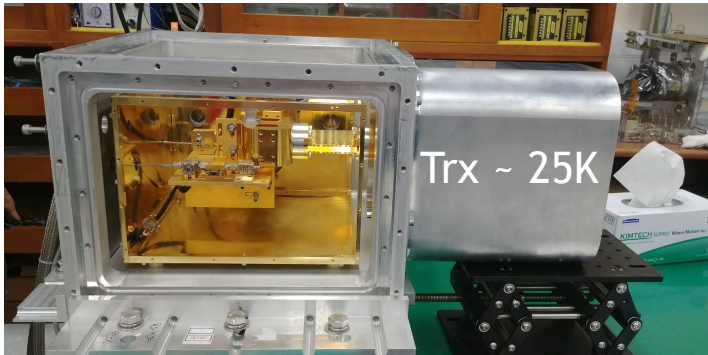
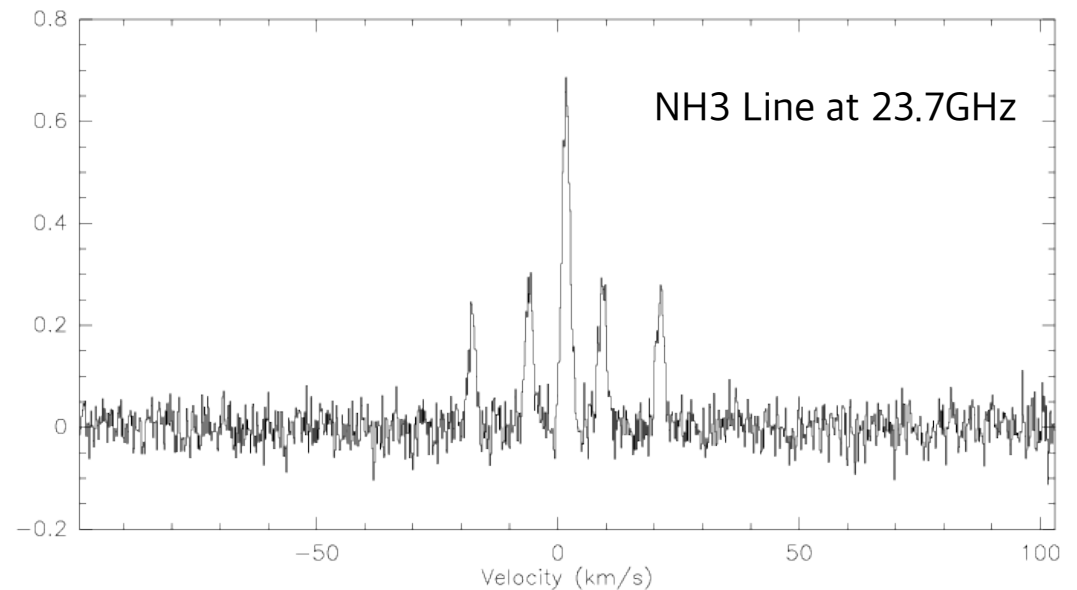


# KVN System Updates

- Receiver Upgrade to support wide frequency range
  - K-band: 21.25 - 23.25 GHz → 18 - 26 GHz (all KVN)
    - compact feed horn, Wideband compact polarizer, New LNA, Trx~25K
  - W-band: 85 - 95 GHz → 85 - 116 GHz (KUS) (KYS/KTN 2019B~)
  - Q-band: 42.1- 44.1 GHz → 35 - 50 GHz (2019B~)



First Light with upgraded 22GHz Rx



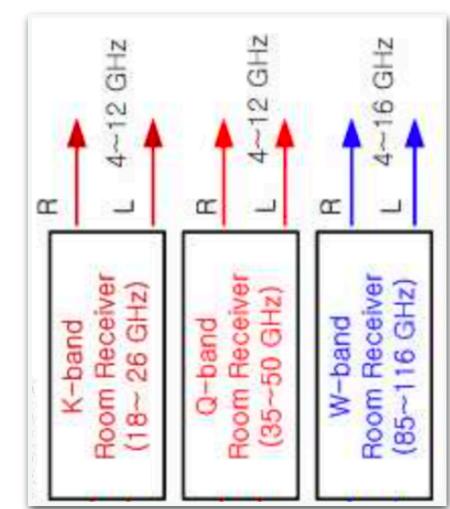
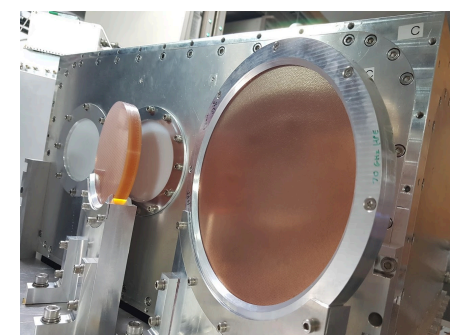
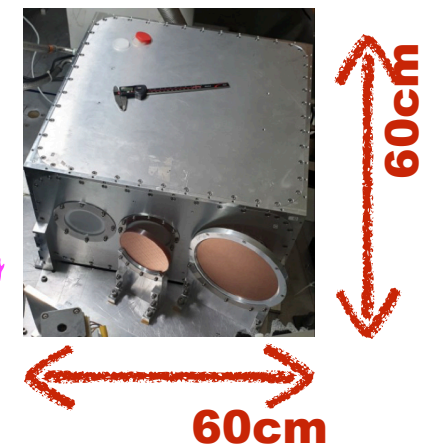
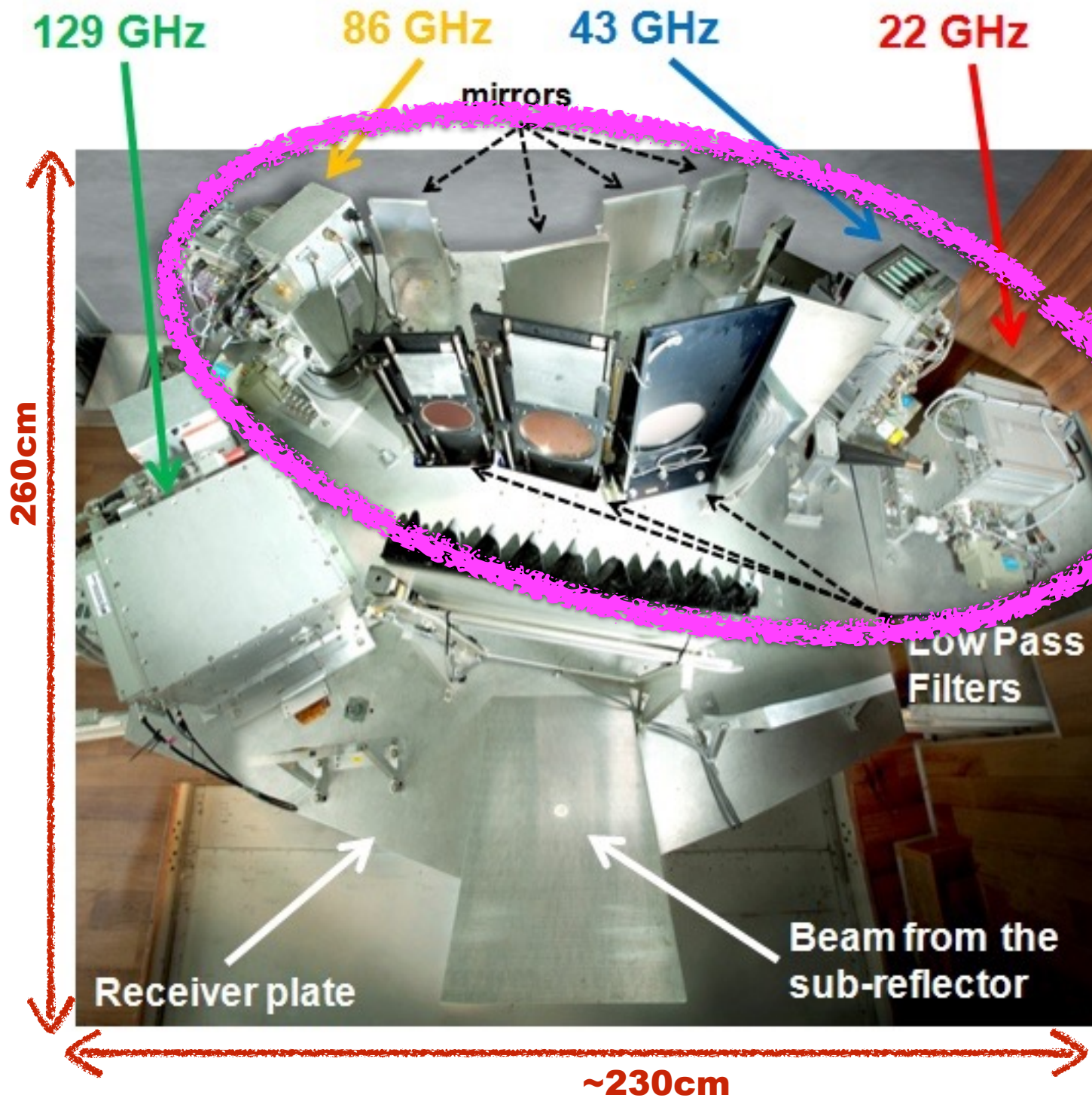
KUS 2018.7



KTN 2018.7

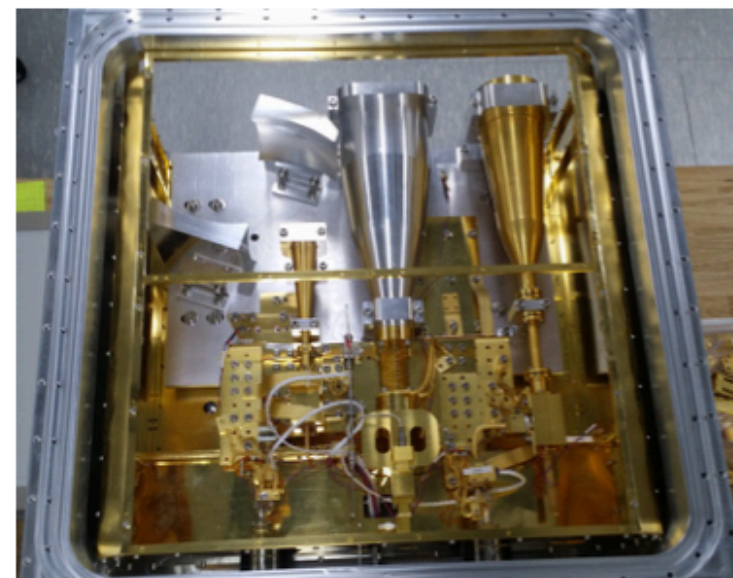
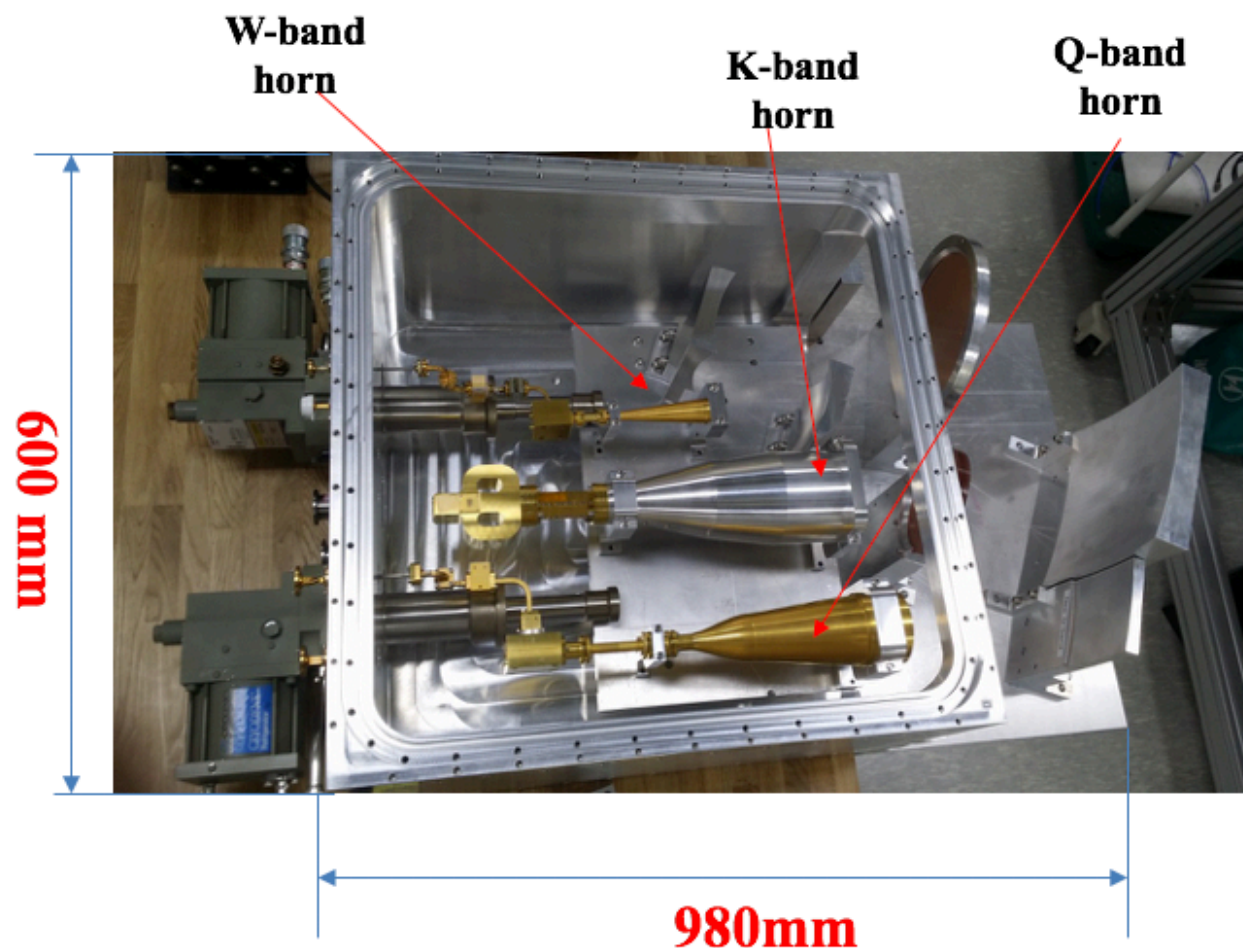
# Compact Triple-band Receiver (CTR)

Installed on Sep. 2~3 at KYS



RF: 18-116GHz

# Compact triple band receiver



Interior of dewar

## Observing bandwidths

K-band : 18~26GHz

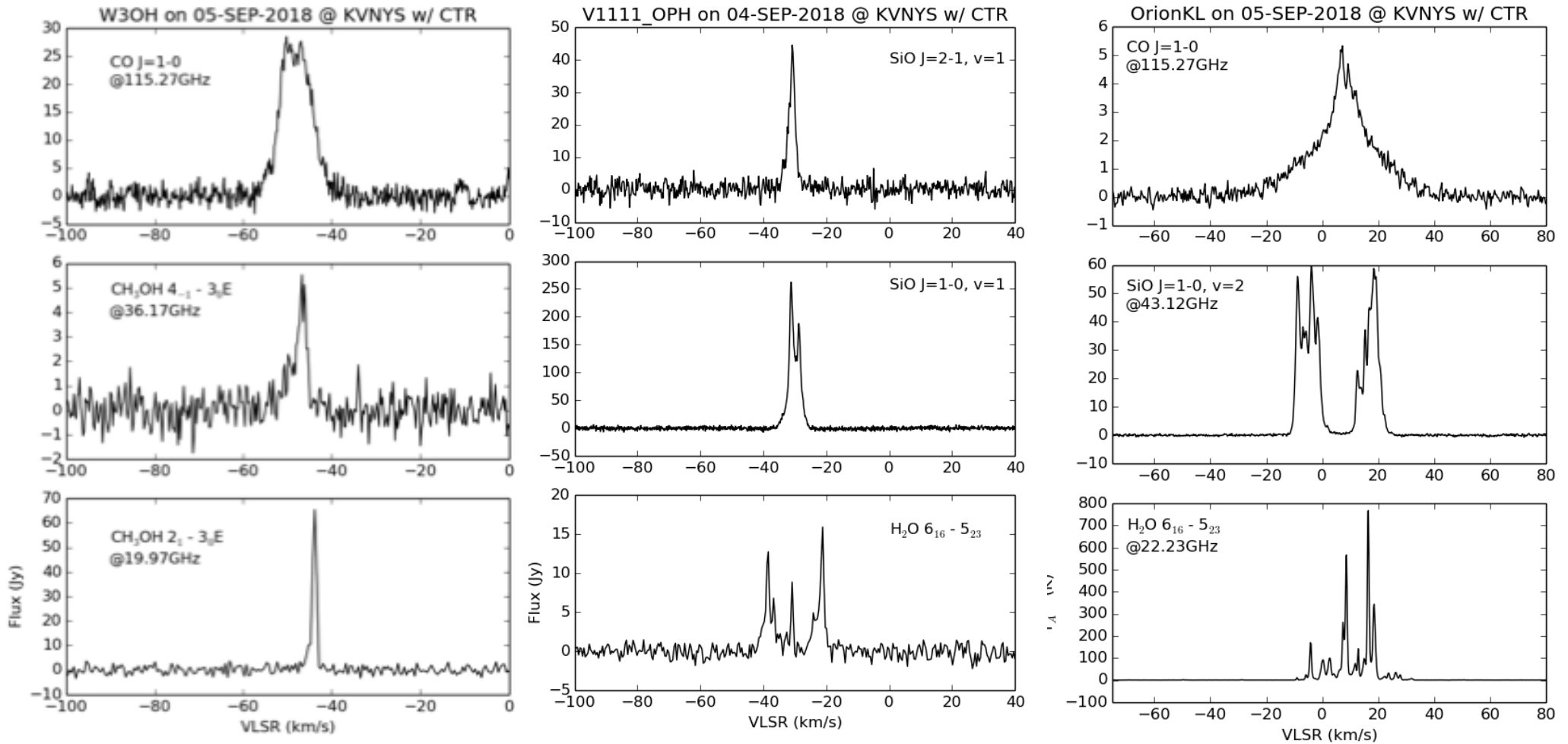
Q-band : 35~50GHz

W-band : 85~116GHz

## IF bandwidths LHCP & RHCP

8~16GHz

# First Light of Compact Triple-band Receiver (CTR) (2018 Sep 5 @ KVNYS, Last Night !!)



Aperture

22GHz ~ 70%  
43GHz ~ 70%  
86GHz ~ 60%

Pointing Offset

3 arc seconds