Present status of Ibaraki station: Hitachi and Takahagi 32-m antennas

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Sampler ADS-3000+ replaced ADS-1000.

By using ADS-3000+ and OCTADISK, 2 IFs (512 MHz BW x 2 bits) can be recorded simultaneously.

Following observation modes became available:

(a) Same frequency and same polarization observation by both telescopes
=> phase-up, 2 element interferometer for continuum observations

(b) Same frequency but different polarization observation by one telescope
=> polarization measurement

(c) Different frequency observation by two telescopes
=> SED measurement
=> simultaneous observations of methanol and water masers
[but usually ADS-3000+ doesn't used for maser obs.]

Conversion software (from OCTADISK format to VDIF) has been installed.

Time series data can be obtained.
=> We started observations of pulsars and FRB.

Software correlator (gico3) has been installed.

=>We started high-sensitivity continuum observations
by using two antennas as interferometer.
Fringe detection sensitivity ～ 1 mJy (3-sigma)
for 8 GHz obs., 512 MHz BW, 10 min. integ

Down converters have been altered to output 6 GHz and 8 GHz IFs simultaneously.

=> We started monitoring observations of polarization of 6.7 GHz methanol masers.

OCTADISK2 will be installed soon.

By using OCTAD + OCTADISK2, 4 IFs (512 MHz BW x 2 bit) can be recorded simultaneously.
=> monitoring observations of continuum of both polarization can be done.

operation time for two antennas (from 2017 April to 2018 March)

Single-dish monitoring observations of 6.7 GHz methanol masers (including polarization measurement)
～4,000 hours

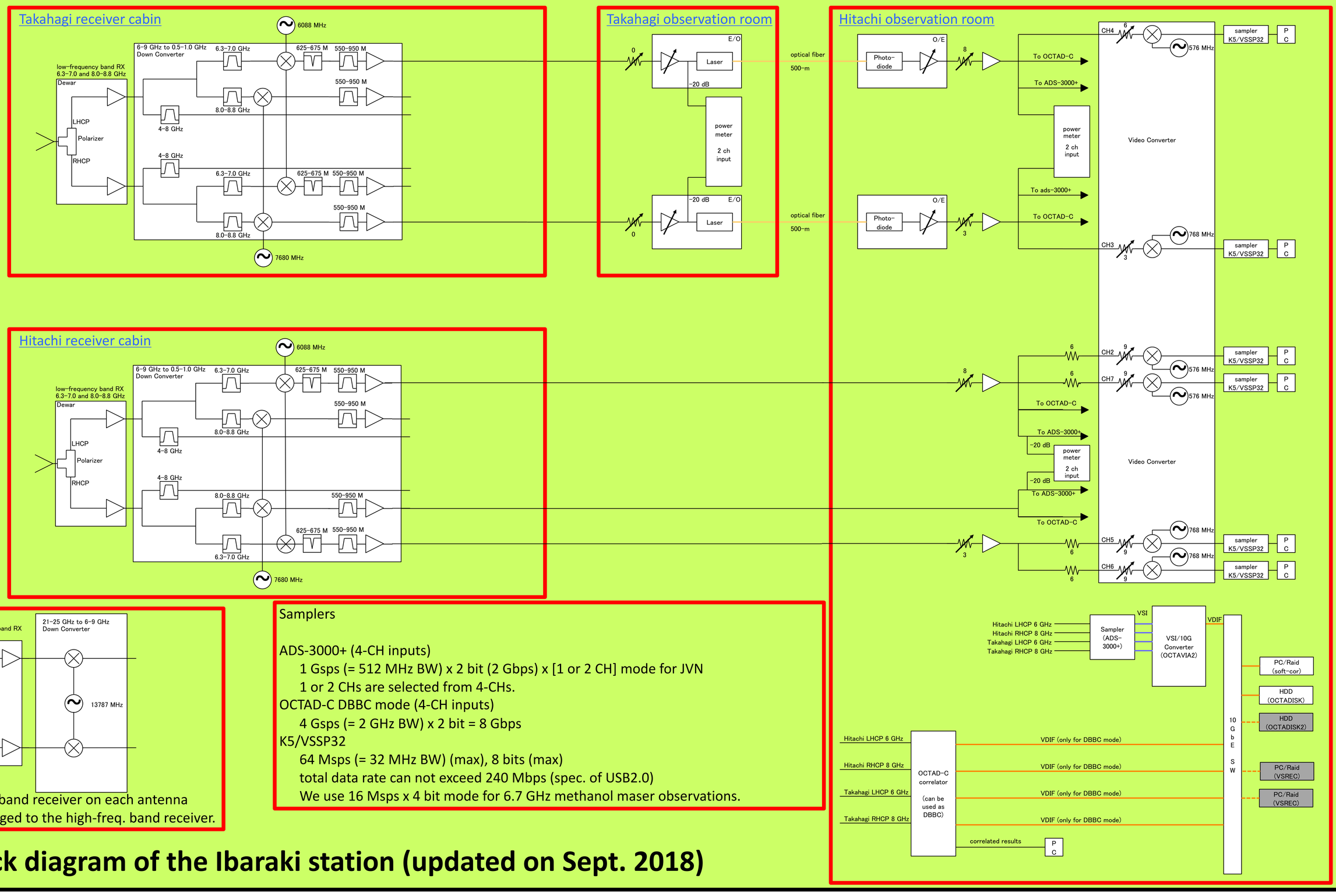
VLBI (imaging mode) including EAVN
108 hours

VLBI (for the fringe detection)
28 hours

Hitachi-Takahagi interferometer for the high-sensitivity continuum observations
307 hours

Time series (Crab pulsar, FRB)
101 hours

student experiment
～ 2,000 hours



The block diagram of the Ibaraki station (updated on Sept. 2018)