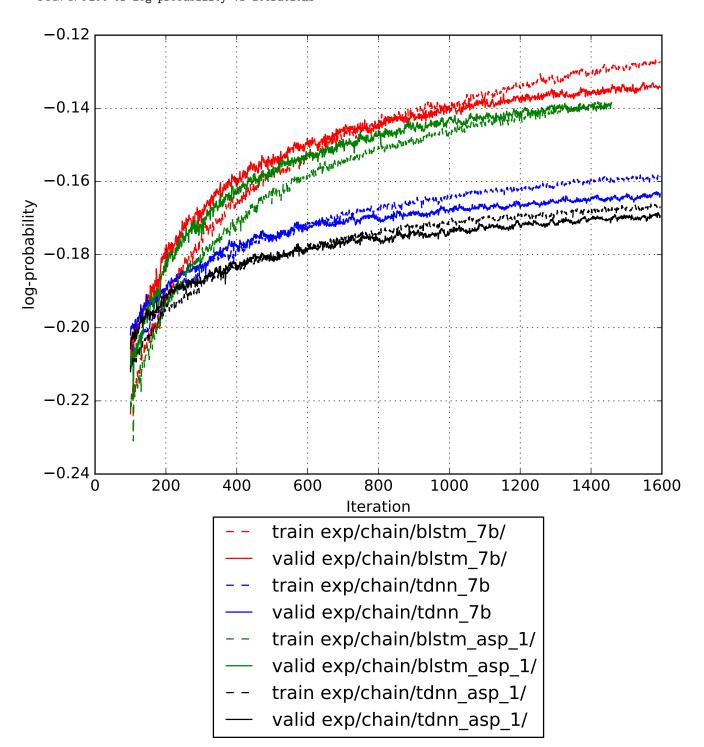
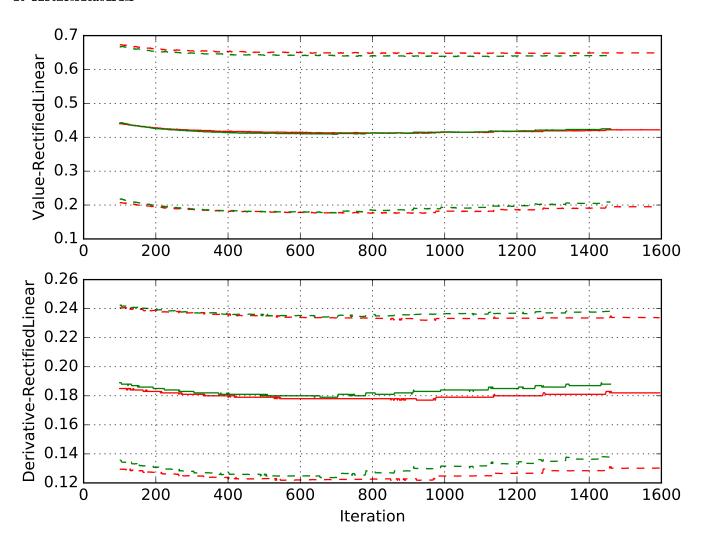
${\rm FIG.}\ 1:$  Plot of log-probability vs iterations



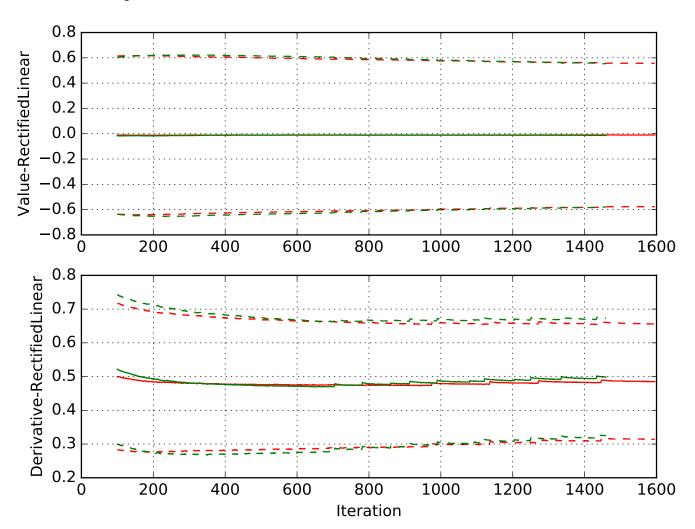
 ${\rm FIG.}$  2: Mean and stddev of the value and derivative at  ${\rm BLstm1\_backward\_f}$ 





- Mean+-Stddev exp/chain/blstm\_7b/
- Mean exp/chain/blstm\_asp\_1/
- Mean+-Stddev exp/chain/blstm\_asp\_1/

 ${\rm FIG.~3:~Mean~and~stddev~of~the~value~and~derivative~at~BLstm1\_backward\_g}$ 



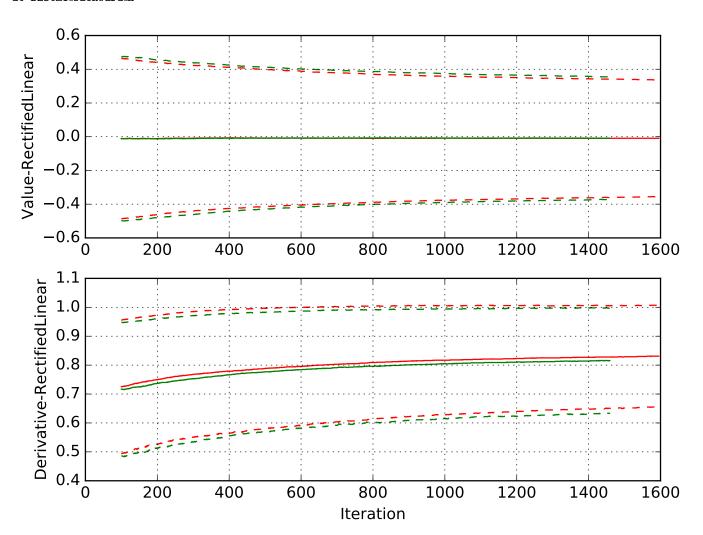
— Mean exp/chain/blstm\_7b/

- Mean+-Stddev exp/chain/blstm\_7b/

— Mean exp/chain/blstm\_asp\_1/

-- Mean+-Stddev exp/chain/blstm\_asp\_1/

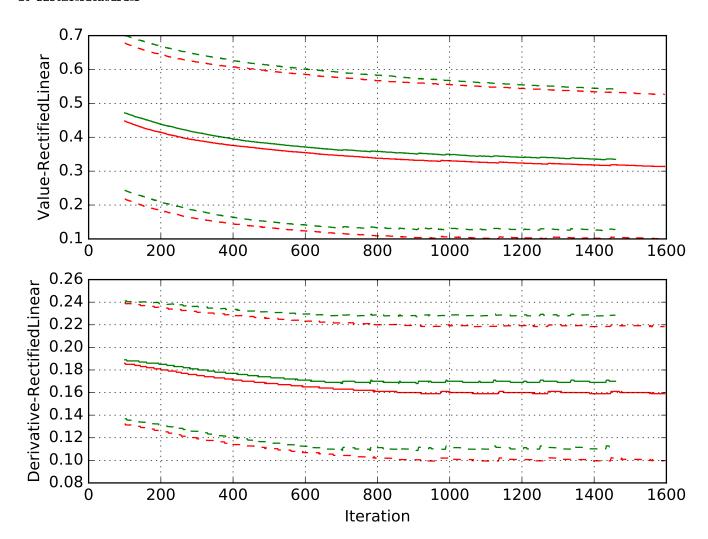
 $FIG.\ 4:$  Mean and stddev of the value and derivative at BLstm1\_backward\_h





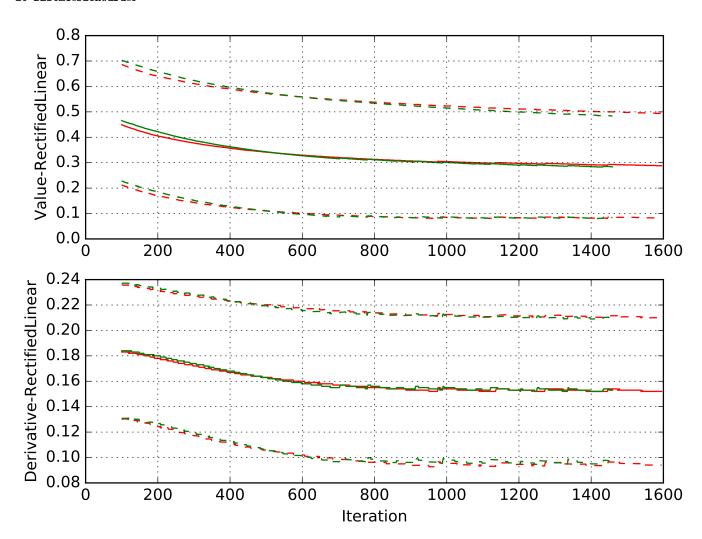
- Mean+-Stddev exp/chain/blstm\_7b/
- Mean exp/chain/blstm\_asp\_1/
- Mean+-Stddev exp/chain/blstm\_asp\_1/

 $FIG.\ 5:$  Mean and stddev of the value and derivative at BLstm1\_backward\_i



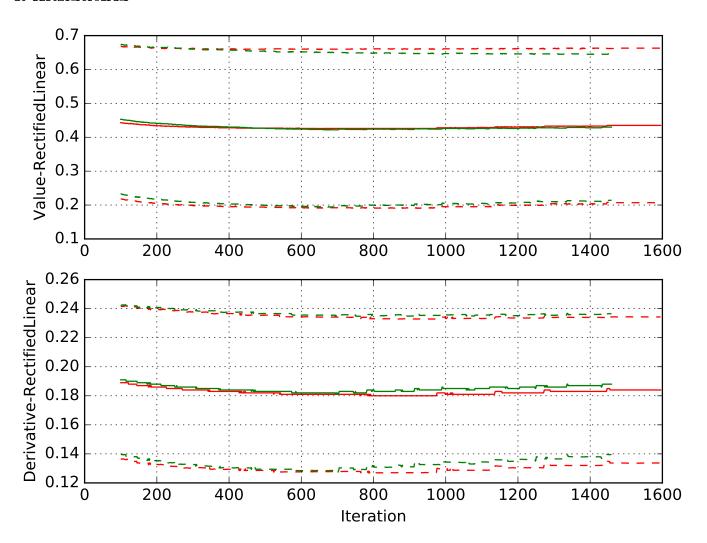
- Mean exp/chain/blstm\_7b/
- Mean+-Stddev exp/chain/blstm\_7b/
- Mean exp/chain/blstm\_asp\_1/
- Mean+-Stddev exp/chain/blstm\_asp\_1/

 ${\rm FIG.}$  6: Mean and stddev of the value and derivative at  ${\rm BLstm1\_backward\_o}$ 



- Mean exp/chain/blstm\_7b/
- Mean+-Stddev exp/chain/blstm\_7b/
- Mean exp/chain/blstm\_asp\_1/
- Mean+-Stddev exp/chain/blstm\_asp\_1/

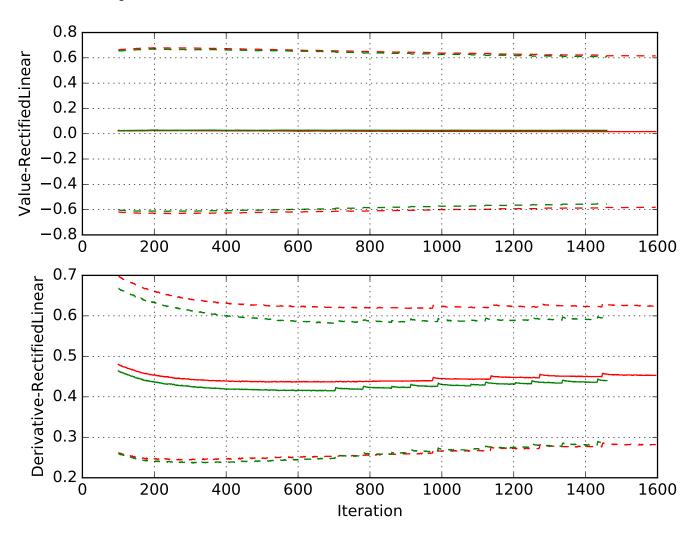
 ${\rm FIG.}$  7: Mean and stddev of the value and derivative at  ${\rm BLstm1\_forward\_f}$ 





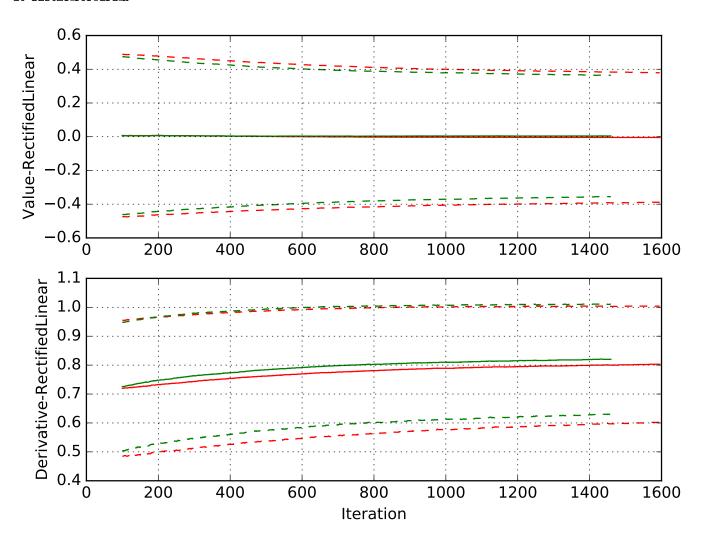
- Mean+-Stddev exp/chain/blstm\_7b/
- Mean exp/chain/blstm\_asp\_1/
- Mean+-Stddev exp/chain/blstm\_asp\_1/

 ${\rm FIG.~8:~Mean~and~stddev~of~the~value~and~derivative~at~BLstm1\_forward\_g}$ 



- Mean exp/chain/blstm\_7b/
- Mean+-Stddev exp/chain/blstm\_7b/
- Mean exp/chain/blstm\_asp\_1/
- -- Mean+-Stddev exp/chain/blstm\_asp\_1/

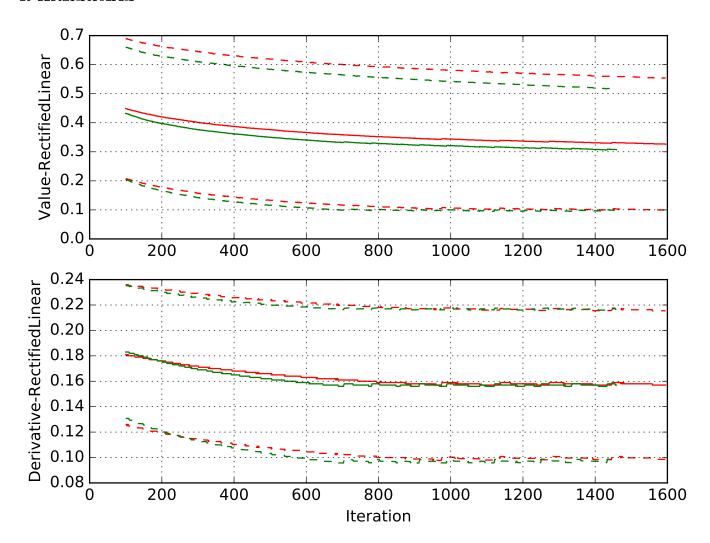
 $FIG.\ 9:$  Mean and stddev of the value and derivative at  ${\tt BLstm1\_forward\_h}$ 





- Mean+-Stddev exp/chain/blstm\_7b/
- Mean exp/chain/blstm\_asp\_1/
- -- Mean+-Stddev exp/chain/blstm\_asp\_1/

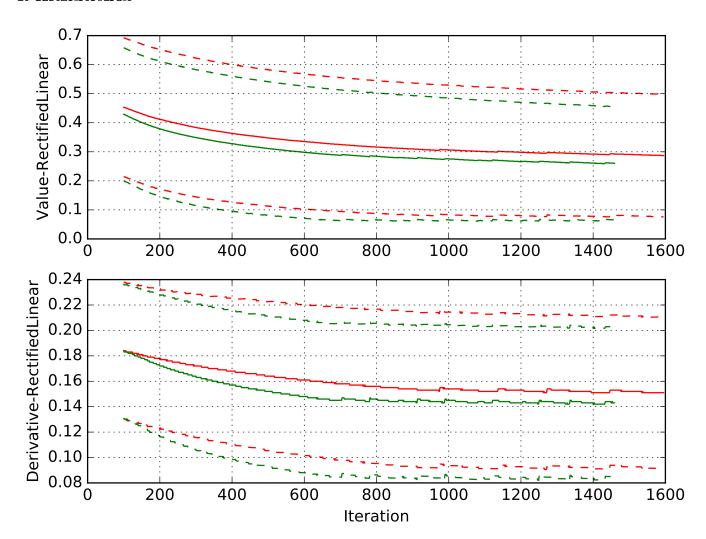
 $FIG.\ 10:$  Mean and stddev of the value and derivative at  ${\tt BLstm1\_forward\_i}$ 





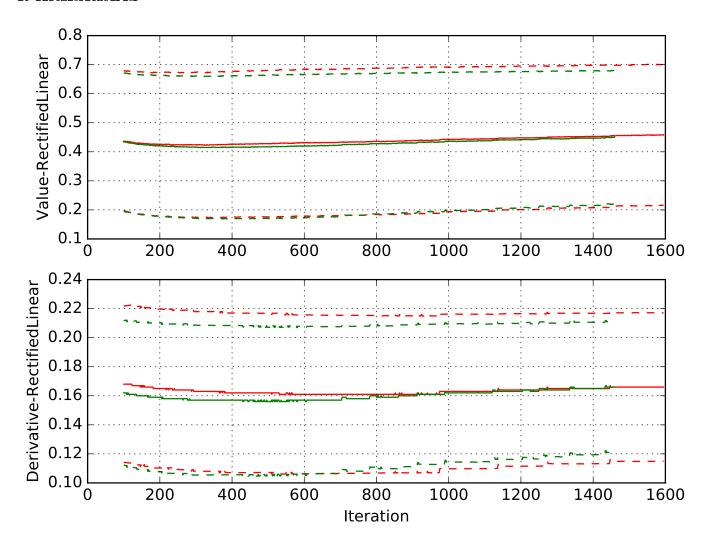
- Mean+-Stddev exp/chain/blstm\_7b/
- Mean exp/chain/blstm\_asp\_1/
- Mean+-Stddev exp/chain/blstm\_asp\_1/

 $FIG.\ 11:$  Mean and stddev of the value and derivative at  ${\tt BLstm1\_forward\_o}$ 



- Mean exp/chain/blstm\_7b/
- Mean+-Stddev exp/chain/blstm\_7b/
- Mean exp/chain/blstm\_asp\_1/
- Mean+-Stddev exp/chain/blstm\_asp\_1/

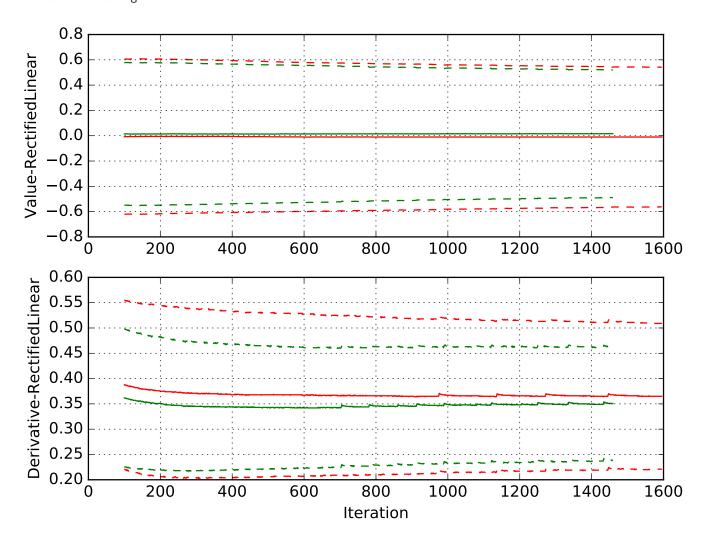
 ${\rm FIG.~12}$ : Mean and stddev of the value and derivative at  ${\rm BLstm2\_backward\_f}$ 





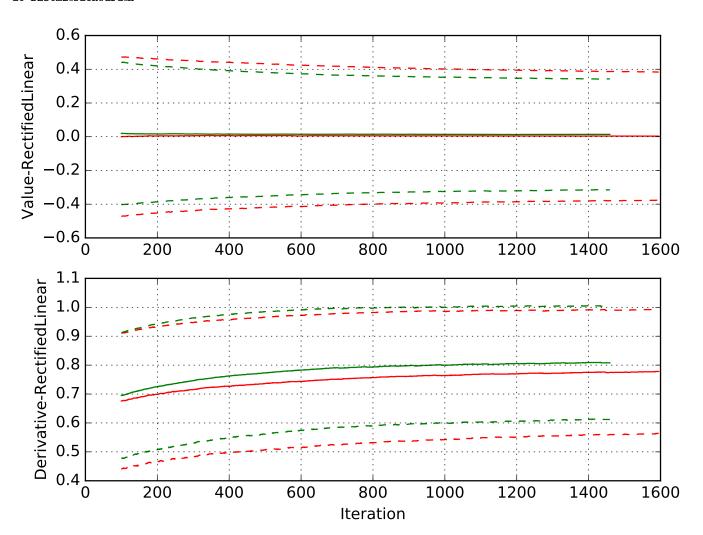
- Mean+-Stddev exp/chain/blstm\_7b/
- Mean exp/chain/blstm\_asp\_1/
- Mean+-Stddev exp/chain/blstm\_asp\_1/

 ${\rm FIG.~13:}$  Mean and stddev of the value and derivative at  ${\rm BLstm2\_backward\_g}$ 



- Mean exp/chain/blstm\_7b/
- Mean+-Stddev exp/chain/blstm\_7b/
- Mean exp/chain/blstm\_asp\_1/
- -- Mean+-Stddev exp/chain/blstm\_asp\_1/

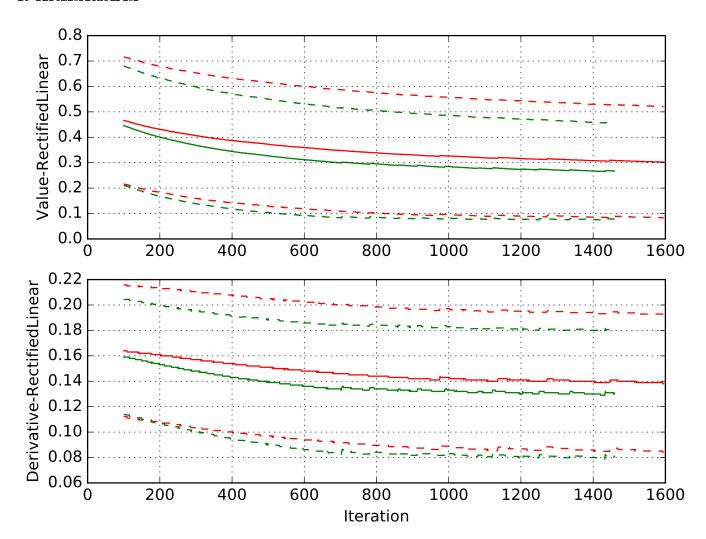
 $FIG.\ 14\colon$  Mean and stddev of the value and derivative at BLstm2\_backward\_h





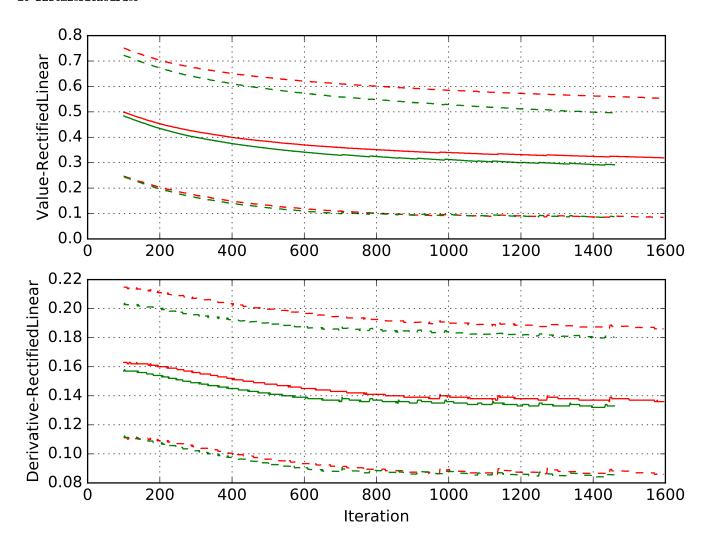
- Mean+-Stddev exp/chain/blstm\_7b/
- Mean exp/chain/blstm\_asp\_1/
- -- Mean+-Stddev exp/chain/blstm\_asp\_1/

 ${\rm FIG.~15}$ : Mean and stddev of the value and derivative at  ${\rm BLstm2\_backward\_i}$ 



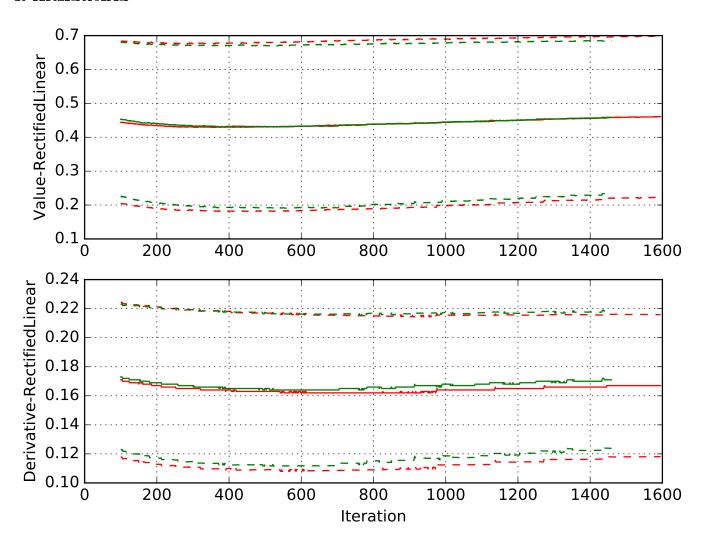
- Mean exp/chain/blstm\_7b/
- Mean+-Stddev exp/chain/blstm\_7b/
- Mean exp/chain/blstm\_asp\_1/
- Mean+-Stddev exp/chain/blstm\_asp\_1/

 $FIG.\ 16:$  Mean and stddev of the value and derivative at  ${\tt BLstm2\_backward\_o}$ 



- Mean exp/chain/blstm\_7b/
- Mean+-Stddev exp/chain/blstm\_7b/
- Mean exp/chain/blstm\_asp\_1/
- Mean+-Stddev exp/chain/blstm\_asp\_1/

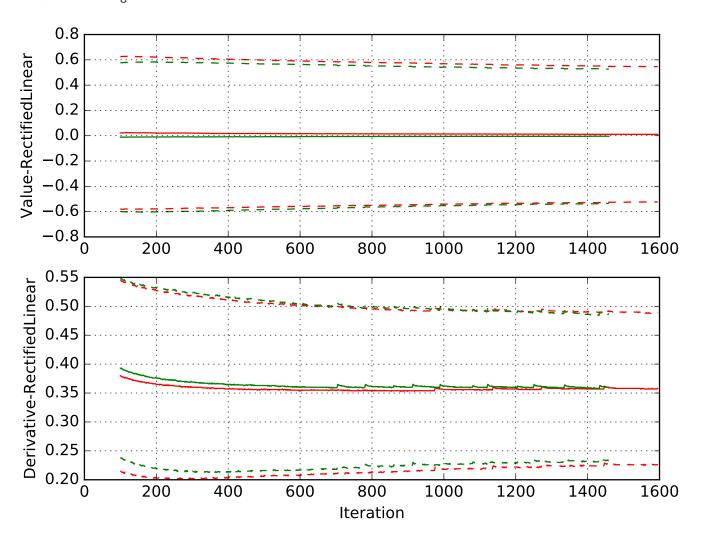
 ${\rm FIG.~17}:$  Mean and stddev of the value and derivative at  ${\rm BLstm2\_forward\_f}$ 





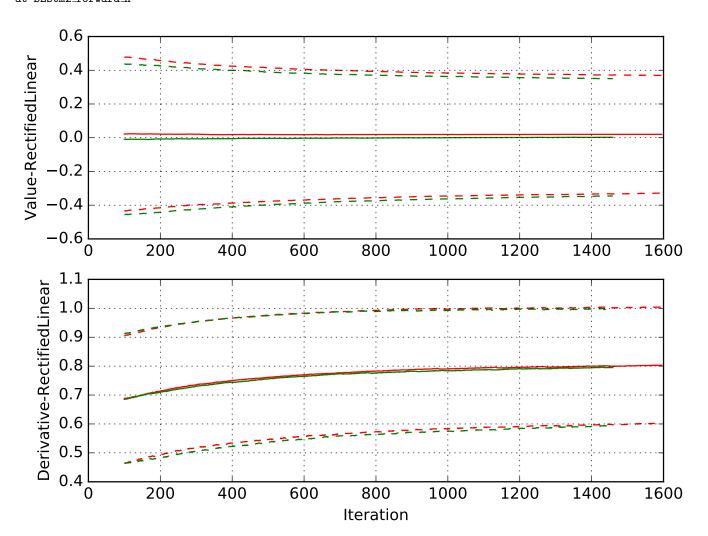
- Mean+-Stddev exp/chain/blstm\_7b/
- Mean exp/chain/blstm\_asp\_1/
- Mean+-Stddev exp/chain/blstm\_asp\_1/

FIG.~18: Mean and stddev of the value and derivative at  $BLstm2\_forward\_g$ 



- Mean exp/chain/blstm\_7b/
- Mean+-Stddev exp/chain/blstm\_7b/
- Mean exp/chain/blstm\_asp\_1/
- -- Mean+-Stddev exp/chain/blstm\_asp\_1/

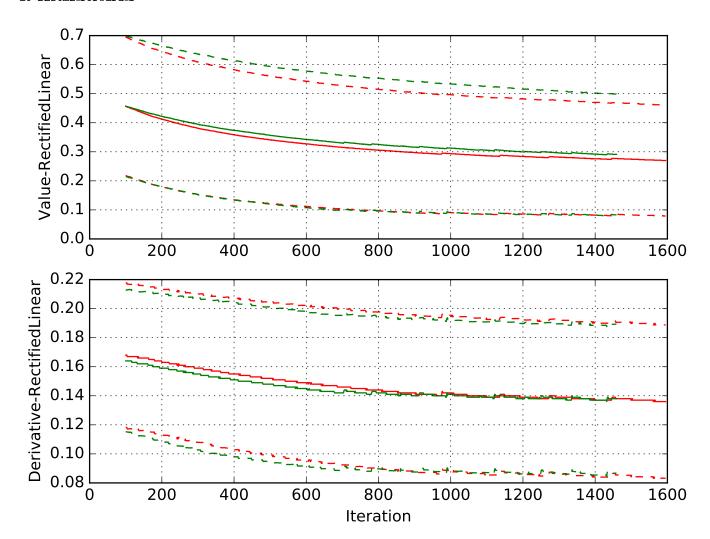
 ${\rm FIG.~19}:$  Mean and stddev of the value and derivative at  ${\rm BLstm2\_forward.h}$ 





- Mean+-Stddev exp/chain/blstm\_7b/
- Mean exp/chain/blstm\_asp\_1/
- -- Mean+-Stddev exp/chain/blstm\_asp\_1/

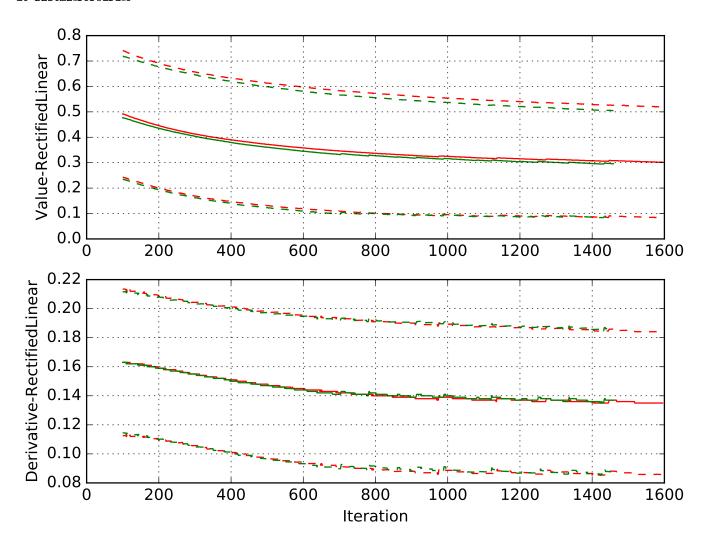
 $FIG.\ 20:$  Mean and stddev of the value and derivative at BLstm2\_forward\_i





- Mean+-Stddev exp/chain/blstm\_7b/
- Mean exp/chain/blstm\_asp\_1/
- Mean+-Stddev exp/chain/blstm\_asp\_1/

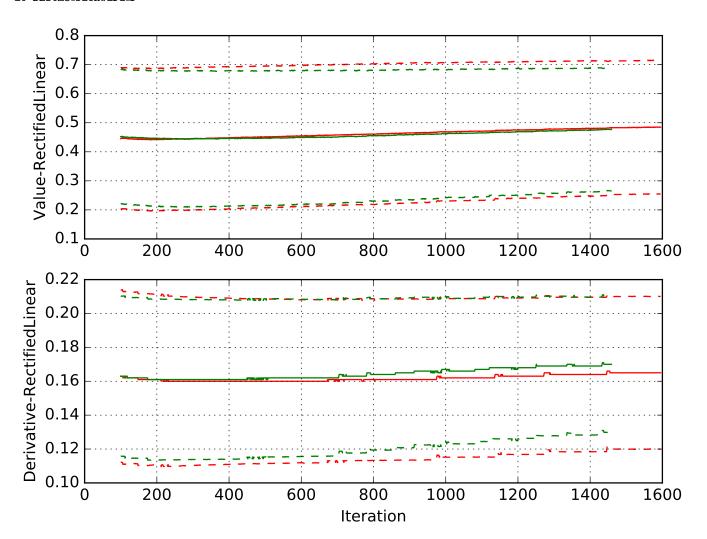
 ${\rm FIG.~21}:$  Mean and stddev of the value and derivative at  ${\rm BLstm2\_forward\_o}$ 





- Mean+-Stddev exp/chain/blstm\_7b/
- Mean exp/chain/blstm\_asp\_1/
- Mean+-Stddev exp/chain/blstm\_asp\_1/

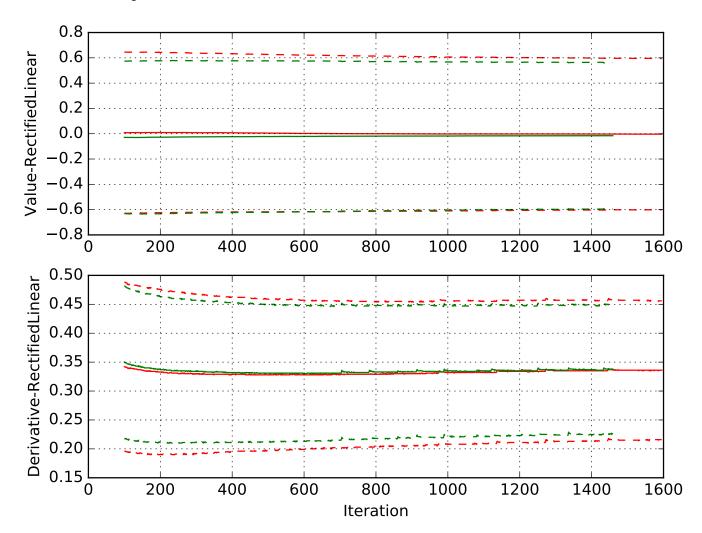
 ${\rm FIG.~22}$ : Mean and stddev of the value and derivative at  ${\rm BLstm3\_backward\_f}$ 





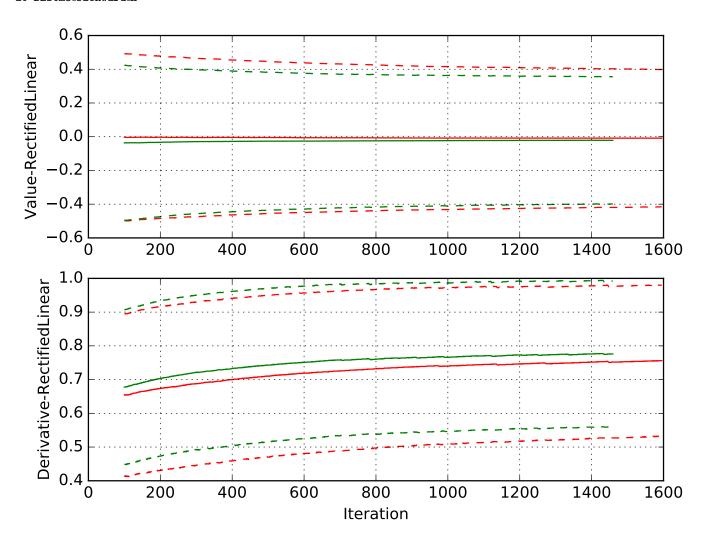
- Mean+-Stddev exp/chain/blstm\_7b/
- Mean exp/chain/blstm\_asp\_1/
- Mean+-Stddev exp/chain/blstm\_asp\_1/

 ${
m FIG.~23}$ : Mean and stddev of the value and derivative at  ${
m BLstm3\_backward\_g}$ 



- Mean exp/chain/blstm\_7b/
- Mean+-Stddev exp/chain/blstm\_7b/
- Mean exp/chain/blstm\_asp\_1/
- -- Mean+-Stddev exp/chain/blstm\_asp\_1/

 $FIG.\ 24\colon$  Mean and stddev of the value and derivative at BLstm3\_backward\_h



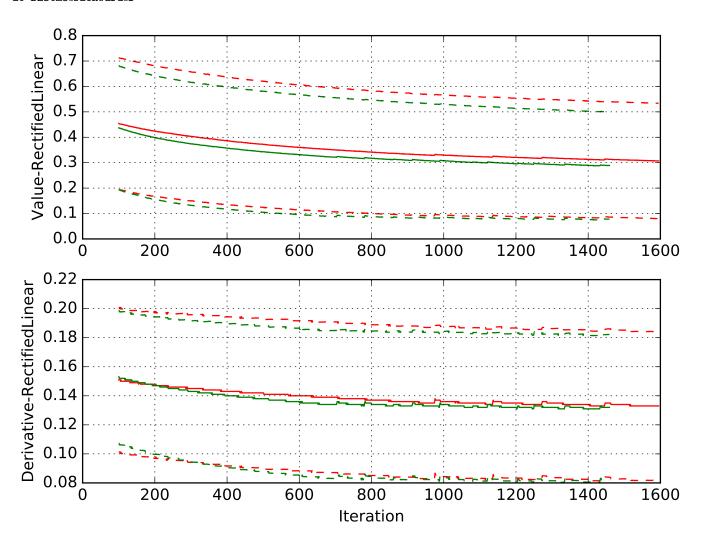
— Mean exp/chain/blstm\_7b/

– Mean+-Stddev exp/chain/blstm\_7b/

— Mean exp/chain/blstm\_asp\_1/

-- Mean+-Stddev exp/chain/blstm\_asp\_1/

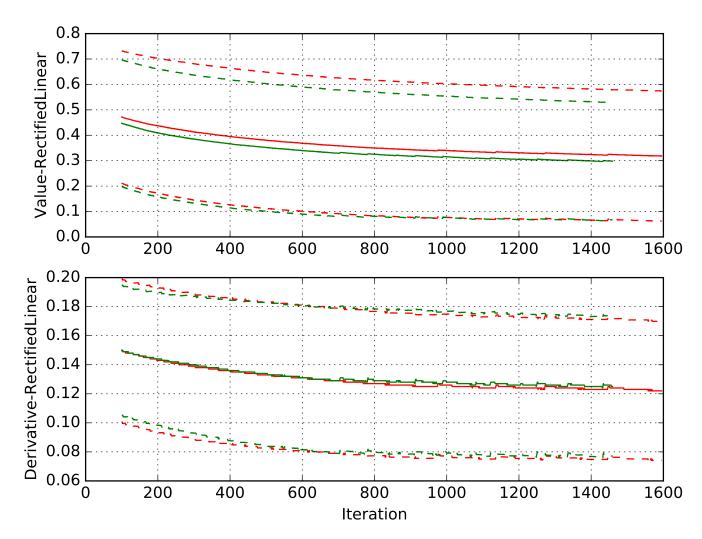
 ${\rm FIG.~25}$ : Mean and stddev of the value and derivative at  ${\rm BLstm3\_backward\_i}$ 





- Mean+-Stddev exp/chain/blstm\_7b/
- Mean exp/chain/blstm\_asp\_1/
- Mean+-Stddev exp/chain/blstm\_asp\_1/

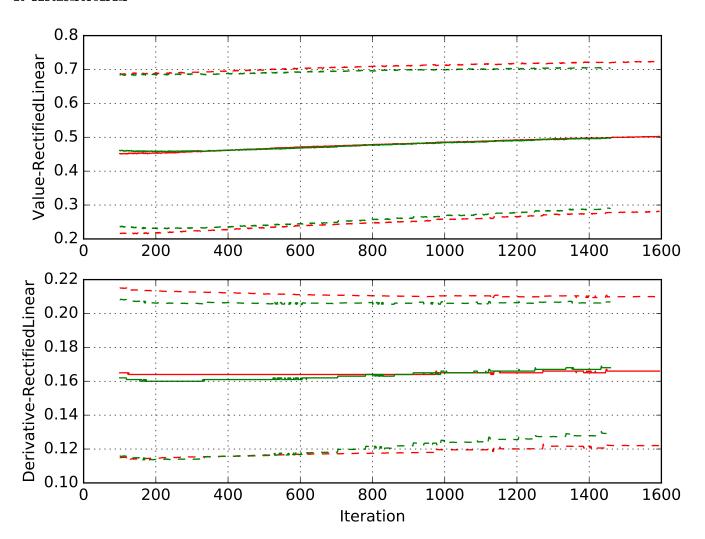
 ${
m FIG.}$  26: Mean and stddev of the value and derivative at  ${
m BLstm3\_backward\_o}$ 





- Mean+-Stddev exp/chain/blstm\_7b/
- Mean exp/chain/blstm\_asp\_1/
- Mean+-Stddev exp/chain/blstm\_asp\_1/

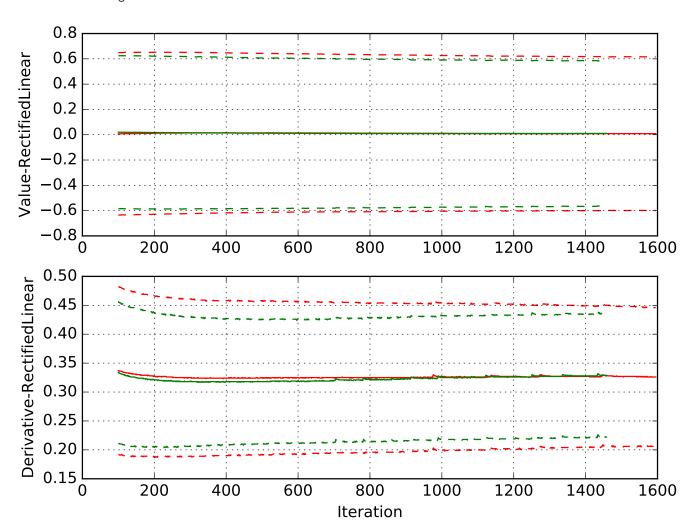
 ${\rm FIG.~27}:$  Mean and stddev of the value and derivative at  ${\rm BLstm3\_forward\_f}$ 





- Mean+-Stddev exp/chain/blstm\_7b/
- Mean exp/chain/blstm\_asp\_1/
- Mean+-Stddev exp/chain/blstm\_asp\_1/

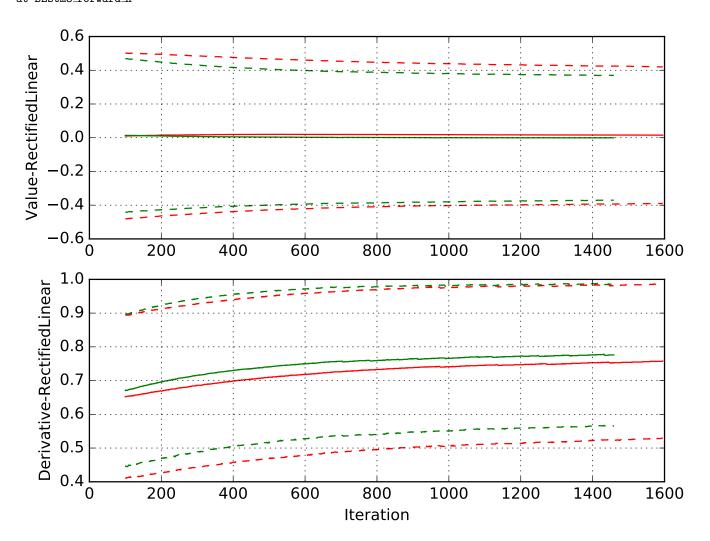
 ${
m FIG.~28}$ : Mean and stddev of the value and derivative at  ${
m BLstm3\_forward\_g}$ 





- Mean+-Stddev exp/chain/blstm\_7b/
- Mean exp/chain/blstm\_asp\_1/
- -- Mean+-Stddev exp/chain/blstm\_asp\_1/

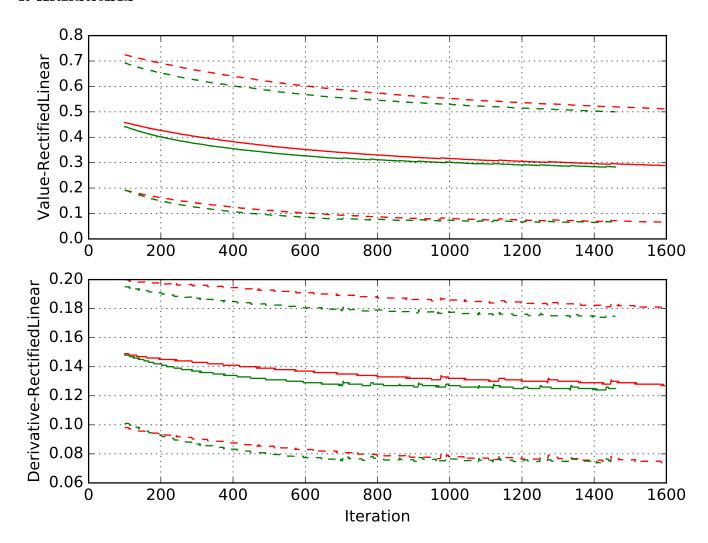
 ${\rm FIG.~29}\colon$  Mean and stddev of the value and derivative at  ${\tt BLstm3\_forward\_h}$ 





- Mean+-Stddev exp/chain/blstm\_7b/
- Mean exp/chain/blstm\_asp\_1/
- -- Mean+-Stddev exp/chain/blstm\_asp\_1/

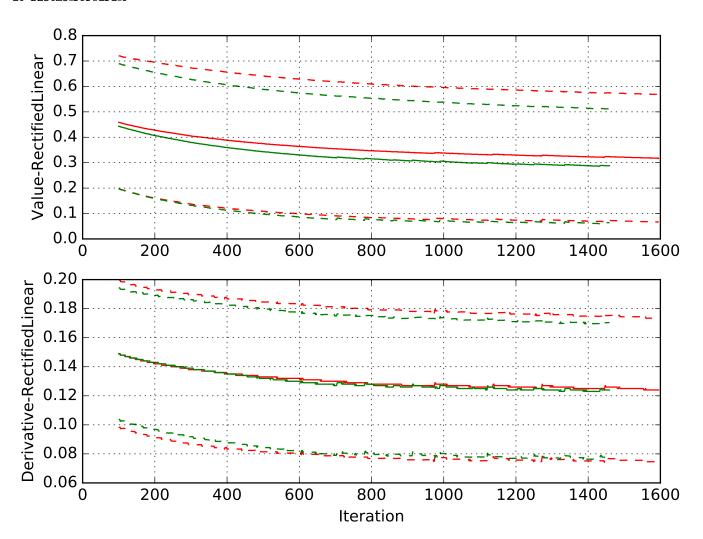
 ${\rm FIG.~30:}$  Mean and stddev of the value and derivative at  ${\rm BLstm3\_forward\_i}$ 





- Mean+-Stddev exp/chain/blstm\_7b/
- Mean exp/chain/blstm\_asp\_1/
- Mean+-Stddev exp/chain/blstm\_asp\_1/

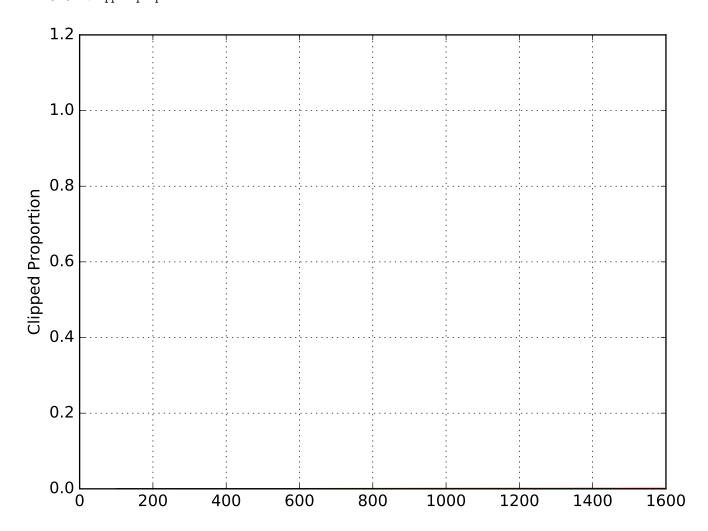
 ${\rm FIG.~31:~Mean~and~stddev~of~the~value~and~derivative~at~BLstm3\_forward\_o}$ 



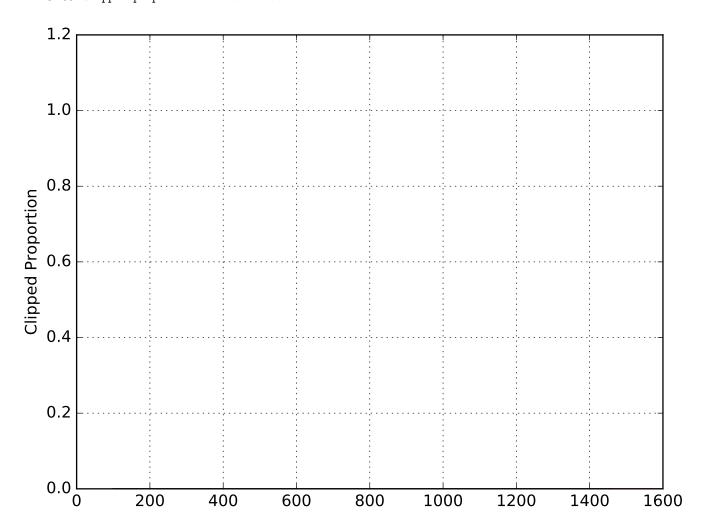


- Mean+-Stddev exp/chain/blstm\_7b/
- Mean exp/chain/blstm\_asp\_1/
- Mean+-Stddev exp/chain/blstm\_asp\_1/

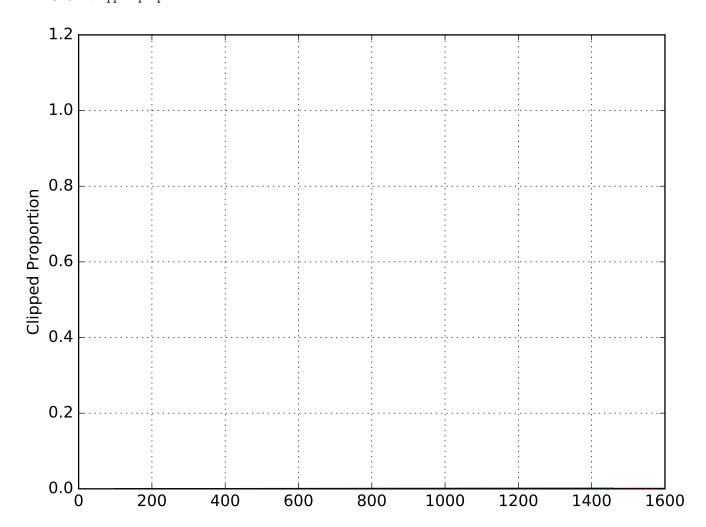
 $FIG.\ 32:\ {\tt Clipped\ proportion\ at\ BLstm1\_backward\_c}$ 



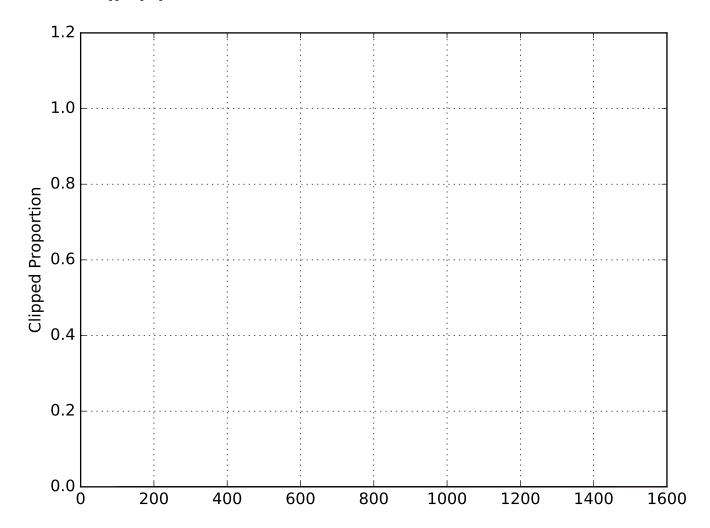
 ${\rm FIG.~33:~Clipped~proportion~at~BLstm1\_backward\_r}$ 



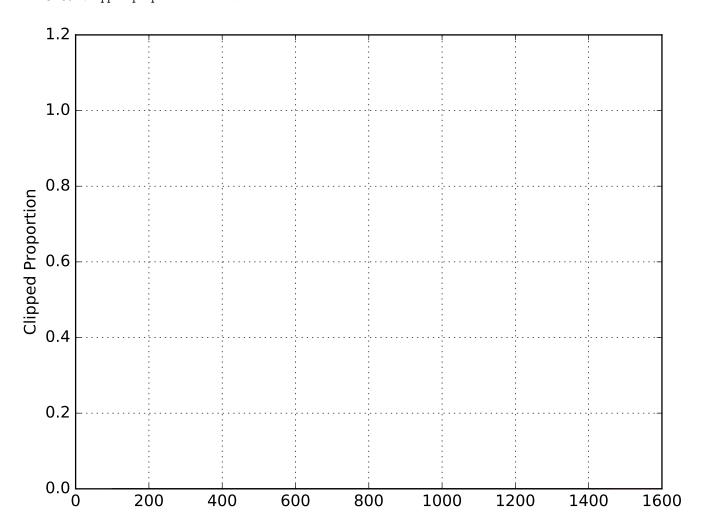
 $FIG.\ 34:\ {\tt Clipped\ proportion\ at\ BLstm1\_forward\_c}$ 



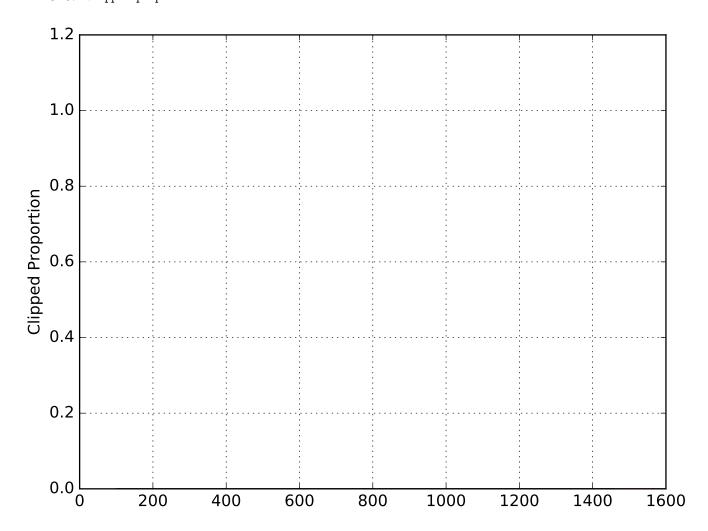
 $FIG.\ 35:\ {\tt Clipped\ proportion\ at\ BLstm1\_forward\_r}$ 



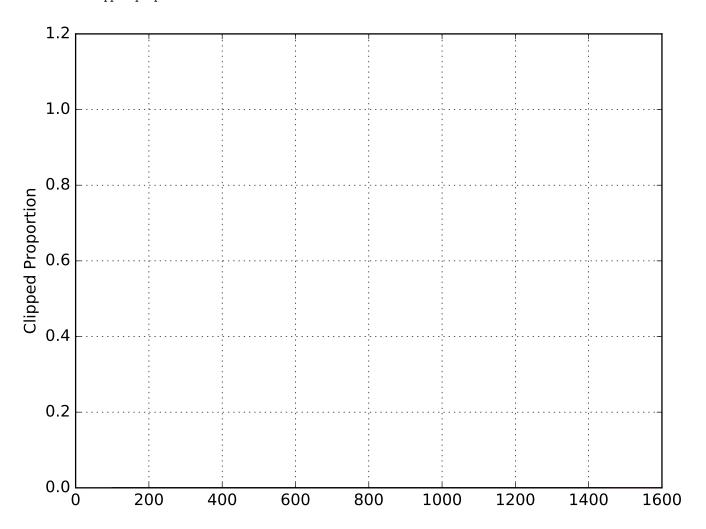
 $FIG.\ 36:\ {\tt Clipped\ proportion\ at\ BLstm2\_backward\_c}$ 



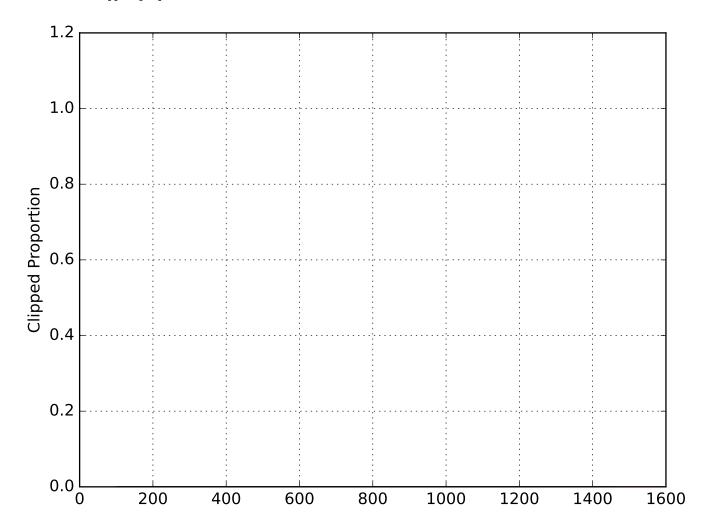
 ${\rm FIG.~37:~Clipped~proportion~at~BLstm2\_backward\_r}$ 



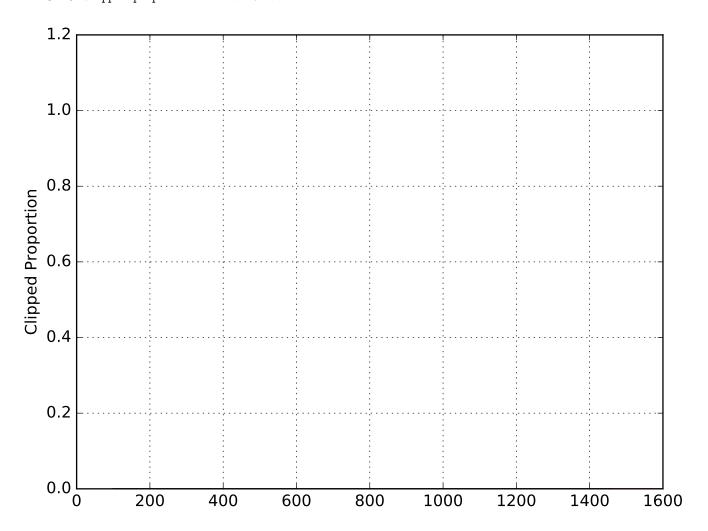
 $FIG.\ 38:\ {\tt Clipped\ proportion\ at\ BLstm2\_forward\_c}$ 



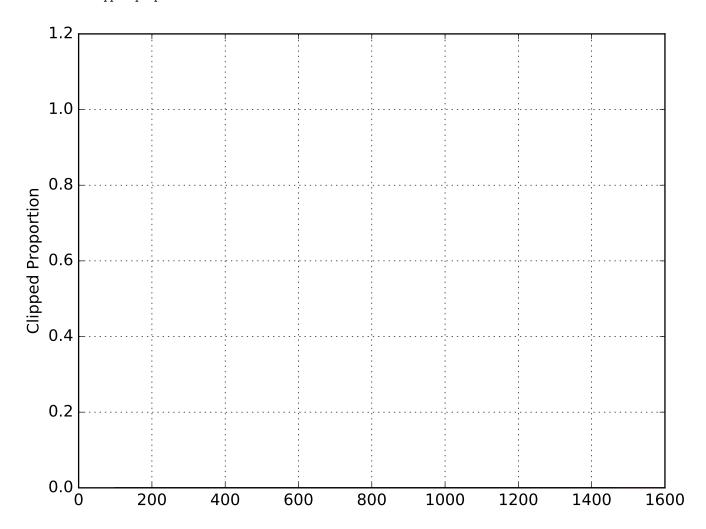
 ${\rm FIG.~39:}$  Clipped proportion at  ${\rm BLstm2\_forward\_r}$ 



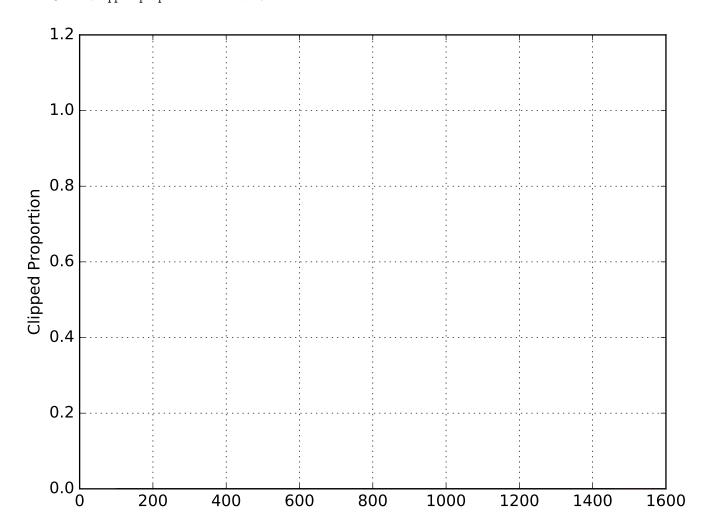
 $FIG.\ 40: \ {\tt Clipped\ proportion\ at\ BLstm3\_backward\_c}$ 



 ${\rm FIG.~41:~Clipped~proportion~at~BLstm3\_backward\_r}$ 



 $FIG.\ 42: \ {\tt Clipped\ proportion\ at\ BLstm3\_forward\_c}$ 



 ${\rm FIG.~43:~Clipped~proportion~at~BLstm3\_forward\_r}$ 

