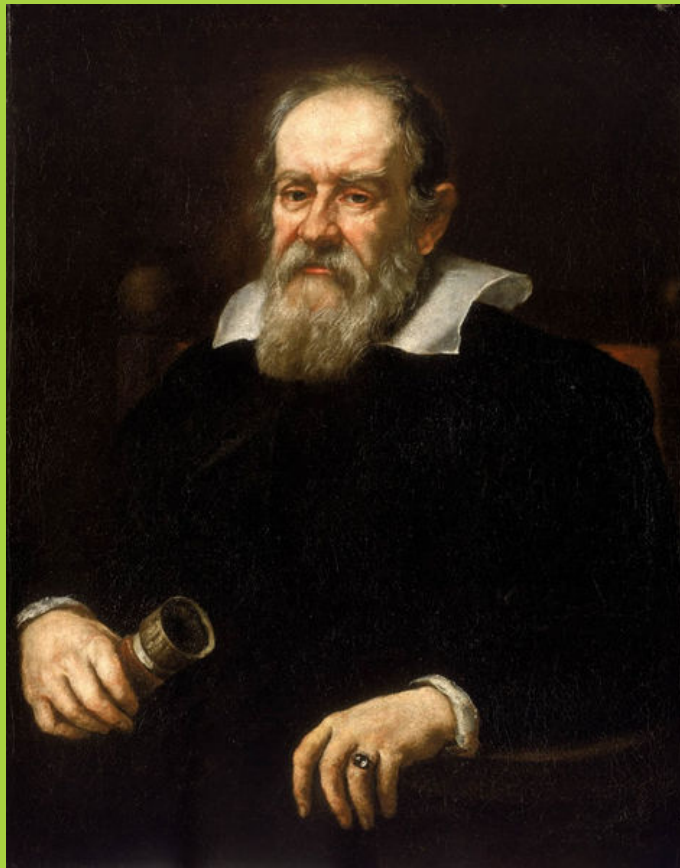


**Galileo Galilei and Robert  
Bellarmine: the ‘new science’  
and the Church in context**

# From last time

- Old science
- Copernicanism and its problems
- Giordano Bruno and his interpretation of Copernicanism
- After Bruno...

# Galileo Galilei (1564-1642)



# Galileo and the new science

- Experimental method: induction instead of deduction
- Astronomical observations (the existence of sunspots means that heavens are corruptible!)
- Copernicanism is true (is the Bible wrong?)
- Galileo's relativity

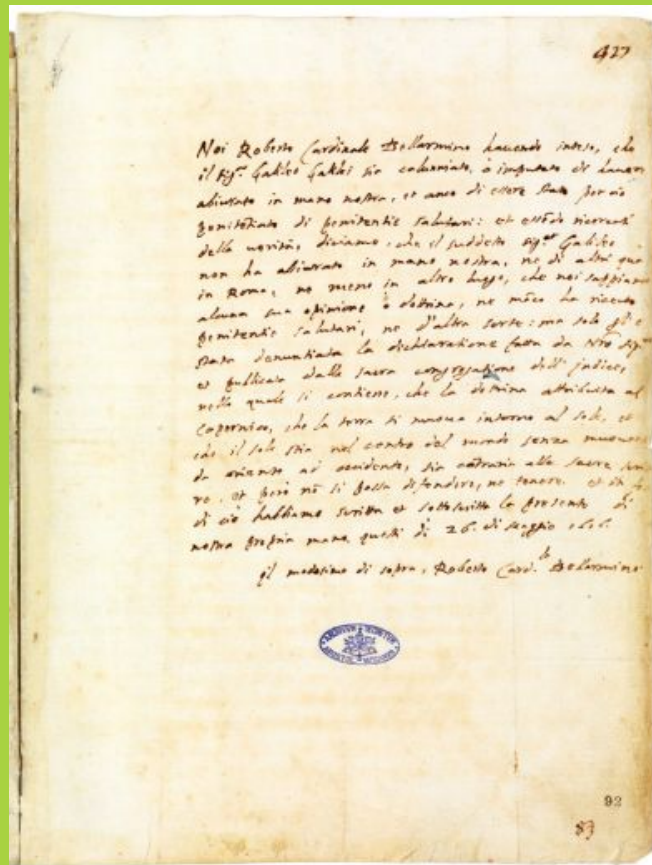
# Galileo's trials (1615-6, 1632-3): why was he put on trial?



# Robert Bellarmine (1542-1621)



# Bellarmino's 'Precetto', 1616



# Robert Bellarmine (1542-1621)





# Bellarmino's agenda: three points

- The Church did not oppose experiments (Bellarmino actually tried and liked the telescope!), nor did it oppose Galileo's mechanical theory. The Church was simply preoccupied with Galileo's endorsement of Copernicanism:
  - 1) Copernicanism is not 'true'
  - 2) The Church is the only institution in charge of interpreting Scripture
  - 3) The Church has to be up-to-date and the leader in scientific matters

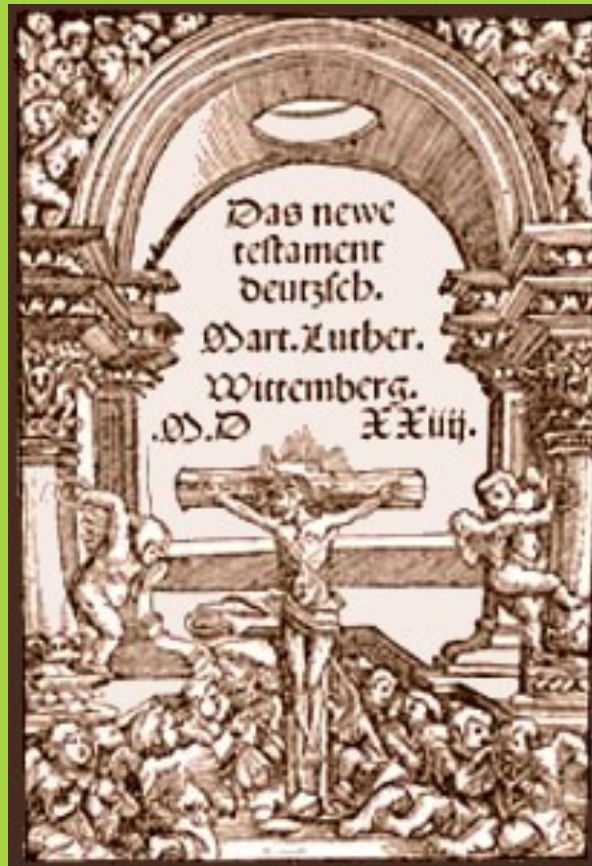
# 1) Galileo: Copernicanism IS true, 'eppur si muove'



# 1) Bellarmine: Copernicanism is not 'true'

'...whenever a true demonstration would be produced that the sun stands in the center of the world and the earth in the third heaven ... then at that time it would be necessary to proceed with great caution in interpreting the Scriptures which seem to be contrary... But I do not believe that there is such a demonstration, for it has not been shown to me' (Bellarmino to Foscarini, 12 April 1615)

## 2) Scriptural exegesis and the orthodoxy of the Church



## 2) Galileo and Scriptural exegesis

'it seems to me that it was extremely prudently ..established by Your Paternity that the Sacred Scripture can never lie or err, but its tenets are absolutely and inviolably true. Only I would add that, even if the Scripture cannot err, nevertheless **its interpreters and expositors can err in several ways**, among which a very serious and frequent case is when they would want to limit their interpretation only to **the mere literal significance** of the words' (Galileo to Castelli 21 December 1613, my emphasis)

## 2) Bellarmine and Scriptural exegesis

‘I say that it appears that you (Foscarini and Galileo) have acted prudently in being satisfied with speaking of Copernicanism as a hypothesis...for to say that the assumption that the earth moves..saves all appearances better than do eccentrics and epicycles is to speak well. But to wish to assert that the sun is really located in the center of the world...[is] making the Holy Scripture false...and the Council of Trent has prohibited the interpretation of Scripture contrary to the common agreement of the Holy Fathers’ (Bellarmine to Foscarini, 12 April 1615)

### 3) Catholicism and the new science: a complex relationship

- Copernicanism: dangerous and NOT 'true'
- Sunspots? Dangerous (against incorruptibility of the heavens and proved by, among the others, Tycho Brahe , 1546-1601, who was Lutheran) but true
- New measurements of the movement of the comets? Dangerous because their author was Tycho, but true
- So?



# 1620: Biancani's 'Sphaera Mundi'





# Sphaera Mundi: Tycho and Galileo are right on sunspots and comets!

‘my intention and opinion in this work is first to report the hypotheses of the ancients, commonly accepted, and to pursue them; ... nevertheless I will not think that the new observations and discoveries of the moderns should be neglected’ (G.Biancani, Sphaera Mundi)

# Tycho, Bellarmine and the Index



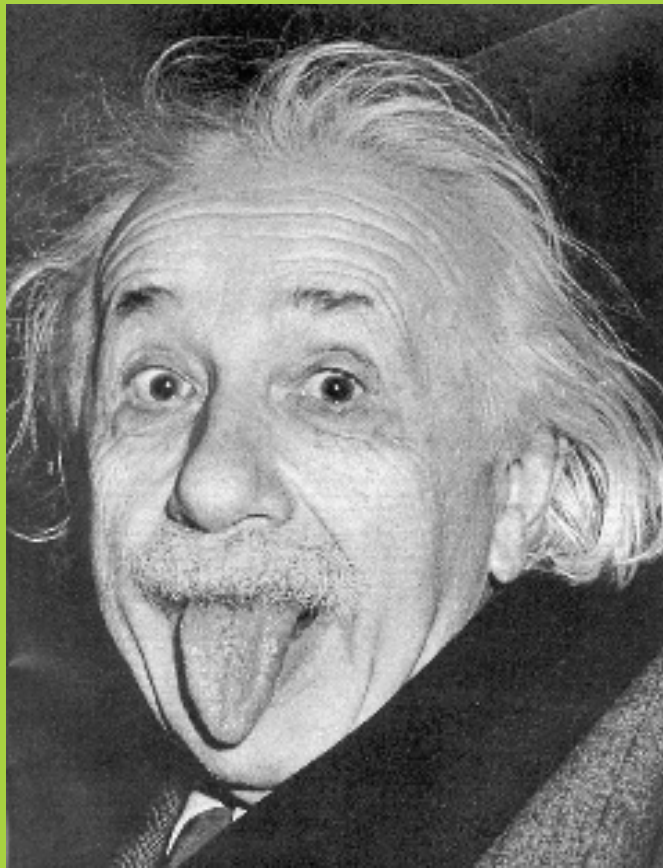
# Bellarmino's censure (1620)

- Tycho was a heretic, for he praised Luther and other Reformers in his book. However...
- His children are committed Catholics, so..
- 'Posset fortasse corrigi liber' ( 'maybe the book could be corrected' ) ! (ACDF S.O. Censurae Librorum II, fasc.13, fol. 606r)

# Conclusions

- Was Bellarmine wrong on the ‘true’ character of Copernicanism?
- Was Galileo right?
- Was the Catholic Church opposed to science? Opposed to science for science’s sake?

Science and everything else:  
is God playing dice?



# In sum...

- Just like in the case of Bruno, also in the case of Galileo it is not simply a matter of ‘science vs. religion’, and this for three reasons (at least):
  - 1) Historical developments of the very concepts of ‘science’ and ‘religion’
  - 2) Religion is a complex issue
  - 3) Science is a complex issue

# Religion, science and modernity

‘Three great events stand at the threshold of the modern age and determine its character: 1) the discovery of America; 2) the Reformation; 3) the invention of the telescope and the development of a new science that considers the nature of the earth from the viewpoint of the universe’ (Hannah Arendt, ‘The Human Condition’ )