Modified Relativistic Dynamics in Regions of Extremely Small Accelerations: Velocity and Acceleration Dependence of Time

E. T. Rodulfo* and E B. Bornilla†
Physics Department, De La Salle University,
2401 Taft Avenue, Manila, Philippines

Title font size: 14
For Author(s)
Font size: **10**
For affiliation(s)
Font size: **8**

Parametric study of radiation force on nonlinear microspheres (e.g. poly and fused quartz) was considered using a 1064 nm Nd:YAG diode-pumpe laser. Other experimental parameter (e.g. back focal power, numerical ape size of the microsphere) were also included in the optimization process. Near the beam focus, optical trapping force behaves linearly with microsphere displacement where trapping sti®ness is the constant of proportionality.

FONT SIZE
Section: **13**
Subsection: **12**
Subsubsection: **11**

1. SECTION

1.1. Subsection

Newton's statement of the law of universal gravitation in the form

$$F = \frac{GMm}{r^2} \tag{1}$$

has been verified and, along with the second law,

$$\vec{F} = m\frac{d^2\vec{r}}{dt^2} \equiv m\vec{a} \tag{2}$$

Utilized with great success since its formulation in the 16th century. However, observations in the galactic region exhibit deviations from the predictions of Newton's laws [1]. To explain these, M. Milgrom [2] proposed to generalize eqn (2) with

Utilized with great success since its formulation in the 16th century. However, observations in the galactic region exhibit deviations from the predictions of Newton's laws [2]. To explain these, M. Milgrom [2] proposed to generalize eqn (2) with

Utilized with great success since its formulation in the 16th century. However, observations in the galactic region exhibit deviations from the predictions of Newton's laws

2. SECTION

2.2. SUBSECTION

2.2.1. Subsubsection

Utilized with great success since its for 16th century. However, observations in the

2 Column Format
In between spacing: **0.3"**

Column #1 (width): 3.36"

Column #2 (width): 3.36"

(to edit this: double click on the shaded-margin at the top-center)

Font (everything): Century
Font size (**Title**): **13**
Font size (**content**): **9**

Utilized w (2)
16th century he
exhibit deviations from the predictions of Newton's laws on
[1]. To exp posed to
generalize e

Note: 2 column formatting for the **content** and **References**

3. METH

Newton's ation
in the form

Captions (Figures and Tables)
Font: **Century**
Font size: **9**

(1)

has been verified and, along with the second law,

$\vec{a}$ (2)

Page Margin
Top: **0.75"**
Bottom: **1.5"**
Left: **0.75"**
Right: **0.5"**

Utilized wit s formulation in the
16th century. H the galactic region
exhibit deviati s of Newton's laws
[1]. To expla [2] proposed to
generalize eqn

4. RESULTS AND DISCUSSION

tement of the law of universal gravitation

$$F = \frac{GMm}{r^2} \tag{1}$$

d and, along with the second law,

$$\vec{F} = m\frac{d^2\vec{r}}{dt^2} \equiv m\vec{a} \tag{2}$$

Utilized with great success since its formulation in the 16th century. However, observations in the galactic region exhibit deviations from the predictions of Newton's laws [1]. To explain these, M. Milgrom [2] proposed to generalize eqn (2) with

*Electronic address: rodulfoe@dlsu.edu.ph
† Electronic address: bornillae@dlsu.edu.ph

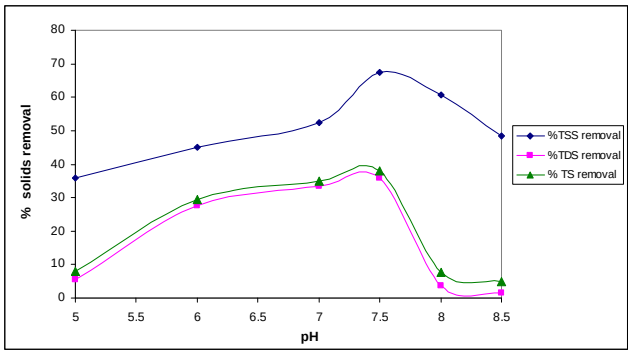

Fig. 1: Effect of pH on % removal of solids using PAC (800 ppm) and excelfloc (1ppm).

TABLE I: Characteristics of Untreated Wastewater.

Parameter	Unit	Value
pH	-	12.58 – 12.14
Chemical Oxygen Demand	ppm	666.48 – 669.19
Total Suspended Solids	ppm	116 – 132
Total Dissolved Solids	ppm	3241 – 33256
Total Solids	ppm	3436 – 3451
Chromium	ppm	0.5336 – 0.5349

Sample **Figure** and **Table**

[1] J. Gale, C. P. Romero, G. B. Tafoya and J. Conia, *Application of Optical Trapping for Cells Grown on Plates Optimization of PCR and Fidelity of DNA Sequencing of p53 Gene from a Single Cell*, Clinical Chemistry (American Association for Clinical Chemisty, Inc. University of New Mexico, 2003).

[2] J. Gale, C. P. R... and J. Conia, *Application of C... Cells Grown on Plates Optimiza... idelity of DNA Sequencing of p... le Cell*, Clinical Chemistry (An... for Clinical Chemisty, Inc. U... ico, 2003).

Do **NOT** forget to put this division line!

For Figures:

Fig. 1: , Fig. 2: , etc. and **NOT** Figure 1: , Figure 2: ,etc.
(do NOT forget the **comma** after the number of the figure.)

For Tables:

Table I: , Table II: , etc. and **NOT** Table 1: , Table 2: , etc.

Take Note (tables and figures):
- The **comma** is in **Times New Roman.**
- If the caption for both figures and tables is only one-liner, **center** it.
- If the caption for both figures and tables is two-liner or more, **justify** it

- **Tables (only):** The caption should be positioned at the top of the table.
- **Figures (only):** The caption should be placed at the bottom after each figure.