

KIC 008507325

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})
008507325-01	OBS	No	0.764061	131.753749	25.3	5.574	14.4	6.8	4.13	7336	2.13	104375.29
008507325-02	OBS	No	28.120674	133.201278	378.0	1.462	10.7	8.3	4.13	7336	8.28	852.58

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008507325-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_SATURATED
008507325-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_SATURATED—HALO_GHOST

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

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

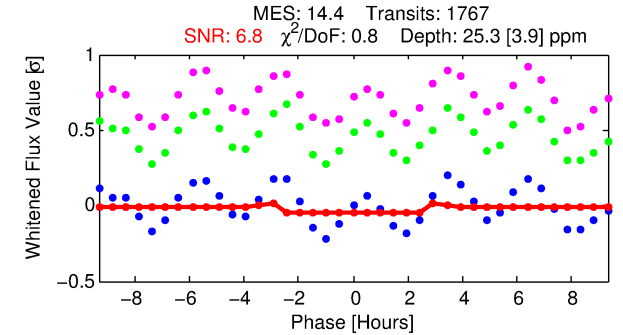
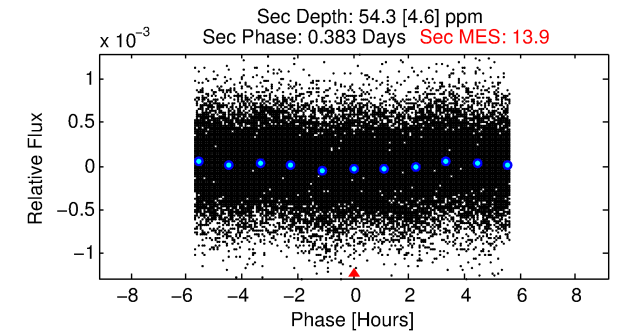
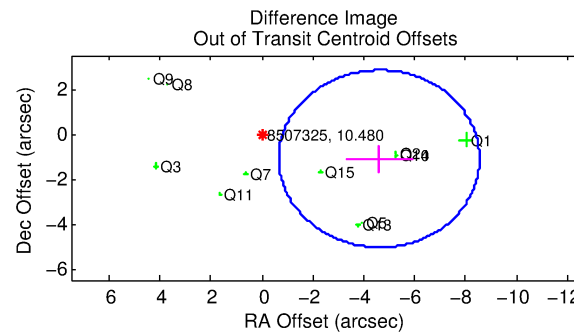
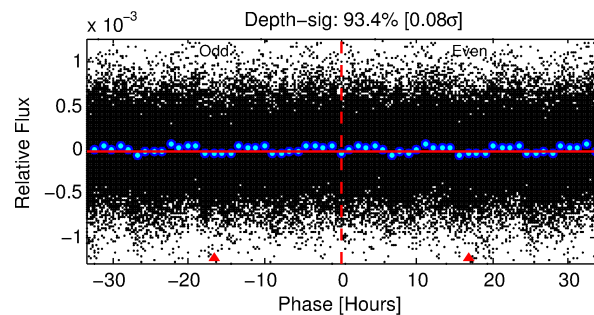
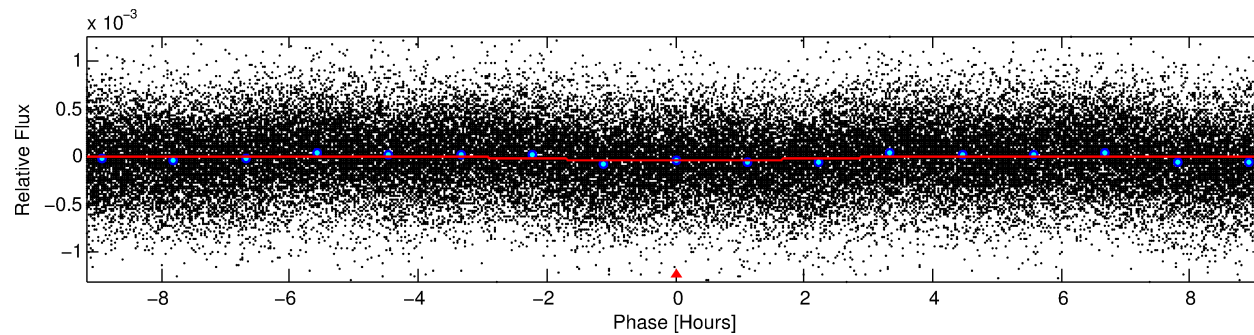
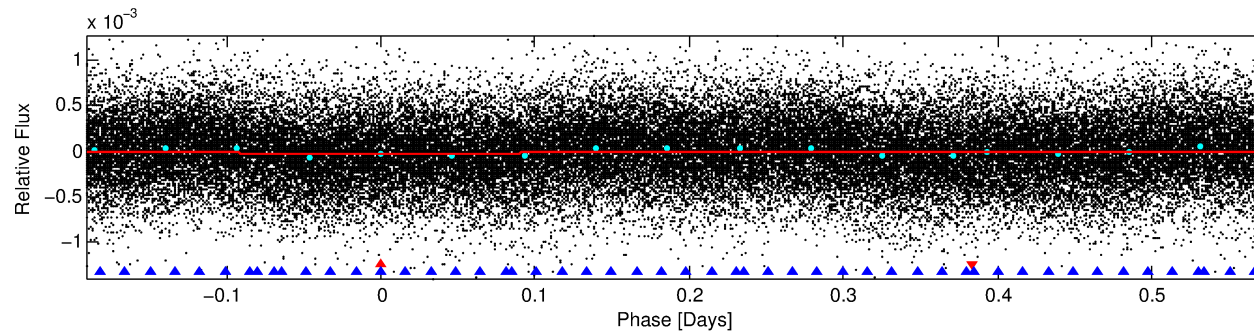
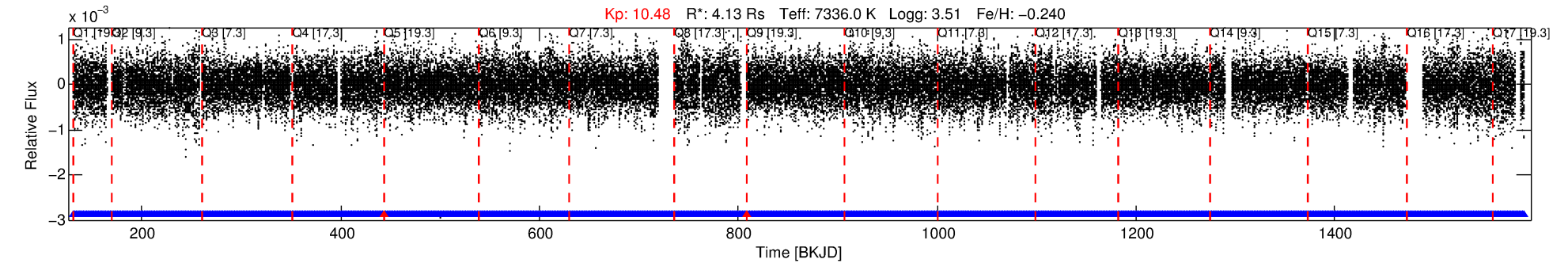
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008507325-01

No Significant Match Found

DV One-Page Summary

KIC: 8507325 Candidate: 1 of 2 Period: 0.764 d



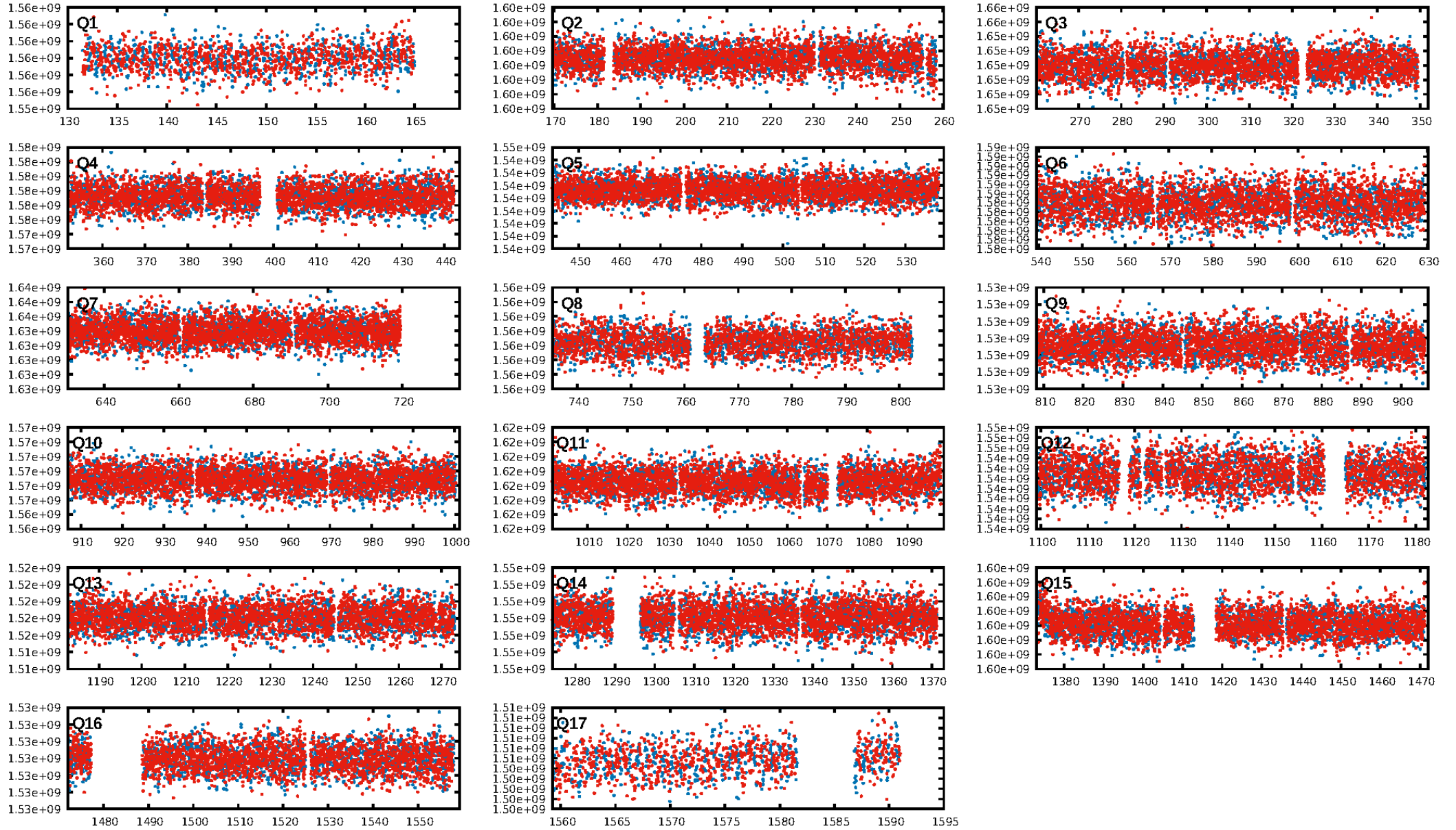
DV Fit Results:

Period = 0.76406 [0.00002] d
Epoch = 131.7537 [0.0041] BKJD
Rp/R* = 0.0047 [0.0029]
a/R* = 1.18 [1.03]
b = 0.47 [5.04]
Seff = 104375.29 [107015.37]
Teq = 4583 [1175] K
Rp = 2.13 [1.79] Re
a = 0.0206 [0.0125] AU
Ag = 2.80 [4.46] [0.40 σ]
Teffp = 9163 [2847] K [1.49 σ]

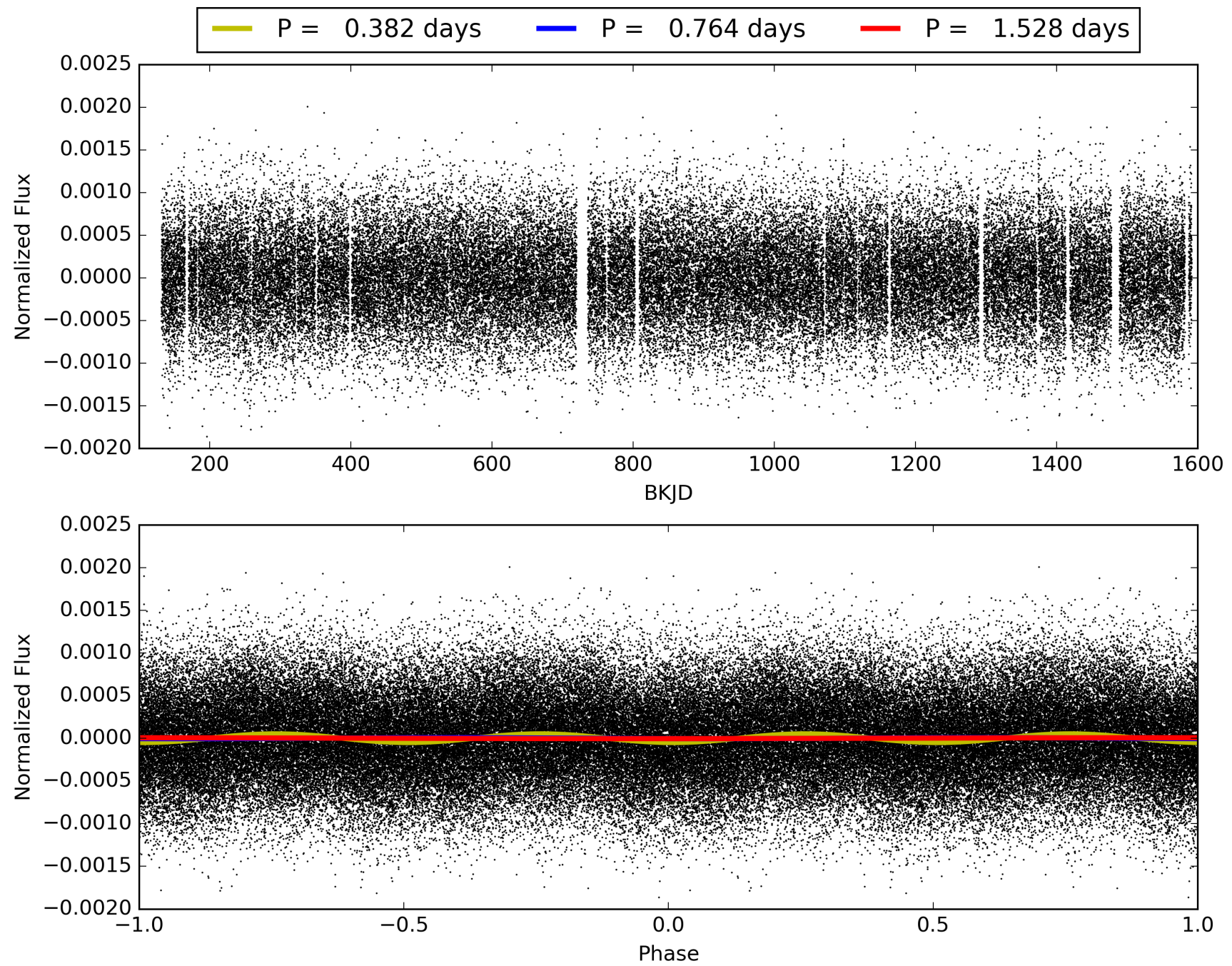
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [113.93 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.86e-24
RollingBand-fgt: 1.00 [1686/1688]
GhostDiagnostic-chr: 1.095
Centroid-sig: 0.9%
Centroid-so: 1.133 arcsec [2.47 σ]
OotOffset-rm: 4.743 arcsec [3.61 σ]
KicOffset-rm: 5.120 arcsec [3.67 σ]
OotOffset-st: 3/4/1/4 [12]
KicOffset-st: 3/4/1/4 [12]
DiffImageQuality-fgm: 0.33 [4/12]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 008507325-01, PDC Light Curves

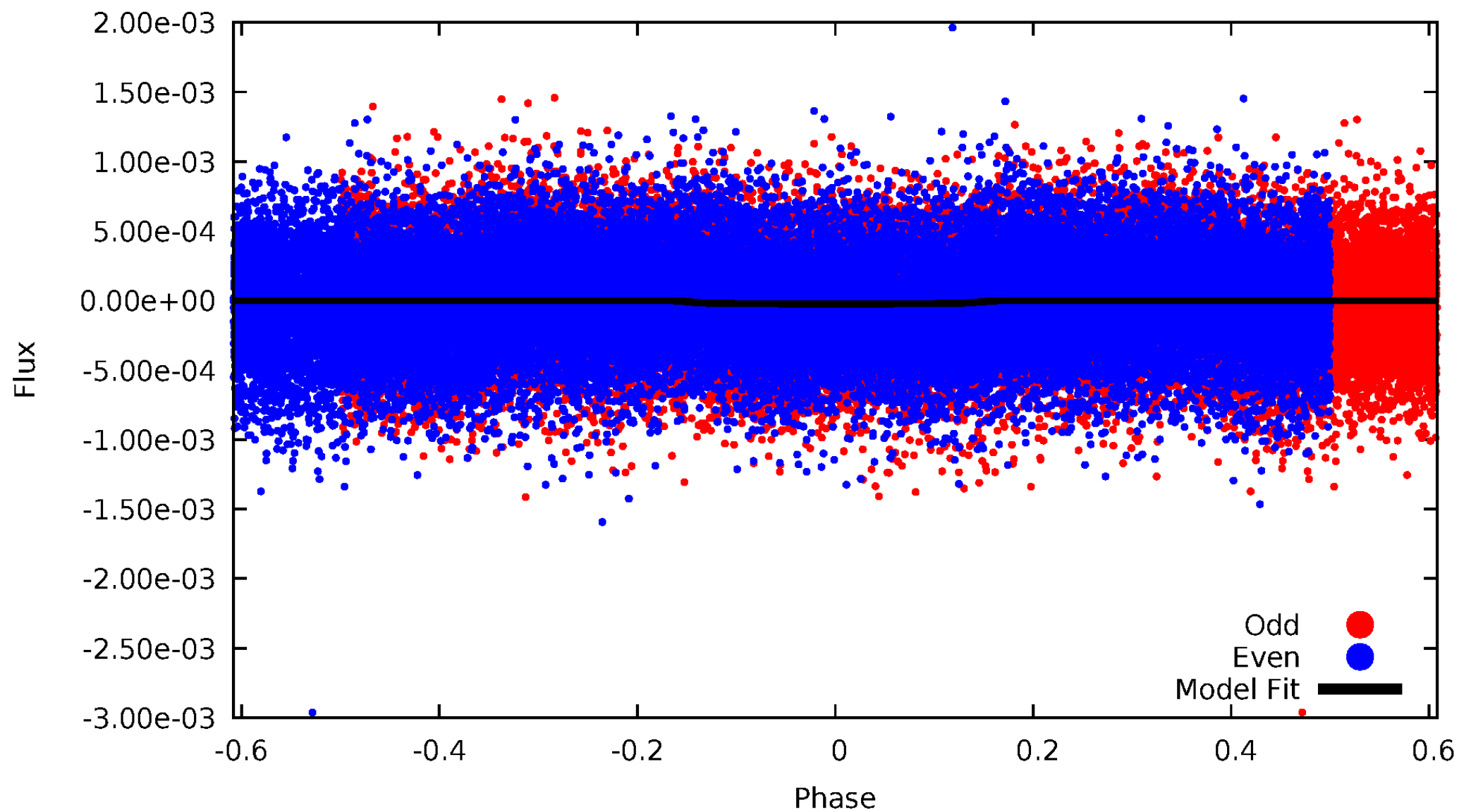


TCE 008507325-01



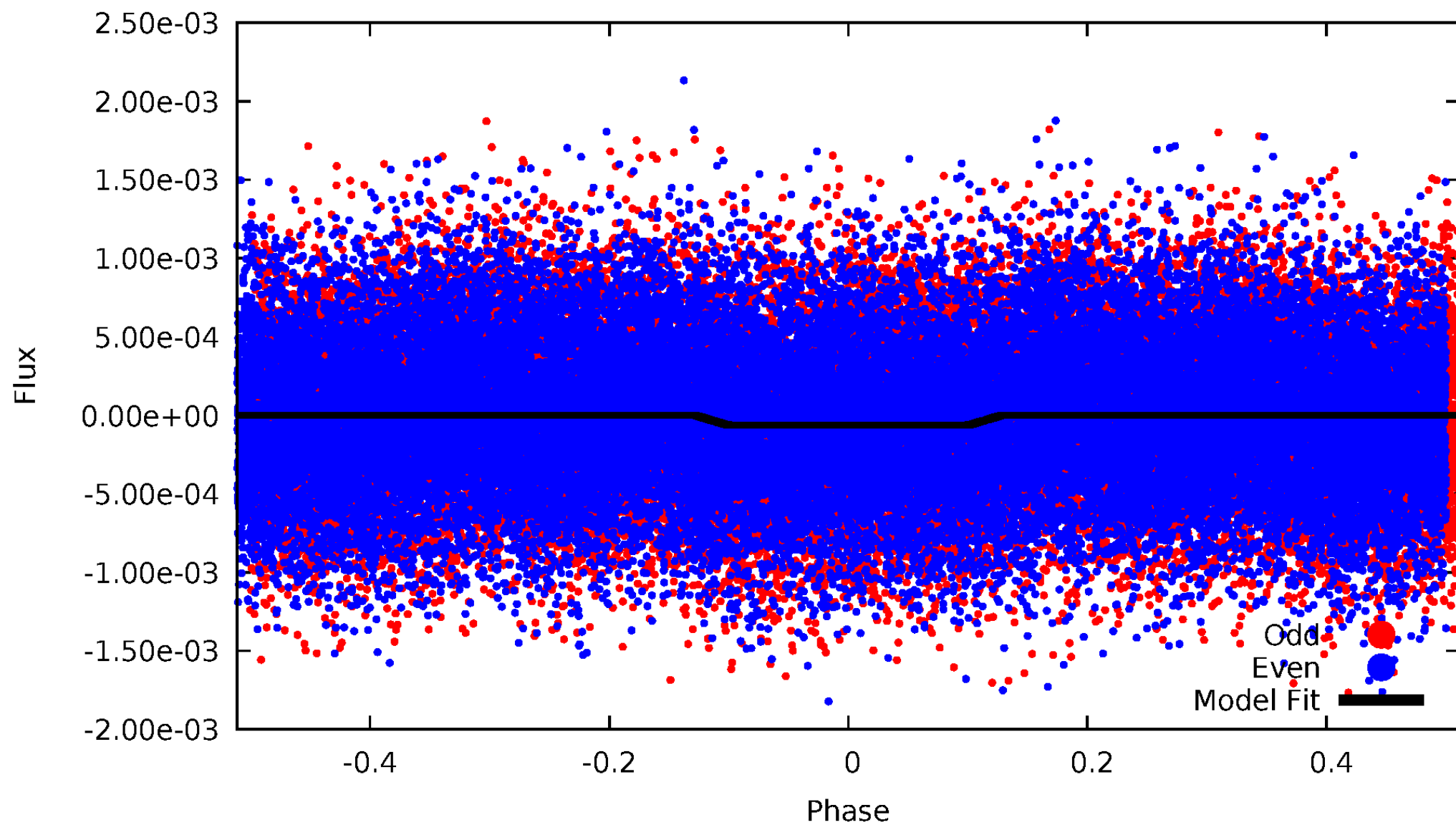
DV Odd/Even

TCE 008507325-01



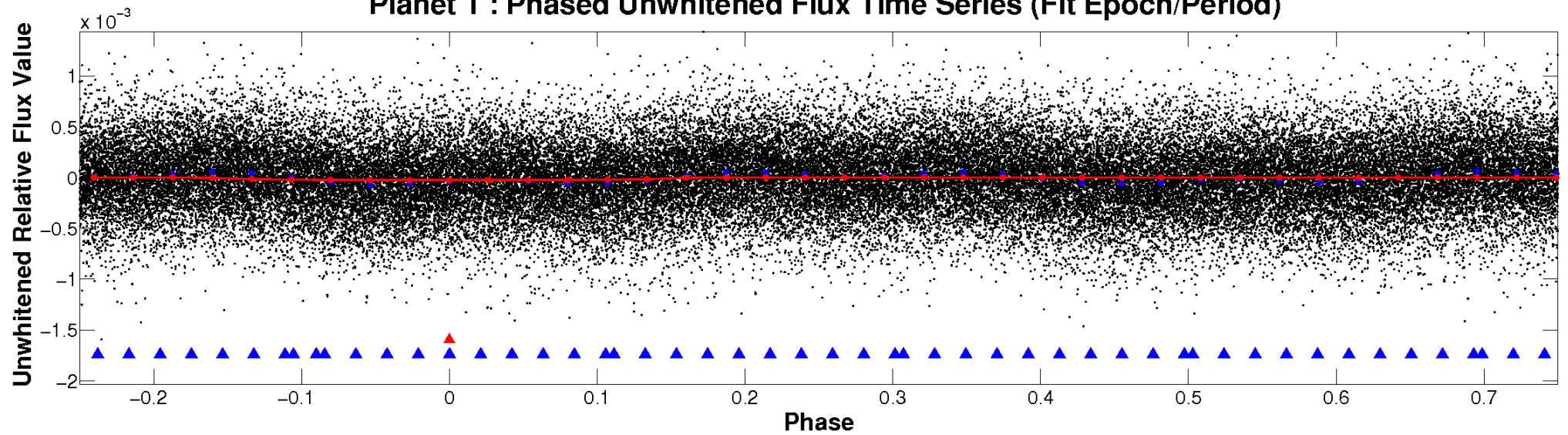
ALT Odd/Even

TCE 008507325-01

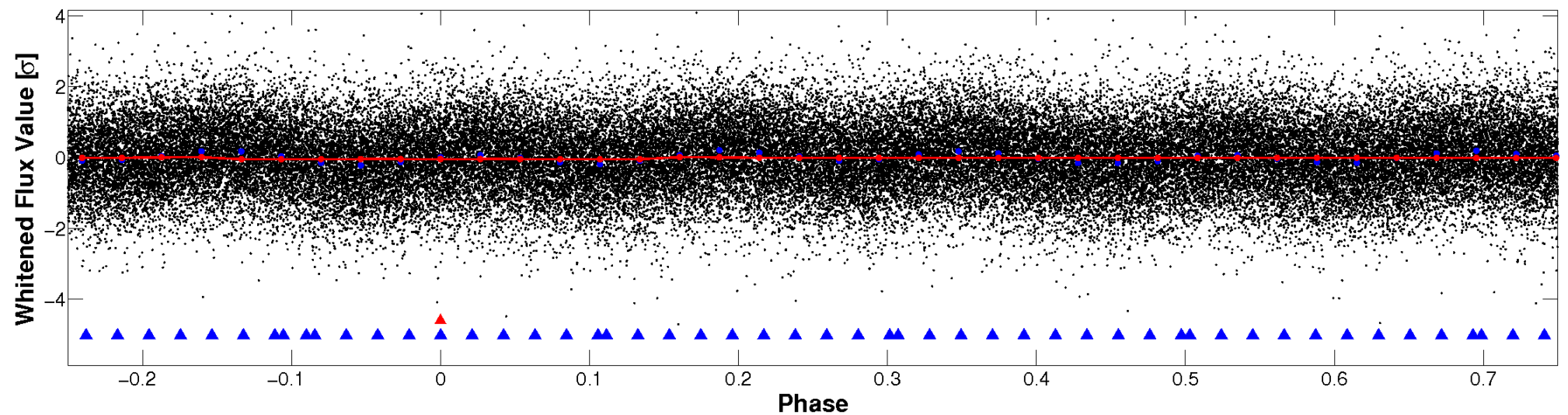


Non-Whitened Vs. Whitened Light Curve

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

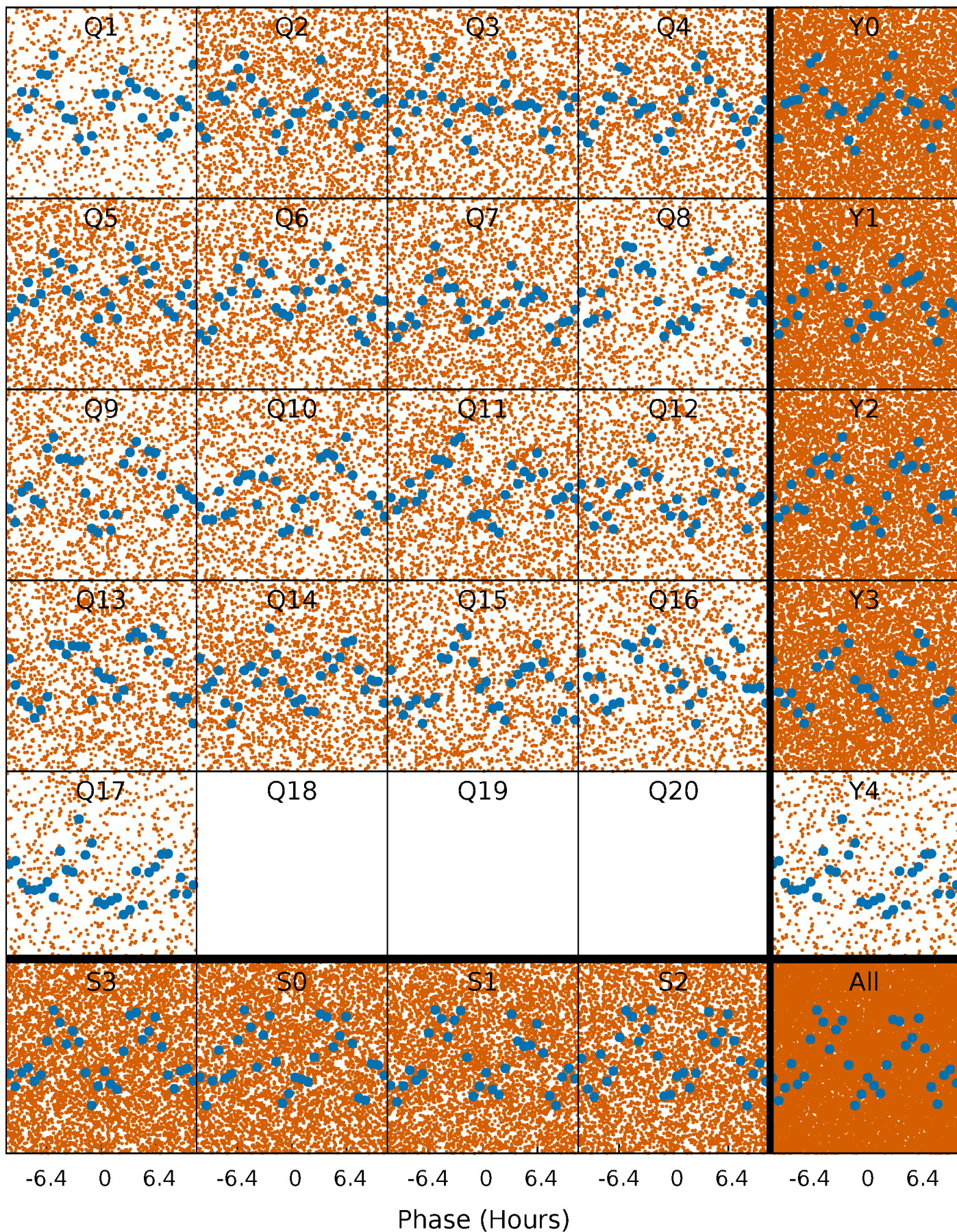


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



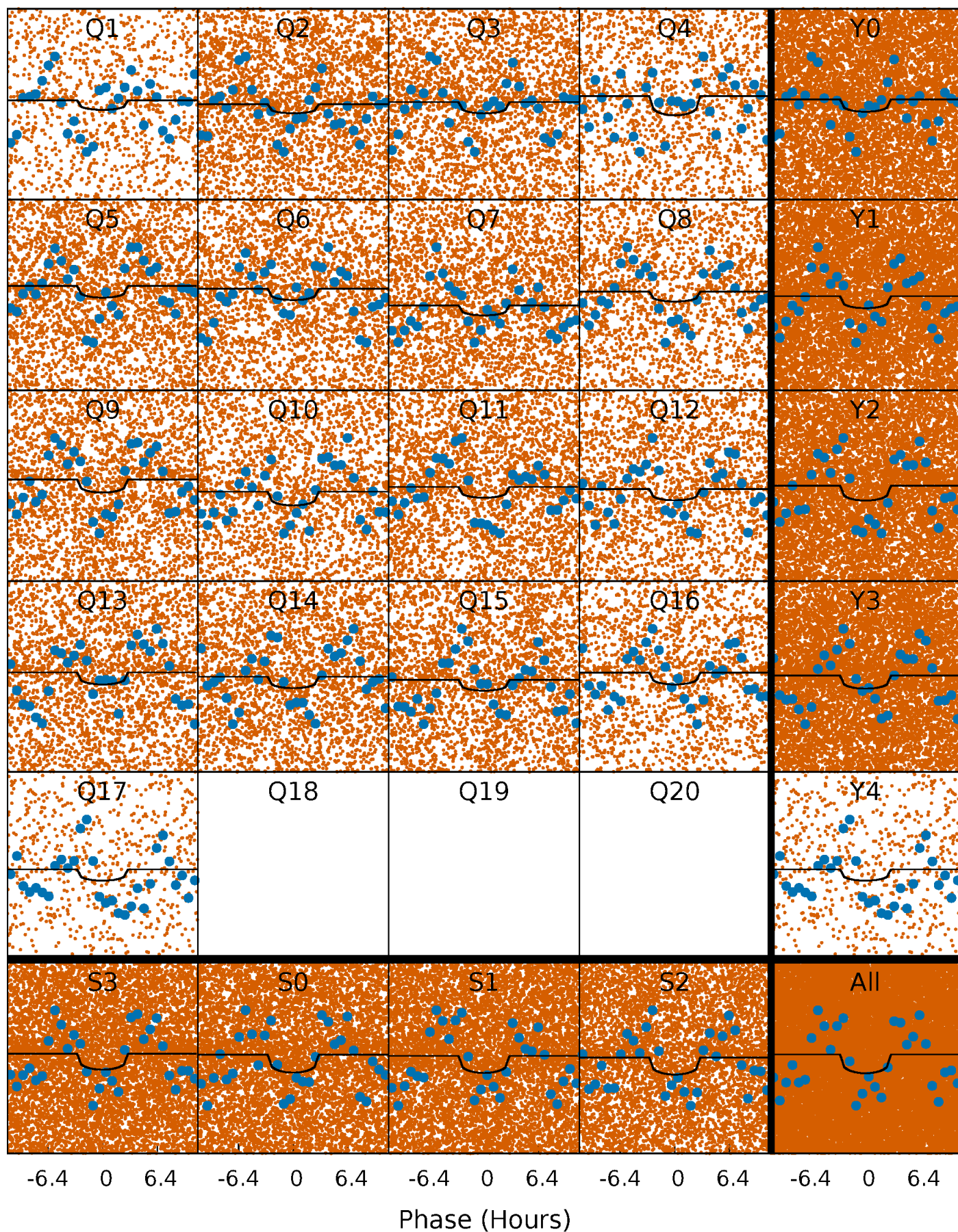
PDC Quarter-Phased Transit Curves

TCE 008507325-01 P= 0.764061 Days $T_0=131.753749$ (BKJD)



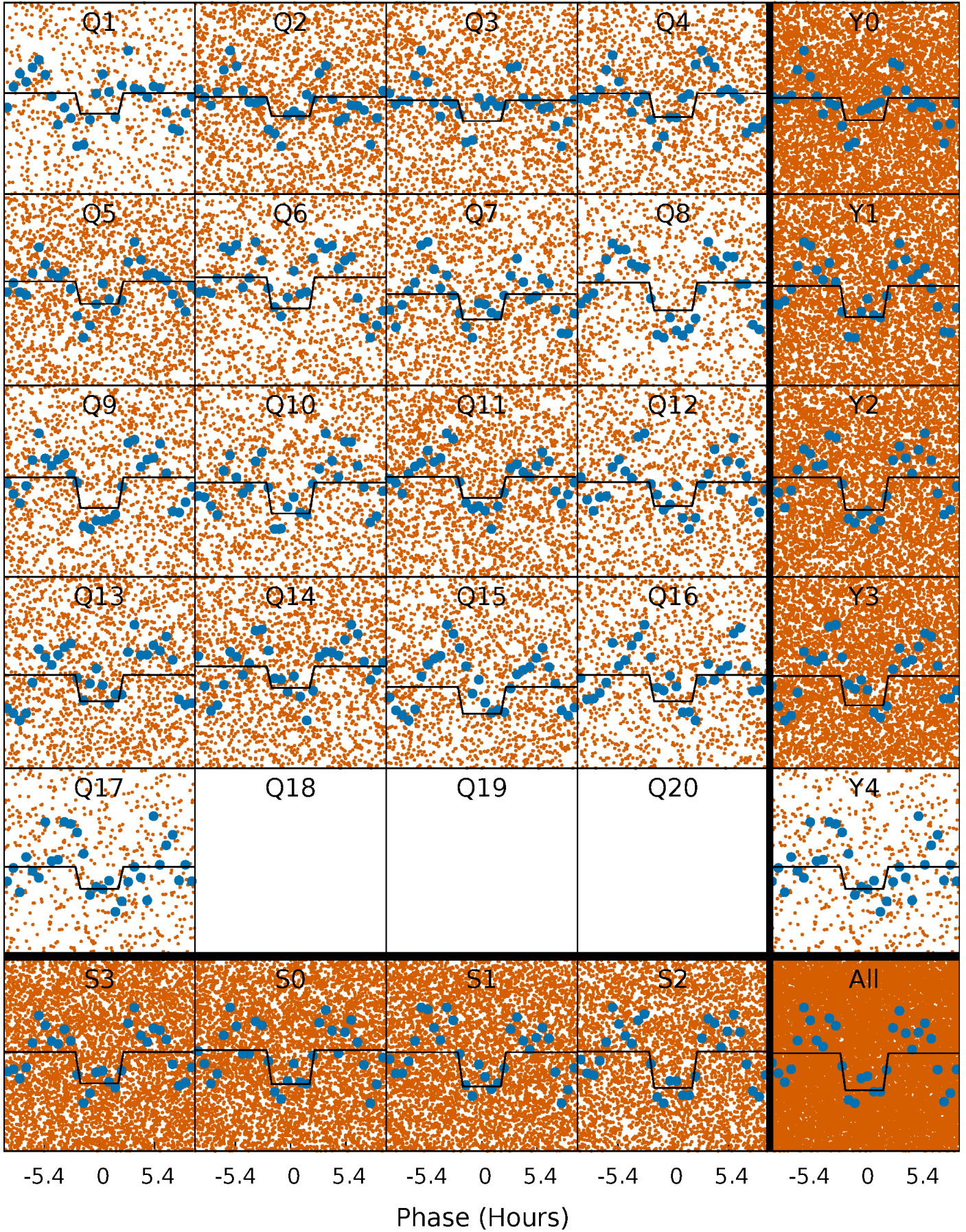
DV Quarter-Phased Transit Curves

TCE 008507325-01 P= 0.764061 Days $T_0=131.753749$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

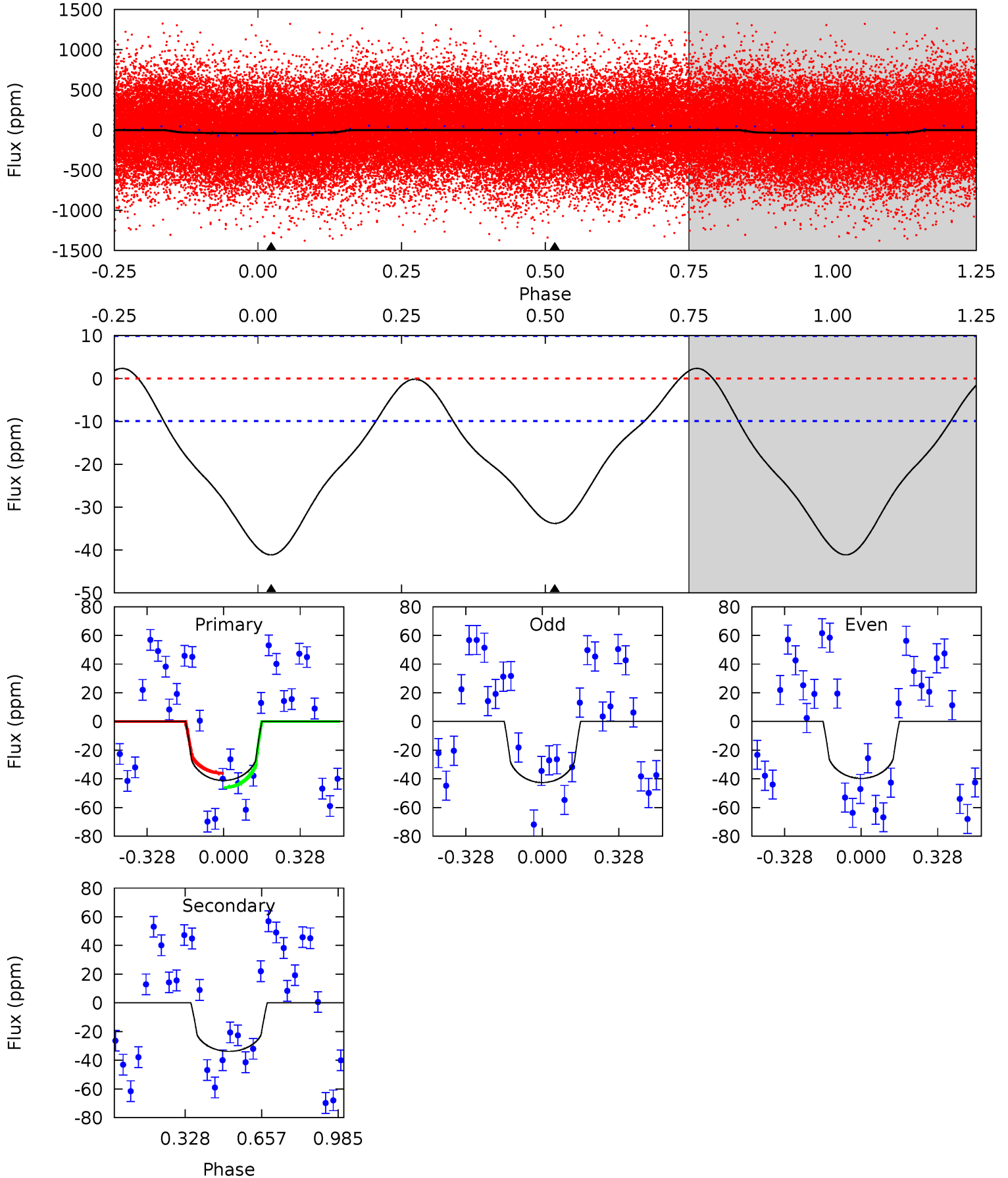
TCE 008507325-01 P= 0.764078 Days $T_0=131.750838$ (BKJD)



DV Model-Shift Uniqueness Test

008507325-01, P = 0.764061 Days, E = 130.989688 Days

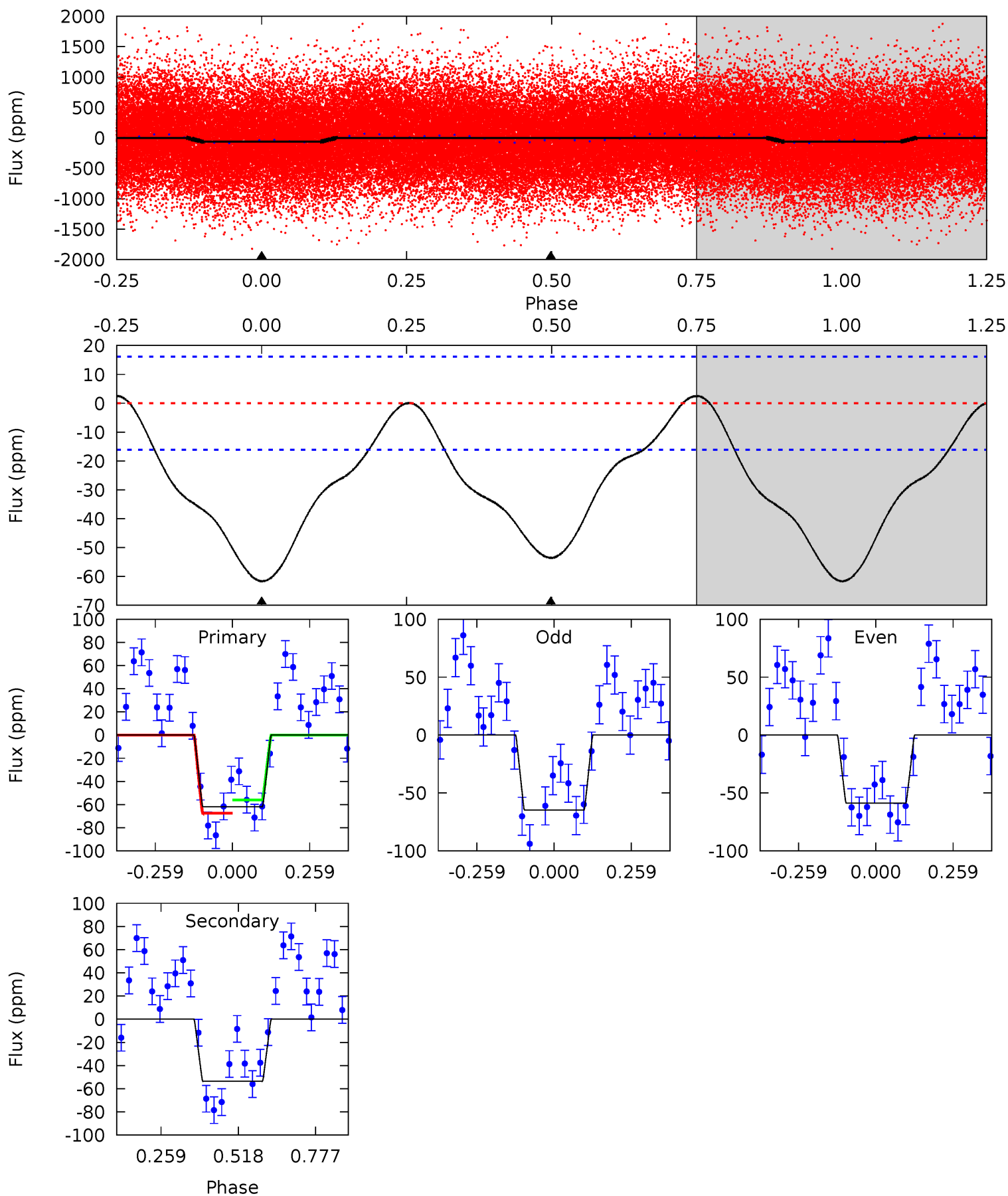
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.9	14.7	0	0	4.31	0.98	0.55	17.9	17.9	14.7	14.7	0.63	1.19	0.05	2.20



Alt Model-Shift Uniqueness Test

008507325-01, P = 0.764078 Days, E = 130.986760 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.7	14.5	0	0	4.36	1.13	0.44	16.7	16.7	14.5	14.5	0.80	1.13	0.04	1.54



Stellar Parameters For KIC 008507325

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7336^{+230}_{-281}	$3.506^{+0.612}_{-0.068}$	$-0.240^{+0.250}_{-0.300}$	$4.131^{+0.417}_{-2.361}$	$1.996^{+0.065}_{-0.619}$	$0.040^{+0.334}_{-0.009}$
	+3%/-4%	+17%/-2%	+104%/-125%	+10%/-57%	+3%/-31%	+838%/-22%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008507325-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-34 ± 2	$1.84^{+1.17}_{-1.04}$	6152^{+457}_{-903}	7841^{+6299}_{-2189}	$2.313^{+9.066}_{-1.481}$
Alt.	-54 ± 4	$3.04^{+1.61}_{-1.33}$	6111^{+486}_{-927}	6469^{+2381}_{-1429}	$1.312^{+2.839}_{-0.738}$

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

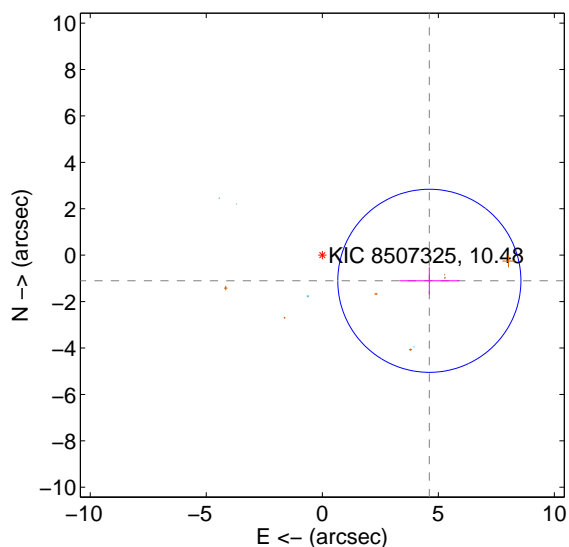
Supplemental centroid analysis for 008507325-01. **Kepler magnitude: 10.48.** Transit SNR 6.79

There are 4 quarters with good PRF difference image offsets

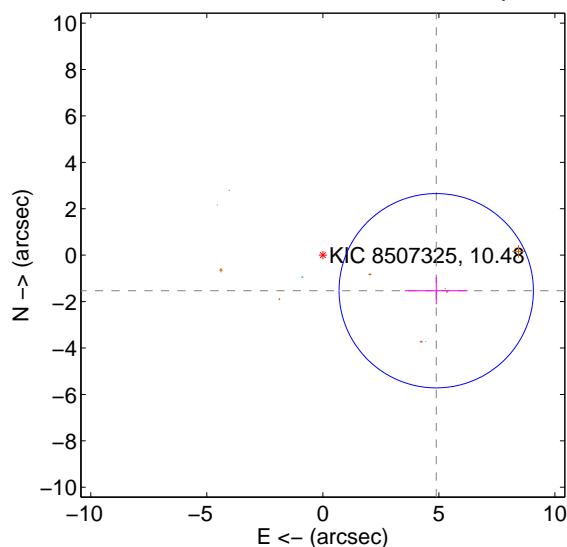
The direct PRF centroid is offset from the target star catalog position by about 0.89 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.743 ± 1.315	3.61	-4.612 ± 1.284	-1.104 ± 0.590
PRF-fit source offset from KIC position	5.120 ± 1.395	3.67	-4.885 ± 1.355	-1.532 ± 0.581
photometric centroid source offset	1.13 ± 0.46	2.47	1.02 ± 0.49	0.49 ± 0.29

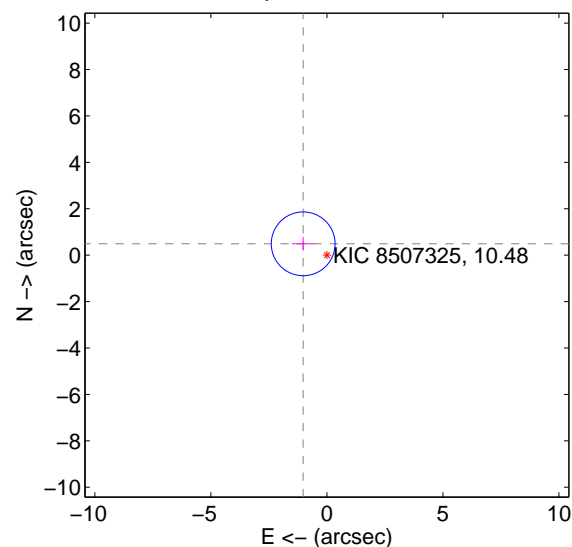
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

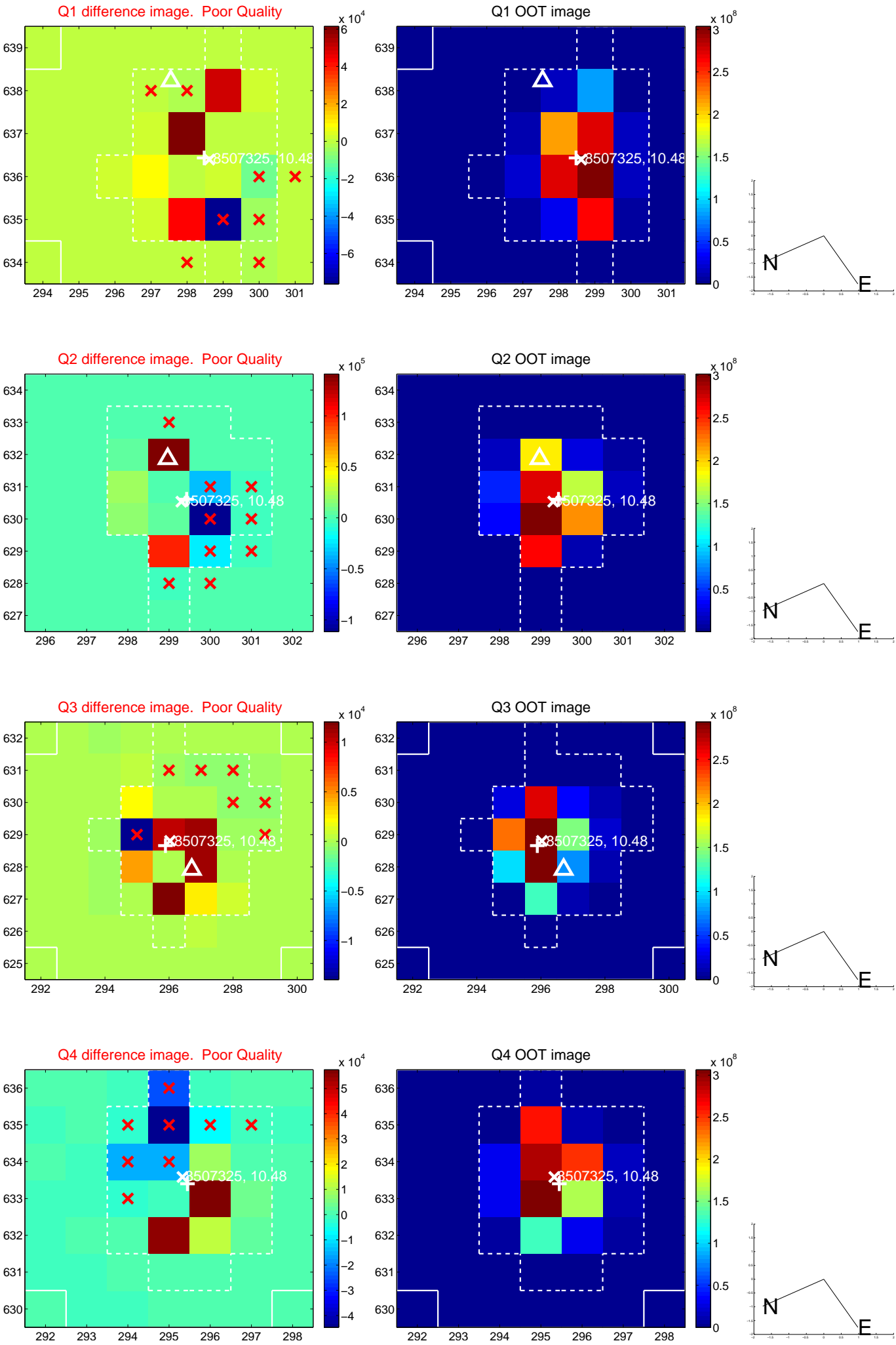


offset from photometric centroids

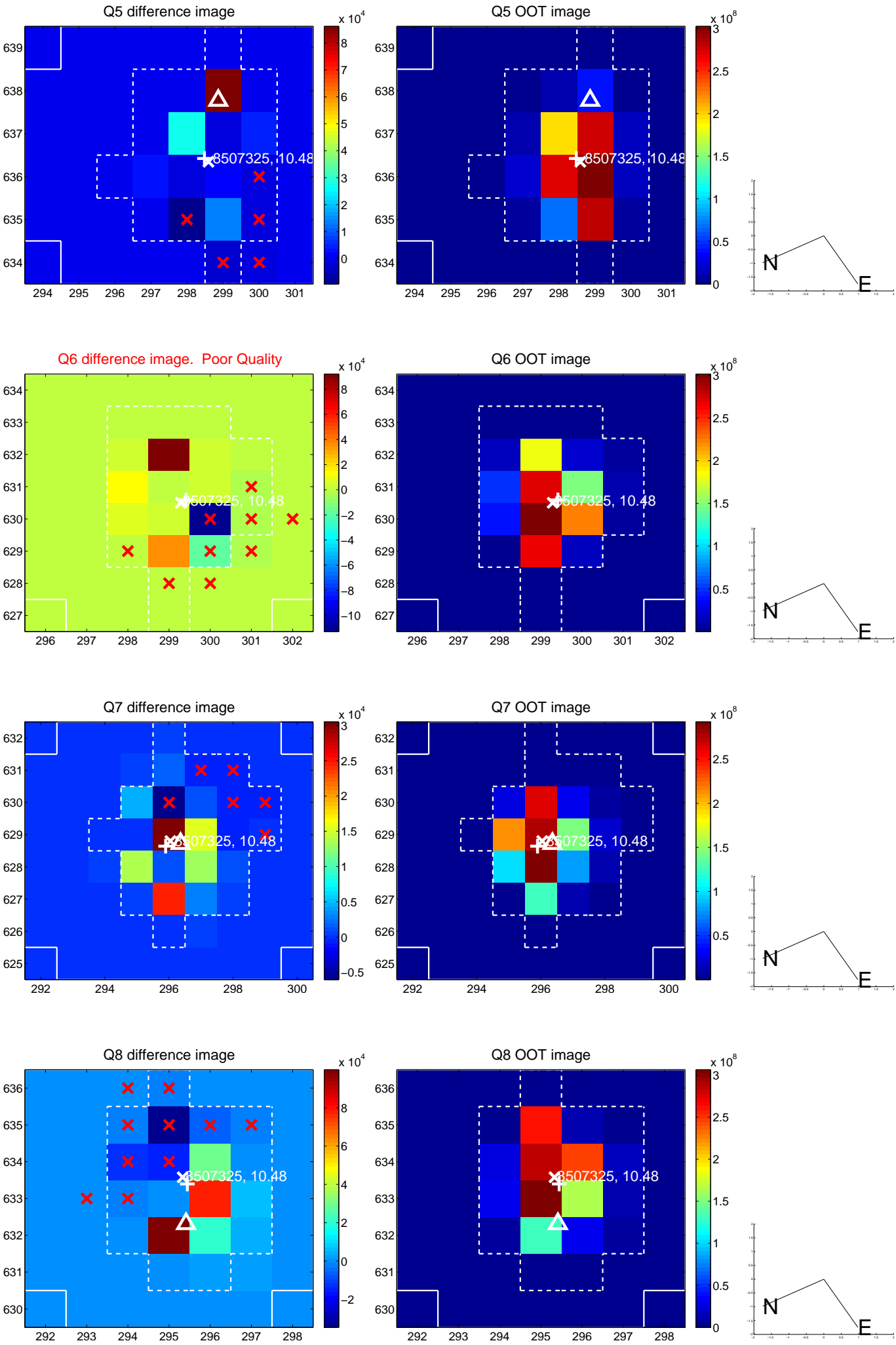


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

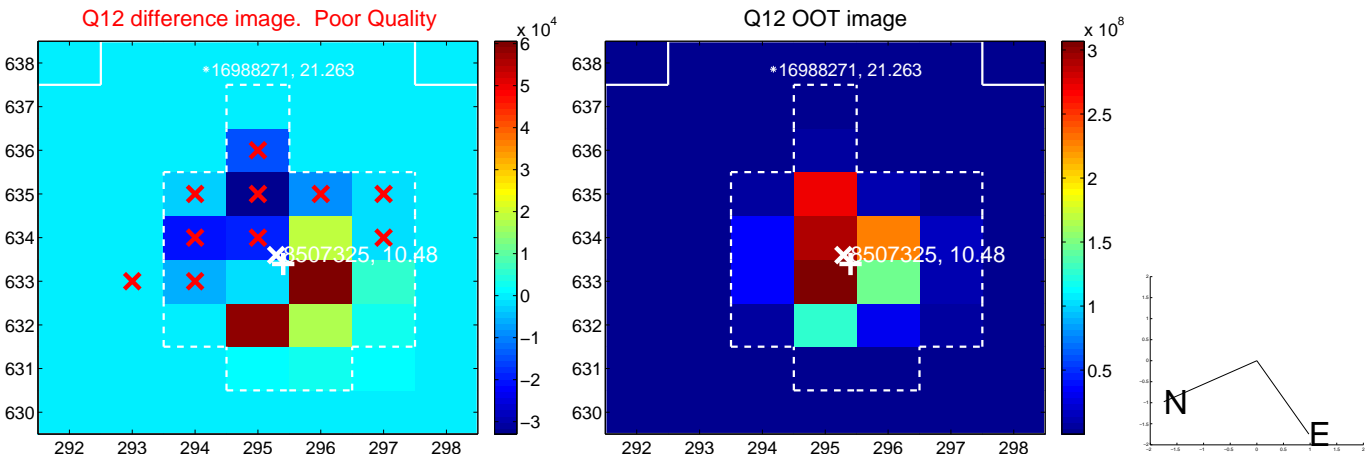
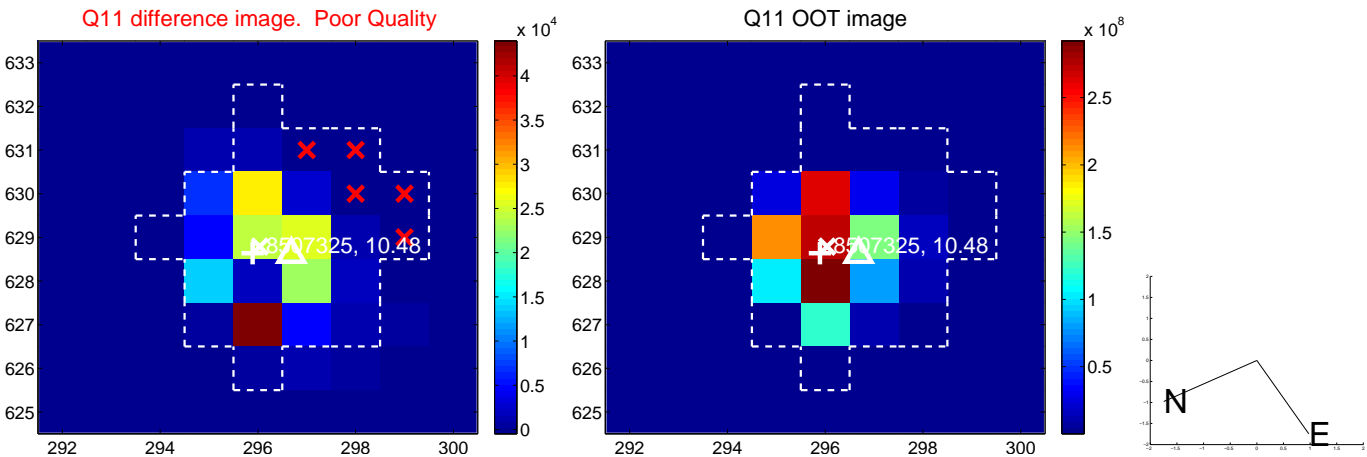
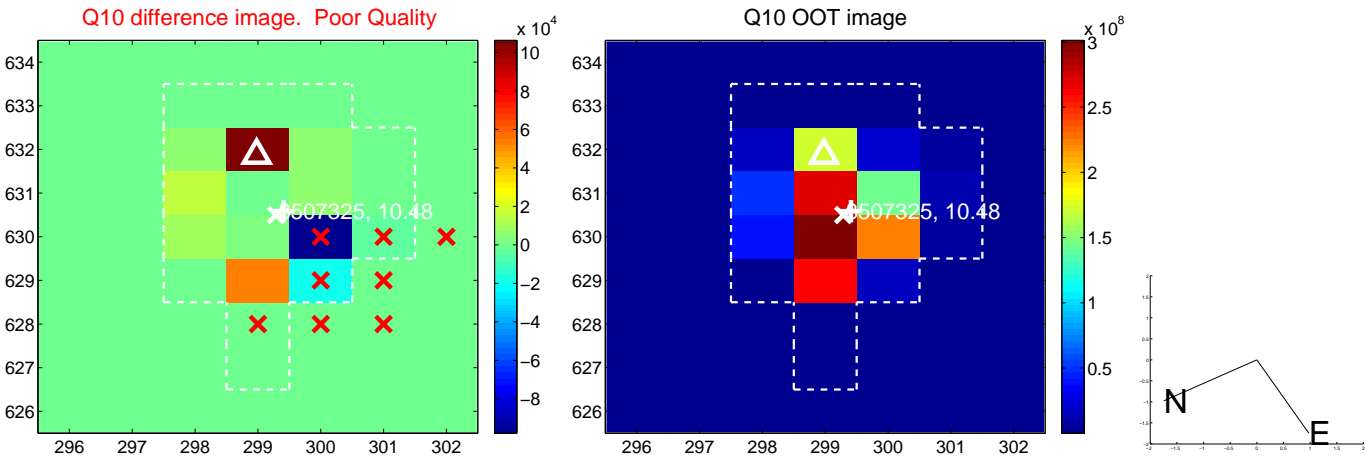
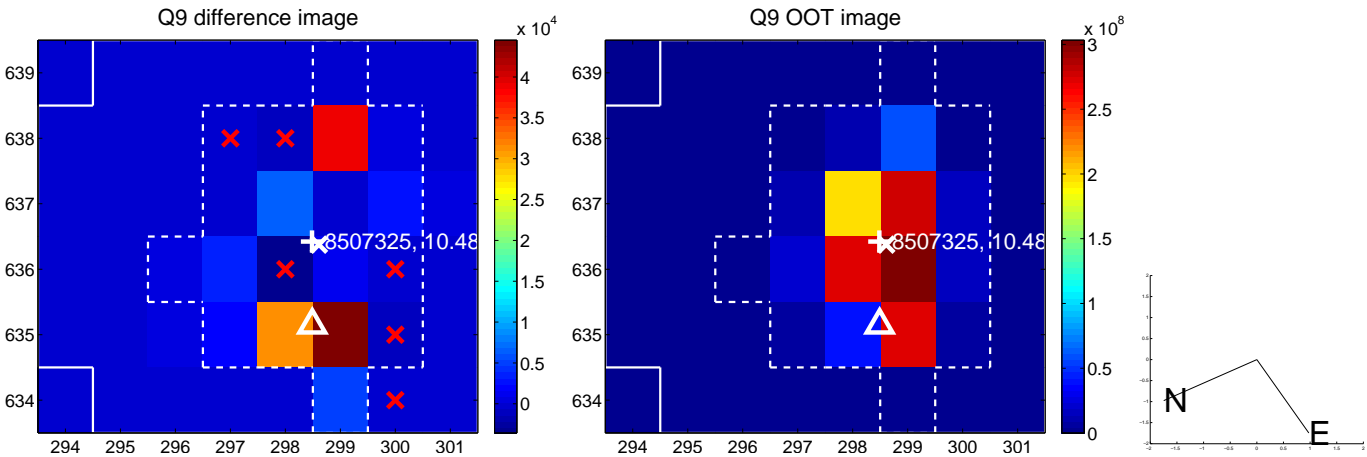
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



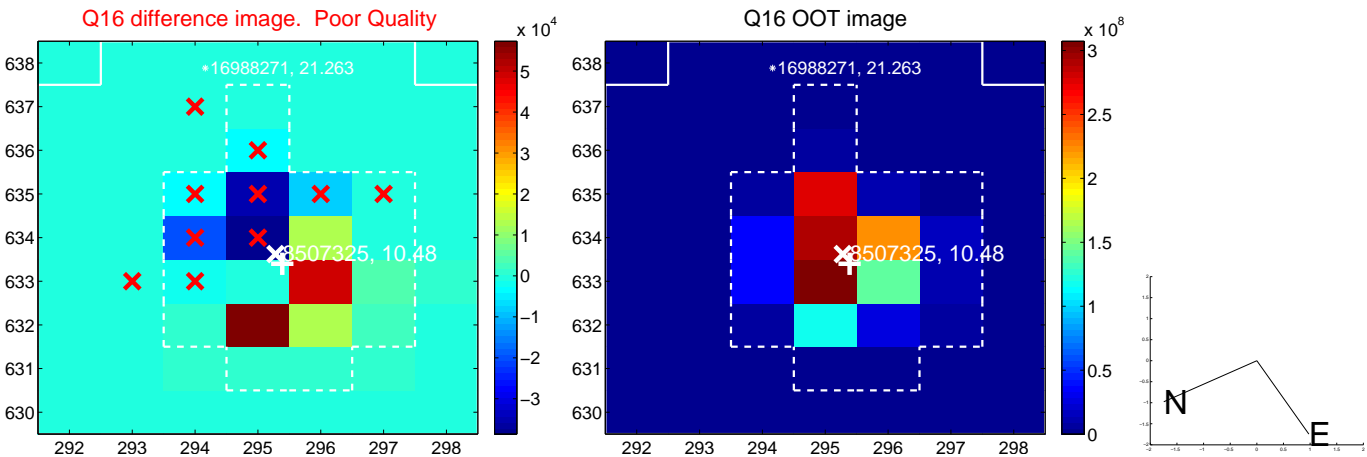
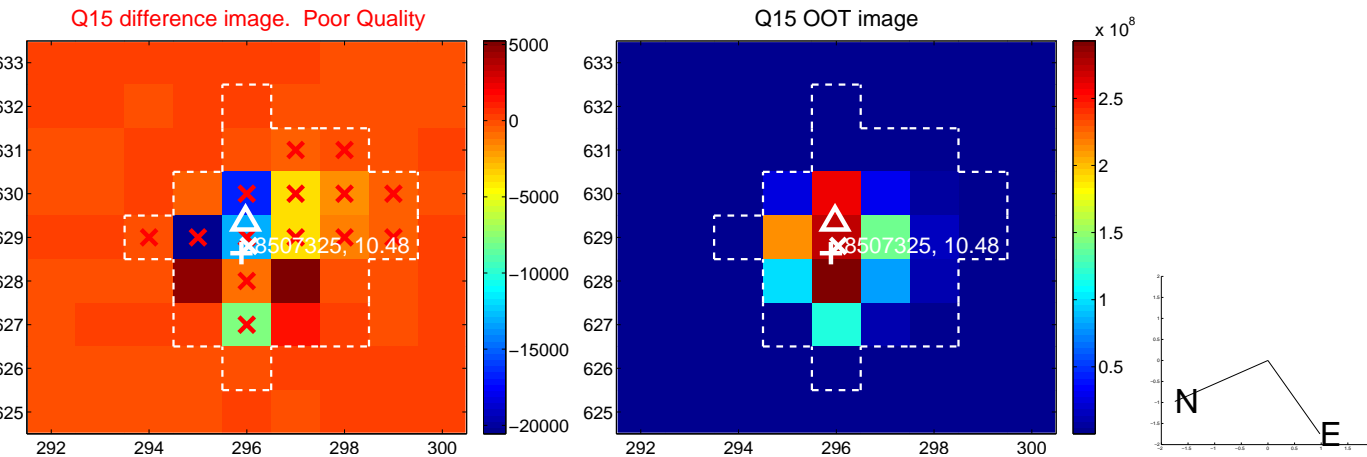
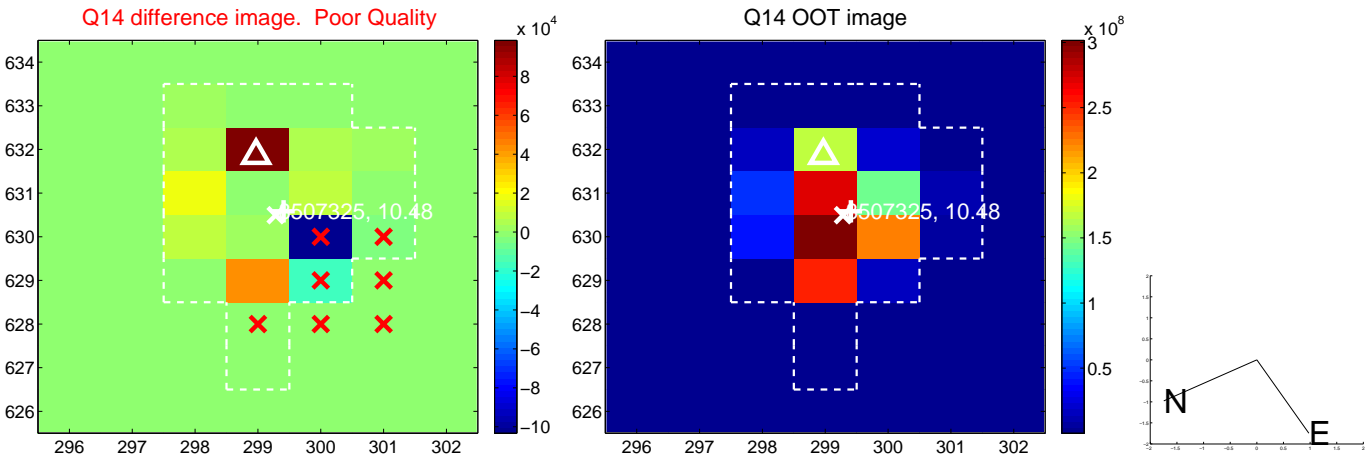
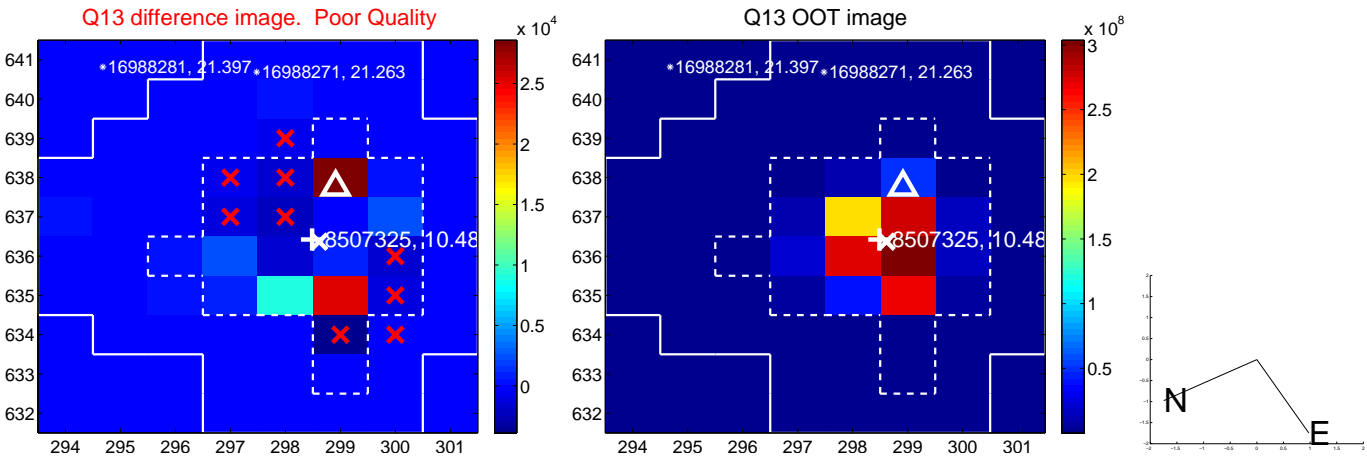
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



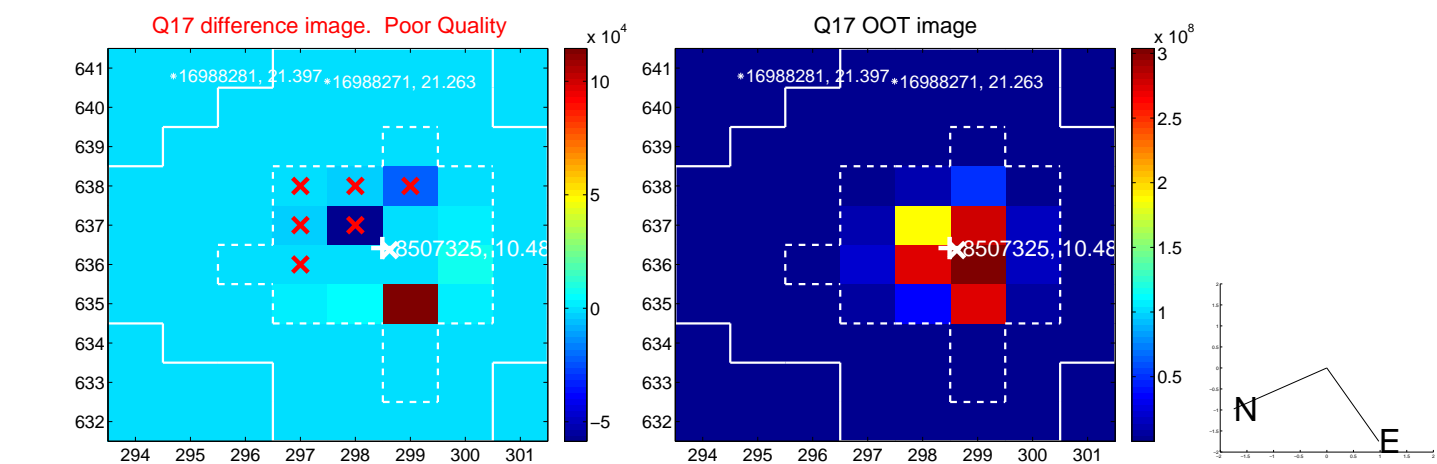
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



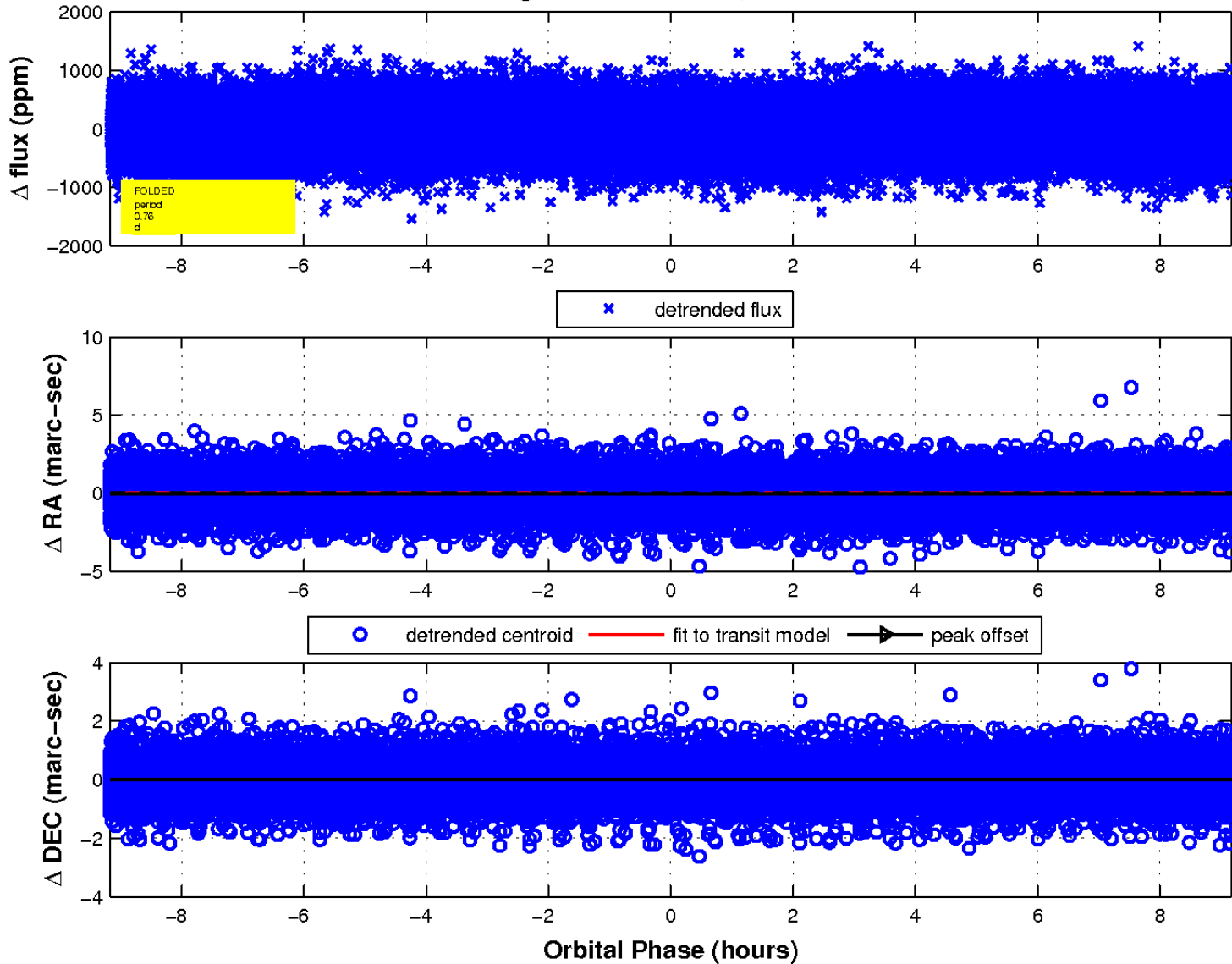
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

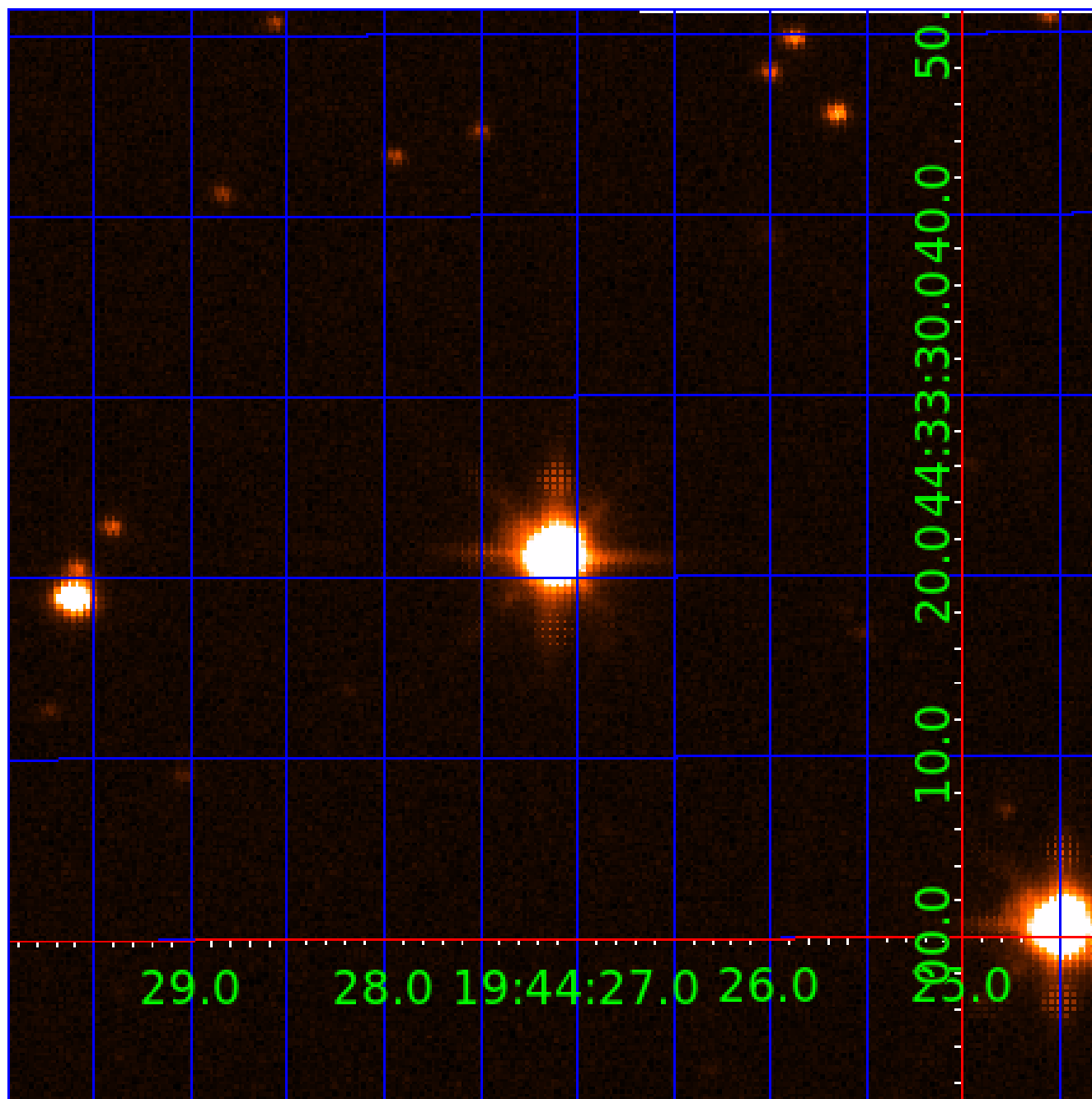


fluxWeightedCentroids, Planet 1 of 2



UKIRT Image

Declination



KIC 008507325

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})
008507325-01	OBS	No	0.764061	131.753749	25.3	5.574	14.4	6.8	4.13	7336	2.13	104375.29
008507325-02	OBS	No	28.120674	133.201278	378.0	1.462	10.7	8.3	4.13	7336	8.28	852.58

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008507325-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_SATURATED
008507325-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_SATURATED—HALO_GHOST

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

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

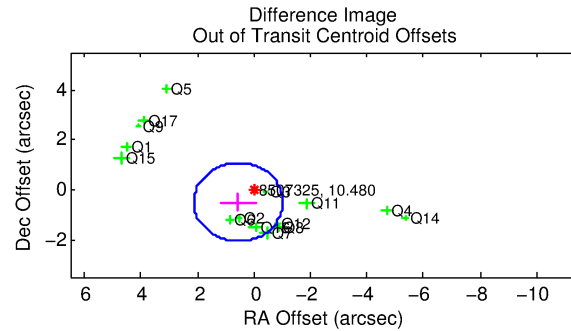
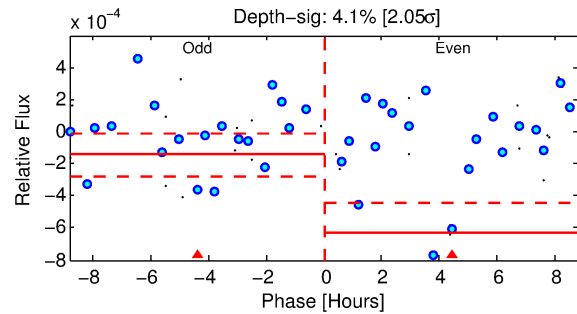
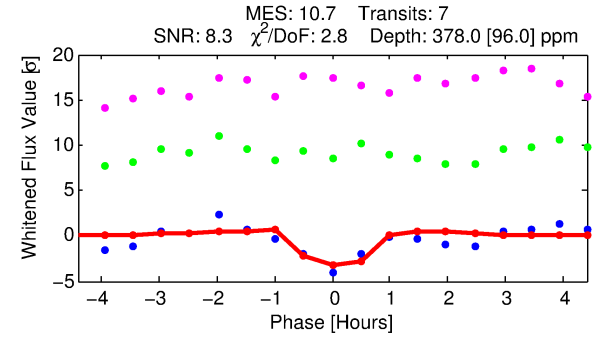
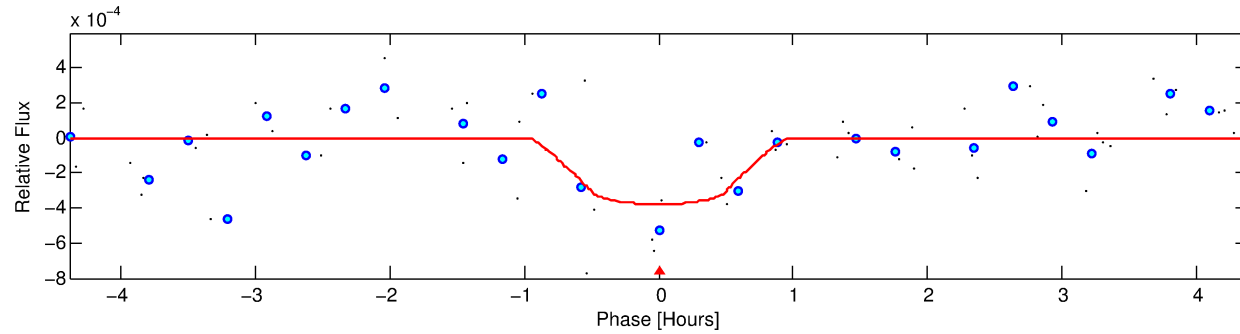
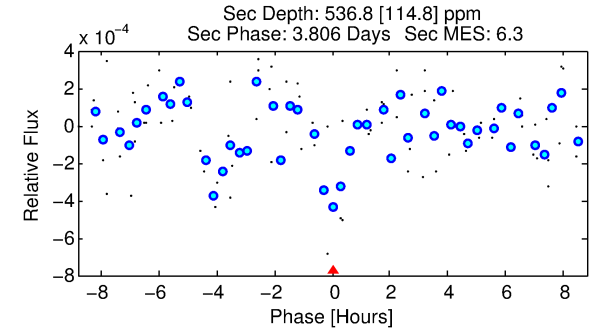
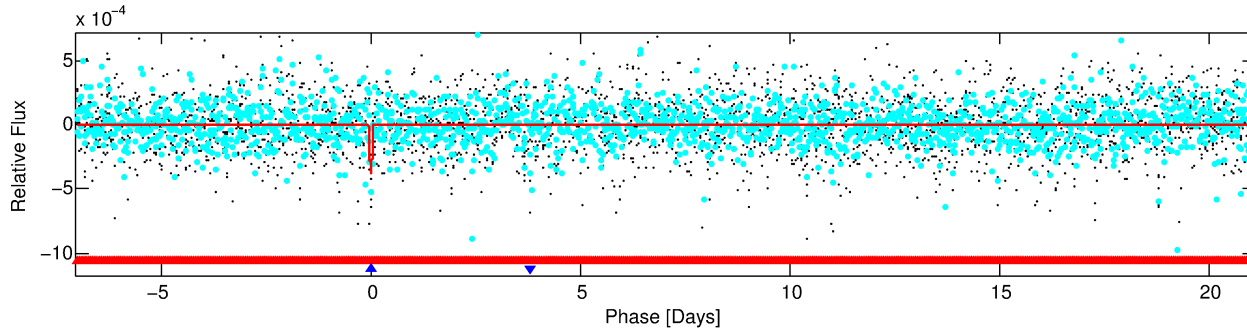
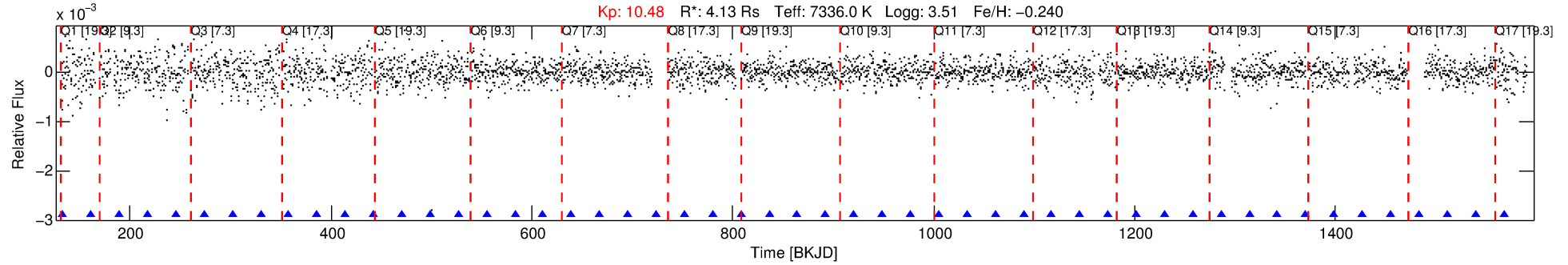
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008507325-02

No Significant Match Found

DV One-Page Summary

KIC: 8507325 Candidate: 2 of 2 Period: 28.121 d



DV Fit Results:

Period = 28.12067 [0.00039] d
Epoch = 133.2013 [0.0093] BKJD
Rp/R* = 0.0184 [0.0253]
a/R* = 130.76 [855.03]
b = 0.49 [10.27]
Seff = 852.58 [874.14]
Teq = 1378 [353] K
Rp = 8.28 [12.33] Re
a = 0.2279 [0.1378] AU
Ag = 223.55 [656.71] [0.34σ]
Teffp = 8237 [5687] K [1.20σ]

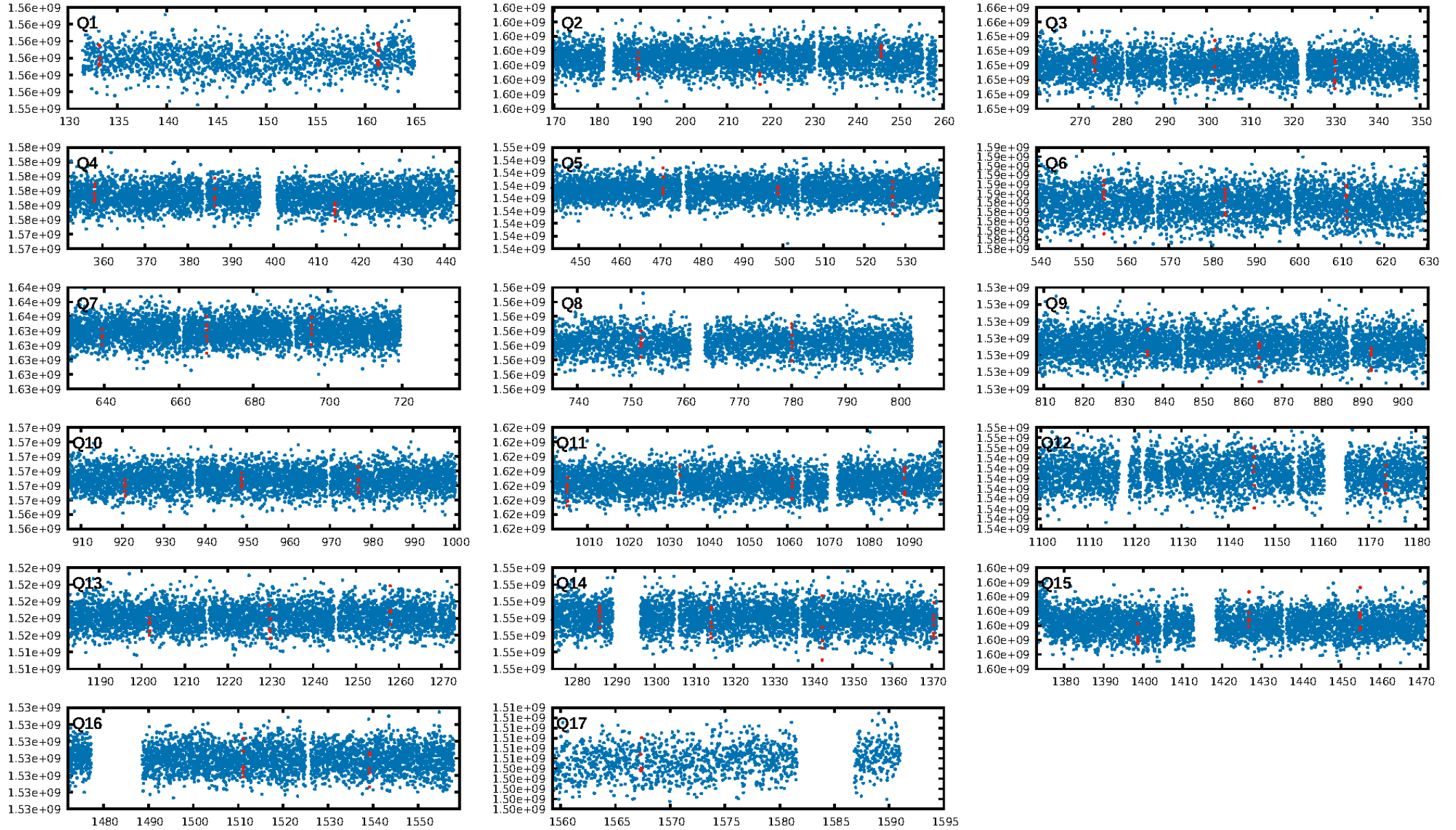
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [113.93σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.2%
ModelChiSquareGof-sig: 83.3%
Bootstrap-pfa: 1.99e-12
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: 0.1629
Centroid-sig: 34.4%
Centroid-so: 0.193 arcsec [1.16σ]
OotOffset-rm: 0.749 arcsec [1.43σ]
KicOffset-rm: 0.885 arcsec [1.46σ]
OotOffset-st: 3/4/4/4 [15]
KicOffset-st: 3/4/4/4 [15]
DiffImageQuality-fgm: 0.20 [3/15]
DiffImageOverlap-fno: 0.24 [4/17]

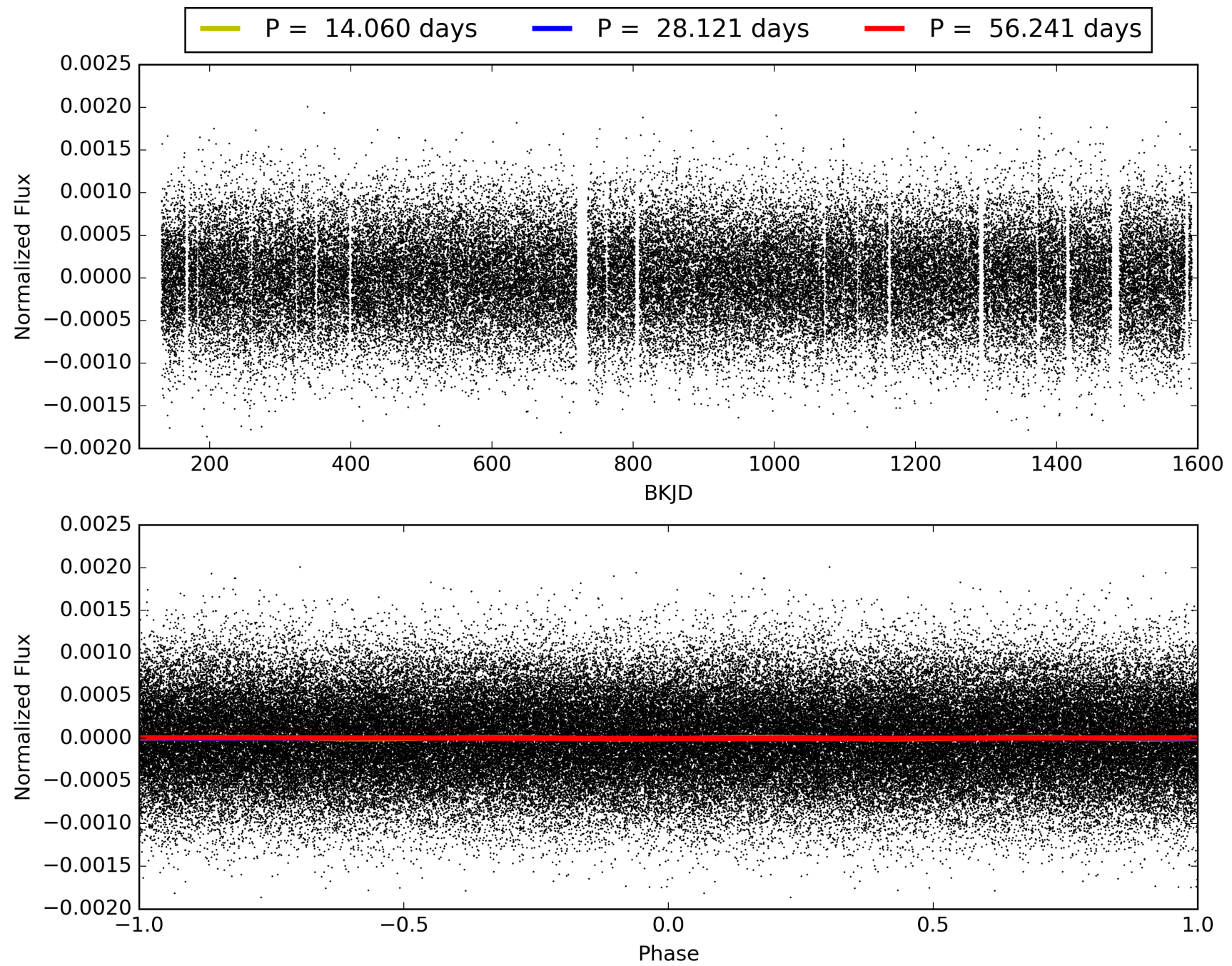
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 01:28:47 Z

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

TCE 008507325-02, PDC Light Curves

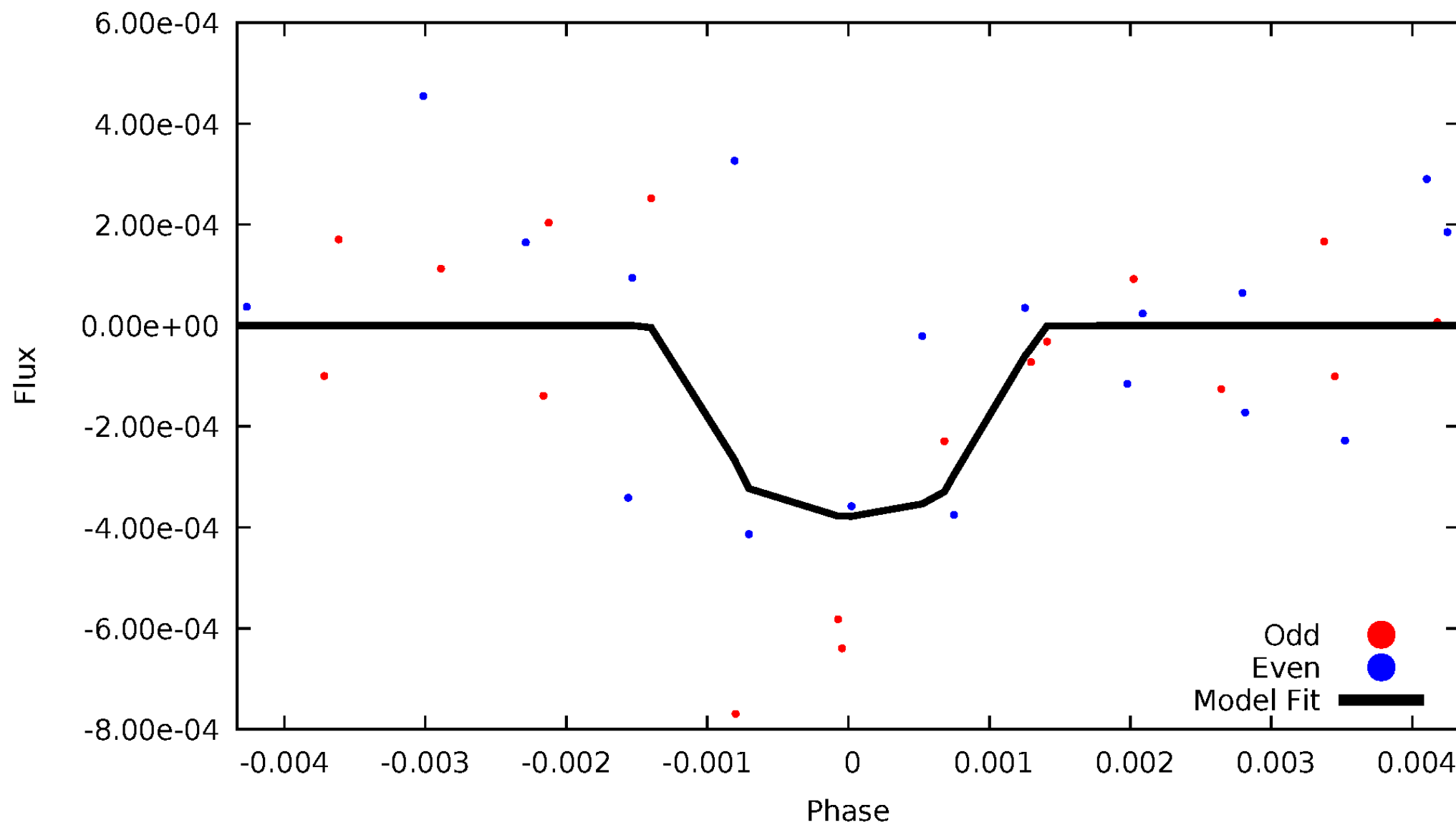


TCE 008507325-02



DV Odd/Even

TCE 008507325-02

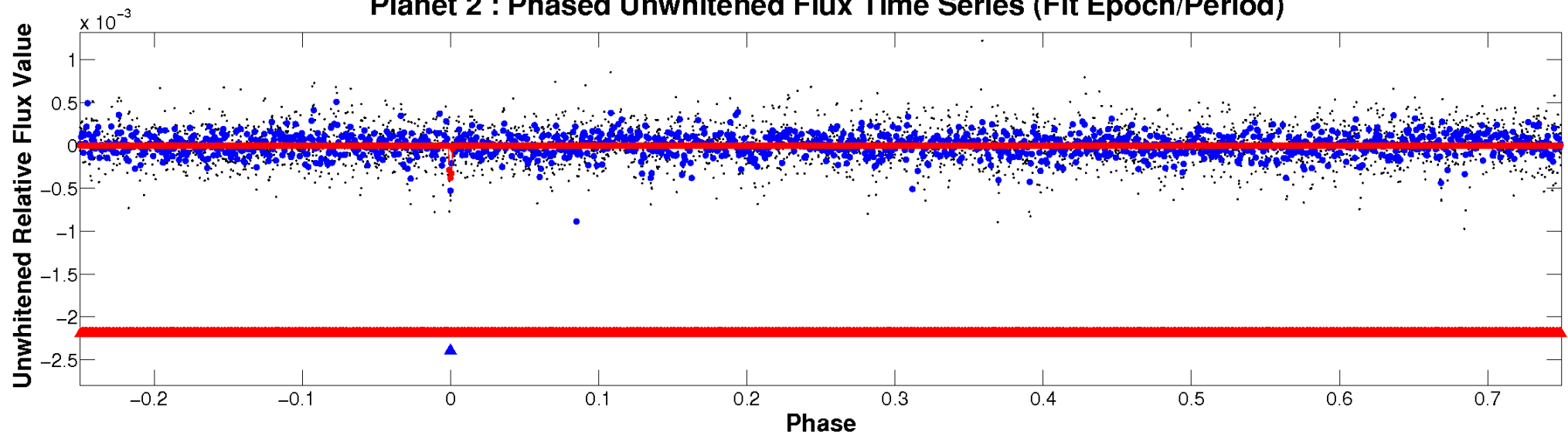


ALT Odd/Even

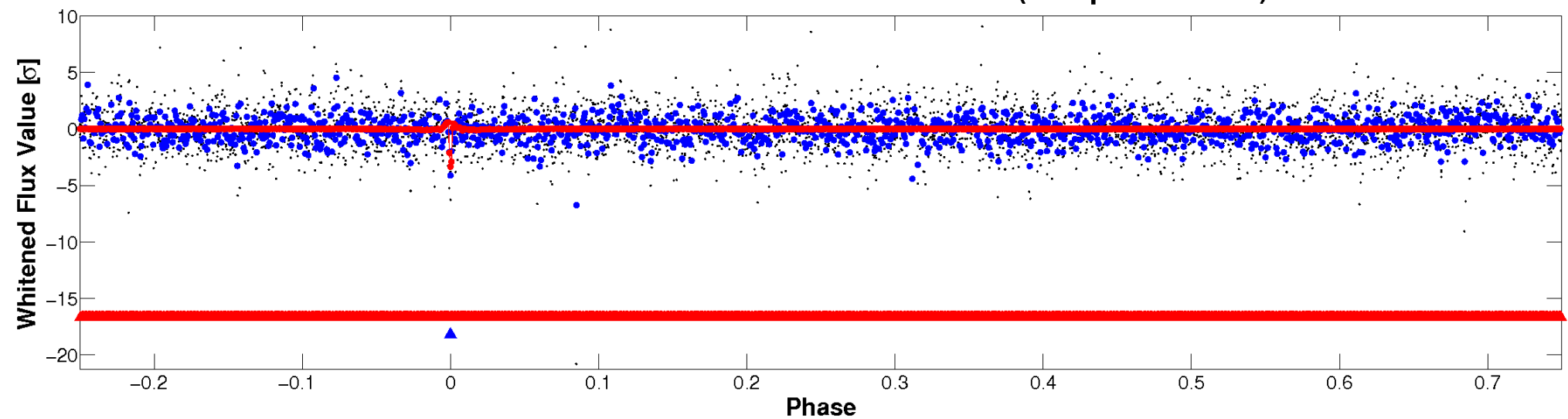
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

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

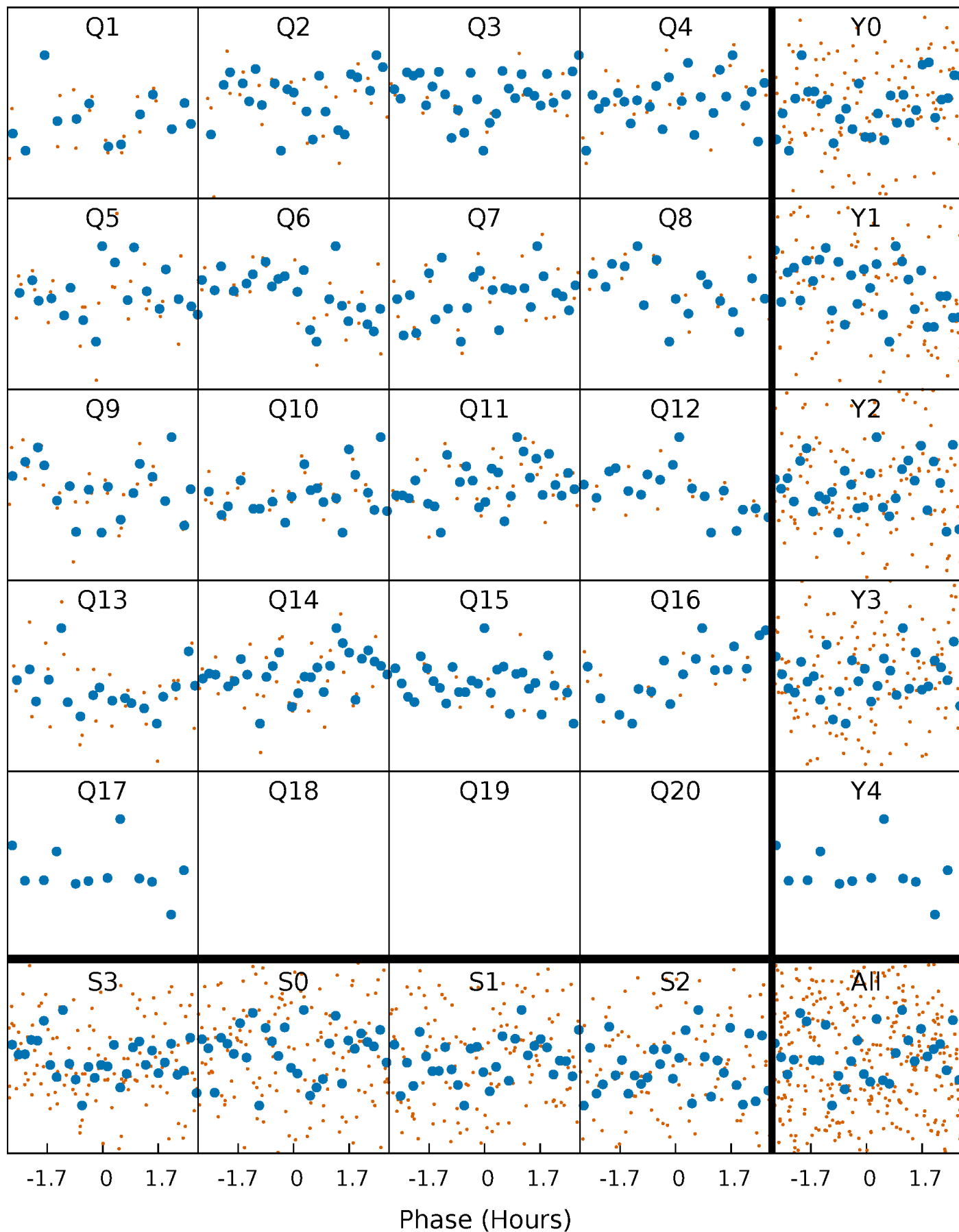


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



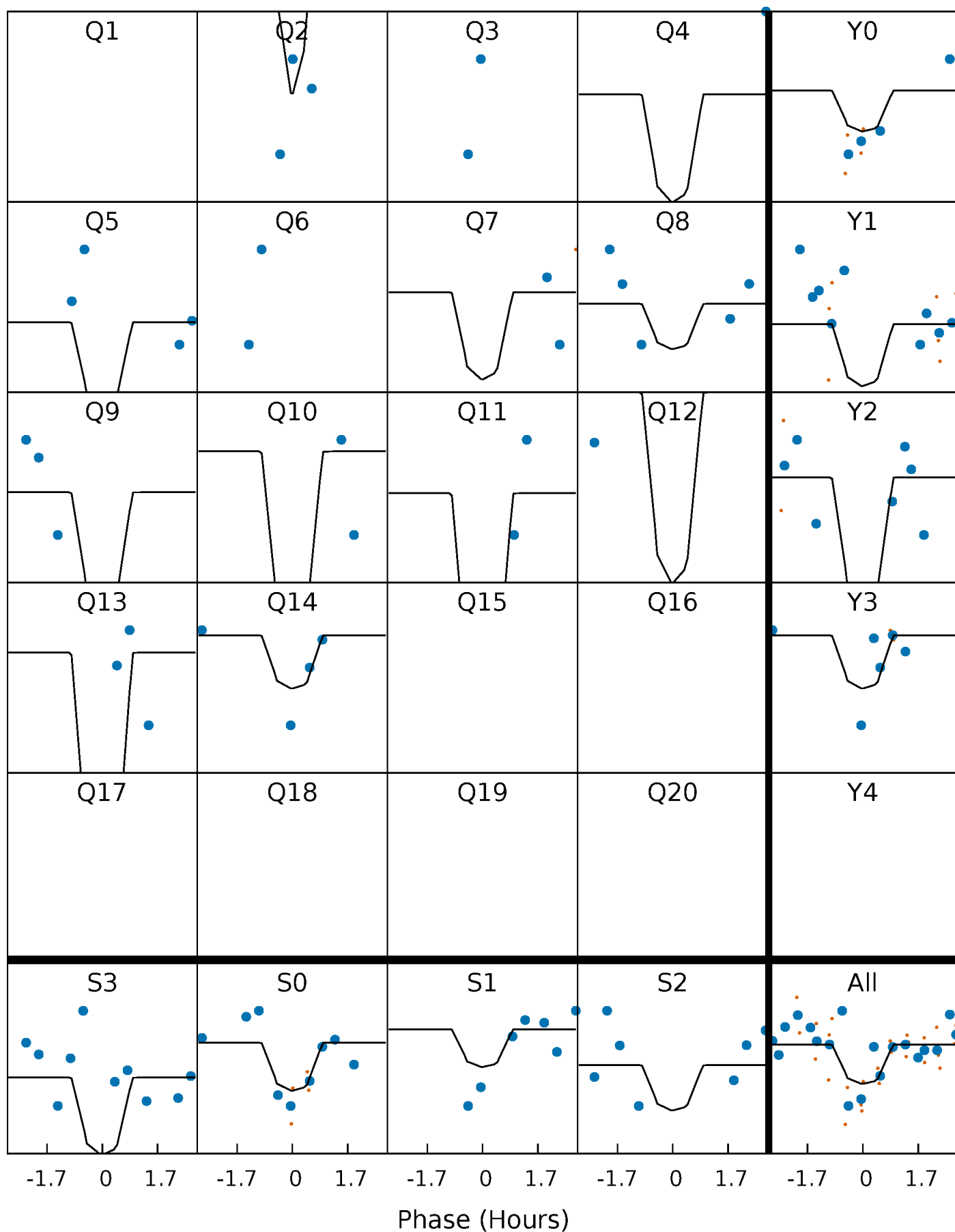
PDC Quarter-Phased Transit Curves

TCE 008507325-02 P= 28.120674 Days $T_0=133.201278$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 008507325-02 P= 28.120674 Days $T_0=133.201278$ (BKJD)

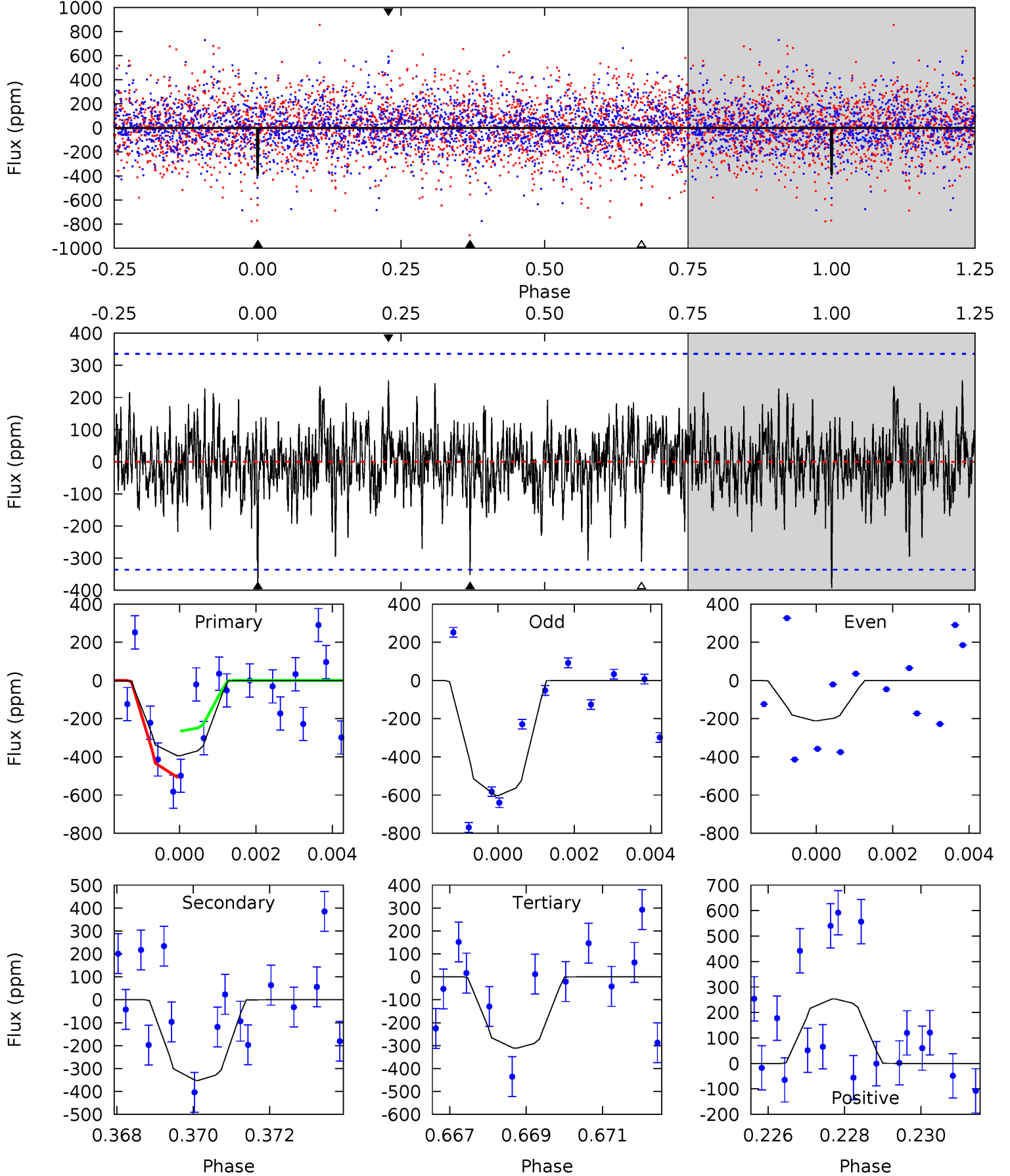


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

008507325-02, $P = 28.120674$ Days, $E = 105.080604$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.23	5.56	4.92	4.00	5.31	3.06	1.26	1.31	2.23	0.64	1.56	3.07	0.92	0.39	1.88



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 008507325

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7336^{+230}_{-281}	$3.506^{+0.612}_{-0.068}$	$-0.240^{+0.250}_{-0.300}$	$4.131^{+0.417}_{-2.361}$	$1.996^{+0.065}_{-0.619}$	$0.040^{+0.334}_{-0.009}$
	+3%/-4%	+17%/-2%	+104%/-125%	+10%/-57%	+3%/-31%	+838%/-22%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008507325-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-352 ± 63	$9.69^{+10.07}_{-6.15}$	1861^{+124}_{-271}	6102^{+5397}_{-1538}	101^{+645}_{-76}
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 $A_{obs} \gg 1.0$

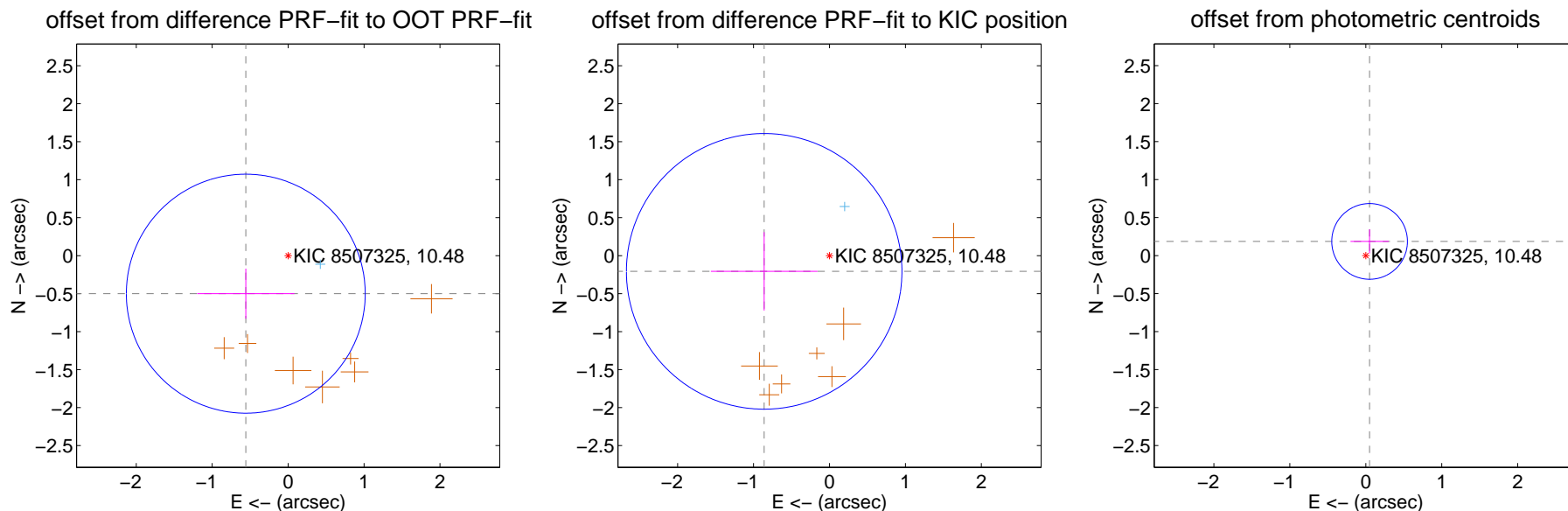
DV Centroid Data

Supplemental centroid analysis for 008507325-02. **Kepler magnitude: 10.48.** Transit SNR 8.31

There are 3 quarters with good PRF difference image offsets

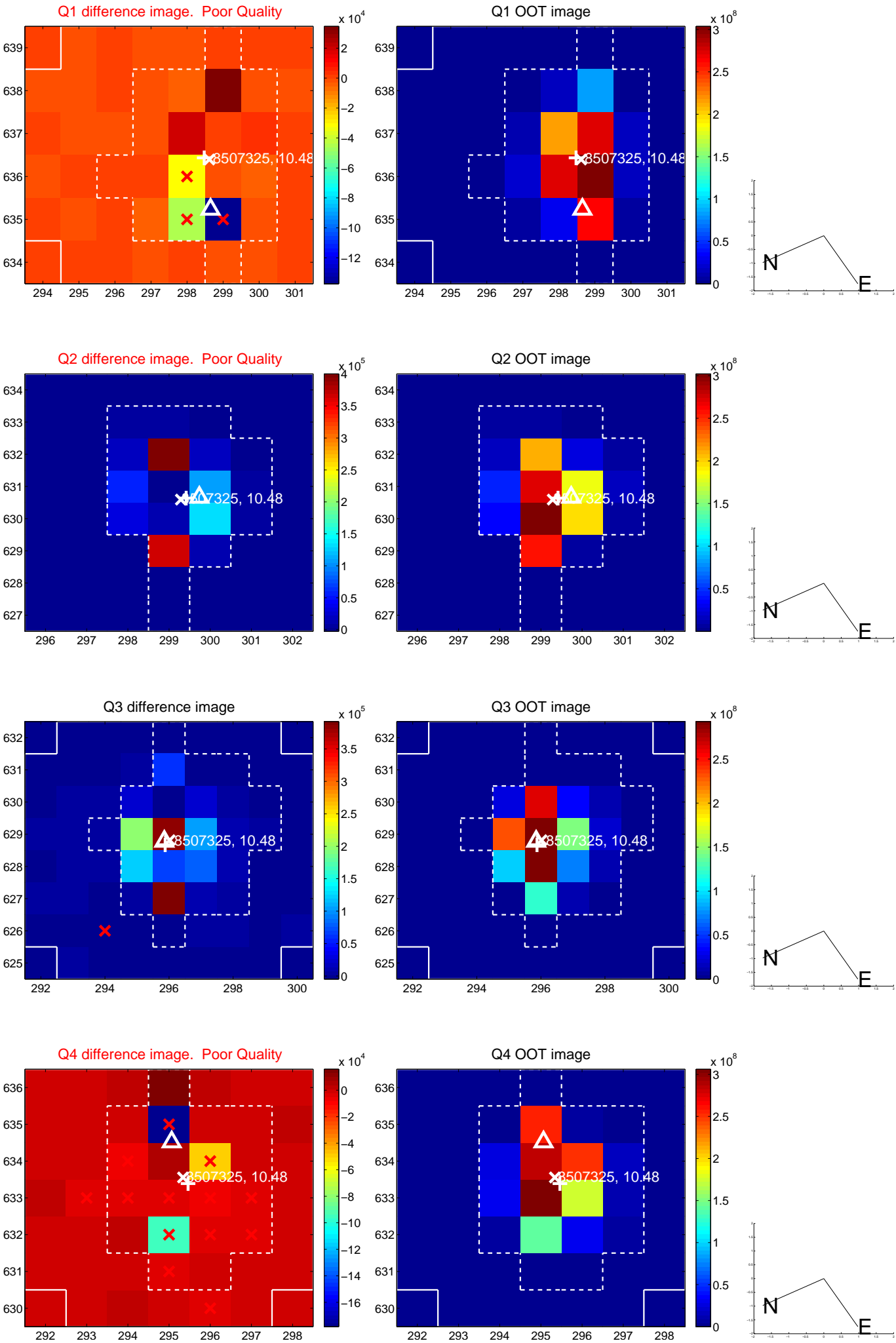
The direct PRF centroid is offset from the target star catalog position by about 0.58 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.749 ± 0.524	1.43	0.558 ± 0.640	-0.501 ± 0.330
PRF-fit source offset from KIC position	0.885 ± 0.605	1.46	0.860 ± 0.703	-0.207 ± 0.515
photometric centroid source offset	0.19 ± 0.17	1.16	-0.05 ± 0.25	0.19 ± 0.16

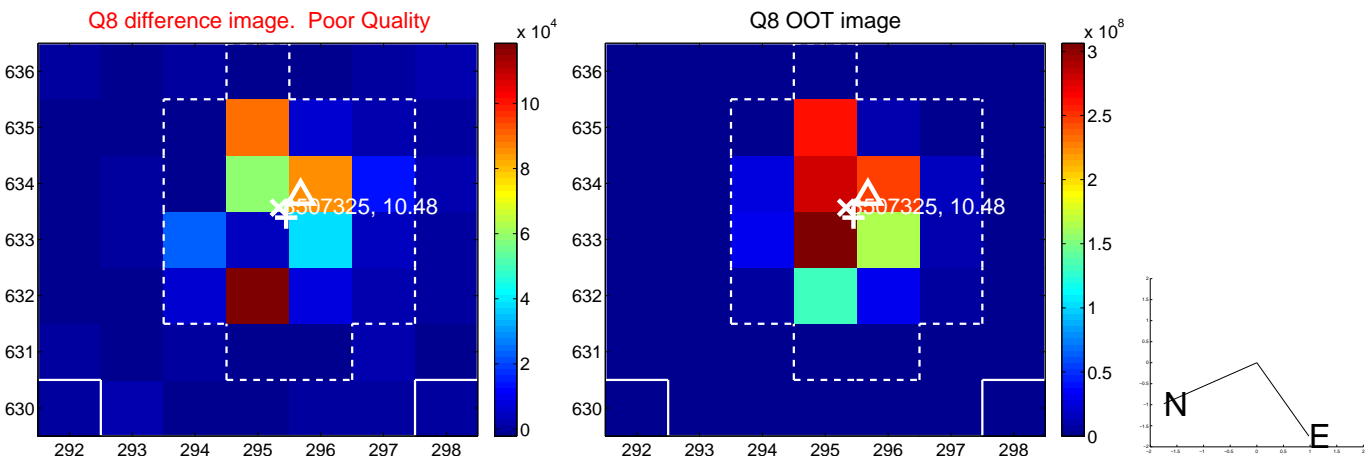
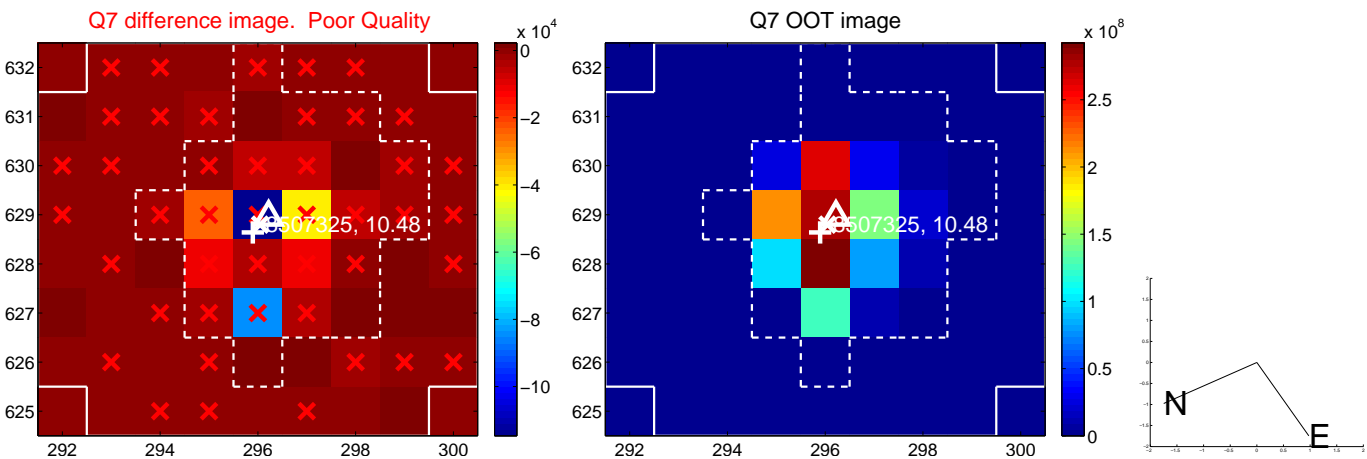
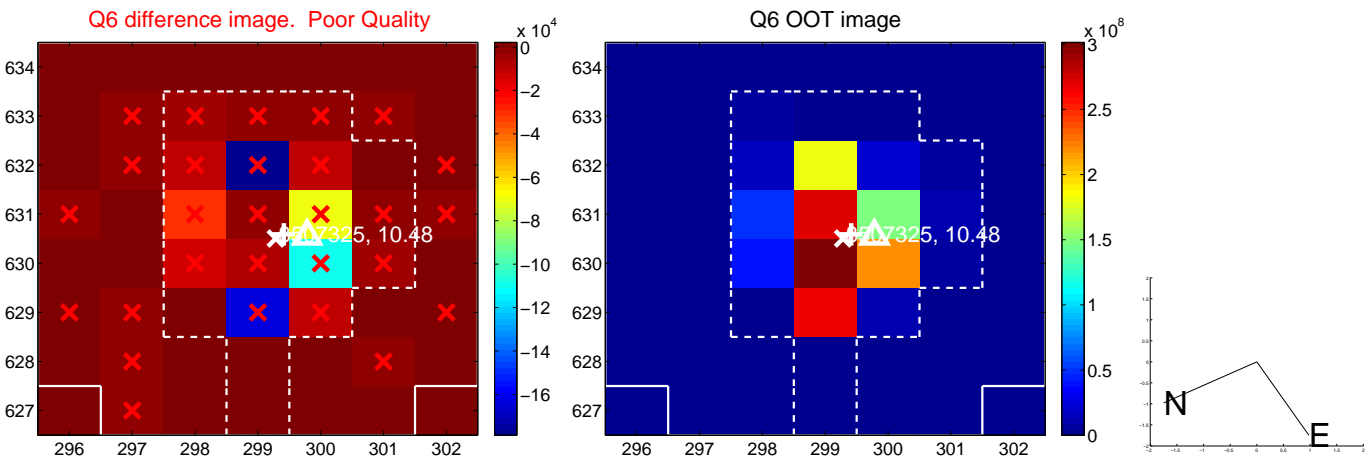
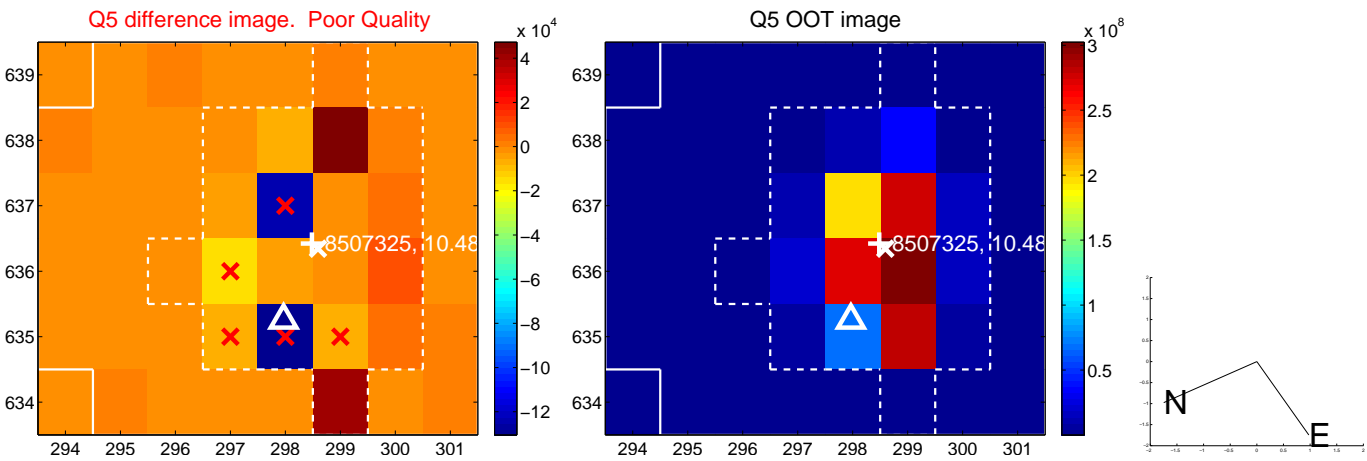


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

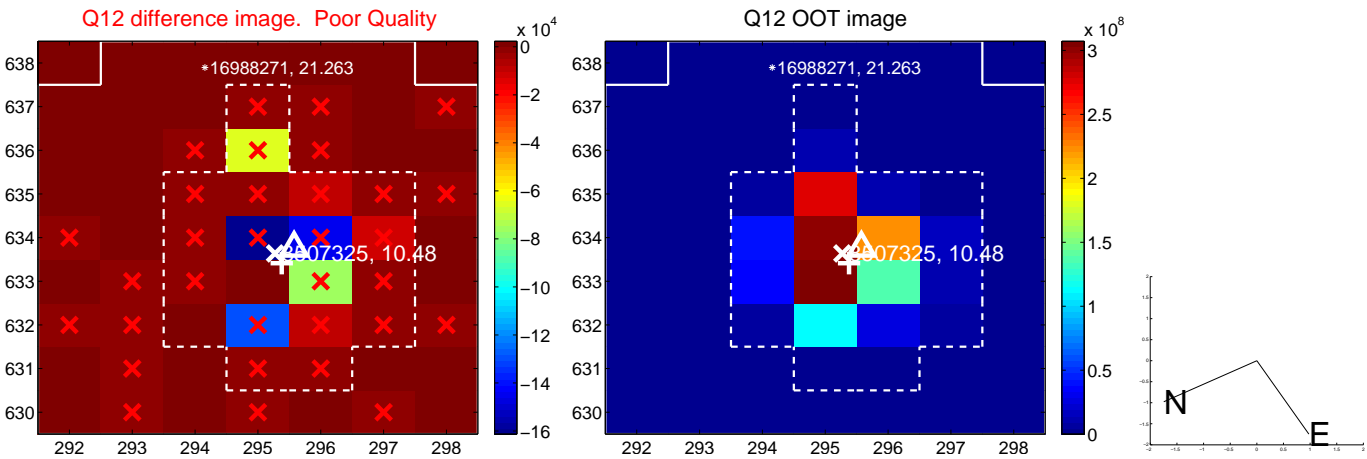
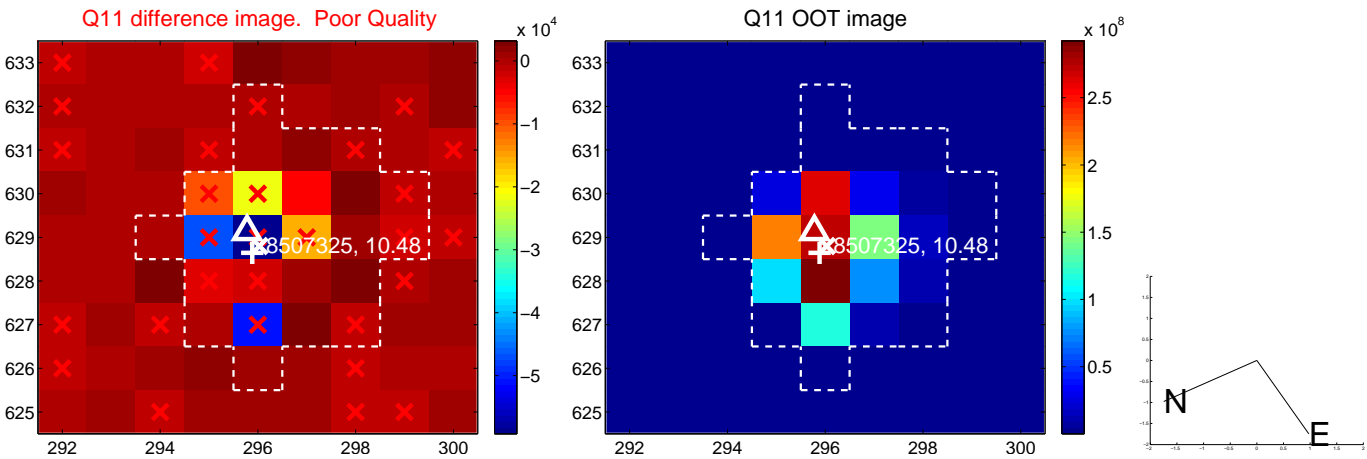
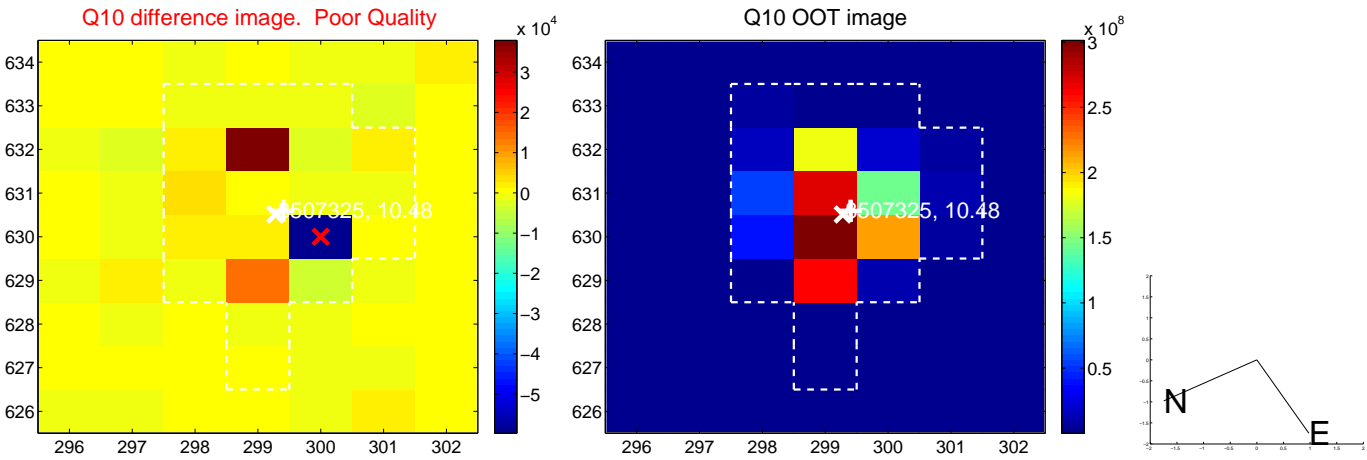
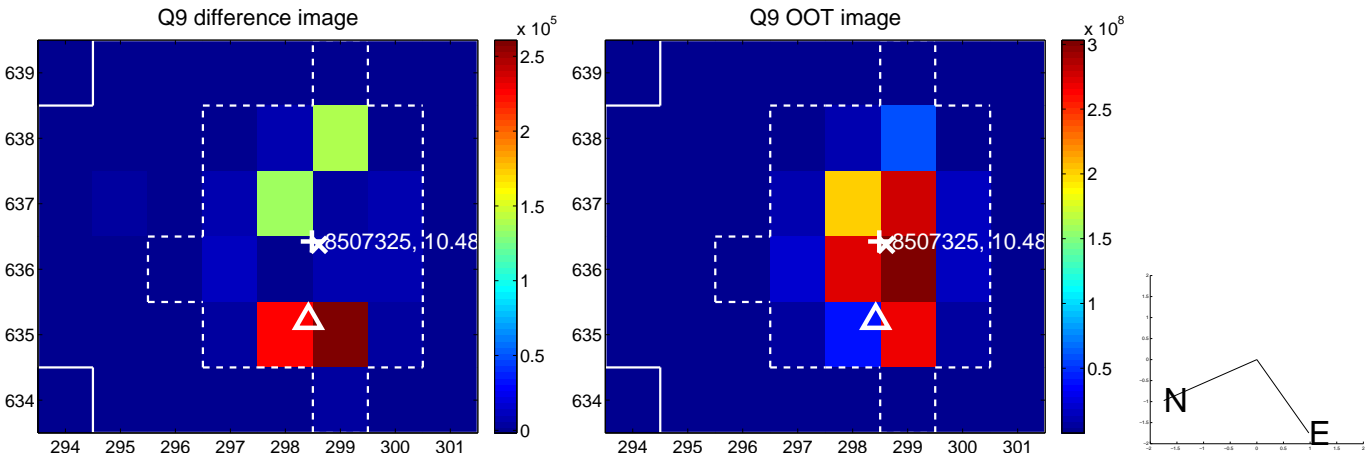
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



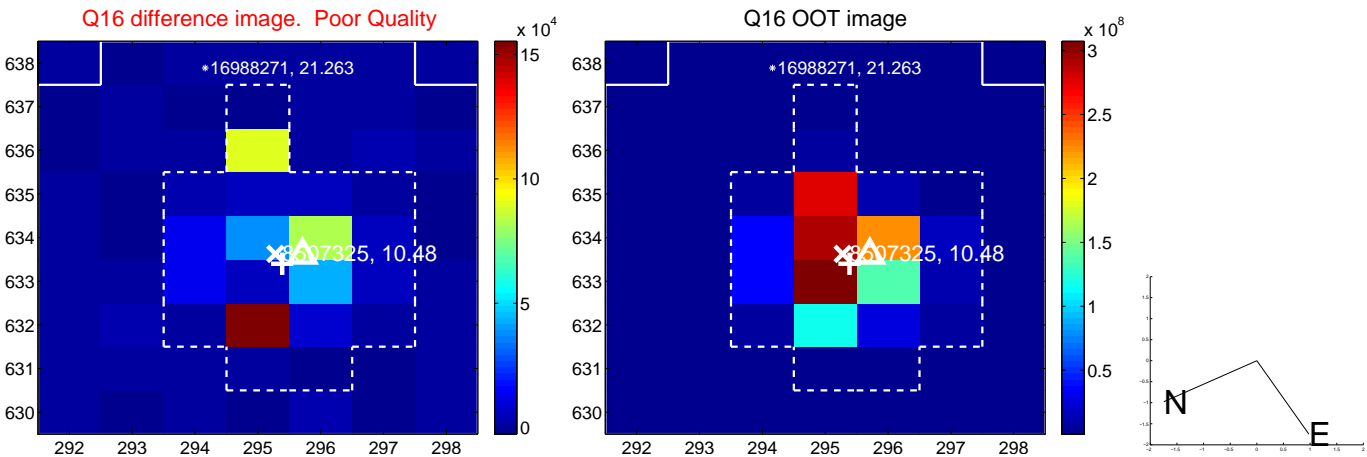
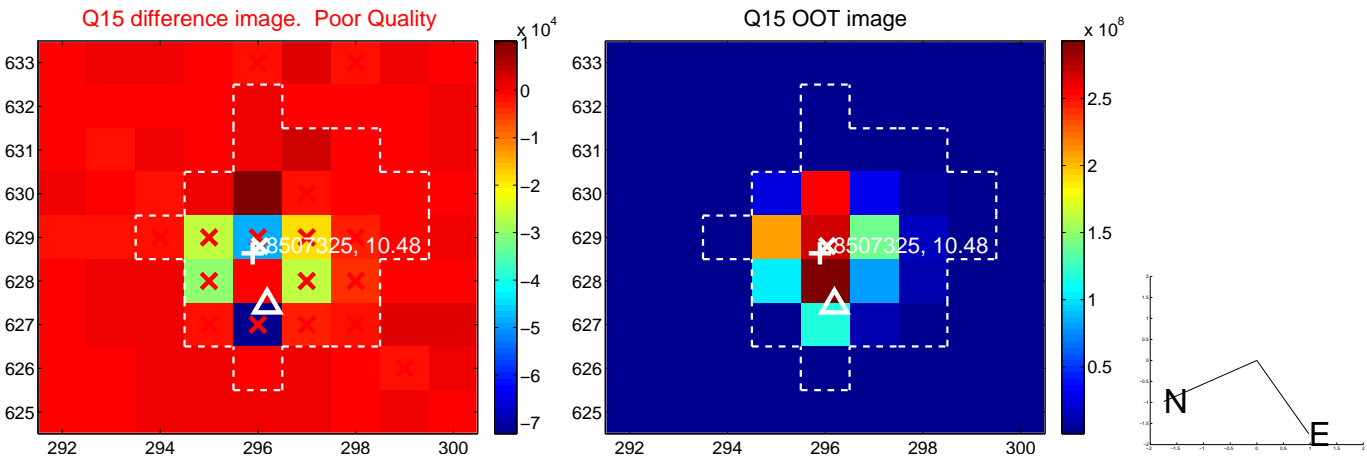
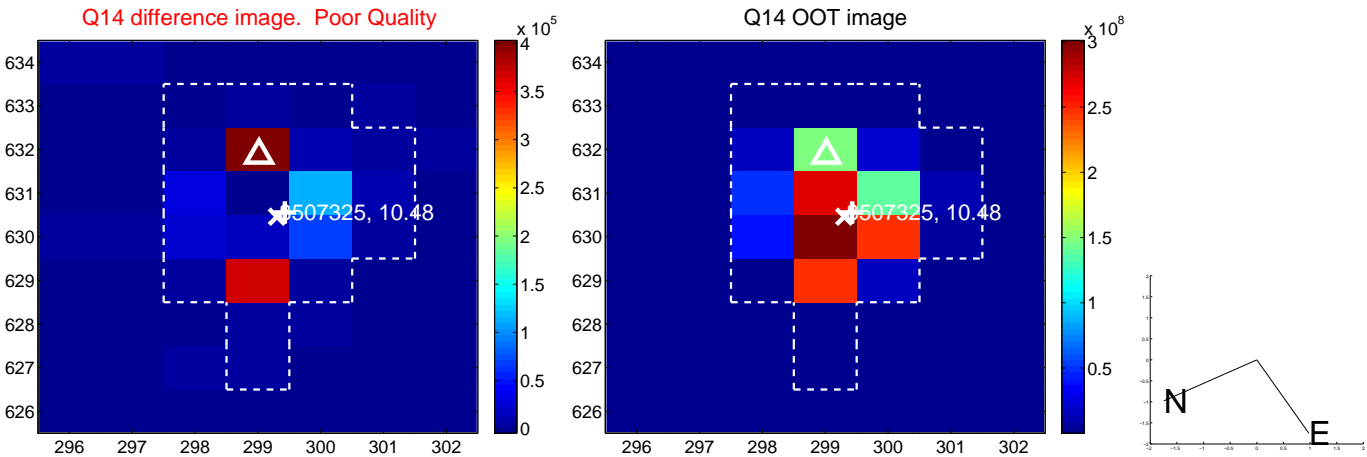
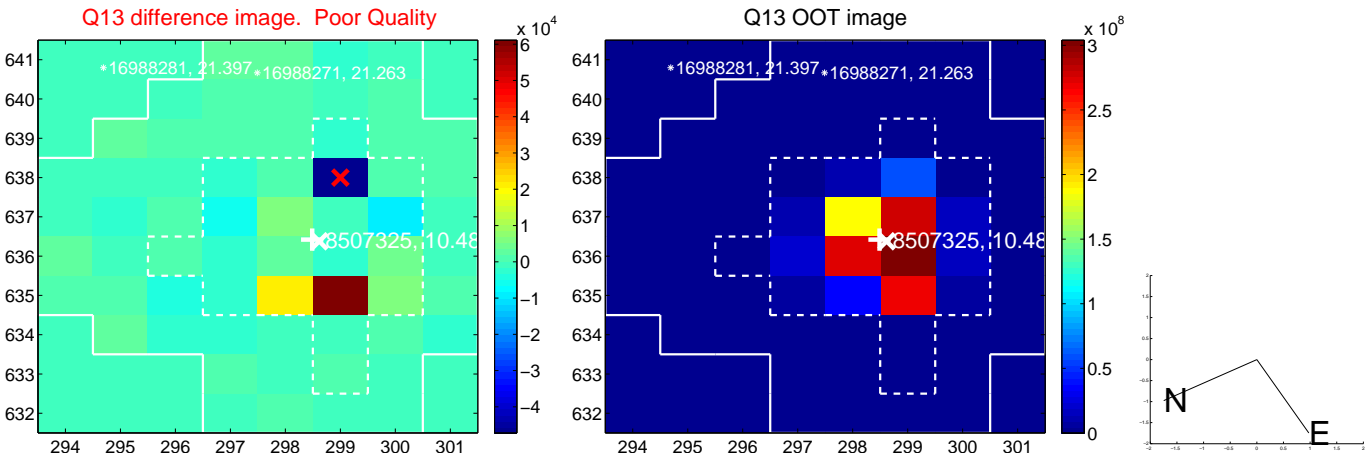
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



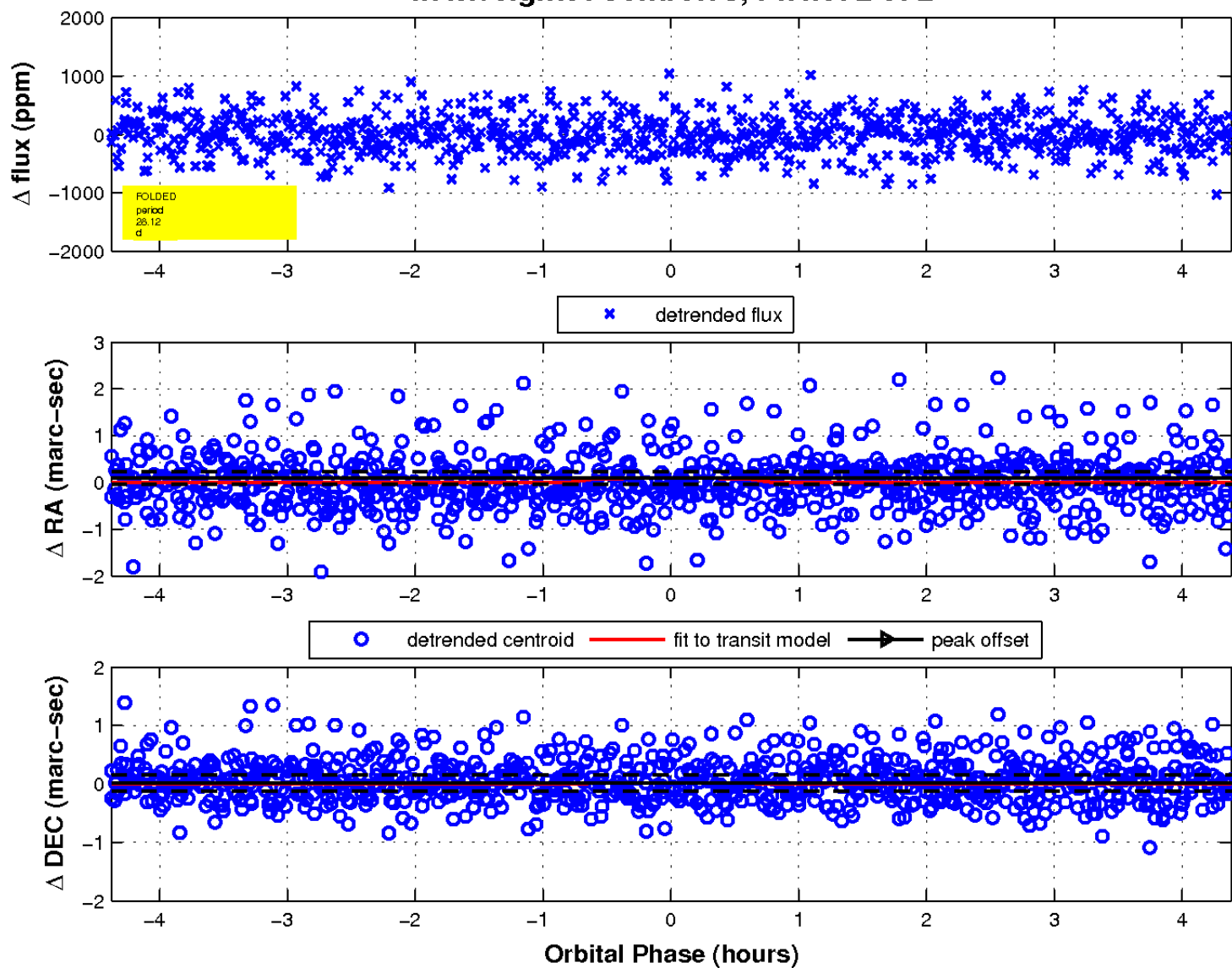
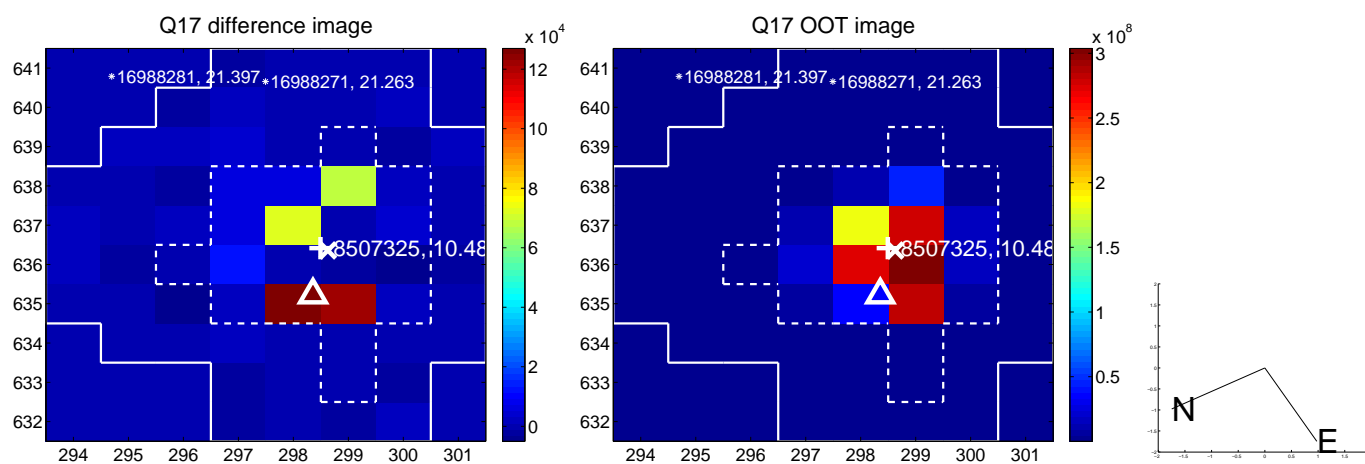
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

