

Arthur S. Eddington: From Physics to Philosophy and Back Again

27 – 29 May 2019

MONDAY 27 MAY 2019

Institut d'Astrophysique de Paris, Amphitheatre
98 bis boulevard Arago, 75014 Paris

9h00 *Registration and coffee*

9h30 **Welcome**

Francis Bernardeau (IAP) and **Michel Boyancé** (IPC)
Introduction — **Florian Laguens** (IPC)

10h-12h **Eddington and Religion**

Chair: Helge Kragh

The Questing Quaker: Eddington's religious life in science.
Matthew Stanley (New York University)

Eddington, Lodge and the Religious Roots of a "Modern" Ether.
Jaume Navarro (University of the Basque Country)

May a Quaker be a Cosmologist?
George F. R. Ellis (University of Cape Town)

12h00 *Cocktail* (Observatoire de Paris, Salle du Conseil)

13h30-16h **Eddington on Stars and Stellar Systems**

Chair: David Valls-Gabaud

A. S. Eddington: The Founder of the Theory of Stellar Structure.
André Maeder (Université de Genève)

Eddington and the Foundations of Stellar Dynamics.
James Binney (University of Oxford)

Eddington's Approach to Star-Streams and the Structure of the Universe.
Scott Walter (Université de Nantes)

Selection Bias in Astronomical Surveys: Eddington, Malmquist and Bayes.
Martin A. Hendry (University of Glasgow)

16h00 *Coffee break*

16h30-18h **Lemaître and Eddington**

Chair: Florian Laguens

Eddington and Lemaître: Their Encounters, Their Science and Their Philosophies.
Matthew P. Wiesner (Benedictine University)

Eddington, Lemaître and the Discovery and the Expanding Universe.
Cormac O'Raiheartaigh (Waterford Institute of Technology, Dublin Institute for Advanced Studies)

When Eddington Showed an Algebraic Pathway: Georges Lemaître's Spinor Theory.
Dominique Lambert (Université de Namur)

18h-18h30 General discussion

Arthur S. Eddington: From Physics to Philosophy and Back Again

27 – 29 May 2019

TUESDAY 28 MAY 2019

Observatoire de Paris, Salle du Conseil
77 avenue Denfert-Rochereau, 75014 Paris

9h30 Welcome - **Claude Catala** (Observatoire de Paris)

9h30-11h **Operationalism and Structuralism**

Chair: Huw Price

Equations, Verification, and Operations: Wittgenstein's Remarks on Eddington.
John Preston (University of Reading)

Arthur Eddington and the *Gestalt* theory.
Anna Curir (Osservatorio Astronomico di Torino)

Eddington's Structuralism: How Deep Does it Go?
Steven French (University of Leeds)

11h00 *Coffee break*

11h30-13h **Time and consciousness**

Chair: Steven French

Exceedingly Sharp and Mostly Well-Aimed – Eddington's Arrow of Time.
Huw Price (University of Cambridge)

Eddington and Gravitational Evolution from Initial Heat Death.
Amr El-Zant (British University in Egypt)

Eddington and Bergson on Time: is There Really Something to Say about It?
Florian Laguens (IPC-Facultés Libres de Philosophie et de Psychologie)

13h00 *Lunch*

14h00 *Private tour of Paris Observatory and exhibition*

15h-17h **Debates in Astrophysics and Cosmology**

Chair: Gerry Gilmore

Pioneer of Nuclear Astrophysics: Eddington and the Solar Energy Problem ca. 1917-1930.

Helge Kragh (University of Copenhagen)

Relativistic Cosmological Models 1917-1934.

Jean-Pierre Luminet (Observatoire de Paris, Laboratoire d'Astrophysique de Marseille)

The Philosophical Aspects of the Eddington-Milne Debate.

Gauvain Leconte (Institut d'histoire et de philosophie des sciences et des techniques)

Eddington: Father of Matter Creation in Cosmology?

Eve-Aline Dubois (Université de Namur)

17h-17h30 General discussion

19h00 *Conference Dinner* at the Ciel de Paris Restaurant
(Montparnasse Tower, 56th floor, avenue du Maine, 75015 Paris)

Arthur S. Eddington: From Physics to Philosophy and Back Again

27 – 29 May 2019

WEDNESDAY 29 MAY 2019

Institut d'Astrophysique de Paris, Amphitheatre
98 bis boulevard Arago, 75014 Paris

9h30-11h30 **The 29 May 1919 Eclipse**

Chair: André Maeder

Eddington, Dyson and the Eclipse of 1919.

Daniel J. Kennefick (University of Arkansas)

The 1919 May 29 eclipse: On Accuracy and Precision.

David Valls-Gabaud (Observatoire de Paris)

The 1919 Eclipse: Were the Results Robust?

Gerry Gilmore & Gedrun Pebody (University of Cambridge)

Chasing 'Mare's Nests': Eddington and the Early Reception of General Relativity among Astronomers.

Jeffrey Crelinsten (University of Toronto)

11h30 *Coffee break*

12h-13h **General Relativity Theory**

Chair: George Ellis

Eddington's Essential Role in Clarifying the Contents of Early General Relativity.

Olivier Darrigol (Université Paris-Diderot)

Weyl's *Raum Zeit Materie* and Eddington's *Space, Time and Gravitation*: General Relativity and beyond.

Christophe Eckes (Université de Lorraine)

13h00 *Lunch*

14h30-15h30 **From Subjectivism to Fundamental Theory**

Chair: Olivier Darrigol

Eddington and the Fine Structure Constant.

Jean-Marc Lévy-Leblond (Université de Nice)

Eddington's Epistemology as a Gateway to His Quantum Theory.

Agne Alijauskaite (Vilnius University)

15h30-16h General discussion

16h00 **End of conference**