

KIC 011725829

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})
011725829-01	OBS	No	0.527200	131.938503	29.0	1.117	11.0	9.0	2.83	8156	1.78	129137.70
011725829-02	OBS	No	0.527217	131.579744	179.1	1.500	7.8	-1.0	2.83	8156	3.83	129132.06

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011725829-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
011725829-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_NOFITS

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

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

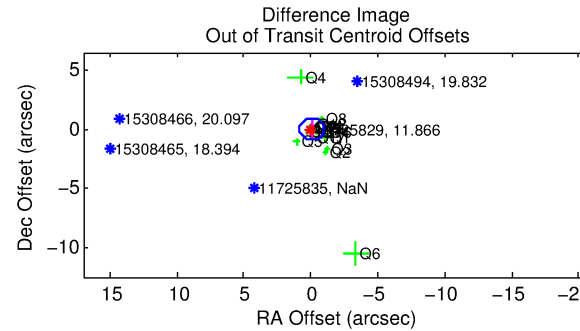
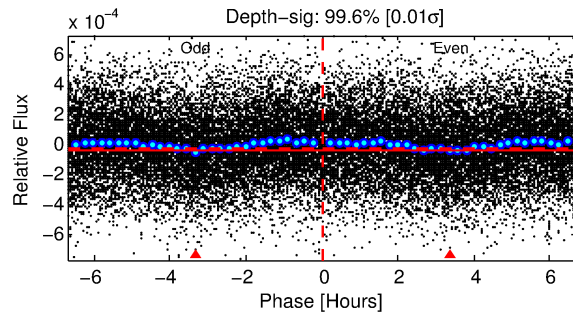
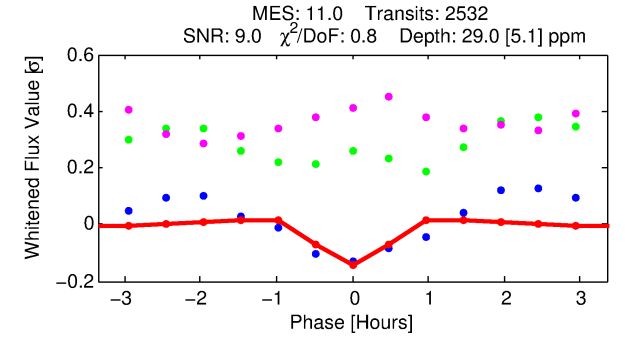
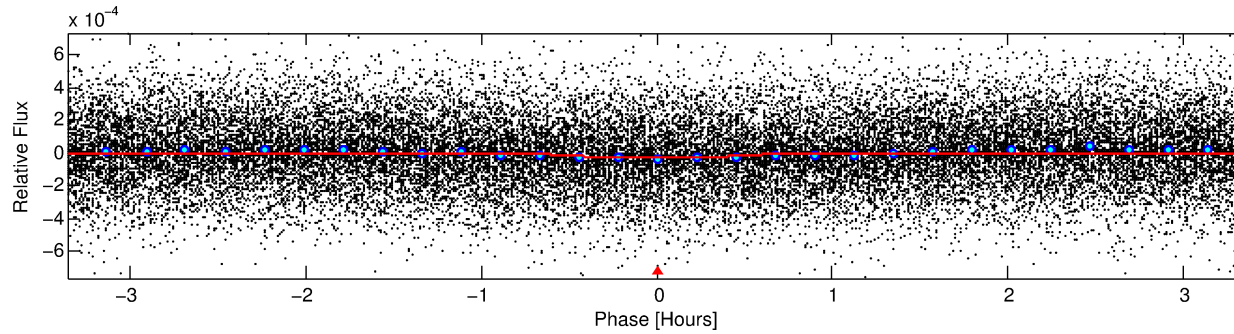
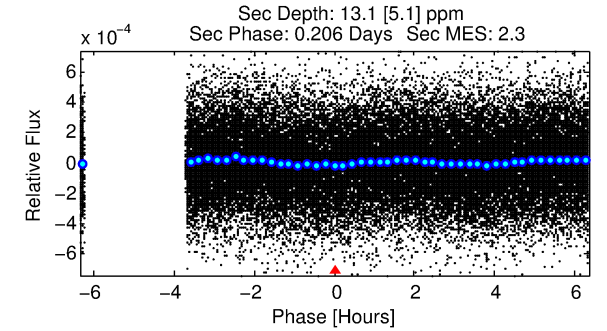
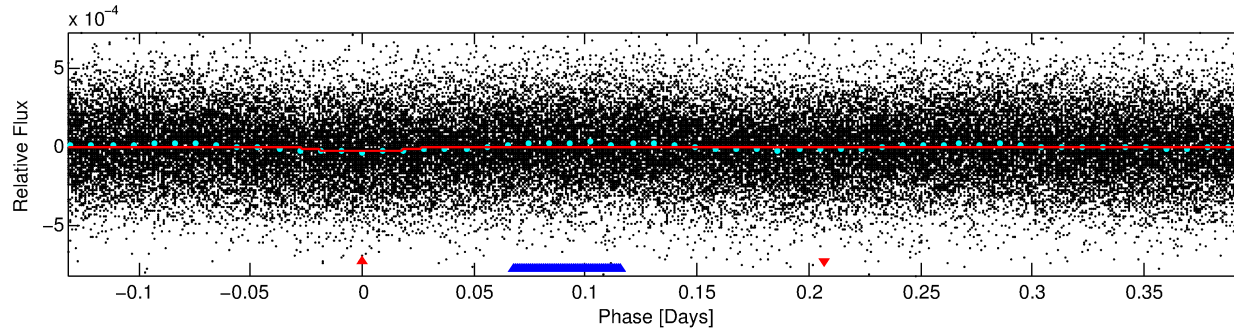
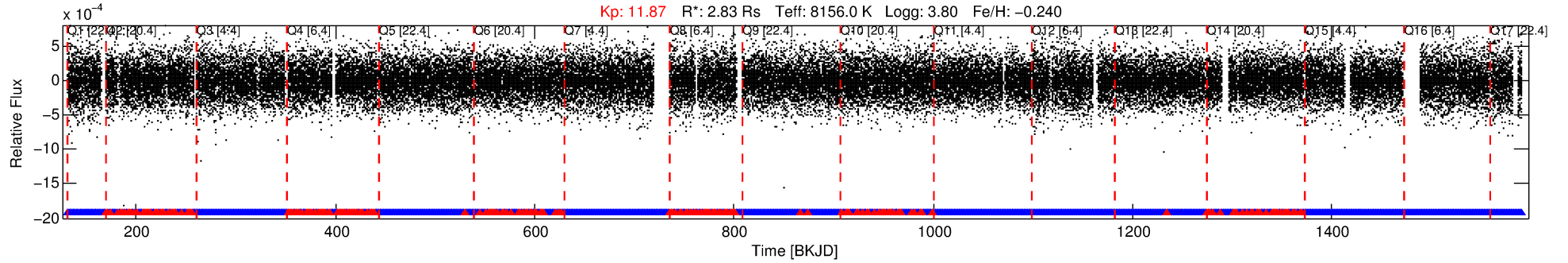
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011725829-01

No Significant Match Found

DV One-Page Summary

KIC: 11725829 Candidate: 1 of 2 Period: 0.527 d



DV Fit Results:

Period = 0.52720 [0.00001] d
Epoch = 131.9385 [0.0020] BKJD
 R_p/R^* = 0.0058 [0.0015]
 a/R^* = 1.87 [1.98]
 b = 0.90 [0.32]
 S_{eff} = 129137.69 [88300.50]
 T_{eq} = 4834 [826] K
 R_p = 1.78 [0.88] R_e
 a = 0.0157 [0.0065] AU
 A_g = 0.56 [0.51] [-0.86σ]
 T_{eff} = 6462 [1068] K [1.21σ]

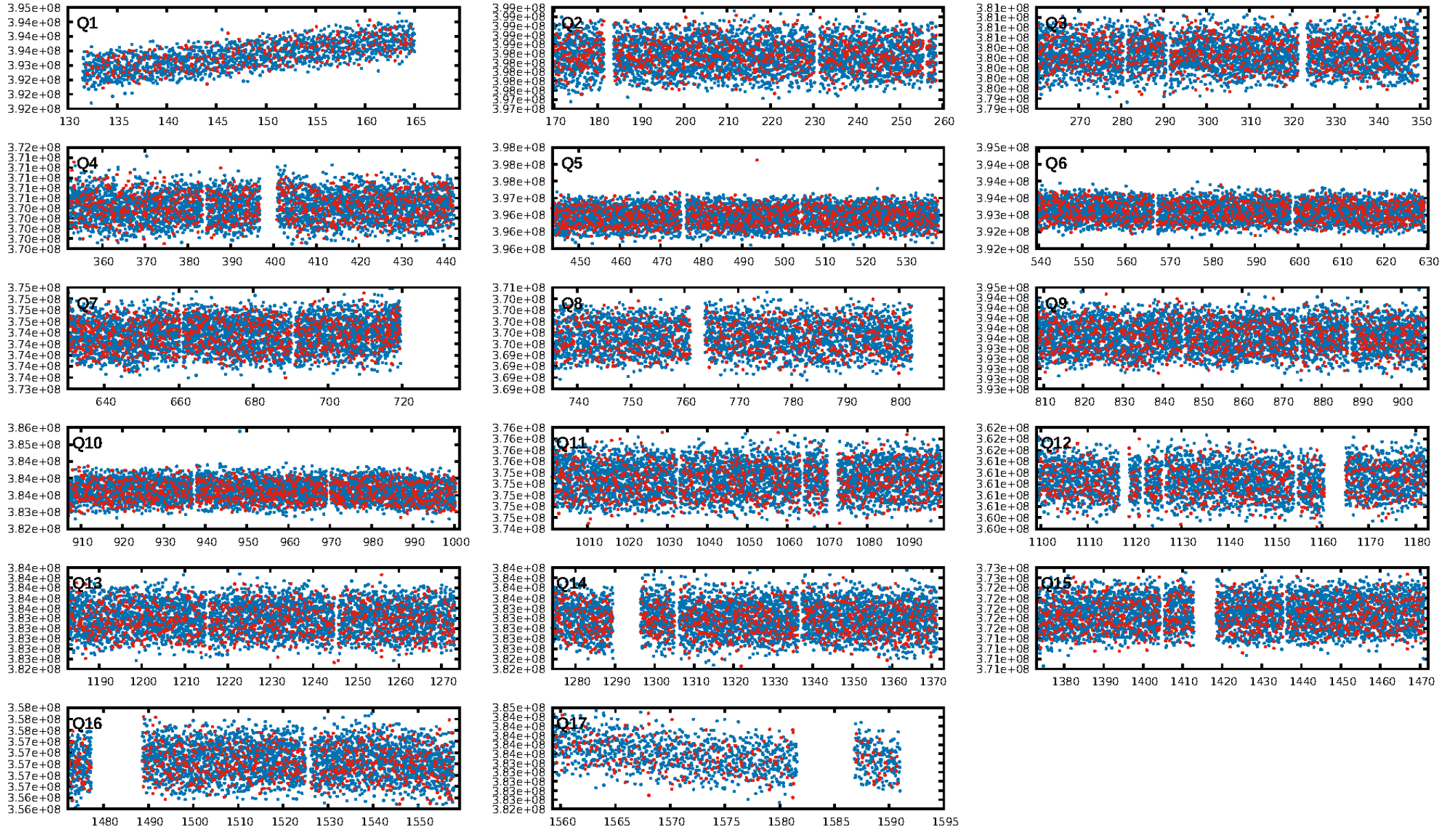
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 8.05e-20
RollingBand-fgt: 0.90 [2174/2419]
GhostDiagnostic-chr: 3.275
Centroid-sig: N/A
Centroid-so: 1.225 arcsec [2.22σ]
OotOffset-rm: 0.056 arcsec [0.18σ]
KicOffset-rm: 0.063 arcsec [0.17σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.65 [11/17]
DiffImageOverlap-fno: 0.00 [0/17]

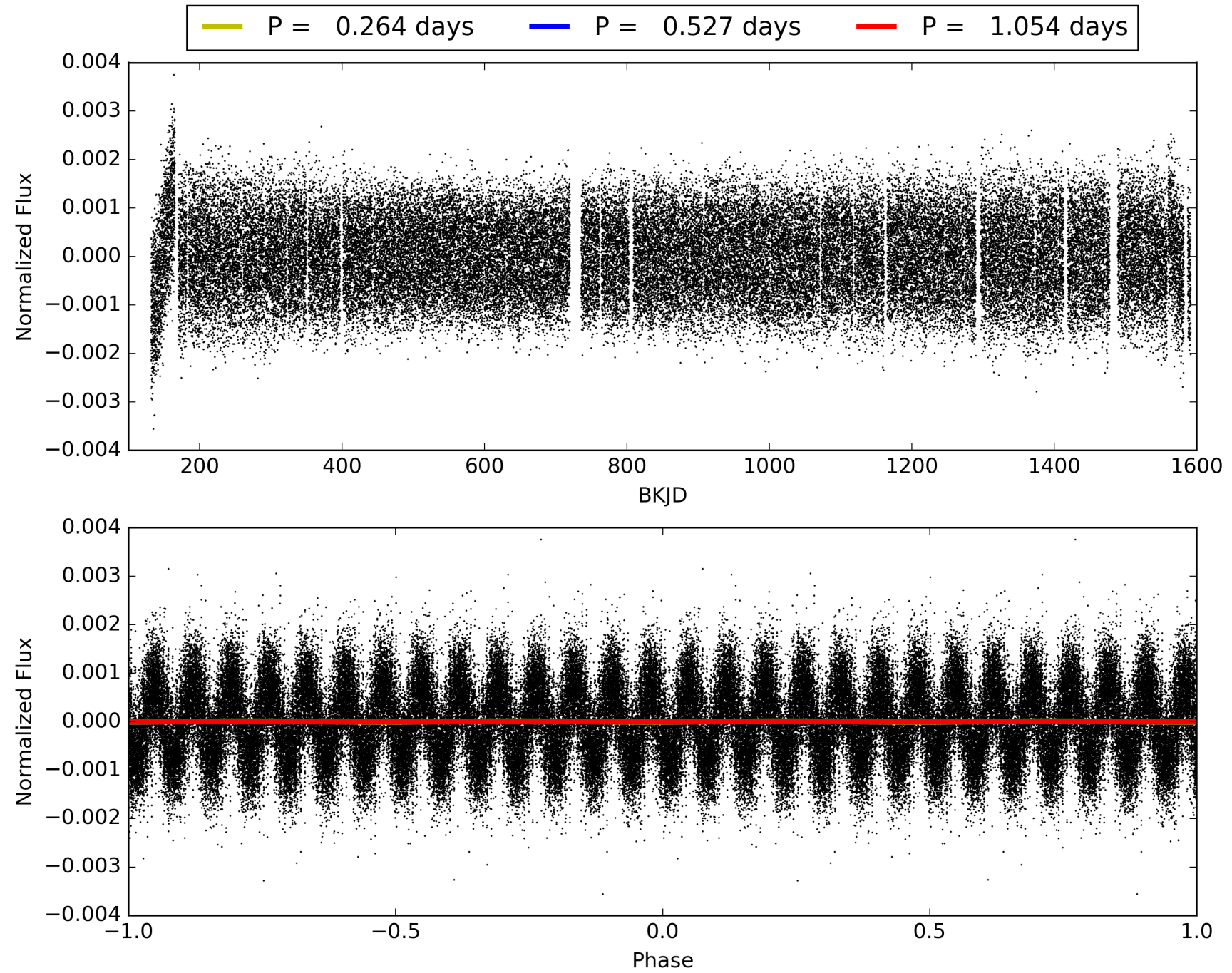
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 13:06:16 Z

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

TCE 011725829-01, PDC Light Curves

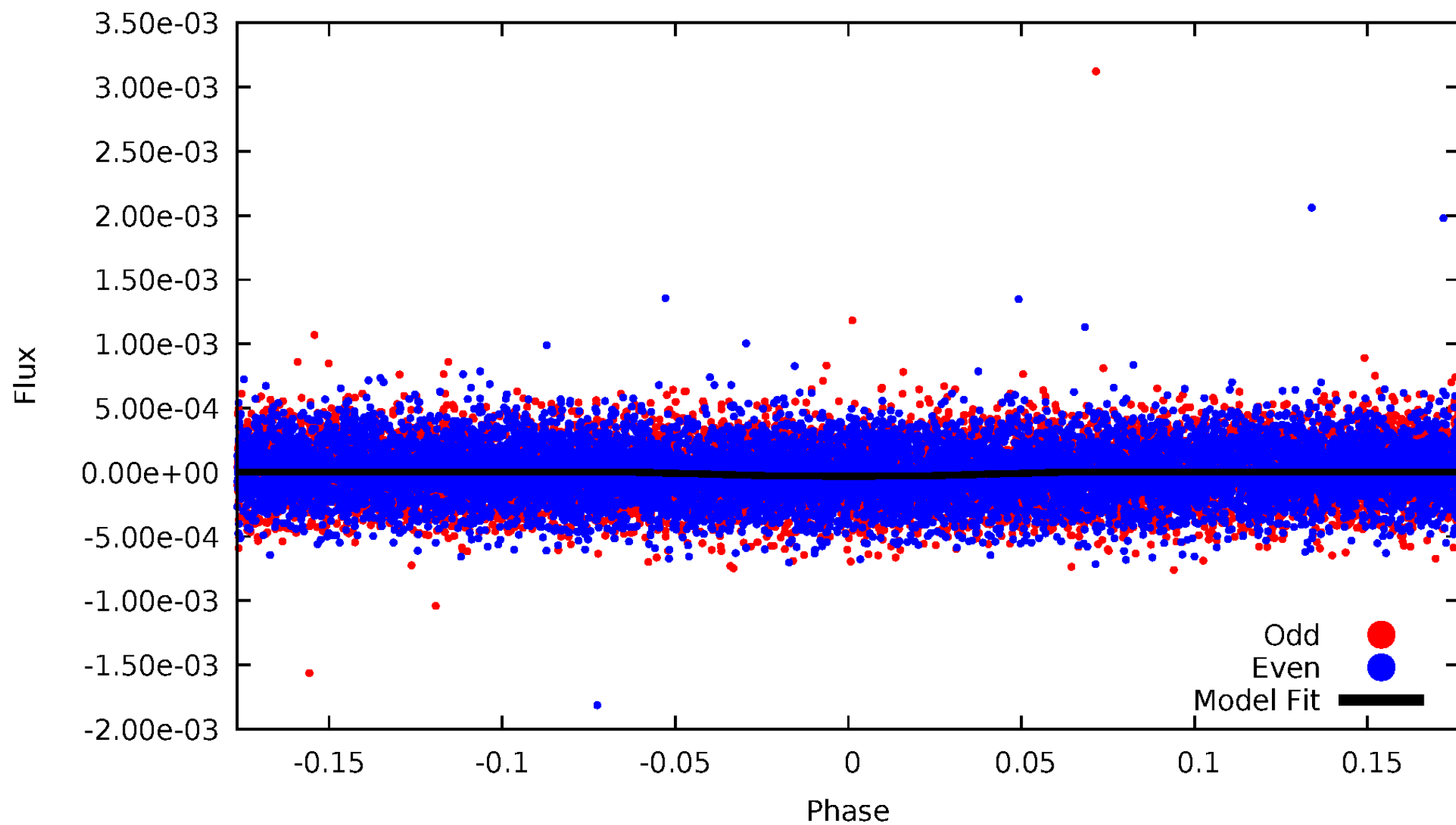


TCE 011725829-01



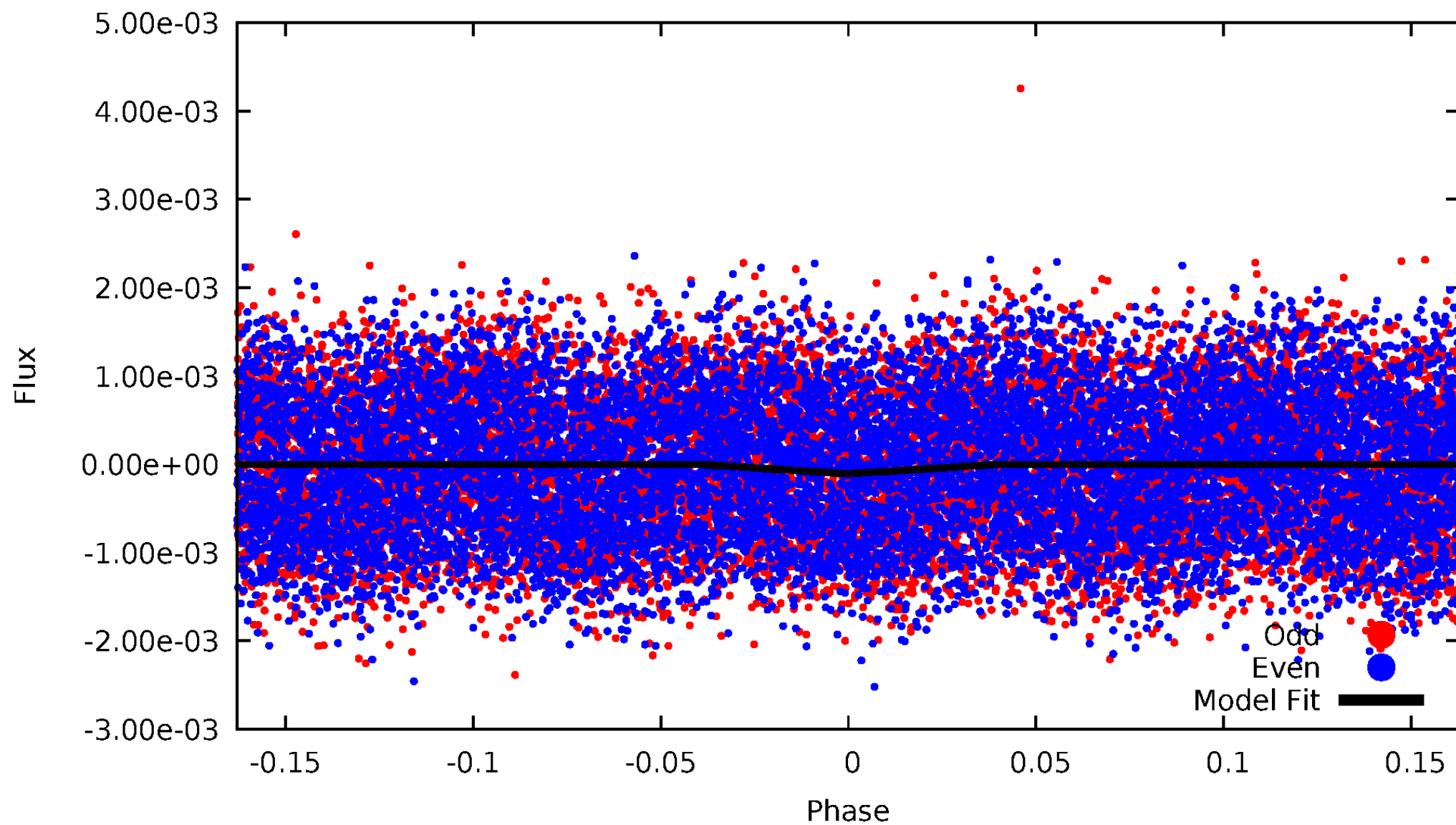
DV Odd/Even

TCE 011725829-01



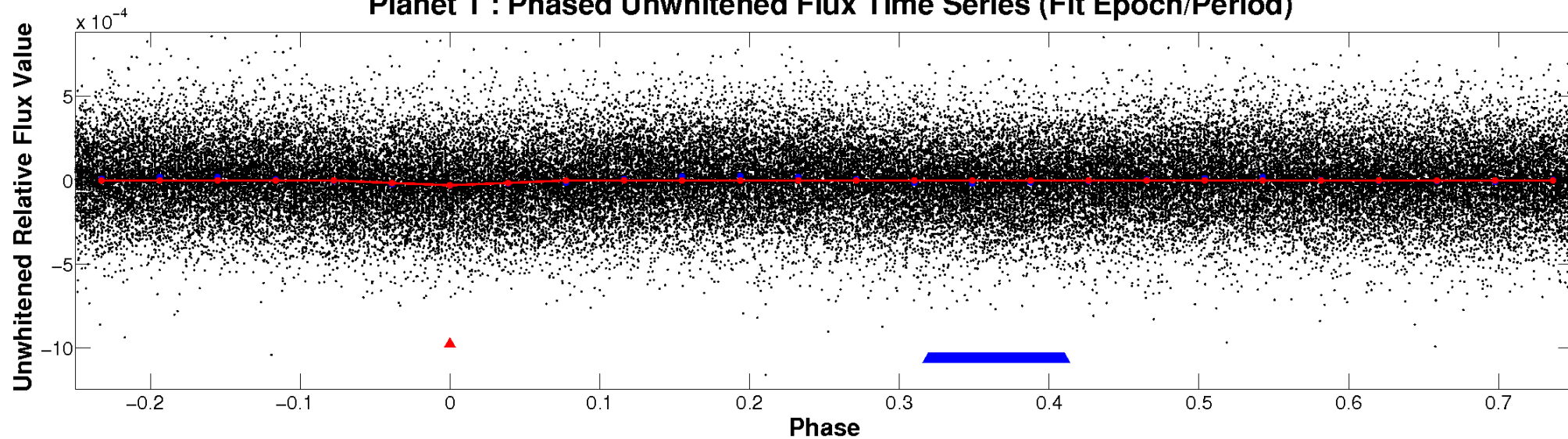
ALT Odd/Even

TCE 011725829-01

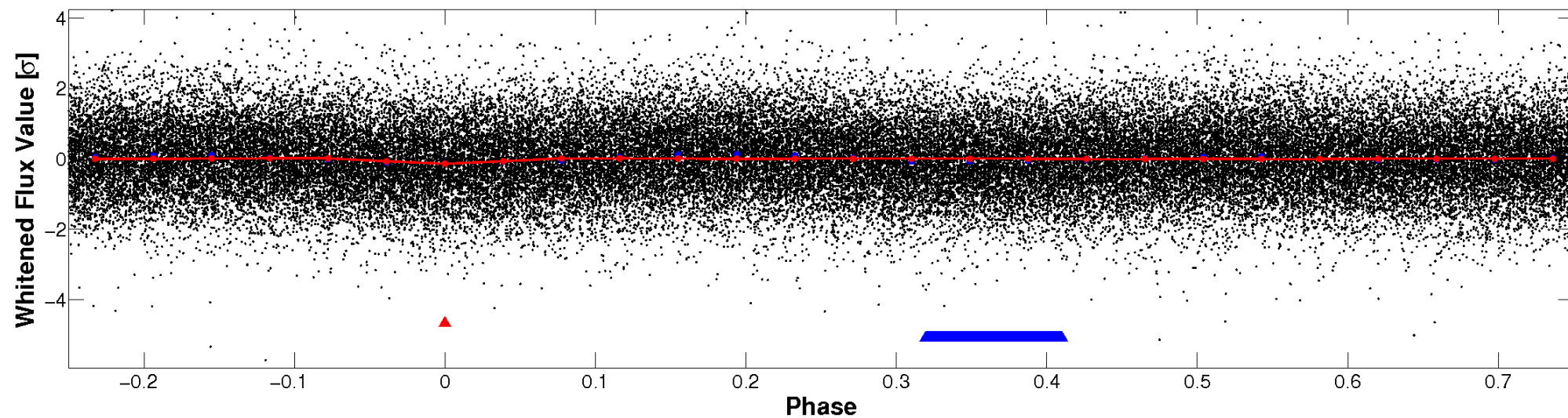


Non-Whitened Vs. Whitened Light Curve

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

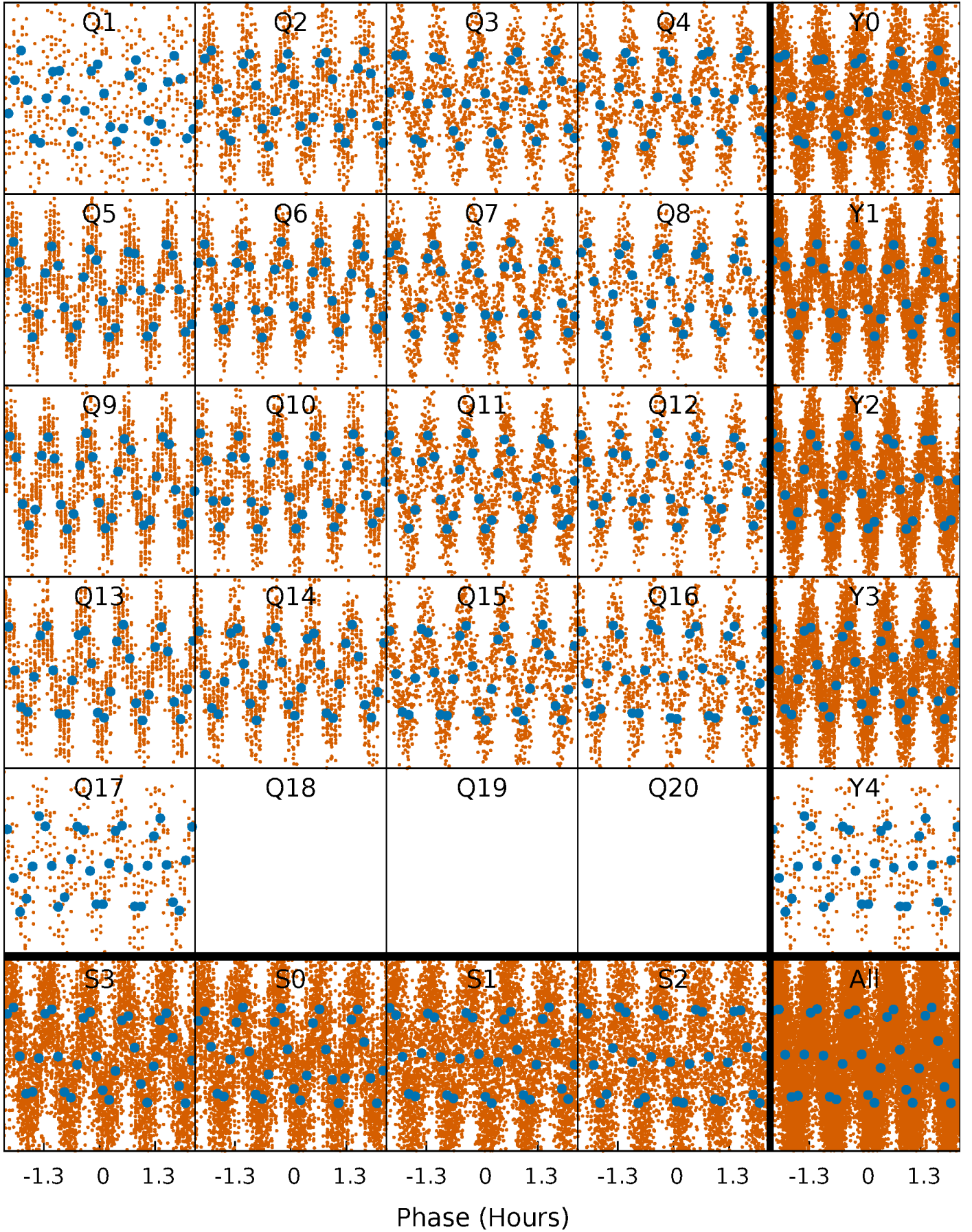


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



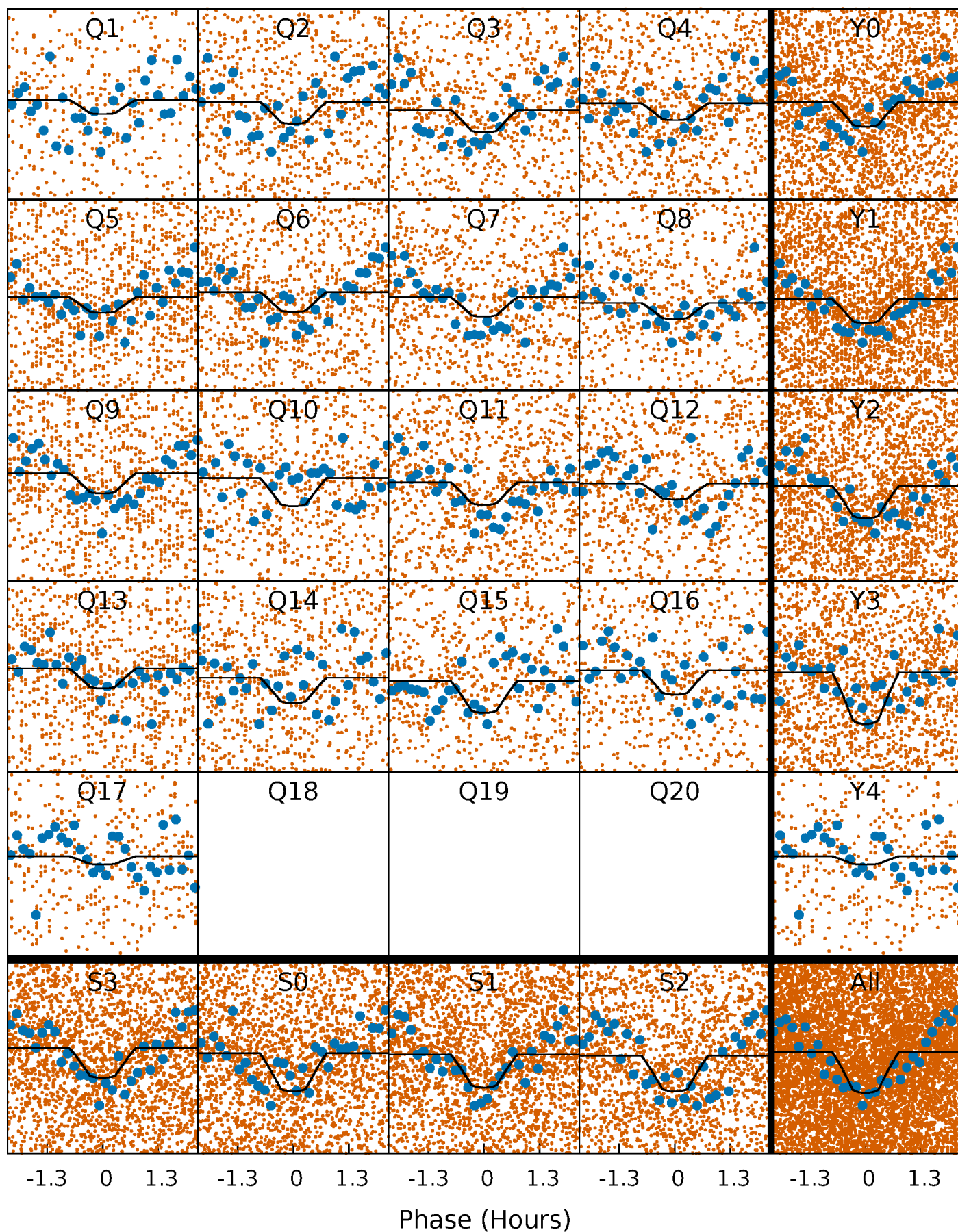
PDC Quarter-Phased Transit Curves

TCE 011725829-01 $P = 0.527200$ Days $T_0 = 131.938503$ (BKJD)



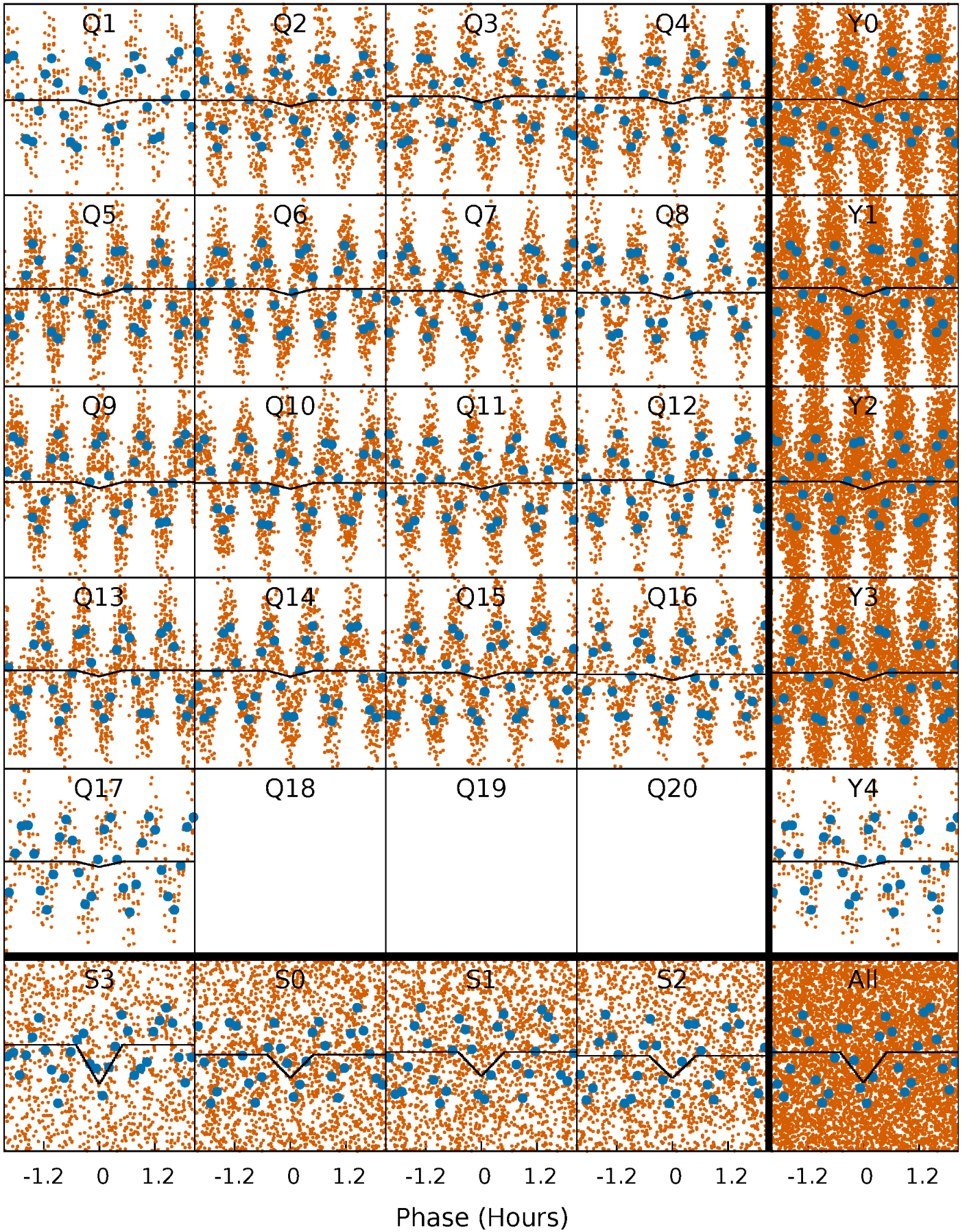
DV Quarter-Phased Transit Curves

TCE 011725829-01 P= 0.527200 Days $T_0=131.938503$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

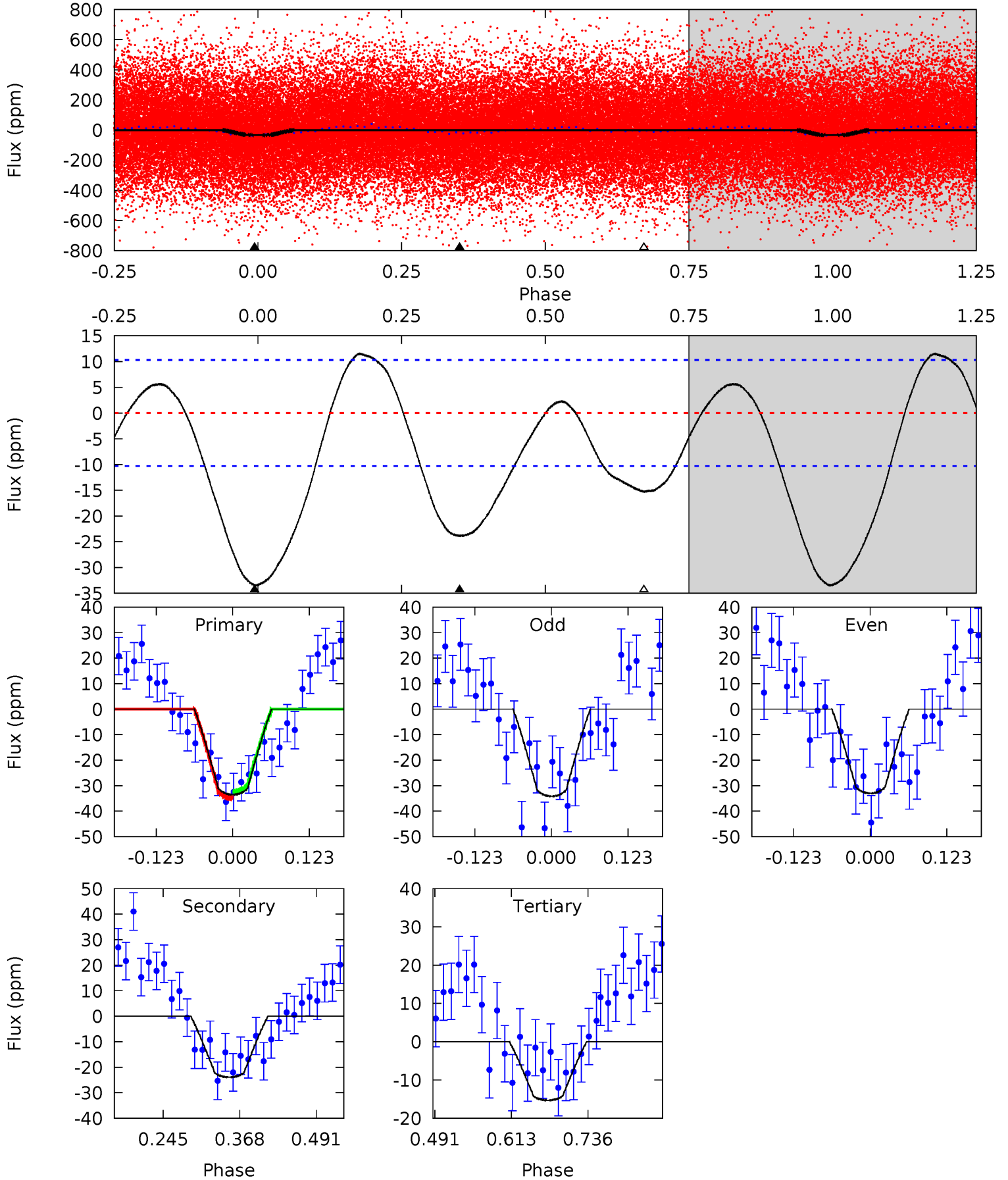
TCE 011725829-01 P= 0.527217 Days $T_0=131.940465$ (BKJD)



DV Model-Shift Uniqueness Test

011725829-01, P = 0.527200 Days, E = 131.411303 Days

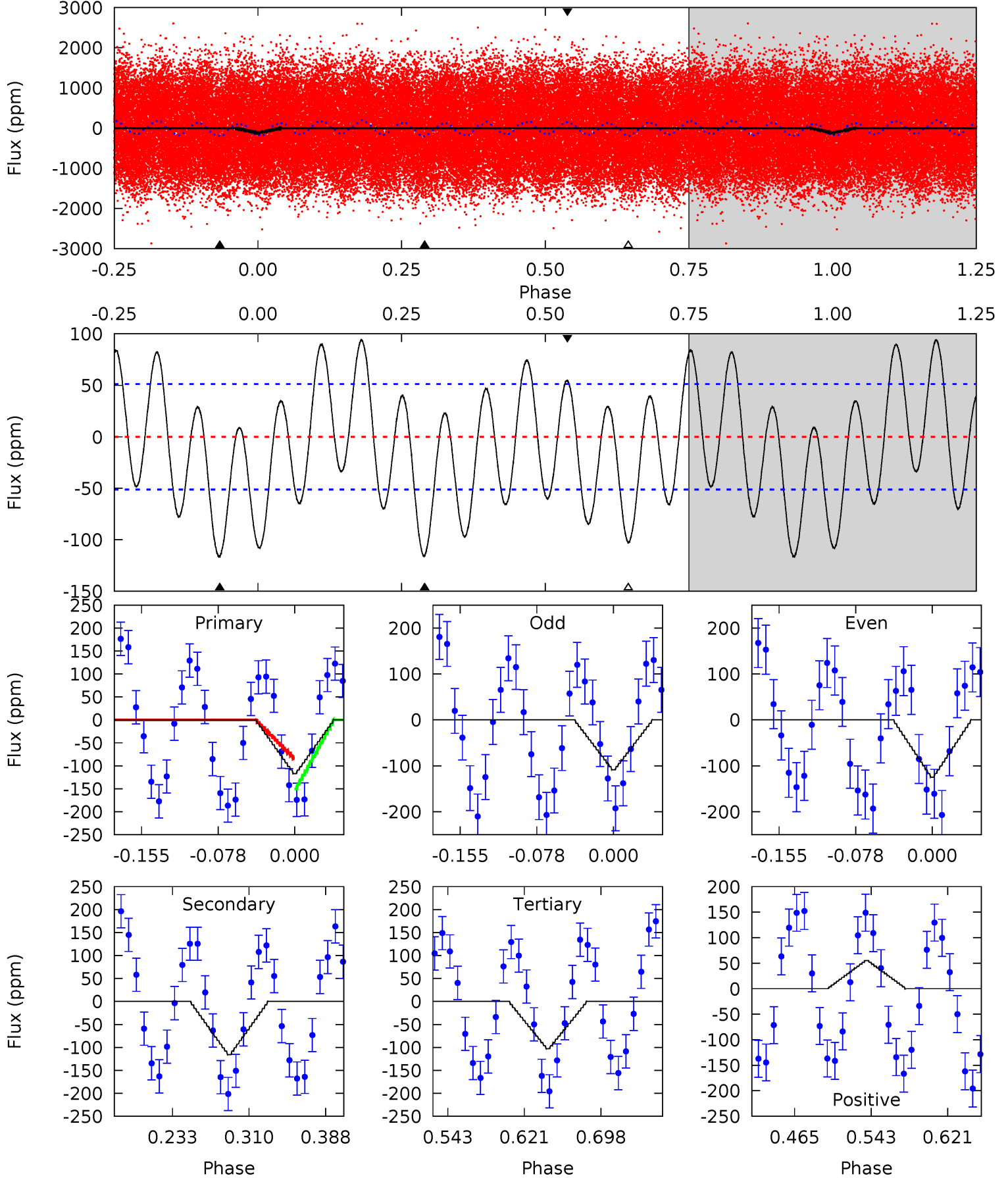
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.7	10.5	6.72	0	4.52	1.54	3.67	8.01	14.7	3.78	10.5	0.26	0.86	0.26	0.53



Alt Model-Shift Uniqueness Test

011725829-01, P = 0.527217 Days, E = 131.413248 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	10.4	9.27	4.97	4.62	1.76	4.48	1.26	5.55	1.17	5.47	0.74	0.87	0.45	3.03



Stellar Parameters For KIC 011725829

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	8156^{+225}_{-338}	$3.801^{+0.391}_{-0.069}$	$-0.240^{+0.150}_{-0.300}$	$2.827^{+0.374}_{-1.198}$	$1.841^{+0.094}_{-0.374}$	$0.115^{+0.371}_{-0.026}$
	+3%/-4%	+10%/-2%	+62%/-125%	+13%/-42%	+5%/-20%	+324%/-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 011725829-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-24 ± 2	$1.58^{+0.50}_{-0.48}$	6521^{+412}_{-682}	6871^{+1545}_{-1107}	$1.264^{+1.418}_{-0.534}$
Alt.	-116 ± 11	$2.95^{+0.59}_{-0.72}$	6560^{+407}_{-734}	7925^{+1101}_{-817}	$1.782^{+1.296}_{-0.531}$

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 $A_{obs} \gg 1.0$

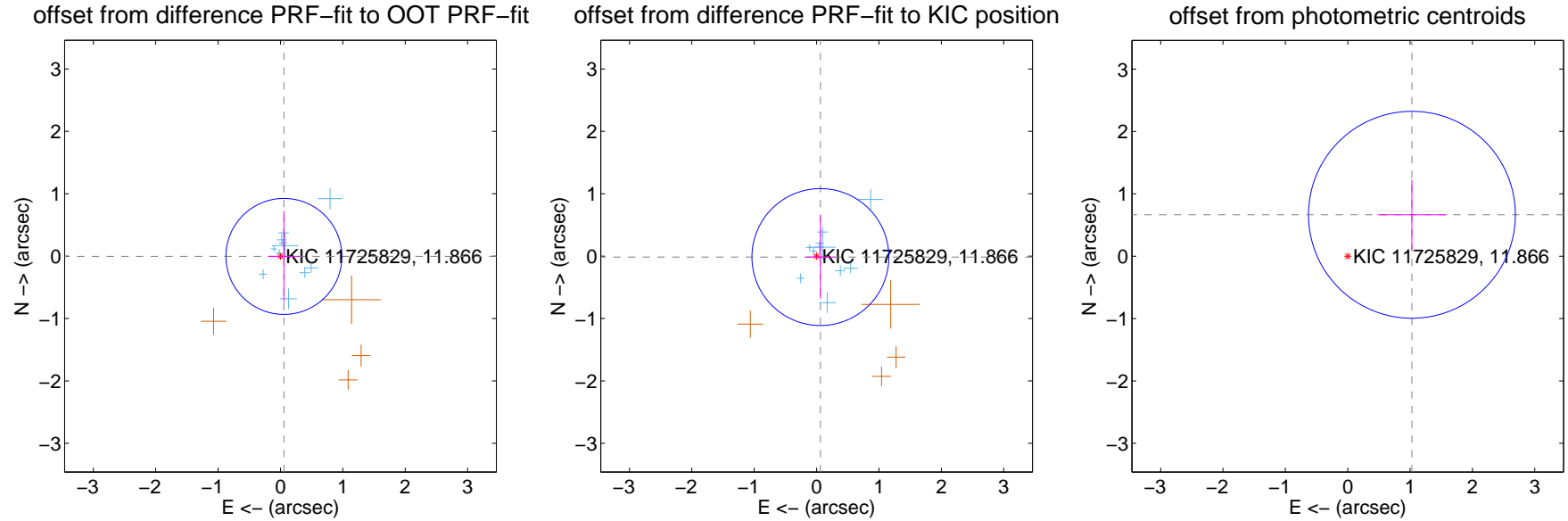
DV Centroid Data

Supplemental centroid analysis for 011725829-01. **Kepler magnitude: 11.87.** Transit SNR 8.97

There are 11 quarters with good PRF difference image offsets

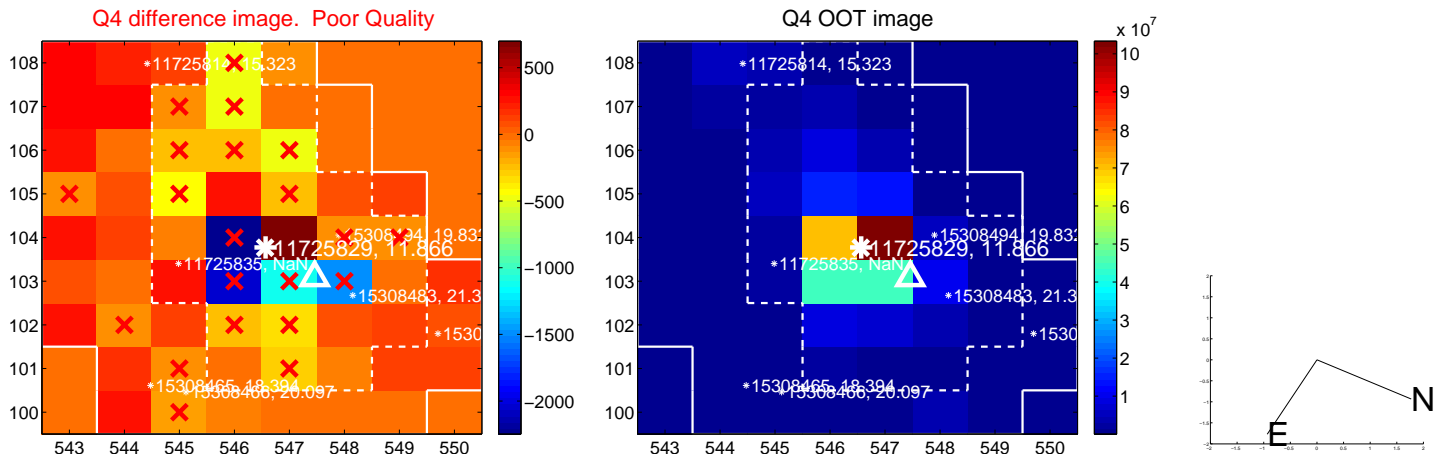
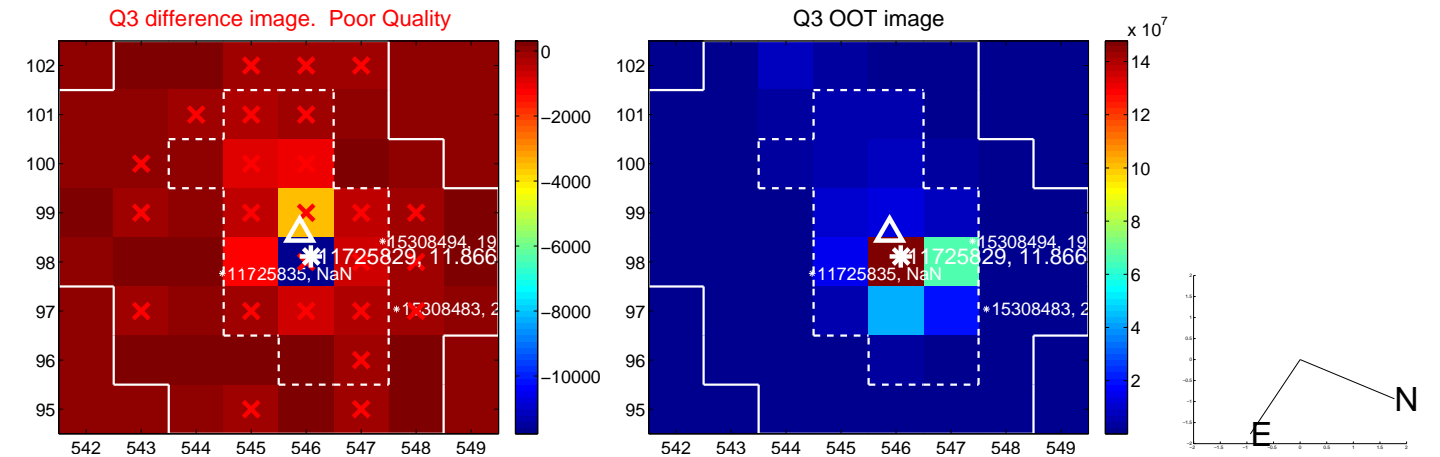
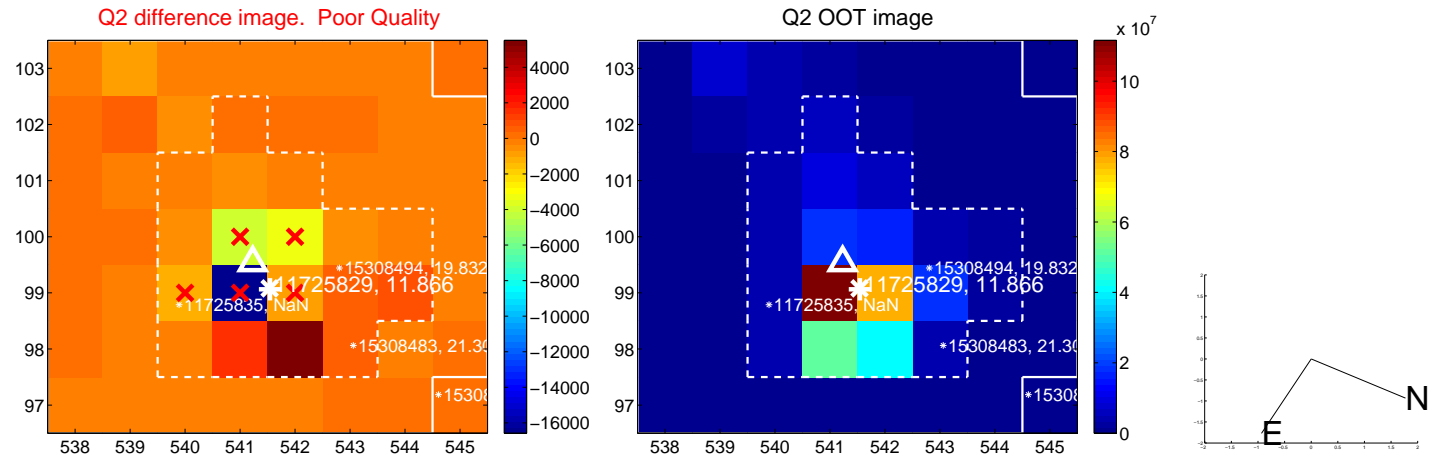
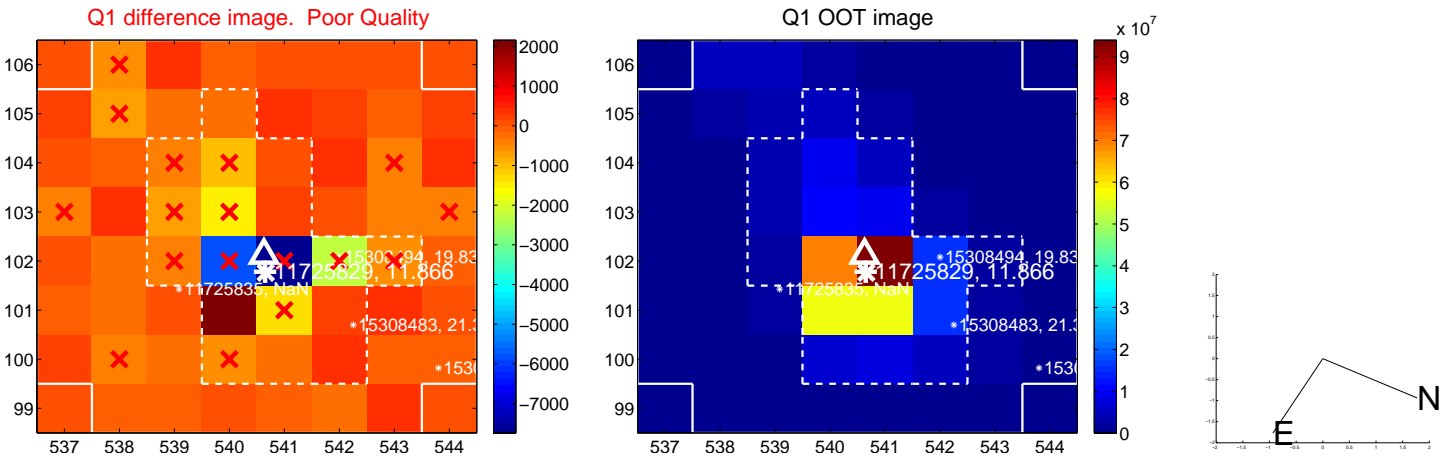
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.056 ± 0.310	0.18	-0.055 ± 0.258	-0.005 ± 0.732
PRF-fit source offset from KIC position	0.063 ± 0.366	0.17	-0.061 ± 0.238	-0.015 ± 0.669
photometric centroid source offset	1.23 ± 0.55	2.22	-1.03 ± 0.55	0.66 ± 0.56

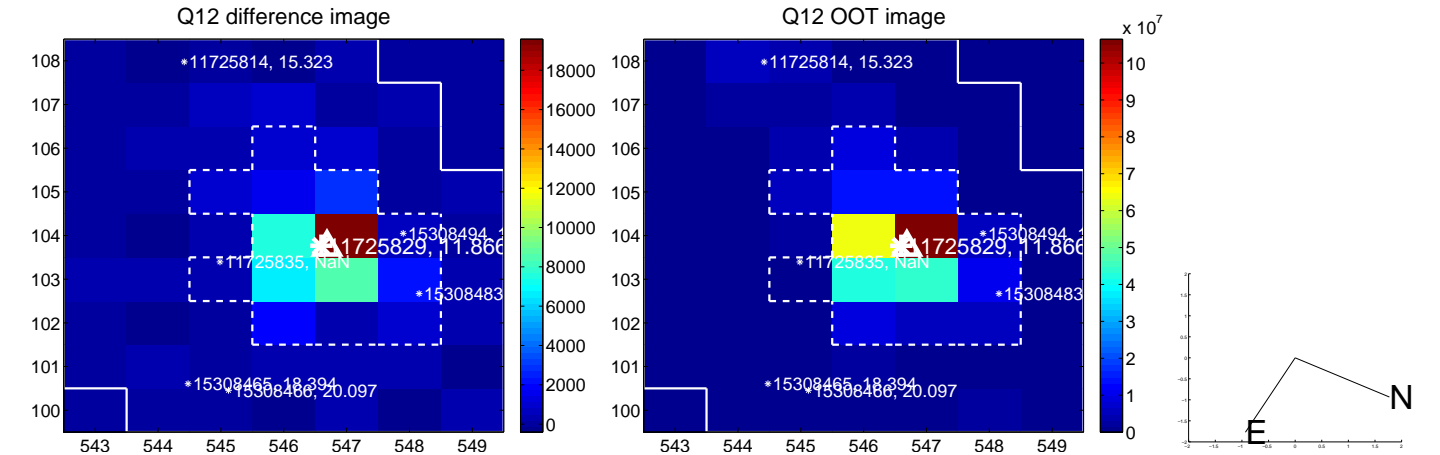
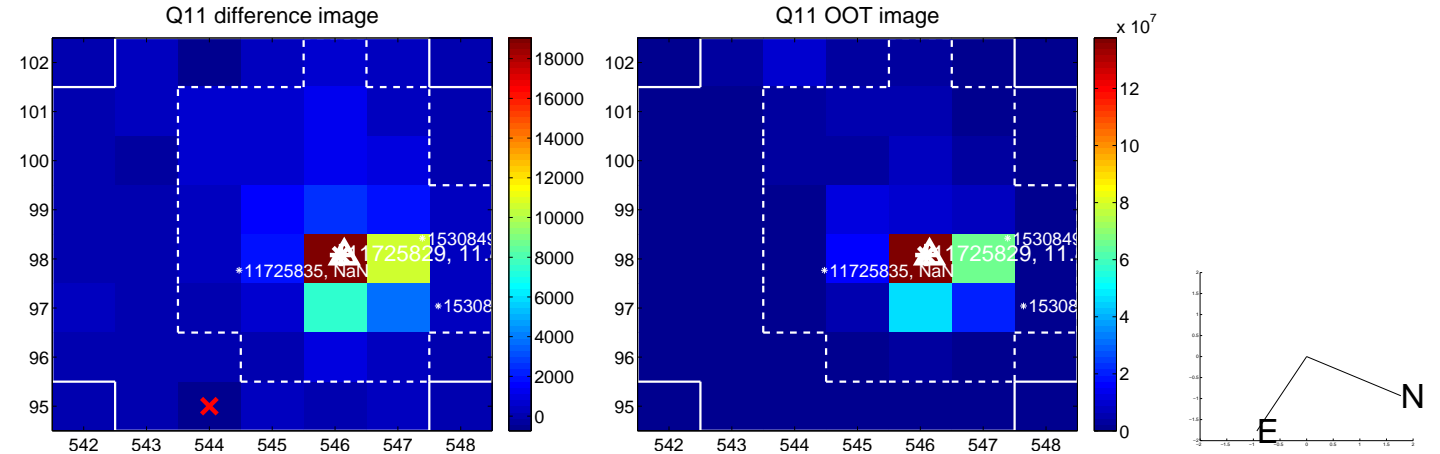
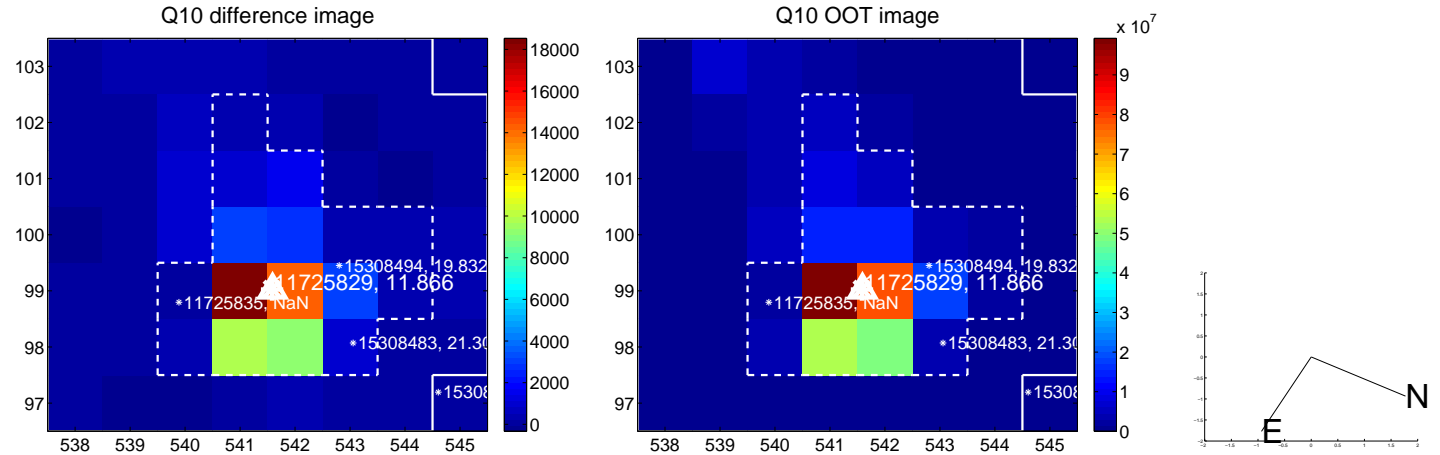
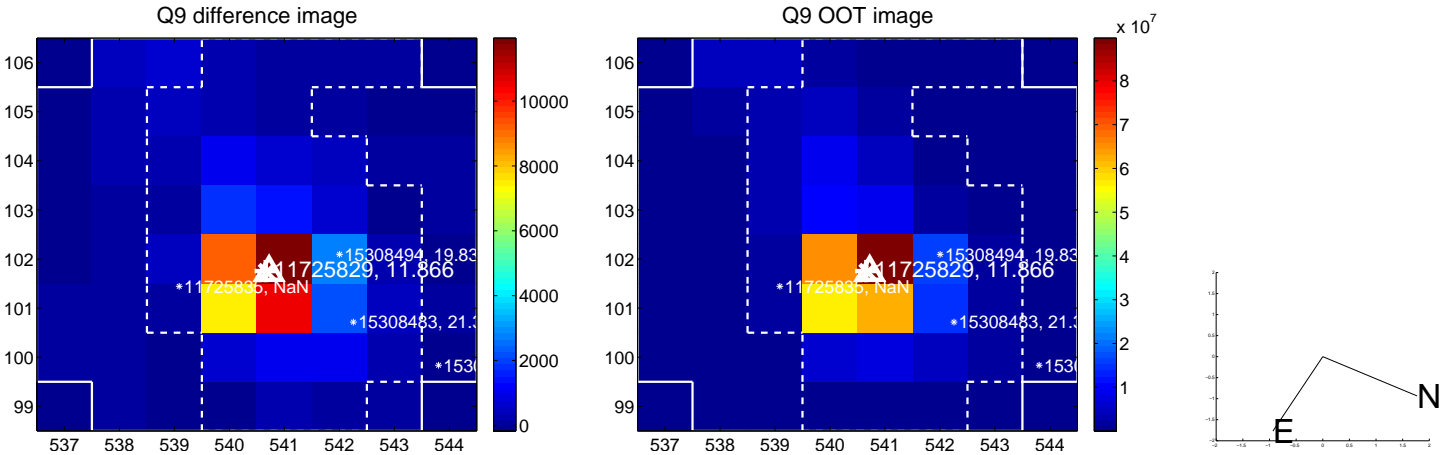


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

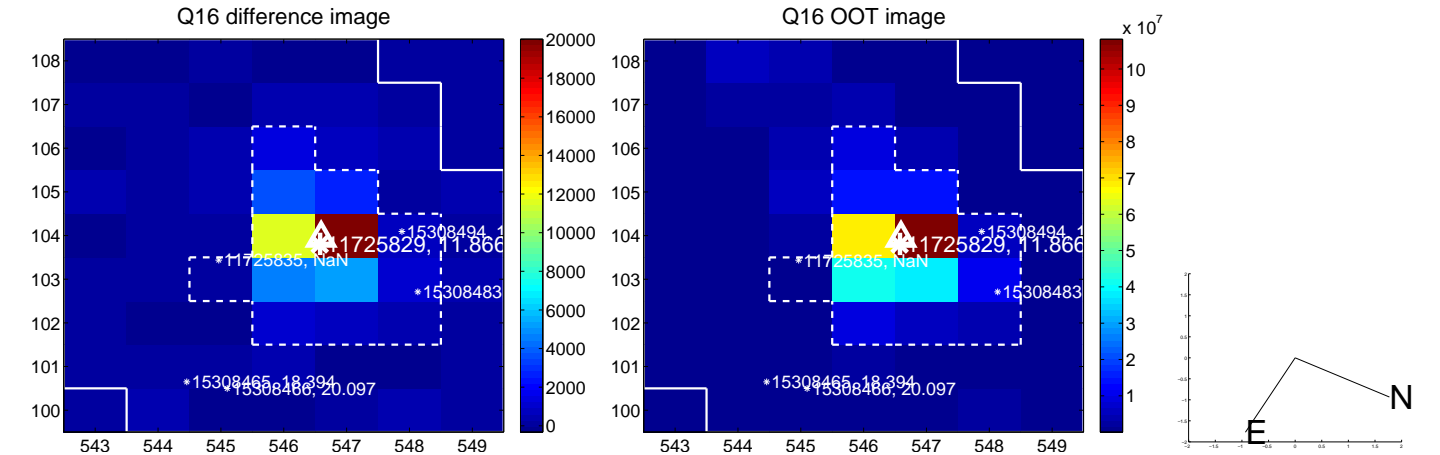
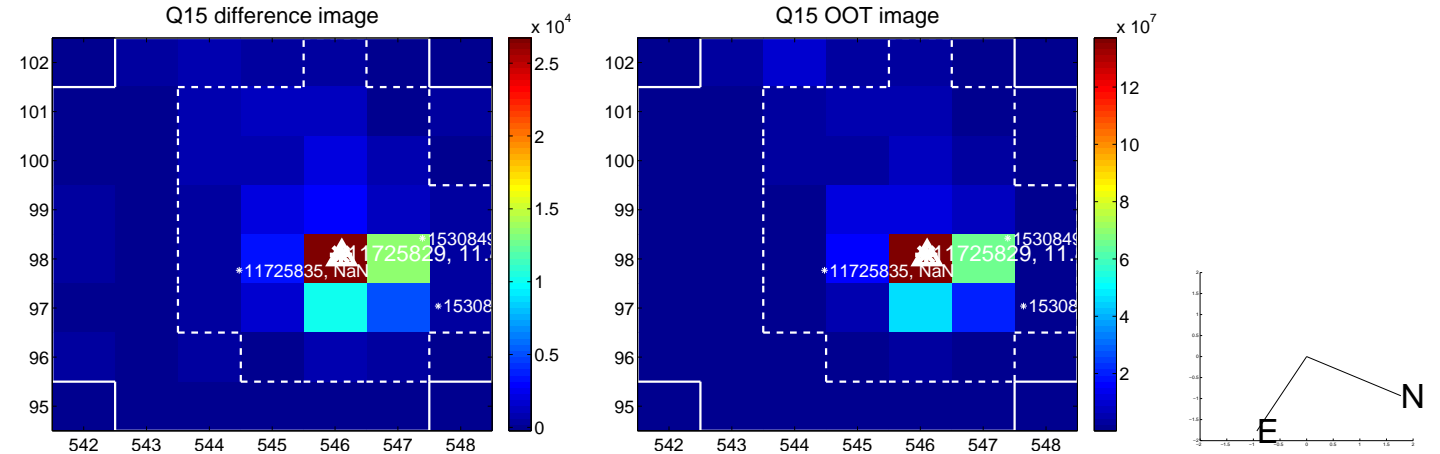
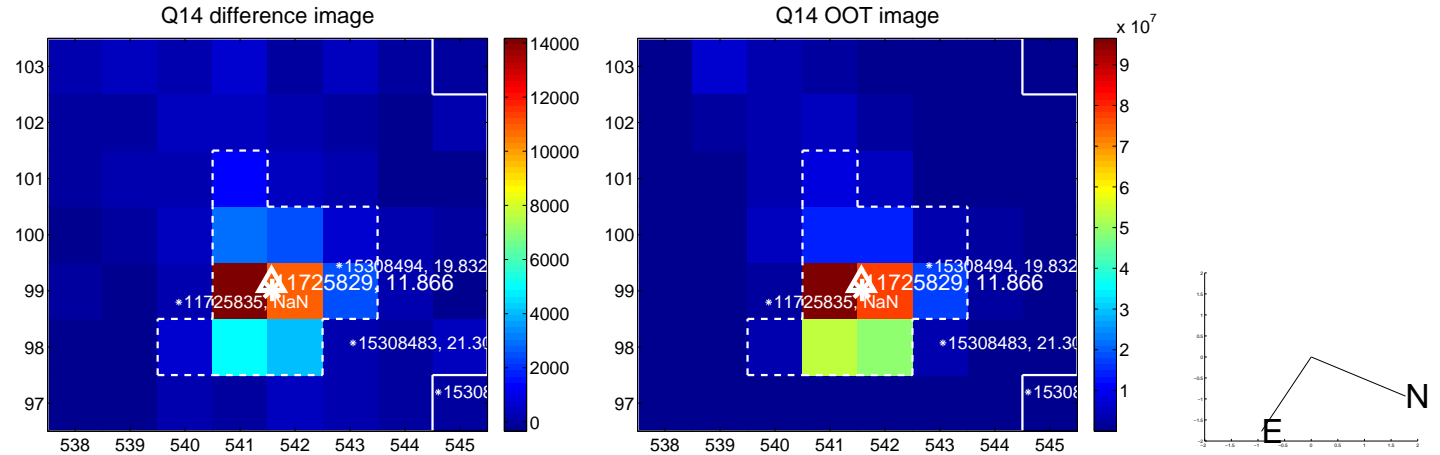
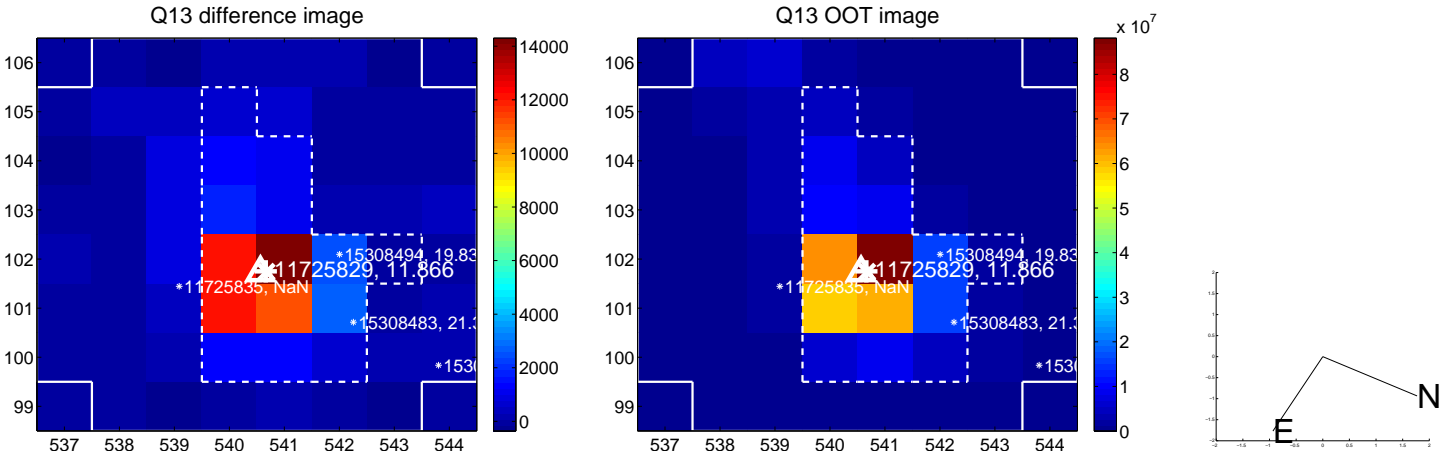
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



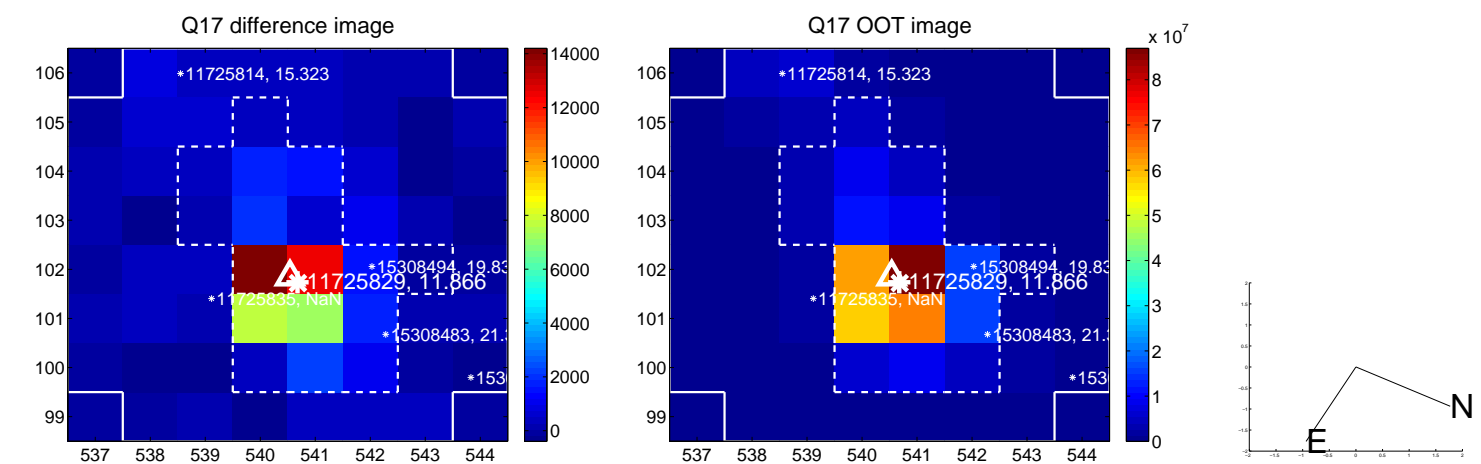
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



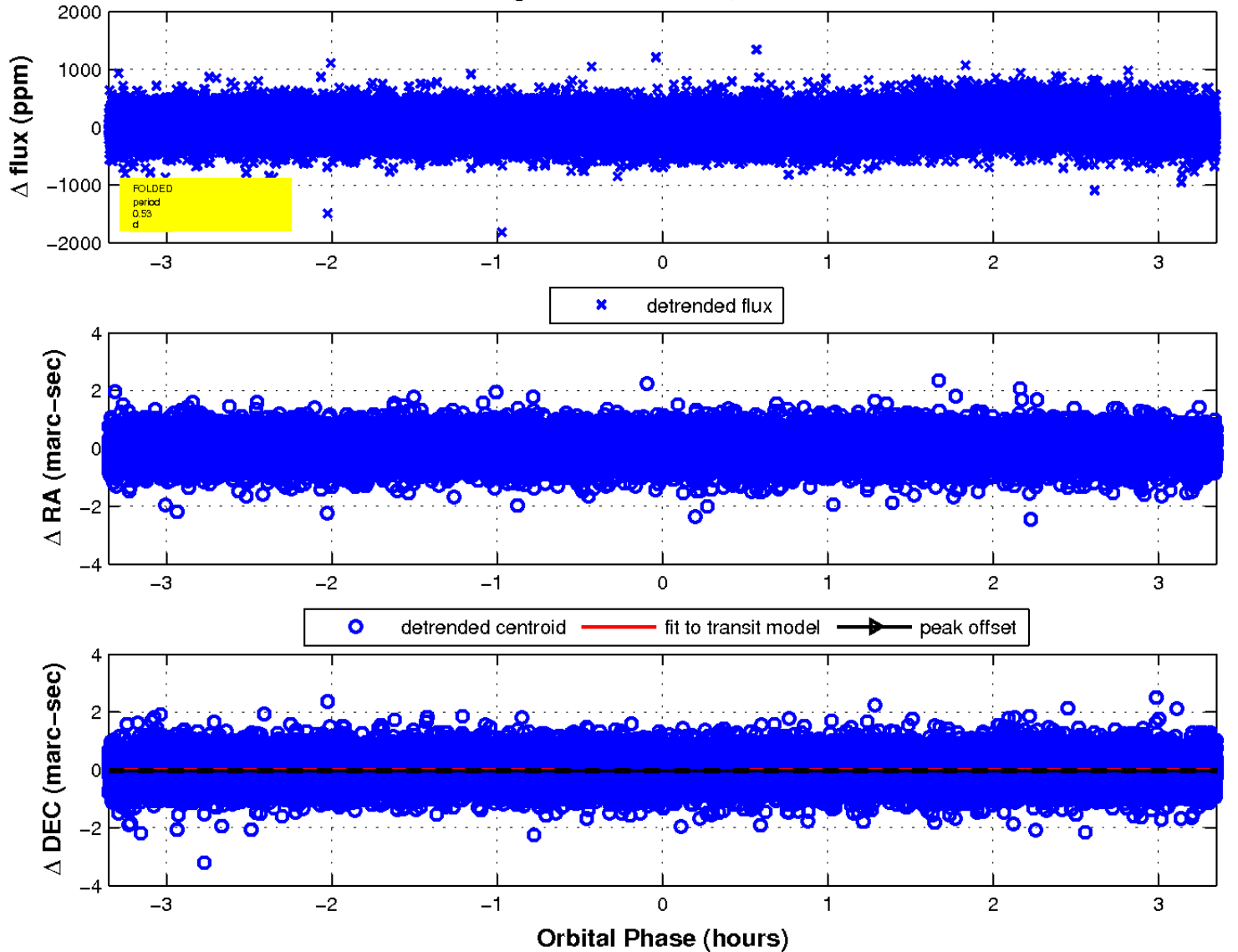
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

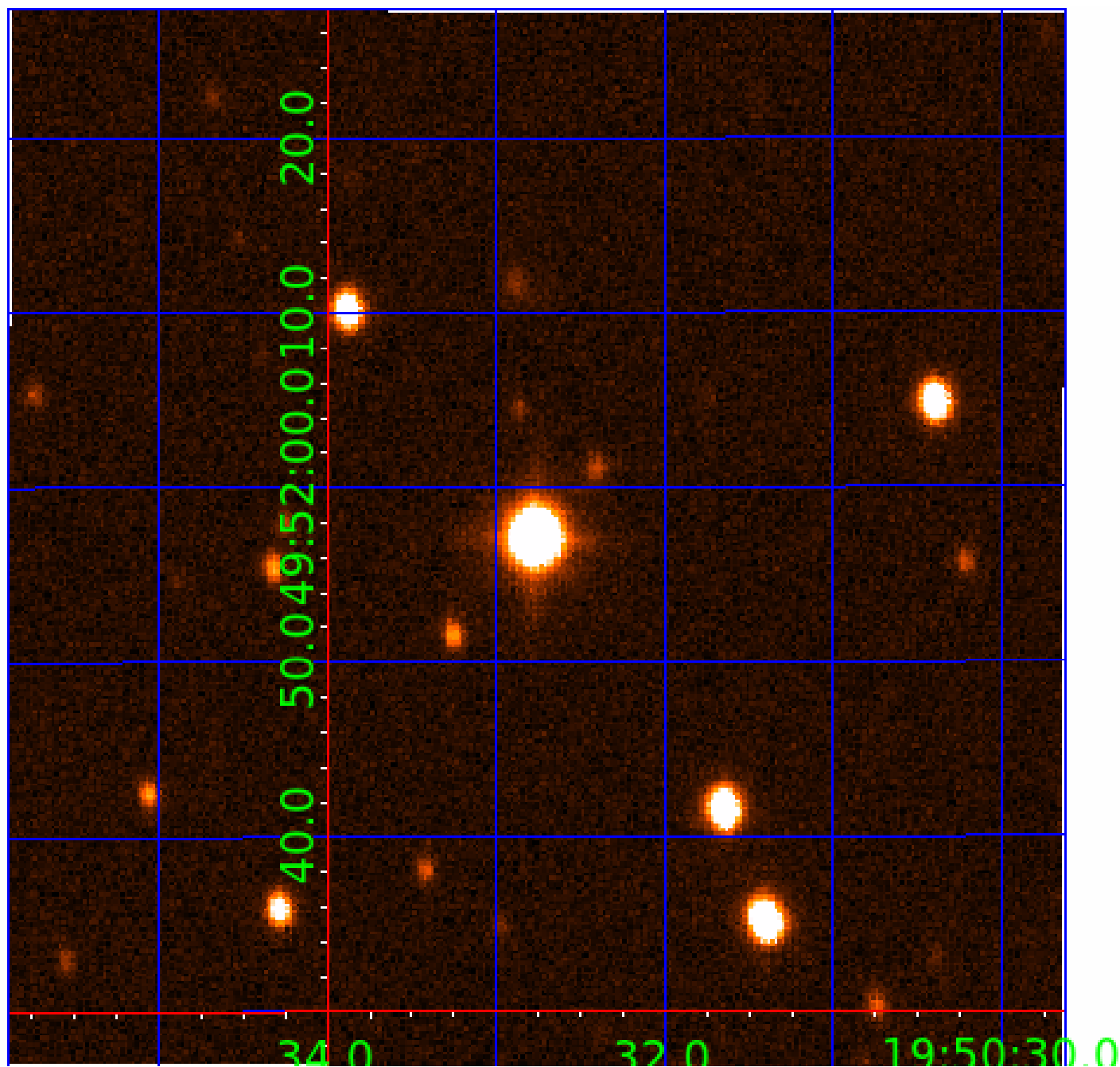


fluxWeightedCentroids, Planet 1 of 2



UKIRT Image

Declination



KIC 011725829

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})
011725829-01	OBS	No	0.527200	131.938503	29.0	1.117	11.0	9.0	2.83	8156	1.78	129137.70
011725829-02	OBS	No	0.527217	131.579744	179.1	1.500	7.8	-1.0	2.83	8156	3.83	129132.06

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011725829-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
011725829-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_NOFITS

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

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

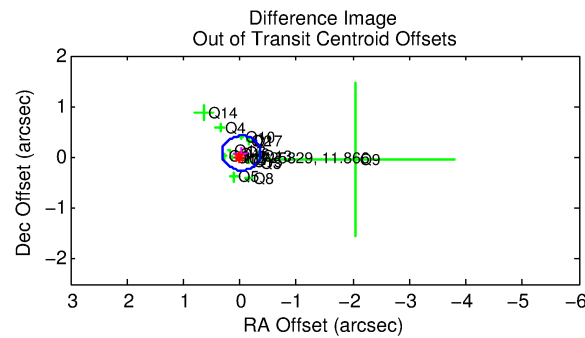
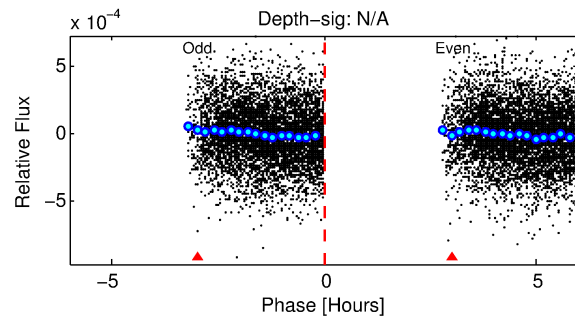
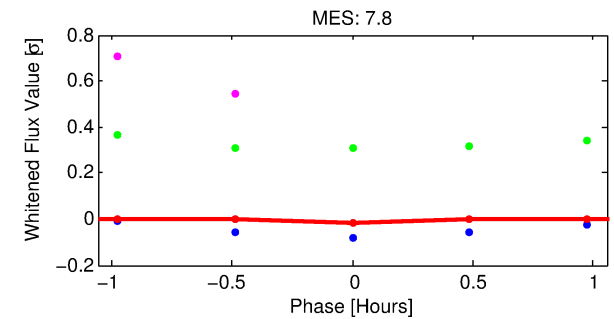
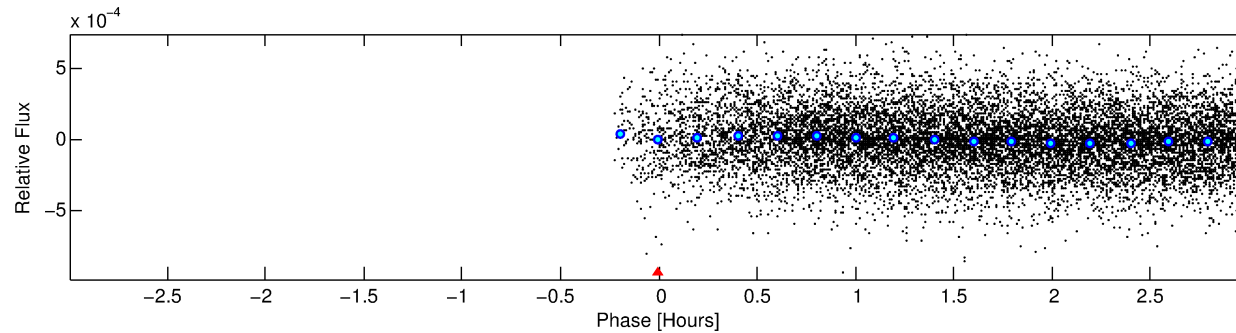
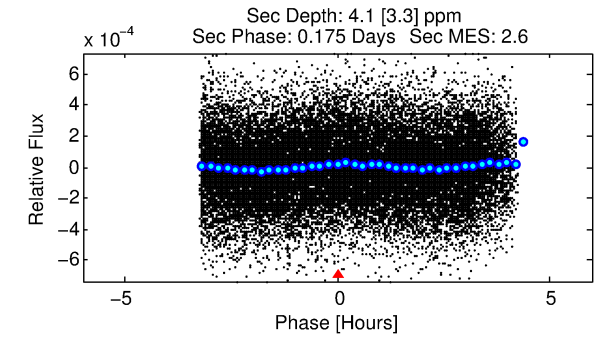
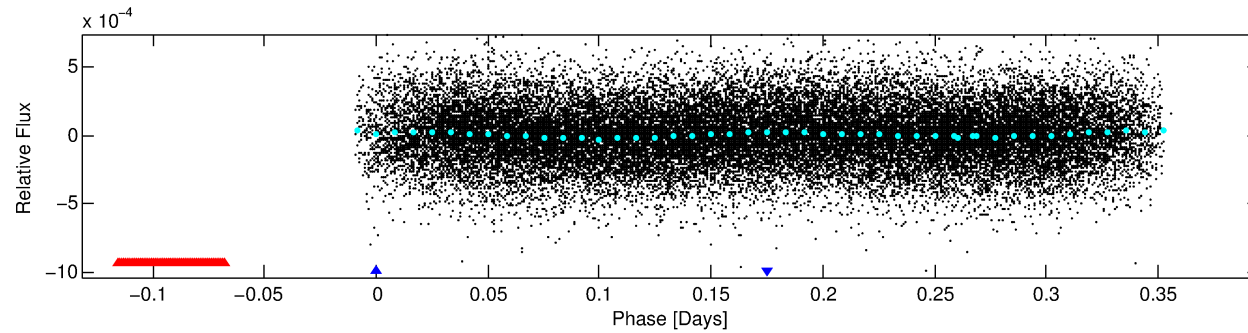
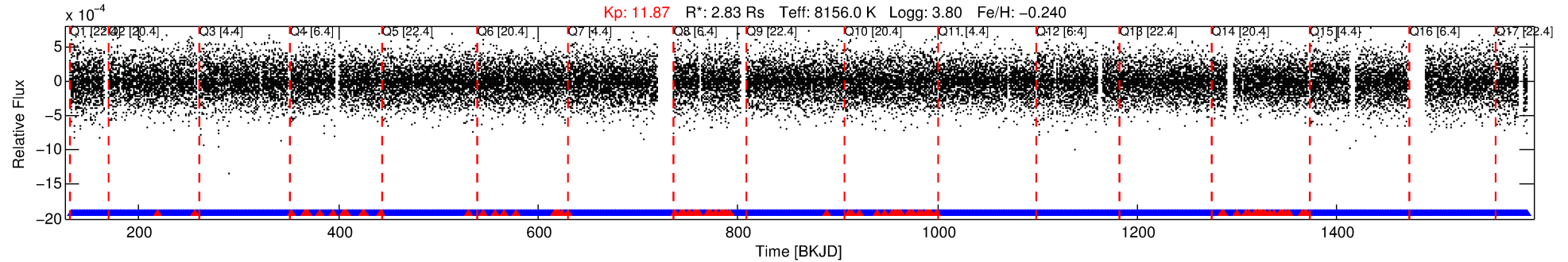
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011725829-02

No Significant Match Found

DV One-Page Summary

KIC: 11725829 Candidate: 2 of 2 Period: 0.527 d



TPS TCE Results:

Period = 0.52722 d
Epoch = 131.5797 BKJD

DV fit results are unavailable

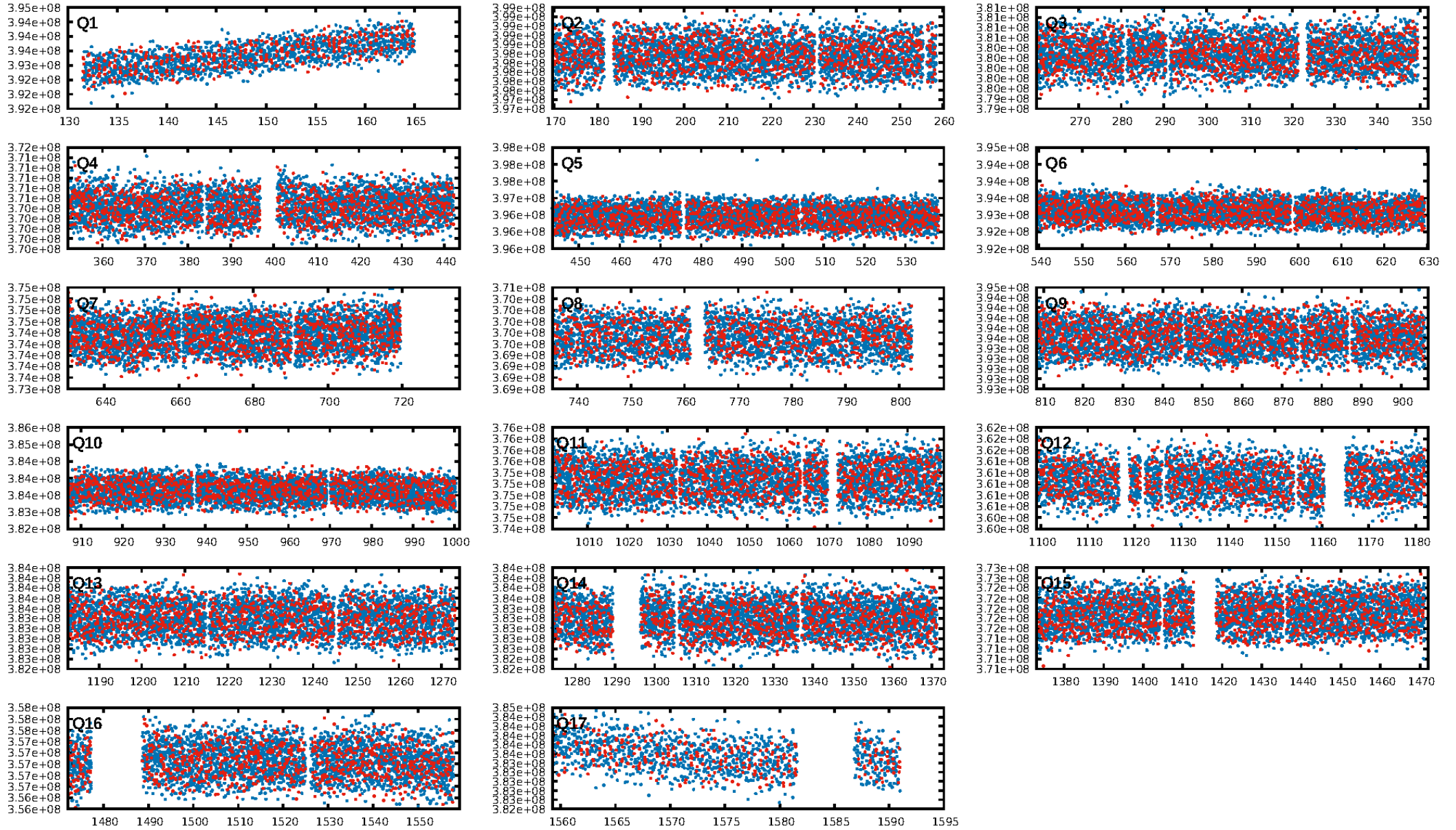
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.60e-12
RollingBand-fgt: 0.96 [2041/2137]
GhostDiagnostic-chr: 1.863
Centroid-sig: N/A
Centroid-so: 0.544 arcsec [5.26σ]
OotOffset-rm: 0.083 arcsec [0.74σ]
KicOffset-rm: 0.076 arcsec [0.67σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.47 [8/17]
DiffImageOverlap-fno: 0.00 [0/17]

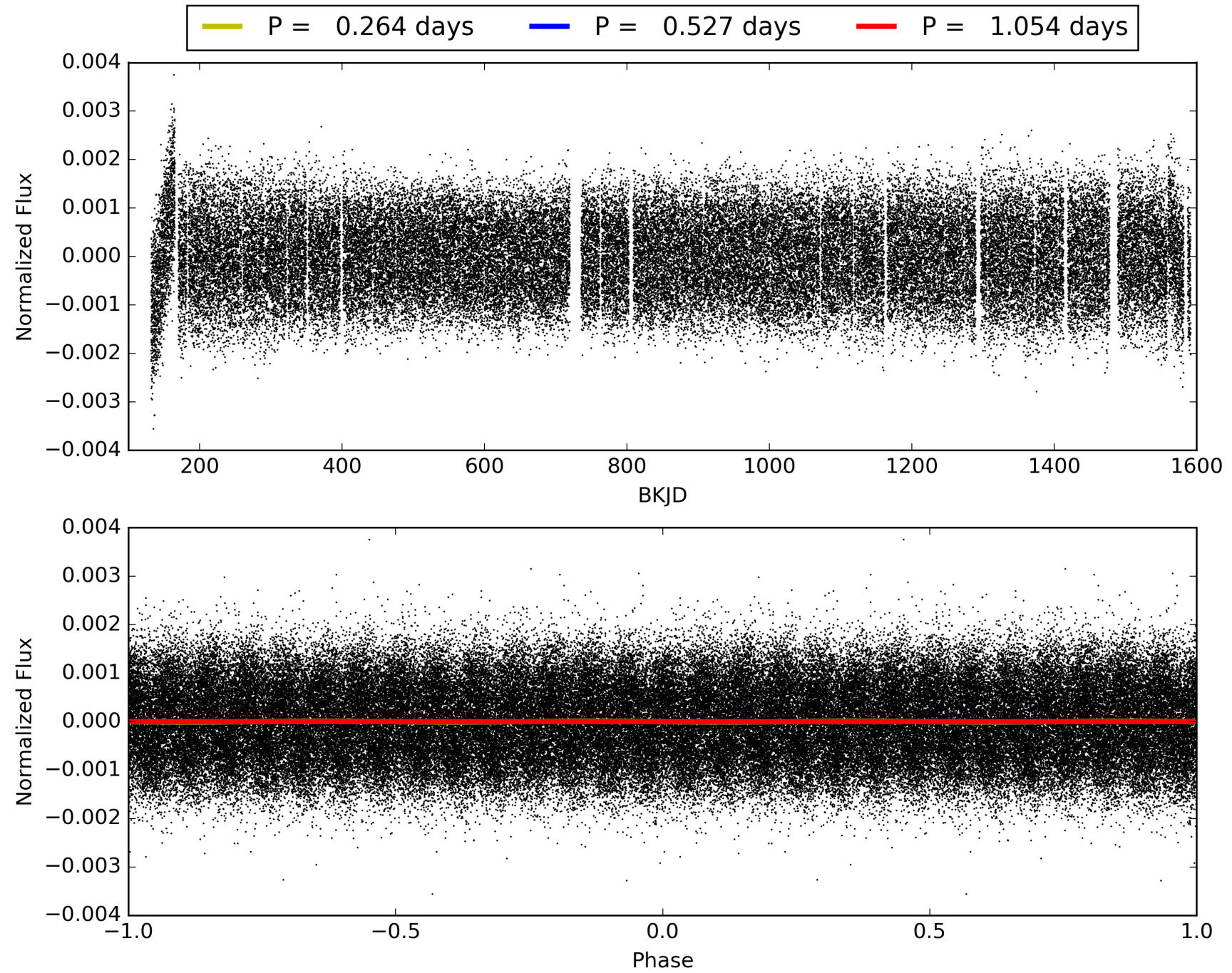
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 13:06:26 Z

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TCE 011725829-02, PDC Light Curves

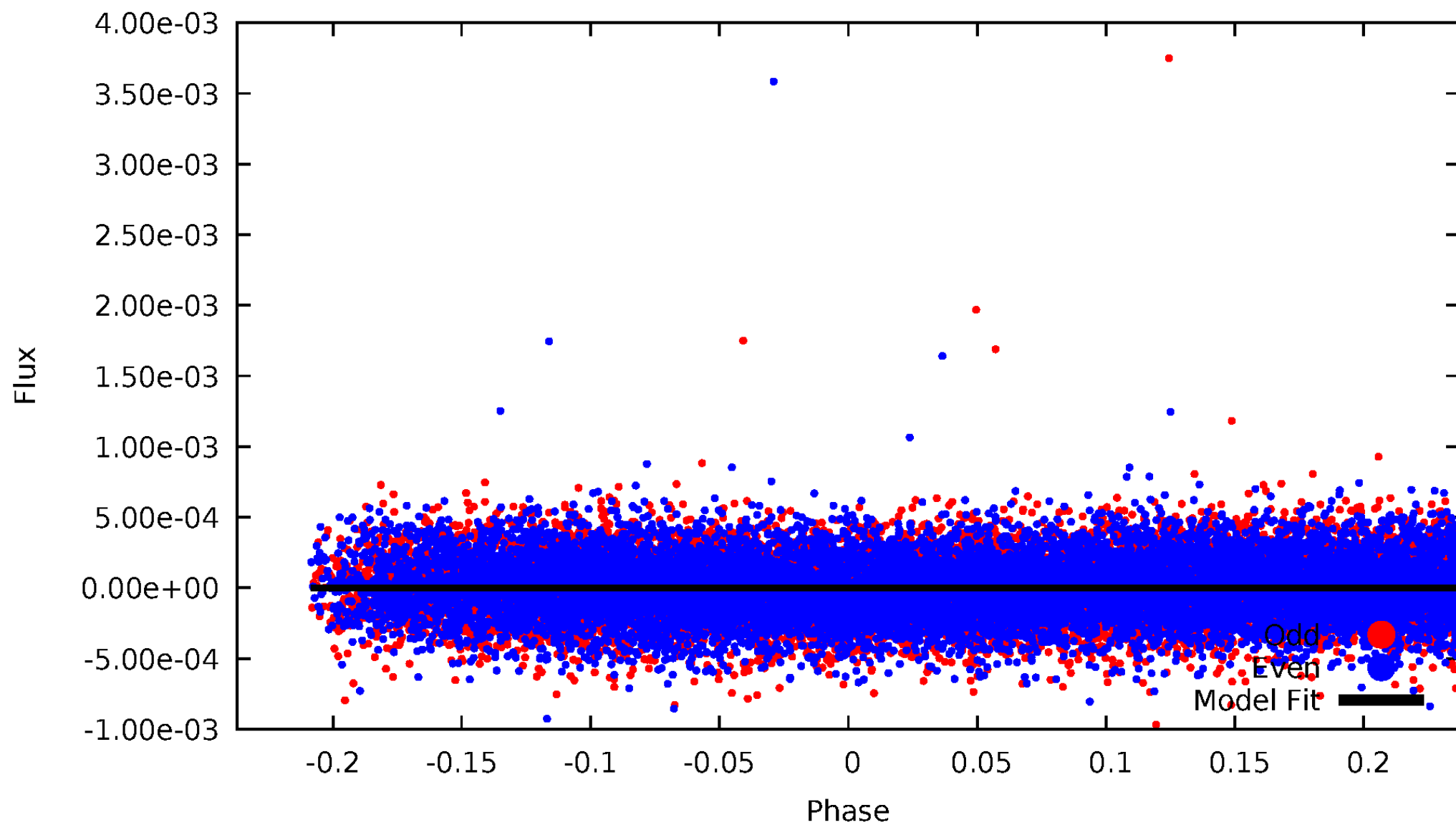


TCE 011725829-02



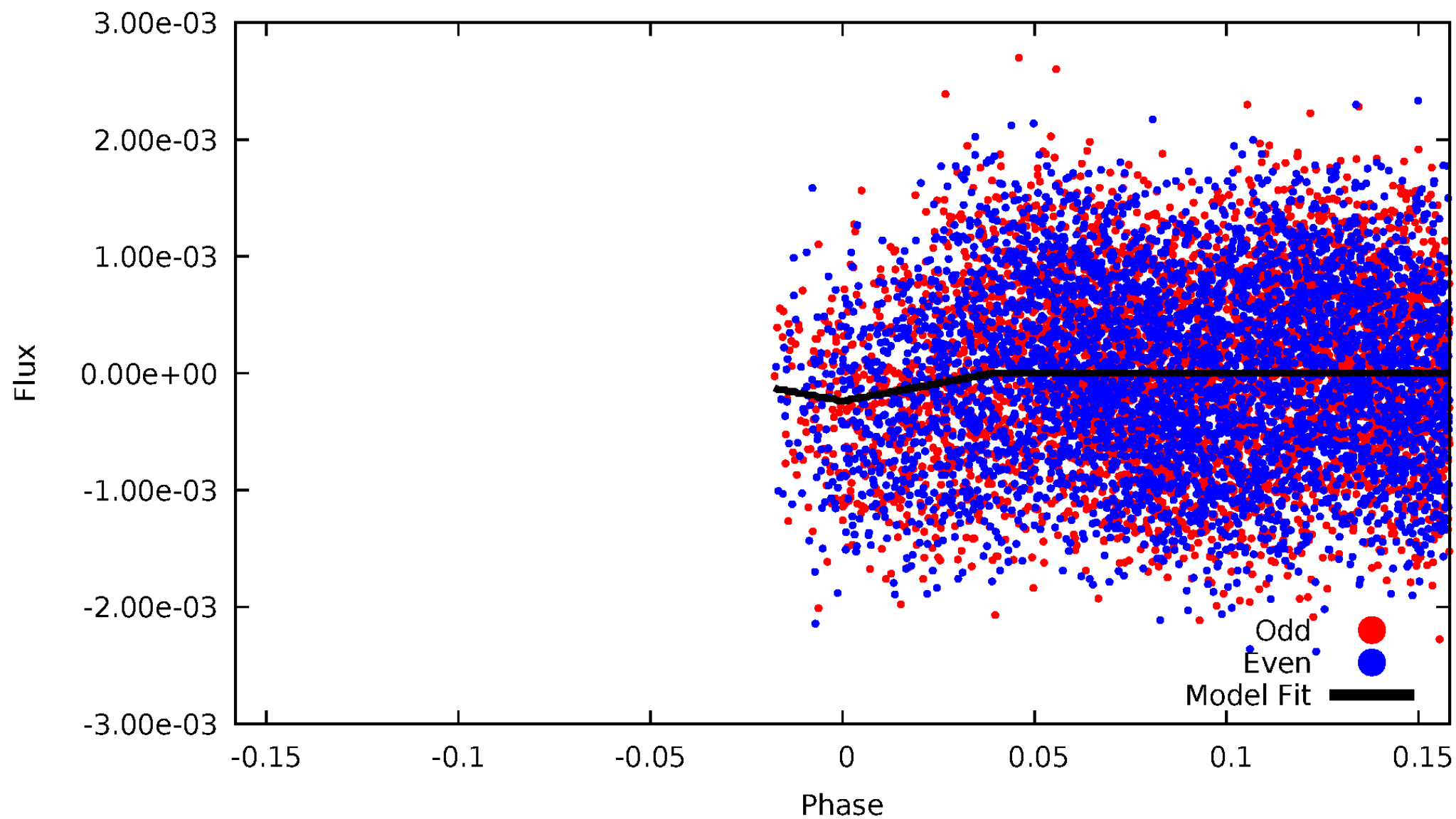
DV Odd/Even

TCE 011725829-02



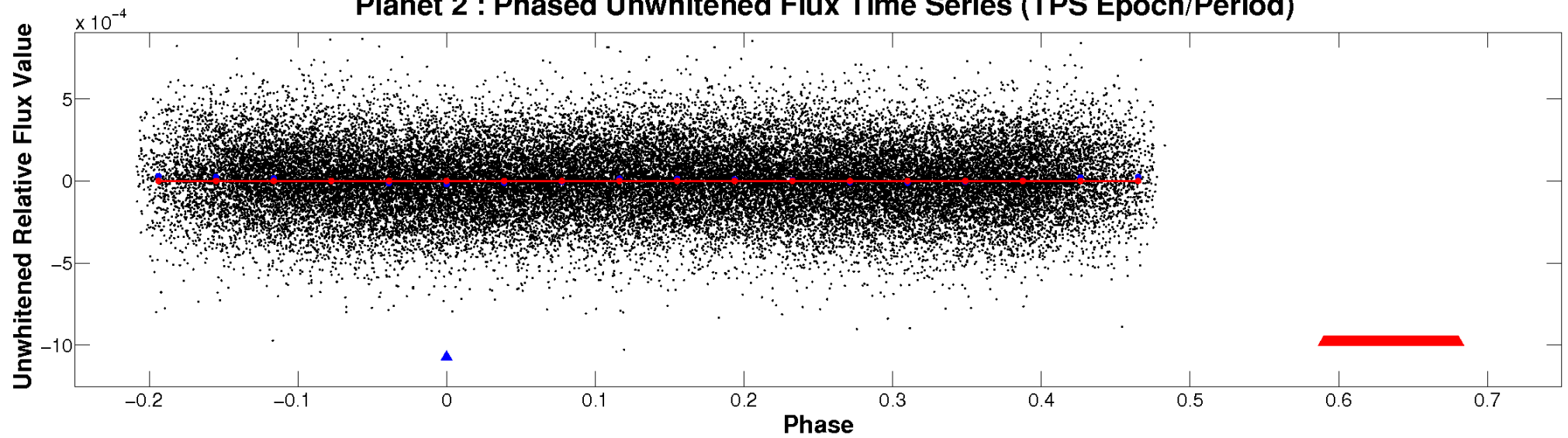
ALT Odd/Even

TCE 011725829-02

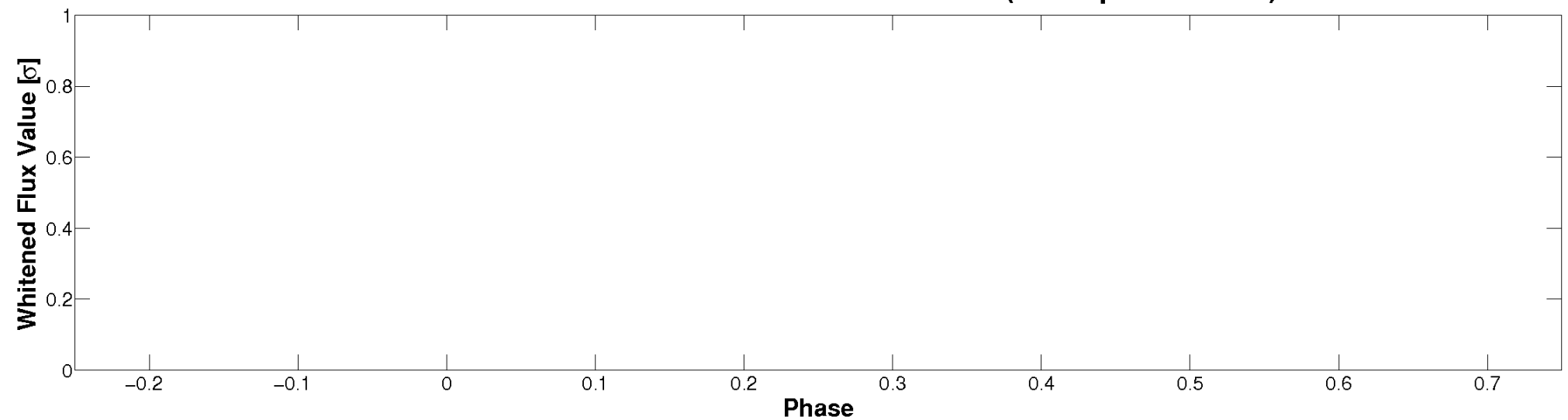


Non-Whitened Vs. Whitened Light Curve

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

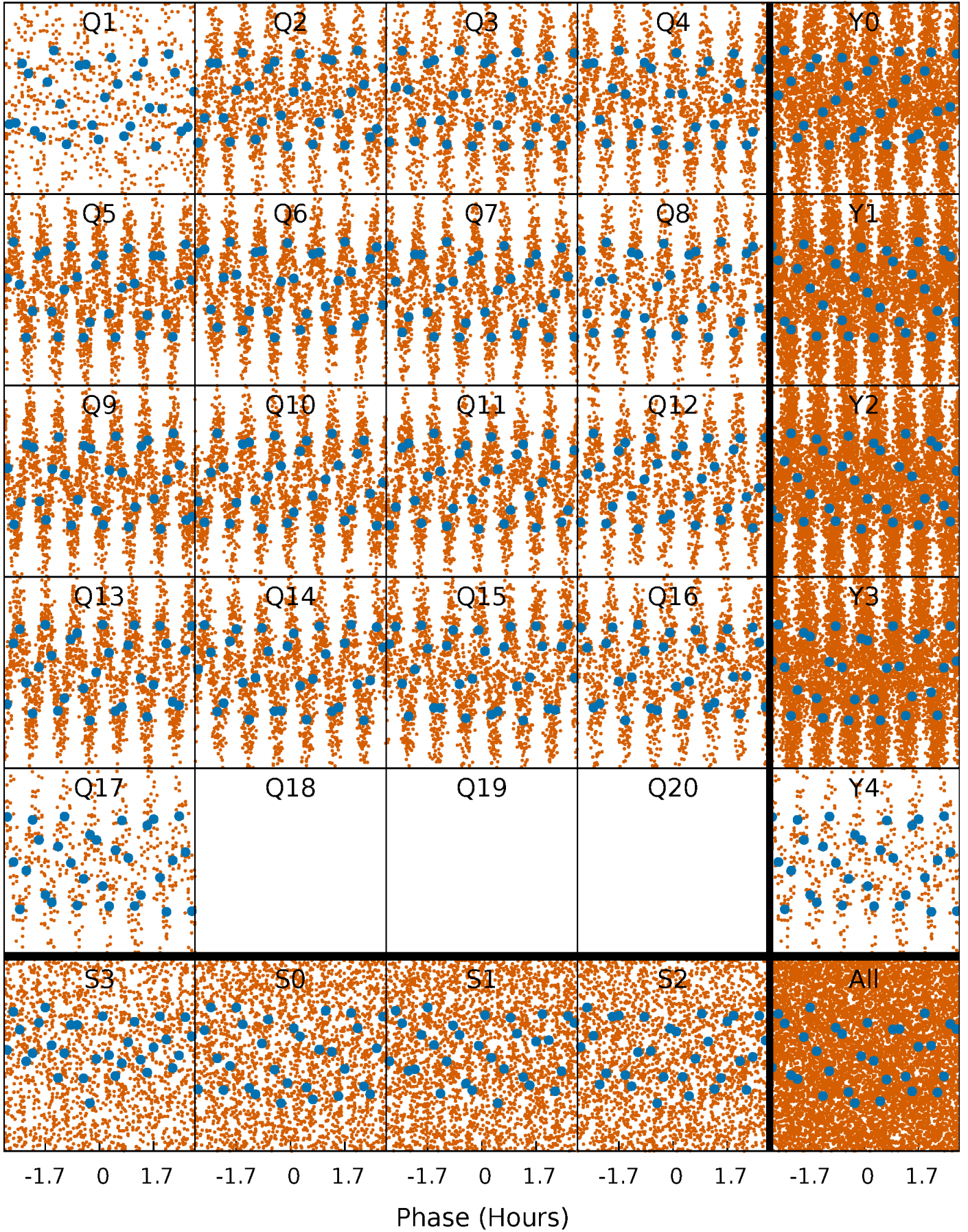


Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)



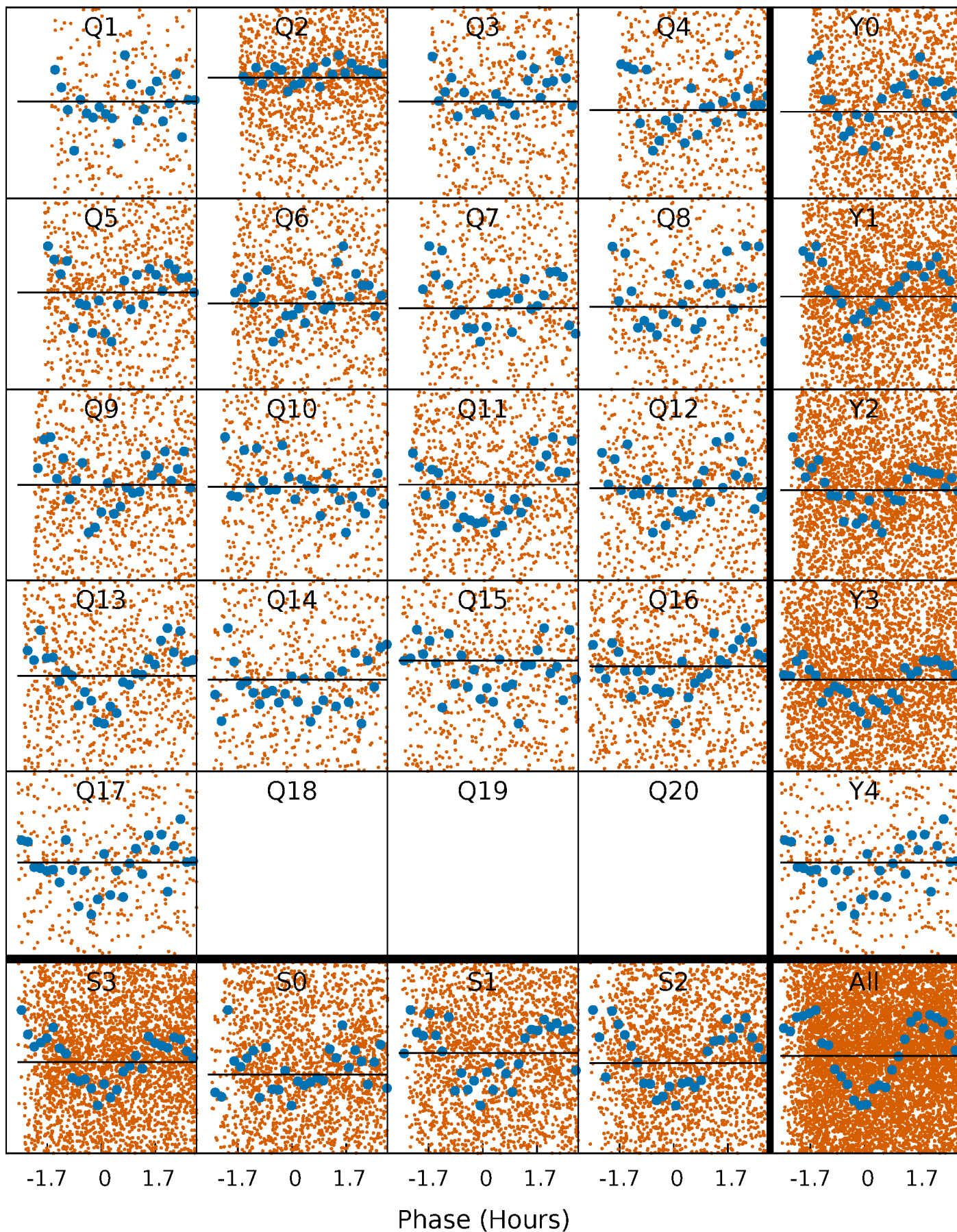
PDC Quarter-Phased Transit Curves

TCE 011725829-02 P= 0.527217 Days $T_0=131.579744$ (BKJD)



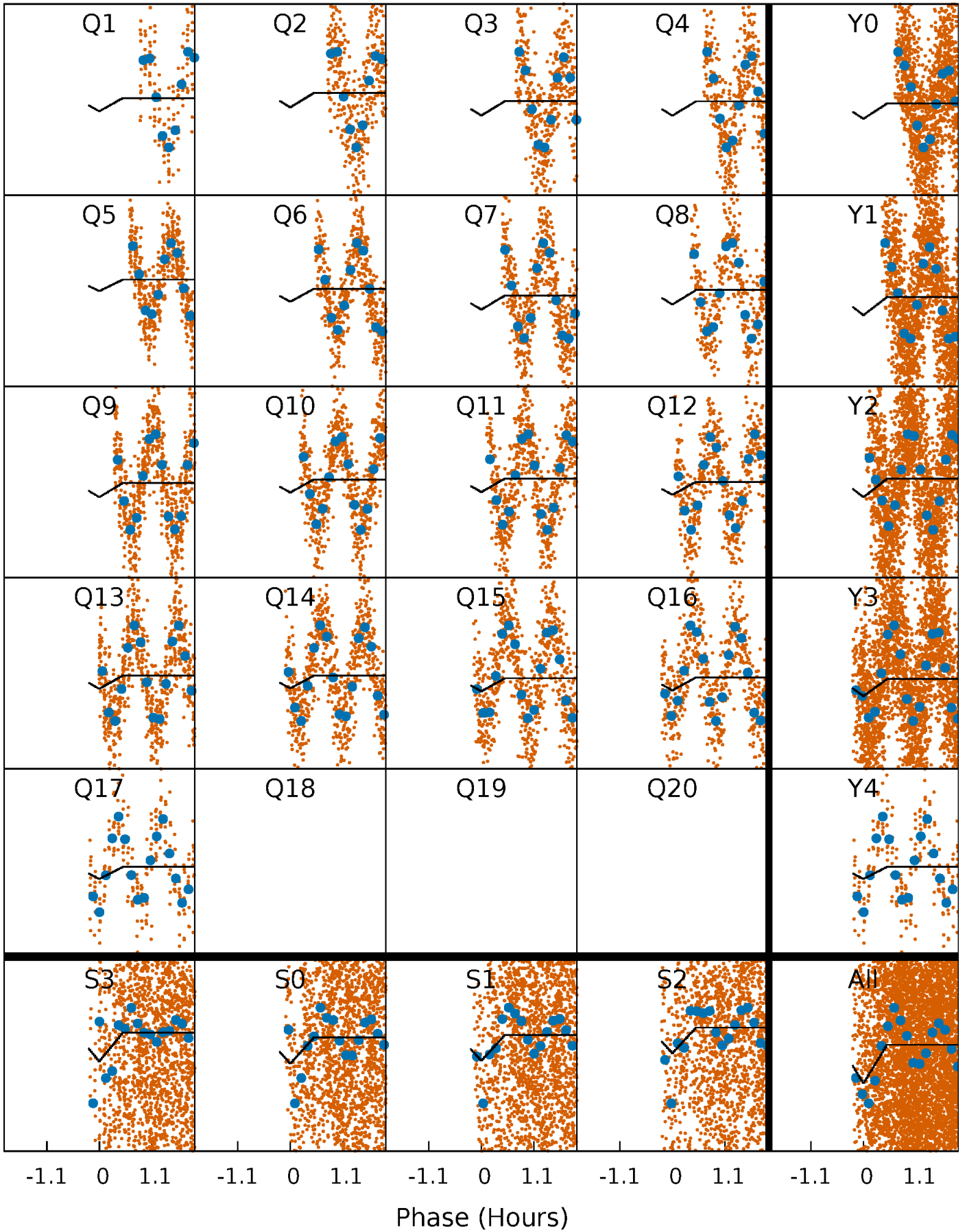
DV Quarter-Phased Transit Curves

TCE 011725829-02 P= 0.527217 Days $T_0=131.579744$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

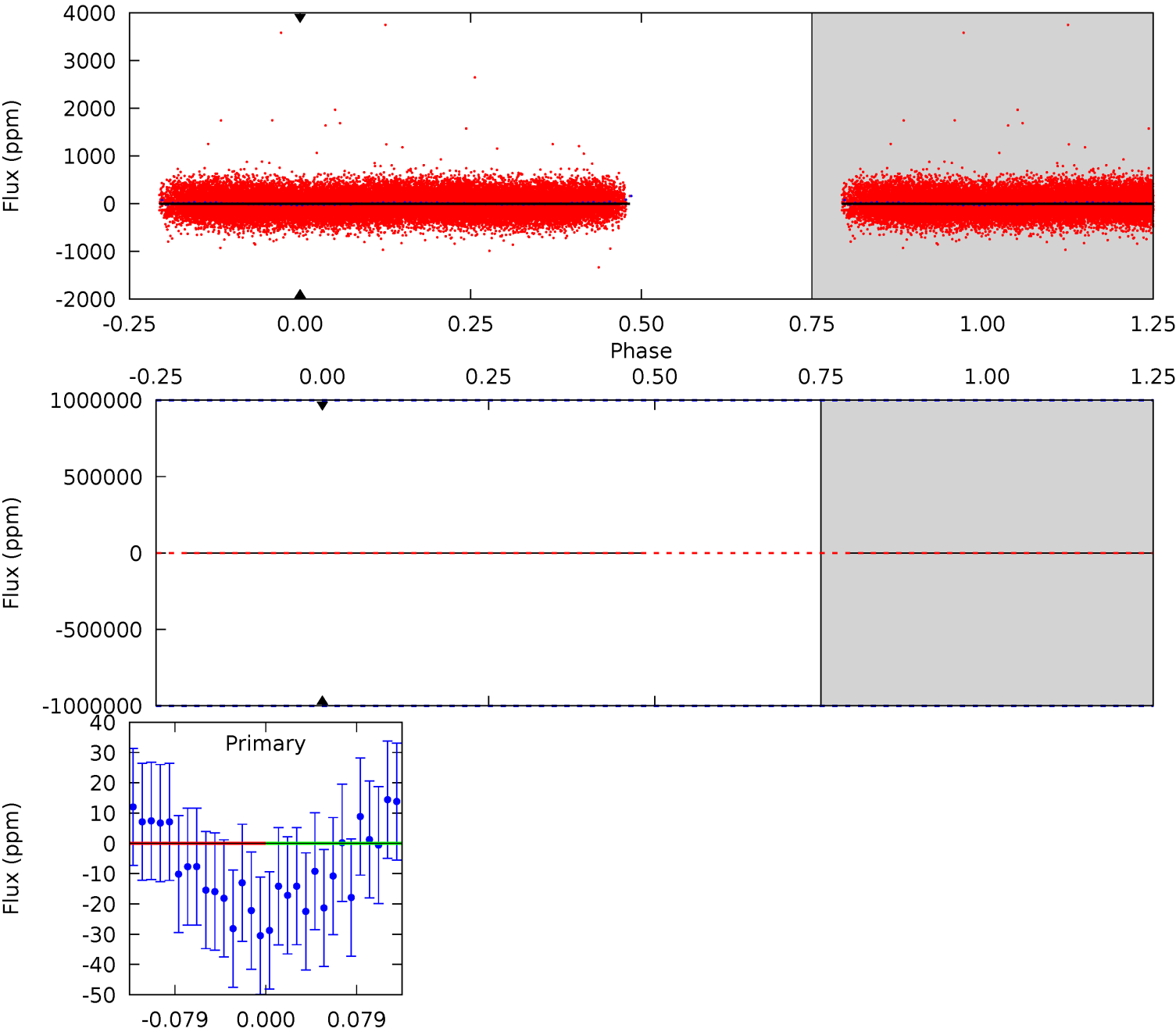
TCE 011725829-02 P= 0.527217 Days $T_0=132.006413$ (BKJD)



DV Model-Shift Uniqueness Test

011725829-02, P = 0.527217 Days, E = 131.052527 Days

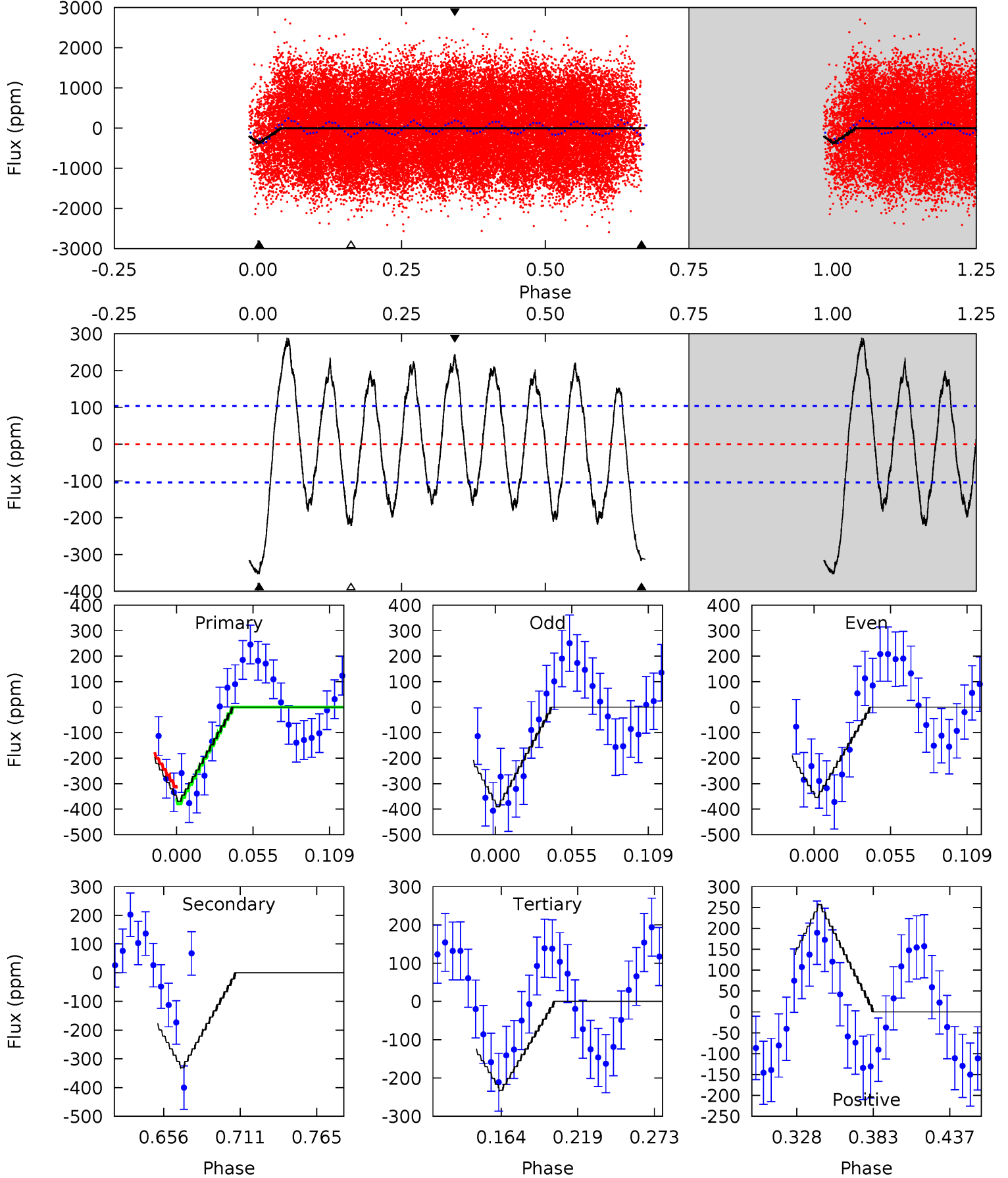
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

011725829-02, P = 0.527217 Days, E = 131.479196 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.9	14.3	10.0	11.1	4.69	1.92	6.04	5.91	4.87	4.26	3.21	0.76	3.22	0.45	0.70



Stellar Parameters For KIC 011725829

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	8156^{+225}_{-338}	$3.801^{+0.391}_{-0.069}$	$-0.240^{+0.150}_{-0.300}$	$2.827^{+0.374}_{-1.198}$	$1.841^{+0.094}_{-0.374}$	$0.115^{+0.371}_{-0.026}$
	+3%/-4%	+10%/-2%	+62%/-125%	+13%/-42%	+5%/-20%	+324%/-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 011725829-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$20.11^{+24.91}_{-14.22}$	6524^{+441}_{-676}	4817^{+45703}_{-48001}	$0.519^{+56.319}_{-47.201}$
Alt.	-316 ± 22	$19.25^{+22.19}_{-13.25}$	6497^{+442}_{-719}	-4543^{+10752}_{-703}	$0.115^{+1.066}_{-0.090}$

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

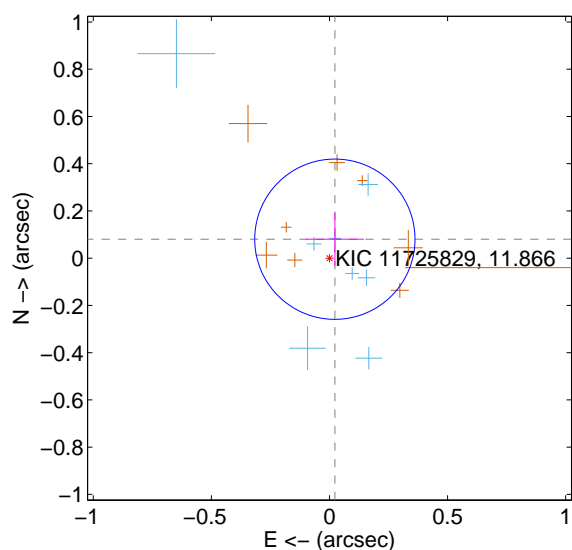
Supplemental centroid analysis for 011725829-02. **Kepler magnitude: 11.87.** Transit SNR -1.00

There are 8 quarters with good PRF difference image offsets

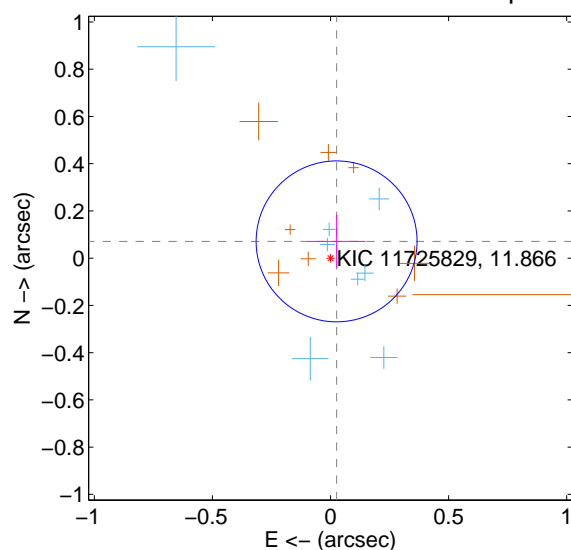
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.083 ± 0.113	0.74	-0.023 ± 0.123	0.080 ± 0.112
PRF-fit source offset from KIC position	0.076 ± 0.114	0.67	-0.026 ± 0.123	0.071 ± 0.112
photometric centroid source offset	0.54 ± 0.10	5.26	-0.49 ± 0.10	-0.25 ± 0.11

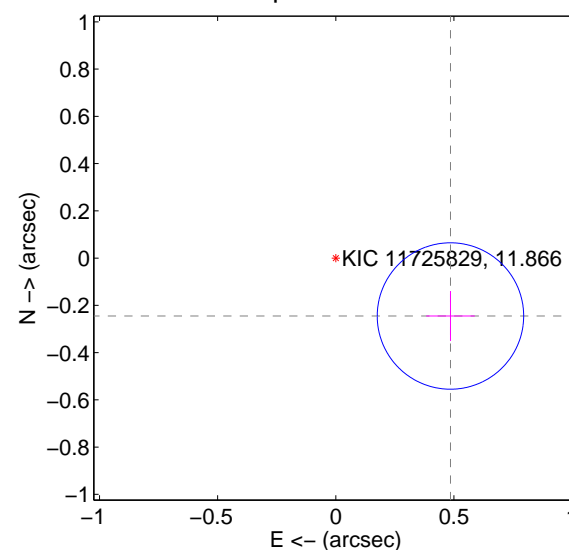
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

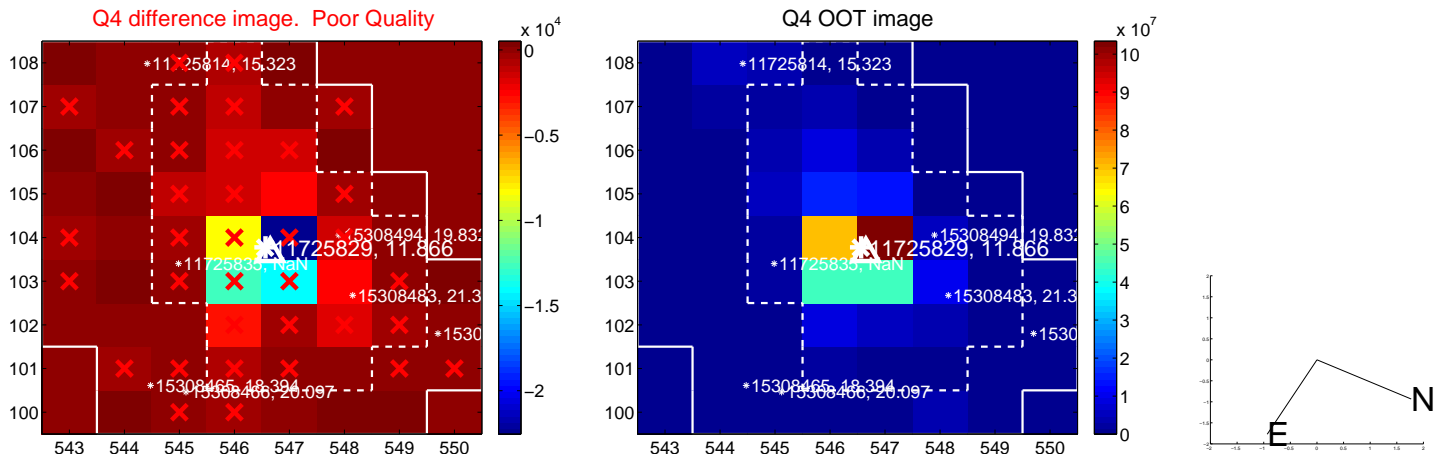
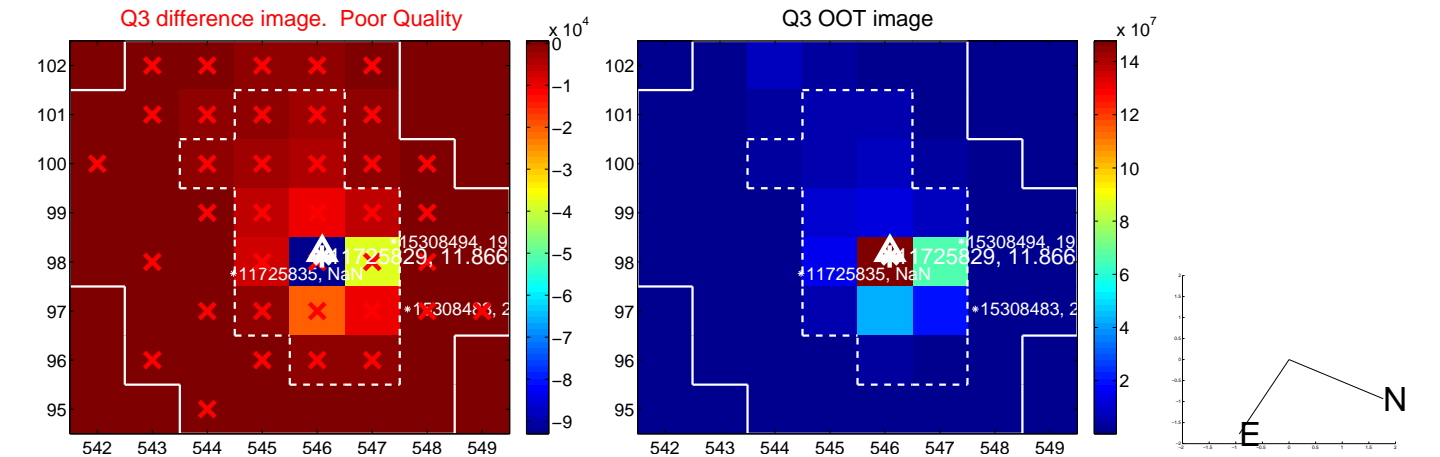
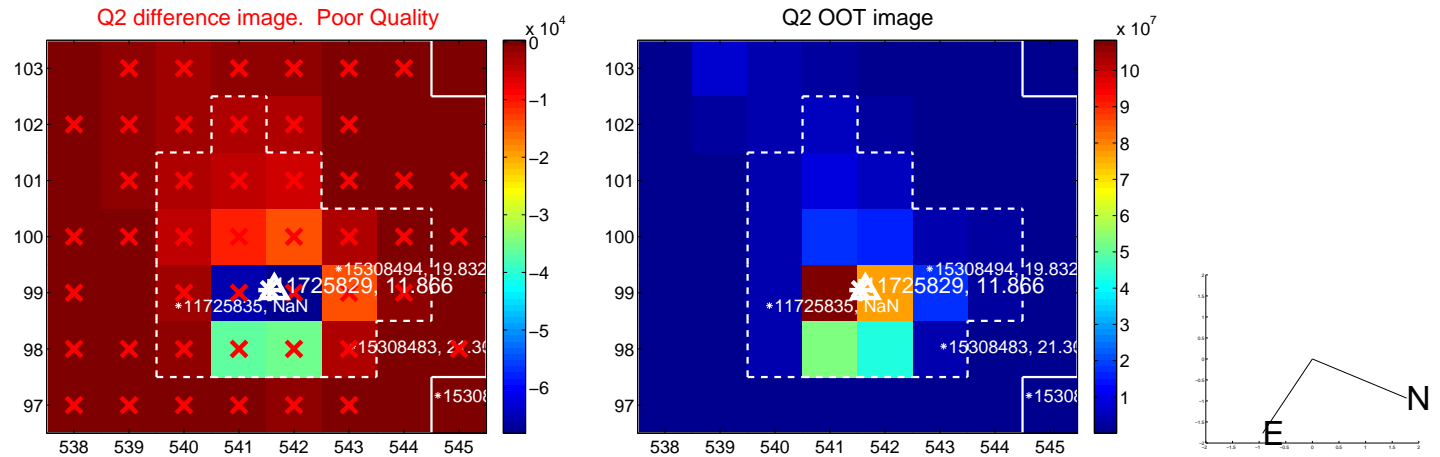
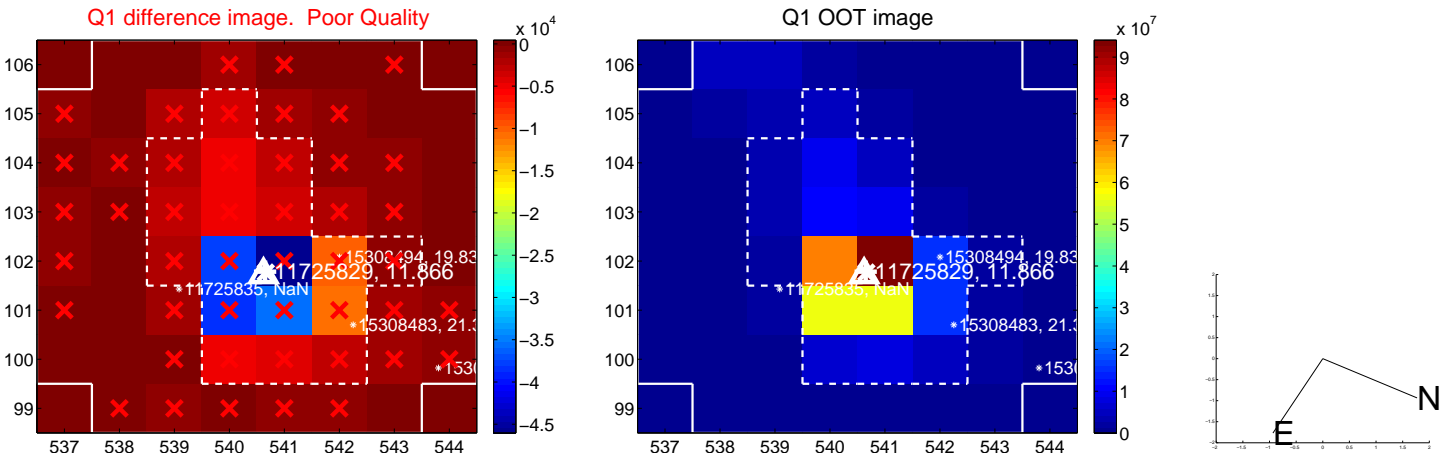


offset from photometric centroids

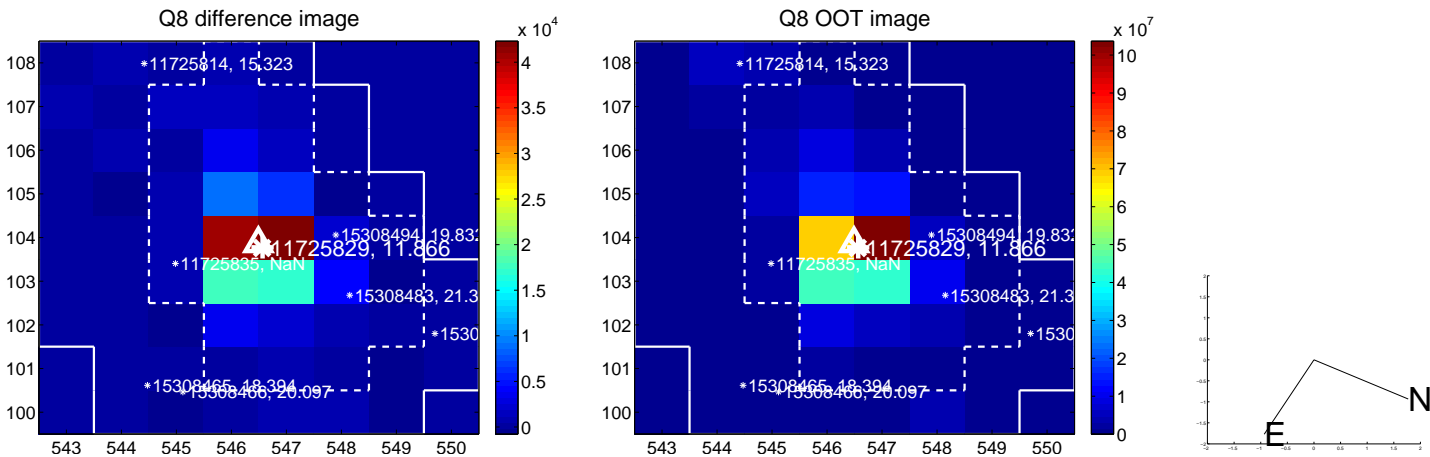
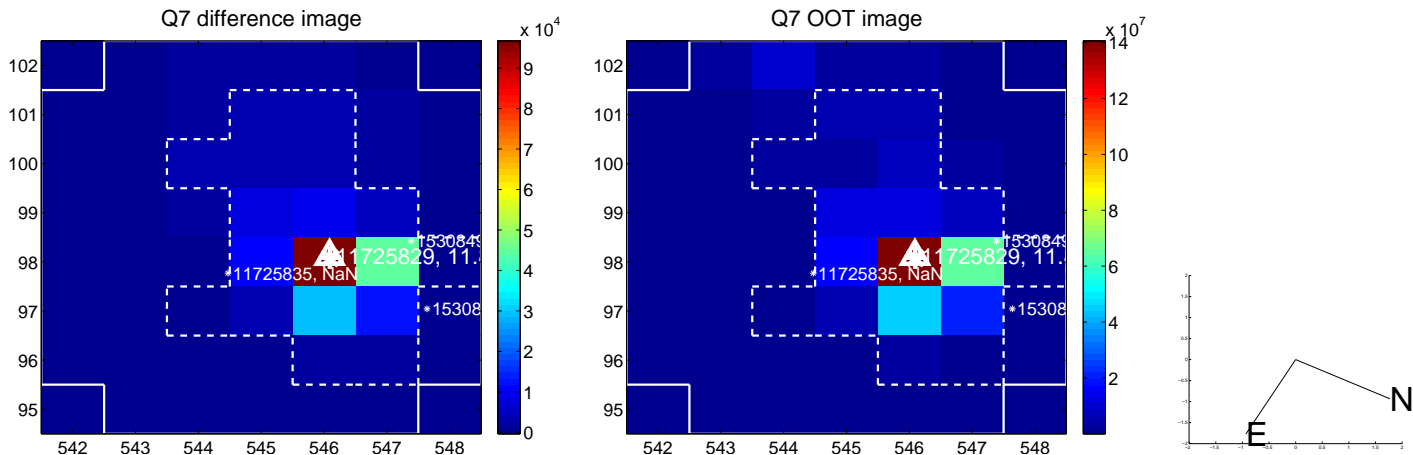
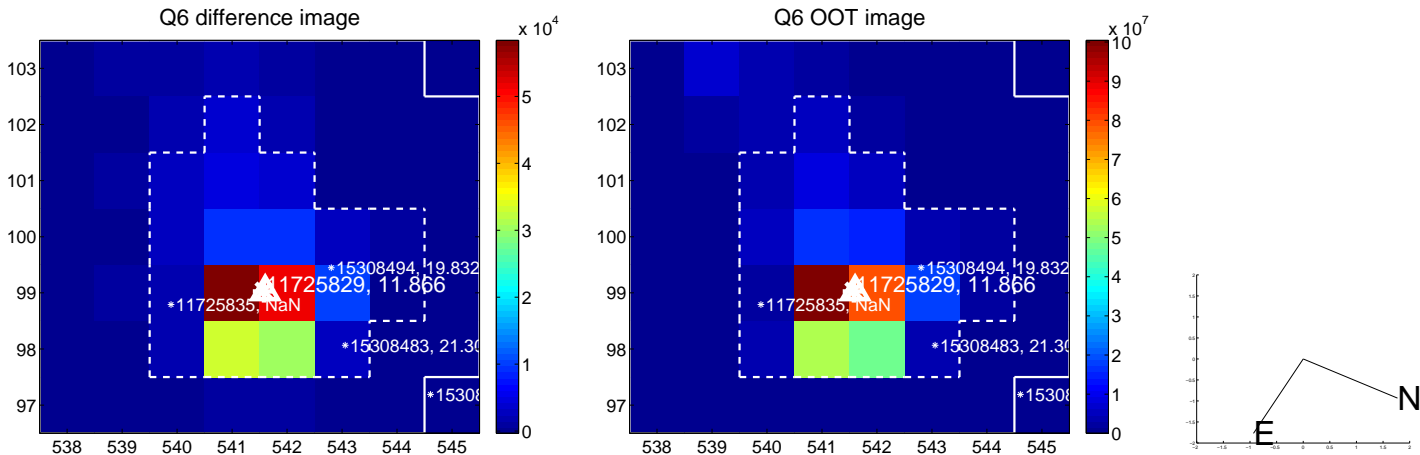
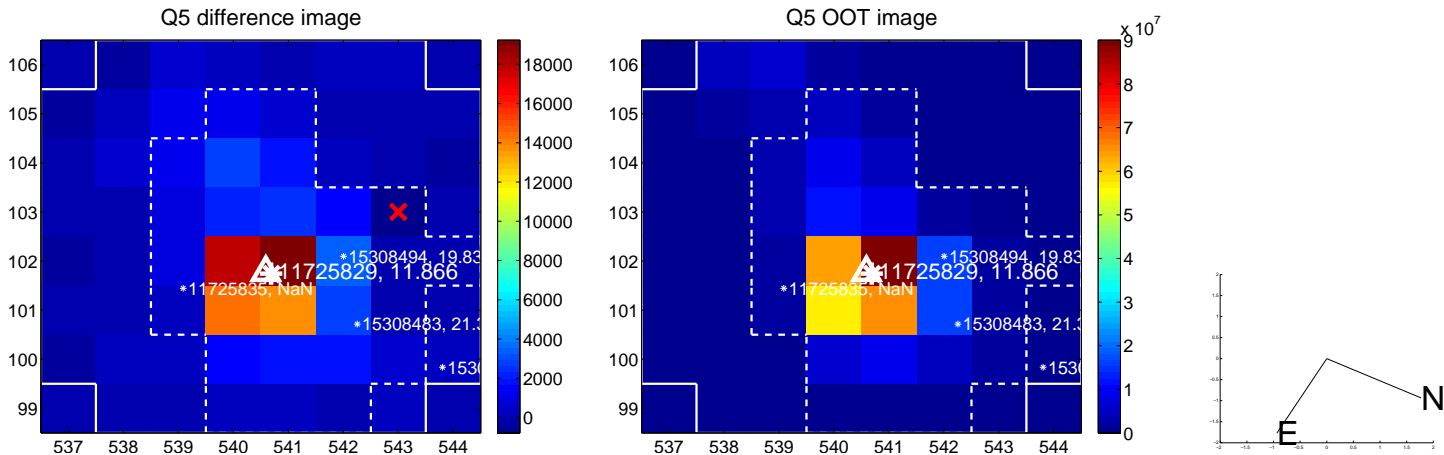


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

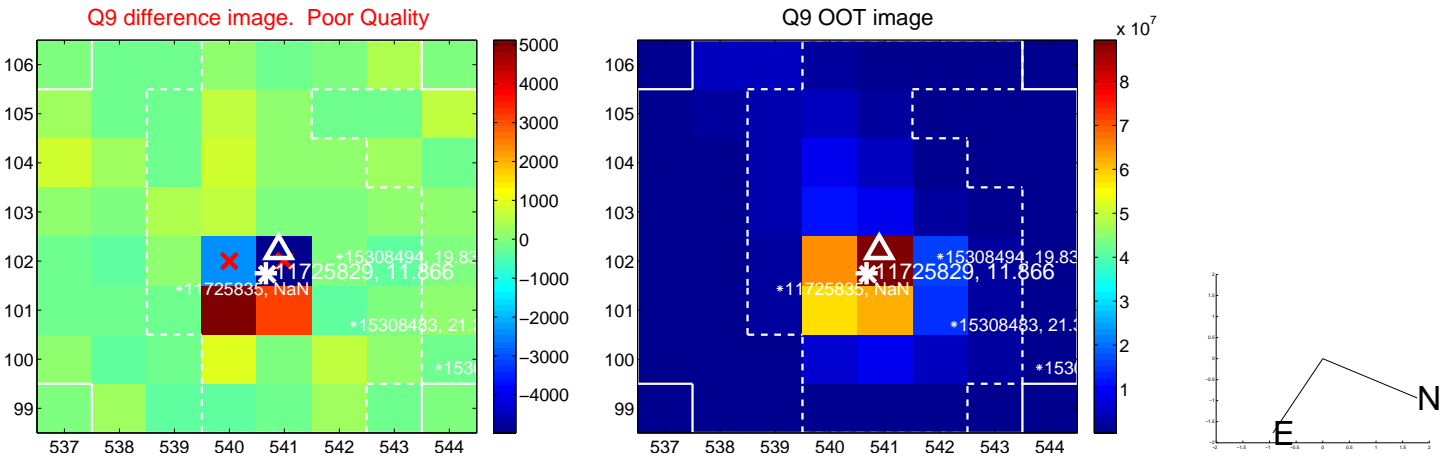
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



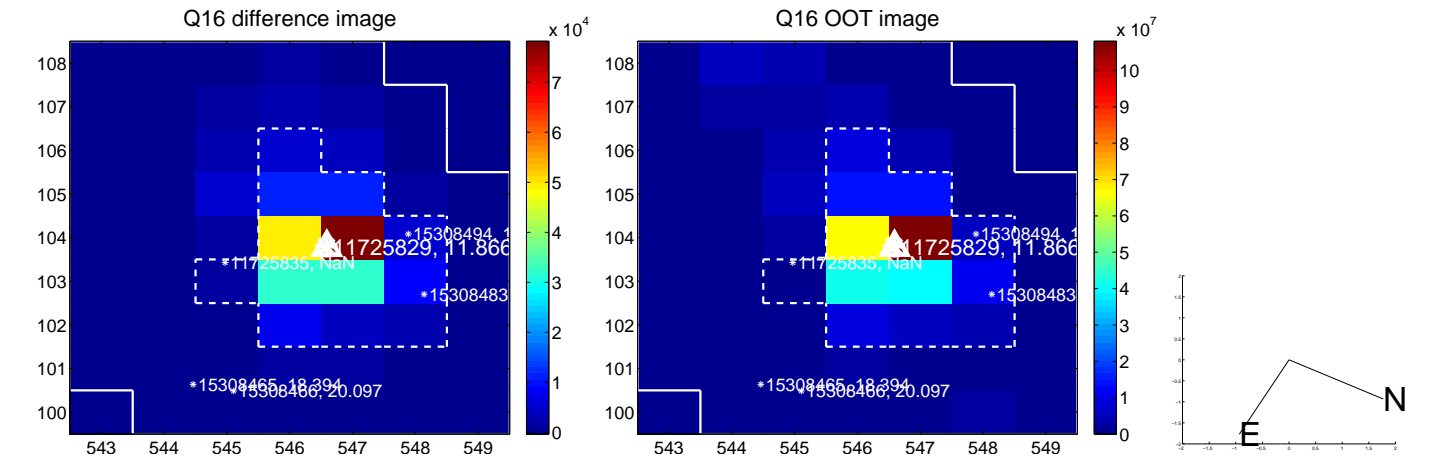
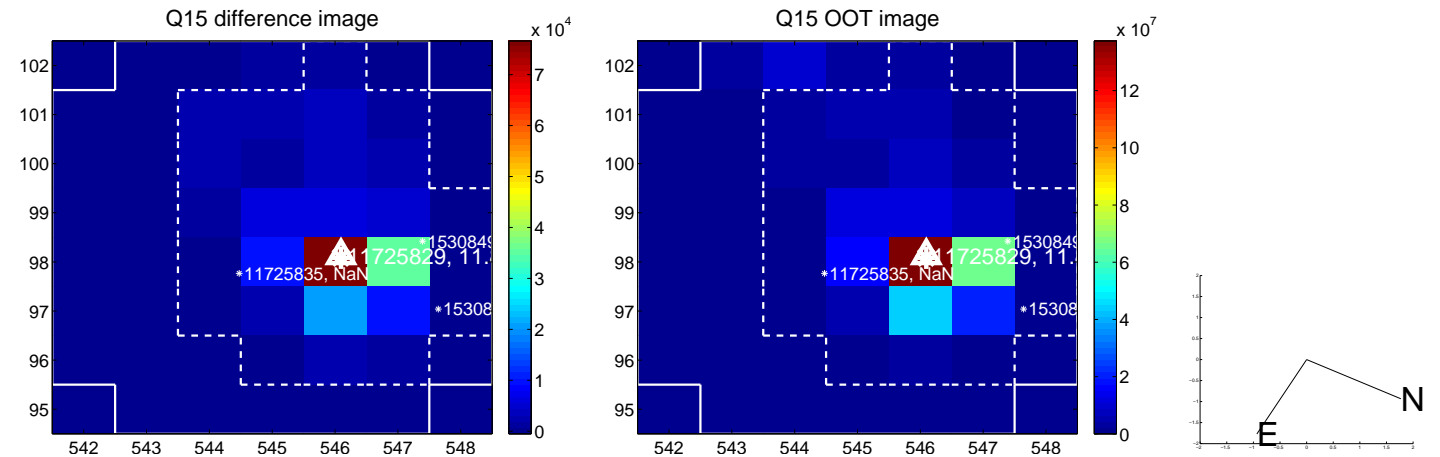
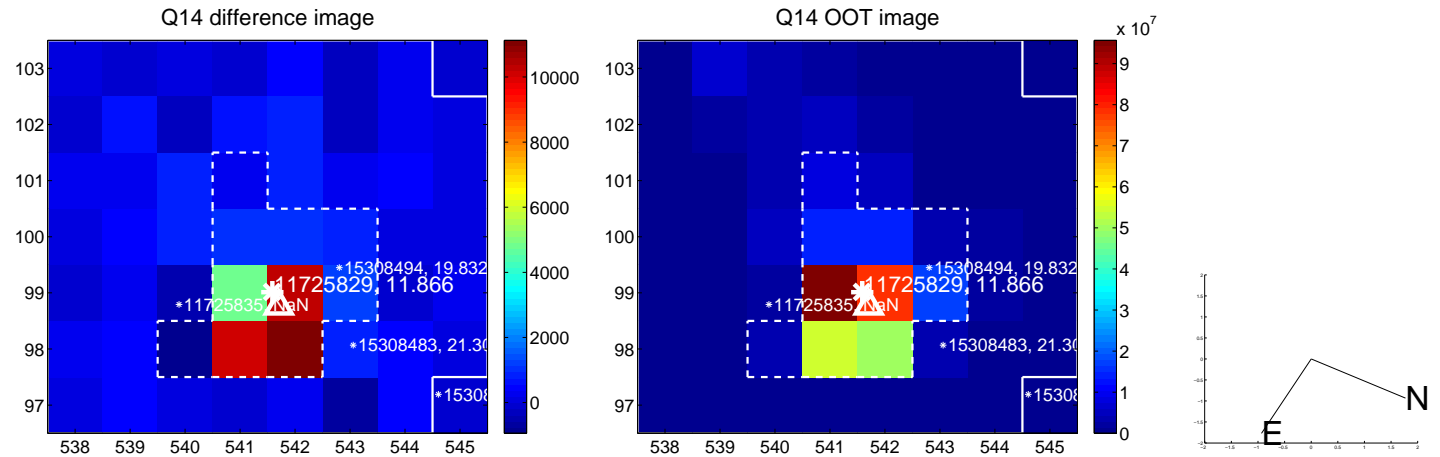
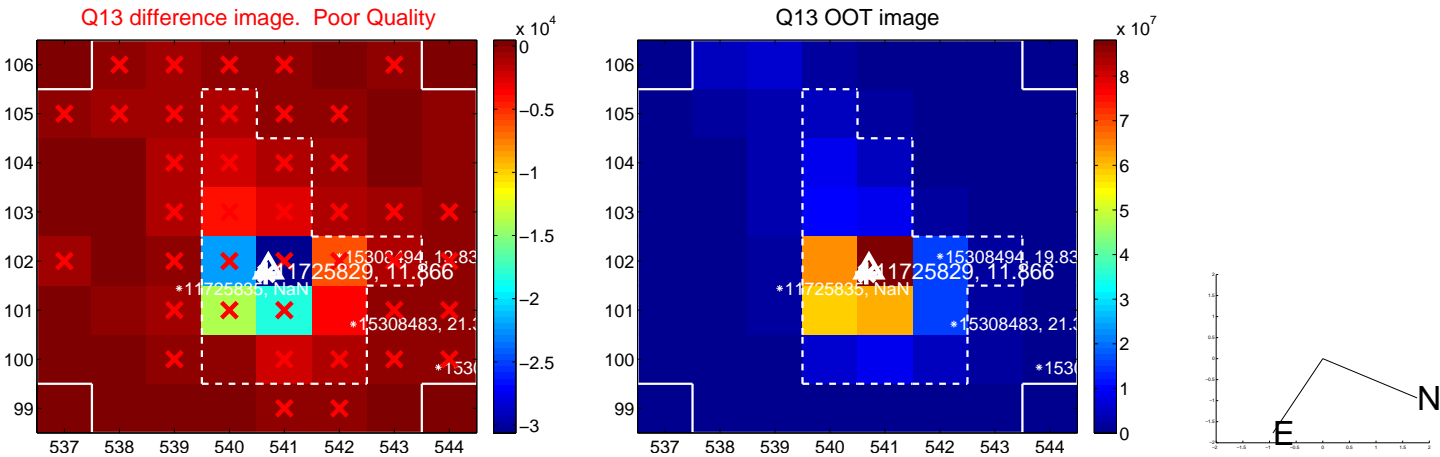
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



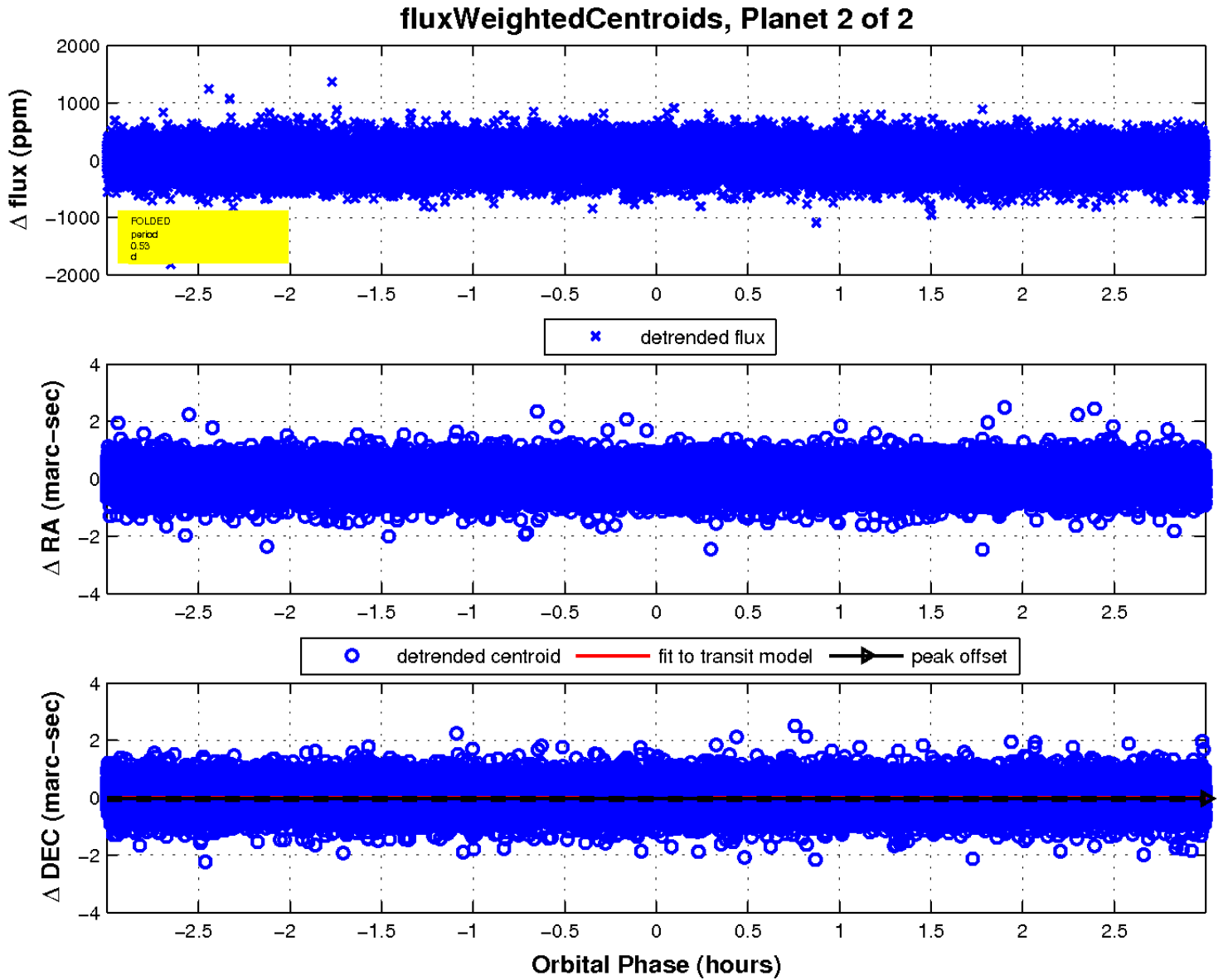
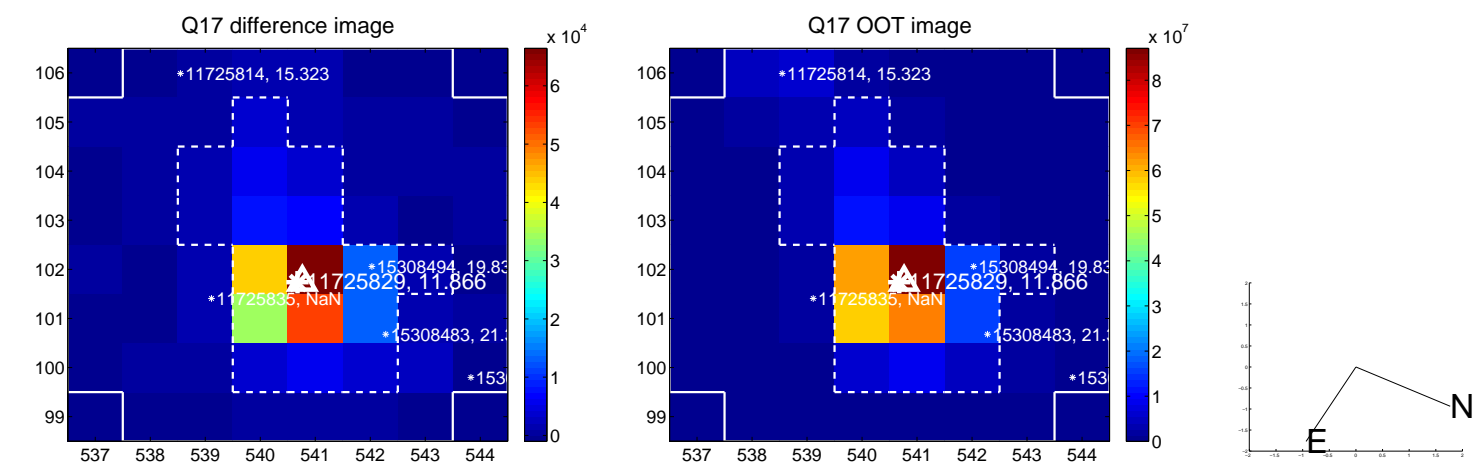
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UKIRT Image

Declination

