962-46-903 **Elizabeth M Bator** (bator@unt.edu), Department of Mathematics, University of North Texas, Denton, TX 76203, and **Rhonda K Huettenmueller*** (rh0015@unt.edu), Department of Mathematics, University of North Texas, Denton, TX 76203. *The Pettis Integral and Operator Theory.* Preliminary report.

Let (Ω, Σ, μ) be a finite measure space; X, a Banach space with continuous dual X^*; and $f :\to X$ a Dunford integrable function. It is well known that the operator $T_f : X^* \to L_1(\mu)$, defined by $T_f(x^*) = \int x^* f \, d\mu$, is weak* to weak continuous if and only if f is Pettis integrable. Using known results of Pettis integration as motivation, we pursue an investigation of weak* to weak continuous operators. (Received September 28, 2000)