

KIC 011569475

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})
011569475-01	OBS	No	1.317343	132.771699	68.5	4.504	12.8	10.4	12.08	6740	10.92	0.00
011569475-02	OBS	4029.01	1.317270	132.174057	72.6	6.796	18.5	13.3	12.08	6740	10.58	0.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011569475-01	OBS	FP	0.00	1	0	0	0	LPP_DV
011569475-02	OBS	FP	0.00	1	0	0	0	LPP_DV—SAME_NTL_PERIOD

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 011569475-01

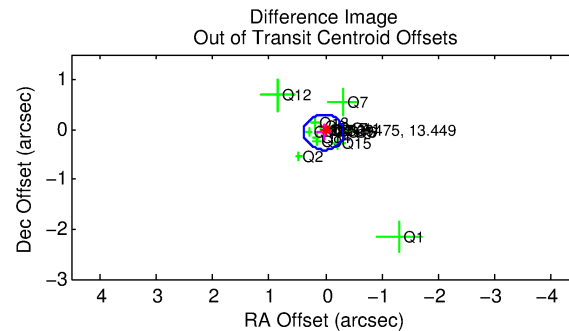
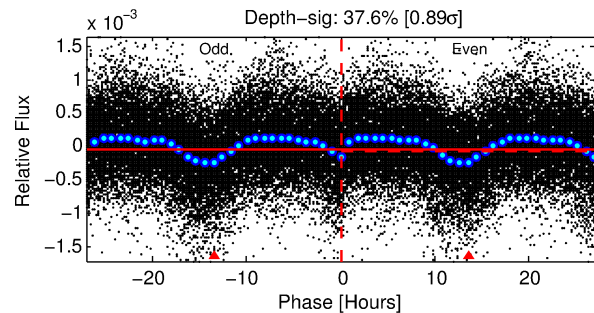
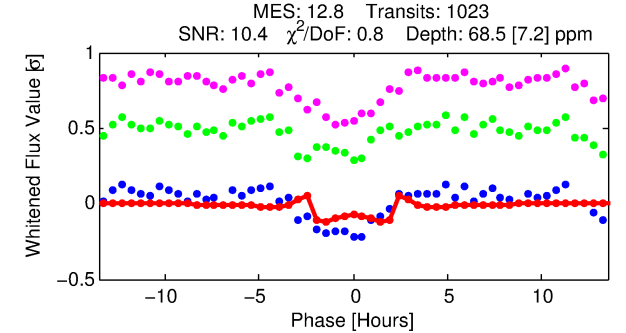
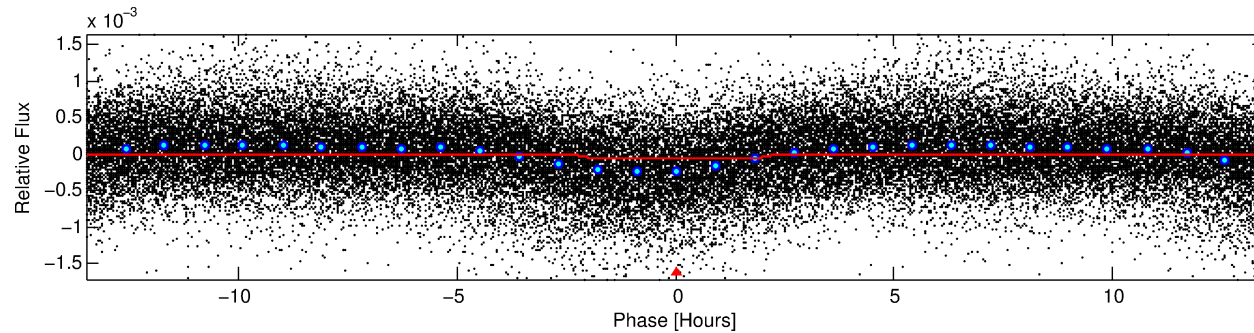
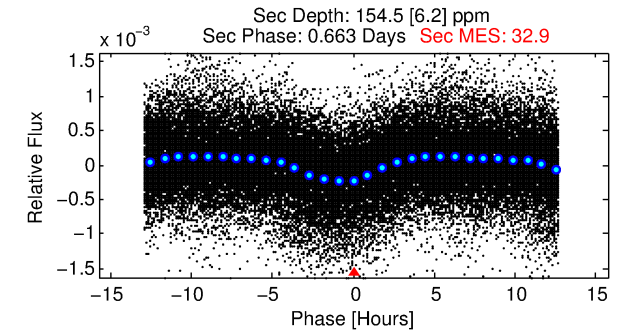
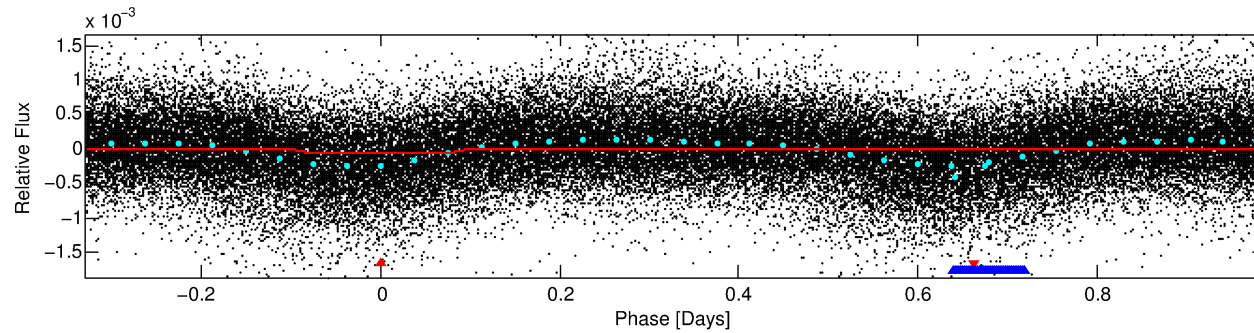
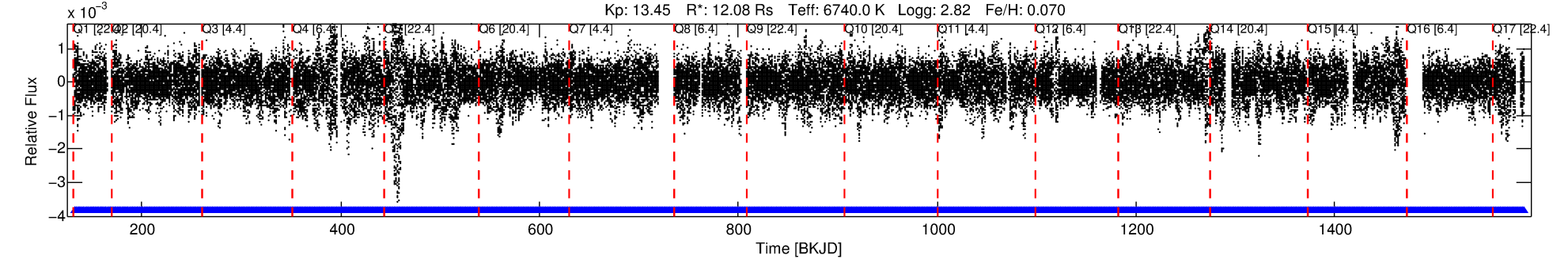
No Significant Match Found

DV One-Page Summary

KIC: 11569475 Candidate: 1 of 2 Period: 1.317 d

KOI: K04029 Corr: No Ephemeris Match

Kp: 13.45 R*: 12.08 Rs Teff: 6740.0 K Logg: 2.82 Fe/H: 0.070



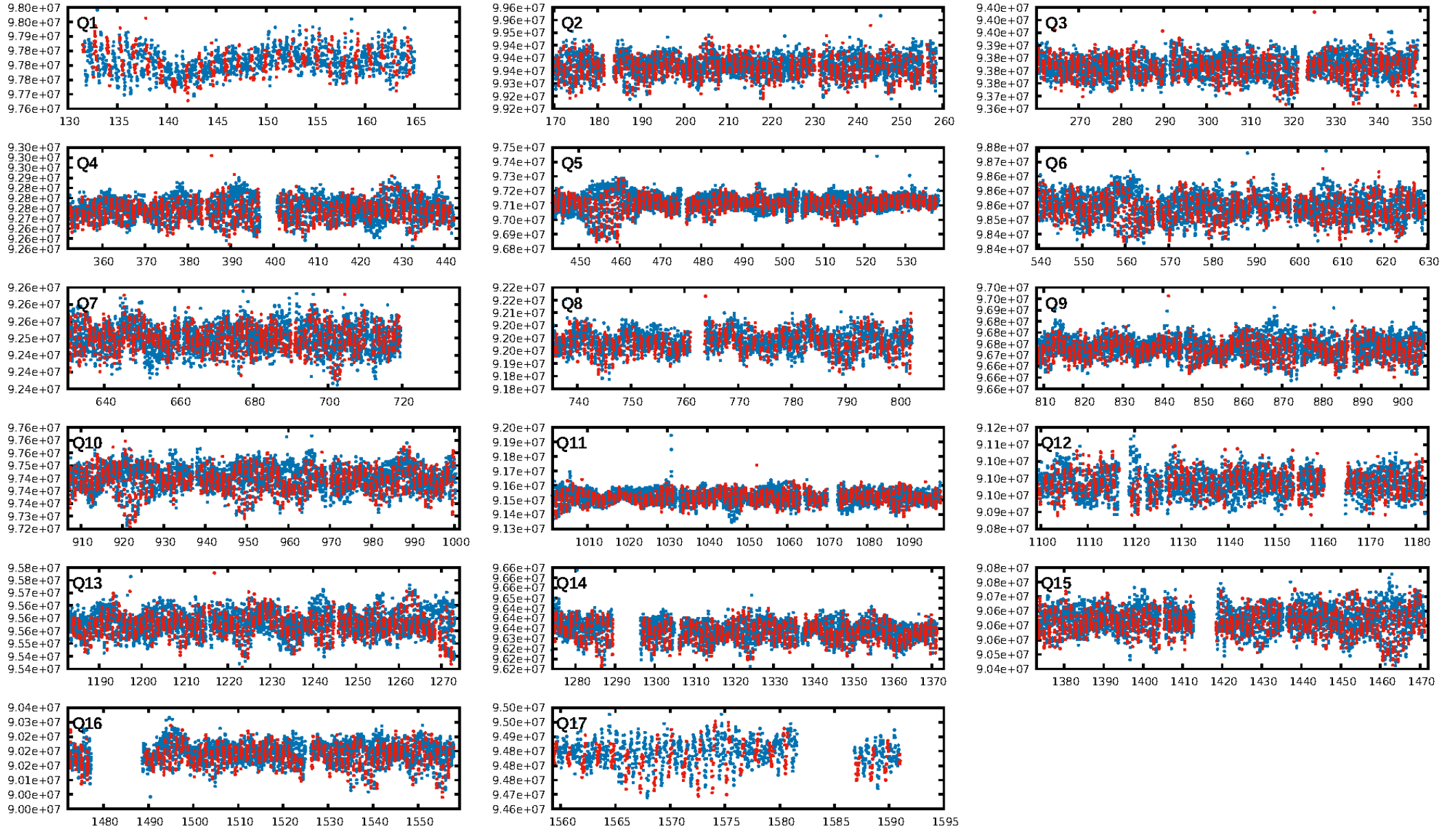
DV Fit Results:

Period = 1.31734 [0.00001] d
Epoch = 132.7717 [0.0018] BKJD
Rp/R* = 0.0083 [0.0017]
a/R* = 1.69 [1.25]
b = 0.77 [0.61]
Seff = N/A
Teq = N/A
Rp = 10.92 [6.61] Re
a = N/A
Ag = N/A
Teffp = N/A

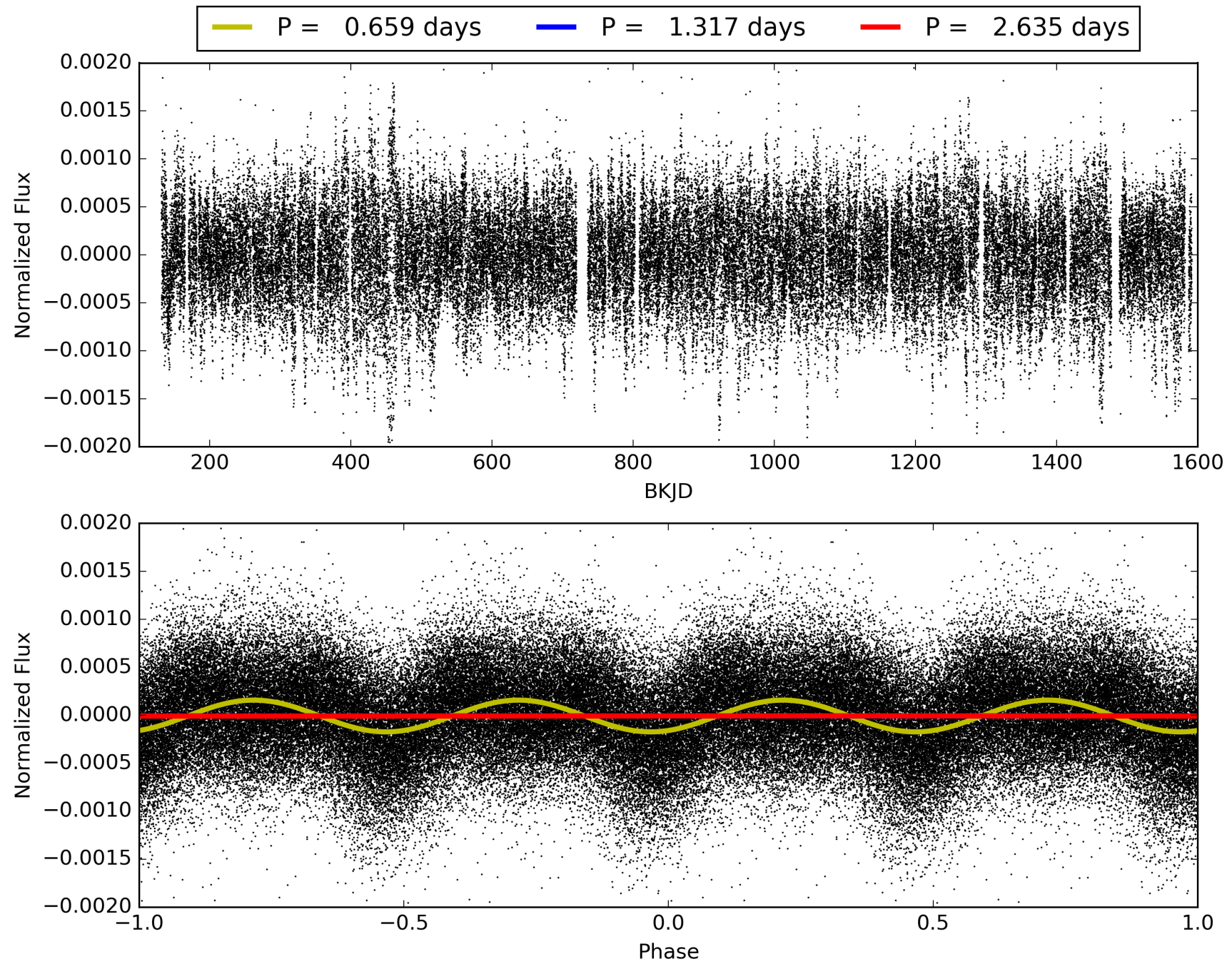
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [976/976]
GhostDiagnostic-chr: 1.219
Centroid-sig: 0.2%
Centroid-so: 1.067 arcsec [2.91σ]
OotOffset-rm: 0.069 arcsec [0.59σ]
KicOffset-rm: 0.147 arcsec [1.22σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 011569475-01, PDC Light Curves

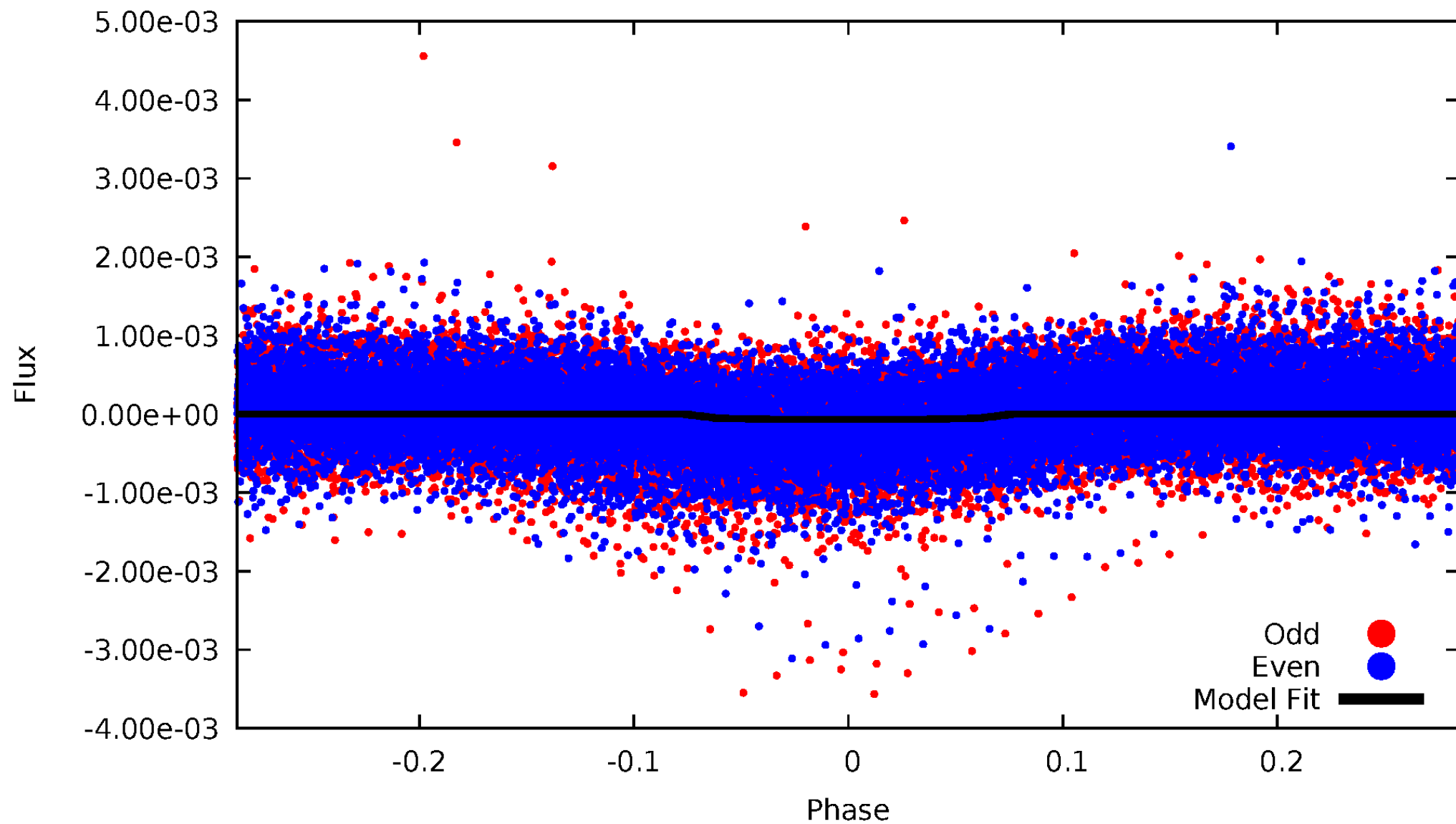


TCE 011569475-01



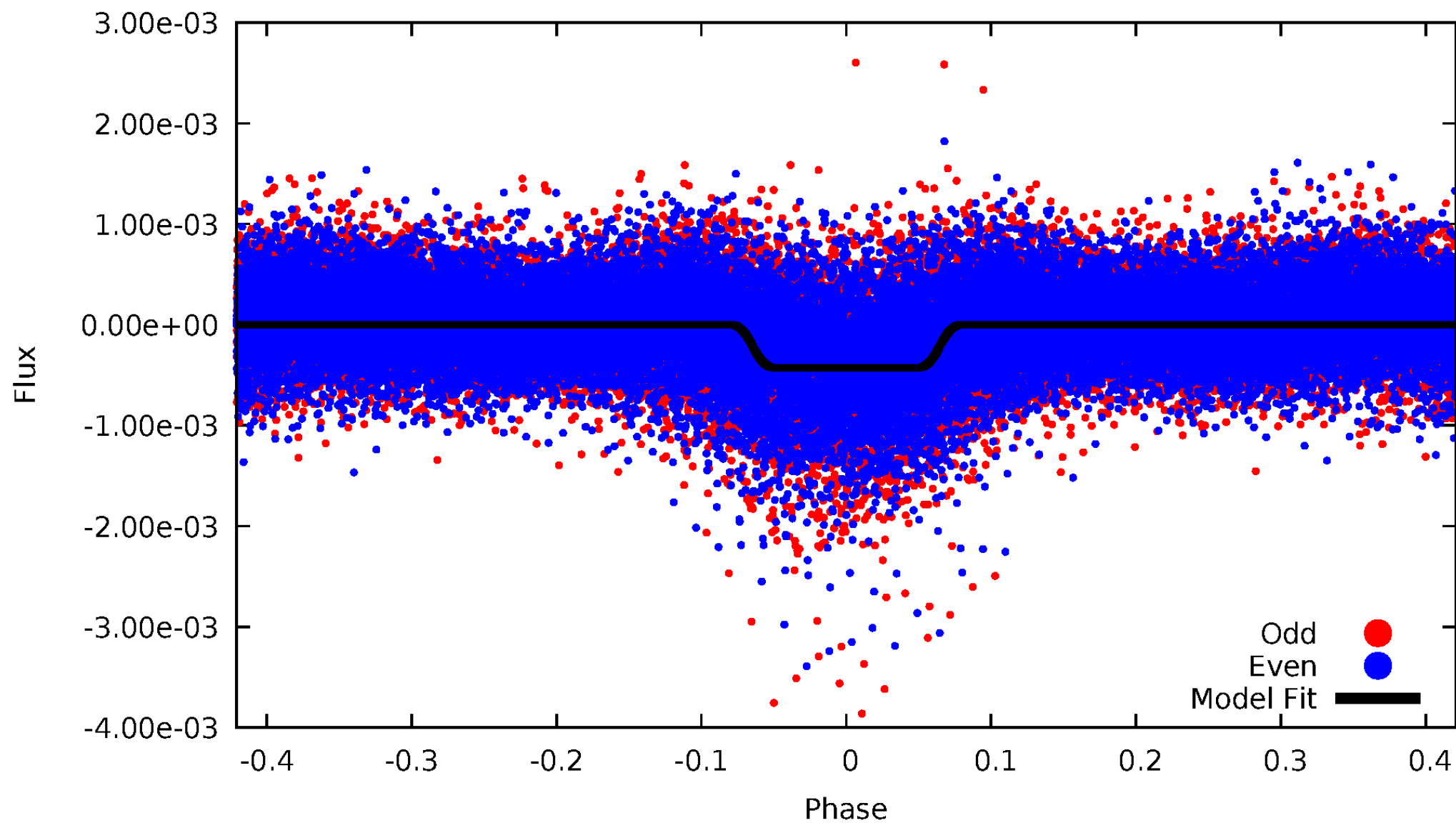
DV Odd/Even

TCE 011569475-01

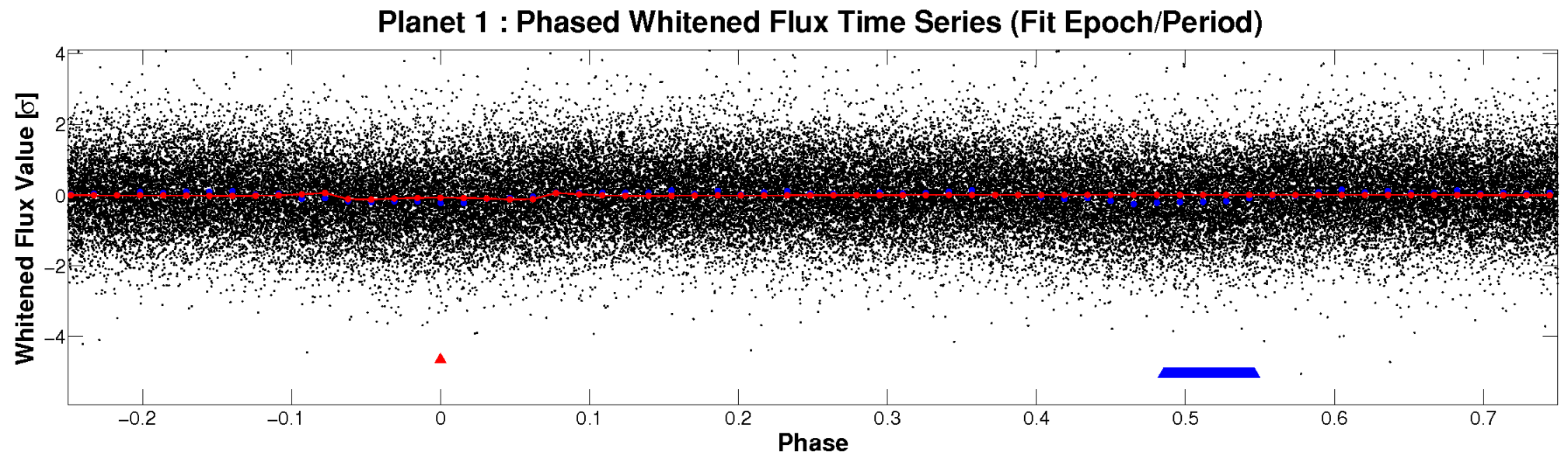
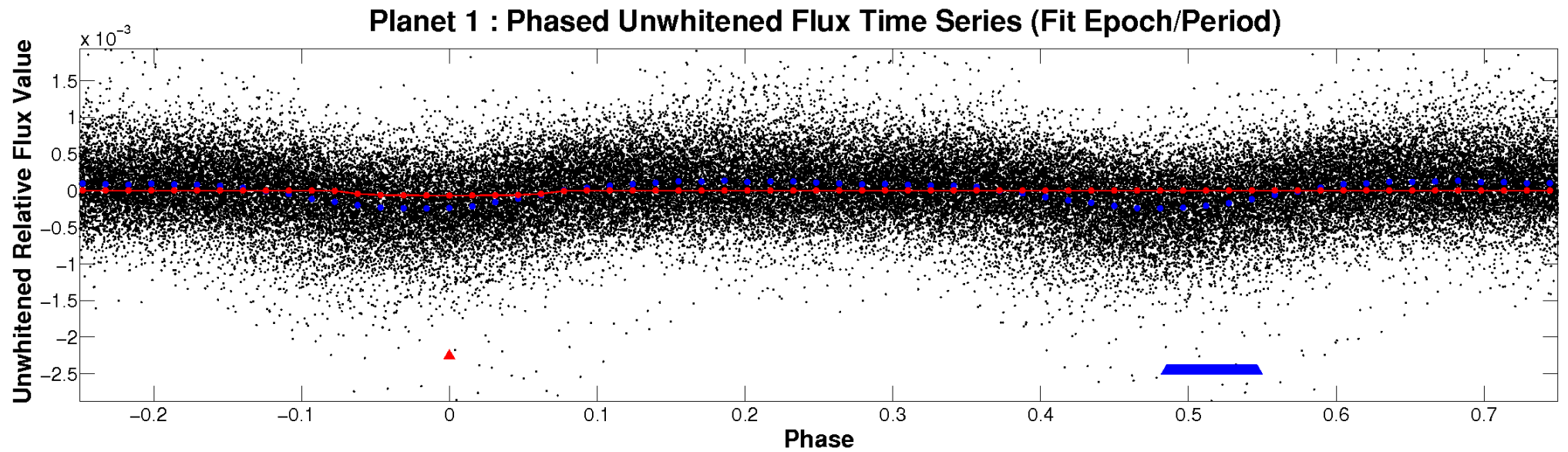


ALT Odd/Even

TCE 011569475-01

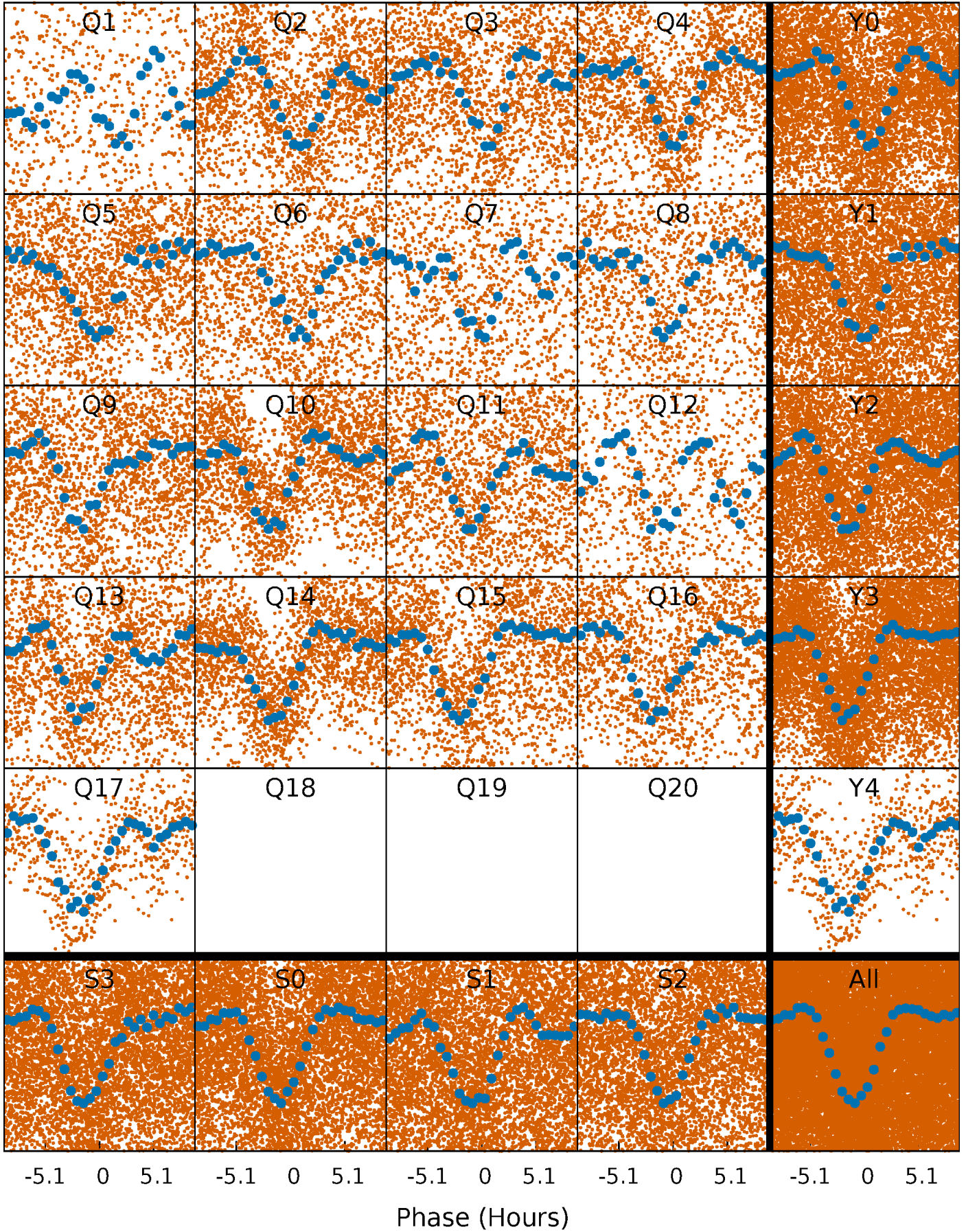


Non-Whitened Vs. Whitened Light Curve



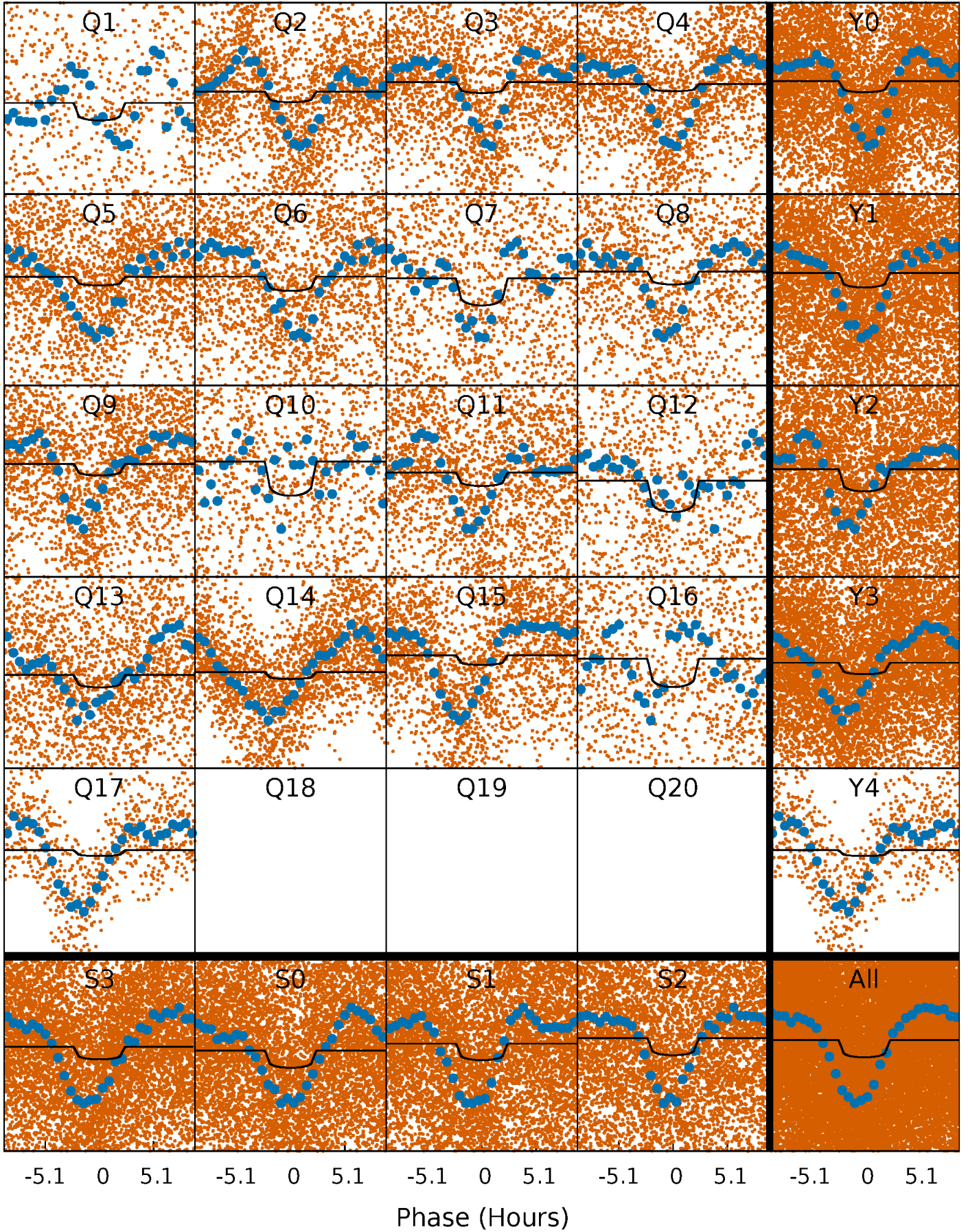
PDC Quarter-Phased Transit Curves

TCE 011569475-01 P= 1.317343 Days $T_0=132.771699$ (BKJD)



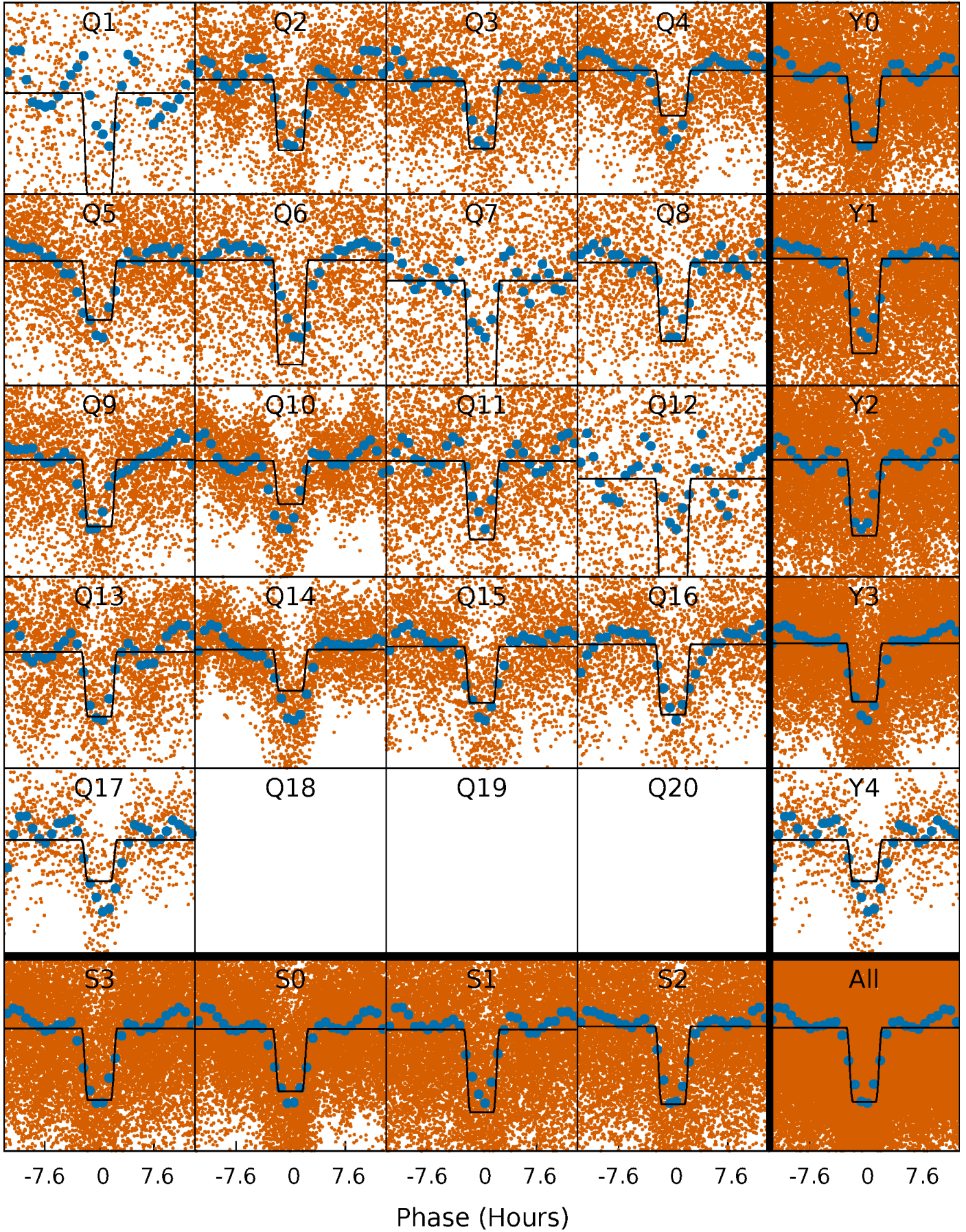
DV Quarter-Phased Transit Curves

TCE 011569475-01 P= 1.317343 Days $T_0=132.771699$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

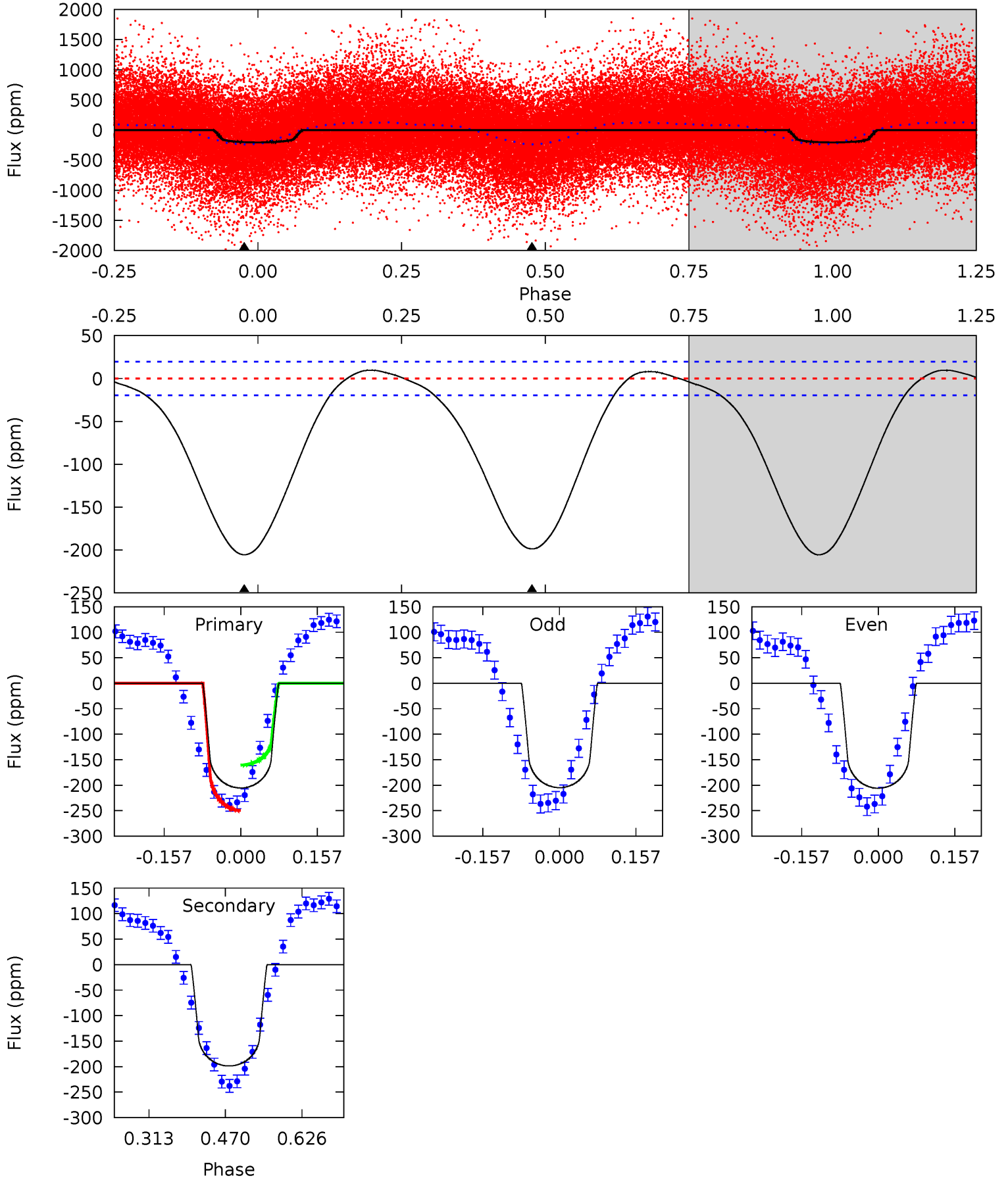
TCE 011569475-01 P= 1.317218 Days $T_0=132.803857$ (BKJD)



DV Model-Shift Uniqueness Test

011569475-01, P = 1.317343 Days, E = 131.454356 Days

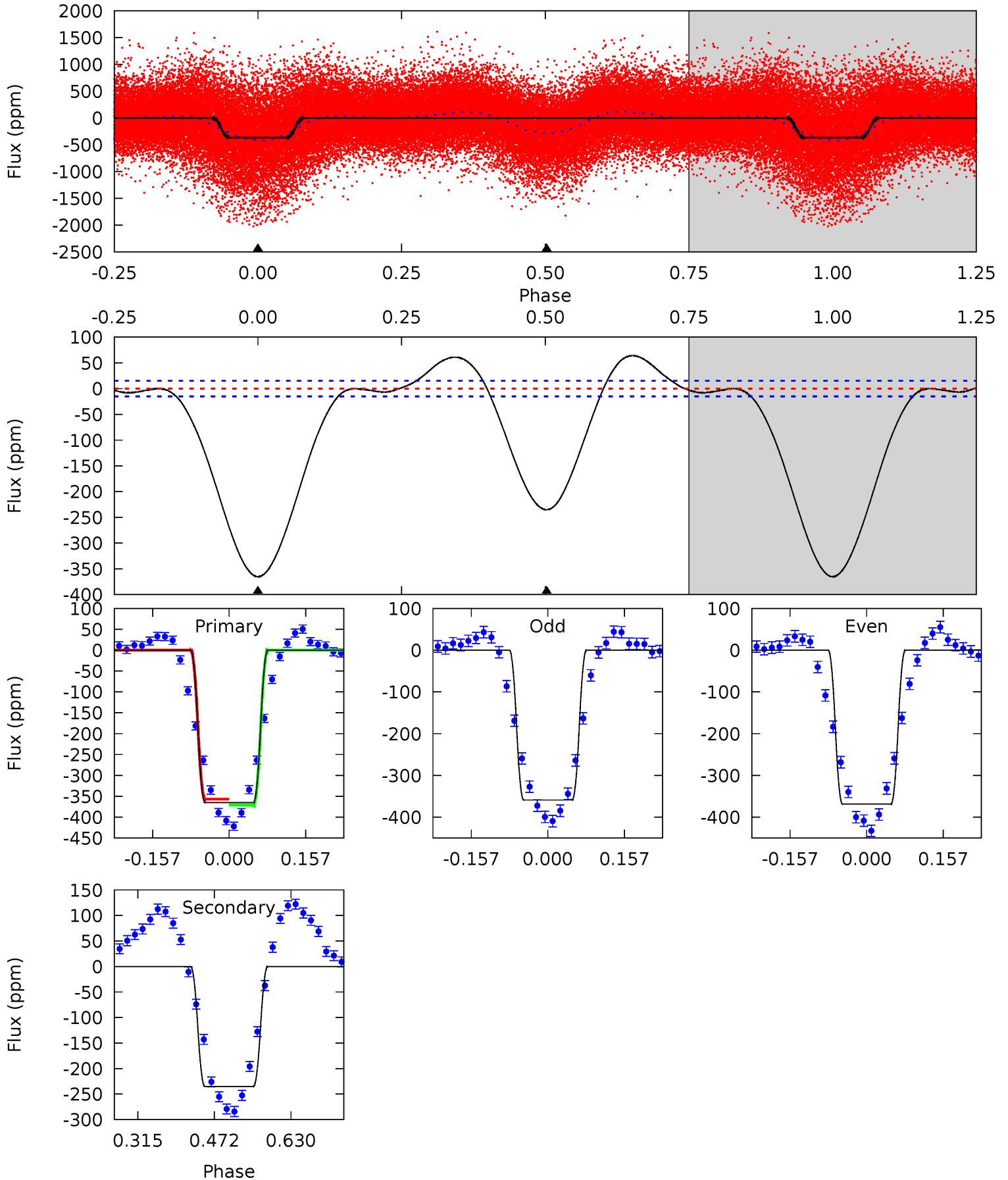
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
47.0	45.5	0	0	4.47	1.42	2.24	47.0	47.0	45.5	45.5	0.12	1.14	0.04	10.2



Alt Model-Shift Uniqueness Test

011569475-01, P = 1.317218 Days, E = 131.486639 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
107.7	69.4	0	0	4.47	1.41	6.75	107.7	107.7	69.4	69.4	1.43	1.16	0.15	2.08



Stellar Parameters For KIC 011569475

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6740^{+163}_{-265}	$2.816^{+0.513}_{-0.054}$	$0.070^{+0.200}_{-0.550}$	$12.080^{+0.766}_{-6.893}$	$3.479^{+0.070}_{-1.430}$	$0.003^{+0.019}_{-0.000}$
	+2%/-4%	+18%/-2%	+286%/-786%	+6%/-57%	+2%/-41%	+685%/-10%
Source	PHO1	FLK73	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 011569475-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-199 ± 4	$9.48^{+2.83}_{-2.94}$	7358^{+467}_{-933}	8666^{+1690}_{-1318}	$1.478^{+1.337}_{-0.575}$
Alt.	-235 ± 3	$24.85^{+4.11}_{-7.05}$	7368^{+458}_{-1016}	-4020^{+8685}_{-912}	$0.258^{+0.210}_{-0.062}$

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

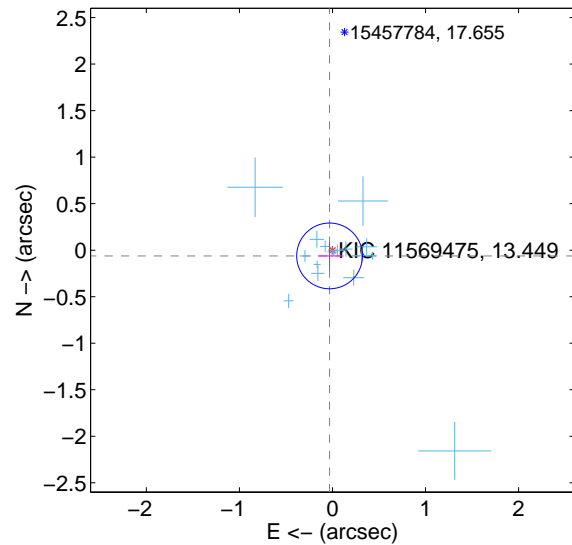
Supplemental centroid analysis for 011569475-01. Kepler magnitude: 13.45. Transit SNR 10.36

There are 17 quarters with good PRF difference image offsets

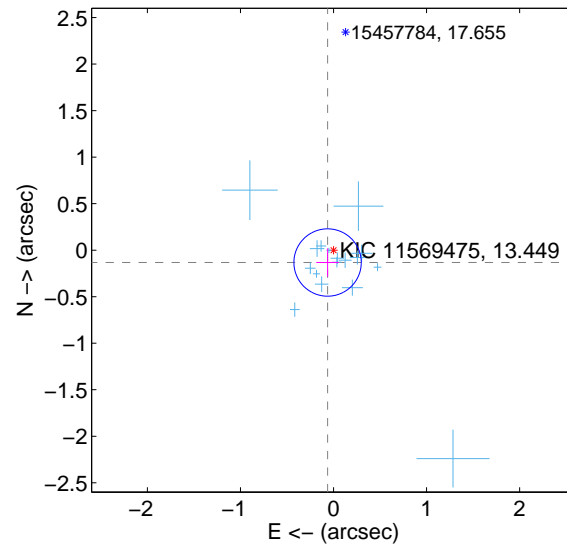
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.069 ± 0.118	0.59	0.031 ± 0.126	-0.062 ± 0.151
PRF-fit source offset from KIC position	0.147 ± 0.121	1.22	0.064 ± 0.122	-0.133 ± 0.153
photometric centroid source offset	1.07 ± 0.37	2.91	-1.02 ± 0.36	-0.31 ± 0.40

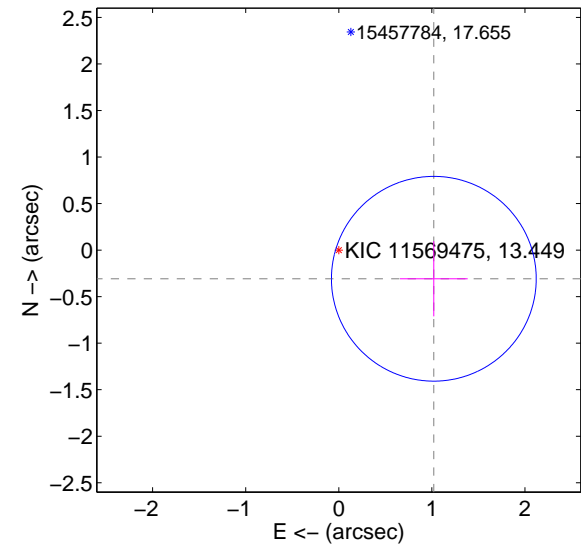
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

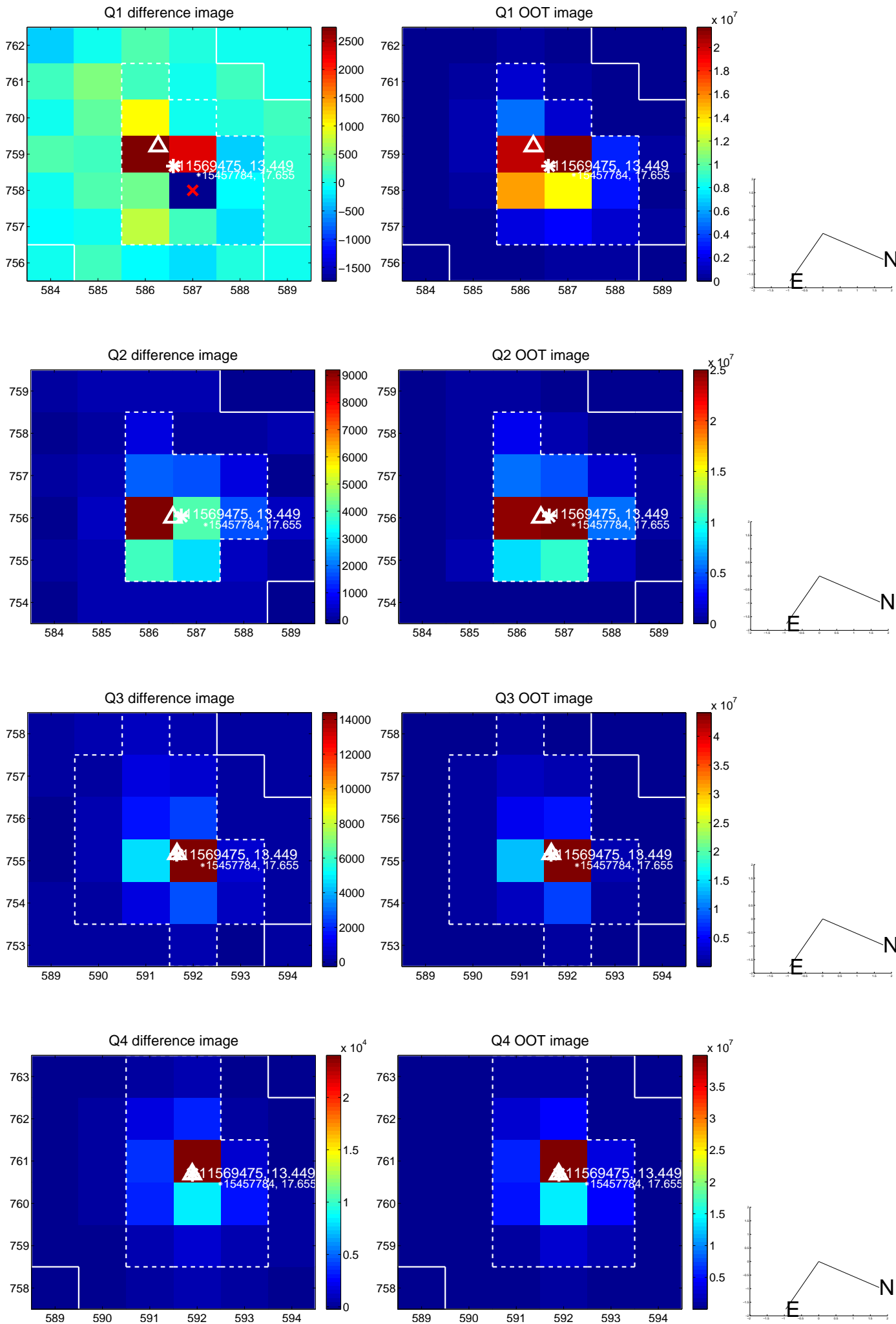


offset from photometric centroids

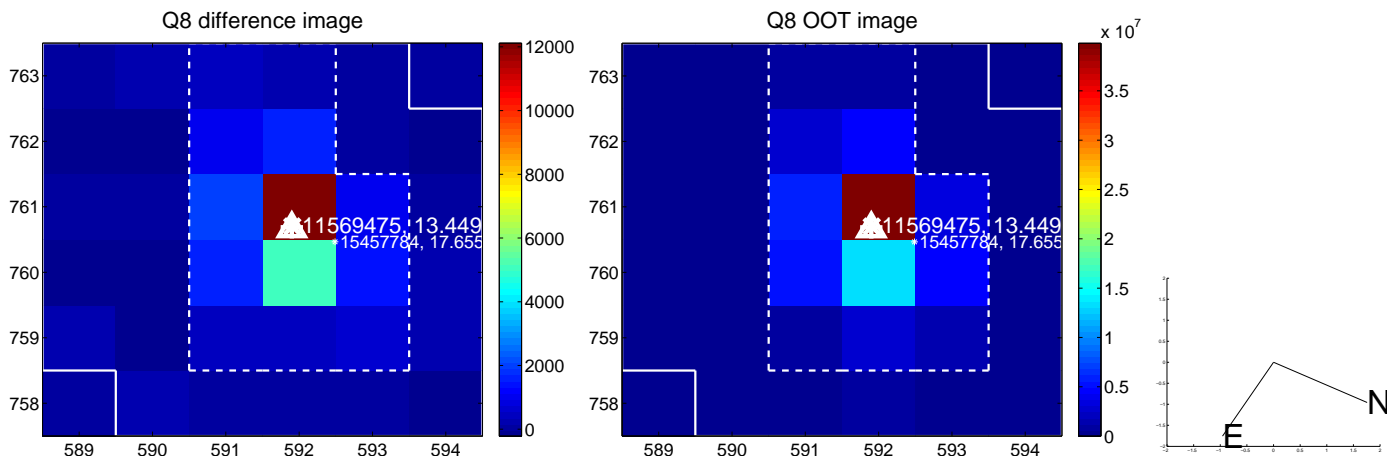
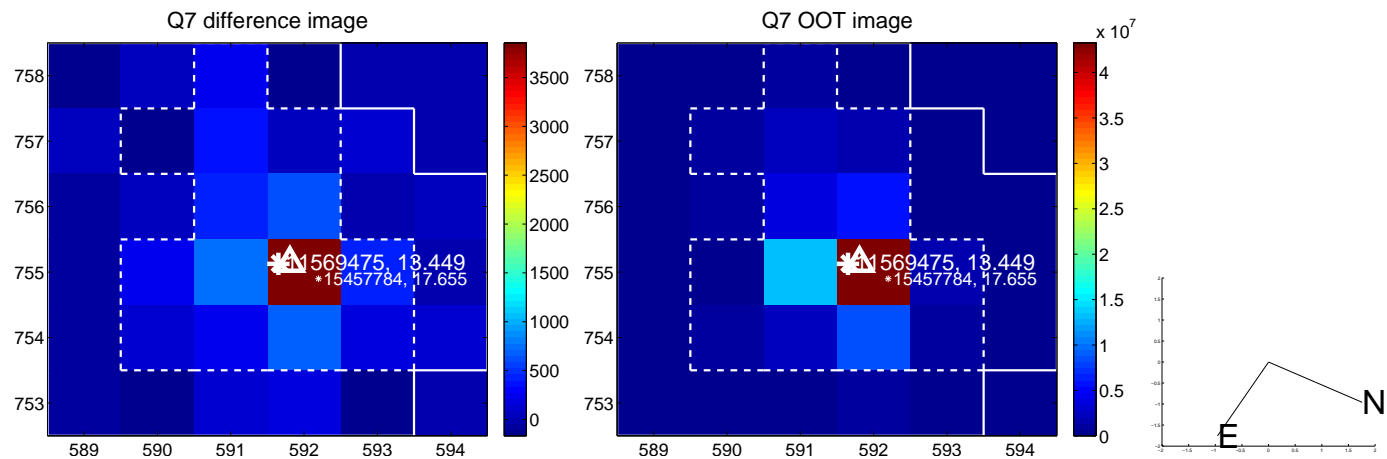
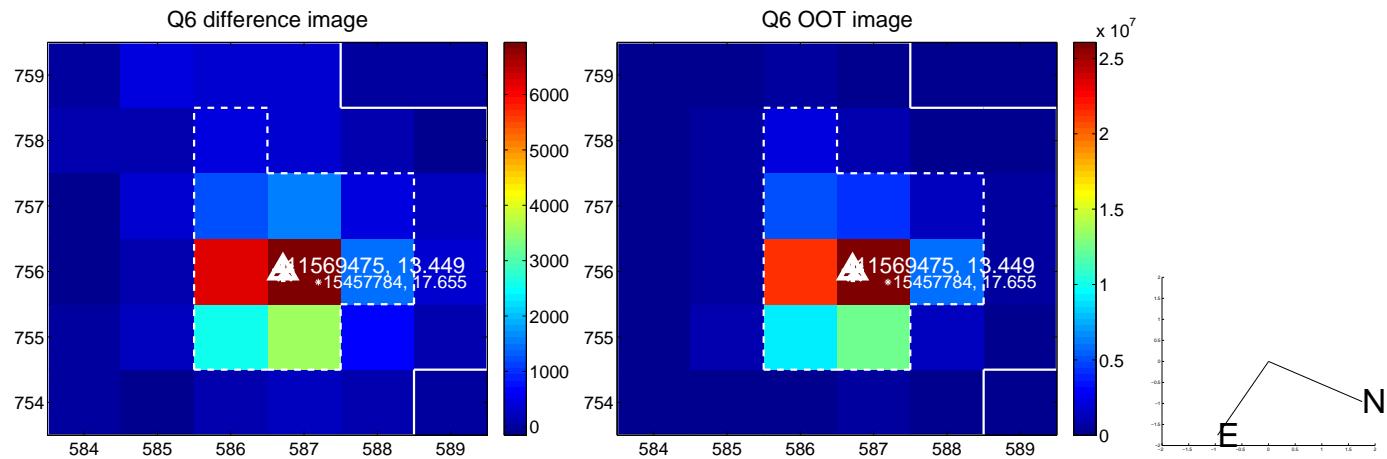
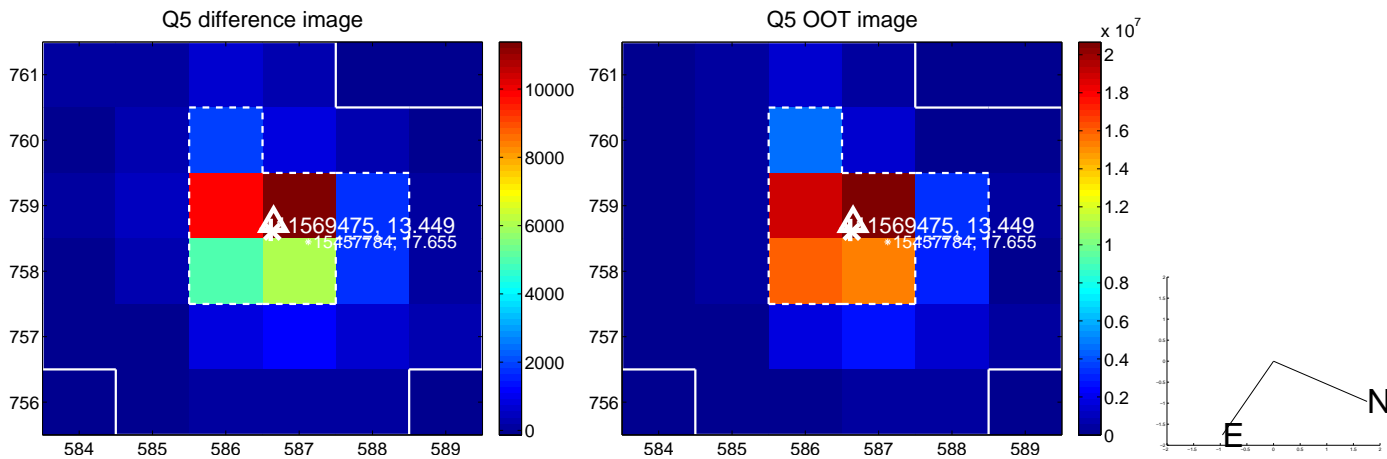


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

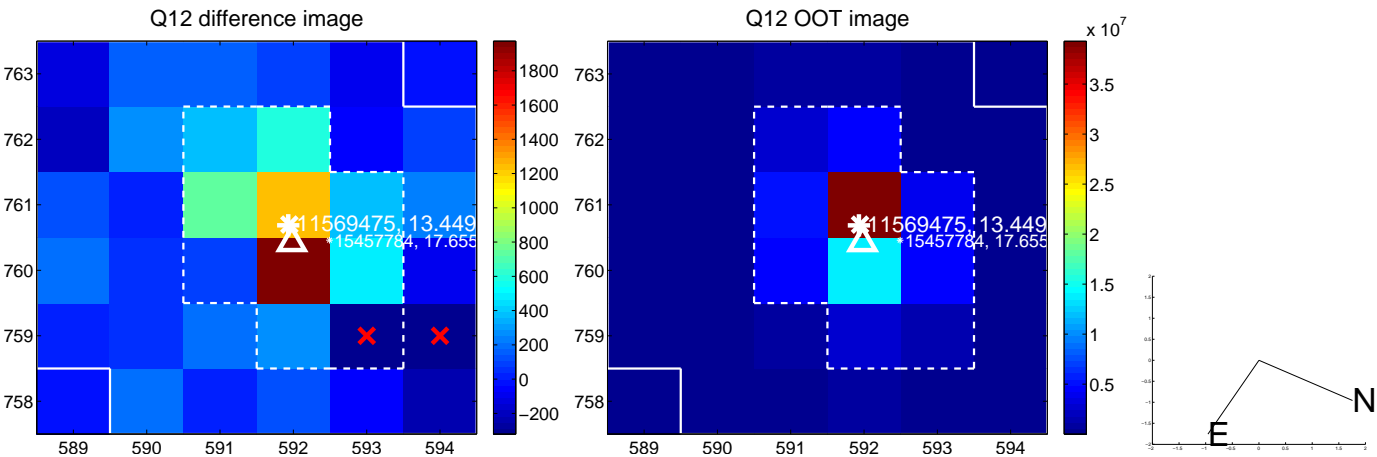
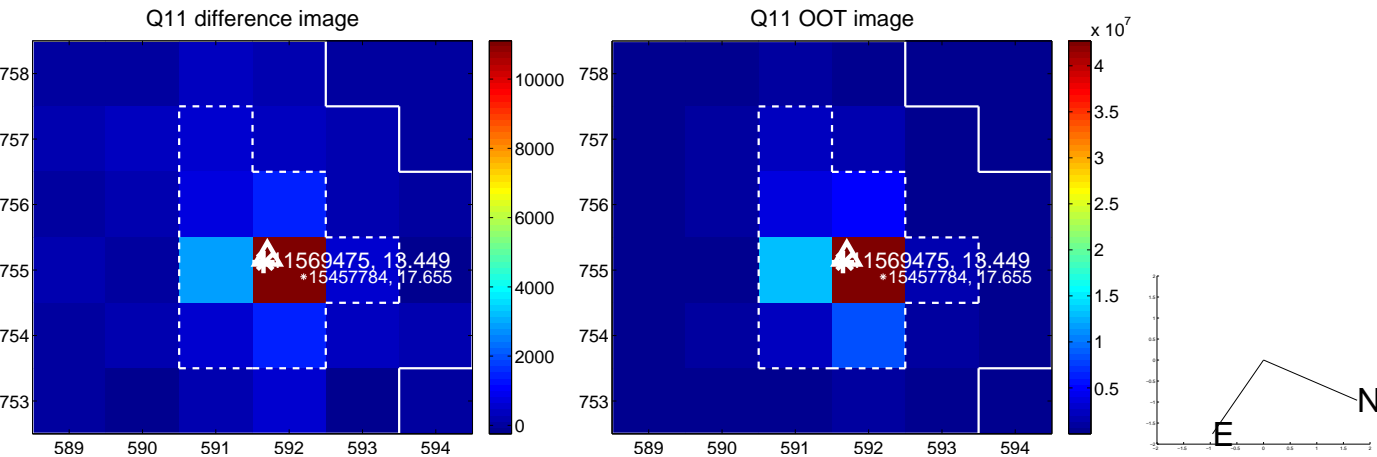
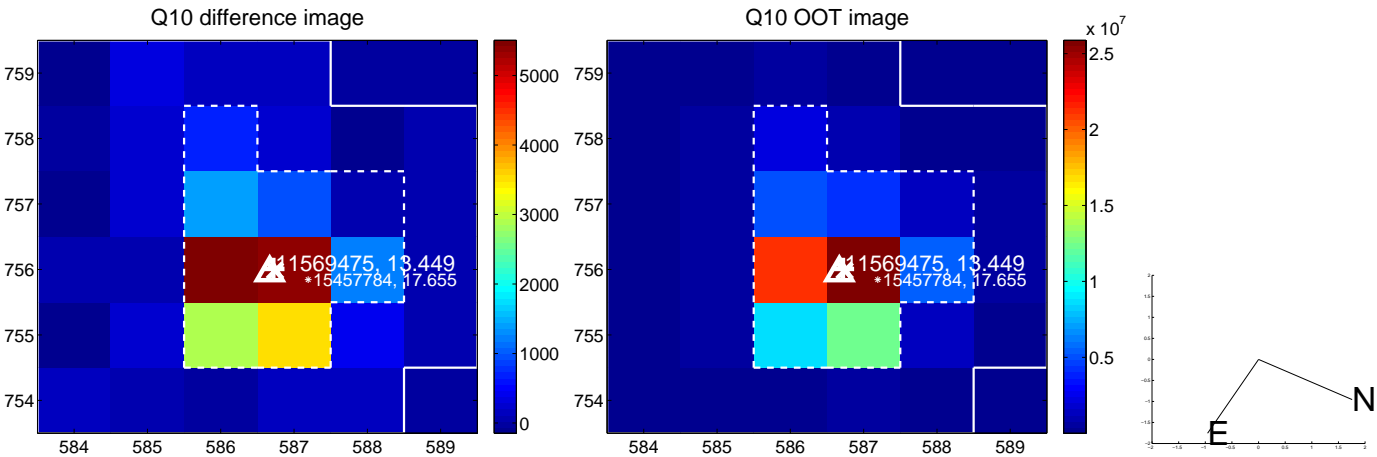
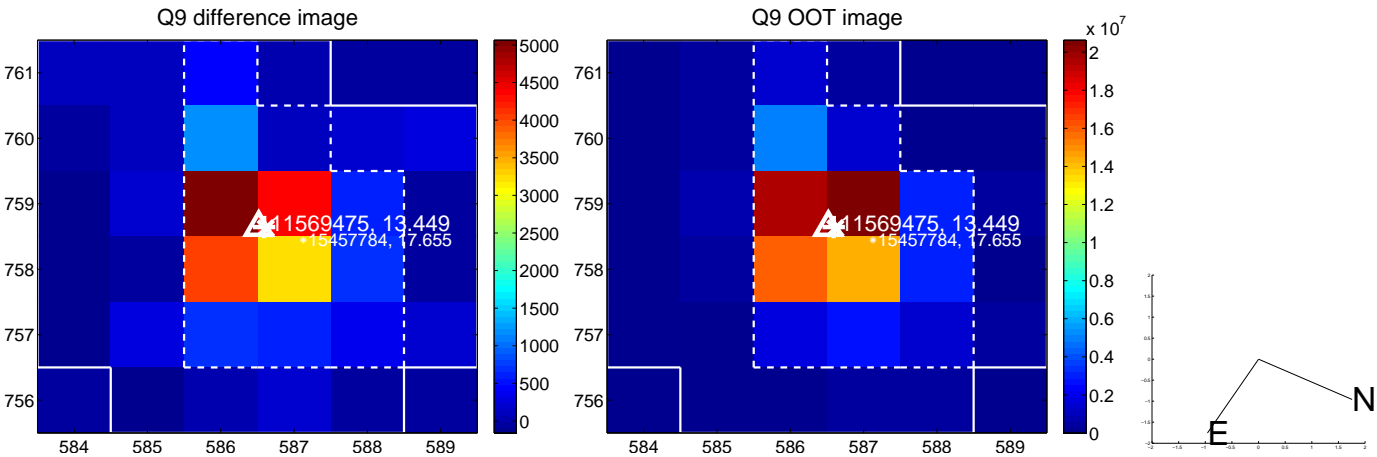
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



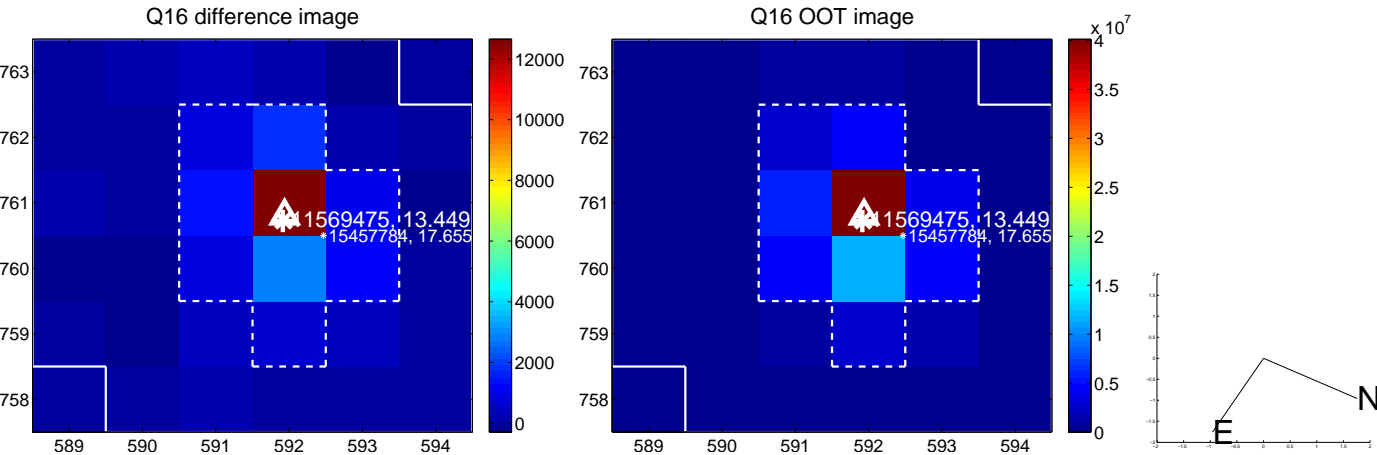
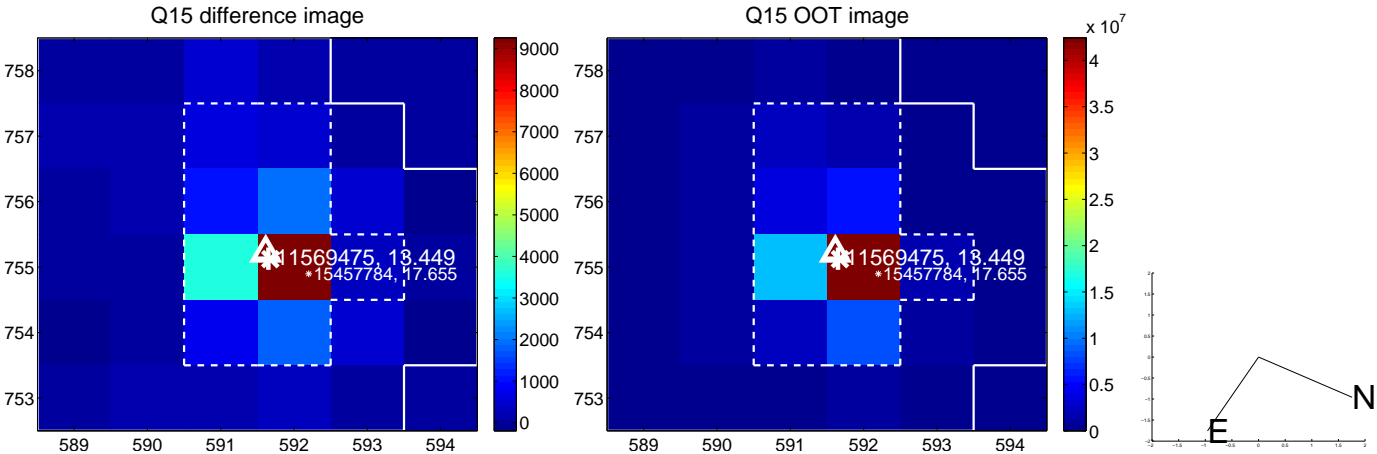
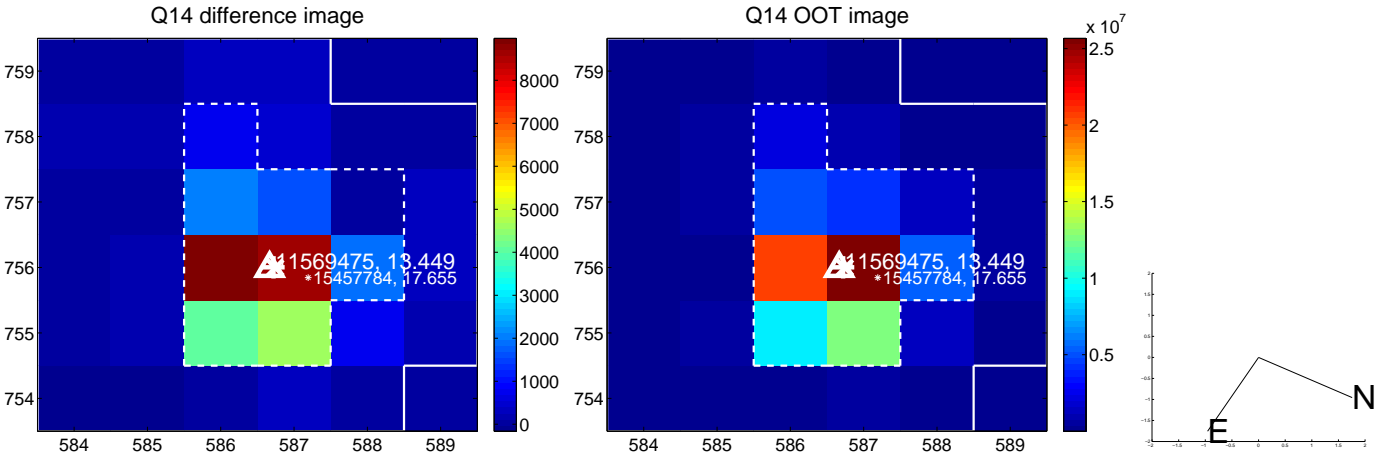
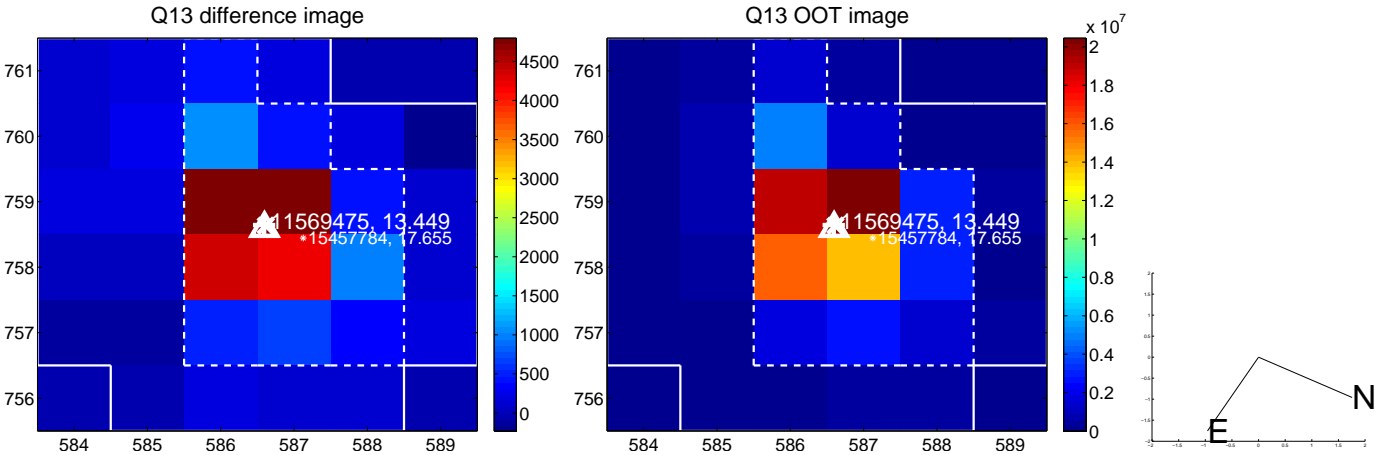
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



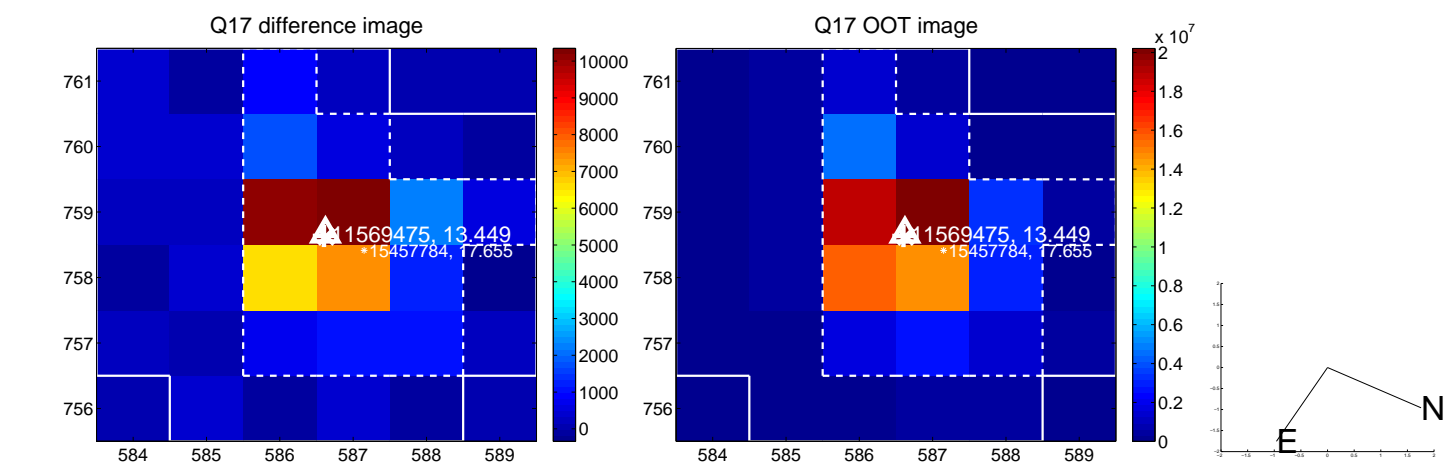
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



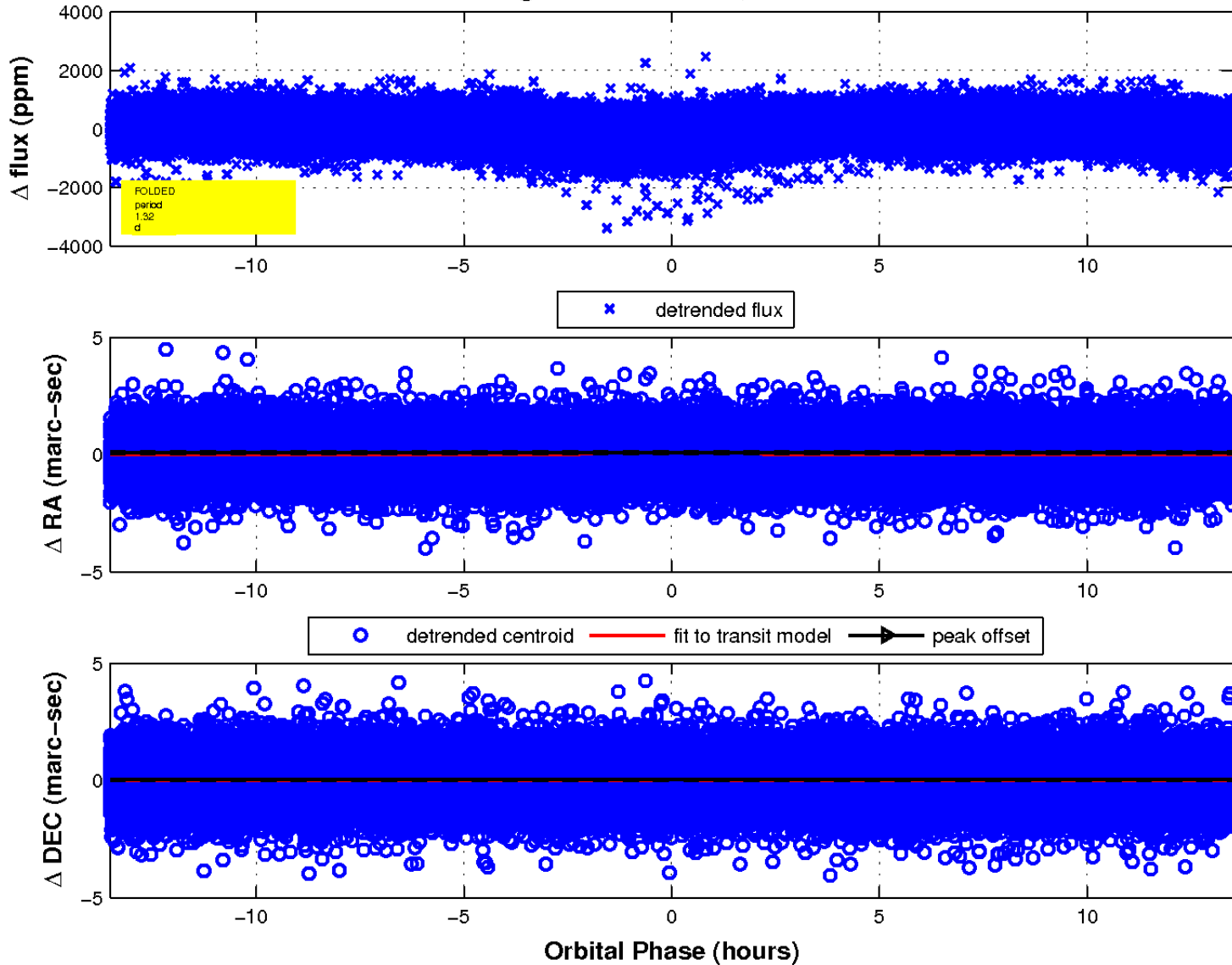
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

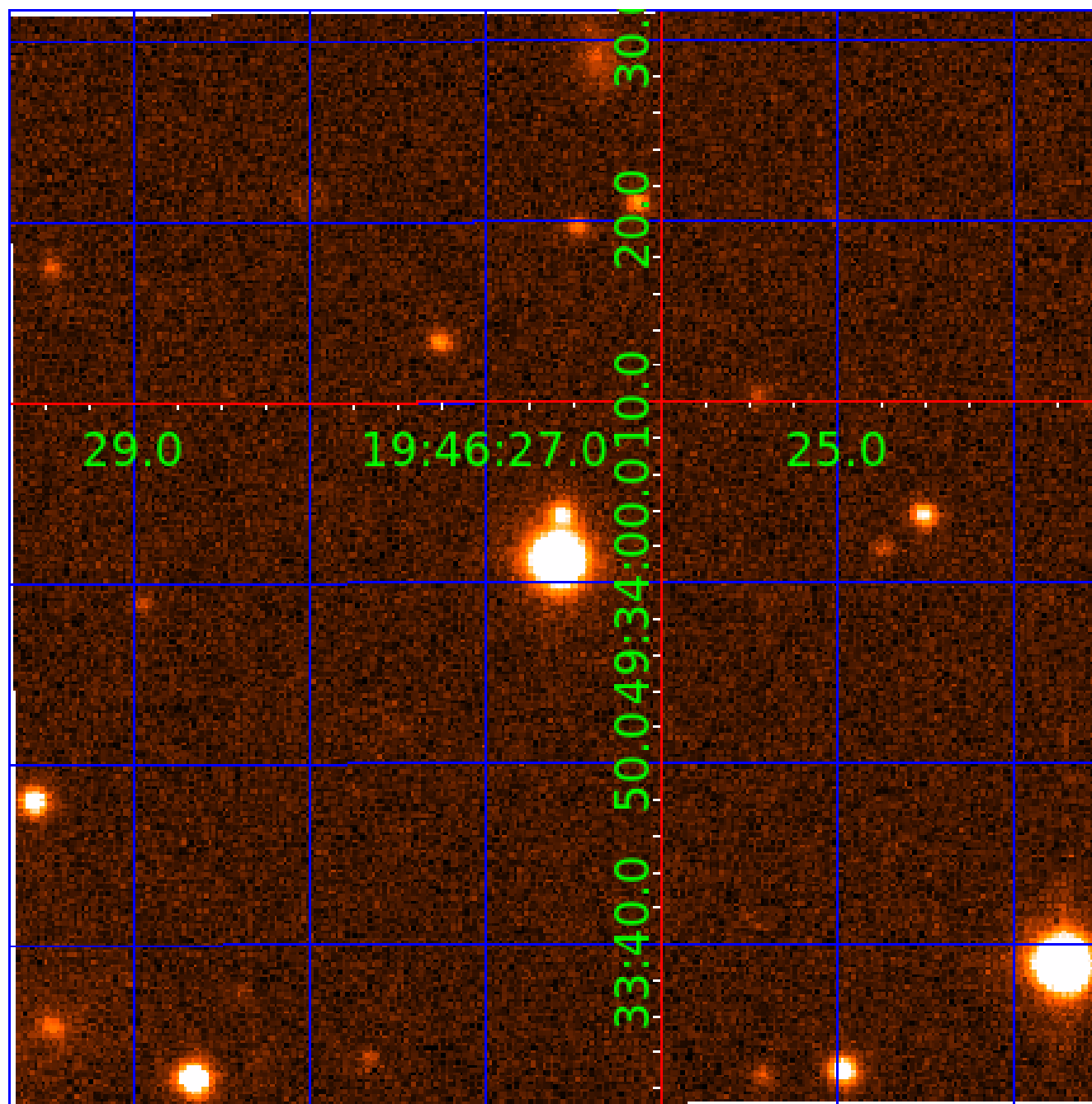


fluxWeightedCentroids, Planet 1 of 2



UKIRT Image

Declination



KIC 011569475

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})
011569475-01	OBS	No	1.317343	132.771699	68.5	4.504	12.8	10.4	12.08	6740	10.92	0.00
011569475-02	OBS	4029.01	1.317270	132.174057	72.6	6.796	18.5	13.3	12.08	6740	10.58	0.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011569475-01	OBS	FP	0.00	1	0	0	0	LPP_DV
011569475-02	OBS	FP	0.00	1	0	0	0	LPP_DV—SAME_NTL_PERIOD

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.

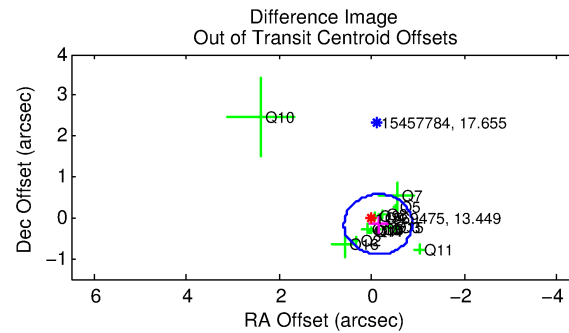
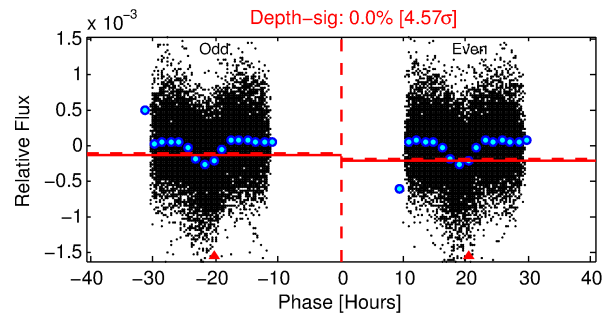
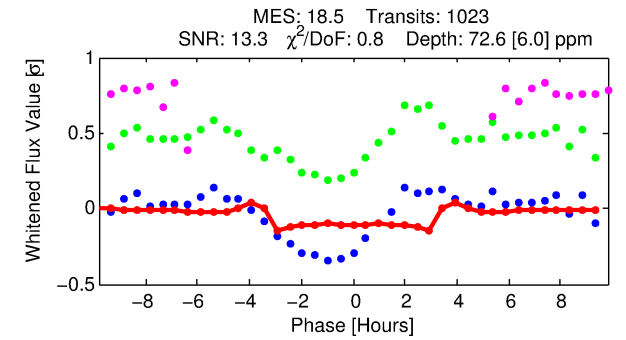
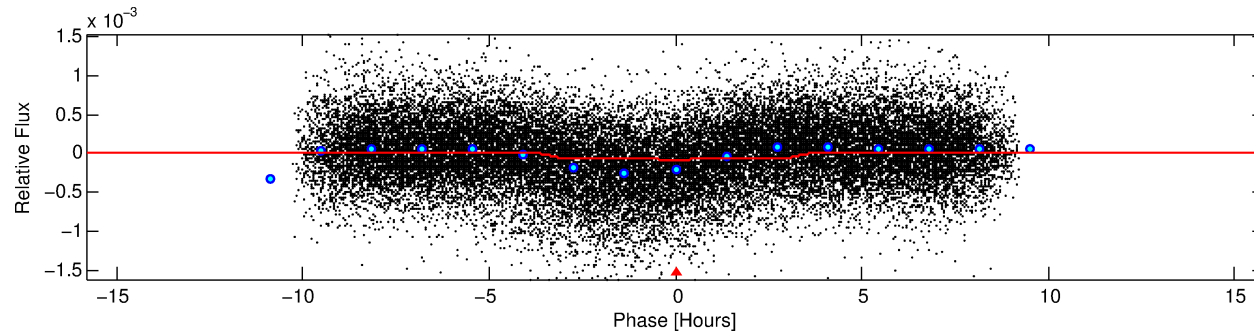
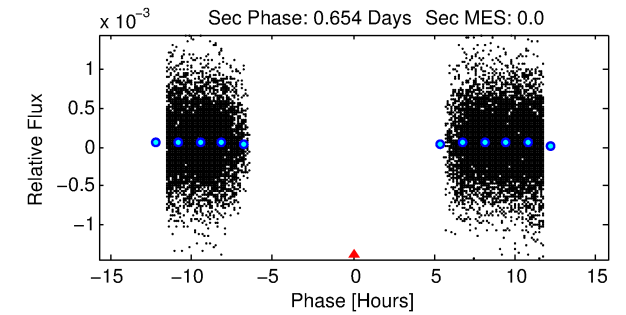
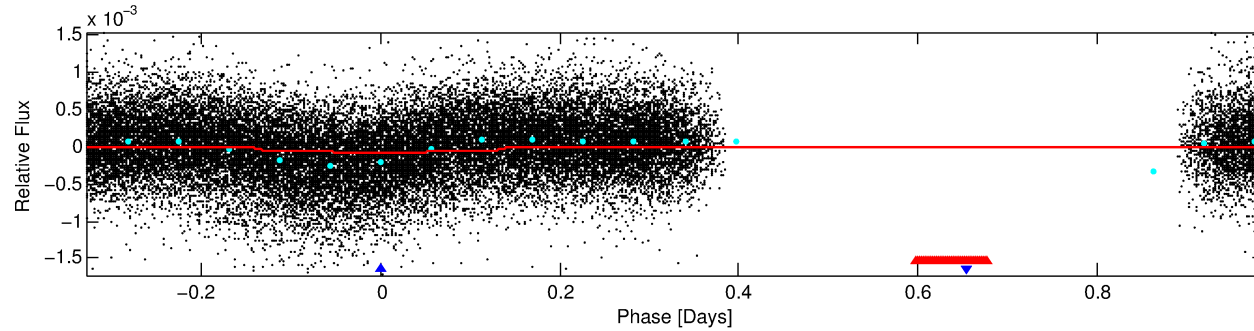
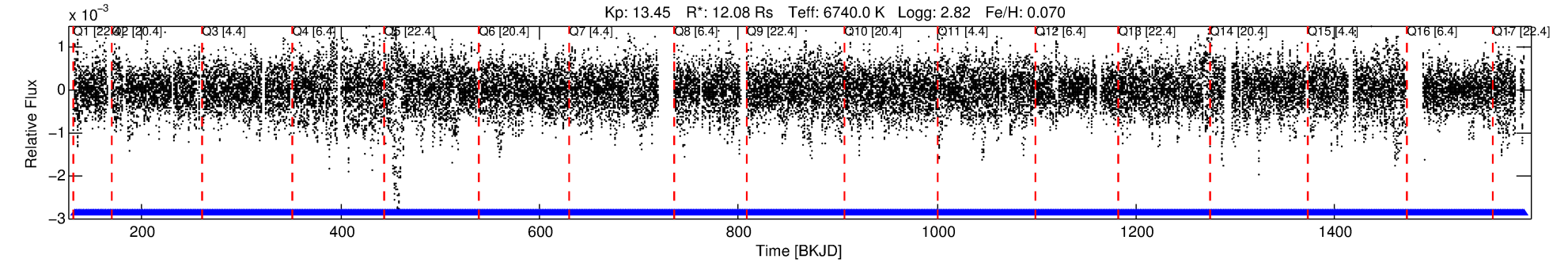
Ephemeris Match Information For 011569475-02

No Significant Match Found

DV One-Page Summary

KIC: 11569475 Candidate: 2 of 2 Period: 1.317 d

KOI: K04029.01 Corr: 0.804



DV Fit Results:

Period = 1.31727 [0.00001] d
Epoch = 132.1741 [0.0021] BKJD
Rp/R* = 0.0080 [0.0023]
a/R* = 1.51 [1.36]
b = 0.45 [2.86]
Seff = N/A
Teq = N/A
Rp = 10.58 [6.78] Re
a = N/A
Ag = N/A
Teffp = N/A

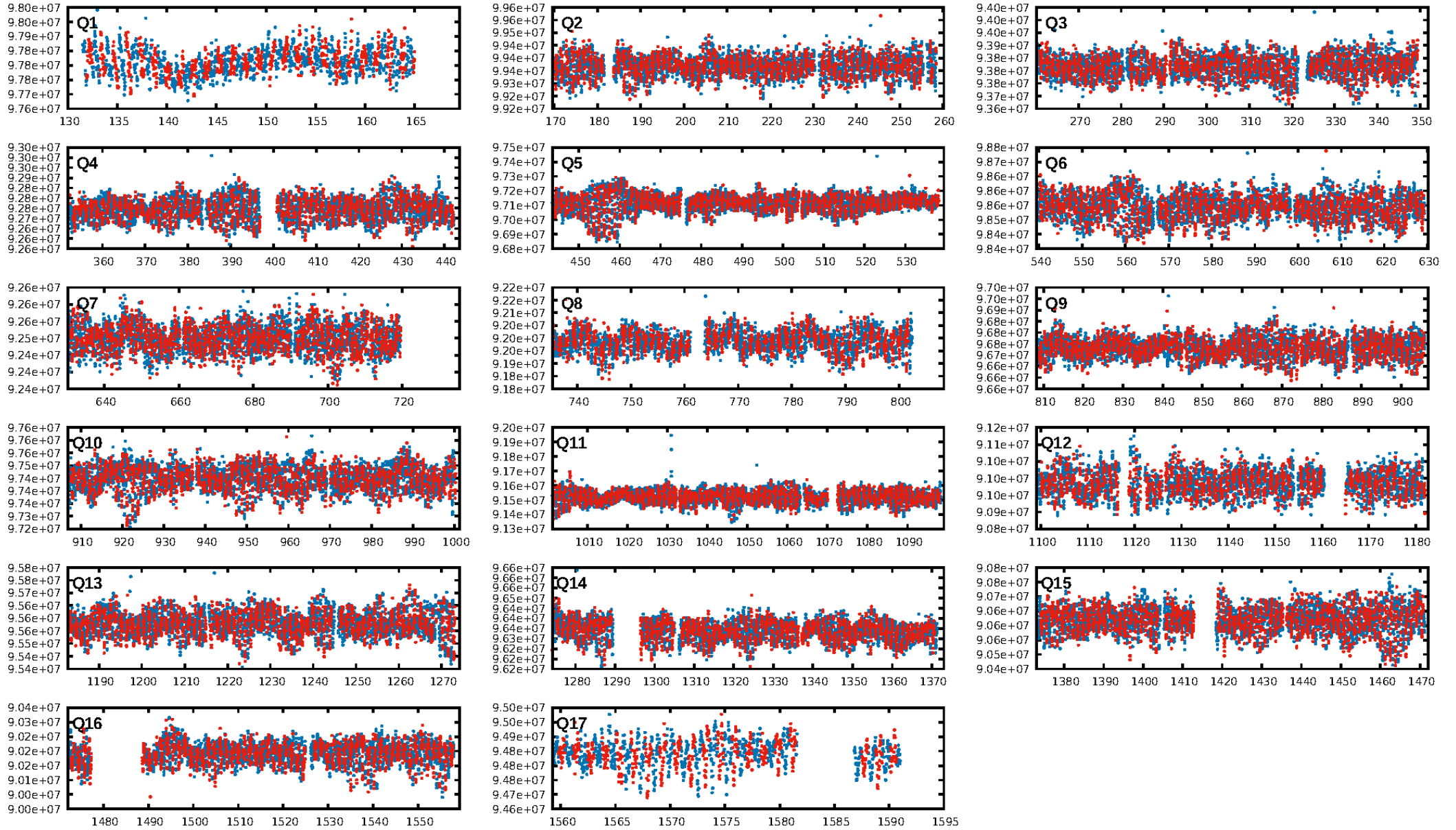
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [977/977]
GhostDiagnostic-chr: 1.623
Centroid-sig: 0.1%
Centroid-so: 0.716 arcsec [2.30σ]
OotOffset-rm: 0.213 arcsec [0.87σ]
KicOffset-rm: 0.263 arcsec [1.20σ]
OotOffset-st: 4/4/3/4 [15]
KicOffset-st: 4/4/3/4 [15]
DiffImageQuality-fgm: 1.00 [15/15]
DiffImageOverlap-fno: 0.41 [7/17]

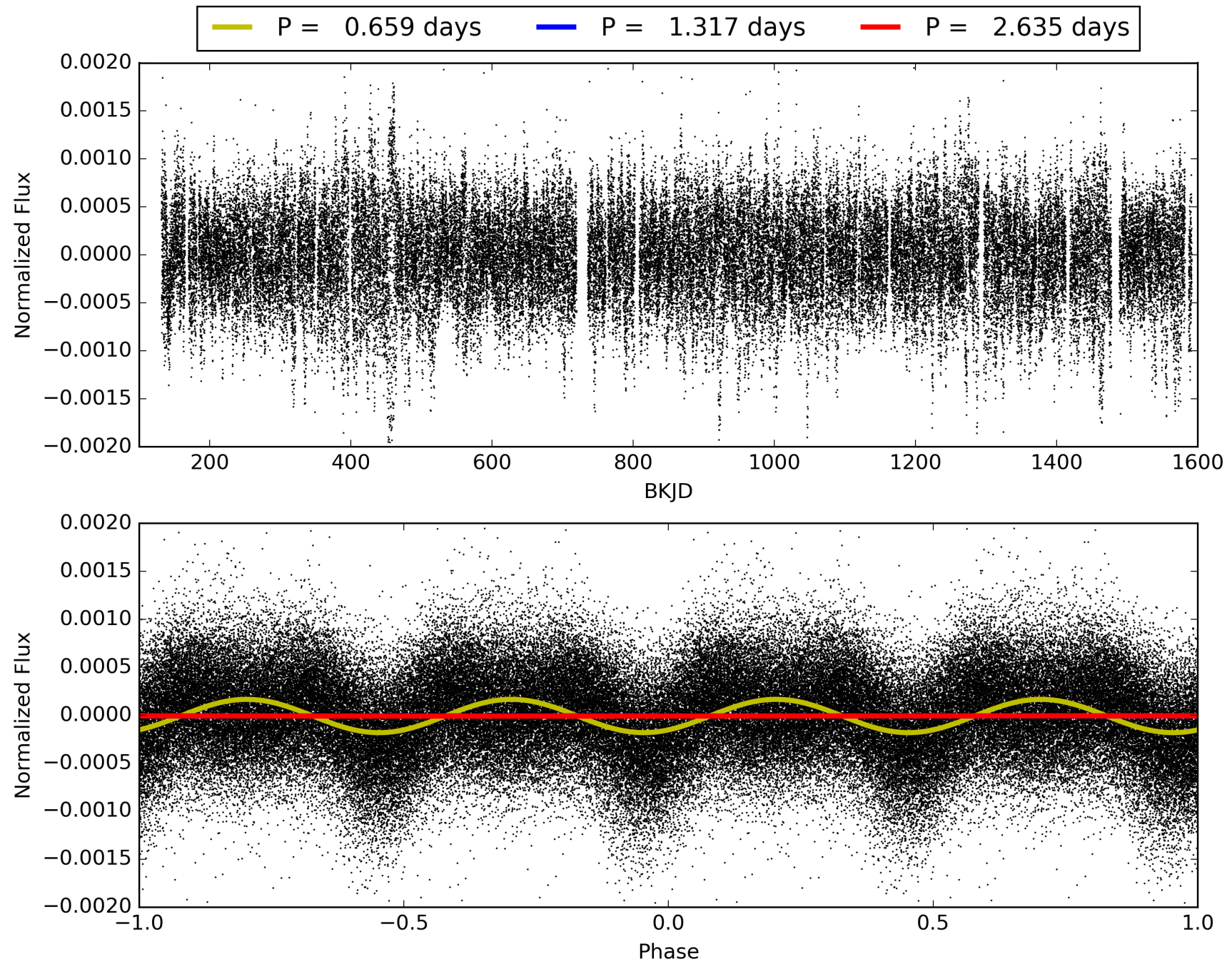
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 23:04:22 Z

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

TCE 011569475-02, PDC Light Curves

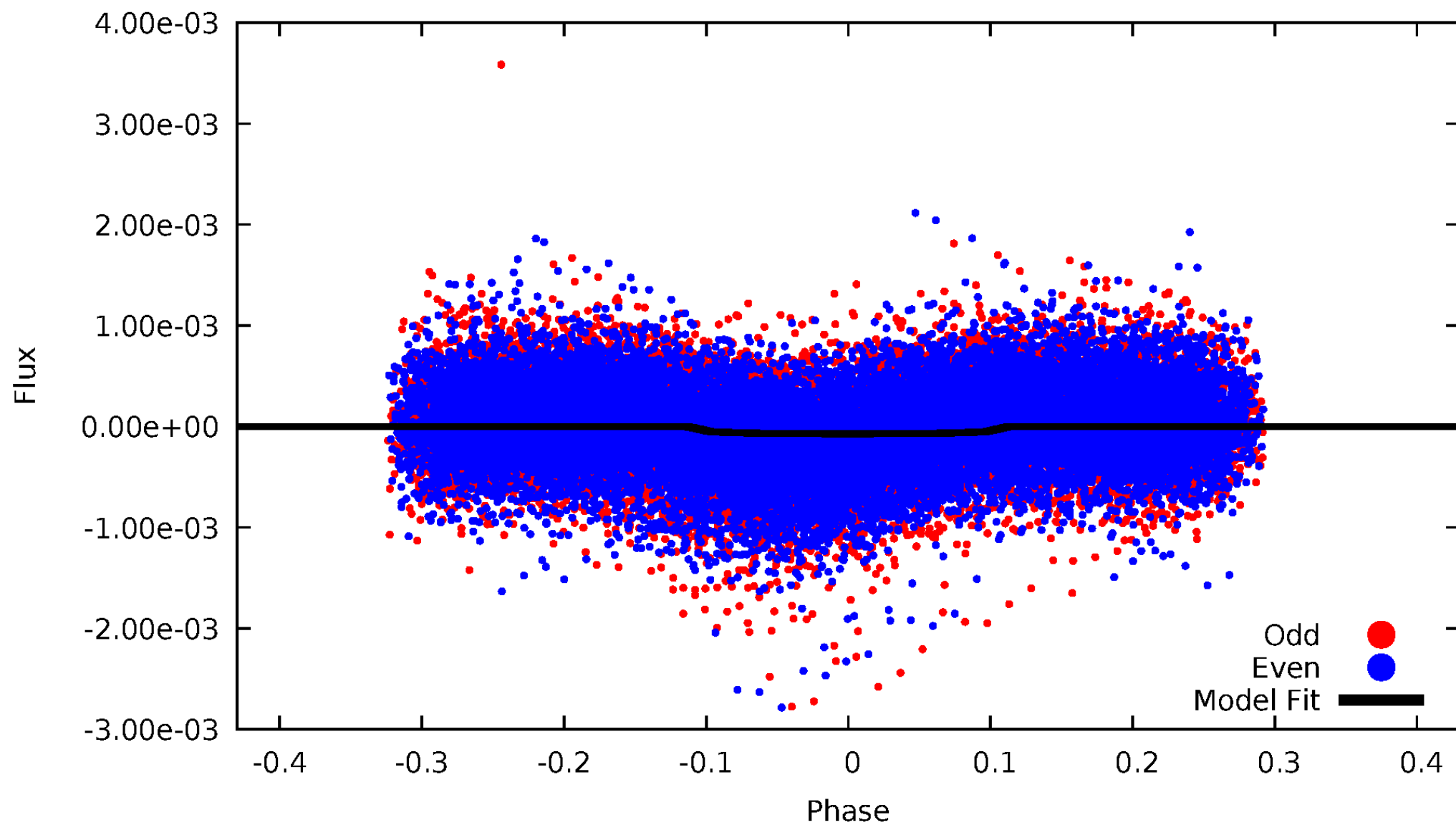


TCE 011569475-02



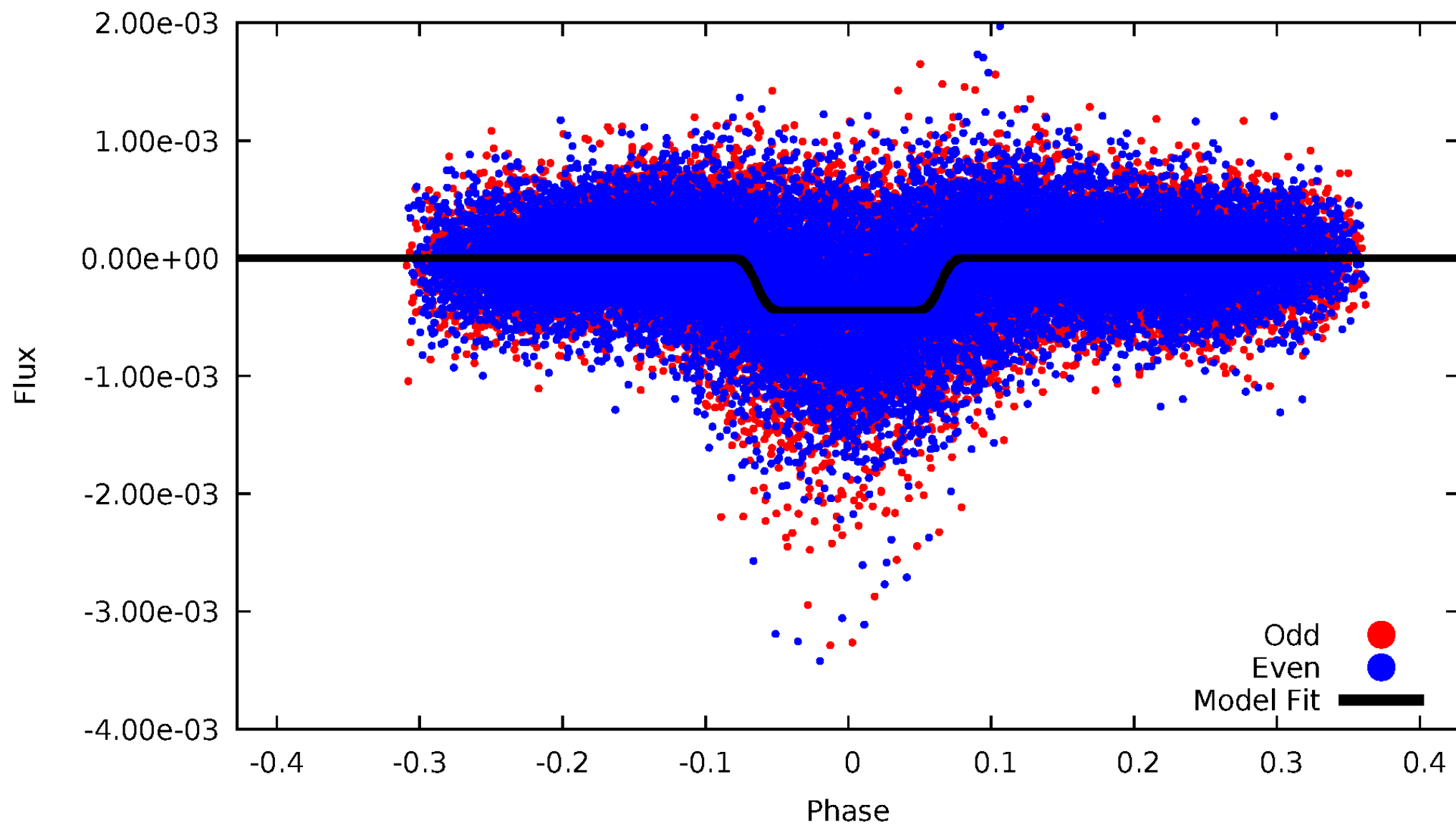
DV Odd/Even

TCE 011569475-02



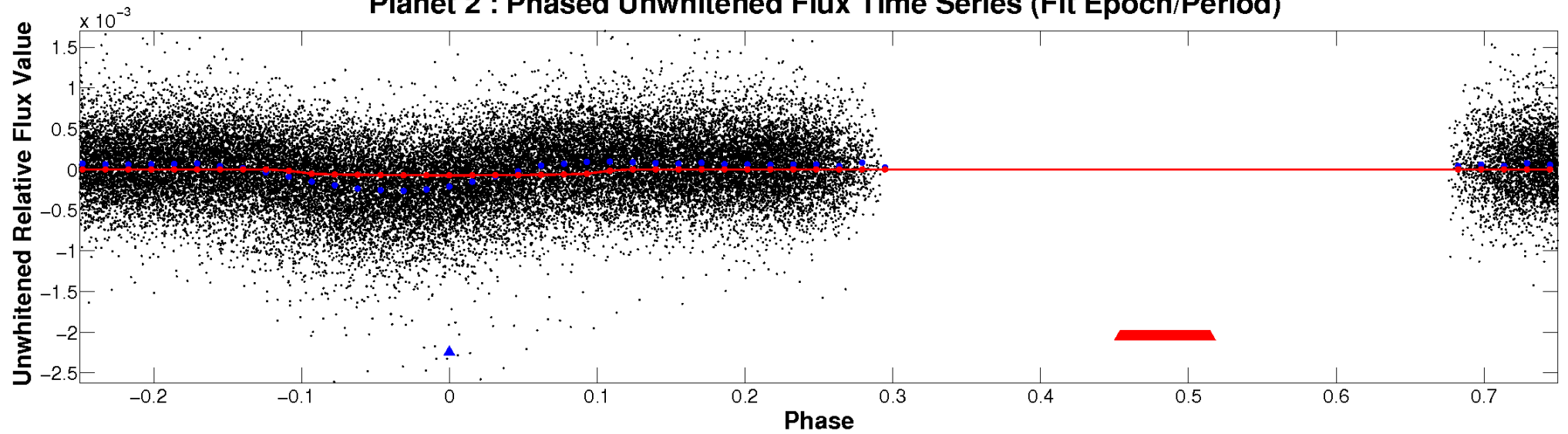
ALT Odd/Even

TCE 011569475-02

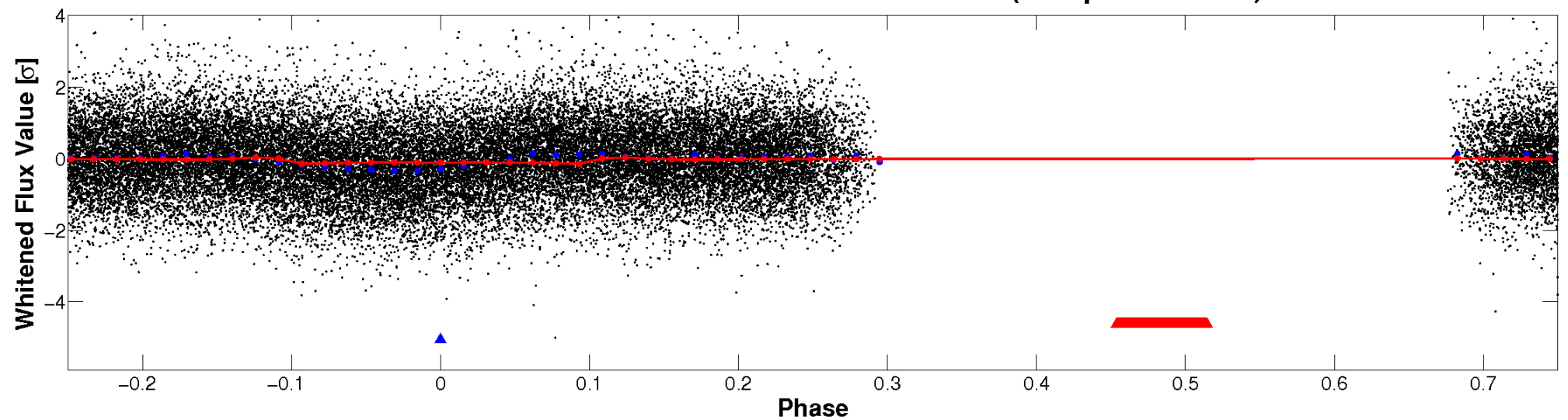


Non-Whitened Vs. Whitened Light Curve

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

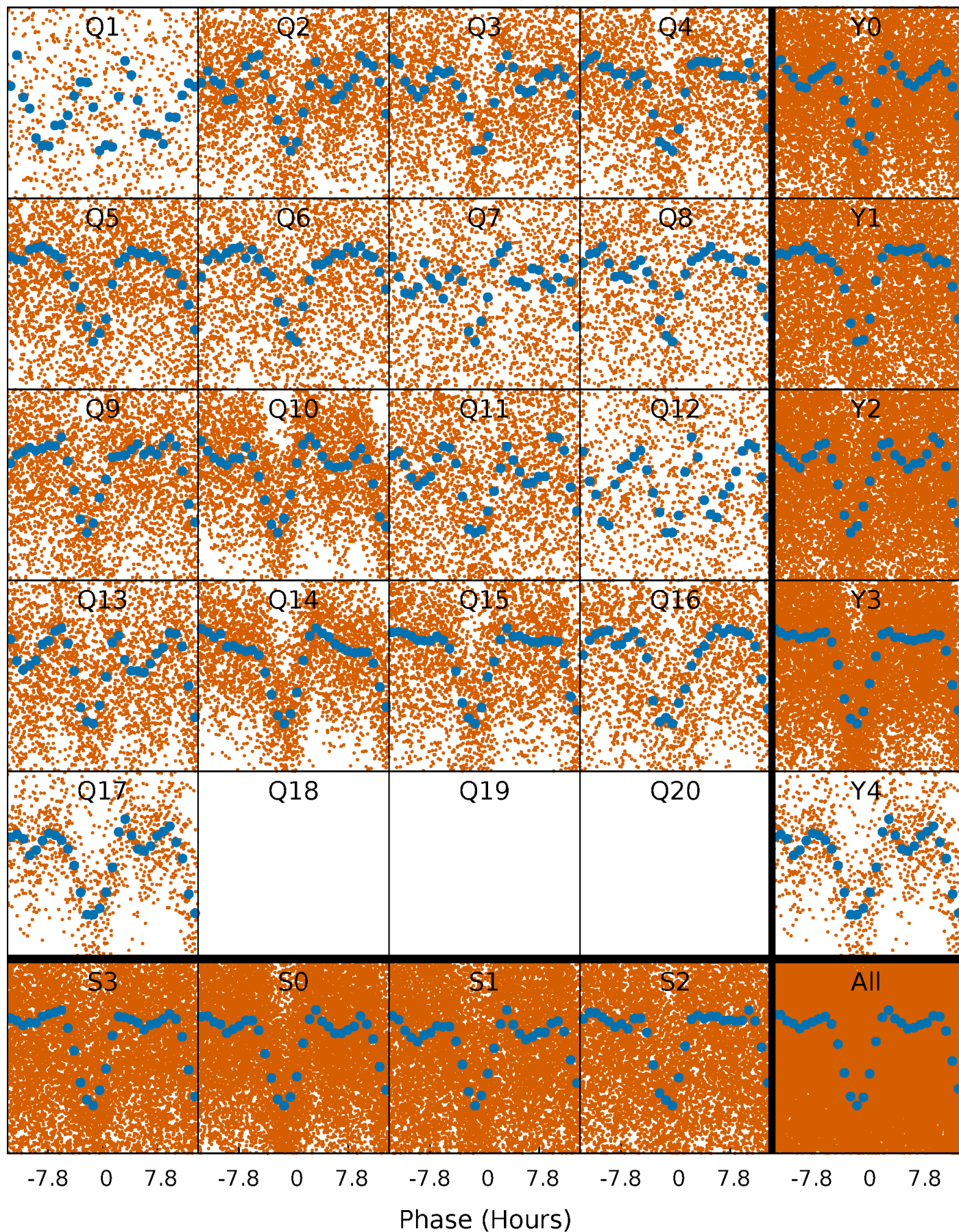


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



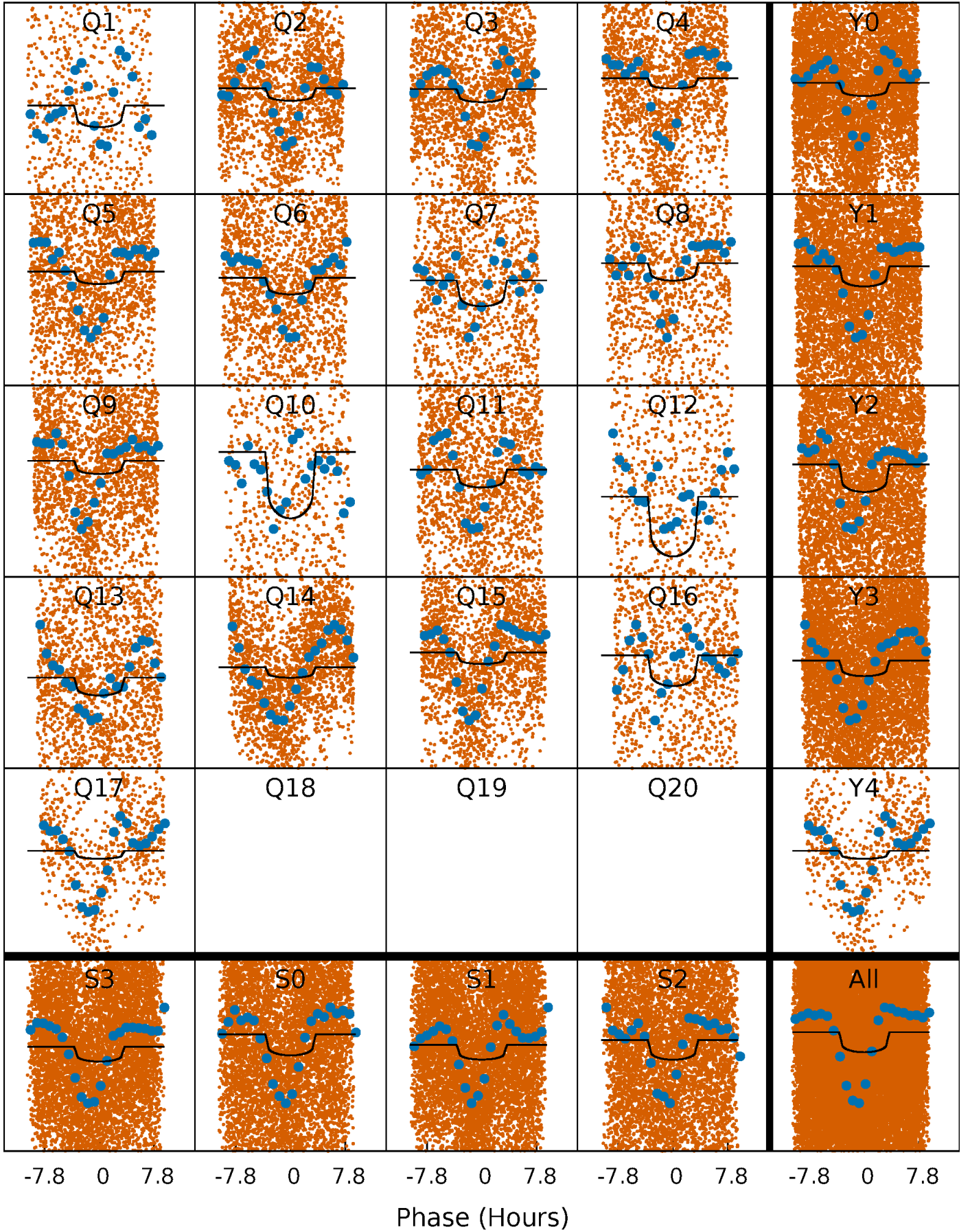
PDC Quarter-Phased Transit Curves

TCE 011569475-02 P= 1.317270 Days $T_0=132.174057$ (BKJD)



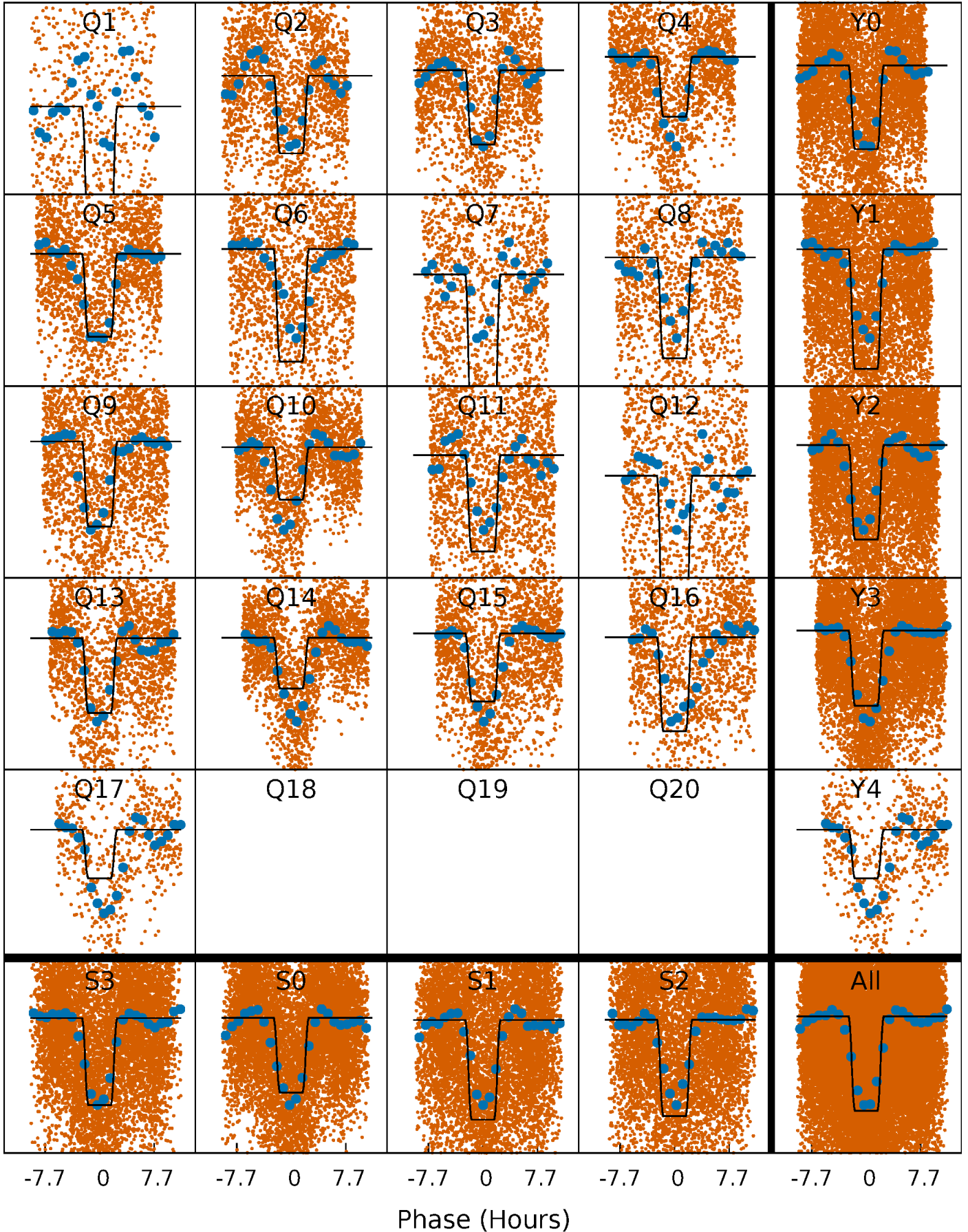
DV Quarter-Phased Transit Curves

TCE 011569475-02 $P = 1.317270$ Days $T_0 = 132.174057$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

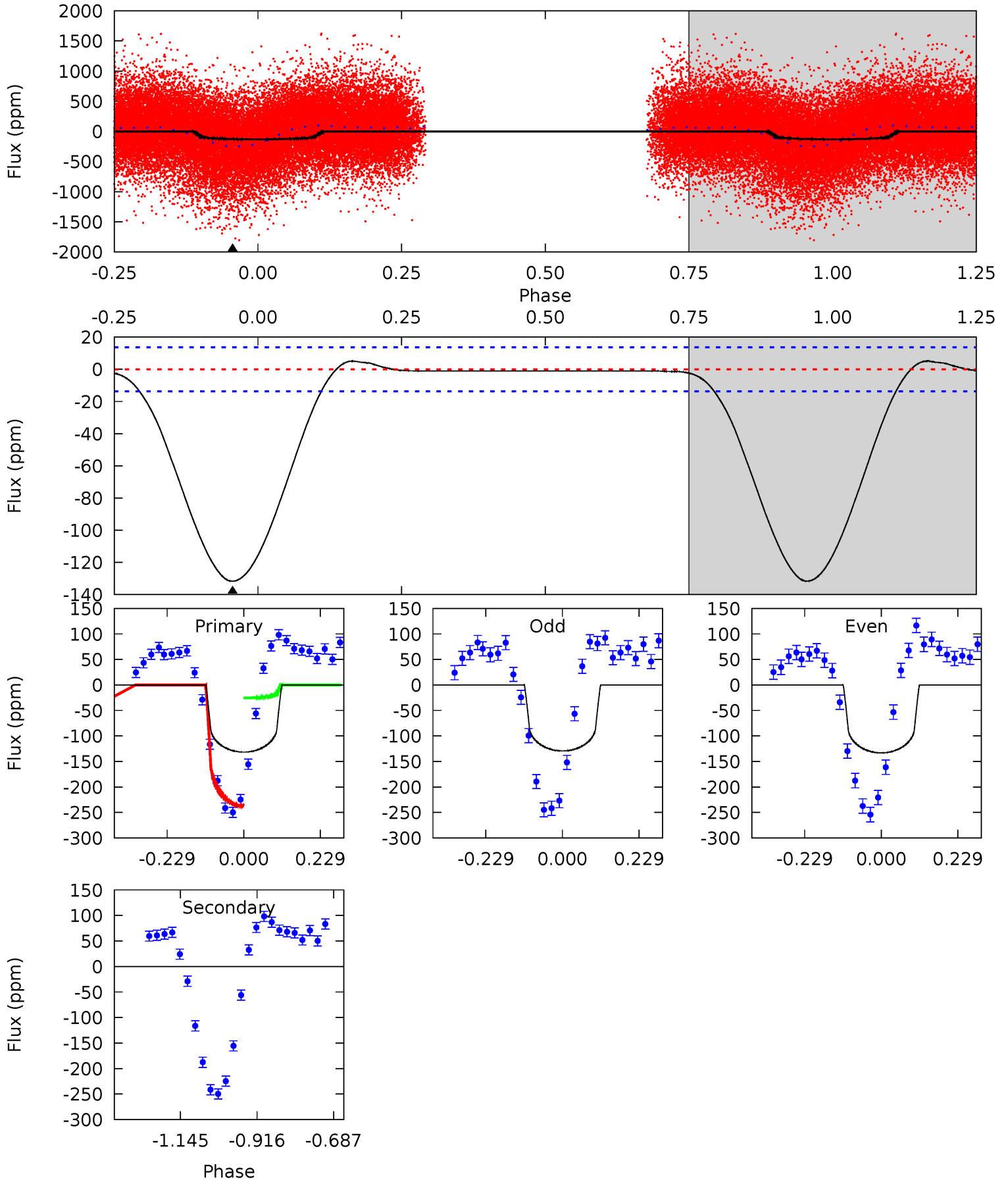
TCE 011569475-02 $P = 1.317204$ Days $T_0 = 132.154889$ (BKJD)



DV Model-Shift Uniqueness Test

011569475-02, P = 1.317270 Days, E = 130.856787 Days

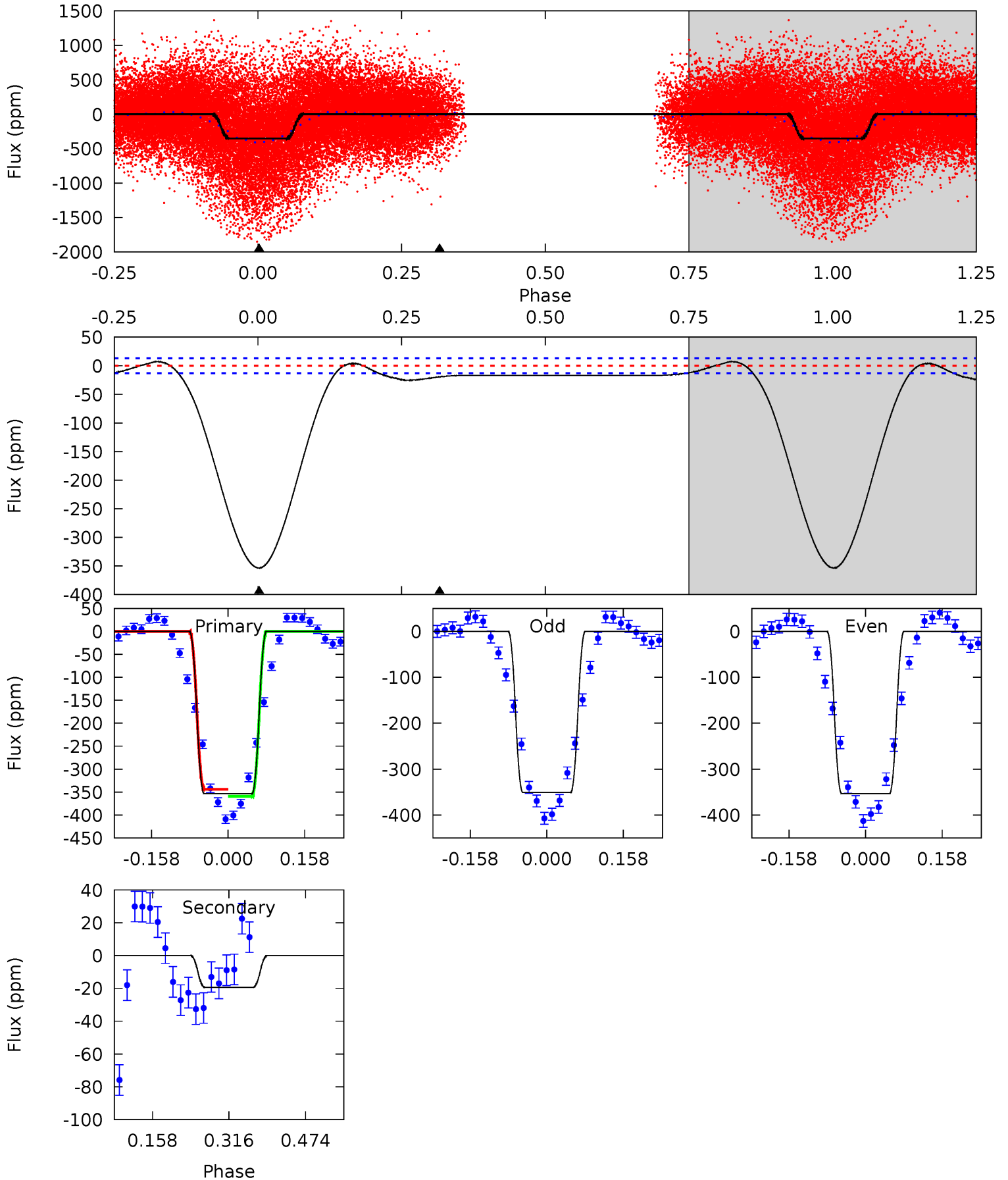
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
42.3	0	0	0	4.39	1.20	0.60	42.3	42.3	0	0	0.61	1.15	0.04	31.7



Alt Model-Shift Uniqueness Test

011569475-02, P = 1.317204 Days, E = 130.837685 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
121.5	6.68	0	0	4.47	1.41	2.68	121.5	121.5	6.68	6.68	0.47	1.04	0.02	1.94



Stellar Parameters For KIC 011569475

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6740^{+163}_{-265}	$2.816^{+0.513}_{-0.054}$	$0.070^{+0.200}_{-0.550}$	$12.080^{+0.766}_{-6.893}$	$3.479^{+0.070}_{-1.430}$	$0.003^{+0.019}_{-0.000}$
	+2%/-4%	+18%/-2%	+286%/-786%	+6%/-57%	+2%/-41%	+685%/-10%
Source	PHO1	FLK73	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 011569475-02 / KOI 4029.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 3	$9.18^{+3.60}_{-3.41}$	7397^{+445}_{-954}	-6031^{+763}_{-390}	$-0.001^{+0.027}_{-0.028}$
Alt.	-19 ± 3	$25.49^{+4.71}_{-7.60}$	7392^{+456}_{-991}	-5936^{+809}_{-375}	$0.020^{+0.018}_{-0.006}$

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 $A_{obs} \gg 1.0$

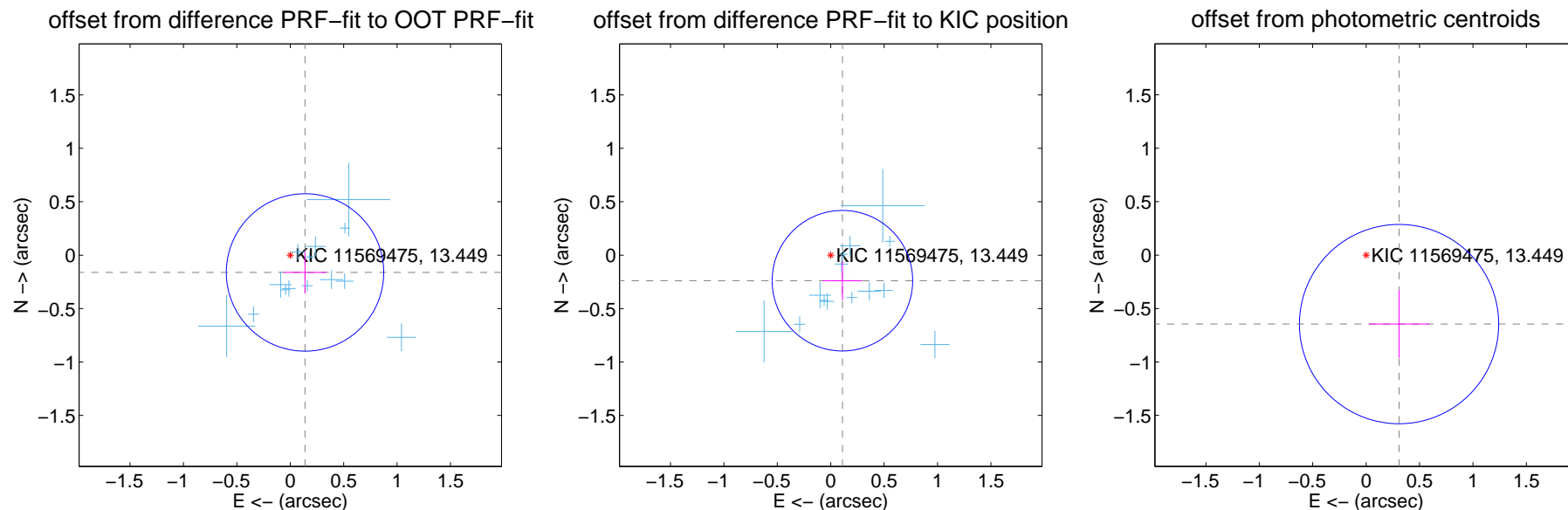
DV Centroid Data

Supplemental centroid analysis for 011569475-02. Kepler magnitude: 13.45. Transit SNR 13.31

There are 15 quarters with good PRF difference image offsets

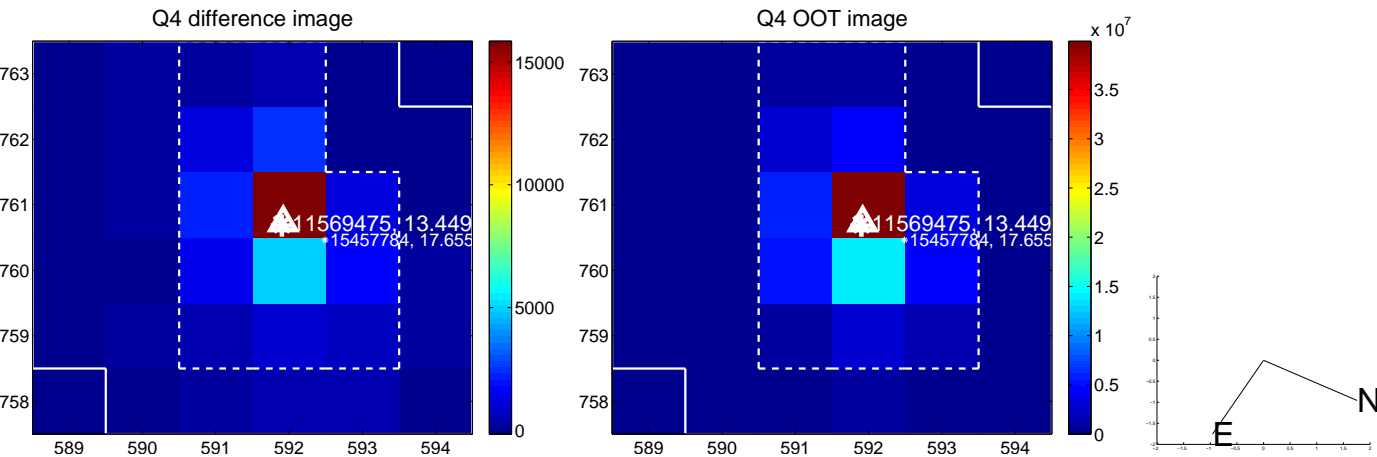
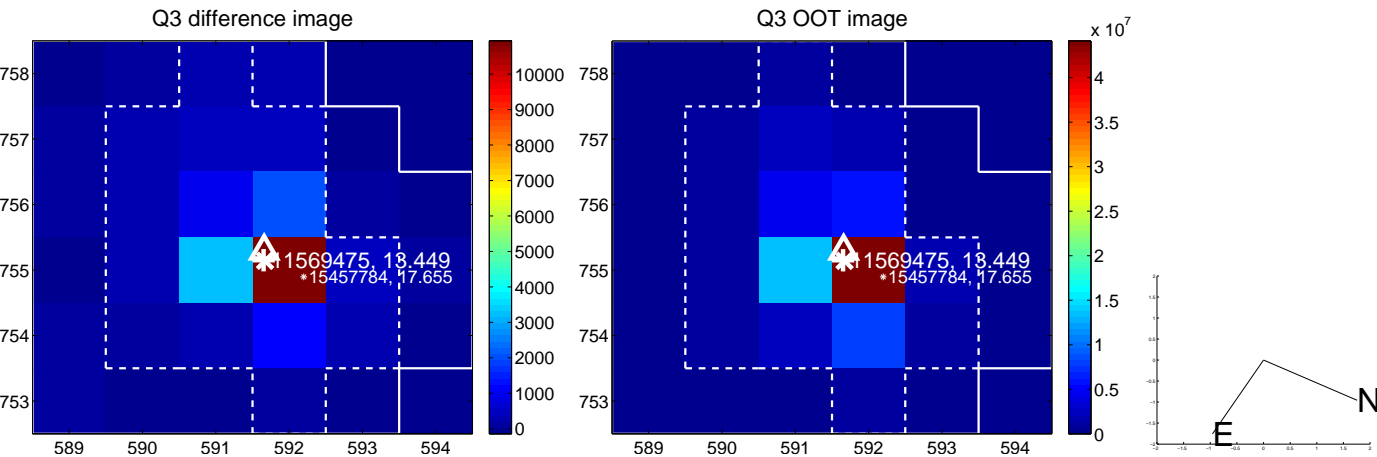
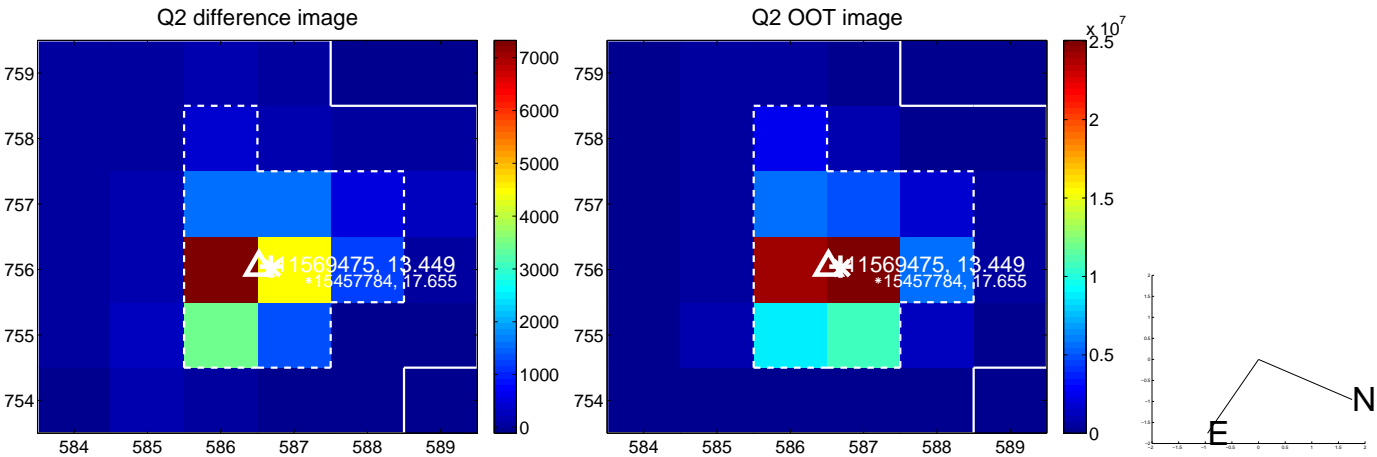
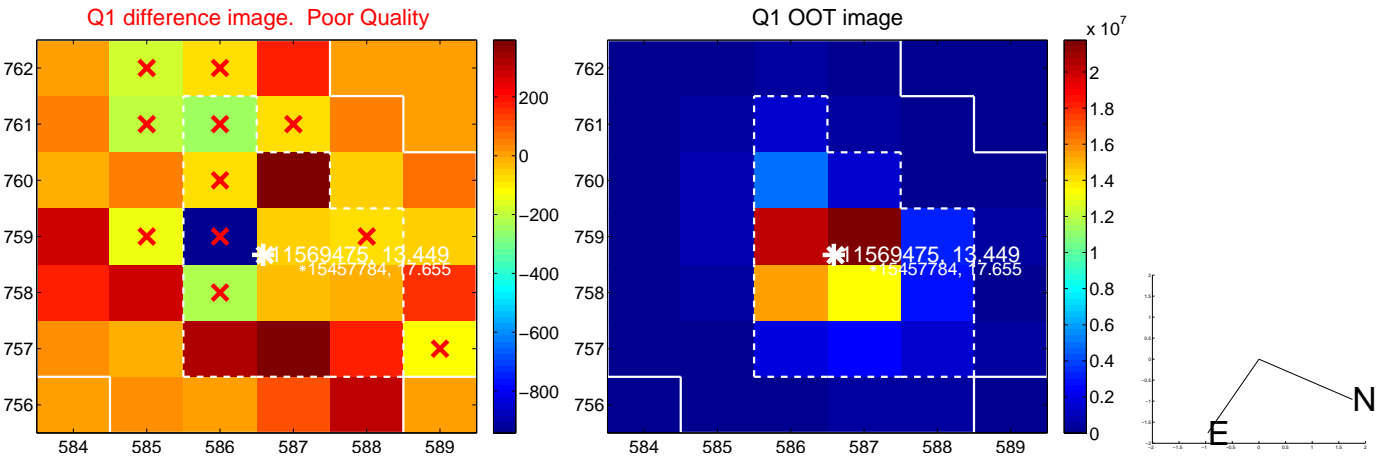
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.213 ± 0.246	0.87	-0.138 ± 0.196	-0.162 ± 0.195
PRF-fit source offset from KIC position	0.263 ± 0.219	1.20	-0.110 ± 0.184	-0.239 ± 0.182
photometric centroid source offset	0.72 ± 0.31	2.30	-0.31 ± 0.28	-0.65 ± 0.32

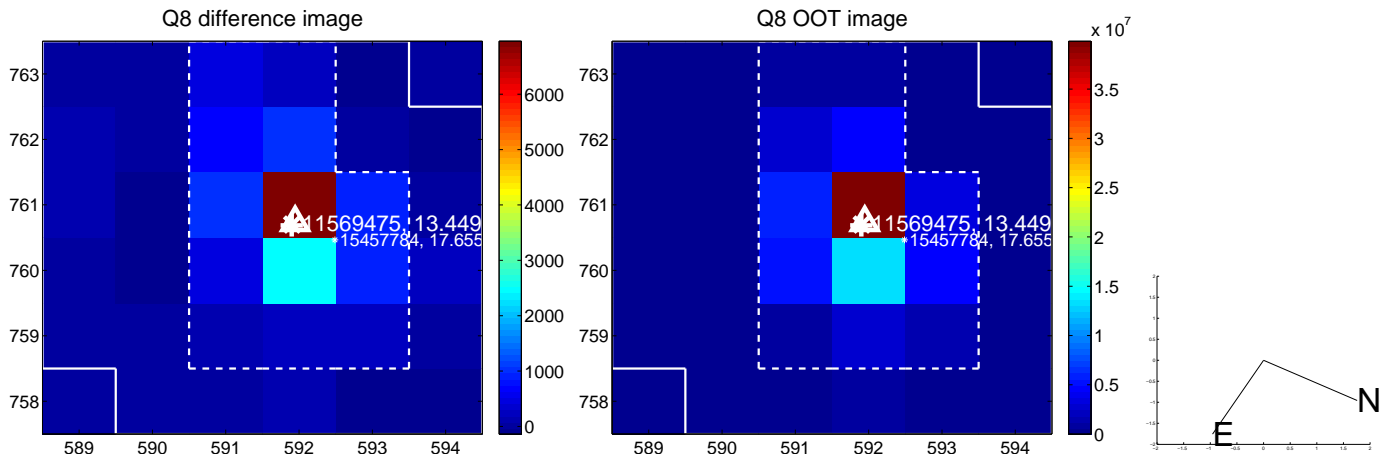
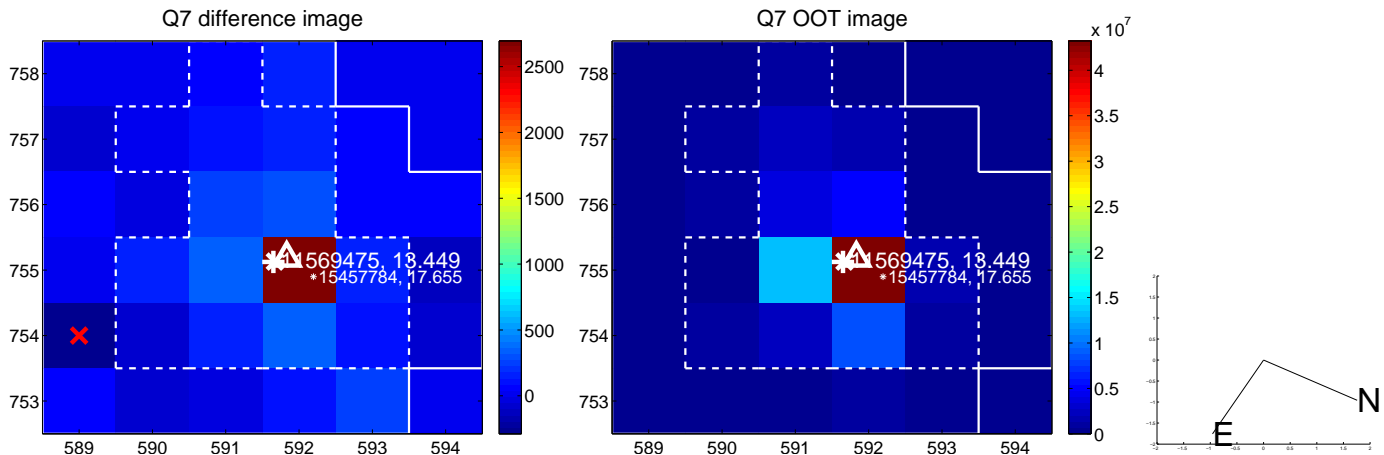
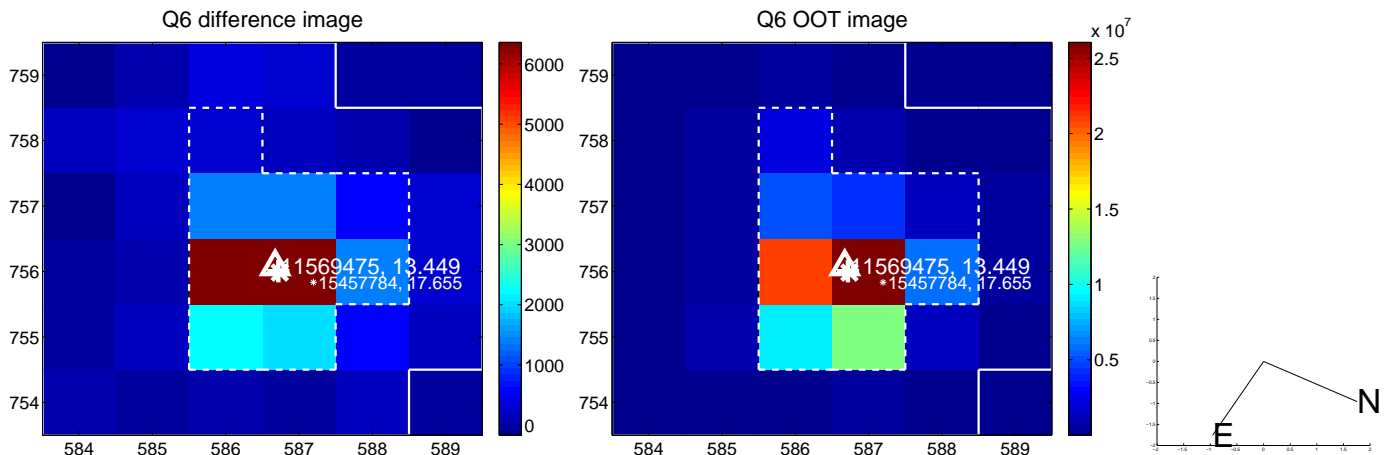
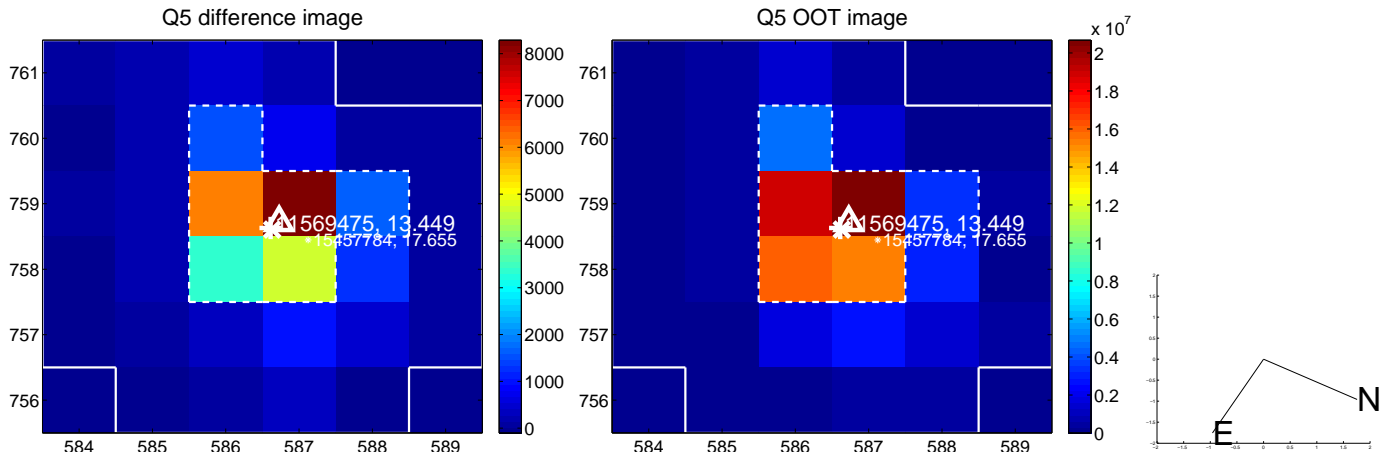


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

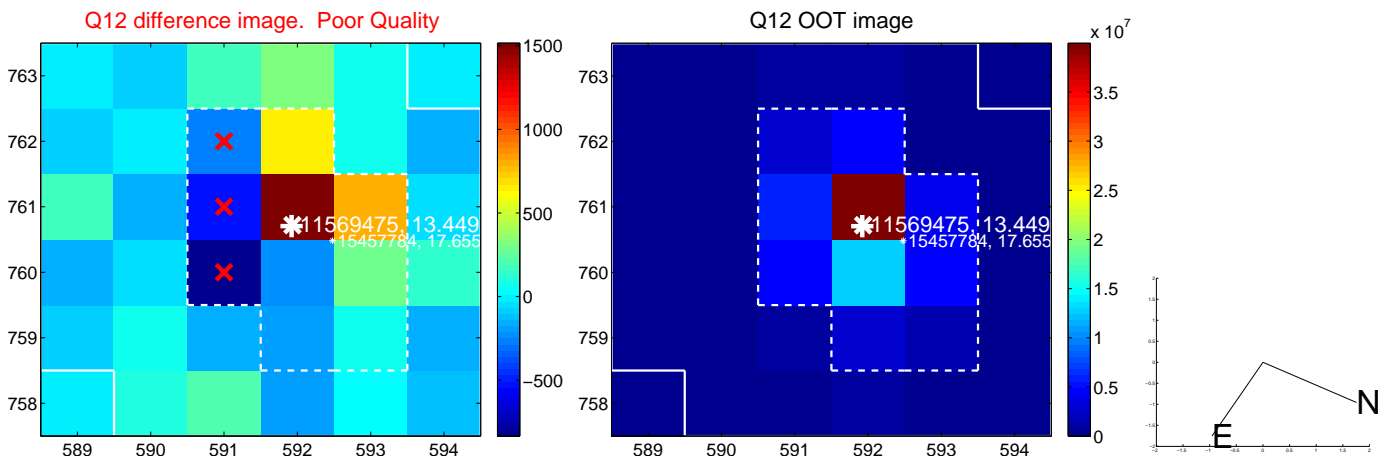
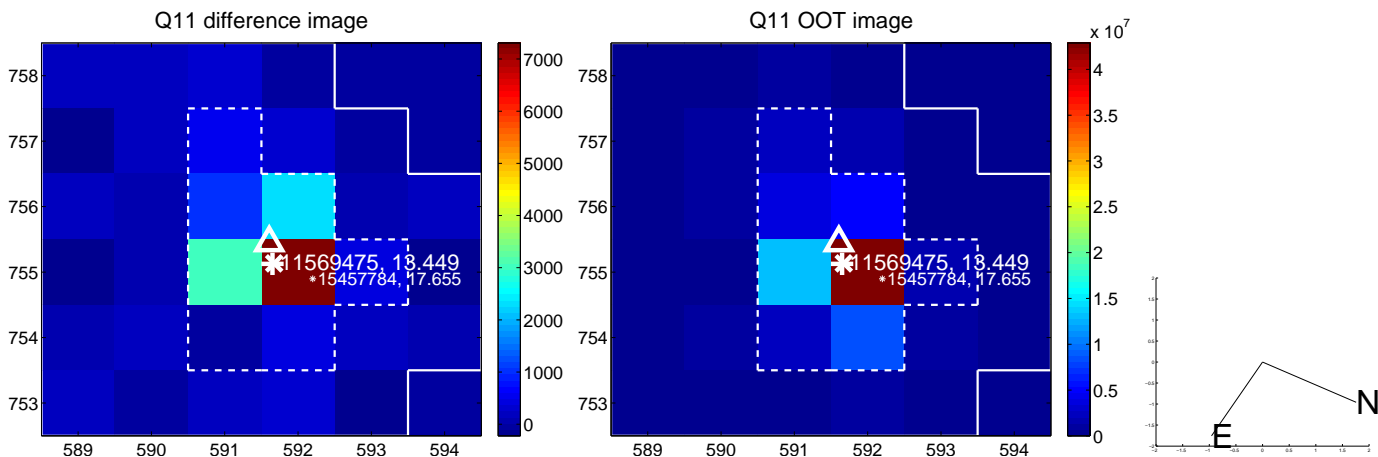
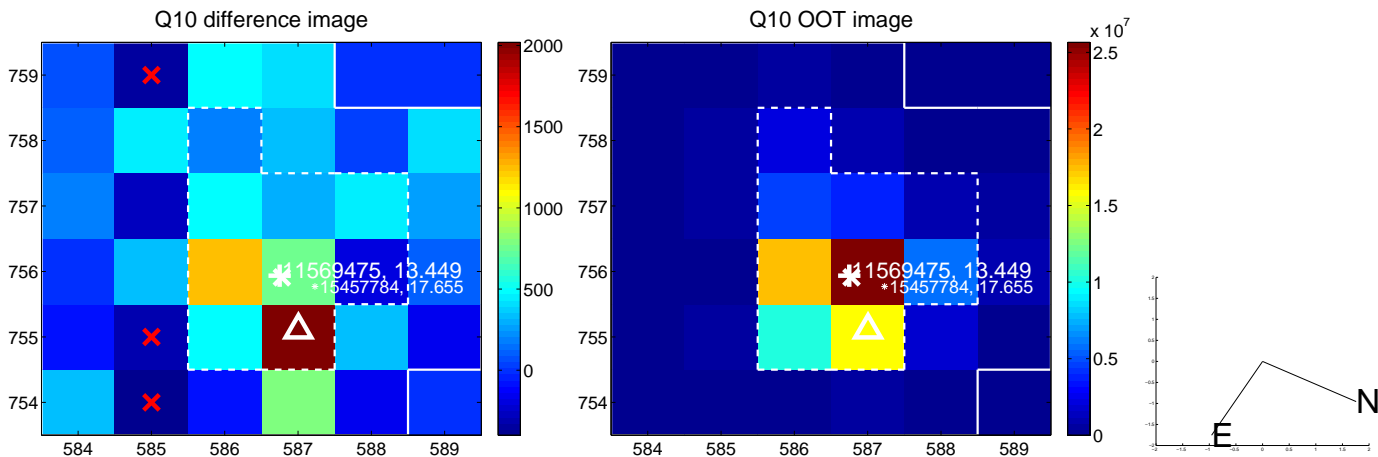
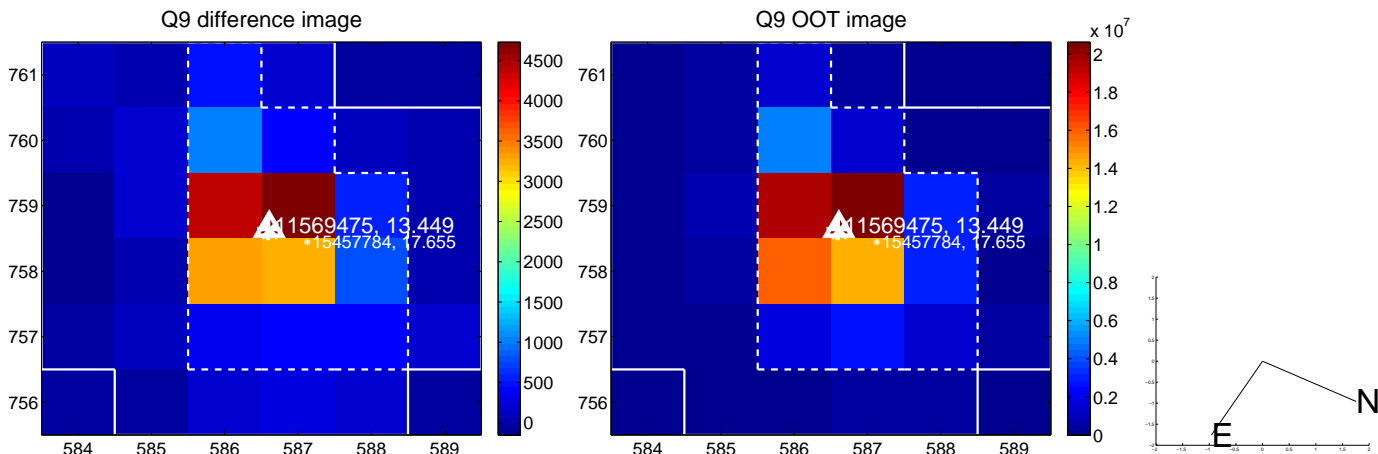
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



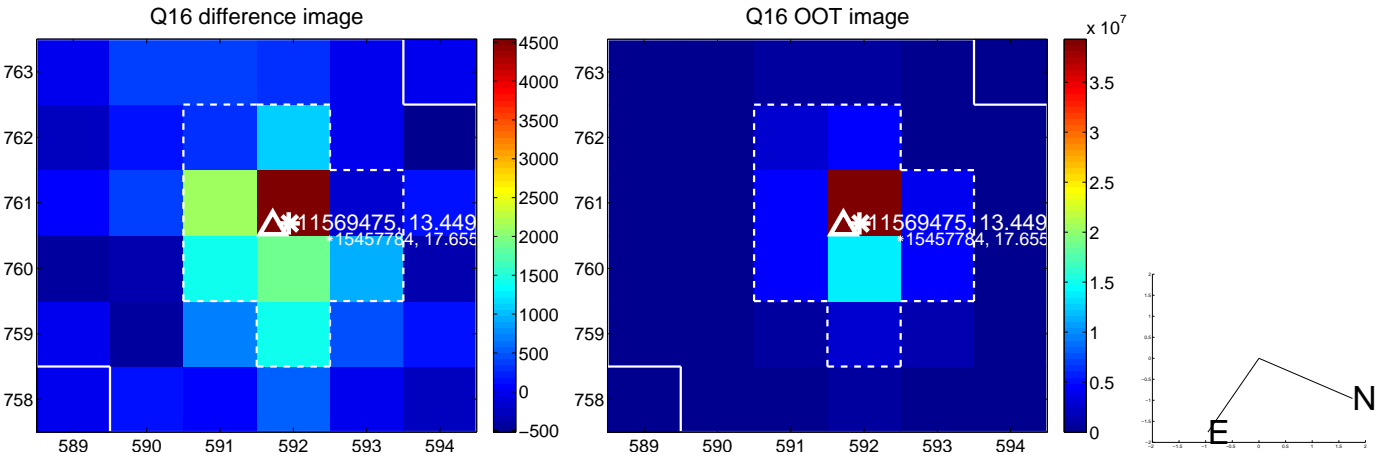
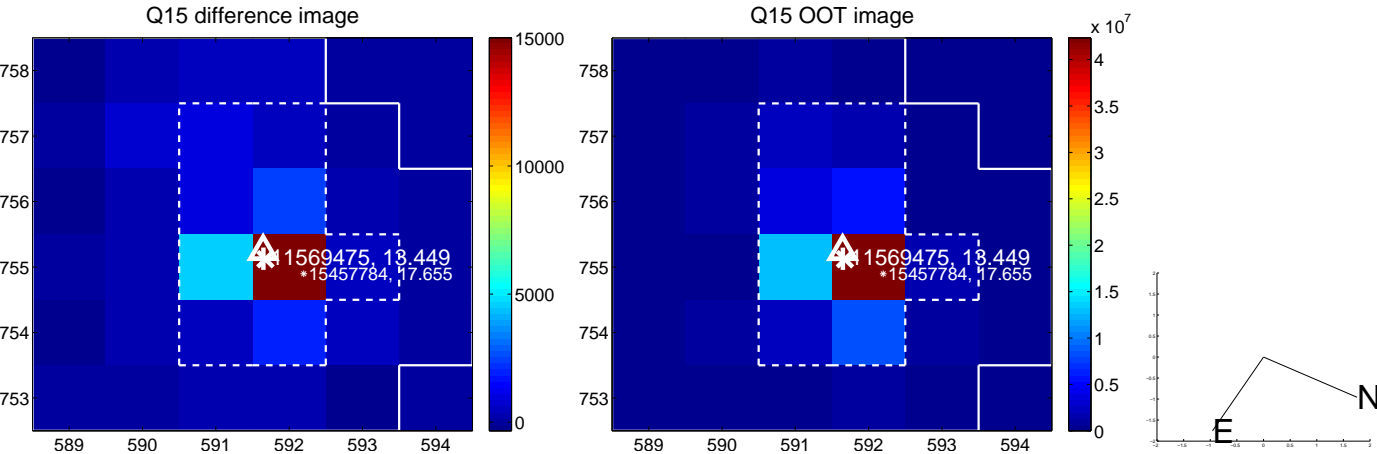
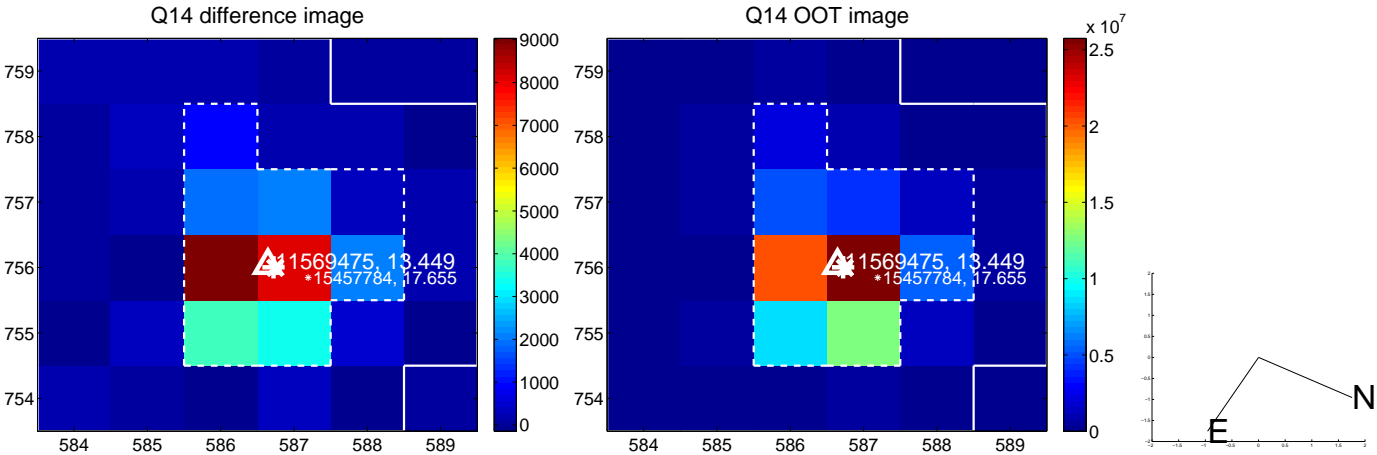
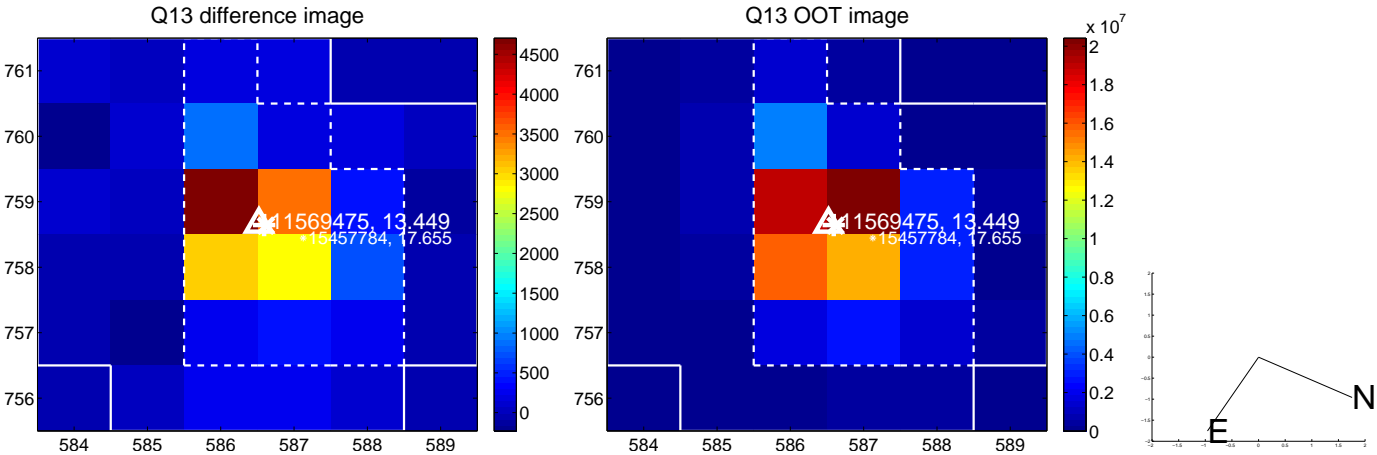
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



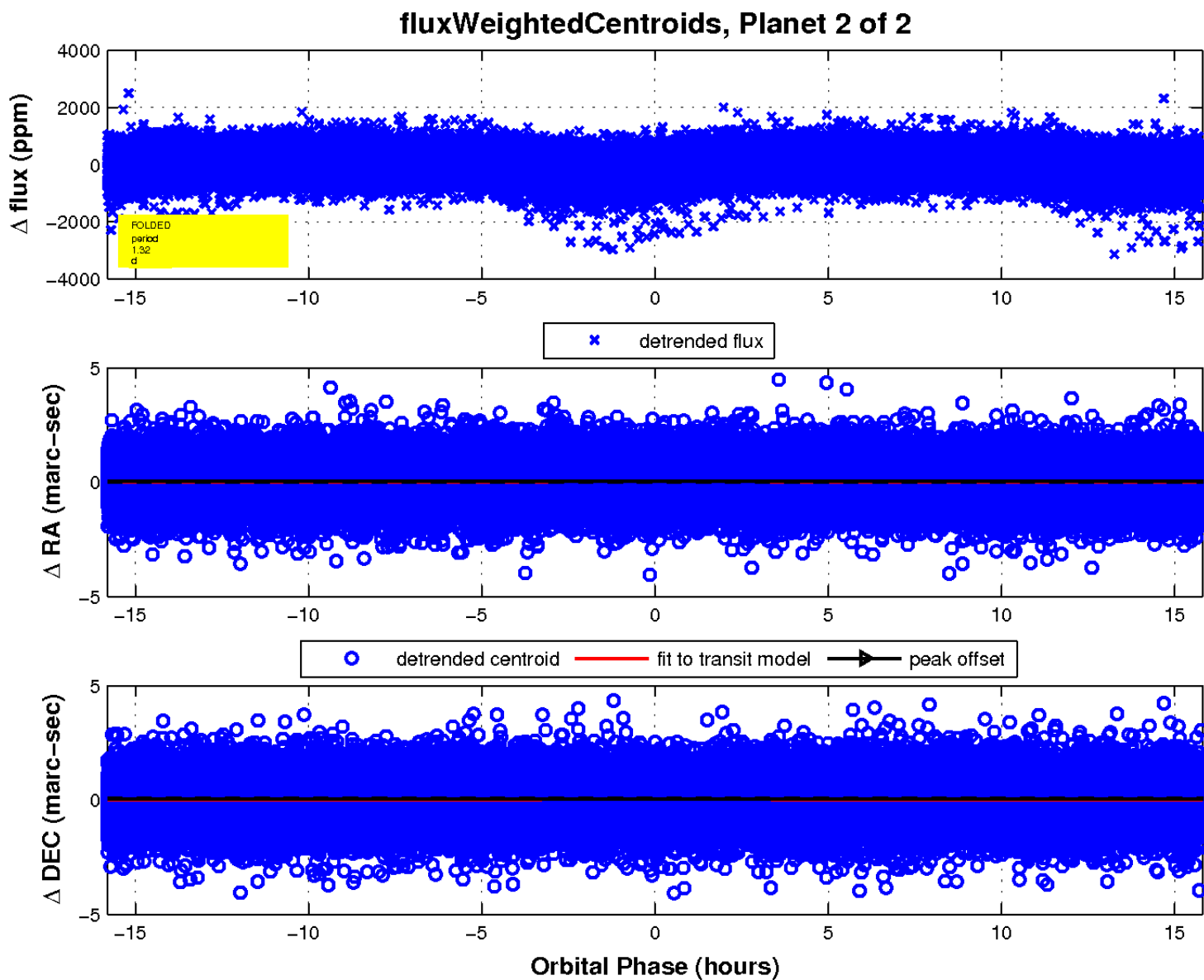
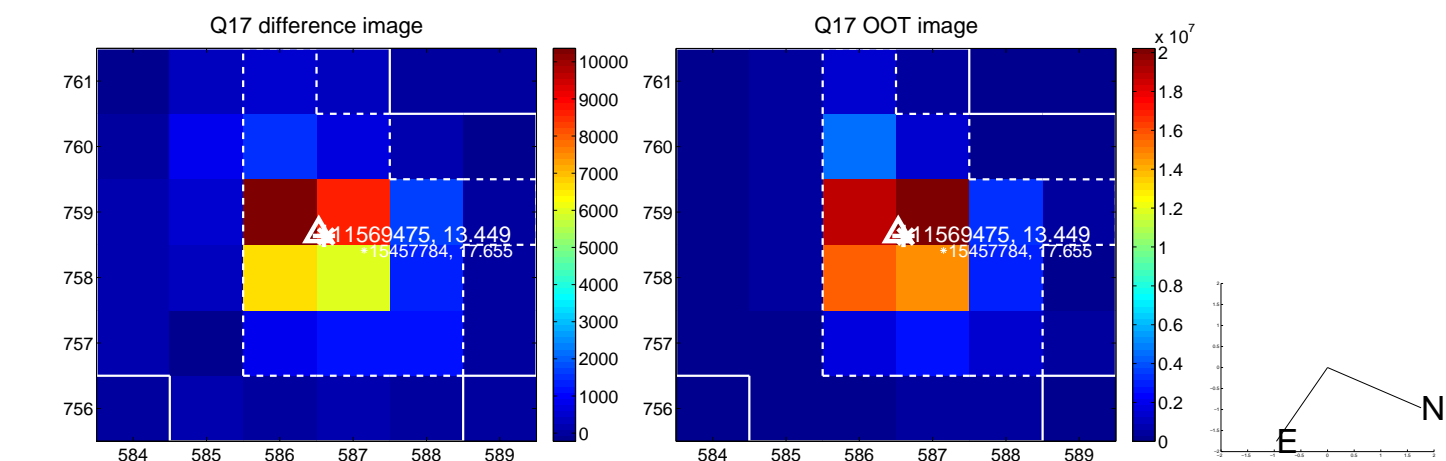
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

