

# **Wave Front Sensing**

*An adaptation of the Beach Boys "Surf'n USA" written and performed by Lynda Williams for the KOA Wave Front Sensing and Controls 2000 Conference, Mauna Kea, Hawaii.*

If everybody had a telescope  
designed by KOA  
with adaptive optics to catch EM waves.  
They'd correct all the distortions  
due to the atmosphere.  
And use some Bushy Fuzzy logic  
for wave front sensing.

You'll catch them sensing on Mauna Kea  
with the Keck scopes  
and over on Maui  
with the DARPA folks.  
In La Silla, Chile,  
with the "Come on Plus"  
Everybody's gone surf'n with Adaptive Optics!

They'll be sensing with a Shack-Hartman  
for wave slope and curve and  
catching differential phase  
with interferometers.  
Searching for a reference star  
in the isoplanatic patch.  
Reconstructing the image  
with some fuzzy math!

We'll be sensing with the Next Gen Space Telescope!  
at La Palma, Italy, with Galileo  
With Gemini and Subaru on Mauna Kea too.

Everybody's gone sensing with KOA.  
Everybody's gone sensing, wave front sensing!