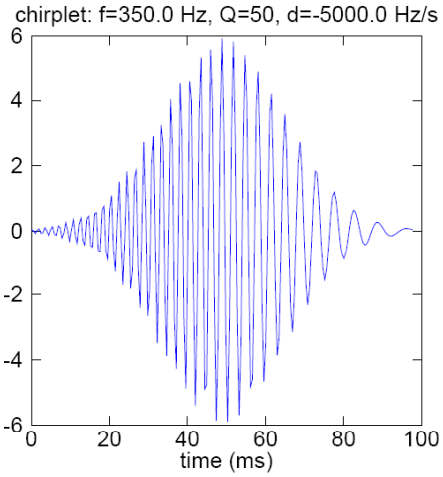
Detection of GW chirplet-like template families

Éric Chassande-Mottin[(1)] and Miriam Miele[(2)]

[(1)]CNRS and Université Paris Denis Diderot, AstroParticule et Cosmologie Laboratoire

[(2)]ERASMUS fellow from Università del Sannio

Omega pipeline, based on sine-gaussian templates, lead to losses in performance in the detection of intermediate GW target signals ("chirping burst")



Extension of Omega pipeline → **CHIRPLETIZED OMEGA**

- Building of template bank with chirplet
  - Definition of metric in the chirplet space
  - Number of templates estimation
- Chirplet transform
  - Definition and implementation
  - Example with simulated data