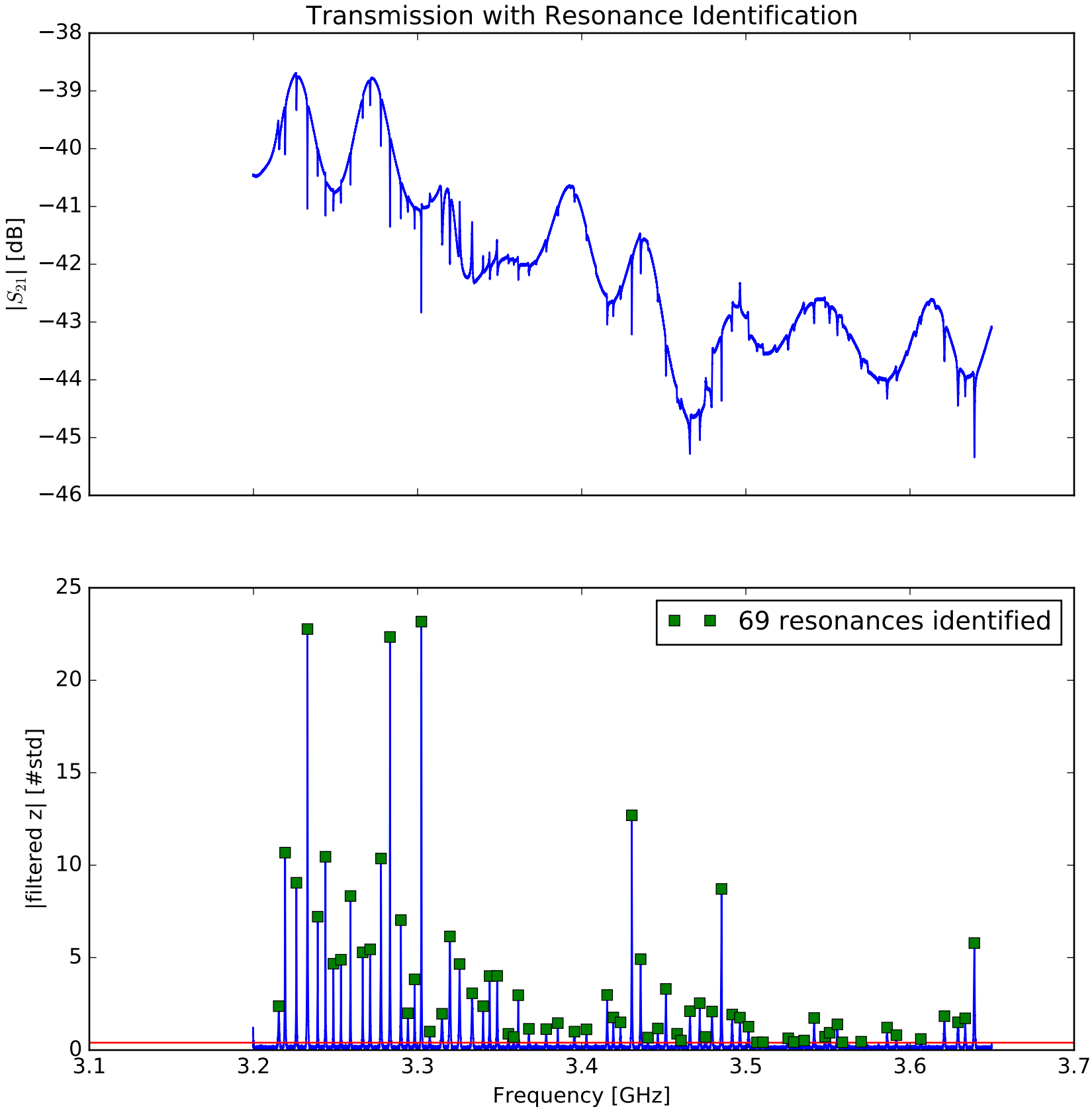
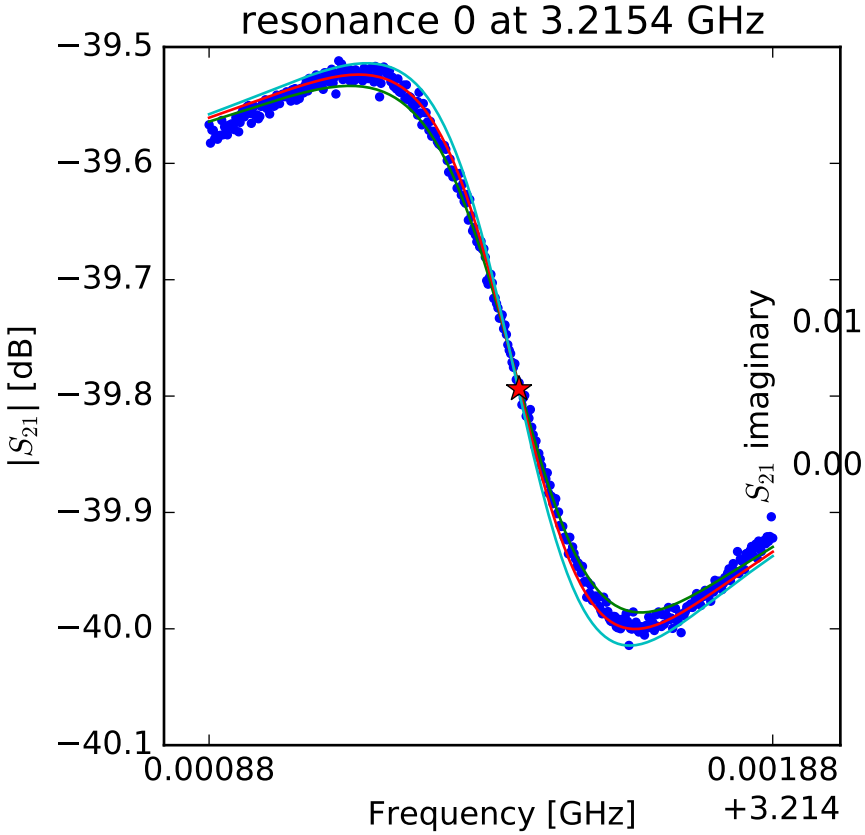
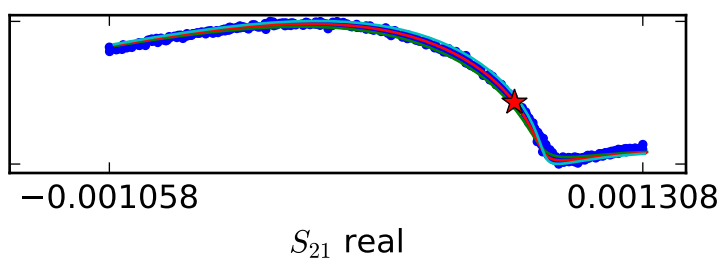
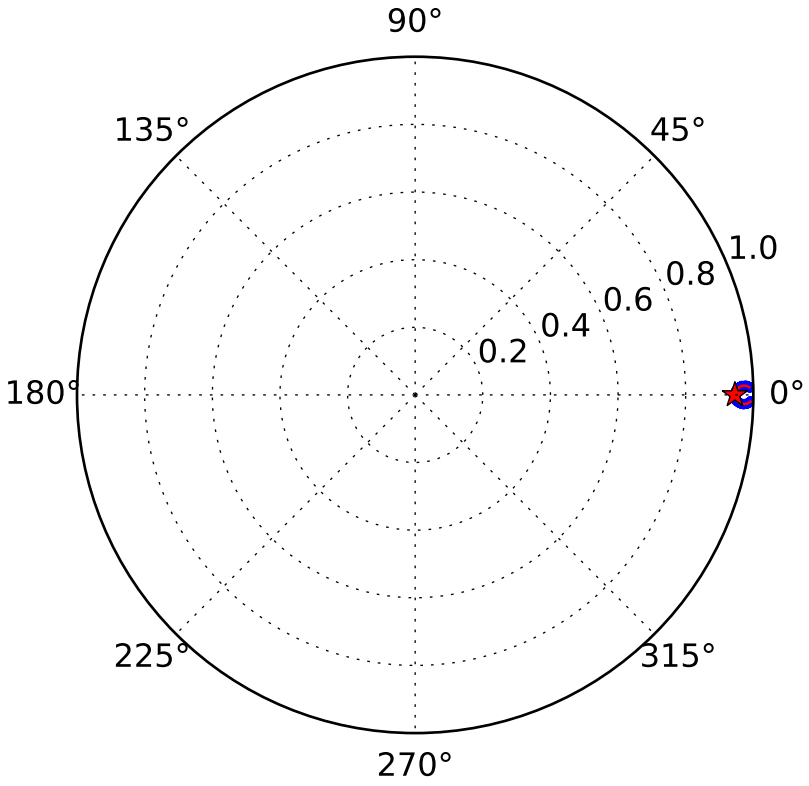
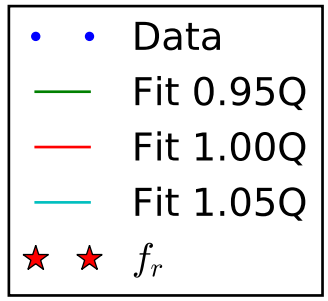

Transmission with Resonance Identification
$|S_{21}|$ [dB]
−38
−39
−40
−41
−42
−43
−44
−45
−46
|filtered z| [#std]
25
20
15
10
5
0
69 resonances identified
3.1
3.2
3.3
3.4
3.5
3.6
3.7
Frequency [GHz]



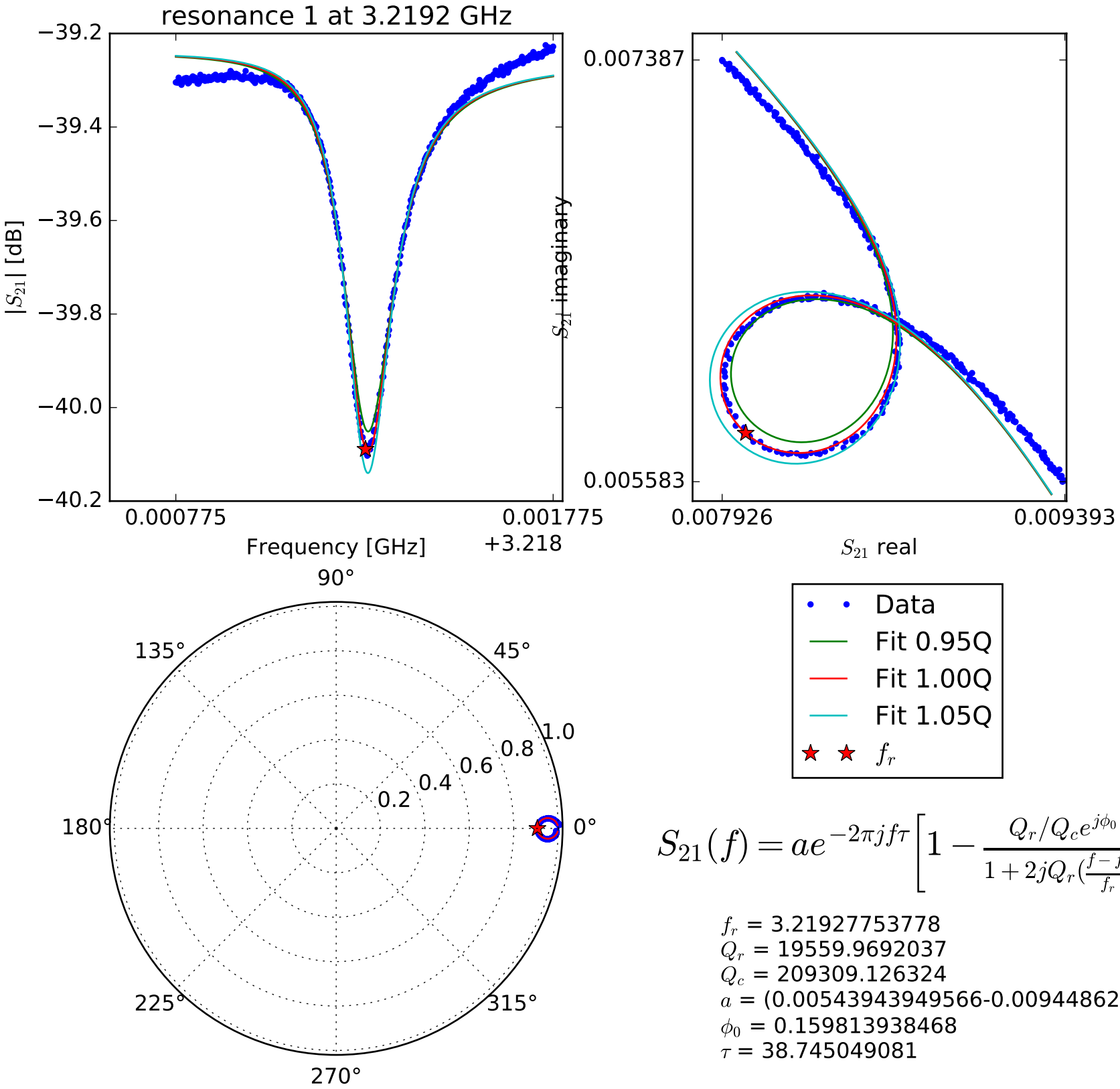






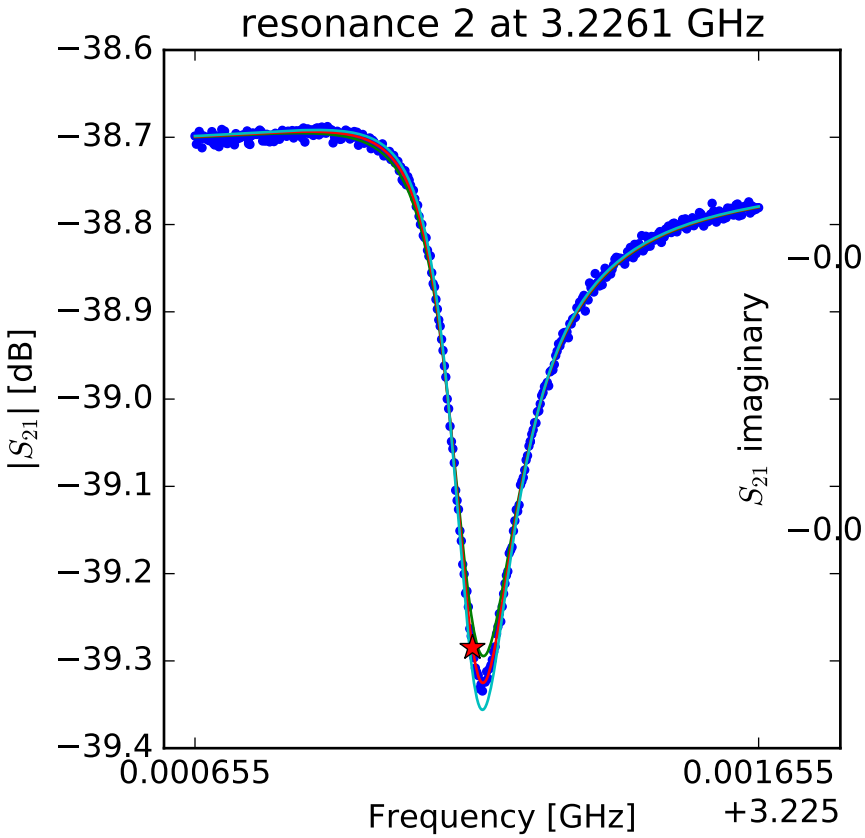
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

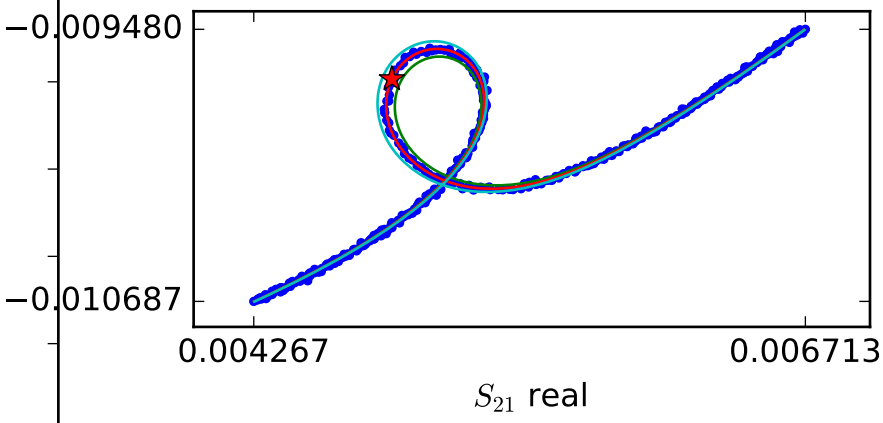
f_r = 3.21542994456
Q_r = 6645.20345539
Q_c = 121742.201554
a = (0.00184636639842+0.010164528894j)
ϕ_0 = 1.38223988035
τ = 37.3120516996

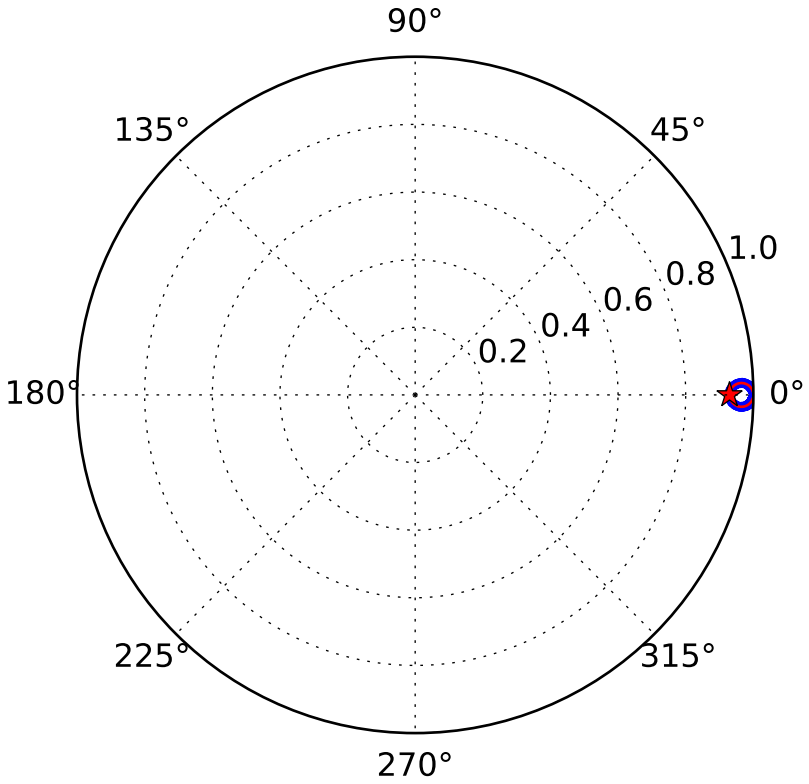


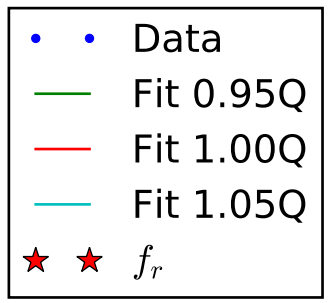
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.21927753778
Q_r = 19559.9692037
Q_c = 209309.126324
a = (0.00543943949566-0.00944862832666j)
ϕ_0 = 0.159813938468
τ = 38.745049081



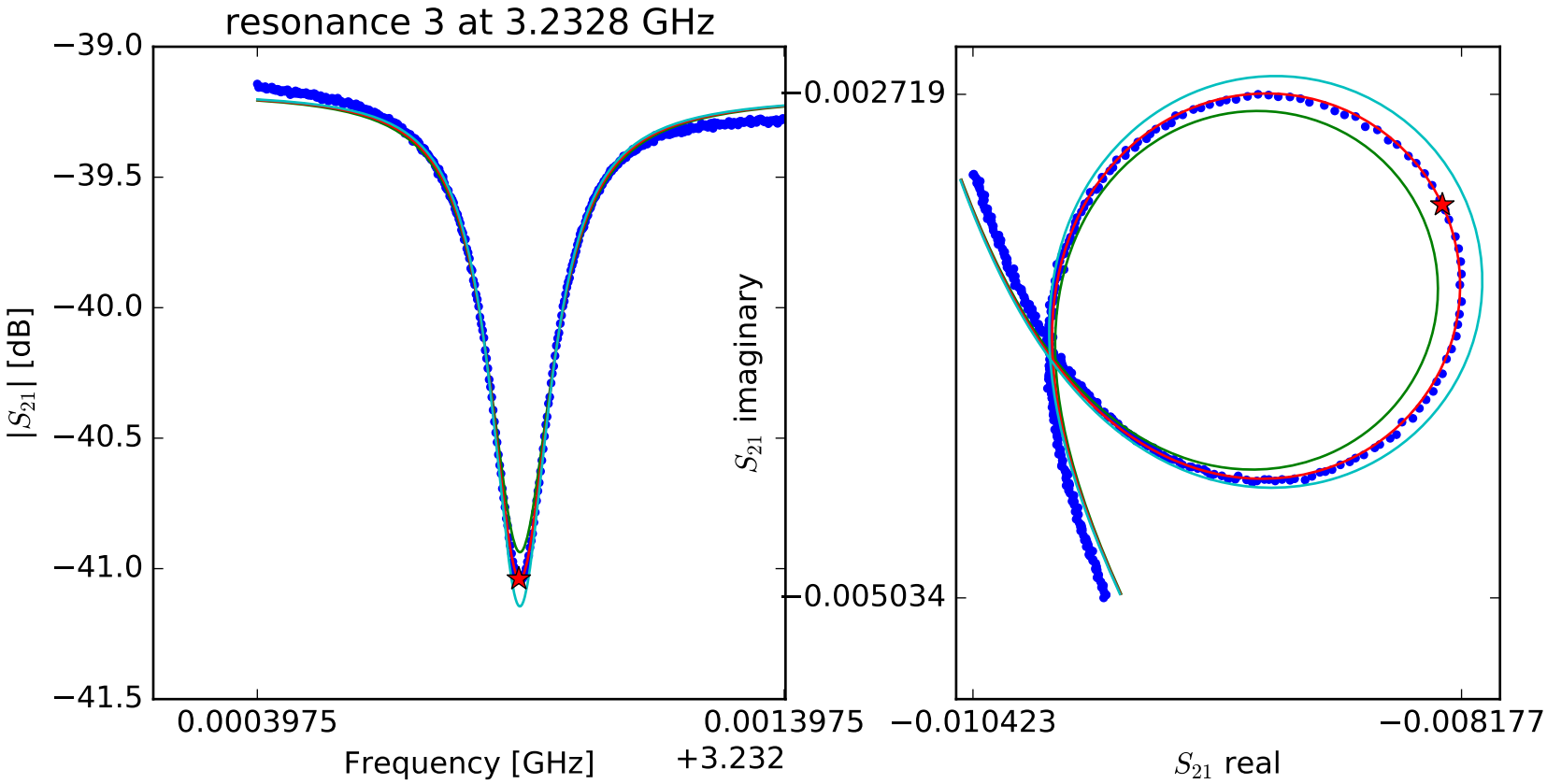


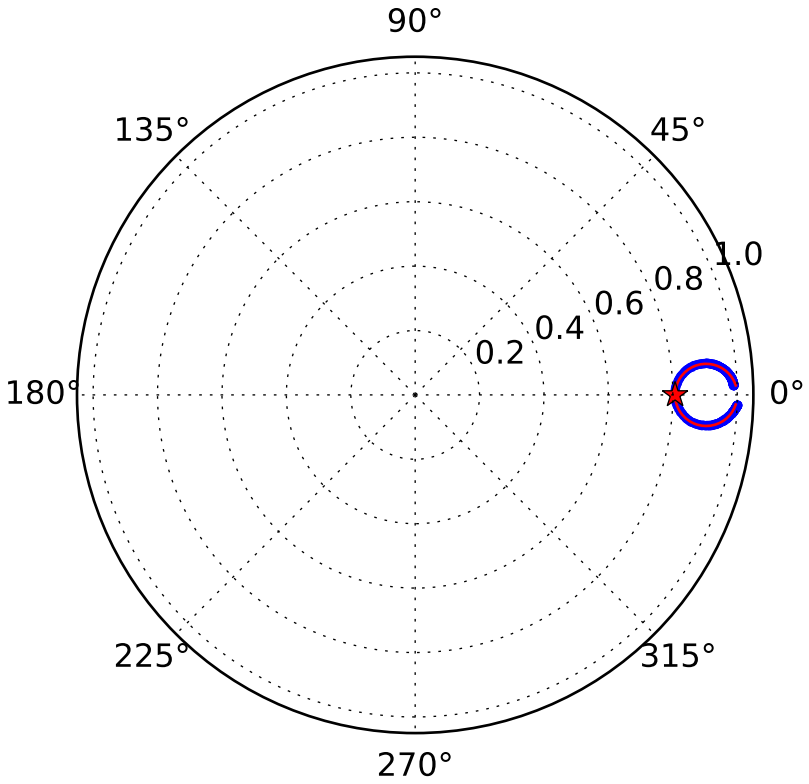


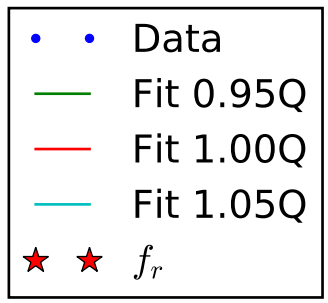


$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.22614730665
Q_r = 21950.7680054
Q_c = 311583.522467
a = (0.00889162011501+0.00741231683071j)
ϕ_0 = 0.477774710724
τ = 40.3828213046

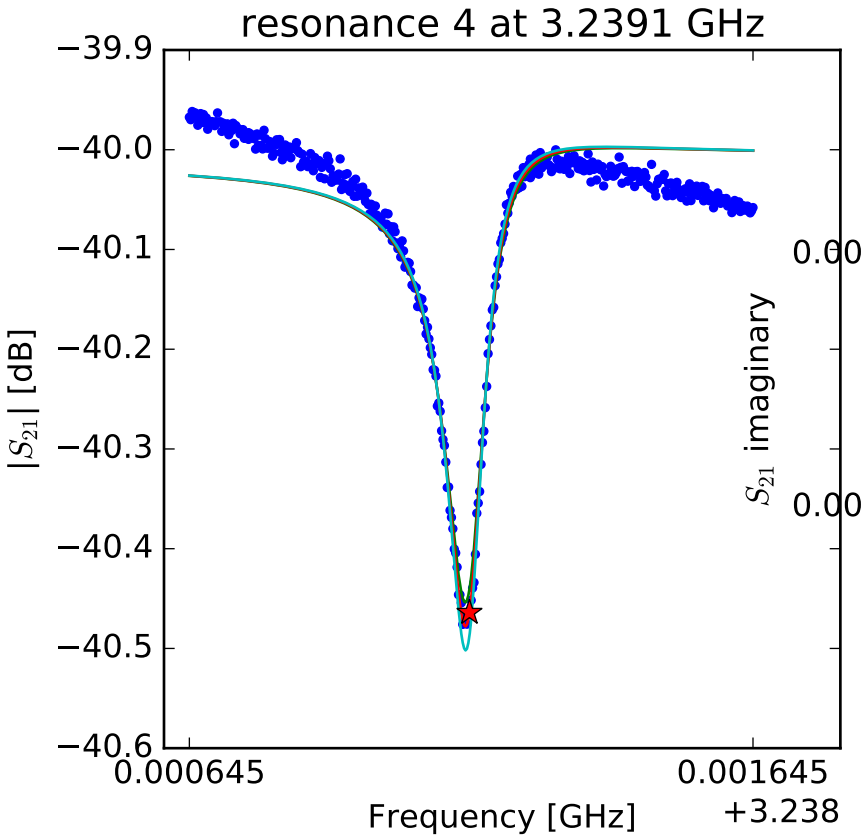


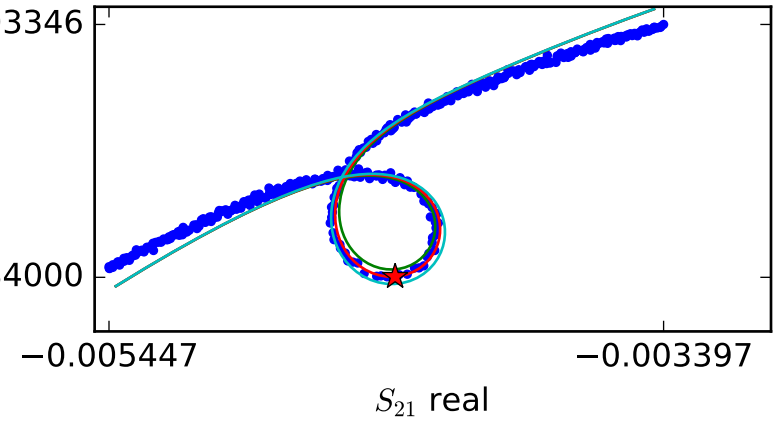


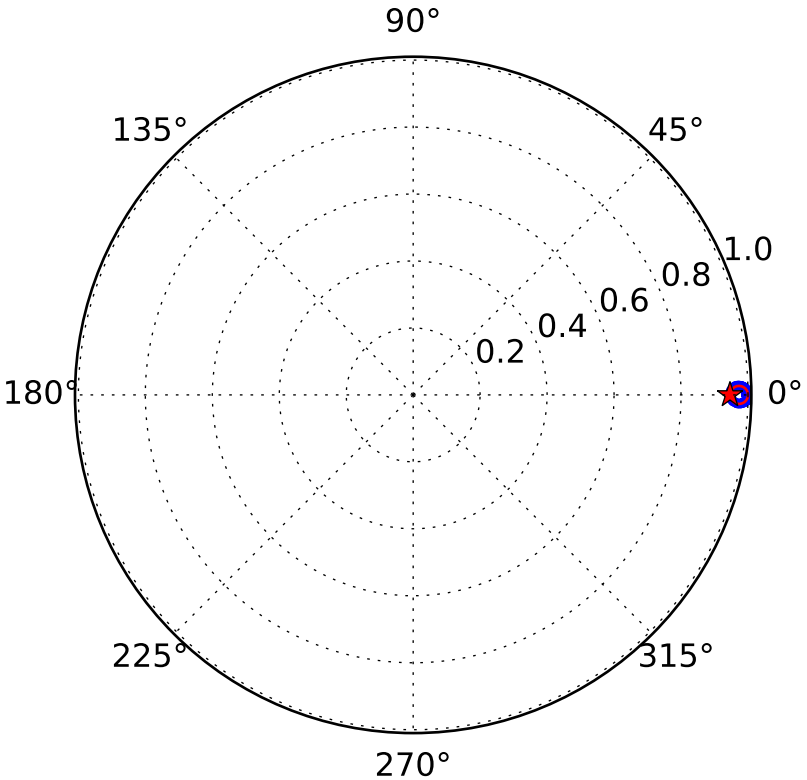


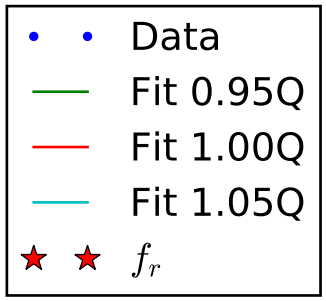
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.23289386617
Q_r = 20426.0175312
Q_c = 105794.243246
a = (-0.0069996497058+0.00847524860728j)
ϕ_0 = 0.0465581855816
τ = 39.2214719192



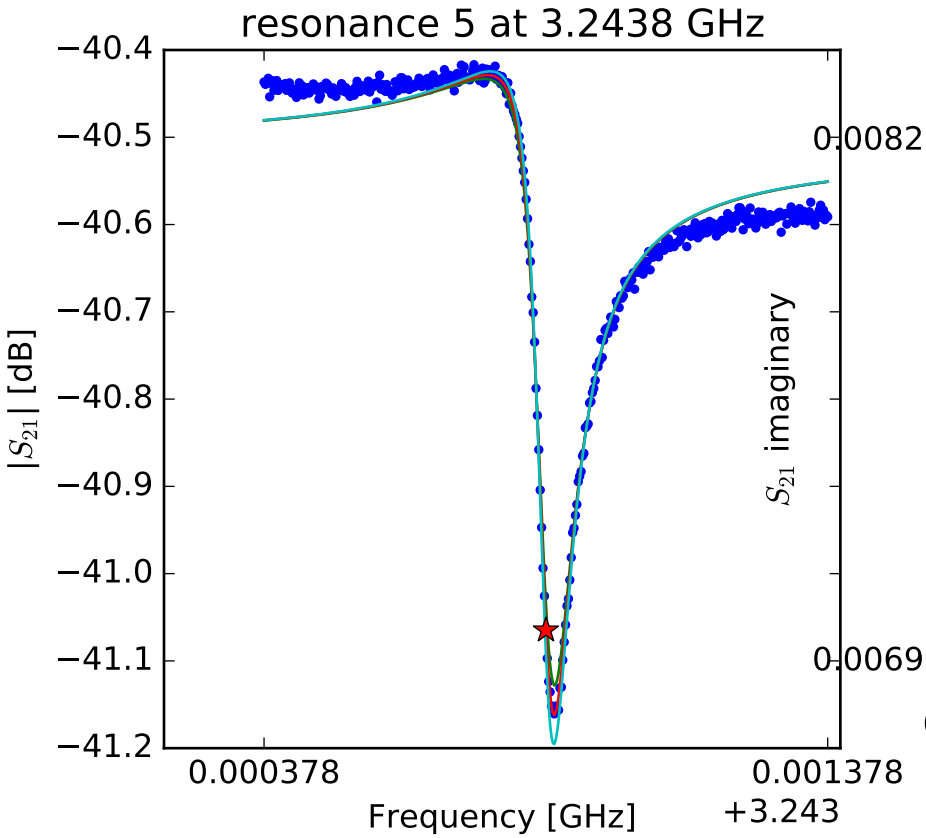


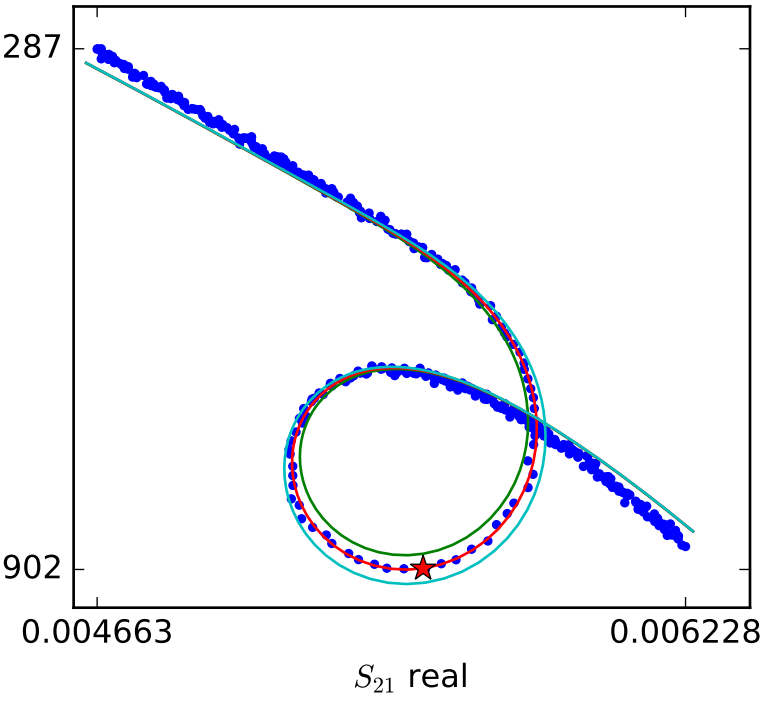


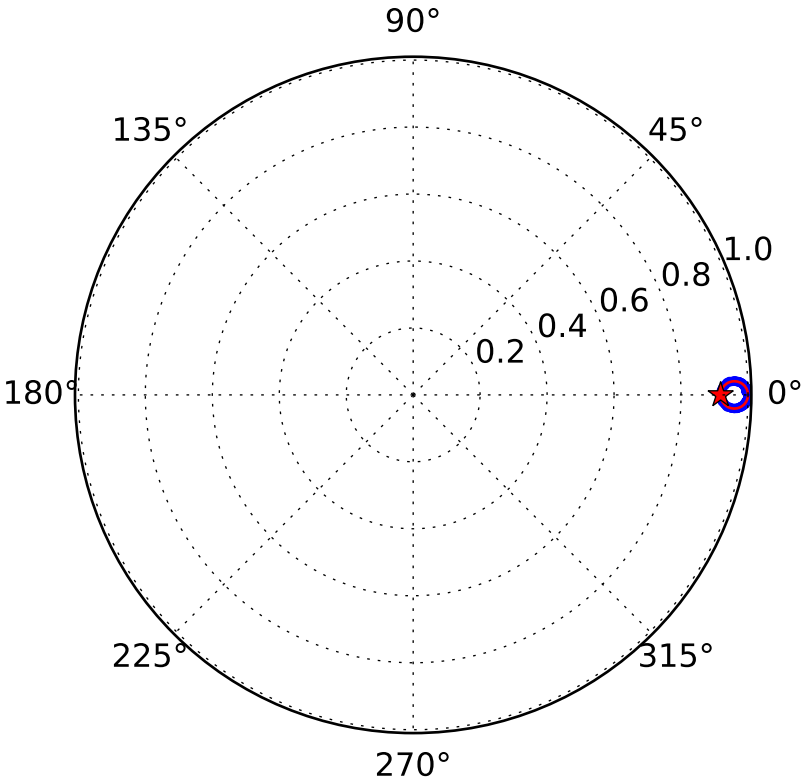


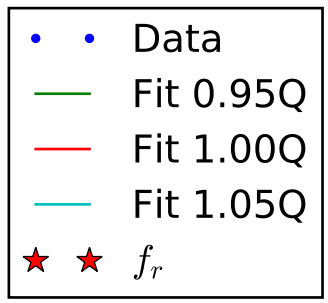
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.23914194894
Q_r = 38196.8129165
Q_c = 709120.2438
a = (-0.00998007111008-0.000403227792621j)
ϕ_0 = -0.324363933605
τ = 37.1032486837



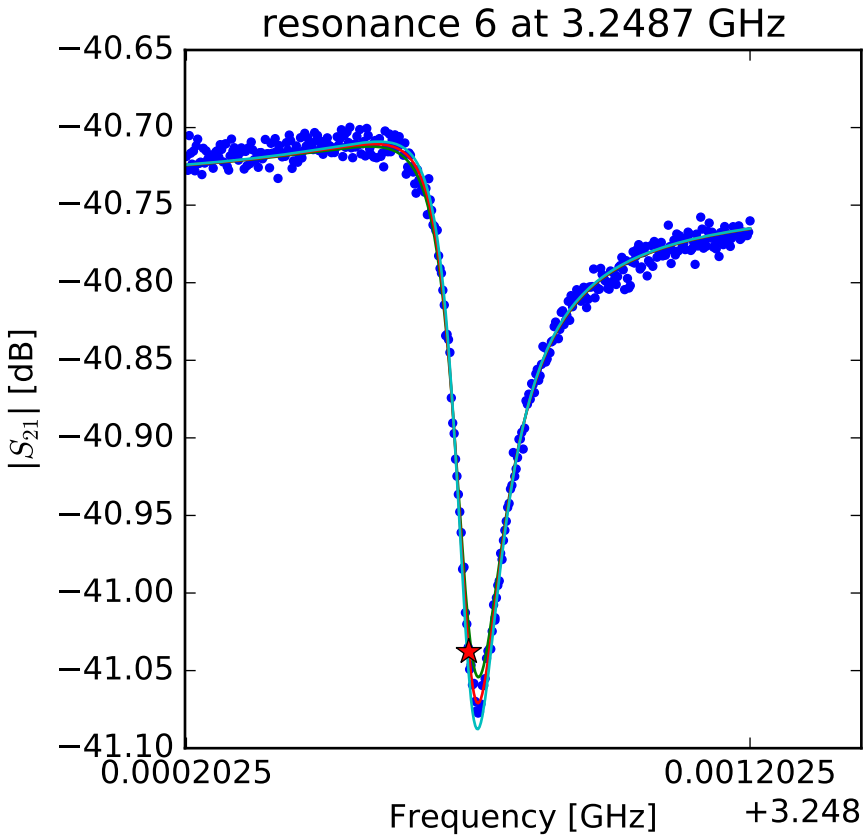


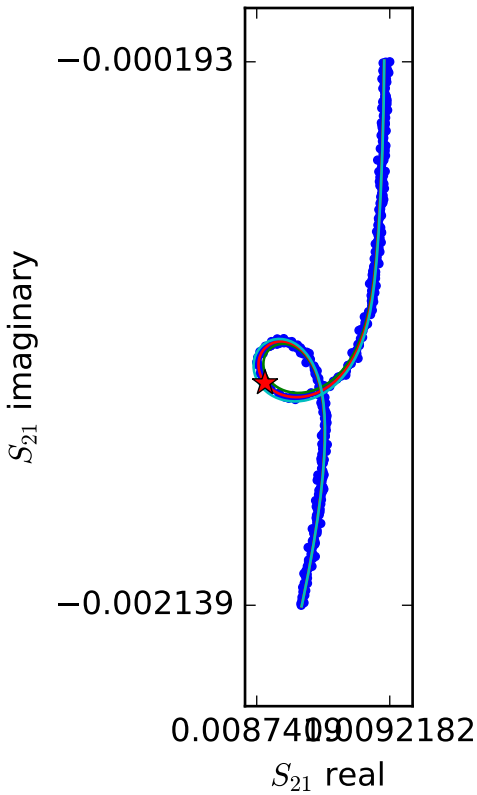


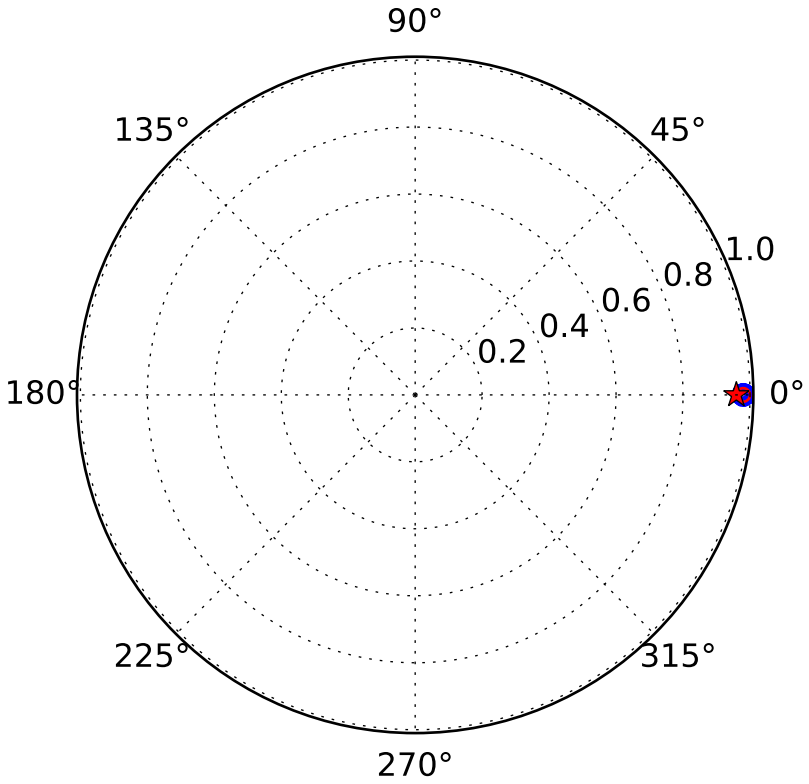


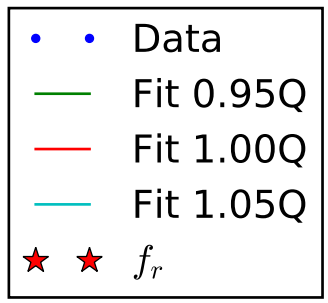
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.24387769383
Q_r = 41520.0348344
Q_c = 508021.186194
a = (0.00689191797362+0.00643208341562j)
ϕ_0 = 0.689491151566
τ = 36.0581304647



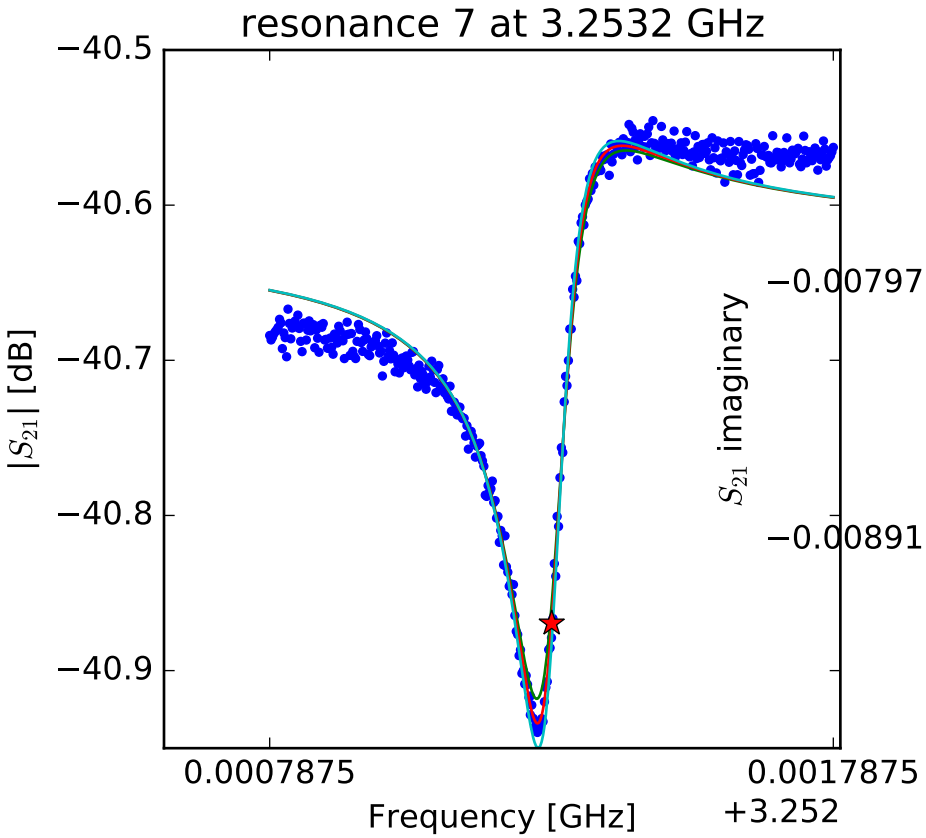


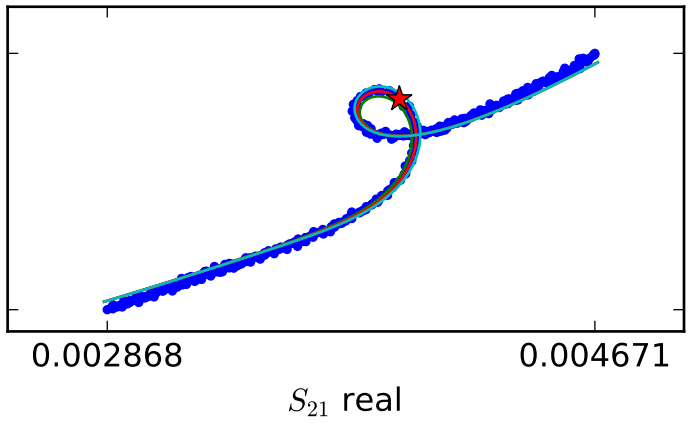


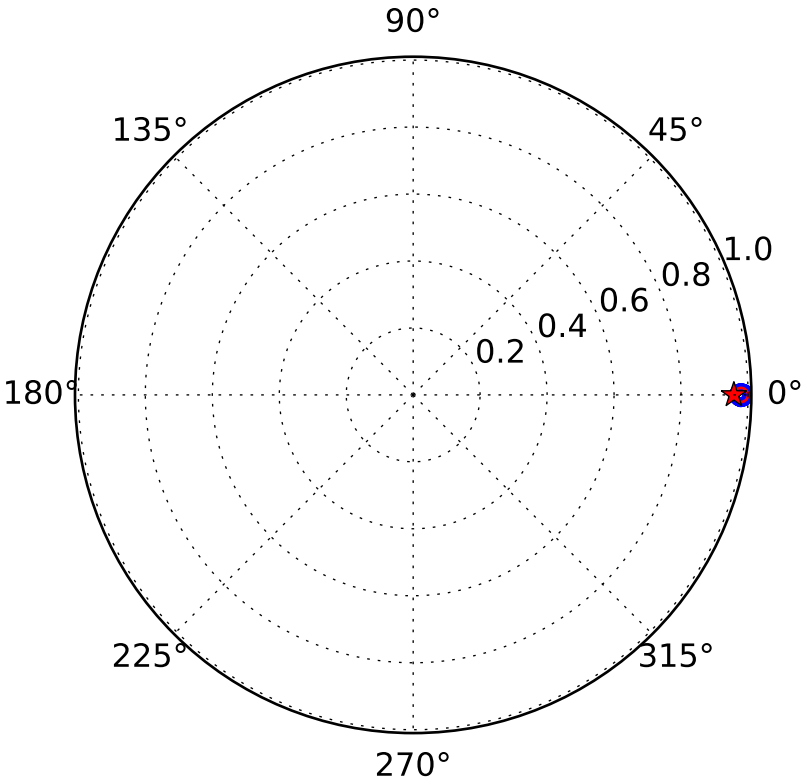


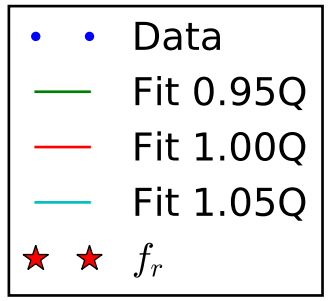
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.24870347119
Q_r = 31031.7099154
Q_c = 760757.981867
a = (0.00713159448970.00578325476559j)
ϕ_0 = 0.593382504915
τ = 35.4384027536



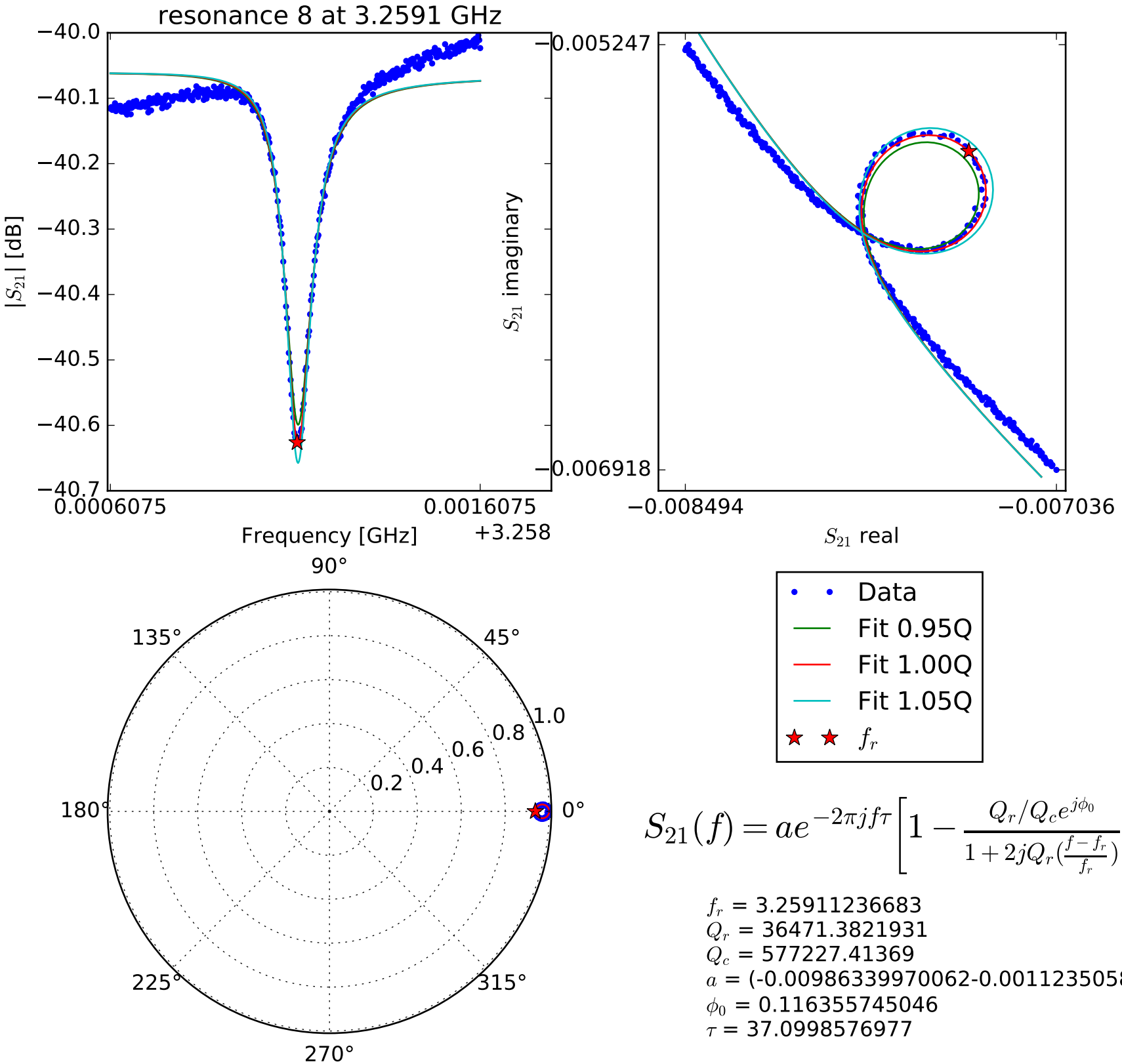






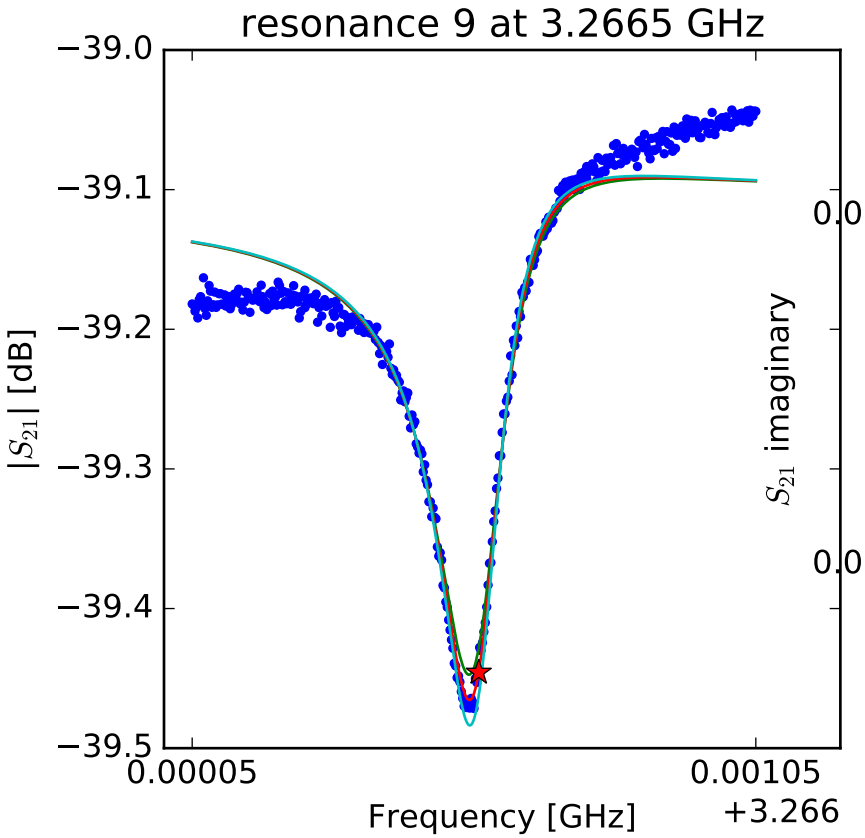
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

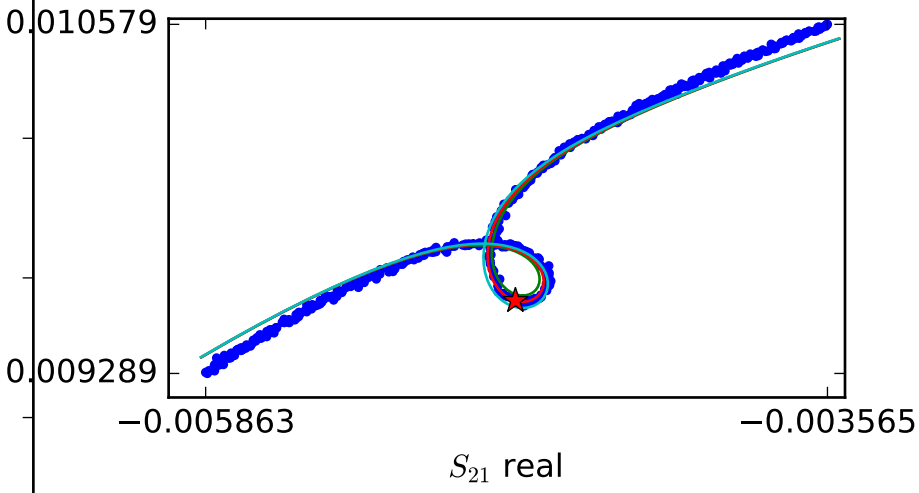
f_r = 3.25328784025
Q_r = 28989.6097643
Q_c = 686010.269459
a = (0.00821751751698+0.00437404074765j)
ϕ_0 = -0.827088856164
τ = 35.7364860876

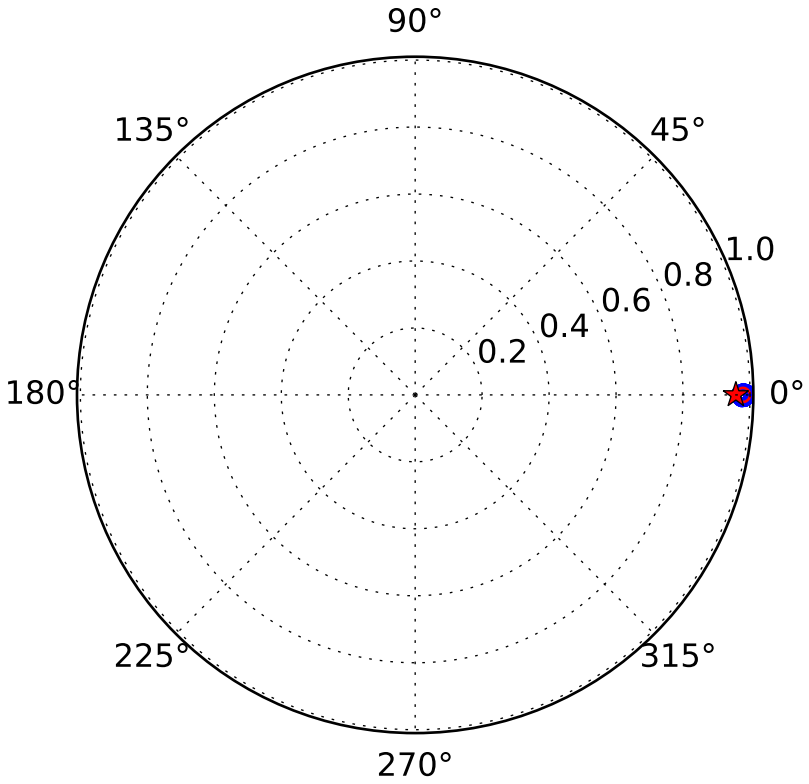


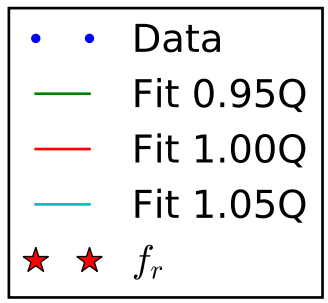
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.25911236683
Q_r = 36471.3821931
Q_c = 577227.41369
a = (-0.00986339970062-0.00112350584135j)
ϕ_0 = 0.116355745046
τ = 37.0998576977



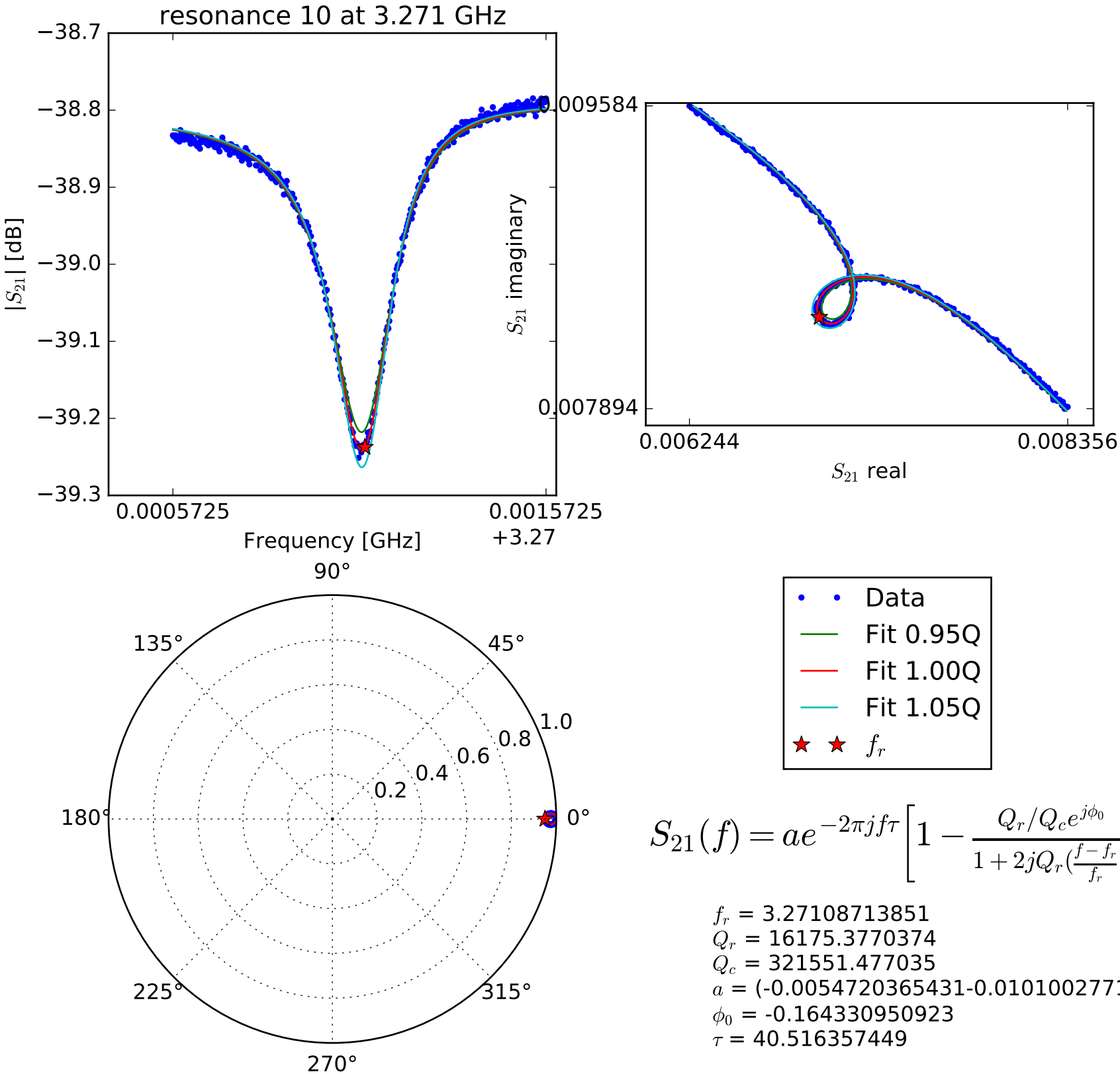






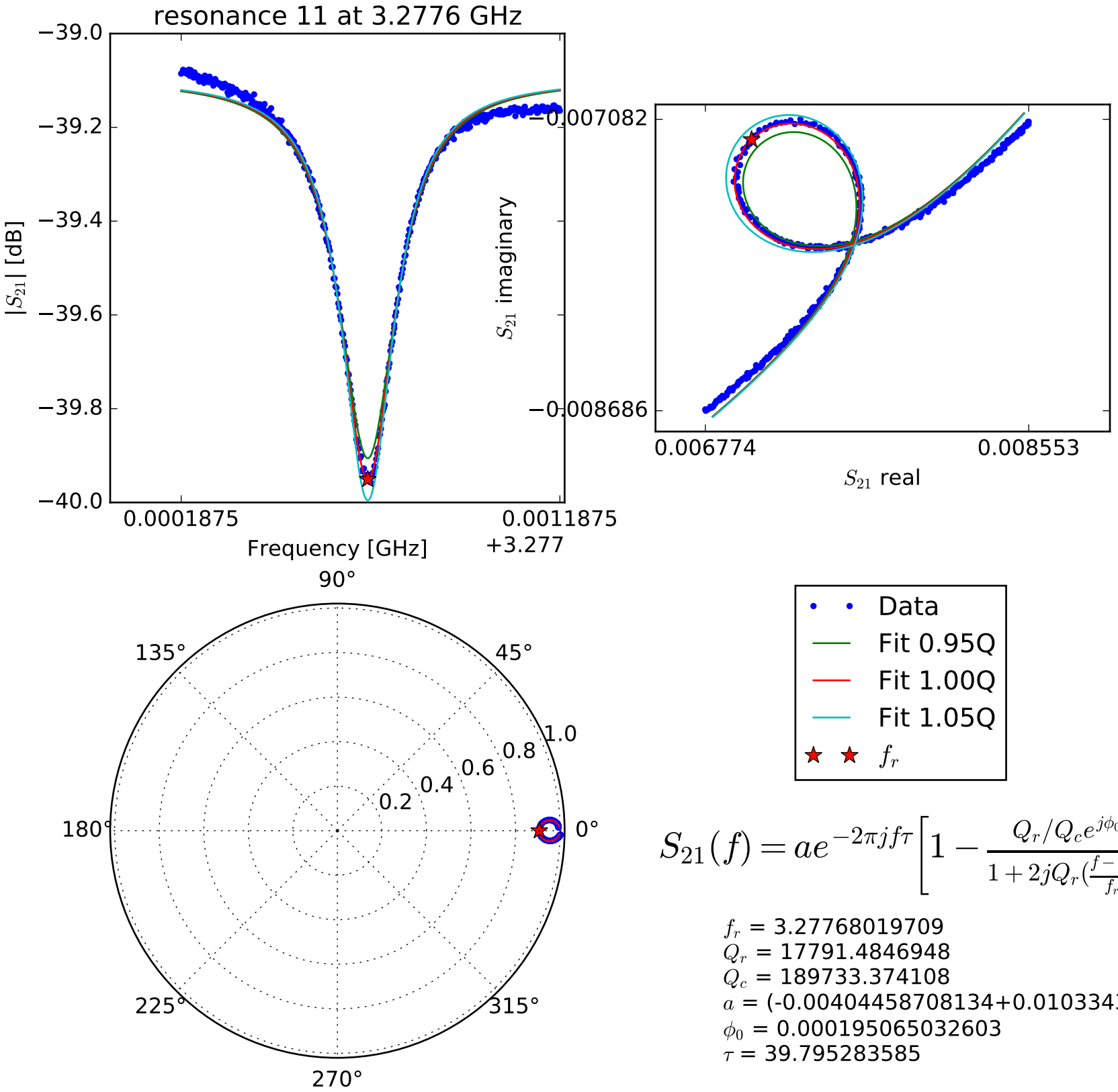
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.26655834335
Q_r = 22955.5953423
Q_c = 542884.964544
a = (0.00880115018173-0.00673059782491j)
ϕ_0 = -0.445562496778
τ = 39.667476277



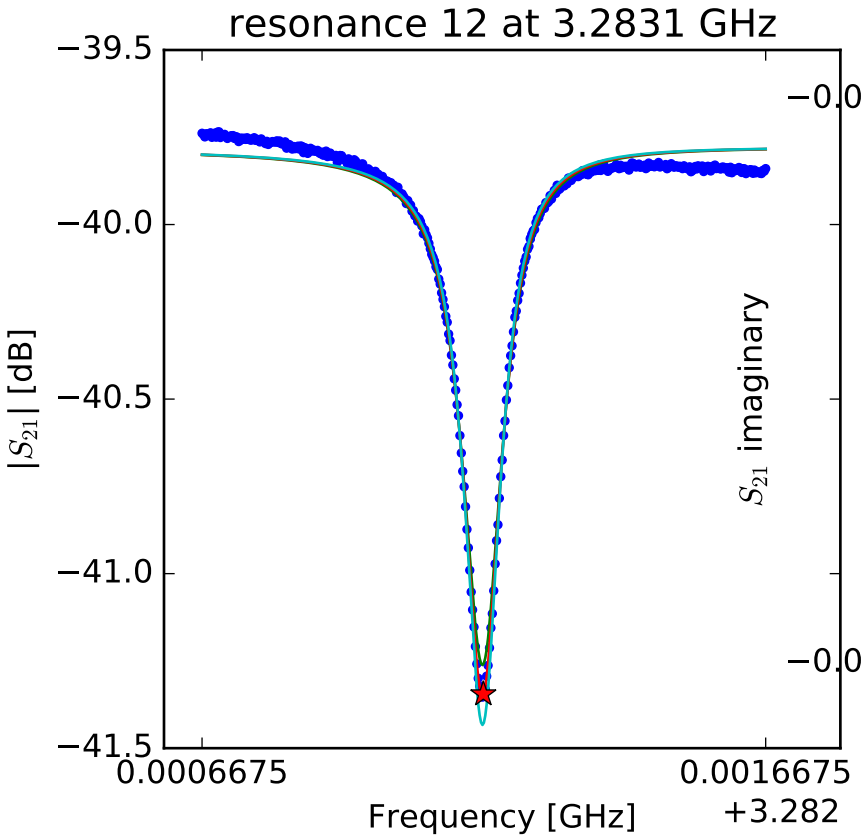
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

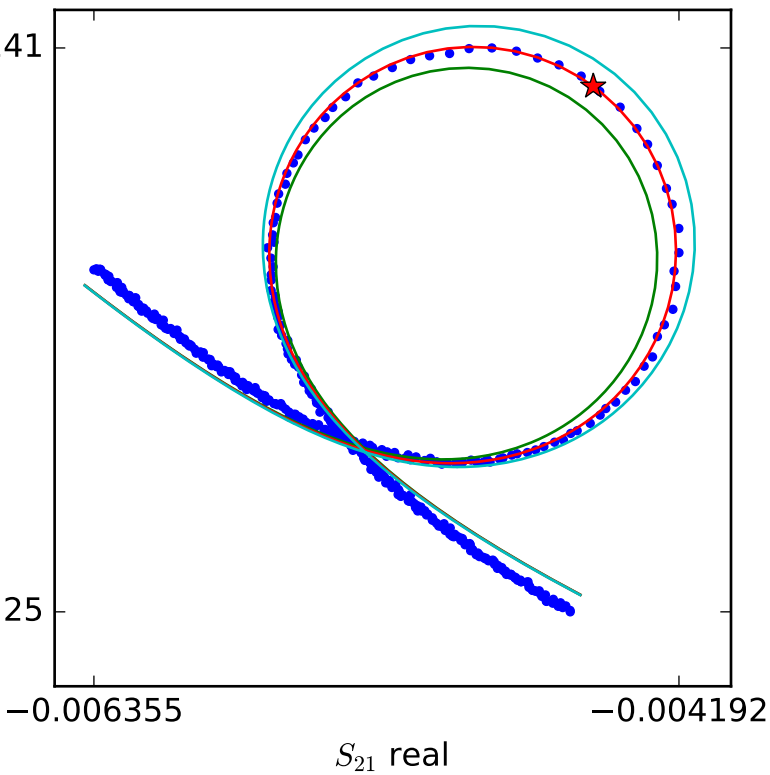
f_r = 3.27108713851
Q_r = 16175.3770374
Q_c = 321551.477035
a = (-0.0054720365431-0.0101002771015j)
ϕ_0 = -0.164330950923
τ = 40.516357449

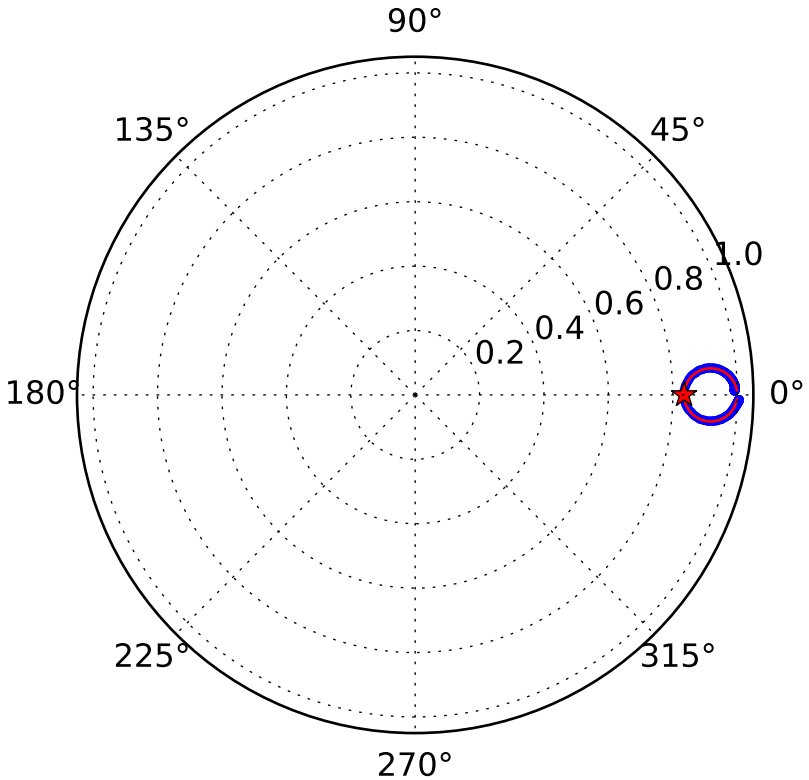


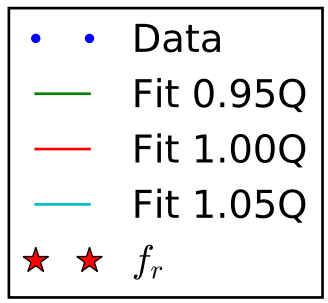
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.27768019709
Q_r = 17791.4846948
Q_c = 189733.374108
a = (-0.00404458708134+0.0103343639463j)
ϕ_0 = 0.000195065032603
τ = 39.795283585



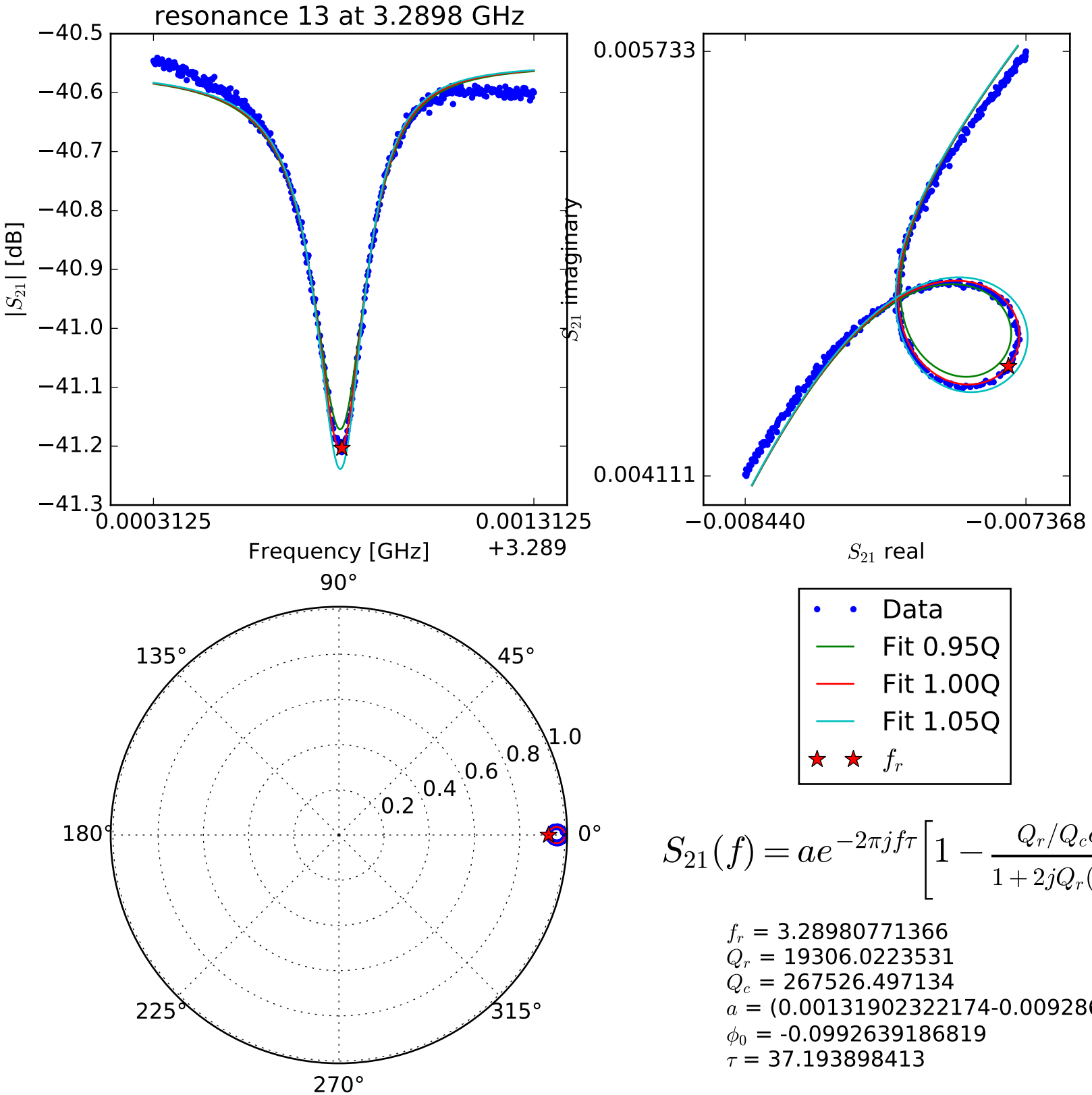






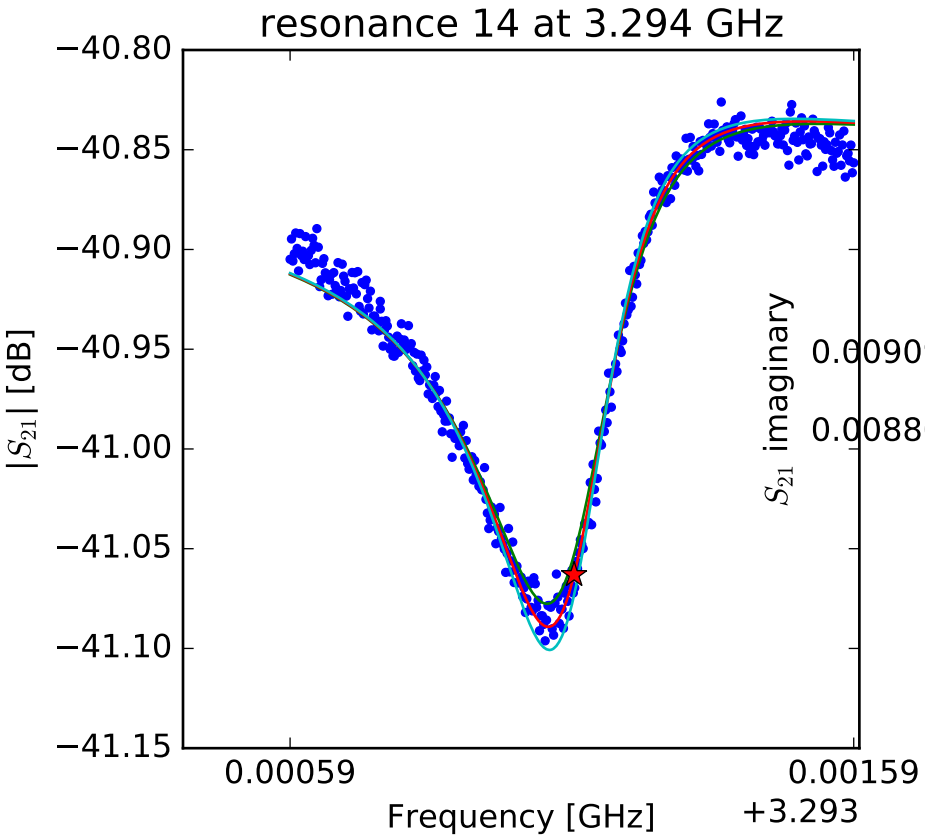
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

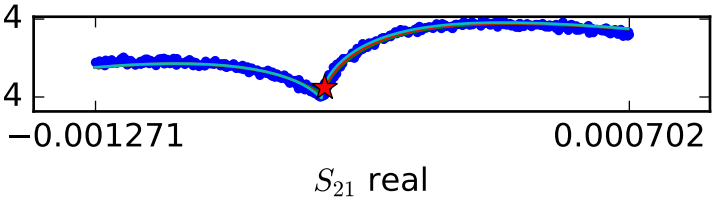
f_r = 3.28316657228
Q_r = 36703.6430438
Q_c = 222252.309719
a = (-0.00430630339622+0.00930686031988j)
ϕ_0 = -0.0636351189779
τ = 38.273783732

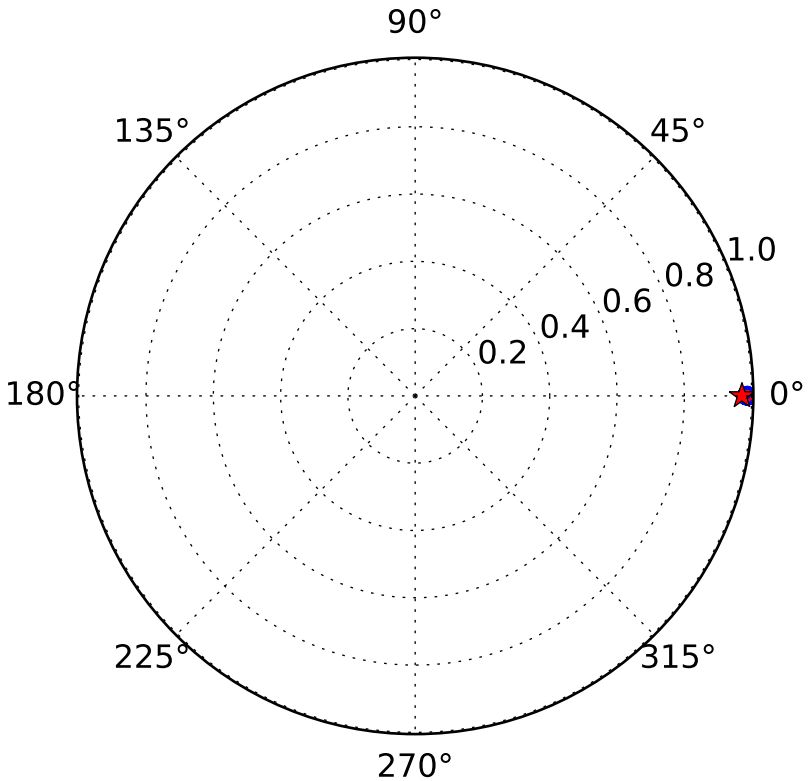


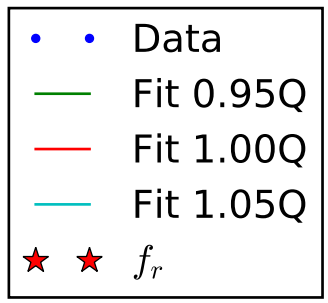
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.28980771366
Q_r = 19306.0223531
Q_c = 267526.497134
a = (0.00131902322174-0.00928652727469j)
ϕ_0 = -0.0992639186819
τ = 37.193898413



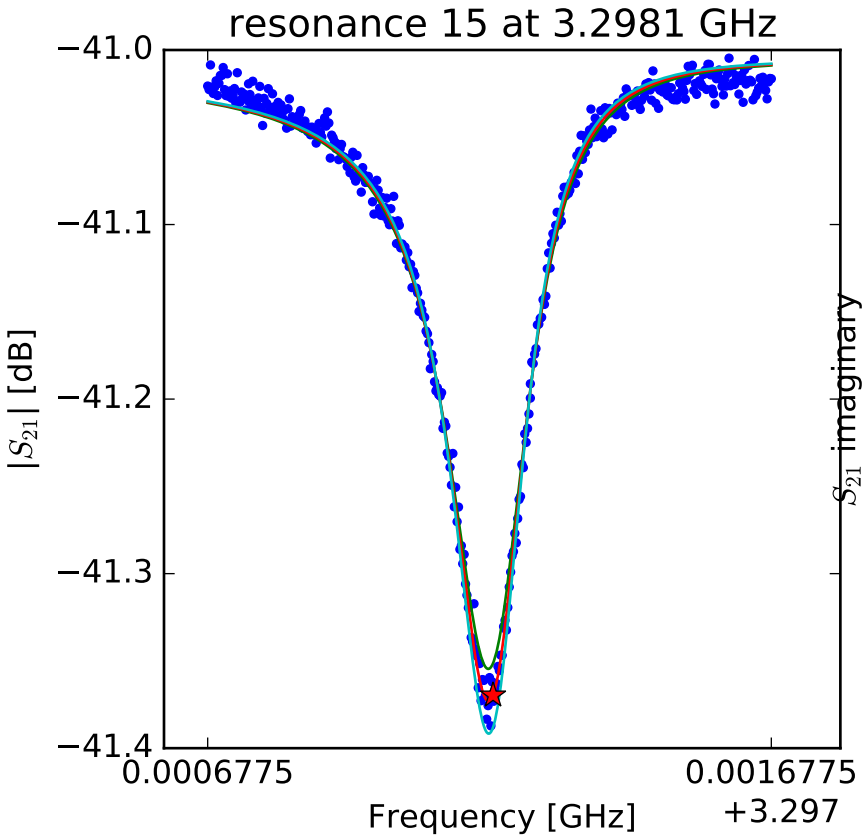


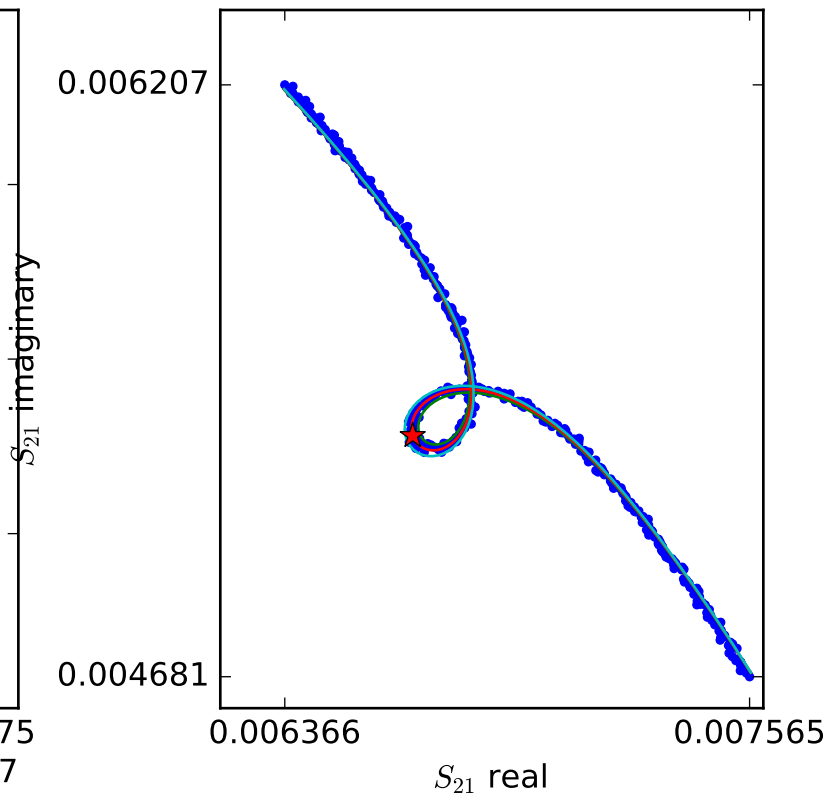


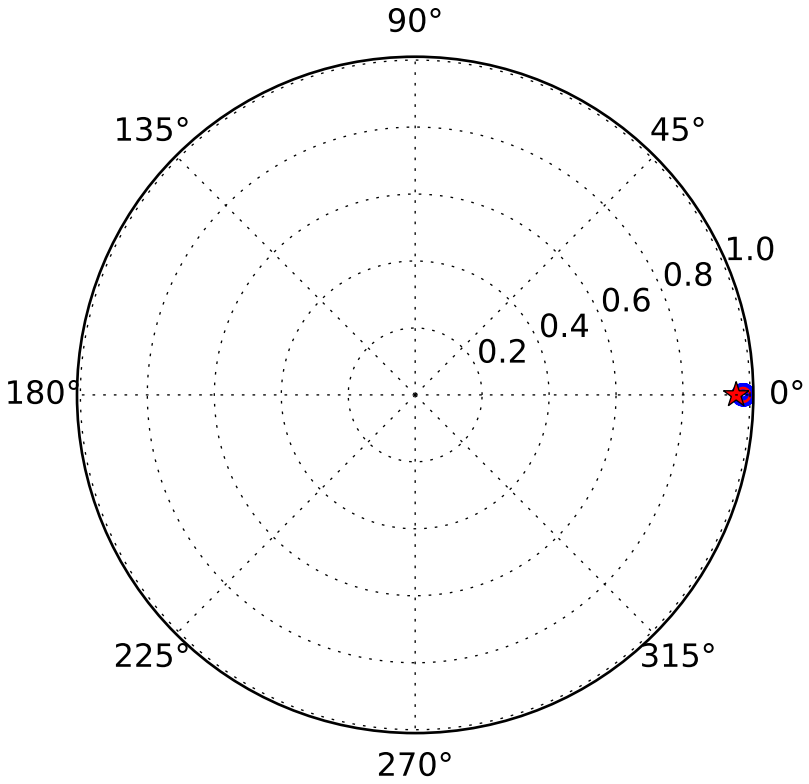


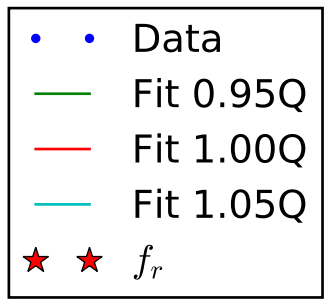
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.29409390514
Q_r = 12008.1535266
Q_c = 416383.924632
a = (0.00528222681047+0.00735683526461j)
ϕ_0 = -0.636082401526
τ = 36.7008516322



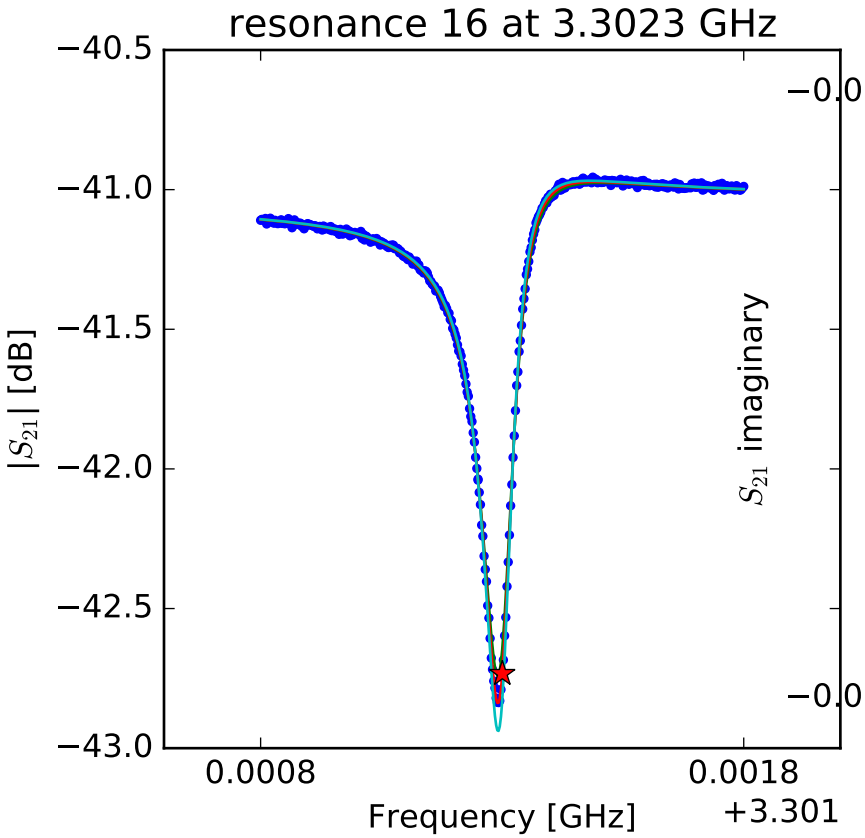


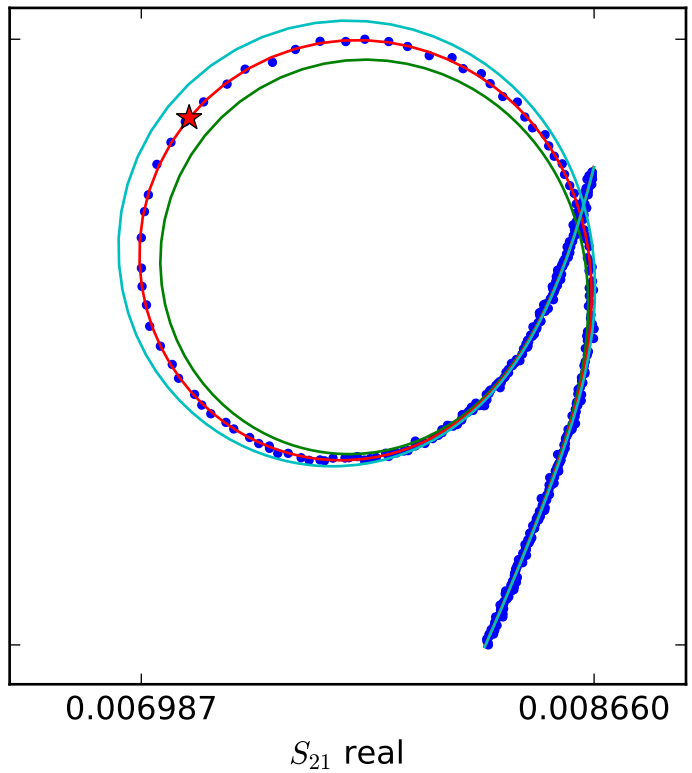


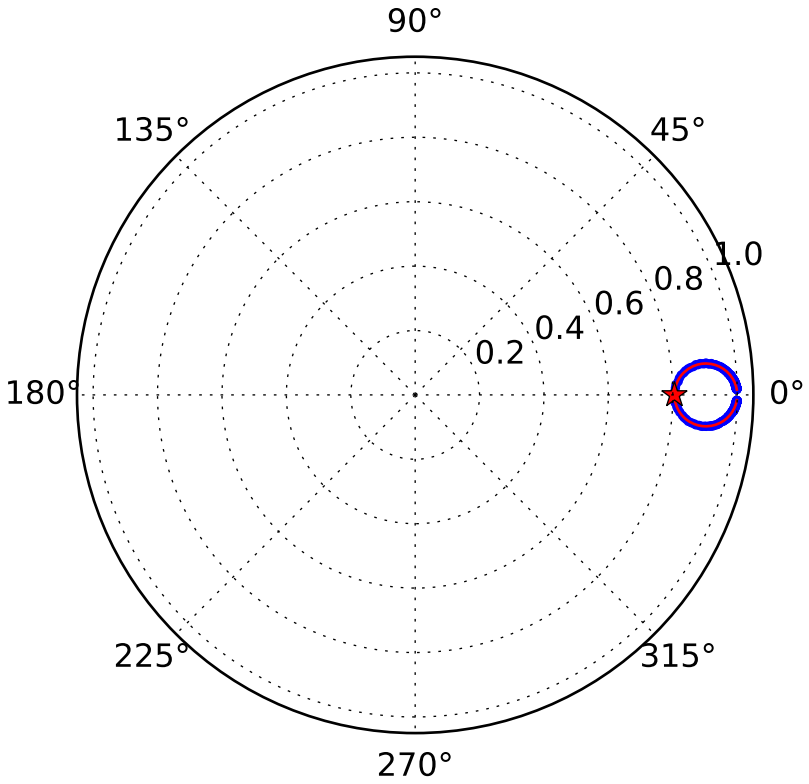


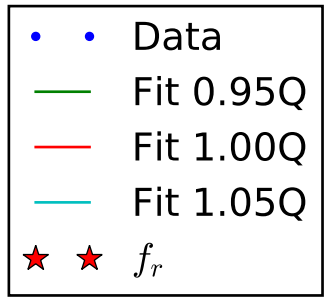
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.2981838464
Q_r = 19546.2145707
Q_c = 472615.176192
a = (0.00869039678979+0.00193235614825j)
ϕ_0 = -0.187147268986
τ = 36.6654828515



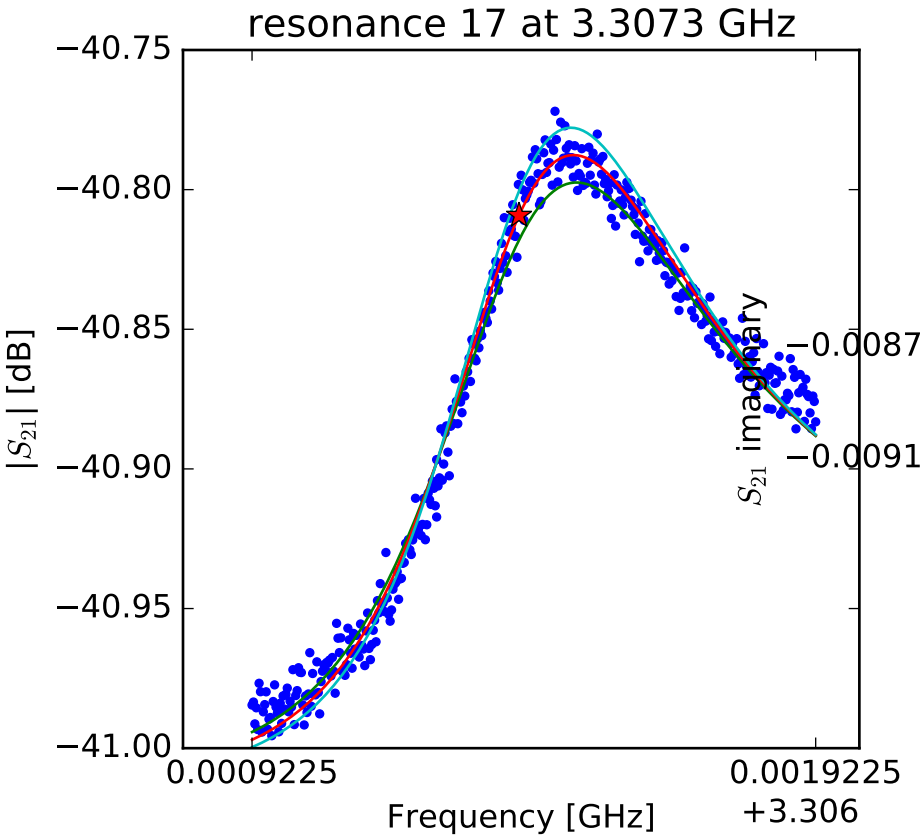


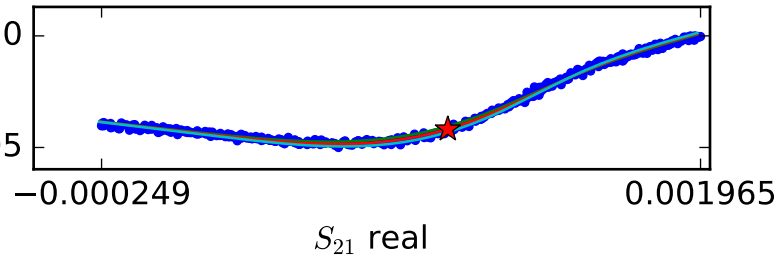


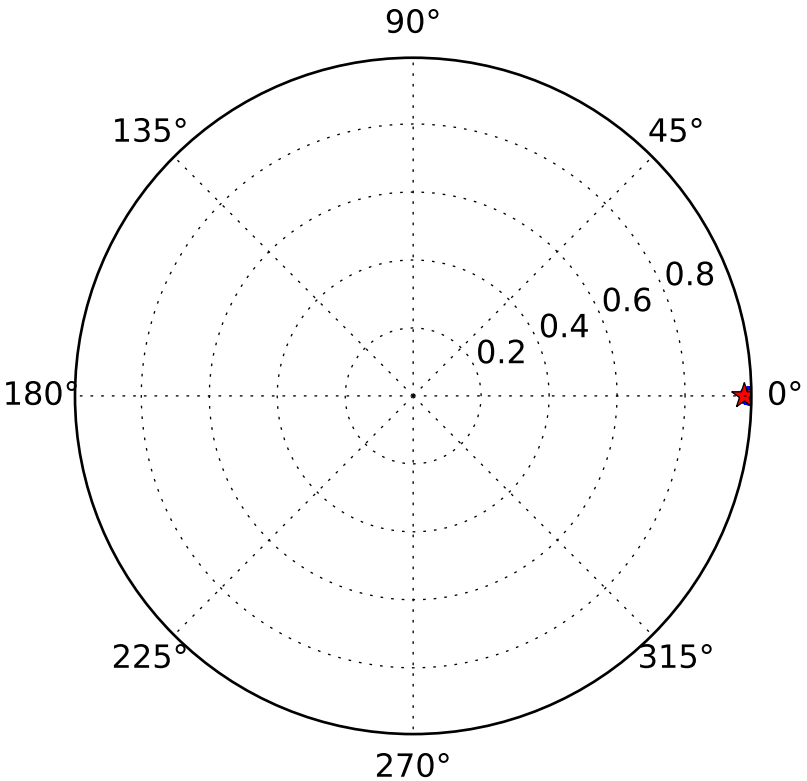


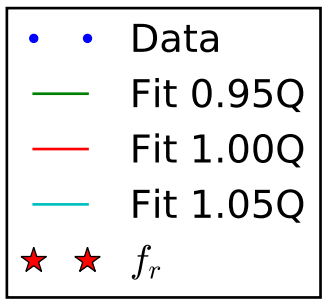
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.30230035643
Q_r = 39462.5840553
Q_c = 202316.088129
a = (-0.00859170525101-0.00219998954215j)
ϕ_0 = -0.392216679694
τ = 37.4239704085



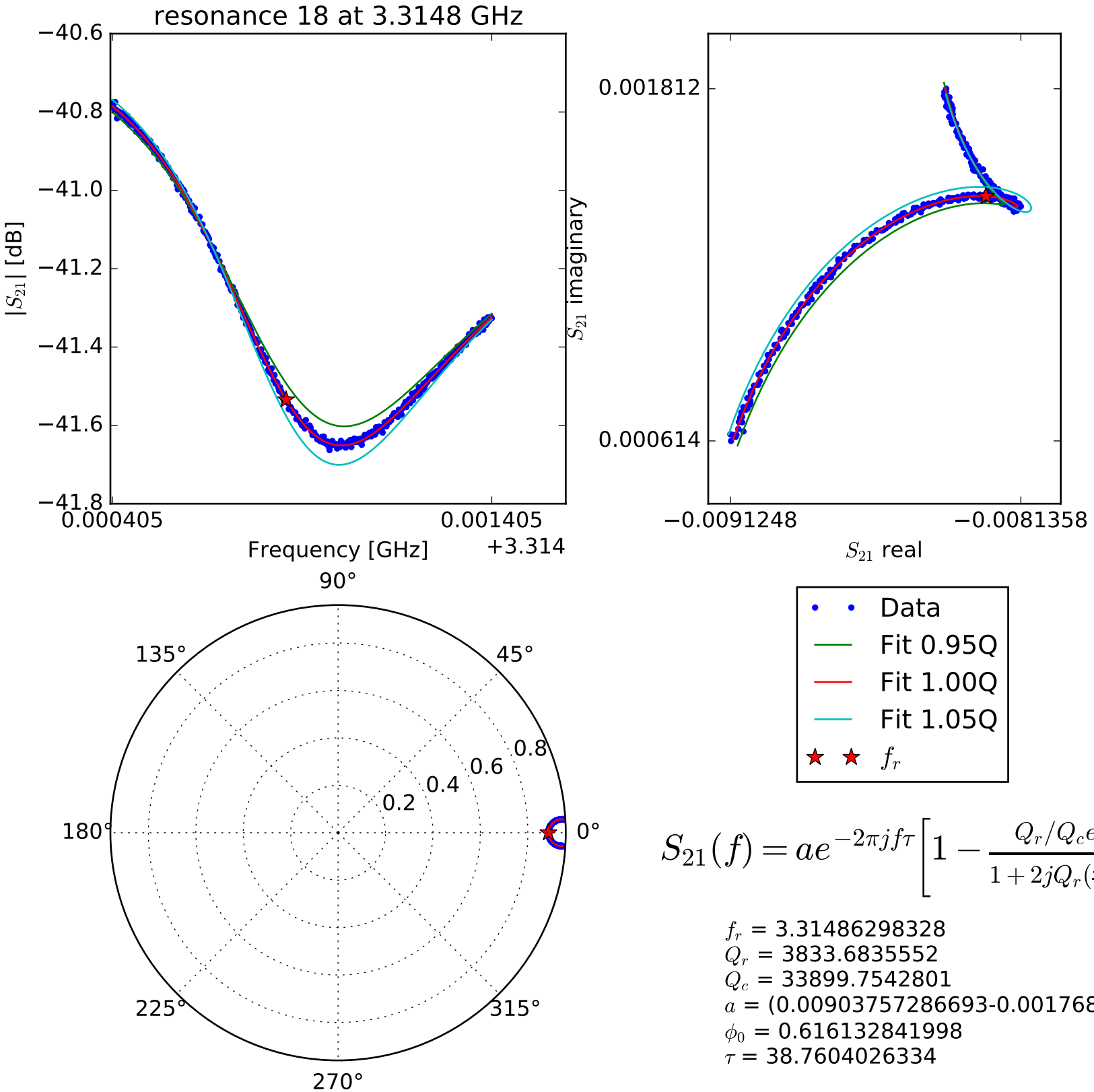






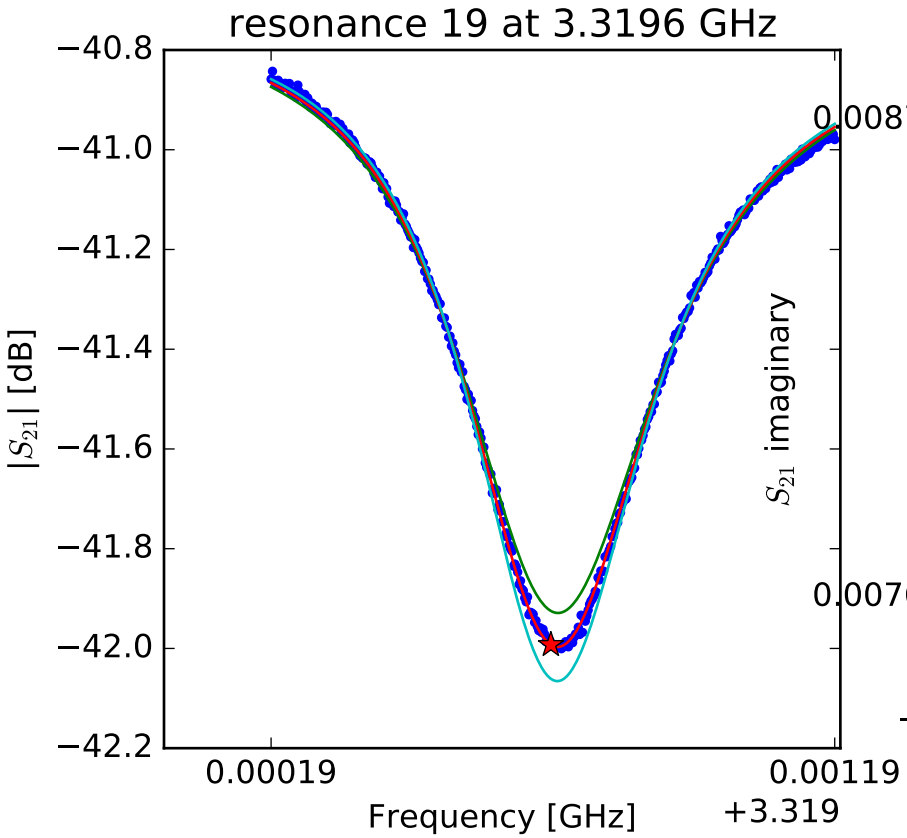
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

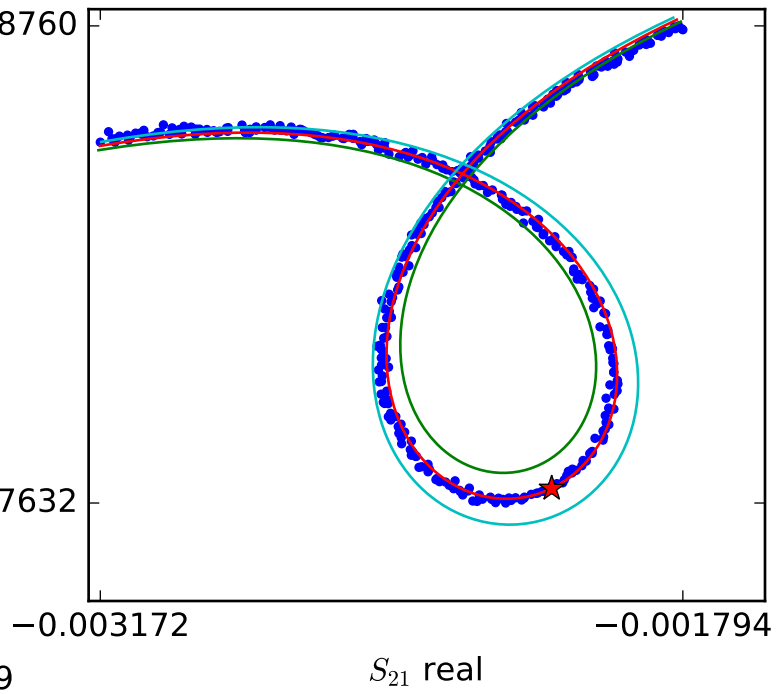
f_r = 3.3073961873
Q_r = 5713.12482202
Q_c = 222503.188824
a = (0.000926208865592+0.00887895324993j
ϕ_0 = -2.48966690139
τ = 36.726122963

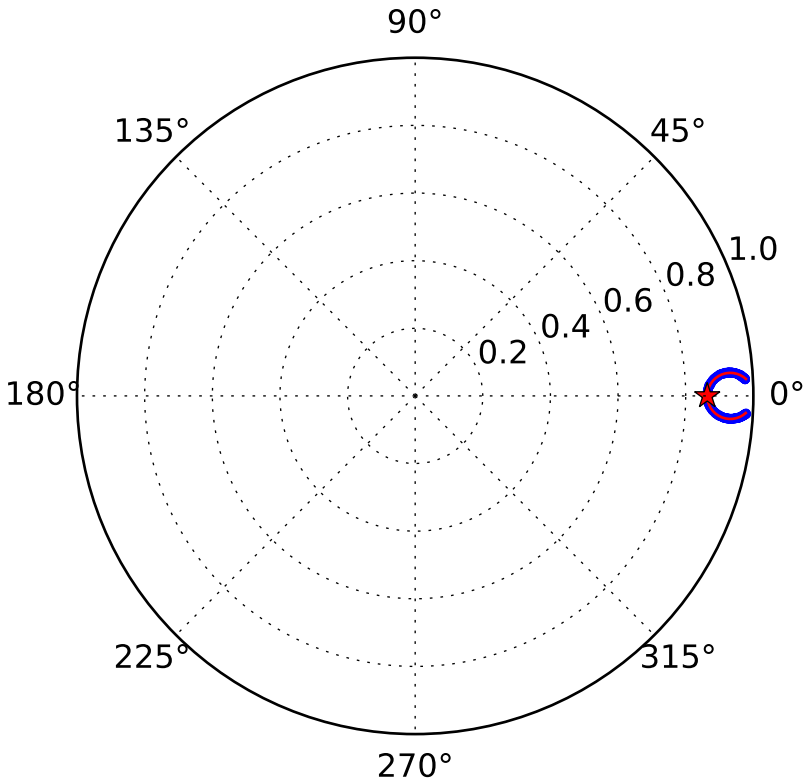


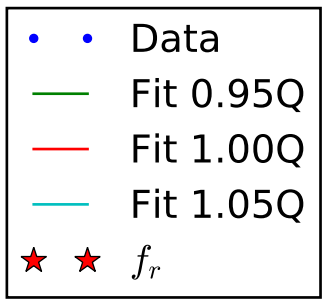
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.31486298328
Q_r = 3833.6835552
Q_c = 33899.7542801
a = (0.00903757286693-0.00176840455849j)
ϕ_0 = 0.616132841998
τ = 38.7604026334



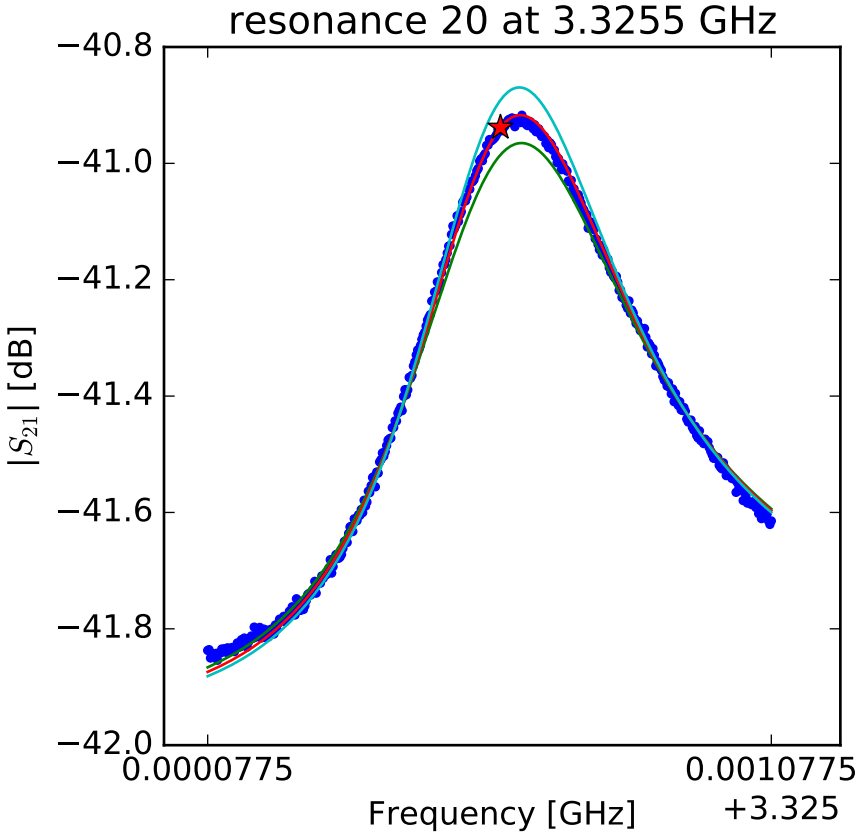


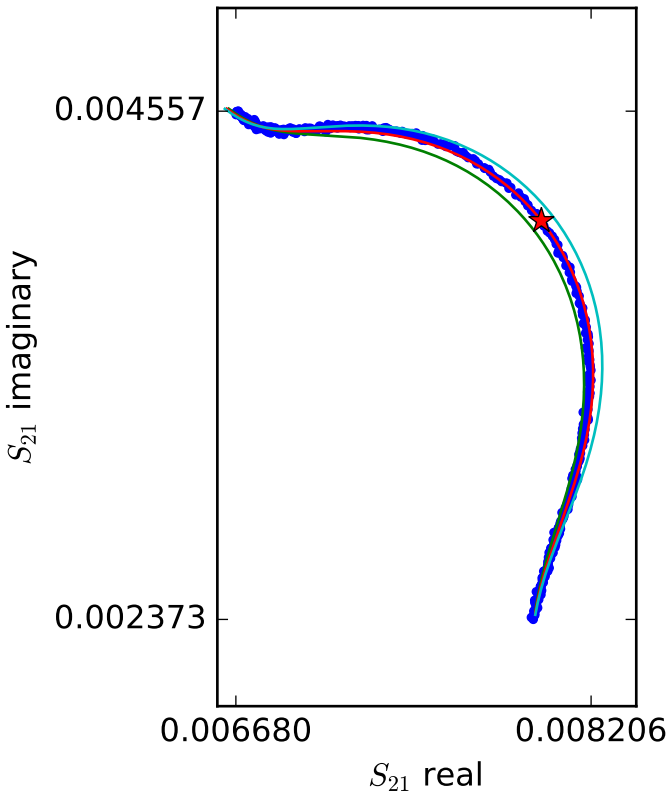


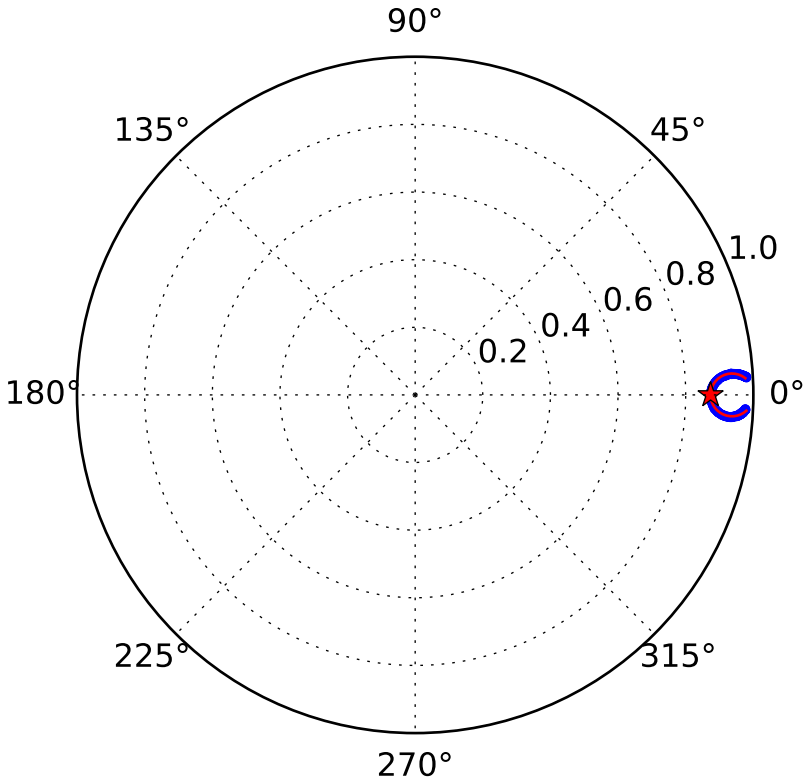


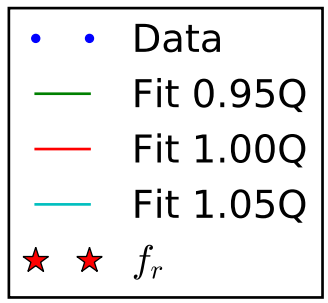
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.31968637497
Q_r = 7526.43122523
Q_c = 55199.8303359
a = (0.000537571706034+0.00918071676684j)
ϕ_0 = 0.10184605491
τ = 40.9513075461



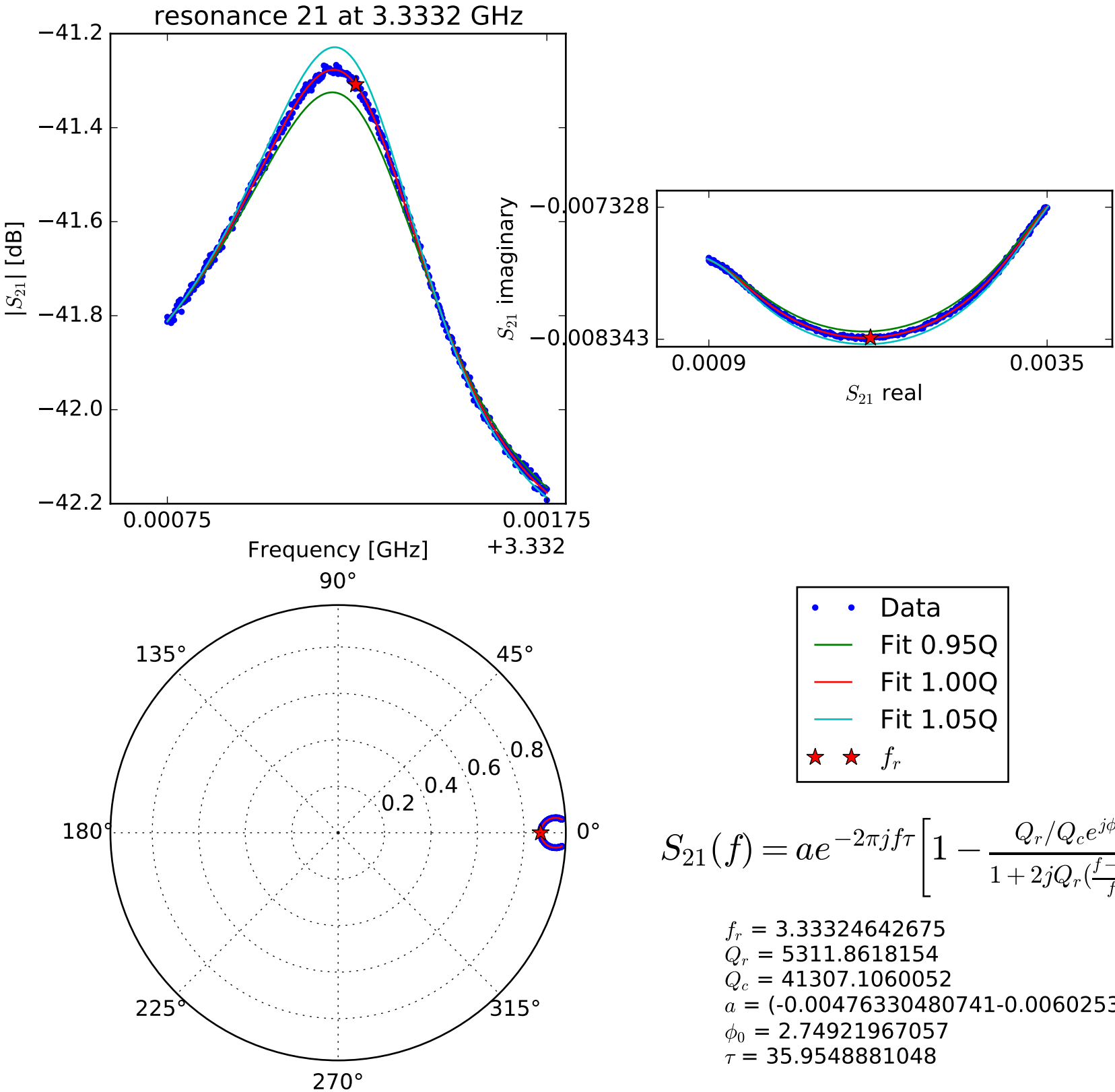






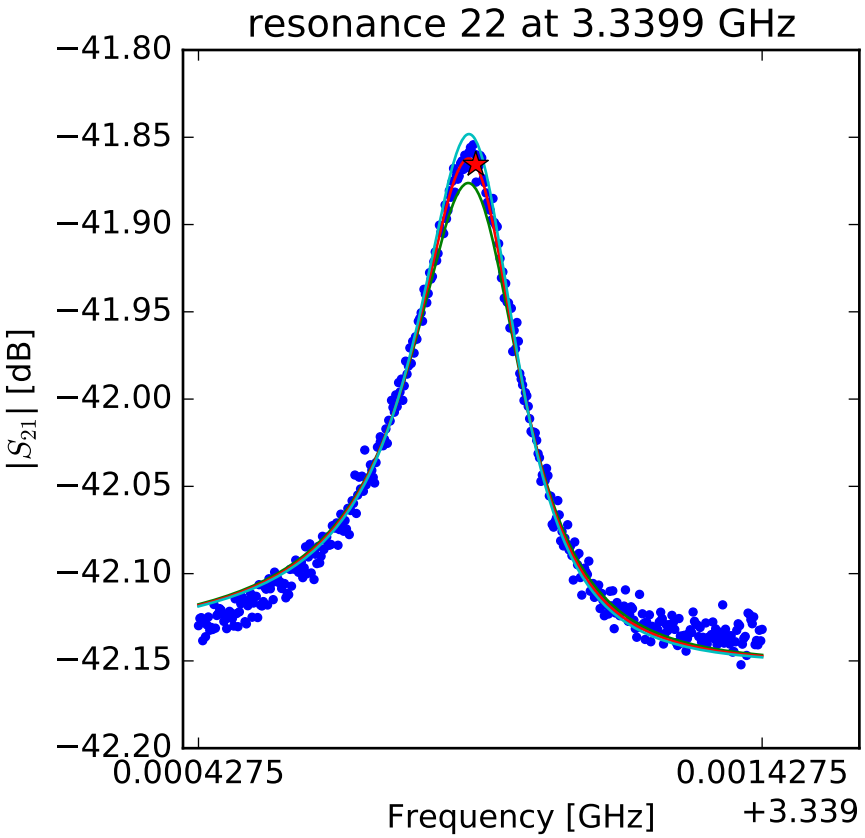
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

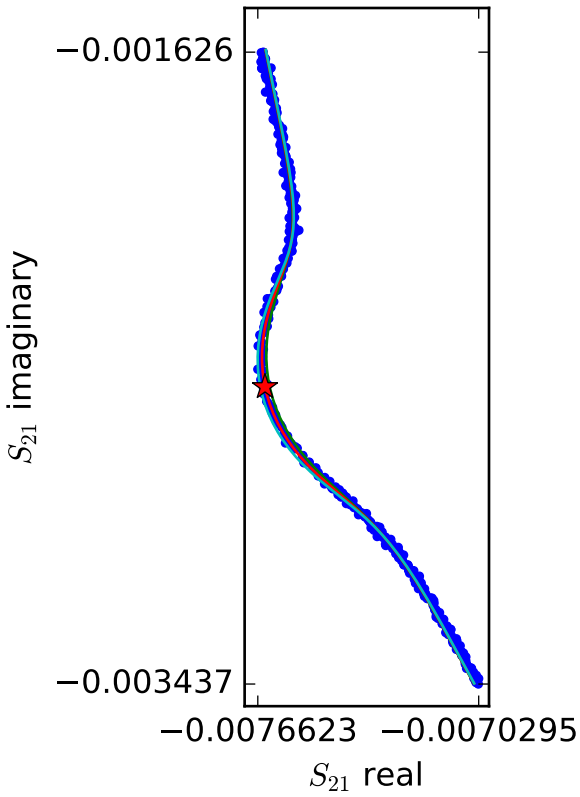
f_r = 3.32559692325
Q_r = 7196.27882404
Q_c = 56876.365372
a = (0.0079228535663-0.00117205427917j)
ϕ_0 = -2.81979173063
τ = 35.1537172104

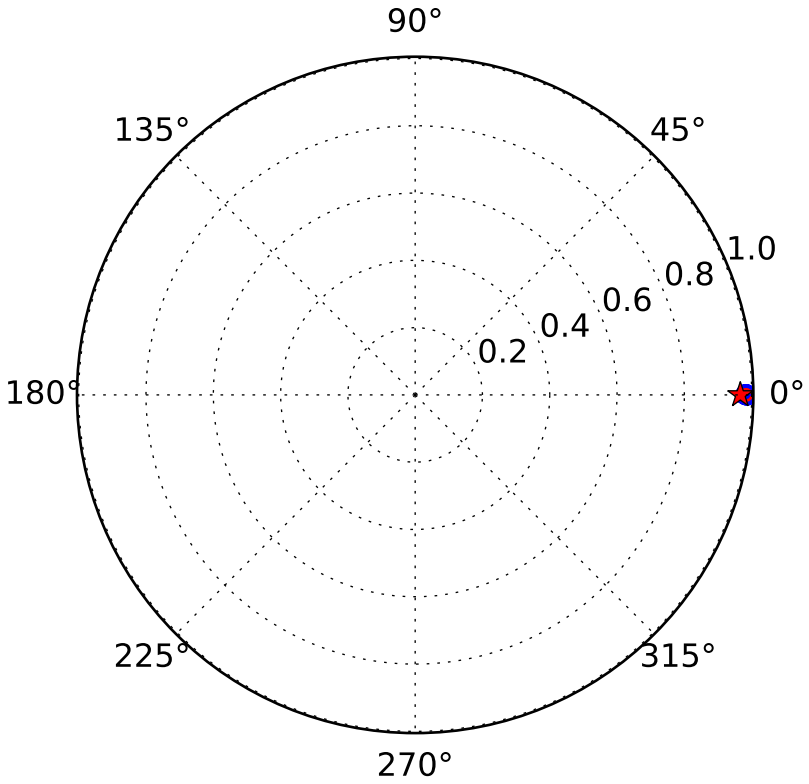


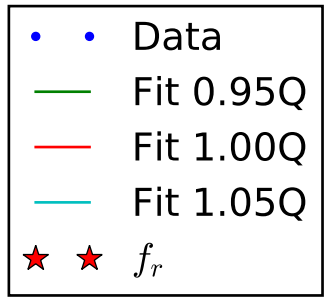
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.33324642675
Q_r = 5311.8618154
Q_c = 41307.1060052
a = (-0.00476330480741-0.00602534847979j)
ϕ_0 = 2.74921967057
τ = 35.9548881048



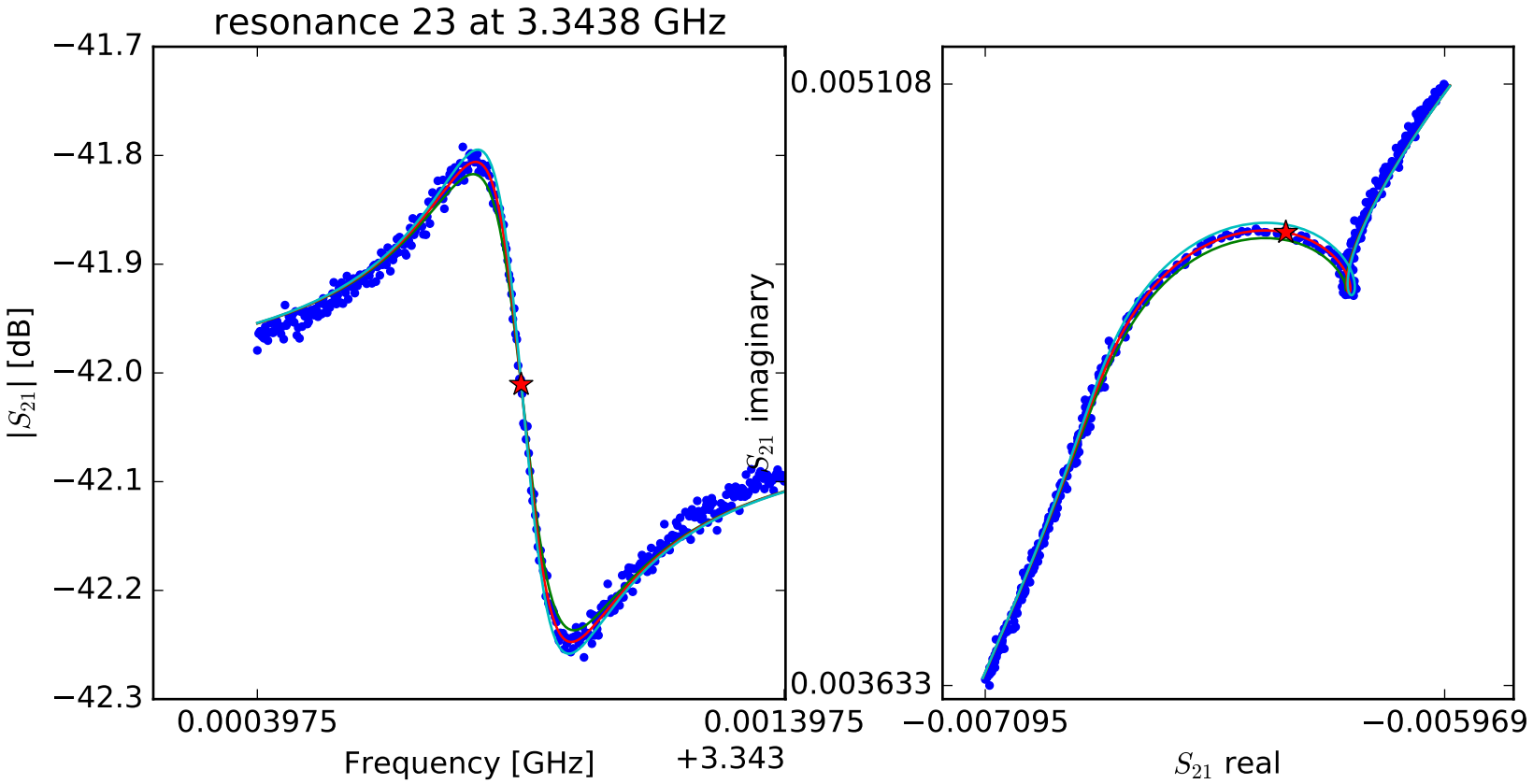


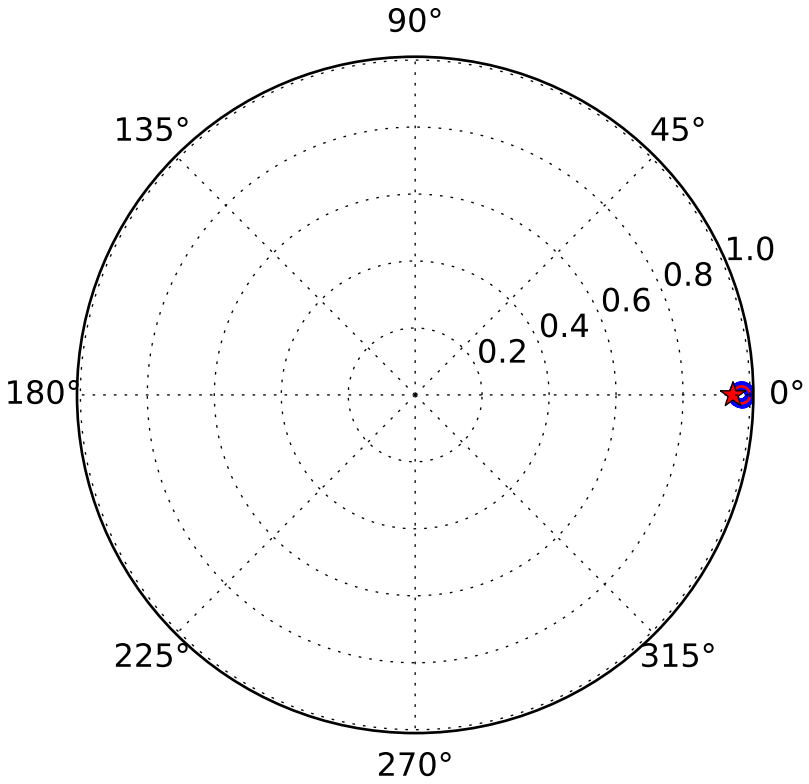


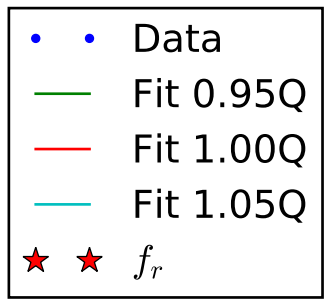


$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.33991935415
Q_r = 14715.7406073
Q_c = 435677.552783
a = (0.00593293940476+0.0050787410137j)
ϕ_0 = 2.91630910599
τ = 36.6953758782

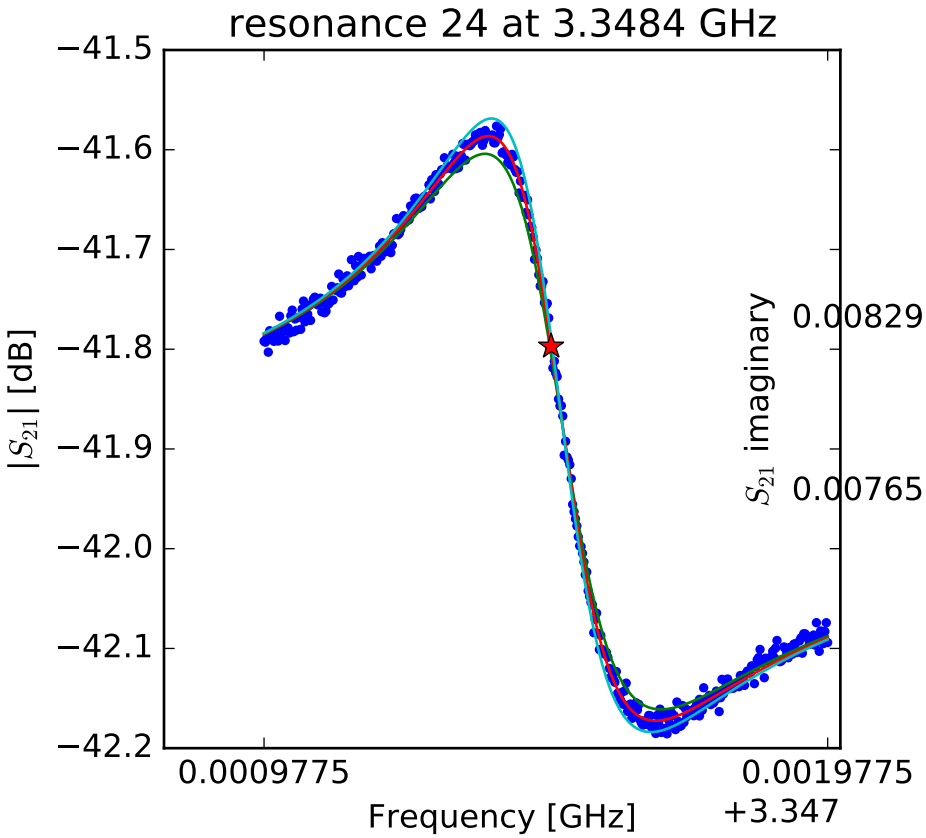


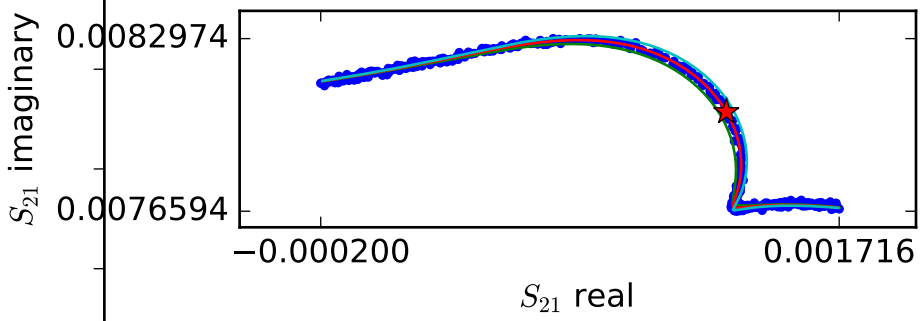


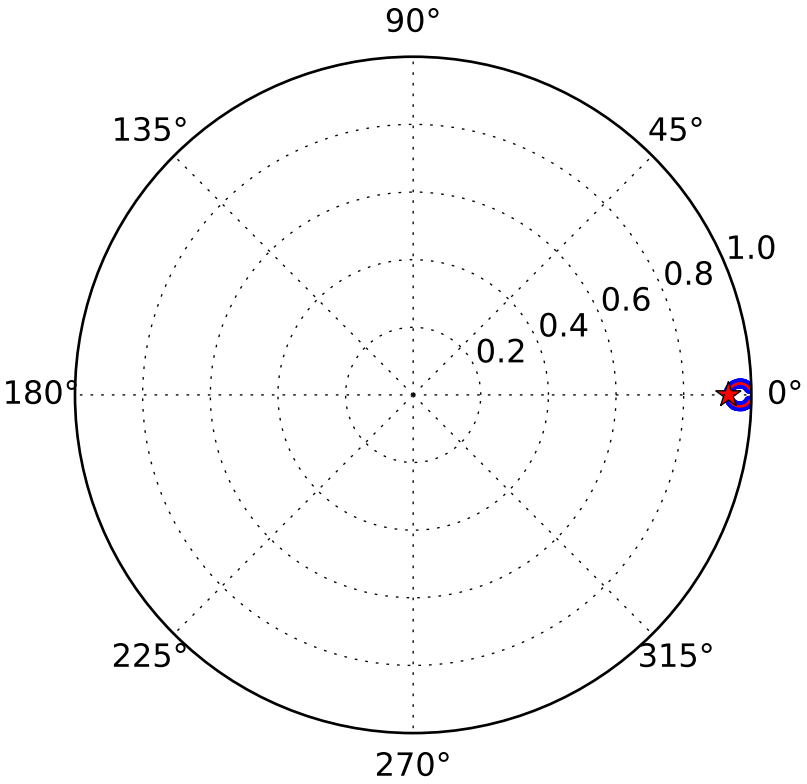


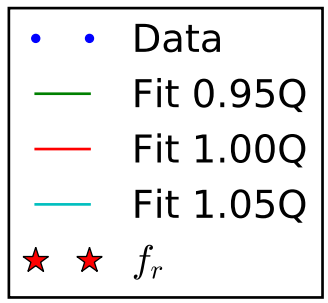
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.34389820135
Q_r = 18452.0681688
Q_c = 362734.353893
a = (-0.00751536354991+0.00248147473371j)
ϕ_0 = 1.59308417952
τ = 37.0953864702



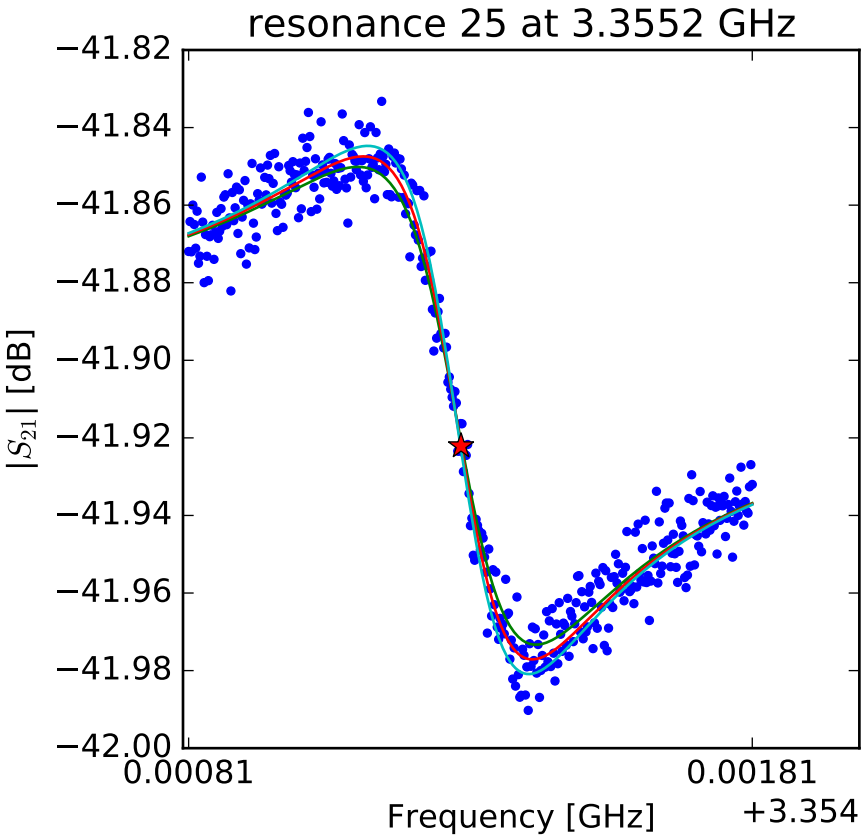


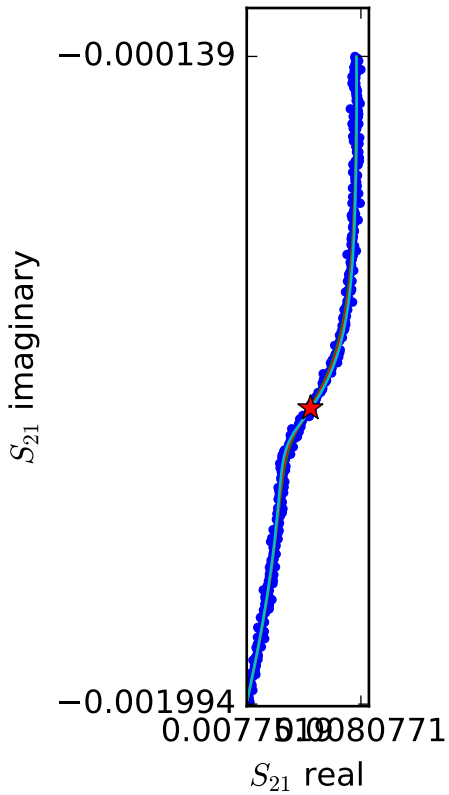


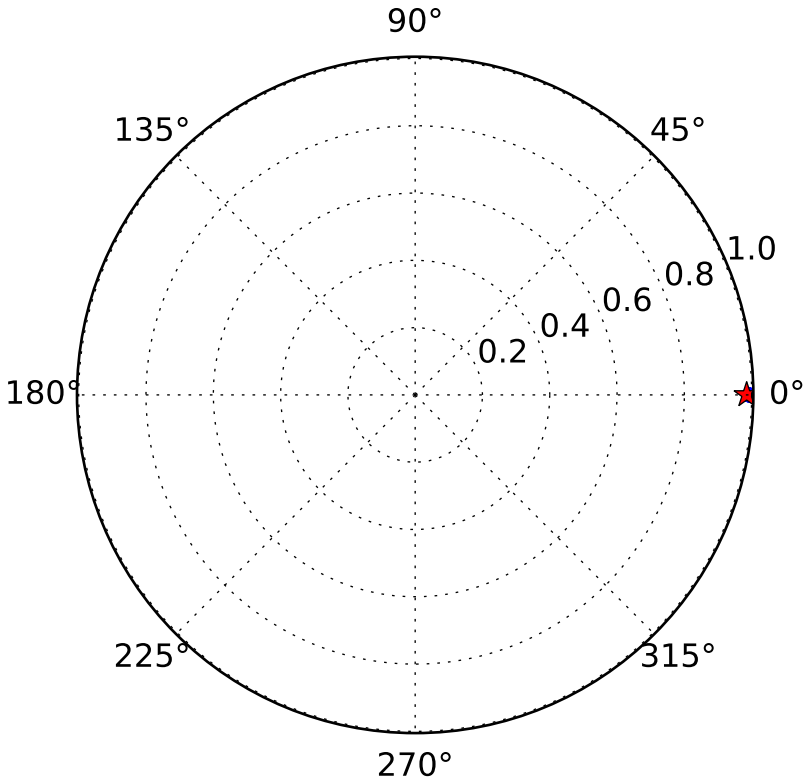


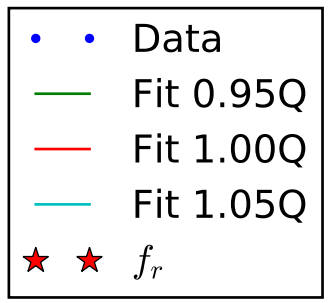
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.34848691148
Q_r = 11645.5803228
Q_c = 171264.52424
a = (-0.00789600530602-0.00125662345174j)
ϕ_0 = 1.790160494
τ = 37.4169777029



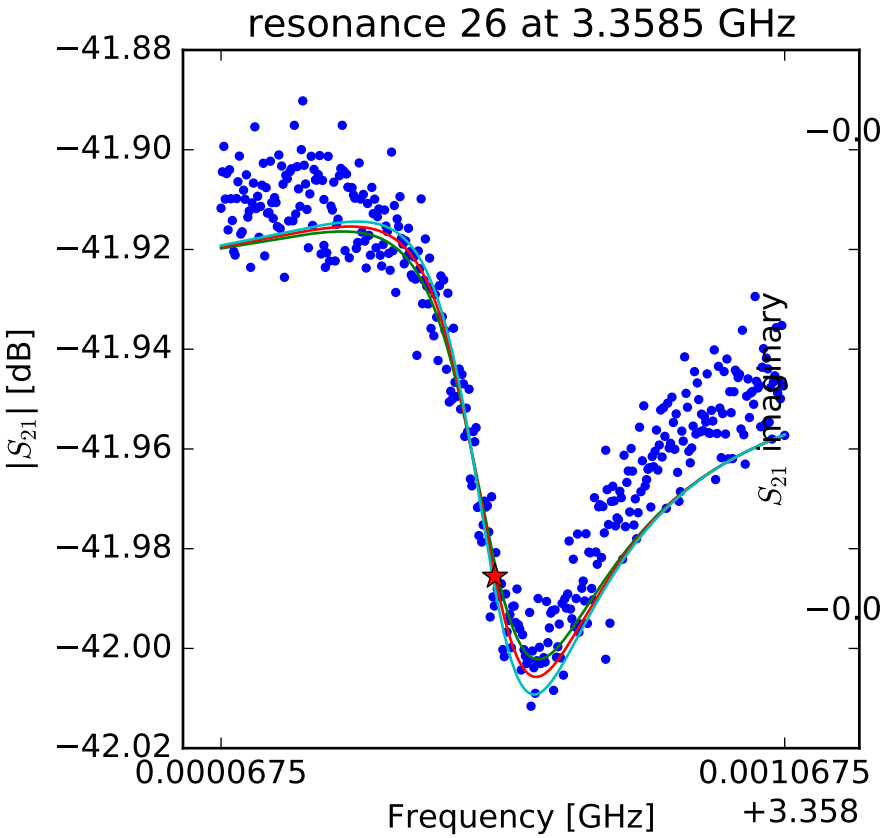


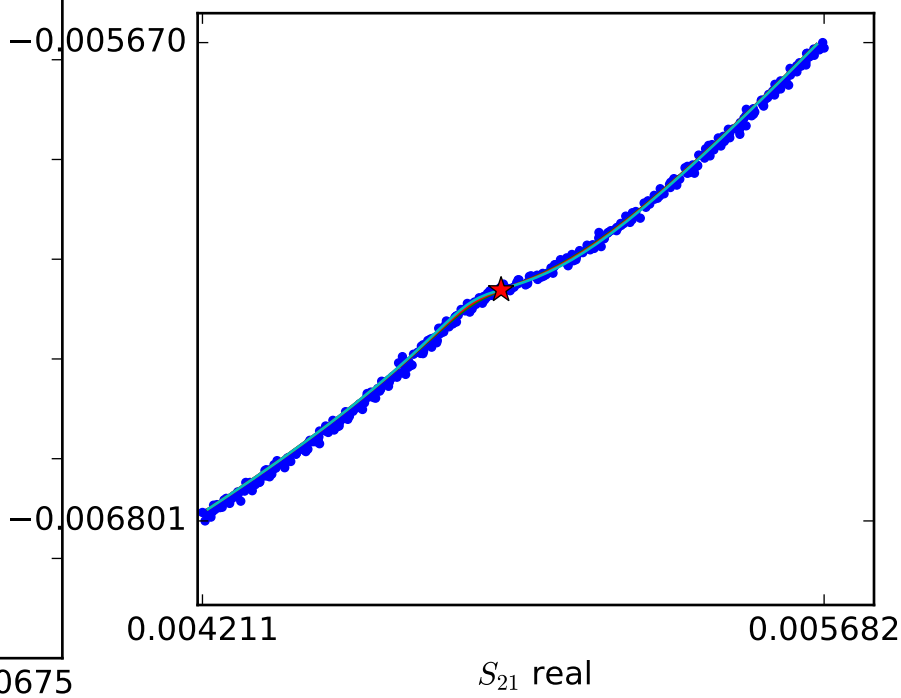


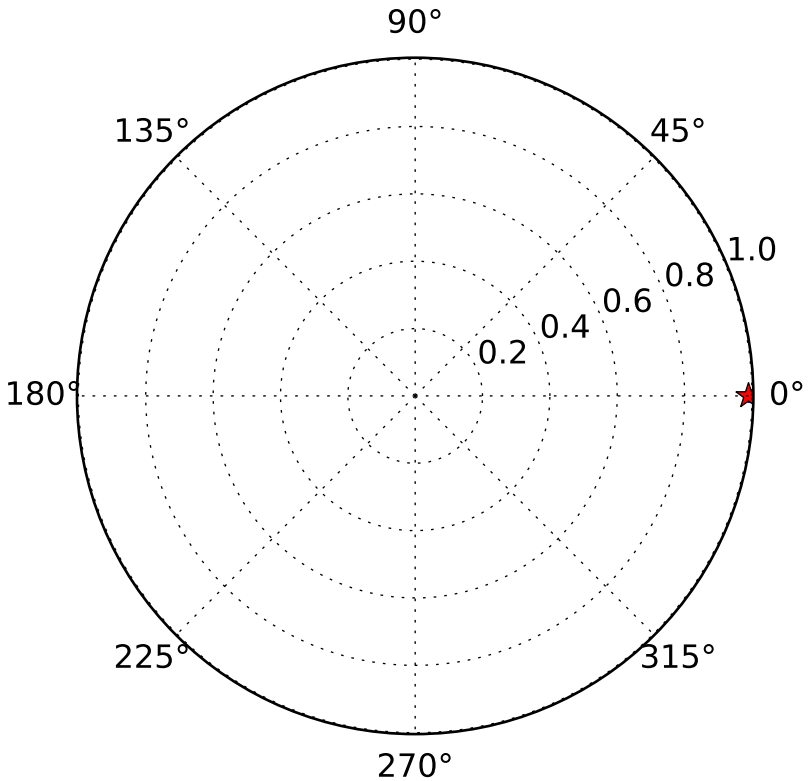


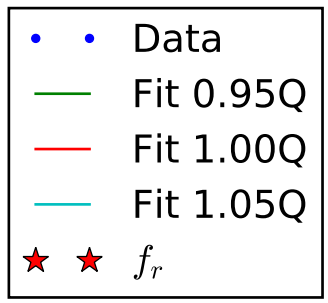
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.35529329482
Q_r = 11324.238831
Q_c = 759383.470811
a = (0.00405625951868+0.00693469501542j)
ϕ_0 = 1.403852167
τ = 37.3100781959



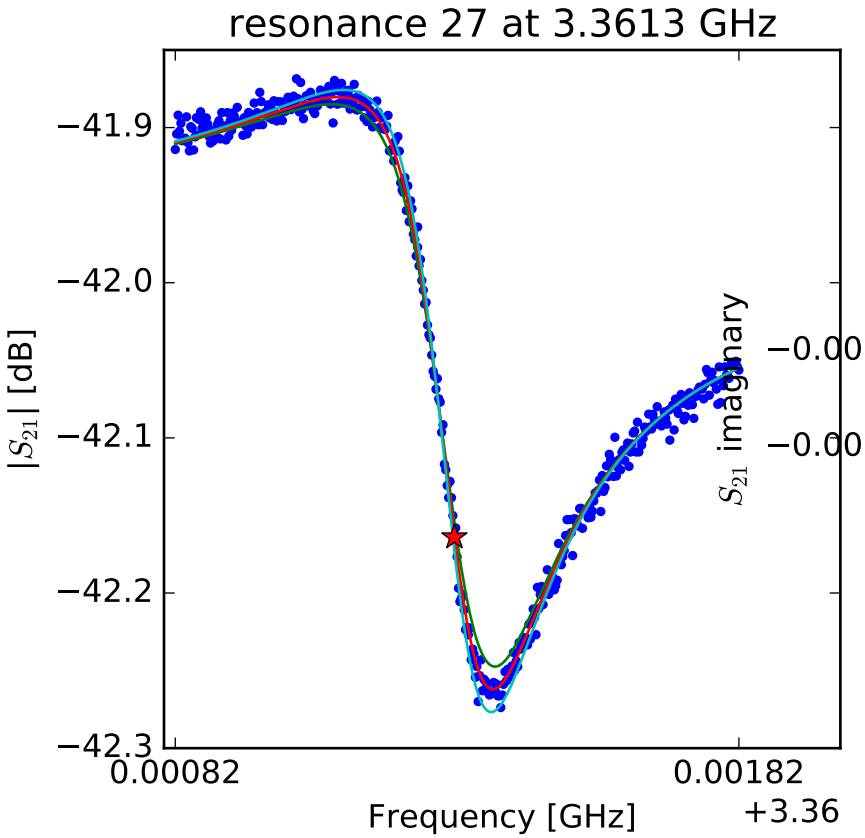


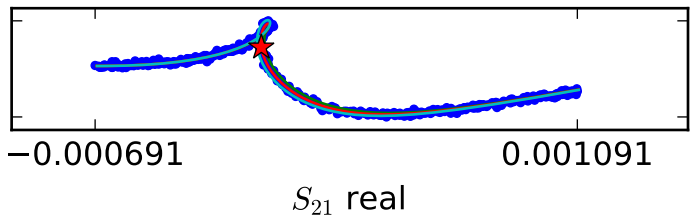


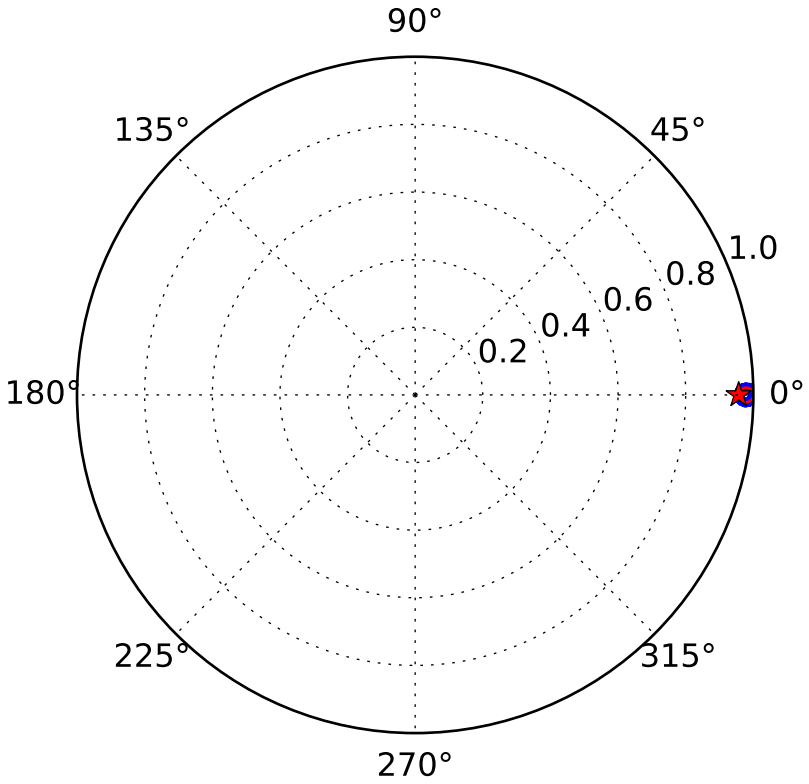


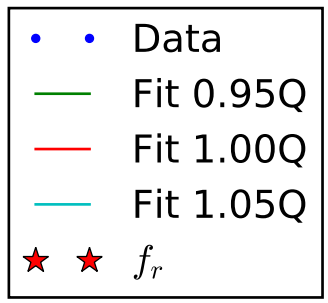
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.35855348326
Q_r = 12264.2614884
Q_c = 1182838.96167
a = (0.00413132243145-0.00685390677764j)
ϕ_0 = 0.975309071006
τ = 36.6166306519



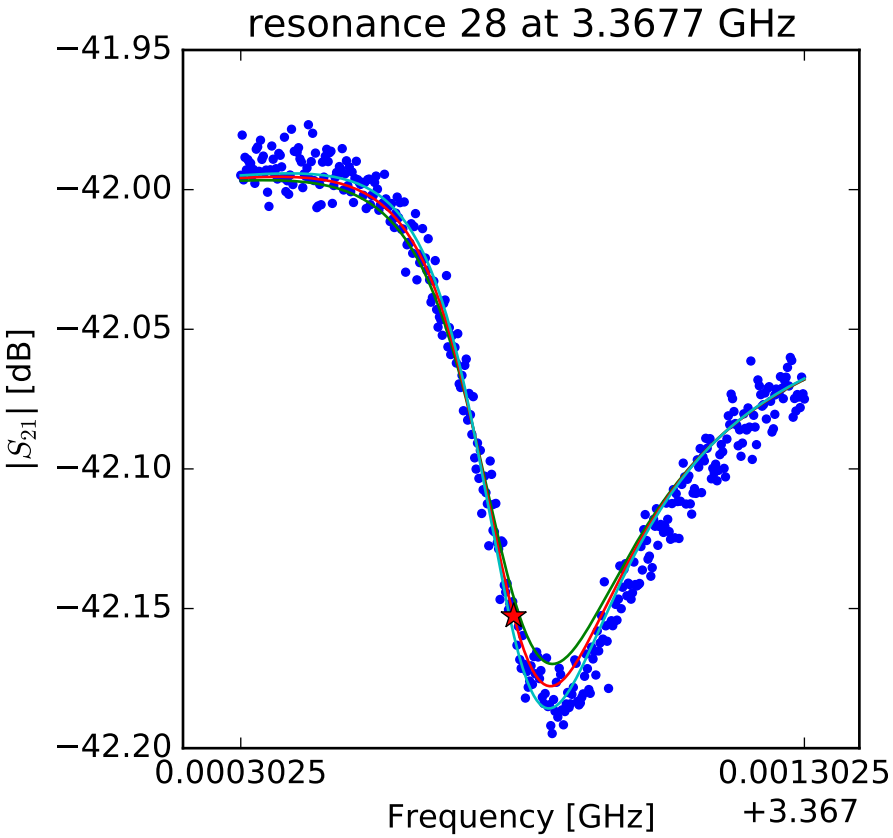


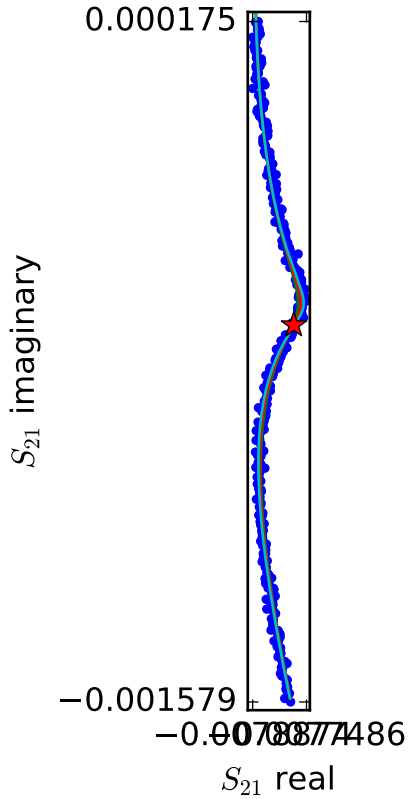


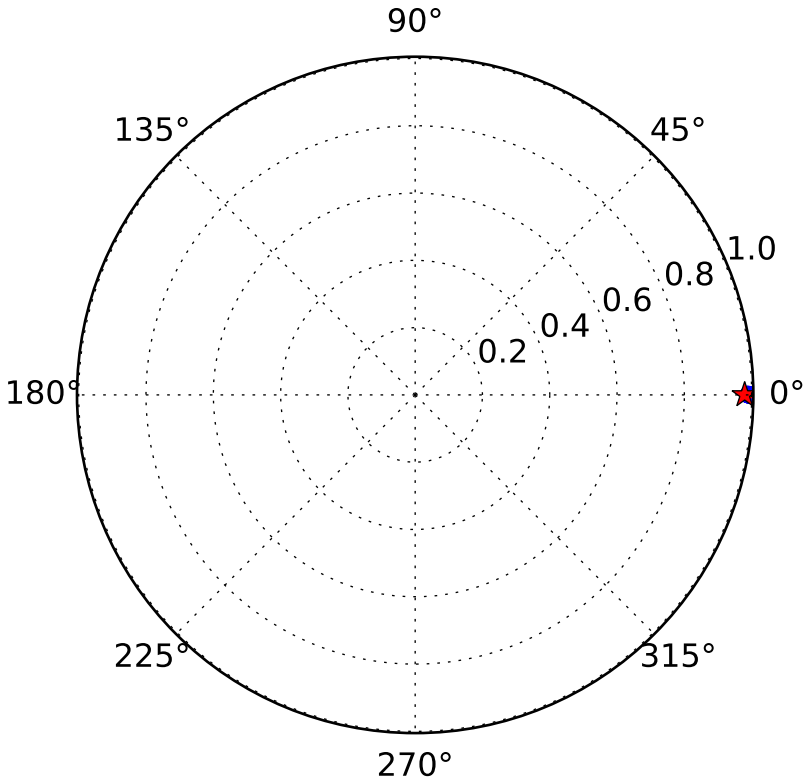


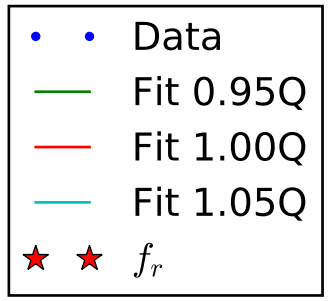
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.36131524132
Q_r = 14127.4855729
Q_c = 325102.222637
a = (0.0078751479312-0.00121765371007j)
ϕ_0 = 1.02552585845
τ = 37.2536055349



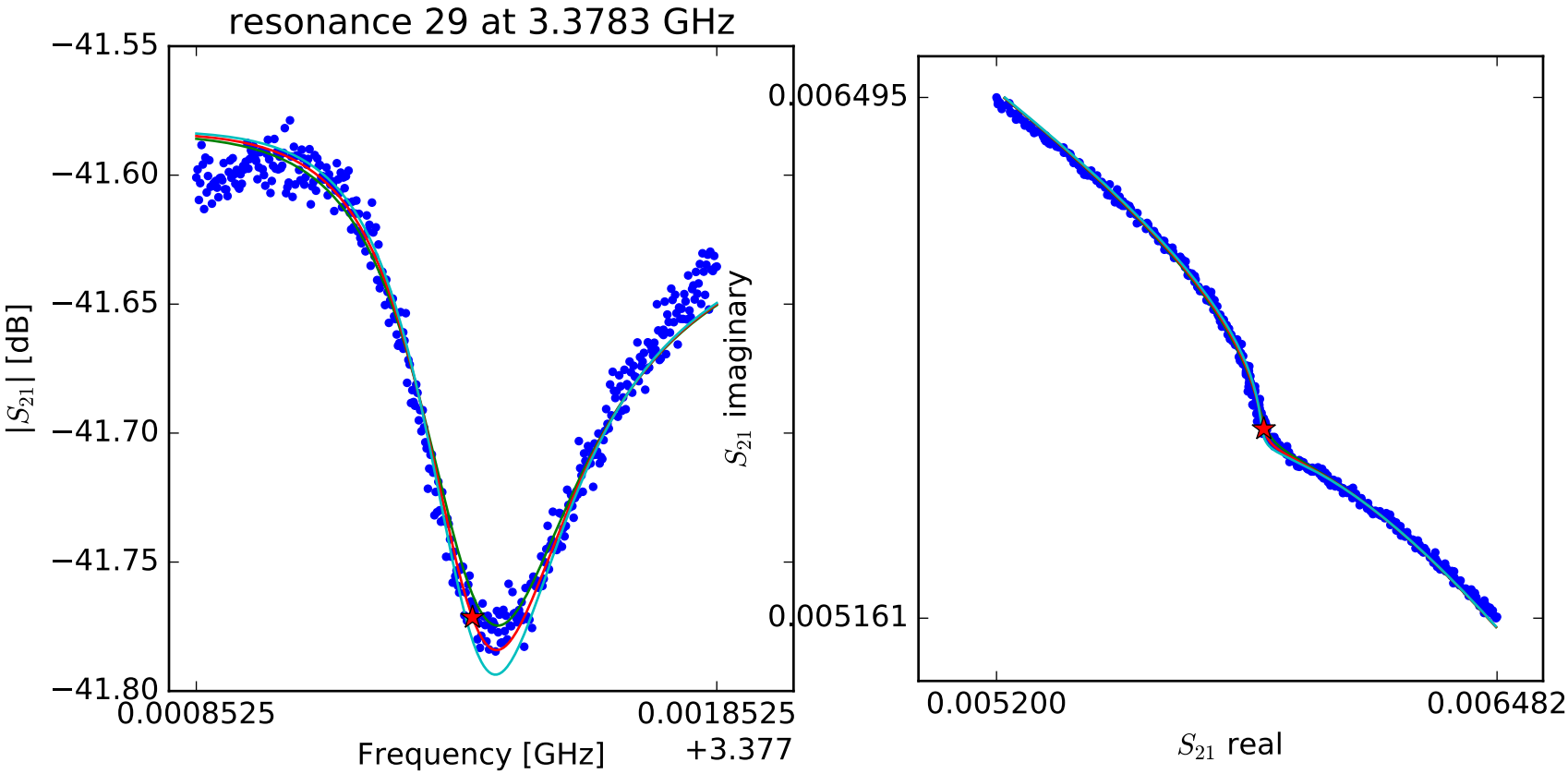


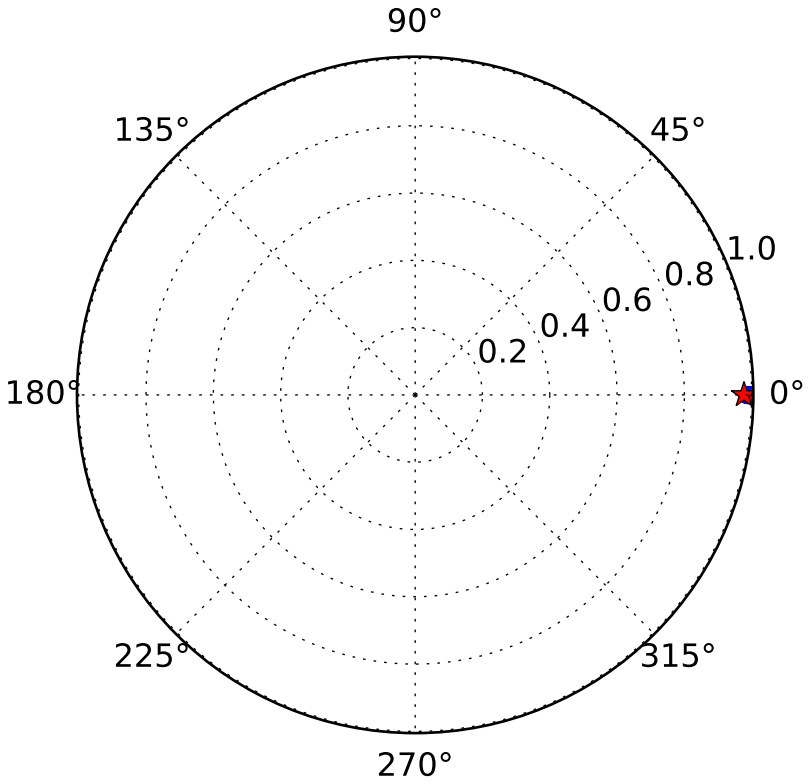


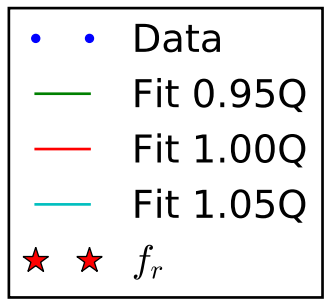


$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.36778666763
Q_r = 10188.2008207
Q_c = 488851.268387
a = (-0.001670843661+0.00774721379302j)
ϕ_0 = 0.746300441966
τ = 37.0478117299

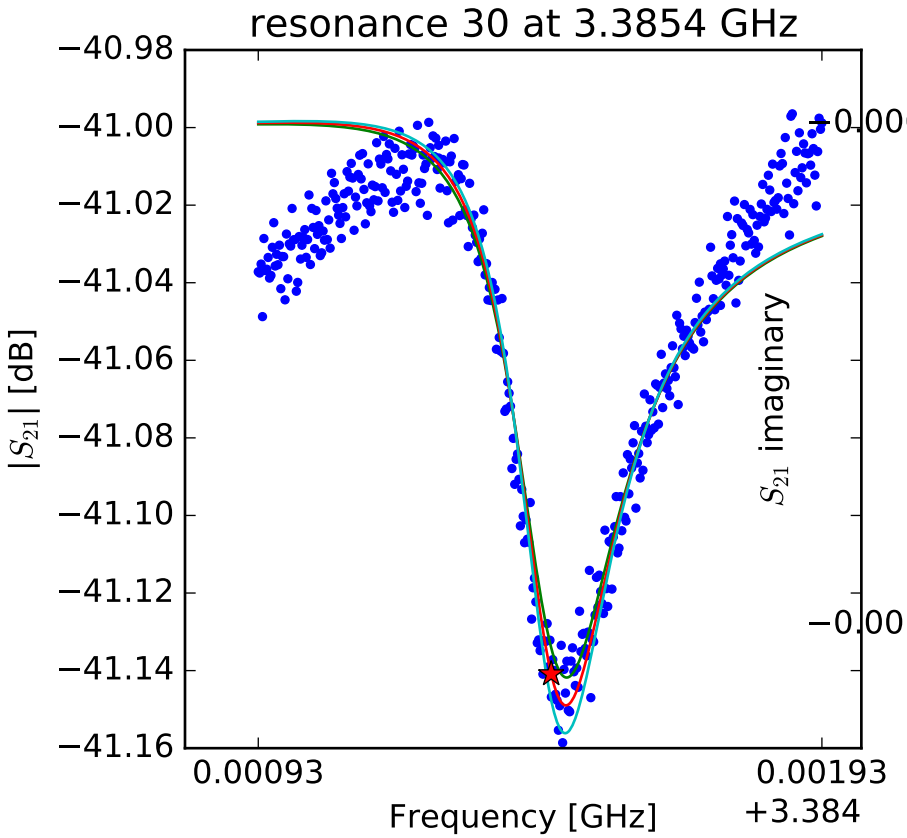


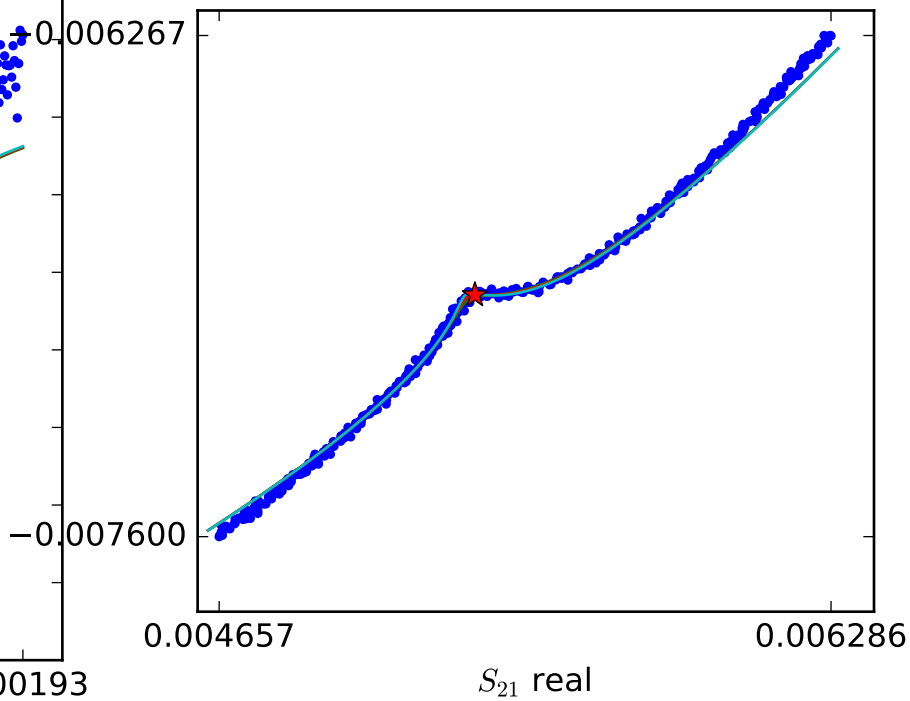


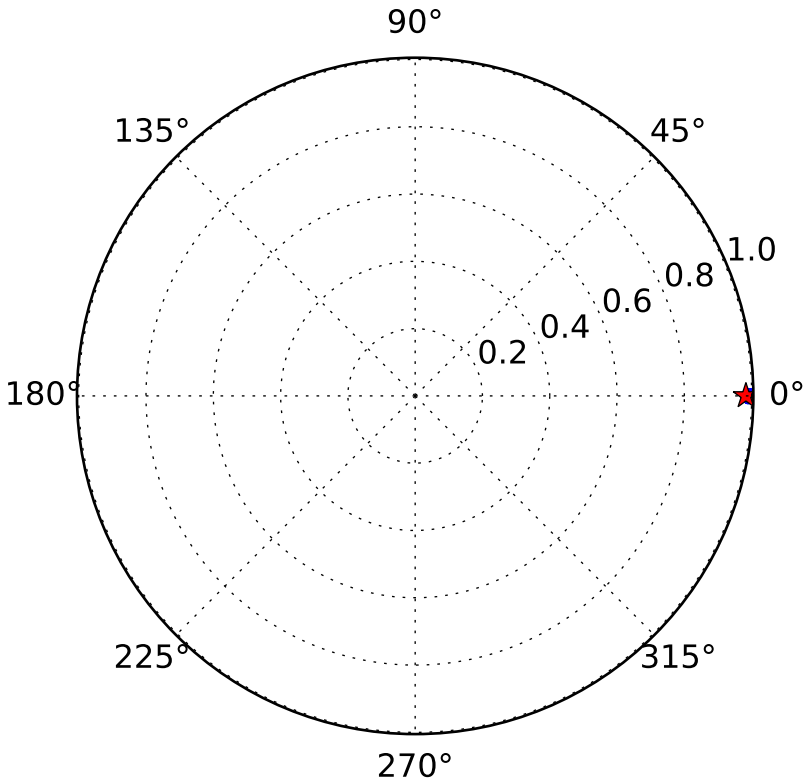


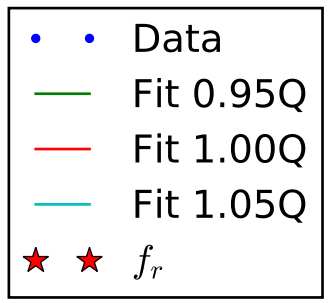
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.37838301983
Q_r = 9379.21153642
Q_c = 410608.183096
a = (0.00401786600945-0.00728733374091j)
ϕ_0 = 0.4980051377
τ = 37.505136663



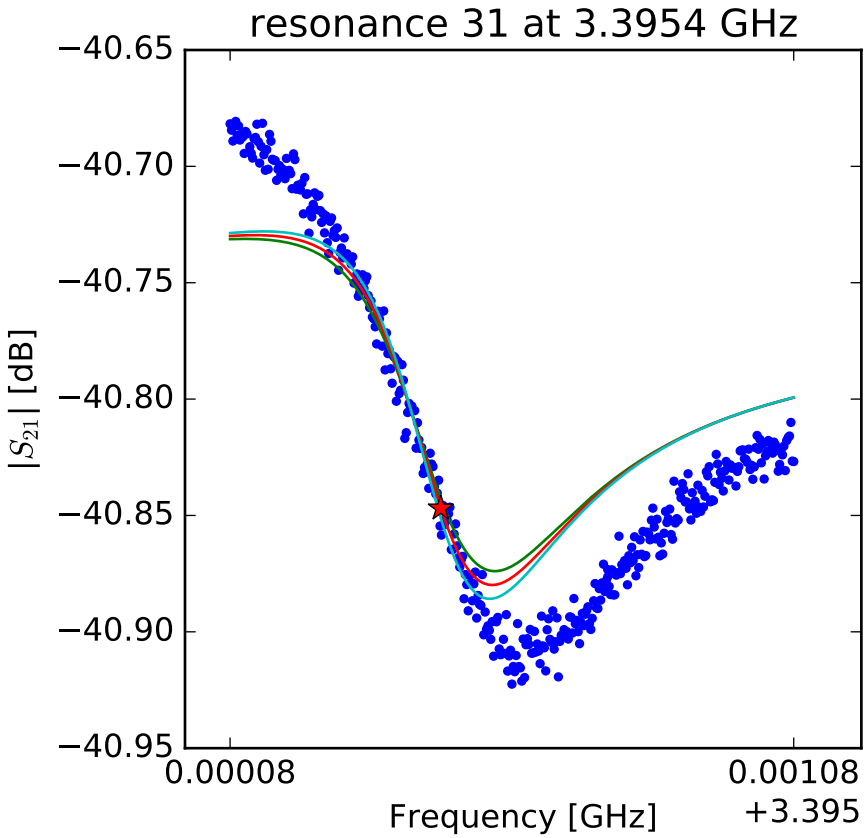


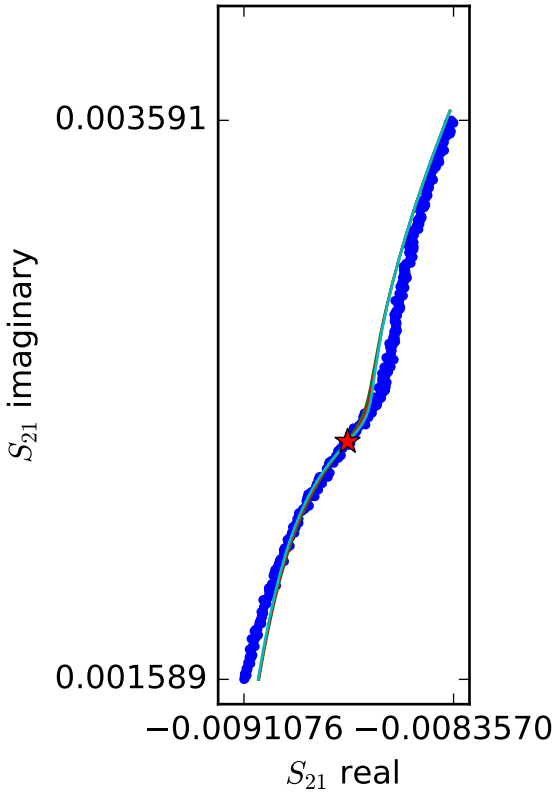


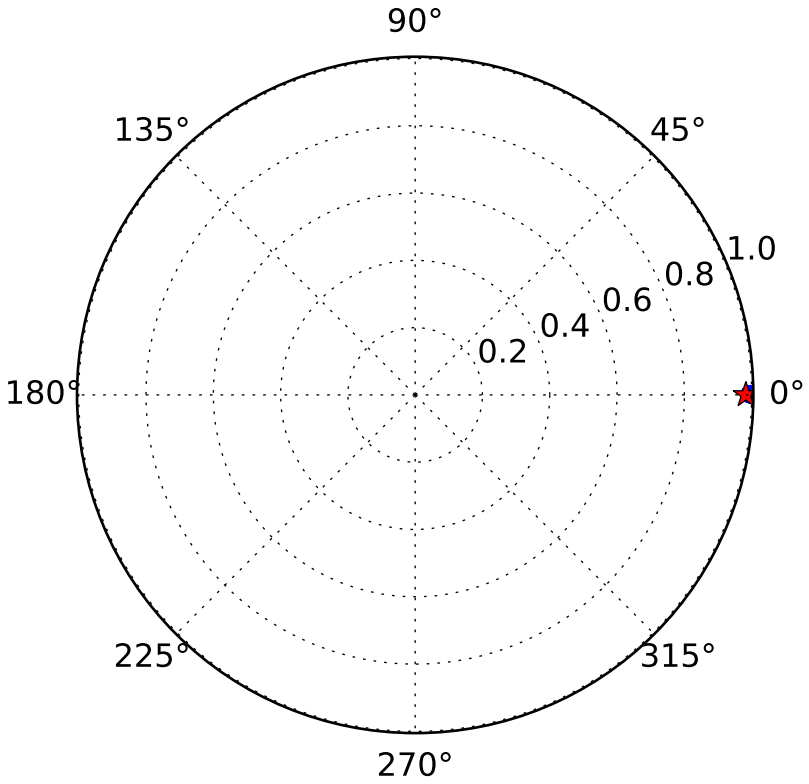


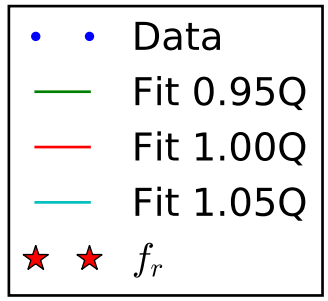
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.38544967274
Q_r = 15339.370257
Q_c = 893758.408455
a = (-0.00826704662794+0.00331188953527j)
ϕ_0 = 0.460875931417
τ = 38.8674996235



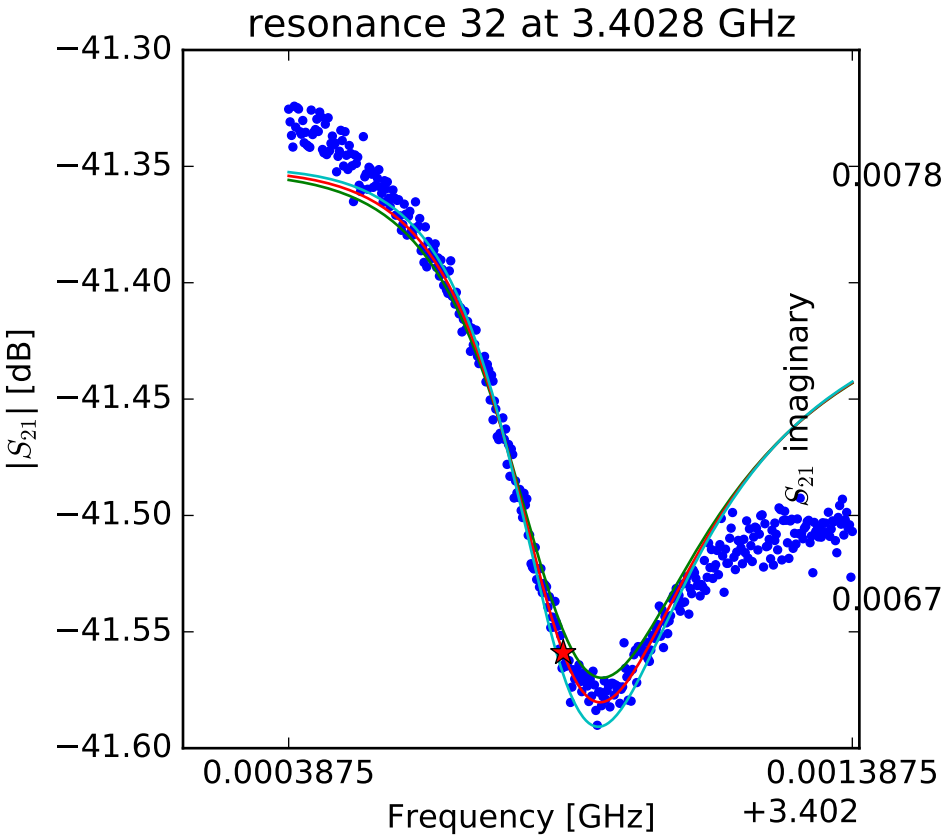


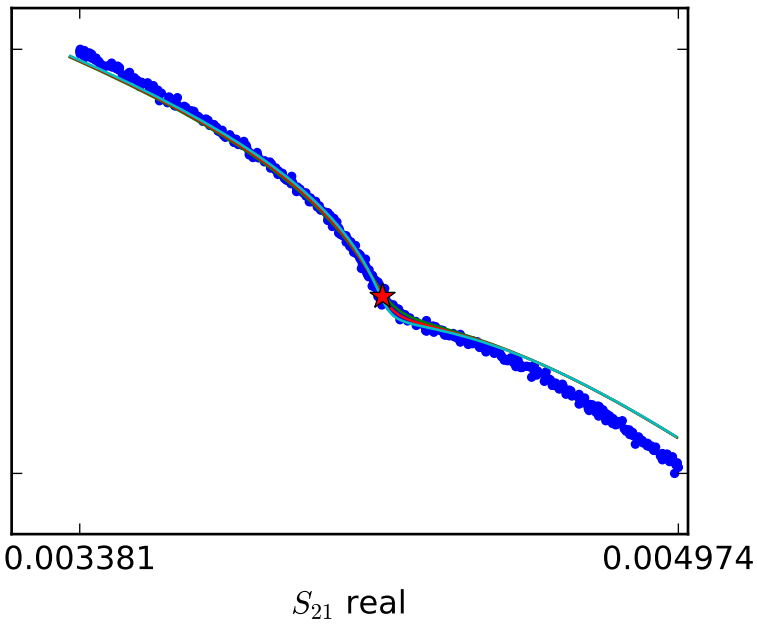


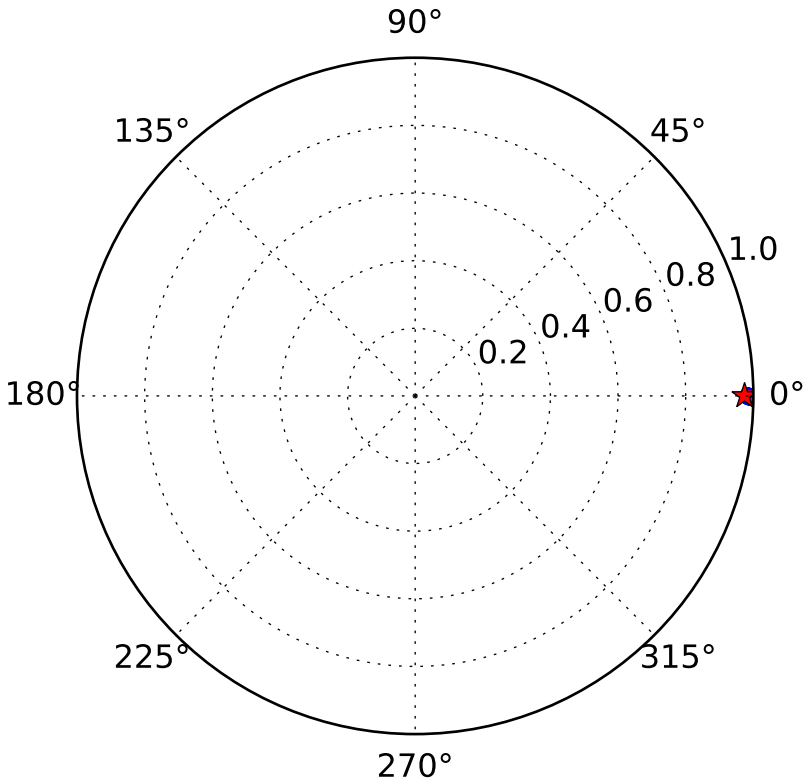


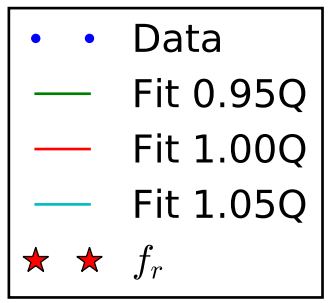
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.39545375579
Q_r = 9795.7246913
Q_c = 568730.687397
a = (-0.00693159645899-0.00598891418875j)
ϕ_0 = 0.960736244196
τ = 38.6265000579



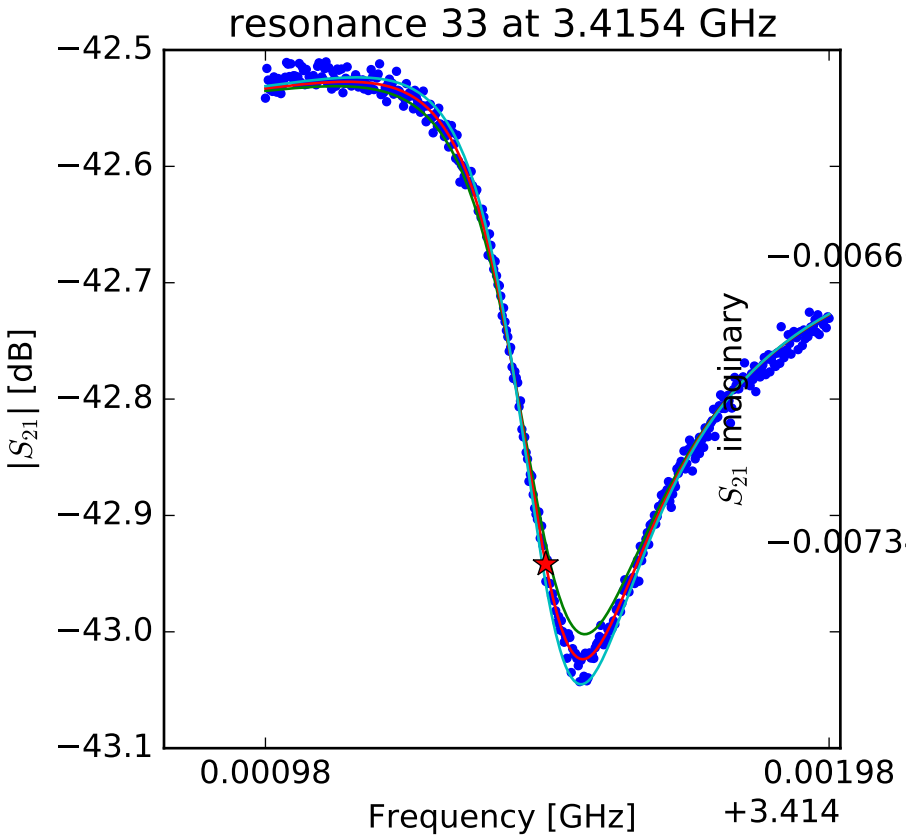


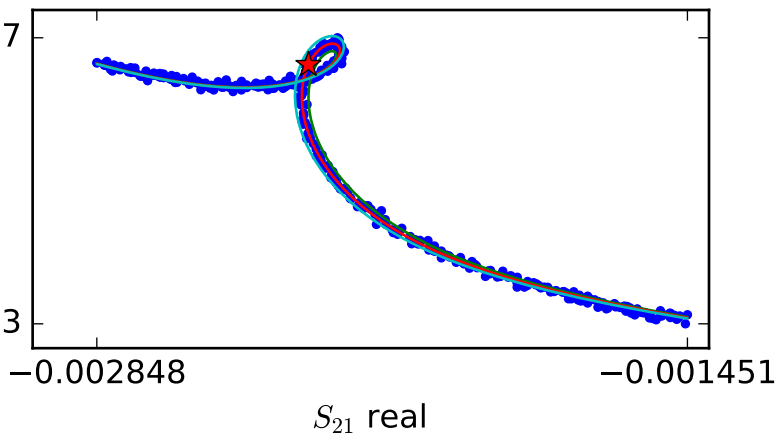


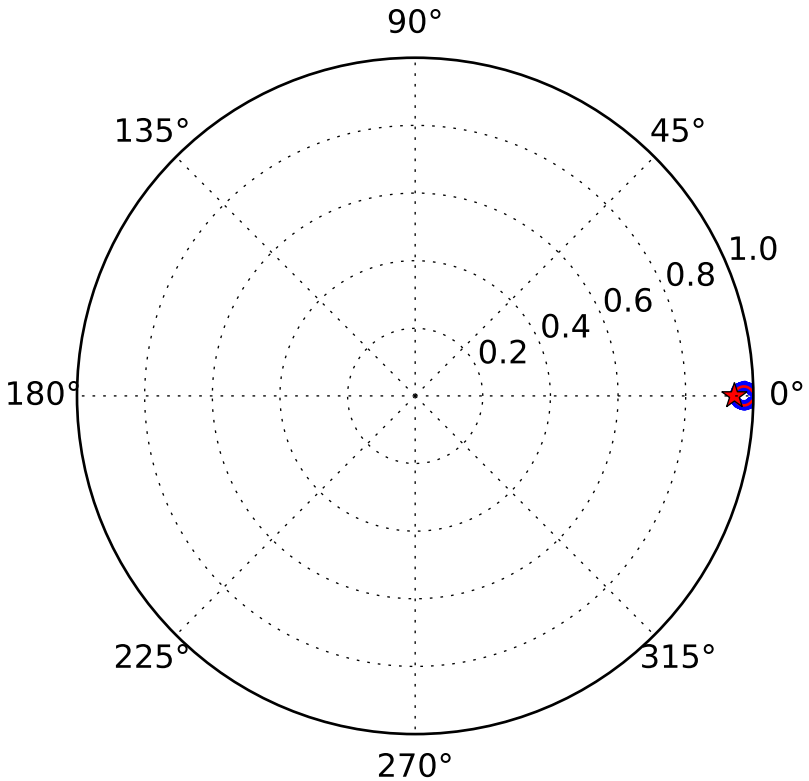


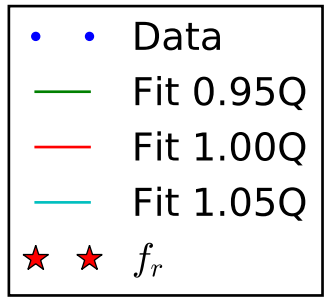
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.40287467253
Q_r = 8252.02333307
Q_c = 317572.089391
a = (0.000744382772361-0.00850595164035j)
ϕ_0 = 0.605326400783
τ = 38.0839803108



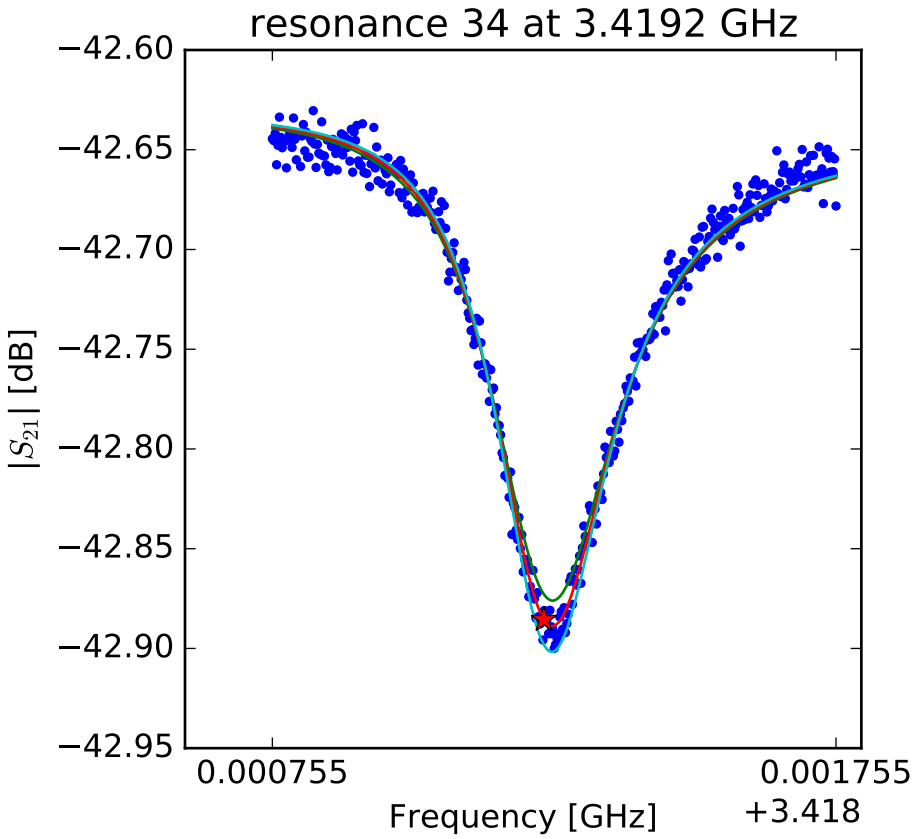


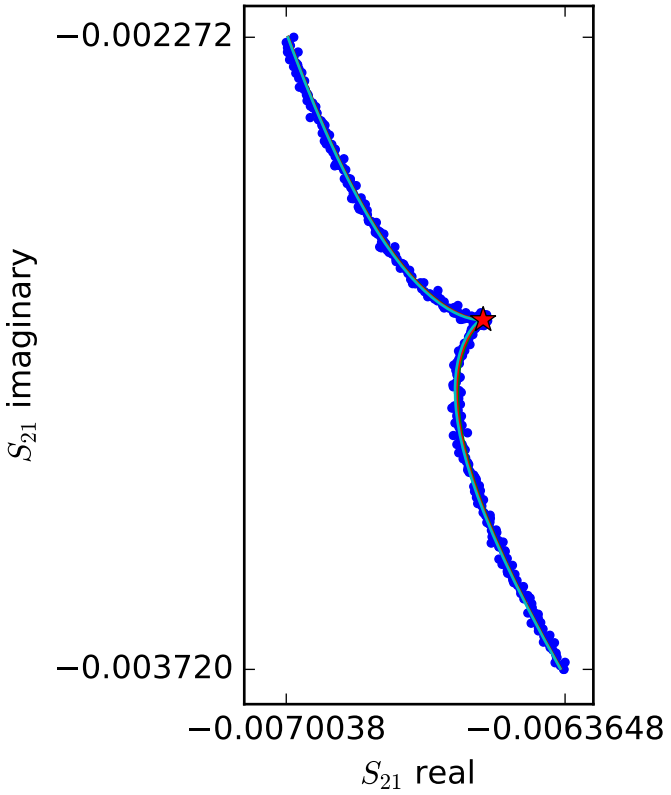


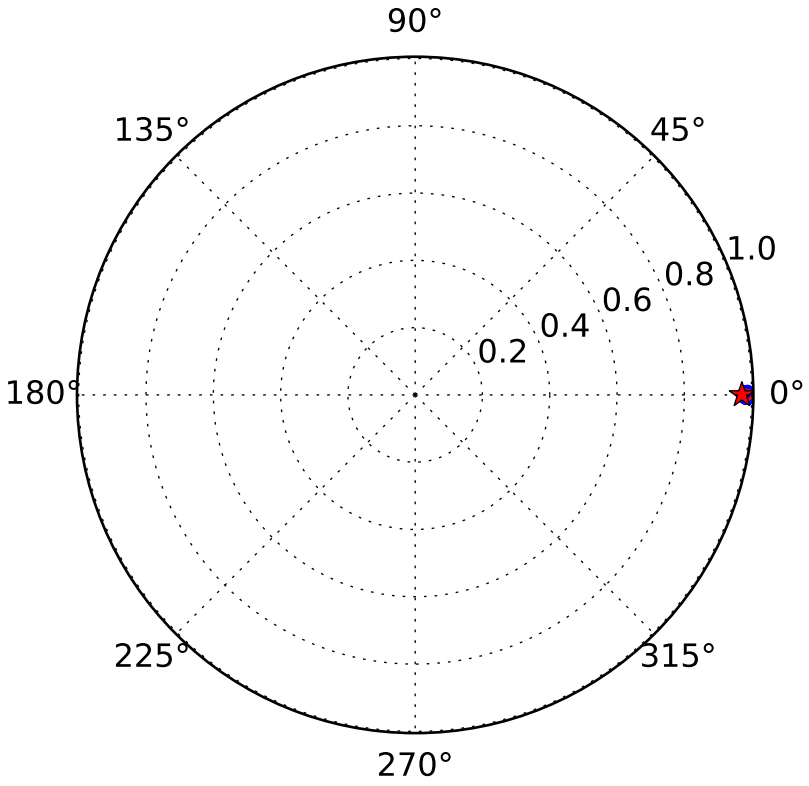


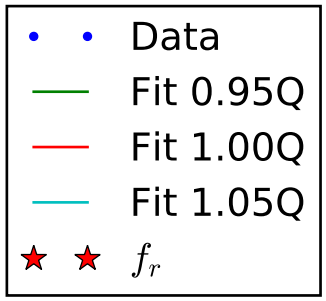
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.41547722842
Q_r = 11214.7168049
Q_c = 200205.508836
a = (0.0073920714354+0.000539445161922j)
ϕ_0 = 0.79477021594
τ = 36.1028311309



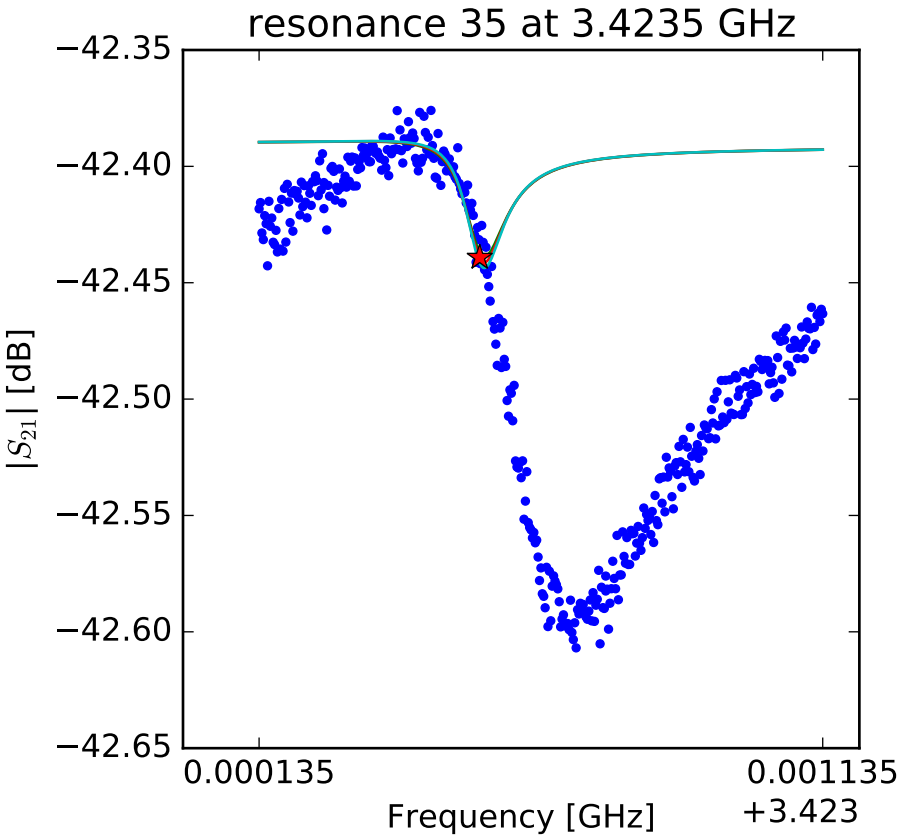


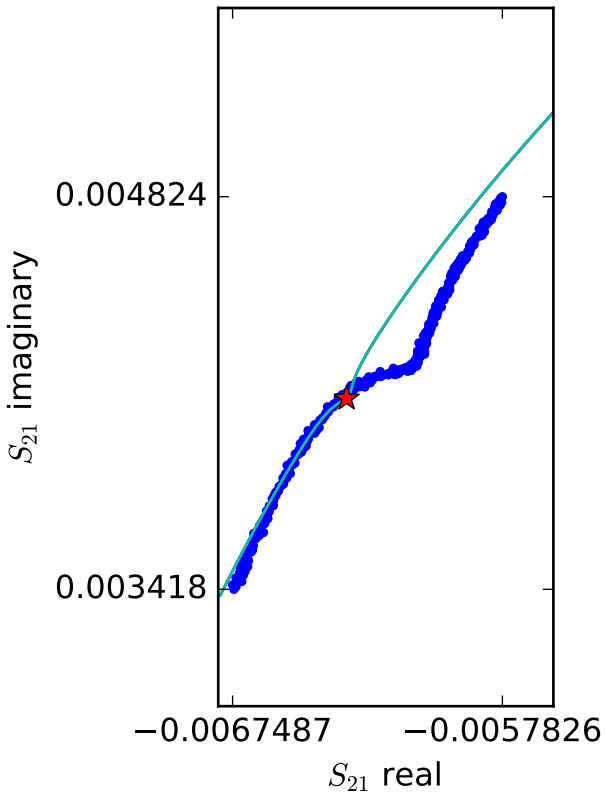


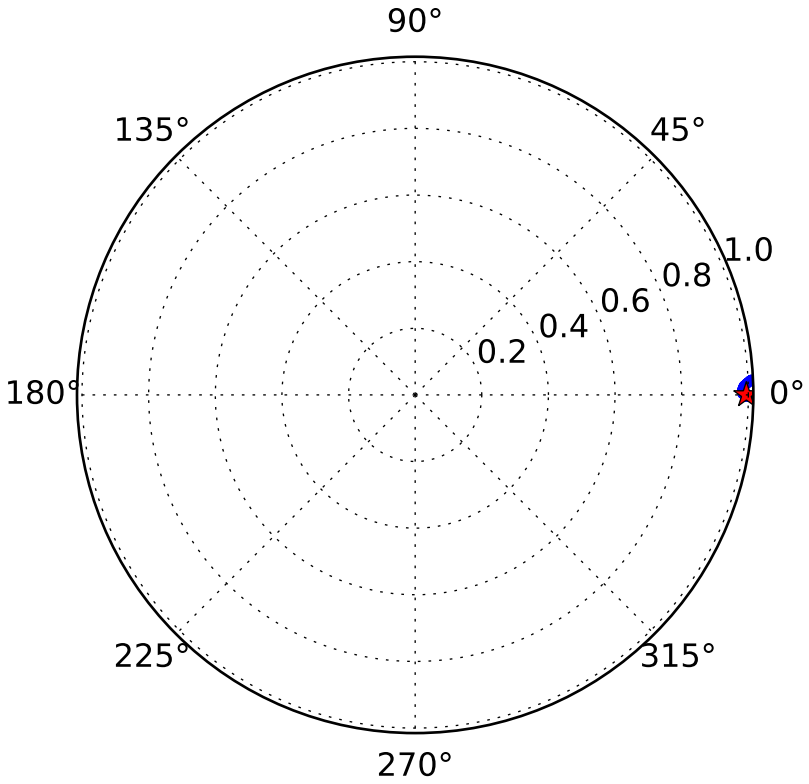


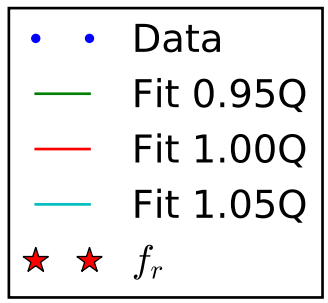
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.4192367264
Q_r = 13087.3013458
Q_c = 450176.95996
a = (-0.000687252824791-0.00735052894279j)
ϕ_0 = 0.221533001695
τ = 36.3143654893



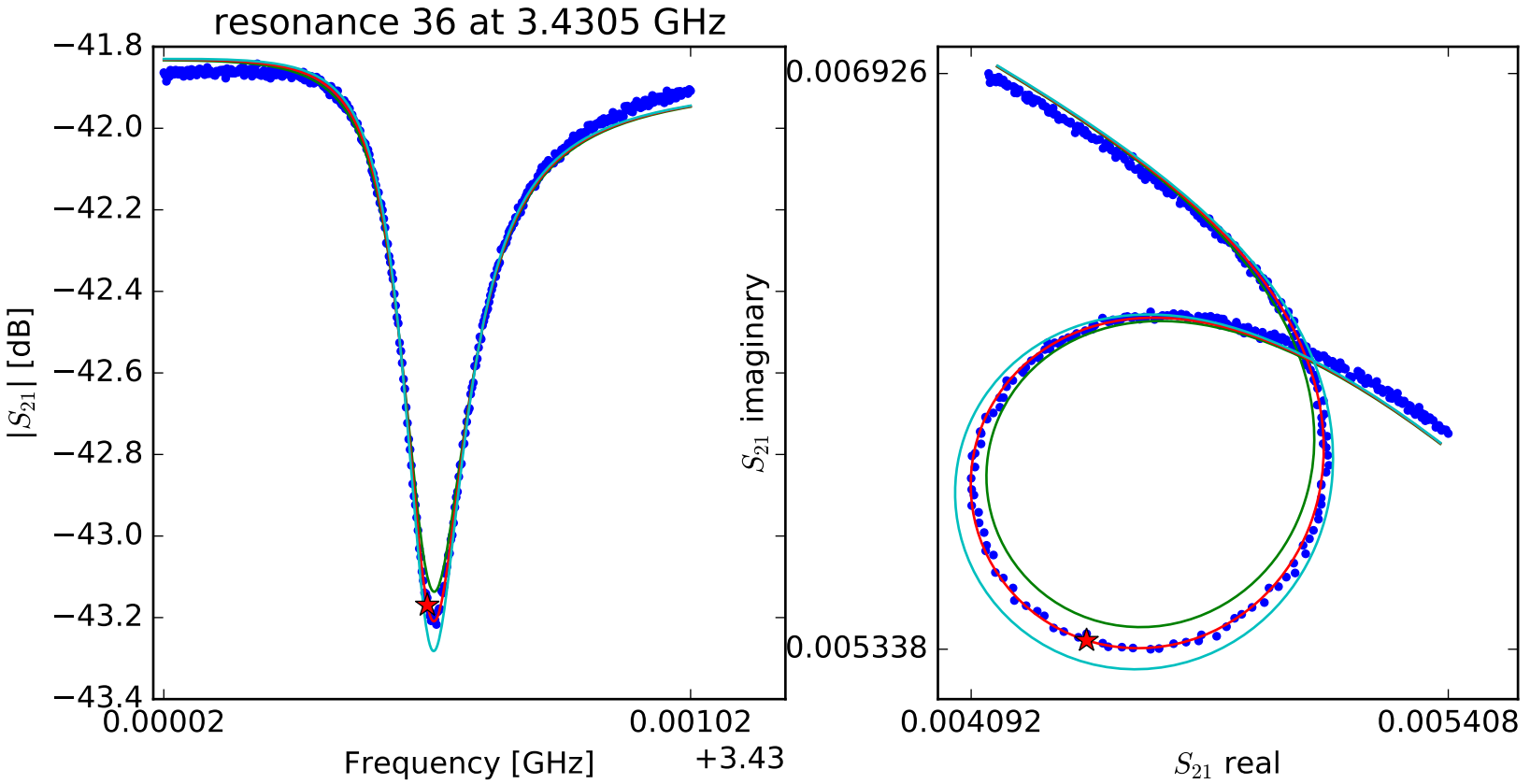


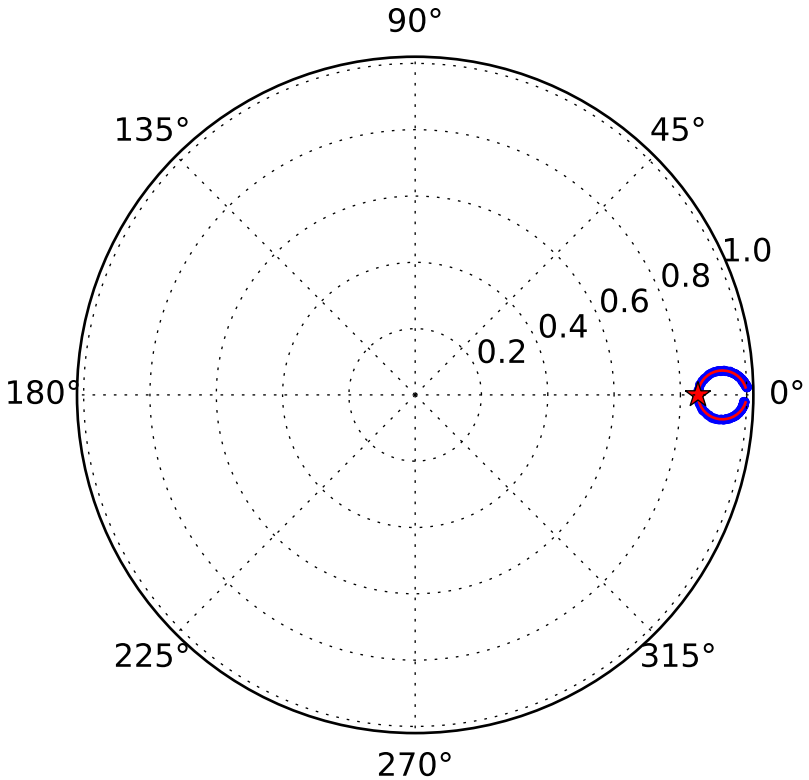


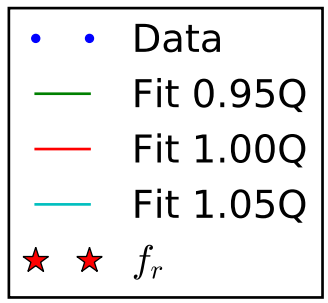


$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.42352634536
Q_r = 40033.5508993
Q_c = 6704038.56528
a = (0.00744746778732+0.00148192762764j)
ϕ_0 = -5.88758299425
τ = 44.2883377629

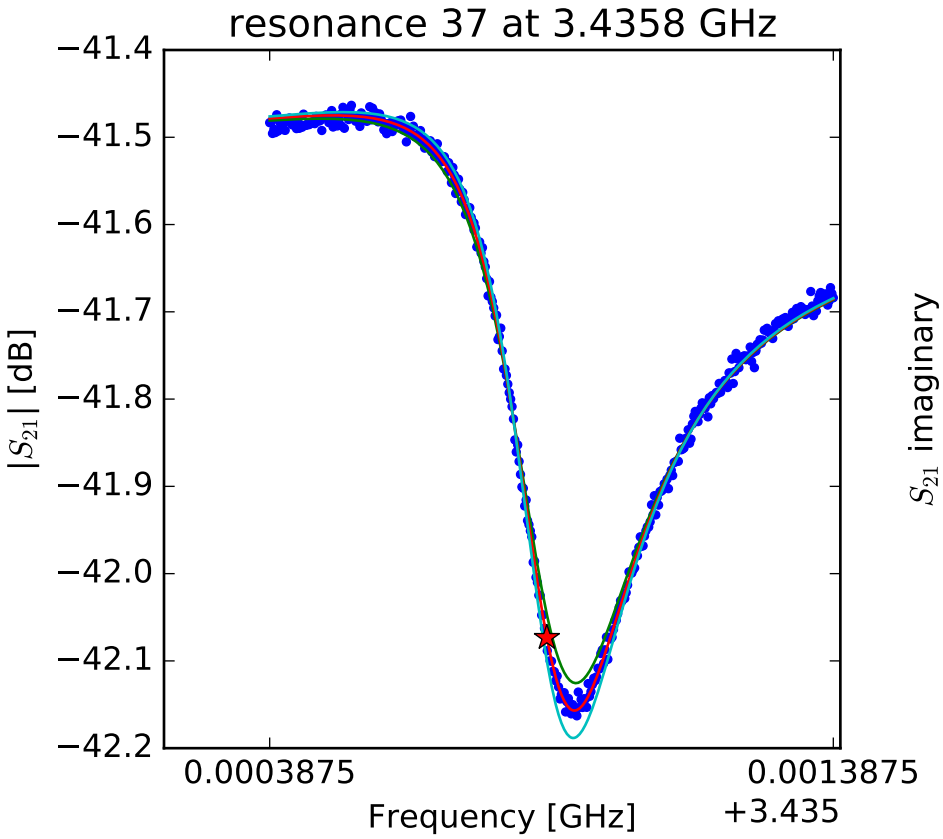


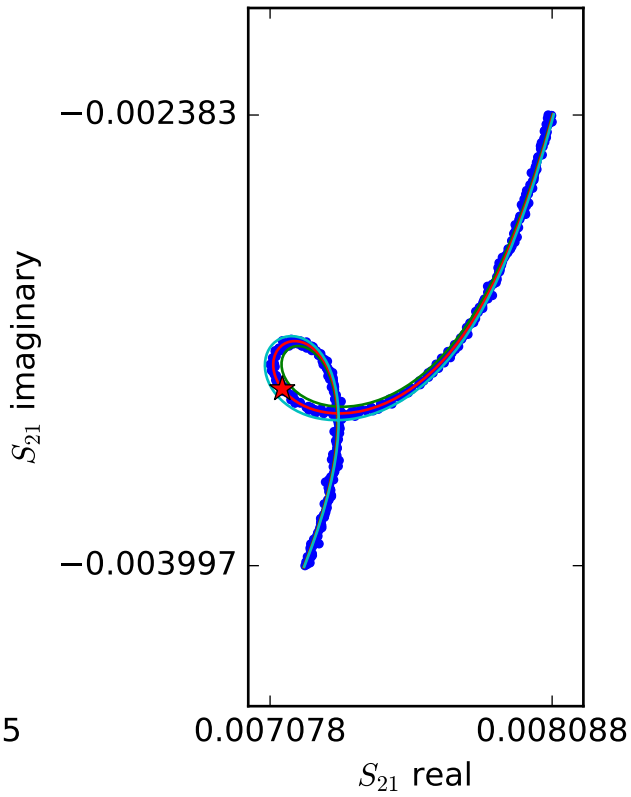


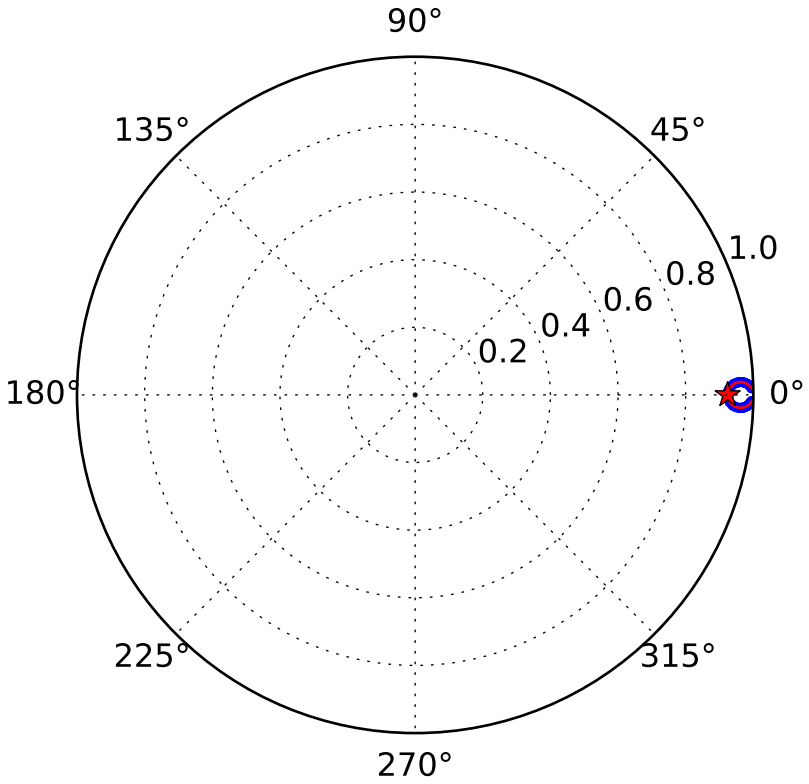


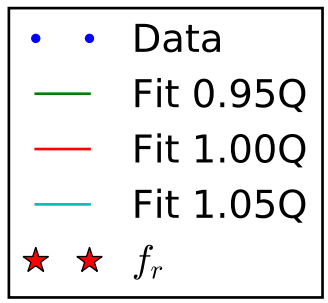
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.43052021028
Q_r = 21764.7960365
Q_c = 147882.185645
a = (-0.000225680660999-0.00806843870149j)
ϕ_0 = 0.292802092135
τ = 38.6522221514



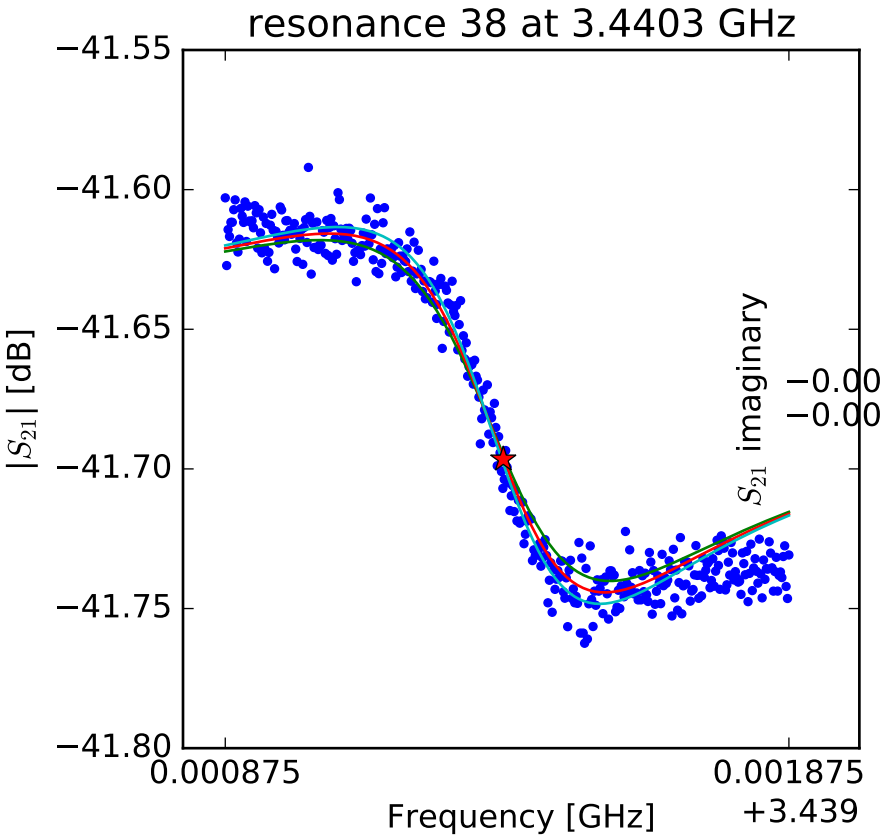


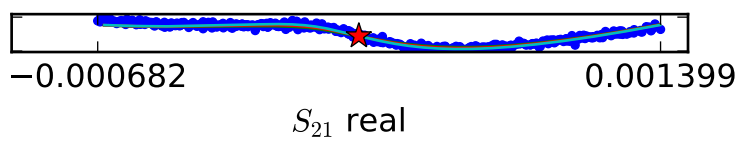


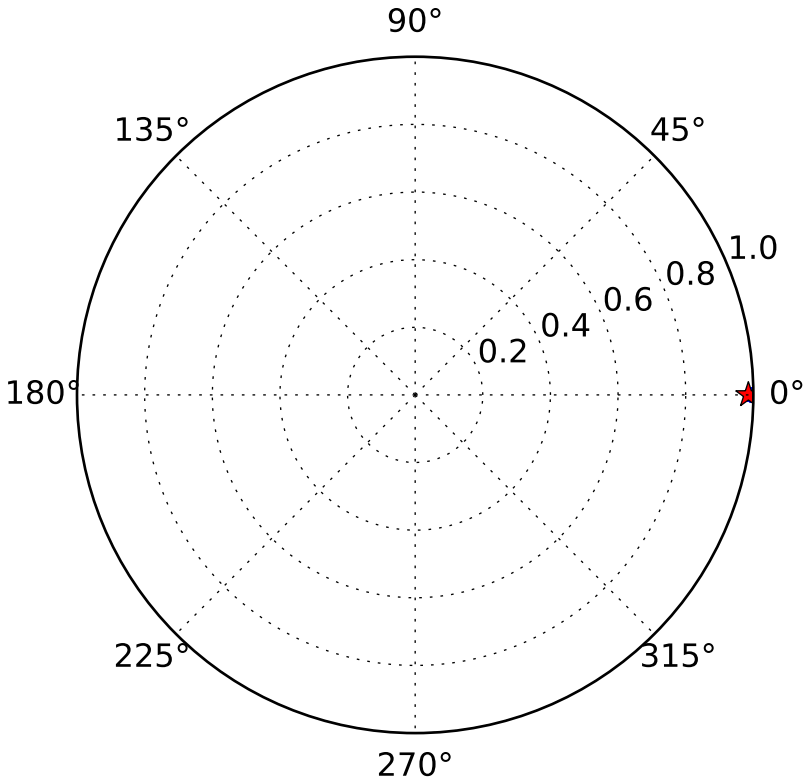


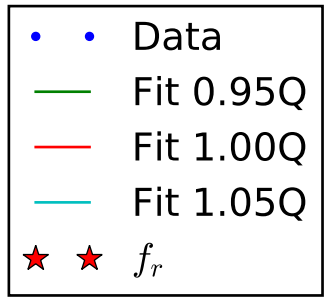
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.43587925268
Q_r = 12586.8786667
Q_c = 165300.242838
a = (-0.00280481876029-0.00788392993119j)
ϕ_0 = 0.665098061536
τ = 40.0939250513



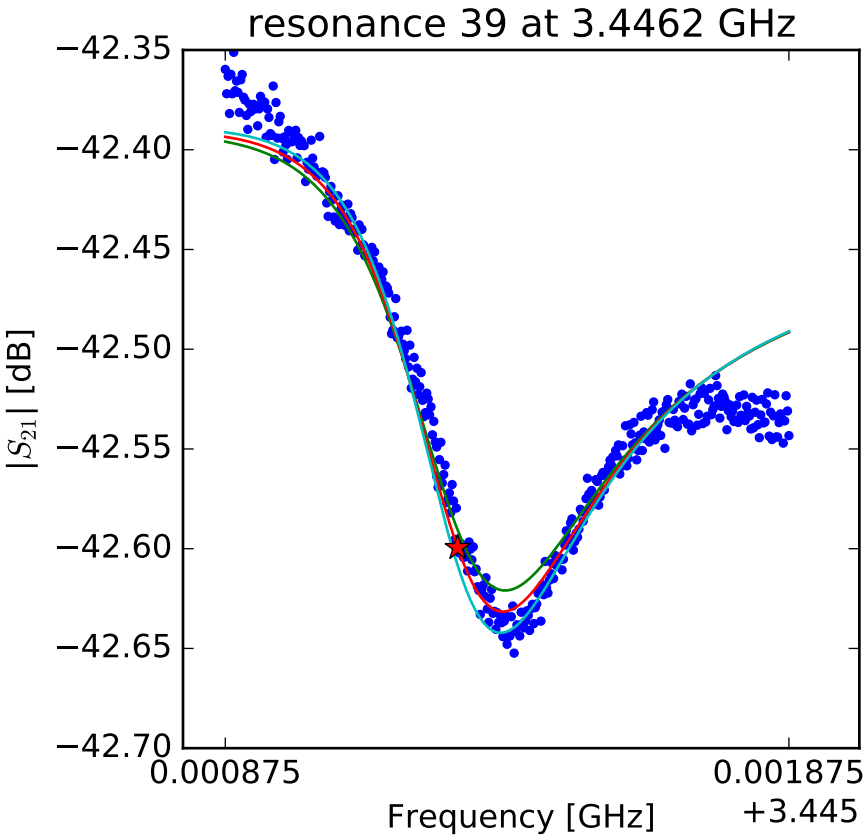


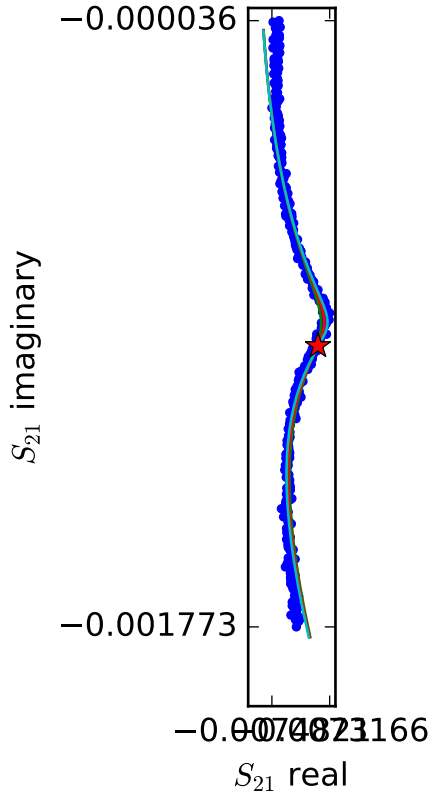


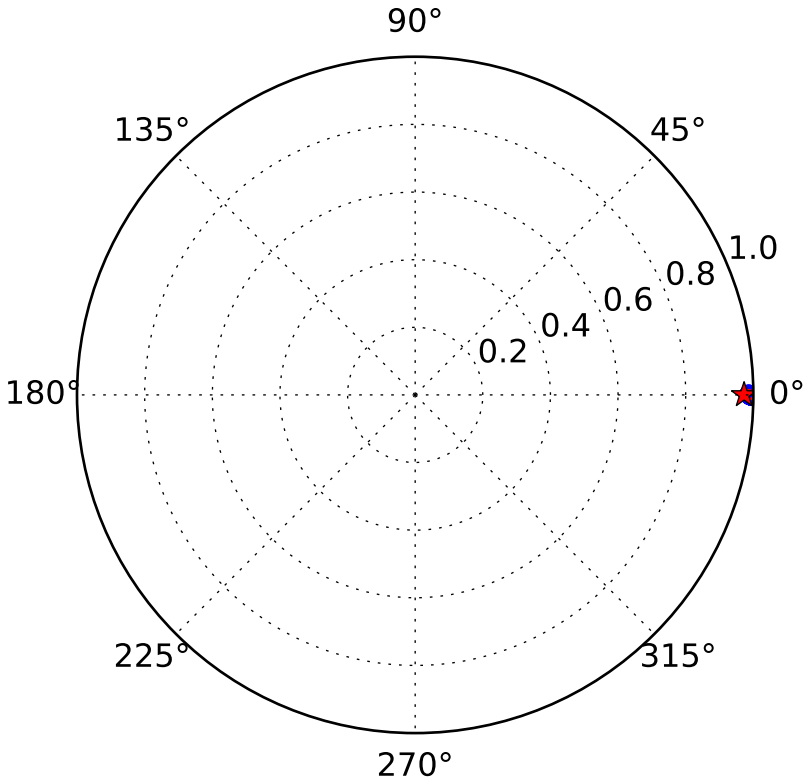


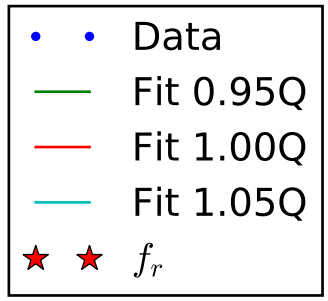
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.44036826741
Q_r = 7296.37699428
Q_c = 494156.032204
a = (0.00814542839305+0.00135874376897j)
ϕ_0 = 1.29576273162
τ = 40.1900440266



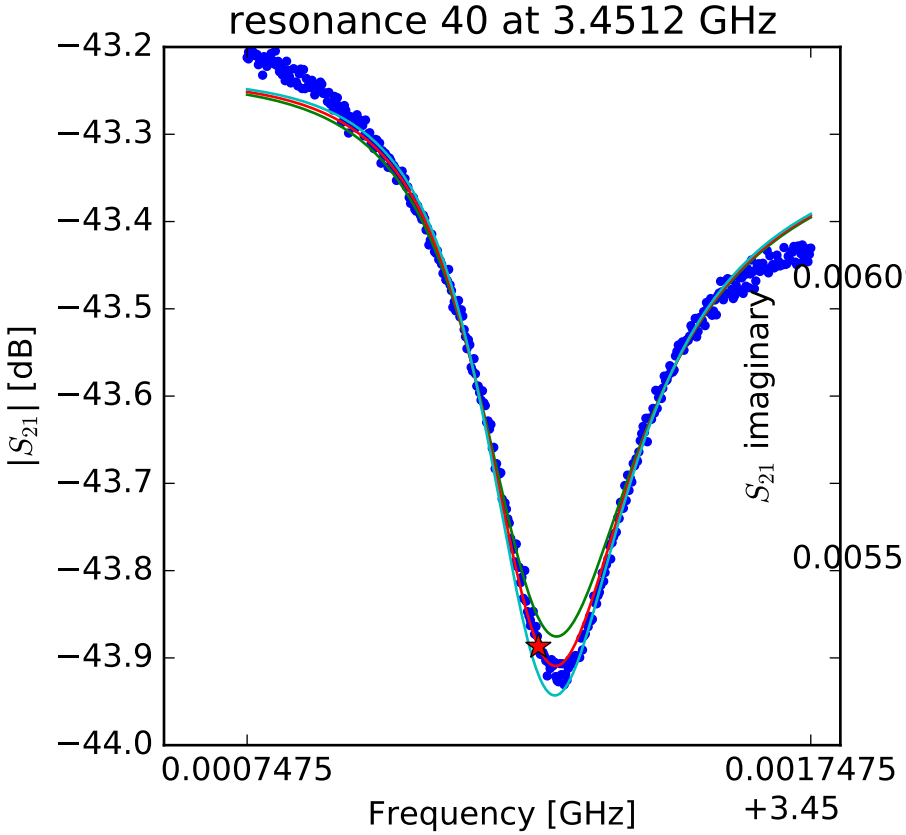


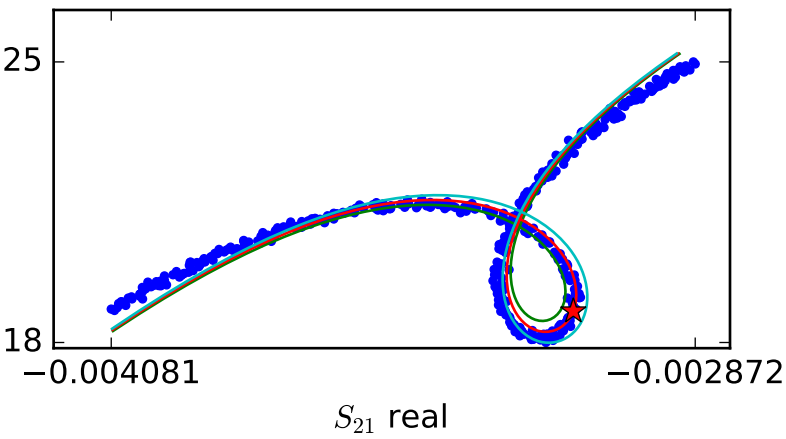


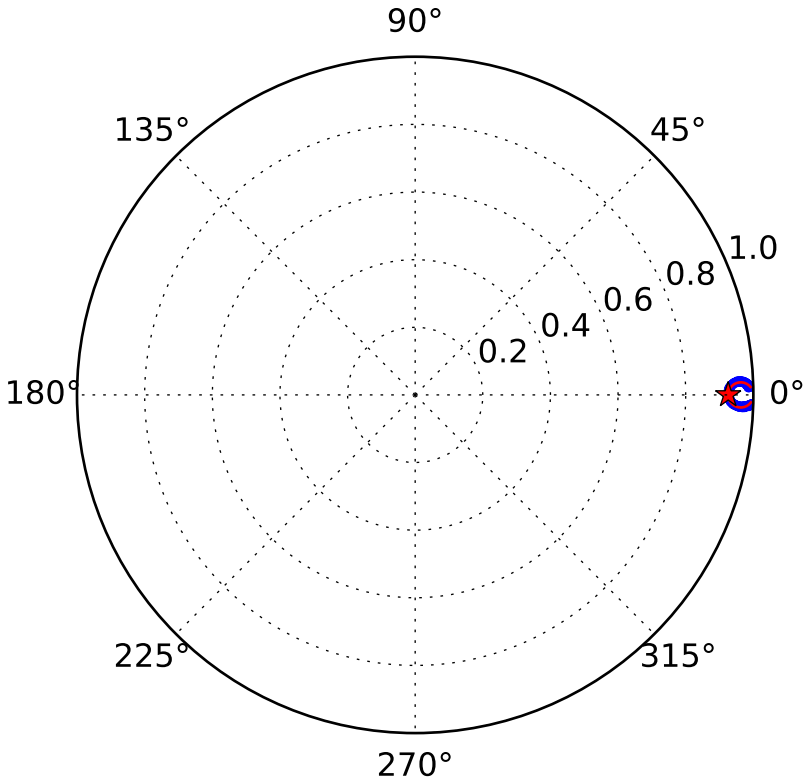


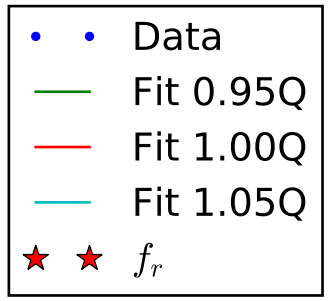
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.44628723268
Q_r = 8329.57536315
Q_c = 304352.618576
a = (0.00278987661262+0.00703351844863j)
ϕ_0 = 0.729626727852
τ = 39.3658715679



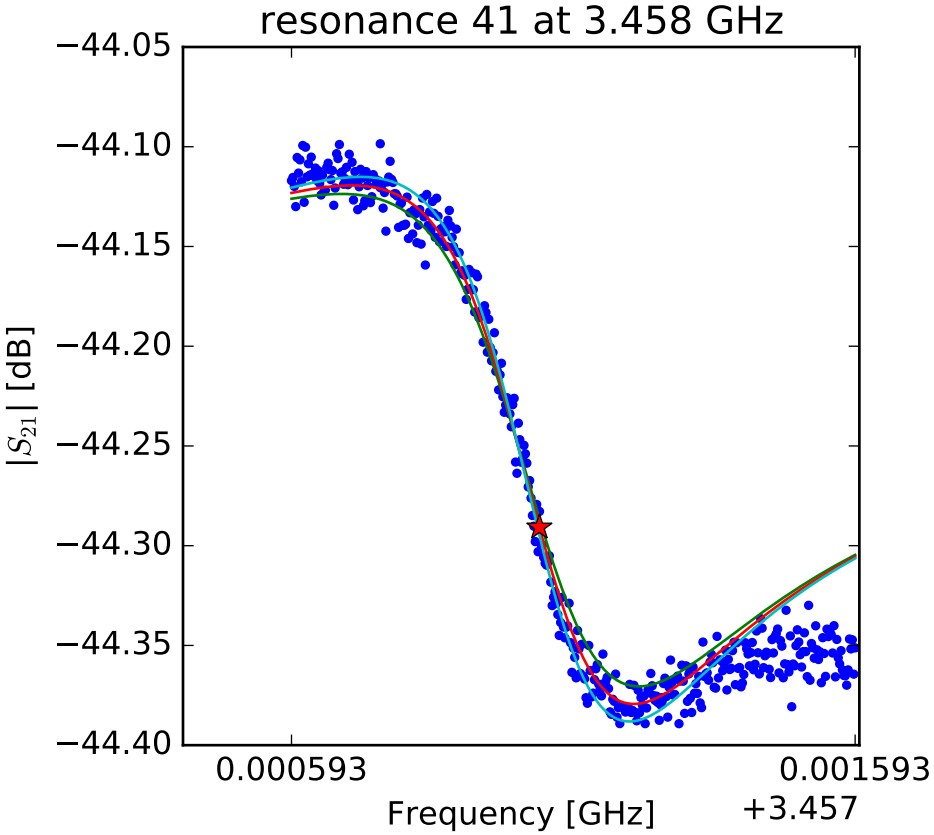


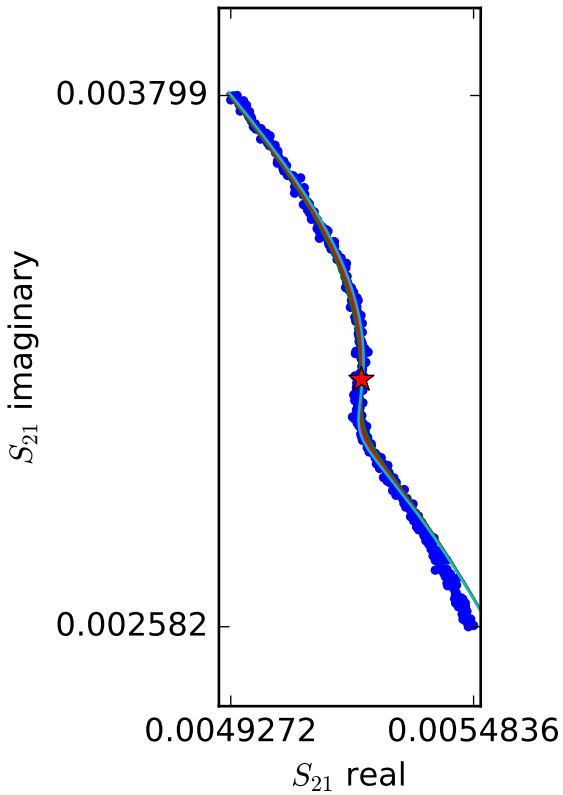


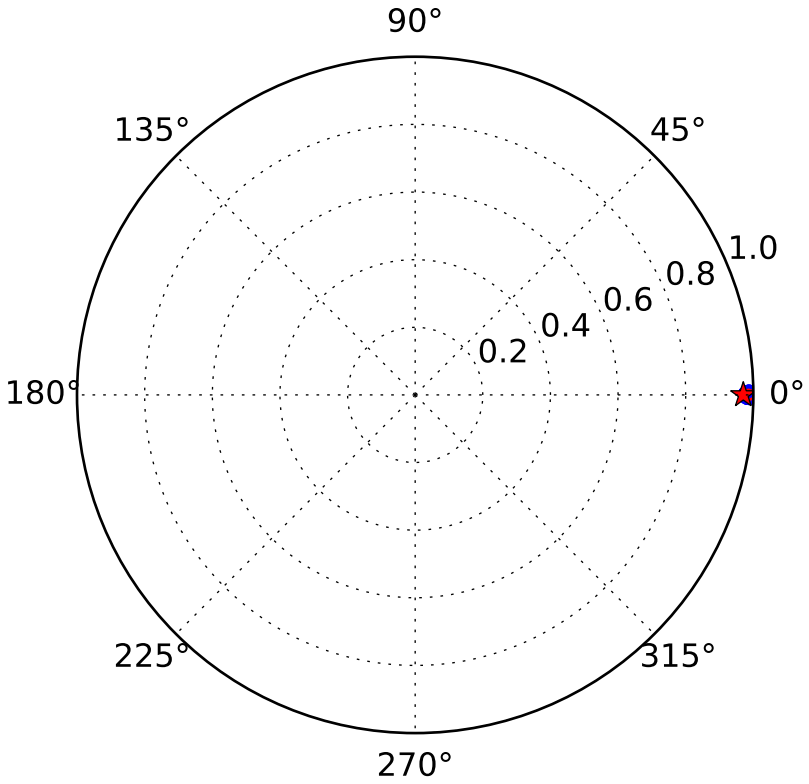


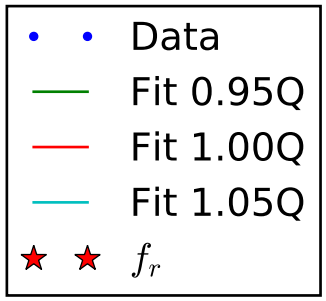
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.45126427654
Q_r = 10098.142122
Q_c = 135637.775757
a = (-0.00610689142427-0.00315164815137j)
ϕ_0 = 0.34078472968
τ = 37.1574825966



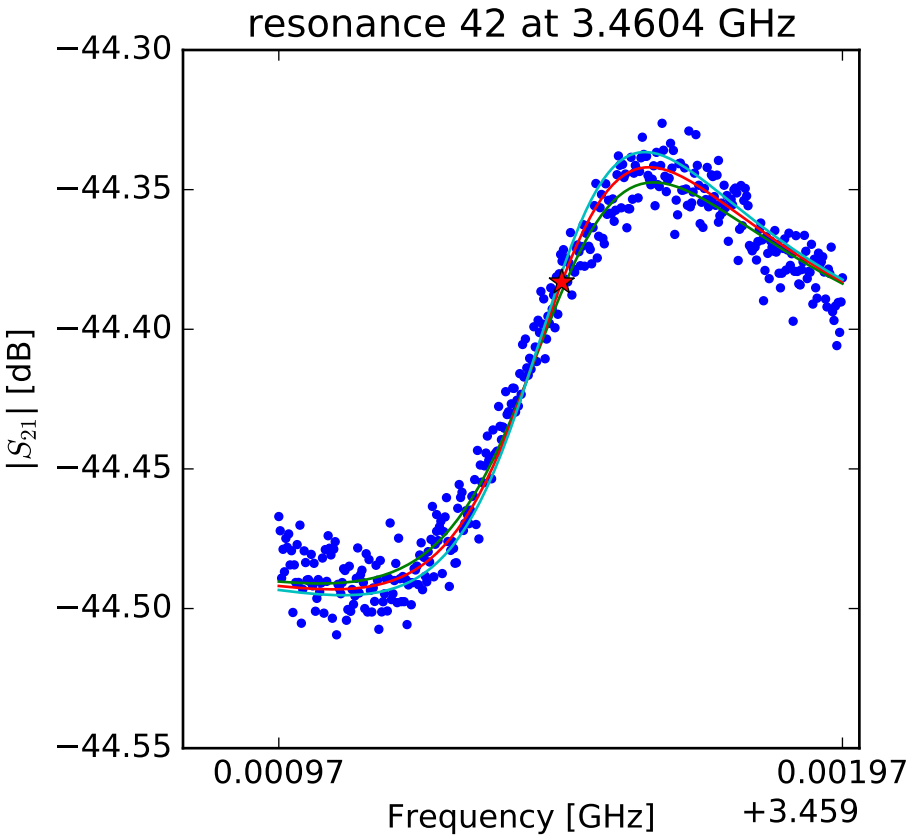


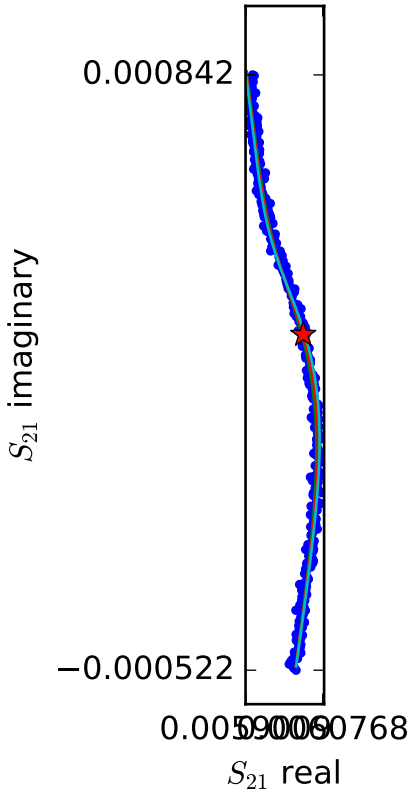


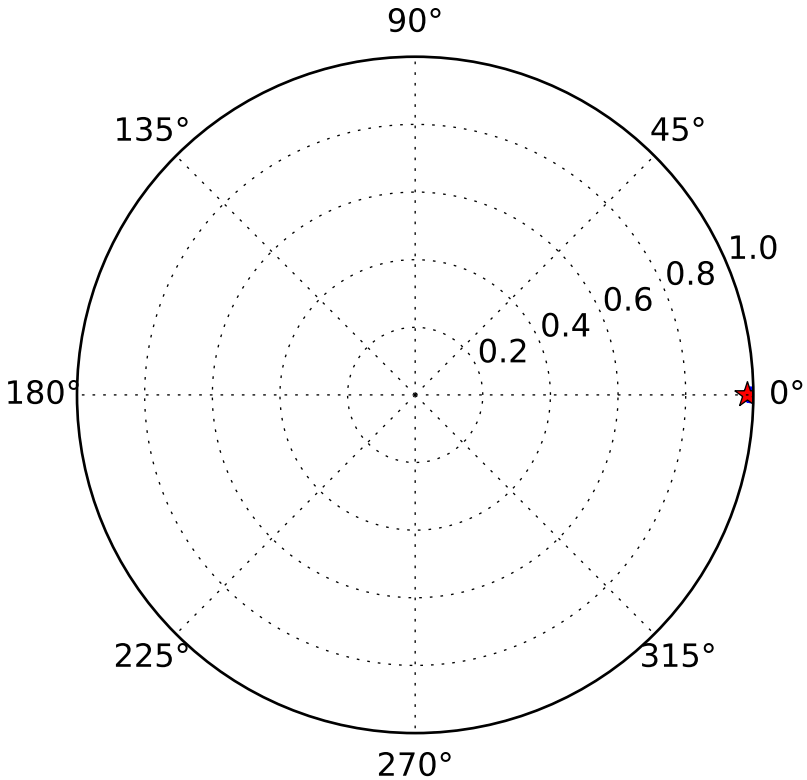


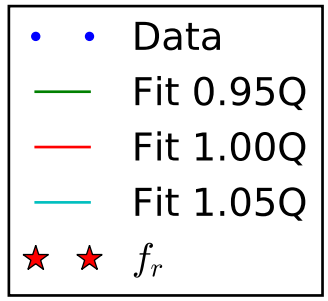
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.45803234903
Q_r = 7310.15459331
Q_c = 245487.718394
a = (0.0052875294319-0.00316572845614j)
ϕ_0 = 1.21824644132
τ = 35.518277272



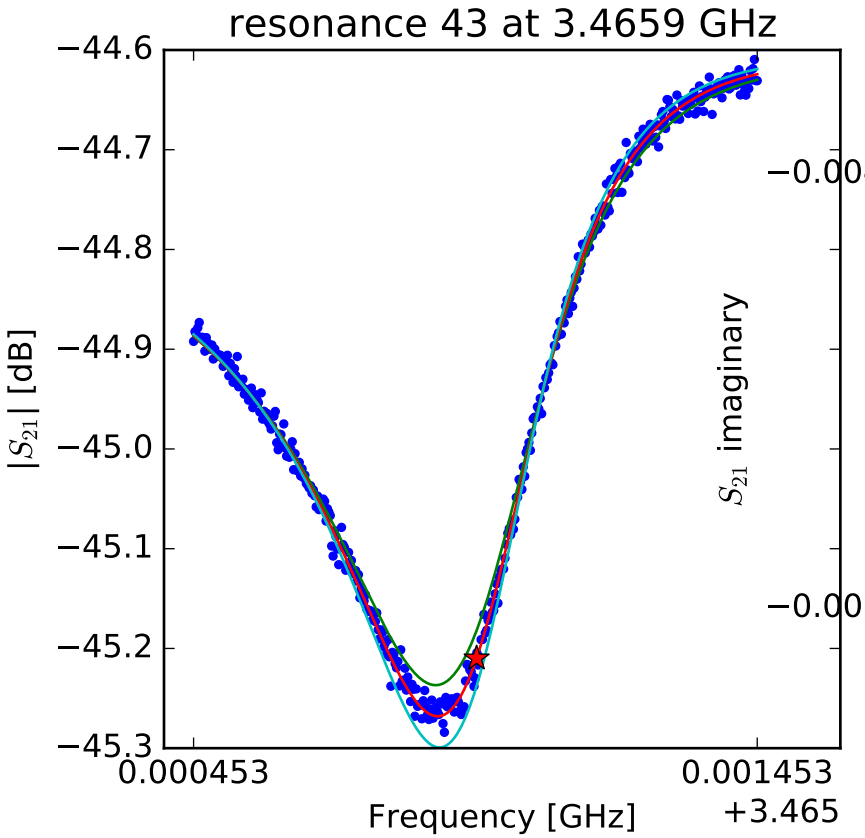


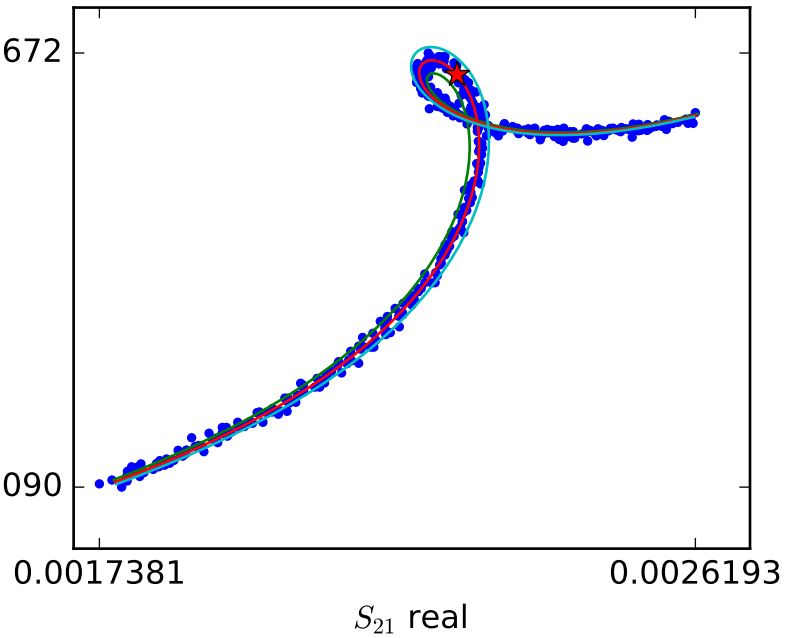


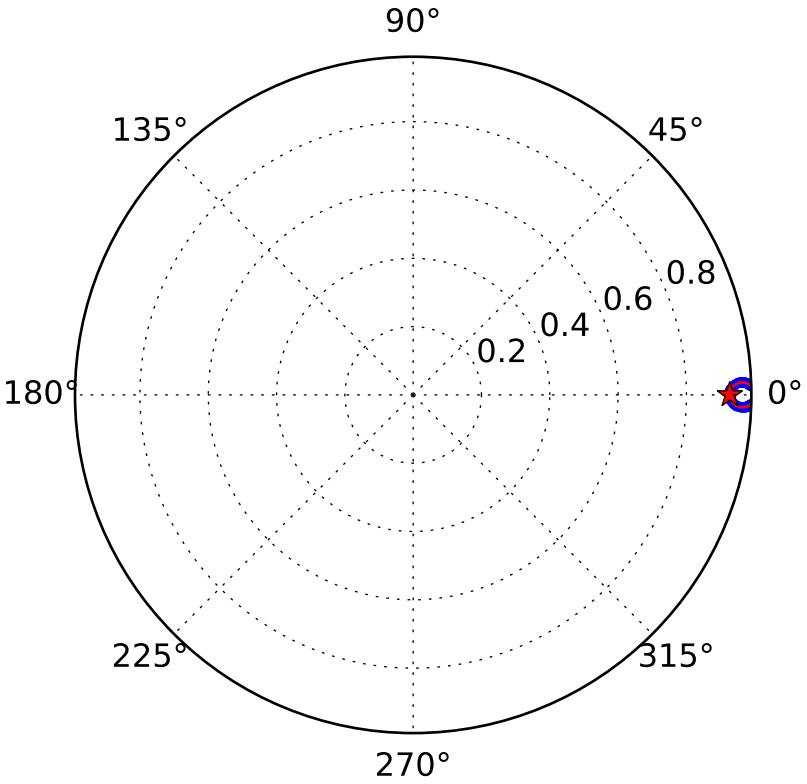


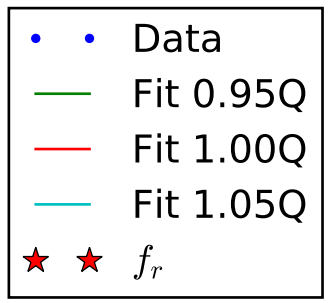
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.46047197459
Q_r = 6889.80300071
Q_c = 394398.938305
a = (0.00402129088677+0.00444000915076j)
ϕ_0 = -2.02827256559
τ = 35.2925355247



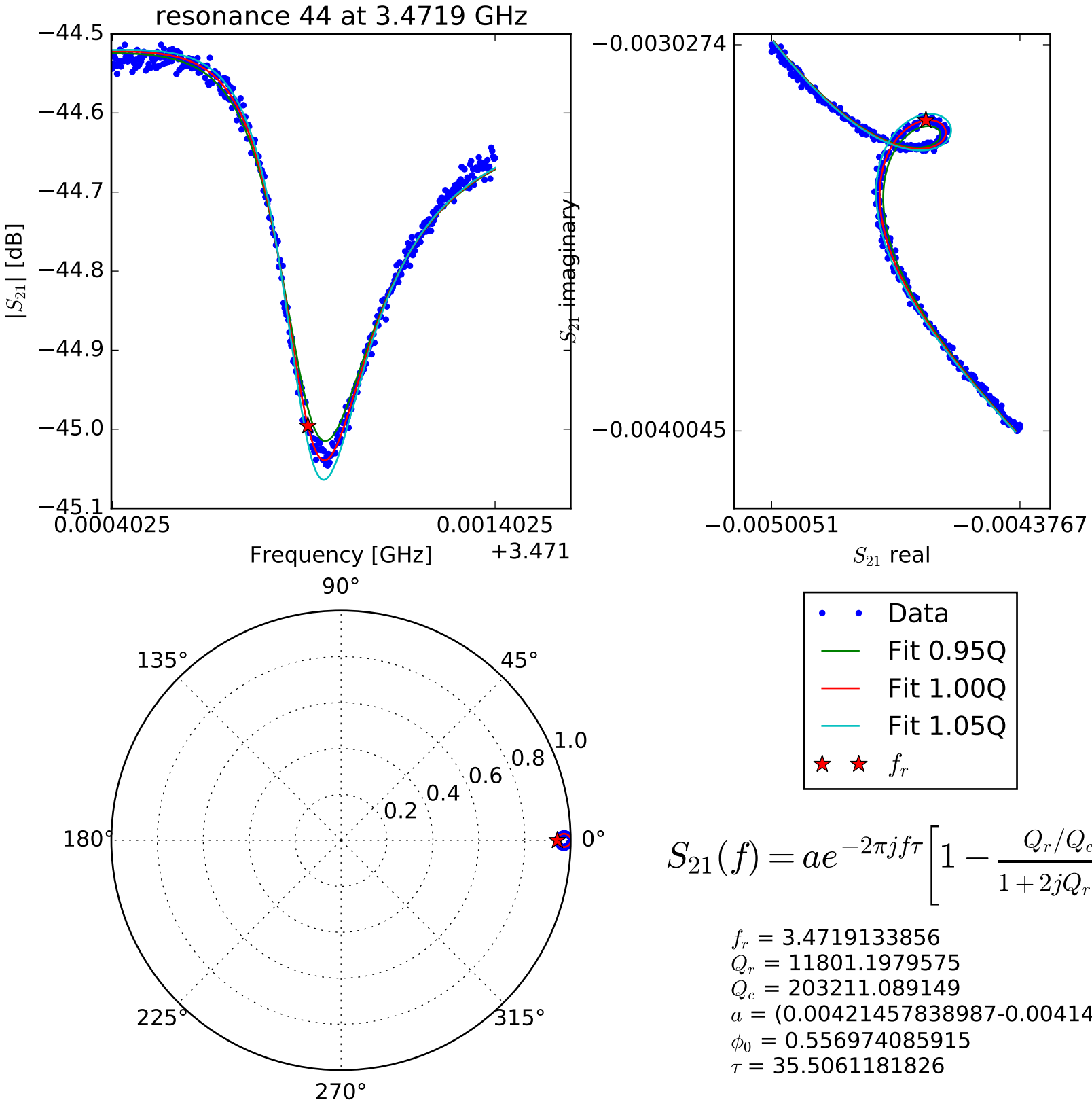






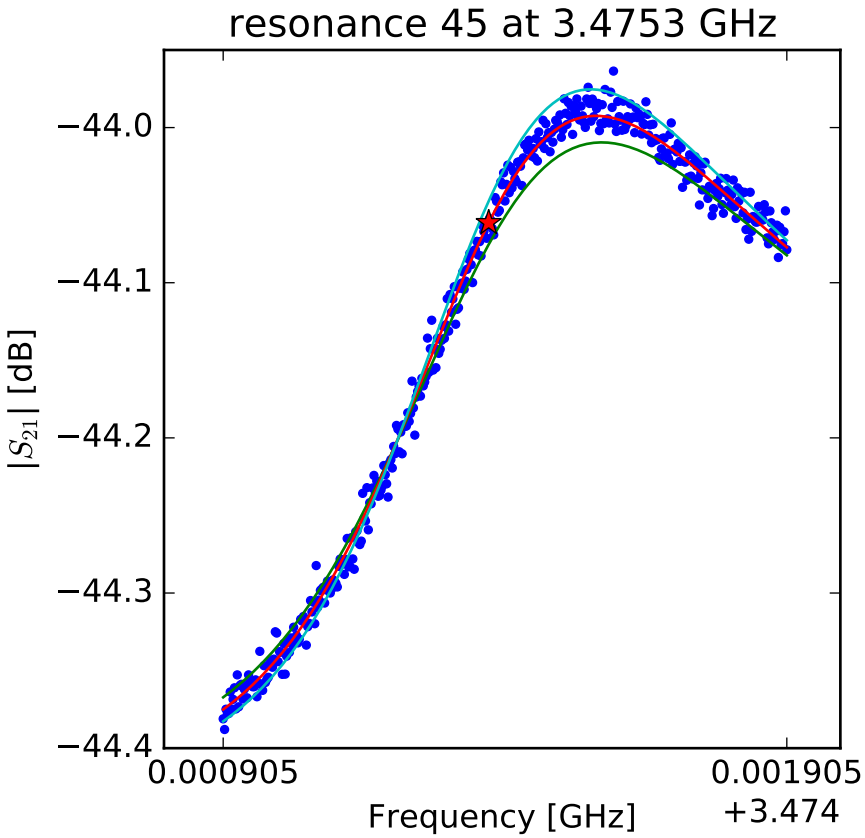
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

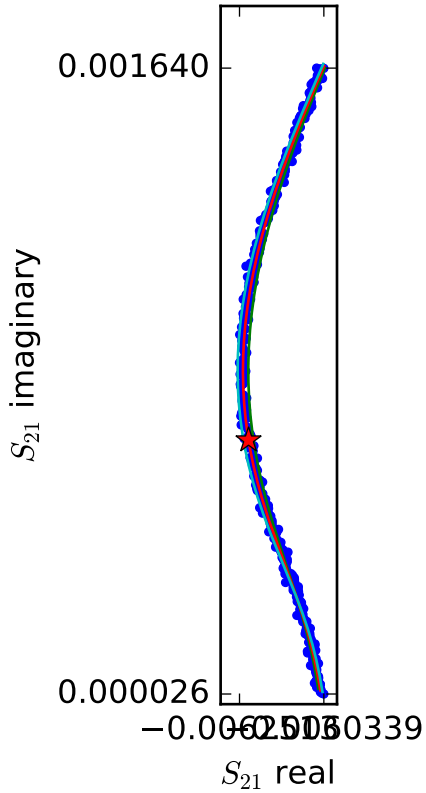
f_r = 3.46595462177
Q_r = 7531.62434646
Q_c = 102967.307745
a = (-0.00564542728133+0.0015180995363j)
ϕ_0 = -0.563197593534
τ = 35.0977059121

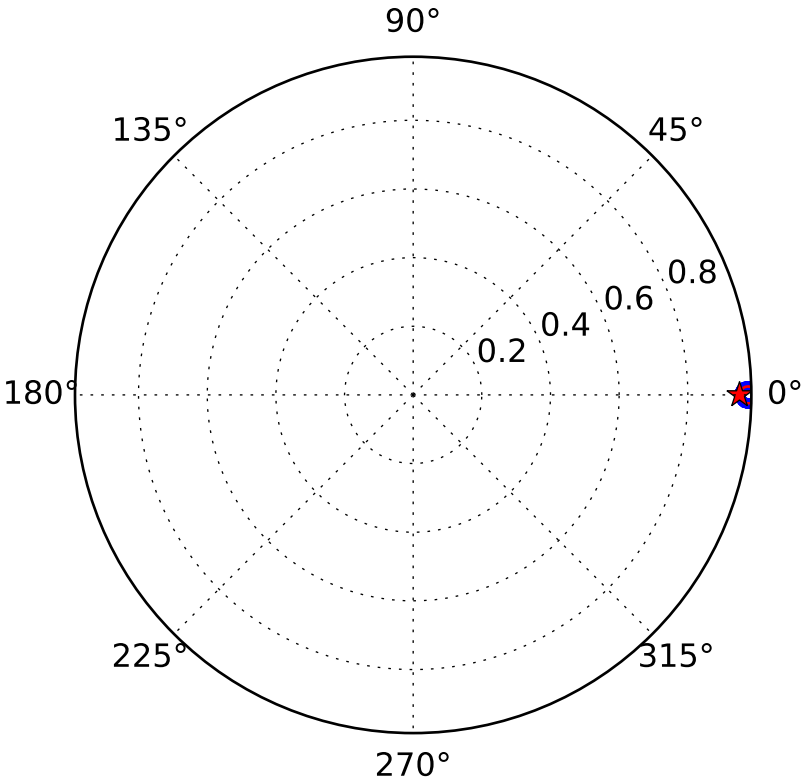


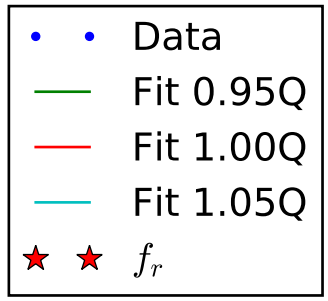
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.4719133856
Q_r = 11801.1979575
Q_c = 203211.089149
a = (0.00421457838987-0.00414999768942j)
ϕ_0 = 0.556974085915
τ = 35.5061181826



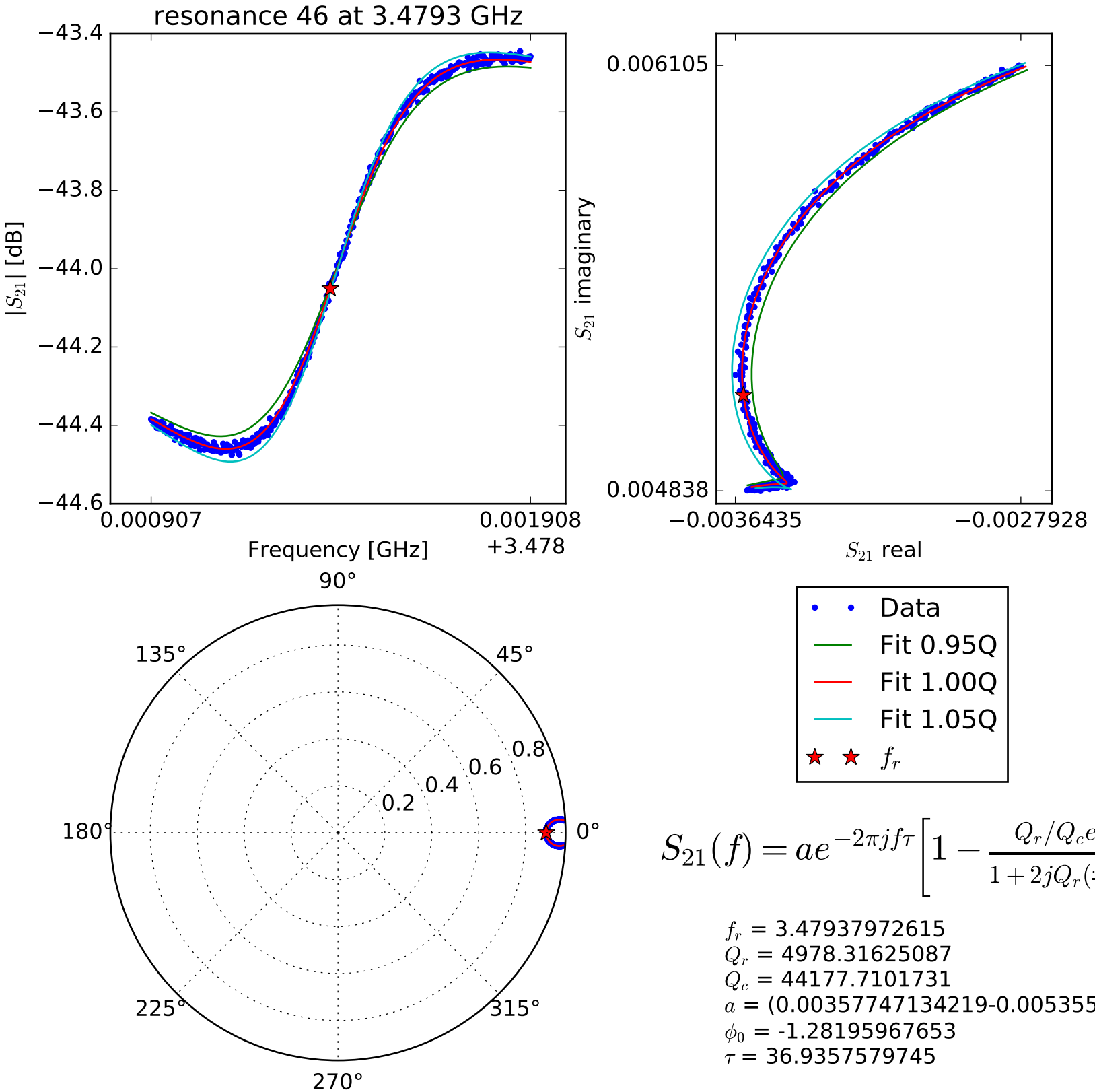






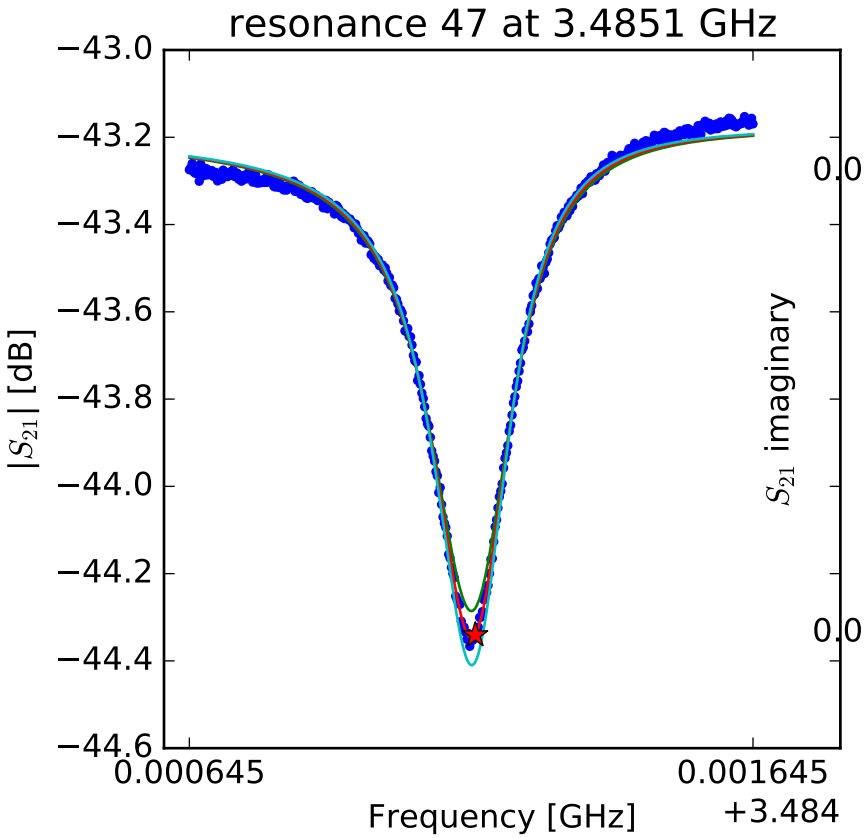
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

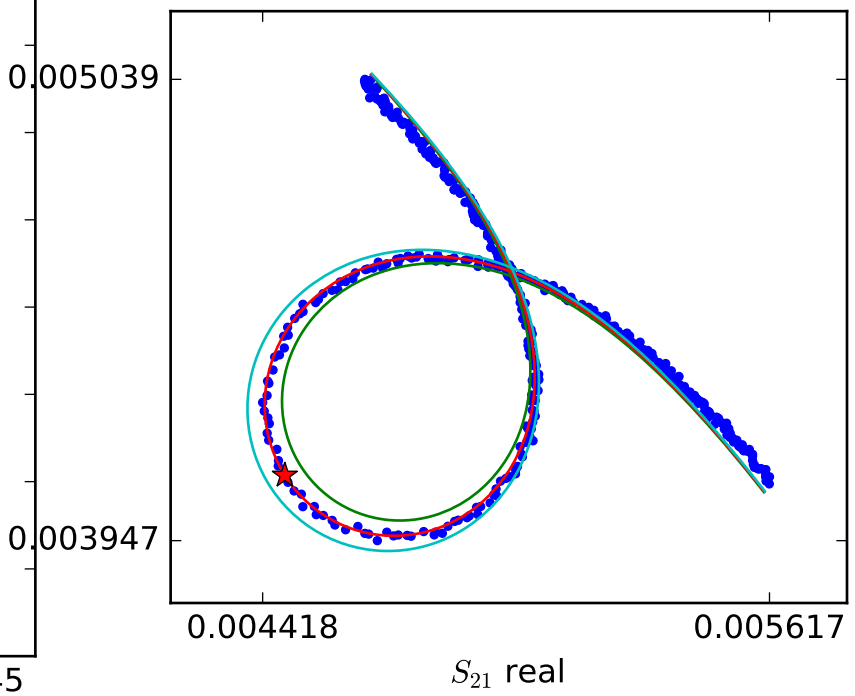
f_r = 3.47537607755
Q_r = 4133.91966142
Q_c = 83740.3474768
a = (0.00502177430587-0.00340531281016j)
ϕ_0 = -2.27325760161
τ = 36.0905692856

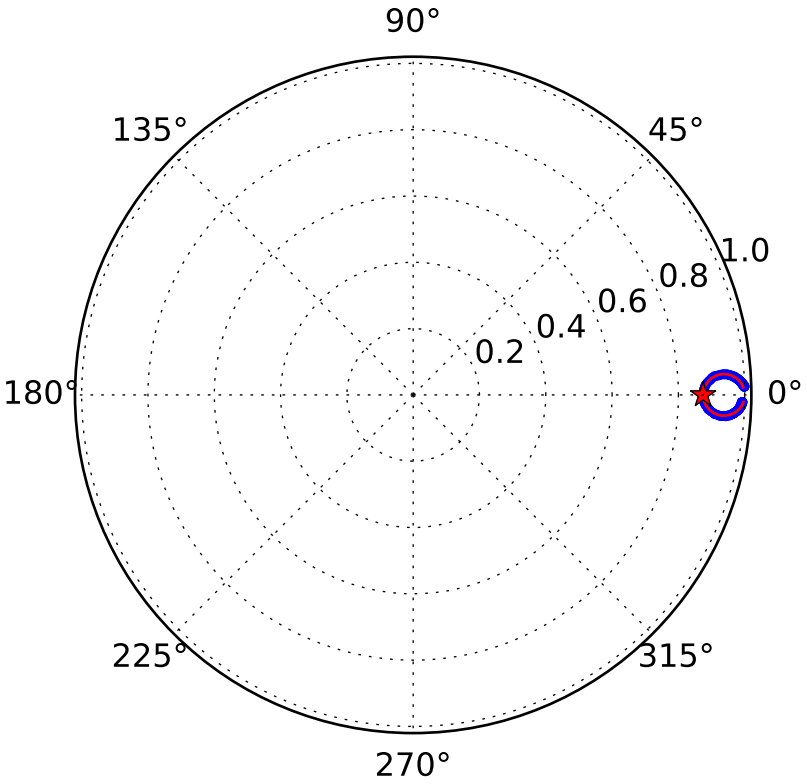


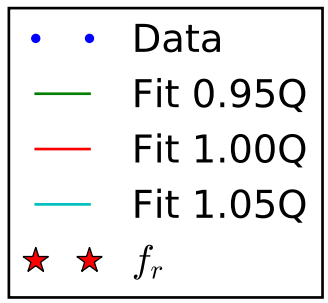
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.47937972615
Q_r = 4978.31625087
Q_c = 44177.7101731
a = (0.00357747134219-0.00535574518829j)
ϕ_0 = -1.28195967653
τ = 36.9357579745



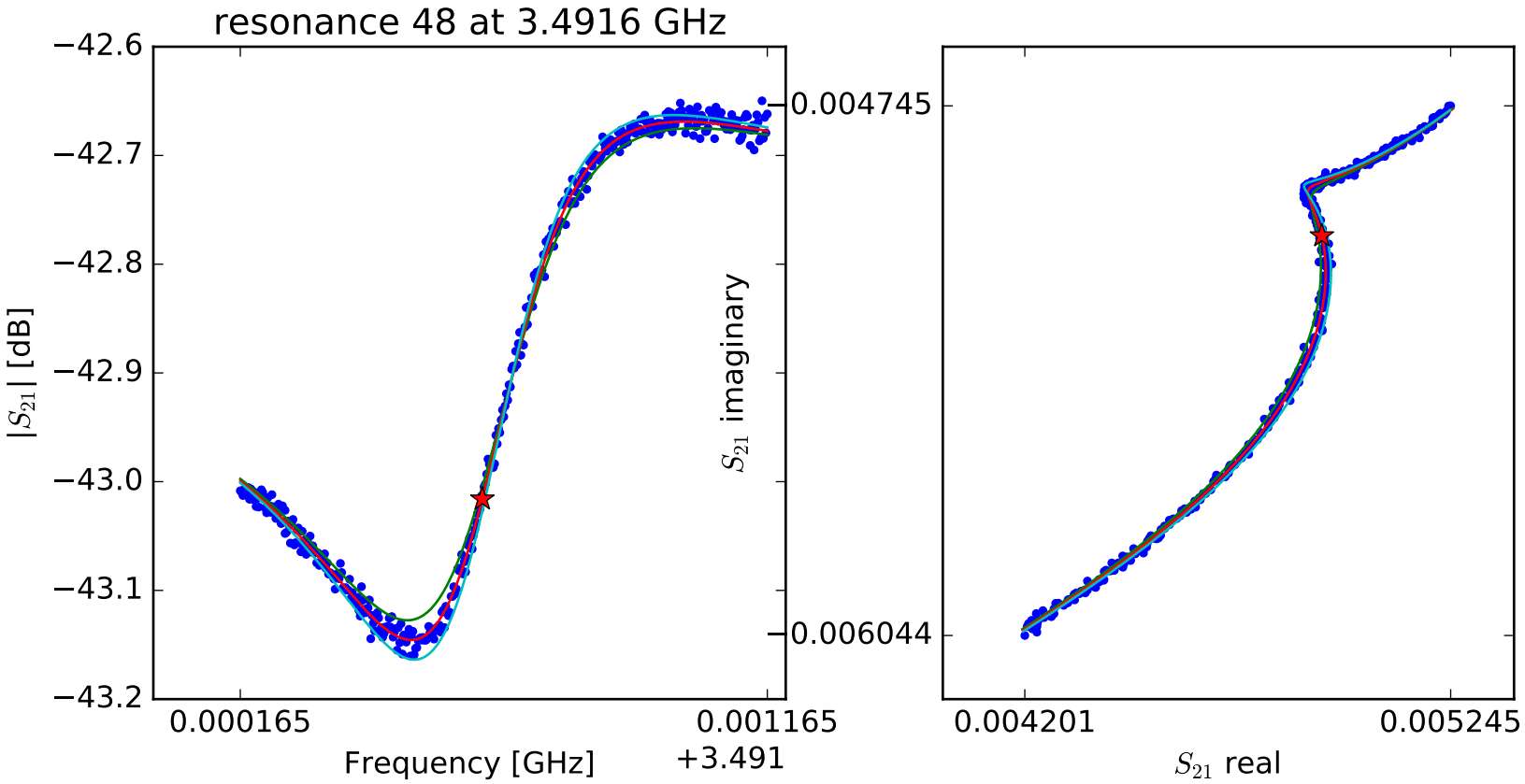


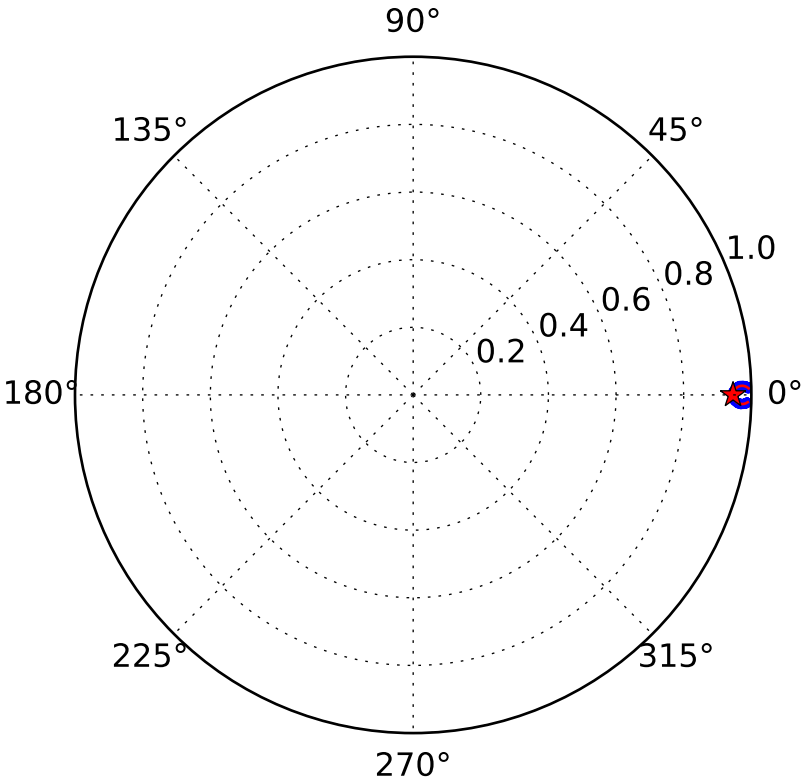


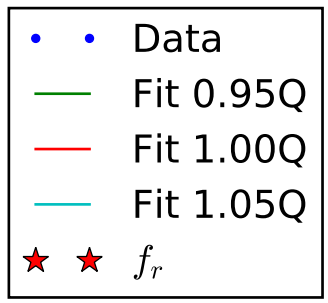


$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.4851522549
Q_r = 19159.231154
Q_c = 152508.36912
a = (-0.00571798347126-0.00391210262853j)
ϕ_0 = -0.135329033485
τ = 38.2997353921

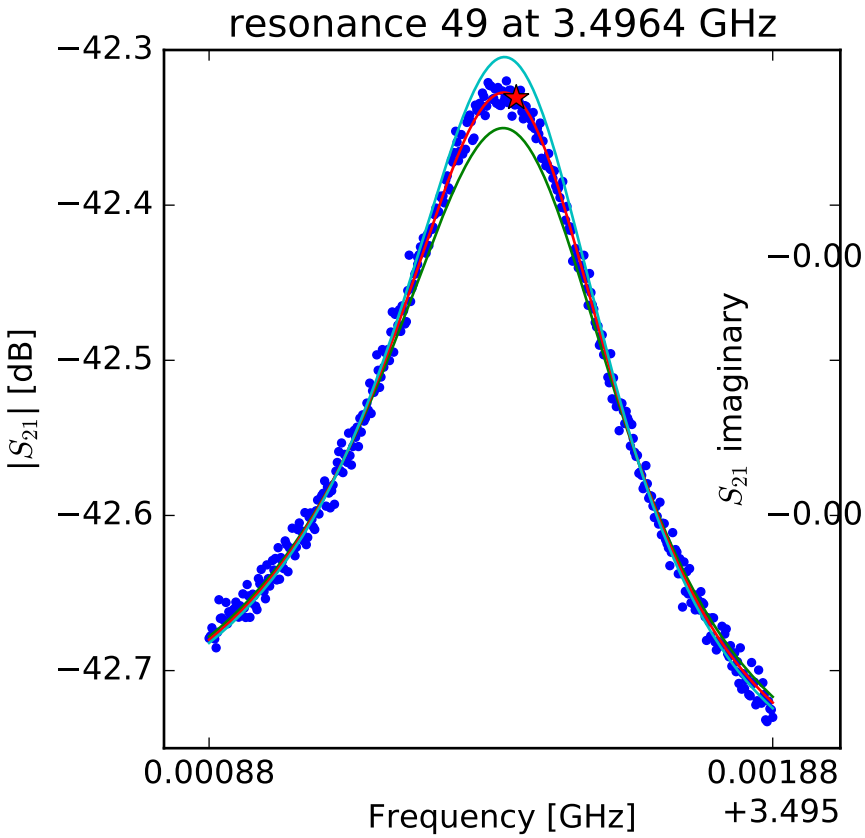


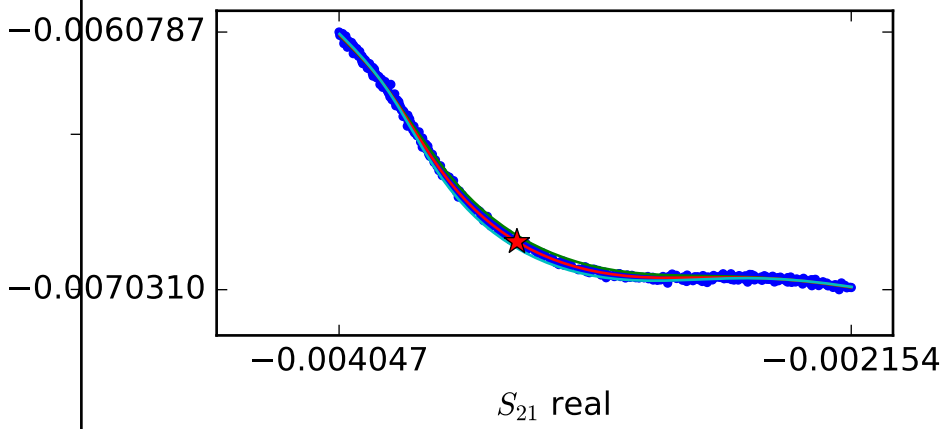


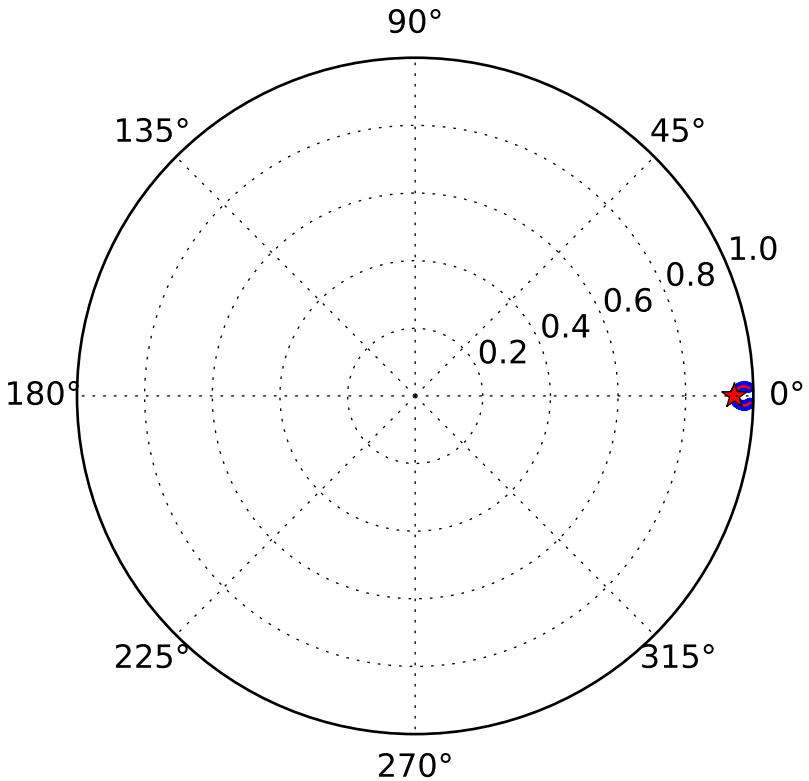


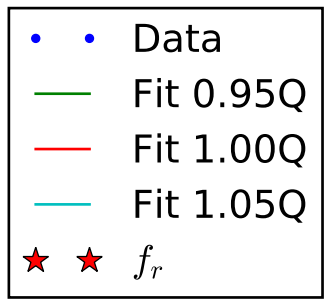
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.49162427688
Q_r = 7671.68390719
Q_c = 141692.11402
a = (0.00553742879542-0.00468584079431j)
ϕ_0 = -1.04918276833
τ = 38.9569534566



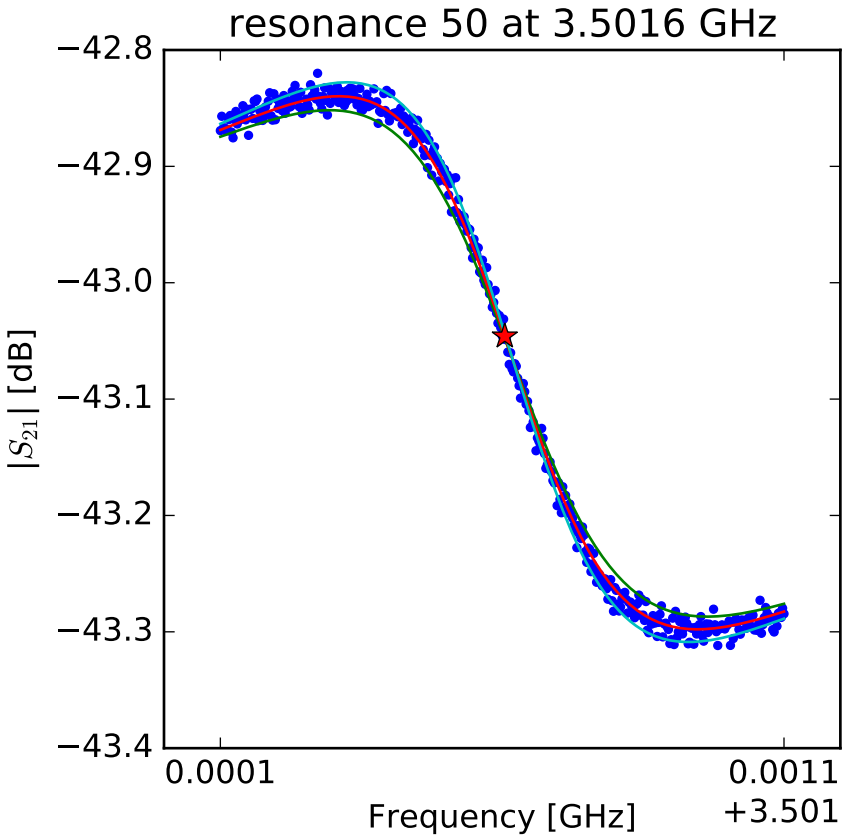


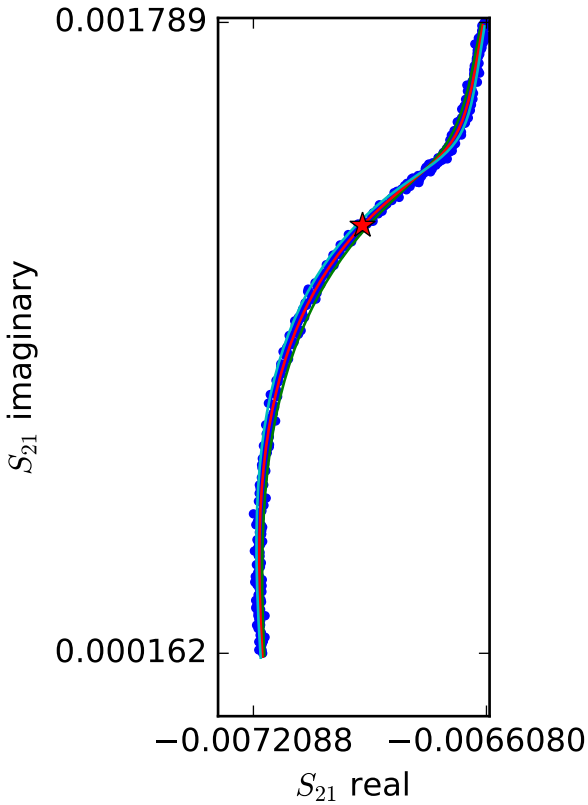


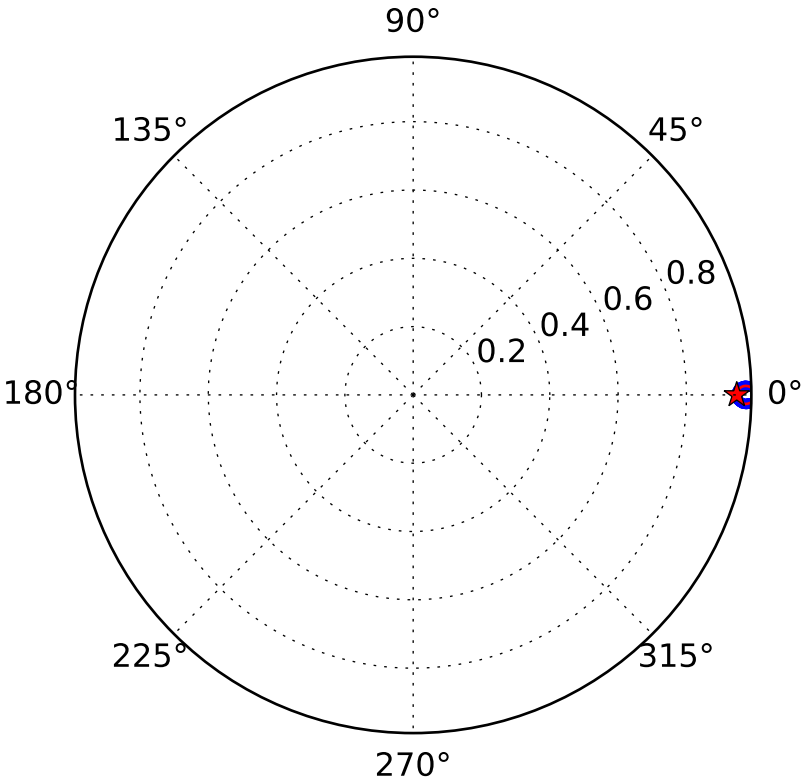


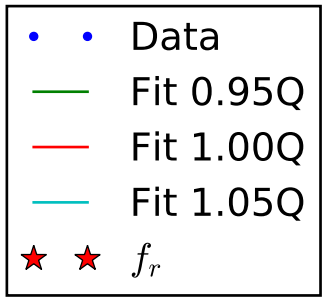
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.49642499559
Q_r = 6983.68113161
Q_c = 124573.763595
a = (-0.00700780173149+0.00184425937003j)
ϕ_0 = 2.96114426489
τ = 38.8341321502



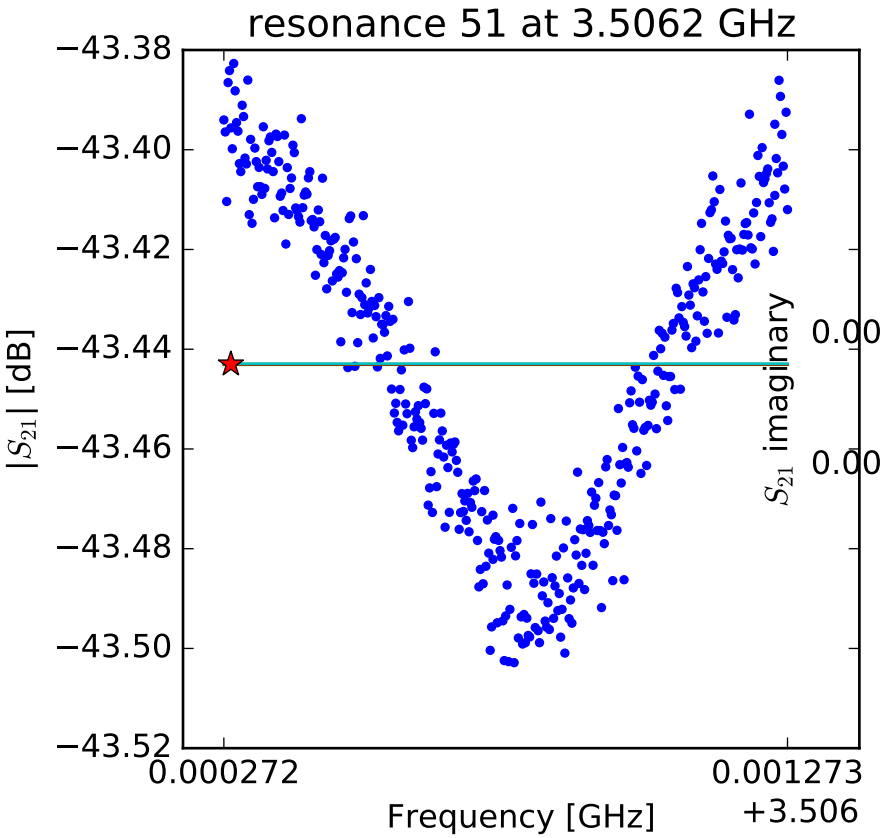


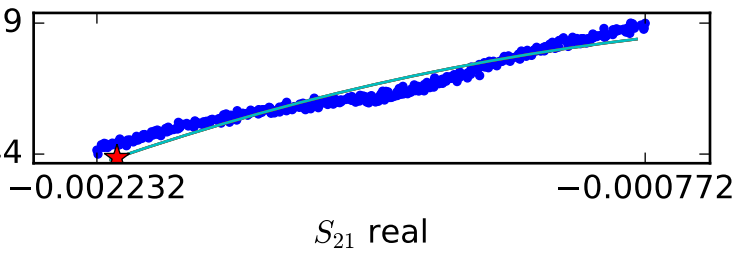


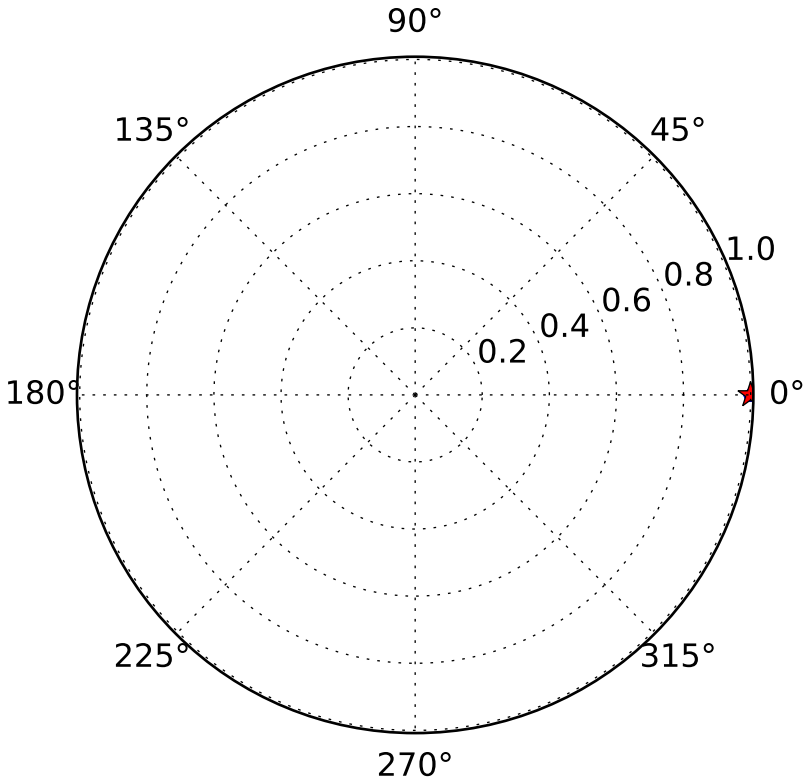


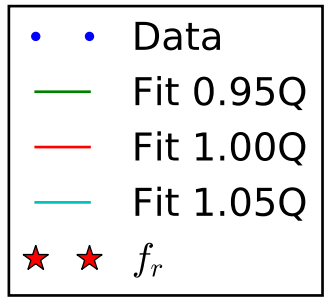
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.50160460579
Q_r = 5516.19738176
Q_c = 104440.689792
a = (-0.000382006759742+0.00700446613607
ϕ_0 = 1.61798554188
τ = 37.9194876847



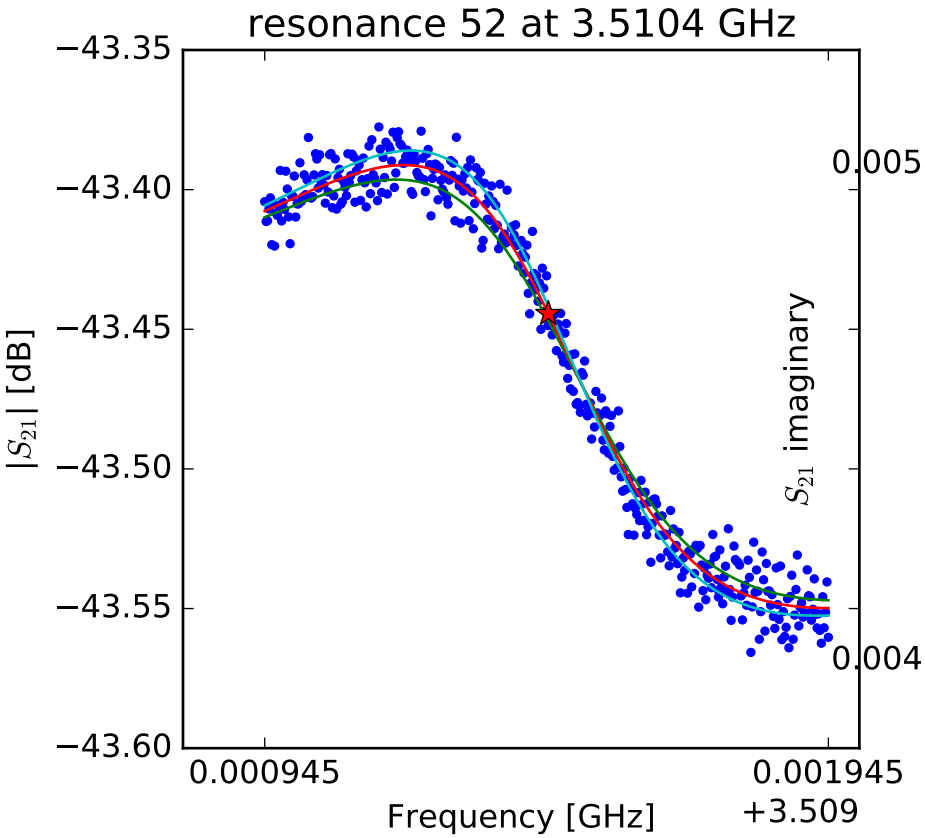


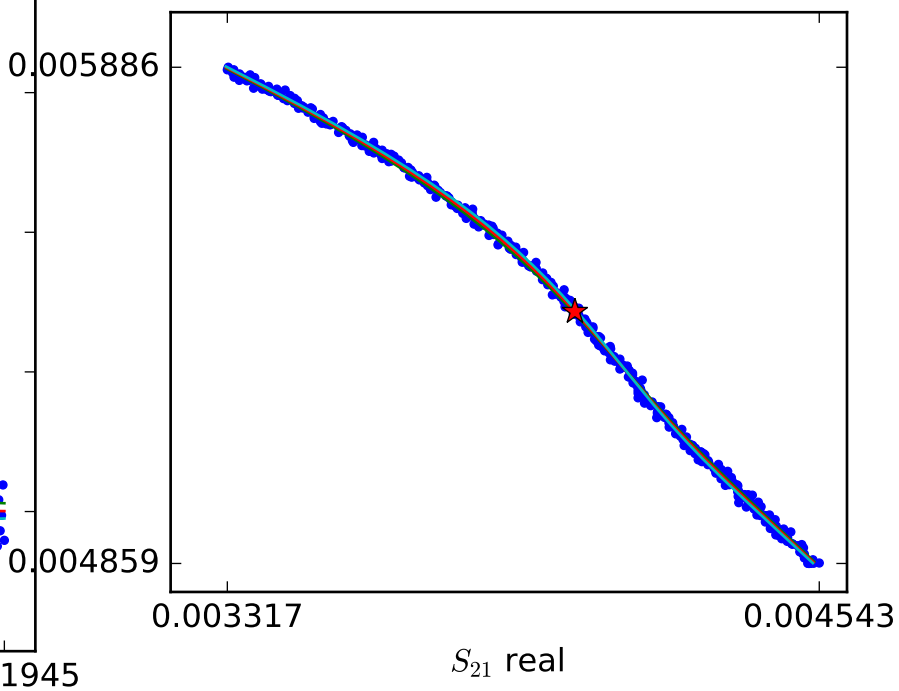


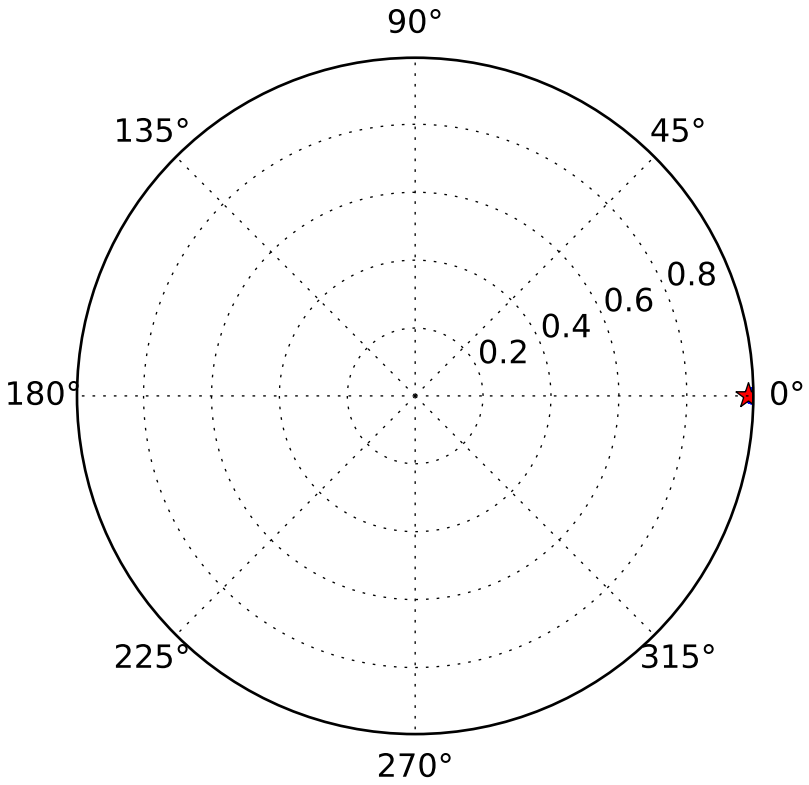


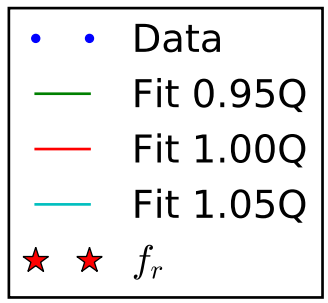
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.50628492677
Q_r = 0.000211381211071
Q_c = 0.687766386744
a = (-0.00449536947615-0.00500276420209j)
ϕ_0 = 2.51057785678
τ = 34.0334545321



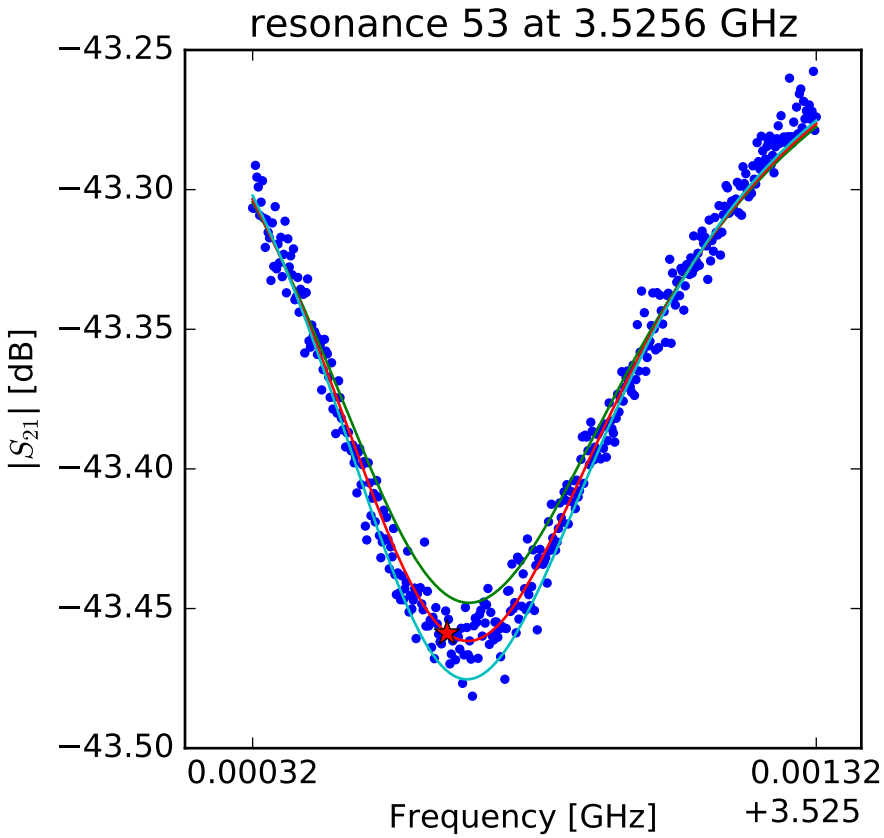


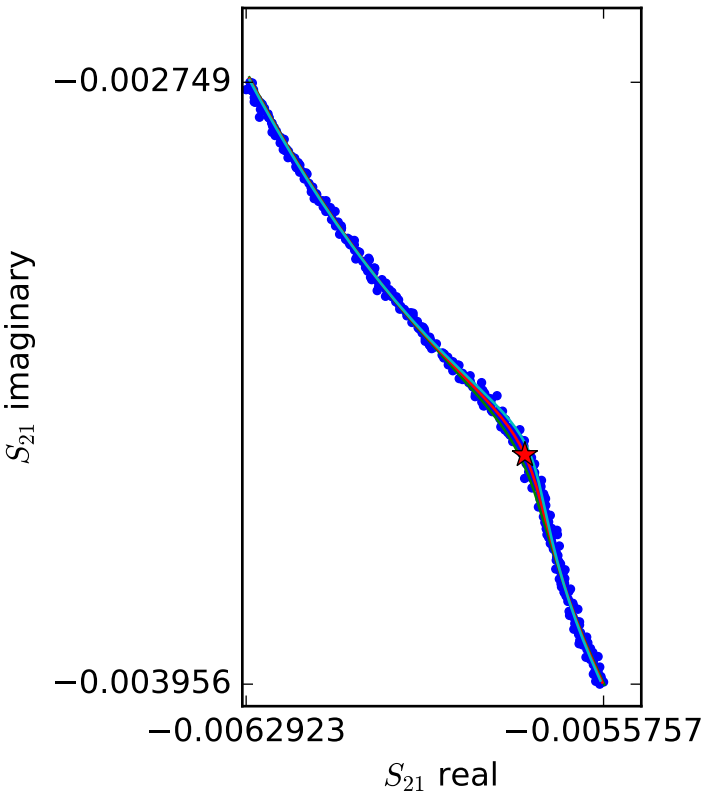


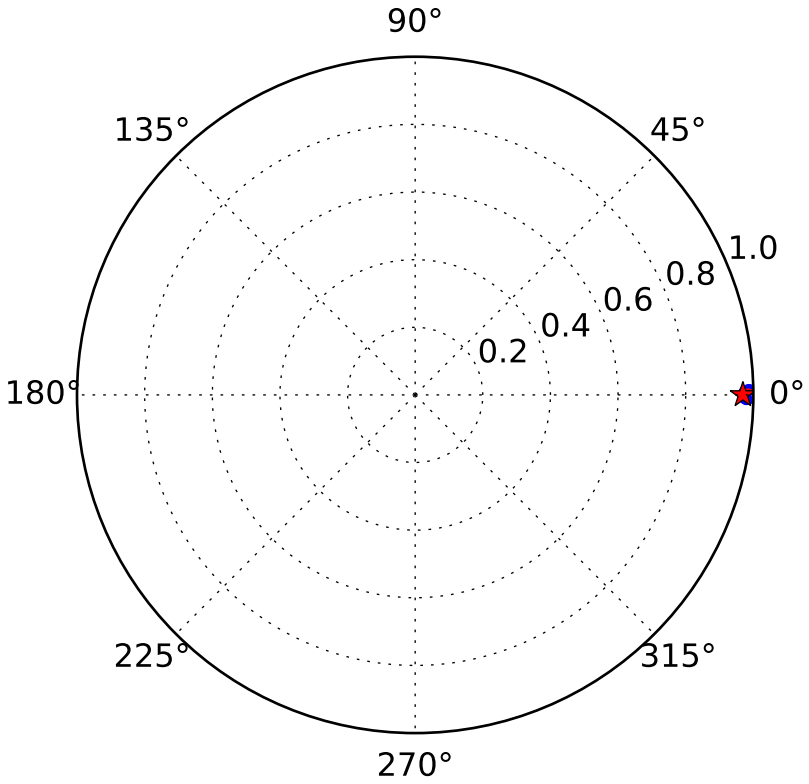


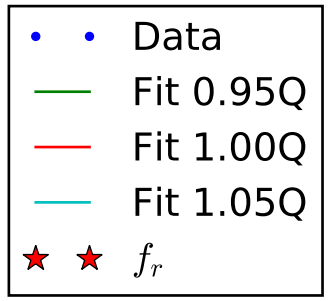
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.51044815192
Q_r = 4906.33320022
Q_c = 267833.274394
a = (-0.00525580067423-0.00413433540113j)
ϕ_0 = 1.88921329514
τ = 36.8772786159



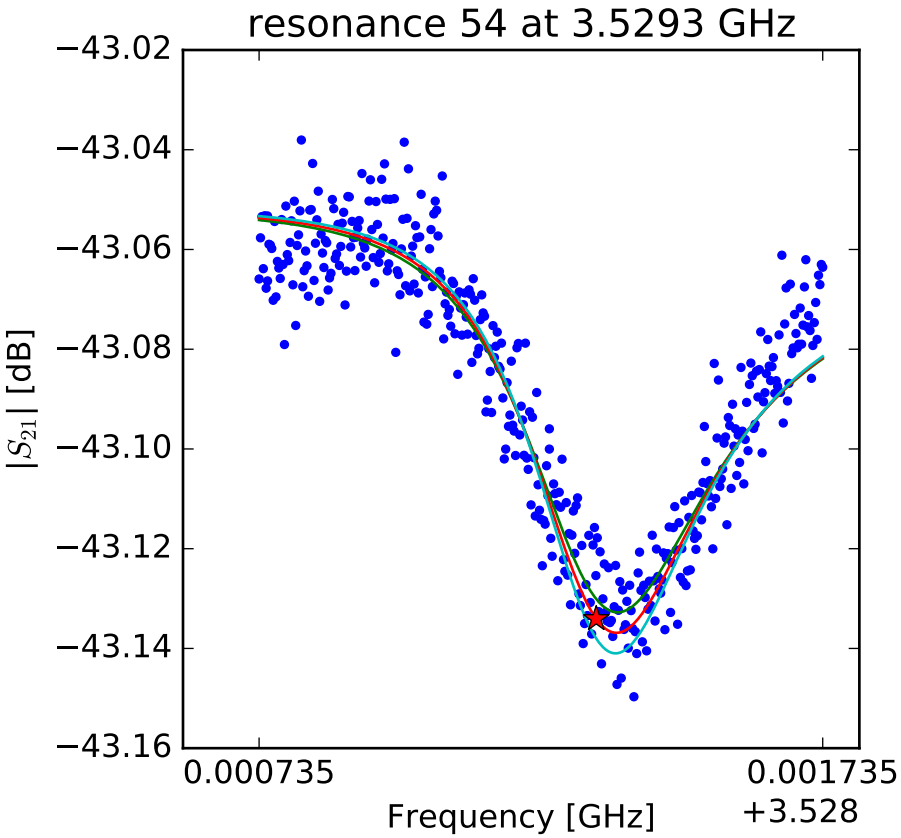


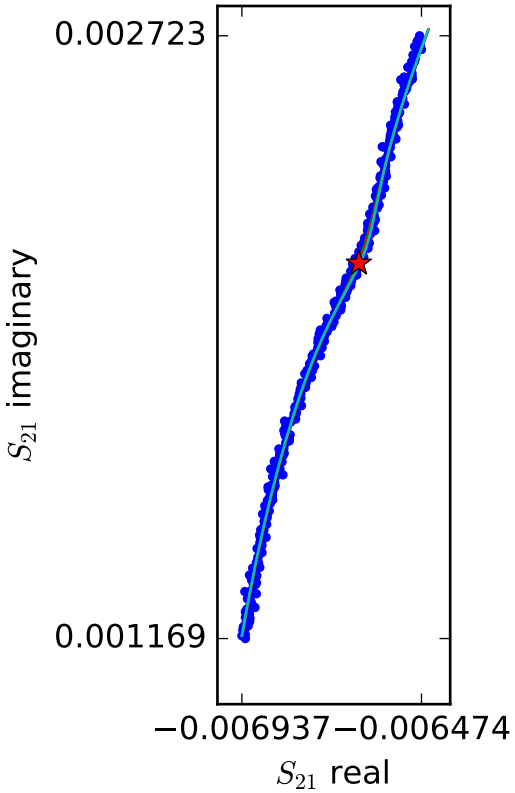


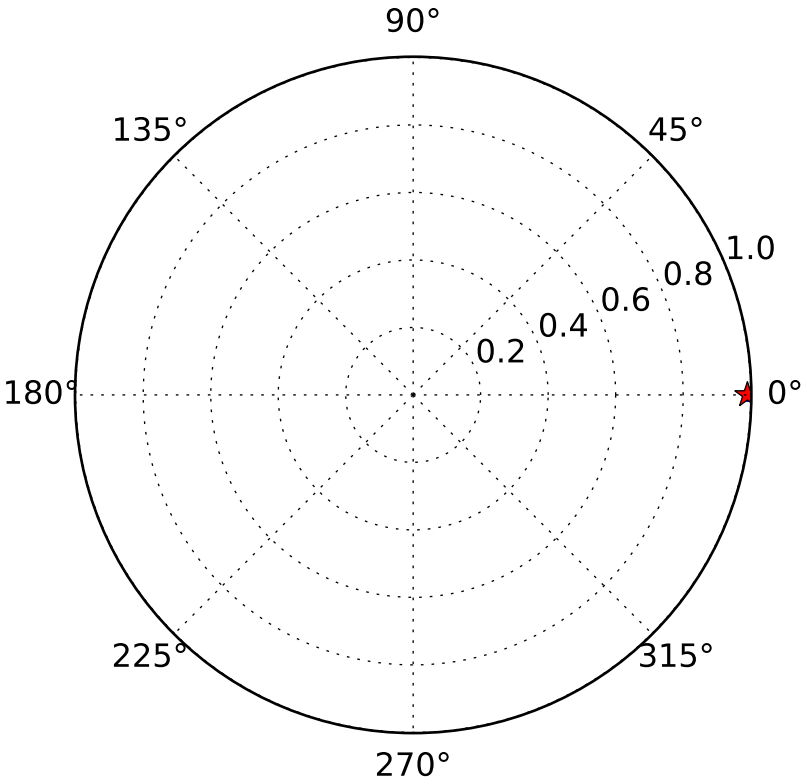


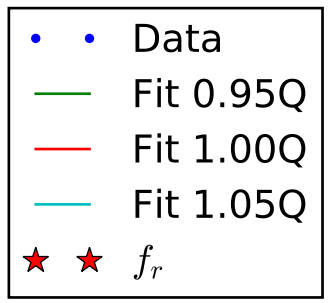
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.5256650498
Q_r = 4833.5222072
Q_c = 156425.966242
a = (-0.00571691400835-0.00390774767969j)
ϕ_0 = 0.198533884155
τ = 37.4418099095



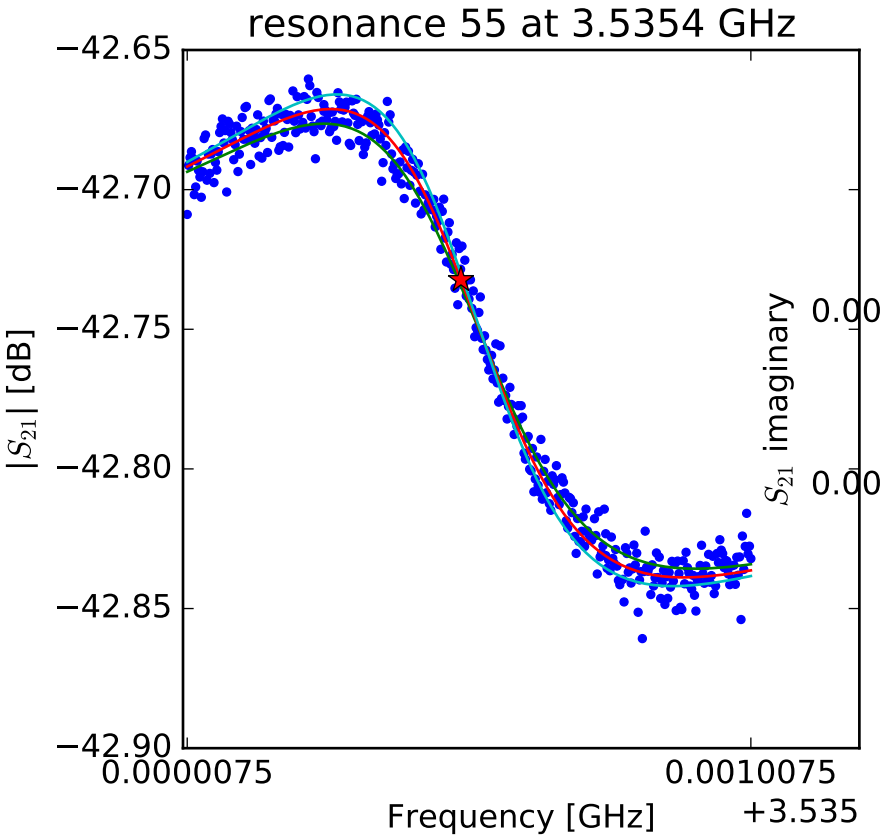


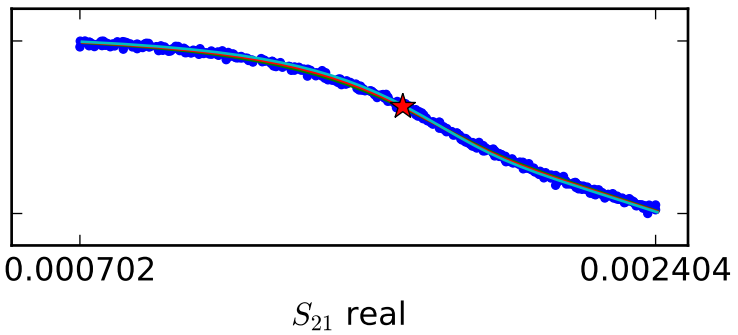


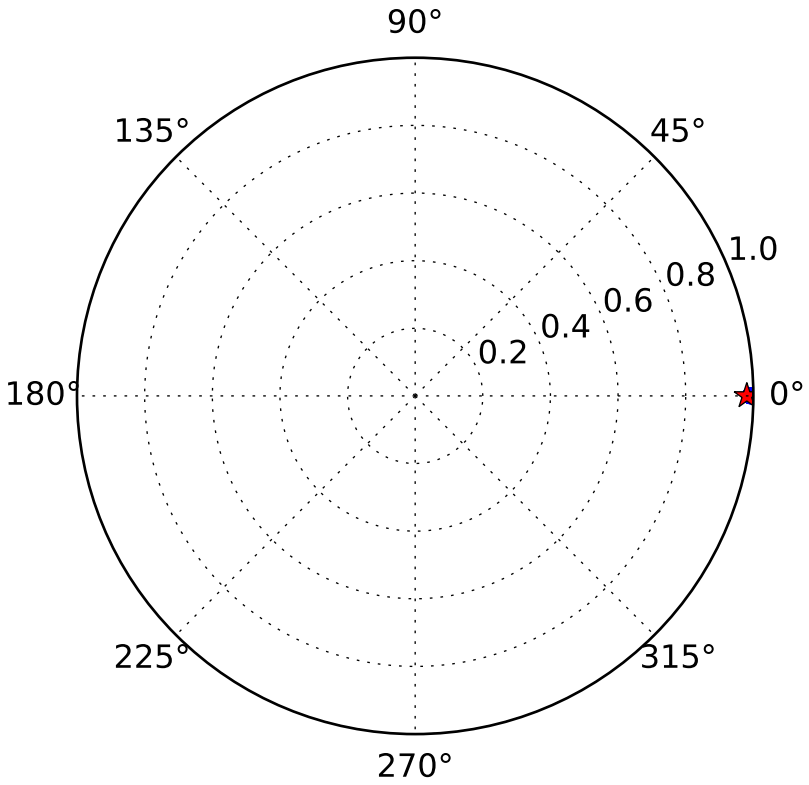


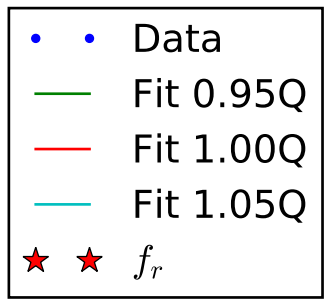
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.52933319987
Q_r = 9076.56121952
Q_c = 935682.735388
a = (-0.0014620896307-0.00688115911242j)
ϕ_0 = 0.363150120139
τ = 38.0427958913



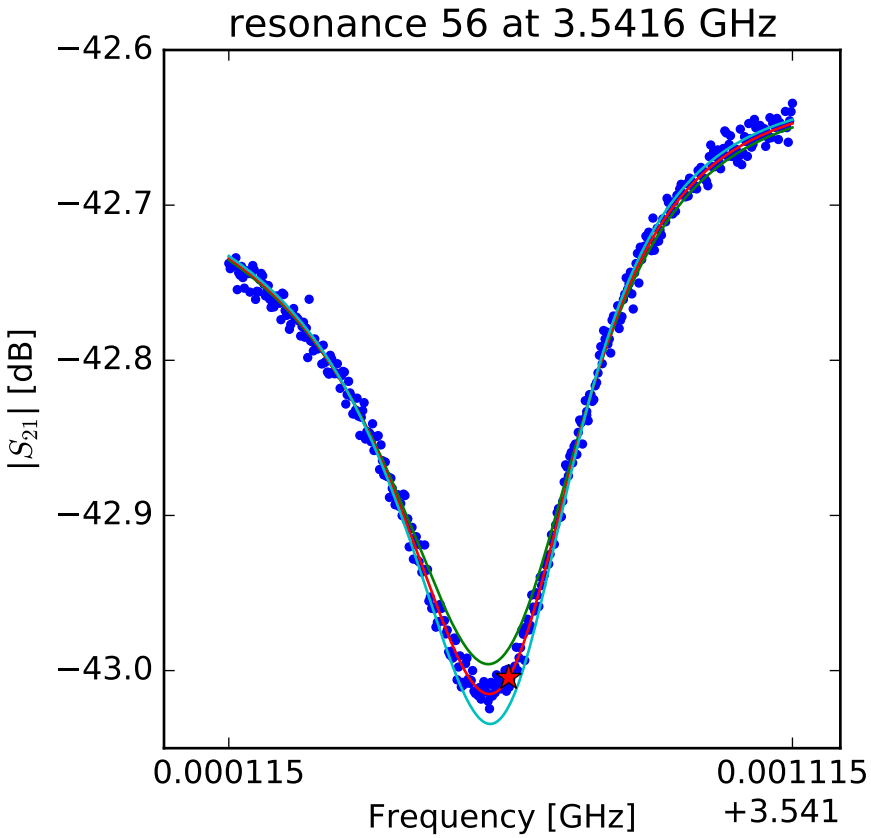


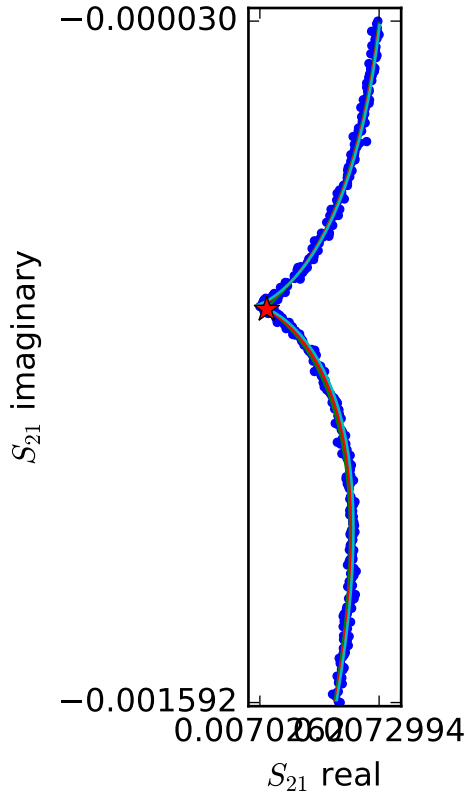


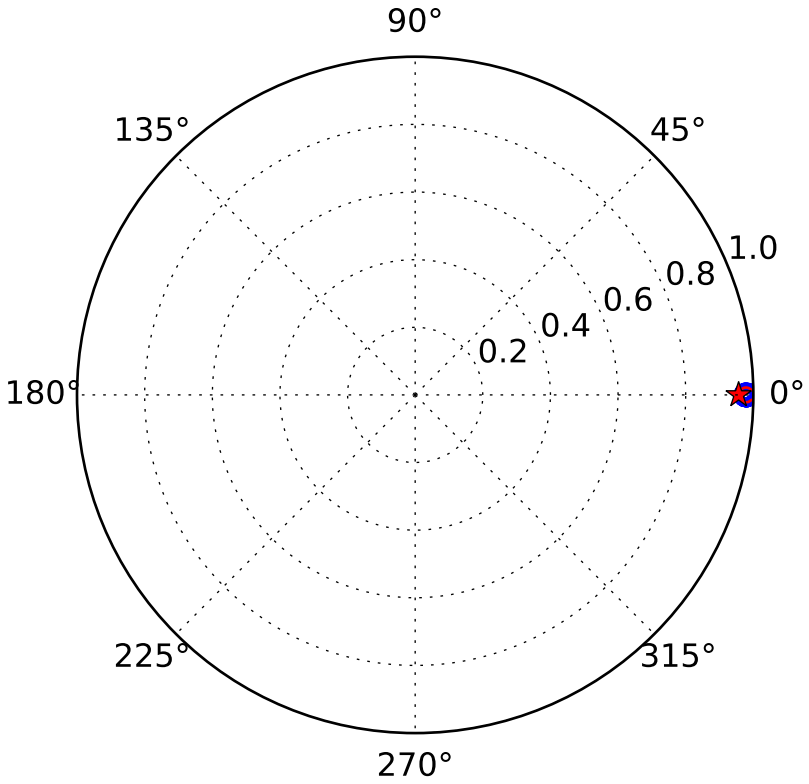


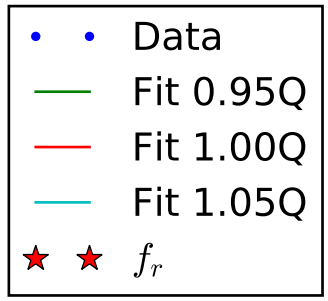
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.53549307432
Q_r = 5850.19045203
Q_c = 302223.71765
a = (0.00254051378264+0.00680548889382j)
ϕ_0 = 1.82661278097
τ = 38.1775892041



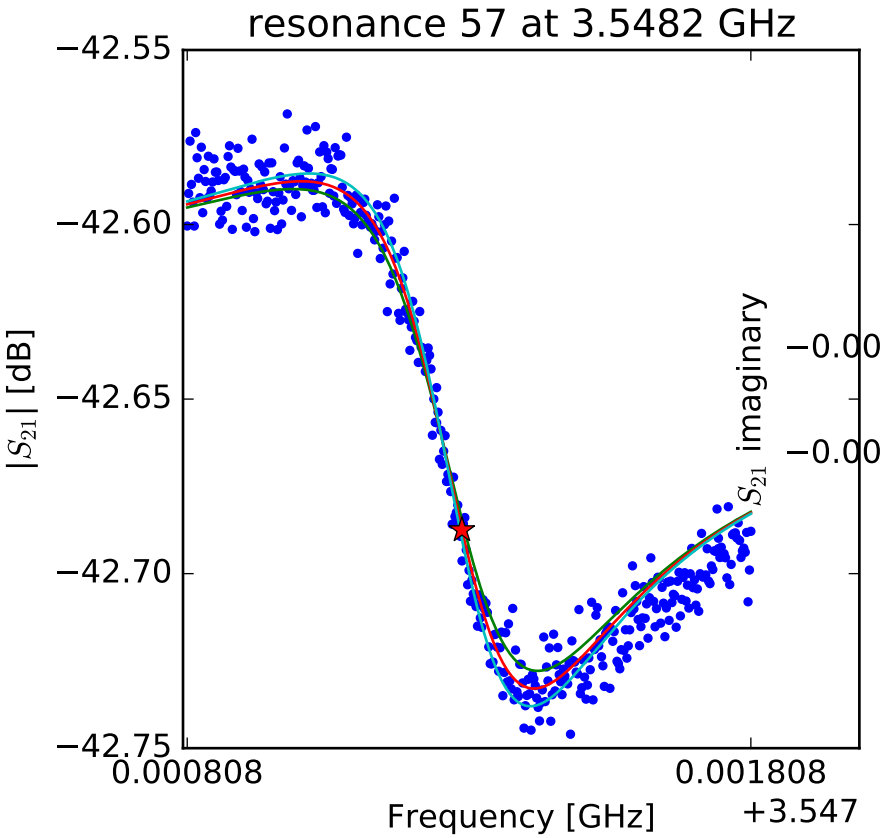


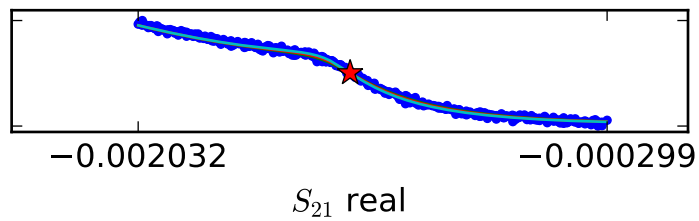


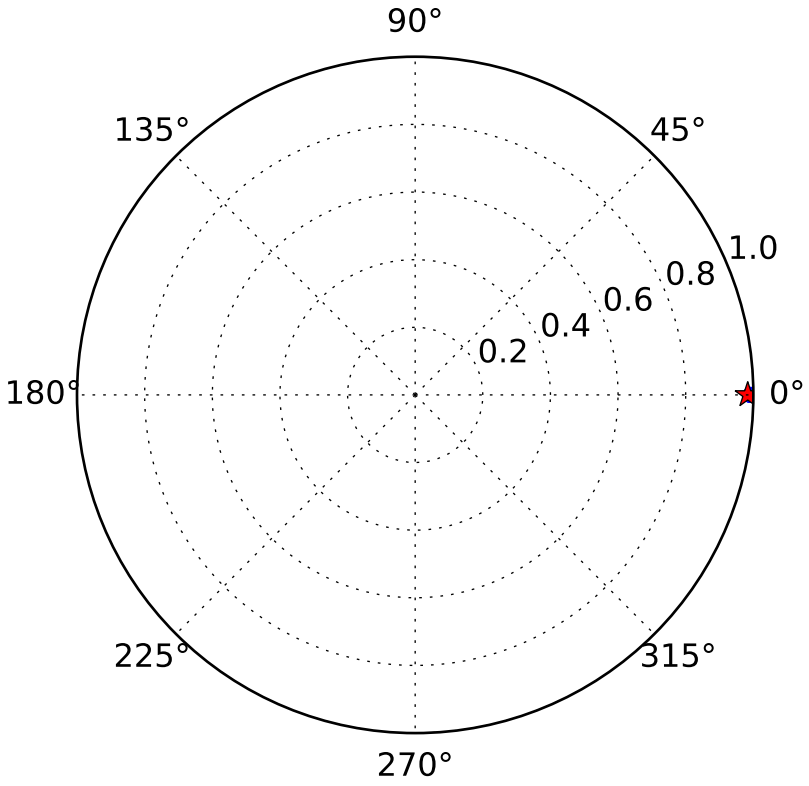


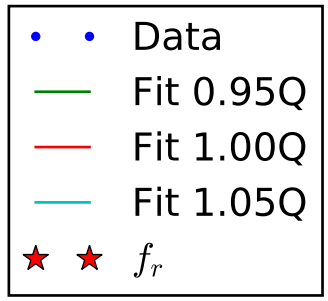
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.54161151532
Q_r = 8486.78242328
Q_c = 194500.893923
a = (0.00728133863608-0.00120825612496j)
ϕ_0 = -0.318854442848
τ = 38.3982437459



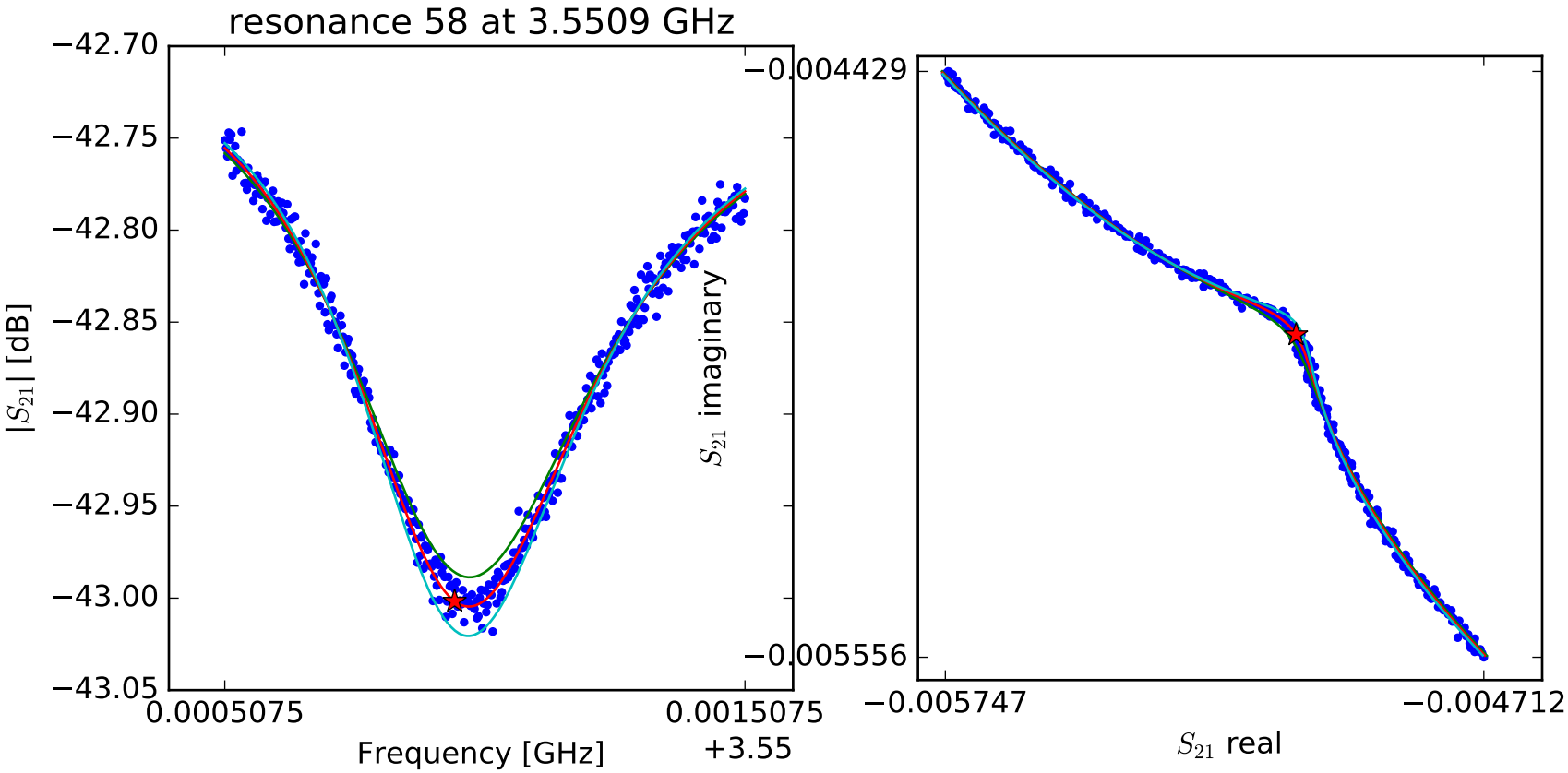


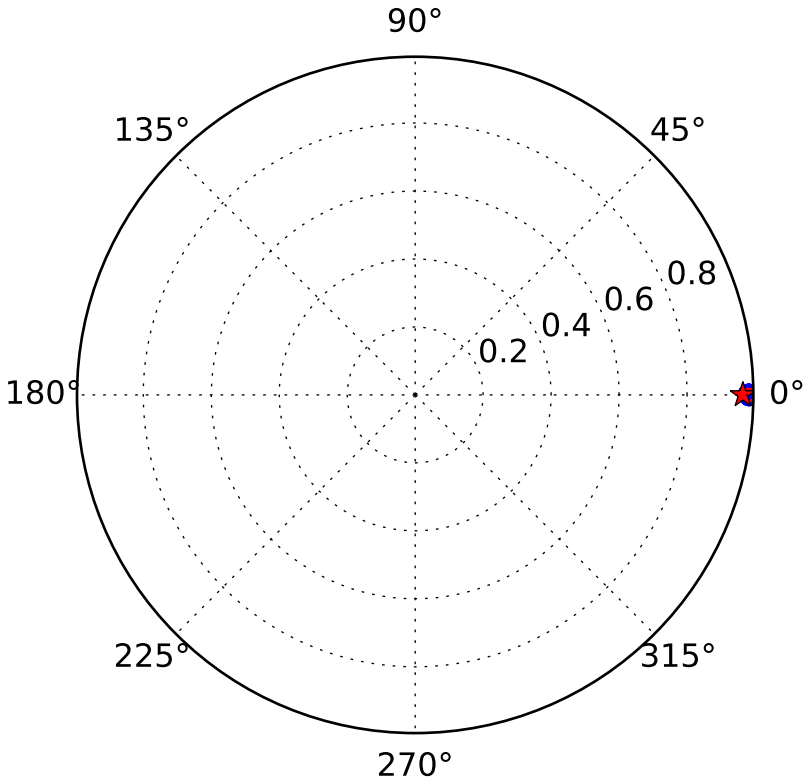


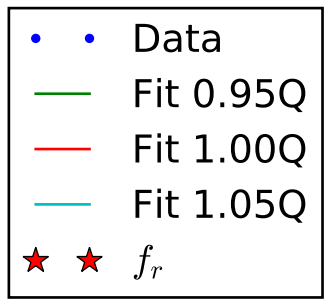


$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.54829490791
Q_r = 9305.34723049
Q_c = 557947.751365
a = (-0.00601705322956-0.00428319554186j)
ϕ_0 = 1.17125855857
τ = 38.8561877681

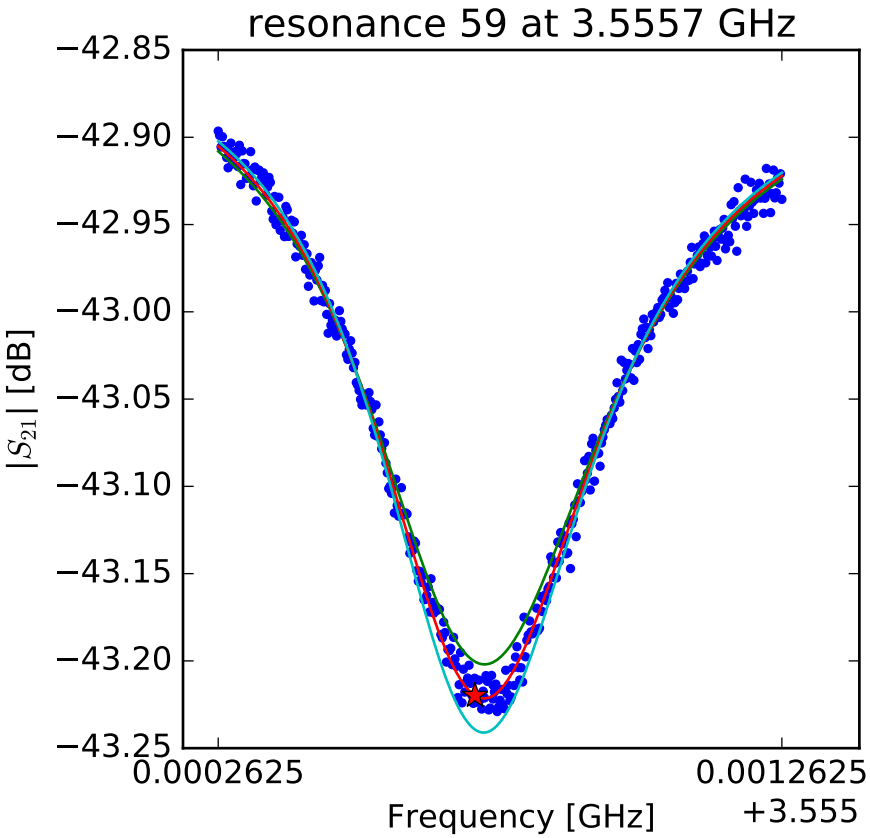


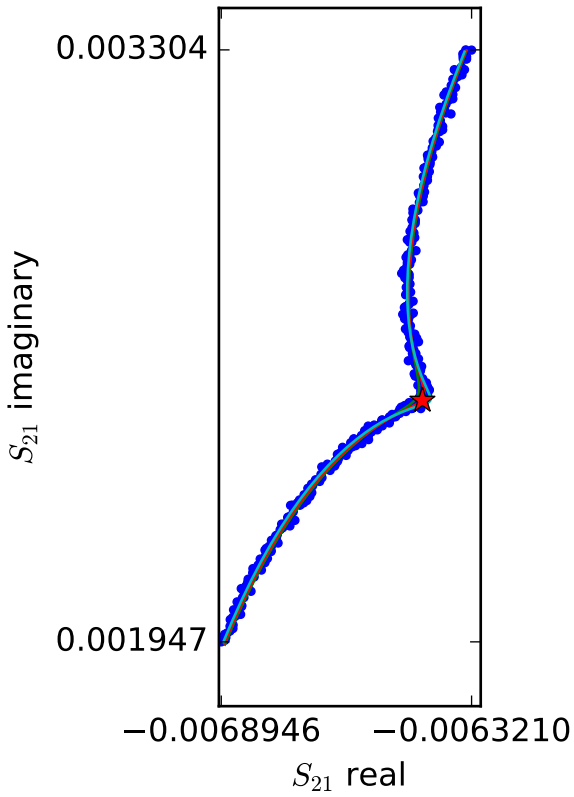


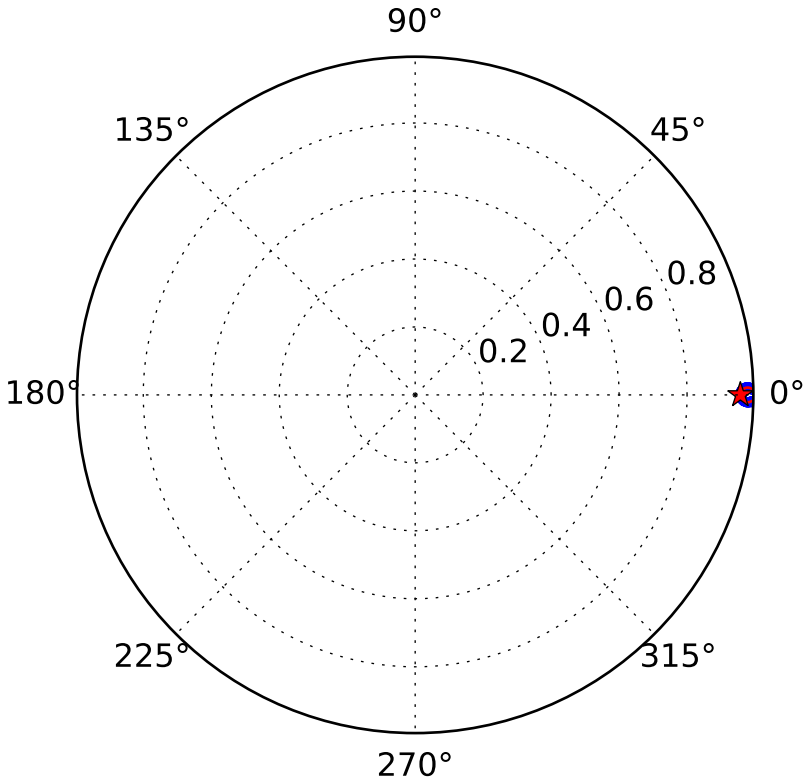


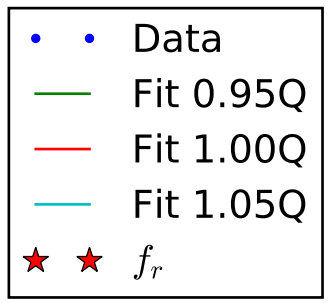
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.55094929923
Q_r = 6138.05004899
Q_c = 171723.724199
a = (-0.00721050383366+0.00134913985992j)
ϕ_0 = 0.184997174086
τ = 38.5380490429



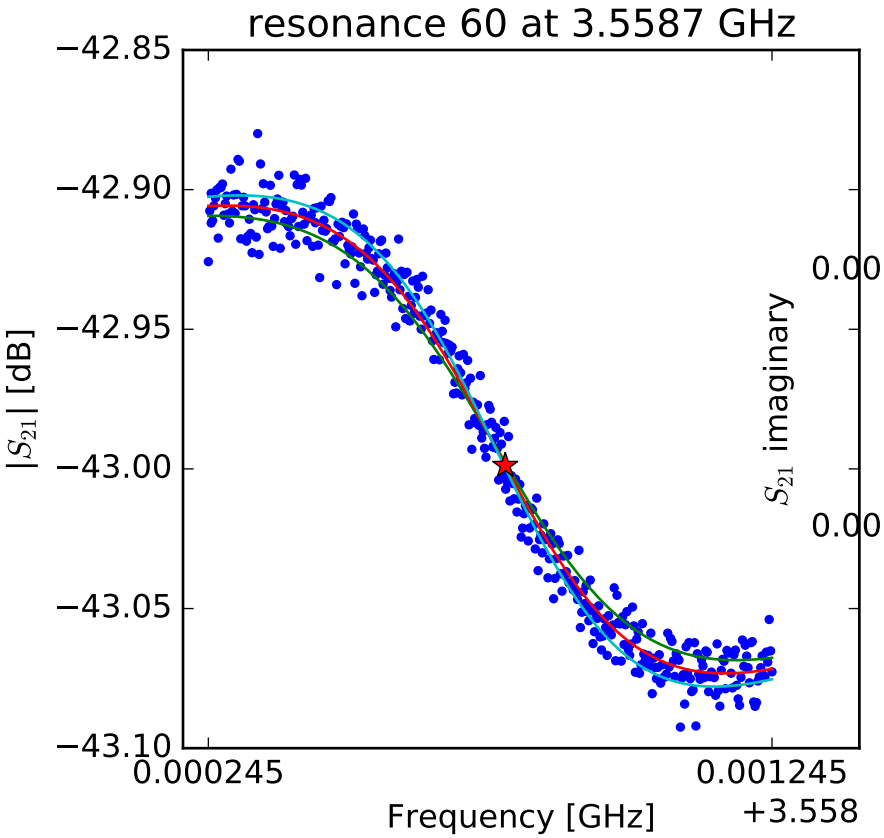


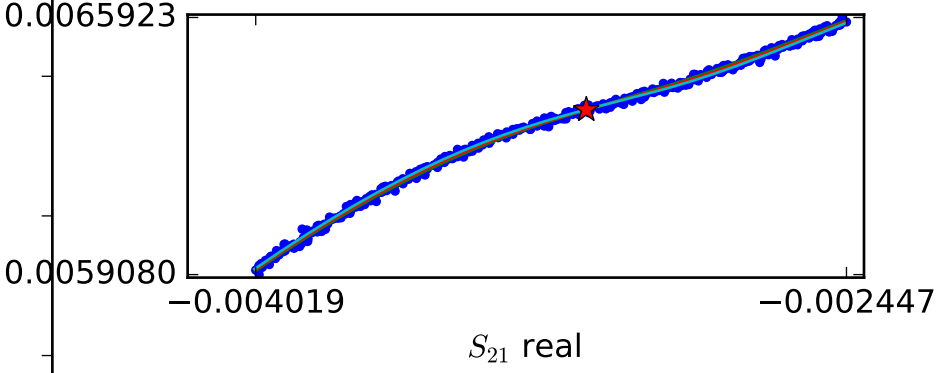


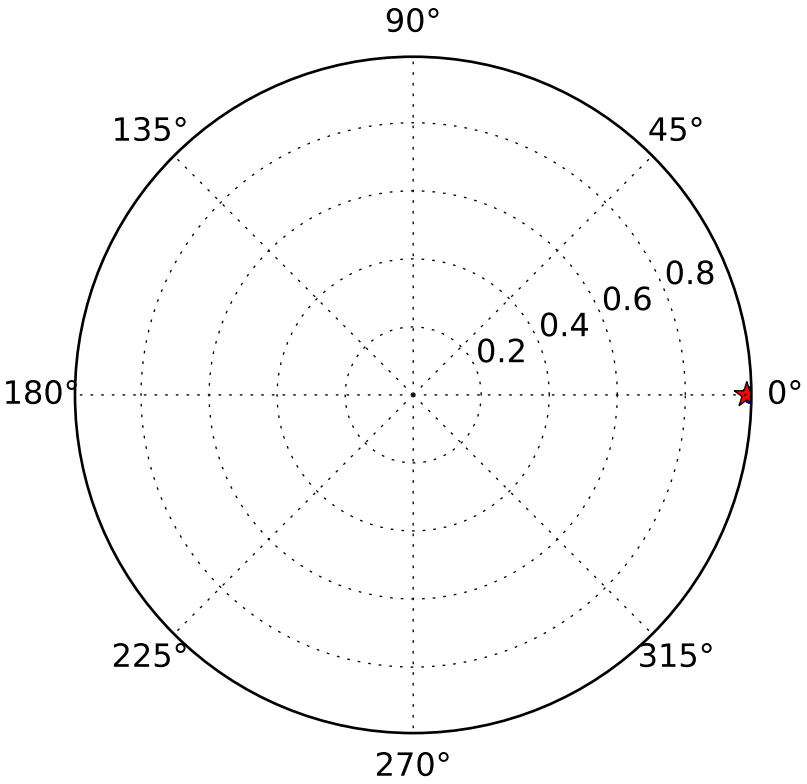


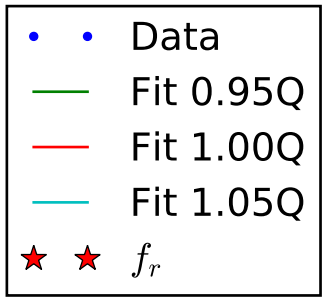
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.55571802078
Q_r = 7055.33353986
Q_c = 163156.872861
a = (-0.00665724669283+0.00277328753193j)
ϕ_0 = 0.12537156696
τ = 38.2469251115



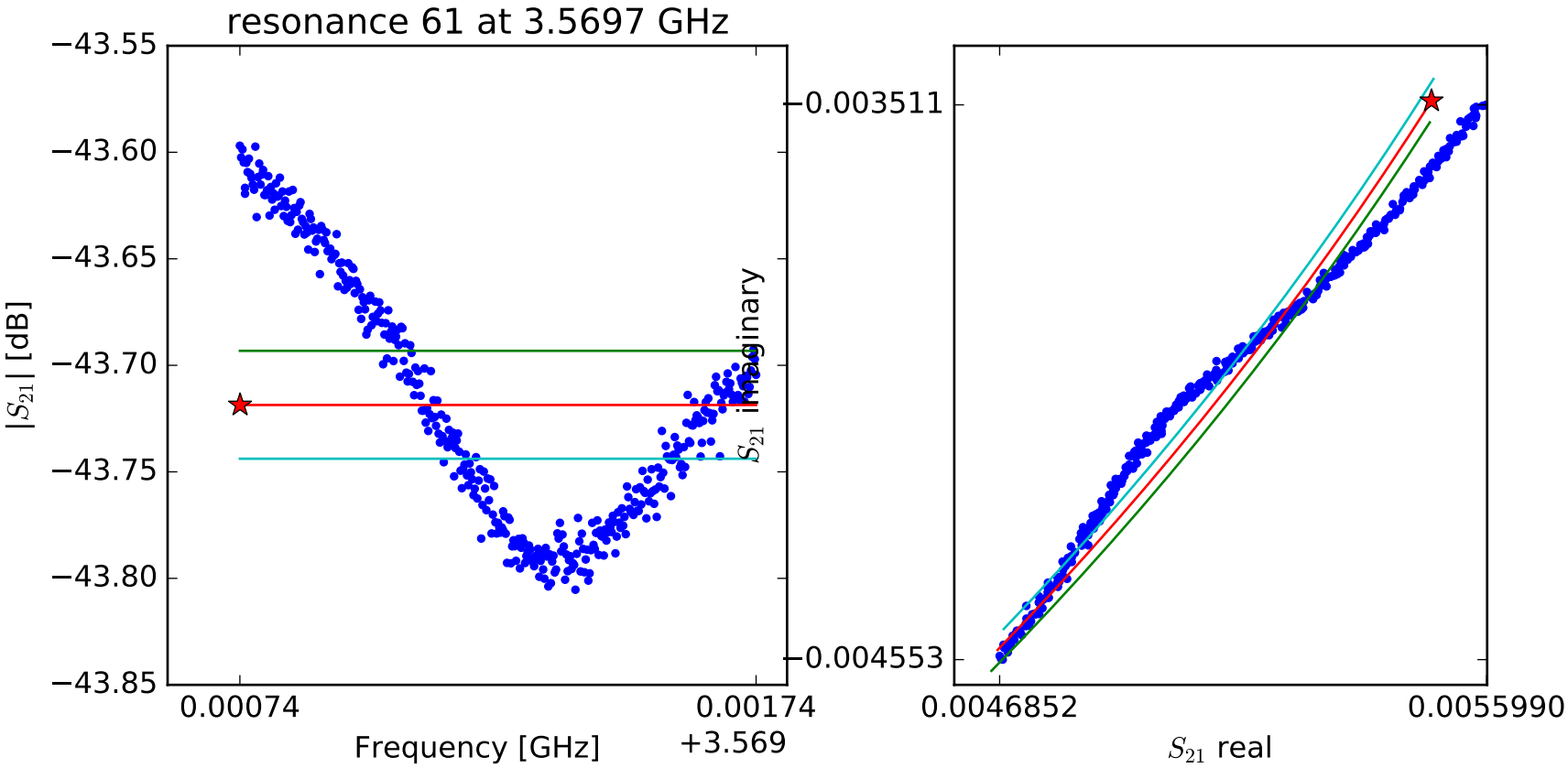


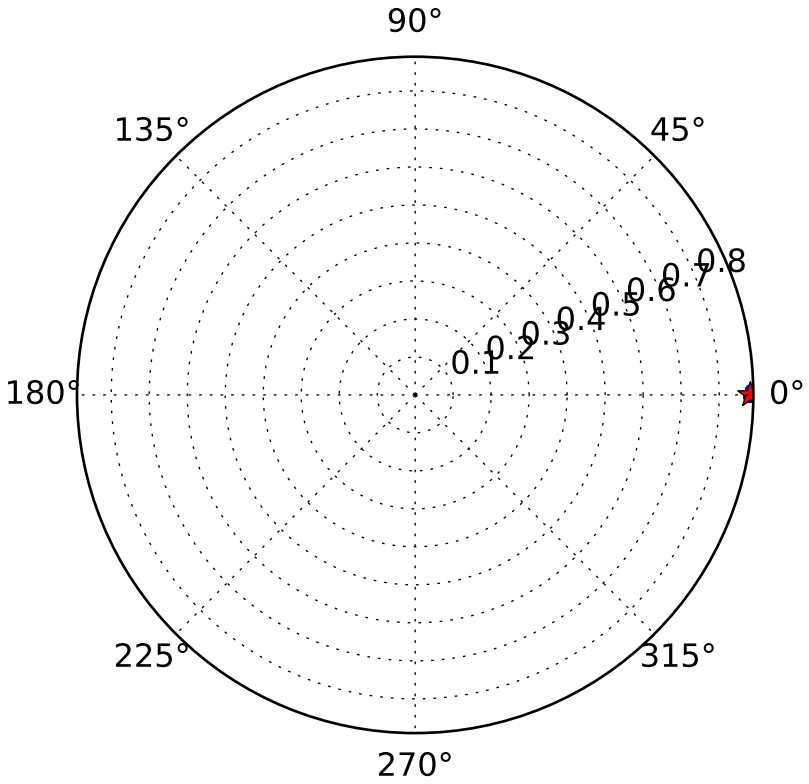


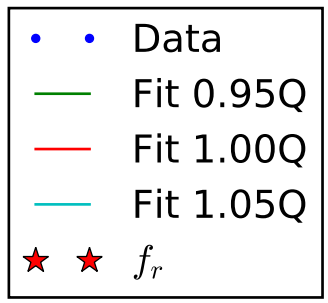


$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.55877173611
Q_r = 4048.52750357
Q_c = 210159.824012
a = (0.00703947540187+0.000901484575437j)
ϕ_0 = 1.44011767017
τ = 38.4104777909

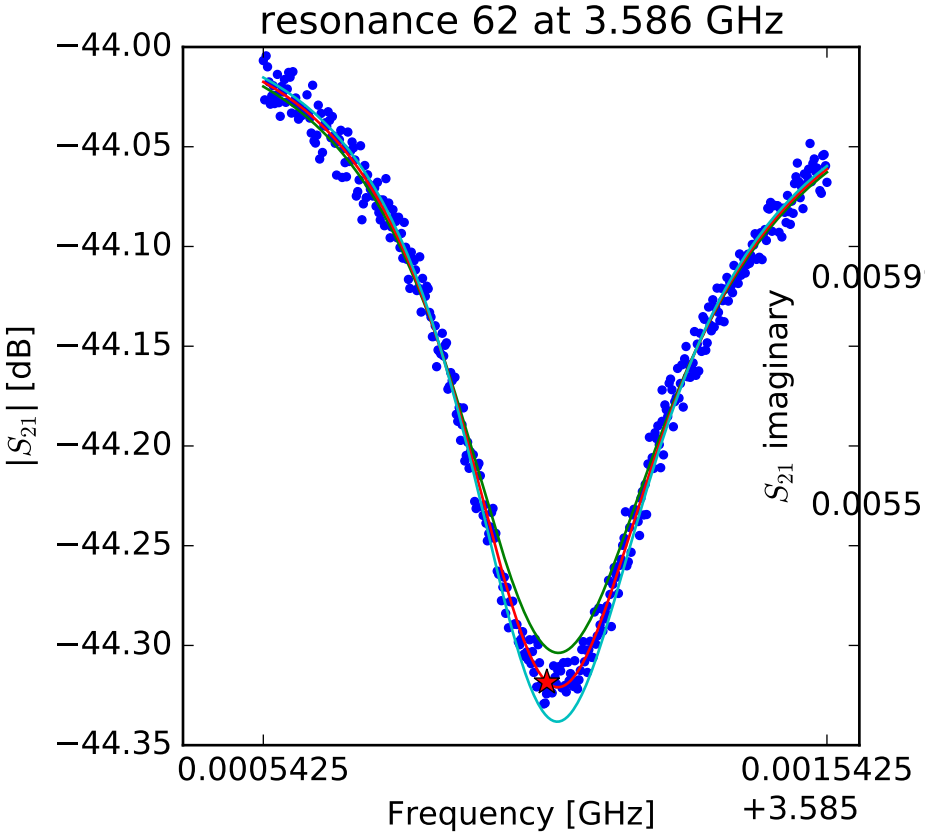


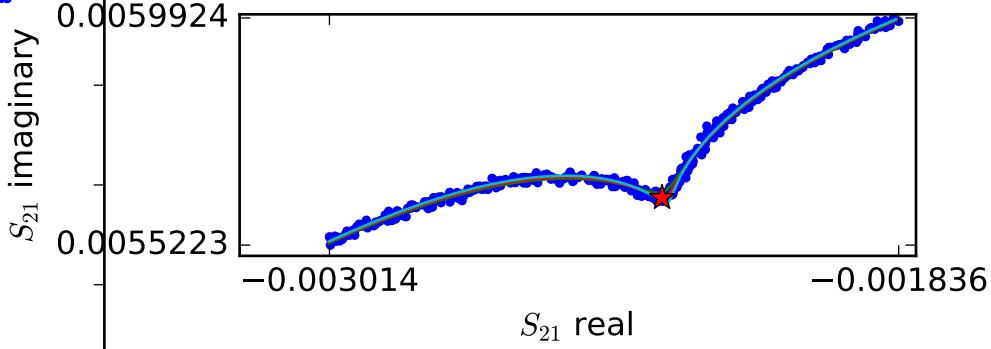


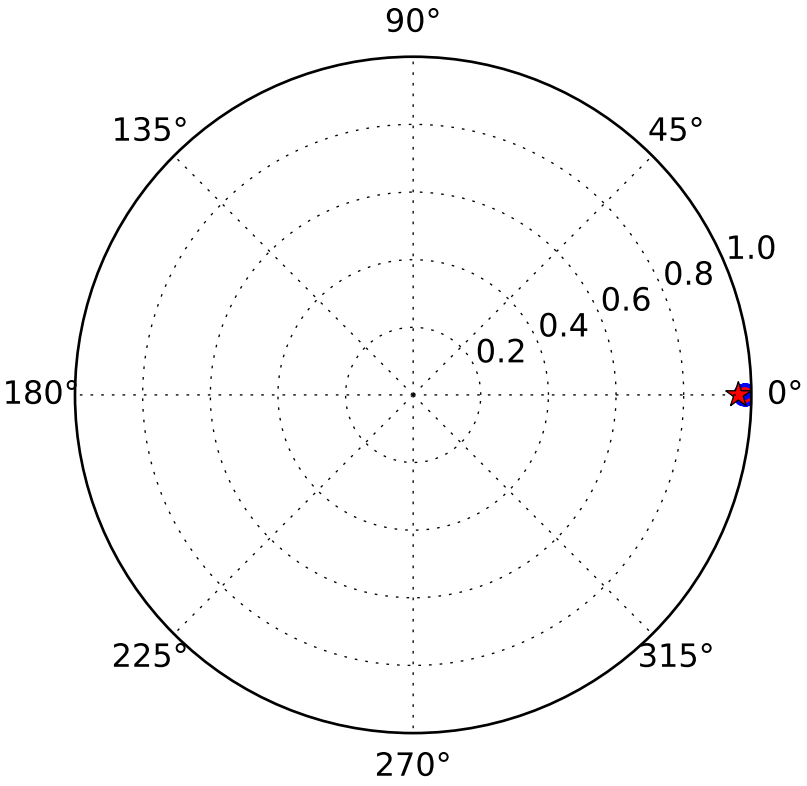


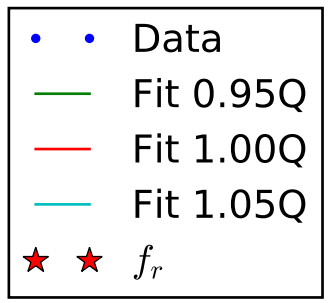
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.56974038066
Q_r = 0.000300543424822
Q_c = 0.00254929369861
a = (-0.00408527654143-0.00560430620069j)
ϕ_0 = -0.982787096415
τ = 32.1470774243



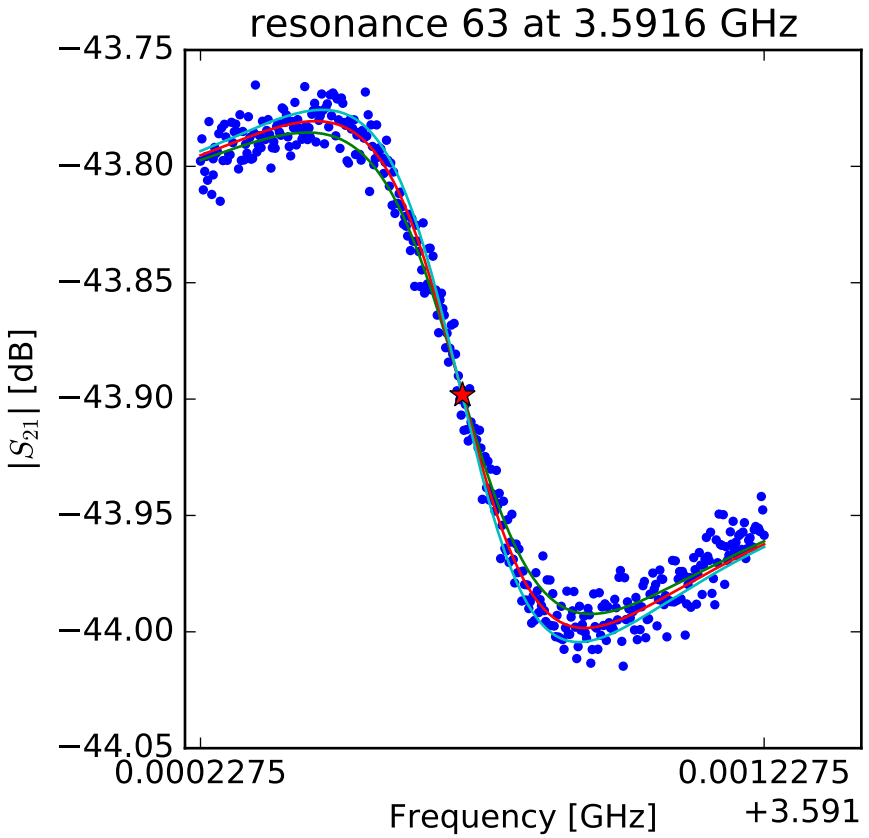


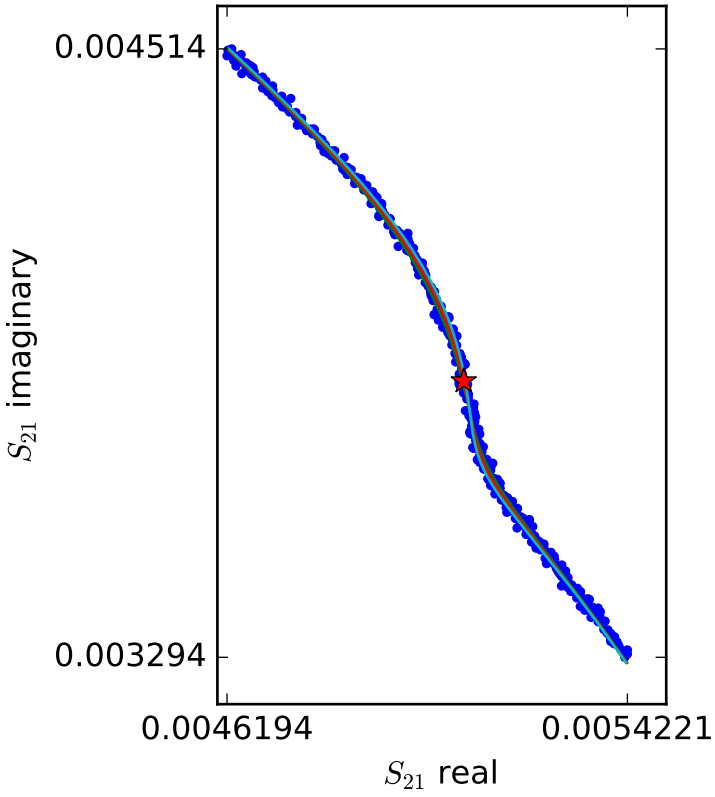


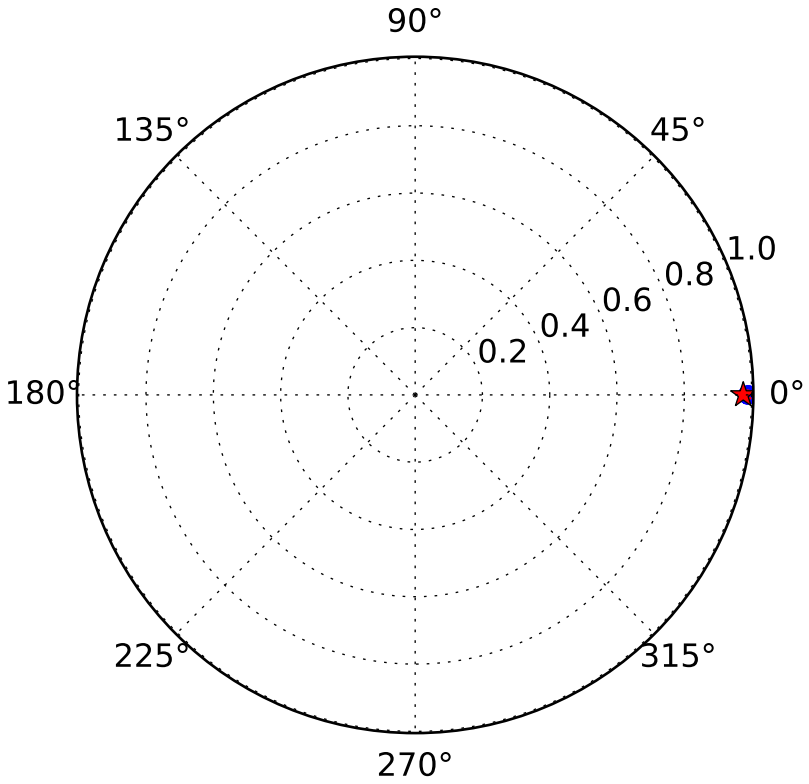


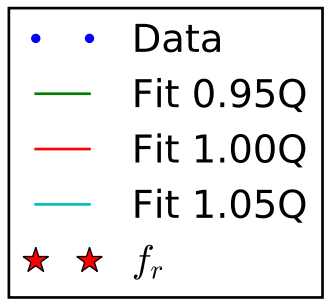
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.58604551802
Q_r = 7822.7002195
Q_c = 203386.115466
a = (-0.00453378112627-0.00440612491838j)
ϕ_0 = 0.166774110279
τ = 36.6167205546



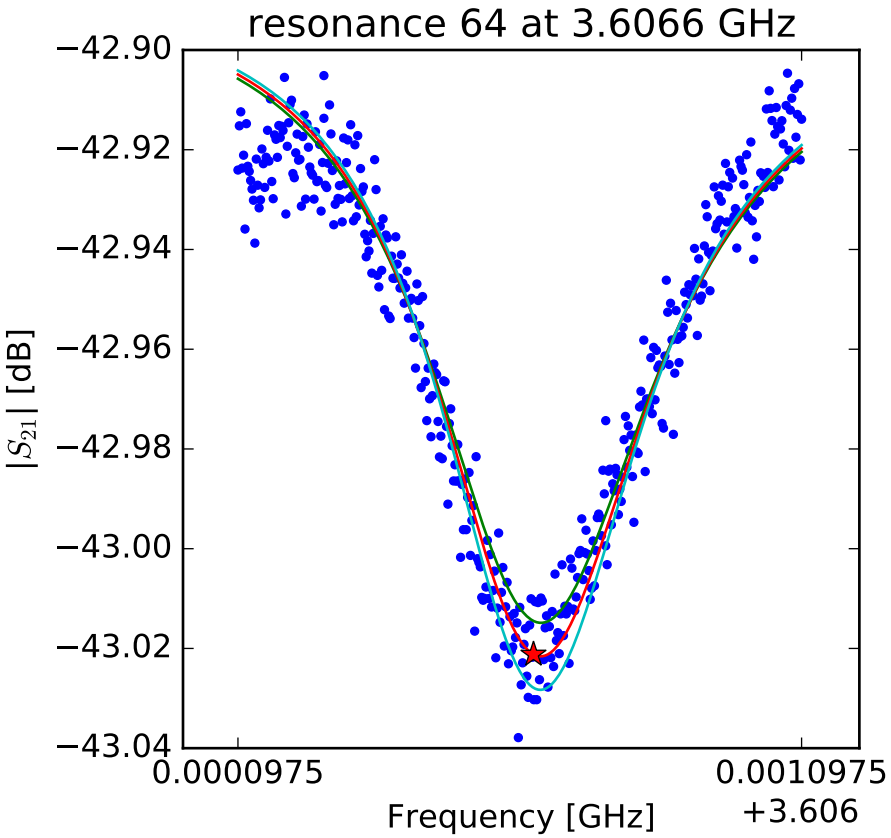


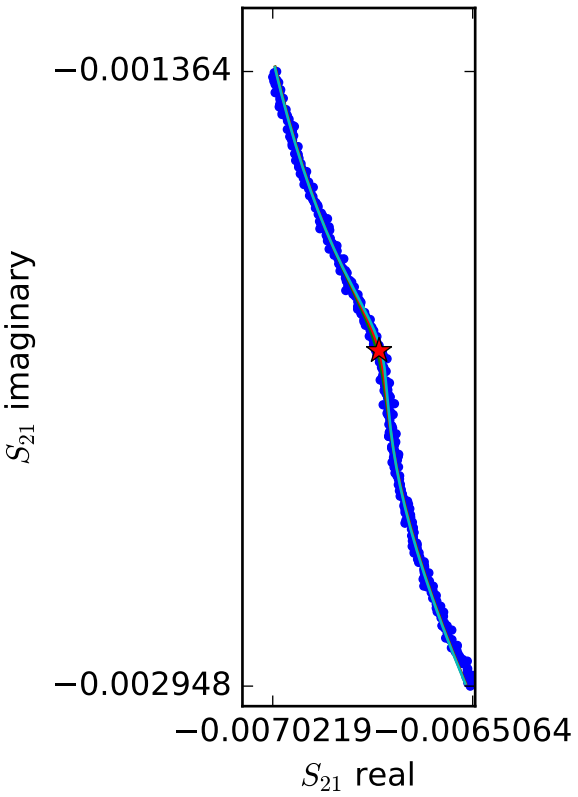


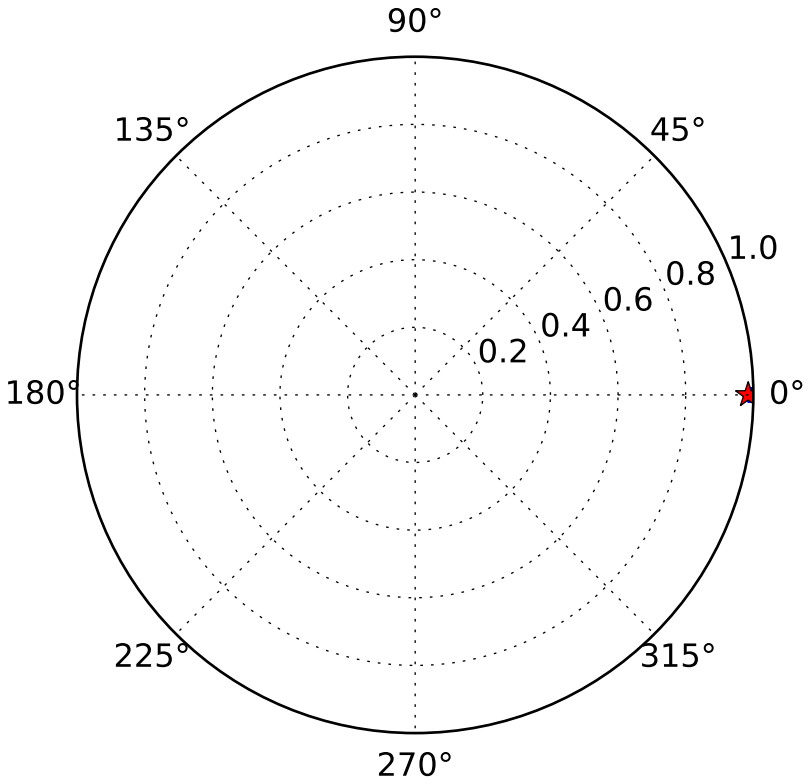


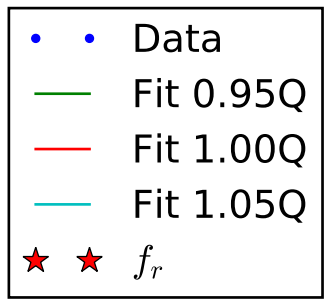
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.59169228995
Q_r = 7554.97886454
Q_c = 301664.746199
a = (-0.00483745255494-0.00418856651911j)
ϕ_0 = 1.46509463632
τ = 36.8925372825



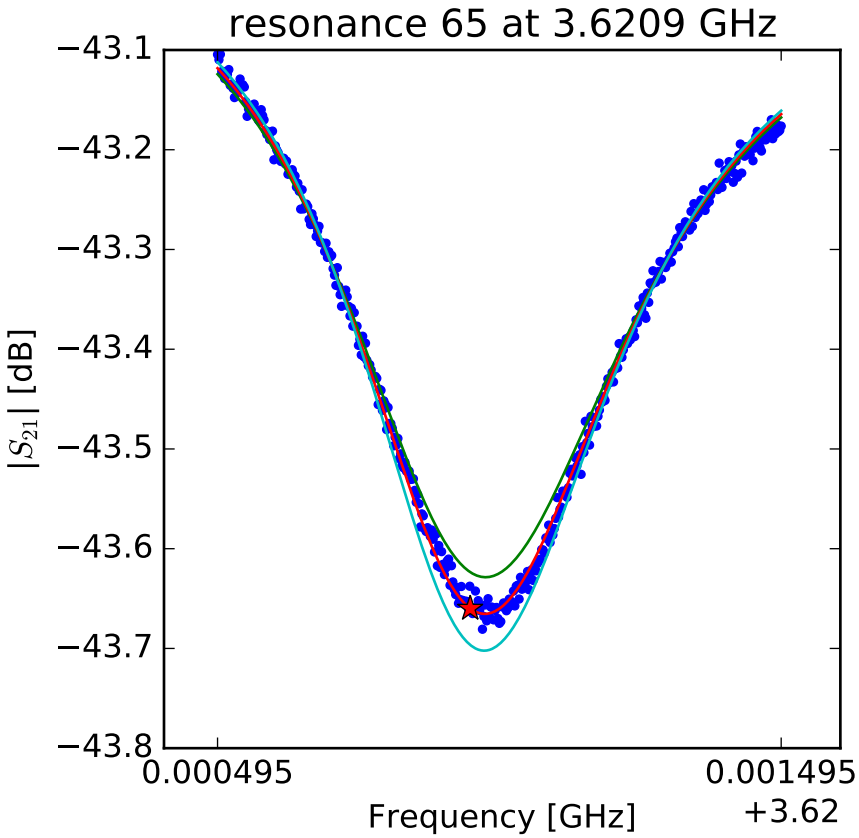


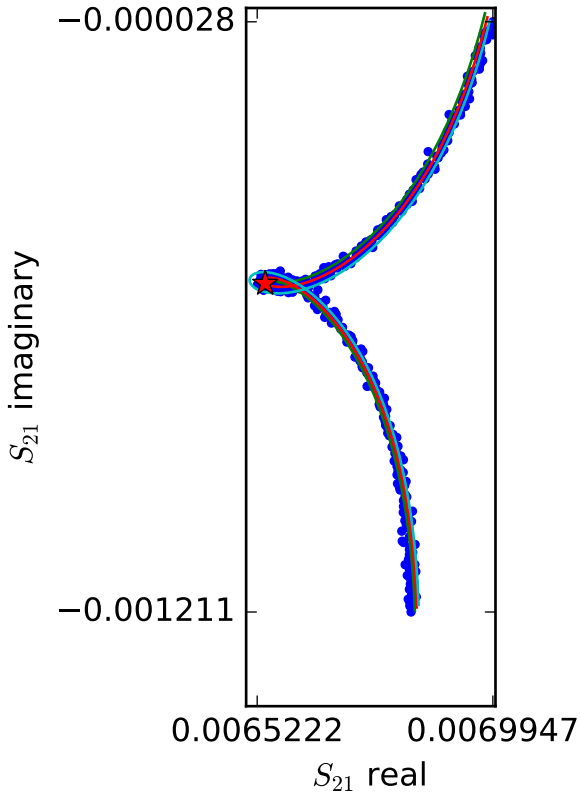


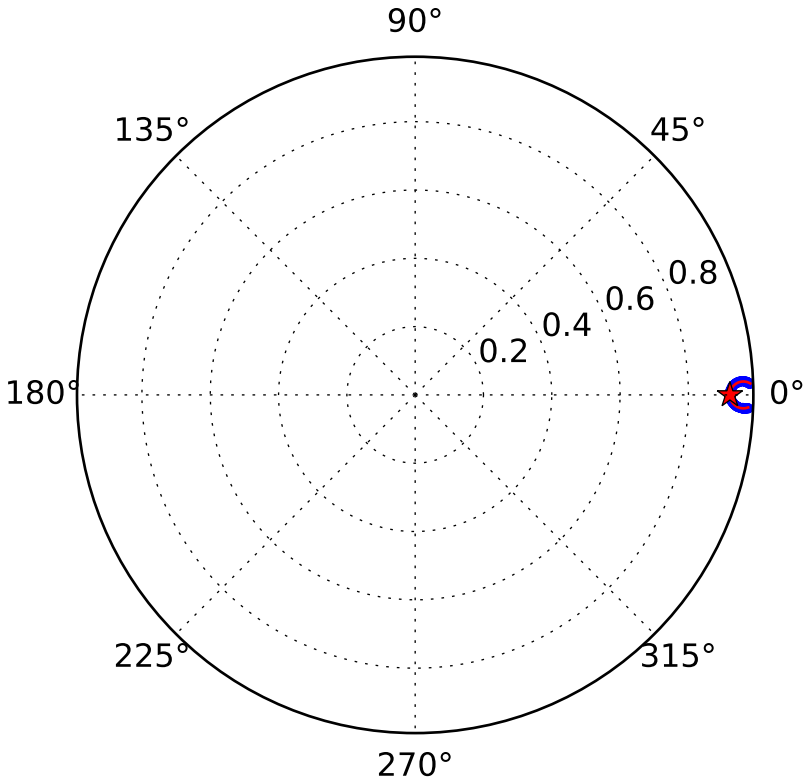


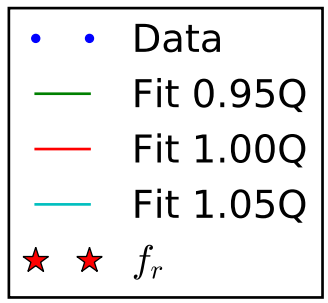
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.60662183303
Q_r = 7660.40150549
Q_c = 501294.429498
a = (0.00564811504592+0.00441862302916j)
ϕ_0 = 0.107175405472
τ = 38.9721274134



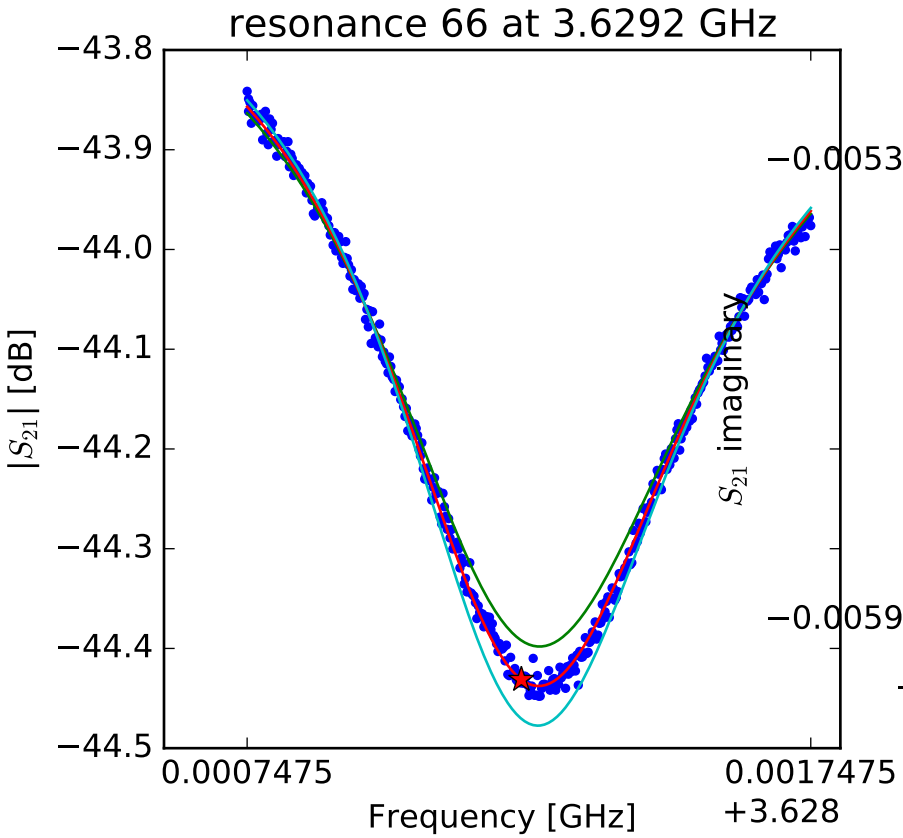


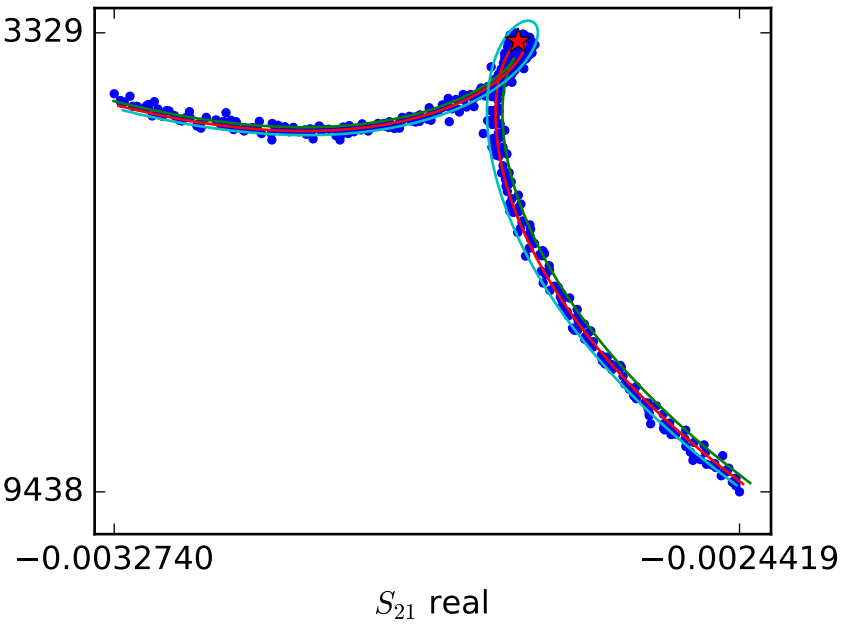


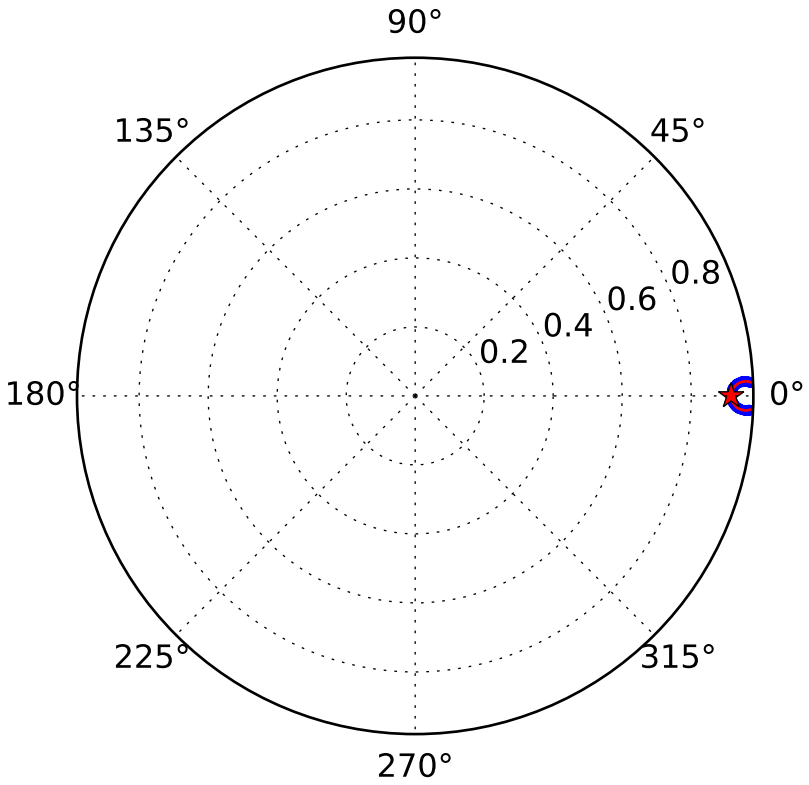


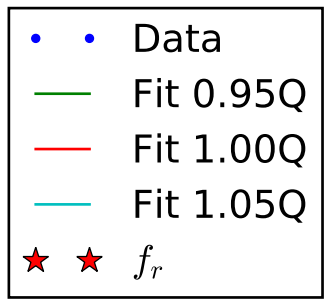
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.62094331604
Q_r = 5868.44845294
Q_c = 74571.4471176
a = (0.00572448209288+0.00422269337151j)
ϕ_0 = 0.161225694581
τ = 38.6949955909



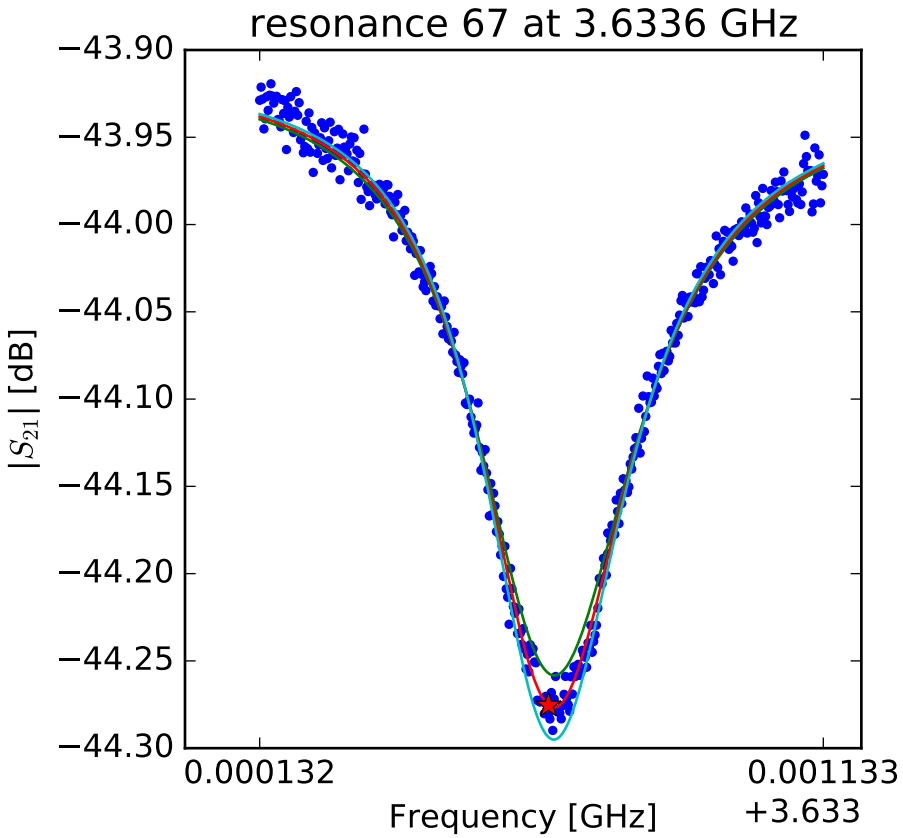


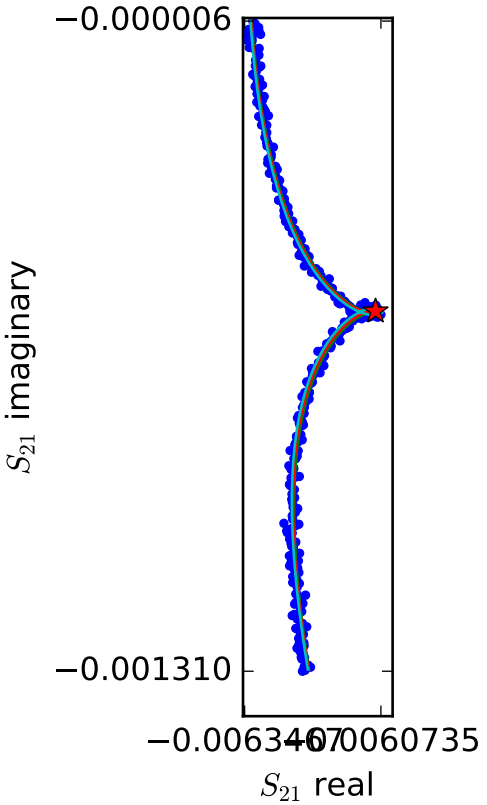


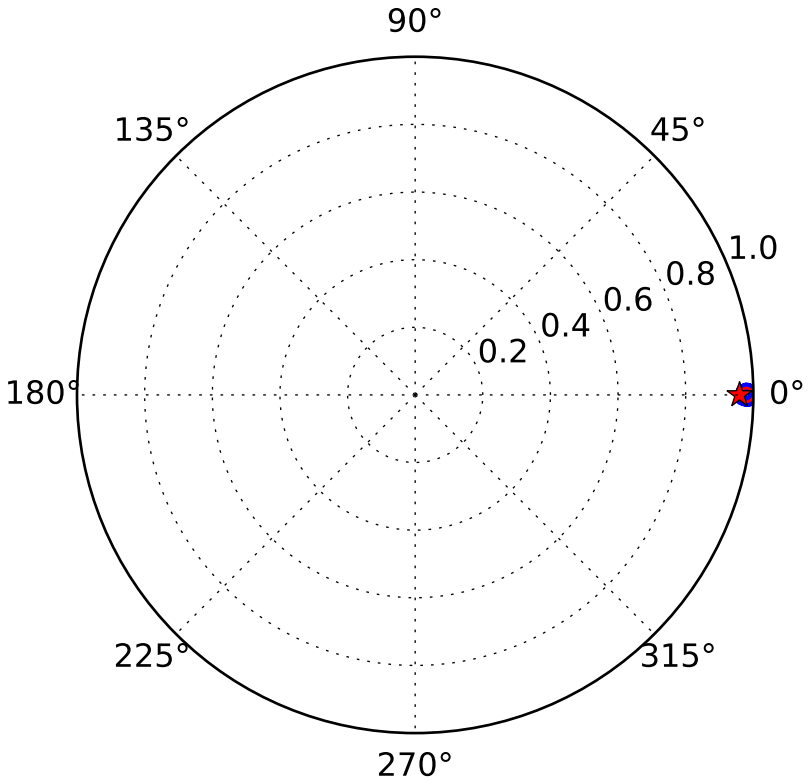


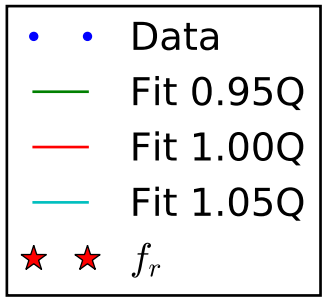
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.62923405461
Q_r = 5227.40937772
Q_c = 61991.7990986
a = (0.00453998586055-0.00471790763919j)
ϕ_0 = 0.168978570914
τ = 36.9760668416



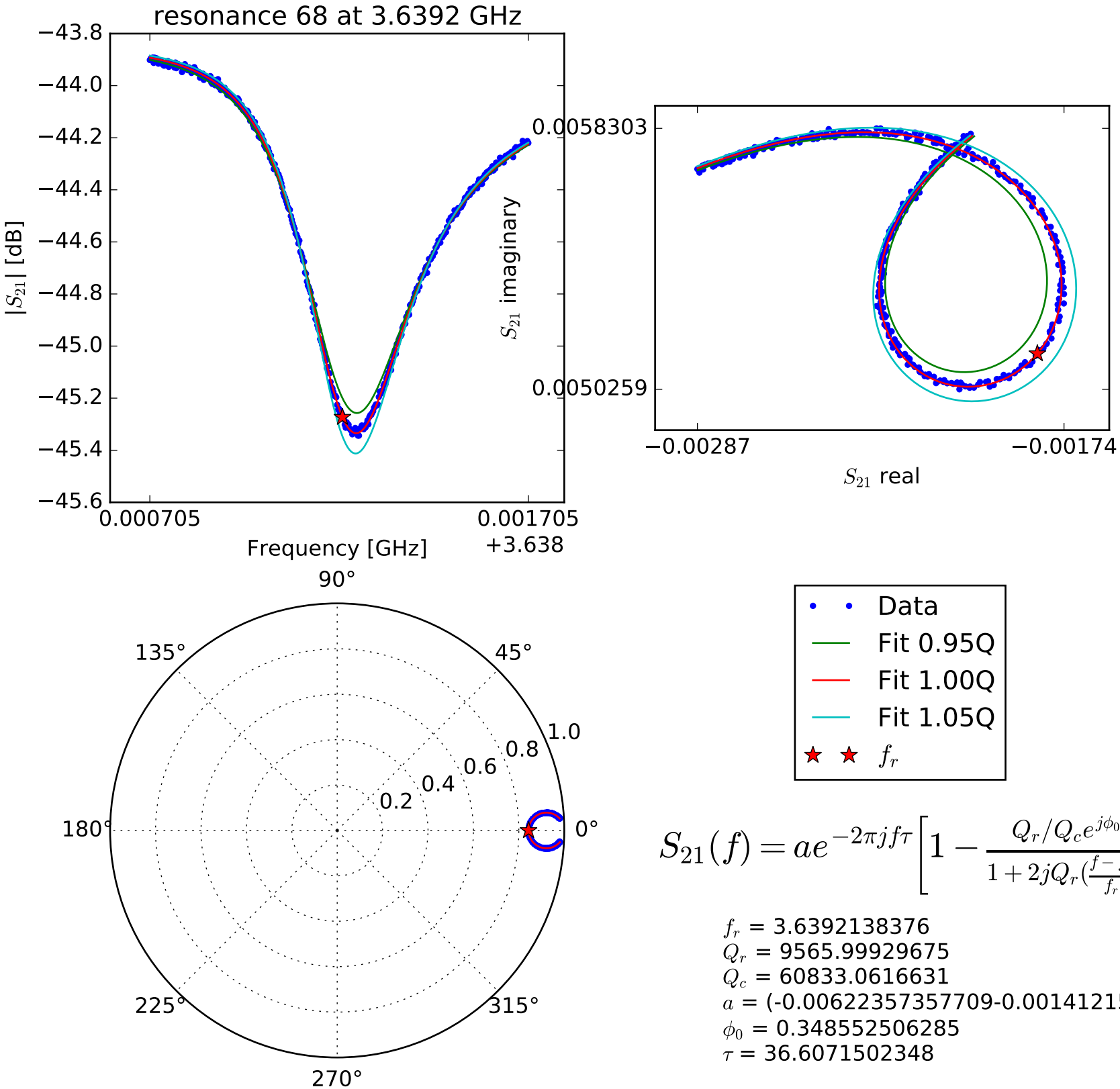






$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.63364491939
Q_r = 10817.1536404
Q_c = 265614.789116
a = (0.00636552735803+0.000246019524013j)
ϕ_0 = 0.115973178528
τ = 36.7372259745



$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.6392138376
Q_r = 9565.99929675
Q_c = 60833.0616631
a = (-0.00622357357709-0.0014121595779j)
ϕ_0 = 0.348552506285
τ = 36.6071502348