Point-by-point answer to Referee 2

1. **Referee**: This article is substantially based on a pervious publication of the author (2017).
   - **Answer**:Figure 3 of the previous publication contained only two sea volumes at-50 m and +130 m sea levels. The plotting of the calibration curve was based on the measurements of Exxon's and Hallam's sea levels.
   - In the recent MS the calibration curve (Fig. 2) contains sea volumes at -50, +130 and +350 m sea leves relative to the present one, plus the highest volume converted to sea level of the infant Earth (Pope et al., Rosing et al.) that made estimations more reliable and the calibration curve could be extended to higher see levels and volumes.
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2. The article topics is that the escape of hydrogen through he planetary leak cannot be reliably judged.
   - The information requested by the reviewer is found in the Introduction (page 3).

     Lines 69-78 are quoted: " The shrinkage of freshwater reservoirs including atmospheric moisture (snow, rain, clouds) and ice (glaciers, polar ice, ice sheets, permanent snow) is contributed by the freshwater loss of global warming. The atmospheric escape of hydrogen on Earth is assumed to result in approximately 3kg/s loss of hydrogen and about 50 g/s loss of helium (Zahnle, 2006; Catling and Zahnle, 2009).The abundant CH_4 originating from methanogenesis could have supported the escape of hydrogen to space by orders of magnitude faster than today (Catling et al., 2001).Our own repeated calculations showed that under the conditions that exist today, the H escape could have resulted in only about 0.02% loss of the recent ocean volume.The explanation to this negligible loss could be that the escape of water: a) was much faster earlier, b)came from different sources that could sum up, or c) was not significant during the evolution of Earth.

     Regarding oxygen, only small quantities were found to escape to the Moon from the Earth (Terada et al., 2017). O_2 produced by photosynthesis absorbed in oceans and seabed rocks started to gas out about 1,850 Mya but was absorbed mainly by

land surfaces. When the ocean saturated, oxygen began to accumulate in the atmosphere (Holland, 2006)".

3. See level is not immediately related to water volume as long as it is unclear to what datum the level gauge did refer to in the past.
   - Data were obtained from references. The validity of data of others. were not questioned.
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   - **4** .The quantity and units of Osmolarity is not among the SI units in Ocean Science.
   - The osmotic concentration is the measure of solute concentration used when the solution contains more or many dissolved particles 1 Osm = 10^{23} dissolved particles /L solution, often not even known the all the components. The osmolarity can be calculated, by adding the molarities of the constituent ions. The composition of the seawater varies around the world and mostly only the osmolarity of the NaCl is given which is about 1000 mmol/kg water. Osmolaty is measured by an osmometer based on t he freezing point depression giving the results in osmolality Osm/kg solute or in osmolarity Osm/L. Plasma osmolality isnormally given in Osm/L. The ocen is regarded as the largest osmolyte system, thus its concentration was given in osmotic concentratio,similrly to the oamlarity of blood serum.
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   - **5**) Sea volume is not proportional to water mass, due to thermal expansion.
   - -The usually quoted value of the average temperature of water in the cean is by Michael Pilcher oceanographer 3.52 dedrees Celsius updated by Ken Miller MIT, Apr. 15, 1982 and supported by 175 answers and answer views. In the recent decades the deep water the temperature has slightly elevated probably in less than few hundreds of of one degree. These changes are unlikely to significantly influnce the volume of the incompressible liquid water
   - **6**. To the questions how gravitational, volcanic, radioactive processes, solar winds could have changed the sea levels and volumes of sea the author does not know the answer.