

V135a The Next Generation Very Large Array - Spring 2023

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We present an overview, status, and the future plan of the Next Generation Very Large Array (ngVLA), including the recent scientific and technical activities of the ngVLA study group, which is coordinated by NAOJ in close collaboration with members of the Japanese science community. A two-year extension, between fiscal years of 2022-2023, of the study group has been approved, and the group is planning to organize meetings and workshops for further promotion of ngVLA science in Japan. There are five science working groups (SWGs), but we will plan to focus more on examining the topics that span multiple SWGs in the coming years. Also, these activities will be proceeded in close coordination with the Science Working Group organized by the NRAO. Technical studies in the area of the antenna, front end, and time/frequency distribution have also seen some significant progress. Armed with the solid outcome for ngVLA in the Astro2020 decadal survey, the study group is actively investigating the possible future contributions toward offering a significant fraction of ngVLA observing time to the Japanese community. The ngVLA will be operated at frequencies from 1.2 to 116 GHz and consist of three arrays —the Main Array with 214 18-m antennas (baselines up to 1000 km), the Short Baseline Array with 19 antennas of 6-meter diameter and four single-dish antennas of 18-meter diameter, and the Long Baseline Array which will consist of 30 18-meter antennas with the longest baseline of 8860 km.