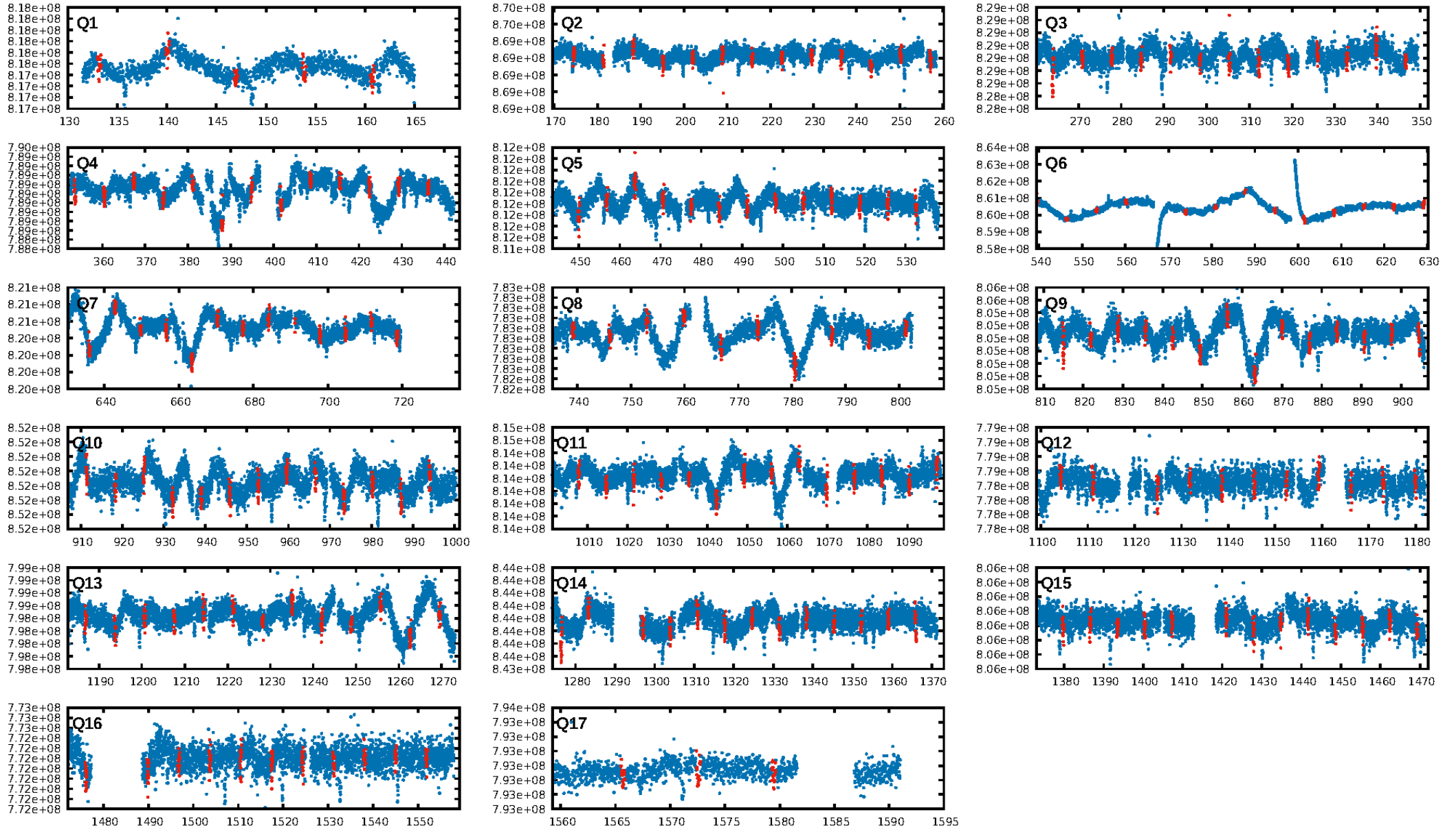
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [17.94σ]
ModelChiSquare2-sig: 96.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 9.13e-152
RollingBand-fgt: 1.00 [179/179]
GhostDiagnostic-chr: 16.64
Centroid-sig: 0.0%
Centroid-so: 0.805 arcsec [2.24σ]
OotOffset-rm: 2.048 arcsec [3.45σ]
KicOffset-rm: 1.578 arcsec [2.33σ]
OotOffset-st: 3/4/4/4 [15]
KicOffset-st: 3/4/4/4 [15]
DiffImageQuality-fgm: 0.80 [12/15]
DiffImageOverlap-fno: 1.00 [17/17]

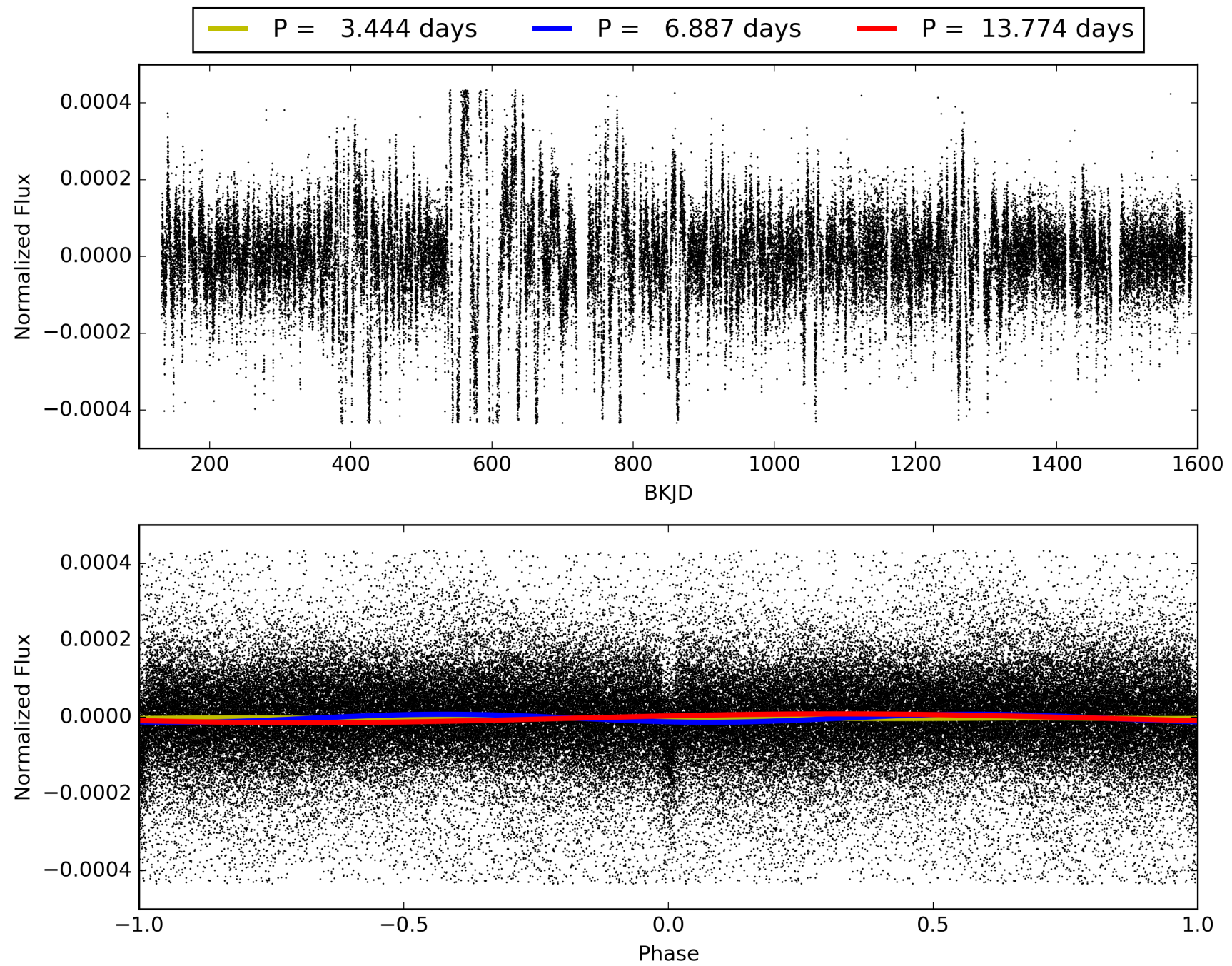
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 15:24:00 Z

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

TCE 006521045-02, PDC Light Curves

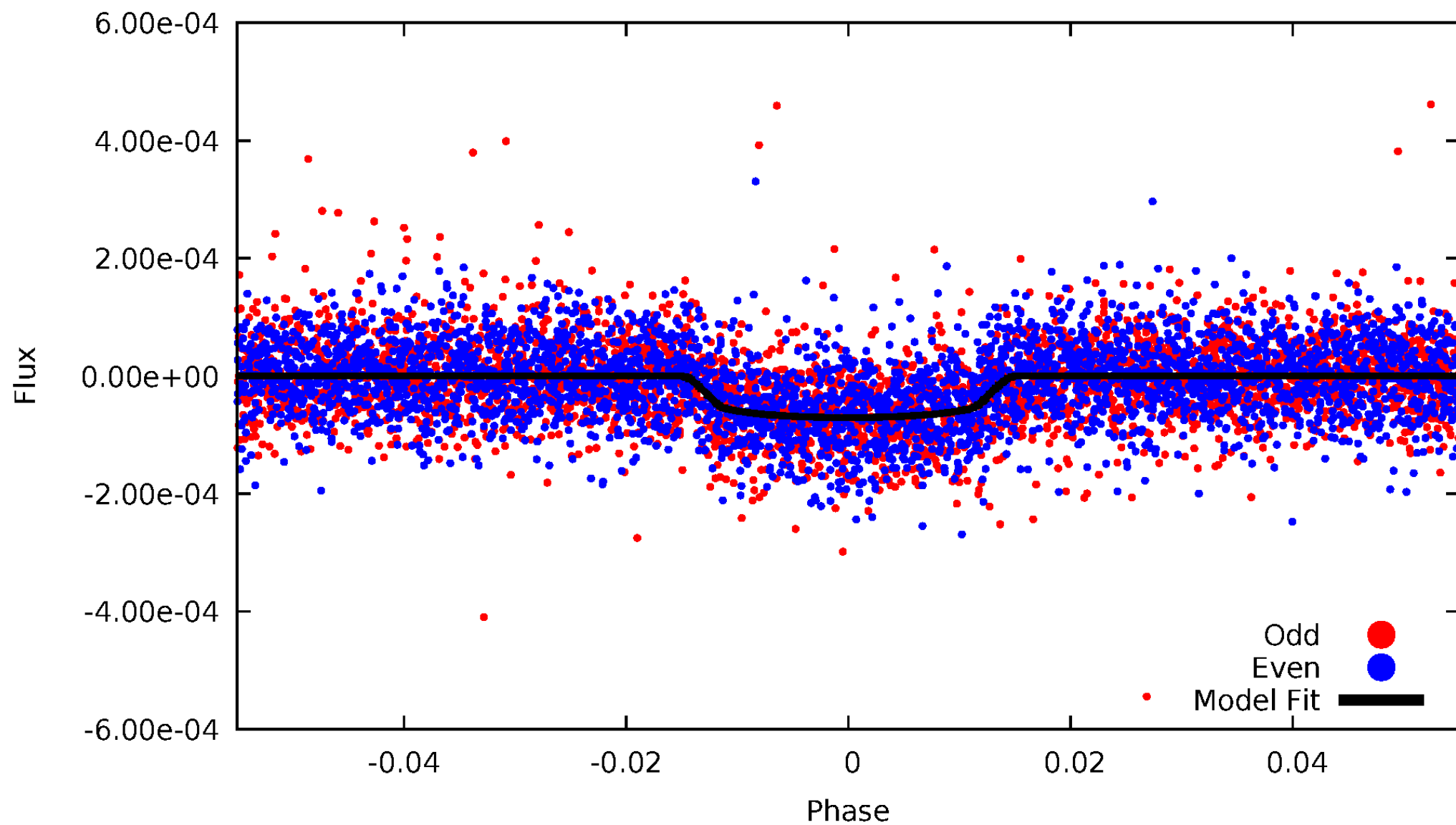


TCE 006521045-02



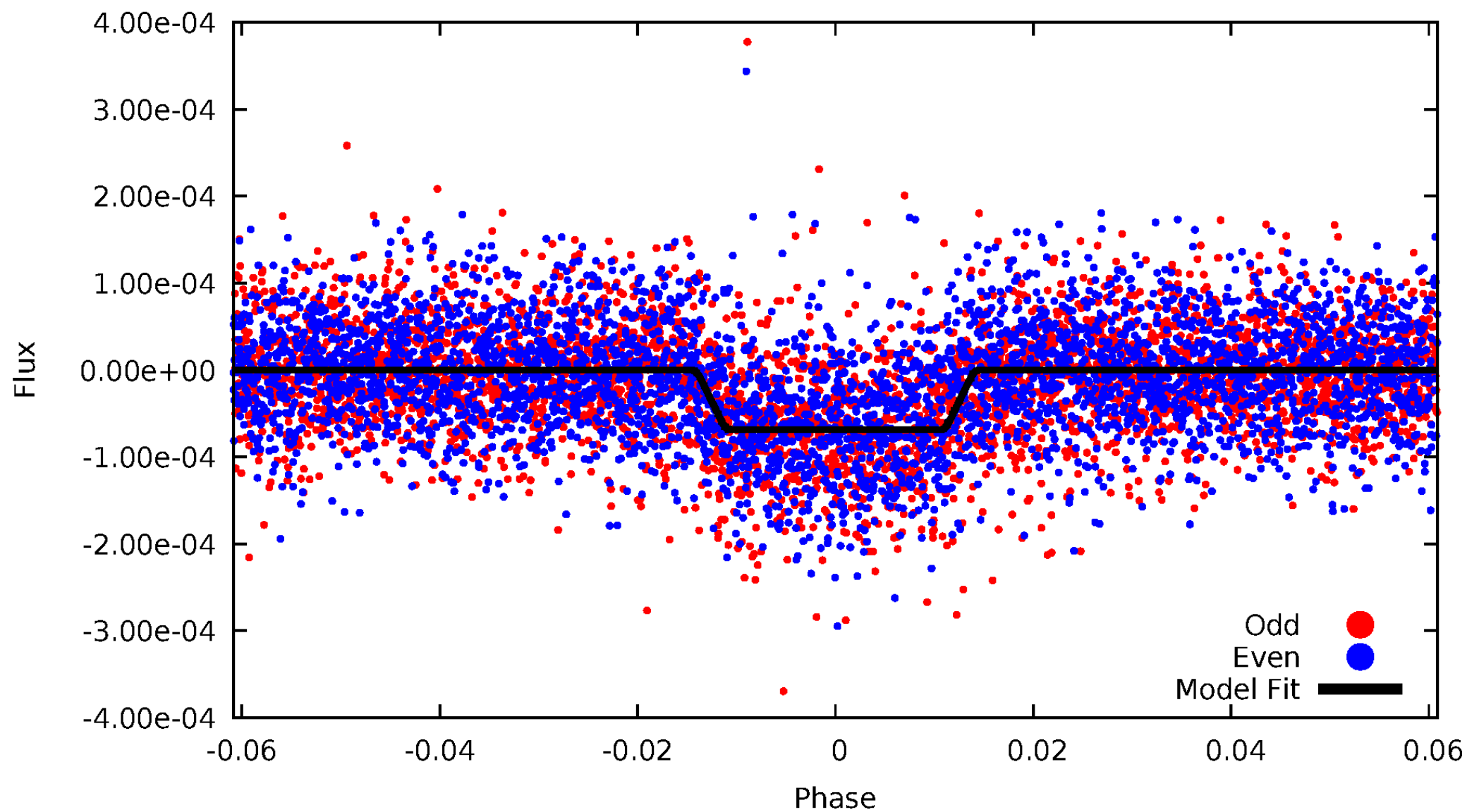
DV Odd/Even

TCE 006521045-02



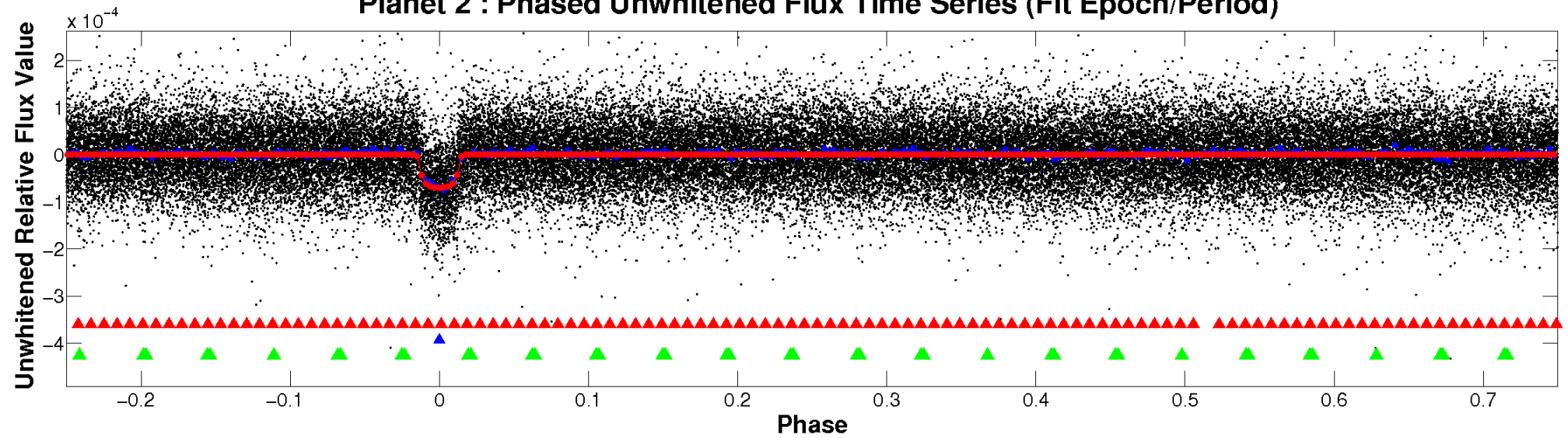
ALT Odd/Even

TCE 006521045-02

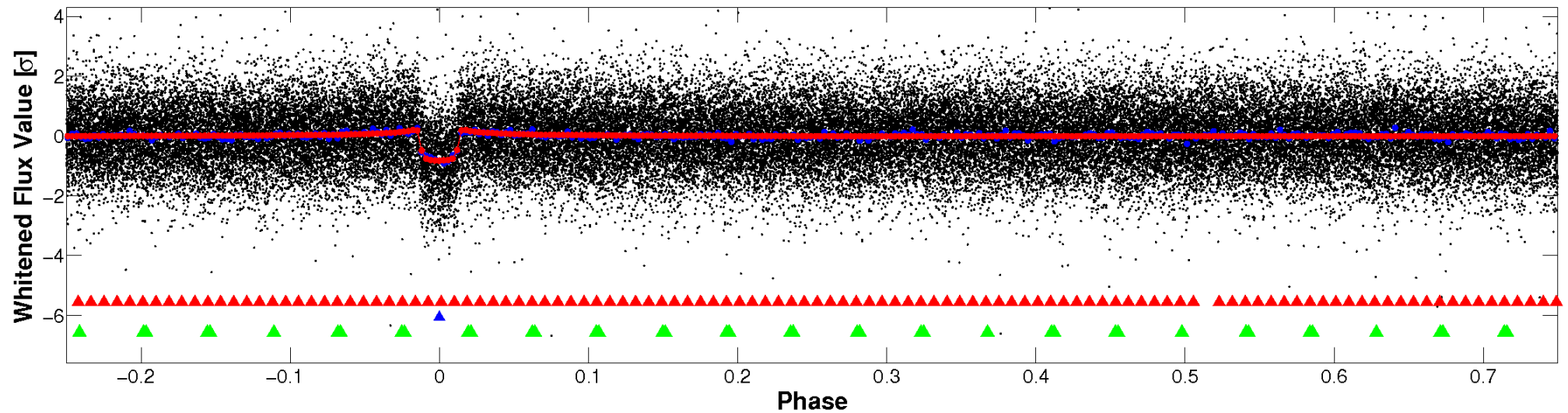


Non-Whitened Vs. Whitened Light Curve

Planet 2 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

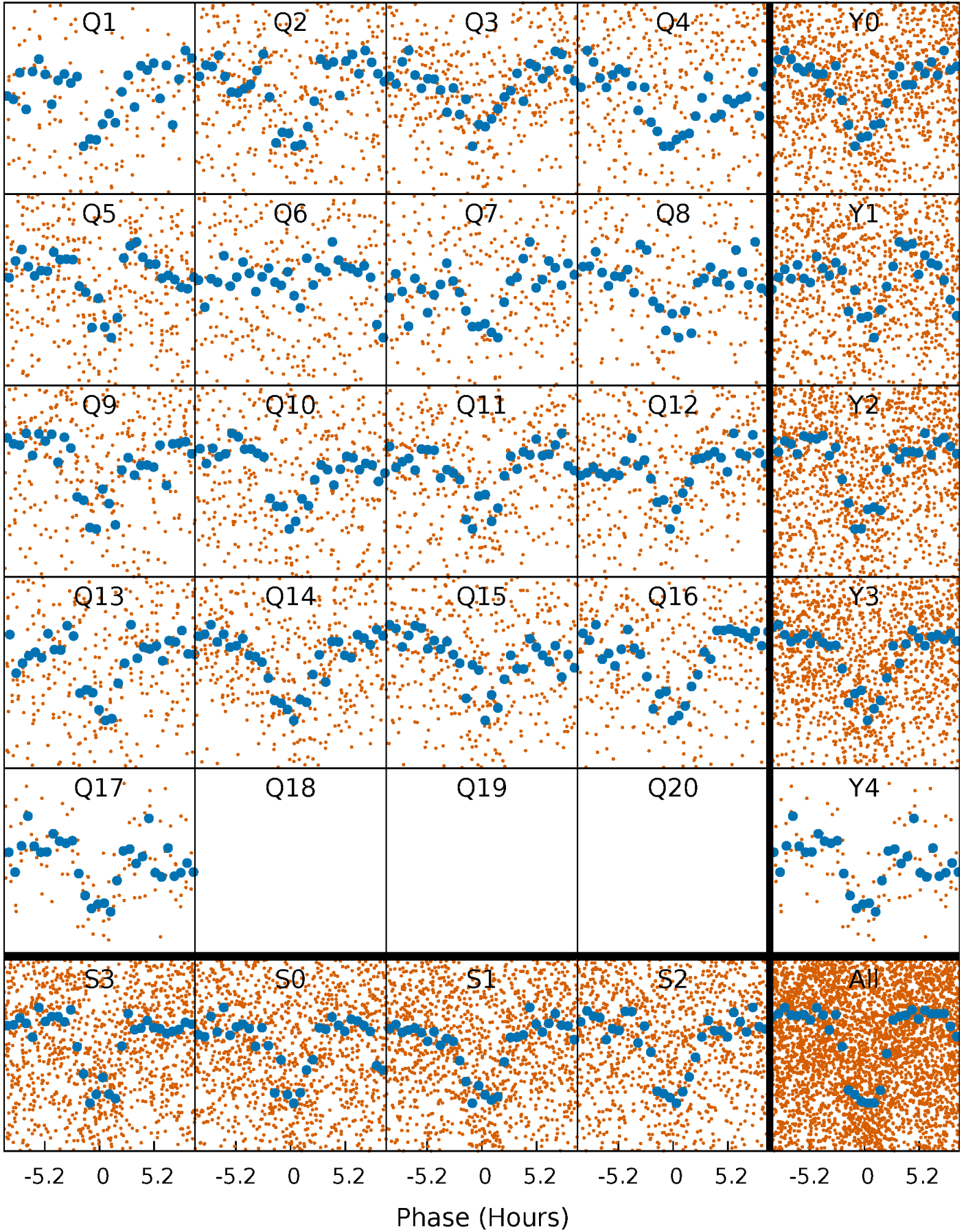


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



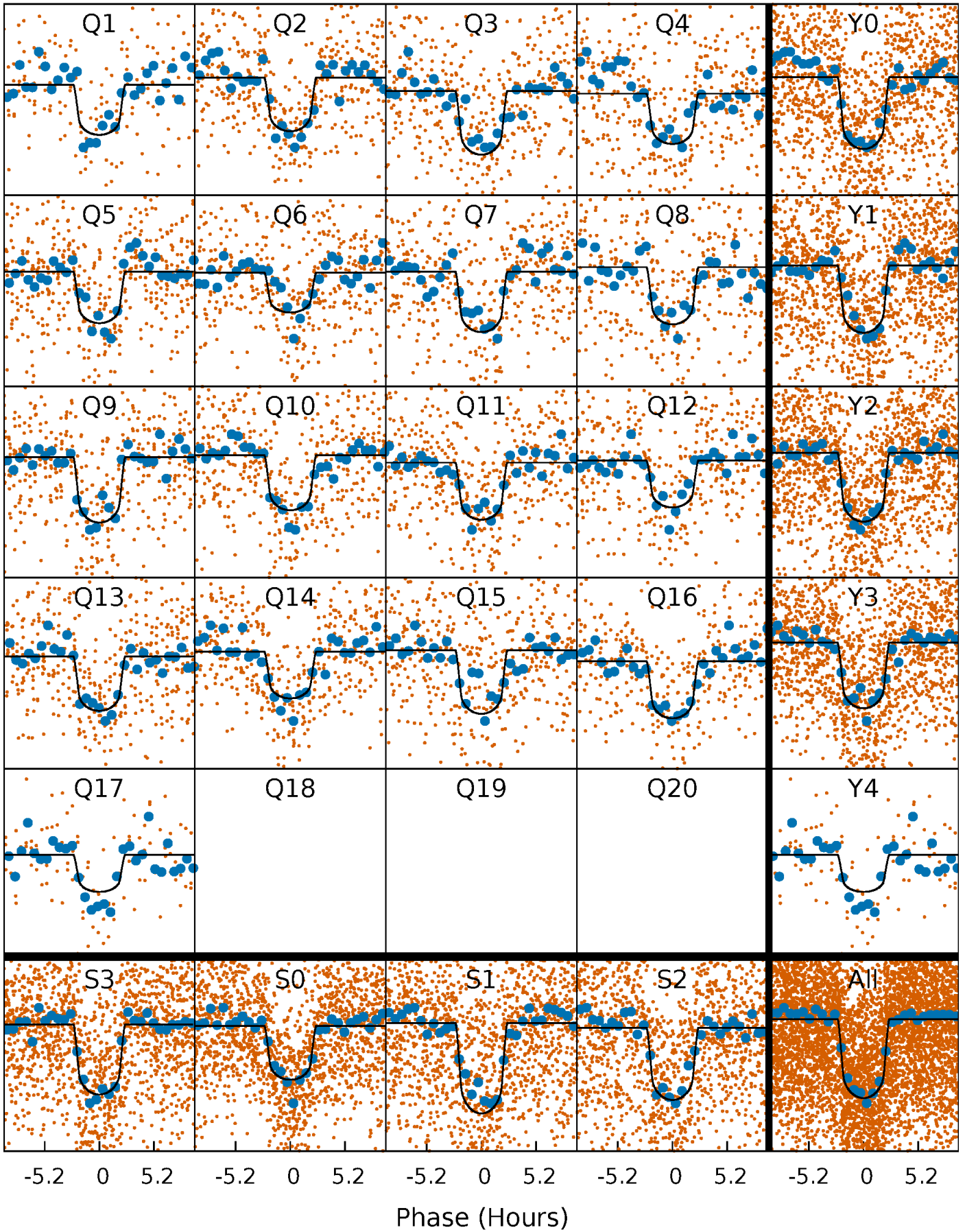
PDC Quarter-Phased Transit Curves

TCE 006521045-02 P= 6.887056 Days $T_0=133.178553$ (BKJD)



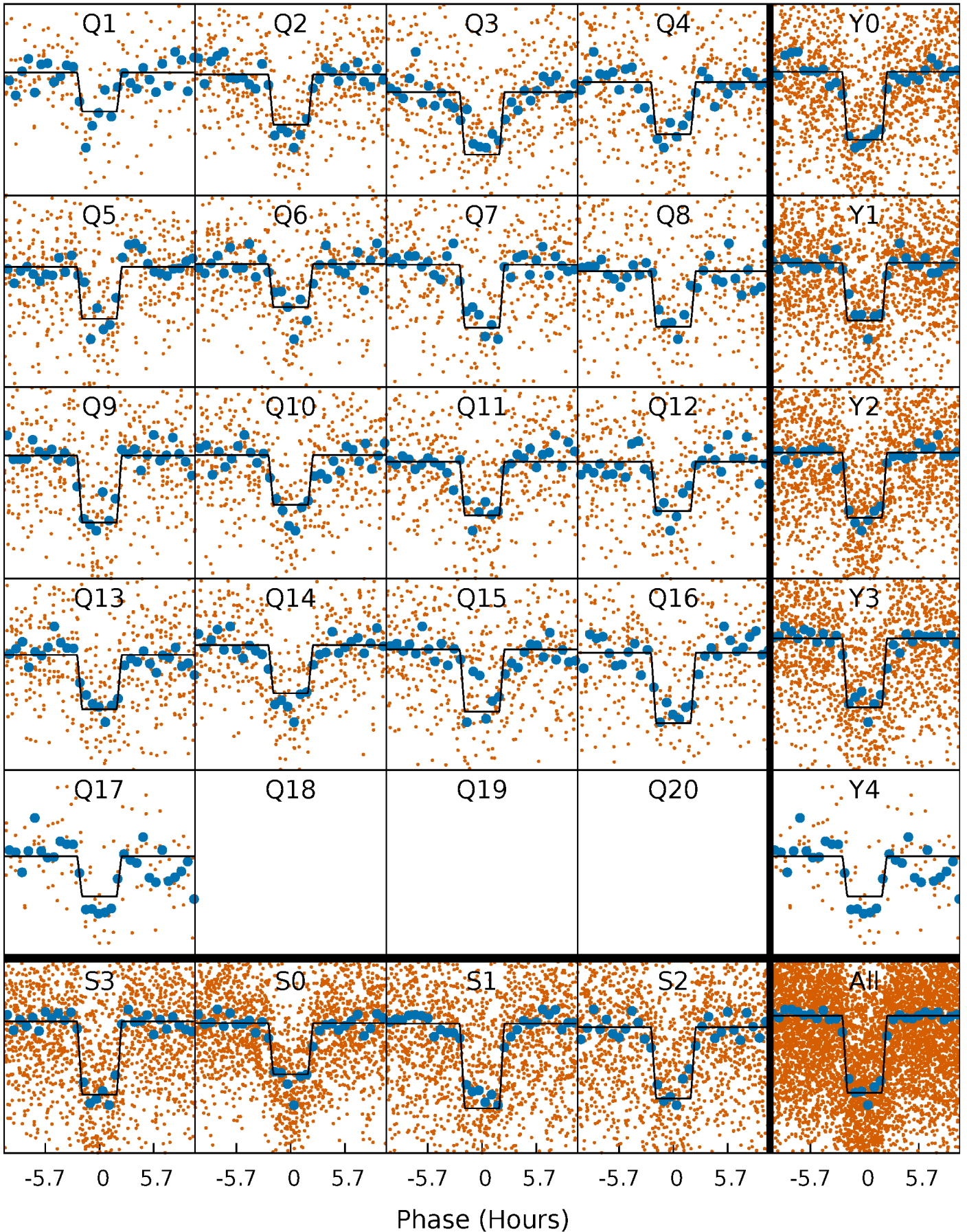
DV Quarter-Phased Transit Curves

TCE 006521045-02 P= 6.887056 Days $T_0=133.178553$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

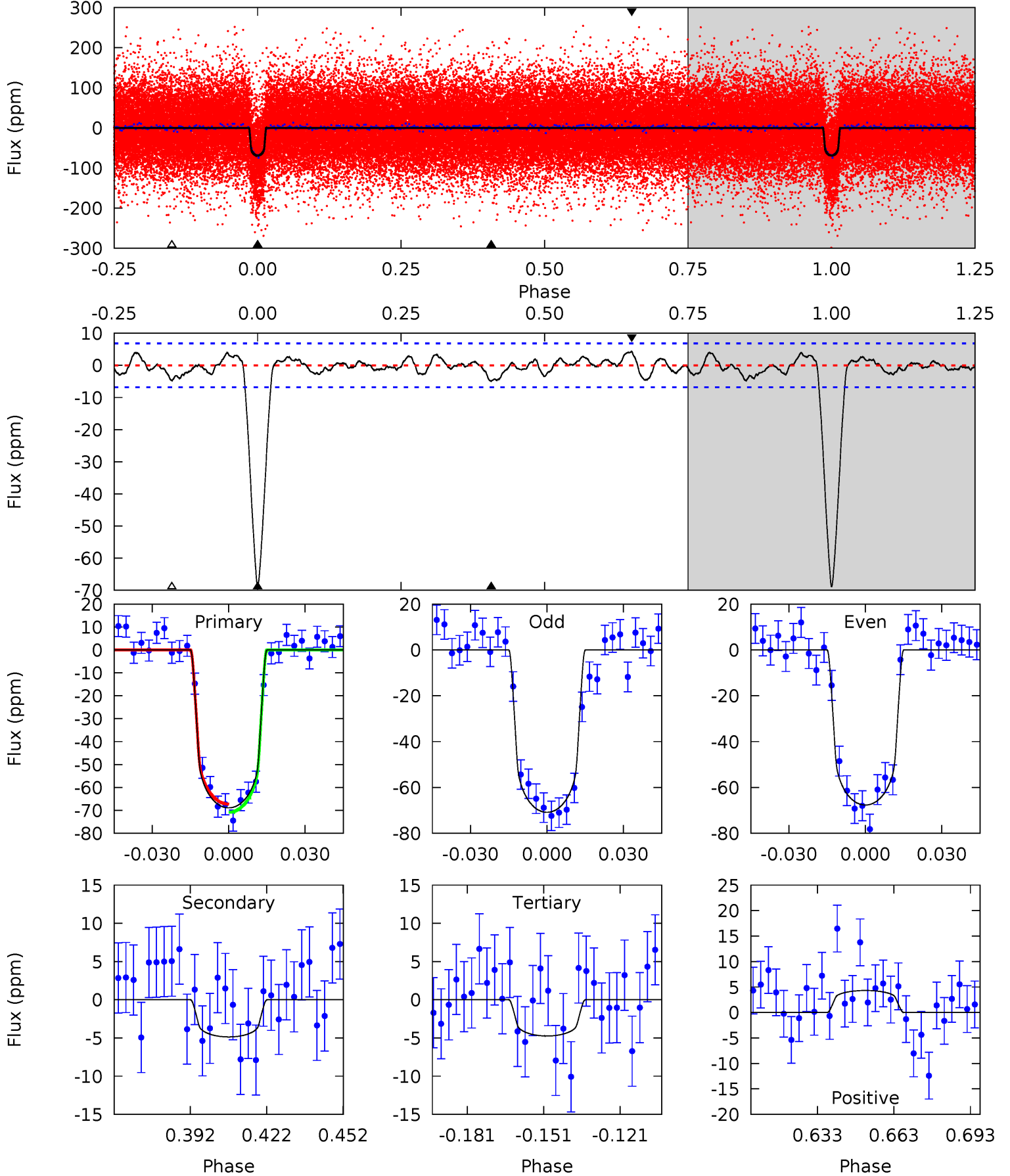
TCE 006521045-02 P= 6.887003 Days $T_0=133.185695$ (BKJD)



DV Model-Shift Uniqueness Test

006521045-02, P = 6.887056 Days, E = 126.291497 Days

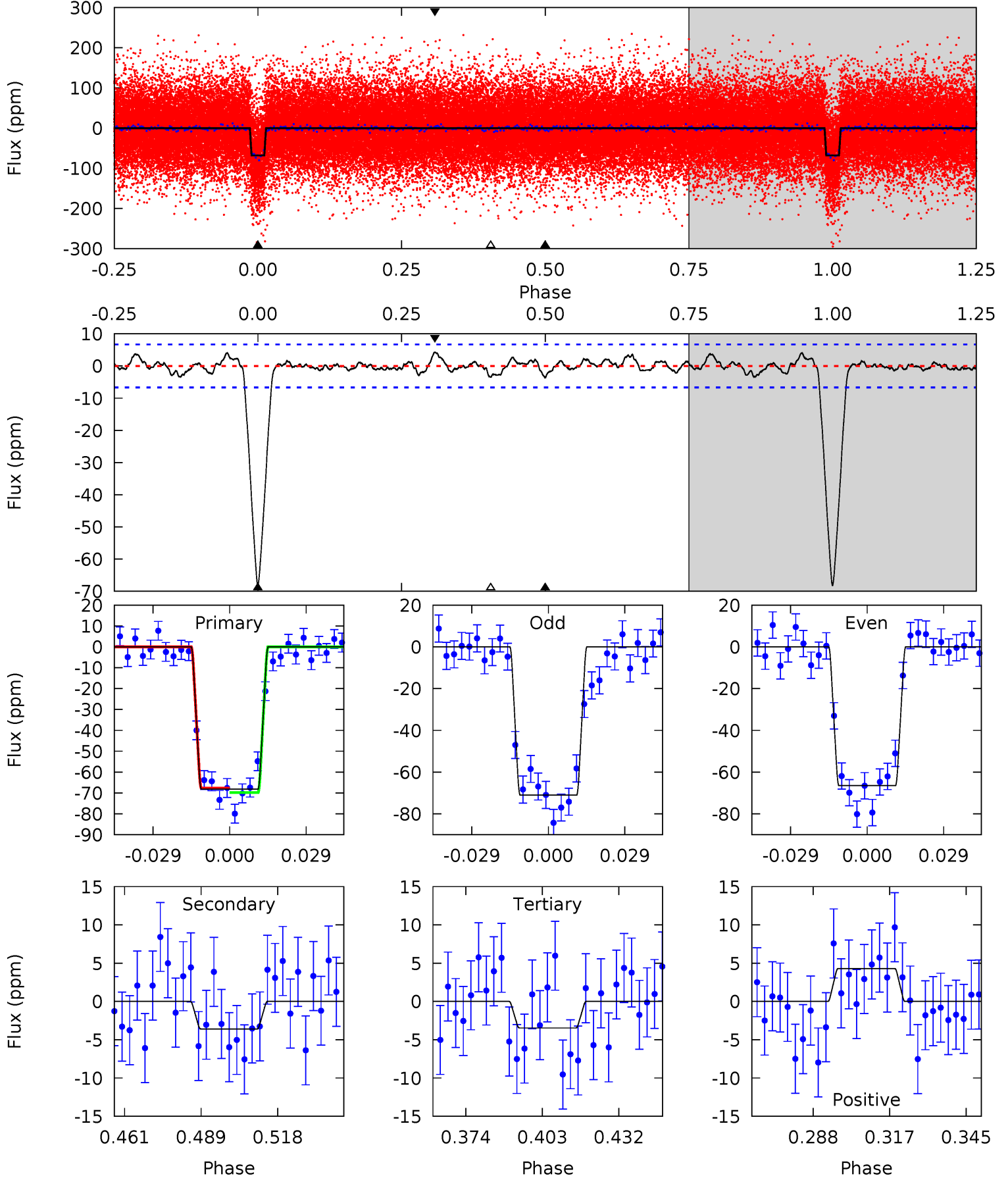
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
48.7	3.44	3.35	3.05	4.81	2.17	1.32	45.3	45.6	0.09	0.39	1.13	0.98	0.06	1.26



Alt Model-Shift Uniqueness Test

006521045-02, P = 6.887003 Days, E = 126.298692 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
49.1	2.59	2.50	3.10	4.82	2.19	1.05	46.6	46.0	0.09	-0.51	1.62	0.97	0.06	0.76



Stellar Parameters For KIC 006521045

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	5788^{+78}_{-78}	$4.122^{+0.033}_{-0.027}$	$0.100^{+0.150}_{-0.150}$	$1.474^{+0.094}_{-0.079}$	$1.050^{+0.126}_{-0.068}$	$0.462^{+0.056}_{-0.050}$
	+1%/-1%	+1%/-1%	+150%/-150%	+6%/-5%	+12%/-6%	+12%/-11%
Source	SPE72	AST69	SPE72	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 006521045-02 / KOI 0041.02

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-5 ± 1	$1.49^{+0.17}_{-0.18}$	1611^{+28}_{-29}	3337^{+203}_{-213}	$6.416^{+2.469}_{-2.233}$
Alt.	-4 ± 1	$1.34^{+0.17}_{-0.19}$	1613^{+30}_{-32}	3279^{+252}_{-257}	$5.651^{+3.380}_{-2.285}$

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 $A_{obs} \gg 1.0$

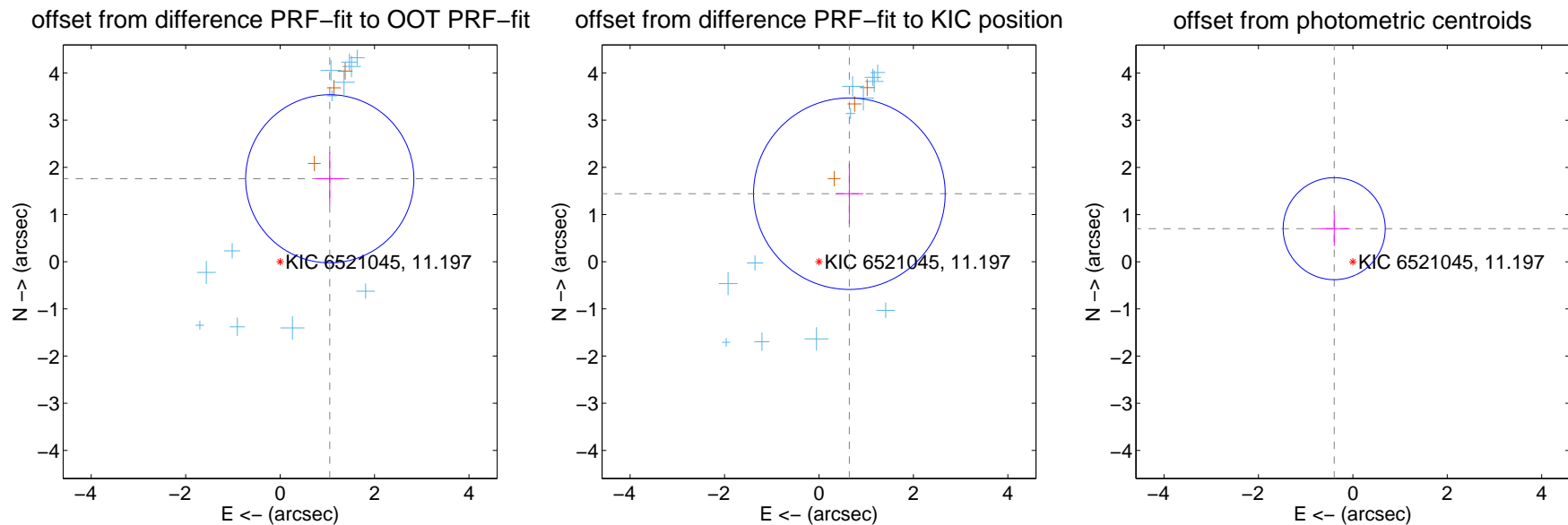
DV Centroid Data

Supplemental centroid analysis for 006521045-02. **Kepler magnitude: 11.20.** Transit SNR 30.22

There are 12 quarters with good PRF difference image offsets

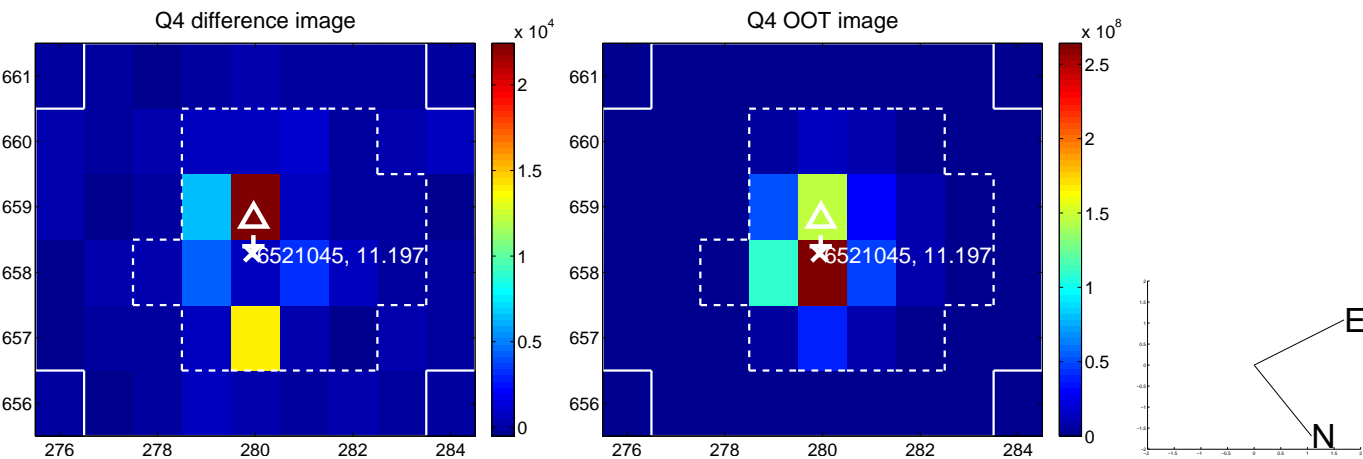
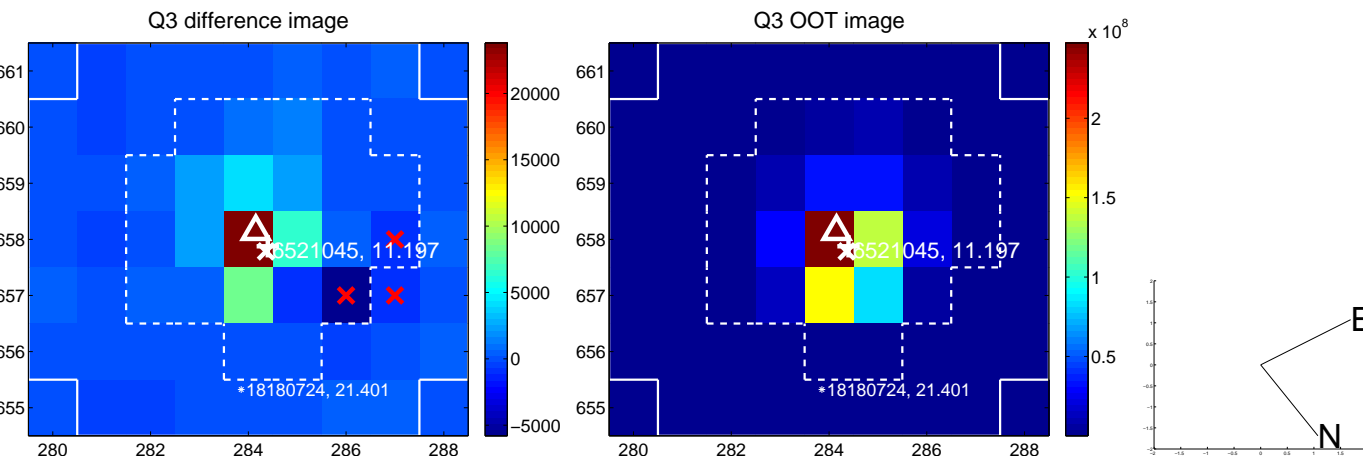
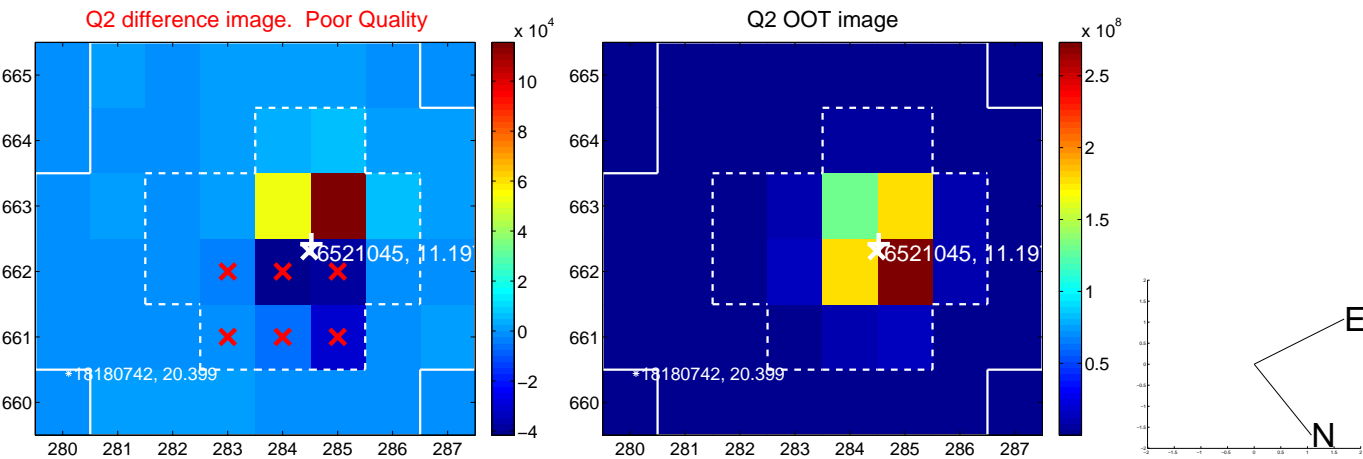
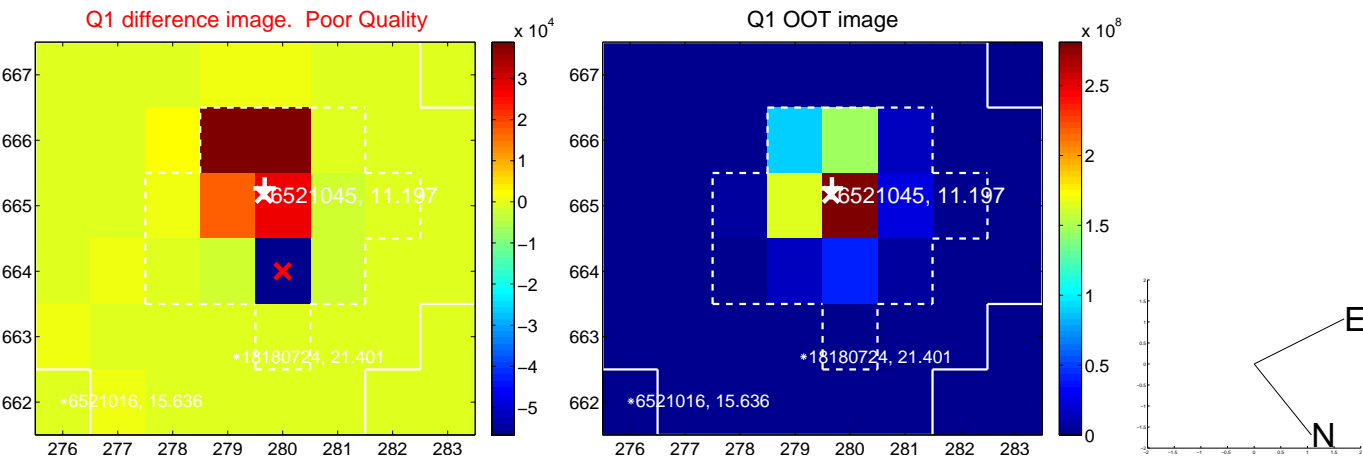
The direct PRF centroid is offset from the target star catalog position by about 0.50 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.048 ± 0.594	3.45	-1.051 ± 0.296	1.757 ± 0.559
PRF-fit source offset from KIC position	1.578 ± 0.676	2.33	-0.643 ± 0.297	1.441 ± 0.636
photometric centroid source offset	0.81 ± 0.36	2.24	0.40 ± 0.33	0.70 ± 0.37

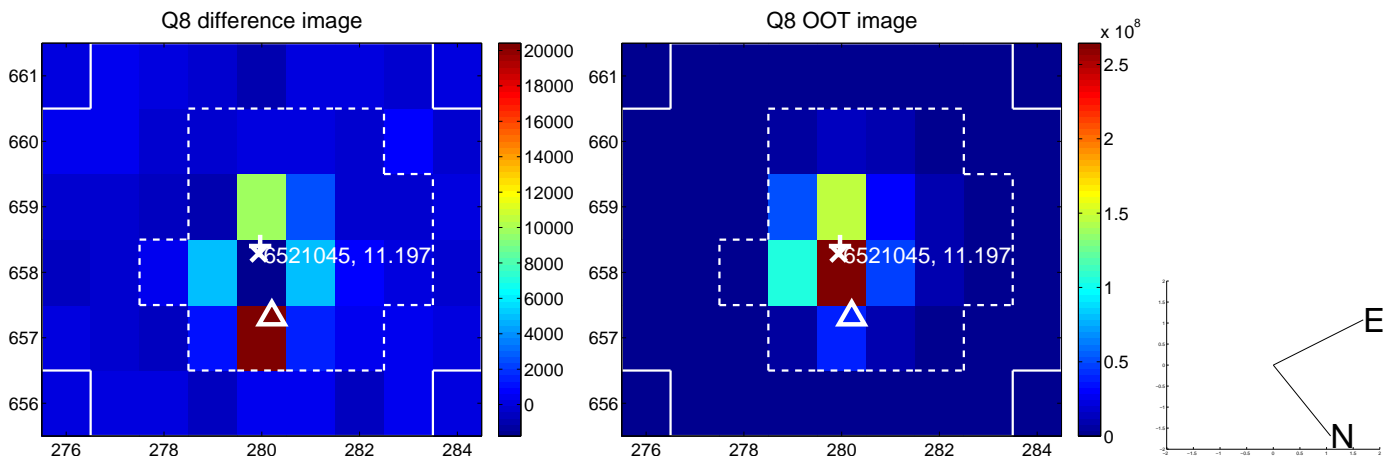
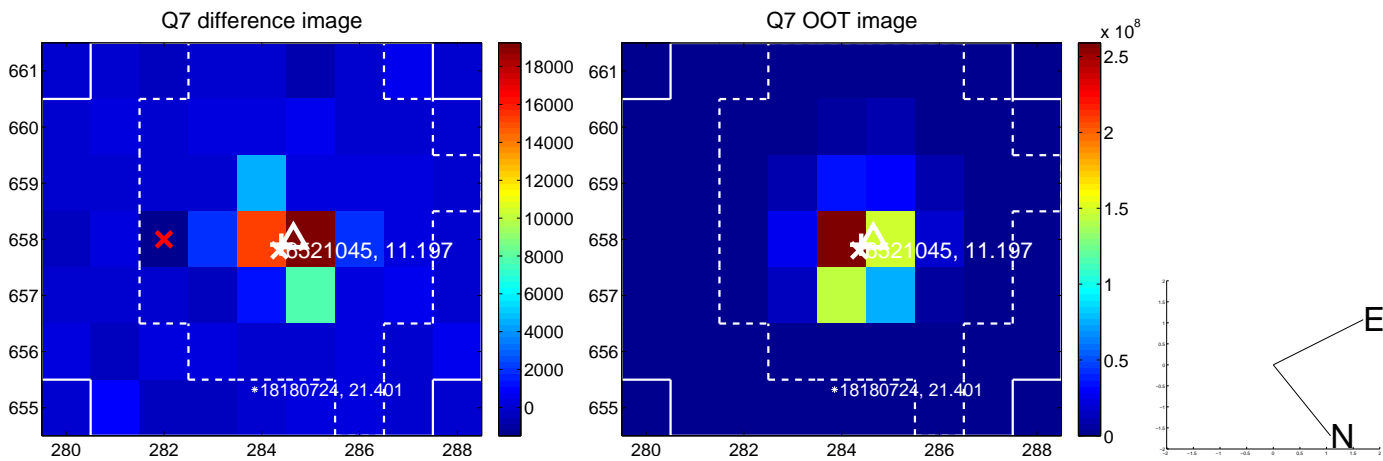
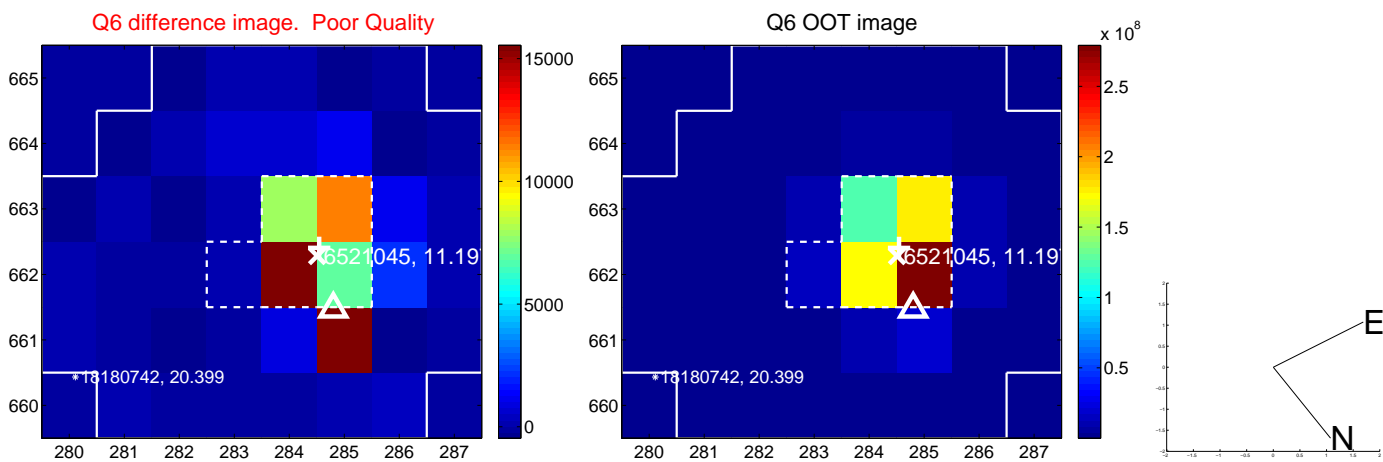
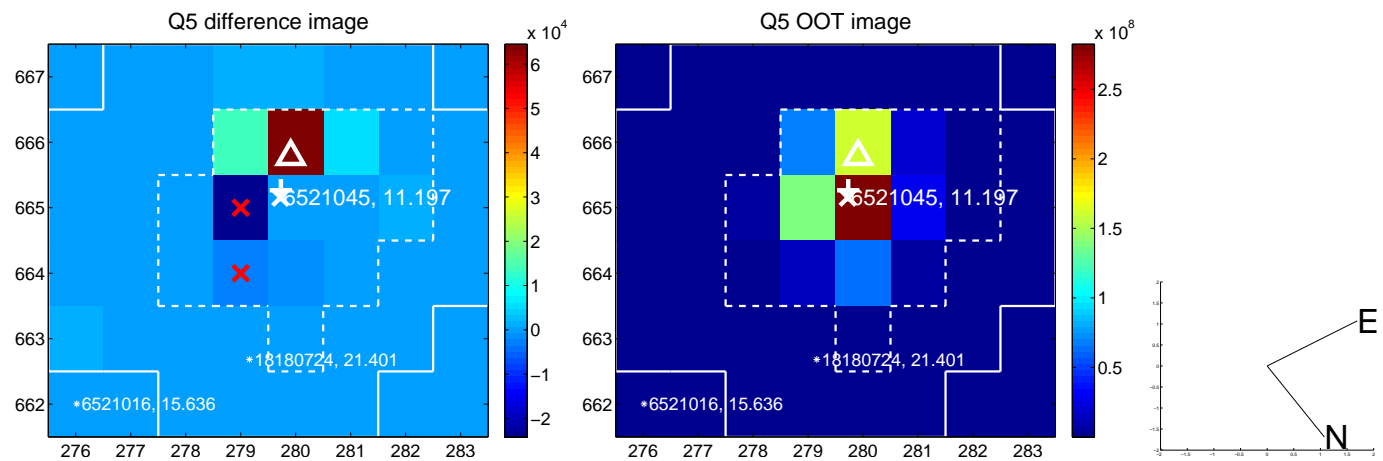


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

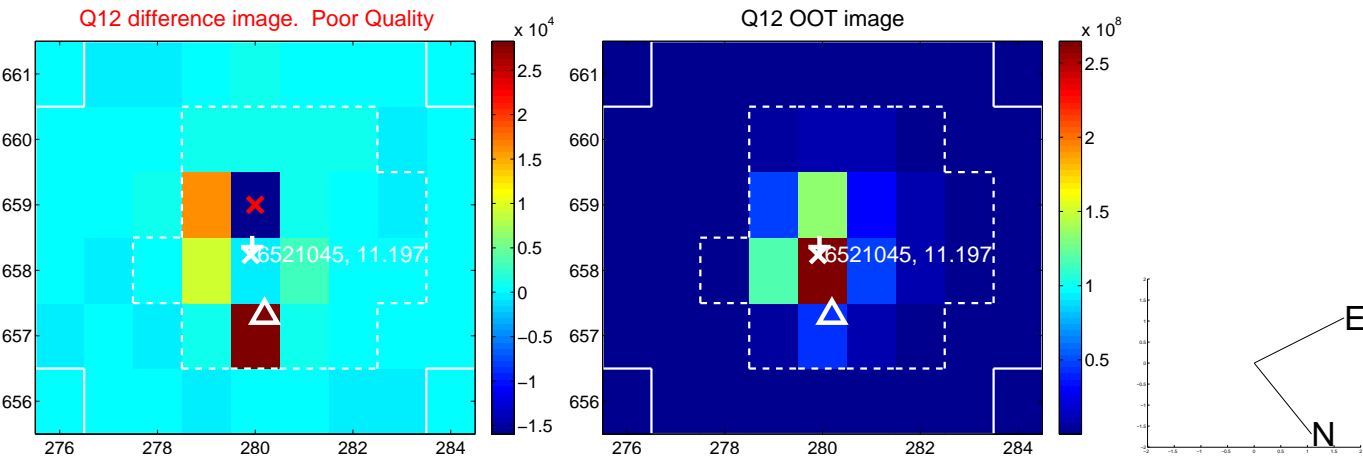
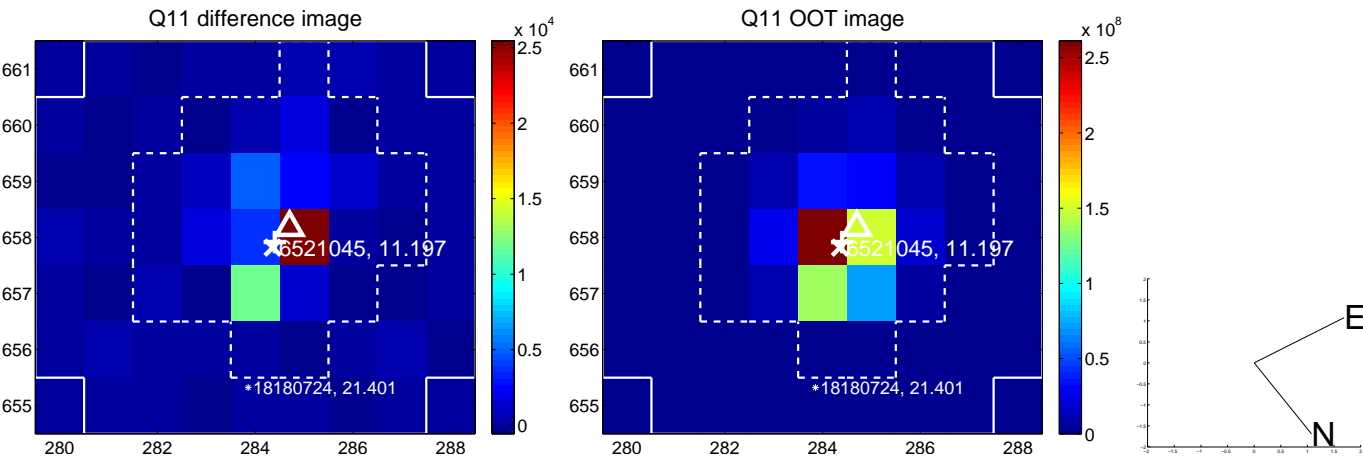
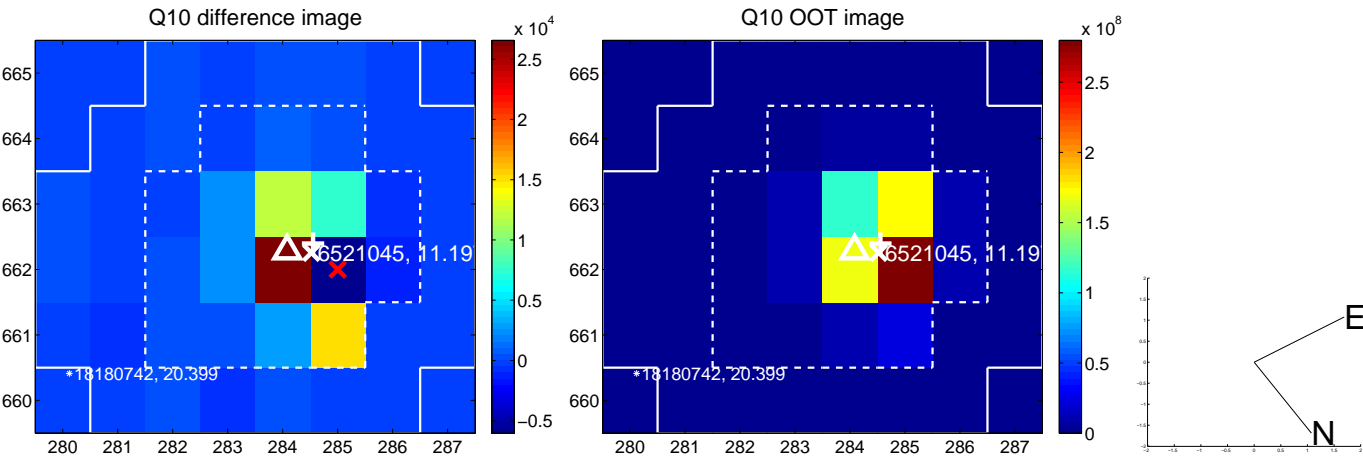
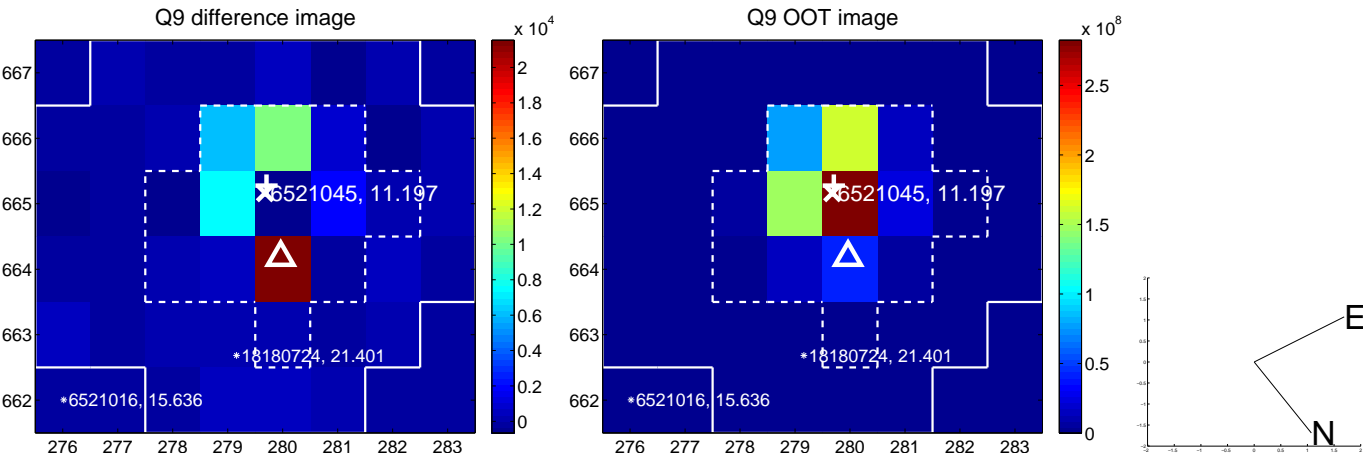
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



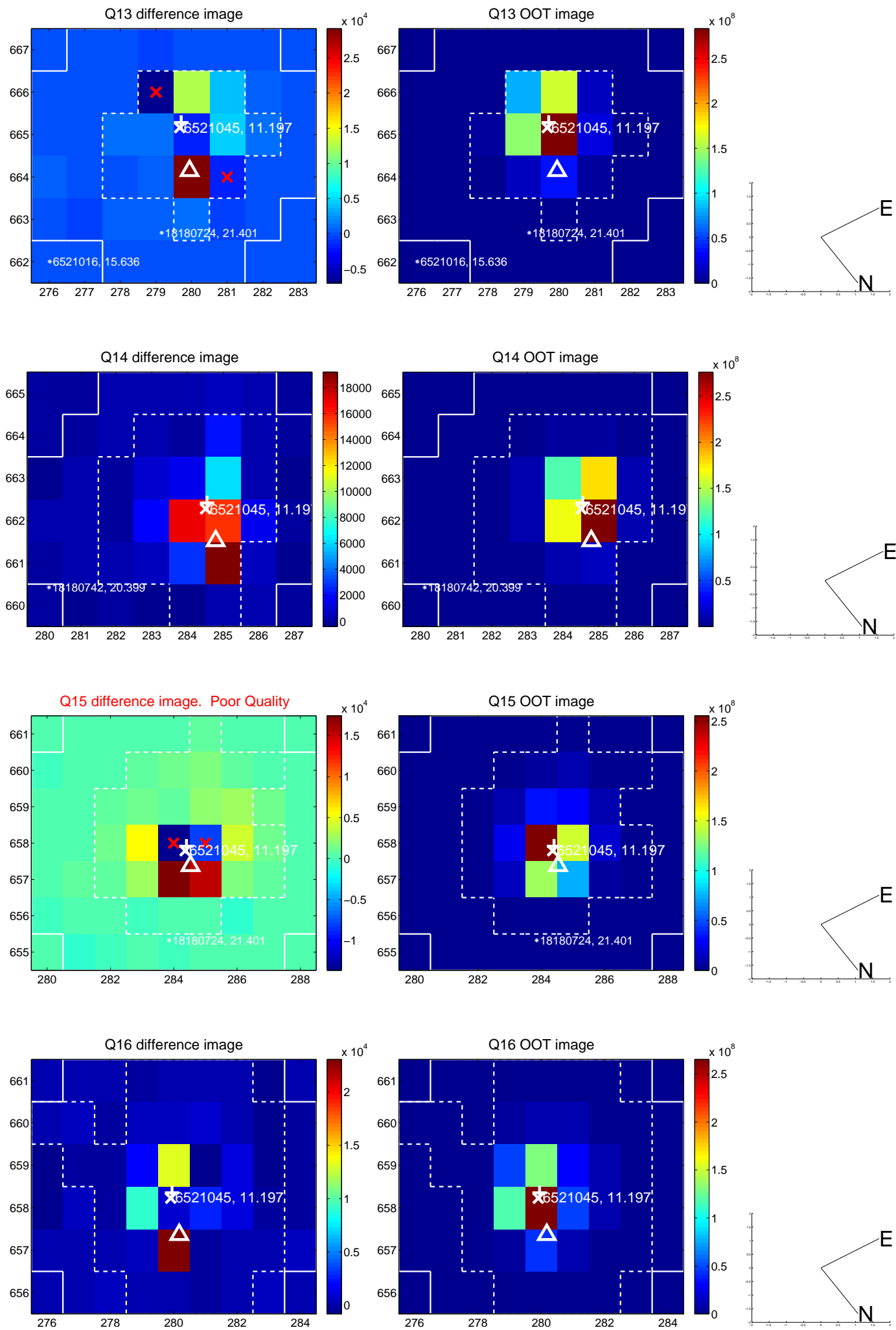
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



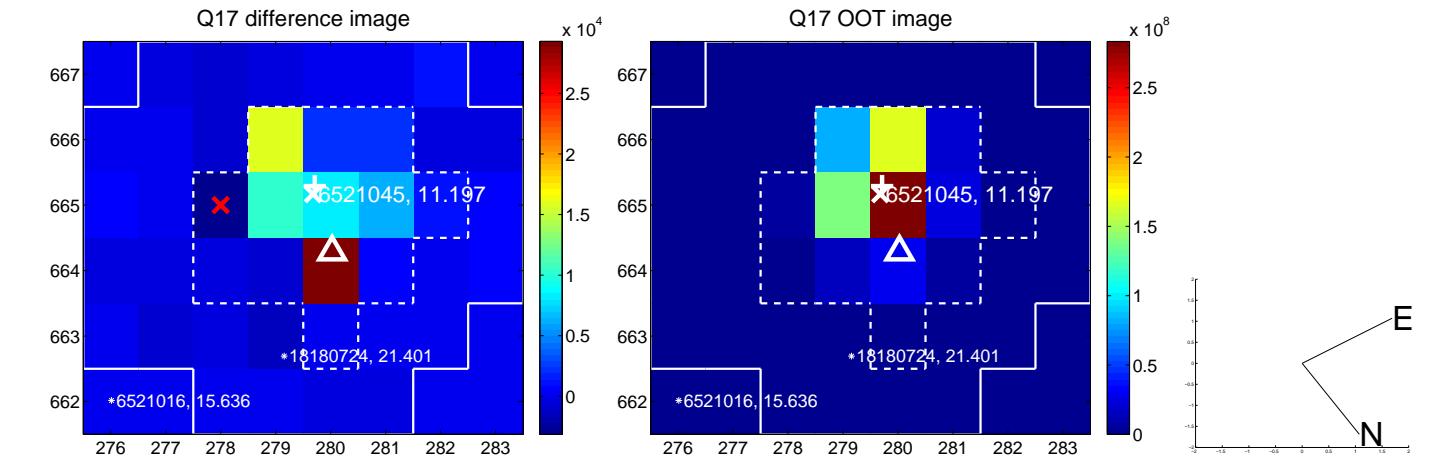
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



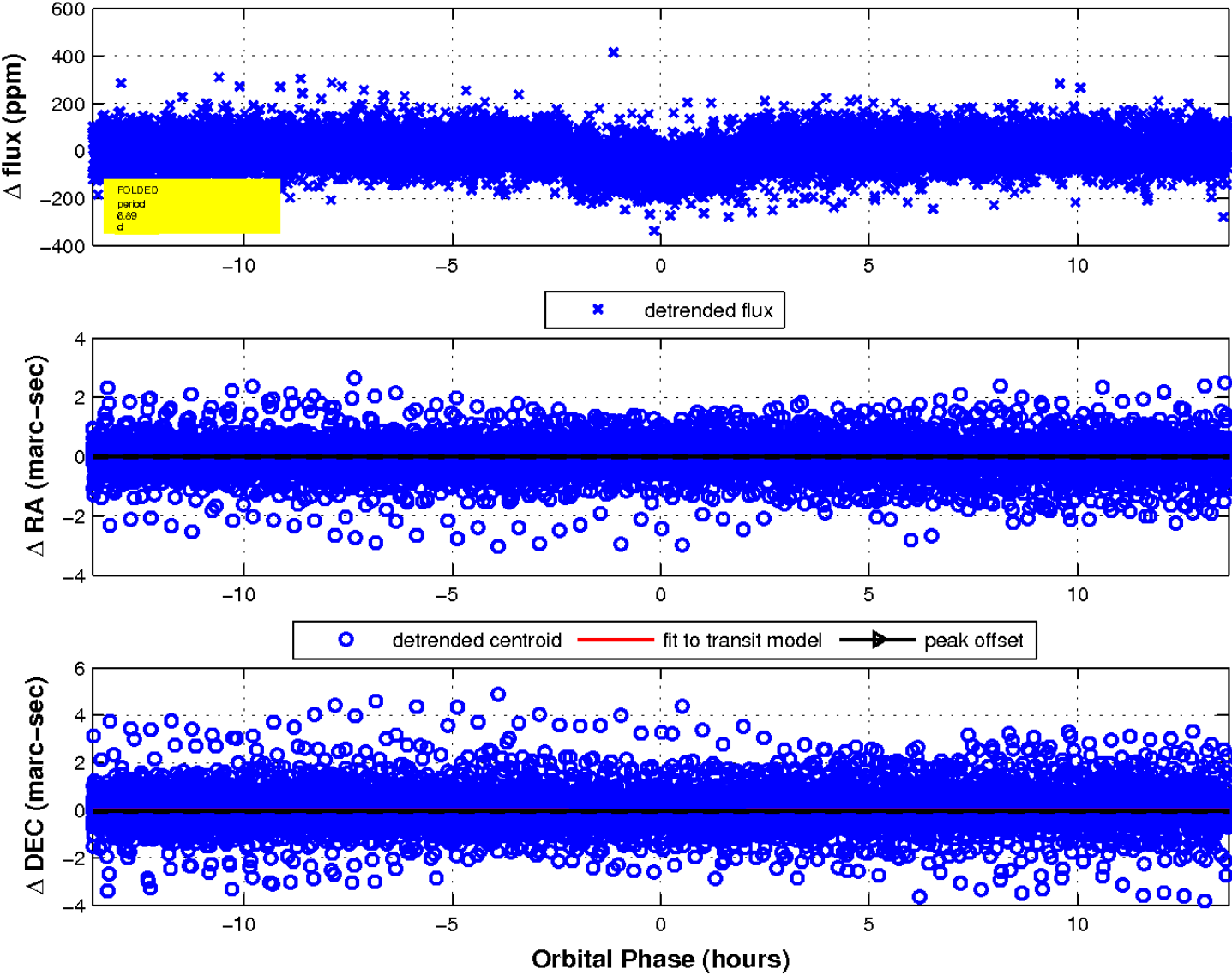
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

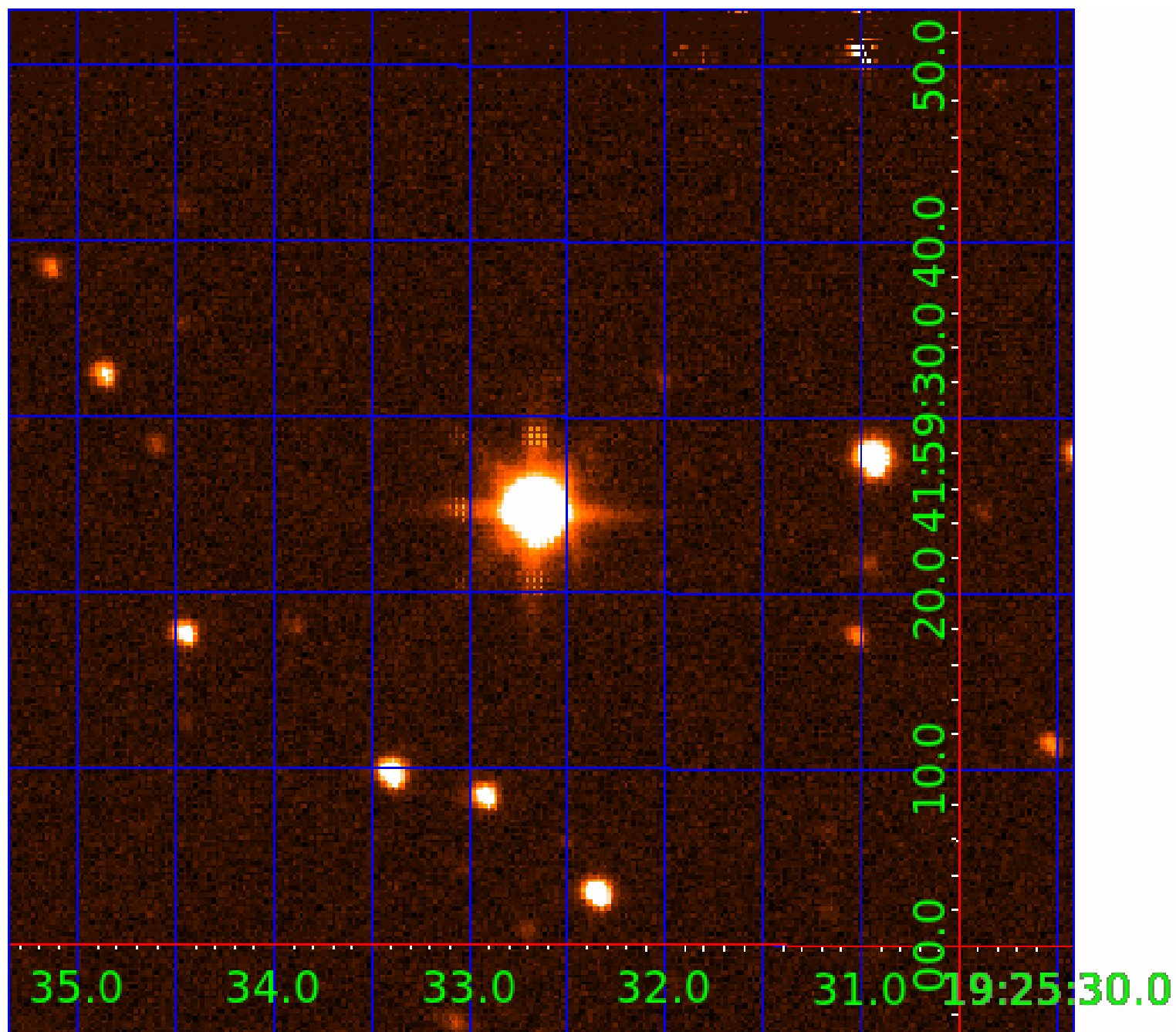


fluxWeightedCentroids, Planet 2 of 3



UKIRT Image

Declination



KIC 006521045

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})
006521045-01	OBS	0041.01	12.815898	135.763176	221.1	6.500	68.6	74.1	1.47	5788	2.44	184.08
006521045-02	OBS	0041.02	6.887056	133.178553	70.7	4.547	27.5	30.2	1.47	5788	1.48	421.34
006521045-03	OBS	0041.03	35.333074	153.985486	97.1	6.042	18.0	19.2	1.47	5788	1.75	47.62

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006521045-01	OBS	PC	1.00	0	0	0	0	CENT_SATURATED
006521045-02	OBS	PC	1.00	0	0	0	0	CENT_SATURATED
006521045-03	OBS	PC	1.00	0	0	0	0	CENT_SATURATED

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.

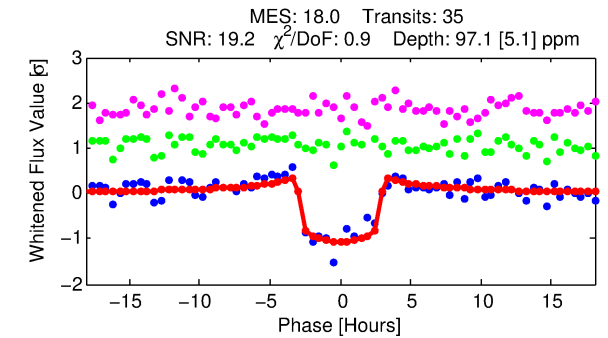
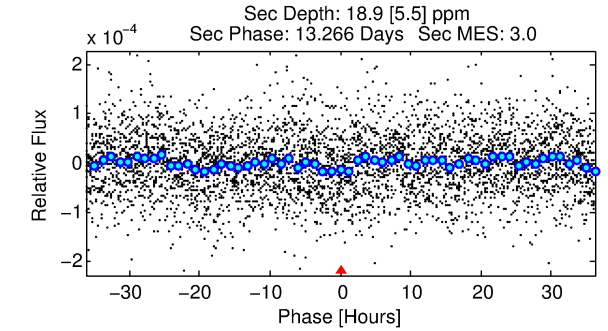
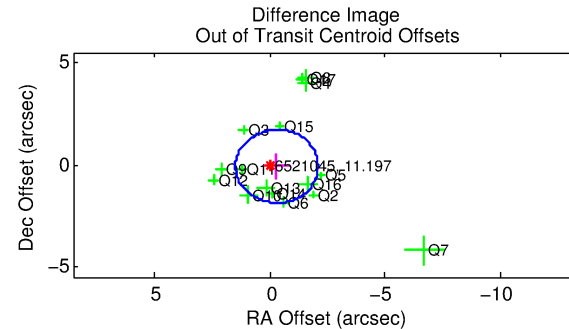
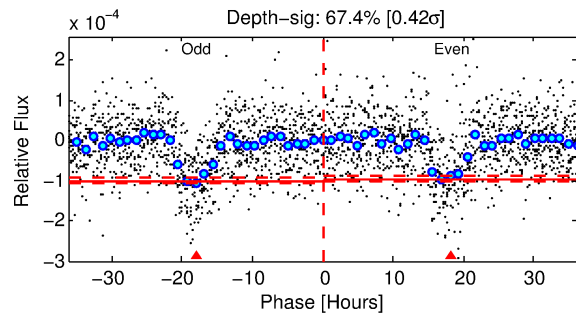
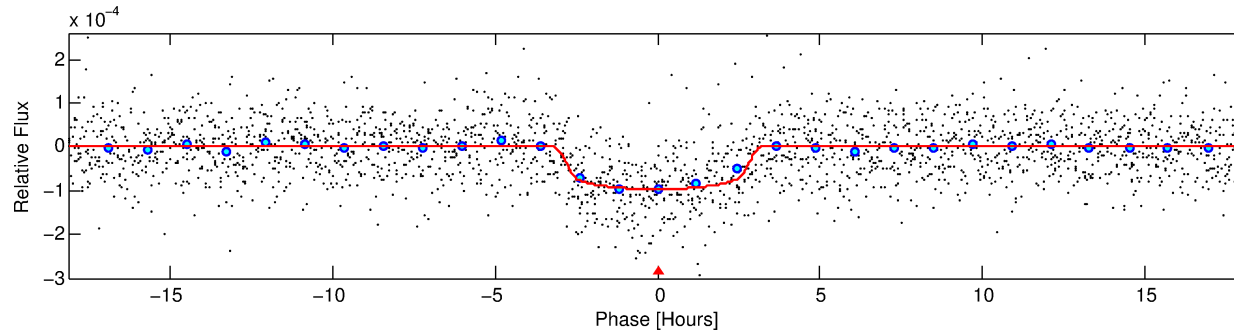
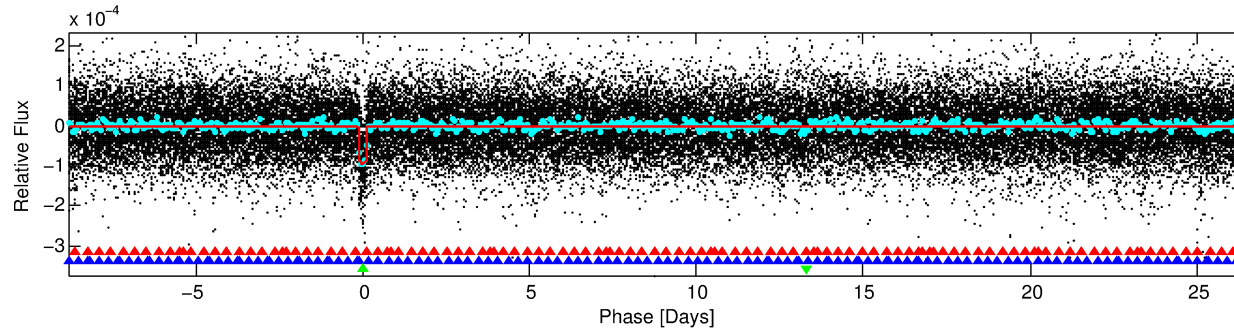
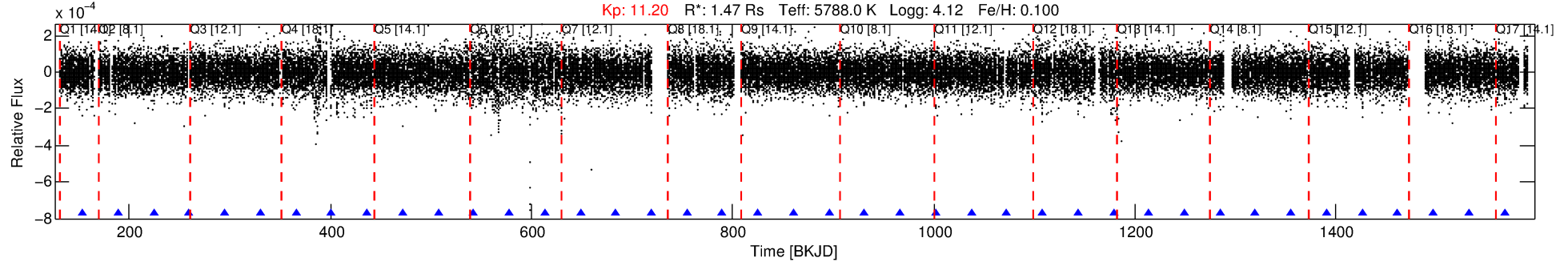
Ephemeris Match Information For 006521045-03

No Significant Match Found

DV One-Page Summary

KIC: 6521045 Candidate: 3 of 3 Period: 35.333 d
KOI: K00041.03 Name: Kepler-100d Corr: 0.982

Kp: 11.20 R*: 1.47 Rs Teff: 5788.0 K Logg: 4.12 Fe/H: 0.100



DV Fit Results:

Period = 35.33307 [0.00020] d
Epoch = 153.9855 [0.0050] BKJD
Rp/R* = 0.0109 [0.0014]
a/R* = 19.57 [12.17]
b = 0.91 [0.12]
Seff = 47.62 [4.06]
Teq = 670 [14] K
Rp = 1.75 [0.26] Re
a = 0.2142 [0.0106] AU
Ag = 156.39 [62.36] [2.49σ]
Teffp = 3662 [363] K [8.23σ]

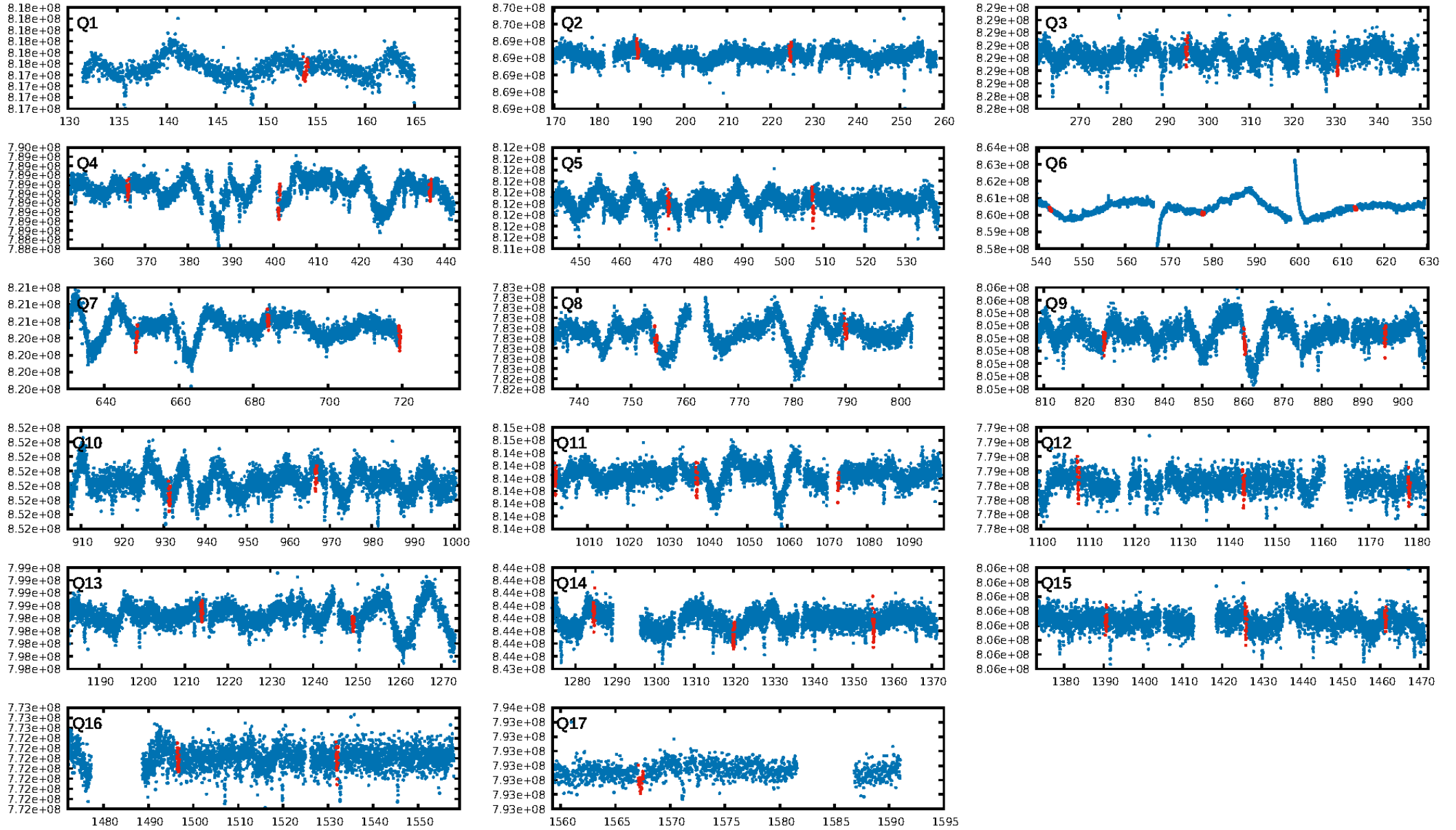
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [60.90σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 80.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.95e-66
RollingBand-fgt: 1.00 [34/34]
GhostDiagnostic-chr: 5.762
Centroid-sig: 19.9%
Centroid-so: 0.554 arcsec [1.03σ]
OotOffset-rm: 0.318 arcsec [0.53σ]
KicOffset-rm: 0.403 arcsec [0.65σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.75 [12/16]
DiffImageOverlap-fno: 0.76 [13/17]

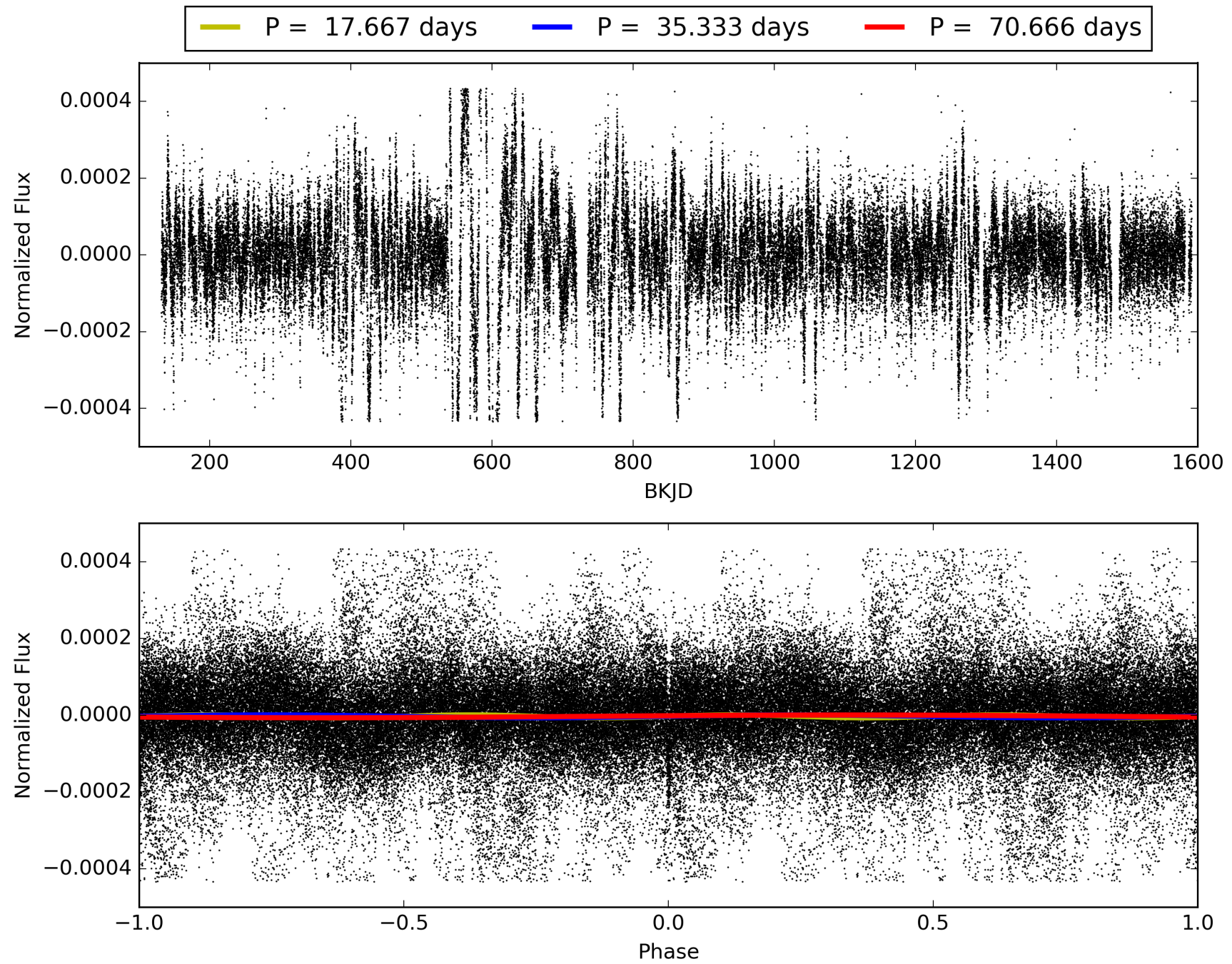
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 15:24:07 Z

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

TCE 006521045-03, PDC Light Curves

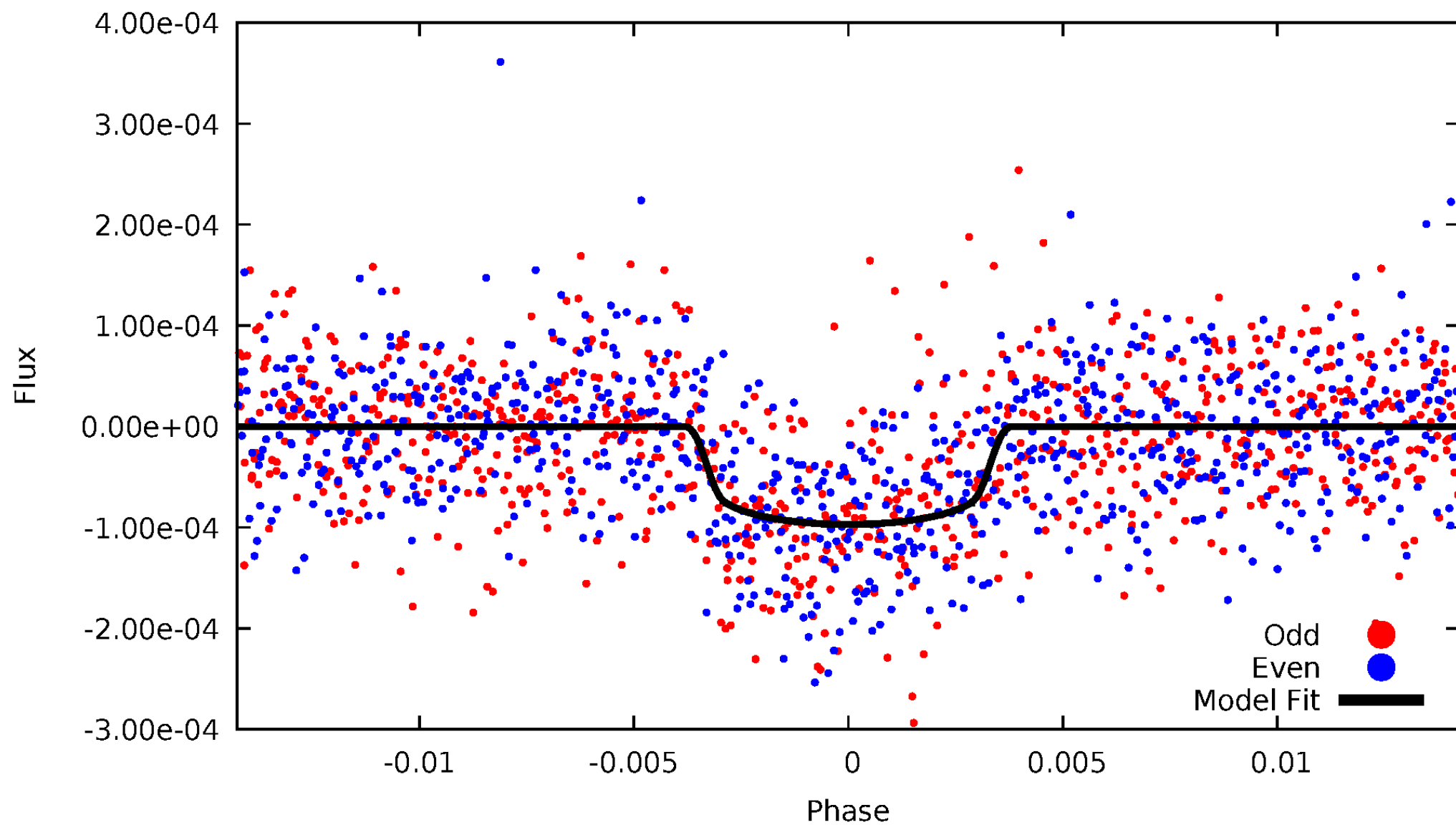


TCE 006521045-03



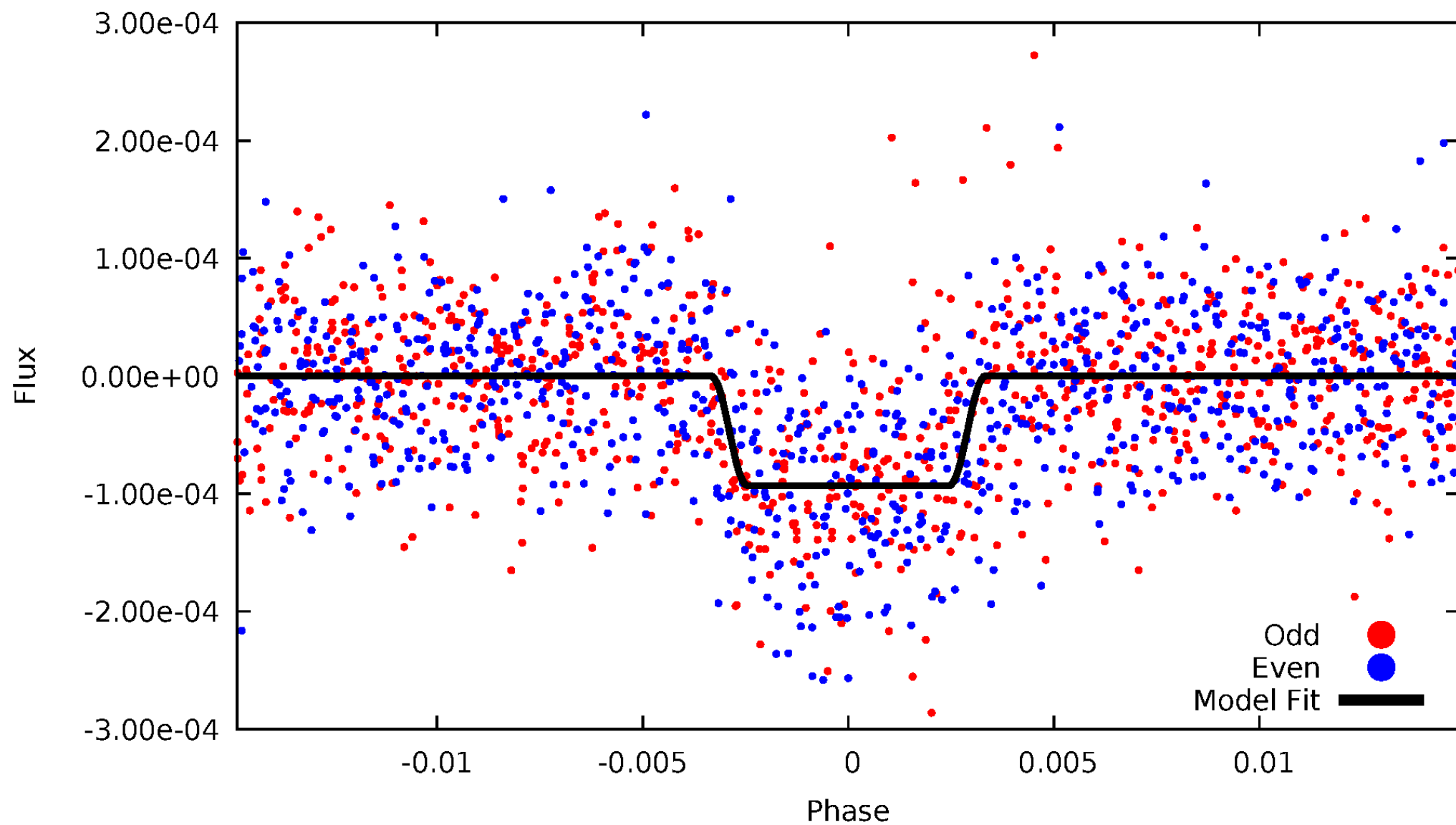
DV Odd/Even

TCE 006521045-03

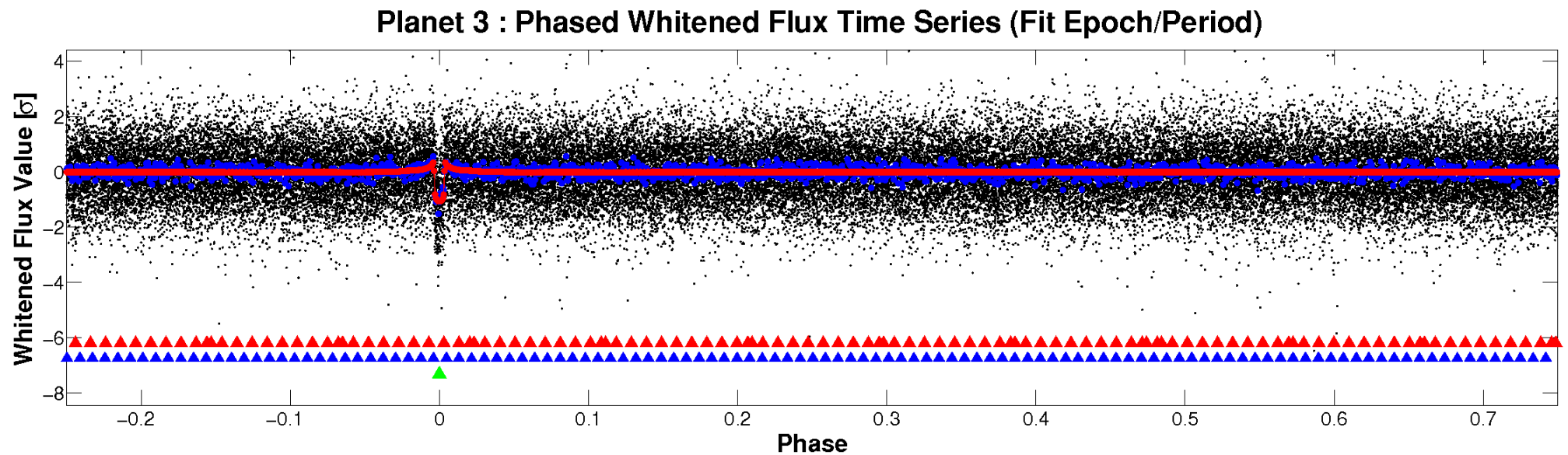
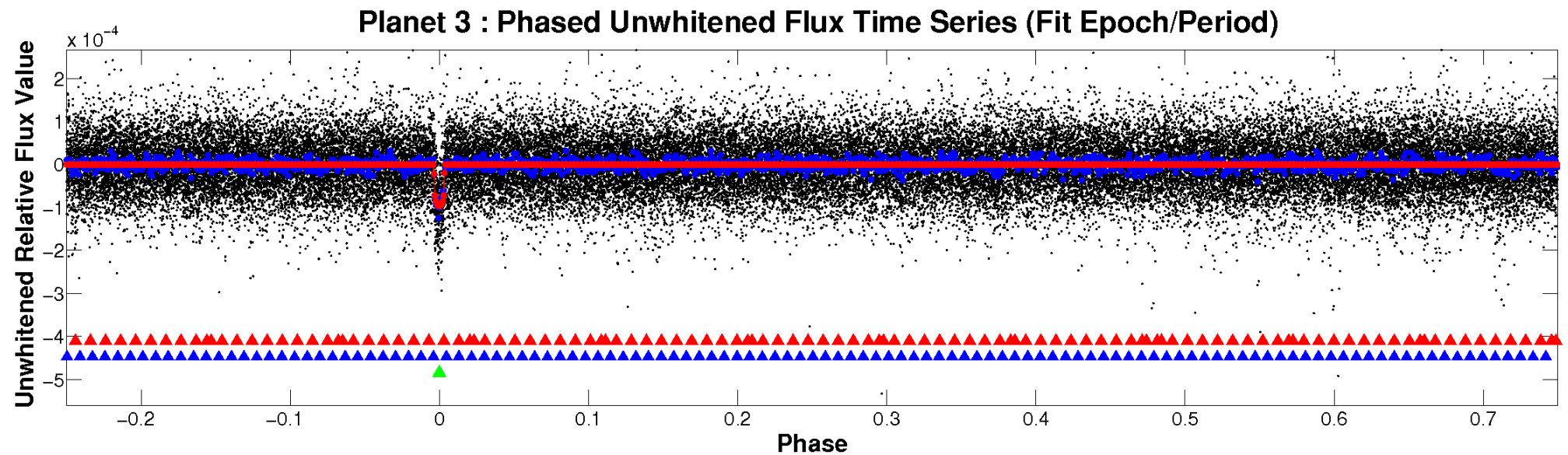


ALT Odd/Even

TCE 006521045-03

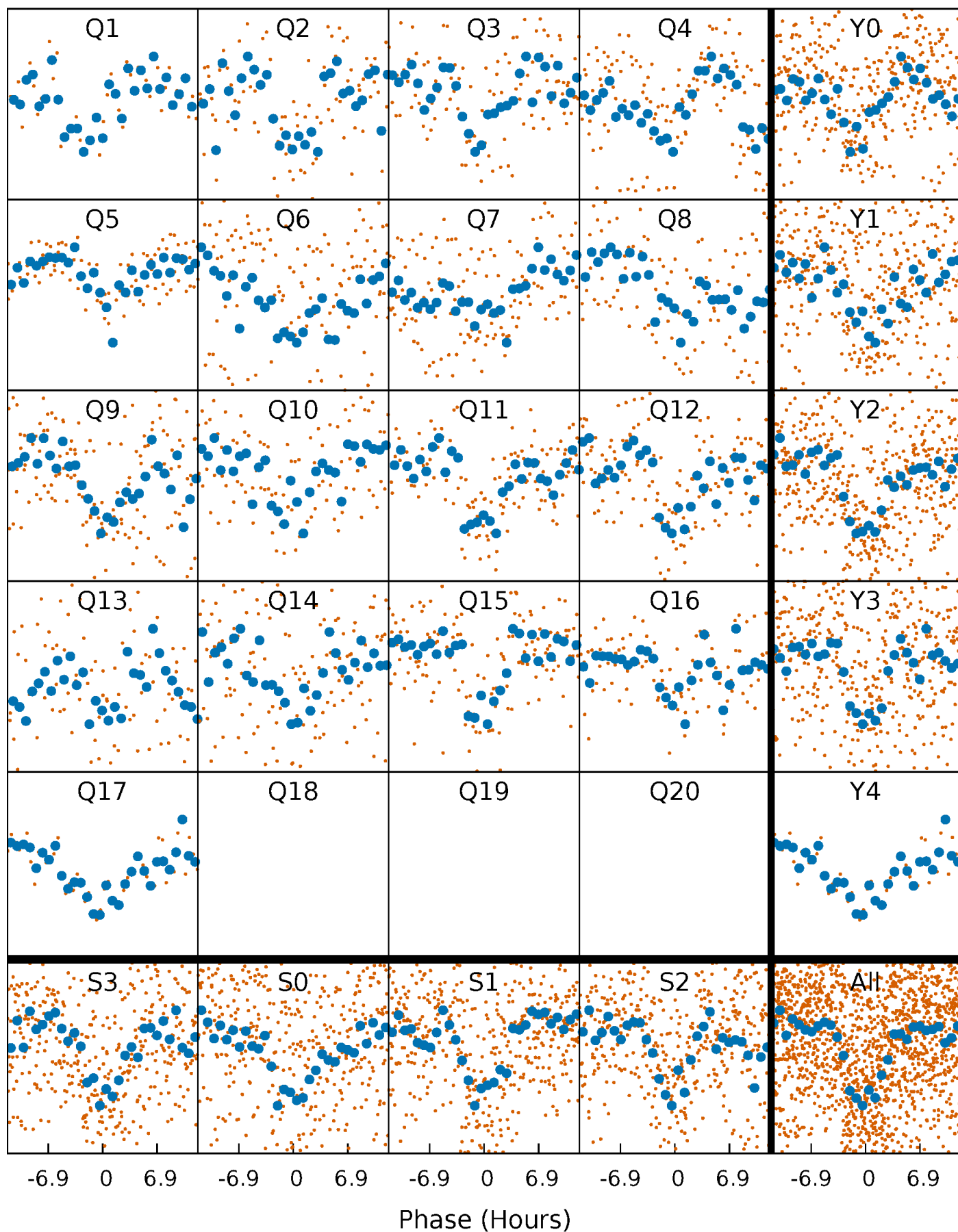


Non-Whitened Vs. Whitened Light Curve



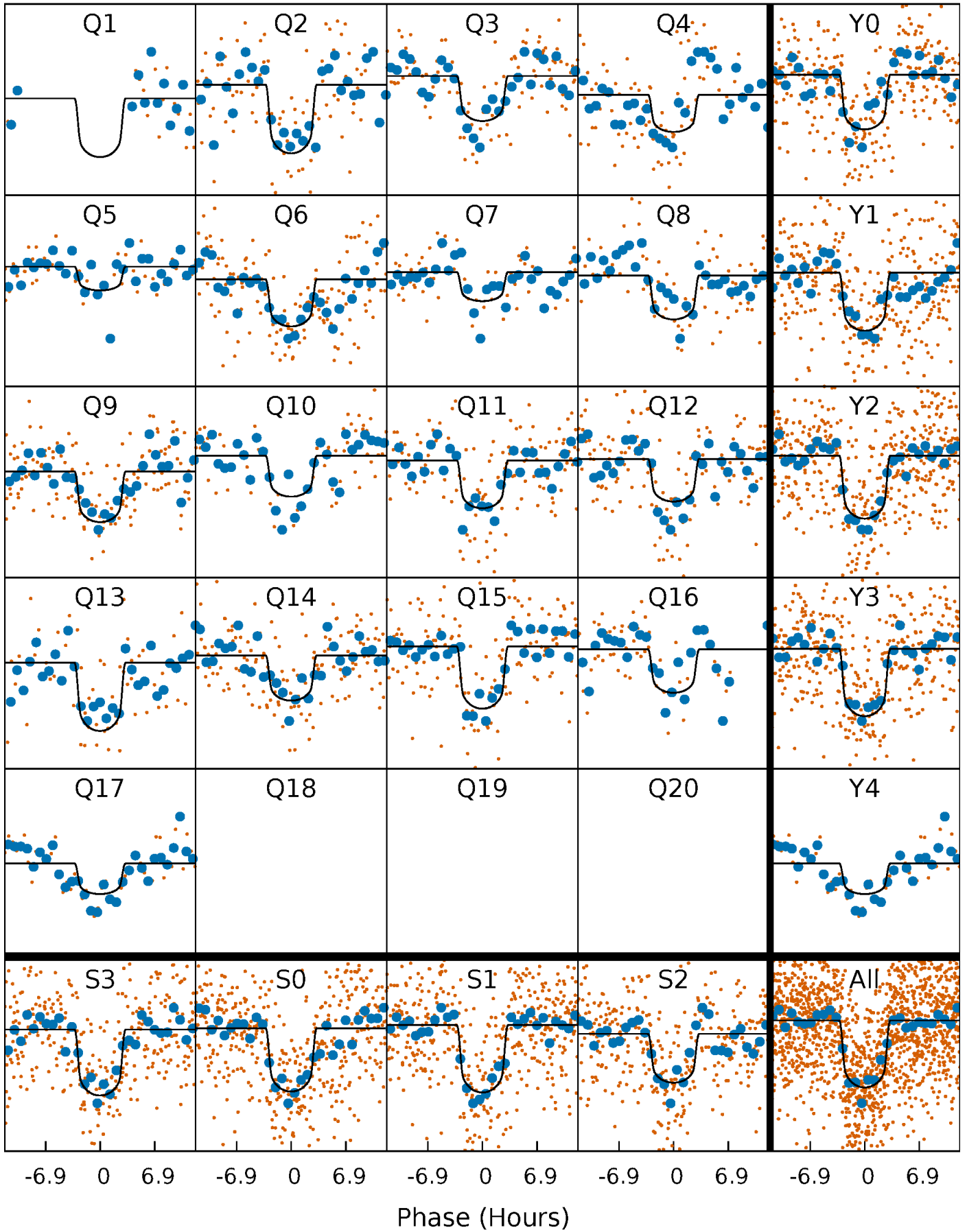
PDC Quarter-Phased Transit Curves

TCE 006521045-03 P= 35.333074 Days $T_0=153.985487$ (BKJD)



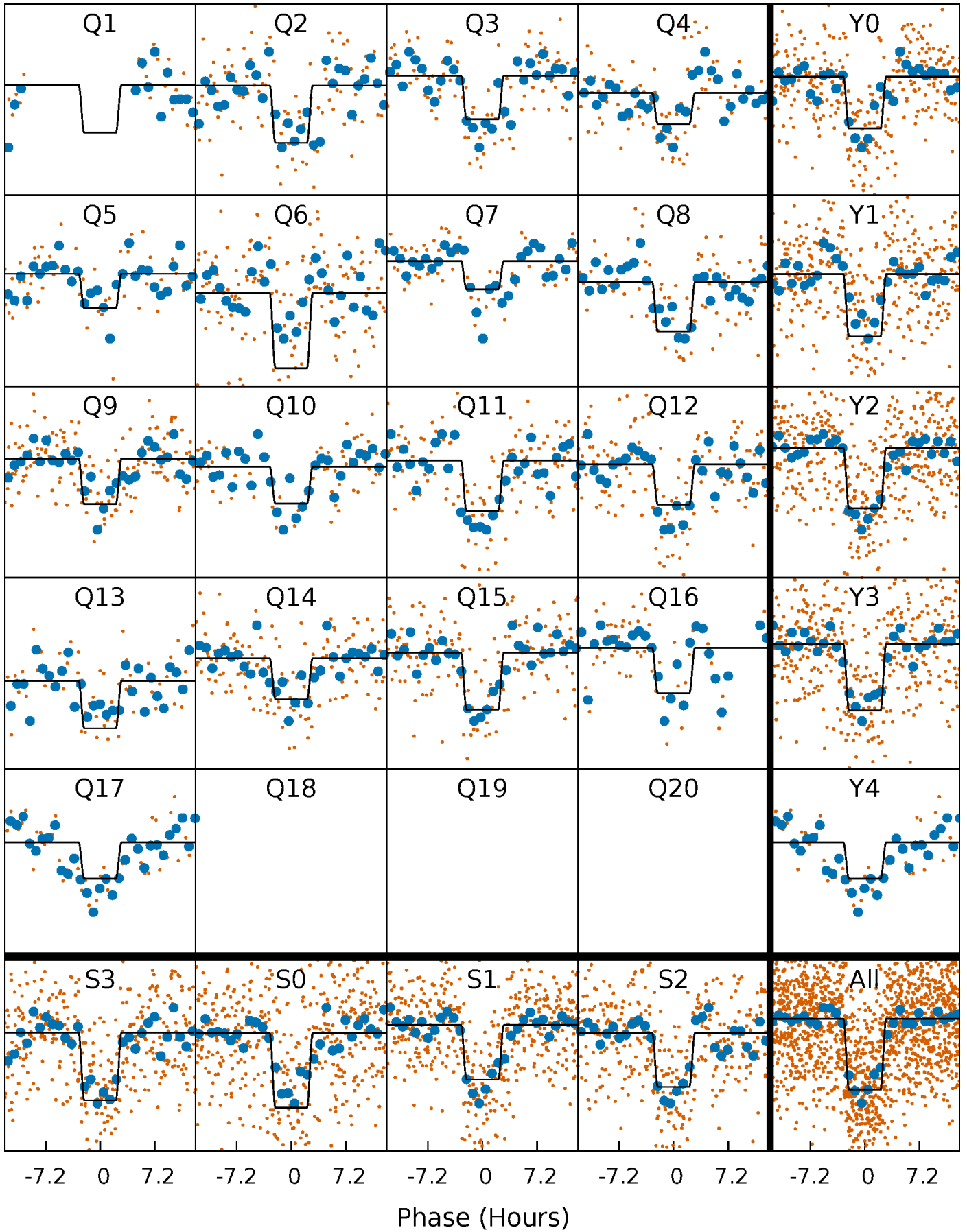
DV Quarter-Phased Transit Curves

TCE 006521045-03 P= 35.333074 Days $T_0=153.985487$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

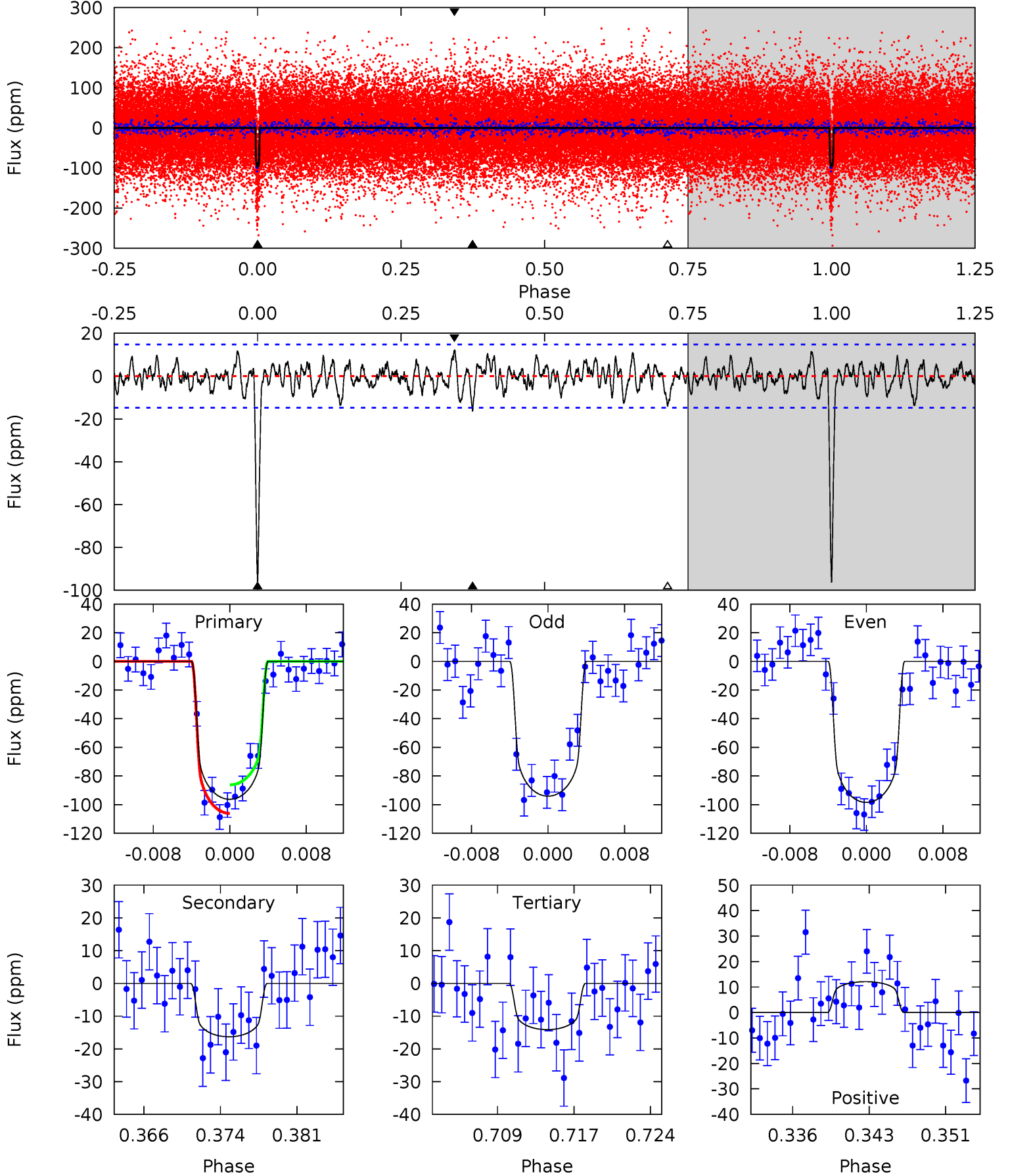
TCE 006521045-03 P= 35.333917 Days $T_0=153.960146$ (BKJD)



DV Model-Shift Uniqueness Test

006521045-03, P = 35.333074 Days, E = 118.652413 Days

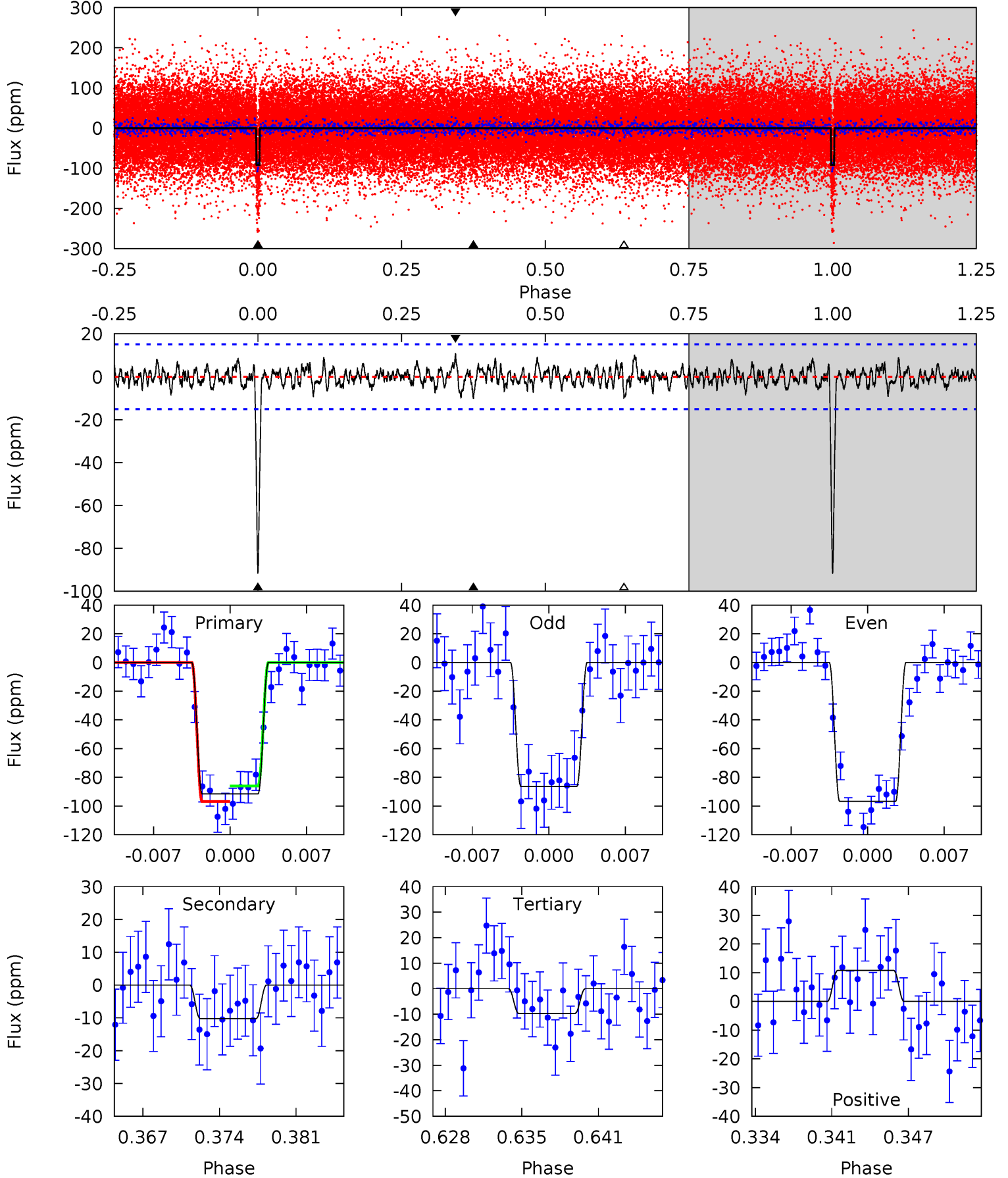
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
33.1	5.61	4.86	4.16	5.08	2.67	1.59	28.2	28.9	0.75	1.45	0.75	1.00	0.11	3.42



Alt Model-Shift Uniqueness Test

006521045-03, P = 35.333917 Days, E = 118.626229 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
30.9	3.45	3.30	3.64	5.10	2.71	1.11	27.6	27.2	0.15	-0.20	1.76	0.99	0.11	1.83



Stellar Parameters For KIC 006521045

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	5788^{+78}_{-78}	$4.122^{+0.033}_{-0.027}$	$0.100^{+0.150}_{-0.150}$	$1.474^{+0.094}_{-0.079}$	$1.050^{+0.126}_{-0.068}$	$0.462^{+0.056}_{-0.050}$
	+1%/-1%	+1%/-1%	+150%/-150%	+6%/-5%	+12%/-6%	+12%/-11%
Source	SPE72	AST69	SPE72	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 006521045-03 / KOI 0041.03

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-16 ± 3	$1.74^{+0.25}_{-0.23}$	935^{+16}_{-17}	3877^{+256}_{-193}	134^{+54}_{-37}
Alt.	-10 ± 3	$1.58^{+0.23}_{-0.25}$	935^{+18}_{-17}	3727^{+260}_{-260}	107^{+52}_{-38}

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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

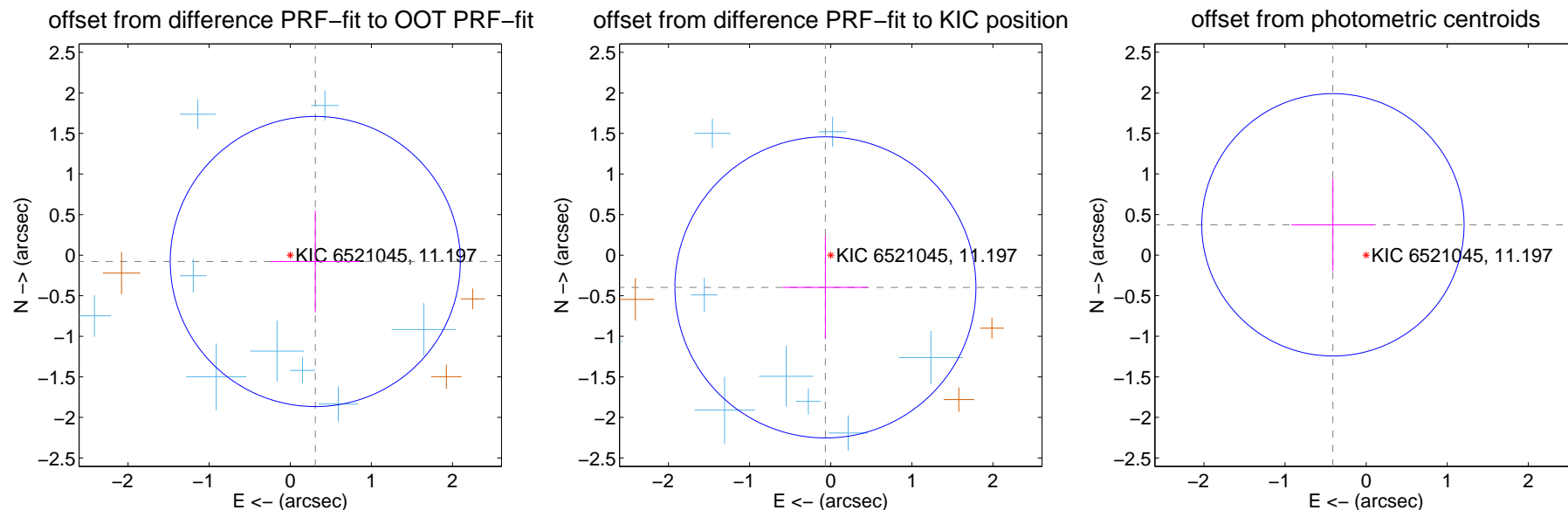
DV Centroid Data

Supplemental centroid analysis for 006521045-03. **Kepler magnitude: 11.20.** Transit SNR 19.16

There are 12 quarters with good PRF difference image offsets

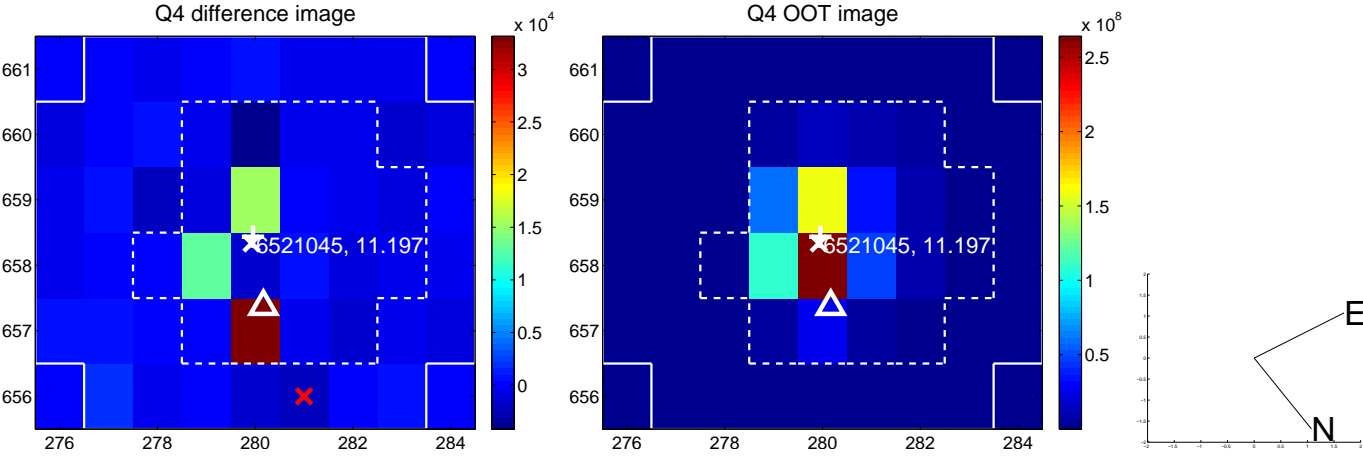
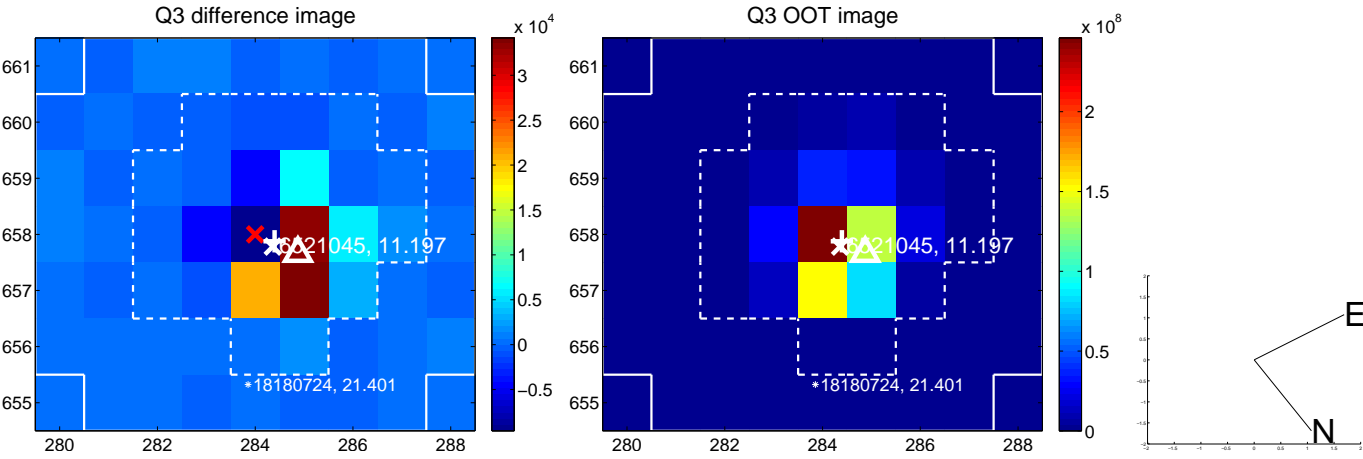
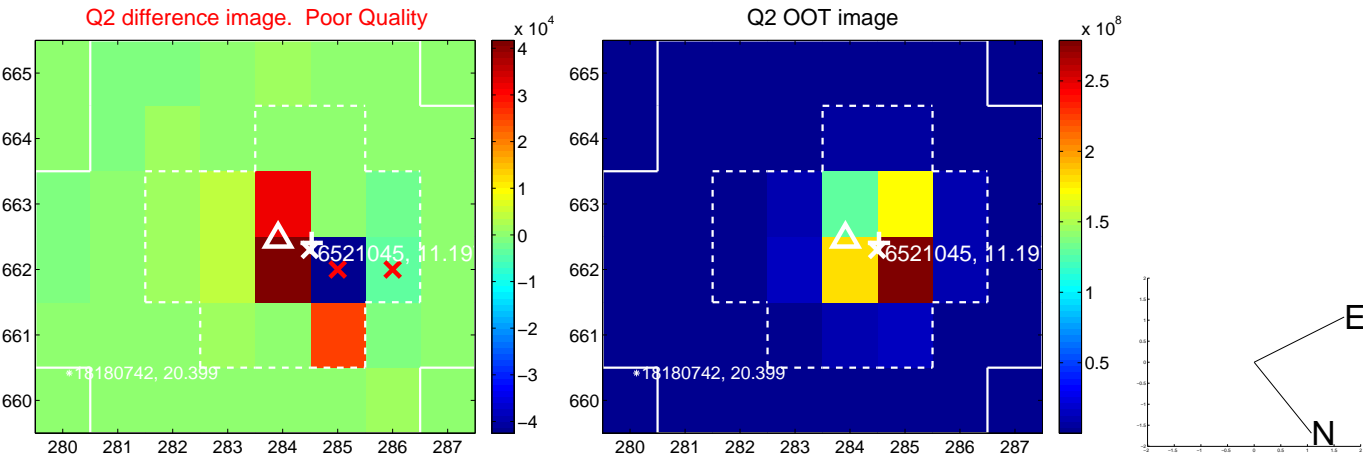
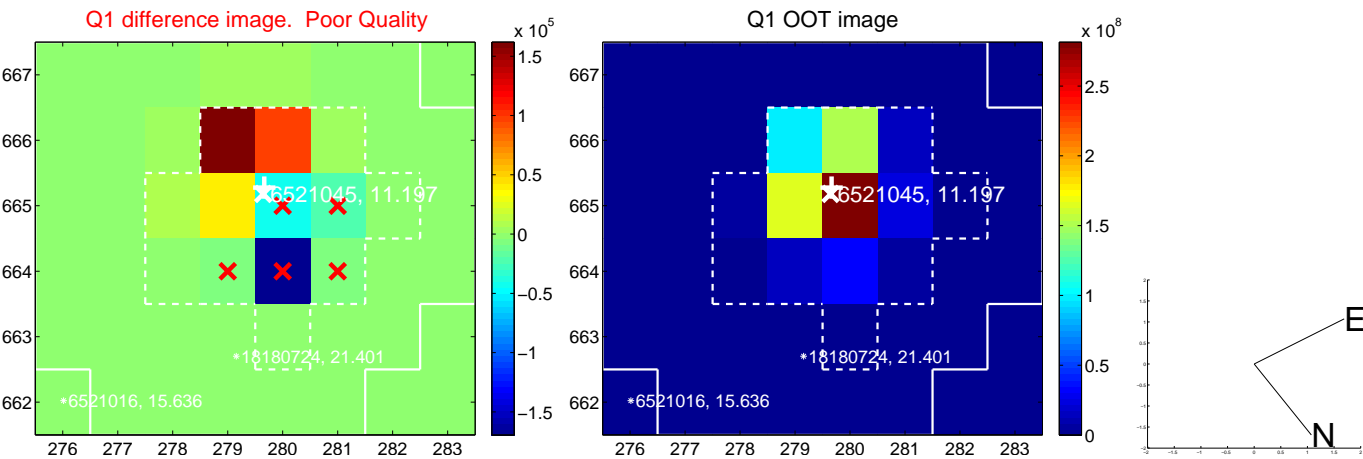
The direct PRF centroid is offset from the target star catalog position by about 0.50 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.318 ± 0.596	0.53	-0.309 ± 0.550	-0.078 ± 0.628
PRF-fit source offset from KIC position	0.403 ± 0.619	0.65	0.065 ± 0.522	-0.397 ± 0.636
photometric centroid source offset	0.55 ± 0.54	1.03	0.41 ± 0.51	0.37 ± 0.57

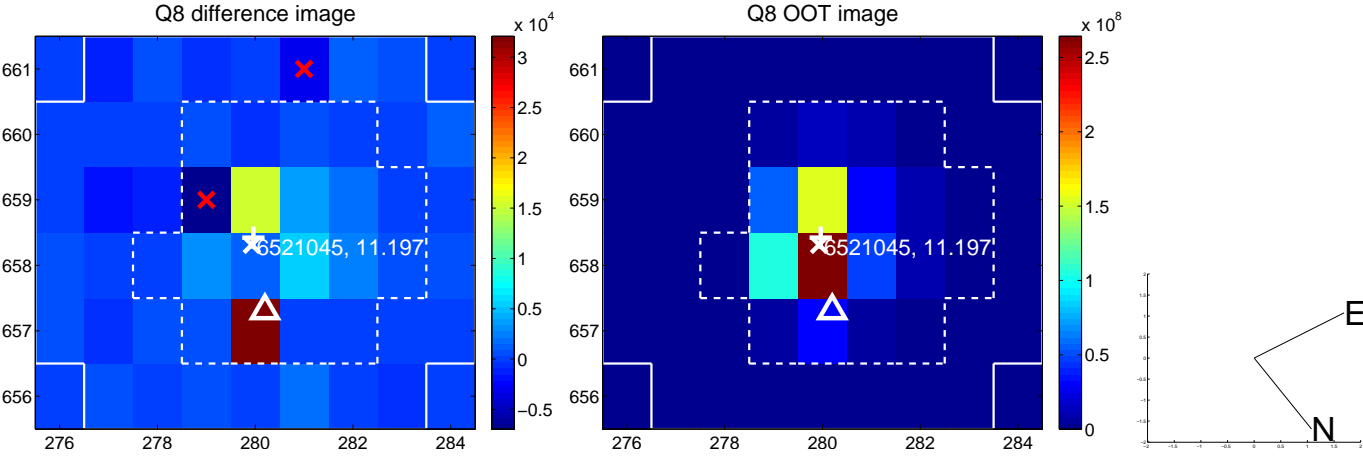
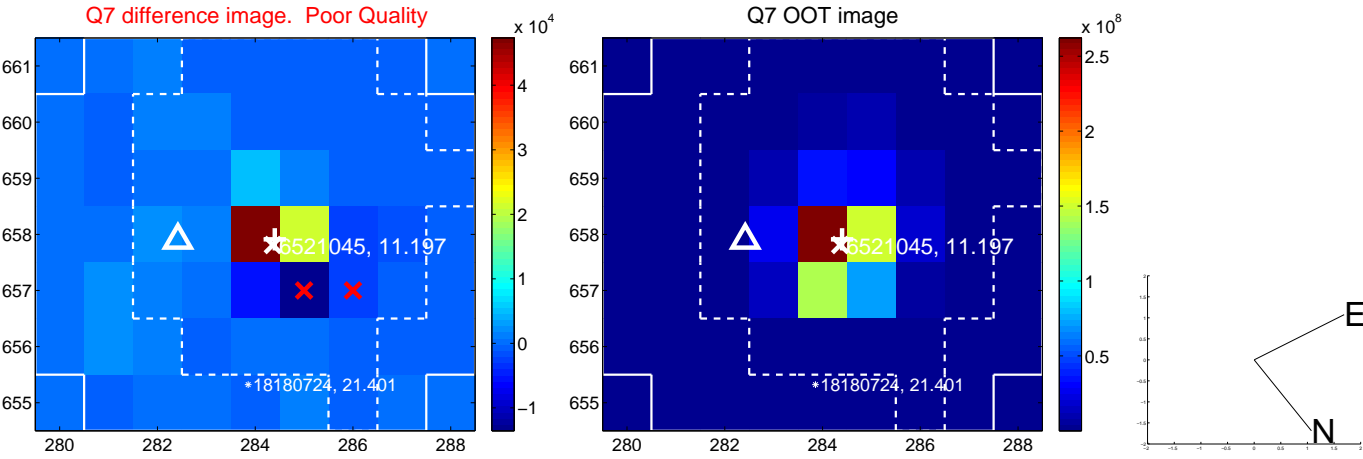
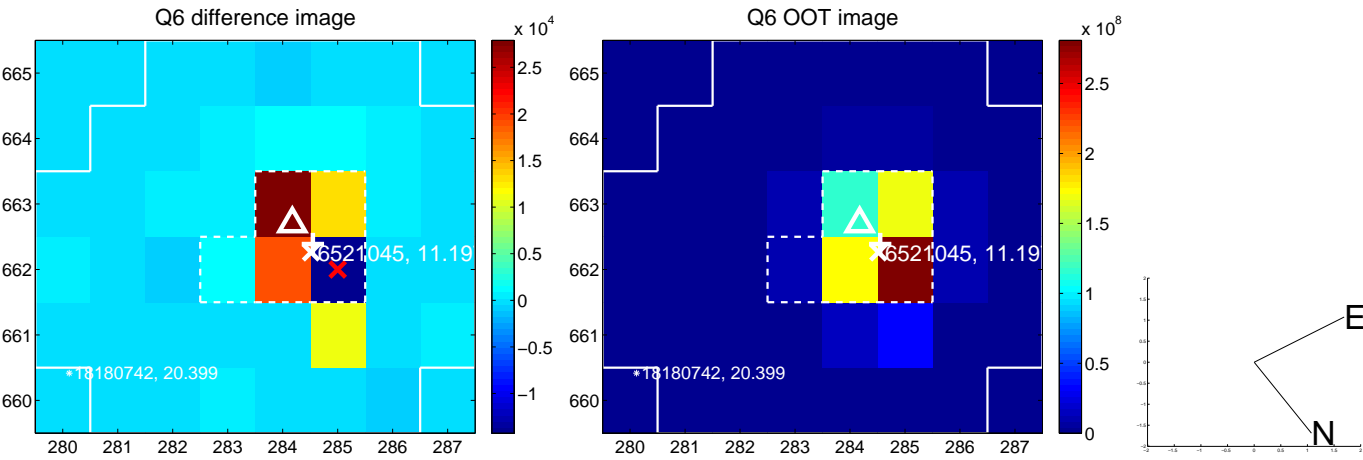
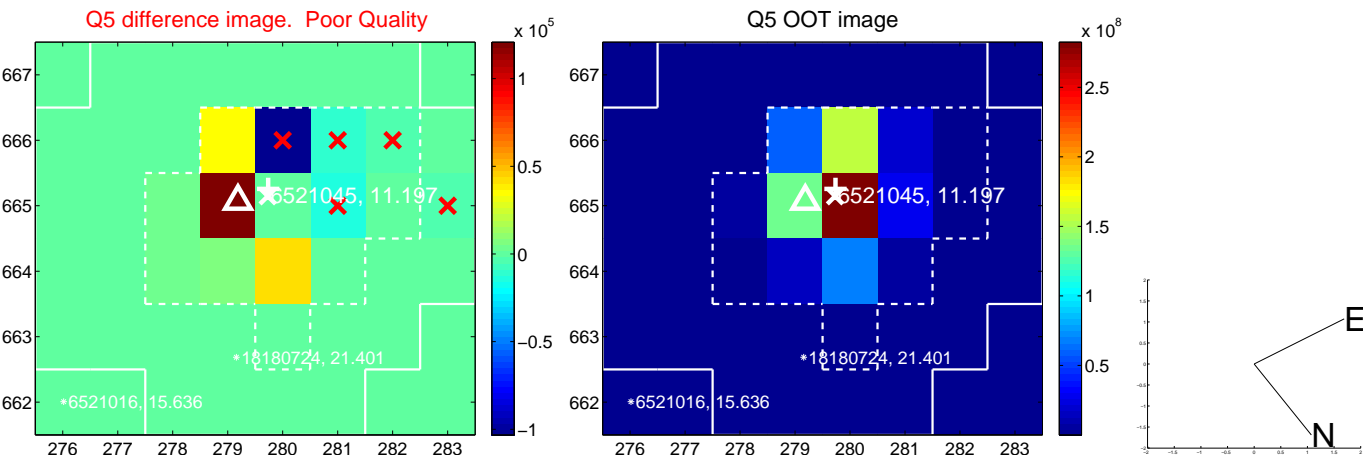


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

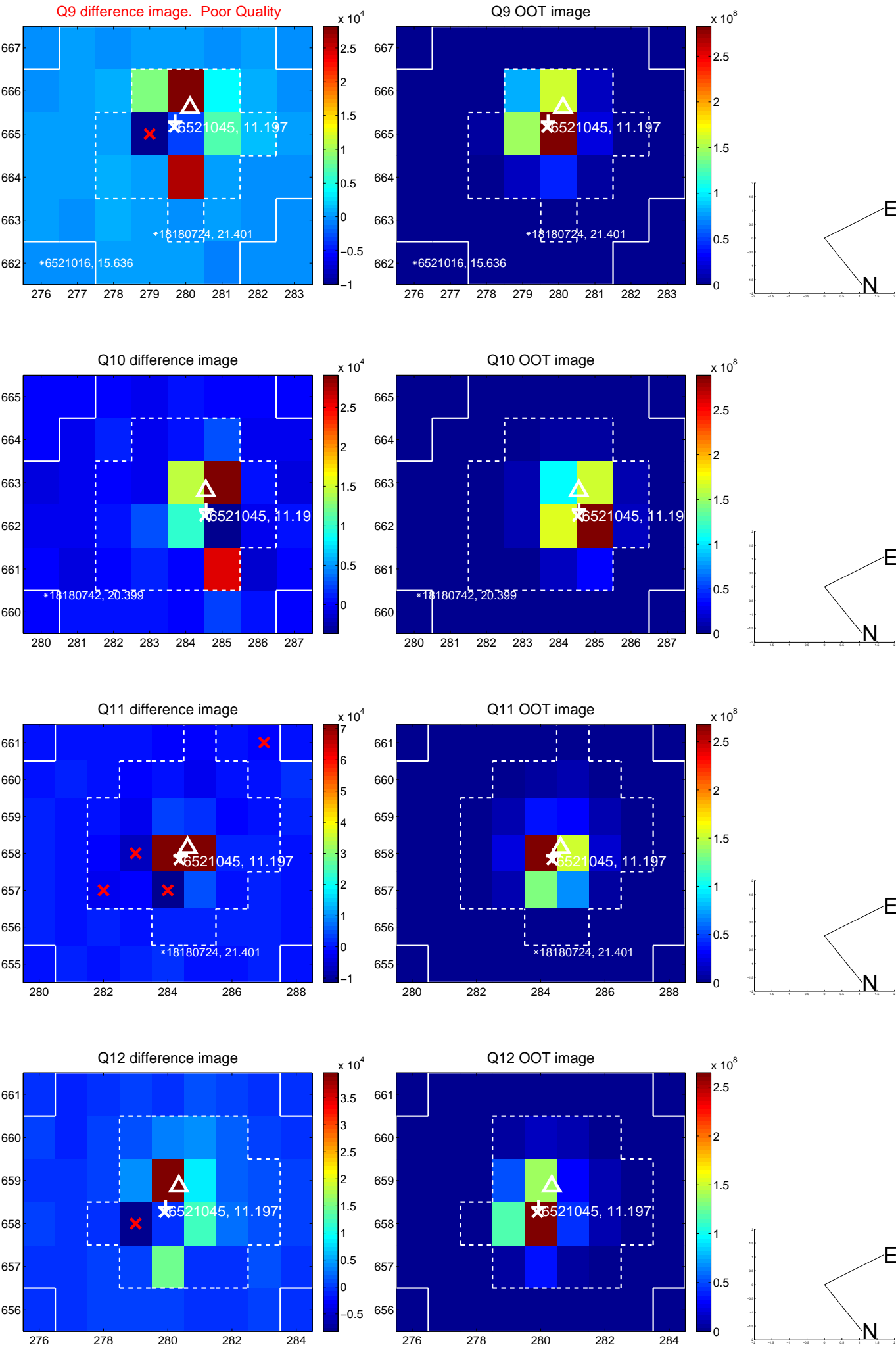
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



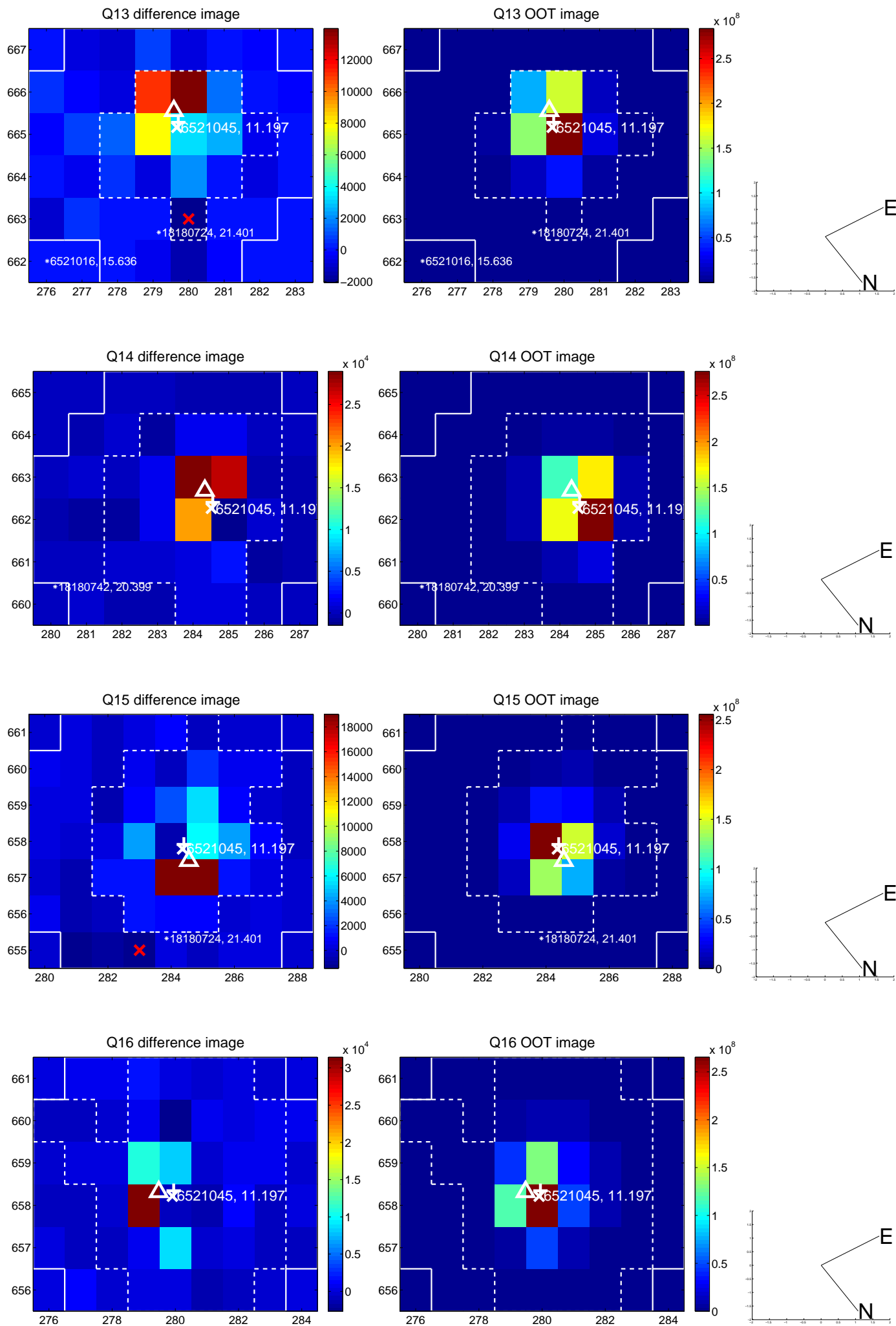
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



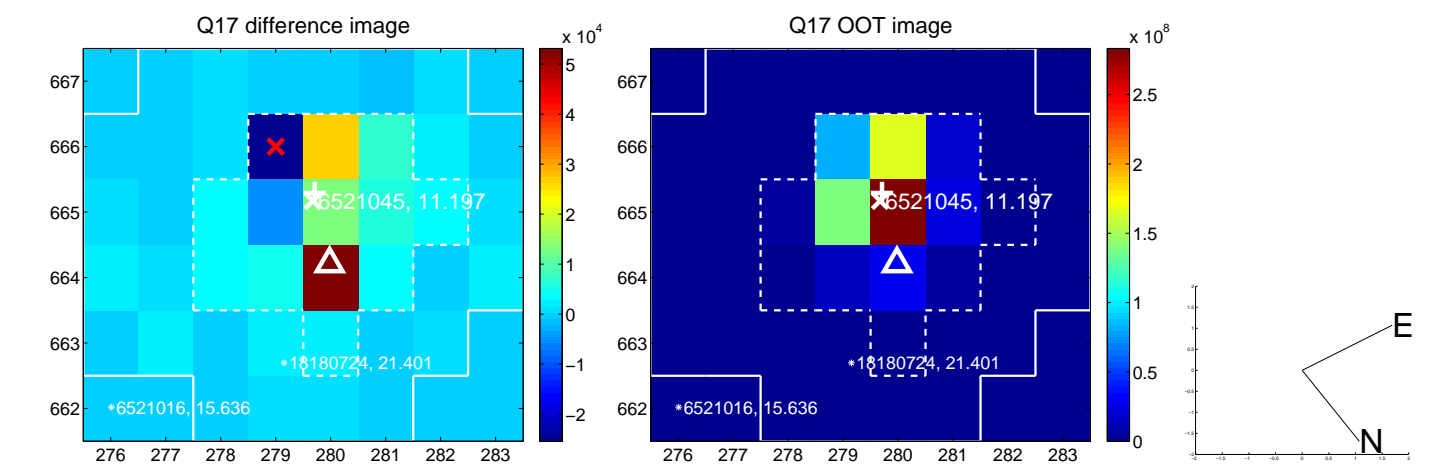
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



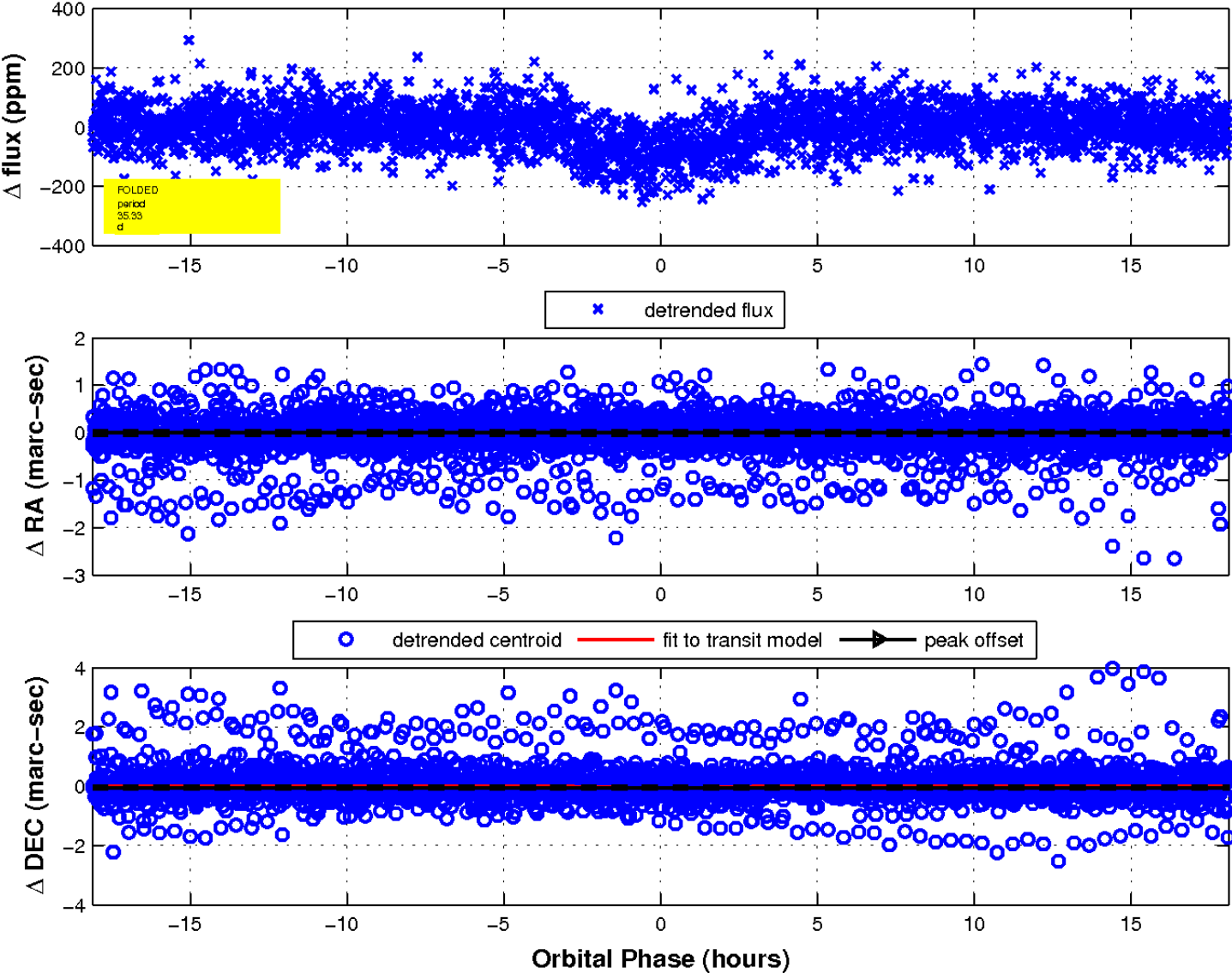
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 3 of 3



UKIRT Image

Declination

