Anonymous Referee #1

Thank you for your helpful comments. We address all of them in our replies below and in most cases have modified the manuscript accordingly, which is in each case indicated in our reply.

Ad Specific comments

38: Fig. 1: The map: the marked distribution of granite is not complete. And it is a questionable presentation: what is important: relief or lithology- I suggest only one of them. The northern most mofettes in Fig. 1(latitude > 50.2)? They are really mofettes? Please check it.
important: relief or lithology- I suggest only one of them.

56-62: at the end of these sentences, the authors should add here the sentences of the lines 73-81 for a better overview about the gas isotopic features.
Thank you for this suggestion, we moved the paragraphs accordingly, which also allowed to remove one sentence.

61: what is the meaning of "... high 3/4 He ratios..." ?
Now, after rearranging the paragraph, it gets clearer.

65: similar as above: What is high gas flow ? , see also line 73 and 75: unclear.
We have indicated the daily discharge of dozens of tons of gas

67: "the ascent of gas" – Numerous studies show that the earthquake swarms are related to the ascent of gas? This assumption has no evidences in my opinion or please, indicate the references.
Our formulation reads precisely "numerous studies of the local earthquake swarms show that they may be related to pressurized fluids in the crust and the ascent of gas". First, we mention fluids in general and only then gas. And we cite these studies in the next sentence. So, we decide to keep the sentence as it is.

73 "gases produced", this terminus is may be correct but not usual for the characterization of natural degassing sites, see also line 108 & 405
Thank you, we changed to discharge (the first occurrence exists no more because the sentence was removed)

104: please add: (see Fig. 1)
OK, added.

110: what means "deep root" zone of mofettes? The origin of CO2 is known.
Yes, the gas is most probably of mantle origin. But here, we have in mind the mofettes, compared to diffuse degassing. In particular the fast coseismic reaction of the mofettes, which indicates that the CO2 origin is deeper than hypocenters, but nothing about the mantle origin.

201 "Within a few months" should be changed into " Within a few days..." ?
No, the onset of increase started 4 days after the first event (mainshock) and continued for about three months, which underlines its significance.

294 & 295: This explanation is may be correct for mineral springs with a continuous gas/water discharge. However, mofettes can be considered as gas dominated migration path. It means that the CO2 will migrate as gas phase with over-pressure above the supercritical point. The water phase content will be of minor importance here. The groundwater horizons are the barriers and the beginning of the bubble creation which depends on the pressure ratios of gas and the water

column if the maximal solubility in water is reached. This effect can be observed in submarine gas vents.
Thank you for this comment; we added a sentence "or in the presence of significant water discharge, such as in mineral springs." to the end of the first paragraph of 2.4 to take this into account.

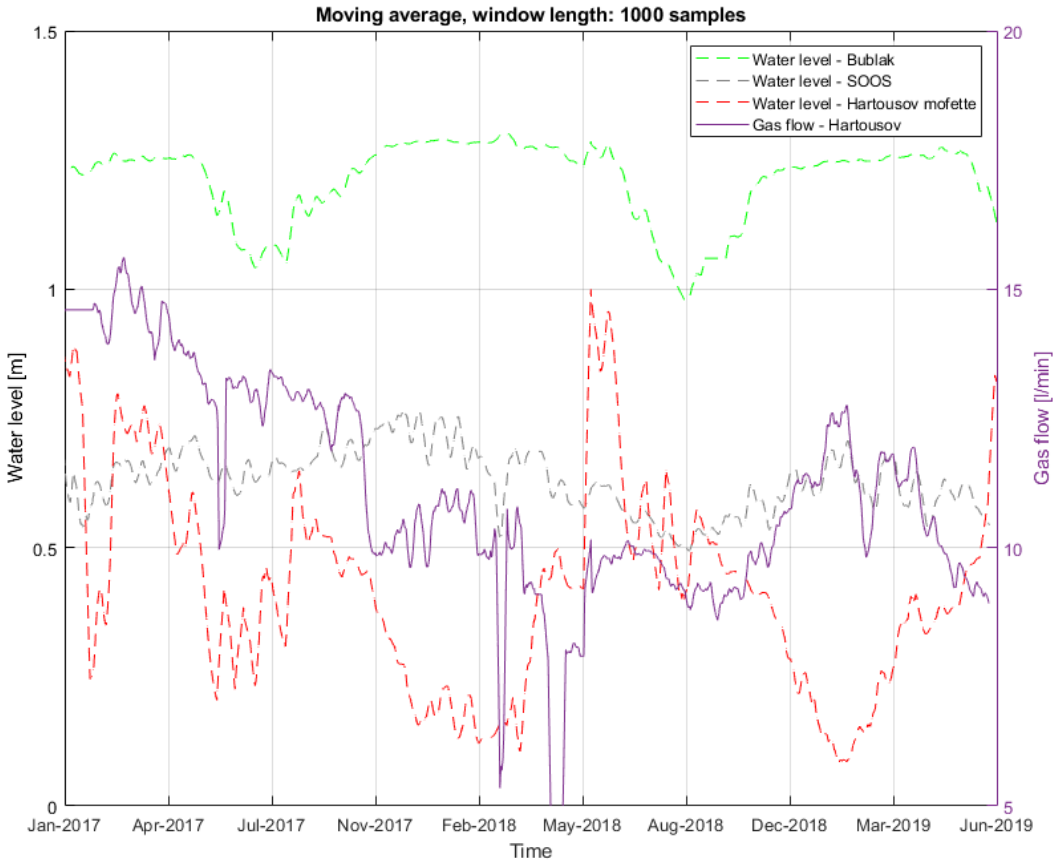
300: the driving force for gas flow is the hydraulic pressure gradient and the density contrast
Thank you for the comment; we had in mind "steady flow of the dissolved CO2" and have modified the text accordingly.

354: the section 2.6: the interpretation with the barometric efficiency is an interesting approach. Because of "the many unknowns in this regard", a simplified way could be helpful in this context. What about this comparison: show an additional graph with the result of pressure head (in mbar) minus the atmospheric pressure (in mbar).
*The reviewer is right that such a plot might be illustrative. However, in Fig. 7a we show pressure_head minus 0.76*atmospheric_pressure, which is very similar and possibly better, we believe.*

387-391 these lines should be at the end of this section.
Thank you, we moved these lines accordingly.

427&428: The authors claim the increase of gas discharge as anomalous effect of different reasons except the anomalies as "probably merely accidental" at two sites (Soos and Bublák) during the summer 2016. These anomalies occurred a few weeks after the gas flow increase at Hartoušov due to the drilling process and the influence to the hydraulic regime. An assumption or specific interpretation should be added. Please think about the fluid interaction of the deeper horizons in the area (Cheb basin). For example, the gas eruption at the drill site H11 in the year 1957 induce an anomalous gas discharge and variations in the water levels in Františkovy Lázneˇ, about 2 km far. A reduced water table at the Hartoušov drill site could influence the hydraulic pressure regime in the nearby Cheb basin. This influence could trigger the ex-solution of CO2 of the water table with a temporal delay at other locations (mofettes), similar to the atmospheric pressure effect.
The eruption in 1957 and drilling in 2016 were rather different in scale. In 1957 the eruption lasted for several days with water fountain of about 50 m height compared to very small and short gas leakages during the 2016 drilling.

464: Please take into account also that the strong drought period during the last summer reduces the level of the surrounding ground water table. This hydraulic pressure reduction induces an addition gas release as diffuse compo- nent and could reduce the total amount of gas discharge at the monitoring site.
We newly checked this influence by comparing the records of gas flow and water level in three sites: Hartousov mofette, Bublak and Soos.
In the Hartousov mofette similar decay of water level and gas flow rate is visible until about February 2018. The later anticorrelation is probably caused by malfunction of the level logger (temperature dependent).
Bublak and Soos show water level minima in summer 2018 and 2019, which partially correlate with the lowered gas flow in summer. However, no clear relation is found for 2017.
Because of unclear relation we do not show this graph in the paper. We added few sentences commenting on this possible influence to the Discussion.



477: because of missing evidences of this process, please add "... indicates the possible presence of..."
We believe that the verb 'indicates' is a sufficient way to indicate that it is not fully proved (compared to verbs like proves, documents, etc...)

Ad Technical comments

CO2 – should be written with 2 subscript. The names of the ref- erences in the text should be outside the brackets, e.g. Fischer et al. (...), see line 68, 250, 259 a.s.o.
Thank you, corrected

439: considered as an 493 "discharges" is a better term here than "emanations"
Thank you, corrected

564 this reference is not mentioned in the text A few typesetting mistakes in the reference list
Thank you, corrected

The figure captions should be not in bold
Thank you for this comment, this occurred by mistake, now it has bee corrected.