

Development of GNSS Radio Telescope with Rawdata Output using Smartphones

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The android smartphones are useful for high-school students to observe multi-GNSS satellites such as GPS and learn the space technologies actively. It is important to foster young people in the field of space technologies. We can observe GPS, Glonass, BDS and QZSS more than thirty GNSS satellites over the sky of eastern Asia. On JpGU 2016 we showed that smartphones of high-school students can receive the GNSS satellites and display the skyplots or levelplots on the screen of their smartphones very easily, just as radio telescopes. On JpGU 2017 we will show the big step of GNSS raw data output from the Android7 smartphones. They can offer the pseudo-ranges, the carrier phases and even the doppler data of GNSS satellites precisely. We will show that the students can learn the higher experiments and data reductions regarding satellite-orbits determination, navigation and positioning using the raw data from their radio telescopes now.

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