



THE INSTITUTE FOR ADVANCED PHYSICS

The Institute News

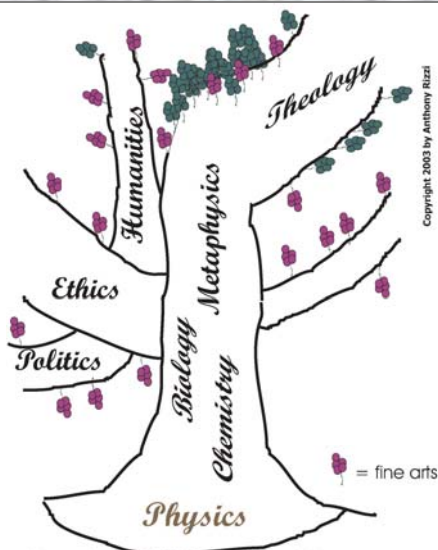
- IAP 10 Years Strong!!!
- Faculty and Members Photo Album Highlights
- Letter from Fr. Benedict Ashley
- Phenomenal Research and Discoveries

Institute for Advanced Physics Ten Years Strong!

The existence of God and other like truths about God, which can be known by natural reason, are not articles of faith, but are preambles to the articles; for faith presupposes natural knowledge, even as grace presupposes nature, and perfection supposes something that can be perfected.

St. Thomas Aquinas, Summa Theologica

On March 14, 2013, the Institute for Advanced Physics (IAP) celebrated ten years of service toward our mission of rooting out the misunderstanding and misapplication of modern science by answering the many, many profound questions that it appears to raise against the *preambula fidei*, the preamble of the Faith. In this way, we are building a culture of life and faith from the only place one can, from the ground of our thinking. To this end, each one of our benefactors is an essential cornerstone of all of IAP's achievements and we remain grateful for their support. The backbone of our organization is our faculty and members. Under the guidance of our Founder, Dr. Anthony Rizzi, **IAP has grown to include over 90 faculty, members, volunteers and others.** All of them contribute their time,



After generics obtained more directly through the senses, empiriological work becomes essential to further understanding.

talent and expertise solely because the mission is essentially important. These individuals further IAP's mission as researchers and teachers (Ph.D. physicists and philosophers), faculty, accountants, lawyers, audio-visual technicians, network administrators, web developers, editors, videographers, film producers, administrative assistant support and artists to name just a few. The fruits of our mission are our many publications, and our trained physicists as well scientists of all types and other professionals and workers of all types as well as the enthusiastic students trained by them.

Institute for Advanced Physics Faculty & Members Photo Album Highlights

How should we do science? If this question is not answered adequately, science will stay disconnected from, or worse answer via scientism, man's deepest questions, and the widespread loss of meaning and the resulting feelings of displacement and malaise can only be expected to deepen. With no integrated balance, technocratic thought and devices will reign, and man will feel increasingly alienated as less and less room is allotted for his humanity. It is only by clearly grounding our thinking in the basic physics that we know directly through the senses that we can get the truth we seek and need. With that base physics, we can place our modern scientific knowledge in context and regain meaning in our increasingly chaotic and busy lives. More than this, grounding and integrating modern science with this simple physics will give access to all (scientist and non-scientist) to the full sweep of the deep meaning and beauty embedded in modern science. We are made for Truth; thus, only by putting truth again in the center of our thinking and action can we regain ourselves.



Anthony Rizzi, Founder and Director of the Institute for Advanced Physics (2003 to present) (quoted from the Preface of *The Science Before Science*)

Most of all, I believe that [Rizzi] wants us all to love (filia) wisdom (sophia). I strongly recommend this book.

The Physics Teacher, Vol. 47, May 2009, AAPT book review of *The Science Before Science: A Guide to Thinking in the 21st Century*

IAP's mission directly addresses the most important intellectual problem of the last 400 years, without which the Church cannot truly evangelize modern man.

IAP is the first and only institution addressing this problem at its core by integrating the proper philosophical depth into the heart of modern science.

Fr. Benedict Ashley (May 3, 1915 – February 23, 2013), O.P., Renowned Thomist philosopher and theologian, IAP Associate Faculty (March 2003 – February 2013)



July 2003 speakers at IAP's "A Cultural Renewal of Science", The University of Notre Dame (as announced in 2003)

Ralph McInerny, Ph.D., will speak on the humanities. Prof. McInerny is a member of the Institute for Advanced Physics Board of Directors, a member of President Bush's Committee on the Arts and Humanities, professor of philosophy at Notre Dame, Gifford Lecturer and author of over 50 books including the internationally famous novels, the *Father Dowling Mysteries*, which have been serialized for television. He is also director of the Jacques Maritain Center.

Anthony Rizzi, Ph.D., the director of the Institute for Advanced Physics, will speak on physics. He is an MIT and Princeton educated physicist who gained worldwide recognition in theoretical physics by solving an 80-year old problem in Einstein's theory. He is author of the soon to be released *The Science Before Science: A Guide to Thinking in the 21st Century*.

Fr. Benedict Ashley, O.P., Professor of Philosophy at St. Louis University, author of over 20 books will speak on scientism's impact on theology.

Jude Dougherty, Ph.D., Emeritus Dean of the Philosophy Department at Catholic University, will speak on philosophy.

John Hittinger, Ph.D., is Vice-President and Provost of St. Mary's College, Michigan, will speak on university curriculum.

James Stoner, Ph.D., will speak on politics. He is a Harvard educated Professor of Political Studies at Louisiana State University and a member of President Bush's National Council on the Humanities.

Benjamin Wiker, Ph.D., will speak on biology. He is a lecturer in theology and science at the Franciscan University of Steubenville and author of *Moral Darwinism: How We Became Hedonists*.

Robert P. George, Ph.D., J.D., of Princeton University, a member of President Bush's Bio-Ethics commission, will speak on his experience interfacing with scientists on that commission.



Jude Dougherty,
IAP Advisory Board Member

Although by Revelation we are elevated to the knowledge of things that would otherwise remain unknown to us, yet we are never raised so far as to know them in any way other than through things that can be known by the senses. **St. Thomas Aquinas**



I am writing to express my complete and enthusiastic support for the work of the Institute for Advanced Physics. The people involved are knowledgeable and even exceptional in their fields. ... As a board member, I can testify that the Institute's work is crucial to reforming our culture. Misunderstanding of science is the key source of the confusion in the humanities and the larger culture. Physics in the broad sense is the foundation for all of our knowing.

Ralph McInerny (February 24, 1929 – January 29, 2010), Professor of Philosophy, University of Notre Dame, Member of the President's committee for the Arts and Humanities, Gifford Lecturer, IAP Board Member (March 2003 – January 2010)



A solid understanding of human nature is impossible without a sound understanding of nature, and this means that genuine progress in politics, society, and culture depends on the kind of foundational work in physics that the Institute for Advanced Physics undertakes. Science has built the modern world, and it is folly to think we can address the ills around us if we ignore science and its challenges. True faith has nothing to fear from science, but we ought to be afraid of ignorance, whether of our world or of ourselves.

Prof. Jim Stoner, Chairman, Department of Political Science, LSU, member of President Bush's National Council on the Humanities, involved and instrumentally important to IAP since its beginning

July 2004 at Physics for Realists I - Mechanics, The University of Notre Dame

The IAP certified members met to continue their work together on the IAP's major long-term project of writing a series of undergraduate-level physics textbooks. The first step is cutting edge research; the meaning of the equational physics has to be uncovered. This is the core of IAP's work and has never been done by anyone before. The importance of the project cannot be overstated. The current generation of physicists, including the conference participants, was formed in the current intellectual miasma that blinds our civilization to the truth that modern science is not the first or the last word on the natural world, but that science depends on a broader philosophy of nature for its proper understanding. Faculty include: **Fr. Benedict Ashley, Dr. Ralph McInerny, Fr. Neal Nichols, and Dr. Anthony Rizzi**; members include: **Dr. John Keck and Dr. Alex Sich**

July 2005 at Physics for Realists II - Mechanics, The University of Notre Dame

2nd annual conference faculty include: **Fr. Benedict Ashley, Dr. Ralph McInerny, Fr. Neal Nichols, Dr. Anthony Rizzi**. Members include: **Fr. Matthew Green, Capt. Stephen Guse, Dr. Joseph Haller, Fr. Vincent Higgins, Dr. John Keck, Dr. Christopher Morrissey, and IAP's 7 ft water rocket**

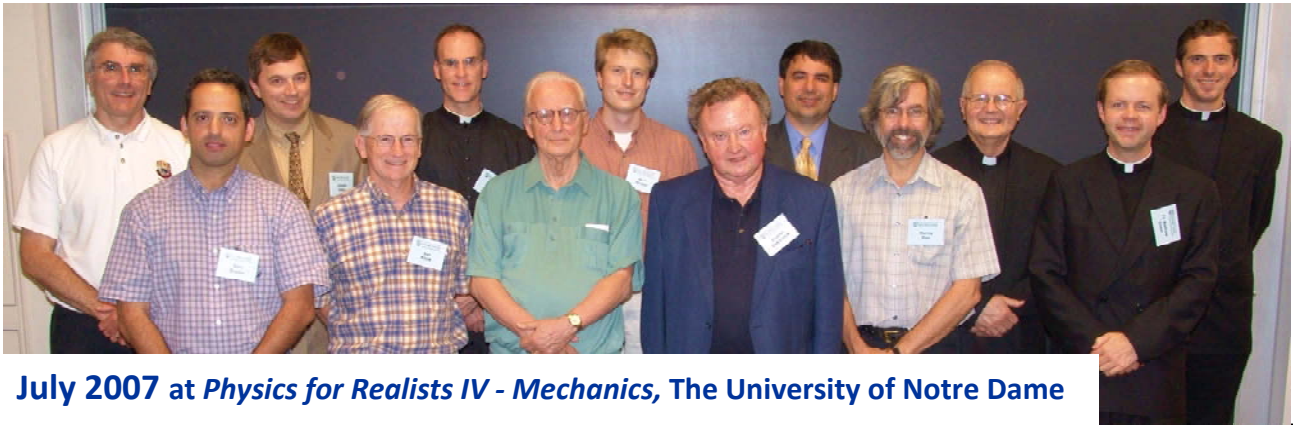


If the foundations be destroyed, what can the righteous do? Psa 11:3



July 2006 at *Physics for Realists III - Mechanics*, The University of Notre Dame

4th annual conference from left to right, *top row*: Dr. John Keck, Fr. Neal Nichols, Dr. Joseph Haller, Dr. Anthony Rizzi, Fr. Vincent Bork, Fr. Timothy Walsh. *Bottom row*: Dr. Murray Daw, Dr. Ralph McInerny, Capt. Stephen Guse, Fr. Benedict Ashley, Dr. Ken Klenk, Dr. Dermott Mullan, Fr. Matthew Green



July 2007 at *Physics for Realists IV - Mechanics*, The University of Notre Dame

Back row, left to right: Mr. Rado Krevs, Dr. Joe Haller, Fr. Neal Nichols, Dr. Mark Wyman, Dr. Anthony Rizzi, Fr. Cliff Hill, Fr. Matthew. *Front row, left to right*: Dr. Gino Sterino, Dr. Ken Klenk, Prof. Ralph McInerny, Prof. Thomas DeKoninck, Prof. Murray Daw, Fr. Matthew Green.



July 2008: *Physics for Realists V – Electricity & Magnetism + Mech. workshop*, University of Notre Dame

6th annual conference from left to right: Mr. Rado Krevs, Fr. Neal Nichols, Dr. Gino Sturino, Dr. Joe Haller, Dr. Anthony Rizzi, Dr. Murray Daw, Dr. Ralph McInerny, Fr. Cliff Hill, PhD, Dr. Dan Welch, and Dr. Ken Klenk

If something is wrong in our relationship with reality, then we must all reflect seriously on the whole situation and we are all prompted to question the very foundations of our culture...We must listen to... nature and we must answer accordingly...[We must] come back to the fundamental concepts of nature and reason, from which we set out. Pope Benedict XVI, September 2011, papal address to German parliament

The matter is urgent. Contemporary developments in science challenge theology...deeply.
Pope John Paul II's June 1, 1988 letter to the Vatican Observatory



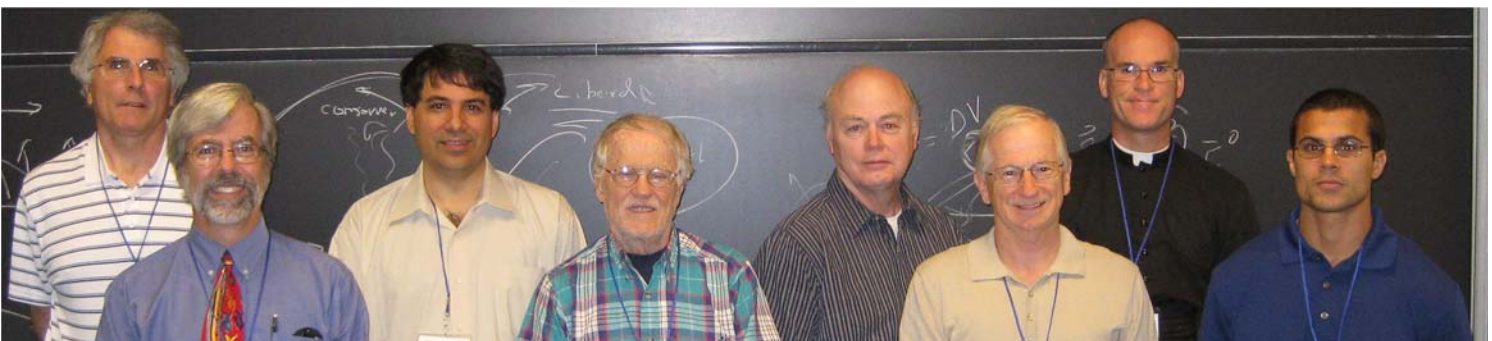
July 2009 at Physics for Realists VI – Electricity & Magnetism, The University of Notre Dame

7th annual conference from left to right, Dr. Dan Welch, Fr. Neal Nichols, Dr. Joe Haller, Dr. Anthony Rizzi, Dr. Ken Klenk, Dr. Murray Daw, Fr. Clifton Hill, PhD, Dr. Joe Martin; conference photos courtesy of Mrs. Cecilia Klenk



July 2010 at Physics for Realists VII - Electricity & Magnetism, The University of Notre Dame

8th annual conference from left to right: Dr. Ken Klenk, Dr. Joe Haller, Dr. Dan Welch, Fr. Neal Nichols, Dr. Anthony Rizzi, Fr. Benedict Ashley, Fr. Clifton Hill, Dr. Joe Martin and Dr. Murray Daw



July 2011 at Physics for Realists VIII - Electricity & Magnetism with a teaching workshop, University of Notre Dame

9th annual conference from left to right: Rado Krevs, Dr. Murray Daw, Dr. Anthony Rizzi, Dr. Joe Martin, Dr. Dan Welch, Dr. Ken Klenk, Fr. Neal Nichols, Anthony DiCarlo



10th annual conference IAP members and faculty: (standing, from left to right) **Dr. Anthony Rizzi, Dr. Jim Stoner, Fr. Neal Nichols, Dr. Dan Lejeune, Dr. Dan Welch, Dr. Murray Daw, John Baker, Anthony DiCarlo,** (kneeling, from left to right) **Dr. Ken Klenk, James Louviere, Stephen Strickland, Dr. Joe Martin, David Giroir, and Don Caffery** (not pictured).

July 2012 at Physics for Realists IX – Quantum Mechanics, Louisiana State University



Physics for Realists is a landmark series that uses our common sense to discover and clarify modern physical theory. The resulting pedagogical approach makes physics more accessible and its beauty more evident. This series will revolutionize our understanding of physics and the way it is taught.

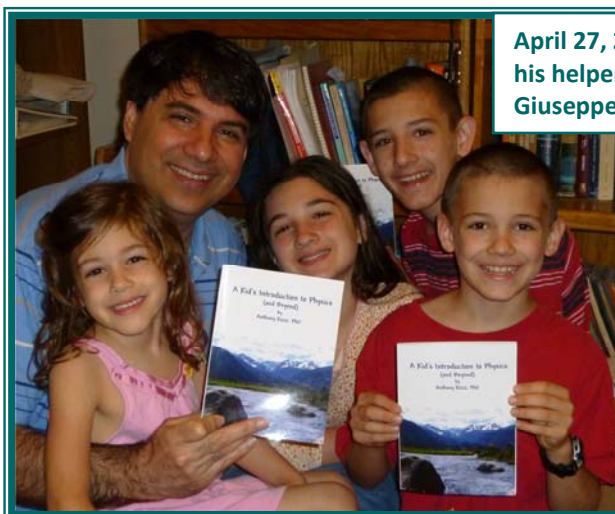
**Murray Daw, Bowen Prof. of Physics Clemson University
IAP Adjunct Faculty (2006 to present)**

Dr. Murray Daw is an IAP faculty member involved in teaching and research. Dr. Daw teaches *Physics for Realists* to college students and at physics colloquiums, including the **American Association of Physics Teachers, Auburn University, College of Charleston, North Georgia College and State University, and Furman University.** He was an IAP faculty team member at **St. Joseph University, PA, Wofford College, SC, Clemson University, SC and Southern Catholic College, GA.** He also teaches laymen *Physics for Realists* principles in seminars and magazine publications.



Congratulations on your work [IAP]...

**Archbishop Philip Hannan (1913 - 2011)
IAP Advisory Board Member (2003-2011)**



April 27, 2012: Dr. Rizzi and his helpers Thomasina, Kateri, Giuseppe and Nicolo Rizzi



May 2003 Princeton University, Rizzi (pictured with Robbie George, Luis Tellez and Jim Stoner) addresses the James Madison Program in American Ideals and Institutions



Fr. Neal Nichols, FSSP, IAP Spiritual Director (2003 to present), continues to be very dedicated to IAP's mission and its members.



James Louviere, IAP Associate Member (2004 to present), (left) provides audio/visual support for IAP. His projects include long hours working with Dr. Rizzi on the music video for the **2007 EWTN Science Before Science** series and IAP's *Return to Wisdom*. He taped IAP's 2003 and 2012 conferences as well as DVD production of various talks. His daughter, **Linde Dean**, volunteers her help with DVD production.



September 25, 2007 EWTN aired the second episode of the five part series *The Science Before Science: A Guide to Thinking in the 21st Century*; IAP members present from left to right: James & Ruth Anne Louviere, Phillip Bellini, Fr. Cliff Hill, Jamie Anson, James Stoner, Don Caffery, Anthony Rizzi, and Larry Anderson



Fr. John Saward is a respected philosopher, theologian and author; Pope Benedict XVI said: "Prof. Saward has provided his readers a great service by his careful treatment of the connection between sacred art, the heroic virtue of saintly people & the fullness of truth ..." Fr. Saward, currently in Oxford, has been deeply involved in IAP since IAP's beginning.

Photo bottom left: **National Science Teachers Conference, March 2009**; **Alan Wegienka** (right, front) of **Design Simulations Inc.** donated *Interactive Physics* software licenses to IAP for use in *Physics for Realists Mechanics*; also pictured from right to left: Paul Mitiguy, Anthony Rizzi, and Associate Member David Giroir (2007 to present)



2009 IAP faculty **Joe Haller, Fr. Nichols** (member), **Anthony Rizzi, Fr. Hill** and **Murray Daw** teach *Physics for Realists* to PA physics teachers at Saint Joseph University, Philadelphia

“...the Institute is strong”
2007 Letter to Members from Associate Faculty Fr. Benedict Ashley
Fr. Ashley passed away on February 23, 2013. Requiescat in pace our dear friend

Dear Friends,

As with every year for the last five years, I was very much looking forward to the events and discussions of the Institute for Advanced Physics summer conference. My superior has determined that my health, at the age of 92, is such that I cannot be with you this year.* I profoundly regret that my health prevents me from attending the conference this year. Though my health has declined the Institute is strong; I have much confidence in the Institute and Dr. Anthony Rizzi who is so ably heading it. As you all know by now, Dr. Rizzi is an excellent philosopher and knows the principles of St. Thomas and Aristotle well. Every day I grow more convince of the Institute's importance for the future of science and the mission of the Church. IAP is the only institution that is addressing the Church's and the world's biggest problem. The magnitude of the problem is made blasphemously evident by such widely selling books as *God: The Failed Hypothesis*, by the physicist Victor J. Stenger and *The God Delusion* by the biologist Richard Dawkins.

Vatican II and Pope John Paul II indicated how important it is for the Church that it honestly and openly face the question of how modern science should be positively related to the Faith. The Catholic theologians of the twentieth century generally avoided this question, putting their reliance on metaphysics to show the harmony of reason and faith. On the other hand scientists, even Catholic ones, were so proud of their success in elaborating the details of science and applying these technologically, that they neglected the renewal and clarification of its foundations. They proposed and successfully tested mathematical hypotheses but avoided asking what physical reality they ambiguously reveal.

Dr. Rizzi in his important work, *The Science Before Science*, has made this problem clear and, as you know, is now, with your help, producing the first physics textbook that

provides a way out of the scientism for scientists and thus for the entire culture. For the first time, Newtonian physics is put on a solid philosophical ground. I am honored to be an Associate Faculty of the Institute for Advanced Physics; as such, Dr. Rizzi and I have been in constant consultation and, of course, I remain an active faculty, hoping to see you next year.

You have all read *The Science Before Science* and are thus aware of the reasons that many serious obstacles must be overcome to achieve the great goal of the Institute. You have a responsibility as do I to give Dr. Rizzi the courageous and intensive support he and the mission needs. I hope and pray for your work at this 2007 summer conference and am confident it will be an important step in achieving this goal.

Lastly, I congratulate the new certified members: Dr. Thomas De Koninck and Fr. J. Cliff Hill, PhD, and express my regret for not being able to personally shake your hand on your important accomplishment of completing the requirements of certification. You two, it so happens, are also my old friends whom I have not seen in a long time. I particularly regret not being able to see you; hope to see you soon and Congratulations!

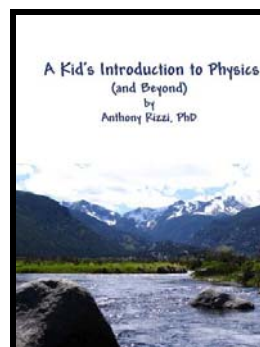
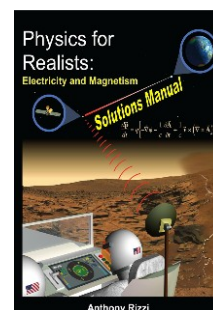
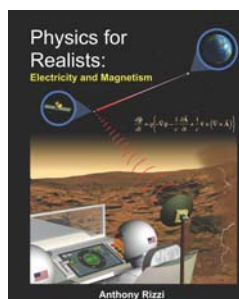
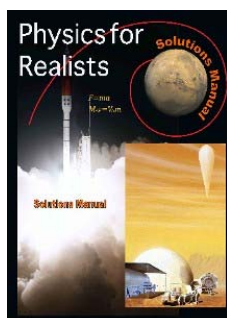
To all present here, my prayers and humble blessing for your work at this conference and your work generally for IAP.

Benedict M. Ashley, OP
Associate Faculty, IAP
July, 2007

Even so, Fr. Ashley managed to attend the 2008 IAP Annual Conference at Notre Dame and continued till his death to put the lion share of his time toward IAP work. **The Chicago Tribune printed an article about Fr. Ashley on March 24, 2013 written by **Bob Goldsborough** which can be found at http://articles.chicagotribune.com/2013-03-24/news/ct-met-benedict-ashley-obit-20130324_1_science-and-religion-dominican-province-dominican-order*

Phenomenal Amount of Research and Discoveries by IAP Faculty and Members in Ten Years Time

Physica ad Dei Gloriam



Physics for Realists Mechanics: Modern Physics with a Common Sense Grounding Vol. I

May 2008, ISBN: 978-0-9816470-0-5; 602 pages, 8 x 10, hard cover, includes *Interactive Physics* software download

PFR Mechanics Solutions Manual Vol. I

November 2008, ISBN: 978-0-9816470-1-2; 316 pages, 8 ½ x 11, soft cover

Physics for Realists Electricity and Magnetism: Modern Physics with a Common Sense Grounding Vol. II

July 2011, ISBN: 978-0-9816470-2-9; 482 pages, 8 x 10, hard cover, includes perforated flip book time sequence

PFR E&M Solutions Manual Vol. II

May 2012, ISBN: 978-0-9816470-4-3; 233 pages, 8 ½ x 11, soft cover

Journal of Integral Physica Vol. I

July 2005, ISSN 1557-7538; 67 pages, 8 ½ x 11, soft cover

Journal of Integral Physica Vol. II

Oct 2009, ISSN 1557-7538

83 pages, 8 ½ x 11, soft cover

A Kid's Introduction to Physics (and Beyond)

April 2012, ISBN: 978-0-9816470-3-6; 70 pages, 6 x 8, 14 font, soft cover

The Science Before Science: A Guide to Thinking and Believing

September 2007, EWTN/IAP DVD mini-series, five episodes, 30 minutes each

Return to Wisdom, IAP DVD, 30 minutes

Cultural Renewal of Science Conference DVDs, July 2003, IAP DVD, 10 talks

TV & radio interviews, including EWTN & NPR, also newspaper & magazine articles and various other venues!

The Institute for Advanced Physics
Science Education and Gravitational Research
P.O. Box 15030, Baton Rouge, LA 70895 Email: info@iapweb.org

Earth Calendar	Mars Calendar
Year: 2007 AD	Year: 1067 RDH
Month: September	Month: Februaria
Day of Month: 19	Sol of Month: 26
Day of Week: Wednesday	Sol of Week: Sunday
Time: 15h 43m 37.385s	Time: 08h 09m 42.351s
Julian Day: 2454363.155294	Julian Sol: 2434752.840074

Now
 Earth Mars
 Year
 Month
 Day of Month
 Hour
 Minute
 Second
 Millisecond
 Julian Day
 Time Zone

“Congratulations, Mars Calendar, one of your products, has been added to Softpedia’s database of software programs for the Windows operating system.”

Dr. Haller, IAP Physics Professor, developed software for visualizing the time development of fields, a feature very useful in understanding the propagation of electric and magnetic fields. See the time sequence images which appear as a tear out flip book in IAP’s *Physics for Realists Electricity and Magnetism*. Dr. Haller also sketched the initial design for the cover of the *Physics for Realists Electricity & Magnetism* textbook.

In fall 2007, Dr. Rizzi designed and did the calculations for a revolutionary Mars calendar. Dr. Joe Haller (2005 to present) designed the java applet which now appears on IAP’s web site:

<http://www.iapweb.org/MartianCalendar/>

NASA: In 2011, IAP’s Mars Calendar was incorporated into a **NASA educational web site:**

<http://marsvlm.herokuapp.com/4/1/2/2>

Softpedia Award: In 2011, IAP won an award from **Softpedia Editorial Team**



100 yrs ago Pope calls for “a special Institute” to address science

September 8, 2007 marked the 100th anniversary of a particularly important Papal encyclical entitled, *Pascendi Dominici Gregis* (On Feeding the Flock of the Lord.) In his encyclical letter Pope Pius X warns of the Scientism which destroys common sense—a common sense which was made rigorous by St Thomas Aquinas. The Pope warns that the loss of this common sense constitutes a giving over of all that is most human to the purely emotional realm. He calls us back to the intellect, to using our minds like Pope Benedict XVI who reminds us: “Not to act reasonably, not to act with logos, is contrary to the nature of God.”

In the encyclical Pope Pius X actually calls for “a special Institute” to address science. It is interesting in the past 100 years just how prophetic this encyclical letter has proved.

You can look up the full letter at Papal Encyclicals Online or point your browser to:

<http://www.papalencyclicals.net/Pius10/p10pasce.htm>

IAP has the support of top Vatican officials.

The Institute for Advanced Physics’s enormous success on all fronts in research and education is due to the tireless devotion of our faculty, members, volunteers and our benefactors. The Institute for Advanced Physics is powered by the combined labors, talent and inspiration of **over 90 people!!! We extend our sincere gratitude to all our volunteers.** We thank each one of you for your contribution, including our student interns: **Johnathan Borderlon, Ben Chutz, John Halpine, Sam Reid and Steven Titus.** **And we remain extremely grateful to our benefactors, those foundational funders who have supported IAP since 2003 and those who have more recently come onboard. This work is not possible without you. Thank you for making the Institute for Advanced Physics ten years strong.**

Physica ad Dei Gloriam