



6th IAPT National Student Symposium on Physics

Indian Association of Physics Teachers

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Department of Physics, Panjab University, Chandigarh

October 4-6, 2018



To foster a culture of innovation and creativity among the young students, IAPT has instituted the annual National Student Symposium on Physics (NSSP). The yearly series started in 2013 in collaboration with the Department of Physics, Panjab University, Chandigarh. The Symposium provides a national forum to young students, mostly at the Master Level, to present their new ideas and innovative work at an early stage of academic career. Sixth in the series, NSSP-2018, will be held during October 4-6, 2018.

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Invited Talks by Subject Experts
Oral Presentations by the Students
Poster Presentations by the Students
Visit to Research Laboratories

The undergraduate and postgraduate students with physics background can apply for the symposium latest by **15 September, 2018**. Registration fee of Rs. 750 shall be collected from selected participants. Local hospitality and free accommodation shall be provided to all students. Limited travel support (bus or sleeper class by train) may be given to few selected participants. Application form and other details are available at the **Symposium website** <http://physics.puchd.ac.in/events/nssp/nssp2018/>

For more information, contact
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Register now at <http://physics.puchd.ac.in/events/nssp>
 For contribution from NSSP-2017, Visit: - www.iopb.res.in/~sjp

The periodic table

of electrons in an atom

$$n_e = \sum_{l=0}^{n-1} (2l+1) \times 2 \times \frac{1}{2}$$

Shielding

Electrons in different angular momentum states are shielded from the nuclear charge, because of varying distances from the nucleus. This changes the ionization energy of the atoms

nuclear potential

- 1) short range repulsion
- 2) strong nuclear force
- 3) coulomb force

Radioactivity

units

$1 \text{ Bq} = 1 \text{ decay/s}$

$N = N_0 2^{-t/t_{1/2}}$

where:

$t_{1/2} = \frac{\ln(2)}{\lambda}$ $N_0 = \text{original amount}$
 $N = \text{after decay}$

$t = \frac{t_{1/2}}{\ln(2)} \ln\left(\frac{N_0}{N}\right)$

The standard model works most of the time, but has holes in it.

u	c	t	Y
u _c	u _s	u _b	u _w
d	s	b	g
ν _e	ν _μ	ν _τ	Z
e	M	T	W

Force carriers