

## Timeline of events related with Papers 1 and 2

Here we summarize relevant events concerning the Papers, Letters and the retractions. Some of them are recorded in Editorial,<sup>1</sup> but there are important omissions and incorrect statements.

The events recorded in Editorial<sup>1</sup> are reproduced here between [] (while removing unnecessary details concerning the review processes and the author affiliations), some with our comments. The events omitted in Editorial<sup>1</sup> are marked with ●, while those happened after its publication are marked with ○.

Date	Event (and our comments)	Not mentioned in Editorial <sup>1</sup>
20.02.2015	The Glass Badge data are provided to Miyazaki and Hayano by Chiyoda Technol Co. (Reported in a news article by Our-planet TV on 8 February 2020. <a href="#">link</a> )	●
12.08.2015	The Grass Badge data from July 2012 to June 2014 and information with respect to decontamination are provided to Miyazaki and Hayano by Date City. (Confirmed by Date City Citizen's Exposure Data Provision Investigation Committee report 2020. <a href="#">link</a> )	●
13.09.2015	"Measure and Communicate - 4.5 years, and beyond" is presented by Hayano at 12th ICRP Dialogue in Date-city. The presentation includes results of analysis of Glass Badge data: substantial reduction due to decontamination in area A: the most contaminated region and forecast of lifetime exposure. ( <a href="#">link</a> )	●
21.10.2015	Preliminary figures is sent to the then chairman of the Nuclear Regulation Authority (NRA) of Japan by Hayano, saying that they were working to write papers on the data of Date City, and he would give it to the chairman of NRA because the results could be useful for regulation purpose. (Reported in a news article by Our-planet TV on 3 February 2020. <a href="#">link</a> )	●
23.10.2015	The letter of request dated 1 August, 2015 (before the data transfer mentioned above) is submitted to Miyazaki by the then mayor of Date City asking analysis of data and writing the papers. (Confirmed by Date City Citizen's Exposure Data Provision Investigation Committee report 2020. <a href="#">link</a> )	●

02.11.2015	The Research Protocol of “Analysis of Individual Dose Measurement in Date City after Fukushima Daiich Nuclear Accident” is submitted by Professor Ohtsuru of Department of Radiation Health Management in the Fukushima Medical University(FMU) to the Research Ethics Committee of FMU. Miyazaki and Hayano are listed as the principal investigator and a co-investigator, respectively. ( <a href="#">link</a> )	•
17.12.2015	The Research Protocol is approved by the Research Ethics Committee of FMU. ( <a href="#">link</a> )	•
18.08.2016	[Paper 1 <sup>2</sup> is submitted to Journal of Radiation Protection (JRP).]	
06.12.2016	[Following a single-blind review process, Paper 1 is published.]	
08.01.2017	[Paper 2 <sup>3</sup> is submitted.]	
06.07.2017	[Following a single-blind review process, Paper 2 is published.]	
18.08.2018	[Letter 1 by SK is submitted.]	
16.11.2018	[Following a single-blind review process, Letter 1 is “ready to be accepted” for publication, and the authors of the two Papers (Makoto Miyazaki and Ryugo Hayano) are invited to submit a responding Letter.] <u>IOP says it was “provisionally accepted”</u> , but what SK was told was that <u>it was ready to be accepted</u> .	
27.11.2018	[Makoto Miyazaki and Ryugo Hayano respond and ask to submit a Corrigendum to correct Paper 2, rather than submit a Letter in response. Within this correspondence Makoto Miyazaki and Ryugo Hayano note that the dataset had at that stage been discarded.] <u>The claim by Miyazaki and Hayano is wrong.</u> They said that this was required by the ethical policies of Fukushima Medical University, however, the Japanese national policy regarding the medical research ethics, whose article on research data has been effective since 1 October 2015 (hence before the ethical approval of the original studies), <sup>4</sup> requires that the dataset be <u>preserved</u> as long as possible, instead of being discarded, and <u>Rules of FMU</u> stated that data should be kept at least for 10 years.	
12.12.2018	[Makoto Miyazaki and Ryugo Hayano are invited to submit a Corrigendum for Paper 2.]	
12.12.2018	JRP decided not to publish Letter 1, as the authors would write a corrigendum. This decision would be reconsidered on 29 January 2019 and JRP promised that it would publish Letter 1 even if the original papers would be retracted.	•

07.01.2019	<p>[A Date City resident informs IOP Publishing of an investigation by the University of Tokyo (the institution affiliated with Ryugo Hayano) regarding potential ethical misconduct in scientific research. IOP Publishing asks Makoto Miyazaki and Ryugo Hayano to confirm their awareness of this and to elaborate on any details they might have.]</p> <p>The Date City resident mentioned here has informed the IOP publishing regarding not only potentially ethical misconduct but also scientific misconduct.</p>
08.01.2019	<p>Hayano posts a note on twitter<sup>5</sup> admitting the miscalculation in Paper 2.<sup>3</sup> However, later he withdraws this explanation.<sup>6</sup></p>
10.01.2019	<p>[IOP Publishing contacts the University of Tokyo Research Ethics Promotion Group to seek confirmation and further details about any investigation.]</p>
11.01.2019	<p>[IOP Publishing is first made aware by Makoto Miyazaki and Ryugo Hayano of an official investigation on behalf of the Date City authorities into the matter. Makoto Miyazaki and Ryugo Hayano also confirm their awareness of an allegation from a Date City resident concerning research misconduct against the University of Tokyo, although Makoto Miyazaki and Ryugo Hayano explained they had not received correspondence from the University in relation to the matter.]</p> <p>Contrary to what the authors told to IOP Publishing<sup>1</sup> “In the same message the authors notified IOP Publishing (for the first time) that an official investigation by a committee acting on behalf of the Date City authorities (the local government who supplied the authors of the Papers with data that underpinned the research), was underway”, the investigation by Date City had started on 4 February,<sup>7</sup> therefore, it was not “underway” on 11 January.</p>
11.01.2019	<p>[IOP Publishing receives notification from the University of Tokyo Research Ethics Promotion Group that they will not enter into any correspondence with IOP Publishing on the matter or respond to any questions asked.]</p>
11.01.2019	<p>[Expressions of Concern notices (2019 J. Radiol. Prot. 39 176 and 2019 J. Radiol. Prot. 39 177) are published on the Papers, alerting readers to the ongoing investigation. IOP Publishing and the journal’s Editorial Board agree to place the Corrigendum and Letter 1 on hold until the official Date City committee investigation is complete.]</p>

	<p>It was impossible for JRP to make Letter 1 on hold on 11 January 2019, because JRP had decided not to publish Letter 1 on 12 December 2018, and the decision was reversed only on 29 January 2019. Furthermore, the Date City committee investigation started on 4 February 2019, later than this date 11 January.</p>	
15.04.2019	[Makoto Miyazaki and Ryugo Hayano inform IOP Publishing that a ‘fullscale investigation’ on behalf of Fukushima Medical University (the institution affiliated with Makoto Miyazaki) was underway.]	
19.07.2019	The investigations of the University of Tokyo (UT) and Fukushima Medical University (FMU) concluded. <sup>8,9</sup> Hayano changed the account for the mistakes in Paper 2 <sup>3</sup> on twitter. <sup>6</sup>	•
15.08.2019	<p>[Makoto Miyazaki informs IOP Publishing that the investigations on behalf of Fukushima Medical University and the University of Tokyo did not confirm whether or not unconsented data were reported in the Papers, and that the matter remained subject to an investigation by a committee acting on behalf of Date City authorities. IOP Publishing was further informed that the investigations by the two universities did not identify staff misconduct in relation to the research reported in the Papers.]</p> <p><u>Miyazaki’s claim misrepresents the investigation reports.</u></p> <ul style="list-style-type: none"> <li>• FMU admitted that unconsented data were used. It only stated that the authors could not be held responsible for it. UT did not investigate the ethical aspects.</li> <li>• FMU report is wrong about the lifetime doses. It is clear that the lifetime doses were underestimated.<sup>10</sup></li> </ul>	
30.01.2020	[A second Letter (‘Letter 2’), raising various technical issues within Paper 1 is submitted.]	
04.03.2020	[A third Letter (‘Letter 3’), raising various technical issues within Paper 1 is submitted.]	
	<u>Letter 3 is by all of us, not only by SK as in Editorial.<sup>1</sup></u>	
10.03.2020	[A fourth Letter (Letter 4), raising various technical issues within Paper 2 is submitted.]	
16.03.2020	[Letter 2 received a decision of ‘Provisional Acceptance’ but is placed on hold until the official Date City committee investigation is concluded. Letter 3 receives a decision of ‘Provisional Acceptance’ but is placed on hold until the official Date City committee is concluded.]	
17.03.2020	The investigation of Date City concluded. <sup>7</sup>	•

	This was communicated to JRP by Miyazaki only in June (see 04.06.2020), even though “IOP Publishing had routinely requested updates on the progress of the investigations” and the authors “were responsive and helpful”. <sup>1</sup>	
18.03.2020	Letter 1 was provisionally accepted.	•
23.03.2020	Letter 1 was formally accepted and JRP sent a message to Kurokawa saying ”We will contact you again soon when proofs of your article are ready for final approval.” This clearly shows that Letter 1 was not <i>on hold</i> .	•
07.04.2020	[Letter 4 receives decision of ‘Provisional Acceptance’ but is placed on hold until the official Date City committee investigation is concluded.] <u>The Letter authors had been told</u> that JRP was waiting for the replies of the original authors and were never informed by JRP that the Letters were on hold because of the Investigation of the Date City committee was underway.	
04.06.2020	[IOP Publishing receives notification from Makoto Miyazaki that the official Date City committee investigation has concluded, and that it had found that some subjects within the study did not consent to their data being used for research.]	
04.06.2020	[IOP Publishing begins the process to retract the Papers on the basis of the outcome of the official Date City investigation (use of some unconsented data). A final internal meeting was held to reconsider any potential ethical concerns associated with publishing the four Letters which comment on the Papers. Since IOP Publishing was not provided specific details of the ethically inappropriate data, it was not felt possible to independently verify with certainty whether or not the four Letters were free of the use of the ethically inappropriate data. Given that the four Letters are heavily based on the Papers and cite data, figures, and equations, the decision to not publish the Letters was made.]	
08.07.2020	The JRP editor address to the author of Letter 1, notifies of their decision not to publish the Letters, and told him that JRP “should not proceed with the publication of any of the four Letters, on the same basis”.	•
11.07.2020	A Objection to the decision not to publish is sent to Editor In Chief of JRP by the Letter authors, where it is argued that the Letters did not use the unconsented data.	•
14.07.2020	JRP refuses the request saying “there is a serious problem in that they comment upon, and draw conclusions about, papers that have been retracted due to the use of unconsented data”.	•
27.07.2020	JRP and SK exchange further emails.	•
28.07.2020	[Retraction notices are published in the journal.]	

	<u>The retraction notices contained various errors</u> , including the link to the report of Date City. <sup>11</sup>	
26.08.2020	The Letter authors write to IOP council members and IOP's Policy Center to raise the question.	o
09.09.2020	IOP Publishing informs the Letter authors that they seek advise for COPE on handling of the papers and letters (submitted on 04.09.2020). Thereafter, there are several correspondences between IOP Publishing and the Letter authors, but IOP Publishing tells them to wait until COPE's ruling.	o
12.10.2020	Concerns are raised to COPE by the Letter authors, but kept on hold as IOP Publishing had consulted COPE (see <b>IOPP response to COPE.pdf</b> in the supplementary material for the inquiry).	o
26.10.2020	IOP inform the result of the advise by COPE (see <b>COPE_ruling.pdf</b> in the supplementary material). In the further correspondences, the Letter authors argue that the Letter can be published, but IOP Publishing refuses it.	o
09.11.2020	IOP send the Letter authors the content of the inquiry submitted to COPE by IOP (see <b>Withdrawal.pdf</b> in the supplementary material).	o
17.11.2020	The Letter authors reopen their inquiry to COPE (see the entry on 12.10.2020).	o
23.11.2020	Inquiry on the matter is sent to JRP/IOP by COPE.	o
09.12.2020	IOP responds to the inquiry.	o
16.12.2020	Objection to IOP's response is sent to COPE by the Letter authors. Objections describes purposes of the claim and the the errors in the retraction notice of Paper 1 <sup>12</sup> and COPE's unrespected guideline (see <b>COPE_Comment20201215.pdf</b> in the supplementary material).	o
04.01.2021	Inquiry to IOP is sent by COPE that focuses on "the circumstances and process" and "the error in Table 1" (see <b>20210104COPEtoIOP.pdf</b> in the supplementary material).	o
12.01.2021	IOP's Response is sent to COPE.	o
18.01.2021	The Results of COPE Review (see <b>Kageura summary report.pdf</b> in the supplementary material) is sent to us. It concludes "The journal's decision to withdraw the acceptance of these letters is reasonable as the authors did not provide evidence that the data used in the letters were not based on the unconsented data." and "the journal followed an adequate process to handle the concerns raised about the reversal of the acceptance decision for the letters to the Editor."	o

18.01.2021	JRP informs SK that they are in the process of updating the retraction notice of Paper 2 and asks to consent to be acknowledged. In the further correspondences, a discussion follows why such correction is possible without publishing Letter 1.	○
27.01.2021	Objection/inquiry to the conclusion of COPE is sent to COPE by the Letter authors with attachment that corrected Publisher's notice and inquiry on COPE's criteria for the use of "unconsented data".	○
08.02.2021	COPE's response to the inquiry is emailed to us that states "It is beyond the scope of this process to evaluate the scientific content of publications, or the content of notifications posted on an article that pertain to the content" and "some of the data were unconsented such that none of the data should be used in any future analysis". (see 20210208COPEtoKage.pdf in the supplementary material).	○
14.02.2021	A fifth Letter ('Letter 5'), raising various technical issues within the retraction notices and the editorial is submitted.	○
16.02.2021	JRP rejects Letter 5, saying that "the matter is now closed".	○
06.01.2022	JRP made corrections to Retraction Notices and Publisher's Note, following the provision of further information from Date City Council.	

## References

- <sup>1</sup> Publisher's Note on: 'Individual external dose monitoring of all citizens of Date City by passive dosimeter 5 to 51 months after the Fukushima NPP accident (series): I. Comparison of individual dose with ambient dose rate monitored by aircraft surveys' (2017 J. Radiol. Prot. 37 1) and 'Individual external dose monitoring of all citizens of Date City by passive dosimeter 5 to 51 months after the Fukushima NPP accident (series): II. Prediction of lifetime additional effective dose and evaluating the effect of decontamination on individual dose' (2017 J. Radiol. Prot. 37 623) *Journal of Radiological Protection*. 2020;40:E19–E23. <https://doi.org/10.1088/1361-6498/aba42a>.
- <sup>2</sup> Miyazaki Makoto, Hayano Ryugo. Individual external dose monitoring of all citizens of Date City by passive dosimeter 5 to 51 months after the Fukushima NPP accident (series): 1. Comparison of individual dose with ambient dose rate monitored by aircraft surveys *Journal of Radiological Protection*. 2016;37:1–12. <https://doi.org/10.1088/1361-6498/37/1/1>.
- <sup>3</sup> Miyazaki Makoto, Hayano Ryugo. Individual external dose monitoring of all citizens of Date City by passive dosimeter 5 to 51 months after the Fukushima NPP accident (series): II. Prediction of lifetime additional effective dose and evaluating the effect of decontamination on individual dose *Journal of Radiological Protection*. 2017;37:623–634. <https://doi.org/10.1088/1361-6498/aa6094>.

- <sup>4</sup>The Ministry of Education, Culture, Sports, Science and Technology . Ethical Guidelines for Medical and Health Research Involving Human Subjects [https://www.lifescience.mext.go.jp/files/pdf/n2181\\_01.pdf](https://www.lifescience.mext.go.jp/files/pdf/n2181_01.pdf).
- <sup>5</sup>Hayano Ryugo. <https://twitter.com/hayano/status/1082488374043103232>.
- <sup>6</sup>Hayano Ryugo. <https://twitter.com/hayano/status/1152129151786049542>.
- <sup>7</sup>Date City Citizen’s Exposure Data Provision Investigation Committee report 2020. <https://www.city.fukushima-date.lg.jp/uploaded/attachment/43948.pdf>[in Japanese].
- <sup>8</sup>The University of Tokyo . On the allegation about papers by a former professor at school of science 19 July 2019, <https://www.iwanami.co.jp/kagaku/400120284.pdf> [in Japanese].
- <sup>9</sup>Fukushima Medical University . On the investigation results concerning misconducts related with research activities 19 July 2019, [https://www.fmu.ac.jp/univ/daigaku/topics/data/20190719\\_press.pdf](https://www.fmu.ac.jp/univ/daigaku/topics/data/20190719_press.pdf) [in Japanese].
- <sup>10</sup>Kurokawa Shin-ichi, Tanimoto Yoh. Comments on the investigation reports by Fukushima Medical University and the University of Tokyo on allegations regarding papers on radiation dose estimates in Date City *KAGAKU*. 2019;89:e0001–596. [https://www.iwanami.co.jp/kagaku/eKagaku\\_201908\\_Kurokawa&Tanimoto.pdf](https://www.iwanami.co.jp/kagaku/eKagaku_201908_Kurokawa&Tanimoto.pdf).
- <sup>11</sup>Tanimoto Yoh, Hamaoka Yutaka, Kurokawa Shin-ichi, Kageura Kyo, Makino Jun, Oshikawa Masaki. Comments on ”Publisher’s Note” on papers on individual external dose monitoring of all citizens of Date City <https://osf.io/preprints/metaarxiv/n6fyh/>.
- <sup>12</sup>Retraction: Individual external dose monitoring of all citizens of Date City by passive dosimeter 5 to 51 months after the Fukushima NPP accident (series): 1. Comparison of individual dose with ambient dose rate monitored by aircraft surveys (2017 J. Radiol. Prot. 37 1) *Journal of Radiological Protection*. 2020;40:908–909. <https://doi.org/10.1088/1361-6498/ab9ff0>.