

KIC 005629449

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})
005629449-01	OBS	No	0.709741	132.112175	30.4	5.027	8.1	5.8	13.40	6489	7.65	0.00
005629449-02	OBS	No	9.955690	140.825821	567.1	2.308	12.1	8.5	13.40	6489	33.40	15883.88
005629449-03	OBS	No	24.621583	154.019267	259.3	0.587	12.1	3.6	13.40	6489	23.51	4749.31
005629449-04	OBS	No	39.975838	169.867284	622.6	1.235	10.9	9.9	13.40	6489	36.58	2488.79
005629449-05	OBS	No	17.119042	142.235469	163.1	6.632	7.7	5.4	13.40	6489	19.95	7710.44
005629449-06	OBS	No	37.317356	146.537853	586.2	1.542	11.1	9.2	13.40	6489	36.09	2727.96

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005629449-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_ALT
005629449-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—MOD_NONUNIQ_ALT
005629449-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005629449-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005629449-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005629449-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV

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

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

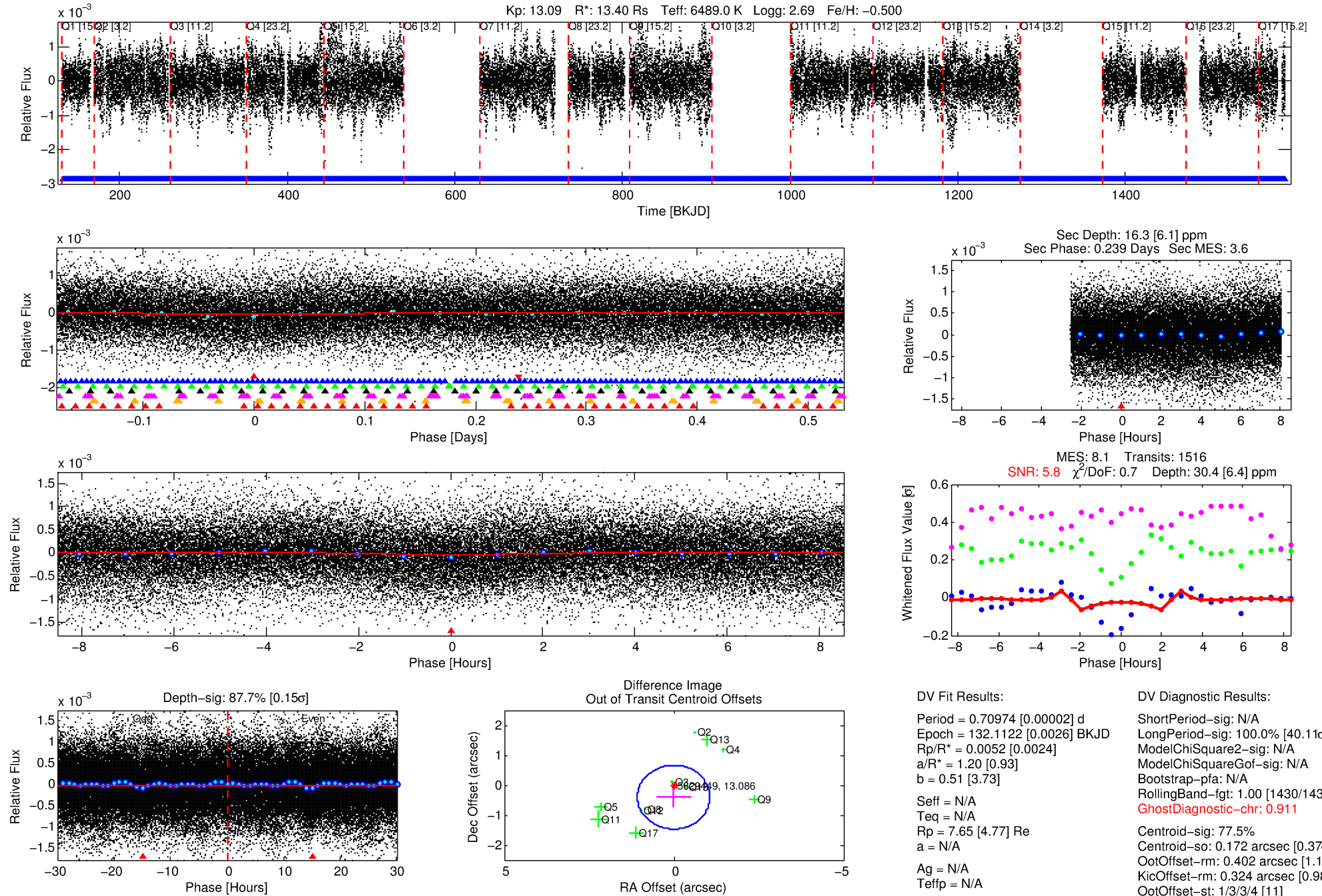
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005629449-01

No Significant Match Found

DV One-Page Summary

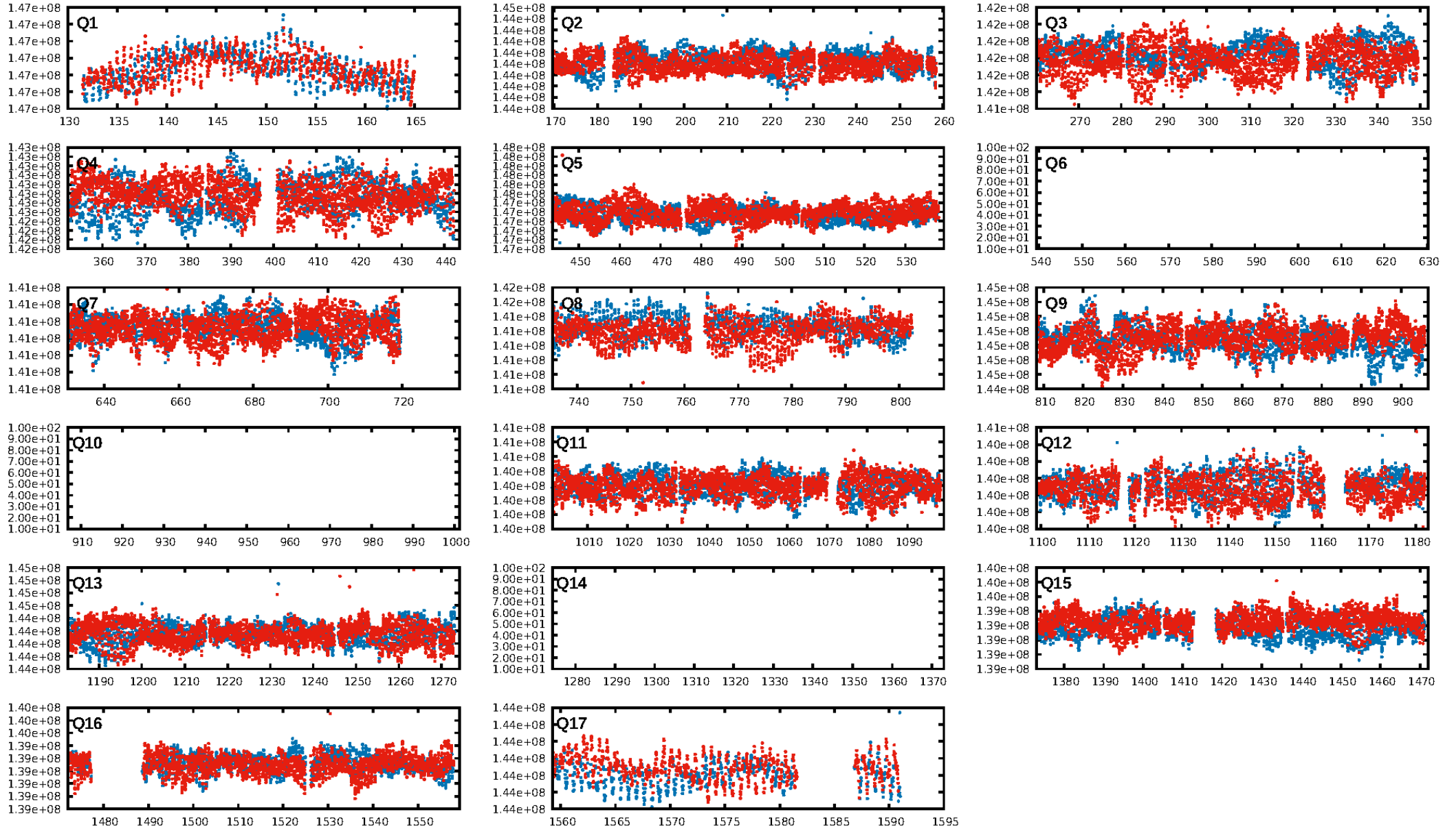
KIC: 5629449 Candidate: 1 of 7 Period: 0.710 d



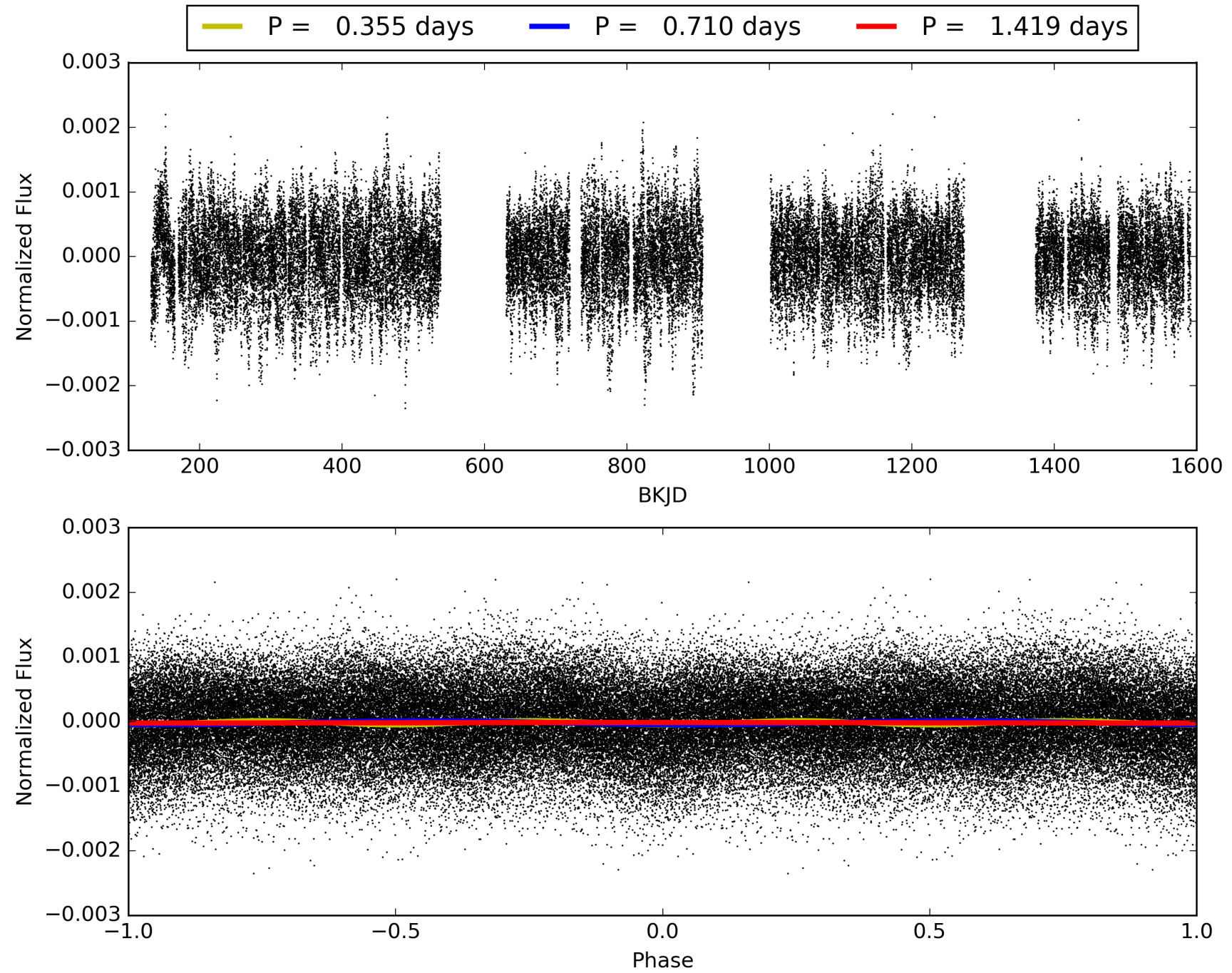
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:56:04 Z

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

TCE 005629449-01, PDC Light Curves

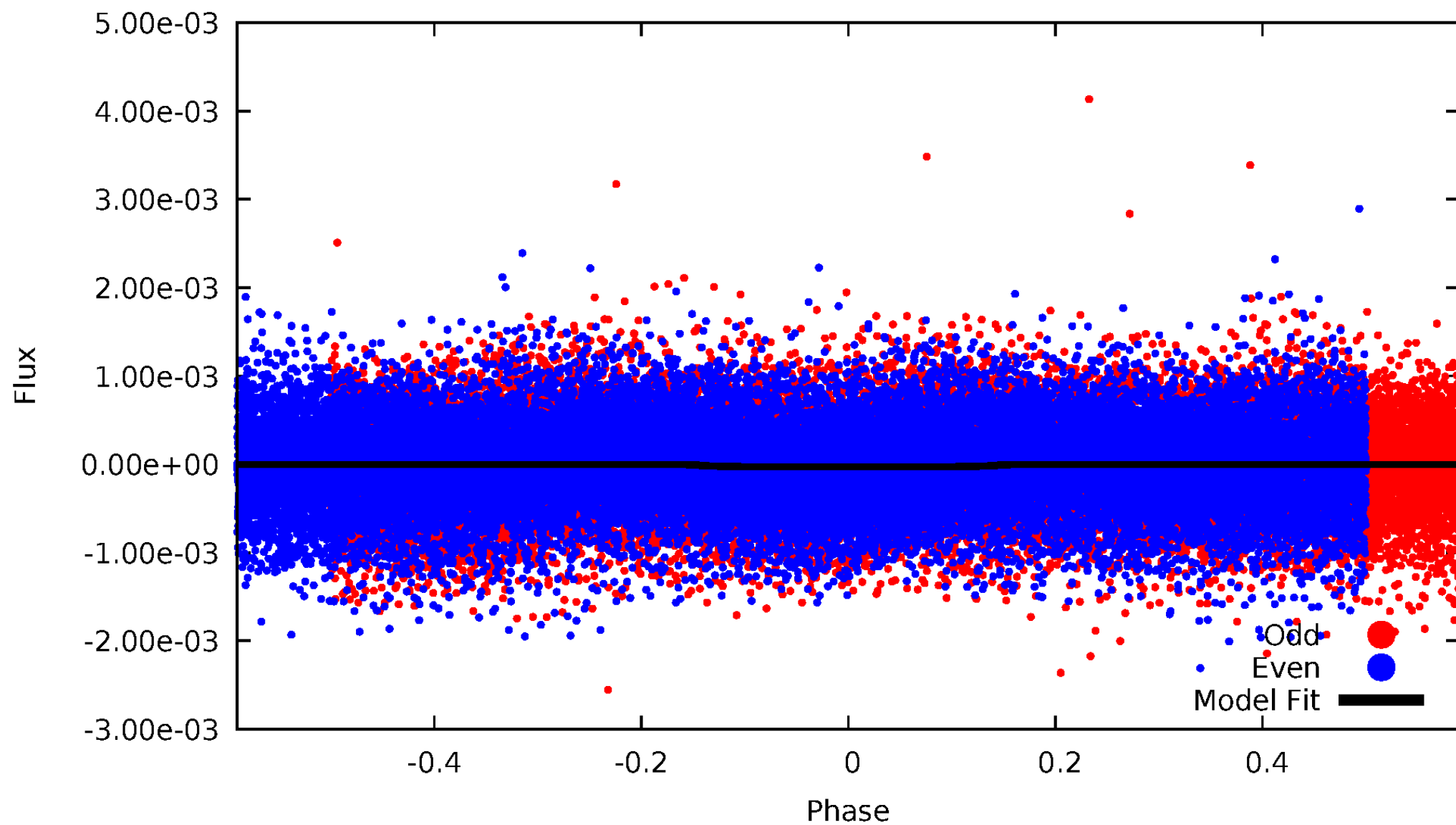


TCE 005629449-01



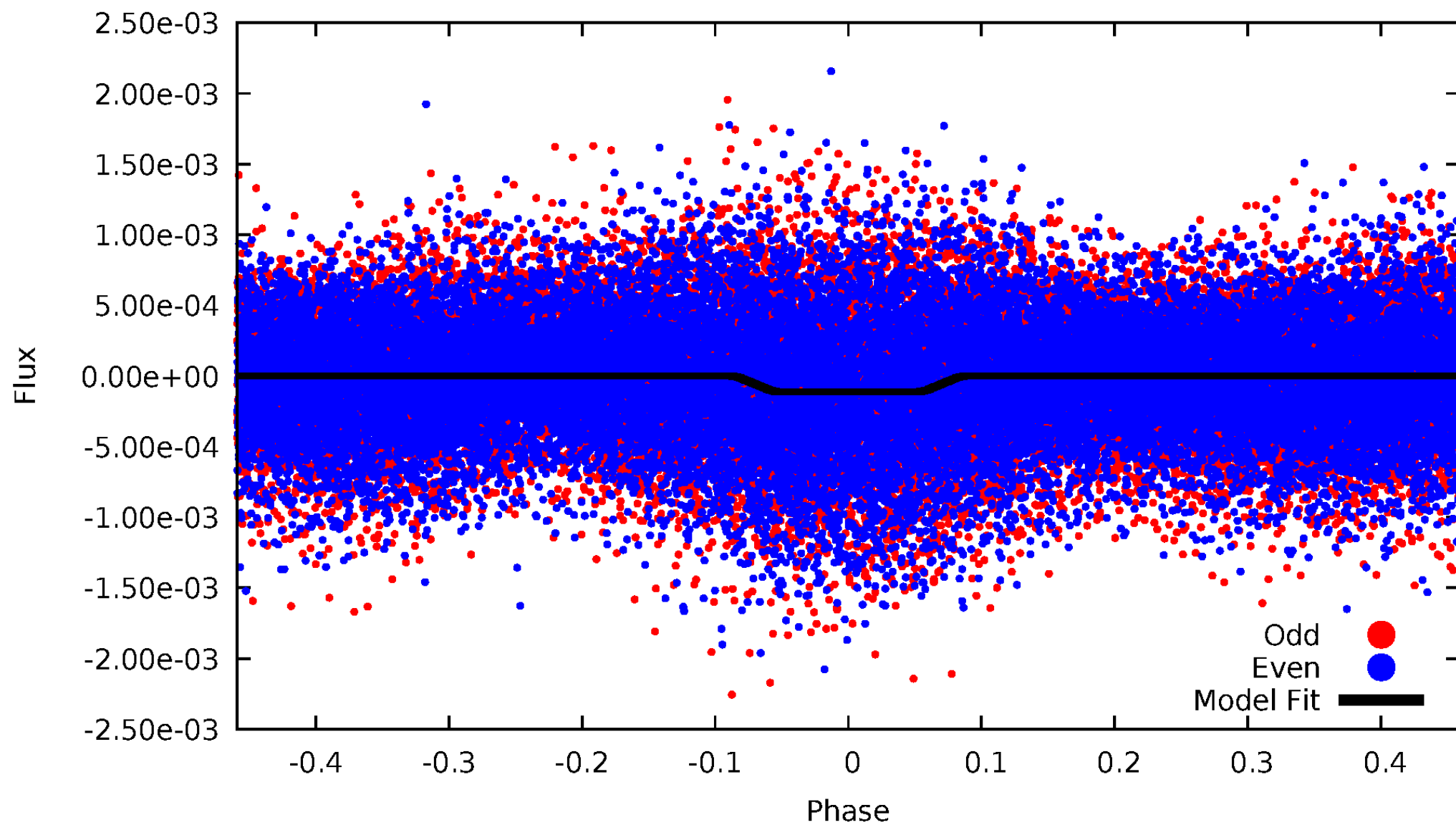
DV Odd/Even

TCE 005629449-01



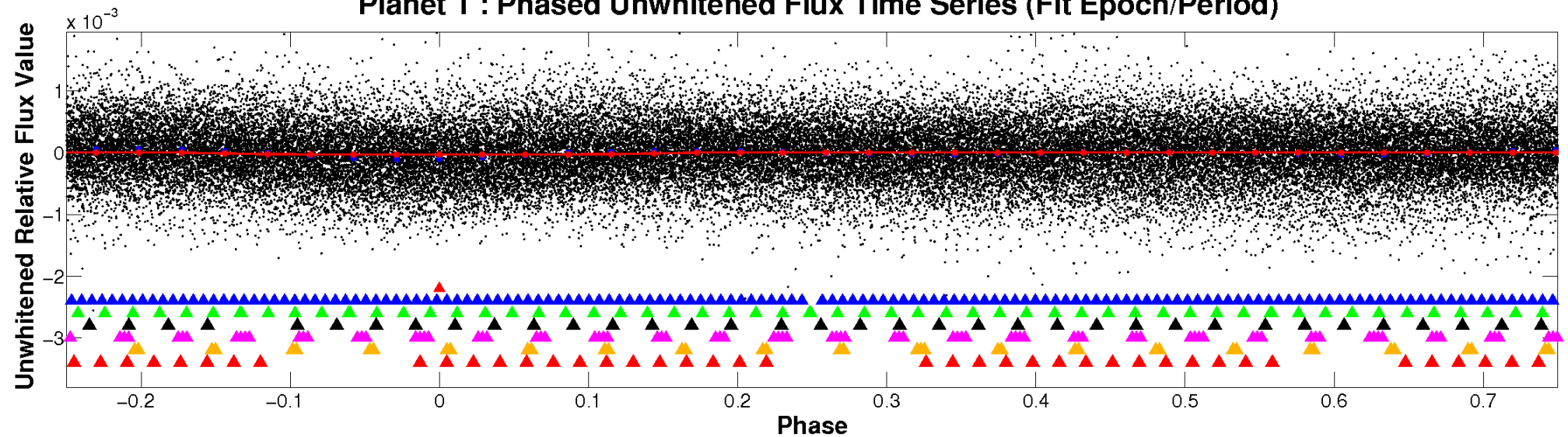
ALT Odd/Even

TCE 005629449-01

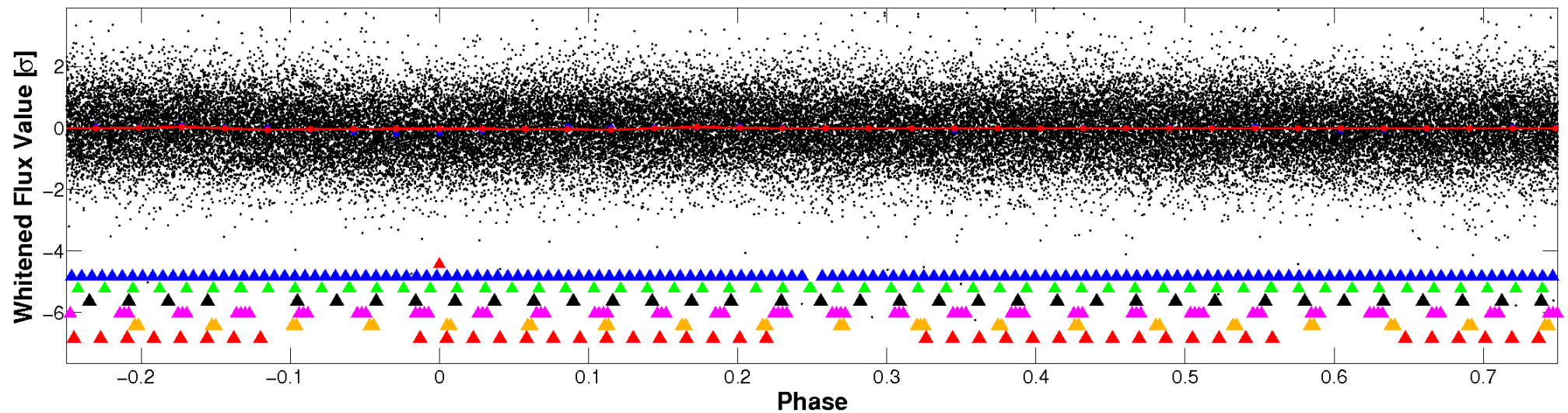


Non-Whitened Vs. Whitened Light Curve

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

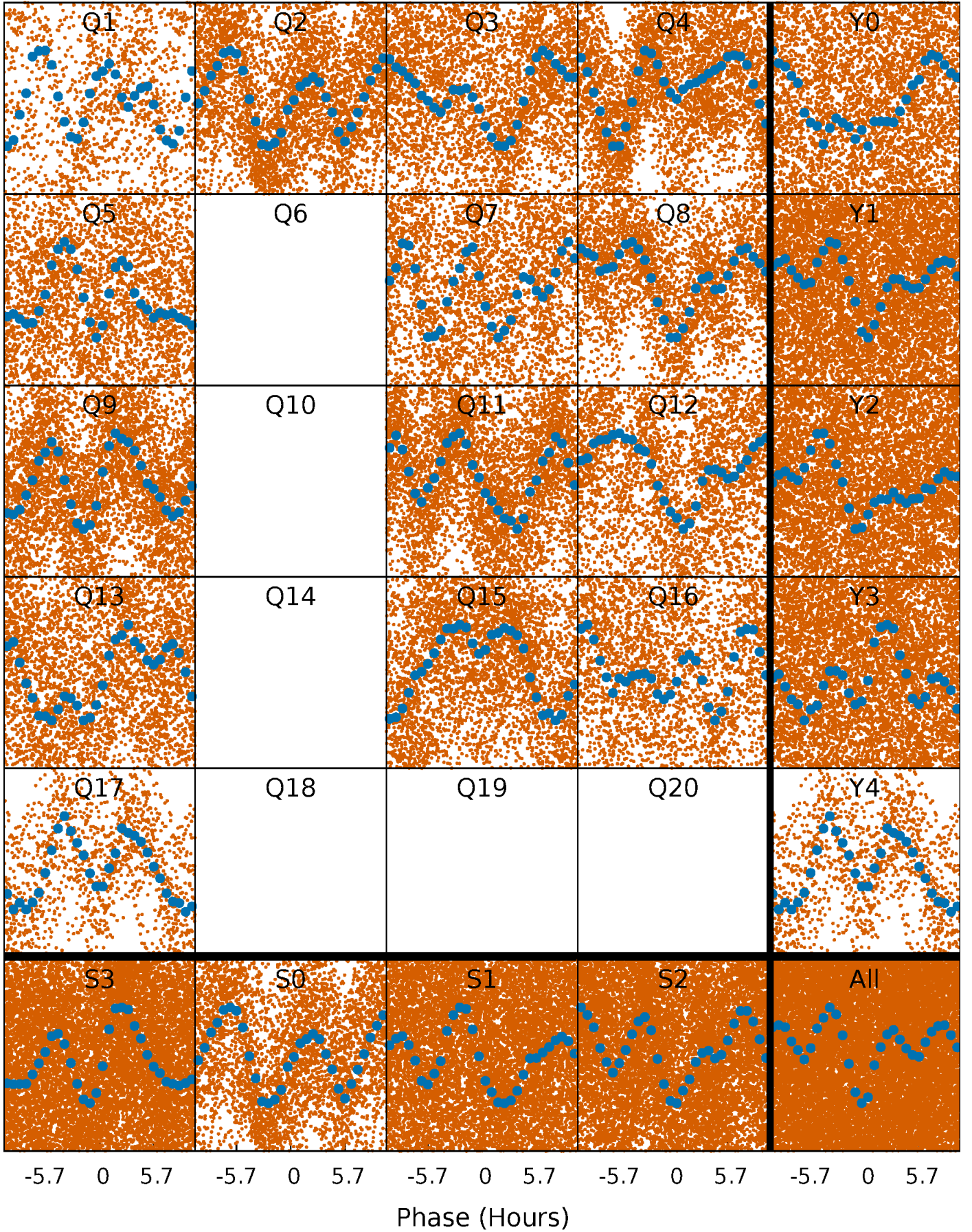


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



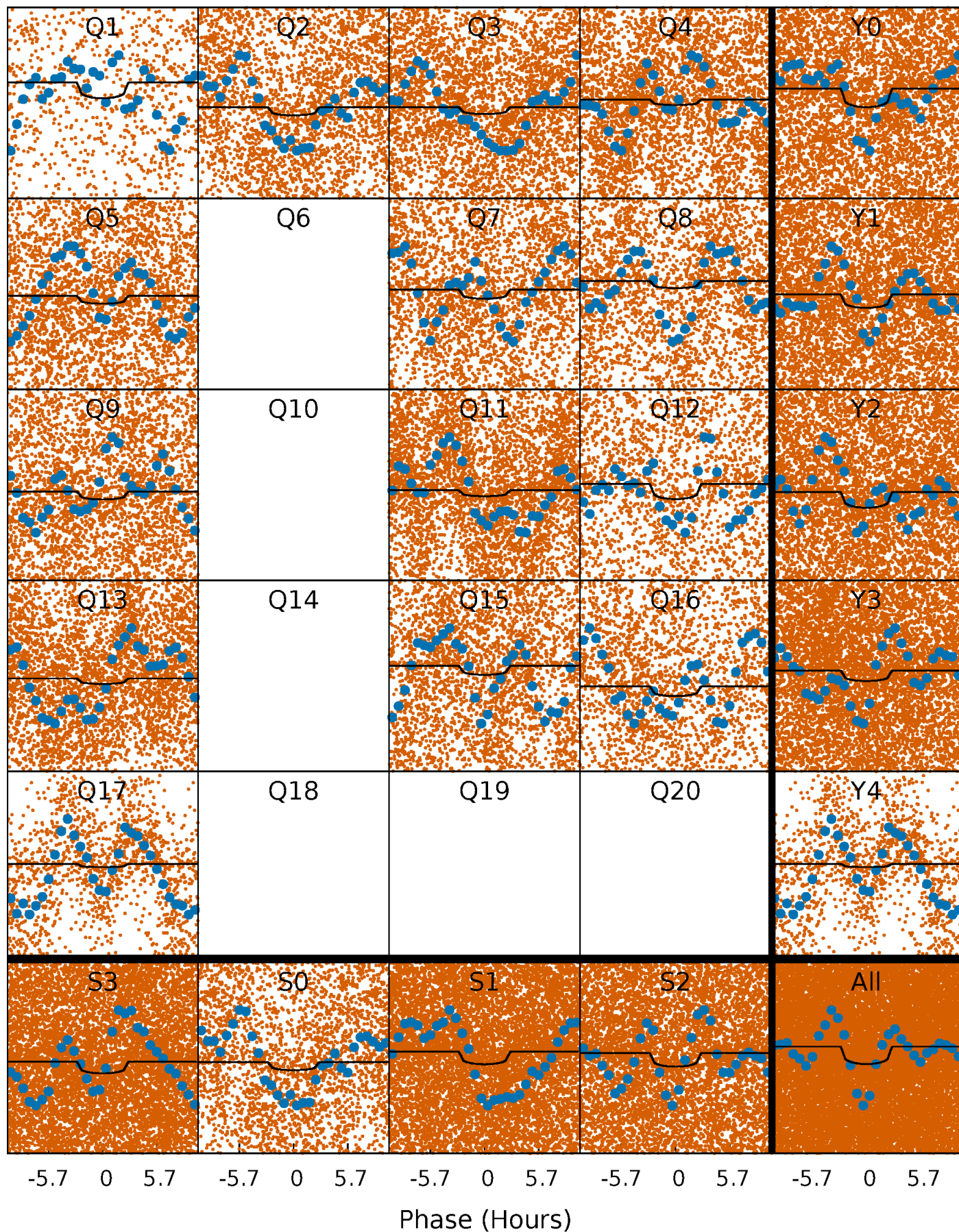
PDC Quarter-Phased Transit Curves

TCE 005629449-01 P= 0.709741 Days $T_0=132.112175$ (BKJD)



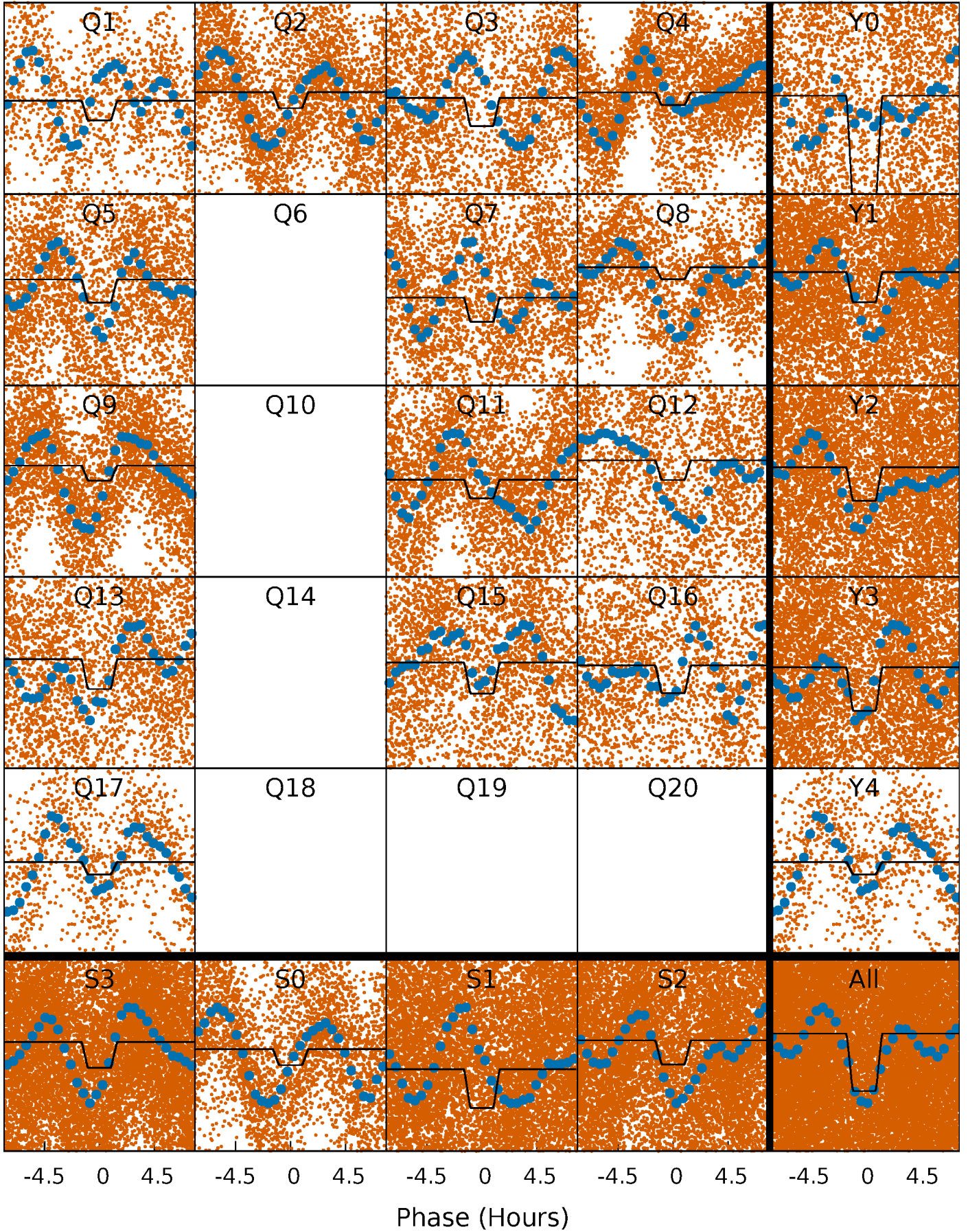
DV Quarter-Phased Transit Curves

TCE 005629449-01 P= 0.709741 Days $T_0=132.112175$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

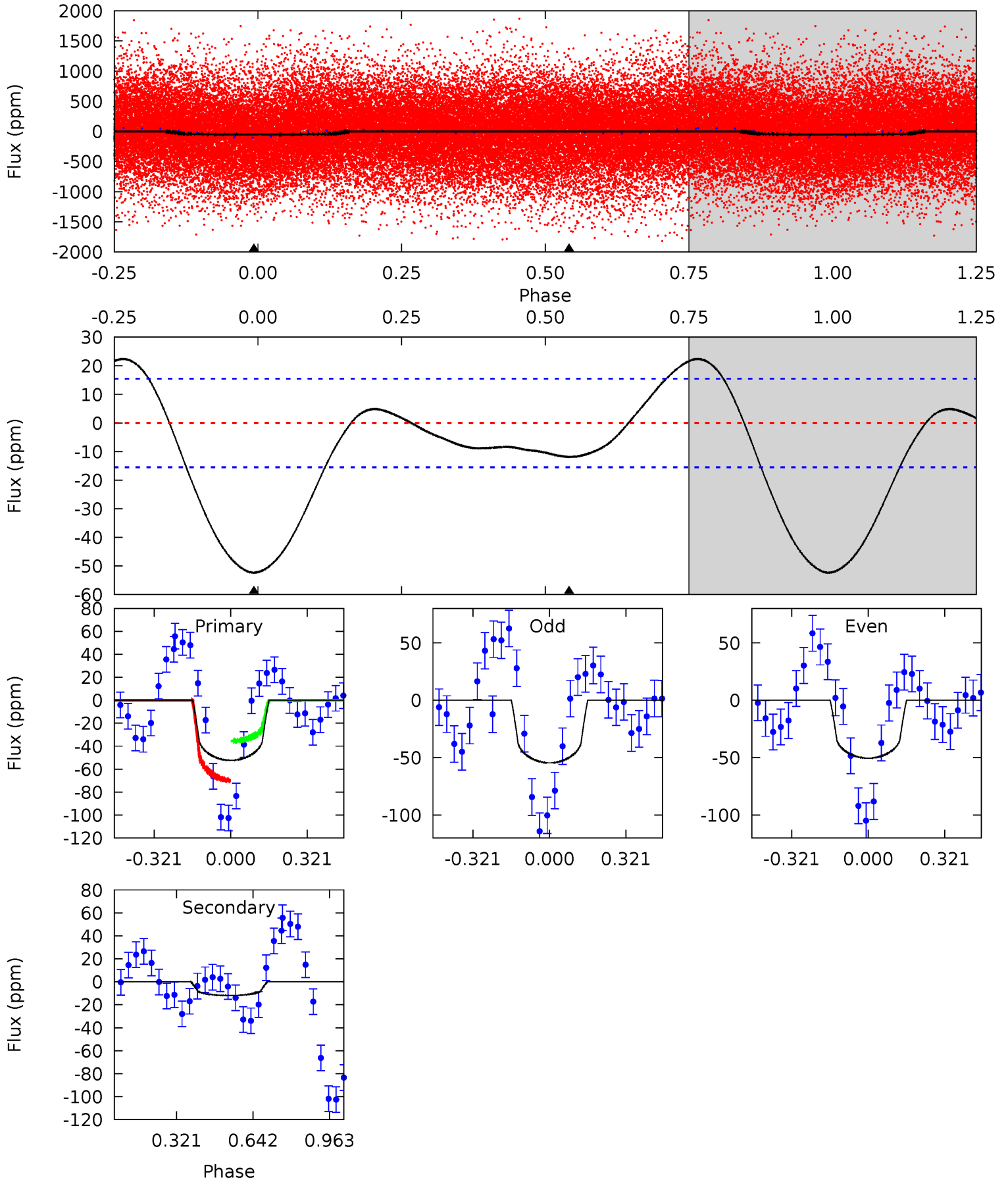
TCE 005629449-01 P= 0.709747 Days $T_0=132.092085$ (BKJD)



DV Model-Shift Uniqueness Test

005629449-01, P = 0.709741 Days, E = 131.402434 Days

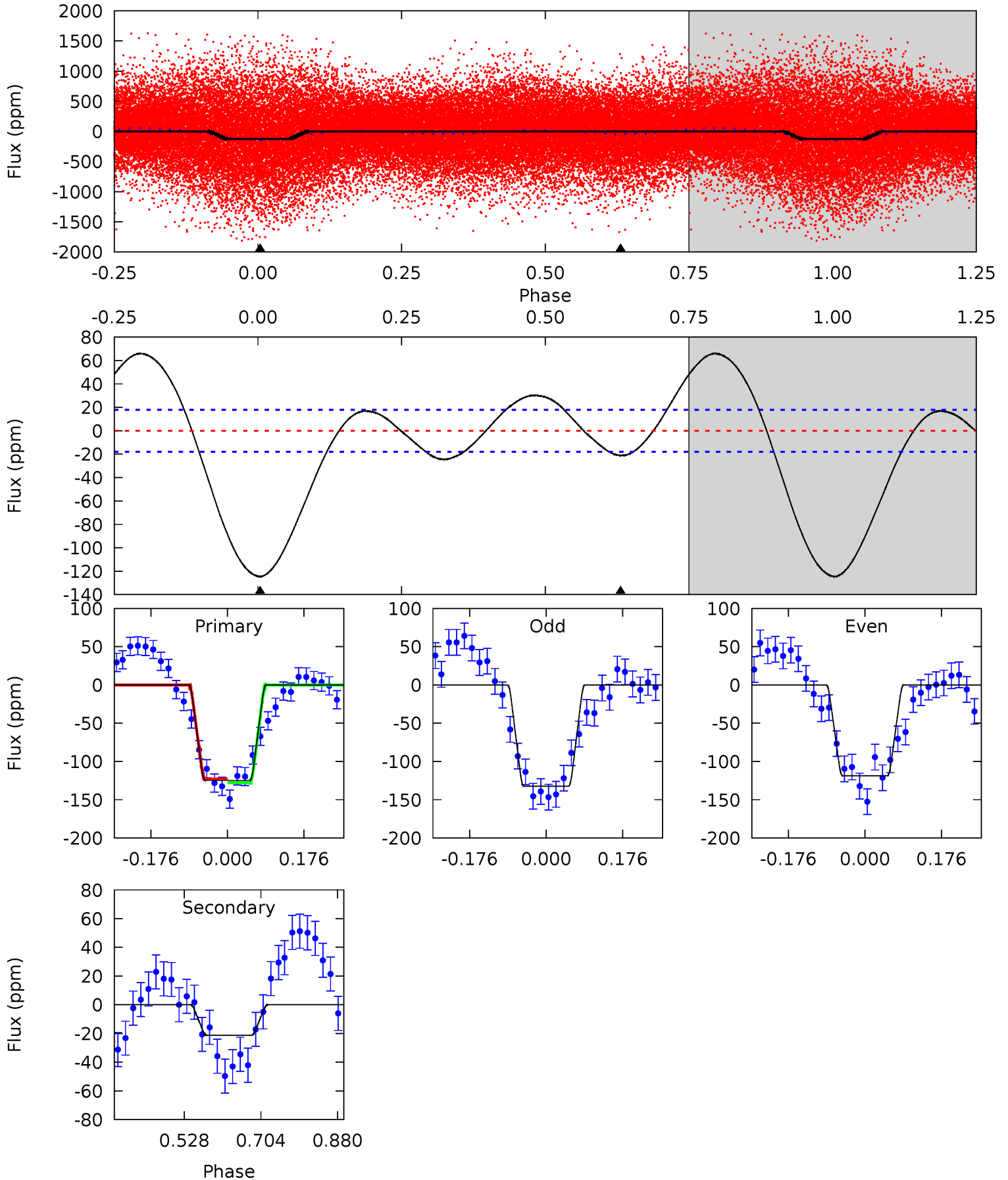
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.6	3.33	0	0	4.31	0.99	1.18	14.6	14.6	3.33	3.33	0.57	0.84	0.30	4.67



Alt Model-Shift Uniqueness Test

005629449-01, P = 0.709747 Days, E = 131.382338 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
30.8	5.24	0	0	4.44	1.35	5.47	30.8	30.8	5.24	5.24	1.67	1.08	0.35	0.65



Stellar Parameters For KIC 005629449

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	6489^{+645}_{-1399}	$2.694^{+0.189}_{-0.231}$	$-0.500^{+0.200}_{-0.450}$	$13.402^{+3.514}_{-5.710}$	$3.239^{+0.107}_{-2.025}$	$0.002^{+0.003}_{-0.001}$
	+10%/-22%	+7%/-9%	+40%/-90%	+26%/-43%	+3%/-63%	+142%/-52%
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 005629449-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-12 ± 4	$7.36^{+4.31}_{-3.47}$	9613^{+1450}_{-1953}	-7092^{+2885}_{-1910}	$0.056^{+0.149}_{-0.034}$
Alt.	-21 ± 4	$15.12^{+4.86}_{-4.15}$	9611^{+1425}_{-1920}	-7740^{+1784}_{-1627}	$0.025^{+0.023}_{-0.011}$

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 $A_{obs} \gg 1.0$

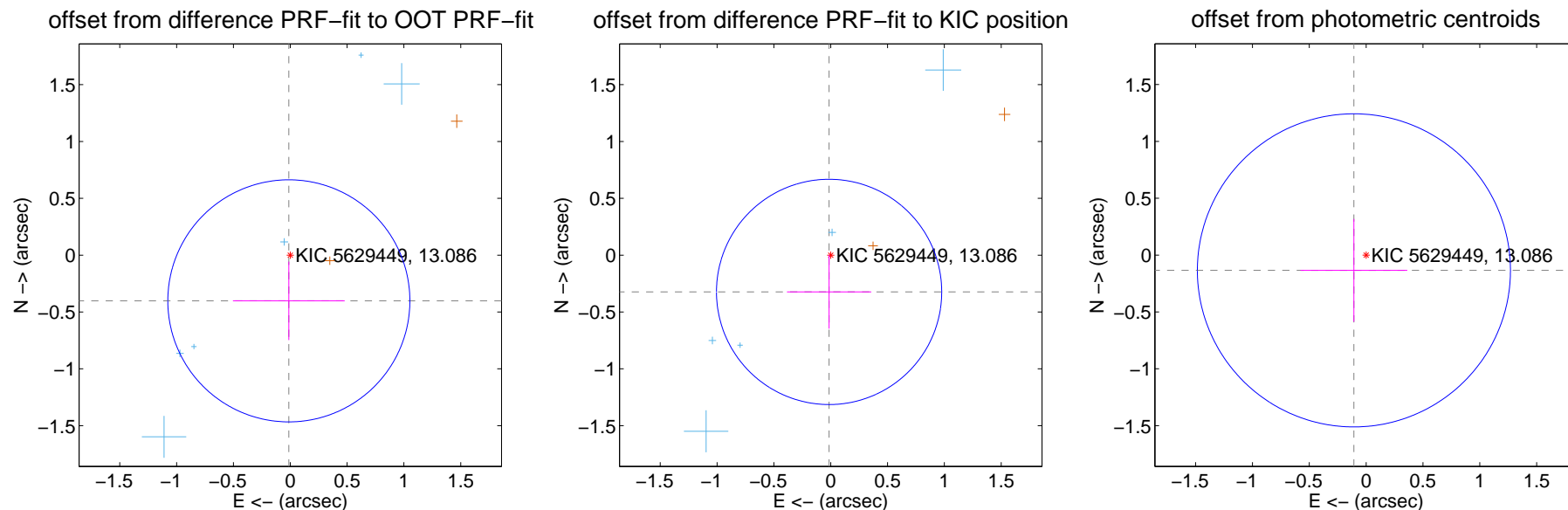
DV Centroid Data

Supplemental centroid analysis for 005629449-01. Kepler magnitude: 13.09. Transit SNR 5.79

There are 8 quarters with good PRF difference image offsets

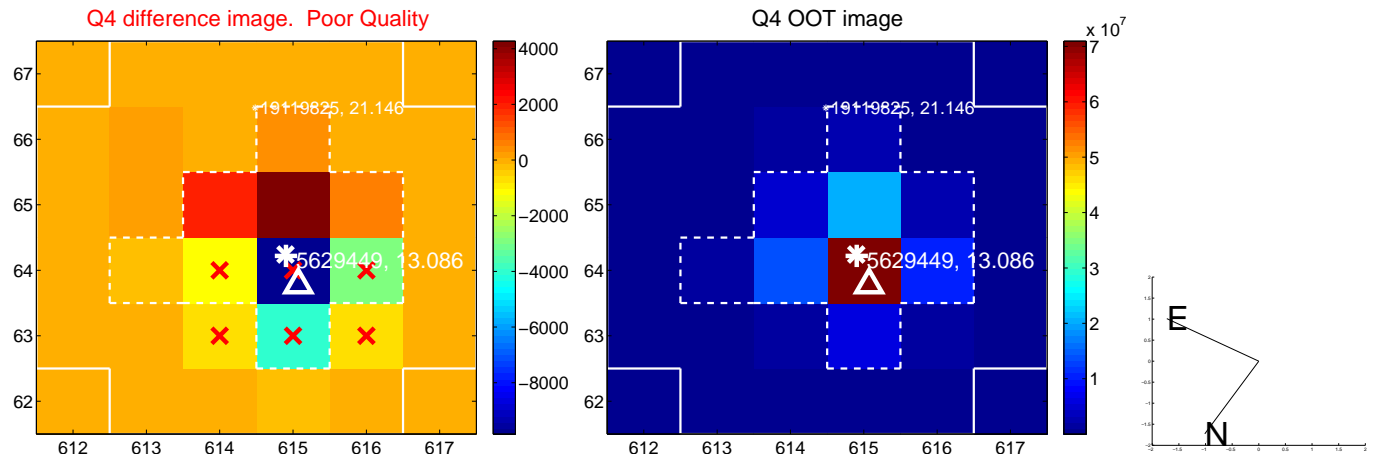
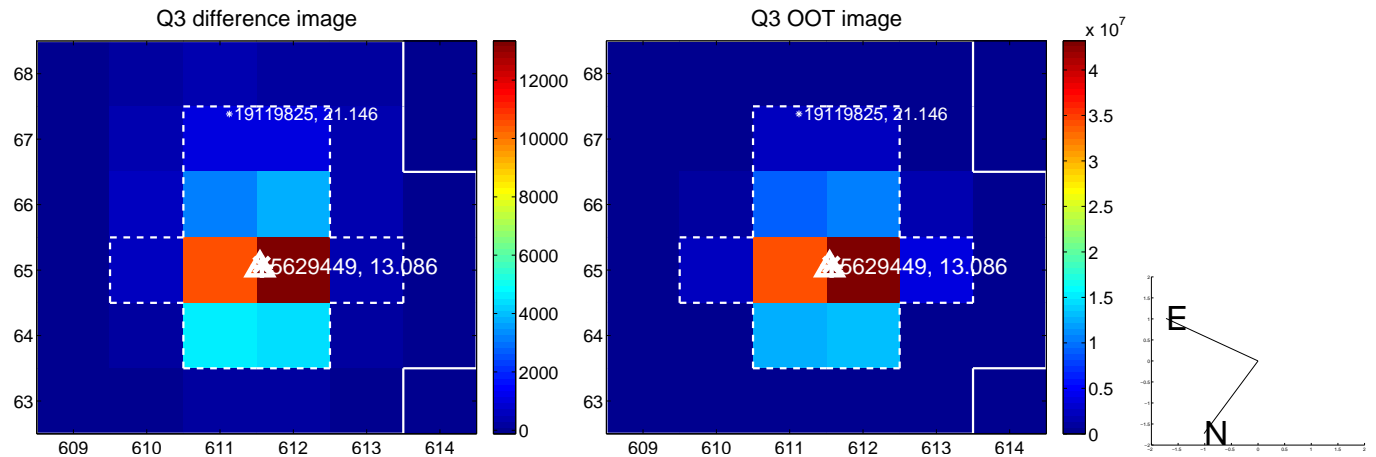
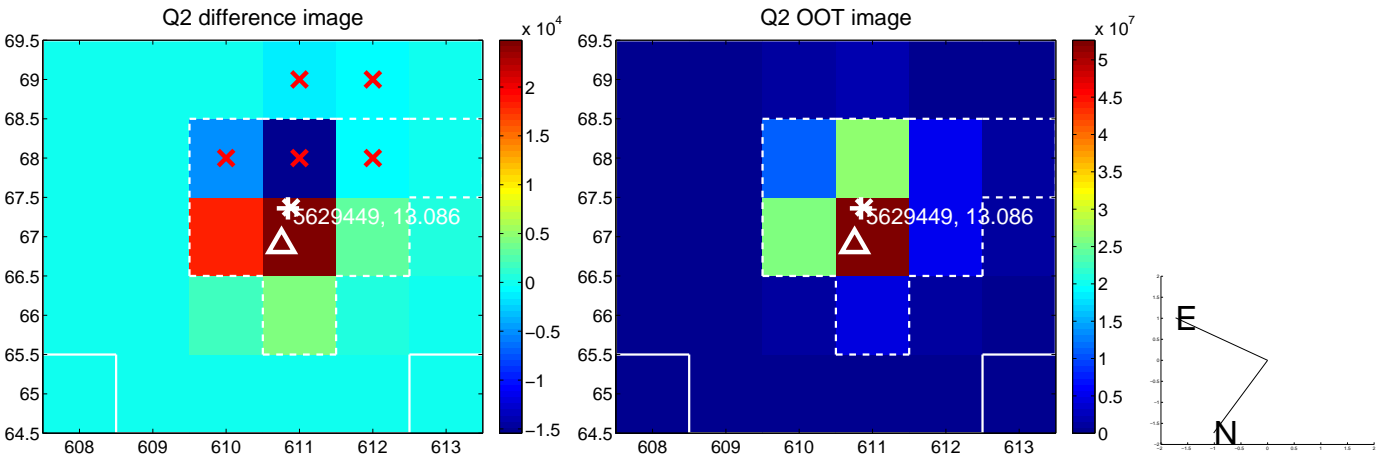
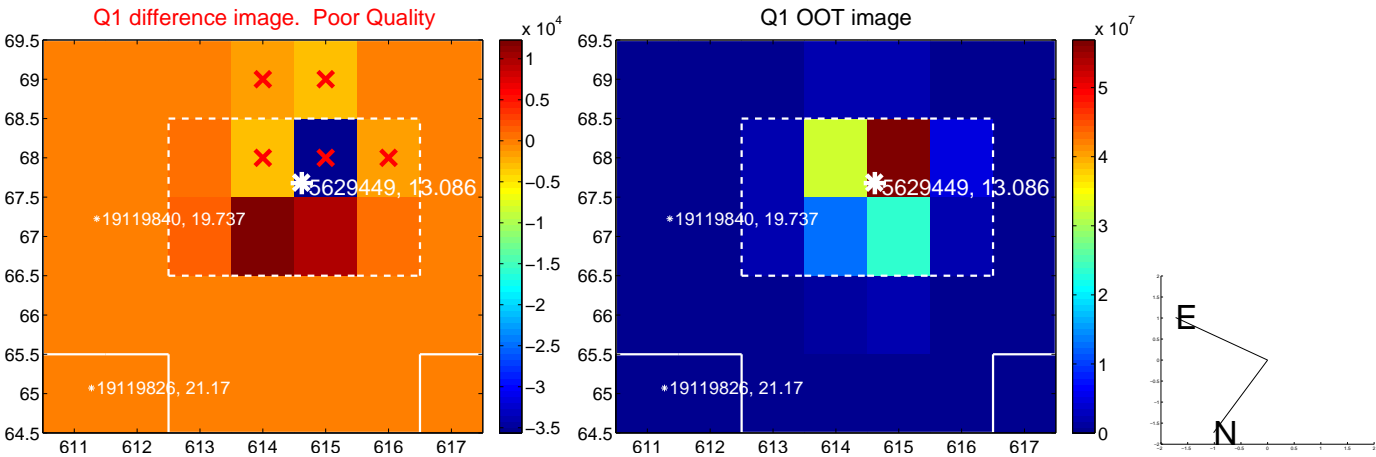
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.402 ± 0.355	1.13	0.012 ± 0.492	-0.402 ± 0.346
PRF-fit source offset from KIC position	0.324 ± 0.330	0.98	0.014 ± 0.371	-0.323 ± 0.323
photometric centroid source offset	0.17 ± 0.46	0.37	0.11 ± 0.47	-0.13 ± 0.45

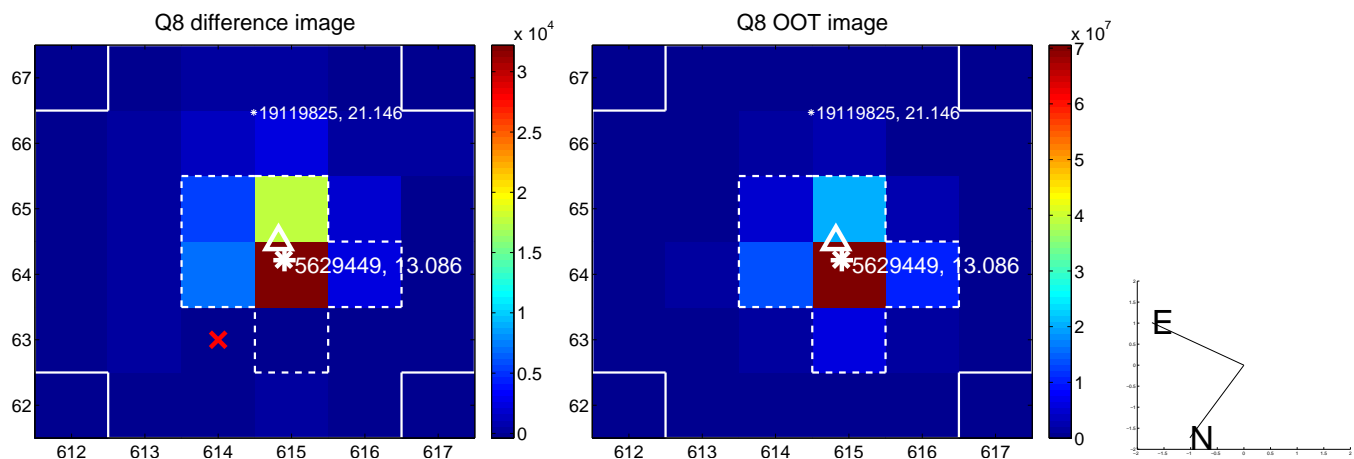
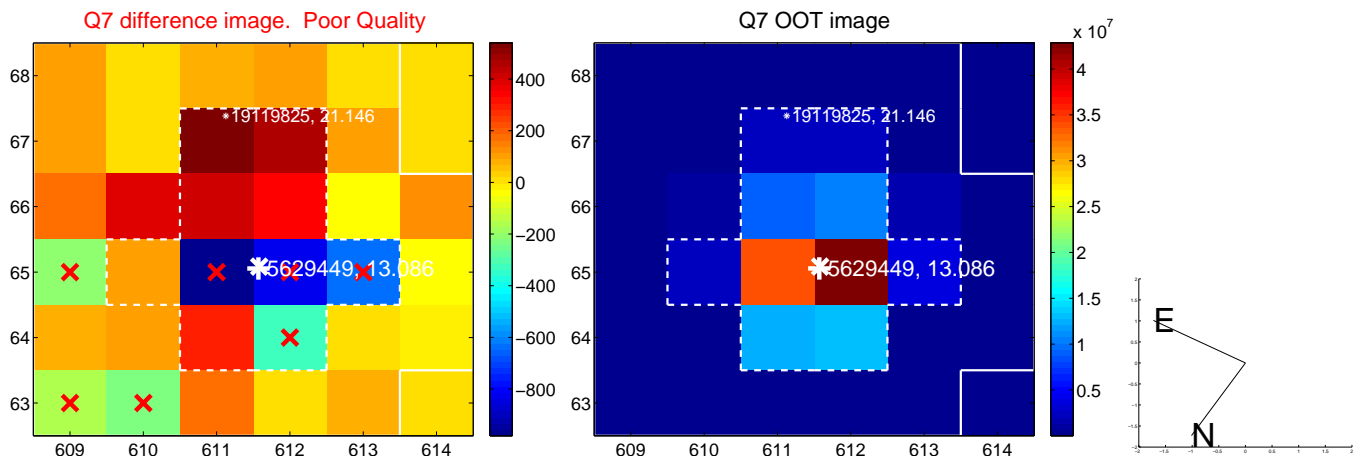
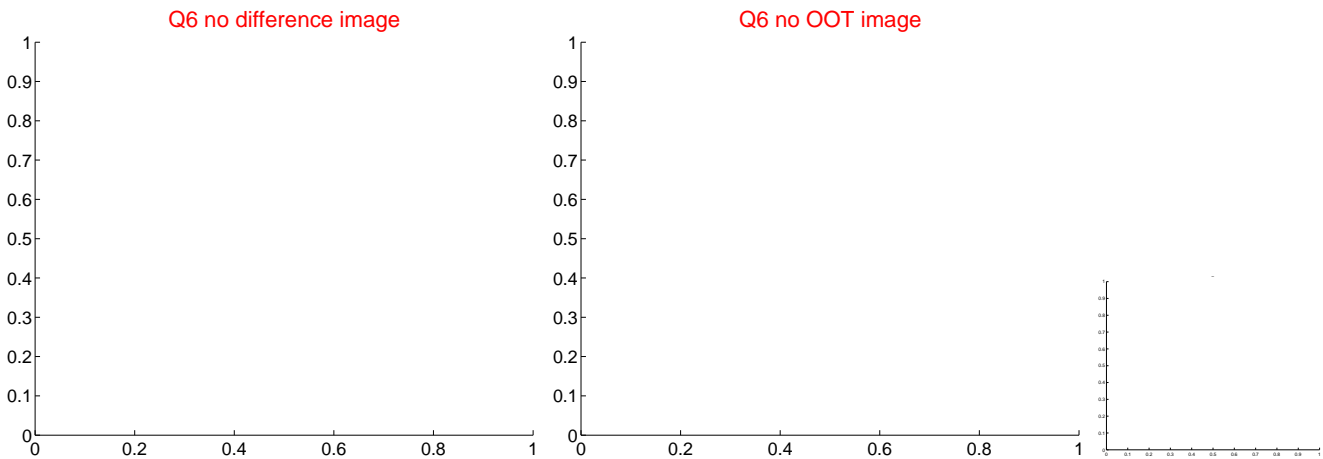
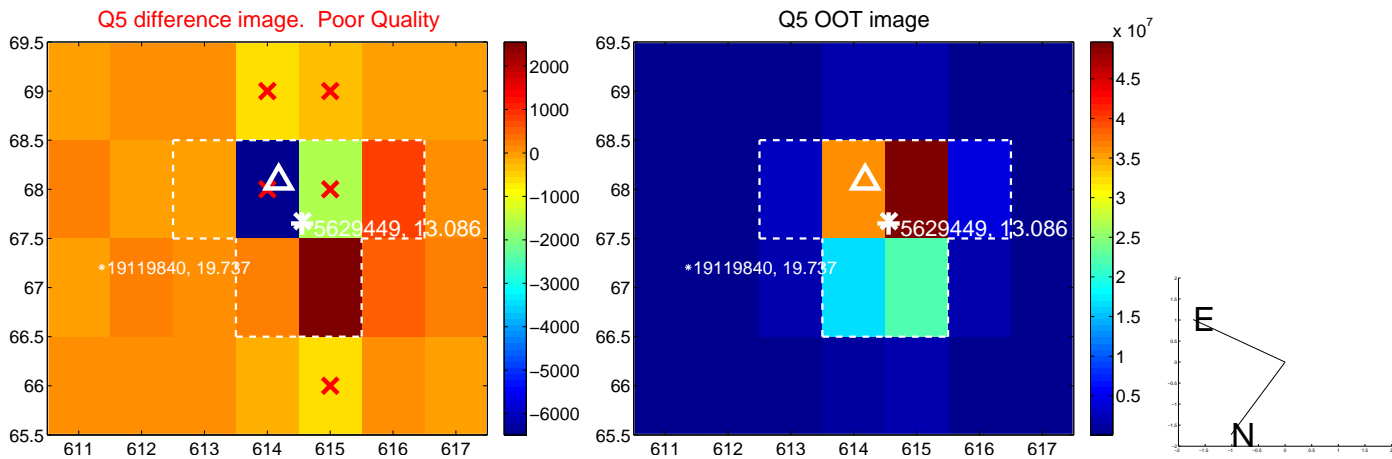


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

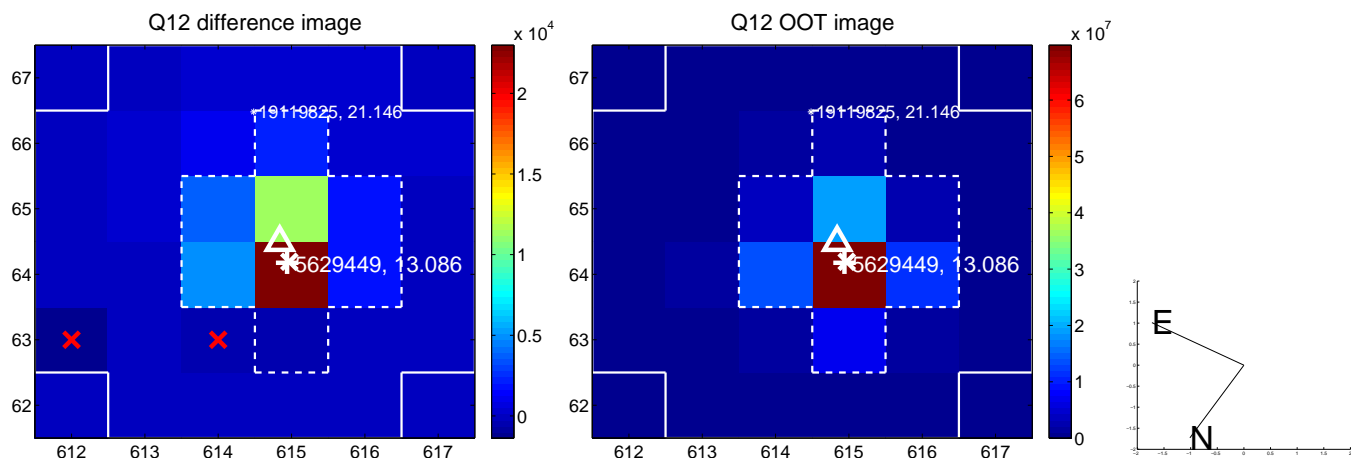
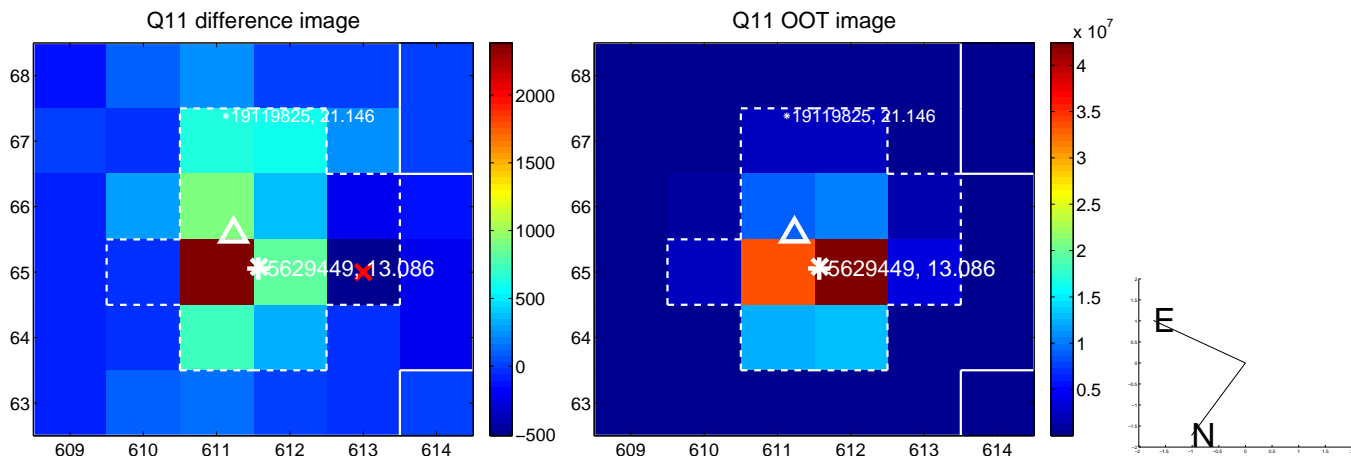
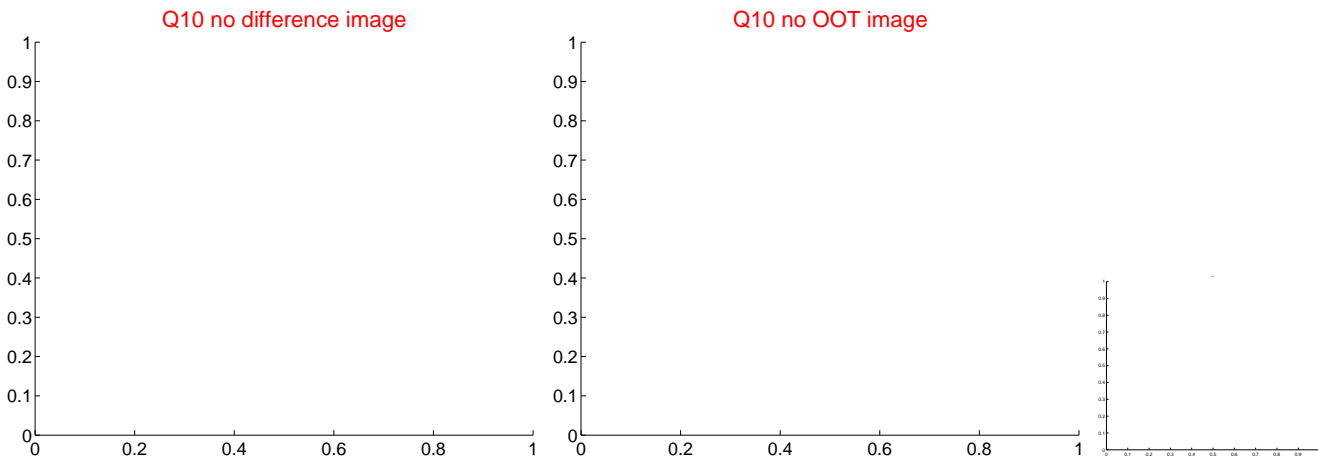
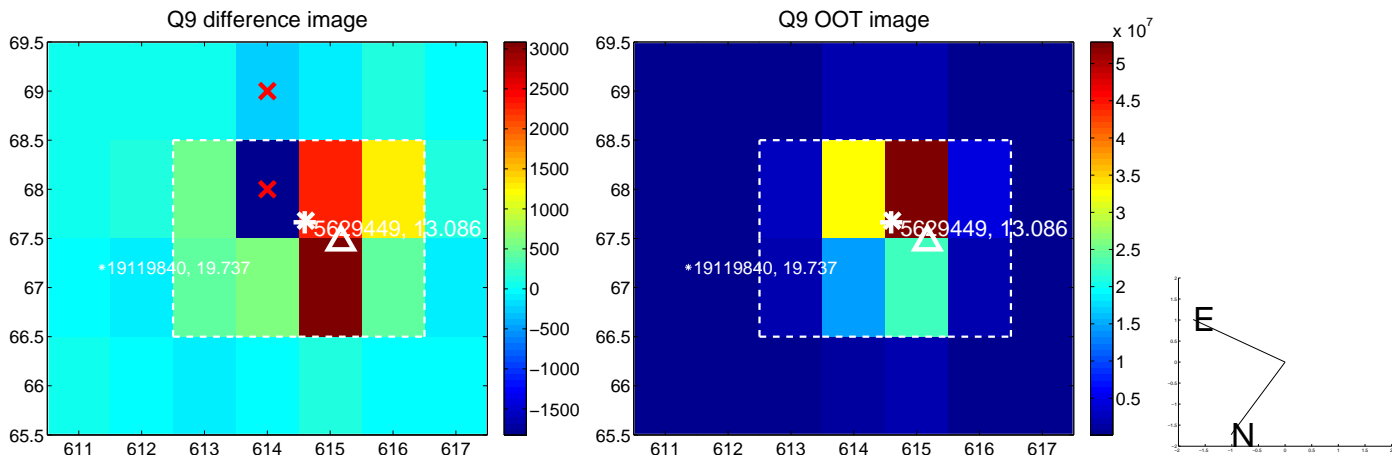
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



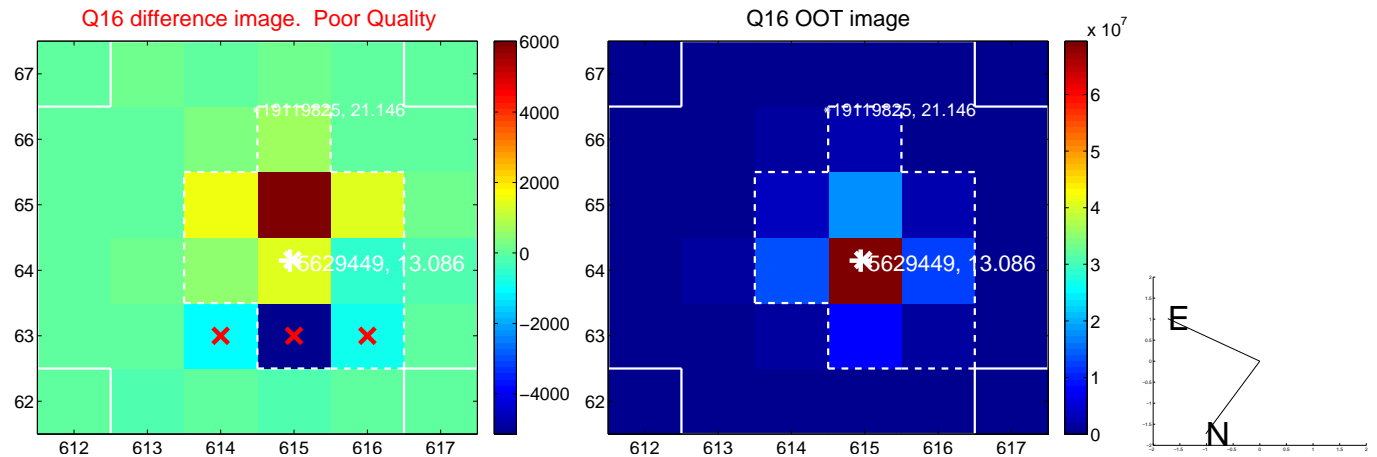
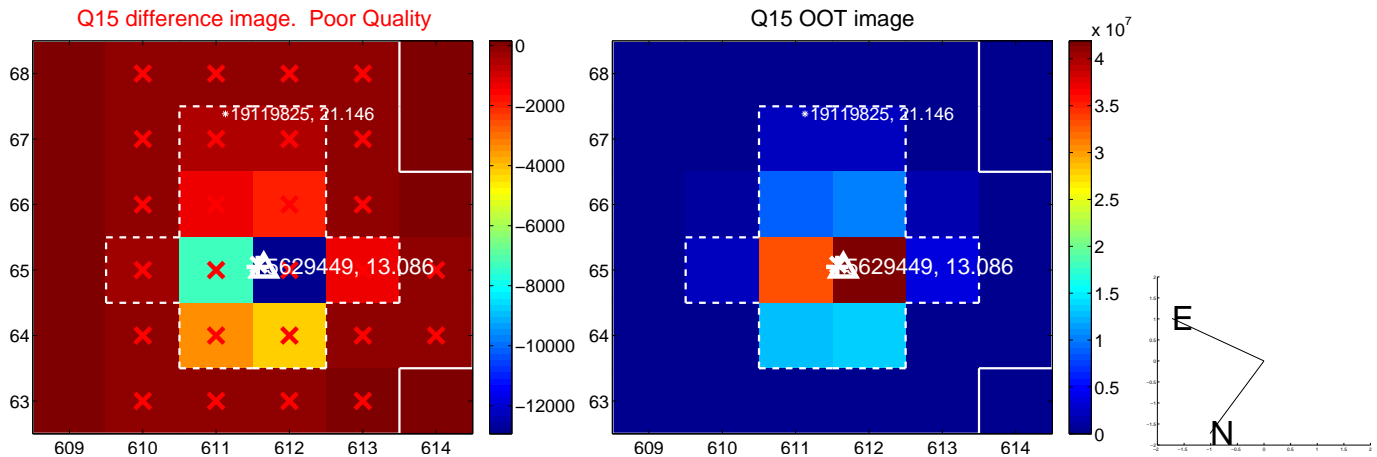
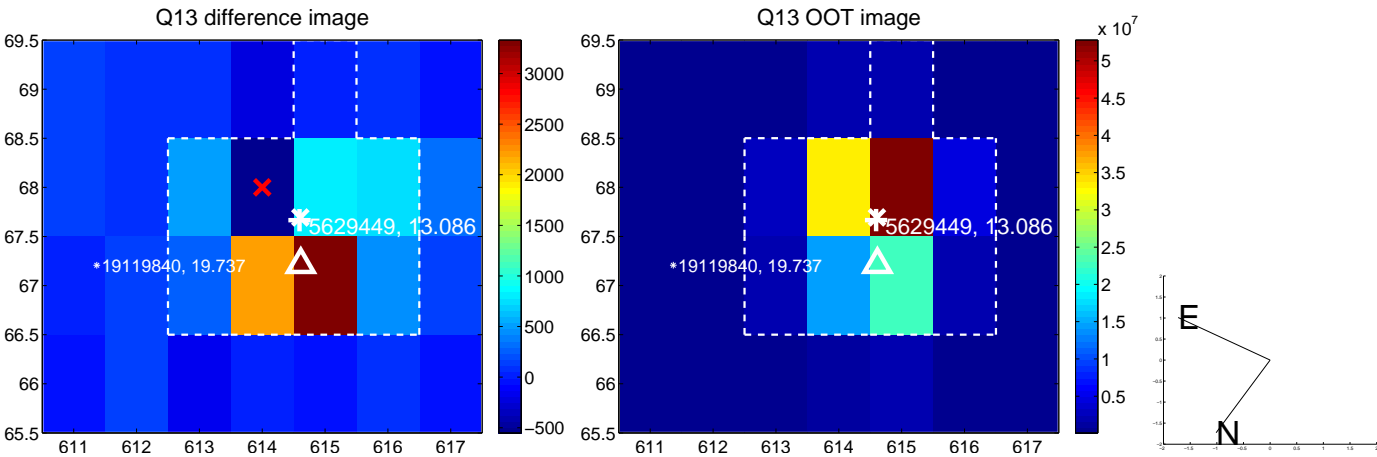
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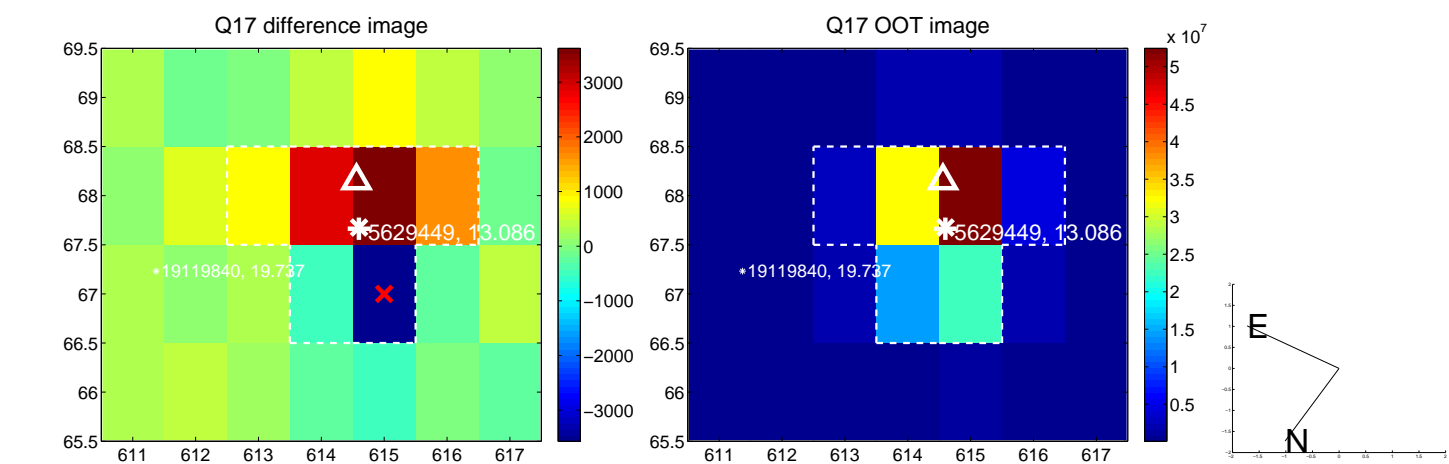
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



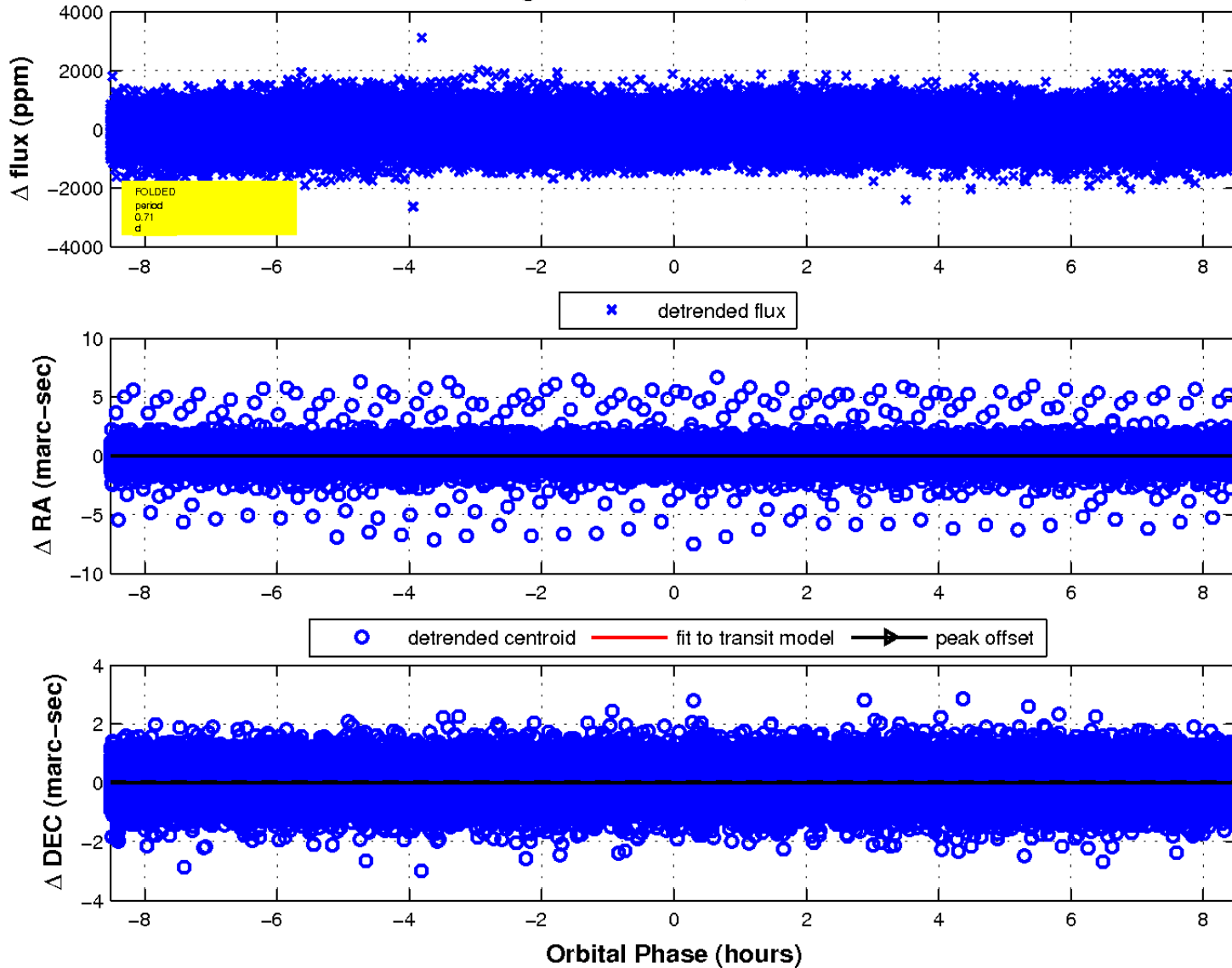
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



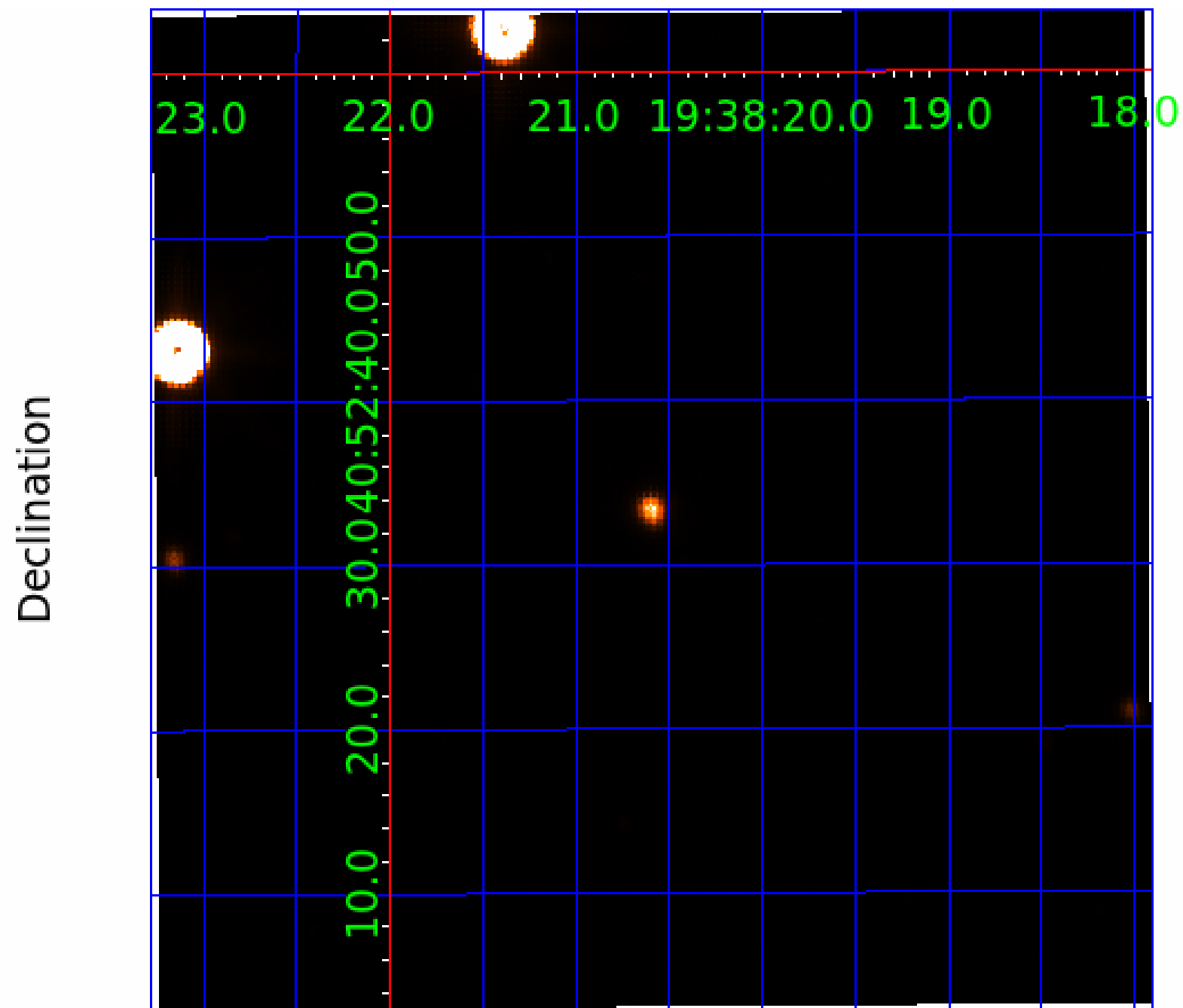
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 7



UKIRT Image



KIC 005629449

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})
005629449-01	OBS	No	0.709741	132.112175	30.4	5.027	8.1	5.8	13.40	6489	7.65	0.00
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005629449-04	OBS	No	39.975838	169.867284	622.6	1.235	10.9	9.9	13.40	6489	36.58	2488.79
005629449-05	OBS	No	17.119042	142.235469	163.1	6.632	7.7	5.4	13.40	6489	19.95	7710.44
005629449-06	OBS	No	37.317356	146.537853	586.2	1.542	11.1	9.2	13.40	6489	36.09	2727.96

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005629449-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_ALT
005629449-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—MOD_NONUNIQ_ALT
005629449-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005629449-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005629449-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005629449-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV

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

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

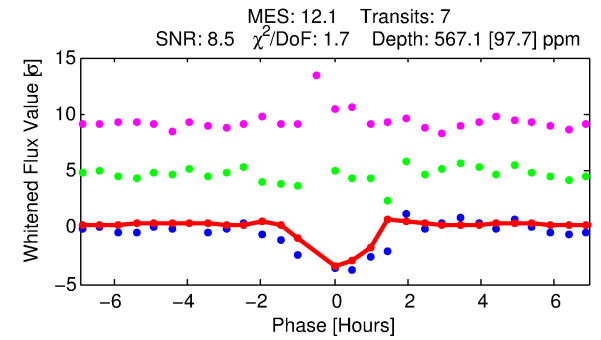
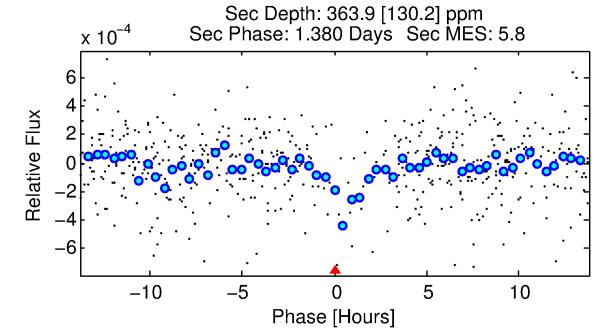
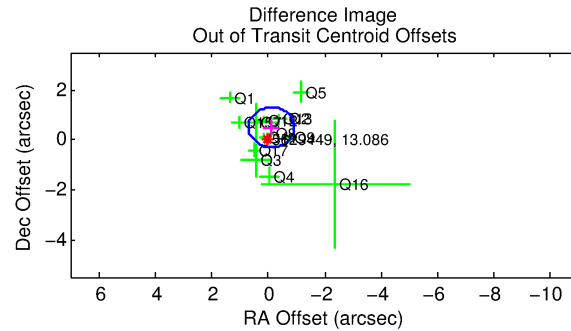
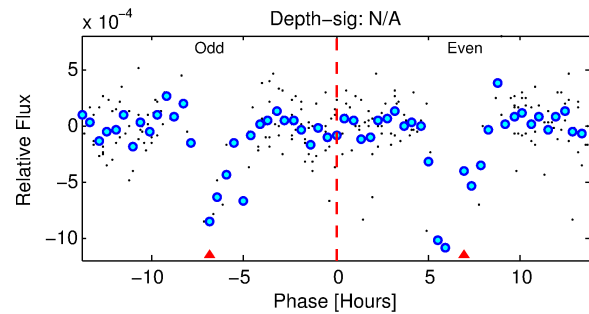
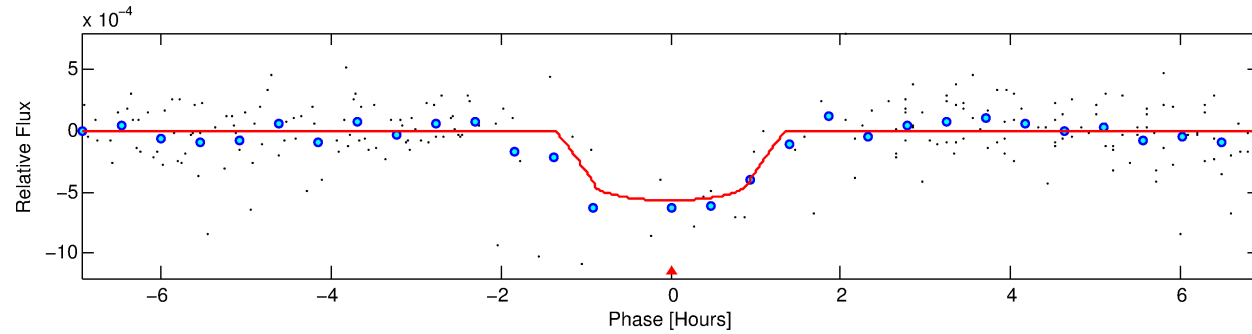
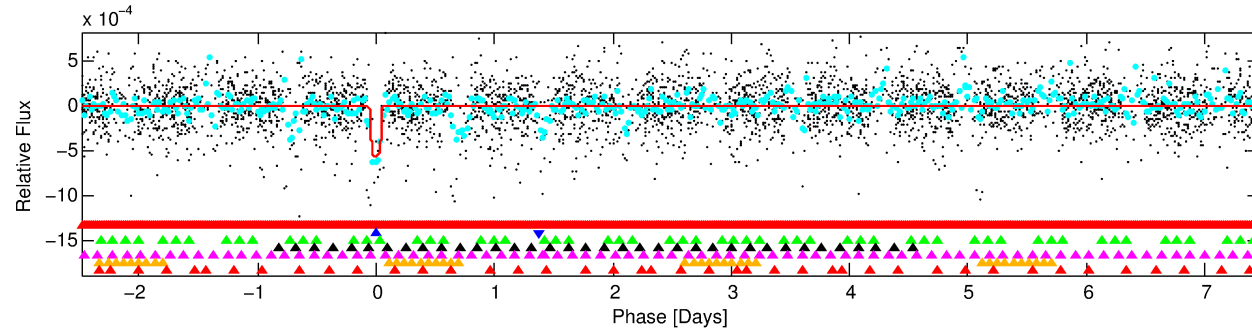
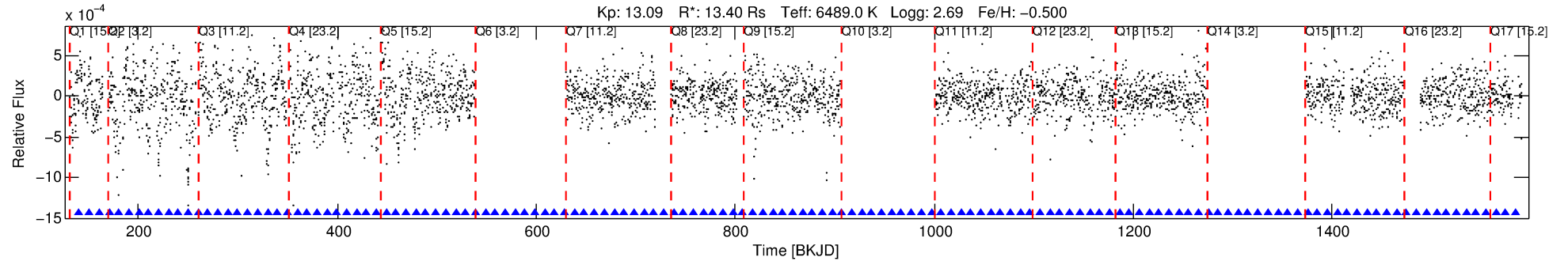
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005629449-02

No Significant Match Found

DV One-Page Summary

KIC: 5629449 Candidate: 2 of 7 Period: 9.956 d



DV Fit Results:

Period = 9.95569 [0.00033] d
Epoch = 140.8258 [0.0059] BKJD
Rp/R* = 0.0228 [0.0349]
a/R* = 27.84 [229.41]
b = 0.58 [9.61]
Seff = 15883.88 [15482.68]
Teq = 2863 [698] K
Rp = 33.40 [53.04] Re
a = 0.1340 [0.0449] AU
Ag = 3.22 [10.04] [0.22σ]
Teffp = 5930 [4743] K [0.64σ]

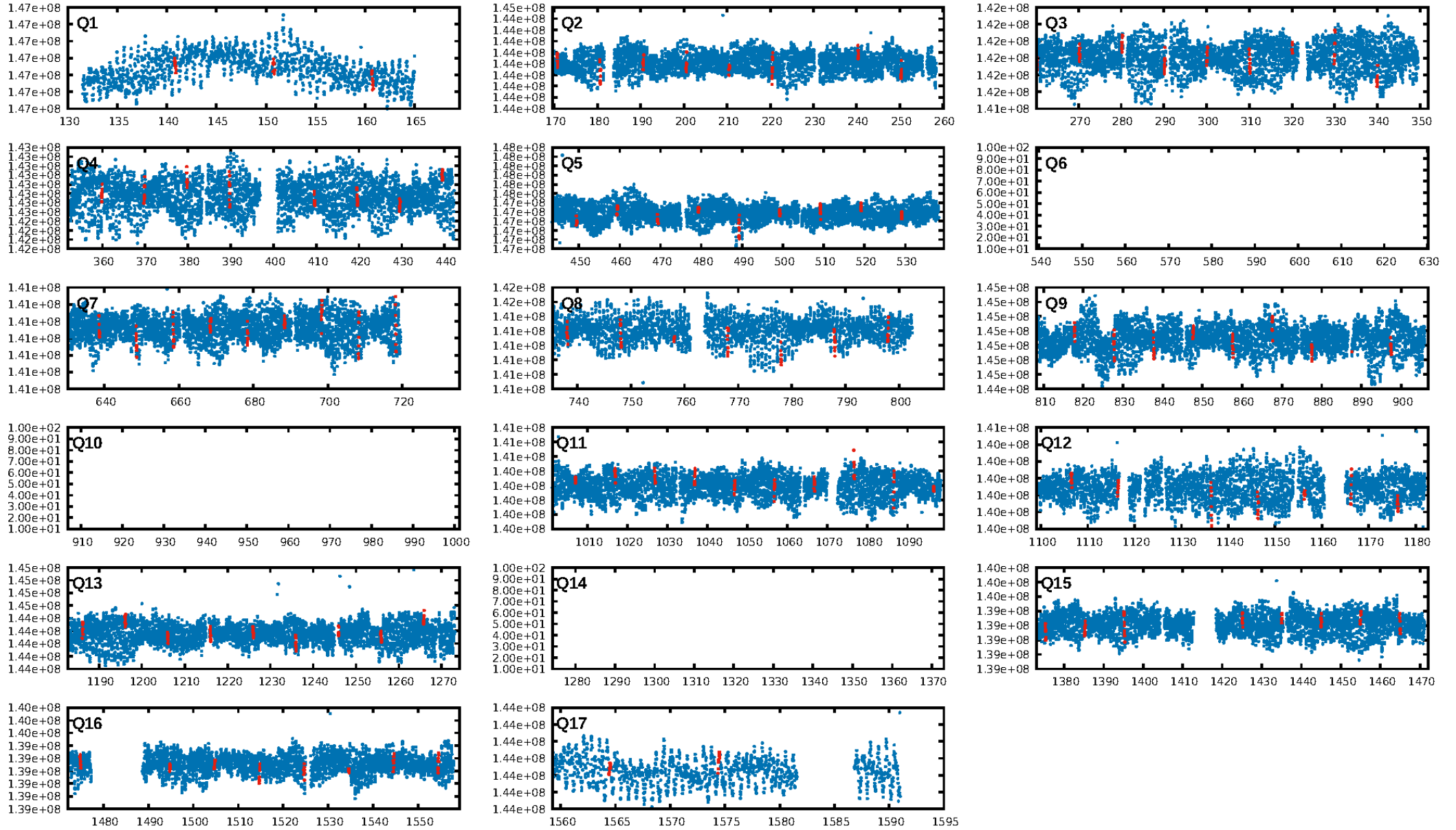
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [40.11σ]
LongPeriod-sig: 100.0% [24.48σ]
ModelChiSquare2-sig: 31.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: -0.4375
Centroid-sig: 10.0%
Centroid-so: 0.199 arcsec [1.46σ]
OotOffset-rm: 0.504 arcsec [1.88σ]
KicOffset-rm: 0.588 arcsec [2.01σ]
OotOffset-st: 1/4/4/5 [14]
KicOffset-st: 1/4/4/5 [14]
DiffImageQuality-fgm: 0.50 [7/14]
DiffImageOverlap-fno: 0.00 [0/14]

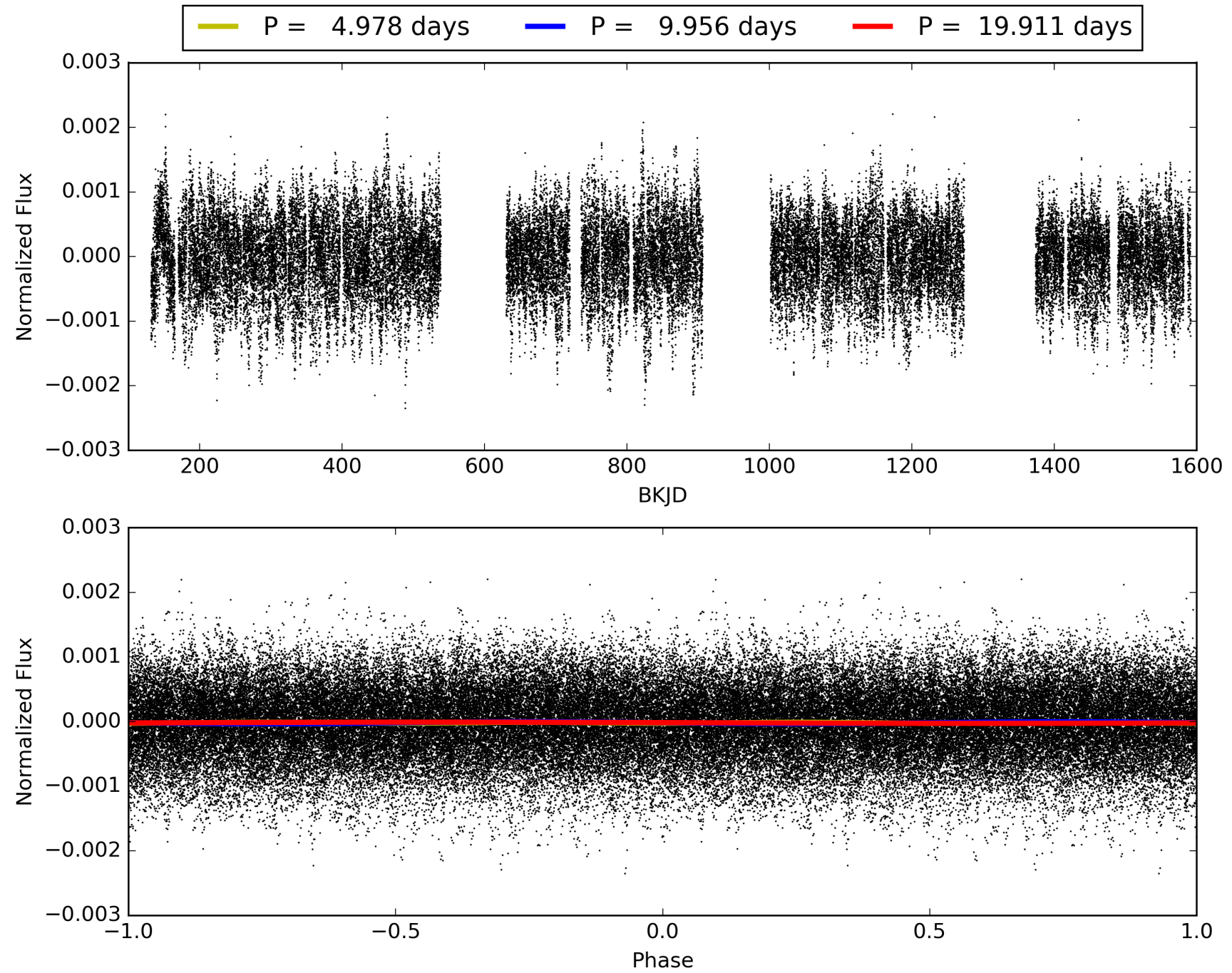
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:56:14 Z

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

TCE 005629449-02, PDC Light Curves

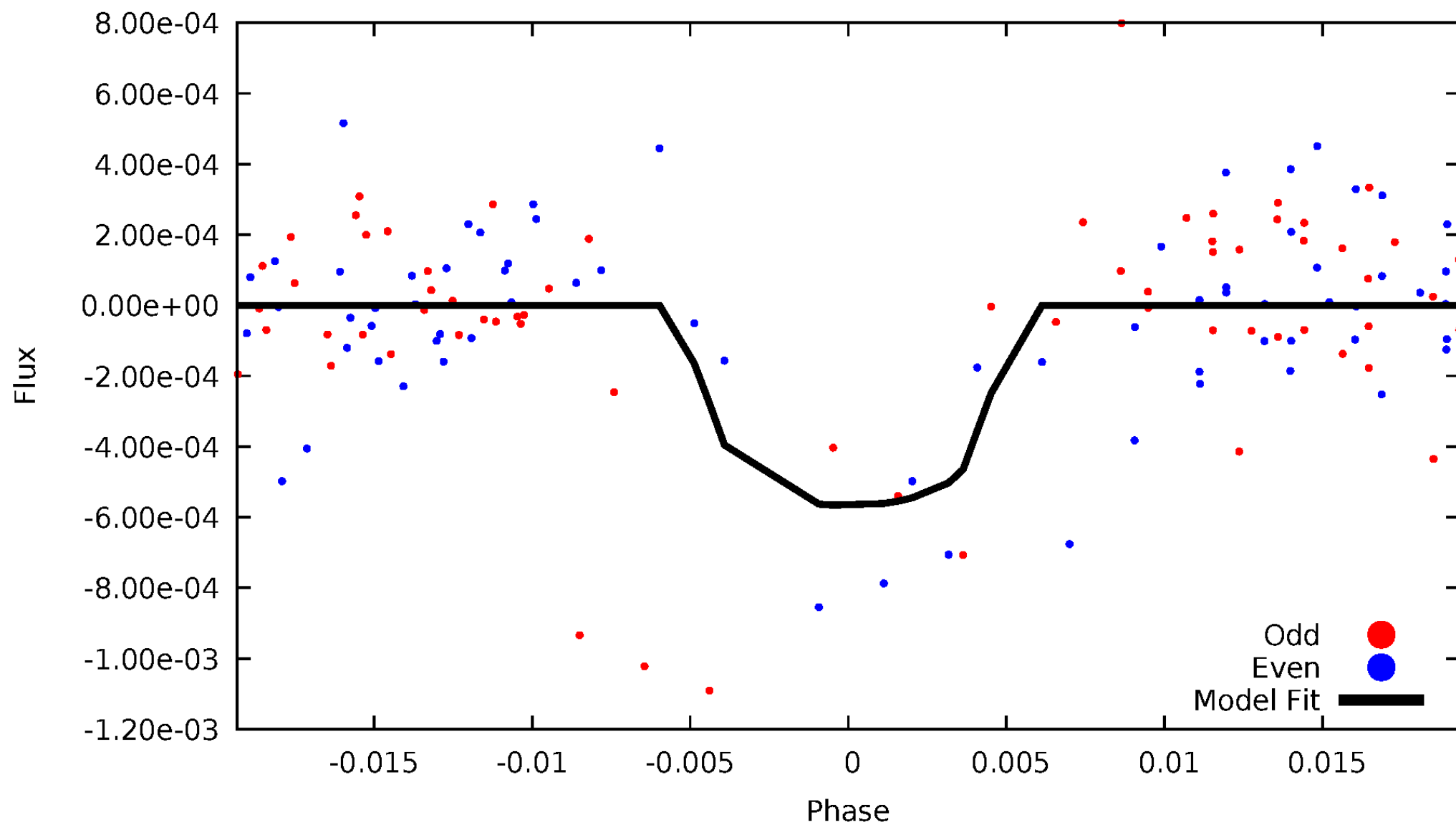


TCE 005629449-02



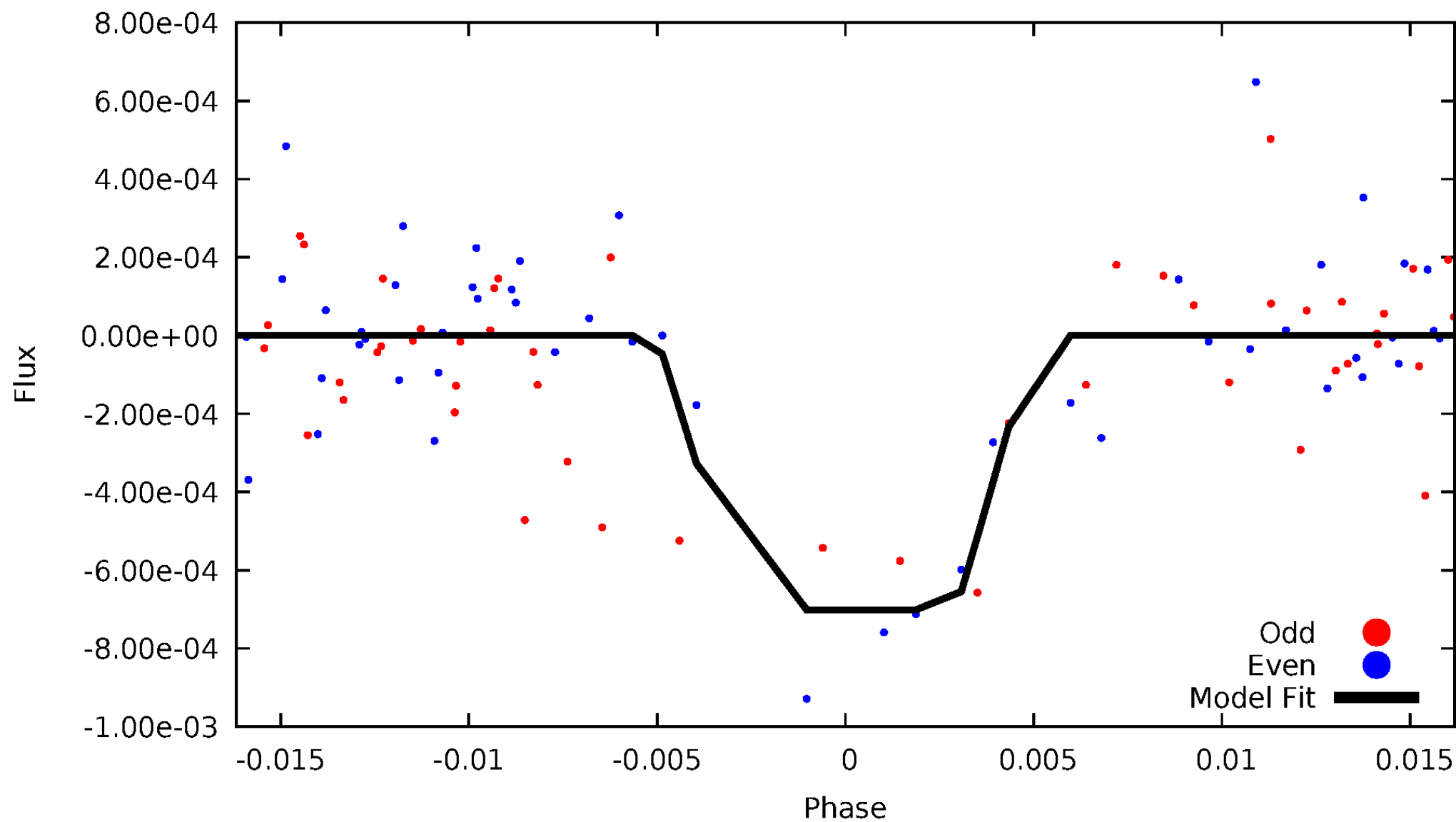
DV Odd/Even

TCE 005629449-02



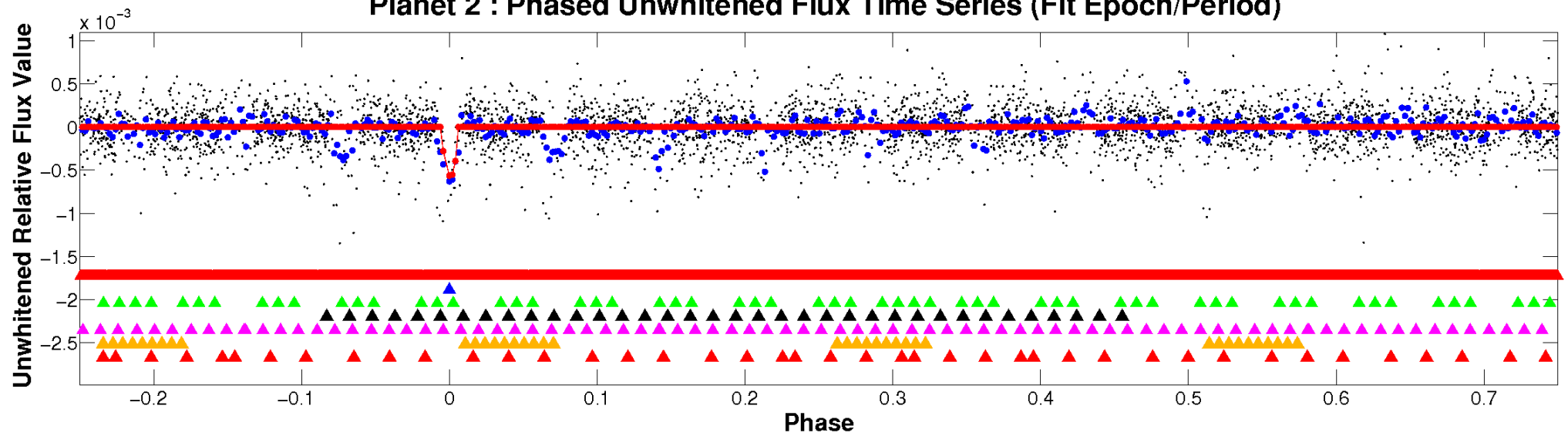
ALT Odd/Even

TCE 005629449-02

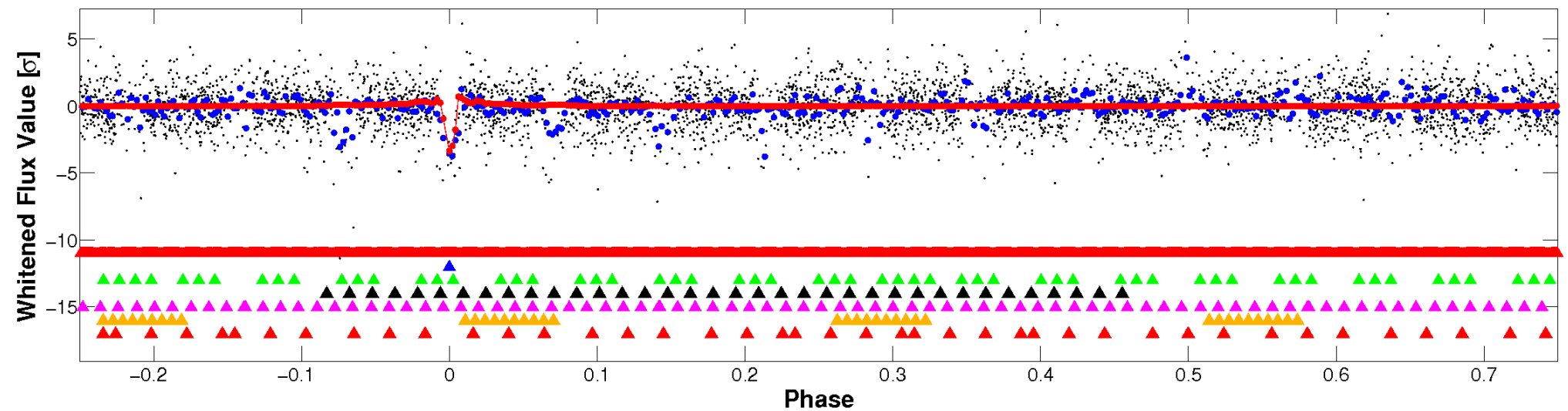


Non-Whitened Vs. Whitened Light Curve

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

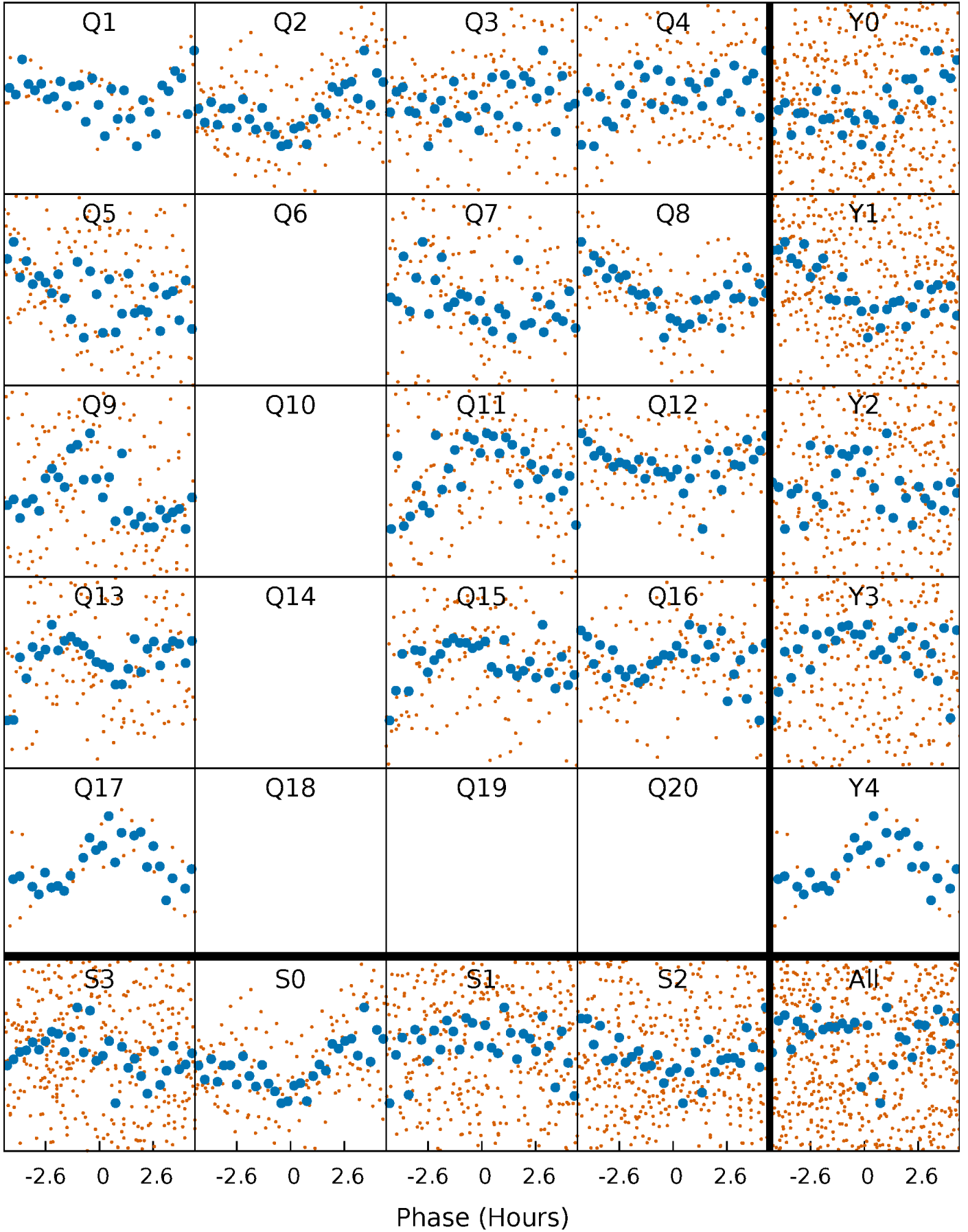


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



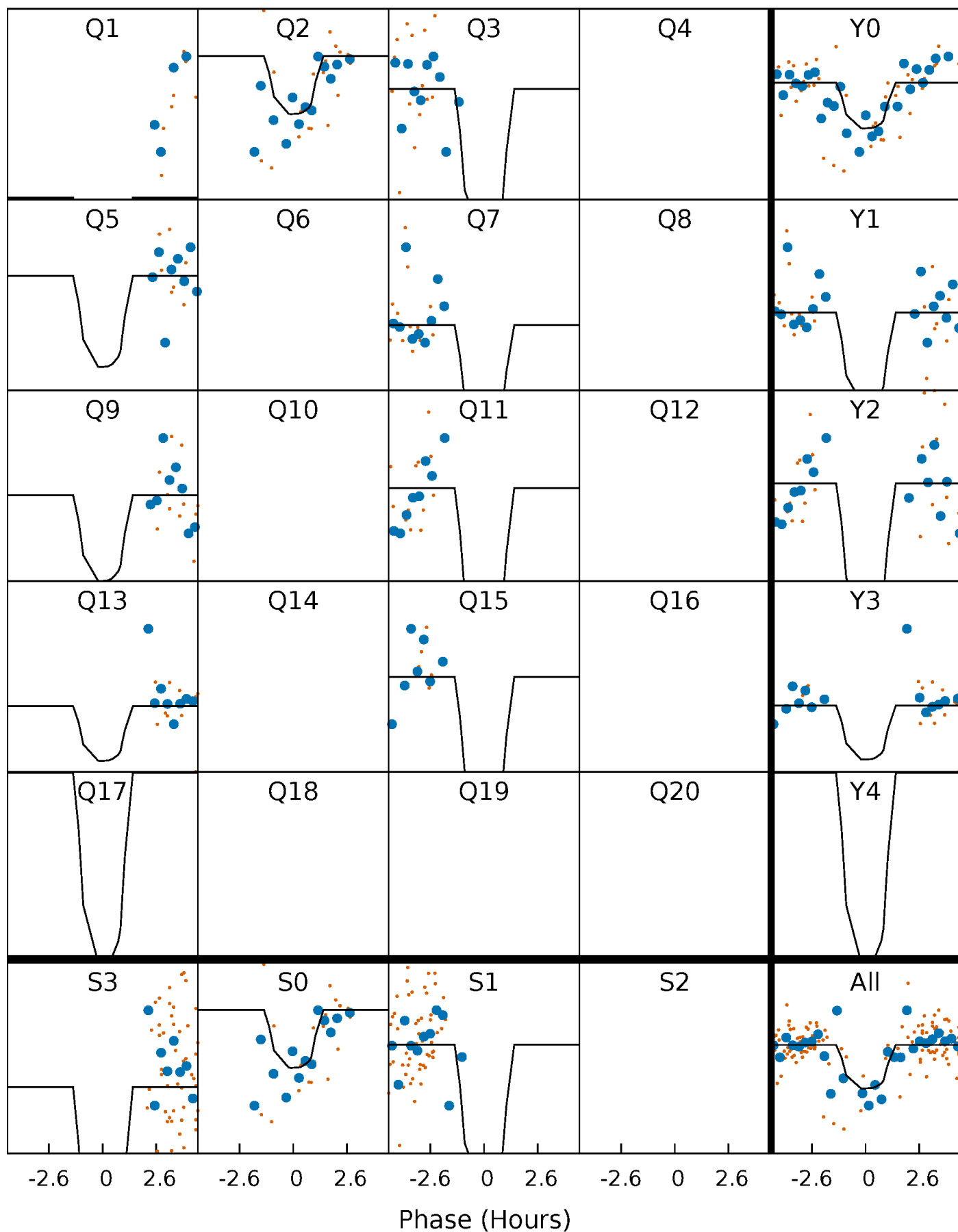
PDC Quarter-Phased Transit Curves

TCE 005629449-02 P= 9.955690 Days $T_0=140.825821$ (BKJD)



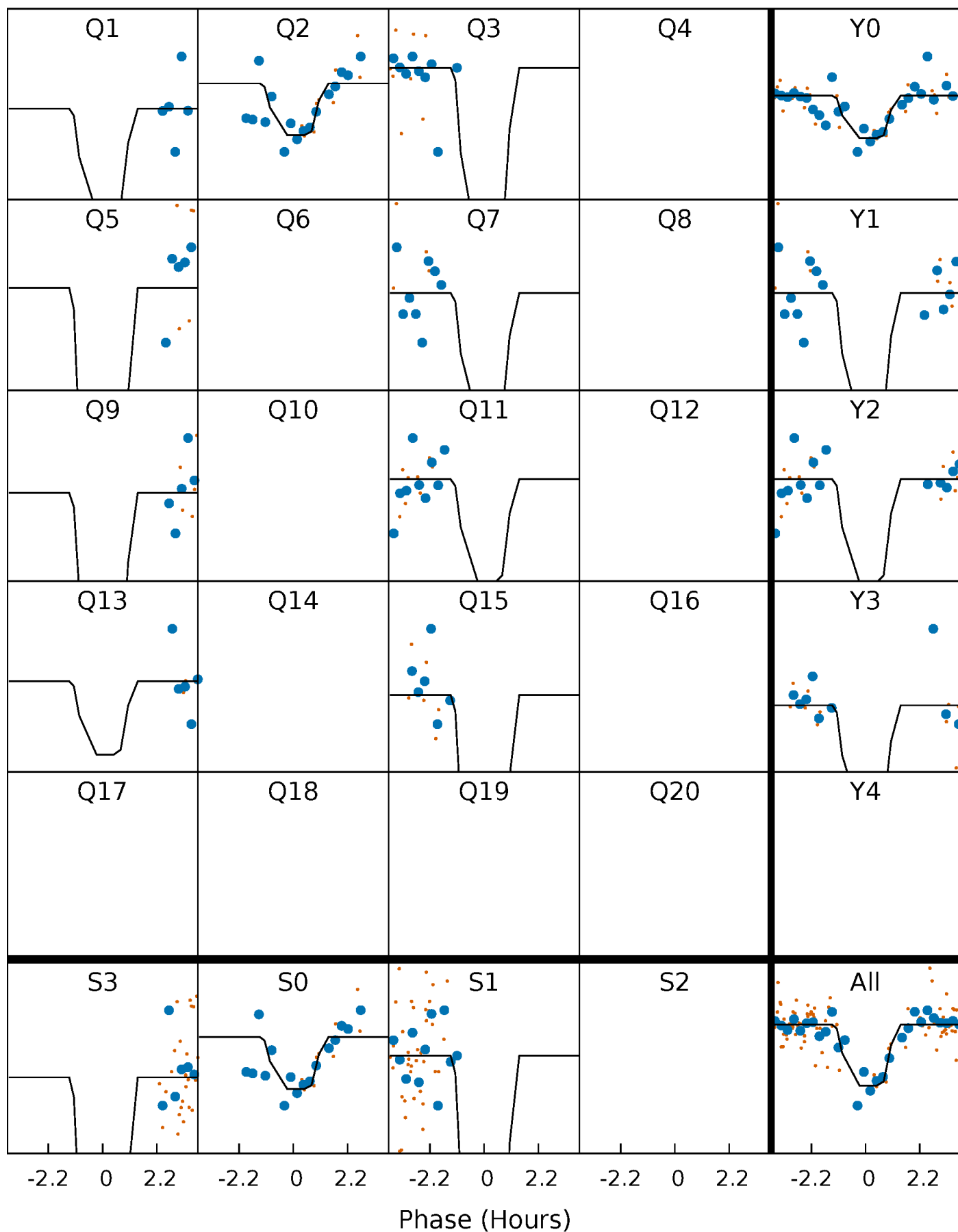
DV Quarter-Phased Transit Curves

TCE 005629449-02 P= 9.955690 Days $T_0=140.825821$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

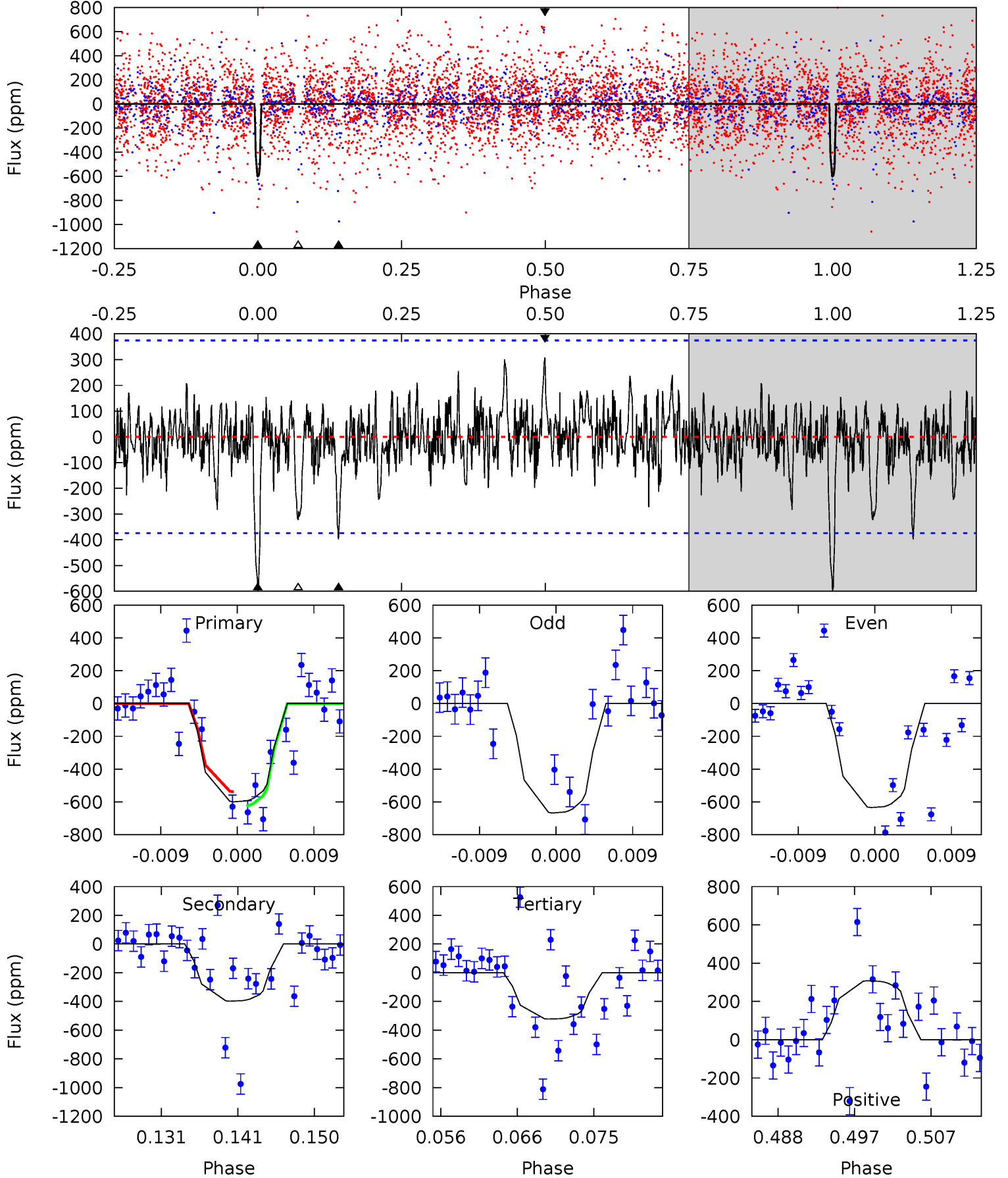
TCE 005629449-02 $P = 9.955430$ Days $T_0 = 140.828857$ (BKJD)



DV Model-Shift Uniqueness Test

005629449-02, P = 9.955690 Days, E = 130.870131 Days

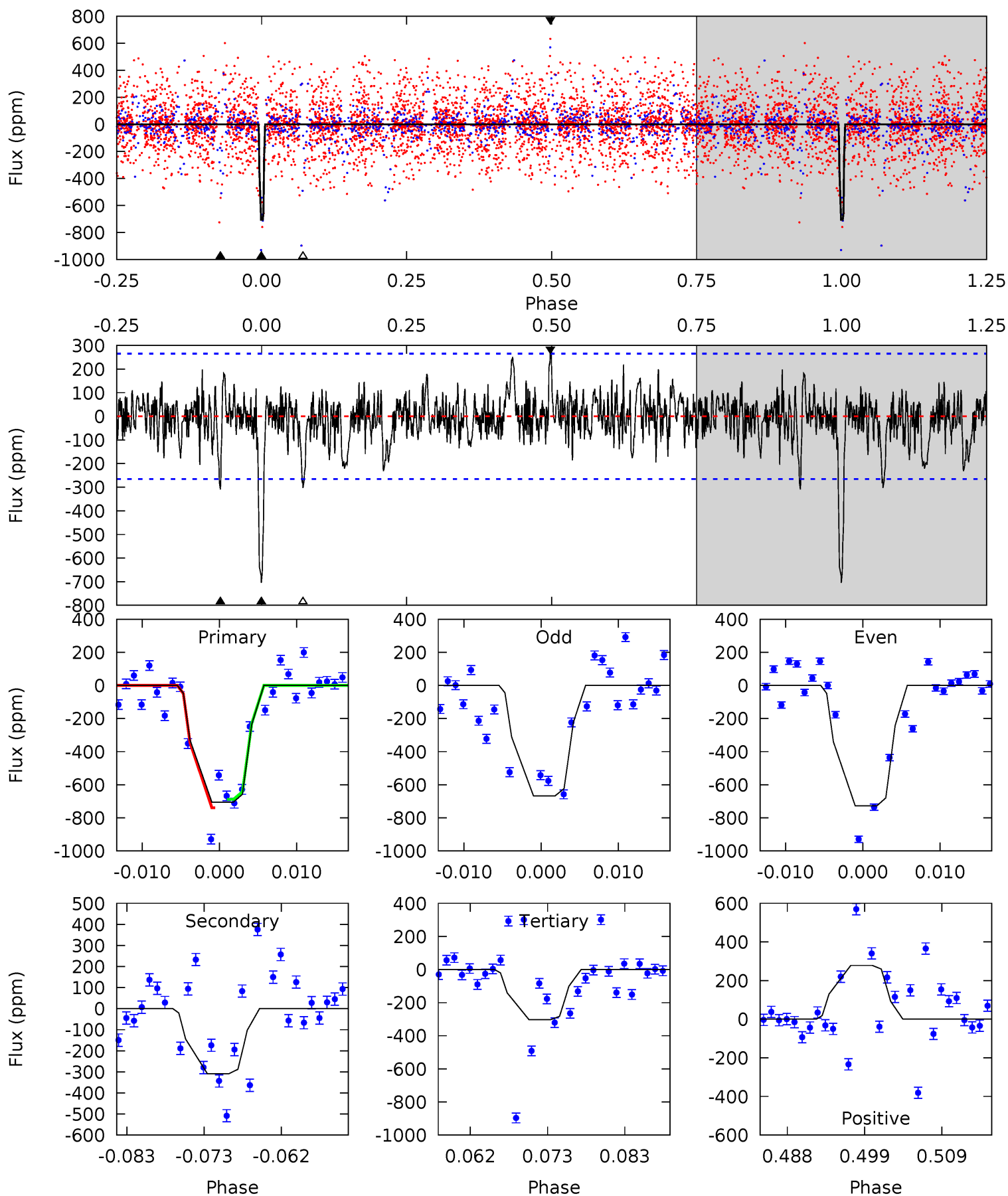
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.07	5.36	4.35	4.15	5.04	2.60	1.08	3.73	3.93	1.01	1.21	0.23	1.07	0.34	0.57



Alt Model-Shift Uniqueness Test

005629449-02, P = 9.955430 Days, E = 130.873427 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.3	5.83	5.73	5.25	5.02	2.56	1.23	7.60	8.07	0.11	0.58	0.56	1.04	0.28	0.45



Stellar Parameters For KIC 005629449

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6489^{+645}_{-1399}	$2.694^{+0.189}_{-0.231}$	$-0.500^{+0.200}_{-0.450}$	$13.402^{+3.514}_{-5.710}$	$3.239^{+0.107}_{-2.025}$	$0.002^{+0.003}_{-0.001}$
	+10%/-22%	+7%/-9%	+40%/-90%	+26%/-43%	+3%/-63%	+142%/-52%
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 005629449-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-398 ± 74	$48.38^{+46.44}_{-32.99}$	3939^{+640}_{-858}	4596^{+3991}_{-1695}	$1.536^{+12.075}_{-1.130}$
Alt.	-309 ± 53	$51.09^{+51.12}_{-33.16}$	4016^{+548}_{-783}	4065^{+3308}_{-6392}	$0.980^{+6.635}_{-0.699}$

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 $A_{\text{obs}} \gg 1.0$

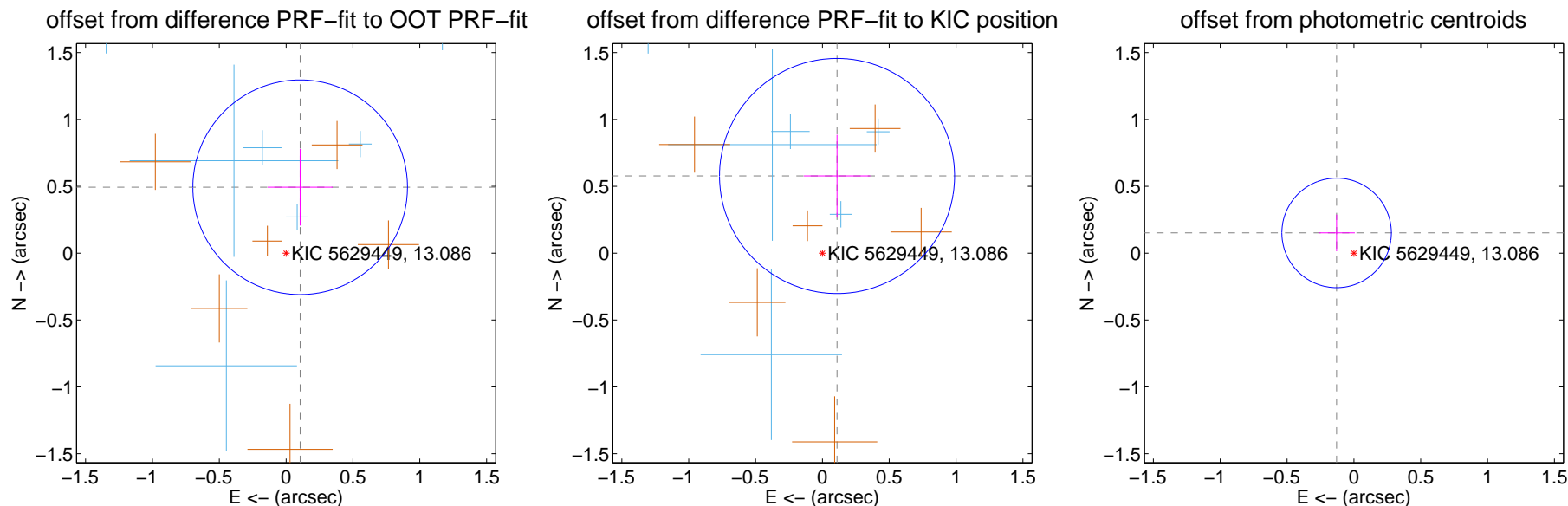
DV Centroid Data

Supplemental centroid analysis for 005629449-02. Kepler magnitude: 13.09. Transit SNR 8.50

There are 7 quarters with good PRF difference image offsets

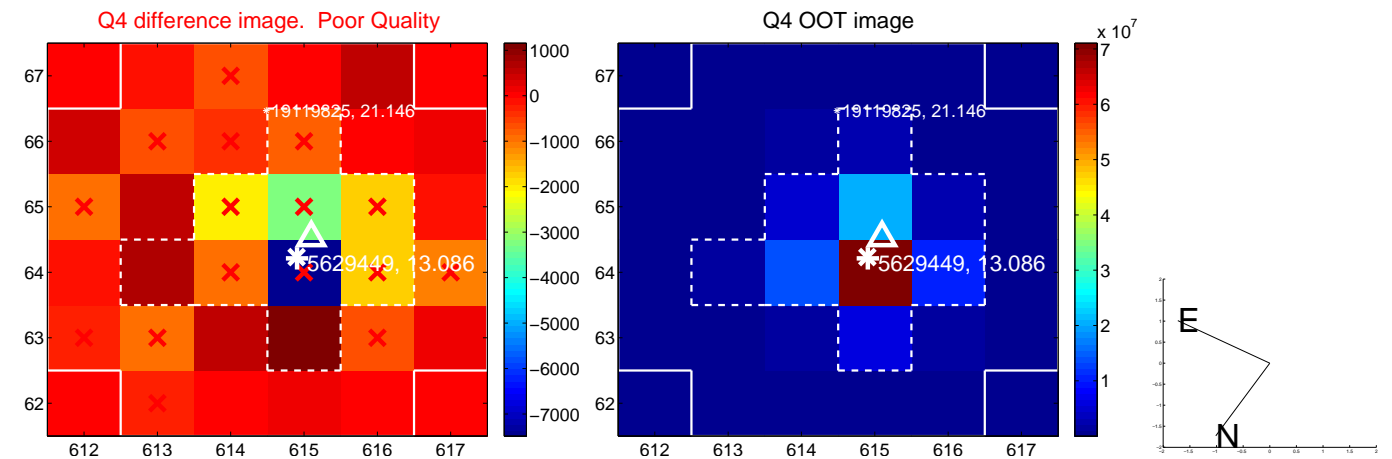
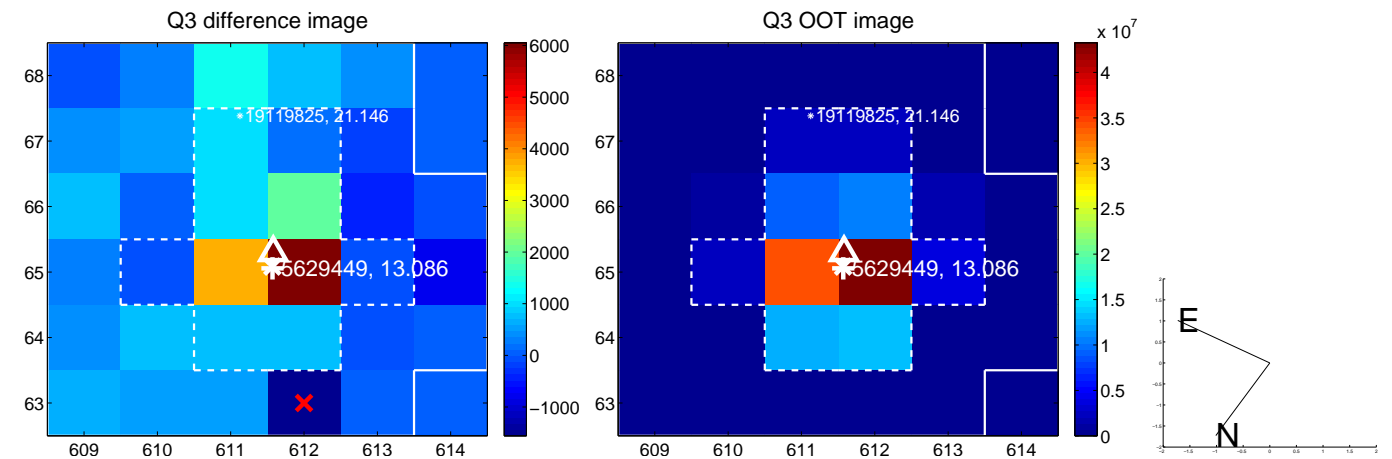
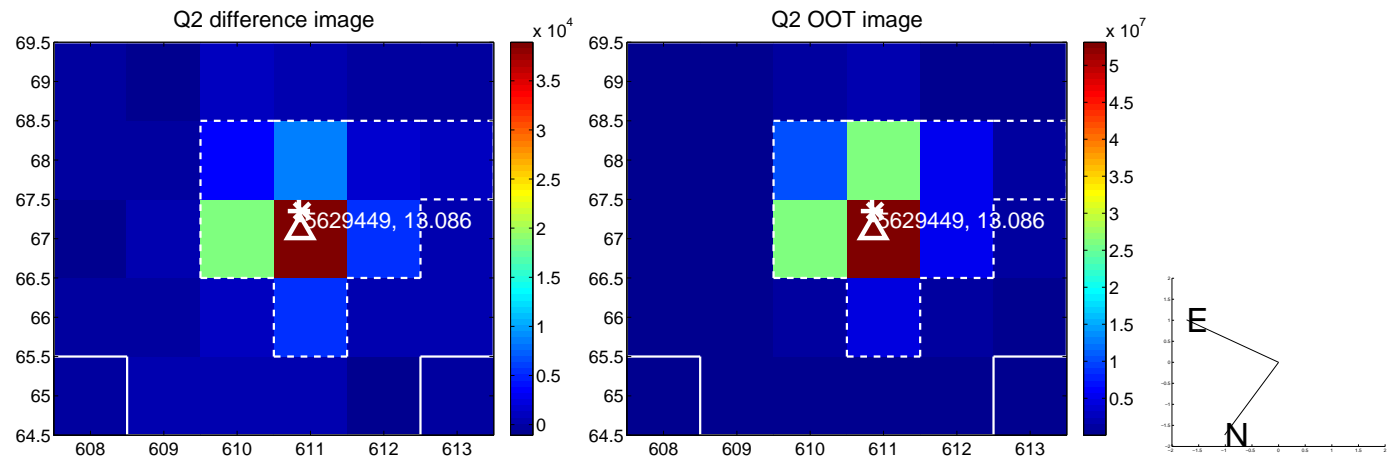
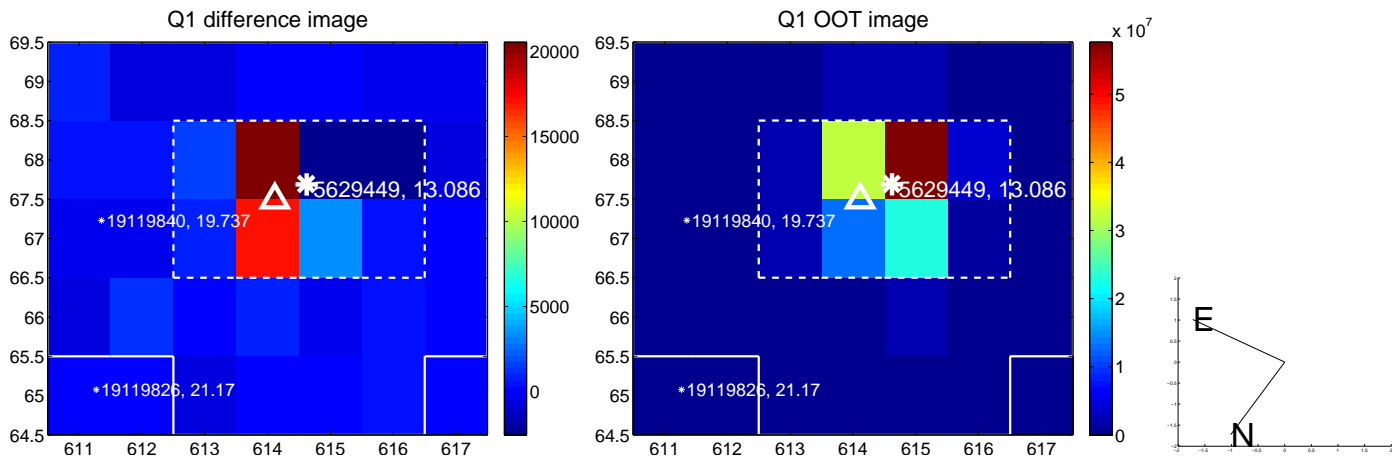
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.504 ± 0.268	1.88	-0.105 ± 0.243	0.493 ± 0.287
PRF-fit source offset from KIC position	0.588 ± 0.293	2.01	-0.110 ± 0.249	0.577 ± 0.308
photometric centroid source offset	0.20 ± 0.14	1.46	0.13 ± 0.14	0.15 ± 0.14

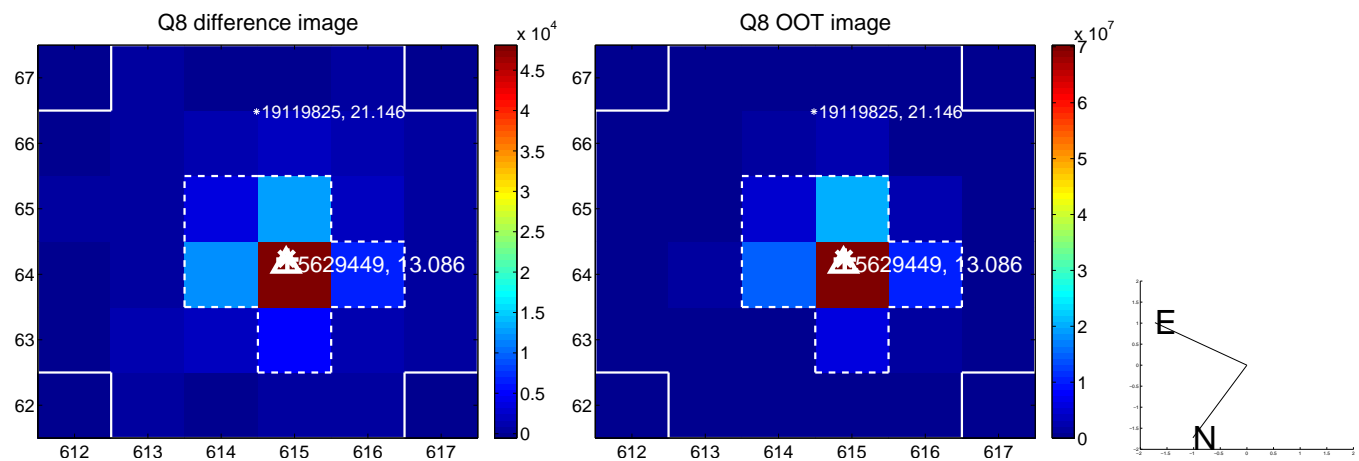
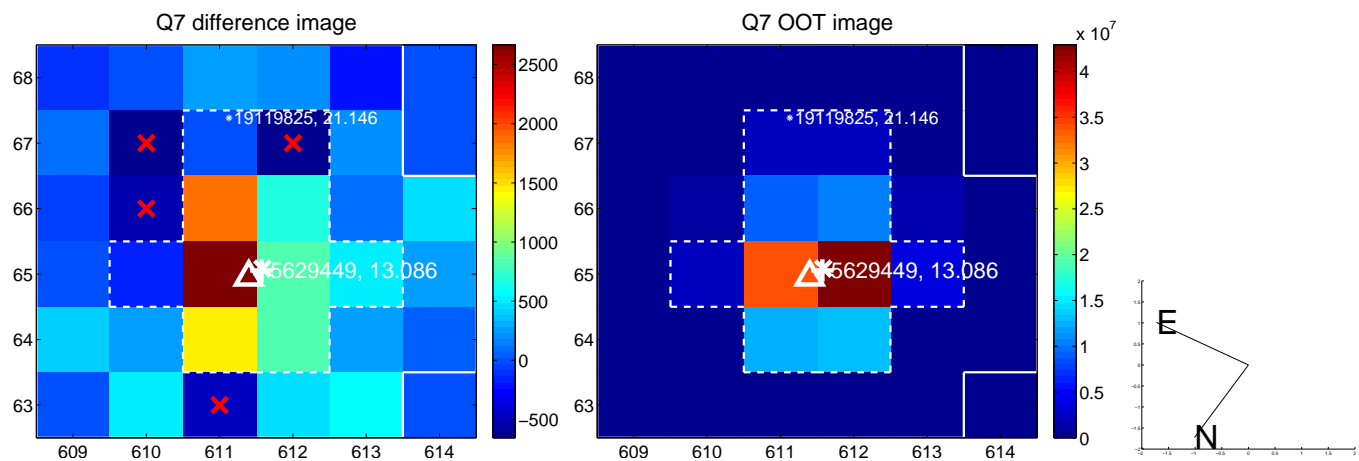
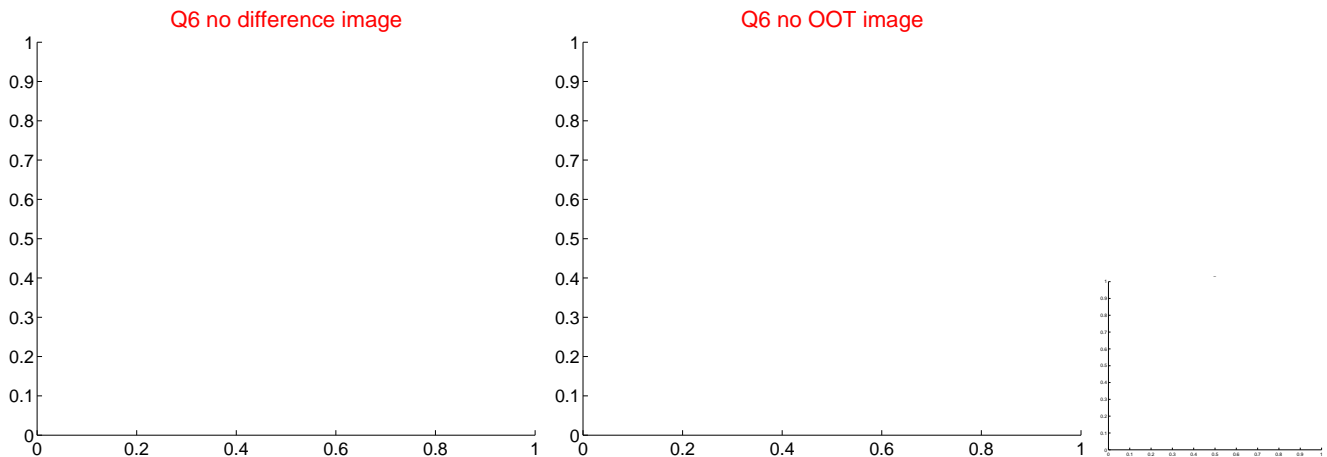
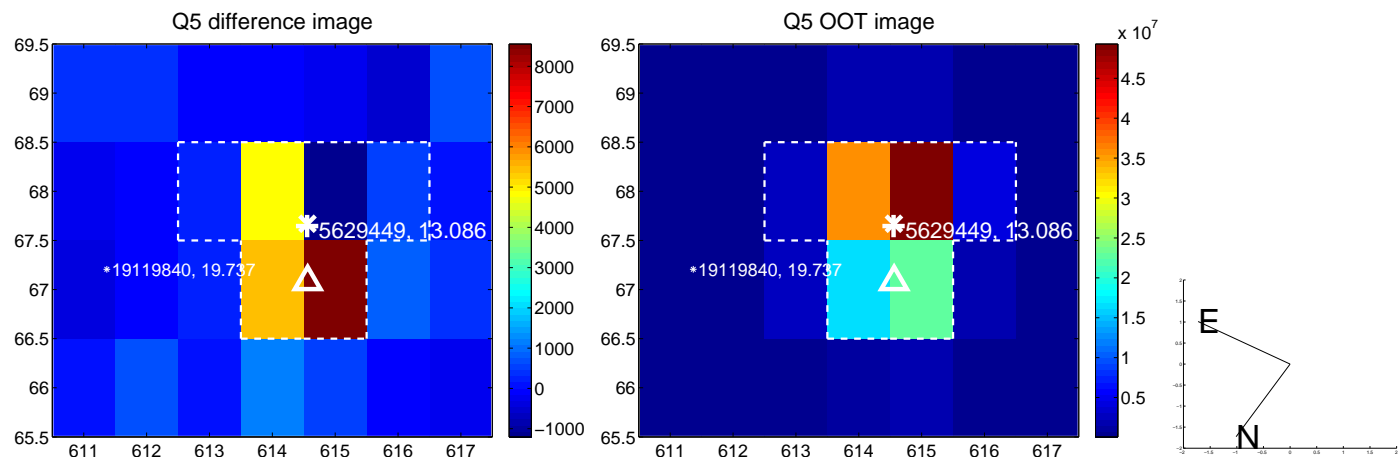


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

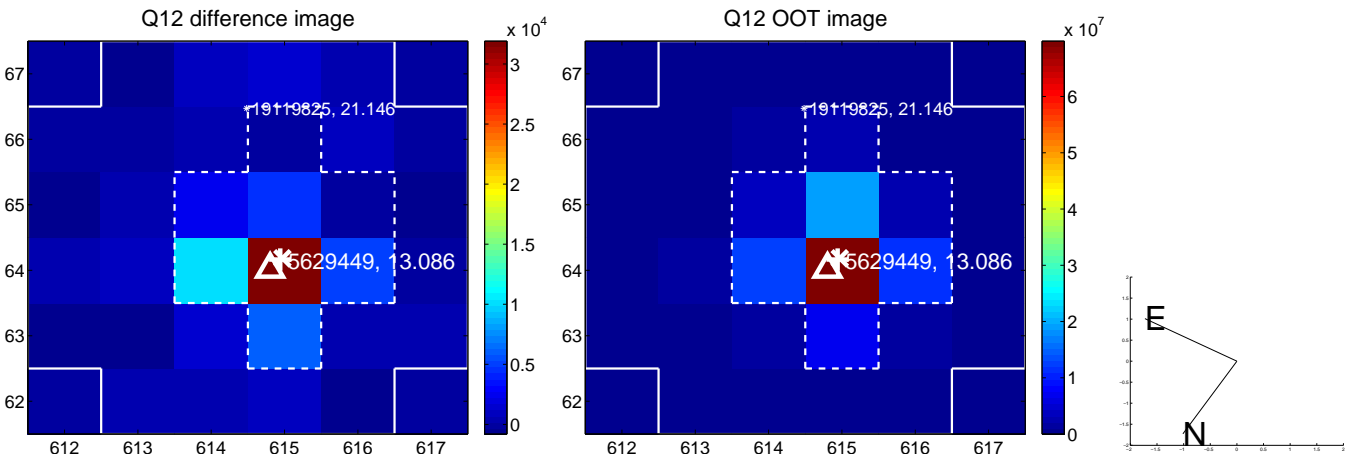
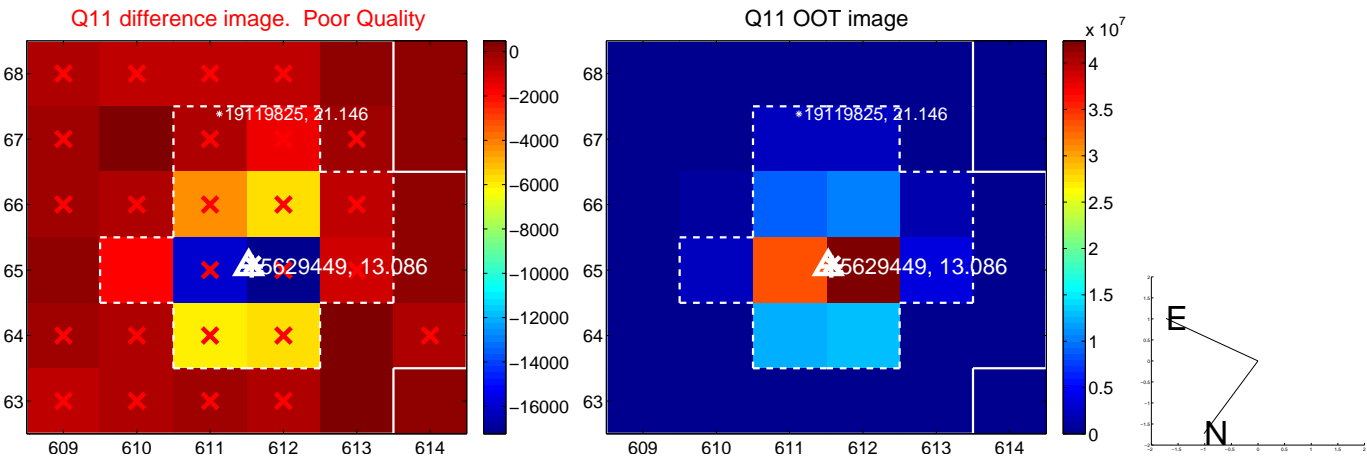
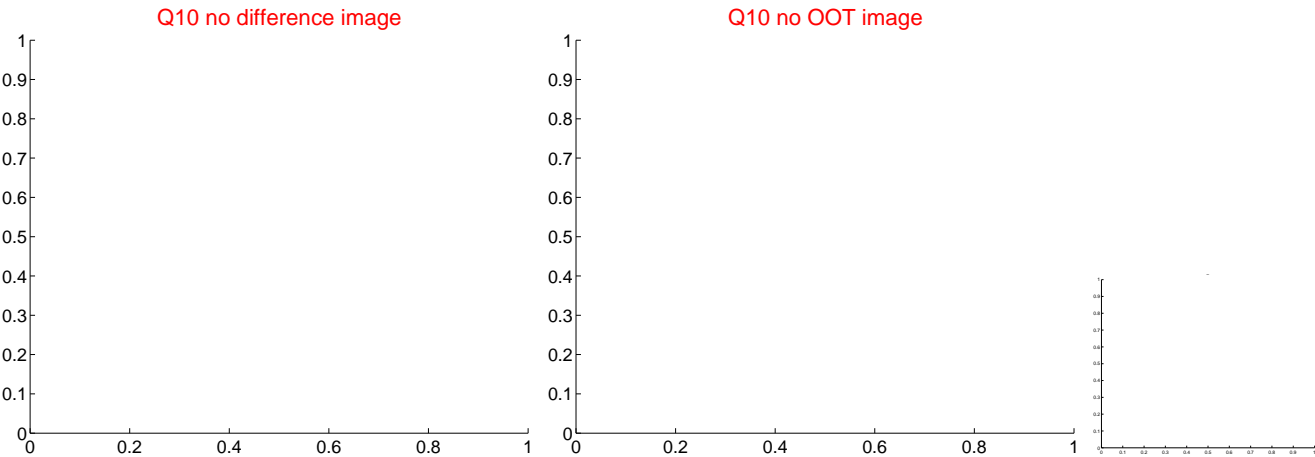
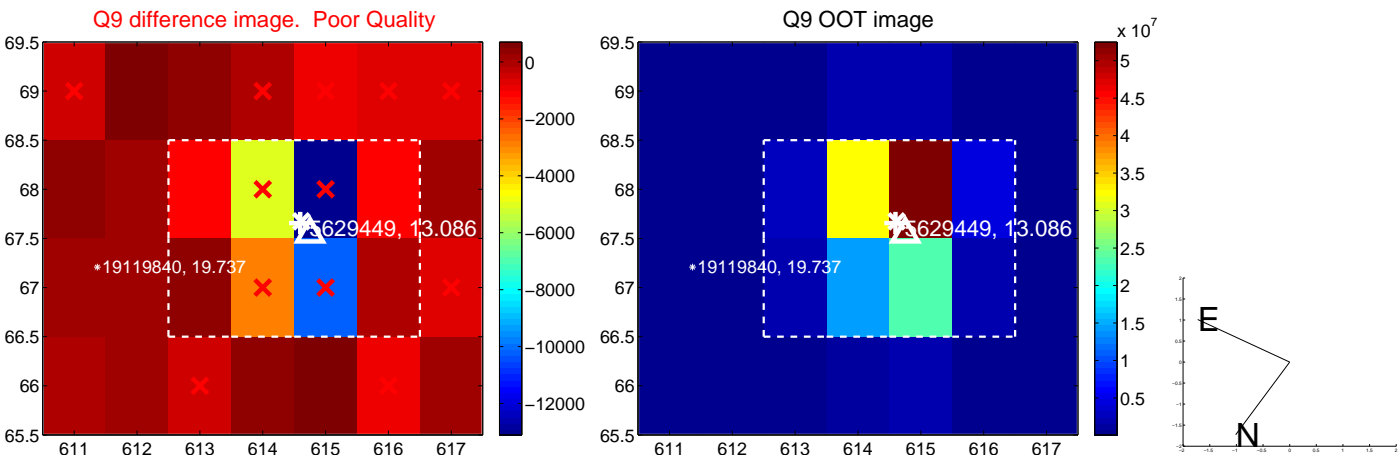
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



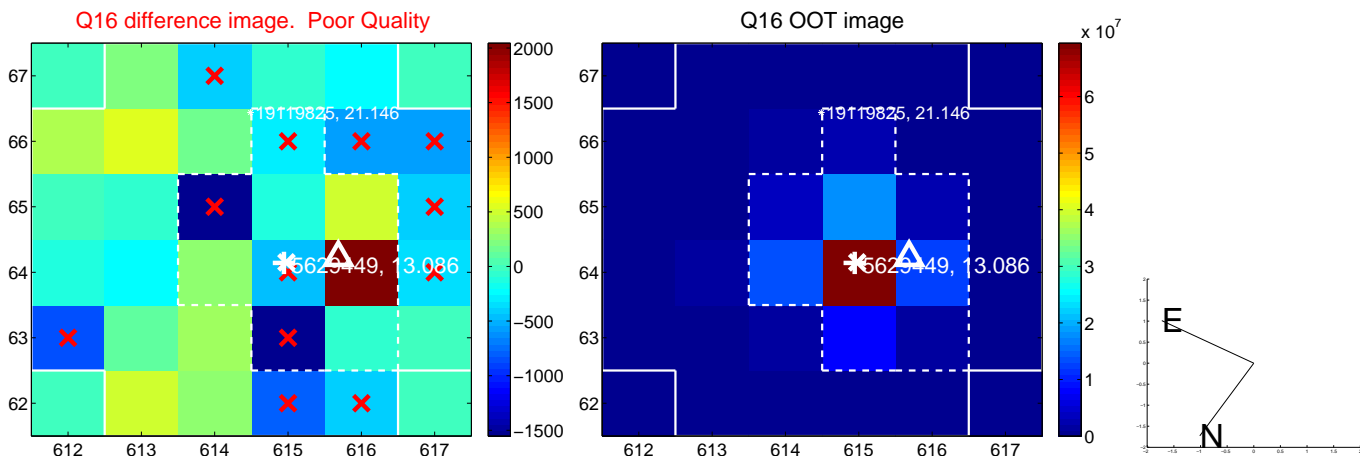
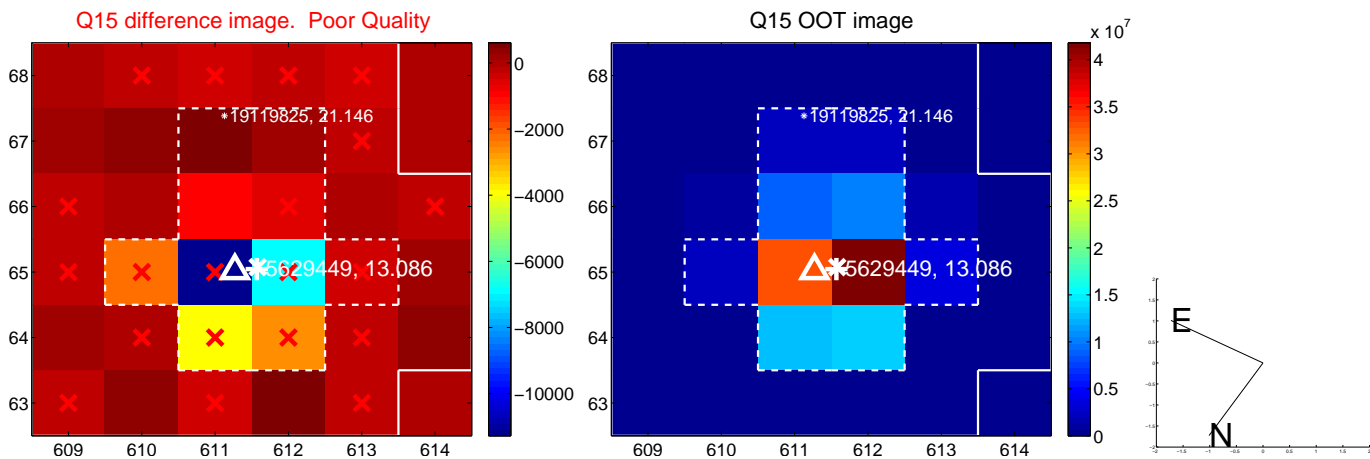
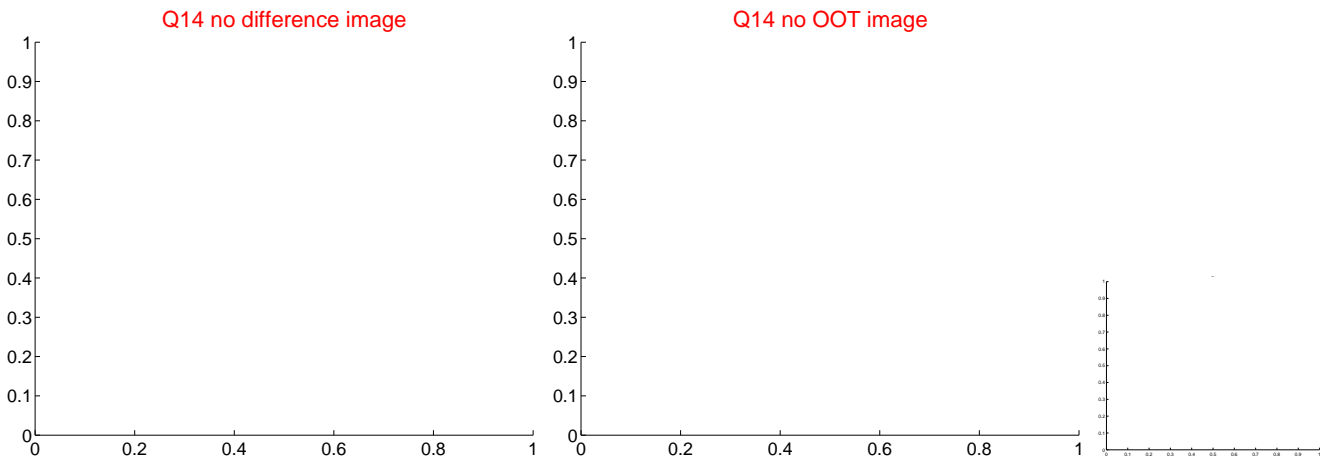
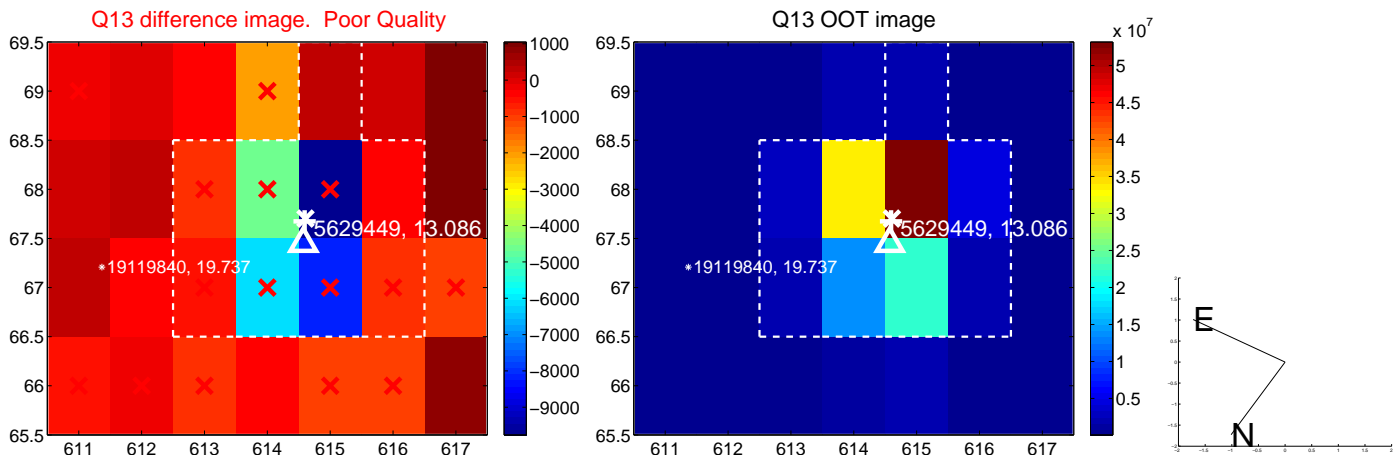
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



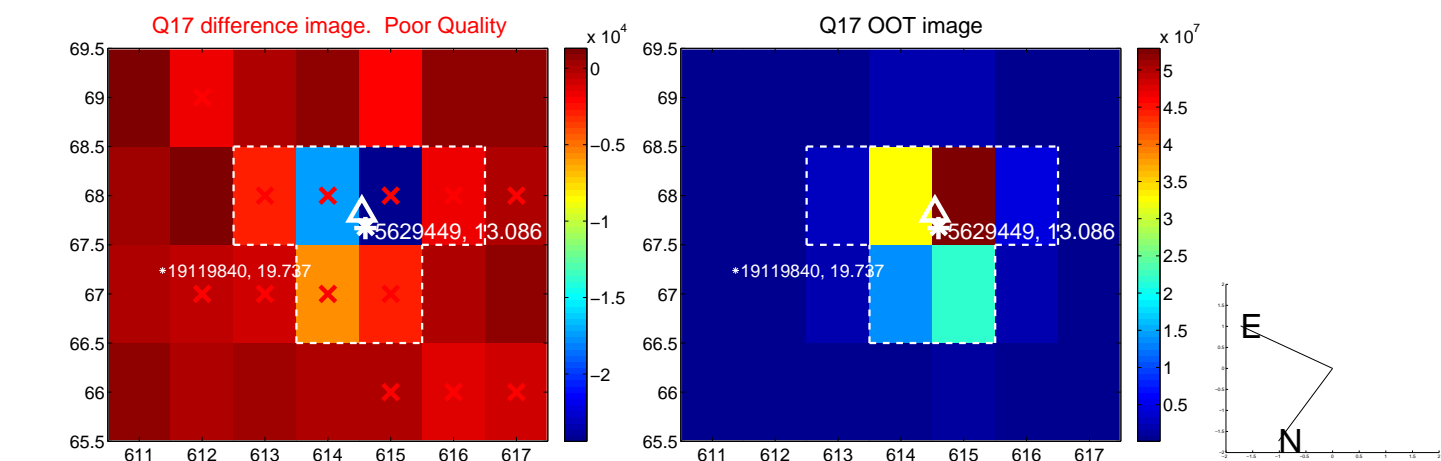
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



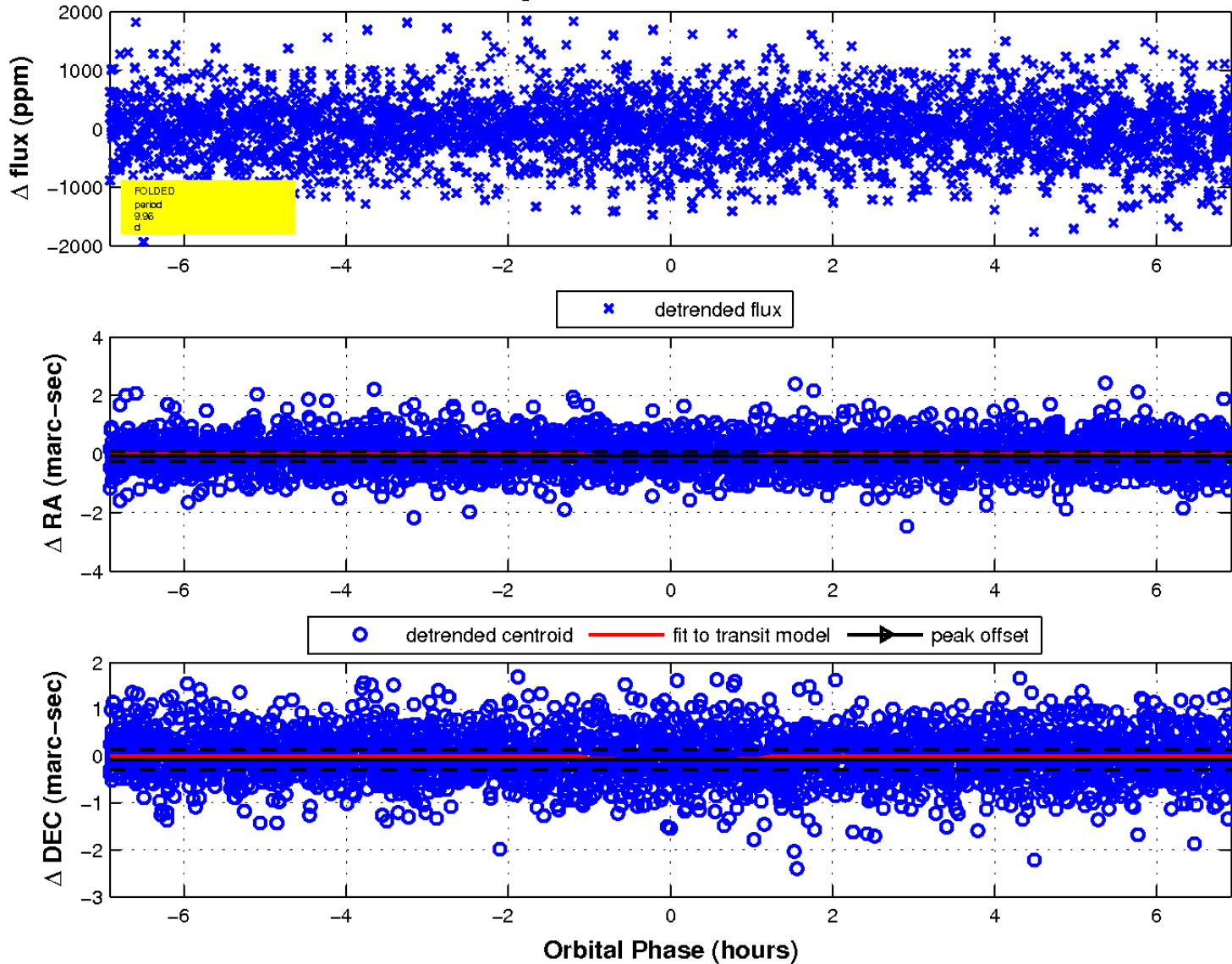
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



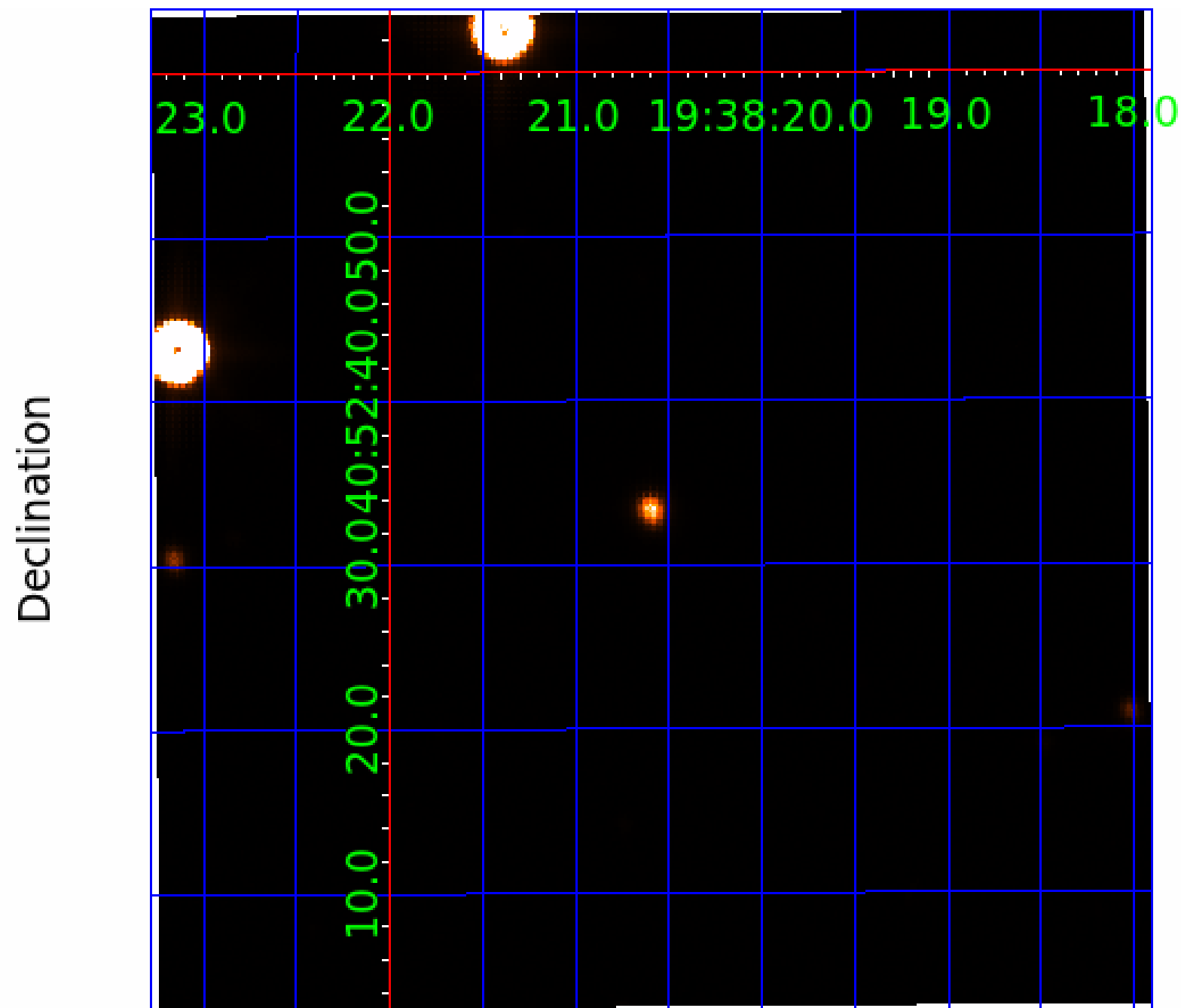
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 2 of 7



UKIRT Image



KIC 005629449

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})
005629449-01	OBS	No	0.709741	132.112175	30.4	5.027	8.1	5.8	13.40	6489	7.65	0.00
005629449-02	OBS	No	9.955690	140.825821	567.1	2.308	12.1	8.5	13.40	6489	33.40	15883.88
005629449-03	OBS	No	24.621583	154.019267	259.3	0.587	12.1	3.6	13.40	6489	23.51	4749.31
005629449-04	OBS	No	39.975838	169.867284	622.6	1.235	10.9	9.9	13.40	6489	36.58	2488.79
005629449-05	OBS	No	17.119042	142.235469	163.1	6.632	7.7	5.4	13.40	6489	19.95	7710.44
005629449-06	OBS	No	37.317356	146.537853	586.2	1.542	11.1	9.2	13.40	6489	36.09	2727.96

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005629449-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_ALT
005629449-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—MOD_NONUNIQ_ALT
005629449-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005629449-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005629449-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005629449-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV

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

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

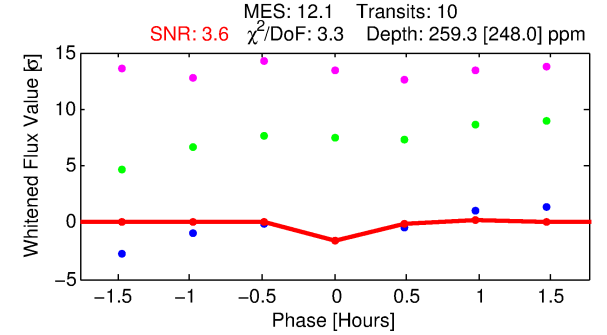
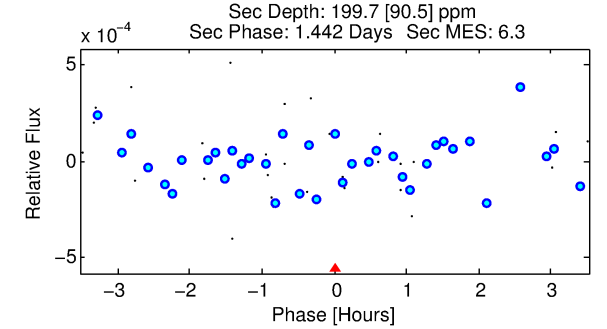
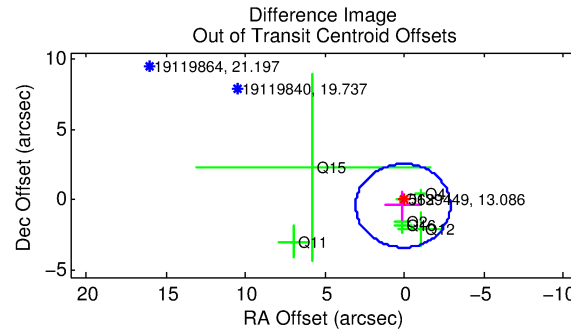
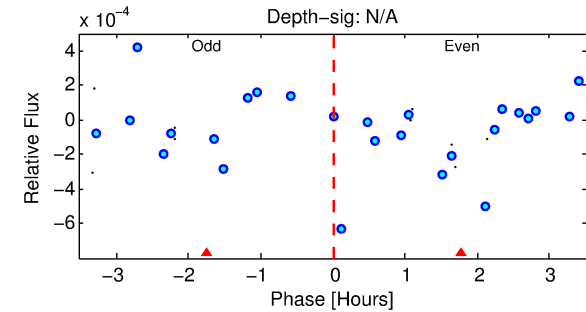
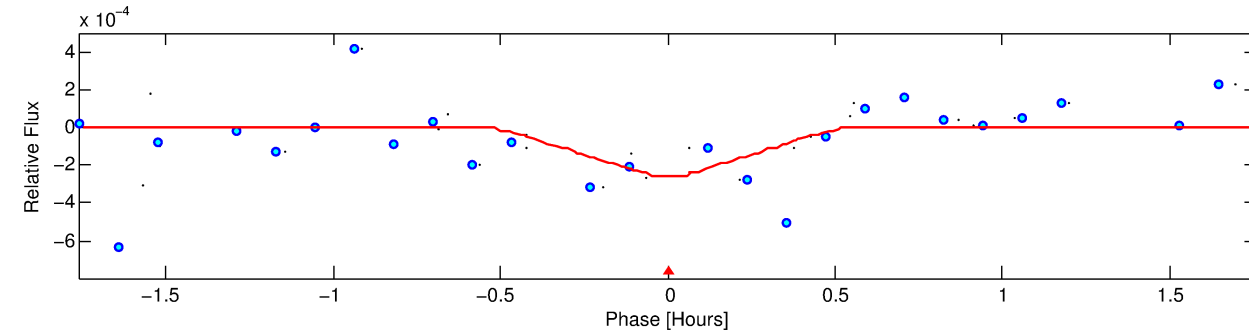
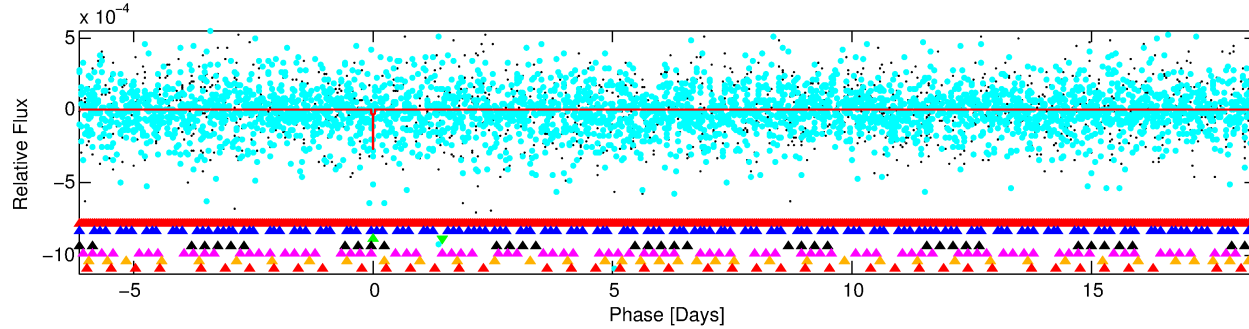
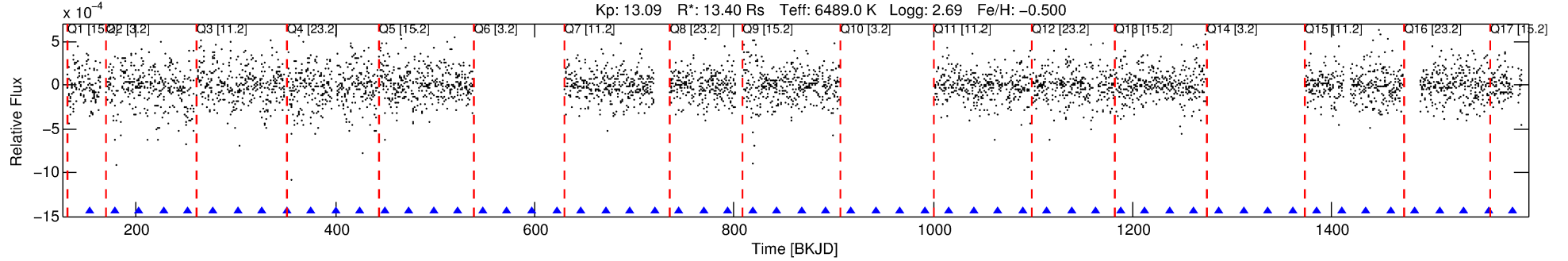
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005629449-03

No Significant Match Found

DV One-Page Summary

KIC: 5629449 Candidate: 3 of 7 Period: 24.622 d



DV Fit Results:

Period = 24.62158 [0.00050] d
Epoch = 154.0193 [0.0189] BKJD
Rp/R* = 0.0161 [0.0569]
a/R* = 250.05 [4588.55]
b = 0.65 [16.92]
Seff = 4749.31 [4629.35]
Teq = 2117 [516] K
Rp = 23.51 [83.79] Re
a = 0.2451 [0.0821] AU
Ag = 11.95 [84.91] [0.13 σ]
Teffp = 6085 [10868] K [0.36 σ]

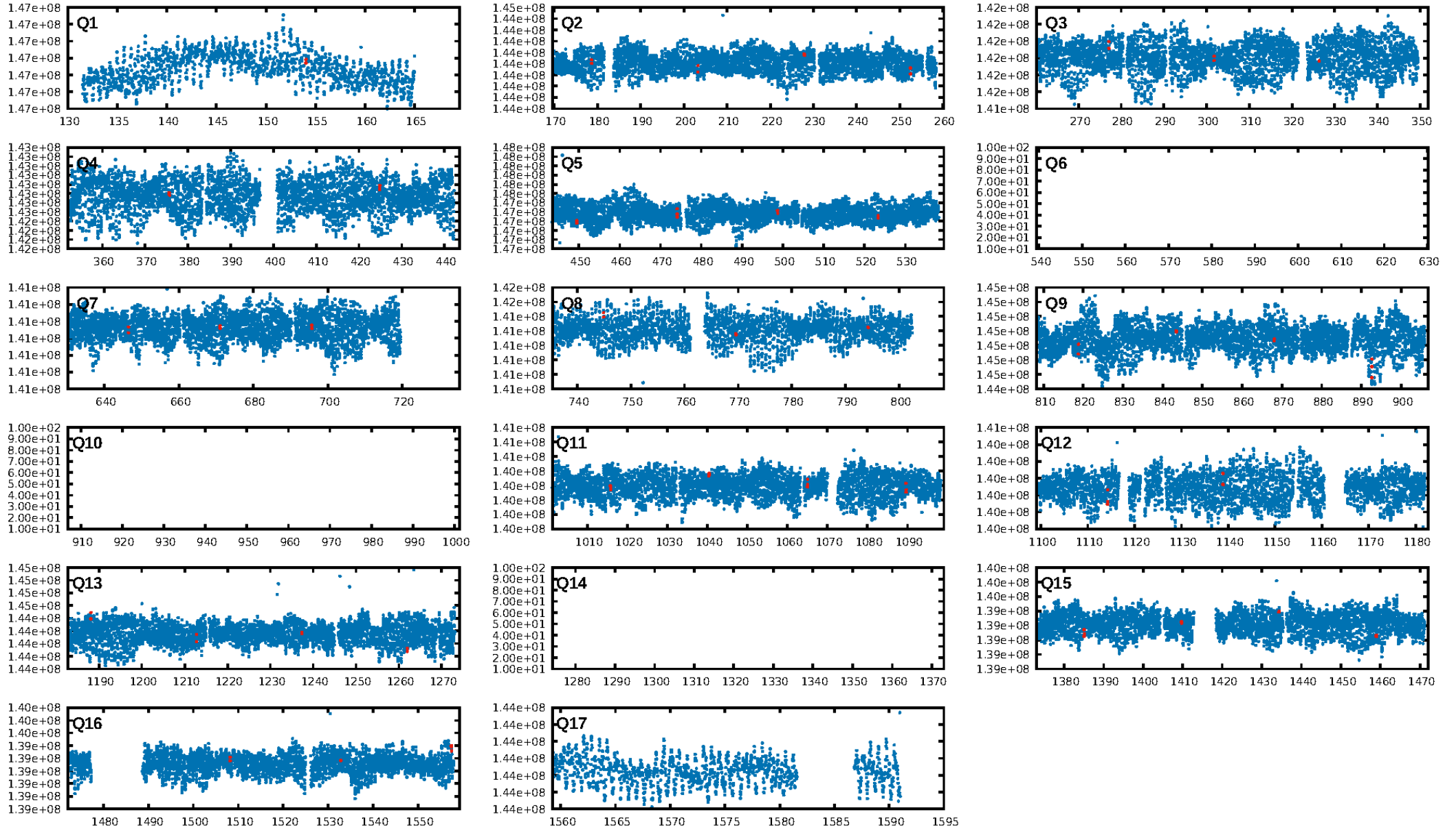
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [27.04 σ]
LongPeriod-sig: 100.0% [158.29 σ]
ModelChiSquare2-sig: 37.3%
ModelChiSquareGof-sig: 90.5%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [10/10]
GhostDiagnostic-chr: 0.8357
Centroid-sig: 17.2%
Centroid-so: 0.914 arcsec [0.92 σ]
OotOffset-rm: 0.429 arcsec [0.43 σ]
OotOffset-st: 1/2/3/1 [7]
KicOffset-rm: 0.367 arcsec [0.36 σ]
KicOffset-st: 1/2/3/1 [7]
DiffImageQuality-fgm: 0.14 [1/7]
DiffImageOverlap-fno: 0.38 [3/8]

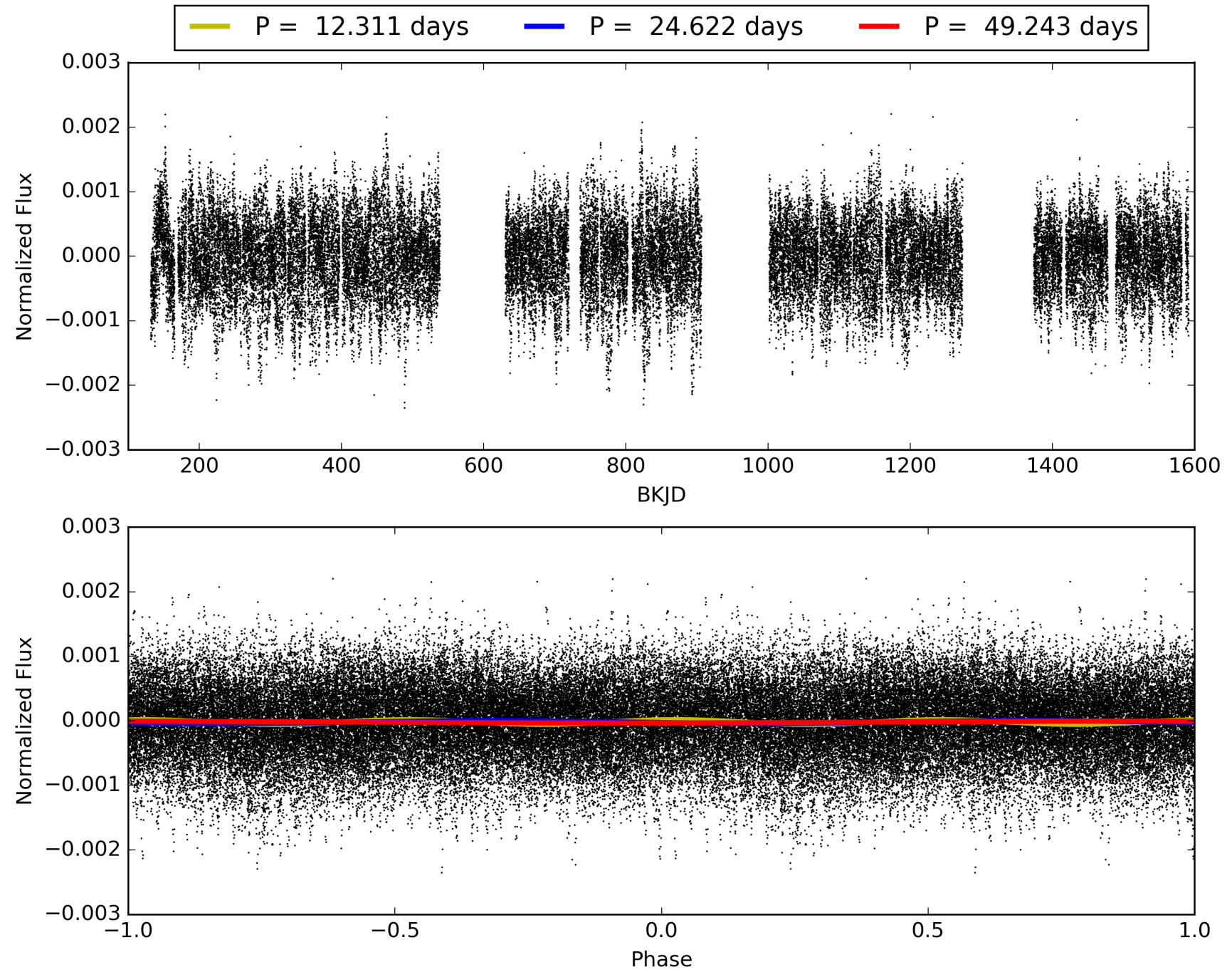
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:56:18 Z

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

TCE 005629449-03, PDC Light Curves

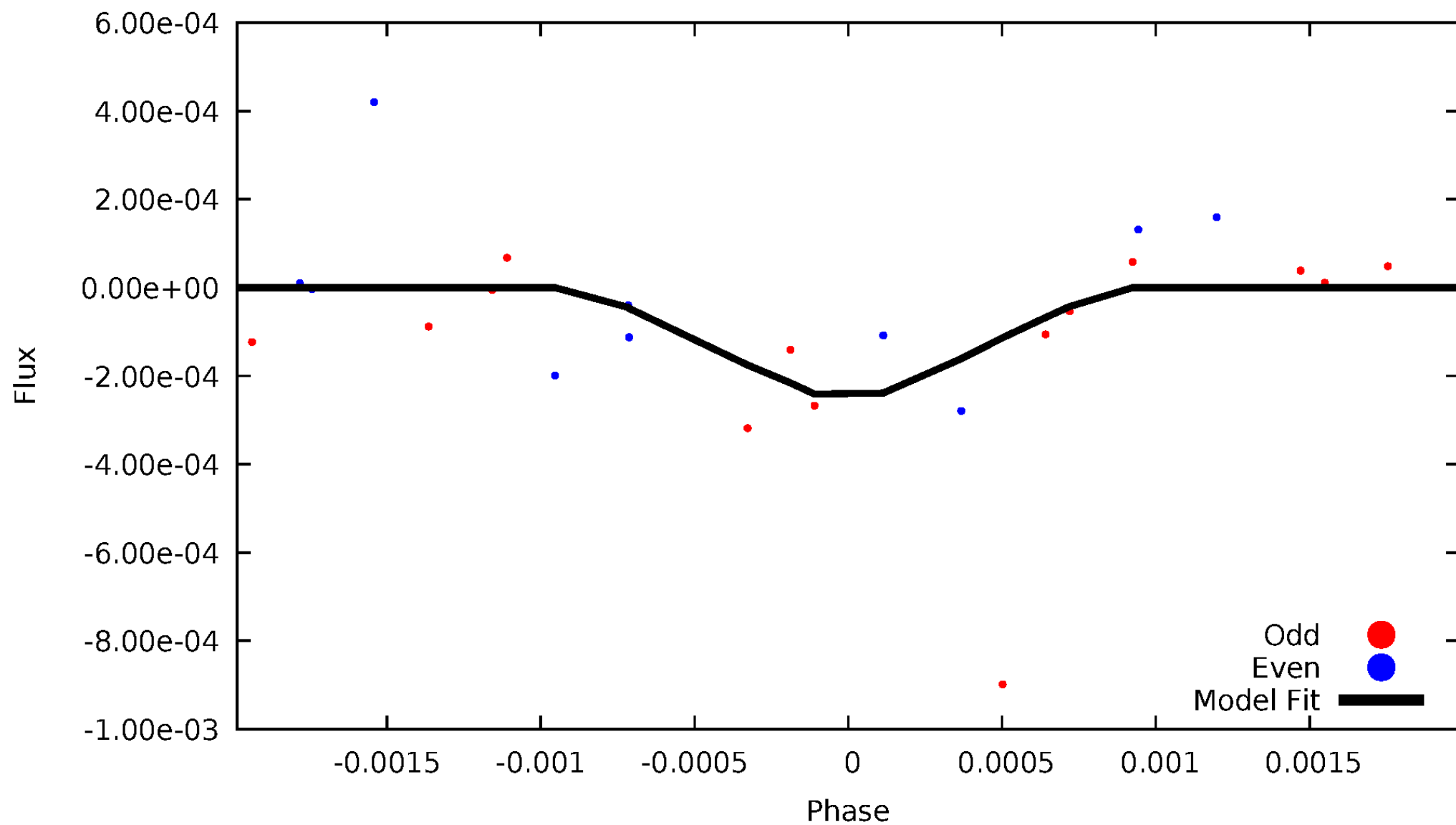


TCE 005629449-03



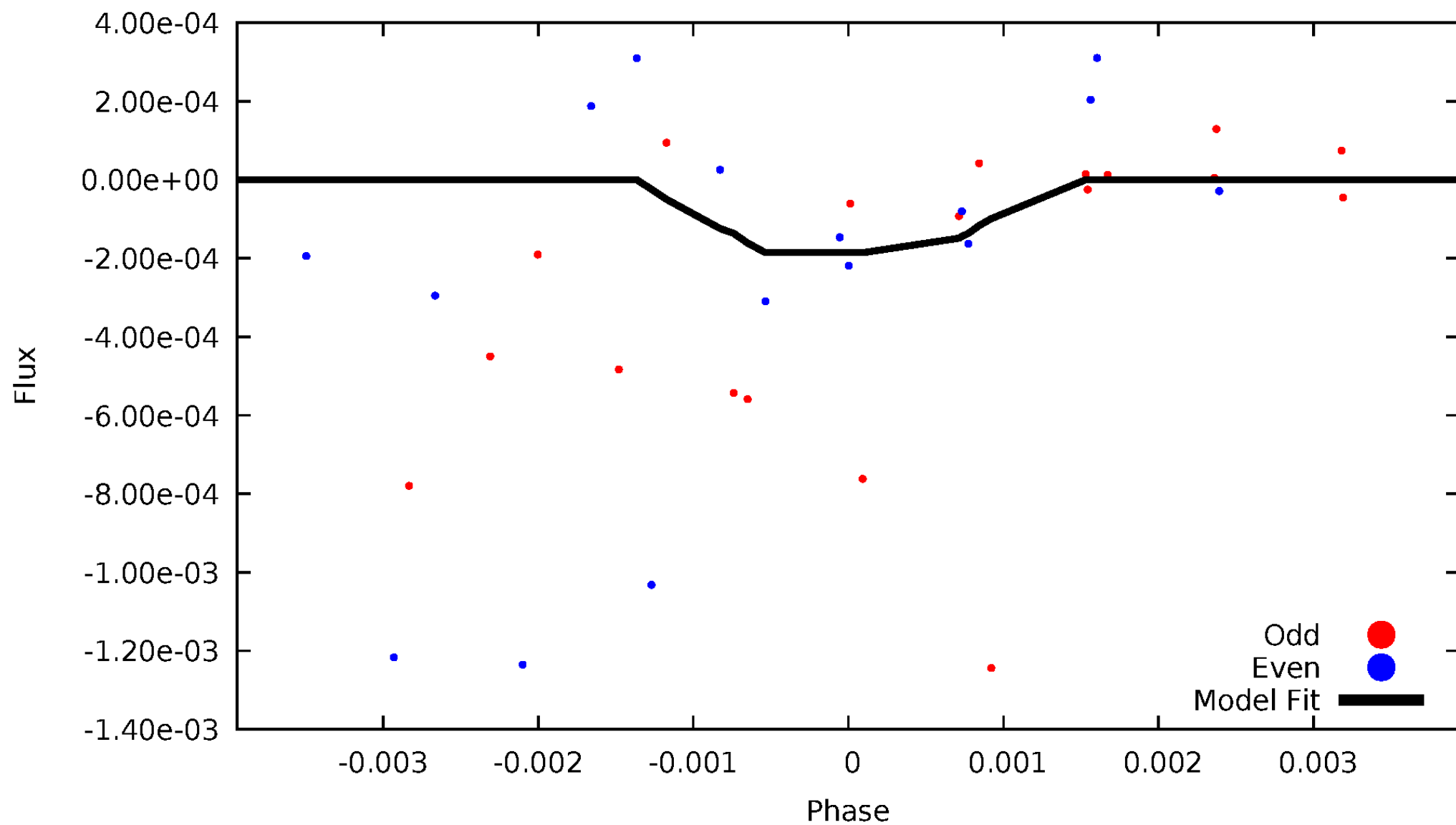
DV Odd/Even

TCE 005629449-03



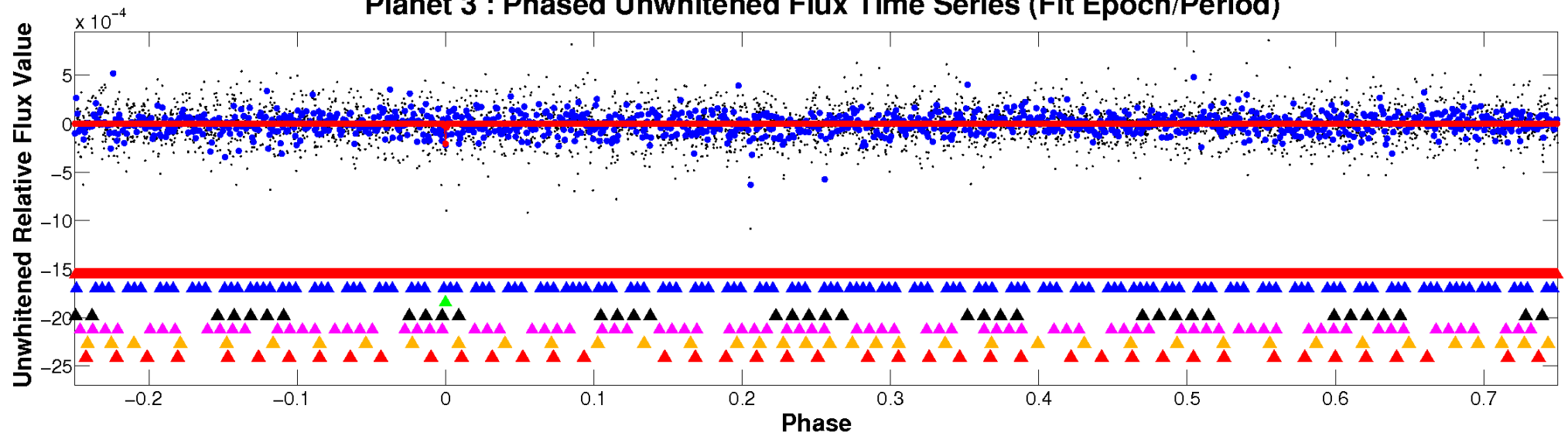
ALT Odd/Even

TCE 005629449-03

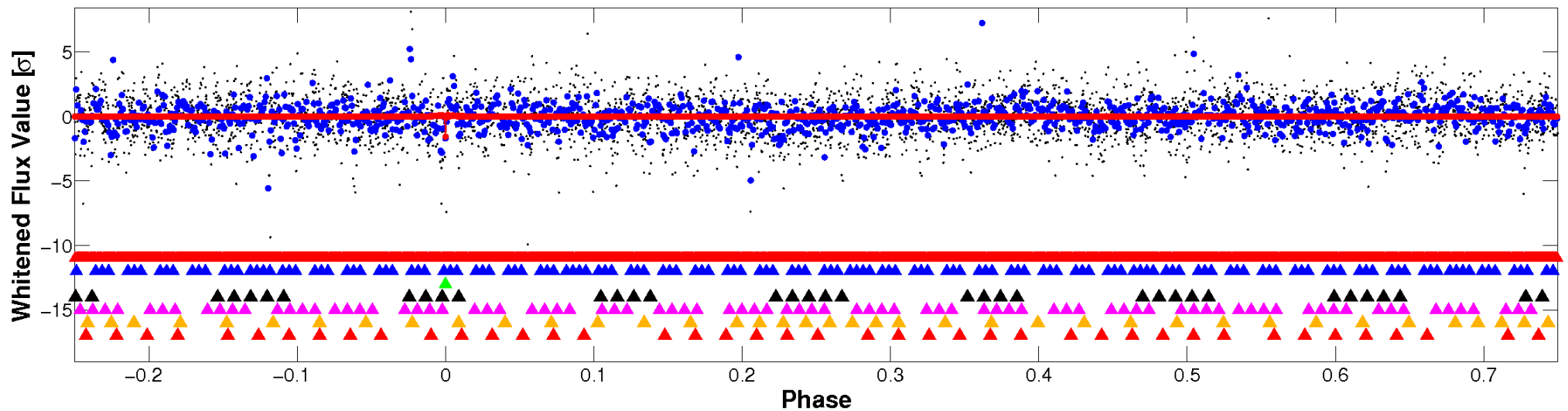


Non-Whitened Vs. Whitened Light Curve

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

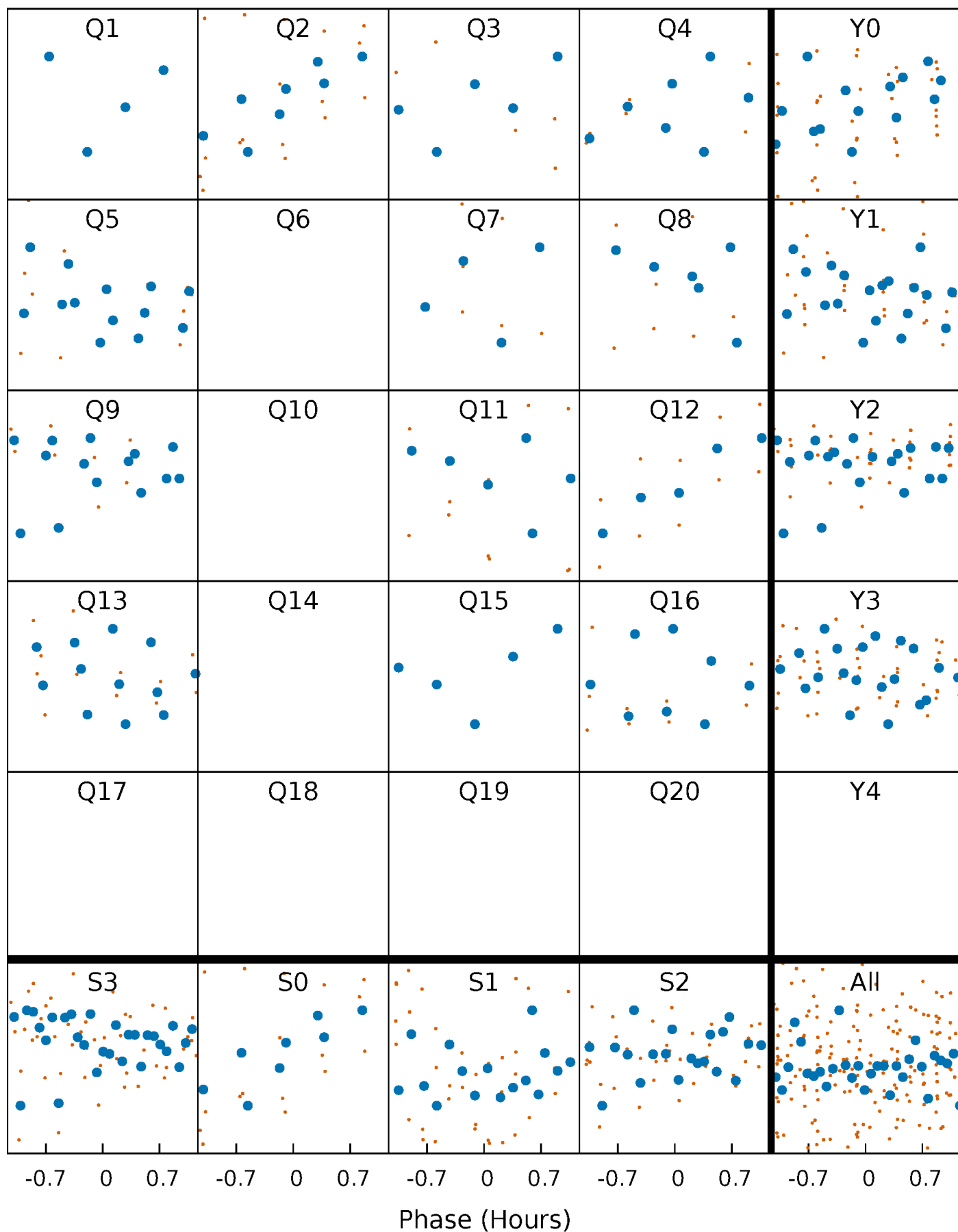


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



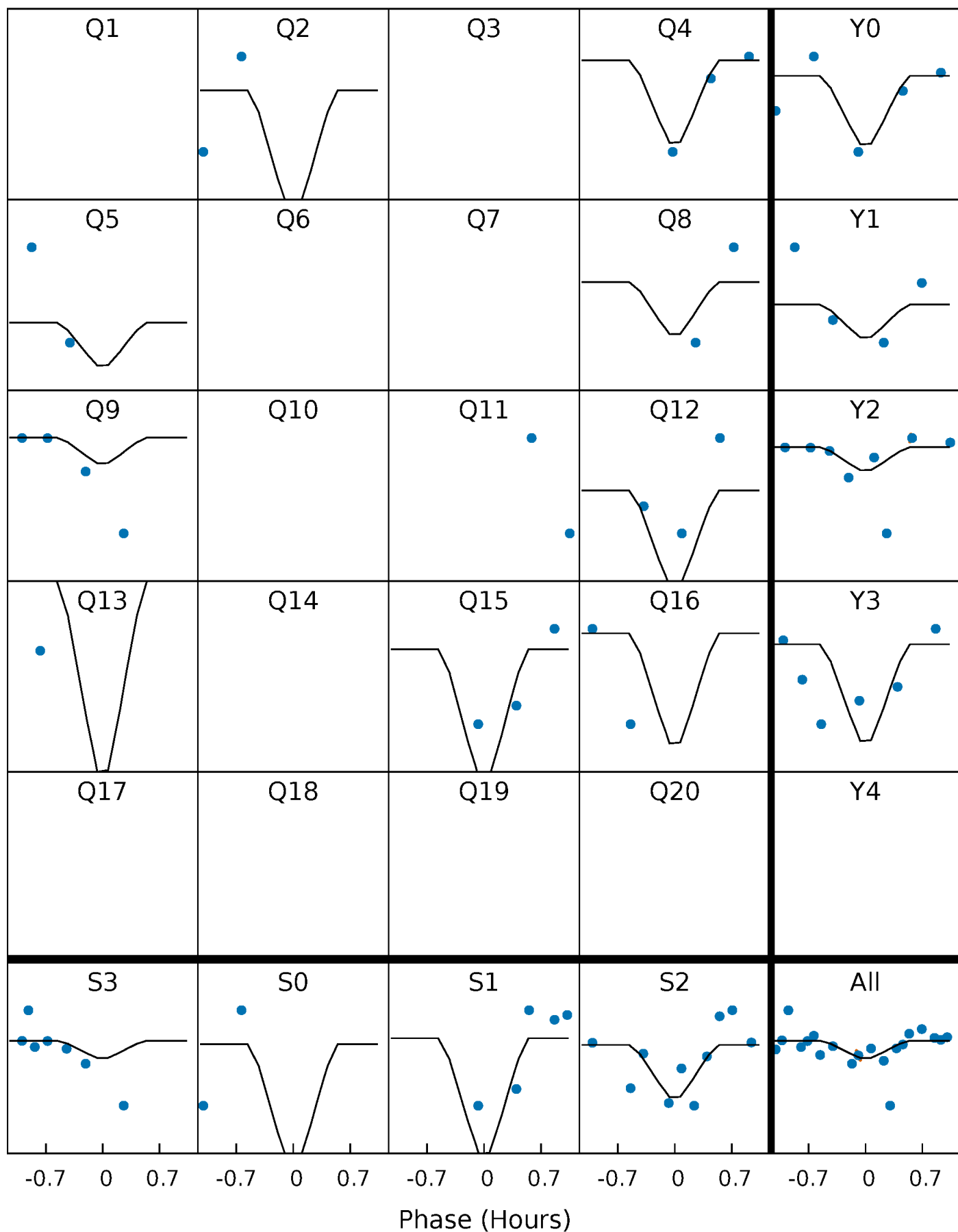
PDC Quarter-Phased Transit Curves

TCE 005629449-03 P= 24.621583 Days $T_0=154.019267$ (BKJD)



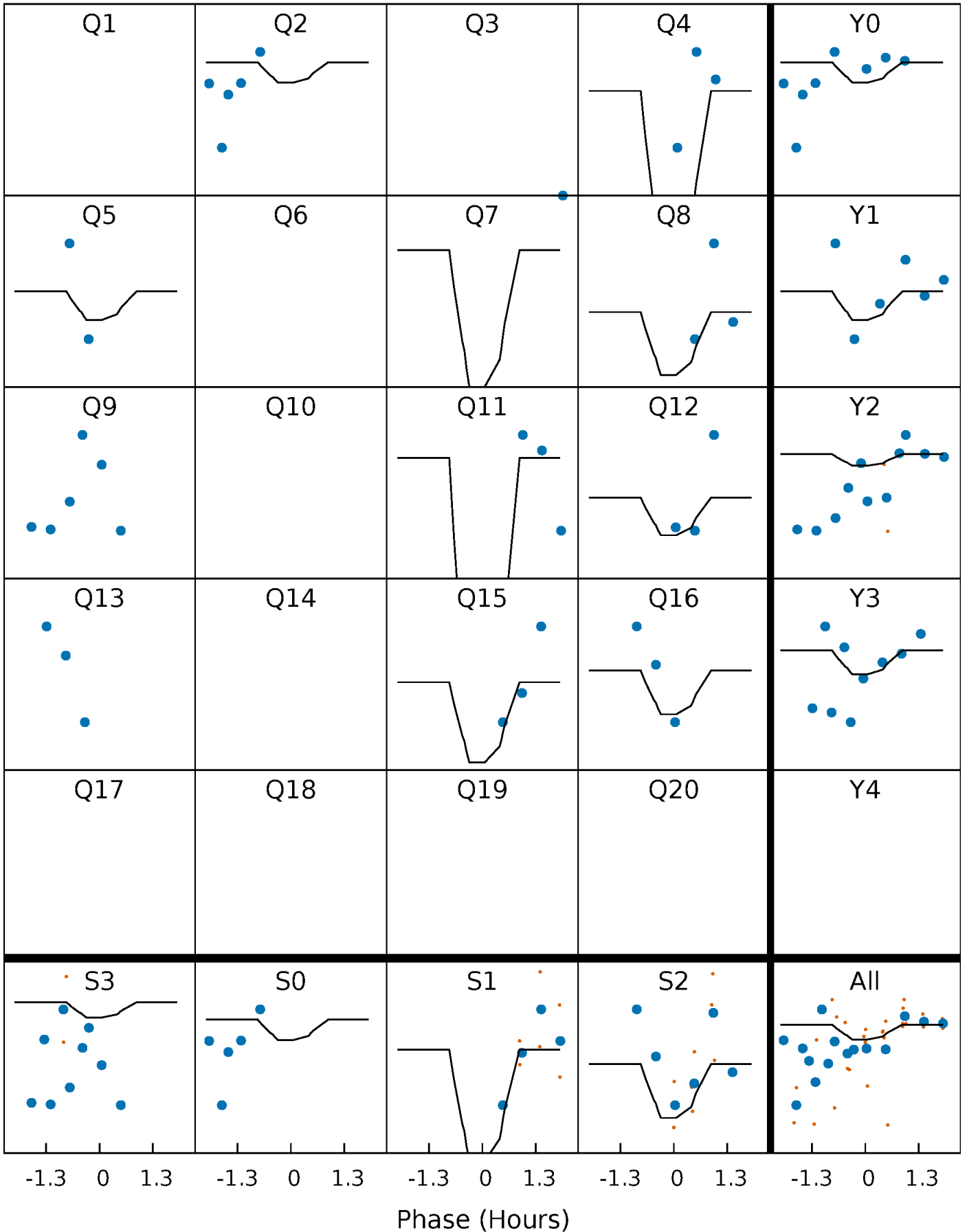
DV Quarter-Phased Transit Curves

TCE 005629449-03 P= 24.621583 Days $T_0=154.019267$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

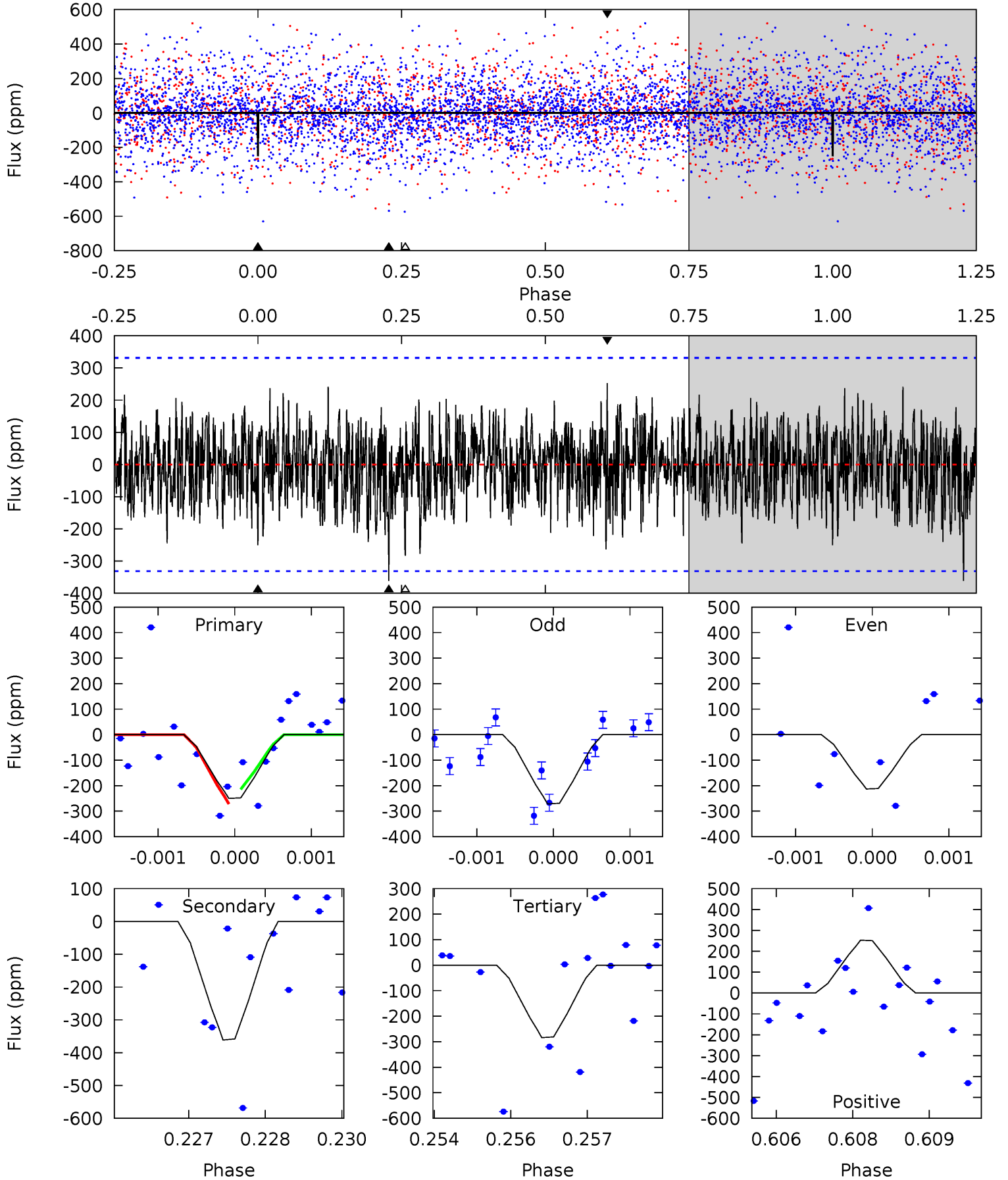
TCE 005629449-03 P= 24.621127 Days $T_0=154.021255$ (BKJD)



DV Model-Shift Uniqueness Test

005629449-03, P = 24.621583 Days, E = 129.397684 Days

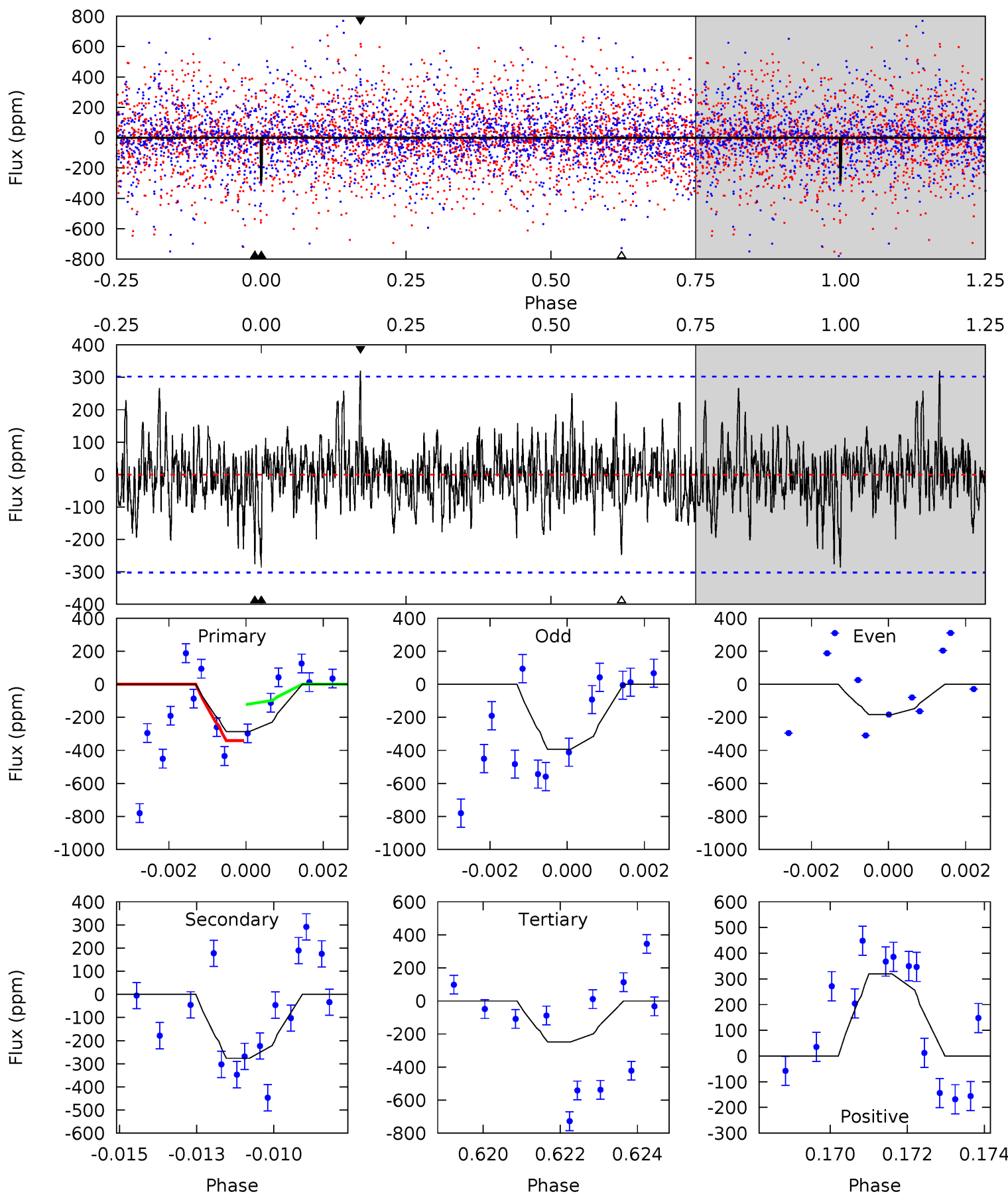
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.07	5.87	4.61	4.11	5.39	3.19	1.39	-0.55	-0.04	1.26	1.76	0.51	1.61	0.41	0.47



Alt Model-Shift Uniqueness Test

005629449-03, P = 24.621127 Days, E = 129.400128 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.04	4.86	4.36	5.63	5.32	3.08	1.28	0.68	-0.59	0.50	-0.77	1.80	2.14	0.53	1.87



Stellar Parameters For KIC 005629449

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6489^{+645}_{-1399}	$2.694^{+0.189}_{-0.231}$	$-0.500^{+0.200}_{-0.450}$	$13.402^{+3.514}_{-5.710}$	$3.239^{+0.107}_{-2.025}$	$0.002^{+0.003}_{-0.001}$
	+10%/-22%	+7%/-9%	+40%/-90%	+26%/-43%	+3%/-63%	+142%/-52%
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 005629449-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-361 ± 62	$67.66^{+64.22}_{-48.86}$	2926^{+461}_{-635}	4086^{+3315}_{-1214}	$2.339^{+28.601}_{-1.717}$
Alt.	-276 ± 57	$60.40^{+71.24}_{-42.54}$	2925^{+457}_{-597}	4002^{+2887}_{-1263}	$2.205^{+22.249}_{-1.709}$

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 $A_{\text{obs}} \gg 1.0$

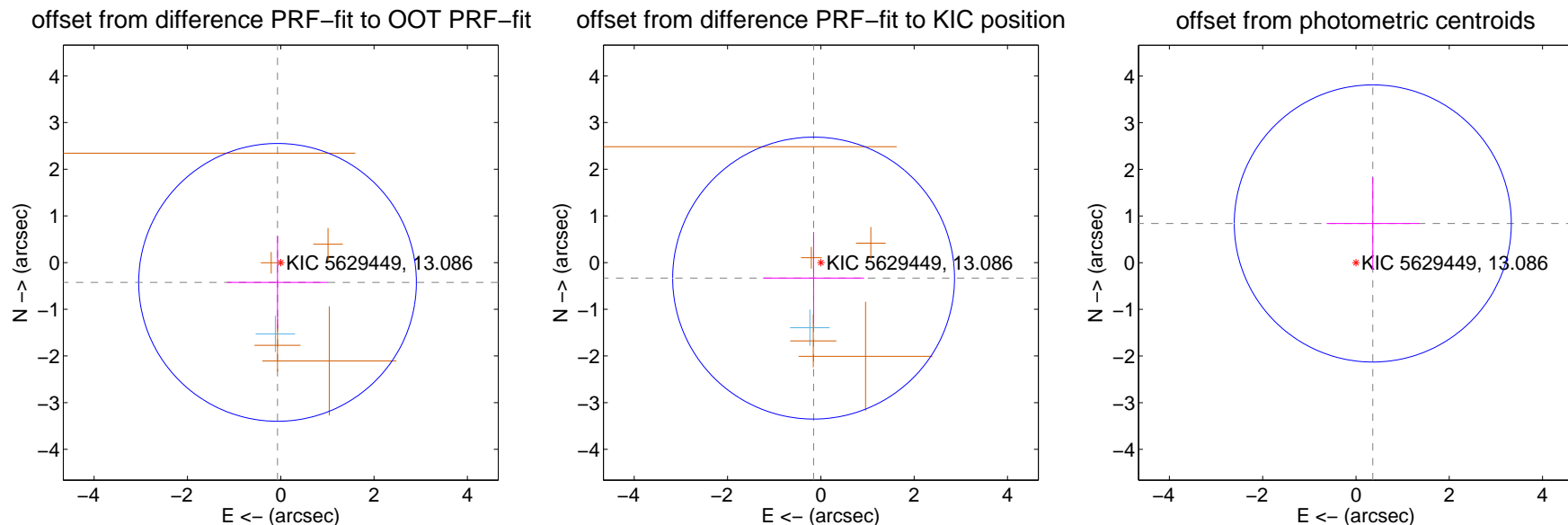
DV Centroid Data

Supplemental centroid analysis for 005629449-03. Kepler magnitude: 13.09. Transit SNR 3.62

There are 1 quarters with good PRF difference image offsets

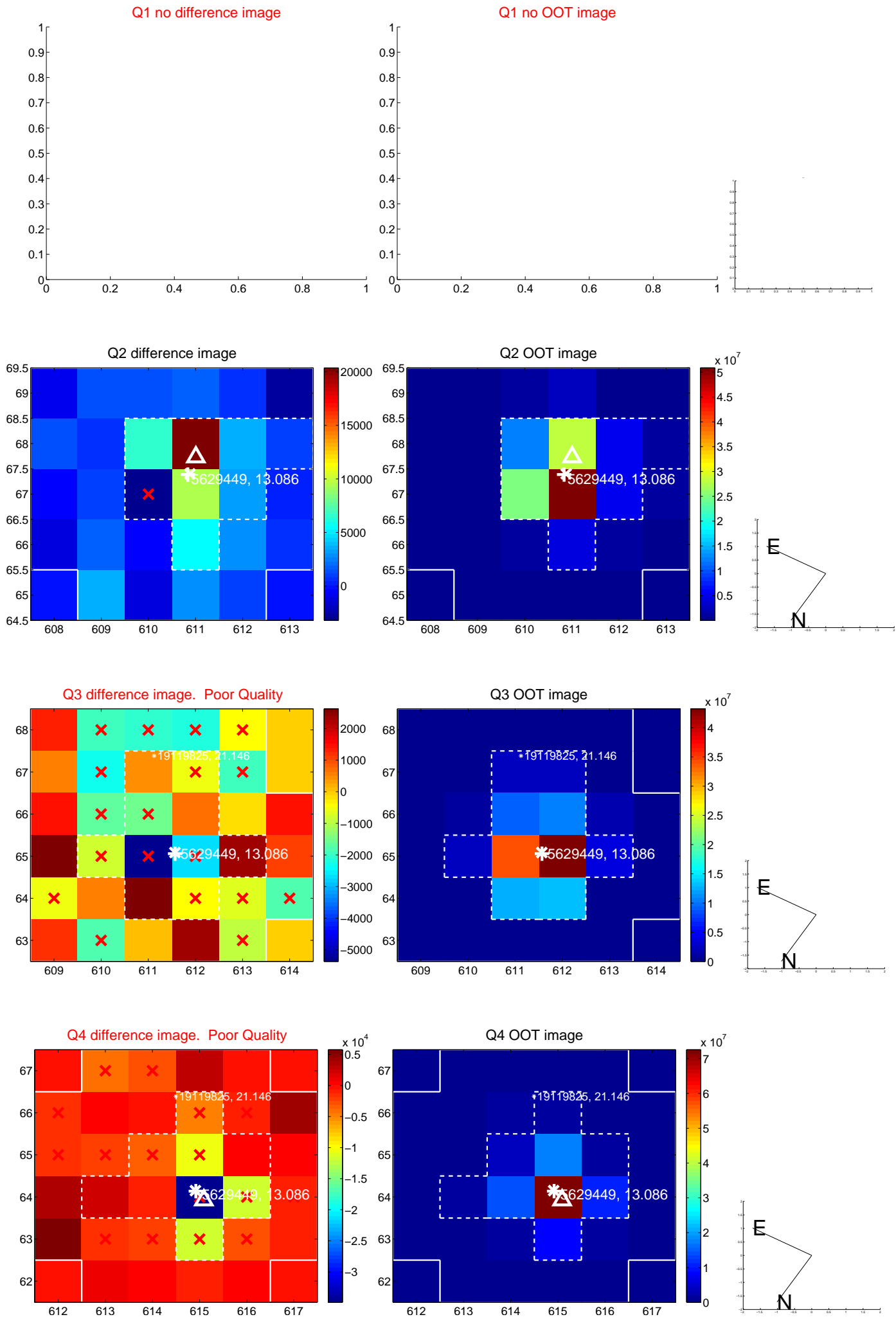
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.429 ± 0.992	0.43	0.069 ± 1.082	-0.424 ± 0.989
PRF-fit source offset from KIC position	0.367 ± 1.006	0.36	0.156 ± 1.082	-0.332 ± 0.989
photometric centroid source offset	0.91 ± 0.99	0.92	-0.36 ± 0.99	0.84 ± 0.99



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.

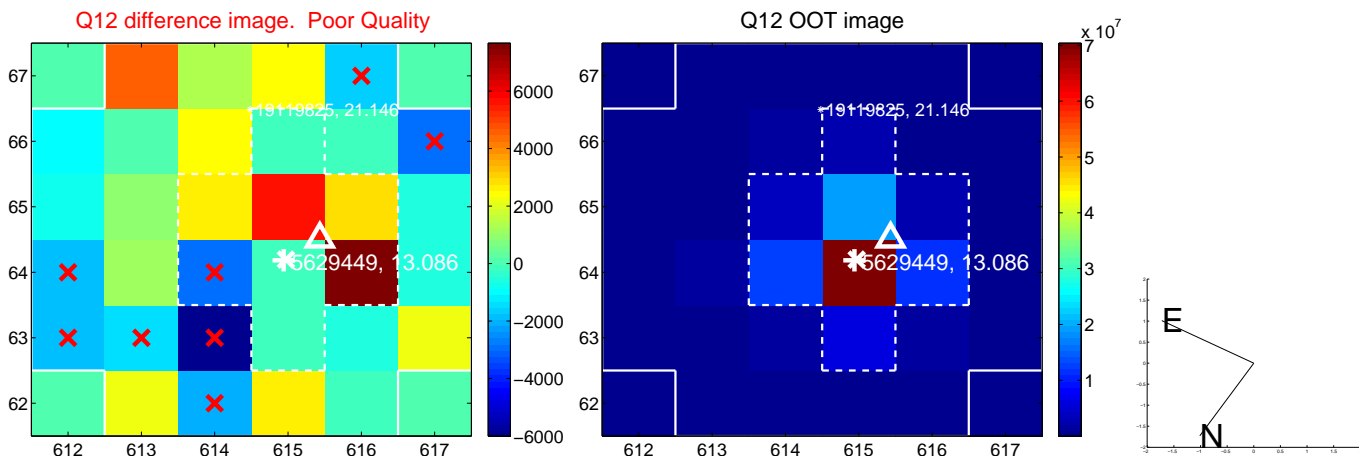
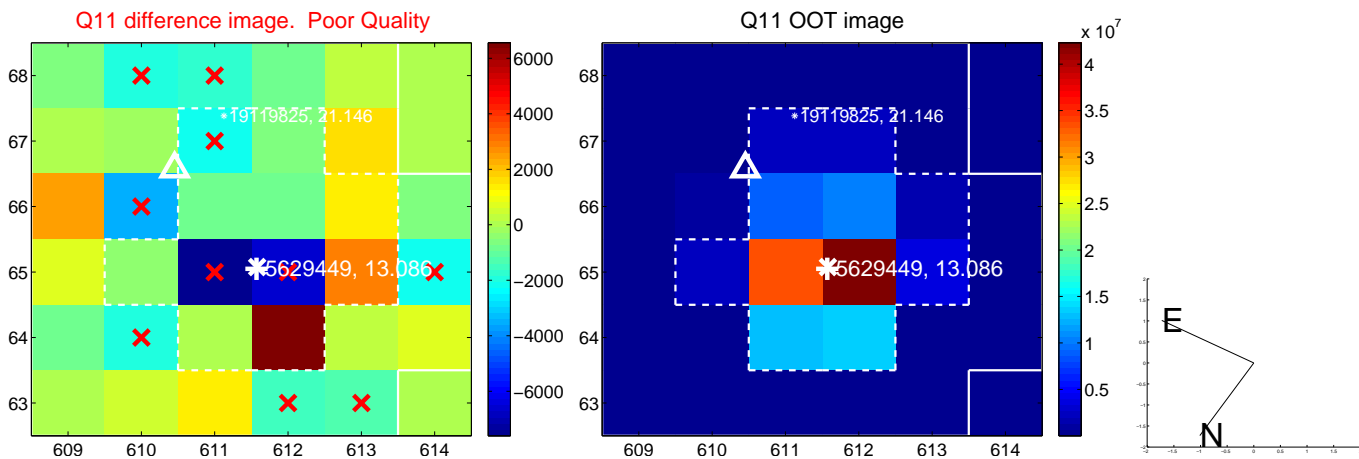
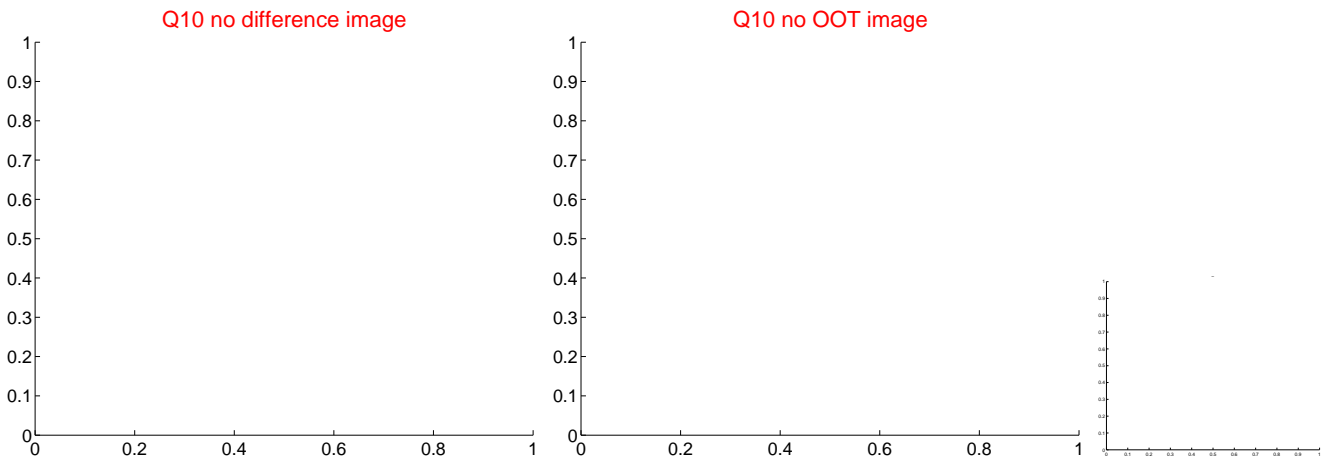
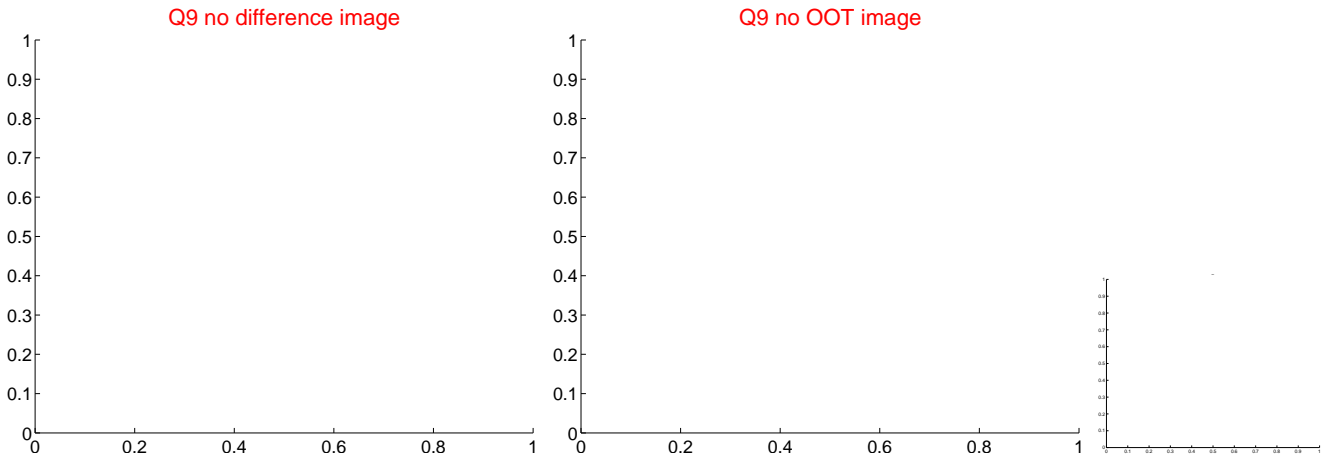
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



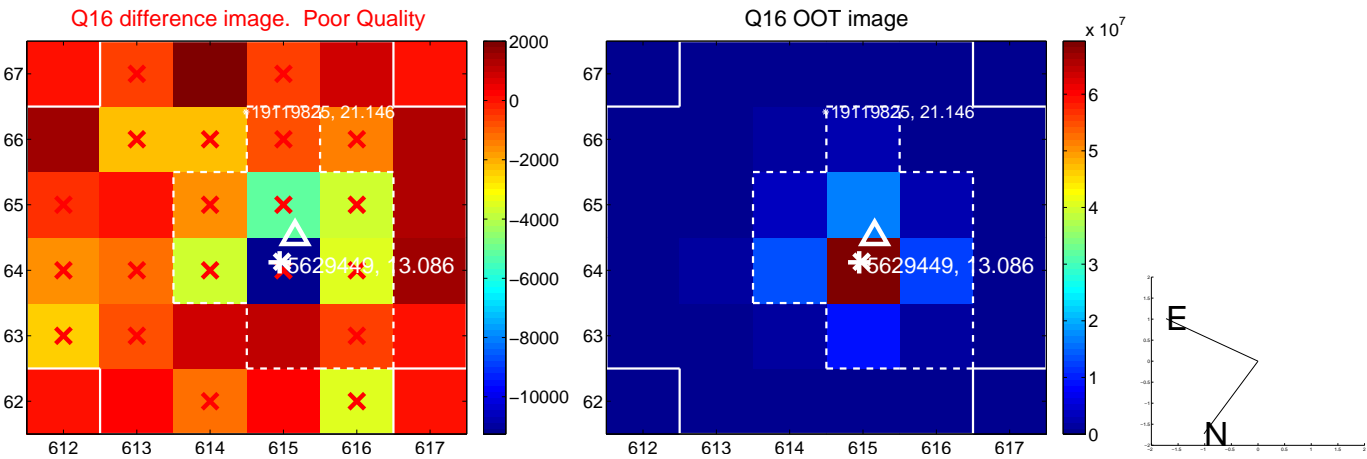
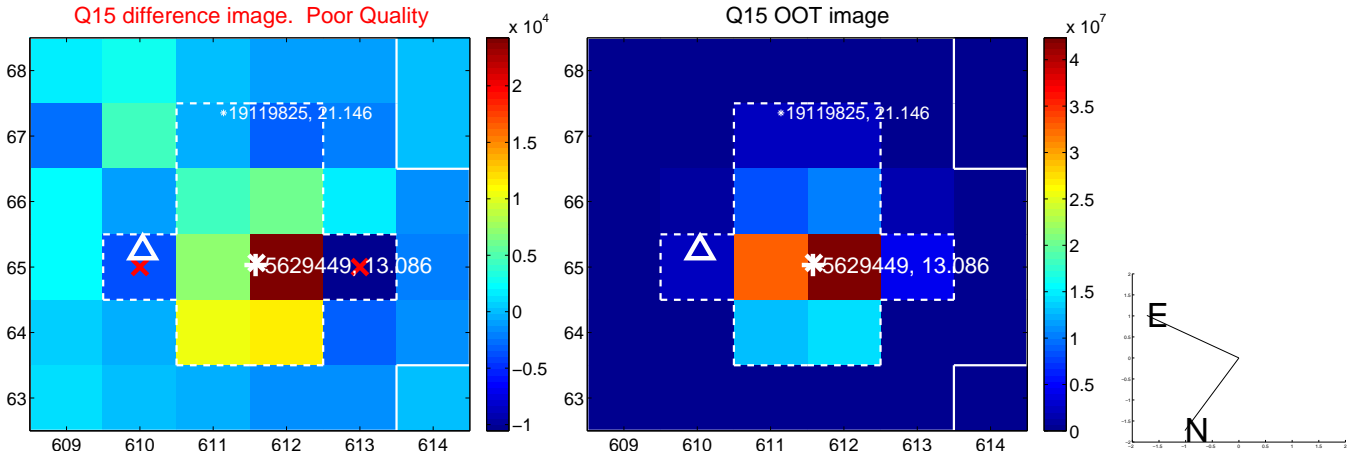
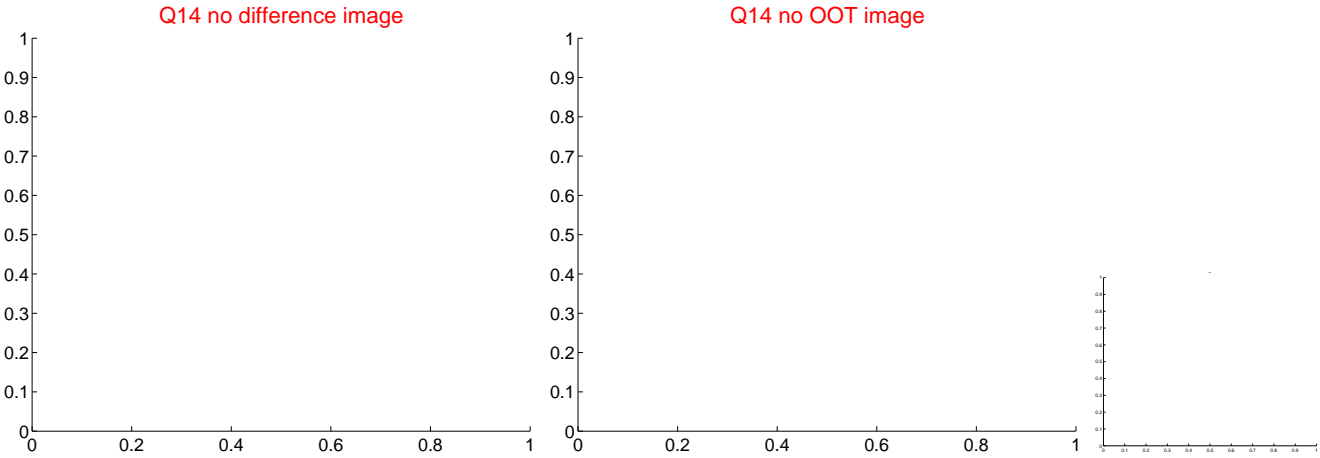
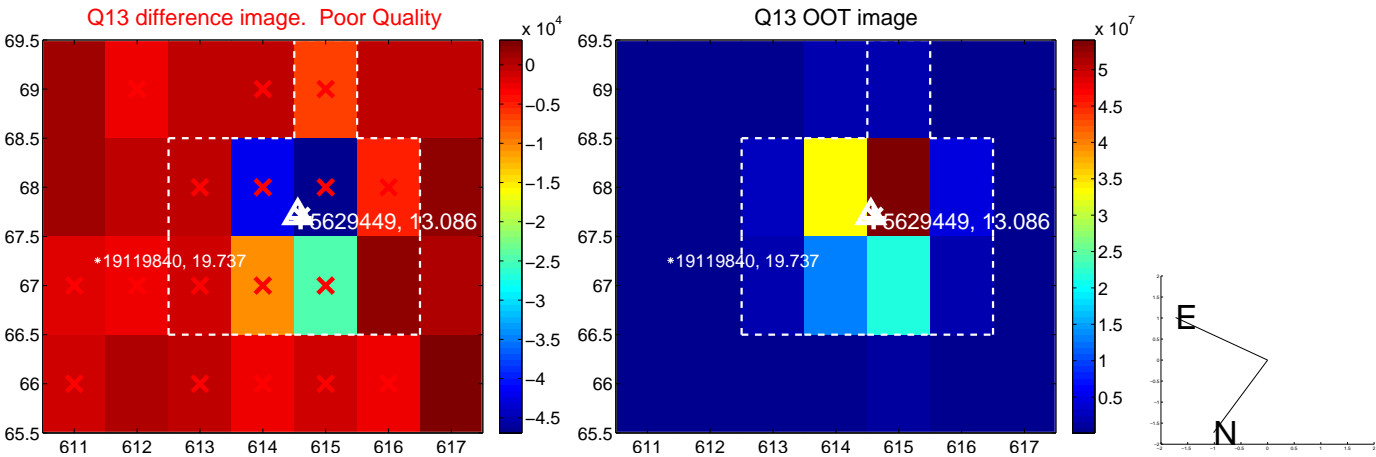
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



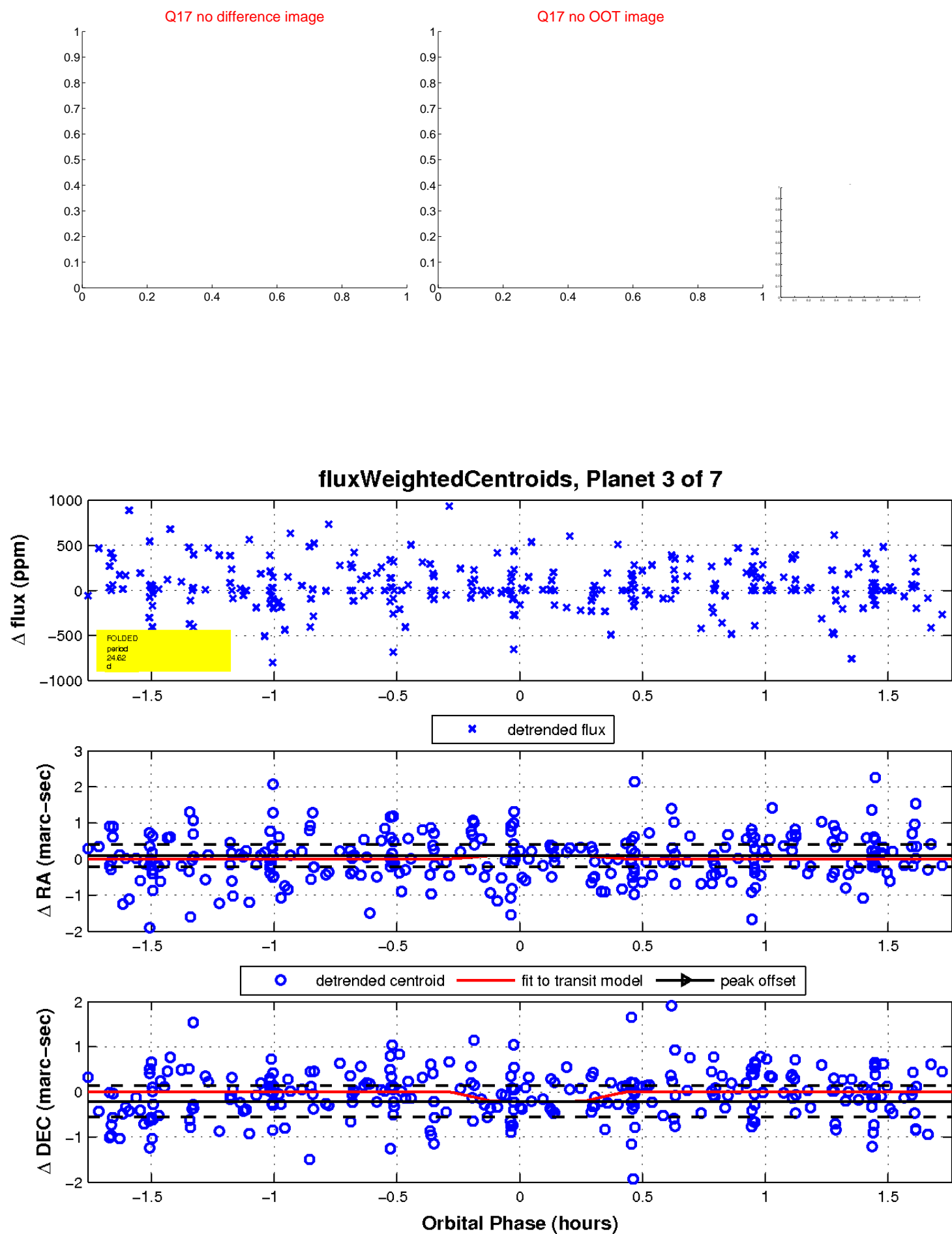
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



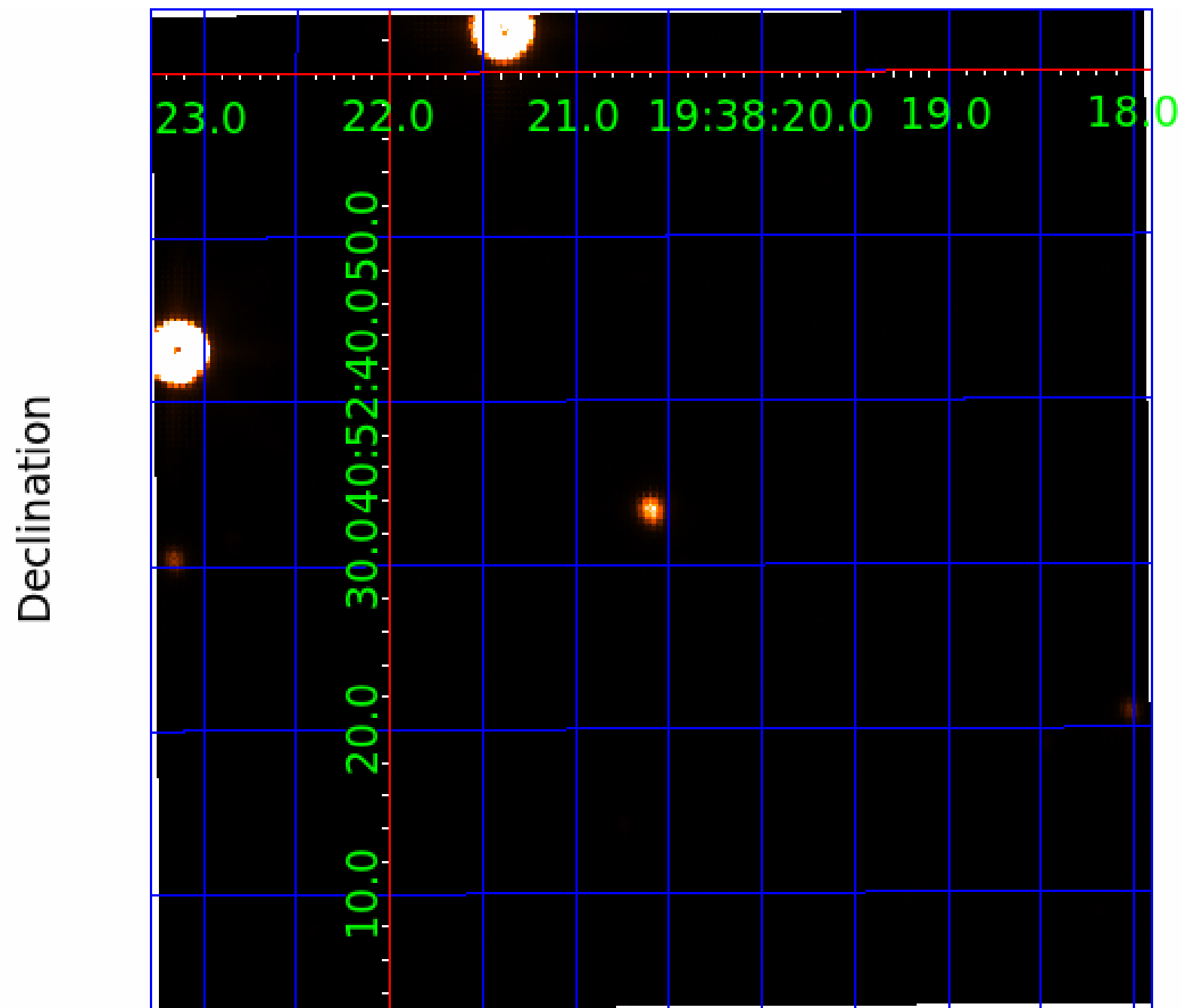
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 005629449

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})
005629449-01	OBS	No	0.709741	132.112175	30.4	5.027	8.1	5.8	13.40	6489	7.65	0.00
005629449-02	OBS	No	9.955690	140.825821	567.1	2.308	12.1	8.5	13.40	6489	33.40	15883.88
005629449-03	OBS	No	24.621583	154.019267	259.3	0.587	12.1	3.6	13.40	6489	23.51	4749.31
005629449-04	OBS	No	39.975838	169.867284	622.6	1.235	10.9	9.9	13.40	6489	36.58	2488.79
005629449-05	OBS	No	17.119042	142.235469	163.1	6.632	7.7	5.4	13.40	6489	19.95	7710.44
005629449-06	OBS	No	37.317356	146.537853	586.2	1.542	11.1	9.2	13.40	6489	36.09	2727.96

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005629449-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_ALT
005629449-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—MOD_NONUNIQ_ALT
005629449-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005629449-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005629449-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005629449-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV

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

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

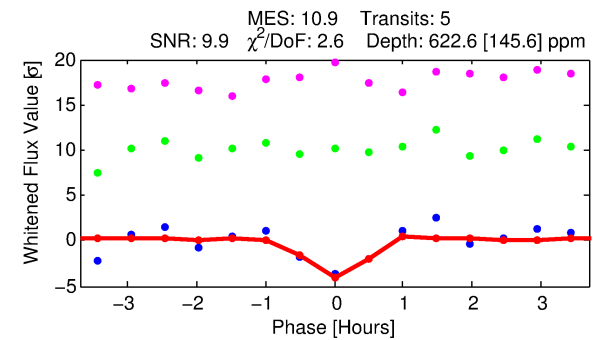
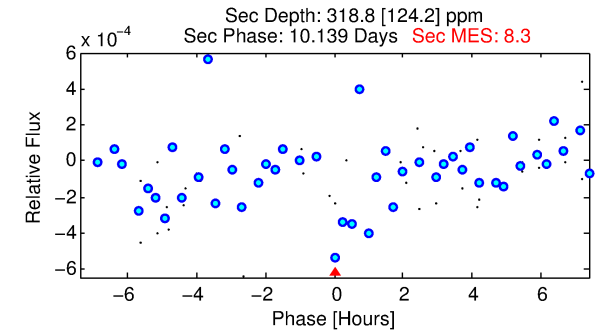
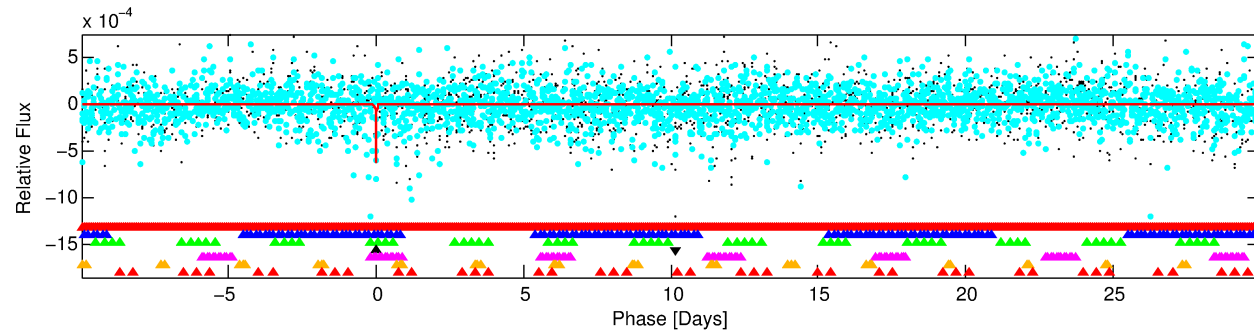
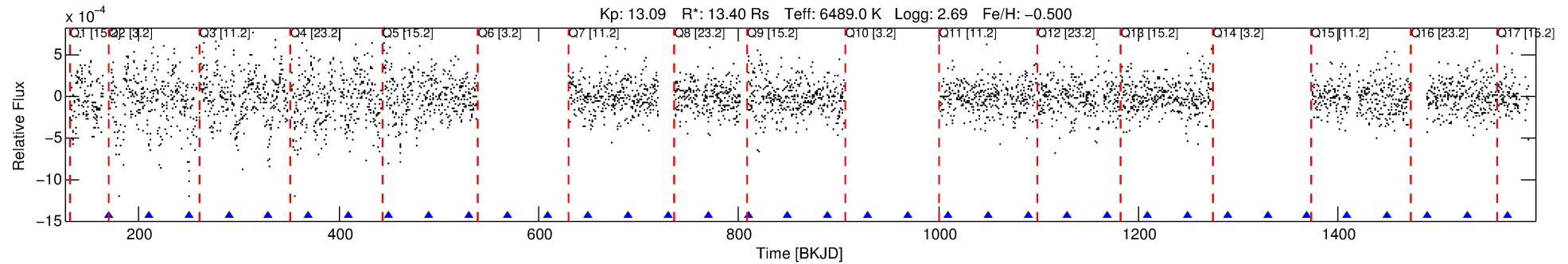
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005629449-04

No Significant Match Found

DV One-Page Summary

KIC: 5629449 Candidate: 4 of 7 Period: 39.976 d

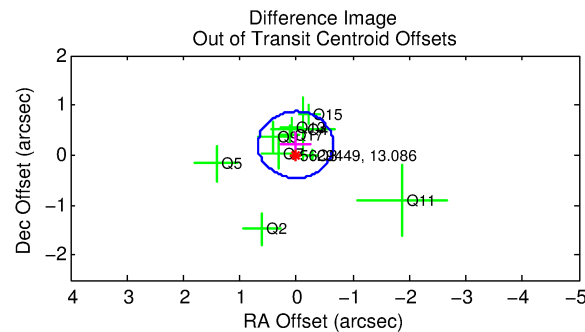
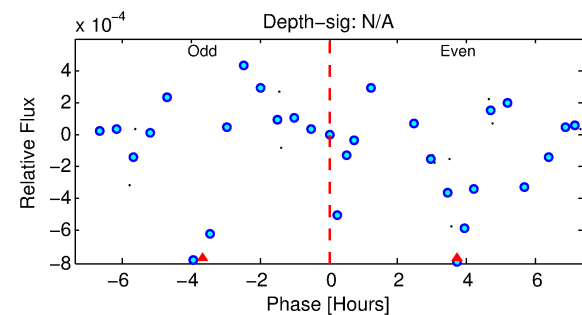
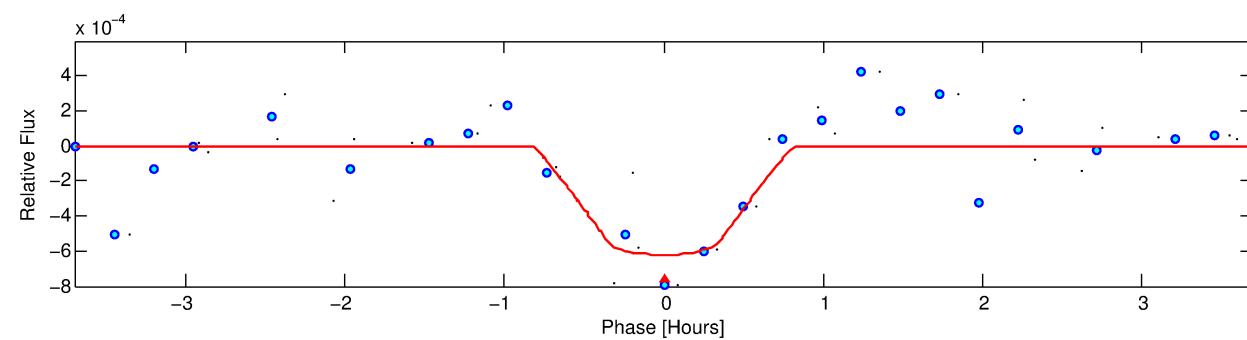


DV Fit Results:

Period = 39.97584 [0.00042] d
Epoch = 169.8673 [0.0046] BKJD
Rp/R* = 0.0250 [0.0492]
a/R* = 170.90 [1863.39]
b = 0.76 [6.17]
Seff = 2488.79 [2425.93]
Teq = 1801 [439] K
Rp = 36.58 [73.61] Re
a = 0.3386 [0.1134] AU
Ag = 15.03 [59.80] [0.23σ]
Teffp = 5483 [5546] K [0.66σ]

DV Diagnostic Results:

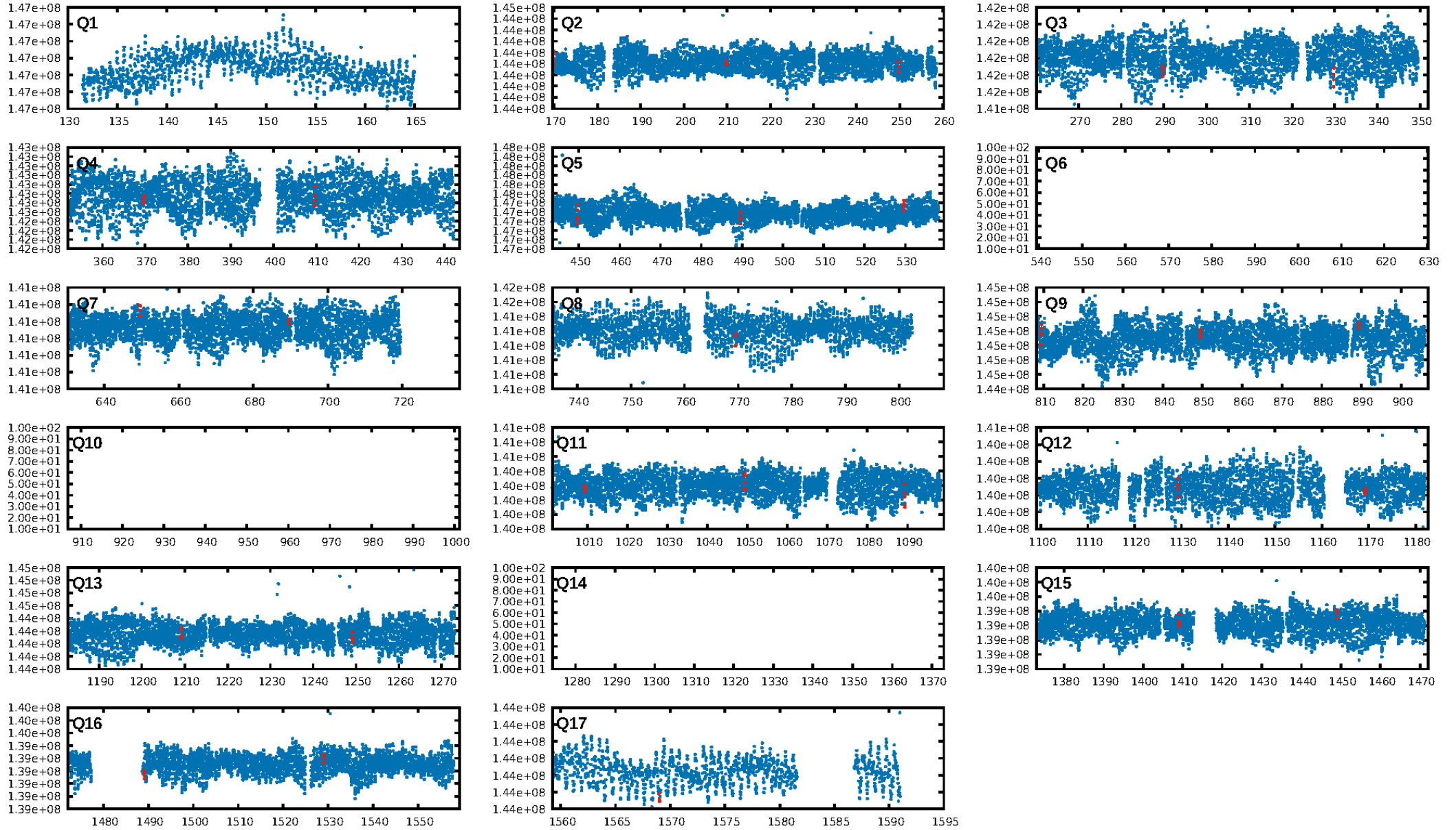
ShortPeriod-sig: 100.0% [32.30σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 3.2%
ModelChiSquareGof-sig: 74.5%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 0.255
Centroid-sig: 4.1%
Centroid-so: 0.595 arcsec [1.80σ]
OotOffset-rm: 0.211 arcsec [0.95σ]
OotOffset-st: 1/4/1/4 [10]
KicOffset-rm: 0.303 arcsec [1.38σ]
KicOffset-st: 1/4/1/4 [10]
DiffImageQuality-fgm: 0.50 [5/10]
DiffImageOverlap-fno: 0.08 [1/12]



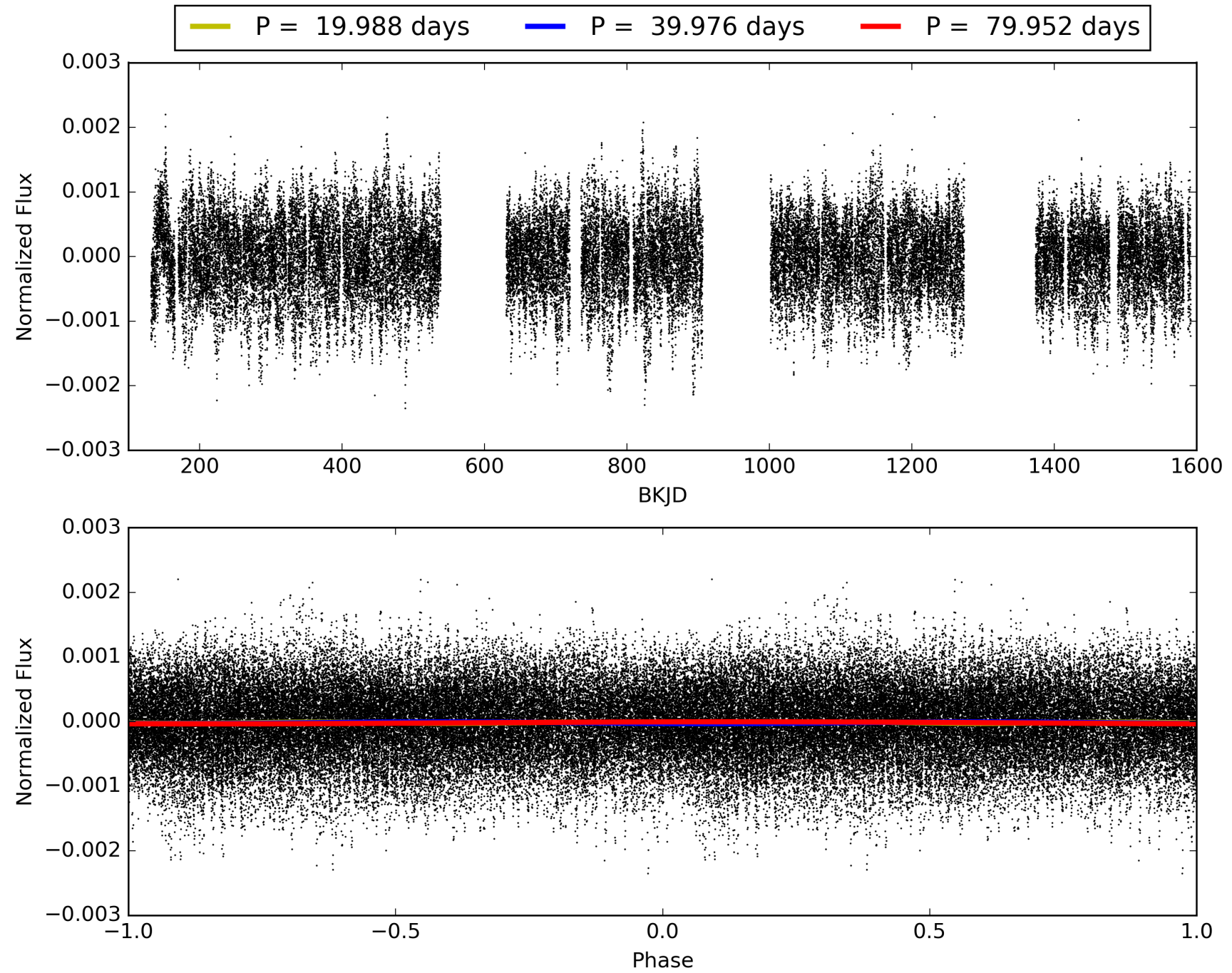
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:56:21 Z

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

TCE 005629449-04, PDC Light Curves

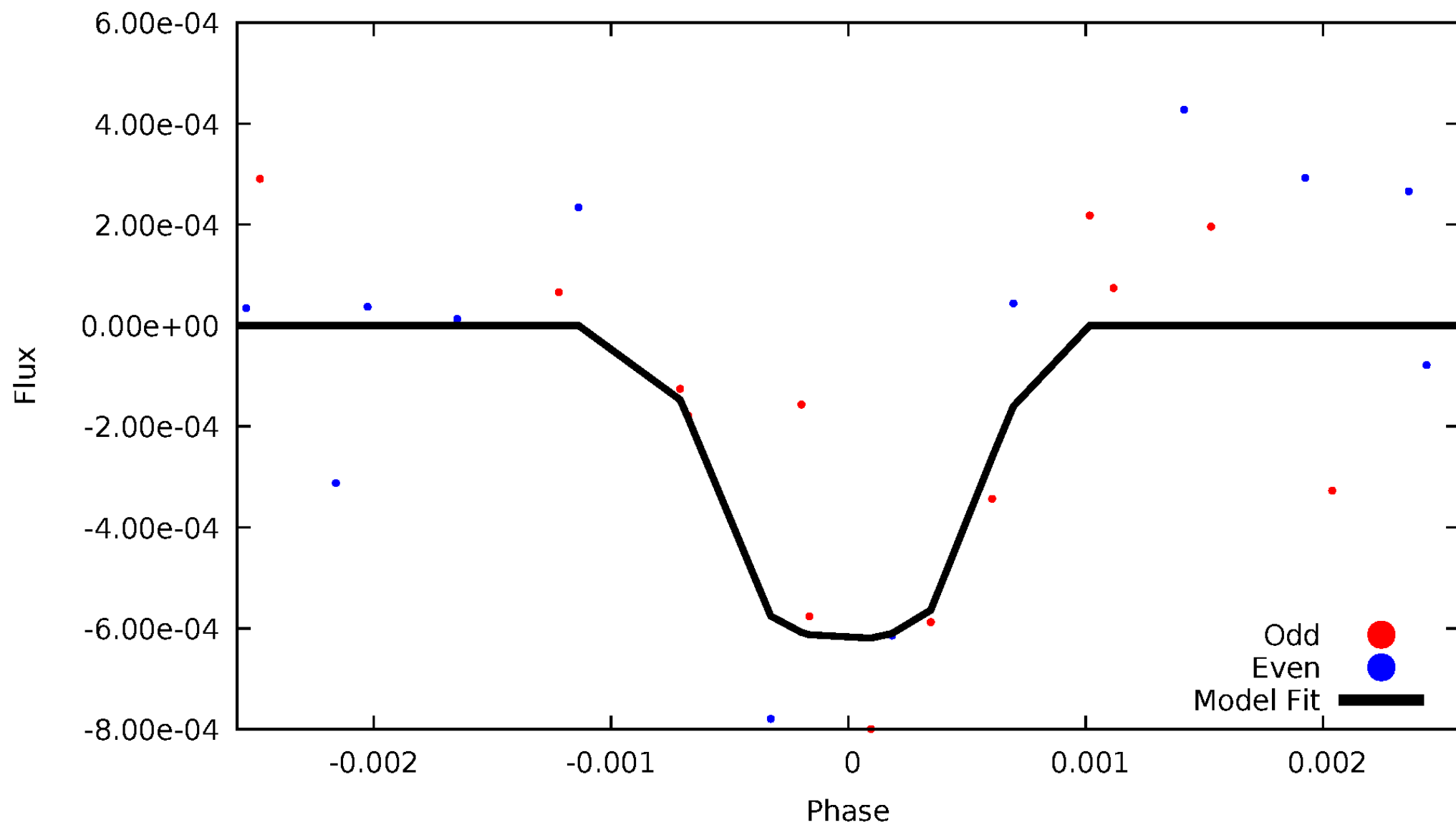


TCE 005629449-04



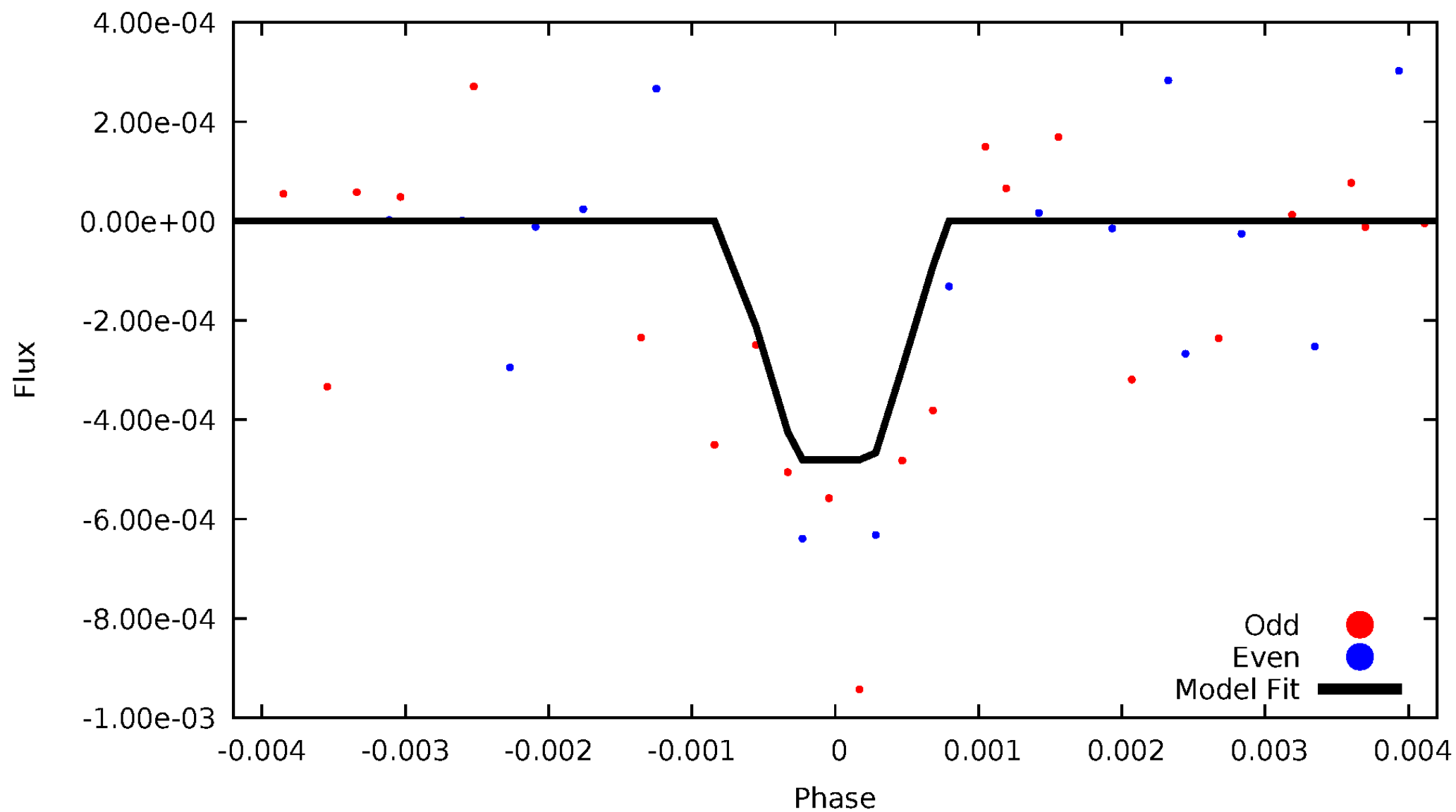
DV Odd/Even

TCE 005629449-04



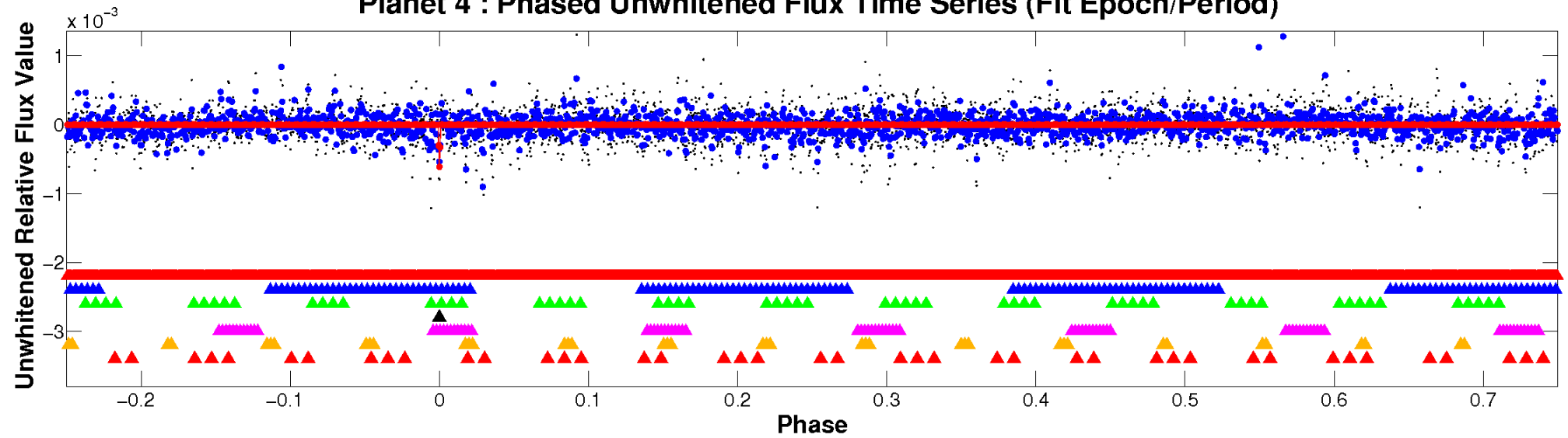
ALT Odd/Even

TCE 005629449-04

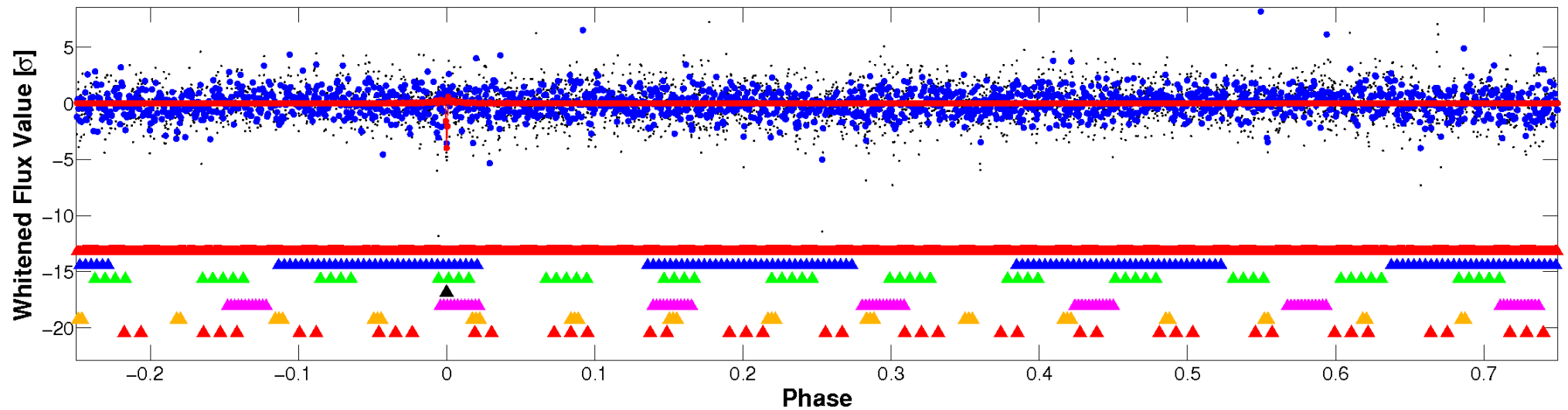


Non-Whitened Vs. Whitened Light Curve

Planet 4 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

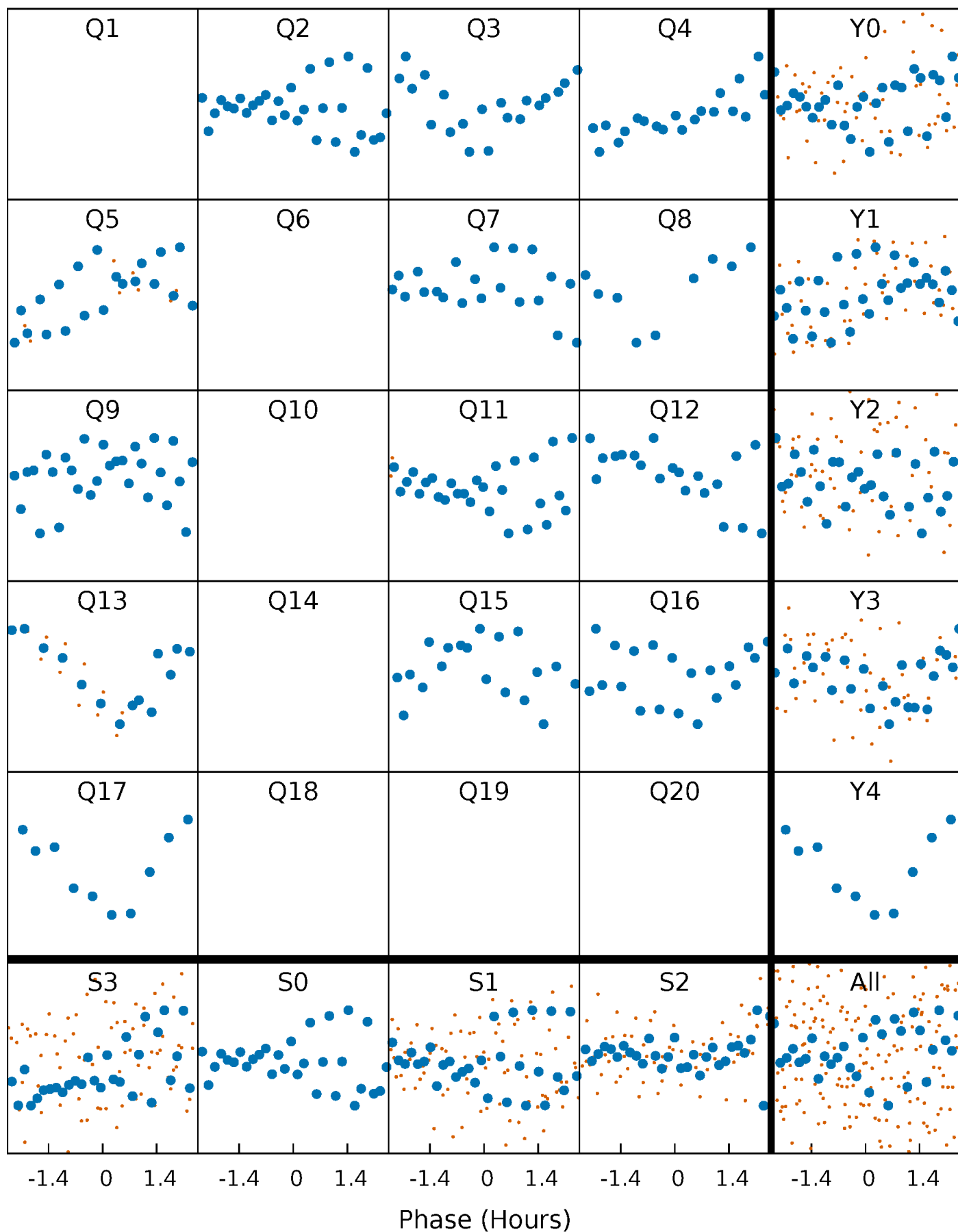


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



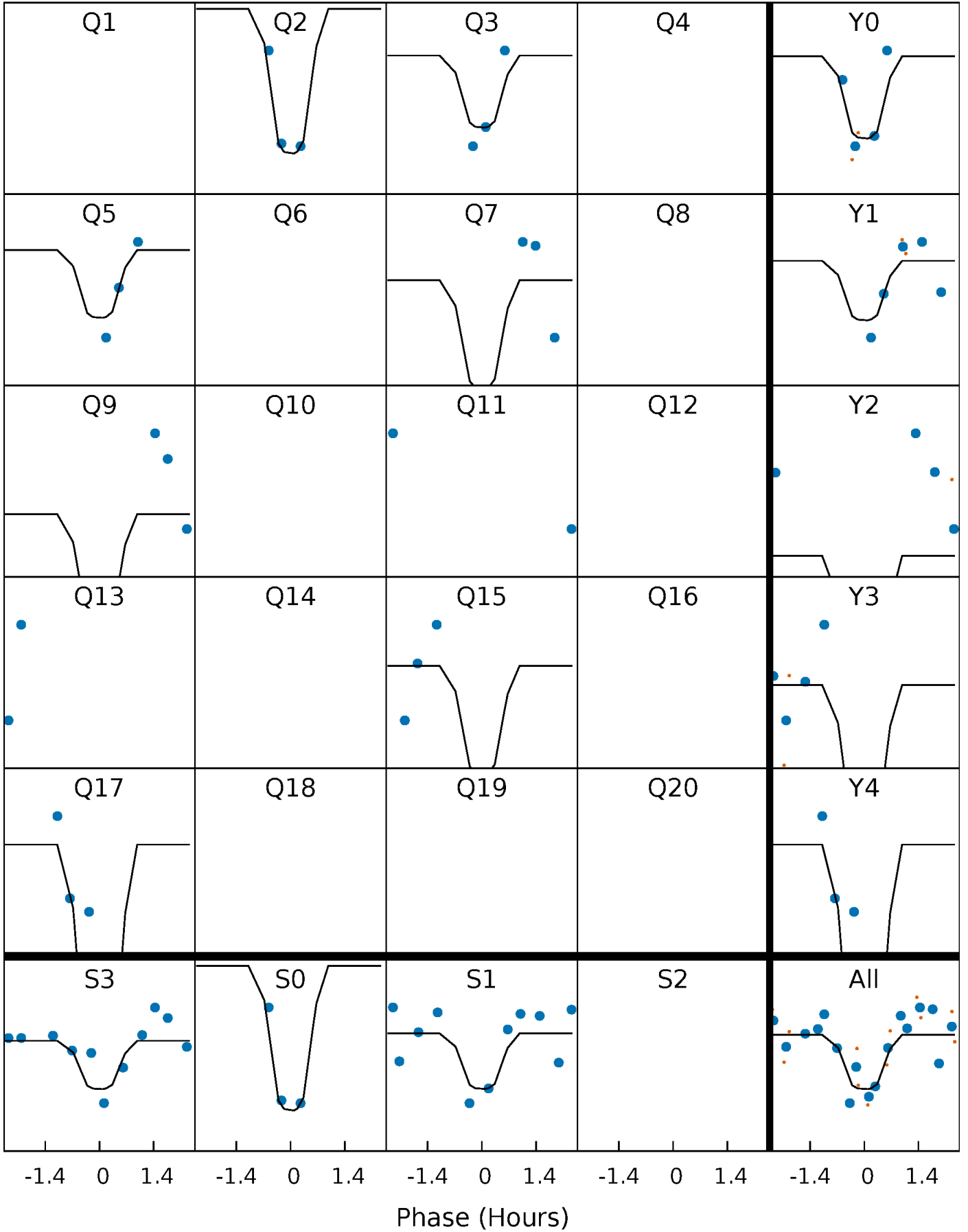
PDC Quarter-Phased Transit Curves

TCE 005629449-04 P= 39.975838 Days $T_0=169.867284$ (BKJD)



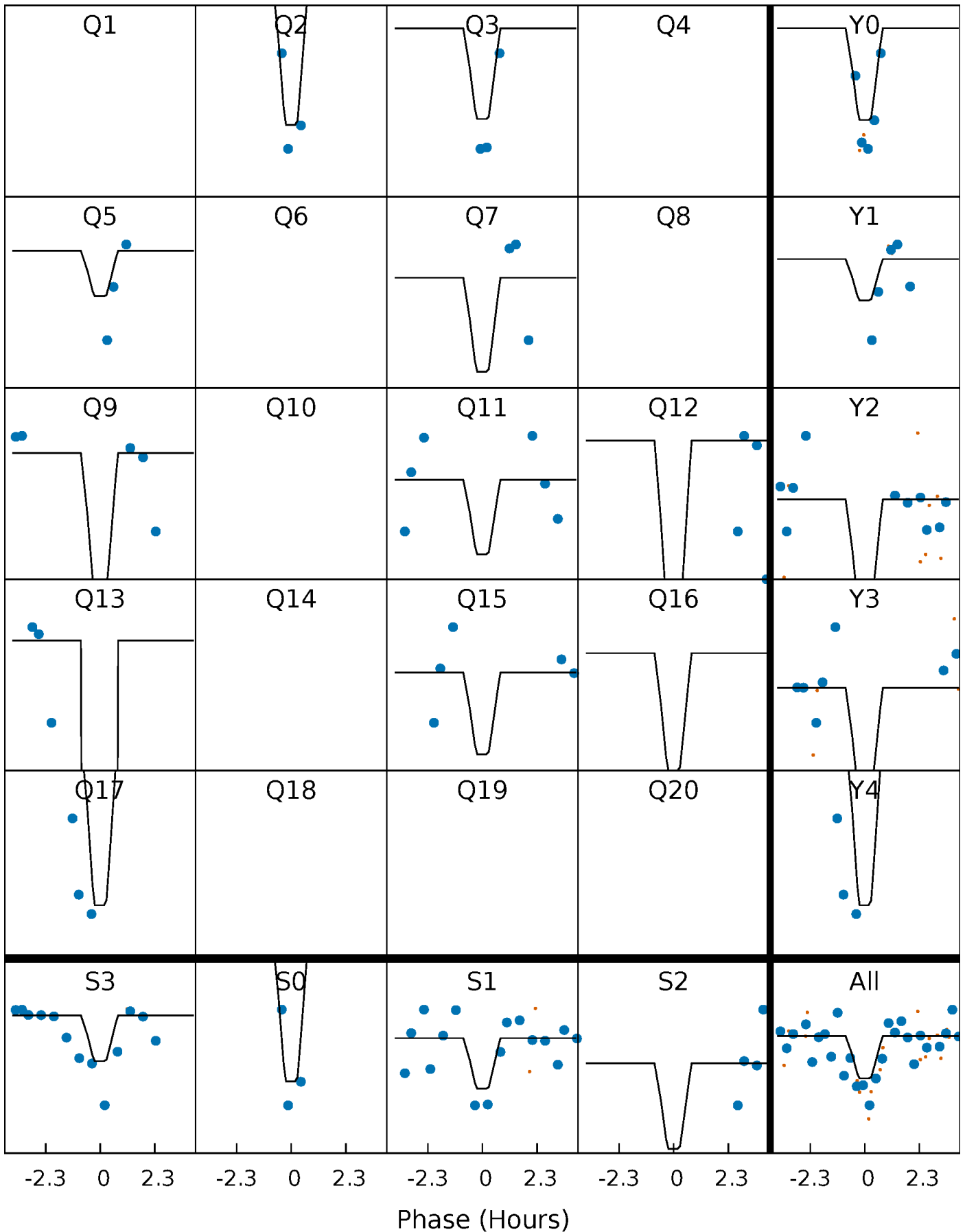
DV Quarter-Phased Transit Curves

TCE 005629449-04 P= 39.975838 Days $T_0=169.867284$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

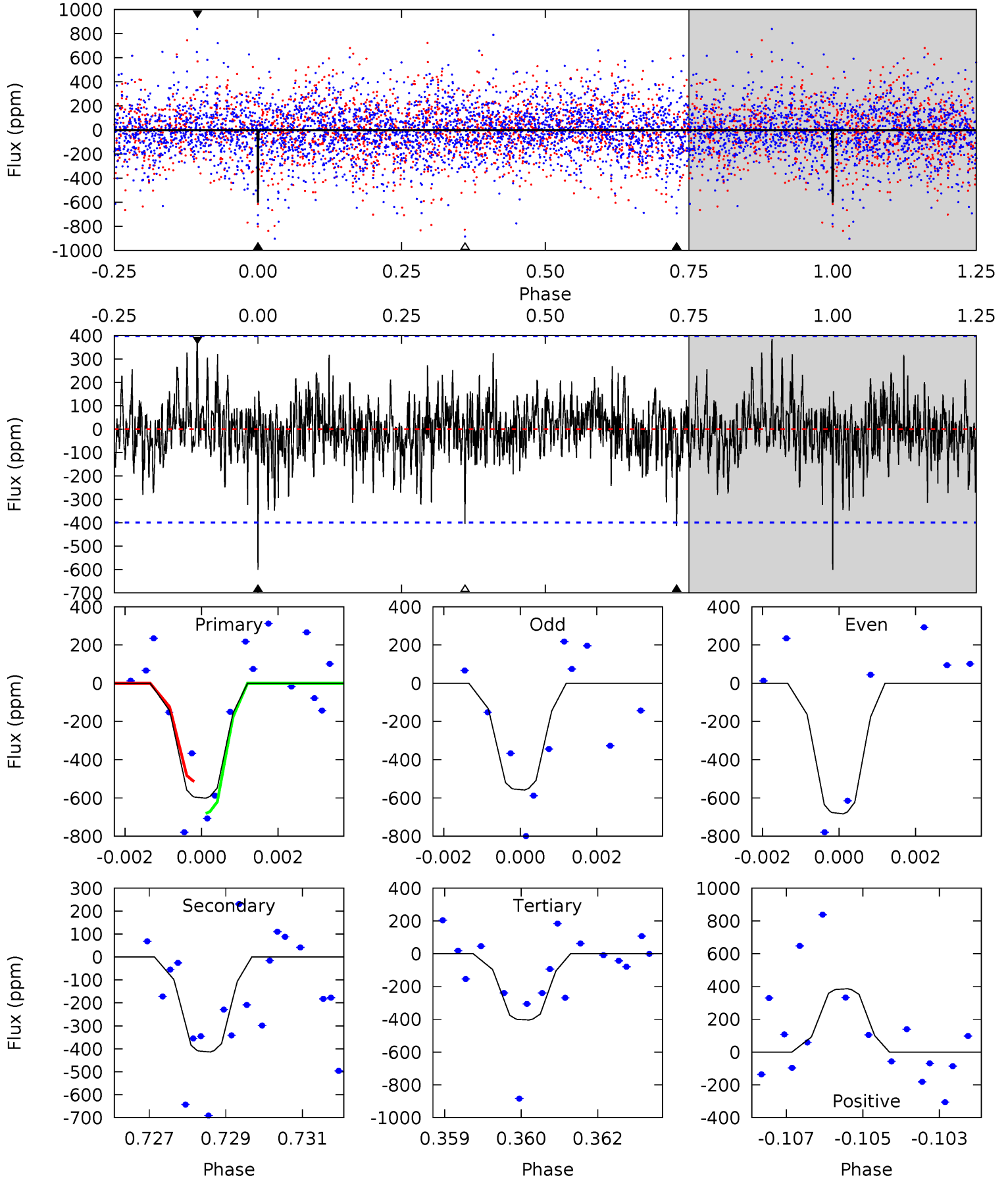
TCE 005629449-04 P= 39.976137 Days $T_0=169.862156$ (BKJD)



DV Model-Shift Uniqueness Test

005629449-04, P = 39.975838 Days, E = 129.891446 Days

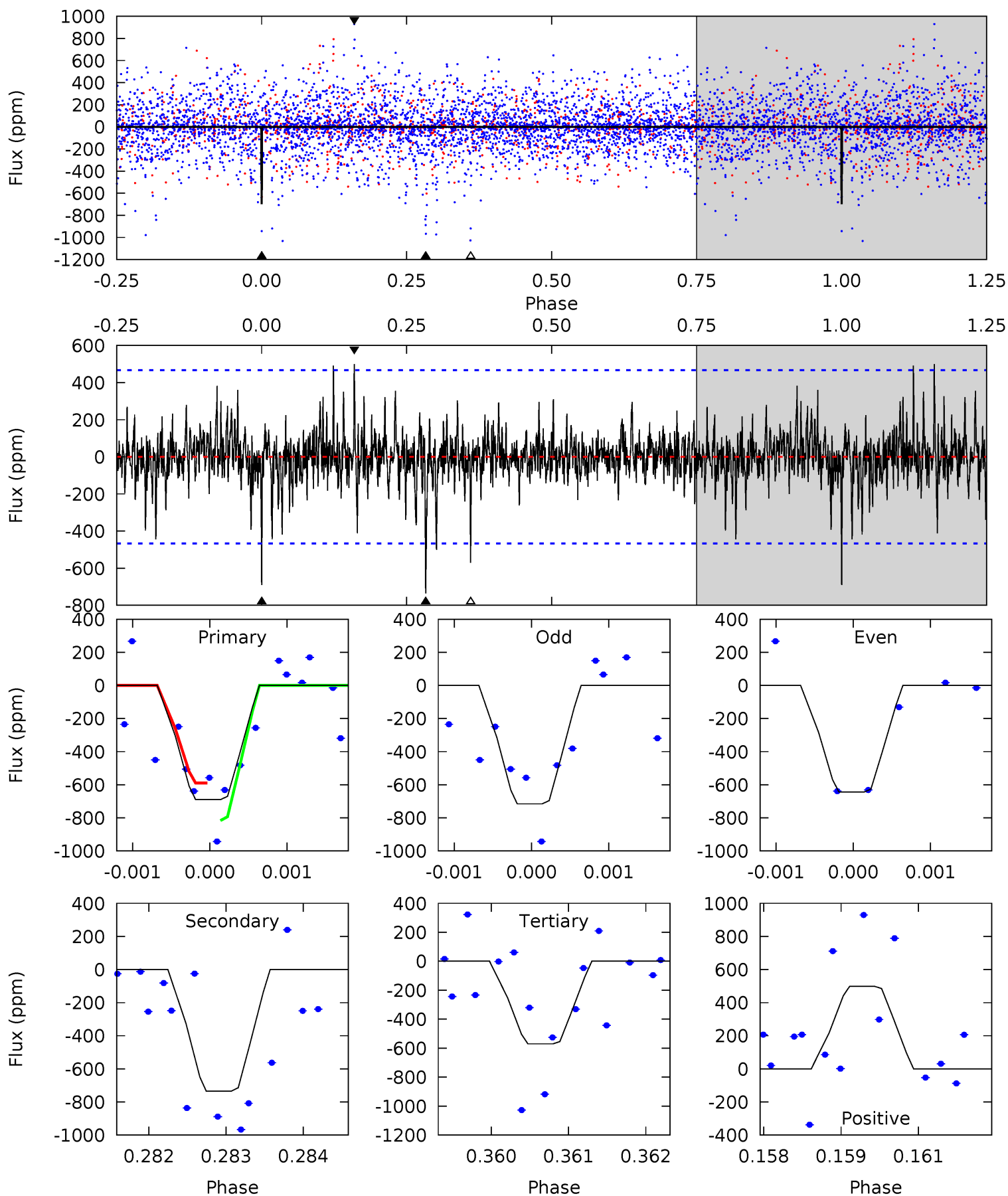
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.08	5.56	5.44	5.19	5.36	3.14	1.33	2.65	2.90	0.13	0.38	0.81	0.88	0.39	1.11



Alt Model-Shift Uniqueness Test

005629449-04, P = 39.976137 Days, E = 129.886019 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.00	8.52	6.61	5.78	5.41	3.23	1.24	1.38	2.21	1.90	2.74	0.38	1.16	0.40	1.34



Stellar Parameters For KIC 005629449

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6489^{+645}_{-1399}	$2.694^{+0.189}_{-0.231}$	$-0.500^{+0.200}_{-0.450}$	$13.402^{+3.514}_{-5.710}$	$3.239^{+0.107}_{-2.025}$	$0.002^{+0.003}_{-0.001}$
	+10%/-22%	+7%/-9%	+40%/-90%	+26%/-43%	+3%/-63%	+142%/-52%
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 005629449-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-414 ± 74	$61.70^{+69.73}_{-39.47}$	2528^{+391}_{-501}	4365^{+3080}_{-1133}	$5.955^{+44.146}_{-4.544}$
Alt.	-735 ± 86	$63.66^{+62.54}_{-43.35}$	2523^{+391}_{-495}	4962^{+4537}_{-1267}	10^{+89}_{-7}

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 $A_{\text{obs}} \gg 1.0$

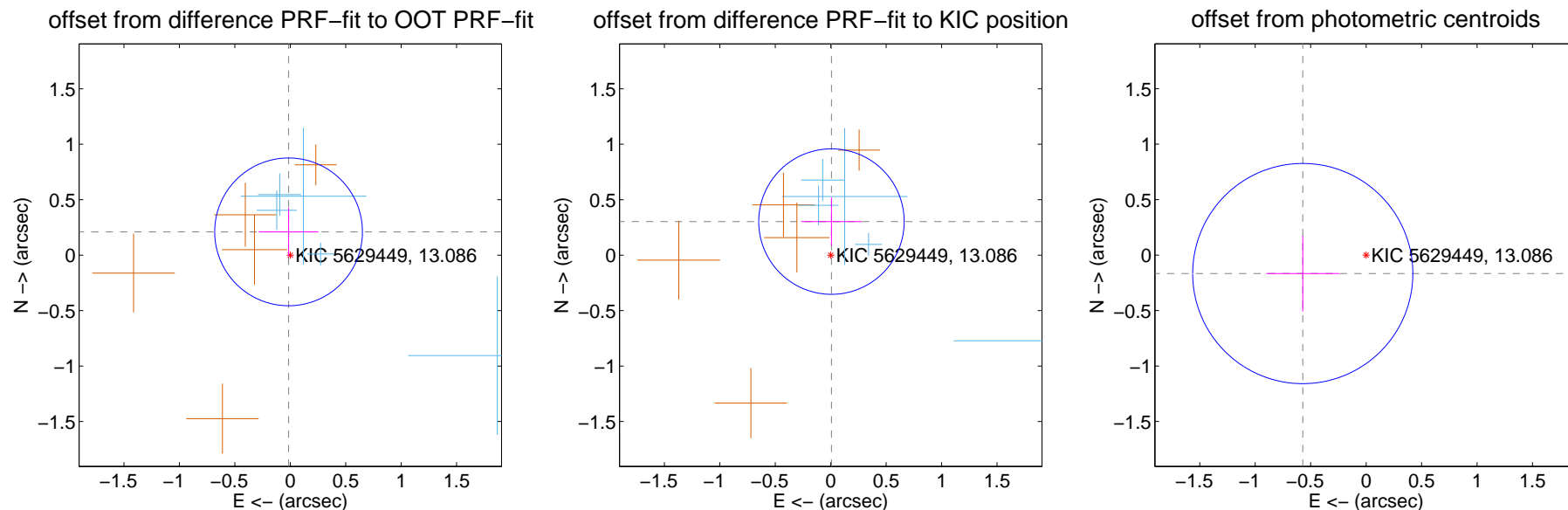
DV Centroid Data

Supplemental centroid analysis for 005629449-04. Kepler magnitude: 13.09. Transit SNR 9.94

There are 5 quarters with good PRF difference image offsets

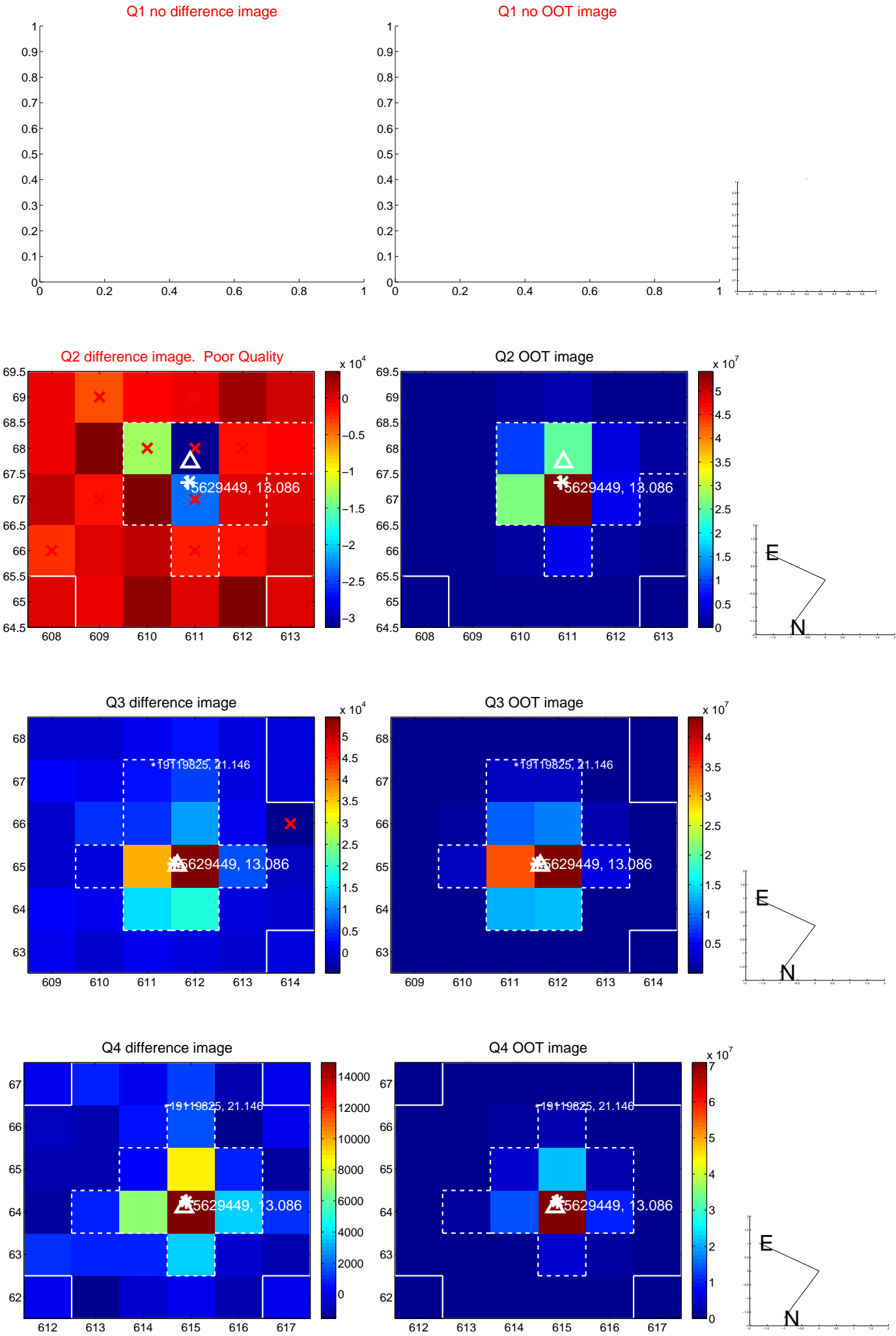
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.211 ± 0.222	0.95	0.015 ± 0.269	0.210 ± 0.218
PRF-fit source offset from KIC position	0.303 ± 0.219	1.38	-0.007 ± 0.273	0.303 ± 0.219
photometric centroid source offset	0.60 ± 0.33	1.80	0.57 ± 0.33	-0.17 ± 0.34

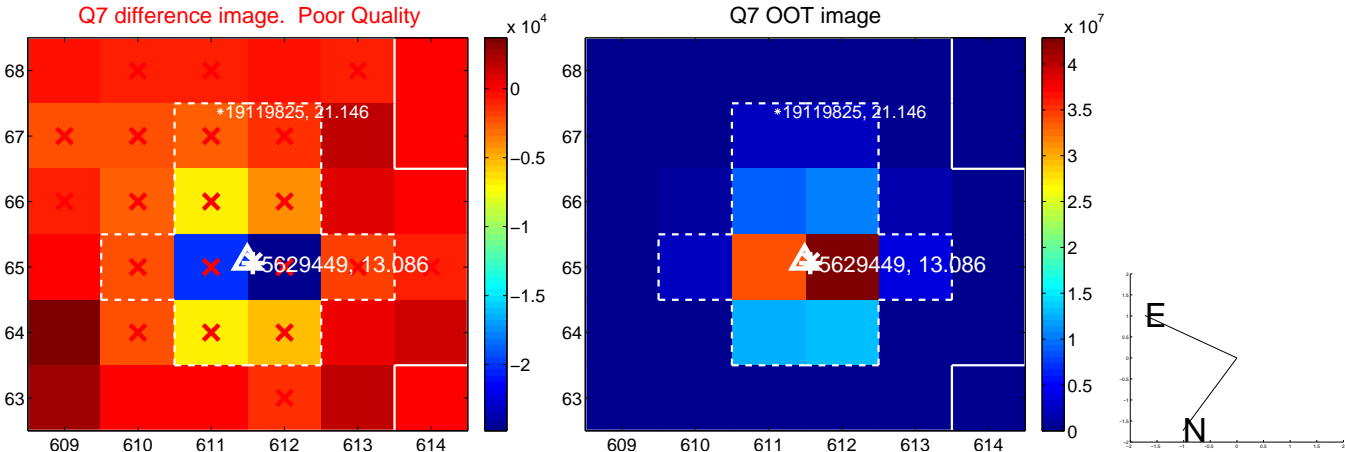
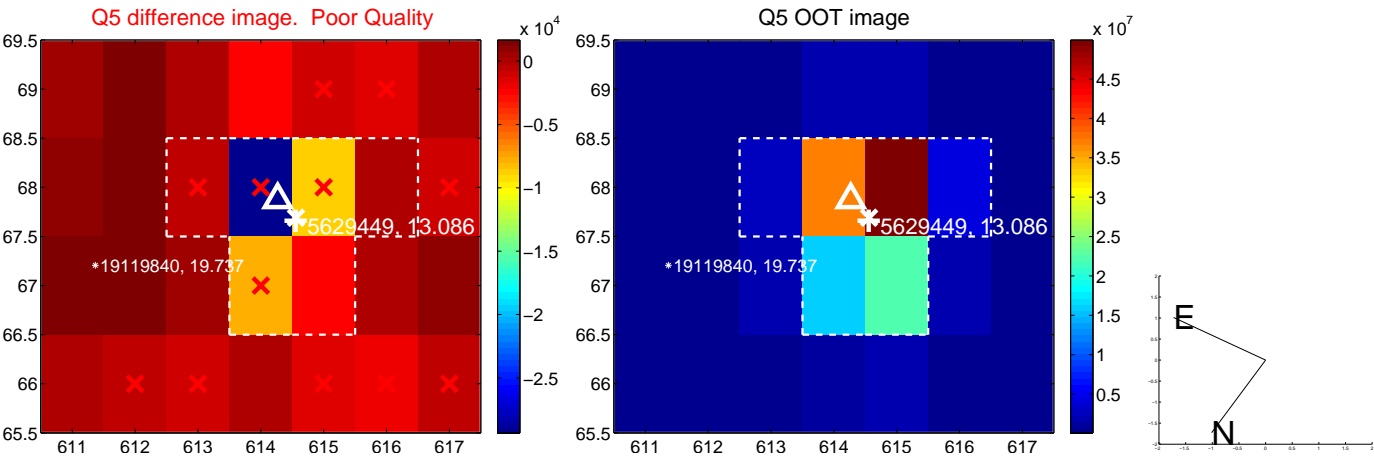


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

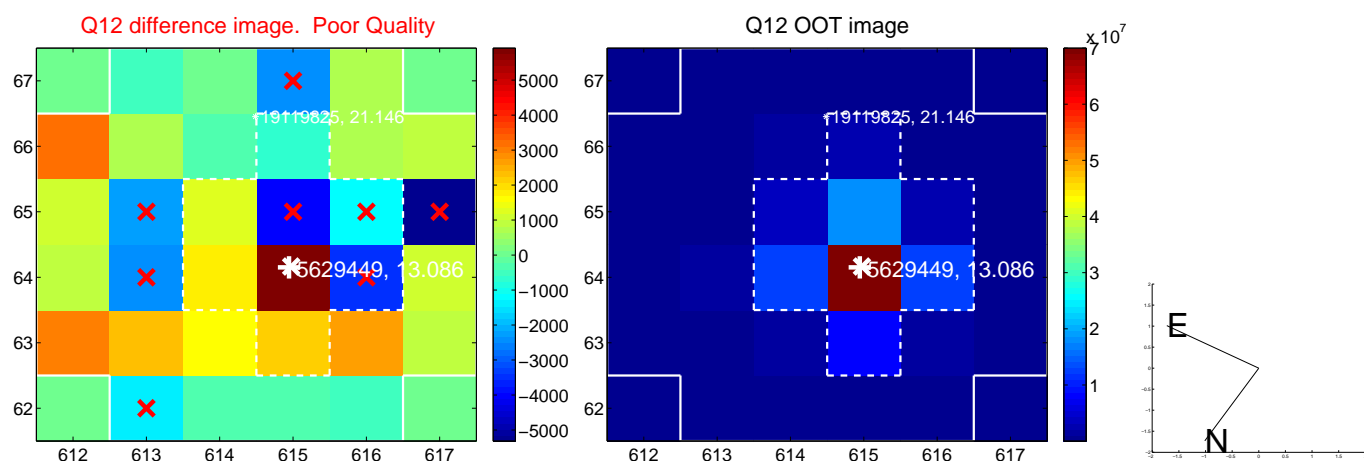
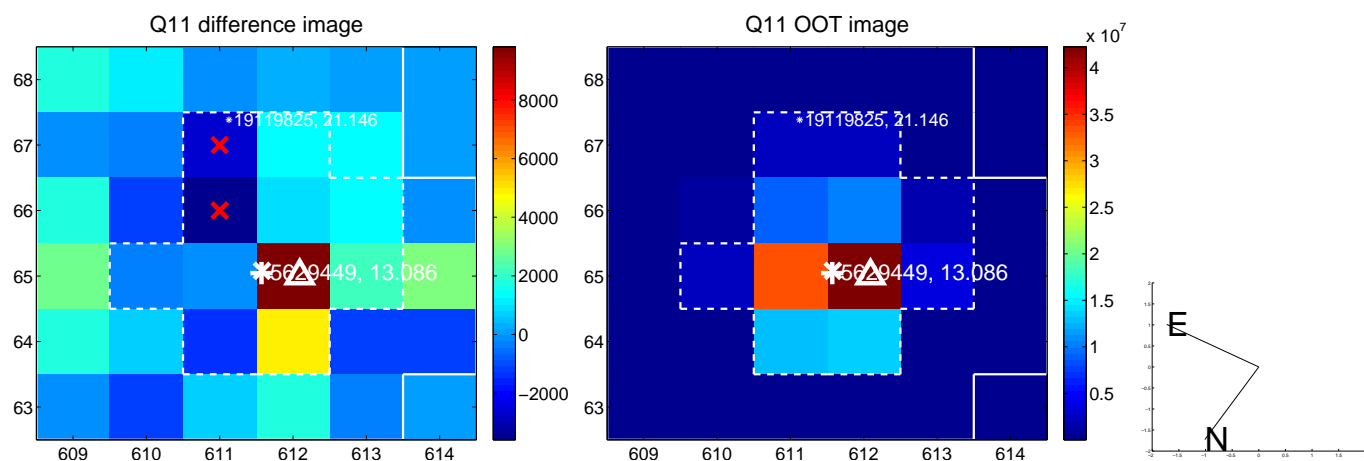
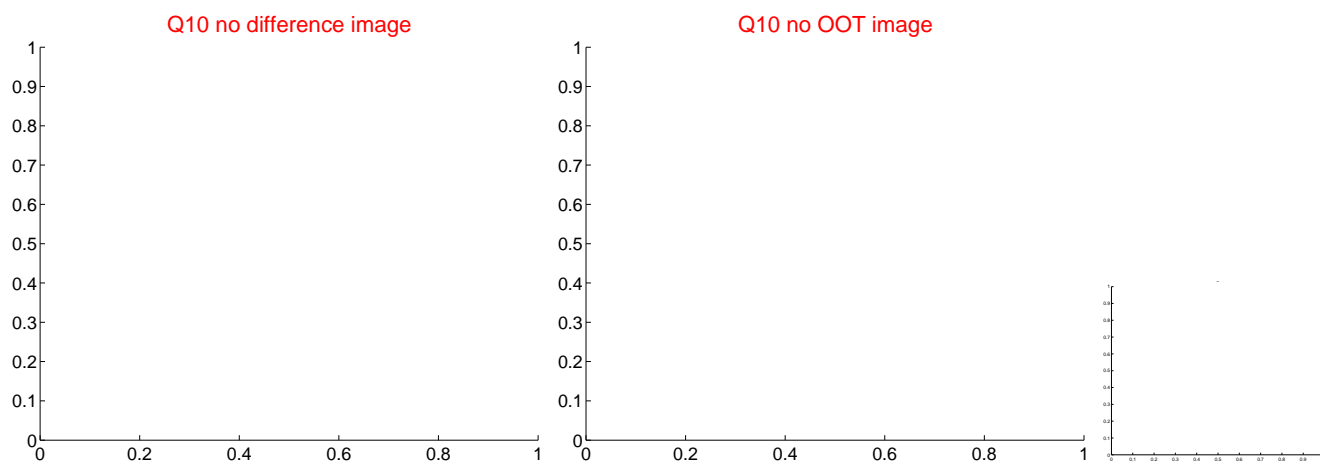
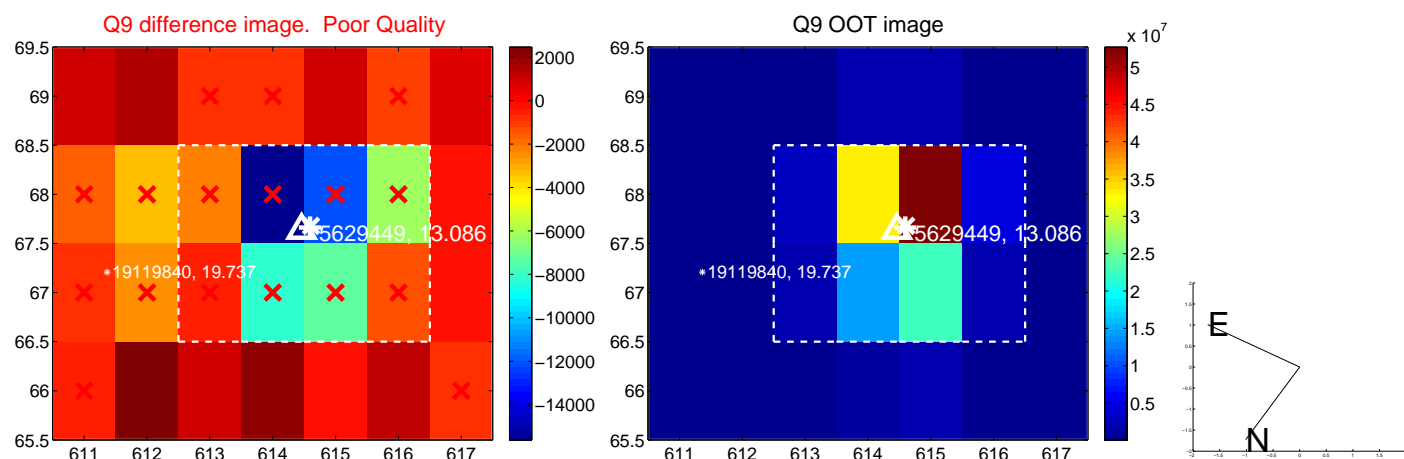
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



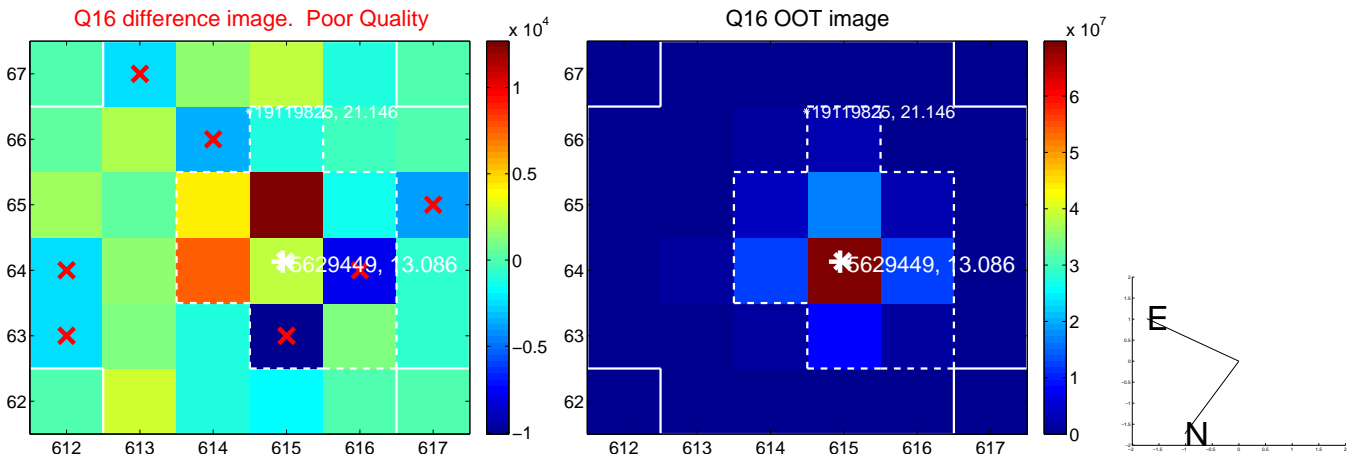
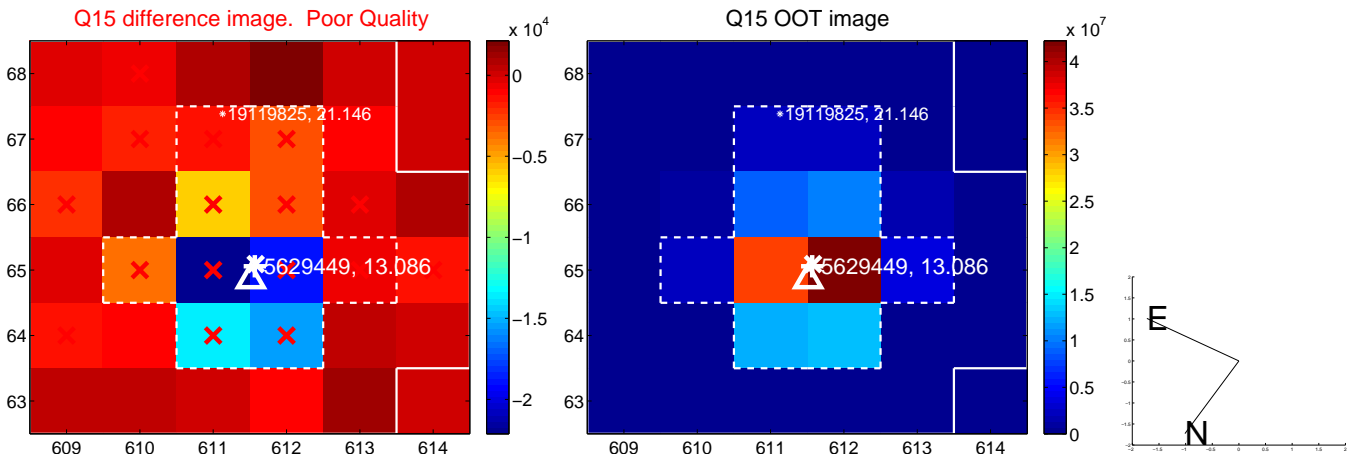
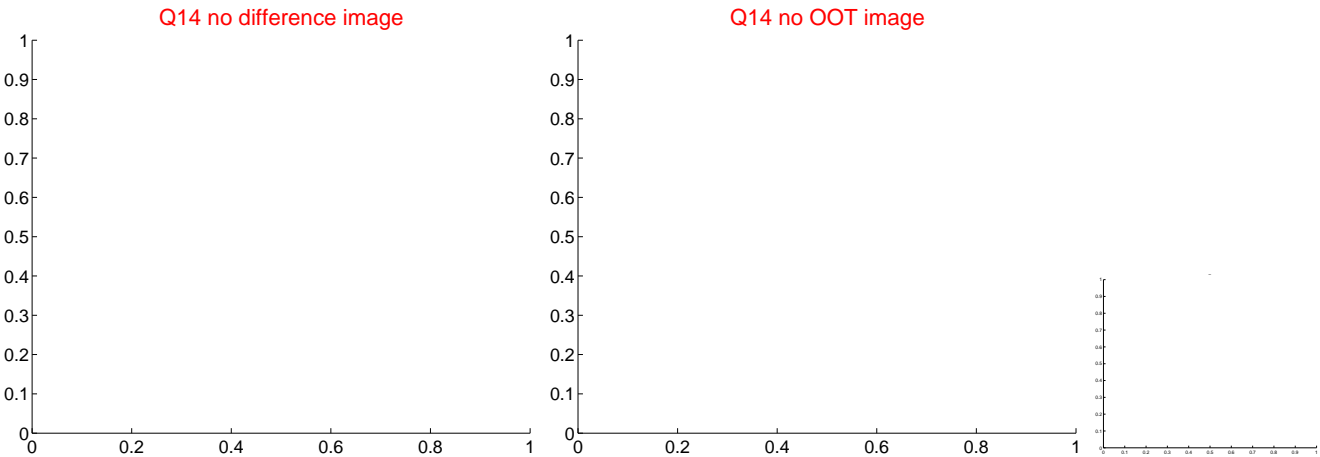
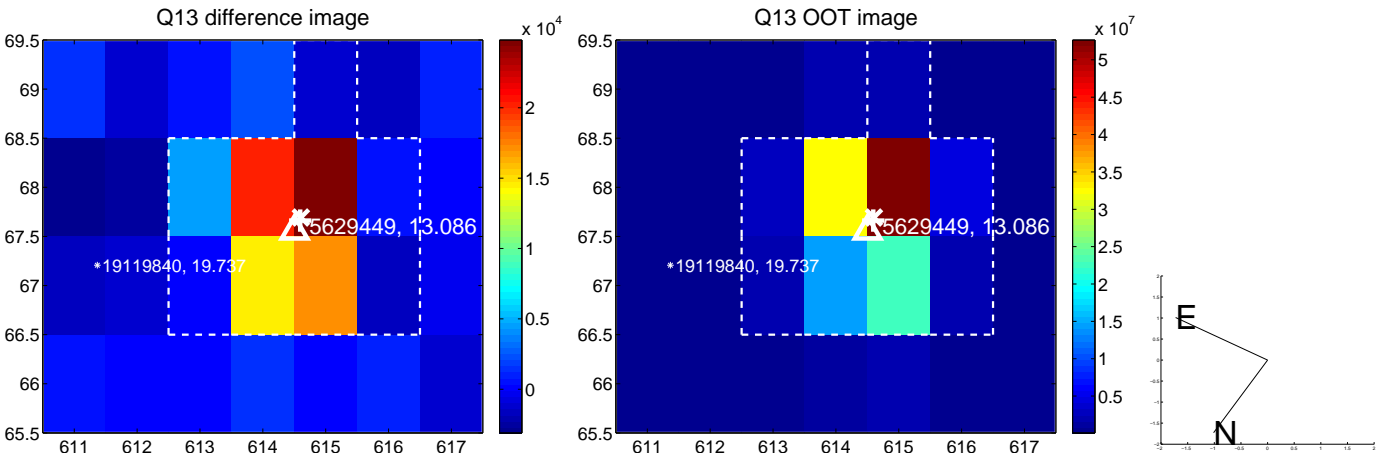
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



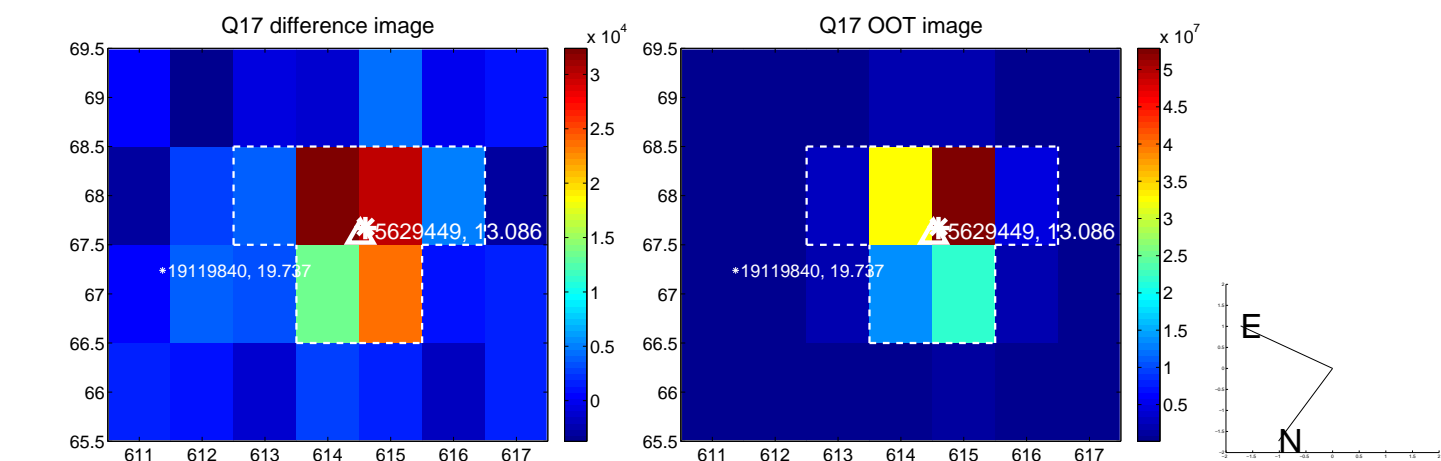
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



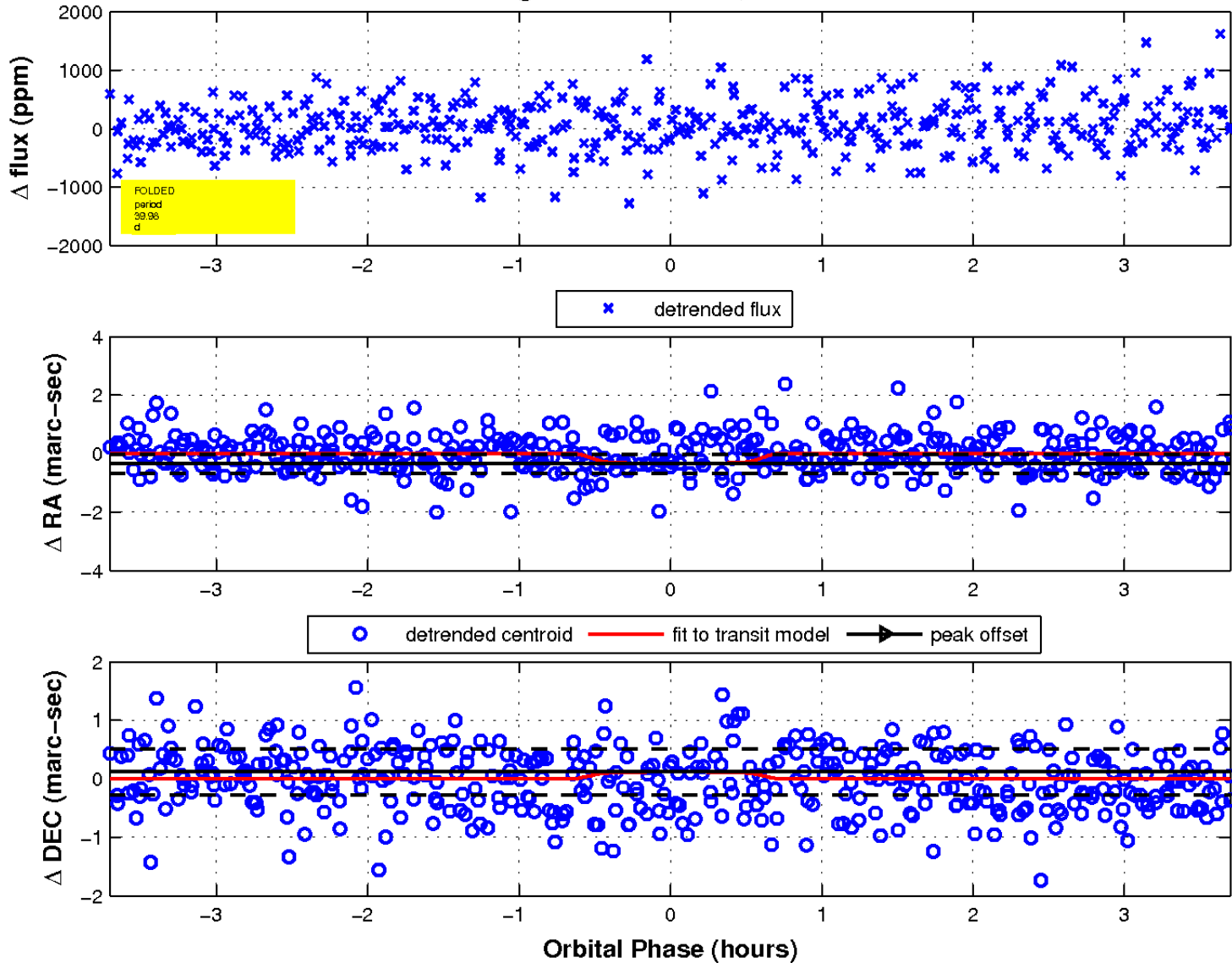
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



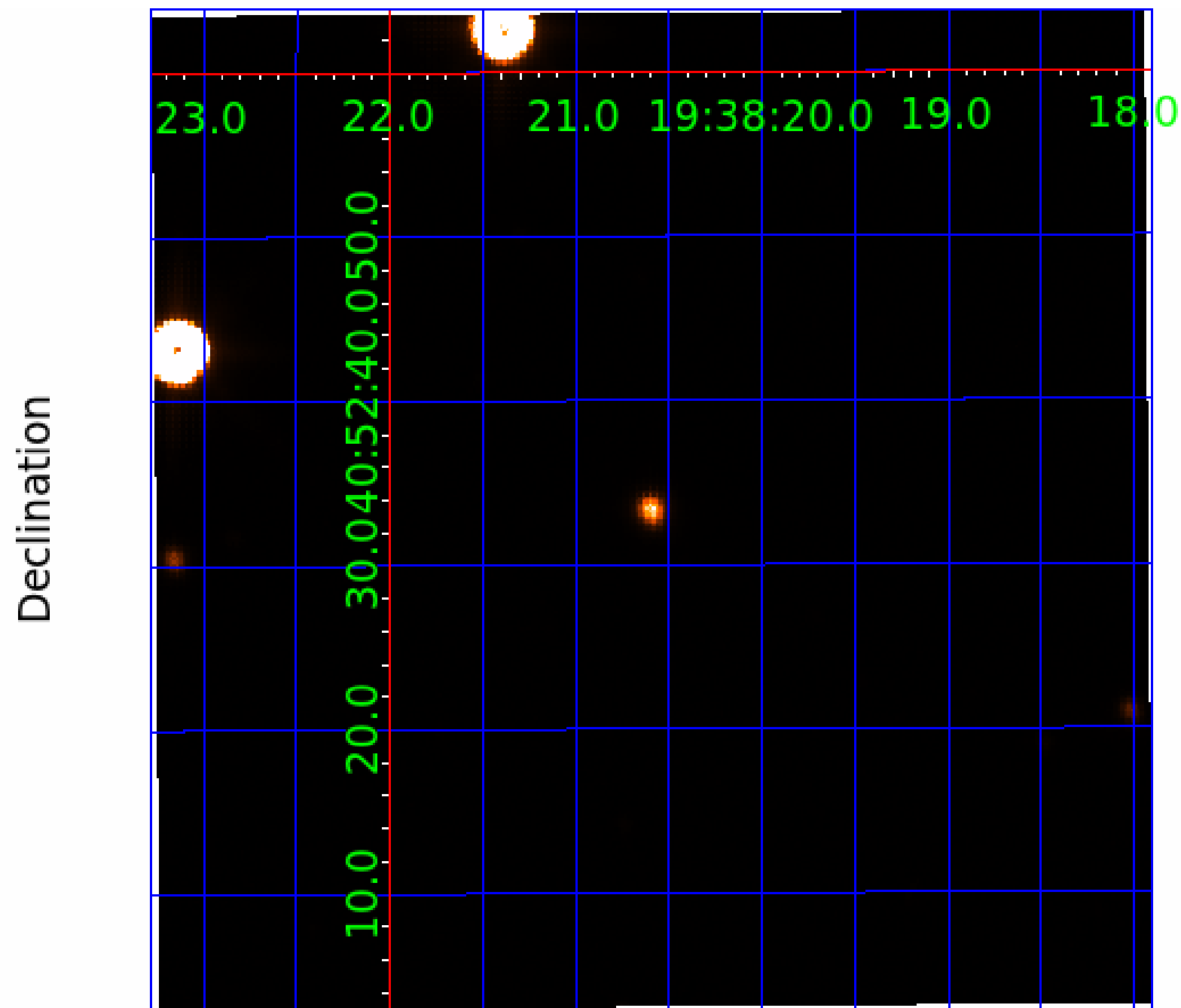
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 4 of 7



UKIRT Image



KIC 005629449

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})
005629449-01	OBS	No	0.709741	132.112175	30.4	5.027	8.1	5.8	13.40	6489	7.65	0.00
005629449-02	OBS	No	9.955690	140.825821	567.1	2.308	12.1	8.5	13.40	6489	33.40	15883.88
005629449-03	OBS	No	24.621583	154.019267	259.3	0.587	12.1	3.6	13.40	6489	23.51	4749.31
005629449-04	OBS	No	39.975838	169.867284	622.6	1.235	10.9	9.9	13.40	6489	36.58	2488.79
005629449-05	OBS	No	17.119042	142.235469	163.1	6.632	7.7	5.4	13.40	6489	19.95	7710.44
005629449-06	OBS	No	37.317356	146.537853	586.2	1.542	11.1	9.2	13.40	6489	36.09	2727.96

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005629449-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_ALT
005629449-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—MOD_NONUNIQ_ALT
005629449-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005629449-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005629449-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005629449-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV

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

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

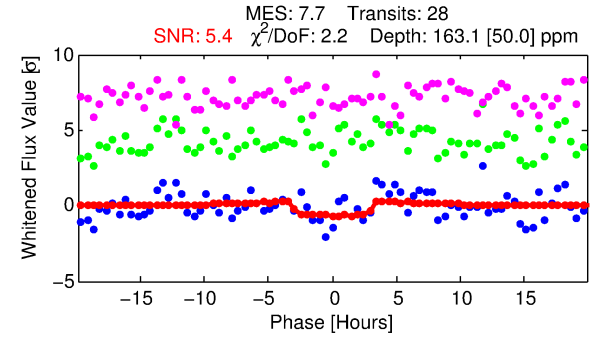
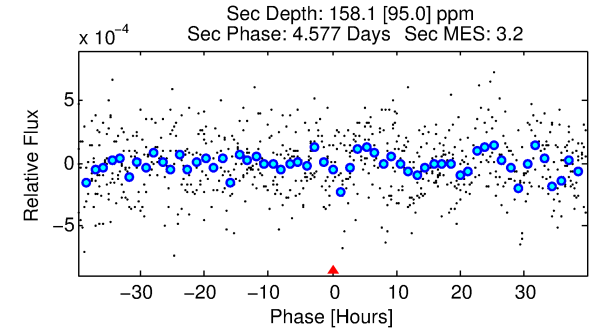
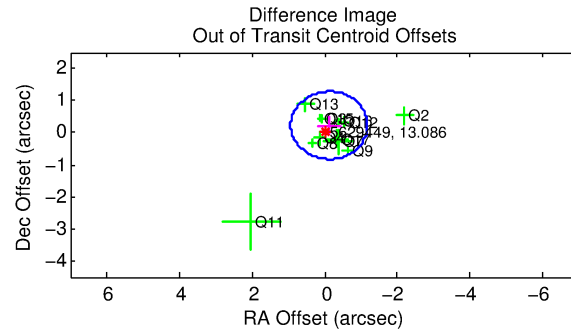
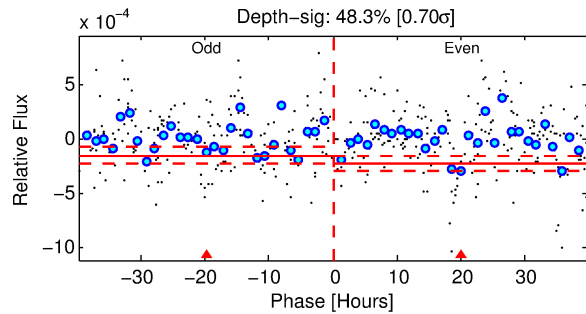
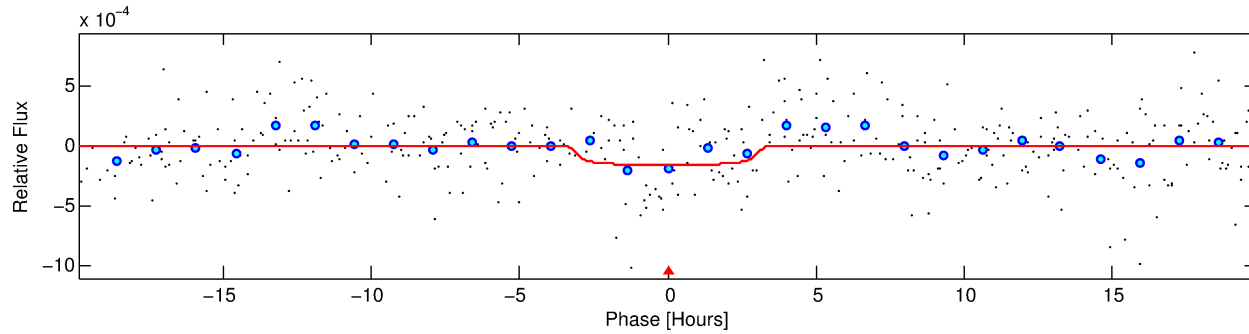
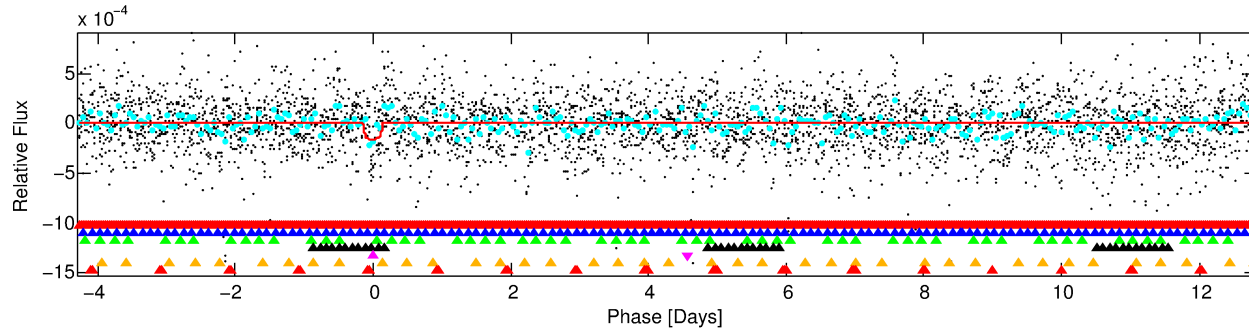
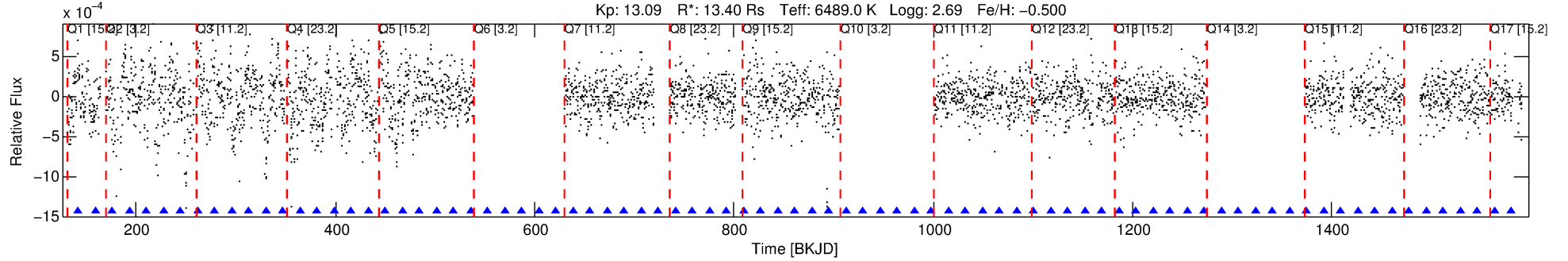
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005629449-05

No Significant Match Found

DV One-Page Summary

KIC: 5629449 Candidate: 5 of 7 Period: 17.119 d



DV Fit Results:

Period = 17.11904 [0.00100] d
Epoch = 142.2355 [0.0428] BKJD
Rp/R* = 0.0136 [0.0067]
a/R* = 9.24 [24.43]
b = 0.90 [0.57]
Seff = 7710.44 [7515.69]
Teq = 2389 [582] K
Rp = 19.95 [13.02] Re
a = 0.1924 [0.0644] AU
Ag = 8.09 [10.05] [0.70 σ]
Teffp = 6230 [2248] K [1.65 σ]

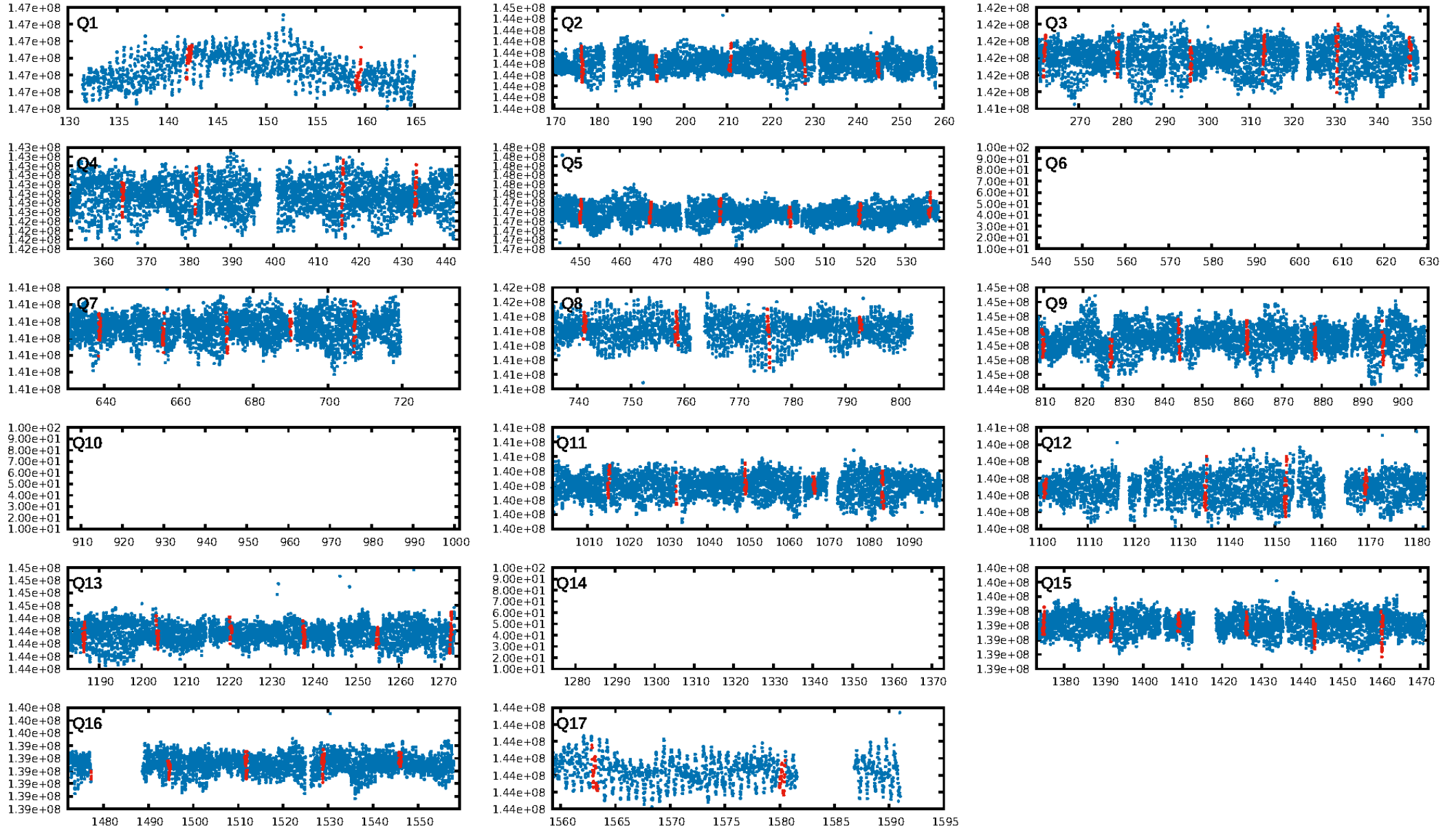
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [24.48 σ]
LongPeriod-sig: 100.0% [27.04 σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [25/25]
GhostDiagnostic-chr: 46.62
Centroid-sig: 20.6%
Centroid-so: 0.389 arcsec [1.00 σ]
OotOffset-rm: 0.254 arcsec [0.72 σ]
OotOffset-st: 1/4/4/3 [12]
KicOffset-rm: 0.343 arcsec [1.11 σ]
KicOffset-st: 1/4/4/3 [12]
DiffImageQuality-fgm: 0.75 [9/12]
DiffImageOverlap-fno: 0.00 [0/14]

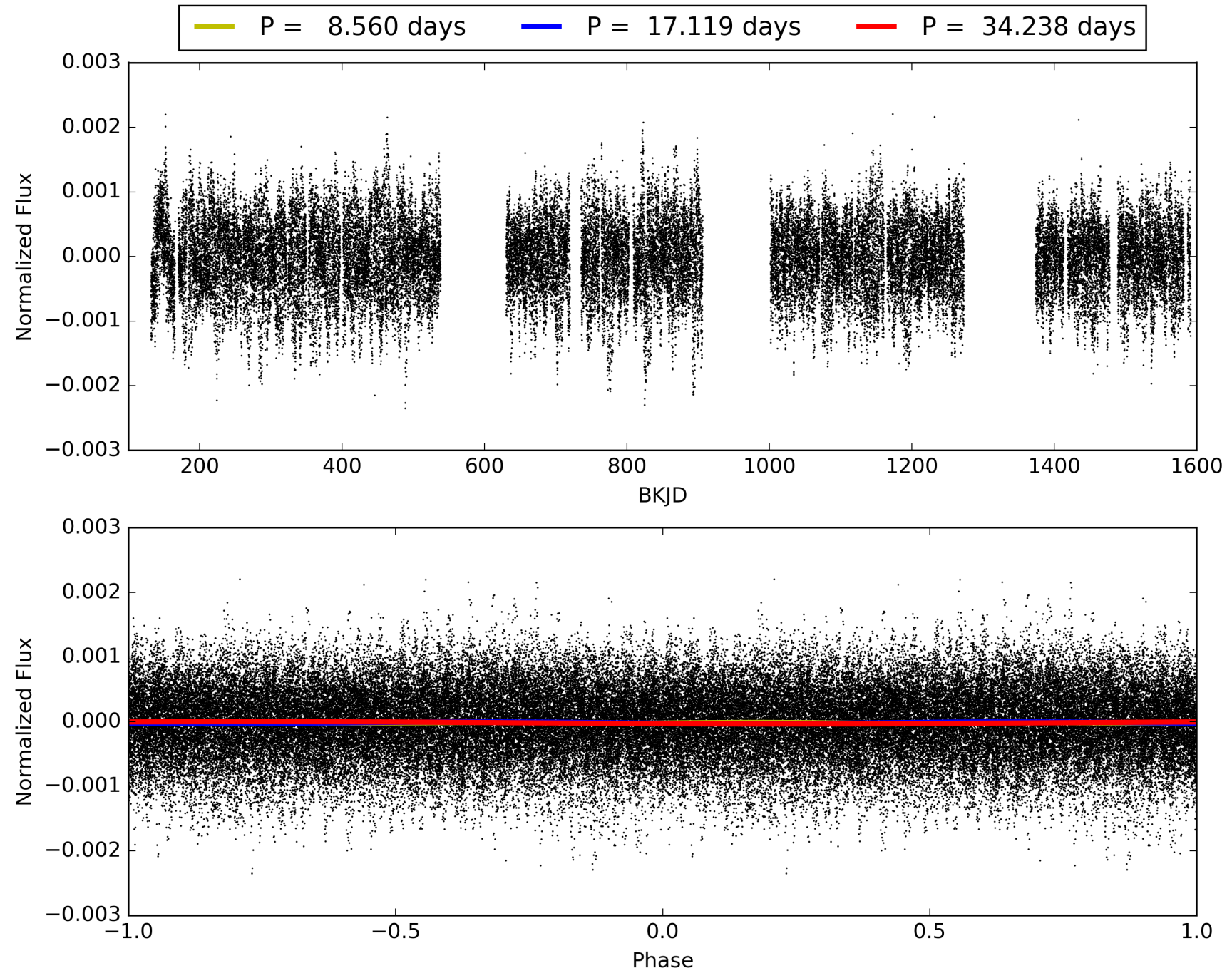
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:56:24 Z

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

TCE 005629449-05, PDC Light Curves

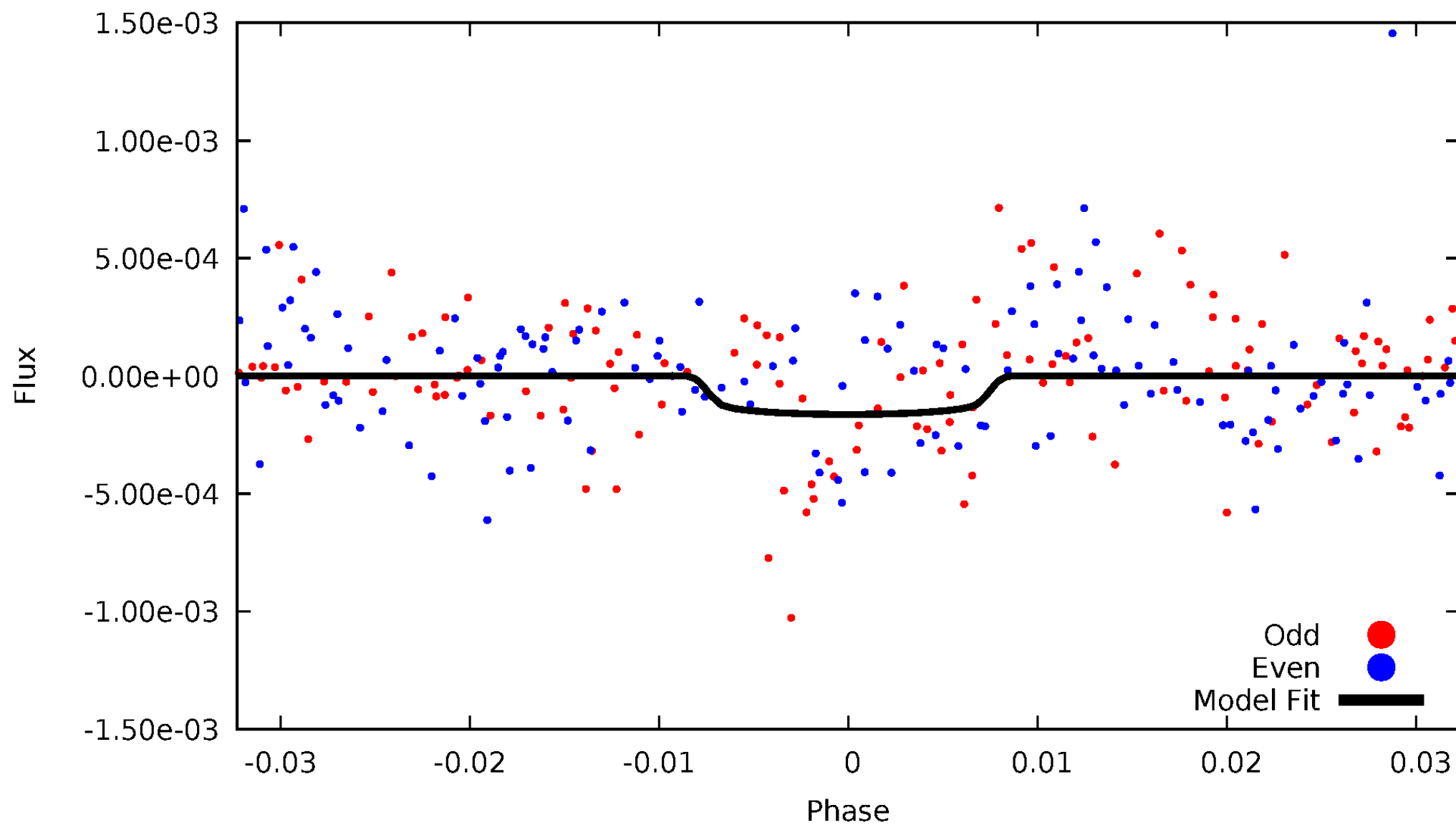


TCE 005629449-05



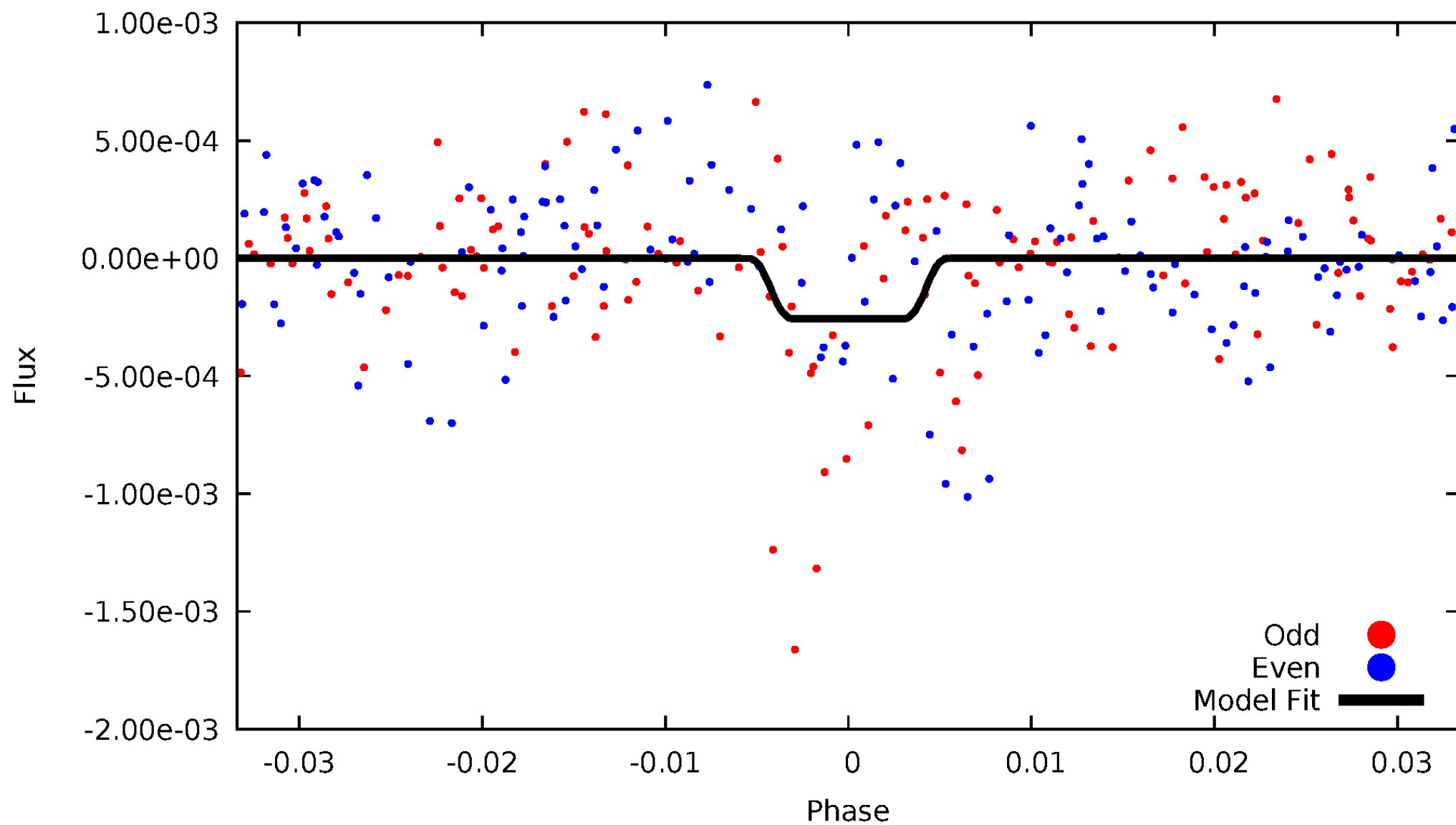
DV Odd/Even

TCE 005629449-05



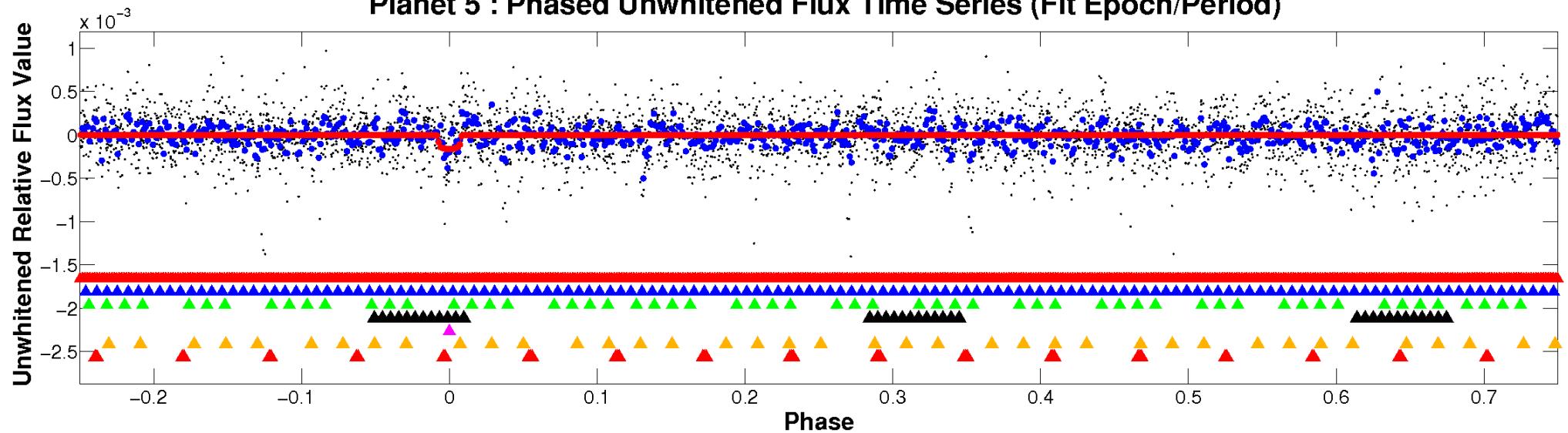
ALT Odd/Even

TCE 005629449-05

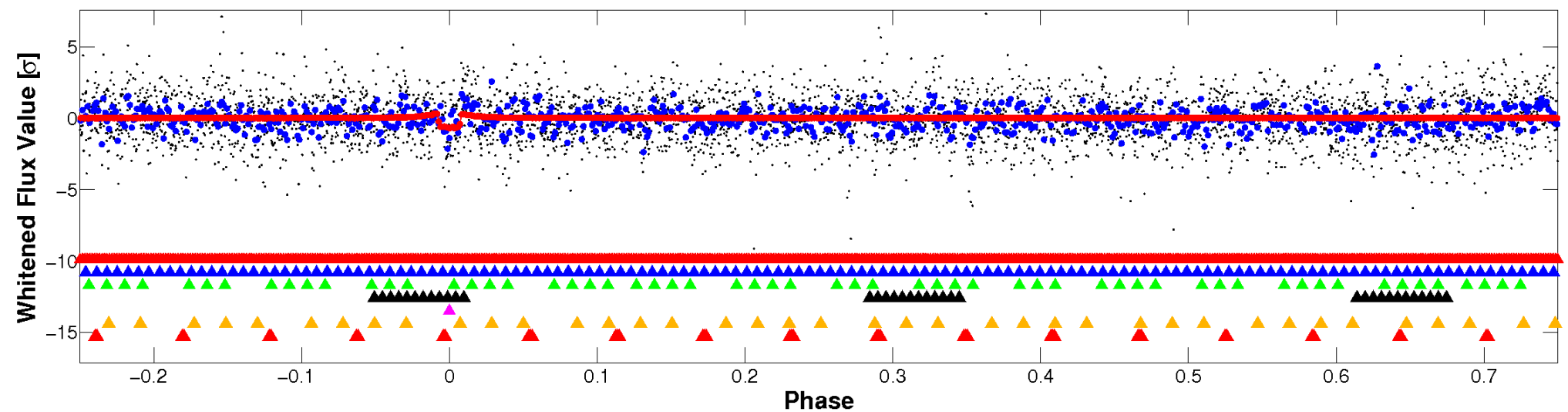


Non-Whitened Vs. Whitened Light Curve

Planet 5 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

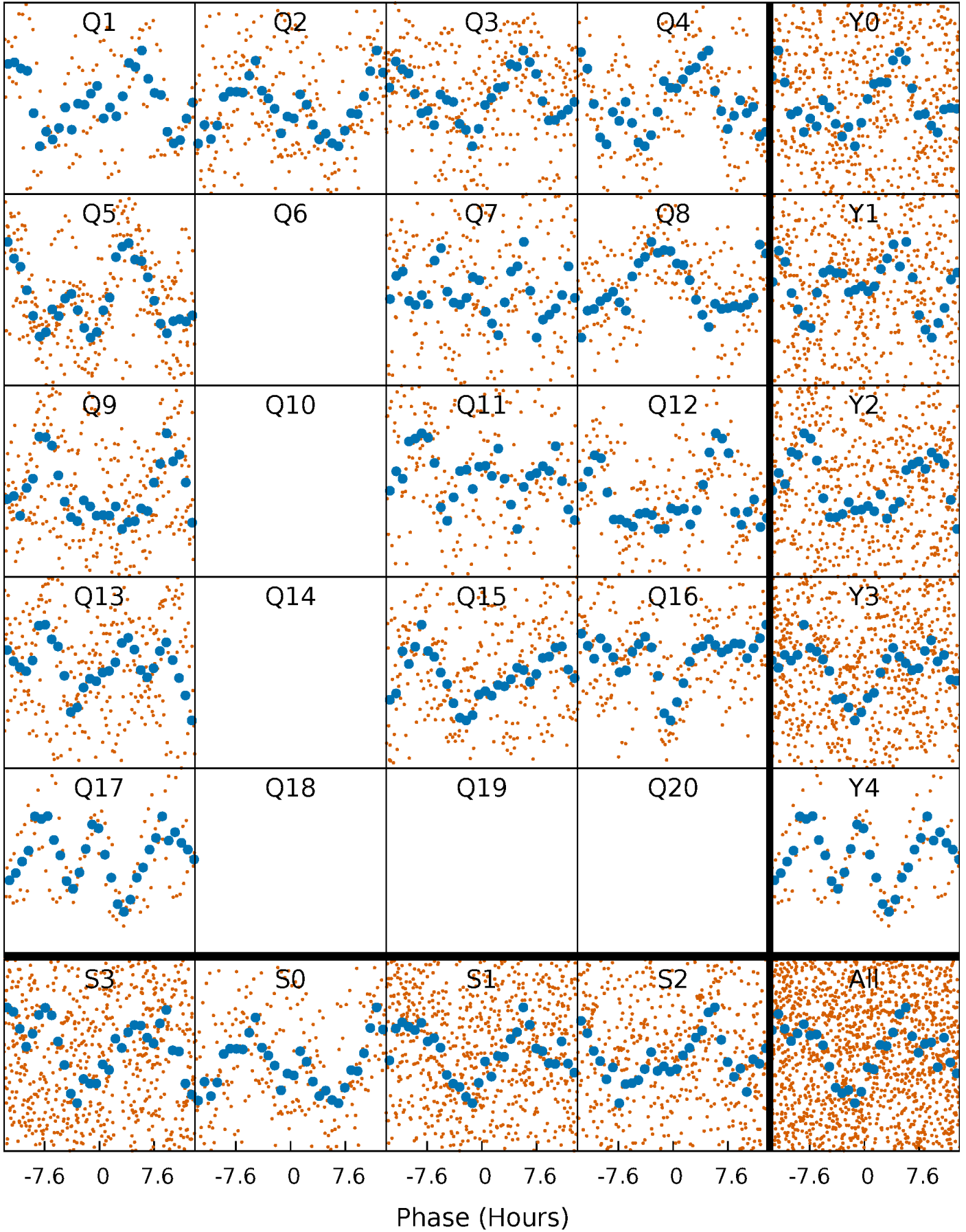


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



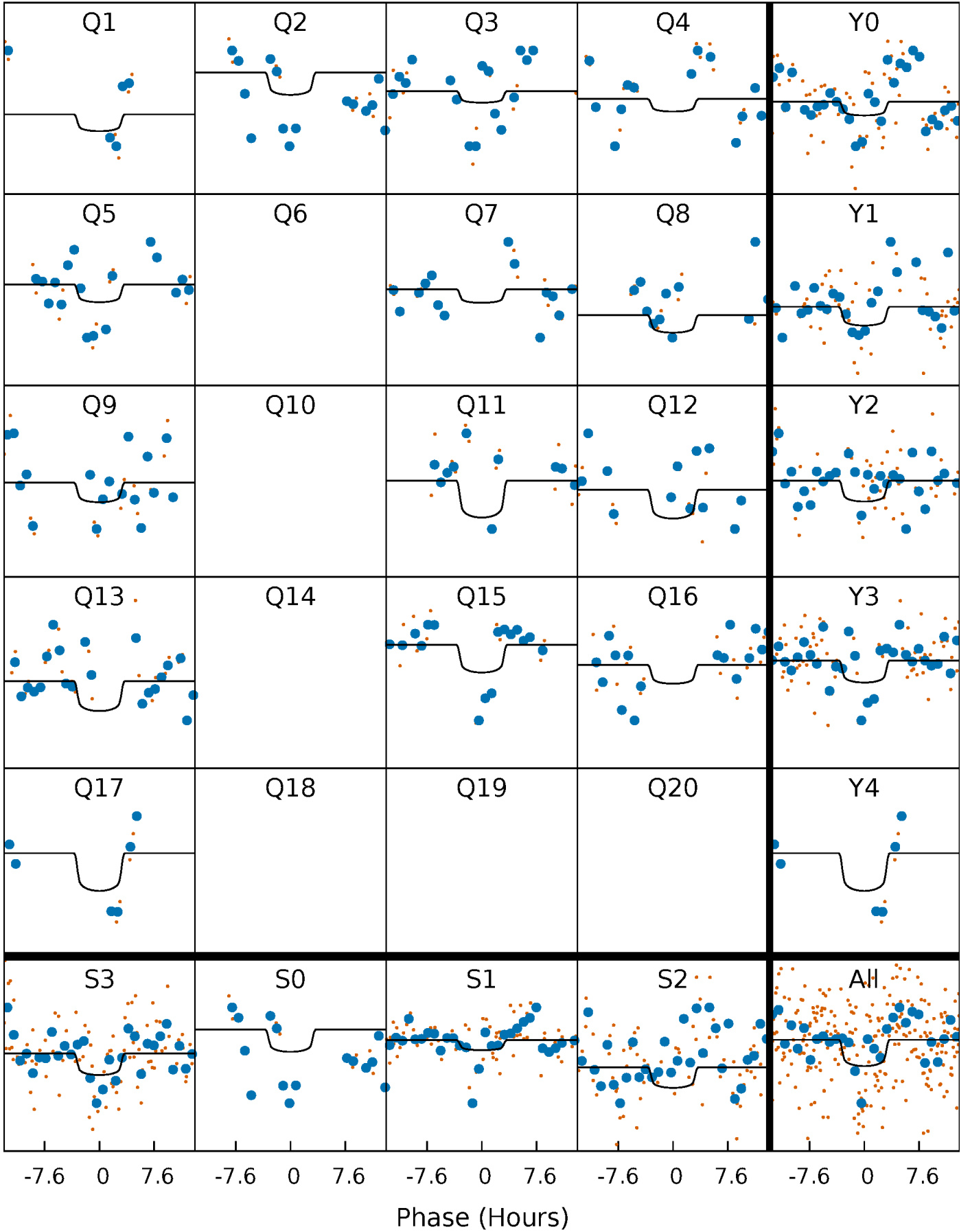
PDC Quarter-Phased Transit Curves

TCE 005629449-05 P= 17.119042 Days $T_0=142.235469$ (BKJD)



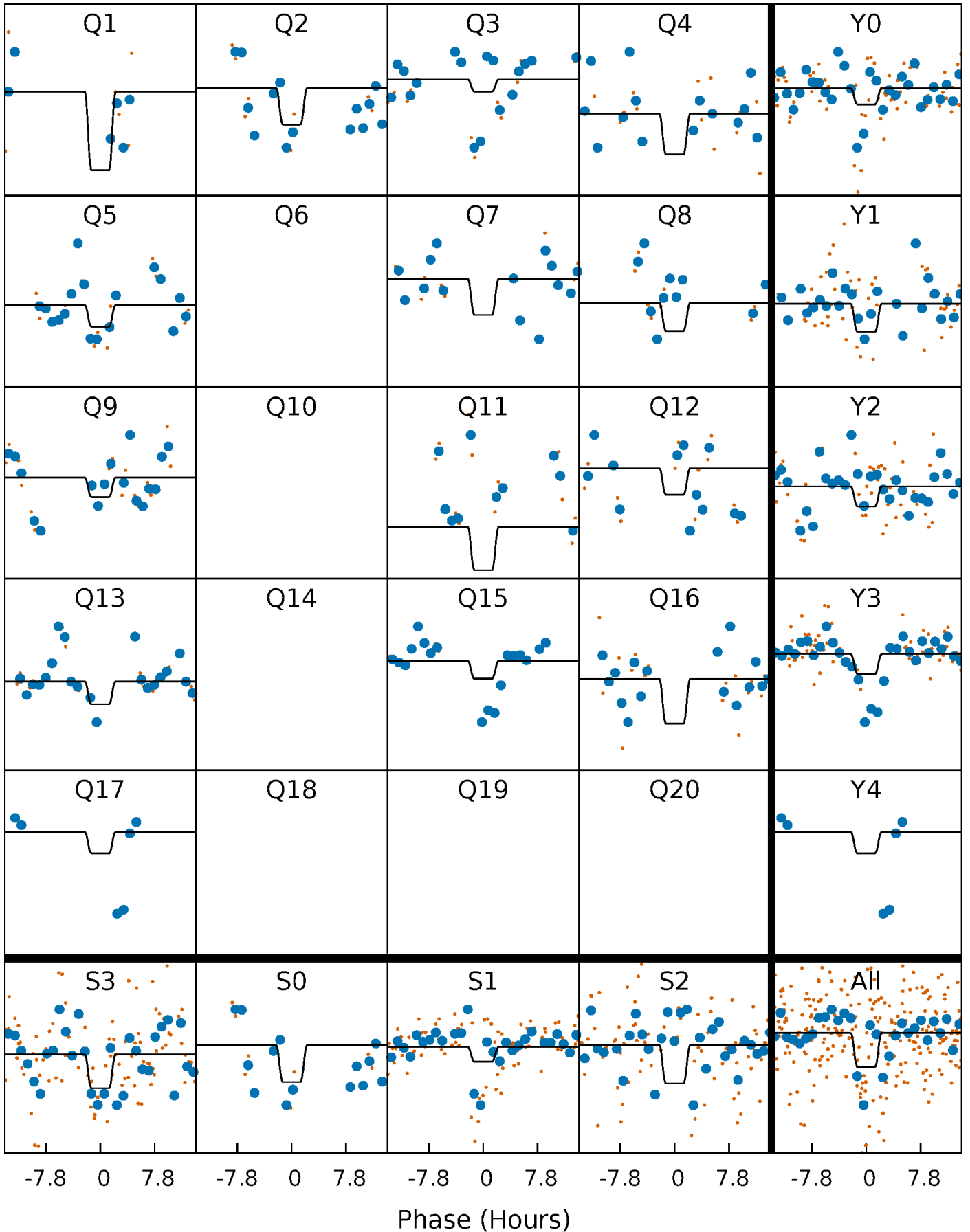
DV Quarter-Phased Transit Curves

TCE 005629449-05 P= 17.119042 Days $T_0=142.235469$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

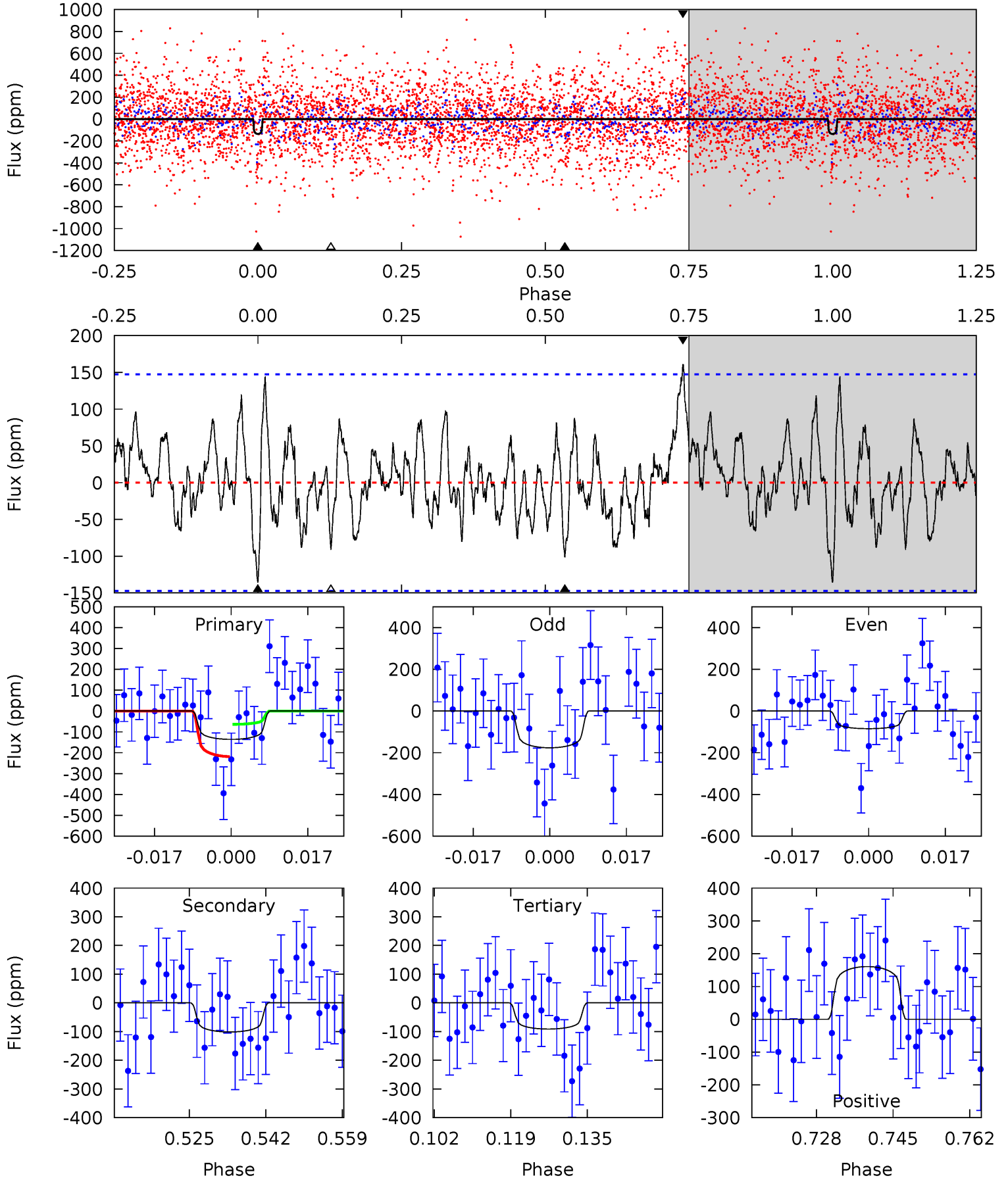
TCE 005629449-05 $P = 17.118900$ Days $T_0 = 142.235288$ (BKJD)



DV Model-Shift Uniqueness Test

005629449-05, P = 17.119042 Days, E = 125.116427 Days

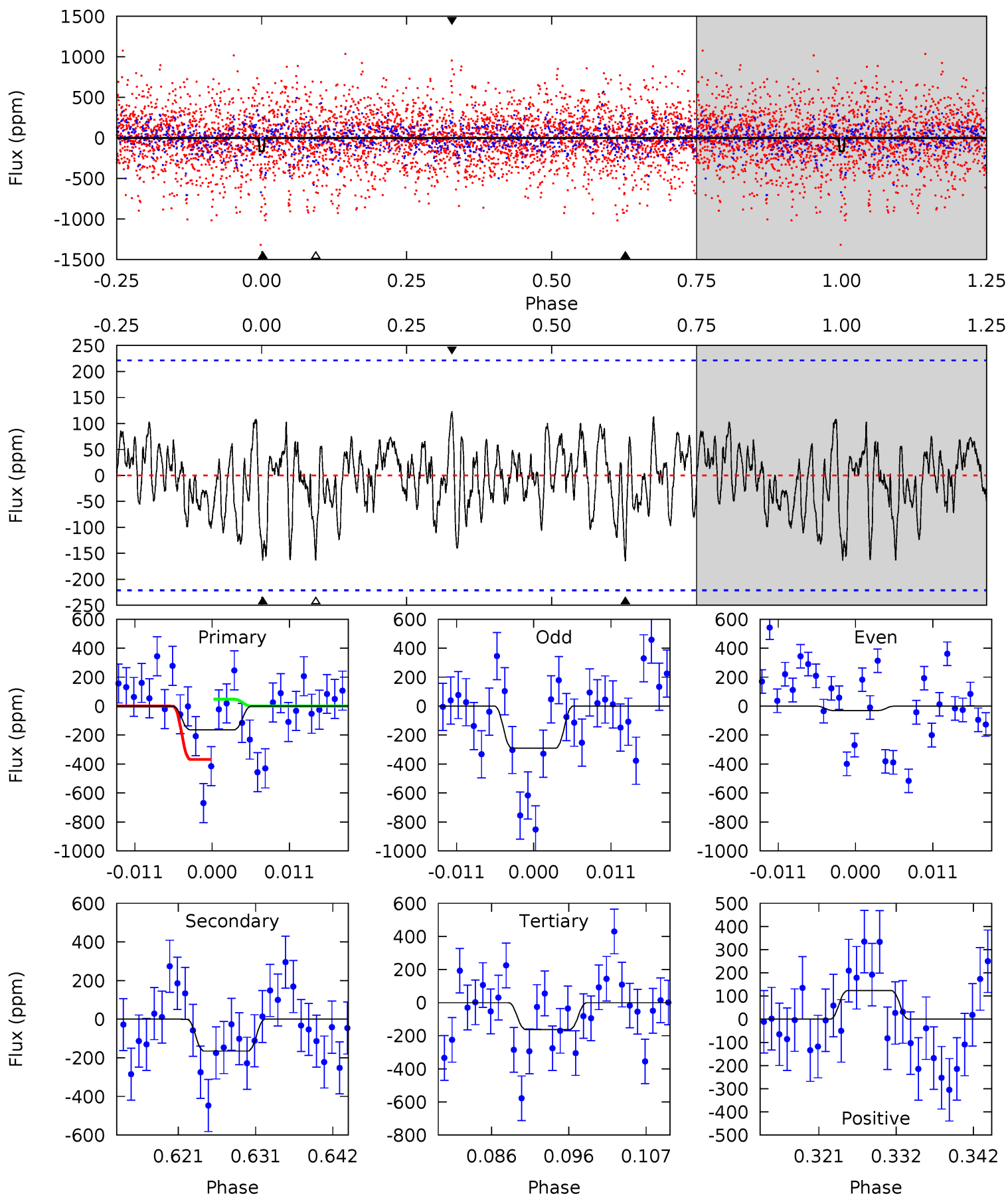
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.54	3.39	3.05	5.37	4.92	2.39	1.45	1.49	-0.83	0.34	-1.98	1.52	1.63	0.54	2.60



Alt Model-Shift Uniqueness Test

005629449-05, P = 17.118900 Days, E = 125.116388 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.71	3.74	3.69	2.79	5.01	2.55	1.18	0.02	0.92	0.06	0.95	2.96	1.41	0.43	3.62



Stellar Parameters For KIC 005629449

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	6489^{+645}_{-1399}	$2.694^{+0.189}_{-0.231}$	$-0.500^{+0.200}_{-0.450}$	$13.402^{+3.514}_{-5.710}$	$3.239^{+0.107}_{-2.025}$	$0.002^{+0.003}_{-0.001}$
	+10%/-22%	+7%/-9%	+40%/-90%	+26%/-43%	+3%/-63%	+142%/-52%
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 005629449-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-101 ± 30	$19.98^{+10.97}_{-9.82}$	3320^{+490}_{-721}	5240^{+2396}_{-1276}	$4.603^{+12.815}_{-2.778}$
Alt.	-165 ± 44	$24.08^{+11.12}_{-10.53}$	3386^{+490}_{-711}	5485^{+1918}_{-1198}	$5.168^{+10.614}_{-2.811}$

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 $A_{obs} \gg 1.0$

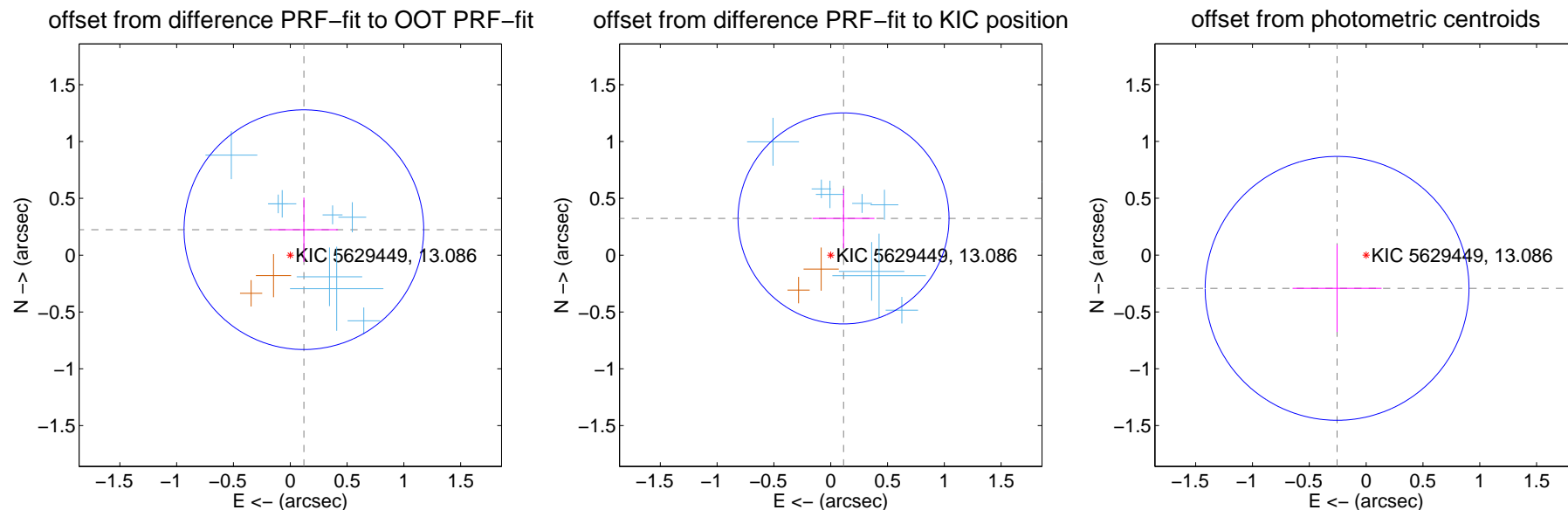
DV Centroid Data

Supplemental centroid analysis for 005629449-05. Kepler magnitude: 13.09. Transit SNR 5.36

There are 9 quarters with good PRF difference image offsets

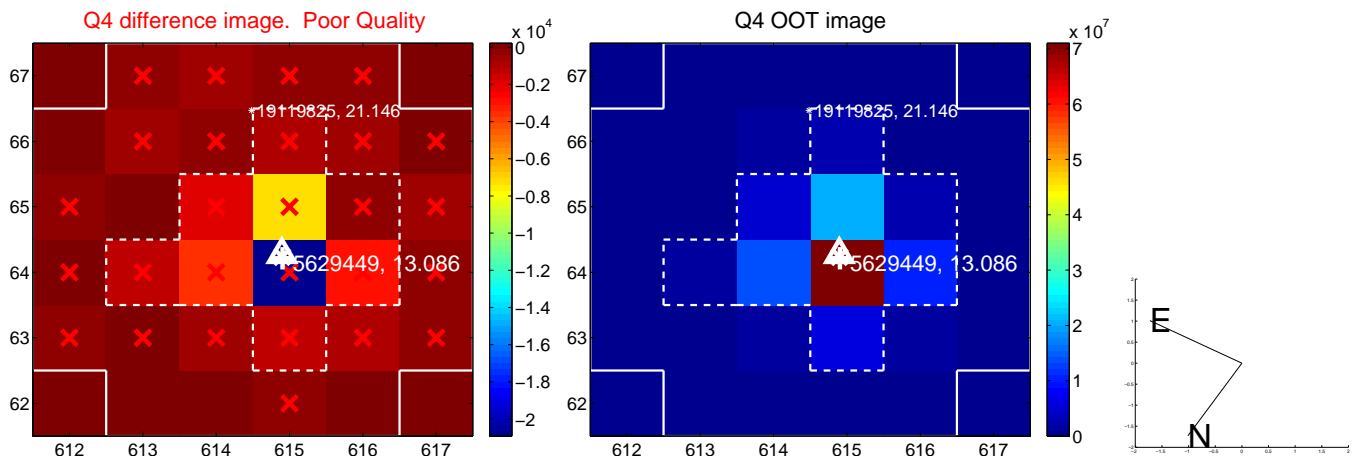
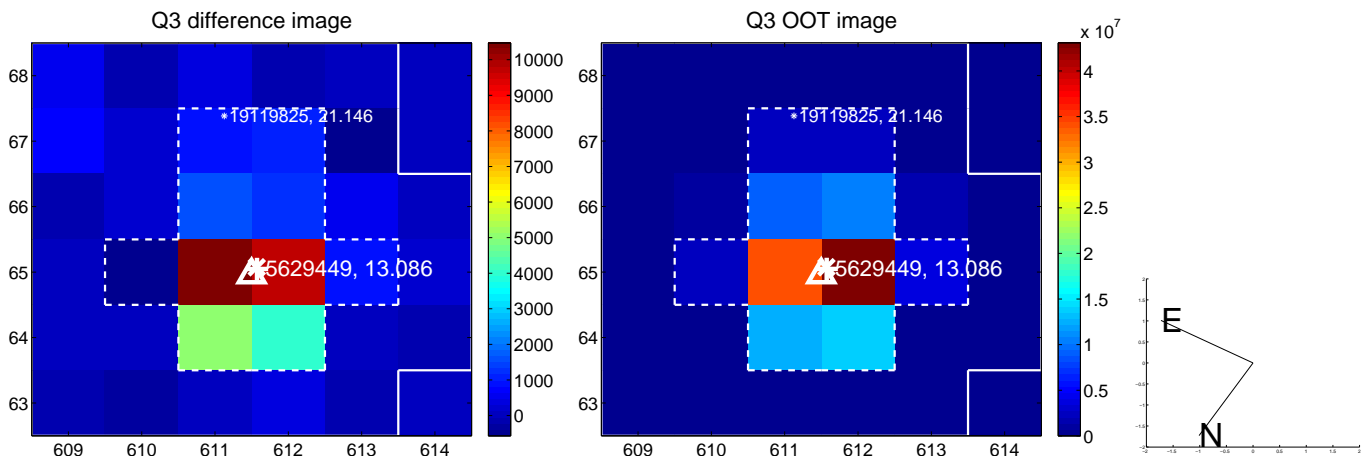
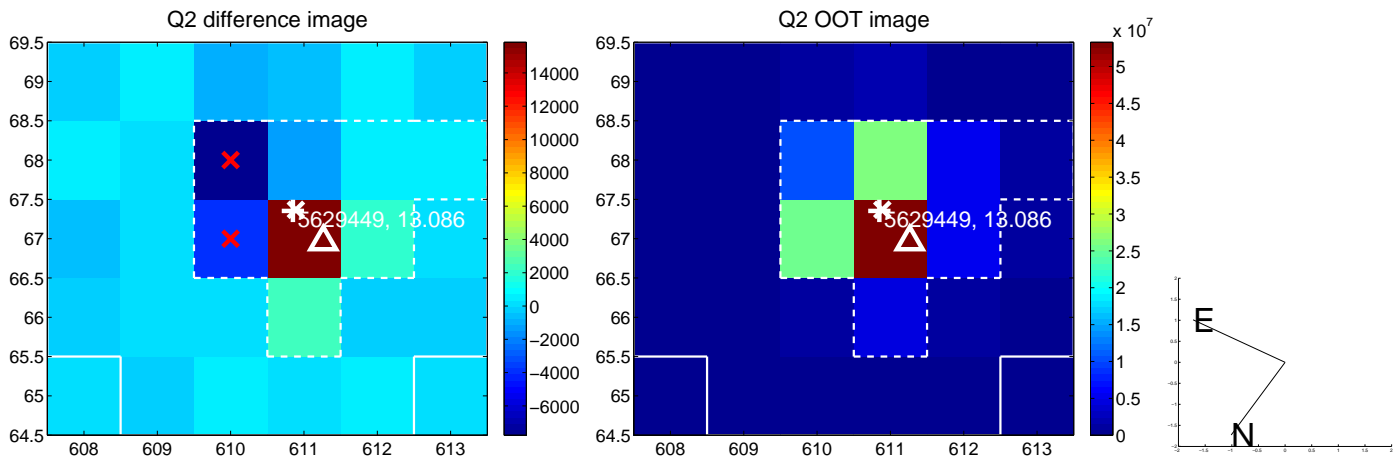
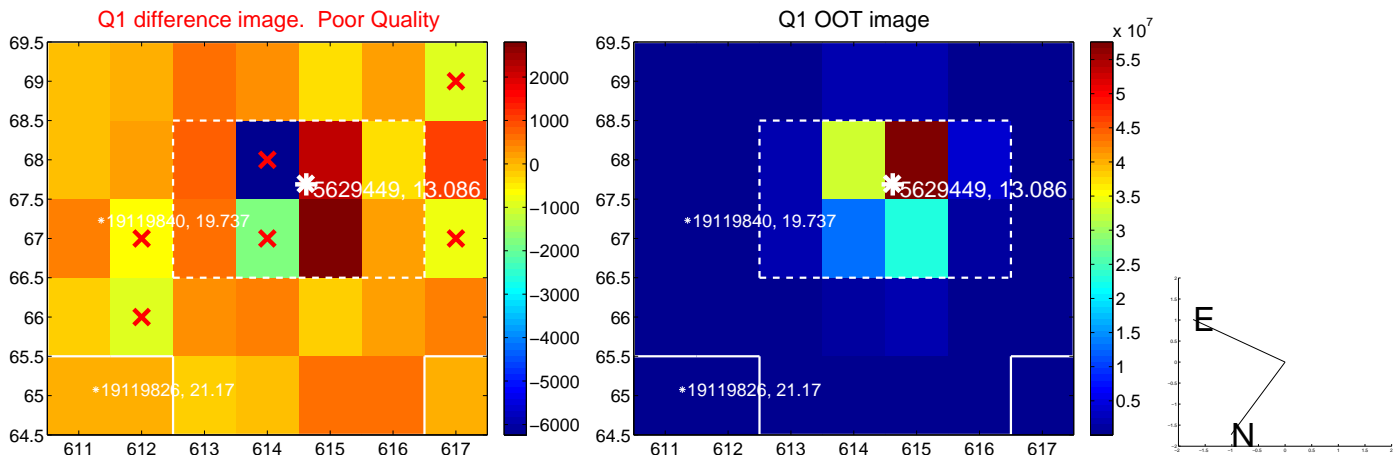
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.254 ± 0.352	0.72	-0.120 ± 0.300	0.224 ± 0.283
PRF-fit source offset from KIC position	0.343 ± 0.310	1.11	-0.113 ± 0.273	0.324 ± 0.264
photometric centroid source offset	0.39 ± 0.39	1.00	0.26 ± 0.39	-0.29 ± 0.38

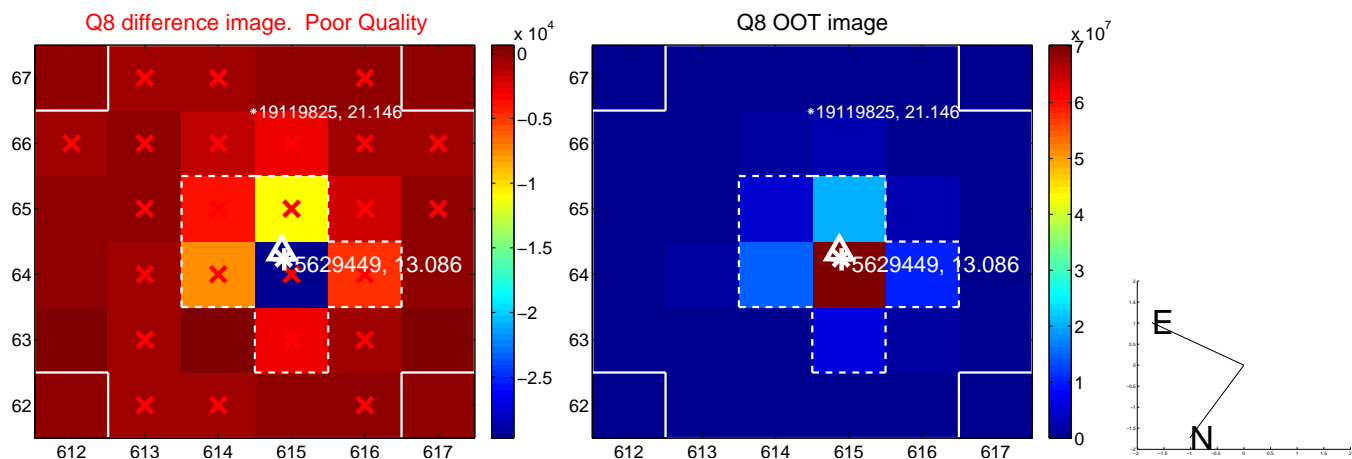
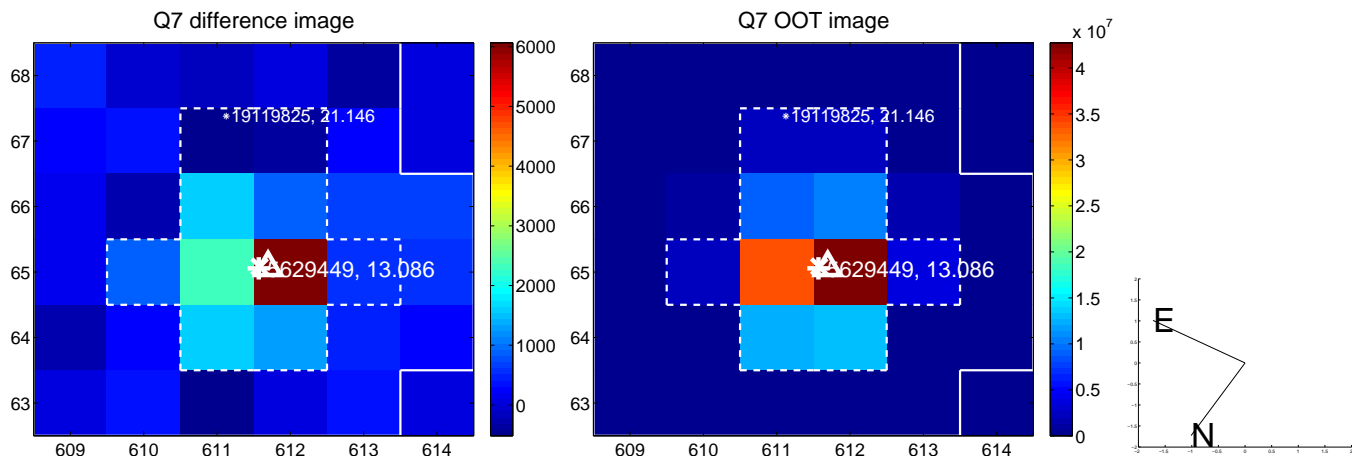
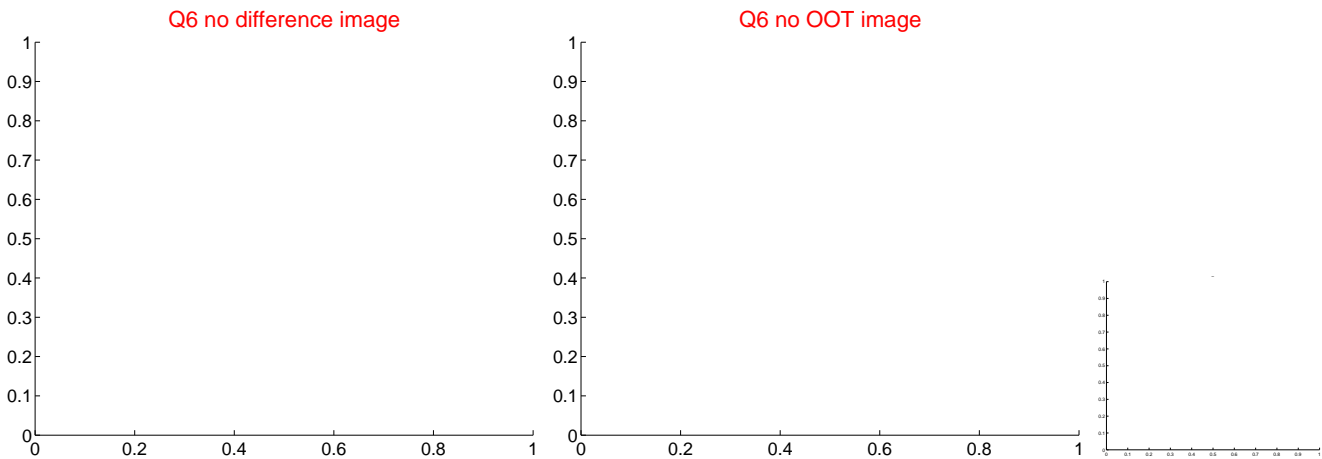
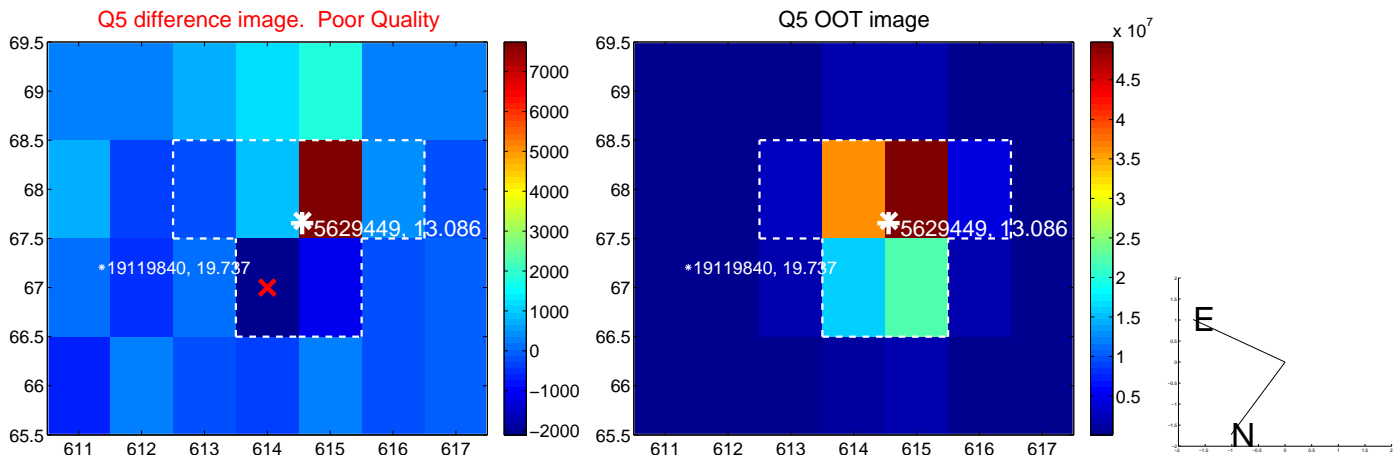


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

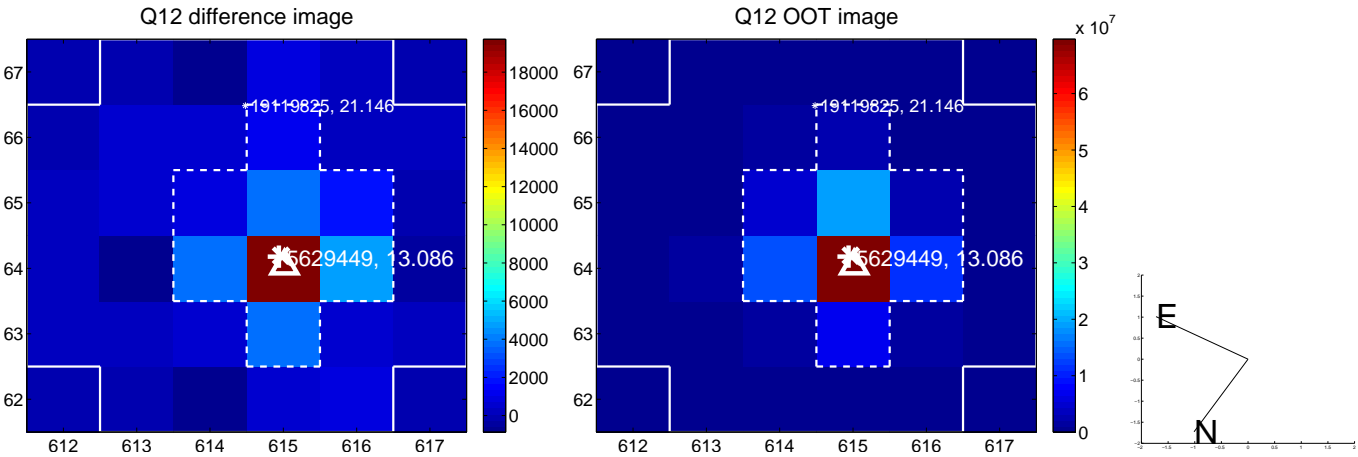
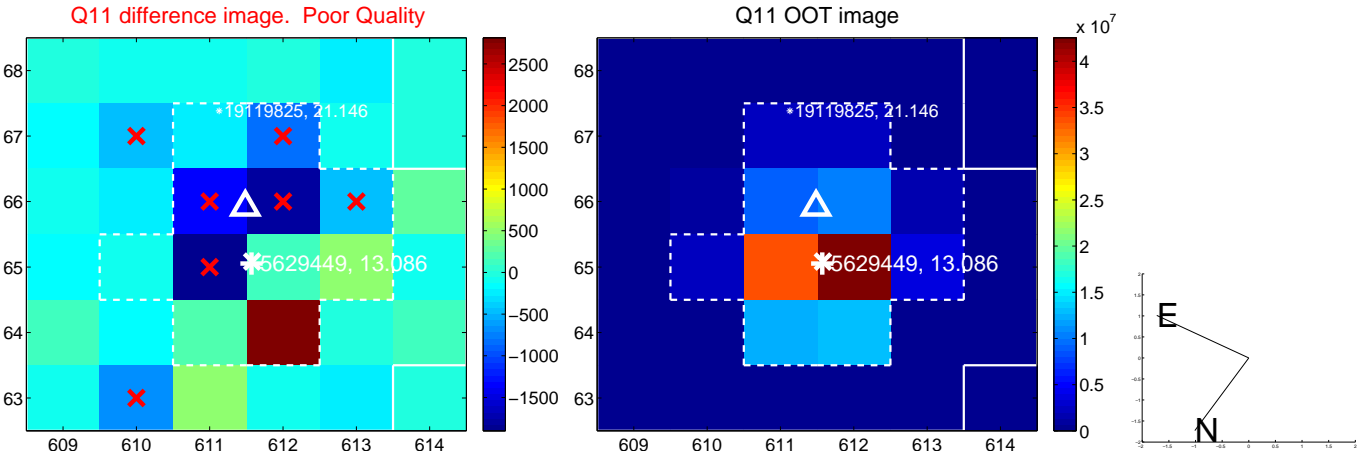
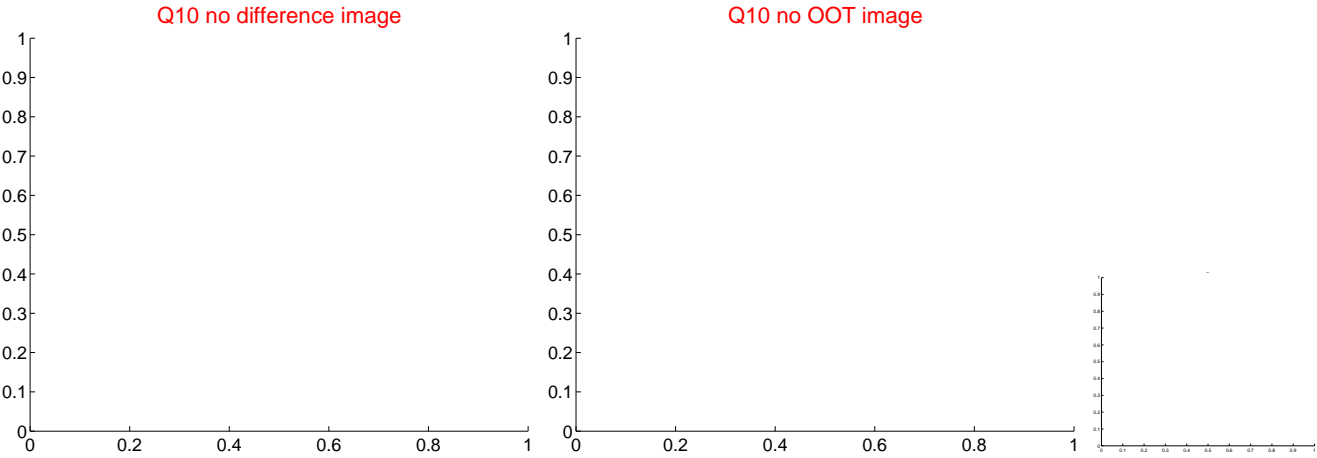
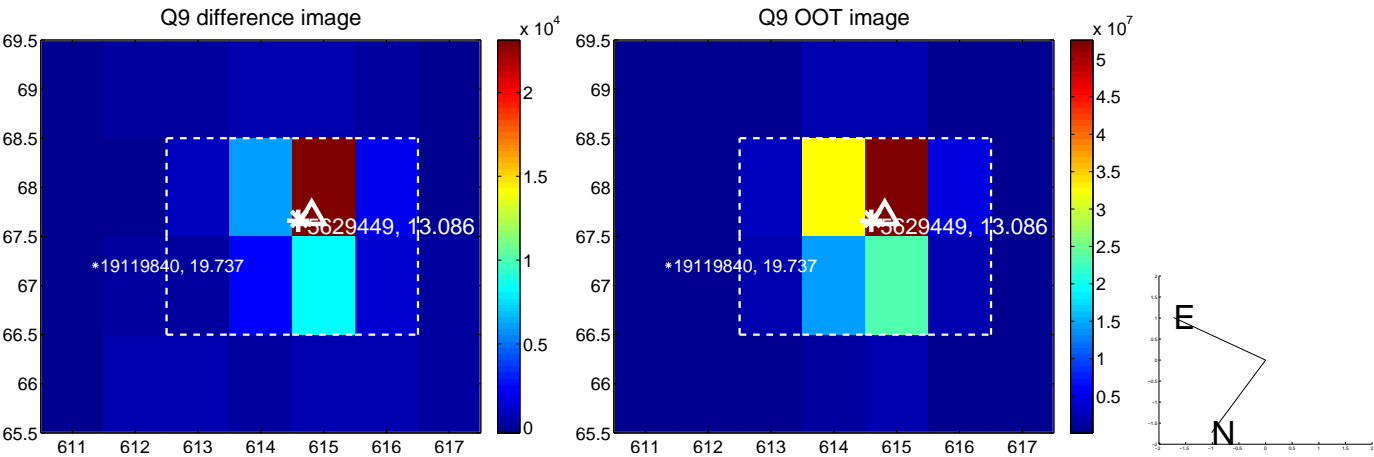
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



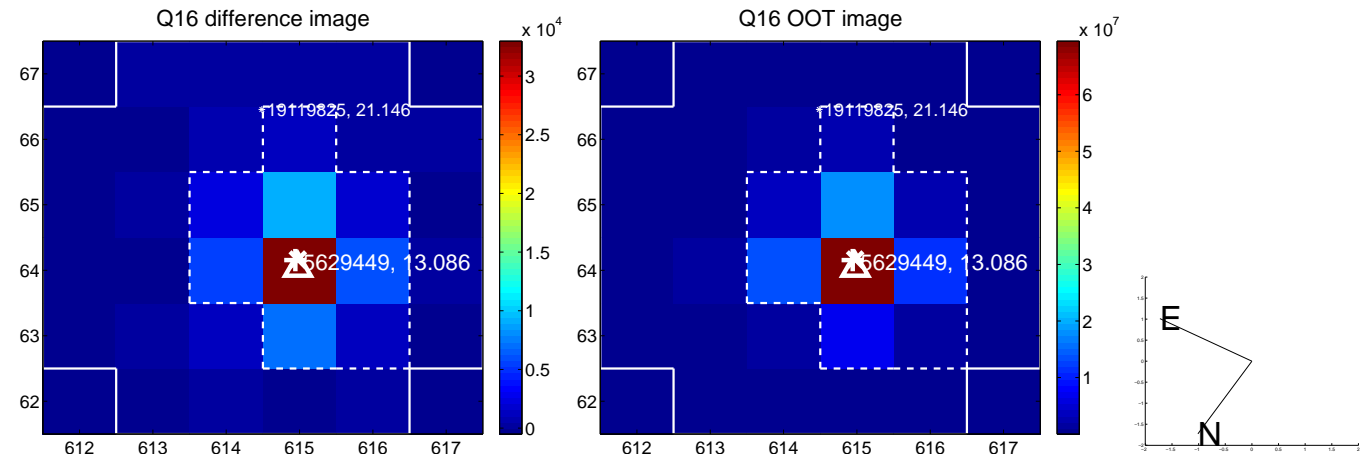
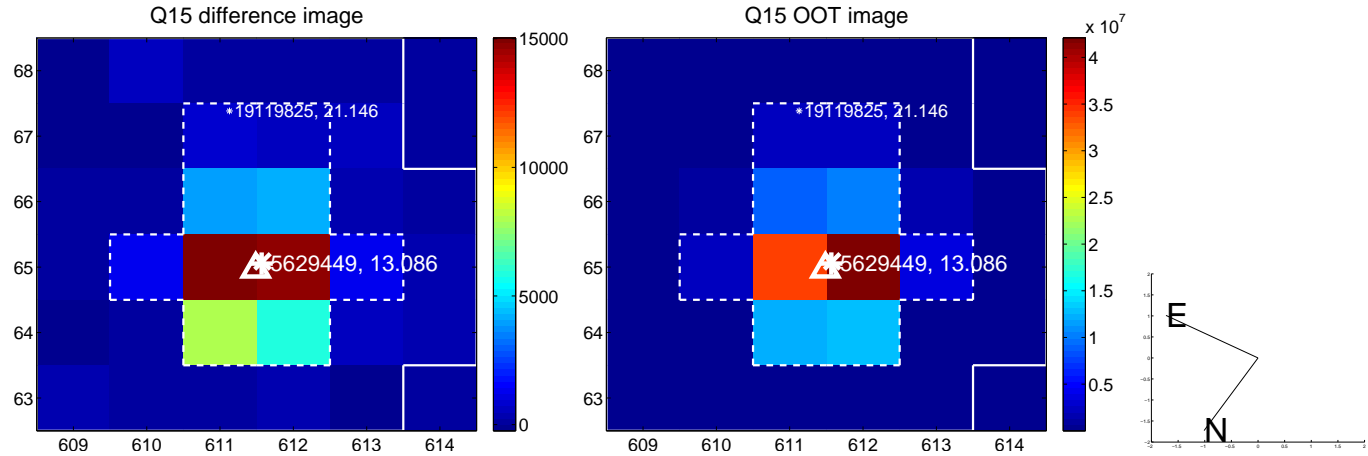
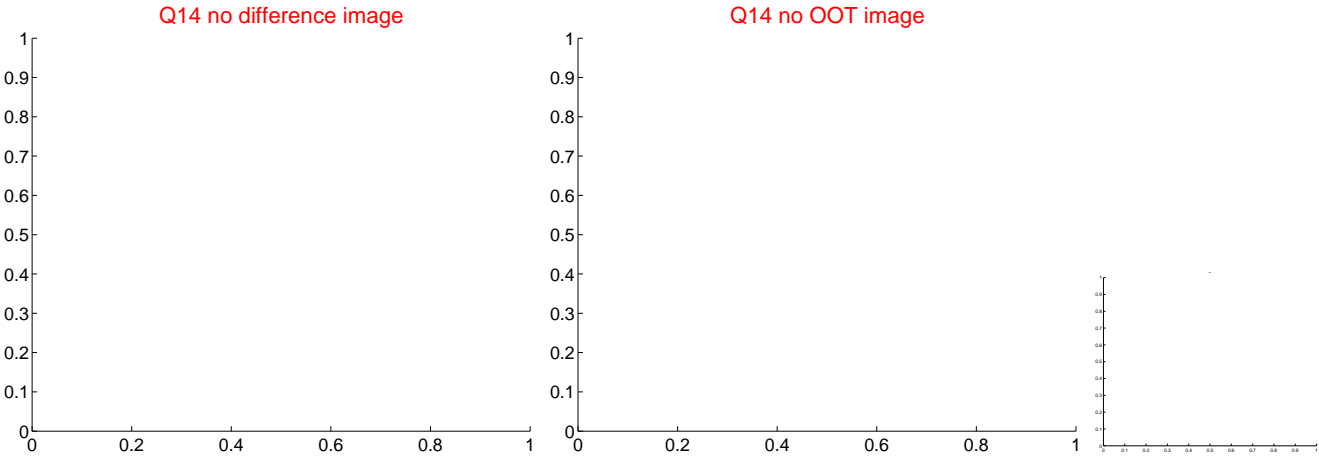
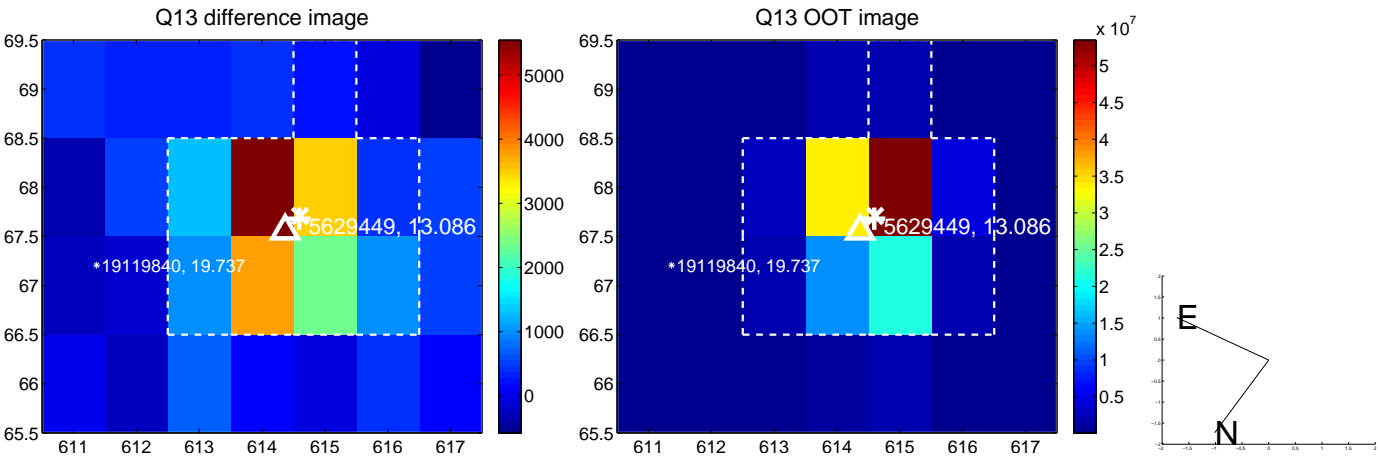
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



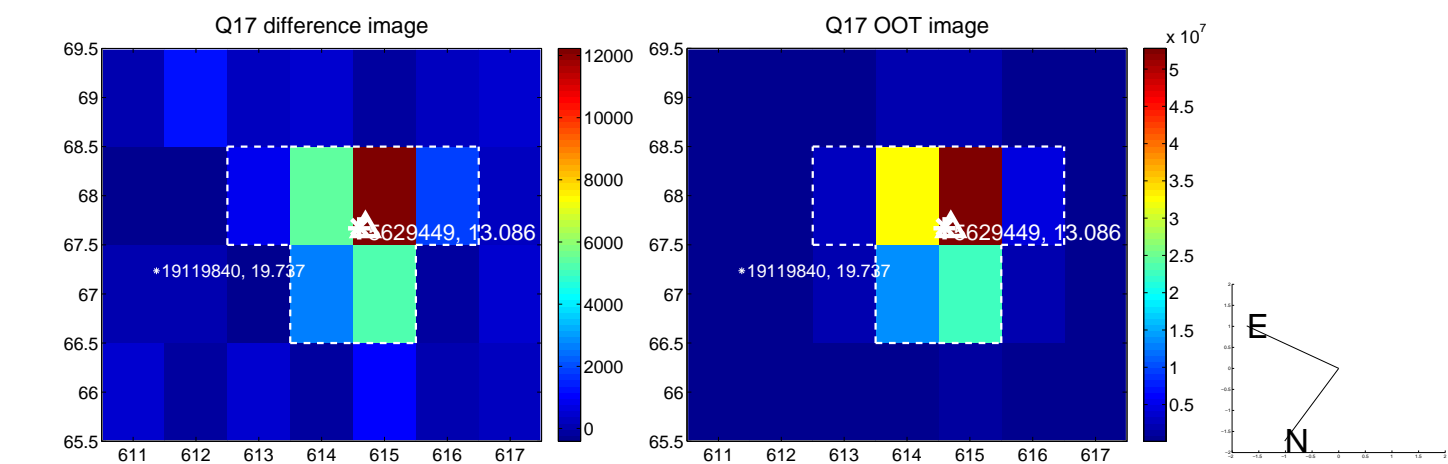
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



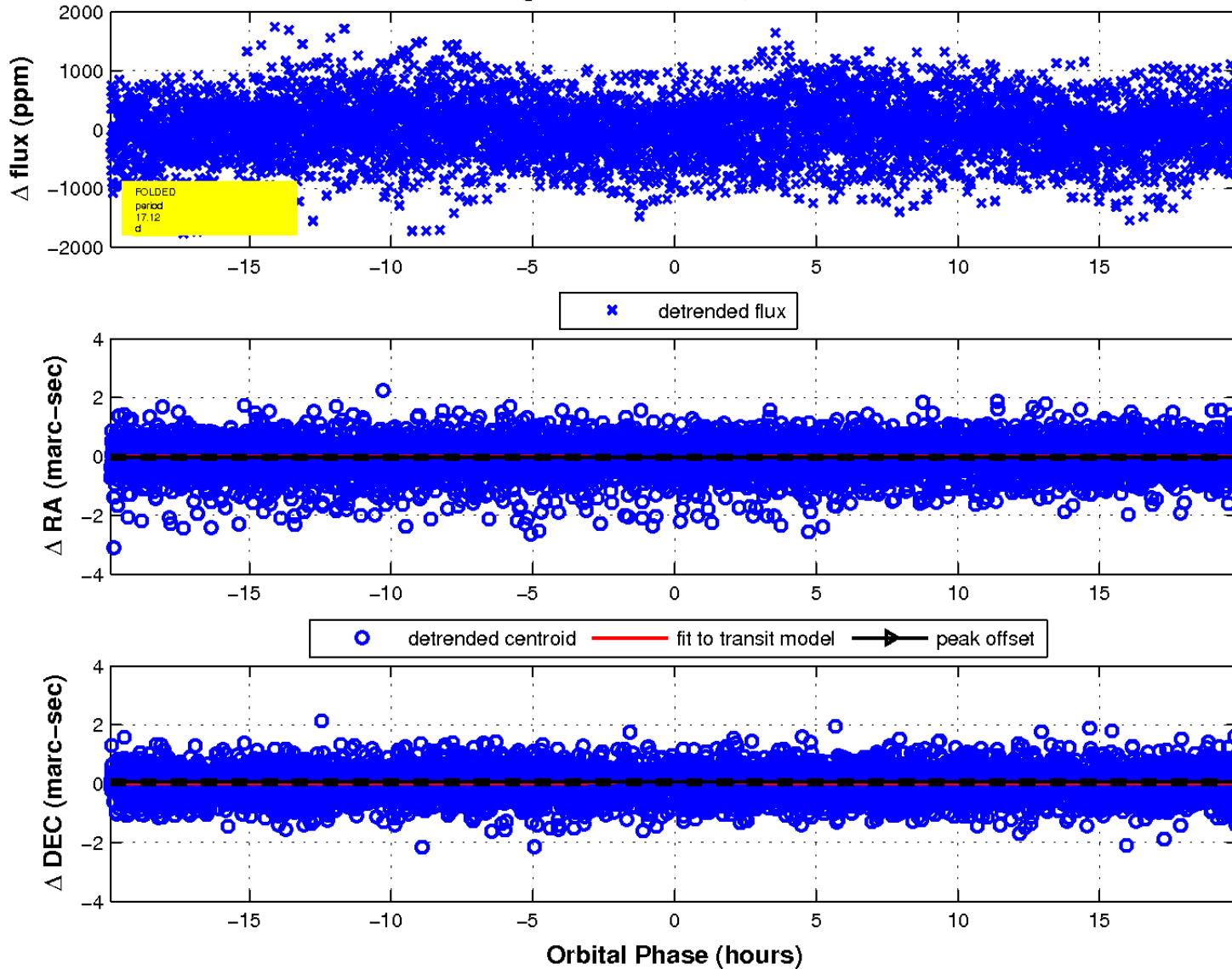
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



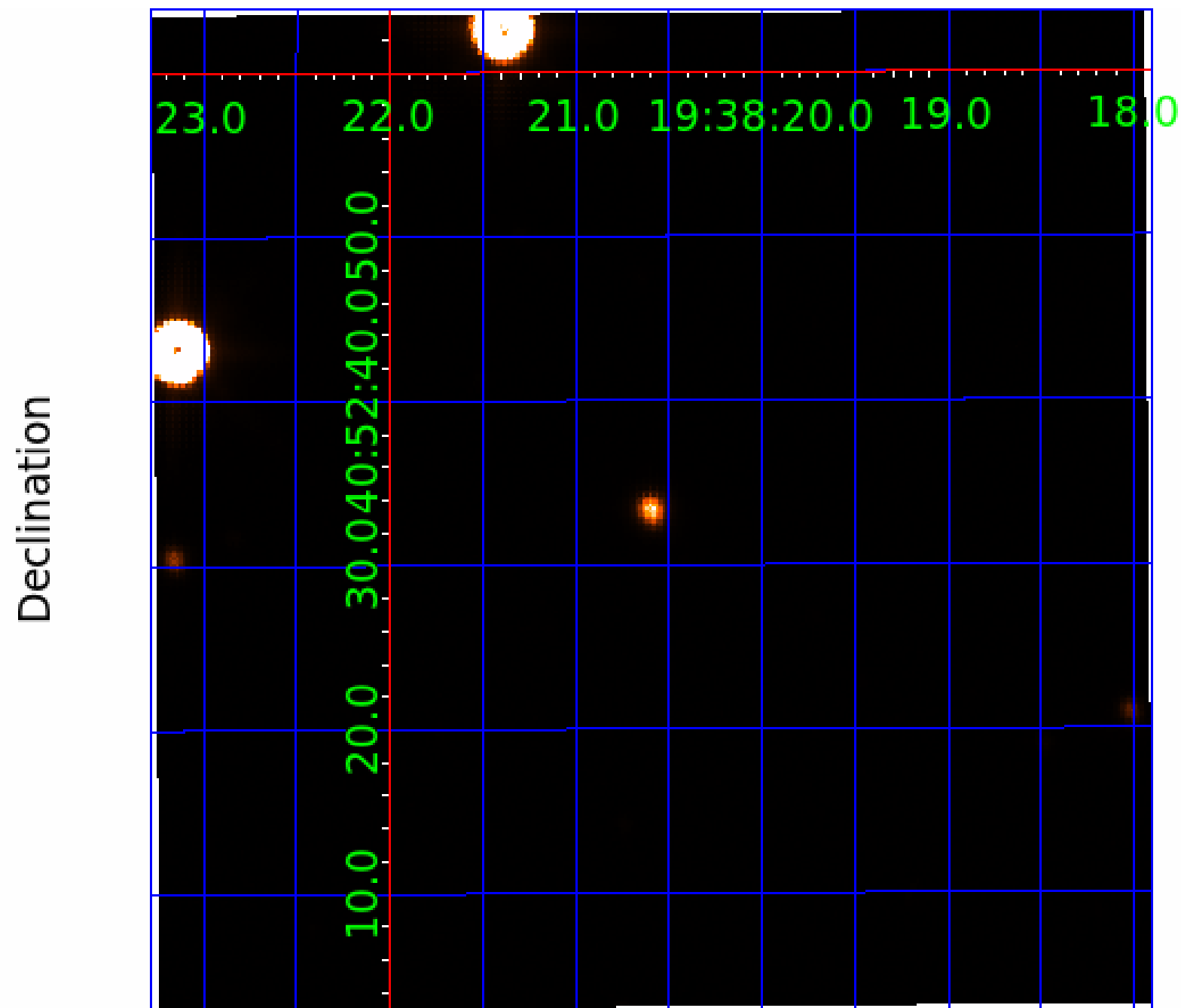
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 5 of 7



UKIRT Image



KIC 005629449

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})
005629449-01	OBS	No	0.709741	132.112175	30.4	5.027	8.1	5.8	13.40	6489	7.65	0.00
005629449-02	OBS	No	9.955690	140.825821	567.1	2.308	12.1	8.5	13.40	6489	33.40	15883.88
005629449-03	OBS	No	24.621583	154.019267	259.3	0.587	12.1	3.6	13.40	6489	23.51	4749.31
005629449-04	OBS	No	39.975838	169.867284	622.6	1.235	10.9	9.9	13.40	6489	36.58	2488.79
005629449-05	OBS	No	17.119042	142.235469	163.1	6.632	7.7	5.4	13.40	6489	19.95	7710.44
005629449-06	OBS	No	37.317356	146.537853	586.2	1.542	11.1	9.2	13.40	6489	36.09	2727.96

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005629449-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_ALT
005629449-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—MOD_NONUNIQ_ALT
005629449-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005629449-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005629449-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005629449-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV

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

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

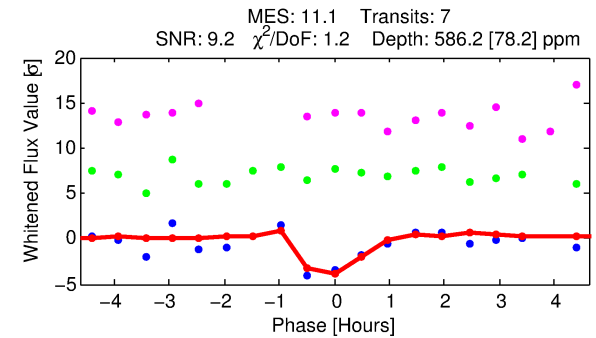
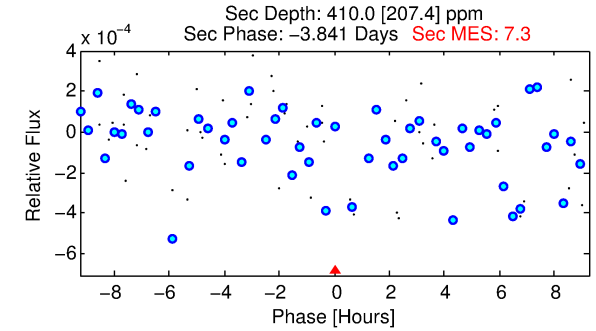
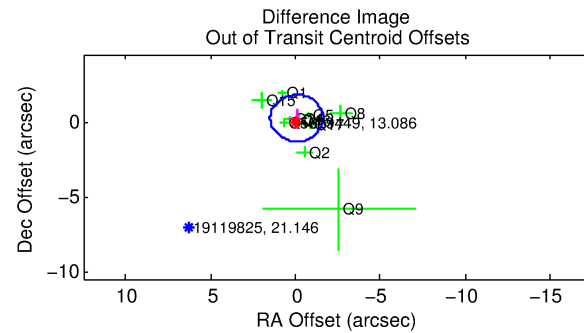
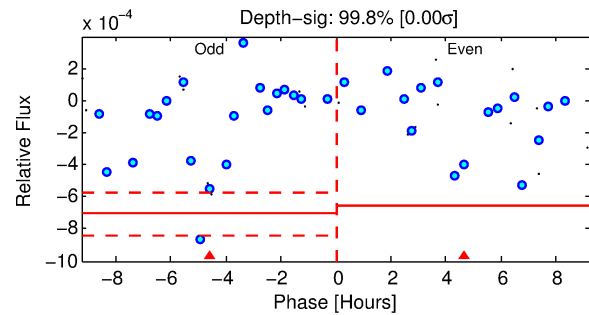
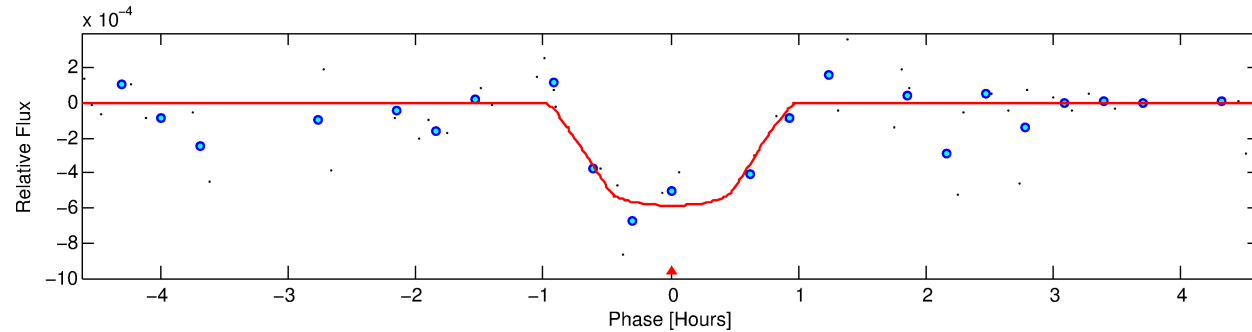
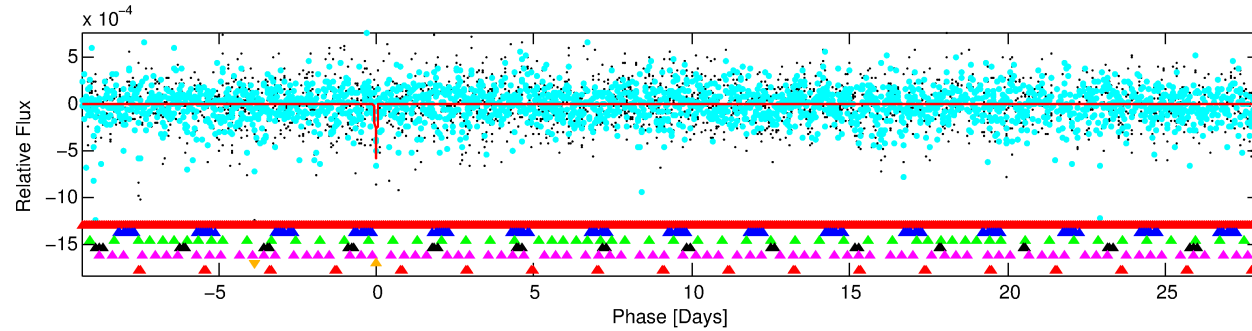
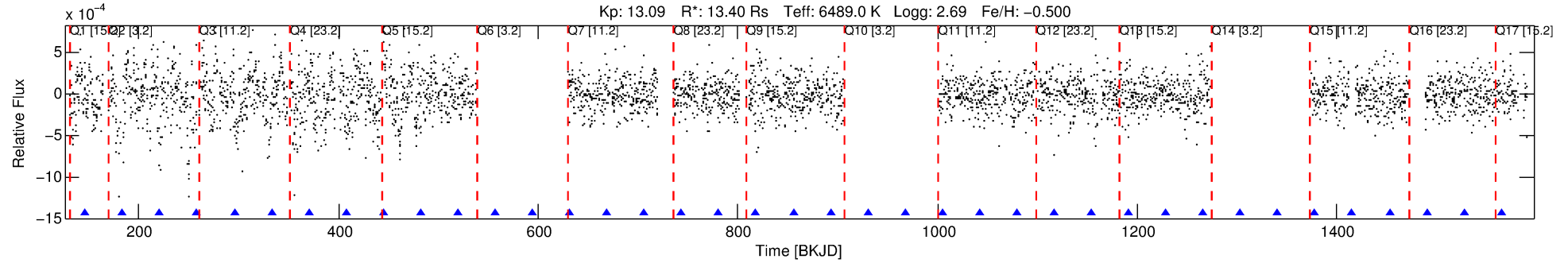
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005629449-06

No Significant Match Found

DV One-Page Summary

KIC: 5629449 Candidate: 6 of 7 Period: 37.317 d



DV Fit Results:

Period = 37.31736 [0.00022] d
Epoch = 146.5379 [0.0049] BKJD
Rp/R* = 0.0247 [0.0227]
a/R* = 116.15 [618.34]
b = 0.81 [2.27]
Seff = 2727.96 [2659.05]
Teq = 1843 [449] K
Rp = 36.09 [36.53] Re
a = 0.3234 [0.1083] AU
Ag = 18.11 [35.46] [0.48σ]
Teffp = 5878 [3072] K [1.30σ]

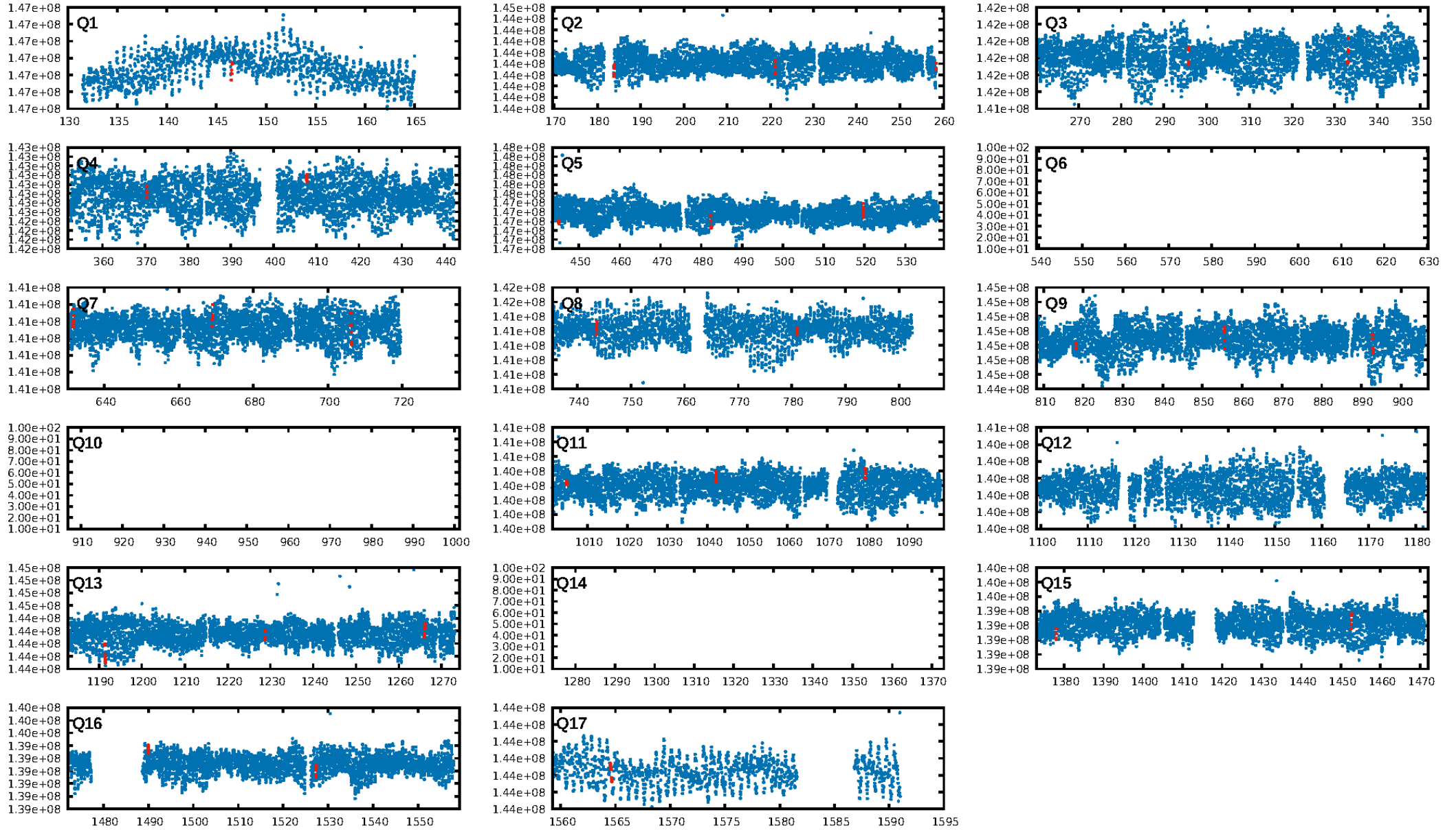
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [23.11σ]
LongPeriod-sig: 100.0% [32.30σ]
ModelChiSquare2-sig: 72.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: -0.2639
Centroid-sig: 72.0%
Centroid-so: 0.189 arcsec [0.62σ]
OotOffset-rm: 0.245 arcsec [0.47σ]
OotOffset-st: 1/2/3/5 [11]
KicOffset-rm: 0.338 arcsec [0.57σ]
KicOffset-st: 1/2/3/5 [11]
DiffImageQuality-fgm: 0.36 [4/11]
DiffImageOverlap-fno: 0.08 [1/13]

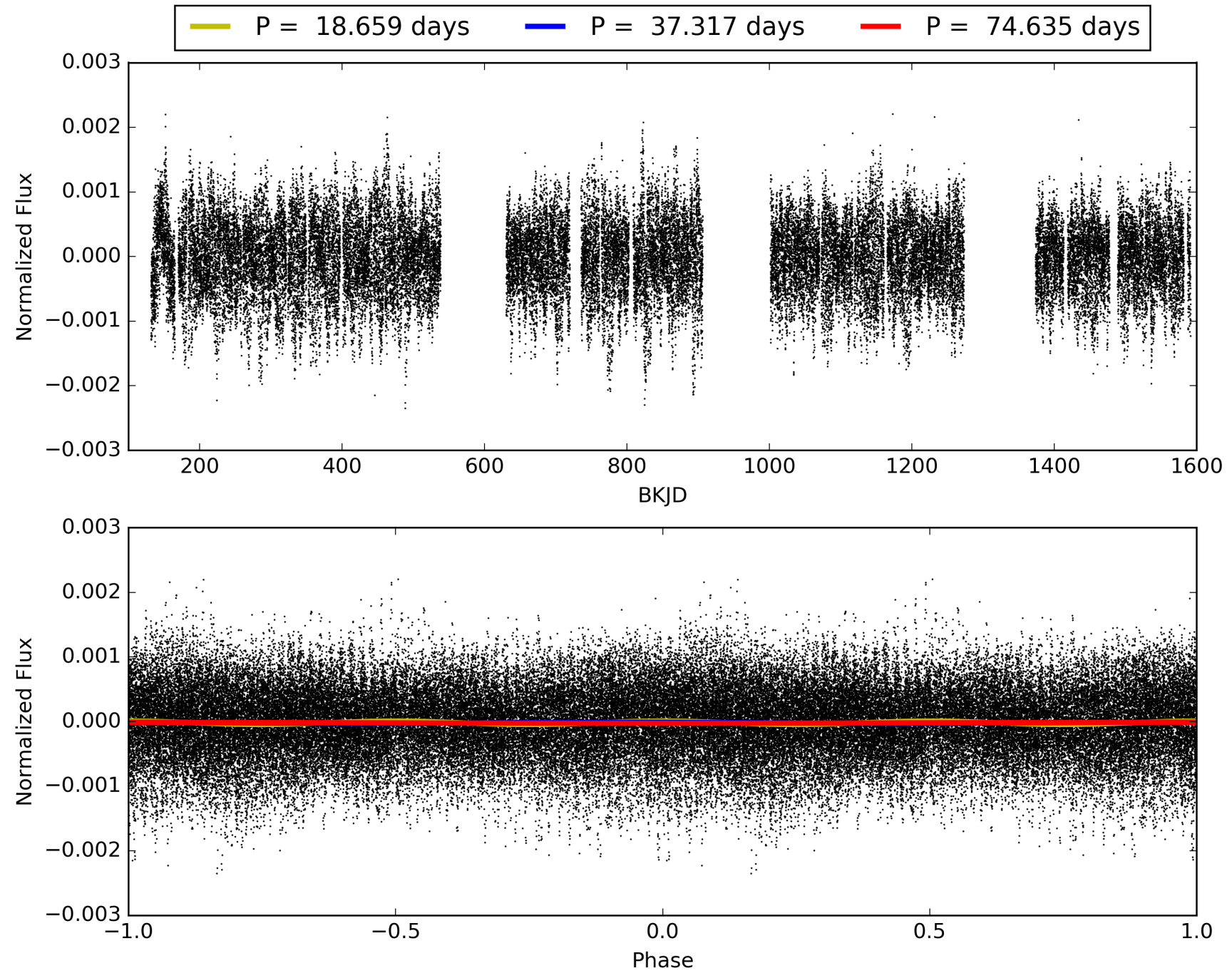
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:56:27 Z

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

TCE 005629449-06, PDC Light Curves

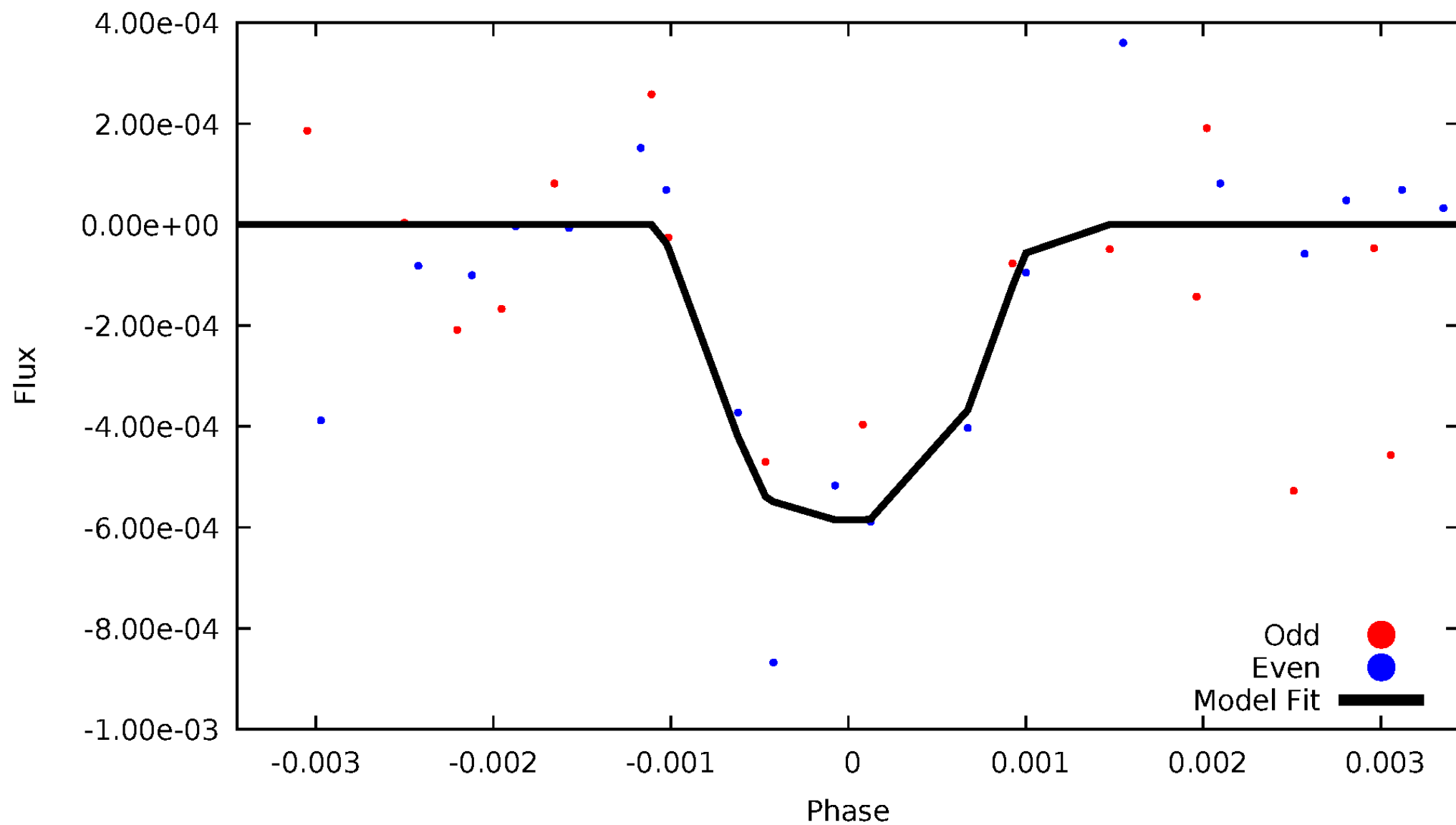


TCE 005629449-06



DV Odd/Even

TCE 005629449-06

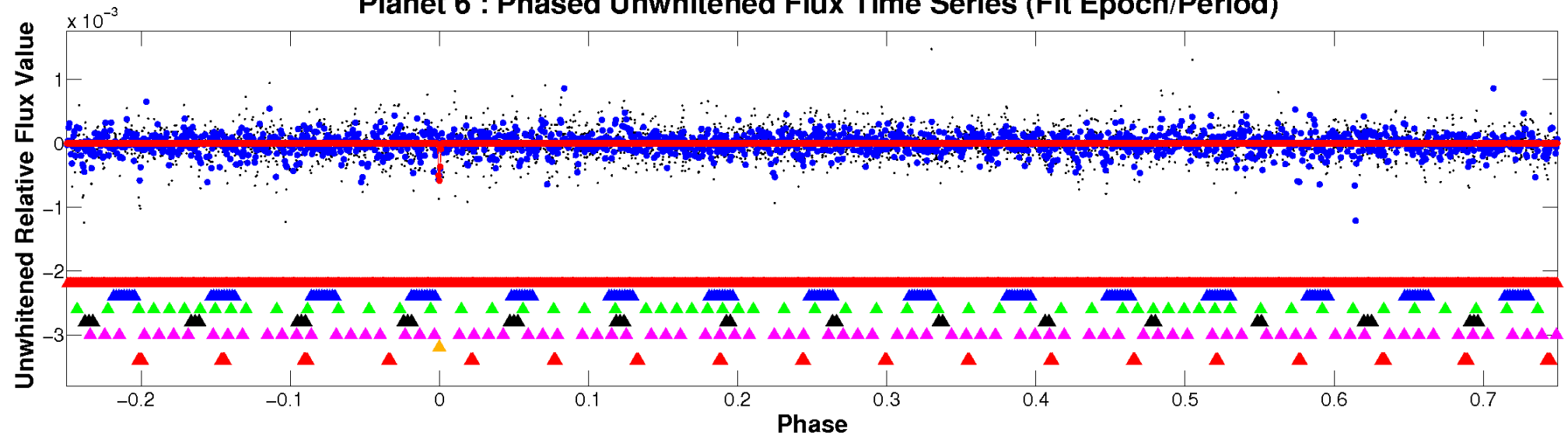


ALT Odd/Even

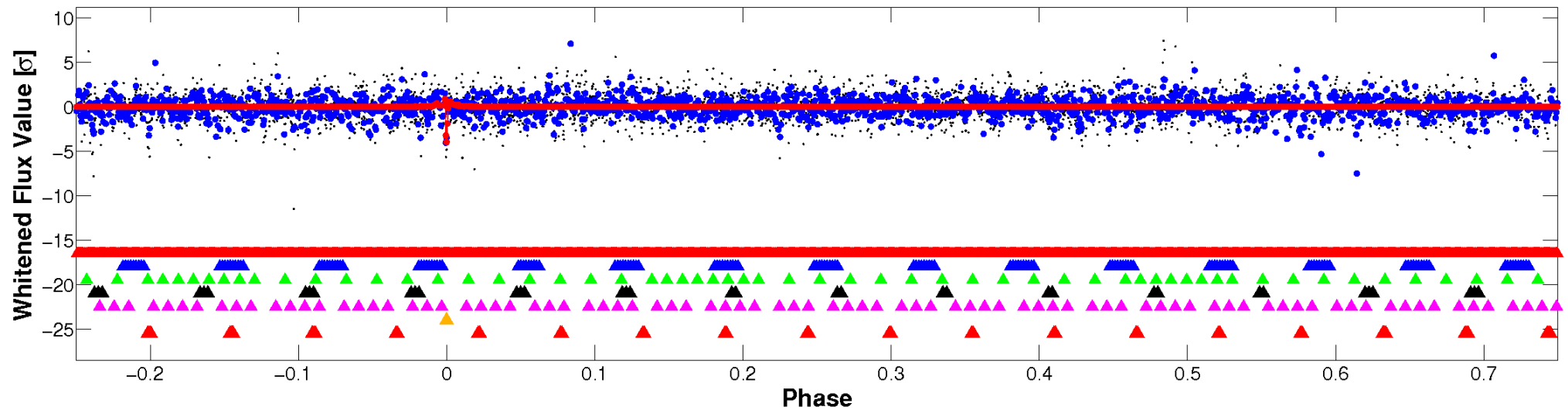
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

Planet 6 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

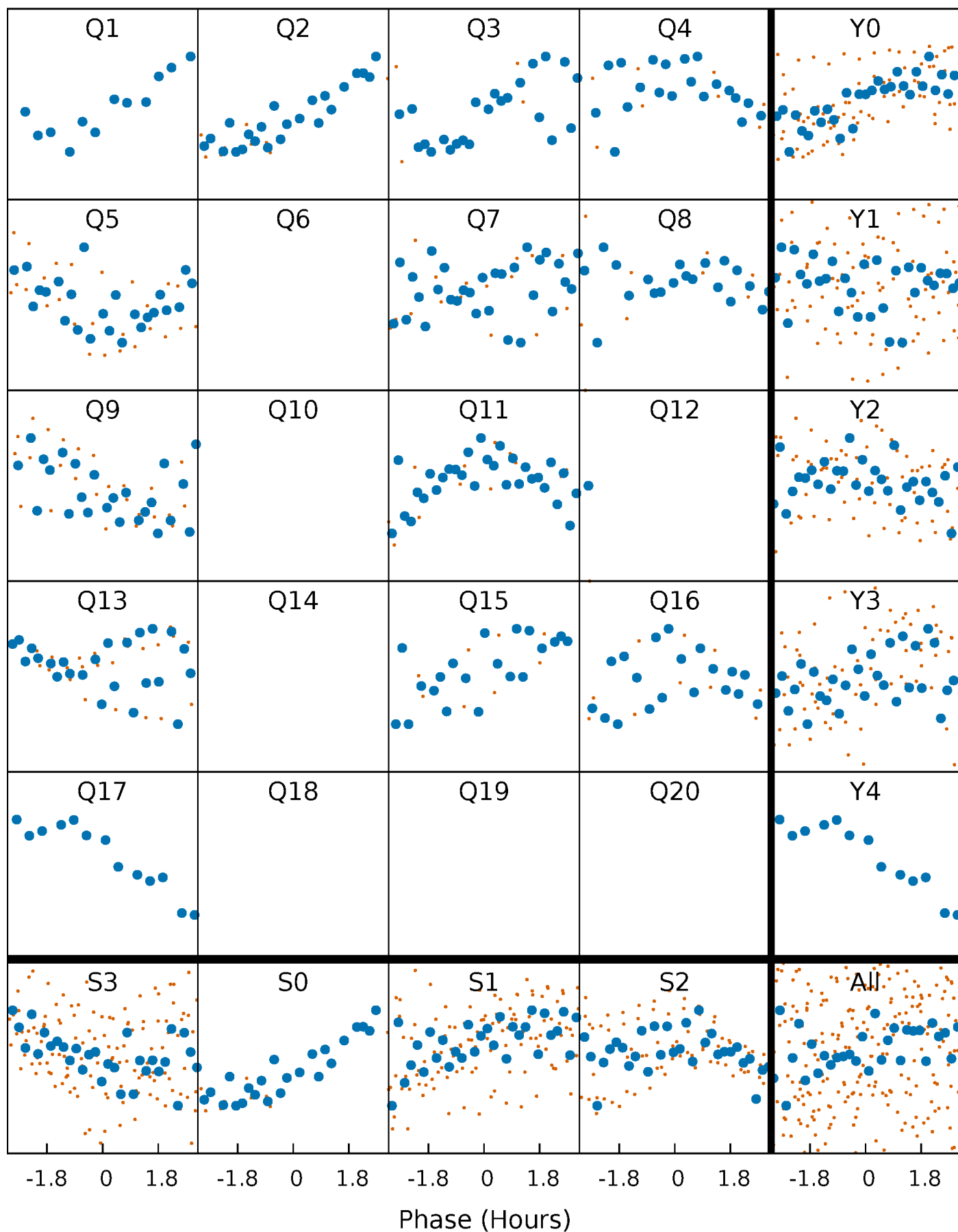


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



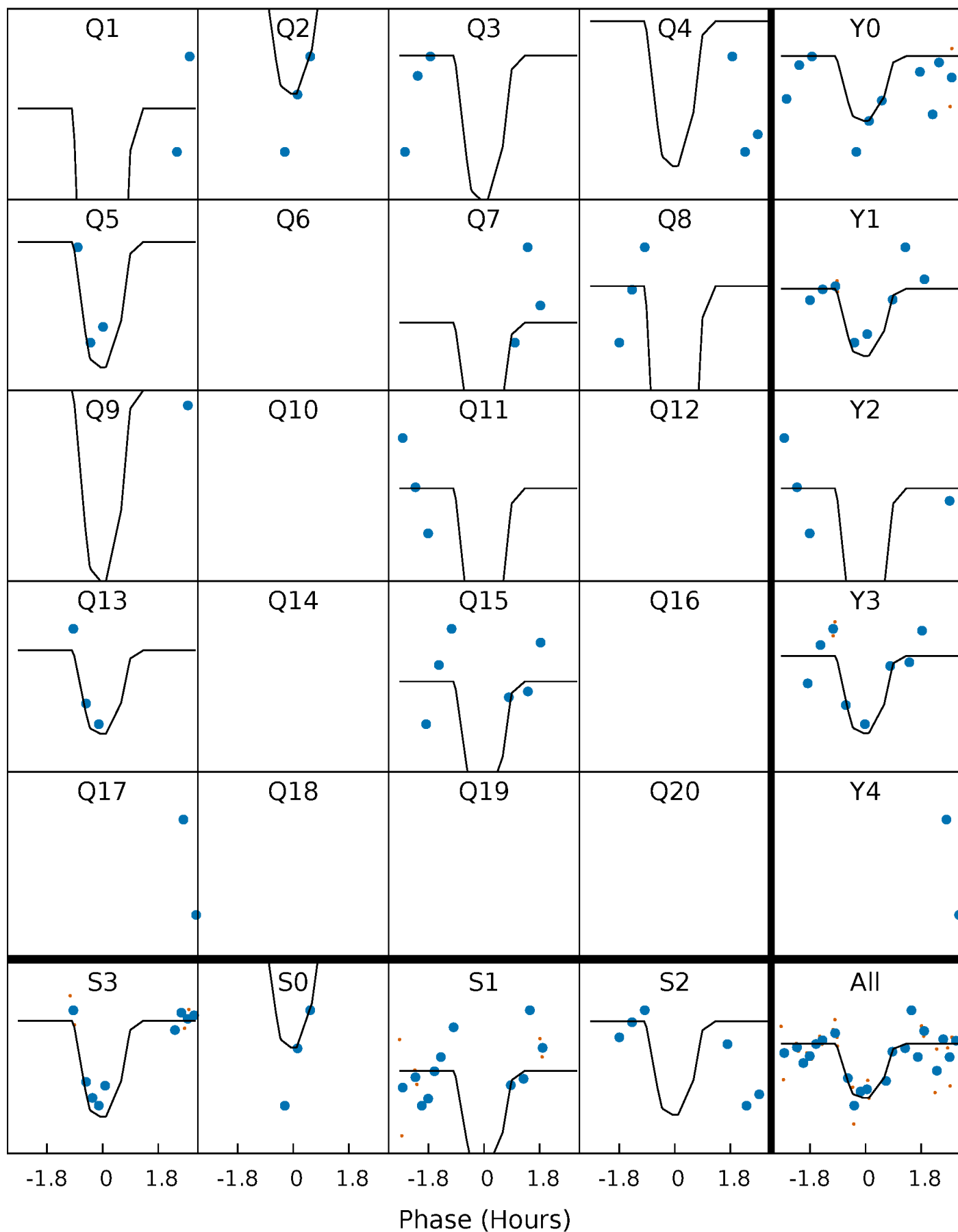
PDC Quarter-Phased Transit Curves

TCE 005629449-06 P= 37.317356 Days $T_0=146.537853$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 005629449-06 P= 37.317356 Days $T_0=146.537853$ (BKJD)

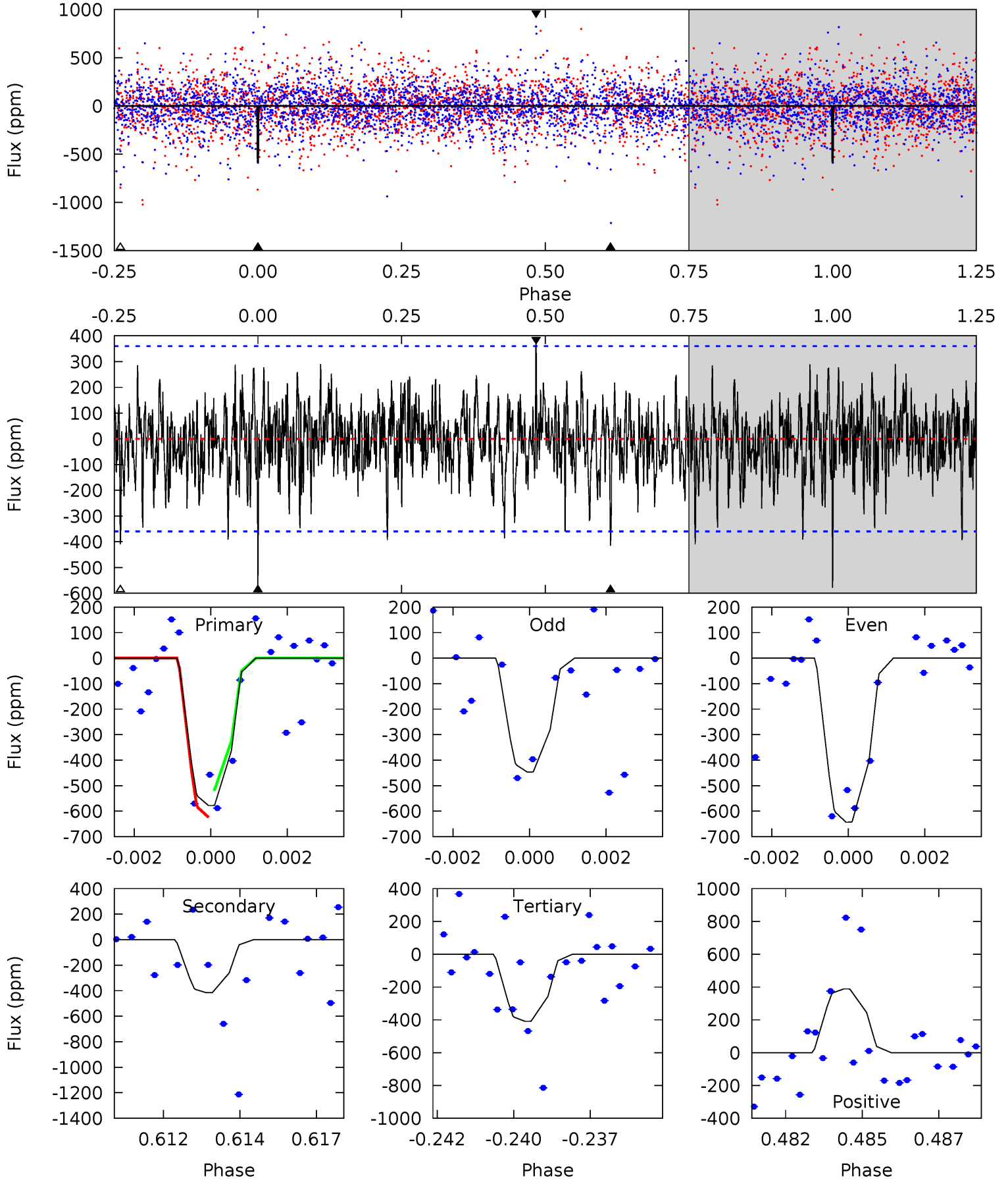


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

005629449-06, P = 37.317356 Days, E = 109.220497 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.49	6.10	6.01	5.71	5.29	3.02	1.57	2.48	2.78	0.10	0.40	1.41	1.09	0.40	0.79



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 005629449

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	6489^{+645}_{-1399}	$2.694^{+0.189}_{-0.231}$	$-0.500^{+0.200}_{-0.450}$	$13.402^{+3.514}_{-5.710}$	$3.239^{+0.107}_{-2.025}$	$0.002^{+0.003}_{-0.001}$
	+10%/-22%	+7%/-9%	+40%/-90%	+26%/-43%	+3%/-63%	+142%/-52%
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 005629449-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-416 ± 68	$41.09^{+33.96}_{-27.33}$	2575^{+368}_{-520}	5258^{+4614}_{-1269}	13^{+106}_{-9}
Alt.	N/A	N/A	N/A	N/A	N/A

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 $A_{obs} \gg 1.0$

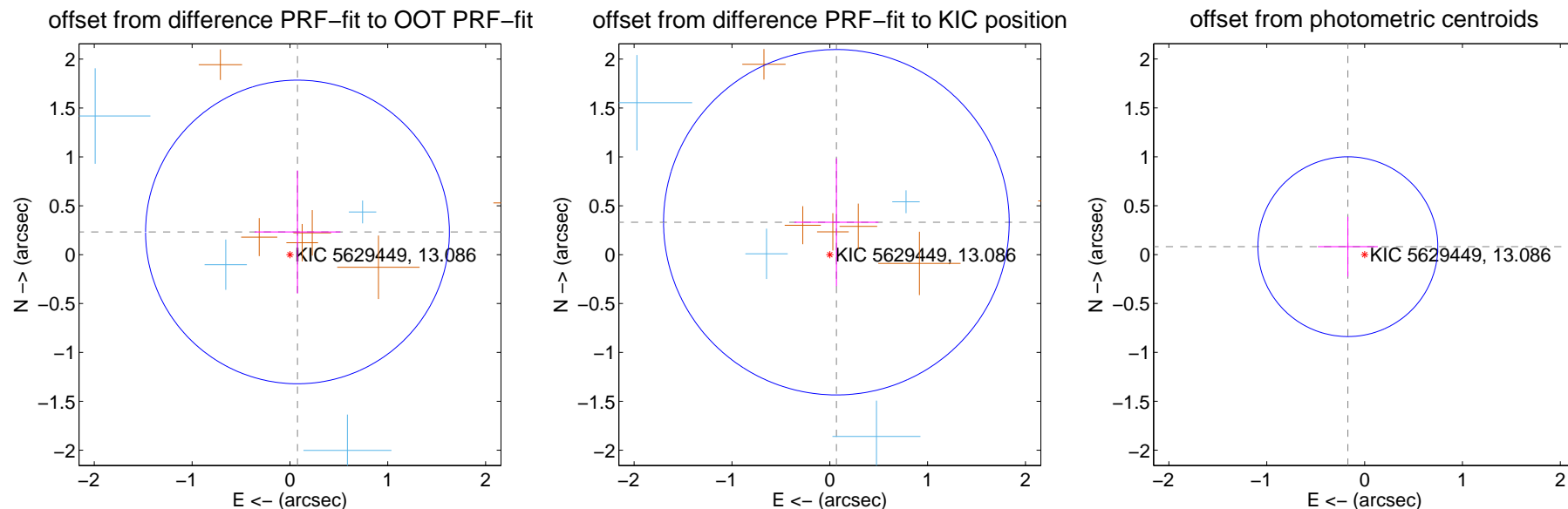
DV Centroid Data

Supplemental centroid analysis for 005629449-06. Kepler magnitude: 13.09. Transit SNR 9.15

There are 4 quarters with good PRF difference image offsets

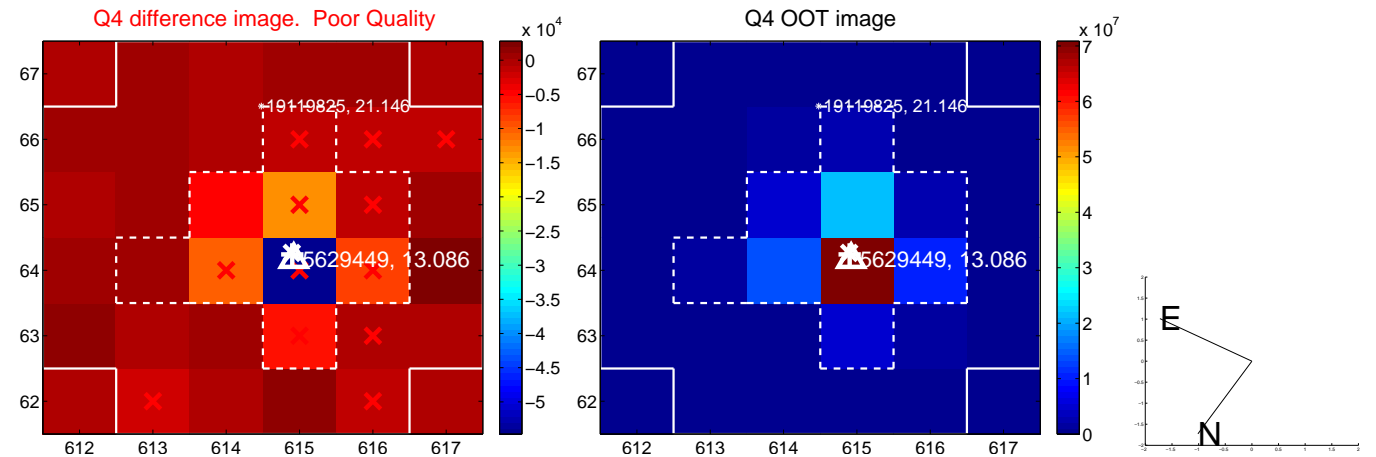
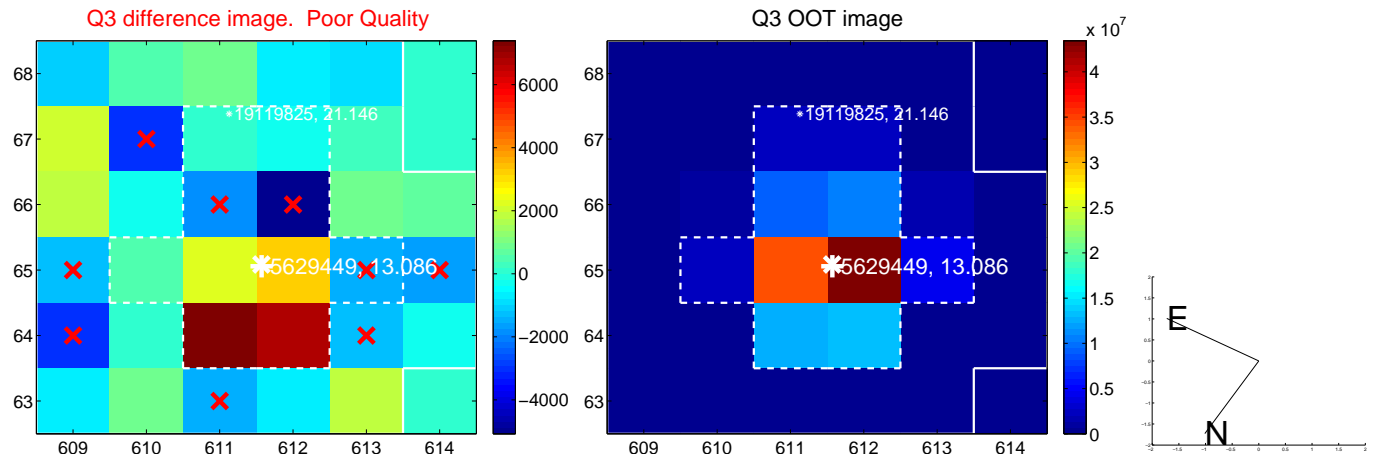
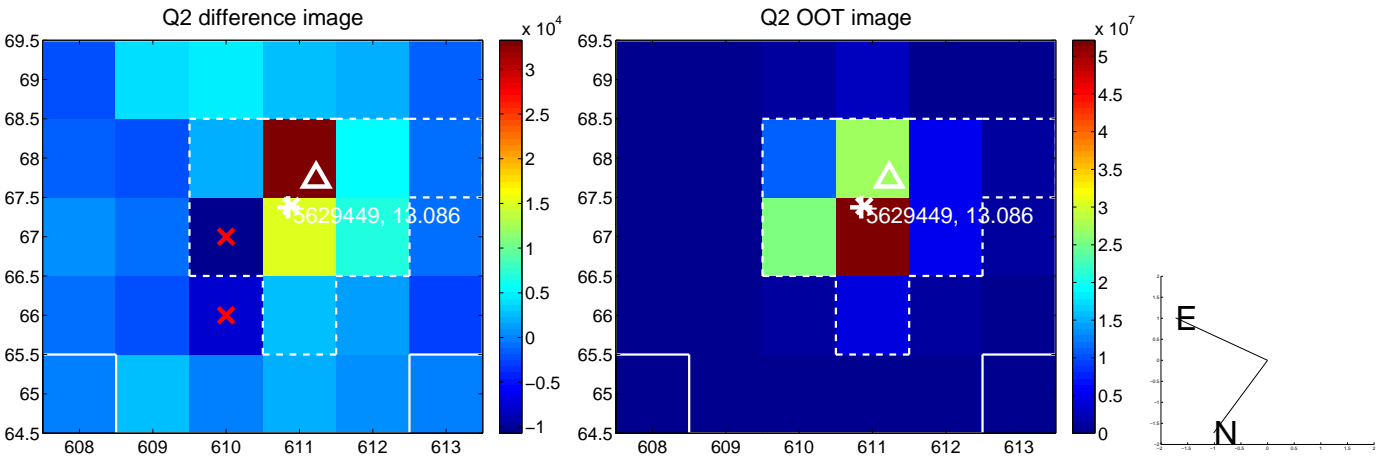
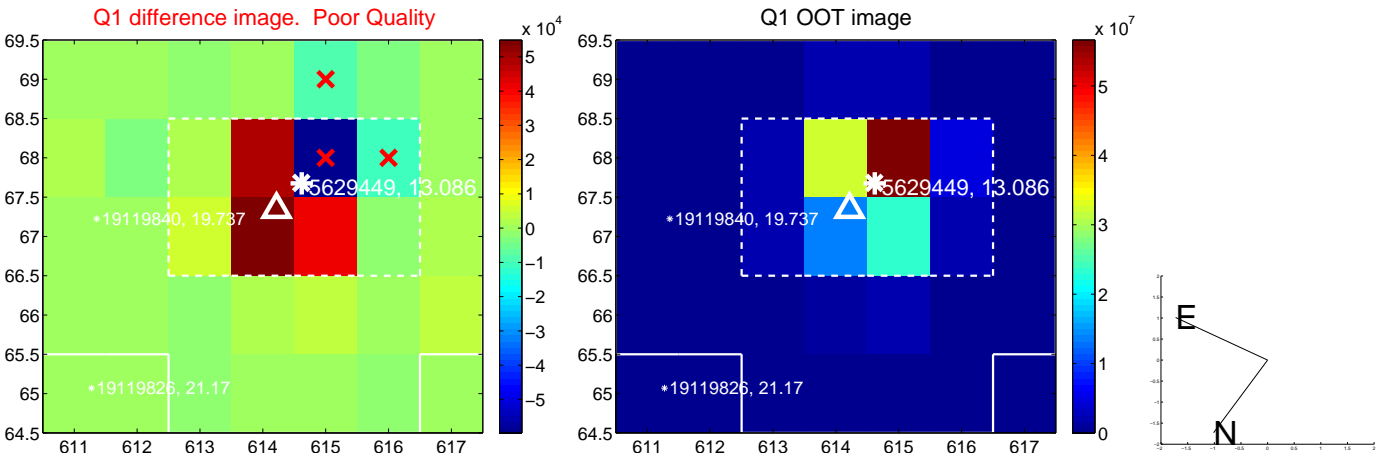
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.245 ± 0.518	0.47	-0.077 ± 0.439	0.232 ± 0.629
PRF-fit source offset from KIC position	0.338 ± 0.589	0.57	-0.067 ± 0.430	0.332 ± 0.653
photometric centroid source offset	0.19 ± 0.31	0.62	0.17 ± 0.31	0.08 ± 0.31

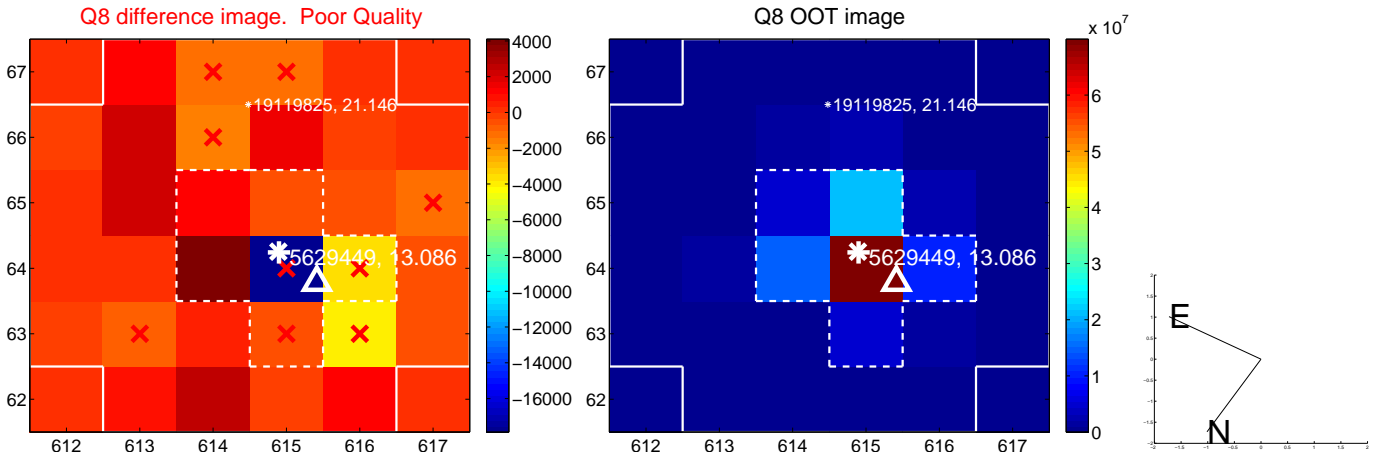
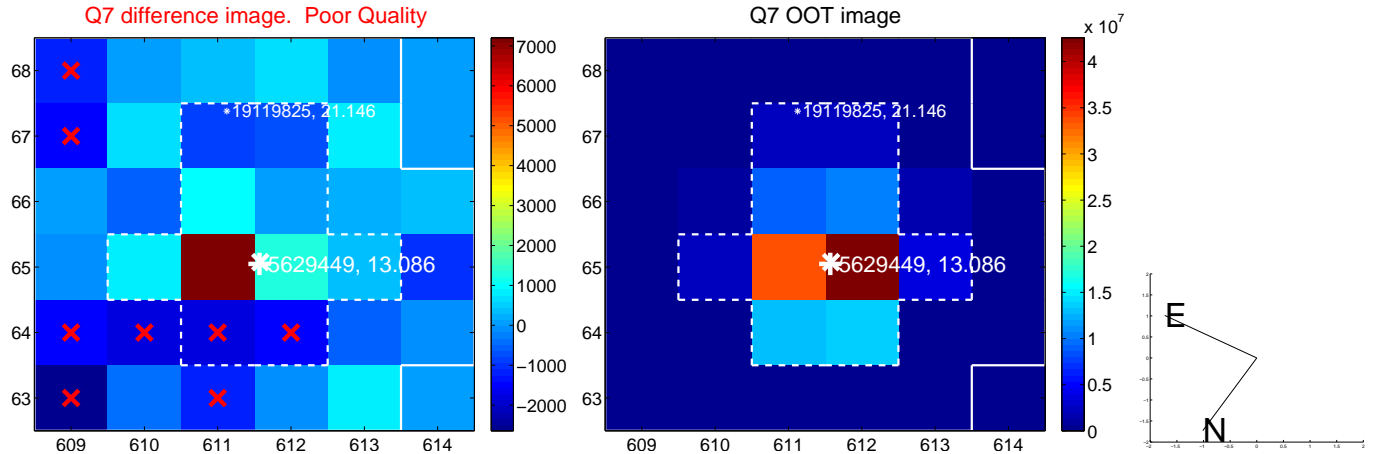
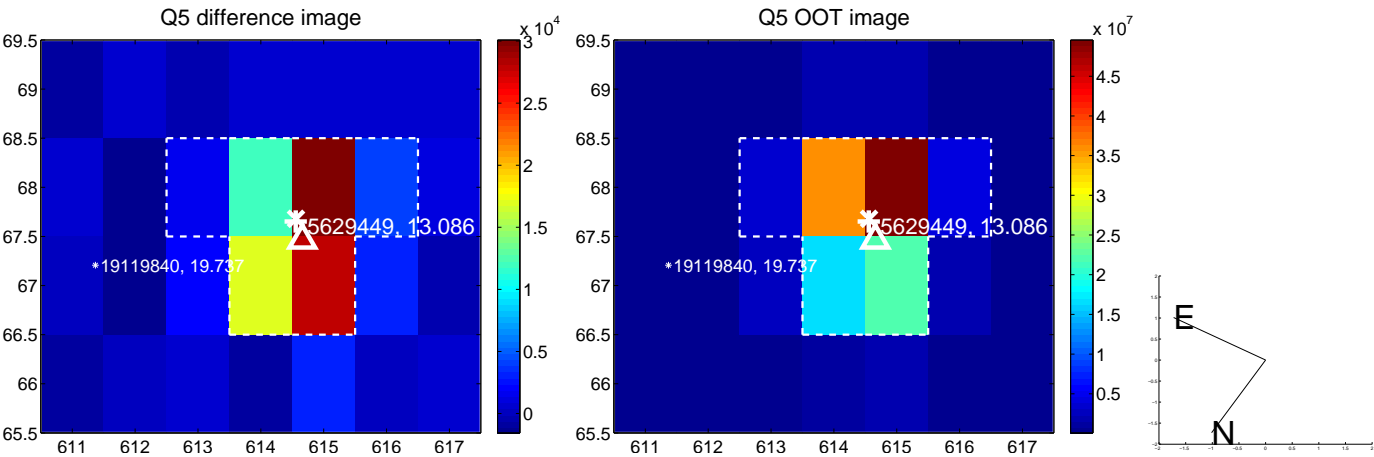


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

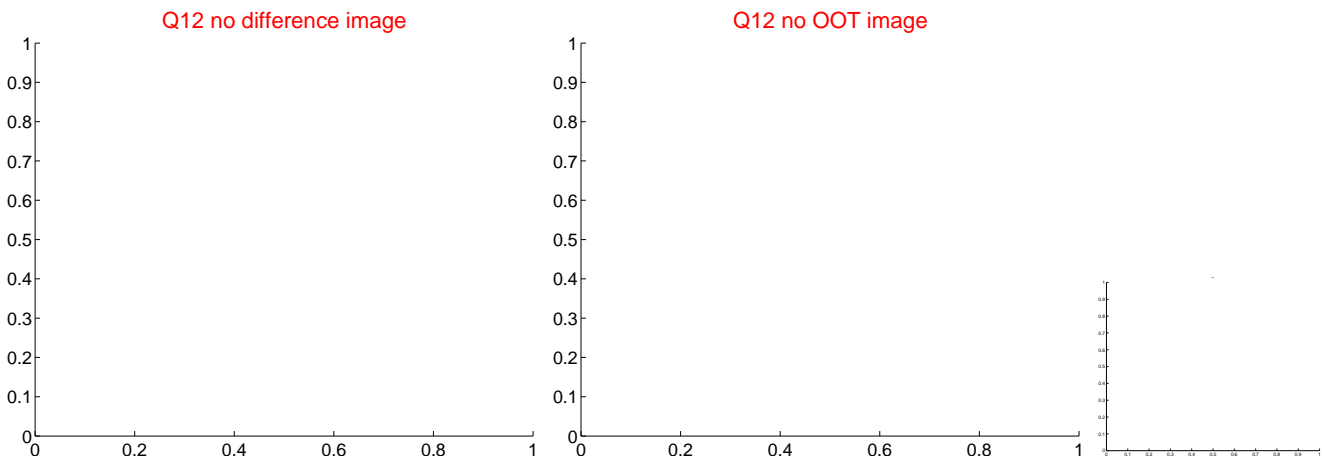
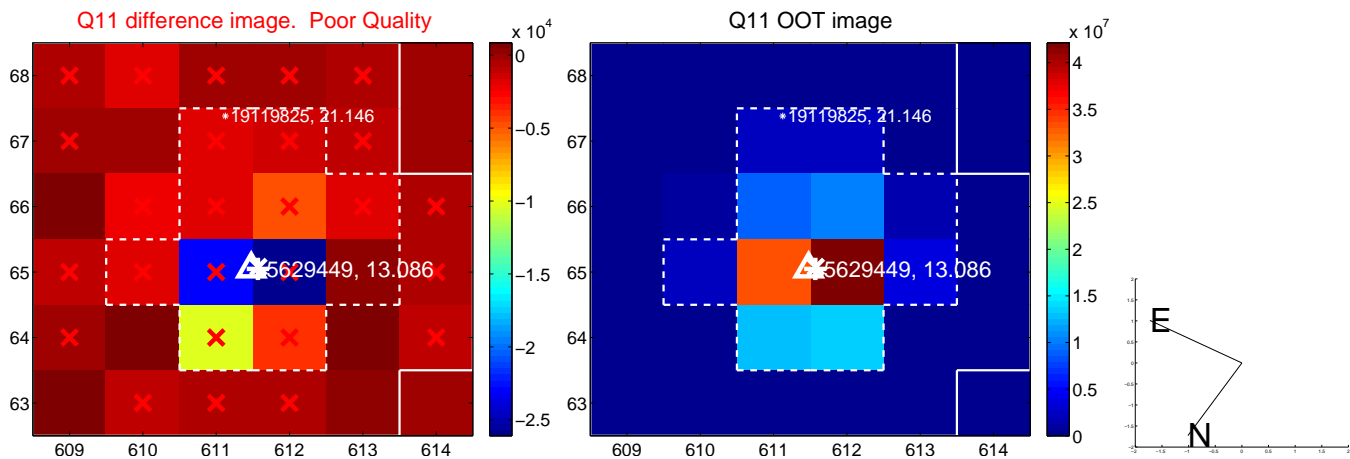
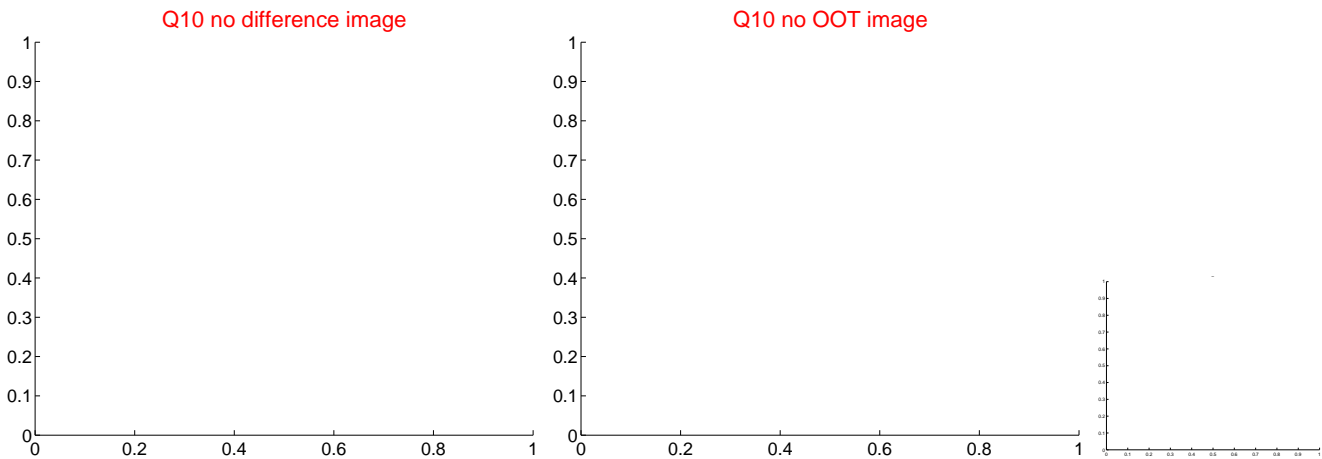
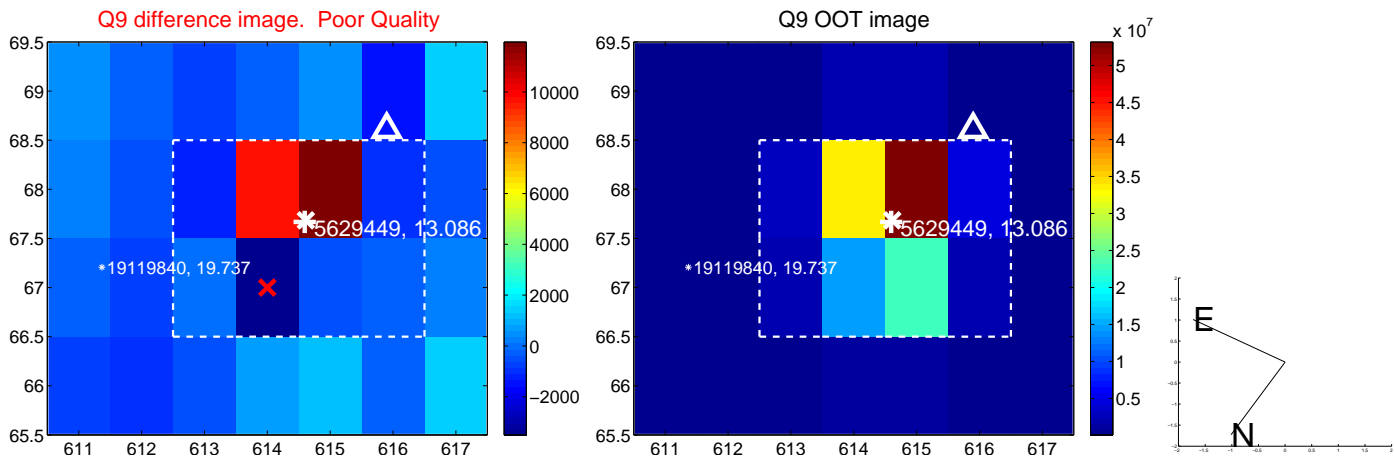
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



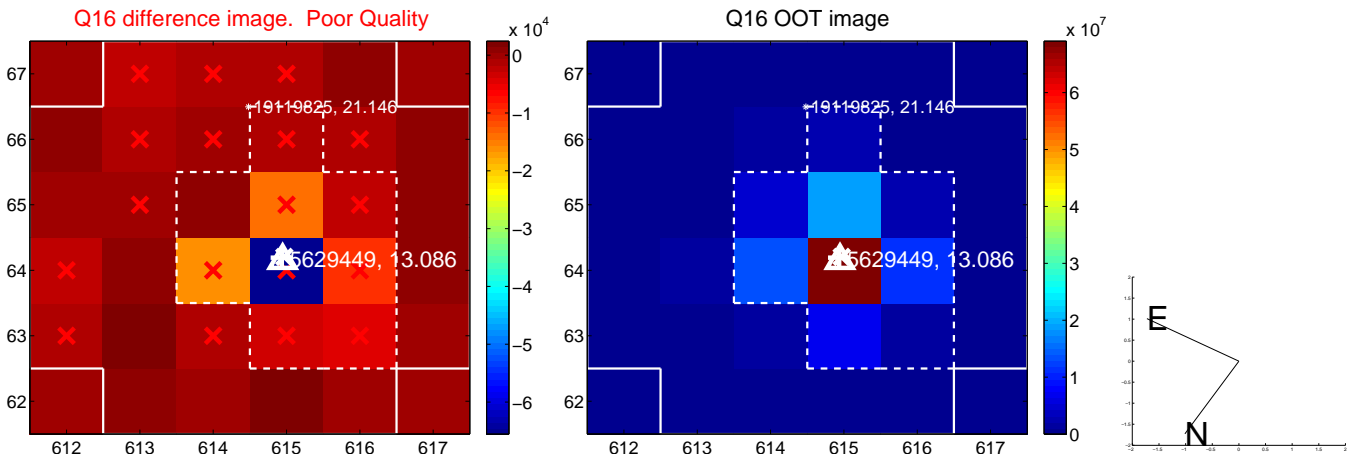
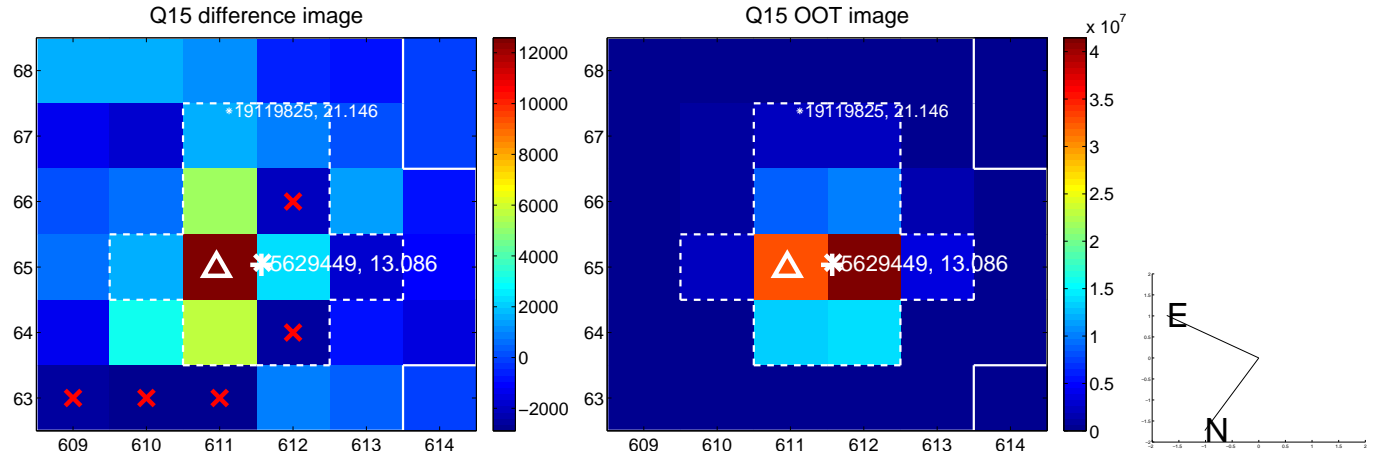
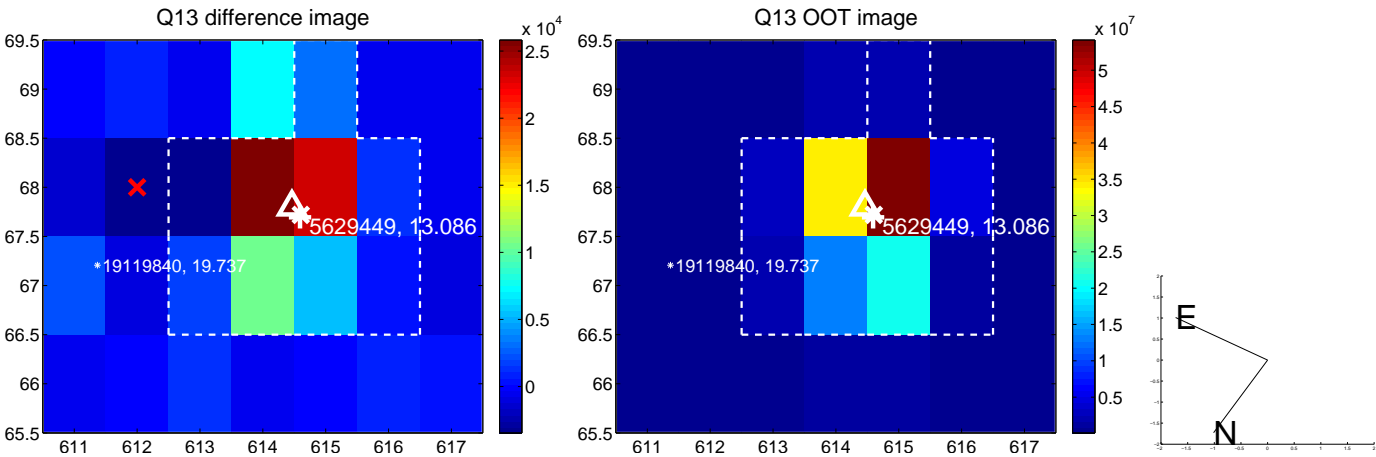
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



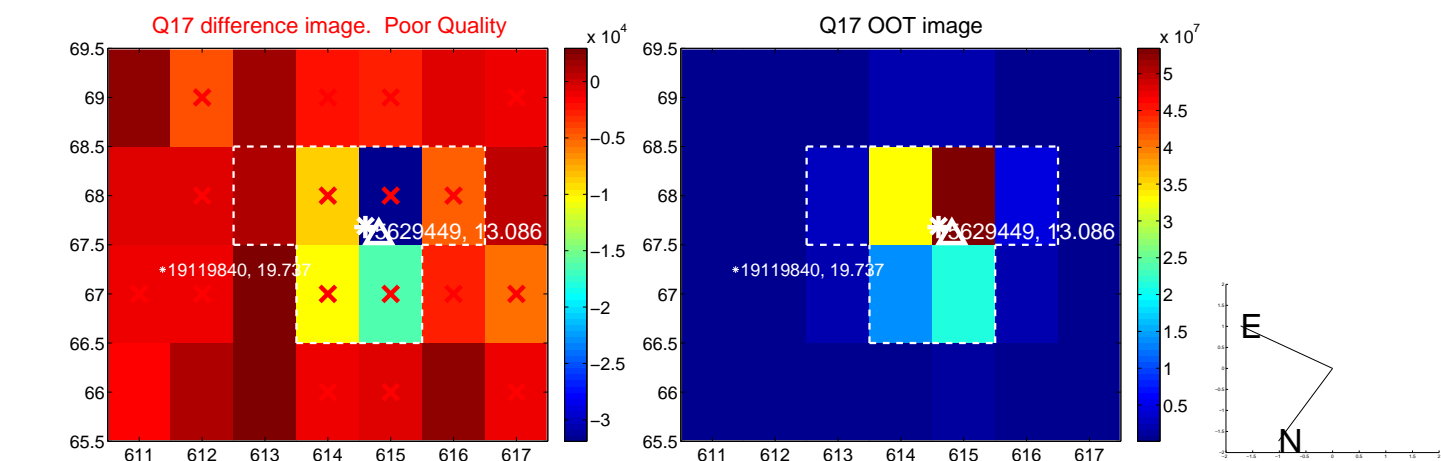
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



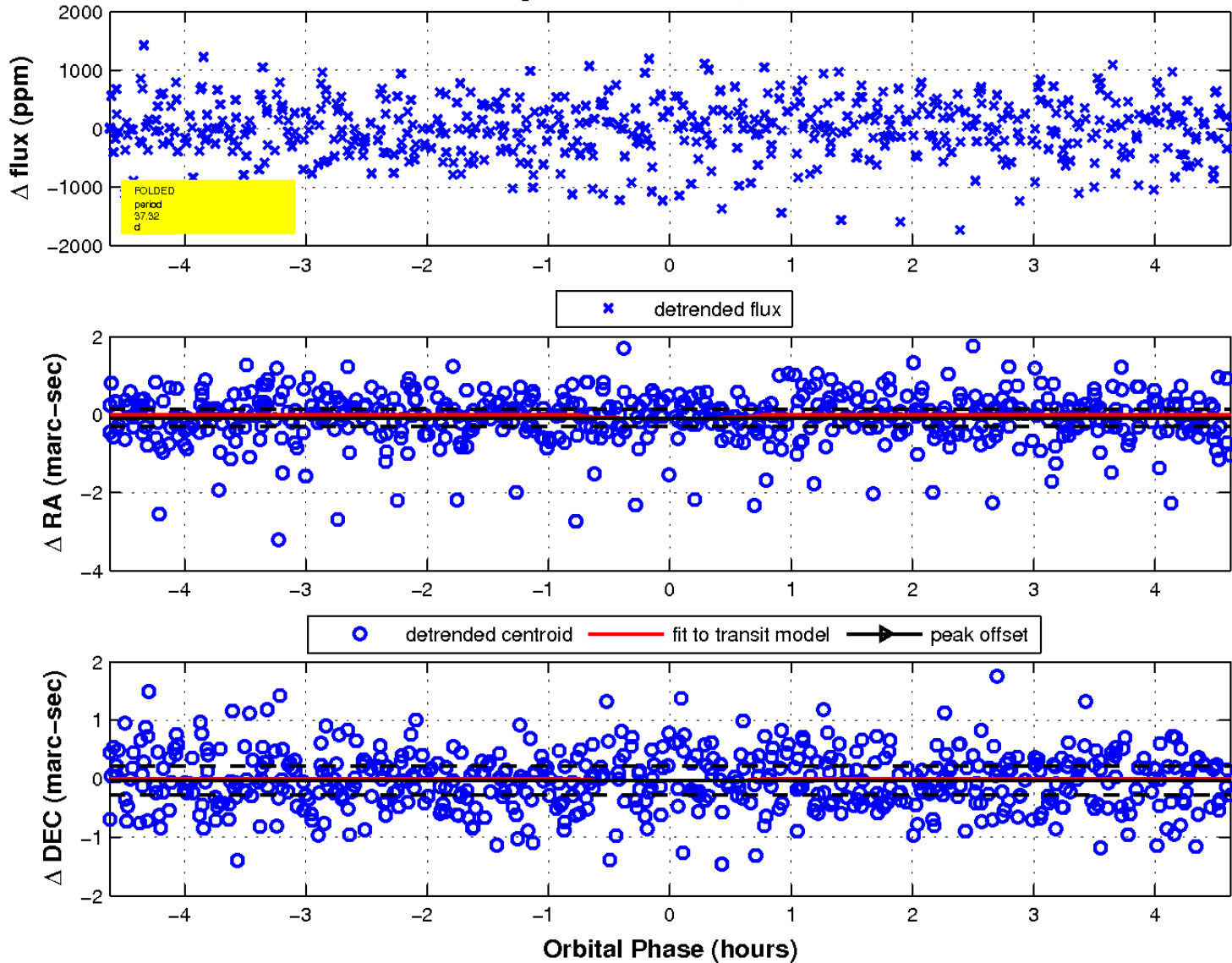
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 6 of 7



UKIRT Image

