

## *Backup information*

for: <http://zfitter.com/2012-11-04-memo-zfitter-gfitter-v24.pdf>

by:

Prof. A. A. Akhundov, Prof. P. Christova, Dr. S. Riemann, Dr. T. Riemann et al.  
(4 November 2012 v.2.4 (19 November) filename: 20122012-11-04-memo-zfitter-gfitter-v24\*.pdf)

Collection: T. Riemann, ZFITTER spokesperson,

<http://zfitter.com>, [tordriemann@googlemail.com](mailto:tordriemann@googlemail.com)

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The document contains kind of backup information for those who are not aware of some ethical and legal issues and of the developments from March 2011 till October 2012. It is by far not complete, but may serve as a guideline for understanding.



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[tordriemann@googlemail.com](mailto:tordriemann@googlemail.com)

[Add. 1 March 2013] Today, the Gfitter case is lasting for 2 years. Additional facts are made public on <http://zfitter.com>.

An investigation of the Gfitter case at DESY, initiated by the DESY ombudspersons and under the final responsibility of the DESY Board of Directors, was performed in March and April 2011, and was presented to the DESY Board of Directors on 18 April 2011. In its decision of 21 April 2011, the DESY Board of Directors concluded that there are no violations of the Rules of Good Scientific Practice like plagiarism which would deserve sanctions.

A similar outcome was reported as result of an investigation by the Editors-in-Chief of „European Physics Journal C“, lasting from September 2011 to January 2012. See the letter of Editors-in-Chief to T. Riemann of 26 January 2011, [http://zfitter.com/Letter\\_Riemann.pdf](http://zfitter.com/Letter_Riemann.pdf).

This both is in clear contradiction to the results of the investigations by the ZFITTER collaboration, performed from March to May 2011, with minor later additional findings, by A. Akhundov, S. Riemann, T. Riemann et. al.

Since November 2011, there is an ongoing investigation of the Gfitter case at DESY by the Ombudsman for Science in Germany. The arbitration award [[http://zfitter.com/Schiedsspruch\\_prof\\_loewer-EN-06Jul2012.pdf](http://zfitter.com/Schiedsspruch_prof_loewer-EN-06Jul2012.pdf)] of the Ombudsman of 3 July 2012 shall become public by its realization. The realization is expected to get started in the nearest future.

The recommendations of the arbitration award do not cover the entire conflict. Some of the essentials, as seen by the ZFITTER collaboration and collected in the „Memorandum“, are not matched.

The Gfitter homepage at DESY, <http://gfitter.desy.de/>, is run under the responsibility of the DESY Board of Directors. The homepage describes the project, presents numerous numerical results and contains links to the main publications and talks. Including those which have been created with non-cited use of scientific results of the ZFITTER collaboration.

A private ZFITTER homepage, <http://zfitter.com/>, is financed by and run under the responsibility of T. Riemann, ZFITTER spokesperson. The homepage describes the project. It contains links to the findings about the *non-authorized hidden* use of ZFITTER results in the Gfitter project which we find to be substantial. Despite the conclusions of others.

The „Memorandum on ZFITTER/Gfitter“ (4 Nov. 2012) is a follow-up of T. Riemann's draft agreement <http://zfitter.com/2011-08-12-draft-agreement.pdf> and its modified version <http://zfitter.com/2011-09-15-draft-agreement.pdf>. They did not get realized.

## Facts

### ZFITTER



#### ZFITTER main authors

From left to right: Lida Kalinovskaya, Pena Christova, Dima Bardin, Tord Riemann, Sabine Riemann, Andrej Arbuzov  
Photograph made on occasion of 5th Helmholtz International Summer School "Calculations for Modern and Future Colliders", July 23 - August 2, 2012, Dubna, Russia, [CALC 2012](#). Right: Sasha Olshevsky and Arif Akhundov.  
Left photograph: © 2012 T. Riemann (priv.); middle: © JINR, Dubna; right: © A. Akhundov (priv.).

For the ZFITTER project, see the homepage <http://zfitter.com/> and the recent talk „ZFITTER – 20 years after“ by T. Riemann at the conference Loops and Legs in Quantum Field Theory, LL2012, <https://indico.desy.de/getFile.py/accesscontribId=29&sessionId=10&resId=0&materialId=slides&confId=4362>. [added 6 Mar 2013] The contribution to the conference proceedings has been retracted; an extended version is <http://arxiv.org/abs/1302.1395>.

The ZFITTER project dates back to the 1980ies and is supported until now.

Main long-term authors are D. Bardin (spokesperson until 2005), A. Akhundov, A. Arbuzov, P. Christova, L. Kalinovskaya, A. Olchevsky, S. Riemann, T. Riemann (spokesperson since 2005), together with O. Fedorenko (1951-1994) and M. Bilenky (left particle physics). A complete list of authors may be found here: [http://zfitter.com/zfitter\\_authors.html](http://zfitter.com/zfitter_authors.html). The Journal „Computer Physics Communications“ would add to the list all co-authors of the corresponding publications in CPC.

The most important applications are by the LEP collaborations DELPHI, L3, OPAL and by the LEP electroweak working group (LEPEWWG), in the Review of Particle Properties, but there are numerous additional applications for precision calculations.

There seems to be no truly competitive open source software available, although it is appropriate to say that the TOPAZ0 package (G. Passarino et al.) and the BHM/WOH package (W. Hollik et al.) represent the same scientific level. See the report <http://arxiv.org/abs/hep-ph/9709229> with an overview on the state-of-the art in 1995. For ZFITTER there exist several documentations with about 350 pages in sum. Three of them appeared in „Computer Physics Communications“ (CPC), namely in 1989, 2001, 2006; see here:

[http://cpc.cs.qub.ac.uk/summaries/ADCZ\\_v1\\_0.html](http://cpc.cs.qub.ac.uk/summaries/ADCZ_v1_0.html),

[http://cpc.cs.qub.ac.uk/summaries/ADMJ\\_v2\\_0.html](http://cpc.cs.qub.ac.uk/summaries/ADMJ_v2_0.html).

Due to these publications, ZFITTER is licenced by CPC since 1989 with the same licence all over the years.

The licence statement may be found here: <http://cpc.cs.qub.ac.uk/licence/licence.html>.

The authors expect from users, in addition to the licence, to respect „conditions of use“: They do not want that, without special agreement, ZFITTER gets divided into parts and that then, as a consequence, the program's integrity is lost.

In 2000, the ZFITTER team (D. Bardin, M. Bilenky, P. Christova, M. Jack, L. Kalinovskaya, A. Olchevsky, S. Riemann, T. Riemann) was awarded the Science Award of JINR, Dubna, Russia for „Theoretical support of experimental precision tests of the Standard Model at the Z resonance“. The external reviewer was academician Prof. L. Okun from ITEP Moscow; see <http://zfitter.com/jinr-prize-certificate-t-riemann-2.pdf> and <http://zfitter.com/jinr-prize-okun.pdf>.

In 2005/2006, ZFITTER was supported by a so-called ZFITTER Support Group which was formally closed in February 2012. Presently, responsibility for ZFITTER is by the long-term authors introduced above.

Today, in LHC times, ZFITTER may be successfully applied in several respects, e.g.:

- The global precision analyses as exemplified by the LEPEWWG in the Standard Model or by the

CKMFitter collaboration in four-generation scenarios;

- Direct data analysis of Drell-Yan processes at the LHC as exemplified by the CDF collaboration;
- Precise determination of parton distribution functions from the Tevatron and LHC Drell-Yan data.

It might well be that for future use ZFITTER has to be further improved. The project is supported by the long-term authors, and additional supporters are welcome.

## ***Gfitter/GSM***

The Gfitter software (2006-July 2011) contains a library of Standard Model Physics with quantum field theoretical corrections to so-called pseudo-observables due to electroweak and strong interactions. The name of this library is Gfitter/GSM.

The authors of Gfitter/GSM are:

Martin Goebel (diploma student at DESY, PhD student at DESY, postdoc at DESY)

Prof. Johannes Haller (Hamburg University, Georg August University Göttingen, Hamburg University)

Dr. Andreas Höcker (staff at CERN)

Dr. Klaus Mönig, (leading scientist at DESY, Zeuthen)

Gfitter has been created since Summer 2006, and it was first presented to the public by M. Goebel in December 2007 at a meeting of the „HGF Alliance for Physics at the Terascale“. There are several further authors of other parts of the Gfitter project who were using Gfitter/GSM.

We will consider here mainly the period from Summer 2006 to Summer 2011.

The main publications based on Gfitter/GSM are the diploma thesis of M. Goebel, an article in „European Physics Journal C“, EPJC60(2009)543, and the preprint <http://arxiv.org/abs/1107.0975v1>. The latter was submitted to EPJC in July 2011, was accepted for publication in EPJC on 12 September 2011 (private information, A. Hoecker on 20 Sep 2011), but did not appear. Many further publications, about 35 in number, have been made by Gfitter or by Gfitter authors in form of journal articles, talks at conferences, write-ups in conference proceedings, etc. Often they contain new numerical results.

Two webpages at DESY and at CERN are also used for a distribution of updated numerical results.

The Gfitter software is written in C++ and is, until now, not publicly available, but it is labelled to be open source.

## ***Gfitter uses ZFITTER results***

A rather complete list of the publicly available Gfitter publications was made public 10 August 2011. Last update: 26 August 2012, by adding several items. The list may be found here:

- <http://zfitter.com/gfitter-publications.html>.

There are about 37 publications of different importance from December 2007 to March 2011, where ZFITTER software or ZFITTER text is not quoted properly. There is no one where ZFITTER software would be quoted correctly.

The ZFITTER group has been actively interested to get familiar with the Gfitter code since May 2009 (access was refused then). The interest was initiated by a hint of a colleague who suspected that Gfitter might contain ZFITTER software. Finally we got access to the Gfitter package by a dedicated internet search on 2 March, 2011. The search was initiated by another hint of a colleague who suspected that Gfitter might contain ZFITTER software. In the following we will refer to this version of the package when we refer to Gfitter or Gfitter/GSM. It seems to date back to the year 2008. Prof. Haller made a later version available to ZFITTER on 3 March 2011, and this version will be dated here as of 3 March 2011. Both versions are, concerning the problems discussed here, practically identical and we will not distinguish between them. They are labelled to be proprietary by the Gfitter authors until now, but we might offer access to them in cases of well-founded interest.

It became evident already on 1 March 2011, and at first glance, that the Standard Model library Gfitter/GSM contains source code which has been copied (thanks to Dr. A. Hoecker we know: by emacs) from the Standard Model library of the Fortran package ZFITTER v.6.42. This library is maintained mainly in the file ZFITTER/dizet6\_42.f, but not exclusively. The evidence of the „integrations“ by *copy-paste-adapt* was obtained by comparing the source codes of the two programs and by further studies. The evidence was established during March to May 2011, with few additions afterwards. See the following documents:

- [gfitter-uses-175-functions-of-zfitter.txt](#) - List of the known „integrations“ from ZFITTER v.6.42 into Gfitter/gsm, status 10 May 2011 (available on request);
- [zfitter-code-in-gfitter.html](#) - Samples of the „integration“ of ZFITTER software in Gfitter/GSM software, created 03. Aug 2011;
- [gfitter-gsm-patches.html](#) - Patches of misprints arising from the „integrations“, created 28 Oct 2011.

There is also a kind of „self-documentation“ by the Gfitter group. A Gfitter version, created after the moderated Zeuthen meeting of ZFITTER and Gfitter representatives on 11 May 2011, and dated by us on 21 July 2011, contains about 150 to 200 C++ functions which are declared by Gfitter to trace back to ZFITTER code with indications of the line numbers in the original source, e.g. in ZFITTER/dizet6\_42.f. We did not check the correctness or completeness of these findings. The Gfitter authors do not express that these „integrations“ were *non-authorized and hidden*.

The Gfitter v.21.7.2011 package is quoted in the so-called erratum to the main article EPJC60(2009)543 as the software basis of that article, as well as in another main publication <http://arxiv.org/abs/1107.0975v1>. Further, it is quoted there as being co-authored by members of both groups. These statements by Gfitter are not correct and the erratum does not „heal“ the conflict. Unfortunately, the Editors-in-Chief of EPJC do not respect the corresponding collective requests of the long-term ZFITTER authors to retract that erratum. For the latter, see <http://zfitter.com/2012-02-02-letter-to-Springer-Moenig.pdf> and <http://zfitter.com/letter-to-the-epjc-editors.pdf>.

Quotations from the corresponding emails with procurations:

30.1.2012

Dear Tord,

we would like to join your demand: there should be no code co-authored by Gfitter and by us. We ask you to act for us since you are [the] ZFITTER spoke[s]person.

Thanks in advance,

Dima [Bardin] and Lida [Kalinovskaya].

31.1.2012

Dear Tord,

I also join to your demand. There is no code co-authored by Gfitter and by me.

I would like to ask you to act on my behalf.

Best regards,

Arif [Akhundov]

1.2.2012

So do I.

Sasha [Olshevskiy].

1.2.2012

Dear Tord,

Please, act for me also, since you are [the] ZFITTER spoke[s]person.

I believe, you have right!

Best regards!

Pena [Christova]

1.2.2012

Dear Tord,

I agree with you. Having a code .. co-authored

by Gfitter and by our team would be unfair.

I ask you to act for me since you are [the] ZFITTER spoke[s]person.

With best wishes,  
Andrej [Arbuzov].

30.1.2012  
Muendliche Bitte um Vertretung:  
Sabine [Riemann]

It became evident already on 1 March 2011, and at first glance, that the article EPJC60(2009)543 contains text parts which have been copied (thanks to Dr. A. Hoecker we know: by emacs) from texts, which have been published by ZFITTER authors.

The evidence for EPJC60(2009)543 was obtained by comparing the latex source of the preprint arXiv:0811.0009v3 of the article EPJC60(2009)543 with two latex sources by ZFITTER:

- (i) the archived preprint hep-ph/9908433v3 for CPC133(2001)229, authored by D. Bardin, M. Bilenky, P. Christova, M. Jack, L. Kalinovskaya, A. Olchevski, S. Riemann, T. Riemann;
- (ii) arXiv:hep-ph/9709229v1 (1995), section 4.4 „ZFITTER basics“, authored by D. Bardin, L. Kalinovskaya, S. Riemann, T. Riemann.

The evidence for the diploma thesis derives from a comparison of the pdf versions of the diploma thesis (dated 29 February 2008) and of EPJC60(2009)543 (dated much later, as of 3 November 2008). They agree for several pages of text, and the only explanation is that the latex sources also agree. The latter contains material from ZFITTER authors' latex source files, so the former does also.

See the following document:

- <http://zfitter.com/zfitter-text-in-gfitter-publications.html> - Samples of [latex source] text, found in the main Gfitter publication and also in a diploma thesis, taken from latex source files written by ZFITTER authors, created 24 Oct 2011.

## ***Ethical and legal judgements***

For a general statement on the issue, see the document „Null Toleranz zu Plagiaten in der Grundlagenforschung!“ by T. Riemann, 30 April 2012:

<http://zfitter.com/null-toleranz-zu-plagiaten-in-der-teilchenphysik.pdf>.

The important questions are now the following:

- Do the Gfitter authors say that they use text and software from ZFITTER?
- Would this be necessary? If yes, are quotations sufficiently evident and at the proper place?
- Does Gfitter respect copyright, licences and conditions of use of ZFITTER?

It took us a while to understand the essentials of the ethical and legal aspects and how to proceed furtheron. Of course, it is quite easy to say: Do not copy or use in any other respect the scientific results of others without permission (if needed) and without a proper quotation. To do so would be illegal. The problems arise when the others, together with supporters, say: What we do *is* legal, common sense, common practice, and we have nothing to admit.

The factual essentials may be summarized as follows:

- Neither the diploma student in his thesis nor the Gfitter authors in the numerous publications spell out that they use ZFITTER software (v.6.42) and/or text passages authored by ZFITTER authors, by *copy-paste-adapt* (they would call this „integration“).
- They say (e.g. in Appendix A.3 of EPJC60(2009)543, the second and in fact last mentioning of ZFITTER there) that „*The calculation of the electroweak form factors ... follows the ZFITTER procedure.*“ But this is not saying that they „integrate“ parts of the ZFITTER software. Maybe there

is a *ZFITTER approach*. This might be disputed. But if yes, then one might use this ZFITTER approach in quite different ways, not using the ZFITTER software at all. See the talk by T. Riemann at LL2012 [added 6 Mar 2013:] and the hep-ph/1302.1395 mentioned above.

- They say (e.g. in the Introduction of EPJC60(2009)543, the first mentioning of ZFITTER there) that „... results have been cross checked against the ZFITTER package ... “ But this is not saying that they „integrate“ the ZFITTER software. Running their own, independent code and in parallel also running ZFITTER is something different.
- To summarize: In fact, the Gfitter authors quote ZFITTER publications, but not for „integrating“ the ZFITTER code or texts written by ZFITTER authors.

### **Conclusion:**

The Gfitter/GSM authors used ZFITTER text and software by *non-authorized hidden copy-paste-adapt*, including a translation of software parts from Fortran to C++.

In doing so, the Gfitter/GSM authors violate several ethical and legal regulations:

- Gfitter authors violate ZFITTER's copyrights for texts and software.  
*Statement depends* on time-dependent, national legal and also institutional regulations.
- Gfitter authors violate ZFITTER's CPC licence for software and the conditions of use.  
*Statement depends* on respecting or not the licence agreement issued by CPC to the authors of the software/its description and respecting or not the authors' right to formulate conditions of use.
- Gfitter authors plagiarise ZFITTER's scientific work.  
*Statement depends* on the ethical rules applied and on applying an academic definition of plagiarism.

### **Ethical and legal rules of basic research**

It is possible to start an endless discussion - or to refuse from any discussion - on the issues of copyright, licences, plagiarism.

In fact, the matter is simple if one accepts that there have to be respected certain basic standards by everybody in international academic basic research, performed at universities, governmental or international research centers etc.

The issue is basically not a legal one, but an ethical one.

*One ethical standard* in academic research is proper citation – say clearly what has been created by use of others' work, and name the source and its authors.

*Another ethical standard* is that we expect from authors of academic scientific work sufficient responsibility and professionalism – authors have to know the rules of the game (here: of quoting) and to respect them, or they should not publish. Not knowing the rules is no excuse and cannot be tolerated.

*A third ethical standard* is that violation of proper citation has to be sanctioned in a proper way, according to commonly accepted rules, irrespective of the social status of the authors whose rights were violated. And with no exceptions for the „confidants of the responsables“.

When working in science, one has not only to formulate rules for the use of own work by others. One has also to respect the rules formulated by others for their work. It is not correct to project own rules to the work of others. The others have the right to formulate their rules, and if one does not like the rules of the others, then one cannot use their work.

These are elements of fair work.

All these specific rules have, of course, to respect the general rules.

### **But what are the general rules? Are there any?**



This is not an essay on scientific ethics.

Let us only notice that violating general rules, often called the *Rules of Good Scientific Practice*, leads to a misbalance of *Competition and Cooperation*. These two are key elements of modern international academic basic research. Violating their balance leads, in the long term, to the end of excellence of science. And then, a bit later, to the end of financing by the society.

The problem is also internationality.

Copyright appears to be a national notion, finally, when it comes to the execution. As we experience. In the Gfitter case with its multi-national and multi-institutional and long-term aspects, it is practically impossible to apply a definite notion of copyright which everybody would accept. Even the decision whether a person is an author of ZFITTER (or not, or of a part of it) proved to be difficult.

In practice one might follow DESY's Board of Directors' brute-force approach: Just apply German law, basically formulated in „Deutsches Urheberrechtsgesetz 1965-2011“ (Dtsch. Urhg.), and use it as a guideline.

A Russian author might ask: Why?

Let us ignore him for the moment and do so.

The result is not unique, but we believe that the statements of the following three items are undoubtedly correct, and that they are of utmost importance for judging the Gfitter case:

- A - Authors have the right to decide if the work is published or not.
- B - Authors have to be quoted when their work is used - for using the work, of course.
- C - Authors may forbid to change their work if they consider this to be not appropriate.

This is the contents of paragraphs 12 to 14 of Dtsch. Urhg., formulating the so-called „personal copyrights“ (persönliche Urheberrechte). The personal copyrights may not be transferred to or denied by third parties. They apply to all „works“, including software, if the „work“ has a required level of originality/creativity (in German: Schöpfungshöhe). There are special regulations for software, but not with respect to the personal copyrights.

Evidently, item A is of no concern here, but Gfitter violates item B and item C.

Some scientists deny the relevance of item C and tend to not respecting it:

- Because this hinders the scientific progress;

- Or: because open source software is by definition free of any conditions once made public.

They argue that authors who do not want to allow modifications of their work should not publish it.

For software: if you want item C to be respected, then deliver the software only by personal contacts, or even more restrictive, only in form of executables and by personal contacts!

We leave the statements as they are.

It is evident that there is no exchange of knowledge without mutual (and better not one-sided!) agreements on rules to be followed. There is deep reason to follow authors' wishes to respect the frame spanned by items A, B, C as defined by German law or other law systems, or by licences.

*In order not to disbalance Competition and Cooperation.*

### ***The CPC licence***

Interesting enough, a closer inspection shows that the CPC licence, granted to ZFITTER in 1989, 2001, 2006 over all the years with identical phrasing - over a period of 17 years - agrees perfectly with items A, B, C extracted from German Urheberrechtsgesetz. So, in a sense, the CPC licence transforms here the German law

into an international „rule“ to be respected by everybody acting in international academic basic research and using CPC software.

Why should one accept the CPC licence?

First of all: Why is this a relevant question?

*Because we are confronted with the fact that both all the Gfitter authors and members of the to the DESY expressedly **do not accept** (i) the validity of the CPC licence for ZFITTER and/or (ii) that the holder of the licence rights are the ZFITTER authors.*

*Added 9 Nov 2012:*

*status of 14 March 2011 to October 2012, never commented by Gfitter authors, but expressed explicitly by three of the DESY directors on occasions).*

*Added 6 March 2013:*

*Quote from a letter of DESY Board of Directors to the DESY Work Council, dated 4 February 2013:*

*„Wir sehen ... seitens DESY die Notwendigkeit, erneut in die inhaltliche juristische Aufarbeitung der Auseinandersetzung einsteigen. DESY wird sich im Zuge dessen auf der Grundlage der Prüfungsergebnisse positionieren zu den Fragen der Urheberrechtsverletzung, des Zitiergebotes und der Einhaltung der Regeln der guten wissenschaftlichen Praxis ...“*

In English, approximately:

*„We see the need ... by DESY, again to get into the substantive legal processing of the dispute. DESY will position itself on the basis of the examination results on the issue of copyright infringement, to the question of the necessity of quotation and to the question of compliance with the rules of good scientific practice.“*

One might dispute licences.

At least one fact is evident: If scientists want to have generally acceptable rules of scientific exchange, then the licences and individual copyright statements granted by international publishers are a perfect means of their definition. Once they are respected.

A prominent, actual example: The article by the ATLAS collaboration, „Observation of a new particle in the search for the Standard Model Higgs boson with the ATLAS detector at the LHC“ is copyrighted by Physics Letters B as follows: „© CERN for the benefit of the ATLAS Collaboration.“

Why not respect this?

And why not respect also the CPC licence for ZFITTER?

### ***A difference of CPC licence and items A - C***

The CPC licence *does not forbid* to modify a code as long as it is not given to a third party (which deserves the written permission by the author, represented by the corresponding author (for ZFITTER in all three CPC articles: T.R.) and/or the spokesperson (for ZFITTER: presently T.R.)). The item C *forbids* this. ZFITTER also *forbids* this in the conditions of use, but is open to be contacted in case.

Commentary 1:

The difference is a bit artificial. If nobody can look at the modifications of a derived code - because it is not given to others in fulfilment of the CPC licence - then they are, in a sense, irrelevant and appear to be just a part of the newly created software.

In that sense, the *strict* fulfillment of the CPC licence fulfils, in practice, also the item C and ZFITTER's conditions of use.

Commentary 2:

The authors of Gfitter/GSM are four persons. The other five authors of Gfitter and the friends of Gfitter – e.g. the approximately 3000 members of the ATLAS collaboration - are not authors of Gfitter/GSM. Consequently they are not entitled to use Gfitter/GSM in any form. Or the CPC licence is violated, as well as also the ZFITTER conditions of use and item C.

If not ZFITTER authors allow this.

They were not even asked.



## ***Plagiarism***

Plagiarism is a different notion compared to copyright or licences. The two latter may be closely related, as was discussed.

May a copyright statement or a licence be violated or not, in both situations a case of plagiarism might be claimed in case. And, at the other hand, not every violation of copyright or of a licence is also a case of plagiarism.

Everybody has a feeling of what plagiarism is, and many of us think that plagiarism should be prevented. If one looks at a definite situation, like the Gfitter case, then some people tend to argue that there is no commonly accepted definition and just try to refuse from a discussion of the issue. The more, if one has to decide on sanctions.

## ***Definitions of plagiarism***

The commonly accepted ethical rules of science in Germany are defined by Deutsche Forschungsgemeinschaft (DFG), basically relying on the document „Vorschläge zur Sicherung guter wissenschaftlicher Praxis: *Empfehlungen der Kommission Selbstkontrolle in der Wissenschaft*“, Denkschrift, Deutsche Forschungsgemeinschaft, 1998. Here it is:

[http://www.dfg.de/download/pdf/dfg\\_im\\_profil/reden\\_stellungnahmen/download/empfehlung\\_wiss\\_praxis\\_0198.pdf](http://www.dfg.de/download/pdf/dfg_im_profil/reden_stellungnahmen/download/empfehlung_wiss_praxis_0198.pdf)

In English:

[http://www.dfg.de/download/pdf/dfg\\_im\\_profil/reden\\_stellungnahmen/download/self\\_regulation\\_98.pdf](http://www.dfg.de/download/pdf/dfg_im_profil/reden_stellungnahmen/download/self_regulation_98.pdf)

The document is authored, among others, by Professor Björn Wiik, at that time Chair of the DESY Board of Directors. The title in English: „Proposals for safeguarding good scientific practice: recommendations of the commission self-regulation in science“. The document does not define „plagiarism“, although the word is used. But it proposes sanctions for violations of good scientific practice.

In the English wikipedia, as well as in any good dictionary, one may find definitions which all are close to each other. The wikipedia entry <http://en.wikipedia.org/wiki/Plagiarism> quotes under „Academia“ the definitions used at Stanford University, Yale College, Princeton University and others.

Let us quote here two other definitions, which are of direct relevance to the Gfitter case:

## ***Springer Publisher's definition of plagiarism***

The main article on the Gfitter project appeared in „European Physics Journal C“ (EPJC), a journal issued by Springer Publisher.

At Springer Publisher's webpage <http://www.springer.com/authors/journal+authors?SGWID=0-154202-12-601001-0>, created in 2010, we read: „Springer Defines New Policy on Publishing Integrity“. The most important document in our context, which is linked there, is „... the full document of Springer's Policy on Publishing Integrity“, see:

[http://www.springer.com/cda/content/document/cda\\_downloadaddocument/Policy\\_on\\_Publishing\\_Integrity2010.pdf?SGWID=0-0-45-784498-0](http://www.springer.com/cda/content/document/cda_downloadaddocument/Policy_on_Publishing_Integrity2010.pdf?SGWID=0-0-45-784498-0).

It contains the „Guidelines for Journal Editors“ with the *"Seven Steps for Journal Editors When Encountering Possible Misconduct"*. The complete document is essential; on page 7 we read (emphasis in red color by T.R.):

### ***„Plagiarism***

***Plagiarism occurs when someone presents the work of others (data, text, or theories) as if they were his/her own and without proper acknowledgment.“***

One may dispute the meaning of these words, one may have problems to understand why software programs are covered, or why text consisting of complicated mathematical formulas in latex form is covered, but by the end of the day the phrasing is clear-cut.

## ***DESY's definition of plagiarism***

Several of the Gfitter authors have been in the past or are presently employed at DESY, and two of the ZFITTER authors are employed at DESY.

DESY administration is regulated by the „Procedure and company regulations (GO/BO) for Deutsche[s] Elektronen-Synchrotron DESY, Edition 01, March 2010“. The German version may be found under [http://www.desy.de/e428/e67620/e73268/GOBOdeutsch\\_ger.pdf](http://www.desy.de/e428/e67620/e73268/GOBOdeutsch_ger.pdf), and the English version under [http://www.desy.de/e428/e67620/e73269/GOBOengl\\_ger.pdf](http://www.desy.de/e428/e67620/e73269/GOBOengl_ger.pdf).

The relevant part for the Gfitter case is Appendix 5 of GO (GO for Geschäftsordnung), in German available under <http://adweb.desy.de/verwaltung/public/gobo/bo-anl-5.pdf>. For the English version, see the long text of DESY GO/BO. Appendix 5 is derived from the 1998 DFG recommendations quoted above.

At page 118 of Appendix 5 we read (emphasis in red color by T.R.):

„The following is particularly considered as a scientific misconduct:

- • Making up and distorting data;
- • Misrepresentations in advertising, applications for support, publications etc.;
- • **Violation of intellectual property by means of**  
**- unauthorised use under presumption of authorship (plagiarism)** as well as presumption or unfounded acceptance of scientific authorship or co-authorship
- Exploitation of external, unreleased scientific ideas or research attempts (theft of ideas)
- Release or accessibility without approval of the beneficiary;
- • Damage to, destruction or manipulation of scientific test arrangements.“

It is undoubtedly true that, when applying one or the other of the quoted definitions of plagiarism by Springer Verlag and by DESY, one comes to the conclusion that Gfitter has plagiarised.

Both definitions do not consider whether the „integrations“ by *non-authorized copy-paste-adapt* were performed with the aim of „conscious deception“ (bewusste Täuschung) or just so, as a part of the „habitual behaviour“ (gewohnheitsmässiges Verhalten).

It makes no difference for the outcome, looking at the facts.

Once an institution starts sanctioning, there might arise a difference of some importance if *conscious deception* is behind.

*In the Gfitter case, it is proven that the Gfitter authors rigorously made hidden that they performed non-authorized copy-paste-adapt.*

Interesting in this context are two statements by authors (in English), <http://zfitter.com/2011-03-11-author-to-responsible-en.pdf> and <http://zfitter.com/2011-04-13-authors-to-responsible-en.pdf>.

When comparing to the texts <http://zfitter.com/zfitter-code-in-gfitter.html>, <http://zfitter.com/gfitter-uses-175-functions-of-zfitter.txt>, <http://zfitter.com/zfitter-text-in-gfitter-publications.html>, <http://zfitter.com/gfitter-publications.html>, one will notice that there are crucial contradictions.

Gfitter authors are hiding their “integrations” until now, by a variety of methods.

## ***What is a severe case of plagiarism, or of licence or copyright violations?***

This is an important issue once sanctioning is disputed.

We want to remind about the following facts in the Gfitter case:

- The Gfitter group performed *non-authorized hidden copy-paste-adapt* of about 5 pages of text (in fact most of the essentials of one-loop formulae for Z boson physics) and of about 175 Fortran identities of quite different complexity (in fact all the essentials of higher-order Standard Model corrections to Z boson physics).

Without that, the program Gfitter/GSM could not be applied to Standard Model analyses of modern data and the so-called „physics content“ of their project would be much reduced.

- They did this *non-authorized hidden copy-paste-adapt* in a well-organised group of four, later of eight or nine scientists.
- They did this from 2006 to 2011, over a period of five years.
- At least three of them (Dr. Hoecker, staff at CERN, Prof. Haller, professor of physics at Hamburg University, Dr. Moenig, leading scientist at DESY) hold year-long leading and teaching positions in European particle physics and cannot simply say that they do not know the relevant rules.
- They published about 35 publications of different relevance without mentioning only once that ZFITTER code was used by them; the ZFITTER texts were used only in two main publications.
- The Gfitter code is hold proprietary over many years, although it uses the open source code ZFITTER. This is of utmost importance for hiding the *non-authorized copy-paste-adapt*.
- When asked, the Gfitter authors – deviating from facts - declared at numerous occasions that they used ZFITTER material only when it was available in the literature. Among the most important instances are the following:
  - Public letter to a DESY director, dated 11 March 2011, <http://zfitter.com/2011-03-11-author-to-responsible-en.pdf>;
  - Public letter to the Chair of the DESY Board of Directors, dated 13 April 2011, <http://zfitter.com/2011-04-13-authors-to-responsible-en.pdf>;
  - Statements at the moderated Zeuthen meeting of ZFITTER and Gfitter representatives on 11 June 2011, e.g.: „Any number but 12 is wrong!“, compared to the number 175 stated by ZFITTER that day;
  - Statement made on 26 June 2012 in Hamburg that the main Gfitter article is not proven to be based on the Gfitter codings as known to ZFITTER.
- Until today, no one of the Gfitter authors is ready to accept the validity of ZFITTER's CPC licence.
- Until today, no one of the Gfitter authors is ready to accept that ZFITTER authors have personal copyrights with ZFITTER.
- Of course, they do not admit that they made „integrations“ by *non-authorized hidden copy-paste-adapt* (i.e. that they have plagiarised).

We consider the Gfitter case as a severe one. If this is not a severe case, which else case would be? It is certainly not the most important one.

*Maybe it is the most voluminous case of scientific misconduct ever in elementary particle physics.*

## ***The role of research institutions and of the Editors-in-Chief of EPJC***

It is evident that the Gfitter group would not withstand the 18 months of ethical pressure made by the ZFITTER group without a substantial support though not by institutions, but by one or the other influential person.

The question arises:

Who supports Gfitter, and why?

The first question is easily answered, the second one is not.

We do not give a complete list of Gfitter supporters, but just mention:

- ***[1 March 2013] No comment on the role of persons at physics research institutions.***
- Of great importance are the Editors-in-Chief of „European Physics Journal C“. They go an efficient way. Most of the facts are recognized, but they are interpreted as harmless. See the quoted letter to T. Riemann, [http://zfitter.com/Letter\\_Riemann.pdf](http://zfitter.com/Letter_Riemann.pdf).

Some supporters of Gfitter do not try to hide that they ignore one or the other administrative or ethical rule

for treating cases of suspected plagiarism or other deviations from Good Scientific Practice. We quoted few of the relevant documents.

Without that support by single persons with administrative or other influence, there would be no chance for Gfitter to escape from admission of deviations from Good Scientific Practice and from the potential sanctions by research institutions and/or funding agencies.

- *End of document* -

### **Annotation**

ZFITTER author Professor A. A. Akhundov wrote on 20 September 2012 a letter to the Ombudsman for Science in Germany and to the Chair of the DESY Board of Directors expressing thoughts related to the Arbitration Award by the Ombudsman for Science in Germany of 3 July 2012.

There is agreement with A. Akhundov to bring his letter to notice together with the present memorandum.