

SKA Japan Consortium

Keitaro Takahashi
Kumamoto University
2011/11/30 @ Daejeon

SKA-Japan Consortium

founded in 2008, about 100 people

Organizers

H. Nakanishi (Kagoshima)
K. Takahashi (Kumamoto)
O. Kameya (NAOJ)

Science Working Group

K. Takahashi
(Kumamoto)

Industry Forum

T. Kumazawa
(TOYO)

NAOJ contact
Y. Hagiwara (NAOJ)

Cosmic Magnetism

T. Akahori
(KASI)

AGN

N. Kawakatsu
(Tsukuba)

High-z

H. Hirashita
(ASIAA)

Astrometry

H. Imai
(Kagoshima)

Pulsar

O. Kameya
(NAOJ)

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You can find them in the program!

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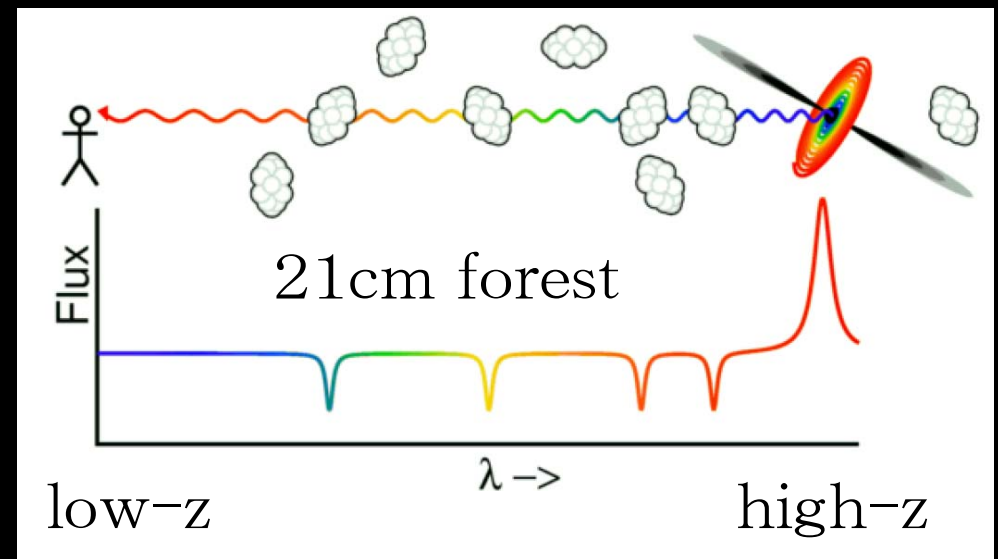
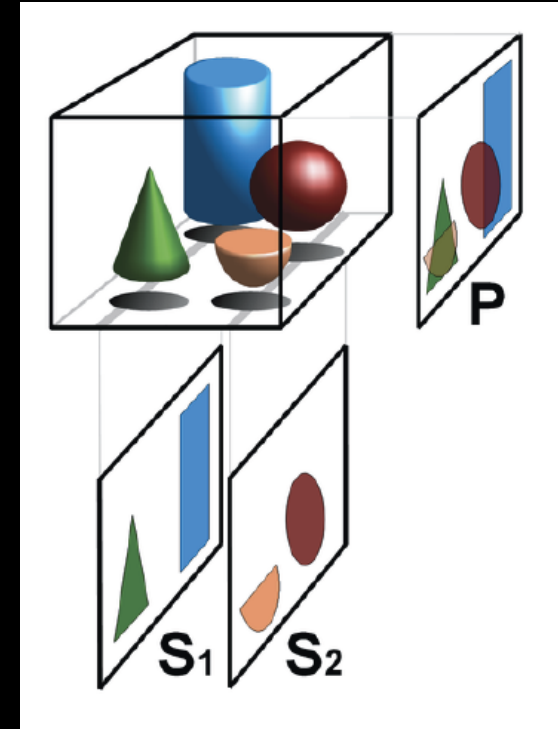
brief history

2008 foundation of consortium
seek for seeds
2009 “ultra-wideband” appeared
as a key word
Some joined ASKAP.
2010 “SKA-JAPAN workshop”
discussed key science and
engineering for SKA-Japan
2011 I joined LOFAR.
1 grant adopted
6 grants applied



activity

- share information by consortium ML
- telecon: monthly
- SWG telecon: monthly
- workshop
- application to grants
- research toward SKA and precursors/pathfinders
 - RM synthesis to probe intergalactic magnetic fields
 - POSSUM
 - 21cm line to probe evolution of galaxies and universe
 - GASKAP
- international collaboration



fund

JSPS grant adopted

“Strategic Young Researcher Overseas Visits Program
for Accelerating Brain Circulation”

representative: T. Handa (Kagoshima)

member: Kagoshima, Kumamoto, Nagoya, NAOJ

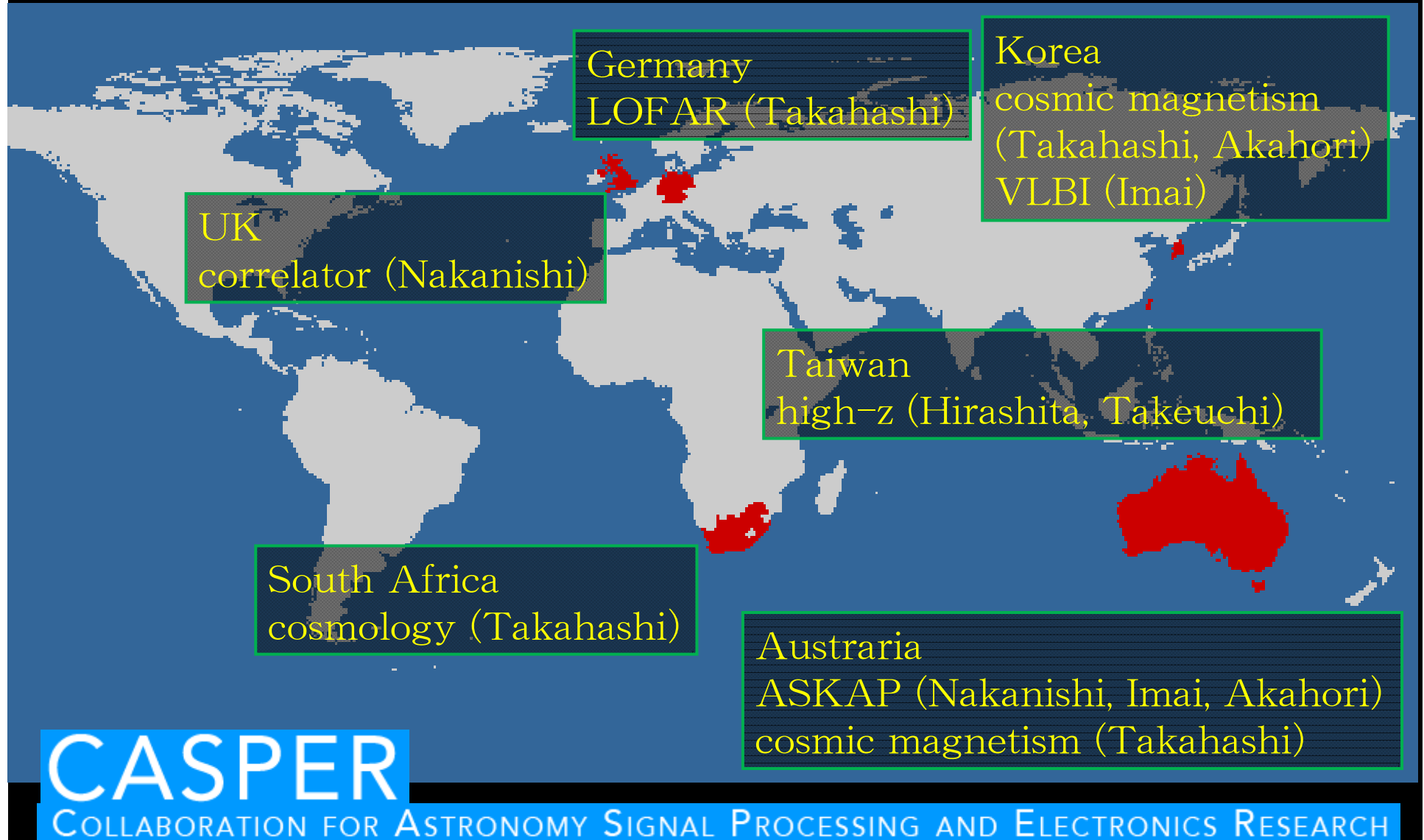
send 3-6 persons * 1 year to foreign institutes

(Oxford, CSIRO, ICRAR, ...)

hire 1-2 posdocs mainly for engineering

develop correlator (ROACH)

international collaboration



international collaboration



UK-Oxford group
development of correlator
FPGA, ROACH, CASPER
(Nakanishi)

CASPER

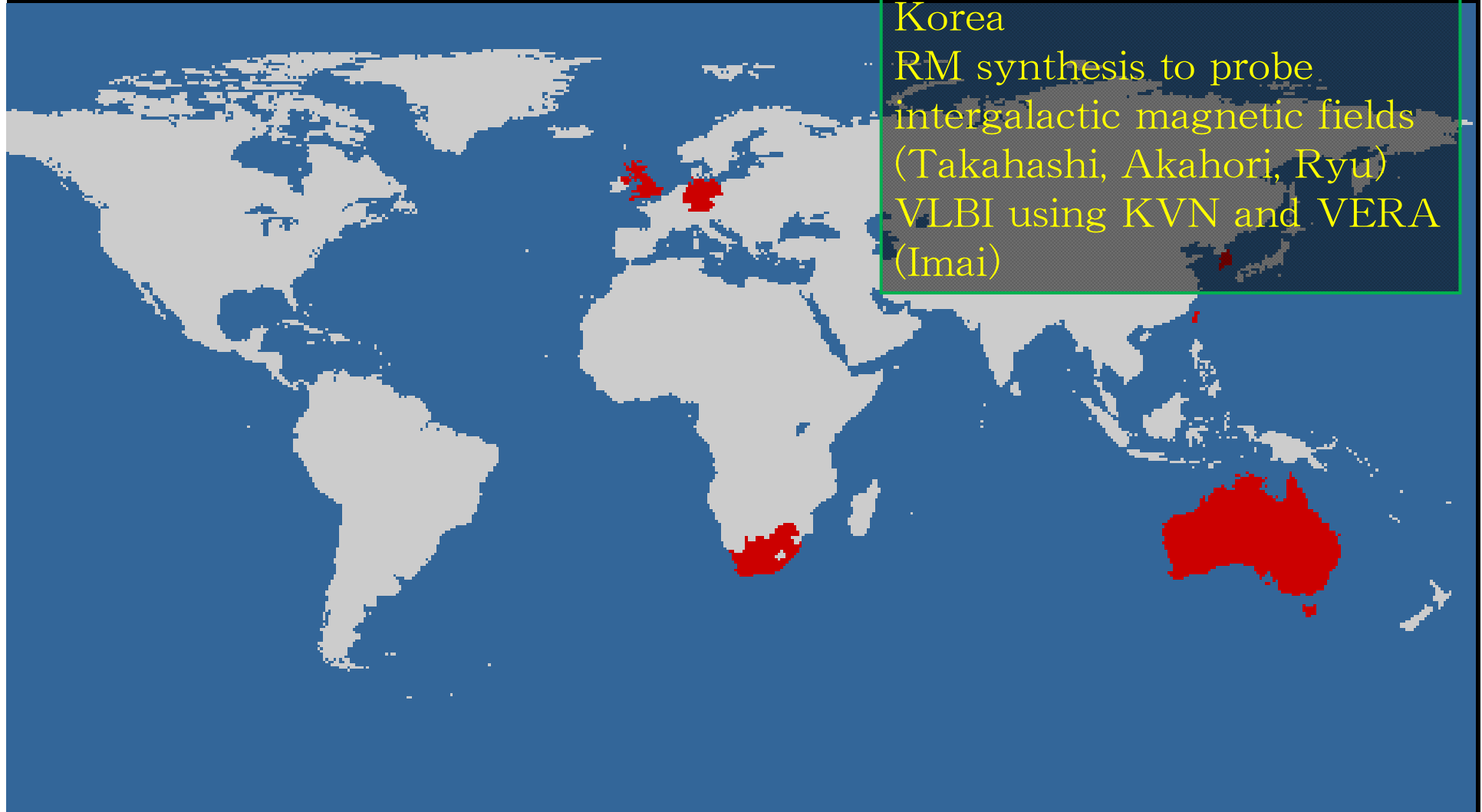
COLLABORATION FOR ASTRONOMY SIGNAL PROCESSING AND ELECTRONICS RESEARCH

international collaboration

Germany
LOFAR
Magnetic field Key Science Project
associated member
(Takahashi)



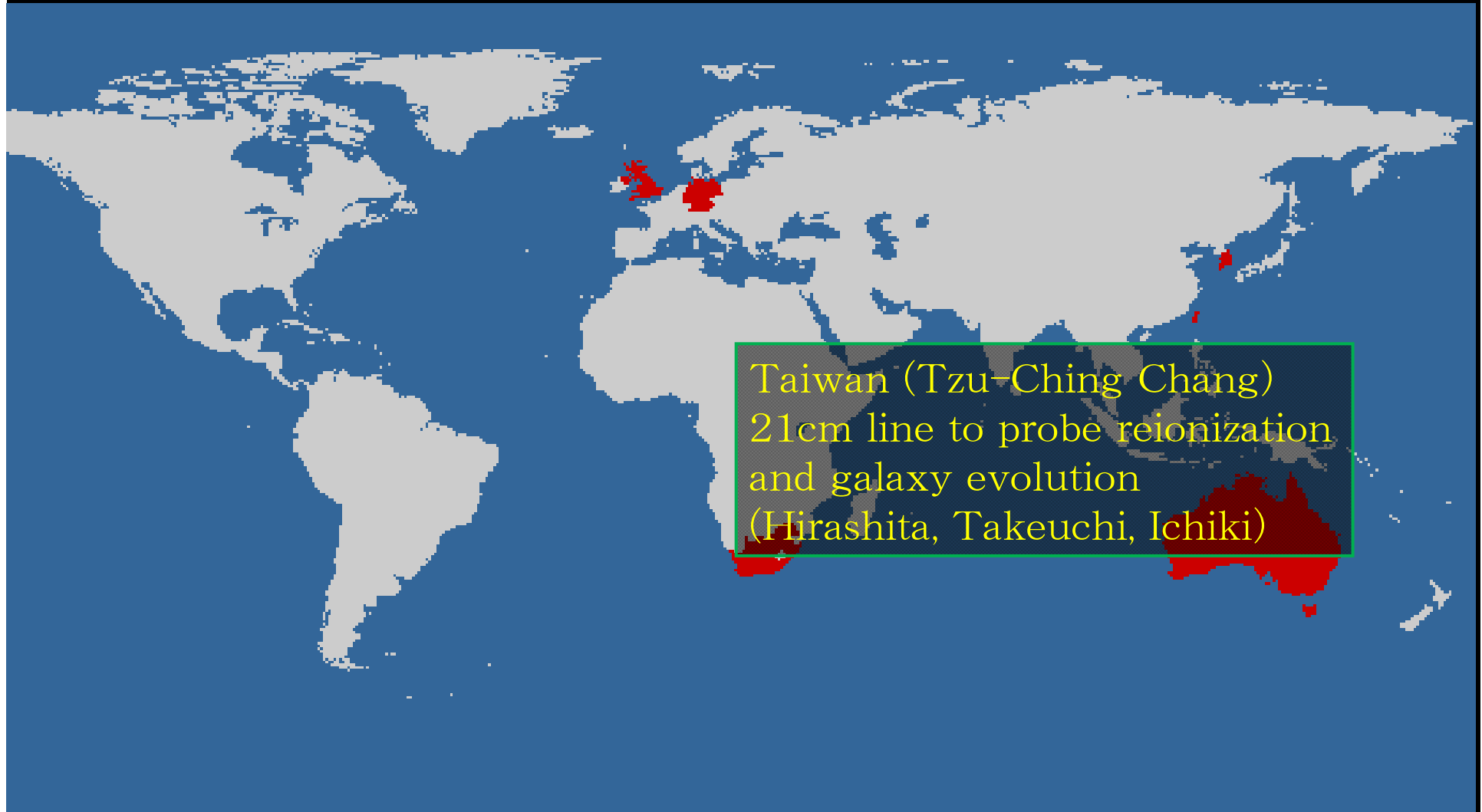
international collaboration



Korea

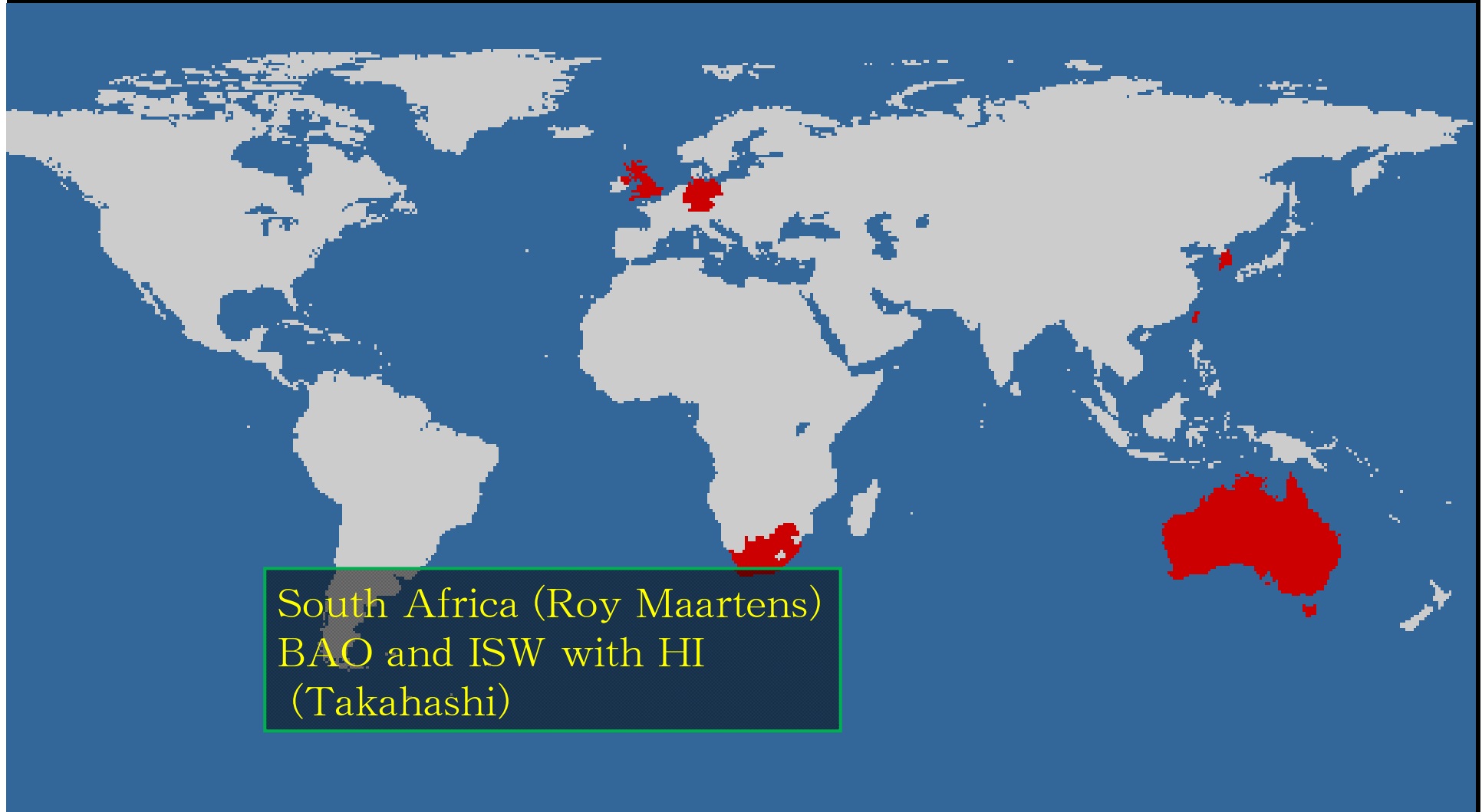
RM synthesis to probe
intergalactic magnetic fields
(Takahashi, Akahori, Ryu)
VLBI using KVN and VERA
(Imai)

international collaboration



Taiwan (Tzu-Ching Chang)
21cm line to probe reionization
and galaxy evolution
(Hirashita, Takeuchi, Ichiki)

international collaboration



South Africa (Roy Maartens)
BAO and ISW with HI
(Takahashi)

international collaboration



Austraria
ASKAP (Nakanishi, Imai, Akahori)
RM synthesis (Takahashi)

international collaboration



CASPER

COLLABORATION FOR ASTRONOMY SIGNAL PROCESSING AND ELECTRONICS RESEARCH

summary

- Many research projects for SKA are now in progress.
- With a grant solely for SKA, we are now redefining SKA–Japan consortium to make it more robust and effective.
- We have already begun international collaboration and are ready for more and more.