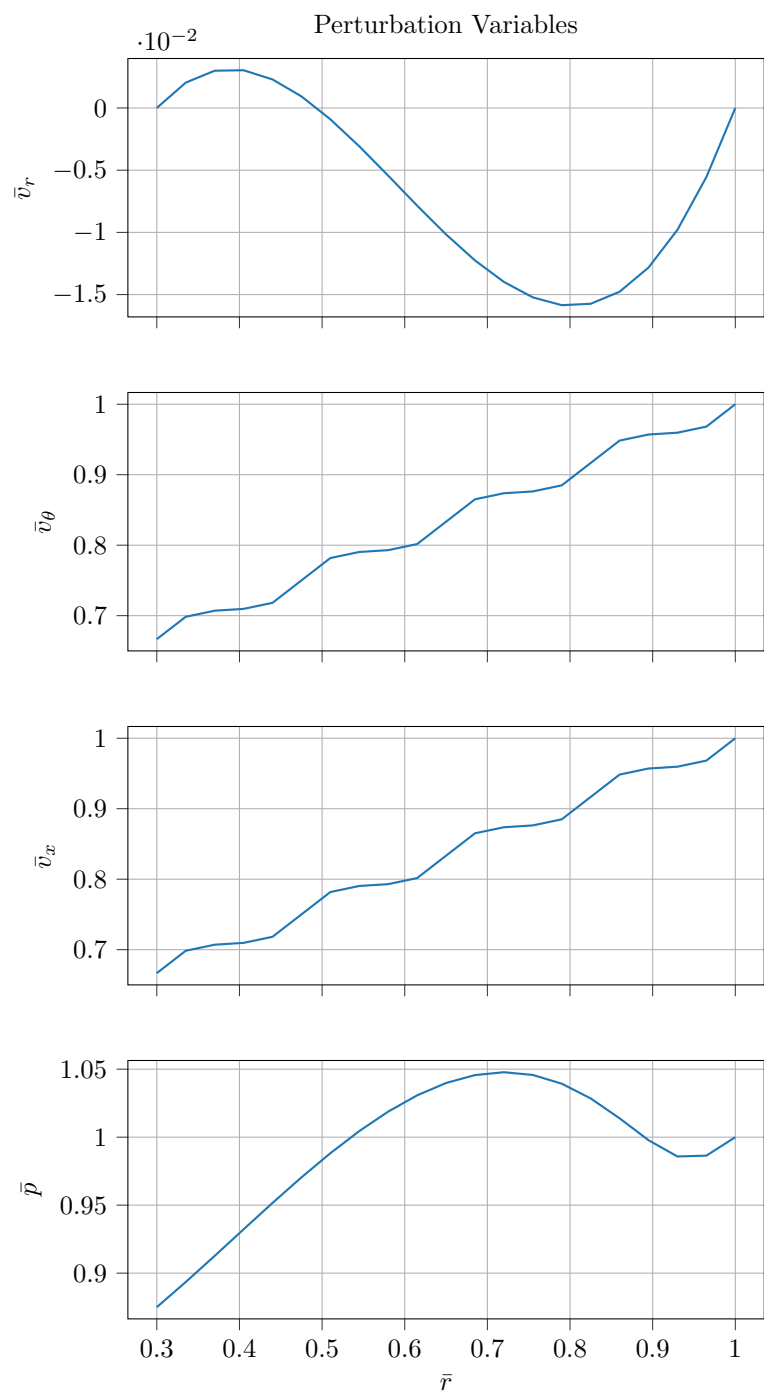


Figure 1: Mach distribution for method of manufactured solution case

1 Results

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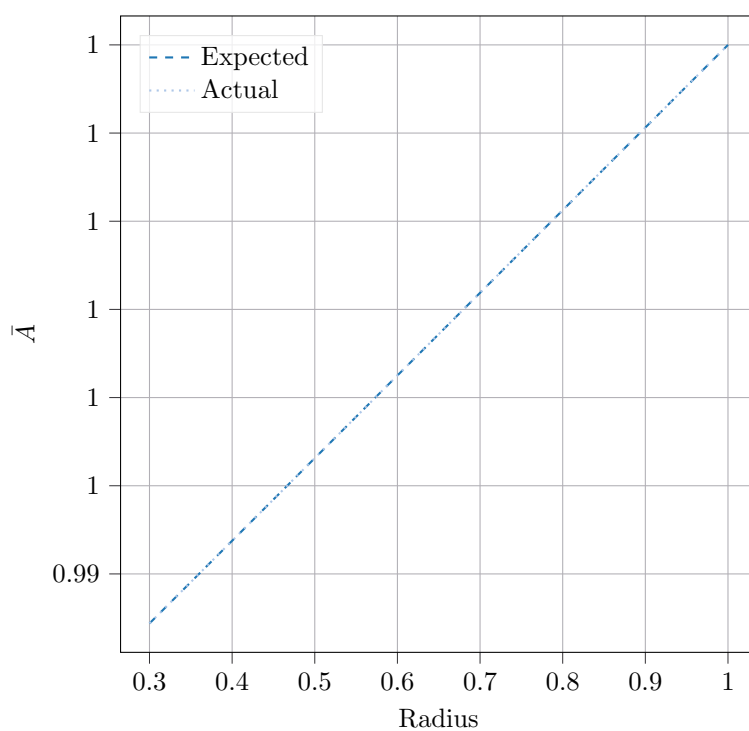


Figure 2: Speed of Sound from Integrating the Tangential Mach Number

L2 Norm of the Error for the Manufactured Solution as a function of Grid Points

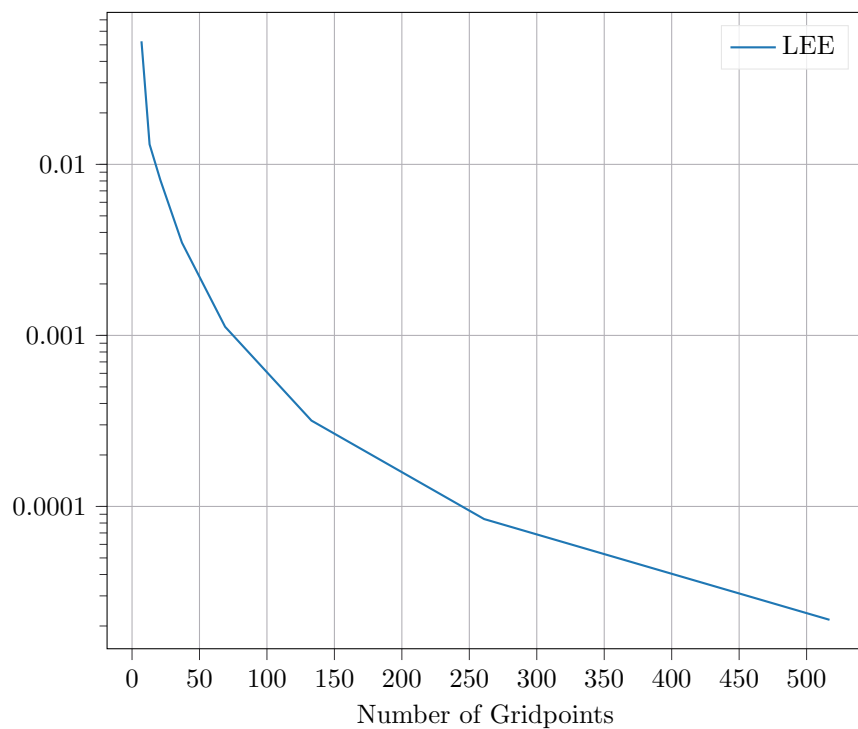
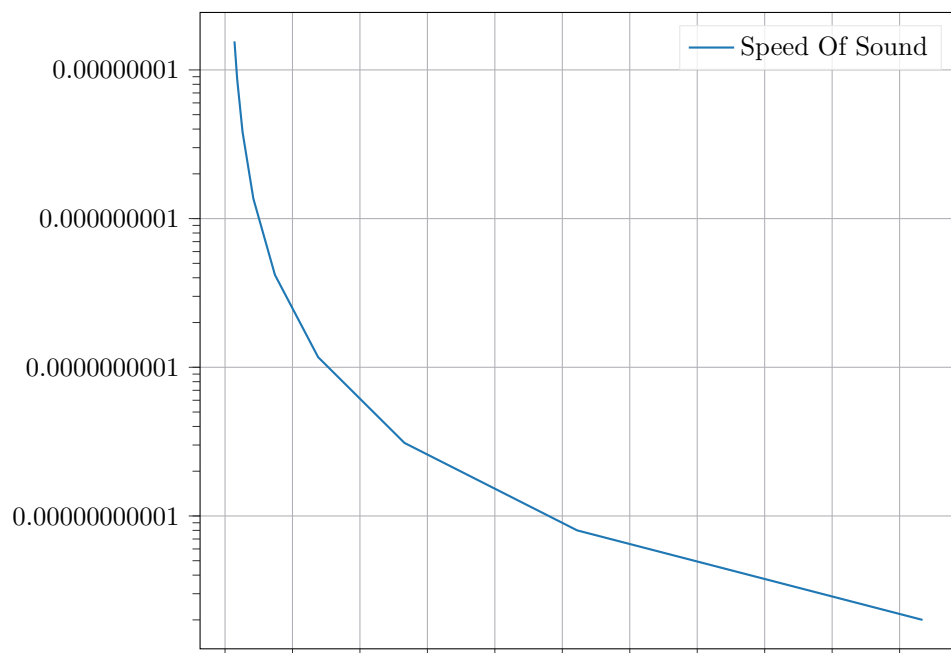


Figure 3: Speed of Sound Expected vs Actual

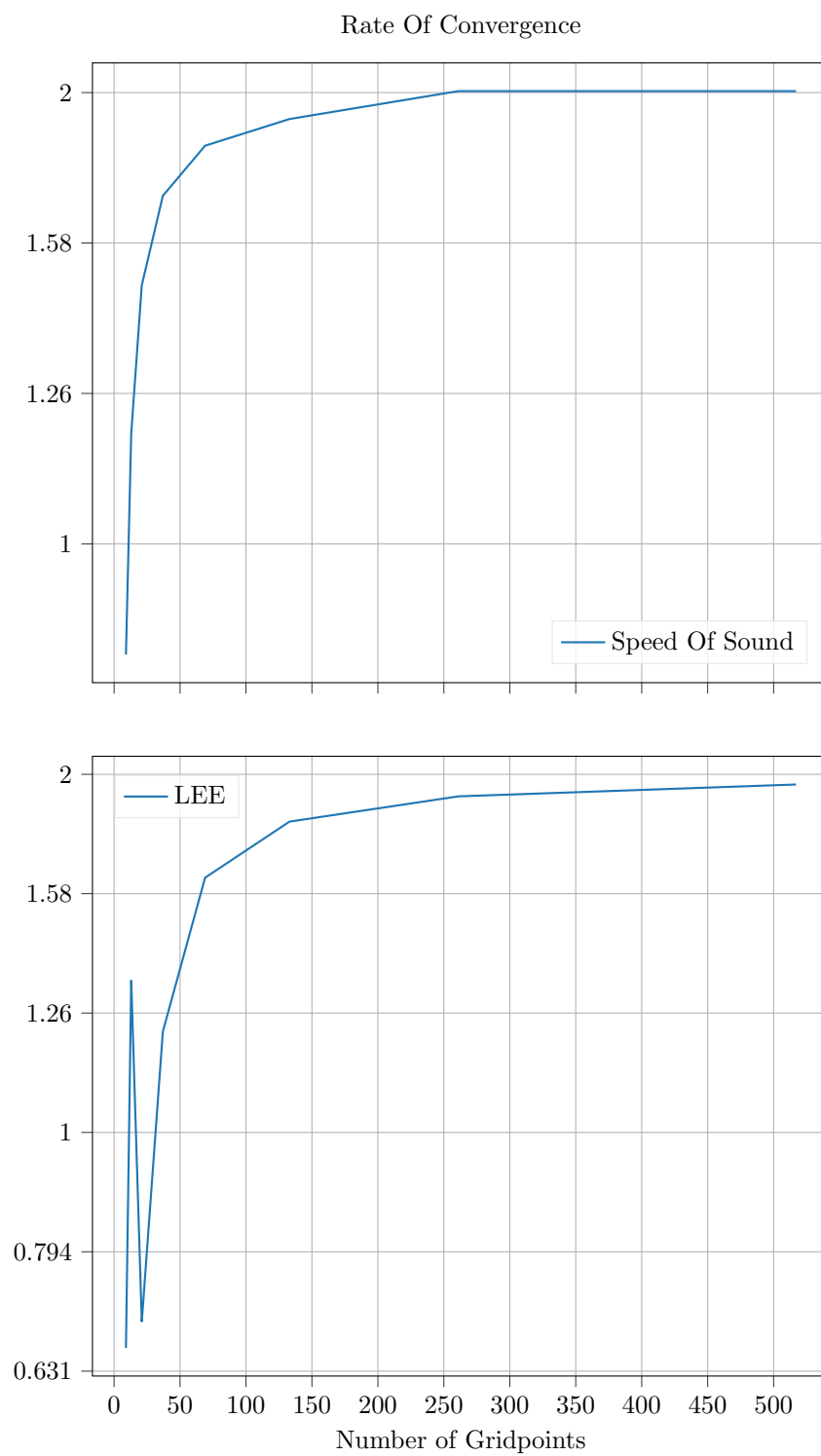


Figure 4: Rate of Convergence for the Speed of Sound Integration

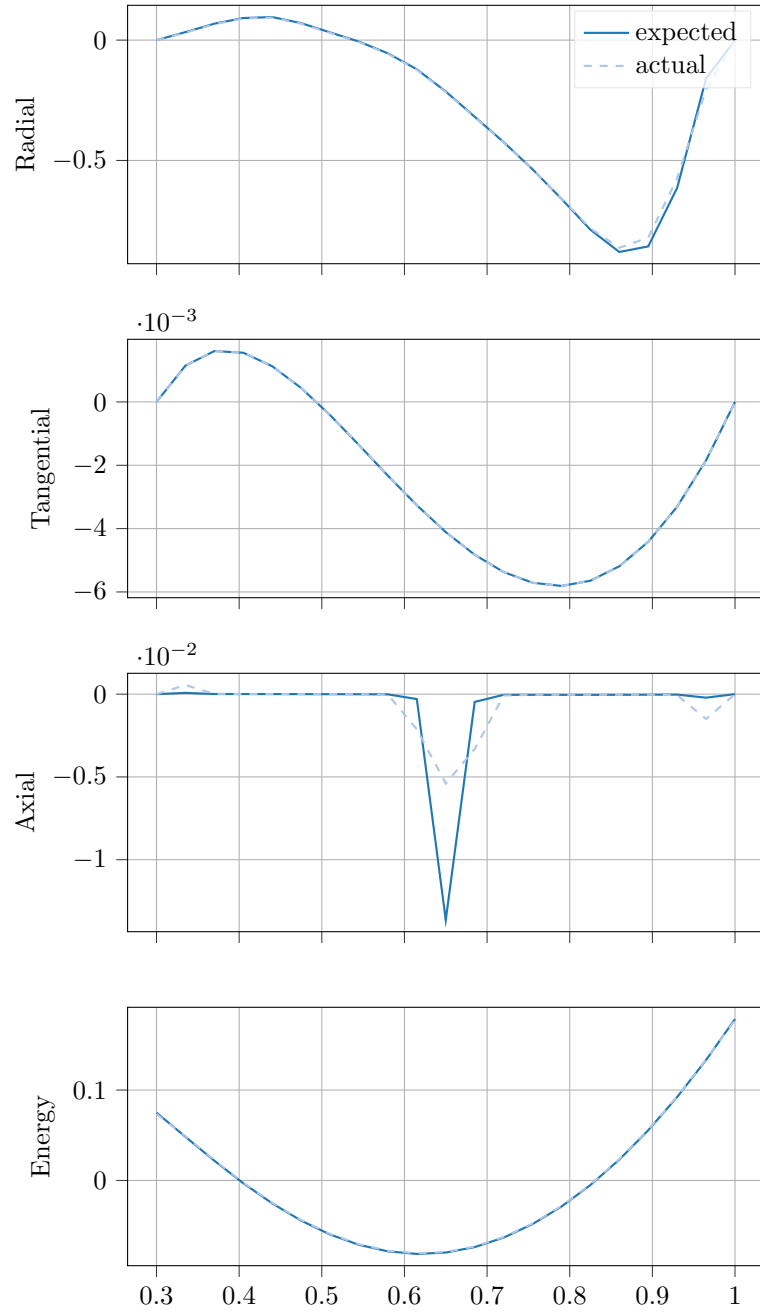
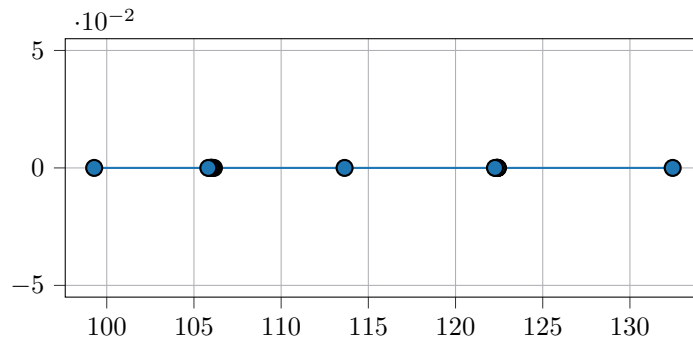


Figure 5: Source Term Error



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#	j	Re(gam)	Im(gam)	Re(gam/ak)	Im(gam/ak)	nz
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2	-0.368543850968E+02	-0.907765124549E-04	-0.122847950323E+01	-0.302588374850E-05	-0.814014395330E+00	0.200500938225E-05
3	-0.410609869384E+02	0.893929136549E-01	-0.136869956461E+01	0.297976378850E-02	-0.730617066165E+00	-0.159060931508E-02
4	-0.409179157657E+02	-0.182993550805E+00	-0.136393052552E+01	-0.609978502684E-02	-0.733160510023E+00	0.327884845864E-02
5	-0.398233007529E+02	0.129985845275E-02	-0.132744335843E+01	0.433286150918E-04	-0.753327810626E+00	-0.245891099890E-04
6	-0.388970982530E+02	-0.103039846710E+00	-0.129656994177E+01	-0.343466155700E-02	-0.771260346581E+00	0.204309708062E-02
7	-0.388989792043E+02	0.101102062135E+00	-0.129663264014E+01	0.337006873783E-02	-0.771223254607E+00	-0.200448091446E-02
8	0.215234419152E+02	0.100926800293E+01	0.717448063839E+00	0.336422667642E-01	0.139077106075E+01	-0.652154398233E-01
9	0.238271901517E+02	0.462435695669E-02	0.794239671724E+00	0.154145231890E-03	0.125906574292E+01	-0.244358205484E-03
10	0.236791559644E+02	-0.389784729957E-02	0.789305198812E+00	-0.129928243319E-03	0.126693701550E+01	0.208551649055E-03
11	0.22616501041E+02	0.334130168790E+00	0.752055003470E+00	0.111376722930E-01	0.132939840532E+01	-0.196879267034E-01
12	0.230137784832E+02	0.455067320398E-01	0.767125949439E+00	0.151689106799E-02	0.130356180854E+01	-0.257762270380E-02
13	0.228949672534E+02	0.767863116381E-01	0.763165575113E+00	0.255954372127E-02	0.131031690163E+01	-0.439460781225E-02
14	0.224410660172E+02	-0.211028052878E+00	0.748035533906E+00	-0.703426842926E-02	0.133671688492E+01	0.125700231465E-01
15	0.992784293985E+02	0.000000000000E+00	0.330928097995E+01	0.000000000000E+00	0.302180445257E+00	0.000000000000E+00
16	0.104523070174E+03	0.899017863365E-06	0.348410233912E+01	0.299672621122E-07	0.287017975554E+00	-0.246868262386E-08
17	0.104508001033E+03	-0.456994380169E-06	0.348360003444E+01	-0.152331460056E-07	0.287059361039E+00	0.125525809960E-08
18	0.107355855625E+03	-0.171970832432E-05	0.357852852084E+01	-0.573236108108E-07	0.279444468355E+00	0.447635553383E-08
19	0.107548069747E+03	0.000000000000E+00	0.358493565822E+01	0.000000000000E+00	0.278945034259E+00	0.000000000000E+00
20	0.111867288290E+03	0.000000000000E+00	0.372890960968E+01	0.000000000000E+00	0.268174910275E+00	0.000000000000E+00
21	0.115407757705E+03	0.000000000000E+00	0.384692525685E+01	0.000000000000E+00	0.259947863094E+00	0.000000000000E+00
22	0.124502973806E+03	0.000000000000E+00	0.415009912688E+01	0.000000000000E+00	0.240958099897E+00	0.000000000000E+00
23	0.124780808439E+03	0.000000000000E+00	0.415936028129E+01	0.000000000000E+00	0.240421587064E+00	0.000000000000E+00
24	0.120283710599E+03	0.000000000000E+00	0.400945736863E+01	0.000000000000E+00	0.249410308693E+00	0.000000000000E+00
25	0.120014355081E+03	0.000000000000E+00	0.400047850269E+01	0.000000000000E+00	0.249970097159E+00	0.000000000000E+00
26	0.132451628167E+03	0.000000000000E+00	0.441505427222E+01	0.000000000000E+00	0.226497781985E+00	0.000000000000E+00
27	0.195703756211E+26	0.559867394630E-66	0.652345854035E+24	0.186622464877E-67	0.232349875696E+26	0.456335163689E-71
28	0.485110122761E-32	0.120736814982-152	0.161703374254E-33	0.402456049940-154	0.726079369934E-42	0.369971430729E-56