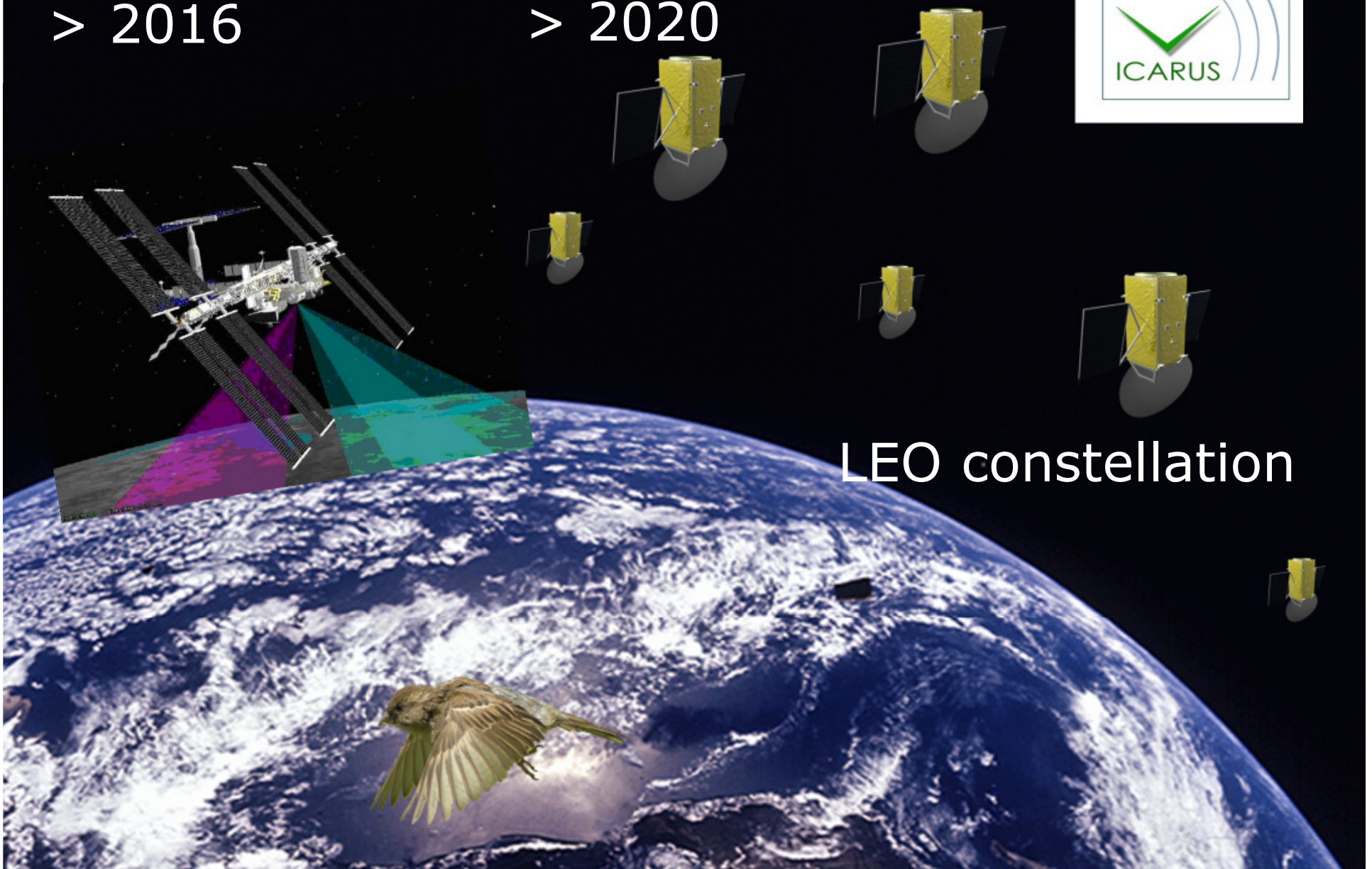


International Cooperation for Animal Research Using Space - ICARUS



> 2016

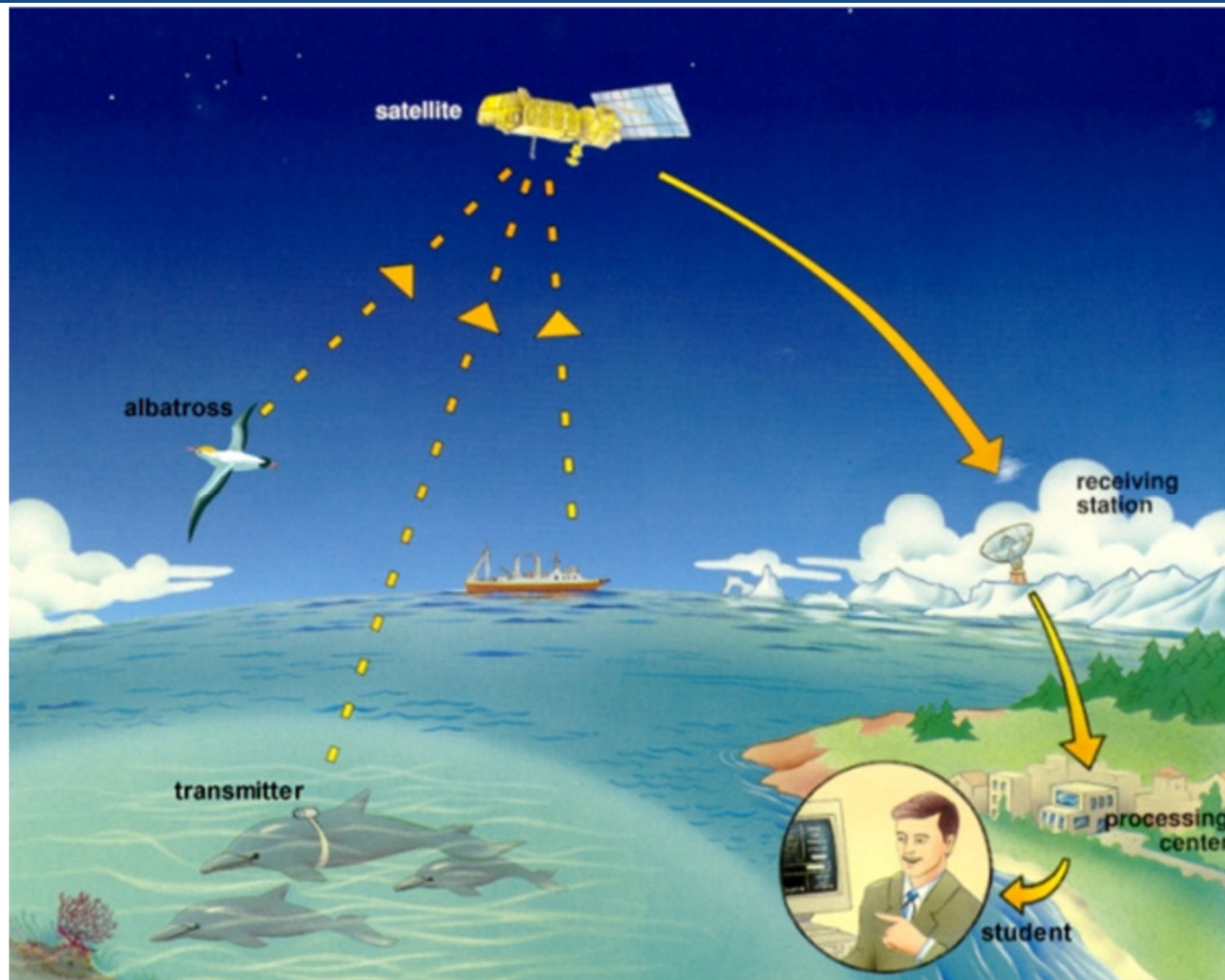
> 2020



LEO constellation

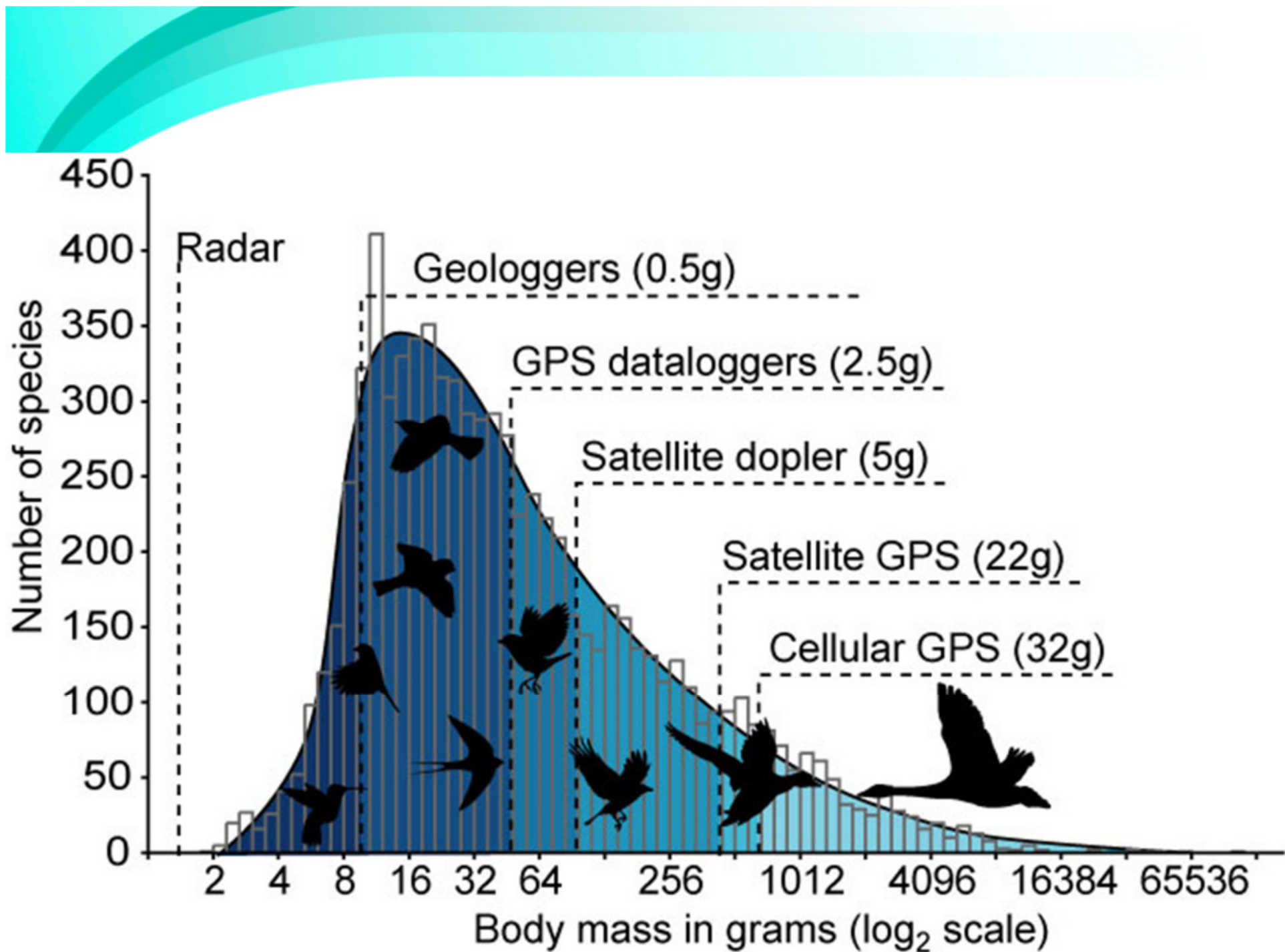


The ARGOS satellite system



NATIONAL
GEOGRAPHIC

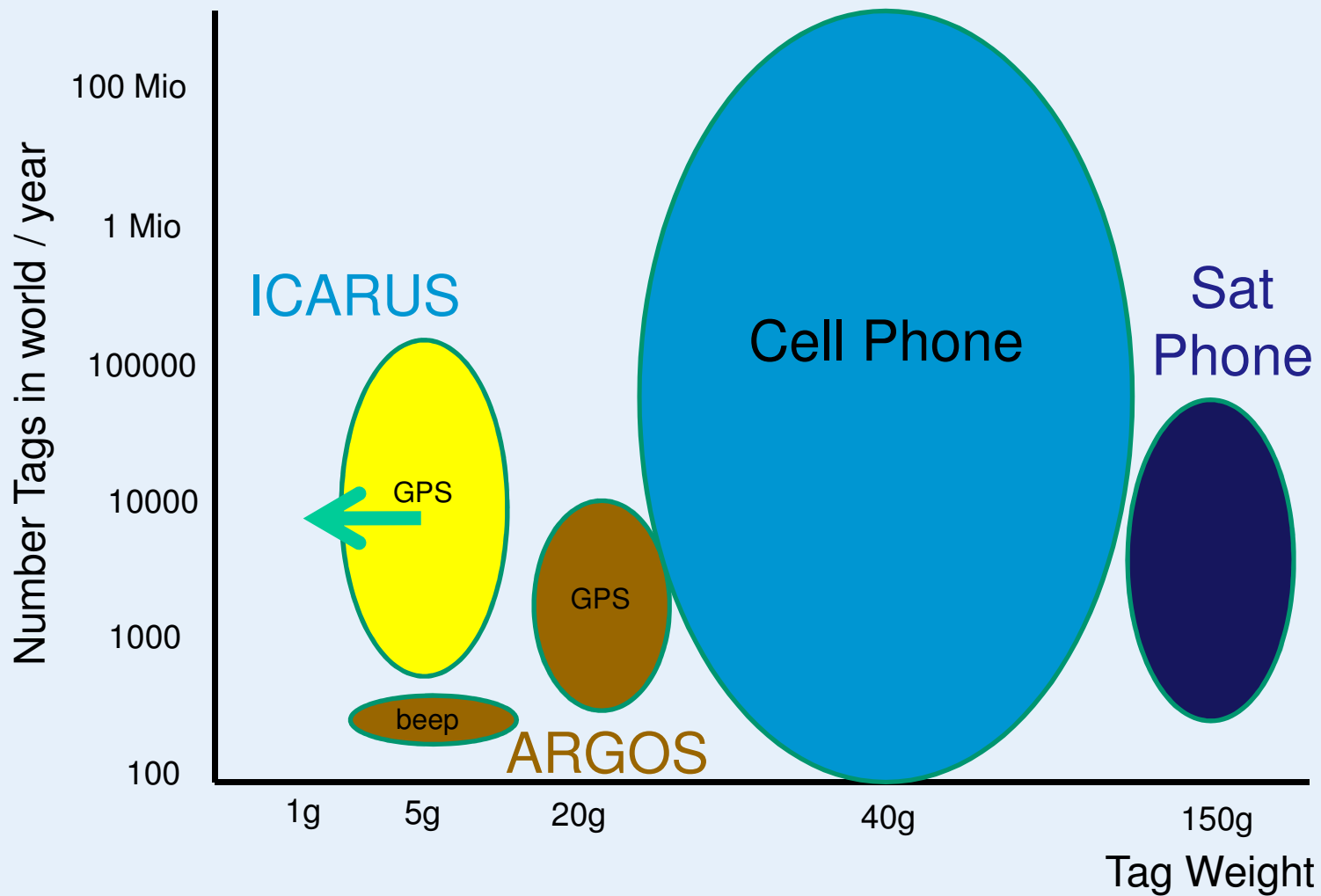


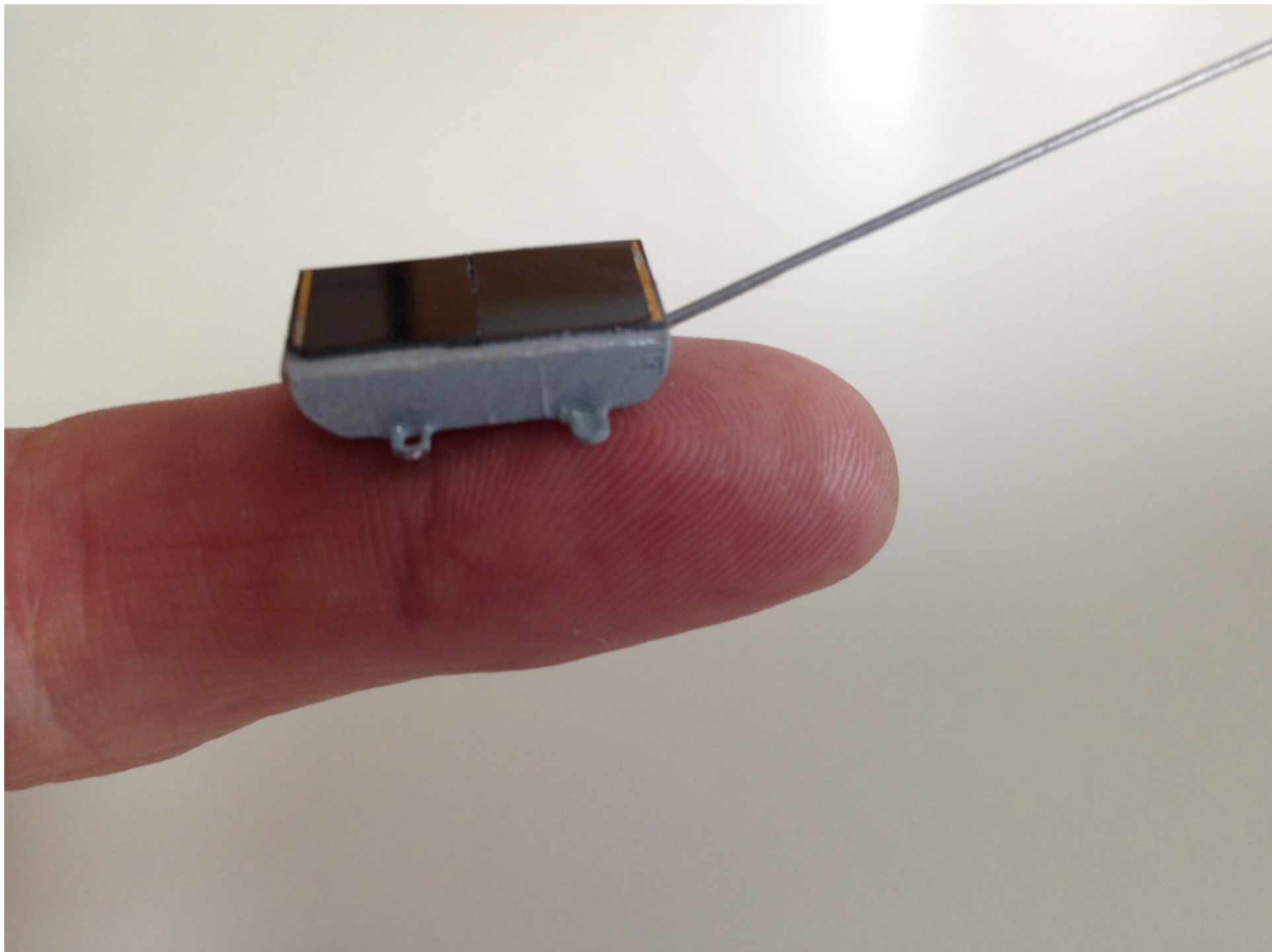


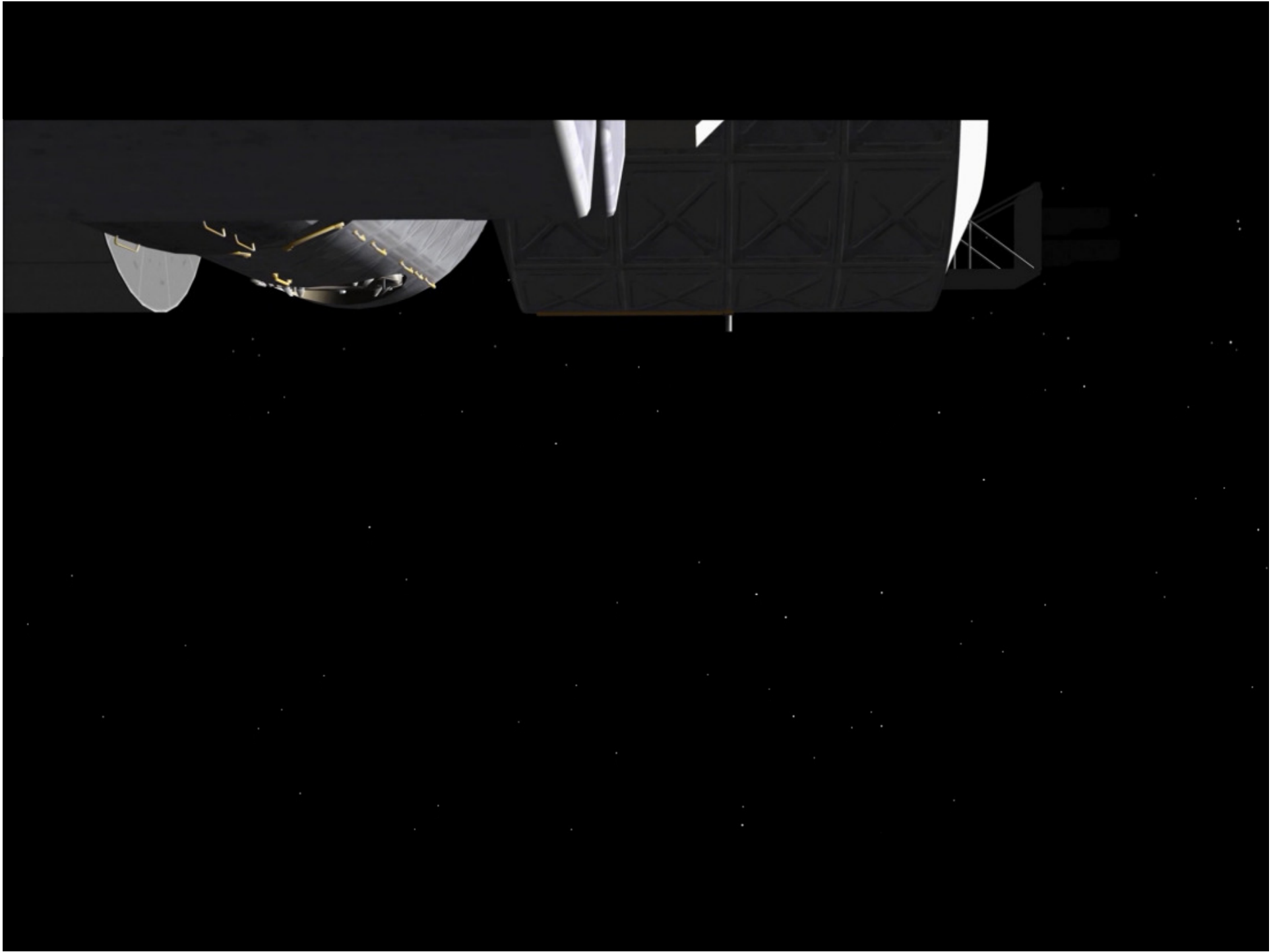


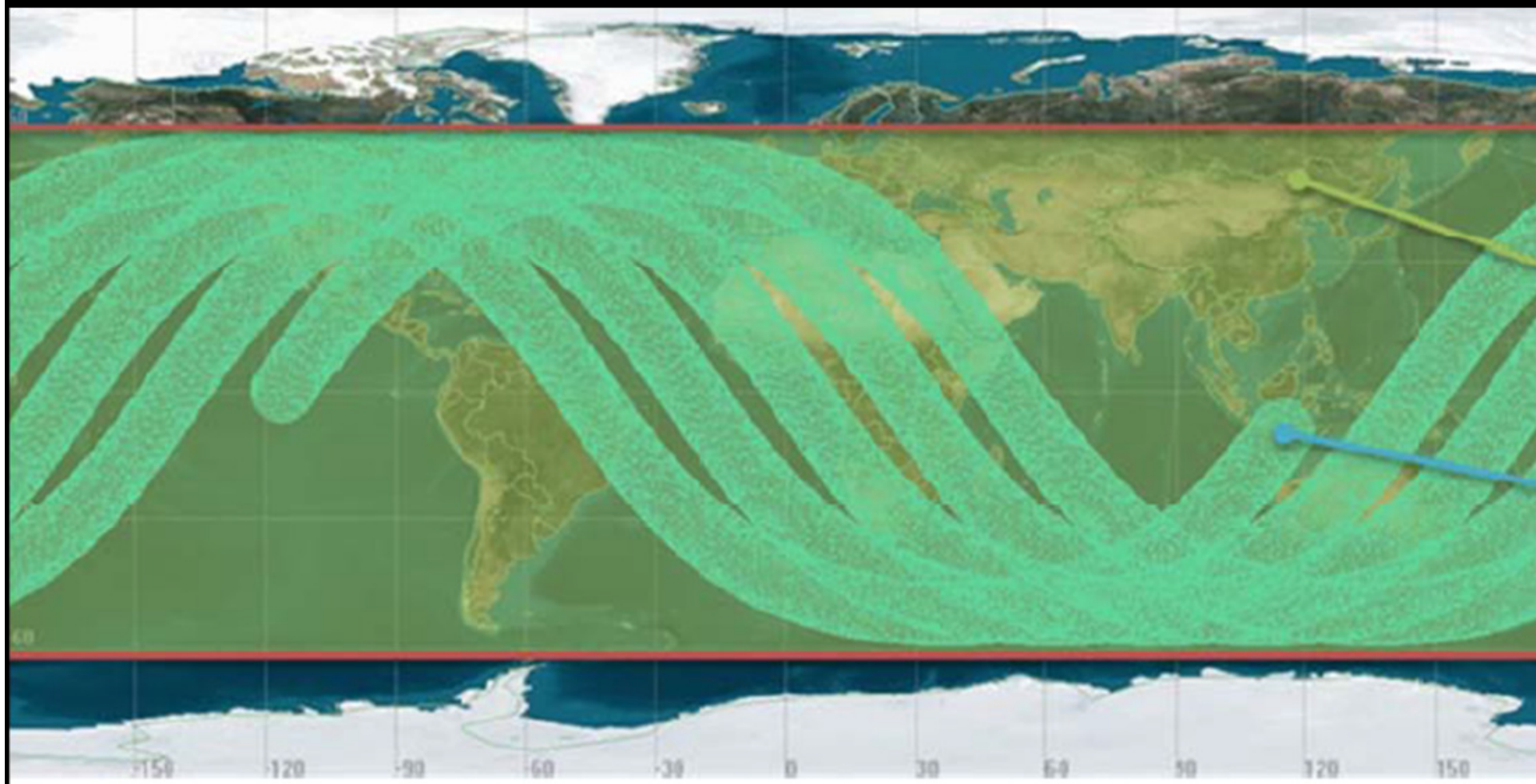


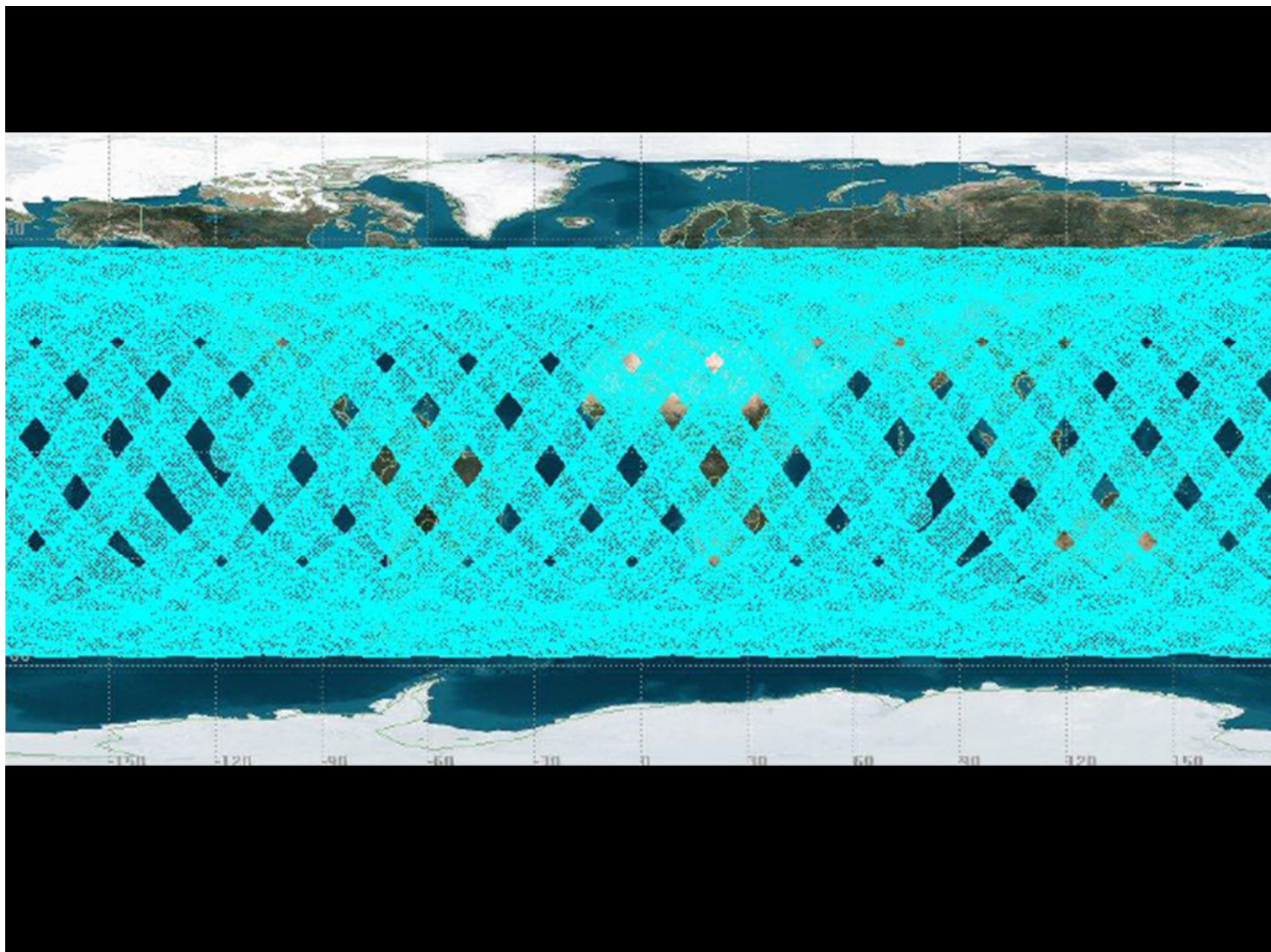
The ICARUS Niche



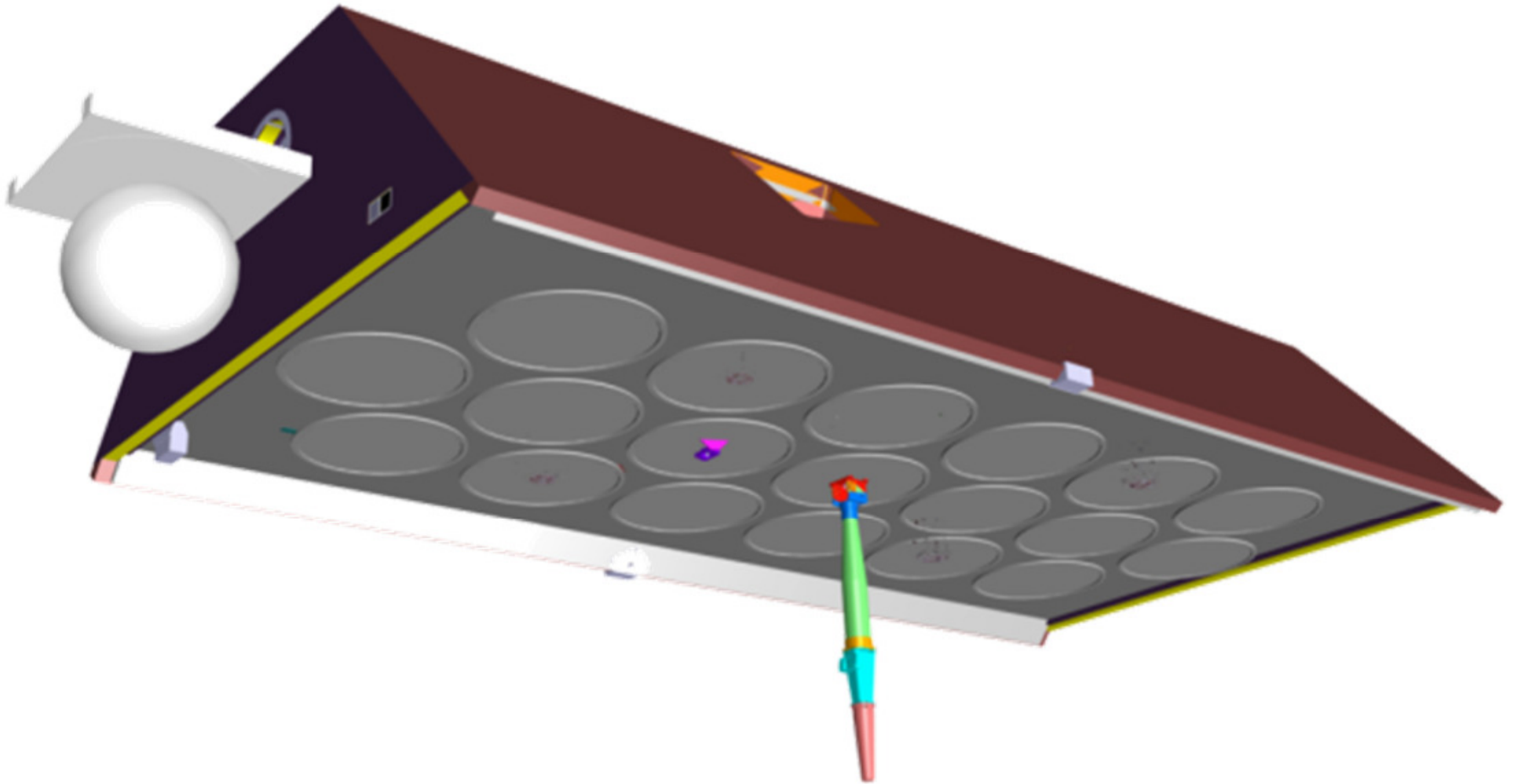








ICARUS payloads



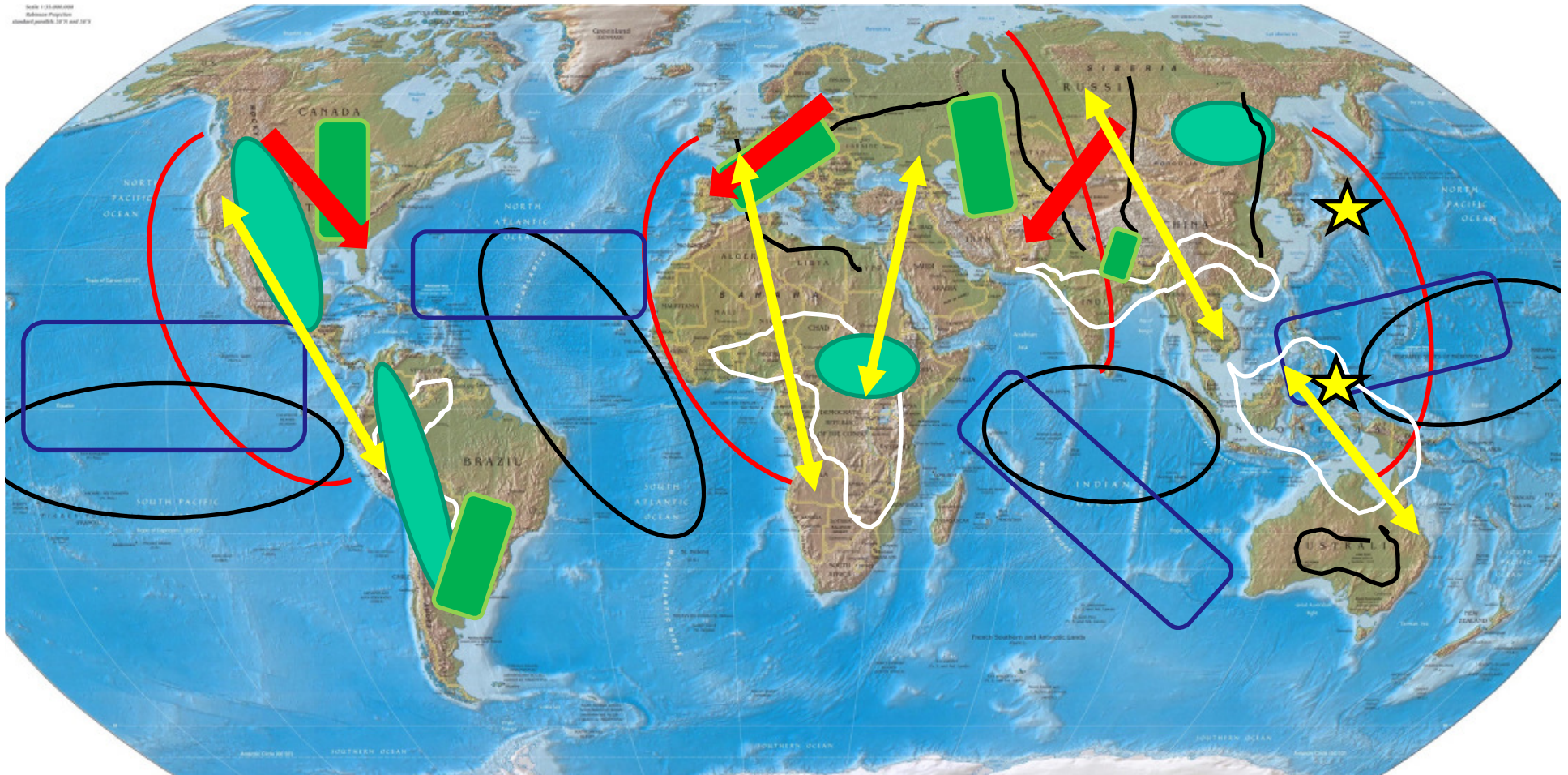
Shorebirds

Seabirds

Seaturtles

Bats

Carnivores



6 Waterbirds **7 Thrushes**

8 Disaster

9 Navigation

10 Cuckoos













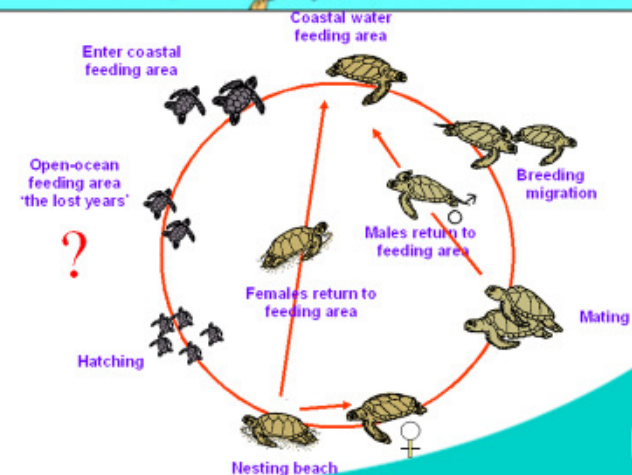
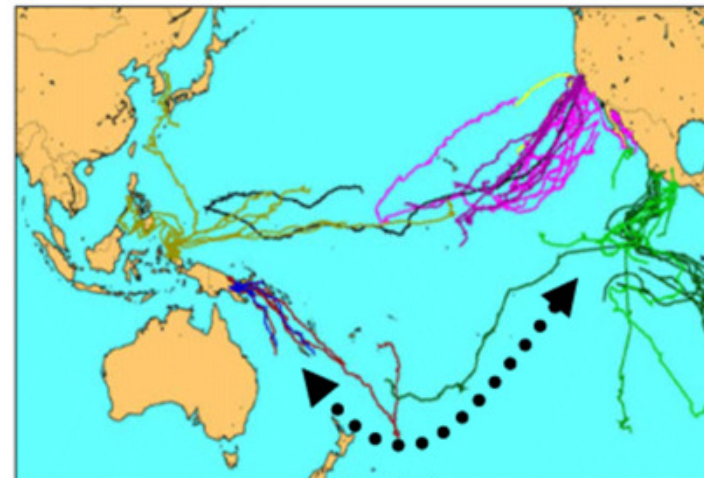






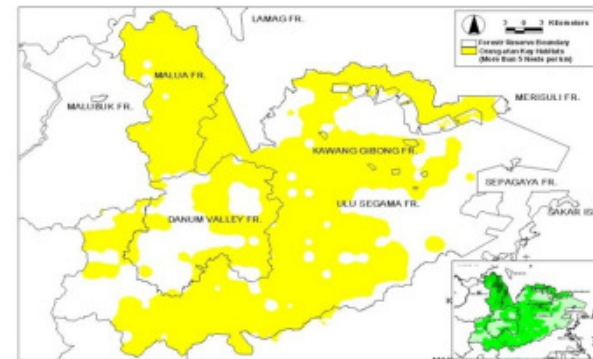
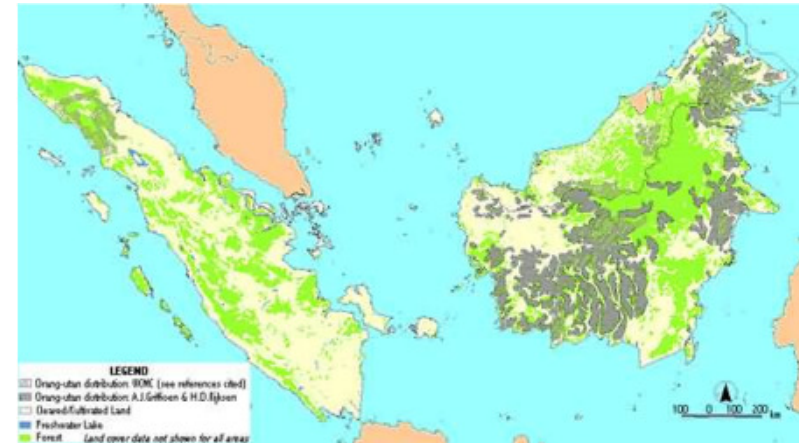
CONSERVATION: Tracking the Lost Years of Sea Turtle Hatchlings

Tracking baby turtles to discover how they survive their first moments in the ocean.



BIODIVERSITY

Restoration of endangered wildlife



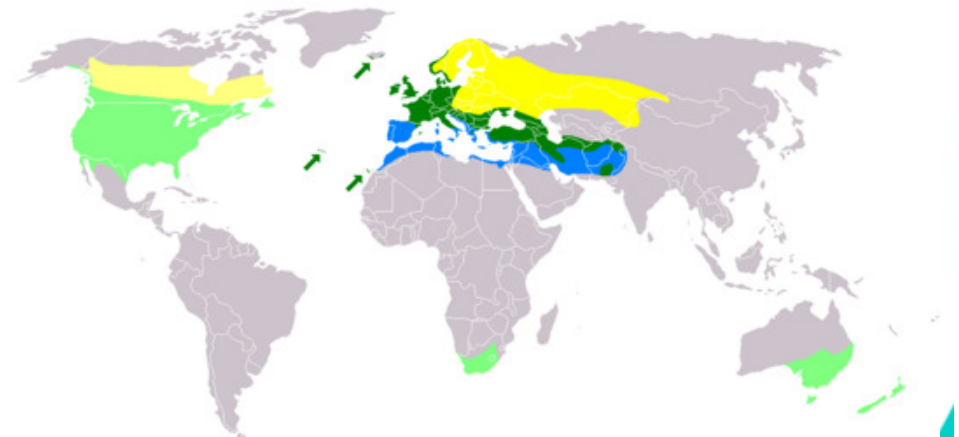
HUMAN-WILDLIFE INTERACTIONS: Pastoralists, cattle & wildlife



INVASIVE SPECIES

European Starlings as example

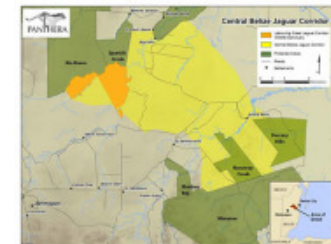
We do not know how invasive species spread and which individuals survive



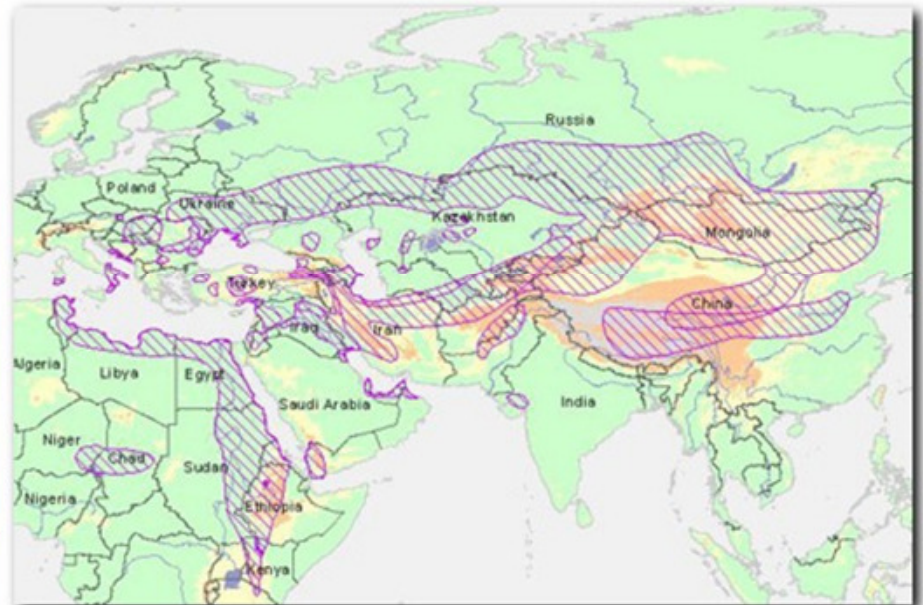


DISPERSAL

Dispersing juveniles connecting fragmented landscapes



Mapping UNKNOWN MIGRATIONS



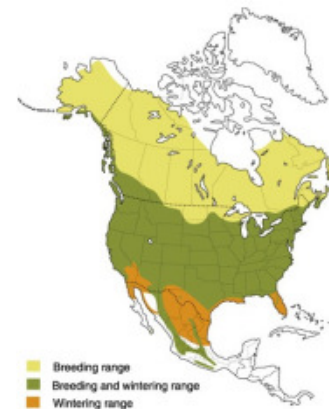


EDUCATION

in a globally changing world

A blackbird for every school

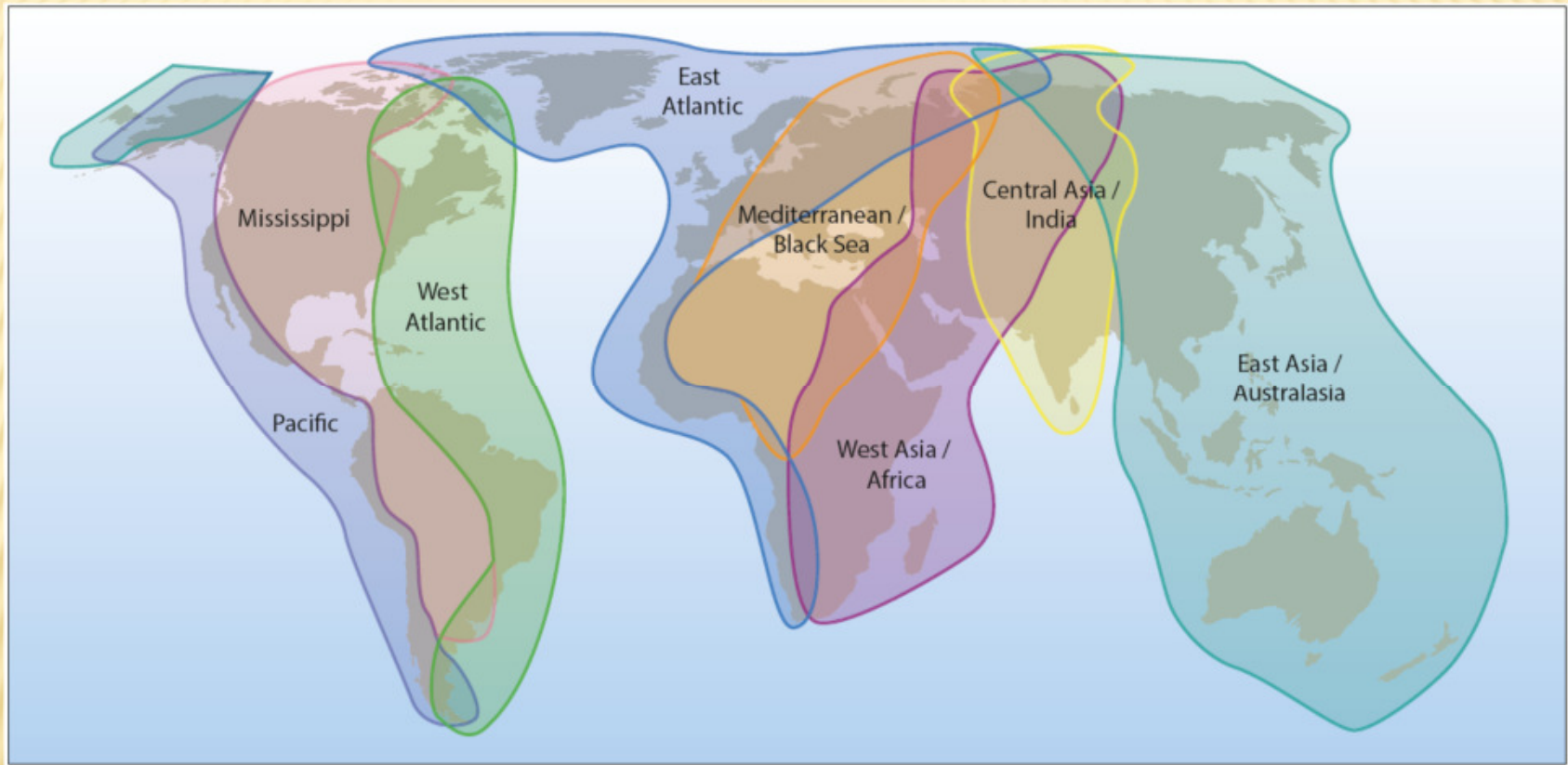
We can track climate change through the movements of thrushes around the world



digitized by GROMS after del Hoyo et al. 1991-2002.
www.fhbw.com
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MAJOR FLYWAYS OF ARCTIC BIRDS

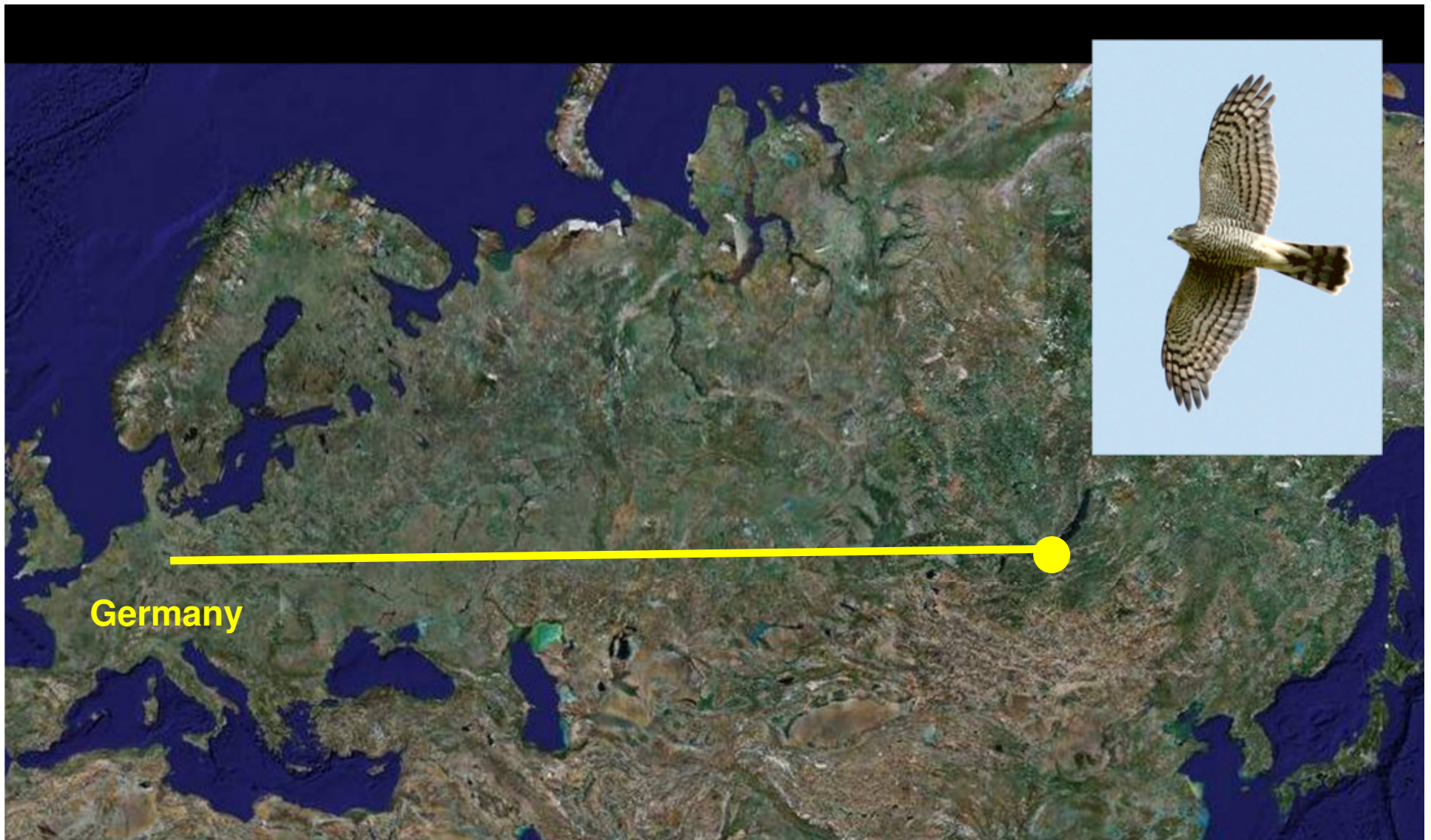


BIRD MIGRATION LINKS ARCTIC BREEDING AREAS TO ALL OTHER PARTS OF THE GLOBE. ADAPTED FROM ACIA 2005.

Top predators of the Commander Islands: foraging areas segregation and predator-prey relations

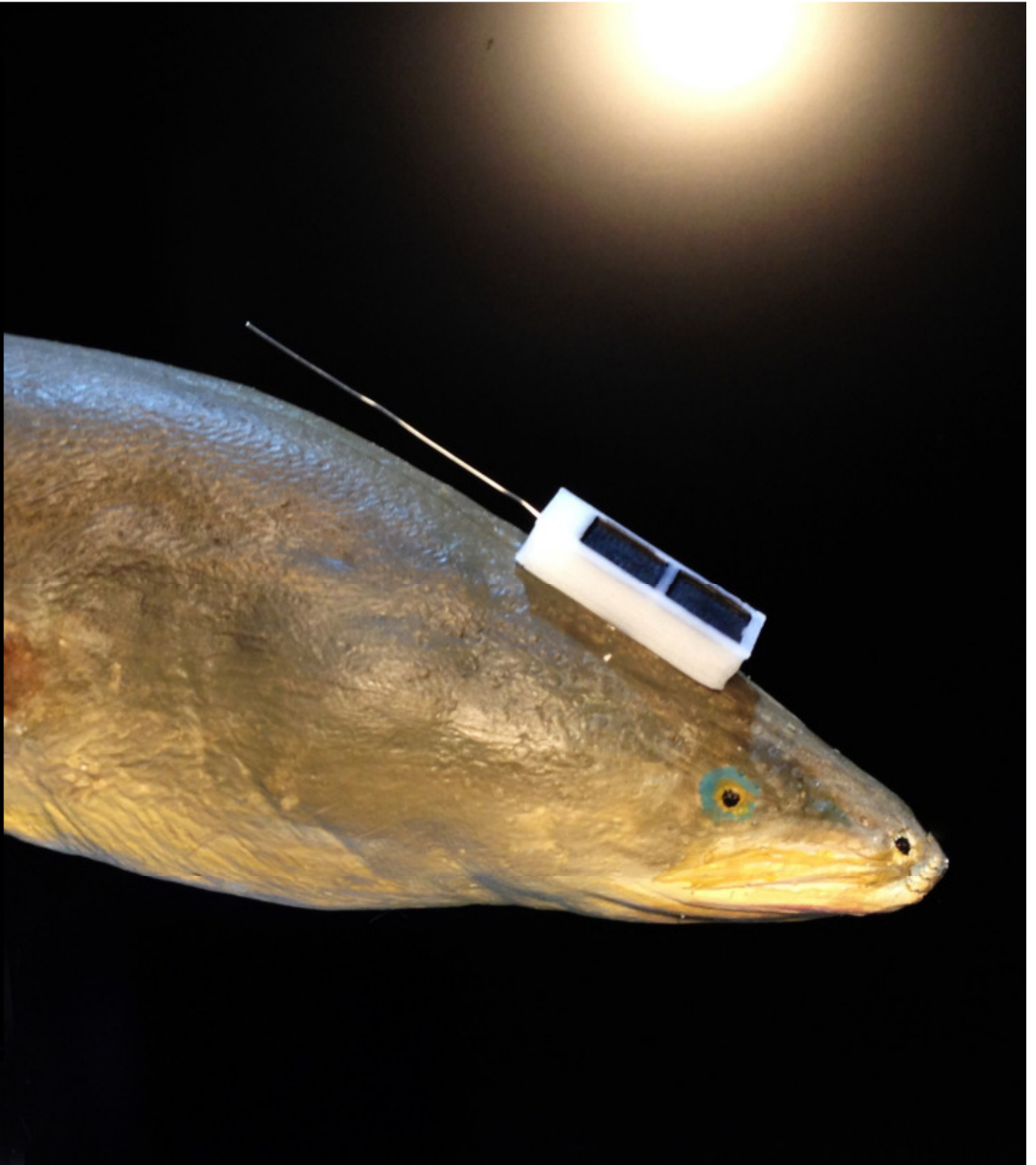
The team:

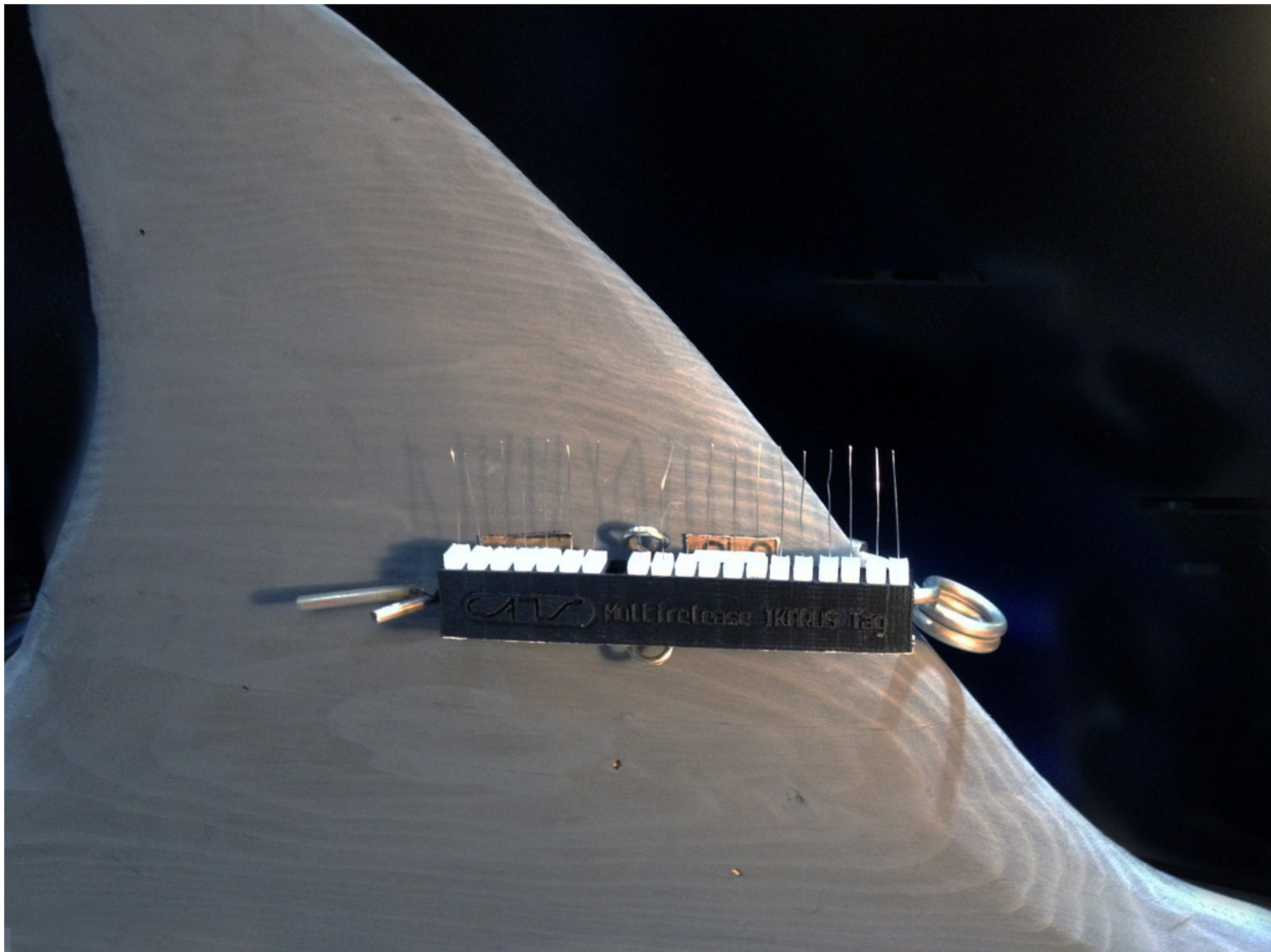
Belonovich Olga, Ph.D., Principal Investigator, Kamchatka Research Institute of Fisheries and Oceanography;
Yakovlev Vladimir, Research Assistant, Commander Islands Nature and Biosphere Reserve;
Fomin Sergey, Ph.D. student, Kamchatka Branch of the Pacific Geographical Institute;
Zakharova Daria, Ph.D. student, Vyatka Agricultural Academy.



Eurasian Sparrowhawk (!)

Ringed (ad/imm) in Baikalsky Nature Reserve, found in Germany in four years (Baskakov, Mikhalkin, 2000); the only ring recovery from several tens sparrowhawks ringed there





ICARUS science



