Abstract Submitted
for the DFD15 Meeting of
The American Physical Society

Observation of Wood's anomalies on surface gravity waves propagating on a channel[1] CLAUDIO FALCÓN, ANDREA SCHMESSANE, Universidad de Chile — We report experiments demonstrating the appearance of Wood's anomalies in surface gravity waves in a shallow water limit propagating along a channel with a submerged obstacles. Space-time measurements of surface gravity waves allows us to compute the stationary complex field of the wave and the amplitude growth of localized and propagative modes over all the channel including the scattering region. This allows us to access the near and far field dynamics, which constitute a new and complementary way of observation of mode resonances of the incoming wave displaying Wood's anomalies. Transmission coefficient, dispersion relations and normalized wave energy of the incoming wave and the excited mode are measured and found to be in good agreement with theoretical predictions

[1]FONDECYT 1130354

Claudio Falcon
Universidad de Chile

Date submitted: 06 Jun 2015 Electronic form version 1.4