NEW LARGE INTERSTELLAR MOLECULES DETECTED WITH THE GBT

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At present, more than 135 different molecules have been identified in interstellar clouds. The newest instrument in the interstellar molecule search arsenal is the recently commissioned Green Bank Telescope (GBT). In 2004, the large aldehydes propenal (CH_2CHCHO) and propanal (CH_3CH_2CHO) were the first new interstellar molecules discovered with the GBT. At the same time, the GBT was used to observe interstellar glycolaldehyde (CH_2OHCHO), which is the simplest possible aldehyde sugar, interstellar ethylene glycol ($HOCH_2CH_2OH$), which is the sugar alcohol of glycolaldehyde. These new GBT observations suggest that successive hydrogen addition reactions are common in the formation of larger related species. The observations will be presented and discussed.