The ins and outs of INSPIRE

Beijing, 26 November 2018 Micha Moskovic, CERN Scientific Information Service



INSPIRE in a nutshell

- Main HEP information platform
- Freely available, run by 5 institutions (+partners)









Institute of High Energy Physics Chinese Academy of Sciences





History

- SPIRES (1974-2012): network of databases (literature, authors, conferences, jobs, institutions, experiments)
- 1991: first database on the web, first website in USA
- INSPIRE (2012)
 - Same content
 - Same look & feel
 - Based on Invenio software developed at CERN
- Future (2019?): Inspire labs
 - Complete rewrite
 - Modern web interface



Some numbers

- 50K active users
- 1.3M bibliographic records (HEP)
 - arXiv preprints
 - Published papers
 - Theses
 - Conference proceedings
- 120K author records (HEPNames)
- 23M citations
- 200K searches/day





Welcome to <u>INSPIRE</u>, the High Energy Physics information system. Please direct questions, comments or concerns to <u>feedback@inspirehep.net</u>.



HEPNAMES

Institutions ::

Conferences

Jobs

EXPERIMENTS :: JOURNALS

HELP

HEP Search

High-Energy Physics Literature Database

Use "find " for SPIRES-style

search (other tips)

Brief format

Search

Easy Search Advanced Search

find j "Phys. Rev. Lett., 105*" .. more

HOW TO SEARCH

SPIRES syntax is (mostly) supported (requires "find")

find a richter, b and t quark and date > 1984

find j phys.rev., D50,1140 or j jhep, 0903,112

find eprint arxiv:1007.5048 (Note the plots available on the detailed record)

find fulltext "quark-gluon plasma" (Note new "fulltext" operator)

find a ellis and refersto a witten (Note "refersto")

find a kane and citedby title SUSY and topcite 200+ (Note "citedby")

New techniques:

1985 richter quark multiplicity

arXiv:1007.5048

citedby:author:ellis -refersto:author:witten

author:randall | author:sundrum cited:450->1350

Additional Help:

More search tips and full help

HEP

Additions Corrections

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RESOURCES

ADS

arXiv

HepData

INIS

PDG

PDG review of online

resources

Literature

Finding & displaying papers



Searching on INSPIRE: syntax

3 ways to search:

- SPIRES-like syntax:
 f cn BESIII and t charmoniumlike
- Invenio syntax: collaboration:BESIII title:charmoniumlike
- no syntax (searches in many different fields):

BESIII charmoniumlike



Searching on INSPIRE: keywords

Many keywords available:

Author (finds compatible names):
 f a Moskovic, Micha

Title words:f t supergravity

Topcite (select number of citations):
 f topcite 100->1000

Author count (select number of authors):
 f ac 5+

Journal (title, volume, page/article ID):
 f j JHEP 1404 148



Searching on INSPIRE: keywords

Collaboration:

```
f cn BESIII
```

arXiv eprint number:

```
f eprint 1811.08028
```

arXiv primary category:

```
f primarch hep-ph
```

doi:

```
f doi 10.1103/PhysRevD.98.072003
```

And many more!



Searching on INSPIRE: operators

Use operators to build more powerful searches:

- Boolean (and/or/not):
 f a Moskovic and t instanton
- Parentheses for precedence:
 f a Moskovic and (t instanton or t chiral)
- Ranges (->/+/</>):f topcite 100+ and date 2017->2018
- Quoting for phrases: f t "higgs potential"
- Wildcard (*):f eprint 1811.* and primarch hep-*



Searching on INSPIRE: second order

Second order searches allow to find record citing/cited by another set of records corresponding to a search query:

• Refers to:

```
f ac 1->10 and refersto cn BESIII
```

Cited by:

```
f date > 2017 and citedby a witten
```





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High-Energy Physics Literature Database

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author:randall | author:sundrum cited:450->1350

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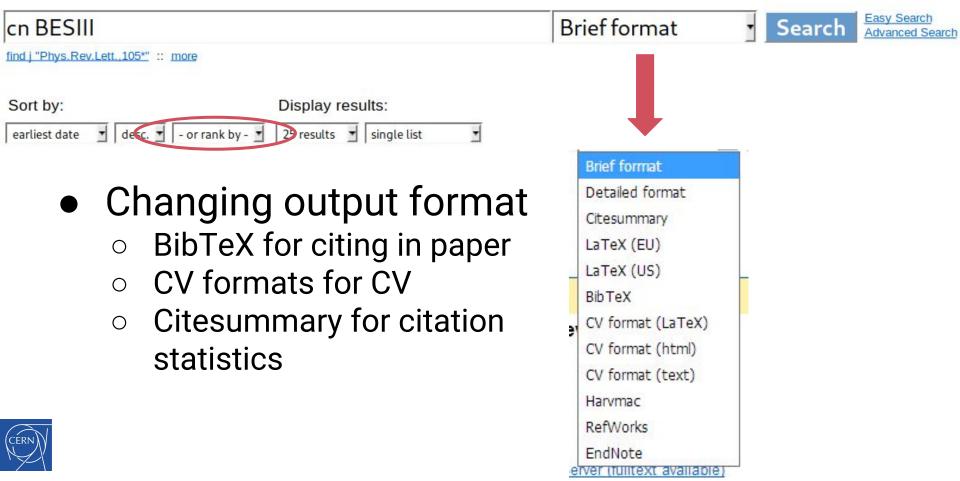
PDG

PDG review of online

resources

Changing display of results

Ordering by number of citations



e-Print: arXiv:1811.08028 [hep-ex] | PDF

Abstract (arXiv)

We study the hadronic decays of Λ_c^+ to the final states $\Sigma^+\eta$ and $\Sigma^+\eta'$, using an e^+e^- annihilation data sample of 567 pb⁻¹ taken at a center-ofmass energy of 4.6 GeV with the BESIII detector at the BEPCII collider. We find evidence for the decays $\Lambda_c^+ o \Sigma^+ \eta$ and $\Sigma^+ \eta'$ with statistical significance of 2.5σ and 3.2σ , respectively. Normalizing to the reference decays $\Lambda_c^+ \to \Sigma^+ \pi^0$ and $\Sigma^+ \omega$, we obtain the ratios of the branching fractions $\frac{\mathcal{B}(\Lambda_c^+ o \Sigma^+ \eta)}{\mathcal{B}(\Lambda_c^+ o \Sigma^+ \pi^0)}$ and $\frac{\mathcal{B}(\Lambda_c^+ o \Sigma^+ \eta')}{\mathcal{B}(\Lambda_c^+ o \Sigma^+ \omega)}$ to be $0.35 \pm 0.16 \pm 0.03$ and $0.86 \pm 0.34 \pm 0.07$, respectively. The upper limits at the 90\% confidence level are set to be $\frac{\mathcal{B}(\Lambda_c^+ o \Sigma^+ \eta)}{\mathcal{B}(\Lambda_c^+ o \Sigma^+ \pi^0)} < 0.58$ and $\frac{\mathcal{B}(\Lambda_c^+ o \Sigma^+ \eta')}{\mathcal{B}(\Lambda_c^+ o \Sigma^+ \omega)} < 1.2$. Using BESIII measurements of the branching fractions of the reference decays, we determine $\mathcal{B}(\Lambda_c^+ o\Sigma^+\eta)=(0.41\pm0.19\pm0.05)\%$ (<0.68%) and $\mathcal{B}(\Lambda_c^+ \to \Sigma^+ \eta') = (1.34 \pm 0.53 \pm 0.21)\%$ (< 1.9%). Here, the first uncertainties are statistical and the second systematic. The obtained branching fraction of $\Lambda_c^+ o \Sigma^+ \eta$ is consistent with the previous measurement, and the branching fraction of $\Lambda_c^+ o \Sigma^+ \eta'$ is measured for the first time.

Note: * Temporary entry *

Record added 2018-11-21, last modified 2018-11-21

Plots

Observation of a Charged Charmoniumlike Structure in $e^+e^- \rightarrow \pi^+\pi^-$ J/ψ at \sqrt{s} =4.26 GeV - BESIII Collaboration (Ablikim, M. et al.) Phys.Rev.Lett. 110 (2013) 252001 arXiv:1303.5949 [hep-ex]

Cited by: 613 records

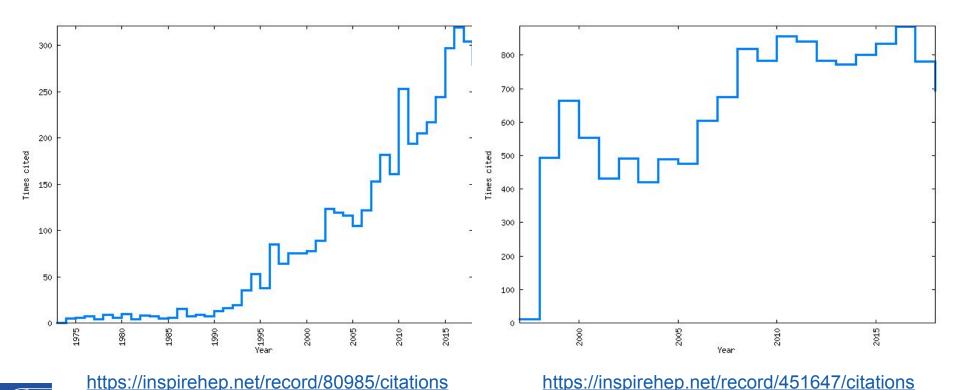
- (526) Study of $e^+e^- o \pi^+\pi^-J/\psi$ and Observation of a Charged Charmoniumlike State at Belle -Belle Collaboration (Liu, Z.O. et al.) Phys.Rev.Lett. 110 (2013) 252002 arXiv:1304.0121 [hep-ex] BELLE-PREPRINT-2013-6, KEK-PREPRINT-2013-2
- (319) The hidden-charm pentaguark and tetraguark states Chen, Hua-Xing et al. Phys.Rept. 639 (2016) 1-121 arXiv:1601.02092 [hep-ph]
- (308) OCD and Strongly Coupled Gauge Theories: Challenges and Perspectives Brambilla, N. et al. Eur.Phys.J. C74 (2014) no.10, 2981 arXiv:1404.3723 [hep-ph] CCQCN-2014-24, CCTP-2014-5, CERN-PH-TH-2014-033. DF-1-2014. HIP-2014-03-TH. ITEP-LAT-2014-1. JLAB-THY-14-1865. MITP-14-016. NT@UW-14-04, RUB-TPII-01-2014, TUM-EFT-46-14, FERMILAB-PUB-14-024-T, LLNL-JRNL-651216, UWTHPH-2014-006
- Observation of the resonant character of the $Z(4430)^-$ state LHCb Collaboration (Aaij, Roel et al.) Phys.Rev.Lett. 112 (2014) no.22, 222002 arXiv:1404.1903 [hep-ex] LHCB-PAPER-2014-014, CERN-PH-EP-2014-061
- (299) Observation of a Charged Charmoniumlike Structure Z_c (4020) and Search for the Z_c (3900) in $e^+e^- \rightarrow \pi^+\pi^-h_c$ - BESIII Collaboration (Ablikim, M. et al.) Phys.Rev.Lett. 111 (2013) no.24, 242001 arXiv:1309.1896 [hep-ex]

more

- .. of which self-citations: 145 records
- (299) Observation of a Charged Charmoniumlike Structure Z_c (4020) and Search for the Z_c (3900) in $e^+e^- \rightarrow \pi^+\pi^-h_c$ - BESIII Collaboration (Ablikim, M. et al.) Phys.Rev.Lett. 111 (2013) no.24, 242001 arXiv:1309.1896 [hep-ex]
- Observation of a charged charmoniumlike structure in $e^+e^- \to (D^*\bar{D}^*)^\pm\pi^\mp$ at $\sqrt{s}=4.26$ GeV -BESIII Collaboration (Ablikim, M. et al.) Phys.Rev.Lett. 112 (2014) no.13, 132001 arXiv:1308.2760 [hep-ex]

Citation graphs

At bottom of citation page, interesting statistics





Authors

Finding, correcting and connecting profiles





HEP :: HEPNAMES :: INSTITUTIONS :: CONFERENCES :: JOBS :: EXPERIMENTS

Moskovic, Micha

View Your Profile

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Manage Your Publications

Help **Open Tickets**

PUBLICATIONS AND OUTPUT

PERSONAL INFORMATION

Personal Details (HepNames)

| e e e e e e e e e e e e e e e e e e e | | | | |
|---------------------------------------|------------------------------|--|--|--|
| Name | Micha Moskovic | | | |
| Current Institution | | | | |
| E-mail | micha.moshe.moskovic@cern.ch | | | |
| Fields | HEP-TH | | | |
| Identifiers | BAI: M.Moskovic.1 | | | |

INSPIRE: INSPIRE-00391618 ORCID: 0000-0002-7638-5686

| Period | Rank | Institution | |
|-------------|------|------------------|--|
| 2016 | PD | CERN | |
| 2014 – 2016 | PD | INFN, Turin | |
| 2010 – 2014 | PHD | Brussels U., PTM | |

Publications Datasets External

- 1. Review of Particle Physics
- 2. Instanton Corrections for m and Ω
- 3. Chiral observables and S-duality in N = 2* U(N) gauge theories
- 4. Holographic backgrounds from D-brane probes
- 5. D-instanton probe and the enhançon mechanism from a quiver gauge theory
- 6. Emergent D4-Brane Background from D-Particles
- 7. Examples of Emergent Type IIB Backgrounds from Matrices
- 8. Boucles de Wilson et localisation en théorie des champs supersymétrique

Click here to see all

Co-Authors

M From 1 (1)

Frank.Ferrari.1 (2) A.Lerda.1 (1) A.Rovai.1 (1) A.Zein.assi.1 (1) E.Conde.1 (1) E.Dell.Aquila.1 (1)

| I STATE STATE | | |
|-----------------|--------|----------|
| | All | Single |
| | papers | authored |
| All papers | 8 | 2 |
| Book | 0 | 0 |
| ConferencePaper | 0 | 0 |
| Introductory | 0 | 0 |
| Loctures | 0 | 0 |

Author profiles

From paper:

2. Instanton Corrections for m and Ω

Micha Moskovic ONFN, Turin & Turin U.), Ahmad Zein Assi (ICTP, Trieste). Dec 19, 2016. 19 pp.

Published in Nucl.Phys. B920 (2017) 601-619

DOI: 10.1016/j.nuclphysb.2017.05.003

e-Print: arXiv:1612.06414 [hep-th] | PDF

From HEPNames:

References | BibTeX | L ADS Abstract Service; /

Detailed record - Cited by 3 re





HepNames

Detailed record

a moskovic

1 records found

1. Micha Moskovic (CERV) [Author Profile]

micha.moshe.moskovic@cern.ch

HEP-TH



The author disambiguation problem

- To be useful, one profile should contain all papers of one single author
- Easy case: only one "Moskovic, M."
- Hard case: "Zhang, J."

| 172 | J.Zhang.8 | Zhang, Jingxi | ■ Recent Papers | Go to Profile (J.Zhang.8) |
|-----|-----------------|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| 173 | J.Zhang.24 | Zhang, Juyong | Recent Papers Rec | Go to Profile (J.Zhang.24) |
| 174 | J.Zhang.14 | Zhang, Jiehao | ■ Recent Papers | Go to Profile (J.Zhang.14) |
| 175 | J.Zhang.34 | Zhang, Juping | Recent Papers Rec | Go to Profile (J.Zhang.34) |
| 176 | J.Zhang.1 | Zhang, Jianfu | ■ Recent Papers | Go to Profile (J.Zhang.1) |
| 177 | J.Zhang.47 | Zhang, Junwei | Recent Papers Rec | Go to Profile (J.Zhang.47) |
| 178 | J.Zhang.71 | Zhang, Junjie | ■ Recent Papers | Go to Profile (J.Zhang.71) |
| 179 | J.Zhang.44 | Zhang, Jingye | Recent Papers Rec | Go to Profile (J.Zhang.44) |
| 180 | J.Zhang.29 | Zhang, Jifang | ■ Recent Papers | Go to Profile (J.Zhang.29) |
| 181 | Jinlong.Zhang.1 | Zhang, Jinlong | Recent Papers Rec | Go to Profile (Jinlong.Zhang.1) |

Disambiguating authors

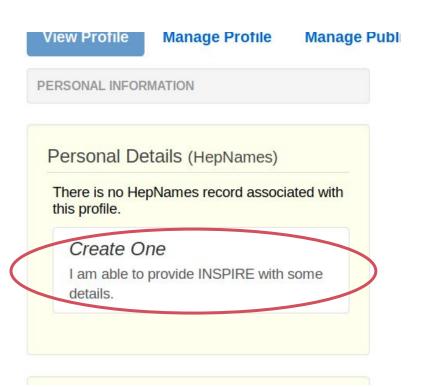
 Solving this requires lots of work from INSPIRE staff



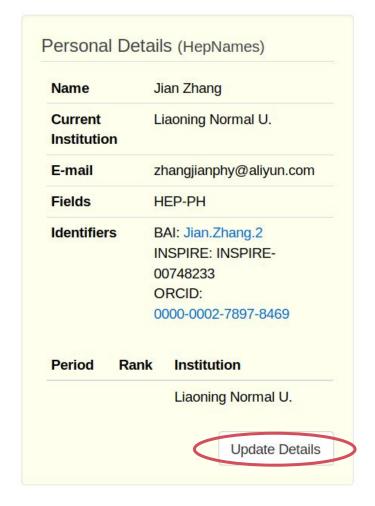
 Good news, you can help make INSPIRE better!



Updating INSPIRE: biographical info



PERSONAL INFORMATION



(login with ORCID, see later)



Updating INSPIRE: merging profiles

Zhang, Jian

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You have successfully logged in via arXiv.

However the profile you are viewing is not your profile.

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Merge Profiles

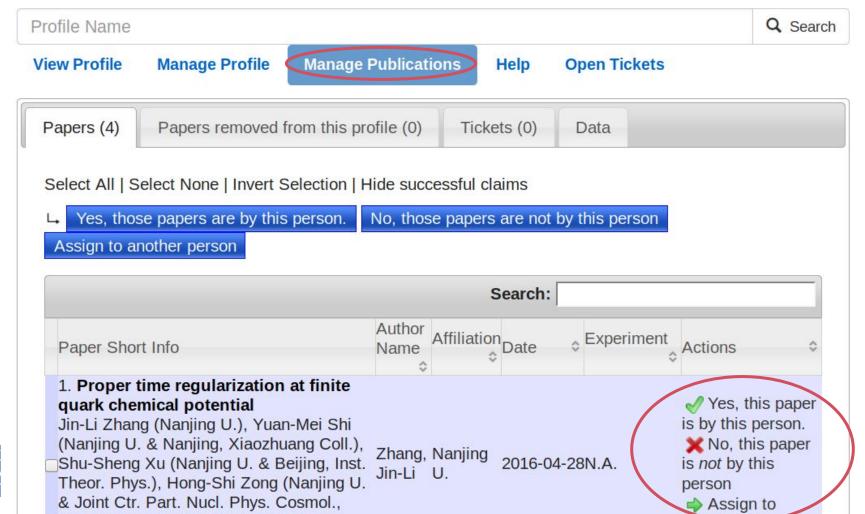
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Updating INSPIRE: claiming papers

Zhang, Jin-Li





Automatic disambiguation: ORCID

ORCID provides a unique identifier for

researchers

https://orcid.org



 Get an ORCID, add it to INSPIRE and give it to publishers & arXiv





1. Connect your ORCID:



2. Export your work (optional, very convenient):





➤ Works (7 of 7)

11 Sort

Instanton Corrections for \$m\$ and \$\Omega\$



Nucl.Phys.B

2017-07 | journal-article

DOI: 10.1016/j.nuclphysb.2017.05.003

ARXIV: 1612.06414

Source: INSPIRE-HEP

@ Preferred source

Chiral observables and S-duality in N = 2 U(N) gauge theories



JHEP

2016-11-04 | journal-article

DOI: 10.1007/JHEP11(2016)020

ARXIV: 1607.08327

Source: INSPIRE-HEP

@ Preferred source

D-instanton probe and the enhançon mechanism from a quiver gauge theory



JHEP

2014 | journal-article



And More

Correcting literature, finding jobs, and the future of INSPIRE



Updating INSPIRE: references

- Sometimes, some citations are missing
- Possible to suggest corrections to references of citing paper



Updating INSPIRE: adding papers

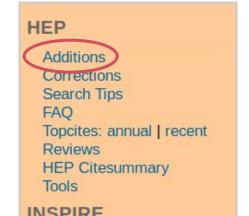
 When a paper is not in INSPIRE, possible to suggest it for inclusion



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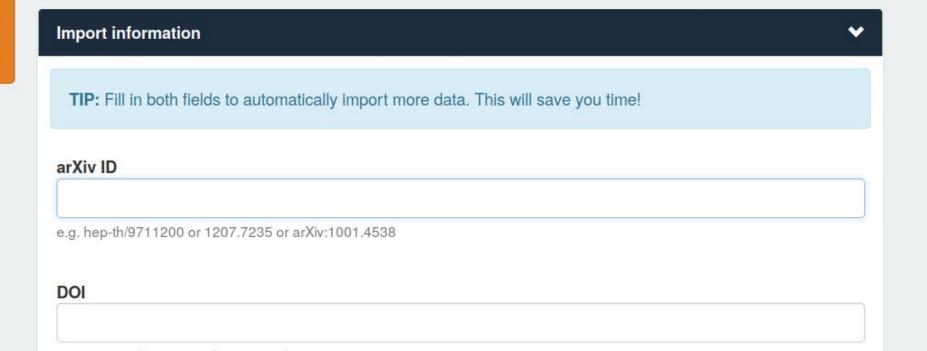


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High-Energy Physics Employment Database

A listing of academic and research jobs of interest to the community in high energy physics, nuclear physics, accelerator physics and astrophysics.

SELECT SEARCH FILTERS (MULTIPLES ALLOWED):

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Africa Asia Australasia Europe Middle East

astro-ph cond-mat cs gr-qc hep-ex

Field:

Crtl + click to select multiple Crtl + click existing to remove Reset search

Optionally add some keywords to the search:

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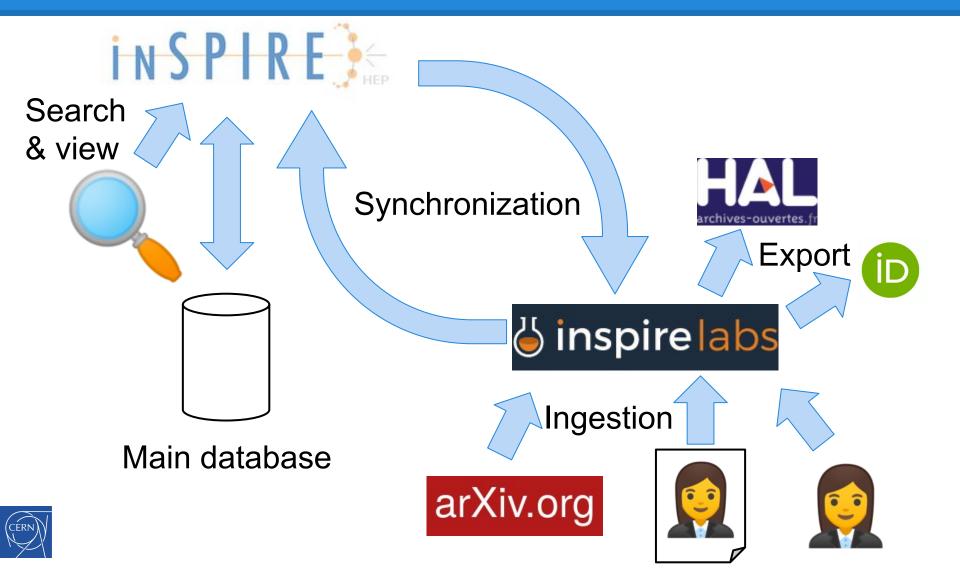
particle physics :: more

The future of INSPIRE: labs

- Technical limitations with current INSPIRE platform
- New "inspire labs" in development
- Already in use for some things
- Will completely replace existing INSPIRE in the coming years



Labs: current status



Bocci, Andrea

Zhang, J.

Zhang, Z.P.

Bona, Marcella

literature v

1612

1213

1210

1159

"Beijing, Inst. High Energy Phys."

Q

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The on-orbit calibration of DArk Matter Particle Explorer

DAMPE Collaboration • G. Ambrosi (INFN, Perugia) et al.

Nov 15, 2018

Published in: Astropart. Phys. 106 (2019) 18-34

DOI: 10.1016/j.astropartphys.2018.10.006

The DArk Matter Particle Explorer (DAMPE), a satellite-based cosmic ray and gamma-ray detector, was launched on December 17, 2015, and began its on-orbit operation on December 24, 2015. In this work we document the on-orbit calibration procedures use...

C cite



← 51 references

O citations

Search for Higgs boson pair production in the $b\bar{b}WW^*$ decay mode at $\sqrt{s}=13$ TeV with the ATLAS detector

ATLAS Collaboration • Morad Aaboud (Oujda U.) et al.

Nov 12, 2018

e-Print: 1811.04671 [hep-ex]

Report number: CERN-EP-2018-237

A coarch for Lligge boson noir production in the $b ar b W W^*$ decay mode is parformed in the



Labs: improvements

- More accurate search
- Easier filtering of results with facets
- Better user profiles
- Easier to use update forms
- Machine Learning algorithms for better author disambiguation



Other useful resources

- HEPData: https://hepdata.net
 Data from tables in experimental HEP publications
- Review of Particle Physics: http://pdg.lbl.gov
 Comprehensive information on particle physics (data about particles, reviews)



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谢谢!

