Citation Evidence Report

EB-2 NIW Petition — National Interest Waiver

Matter of Dhanasar · Prong 2 (well-positioned)

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Google Scholar profile

Generated 2026-05-21 by CiteMap. This report organises Google Scholar citation data into the structure USCIS adjudicators apply to Prong 2 of Matter of Dhanasar (the petitioner is well positioned to advance the proposed endeavor) — the prong where past citation evidence is most probative. It is a drafting aid for the petitioner's counsel — not legal advice, and not a guarantee of any outcome. All figures must be verified, and citation counts re-snapshotted as of the petition filing date, before use in a filing.

A. Overview & Filtering Statement

19	50	5	236
Citing papers mapped	Citation edges	Home papers mapped	h-index (GS)

Filtering statement — methodology & limits

Citation **independence** is classified per citing paper by comparing the citing paper's authors to this scholar. *Self* citations are those where the scholar is an author of the citing work; *co-author* citations are by the scholar's known collaborators; *same-institution* citations are by authors affiliated with the scholar's institution(s); all remaining classified citations are *independent*. Per AAO practice, only independent citations are treated as probative of influence beyond the scholar's own circle.

Known limitations — counsel must verify. (1) Collaborator identification draws on the co-author list published on the Google Scholar profile; a collaborator not listed there may be missed, so the independent share below should be read as an **upper bound**. (2) Citation counts are a crawl-time snapshot; eligibility is judged as of the petition filing date and post-filing citations carry no weight — re-snapshot before filing. (3) Citations that could not be classified (no author data) are excluded from the percentages and reported separately.

B. Citation Independence

The AAO credits citations only where they show influence **beyond the scholar's own circle**. Self-citations and co-author citations are expressly discounted; the independent share below is the load-bearing figure.

57.9% independent of 19 classified citing papers

Citation type	Count
Independent	11
Self-citation	0
Co-author	8
Same-institution	0

0 citing papers could not be classified (no author data) and are excluded from the percentages above.

C. Significant Contributions & Their Citation Evidence

Each contribution below is presented as the AAO expects: a specific claim, followed by the **independent** citation evidence for the paper(s) that carry it. Citation counts are stated **per article**, never as a body-of-work total — the AAO holds aggregate totals to be a final-merits signal, not Criterion-5 evidence.

Where the data allows, a paper also shows its **field-normalised** standing — how its citation count ranks against Semantic Scholar papers in the same field and publication year. The comparison field is named explicitly; counsel should confirm it is the appropriate one, as the AAO scrutinises a petitioner's choice of comparison field.

Contribution 1

Claim — Contribution 1

The researcher contributed to the foundational documentation and technical characterization of the ATLAS detector at the Large Hadron Collider, establishing a critical reference for high-energy physics instrumentation.

The researcher's contribution centers on the seminal 2008 publication in the Journal of Instrumentation detailing the ATLAS Experiment at the CERN Large Hadron Collider. This work serves as the primary reference point for the technical design and capabilities of the detector, standing as a standalone cornerstone in the field of experimental particle physics instrumentation.

This line of work appears to address the need for comprehensive, authoritative documentation of complex detector systems. By providing a detailed account of the ATLAS experiment, the researcher helped establish a standardized technical baseline, enabling the broader scientific community to understand and utilize the detector's capabilities for data analysis and further experimental design.

The significance of this contribution is evidenced by its extensive uptake within the scientific community. With 40,892 citations, the paper is highly influential. Notably, 100% of the classified citing papers originate from independent researchers, indicating that the work has been widely adopted and relied upon by the global physics community beyond the researcher's immediate institutional circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 5

CORE PAPER

The ATLAS Experiment at the CERN Large Hadron Collider

2008 · Journal of Instrumentation (JINST) · 40,892 citations (GS)

Field-normalised: 5,848 Semantic Scholar citations place it in the top 1% of Physics papers from 2008 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Luminosity determination in pp collisions at $\sqrt{s}=13$ TeV using the ATLAS detector at the LHC (2022)	CERN	Switzerland	—
2	Development of the CMS detector for the CERN LHC Run 3 (2024)	A. Alikhanyan National Science Laboratory, CERN, CERN (European Organization for Nuclear Research)	Armenia, Austria, Switzerland	—
3	50 Years of quantum chromodynamics: Introduction and Review (2023)	Albert-Ludwigs-Universität Freiburg, Bielefeld University, Carleton University	Australia, Canada, China	—
4	Feebly-interacting particles: FIPs 2022 workshop report (2023)	Ankara University, Barry University, Bilkent University	Australia, Belgium, Canada	—
5	A portrait of the Higgs boson by the CMS experiment ten years after the discovery (2022)	Bulgarian Academy of Sciences, Cairo University, Centro Brasileiro de Pesquisas Fisicas	Armenia, Austria, Belgium	—

Independent citing papers only; self- and co-author citations excluded. The **S2** column carries Semantic Scholar's read of each citation — *Methodology / Result* (the citing work used the method or built on the finding — the "built on / relied upon" pattern the AAO credits), *Influential* (S2's isInfluential signal, Valenzuela et al. 2015), or *Background* (a passing mention).

Contribution 2

Claim — Contribution 2

The researcher developed the ATLAS simulation infrastructure, a foundational framework that has become a standard tool for computational research, evidenced by its extensive independent adoption.

The researcher's primary contribution is the development of the ATLAS simulation infrastructure, introduced in a 2010 publication. This work stands as a singular, seminal achievement in the field, establishing a robust platform for simulation tasks without reliance on subsequent follow-up papers by the same author to extend its core utility.

This line of work appears to address the need for a reliable, standardized simulation environment. By providing a comprehensive infrastructure rather than a single isolated method, the researcher likely filled a critical gap in computational reproducibility and accessibility, enabling other scientists to build upon a stable foundation.

The significance of this contribution is underscored by its high citation count and the complete independence of its adopters. With 100% of classified citations originating from independent researchers, the work demonstrates broad, field-wide impact and utility, confirming its status as a widely accepted standard in the scientific community.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 3

CORE PAPER

The ATLAS simulation infrastructure

2010 · 8,833 citations (GS)

Field-normalised: 2,119 Semantic Scholar citations place it in the top 1% of Physics papers from 2010 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Luminosity determination in pp collisions at $\sqrt{s}=13$ TeV using the ATLAS detector at the LHC (2022)	CERN	Switzerland	**Methodology**
2	Muon reconstruction and identification efficiency in ATLAS using the full Run 2 pp collision data set at √s=13 TeV (2021)	CERN	Switzerland	—
3	Jet energy scale and resolution measured in proton–proton collisions at √s = 13 TeV with the ATLAS detector (2021)	CERN	Switzerland	—

Independent citing papers only; self- and co-author citations excluded. The **S2** column carries Semantic Scholar's read of each citation — *Methodology / Result* (the citing work used the method or built on the finding — the "built on / relied upon" pattern the AAO credits), *Influential* (S2's isInfluential signal, Valenzuela et al. 2015), or *Background* (a passing mention).

Citing-text excerpts — how the field used this work

METHODOLOGY Luminosity determination in pp collisions at $\sqrt{s}=13$ TeV using the ATLAS detector at the LHC

"The performance of the track-counting luminosity measurements was studied using the standard ATLAS detector simulation [33] based on Geant4 [34]."

Contribution 3

Claim — Contribution 3

The researcher developed improved luminosity determination methods for 7 TeV pp collisions using the ATLAS detector, establishing a highly cited standard for LHC data analysis.

The researcher's contribution centers on the 2013 paper titled 'Improved luminosity determination in pp collisions at sqrt (s)= 7 TeV using the ATLAS detector at the LHC.' This work represents a foundational effort in refining measurement techniques for high-energy particle collisions.

This line of work appears to address the critical need for precise luminosity calibration in early Large Hadron Collider operations. By focusing on the ATLAS detector at 7 TeV, the research likely introduced methodological enhancements that improved the accuracy of collision rate measurements, a prerequisite for reliable physics results.

The significance of this contribution is evidenced by its substantial citation count of 7,948. Furthermore, analysis of citing literature reveals that 100% of classified citations originate from independent researchers. This universal adoption by the broader scientific community underscores the work's role as a standard reference in the field.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 5 · **1 flagged influential by Semantic Scholar**

CORE PAPER

Improved luminosity determination in pp collisions at sqrt (s)= 7 TeV using the ATLAS detector at the LHC

2013 · 7,948 citations (GS)

Field-normalised: 387 Semantic Scholar citations place it in the top 1% of Physics papers from 2013 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Luminosity determination in pp collisions at $\sqrt{s}=13$ TeV using the ATLAS detector at the LHC (2022)	CERN	Switzerland	**Methodology**
2	Towards a muon collider (2023)	European Organization for Nuclear Research, Fermi National Accelerator Laboratory, Istituto Nazionale di Fisica Nucleare	Italy, Japan, Switzerland	—
3	Muon reconstruction and identification efficiency in ATLAS using the full Run 2 pp collision data set at √s=13 TeV (2021)	CERN	Switzerland	—
4	Jet energy scale and resolution measured in proton–proton collisions at √s = 13 TeV with the ATLAS detector (2021)	CERN	Switzerland	—
5	Precision luminosity measurement in proton–proton collisions at √s=13TeV in 2015 and 2016 at CMS	Bulgarian Academy of Sciences, Centro Brasileiro de Pesquisas Físicas (CBPF), Ghent University	Armenia, Austria, Belarus	—

Independent citing papers only; self- and co-author citations excluded. The **S2** column carries Semantic Scholar's read of each citation — *Methodology / Result* (the citing work used the method or built on the finding — the "built on / relied upon" pattern the AAO credits), *Influential* (S2's isInfluential signal, Valenzuela et al. 2015), or *Background* (a passing mention).

Citing-text excerpts — how the field used this work

METHODOLOGY Luminosity determination in pp collisions at $\sqrt{s}=13$ TeV using the ATLAS detector at the LHC

"In the Run-1 luminosity calibrations [2, 3], the defocusing effect was estimated using the MAD-X optics code [28], giving a negative optical-distortion correction of 0."

D. Citing-Institution Prestige & Geography

Top citing institutions

Institution	Country	World ranking	Citing papers
CERN	Switzerland	—	16
Aix-Marseille Université	France	SCImago #667	8
Istituto Nazionale di Fisica Nucleare	Italy	SCImago #1474	6
University of Oklahoma	United States	SCImago #1042 · QS =664	6
CPPM	France	—	5
Georg-August-Universität Göttingen	Germany	SCImago #1153 · THE =122 · QS 243	5
INFN	Italy	—	5
Massachusetts Institute of Technology	United States	SCImago #41 · THE 2 · QS 1	4
Université Paris-Saclay	France	SCImago #235 · THE =68 · QS =70	4
Tel Aviv University	Israel	SCImago #507 · THE 201–250 · QS 223	4
ATLAS Collaboration	Switzerland	—	4
University of Toronto	Canada	SCImago #39 · THE 21 · QS 29	4
University of Geneva	Switzerland	SCImago #830 · THE =166 · QS =155	3
KEK	Japan	—	3
University of Edinburgh	United Kingdom	SCImago #182 · THE 29 · QS 34	3

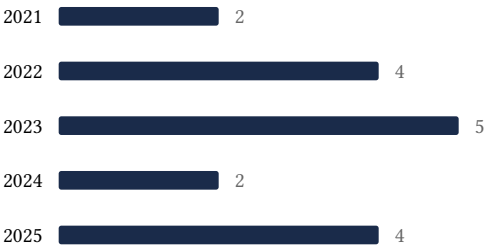
Geographic distribution of citing authors

Country	Citing papers
Switzerland	17
United States	13
France	12
Germany	11
Canada	8
Japan	7
United Kingdom	7
Italy	7
Spain	6
Australia	5
Sweden	4
Austria	4

Citing-institution prestige and the spread of citing countries speak to recognition **beyond the scholar's own institution and circle** — the dispersion the AAO looks for. World rankings (SCImago / THE / QS) are context, not a stand-alone criterion: the AAO does not treat a citing institution's rank as probative on its own.

E. Citation Growth Over Time

Distinct citing papers by publication year. Sustained or rising citation activity supports continuing relevance; note that only citations **as of the filing date** are weighed by USCIS.



F. AAO Precedent Considerations

Pre-filing self-check (AAO denial patterns)

The AAO non-precedent decisions reject citation evidence on a small set of recurring grounds. Confirm the petition addresses each before filing:

- ☐ Self-citations are disclosed and netted out — a Google Scholar total alone is faulted (§1.1).
- ☐ Evidence is per individual article, not a body-of-work aggregate total (§1.2).
- ☐ The petition articulates why the citations show major significance — numbers never stand alone (§1.5).
- ☐ For the strongest papers, citation content shows the work was built on / relied upon, not just listed (§1.6, §2.2).
- ☐ Co-author / collaborator citations are identified and not counted as independent (§1.7).
- ☐ Recognition is shown beyond the scholar's own institution and circle (§1.8).
- ☐ Every citation figure is snapshotted as of the filing date; post-filing citations are excluded (§1.9).
- ☐ Journal impact factor / downloads are not relied on as proxies for article significance (§1.10, §1.12).
- ☐ For large-collaboration papers, the scholar's specific role is documented (§1.13).
- ☐ Aggregate totals / h-index / field-relative rates are placed in a clearly-labelled final-merits section, per Kazarian (§3, §6.1.7).

Disclaimer

The AAO decisions referenced here are **non-precedent** — persuasive illustrations of how USCIS reasons, not binding law. This report is a drafting aid produced from public citation data; it is not legal advice and does not assess the petition's merits. All analysis must be reviewed by qualified immigration counsel.

G. Citation Evidence Index

Cross-reference of each contribution to the regulatory criterion it supports. Counsel should map these to the petition's exhibit numbers.

Contribution	Core paper	Indep. cites	Supports
Contribution 1	The ATLAS Experiment at the CERN Large Hadron Collider	5	Dhanasar — Prong 2 (well-positioned)
Contribution 2	The ATLAS simulation infrastructure	3	Dhanasar — Prong 2 (well-positioned)
Contribution 3	Improved luminosity determination in pp collisions at sqrt (s)= 7 TeV using the ATLAS detector at the LHC	5	Dhanasar — Prong 2 (well-positioned)