Tidal deformability of compact boson stars NOAH SENNETT, JAN
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Inst — Gravitational waves can be used to probe the structure of compact objects
in coalescing binary systems. This structure enters the pre-merger waveform through
tidal interactions between the two bodies, characterized by each object's tidal de-
formability. We investigate whether these effects can differentiate binary black holes
from systems containing compact boson stars. We compute the tidal deformabil-
ity for various boson star models, including ultracompact non-topological solitonic
solutions.

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Date submitted: 30 Sep 2016   Electronic form version 1.4