

Multi-epoch VLBI of a double maser super-burst

Ross Burns, Olga Bayandina, Mateusz Olech, Gabor Orosz, Huib van Langevelde, Katherina Immer, Willem Baan, Tomoya Hirota, Jungha Kim, Koichiro Sugiyama, Gabriele Surcis, Irina Val'ts, Nadya Shakhvorostova, Georgij Rudnitskij, Alexandr Volvach, Gordon MacLeod, James Chibueze, Pawel Wolak, Anna Bartkiewicz, Busaba Kramer, Alex Kraus, Karl Menten, Kazuhito Motogi, Kee-Tae Kim, Crystal Brogan, Todd Hunter, Stan Kurtz

In a rare and spectacular display, two well-known massive star forming regions W49N and G25.65, recently underwent maser 'super-burst' - their fluxes suddenly increasing above 30,000 and 18,000 Jy, respectively, several orders of magnitude above their usual values.

In quick-response, ToO observations with the EVN, VLBA and KaVA were obtained, during a 4 week campaign - producing high-cadence multi-epoch VLBI investigation of the maser emission. The combination of high-resolution, polarisation and flux monitoring during the burst provides one of the best accounts, to date, of the super burst phenomenon and its relevance to the investigation of massive star formation.