-0.100-0.125-0.150log-probability -0.175 -0.200 -0.225-0.250-0.27520 60 80 100 0 40 Iteration

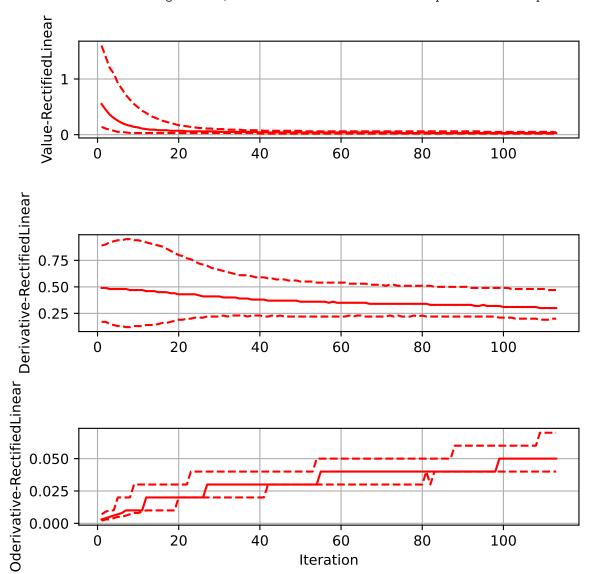
 ${\rm FIG.}\ 1:\ {\rm Plot}\ {\rm of}\ {\rm log-probability}\ {\rm vs}\ {\rm iterations}\ {\rm for}\ {\rm output}$ 

train /home/sourya/kaldi/egs/tamil\_telugu\_proj/s5\_r3/telugu\_exp/chain\_cleaned\_1d/tdnn1d\_sp/valid /home/sourya/kaldi/egs/tamil\_telugu\_proj/s5\_r3/telugu\_exp/chain\_cleaned\_1d/tdnn1d\_sp/

 ${\rm FIG.}\ 2:\ {\rm Plot}\ {\rm of}\ {\rm log-probability}\ {\rm vs}\ {\rm iterations}\ {\rm for}\ {\rm output-xent}$ 

train /home/sourya/kaldi/egs/tamil\_telugu\_proj/s5\_r3/telugu\_exp/chain\_cleaned\_1d/tdnn1d\_sp/valid /home/sourya/kaldi/egs/tamil\_telugu\_proj/s5\_r3/telugu\_exp/chain\_cleaned\_1d/tdnn1d\_sp/

 ${\rm FIG.~3:~Per\text{-}dimension~average\text{-}(value,~derivative)~and~rms\text{-}oderivative~percentiles~for~prefinal\text{-}chain.relu}$ 



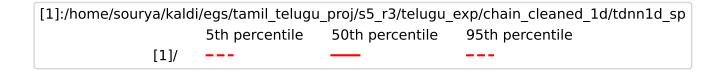
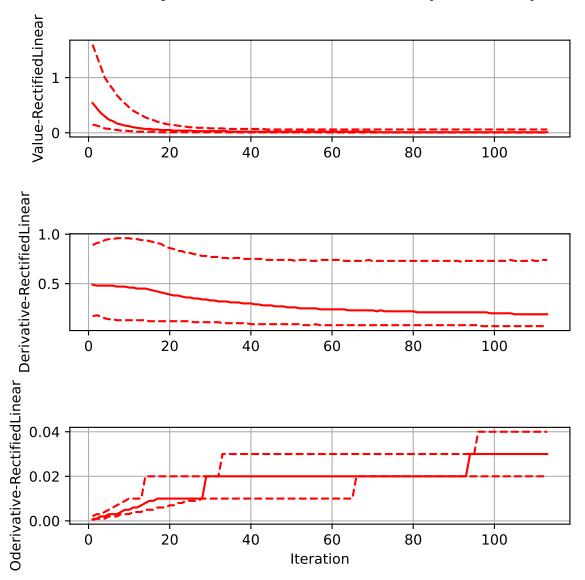


FIG. 4: Per-dimension average-(value, derivative) and rms-oderivative percentiles for prefinal-xent.relu



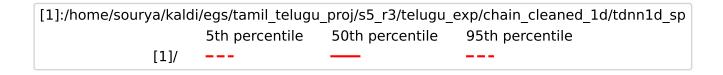
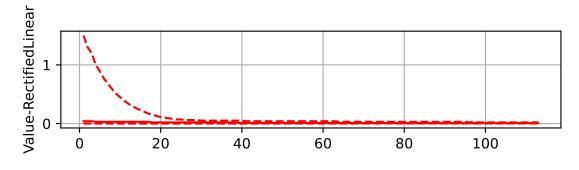
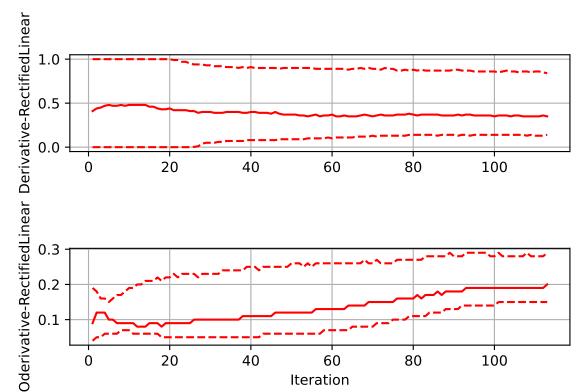
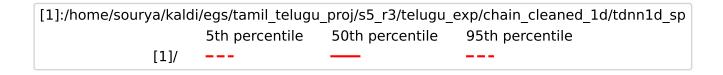


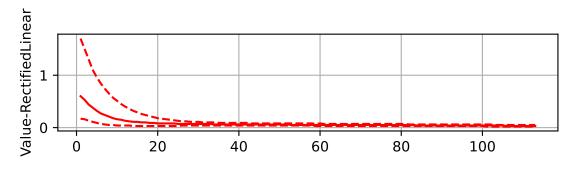
FIG. 5: Per-dimension average-(value, derivative) and rms-oderivative percentiles for tdnn1.relu

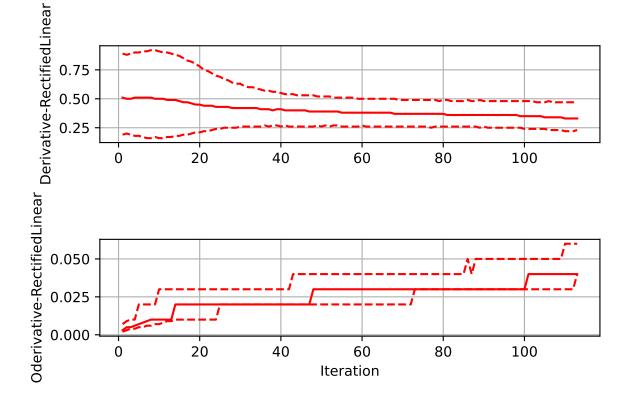






 ${\rm FIG.~6:~Per-dimension~average-(value,~derivative)~and~rms-oderivative~percentiles~for~tdnnf10.relu}$ 





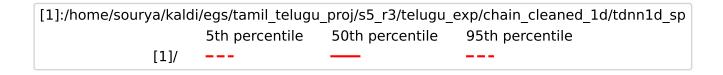
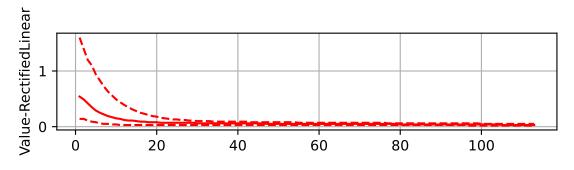
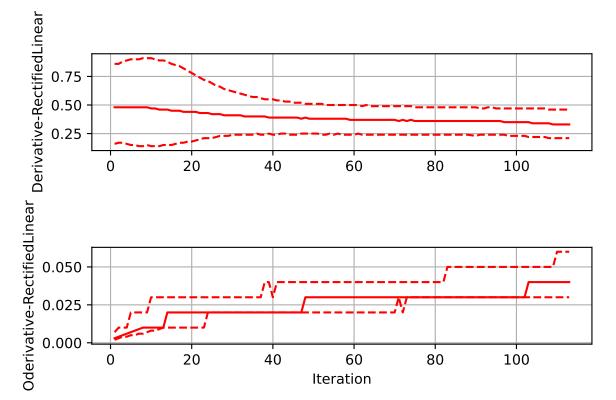
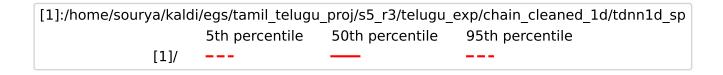


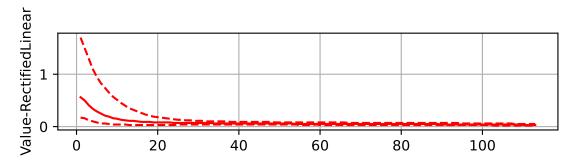
FIG. 7: Per-dimension average-(value, derivative) and rms-oderivative percentiles for tdnnf11.relu

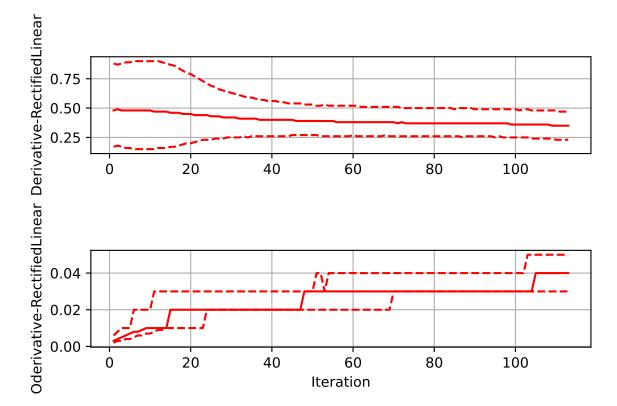






 ${\rm FIG.~8:~Per-dimension~average-(value,~derivative)~and~rms-oderivative~percentiles~for~tdnnf12.relu}$ 





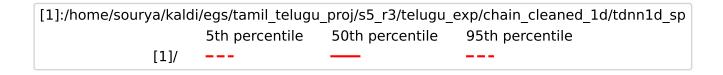
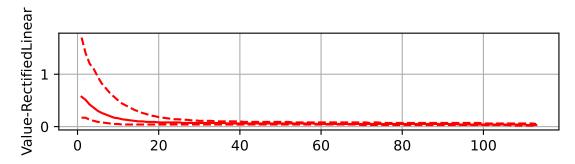
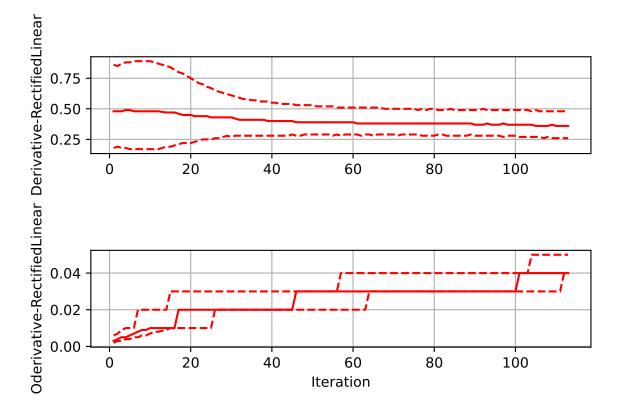
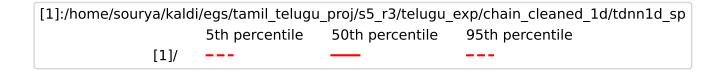


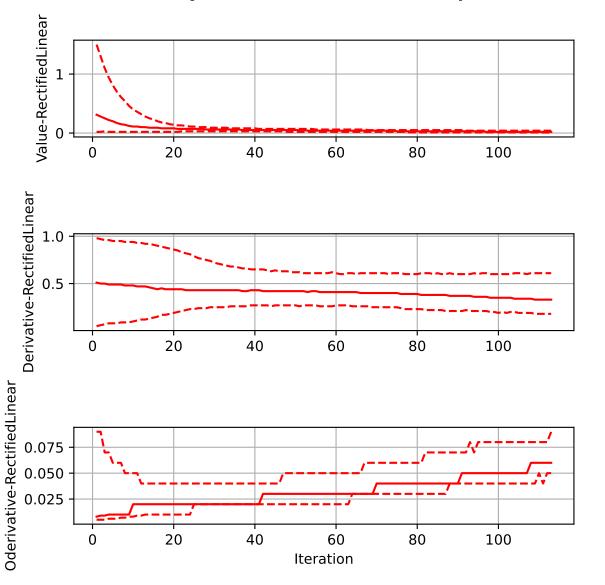
FIG. 9: Per-dimension average-(value, derivative) and rms-oderivative percentiles for tdnnf13.relu

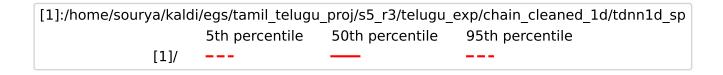




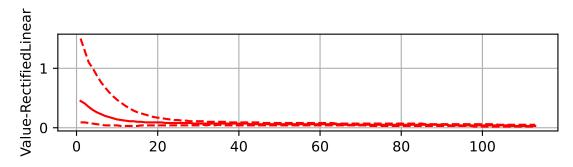


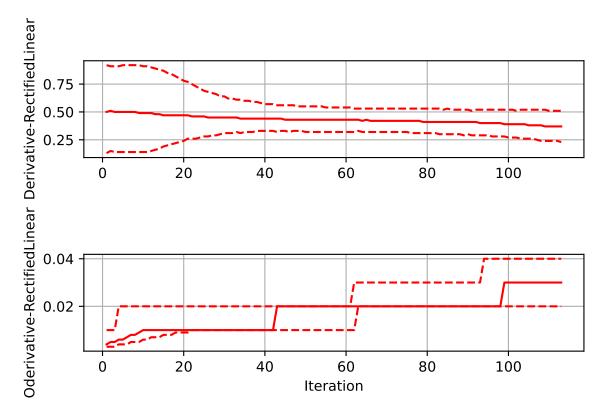
 $FIG.\ 10:\ Per-dimension\ average-(value,\ derivative)\ and\ rms-oderivative\ percentiles\ for\ tdnnf2.relu$ 

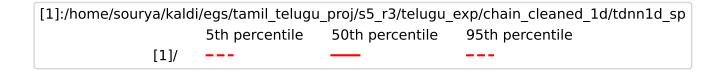




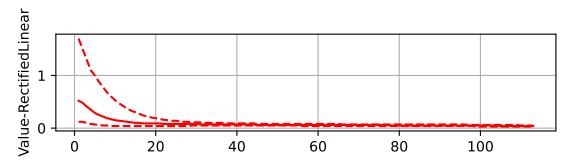
 ${\rm FIG.~11:~Per-dimension~average-(value,~derivative)~and~rms-oderivative~percentiles~for~tdnnf3.relu}$ 

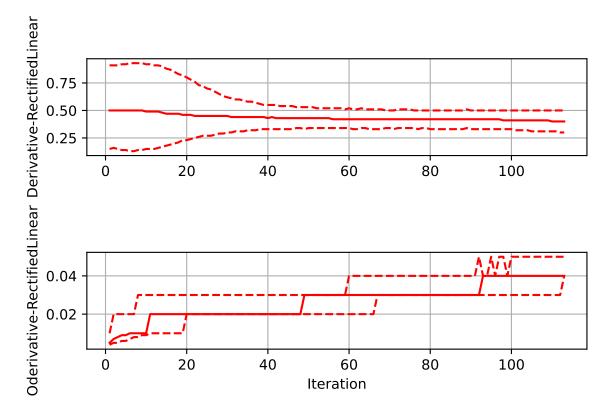


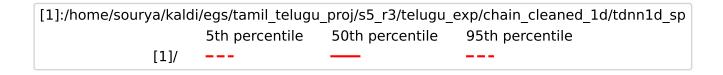




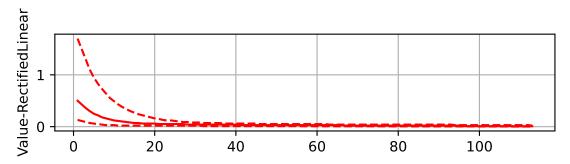
 $FIG.\ 12:\ Per-dimension\ average-(value,\ derivative)\ and\ rms-oderivative\ percentiles\ for\ tdnnf4.relu$ 

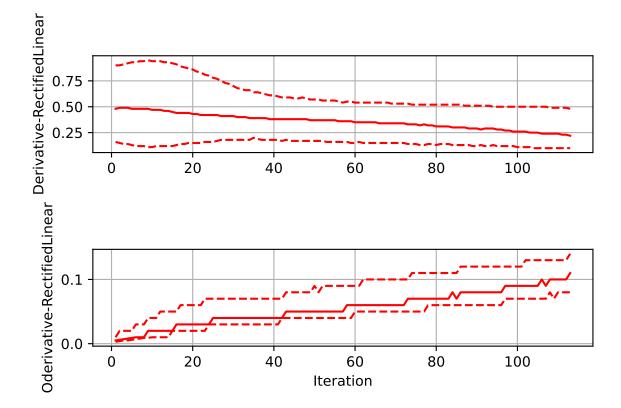


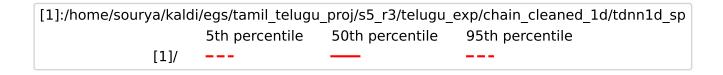




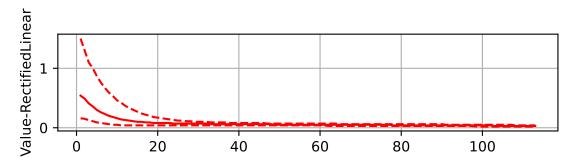
 ${
m FIG.~13:~Per-dimension~average-(value,~derivative)}$  and  ${
m rms-oderivative~percentiles~for~tdnnf5.relu}$ 

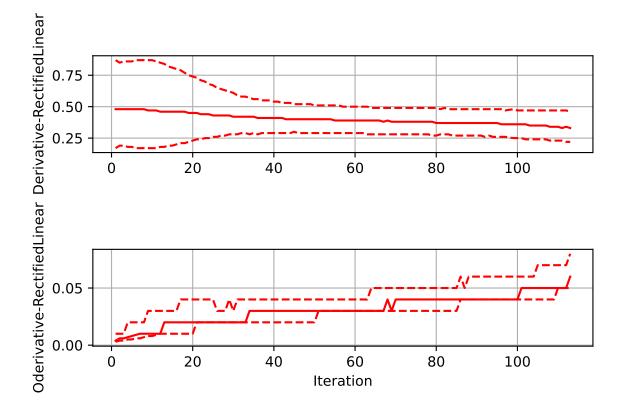


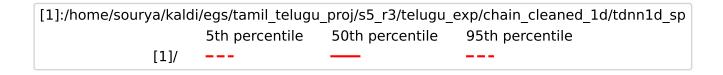




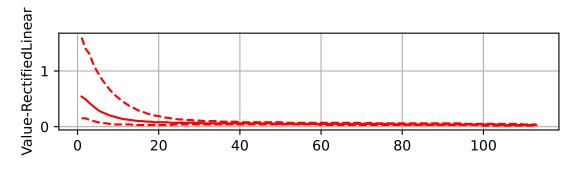
 $FIG.\ 14:\ Per-dimension\ average-(value,\ derivative)\ and\ rms-oderivative\ percentiles\ for\ tdnnf6.relu$ 

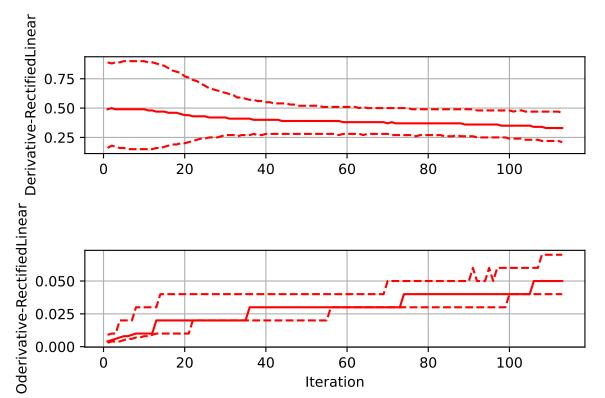


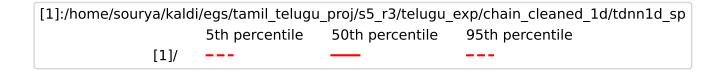




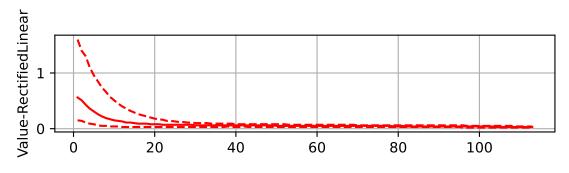
 $FIG.\ 15:\ \texttt{Per-dimension}\ average-(\texttt{value},\ \texttt{derivative})\ \texttt{and}\ \texttt{rms-oderivative}\ \texttt{percentiles}\ \texttt{for}\ \texttt{tdnnf7.relu}$ 

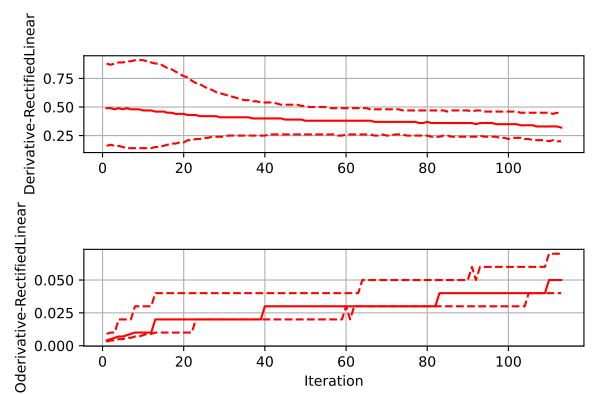






 $FIG.\ 16:\ Per-dimension\ average-(value,\ derivative)\ and\ rms-oderivative\ percentiles\ for\ tdnnf8.relu$ 





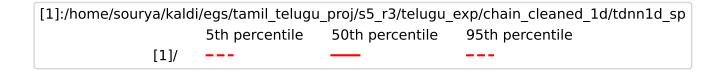
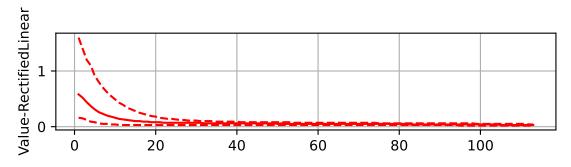
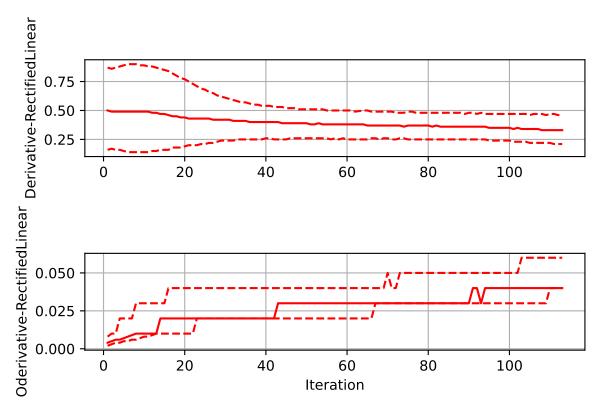
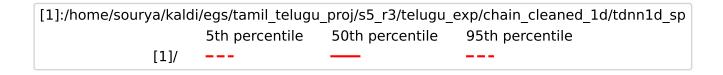


FIG. 17: Per-dimension average-(value, derivative) and rms-oderivative percentiles for tdnnf9.relu







 ${\rm FIG.}\ 18:$  Parameter differences at output-xent.affine

Parameter Differences 4 2 100 Relative Parameter Differences 20 40 80 60 0 0.5 0.4 0.3 0.2 0.1 100 ó 20 40 60 80 Iteration

 ${\rm FIG.}\ 19:$  Parameter differences at output.affine

Parameter Differences 1 8 8 9 9 100 Relative Parameter Differences 20 40 60 80 0 0.25 0.20 0.15 20 ò 40 60 80 100 Iteration

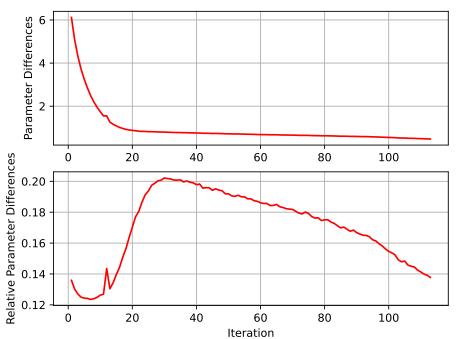
 ${\rm FIG.}\ 20:$  Parameter differences at prefinal-chain.affine

Parameter Differences 3 2 1 100 Relative Parameter Differences 20 40 60 80 0 0.30 0.25 0.20 0.15 20 40 80 100 ò 60 Iteration

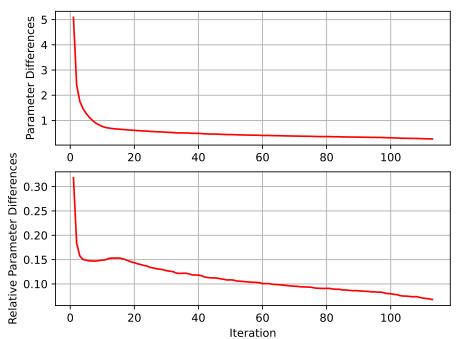
 ${
m FIG.~21:}$  Parameter differences at prefinal-chain.linear

Parameter Differences Relative Parameter Differences 20 40 80 100 60 0 0.30 0.25 0.20 0.15 20 40 100 ò 60 80 Iteration

FIG. 22: Parameter differences at prefinal-1



 $FIG.\ 23\hbox{: Parameter differences at prefinal-xent.} affine$ 



 $FIG.\ 24\hbox{: Parameter differences at prefinal-xent.linear}$ 

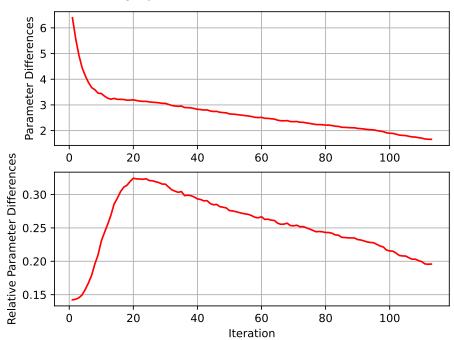


FIG. 25: Parameter differences at tdnn1.affine

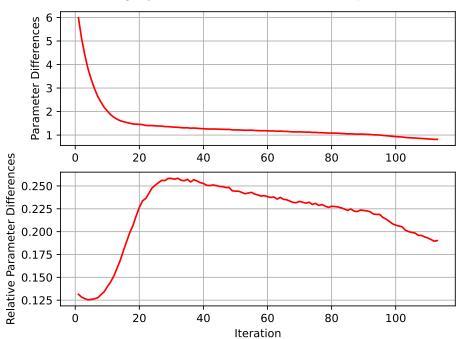


FIG. 26: Parameter differences at tdnnf10.affine

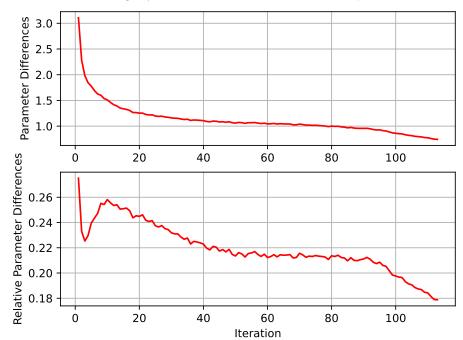


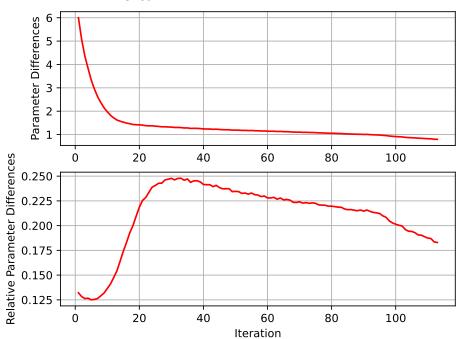
FIG. 27: Parameter differences at tdnnf10.linear

Sey 0 20 40 60 80 100

Iteration

FIG. 28: Parameter differences at tdnnf11.affine

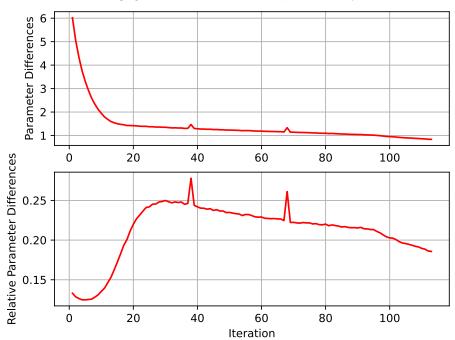
FIG. 29: Parameter differences at tdnnf11.linear



 ${\rm FIG.~30:}$  Parameter differences at tdnnf12.affine

3.0 2.5 2.5 0.20 40 60 80 100 0.24 0.26 0.24 0.20 0.24 0.20 0

FIG. 31: Parameter differences at tdnnf12.linear



 ${\rm FIG.~32:}$  Parameter differences at tdnnf13.affine

Parameter Differences 0.2 0.2 1.5 1.0 Relative Parameter Differences 20 0 40 60 80 100 0.275 0.250 0.225 0.200 0.175 20 ò 40 60 80 100 Iteration

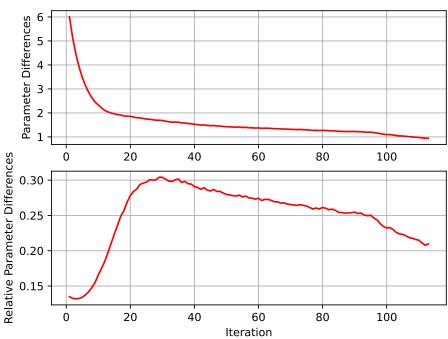
FIG. 33: Parameter differences at tdnnf13.linear

Parameter Differences 100 Relative Parameter Differences 20 0 40 60 80 0.30 0.25 0.20 0.15 20 40 80 Ó 60 100 Iteration

 ${\rm FIG.~34:}$  Parameter differences at tdnnf2.affine

Parameter Differences 3 2 Relative Parameter Differences 20 0 40 60 80 100 0.40 0.35 0.30 0.25 0.20 20 40 100 ò 60 80 Iteration

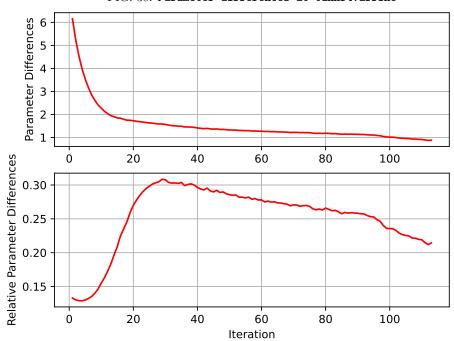
 ${\rm FIG.~35:}$  Parameter differences at tdnnf2.linear



 ${\rm FIG.~36:}$  Parameter differences at tdnnf3.affine

Parameter Differences Relative Parameter Differences 0.300 0.300 0.205 0.205 0.200 0.200 ò Iteration

FIG. 37: Parameter differences at tdnnf3.linear



 ${\rm FIG.~38:}$  Parameter differences at tdnnf4.affine

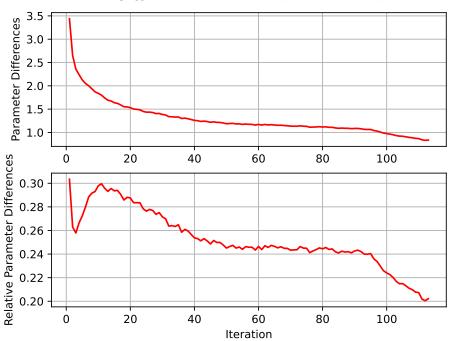
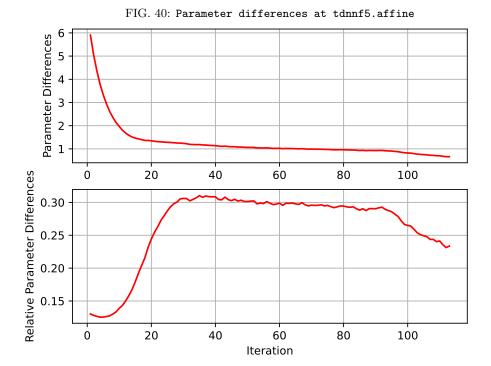
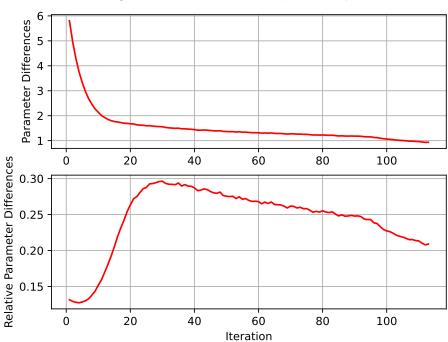


FIG. 39: Parameter differences at tdnnf4.linear



3.0 2.5 2.5 0.20 40 60 80 100 0.24 0.24 0.24 0.24 0.24 0.24 0.24 0.24 0.24 0.24 0.24

FIG. 41: Parameter differences at tdnnf5.linear



 ${\rm FIG.~42:}$  Parameter differences at tdnnf6.affine

Relative Parameter Differences Parameter Differences 3.0 2.5 2.0 1.5 1.0 20 0 40 60 80 100 0.30 0.28 0.26 0.24 0.22 0.20 20 40 80 ò 60 100 Iteration

 ${\rm FIG.~43:}$  Parameter differences at tdnnf6.linear

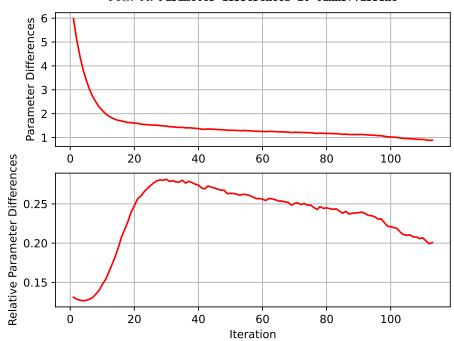
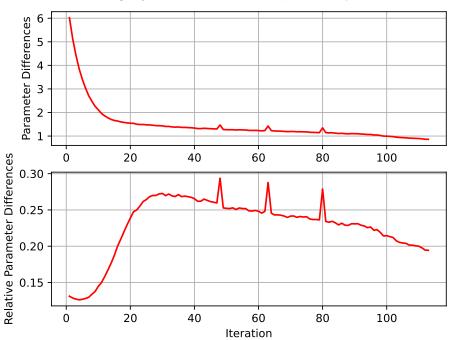


FIG. 44: Parameter differences at tdnnf7.affine

Relative Parameter Differences Parameter Differences 3.0 2.5 2.0 1.5 1.0 20 0 40 60 80 100 0.28 0.26 0.24 0.22 0.20 20 40 80 Ó 60 100 Iteration

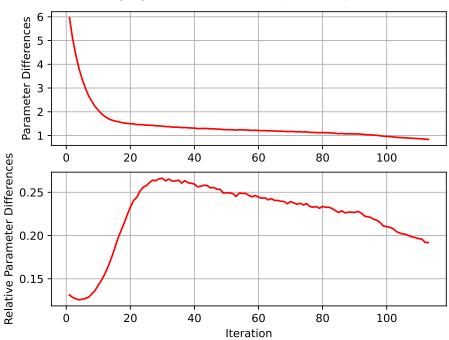
FIG. 45: Parameter differences at tdnnf7.linear



 ${\rm FIG.~46:}$  Parameter differences at tdnnf8.affine

3.0 2.5 2.5 0 20 40 60 80 100 0.28 0.24 0.22 0.20 0.

 ${\rm FIG.~47:}$  Parameter differences at tdnnf8.linear



 ${\rm FIG.~48:}$  Parameter differences at tdnnf9.affine

3.0 2.5 2.5 1.5 0 20 40 60 80 100 September 2.5 0.20 0.24 0.24 0.20 

 ${\rm FIG.}\ 49$ : Parameter differences at tdnnf9.linear