Summary

Star Formation

- Massive Star Formation Triggered by Collisions of Molecular Clouds (Torii)
  - Spitzer bubble can be reproduced by collision of molecular cloud
  - Most of the high-mass star formation in Milky-way takes place in bubble structure?
  - Need detailed study with FoV of several arcmin
  - Paa may be a good tracer
- Research of Massive Star Clusters by NIR Narrow-band Imaging Observations (Takahashi)
  - WR Survey
  - Narrow-bands/Medium-bands imaging + spectroscopy

SWIMS-18

- Overview of the SWIMS-18 Survey (Kodama)
  - Medium- and Narrow-band Imaging for 1sq. Degree
  - 500 nights (imaging) + spectroscopy follow-ups
- Theory of Galaxy Formation and SWIMS (Nagamine)
  - Tuning with observation is important
  - Need tight collaboration with observational astronomers
- SWIMS-18 Narrow-Band Survey Near and Far (Koyama)
  - near : Paa imaging of nearby U/LIRGs
  - far : Difficult to go beyond HiZELS, MAHALO
    => MBF imaging for 10sq. degree (5hr x 360 pointings)
    >200 nights
- ZFOURGE (Spitler)
  - z>3 galaxies (dusty starburst, quiescent galaxies) may be a important targets for SWIMS18

SWIMS-18 (cont'd)

- Protocluster search conducted by narrow/medium-band imaging (Toshikawa)
  - Smaller scale protoclusters can be probed by NB imaging
- Comparison of global physical properties between H-alpha and [OIII] emitters at z=2.23 (Suzuki)
  - [OIII] emitter can be a good probe for SF galaxies at z>3
  - However, it may be difficult to draw physical information from [OIII] luminosity alone
- ALMA observations for H-alpha emitters at z~2 (Tadaki)
  - HAE in SWIMS-18
  - Rest-optical size, compare with ALMA or other data

High-z Galaxies

- Quick Suvery of Protoclusers around AGNs (Tanaka)
  - Probe environment of z>2.6 Powerful RGs using [OIII] emitters
- Rest-frame optical emission lines properties of high-z galaxies in different environments (Silverman)
  - Spectroscopic survey, probing both starbursts and AGNs may be interesting
  - COSMOS may be a good target field, esp. high density region
  - combination with PFS and SWIMS spectroscopy may good for SMBH evolution study
- Nature of Galaxies with Diffferent HI Environment explored by `expensive' spectroscopic survey with SWIMS (Shimakawa)
  - Narrow-band HI absorption survey at z~2
  - Identify redshifts for galaxies
  - ~120 nights

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High-z Galaxies

- IFU spectroscopy of high-z radio galaxies with SWIMS (Hayashi)
  - Probe AGN feedback in powerful radio galaxies at z=1.5-2.5
- Search for distant (z>6) quasars with SWIMS+HSC (Matsuoka)
  - NIR imaging survey of z>7.2 quasars
  - 120nights

Planets and Stars

- Observation of Exoplanet-Atmosphere by SWIMS (Fukui)
  - Follow-up observations of superearth discovered by TESS
- Material Science of the Solar System Probed by NIR Observations (Yoshida)
  - Study of water content in main belt asteroid
  - Low-resolution spectroscopy
  - MIMIZUKU may be also important
- Probe the Stellar Population of Milky Way and Nearby Galaxies using Photometry and Spectrosocpy of Variable Stars (Matsunaga)
  - Probe extragalactic Mira variables, upto 4Mpc
  - ~42 nights in 3yrs
- Our NIR IFU/MOS observations of SNRs and future application to SWIMS (Lee)
  - IFU followup of extragactic SNR
  - R~1000 okay, >2000 prefered

Synergies with other Projects

- GW EM-followup (Tanaka)
  - NS-NS collision : Kilonova => Has NIR excess?
  - ToO Observations at >1um
  - NIR can be detected for ~1week (24AB)
  - Galaxy Targeted Search
- COMIG-PLUS (Kaneko)
  - COMING Started this april
  - Follow-up by Pa-α/β for SFR tracer
  - 14nights
- ALMA-TAO Synergy (Kohno)
  - ALMA follow-up of objects in SWIMS surveys
  - SWIMS-18 to cover ALMA Deep survey fields?

SWIMS at Subaru

- Acceptance is not approved yet...
- There will be a call for proposal as a PI instrument
  - Need at least one SWIMS team member included as CO-I
  - Hopefully from S17B

SWIMS at TAO

- 50% project time
  - Need to share with MIMIZUKU
- Selection/operation procedure is not clear yet.
  - Especially large projects
- Please give us your request how you like to use the telescope
  - Quick request slots?
  - Student time?


TAO
THE UNIVERSITY OF TOKYO

Next workshop at 2016?

Workshop Proceeding Web

- Please send us updated presentation file, from which confidential information is removed
- Deadline ; end of this month
- Will be open to public after that.

SWIMS Lab tour

- After the workshop
- ~10min