



International Physics Olympiad IPhO'2018 Lisboa, Portugal (21st – 29th July, 2018)

Pedro Abreu^(*)

LIP & IST

for the

Portuguese Physics Society

(SPF, Sociedade Portuguesa de Física)

(^(*) also President of the South & Islands delegation of SPF)



IPhO 2018
Lisbon, Portugal



Lisboa, 21/04/2017



Physics Olympiads

- Promotion of excellence in physics education and physics studies
- In Portugal are organized by the Portuguese Physics Society (SPF)
- 2 levels:
 - **Level-A**
Up to 14-yrs old (end of 9th year of school, transition to high-school),
competition by team of up to three students/team,
possibility to participate later in the EUSO – European Science Olympiad
(Physics + Chemistry + Biology) – this participation in EUSO is organized inside the
Ministry of Education
 - **Level-B**
Up to 16-yrs old (end of 11th year of school, 2nd of high-school),
individual competition,
possibility to participate later in the IPhO – International Physics Olympiad and/or in
OIbF – Olimpiada Ibero-americana de Fisica – this participation is responsibility of SPF



Physics Olympiads

- 3 Steps:

- 1st step at school level: one team of up to 3 students selected to compete at Level-A, and up to 3 students selected to compete at Level-B |
- 2nd step at regional level (next April 29th!), 5 regions (North, Centre, South, Azores, Madeira): 3 Level-A teams get medals (up to 9 stds. selected), 3 Level-B stds. get medals and 7 Level-B stds. get mentions (10 stds. selected in N/C/S + 3 Az./Ma.)
- 3rd step at national level (next June 3rd), procedure = regional;
the 3 Level-A stds. Gold medallists get to participate in a preparation (with other 3 gold medallists from Chemistry junior olympiad + 3 from Biology Olympiad)
20 Level-B stds. (3 medallists + 7 mentioned + 10 second-best) are selected for an intense preparation for International Physics Olympiad/Ibero-American Olympiad



International Physics Olympiad

IPhO 2018
Lisbon, Portugal

- Started in 1967 (with only european eastern countries)
- Now involving an average of 90 countries
- State-level representation – Ministry of Education directly invited, usually delegates this representation in the Physics Society or equivalent, delegation consists in:
 - Up to **5 Students** – last year of high-school (in many places with extensive preparation)
 - Up to **2 Leaders** (teachers or scientists supporting the students)
 - As many **Observers** as wanted by the delegation (within reasonable limits)



International Physics Olympiad

IPhO 2018
Lisbon, Portugal

- Started in 1967 (in mostly European eastern countries)
- Now involving an average of 90 countries
- State-level representation – Ministry of Education directly invited, usually delegates this representation in the Physics Society or equivalent, delegation consists in:
 - Up to **5 Students** – last year of high-school (in many places with extensive preparation)
 - Up to **2 Leaders** (teachers or scientists supporting the students)
 - As many **Observers** as wanted by the delegation (within reasonable limits)
- With local guides, academic committee and helpers => ~1 000 people involved



International Physics Olympiad

IPhO 2018
Lisbon, Portugal

- Portugal started in 1993 as an Observer (obligatory) and in 1994 with a deleg.
- As per the by-laws, Pt offered in 2000 to organize the next “free” IPhO, being given the 49th in 2018 – going to happen in 21-29 July 2018 😊!
- Much harder than the National Physics Olympiads
 - **Budgets!** (Swiss 2016 at ~4 M€; Spain 2005 at ~1,4 M€; ours estimated at ~1,1 M€)
 - Organization side
 - Academic side
 - The Scientific Board – consisting of the Academic Committee plus ALL the Leaders – has to formally approve the final english versions of the tests/problems/experiments (can refuse theoretical problems [with other problems needed to fill the gap] or change dramatically the proposed experiments (but cannot ask for further experimental equipment)
 - The approved problems (3 theory, 2 experiments) are to performed by the students in two days separated by a day (one theoretical exam, one practical exam, both with the duration of 5 hours/exam), and usually are very hard (at the level of a 2nd year in physics/engineering course)



International Physics Olympiad

IPhO 2018
Lisbon, Portugal

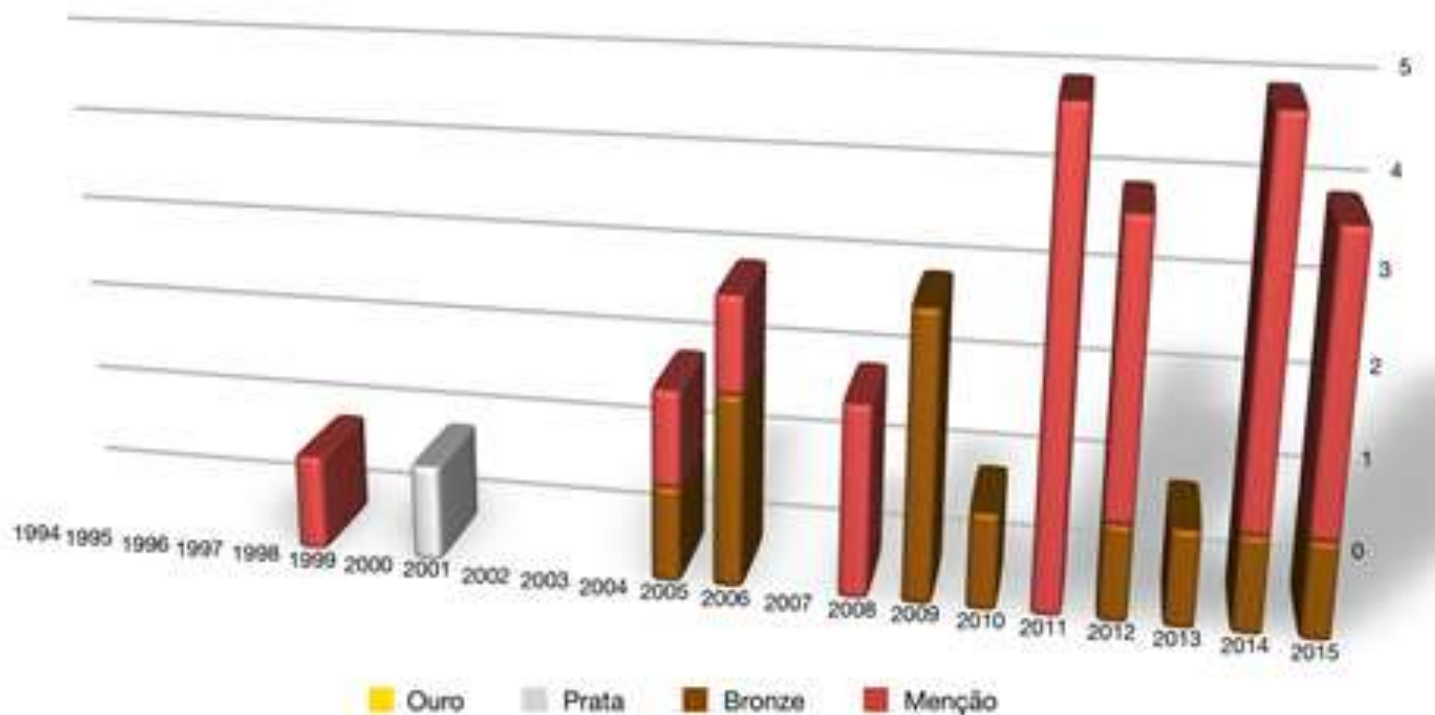
Recent and next years editions of IPhO, OIbF and EUSO

Ano	IPhO	OIbF	EUSO
2016	Zurique, Suíça (+Liechtenstein)	Carmelo, Uruguai	Estónia
2017	Indonésia	Colômbia	Dinamarca
2018	Portugal	Brasil	Eslovénia
2019	Israel	Porto Rico	Portugal
2020	Lituânia	El Salvador	Eslováquia
2021	Singapura	Guatemala	
2022	Japão	Costa Rica	
2023	Irão	Argentina	
2024	França	México	
2025	Colômbia	Chile	
2026	Hungria	Equador	



Results...

Medals (Gold, Silver, Brass) and Mentions by Portuguese Stds. in IPhO





Results...

Medals (Gold, Silver, Brass) and Mentions by Portuguese Stds. in OIbF

