Understanding the long-term changes of tides is important and useful. This paper investigated long-term tidal change in the North Atlantic and discussed a possible underlying mechanism which I think is pretty interesting. I want to provide some suggestions which may further improve this paper.

First, the title of this paper is 'Climate-scale changes of the semidiurnal tide…..', however, the authors only analyzed M2 tide but ignored S2 tide which is also important. In addition to, the gravitational forcing of S2, oscillations in barometric pressure, changes in ocean temperature, and onshore-offshore wind have also been argued as contributing to the sea surface variations at the S2 frequency(Feng et al., 2015). The non-gravitational component of S2 is called the radiational tide and its amplitude has been estimated to be 10–18% of the gravitational amplitude, depending on geographical region and the physical parameters concerned (e.g., pressure, wind stress, and/or thermal forcing) (Feng et al., 2015). It seems that S2 tide is more easily influenced by changes of atmospherical circulation than M2 tide. Thus, it is necessary to check whether the changes of S2 tide are similar to North Atlantic Oscillation (NAO) which will prove underlying mechanism proposed by this paper.

Second, this paper is very similar to Müller (2011) which found the rapid change in semi-diurnal tides in the North Atlantic since 1980. This paper seems to revisit the Müller's work and change 1980 to 1990. The authors need to clearly describe the difference of two papers. By the way, this paper calculates the post-1990 trend and post-1910 trend to show the rapid change in M2 tide since 1990. I think post-1990 trend is meaningless because the length of post-1990 records is too short. I think that you can calculate the trend of 1910-1990 and post-1910.

At last, although it seems that M2 variations are similar to NAO, it is very difficult to prove statistical validity since the data are too short. The authors should point out this in the paper.

Reference:

Feng, X., M. N. Tsimplis, and P. L. Woodworth (2015), Nodal variations and long-term changes in the main tides on the coasts of China, *J. Geophys. Res. Oceans*, 120, 1215–1232.

Müller, M. (2011), Rapid change in semi-diurnal tides in the North Atlantic since 1980, Geophys. Res. Lett., 38, L11602.