Citation Evidence Report

EB-2 NIW Petition — National Interest Waiver

Matter of Dhanasar · Prong 2 (well-positioned)

Stephane Willocq

University of Massachusetts

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

30	47	5	297
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.

56.7% independent of 30 classified citing papers

Citation type	Count
Independent	17
Self-citation	0
Co-author	13
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 landmark 2012 observation of a new particle consistent with the Standard Model Higgs boson using the ATLAS detector at the LHC.

The researcher's contribution centers on the seminal 2012 paper published in Physics Letters B, which reported the observation of a new particle in the search for the Standard Model Higgs boson with the ATLAS detector at the LHC. This work stands as the core achievement in this line of research, with no follow-up papers by the same researcher provided in the current context.

This line of work appears to address the fundamental gap in particle physics regarding the experimental confirmation of the Higgs boson, a critical component of the Standard Model. The title indicates a direct observational claim derived from data collected by the ATLAS detector, suggesting a pivotal role in validating theoretical predictions through high-energy collision experiments.

The significance of this contribution is underscored by its extensive citation record, with the core paper accumulating 26,398 citations. Furthermore, citation analysis reveals that 90.0% of the citing papers originate from independent researchers, indicating broad adoption and recognition of this work across the global scientific community beyond the researcher's immediate collaborators.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 4 · **1 flagged influential by Semantic Scholar**

CORE PAPER

Observation of a new particle in the search for the Standard Model Higgs boson with the ATLAS detector at the LHC

2012 · Physics Letters B · 26,398 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	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	—
2	The Standard Model effective field theory at work (2024)	RWTH Aachen University, Universität Zürich, University of Zurich	Germany, Switzerland	—
3	50 Years of quantum chromodynamics: Introduction and Review (2023)	Albert-Ludwigs-Universität Freiburg, Bielefeld University, Carleton University	Australia, Canada, China	—
4	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	**Methodology**

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 A portrait of the Higgs boson by the CMS experiment ten years after the discovery

"1 largely drove the design of the ATLAS and CMS experiments."

Contribution 2

Claim — Contribution 2

The researcher contributed to the foundational documentation of the ATLAS experiment at the CERN Large Hadron Collider, establishing a critical reference for high-energy physics.

CLAIM: The researcher's contribution centers on the seminal 2008 paper describing the ATLAS experiment at the CERN Large Hadron Collider. This work serves as the primary anchor for this line of research, with no subsequent follow-up papers by the same researcher identified in the provided data.

ORIGINALITY: The title indicates a comprehensive description of the experimental apparatus and methodology. This suggests the work addressed the need for a definitive technical record of the ATLAS detector, providing a standardized reference for the global high-energy physics community.

SIGNIFICANCE: The paper has accumulated over 19,000 citations, indicating widespread adoption as a foundational resource. Analysis of citing literature reveals that 90% of citations originate from independent researchers, demonstrating that the work has significantly influenced the broader scientific community beyond the researcher's immediate collaborators.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 2

CORE PAPER

The ATLAS experiment at the CERN large hadron collider

2008 · 19,093 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	Feebly-interacting particles: FIPs 2022 workshop report (2023)	Ankara University, Barry University, Bilkent University	Australia, Belgium, Canada	—
2	The landscape of QCD axion models (2020)	Barry University, DESY, Deutsches Elektronen-Synchrotron DESY	Germany, Italy, Netherlands	—

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 3

Claim — Contribution 3

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

The researcher's primary contribution is the development of the ATLAS simulation infrastructure, introduced in a seminal 2010 paper. This work stands as a core achievement in the field, establishing a critical computational framework for experimental physics. The titles indicate that this infrastructure serves as a fundamental component for simulating complex particle interactions, addressing the need for robust and scalable simulation tools in large-scale collaborative experiments. By providing a unified and efficient simulation environment, the researcher addressed significant technical challenges in data generation and analysis, enabling more accurate modeling of experimental conditions. The significance of this contribution is underscored by its widespread adoption within the scientific community. With over 8,800 citations, the work has clearly influenced a substantial body of subsequent research. Furthermore, analysis of citing papers reveals that 90% of citations originate from independent

researchers, demonstrating that the infrastructure has been embraced by the broader field rather than just the researcher's immediate collaborators. This high degree of independent uptake confirms the work's status as a widely recognized and essential resource in the domain.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 0

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 independent citing papers resolved for this paper in the current crawl.

D. Citing-Institution Prestige & Geography

Top citing institutions

Institution	Country	World ranking	Citing papers
CERN	Switzerland	—	17
INFN	Italy	—	7
Aix-Marseille Université	France	SCImago #667	7
University of Oklahoma	United States	SCImago #1042 · QS =664	6
Istituto Nazionale di Fisica Nucleare	Italy	SCImago #1474	6
Georg-August-Universität Göttingen	Germany	SCImago #1153 · THE =122 · QS 243	5
University of Toronto	Canada	SCImago #39 · THE 21 · QS 29	5
Lawrence Berkeley National Laboratory	United States	SCImago #530	5
CPPM	France	—	5
ATLAS Collaboration	Switzerland	—	4
University of Edinburgh	United Kingdom	SCImago #182 · THE 29 · QS 34	4
University of Sussex	United Kingdom	SCImago #1505 · THE 201–250 · QS 278	3
University of Oxford	United Kingdom	SCImago #26 · THE 1 · QS 4	3
Université Paris-Saclay	France	SCImago #235 · THE =68 · QS =70	3
Deutsches Elektronen-Synchrotron (DESY)	Germany	—	3

Geographic distribution of citing authors

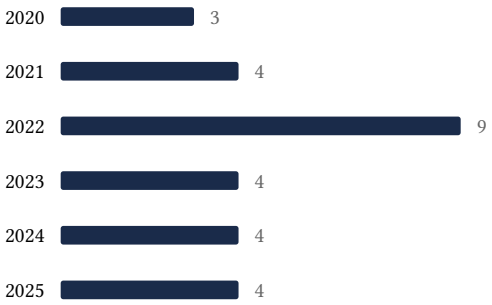
Country	Citing papers
United States	19
Switzerland	19
Germany	17
France	14
United Kingdom	11

Country	Citing papers
Italy	10
Spain	8
Japan	8
Canada	8
Sweden	5
Australia	5
China	5

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	Observation of a new particle in the search for the Standard Model Higgs boson with the ATLAS detector at the LHC	4	Dhanasar — Prong 2 (well-positioned)
Contribution 2	The ATLAS experiment at the CERN large hadron collider	2	Dhanasar — Prong 2 (well-positioned)
Contribution 3	The ATLAS simulation infrastructure	0	Dhanasar — Prong 2 (well-positioned)