**Corrections implemented in the paper: Herewith the authors response to Referees comment.**

**Reviewer 1**

*The thickness – The paper is rather confusing in this respect. In section 2, line 4, it states that “The film*

*thickness was determined to be 100 nm.” Obviously that is not the real width (measured as 98.00 nm*

*later), so that earlier statement needs to be rewritten. “100 nm” appears a few times, so should that not*

*rather say “~100 nm”? Furthermore, the statement that the thickness was measured to be 98.00 nm*

*does not belong in the Conclusion, as the determination of that parameter is part of the experimental*

*procedure, and not an outcome of the study.*

**Authors response:** The value of the film thickness has been edit to read 98 nm for consistency and the detail of the film thickness in the conclusion was deleted in conformity to referees’ suggestion.

**Referees comments**

*Figure 1 – The quality of this figure is below what would be expected for publication. The drawing needs*

*better resolution, and the symbols must be clearly legible.*

**Authors response:** The figure has since been redrawn for better resolution

**Referees comments**

*Figure 4b – The caption to this figure sounds completely misplaced (and also has several grammatical*

*errors). The figure does not show good agreement to me. If there is unexpectedly good correspondence*

*then the authors need to justify that properly in the text. Otherwise they should simply admit to the*

*shortcomings of their results.*

**Authors’ response:** The statement has been revised to read…The cross-sectional plot of Fig. 4 (b) shows a reasonably good agreement between the power and the experimental spectrum deviations in the spectrum intensity can arise due to reflections of the waves at the boundary.

**Referee’s comments:**

*Format and consistency of units – There are inconsistencies throughout the paper regarding whether*

*there is a gap between the quantity and unit or not. E.g. “1837 m/s” and then “1500m/s”. The use of a*

*gap throughout would be preferable. There should also be a gap or full stop between “g” and “cm^-3”*

*(Section 3.1, line 3). Related to this, the authors use degrees for most of the paper, but then use radians*

*in Section 3.1, line 4 – the angle unit needs to be consistent throughout.*

Authors response: The inconsistencies in the gap between the unit and the paper have been revised with gaps being placed between the units or within 2 units of the physical parameter. Additionally the angles in Section 3.1 line 3 have been changed to degrees as per the referee’s request.

Minor corrections:

Affiliations 2 – there should be no gap in front of “Materials” the space has since been delete

Affiliations 4 – “I. Physikalisches Institut 1A” sounds incorrect. The author wishes to differ with the referee as this is the correct name of the affiliation has been used in their publications

Abstract, last sentence – there should be no gap after “15” the gap has been deleted..

Pg 2, line 13 – delete “be responsible for” (means the same as “attributed to”) changed to read… attributed to

Section 1, last paragraph, 3 rd sentence – there should be several commas in that sentence, e.g. after

“Thus”, “switching” and “switch” edited to read… Thus, besides threshold switching, the thermal properties of phase change materials are crucial for not only the rapid and reversible switch but also for scalability

Section 2, line 1 – “AgIn-Sb\_2Te” should not be in italics (same mistake in the last paragraph of Section

2) Has since been corrected in the Section

Section 2, line 3 – “… using Bruker AXS D8 discover …” sounds wrong. Please rephrase. If that is the

name of the instrument, edited to read… **the Bruker AXS D8 Discover High resolution diffractometer**

Section 2, line 8 – “f = 12 cm” should not be in brackets, and there is an “a” missing between “using” and

“high” this has been edited to as requested

Figure 1 caption – “… scattering mechanism is determined from the frequency shift f as:” edited as advised by reviewer

Section 2, last paragraph – (i) the degree sign should be after both “51” and “70”, with no gap in front of

it; (ii) what do you mean by “product of phonon wave vector” – revised to read… incidence angle was varied between 51° and 70° to probe the dispersion of surface phonons in the range 1.8 ≤ *qII d* ≤ 2.4.

Section 3.1, line 2 – “… on a 100 nm …” revised to 98 nm

Next two lines – “The density was determined to be 6.45 …”; furthermore, for the power of “-3” (twice),

the symbol should be a minus, not a dash; finally, the theta should be in italics, it has been implemented

Section 3.1, line 6 – “… the oscillations yielded an interfacial …”done

Section 3.2, line 1 – “Stokes” is a name, so surely it should begin with a capital? (twice) Sentence has been revised to read.. Figure 3 shows a typical surface Brillouin scattering spectra collected for a 98 nm AgIn-Sb2Te thin film on (001) Si substrate at various incidence angles.

Section 3.2, line 4 – remove the “;” after “namely” it has been done

Pg 4, 7 lines from the bottom – “… Rayleigh mode was determined to be 1837 …”

Pg 4, last sentence – split into two sentences “… cross-section. Hence in …”

Section 3.2, last paragraph – there are several variables that should be in italics: “c\_11”, “c\_44”,

“E\_AIST” and the Poisson ratio “\nu” In all the text the authors have placed all the variables in italics

Section 4, line 2 – the power should be minus 3, not dash 3 Has been corrected

References – [9] and [13] have a pagination format inconsistent with the other references. Should be

“450-4??”, etc The references have been revised in accordance to the guidelines of Journal of Physics

**Reviewer 2**

Please refer to "Preparing a paper ... Journal of Physics: Conference Proceedings" on SAIP website under Conference 2017, as there are many mistakes in this article:

1. Positioning of title incorrect w.r.t. left margin. Corrects as per Journal guidelines

2. Alignment of Authors incorrect: Done

3. Alignment of Affiliations incorrect. Done

4. Too large space between "Abstra5ct" and section 1. Done

5. ALL References are in the incorrect format – The references have been formatted as per journal guidelines

**Reviewer 3**

1. Give the modulus vales obtained by ref [15-16] and discuss reasons for significant deviations with own data. To create space, the backscattering geometry set-up and discussion given in Experimental can be shortened. The values have been added and the discussion on their significant deviations given. The backscattering Geometry setup has since been revised for clarity and space allocated appropriately.
2. In physics we usually use “backscattering” and not “back scattering” . This has been corrected all through in the text.