Fight (Round no.):	Room: Stage: _	1 Problem no.: 13
Juror: By land	Signature:	1. 345

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:

- 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 e Consider the following suggestions to e Select each partial grade from each sec 	each start with 5 points. add to or deduct from the initial 5 points. ction and write it in the corresponding box. o questions were posed or not finding shortco	
Rep.: Bulgana 5	Opp.: Poland 5	Rev.: Indonesia 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	Expresses own opinion about 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 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		fight assistant, so we are archive your partial grades — please
☐ Contribution to the discussion		do not bend
. Incide		The second secon

Final Grade: Reporter

Final Grade: Opponent

	Fight (Round no.):	1 Rooi	m: F Stage: Problem no.: 1
Scoring Guideling	nes Juror: RAWLI		
A report chould include:	A CONTRACTOR OF THE CONTRACTOR	10000	0 1
application of appropriate mathematics • r	easonable experimental technique experimental findings to draw su	to <i>gather</i> 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 o opponent appreciated and highlighted the si	nderstanding of the presented con pponent critiqued the experiment	al technique use	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:		Olem and the second of the sec	
important aspects (especially the controver	sial ones) • the reviewer's <i>persond</i> on-trivial and demonstrated, where	oll opinion was in a possible, the r	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 s tart with 5 points . add to or deduct from the initia ction and write it in the corresp	al <i>5 points</i> . onding box.	
Rep.: Bulgaria 5	Opp.: Poland	5	Rev.: Intorna 5
Physics ±3	Physics ±3		Physics ±3
Correct and relevant physics	Correct and relevant	hysics	Correct and relevant physics
Scientific approach	☐ Scientific approach	niysics	Scientific approach
☐ Validity of conclusions		;	☐ Validity of conclusions
	☐ Accurate answers		☐ Accurate answers
Presentation ±1	Presentation ±1	Total Andrews	Presentation ±1
Clear and understandable	☐ Clear and understanda	able	☐ Clear and understandable
Appropriate manner -	Appropriate manner		☐ Appropriate manner
U Overall impression	□ Overall impression		Overall impression
Reporter ±1	Opponent ±1	0	Reviewer ±1
Quality of experimental technique(s) ±	Response to the repor solution	ter's	Provides a thorough review of report and discussion
Structure -	Shows the strong and of the report	weak points	Expresses own opinion about topics presented or discussed
Explanation of formulae and symbols -	Finds shortcomings or the report	errors in	Relevance of questions to both th
X Appropriate models, conformity of dimensions [→]	Relevance of the quest	ions	reporter and the opponent Draws attention to points missed
Slides, on-site experiments, audio, video, as appropriate	Contribution to the dis	cussion	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
\square Novelty of the report			fight assistant, so we con- archive your partial grades – please
Contribution to the discussion			do not bend
Final Grade: Reporter	Final Grade: Opponent	5	Final Grade: Reviewer

	2 29	Fight (Round no.): _	1 Roon	n: <u>F</u> Stage: <u>1</u> Probler	m no.: <u>1</u>
Scoring Guid	delines	Juror: KUNDR	+CIK	_ Signature: \\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	iG
application of appropriate mathe	e matics • reasonable e E ical and experiment	experimental technique al findings to draw suit	to <i>gather</i> and I	explanation of the observed phenom record data (or demonstrate the phenoms of an attempt to communicate d	nomena if
An opposition should show the opponent challenged the reappropriate mathematics present opponent appreciated and highlig	porter's understanding ted • the opponent cri	tiqued the experimental	I technique use	and <i>principles</i> • the opponent under d and questioned the <i>validity</i> of the <i>c</i>	stood the
important aspects (especially the	g an <i>objective summ</i> controversial ones) • mative, non-trivial an	the reviewer's <i>personal</i> d demonstrated, where	opinion was in possible, the re	and opponent • the reviewer appred evidence (not just superficial observe eviewer's understanding of concepts,	untions) e
 The reporter, opponent and Consider the following sugge Select each partial grade from 	reviewer each start estions to add to or a n each section and w	with 5 points. deduct from the initial vrite it in the correspo	5 points.	nation and for their specific role. Domings if there were none to find.	
Rep.: BULGARIA	5 Opp .	: POLTAD	5	Rev.: WDOLGSIA	5
Physics ±3 Correct and relevant phys Scientific approach Validity of conclusions Accurate answers	☐ Sci	cs ±3 rrect and relevant plentific approach idity of conclusions curate answers	hysics	Physics ±3 ☐ Correct and relevant phy ☐ Scientific approach ☐ Validity of conclusions ☐ Accurate answers	sics .
Presentation ±1 Clear and understandable Appropriate manner Overall impression	☐ Cle	ntation ±1 ar and understandal propriate manner erall impression	ble	Presentation ±1 ☐ Clear and understandable ☐ Appropriate manner ☐ Overall impression	e
Reporter ±1		nent ±1	0	Reviewer ±1	4
Quality of experimental technique(s)	☐ Res	ponse to the report	er's	Provides a thorough revieure report and discussion	≥w of
☐ Structure	l oft	ws the strong and w he report	veak points	Expresses own opinion at topics presented or discu	out
☐ Explanation of formulae ar symbols	nd	Is shortcomings or e	errors in	Relevance of guestions to	hoth the
Appropriate models, confo	rmity	report evance of the questi	one	reporter and the opponer	
Slides, on-site experiments video, as appropriate	l	tribution to the disc		Draws attention to points by the reporter or the opp	ponent
References, proper citation ideas and input of others	ns of		an an angan	This sheet will be collected	by the
☐ Novelty of the report				This sheet will be can sca fight assistant, so we can sca archive your partial grades	

 \square Contribution to the discussion

Final Grade: Reporter

Final Grade: Reviewer

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

		-	
Scoring Guideli	Pight (Round no.): Room Nes Juror: 40vet Ribban	m: Stage: Problem no.: Signature:	
application of appropriate mathematics •	pts, theories and principles of the problem • an reasonable experimental technique to gather and experimental findings to draw suitable conclusionable manner	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 statements.	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 rsial ones) • the reviewer's personal opinion was in non-trivial and demonstrated, where possible, the red by the reporter and the opponent	n evidence (not just superficial observations) .	
 The reporter, opponent and reviewed Consider the following suggestions to Select each partial grade from each so 	s consists of a partial grade for <i>physics, present</i> reach <i>start with 5 points</i> . To <i>add</i> to or <i>deduct</i> from the initial <i>5 points</i> . The ection and <i>write it</i> in the corresponding box. The posed or not finding shorted the corresponding shorted shorted the corresponding shorted shorted the corresponding shorted the correspondin		
Physics ±3	Physics ±3	Physics ±3	
O Correct and relevant physics	☐ Correct and relevant physics	☐ Correct and relevant physics	
Scientific approach	☐ Scientific approach	☐ Scientific approach	
☐ Validity of conclusions ☐ Accurate answers	☐ Validity of conclusions ☐ Accurate answers	☐ Validity of conclusions ☐ Accurate answers	
Presentation ±1 +1	Presentation ±1	Presentation ±1	
Clear and understandable	Clear and understandable	☐ Clear and understandable	
☐ Appropriate manner	☐ Appropriate manner ☐ Appropriate manner		
☐ Overall impression	U Overall impression	Overall impression	
Reporter ±1 6	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 and the 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	

This sheet will be collected by the References, proper citations of ideas and input of others fight assistant, so we can scan it and archive your partial grades - please ☐ Novelty of the report ☐ Contribution to the discussion

☐ Contribution to the discussion

do not bend

Final Grade: Reporter

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

Final Grade: Opponent

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

Draws attention to points missed by the reporter or the opponent

	Å	- 1
Scoring Guideli	right (Round no.): 1 Roor Nes Juror: Denjamin Cher	n: F Stage: 1 Problem no.: 13 Signature: B C
application of appropriate mathematics • r	ots, theories and principles of the problem • an eleasonable experimental technique to gather and experimental findings to draw suitable conclusionable manner	record data (or demonstrate the phenomena if
An opposition should show that: • the opponent challenged the reporter's u	nderstanding of the presented concepts, theories apponent 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 controver	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	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, present</i> each <i>start with 5 points</i> . <i>add</i> to or <i>deduct</i> from the initial <i>5 points</i> . ction and <i>write it</i> in the corresponding box. no questions were posed or not finding shortcome.	
Rep.: Julynia 5	Opp.: Poland 5	Rev.: hdmisia 5
Physics ±3 ☐ Correct and relevant physics ☐ Scientific approach — ☐ Validity of conclusions ☐ Accurate answers	Physics ±3 ☐ Correct and relevant physics ← A ☐ 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 AMA Appropriate manner Overall impression	Presentation ±1 ☐ Clear and understandable ○ ☐ Appropriate manner ☐ Overall impression
Reporter ±1 Quality of experimental technique(s) Structure Can Cyp Yand	Opponent ±1 Response to the reporter's solution Shows the strong and weak points	Reviewer ±1 Provides a thorough review of report and discussion Expresses own opinion about
 Explanation of formulae and symbols Appropriate models, conformity of dimensions Slides, on-site experiments, audio, video, as appropriate 	of the report Finds shortcomings or errors in the report Relevance of the questions Contribution to the discussion	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
References, proper citations of ideas and input of others Novelty of the report Contribution to the discussion	distriblish (aggr)	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

	Fight (Round no.): Root	n: Stage: Problem no.:	
Scoring Guidelin	noc .		
	Juror: Chan Aug Park	_ Signature:	
application of appropriate mathematics • r	ets, theories and principles of the problem • an eleasonable experimental technique to gather and experimental findings to draw suitable conclusionable 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 the reviewer's personal opinion was in the reporter and the opponent	n evidence (not just superficial observations) .	
 The grade for each of the three teams consists of a partial grade for <i>physics</i>, <i>presentation</i> and for their <i>specific role</i>. The <i>reporter</i>, <i>opponent</i> and <i>reviewer</i> each <i>start with 5 points</i>. Consider the following <i>suggestions</i> to <i>add</i> to or <i>deduct</i> from the initial <i>5 points</i>. Select each partial grade from each section and <i>write it</i> 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.: Bulgaria 5	Opp.: foland 5	Rev.: Indonesia 5	
Physics ±3 Correct and relevant physics Scientific approach Validity of conclusions Accurate answers	Physics ±3 Correct and relevant physics Scientific approach to 5 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 -0.5	Opponent ±1	Reviewer ±1	
Quality of experimental technique(s) - 0.3	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	
symbols -0.2	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 consider a please archive your partial grades - please	

☐ Contribution to the discussion

Final Grade: Reporter

Final Grade: Reviewer

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

Scoring Guideli	Fight (Round no.): 1 Roo Nes Juror: Poy (and	m: F Stage: Problem no.:
	Juror: 409 Cana	Signature:
application of appropriate mathematics • 1	ots, theories and principles of the problem • an reasonable experimental technique to gather and experimental findings to draw suitable conclusing dable manner	record data for demonstrate the phenomena if
An opposition should show that: • the opponent challenged the reporter's u appropriate mathematics presented • the o opponent appreciated and highlighted the si	nderstanding of the presented concepts, theories	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:		
<i>Important aspects</i> (especially the <i>controver</i>	ctive summary of the performances the reporter sial ones) • the reviewer's personal opinion was in contrivial 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, presen</i> each <i>start with 5 points</i> . <i>add</i> to or <i>deduct</i> from the initial <i>5 points</i> . ction and <i>write it</i> in the corresponding box. no questions were posed or not finding shorte	
Rep.: Poland 5	Opp.: Indonesia 5	Rev.: Bulgania 5
Physics ±3	Physics ±3	Physics ±3 +A
☐ 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 Relevance of the questions	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 can be archive your partial grades — piease

Final Grade: Reporter Final Grade: Opponent

 \square Contribution to the discussion

do not bend

		•	
Scoring Guidelii	1es Juror: Round no.): 1	Room: F Stage: 2	Problem no.: 8
A report should include: • a presentation of the appropriate concep application of appropriate mathematics • reappropriate) • linking of theoretical and e complex ideas in an effective and understand	easonable <mark>experimental technique t</mark> o <i>gatl</i> xperimental findings to draw suitable c	er and record data (or demonsti	rate 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, t pponent critiqued the experimental techn	heories and principles • the opp ique used and questioned the val	onent understood the lidity of the data • the
A review should show that: • the reviewer succeeded in giving an object important aspects (especially the controvers such personal opinions were informative, no principles and appropriate mathematics used	sial ones) • the reviewer's personal opinion of the reviewer's personal opinion on the possible of the possibl	n was in evidence (not just supe	rficial observations) •
The grade for each of the three teams The <i>reporter</i> , <i>opponent</i> and <i>reviewer</i> are Consider the following <i>suggestions</i> to a Select each partial grade from each second by Don't punish missing 'answers' when no	each start with 5 points. add to or deduct from the initial 5 poi ction and write it in the corresponding	nts. box.	
Rep.: Poland 5	Opp.: Indonesia	Rev.: Bulgar	5
Physics ±3	Physics ±3	Physics ±3	A
Correct and relevant physics	E Correct and relevant physics	☐ Correct and re	levant physics
Scientific approach	☐ Scientific approach	☐ Scientific appr	oach
☐ Validity of conclusions ☐ Accurate answers	☐ Validity of conclusions ☐ Accurate answers	☐ Validity of con☐ Accurate answ	
Presentation ±1	Presentation ±1	Presentation ±	:1 0
Clear and understandable	☐ Clear and understandable	E Clear and unde	erstandable
Appropriate manner	☐ Appropriate manner	☐ Appropriate m	anner
Overall impression	☐ Overall impression	☐ Overall impres	sion
Reporter ±1	Opponent ±1	Reviewer ±1	
Quality of experimental technique(s)	Response to the reporter's solution	Provides a thor	rough review of
3 Structure	☐ Shows the strong and weak p	oints 🛭 Expresses own	opinion about
Explanation of formulae and symbols	of the report Finds shortcomings or errors	topics presente	ed or discussed uestions to both the
Appropriate models, conformity of dimensions	the report	reporter and th	ie opponent
Slides, on-site experiments, audio, video, as appropriate	Relevance of the questions Contribution to the discussion	hy the reporter	n to points missed or the opponent
References, proper citations of ideas and input of others		This sheet will b	pe collected by the
Novelty of the report			we can scan it and thial grades - piease
Contribution to the discussion		archive your par	

Final Grade: Reporter

Ceallan	Cuidolinos	Fight (Round no.): Rooi
Jeoning	Guidelines	luror: KUNDRACIK

d no.): _____ Room: ____ Stage: ___ Problem no.: _____

NDRACK Signature: \(\) \(\) \(\) \(\) \(\) \(\)

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

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 secDon't punish missing 'answers' when n	ction and write it in the corresponding box. o questions were posed or not finding shorter	omings if there were none to find.
Rep.: <u>POLAND</u> 5	Opp.: INDONESIA 5	Rev.: BULGARA 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 -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 of dimensions	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 are archive your partial grades — please
Contribution to the discussion		do not bend

Scoring Guidelii	M M M	n: Stage: Problem no.:
scoring daideni	Juror: Horst Ribbuer	Signature:
application of appropriate mathematics • r	ets, theories and principles of the problem • an a 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	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 on-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 sec 	consists of a partial grade for <i>physics, presen</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. no questions were posed or not finding shortc	
Rep.: Palant 5	Opp.: Indonesia 5	Rev.: Bulgania 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 ☐ Accurate answers	☐ 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 O	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 fight assistant, so we can scan it and
☐ Novelty of the report		fight assistant, so we com- archive your partial grades – please

Final Grade: Reporter Final Grade: Opponent

 \square Contribution to the discussion

Final Grade: Reviewer

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

	Λ	
Scoring Guidelii		n: Stage: Problem no.:
overing conden	nes Juror: Benjami check	Signature: ACUS
application of appropriate mathematics • r	ets, 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	and <i>principles</i> • the opponent understood the d and questioned the <i>validity</i> of the <i>data</i> • the
<i>important aspects</i> (especially the <i>controver</i>)	ctive summary of the performances the reporter sial ones) • the reviewer's personal opinion was in the reviewer's personal opinion was in the reviewer and the opponent	revidence (not just superficial observations) a
The <i>reporter, opponent</i> and <i>reviewer</i> Consider the following <i>suggestions</i> to Select each partial grade from each set	consists of a partial grade for <i>physics, presen</i> t each <i>start with 5 points</i> . <i>add</i> to or <i>deduct</i> from the initial <i>5 points</i> . ction and <i>write it</i> in the corresponding box. no questions were posed or not finding shortc	
Rep.: Odan 1 5	Opp.:5	Rev.: 5
Correct and relevant physics ** Scientific approach + A Validity of conclusions of 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
Clear and understandable + \(\) Appropriate manner - \(\) Overall impression + \(\)	Presentation ±1 ☐ Clear and understandable † ↑ ☐ Appropriate manner ☐ Overall impression ♣↑	Presentation ±1 Clear and understandable fl Appropriate manner Overall impression
eporter ±1 Quality of experimental	Opponent ±1	Reviewer ±1
technique(s)	Response to the reporter's solution	Provides a thorough review of **\(^\lambda\) report and discussion
I Structure $\leftarrow \wedge$ Explanation of formulae and	Shows the strong and weak points of the report	Expresses own opinion about topics presented or discussed
symbols + A Appropriate models, conformity	☐ Finds shortcomings or errors in the report +A → they quite.	Relevance of questions to both the reporter and the opponent
of dimensions 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
Movedty of the report		tight assistants - please

 \square Novelty of the report

Final Grade: Reporter

 \square Contribution to the discussion

Final Grade: Reviewer

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

do not bend

archive your partial grades - please

	Fight (Round no.):	m: Stage: Problem no.:
Scoring Guidelir	1es Juror: Chan Oung Park	
application of appropriate mathematics • re	ts, theories and principles of the problem • an a easonable experimental technique to gather and experimental findings to draw suitable conclusionable manner	record data (or demonstrate the phenomena if
An opposition should show that: • the opponent challenged the reporter's un appropriate mathematics presented • the opponent appreciated and highlighted the str	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 ed and questioned the <i>validity</i> of the <i>data</i> • the
important aspects (especially the controvers	tive summary of the performances the reporter ial ones) • the reviewer's personal opinion was in n-trivial and demonstrated, where possible, the refined by the reporter and the opponent	n evidence (not just superficial observations) a
 The reporter, opponent and reviewer e Consider the following suggestions to a Select each partial grade from each sec 	consists of a partial grade for <i>physics, presen</i> each start with 5 points. add to or deduct from the initial 5 points. Ition and write it in the corresponding box. To questions were posed or not finding shortc	
Rep.: Poland 5	Opp.: Indonesia 5	Rev.: Bulgaria 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 0 5 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	Reviewer ±1 +v. 5
Quality of experimental technique(s)	Response to the reporter's solution +0.3 Shows the strong and weak points	 ✓ Provides a thorough review of report and discussion to. ✓ 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 Relevance of the questions	reporter and the opponent Draws attention to points missed
Slides, on-site experiments, audio, video, as appropriate	\square Contribution to the discussion $+0.2-$	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 ☐ Contribution to the discussion		fight assistant, so we consider assistant as a single as a single assistant as a single assistant as a single assistant as a single as a
Final Grade: Reporter	Final Grade: Opponent Revised	Final Grade: Reviewer after IOC feedback and approved by EC on 2011-11-03

·	Fight (Round no.):	n: Stage:3_ Problem no:		
Scoring Guideling	nes Juror: By land			
application of appropriate mathematics • r	ets, theories and principles of the problem • an easonable experimental technique to gather and experimental findings to draw suitable conclusing 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 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 controvers	ctive summary of the performances the reporter sial ones) • the reviewer's personal opinion was in the intrivial and demonstrated, where possible, the industry 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 see 	consists of a partial grade for <i>physics, presen</i> each <i>start with 5 points.</i> <i>add</i> to or <i>deduct</i> from the initial <i>5 points.</i> ction and <i>write it</i> in the corresponding box. no questions were posed or not finding shorte			
Rep.: Indonesia 5	Opp.: Bulgana 5	Rev.: Poland 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)	Opponent ±1 Response to the reporter's	Reviewer ±1 Provides a thorough review of		
Structure Explanation of formulae and	solution Shows the strong and weak points of the report	report and discussion Expresses own opinion about topics presented or discussed		
symbols Appropriate models, conformity of dimensions	Finds shortcomings or errors in the report Relevance of the questions	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☐ Contribution to the discussion		fight assistant, so we con- archive your partial grades – piease do not bend		

Final Grade: Reporter Final Grade: Opponent

		Fight (Round no.):	1	Rooi	m: F Stage: 3 Problem no.:
Scoring Guideli	ines	Juror: Rawln			
					U
application of appropriate mathematics	reasonable e experiment	experimental techniqual findings to draw so	e to ga	ther and	explanation of the observed phenomena • ar record data (or demonstrate the phenomena is ons • an attempt to communicate difficult or
An opposition should show that the opponent challenged the reporter's	t: understandir opponent cri	ng of the presented co	tal tech	theories nique use	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	e <i>rsial</i> ones) • non-trivial an	the reviewer's <i>person</i> d demonstrated, when	<i>al opini</i> re possi	ion was i	and opponent • the reviewer appreciated the in evidence (not just superficial observations) • reviewer's understanding of concepts, theories,
 The grade for each of the three team The reporter, opponent and reviewe Consider the following suggestions t Select each partial grade from each s Don't punish missing 'answers' when 	r each start o add to or e ection and u	with 5 points. deduct from the initi vrite it in the corres	al <i>5 po</i> pondin	<i>ints</i> . g box.	
Rep.: Indonesia 5	Орр	: Bulgana	Mary Mark Collection	5	Rev.: Poland 5
Physics ±3	Physi	cs +3	4	an income	Physics ±3
E Correct and relevant physics			L nhysic	I	Correct and relevant physics
Scientific approach		☐ Correct and relevant physics ☐ Scientific approach			Scientific approach
☐ Validity of conclusions		idity of conclusion	S		☐ Validity of conclusions
☐ Accurate answers	☐ Acc	curate answers			☐ Accurate answers
Presentation ±1	Prese	ntation ±1	384	1	Presentation ±1
Clear and understandable	☐ Cle	ar and understand	able		Clear and understandable
☐ Appropriate manner	I	propriate manner			Appropriate manner
Overall impression	□ Ove	erall impression			☐ Overall impression
Reporter ±1	Орро	nent ±1	***************************************	and post	Reviewer ±1
Quality of experimental technique(s)	☐ Res	ponse to the repo	rter's	interestation parameter properties (Provides a thorough review of report and discussion
Structure	∄ Sho	ws the strong and he report	weak	points	Expresses own opinion about topics presented or discussed
Explanation of formulae and symbols	☐ Find	, pro-			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	, 🗏 Con	tribution to the dis	scussic	n	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	The state of the s				fight assistant, so we see archive your partial grades – please
Contribution to the discussion	Action of the control				do not bend
Final Grade: Reporter 3	Final G	rade: Opponent	Townson	Revised	Final Grade: Reviewer after IOC feedback and approved by EC on 2011-11-0:

	n	
	Fight (Round no.):	m: _ F _ Stage: Problem no.:
Scoring Guidelii		Signature: Welceries
application of appropriate mathematics • r	ets, theories and principles of the problem • an eleasonable 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 on-trivial and demonstrated, where possible, the r d by the reporter and the opponent	n evidence (not just superficial observations) .
The <i>reporter</i> , <i>opponent</i> and <i>reviewer</i> of Consider the following <i>suggestions</i> to Select each partial grade from each seed Don't punish missing 'answers' when no	consists of a partial grade for <i>physics, presen</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. to questions were posed or not finding shortc	
Rep.: IN DOALES (A 5	Opp.: BULGARIA 5	Rev.: <u>POCAPU</u> 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
Cresentation ±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
eporter ±1	Opponent ±1	Reviewer ±1 0,5
Quality of experimental technique(s)	Response to the reporter's solution	Provides a thorough review of report and discussion
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	Expresses own opinion about topics presented or discussed Relevance of questions to both the reporter and the opponent
of dimensions 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 the fight assistant, so the archive your partial grades – please

Final Grade: Reporter

 \Box Contribution to the discussion

Final Grade: Opponent

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



		Fight (Round no	a). 1	Pagn	n: Stage: Pr	- to 1
Scoring Guideli	nes				Signature:	oblem no.: <u>/ /</u>
		Julo1		, 0	_ Signature	
A report should include:		**************************************				
 a presentation of the appropriate concepts application of appropriate mathematics appropriate linking of theoretical and complex ideas in an effective and understar 	reasonable e) ex perimenta	(perimental techn i I findings to draw	ique to ga	ther and i	record data (or demonstrate the	nhenomena if
An opposition should show that: • the opponent challenged the reporter's u appropriate mathematics presented • the o opponent appreciated and highlighted the si	nderstanding pponent crit	iqued the experim	ental tech	theories nique use	and <i>principles</i> • the opponent of and questioned the <i>validity</i> of	understood the the data • the
A review should show that:				Marine Ma		
 the reviewer succeeded in giving an objeimportant aspects (especially the controver such personal opinions were informative, no principles and appropriate mathematics use 	<i>sial</i> ones) • t on-trivial and	he reviewer's <i>pers</i> demonstrated, wi	s <i>onal opin.</i> here possi	<i>ion</i> was ir	revidence Inat just superficial a	heariations) a
 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 wadd to or detion and w	vith 5 points . educt from the ir rite it in the corr	nitial <i>5 po</i> espondin	oints. g box.		
Rep.: 3-donessa 5	Opp.	: Bulgun	Ł	5	Rev.: Talad	5
Physics ±3	Physic	s ±3	and the	6,5	Physics ±3	-1
☐ Correct and relevant physics	☐ Corr	rect and relevar	ــــ nt physic	:S	☐ Correct and relevant	physics
Scientific approach	1	ntific approach			☐ Scientific approach	
☐ Validity of conclusions☐ Accurate answers	l	dity of conclusions arate answers	ons		☐ Validity of conclusion☐ Accurate answers	าร
Presentation ±1	Preser	ntation ±1			Presentation ±1	0,0
☐ Clear and understandable	☐ Clea	r and understa	ndable		☐ Clear and understand	dable
☐ Appropriate manner	l	ropriate manne	er		☐ Appropriate manner	
Overall impression	│	rall impression			Overall impression	
Reporter ±1	Oppon	ent ±1	0	. 5	Reviewer ±1	-6,5-
Quality of experimental technique(s)	☐ Resp	onse to the rep	oorter's	NAME OF THE PROPERTY OF THE PR	Provides a thorough report and discussion	review of
☐ Structure	☐ Show	vs the strong ar e report	nd weak	points	Expresses own opinion topics presented or d	n ahout
Explanation of formulae and symbols	☐ Finds	s shortcomings eport	or errors	s in	☐ Relevance of guestion	ns to both the
 Appropriate models, conformity of dimensions 		rance of the qu	estions		reporter and the opp Draws attention to no	
Slides, on-site experiments, audio, video, as appropriate		ribution to the		on	Draws attention to po by the reporter or the	opponent
References, proper citations of ideas and input of others	Vennemental annual annu				This sheet will be colle	11 7 m
☐ Novelty of the report				To Commission of Employment	fight assistant, so we ca archive your partial gra	des – piease
Contribution to the discussion					de not hend	

Final Grade: Reporter

Scoring Guidelii	Fight (Round no.): 1 Room Nes Juror: 1999 American	n: F Stage: Problem no.: 10 Signature: Day
application of appropriate mathematics • re	ets, 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	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 the 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 sec 	consists of a partial grade for <i>physics</i> , <i>presen</i> t 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. to questions were posed or not finding shortcomes.	
Rep.: Indonesia 5	Opp.: Dulgaria 5	Rev.: Puland 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)	Opponent ±1 Response to the reporter's solution	Reviewer ±1 Provides a thorough review of report and discussion
☐ Structure ☐ Explanation of formulae and symbols —	☐ Shows the strong and weak points of the report ← ↑ ☐ Finds shortcomings or errors in the report	Expresses own opinion about topics presented or discussed Relevance of questions to both the
 □ Appropriate models, conformity of dimensions □ Slides, on-site experiments, audio, video, as appropriate + Λ 	Relevance of the questions - \ Contribution to the discussion	reporter and the opponent Draws attention to points missed +0 (by the reporter or the opponent
References, proper citations of ideas and input of others Novelty of the report Contribution to the discussion		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: Reviewer Service Service

		<i>L</i> 3
Scoring Guideli	nes Fight (Round no.): Roor Juror: Round no.): Roor	m: Stage: Problem no.:/ Signature: Chundry Pan
application of appropriate mathematics • r	ots, theories and principles of the problem • an eleasonable experimental technique to gather and experimental findings to draw suitable conclusionable manner	record data (or demonstrate the phenomena if
An opposition should show that: • the opponent challenged the reporter's u appropriate mathematics presented • the o opponent appreciated and highlighted the si	nderstanding of the presented concepts, theories apponent 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 controver	ctive summary of the performances the reporter sial ones) • the reviewer's personal opinion was in the contrivial 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</i> , <i>presen</i> each <i>start with 5 points</i> . <i>add</i> to or <i>deduct</i> from the initial <i>5 points</i> . ction and <i>write it</i> in the corresponding box. no questions were posed or not finding shorto	
Rep.: Indonesia 5	Opp.: Bulgarle 5	Rev.: Poland 5
Physics ±3 Correct and relevant physics of 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) Structure Explanation of formulae and symbols Appropriate models, conformity of dimensions Slides, on-site experiments, audio, video, as appropriate References, proper citations of	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 + o. S ☐ 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 reporter and the opponent
ideas and input of others Novelty of the report Contribution to the discussion		This sheet will be constant and 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

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