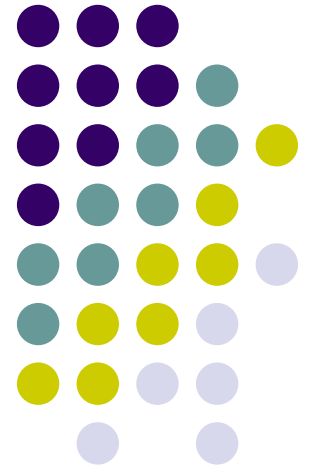


# CODATA 2006

-Oct.25-

CODATA Vision of the Future

Shuichi Iwata



# Roundtable : Speakers

- Roberta BALSTAD
- Mikhail ZGUROVSKY
- Alexei GVISHIANI
- Krishan LAL

chaired by Shuichi IWATA

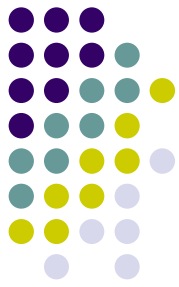


# 孔子



- 吾十有五而志于学
- 三十而立
- 四十而不惑
- 五十而知天命
- 六十而耳順
- 七十而從心所欲不踰矩

# Confucius and CODATA



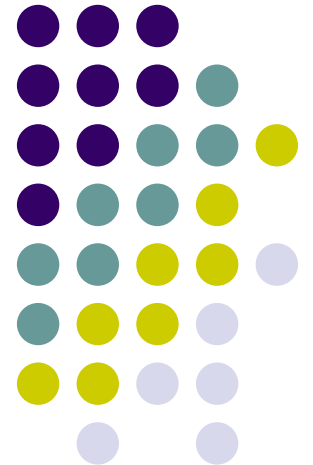
- 0:1966
- 15:1981 wants to learn
  - DBMS, AI, Network, SC, ....
- 30:1996 independent
  - Internet
- 40:2006 confidence
  - Share, Use and Cooperate(Open Access)
- 50:2016 mission
  - ????????

# CODATA & IAUD Joint Forum

Dialogue between Scientists and Designers

@Beijing and Kyoto Oct.25

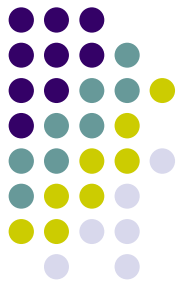
J.WU, D.CHUI, K.UEDA,  
J.CLARKSON, M.CASSIM, K.KATO,  
M.KUBO, R.CHEN, S.IWATA



# CODATA



- Committee on Data for Science and Technology
  - an inter-, multi-, trans-disciplinary scientific committee of the International Council for Science (ICSU), which works to improve the quality, reliability, management and accessibility of data relevant to all fields of science and technology.
- Born 1966
- 23 national members
- 15 scientific unions
- .....
- Here in Beijing, about 600 scientists and data experts are gathering.



# Data and Knowledge

- Fundamental Constants, .....
- Interatomic Potential, ....., Free Energy, ...
- Protein Structure, .....
- Climate Change, .....
- .....
- Knowledge with different expressions
- Knowhow(Data+Model+Evaluation+Procedure+...)

# Regularity in Binaries

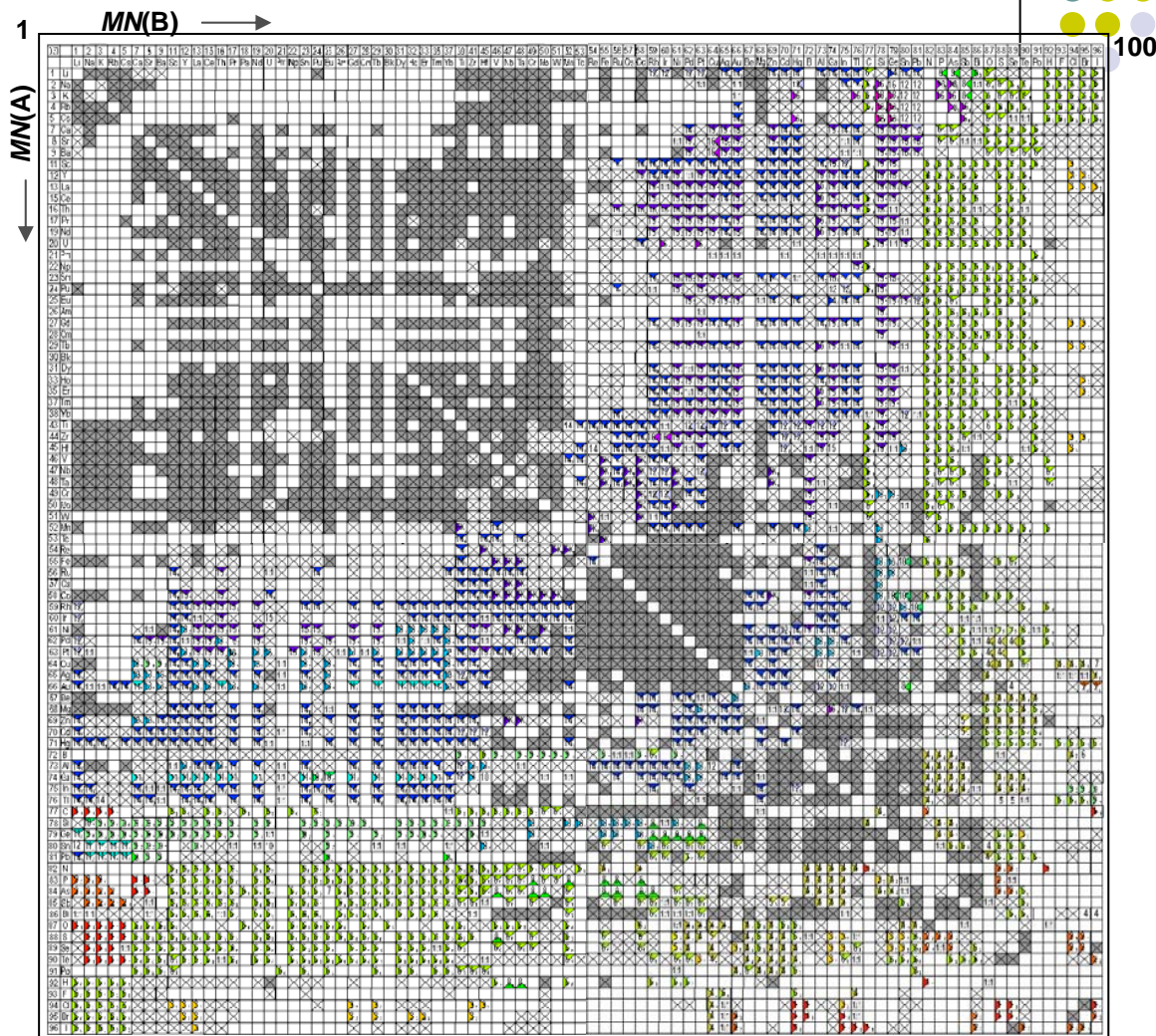
# AETs of Compounds



## MN(A) vs. MN(B) Map for 1:1 Compounds (RT)

- CN 1-3
- CN 4
- CN 6 (-11)
- CN 12 (-13)
- CN 14(-18)
- ⊗ Non-former
- ⊗ Former (no 1:1)

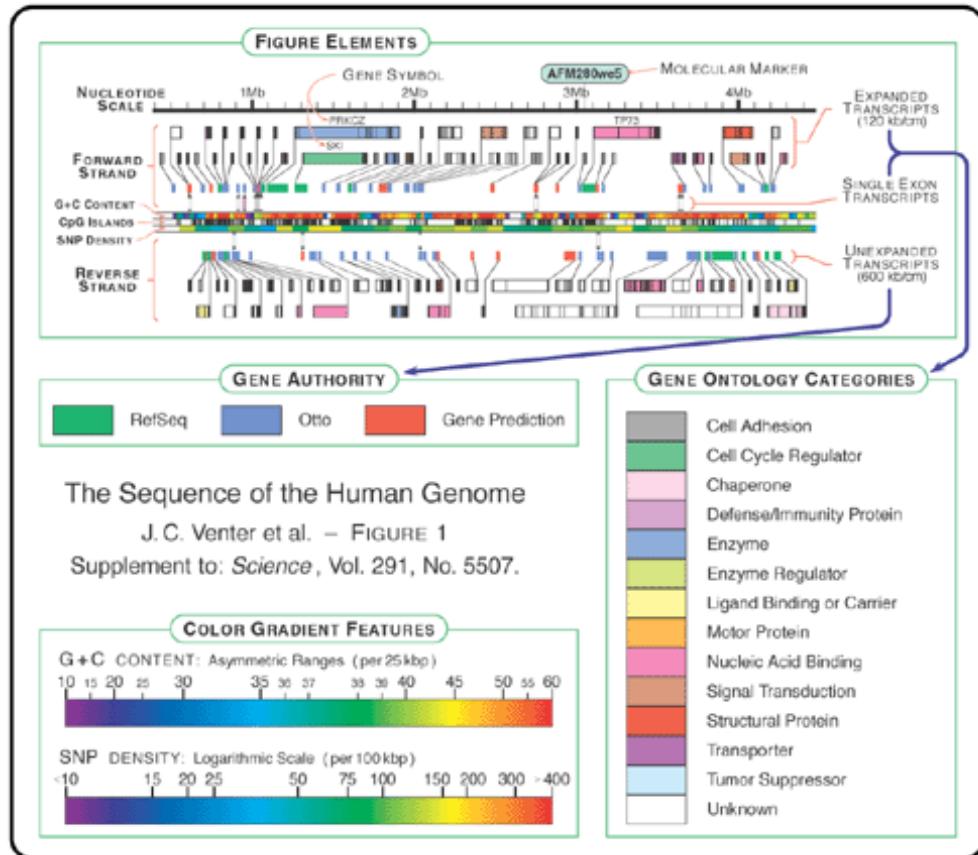
	non compound formation	724		no AB compound formed	544		1:1	AB without structure data	70
	single atom	43		dipole	31		linear or dumb-bell	2	
	triangle, center outside	44		tetrahedron	101		square, center inside	8	
	square pyramid	2		octahedron	2		equatorially mono-capped trigonal prism	615	
	octahedron + trigonal prism	8		trigonal prism	76		distorted square anti-prism	2	
	cube or square prism	3		equatorially bi-capped trigonal prism	74		pseudo Frank-Kasper (13)	12	
	full-capped trigonal prism	15		anti-cubooctahedron	7		pseudo Frank-Kasper (13)	88	
	cubooctahedron	30		Frank-Kasper (15)	8		defective eight equatorially capped pentagonal prism	209	
	mimetic dodecahedron	540		Frank-Kasper (16)	211		pseudo Frank-Kasper (16)	8	
	Frank-Kasper (16)	211							
	Frank-Kasper structures	41							



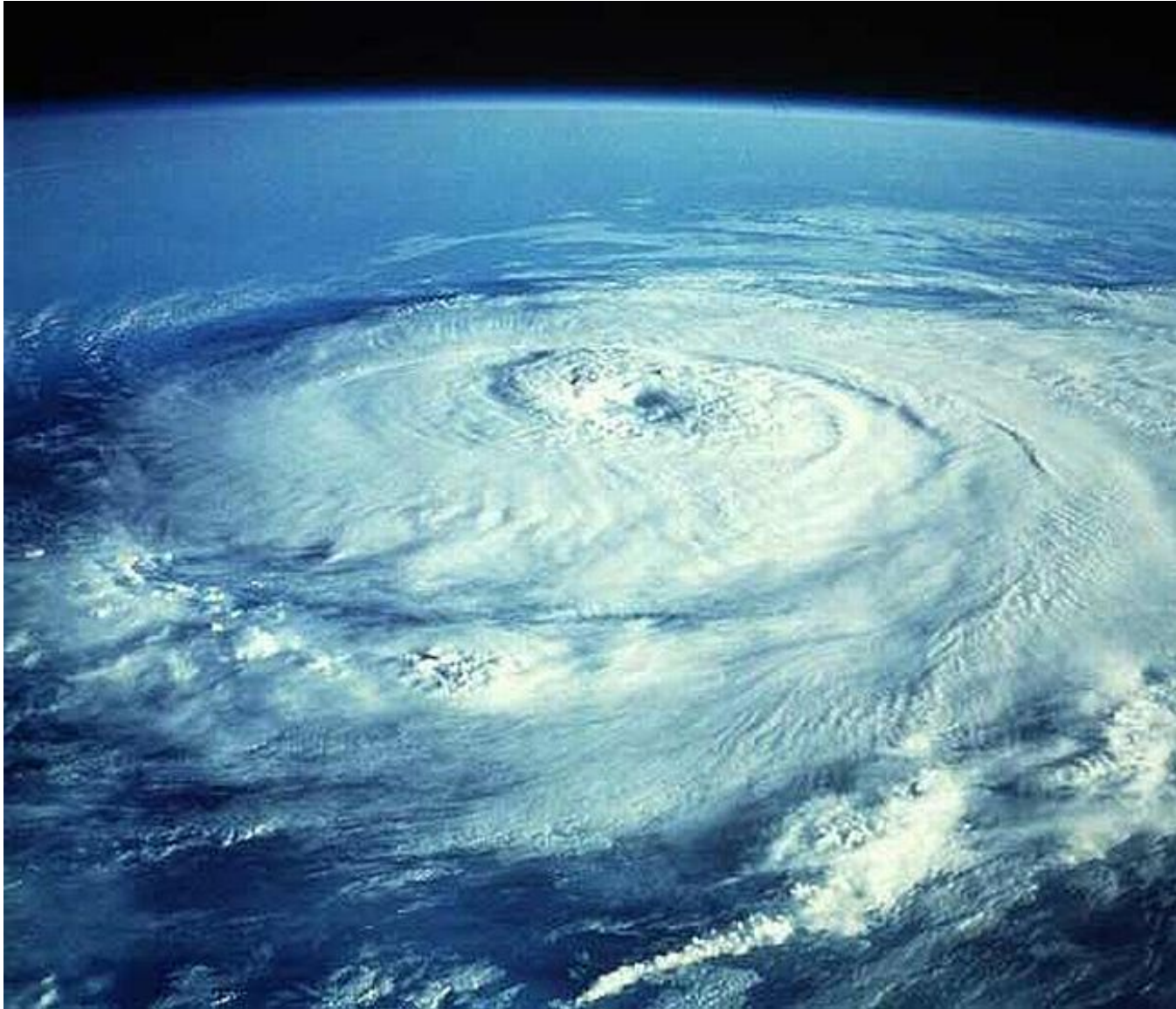
100



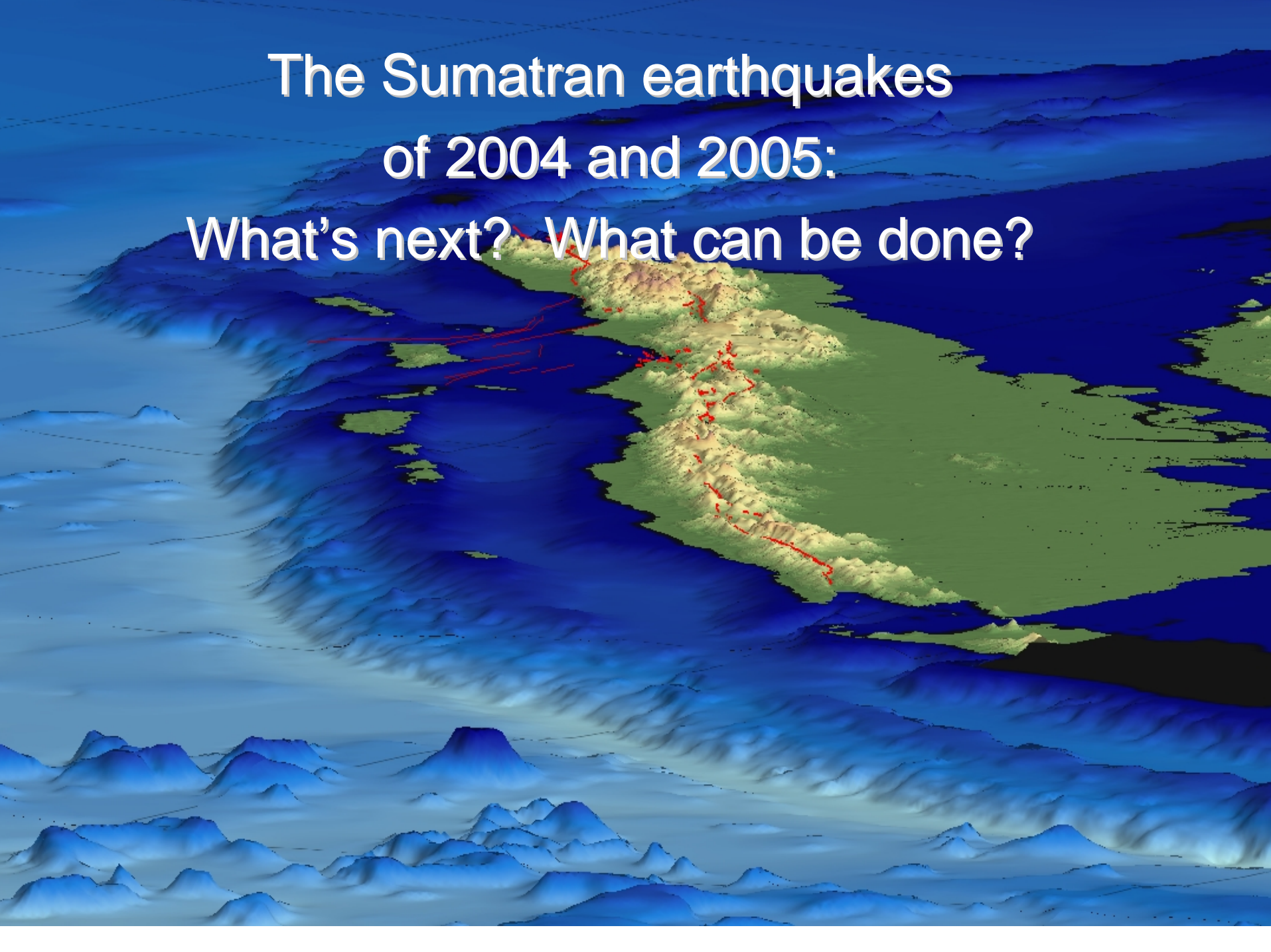
# Human-beings : Homo sapiens, -faber, -ludens, loquens, oeconomicus



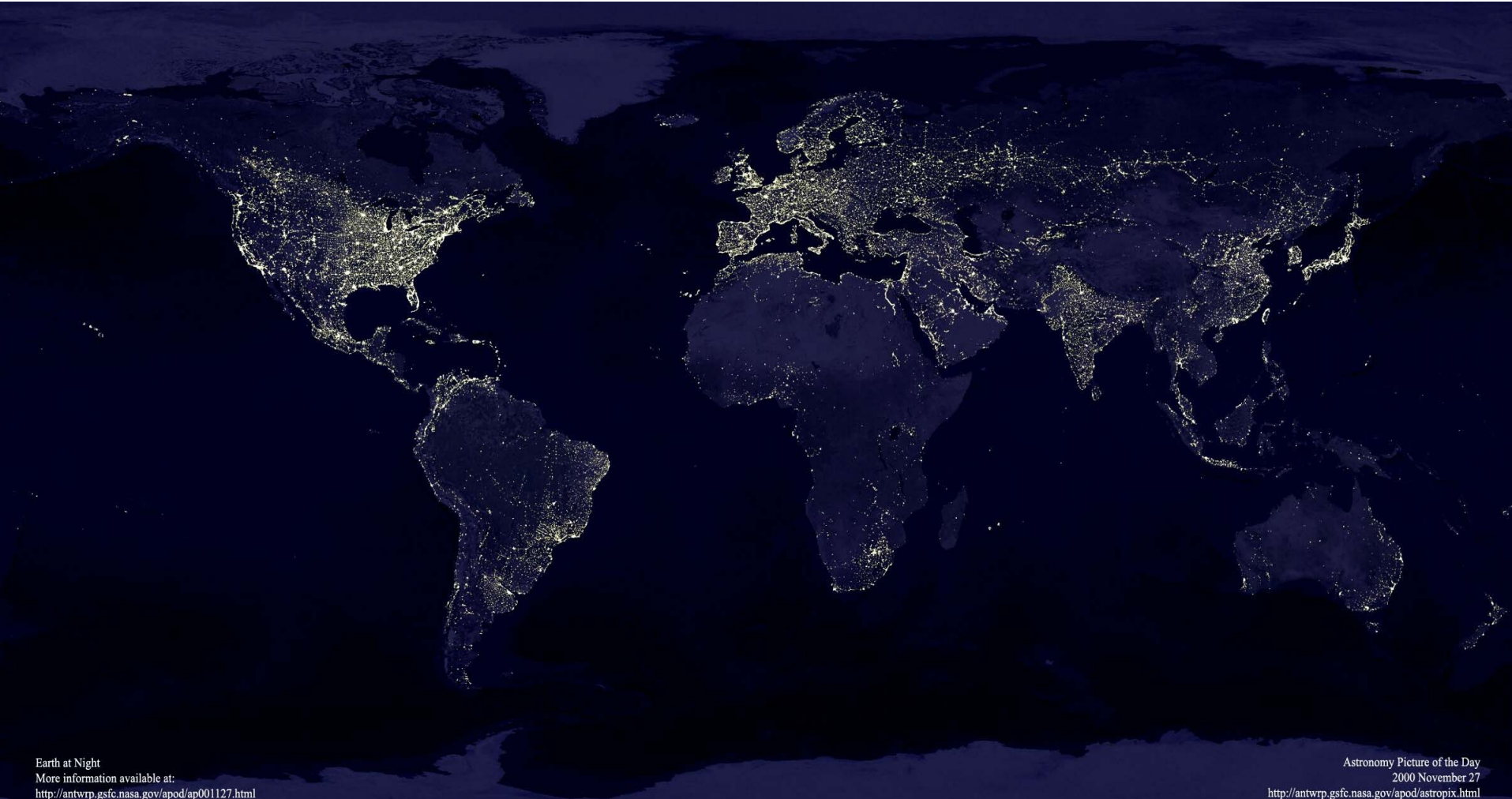
# Cyclone



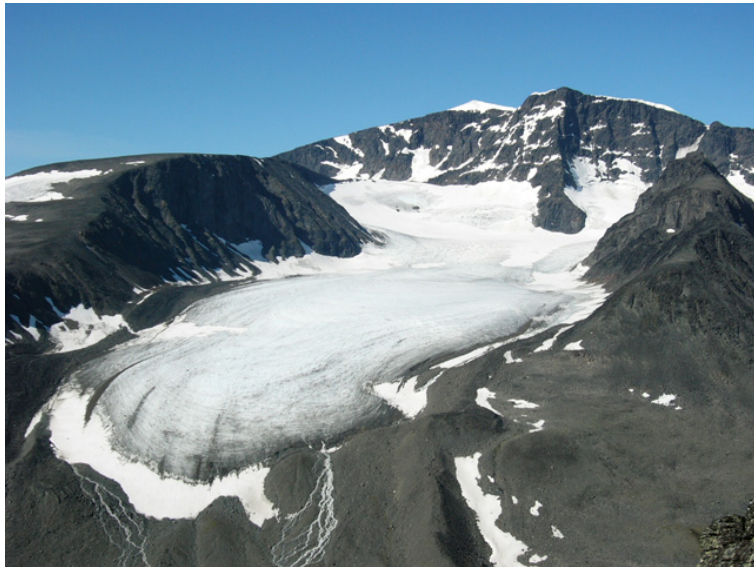
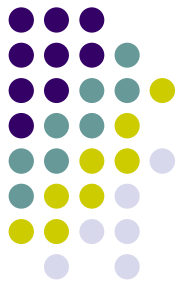
The Sumatran earthquakes  
of 2004 and 2005:  
What's next? What can be done?



We have been emerging with mistakes and successes,  
and we need to make our experiences into public goods.  
It starts from our collaboration fighting against public bads!



# Glaciers



## 禽流感是飞来的横祸吗？

As H5N1 reaches Europe, scientists debate the role of wild birds but agree on the need for greater surveillance

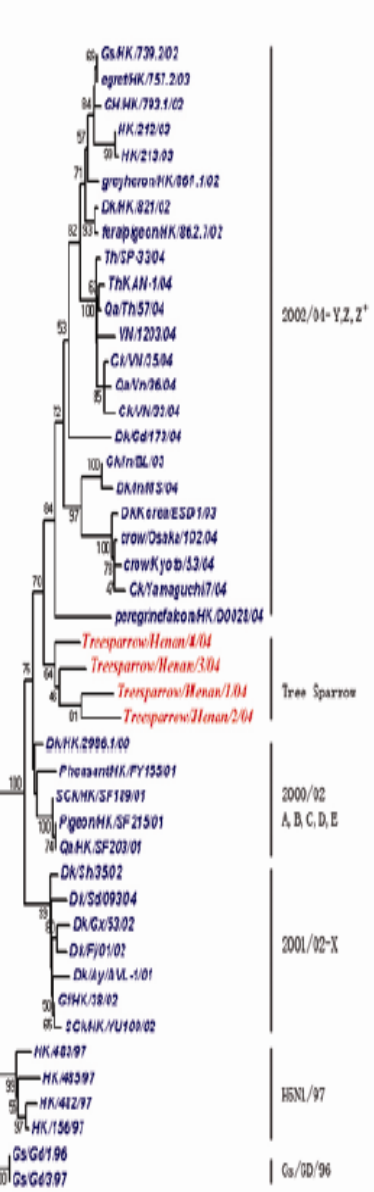
# Are Wild Birds to Blame?

### Searching

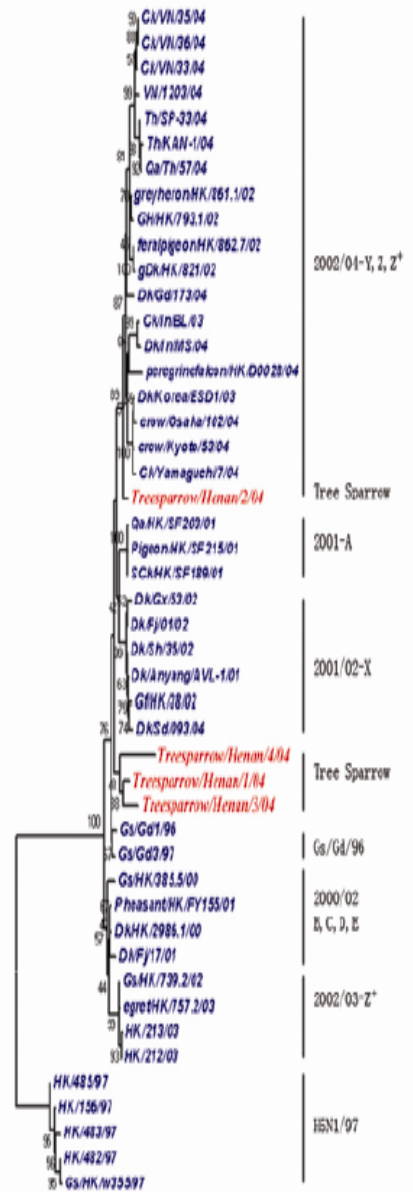
Some answers may come from Fu-Min Lei, an ornithologist at the Institute of Zoology in Beijing, part of the Chinese Academy of Sciences (CAS). Since last March, he has collected more than 6000 viral and serological samples from a variety of wild animals throughout China, including 2000 samples from migratory and resident birds, and is searching for H5N1.

gram. His group currently gathers cloacal samples from 6000 birds annually, primarily in the Netherlands (see sidebar). Extending such surveillance to critical migratory routes crossing Europe, which he estimates would cost about \$2.5 million, would not only serve as an early warning system for a possible pandemic, he says, but also provide data on other viruses that pose a threat to domestic flocks. Osterhaus would like to see similar

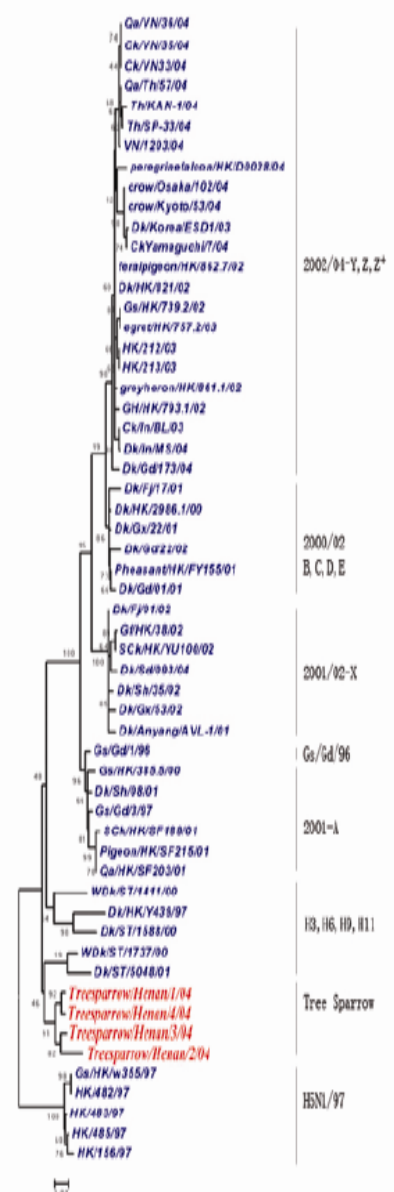
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trying to



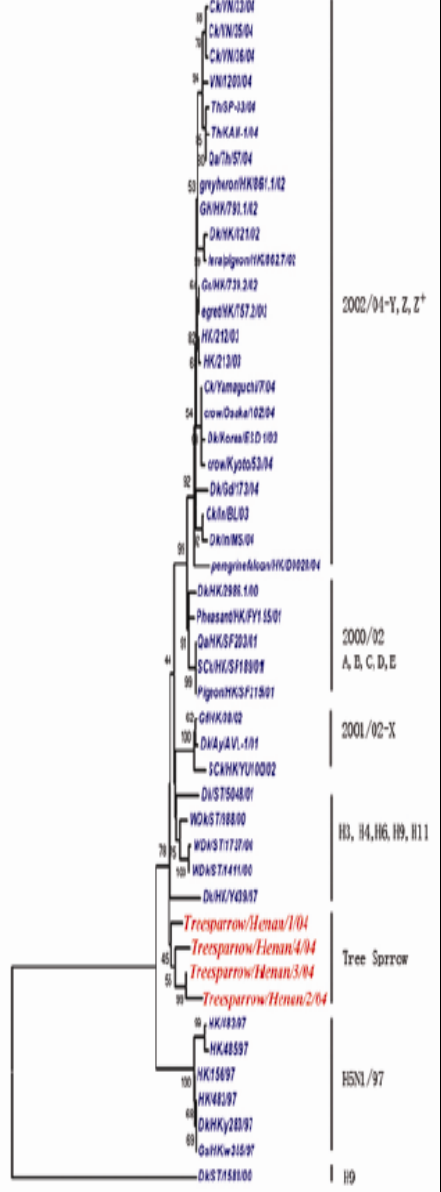
HA



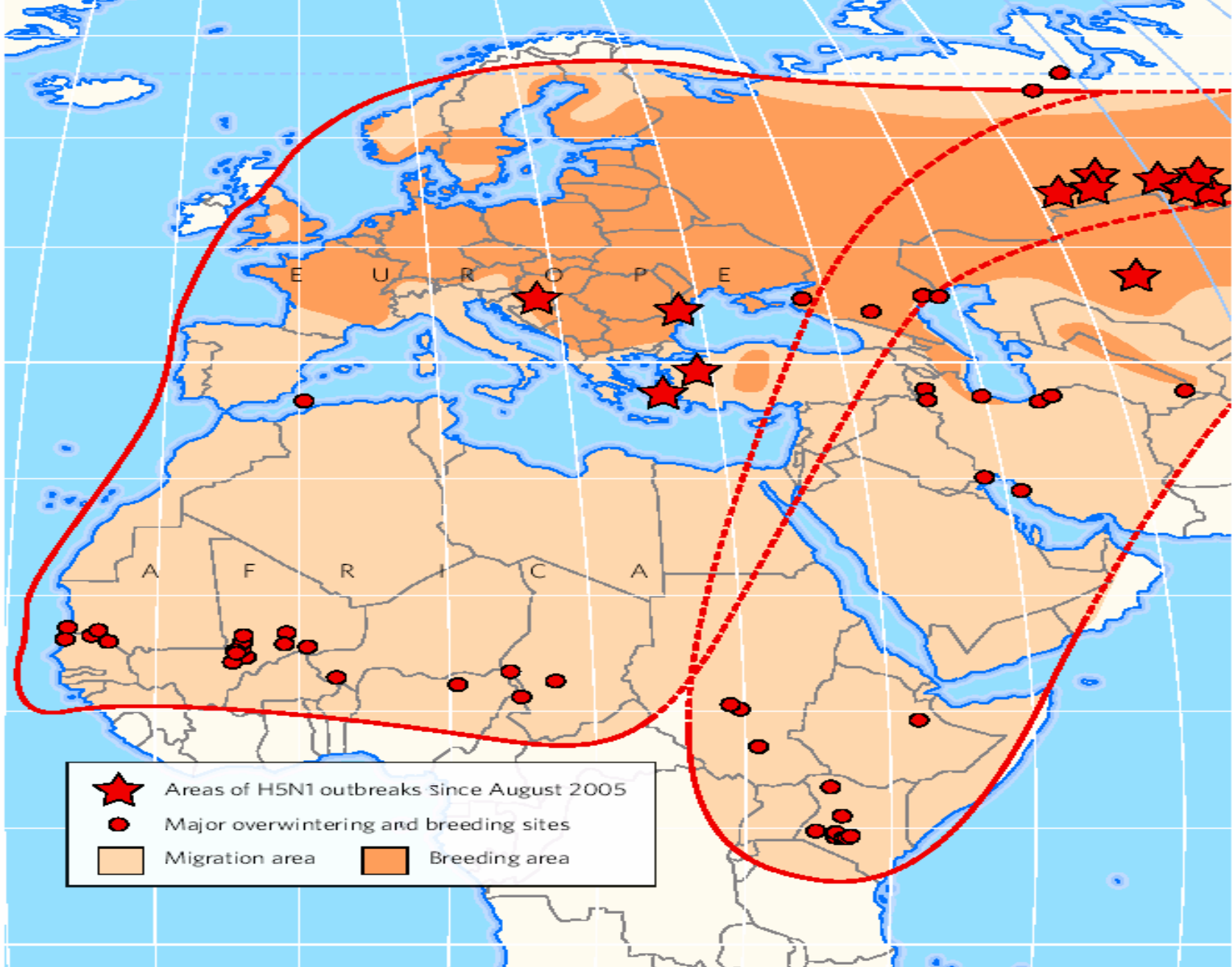
NA



M



NS



Mass migration: red outlines show flyways of the Garganey duck, a species at high risk of spreading the H5N1 virus. The birds breed in the north in summer (dark orange) and then fly south for the winter.