

KIC 006887321

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})
006887321-01	OBS	8129.01	1.657438	131.707568	21.4	4.295	7.4	7.6	1.13	5860	0.61	1811.15

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006887321-01	OBS	FP	0.00	0	0	1	0	CENT_UNRESOLVED_OFFSET—HALO_GHOST

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

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

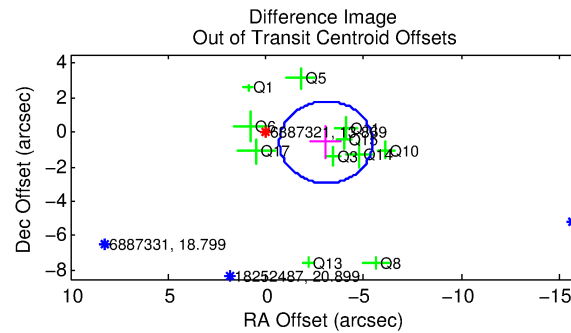
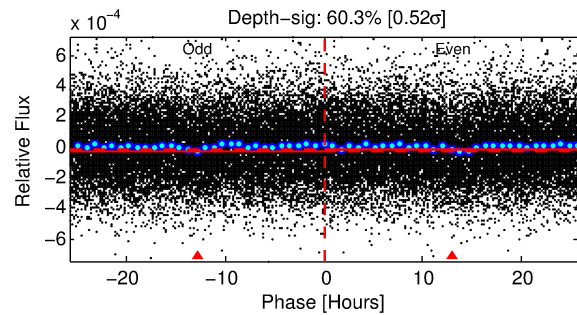
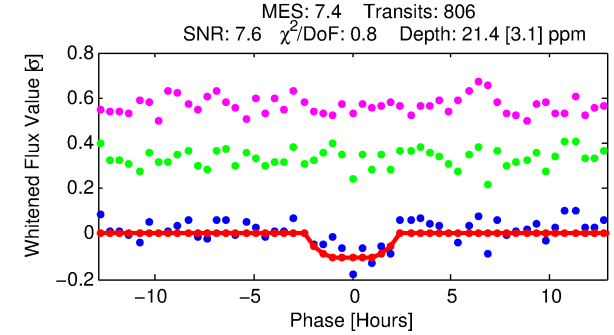
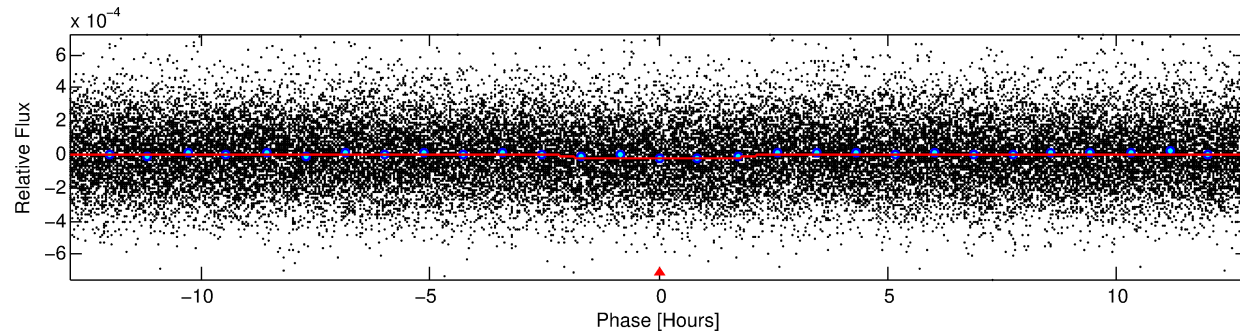
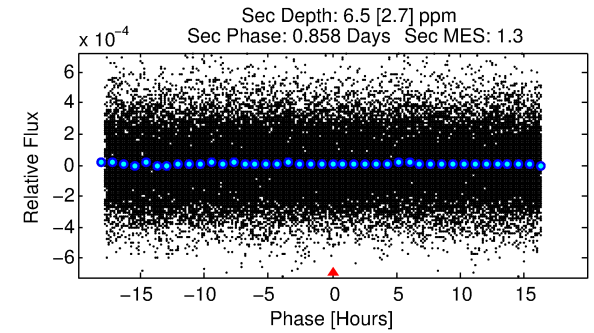
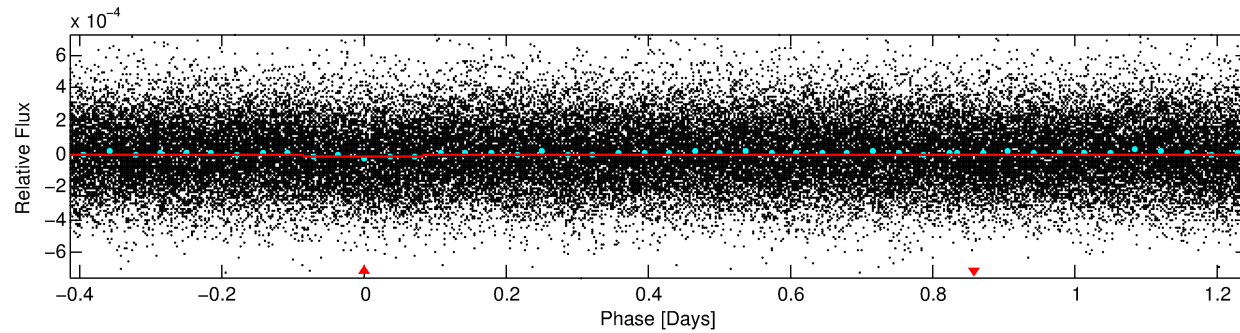
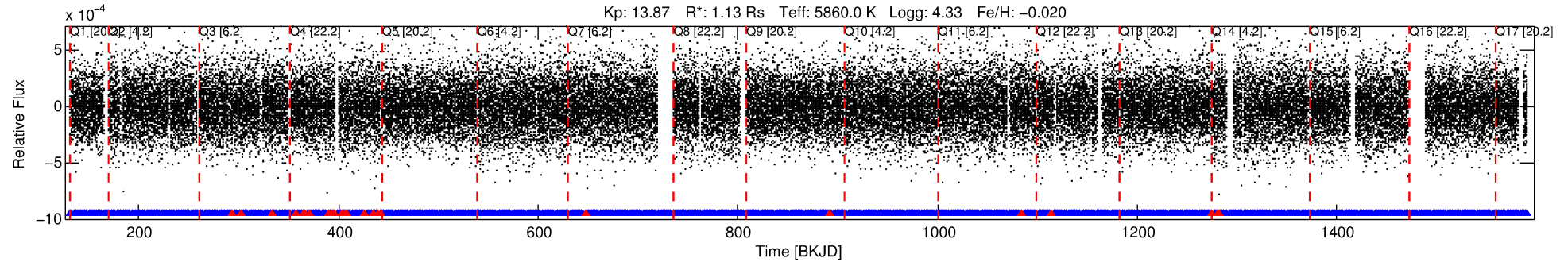
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006887321-01

No Significant Match Found

DV One-Page Summary

KIC: 6887321 Candidate: 1 of 1 Period: 1.657 d



DV Fit Results:

Period = 1.65744 [0.00002] d
Epoch = 131.7076 [0.0070] BKJD
Rp/R* = 0.0049 [0.0027]
a/R* = 1.72 [3.09]
b = 0.87 [0.73]
Seff = 1811.15 [666.99]
Teff = 1663 [153] K
Rp = 0.61 [0.38] Re
a = 0.0273 [0.0065] AU
Ag = 7.31 [9.00] [0.70σ]
Teffp = 4228 [1259] K [2.02σ]

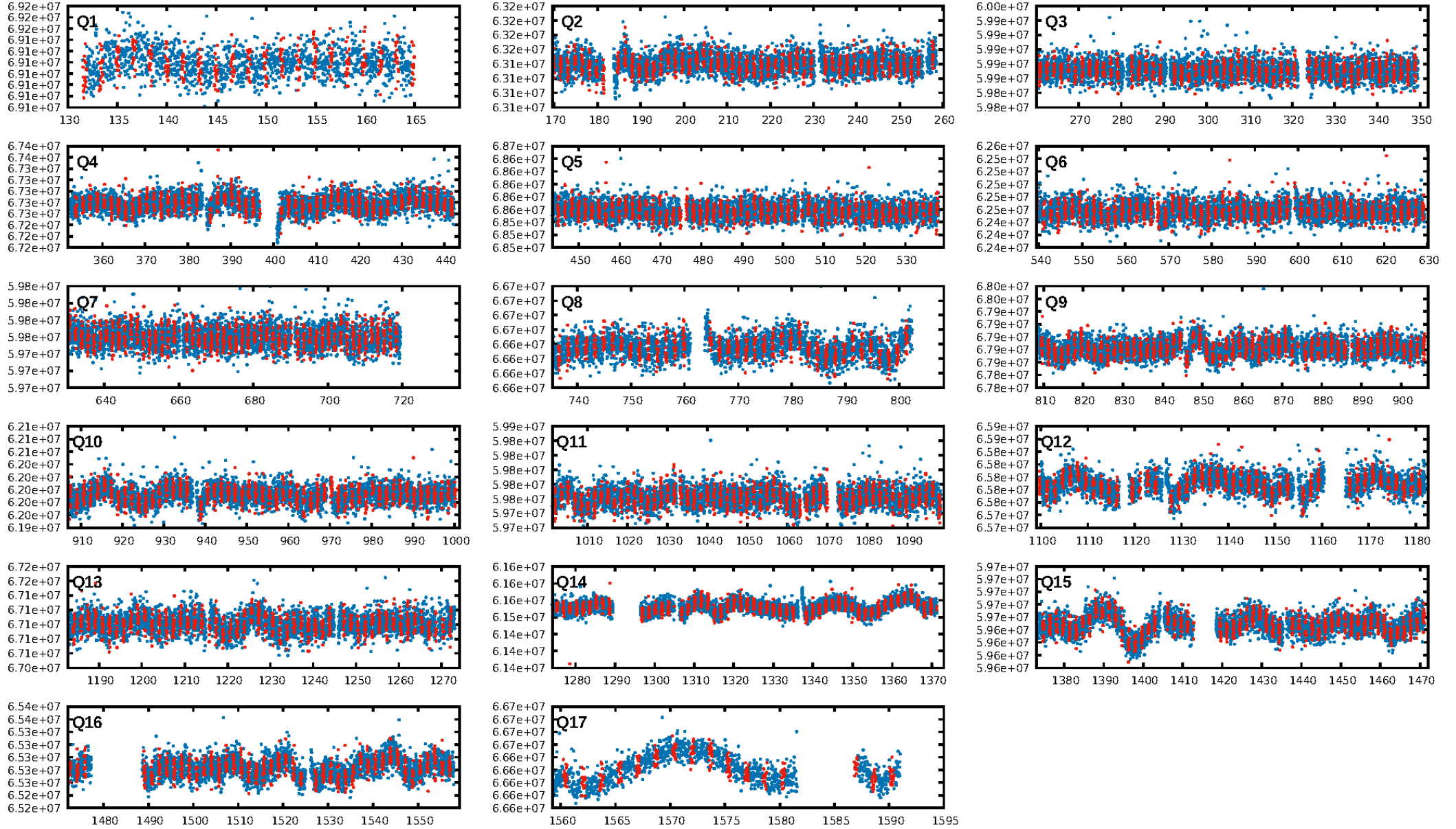
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 6.53e-14
RollingBand-fgt: 0.97 [745/769]
GhostDiagnostic-chr: -0.1301
Centroid-sig: 0.0%
Centroid-so: 7.159 arcsec [3.56σ]
OotOffset-rm: 3.124 arcsec [3.95σ]
KicOffset-rm: 3.148 arcsec [4.00σ]
OotOffset-st: 3/3/1/4 [11]
KicOffset-st: 3/3/1/4 [11]
DiffImageQuality-fgm: 0.09 [1/11]
DiffImageOverlap-fno: 1.00 [17/17]

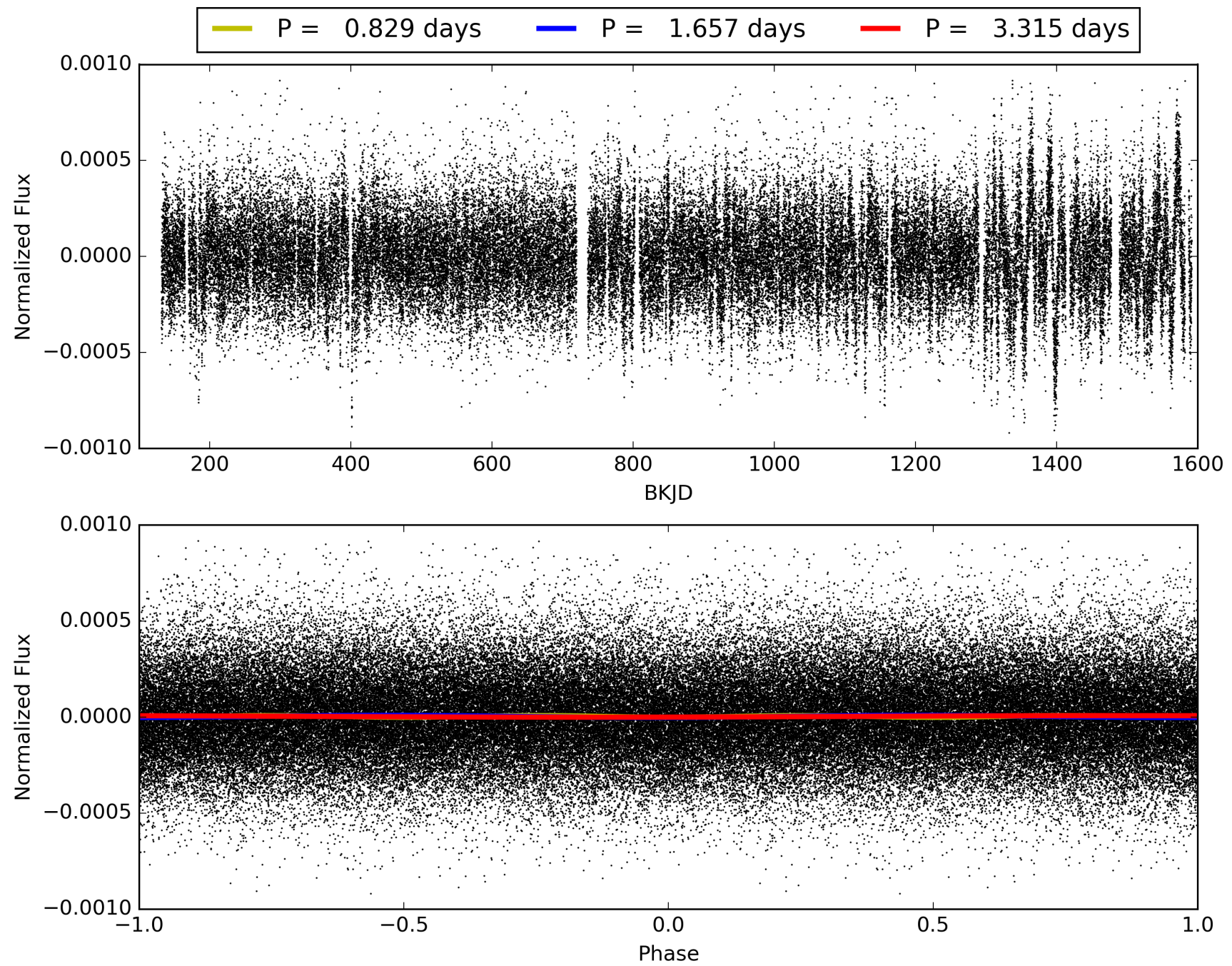
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 21:36:05 Z

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

TCE 006887321-01, PDC Light Curves

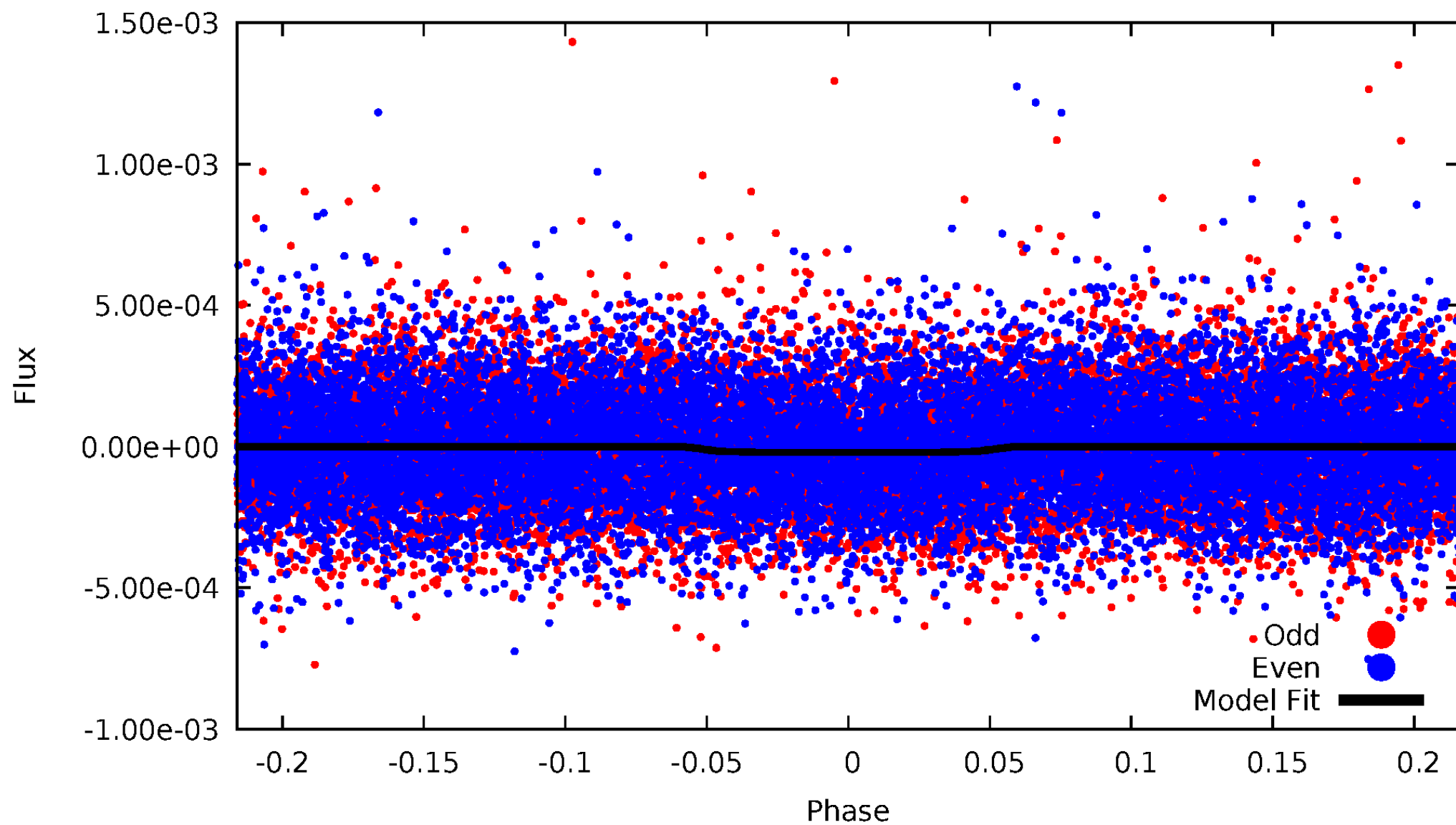


TCE 006887321-01



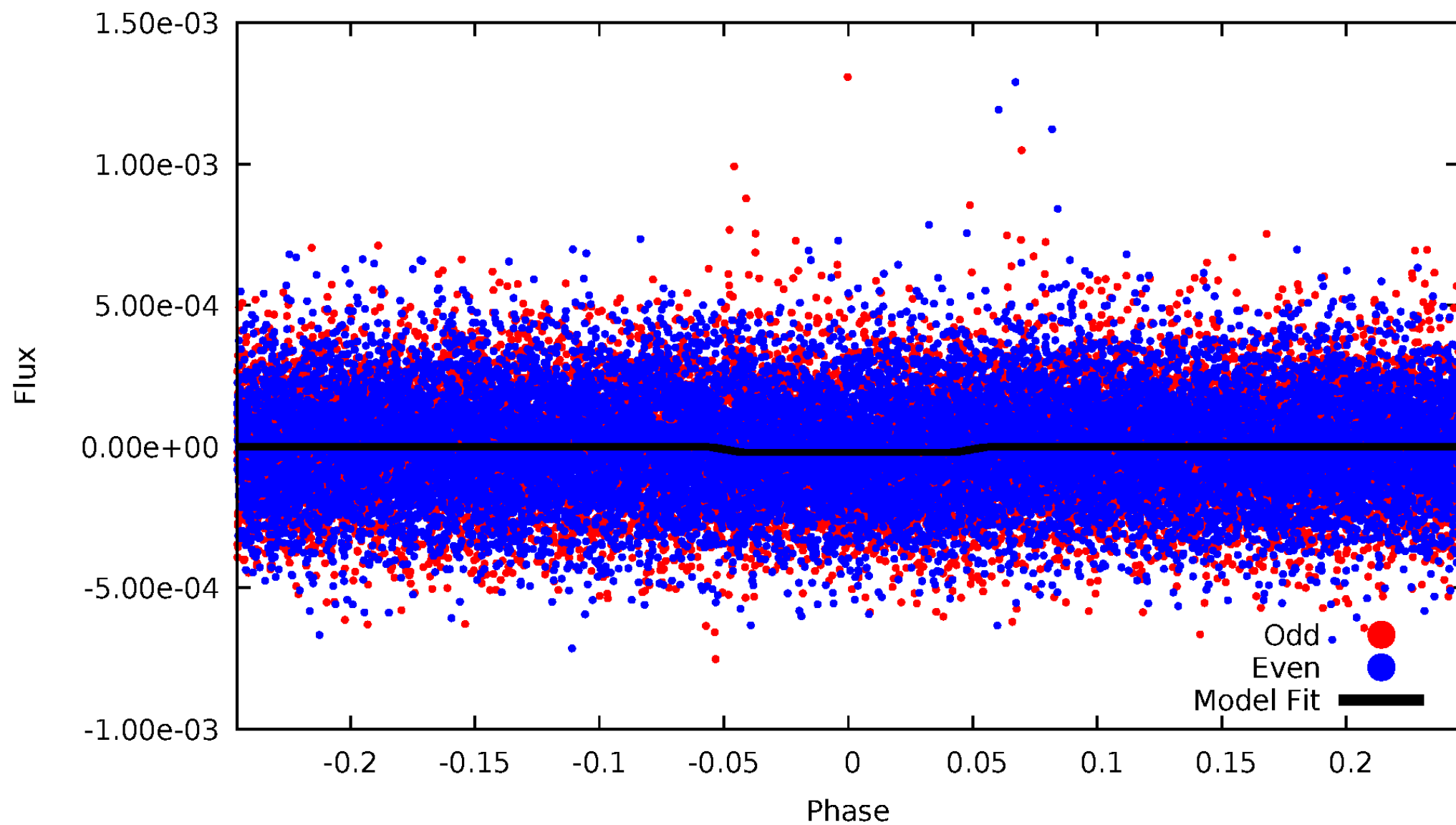
DV Odd/Even

TCE 006887321-01

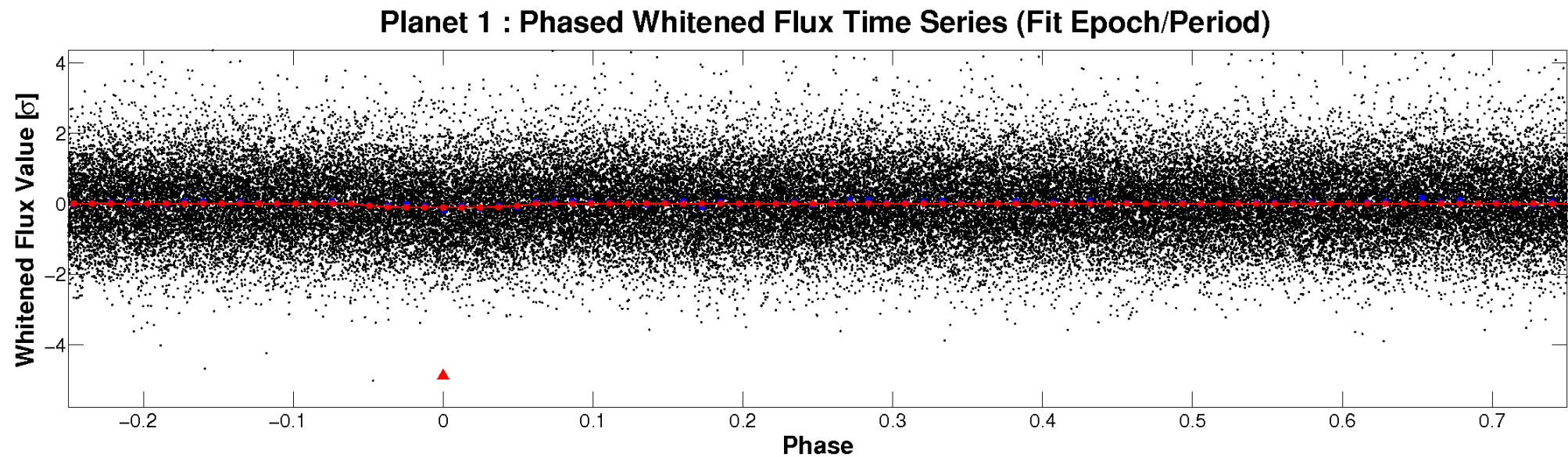
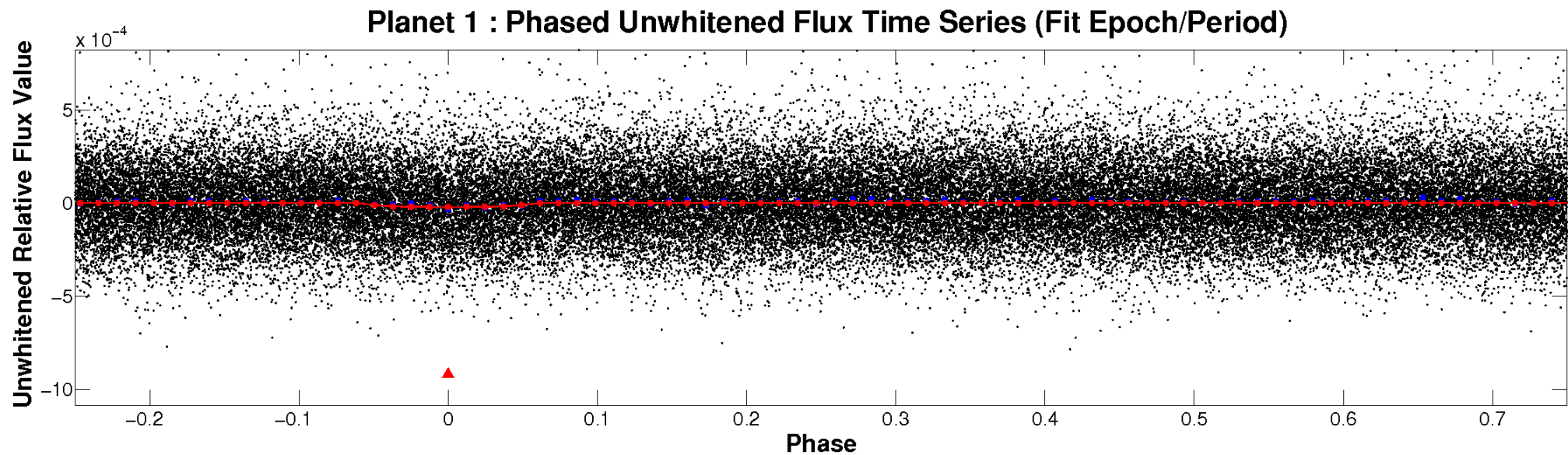


ALT Odd/Even

TCE 006887321-01

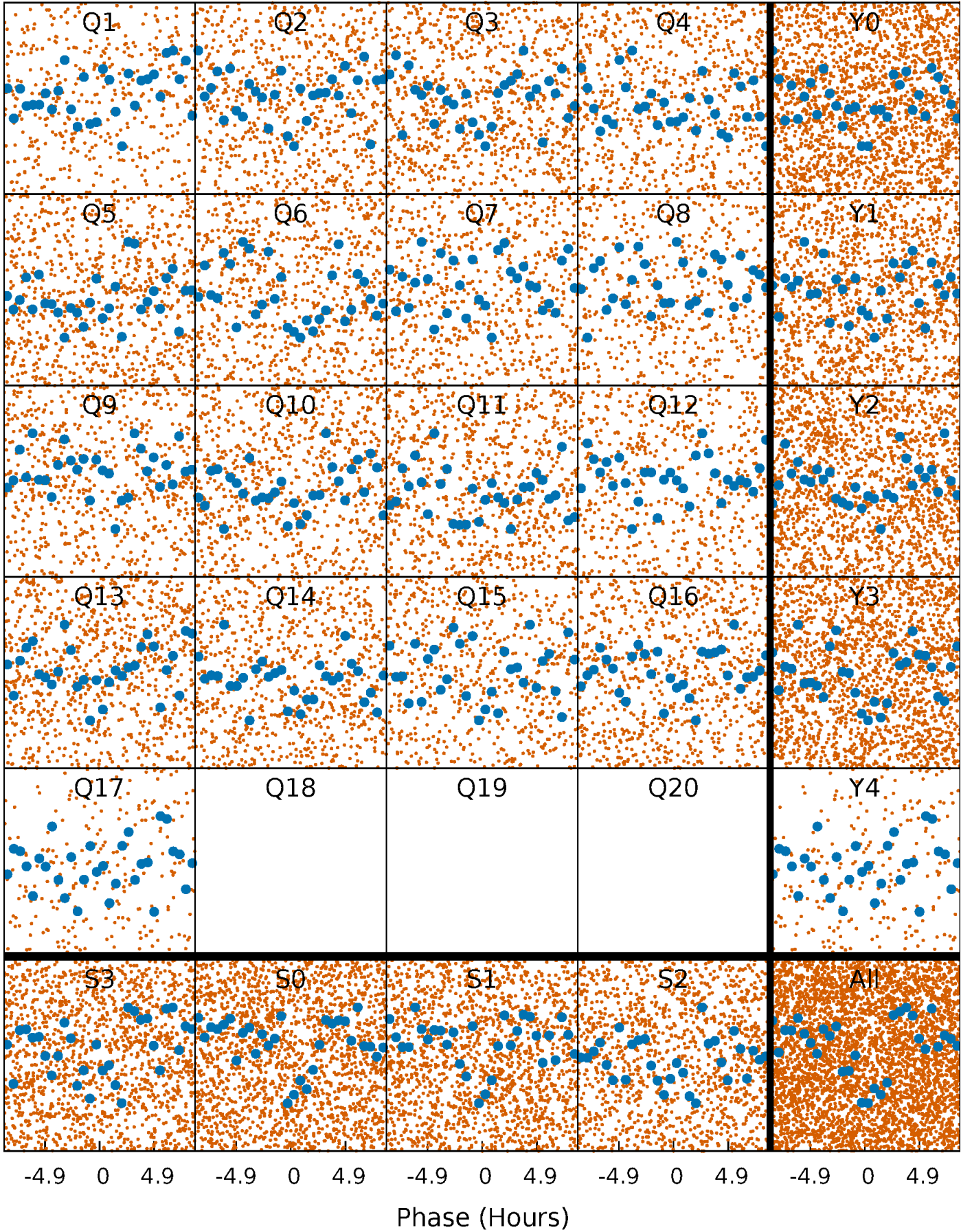


Non-Whitened Vs. Whitened Light Curve



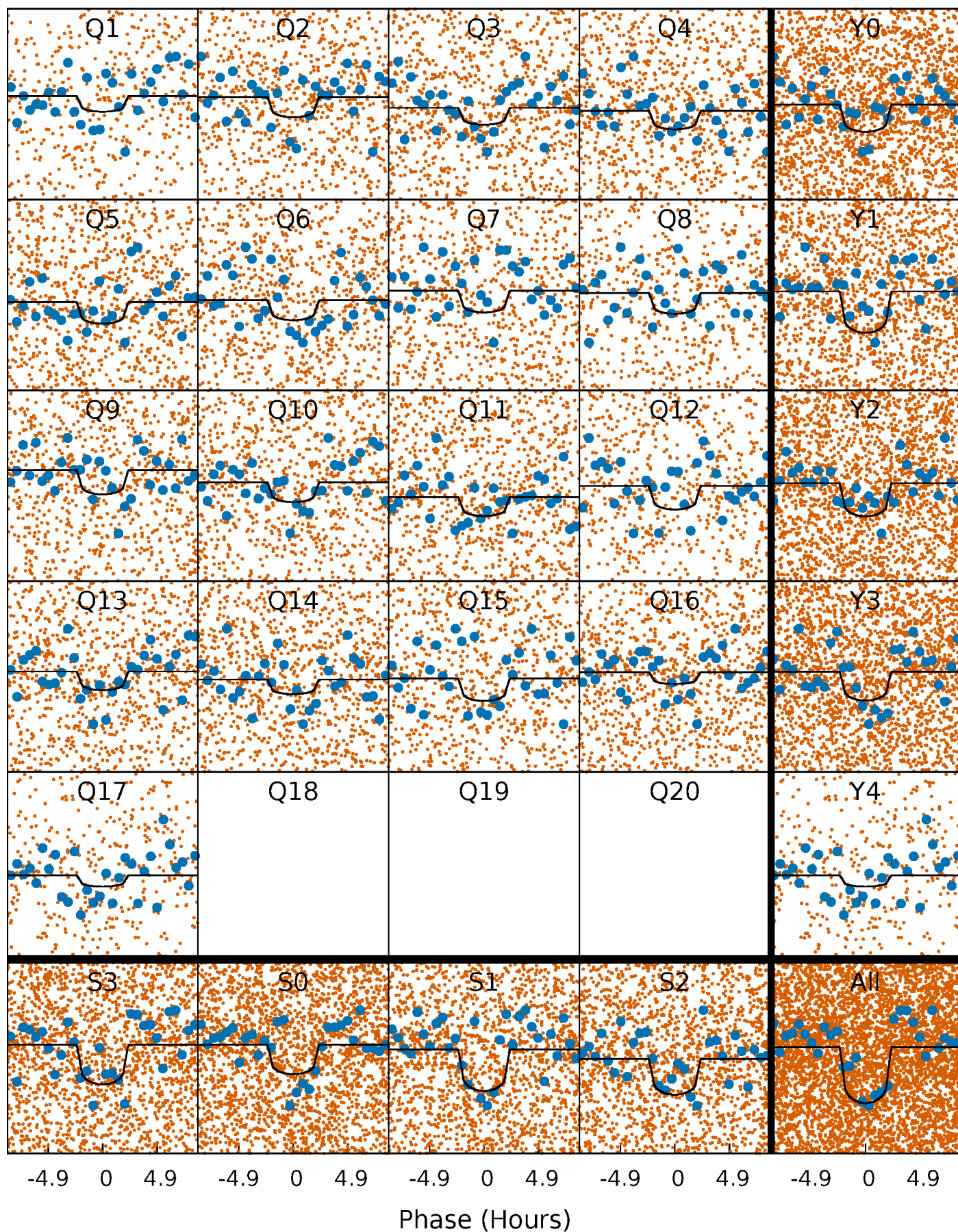
PDC Quarter-Phased Transit Curves

TCE 006887321-01 P= 1.657438 Days $T_0=131.707568$ (BKJD)



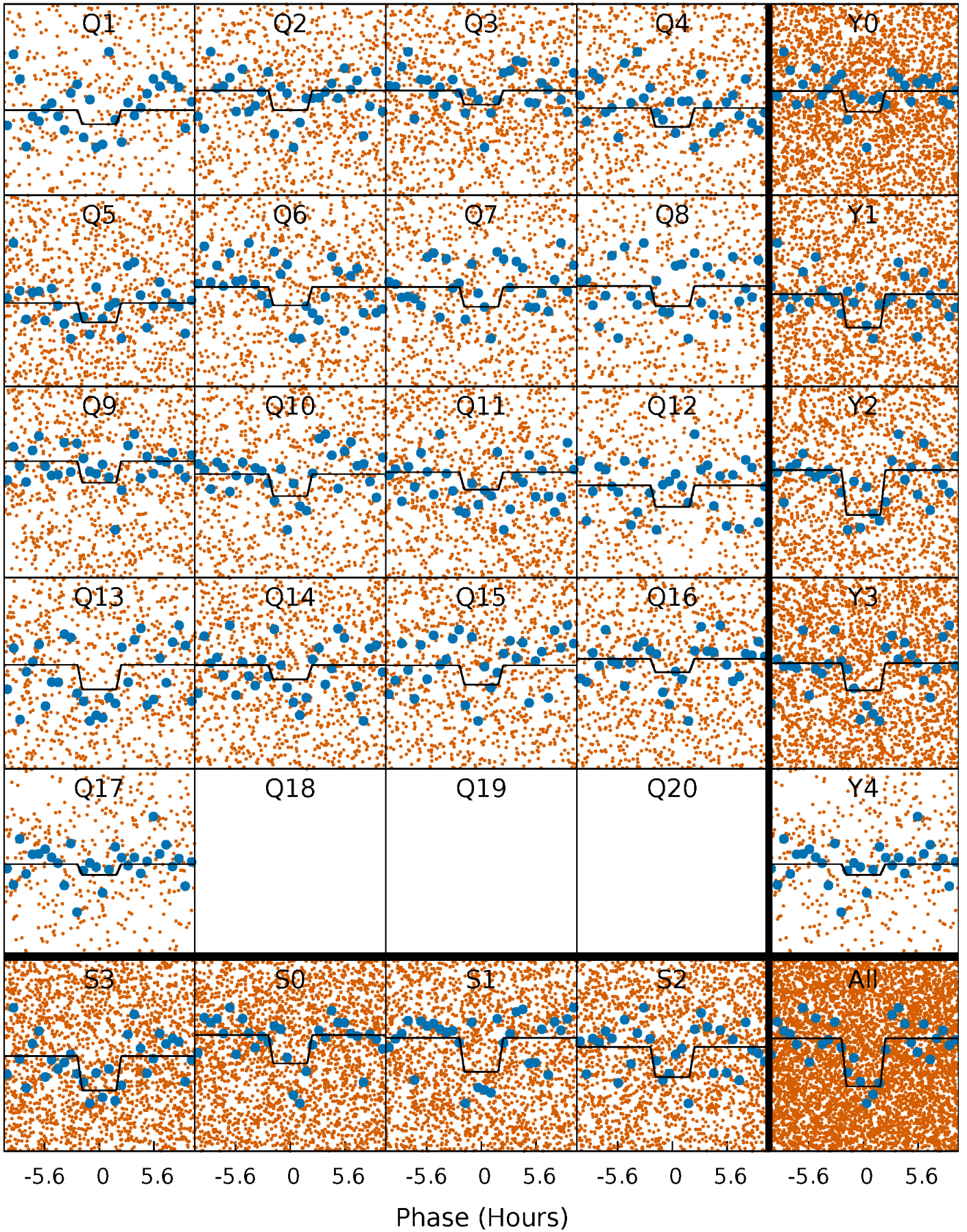
DV Quarter-Phased Transit Curves

TCE 006887321-01 P= 1.657438 Days $T_0=131.707568$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

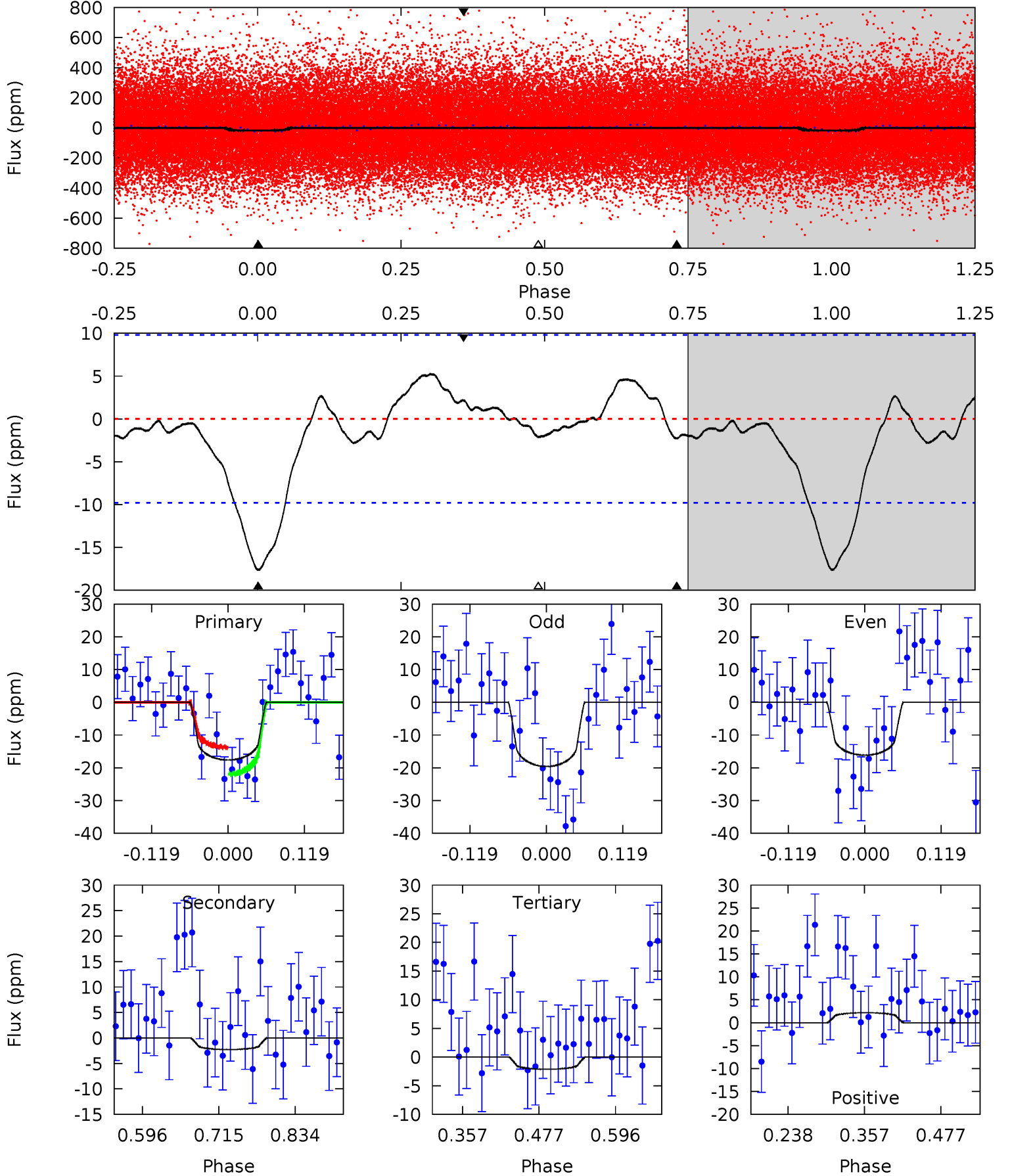
TCE 006887321-01 P= 1.657479 Days $T_0=131.688637$ (BKJD)



DV Model-Shift Uniqueness Test

006887321-01, P = 1.657438 Days, E = 130.050130 Days

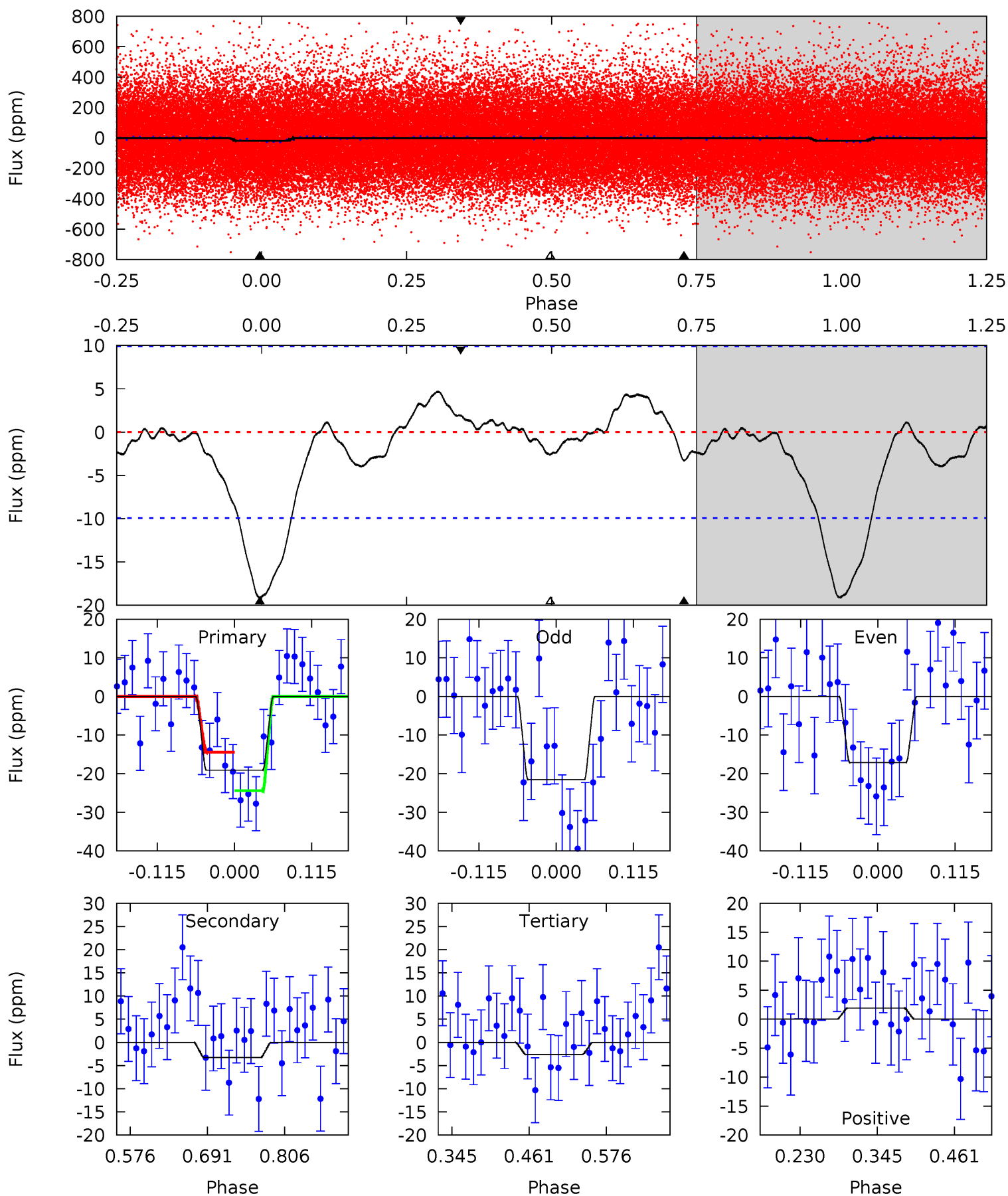
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.14	1.05	0.98	1.00	4.53	1.56	0.97	7.16	7.14	0.07	0.05	0.80	0.82	0.23	1.89



Alt Model-Shift Uniqueness Test

006887321-01, P = 1.657479 Days, E = 130.031158 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.74	1.50	1.18	0.88	4.54	1.58	0.92	7.55	7.86	0.32	0.62	1.02	0.92	0.20	2.28



Stellar Parameters For KIC 006887321

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5860^{+158}_{-193}	$4.326^{+0.153}_{-0.187}$	$-0.020^{+0.250}_{-0.300}$	$1.130^{+0.321}_{-0.214}$	$0.987^{+0.140}_{-0.115}$	$0.964^{+0.725}_{-0.484}$
	+3%/-3%	+4%/-4%	+1250%/-1500%	+28%/-19%	+14%/-12%	+75%/-50%
Source	PHO1	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 006887321-01 / KOI 8129.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-2 ± 2	$0.64^{+0.37}_{-0.33}$	2328^{+169}_{-137}	3458^{+1217}_{-6061}	$1.876^{+7.807}_{-1.774}$
Alt.	-3 ± 2	$0.58^{+0.33}_{-0.30}$	2325^{+178}_{-151}	3892^{+1395}_{-915}	$3.847^{+13.589}_{-2.970}$

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

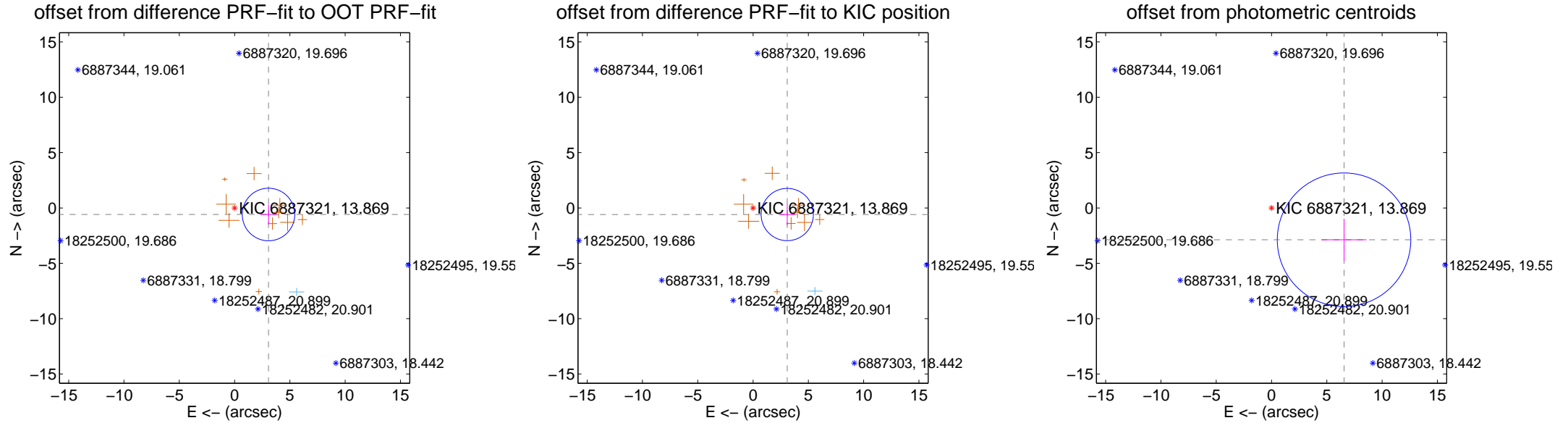
DV Centroid Data

Supplemental centroid analysis for 006887321-01. Kepler magnitude: 13.87. Transit SNR 7.59

There are 1 quarters with good PRF difference image offsets

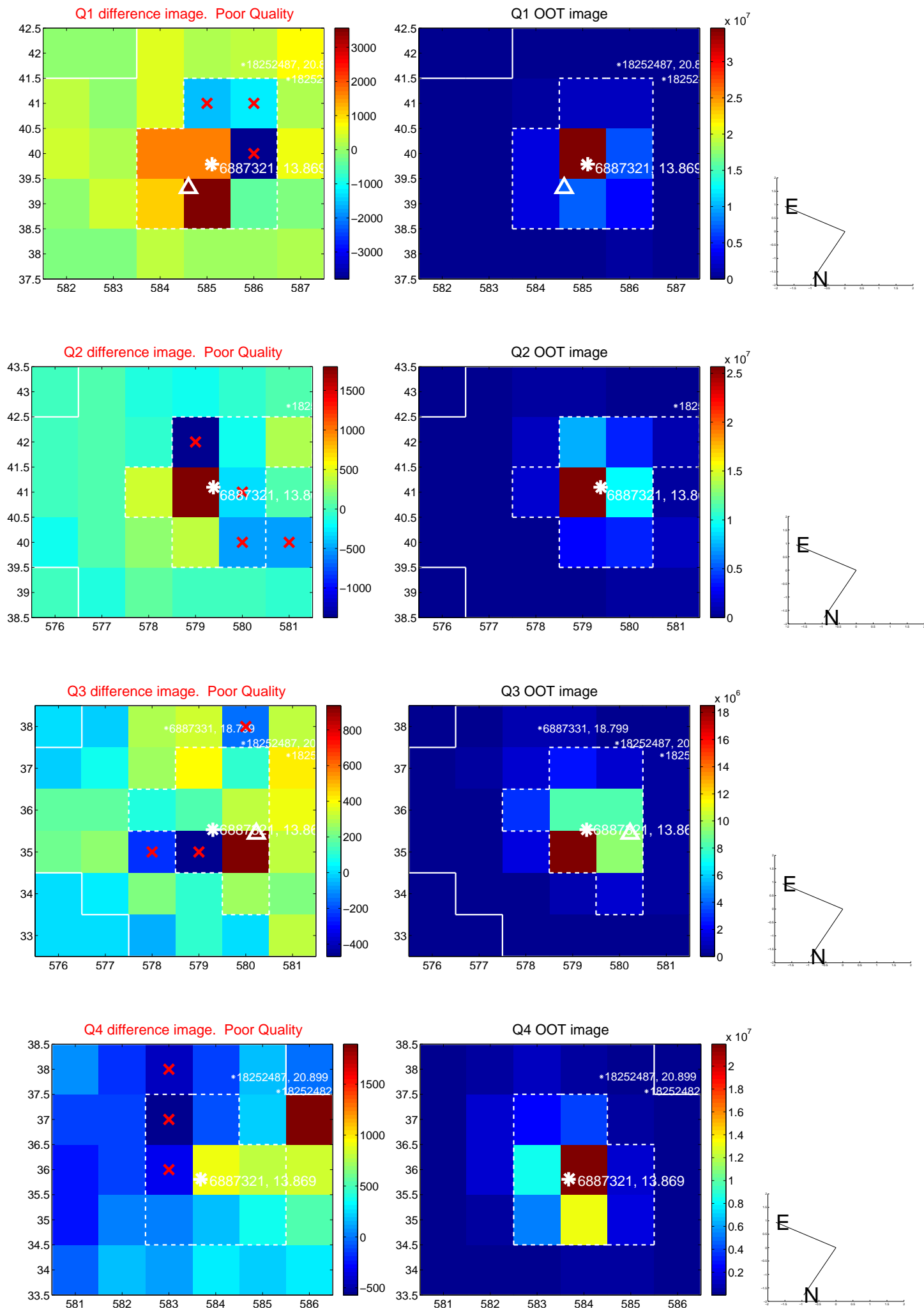
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.124 ± 0.791	3.95	-3.067 ± 0.740	-0.590 ± 0.903
PRF-fit source offset from KIC position	3.148 ± 0.787	4.00	-3.092 ± 0.705	-0.594 ± 0.962
photometric centroid source offset	7.16 ± 2.01	3.56	-6.56 ± 2.03	-2.87 ± 1.90

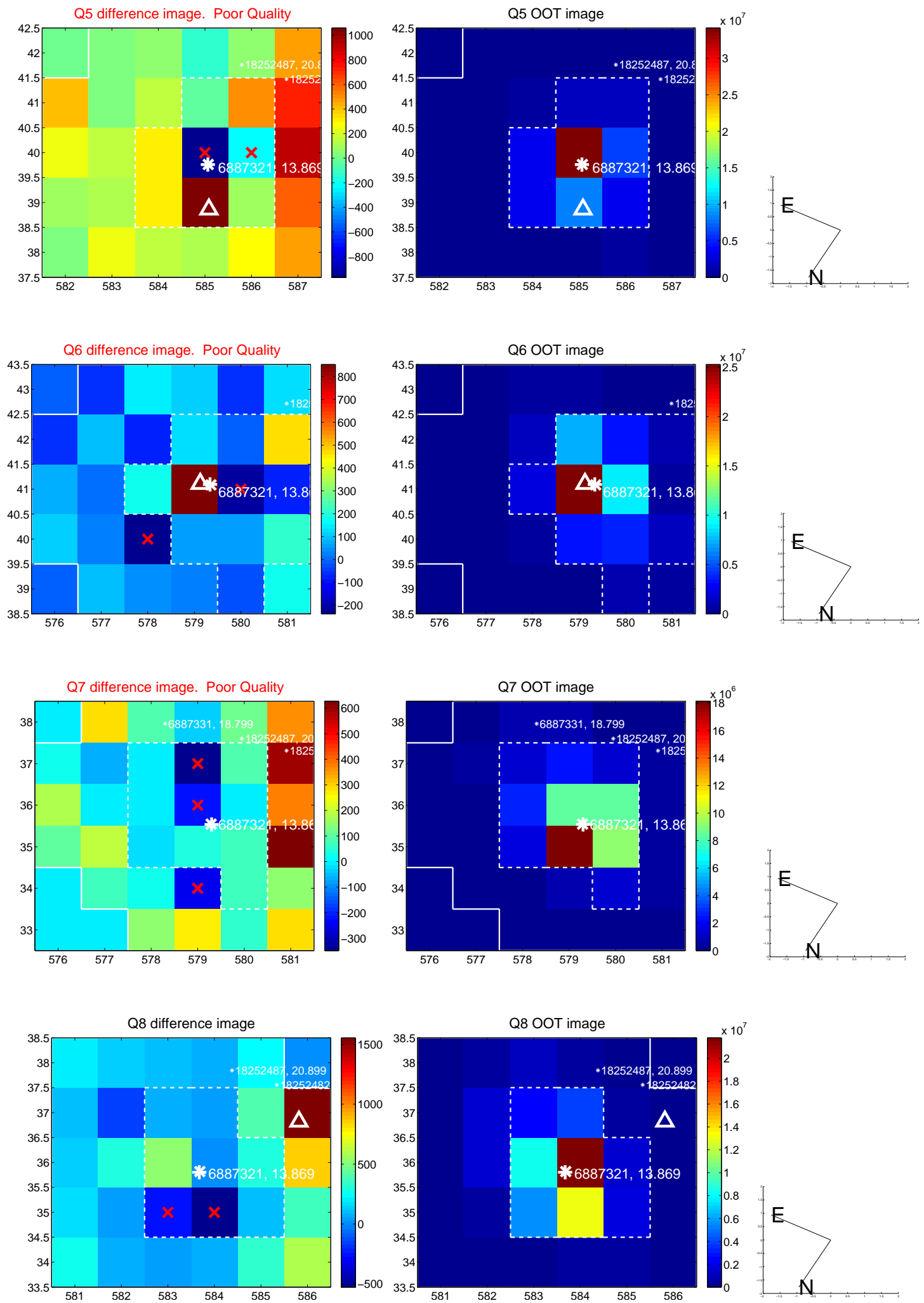


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

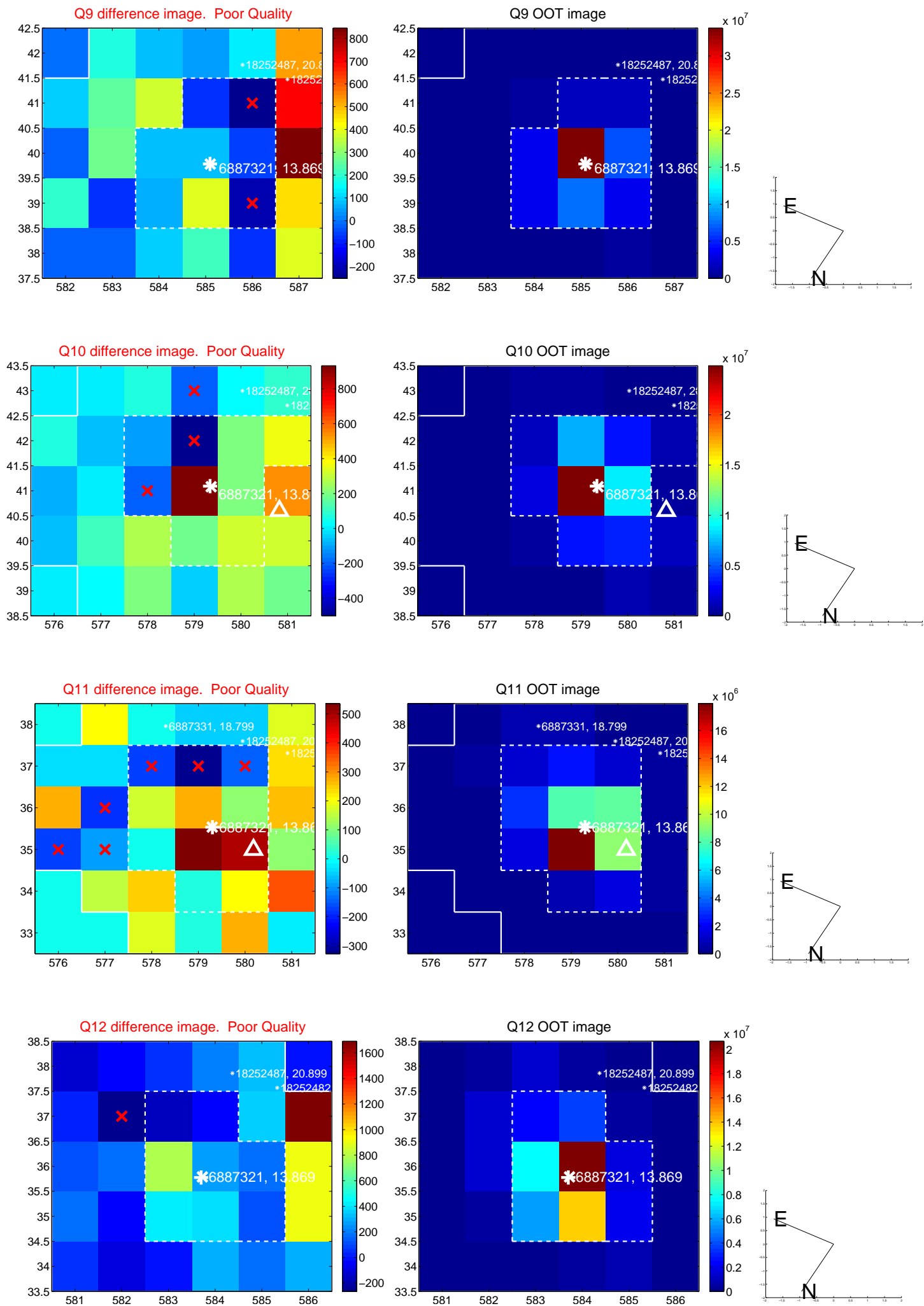
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



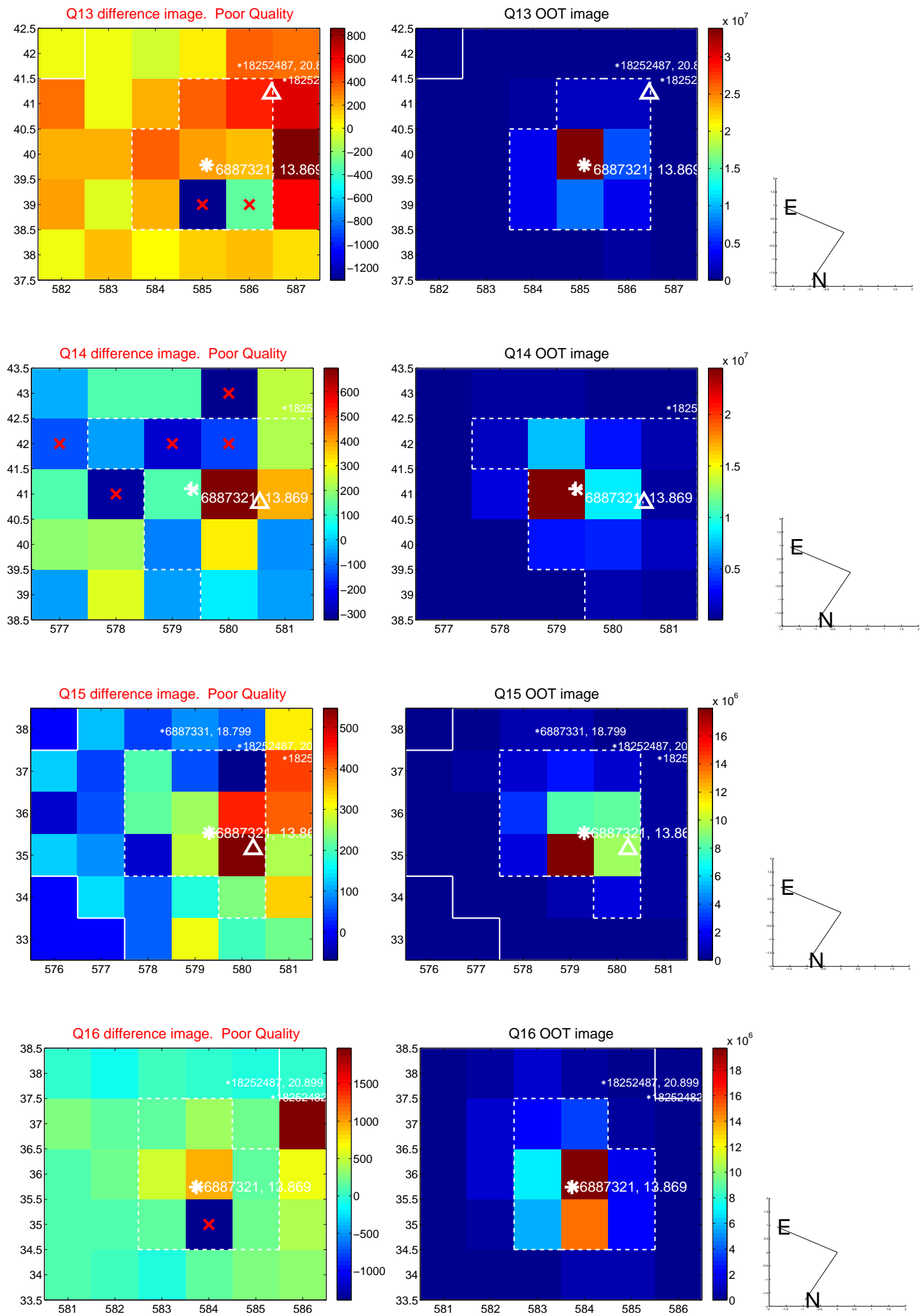
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



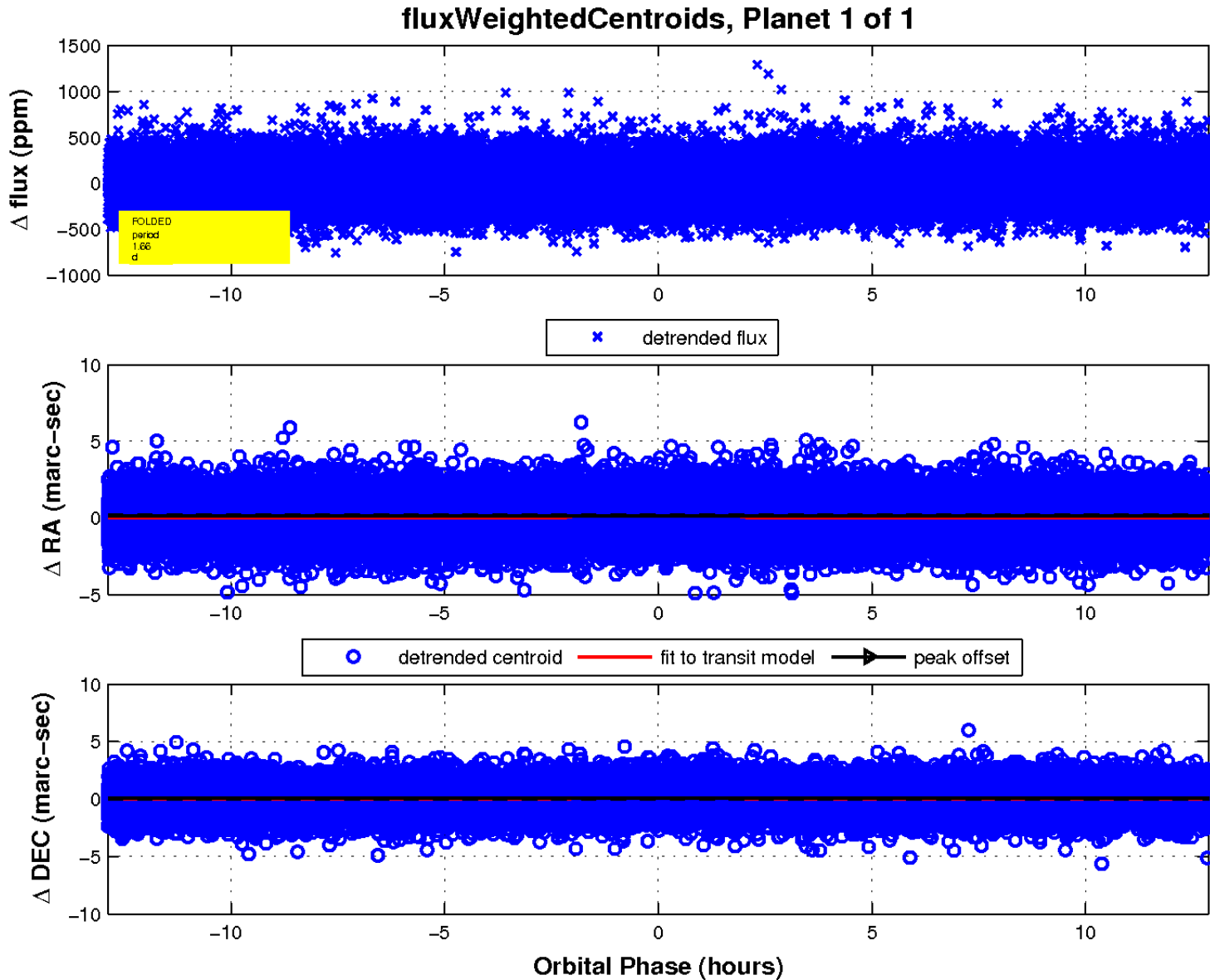
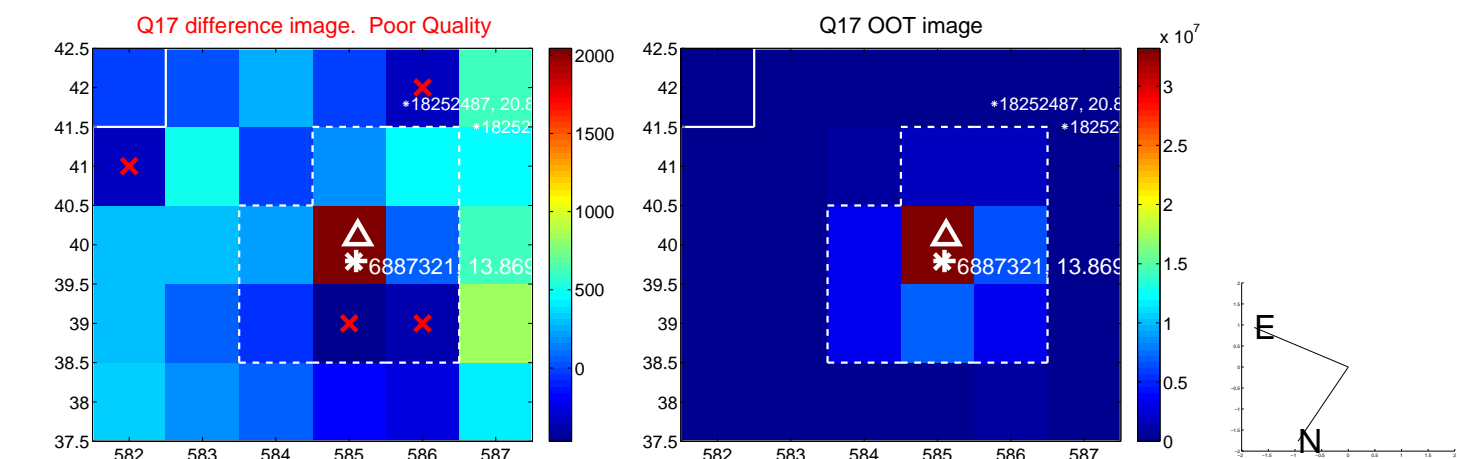
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

