

# By-Laws

for the Management and Governance of

# ALe<sup>-</sup>CS

## Astrochemistry Low-energy Electron Cross-Section Database

*Approved by the Advisory Board on: 2026-04-20.*

### **Governance Summary**

Chair of the Advisory Board : Dr. Brandt. A. L. Gaches

Advisory Board Size: 8

Board member countries: CL, DE, IT, NO, UK

## **ARTICLE I: PURPOSE AND MISSION**

### **I.a Purpose.**

1. The Astrochemistry Low-energy electron Cross-Section database (“the Database”) exists to produce, collect, curate, validate, maintain, and disseminate high-quality electron-impact cross-section data for atoms and molecules of astrophysical relevance.
2. The Database provides these data through a publicly accessible, sustainable, and openly available repository in order to support transparency, reproducibility, and reuse in scientific research.

### **I.b Mission.**

The database’s mission is to:

- provide reliable, sustainable, and open access to high-quality electron-impact data;
- support interdisciplinary research in astronomy, astrochemistry, physics, chemistry, and related fields;
- promote best practice in scientific data stewardship, documentation, and reproducibility;
- respond to evolving community needs and emerging scientific priorities.

### **I.c Principles**

The Database adheres to the FAIR principles (Findable, Accessible, Interoperable, Reusable) and established standards in research data management.

### **I.d Open Access**

1. The Database is publicly accessible and free of charge.
2. Data shall be made available under open licenses wherever possible.
3. The Database actively promotes compliance with Open Science principles.

## **ARTICLE II: GOVERNANCE STRUCTURE**

### **II.a Advisory Board (“the Board”).**

1. The Board is responsible for the scientific, strategic, and organizational oversight of the Database.
2. It ensures that the operation and development of the Database are aligned with its mission and with principles of quality, sustainability, and openness.
3. The Board acts in an advisory and supervisory capacity. Liability for third-party use of the data is excluded to the extent permitted by law.

### **II.b Board Composition.**

1. Board members are appointed based on their scientific and/or technical expertise and serve on a voluntary basis.
2. The composition of the Board shall ensure appropriate representation with respect to:
  - scientific disciplines,
  - institutional affiliations,
  - geographic distribution,
  - career stages.
3. The Board regularly reviews its composition to ensure continued effectiveness and adequate representation.

## **II.c Chair.**

1. The Board is led by a Chair.
2. The Chair serves without a fixed term until resignation or inability to serve.
3. The Chair is responsible in particular for:
  - convening and leading Board meetings and setting agendas,
  - representing the Database to host institutions, funding bodies, and the scientific community,
  - coordinating the implementation of Board decisions,
  - overseeing nomination and appointment processes,
  - promoting the long-term sustainability and strategic development of the Database.
4. In the event of temporary incapacity, an Acting Chair may be appointed by majority vote of the Board for a period not exceeding one year.

## **II.d Board Membership**

1. New members may be nominated by any Board member and approved by a simple majority vote.
2. Appointments may be made to address emerging scientific priorities or expertise gaps.

## **II.e Removal**

A member may be removed for inactivity, conflict of interest, or conduct detrimental to the mission of the Database by a two-thirds vote of the full Board.

## **II.f Meetings and Decision-Making**

1. The Board shall meet at least twice per year, in person or virtually.
2. A quorum is reached when a majority of Board members is present.
3. Decisions are taken by simple majority unless otherwise specified.
4. In the event of a tie, the Chair has the casting vote.
5. Minutes of meetings shall be recorded, approved, and archived in an appropriate and accessible manner.

## **II.g Conflicts of Interest and Scientific Integrity**

1. Board members must disclose any potential conflicts of interest.
2. Members shall recuse themselves from related discussions and decisions.
3. Principles of good scientific practice apply.

# **ARTICLE III: OPERATIONS AND MANAGEMENT**

## **III.a Operational Management Team**

1. An operational management team shall oversee the day-to-day operation of the Database.
2. The team is responsible for:
  - maintaining and developing the technical infrastructure (software, APIs),
  - curating and validating submitted datasets,
  - implementing quality standards,
  - preparing materials for Board review,
  - implementing approved updates and releases.

### **III.b Quality Assurance**

1. The Database implements a structured curation and validation system.
2. The Board defines binding quality standards, which are regularly reviewed.
3. The management team is responsible for implementing these standards.

### **III.c Data Submission**

1. Contributors must provide adequate metadata and methodological documentation.
2. Source code required for reproducibility may be requested.
3. All submissions undergo a standardized review and validation process.

### **III.d Versioning and Archiving**

1. All datasets are versioned and uniquely identifiable.
2. Previous versions remain permanently archived and citable.
3. Persistent identifiers (e.g., DOIs) are used where applicable.

## **ARTICLE IV: SUSTAINABILITY AND LONG-TERM AVAILABILITY**

1. The long-term availability of the Database is ensured through appropriate technical and institutional measures.
2. These measures include:
  - sustainable hosting solutions,
  - regular backups and integrity checks,
  - use of established and scalable infrastructures,
3. A strategy for continuing funding shall be actively pursued.

## **ARTICLE V: AMENDMENTS AND DISSOLUTION**

### **V.a Amendments**

Amendments to these statutes require a two-thirds majority of the Board.

### **V.b Dissolution and Data Transfer**

1. In the event of dissolution, the Database shall be transferred to a suitable scientific institution or infrastructure.
2. The long-term preservation, accessibility, and citability of all data must be ensured.

## **ADVISORY BOARD MEMBERS**

As of adoption, the following are the advisory board members for the Astrochemistry Low-energy electron Cross-Section (ALeCS) database

### **Chair of the Advisory Board:**

Name: Dr. Brandt A. L. Gaches, University of Duisburg-Essen, Duisburg, DE

### **Board Member:**

Name: Prof. Stefano Bovino, Sapienza University of Rome, Sapienza, IT

### **Board Member:**

Name: Dr. Giulia Bovolenta, Italian Institute of Technology, Genova, IT

### **Board Member:**

Name: Dr. Prasanta Gorai, University of Oslo, Oslo, NO

### **Board Member:**

Name: Dr. Tommaso Grassi, Max Planck Institute for Extraterrestrial Physics, Garching bei München, DE

### **Board Member:**

Name: Dr. Marco Padovani, INAF–Osservatorio Astrofisico di Arcetri, Firenze, IT

### **Board Member:**

Name: Prof. Claire Vallance, University of Oxford, Oxford, UK

### **Board Member:**

Name: Prof. Dr. Stefan Vogt-Geisse, Universidad de Concepción, Concepción, CL