

KIC 007031992

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R _★ (R _☉)	T _★ (K)	R _p (R _⊕)	S _p (S _⊕)
007031992-01	OBS	6808.01	0.566760	131.843957	27.6	3.601	10.2	5.8	0.85	5812	0.48	4301.61

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007031992-01	OBS	FP	0.00	1	0	1	1	LPP_DV—HALO_GHOST—EPHEM_MATCH

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.

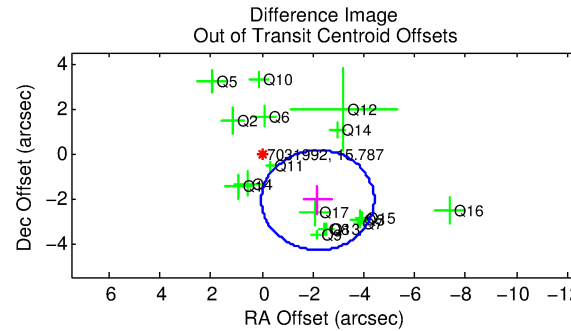
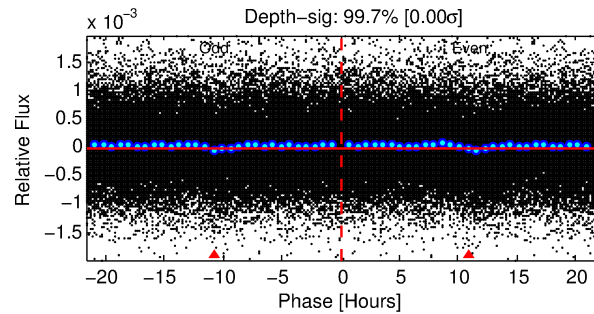
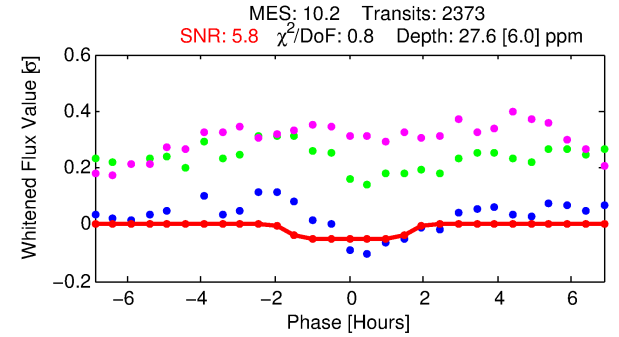
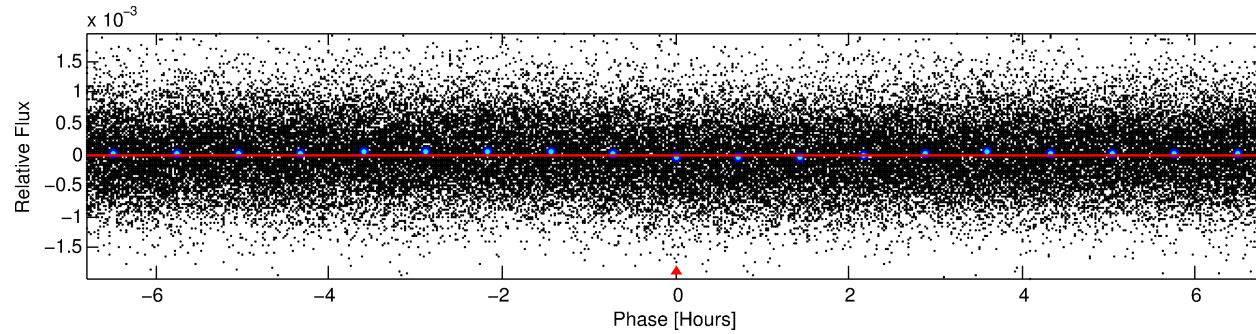
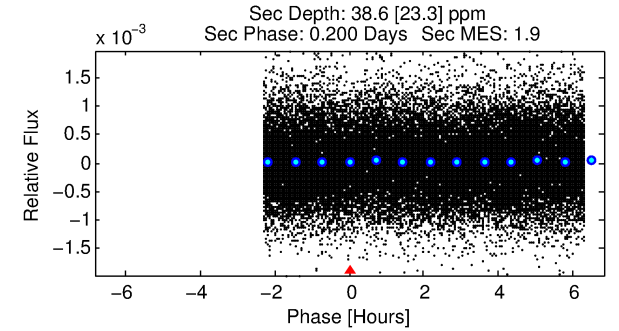
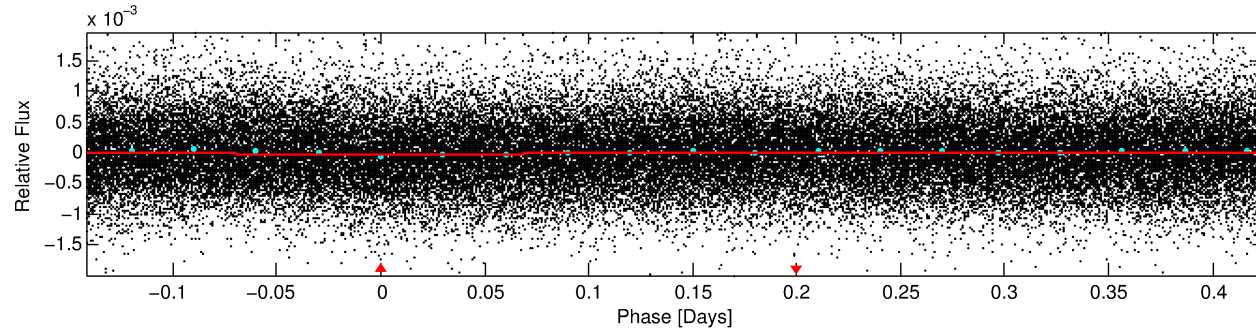
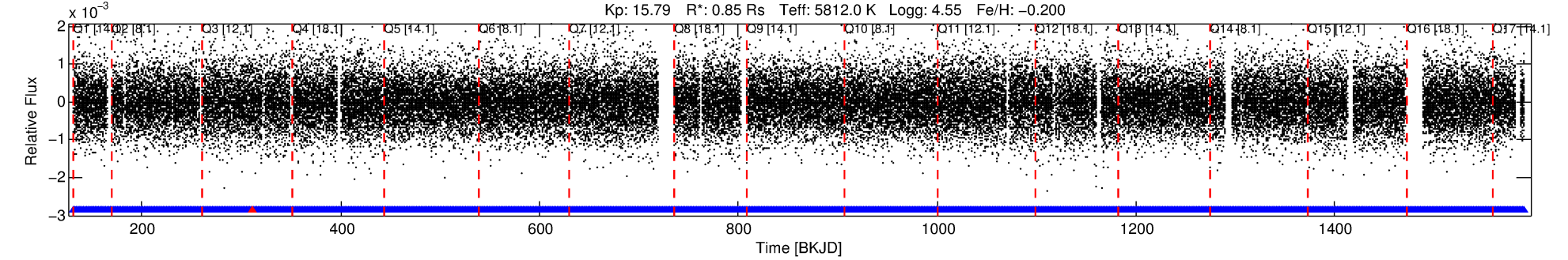
Ephemeris Match Information For 007031992-01

TCE (1)	KIC	Parent (2)	Parent KIC	P ₁ :P ₂	Dist (″)	ΔRow	ΔCol	m ₂	m ₁	D ₂ /D ₁	Mechanism	Flag	σ _P	σ _T
007031992-01	7031992	RR-Lyr-pri	7198959	1:1	727.3	113	-144	7.86	15.79	22261.00	Direct-PRF	0	2.38	23.81

Notes: P₁:P₂ is the period ratio. Dist is the distance in arcseconds. ΔRow and ΔCol are the number of pixels apart in row and column. m₂ and m₁ are the magnitudes of the parent and child. D₂/D₁ is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant σ_P < 5.0 and σ_T < 5.0. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 7031992 Candidate: 1 of 1 Period: 0.567 d
KOI: K06808.01 Corr: 0.787



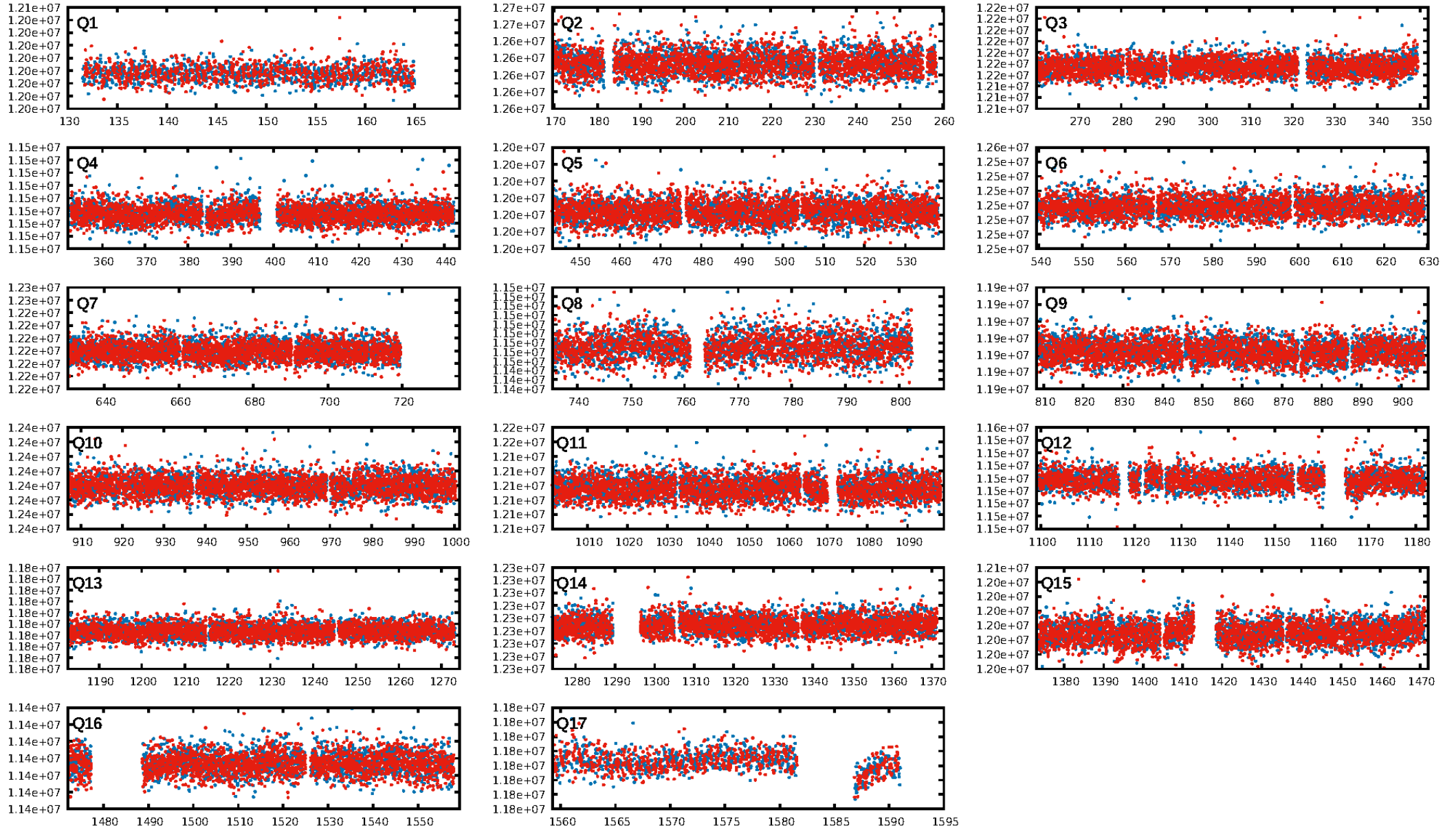
DV Fit Results:

Period = 0.56676 [0.00002] d
Epoch = 131.8440 [0.0076] BKJD
Rp/R* = 0.0052 [0.0072]
a/R* = 1.20 [2.33]
b = 0.71 [4.66]
Seff = 4301.61 [1567.76]
Teff = 2065 [188] K
Rp = 0.48 [0.69] Re
a = 0.0132 [0.0031] AU
Ag = 15.93 [46.00] [0.32 σ]
Teffp = 6379 [4577] K [0.94 σ]

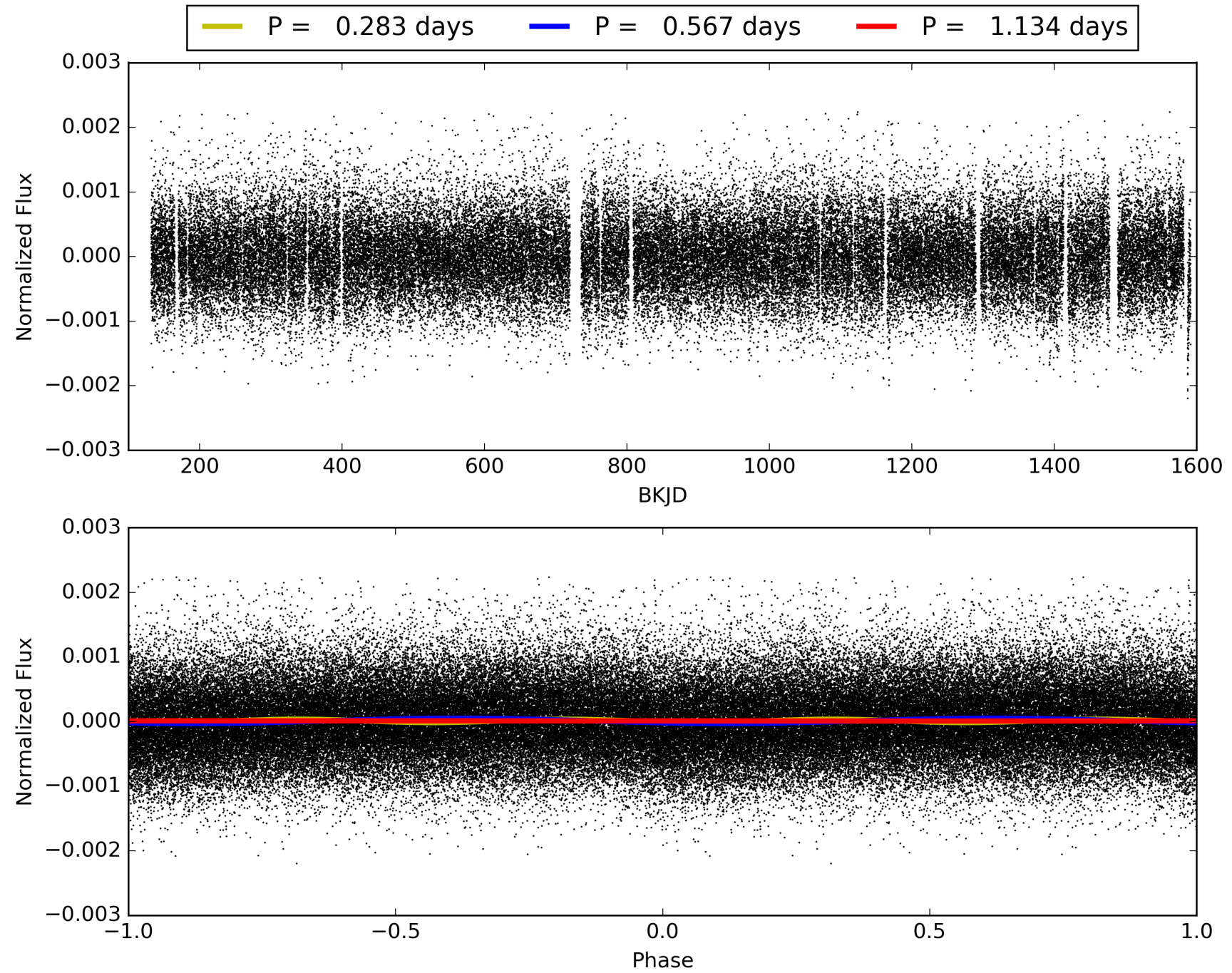
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.12e-17
RollingBand-fgt: 1.00 [2266/2267]
GhostDiagnostic-chr: 0.003993
Centroid-sig: 3.4%
Centroid-so: 5.076 arcsec [2.02 σ]
OotOffset-rm: 3.031 arcsec [4.10 σ]
KicOffset-rm: 3.052 arcsec [4.09 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.00 [0/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 007031992-01, PDC Light Curves

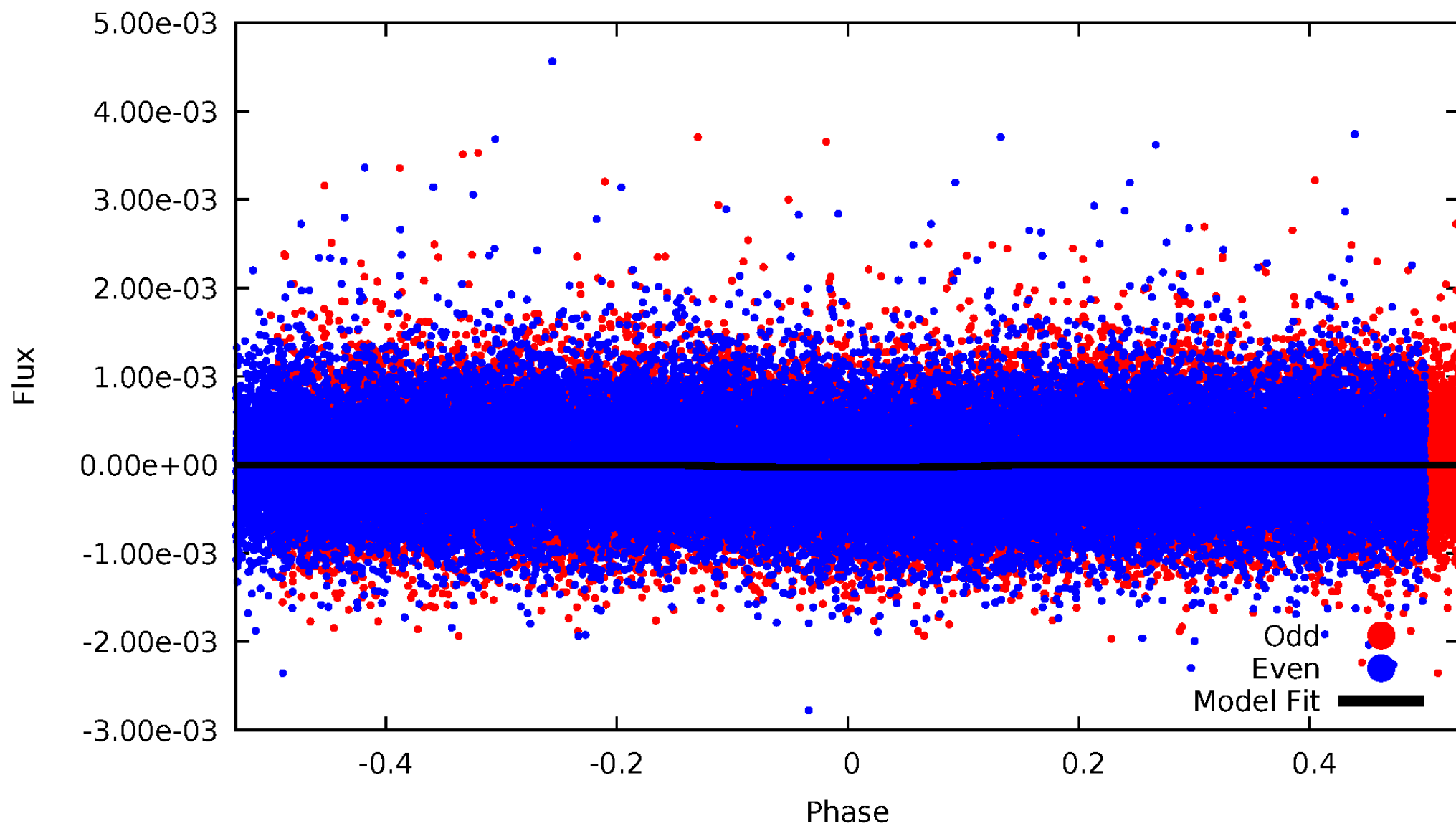


TCE 007031992-01



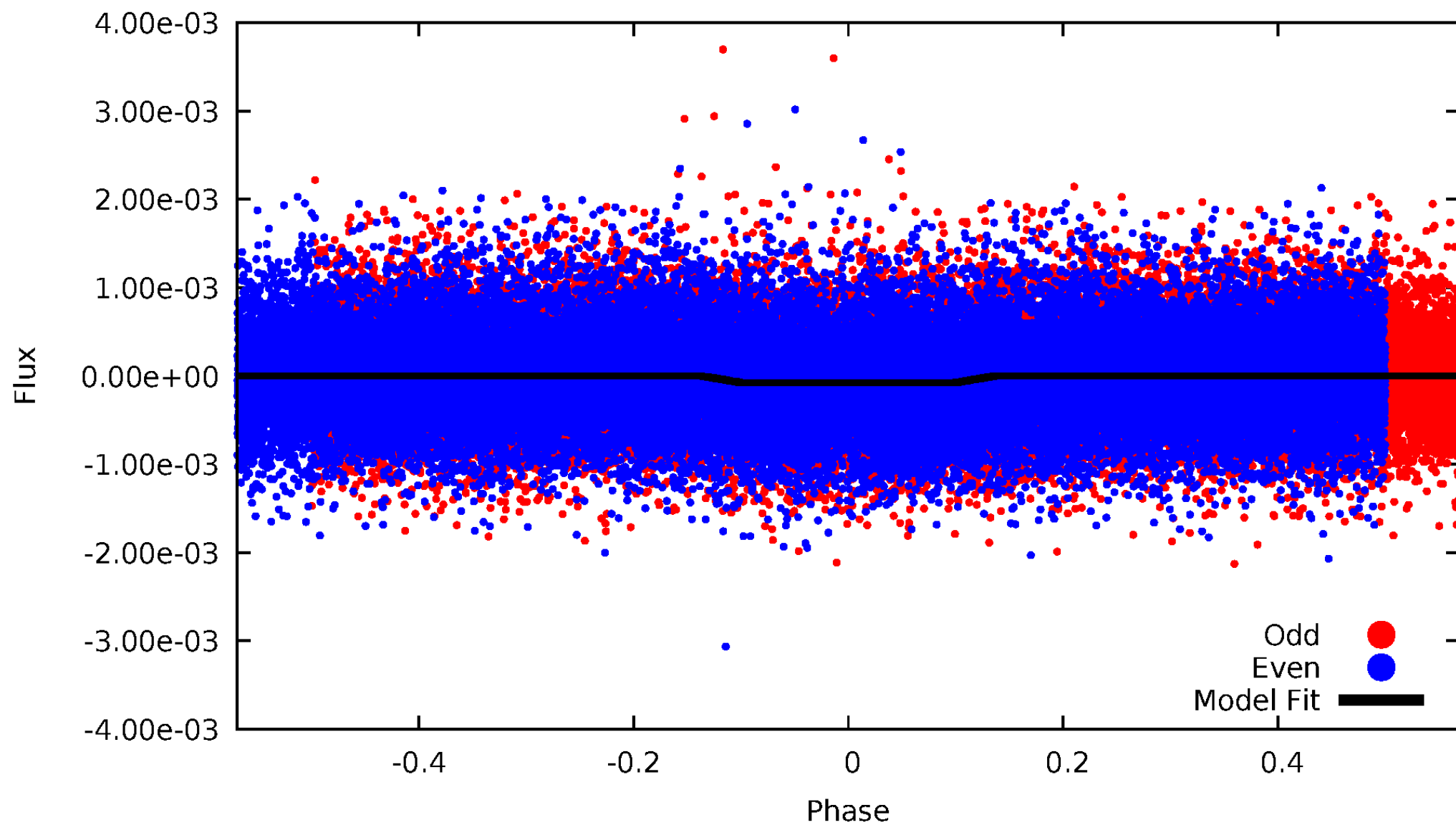
DV Odd/Even

TCE 007031992-01

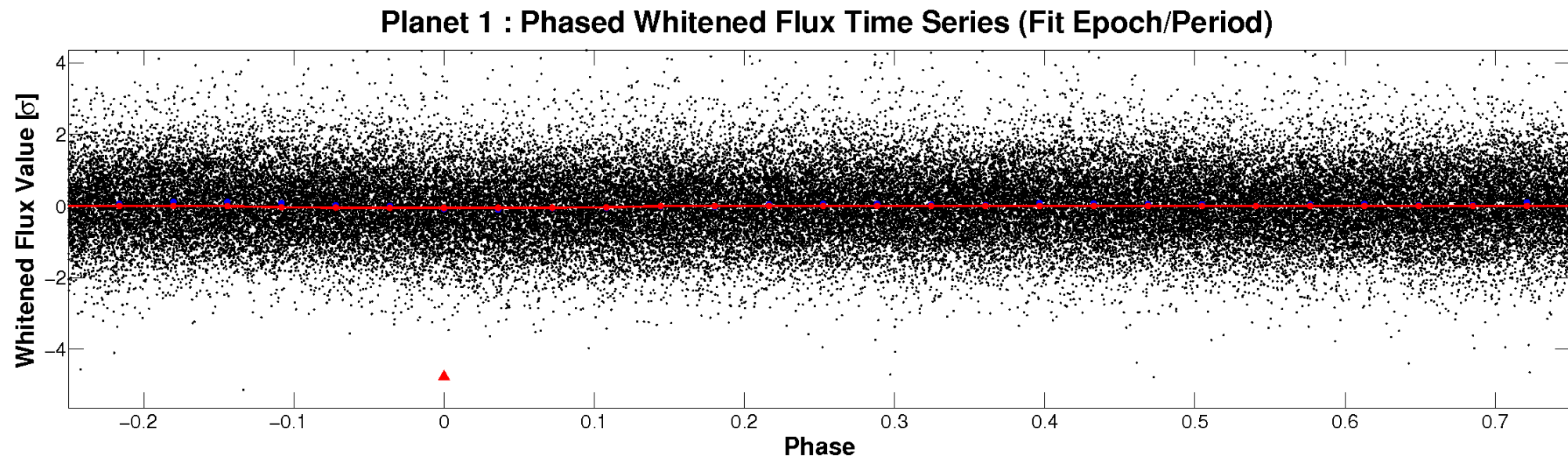
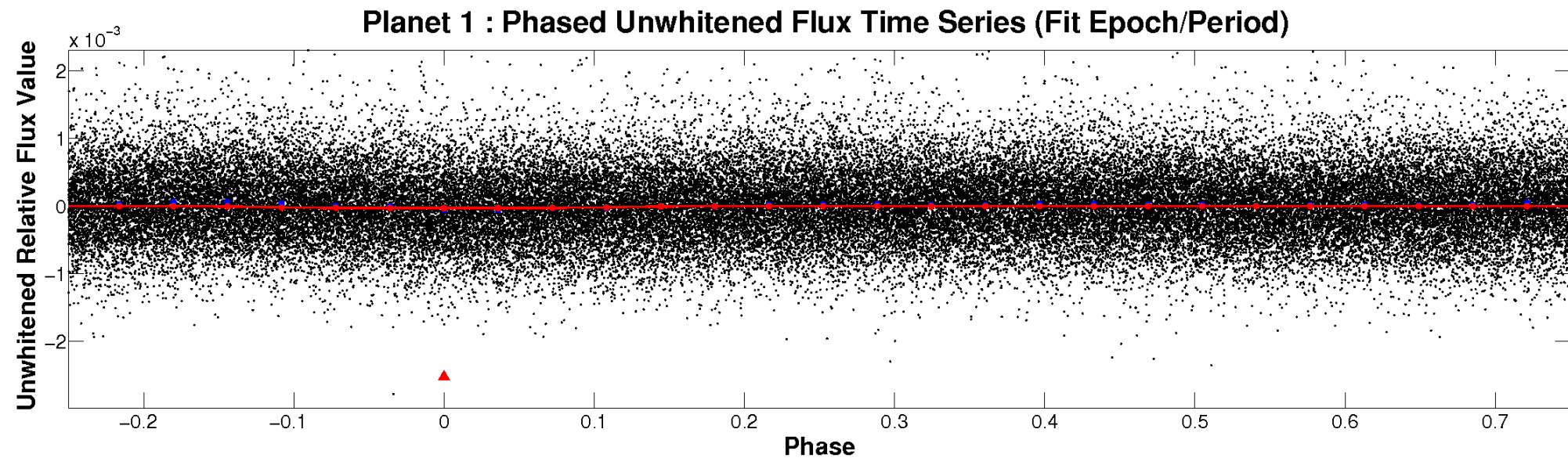


ALT Odd/Even

TCE 007031992-01

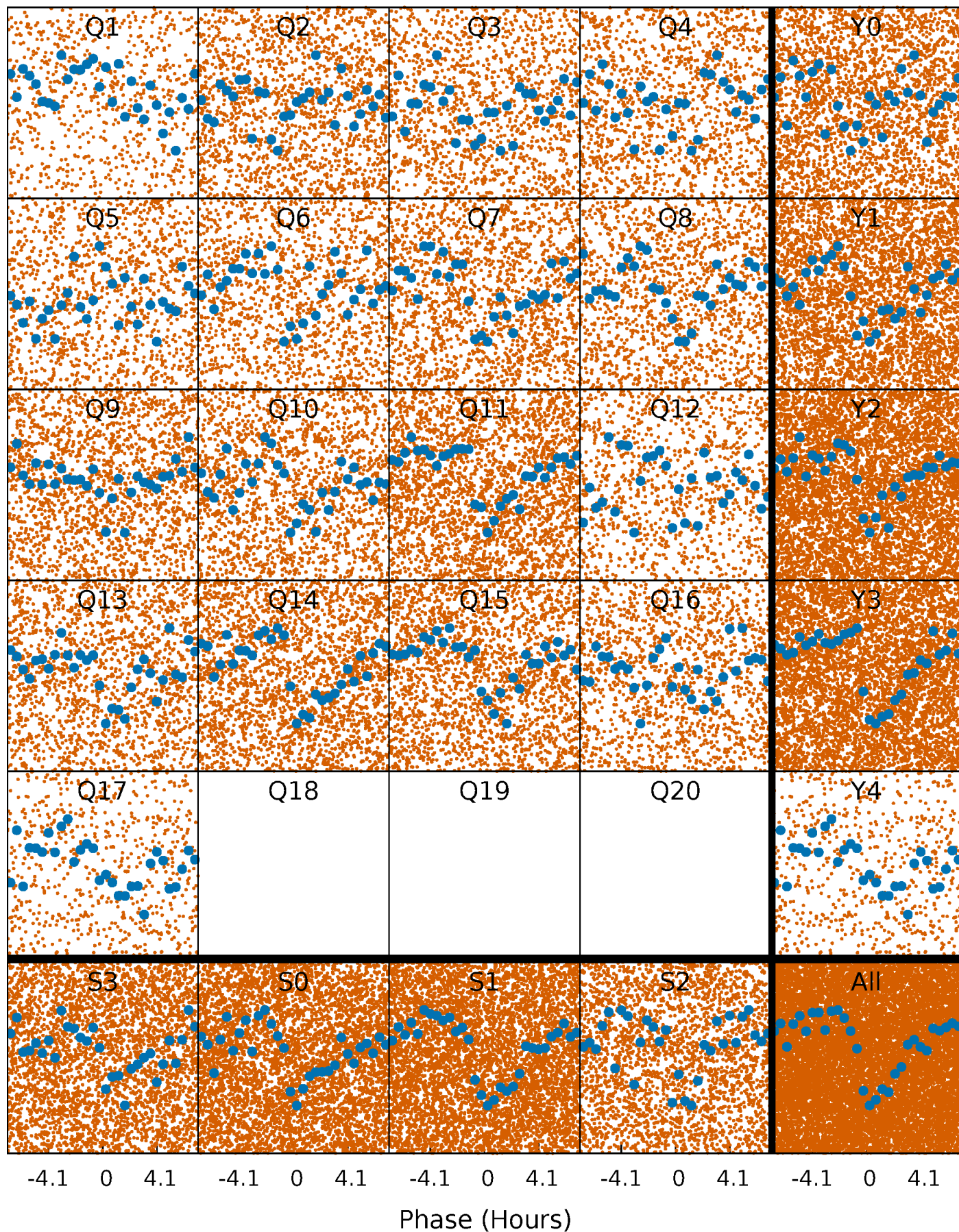


Non-Whitened Vs. Whitened Light Curve



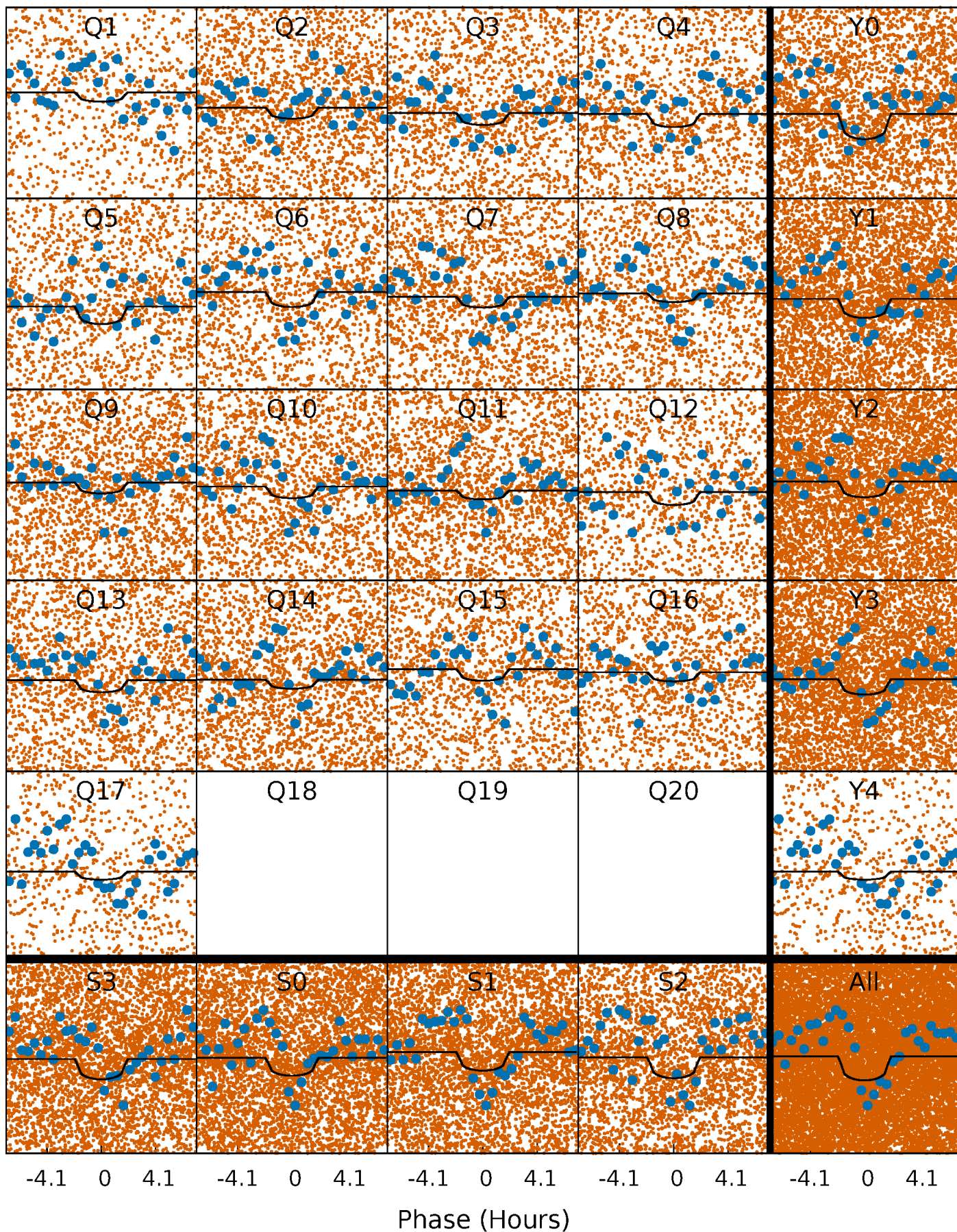
PDC Quarter-Phased Transit Curves

TCE 007031992-01 P= 0.566760 Days $T_0=131.843957$ (BKJD)



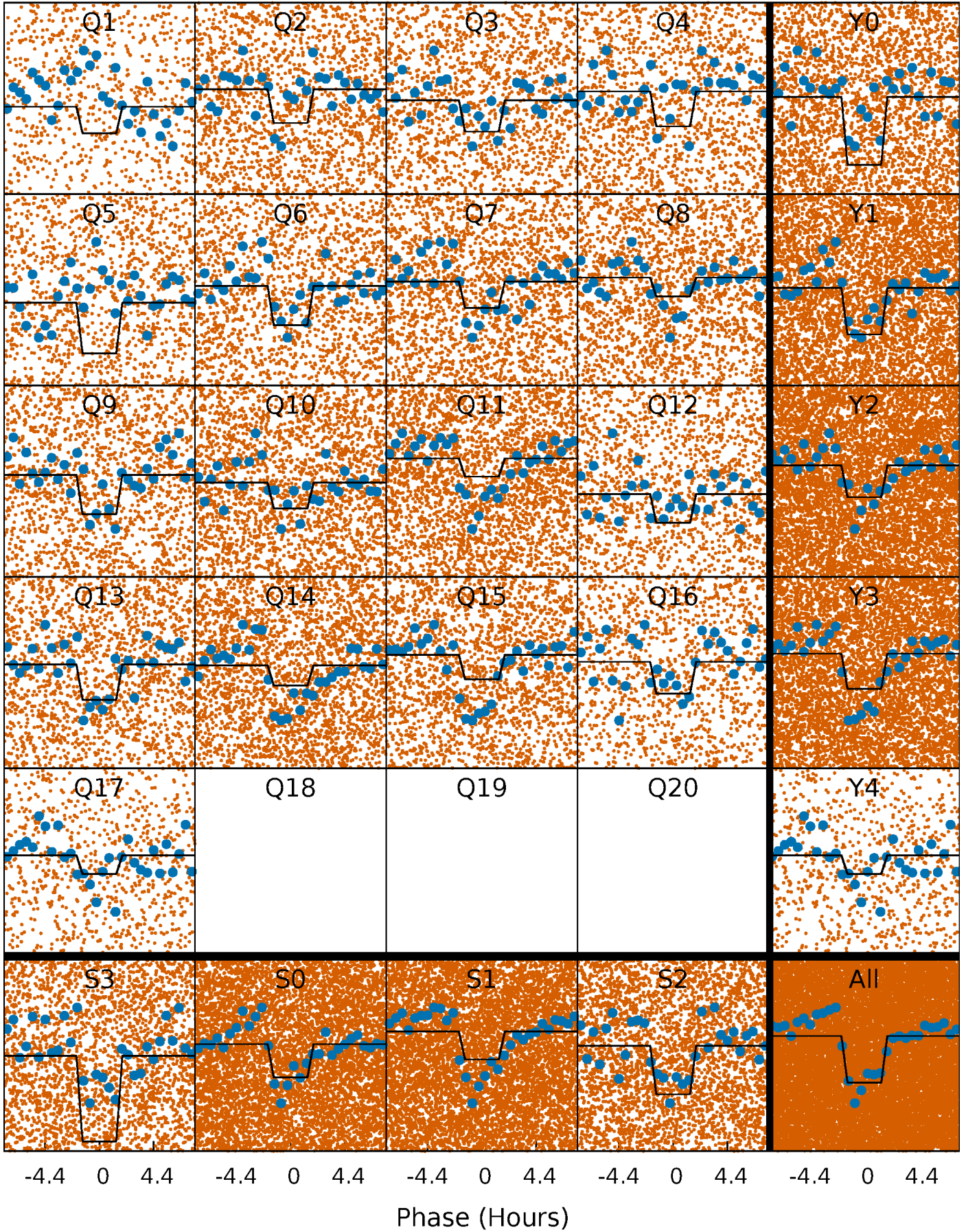
DV Quarter-Phased Transit Curves

TCE 007031992-01 P= 0.566760 Days $T_0=131.843957$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

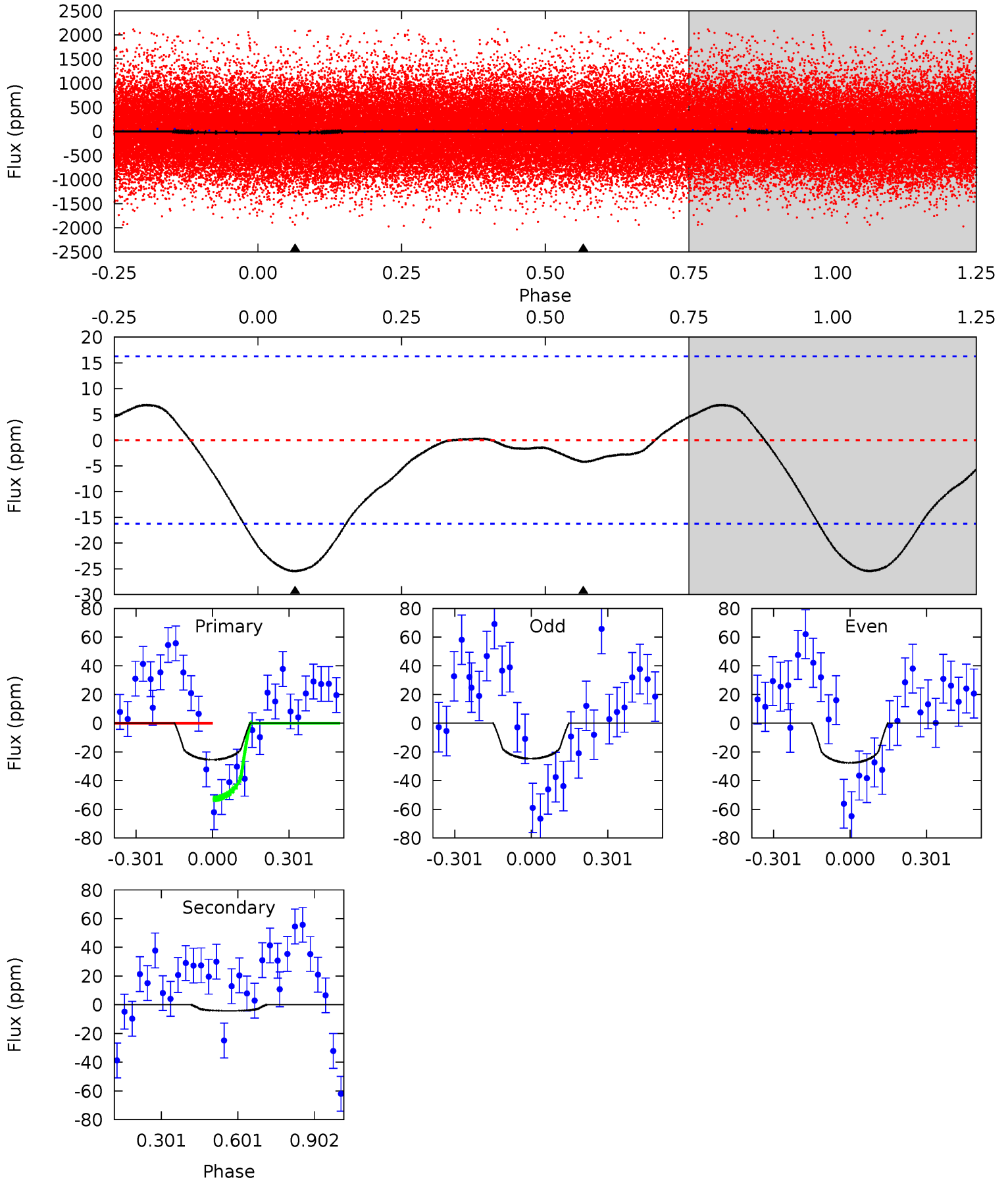
TCE 007031992-01 P= 0.566795 Days $T_0=131.828482$ (BKJD)



DV Model-Shift Uniqueness Test

007031992-01, P = 0.566760 Days, E = 131.277197 Days

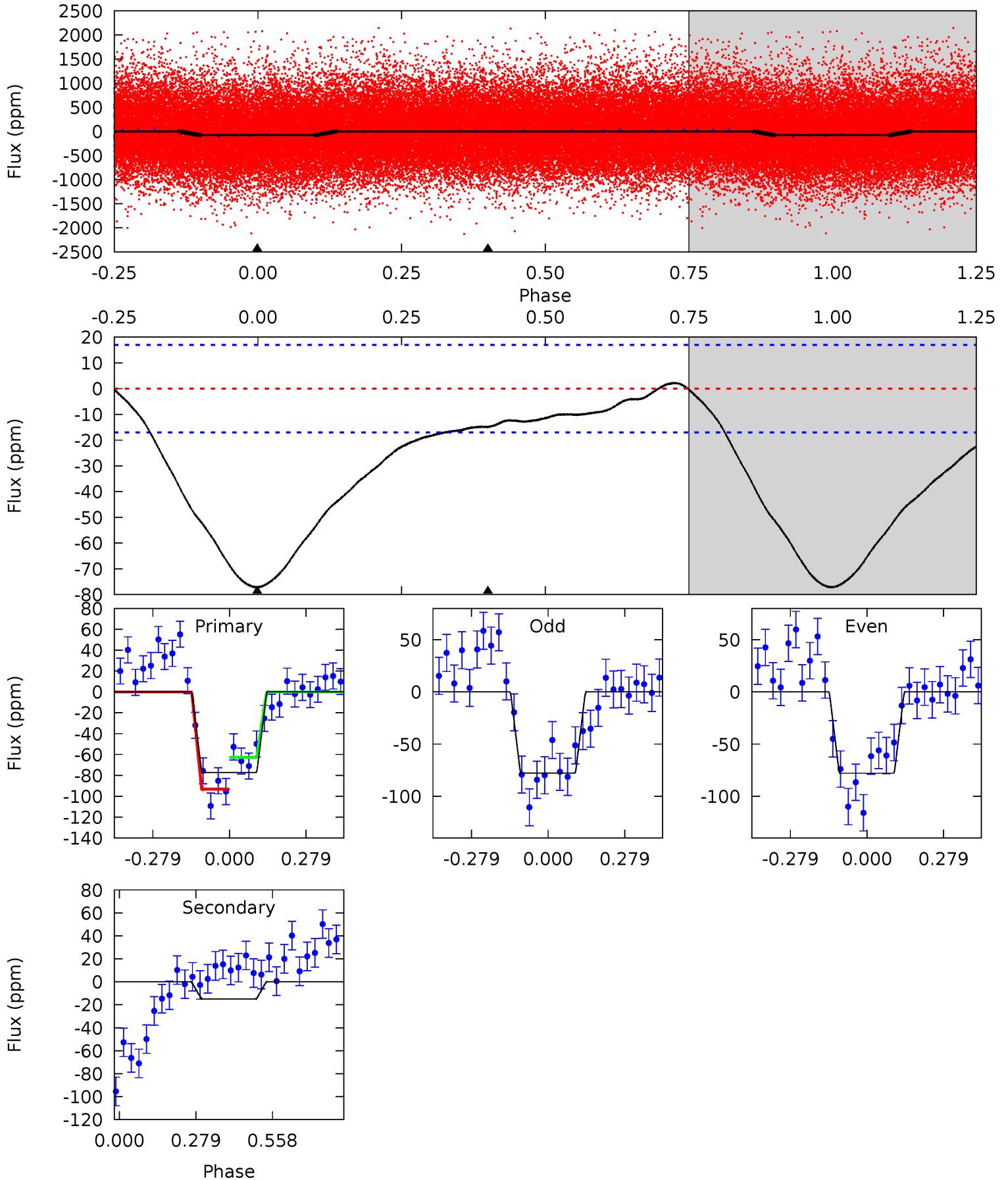
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.78	1.13	0	0	4.33	1.04	0.99	6.78	6.78	1.13	1.13	0.39	0.80	0.21	6.94



Alt Model-Shift Uniqueness Test

007031992-01, P = 0.566795 Days, E = 131.261687 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.7	3.81	0	0	4.34	1.08	0.60	19.7	19.7	3.81	3.81	0.02	0.98	0.03	3.87



Stellar Parameters For KIC 007031992

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5812^{+156}_{-191}	$4.551^{+0.035}_{-0.184}$	$-0.200^{+0.300}_{-0.300}$	$0.853^{+0.242}_{-0.076}$	$0.947^{+0.099}_{-0.110}$	$2.146^{+0.402}_{-1.070}$
	+3%/-3%	+1%/-4%	+150%/-150%	+28%/-9%	+10%/-12%	+19%/-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 007031992-01 / KOI 6808.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-4 ± 4	$0.72^{+0.67}_{-0.47}$	2952^{+200}_{-136}	3024^{+2127}_{-6044}	$0.568^{+5.475}_{-0.522}$
Alt.	-15 ± 4	$1.00^{+0.76}_{-0.64}$	2954^{+198}_{-132}	3765^{+2137}_{-1006}	$1.371^{+9.565}_{-0.929}$

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 $A_{obs} \gg 1.0$

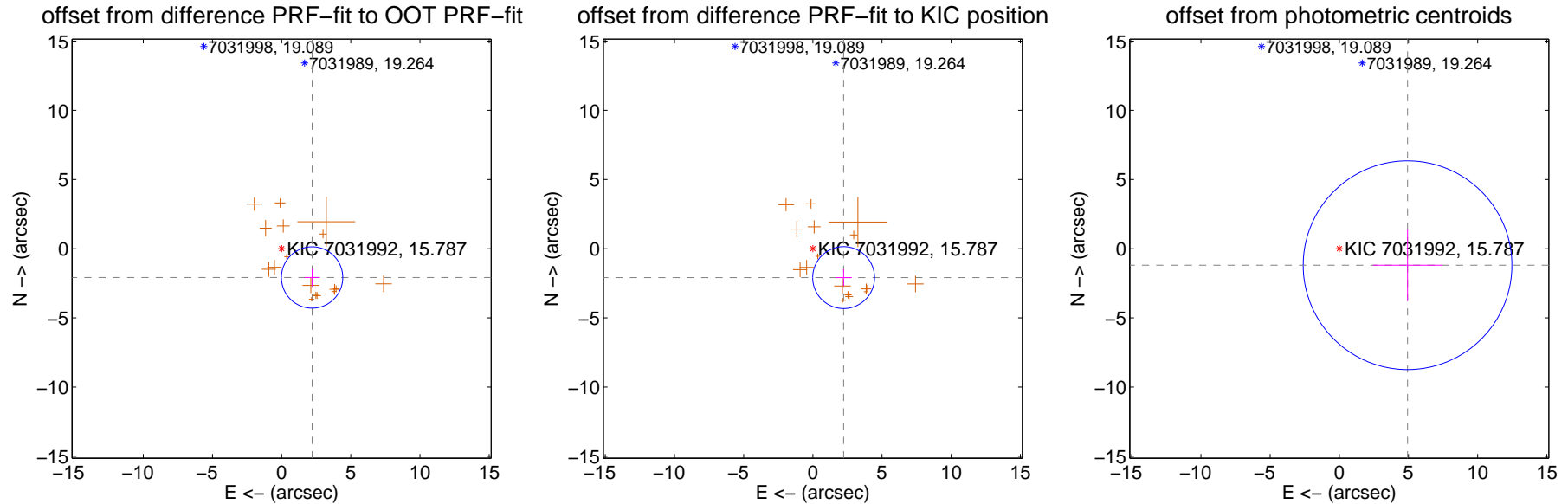
DV Centroid Data

Supplemental centroid analysis for 007031992-01. Kepler magnitude: 15.79. Transit SNR 5.84

There are 0 quarters with good PRF difference image offsets

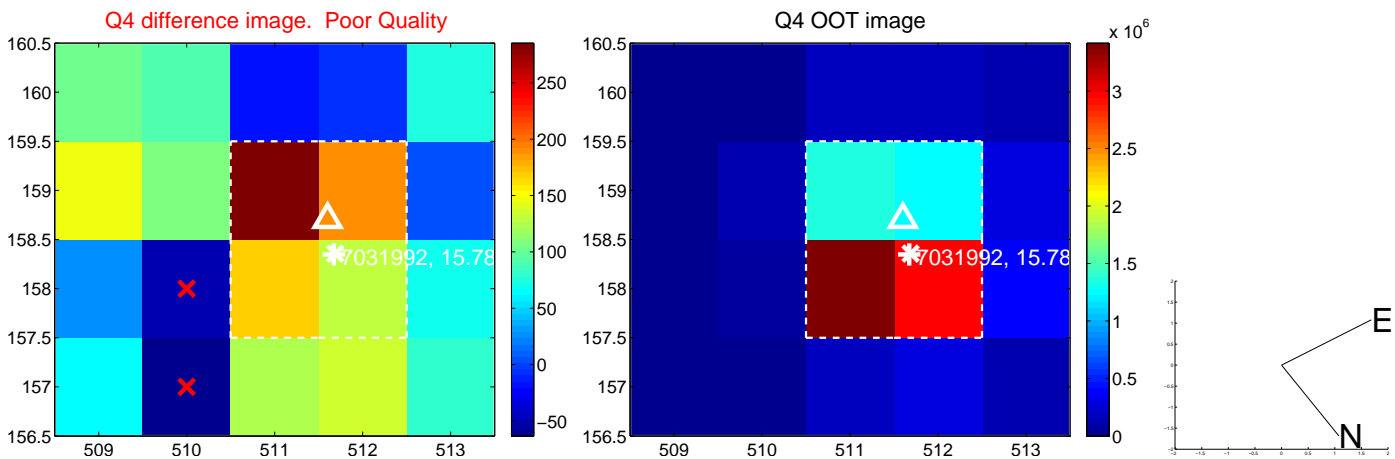
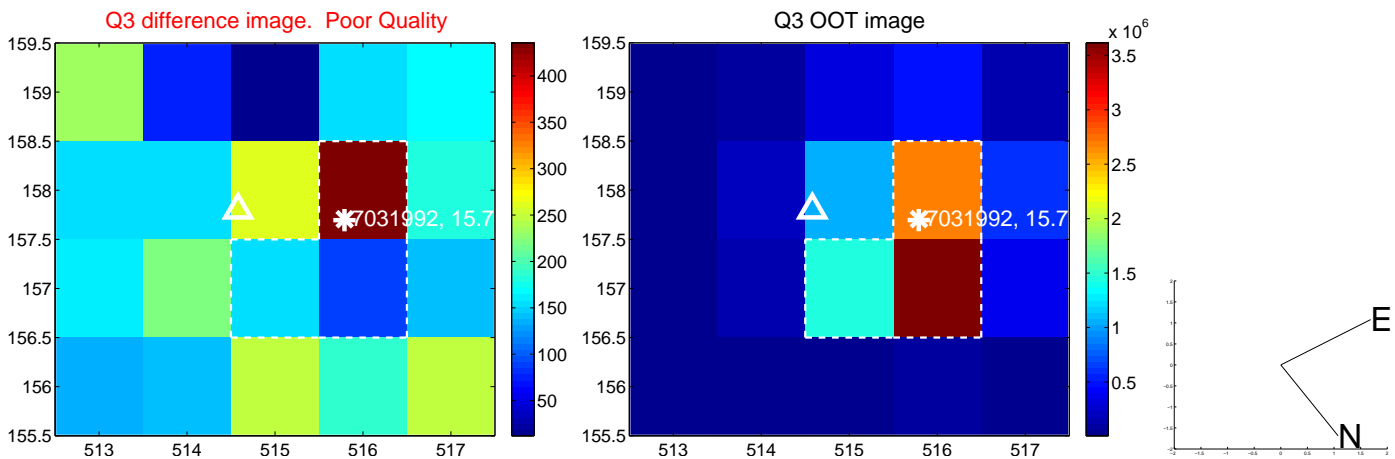
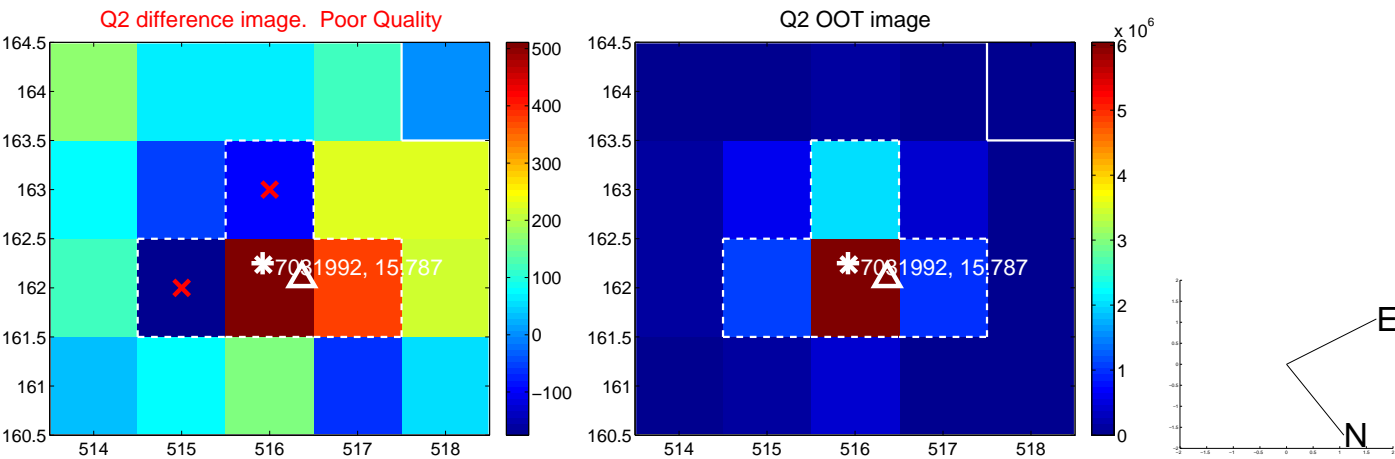
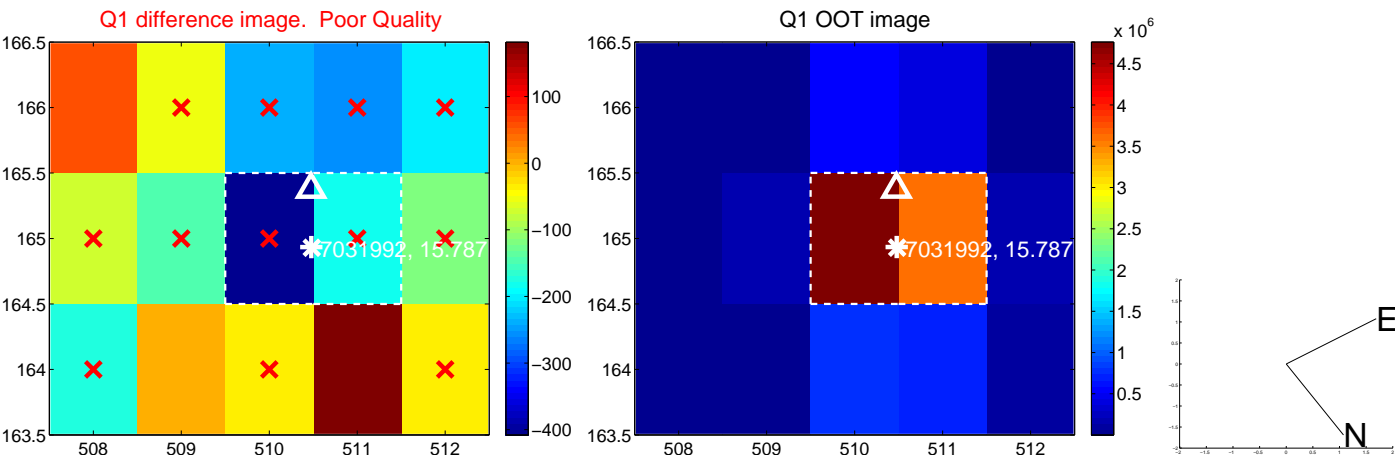
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.031 ± 0.739	4.10	-2.202 ± 0.561	-2.082 ± 0.631
PRF-fit source offset from KIC position	3.052 ± 0.745	4.09	-2.224 ± 0.587	-2.090 ± 0.605
photometric centroid source offset	5.08 ± 2.51	2.02	-4.93 ± 2.51	-1.19 ± 2.58

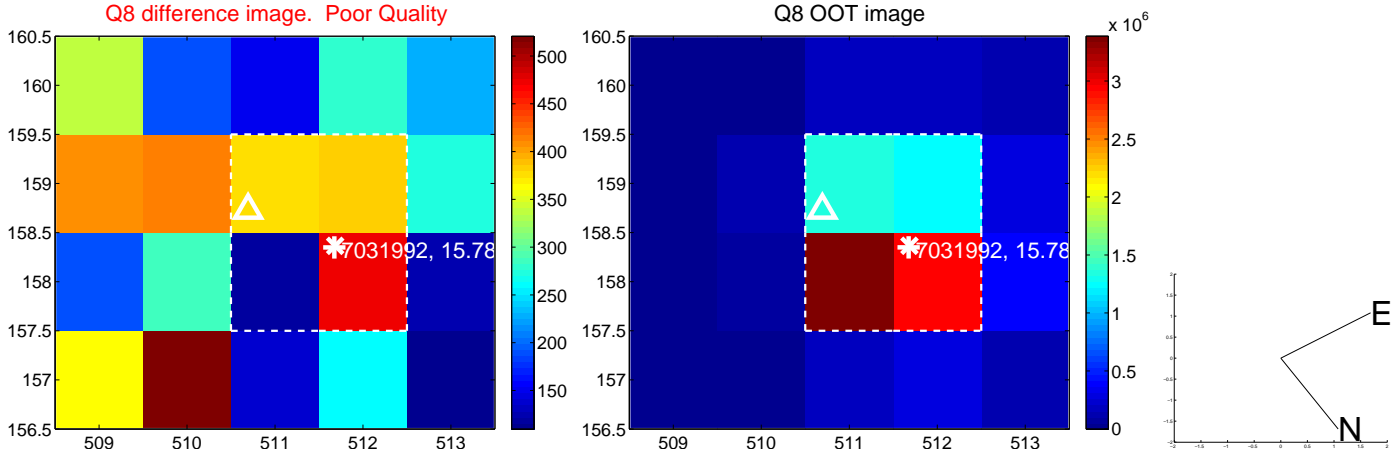
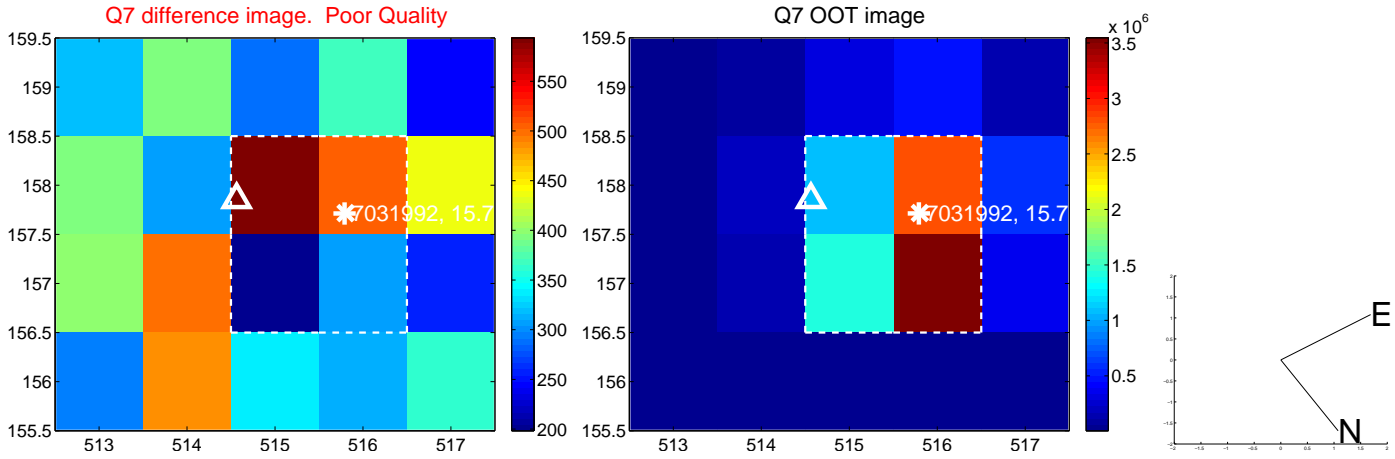
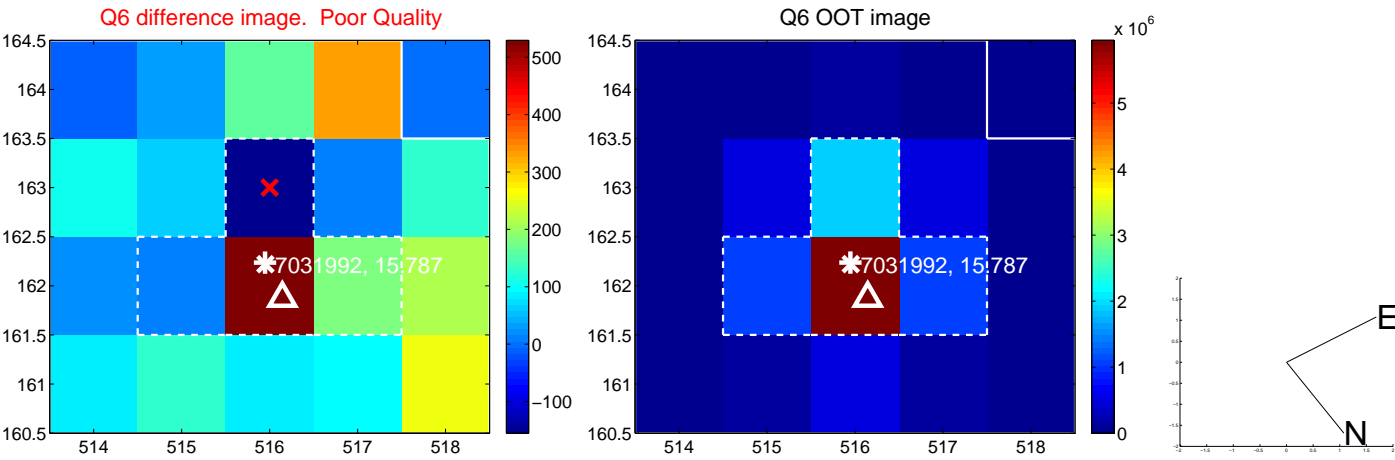
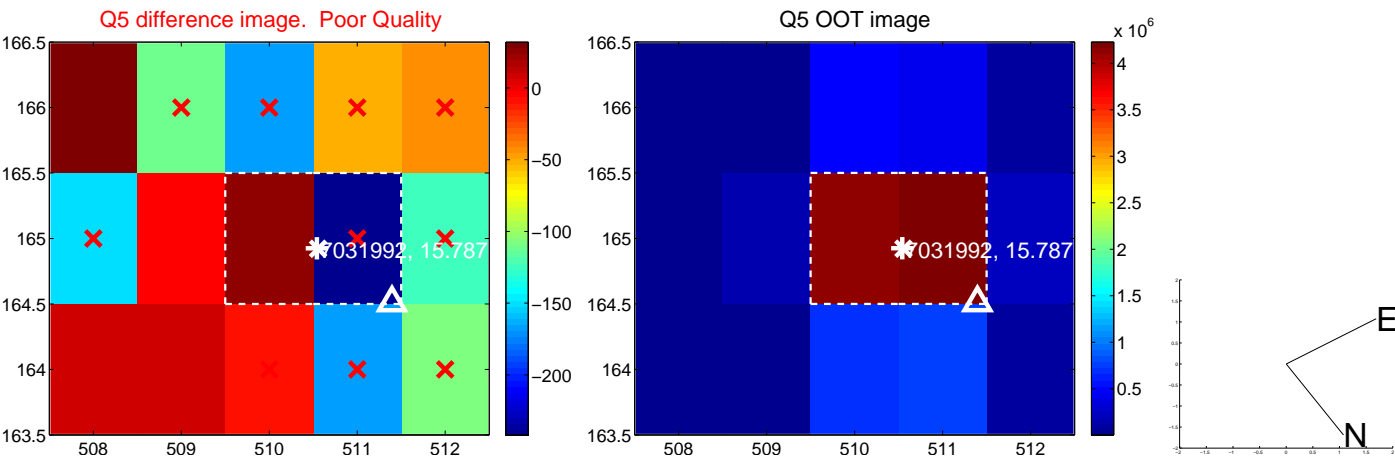


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

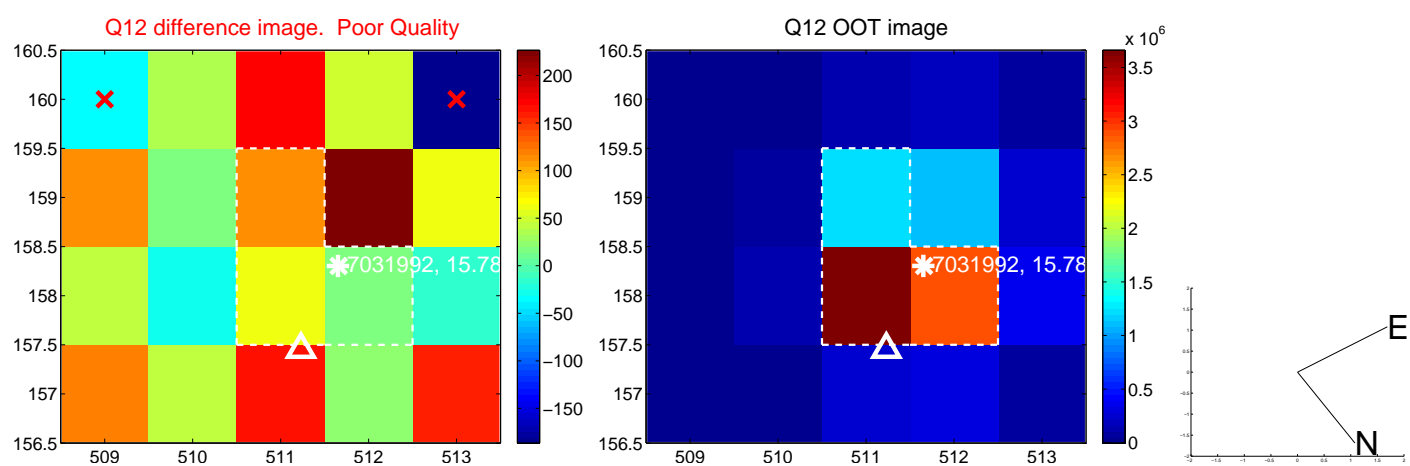
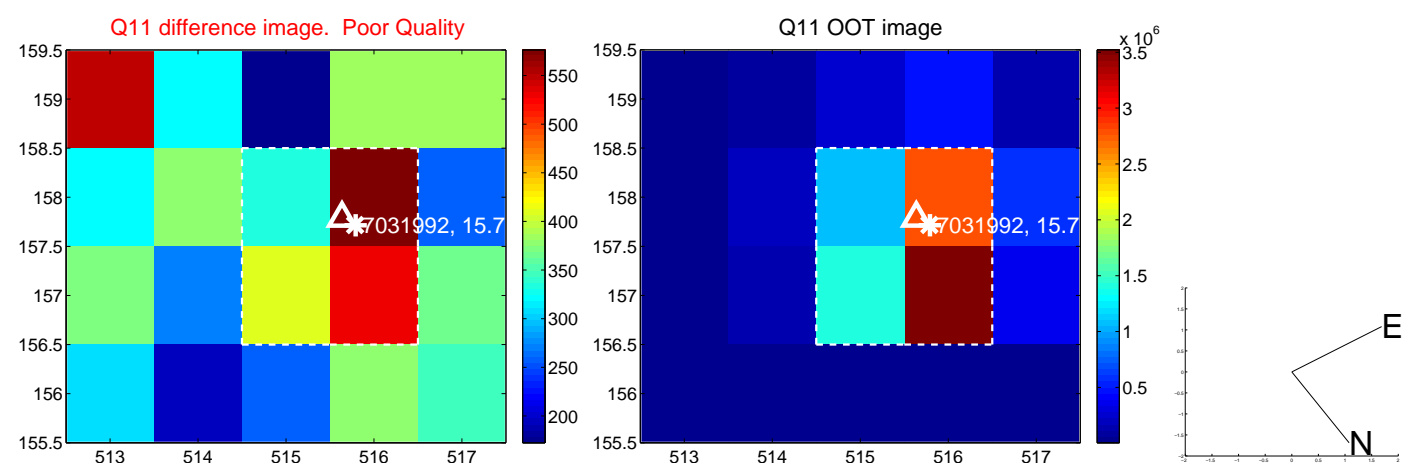
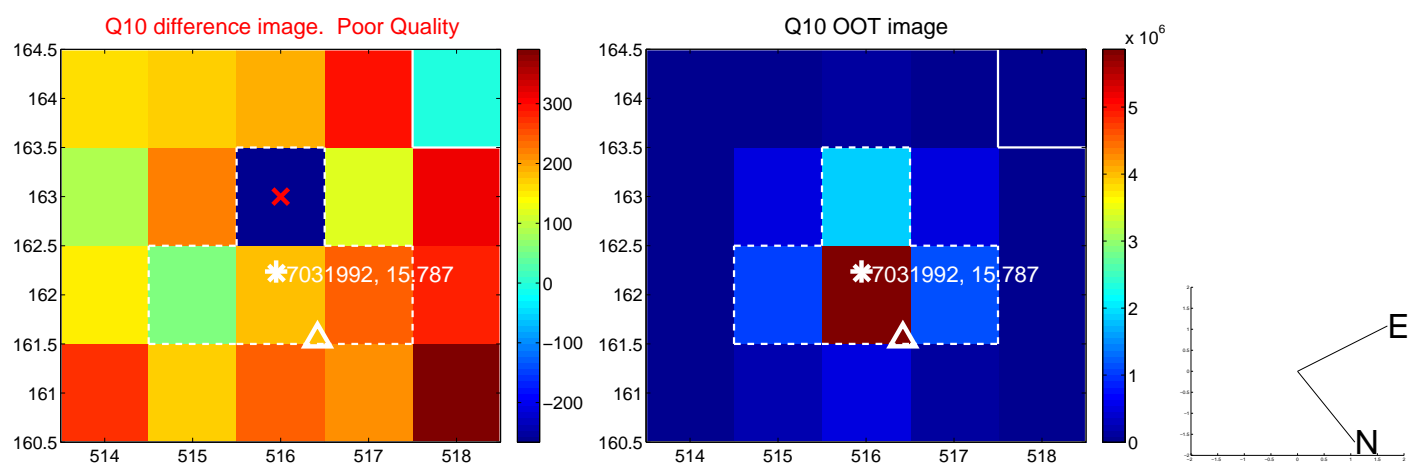
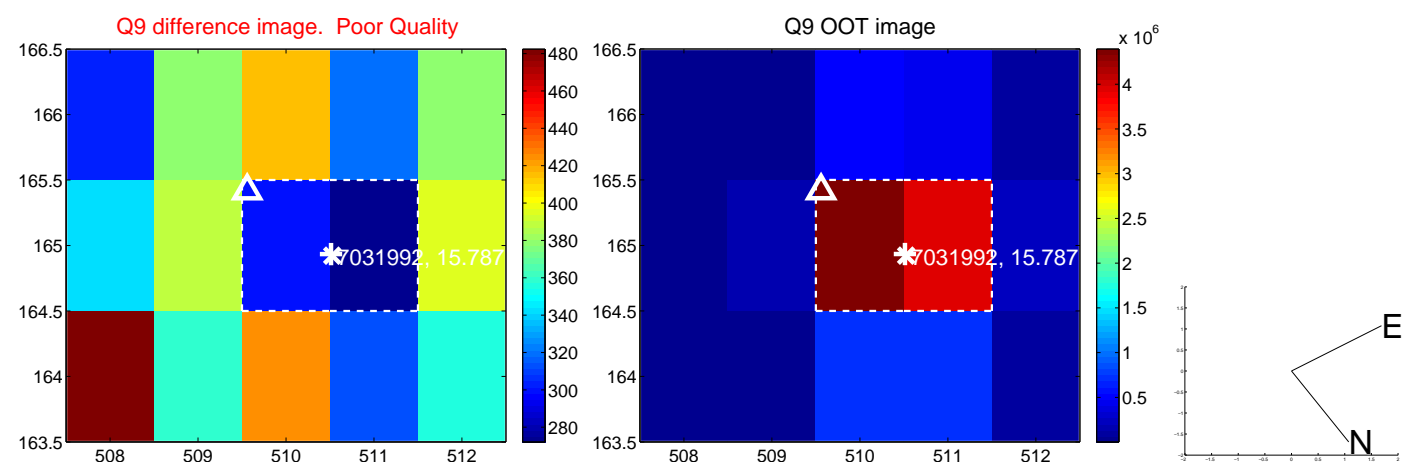
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



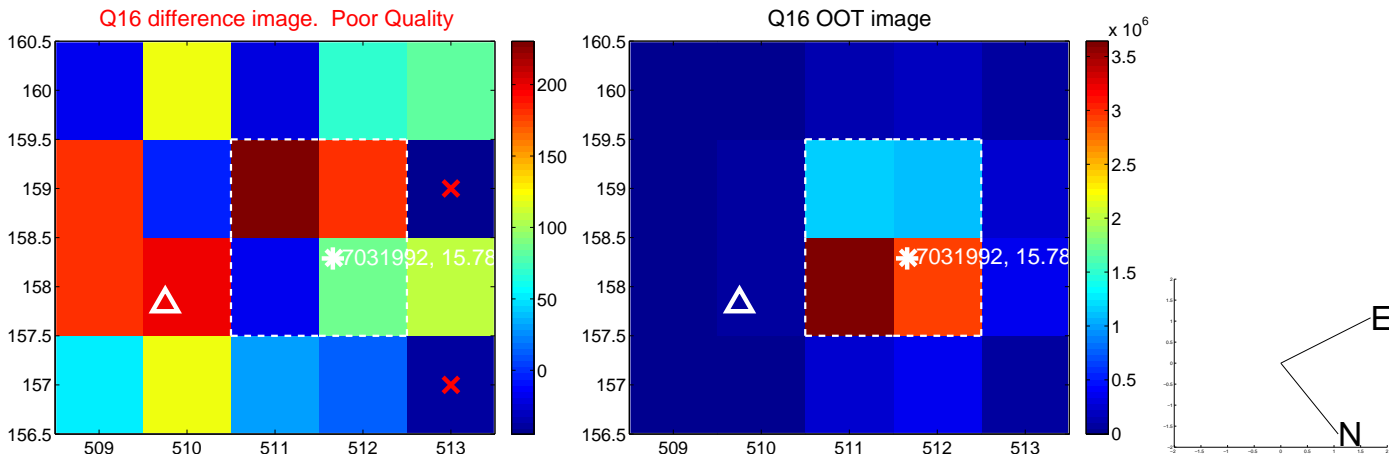
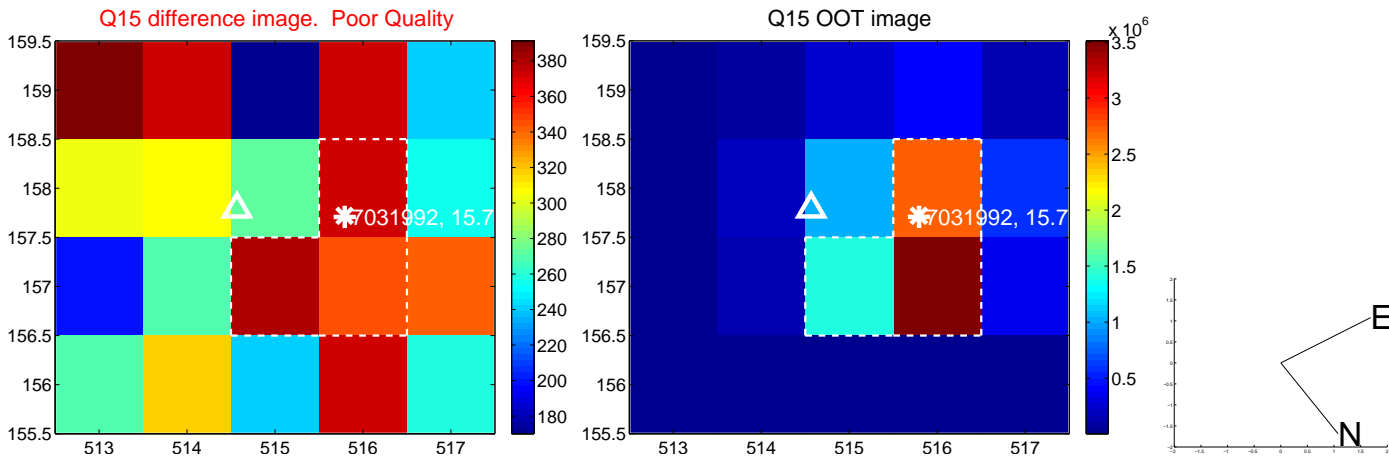
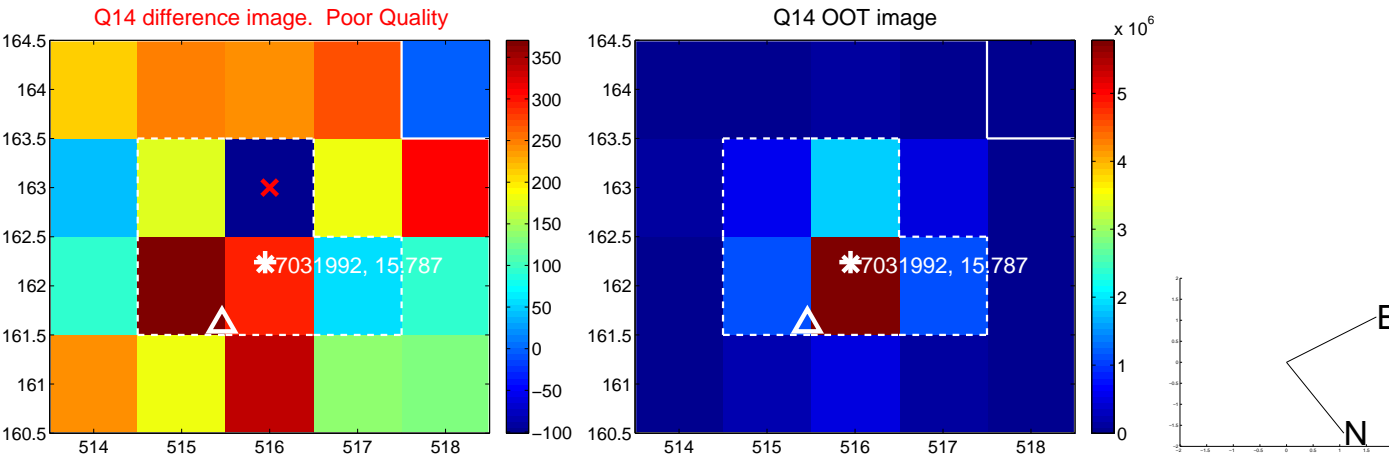
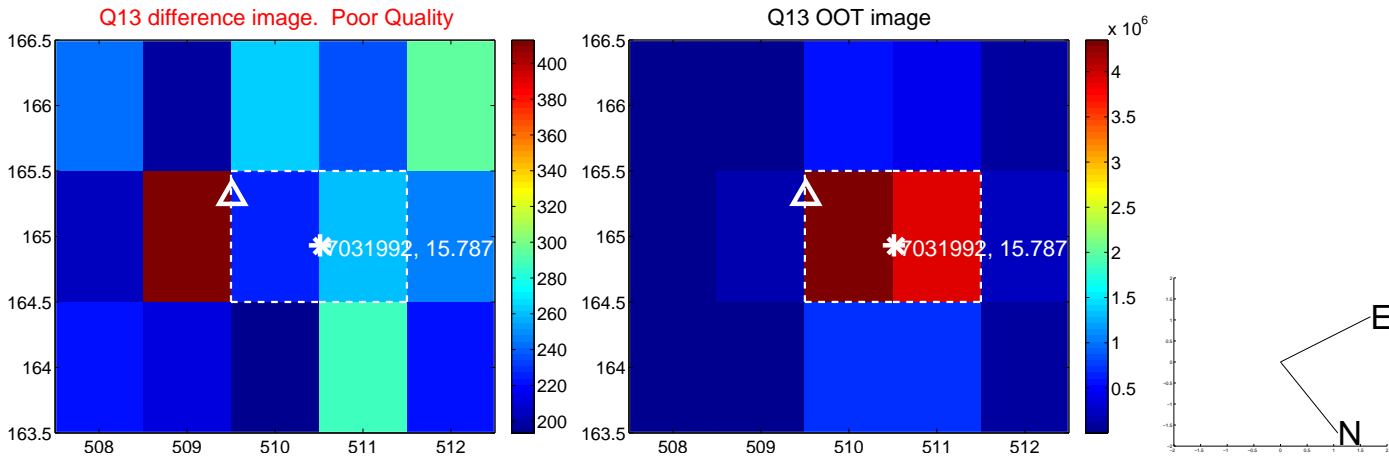
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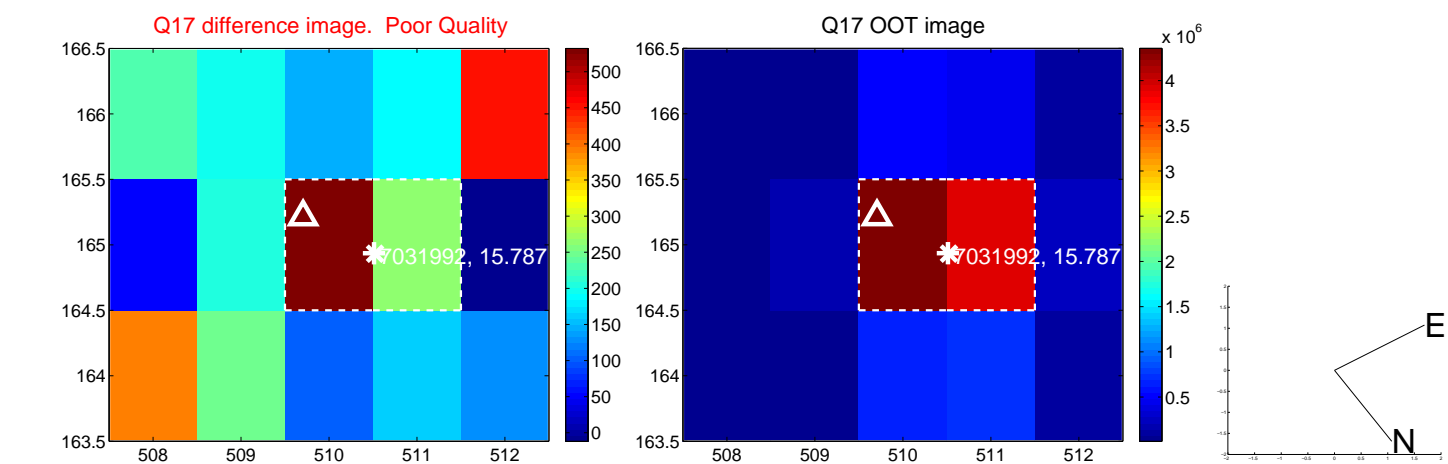
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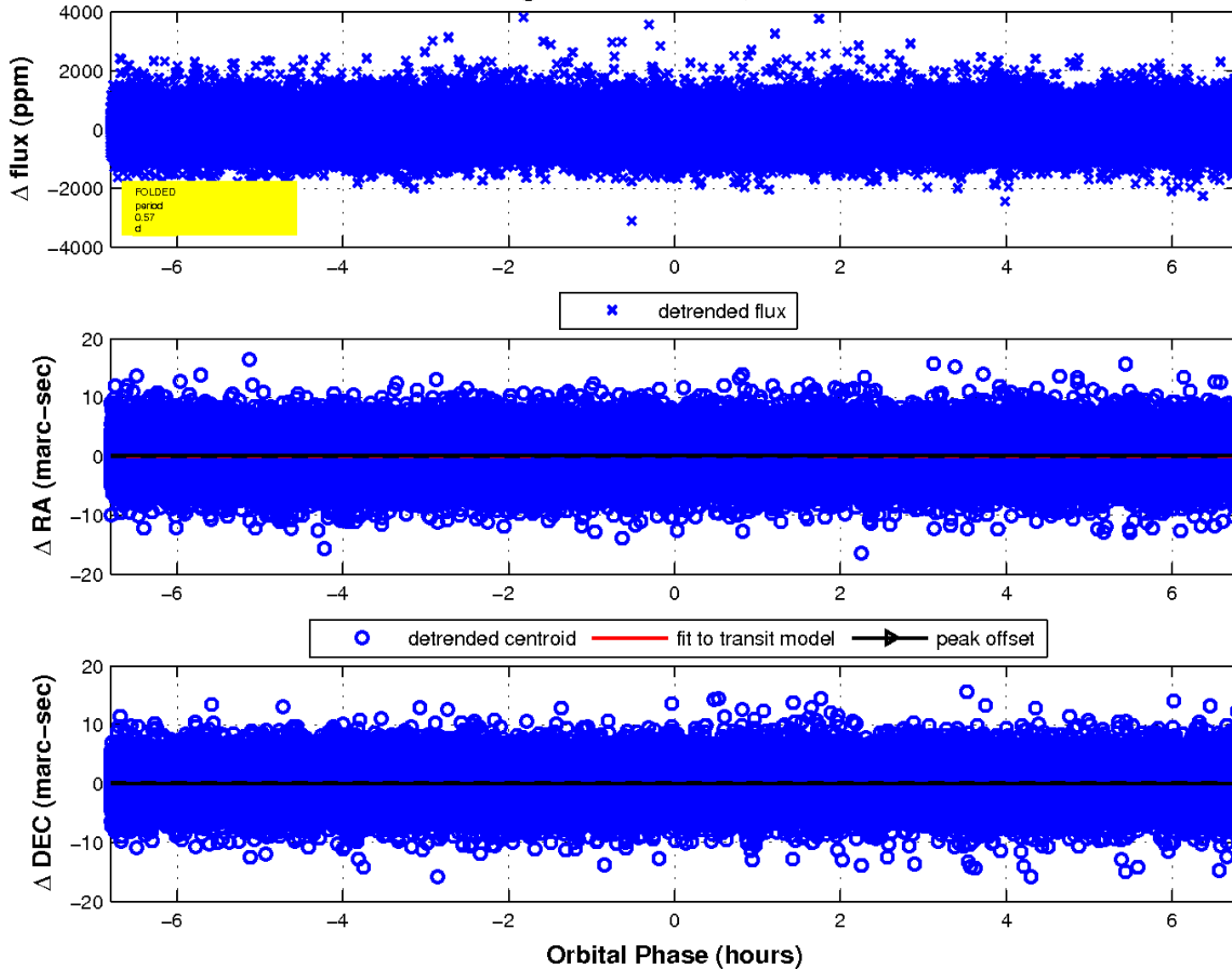
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

