

KIC 011822789

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})
011822789-01	OBS	No	0.648272	132.079188	110.8	1.063	8.8	6.4	2.66	7780	2.99	69636.93

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011822789-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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

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

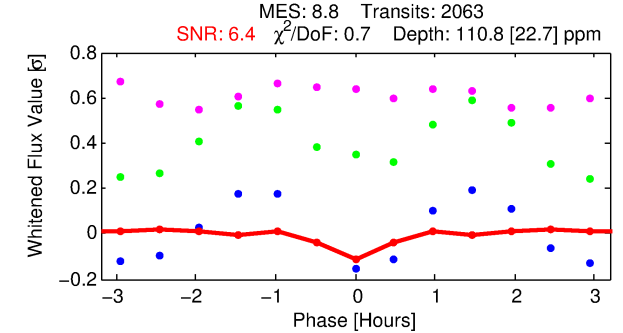
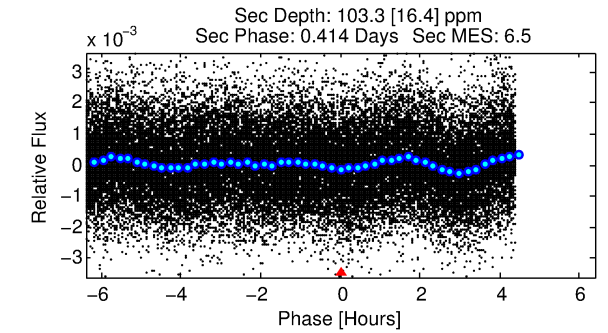
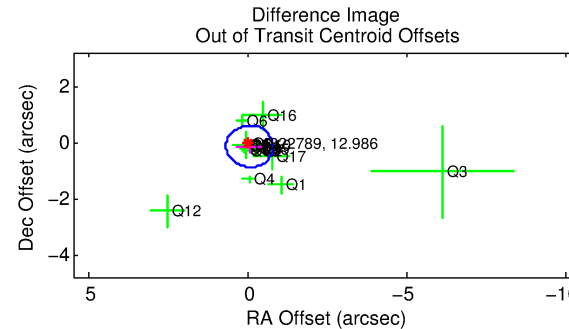
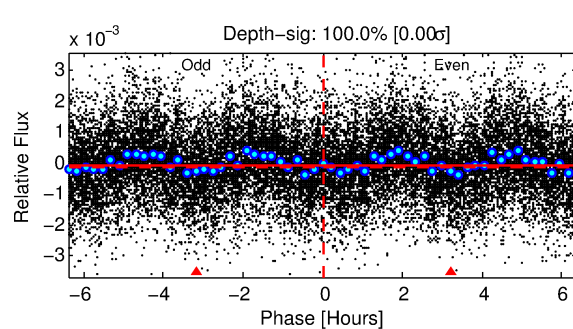
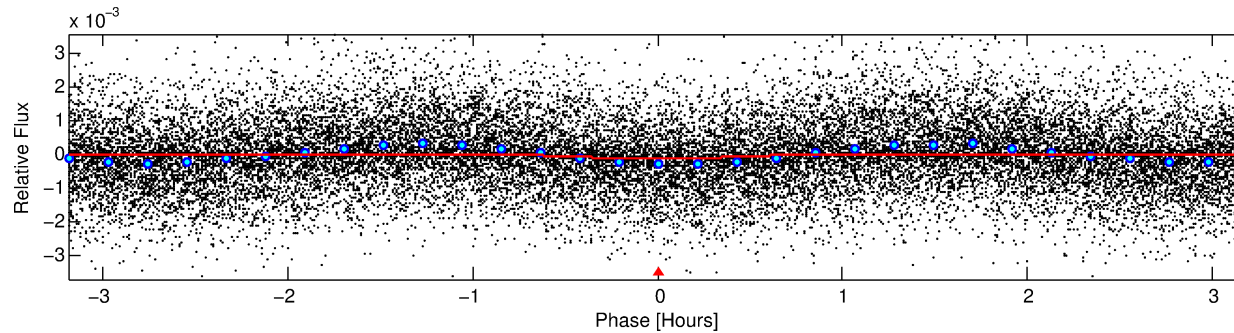
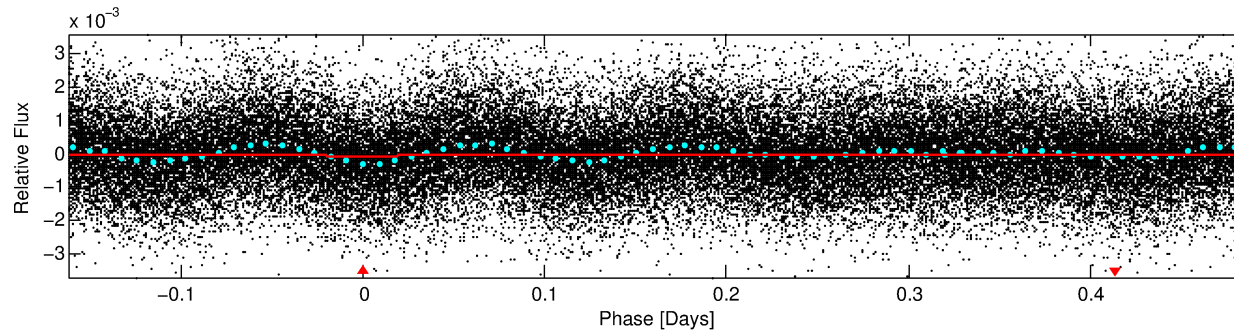
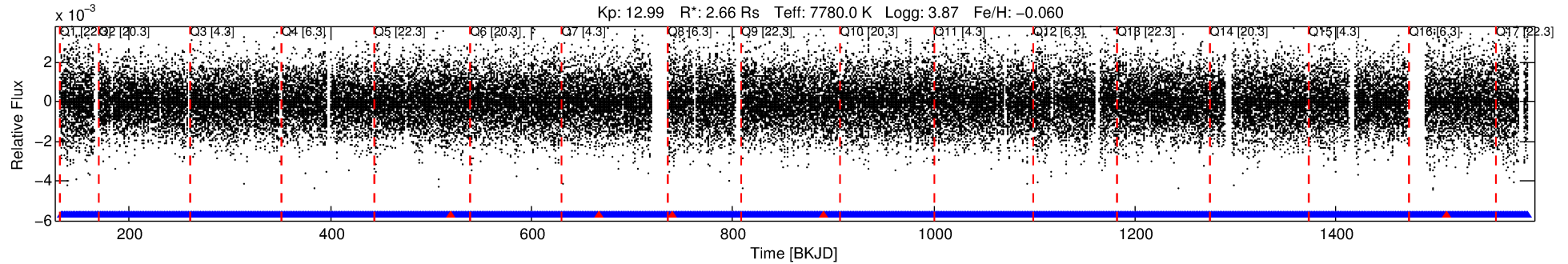
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011822789-01

No Significant Match Found

DV One-Page Summary

KIC: 11822789 Candidate: 1 of 1 Period: 0.648 d



DV Fit Results:

Period = 0.64827 [0.00002] d
Epoch = 132.0792 [0.0020] BKJD
Rp/R* = 0.0103 [0.0038]
a/R* = 3.66 [7.27]
b = 0.66 [1.86]
Seff = 69636.93 [40150.96]
Teq = 4142 [597] K
Rp = 2.99 [1.63] Re
a = 0.0182 [0.0066] AU
Ag = 2.11 [1.99] [0.56σ]
Teffp = 7723 [1503] K [2.21σ]

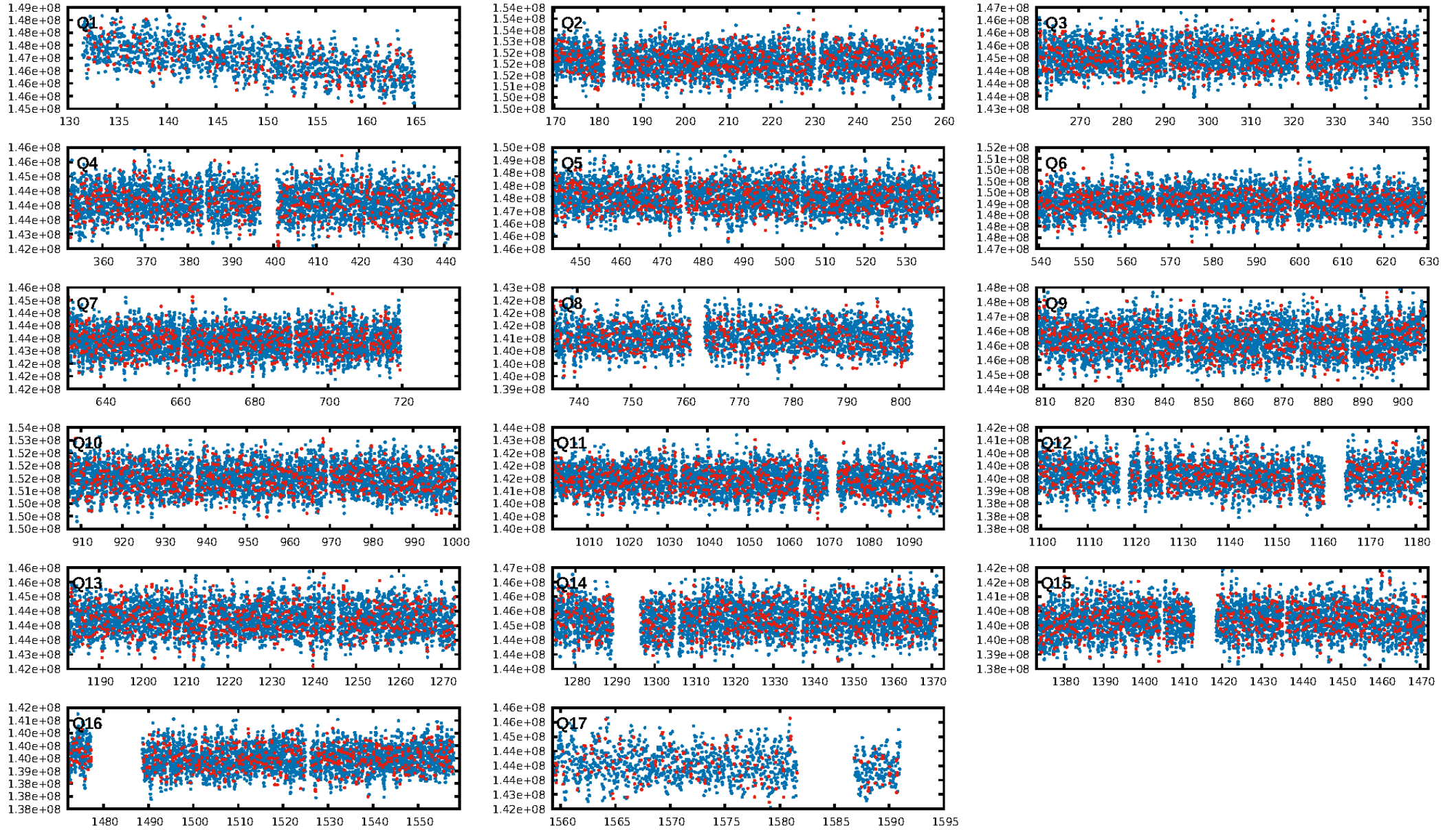
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.98e-22
RollingBand-fgt: 1.00 [1965/1970]
GhostDiagnostic-chr: 0.8072
Centroid-sig: 30.9%
Centroid-so: 0.406 arcsec [1.46σ]
OotOffset-rm: 0.113 arcsec [0.46σ]
KicOffset-rm: 0.176 arcsec [0.45σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.88 [15/17]
DiffImageOverlap-fno: 1.00 [17/17]

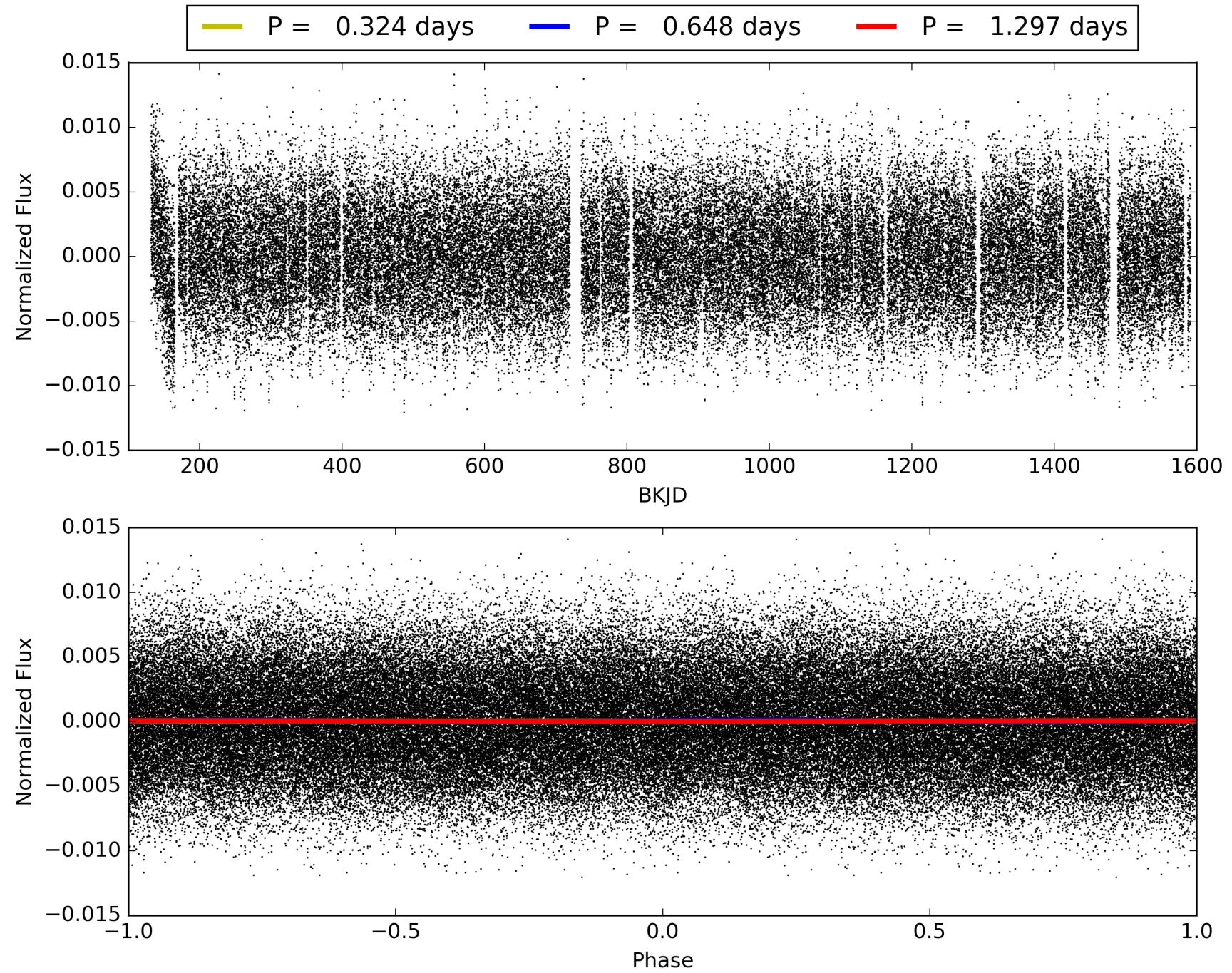
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 04:46:58 Z

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

TCE 011822789-01, PDC Light Curves

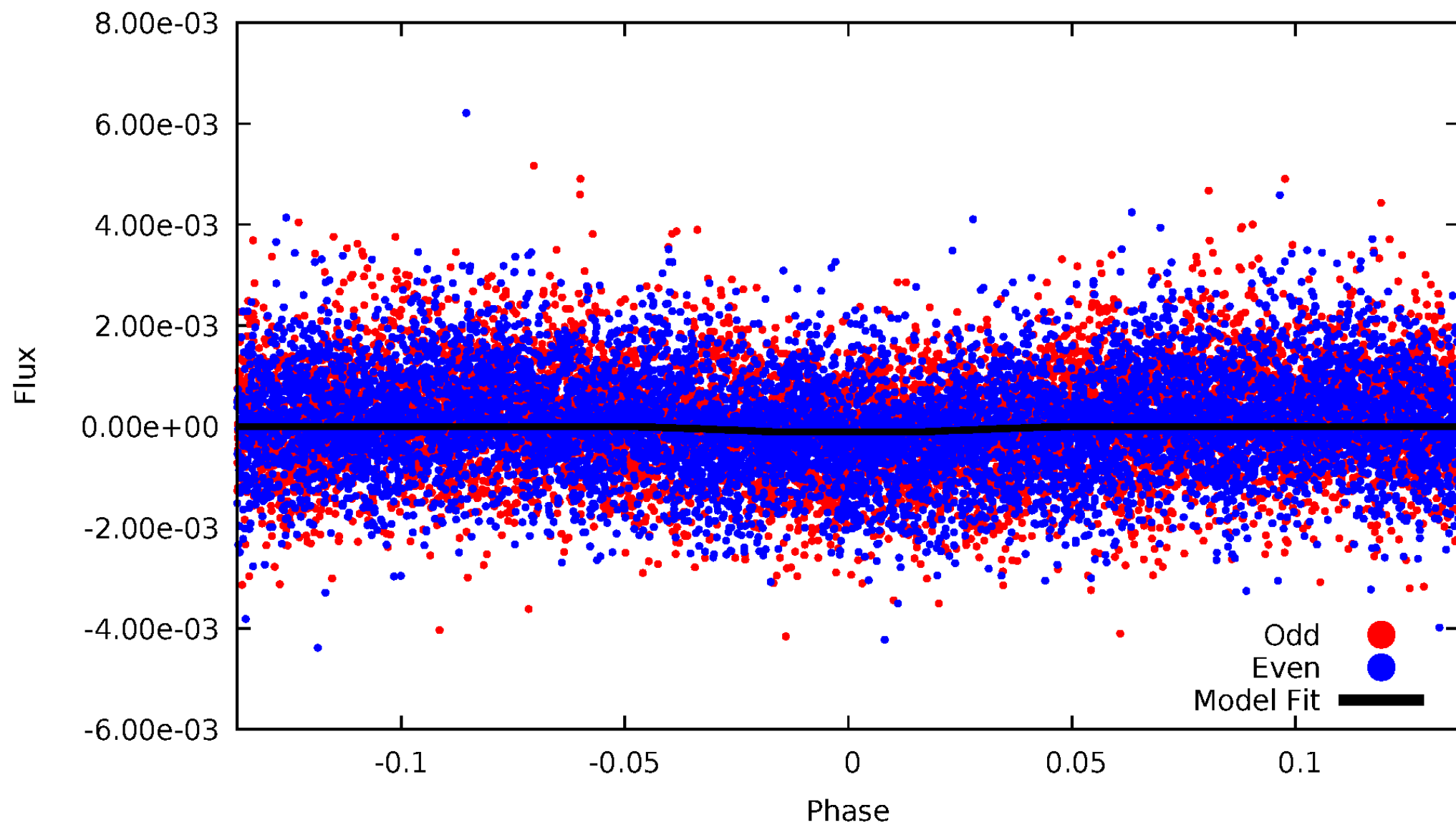


TCE 011822789-01



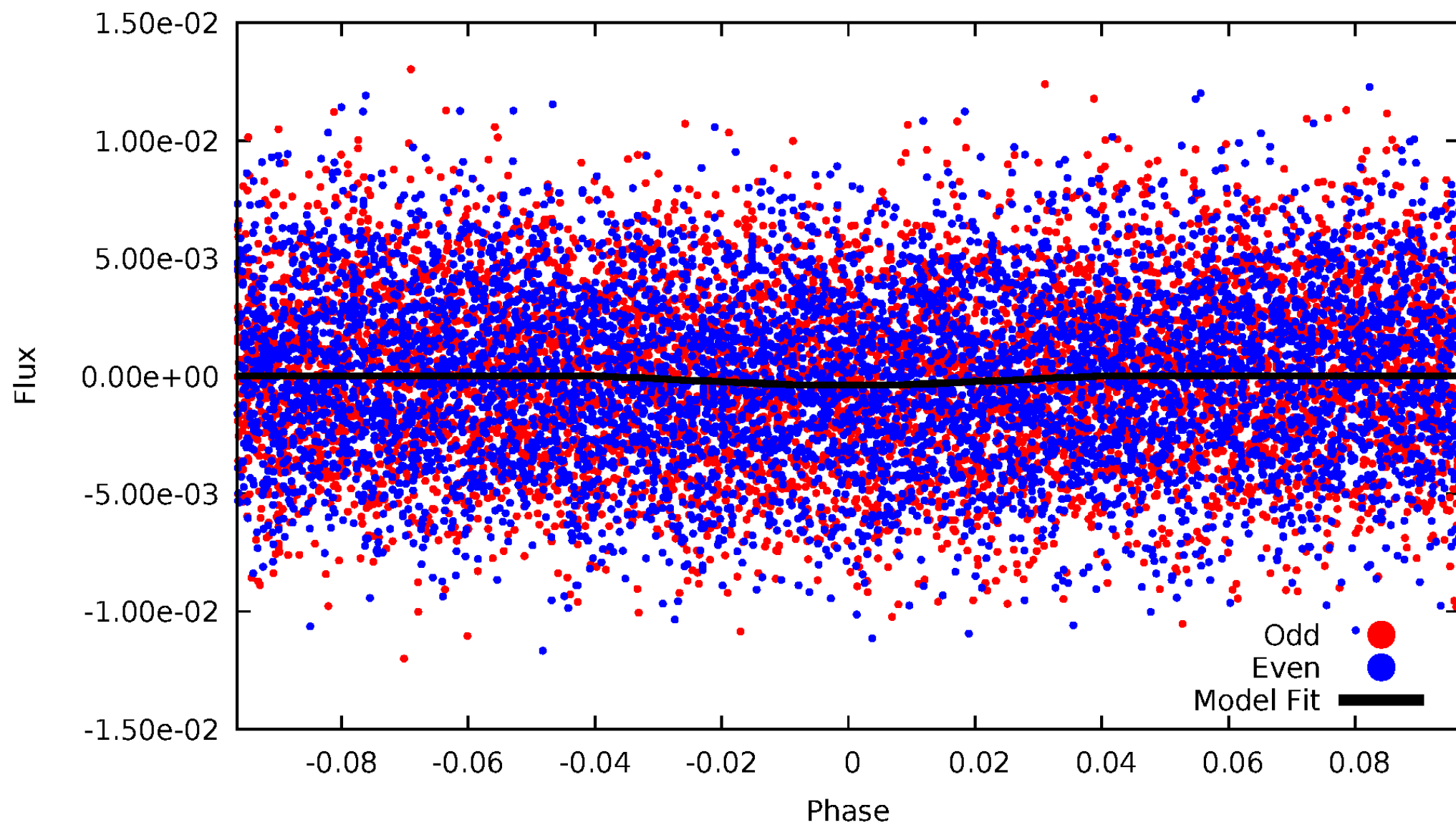
DV Odd/Even

TCE 011822789-01

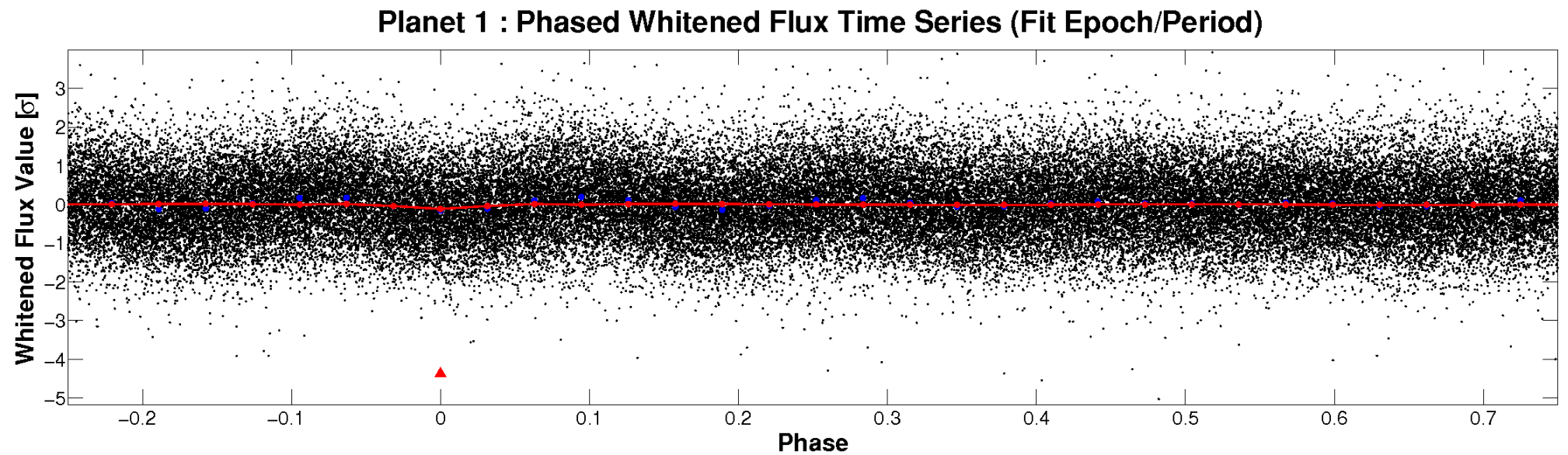
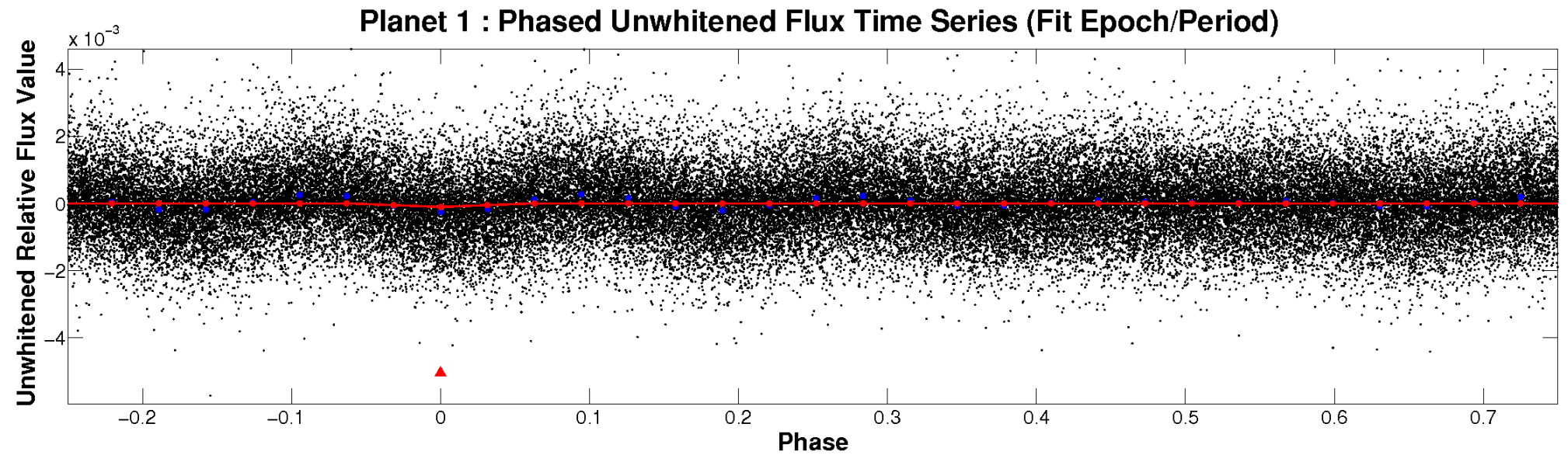


ALT Odd/Even

TCE 011822789-01

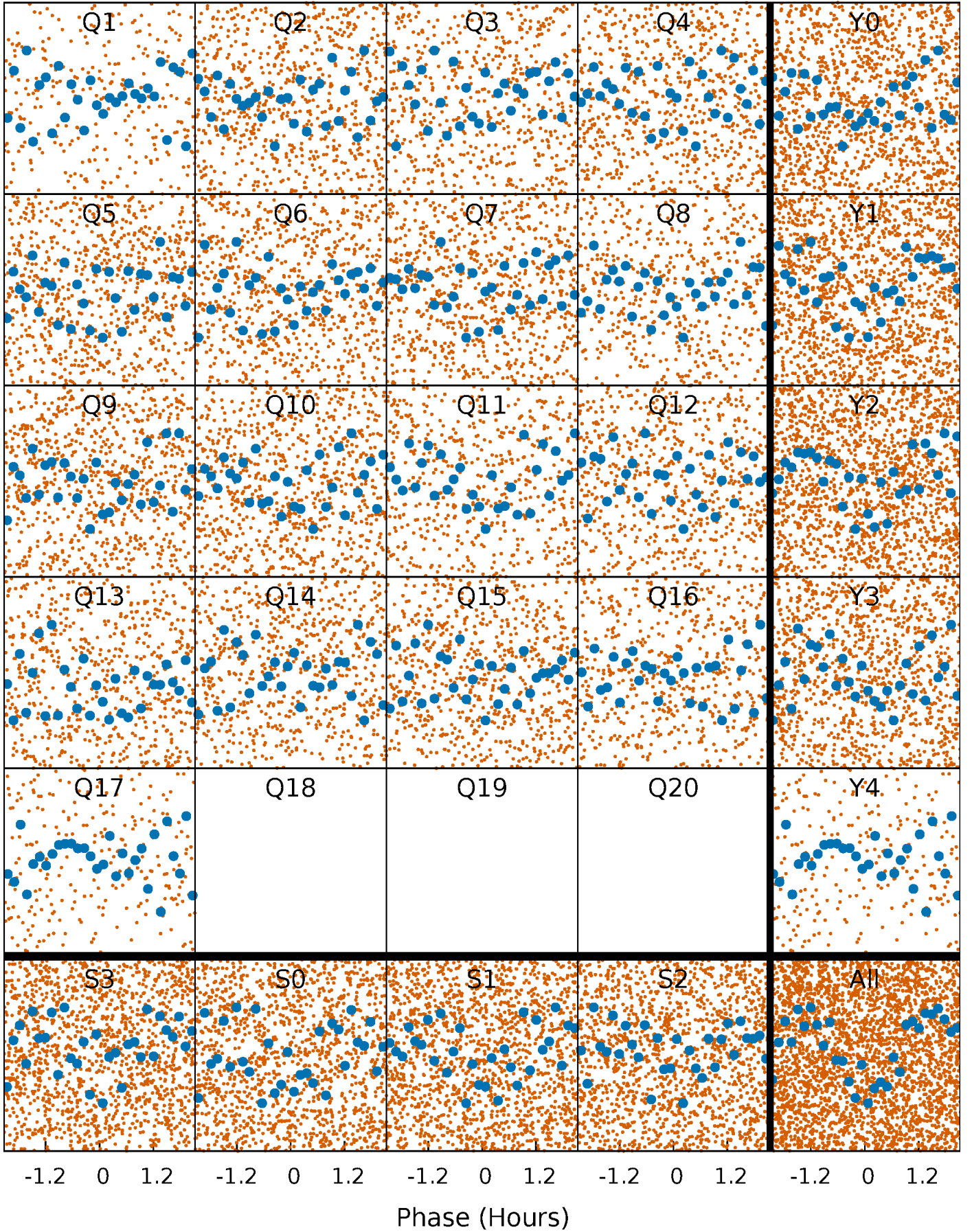


Non-Whitened Vs. Whitened Light Curve



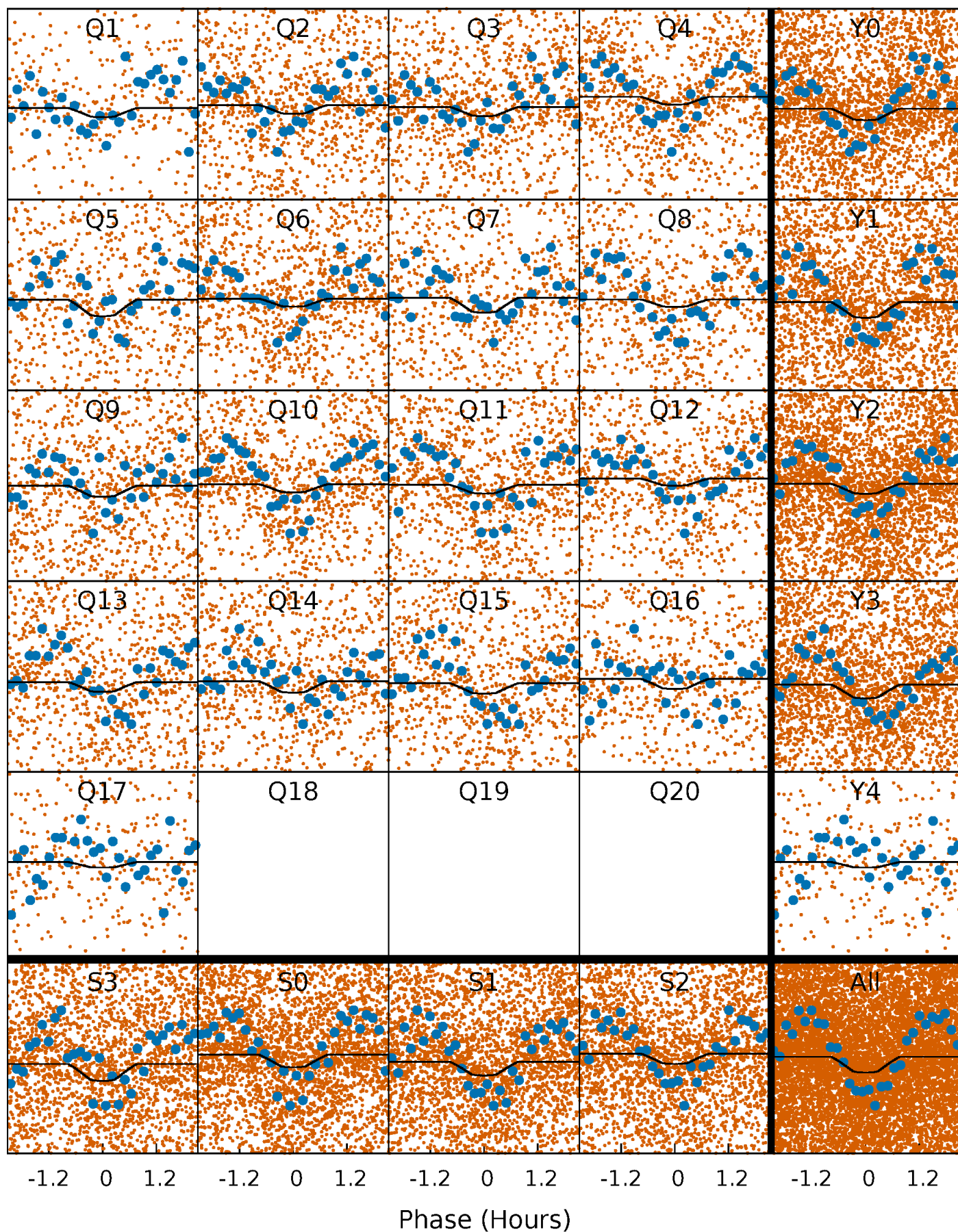
PDC Quarter-Phased Transit Curves

TCE 011822789-01 P= 0.648272 Days $T_0=132.079188$ (BKJD)



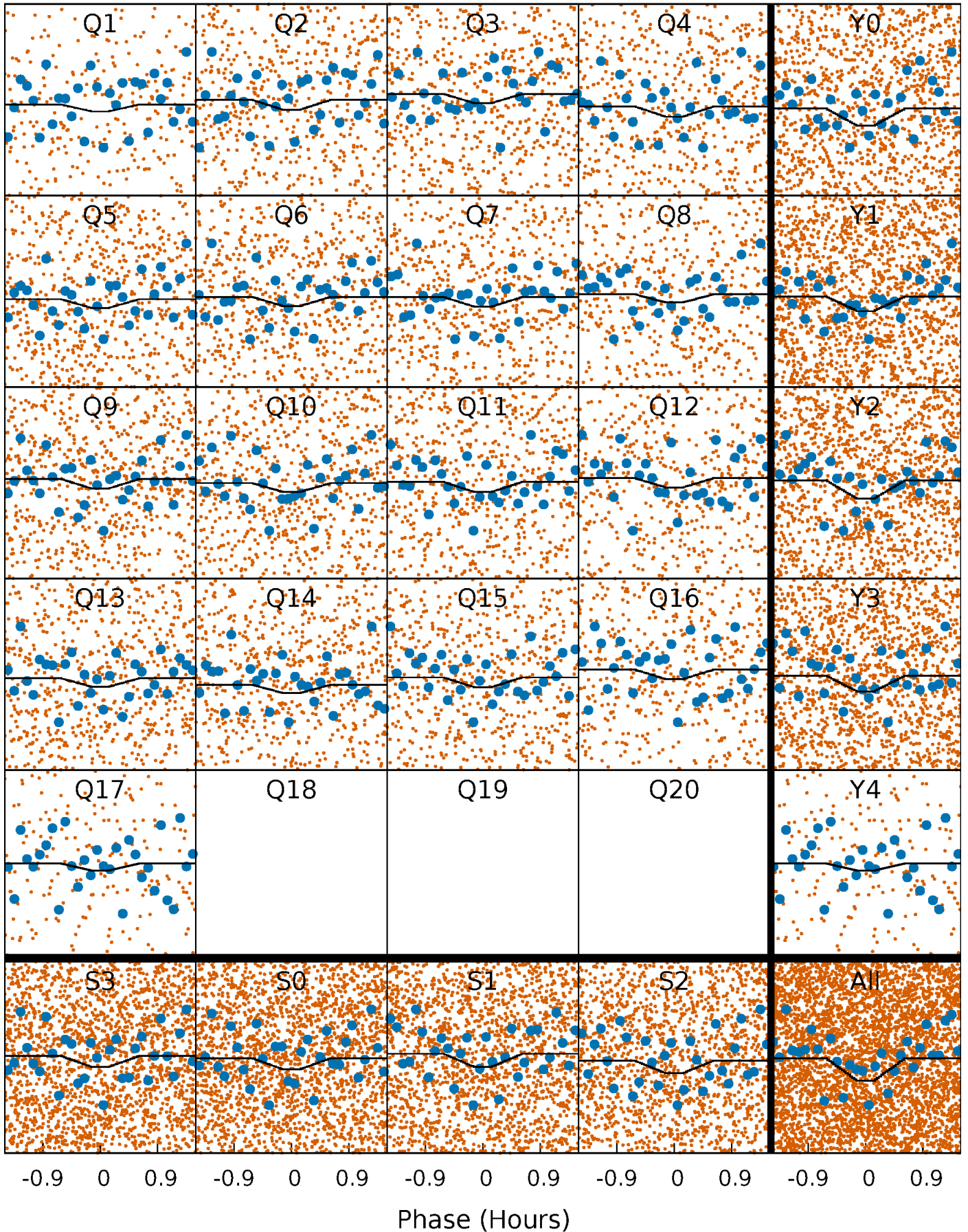
DV Quarter-Phased Transit Curves

TCE 011822789-01 P= 0.648272 Days $T_0=132.079188$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

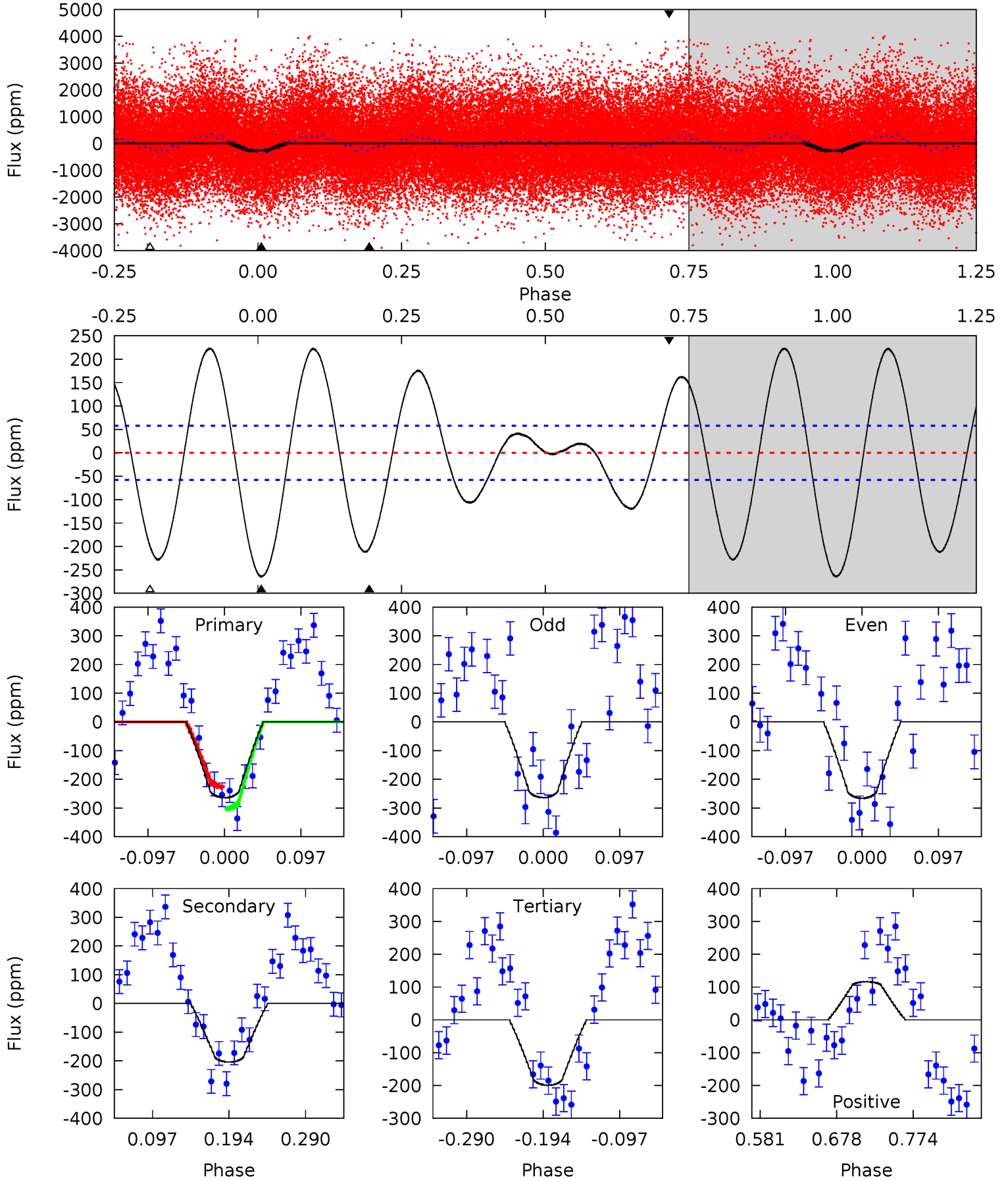
TCE 011822789-01 P= 0.648277 Days $T_0=132.077893$ (BKJD)



DV Model-Shift Uniqueness Test

011822789-01, P = 0.648272 Days, E = 131.430916 Days

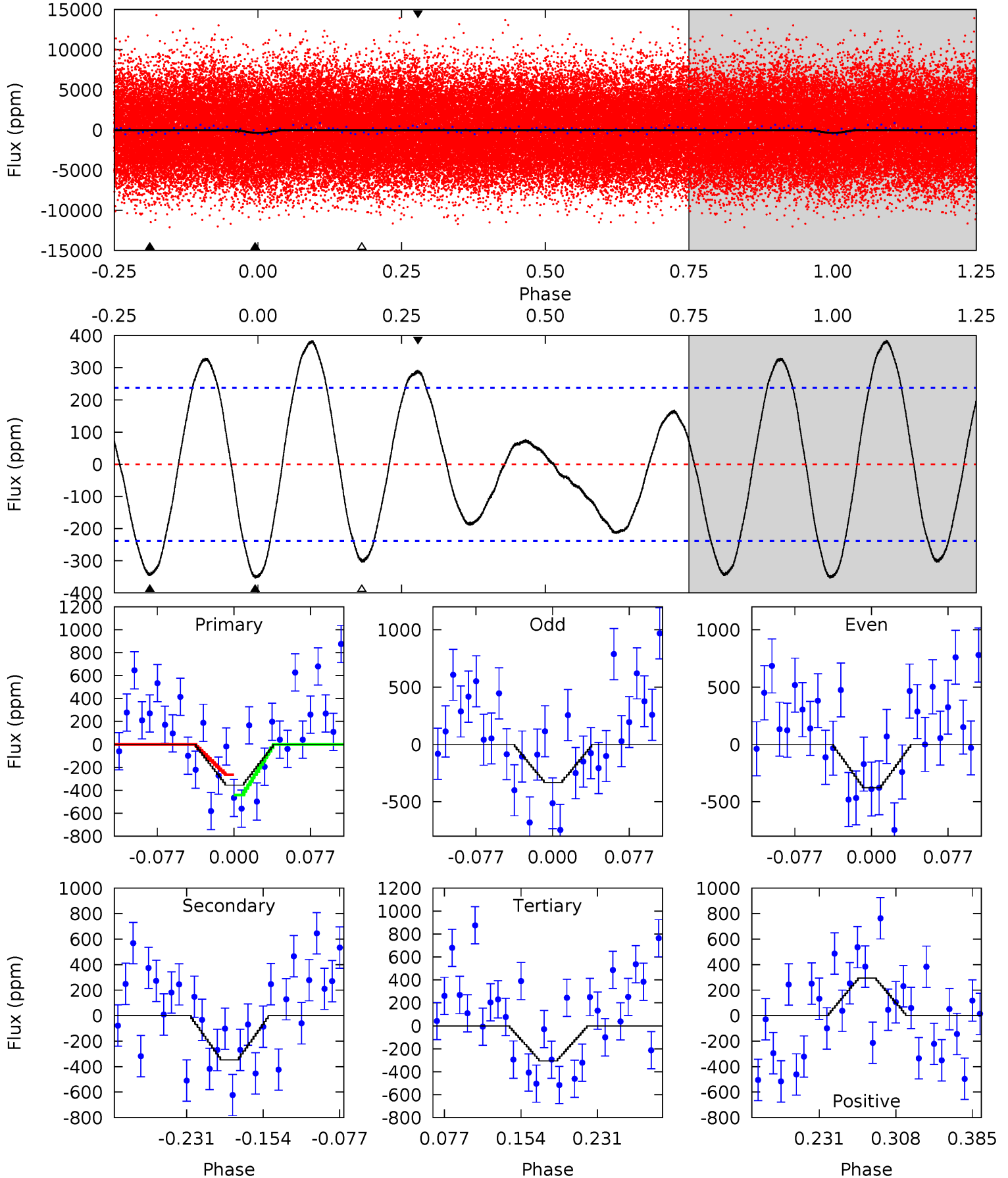
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.9	16.1	15.7	9.18	4.57	1.66	7.68	5.14	11.7	0.39	6.94	0.10	1.16	0.46	3.07



Alt Model-Shift Uniqueness Test

011822789-01, P = 0.648277 Days, E = 131.429616 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.89	6.73	5.92	5.70	4.62	1.77	3.45	0.96	1.19	0.81	1.03	0.45	0.87	0.52	1.72



Stellar Parameters For KIC 011822789

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7780^{+214}_{-322}	$3.874^{+0.315}_{-0.105}$	$-0.060^{+0.200}_{-0.350}$	$2.658^{+0.426}_{-1.064}$	$1.926^{+0.082}_{-0.439}$	$0.144^{+0.322}_{-0.047}$
	+3%/-4%	+8%/-3%	+333%/-583%	+16%/-40%	+4%/-23%	+223%/-32%
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 011822789-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-204 ± 13	$2.71^{+1.26}_{-1.05}$	5689^{+379}_{-558}	9335^{+4511}_{-1889}	$4.894^{+7.904}_{-2.585}$
Alt.	-347 ± 52	$5.35^{+1.31}_{-1.26}$	5681^{+363}_{-566}	7191^{+1113}_{-898}	$2.219^{+1.497}_{-0.854}$

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 $A_{obs} \gg 1.0$

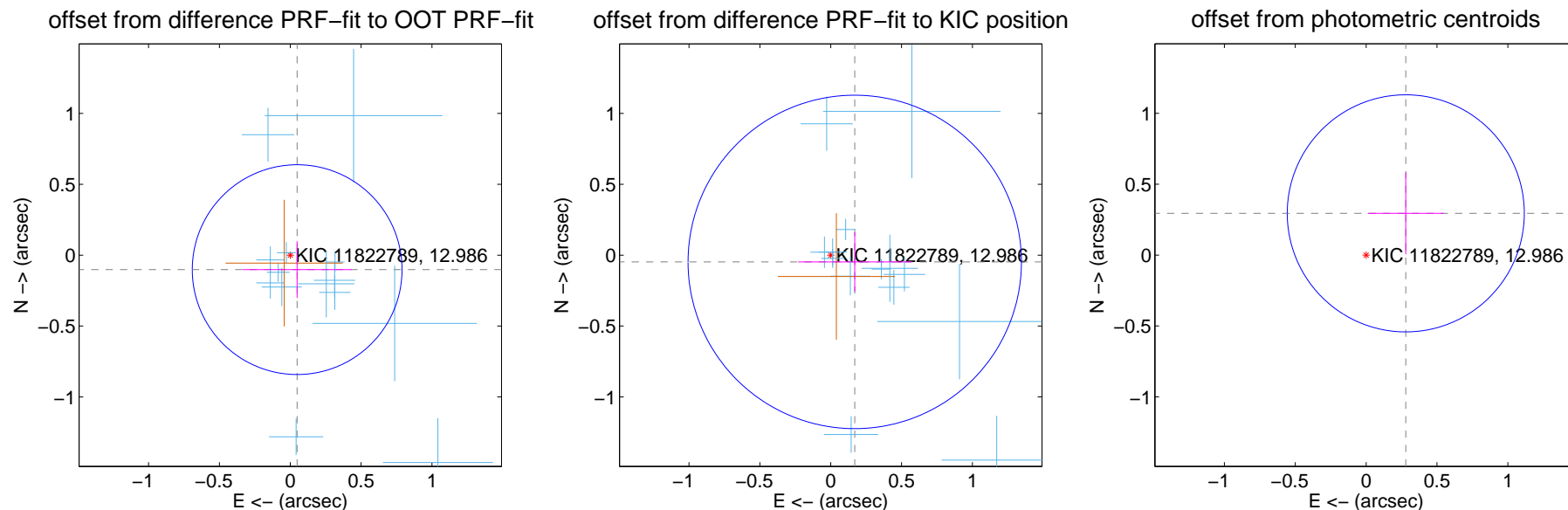
DV Centroid Data

Supplemental centroid analysis for 011822789-01. Kepler magnitude: 12.99. Transit SNR 6.37

There are 15 quarters with good PRF difference image offsets

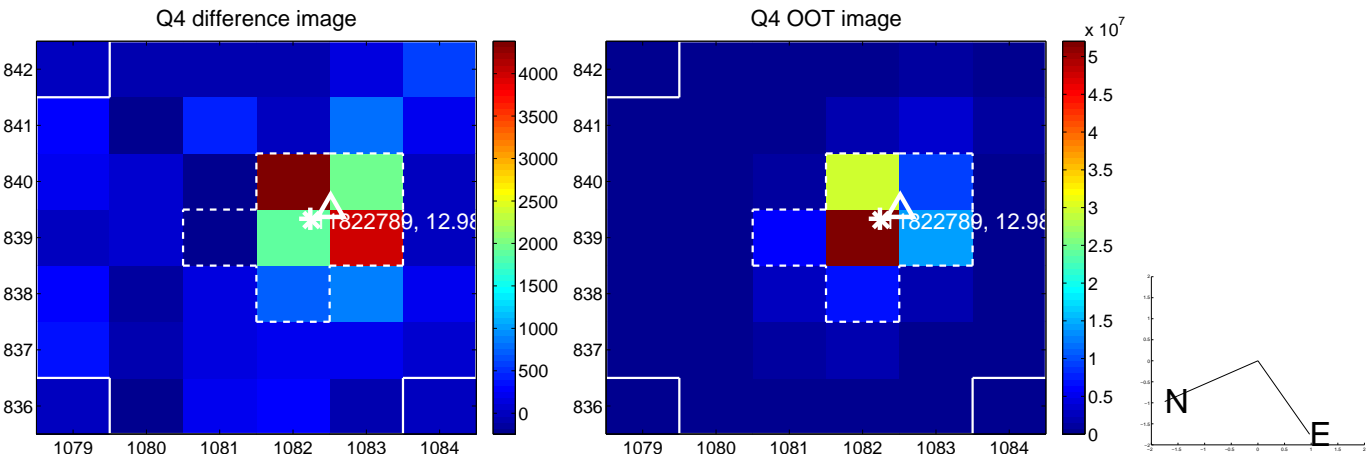
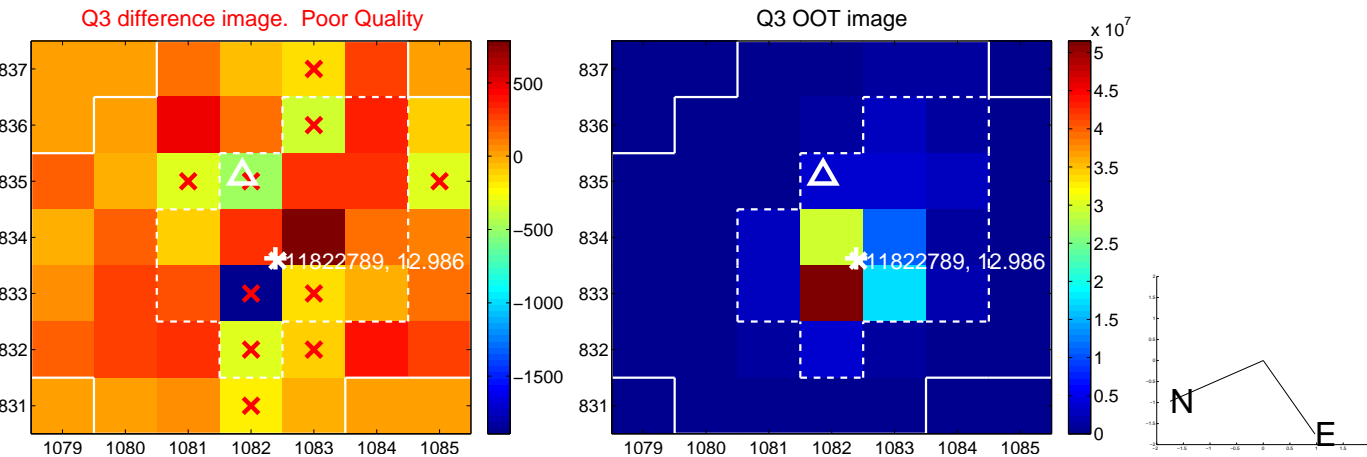
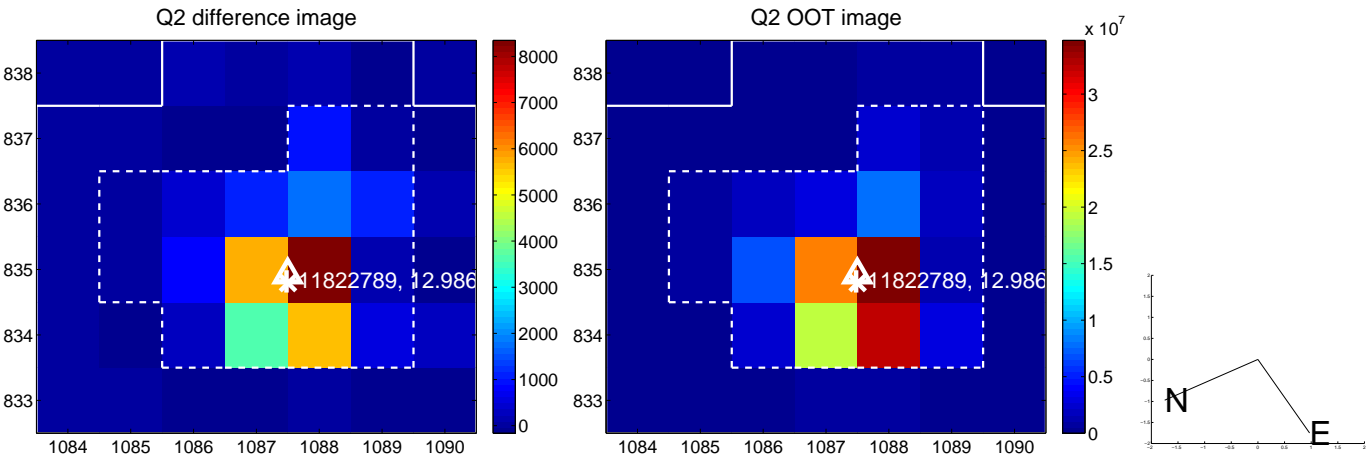
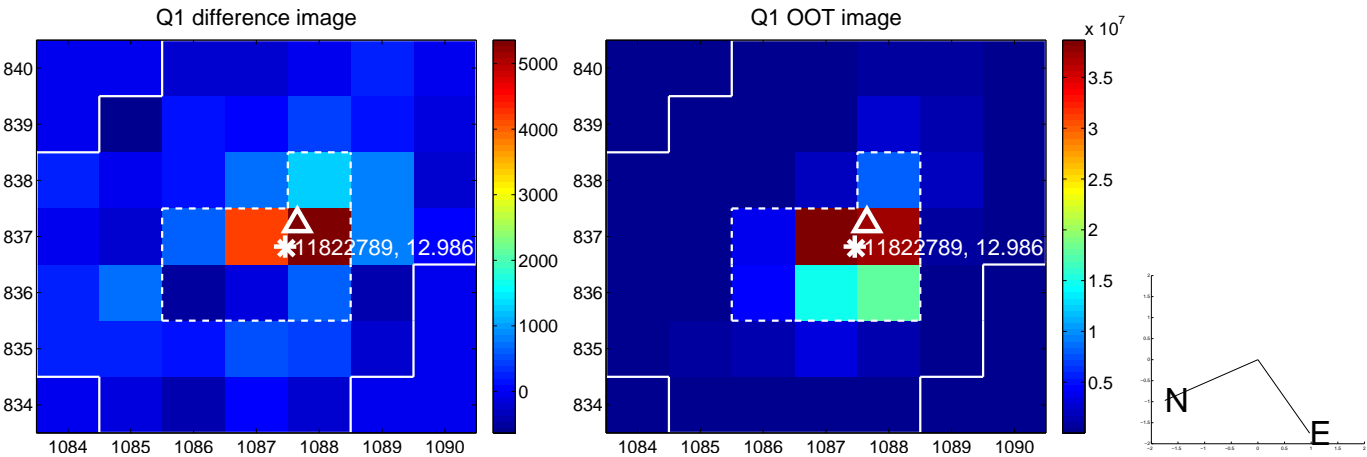
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.113 ± 0.247	0.46	-0.049 ± 0.384	-0.102 ± 0.200
PRF-fit source offset from KIC position	0.176 ± 0.392	0.45	-0.169 ± 0.399	-0.048 ± 0.209
photometric centroid source offset	0.41 ± 0.28	1.46	-0.28 ± 0.27	0.29 ± 0.29

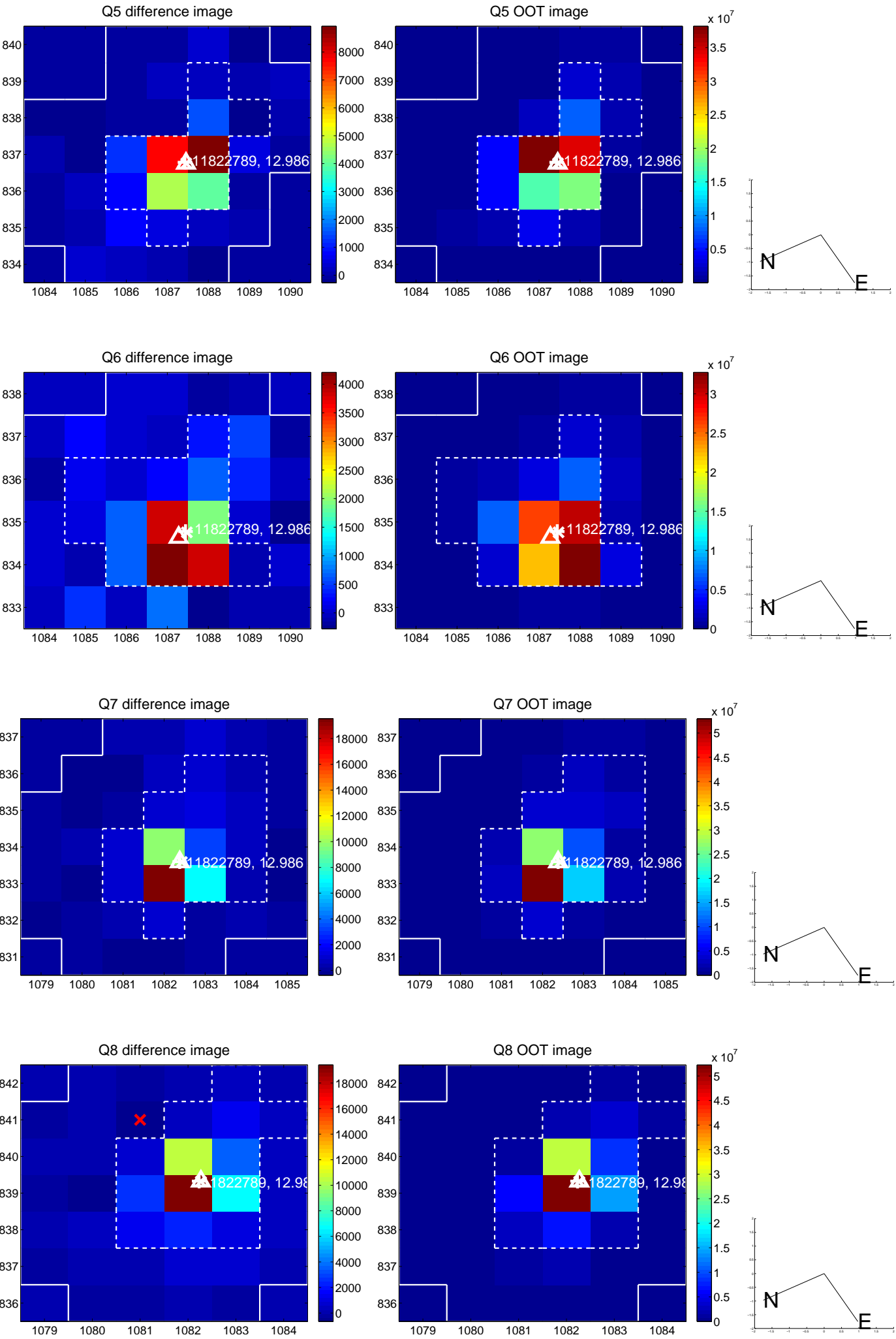


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

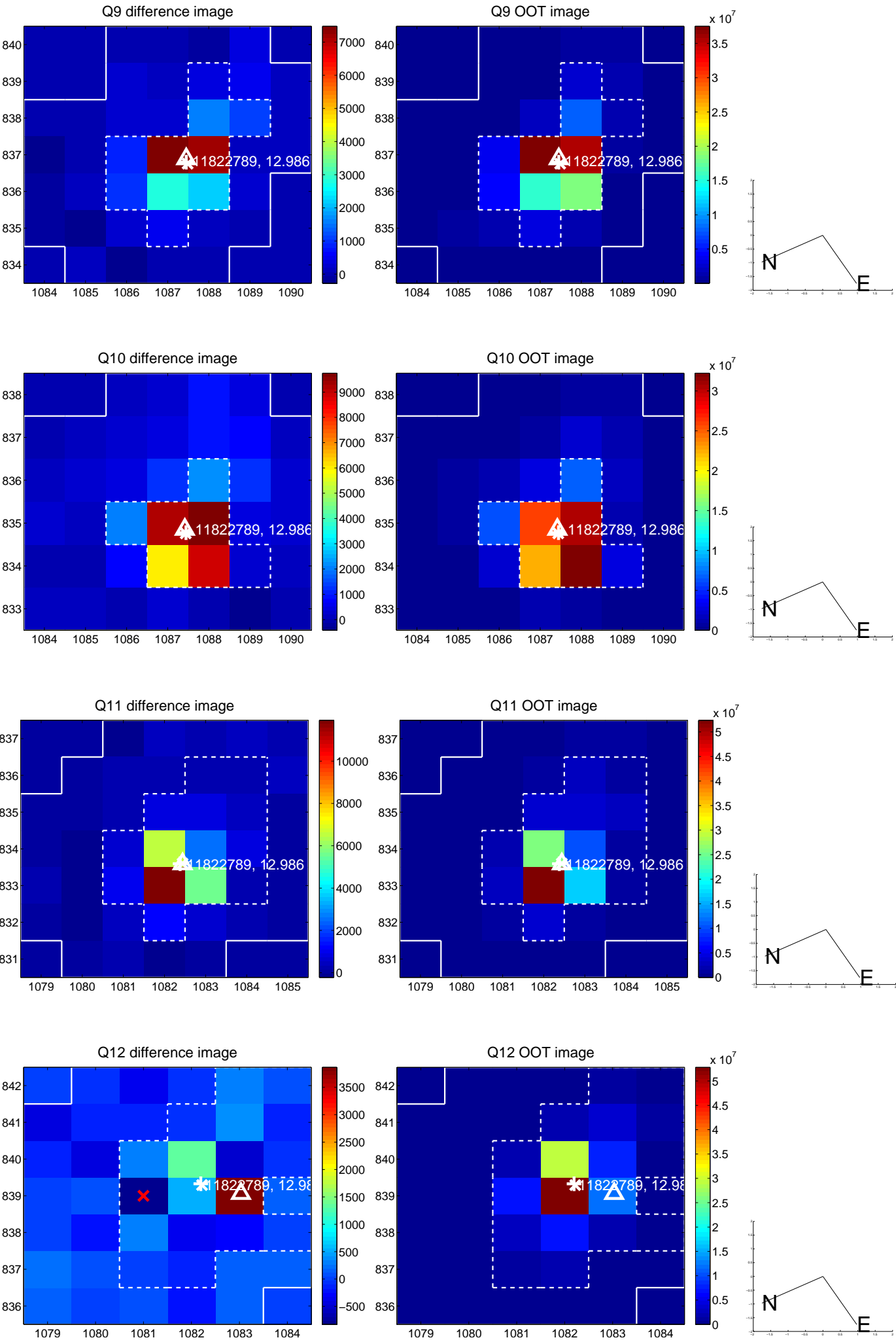
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



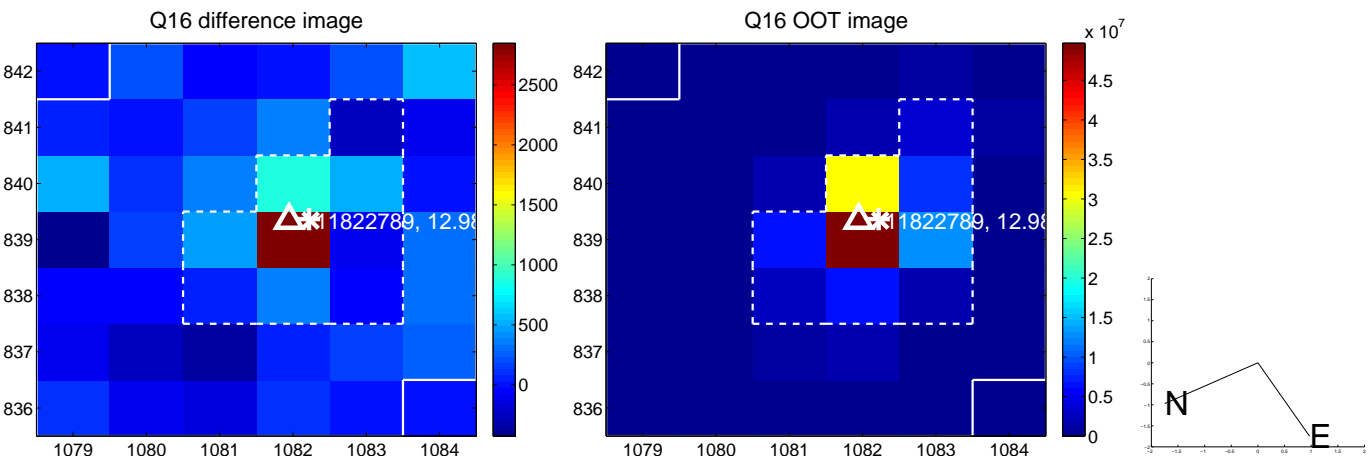
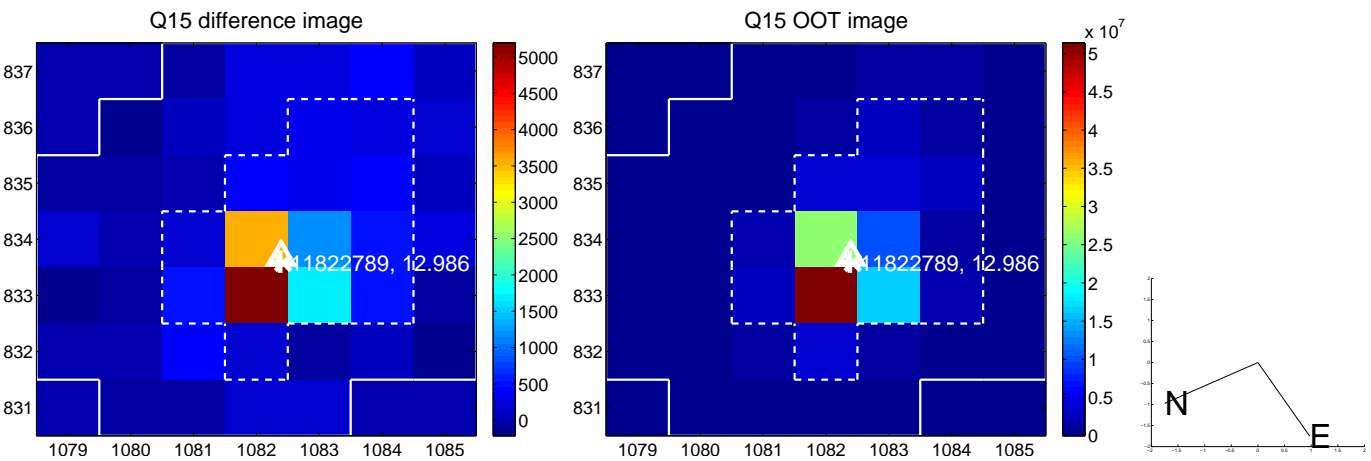
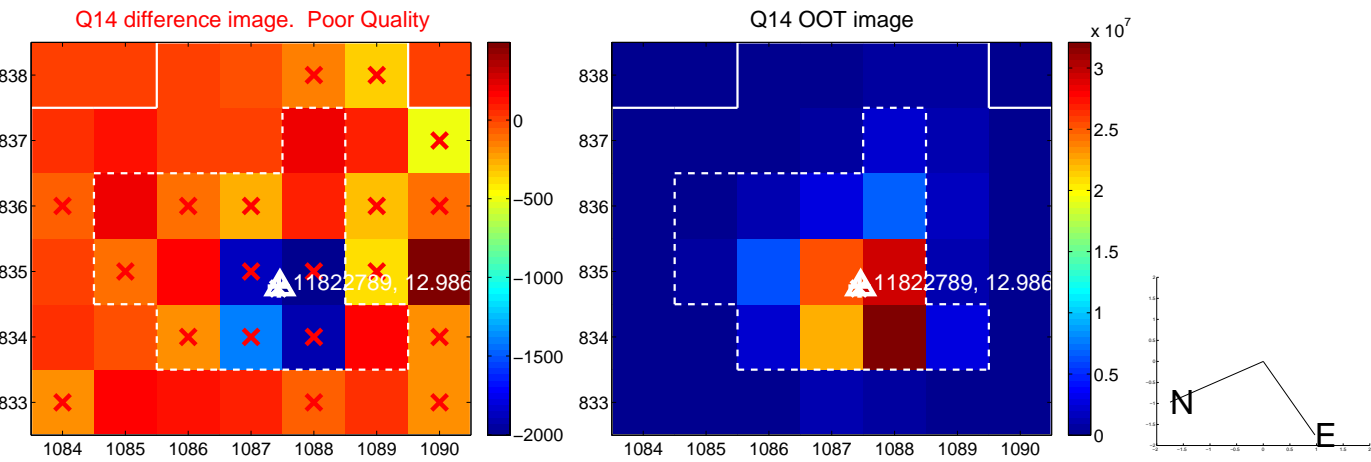
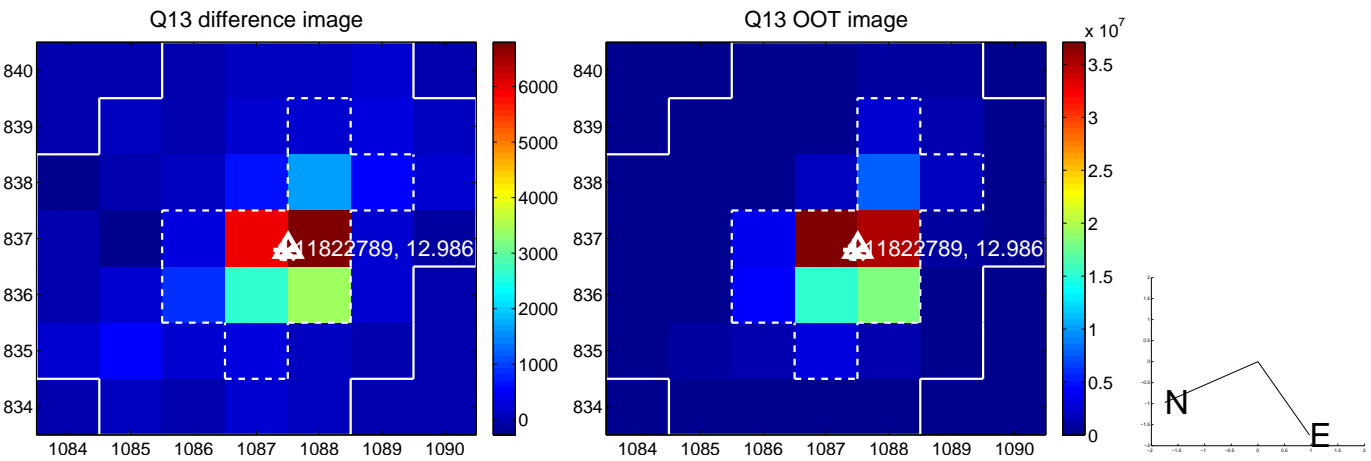
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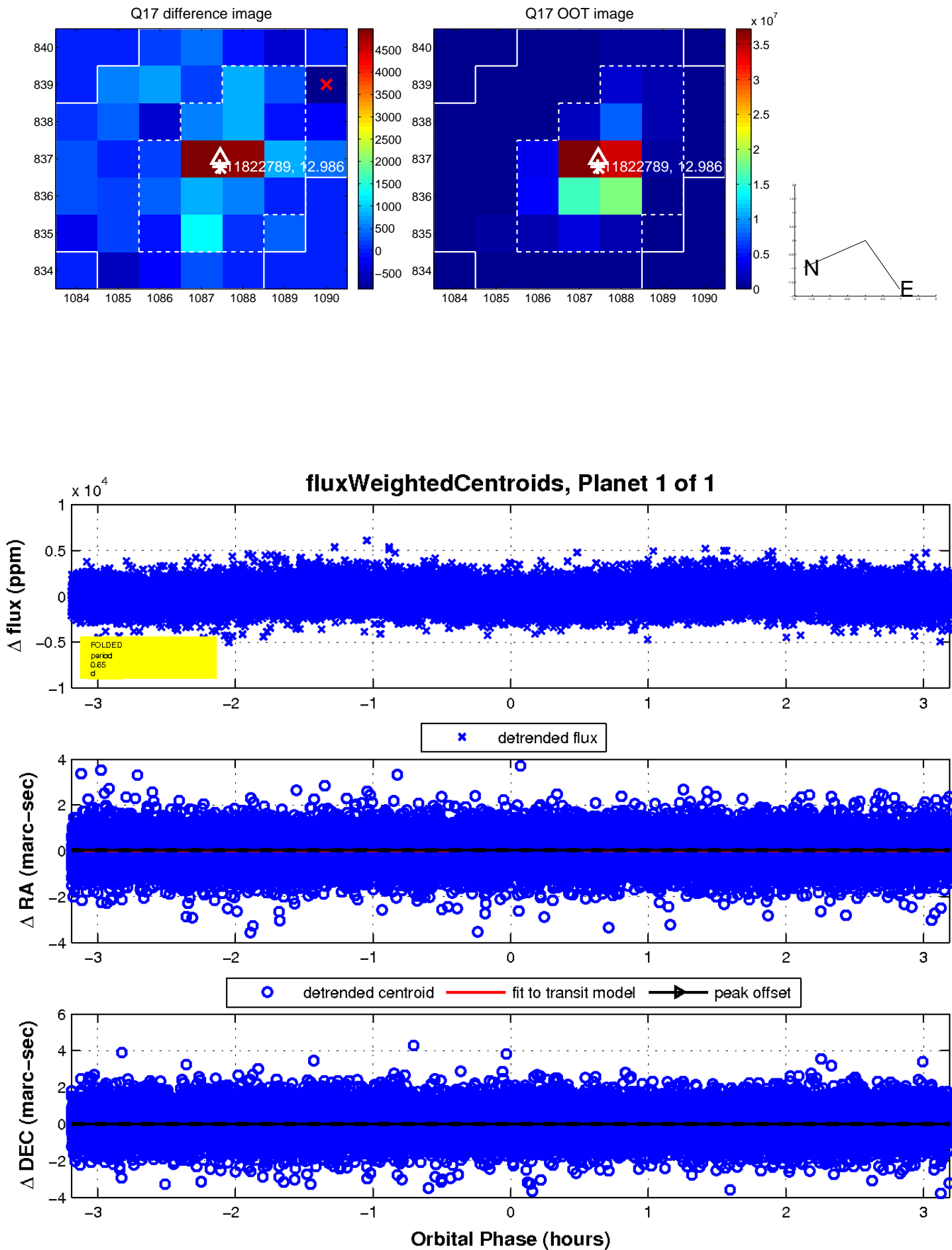
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UKIRT Image

Declination

