

KIC 005567499

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})
005567499-01	OBS	No	0.925943	132.489275	24.4	5.279	9.3	8.2	2.88	7737	1.49	49552.92
005567499-02	OBS	No	117.511070	133.832643	314.2	7.345	8.1	9.2	2.88	7737	5.65	77.70

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005567499-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT
005567499-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

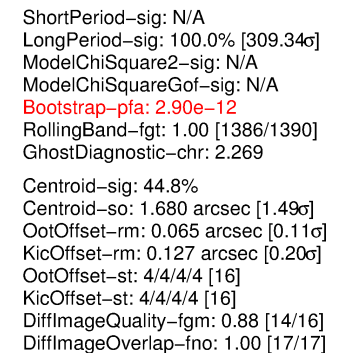
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

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

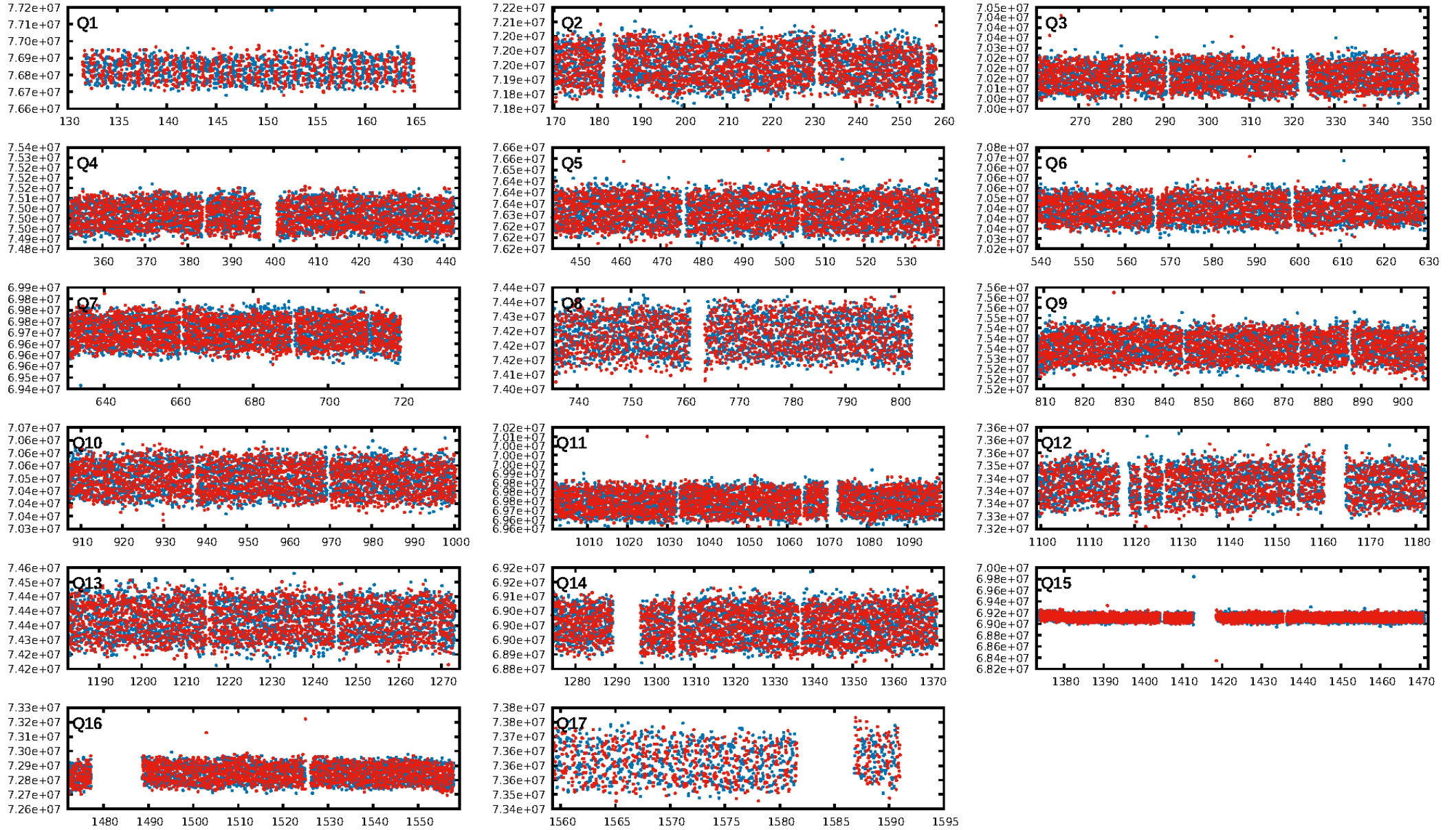
Ephemeris Match Information For 005567499-01

No Significant Match Found

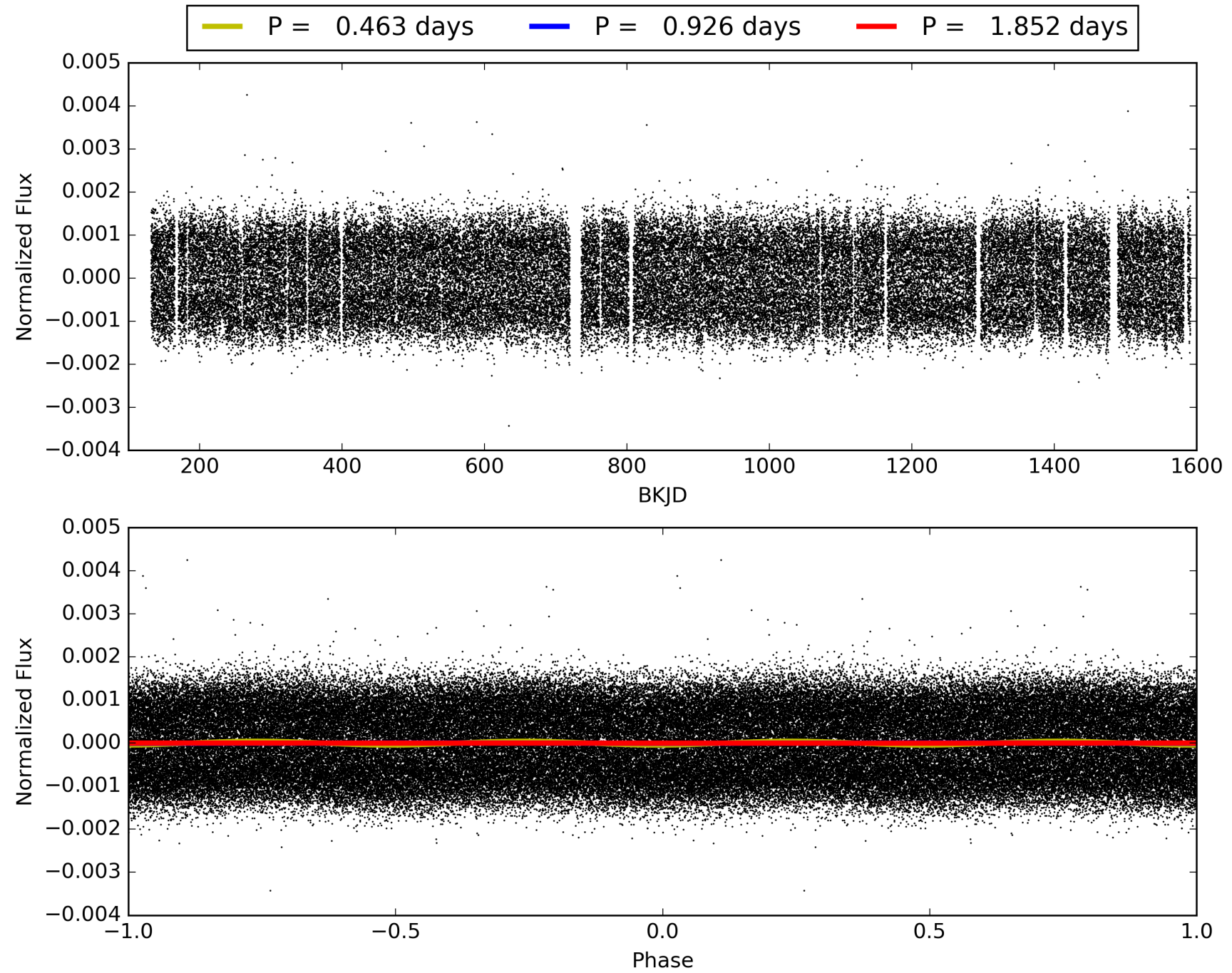
KIC: 5567499 Candidate: 1 of 2 Period: 0.926 d



TCE 005567499-01, PDC Light Curves

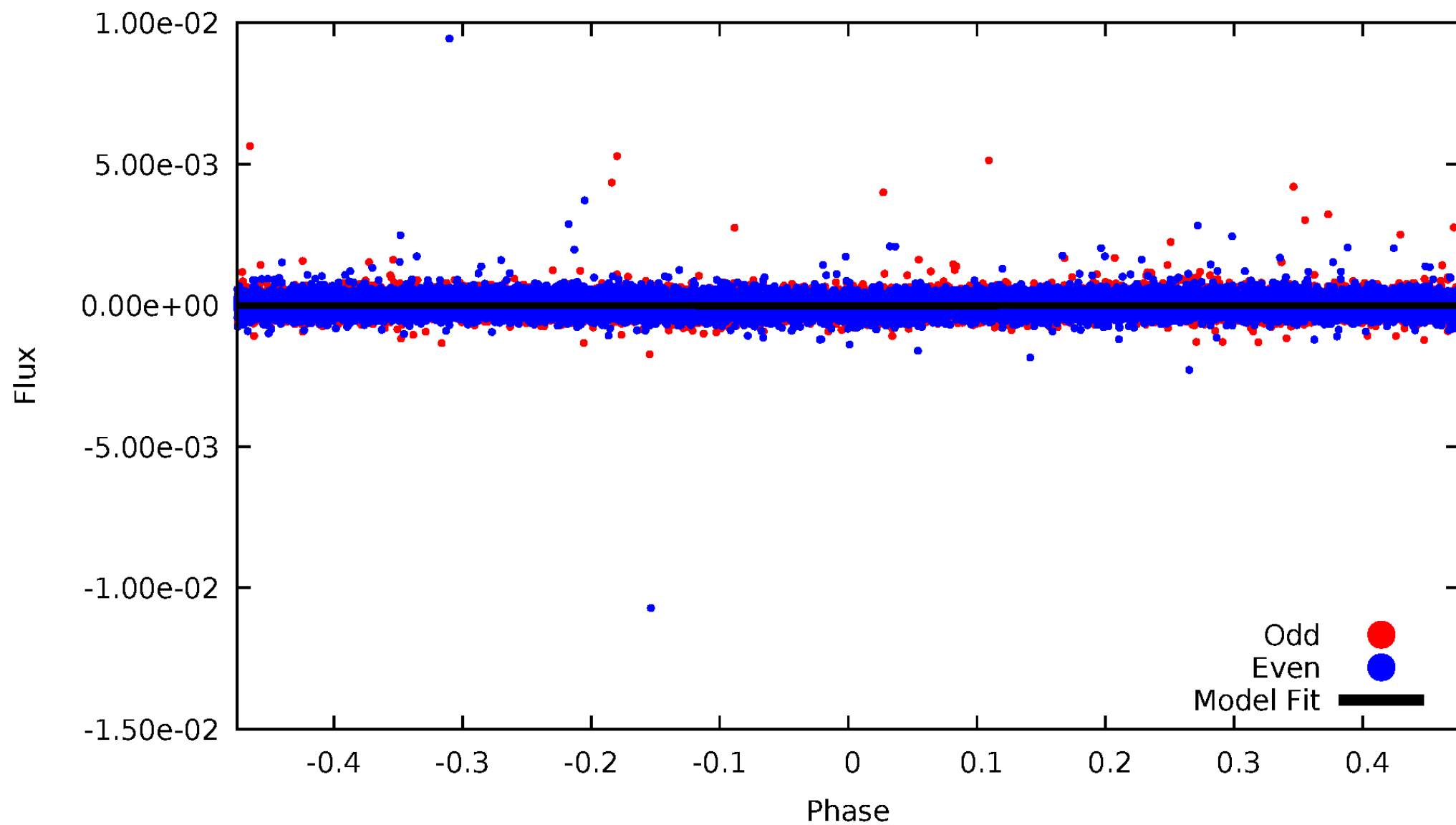


TCE 005567499-01



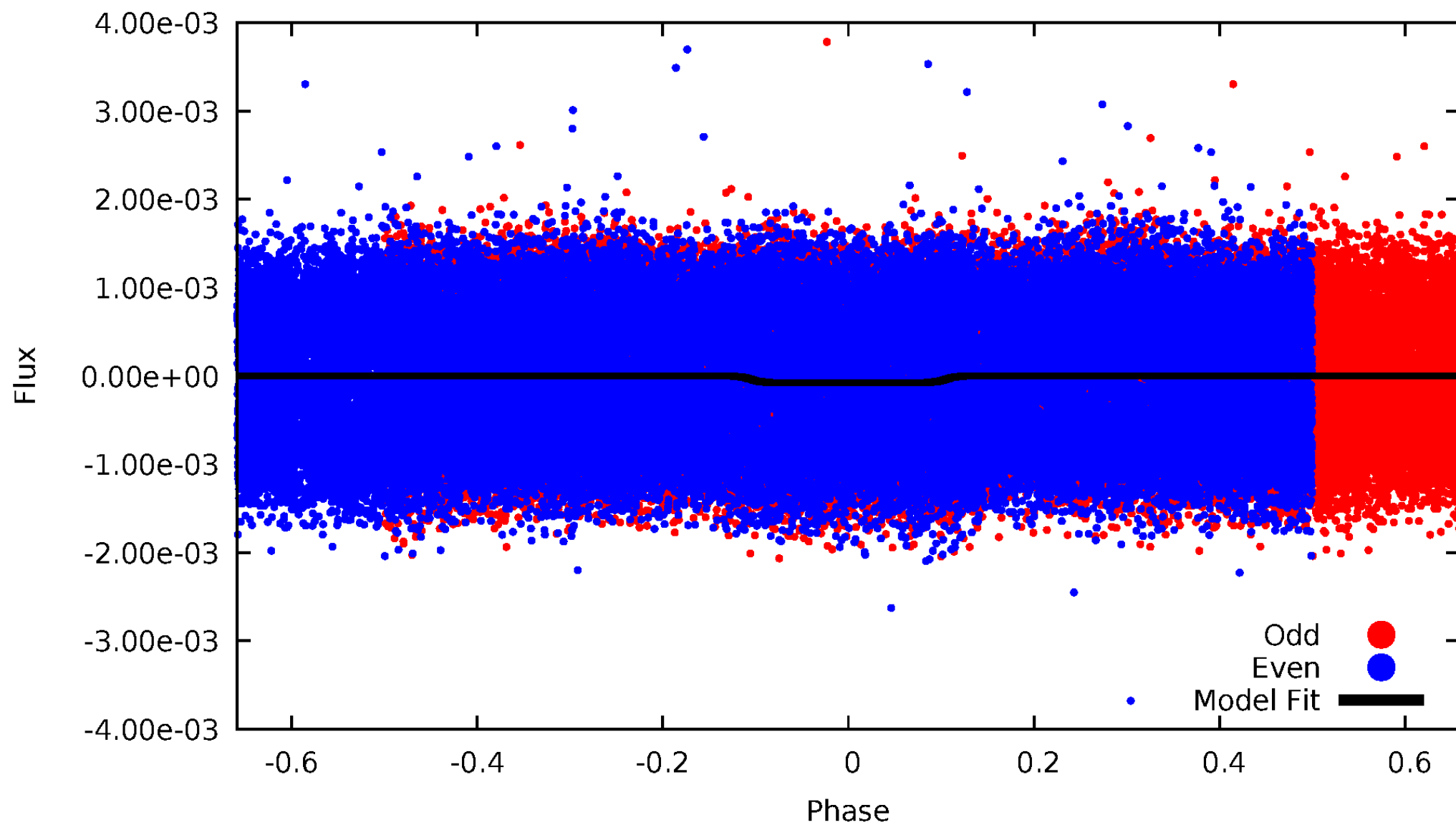
DV Odd/Even

TCE 005567499-01

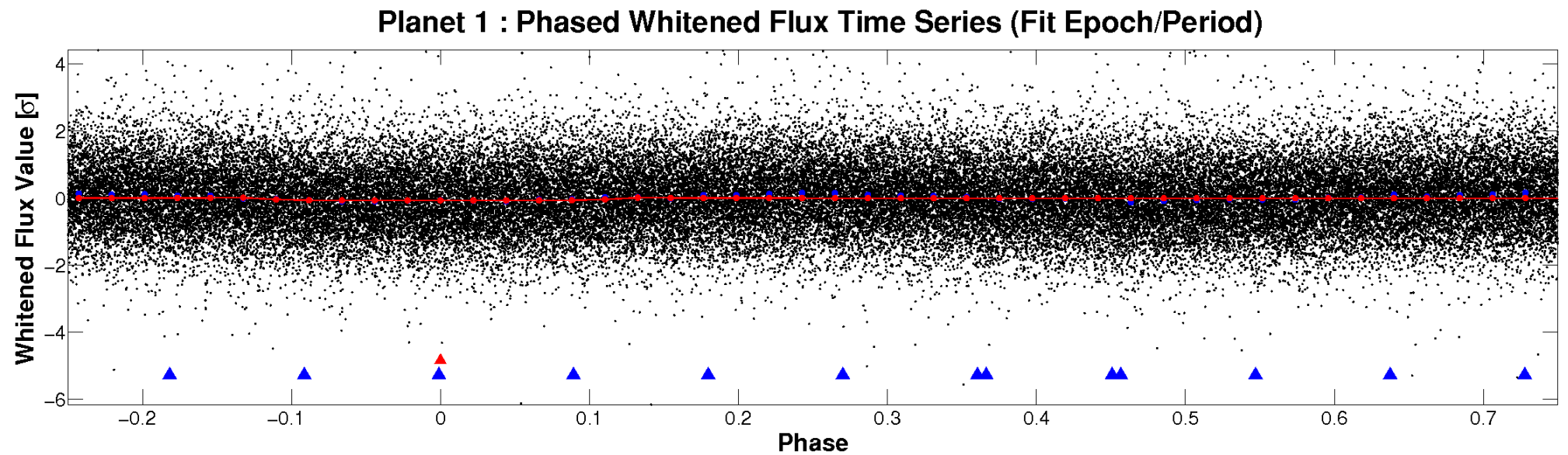
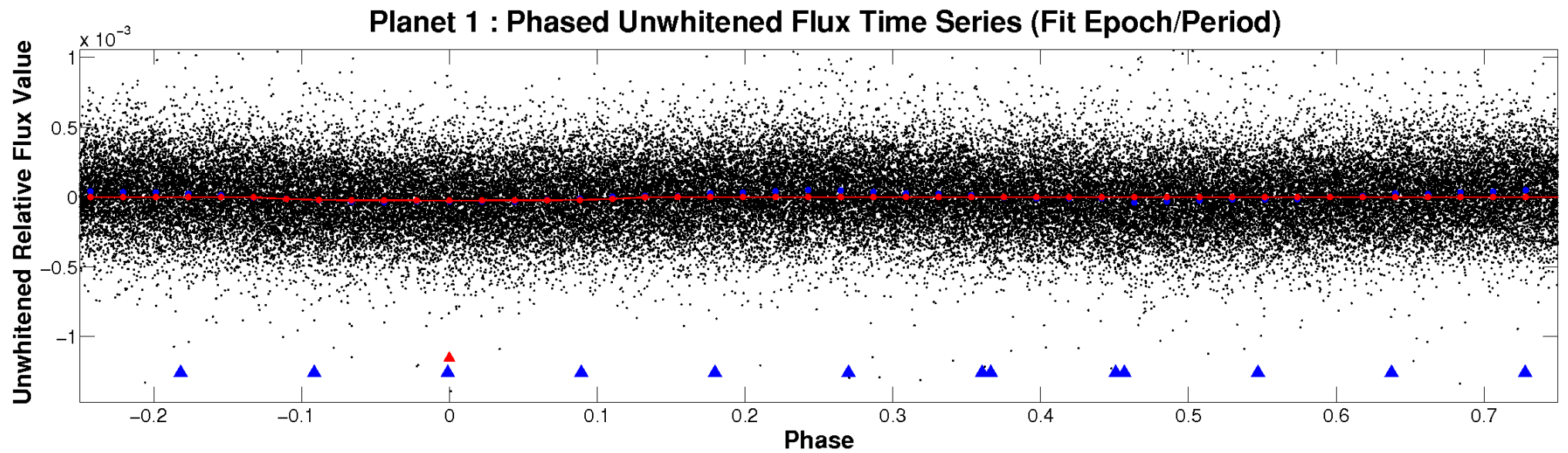


ALT Odd/Even

TCE 005567499-01

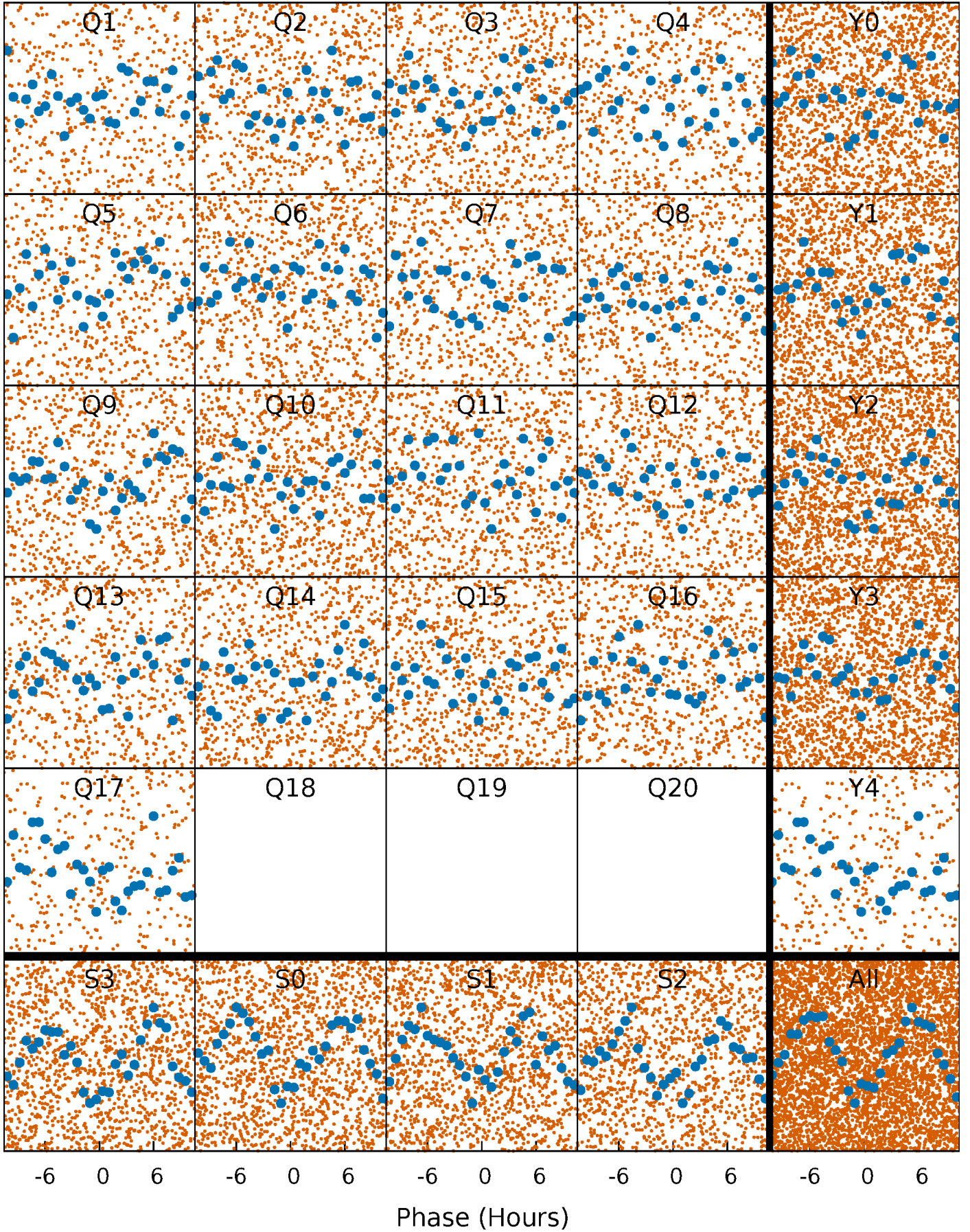


Non-Whitened Vs. Whitened Light Curve



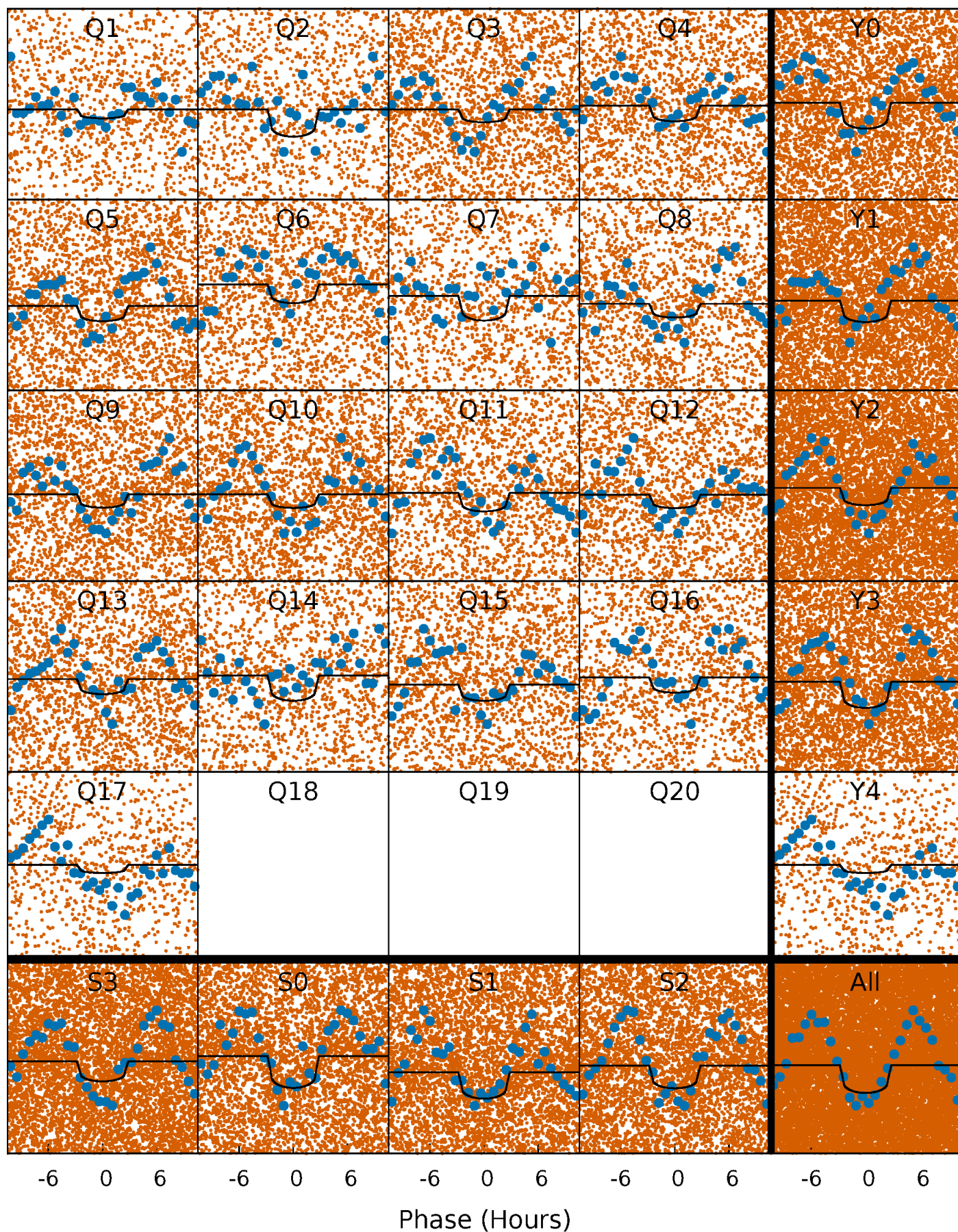
PDC Quarter-Phased Transit Curves

TCE 005567499-01 P= 0.925943 Days $T_0=132.489275$ (BKJD)



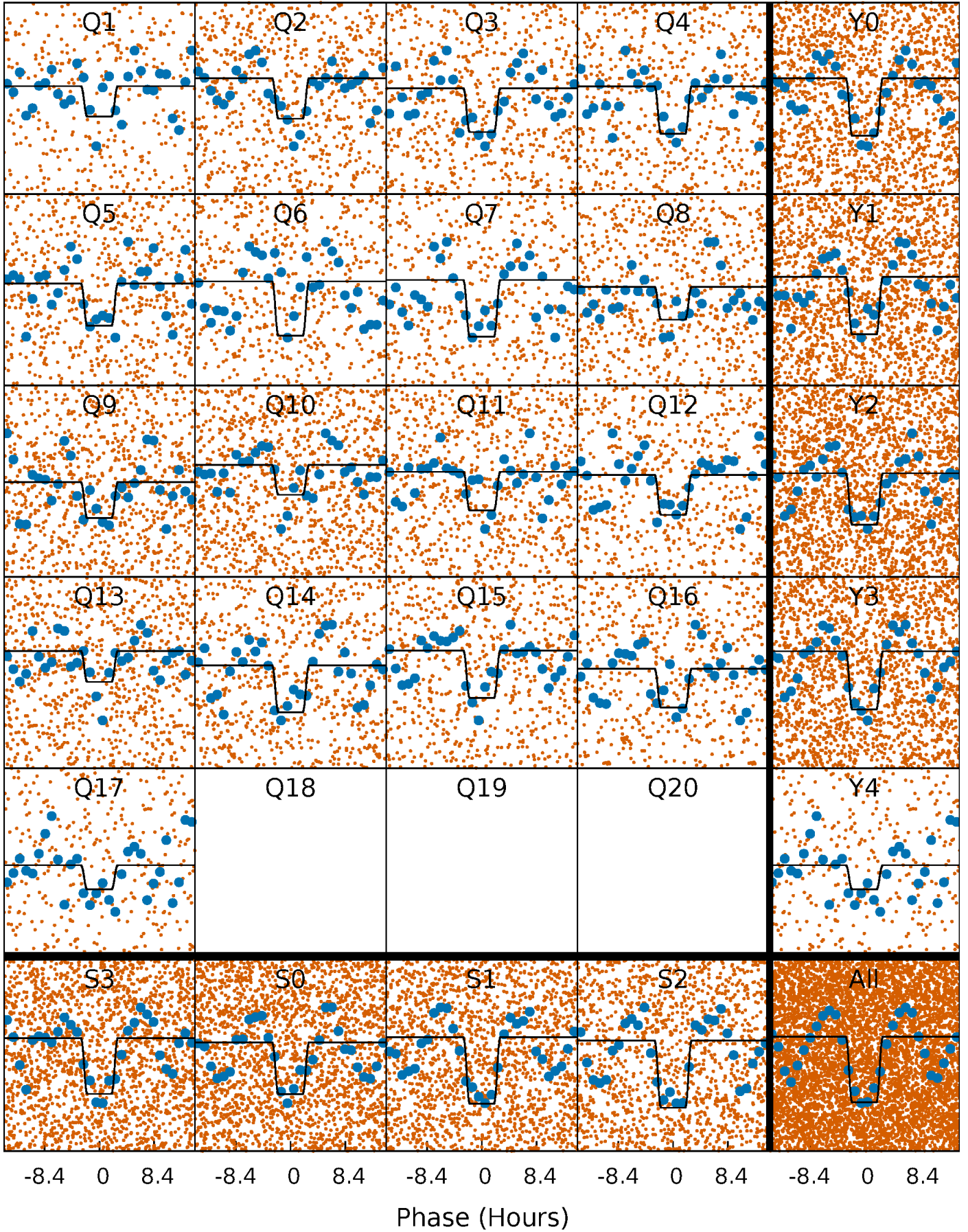
DV Quarter-Phased Transit Curves

TCE 005567499-01 P= 0.925943 Days $T_0=132.489275$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

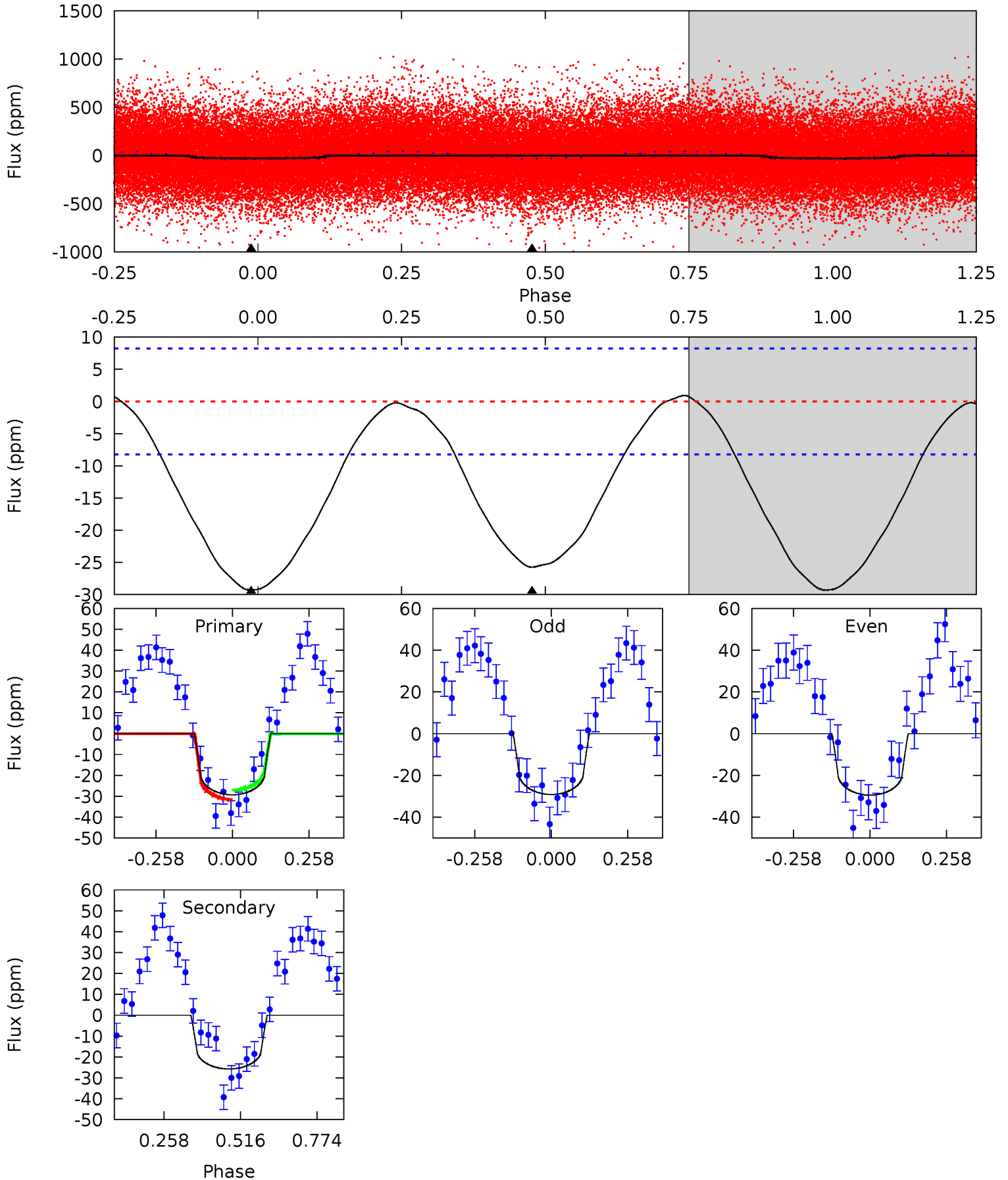
TCE 005567499-01 P= 0.926031 Days $T_0=132.405080$ (BKJD)



DV Model-Shift Uniqueness Test

005567499-01, P = 0.925943 Days, E = 130.637389 Days

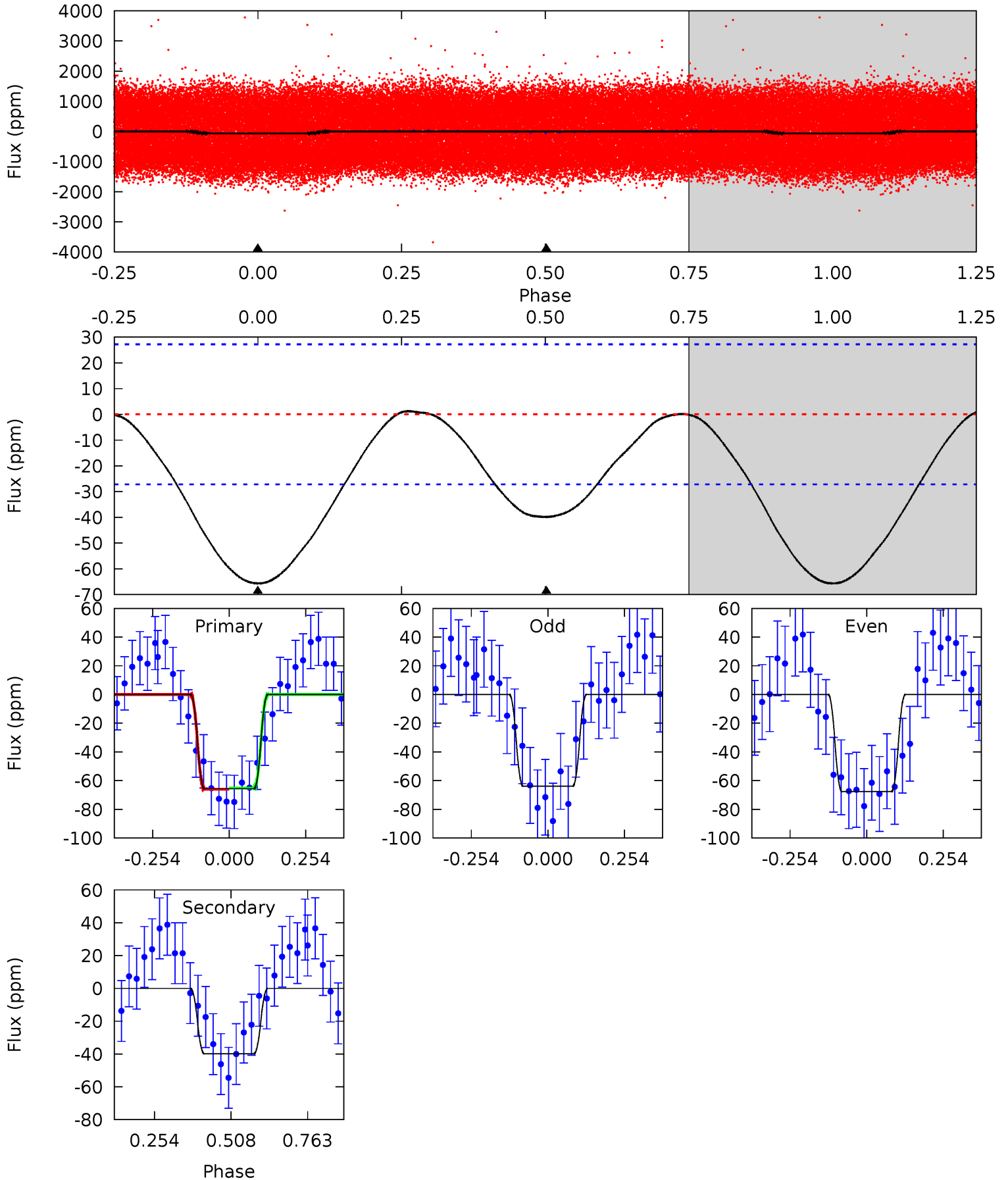
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.5	13.6	0	0	4.36	1.13	0.33	15.5	15.5	13.6	13.6	0.09	0.92	0.03	1.25



Alt Model-Shift Uniqueness Test

005567499-01, P = 0.926031 Days, E = 131.479049 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.5	6.40	0	0	4.36	1.14	0.19	10.5	10.5	6.40	6.40	0.30	0.88	0.02	0.08



Stellar Parameters For KIC 005567499

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7737^{+211}_{-316}	$3.807^{+0.383}_{-0.090}$	$-0.140^{+0.200}_{-0.350}$	$2.884^{+0.402}_{-1.286}$	$1.948^{+0.088}_{-0.496}$	$0.114^{+0.338}_{-0.033}$
	+3%/-4%	+10%/-2%	+143%/-250%	+14%/-45%	+5%/-25%	+295%/-29%
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 005567499-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-26 ± 2	$1.33^{+0.80}_{-0.63}$	5159^{+367}_{-550}	7745^{+4353}_{-1633}	$4.099^{+10.639}_{-2.455}$
Alt.	-40 ± 6	$2.43^{+0.86}_{-0.83}$	5144^{+364}_{-549}	6220^{+1424}_{-997}	$1.968^{+2.204}_{-0.904}$

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

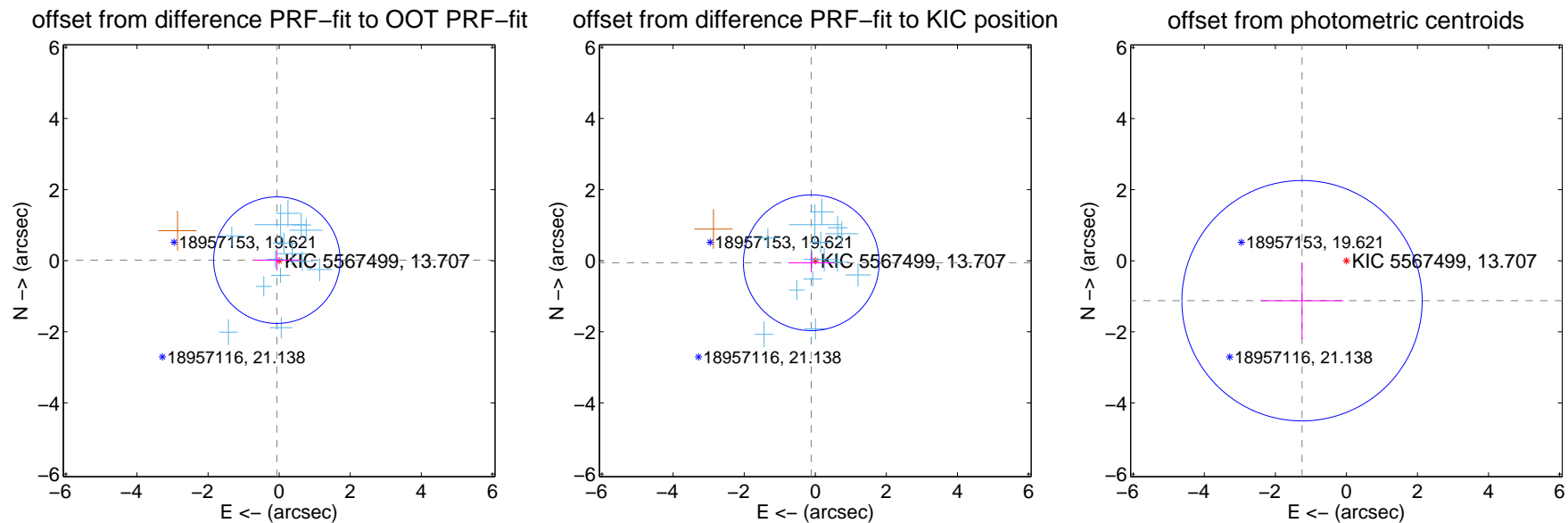
DV Centroid Data

Supplemental centroid analysis for 005567499-01. Kepler magnitude: 13.71. Transit SNR 8.18

There are 14 quarters with good PRF difference image offsets

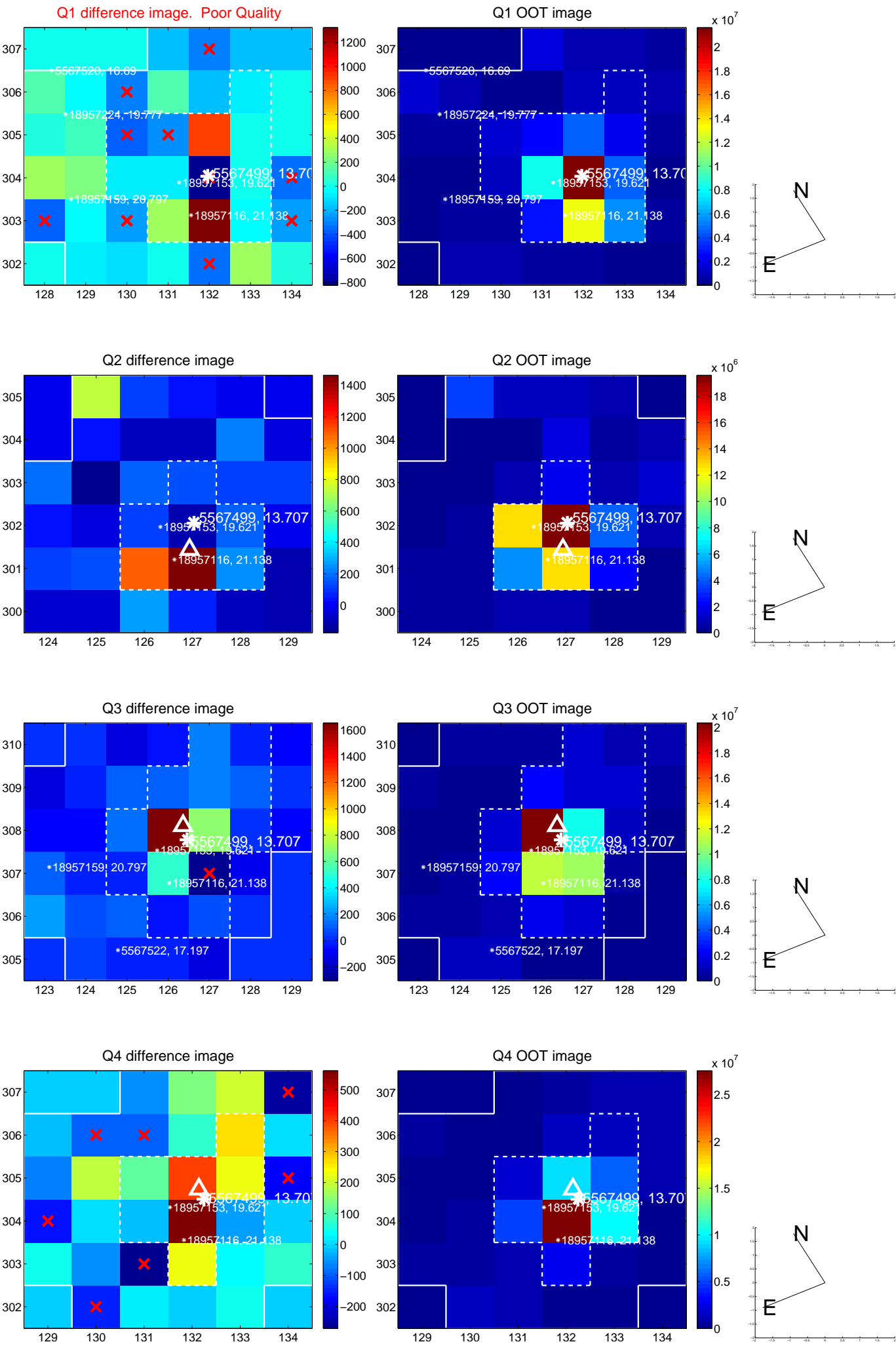
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.065 ± 0.593	0.11	0.063 ± 0.631	0.015 ± 0.265
PRF-fit source offset from KIC position	0.127 ± 0.636	0.20	0.113 ± 0.647	-0.058 ± 0.276
photometric centroid source offset	1.68 ± 1.13	1.49	1.25 ± 1.16	-1.12 ± 1.08

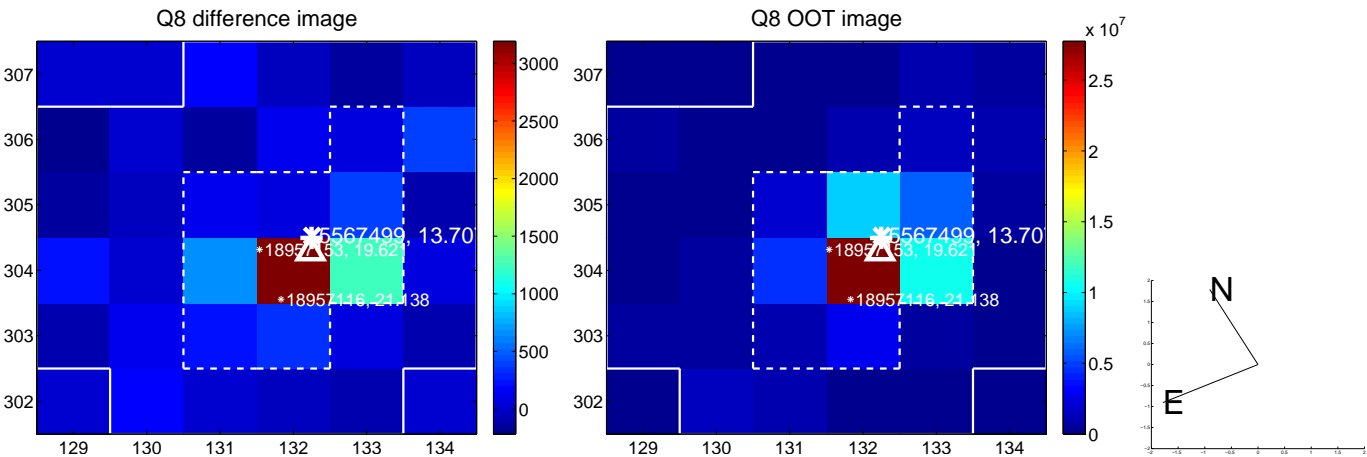
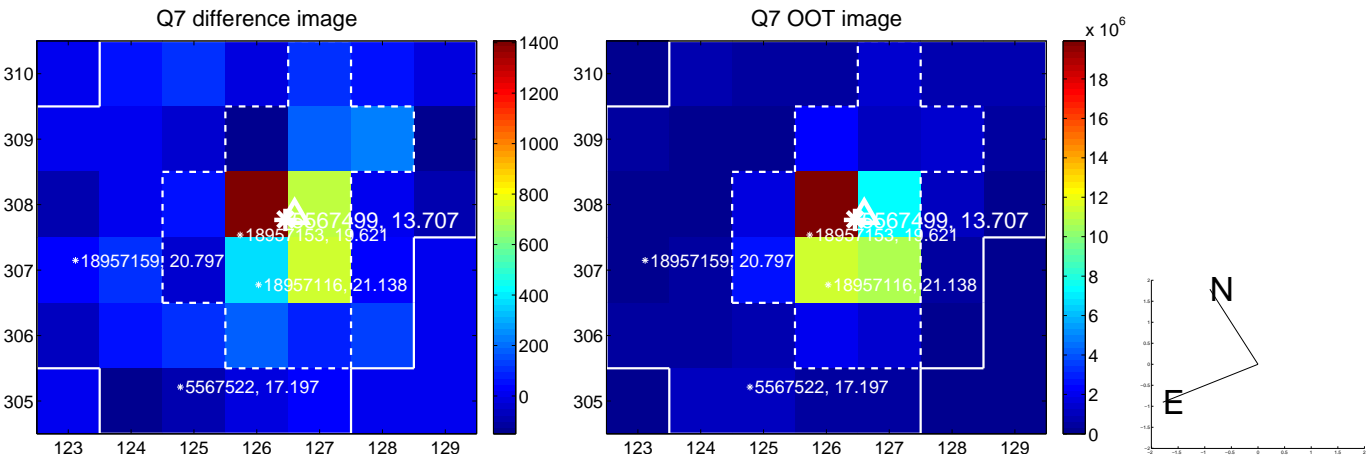
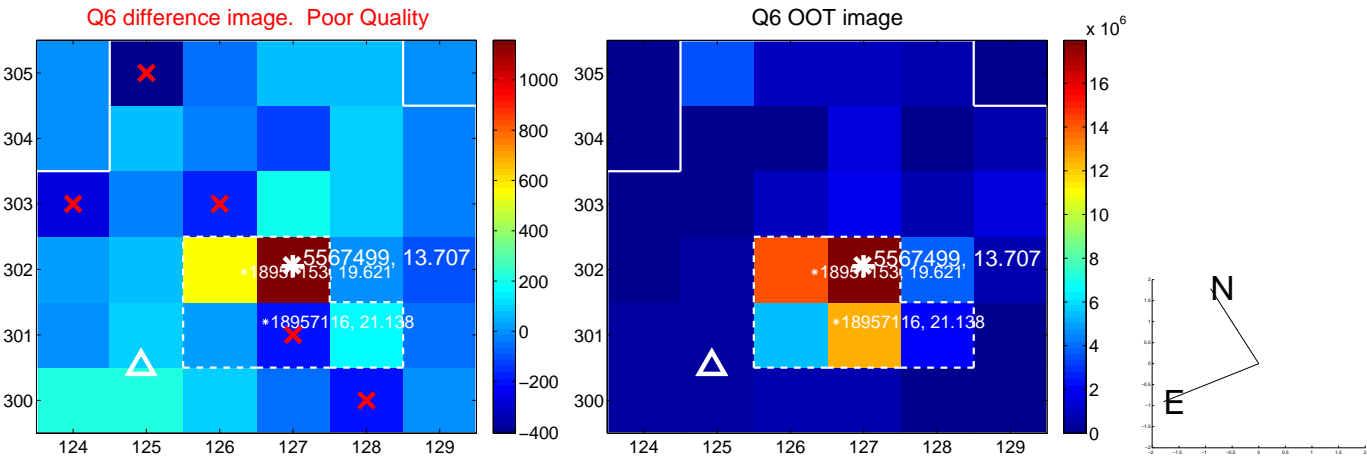
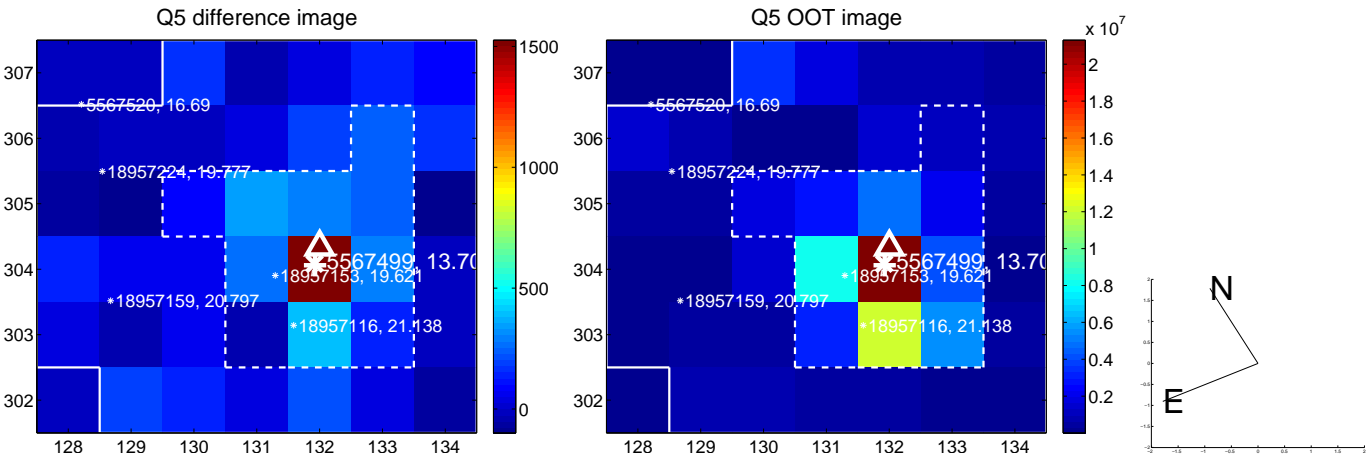


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

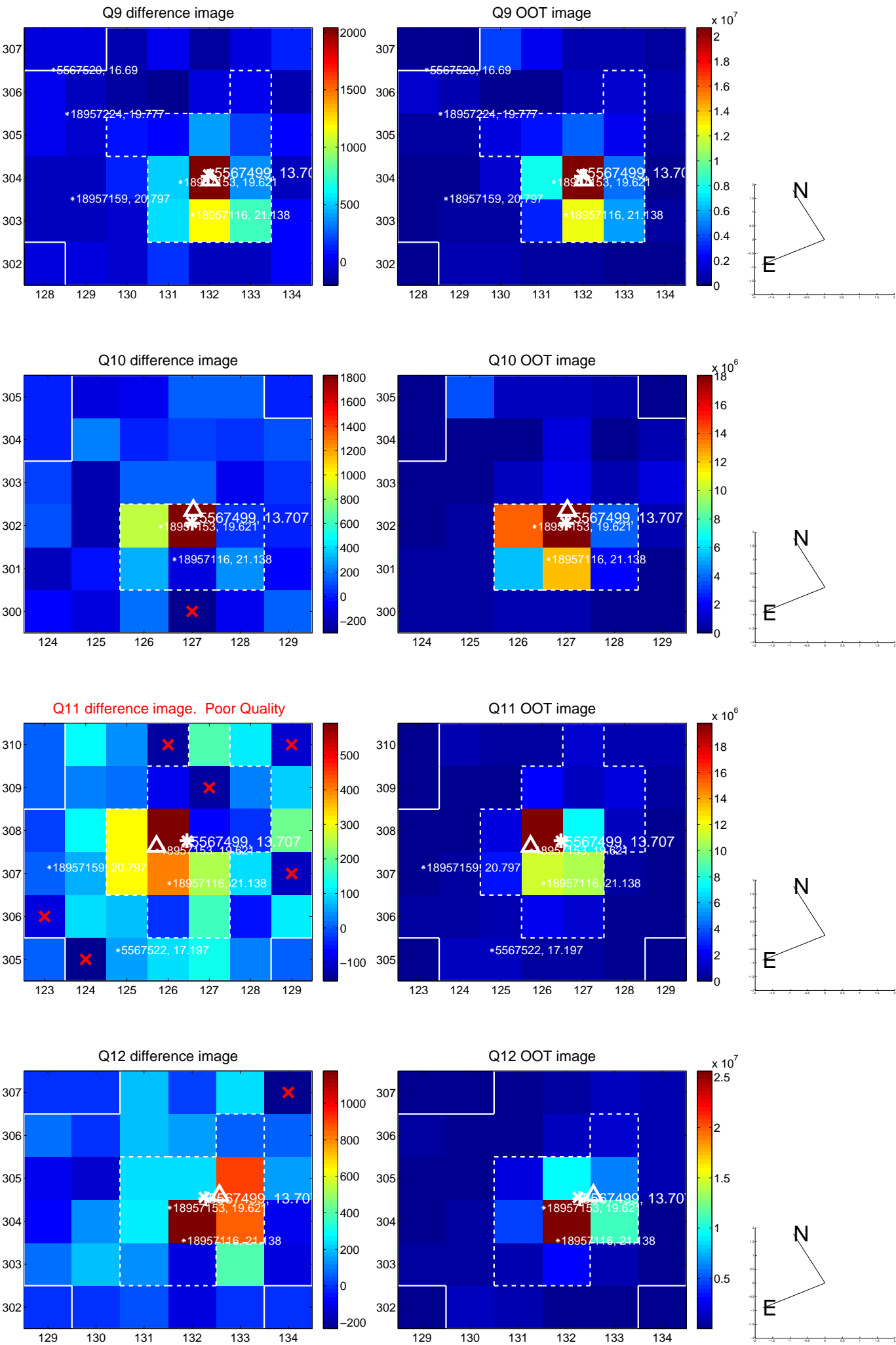
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



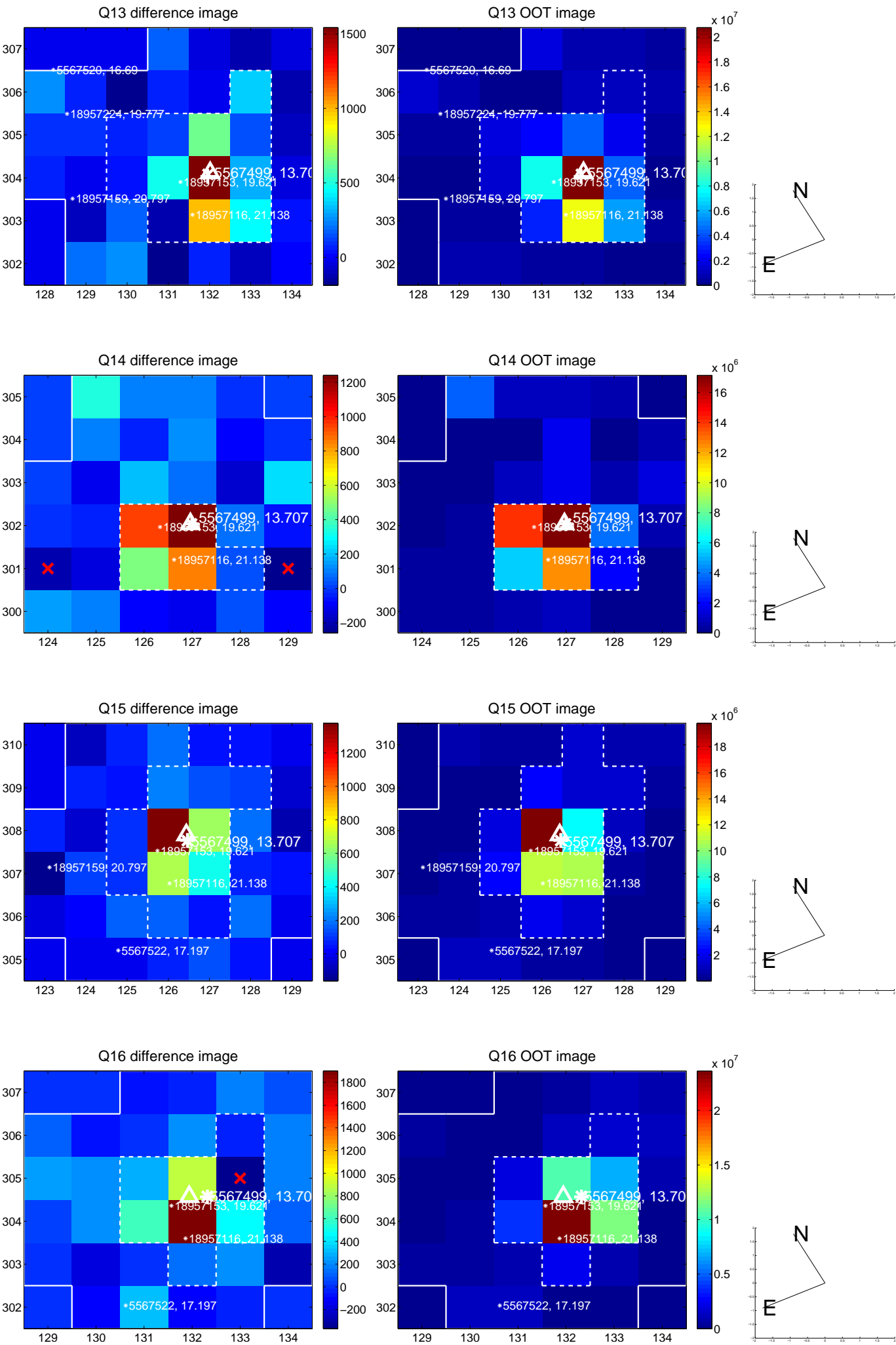
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



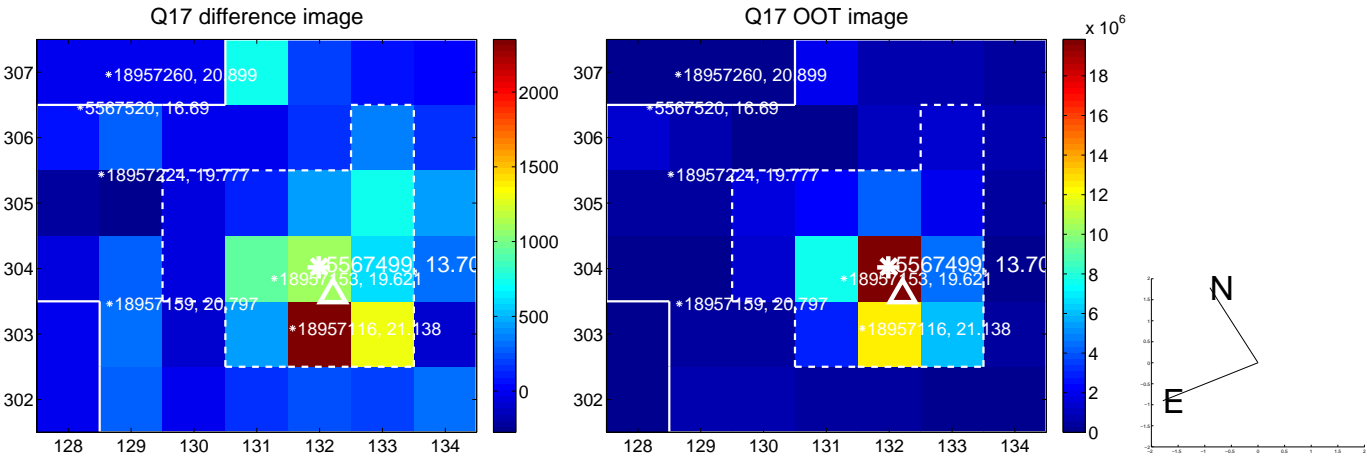
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



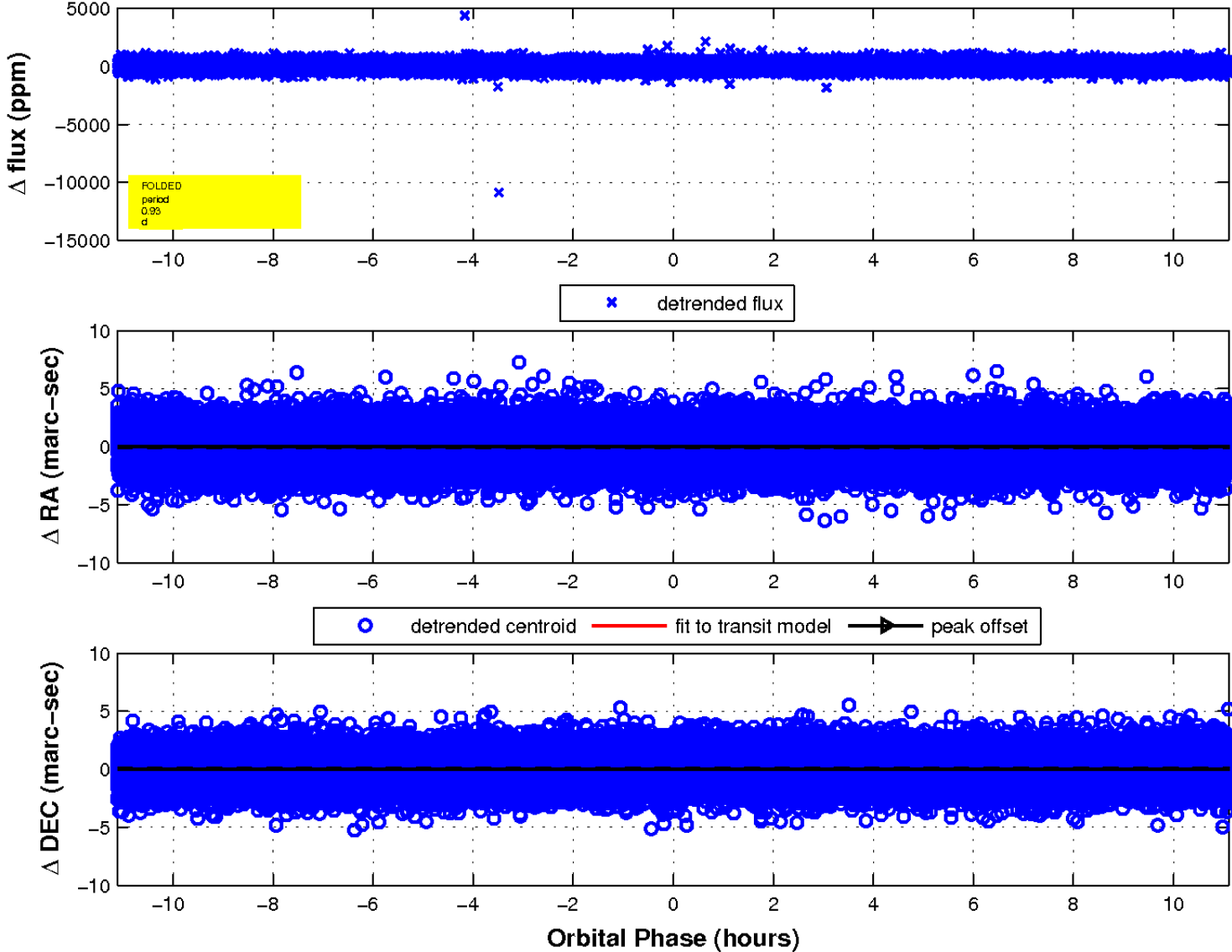
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



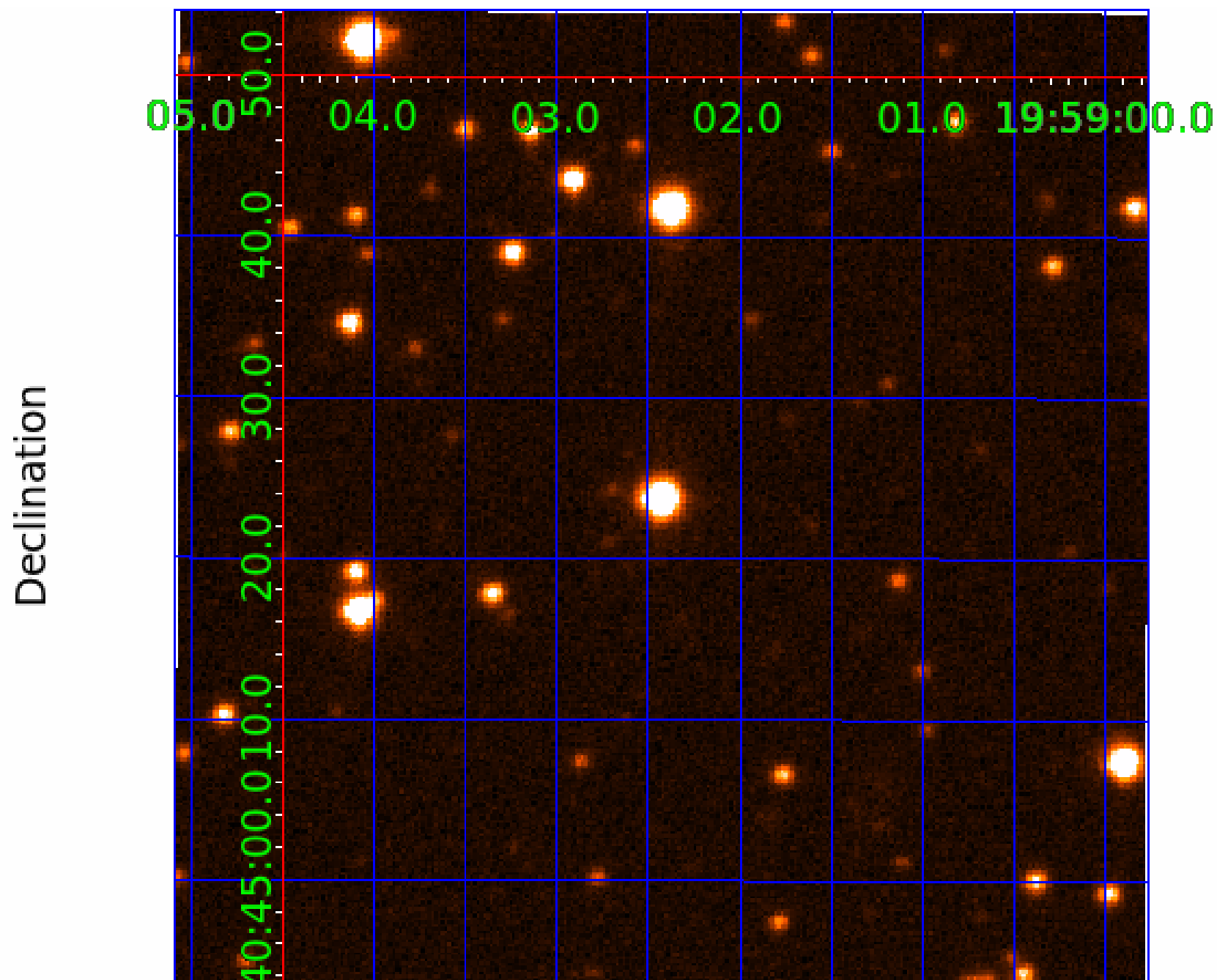
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 2



UKIRT Image



KIC 005567499

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})
005567499-01	OBS	No	0.925943	132.489275	24.4	5.279	9.3	8.2	2.88	7737	1.49	49552.92
005567499-02	OBS	No	117.511070	133.832643	314.2	7.345	8.1	9.2	2.88	7737	5.65	77.70

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005567499-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT
005567499-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

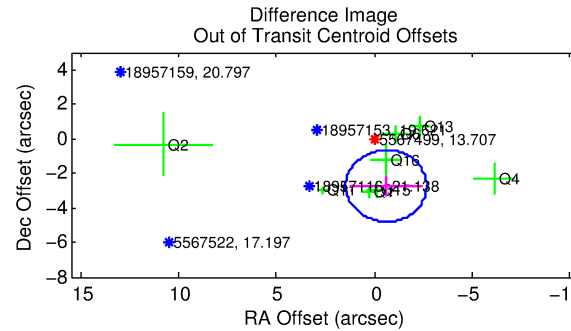
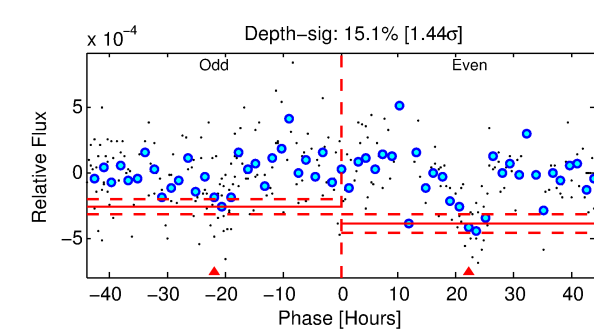
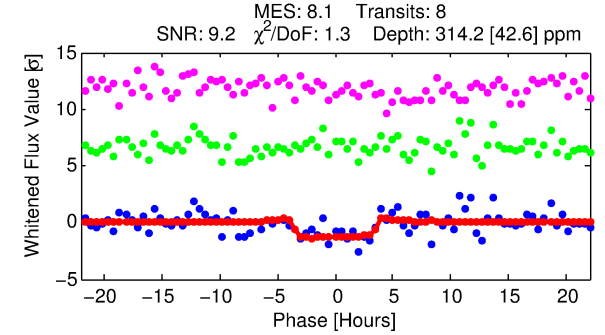
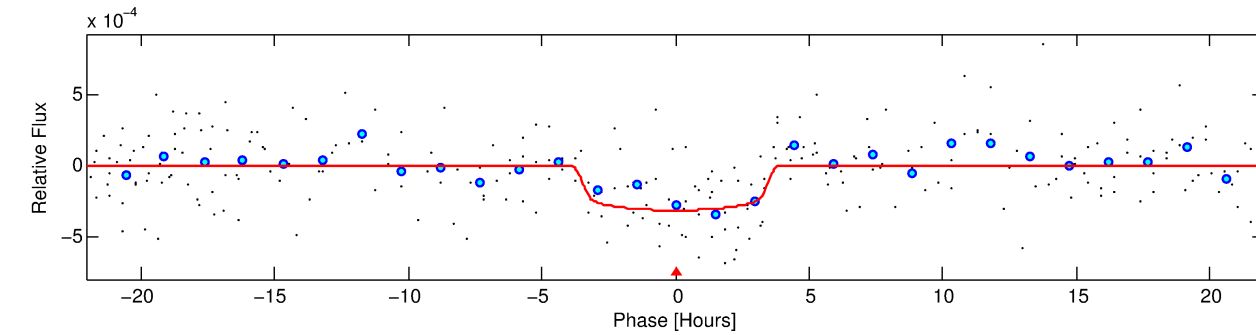
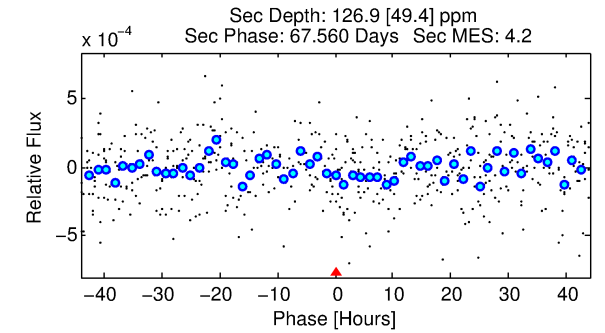
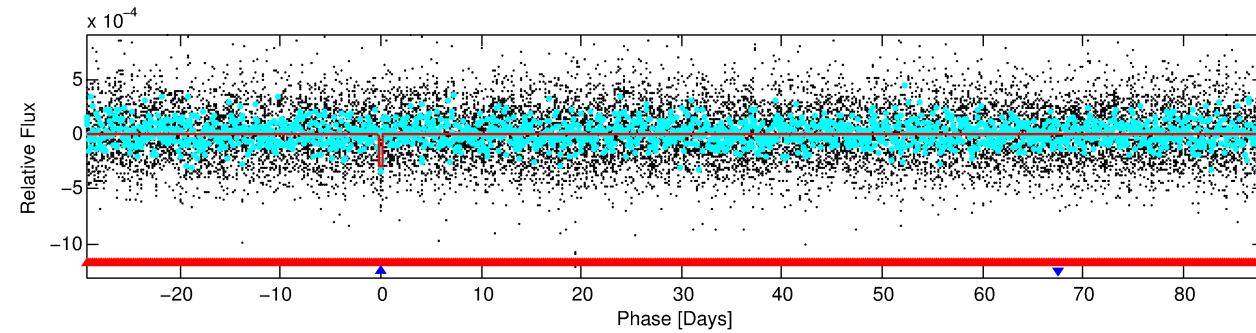
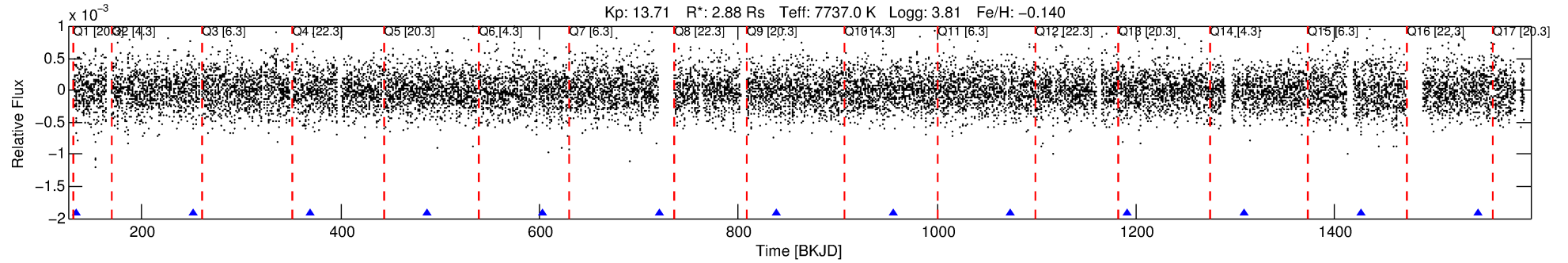
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005567499-02

No Significant Match Found

DV One-Page Summary

KIC: 5567499 Candidate: 2 of 2 Period: 117.511 d



DV Fit Results:

Period = 117.51107 [0.00196] d
Epoch = 133.8326 [0.0163] BKJD
Rp/R* = 0.0179 [0.0060]
a/R* = 76.61 [145.36]
b = 0.80 [0.84]
Seff = 77.70 [52.74]
Teff = 757 [128] K
Rp = 5.65 [3.15] Re
a = 0.5862 [0.2451] AU
Ag = 752.68 [765.91] [0.98 σ]
Teffp = 6131 [1215] K [4.40 σ]

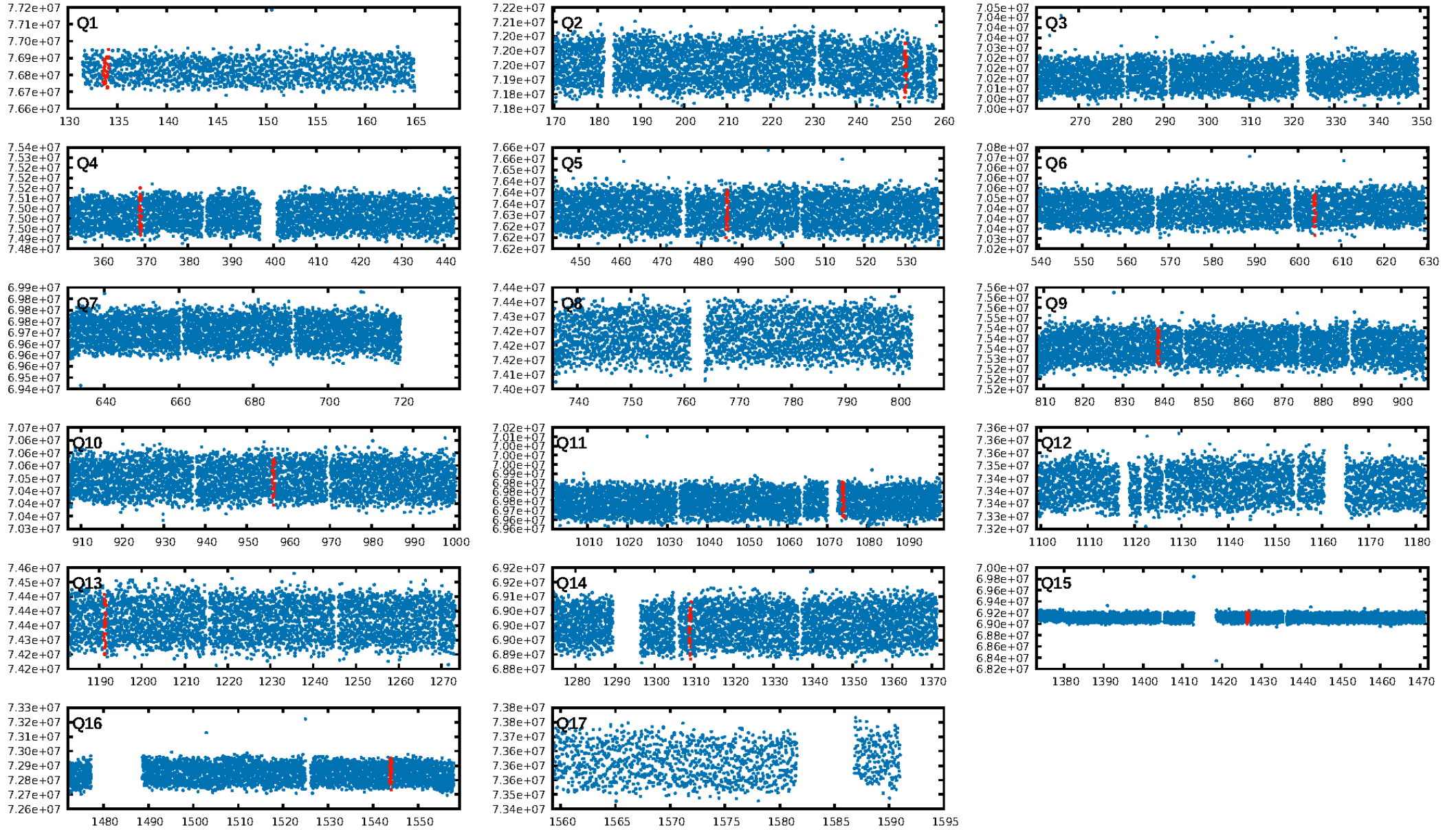
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [309.34 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 81.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.64e-08
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: 0.4642
Centroid-sig: 43.4%
Centroid-so: 1.083 arcsec [1.26 σ]
OotOffset-rm: 2.800 arcsec [4.06 σ]
KicOffset-rm: 2.790 arcsec [3.66 σ]
OotOffset-st: 2/2/2/2 [8]
KicOffset-st: 2/2/2/2 [8]
DiffImageQuality-fgm: 0.50 [4/8]
DiffImageOverlap-fno: 0.00 [0/12]

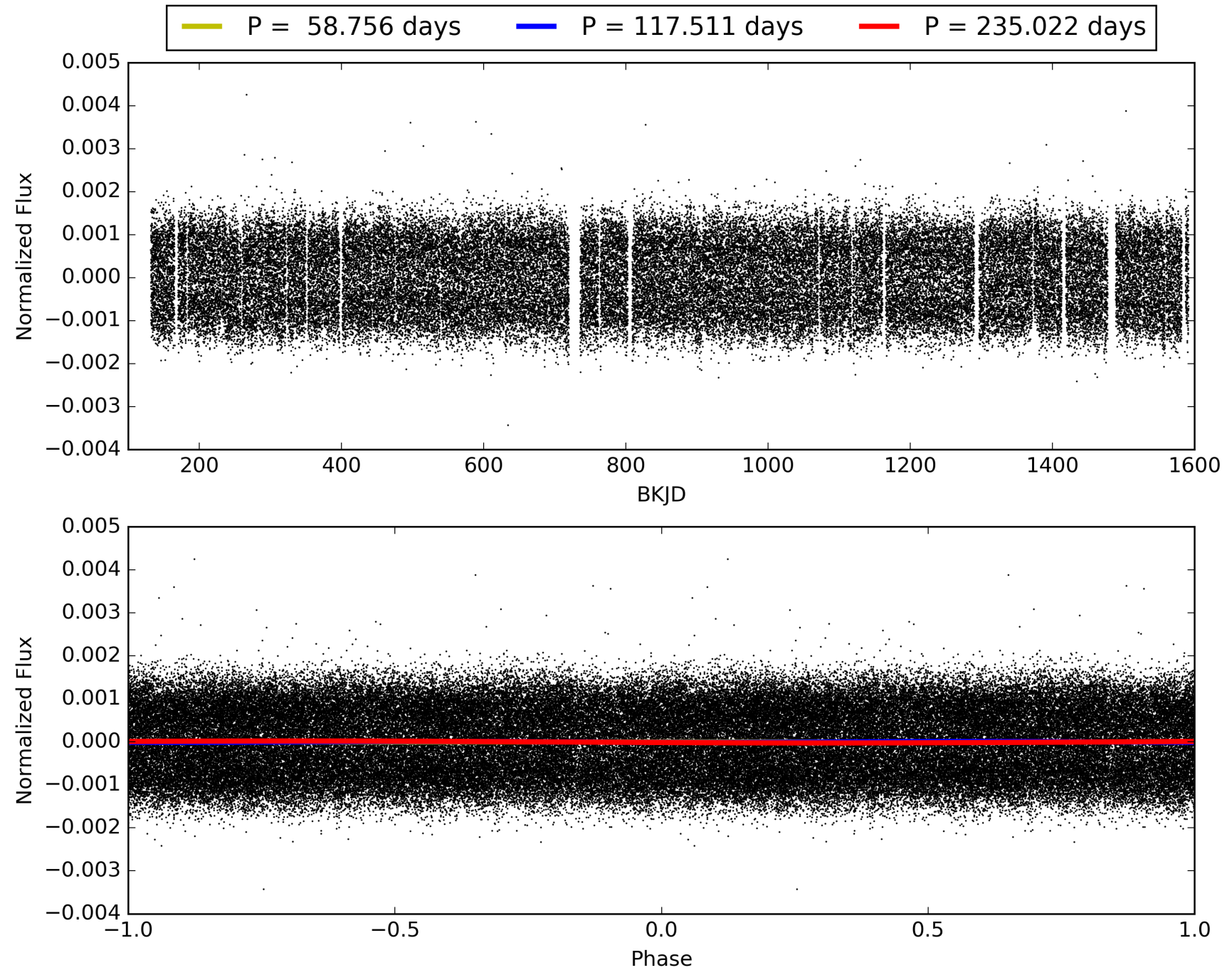
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 17:43:02 Z

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

TCE 005567499-02, PDC Light Curves

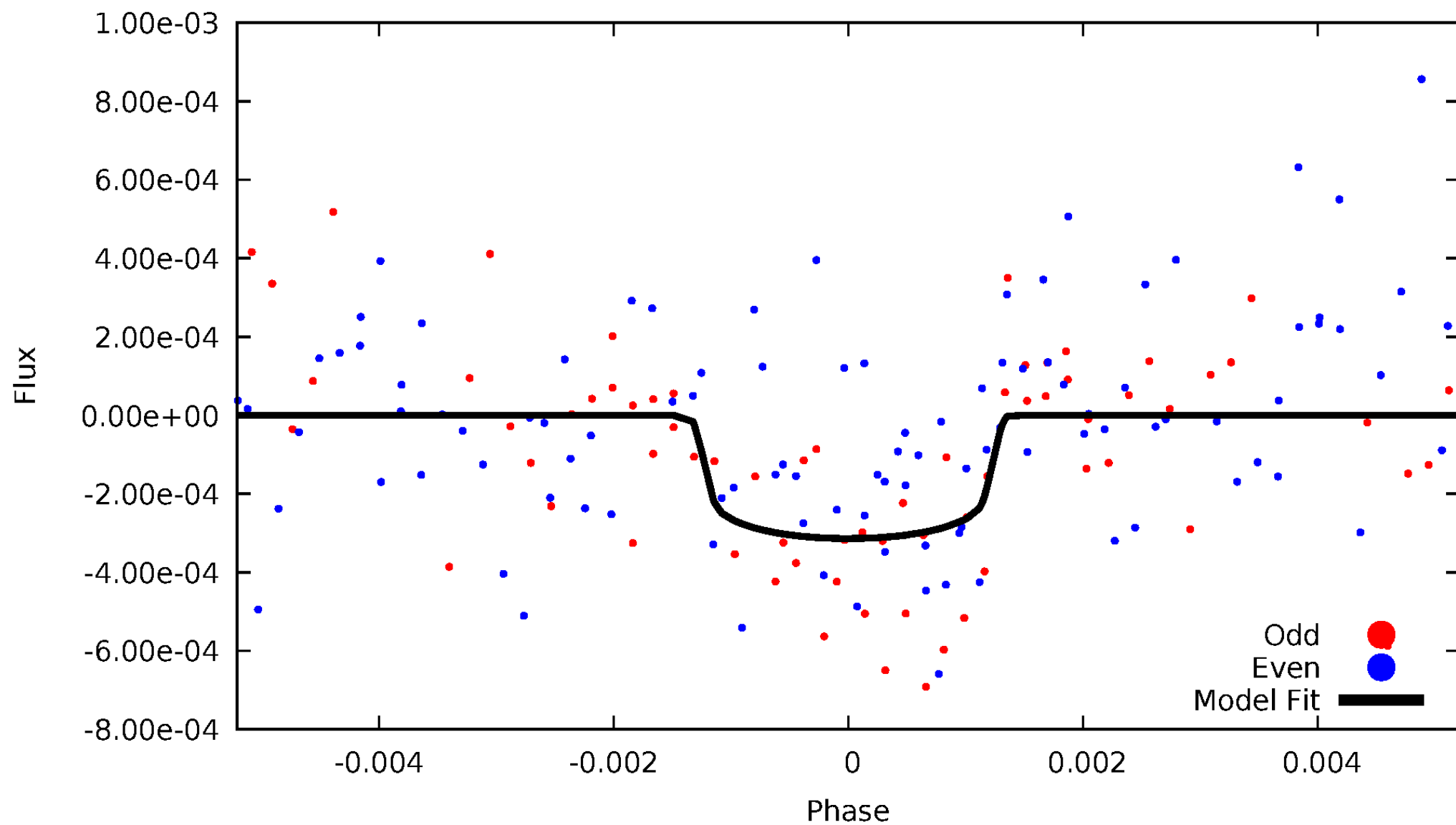


TCE 005567499-02



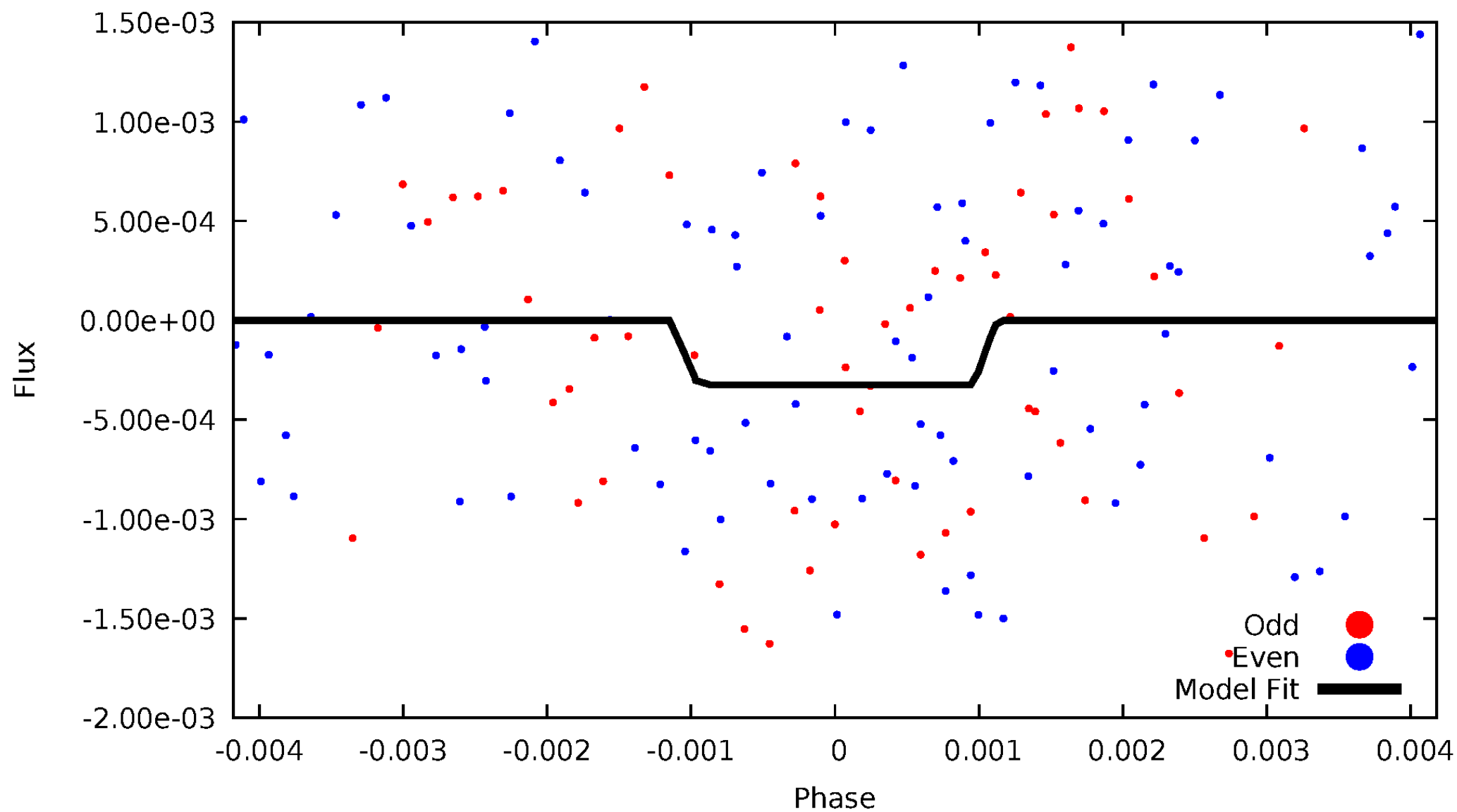
DV Odd/Even

TCE 005567499-02



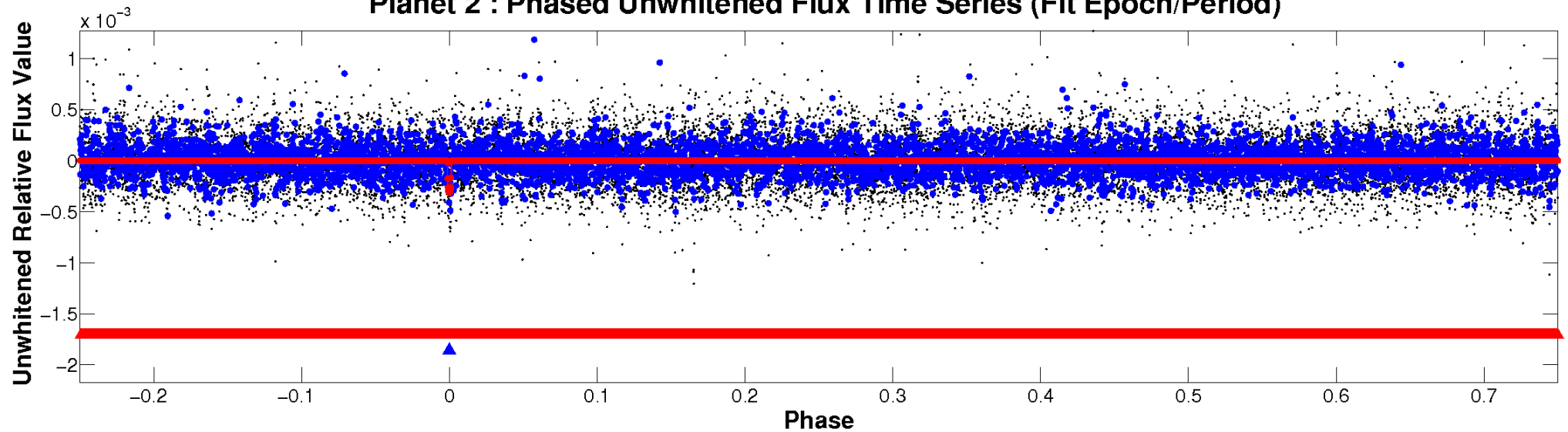
ALT Odd/Even

TCE 005567499-02

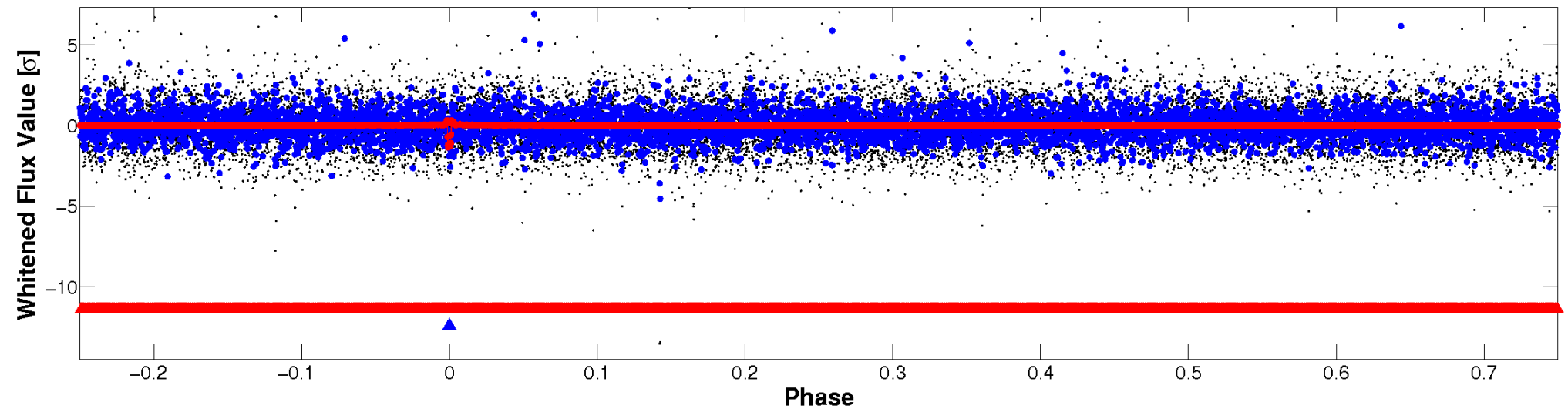


Non-Whitened Vs. Whitened Light Curve

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

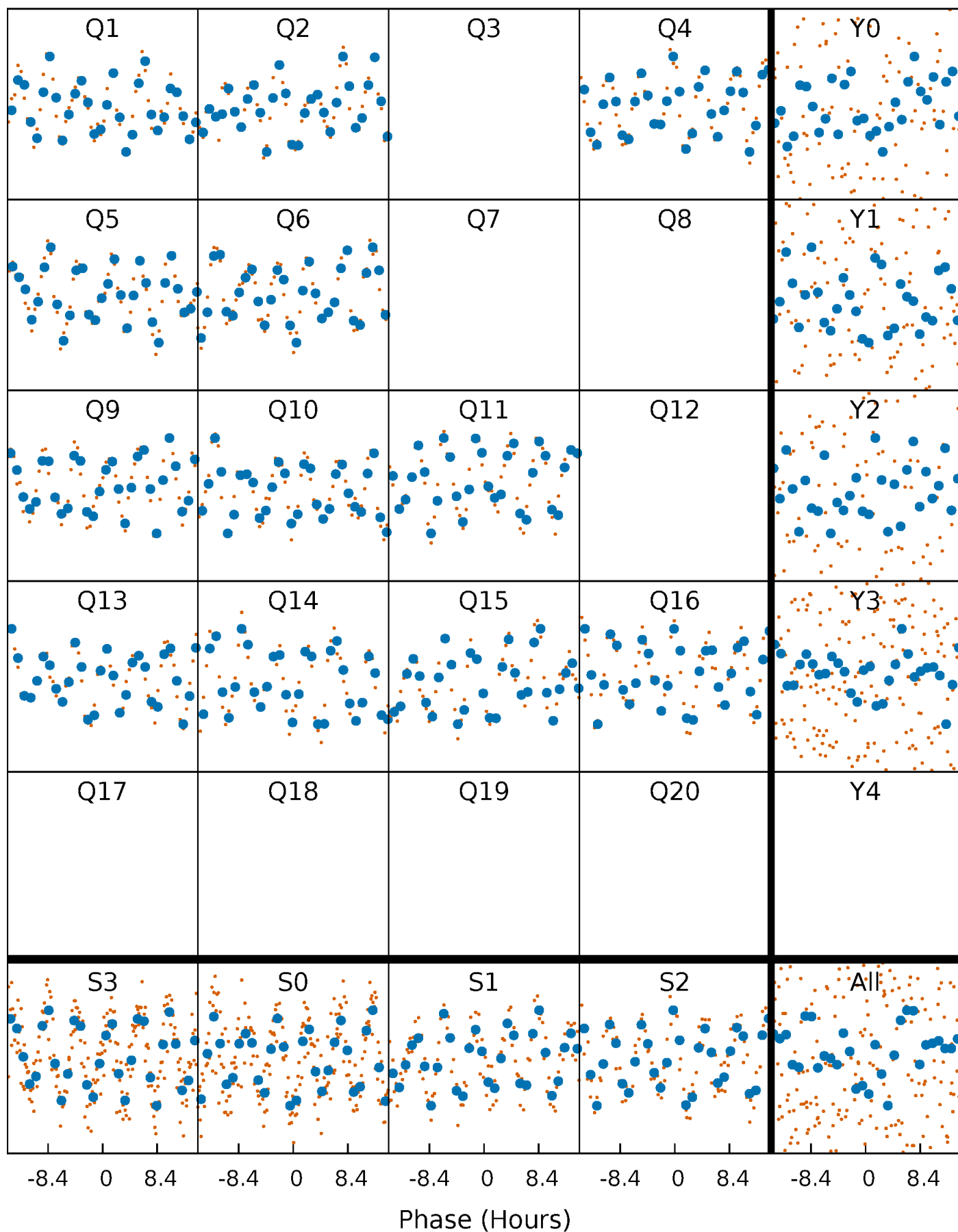


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



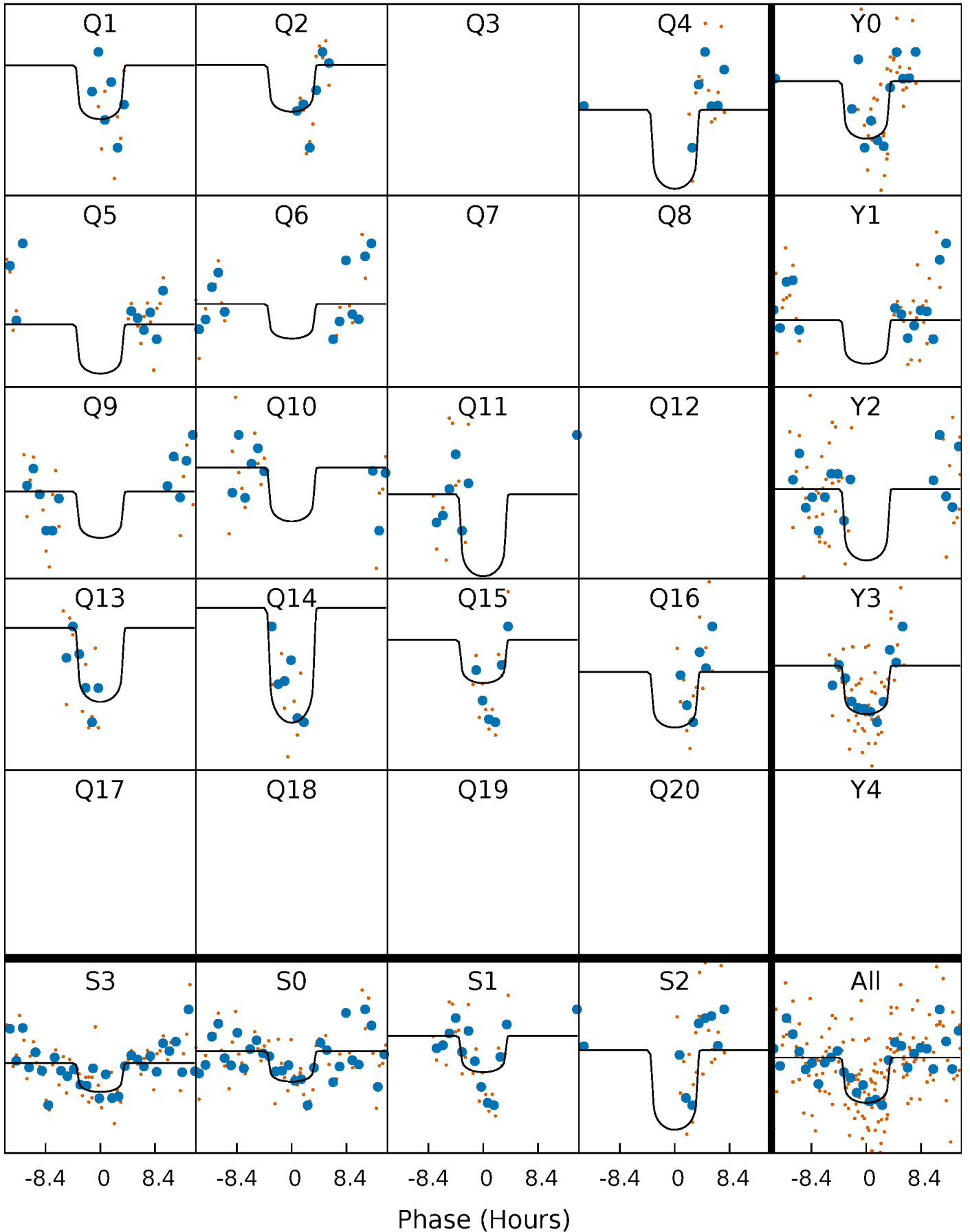
PDC Quarter-Phased Transit Curves

TCE 005567499-02 P=117.511070 Days $T_0=133.832643$ (BKJD)



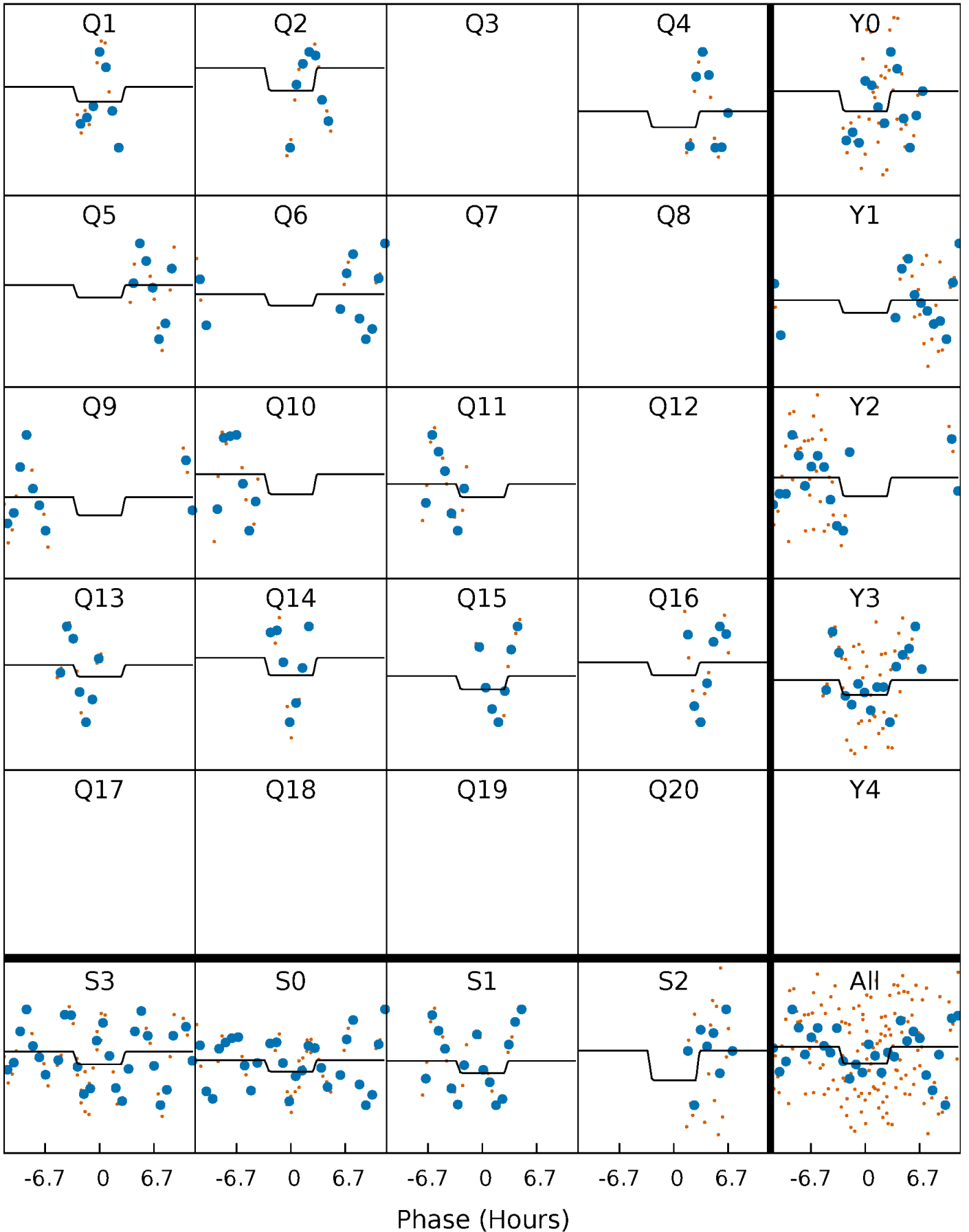
DV Quarter-Phased Transit Curves

TCE 005567499-02 P=117.511070 Days $T_0=133.832643$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

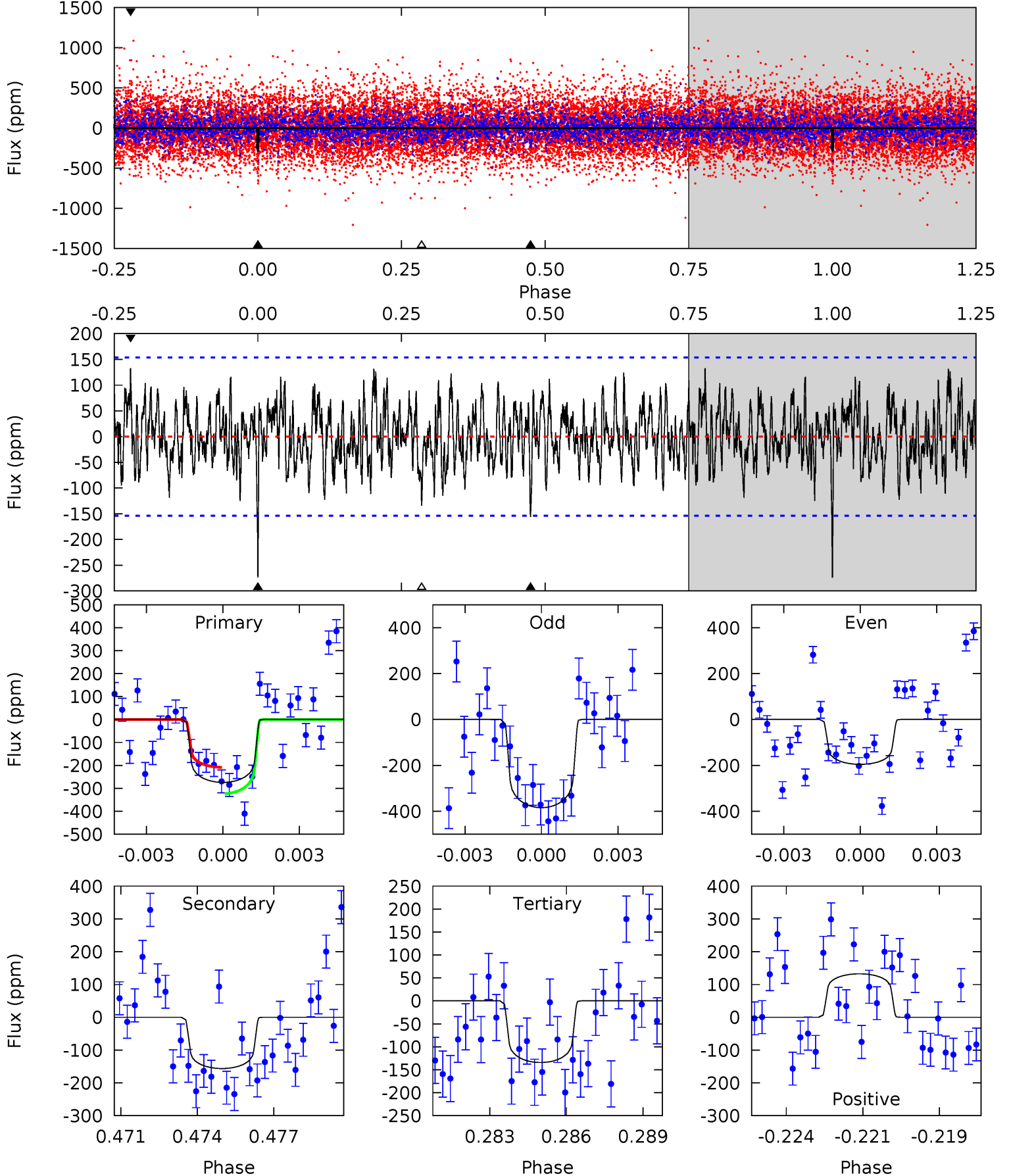
TCE 005567499-02 P=117.504348 Days $T_0=133.873602$ (BKJD)



DV Model-Shift Uniqueness Test

005567499-02, P = 117.511070 Days, E = 16.321573 Days

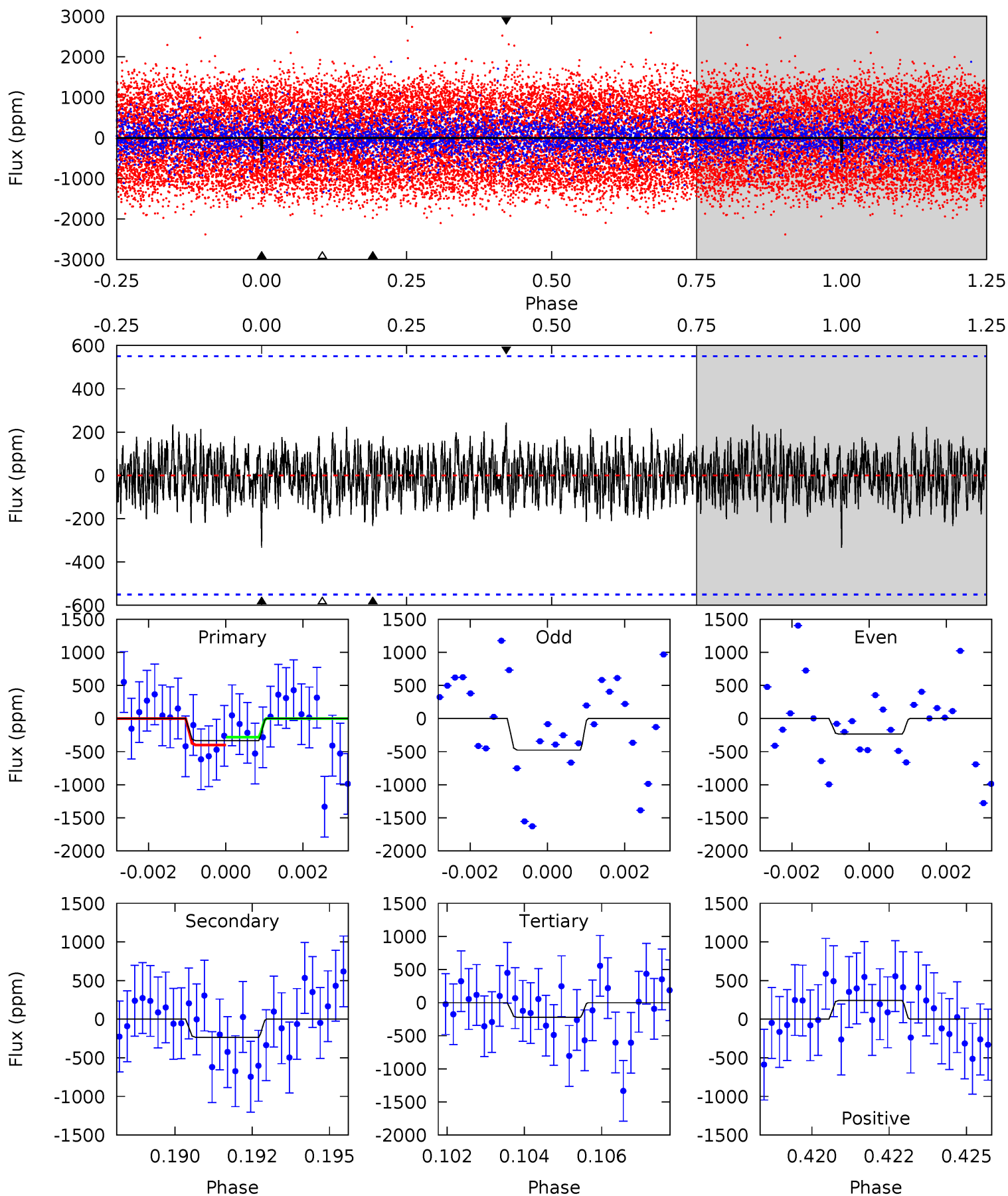
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.39	5.36	4.60	4.54	5.27	2.99	1.64	4.79	4.85	0.75	0.81	3.17	1.05	0.33	1.93



Alt Model-Shift Uniqueness Test

005567499-02, P = 117.504348 Days, E = 16.369254 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.22	2.26	2.14	2.35	5.31	3.06	0.80	1.07	0.87	0.11	-0.09	1.14	1.06	0.42	0.55



Stellar Parameters For KIC 005567499

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7737^{+211}_{-316}	$3.807^{+0.383}_{-0.090}$	$-0.140^{+0.200}_{-0.350}$	$2.884^{+0.402}_{-1.286}$	$1.948^{+0.088}_{-0.496}$	$0.114^{+0.338}_{-0.033}$
	+3%/-4%	+10%/-2%	+143%/-250%	+14%/-45%	+5%/-25%	+295%/-29%
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 005567499-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-156 ± 29	$5.11^{+2.10}_{-1.85}$	1030^{+68}_{-113}	6267^{+1551}_{-887}	1086^{+1632}_{-559}
Alt.	-234 ± 104	$5.02^{+2.17}_{-1.69}$	1025^{+74}_{-107}	6983^{+2009}_{-1389}	1619^{+2382}_{-1003}

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

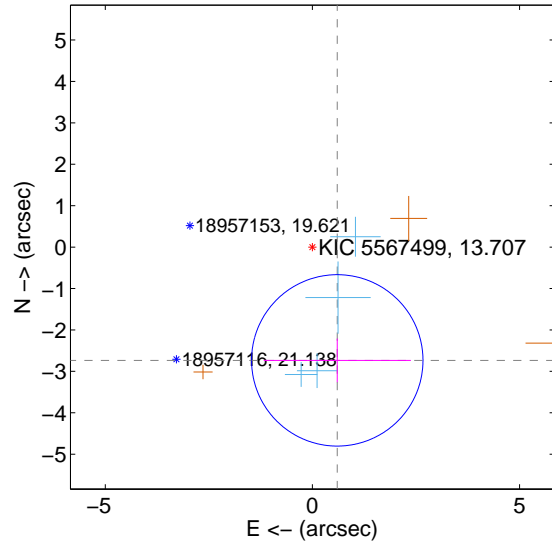
Supplemental centroid analysis for 005567499-02. Kepler magnitude: 13.71. Transit SNR 9.21

There are 4 quarters with good PRF difference image offsets

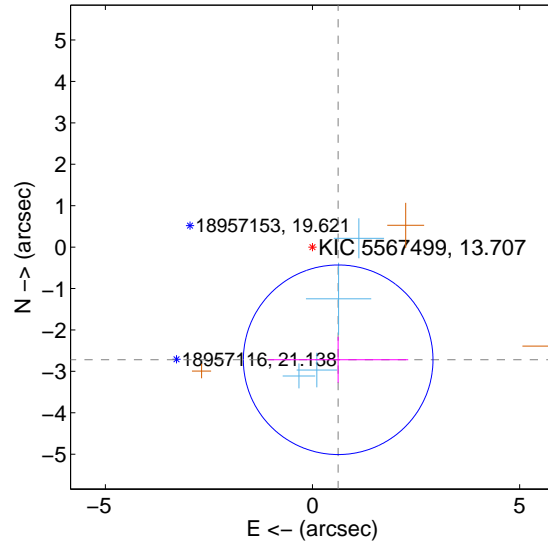
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.800 ± 0.690	4.06	-0.599 ± 1.776	-2.735 ± 0.526
PRF-fit source offset from KIC position	2.790 ± 0.763	3.66	-0.619 ± 1.690	-2.720 ± 0.553
photometric centroid source offset	1.08 ± 0.86	1.26	1.08 ± 0.86	0.09 ± 0.80

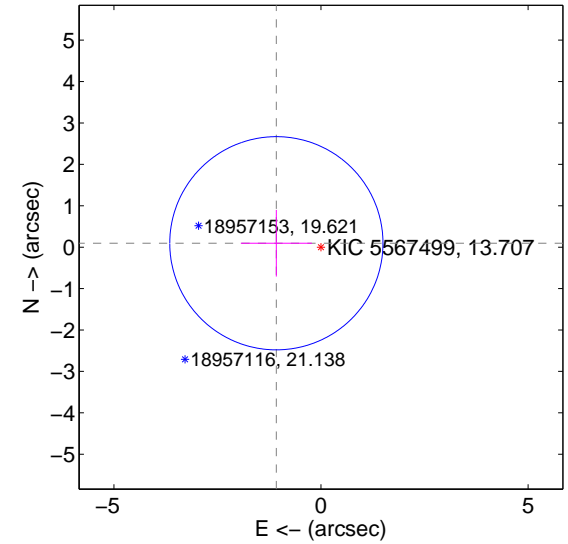
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

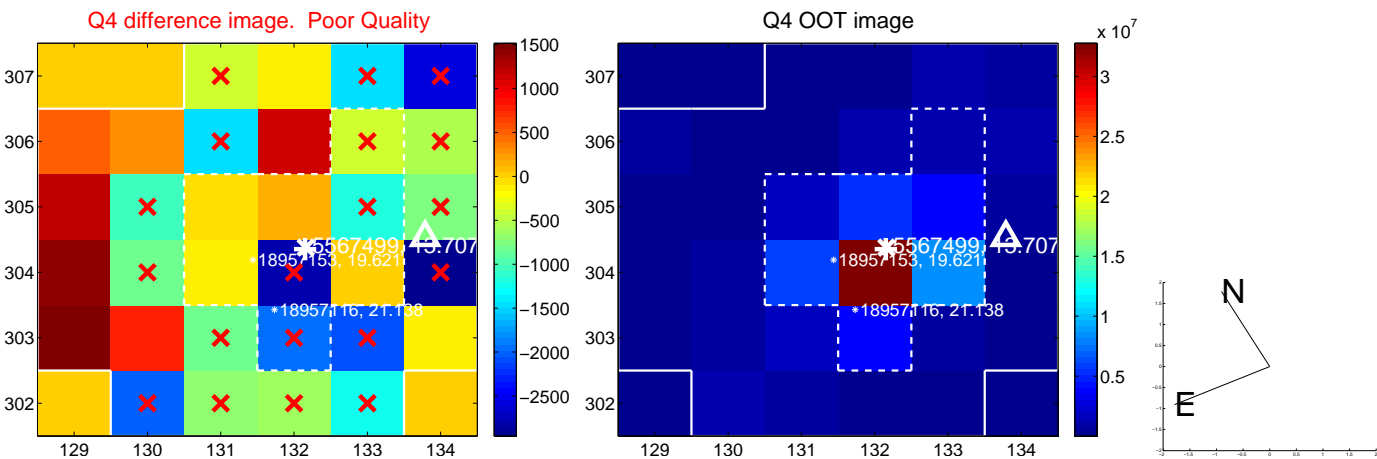
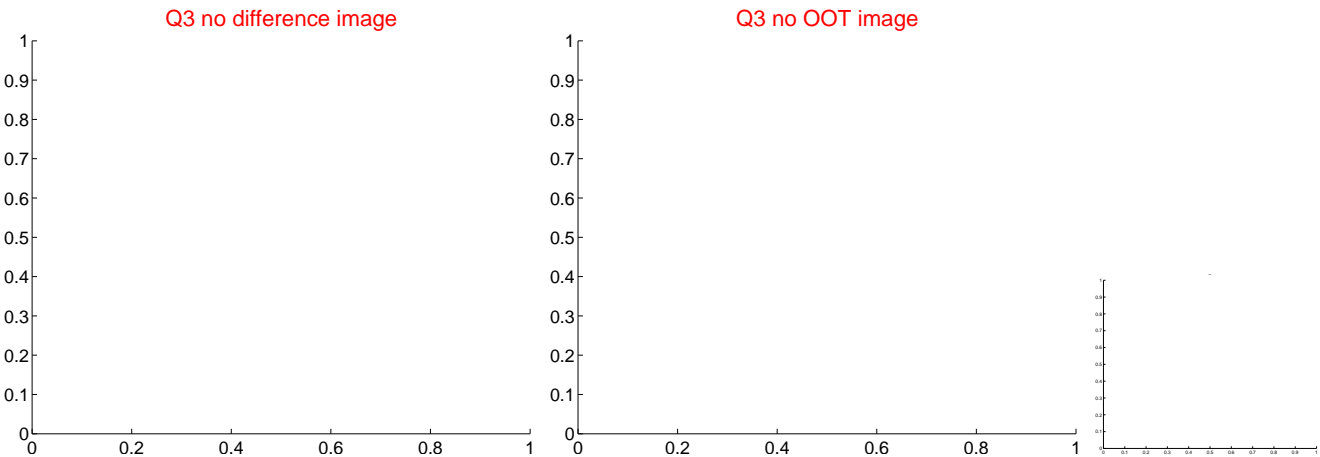
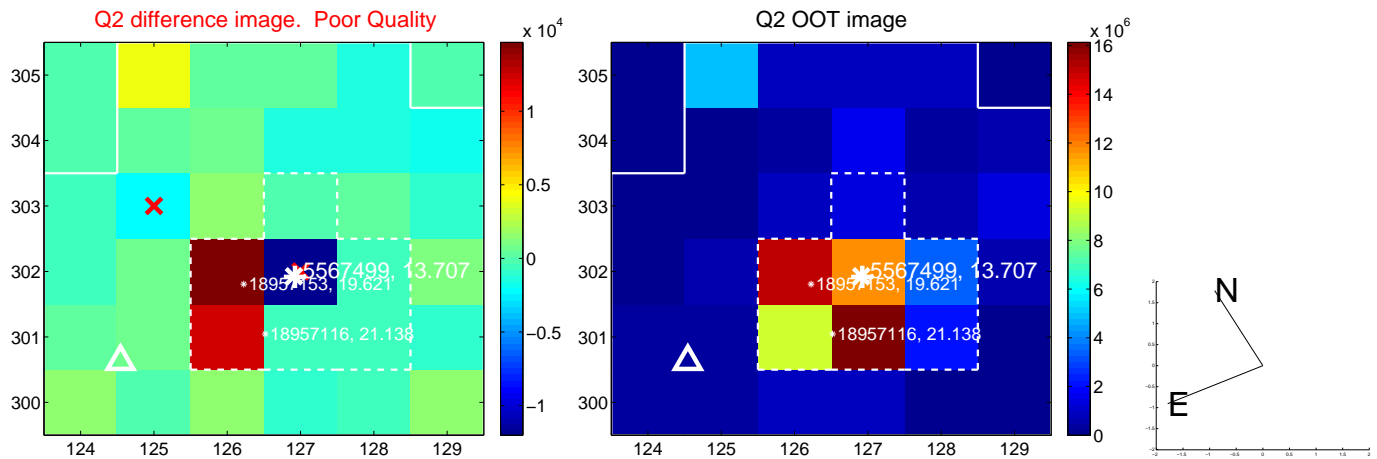
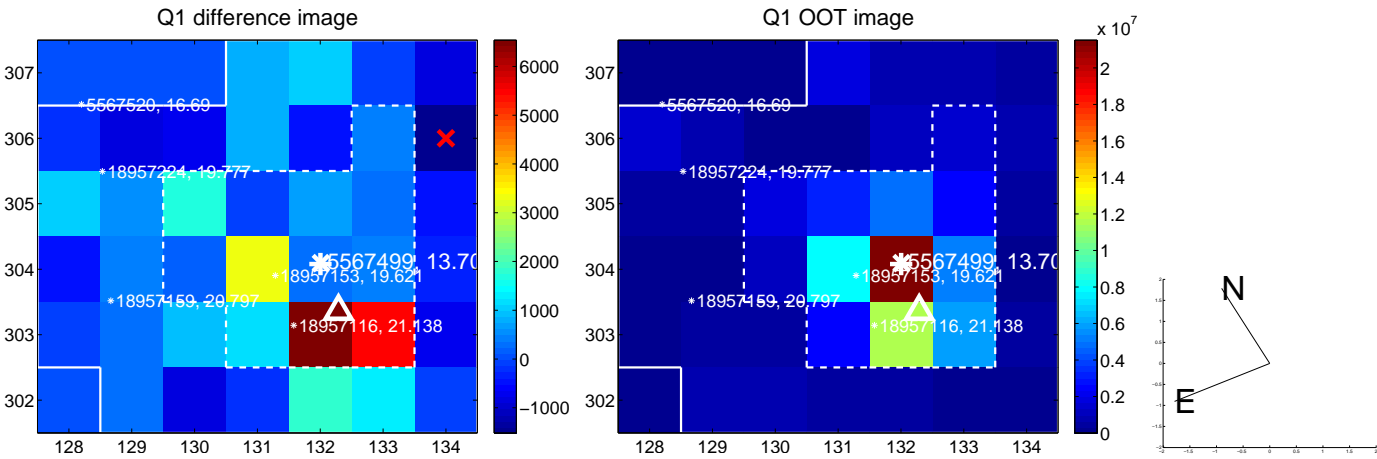


offset from photometric centroids

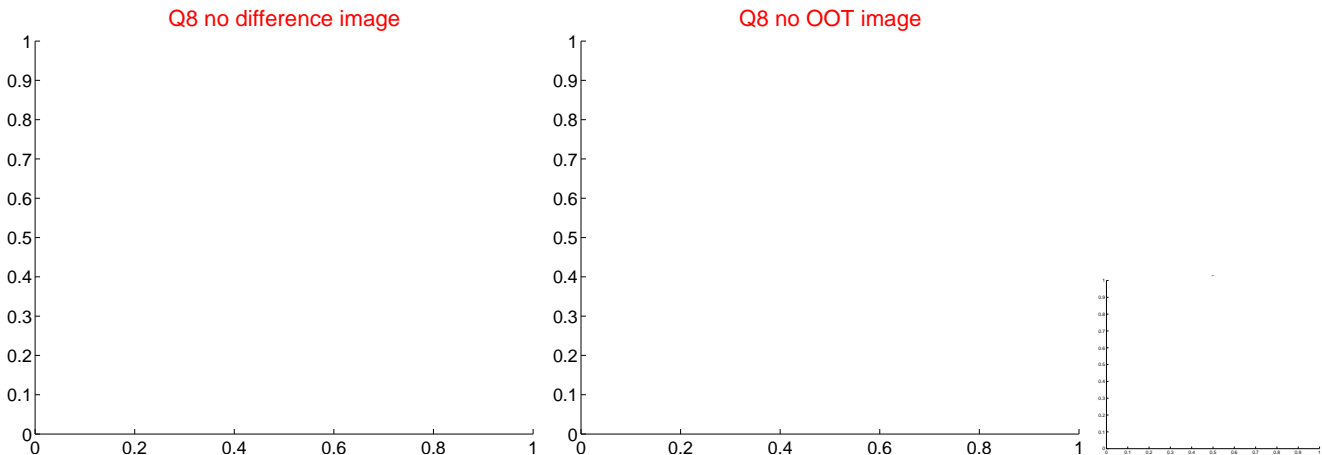
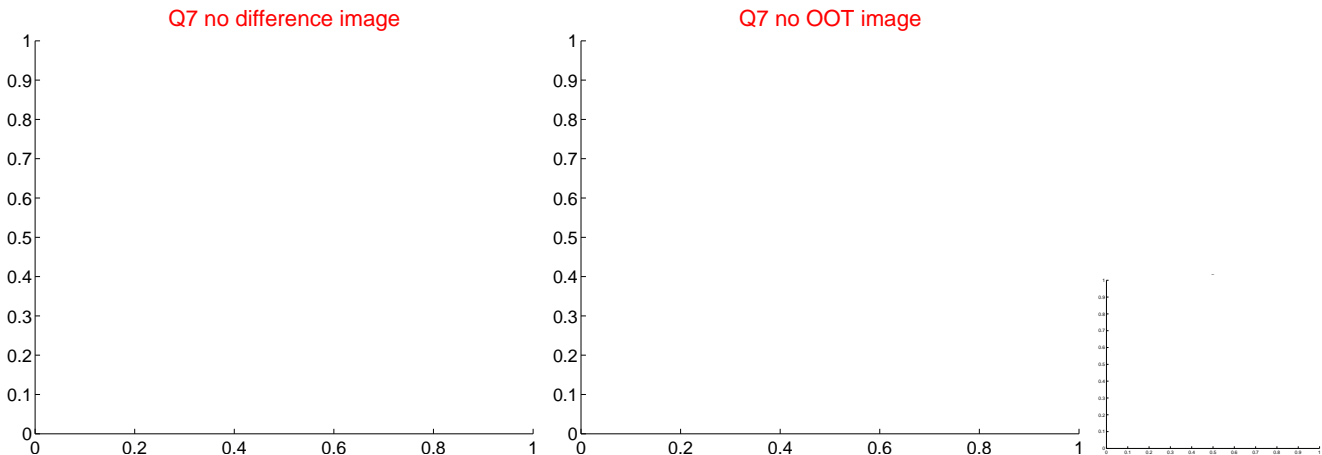
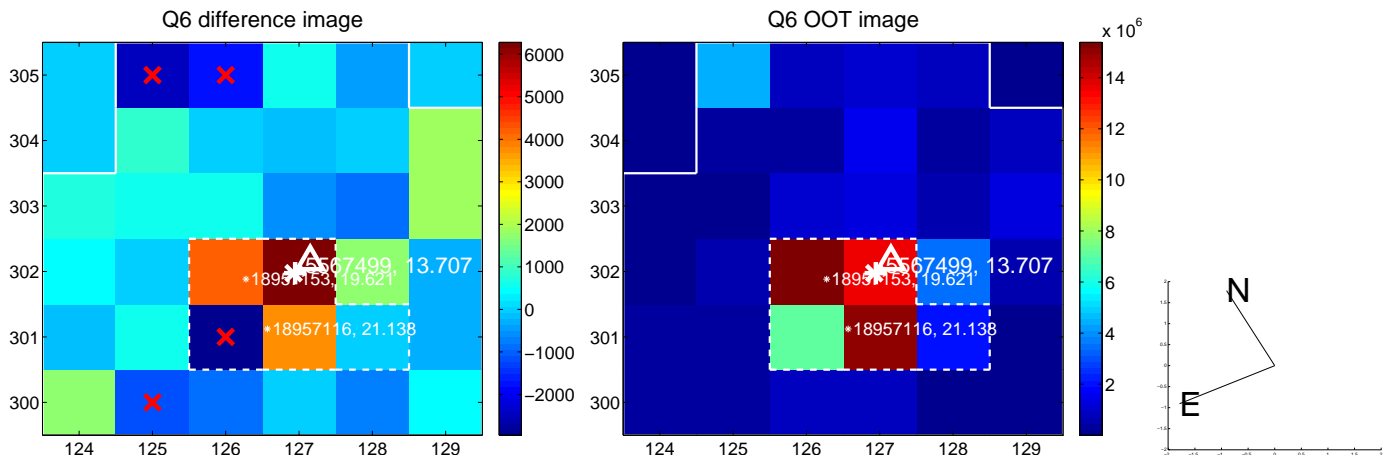
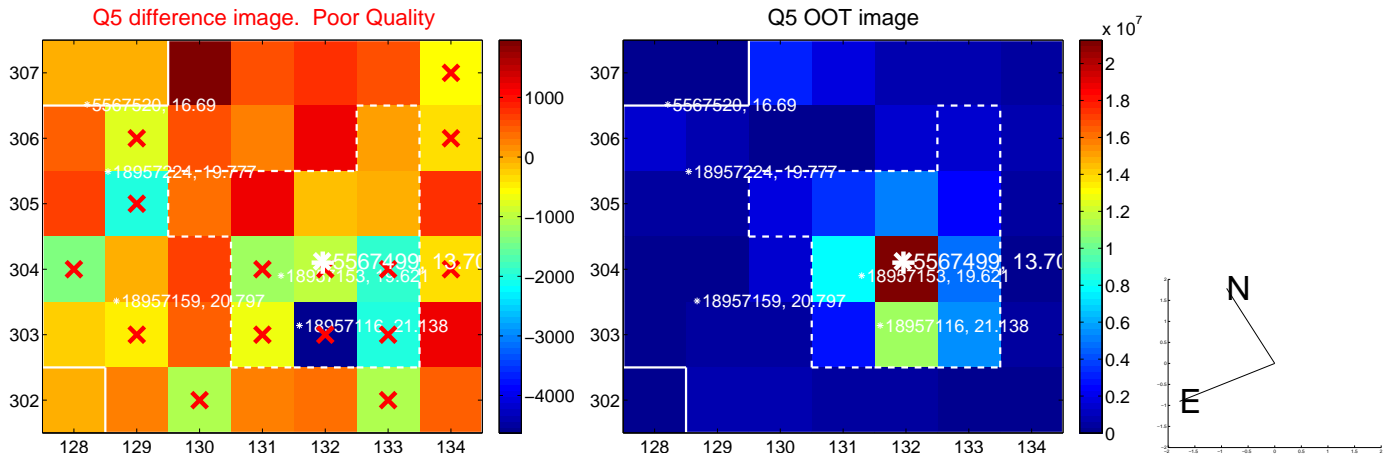


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

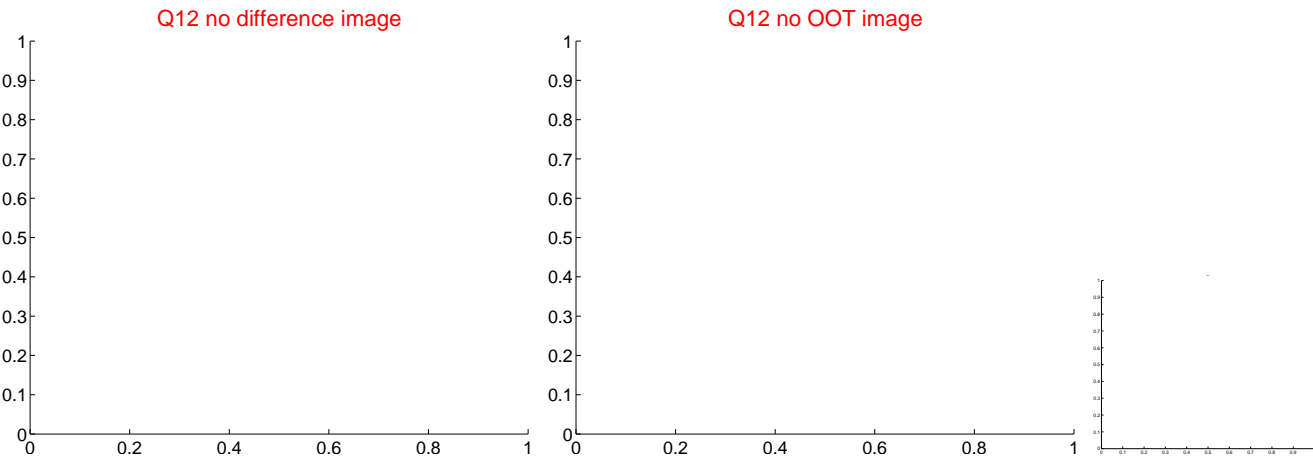
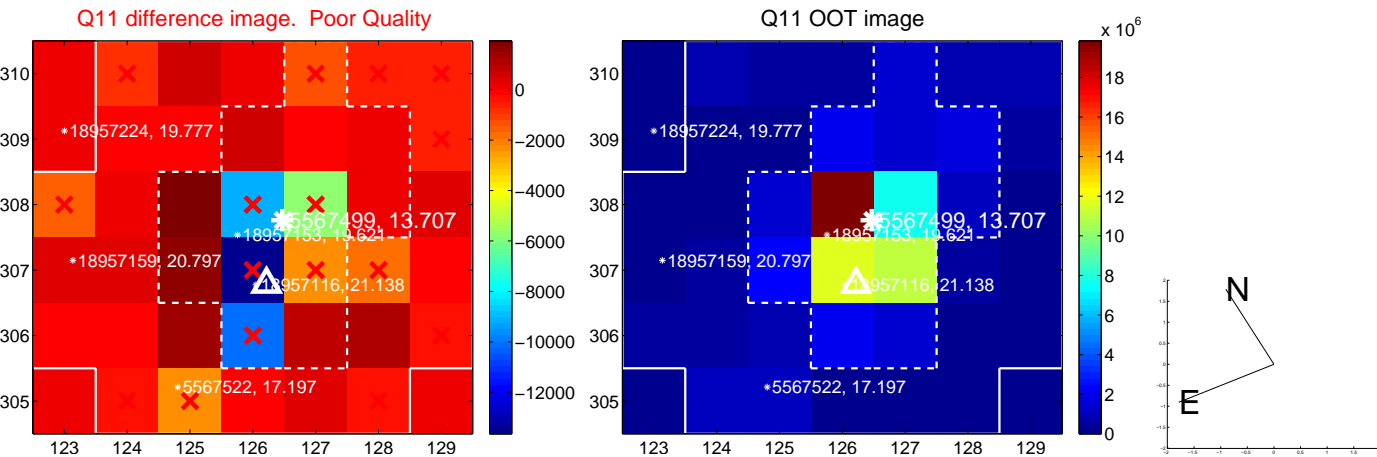
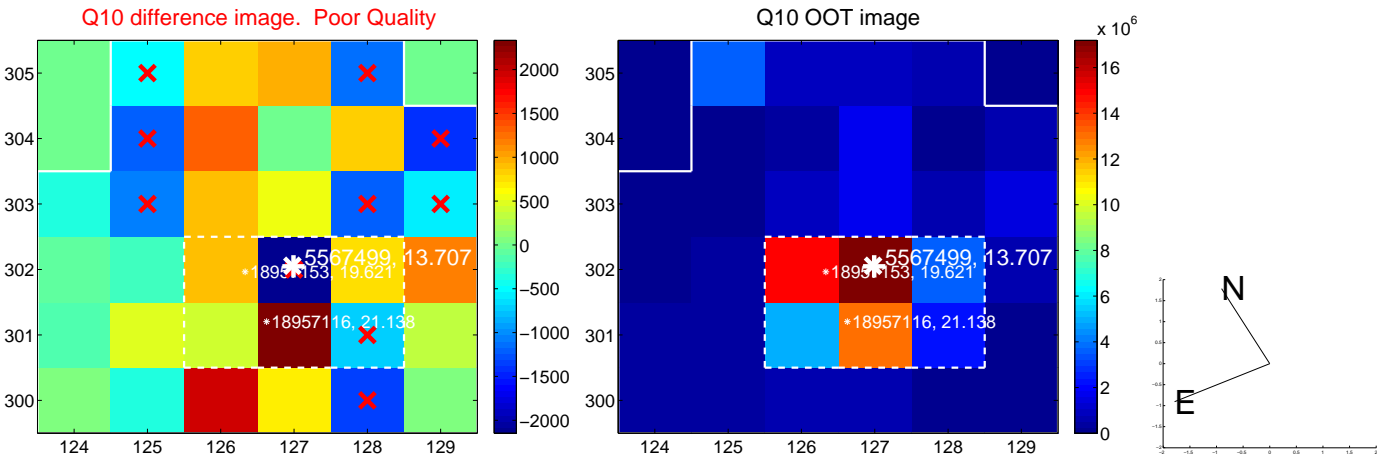
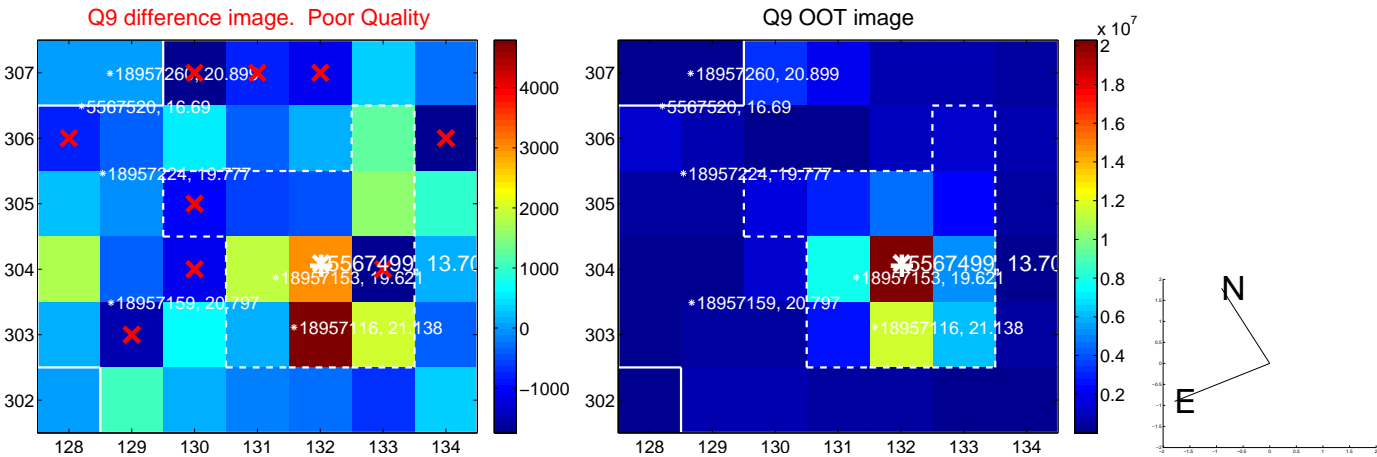
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



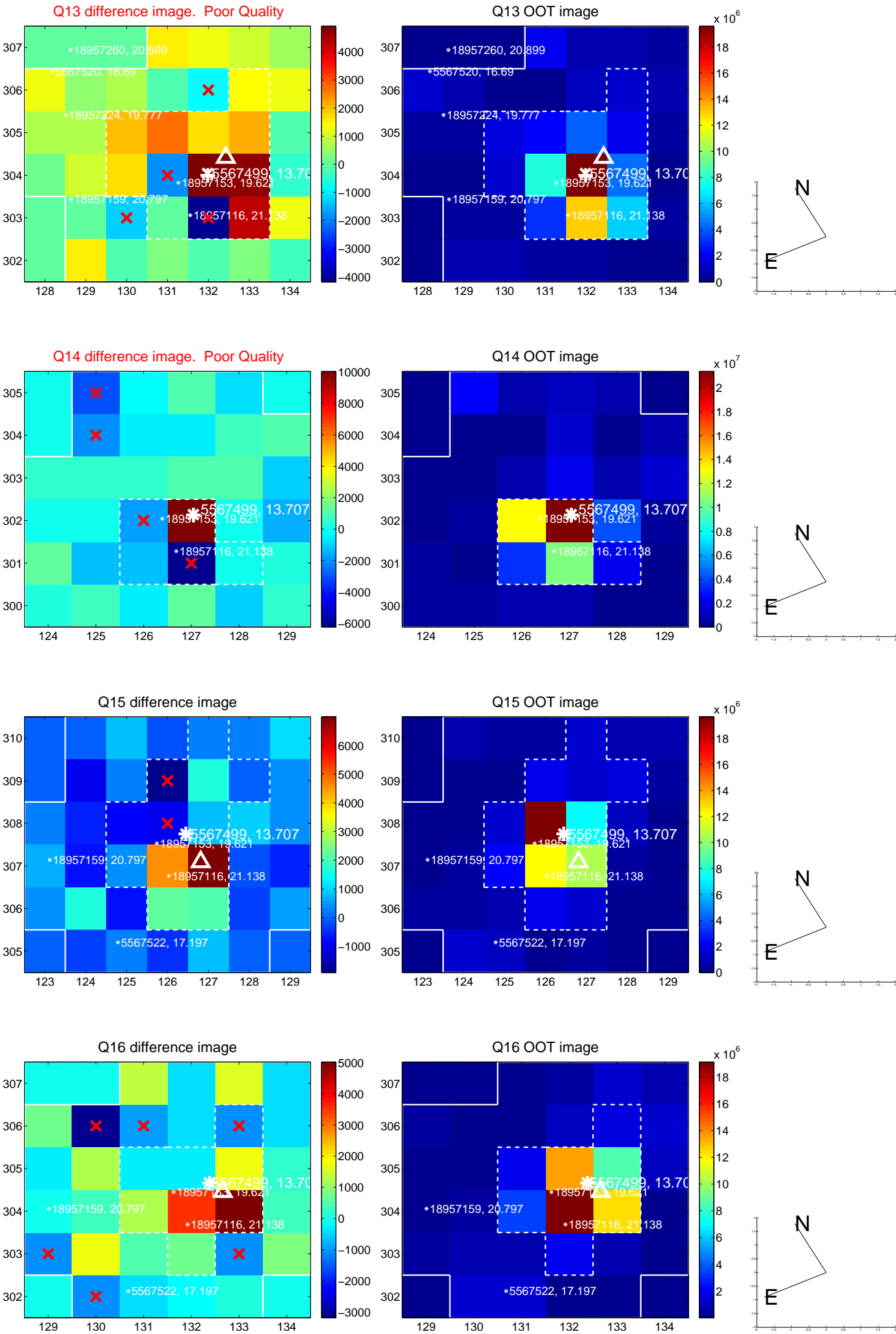
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



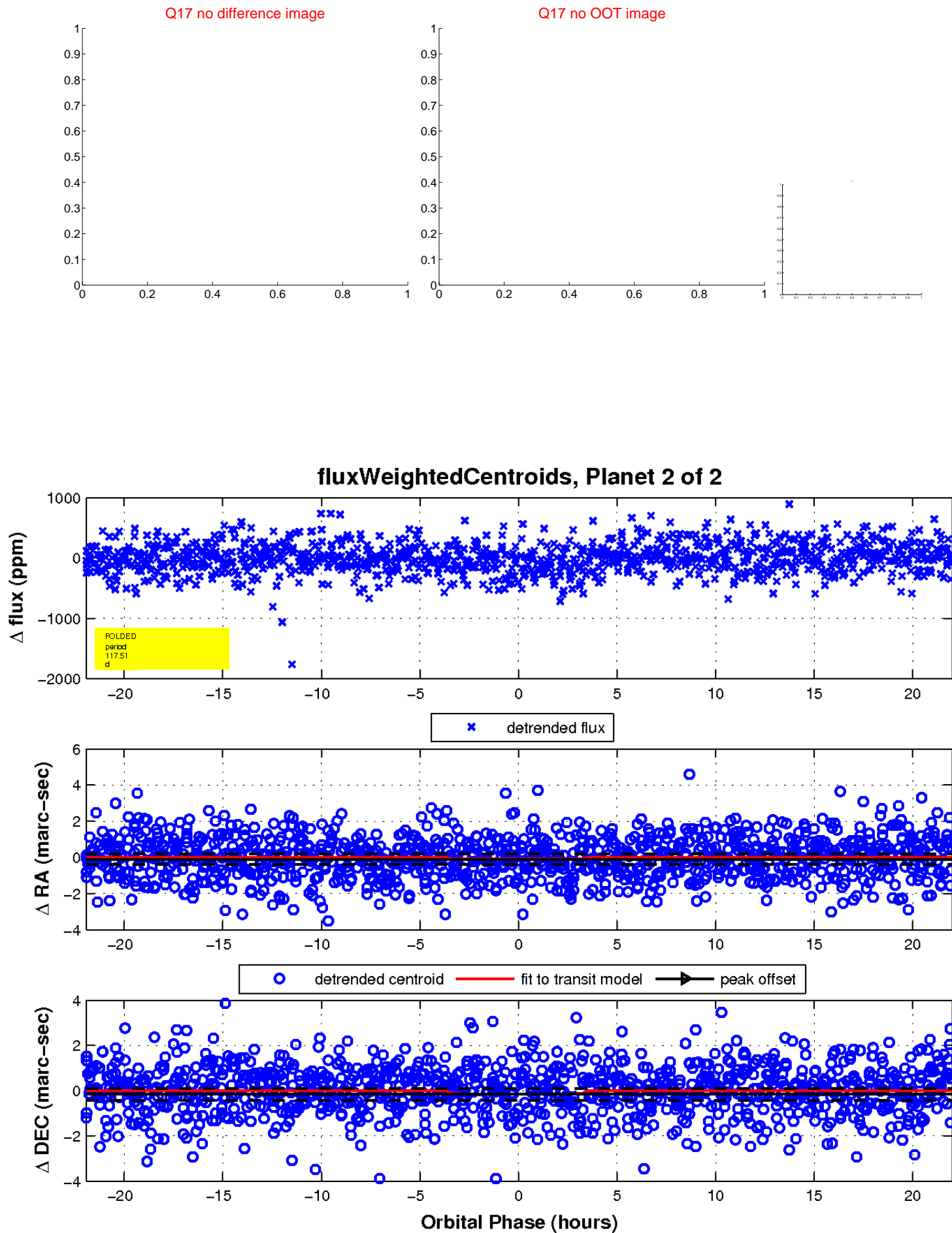
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

