

1116-VR-1044      **Mylan Redfern\*** ([redfern\\_m@utpb.edu](mailto:redfern_m@utpb.edu)), Math & CS Dept., University of Texas, Permian Basin, 4901 E. University, Odessa, TX 79762, and **David Betounes** ([betounes\\_d@utpb.edu](mailto:betounes_d@utpb.edu)), Math & CS Dept., University of Texas, Permian Basin, 4901 E University, Odessa, TX 79762. *A Surprise Among the Trig Substitutions*. Preliminary report.

Having taught Calculus II for more years than we would like to count, we recently were stunned to learn an aspect of trig substitutions that has apparently gone unnoticed by calculus book authors for over three decades (maybe longer, but that's the oldest calculus book we could locate).

While we are not absolutely certain that these authors, and others, were unaware of it, or rather conveniently chose to overlook it, we do know that having it brought to light by one of our students was an unsettling revelation.

In our talk we will discuss this surprising (to us) aspect of trig substitutions: *half of them can be done another way without trig functions*. We suggest a way to revise our calculus books accordingly. (Received September 16, 2015)