		Prediction (%)		
		Sleep	Wake	\sum
Ground Truth	N3	12.0	0.9	12.9
	N2	21.9	1.9	23.8
	N1	46.0	9.1	55.1
	REM	48.9	4.3	53.2
	Wake	33.9	16.8	50.7

 \sum : Summation

Table 2. To investigate the cause of uncertainty for non-apneic epochs, the ground truth sleep stages of these epochs were extracted for CNN_Test. The percentage indicates the ratio of uncertain non-apneic epochs to the number of epochs in a specific sleep stage. Thus, the right column \sum is the total ratio of uncertain non-apneic epochs per sleep stage. It is observed that the classes N1 and REM had the largest ratio of uncertain non-apneic epochs, being 55.1% and 53.2%, respectively (indicated in grey). However, uncertain predictions did not necessarily imply incorrect predictions. Nevertheless, classes N1 and REM also had the largest ratio of uncertain non-apneic epochs which were wrongly predicted, respectively 9.1% and 4.3% (indicated in grey).

Frontiers 1