Report and draft of response for the Reviewer #1. For the second we may write a global reply saying basically that the paper that he mentions has not been submitted to JINST and that the arxiv file has been corrected to make this clearer.

Comments of the reviewer are in blue.
Draft of responses are in black.
In red, open questions in which I will appreciate your help..

A. Irles, 2019/04/19

Reviewer #1: The authors present initial results from a beam test at DESY of the technological prototype of the CALICE highly granular silicon-tungsten electromagnetic calorimeter (SiW-ECAL).
When completed this will be a highly innovative, significant instrument.
The tested calorimeter included seven of the layers of 18 x 18 cm^2 coverage. The goals of the beam test program are:

1. Calibration without tungsten absorber using 3 GeV positrons,
2. Test of the tungsten-less system in a magnetic field up to 1 T, and
3. Test of the response to electrons of fully equipped detector, including the tungsten absorber.

In this paper the first goal is addressed in a 3 GeV positron beam and, briefly, results are presented for the second goal.

The authors explain in detail their analysis of the data, including suppression of noisy channels, measurements of noise in remaining channels, and response to electrons that behave as MIPs. Some tests of pedestal and noise stability within a magnetic field are also presented.

Since a major purpose of the calorimeter is to measure electromagnetic showers, it is disappointing that the authors do not present such results. While there is a detailed presentation of noisy channels, and the characterization of the various types of noise, with these channels masked from the output, measurements of shower development for the seven layers with tungsten absorber are not presented. It may be that the beam test did not reach that level of data taking.

The analysis of the calibration without tungsten that is presented is pretty well done and interesting. The presentation of the magnetic field effects is quite limited and would be better if expanded and clarified.

The primordial goal of the tests in the Magnetic field was technical (get experienced in the running in magnetic field, test the durability of the components, etc). The amount data collected is limited, therefore not largely discussed in the text. In any case, we have added some words to describe more explicitely the technical character of the test and we have added some clarifications in section 3.2.1 and in the caption of Fig.9

My recommendation is to publish the paper after a revision that includes adding electromagnetic shower results from the beam test.

The original goal of the paper is to serve as a technical paper to show the performance of the technological SiW-ECAL prototype at its status at 2017. The experience acquired during the construction of the prototyes and the operation during this beam test has served as a basis for further developments and R&D efforts with the scope of performing an intense beam test campaign with fully equipped stack of ~20 layers (instead of 7). Most of personpower is now

concentrated in this topic and this is the reason why a deep shower analysis has not been presented here. However, we completely understand the comments of the referee and for that we have added a new section « Performance of the SiW-ECAL for low energy electromagnetic showers ». We hope that the referee considers now the content of the article more suitable for the publication. In addition, this matter has been largely discussed within the CALICE collaboration. It has been agreed within the collaboration that one of the next goals is the publication of another article presenting a deep analysis with Geant comparisons of these data and the new data from DESY and CERN beam tests during 2018 and potentially also during 2019 at DESY (at least). This will require the scrutiny of the full collaboration.

I noted a number of issues with the text and presentation
which I list here. I suspect there are more that would benefit
from a careful review of the text and presentation in tables
and figures.

Several of the figures are not suitable for black and white printing
and should be redone before the paper is published.

We provide a new version of Figures 2, 3, 4, 8 & 9.

The first sentence of the abstract is not a complete sentence.

« The technological prototype of the CALICE highly granular silicon-tungsten electromagnetic calorimeter (SiW-ECAL) tested in beam at DESY in 2017. »

→
« The technological prototype of the CALICE highly granular silicon-tungsten electromagnetic calorimeter (SiW-ECAL) has been tested in beam at DESY in 2017. »

label two parts of Figure 1, Figure 1(a) and Figure 1(b)
so that references in text can be specific.

Done

line 97 "In the picture"   rather "in Figure 1(a)"

Done

line 136 "timestamped" broken at wrong point "times" "tamped"

Done

line 138 "brunch" should this be "bunch"?

Done

line 145 "bigger" suggest using "larger"

Done

lines 166-67 poor sentence construction

« Test in a magnetic field up to 1 T using, also without tungsten and with 3 GeV positrons. For this test, a PVC structure was designed and produced to support one single readout module.»
→ « Test in a magnetic field up 1 T using 3 GeV positron. For this test, a PVC structure was designed and produced to support one single readout module, without any tungsten plates.»

lines 281-301 reference to "width" and "standard deviation"
It can be assumed the term width is used here to be synonymous with standard deviation, but usually width refers to full width at half max. So care in terms is warranted.

Figure 5 - is pedestal "width" the pedestal "standard deviation"?
I am already defining what I mean with width… «The width of the pedestal is associated to the standard deviation of the Gaussian.» Do you have any proposal on the wording of this ?

line 315 reports S/N is measured to be 20.4 based on triggered events.
line 252 S/N arrived at 12.8 using threshold curves with charge injection. Why the difference? Could it be the triggered events for electrons are not good approximations for a MIP?

In fact, the differences are intrinsic to the system since the ASIC has two « separated electronic branchs » for the trigger decission and the charge measurement. These branchs have different shapers and amplifiers. It is explained in lines 122-138 »

lines 460-61 (ref 17) search for doi:10.1088/1748-0221/13/03/C03009
fails to find reference
doi.org/10.1088/1748-0221/13/03/C03009 is successful

Hyperlinks are fixed.

line 476 punctuation (period?) missing before "arXiv:1810.05133"

Done

Figure 9 - caption should mention the comparison of different magnetic field values. There is no mention of magnetic field in the caption.

Done