

مركز بحوث

الدراسات العلمية و الطبية

RESEARCH CENTER

FOR FEMALE SCIENTIFIC AND MEDICAL COLLEGES

عمادة البحث العلمي

جامعة الملك سعود



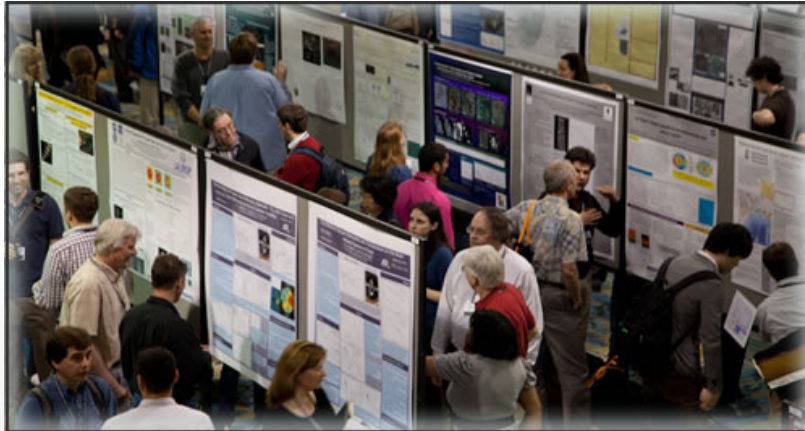
كيف نعد ملصق علمي ؟

How to Prepare a Scientific Poster

د. سلوى الصالح
قسم الفيزياء و الفلك
كلية العلوم - جامعة الملك سعود

لماذا نعد الملصق العلمي ؟

- الإتصال البحثي.
- تسويق الذات علميا.
- التواصل مع الرائدین في مجال الإختصاص و أصحاب الدعم المادي.





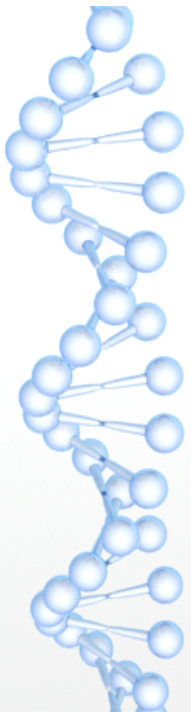
الملخص العلمي Abstract

• الهدف:

- التقديم للمشاركة بملصق علمي بأحد المؤتمرات يتطلب ارسال ملخص علمي.
- تلخيص العمل البحثي بشكل يسمح للقارئ بأخذ فكرة عامة عن العمل في غضون بضعة دقائق.

• التحديات:

- يجب تلخيص عمل أشهر- أو ربما سنوات- في أقل من 500 كلمة !
- تحديد إن كان العمل مناسب لعرضه في مؤتمر علمي ..



الملخص العلمي

- الملخص العلمي عبارة عن تلخيص قصير للبحث العلمي، الرسالة العلمية أو عرض حالة .. بشكل سريع و مركز . بحيث يستطيع القارئ المختص فهم النقاط الأساسية و الهدف من المادة العلمية الأساسية.
- كتابة الملخص العلمي تعد **الخطوة الأولى و الأساسية** لإعداد الملصق العلمي.

الملخص (تابع)

- يشكل الملخص العلمي **محتوى** الملصق العلمي
- يتميز الملصق العلمي بإضافة لمسة « جمالية » و « فنية » على الملخص. و ذلك بإضافة رسومات توضيحية – عند الإمكان.
- يعرض الملخص العلمي على الأقران، peers لتدقيق محتواه و ضمان سلامته من الأخطاء العلمية و اللغوية

محتويات الملخص

- مقدمة للبحث، تحتوي خلفية بسيطة عن موضوع البحث و الهدف

Introduction منه

- الطرق المتبعة Methods

- النتائج Results

- الاستنتاج Conclusion

- يجب أن يكون بحدود 250-500 كلمة

- يرفق مع الملخص معلومات المؤلفين



نقاط ارشادية Guidelines

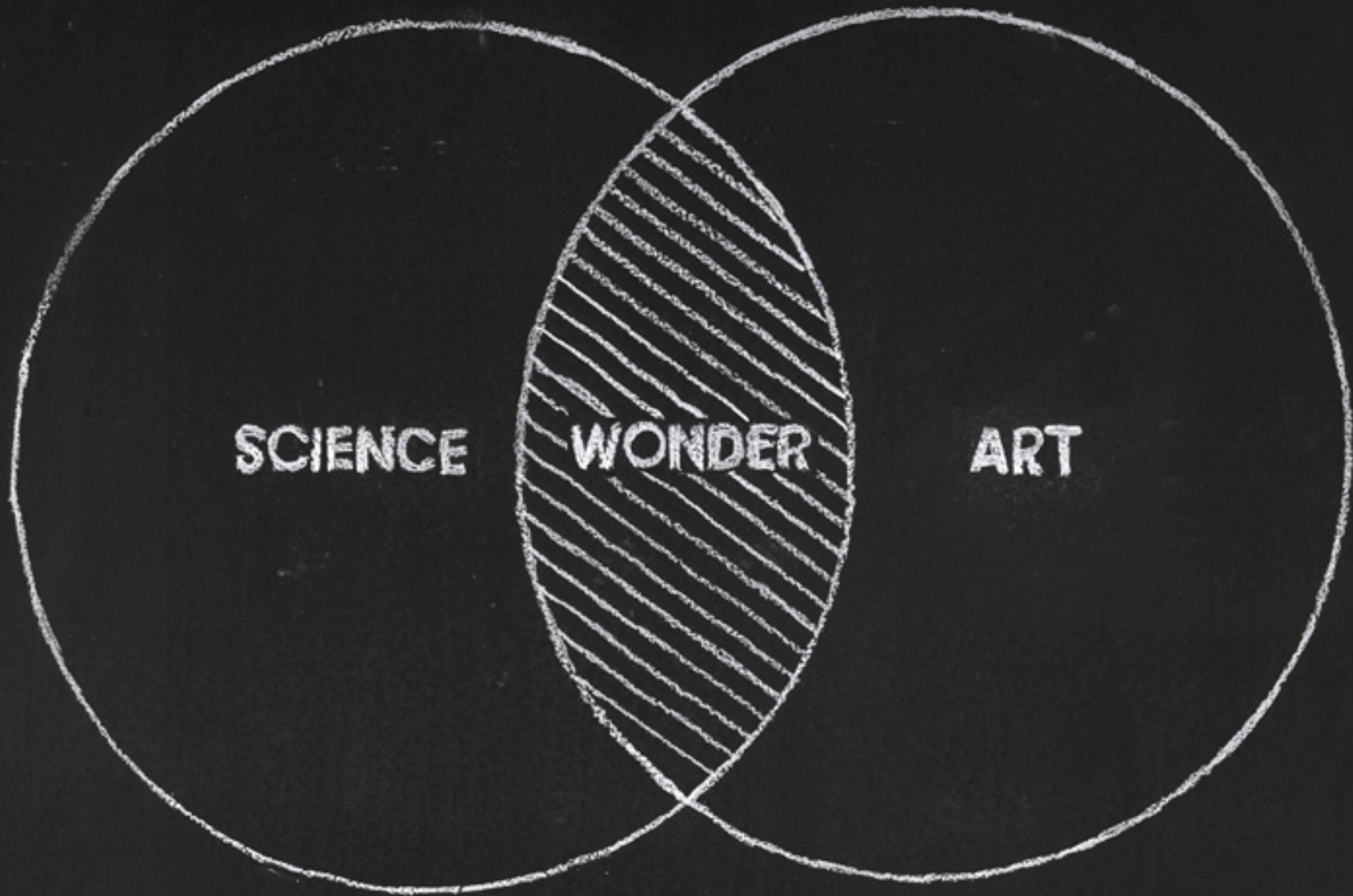
في حال الحصول على الموافقة بالمشاركة يجب الإطلاع على ال guidelines هي مجموعة من التعليمات و المعلومات الموجودة عادة على الموقع الإلكتروني للمؤتمر، و تتضمن :



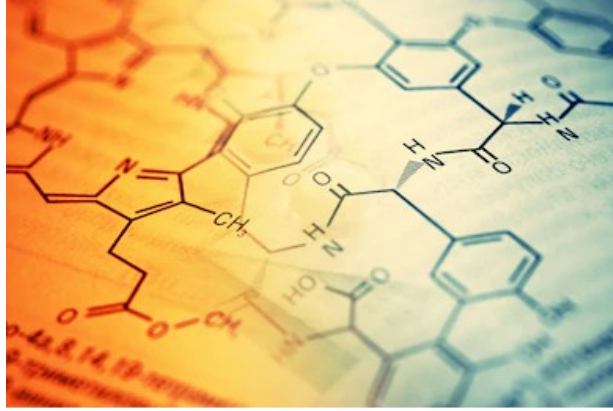
- معلومات عن نوعية الحضور؛
- المساحة المخصصة للعرض أو أبعاد الملصق العلم
- بعض الإقتراحات من القائمين على المؤتمر



بناء الملصق العلمي ...



النقاط الهامة في اعداد الملصق العلمي



- التخطيط
- البساطة
- سهل القراءة
- يجذب الانتباه
- القدرة على إيصال أهم ما يتضمنه البحث العلمي

النقاط الهامة في اعداد الملصق العلمي

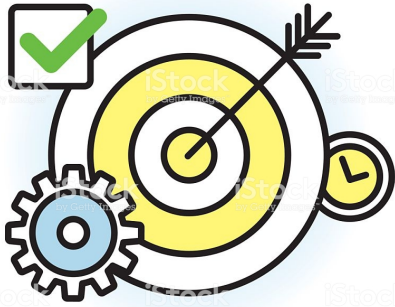
• التوقيت المناسب

- إيصال الفكرة الأساسية في أقل من 5 دقائق.
- يمكن قراءة كامل محتوى الملصق خلال 10 دقائق.

• الترتيب

- ترتيب الملصق مشابه لترتيب المقالة العلمية.

• التركيز على **النتائج** !



إنشاء الملصق

يقوم انشاء الملصق على ثلاث محاور:

- أولا: المحتوى.
- ثانيا: التنسيق.
- ثالثا: اختيار البرنامج المناسب لعمل الملصق.

محتويات الملصق العلمي

• **العنوان Title :** يجب أن لا يتخطى السطرين

- يمكن قراءته عن بعد.

- مقتضب و واضح.

- يعطي الإنطباع الأول عن البحث

• **أسماء المؤلفين و انتماءهم**

Impact of statistical fluctuations
in the Monte Carlo on template fits

Matteo Defranchis¹, Jan Kieseler²

¹Deutsches Elektronen-Synchrotron (DESY), ²CERN



Introduction

Template fits to final state distributions are an essential tool in high energy physics analyses as they allow to constrain systematic uncertainties using the data. Such templates describe the variation of shape and normalisation of the distributions with respect to the uncertainties (nuisance parameters). This dependence is often derived by simulation and the impact of statistical fluctuations in the Monte Carlo can lead to unphysical constraints of the nuisance parameters and therefore to underestimating systematic uncertainties.

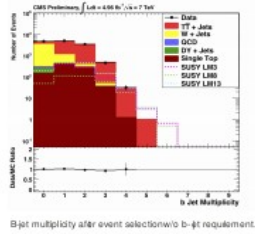
Here we illustrate a fully-consistent method to estimate the impact of this effect on template fit results. As an example we will take a CMS analysis where a template fit to final state distributions is performed to extract the $t\bar{t}$ cross section and the top quark MC mass in the final state with an electron and a muon. The analysis is currently being reviewed internally by CMS.

المقدمة Introduction:

- لا تتجاوز 200 كلمة.
- تعريف المشكلة التي يتمحور حولها البحث.
- الهدف من الدراسة.
- تحتوي على فرضية البحث بشكل واضح.

Event Selection

Selection criteria	Object definition
1 lepton	Isolated muon or electron with $p_T > 20$ GeV, $ \eta < 2.1$ and $\Delta R > 2.5$, resp.
Veto on 2 nd lepton	Muon or electron fulfilling looser criteria
3-4 jets	Jets with $p_T > 40$ and $ \eta < 2.4$ reconstructed with the anti- k_r algorithm from particle flow objects
HT > 375 GeV	Scalar sum of the p_T of all selected jets
$E_{T}^{miss} > 60$ GeV	Vectorial sum of the p_T of all particle flow objects
1, 2 or ≥ 3 b-jets	Selected jets with 2 tracks with impact parameter significance ≥ 3.3 (track counting algorithm)



→ Very good agreement between data and simulated events

The method

In order to assess the impact of statistical fluctuations in the Monte Carlo, toy experiments are performed where each bin in the templates is smeared according to a Poisson distribution based on the effective number of MC entries in each bin.

Toy experiments are created simultaneously for all the nuisance parameters while consistently taking into account the correlation between templates. The template dependencies are then re-derived and the fit to the data points is repeated. The spread of the best fit values quantifies the effect of statistical fluctuations in the MC and is added as an additional uncertainty to the final result.

المواد و الأدوات Materials/Methods : أقل عدد

يمكن من الكلمات .

- استخدام الصور و الرسومات التوضيحية للأجهزة المستخدمة.

- توضيح الجدول الزمني الذي أجريت فيه التجارب.

- (في حالة الأبحاث النظرية، يتم شرح عناصر

الدراسة النظرية بدلا من ذلك)

Kaluza Klein Black Holes

Kaluza-Klein black holes are a 5d uplifted solution of rotating black holes with electric Q and magnetic P charges [8, 15, 12]. This is a general solution to the dyonic solution (where $Q = P$). This solution is considered from the 4d Einstein-Maxwell-dilaton theory [14], or as a rotating D0-D6 bound state in string theory [10]. The KK solution in 5d pure Einstein gravity has the following metric:

$$ds_{(5)}^2 = \frac{H_2}{H_1} (R dt + A)^2 - \frac{H_3}{H_2} (dt + B)^2 + H_1 \left(\frac{dr^2}{\Xi} + d\theta^2 + \frac{\Xi}{H_3} \sin^2 \theta d\phi \right) \quad (2)$$

Where: H_1, H_2, A and B are functions of four parameters p, q, j and μ . With R being the radius of the compactified fifth K-K dimension y with the condition $y = j + 2\pi$. There are four physical parameters that characterises the rotating K-K black hole, the mass M , electric and magnetic charges Q, P and the angular momentum J . They are given in terms of the parameters μ, q, p and j :

$$M = \frac{p+q}{4} \quad Q = \frac{1}{2} \left(\frac{q(q^2 - 4\mu^2)}{p+q} \right)^{1/2} \quad (3)$$

$$P = \frac{1}{2} \left(\frac{\mu(p^2 - 4j^2)}{p+q} \right)^{1/2} \quad J = \frac{\sqrt{pq}(pq + 4\mu^2)}{4(p+q)} j \quad (4)$$

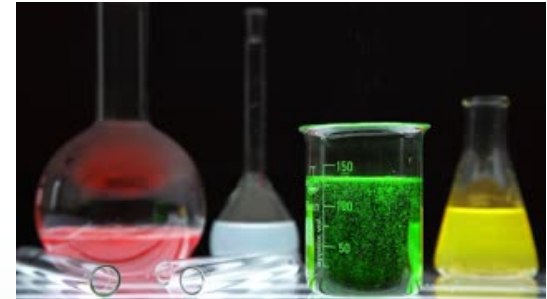
The Hawking temperature is then:

$$T_0 = \frac{\mu h}{\pi \sqrt{pq} \left(\frac{2\mu}{\sqrt{1-j^2}} + \frac{4\mu^2 + pq}{p+q} \right)} \quad (5)$$

Using the relation $dS = dM/T$ we can obtain the entropy:

$$S_0 = \frac{2\pi^{2+q} \left(\frac{3(p+q)}{4\sqrt{1-j^2}} + 12\mu + \frac{pq}{\mu} \right)}{3h} \quad (6)$$

Experimental



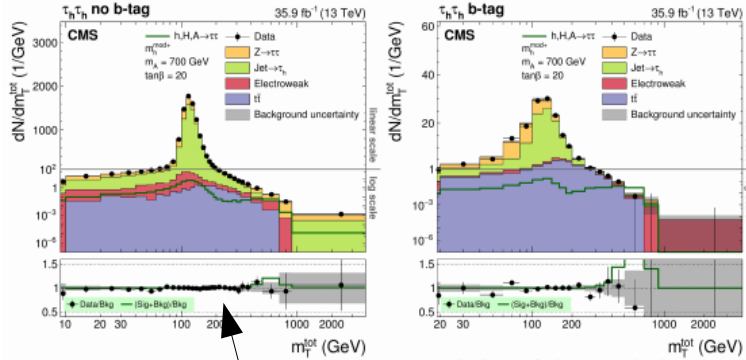
Theoretical

Signal extraction and results

Fit on all categories using **total transverse mass** variable as final discriminant to extract signal:

$$m_T^{tot} = \sqrt{m_T^2(p_T^{\tau_1}, p_T^{miss}) + m_T^2(p_T^{\tau_2}, p_T^{miss}) + m_T^2(p_T^{\tau_1}, p_T^{\tau_2})}$$

$$\text{where: } m_T(l_1, l_2) = \sqrt{2 p_T^l p_T^l (1 - \cos \theta_{l,2})}$$



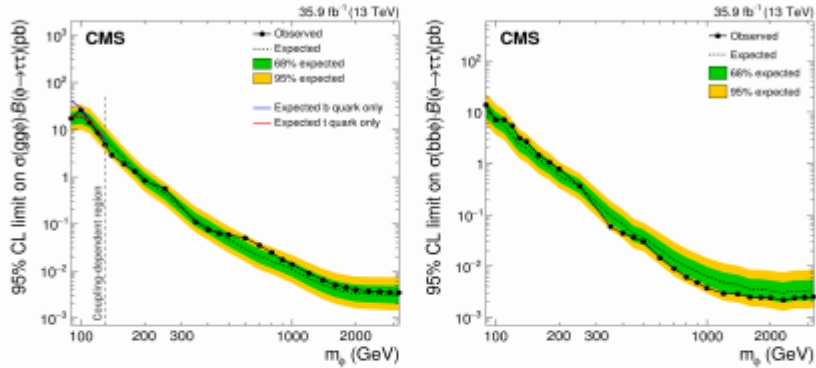
No Signal observed → setting exclusion limits

Simplify plots.. when possible !

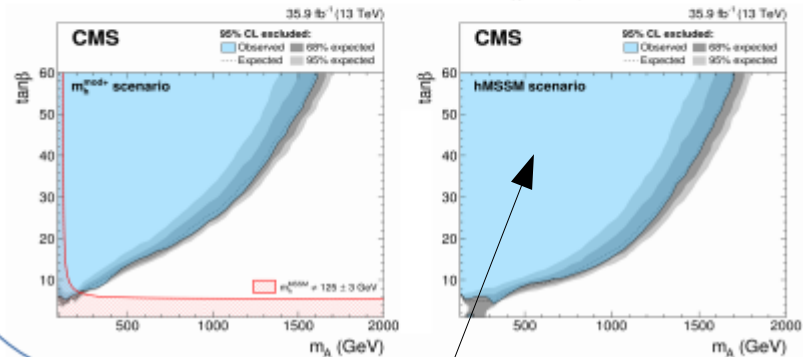
- **النتائج Results** : تعرض ما توصلت له الدراسة
- البدء بشرح النتائج (qualitative description)
- ربط النتائج بالفرضية من خلال طرح تحليل محدد للنتائج
- استخدام رسومات بيانية توضح أهم النتائج.

Improved model constraints and limits on the cross section

Model independent limit on cross-section times branching ratio between 90 and 3200 GeV

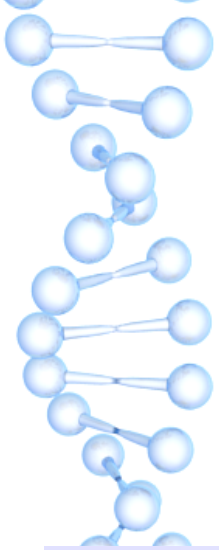


2D likelihood scan on $m_A - \tan\beta$



Compared between previous results and current results for a theoretical model

- **المناقشة Discussion** : (عند الحاجة لها) لا تتعدى 300 كلمة
 - التذكير بالفرضية
 - ذكر إن كانت النتائج نهائية (conclusive) أم لا
 - الإشارة للنتائج المشابهة أو ذات العلاقة من دراسات سابقة
 - مناقشة الصعوبات أو حدود الدراسة، ثم الإشارة للنقاط التي يمكن التوسع بها أو دراستها في المستقبل Outlook



- **الاستنتاج Conclusion** : بضعة جمل، لا أكثر
- يجب أن يكون الإستنتاج شديد الإختصار و لكن شديد التركيز على خلاصة ما توصل إليه البحث.
- إعادة التذكير بالرابط بين الفرضية الأساسية و النتائج .

Conclusions

We have shown that statistical fluctuations in the Monte Carlo can play a significant role in template fits, using a realistic state-of-the-art analysis example.

In the measurement we considered, this leads to an additional uncertainty on the top quark mass of 350 MeV, which is a sizable contribution to the total uncertainty. The effect on the cross section is found to be small.

Conclusions

In this research, the geometry of 5-D rotating Kaluza Klein black holes with electric and magnetic charges was deformed by the rainbow functions f, g motivated by loop quantum gravity and non-commutative geometry. Resulting a deformation on the thermodynamics of the 4D rotating K-K black hole. The deformed temperature and entropy indicate the existence of a remnant after the decay of the black hole to a 'Plankckian' scale. Moreover, the critical behaviour of this black hole was studied via calculating its Gibbs free energy, the ordinary and the deformed black holes appear to show the same critical behaviour.

References

- [1] Ahmed Farag Ali. Black hole remnant from gravity's rainbow. *Physical Review D*, 89(10):104040, 2014.
- [2] Ahmed Farag Ali, Mir Faizal, and Mohammed M. Khalil. Remnants of black rings from gravity's rainbow. *JHEP*, 12:159, 2014.
- [3] Ahmed Farag Ali, Mir Faizal, and Mohammed M. Khalil. Absence of Black Holes at LHC due to Gravity's Rainbow. *Phys. Lett.*, B743:295–300, 2015.
- [4] Ahmed Farag Ali, Mir Faizal, and Mohammed M Khalil. Remnant for all black objects due to gravity's rainbow. *Nuclear Physics B*, 894:341–360, 2015.
- [5] Ahmed Farag Ali, Mir Faizal, and Barun Majumder. Absence of an Effective Horizon for Black Holes in Gravity's Rainbow. *Europhys. Lett.*, 109(2):20001, 2015.
- [6] Ahmed Farag Ali, Mir Faizal, Barun Majumder, and Ravi Mistry. Gravitational collapse in gravity's rainbow. *International Journal of Geometric Methods in Modern Physics*, 12(09):1550085, 2015.
- [7] Giovanni Amelino-Camelia. Quantum-spacetime phenomenology. *Living Reviews in Relativity*, 16(1):5, 2013.
- [8] GW Gibbons and DL Wiltshire. Black holes in kaluza-klein theory. *Annals of Physics*, 167(1):201–223, 1986.
- [9] Yongwan Gim and Wontae Kim. Black Hole Complementarity in Gravity's Rainbow. *JCAP*, 1505(05):002, 2015.
- [10] Nissan Itzhaki. D6+ d0 and five dimensional spinning black hole. *Journal of High Energy Physics*, 1998(09):018, 1998.

المراجع References : قائمة بأهم المصادر فقط

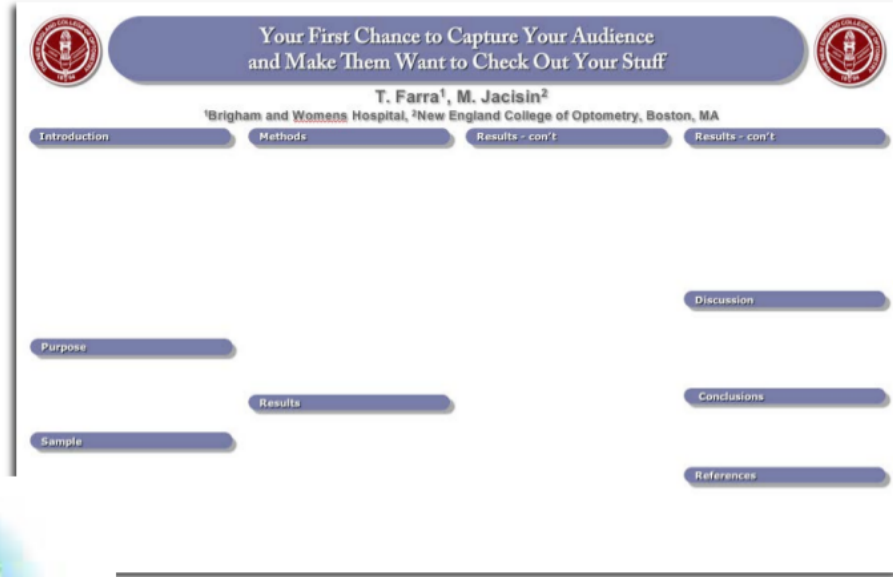
- بين 5 و 10 مراجع

- استخدام الصيغة للمراجع متطابقة لتلك التي استخدمت في
المقالة مثلا (APA, ITFEEER , Chicago ..etc)

الشكر Acknowledgment : للجهات الداعمة ، و/أو الأفراد أو
الجهات الذين قاموا بتقديم المساعدة

Acknowledgements This research project was supported by a grant from the " Research Center of the Female Scientific and Medical Colleges ", Deanship of Scientific Research, King Saud University.

تنسيق الملصق العلمي



- تقسيم الملصق الى أعمدة
- ترتيب النصوص و الصور و الرسومات بشكل متوازن
- يعطى عنوان لكل الرسوم
- ترك 40% من مساحة الملصق فارغة
- الحرص على المحاذاة alignment



تنسيق الملصق العلمي

حجم الخطوط المستخدمة

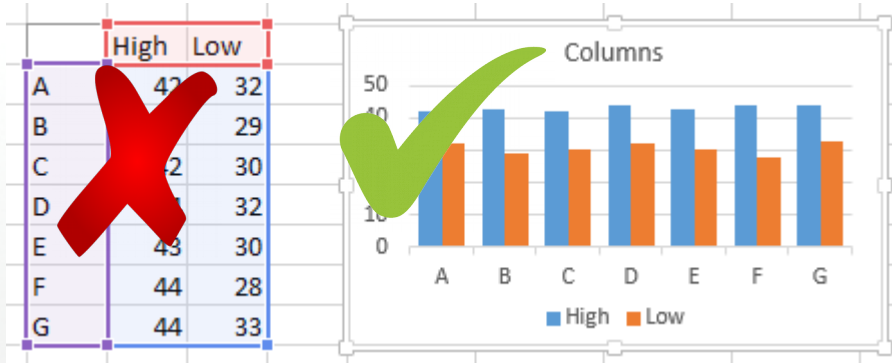
للتمكن من قراءة الملصق من بعد 2 م و قراءة العنوان الرئيسي من بعد 3 م نستخدم :



- العنوان الرئيسي pt 85
- اسماء المؤلفين pt 56
- عناوين النصوص pt 36
- النصوص pt 24
- عناوين الصور و الرسومات pt 18

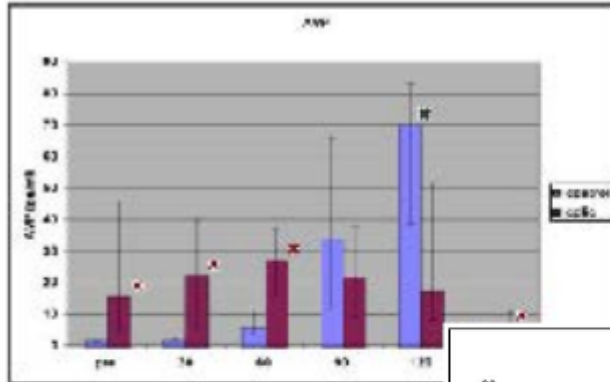
تنسيق الملصق العلمي الصور و الرسومات

- استخدام الصور و الرسومات البيانية التي تسهل فهم البحث.
- اختصار كتابة المعلومات فوق الصور و الرسوم إلى تلك الأساسية فقط.
- وضع عناوين captions لجميع الرسومات و الصور.
- تسمية ما بداخل الرسومات البيانية مباشرة على الرسم باستخدام labels و تجنب المفاتيح Legends .. إن أمكن.
- استبدال الجداول برسومات بيانية إن أمكن .



تنسيق الملصق العلمي

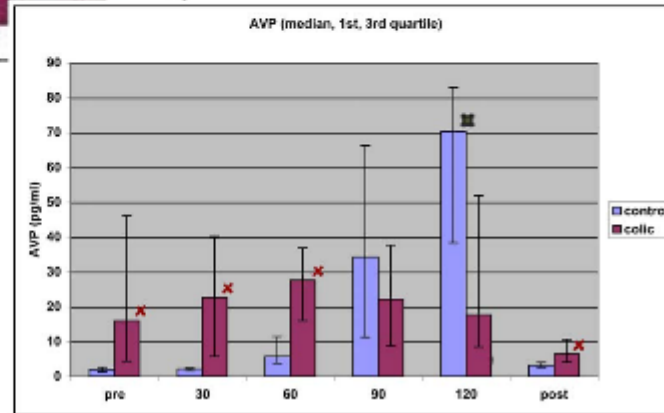
دقة الصور و الرسومات



jpg



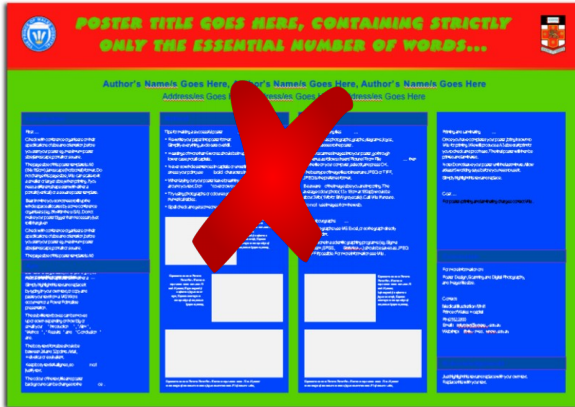
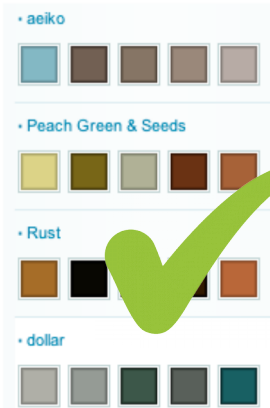
png



تنسيق الملصق العلمي استخدام الألوان

يجب على الملصق أن يكون ملصق بصري، و هناك أهمية كبيرة
و قواعد عامة لاستخدام الألوان

- خلفية الملصق background
- ألوان النص
- ضبط الألوان



Blue on Red appears blurry to the human eye.

Yellow on white is hard to read.

Red on Blue appears blurry to the human eye.

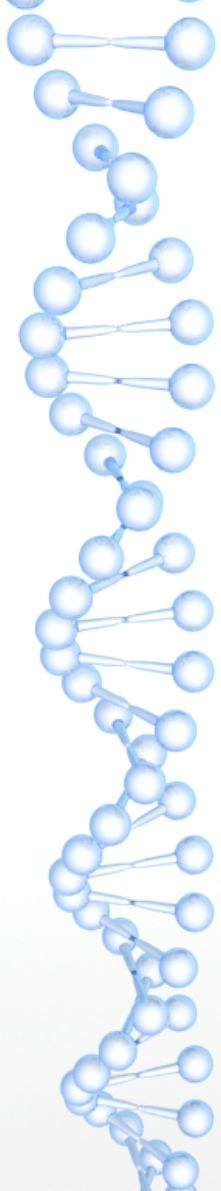
اختيار البرنامج المناسب

يوجد عدة خيارات :

- MS Power Point / LibreOffice Impress/ Apple Keynote
- Adobe Illustrator
- Adobe InDesign
- Document processing programming Language
LaTeX, PostScript ..etc

CODE

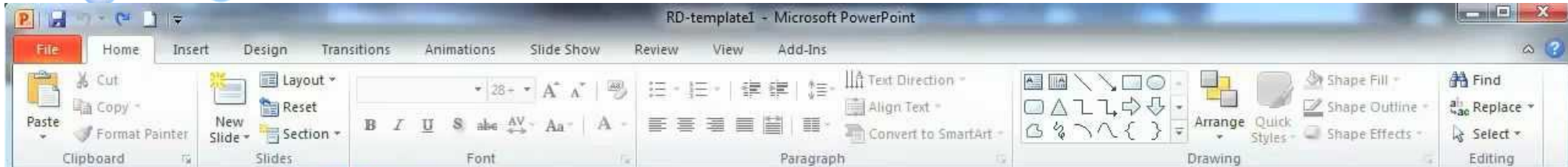




برامج العروض التقديمية

- سهولة الاستخدام و لا تحتاج لتعلم الكثير لاستخدامها.
- يعد الملصق على شريحة واحدة.
- تفتقر للمرونة.



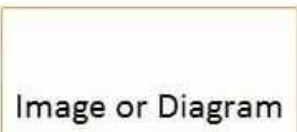


Author 1, 2, 3, 80 pt bold, italic
School of Library, Archival and Information Studies
First.last@ubc.ca



Introduction

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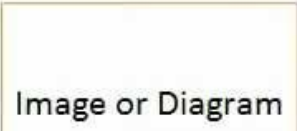
More Findings

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Discussion

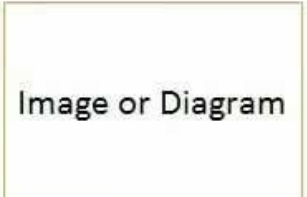
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Findings

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Acknowledgements

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Title: contains concise title and appropriate STEM topic.

Literature review:

LI review intro: Briefly introduces topic and demonstrates why it is scientifically interesting or important.

LI review body: Discussion of sources in students' own words, organized in a particular way with strong transitions to demonstrate relationships between main ideas, focused on the research topic; explanations for technical terms and acronyms.

LI review conclusion: Conclusions are justified by literature reviewed. Establishes research question.

Methods design: breaks down design of experiment and purpose of experiment. Describes instruments and why they are used. Cites previously used methods.

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Expected Results: Describes what is expected to be found with the project. Does not jump to conclusions and cites primary sources to support hypothesis. Describes possible outcomes and alternative possible results. Explains how results relate to hypothesis.

Budget/timeline: Includes timeline with major milestones and budget for all materials. Timeline and expenses are feasible for undergraduate project.

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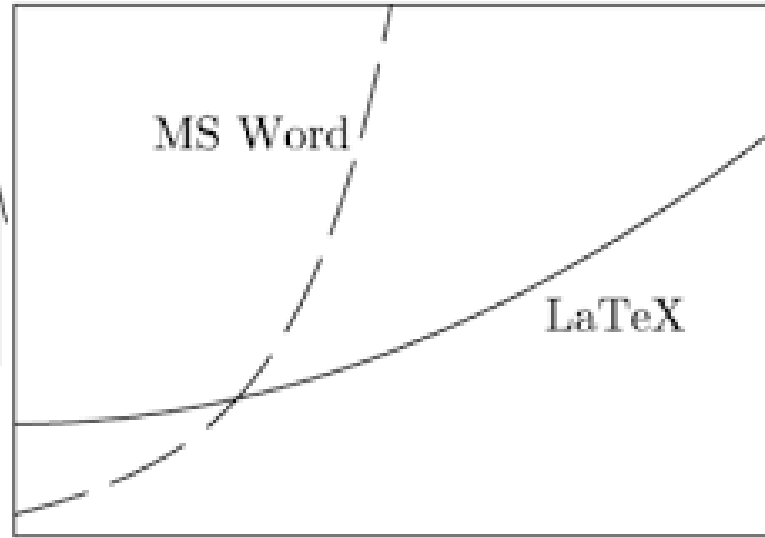
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الخيار الأمثل هو لغة LaTeX مثلا من خلال
حزمة

LaTeX beamerposter package

<https://github.com/deselaers/latex-beamerposter>


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5 \usepackage{graphicx,url}
6 \usepackage{blindtext,tikz}
7 \usepackage{background}
8 \usepackage[utf8]{inputenc}
9 \columnsep=100pt
10 \columnseprule=3pt
11 \usepackage[british,UKenglish,french]{babel}
12 \usepackage[dvipsnames]{xcolor}
13 \usepackage{euler,eucal} % euler font for maths
14 \usepackage{palatino} % Uncomment to use the Palatino font
15 %\usepackage{subfig}
16 % \usepackage{wrapfig}
17 %%%%%%%%%%%%%%%%%%%%%%%%%%
18 %colour options
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20 %\definecolor{mainCol}{rgb}{1,1,1}
21 %\definecolor{TextCol}{rgb}{0,0,0}
22 \colorlet{SectionCol}{white}
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30   scale=1,
31   angle=0,
32   opacity=1,
33   contents=
34   {\begin{tikzpicture}[remember picture,overlay] \path [right color = c!15!,middle color = c!10!gray!5!, left color = gray!5!] (current page.south west)rectangle (current page.no
35   \end{tikzpicture}}
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48 \newcommand{\OC}[2]{\mbox{\$[\, #1\, \, #2\, \, ]\$}}

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أنواع الملصقات العلمية

- ملصق البحث العلمي Scientific research poster
- ملصق السلامة و تحسين الأداء Safety and Quality Improvement
- ملصق عرض الحالة Case study/case presentation
- يستخدم النوعين الأخيرين بشكل خاص في التخصصات الطبية / و البيئة الإكلينيكية





Search for Supersymmetry in Final States with a Single Lepton, B-jets and Missing Transverse Energy at CMS



Abstract

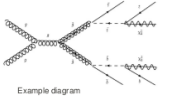
Motivated by supersymmetric models with light top and bottom squarks, a search for supersymmetry in final states with a single lepton, b-jets and missing transverse energy is performed. The analysis is based on data recorded at the CMS experiment in proton-proton collisions at a center of mass energy of 7 TeV during 2011, corresponding to an integrated luminosity of 4.96fb. Results are interpreted in the context of the Constrained Minimal Supersymmetric Standard Model and a heavy flavor simplified model.

Alian Cakir¹, Francesco Costanza¹, Dean Horton¹, Dirk Krücker¹, Isabell Metzger-Pellmann¹, Niklas Pletsch¹, Elias Roni¹, Özgür Sahin¹, Hannes Schettler¹, Peter Schöper¹, Matthias Stein¹

¹Deutsches Elektronen-Synchrotron DESY
²University of Hamburg

Supersymmetry

Supersymmetry (SUSY) predicts that for each Standard Model (SM) particle there exists a partner particle (sparticle) with identical gauge quantum numbers, but a spin differing by 1/2. Assuming R-parity conservation, sparticles are produced in pairs and their decay chains terminate with the lightest supersymmetric particle (LSP), which is stable. In several SUSY scenarios top and bottom squarks are lighter than the squarks of the 1st and 2nd generation, which may result in an excess of events with a large multiplicity of 3rd generation quarks.



Example diagram

Signature

- Large jet and b-jet multiplicity
- Missing transverse energy from two stable LSPs
- Lepton from leptonically decaying top quark or two- or three-body decay of neutralino or chargino

Event Selection

Selection criteria	Object definition
1 lepton	Isolated muon or electron with $p_T > 20$ GeV, $ \eta < 2.4$ and $ \Delta R > 2.5$ (with respect to other leptons)
veto on 2 nd lepton	Muon or electron fulfilling looser criteria
8 A-jets	jets with $p_T > 40$ and $ \eta < 2.4$ reconstructed with the anti-k _r algorithm; transverse flow objects
HT > 375 GeV	Scalar sum of the p_T of all selected jets
E _{miss} > 60 GeV	Metastable sum of the p_T of all particles flow objects
1, 2 or ≥ 3 b-jets	Selected jets with 2 b-tags with impact parameter significance > 3.3 (track-counting algorithm)

Background Estimation from Data

The main background after the event selection with b-jet requirement originates from tt events. For these Y_{top} , H_T and H_D are only slightly correlated, which allows one to estimate the background using a factorization method:

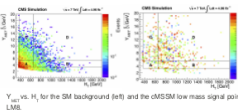
• Define signal-enriched region D at large values of Y_{top} and H_T and control regions A, B and C:

Region	H_T / GeV	Y_{top} / %GeV
A	$375 < H_T < 600$	$3.25 < Y_{top} < 5.5$
B	$H_T > 650$	$3.25 < Y_{top} < 5.5$
C	$375 < H_T < 600$	$Y_{top} > 5.5$
D	$H_T > 650$	$Y_{top} > 5.5$

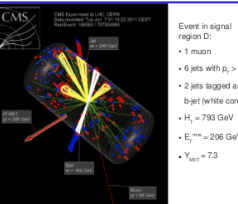
• Calculate expected number of background events in region D from control regions:

$$\kappa \frac{N_D}{N_C} = \frac{N_D}{N_B} \Rightarrow N_D = \kappa \frac{N_A}{N_C} \frac{N_B}{N_C}$$

• where the correlation between Y_{top} and H_T is taken into account by the factor $\kappa = 1.20 \pm 0.04$ estimated from simulated events.



Y_{top} vs. H_T for the SM background (left) and the cMSSM low mass signal point (right)



Systematic Uncertainties

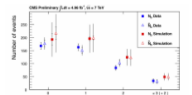
• Systematic uncertainties on data prediction mostly cancel out (only contributions < 1% given):

Uncertainty	$\Delta\epsilon$ (1 b-jet)	$\Delta\epsilon$ (2 b-jets)	$\Delta\epsilon$ (≥ 3 b-jets)
Jet energy scale	+2.2%	+1.4%	+4.0%
Jet energy res.	-1.7%	-1.8%	-1.5%
System ID	+1.5%	+0.7%	+1.2%
Cross-section	+1.0%	+2.0%	+1.4%

• The correlation between Y_{top} and H_T is cross-checked in data in the exclusive 0 b-jet channel

→ An additional uncertainty of 10% is applied on κ

Results



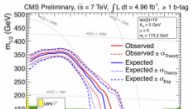
- Number of simulated and predicted simulated events agree well → Test on simulated events closes
- Agreement between data and prediction from data within uncertainties → No excess observed

Interpretation

95% CL limits are set upon the parameters of the Constrained Supersymmetric Standard Model (cMSSM) and a heavy flavor simplified model using the CLs technique.

cMSSM

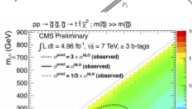
- tanβ=10, $A_0 = 0$ and $\mu > 0$
- ≥1-b-jet



CMS Preliminary, $\sqrt{s} = 7$ TeV, $|\Delta R|_{l, b} > 4.96$ fb⁻¹, 1 b-jet

Simplified model "T1tt"

- ≥ 3 b-jets



CMS Preliminary, $|\Delta R|_{l, b} > 4.96$ fb⁻¹, $\sqrt{s} = 7$ TeV, ≥ 3 b-jets

Summary & Outlook

A search for SUSY with light 3rd generation squarks has been performed on data collected by the CMS experiment in proton-proton collisions at a center-of-mass energy of 7 TeV, corresponding to an integrated luminosity of 4.96fb. No deviation from the SM has been found. Limits upon the parameters of the cMSSM and a simplified model have been set.

Defining signal regions at large values of Y_{top} and H_T might increase the sensitivity of the analysis (work in progress).

Reference: CMS PAS SUS-11-028



Thermodynamics of Rotating Kaluza-Klein Black Holes in Gravity's Rainbow

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Department of Physics and Astronomy
King Fahd University of Petroleum & Minerals
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Introduction

Black holes represent the most extreme objects in the universe. Their study is not only important for understanding the evolution of the universe but also for understanding the fundamental laws of physics. In this paper, we study the thermodynamics of rotating Kaluza-Klein black holes in gravity's rainbow. The thermodynamic quantities are calculated for these black holes. It is shown that the thermodynamic quantities are finite and well behaved. The results are compared with those of the standard black holes.

$$R^2 P(\lambda) d\lambda - p^2 \lambda^2 \lambda^2 d\lambda = \omega^2$$

where λ is the Planck energy, R is the energy of the black hole geometry in probe, and $P(\lambda)$ and p are the parameters of the rainbow function. The rainbow function is defined as $P(\lambda) = 1 - \beta \lambda^2$, where β is a constant. The rainbow function is used to modify the metric tensor of the black hole.

Kaluza-Klein Black Holes

Kaluza-Klein black holes are a special class of rotating black holes in higher dimensions. They are characterized by their unique geometry and their ability to support a horizon. In this paper, we study the thermodynamics of these black holes in gravity's rainbow.

$$ds^2 = -dt^2 - 2a dt d\phi + a^2 d\phi^2 + \frac{dr^2}{1 - \frac{r^2}{R^2}} + r^2 d\Omega^2$$

where t , ϕ , r and Ω are the coordinates in the four-dimensional spacetime. a is the rotation parameter. The metric tensor is used to calculate the thermodynamic quantities.

$$M = \frac{1}{4\pi} \int_{\Sigma} \sqrt{-g} T_{\mu\nu} n^\mu d\Sigma^\nu$$

$$J = \frac{1}{8\pi} \int_{\Sigma} \sqrt{-g} T_{\mu\nu} \xi^\mu d\Sigma^\nu$$

The Hawking temperature is given by

$$T_H = \frac{\kappa}{2\pi}$$

Using the relation $\kappa = \frac{1}{2} \nabla_\mu \chi \nabla^\mu \chi$, we can calculate the Hawking temperature.

$$T_H = \frac{1}{4\pi} \frac{1}{r} \frac{dr}{dt}$$

K-K Black holes in gravity's rainbow

The rotating K-K black holes are defined by the metric tensor in the four-dimensional spacetime. The thermodynamic quantities are calculated for these black holes. It is shown that the thermodynamic quantities are finite and well behaved. The results are compared with those of the standard black holes.

$$f(R) = 1 \quad g(R) = \sqrt{1 - \beta R^2}$$

Here, κ and ω are the surface gravities. Here, χ is the Killing vector field. The formula for the Hawking temperature is given by

$$T_H = \frac{1}{4\pi} \frac{1}{r} \frac{dr}{dt}$$

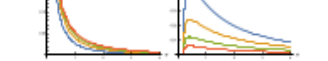


Figure 1: Mass (left) and entropy (right) versus rotation parameter a for different values of the rainbow function parameter beta. The curves show that the mass and entropy are finite and well behaved.

Similarly, the differential entropy is calculated from the integral $S = \int_{\Sigma} \sqrt{-g} T_{\mu\nu} \xi^\mu d\Sigma^\nu$.

$$dS = \frac{1}{4\pi} \int_{\Sigma} \sqrt{-g} T_{\mu\nu} \xi^\mu d\Sigma^\nu$$

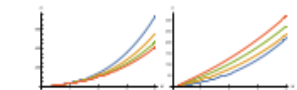


Figure 2: The differential entropy of different rotating K-K black holes in gravity's rainbow. The curves show that the differential entropy is finite and well behaved.

In order to check the validity of rotating K-K black holes and their thermodynamic quantities, we can check the validity of the first law of thermodynamics. The first law of thermodynamics is given by

$$dM = T_H dS + \Omega dJ$$

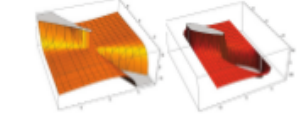


Figure 3: A plot of the mass (left) and entropy (right) versus rotation parameter a for different values of the rainbow function parameter beta. The curves show that the mass and entropy are finite and well behaved.

The differential entropy is calculated from the integral $S = \int_{\Sigma} \sqrt{-g} T_{\mu\nu} \xi^\mu d\Sigma^\nu$.

$$dS = \frac{1}{4\pi} \int_{\Sigma} \sqrt{-g} T_{\mu\nu} \xi^\mu d\Sigma^\nu$$

$$dS = \frac{1}{4\pi} \int_{\Sigma} \sqrt{-g} T_{\mu\nu} \xi^\mu d\Sigma^\nu$$

Both ordinary and differential rotating K-K black holes do not violate the first law of thermodynamics. The results are compared with those of the standard black holes.

Conclusions

In this research, the thermodynamics of rotating Kaluza-Klein black holes in gravity's rainbow is studied. The thermodynamic quantities are calculated for these black holes. It is shown that the thermodynamic quantities are finite and well behaved. The results are compared with those of the standard black holes.

Acknowledgments: This work was supported by a grant from the Research Center of the Institute of Science and Technology (IST) at King Fahd University of Petroleum & Minerals.

References

- [1] Ahmed Faruqi, M. Black hole remnant from gravity's rainbow. *Phys. of Letters B*, 198, 103-108, 2011.
- [2] Ahmed Faruqi, M. Black hole remnant from gravity's rainbow. *Phys. of Letters B*, 198, 103-108, 2011.
- [3] Ahmed Faruqi, M. Black hole remnant from gravity's rainbow. *Phys. of Letters B*, 198, 103-108, 2011.
- [4] Ahmed Faruqi, M. Black hole remnant from gravity's rainbow. *Phys. of Letters B*, 198, 103-108, 2011.
- [5] Ahmed Faruqi, M. Black hole remnant from gravity's rainbow. *Phys. of Letters B*, 198, 103-108, 2011.
- [6] Ahmed Faruqi, M. Black hole remnant from gravity's rainbow. *Phys. of Letters B*, 198, 103-108, 2011.
- [7] Ahmed Faruqi, M. Black hole remnant from gravity's rainbow. *Phys. of Letters B*, 198, 103-108, 2011.
- [8] Ahmed Faruqi, M. Black hole remnant from gravity's rainbow. *Phys. of Letters B*, 198, 103-108, 2011.
- [9] Ahmed Faruqi, M. Black hole remnant from gravity's rainbow. *Phys. of Letters B*, 198, 103-108, 2011.
- [10] Ahmed Faruqi, M. Black hole remnant from gravity's rainbow. *Phys. of Letters B*, 198, 103-108, 2011.
- [11] Ahmed Faruqi, M. Black hole remnant from gravity's rainbow. *Phys. of Letters B*, 198, 103-108, 2011.





ملصق دراسة الحالة

- يتضمن المقدمة، عرض الحالة ، المناقشة و المراجع.
- عرض الحالة : case presentation
 - Patient history
 - Hospital course
 - Family and social history
 - Lab work, medical imaging , other diagnostic studies
- يجب ذكر العلامات السلبية و الإيجابية التي ظهرت من خلال فحص المريض سريريا



Hidden in Plain Sight:

False Reassurances Obscuring a Case of Intravascular Lymphoma

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Department of Medicine, Oregon Health & Science University, Portland, OR



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Introduction

An ill 67 year old man presents with weakness and profound failure to thrive immediately following an episode of syncope.

Background

- For the preceding **6 months**, he has been undergoing an exhaustive workup for chronically progressive B-symptoms and elevated inflammatory markers, including ferritin 1600 ng/mL, CRP 18 mg/L, ESR 94 mm/hr, and LDH 300U/L without hemolysis.
- Wife additionally describes **1 year** of “personality changes” including sudden anger, anxiety, and extremely vivid dreams – all new.
- Thought to have polymyalgia rheumatica, he received escalating doses of prednisone, up to 60mg daily for over a month, which briefly improved symptoms though were stopped given transient efficacy and development of significant anasarca, transudative pleural effusion, pericardial effusion, and progressive weakness.
- Over the **2 months** preceding admission, he experienced progressively worsening dyspnea, weakness, and dysphonia against a background of a more gradual decline in renal function and persistent sinus tachycardia without a satisfactory diagnosis.
- Outpatient work up includes:
 - negative ANA, ANCA, RF, PPD, viral hepatitis, HIV, Lyme testing
 - SPEP, UPEP, IgG, IgA, and iron studies within normal limits
 - reassuring CT Chest, Abdomen, Pelvis (mild splenomegaly)
 - normal bone marrow biopsy
 - PFTs notable for obstructive disease with low DLCO
- Unremarkable past medical history, family history, medications
- Social history: Accomplished jazz saxophonist, working “up until a few weeks ago”. No cigarettes or alcohol since age 27. No IVDU.

Presentation

- Reports syncope while walking slowly after 1 day of acute on chronic dyspnea in setting of a week of worsened fatigue, lack of appetite, dysphonia, and profound weakness.
- Review of Systems:** Continued B-symptoms. No chest pain, palpitations, cough, urinary symptoms, diarrhea, vomiting, or evidence of bleeding.
- Vitals/Exam:** afebrile, HR 111, BP 81/50, RR 26, O2 93% on room air. Thin white male, no acute distress, mildly confused though otherwise neurologically intact, dry mucous membranes, irregularly irregular tachycardia, decreased left base breath sounds with normal work of breathing, 3+ lower extremity edema to mid back.
- Pertinent Labs:** Hb 7.1, MCV 74, WBC 6.8, platelets 168, Na 126, Cr 1.7, CK 2, Albumin 1, and lactate 5.5 which improves with crystalloids. CRP 18, ESR 140, LDH 287

Hospital Course and Transfer

- Initially admitted to the ICU, presumptively treated for septic shock, adrenal insufficiency, and anemia with antibiotics, 2g methylprednisolone IV daily and blood transfusions for several days without clinical or diagnostic progress.
- Consideration for insidious malignancy such as intravascular lymphoma entertained, but ruled out** due to normal peripheral blood flow cytometry and cytogenetics (along with recent normal bone marrow biopsy).
- Transferred to tertiary care center for continued workup and care.
- Upon arrival, noted to be mildly tachycardic and tachypneic though saturating 100% on room air. Recommendations placed for further imaging, labs, and studies **including a skin and fat pad biopsy**.
- However, within 24 hours of arrival patient suddenly began gasping for air with rapidly deteriorating bradycardia. He was found to be in PEA arrest and unfortunately died.
- Autopsy confirmed **diffuse organ involvement of intravascular diffuse large B-cell lymphoma**.
- Immediate cause of respiratory arrest attributed to “severe leukostasis” of “alveolar capillaries congested with neoplastic cells”.

Extent of Organ Involvement

Specifically noted on pathologic examination to involve microcirculation of the following organs:

- Lung (fig. A)
- Coronary arteries
- Skeletal Muscle
- Thyroid
- Adrenal glands
- Bladder
- Testicle
- Colon
- Liver
- Kidney
- Prostate
- Stomach
- Spleen
- Skin (fig. B)
- Central Nervous System:
 - Basal ganglia (fig. C)
 - R frontal (fig. D) & occipital cerebral cortex
 - Pituitary gland (anterior and posterior)
 - Choroid plexus of medulla
 - Thalamus

Note: NOT seen in bone marrow or lymph nodes

Pathologic Findings

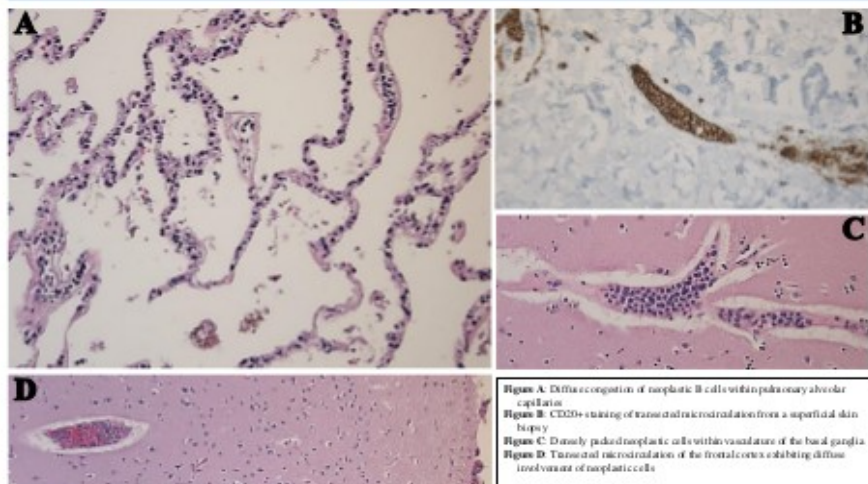


Figure A: Diffuse congestion of neoplastic B cells within pulmonary alveolar capillaries
Figure B: CD20+ staining of neoplastic reconstruction from a superficial skin biopsy
Figure C: Densely packed neoplastic cells within vasculature of the basal ganglia
Figure D: Transient microcirculation of the frontal cortex exhibiting diffuse involvement of neoplastic cells

Discussion

- Intravascular lymphoma is an extremely rare subtype of extranodal diffuse large B-cell lymphoma characterized by **tumor proliferation within the lumina of small blood vessels**¹
- The entity was first described in 1959 as “angi endotheliomatosis proliferans systemisata” by Pfleger and Tappeiner, who theorized the malignancy derived from the endothelial cells themselves.²
- Given its rarity and nonspecificity of symptoms, diagnosis is difficult: over 60% of cases involving CNS are diagnosed postmortem.³
- Only 5-9% of cases of intravascular lymphoma are detectable in peripheral blood!** Small studies point to aberrant expression of markers which home to endothelial cell surface ligands, or aberrant lymphocyte homing and transvascular migration signaling.^{4,5}
- Therefore, a **random skin biopsy is the diagnostic test of choice**.^{6,7,8}
- In this case, presence of intravascular lymphoma was in fact suspected at the referring hospital, though prematurely ruled out given normal bone marrow negative peripheral cytogenetics and peripheral flow cytometry. Nevertheless, disease involvement was clear on postmortem skin biopsy.
- This case illustrates key characteristics that can increase suspicion.⁹

	Anemia	↑LDH; Erythrocytoblasts	↑CRP	Hepatic/renal/lymphoid dysfunction
Incidence	65%	80-95%	45%	15-20%

- The literature further describes two distinct phenotypes: Western and Asian, which vary in organ involvement.⁹ Interestingly, this case transcends the International Consensus Guidelines:

	CNS	Skin	Bone Marrow	Liver, spleen
Western	+	+	+	+
Asian			+	+

- Early diagnosed cases have been successfully treated with aggressive chemotherapy such as R-CHOP.¹

Teaching Points

- Symptoms of intravascular lymphoma are nonspecific, though the **presence of an inexplicable inflammatory state, elevated LDH, anemia, and organ dysfunction** can raise suspicion.
- Definitive diagnosis is made via **random skin biopsy**.
- Distinction between Asian and Western phenotypes are not clear-cut.

References

- Zachariae D, Nelson R, Fleisher B. Intravascular Lymphoma: The Oncologist's Core Review. *J Clin Oncol*. 2011;29(11):1593-7.
- Pfleger J. "Systemic" Angi endotheliomatosis: a new type of lymphoma. *Virchows Arch*. 1959;136:1-10.
- Fisher B, Lee E, Robinson D, Gosses C, Nappi J. Theoretical basis for intracerebral lymphoma. *Cancer*. 1984;53(1):103-110.
- Kalish JM, Sherman D, Chhabildas J, Tamm R, Winkler M. Intravascular lymphoma: clinicopathologic features and molecular genetic analysis. *Leuk Lymphoma*. 2009;50(12):1765-1774. doi:10.1080/10420930.2009.333333.
- Pattanaik M, Jangjiri S, Gopal V, et al. Diffuse large B-cell lymphoma with organomegaly. *Am J Clin Pathol*. 2008;122(2):208-211.
- Zand M, Sherman D, Henson C, et al. Intracerebral lymphoma: the diagnosis of intracerebral large B-cell lymphoma. *Am J Clin Pathol*. 2007;122(2):212-217.
- Koepsel A, Finkbeiner H, Stiglmayr R. The histology of intracerebral diffuse large B-cell lymphoma: strong immunohistochemical and molecular biology evidence. *Am J Clin Pathol*. 2008;120(1):72-81. doi:10.1016/j.ajcp.2007.08.017.
- Wang R, Jankovic H, Henson C, et al. Brainstem lymphoma and intracerebral lymphoma: the diagnosis of intracerebral large B-cell lymphoma. *Ann Oncol*. 2009;20(12):2522-2525. doi:10.1093/annonc/mdp317.
- Pattanaik M, Evans A-M, Campbell A-M. Endothelial Origin, and Management of Intracerebral Large B-Cell Lymphoma. *Peripher Blood Proteinom Proteom Intenational Consensus Meeting*. 2011; 20(1):2522-2525. doi:10.1093/annonc/mdp317.

ملصق السلامة و تحسين الأداء

- يتضمن المقدمة، نتائج مقابلات أو استبانات أجريت .
- لفت الإنتباه لمشكلة محددة يتناولها البحث
- التوصيات و الخطوات التي يجب اتباعها لحل المشكلة
- يوجد مجال أكبر للابداع

REDESIGNING CARE TRANSITIONS: STANDARDIZING THE INTERPROFESSIONAL DISCHARGE PROCESS AT THE VA PORTLAND HEALTHCARE SYSTEM (VAPORHCS)

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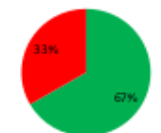
Background:

- Hospital admissions provide interventions that require ongoing management after discharge
- Communication of transitional care needs between inpatient and outpatient settings is facilitated primarily by discharge documentation
- Inpatient care documentation is often not targeted toward the appropriate outpatient audience
- Increased risk of errors occur by unclear or incomplete documentation
- Standardization of discharge planning and documentation is associated with more complete follow-up care and lower readmission rates and can improve the safety of care transitions^{1,2}

Current State:

- Reviewed discharge documentation from 1,000 randomly selected patients discharged from the VAPORHCS medicine service July 2013 – June 2014 which showed:
 - 41% lacked an accurate, complete reconciled medication list
 - 54% had no clear delineation of follow-up care responsibility
 - 46% lacked complete list of post-discharge follow-up appointments

Discharge Instructions



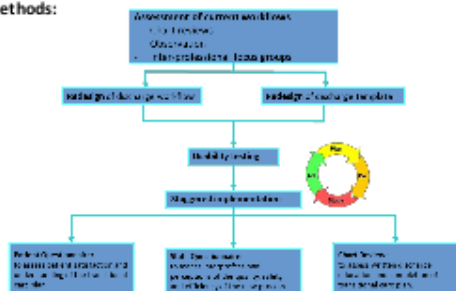
Follow-up Completion



Interventions:

- A new interprofessional discharge instructions note was created to include:
 - standardized patient education
 - Prompts for essential but frequently omitted components
 - embedded orders to streamline workflow and decrease errors of omission
- Discharge workflow changed to facilitate congruity between physician, pharmacy, and nursing counseling to the patient.

Methods:



Results

Usability Metrics:

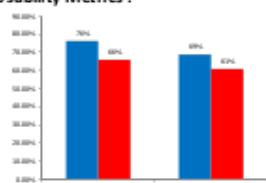


Figure 1. Usability (N=14), by subject use terms, included in the discharge documentation, and in the standard 3-point usability test. When this data was measured by level of training, a subject did not use discharge process, associated for in a resident, but that the new process was better for hospital employees. When this data was measured by all staff on the unit, for new process compared to either in both or less, as in the case.

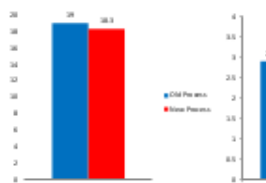


Figure 2. Usability data, by average time spent on discharge process. There was no significant difference in all process but when the new and old discharge processes.

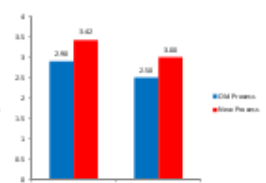
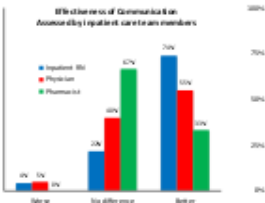
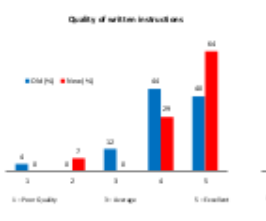


Figure 3. Perceived quality, by quality of discharge as per process of all items of discharge process. There was a trend toward a higher quality post usability test by physician providers.

Provider Perceptions:



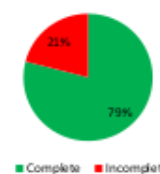
Patient Satisfaction & Education:



Outcomes Measures:

Reviewed discharge documentation from 1,000 randomly selected patients discharged from the VAPORHCS medicine service October 2015 – December 2015 which showed:

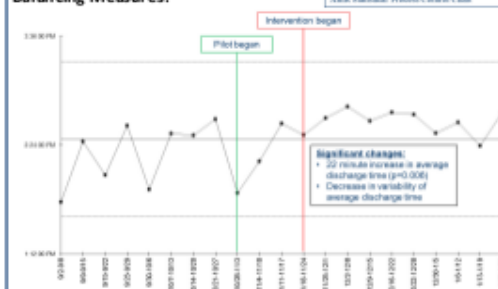
Discharge Instructions



Follow-up Completion



Balancing Measures:



Conclusions:

- The use of a new standardized discharge workflow and documentation resulted in improved completion of discharge instructions and patient follow-up
- No time difference was demonstrated in usability testing despite perception from physicians that process took longer, but discharges times were slightly delayed (and less variable)
- Perceptions of new process overall increased for inpatient team members, mixed for outpatient
- The new discharge process improved patient satisfaction with discharge instructions and education but did not improve patient understanding of their discharge care plan

Next Steps:

- Evaluation of additional patient outcome measures (readmission rates, unscheduled care visits)
- Investigate and address root causes of dissatisfaction uncovered by feedback process
- Expansion to other specialties within VAPORHCS

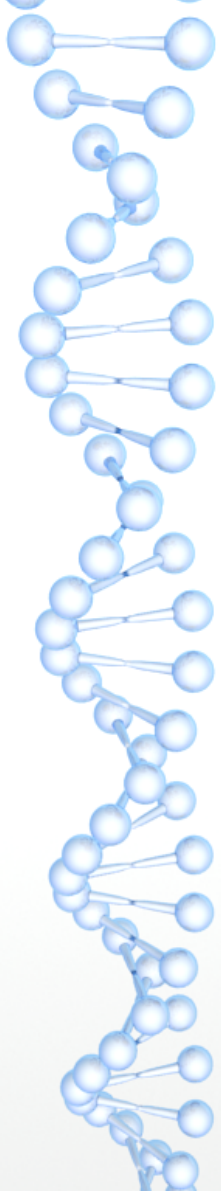
References:

1. Shepard S, McClaran J, Phillips CQ, Lavin PA, Cernson UM, Conerton JD, Barras SL. Discharge planning from hospital to home - Cochran Database Syst Rev. 2012 Jan 21;11:CD000382. doi: 10.1002/14651958.CD000382.pub2.
2. Gagnon J, Kanath A, Kaboli P. Discharge documentation improvement project: Combined discharge summary, patient instructions, medication reconciliation, and nursing instructions. 2011.

عناصر تحكيم الملصق العلمي

- أصالة وتأثير المحتوى
- طريقة إجراء البحث و مناقشته
- الناحية البصرية و الفنية للملصق
- من خلال المقابلة أو العرض الذي يقدمه الباحث





Thank You !