Scoring Guidelir	nes
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	Fight (Round no.):	m: Stage: Problem no.:
Scoring Guideli	NES Juror: ALAN ALLINSON	
application of appropriate mathematics *	pts, theories and principles of the problem • an reasonable experimental technique to gather and experimental findings to draw suitable conclusi	record data (or demonstrate the phenomena if
complex ideas in an effective and understa	<i>ndable</i> manner	ons • an attempt to communicate difficult or
An opposition should show that • the opponent challenged the reporter's tappropriate mathematics presented • the copponent appreciated and highlighted the second component appreciated and highlighted the second component.	<i>understanding</i> of the presented <i>concepts, theories</i> apponent <i>critiqued</i> the <i>experimental technique</i> us	and <i>principles</i> • the opponent understood the ed and questioned the <i>validity</i> of the <i>data</i> • the
A review should show that:		
important aspects (especially the controve	ective summary of the performances the reporter rsial ones) • the reviewer's personal opinion was in con-trivial and demonstrated, where possible, the red by the reporter and the opponent	n evidence (not just superficial observations)
 The reporter, opponent and reviewer Consider the following suggestions to Select each partial grade from each se 	s consists of a partial grade for <i>physics, presen</i> reach <i>start with 5 points.</i> o <i>add</i> to or <i>deduct</i> from the initial <i>5 points</i> . ection and <i>write it</i> in the corresponding box. no questions were posed or not finding shorto	
Rep.: Czech Son Ha Kuan 5	Opp.: NZ kayle Potaka 5	Rev.: Germany 5 Paul Hege 5
Physics ±3	Physics ±3	Physics ±3
 ☐ Correct and relevant physics ☐ Scientific approach ☐ Validity of conclusions 	☐ Correct and relevant physics ☐ Scientific approach ☐ Validity of conclusions ☐ Accurate answers	☐ Correct and relevant physics ☐ Scientific approach ☐ Validity of conclusions
☐ Accurate answers	Accurate answers	☐ Accurate answers
Presentation ±1	Presentation ±1	Presentation ±1
Clear and understandable Appropriate manner	☐ Clear and understandable ☐ Appropriate manner	Clear and understandable
Overall impression	Overall impression	☐ Overall impression
Reporter ±1	Opponent ±1	Reviewer ±1
Quality of experimental technique(s) — analysis what	Response to the reporter's solution	Provides a thorough review of report and discussion
Structure is happy I h	☐ Shows the strong and weak points of the report	Expresses own opinion about topics presented or discussed
symbols Appropriate and delegate to	Finds shortcomings or errors in the report	Relevance of questions to both the reporter and the opponent
of dimensions Slides, on-site experiments, audio.	Appropriate models, conformity of dimensions Relevance of the questions Contribution to the discussion	
video, as appropriate References, proper citations of	12tA - where is	callected by the
ideas and input of others		This sheet will be collected by the fight assistant, so we can scan it and
Novelty of the report		archive your partial stades
Contribution to the discussion	-	do not bend
Final Grade: Reporter	Final Grade: Opponent	1/

	Fight (Round no.):		n: Stage:3 Problem no.:
Scoring Guideli	NES Juror: <u>GEORGE LASI</u>		m /
A report should include:	THOUSAND TO THE TOTAL THE		000
• a presentation of the appropriate conception application of appropriate mathematics • 1	easonable experimental technique to experimental findings to draw suita	gather and	explanation of the observed phenomena • an record data (or demonstrate the phenomena if ons • an attempt to communicate difficult or
An opposition should show that: • the opponent challenged the reporter's u appropriate mathematics presented • the opponent appreciated and highlighted the st	nderstanding of the presented concept pponent critiqued the experimental to	echnique use	and <i>principles</i> • the opponent understood the ed and questioned the <i>validity</i> of the <i>data</i> • the
important aspects (especially the controver	sial ones) ● the reviewer's personal o on-trivial and demonstrated, where po	<i>pinion</i> was in	and opponent • the reviewer appreciated the n evidence (not just superficial observations) • eviewer's understanding of concepts, theories,
 The grade for each of the three teams The reporter, opponent and reviewer Consider the following suggestions to Select each partial grade from each se Don't punish missing 'answers' when re 	each start with 5 points. add to or deduct from the initial 5 ction and write it in the correspon	points.	
Rep.: <u>CH</u> 5	Opp.: <i>N ₹</i>	5	Rev.: <i>GER</i> 5
Physics ±3	Physics ±3		Physics ±3
Correct and relevant physics Scientific approach Validity of conclusions Accurate answers	☐ Correct and relevant phy☐ Scientific approach☐ Validity of conclusions☐ Accurate answers	/sics	☐ Correct and relevant physics ☐ Scientific approach ☐ Validity of conclusions ☐ Accurate answers
Presentation ±1	Presentation ±1		Presentation ±1
Clear and understandable Appropriate manner Overall impression	☐ Clear and understandabl☐ Appropriate manner☐ Overall impression	e	☐ Clear and understandable ☐ Appropriate manner ☐ Overall impression
Reporter ±1	Opponent ±1		Reviewer ±1
Quality of experimental technique(s)	Response to the reporter solution	''S	Provides a thorough review of report and discussion
Structure	Shows the strong and we of the report	ak points	Expresses own opinion about topics presented or discussed
Explanation of formulae and symbols	Finds shortcomings or eri	rors in	Relevance of questions to both the
Appropriate models, conformity of dimensions	the report Relevance of the question	ns	reporter and the opponent Draws attention to points missed
Slides, on-site experiments, audio, video, as appropriate	Contribution to the discus		by the reporter or the opponent
References, proper citations of ideas and input of others			This sheet will be collected by the
Novelty of the report		·	This sheet will be constructed fight assistant, so we can scan it and archive your partial grades — please
Contribution to the discussion			do not bend
Final Grade: Reporter	Final Grade: Opponent	Revised :	Final Grade: Reviewer after IOC feedback and approved by EC on 2011-11-03

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J	CO			19	G	uI	\boldsymbol{q}	<i>e</i>			7	2	5

Fight (Round no.):	J.	Room:	0	Stage:	3.	Problem no.:	3
Juror: Zenzaci	- Rije	الأصي	Signatur	e: <u> </u>	Da,	Lan's	Z

Revised after IOC feedback and approved by EC on 2011-

Α	report	should	include:

• a presentation of the appropriate concepts, theories and principles of the problem • an explanation of the observed phenomena • an application of appropriate mathematics • reasonable experimental technique to gather and record data (or demonstrate the phenomena if appropriate) • linking of theoretical and experimental findings to draw suitable conclusions • an attempt to communicate difficult or complex ideas in an effective and understandable manner

An opposition should show that:

• the opponent challenged the reporter's understanding of the presented concepts, theories and principles • the opponent understood the appropriate mathematics presented • the opponent critiqued the experimental technique used and questioned the validity of the data • the opponent appreciated and highlighted the strengths and weaknesses of the report

A review should show that:

Final Grade: Reporter

- the reviewer succeeded in giving an objective summary of the performances the reporter and opponent the reviewer appreciated the important aspects (especially the controversial ones) • the reviewer's personal opinion was in evidence (not just superficial observations) • such personal opinions were informative, non-trivial and demonstrated, where possible, the reviewer's understanding of concepts, theories, principles and appropriate mathematics used by the reporter and the opponent
- The grade for each of the three teams consists of a partial grade for *physics*, *presentation* and for their *specific role*.
- The reporter, opponent and reviewer each start with 5 points.
- Consider the following suggestions to add to or deduct from the initial 5 points.

 Select each partial grade from each section and write it in the corresponding box. Don't punish missing 'answers' when no questions were posed or not finding shortcomings if there were none to find. 					
Rep.: 5	Opp.: 5	Rev.: 5			
Physics ±3 ☐ Correct and relevant physics ☐ Scientific approach ☐ Validity of conclusions ☐ Accurate answers	Physics ±3 Correct and relevant physics Scientific approach Validity of conclusions Accurate answers	Physics ±3 Correct and relevant physics Scientific approach Validity of conclusions Accurate answers			
Presentation ±1 Clear and understandable Appropriate manner Overall impression	Presentation ±1 ☐ Clear and understandable ☐ Appropriate manner ☐ Overall impression	Presentation ±1 ☐ Clear and understandable ☐ Appropriate manner ☐ Overall impression			
Reporter ±1	Opponent ±1 + 1	Reviewer ±1			
Quality of experimental technique(s)	Response to the reporter's solution	Provides a thorough review of report and discussion			
☐ Structure ☐ Explanation of formulae and	Shows the strong and weak points of the report	Expresses own opinion about topics presented or discussed			
symbols Appropriate models, conformity of dimensions	Finds shortcomings or errors in the report	Relevance of questions to both the reporter and the opponent			
Slides, on-site experiments, audio, video, as appropriate	☐ Relevance of the questions ☐ Contribution to the discussion	Draws attention to points missed by the reporter or the opponent			
References, proper citations of ideas and input of others		This sheet will be collected by the fight assistant, so we can scan it and			
☐ Novelty of the report		fight assistant, so we con archive your partial grades – please			
Contribution to the discussion		do not bend			
f-consequent		and the state of t			

Final Grade: Opponent

Scoring Guidelii	noc . 1 -T	n: C Stage: 3 Problem no.: 3
	Juror: 1-76m9 June	Signature:
application of appropriate mathematics • r	ets, theories and principles of the problem • and easonable experimental technique to gather and experimental findings to draw suitable conclusions dable manner	record data (or demonstrate the phenomena if
An opposition should show that: • the opponent challenged the reporter's unappropriate mathematics presented • the opponent appreciated and highlighted the st	nderstanding of the presented concepts, theories pponent critiqued the experimental technique use	and <i>principles</i> • the opponent understood the ed and questioned the <i>validity</i> of the <i>data</i> • the
important aspects (especially the controvers	ctive summary of the performances the reporter sial ones) • the reviewer's personal opinion was in trivial and demonstrated, where possible, the red by the reporter and the opponent	evidence (not just superficial observations) •
 The reporter, opponent and reviewer Consider the following suggestions to Select each partial grade from each see 	consists of a partial grade for <i>physics, presen</i> each <i>start with 5 points</i> . add to or deduct from the initial <i>5 points</i> . ction and write it in the corresponding box. no questions were posed or not finding shortc	
Rep.:5	Opp.:5	Rev.: 5
Physics ±3 Correct and relevant physics Scientific approach Validity of conclusions Accurate answers Presentation ±1 Clear and understandable Appropriate manner	Physics ±3 Correct and relevant physics Scientific approach Validity of conclusions Accurate answers Presentation ±1 Clear and understandable Appropriate manner	Physics ±3 Correct and relevant physics Scientific approach Validity of conclusions Accurate answers Presentation ±1 Clear and understandable Appropriate manner
Overall impression	Overall impression	Overall impression
Reporter ±1	Opponent ±1	Reviewer ±1
Quality of experimental technique(s)	Response to the reporter's solution	Provides a thorough review of report and discussion
Structure	Shows the strong and weak points of the report	Expresses own opinion about topics presented or discussed
Explanation of formulae and symbols	Finds shortcomings or errors in	Relevance of questions to both the
Appropriate models, conformity of dimensions	the report Relevance of the questions	reporter and the opponent Draws attention to points missed
Slides, on-site experiments, audio, video, as appropriate	Contribution to the discussion	by the reporter or the opponent
References, proper citations of ideas and input of others		This sheet will be collected by the fight assistant, so we can scan it and
☐ Novelty of the report		archive your partial grades
Contribution to the discussion		do not bend

Final Grade: Opponent

Final Grade: Reporter

		Fight (R	ouna no.):	<u>'</u> Room:	<u> </u>
Scorina	Guidelines		KABE	211/1/	
The state of the s		Juror:	MIDE	-MA	Signature:

Signature: Add nu

A report should include:

• a presentation of the appropriate concepts, theories and principles of the problem • an explanation of the observed phenomena • an application of appropriate mathematics • reasonable experimental technique to gather and record data (or demonstrate the phenomena if appropriate) • linking of theoretical and experimental findings to draw suitable conclusions • an attempt to communicate difficult or complex ideas in an effective and understandable manner

An opposition should show that:

• the opponent challenged the reporter's understanding of the presented concepts, theories and principles • the opponent understood the appropriate mathematics presented • the opponent critiqued the experimental technique used and questioned the validity of the data • the opponent appreciated and highlighted the strengths and weaknesses of the report

A review should show that:

- the reviewer succeeded in giving an *objective summary* of the performances the *reporter* and *opponent* the reviewer appreciated the *important aspects* (especially the *controversial* ones) the reviewer's *personal opinion* was in evidence (*not* just *superficial observations*) such personal opinions were *informative*, *non-trivial* and demonstrated, where possible, the reviewer's *understanding* of *concepts*, *theories*, *principles* and *appropriate mathematics* used by the reporter and the opponent
- The grade for each of the three teams consists of a partial grade for physics, presentation and for their specific role.
- The reporter, opponent and reviewer each start with 5 points.
- Consider the following *suggestions* to *add* to or *deduct* from the initial *5 points*.
- Select each partial grade from each section and write it in the corresponding box.

Don't punish missing 'answers' when no questions were posed or not finding shortcomings if there were none to find.					
Rep.: 5	Opp.: 5	Rev. :5			
Physics ±3	Physics ±3	Physics ±3			
Correct and relevant physics	☐ Correct and relevant physics	☐ Correct and relevant physics			
Scientific approach	☐ Scientific approach	☐ Scientific approach			
☐ Validity of conclusions	☐ Validity of conclusions	☐ Validity of conclusions			
☐ Accurate answers	☐ Accurate answers	☐ Accurate answers			
Presentation ±1	Presentation ±1 +1	Presentation ±1			
☐ Clear and understandable	☐ Clear and understandable	☐ Clear and understandable			
☐ Appropriate manner	☐ Appropriate manner	☐ Appropriate manner			
Overall impression	Overall impression	Overall impression			
Reporter ±1	Opponent ±1 +1	Reviewer ±1			
Quality of experimental technique(s)	Response to the reporter's solution	Provides a thorough review of report and discussion			
☐ Structure	☐ Shows the strong and weak points	Expresses own opinion about			
☐ Explanation of formulae and	of the report	topics presented or discussed			
symbols	Finds shortcomings or errors in the report	Relevance of questions to both the reporter and the opponent			
Appropriate models, conformity of dimensions	☐ Relevance of the questions				
Slides, on-site experiments, audio, video, as appropriate	Contribution to the discussion	Draws attention to points missed by the reporter or the opponent			
References, proper citations of ideas and input of others		This sheet will be collected by the fight assistant, so we can scan it and			
☐ Novelty of the report		archive your partial grades			
Contribution to the discussion		do not bend			
_{pero} ,	***************************************				

Grade: Reporter Final Grade: Opponent

Final Grade: Reviewer

Final Grade: Reporter

Scoring Guide

NZ GER CZ	Fight (Round no	o.): 1 Roor	n: C Stage: 1	Problem no : 6
Scoring Guideli	Table and and	32 LKA		Kelin
A report should include: • a presentation of the appropriate conceapplication of appropriate mathematics • appropriate) • linking of theoretical and complex ideas in an effective and understand	reasonable experimental techni experimental findings to draw	i que to <i>gather</i> and .	record data (or demonstrate	the phenomena if
An opposition should show that the opponent challenged the reporter's appropriate mathematics presented • the opponent appreciated and highlighted the	understanding of the presented opponent critiqued the experim	ental technique use	and <i>principles</i> • the opponed and questioned the <i>validit</i>	ent understood the ty of the <i>data</i> • the
A review should show that: • the reviewer succeeded in giving an objimportant aspects (especially the controve such personal opinions were informative, in principles and appropriate mathematics us	ersial ones) • the reviewer's <i>pers</i> non-trivial and demonstrated, wi	conal opinion was in here possible, the re	n evidence (<i>not</i> just <i>superfic</i>	ial observations) •
The grade for each of the three team The <i>reporter</i> , <i>opponent</i> and <i>reviewe</i> Consider the following <i>suggestions</i> to Select each partial grade from each s Don't punish missing 'answers' when	r each s tart with 5 points . O add to or deduct from the ir ection and write it in the corr	nitial 5 points . esponding box.		
Rep.: 5	Орр.:	5	Rev.:	5
hysics ±3	Physics ±3	1	Physics ±3	1
Correct and relevant physics	Correct and relevan	. ,	☐ Correct and relev	ant physics
Scientific approach Validity of conclusions	Scientific approach		Scientific approach	
Accurate answers	☐ Validity of conclusion ☐ Accurate answers	ons	☐ Validity of conclu☐ Accurate answers	
	- 1 Courace answers	#8000MNstSunnendonomical processing	— Accurate answers	,

Rep.: 5	Opp.: 5	Rev.: 5
Physics ±3	Physics ±3	Physics ±3
☐ Correct and relevant physics	☐ Correct and relevant physics	☐ Correct and relevant physics
☐ Scientific approach	☐ Scientific approach	☐ Scientific approach
☐ Validity of conclusions	☐ Validity of conclusions	☐ Validity of conclusions
☐ Accurate answers	☐ Accurate answers	☐ Accurate answers
Presentation ±1	Presentation ±1	Presentation ±1
☐ Clear and understandable	☐ Clear and understandable	☐ Clear and understandable
☐ Appropriate manner	☐ Appropriate manner	☐ Appropriate manner
Overall impression	☐ Overall impression	Overall impression
Reporter ±1	Opponent ±1	Reviewer ±1
Quality of experimental technique(s)	Response to the reporter's solution	Provides a thorough review of report and discussion
☐ Structure	☐ Shows the strong and weak points	☐ Expresses own opinion about
☐ Explanation of formulae and	of the report	topics presented or discussed
symbols Appropriate models, conformity	Finds shortcomings or errors in the report	Relevance of questions to both the reporter and the opponent
of dimensions	☐ Relevance of the questions	☐ Draws attention to points missed
Slides, on-site experiments, audio, video, as appropriate	☐ Contribution to the discussion	by the reporter or the opponent

This sheet will be collected by the References, proper citations of fight assistant, so we can scan it and ideas and input of others archive your partial grades - please ☐ Novelty of the report ☐ Contribution to the discussion do not bend

> Final Grade: Reviewer Revised after IOC feedback and approved by EC on 2011-11-03

Final Grade: Opponent

Consider Control 1	Fight (Round no.): Roo	m: Stage: Problem no.:
Scoring Guideli	nes Juror: Hong Jung	_ Signature:
application of appropriate mathematics •	epts, theories and principles of the problem • an reasonable experimental technique to gather and experimental findings to draw suitable conclusi	record data (or demonstrate the phenomena if
complex ideas in an effective and understa	indable manner	sis a an actempt to communicate difficult of
An opposition should show that • the opponent challenged the reporter's appropriate mathematics presented • the opponent appreciated and highlighted the	understanding of the presented concepts, theories opponent critiqued the experimental technique us	and <i>principles</i> • the opponent understood the ed and questioned the <i>validity</i> of the <i>data</i> • the
A review should show that:		
important aspects (especially the controve	ective summary of the performances the reporter ersial ones) • the reviewer's personal opinion was in non-trivial and demonstrated, where possible, the seed by the reporter and the opponent	n evidence (not just superficial observations) .
Select each partial grade from each se	o add to or deduct from the initial 5 points. ection and write it in the corresponding box. no questions were posed or not finding shorte	comings if there were none to find.
Physics ±3	Physics ±3	Physics ±3
Correct and relevant physics	☐ Correct and relevant physics	☐ Correct and relevant physics
Scientific approach	☐ Scientific approach	☐ Scientific approach
Validity of conclusions	☐ Validity of conclusions	☐ Validity of conclusions
Accurate answers	☐ Accurate answers	☐ Accurate answers
resentation ±1	Presentation ±1	Presentation ±1
Clear and understandable	Clear and understandable	Clear and understandable
Appropriate manner	☐ Appropriate manner	Appropriate manner
Overall impression	Overall impression	Overall impression
eporter ±1	Opponent ±1	Reviewer ±1
⚠ Quality of experimental technique(s)	Response to the reporter's solution	Provides a thorough review of report and discussion
Structure	Shows the strong and weak points	Expresses own opinion about
Explanation of formulae and symbols	of the report Finds shortcomings or errors in	topics presented or discussed Relevance of questions to both the
Appropriate models, conformity	the report	reporter and the opponent

This sheet will be collected by the fight assistant, so we can scan it and archive your partial grades - please do not bend

Draws attention to points missed by the reporter or the opponent

Final Grade: Reporter Final Grade: Opponent

Relevance of the questions

☐ Contribution to the discussion

Appropriate models, conformity of dimensions

Slides, on-site experiments) audio, video, as appropriate

References, proper citations of ideas and input of others

☐ Contribution to the discussion

☐ Novelty of the report

C	CO	F	e F	, B	7				0	8	, #	7	0	C
Second P	LU	#				S	LA	M	<u>_</u>	H				J

Fight (Round no.):	Room:	Stage:	1	Problem no	.: <u>&</u>
Juror: Coursana	Rafern D Si	gnature:	Pale	soits.	2

Revised after IOC feedback and approved by EC on 2011

A	re	port	should	include:
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• a presentation of the appropriate concepts, theories and principles of the problem • an explanation of the observed phenomena • an application of appropriate mathematics • reasonable experimental technique to gather and record data (or demonstrate the phenomena if appropriate) • linking of theoretical and experimental findings to draw suitable conclusions • an attempt to communicate difficult or complex ideas in an effective and understandable manner

An opposition should show that:

• the opponent *challenged* the *reporter's understanding* of the presented *concepts, theories* and *principles* • the opponent understood the *appropriate mathematics* presented • the opponent *critiqued* the *experimental technique* used and questioned the *validity* of the *data* • the opponent appreciated and highlighted the *strengths and weaknesses* of the report

A review should show that:

- the reviewer succeeded in giving an *objective summary* of the performances the *reporter* and *opponent* the reviewer appreciated the *important aspects* (especially the *controversial* ones) the reviewer's *personal opinion* was in evidence (*not* just *superficial observations*) such personal opinions were *informative*, *non-trivial* and demonstrated, where possible, the reviewer's *understanding* of *concepts*, *theories*, *principles* and *appropriate mathematics* used by the reporter and the opponent
- The grade for each of the three teams consists of a partial grade for physics, presentation and for their specific role.
- The reporter, opponent and reviewer each start with 5 points.
- Consider the following *suggestions* to *add* to or *deduct* from the initial *5 points*.
- Select each partial grade from each section and write it in the corresponding box.

 Don't punish missing 'answers' when no questions were posed or not finding shortcomings if there were none to find. 				
Rep.: 5	Opp.: 5	Rev.: 5		
Physics ±3	Physics ±3	Physics ±3		
Correct and relevant physics	Correct and relevant physics	Correct and relevant physics		
☐ Scientific approach	☐ Scientific approach	☐ Scientific approach		
☐ Validity of conclusions	☐ Validity of conclusions	☐ Validity of conclusions		
☐ Accurate answers	☐ Accurate answers	☐ Accurate answers		
Presentation ±1	Presentation ±1 +1	Presentation ±1		
	☑ Clear and understandable	☐ Clear and understandable		
☐ Appropriate manner	☐ Appropriate manner	☐ Appropriate manner		
☐ Overall impression	☐ Overall impression	☐ Overall impression		
Reporter ±1	Opponent ±1	Reviewer ±1 +1		
Quality of experimental technique(s)	Response to the reporter's solution	Provides a thorough review of report and discussion		
☐ Structure	☐ Shows the strong and weak points	Expresses own opinion about		
🗵 Explanation of formulae and	of the report	topics presented or discussed		
symbols	Finds shortcomings or errors in the report	Relevance of questions to both the reporter and the opponent		
 Appropriate models, conformity of dimensions 	☐ Relevance of the questions	Draws attention to points missed by the reporter or the opponent		
Slides, on-site experiments, audio, video, as appropriate	☐ Contribution to the discussion	by the reporter or the opponent		
References, proper citations of ideas and input of others		This sheet will be collected by the fight assistant, so we can scan it and		
☐ Novelty of the report		fight assistant, so we con archive your partial grades – please		
Contribution to the discussion		do not bend		

Final Grade: Opponent

Scoring Guideli			n: Stage: Prob	
Jeorning Caracii	Juror: Xuene	i (au	_ Signature: _ X (<u> </u>
A report should include: • a presentation of the appropriate conce application of appropriate mathematics • appropriate) • linking of theoretical and complex ideas in an effective and understa	reasonable experimental technique experimental findings to draw suit	to gather and	record data (or demonstrate the pi	henomena if
An opposition should show that • the opponent challenged the reporter's appropriate mathematics presented • the opponent appreciated and highlighted the statement of the statem	: understanding of the presented conc opponent critiqued the experimenta	I technique use	and <i>principles</i> • the opponent under the definition of the destioned the validity of the	derstood the e <i>data</i> • the
A review should show that:				
 the reviewer succeeded in giving an objection important aspects (especially the controver such personal opinions were informative, reprinciples and appropriate mathematics us 	ersial ones) • the reviewer's personal non-trivial and demonstrated, where	opinion was in possible, the re	n evidence (not just superficial obs.	eruntions) e
 The grade for each of the three team The reporter, opponent and reviewer Consider the following suggestions to Select each partial grade from each se Don't punish missing 'answers' when 	r each start with 5 points. O add to or deduct from the initial ection and write it in the correspo	5 points. Sinding box.		
Rep.: New Zealen 5	Opp.: Gerney	- 5	Rev.: Czech	5
Physics ±3 ☐ Correct and relevant physics ☐ Scientific approach ☐ Validity of conclusions ☐ Accurate answers	Physics ±3 ☐ Correct and relevant p ☐ Scientific approach ☐ Validity of conclusions ☐ Accurate answers	hysics	Physics ±3 ☐ Correct and relevant p ☐ Scientific approach ☐ Validity of conclusions ☐ Accurate answers	hysics
Presentation ±1	Presentation ±1	· ·	Presentation ±1	0
☐ Clear and understandable☐ Appropriate manner☐ Overall impression	☐ Clear and understanda ☐ Appropriate manner ☐ Overall impression	ble	☐ Clear and understanda ☐ Appropriate manner ☐ Overall impression	ble
Reporter ±1	Opponent ±1	/	Reviewer ±1	
Quality of experimental technique(s)	Response to the report solution	er's	Provides a thorough re-	view of
☐ Structure ☐ Explanation of formulae and	Shows the strong and v	veak points	Expresses own opinion topics presented or disc	about cussed
symbols Appropriate models, conformity	Finds shortcomings or each the report	errors in	Relevance of questions reporter and the oppon	to both the
of dimensions Slides, on-site experiments, audio,	Relevance of the questi Contribution to the disc		Draws attention to poin by the reporter or the c	nts missed opponent
video, as appropriate References, proper citations of	a contribution to the disc	.ussiOII	ill ha rallecte	ed by the
ideas and input of others Novelty of the report			This sheet will be collect fight assistant, so we can sarchive your partial grade	Standard
Contribution to the discussion			do not bend	•
Final Grade: Reporter	Final Grade: Opponent	Revised a	Final Grade: Reviewer after IOC feedback and approved by EC	on 2011-11-03

Convince Carialalia	Fight (Round no.): Roor	n: Stage: Problem no.: &
Scoring Guidelin	165 Juror: ALAN ALLINSON	Signature: Ale All
A report should include:		
• a presentation of the appropriate concepapplication of appropriate mathematics • re	ts, theories and principles of the problem • an a easonable experimental technique to gather and xperimental findings to draw suitable conclusion dable manner	record data (or demonstrate the phenomena if
An opposition should show that:		
• the opponent <i>challenged</i> the <i>reporter's un</i>	nderstanding of the presented concepts, theories oponent critiqued the experimental technique use rengths and weaknesses of the report	and <i>principles</i> • the opponent understood the d and questioned the <i>validity</i> of the <i>data</i> • the
important aspects (especially the controvers	tive summary of the performances the reporter sial ones) • the reviewer's personal opinion was in n-trivial and demonstrated, where possible, the red by the reporter and the opponent	n evidence (not just superficial observations) .
 The reporter, opponent and reviewer of the consider the following suggestions to a select each partial grade from each second 	consists of a partial grade for <i>physics</i> , <i>present</i> each <i>start with 5 points</i> . add to or <i>deduct</i> from the initial <i>5 points</i> . action and <i>write it</i> in the corresponding box. o questions were posed or not finding shortcy Tobias Scheme Inago 5	
Physics ±3	Physics ±3	Physics ±3
Correct and relevant physics	Correct and relevant physics	☐ Correct and relevant physics
Scientific approach—tack of data	☐ Scientific approach ,	☐ Scientific approach
☐ Validity of conclusions	☐ Validity of conclusions	☐ Validity of conclusions
☐ Accurate answers	☐ Accurate answers	☐ Accurate answers
Presentation ±1	Presentation ±1	Presentation ±1
☑ Clear and understandable	☐ Clear and understandable	Clear and understandable
Appropriate manner	Appropriate manner	Appropriate manner
Overall impression	Overall impression	Overall impression
Reporter ±1	Opponent ±1	Reviewer ±1
Quality of experimental technique(s)	Response to the reporter's solution	Provides a thorough review of report and discussion
], Structure	☐ Shows the strong and weak points	,
Explanation of formulae and symbols	of the report Finds shortcomings or errors in	topics presented or discussed
Appropriate models, conformity	the report	Relevance of questions to both the reporter and the opponent

☐ Relevance of the questions

Contribution to the discussion

Appropriate models, conformity of dimensions

Slides, on-site experiments, audio, video, as appropriate

? References, proper citations of ideas and input of others

 \square Contribution to the discussion \bigcirc \bigcirc \bigcirc \bigcirc \bigcirc

☐ Novelty of the report

Final Grade: Reporter

Final Grade: Opponent Final Grade: Reviewer

Revised after IOC feedback and approved by EC on 2011-11-03

Draws attention to points missed by the reporter or the opponent

This sheet will be collected by the

fight assistant, so we can scan it and archive your partial grades – please

do not bend

Scoring Guidelines

Fight (Round no.):	_ Room: _	<u></u>	Stage: _	4	Problem no.:	6
Juror: GEDRGE LASKHI	SHVILIS	ignatur	e: 4	Mey	Ma	

Δ	report	should	include:
~		3112211	HILLUUC.

• a presentation of the appropriate concepts, theories and principles of the problem • an explanation of the observed phenomena • an application of appropriate mathematics • reasonable experimental technique to gather and record data (or demonstrate the phenomena if appropriate) • linking of theoretical and experimental findings to draw suitable conclusions • an attempt to communicate difficult or complex ideas in an effective and understandable manner

An opposition should show that:

• the opponent challenged the reporter's understanding of the presented concepts, theories and principles • the opponent understood the appropriate mathematics presented • the opponent critiqued the experimental technique used and questioned the validity of the data • the opponent appreciated and highlighted the strengths and weaknesses of the report

A review should show that:

- the reviewer succeeded in giving an objective summary of the performances the reporter and opponent the reviewer appreciated the important aspects (especially the controversial ones) • the reviewer's personal opinion was in evidence (not just superficial observations) • such personal opinions were informative, non-trivial and demonstrated, where possible, the reviewer's understanding of concepts, theories, principles and appropriate mathematics used by the reporter and the opponent
- The grade for each of the three teams consists of a partial grade for physics, presentation and for their specific role.
- The reporter, opponent and reviewer each start with 5 points.
- Consider the following suggestions to add to or deduct from the initial 5 points.

 Select each partial grade from each section and write it in the corresponding box. Don't punish missing 'answers' when no questions were posed or not finding shortcomings if there were none to find. 				
Rep.: N≥ 5	Opp.: <u>GER</u> 5	Rev.:		
Physics ±3	Physics ±3	Physics ±3		
☐ Correct and relevant physics	☐ Correct and relevant physics	☐ Correct and relevant physics		
☐ Scientific approach	Scientific approach	☐ Scientific approach		
☐ Validity of conclusions	☐ Validity of conclusions	☐ Validity of conclusions		
Accurate answers	☐ Accurate answers	☐ Accurate answers		
Presentation ±1	Presentation ±1	Presentation ±1		
☐ Clear and understandable	☐ Clear and understandable	☐ Clear and understandable		
☐ Appropriate manner	☐ Appropriate manner	☐ Appropriate manner		
Overall impression	☐ Overall impression	Overall impression		
Reporter ±1	Opponent ±1	Reviewer ±1		
Quality of experimental technique(s)	Response to the reporter's solution	Provides a thorough review of report and discussion		
☐ Structure	☐ Shows the strong and weak points	Expresses own opinion about		
☐ Explanation of formulae and	of the report	topics presented or discussed		
symbols Appropriate models, conformity	Finds shortcomings or errors in the report	Relevance of questions to both the reporter and the opponent		
of dimensions	☐ Relevance of the questions	☐ Draws attention to points missed		
Slides, on-site experiments, audio, video, as appropriate	Contribution to the discussion	by the reporter or the opponent		
References, proper citations of ideas and input of others		This sheet will be collected by the fight assistant, so we can scan it and		
☐ Novelty of the report		fight assistant, so we can be assected archive your partial grades - please		
Contribution to the discussion		do not bend		
		-		

Final Grade: Opponent

Scoring G

	Fisha (David as)	C . D
Scoring Guideli		n: C Stage: 2 Problem no.: 12 Signature: When
application of appropriate mathematics • r	ots, theories and principles of the problem • an e easonable experimental technique to gather and experimental findings to draw suitable conclusion adable manner	record data for demonstrate the phenomena if
An opposition should show that: • the opponent challenged the reporter's unappropriate mathematics presented • the opponent appreciated and highlighted the st	nderstanding of the presented concepts, theories pponent critiqued the experimental technique use	and <i>principles</i> • the opponent understood the data • the
important aspects (especially the controvers	ctive summary of the performances the reporter sial ones) • the reviewer's personal opinion was in on-trivial and demonstrated, where possible, the red by the reporter and the opponent	evidence (not just superficial observations)
 The reporter, opponent and reviewer Consider the following suggestions to Select each partial grade from each see 	consists of a partial grade for <i>physics</i> , <i>presen</i> each <i>start with 5 points</i> . add to or deduct from the initial <i>5 points</i> . ction and write it in the corresponding box. no questions were posed or not finding shortc	
Rep.:5	Opp.: 5	Rev.: 5
Physics ±3 Correct and relevant physics Scientific approach Validity of conclusions Accurate answers	Physics ±3 Correct and relevant physics Scientific approach Validity of conclusions Accurate answers	Physics ±3 ☐ Correct and relevant physics ☐ Scientific approach ☐ Validity of conclusions ☐ Accurate answers
Presentation ±1 Clear and understandable Appropriate manner Overall impression	Presentation ±1 ☐ Clear and understandable ☐ Appropriate manner ☐ Overall impression	Presentation ±1
Reporter ±1 Quality of experimental technique(s)	Opponent ±1 Response to the reporter's solution	Reviewer ±1 Provides a thorough review of report and discussions
☐ Structure ☐ Explanation of formulae and symbols ☐ Appropriate models, conformity	Shows the strong and weak points of the report Finds shortcomings or errors in the report	report and discussion Expresses own opinion about topics presented or discussed Relevance of questions to both the reporter and the opponent

Reporter ±1

Appropriate models, conformity of dimensions

☐ Slides, on-site experiments, audio, video, as appropriate

References, proper citations of ideas and input of others

☐ Novelty of the report

Final Grade: Reporter

☐ Contribution to the discussion

Final Grade: Opponent

☐ Relevance of the questions

☐ Contribution to the discussion



do not bend

Draws attention to points missed by the reporter or the opponent

This sheet will be collected by the

fight assistant, so we can scan it and

archive your partial grades - please

Scoring Guidelines	Fight (Round no.):/ Room:C Stage: Problem no.:/2 Juror:/ Jung Signature: A
A report should include:	
• a presentation of the appropriate concepts, theories	and principles of the problem • an explanation of the observed phenomena • an
application of appropriate mathematics • reasonable e	experimental technique to gather and record data (or demonstrate the phenomena if
	al findings to draw suitable conclusions a an attempt to communicate difficult or

complex ideas in an effective and understandable manner

An opposition should show that:

• the opponent *challenged* the *reporter's understanding* of the presented *concepts, theories* and *principles* • the opponent understood the *appropriate mathematics* presented • the opponent *critiqued* the *experimental technique* used and questioned the *validity* of the *data* • the opponent appreciated and highlighted the *strengths and weaknesses* of the report

A review should show that:

- the reviewer succeeded in giving an *objective summary* of the performances the *reporter* and *opponent* the reviewer appreciated the *important aspects* (especially the *controversial* ones) the reviewer's *personal opinion* was in evidence (*not* just *superficial observations*) such personal opinions were *informative*, *non-trivial* and demonstrated, where possible, the reviewer's *understanding* of *concepts*, *theories*, *principles and appropriate mathematics* used by the reporter and the opponent
- The grade for each of the three teams consists of a partial grade for physics, presentation and for their specific role.

 The reporter, opponent and reviewer expensions Consider the following suggestions to expensions Select each partial grade from each second 	each start with 5 points. Find to or deduct from the initial 5 points. Start and write it in the corresponding box. To questions were posed or not finding shorted	, ,
Rep.:	Opp.:5	Rev.: 5
Physics ±3	Physics ±3	Physics ±3
Correct and relevant physics	☐ Correct and relevant physics	☐ Correct and relevant physics
Scientific approach	☐ Scientific approach	☐ Scientific approach
☐ Validity of conclusions	☐ Validity of conclusions	☐ Validity of conclusions
☐ Accurate answers	Accurate answers	☐ Accurate answers
Presentation ±1	Presentation ±1	Presentation ±1
Clear and understandable	Clear and understandable	Clear and understandable
☐ Appropriate manner	Appropriate manner	☐ Appropriate manner
Overall impression	Overall impression	☐ Overall impression
Reporter ±1	Opponent ±1	Reviewer ±1
Quality of experimental technique(s)	Response to the reporter's solution	Provides a thorough review of report and discussion
☐ Structure	Shows the strong and weak points	Expresses own opinion about
Explanation of formulae and symbols	of the report Finds shortcomings or errors in	topics presented or discussed Relevance of questions to both the
Appropriate models, conformity of dimensions	the report	reporter and the opponent
	Relevance of the questions	Draws attention to points missed by the reporter or the opponent
Slides, on-site experiments, audio, video, as appropriate	☐ Contribution to the discussion	
References, proper citations of ideas and input of others		This sheet will be collected by the fight assistant, so we can scan it and
☐ Novelty of the report		archive your partial glades
Contribution to the discussion		do not bend
Final Grade: Reporter	Final Grade: Opponent	Final Grade: Boylower

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Fight (Round no.):	Room:	: Stage	· 2.	Problem no.	: 12.
Juror: Zusana	Rajsont	Signature:	Dail	antos	2

Ar	eport	should	include:
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• a presentation of the appropriate concepts, theories and principles of the problem • an explanation of the observed phenomena • an application of appropriate mathematics • reasonable experimental technique to gather and record data (or demonstrate the phenomena if appropriate) • linking of theoretical and experimental findings to draw suitable conclusions • an attempt to communicate difficult or complex ideas in an effective and understandable manner

An opposition should show that:

• the opponent *challenged* the *reporter's understanding* of the presented *concepts, theories* and *principles* • the opponent understood the *appropriate mathematics* presented • the opponent *critiqued* the *experimental technique* used and questioned the *validity* of the *data* • the opponent appreciated and highlighted the *strengths and weaknesses* of the report

A review should show that:

- the reviewer succeeded in giving an *objective summary* of the performances the *reporter* and *opponent* the reviewer appreciated the *important aspects* (especially the *controversial* ones) the reviewer's *personal opinion* was in evidence (*not* just *superficial observations*) such personal opinions were *informative*, *non-trivial* and demonstrated, where possible, the reviewer's *understanding* of *concepts*, *theories*, *principles and appropriate mathematics* used by the reporter and the opponent
- The grade for each of the three teams consists of a partial grade for physics, presentation and for their specific role.
- The reporter, opponent and reviewer each start with 5 points.
- Consider the following suggestions to add to or deduct from the initial 5 points.
- Select each partial grade from each section and write it in the corresponding box.

 Don't punish missing 'answers' when n 	o questions were posed or not finding shortco	omings if there were none to find.
Rep.: 5	Opp.: 5	Rev.: 5
Physics ±3	Physics ±3	Physics ±3
Correct and relevant physics	☐ Correct and relevant physics	☐ Correct and relevant physics
Scientific approach	☐ Scientific approach	☐ Scientific approach
☐ Validity of conclusions	☐ Validity of conclusions	☐ Validity of conclusions
☐ Accurate answers	Accurate answers	☑ Accurate answers
Presentation ±1 +1	Presentation ±1 +1	Presentation ±1
Clear and understandable	☐ Clear and understandable	☐ Clear and understandable
☐ Appropriate manner	Appropriate manner	☐ Appropriate manner
Overall impression	Overall impression	☐ Overall impression
Reporter ±1	Opponent ±1	Reviewer ±1 +1
Quality of experimental technique(s)	Response to the reporter's solution	Provides a thorough review of report and discussion
Structure ■ Struc	☐ Shows the strong and weak points	Expresses own opinion about
☐ Explanation of formulae and	of the report	topics presented or discussed
symbols Appropriate models, conformity	Finds shortcomings or errors in the report	Relevance of questions to both the reporter and the opponent
 Appropriate models, conformity of dimensions 	☐ Relevance of the questions	Draws attention to points missed
Slides, on-site experiments, audio, video, as appropriate	☐ Contribution to the discussion	by the reporter or the opponent
References, proper citations of ideas and input of others		This sheet will be collected by the fight assistant, so we can scan it and
☐ Novelty of the report		fight assistant, so we com- archive your partial grades – please
Contribution to the discussion		do not bend
CONTROL CONTRO		gibin de la companya

de: Reporter Final Grade: Oppon





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Final Grade: Opponent

Physics ±3

Scientific approach

☐ Accurate answers

Presentation ±1

☐ Validity of conclusions

Clear and understandable

Appropriate manner

☐ Quality of experimental

団 Explanation of formulae and

Appropriate models, conformity

Slides, on-site experiments, audio,

References, proper citations of ideas and input of others

Contribution to the discussion

Overall impression

Reporter ±1

図 Structure

☐ Novelty of the report

Final Grade: Reporter

Scoring Guidelii		n: Stage: Problem no.: 2
scoring Guideni	Juror: <u>Xue wei Cas</u>	Signature: X Cao
application of appropriate mathematics • re	ts, theories and principles of the problem • an e easonable experimental technique to gather and experimental findings to draw suitable conclusion dable manner	record data (or demonstrate the phenomena if
An opposition should show that: • the opponent challenged the reporter's unappropriate mathematics presented • the opponent appreciated and highlighted the st	nderstanding of the presented concepts, theories pponent critiqued the experimental technique use rengths and weaknesses of the report	and <i>principles</i> • the opponent understood the d and questioned the <i>validity</i> of the <i>data</i> • the
A review should show that:		
important aspects (especially the controvers	tive summary of the performances the reporter sial ones) • the reviewer's personal opinion was in in-trivial and demonstrated, where possible, the red by the reporter and the opponent	n evidence (not just superficial observations)
The <i>reporter, opponent</i> and <i>reviewer</i> consider the following <i>suggestions</i> to Select each partial grade from each sec	consists of a partial grade for <i>physics</i> , <i>present</i> each <i>start with 5 points</i> . add to or <i>deduct</i> from the initial <i>5 points</i> . ction and <i>write it</i> in the corresponding box. so questions were posed or not finding shortcome.	
Rep.: (Fermany 5	Opp.: (zeeh 5	Rev.: <u>MZ</u> 5
Physics ±3	Physics ±3	Physics ±3
Correct and relevant physics	☐ Correct and relevant physics	☐ Correct and relevant physics
Scientific approach	Scientific approach	☐ Scientific approach
Validity of conclusions	☐ Validity of conclusions	☐ Validity of conclusions
Accurate answers	☐ Accurate answers	☐ Accurate answers
resentation ±1	Presentation ±1	Presentation ±1 /
Clear and understandable	☐ Clear and understandable	Clear and understandable
Appropriate manner	Appropriate manner	☐ Appropriate manner
Overall impression	Overall impression	Overall impression
eporter ±1	Opponent ±1	Reviewer ±1
Quality of experimental technique(s)	Response to the reporter's solution	Provides a thorough review of report and discussion
Structure	☐ Shows the strong and weak points	Expresses own opinion about
Explanation of formulae and symbols	of the report Finds shortcomings or errors in	topics presented or discussed Relevance of questions to both the
Appropriate models, conformity of dimensions	the report	reporter and the opponent
Slides, on-site experiments, audio, video, as appropriate	Relevance of the questions Contribution to the discussion	Draws attention to points missed by the reporter or the opponent
References, proper citations of ideas and input of others		This sheet will be collected by the
Novelty of the report		This sheet will be de- fight assistant, so we can scan it and archive your partial grades — please
Contribution to the discussion		do not bend
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				State Services									

	Fight (Round no.): Ro	om: Stage: Problem no.:					
Scoring Guideli		Signature:AleAllei					
application of appropriate mathematics •	reasonable experimental technique to gather an experimental findings to draw suitable conclusions.	n explanation of the observed phenomena • and record data (or demonstrate the phenomena if sions • an attempt to communicate difficult or					
An opposition should show that • the opponent challenged the reporter's appropriate mathematics presented • the opponent appreciated and highlighted the second	understanding of the presented concepts, theorie opponent critiqued the experimental technique o	es and <i>principles</i> • the opponent understood the used and questioned the <i>validity</i> of the <i>data</i> • the					
important aspects (especially the controve	ersial ones) • the reviewer's personal opinion was non-trivial and demonstrated, where possible, the	er and opponent • the reviewer appreciated the in evidence (not just superficial observations) • reviewer's understanding of concepts, theories,					
 The reporter, opponent and reviewer Consider the following suggestions to Select each partial grade from each see 	s consists of a partial grade for <i>physics, prese</i> reach start with 5 points. On add to or deduct from the initial 5 points. Exection and write it in the corresponding box. In no questions were posed or not finding shor						
Rep.: Germany 5	Opp.: Czech AnhVu Le 5	Rev.: NZ. 5					
Physics ±3 Correct and relevant physics Scientific approach Validity of conclusions Accurate answers	Physics ±3 Correct and relevant physics Scientific approach Validity of conclusions Accurate answers	Physics ±3 Correct and relevant physics Scientific approach Validity of conclusions Accurate answers					
Presentation ±1 Clear and understandable Appropriate manner Overall impression	Presentation ±1 Clear and understandable Appropriate manner Overall impression	Presentation ±1 ☐ Clear and understandable ☐ Appropriate manner ☐ Overall impression					
Reporter ±1 Quality of experimental technique(s) 7	Opponent ±1 7 (Reviewer ±1 Provides a thorough review of report and discussion					
Explanation of formulae and symbols	Shows the strong and weak points of the report Finds shortcomings or errors in the report	ev topics presented or discussed ☐ Relevance of questions to both the					
 Appropriate models, conformity of dimensions Slides, on-site experiments, audio, video, as appropriate 	Relevance of the questions Contribution to the discussion	reporter and the opponent Draws attention to points missed by the reporter or the opponent					
References, proper citations of ideas and input of others Novelty of the report Contribution to the discussion	needs to followthrough to gra out devils.	This sheet will be collected by the fight assistant, so we can scan it and archive your partial grades – please do not bend					
Final Grade: Reporter	Final Grade: Opponent	Final Grade: Reviewer					

Scoring Guidelines

Scoring Guideli	Fight (Round no.): Nes Juror: <u>GEDREF LASE</u>		om: C Stage: 2 Problem no.: 12
application of appropriate mathematics •	reasonable experimental technique to <i>experimental findings</i> to draw <i>suita</i> l	gather an	n <i>explanation</i> of the <i>observed phenomena</i> • an ad <i>record data</i> (or <i>demonstrate</i> the <i>phenomena</i> if <i>the insions</i> • an attempt to communicate <i>difficult</i> or
An opposition should show that • the opponent <i>challenged</i> the <i>reporter's u</i> appropriate mathematics presented • the copponent appreciated and highlighted the s	inderstanding of the presented concept opponent critiqued the experimental to	e <mark>chniaue</mark> u	es and principles • the opponent understood the used and questioned the validity of the data • the
important aspects (especially the controver	rsial ones) • the reviewer's personal o on-trivial and demonstrated, where po	pinion was	er and opponent • the reviewer appreciated the s in evidence (not just superficial observations) • e reviewer's understanding of concepts, theories,
The grade for each of the three teams The <i>reporter</i> , <i>opponent</i> and <i>reviewer</i> Consider the following <i>suggestions</i> to Select each partial grade from each se Don't punish missing 'answers' when	each start with 5 points. add to or deduct from the initial 5 ection and write it in the correspon	<i>points</i> . ding box.	
Rep.: GERMANY 5	Opp.: <u>@ 州</u>	5	Rev.: <u>M</u> Z 5
hysics ±3	Physics ±3		Physics ±3
Correct and relevant physics	☐ Correct and relevant phy	sics	☐ Correct and relevant physics
Scientific approach	☐ Scientific approach		☐ Scientific approach
Validity of conclusions	☐ Validity of conclusions		☐ Validity of conclusions
Accurate answers	☐ Accurate answers		☐ Accurate answers
resentation ±1	Presentation ±1		Presentation ±1

Accurate answers Presentation +1

Rep.: GERMAN

Physics ±3

☐ Clear and understandable

☐ Correct and relevant physics

☐ Validity of conclusions

☐ Appropriate manner

Overall impression

Reporter ±1

Quality of experimental technique(s)

☐ Structure

Explanation of formulae and symbols

Appropriate models, conformity of dimensions

Slides, on-site experiments, audio, video, as appropriate

References, proper citations of ideas and input of others

☐ Novelty of the report

Final Grade: Reporter

☐ Contribution to the discussion

Pre

☐ Clear and understandable

☐ Appropriate manner

☐ Overall impression

☐ Clear and understandable

☐ Appropriate manner

☐ Overall impression

Opponent ±1

☐ Response to the reporter's solution

☐ Shows the strong and weak points of the report

Finds shortcomings or errors in the report

☐ Relevance of the questions

☐ Contribution to the discussion

Reviewer ±1

Provides a thorough review of report and discussion

Expresses own opinion about topics presented or discussed

Relevance of questions to both the reporter and the opponent

Draws attention to points missed by the reporter or the opponent

This sheet will be collected by the fight assistant, so we can scan it and archive your partial grades - please

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6 Final Grade: Opponent

Final Grade: Reviewer

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Scoring Guideli		m: Stage: Problem no.:
Scoring Guiden	Juror: Xuenei Cai	Signature: X Coo
application of appropriate mathematics •	experimental findings to draw suitable conclusi	record data (or demonstrate the phenomena if
An opposition should show that • the opponent challenged the reporter's unappropriate mathematics presented • the component appreciated and highlighted the statements.	<i>understanding</i> of the presented <i>concepts, theories</i> opponent <i>critiqued</i> the <i>experimental technique</i> us	and <i>principles</i> • the opponent understood the ed and questioned the <i>validity</i> of the <i>data</i> • the
important aspects (especially the controver	ctive summary of the performances the reporter rsial ones) • the reviewer's personal opinion was con-trivial and demonstrated, where possible, the red by the reporter and the opponent	n evidence (not just superficial observations) =
 The reporter, opponent and reviewer Consider the following suggestions to Select each partial grade from each se 	consists of a partial grade for <i>physics, preser</i> each <i>start with 5 points</i> . add to or <i>deduct</i> from the initial <i>5 points</i> . action and <i>write it</i> in the corresponding box. no questions were posed or not finding shorte	
Rep.: Czech 5	Opp.: 1/2 5	Rev.: German 5
Physics ±3	Physics ±3	Physics ±3
☐ Correct and relevant physics☐ Scientific approach☐ Validity of conclusions☐ Accurate answers	☐ Correct and relevant physics ☐ Scientific approach ☐ Validity of conclusions ☐ Accurate answers	☐ Correct and relevant physics ☐ Scientific approach ☐ Validity of conclusions ☐ Accurate answers
Presentation ±1	Presentation ±1	Presentation ±1
Clear and understandable Appropriate manner Overall impression	☐ Clear and understandable ☐ Appropriate manner ☐ Overall impression	☐ Clear and understandable ☐ Appropriate manner ☐ Overall impression
Reporter ±1	Opponent ±1	Reviewer ±1
Quality of experimental technique(s)	Response to the reporter's solution	Provides a thorough review of report and discussion
Structure	Shows the strong and weak points of the report	Expresses own opinion about
Explanation of formulae and symbols	Finds shortcomings or errors in	topics presented or discussed Relevance of questions to both the
Appropriate models, conformity of dimensions	the report Relevance of the questions	reporter and the opponent
Slides, on-site experiments, audio, video, as appropriate	Contribution to the discussion	Draws attention to points missed by the reporter or the opponent
References, proper citations of ideas and input of others		This sheet will be collected by the
Novelty of the report		This sheet will be com- fight assistant, so we can scan it and archive your partial grades — piease
Contribution to the discussion		do not bend
Final Grade: Reporter	Final Grade: Opponent Revised	Final Grade: Reviewer after IOC feedback and approved by EC on 2011-11-03