

KIC 006716545

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})
006716545-01	OBS	2906.01	13.909232	142.889477	82.4	7.231	12.2	12.6	1.42	6052	1.62	175.56
006716545-02	OBS	2906.03	21.942559	143.890287	67.2	8.565	7.7	8.4	1.42	6052	1.37	95.60
006716545-03	OBS	2906.02	145.888130	194.625631	161.8	8.464	7.6	8.5	1.42	6052	2.02	7.65

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006716545-01	OBS	PC	0.90	0	0	0	0	NO_COMMENT
006716545-02	OBS	PC	0.87	0	0	0	0	NO_COMMENT
006716545-03	OBS	PC	0.80	0	0	0	0	NO_COMMENT

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

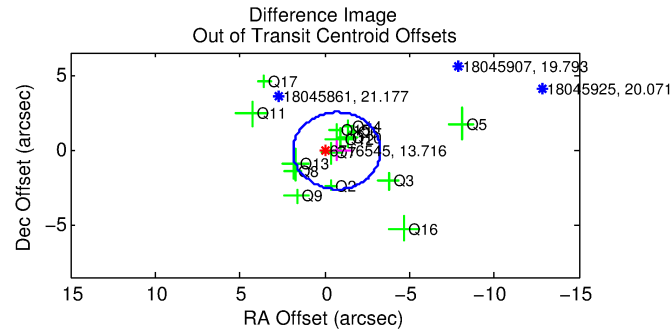
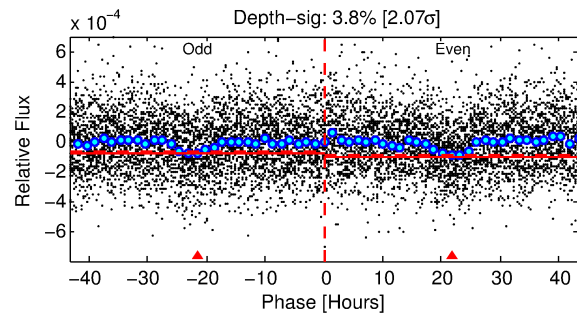
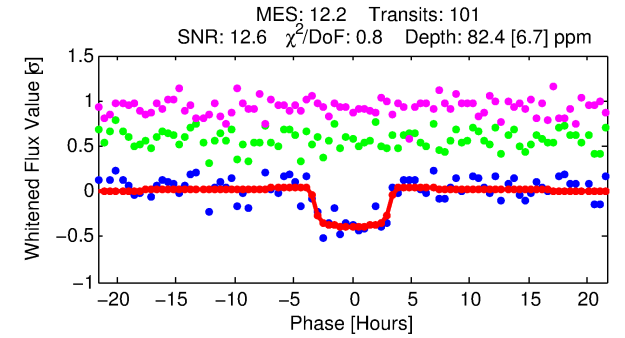
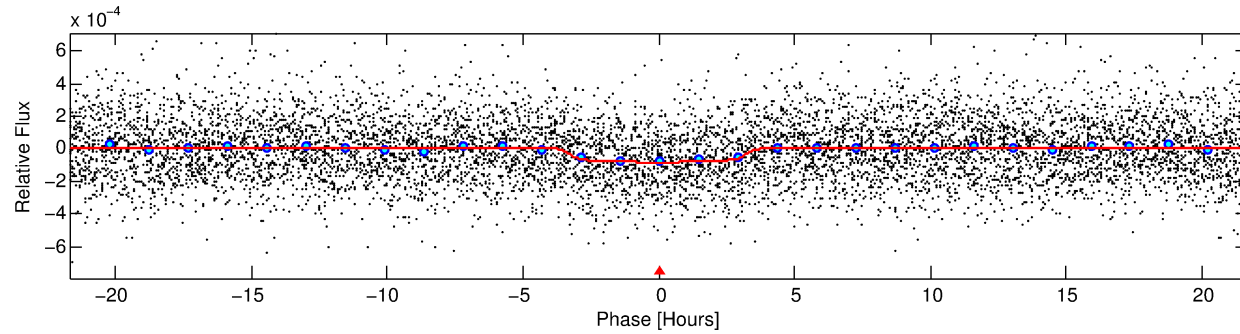
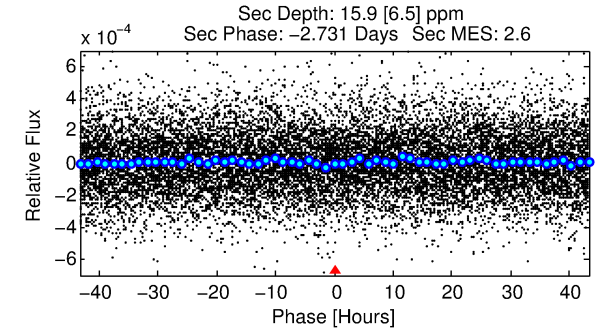
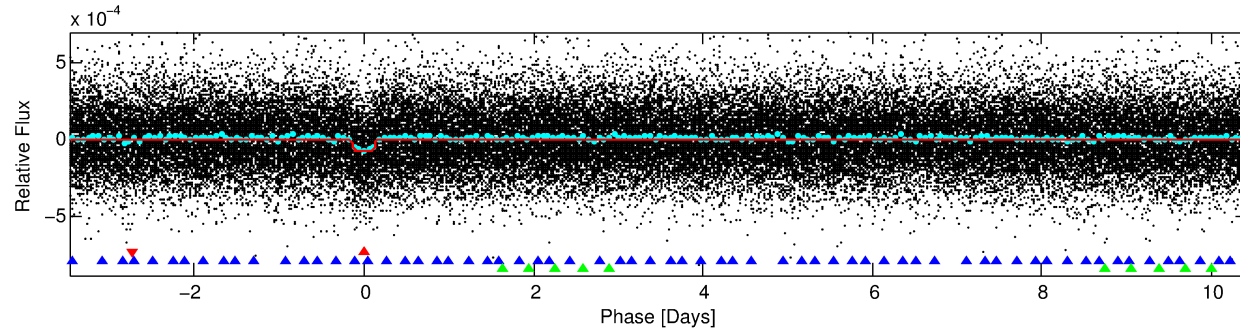
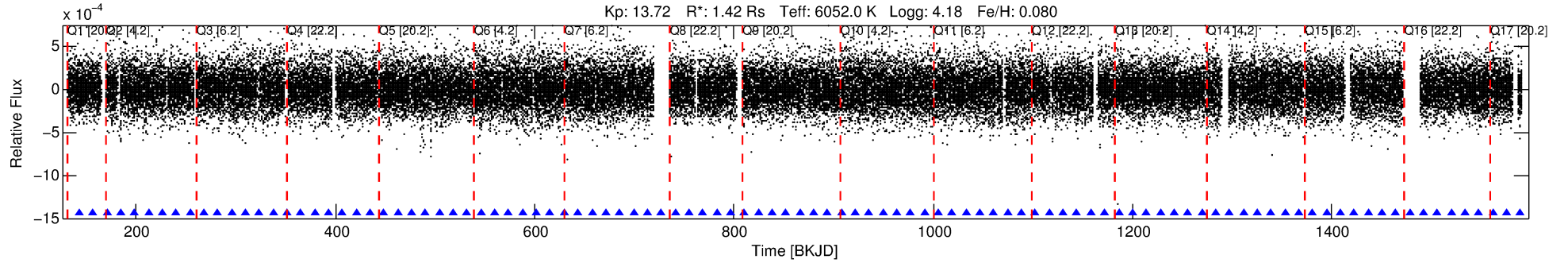
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006716545-01

No Significant Match Found

DV One-Page Summary

KIC: 6716545 Candidate: 1 of 3 Period: 13.909 d
KOI: K02906.01 Corr: 0.958



DV Fit Results:

Period = 13.90923 [0.00017] d
Epoch = 142.8895 [0.0100] BKJD
Rp/R* = 0.0104 [0.0012]
a/R* = 5.21 [2.76]
b = 0.95 [0.06]
Seff = 175.56 [47.75]
Teq = 928 [63] K
Rp = 1.62 [0.35] Re
a = 0.1178 [0.0201] AU
Ag = 46.28 [24.90] [1.82σ]
Teffp = 3743 [440] K [6.33σ]

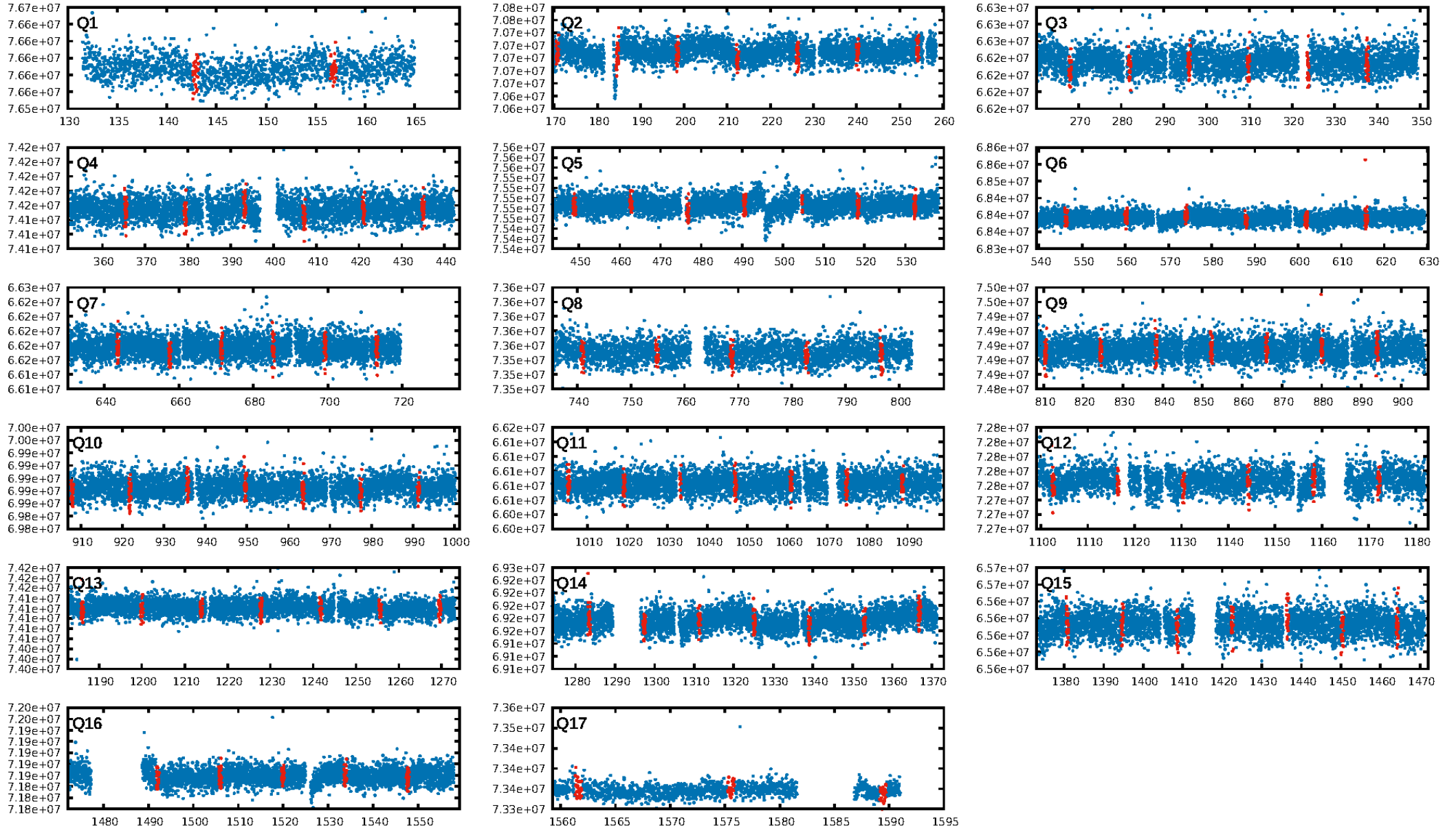
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [17.20σ]
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.47e-34
RollingBand-fgt: 1.00 [96/96]
GhostDiagnostic-chr: 1.822
Centroid-sig: 2.7%
Centroid-so: 2.196 arcsec [1.99σ]
OotOffset-rm: 0.713 arcsec [0.83σ]
KicOffset-rm: 0.684 arcsec [0.94σ]
OotOffset-st: 4/4/3/4 [15]
KicOffset-st: 4/4/3/4 [15]
DiffImageQuality-fgm: 0.67 [10/15]
DiffImageOverlap-fno: 1.00 [17/17]

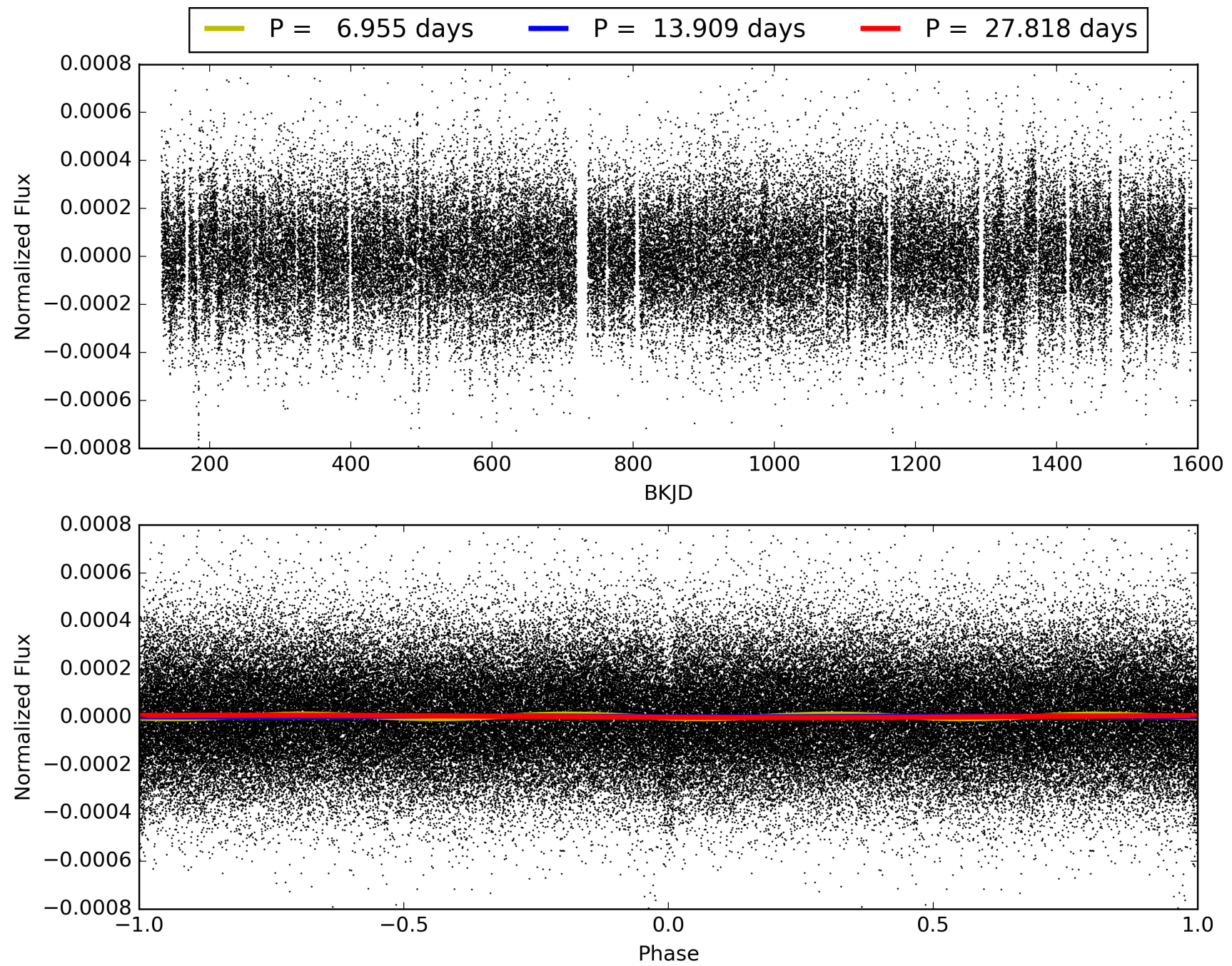
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 08:01:51 Z

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

TCE 006716545-01, PDC Light Curves

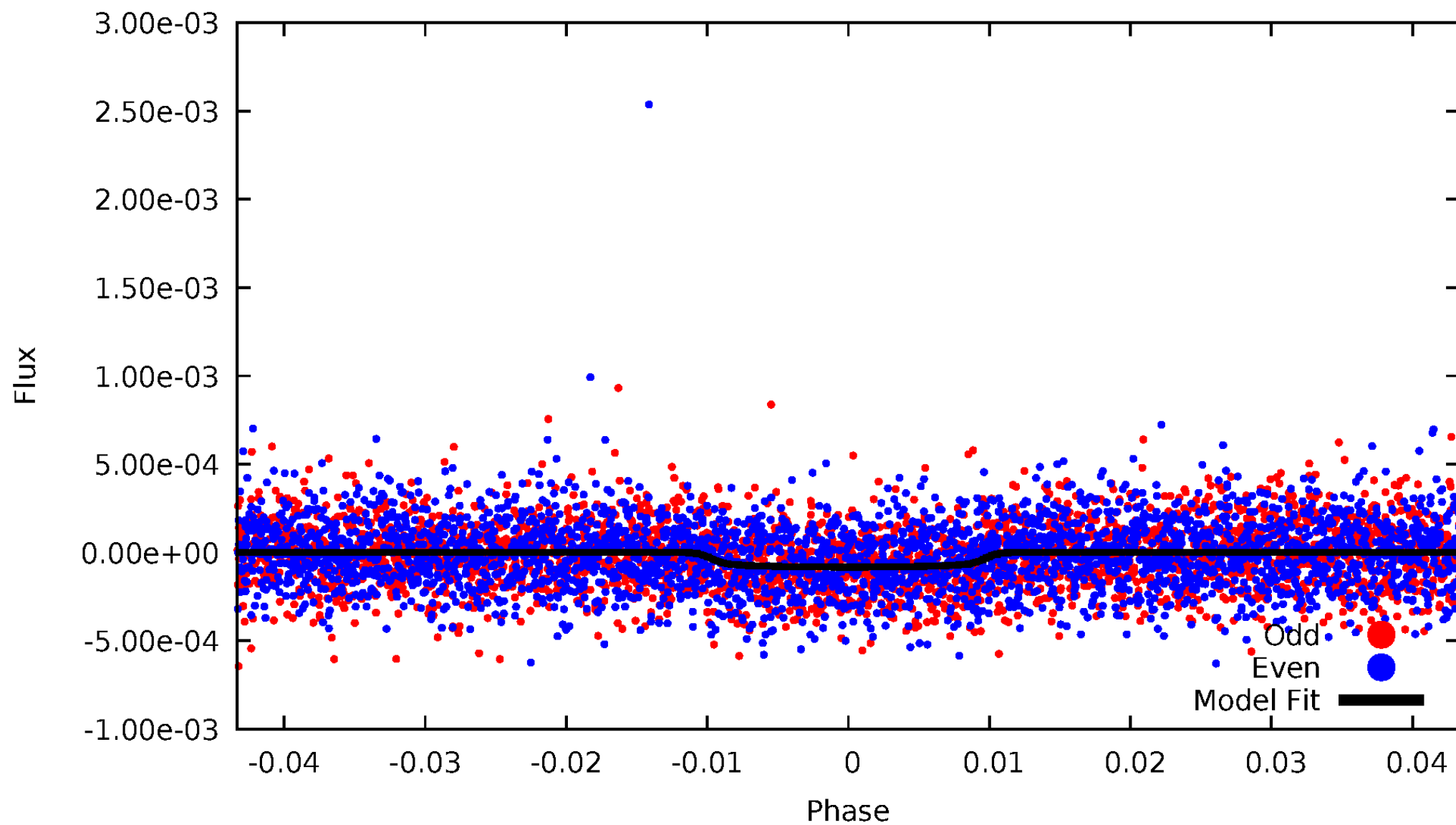


TCE 006716545-01



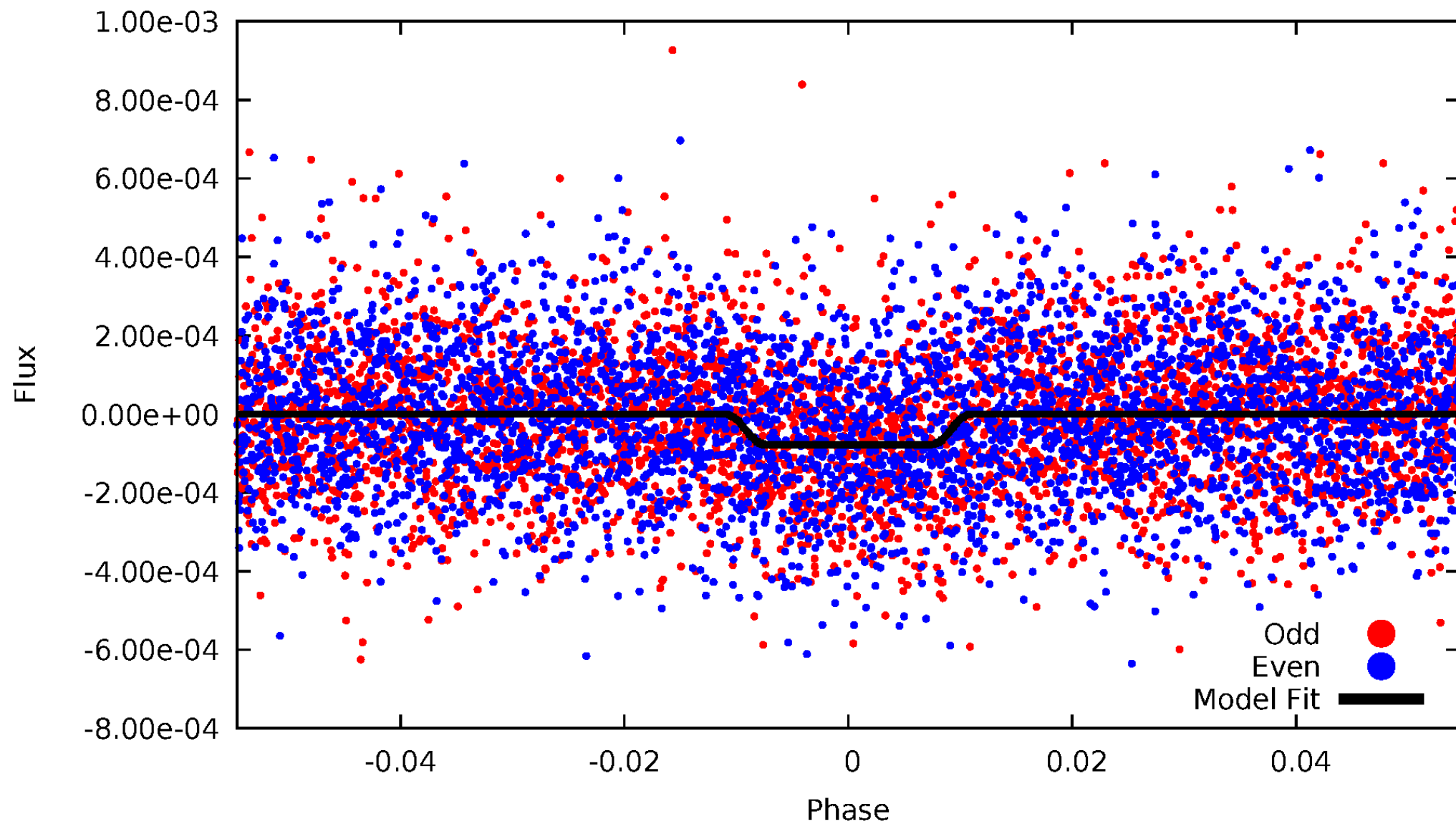
DV Odd/Even

TCE 006716545-01

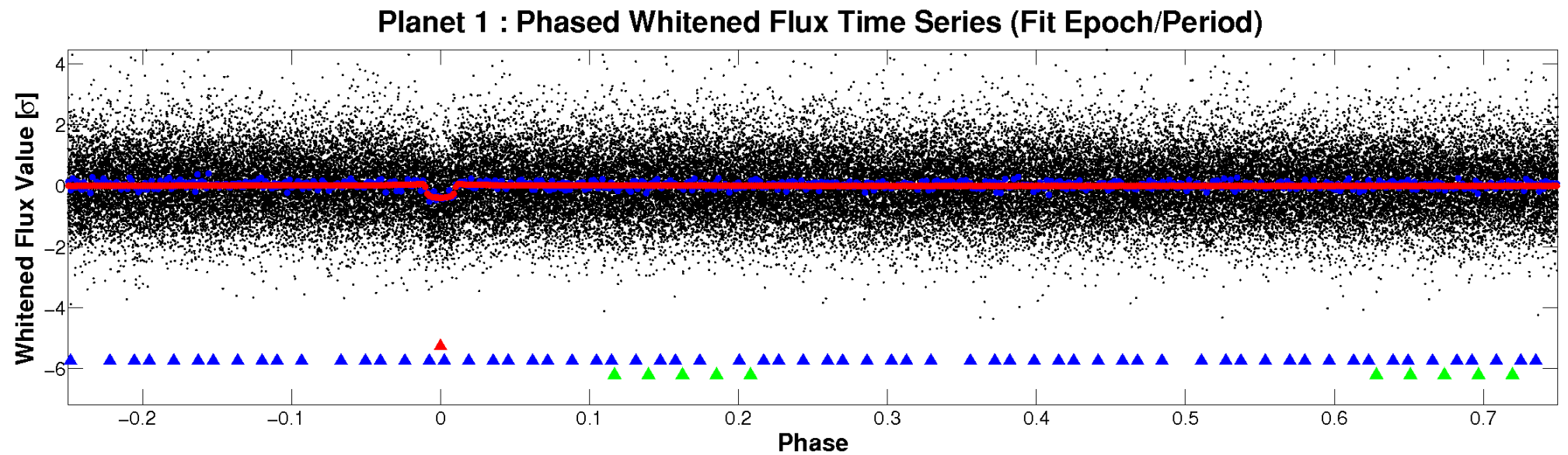
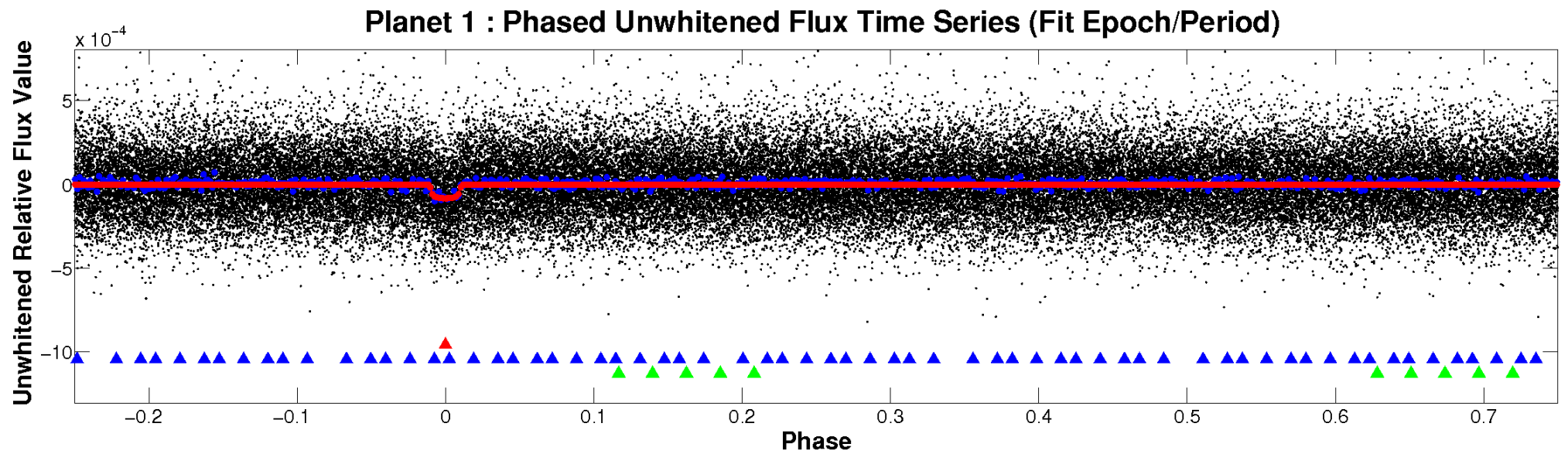


ALT Odd/Even

TCE 006716545-01

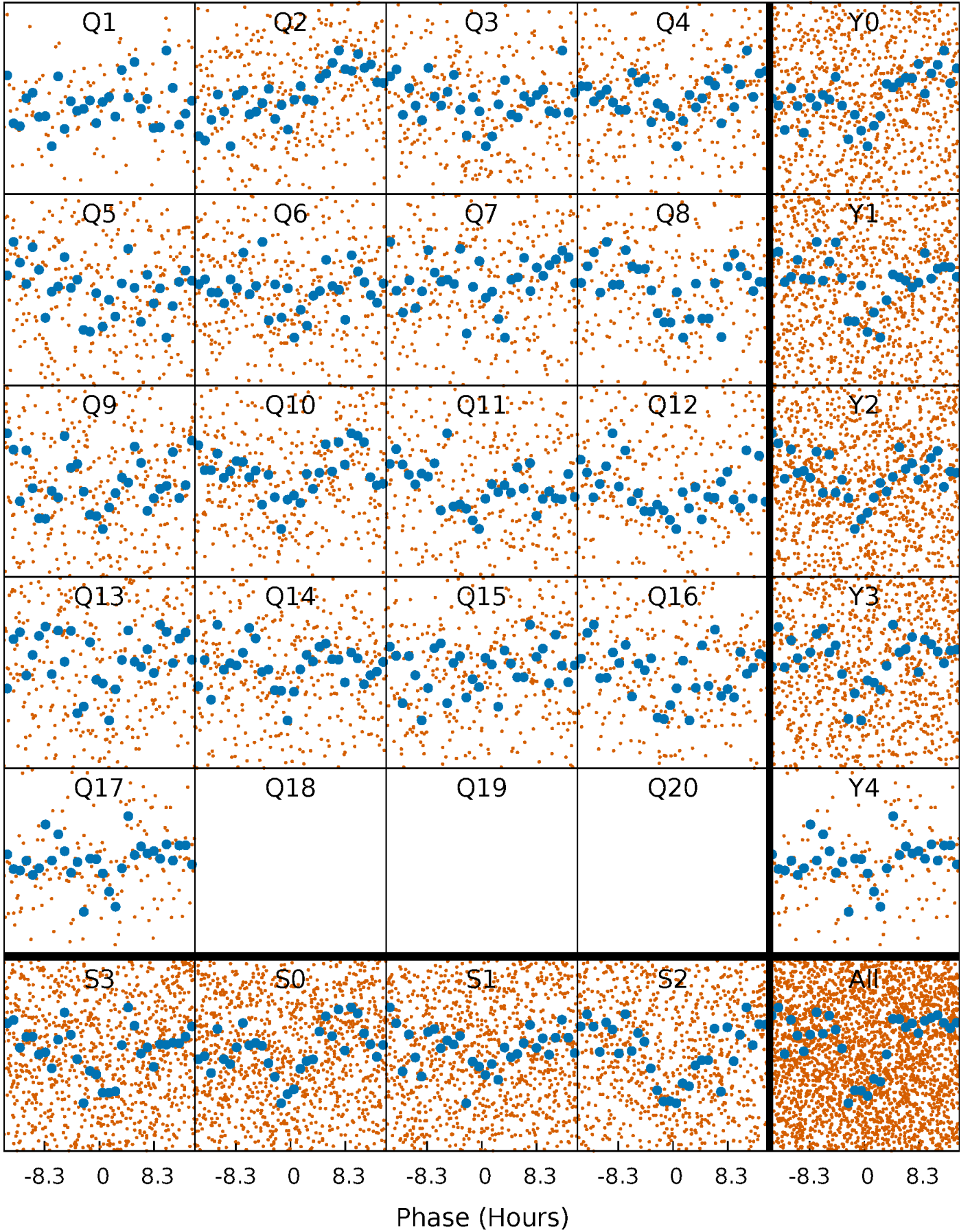


Non-Whitened Vs. Whitened Light Curve



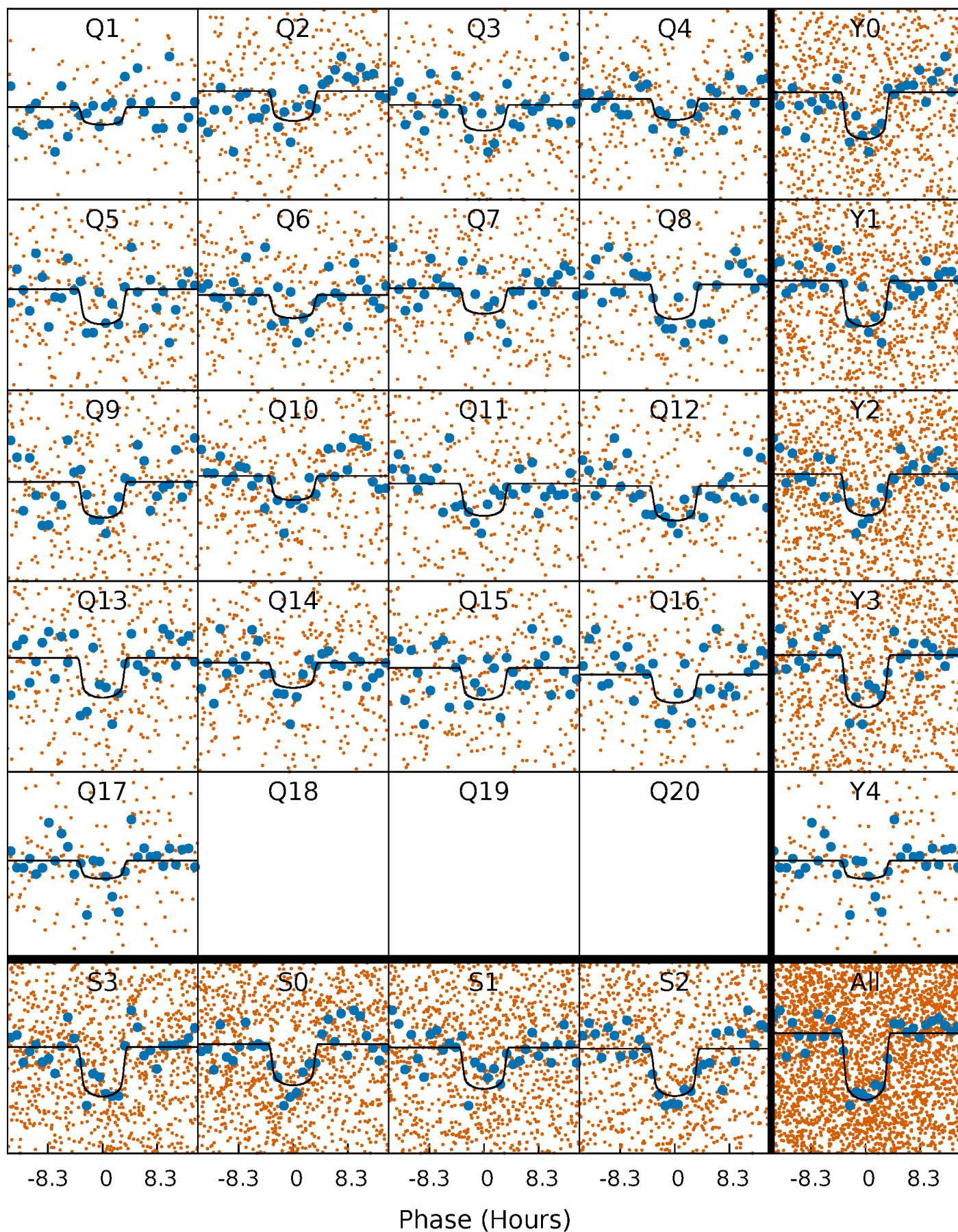
PDC Quarter-Phased Transit Curves

TCE 006716545-01 P= 13.909232 Days $T_0=142.889477$ (BKJD)



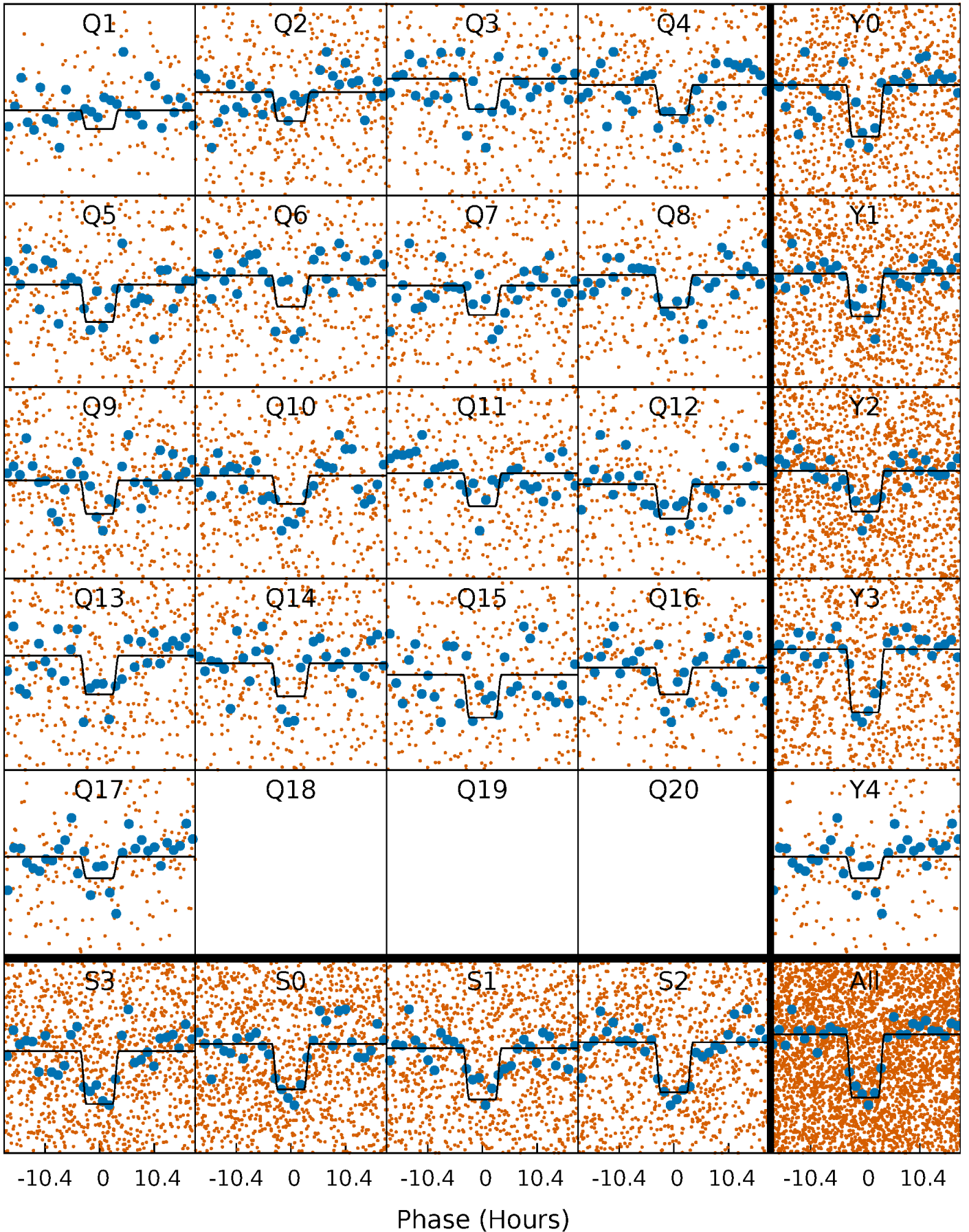
DV Quarter-Phased Transit Curves

TCE 006716545-01 P= 13.909232 Days $T_0=142.889477$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

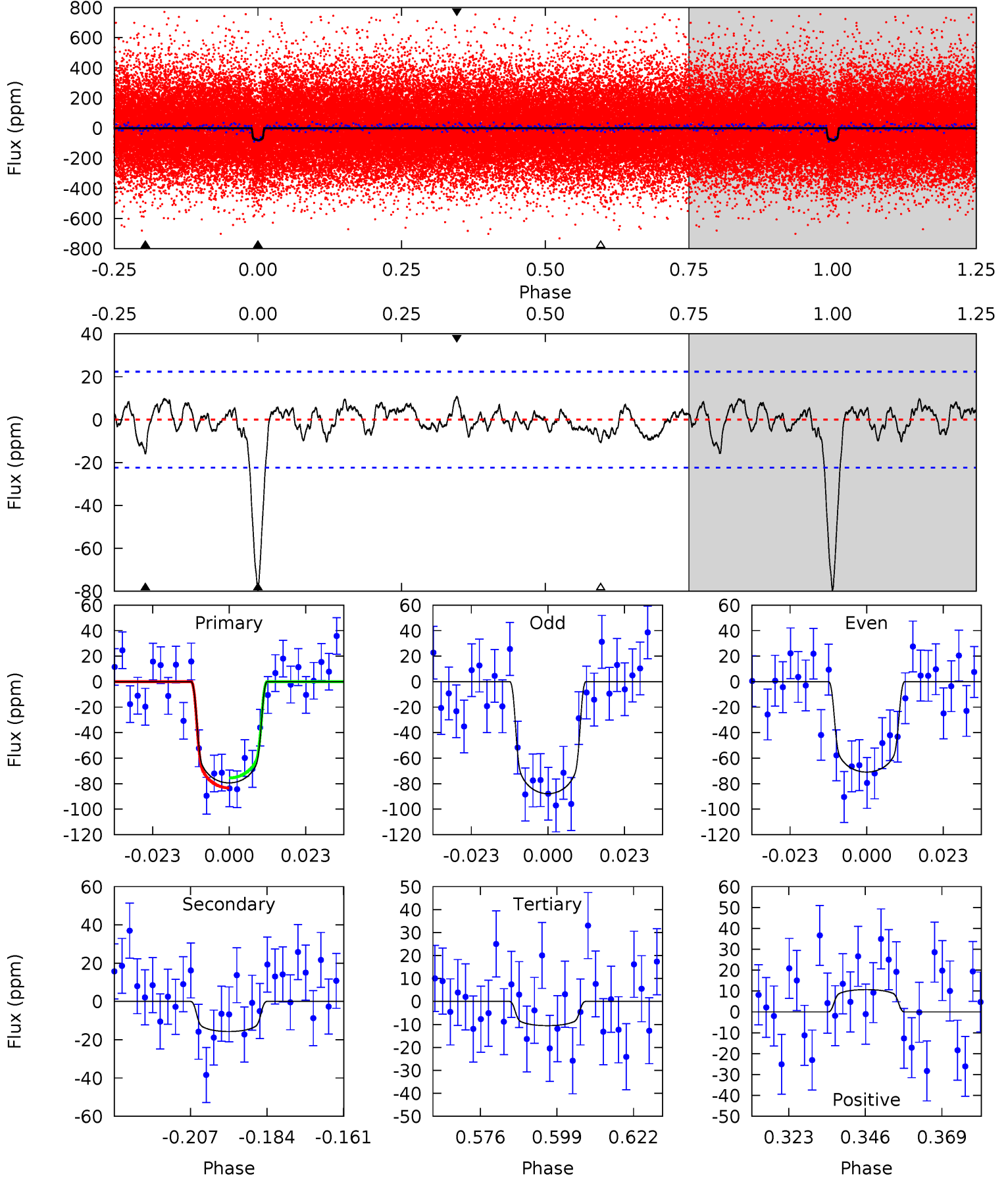
TCE 006716545-01 P= 13.908770 Days $T_0=142.905605$ (BKJD)



DV Model-Shift Uniqueness Test

006716545-01, P = 13.909232 Days, E = 128.980245 Days

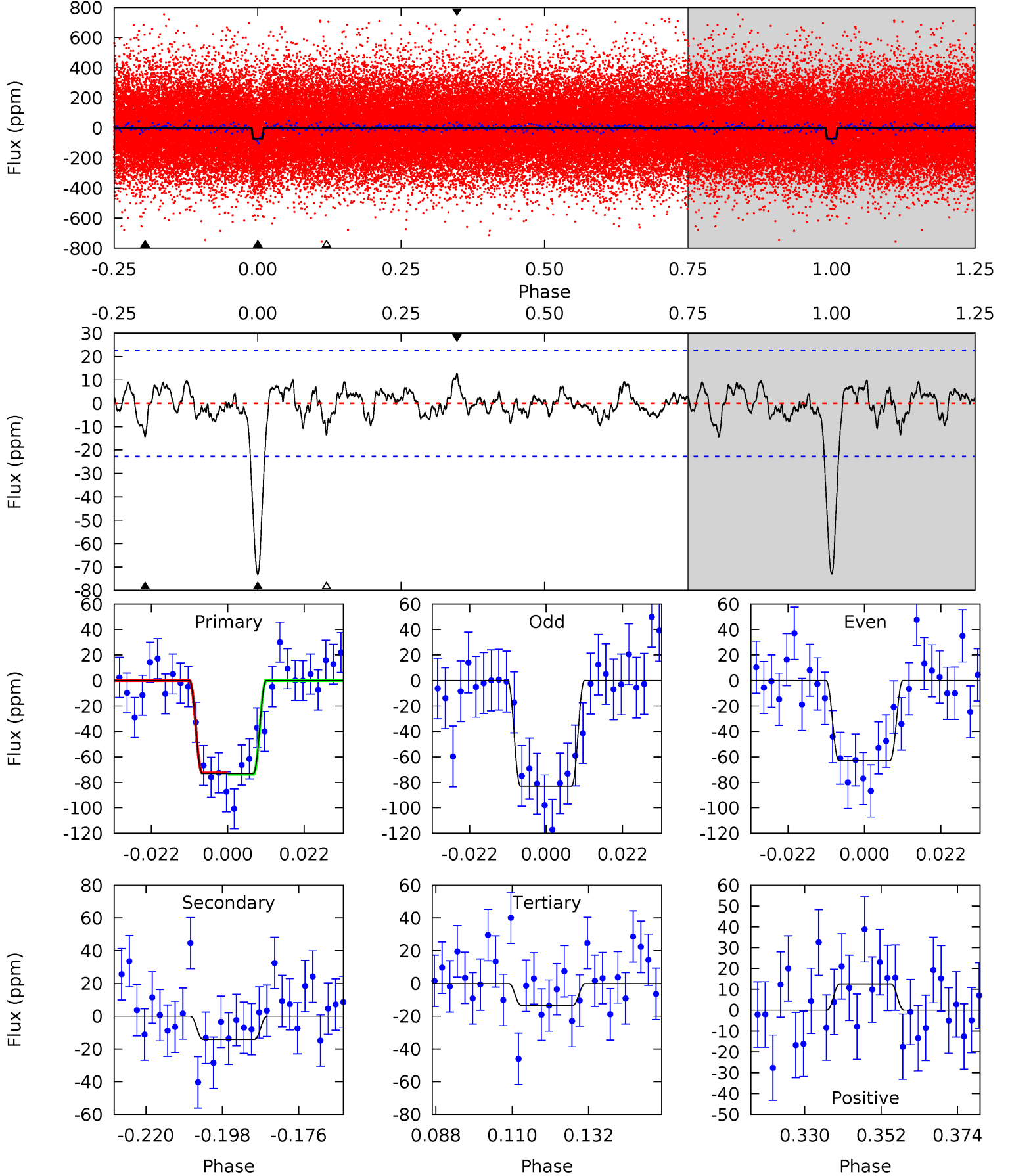
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.3	3.42	2.29	2.32	4.86	2.27	0.99	15.0	14.9	1.13	1.09	1.84	0.94	0.12	0.85



Alt Model-Shift Uniqueness Test

006716545-01, $P = 13.908770$ Days, $E = 128.996835$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.7	3.06	2.89	2.71	4.87	2.29	0.96	12.8	13.0	0.17	0.34	2.16	0.89	0.15	0.11



Stellar Parameters For KIC 006716545

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6052^{+82}_{-82}	$4.183^{+0.154}_{-0.112}$	$0.080^{+0.150}_{-0.150}$	$1.424^{+0.263}_{-0.237}$	$1.128^{+0.111}_{-0.083}$	$0.551^{+0.405}_{-0.201}$
	+1%/-1%	+4%/-3%	+188%/-188%	+18%/-17%	+10%/-7%	+74%/-37%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 006716545-01 / KOI 2906.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-16 ± 5	$1.59^{+0.28}_{-0.22}$	1290^{+59}_{-63}	4018^{+275}_{-248}	46^{+22}_{-17}
Alt.	-14 ± 5	$1.36^{+0.22}_{-0.23}$	1288^{+62}_{-62}	4211^{+345}_{-337}	60^{+34}_{-24}

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

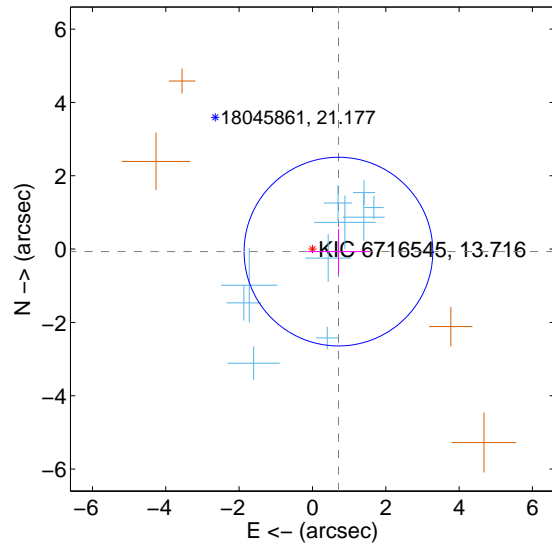
Supplemental centroid analysis for 006716545-01. Kepler magnitude: 13.72. Transit SNR 12.63

There are 10 quarters with good PRF difference image offsets

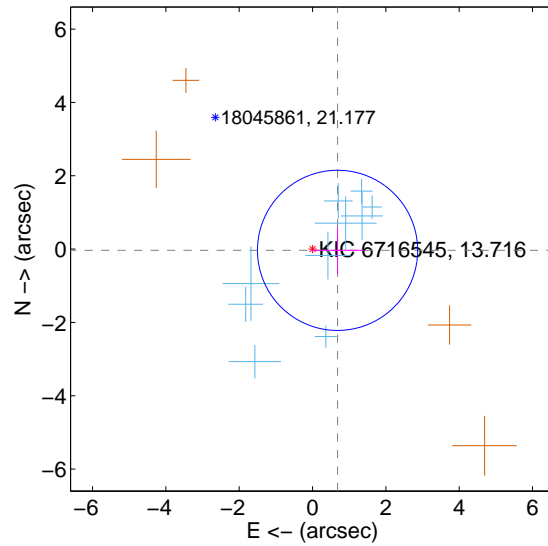
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.713 ± 0.858	0.83	-0.709 ± 0.846	-0.068 ± 0.614
PRF-fit source offset from KIC position	0.684 ± 0.728	0.94	-0.683 ± 0.724	-0.034 ± 0.631
photometric centroid source offset	2.20 ± 1.10	1.99	2.12 ± 1.11	0.57 ± 1.00

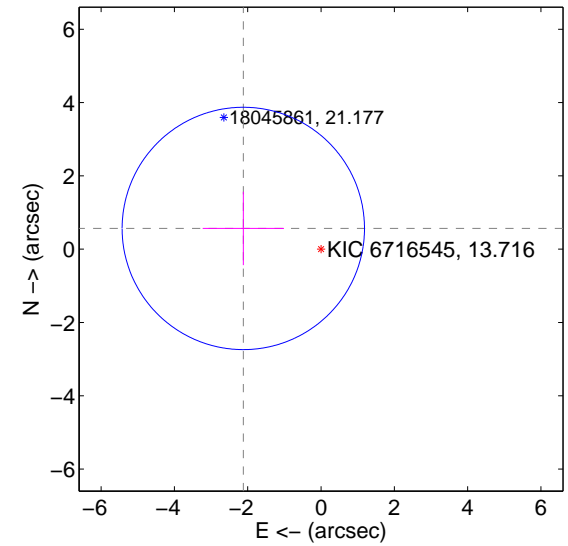
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

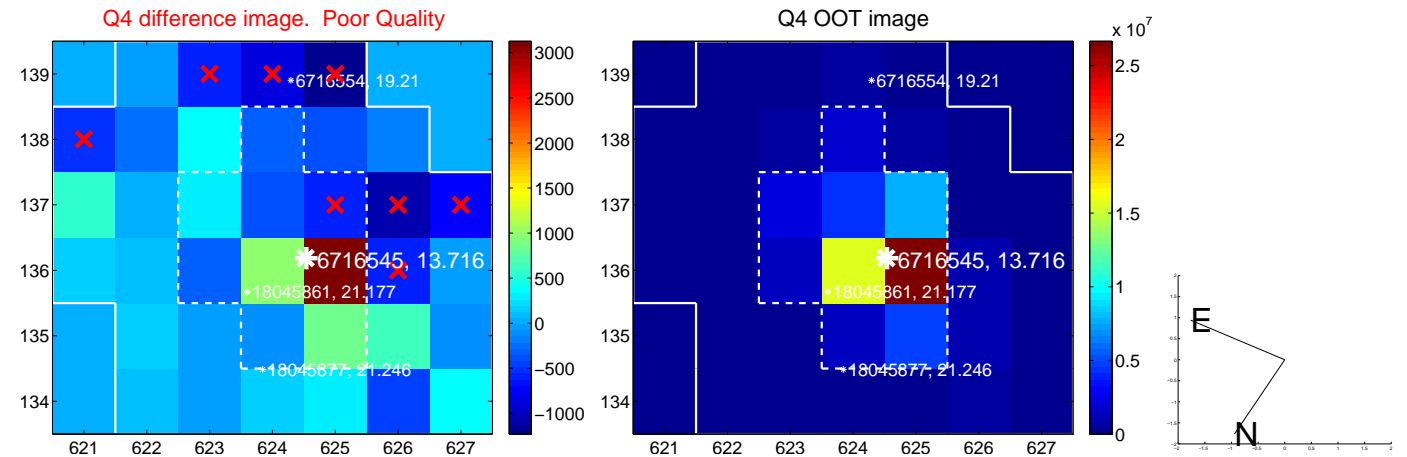
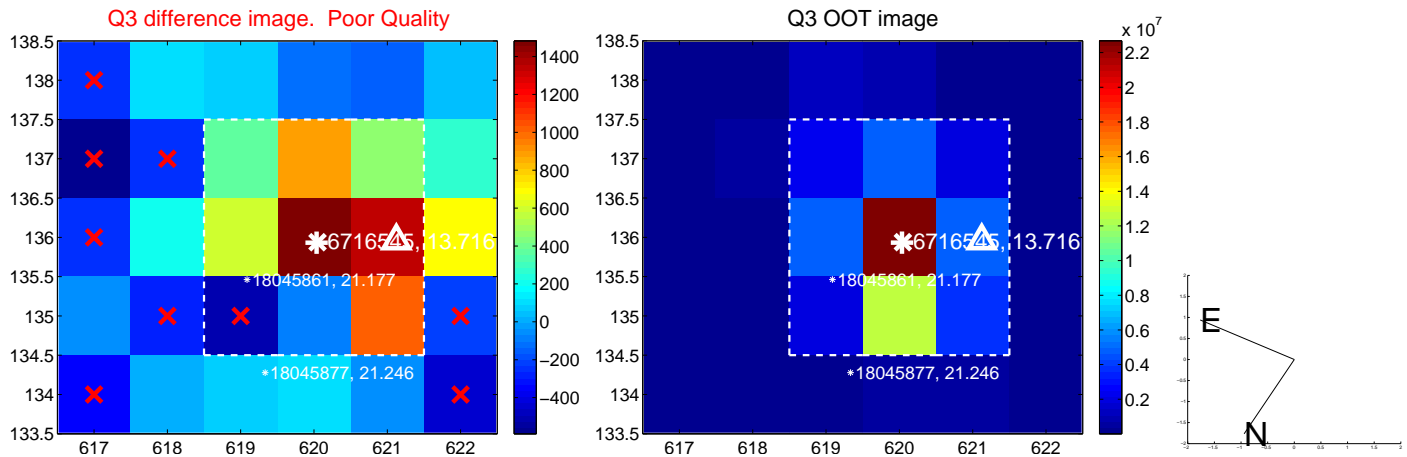
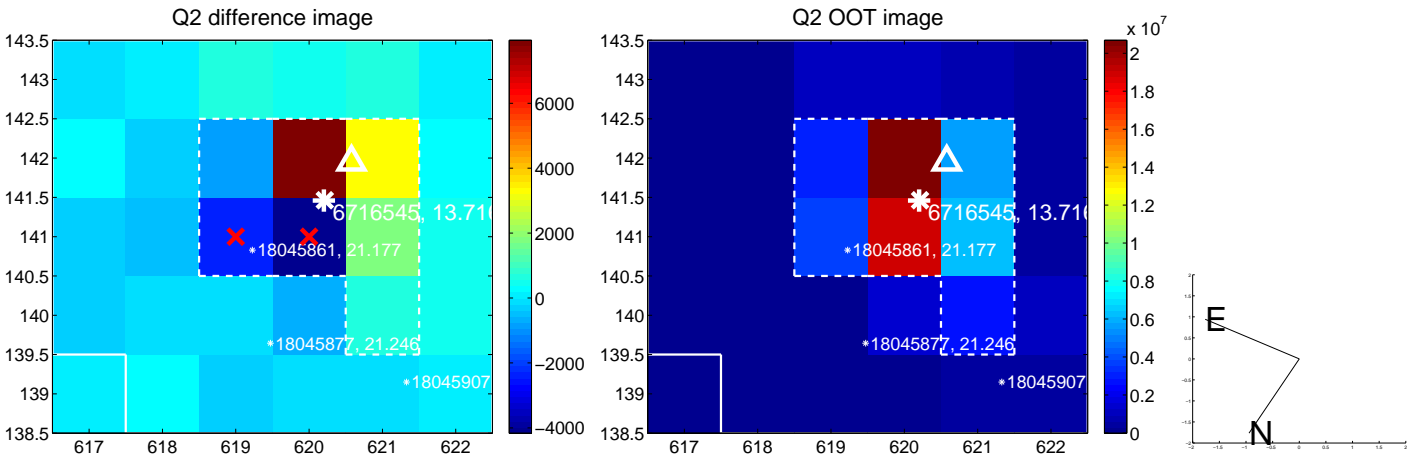
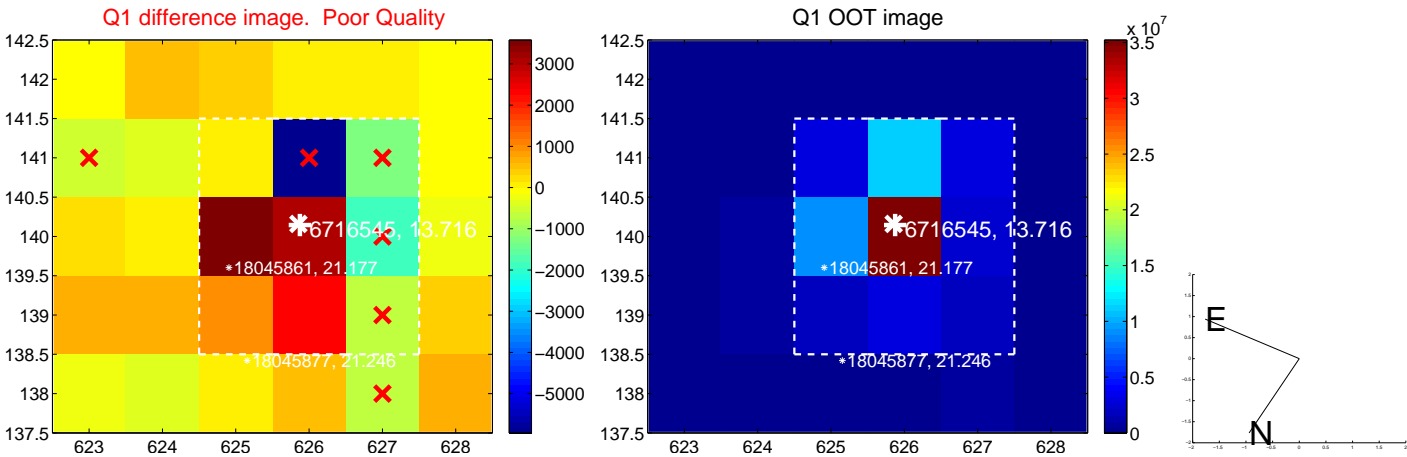


offset from photometric centroids

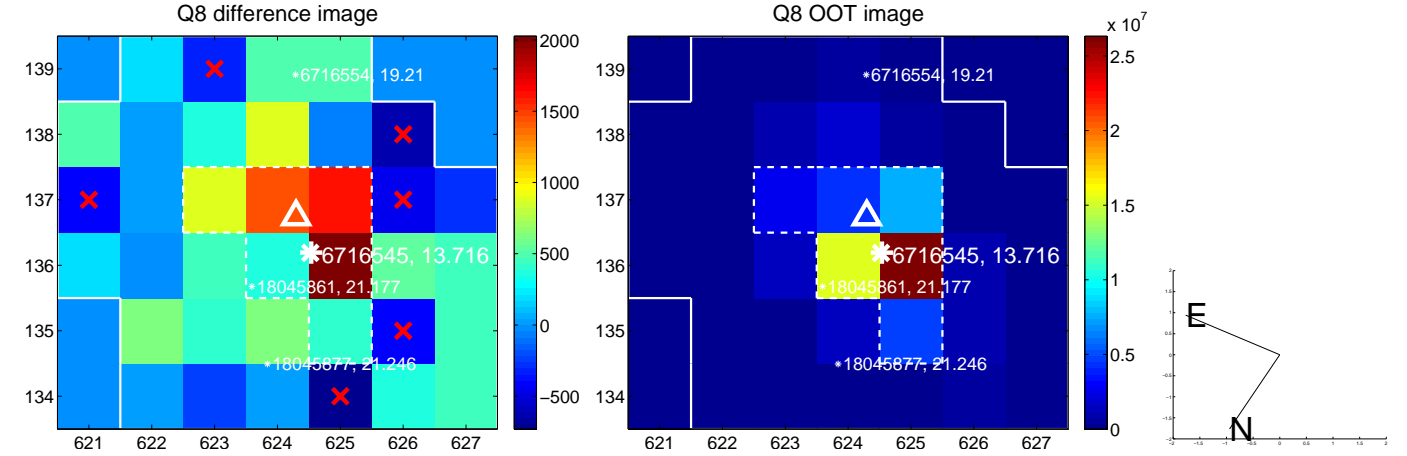
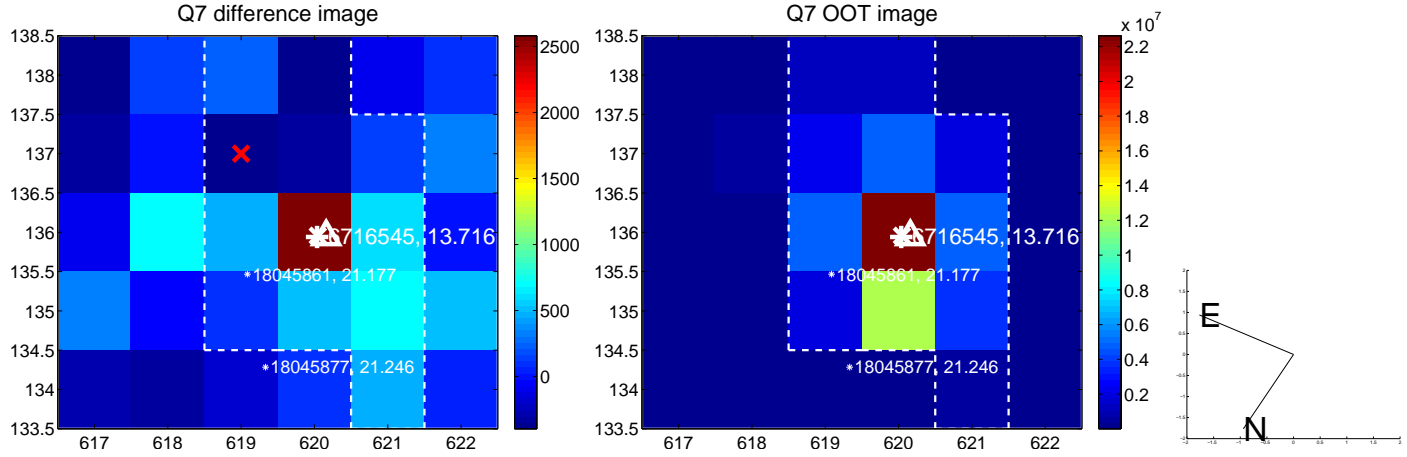
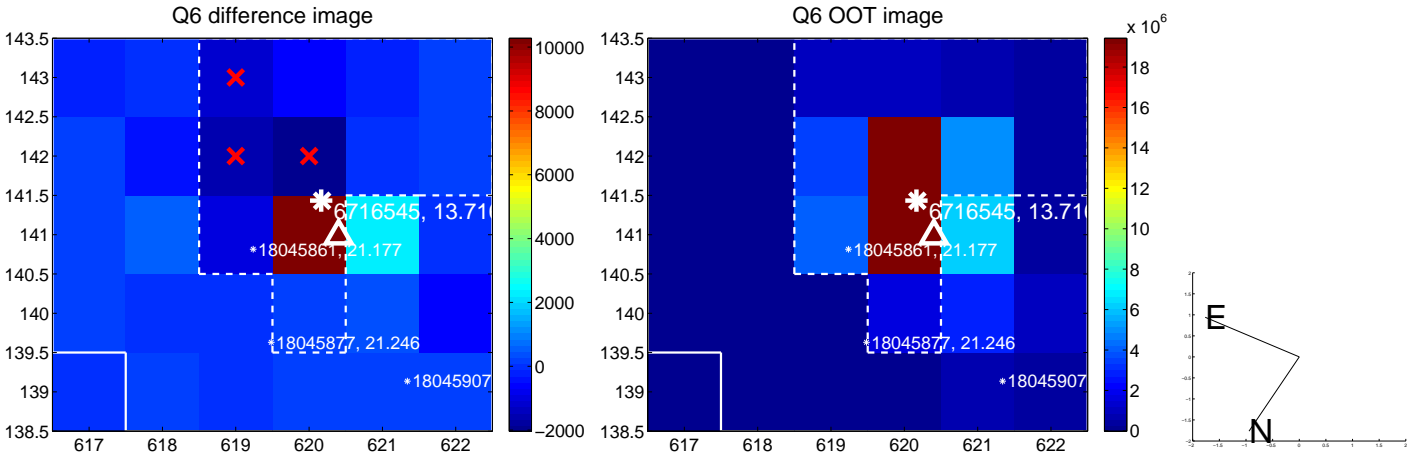
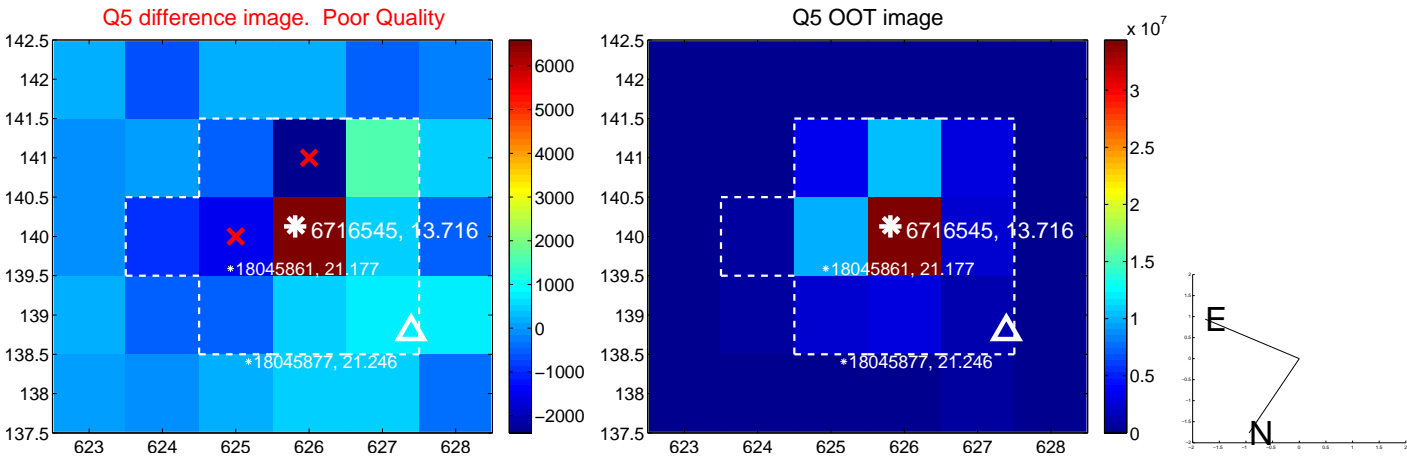


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

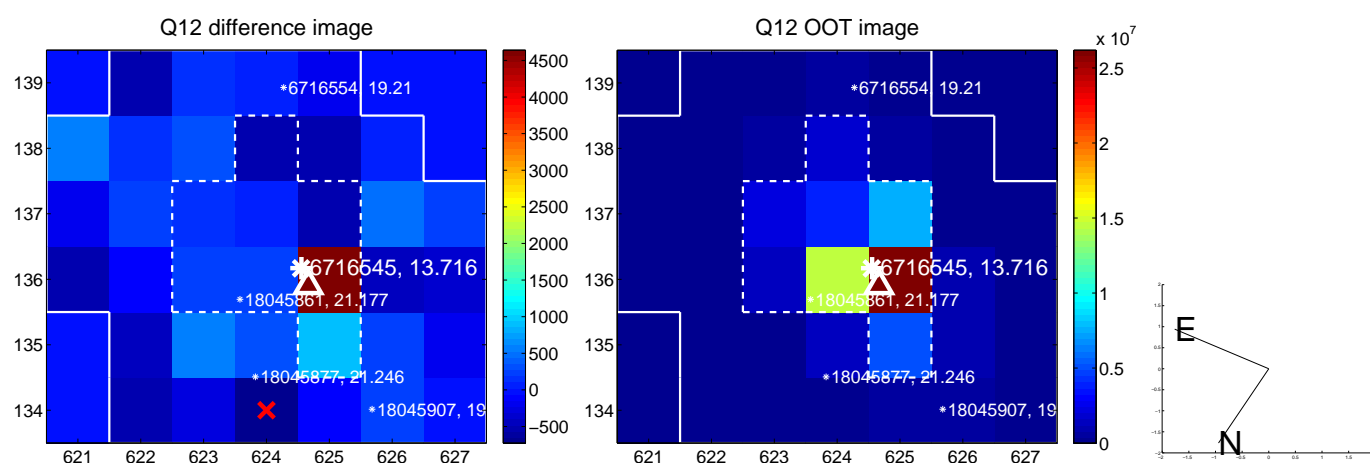
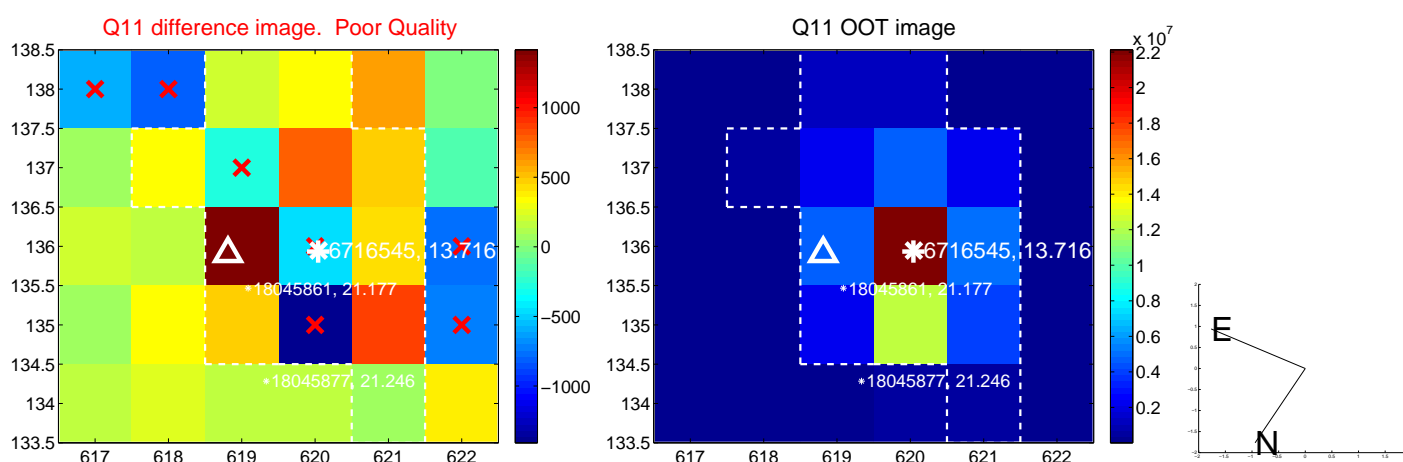
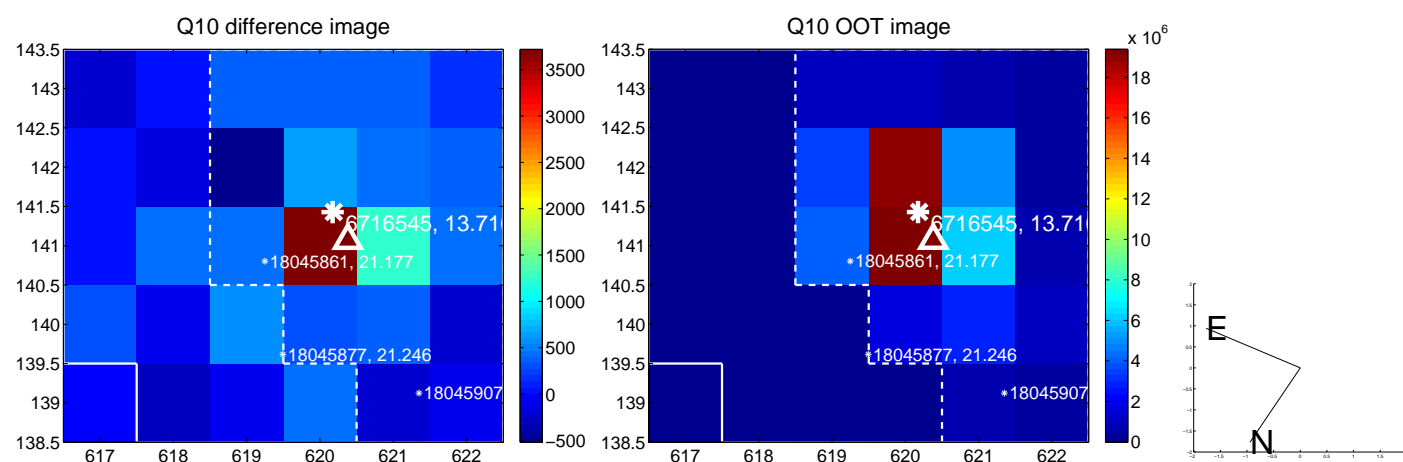
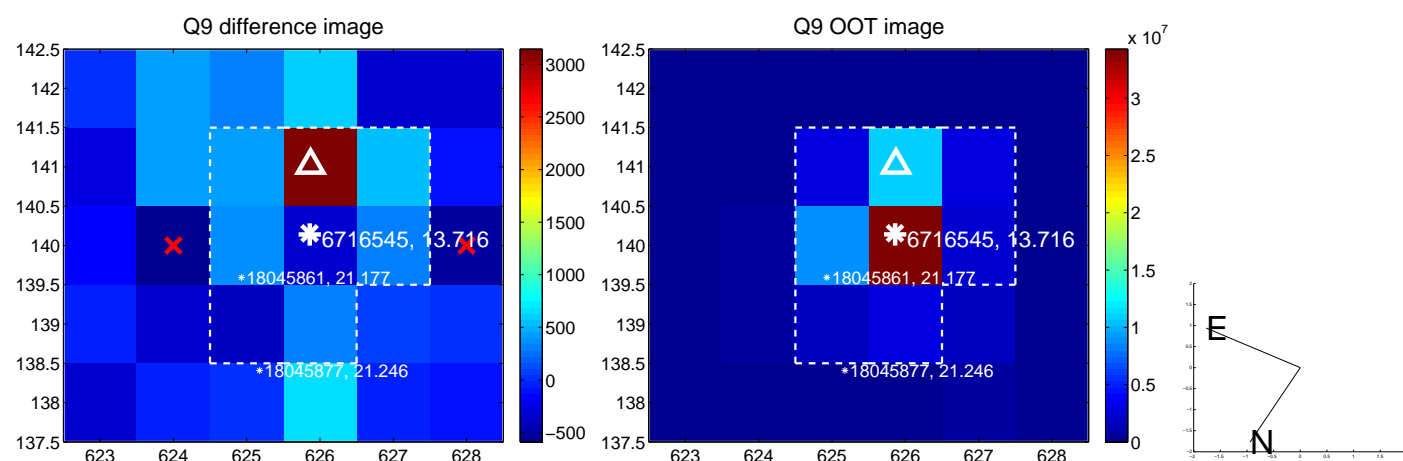
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



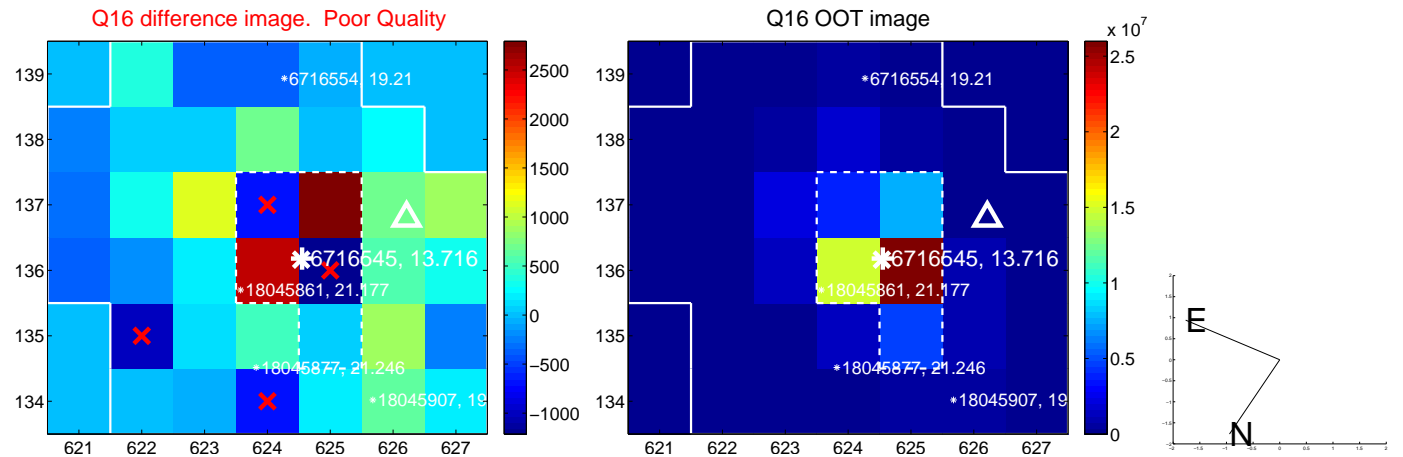
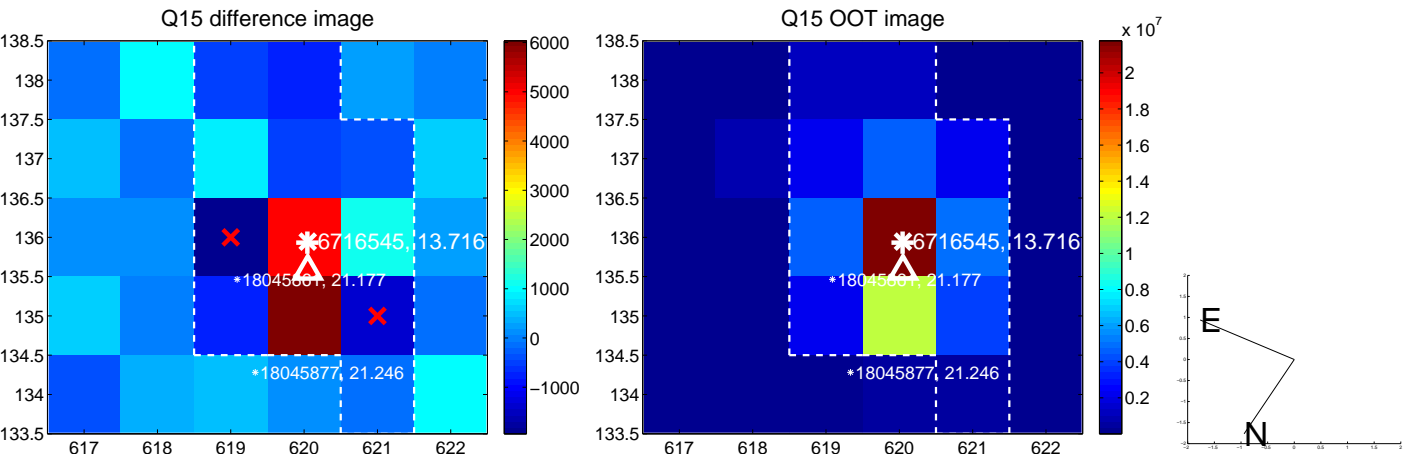
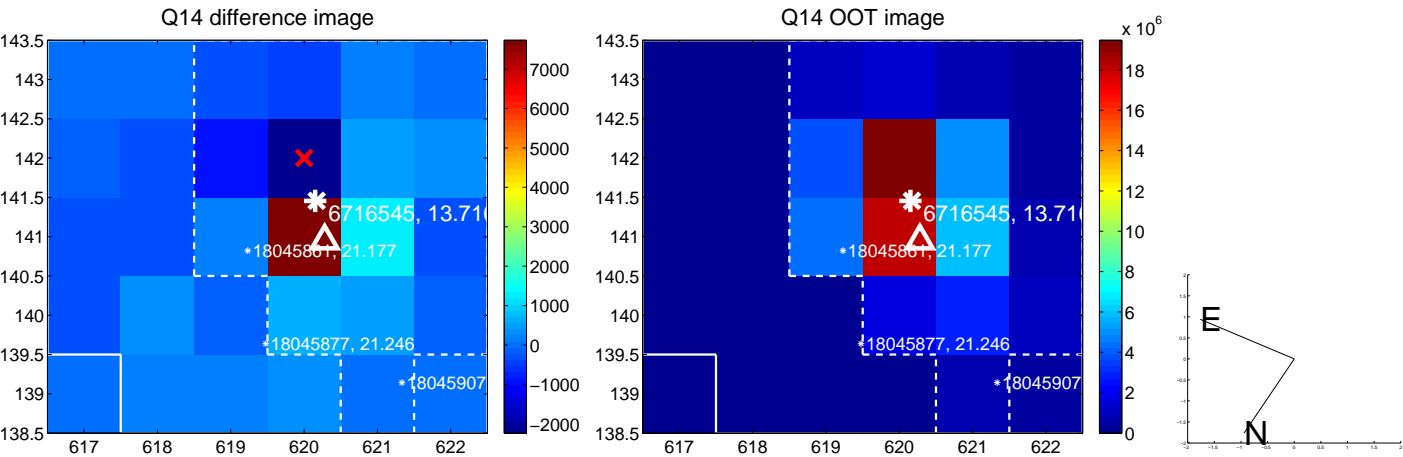
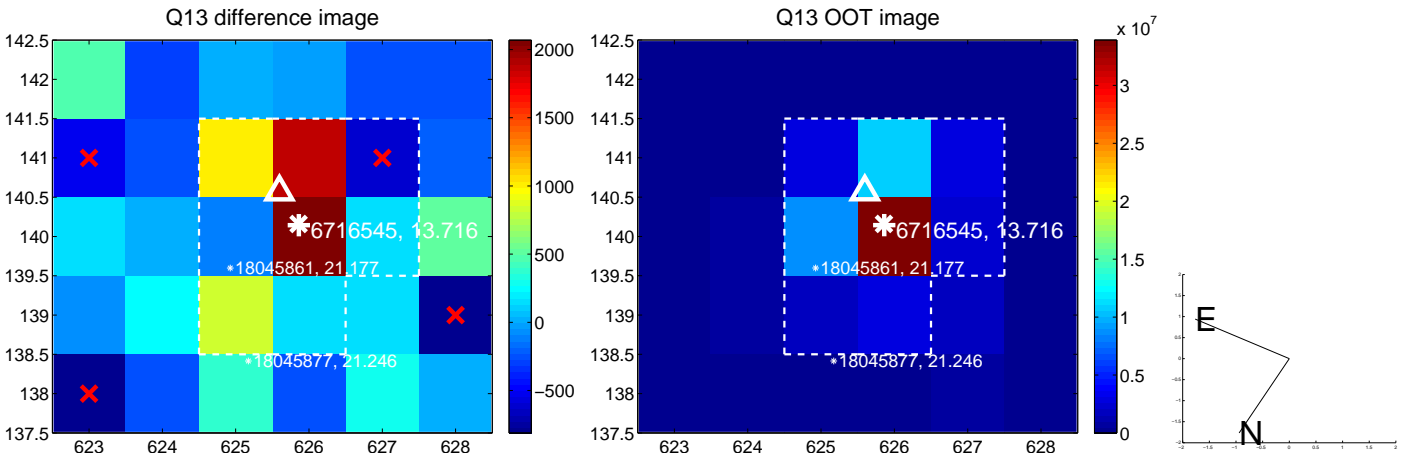
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



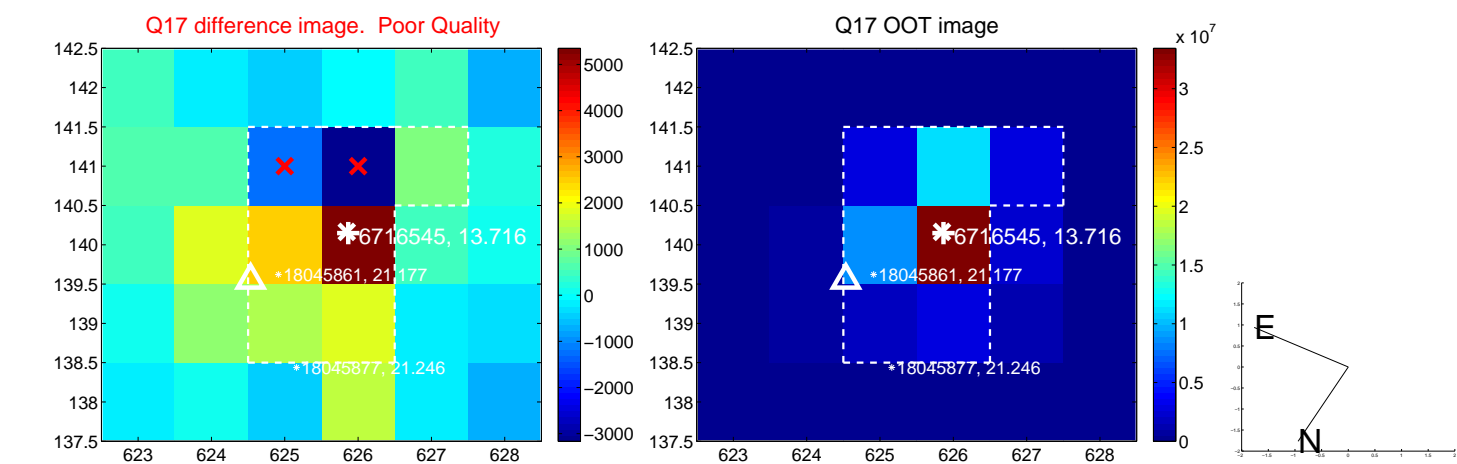
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



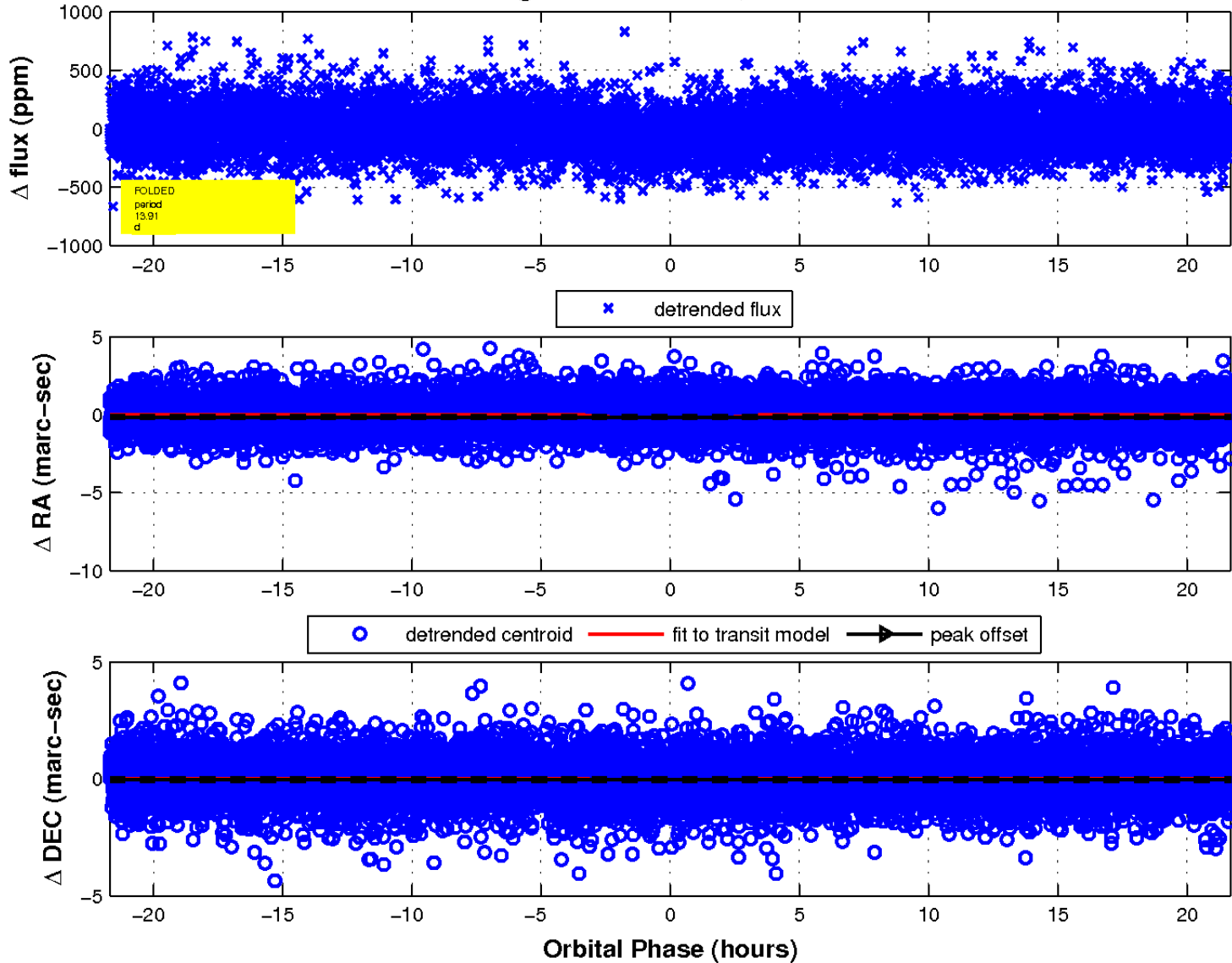
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

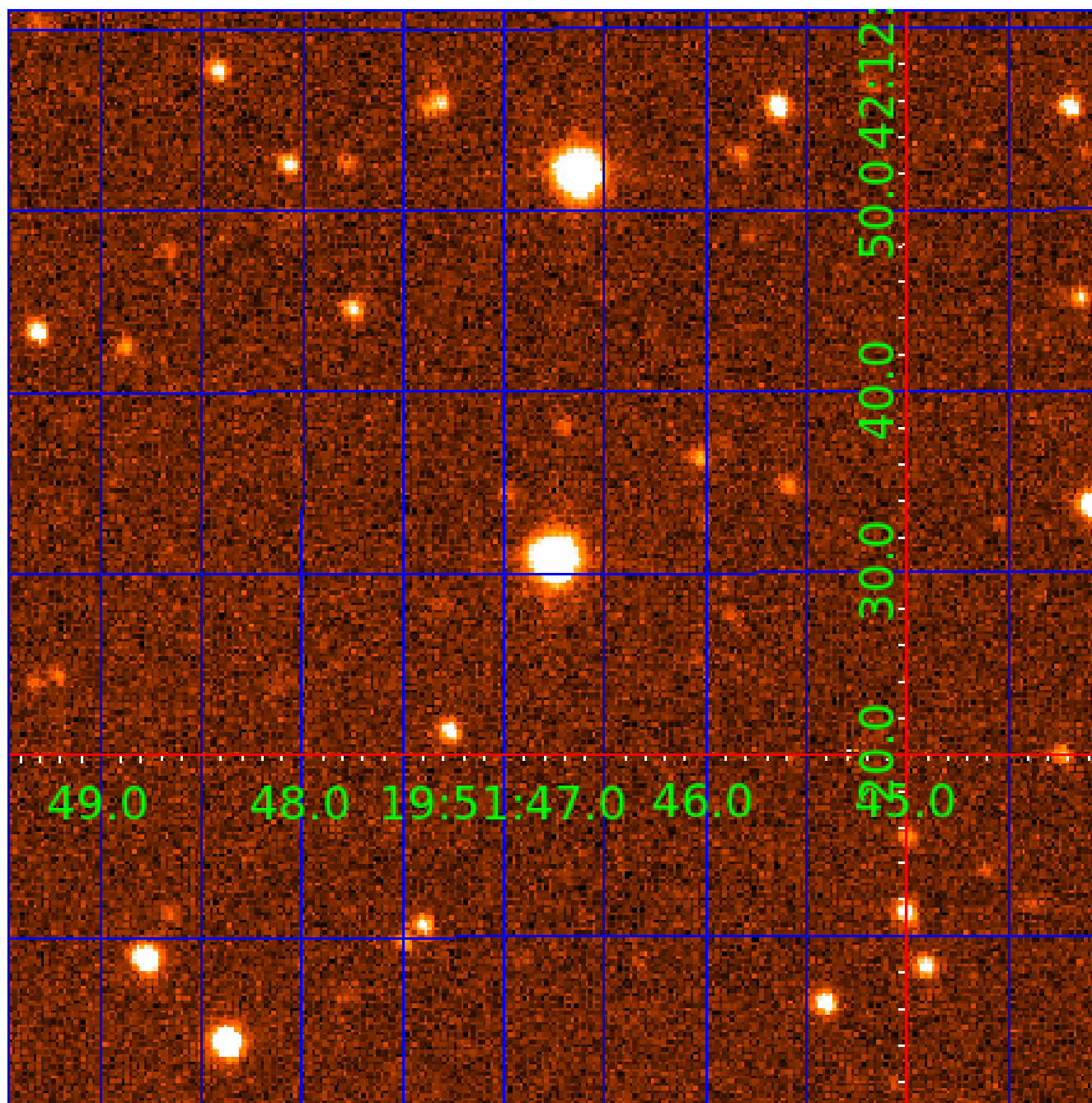


fluxWeightedCentroids, Planet 1 of 3



UKIRT Image

Declination



KIC 006716545

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})
006716545-01	OBS	2906.01	13.909232	142.889477	82.4	7.231	12.2	12.6	1.42	6052	1.62	175.56
006716545-02	OBS	2906.03	21.942559	143.890287	67.2	8.565	7.7	8.4	1.42	6052	1.37	95.60
006716545-03	OBS	2906.02	145.888130	194.625631	161.8	8.464	7.6	8.5	1.42	6052	2.02	7.65

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006716545-01	OBS	PC	0.90	0	0	0	0	NO_COMMENT
006716545-02	OBS	PC	0.87	0	0	0	0	NO_COMMENT
006716545-03	OBS	PC	0.80	0	0	0	0	NO_COMMENT

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.

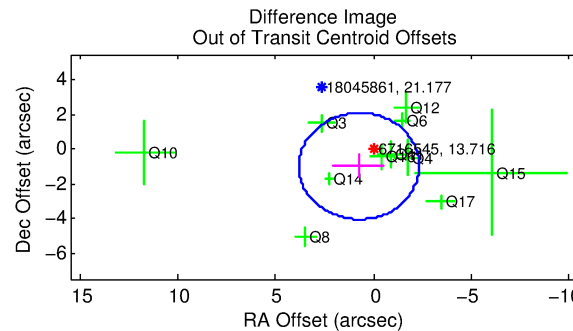
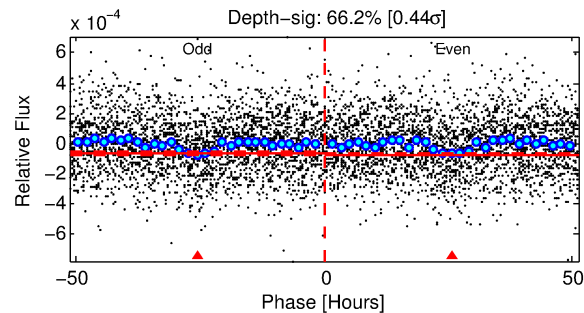
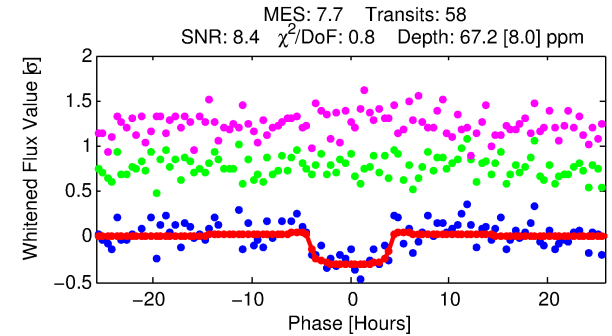
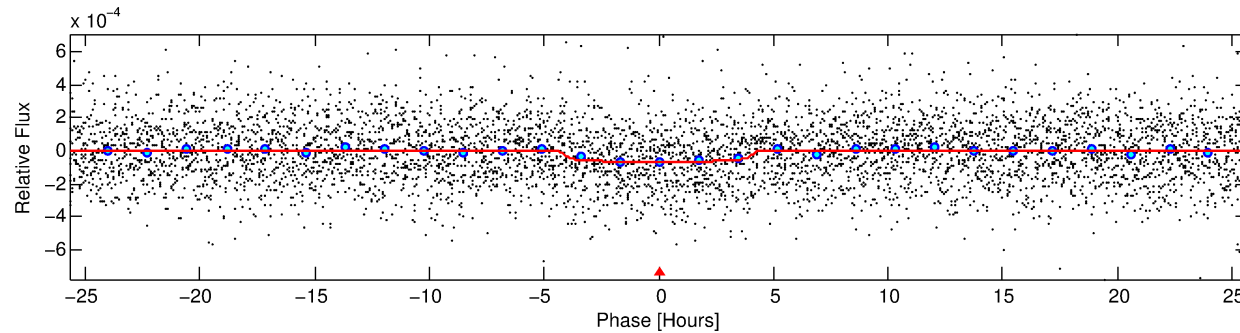
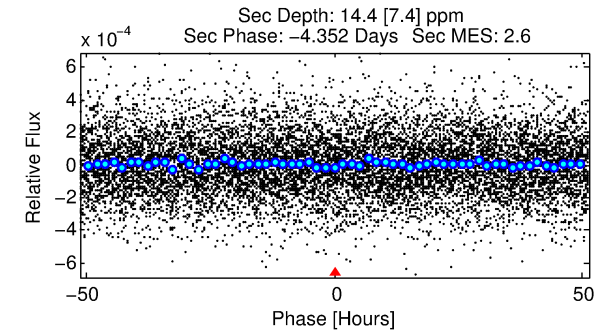
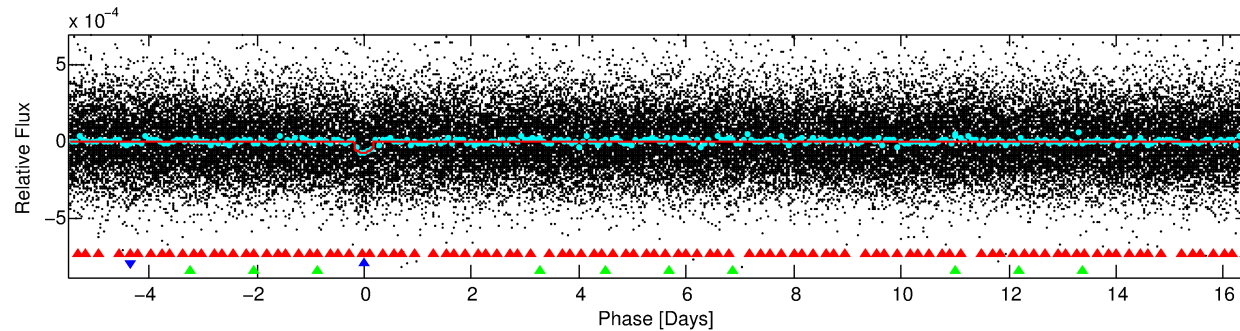
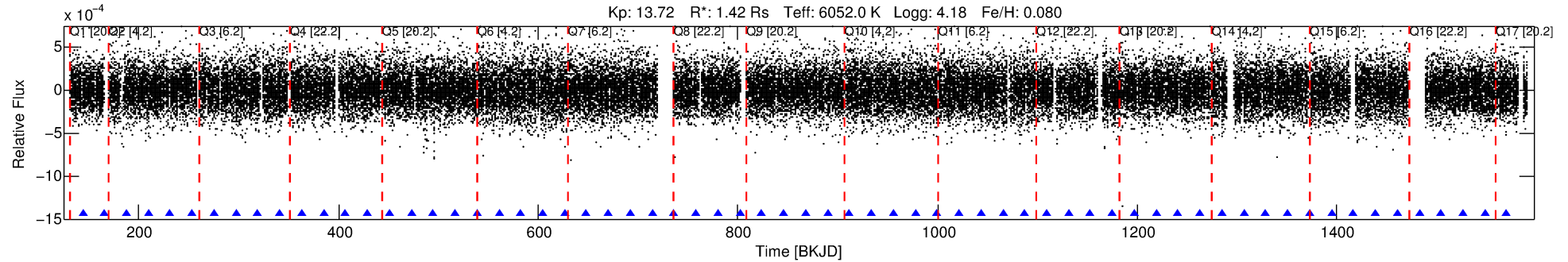
Ephemeris Match Information For 006716545-02

No Significant Match Found

DV One-Page Summary

KIC: 6716545 Candidate: 2 of 3 Period: 21.943 d

KOI: K02906 Corr: No Ephemeris Match



DV Fit Results:

Period = 21.94256 [0.00045] d
Epoch = 143.8903 [0.0165] BKJD
Rp/R* = 0.0088 [0.0030]
a/R* = 9.16 [15.48]
b = 0.90 [0.39]
Seff = 95.60 [26.00]
Teq = 797 [54] K
Rp = 1.37 [0.53] Re
a = 0.1597 [0.0273] AU
Ag = 107.51 [96.05] [1.11σ]
Teffp = 3970 [848] K [3.73σ]

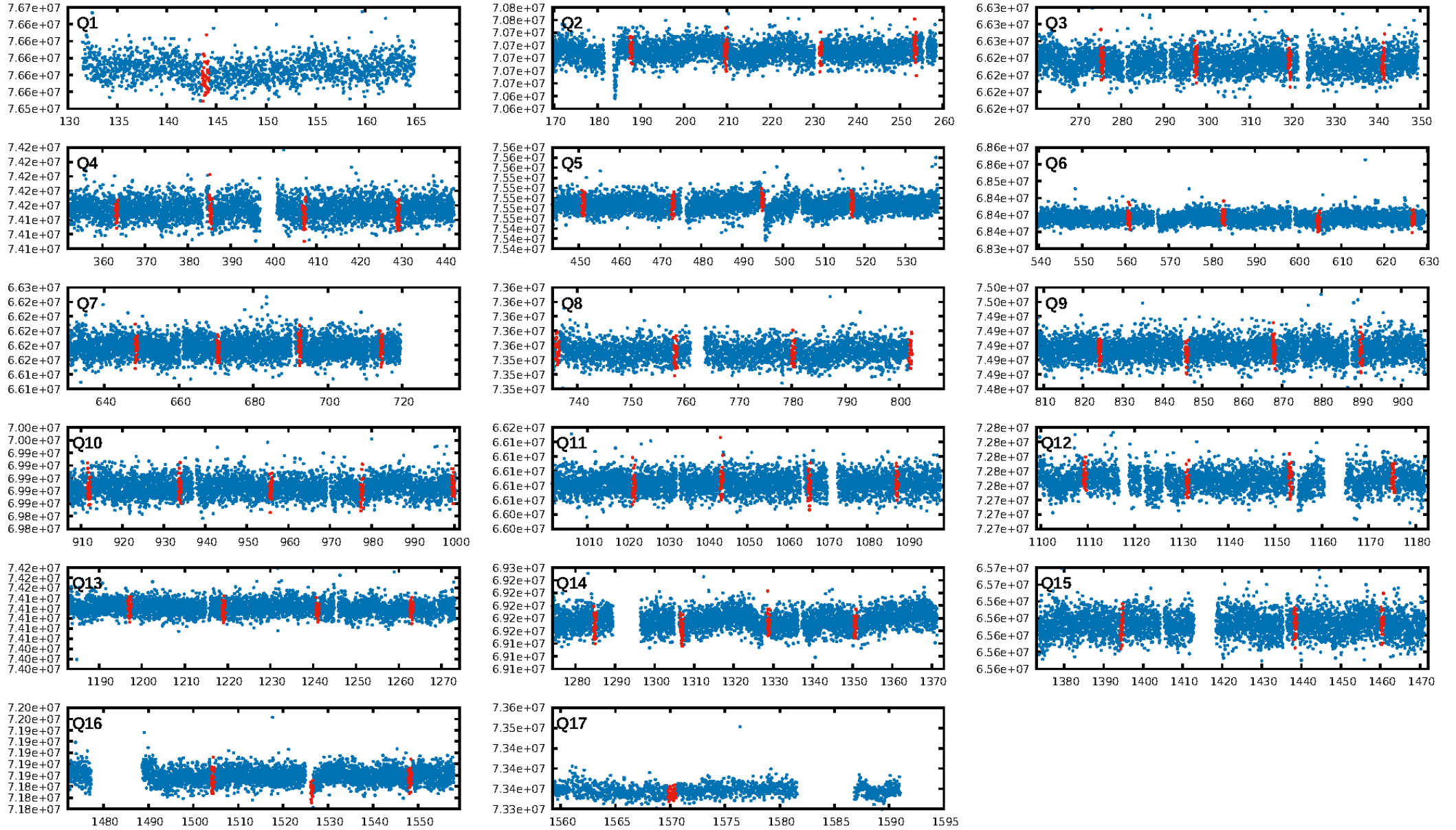
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [17.20σ]
LongPeriod-sig: 100.0% [247.04σ]
ModelChiSquare2-sig: 71.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.58e-14
RollingBand-fgt: 1.00 [56/56]
GhostDiagnostic-chr: 2.232
Centroid-sig: 0.0%
Centroid-so: 3.677 arcsec [2.45σ]
OotOffset-rm: 1.225 arcsec [1.19σ]
KicOffset-rm: 1.212 arcsec [1.33σ]
OotOffset-st: 3/3/4/1 [11]
KicOffset-st: 3/3/4/1 [11]
DiffImageQuality-fgm: 0.27 [3/11]
DiffImageOverlap-fno: 1.00 [17/17]

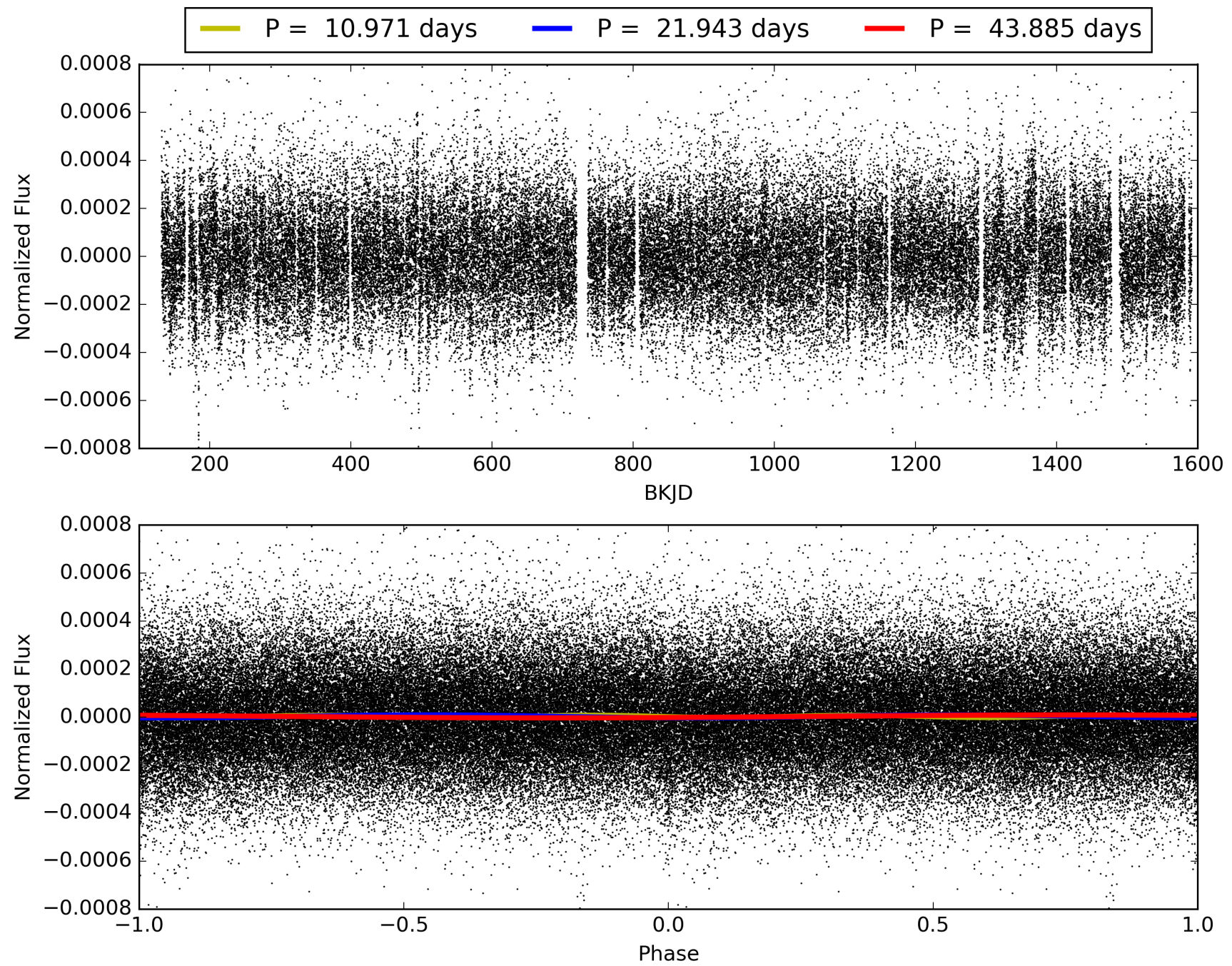
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 08:01:58 Z

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

TCE 006716545-02, PDC Light Curves

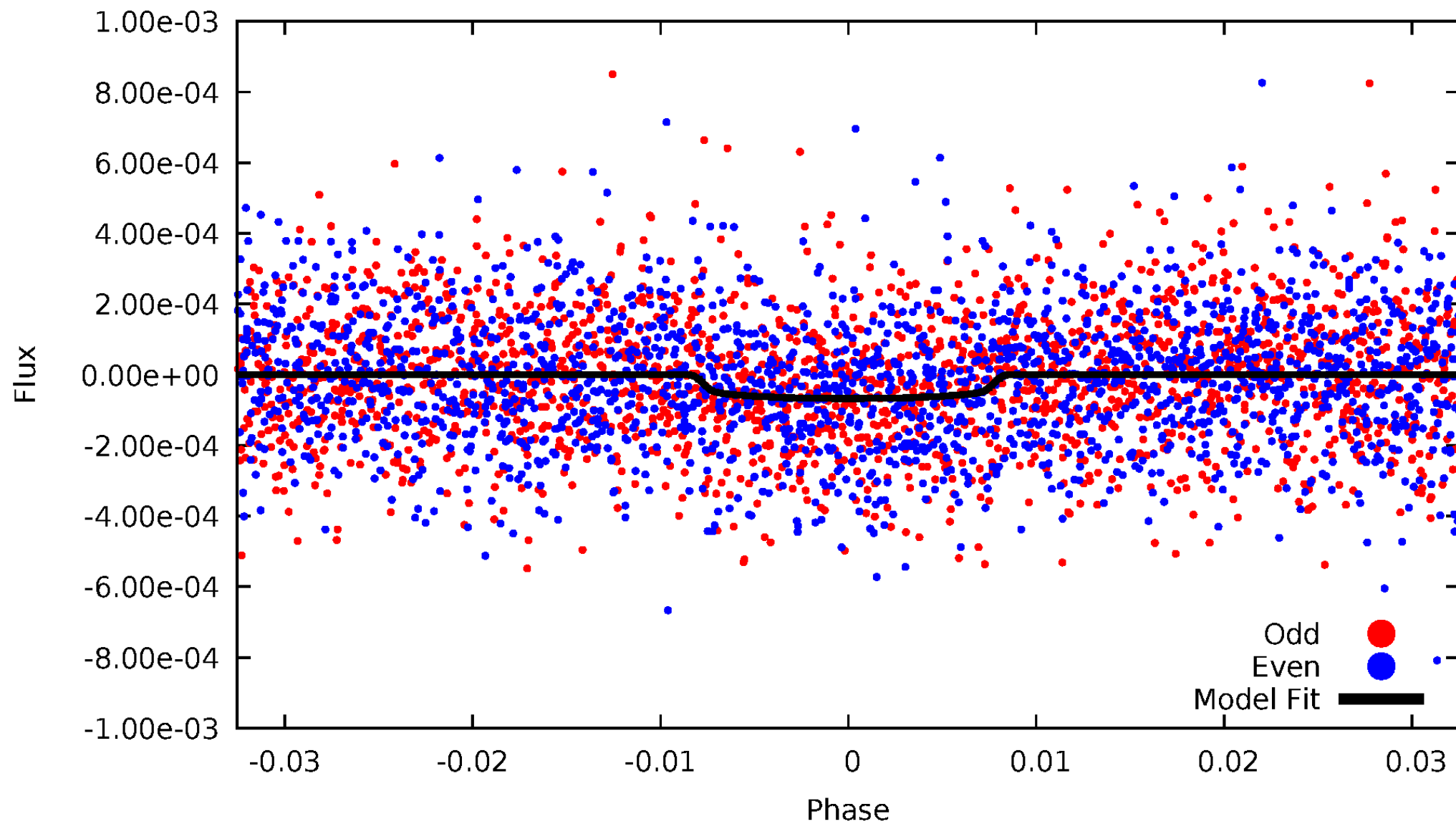


TCE 006716545-02



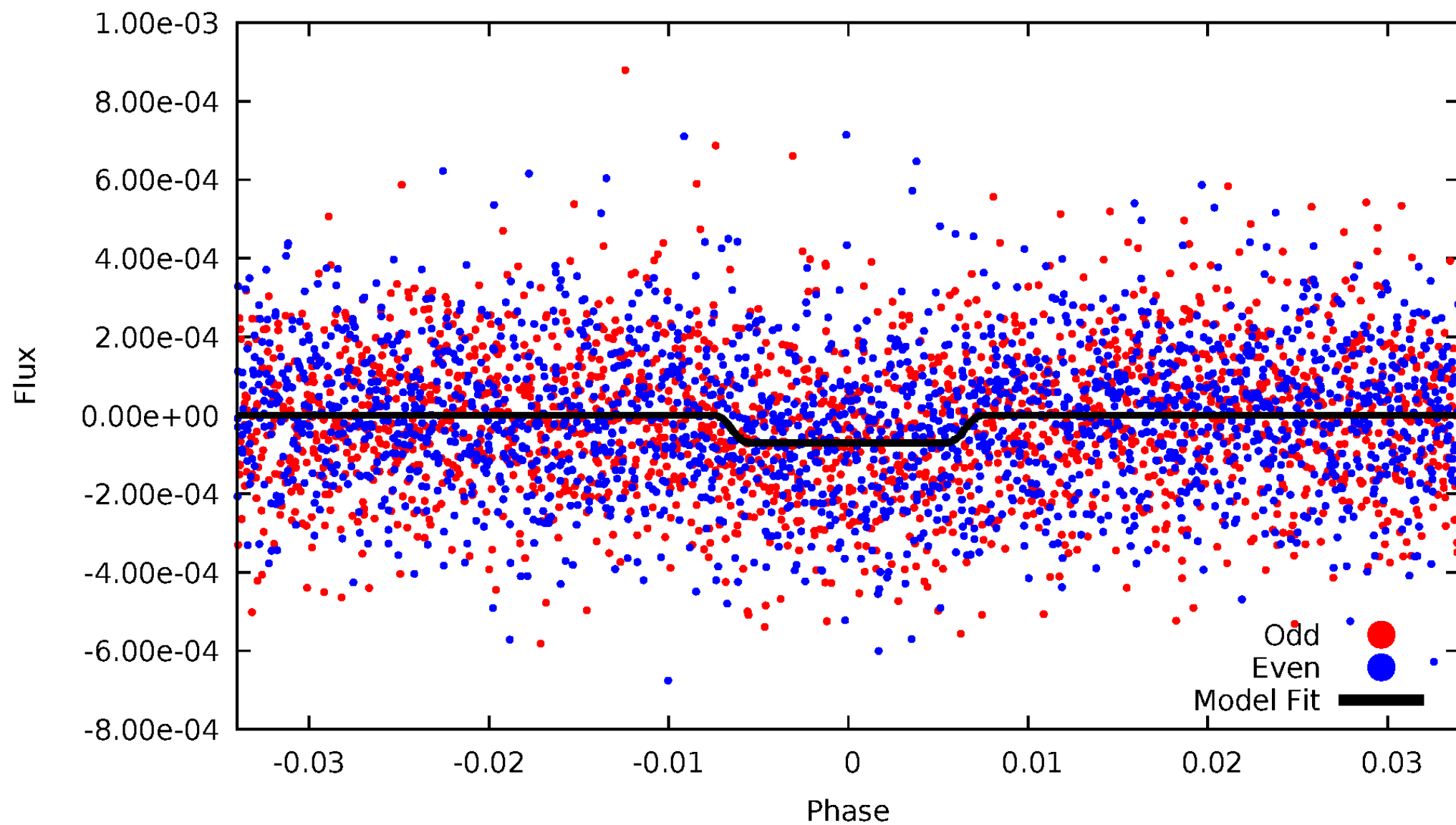
DV Odd/Even

TCE 006716545-02



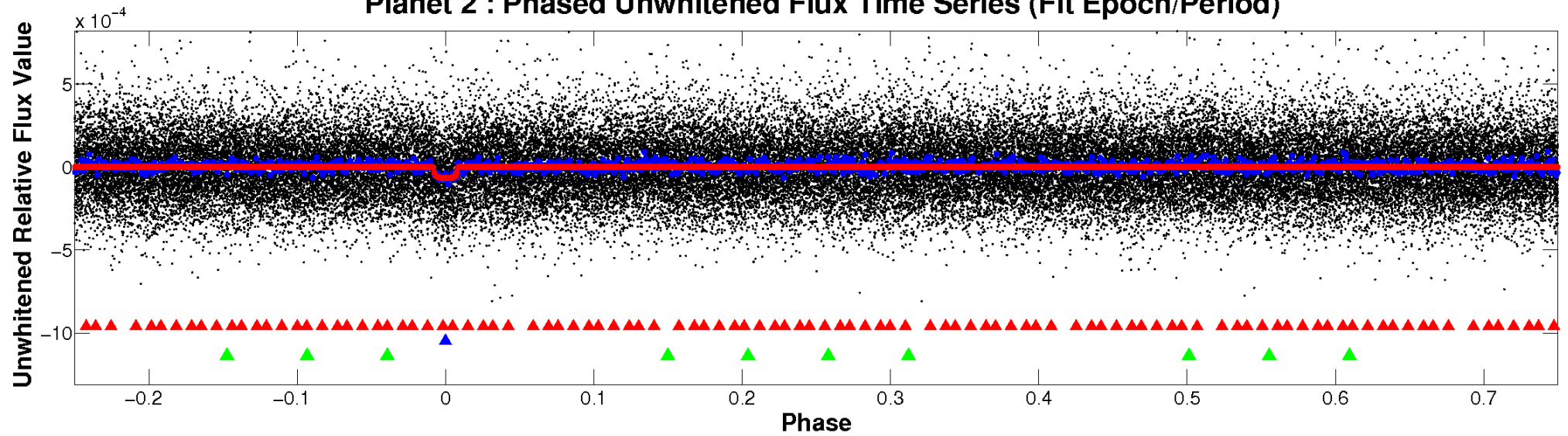
ALT Odd/Even

TCE 006716545-02

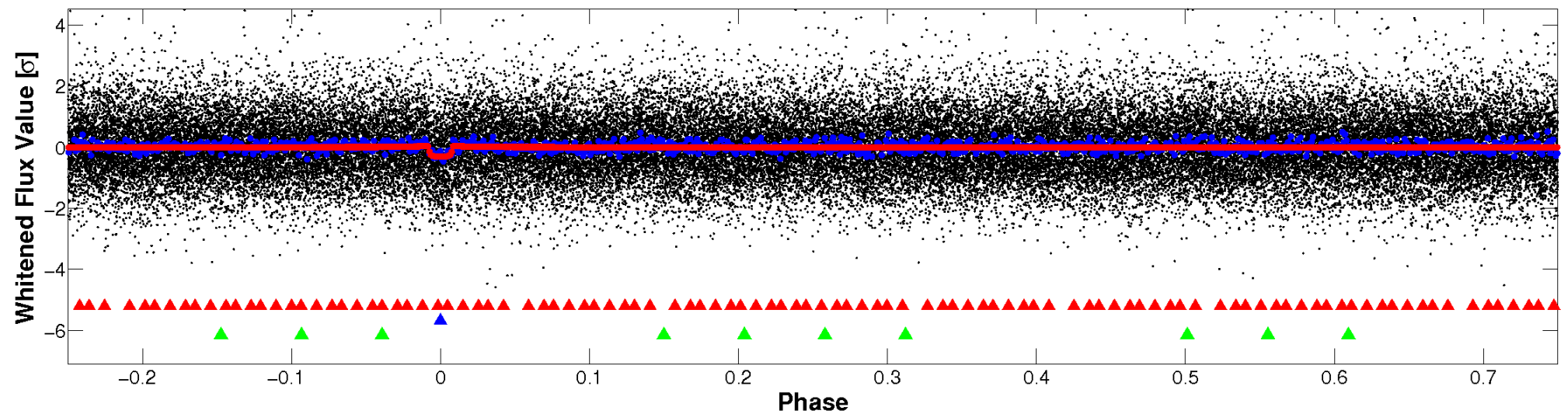


Non-Whitened Vs. Whitened Light Curve

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

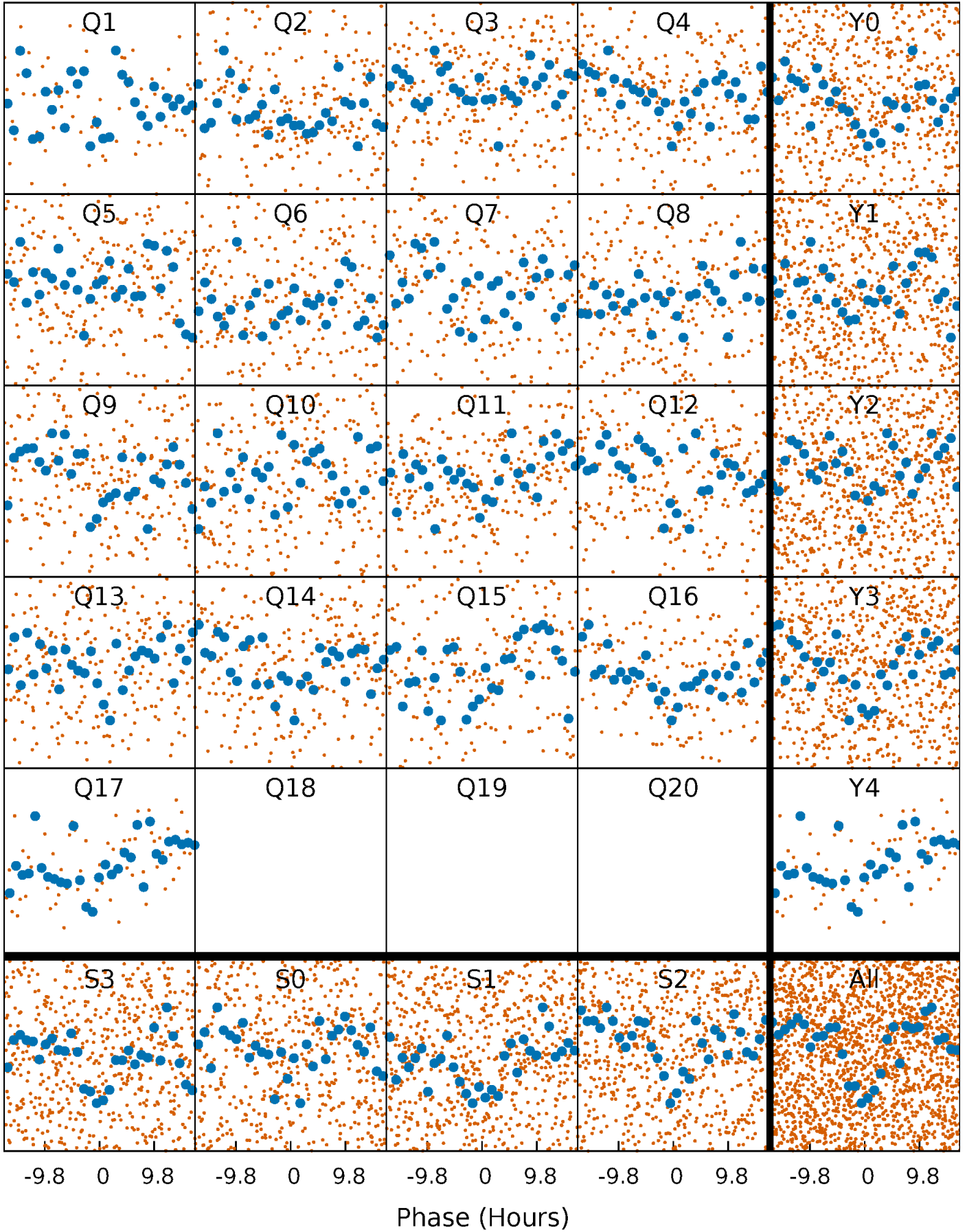


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



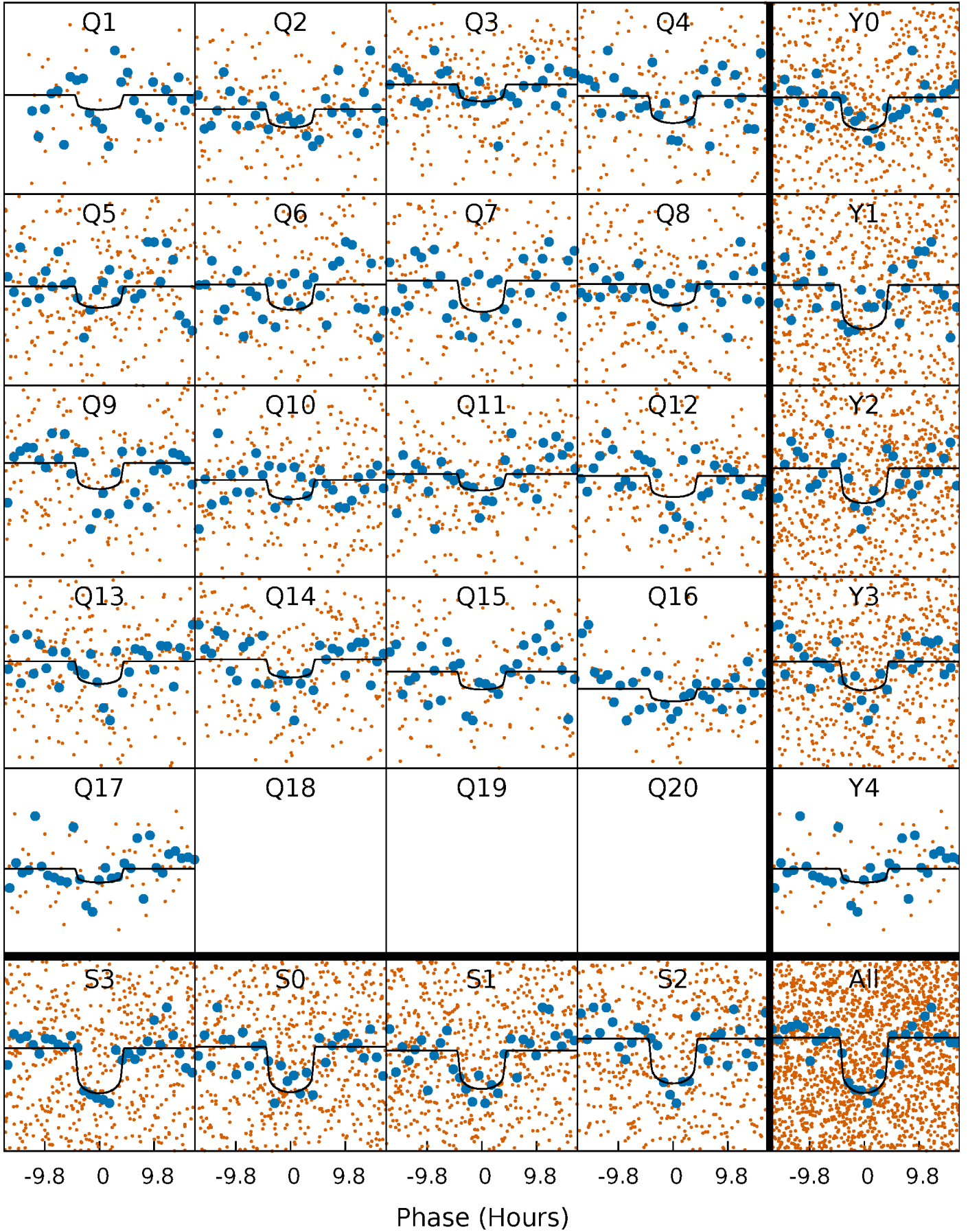
PDC Quarter-Phased Transit Curves

TCE 006716545-02 P= 21.942559 Days $T_0=143.890287$ (BKJD)



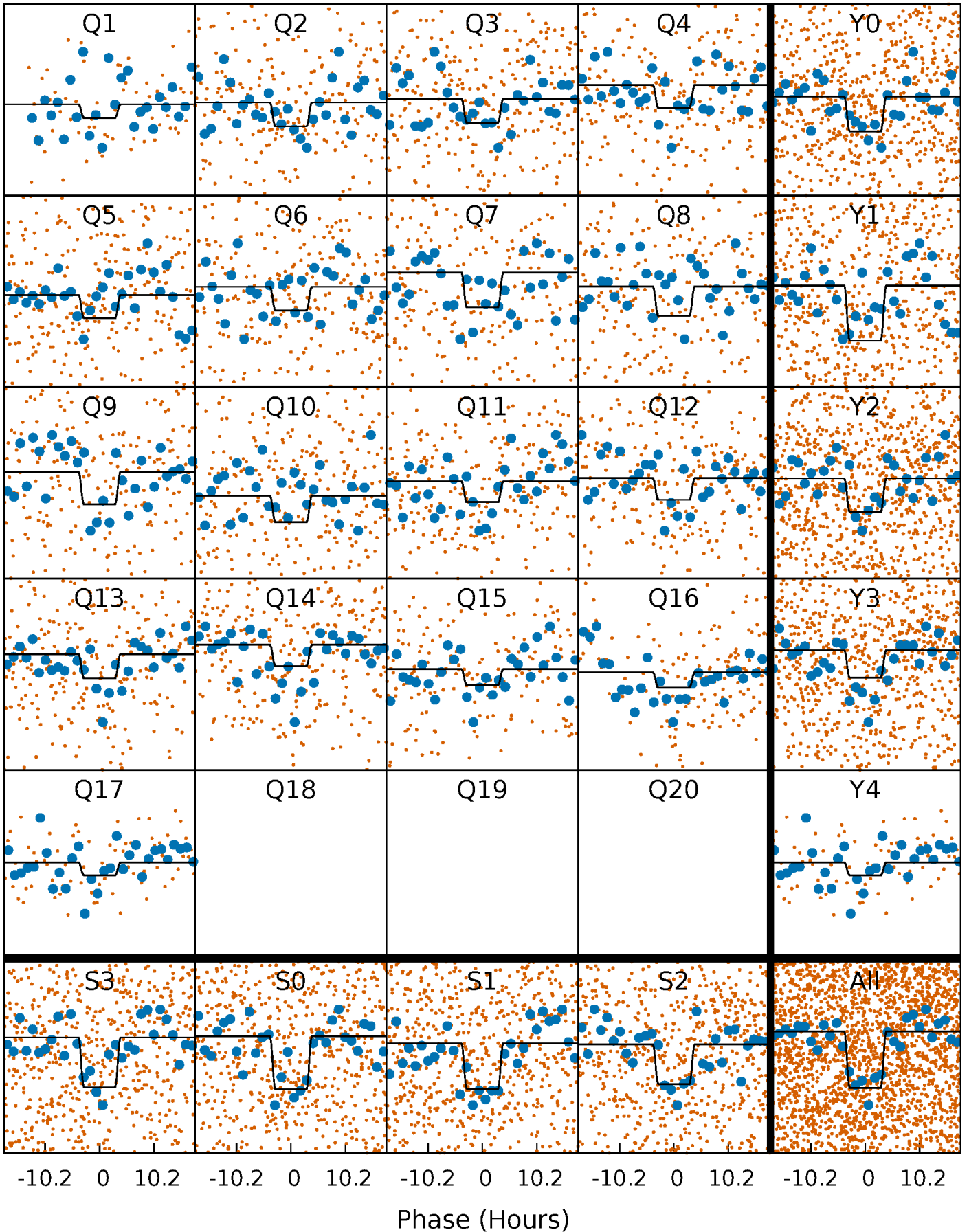
DV Quarter-Phased Transit Curves

TCE 006716545-02 P= 21.942559 Days $T_0=143.890287$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

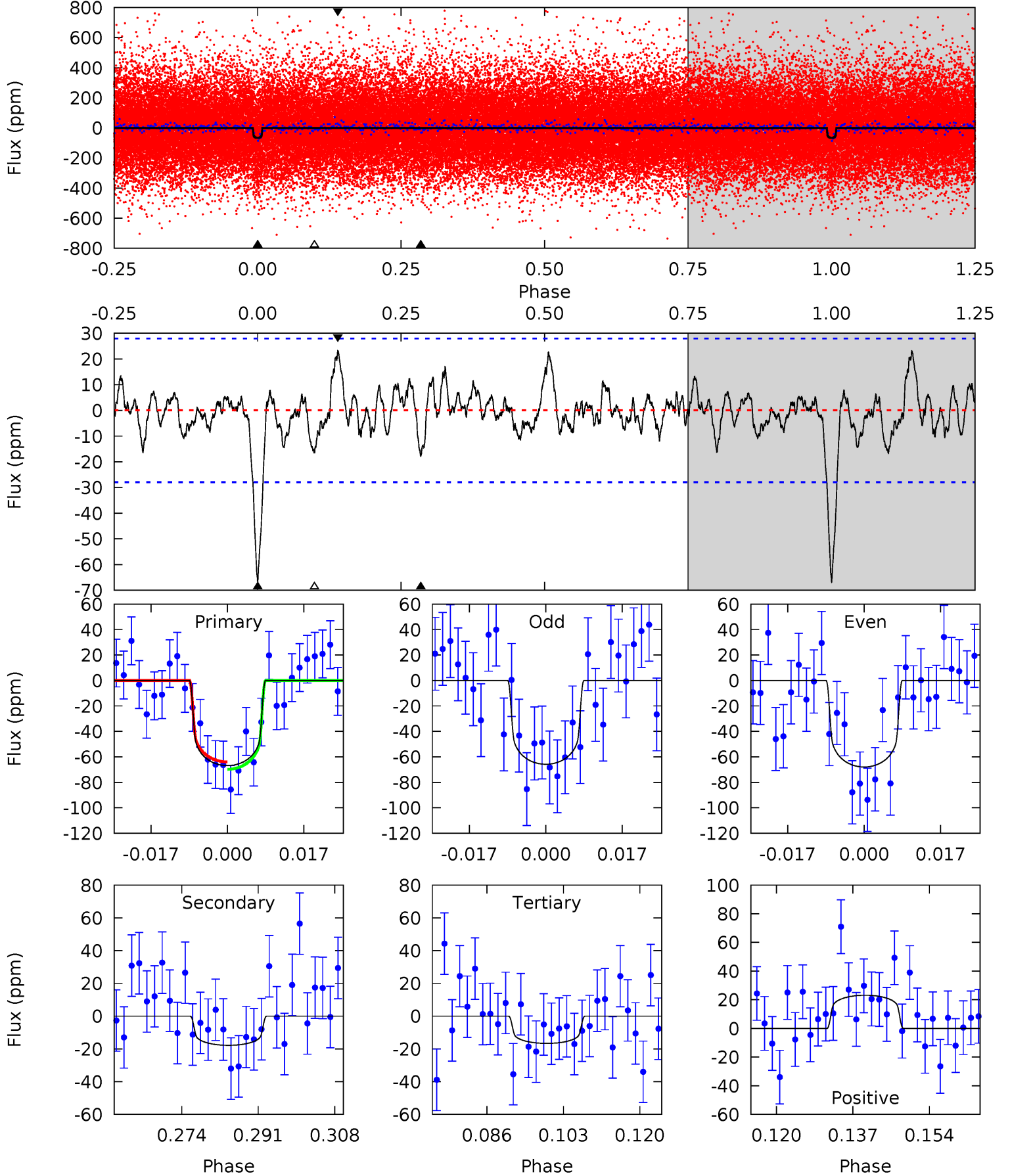
TCE 006716545-02 P= 21.941892 Days $T_0=143.914407$ (BKJD)



DV Model-Shift Uniqueness Test

006716545-02, P = 21.942559 Days, E = 121.947728 Days

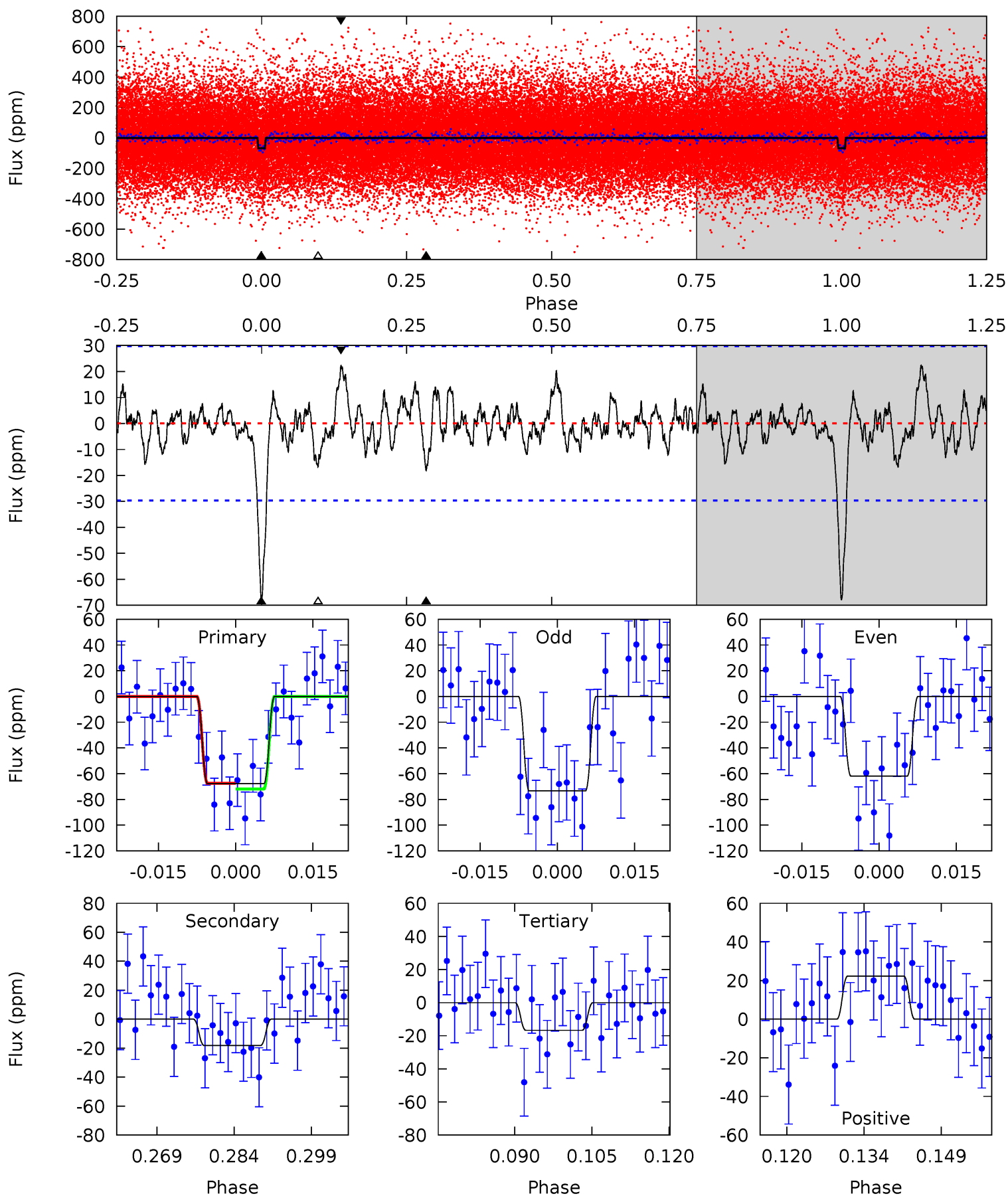
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.8	3.14	2.93	4.08	4.92	2.38	1.17	8.85	7.70	0.21	-0.94	0.19	1.08	0.26	0.51



Alt Model-Shift Uniqueness Test

006716545-02, P = 21.941892 Days, E = 121.972515 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.3	3.04	2.79	3.72	4.95	2.43	1.07	8.51	7.59	0.24	-0.68	0.96	0.95	0.25	0.37



Stellar Parameters For KIC 006716545

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6052^{+82}_{-82}	$4.183^{+0.154}_{-0.112}$	$0.080^{+0.150}_{-0.150}$	$1.424^{+0.263}_{-0.237}$	$1.128^{+0.111}_{-0.083}$	$0.551^{+0.405}_{-0.201}$
	+1%/-1%	+4%/-3%	+188%/-188%	+18%/-17%	+10%/-7%	+74%/-37%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 006716545-02 / KOI 2906.03

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-18 ± 6	$1.36^{+0.49}_{-0.46}$	1108^{+52}_{-55}	4357^{+813}_{-486}	130^{+186}_{-64}
Alt.	-18 ± 6	$1.27^{+0.48}_{-0.43}$	1111^{+53}_{-56}	4485^{+902}_{-558}	152^{+223}_{-80}

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)

A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

DV Centroid Data

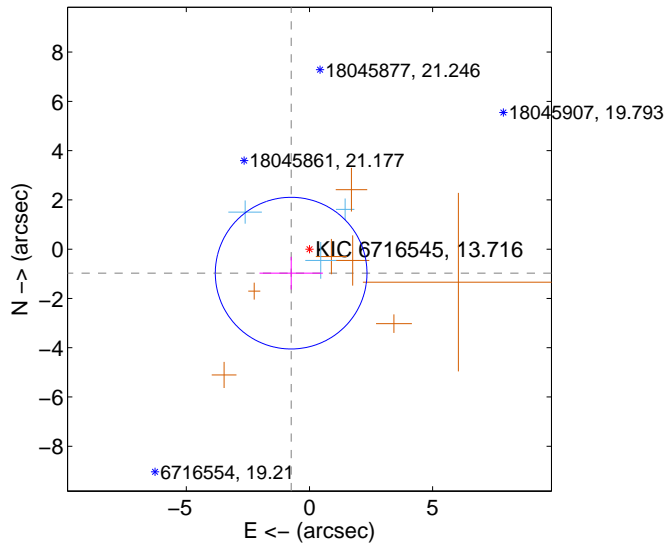
Supplemental centroid analysis for 006716545-02. Kepler magnitude: 13.72. Transit SNR 8.38

There are 3 quarters with good PRF difference image offsets

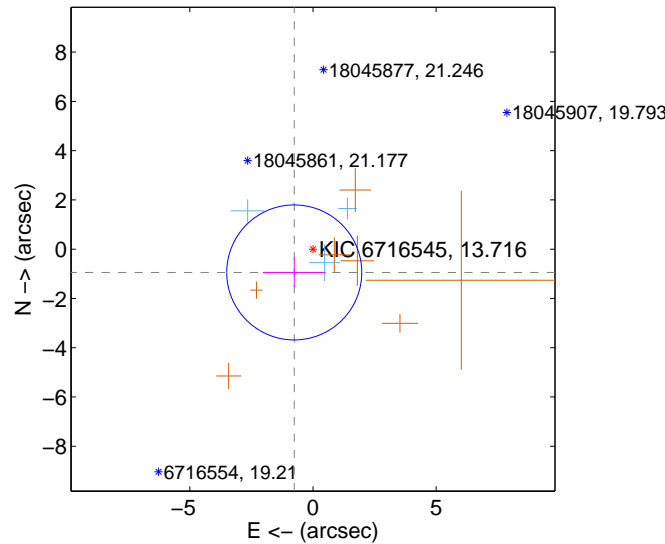
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.225 ± 1.026	1.19	0.744 ± 1.287	-0.973 ± 0.664
PRF-fit source offset from KIC position	1.212 ± 0.913	1.33	0.760 ± 1.275	-0.944 ± 0.599
photometric centroid source offset	3.68 ± 1.50	2.45	-2.18 ± 1.62	2.96 ± 1.44

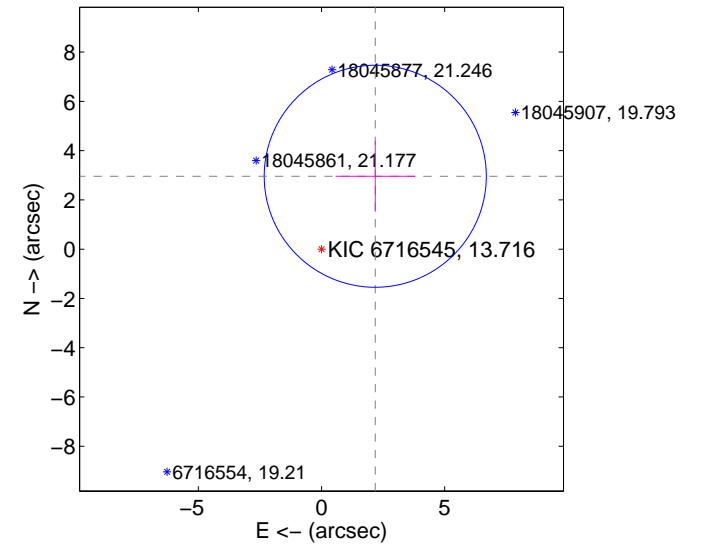
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

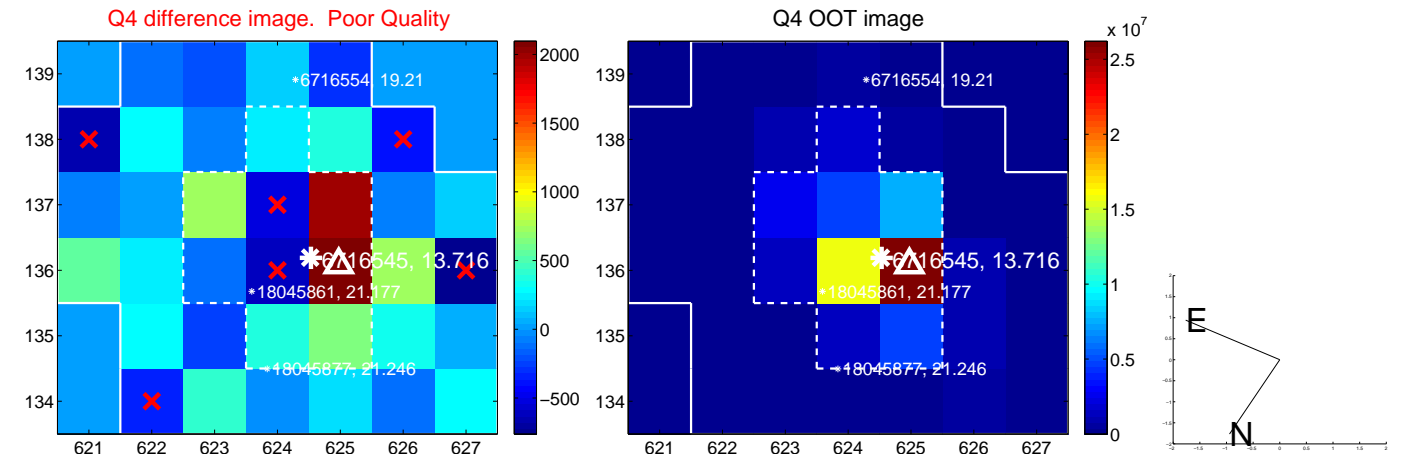
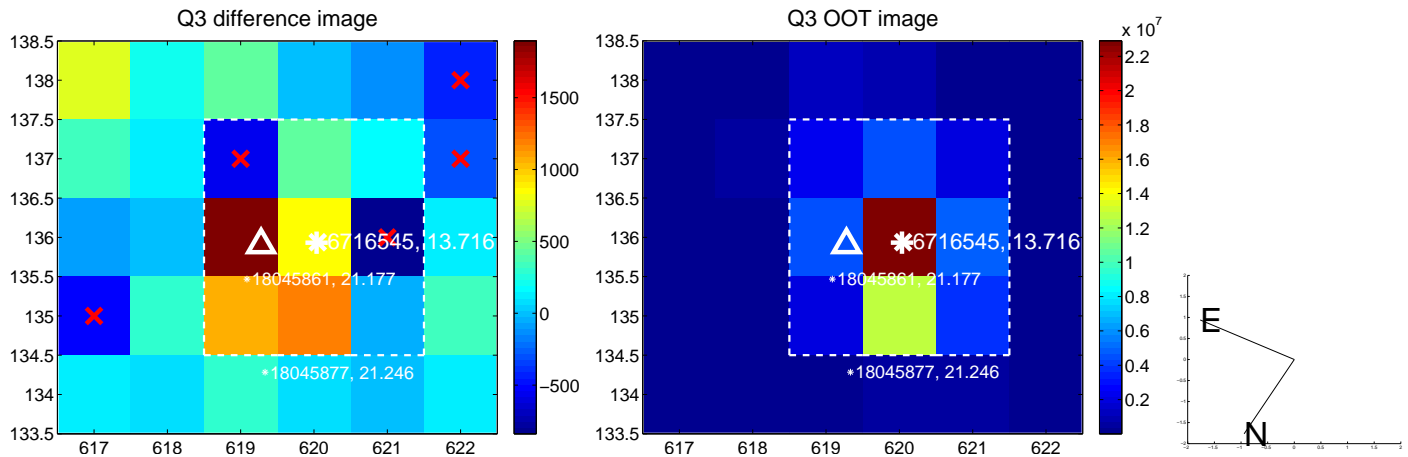
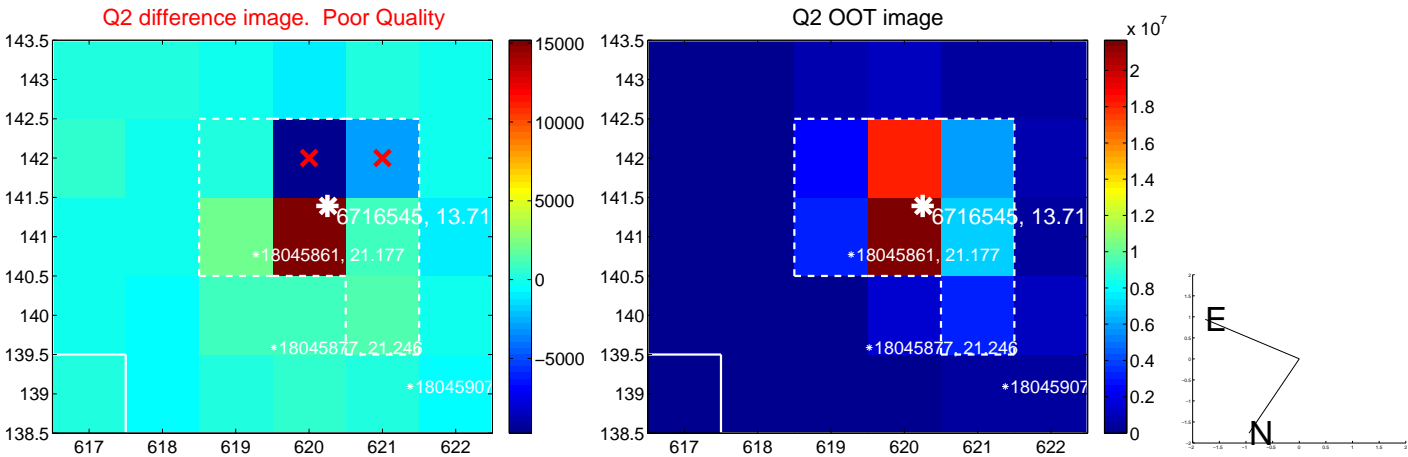
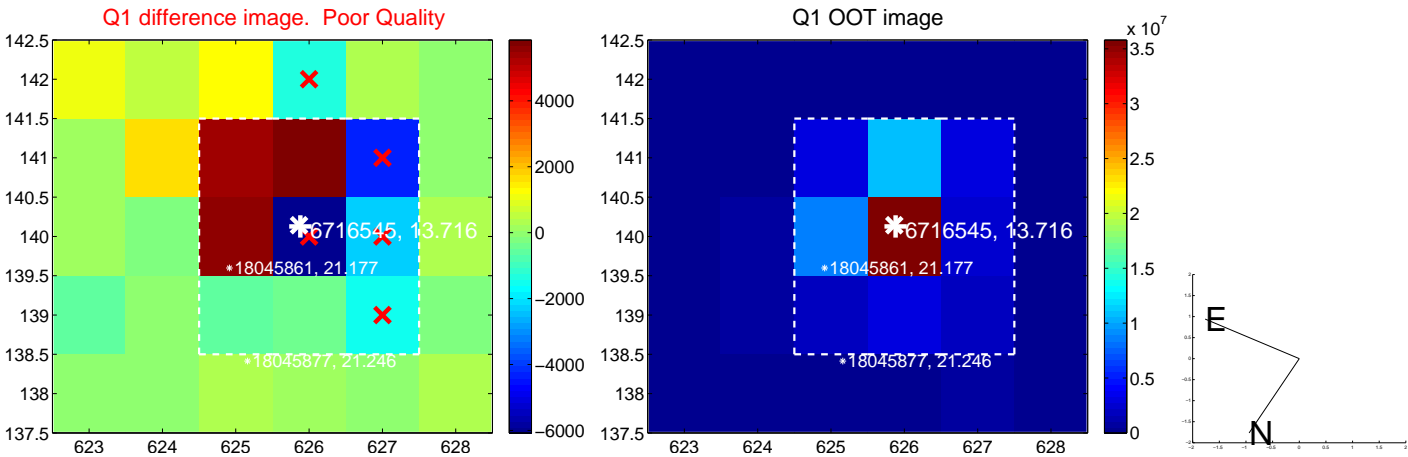


offset from photometric centroids

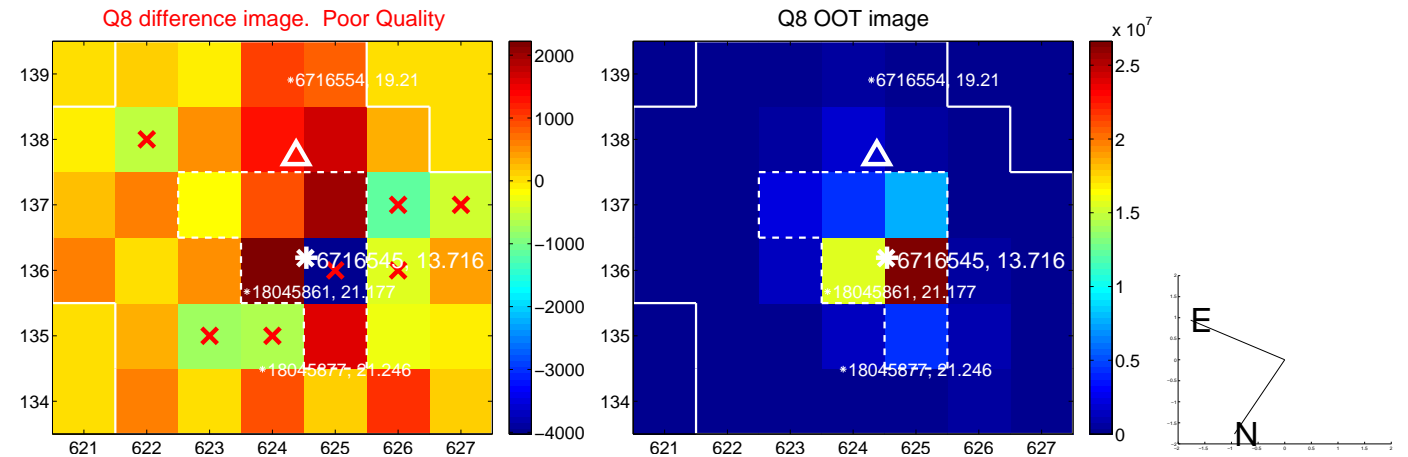
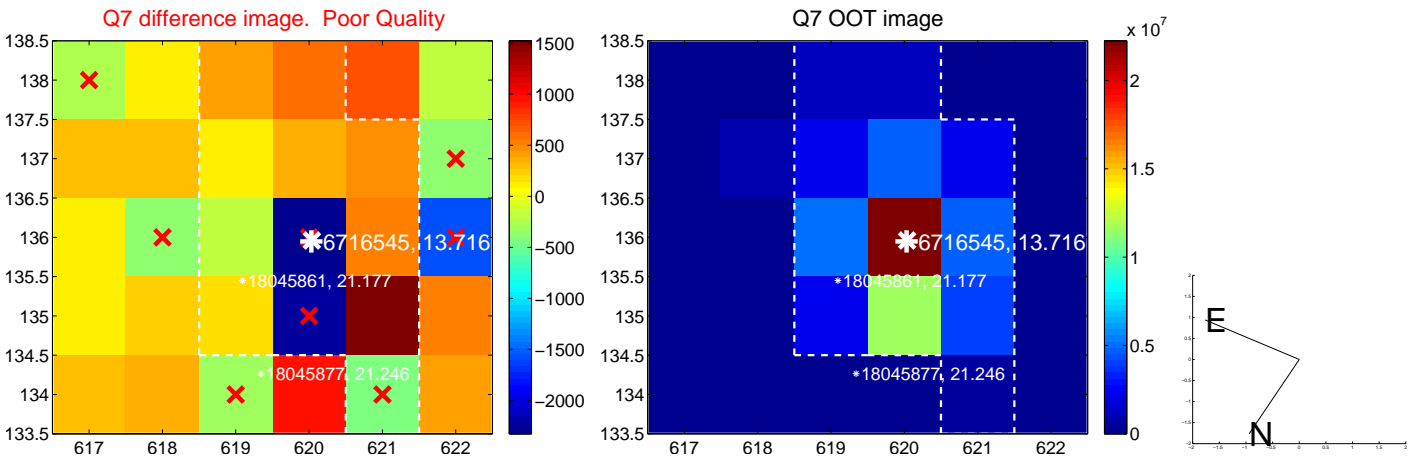
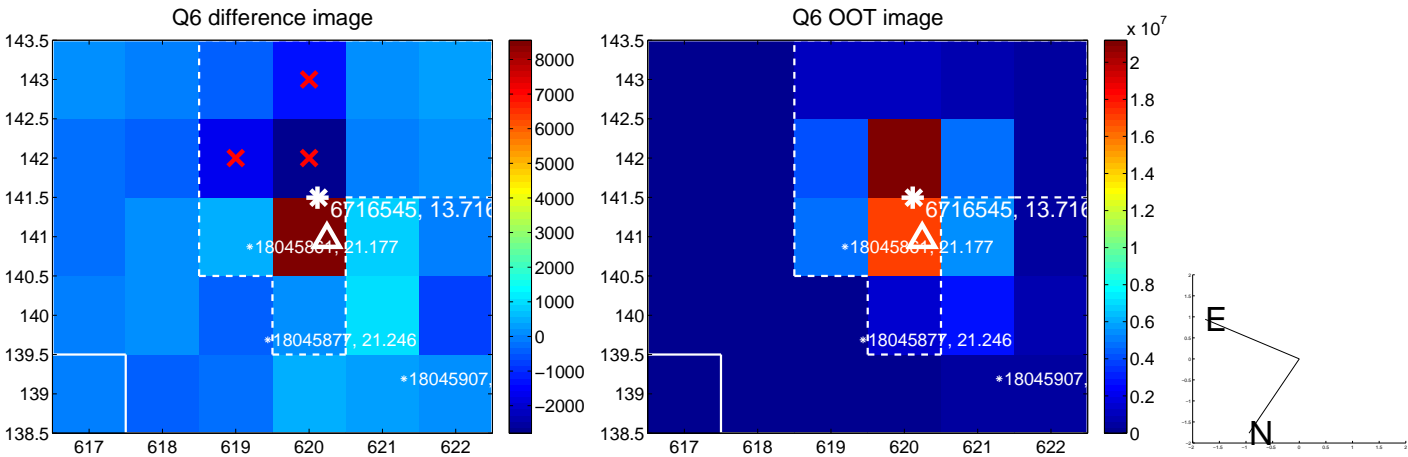
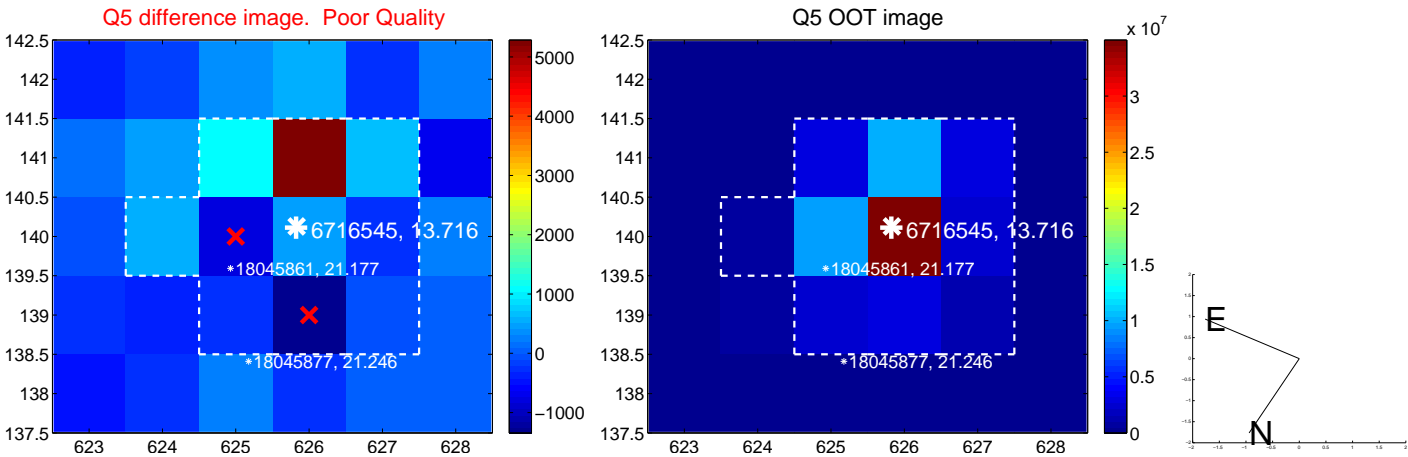


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

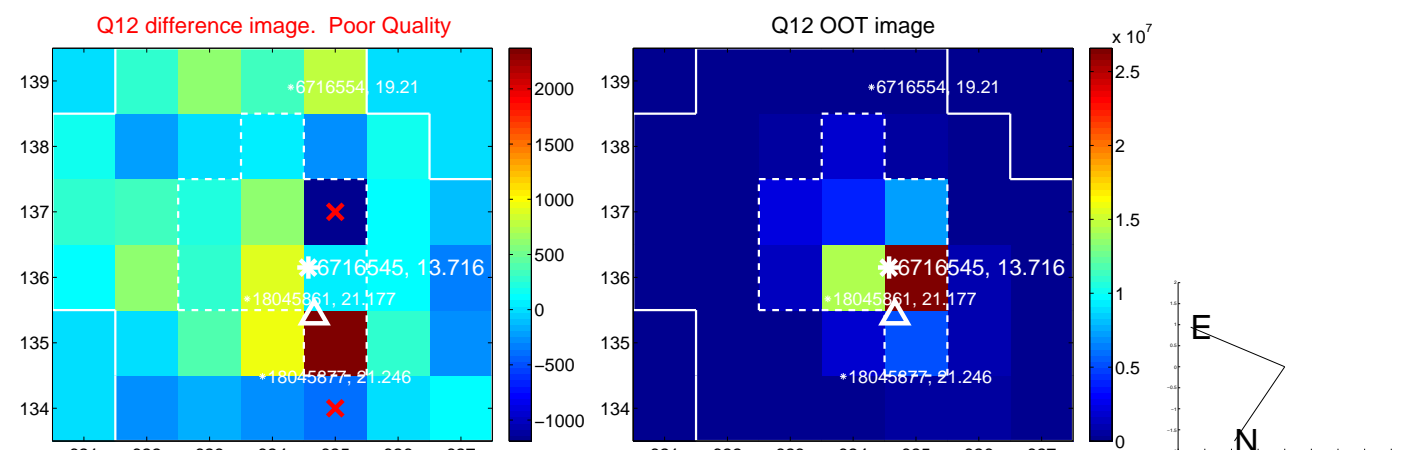
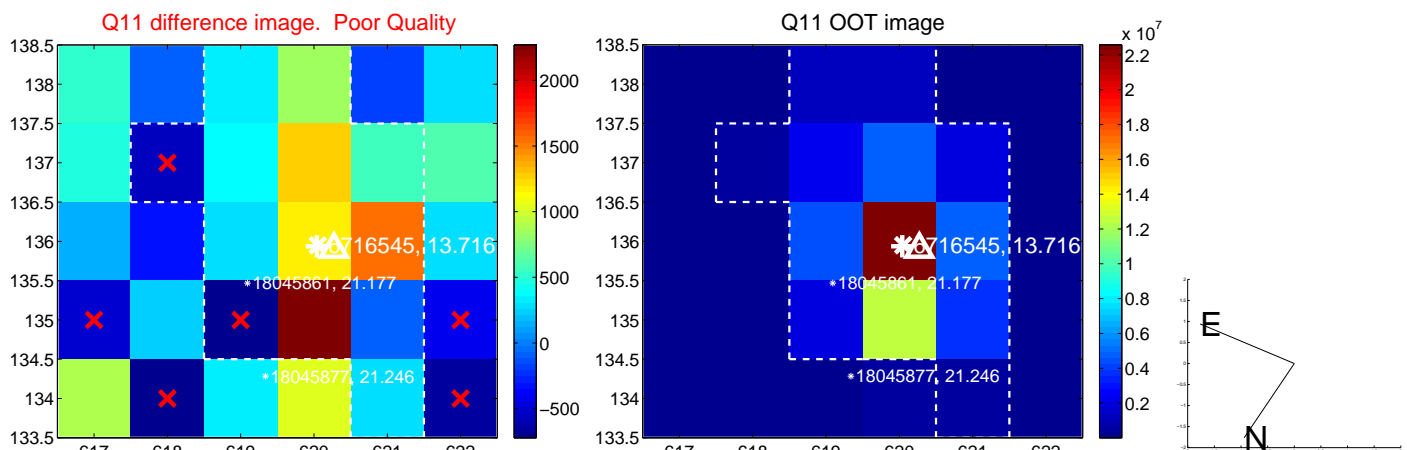
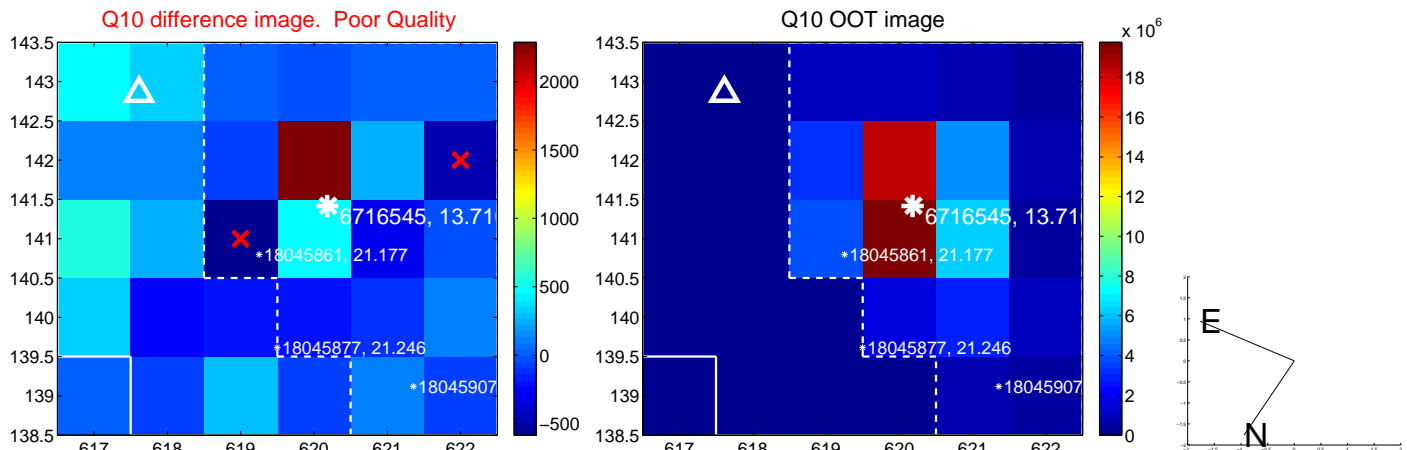
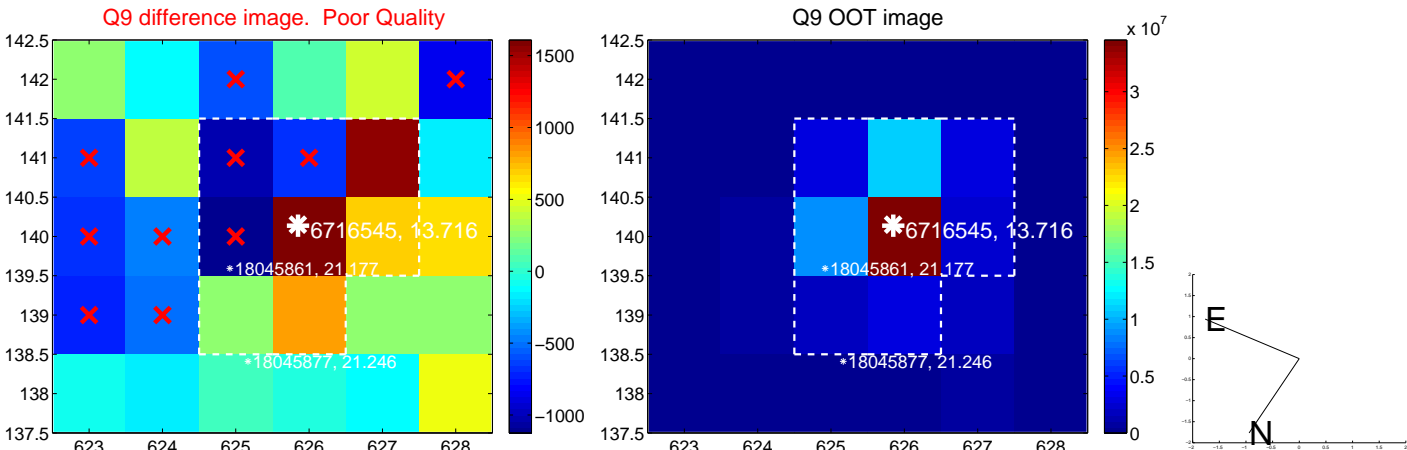
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



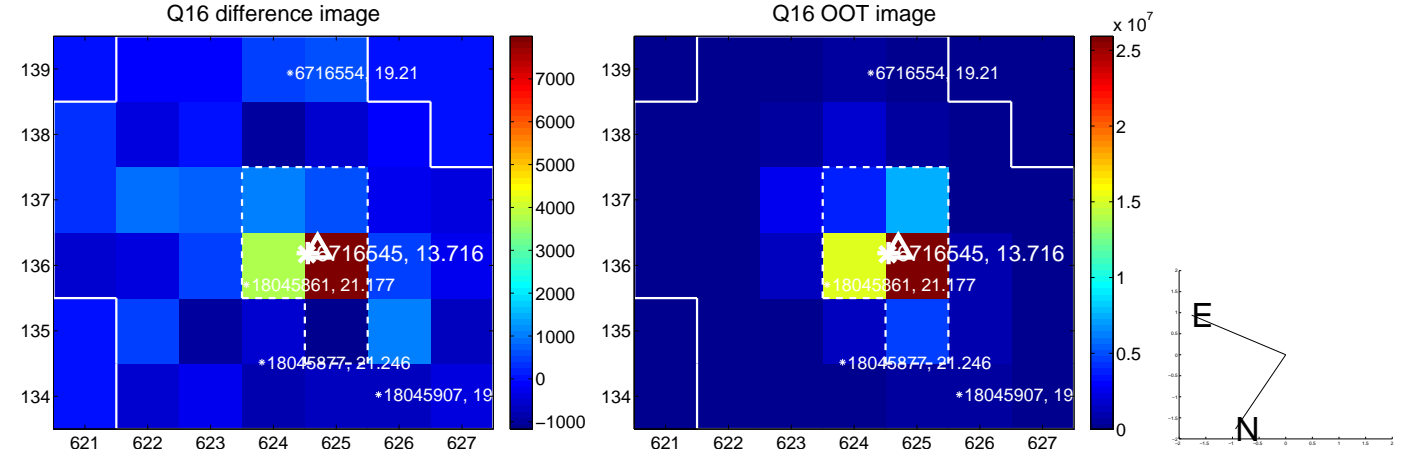
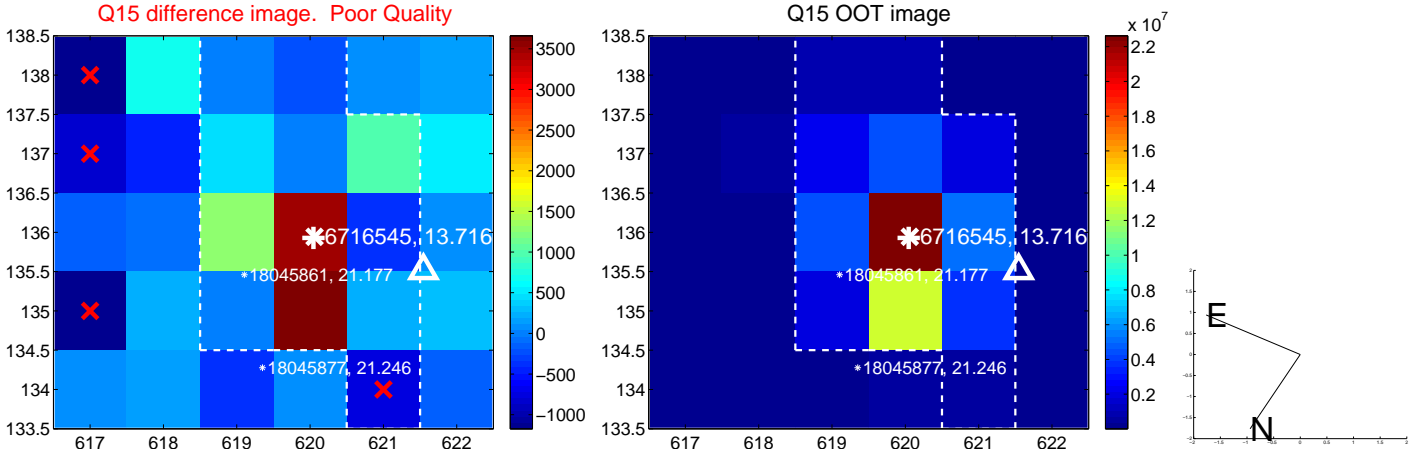
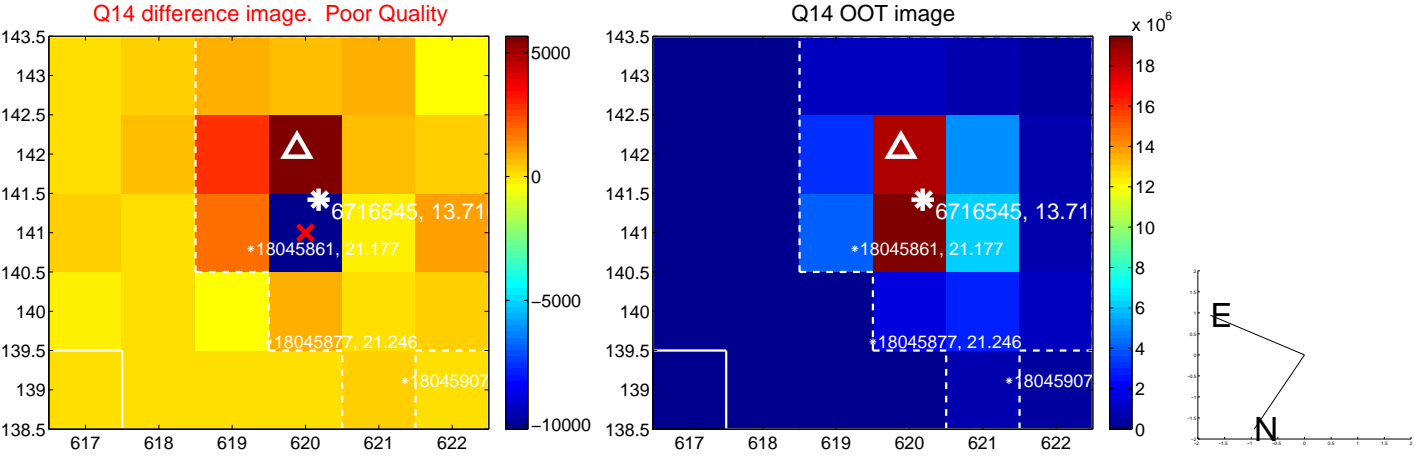
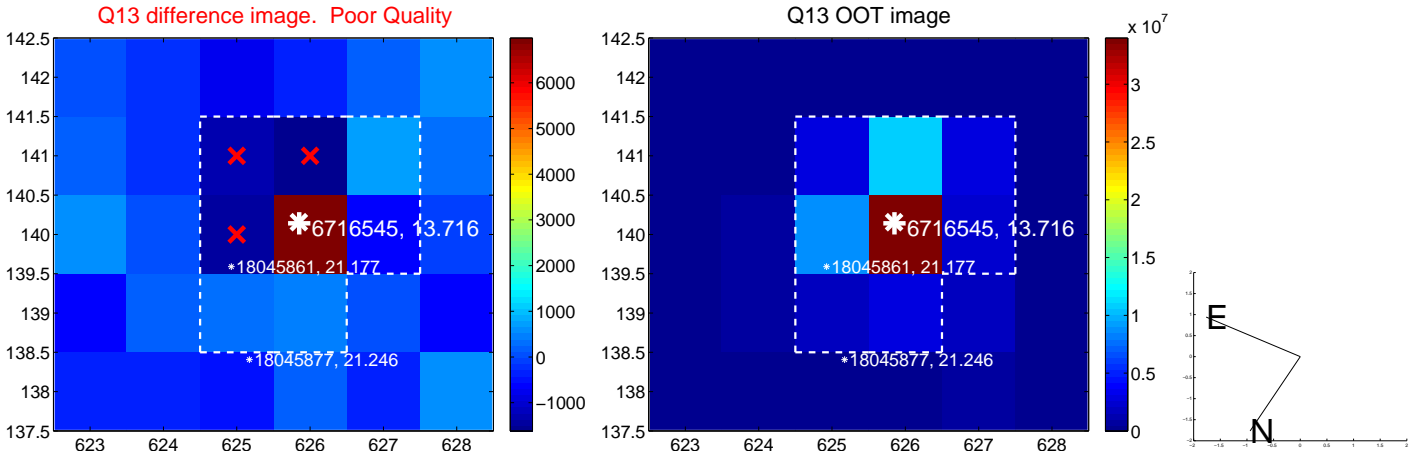
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



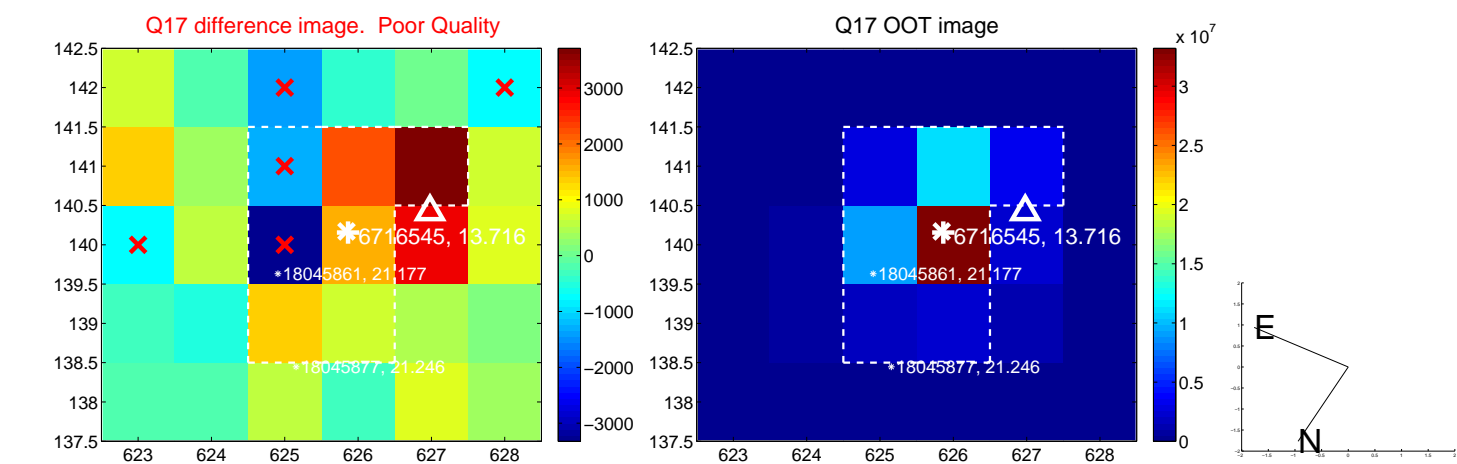
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



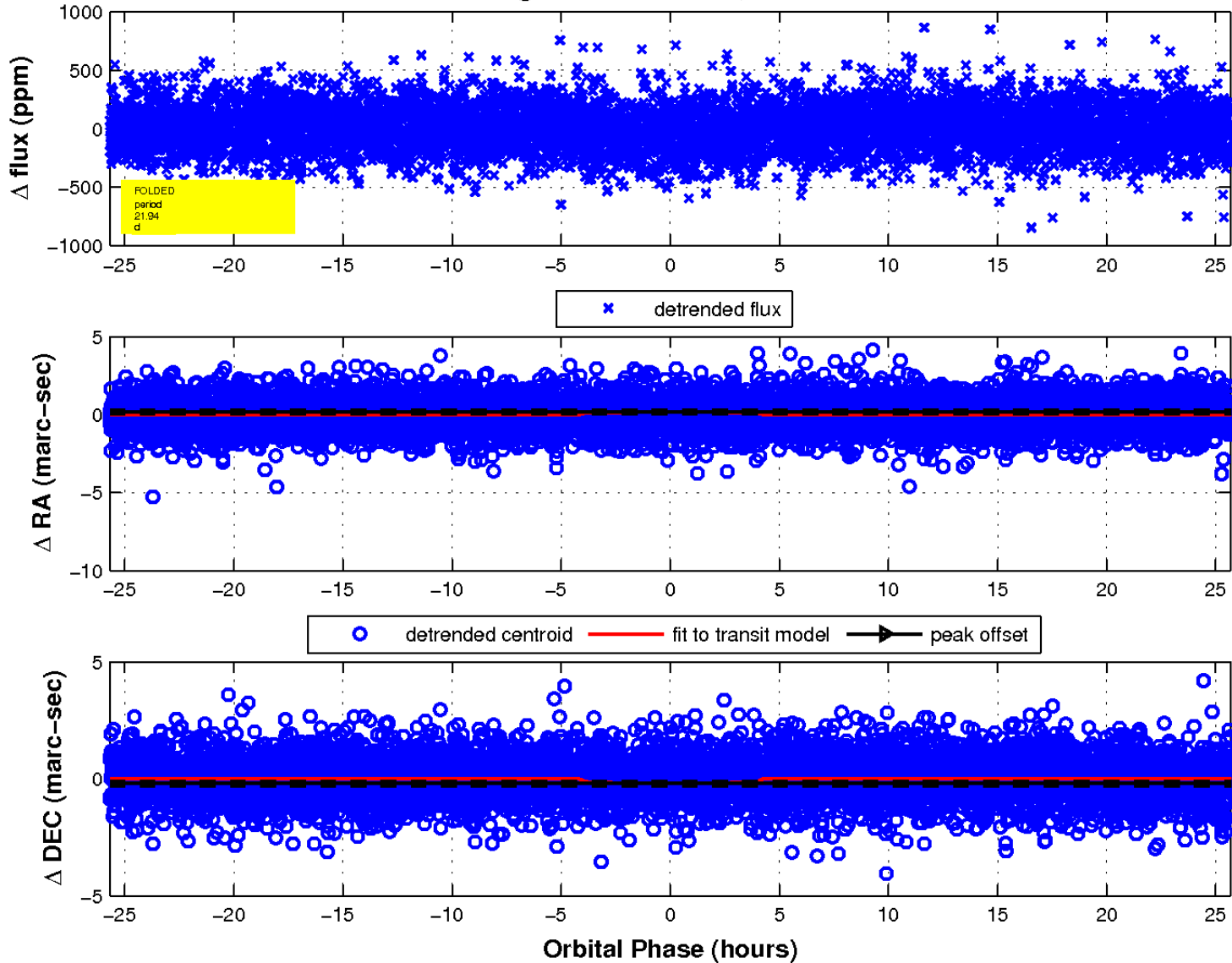
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

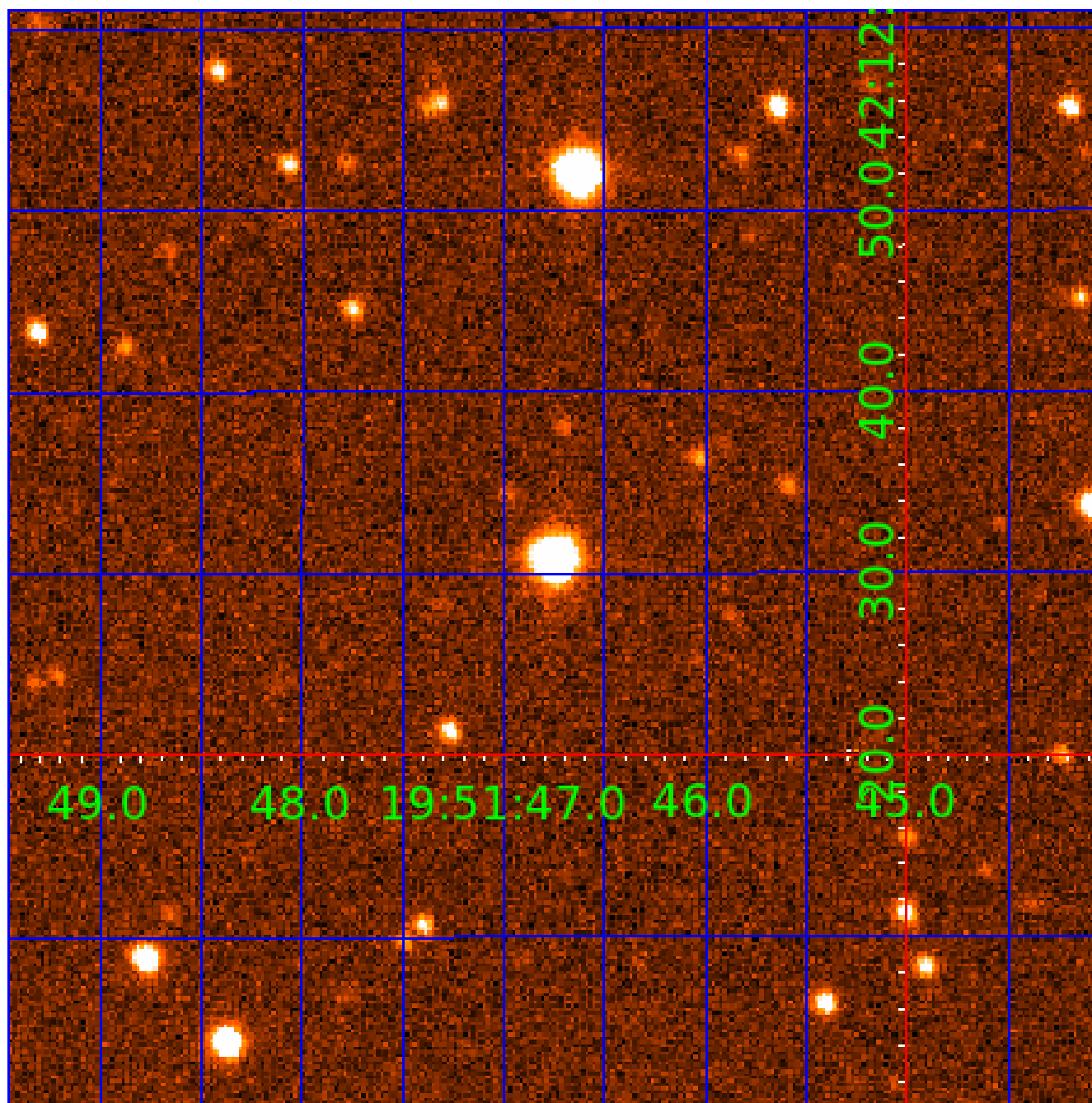


fluxWeightedCentroids, Planet 2 of 3



UKIRT Image

Declination



KIC 006716545

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})
006716545-01	OBS	2906.01	13.909232	142.889477	82.4	7.231	12.2	12.6	1.42	6052	1.62	175.56
006716545-02	OBS	2906.03	21.942559	143.890287	67.2	8.565	7.7	8.4	1.42	6052	1.37	95.60
006716545-03	OBS	2906.02	145.888130	194.625631	161.8	8.464	7.6	8.5	1.42	6052	2.02	7.65

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006716545-01	OBS	PC	0.90	0	0	0	0	NO_COMMENT
006716545-02	OBS	PC	0.87	0	0	0	0	NO_COMMENT
006716545-03	OBS	PC	0.80	0	0	0	0	NO_COMMENT

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

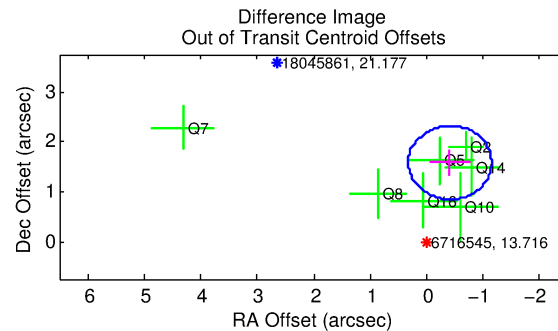
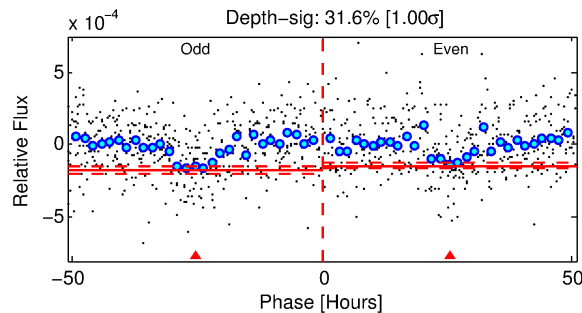
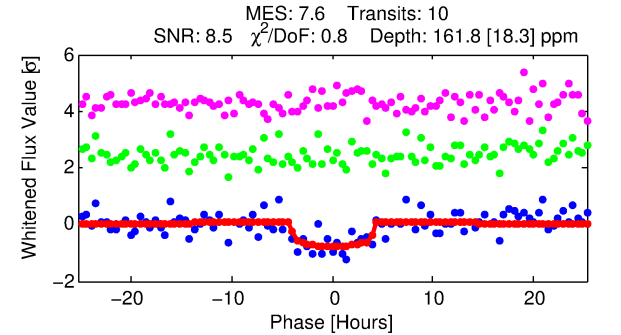
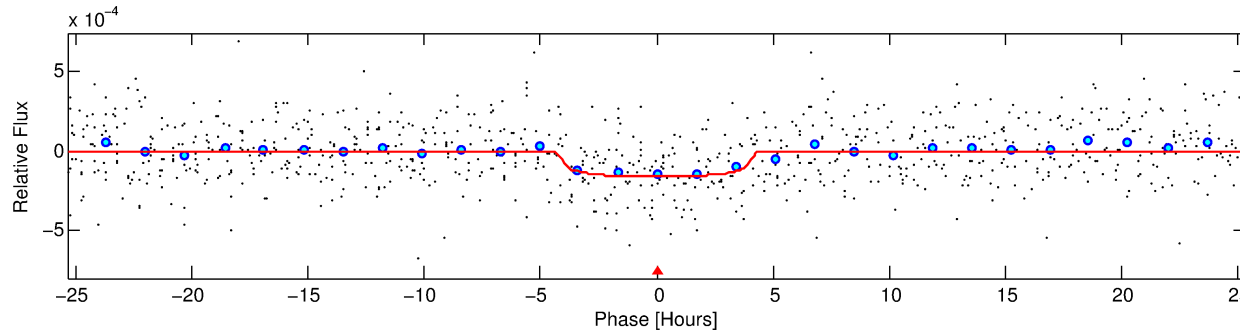
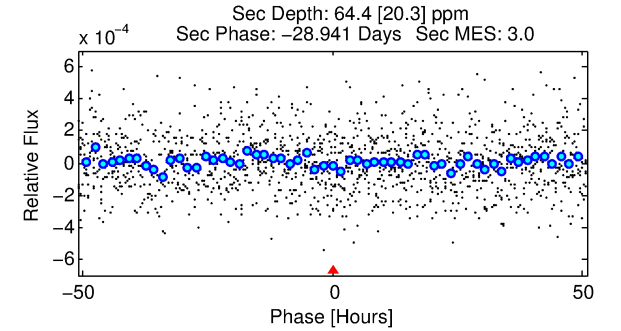
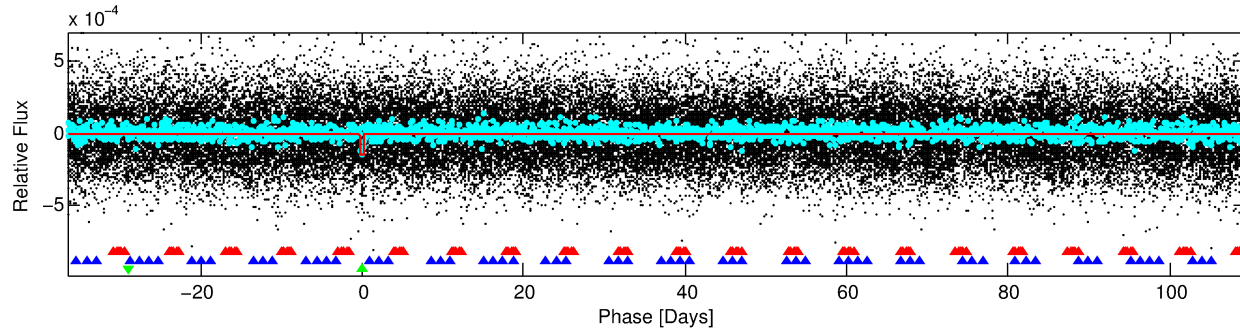
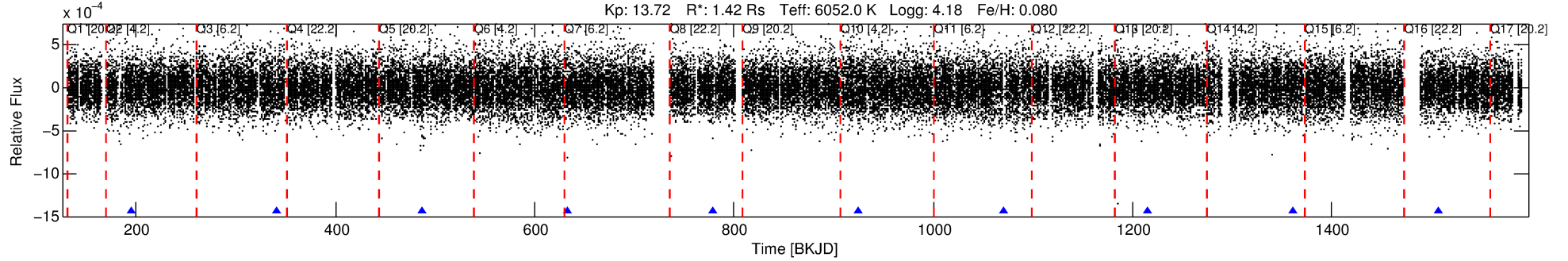
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006716545-03

No Significant Match Found

DV One-Page Summary

KIC: 6716545 Candidate: 3 of 3 Period: 145.888 d
KOI: K02906.02 Corr: 0.980



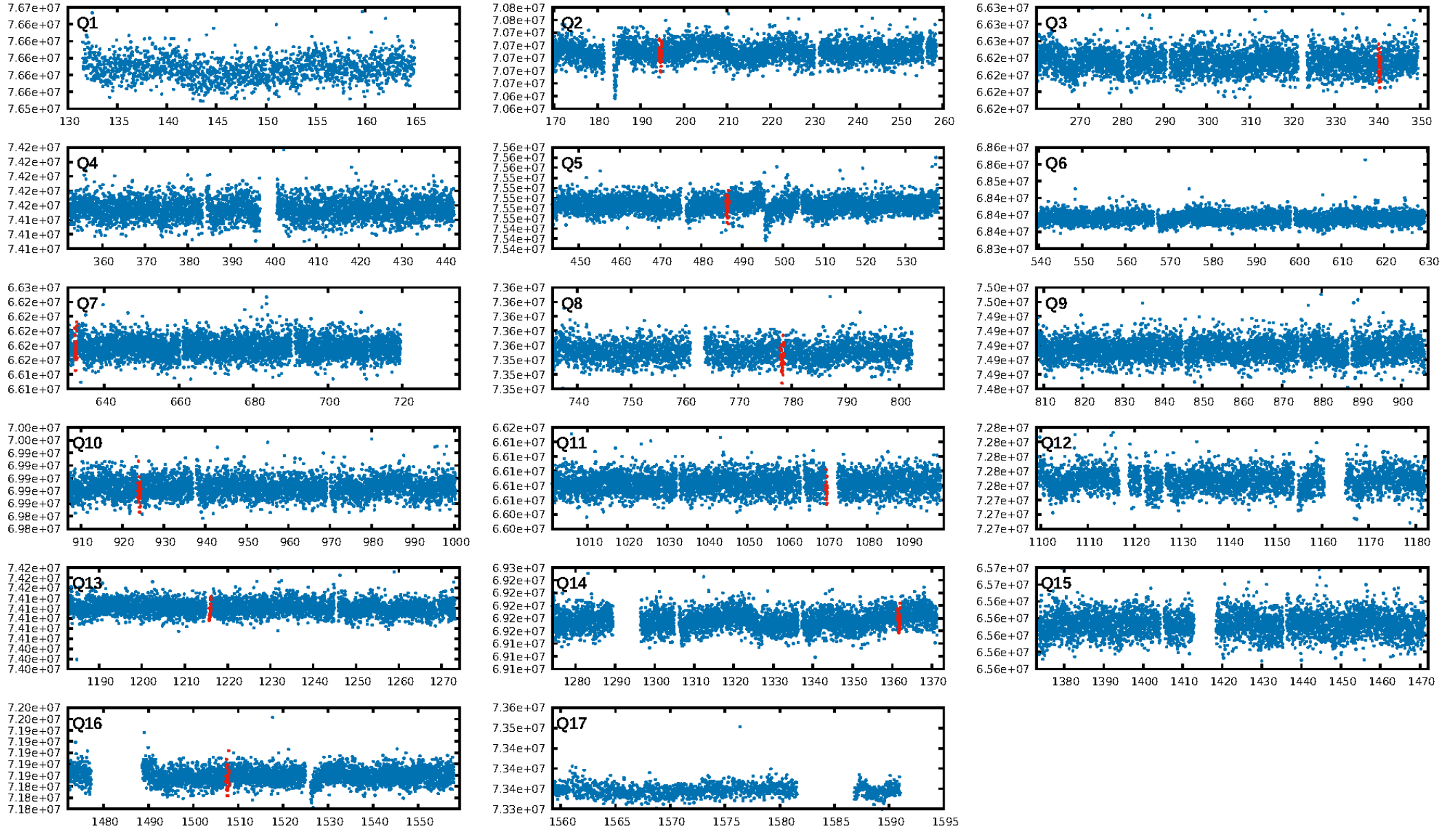
DV Fit Results:

Period = 145.88813 [0.00274] d
Epoch = 194.6256 [0.0145] BKJD
Rp/R* = 0.0130 [0.0085]
a/R* = 79.27 [253.08]
b = 0.81 [1.33]
Seff = 7.65 [2.08]
Teq = 424 [29] K
Rp = 2.02 [1.37] Re
a = 0.5646 [0.0964] AU
Ag = 2766.93 [3782.83] [0.73σ]
Teffp = 4755 [1595] K [2.71σ]

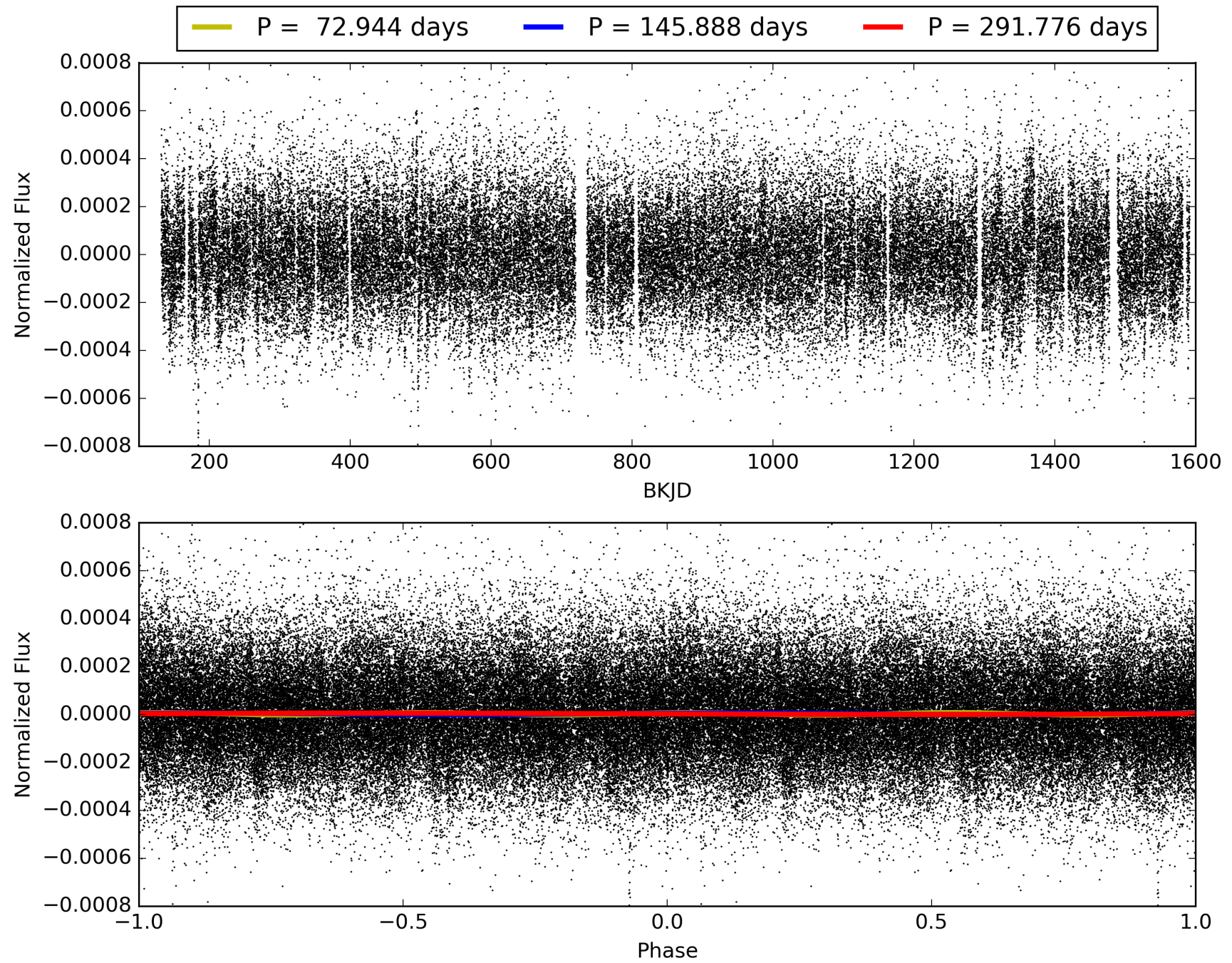
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [247.04σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 81.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 8.49e-14
RollingBand-fgt: 1.00 [10/10]
GhostDiagnostic-chr: -5.517
Centroid-sig: 18.2%
Centroid-so: 2.276 arcsec [1.34σ]
OotOffset-rm: 1.632 arcsec [6.64σ]
KicOffset-rm: 1.640 arcsec [6.38σ]
OotOffset-st: 3/1/2/1 [7]
KicOffset-st: 3/1/2/1 [7]
DiffImageQuality-fgm: 0.86 [6/7]
DiffImageOverlap-fno: 1.00 [8/8]

TCE 006716545-03, PDC Light Curves

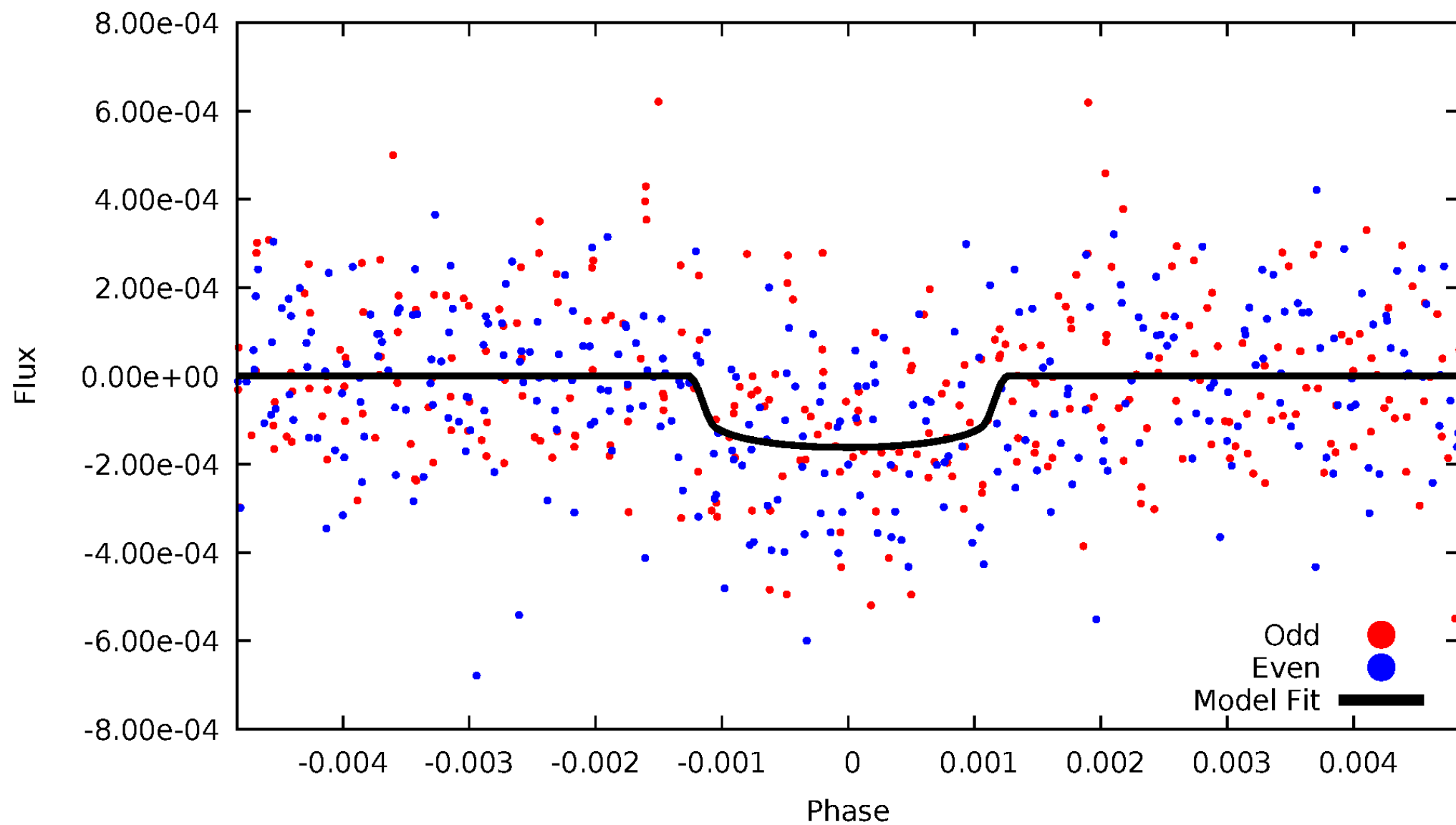


TCE 006716545-03



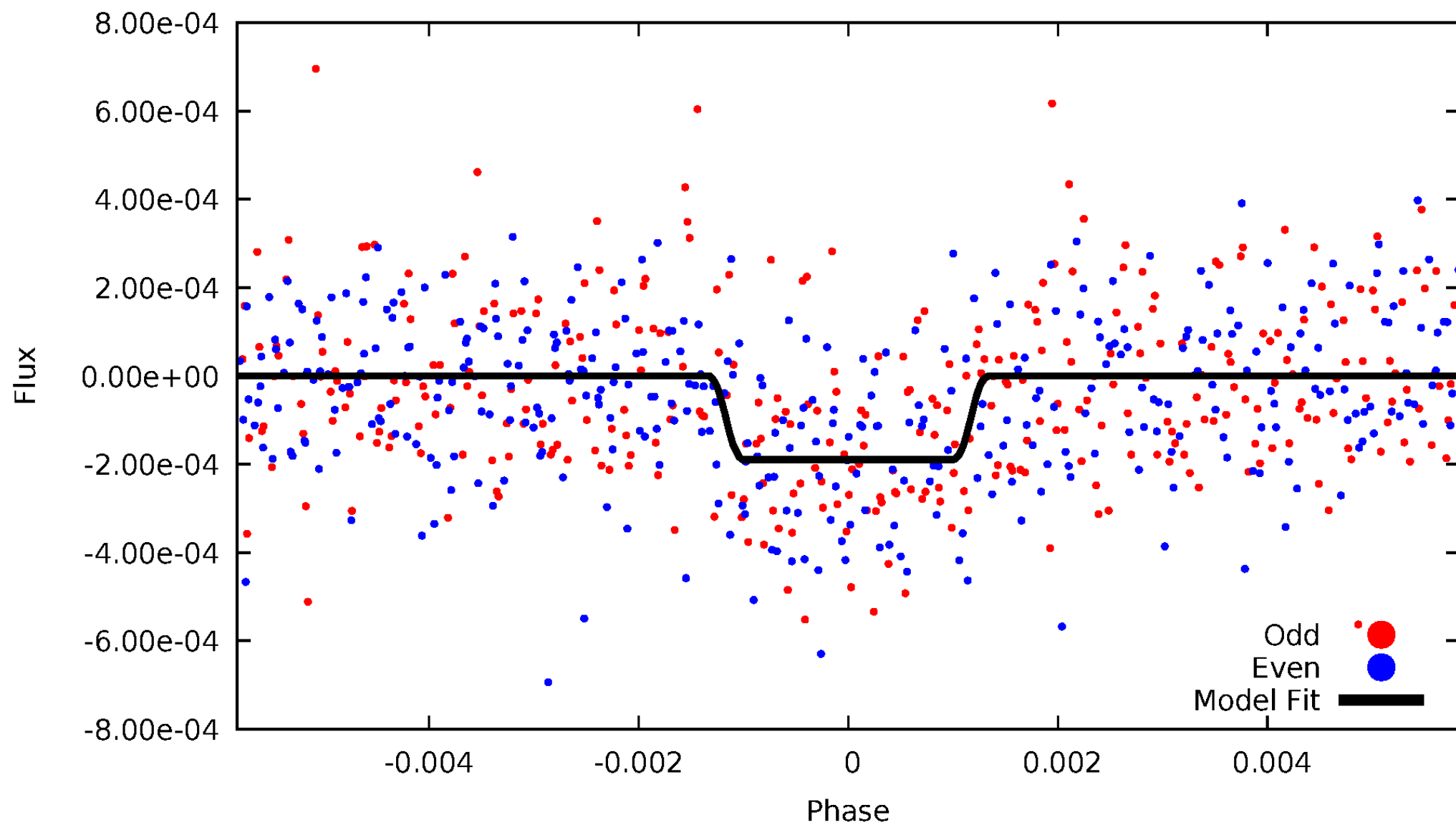
DV Odd/Even

TCE 006716545-03



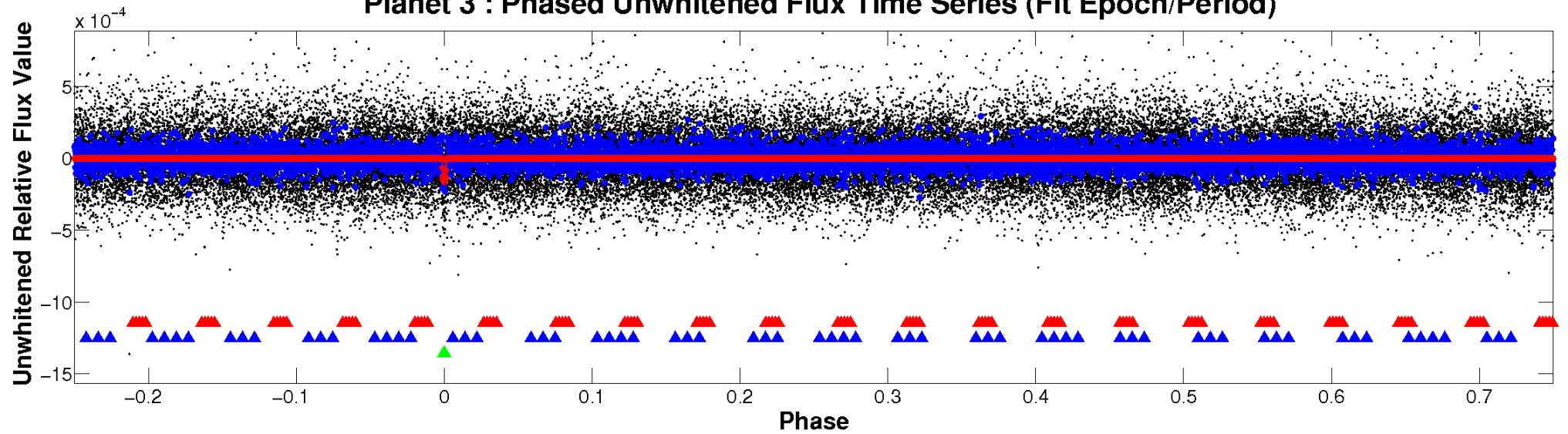
ALT Odd/Even

TCE 006716545-03

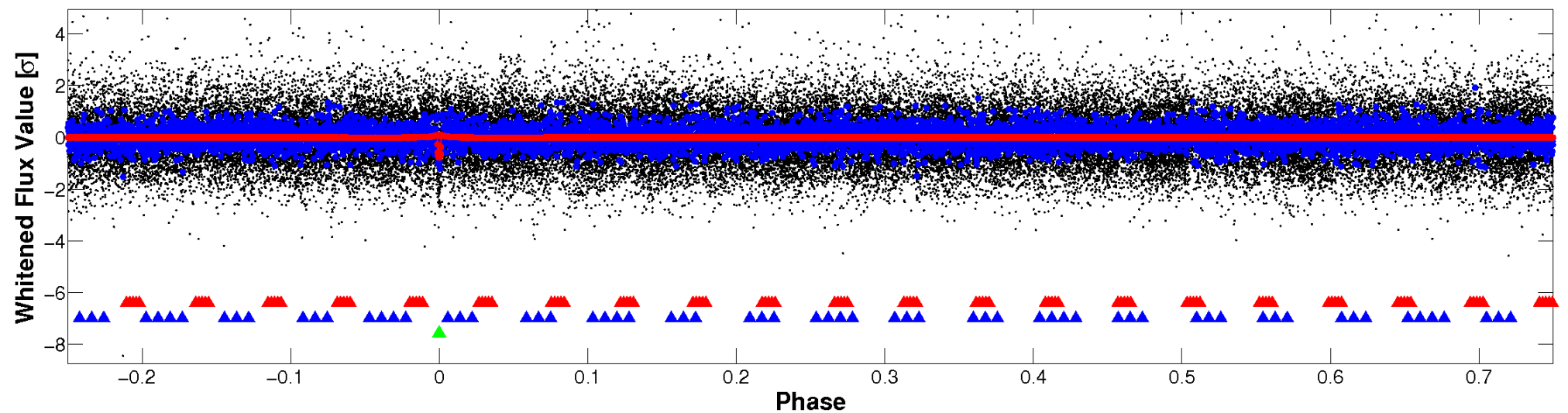


Non-Whitened Vs. Whitened Light Curve

Planet 3 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

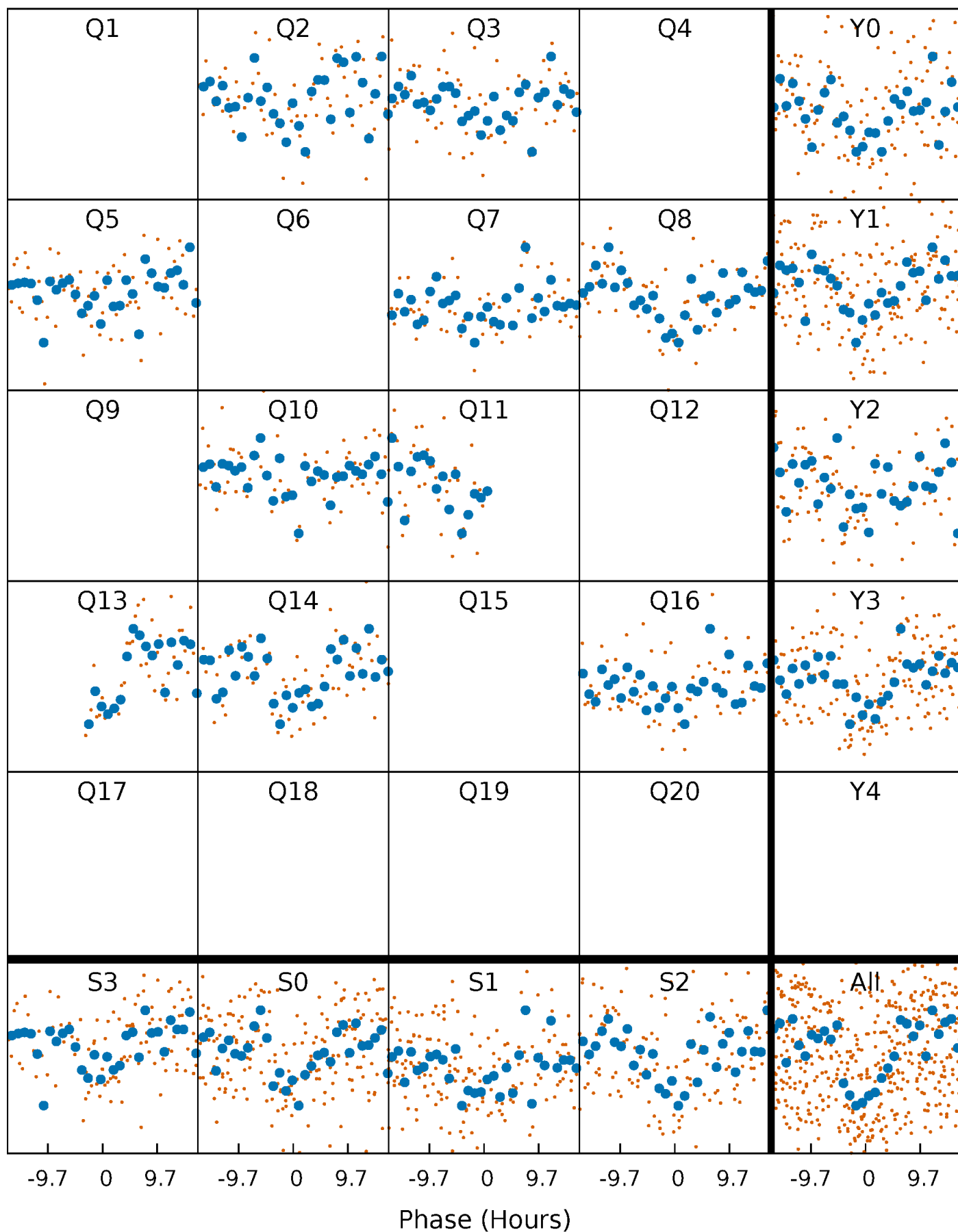


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



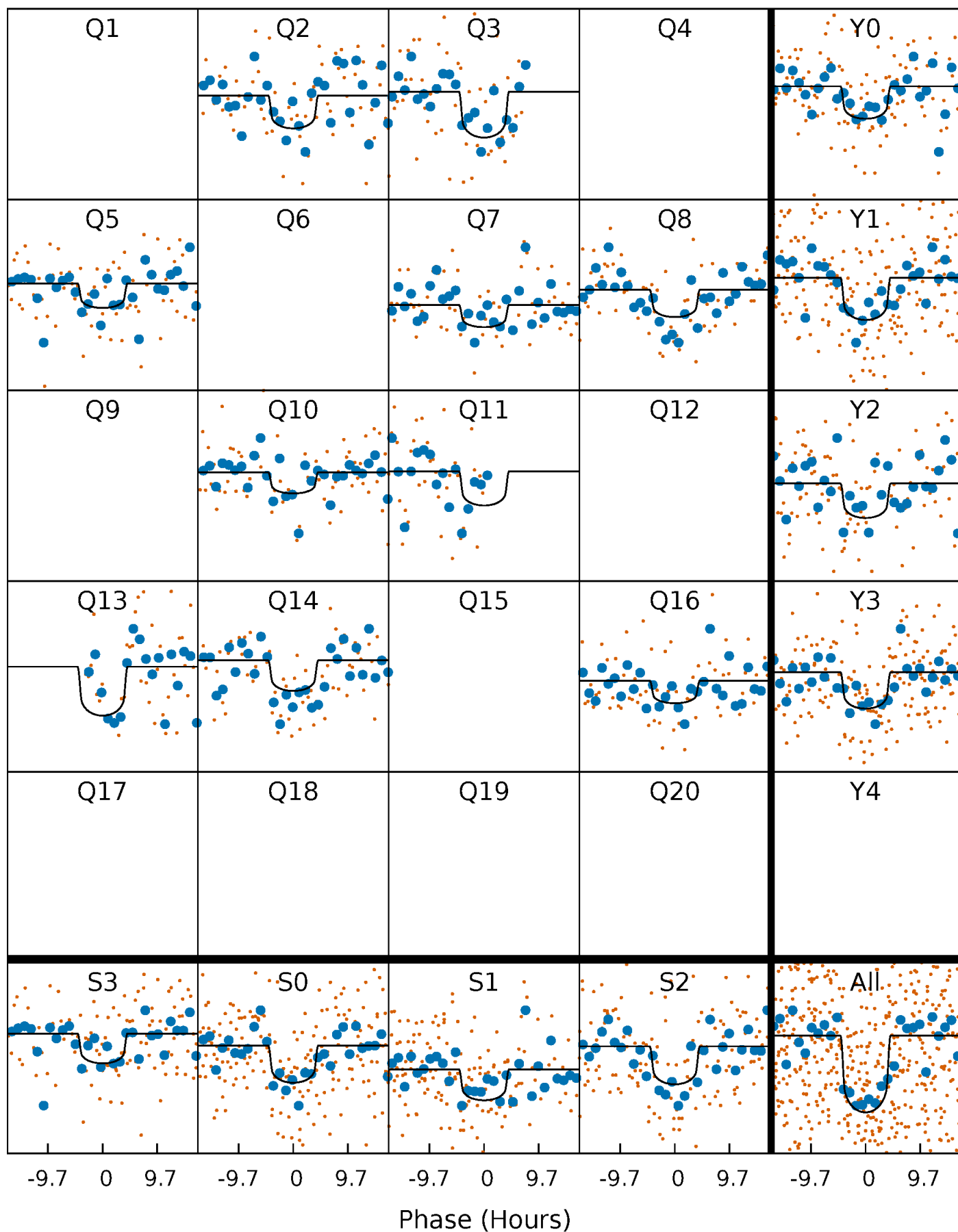
PDC Quarter-Phased Transit Curves

TCE 006716545-03 P=145.888130 Days $T_0=194.625631$ (BKJD)



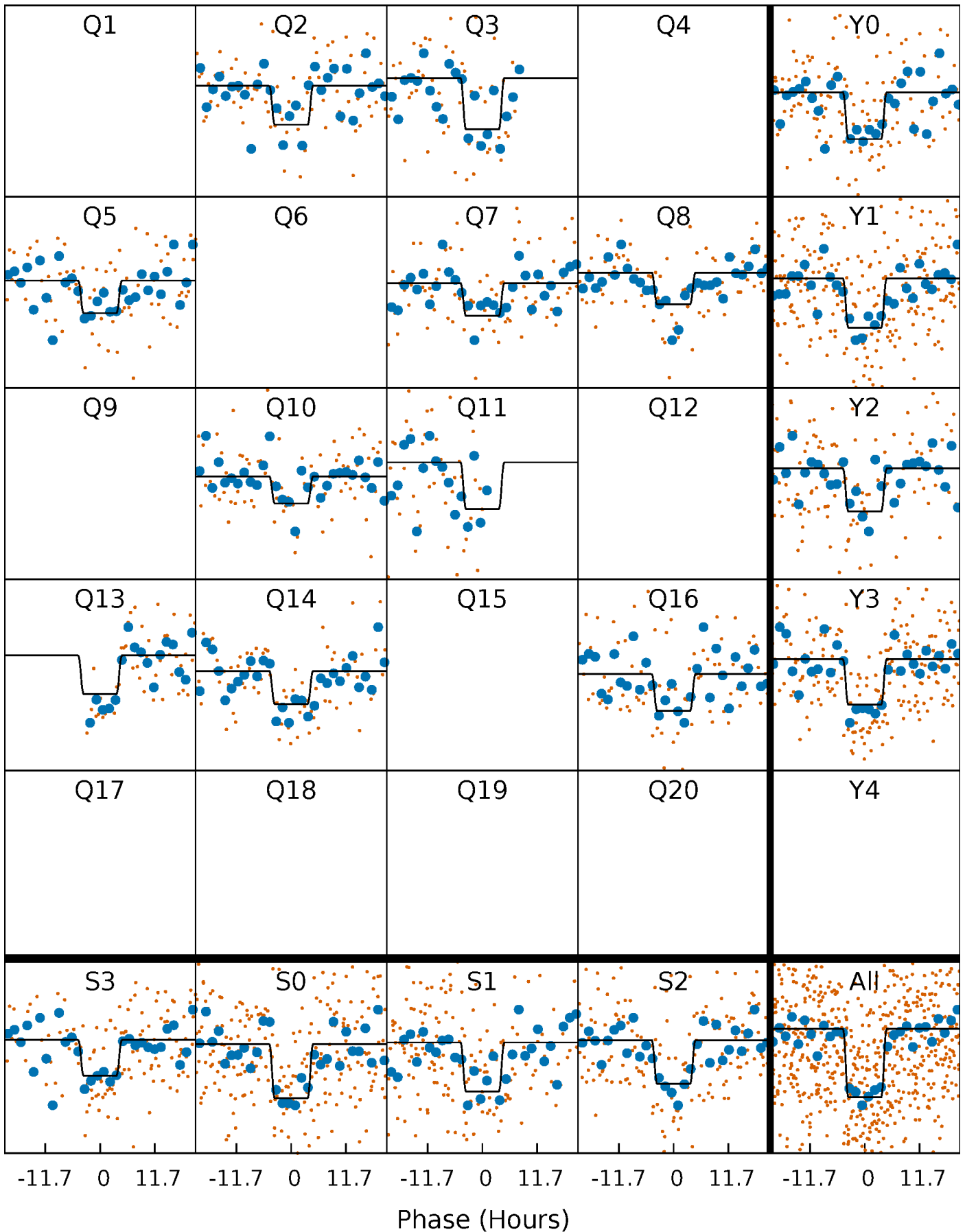
DV Quarter-Phased Transit Curves

TCE 006716545-03 P=145.888130 Days $T_0=194.625631$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

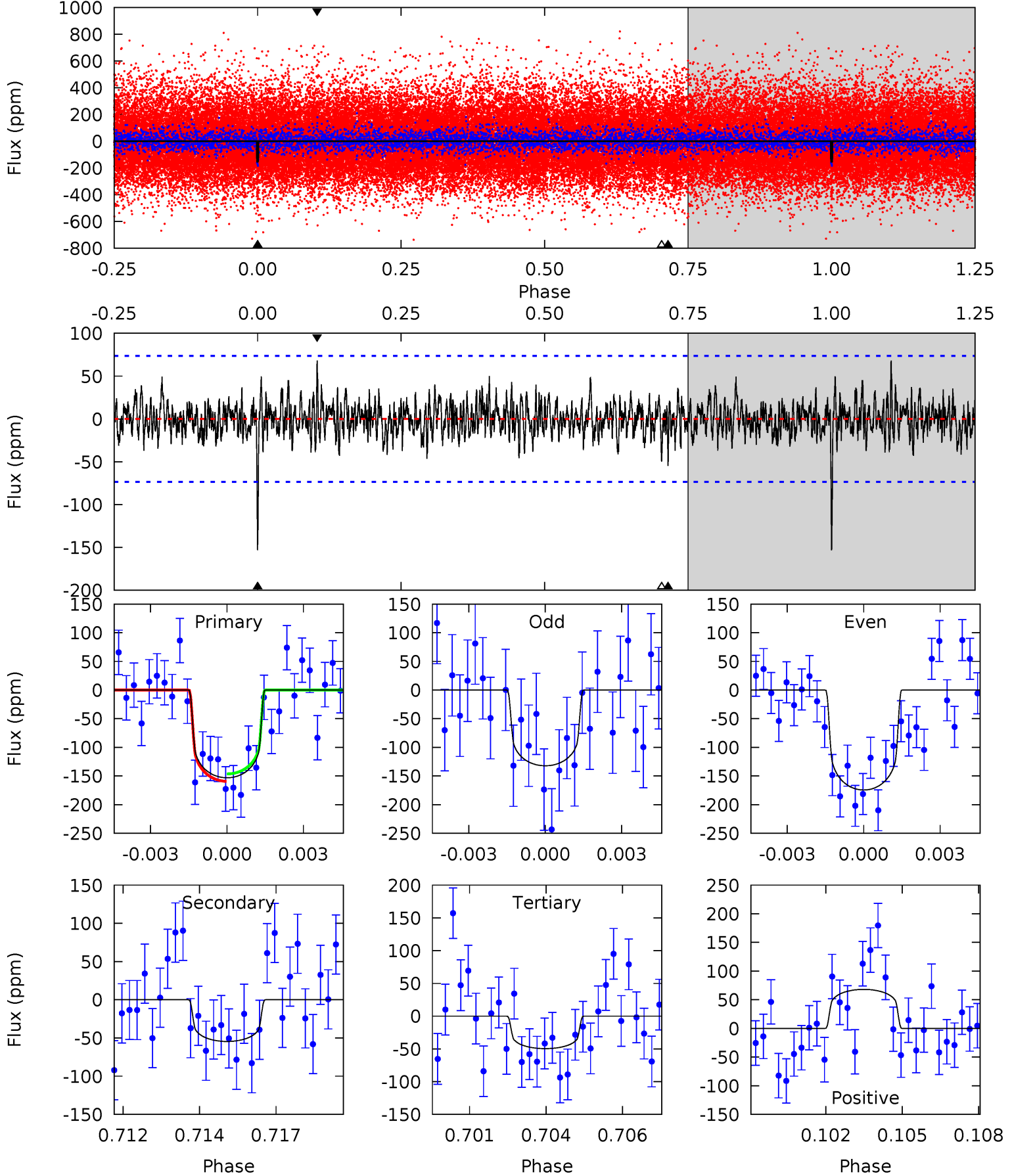
TCE 006716545-03 P=145.888807 Days $T_0=194.612939$ (BKJD)



DV Model-Shift Uniqueness Test

006716545-03, P = 145.888130 Days, E = 48.737501 Days

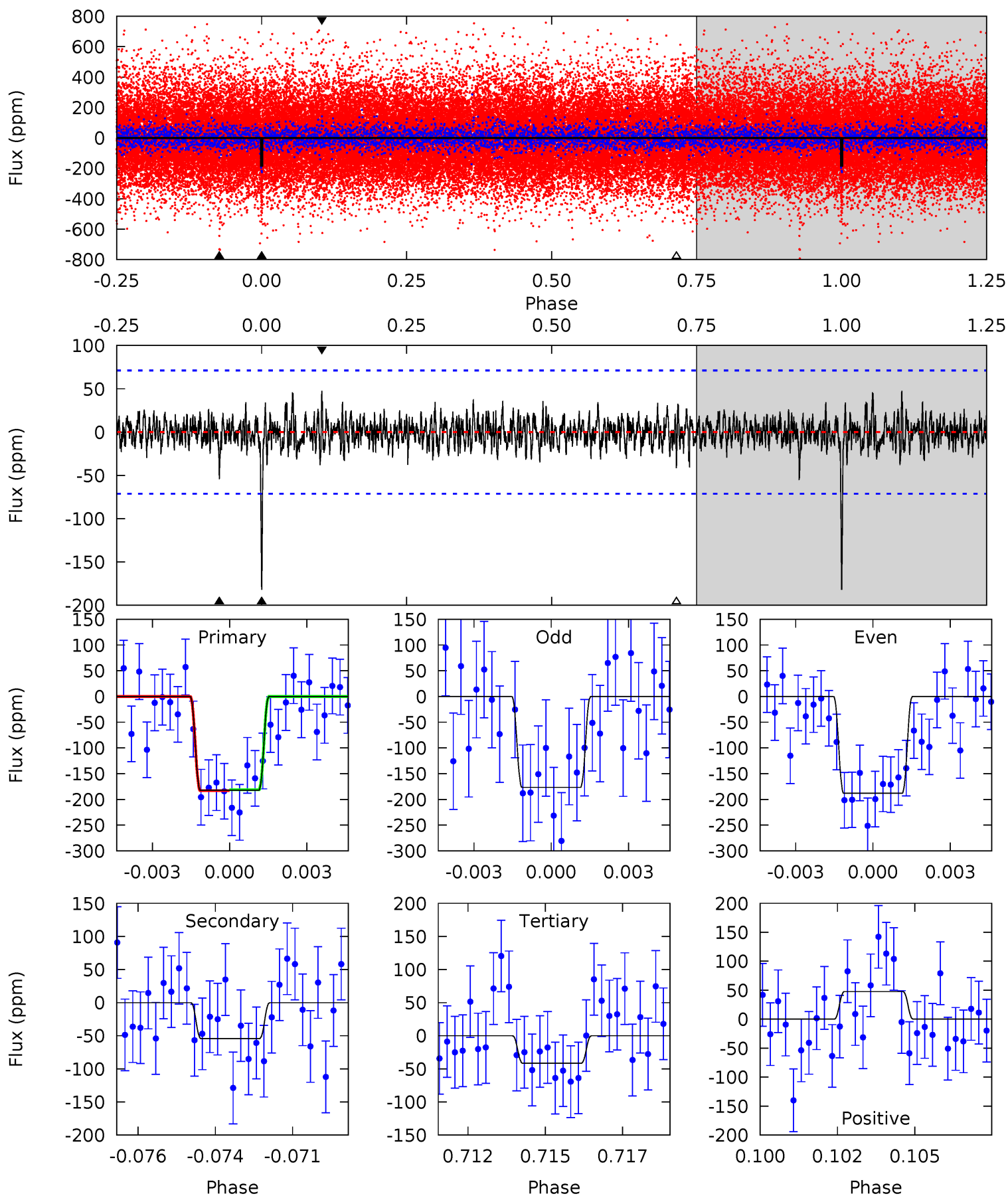
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.0	3.92	3.56	4.89	5.28	3.02	1.15	7.43	6.11	0.36	-0.97	1.52	1.12	0.31	0.46



Alt Model-Shift Uniqueness Test

006716545-03, $P = 145.888807$ Days, $E = 48.724132$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.5	4.02	3.08	3.53	5.28	3.01	0.94	10.4	9.96	0.95	0.49	0.42	1.09	0.21	0.07



Stellar Parameters For KIC 006716545

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6052^{+82}_{-82}	$4.183^{+0.154}_{-0.112}$	$0.080^{+0.150}_{-0.150}$	$1.424^{+0.263}_{-0.237}$	$1.128^{+0.111}_{-0.083}$	$0.551^{+0.405}_{-0.201}$
	+1%/-1%	+4%/-3%	+188%/-188%	+18%/-17%	+10%/-7%	+74%/-37%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 006716545-03 / KOI 2906.02

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-55 ± 14	$2.13^{+1.26}_{-1.20}$	589^{+29}_{-29}	4565^{+2035}_{-741}	2119^{+8366}_{-1346}
Alt.	-54 ± 13	$2.13^{+1.30}_{-1.11}$	589^{+26}_{-29}	4573^{+1783}_{-742}	2127^{+6902}_{-1353}

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 $A_{obs} \gg 1.0$

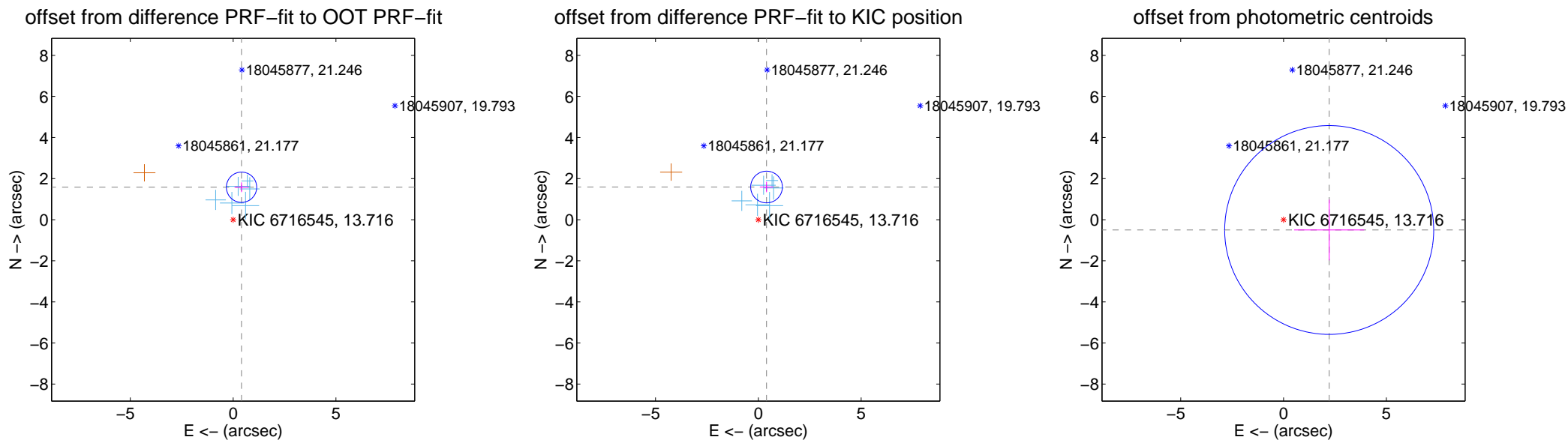
DV Centroid Data

Supplemental centroid analysis for 006716545-03. Kepler magnitude: 13.72. Transit SNR 8.50

There are 6 quarters with good PRF difference image offsets

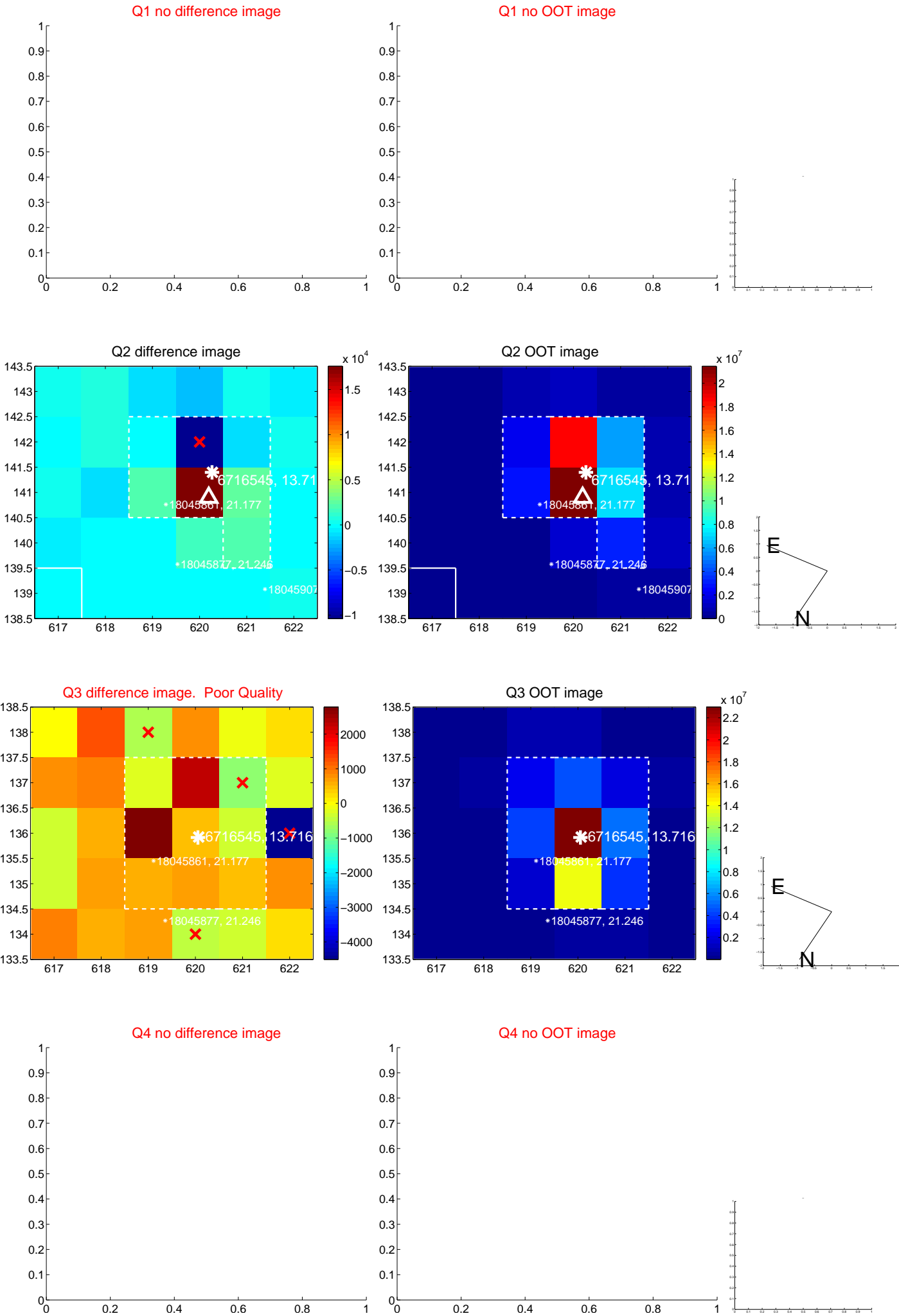
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.632 ± 0.246	6.64	-0.409 ± 0.342	1.580 ± 0.238
PRF-fit source offset from KIC position	1.640 ± 0.257	6.38	-0.399 ± 0.326	1.590 ± 0.252
photometric centroid source offset	2.28 ± 1.69	1.34	-2.22 ± 1.70	-0.50 ± 1.48

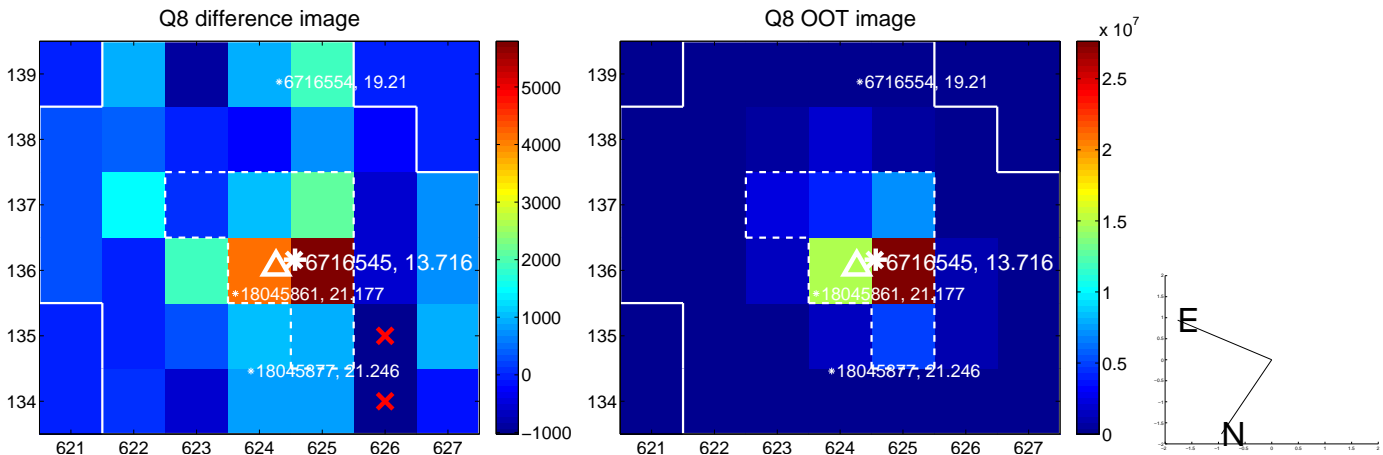
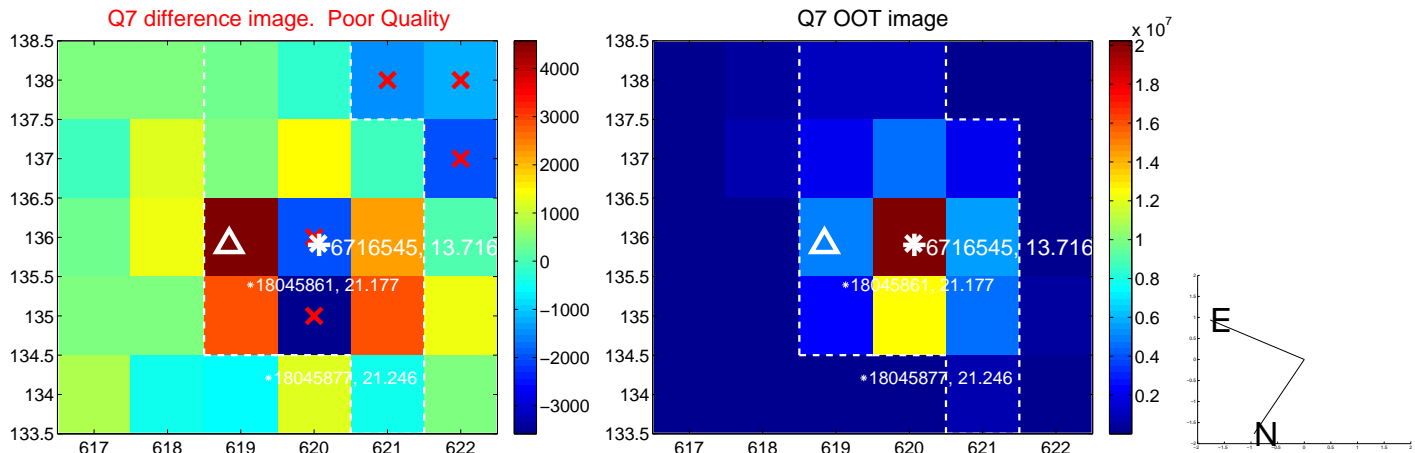
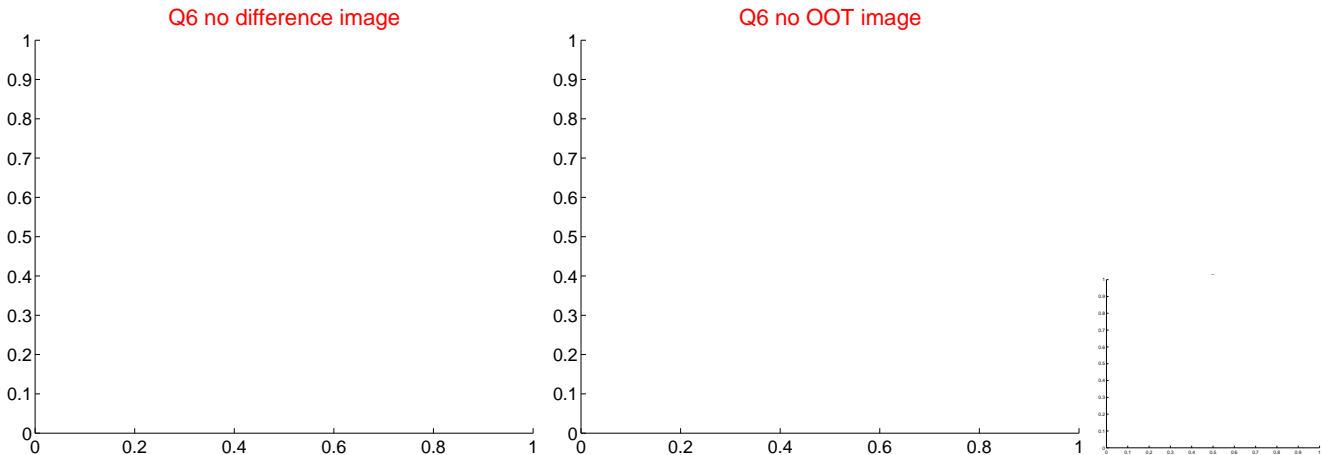
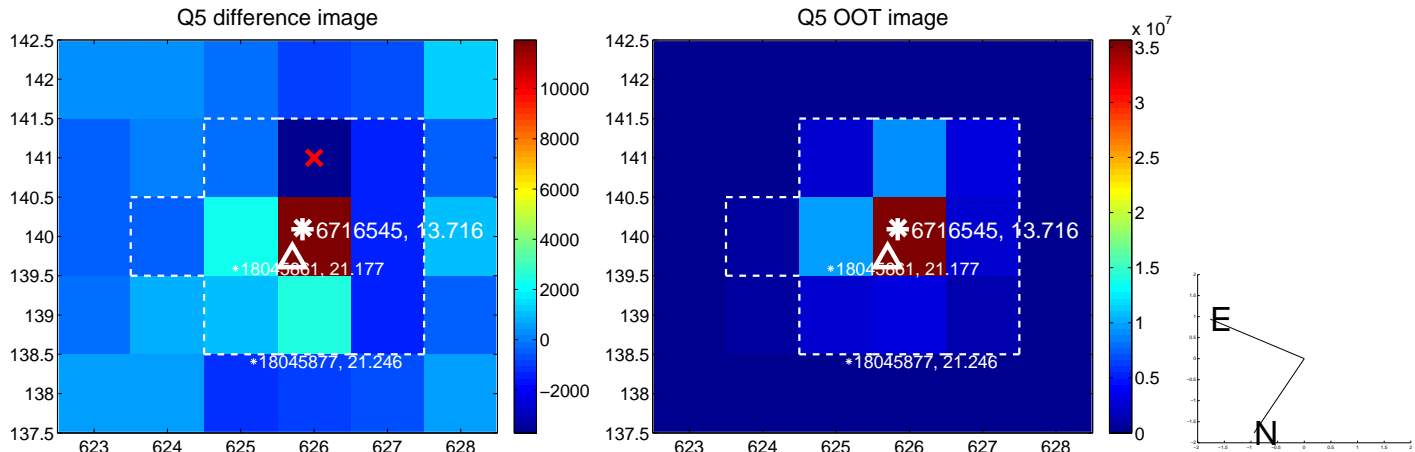


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

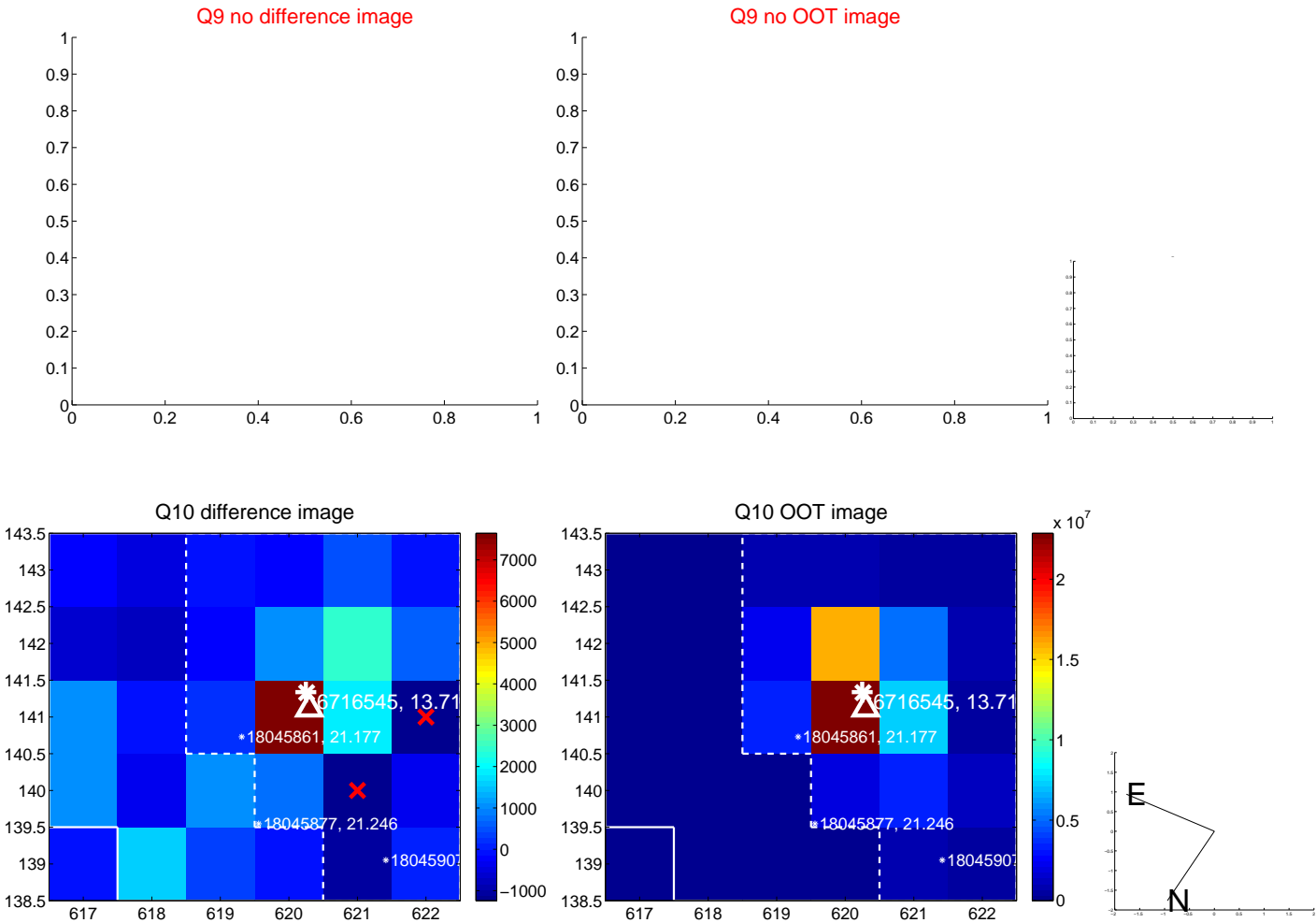
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



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

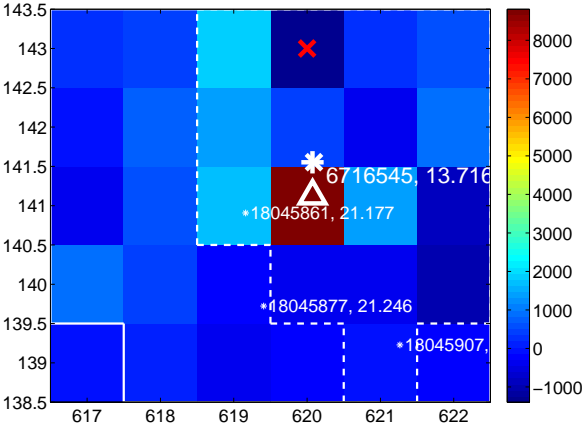
Q13 no difference image



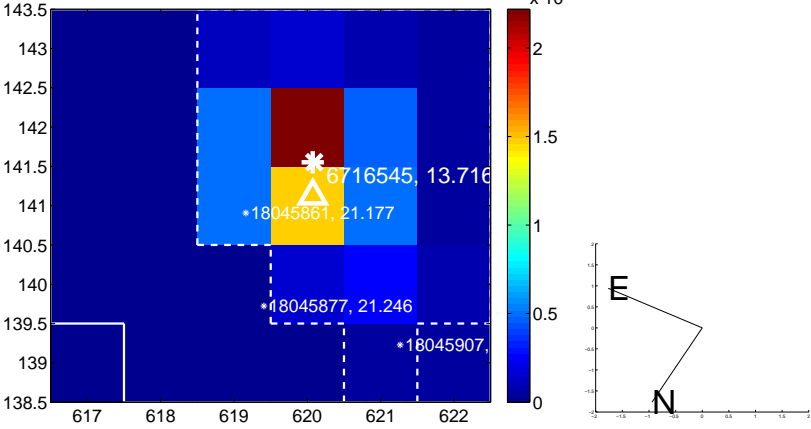
Q13 no OOT image



Q14 difference image



Q14 OOT image



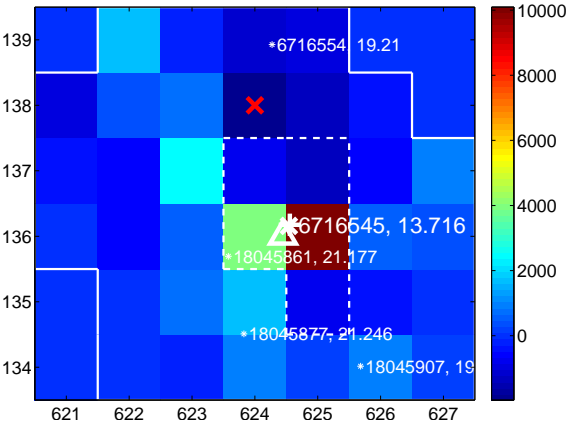
Q15 no difference image



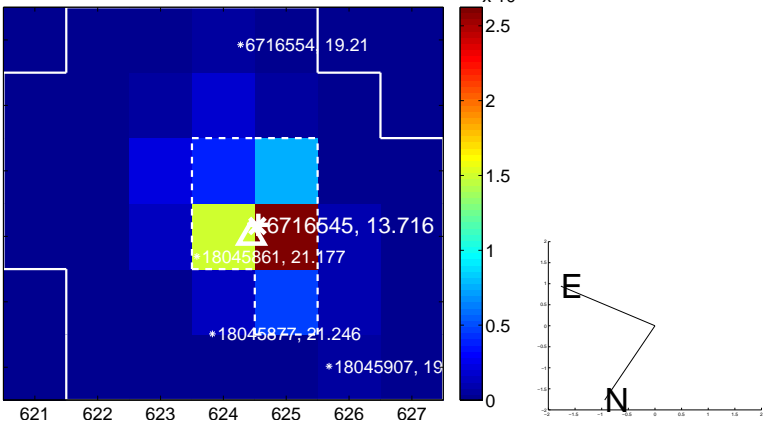
Q15 no OOT image



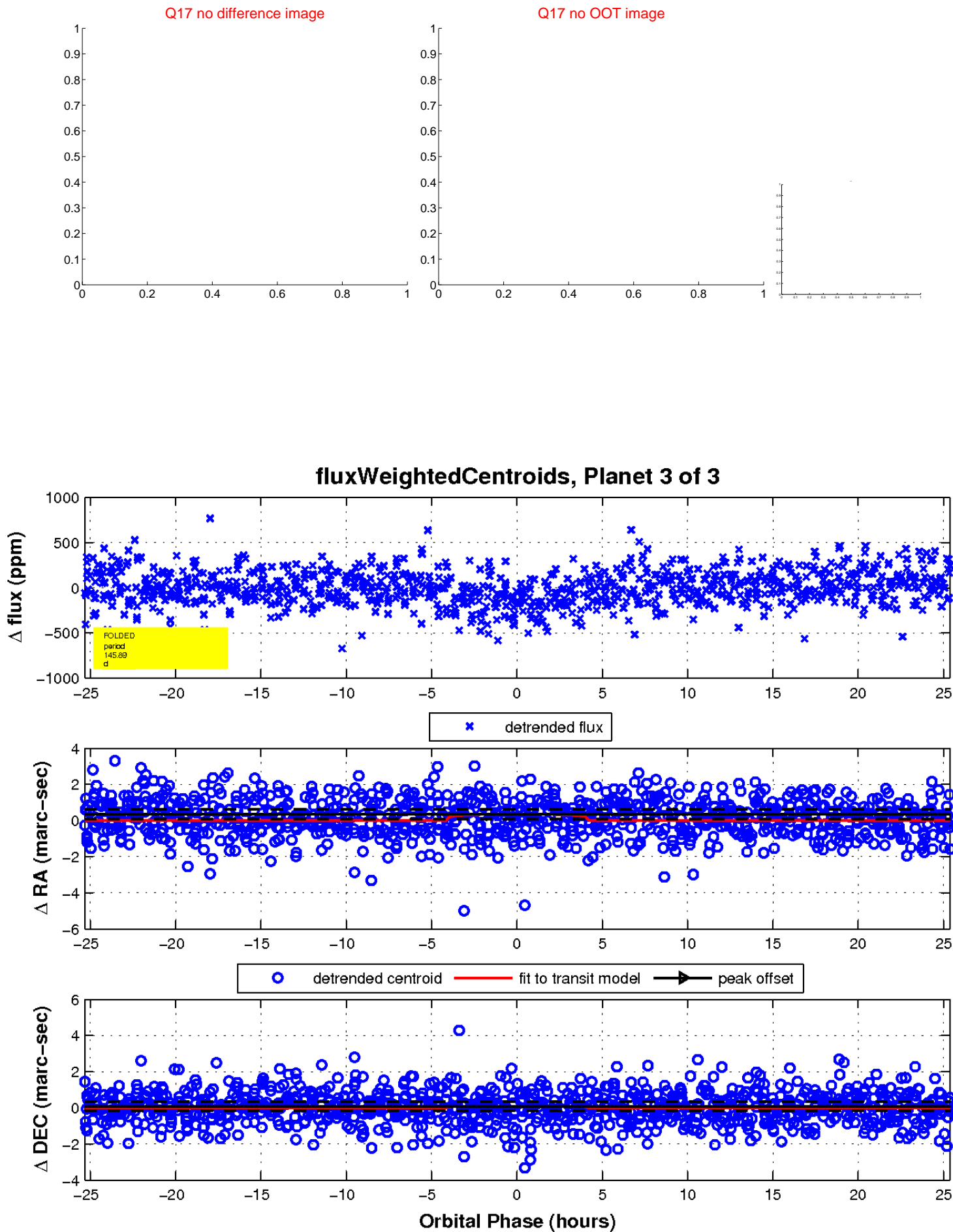
Q16 difference image



Q16 OOT image



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



UKIRT Image

Declination

