

Performance of pre-production band 1 receiver for the Atacama Large Millimeter/submillimeter Array (ALMA)

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© 2018 SPIE. The Atacama Large Millimeter/submillimeter Array (ALMA) Band 1 receiver covers the frequency range of 35-50 GHz. An extension of up to 52 GHz is on a best-effort basis. A total of 73 units have to be built in two phases: 8 preproduction and then 65 production units. This paper reports on the assembly, testing, and performance of the preproduction Band 1 receiver. The infrastructure, integration, and evaluation of the fully-assembled Band 1 receiver system will be covered. Finally, a discussion of the technical and managerial challenges encountered for this large number of receivers will be presented.