



最近のIAUの動向について

2024. 9. 19. 光赤天連シンポジウム
山岡 均 (国立天文台)

IAU = International Astronomical Union

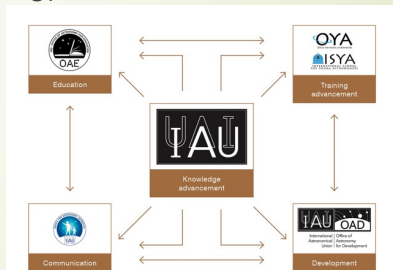
国際天文学連合

- ▶ 1919年創設
 - ▶ 日本は最初の7か国のひとつ
- ▶ 2015年に大きな改革
 - ▶ 9つの部会 (Division)
 - ▶ A: Fundamental Astronomy, B: Facilities, Technologies and Data Science, C: Education, Outreach and Heritage
 - ▶ D: High Energy Phenomena and Fundamental Physics, E: Sun and Heliosphere
 - ▶ F: Planetary Systems and Astrobiology, G: Stars and Stellar Physics
 - ▶ H: Interstellar Matter and Local Universe, J: Galaxies and Cosmology
 - ▶ 39の委員会 (Commission) e.g. C2: CAP (OAO)
 - ▶ 47のWG e.g. WG for Supernova
 - ▶ 5つのOffice (OAD, OAO, OYA, OAE, CPS)
 - ▶ OAOは国立天文台 天文情報センター内に設置
 - ▶ CPSには国立天文台 天文情報センター 周波数資源保護室も参画

1922: first general assembly ©IAU



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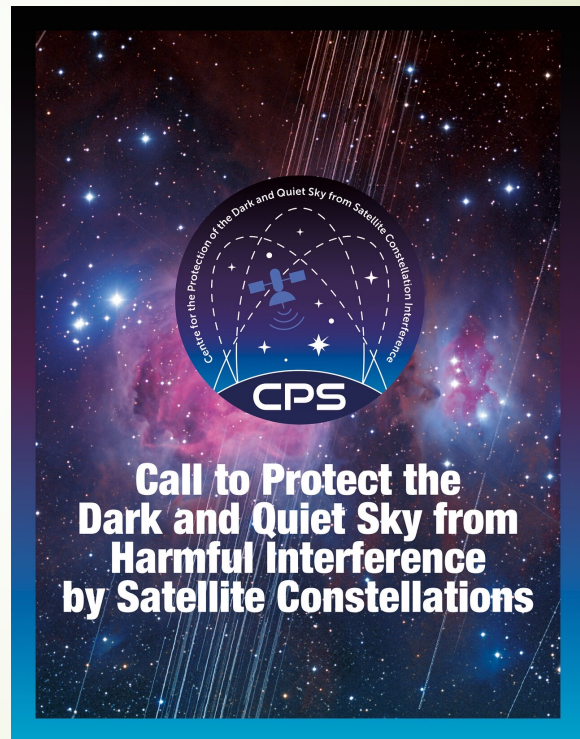


CPS = Centre for the Protection of the Dark and Quiet Sky from Satellite Constellation Interference

- ▶ 2022年設立
- ▶ もともとは光害
- ▶ 周波数保護も？



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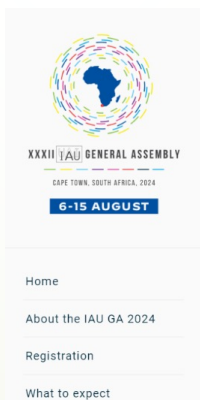
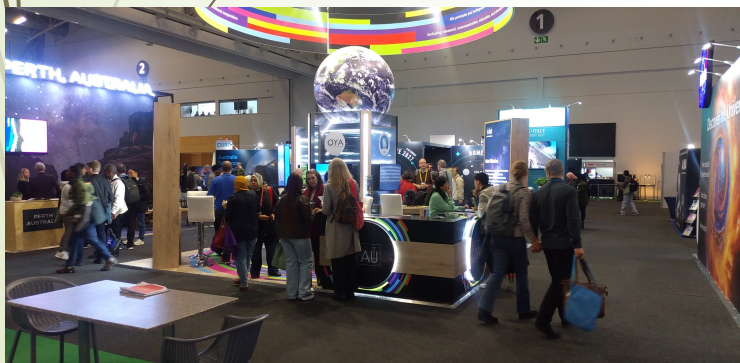
国会員 (National Member) と 個人会員 (Individual/Junior member)

- National Member
 - 現在85か国 (suspended含む)
 - 国単位で負担金 日本では日本学術会議が拠出 2025年は€69.720 ≒ 1,100万円
 - 議決事項に投票権 予算はカテゴリー別重み それ以外は1国1票
- Individual/Junior Member 12850名
 - Individual: 学位取得3年後以降、天文学と継続して関わり
 - Junior: 学位取得直後から加入可能 6年間限定 PhD prizeに必須
 - 毎年募集(2018以降) Resolutionに投票権 (1人1票)
- Honorary Member
 - 2018年以降、国単位で3年に1回推薦
- Deceased Member
 - Individual Memberはもともと終身制 → 近年退会制度もできた



XXXII General Assembly

- ▶ It's Time for Africa!
- ▶ 参加者 107か国 2,648名 (うちオンライン603名)
- ▶ 受理された論文総数2,851件
- ▶ ブース出展多数 (20 sponsors and 43 exhibitors)
 - ▶ 引率された高校生が多数来場



Business Session 議題一覽

■ Business Session I (August 7th)

- 1. Welcome by the President, Debra Elmegreen
- 2. Adoption of the Agenda
- 3. Listing of Representatives of National Members
- 4. Reminder of voting rules
- 5. Voting procedure (for Business Session II)
- 6. Presentation of candidate National Members
- 7. Report of the Executive Committee
- 8. Presentation of Changes to Statutes
- 9. Presentation of Resolutions
- 10. Report of the Special Nominating Committee (slate of new Officers and candidates for SNC)
- 11. Candidates for Finance Committee
- 12. Candidates for Membership Committee
- 13. Candidates for Resolution Committee
- 14. Closure of Business Session I

■ Business Session II (Aug. 14th)

- 1. Welcome by President, Debra Elmegreen
- 2. Adoption of the Agenda
- 3. Listing of Representatives of National Members
- 4. Reminder of voting rules
- 5. Voting procedure
- 6. Changes to Statutes (vote by NM)
- 7. Report of the Membership Committee on new Individual and Junior Members
- 8. Honorary Members admitted by the Executive Committee
- 9. Admission of new National Members
- 10. Deceased Members (followed by 1 minute Silence)
- 11. Resolutions (vote by IM)
- 12. Financial Matters (vote by NM)
- 13. Election of the Finance Committee (vote by NM)
- 14. Election of the Membership Committee (vote by NM)
- 15. Election of the Resolutions Committee (vote by NM)
- 16. Election of the Special Nominating Committee (vote by NM)
- 17. Appointment of Division Presidents and Vice-Presidents
- 18. Election of Executive Committee 2024-2027 (vote by NM)
- 19. Closure of Business Session II

ハイライト

- 規約の改訂
 - 1. Addition of the information related to the identification of the IAU for legal purposes when referring to the foundation of the IAU (1919 in Brussels), the legal nature of the IAU (non-profit and non-governmental), and national identifier and address
 - 2. Change to accept a National Member with Observer status at any time
 - 3. Introduction of voting rights for Interim members (because they pay dues)
- 新しい国会員：4か国 すべてアジア圏
 - モルジブ、ネパール、北朝鮮（再入会）、ベトナム（再入会）
 - いずれもオブザーバ会員
- DatabaseとWebの移設：ESOからIAU本部へ



Resolutions

- ▶ Resolution I for the Protection of the Dark and Quiet Sky from harmful interference by satellite constellations
- ▶ Resolution II to establish a standard Lunar Celestial Reference System (LCRS) and Lunar Coordinate Time (TCL)
- ▶ Resolution III on the establishment of a coordinated lunar time standard by international agreement

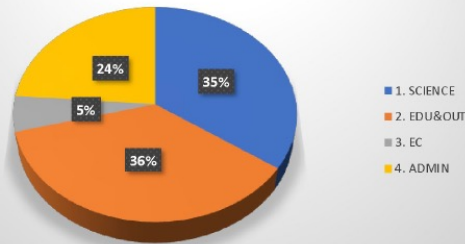
- ▶ 会員向けに5月6日にあらかじめ提示
- ▶ いずれも総会の時間中にオンライン投票→可決

予算についてざっくり

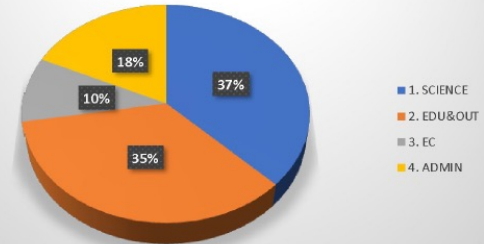
12a. Summary 2024

SUMMARY	Forecast 2024	Approved 2021	Difference	Comments
1. SCIENCE	719.573,00 €	629.387,00 €	-90.186,00 €	Poor estimate of GA expenditure
2. EDUCATION AND OUTREACH	753.312,81 €	589.800,00 €	-163.512,81 €	Delayed OAE, Visegrad, I-HOW
3. EXECUTIVE COMMITTEE AND INST. COMMUNICATION	111.000,00 €	162.000,00 €	51.000,00 €	Better expenditure control
4. ADMINISTRATION AND OPERATIONS	493.149,25 €	304.387,00 €	-188.762,25 €	DB and Web migration
TOTAL EXPENDITURES	2.077.035,06 €	1.685.574,00 €	-391.461,06 €	
5. INCOME	1.700.550,30 €	1.435.855,00 €	264.695,30 €	Arrears, external contributions
NET RESULT	-376.484,76 €	-249.719,00 €	-126.765,76 €	

2024 Forecast



2024 Approved in 2021



予算についてざっくり (続)

12b. Income projection 2025-27

Budget Triennial Projection 2025-27						
5. INCOME			€ 1.314.174,00	€ 1.401.994,00	€ 1.470.140,00	
7A0	National Members Dues					
7A1	Annual Dues		€ 1.136.436,00	€ 1.159.256,00	€ 1.182.402,00	
7A2	Arrears					
7B0	Contributions and Donations					
7B1	Grants GA-related					
	ISYA annual contribution (NASL)		€ 27.738,00	€ 27.738,00	€ 27.738,00	
	Others contribution					
7B4	Fund Raising			€ 65.000,00	€ 110.000,00	
7C0	Royalties					
7C1	Royalties - CUP		€ 60.000,00	€ 60.000,00	€ 60.000,00	
7C2	Royalties - SPRINGER					
7D0	Funds un Transit					
7D1	The Gruber Fellowship		€ 70.000,00	€ 70.000,00	€ 70.000,00	
7D2	Others					
7F0	Bank Interest					
7F1	Interests on accounts in €					
7F2	Interests on accounts in US \$		€ 20.000,00	€ 20.000,00	€ 20.000,00	

ールを追加、削除、また
並べ替え

Proposed 2%
annual increase

Year	Unit in €
2025	3486
2026	3556
2027	3627

A prudent estimate
of the fundraising
income





日本の貢献

- ▶ 副会長：渡部潤一（2018-2024）：任期満了
- ▶ 新副会長：James Chibueze（南アフリカ、鹿児島大学で学位取得）
- ▶ Division E president：清水 敏文（ISAS）
- ▶ Division D vice-president：榎戸 輝揚（京大/理研）
- ▶ Division B member (1st)：林 左絵子（IPMU）
- ▶ Division C member (2nd)：富田 晃彦（和歌山大）
- ▶ Division F member (1st)：石黒 正晃（ソウル国立大）
- ▶ Division G member (2nd)：相川 祐理（東大）
- ▶ Commission B1 president：藤井 通子（東大）
- ▶ Commission E3 president：下条 圭美（国立天文台）

その他

■ 新執行部

- 会長：Willy Benz（スイス）
- 事務局長：Diana Worrall（イギリス）
- 次期会長：Brian Schmidt（豪）
- 次期事務局長：Laura Ferrarese（カナダ）

■ 今後の総会

- 2027: ローマ（8/10 - 19）
- 2030: サンチャゴ（日程未定）



おまけ



付録：天体の名称について

- 国際天文学連合は、天体名や地球外の自然地形の名称を決定・認定する唯一の公的機関
- どの天体等にどのような名前を付けるか、またその手法は、種別ごとに別個の委員会・WG。

- **惑星、準惑星、衛星等の表面地形、大惑星の衛星**
 - Working Group for Planetary System Nomenclature (WGPSN) : EC WG
 - <https://planetarynames.wr.usgs.gov/>
 - 日本人メンバー：現状不在
 - 天体別Task Groupメンバー 水星：倉本圭*（北大）、火星：宮本英昭*（東大）、小天体：渡部潤一、太陽系外：木村淳*（阪大）

- **(広義の) 小惑星、彗星、小惑星の衛星**
 - WG Small Bodies Nomenclature (WGSBN) : EC WG
 - <http://www.klet.org/csbn/> → <https://www.wgsbn-iau.org/>
 - 日本人メンバー：中野圭一
 - ※準惑星の命名、小惑星の衛星の命名にはWGPSNも関与する（後者は？）
 - ※太陽系外から飛来した天体もWGSBNが命名（例：' Oumuamua(11/2017 U1))



- **太陽系外惑星系**

- WG Exoplanetary System Nomenclature : EC WG
- ウェブサイトなし、2021年に設立、NameExoWorlds2022を所管
- 日本人メンバー：林左絵子

- **符号と名称**

- WG Designations & Nomenclature : Commission B2 (Data and Documentation) WG
- <http://cds.u-strasbg.fr/Dic/iau-spec.html>
- 日本人メンバー：現状不在

- **流星群**

- WG Meteor Shower Nomenclature (MSN-WG) : Commission F1 (Meteors, Meteorites and Interplanetary Dust) WG
- ウェブサイトなし
- 日本人メンバー：小関正弘(アソシエイツ)



- ▶ **恒星**

- ▶ WG Star Names (WGSN) : Division C (Education, Outreach and Heritage) WG
- ▶ <https://exopla.net/>
- ▶ 日本人メンバー : 山岡均

- ▶ **参考 :**

- ▶ IAU Themes : Naming of Astronomical Objects
- ▶ <https://www.iau.org/public/themes/naming/>

- ▶ IAU WGs
- ▶ https://www.iau.org/science/scientific_bodies/working_groups/