

KIC 012007544

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})
012007544-01	OBS	No	537.775367	159.932380	2924.0	6.357	10.1	6.6	0.52	3764	2.81	0.04

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
012007544-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

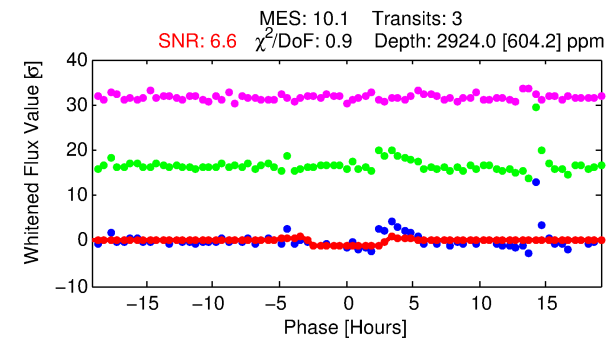
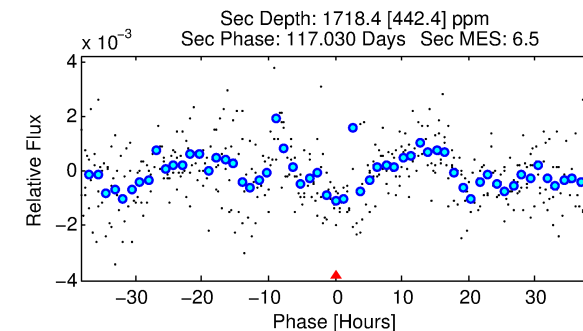
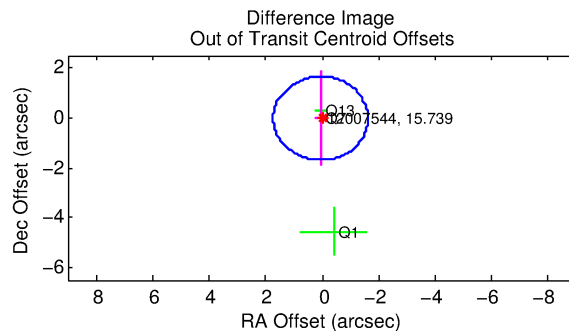
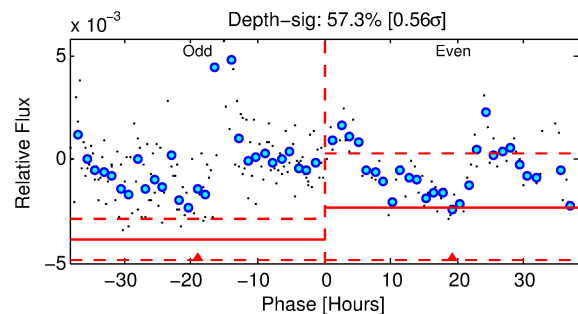
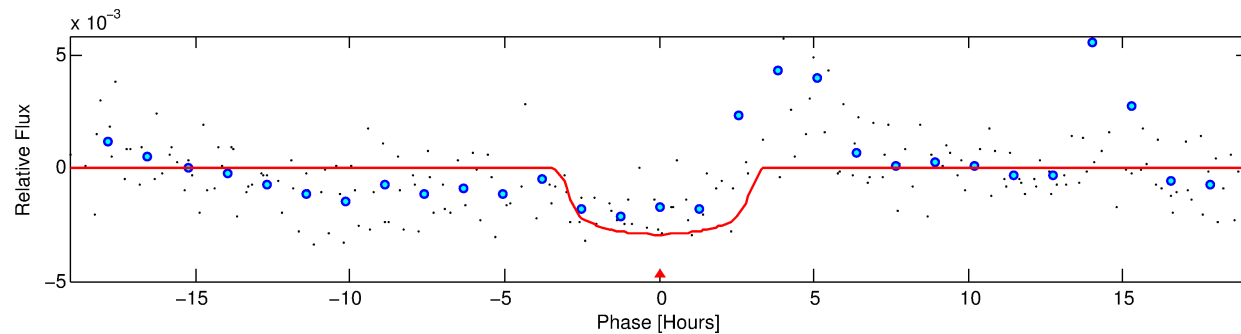
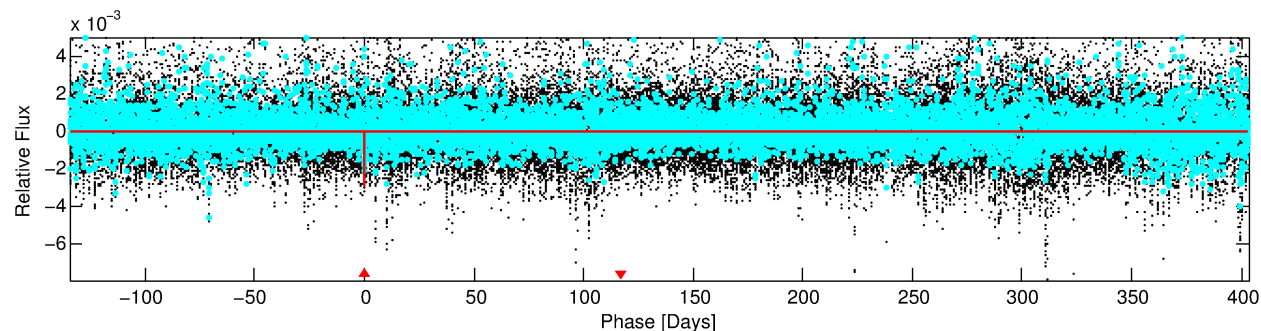
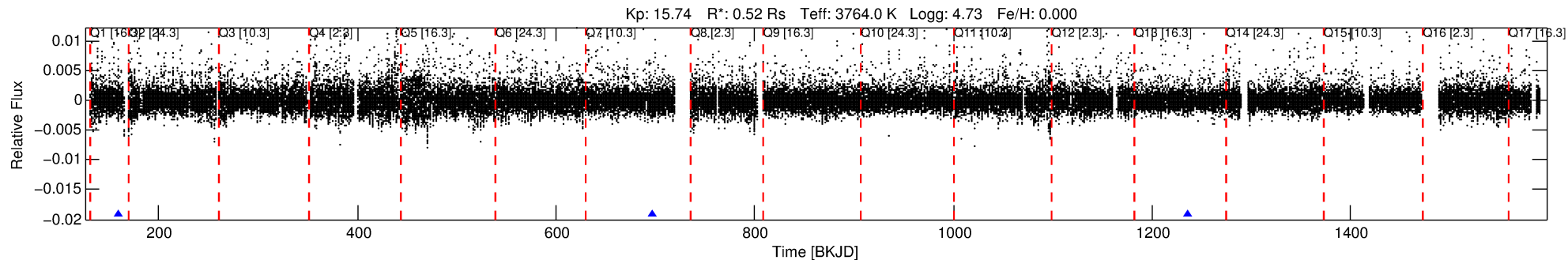
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 012007544-01

No Significant Match Found

DV One-Page Summary

KIC: 12007544 Candidate: 1 of 1 Period: 537.775 d



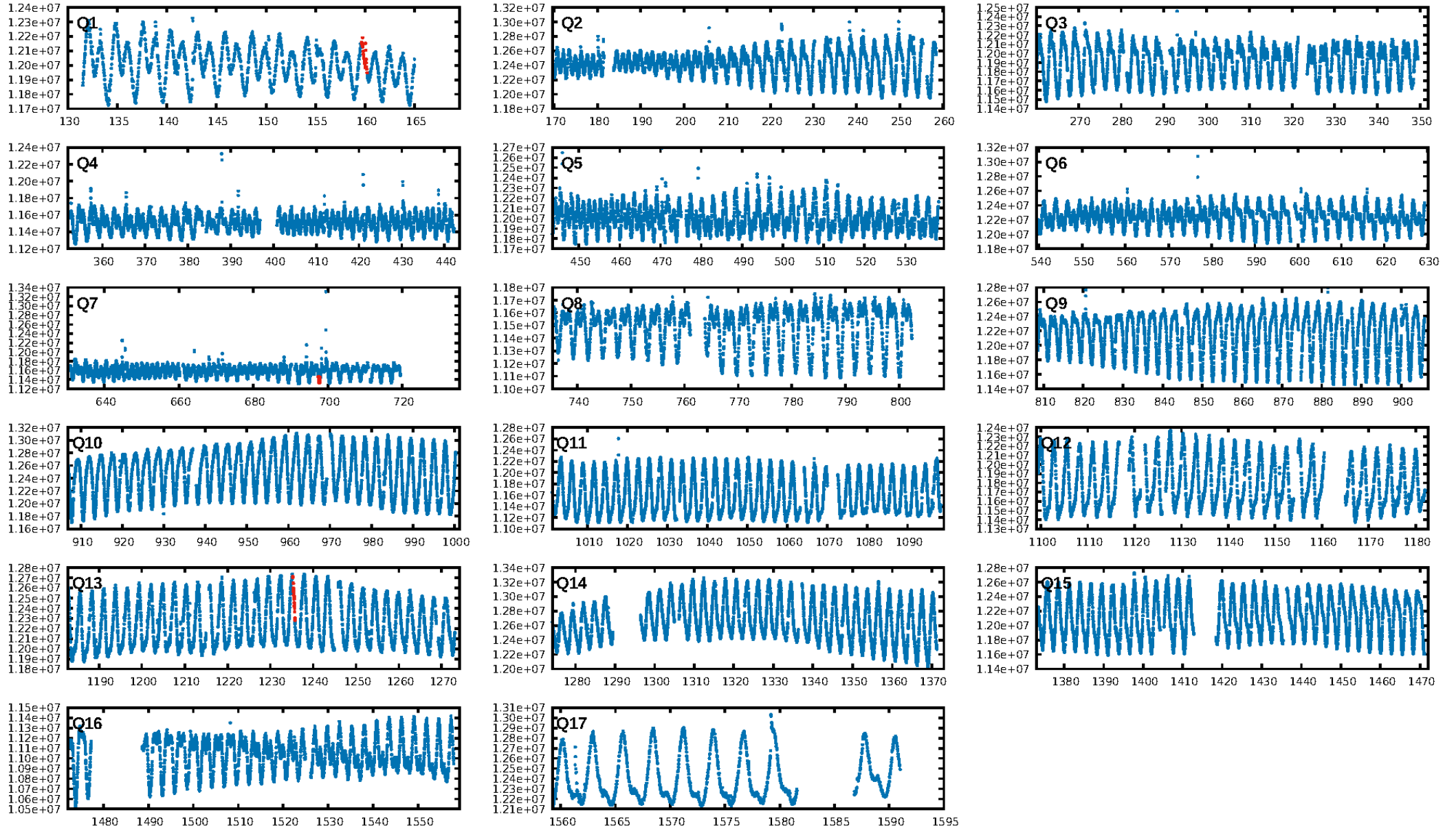
DV Fit Results:

Period = 537.77537 [0.01042] d
Epoch = 159.9324 [0.0119] BKJD
Rp/R* = 0.0500 [0.0664]
a/R* = 620.27 [3401.00]
b = 0.43 [10.60]
Seff = 0.04 [0.01]
Teq = 117 [5] K
Rp = 2.81 [3.75] Re
a = 1.0420 [0.0791] AU
Ag = 129657.63 [346442.25] [0.37 σ]
Teff = 3428 [2291] K [1.45 σ]

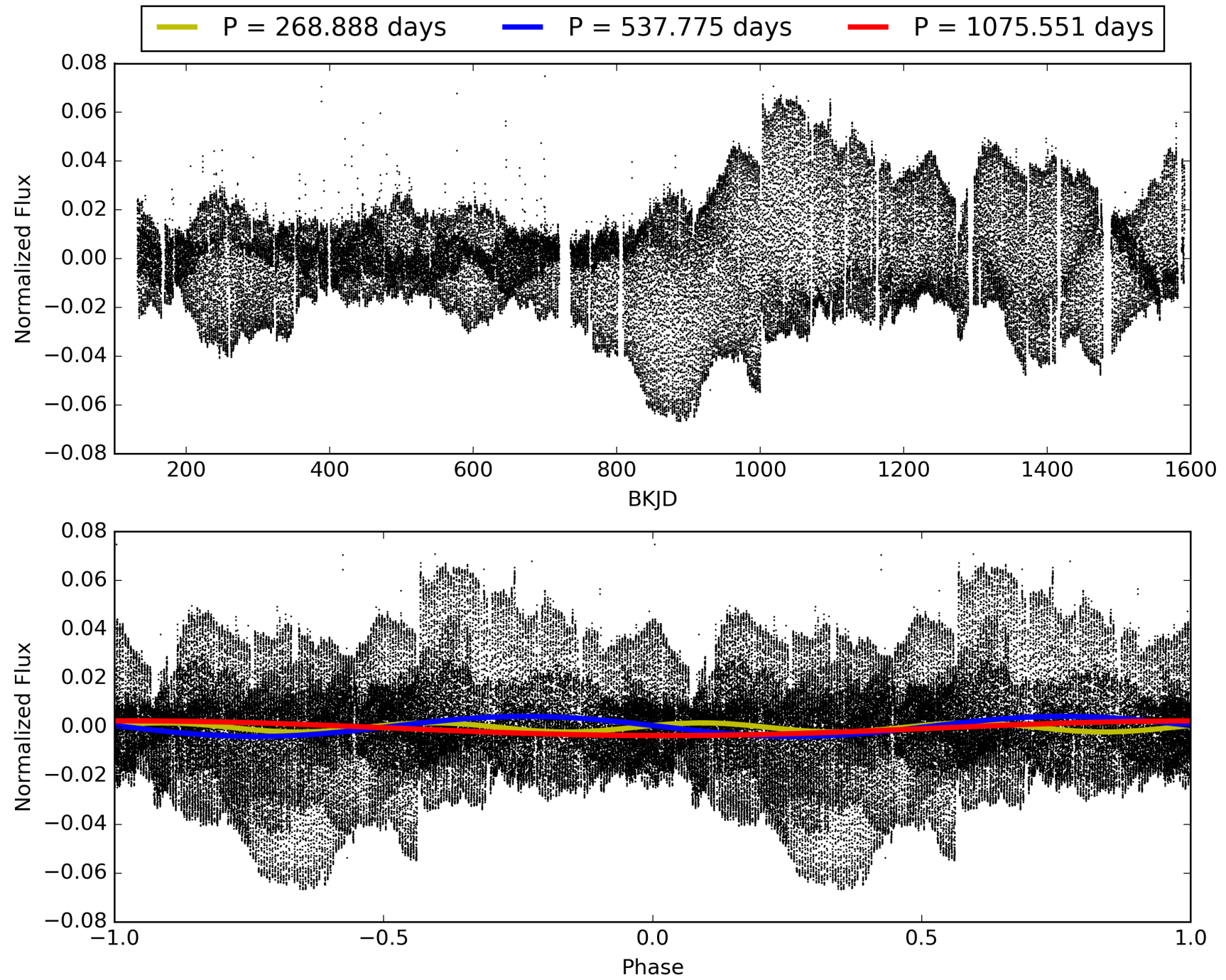
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 28.6%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 1.39e-07
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: 0.4371
Centroid-sig: 37.5%
Centroid-so: 0.669 arcsec [0.90 σ]
OotOffset-rm: 0.063 arcsec [0.11 σ]
OotOffset-st: 0/1/0/2 [3]
KicOffset-rm: 0.460 arcsec [0.43 σ]
KicOffset-st: 0/1/0/2 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [3/3]

TCE 012007544-01, PDC Light Curves

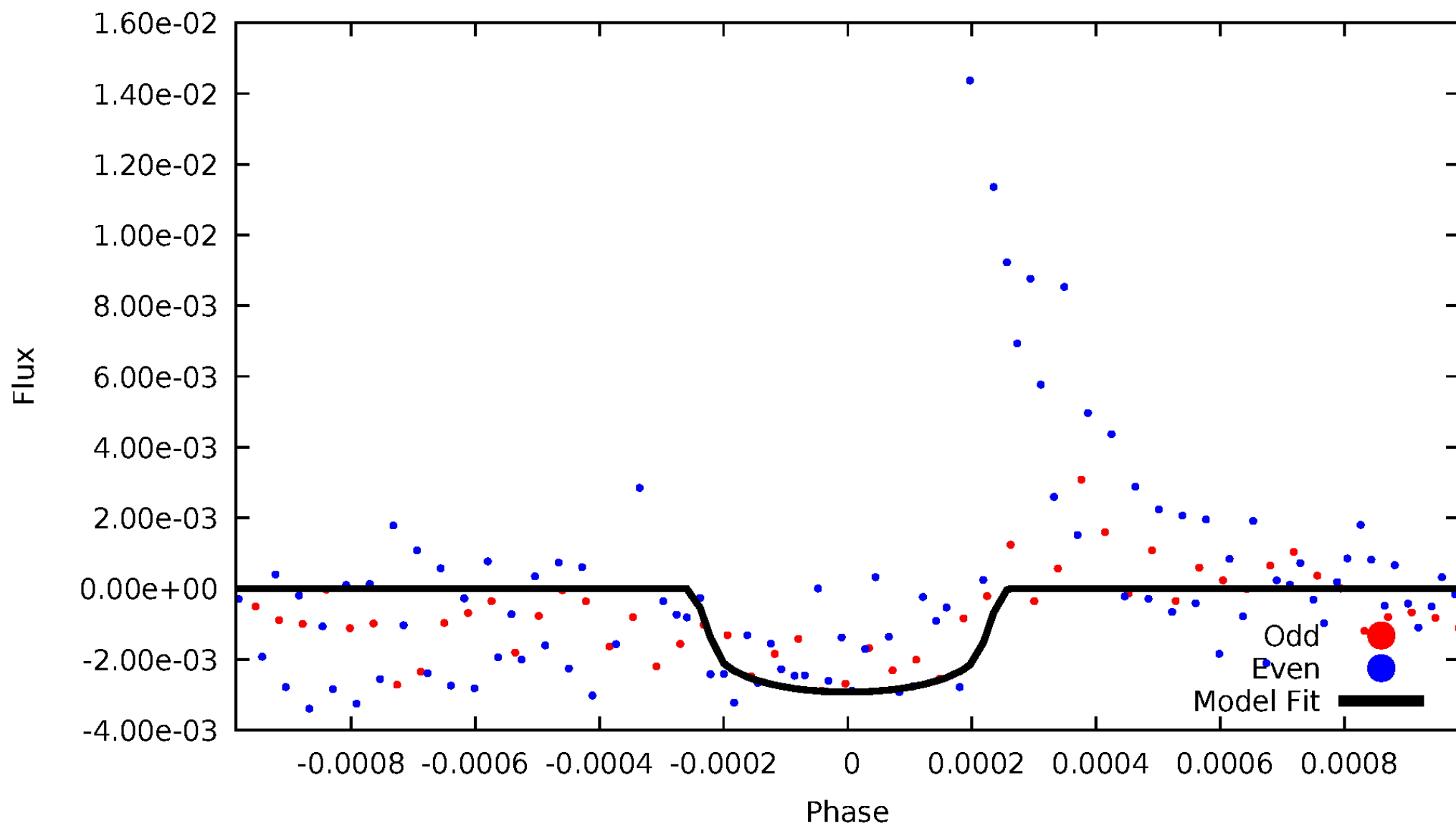


TCE 012007544-01



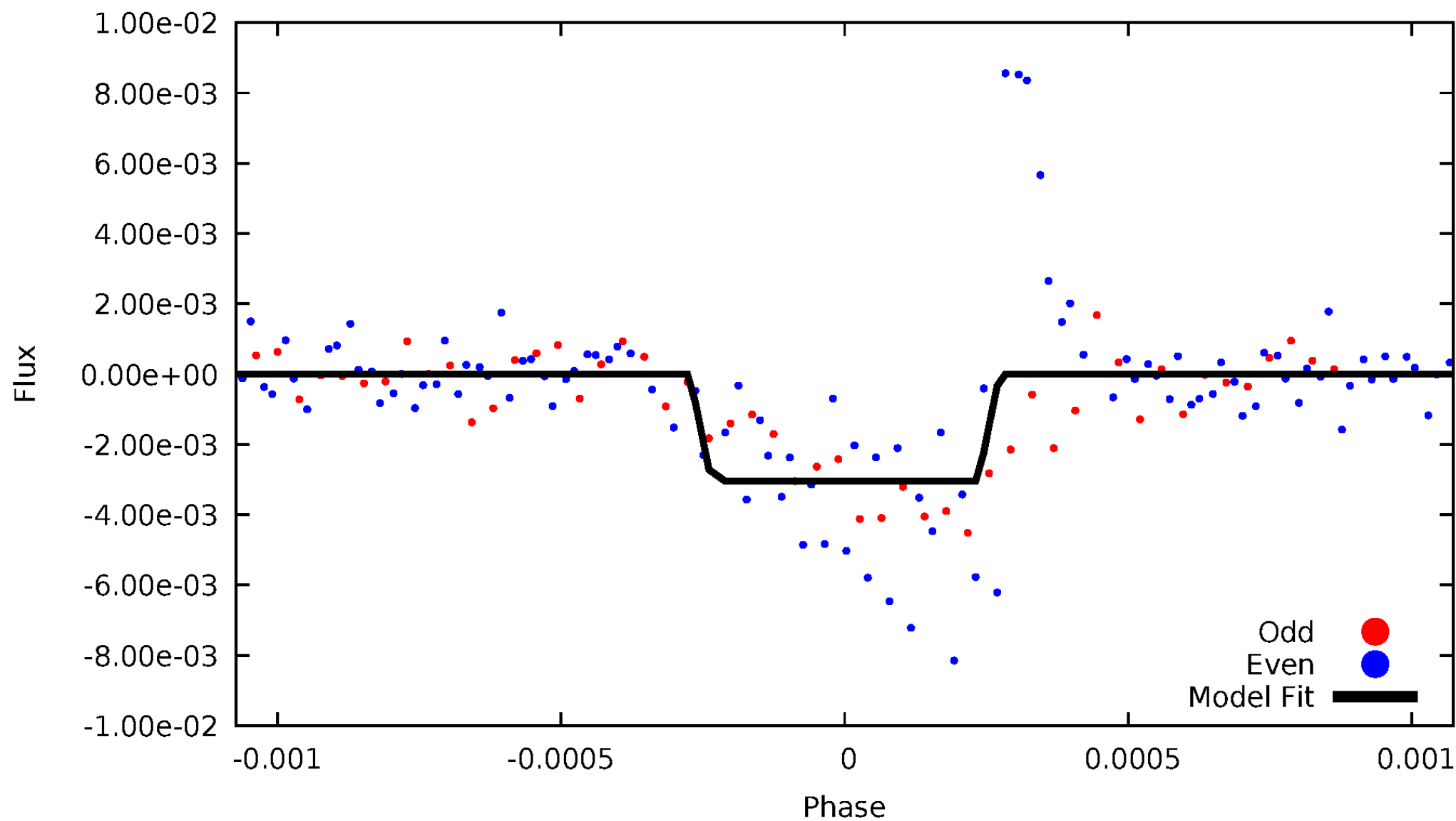
DV Odd/Even

TCE 012007544-01

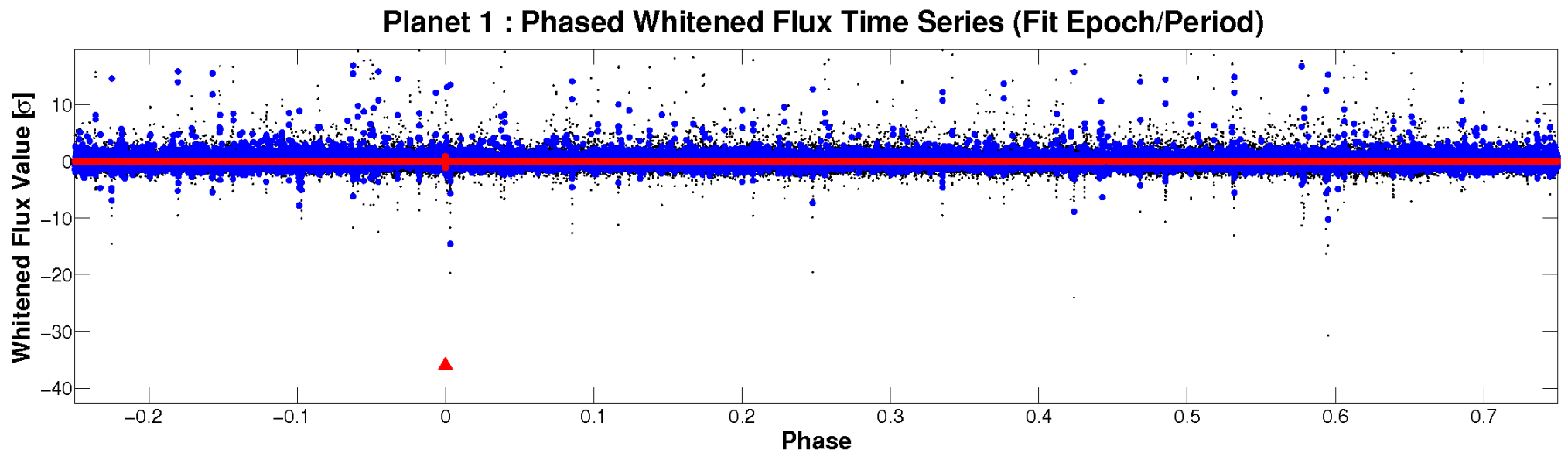
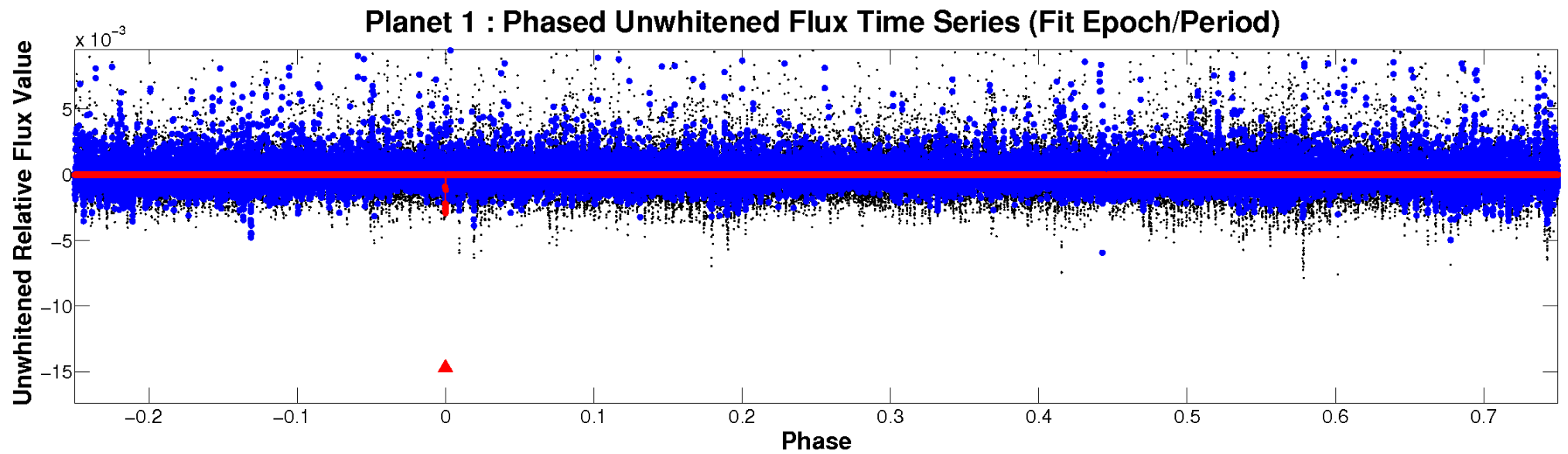


ALT Odd/Even

TCE 012007544-01

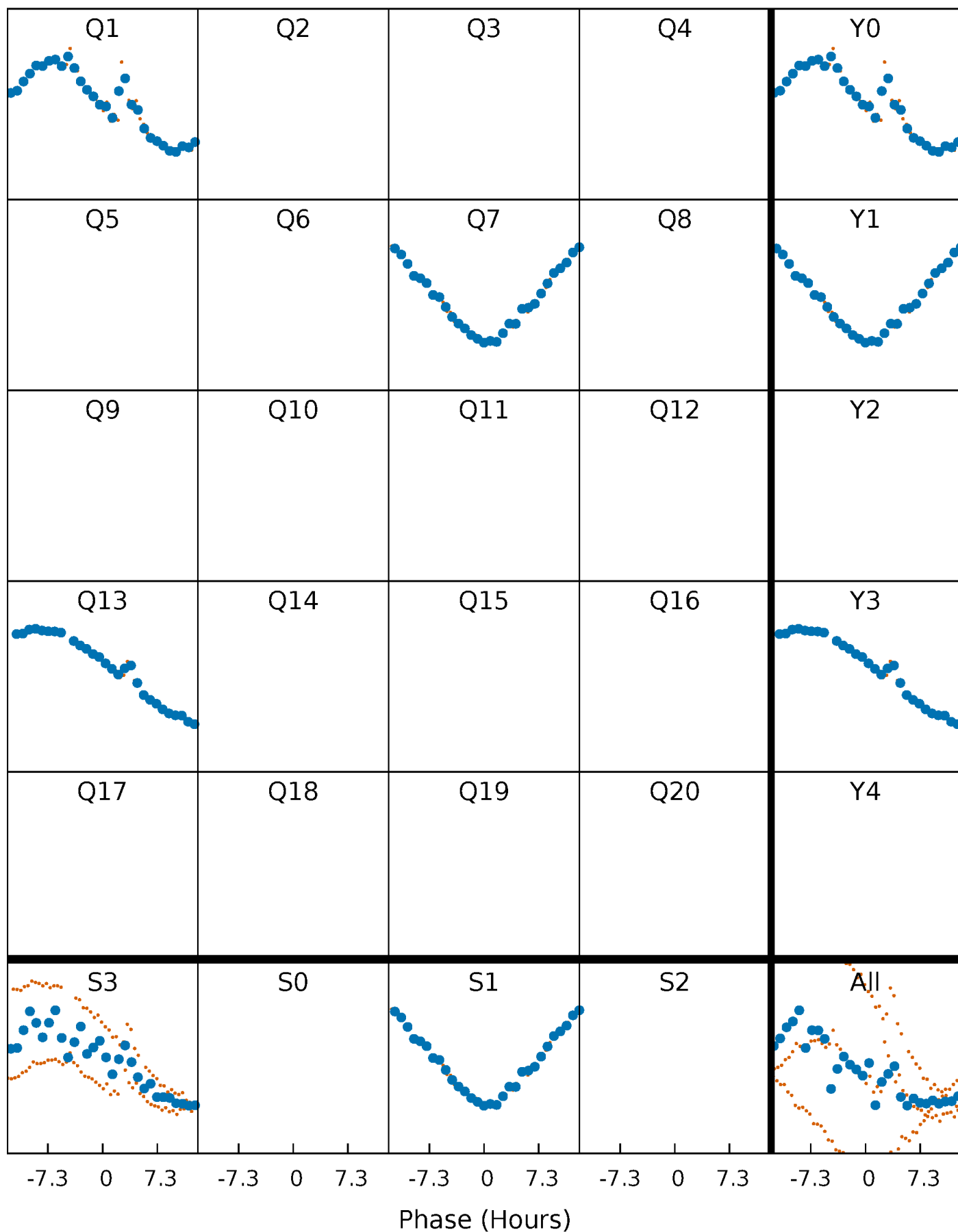


Non-Whitened Vs. Whitened Light Curve



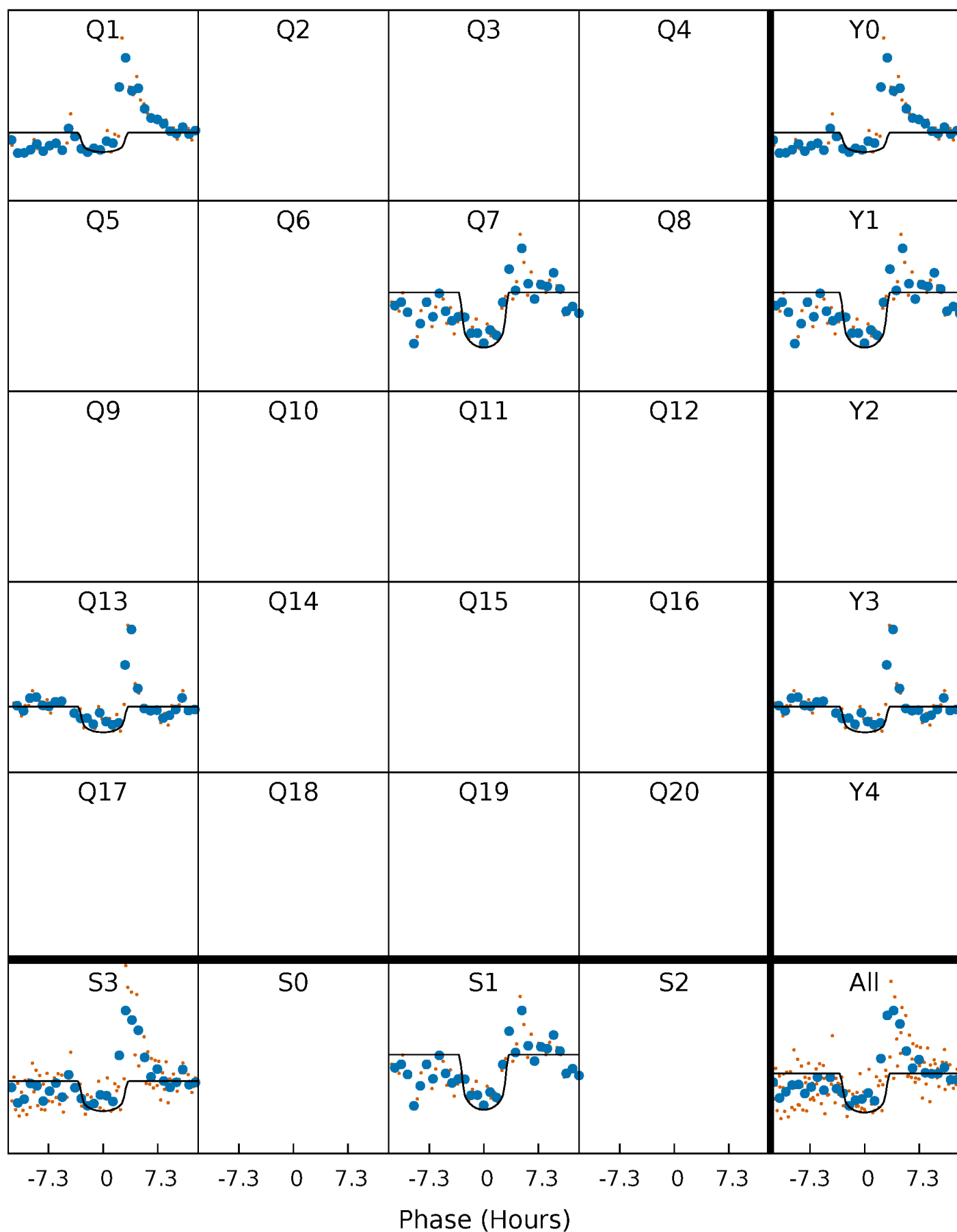
PDC Quarter-Phased Transit Curves

TCE 012007544-01 P=537.775367 Days $T_0=159.932380$ (BKJD)



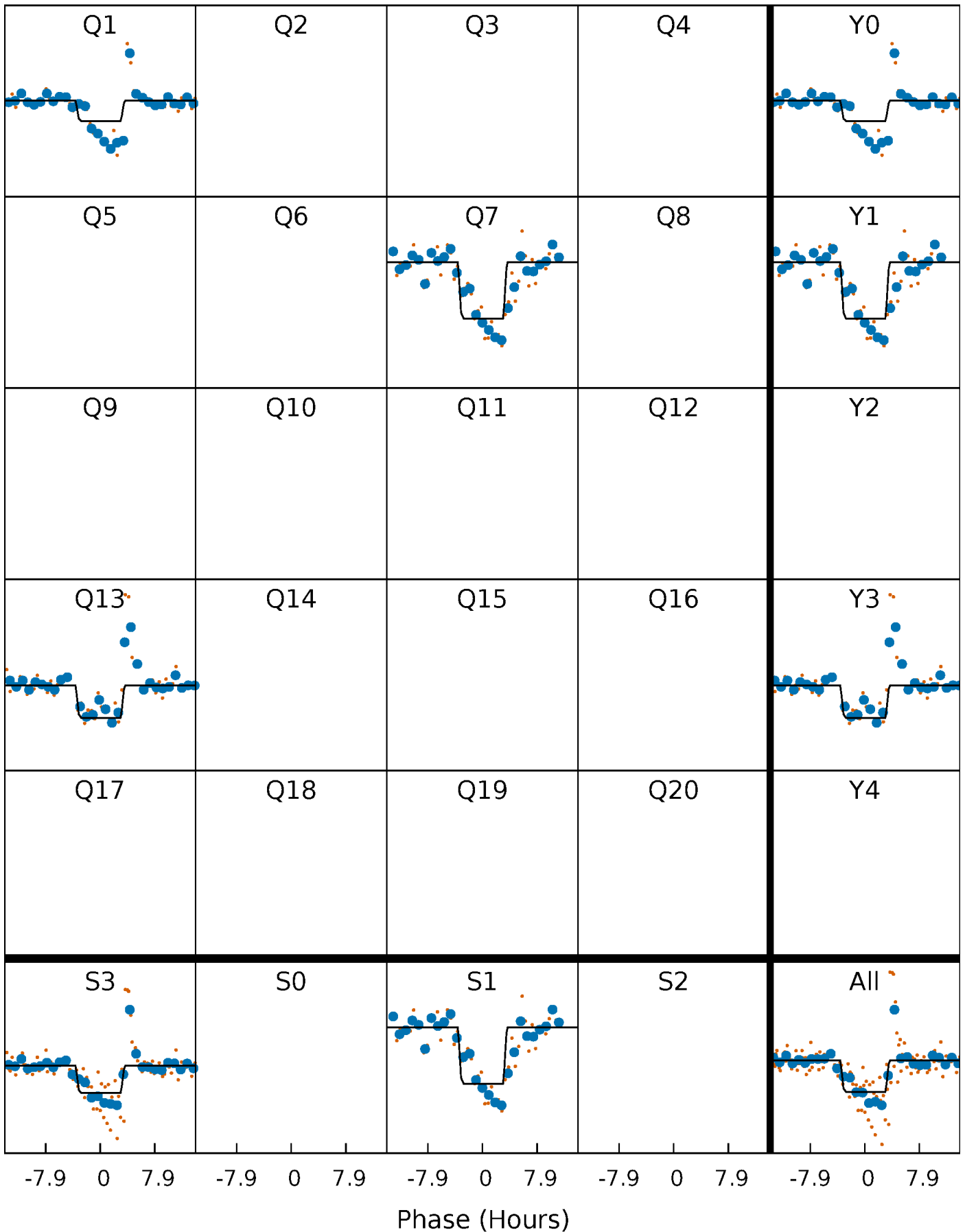
DV Quarter-Phased Transit Curves

TCE 012007544-01 P=537.775367 Days $T_0=159.932380$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

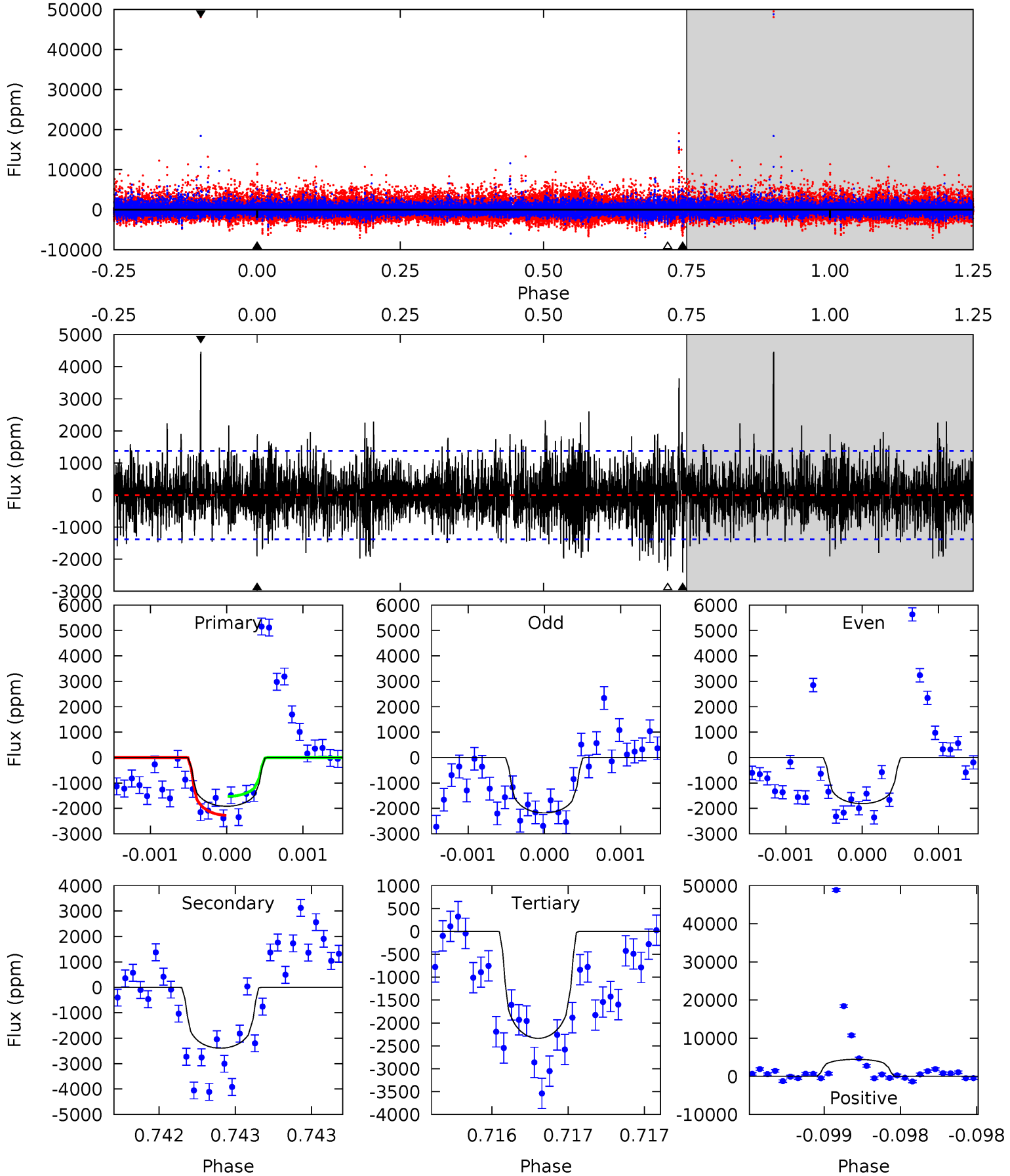
TCE 012007544-01 P=537.797677 Days $T_0=159.873229$ (BKJD)



DV Model-Shift Uniqueness Test

012007544-01, P = 537.775367 Days, E = 159.932380 Days

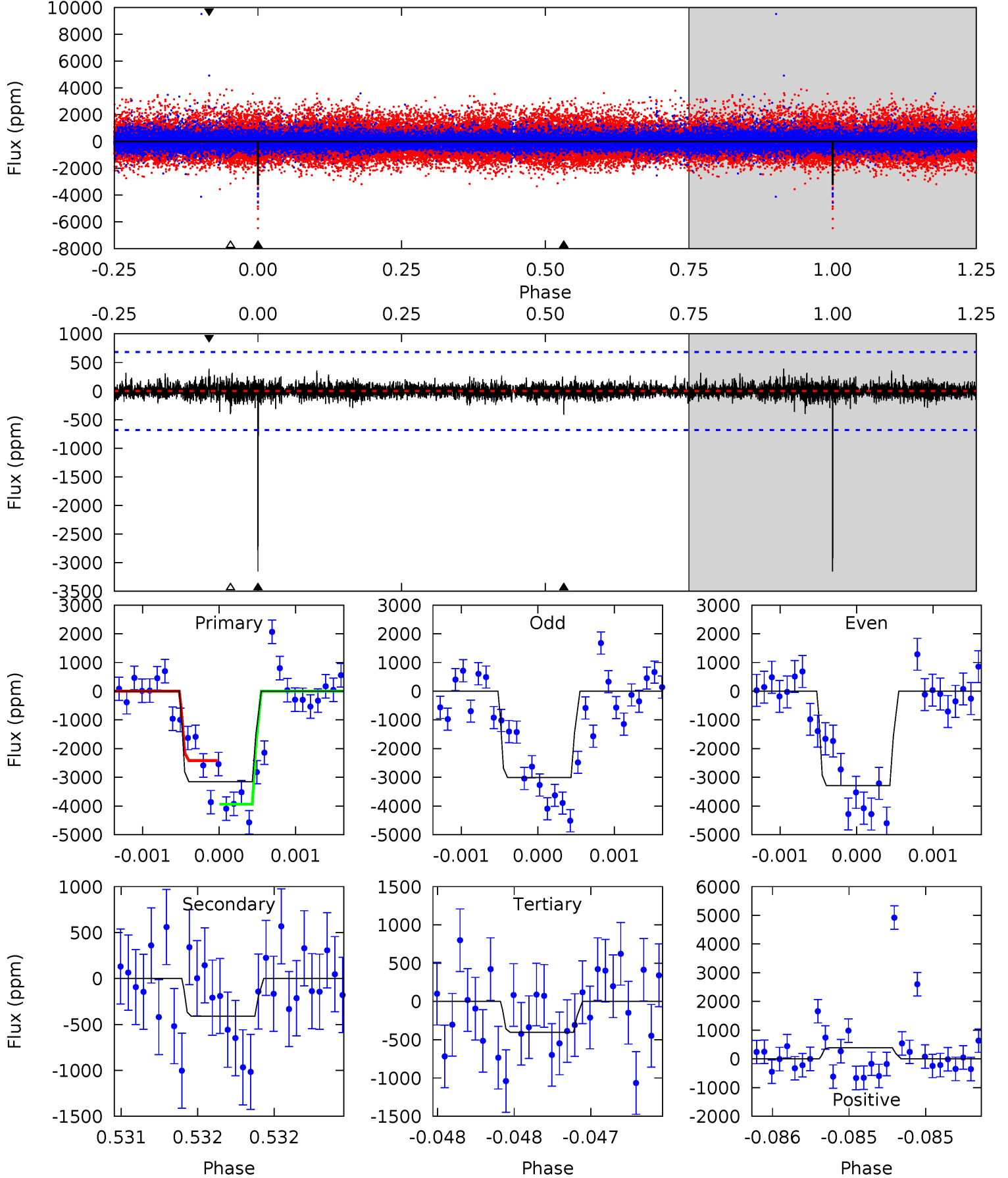
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.74	9.67	9.45	18.0	5.57	3.48	2.54	-1.71	-10.3	0.22	-8.36	0.58	0.88	0.65	1.50



Alt Model-Shift Uniqueness Test

012007544-01, P = 537.797677 Days, E = 159.873229 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.8	3.37	3.29	3.19	5.56	3.46	0.56	22.5	22.6	0.08	0.18	1.03	1.13	0.11	6.25



Stellar Parameters For KIC 012007544

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	3764^{+103}_{-114}	$4.730^{+0.052}_{-0.028}$	$0.000^{+0.100}_{-0.100}$	$0.516^{+0.034}_{-0.050}$	$0.523^{+0.039}_{-0.046}$	$5.345^{+1.322}_{-0.646}$
	+3%/-3%	+1%/-1%	+inf%/-inf%	+7%/-10%	+7%/-9%	+25%/-12%
Source	PHO2	PHO2	PHO2	DSEP		

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

Secondary Eclipse Parameters for KIC 012007544-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-2393 ± 247	$3.90^{+3.41}_{-2.56}$	162^{+5}_{-6}	3371^{+1609}_{-569}	$95824^{+700014}_{-69084}$
Alt.	-412 ± 122	$4.11^{+3.19}_{-2.66}$	163^{+6}_{-5}	2587^{+909}_{-342}	$14503^{+101688}_{-10212}$

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 $A_{obs} \gg 1.0$

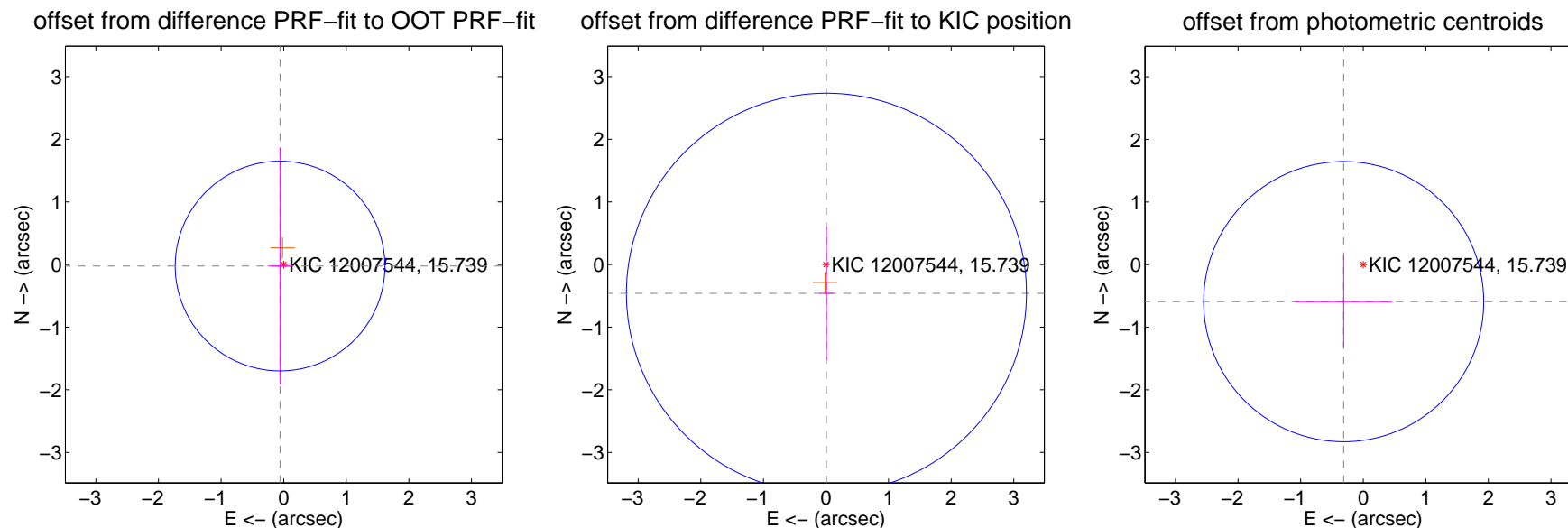
DV Centroid Data

Supplemental centroid analysis for 012007544-01. Kepler magnitude: 15.74. Transit SNR 6.62

There are 1 quarters with good PRF difference image offsets

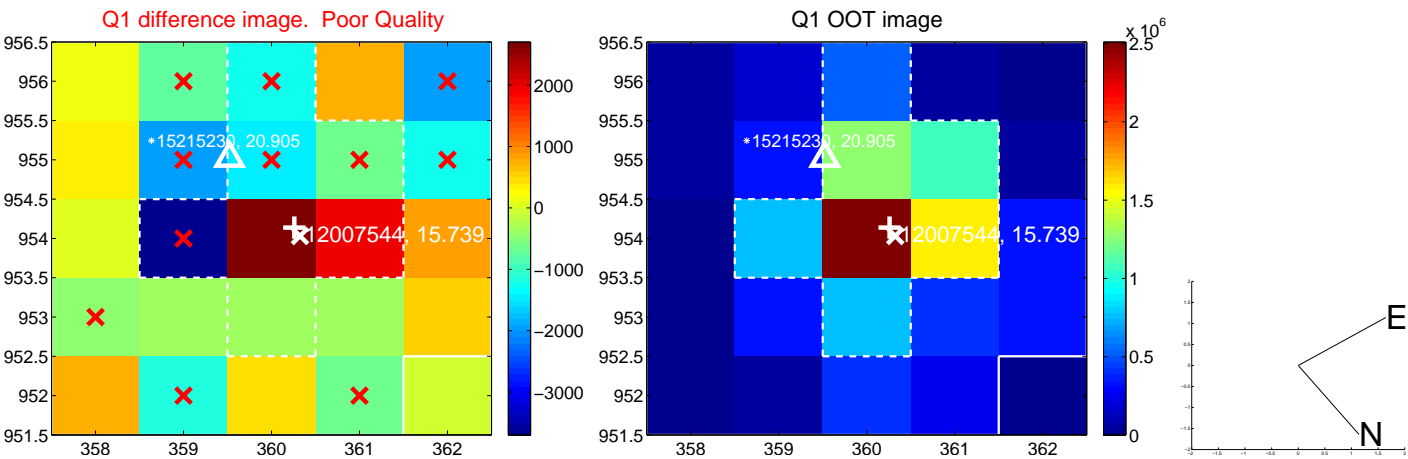
The direct PRF centroid is offset from the target star catalog position by about 0.55 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.063 ± 0.558	0.11	0.058 ± 0.194	-0.024 ± 1.893
PRF-fit source offset from KIC position	0.460 ± 1.065	0.43	-0.007 ± 0.109	-0.460 ± 1.064
photometric centroid source offset	0.67 ± 0.75	0.90	0.31 ± 0.78	-0.59 ± 0.74

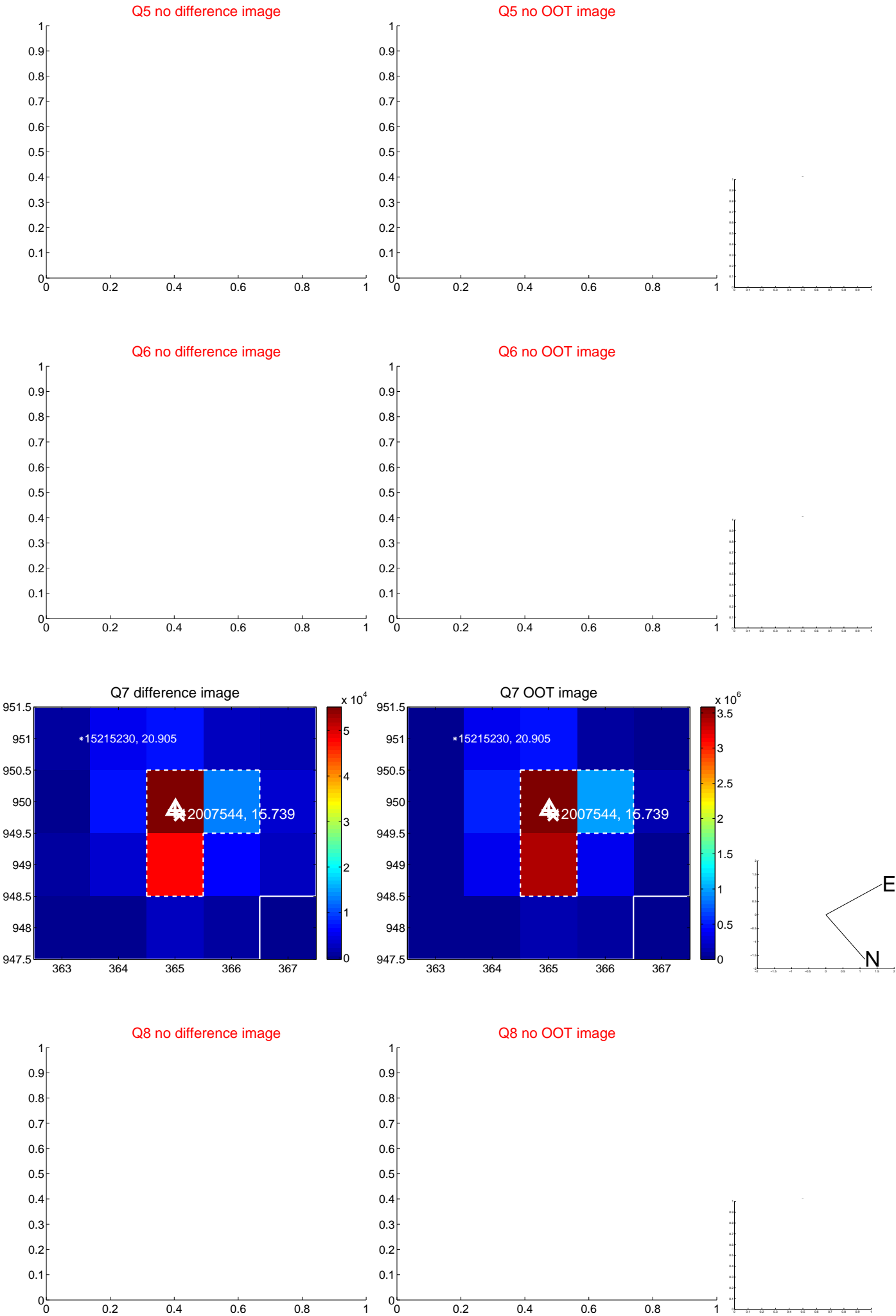


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



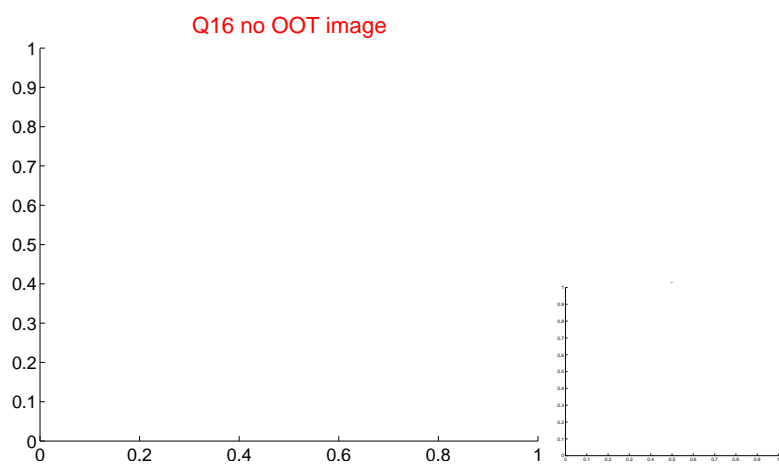
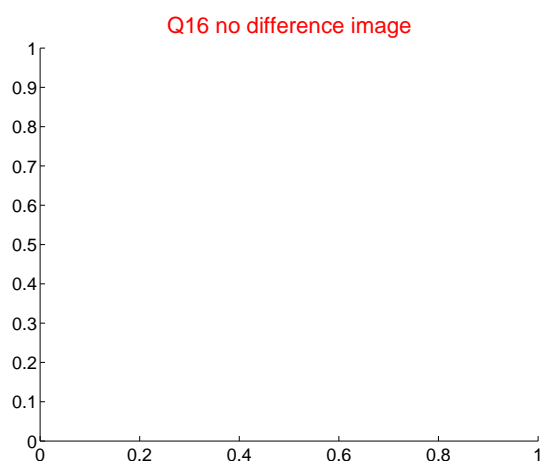
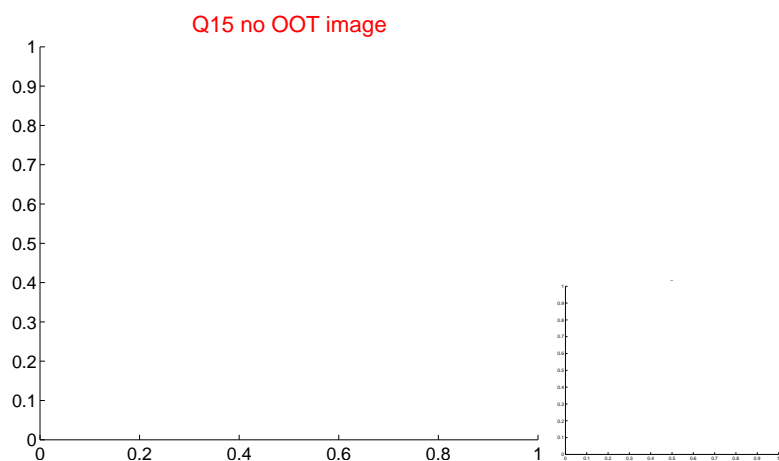
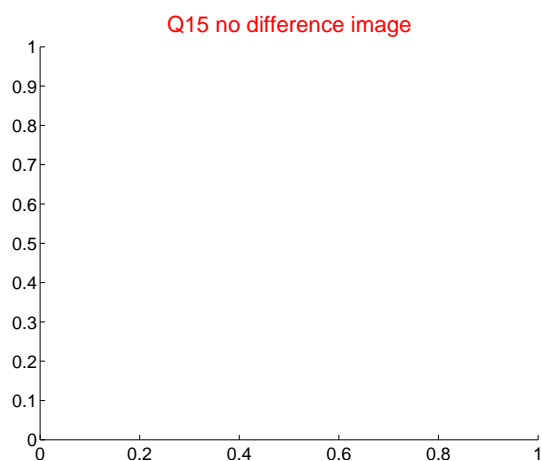
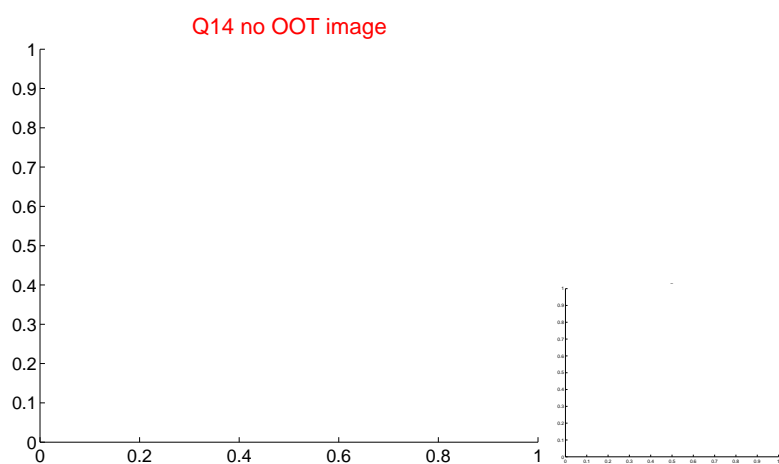
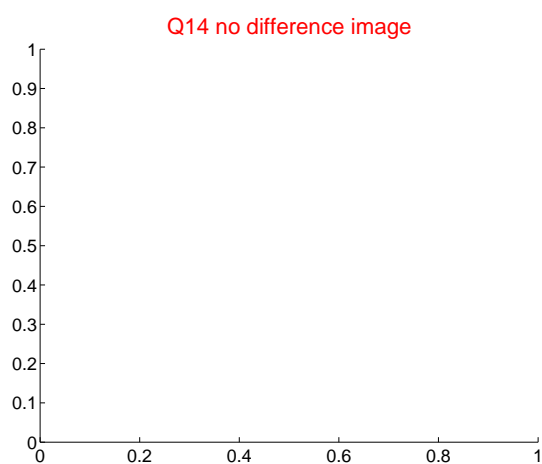
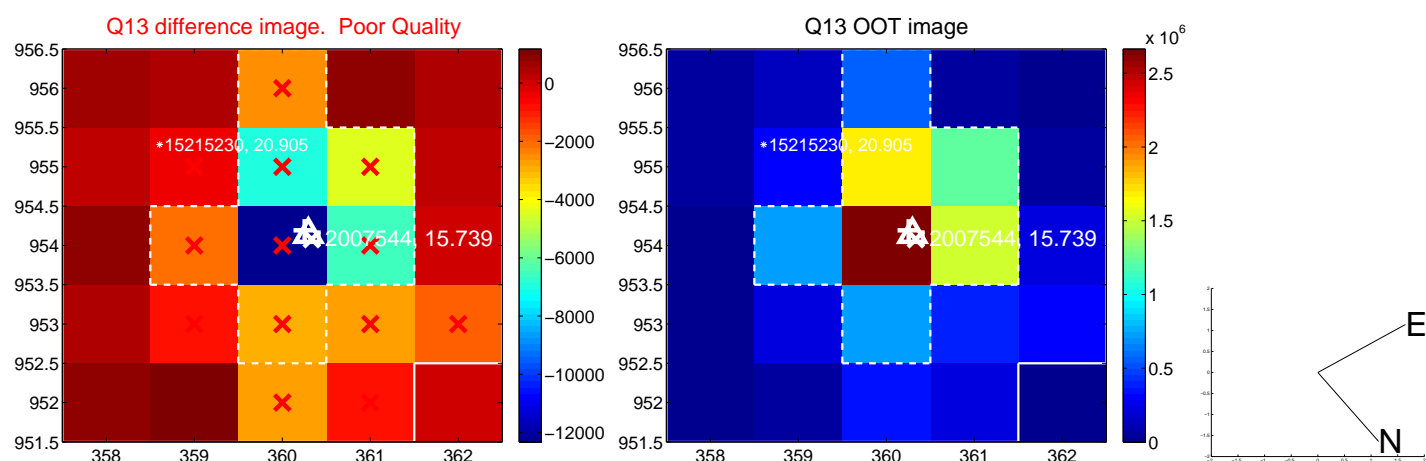
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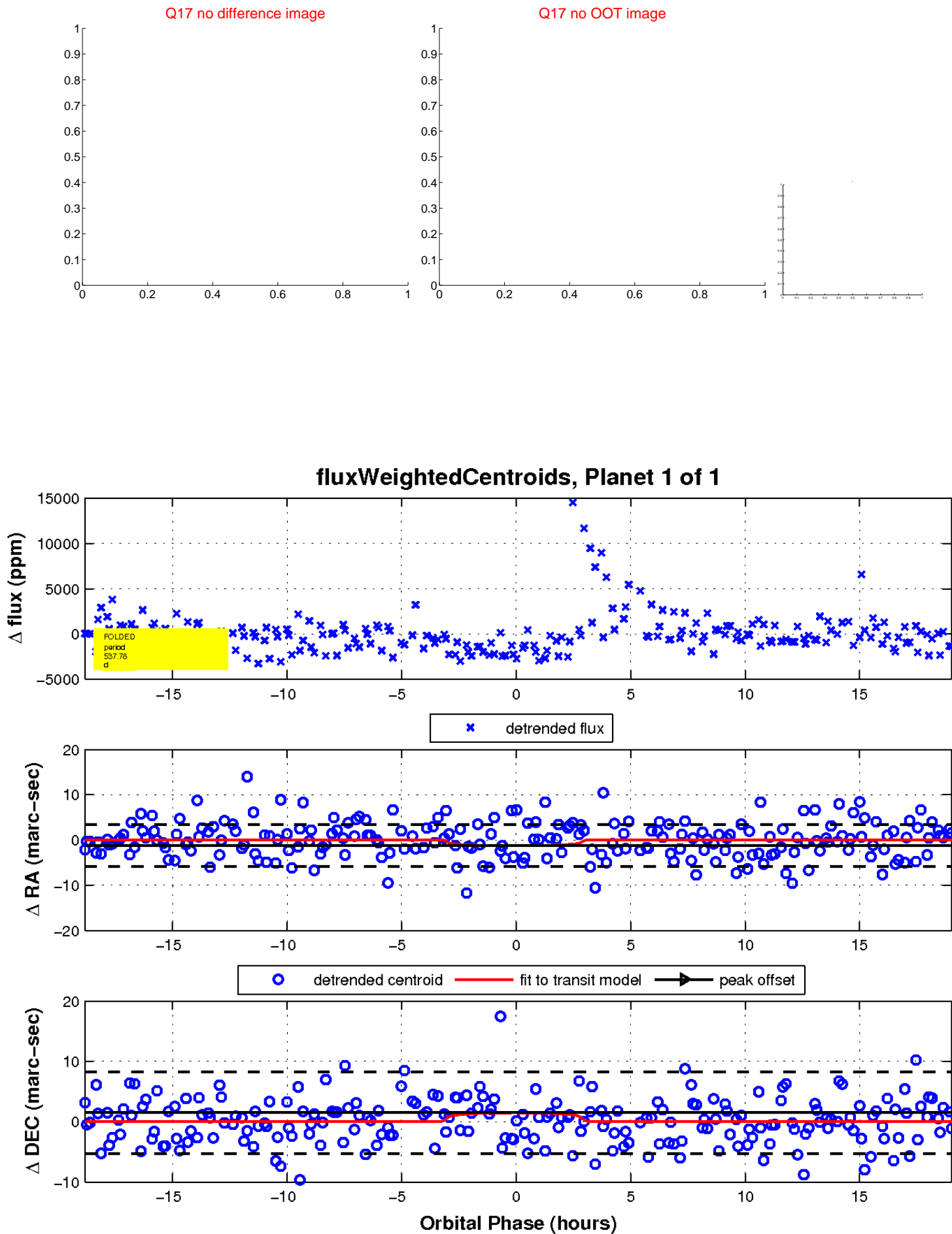
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UKIRT Image

Declination

