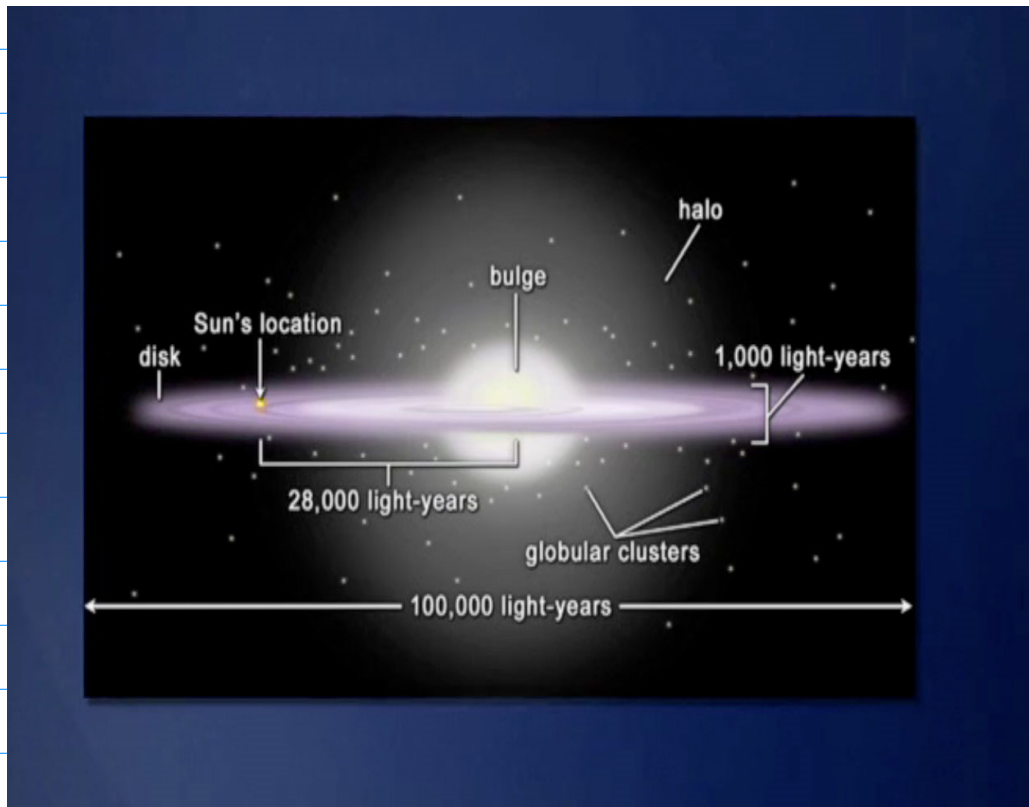


THE CONTENT OF THE Milky Way:



DISK: STARS, STAR CLUSTERS, GAS AND DUST

↓

ASSOCIATIONS: CLUSTERS
OF 10-100 YOUNG, HOT (O-AND B-CLASS)
LUMINOUS STARS

↓

OPEN CLUSTERS:
CLUSTERS OF
100-1000 STARS,
ALSO HOT AND
LUMINOUS



OPEN CLUSTER
M 45

HALO : STARS (COOLER LOWER MAIN SEQUENCE STARS), GLOBULAR CLUSTERS AND NO GAS AND DUST

BULGE : STARS ARE SIMILAR TO THOSE IN THE HALO, BUT THERE ARE ALSO SOME HOT AND LUMINOUS STARS.

THE MATERIAL IN THE DISK IS NOT DISTRIBUTED UNIFORMLY BUT IS CONCENTRATED IN SPIRAL ARMS. HOW DO WE KNOW THAT SINCE THE GAS AND THE DUST BLOCK OUR VIEW?



360° VIEW ALONG THE PLANE OF
THE MILKY WAY

WHEN WE LOOK AT OTHER SPIRAL GALAXIES WE



GALAXY M100

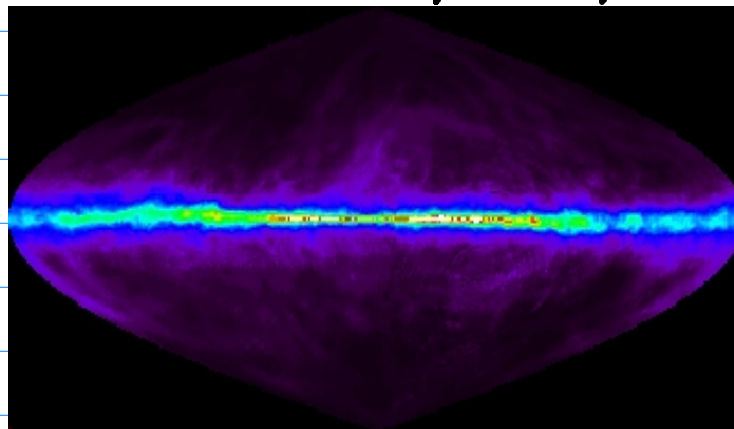
OBSERVE THAT THEIR
SPIRAL ARMS ARE
OUTLINED BY THE
ASSOCIATIONS AND
OPEN CLUSTERS OF
HOT (AND THEREFORE
BLUE) LUMINOUS STARS.

THEREFORE ONE
SHOULD LOOK FOR
SUCH CLUSTERS OF
HOT AND LUMINOUS
STARS IN THE MILKY
WAY.

RESULTS :



THE ASTRONOMERS CAN ALSO EXAMINE THE DISTRIBUTION OF GAS AND DUST IN THE MILKY WAY BY DETECTING THE RADIO WAVES EMITTED BY THE CLOUDS OF GAS AND DUST. RESULTS: GAS AND DUST ARE ALSO CONCENTRATED IN THE SPIRAL ARMS OF THE MILKY WAY:



ALL SKY VIEW AT 21 CM RADIO WAVES

PRODUCED BY COOL CLOUDS OF NEUTRAL HYDROGEN.

THE DISK STARS DIFFER FROM THOSE IN THE HALO AND THE BULGE BY THEIR CONTENT OF ELEMENTS HEAVIER THAN He (SO-CALLED METALS)

DISK STARS : POPULATION I STARS, WHICH HAVE HIGHER CONTENT OF METALS (2-3%)

HALO AND BULGE : POPULATION II STARS - THEY HAVE A LOWER CONCENTRATION OF METALS (0.1%)