

## Radio Telescope Observation for Multi-GNSS Satellites Using Android Smartphones

\*Fujinobu Takahashi<sup>1</sup>, Natsuki Kinugasa<sup>2</sup>

1. Medical ICT Center, Yokohama National University, 2. Yokohama National University

Nearly 30 global navigation satellites (GNSS) are orbiting over East Asia since 2014. They were launched by US(GPS), Russia(Glonass), China(Beidou) and Japan(QZSS). Android smartphones can use the applications to receive them and show the skyplots of their orbits. Though the number of the smartphone-navigation-applications users increase remarkably, most users are mainly interested in the network connections but they have very low interest in orbiting satellites over them. Using the android smartphones themselves we can get the measured GNSS data and use the real-time applications to draw the observed data without the expensive separate instruments. We introduce how to use the smartphone as the radio telescope to observe the orbital motions or the signal levels of the celestial radio sources GNSS. We are very sorry but we could not find the GNSS measuring applications for iPhones.

Keywords: GNSS, Radio telescope, smartphone

