

KIC 008429280

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})
008429280-01	OBS	No	0.579473	131.897337	4.6	5.578	8.2	0.5	0.80	5044	0.17	2421.70

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008429280-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_ALT—CENT_SATURATED

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

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

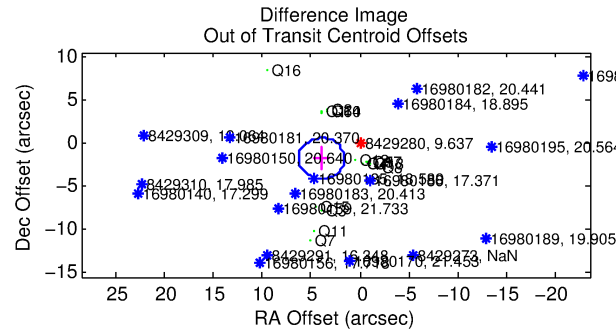
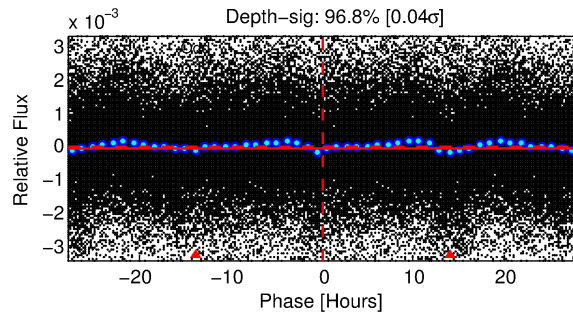
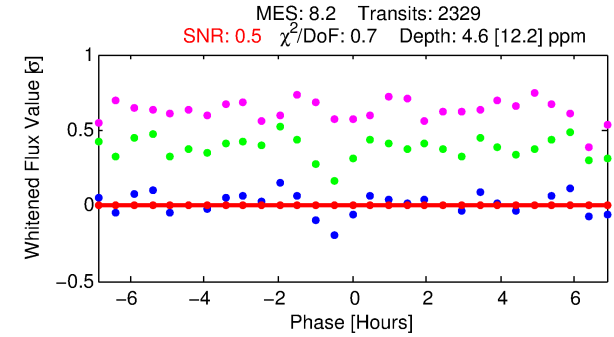
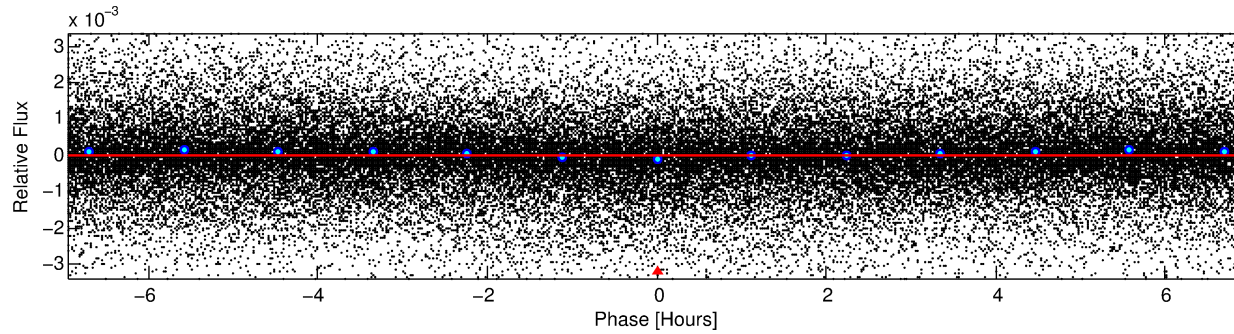
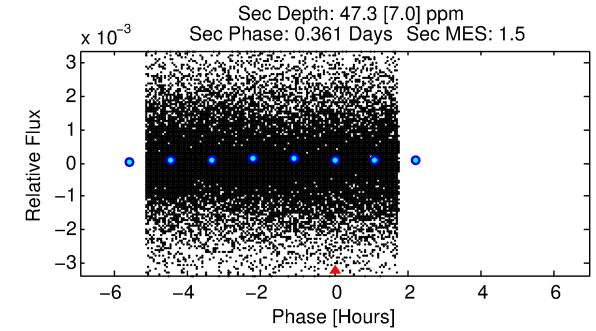
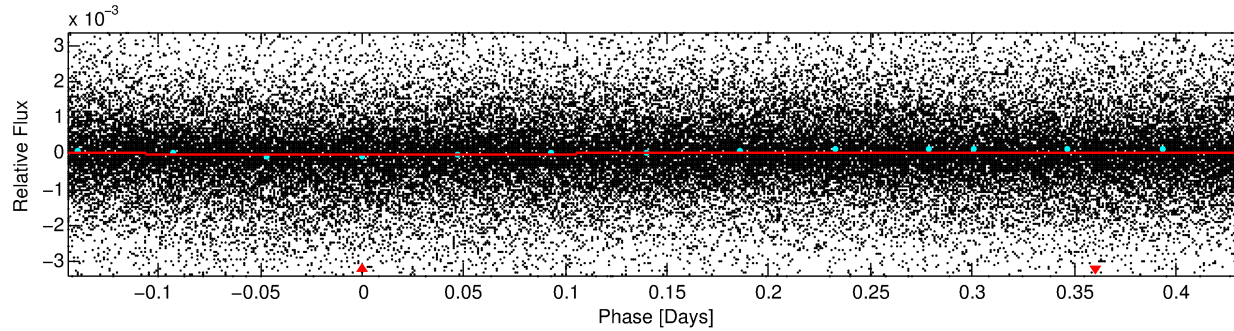
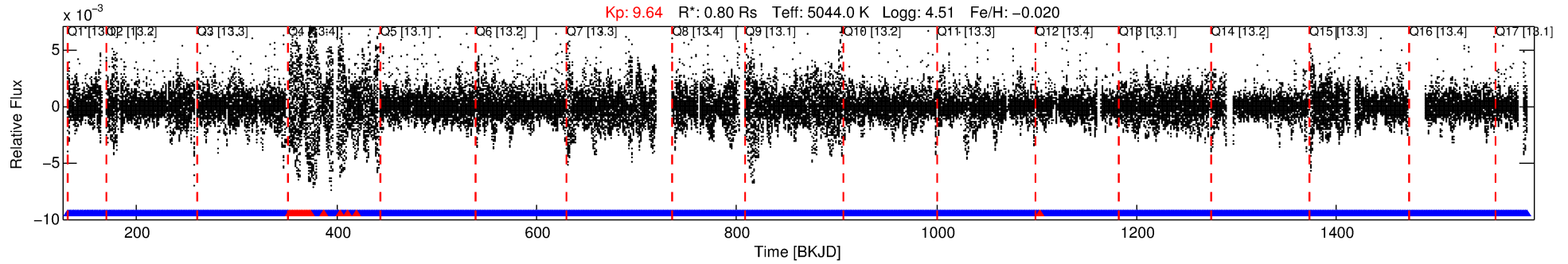
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008429280-01

No Significant Match Found

DV One-Page Summary

KIC: 8429280 Candidate: 1 of 1 Period: 0.579 d



DV Fit Results:

Period = 0.57947 [0.00017] d
Epoch = 131.8973 [0.0206] BKJD
Rp/R* = 0.0019 [0.0055]
a/R* = 1.05 [1.13]
b = 0.04 [278.19]
Seff = 2421.71 [360.03]
Teq = 1789 [66] K
Rp = 0.17 [0.48] Re
a = 0.0124 [0.0010] AU
Ag = 144.82 [836.59] [0.17σ]
Teffp = 9594 [13854] K [0.56σ]

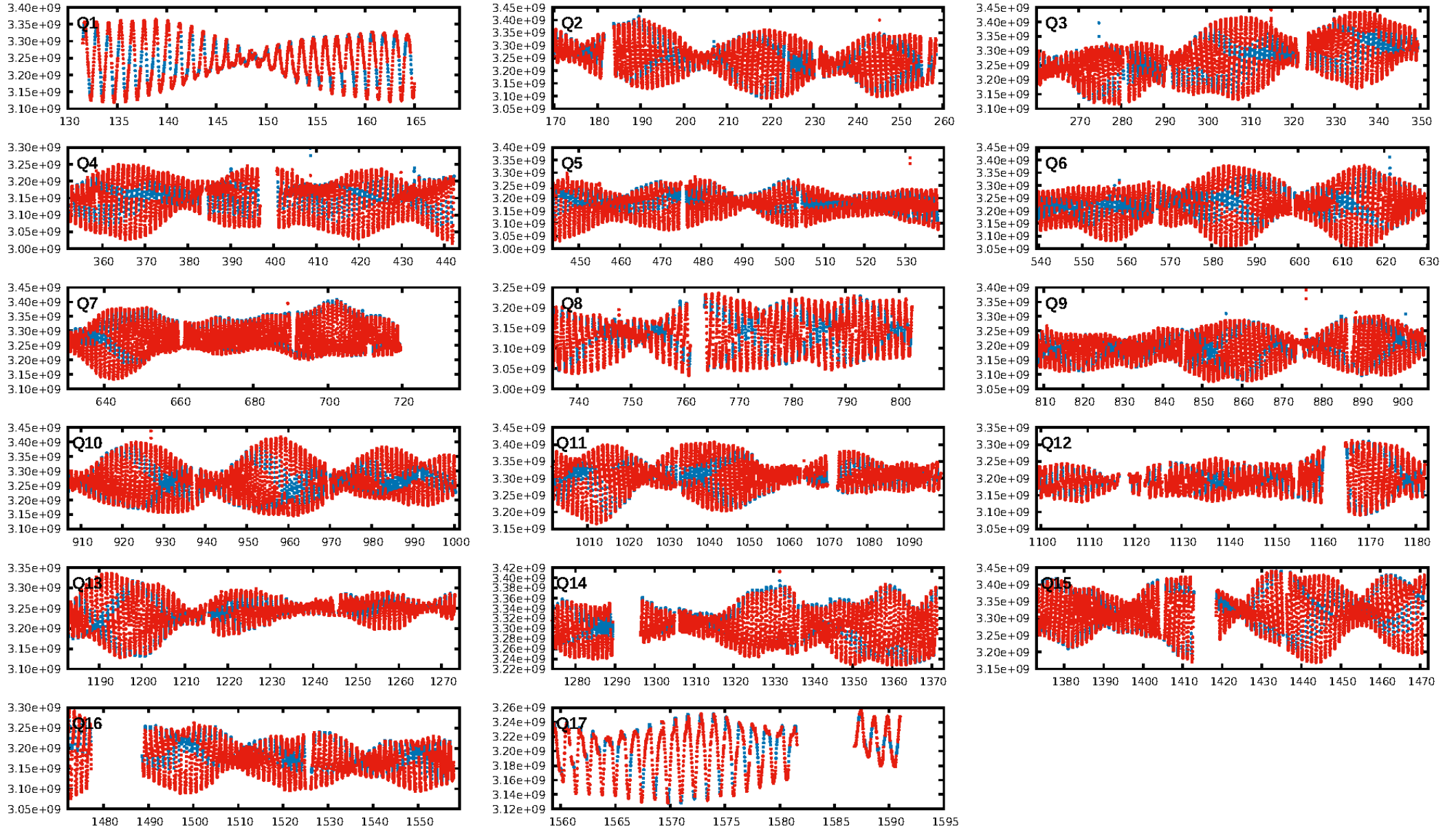
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.98 [2182/2224]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 4.323 arcsec [5.53σ]
KicOffset-rm: 4.268 arcsec [3.45σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.18 [3/17]
DiffImageOverlap-fno: 1.00 [17/17]

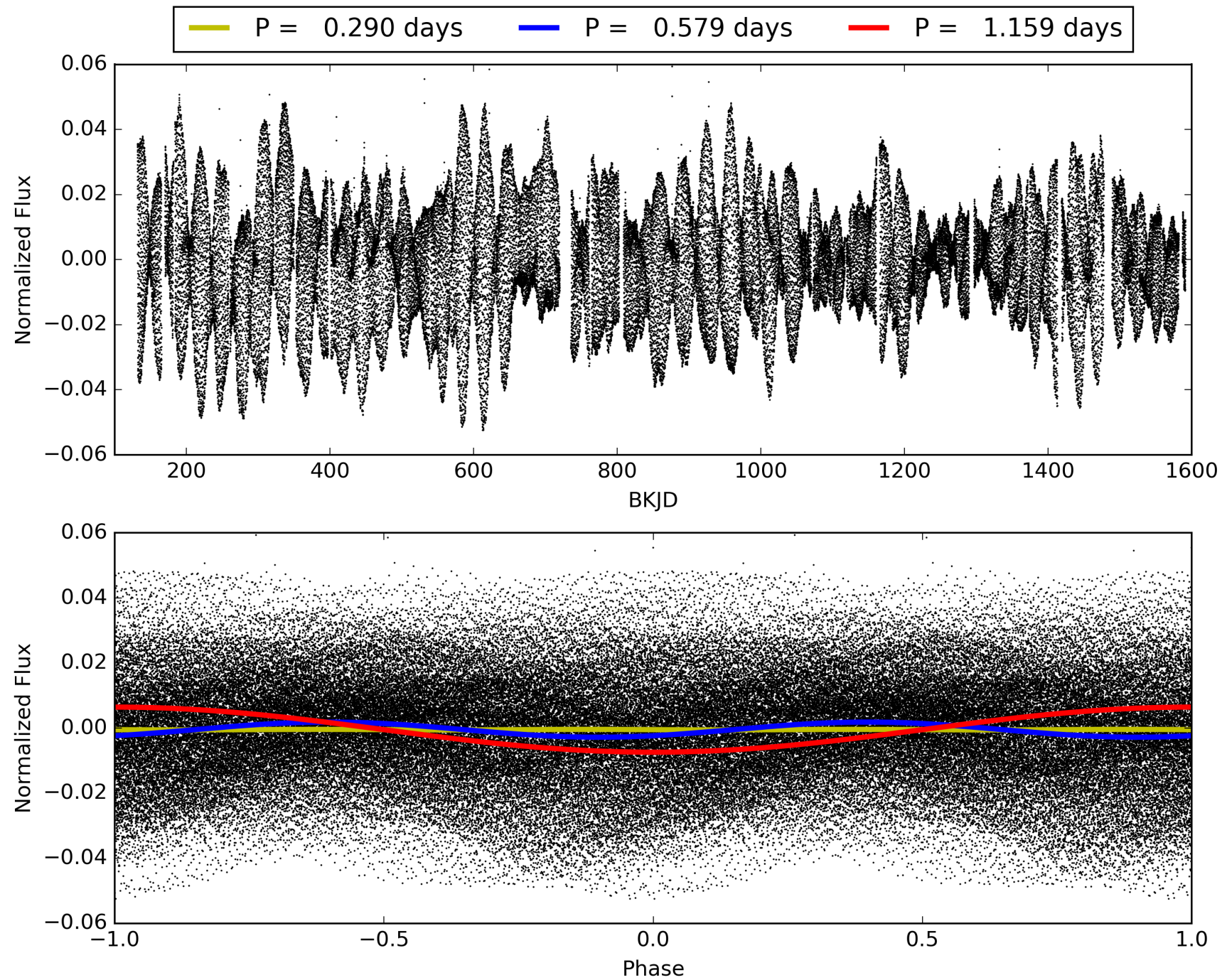
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 13:15:40 Z

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

TCE 008429280-01, PDC Light Curves

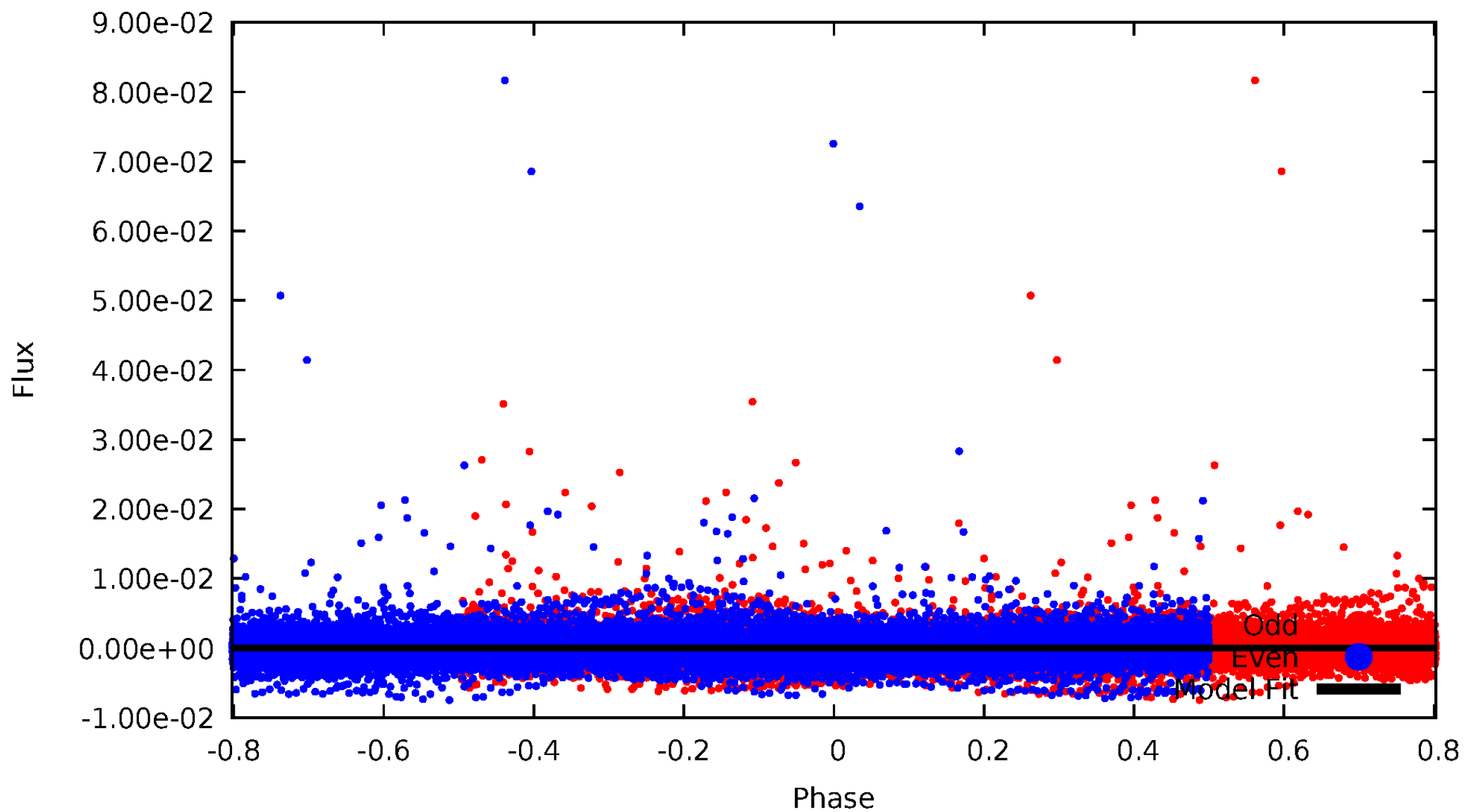


TCE 008429280-01



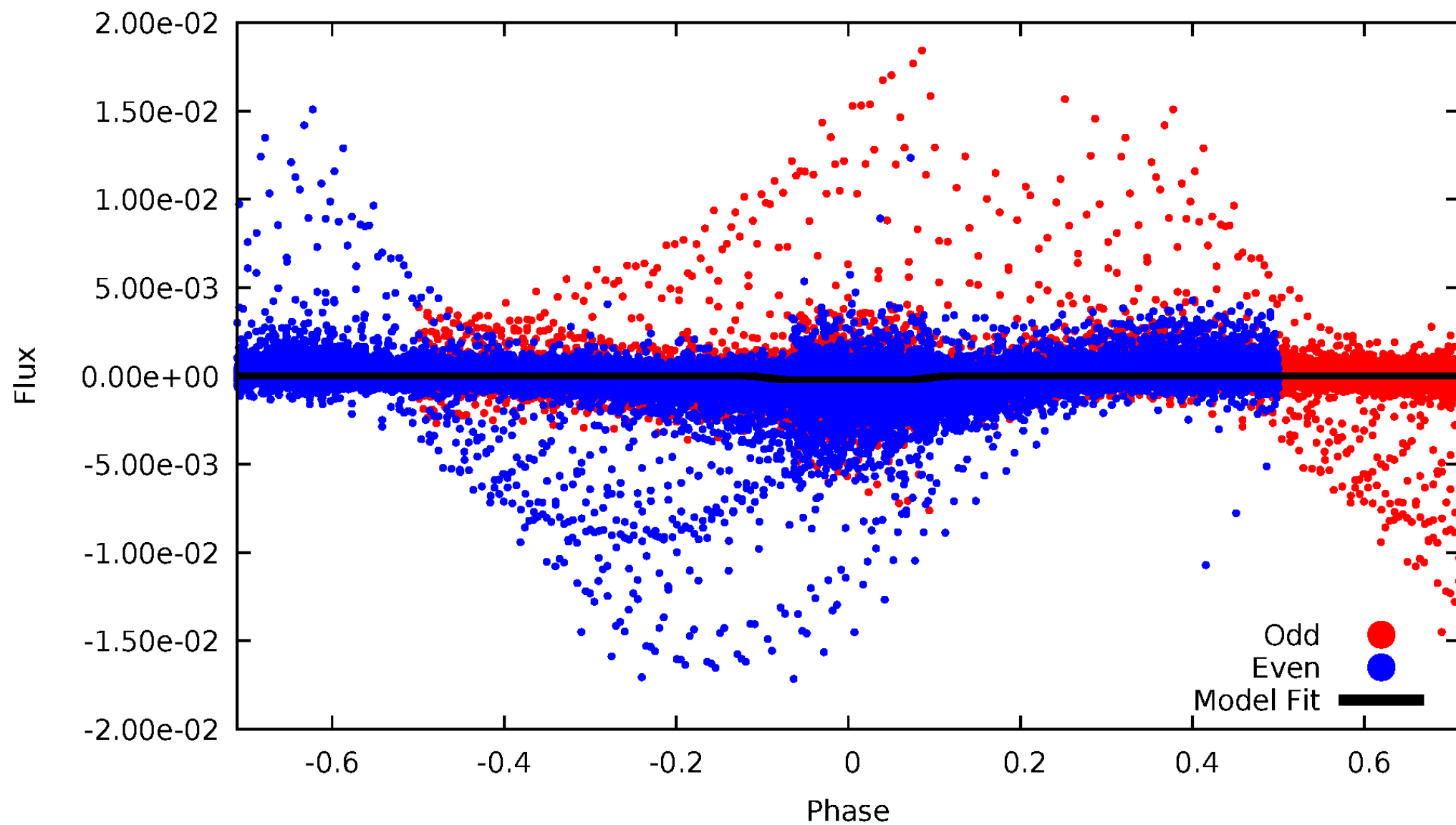
DV Odd/Even

TCE 008429280-01



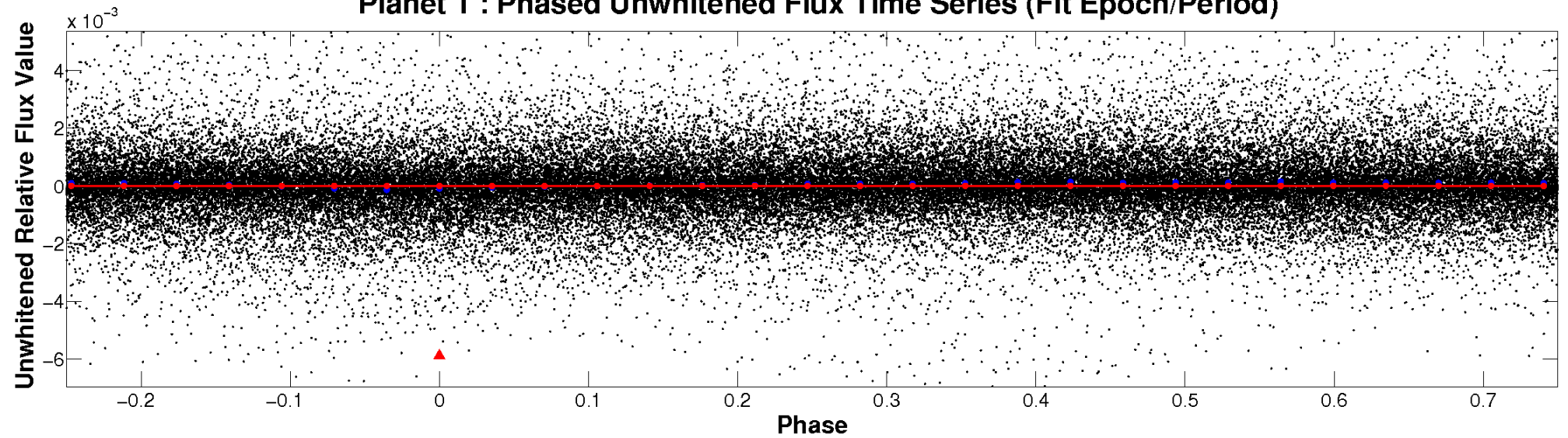
ALT Odd/Even

TCE 008429280-01

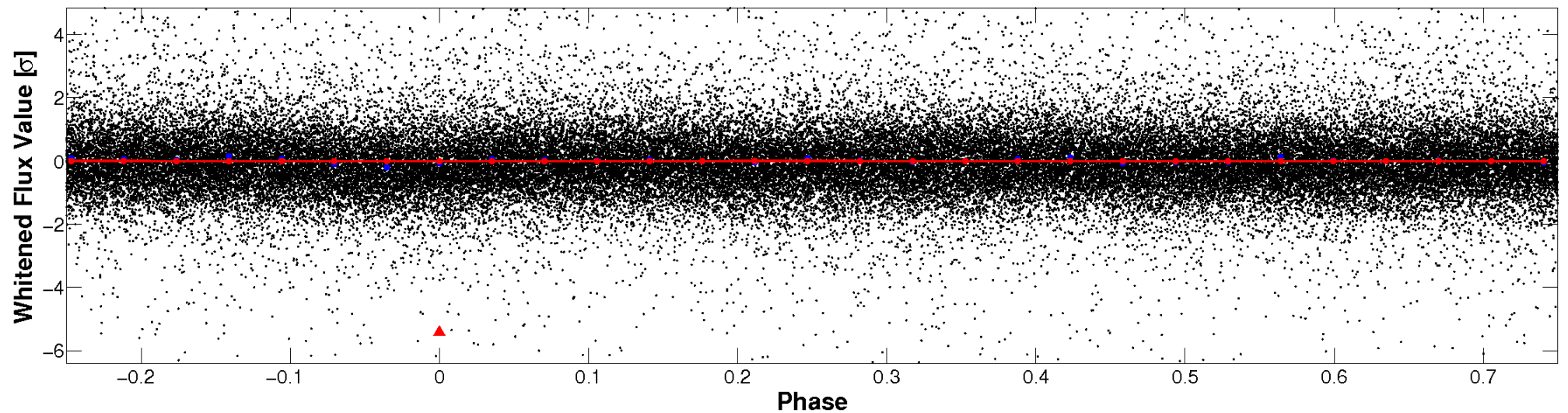


Non-Whitened Vs. Whitened Light Curve

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

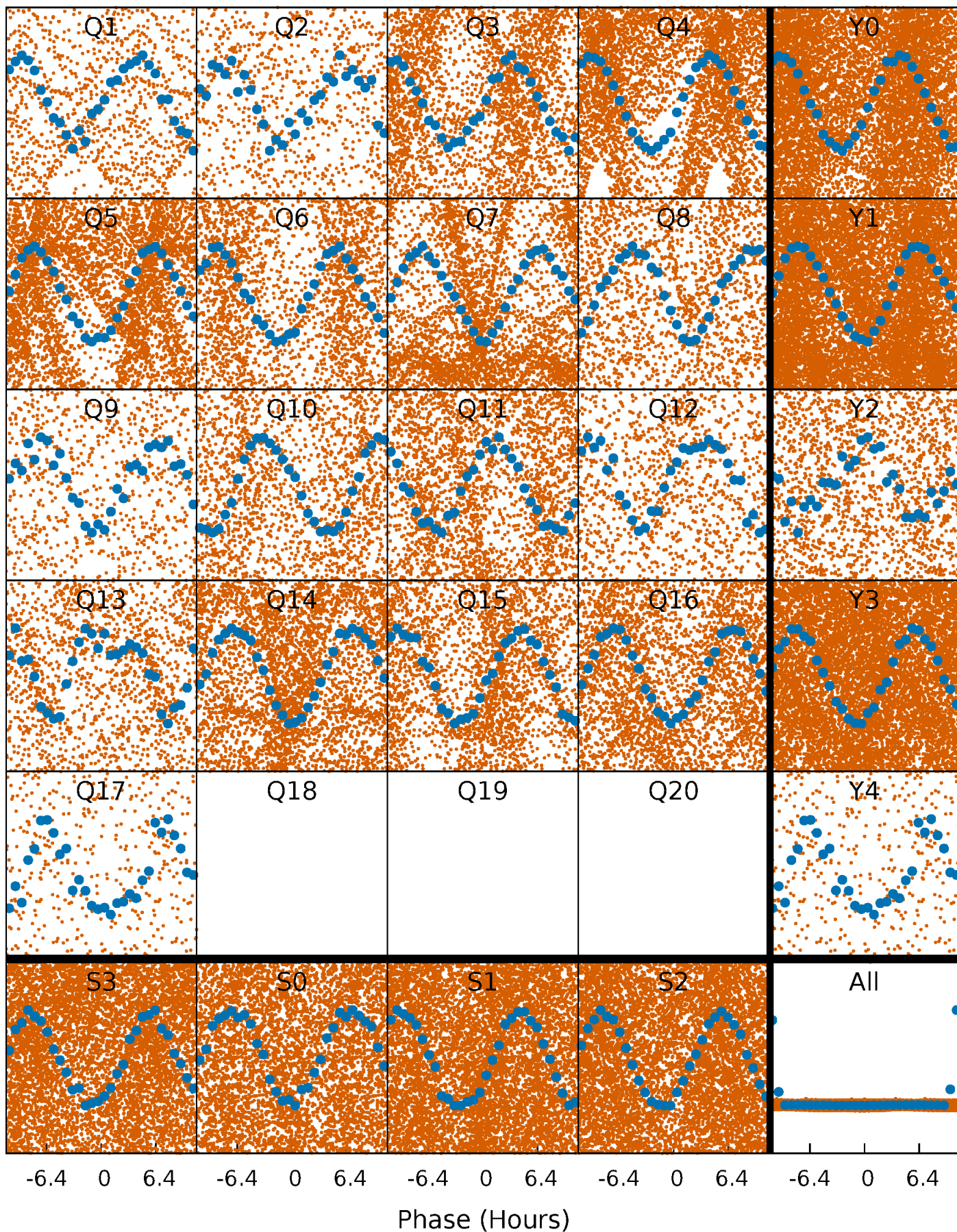


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



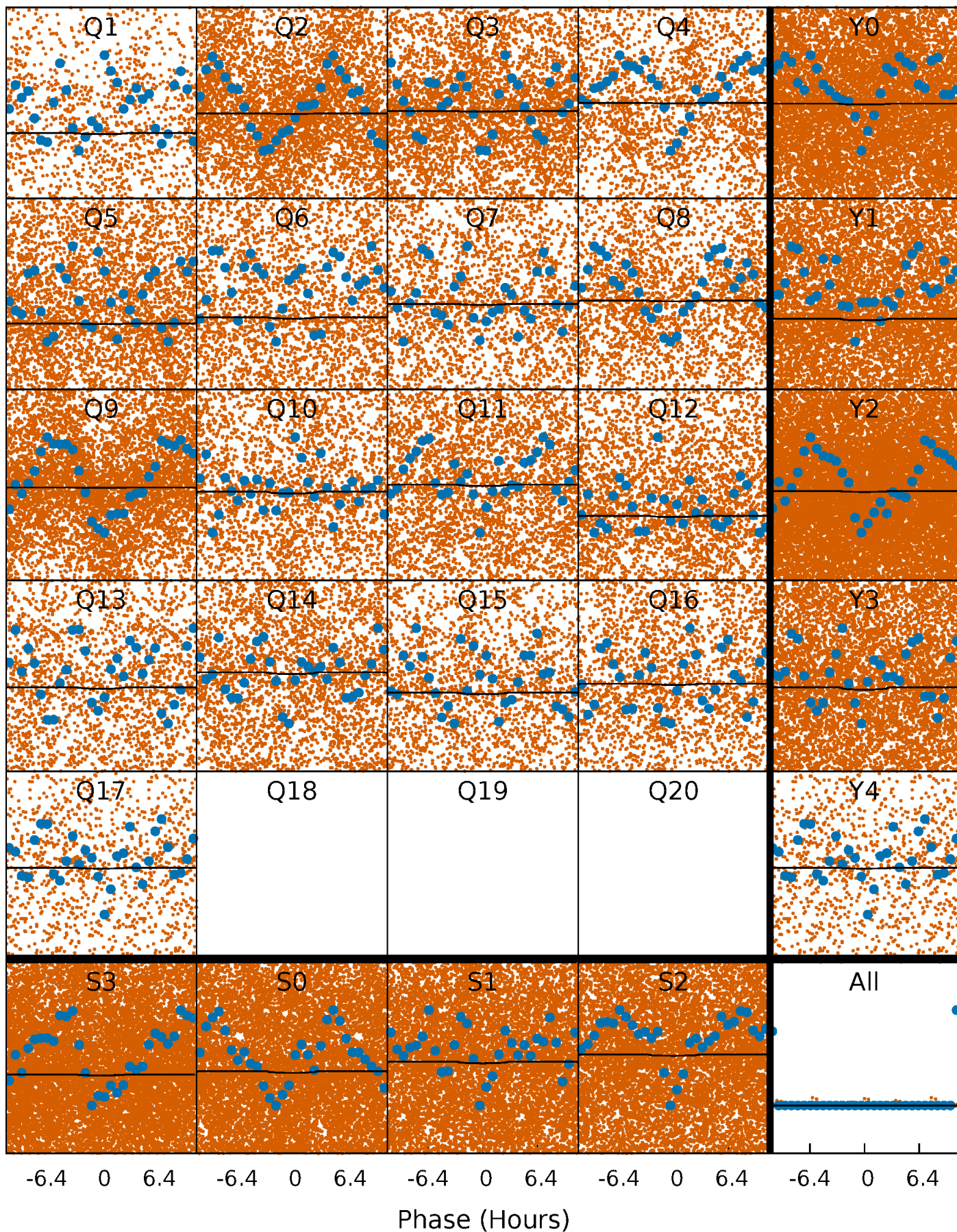
PDC Quarter-Phased Transit Curves

TCE 008429280-01 P= 0.579473 Days $T_0=131.897337$ (BKJD)



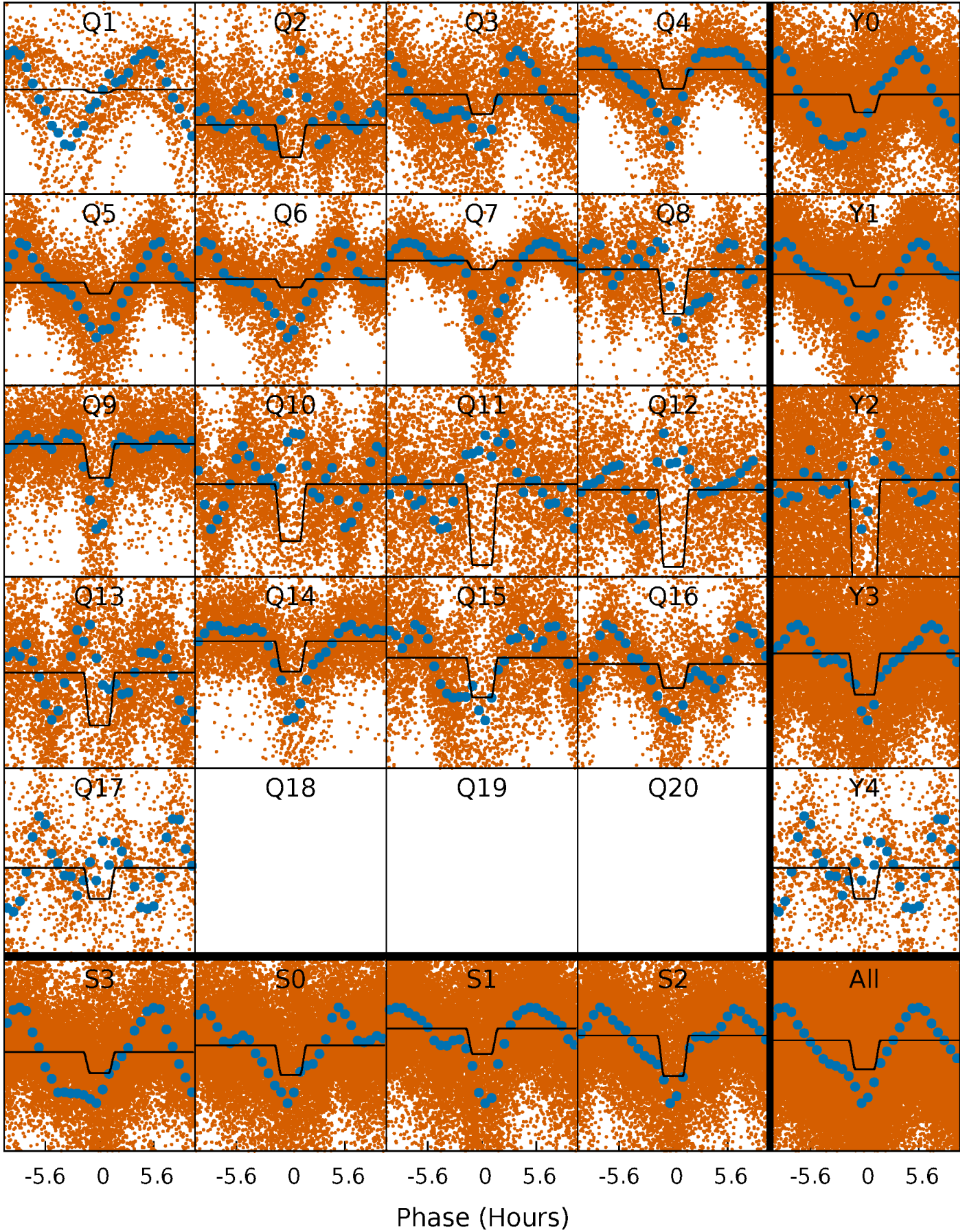
DV Quarter-Phased Transit Curves

TCE 008429280-01 P= 0.579473 Days $T_0=131.897337$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

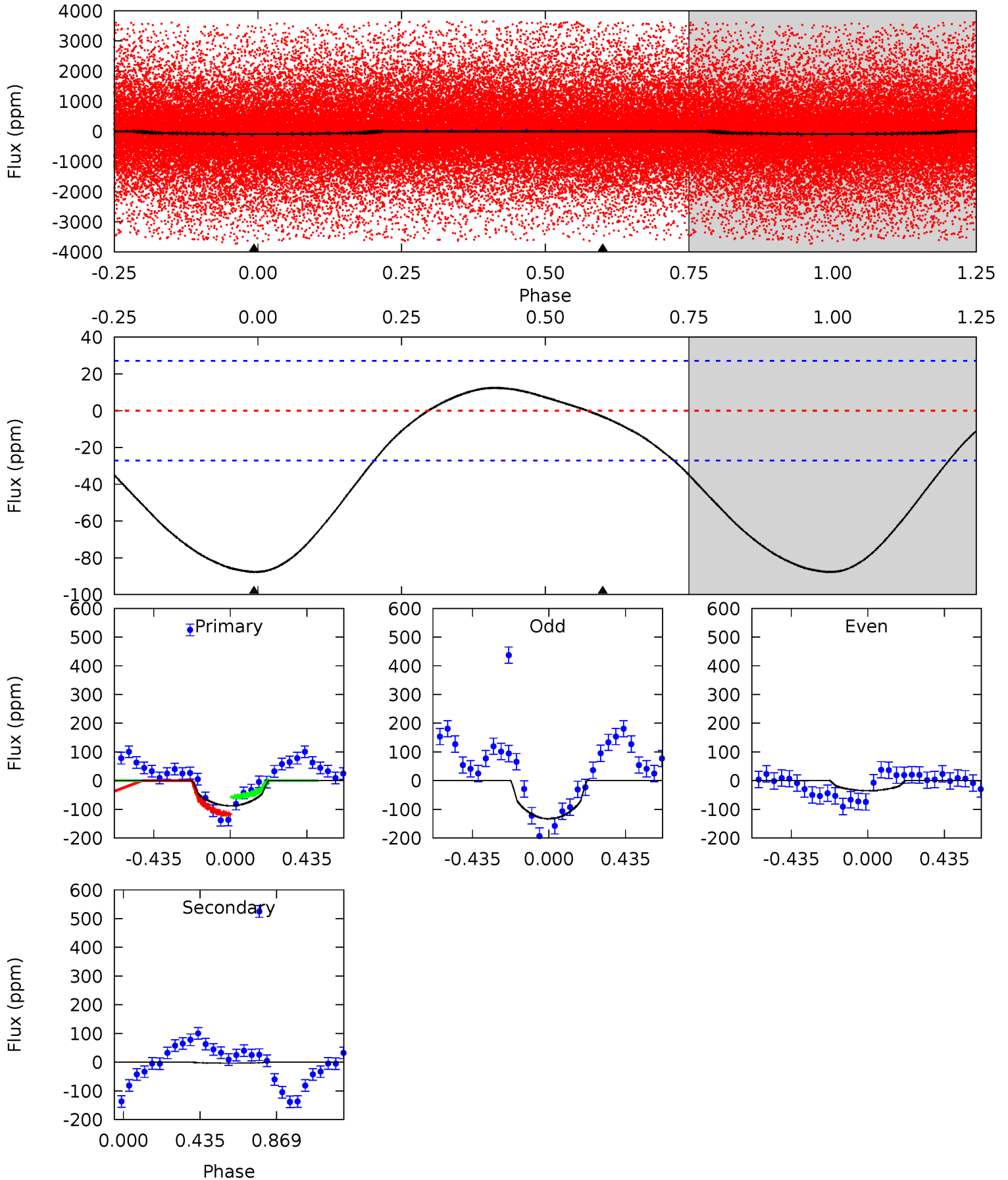
TCE 008429280-01 P= 0.579464 Days $T_0=131.891878$ (BKJD)



DV Model-Shift Uniqueness Test

008429280-01, P = 0.579473 Days, E = 131.317864 Days

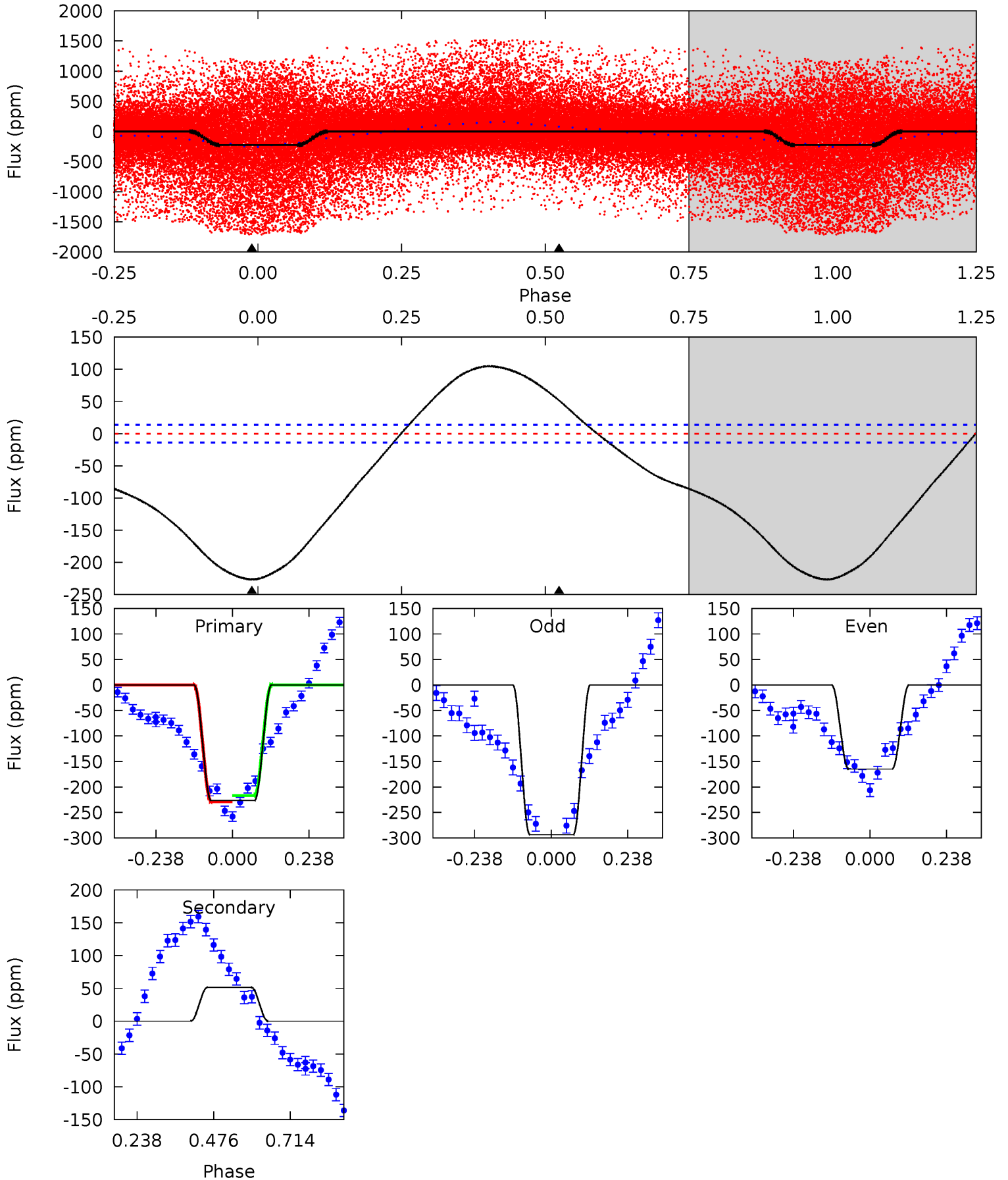
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.7	0.51	0	0	4.25	0.78	0.92	13.7	13.7	0.51	0.51	7.77	1.09	0.12	4.70



Alt Model-Shift Uniqueness Test

008429280-01, P = 0.579464 Days, E = 131.312414 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
71.9	-16.4	0	0	4.38	1.18	13.1	71.9	71.9	-16.4	-16.4	20.4	1.80	0.32	1.96



Stellar Parameters For KIC 008429280

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5044^{+100}_{-100}	$4.511^{+0.075}_{-0.030}$	$-0.020^{+0.150}_{-0.150}$	$0.804^{+0.039}_{-0.061}$	$0.764^{+0.060}_{-0.027}$	$2.071^{+0.561}_{-0.217}$
	+2%/-2%	+2%/-1%	+750%/-750%	+5%/-8%	+8%/-4%	+27%/-10%
Source	SPE13	SPE13	SPE13	DSEP		

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

Secondary Eclipse Parameters for KIC 008429280-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-3 ± 6	$0.39^{+0.34}_{-0.27}$	2485^{+59}_{-69}	3182^{+2331}_{-6968}	$1.112^{+16.540}_{-3.232}$
Alt.	52 ± 3	$1.28^{+0.50}_{-0.49}$	2482^{+66}_{-62}	-3908^{+349}_{-724}	$-2.689^{+1.282}_{-4.419}$

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

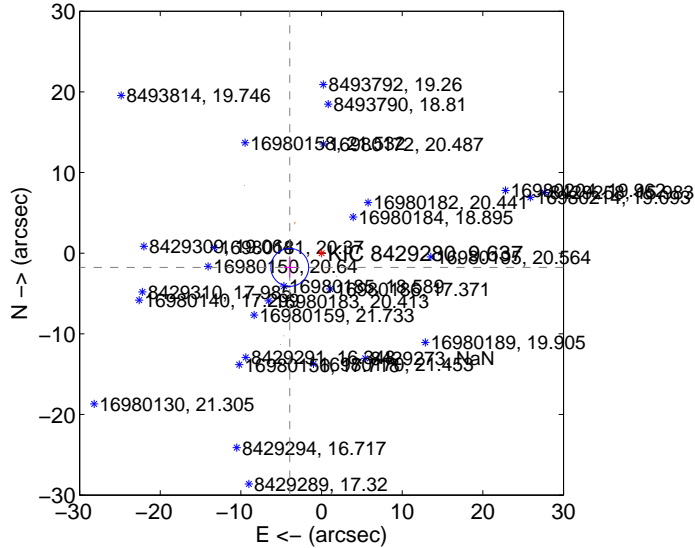
Supplemental centroid analysis for 008429280-01. **Kepler magnitude: 9.64.** Transit SNR 0.53

There are 3 quarters with good PRF difference image offsets

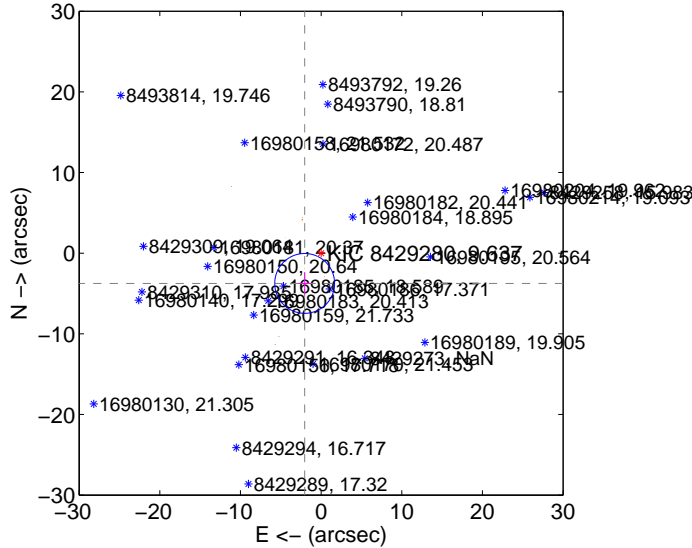
The direct PRF centroid is offset from the target star catalog position by about 1.65 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.323 \pm 0.782	5.53	3.944 \pm 0.728	-1.769 \pm 1.255
PRF-fit source offset from KIC position	4.268 \pm 1.237	3.45	2.039 \pm 0.743	-3.750 \pm 1.385
photometric centroid source offset	—	—	—	—

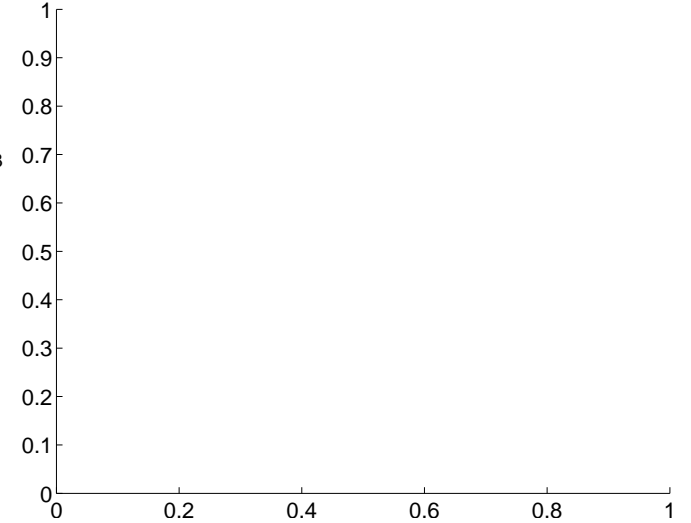
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

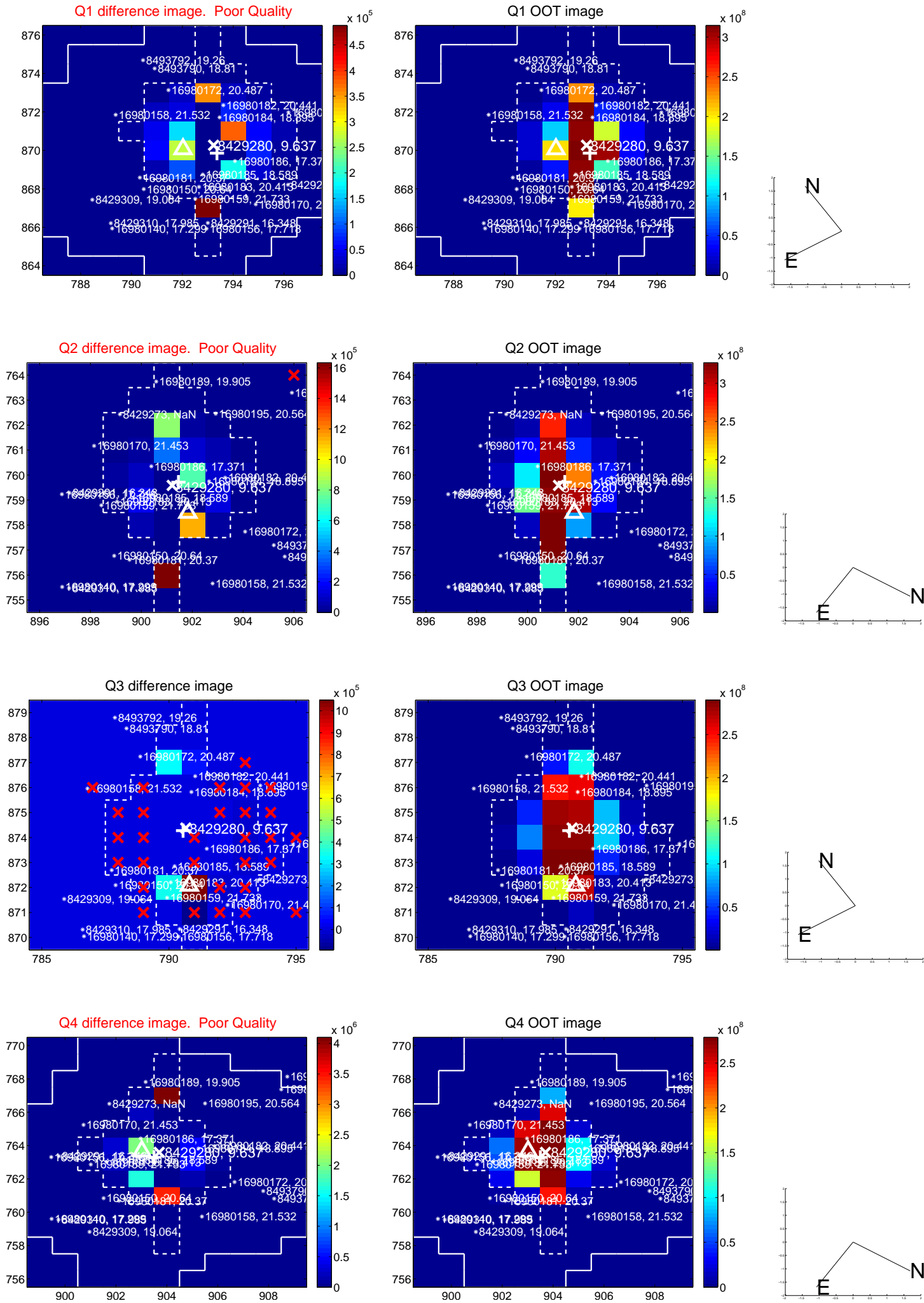


There are no photometric centroids

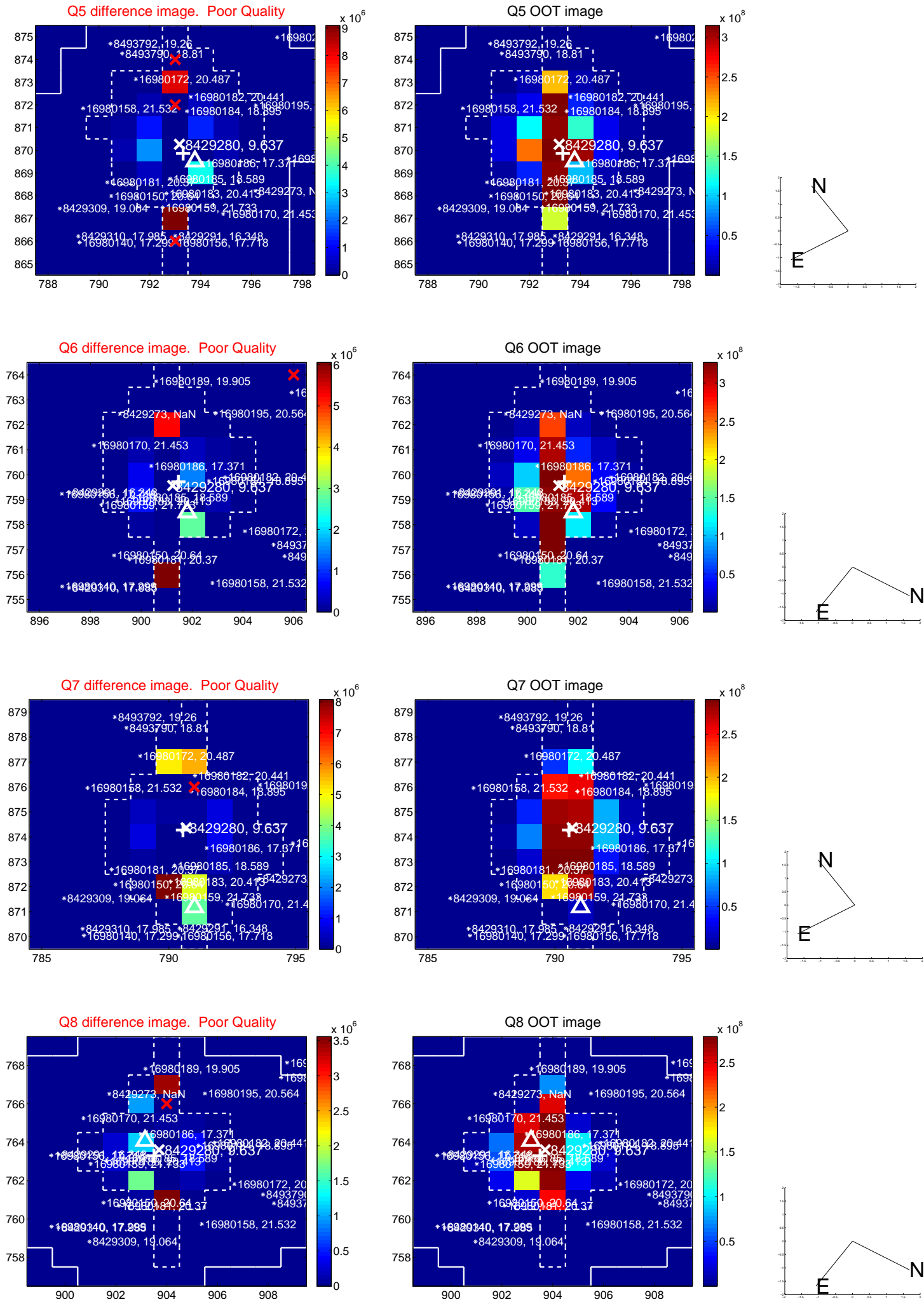


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

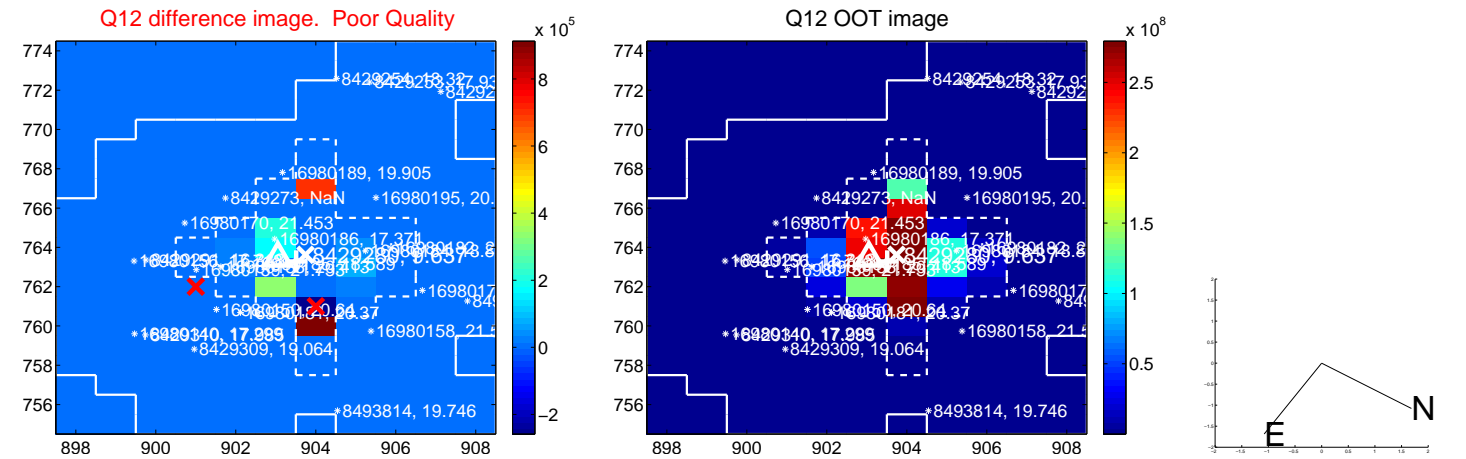
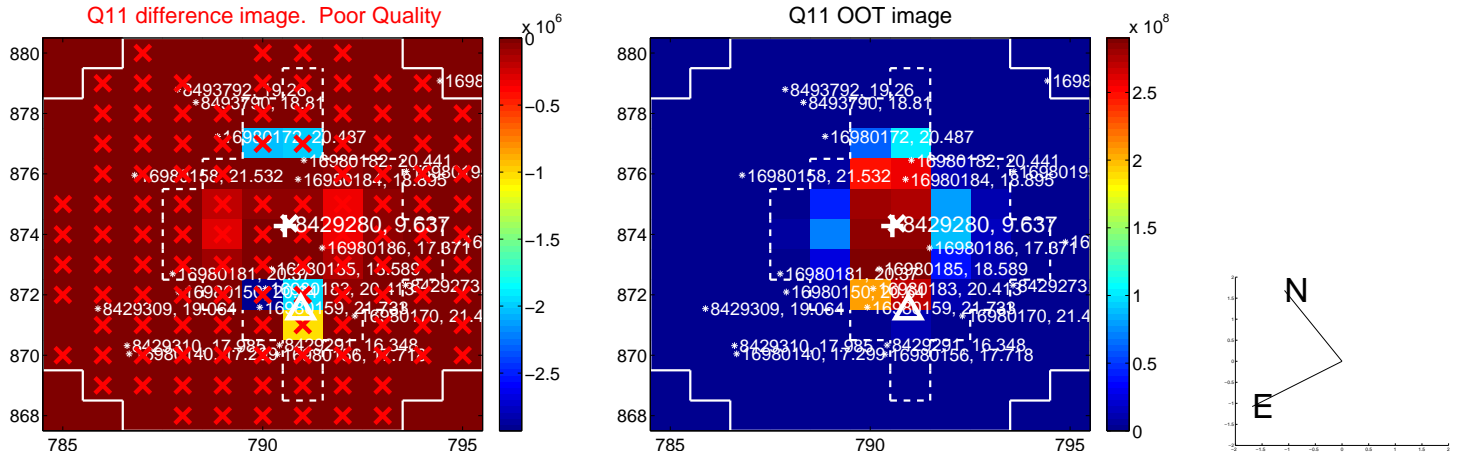
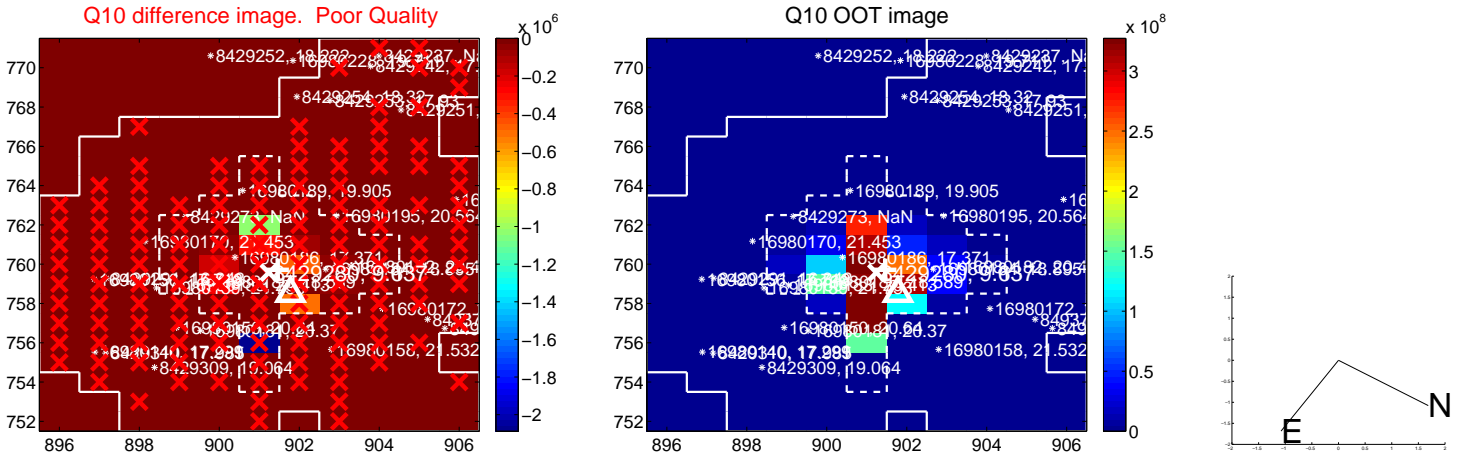
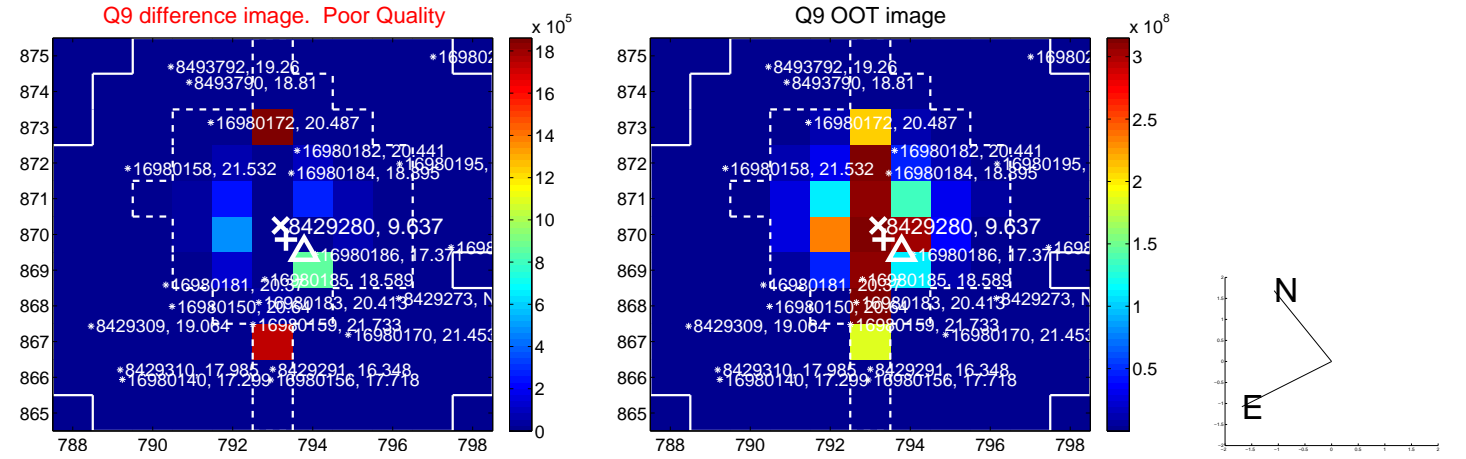
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



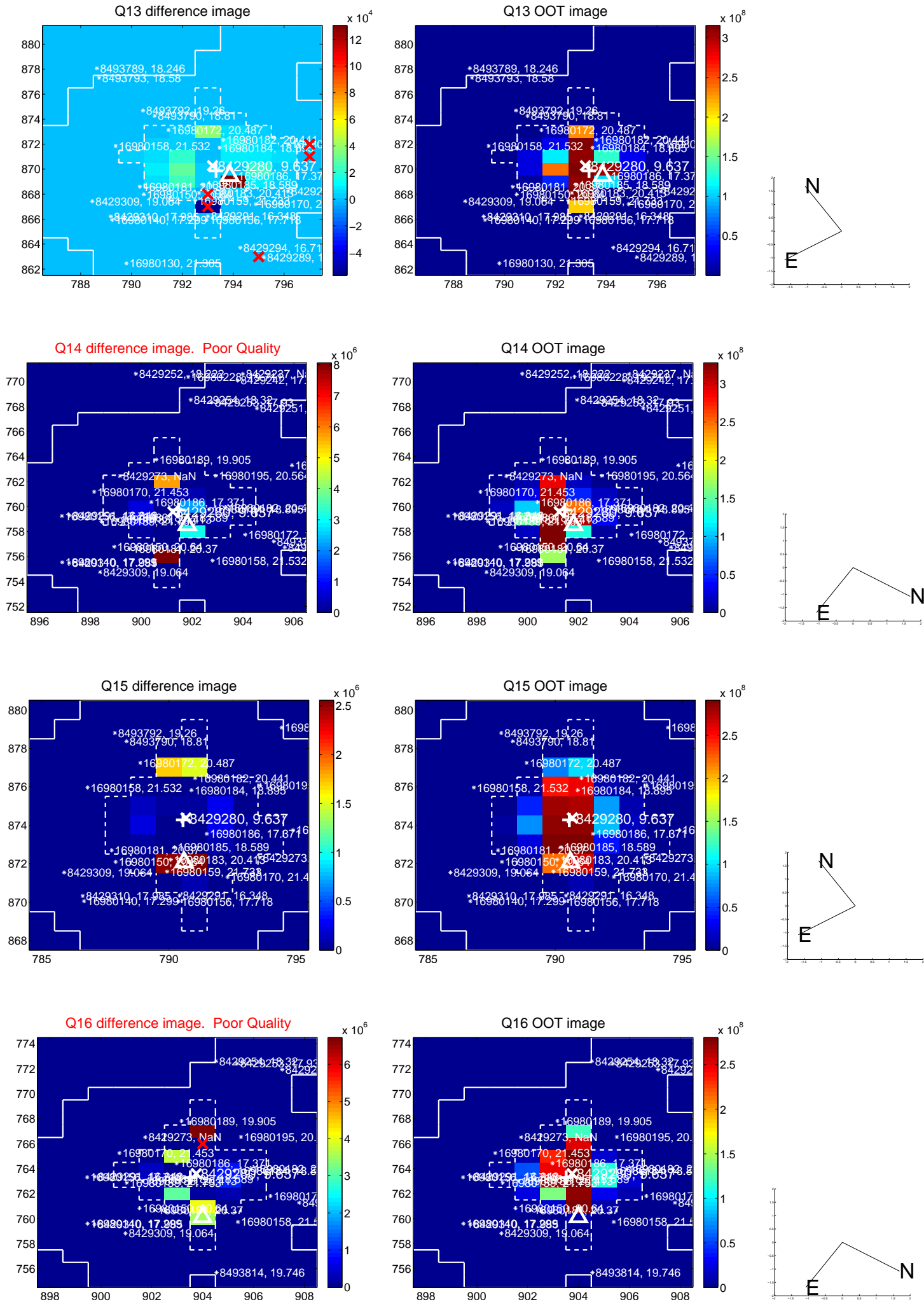
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



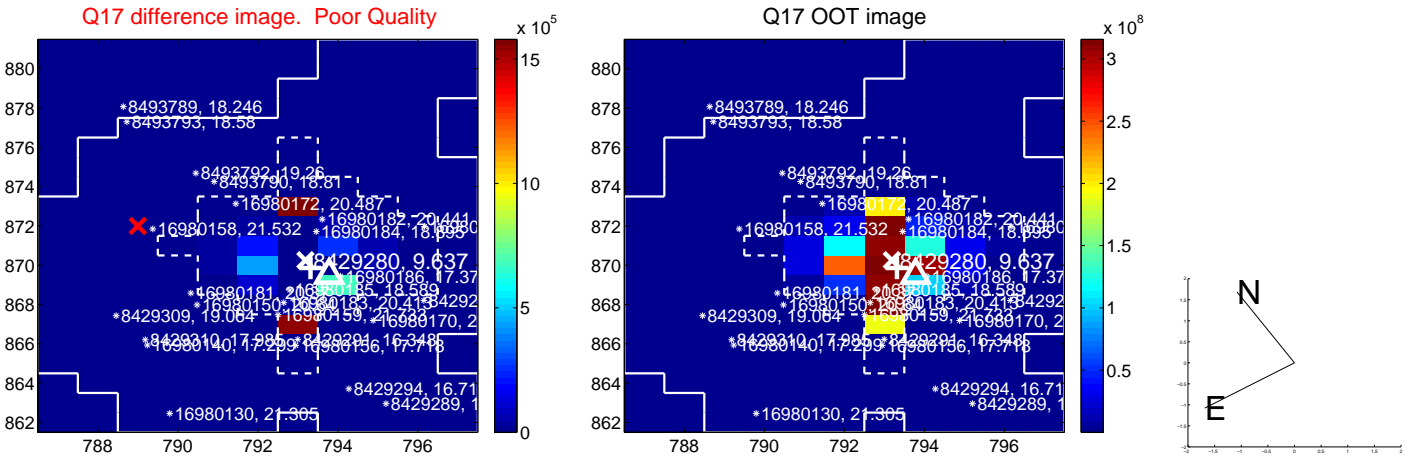
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



folded centroid time series figure for this object.

UKIRT Image

